



Project	The Falls on Refugee Road	Addendum Number	3
Project Number	23446	Date	07/10/2025
To	All Bidders		

This addendum contains changes to the requirements of the bidding Documents, Project Manual and Construction Drawings which have been issued to date. Such changes are to be incorporated into the Construction Documents and shall apply to the work in the same meaning and force as if they had been included in the original documents. Wherever this Addendum modifies a portion of a paragraph of the Project Manual or a portion of any Drawing, the remainder of the paragraph or Drawing shall remain in force.

General:

1. Updated drawing index and spec TOC(Exhibit C) to be issued as part of this addendum.

Specifications	00 01 10 – TABLE OF CONTENTS Updated as described below. 01 23 00 – ALTERNATES (section not re-issued) Paragraph 1.03.A.2.a.1); to clarify reference, change to: “Refer to sheets A350A, A350B, A350C, A350D, A351 and notes on all elevation sheets.” 06 82 00 – MOLDED FIBER GLASS FABRICATIONS Section added to project manual. 08 71 10 - DOOR HARDWARE Hardware Set 3.1 added Hardware Set 8.1 added Hardware Set 10.0 modified 09 51 13 – ACOUSTICAL PANEL CEILINGS Section added to project manual. 10 55 23 – MAILBOXES (section not re-issued) Paragraph 2.01.C Remove model number: “4CADD-09” Add model numbers: “4C15D-18, 4C15S-08, 4CADS-2P, 4CADD-4P.” 12 32 00 – MANUFACTURED WOOD CASEWORK (section not re-issued) Paragraph 2.01.A.1; Change Basis of Design to: “Shaker Slab / Extreme Cons. by REGENT CABINETS.” 23 90 10 – HVAC ALTERNATES Section removed from project manual.
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Architectural

1. At all meter bank locations in all residential buildings, provide fiber cement panel with 4" trim in lieu of vinyl siding behind meter locations. verify and coordinate locations and dimensions with final equipment locations and requirements of utility service provider. Fiber cement extent shall extend 12" beyond all meter banks. paint to match siding.

Drawings

1. G001 – DRAWING INDEX
 - a. Sheets A711, P500-A, P500-B, P500-C, H302 added too bid documents
2. A700 – DOOR SCHEDULE
 - a. Updates to various doors, see revised schedule
3. A711 – DOOR DETAILS
 - a. Sheet added to bid documents

Other

Refer to attached Addendum descriptions and attachments provided by Korda Engineering (Site/Civil), and Prater Engineering (MEP).

Attachments

DRAWING AND SPEC INDEX (EXIHIBIT C)

Specifications: : 00 01 10; 06 82 00; 08 71 10; 09 51 13

Drawings: G001, A700, A711

RFI's

1. Please provide a project specific copy of the Census Docs 500 Contract Form.

Response: It is not available at this time.

2. The initial site plan called for a "Fire Access Only" drive off of Refugee Rd. At that time, it was our intention to utilize this drive for temporary construction access; the thought being that as buildings are turned over on the project, construction traffic could be kept off of Schwartz Rd, maintaining a separation for the first residents from ongoing construction. Despite the removal of the Fire Access Drive on Addendum #1, we'd like to still utilize this as a temporary construction entrance, for the reasons previously mentioned. See attached markup. We would remove the temporary entrance and re-seed/sod once the construction access point is no longer needed.

Response: We do not anticipate any issue with utilizing the former fire access drive for a construction drive. Any permit/approvals for the temporary drive with the City of Columbus would be the responsibility of the Contractor since the Erosion Control Plan shows access of Schwartz Road.



3. According to page 170, 12 32 00 – 2, Manufactured Wood Casework, Part 2 Products, 2.01 Cabinets of Addendum #1 dated 06/11/2025, the basis of design and specs are based on the Advanta Extreme Use Series. This cabinet was retired in 2022 when Advanta closed its doors and is currently unavailable. What are the approved alternatives to the unavailable Advanta Extreme Use Series? I am unaware of any cabinet manufacturers offering a pressure treated toe kick.

Response: Use Regent cabinets as Basis of Design. Spec updated in addendum #3

4. Drawing FP100 from Addendum 1 shows each building having (1) Fire Department Inlet Connection, but Drawing FP103-B from Addendum 1, Level 01 Fire Protection Plan- Building B shows there to be (2) Fire Department Inlet Connections. Please clarify the quantity of connections for all B Buildings.

Response: There is to be one FDC inlet connection per building. The two FDC connections shown on the Level 01 Fire Protection Plan Building B is an attempt to show the two different locations of the one FDC, either at the service entrance or at the opposite side of the breezeway. All FDC's are to be located on the parking side of the building. Refer to drawing FP100 - Fire Protection Site Plan for FDC locations at each building.

5. In Addendum 1, question answer #9, it was confirmed that Garage G2 exterior disconnect is the same size as the 60/NF/2,3R as show for Garage G1 disconnect. However, the Addendum 1 drawing for the Garages no longer show this disconnect, yet the One-Line drawings were not revised to excluded these disconnects. Are these disconnects required for the each of garages or not? Please clarify.

Response : Disconnects have been removed and are not required.

6. Building A1 primary conduits were adjusted, leaving an additional transformer on the north westside of the building, with no primary conduits to it. Is this transformer still required or does it need to be removed from the drawing? Please advise.

Response : Transformer has been removed.

7. Answer to RFI Question #25 states that the utility company will be installing the primary and secondary wiring, conduit, transformers, etc. A new ductbank detail has been added to Addendum 1 drawing E100 and the Feeder Schedules on drawings E-300 & E301, Design. 1 & 2, state conduit ductbank required, with service cable by AEP. Is the primary and secondary conduit ductbank to the Transformers and Meter Centers by contractor and wire by AEP or are both the primary and secondary conduit ductbank and cable to the Transformers and Meter Centers by AEP, as RFI Question #25 answer states? Please clarify.

Response : AEP is providing primary and secondary wiring and conduit for the site except for the feeders from the clubhouse transformer to the clubhouse panel. The electrical contractor will provide/install conduits at street crossings for AEP to pull their wire.



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| | <p>8. Is Network Service required for the EV Charging Stations? If so, what will be the size empty conduit will be required to each EV Charger?</p> <p><i>Response : Yes a network service is required for the EV chargers. Chargers come with an integral wireless LTE modem, so an extra conduit for data will not be required.</i></p> <p>9. On drawing E107-D, there is a receptacle shown for a T.V. (90" A.F.F.), but no outlet for data or coaxial is shown. Is there outlet with data or coaxial cable required for the T.V.? Please advise.</p> <p><i>Response : Yes, an outlet wall data will be provided for the TV.</i></p> <p>10. In Addendum 1, Clubhouse Panel CB has been changed from 400A to 600A, but the Clubhouse Electrical One-Line on drawing E-301 was not updated to reflect the change in size of the service disconnect from 400A to a 600A and feeder upsize for the additional amperage on the Feeder Schedule. Please advise to the feeder now required for the change in amperage.</p> <p><i>Response : One-line diagram has been revised. 2 sets of (3- #500KCMIL Alu. in 3"C)</i></p> <p>11. Addendum 1 drawings E101-A and E103-B added a Coded Note 3 to the MC on those drawings. No Coded Note 3 or required note description was added to the Coded Notes on those drawings. Please provide required Coded Note 3 scope of work.</p> <p><i>Response : Coded note 3 was removed.</i></p> <p>12. Addendum 1 does not include the specifications for fiber cement. Please provide them.</p> <p><i>Response : Specs for Fiber Cement provided as part of the initial 80 GMP set. See Section 07 46 46.</i></p> <p>13. Detail 1 on drawing A421 references the specification "Molded Glass Fiber Fabrication (068200)", but there are no documents in the specifications that refers to this section. Please provide documents.</p> <p><i>Response : Specs updated in addendum #3</i></p> <p>14. Addendum 1 says the following:
10 55 23 – MAILBOXES (section not re-printed)
• Paragraph 2.01.C: Model number added - "model 4CADD-09."
However, the drawings of the mailboxes in the Addendum haven't changed, and they show model 4C15D-18; which are tall mailboxes and not fully ADA compliant. It would take an additional (9) mailbox units to provide 232 tenants with mail compartments using model 4CADD-09.</p> <p><i>Response : Specs updated in addendum #3</i></p> <p>15. The bid documents do not contain a specification for the Acoustical Ceilings referenced in the Clubhouse Rooms D103, D105, D106 – Ceiling Type A1, and Room D109 – Ceiling</p> |
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	Type A3. What type of ceiling material, thickness, finish, grid style, manufacturer is required for Ceiling Types A1 and A3? <i>Response : D103 Conference & Closing and D106 Marketing – Type A1 / can be typical Armstrong or USG spec for white tile and white grid</i> <i>D105 Leasing is now part of D101 Front Lobby. No longer any ceiling tile.</i> <i>D109 Fitness ceiling tile is to be black along with black grid.</i> 16. There is a callout for anti-seep collars adjacent to each outlet control structure and a detail provided. Coded note 3 on the profile sheets C214 - C216 call for trench dams but no detail is provided. Can these be made of clay or do they need to be made of concrete as the anti-seep collars are? <i>Response : As indicated in CMSC Item 901.11, native clay is an acceptable material.</i> 17. Please verify that Curb & Gutter AA-S120 can be substituted with Curb & Gutter Inlet AA-S121. AA-S120 appears to be the old style <i>Response : AA-S121 is an acceptable replacement.</i> 18. Addendum 1 added a Duck Bank Detail to drawing E100. In the detail it calls for secondary and communication to be have 3000 lb concrete encasement and primary duct bank with fill. Please define what is considered secondary, is it just the secondary feeder to panel CB of the Clubhouse that would be concrete encased or does it also include all the secondary ductbanks from the transformers to the Meter Centers also? For the Primary Electric Duct Banks, what fill is required if concrete encasement is not? In Specification Section 260543 - 3.01 - A, it says Ducts shall be concrete encased (minimum 3" cover) when passing under streets and landscape beds or may be directional bored with Schedule 40 HDPE at contractor <i>Response : The duct bank detail is only for when conduits pass under a road for either primary or secondary. Primary is from primary enclosure to transformer and transformer to transformer. Secondary is from transformer to Meter center, or from panel to panel. Locations of duct banks can be found highlighted on attached Preliminary AEP Utility plan.</i> 19. There are 2 castings that work with the curb Inlet manholes; AA-S126 and AA-S142. please clarify which casting is to be used. <i>Response : AA-S142 is to be used.</i> 20. Please verify that curb inlet manhole AA-S121 can be used in place of AA-S120; the difference is that AA-S121 is cast, the other (AA-S120) is laid up brick. <i>Response : AA-S121 is an acceptable replacement. Please note though that AA-S120 can be made of brick, concrete blocks, cast in place concrete or pre-cast concrete.</i>
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21. When can we anticipate the upcoming addendum ? Depending on issuance date, complexity and size of the addendum, it may be a challenge to get all subcontractors and vendors to react to the upcoming addendum by the proposal due date.

Response : Addendum #3 will be issued after the last date for receiving questions.

22. In Addendum No. 1, Question #26, it was asked about data outlets in Clubhouse Building D. It was answered as Telecom outlets to be rough-in only. Is telecom outlet rough-in only just for Clubhouse outlets or for residential units, sprinkler panels & meters requiring data to them also. Detail for residential unit cabling was not revised to read rough-in only. Some confusing with contractors on this scope of work required. Please advise.

Response: Data scope was clarified after previous RFI. For apartment units, the E.C. will provide Cat6 cable to data outlets within the units, detail has been revised, and the utility company will provide wiring up to the media panel in the units. The clubhouse is no longer rough-in only, the E.C. will provide Cat6 cabling to the data outlets, back to the telecom backboard in the electrical room. The E.C. will run the phone lines to the sprinkler panel.

23. Specification Section 23 90 10 HVAC Alternates lists 2 bid alternates H1 & H2 for HVAC, but these are not listed on the Addendum No. 1, Section 01 23 00-1.03 Schedule of Alternates. Are these required alternates for proposal? Please advise.

Response: These HVAC alternates are not required. This specification section will be deleted.

24. Are window treatments required in the Clubhouse, and if so what type?

*Response: 2" horizontal wood-look vinyl, cordless.
Finish: TBD*

25. What pipe size and pipe material connects the downspout boots to the 12" downspout collector pipe?

Response: Downspout detail will be included in Addendum 03. Pipe from downspout boot to collector pipe sheet meet specification section 33 40 00.

26. What pipe material is to be used for the 12" downspout collector pipe now indicated in Addendum #2?

Response: Downspout detail will be included in Addendum 03. Pipe from downspout boot to collector pipe sheet meet specification section 33 40 00.

27. When can we anticipate the upcoming Addendum No. 3? Depending on issuance date, complexity and size of the addendum, it may be a challenge to get all subcontractors and vendors to react to the upcoming addendum by the proposal due date.



Response: See response to 21 above.

28. There is a callout for anti-seep collars adjacent to each outlet control structure and a detail provided. The profiles call out for trench dams but no detail is provided. Can these be made of clay or do they need to be made of concrete as the anti-seep collars are?

Response: See response to 16 above.

29. Please verify that Curb & Gutter AA-S120 can be substituted with Curb & Gutter Inlet AA-S121. AA-S120 appears to be the old style

Response : See Response to 17 above.

30. Please clarify that rook drain collectors are not in drawings. There are downspout locations but no collection system/splash blocks?

Response: Roof drain collection leads were added to the drawings in Addendum 2.

31. Addendum #2 calls for 2 clouded out Door hardware sets to be changed to Set 3.1 and 8.1 but there are no references to the actual itemizing of the new sets. Please advise.

Response: Specs updated in Addendum #3.

32. I. Confirm manufacturer and/or color for QZ-1, ST-1 and ST-2

*Response: QZ-1 / Corian is noted in the Finish Legend. We can go with Pearl Stone for now.
ST-1 / Color: Black Mist or similar
ST-2 / Color: Black Mist or similar*

- II. Confirm intended material to be utilized for the unit interior window sills

Response: Solid surface (Quartz)

III. The issue being that the corresponding specification section 06 61 00 Cast Polymer Fabrications does not appear to outline the correct material. What is the material intended for these locations? The way the section detail calls out the sill, it would appear it's intended to be Quartz. Could you please verify/confirm what the intent is with the window sill scope.

Response: Solid surface (Quartz) to be utilized in interior window sill.

33. General Note A on drawing E-300 and E-300 calls for Compact Aluminum to be used for panel feeders where approved by owner in VE discussions. EC shall size feeder wiring and conduit as necessary to match basis of design copper amps. All feeders shown on Feeder Schedule and Apartment Feeders are aluminum. Are feeders to be standard Aluminum as shown or Copper? Please advise.

Response: Aluminum, as referenced in the apartment feeder notes.



34. Electrical Site Plan does not show the routing of ductbanks for feeders for the Clubhouse Meter Center MC-D1 or Panel CB. Does the Feeders come from the original drawing set transformer, that is located on the south eastside of the Clubhouse, or should it come from the closer transformer on the the north westside of the Clubhouse? Please advise.

Response: Northwest side, shown in addendum 3.

35. Note #2 on these drawings says to provide Fire Alarm Sprinkler Monitoring Panel. Provide 2 phone lines to panel. Where do these phone lines originate from? Is there going to be a telephone backboard for each of these buidlings for communication demark where these Cat 6 cables will be ran? Please advise.

Response: Yes, they will be in the breezeways as shown in addendum 3.



ADDENDUM NO. 3

Owner: Columbus Metropolitan Housing Authority

Project: The Falls on Refugee Road
3355 Refugee Road
Columbus, OH 43232

AUTOCAD

1. CAD base with proposed contours.

DRAWINGS

1. SHEET C101 – OVERALL STAKING PLAN
 - A. **ADD** bulk enclosures.
 - B. **REVISE** proposed AC unit locations.
 - C. **REVISE** proposed tree locations.
2. SHEET C102 – STAKING PLAN
 - A. **ADD** bulk enclosures.
 - B. **REVISE** proposed AC unit locations.
 - C. **REVISE** proposed tree locations.
 - D. **ADD** bollard to legend.
 - E. **ADD** coded notes 2,3,4.
3. SHEET C103 – STAKING PLAN
 - A. **ADD** bulk enclosures.
 - B. **REVISE** proposed AC unit locations.
 - C. **REVISE** proposed tree locations.
 - D. **ADD** bollard to legend.
 - E. **ADD** coded notes 2,3,4.
 - F. **ADD** site sign per coded note 4.



4. SHEET C104 – STAKING PLAN

- A. **ADD** bulk enclosures.
- B. **REVISE** proposed AC unit locations.
- C. **REVISE** proposed tree locations.
- D. **ADD** bollard to legend.
- E. **ADD** coded notes 2,3,4.
- F. **ADD** site sign per coded note 4.

5. SHEET C105 – STAKING PLAN

- A. **ADD** bulk enclosures.
- B. **REVISE** proposed AC unit locations.
- C. **REVISE** proposed tree locations.
- D. **ADD** bollard to legend.
- E. **ADD** coded notes 2,3,4.

6. SHEET C106 – STAKING PLAN

- A. **ADD** bulk enclosures.
- B. **REVISE** proposed AC unit locations.
- C. **REVISE** proposed tree locations.
- D. **ADD** bollard to legend.
- E. **ADD** coded notes 2,3,4.

7. SHEET C108 – STAKING DETAILS

- A. **ADD** Detail C.

8. SHEET C206 – STORM SEWER & GRADING PLAN

- A. **ADD** bulk enclosures.
- B. **ADD** coded notes 4.



9. SHEET C208 – STORM SEWER & GRADING PLAN
 - A. **ADD** bulk enclosures.
 - B. **ADD** coded notes 4.
 - A. **ADD** downspouts and roof drains with associated cleanouts.
10. SHEET C211 – STORM SEWER DETAILS
 - A. **REVISE** detail A, Outlet Control Structure 1.
 - B. **REVISE** detail B, South Basin elevations.
11. SHEET C214 – STORM SEWER PROFILES
 - A. **ADD** roof drain inverts to structure 6, 16, and 19 in profile.
12. SHEET C215 – STORM SEWER PROFILES
 - A. **ADD** roof drain inverts to structures 20, 29, 30, and 31 in profile.
13. SHEET C216 – STORM SEWER PROFILES
 - A. **ADD** roof drain inverts to structures 32, 41, and 45 in profile.
 - B. **ADD** compacted fill area per item 203.
14. SHEET C305 – SANITARY PROFILES
 - A. **ADD** downspouts and roof drains with associated cleanouts.
 - B. **REVISE** construction entrance and concrete washout location.
15. SHEET C306 – SANITARY DETAILS
 - A. **ADD** downspouts and roof drains with associated cleanouts
 - B. **REVISE** construction entrance and concrete washout location.
16. SHEET C221 – EROSION AND SEDIMENT CONTROL PLAN
 - A. **ADD** downspouts and roof drains with associated cleanouts.
 - B. **REVISE** construction entrance and concrete washout location.
17. SHEET C222 – EROSION AND SEDIMENT CONTROL PLAN



- A. **ADD** downspouts and roof drains with associated cleanouts
- B. **REVISE** construction entrance and concrete washout location.

18. SHEET C305 – SANITARY PROFILES

- A. **REVISED** proposed water crossings.

19. SHEET C306 – SANITARY DETAILS

- A. **REVISED** Sanitary Service Schedule Table for services S1, S2, S5, S6, S13, S14, S16, S17, S19.

20. SHEET C410 – WATER SERVICE PLAN & PROFILE

- A. **ADD** 4in WL Profile.
- B. **REVISE** 8" fittings and service line crossings in 8in WL Profile.

21. SHEET C411 – WATER SERVICE PLAN & PROFILE

- A. **ADD** 4in WL Profile.
- B. **REVISE** 8" fittings and service line crossings in 8in WL Profile.

22. SHEET C412 – WATER SERVICE PLAN & PROFILE

- A. **ADD** 4in WL Profile.
- B. **REVISE** 8" fittings and service line crossings in 8in WL Profile.

Addendum 3 Narrative Refugee Road Apartments

Electrical

Sheet E100

1. Moved pole fixture.
2. Revised noting on underground conduit/wiring.
3. Revised underground conduit/wiring pathway per AEP's most recent plan.

Sheet E101-A, E102-A (Typical of E103-B, E104-B, E105-C, E106-C)

1. Revised locations of S1 fixtures in breezeways.
2. Removed S1 fixtures in upper level breezeways.
3. All W1 fixtures changed to W2 fixtures in the breezeways.
4. Added missing exit sign.
5. Revised exit sign locations on first floor.
6. Moved wall sconce out from under stairway on 1st floor.
7. Added telecom backboard to first floor of breezeway for telecom provider to land their equipment.

Sheet E108

1. W1 fixtures changed to W2 fixtures.

Sheet E301

1. Corrected circuit breakers in meter centers to be all 125/2 breakers.

Sheet E400

1. Fixtures W1 and W3 removed from fixture schedule. All W1 and W3 fixtures have become W2 fixtures.

HVAC

Sheet H100

1. Revised outdoor unit locations for buildings C1 and C2.

Sheets H101-A (typical of H103-B and H105-C)

1. Revised refrigerant routing to show refrigerant going down inside the wall cavity.
2. Revised coded note #1 to call out the H301 sheet.
3. Added coded note #3 stating that refrigerant piping is to go down inside wall cavity between gyp. and batt. insulation and to be shielded with 16-gauge steel shielding plates.

Sheets H102-A (typical of H104-B and H106-C)

1. Revised coded note #1 to call out the H301 sheet.

Sheet H107-D

1. Revised coded note #1 to call out the H301 sheet.
2. Revised refrigerant routing to go down inside wall cavity.
3. Moved DF-1 to level 02 to show at the highest elevation.
4. Changed louver tag from L-1 to L-3 on pool heater vent detail.
5. Revised duct routing and added note at D116.
6. Added refrigerant at the D103, D117, and D115.
7. Revised AH/HP designations for amenity spaces.

Sheet H200

1. Added supply air duct to 1 bedroom clubhouse unit laundry room.
2. Revised airflows for other devices in 1 bedroom clubhouse.
3. Revised coded note #7 to provide turning vanes in the elbow.

Sheet H201

1. Revised coded note #7 to provide turning vanes in the elbow.

Sheet H202

1. Added missing transfers.
2. Added missing thermostat.
3. Revised coded note #7 to provide turning vanes in the elbow.

Sheet H300

1. Revised remarks for EF-1 & EF- 2.
2. Revised remarks 1 & 2 in the exhaust fan schedule.
3. Revised split system schedule.

Sheet H301

1. Revised OAF note for amenity space split system AHU detail.
2. Replaced existing heat pump unit mounting detail.
3. Replaced existing outdoor unit/refrigeration piping detail.
4. Revised ducted split systems refrigerant piping detail.

Sheet H302

1. Sheet has been added to include firestopping details.

Plumbing

Sheet P101-A

1. Revised sanitary piping layout.
2. Revised Coded Notes 4, 6, & 7.
3. Added stack diagram designations.

Sheet P102-A

1. Revised sanitary piping layout.
2. Revised Coded Note 4.

3. Added Coded Note 8.
4. Added stack diagram designations.
5. Renamed roof plumbing plan as attic plumbing plan.
6. Revised attic vent piping.

Sheet P103-B

1. Revised sanitary piping layout.
2. Revised Coded Notes 4 & 6.
3. Added stack diagram designations.

Sheet P105-C

1. Revised sanitary piping layout.
2. Revised Coded Note 4 & 6.
3. Added Coded Notes 16 & 17.
4. Added stack diagram designations.
5. Renamed roof plumbing plan as attic plumbing plan.
6. Revised attic vent piping.

Sheet P500-A

1. New sheet issued – Building A stack diagrams.

Sheet P501-B

1. New sheet issued – Building B stack diagrams.

Sheet P502-C

1. New sheet issued – Building C stack diagrams.

TABLE OF CONTENTS

00 00 01	Cover Sheet
00 01 10	Table of Contents

Updated Add 03 – 07/10/2025

DIVISION 00 – PROCUREMENT and CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

01 12 16	Work Sequence
01 21 13	Allowances
01 23 00	Alternates
01 25 00	Substitution Procedures
01 25 01	Substitution Request Form
01 29 00	Payment Procedures
01 31 00	Project Management and Coordination
01 31 19	Project Meetings
01 32 16	Construction Schedules
01 33 23	Shop Drawings, Product Data and Samples
01 34 00	Submittal Review Cover
01 40 00	Quality Requirements
01 45 00	Quality Control
01 45 33	Special Inspections and Structural Tests
01 60 00	Product Requirements
01 64 00	Owner-Furnished Products
01 71 23	Field Engineering
01 73 00	Execution Requirements
01 73 29	Cutting and Patching
01 74 00	Cleaning
01 74 19	Construction Waste Management and Disposal
01 77 00	Project Close-Out
01 78 23	Operating and Maintenance
01 78 39	Project Record Documents

Updated Add 03 – 07/10/2025

DIVISION 02 – EXISTING CONDITIONS (not used)

DIVISION 03 - CONCRETE

03 30 00	Cast-in-Place Concrete
03 35 30	Concrete Cleaning and Sealing

DIVISION 04 – MASONRY

04 00 00	Masonry	<i>Updated Add 01 – 06/11/2025</i>
04 72 00	Cast Stone	<i>Updated Add 01 – 06/11/2025</i>
04 73 10	Manufactured Stone Veneer	<i>Updated Add 01 – 06/11/2025</i>
~~04 73 13~~	~~Calcium Silicate Manufactured Stone~~	<i>Removed Add 01 – 06/11/2025</i>

DIVISION 05 - METALS

~~05 12 00~~	~~Structural Steel~~	Removed Add 01 – 06/11/2025
05 50 00	Metal Fabrications	
05 70 00	Decorative Metals	Added Add 02 – 06/25/2025

DIVISION 06 – WOOD, PLASTICS and COMPOSITES

06 10 00	Rough Carpentry	
06 16 00	Sheathing	
06 16 01	Sheathing - SAP Board	
06 17 53	Shop-Fabricated Wood Trusses	
06 20 00	Finish Carpentry	
06 40 00	Architectural Woodwork	Updated Add 01 – 06/11/2025
06 61 00	Cast Polymer Fabrications	
06 65 00	Simulated Wood Trim	
06 73 00	Composite Decking	
06 82 00	Molded Fiber Glass Fabrications	Added Add 03 – 07/10/2025

DIVISION 07 - THERMAL & MOISTURE PROTECTION

~~07 10 00.13~~	~~Waterproofing~~	Removed Add 01 – 06/11/2025
07 13 26	Self-Adhered Waterproofing	
07 21 00	Thermal Insulation	
07 26 13	Above-Grade Vapor Retarders	
~~07 26 16~~	~~Below-Grade Vapor Retarders~~	Removed Add 01 – 06/11/2025
07 27 19	Plastic Sheet Air Barriers	
07 27 26	Fluid-Applied Membrane Air Barriers	
~~07 27 27~~	~~Self-Adhered Sheet Air Barriers~~	Removed Add 01 – 06/11/2025
07 31 13	Roofing Shingles	Updated Add 01 – 06/11/2025
07 46 33	Vinyl Siding	Updated Add 01 – 06/11/2025
07 46 46	Mineral-Fiber Cement Siding	Updated Add 01 – 06/11/2025
07 54 23	Thermoplastic Polyolefin Roofing	
07 62 00	Sheet Metal Flashing and Trim	
07 84 00	Firestopping	
07 92 00	Joint Sealants	

DIVISION 08 - DOORS & WINDOWS

08 11 13	Hollow Metal Doors and Frames	
08 14 00	Wood Doors	Updated Add 01 – 06/11/2025
08 31 13	Access Doors	
08 36 13	Sectional Doors	Added Add 01 – 06/11/2025
08 41 13	Aluminum-Framed Entrances and Storefronts	
08 53 13	Vinyl Windows and Patio Doors	Updated Add 01 – 06/11/2025
08 71 10	Door Hardware	Updated Add 03 – 07/10/2025
08 81 00	Glass and Glazing	
08 83 00	Mirrors	

08 91 19 Fixed Louvers

DIVISION 09 - FINISHES

09 29 00	Gypsum Wallboard	Updated Add 01 – 06/11/2025
09 30 00	Tile	
09 51 13	Acoustical Panel Ceilings	Added Add 03 – 07/10/2025
09 65 00	Resilient Flooring	
09 65 66	Resilient Athletic Flooring	Added Add 01 – 06/11/2025
09 68 00	Carpeting	
09 91 00	Painting	

DIVISION 10 - SPECIALTIES

10 14 11	Restroom Signage	
10 14 19	Dimensional Letter Signage	Removed Add 02 – 06/25/2025
10 22 21	Demountable Glass Partitions	Added Add 01 – 06/11/2025
10 26 00	Wall Protection	
10 28 13	Toilet Accessories	Updated Add 01 – 06/11/2025
10 31 00	Fireplace Components	
10 44 00	Fire Extinguishers and Cabinets	Updated Add 01 – 06/11/2025
10 55 23	Mailboxes	Updated Add 03 – 07/10/2025

DIVISION 11 - EQUIPMENT

11 31 00	Residential Appliances	Updated Add 01 – 06/11/2025
11 52 23	Television Mounting Brackets	
11 66 00	Exercise Equipment	

DIVISION 12 - FURNISHINGS

12 21 14	Vertical Blinds	Added Add 01 – 06/11/2025
12 21 23	Horizontal Louver Blinds - Cordless	
12 32 00	Manufactured Wood Casework	Updated Add 03 – 07/10/2025
~~12 33 55~~	~~Manufactured Plastic Laminate Clad Casework~~	Removed Add 01 – 06/11/2025
12 36 40	Stone Countertops	
12 36 61	Solid Surface Countertops	
12 48 13	Entrance Mats	
12 56 51	Furniture, Furnishings and Accessories	
12 93 00	Site Furnishings	

DIVISION 13 - SPECIAL CONSTRUCTION

13 15 00 Pool Construction

DIVISION 14 - CONVEYING EQUIPMENT – (not used)

DIVISION 21 – FIRE SUPPRESSION

21 01 00	General
21 05 10	Fire Stopping
21 05 18	Inserts Pipe Hangers Supports
21 05 20	Cutting Patching
21 05 30	Tests Adjustments
21 05 60	Manufacturers Drawings
21 13 13	Fire Protection Piping System Wet

DIVISION 22 – PLUMBING

22 00 00	Plumbing General
22 01 05	Plumbing General Provisions
22 05 10	Manufacturer's Drawings
22 05 13	Electrical Work
22 05 16	Sleeves and Collars
22 05 17	Firestopping
22 05 19	Piping Specialties
22 05 20	Painting
22 05 21	Cutting and Patching
22 05 22	Foundations and Supports
22 05 23	Valves
22 05 29	Inserts, Pipe Hangers, and Supports
22 05 30	Installation of Piping
22 05 53	Tagging and Coding
22 05 54	Equipment Identification
22 05 93	Tests and Adjustments
22 05 94	Protection and Cleaning
22 05 95	Flushing and Sterilizing
22 05 97	Remodeling
22 05 98	Plumbing Demolition
22 07 00	Plumbing Insulation
22 11 16	Domestic Water Piping Systems
22 13 16	Building Soil Waste Vent Piping System
22 33 36	Electric Water Heaters
22 34 36	Gas Domestic Water Heaters
22 34 37	Flues
22 42 00	Plumbing Fixtures
22 63 13	Gas House Lines
23 01 05	HVAC General

DIVISION 23 – HVAC

23 01 10	Manufacturer's Drawings
23 05 13	Electrical Work
23 05 16	Sleeves and Collars
23 05 17	Firestopping

23 05 20	Painting
23 05 21	Cutting and Patching
23 05 22	Foundations and Supports
23 05 29	Inserts, Pipe Hangers & Supports
23 05 30	Installation of Piping
23 05 54	Equipment Identification
23 05 93	Tests & Adjustments
23 05 94	Protection & Cleaning
23 05 96	Substitutions
23 07 00	HVAC Insulation
23 21 13.33	Condensation Drain & Drain Piping Systems
23 23 00	Refrigerant Piping System
23 31 13.13	Low Pressure Ductwork
23 33 13	Dampers
23 34 17	Inline Cabinet Exhaust Fans
23 34 20	Bathroom Exhaust Fans
23 37 00	Registers, Grilles & Diffusers
23 37 23	Louvers
23 54 13	Split System AH Units
23 62 14	Air Cooled Heat Pumps
23 82 39.13	Cabinet Unit Heaters
23 82 46	Electric Duct Heater
~~23 90 10~~	~~HVAC Alternates~~
23 99 00	HVAC Commissioning

Added Add 01 – 06/11/2025

Added Add 01 – 06/11/2025

~~Removed Add 03 – 07/10/2025~~DIVISION 26 – ELECTRICAL

26 00 00	General Provisions
26 00 15	Work Included
26 00 20	Codes and Fees
26 00 25	Tests and Inspections
26 01 20	Operation and Maintenance Manuals
26 05 19	Wire and Cable
26 05 23	Motor and Equipment Wiring
26 05 26	Grounding
26 05 33	Conduits
26 05 34	Boxes and Plates
26 05 43	Underground Electrical Service
26 05 53	Identification
26 09 23	Lighting Control Equipment
26 24 00	Surge Protective Devices
26 24 14	Panelboards
26 24 16	Load Centers
26 27 13	Meter Centers
26 27 26	Wiring Devices
26 28 13	Fuses
26 28 16	Disconnects
26 29 13	Motor Starters and Controls

Updated Add 01 – 06/11/2025

26 51 13 Lighting Fixtures

DIVISION 27 – COMMUNICATION

27 05 28 Pathways for Communications Systems

DIVISION 28 – SAFETY and SECURITY

28 26 00 Emergency Responder Radio System

28 31 00 Fire Alarm System

DIVISION 31 – EARTHWORK

31 00 00 Earthwork

31 10 00 Site Clearing

31 23 33 Piped Utilities-Basic Methods

31 25 00 Erosion and Sediment Control

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 12 00 Flexible Pavement

32 13 00 Rigid Pavement

32 92 00 Turf & Grasses

32 93 00 Plants

DIVISION 33 – UTILITIES

33 11 00 Water Distribution

33 30 00 Sanitary Sewerage

33 40 00 Storm Drainage

APPENDICES

Appendix A Fitness Equipment List (for reference)

Appendix B Geotechnical Engineering Report (for reference)

Appendix C FF&E Schedule and Specifications

Added Add 01 – 06/11/2025

SECTION 06 82 00
MOLDED FIBER GLASS FABRICATIONS

PART 1 GENERAL**1.01 WORK INCLUDED**

- A. Provide all labor, materials, services, equipment and appliances required in conjunction with the design, fabrication and installation of glass fiber shapes as indicated on the drawings and specified herein. Shapes include:
 - 1. Column covers.
- B. Provide anchors, clips, adhesives and finishing accessories.

1.02 RELATED SECTIONS

- A. Rough Carpentry: Section 06 10 00.
- B. Sealants: Section 07 92 00.

1.03 SUBMITTALS

- A. Product Data: Submit for each type of product. Include construction details, material descriptions, weights, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Detail fabrication and assembly of fiber glass fabrications.
 - 3. Indicate requirements for joint treatment.
- C. Samples: Submit representative sample of each type shape showing thickness, finish texture and joint details (attachment and sealing).
 - 1. Linear Items: Minimum 24" length x full width of shape; with finished joint.
 - 2. Nonlinear Shapes: Full size unit.
- D. Certification: Submit certified independent test laboratory reports confirming that proposed products meet or exceed specified performance.
- E. If certification and sample are not submitted with initial Shop Drawing submittal, material will not be reviewed.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Successfully completed a minimum of 5 projects of type, scope and quality required by this project within the past 5 years.
- B. Installer: 3 years successful experience in installation of systems similar to those required by project and acceptable to system manufacturer.

PART 2 PRODUCTS**2.01 SHAPES**

- A. Material: A gel coated surface, fiberglass reinforced resin and additional reinforcements.
 - 1. Shapes: As indicated on drawings.
 - 2. Type: Class 1 fire rated.
 - 3. Color: As selected by Architect.
- B. Material Characteristics
- C. Flexural Strength: 20,000 psi.
 - 1. Tensile Strength: 12,000 psi.
 - 2. Elongation: 1%.
 - 3. Impact Strength: idod, lb./in.of notch: 4
- D. Tolerance (Fabrication)
 - 1. Length: $\pm 1/8"$.
 - 2. Part Thickness: $\pm 1/16"$.

3. Gelcoat Thickness: $\pm$ 2.5 mils.

2.02 ACCESSORIES

- A. Provide all special components, anchors, clips, wires and adhesives required.
- B. Provide joint finishing materials, tape and compounds as required for the various materials. See Section 09 21 16 for joint finishing materials. Provide type recommended for exterior application where required.

2.03 FABRICATION

- A. Molds: Rigid and constructed of materials and in a manner that will result in smooth finished products conforming to profiles, textures and dimensions indicated.
 1. Columns: Provide butt joints for taped, finished, sanded and painted joints.
 2. All Other Shapes: Provide off-set lap joints that fit tight resulting in a hairline joint. Where through surface fasteners are used, countersink fasteners and fill fastener sink with material to match adjacent material. No exposed fastener heads permitted.
- B. Finish
 1. Columns: Field painted finish.
 2. All Other Items: Factory finish; colors and texture as selected by Architect.

2.04 MANUFACTURER

- A. Products by EDON, FIBER TECH, MELTON CLASSICS INC., DECOFORM, STROMBERG ARCHITECTURAL PRODUCTS or ROCCA NOTO are acceptable providing they conform to the requirements specified herein.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine conditions under which work is to be performed and notify Contractor in writing of unsatisfactory conditions. Do not proceed until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 PRE-INSTALLATION RESPONSIBILITY

- A. Prior to manufacturing, dimensions and field conditions not shown on the drawings will be checked by the installer so that appropriate adjustments can be made by the manufacturer.
- B. Prior to installation, the installer shall check jobsite dimensions. Any discrepancies between design and field dimensions shall be brought to the attention of the General Contractor and the Architect. Work shall not proceed until discrepancies are corrected.

3.03 INSTALLATION

- A. Comply with manufacturer's written installation instructions and comply with governing regulations and industry standards applicable to the work. See Section 09 21 16 for joint finishing procedures as applicable.
- B. Leave items ready for field painting or for application of joint sealants, where applicable.

3.04 ADJUSTING AND TESTING

- A. Inspect system components for proper operation and fit. Adjust, repair or replace components not conforming to requirements. Repair or replacement of an individual unit shall be as approved by the Architect.

3.05 PROTECTION

- A. Advise Contractor of procedures required to protect finished work from damage during remainder of construction period.
- B. Provide finished units without damage. Damage shall be repaired by the installer at the expense of the party damaging the work and in accordance with the contract requirements.

END OF SECTION 06 82 00

**SECTION 08 71 10
DOOR HARDWARE****PART 1 GENERAL****1.01 SUMMARY**

- A. This Section includes the following:
 - 1. Commercial door hardware.
 - 2. Cylinders for doors specified in other Sections.
 - 3. Electrified door hardware.

1.02 REFERENCE STANDARDS

- A. BHMA A156.2 - Bored and Preamsembled Locks and Latches; 2022.
- B. BHMA A156.3 - Exit Devices; 2025.
- C. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022.
- D. BHMA A156.18 - Standard for Materials and Finishes; 2020.
- E. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- F. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.
- G. UL 305 - Standard for Panic Hardware; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Include details of electrified door hardware and wiring diagrams.
- C. Samples: For each exposed finish.
- D. Door Hardware Schedule: Organized into door hardware sets indicating type, style, function, size, label, hand, manufacturer, fasteners, location, and finish of each door hardware item. Include description of each electrified door hardware function, including sequence of operation.
- E. Keying Schedule: Detail Owner's final keying instructions for locks.
- F. Product certificates.

1.04 QUALITY ASSURANCE

- A. Supplier Qualifications: Person who is or employs a qualified DHI Architectural Hardware Consultant.
- B. Source Limitations: Obtain electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that are listed to perform electrical modifications, by a testing and inspecting agency acceptable to authorities having jurisdiction, are acceptable.
- C. Keying Conference: Conduct conference at Project site. Incorporate keying conference decisions into final keying schedule.
- D. Pre-installation Conference: Conduct conference at project site.
- E. Keys: Deliver keys to Owner by registered mail.
- F. Templates: Obtain and distribute templates for doors, frames, and other work specified to be factory prepared for installing door hardware.
- G. Standards: Comply with BHMA A156 series standards, Grade 1.
- H. Certified Products: Provide door hardware that is listed in BHMA directory of certified products.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.06 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within warranty period. Warranty includes materials and installation.
 - 1. Warranty Period for Locks: 7 years from date of Contract Completion.
 - 2. Warranty Period for Manual Closers: 10 years from date of Contract Completion.
 - 3. Warranty Period for Exit Devices: 3 years from date of Contract Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Product: Subject to compliance with requirements, provide the product named for each door hardware item indicated in Door Hardware Sets.
- B. Basis-of-Design Product: Product named for each door hardware item indicated in Door Hardware Sets establishes the basis of design. Provide either the named product or a comparable product by one of the manufacturers specified for each type of hardware item.
- C. Manufacturers used in the specification: review for each project

<u>PRODUCTS</u>	<u>MANUFACTURE SPECIFIED</u>	<u>ACCEPTABLE EQUALS</u>
HINGES	MCKINNEY	HAGER, IVES
LOCKSETS	SARGENT	SCHLAGE
CYLINDERS	SARGENT KESO	PRIMUS
EXIT DEVICES	VON DUPRIN 99 SERIES	SARGENT
CLOSERS	LCN 4041	
OVERHEAD STOPS	GLYNN JOHNSON	RIXSON, ABH
PUSH/PULLS, STOPS	IVES	HAGER, ROCKWOOD
FLUSHBOLTS	IVES	HAGER, ROCKWOOD
THRESHOLDS/SEALS	NATIONAL GUARD	HAGER, PEMKO
POWER TRANSFERS/SUPPLIES	VON DUPRIN	SARGENT
AUTO. OPERATORS	BESAM	

2.02 DOOR HARDWARE

- A. Scheduled Door Hardware: Provide door hardware according to Door Hardware Sets at the end of Part 3. Manufacturers' names are abbreviated.

2.03 HINGES

- A. General: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- B. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior Hinges: Stainless steel, with stainless-steel pin.
 2. Interior Hinges: Steel, with steel pin.
 3. Hinges for Fire-Rated Assemblies: Steel, with steel pin.
- C. Non-removable Pins: Provide set screw in hinge barrel that prevents removal of pin while door is closed; for out-swinging exterior doors.
- D. Screws: Phillips flat-head screws; screw heads finished to match surface of hinges.
1. Metal Doors and Frames: Machine screws (drilled and tapped holes).
 2. Wood Doors and Frames: Wood screws.

2.04 MECHANICAL LOCKS AND LATCHES

- A. Mortise Locks
1. Locks shall be BHMA A156.13, Grade 1 mortise locksets, Manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
 2. Locks to have a standard 2-3/4" backset with a full 3/4" throw stainless steel mechanical anti-friction latch bolt. Deadbolt shall be a full 1" throw, constructed of stainless steel.
 3. Lever trim shall be cast or forged in the design specified, with 2-1/8" diameter roses. Levers to be thru-bolted to assure proper alignment. Trim shall be applied by threaded bushing "no exposed screws".
- B. Cylindrical Locks
1. Locks shall be BHMA A156.2, Series 4000 Grade 1 UL Listed for 3-hour doors. Manufactured from heavy gauge cold rolled steel mechanisms that are corrosion treated for normal conditions.
 2. Locks to have standard 2-3/4" backset with a full 1/2" reversible dead latch. Thru-bolted mounting post for positive interlock to the door with concealed mounting screws.
 3. Lever trim shall be pressure cast zinc to match finishes. The design specified, with 3-7/16" diameter roses. Trim shall be applied by "no exposed screws".
- C. Lock Functions
1. Keypad Cylindrical Locks – Sargent KP-77 series.
 2. Keypad Mortise series – Sargent #KP8200.
 3. Storeroom / Closet – Sargent #10G04.
 4. Entrance/Office – Sargent #10G05.
 5. Classroom – Sargent #10G37.
 6. Passage – Sargent #10U15.
 7. Privacy/Bathroom – Sargent #10U65.
 8. Keypad lockset – Sargent #KP10G77.
 9. Hospital Latch – Sargent #115 Push-Pull with 2-3/4 backset

2.05 BOLTS

- A. Shall have forged bronze faceplate with extruded brass lever wrought brass guide and strike. Flush bolts for hollow metal doors shall be extension rod type door up to 7'6" in height shall have 12" steel or brass rods, manual flush bolts for doors over 7'6" in height shall be increased by 6" for each additional 6" of door height. Wood doors shall have corner-wrap type. Provide dust proof strikes for all bottom bolts.

2.06 EXIT DEVICES

- A. Panic Exit Devices: Listed and labeled for panic protection, based on testing according to UL 305.
- B. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled for fire and panic protection, based on testing according to UL 305 and NFPA 252.
- C. All lever design shall match mortise or cylindrical lock lever designs as approved by Architect.

- D. All devices to incorporate a security dead-latching feature. Provide roller strikes for all rim and surface mounted vertical rod devices, ASA strikes for mortise devices, and manufacturer's standard strikes for concealed vertical rod devices.
- E. Removable Mullions: BHMA A156.3.
 - 1. Fire-Exit Removable Mullions: Complying with NFPA 80 that are listed and labeled for fire and panic protection, based on testing according to UL 305 and NFPA 252. Mullions shall be used only with exit devices for which they have been tested.
- F. Carry-Open Bars: Provide carry-open bars for inactive leaves of pairs of doors, unless automatic or self-latching bolts are used.

2.07 CLOSERS

- A. Surface-Mounted Closers
 - 1. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and back check.
 - 2. All closers will not be seen on the public side or hallway side of the door. The appropriate drop plate or mounting plates will be used as conditions dictate.
 - 3. Install with sex bolts.

2.08 PROTECTIVE TRIM UNITS

- A. Protective Trim Units: Sized 2" inches less than door width on push side and 1" inch less than door width on pull side, by height scheduled or indicated. Fasten with exposed machine or self-tapping screws.

2.09 STOPS AND HOLDERS

- A. Stops and Holders: Provide wall stops for doors, unless other type stops are scheduled or indicated. Where wall stops are not appropriate, provide overhead stops.
- B. Silencers for Door Frames: Neoprene or rubber; fabricated for drilled-in application to frame.

2.10 DOOR GASKETING AND THRESHOLDS

- A. Door Gasketing: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide non-corrosive fasteners for exterior applications and elsewhere as indicated.

2.11 KEYING

- A. Match Owner's existing keying system as directed by Owner. Schedule keying meeting with Owner. No keying work is permitted until keying meeting is completed.

2.12 AUTOMATIC DOOR OPERATOR

- A. Description: Self-contained, low energy, electro-mechanical design. Powered open with spring force closing. Motor is to be off when door is in closing mode. Door can be manually operated with power on or off without damage to the operator.
 - 1. Operation: Manual/Automatic. Manual when pushed open; automatic when actuated by push button switch or card reader.
 - 2. Provide operator with the following variable adjustments complying with Standard ANSI A156.19.
 - a. Opening Speed: 3 to 5 seconds.
 - b. Closing Speed: 3 to 5 seconds.
 - c. Time Delay Before Closing: 1.5 to 30 seconds.
 - 3. Opening and Closing Force (Measured 2" out from lock stile of door): Adjustable from 5 to 15 pounds of force to stop door when operating in either direction.
 - 4. Provide operator with feature to turn off opening force when door is stopped for one second. Door then begins to close. Operator immediately resets and will accept another opening signal.

5. Cover: Extruded aluminum.
 - a. Entrance Doors: Fluoropolymer finish to match door. See Section 08 41 13.
 - b. Interior Doors: Clear anodized finish.
 6. Controls: Provide 6" diameter stainless steel push button switch with handicapped insignia. Locate where indicated.
 7. Electrical: 120 VAC, 60 cycle, 1 phase, 15 amp service to the operator.
 8. Manufacturer: BESAM (BES) SW200i Series.
- B. Bollard: 6" x 6" x 42" high aluminum; clear anodized; similar to CURRAN ENGINEERING. Coordinate with recessed round push plate.

2.13 FABRICATION

- A. Base Metals: Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials if different from specified standard.
- B. Fasteners: Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated. Provide steel machine or wood screws or steel through bolts for fire-rated applications.
- C. Spacers or Sex Bolts: For through bolting of hollow metal doors.
- D. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."
- E. Finishes: Comply with BHMA A156.18.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.02 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.03 INSTALLATION

- A. Examine doors and frames for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- B. Steel Door and Frame Preparation: Comply with DHI A115 series. Drill and tap doors and frames for surface-applied hardware according to SDI 107.
- C. Wood Door Preparation: Comply with DHI A115-W series.
- D. Mounting Heights: Comply with the following requirements, unless otherwise indicated:
 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

- E. Adjust and reinforce attachment substrates as necessary for proper installation and operation. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
 - 1. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Section 07 92 00 Sealants.
- F. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with accessibility requirements.
 - 1. Door Closers: Adjust sweep period so that from an open position of 70 degrees, the door will take at least three seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

3.04 FIELD QUALITY CONTROL

- A. Inspections: Owner will engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
- B. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
- C. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.05 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.06 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.07 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.
- B. DOOR HARDWARE SETS
- C. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- D. Quantities listed are for each pair of doors, or for each single door.
- E. The supplier is responsible for handing and sizing all products.
- F. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
- G. Manufacturer's Abbreviations:

1. OT - Other
2. MK - McKinney
3. RO - Rockwood
4. YA - ASSA ABLOY ACCENTRA
5. RF - Rixson
6. PE - Pemko
7. SU - Securitron
8. LU - Lund Equipment Co

3.08 HARDWARE SETS TO FOLLOW.

Hardware Sets**Set: 1.0**

Doors: G01, G02, G03, G04, G05, G06, G07, G09, G11, G13, G15, G17, G19, G21, G23, G25, G27, G29

Description: OH DOOR

1 Hardware By Others

Hardware By Door Supplier

Set: 2.0

Doors: **D111**

Description: Exterior Panic Egress -MELR NL x Pull Closer Stop Arm

2 Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 4-1/2" x 4-1/2"	US32D	MK	087100	
1 Hinge, Full Mortise, Hvy Wt	T4A3386 QC8 4-1/2" x 4-1/2"	US32D	MK	087100	
1 Rim Exit Device, Nightlatch	6100ED B MELR 121NL 1109 x 6-Pin	630	YA	087100	⚡
1 Cylinder Core	SFIC core per facility requirements	626	YA		
1 Cylinder Housing	Rim / Mortise as req'd	626	YA	087100	
1 Door Pull	BF158	US32D	RO	087100	
1 Closer w/ Stop	5821	689	YA	087100	
1 Gasketing	2891AS		PE	087100	
1 Rain Guard	346C		PE	087100	
1 Sweep	3452AV		PE	087100	
1 Threshold w/ Seal	2005AT FHSL14SS		PE	087100	
1 ElectroLynx Harness	QC-hinge/strike/ or power transfer to ceiling		MK	087100	⚡
1 ElectroLynx Harness	QC- (size to door width/hardware)		MK	087100	⚡
1 Position Switch	DPS-M-GR		SU	087100	⚡
1 Power Supply	AQL appropriate to hardware requirements		SU	087100	⚡
1 CARD READER	Wall Reader to be provided by Systems Integrator				

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS.

Set: 2.1Doors: **D101**

Description: Exterior Panic Egress -MELR NL x Pull Closer Stop Arm

2 Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 4-1/2" x 4-1/2"	US32D	MK	087100	
1 Hinge, Full Mortise, Hvy Wt	T4A3386 QC8 4-1/2" x 4-1/2"	US32D	MK	087100	
1 Rim Exit Device, Nightlatch	6100ED B MELR 121NL 1109 x 6-Pin	630	YA	087100	⚡
2 Cylinder Core	SFIC core per facility requirements	626	YA		
2 Cylinder Housing	Rim / Mortise as req'd	626	YA	087100	
1 Door Pull	BF158	US32D	RO	087100	
1 Automatic Opener	6061	689	NO	087100	⚡
1 Gasketing	2891AS		PE	087100	
1 Rain Guard	346C		PE	087100	
1 Sweep	3452AV		PE	087100	
1 Threshold w/ Seal	2005AT FHSL14SS		PE	087100	
1 ElectroLynx Harness	QC-hinge/strike/ or power transfer to ceiling		MK	087100	⚡
1 ElectroLynx Harness	QC- (size to door width/hardware)		MK	087100	⚡
1 Position Switch	DPS-M-GR		SU	087100	⚡
1 Bollard Switch Post	500 w/actuator switch	689	NO	087100	⚡
1 Wall Switch	704		NO	087100	⚡
1 Keyswitch	MKA		SU	087100	⚡
1 Power Supply	AQL appropriate to hardware requirements		SU	087100	⚡

Notes: ACCESS BY AUTOMATIC OPERATOR WHEN EXTERIOR ACTUATOR SWITCH IS TURNED ON VIA KEYSWITCH FOR DAYTIME OPERATION/ OR BY TIMER CONTROL. INTERIOR ACTUATOR SWITCH IS ALWAYS ACTIVE.

Set: 3.0Doors: **D117**, E1, E3, **E5**

Description: Exterior Storeroom Function Pair - MFB Closer Stop Arm OH Stop DPS

6 Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 4-1/2" x 4-1/2"	US32D	MK	087100	
2 Flush Bolt	555	US26D	RO	087100	
1 Dust Proof Strike	570	US26D	RO	087100	
1 Storeroom or Closet Lock	B PB 4605LN	626	YA	087100	

1 Storeroom or Closet Lock	B PB 5405LN	626	YA	087100
1 Surf Overhead Stop	10-336	630	RF	087100
1 Closer w/ Stop	5821	689	YA	087100
1 Rain Guard	346A		PE	087100
1 Gasketing	2891AS		PE	087100
2 Sweep	3452AV		PE	087100
1 Threshold	171A FHSL14SS		PE	087100
2 Position Switch	DPS-M-GR		SU	087100 ⚡
1 Metal Edge Astragal	By HM Door Mfr.			

Set: 3.1

Doors: G1A, G2A, G2B

Description: EXTERIOR INSWING STOREROOM LOCK NO CLOSER SWEEP TH

3 Hinge, Full Mortise, Hvy Wt	T4A3386 4-1/2" x 4-1/2"	US32D	MK	087100
1 Storeroom or Closet Lock	B PB 4605LN	626	YA	087100
1 Gasketing	S88D (Head & Jambs)		PE	087100
1 Door Bottom	209AV		PE	087100
1 Sweep	315CN		PE	087100
1 Threshold w/ Seal	2005AT FHSL14SS		PE	087100

Set: 4.0

Doors: D109

Description: Rim Exit Elec Trim Closer Stop Arm Gasket

2 Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 4-1/2" x 4-1/2"	US26D	MK	087100
1 Hinge, Full Mortise, Hvy Wt	T4A3786 QC8 4-1/2" x 4-1/2"	US26D	MK	087100
1 Electrified Rim Exit, Fail Secure	6100ED B PB691F	630	YA	087100 ⚡
1 Cylinder Core	SFIC core per facility requirements	626	YA	
1 Cylinder Housing	Rim / Mortise as req'd	626	YA	087100
1 Closer w/ Stop	5821	689	YA	087100
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO	087100
1 Gasketing	S88D (Head & Jambs)		PE	087100
1 ElectroLynx Harness	QC-hinge/strike/ or power transfer to ceiling		MK	087100 ⚡
1 ElectroLynx Harness	QC- (size to door width/hardware)		MK	087100 ⚡
1 Position Switch	DPS-M-GR		SU	087100 ⚡

1 Power Supply	AQL appropriate to hardware requirements	SU 087100 ⚡
1 CARD READER	Wall Reader to be provided by Systems Integrator	

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS.

Set: 5.0

Doors: D104, D115

Description: Elec lock Closer COHS Gasket

2 Hinge, Full Mortise, Hvy Wt	T4A3786 QC8 4-1/2" x 4-1/2"	US26D MK 087100
1 Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D MK 087100
1 Fail Secure Lock	B PB 5491LN REX	626 YA 087100 ⚡
1 Cylinder Core	SFIC core per facility requirements	626 YA
1 Conc Overhead Stop	6-336	630 RF 087100
1 Surface Closer	2701	689 YA 087100
1 Kick Plate	K1050 10" high BEV CSK	US32D RO 087100
1 Gasketing	S88D (Head & Jambs)	PE 087100
1 ElectroLynx Harness	QC-hinge/strike/ or power transfer to ceiling	MK 087100 ⚡
1 ElectroLynx Harness	QC- (size to door width/hardware)	MK 087100 ⚡
1 Position Switch	DPS-M-GR	SU 087100 ⚡
1 Power Supply	AQL appropriate to hardware requirements	SU 087100 ⚡
1 CARD READER	Wall Reader to be provided by Systems Integrator	

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS.

Set: 6.0Doors: [D116](#)

Description: Storeroom Function Closer

3 Hinge, Full Mortise	MPB79 (size per spec)	US26D	MK	087100
1 Storeroom or Closet Lock	B PB 4605LN	626	YA	087100
1 Cylinder Core	SFIC core per facility requirements	626	YA	
1 Surface Closer	2701	689	YA	087100
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO	087100
1 Door Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Gasketing	S88D (Head & Jambs)		PE	087100

Set: 7.0Doors: [D104A](#)

Description: Storeroom Function No Closer

3 Hinge, Full Mortise	MPB79 (size per spec)	US26D	MK	087100
1 Storeroom or Closet Lock	B PB 4605LN	626	YA	087100
1 Cylinder Core	SFIC core per facility requirements	626	YA	
1 Door Stop	403 (or) 441CU (As Required)	US26D	RO	087100
3 Silencer	608		RO	087100

Set: 8.0Doors: [D108A](#)

Description: Classroom Function - Panic Egress - Closer Stop Arm Gasket

3 Hinge, Full Mortise	MPB79 (size per spec)	US26D	MK	087100
1 Rim Exit Device, Classroom	6100ED PB626F	630	YA	087100
1 Cylinder Core	SFIC core per facility requirements	626	YA	
1 Cylinder Housing	Rim / Mortise as req'd	626	YA	087100
1 Closer w/ Stop	5821	689	YA	087100
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO	087100
1 Gasketing	S88D (Head & Jambs)		PE	087100

Notes: EXIT DEVICE IS EITHER LOCKED OR UNLOCKED. LOCK FOR AFTERHOURS OPERATION. ALWAYS FREE EGRESS.

Set: 8.1

Doors: D108B

Description: NL Function - Panic Egress - Elec Strike Closer Stop Arm Gasket

3 Hinge, Full Mortise	MPB79 (size per spec)	US26D	MK	087100	
1 Rim Exit Device, Nightlatch	6100ED PB627F 1109 x 6-Pin	630	YA	087100	
1 Cylinder Core	SFIC core per facility requirements	626	YA		
1 Cylinder Housing	Rim / Mortise as req'd	626	YA	087100	
1 Electric Strike	9400/9500	630	HS	087100	⚡
1 SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1 Closer w/ Stop	5821	689	YA	087100	
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO	087100	
1 Gasketing	S88D (Head & Jambs)		PE	087100	
1 ElectroLynx Harness	QC-hinge/strike/ or power transfer to ceiling		MK	087100	⚡
1 Timer	DT-7		SU	087100	⚡
1 Power Supply	AQL appropriate to hardware requirements		SU	087100	⚡

Notes: NL FUNCTION EXIT DEVICE. ELECTRIC STRIKE TO BE IN UNLOCKED STATE DURING OPERATIONAL HOURS. TIMER CONTROLLED LOCKING FOR AFTER HOURS OPERATION. ALWAYS FREE EGRESS. DOOR CAN BE PULLED OPEN WHEN STRIKE IS NOT LOCKED.

Set: 9.0

Doors: D103, D106

Description: Office Function No Closer Gasket

3 Hinge, Full Mortise	MPB79 (size per spec)	US26D	MK	087100	
1 Entry Lock	B PB 4704LN	626	YA	087100	
1 Cylinder Core	SFIC core per facility requirements	626	YA		
1 Door Stop	403 (or) 441CU (As Required)	US26D	RO	087100	
1 Gasketing	S88D (Head & Jambs)		PE	087100	

Set: 10.0Doors: **D107**

Description: Elec Lock Closer Stop Arm Gasket Timer Controlled

2 Hinge, Full Mortise, Hvy Wt	T4A3786 QC8 4-1/2" x 4-1/2"	US26D	MK	087100	
1 Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK	087100	
1 Fail Safe Lock	B PB 5490LN	626	YA	087100	⚡
1 Cylinder Core	SFIC core per facility requirements	626	YA		
1 Closer w/ Stop	5821	689	YA	087100	
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO	087100	
1 Gasketing	S88D (Head & Jambs)		PE	087100	
1 ElectroLynx Harness	QC-hinge/strike/ or power transfer to ceiling		MK	087100	⚡
1 ElectroLynx Harness	QC- (size to door width/hardware)		MK	087100	⚡
1 Timer	DT-7		SU	087100	⚡
1 Power Supply	AQL appropriate to hardware requirements		SU	087100	⚡

Notes: FAIL SAFE OPERATION. WHEN TIMER CONTROL IS INITIATED THE LOCK WILL LOCK FOR AFTER HOURS OPERATION. TIMER CONTROLLED. ALWAYS FREE EGRESS. LOCK IS UNLOCKED WITHOUT POWER.

Set: 11.0Doors: **D113, D114**

Description: Privacy Function No Closer Gasket

3 Hinge, Full Mortise	MPB79 (size per spec)	US26D	MK	087100	
1 Privacy Lock	PB 4602LN	626	YA	087100	
1 Door Stop	403 (or) 441CU (As Required)	US26D	RO	087100	
1 Gasketing	S88D (Head & Jambs)		PE	087100	

Set: 12.0

Description: Apartment Unit - Entry

3 Hinge, Spring set	MPS679 4-1/2" x 4-1/2"	US26D	MK	087100
1 Deadbolt	D241 B	626	YA	087100
1 Passage Latch	PB 4601LN	626	YA	087100
1 Cylinder Core	SFIC core per facility requirements	626	YA	
1 Door Stop	526/528 as req'd	US15	RO	087100
1 Gasketing	S88D (Head & Jambs)		PE	087100
1 Door Bottom	209AV		PE	087100
1 Threshold	151A		PE	087100

Set: 13.0

Description: Apartment Unit - Privacy Function

3 Hinge	By Pre-hung Door Mfr.	619	OT	
1 Privacy Lock	PB 4602LN	626	YA	087100
1 Door Stop	526/528 as req'd	US15	RO	087100
3 Silencer	608CA		RO	087100

Set: 14.0

Description: Apartment Unit - Passage Function

3 Hinge	By Pre-hung Door Mfr.	619	OT	
1 Passage Latch	PB 4601LN	626	YA	087100
1 Door Stop, hinge pin stop	528	NP	RO	087100
3 Silencer	608CA		RO	087100

Set: 15.0

Description: Apartment Unit - Pair Dummy Lever Roller Latch

6 Hinge	By Pre-hung Door Mfr.	619	OT
1 Single Dummy Trim	PB 4755LN	626	YA 087100
1 Roller Latch	594	US26D	RO 087100
2 Door Stop	526/528 as req'd	US15	RO 087100
2 Silencer	608CA		RO 087100

Set: 16.0

Description: Unit Balcony

1 Hardware By Others	Hardware By Door Supplier
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Set: 17.0

Doors: MISC

Description: MISC

1 BITTING LIST	KEY RECORDS	
1 KEY BLANKS	BOX OF 50	
1 Key Cabinet	Sized per specification documents	LU
1 Knox Box	Knox Box (coordinate with local fire station for requirements and location)	

END OF SECTION 08 06 71

**SECTION 09 51 13
ACOUSTICAL PANEL CEILINGS**

PART 1 GENERAL**1.01 WORK INCLUDED**

- A. Provide acoustical lay-in panel ceiling system as shown and specified.

1.02 RELATED SECTIONS

- A. Gypsum Board Ceiling: Section 09 21 16.

1.03 REFERENCE STANDARDS

- A. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2019.
- B. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
- C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
- D. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.
- G. Cisca (AC) - Acoustical Ceilings: Use and Practice; 1999.
- H. UL 94 - Tests for Flammability of Plastic Materials for Parts in Devices and Appliances; Current Edition, Including All Revisions.
- I. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.
- J. Wherever the following abbreviations are used herein, they shall refer to the corresponding standards.
 - 1. AIMA: Acoustical and Insulating Materials Association.
 - 2. ASTM: American Society for Testing and Materials.
 - 3. Cisca: Ceilings and Interior Systems Contractors Association.

1.04 QUALITY ASSURANCE

- A. Workmanship: Cisca (AC) "Ceiling Systems Handbook".
- B. Installation: Performed by an experienced authorized installer approved by acoustical material manufacturer.
- C. Fire Hazard Classification: Provide acoustical materials which have been UL tested, listed and labeled Class 0-25, when tested in accordance with ASTM E84, Class A flame spread rating in accordance with ASTM E1264 requirements.
- D. Coordination Between Trades: Quality assurance includes the cooperation with HVAC, Plumbing and Electrical Contractors in regards to ceiling grid layout.
 - 1. Procedures for submitting coordination drawings for ceiling work is included in Section 01 33 23 - Shop Drawings, Product Data and Samples.

1.05 SUBMITTALS

- A. Product Data
 - 1. Submit manufacturer's product data and installation instructions for each type of acoustical material and suspension system required.
 - 2. Submit manufacturer's written instructions for recommended maintenance practices for each type of acoustical ceiling system required. Include recommendations for cleaning

and refinishing acoustical units and precautions against materials and methods that may be detrimental to finishes and acoustical performances.

- B. Samples: Submit 12" square acoustical panel samples for each type of acoustical unit required. Provide 12" long suspension system and edge molding samples.
- C. Certification: Submit manufacturer's certification of acoustical units fire hazard classification rating and performance requirements.
 - 1. VOC Limits: Include documentation verifying product Low Emitting Material Building Product Disclosures and Optimization.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original, unopened protective packaging, with manufacturer's labels indicating brand name, pattern size, thickness and fire rating as applicable, legible and intact.
- B. Store materials in original protective packaging to prevent soiling, physical damage or wetting.
- C. Store cartons open at each end to stabilize moisture content and temperature.
- D. Do not begin installation until sufficient materials to complete a room are received.

1.07 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Pressurized Plenums (to comply with Cisca's recommendations for cleaning duct system and protecting ceiling units in pressurized plenums from damage and soiling caused by blowing dirt and dust that may be present when duct system is first operated): Operate ventilation system for not less than 48 hours before beginning acoustical panel ceiling installation.

1.08 EXTRA MATERIALS

- A. Maintenance Stock: Under this Section furnish to the Owner prior to final acceptance, extra maintenance stock of acoustical materials, consisting of a minimum of one percent of area of each size, type, thickness installed on the job, and 4% if the area is under 5,000 sq. ft. This extra stock is for the Owner's use after completion of the Project and is not to be used for repair or replacement required during the construction period. Properly package, seal, and identify extra stock material.

PART 2 PRODUCTS

2.01 SUSPENSION SYSTEM

- A. Exposed "Tee" Grid System
 - 1. Description: Cold-rolled electrogalvanized steel, factory applied white finish paint to match ceiling tile.
 - a. Provide color: White; Black grid when adjacent to black acoustical units where indicated in drawings.
 - b. 15/16" exposed face; DONN (USG INTERIORS) Model DX; ROCKFON Chicago Metallic 200 Snap Grid System; ARMSTRONG Prelude.
 - c. 9/16" exposed face; ARMSTRONG Suprafine; DONN (USG INTERIORS) Fineline; ROCKFON Chicago Metallic Temptra 4000.
 - d. High-Humidity Finish: Where indicated, provide coating tested and classified for "severe environment performance" according to ASTM C635/C635M.
 - 2. Description: Comply with ASTM C635/C635M. Provide systems adequate to support light fixtures, ceiling diffusers, and other normal accessories. Maximum deflection 1/360 of the span. All components of system from one manufacturer, die cut, and interlocking.
 - a. Structural Class: Intermediate duty.
 - b. Type of System: Direct Hung.
 - c. Attachment Devices: Size for five times design load indicated in ASTM C635/C635M, Table 1 direct hung.

- d. Hanger Wires: ASTM A641/A641M galvanized carbon steel, soft temper, prestretched not less than 12 gauge.
- e. Carrying Channels: 1-1/2" steel channels, hot-rolled or cold-rolled, not less than 0.475 lbs per linear foot, standard finish.
- f. Members: Provide manufacturer's standard exposed runners, cross runners and accessories of type and profiles indicated, with exposed cross runners coped to lay flush with main runners.
- g. Hold Down Clips: Manufacturer's standard; provide in areas not scheduled to receive retention clips.
- h. Retention Clips at Impact Resistant Ceiling: Manufacturer's standard retention clips designed and spaced to secure acoustical tiles in-place against vandalism in public areas (i.e. corridors, classrooms and similar type rooms, student toilet rooms, locker rooms, vestibules, etc.)
- i. Seismic Clips: Manufacturer's standard seismic clips designed and spaced to secure acoustical panels in place.
- 3. Edge Moldings: Hemmed edge wall angles, cold-rolled electrogalvanized steel, factory applied finish to match grid system. Provide width, configuration and profile indicated.
- B. PVC Exposed "Tee" Grid System
 - 1. Material: Extruded, Grade 1, Type 2 virgin PVC, UL 94 V-O, USDA and Agriculture Canada Accepted.
 - 2. Fire Classification: Class A (1) Flame Spread of 5 per UL 723, Smoke Development of 65.
 - 3. Duty Class: ASTM C635/C635M, Intermediate duty.
 - 4. Hanger Wires: 12 gauge monel.
 - 5. Finish: White; Black grid when adjacent to black acoustical units where indicated in drawings.
 - 6. Edge Moldings: Match tee material and color.
 - 7. Manufacturer: KEEL MANUFACTURING, INC., ACOUSTIC CEILING PRODUCTS or equal.
- C. Perimeter Trim: Provide extruded aluminum trim at ceiling areas indicated. Depth as indicated. Provide curved shapes as indicated. Finish to match ceiling grid as selected by Architect. ARMSTRONG Axiom #AX12STR (Nominal 12" deep x 3/4" wide); DONN (USG INTERIORS) Compasso; ROCKFON Infinity.
- D. Provide grid color:
 - 1. Typical unless noted otherwise: White to match acoustical units.
 - 2. Black when adjacent to black acoustical units where indicated in drawings.

2.02 ACOUSTICAL UNITS

- A. General
 - 1. Cellulose Base
 - a. Toxicity/IEQ: Panel based anti-microbial treatment to inhibit growth of mold and mildew:
 - 1) Coating-Based Antimicrobial Treatment: Provide acoustical panels with face and back surfaces coated with antimicrobial treatment; and showing no mold or mildew growth when tested in accordance with ASTM D3273.
 - 2) Panel-Based Antimicrobial Treatment: Provide acoustical panels manufactured with antimicrobial treatment in the panels.
 - 2. Mineral Base
 - a. Toxicity/IEQ: Panel based anti-microbial treatment to inhibit growth of mold and mildew:
 - 1) Coating-Based Antimicrobial Treatment: Provide acoustical panels with face and back surfaces coated with antimicrobial treatment; and showing no mold or mildew growth when tested in accordance with ASTM D3273.
 - 2) Panel-Based Antimicrobial Treatment: Provide acoustical panels manufactured with antimicrobial treatment in the panels.

- B. Acceptable Manufacturers: The product indicated are by ARMSTRONG. Equal comparable design and performing products by CERTAINTEED, ROCKFON or U.S. GYPSUM are acceptable.
- C. Type ACT-1: Ultima #1912, 24" x 24" x $\frac{3}{4}$ ", beveled tegular edge, NRC .70, CAC 35, light reflectance LR-.90, with white, washable finish; 9/16" grid.
 - 1. Provide black acoustical units and grid where indicated in drawings.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates, structure and installation conditions. Do not proceed with acoustical ceiling systems work until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling.
 - 1. Avoid use of less than half widths units at borders.
- B. Coordinate with ceiling layout on drawings.
- C. Notify Architect of discrepancies between ceiling layout on drawings and ceiling layout proposed. Do not proceed until approved by Architect.

3.03 INSTALLATION

- A. Suspension System: Comply with ASTM C636/C636M requirements and be water or laser leveled, maximum deflection of 1/360 of span and maximum surface leveling tolerance 1/8" in 12'-0".
- B. Rough Suspension
 - 1. Hangers: Ceiling suspension systems shall not be supported from ductwork, electrical conduit, heating or plumbing lines or any other utility lines. Each utility and the ceiling suspension system shall be a separate installation and each shall be independently supported from the building structure. Where interferences occur, employ trapeze hangers or supports to avoid interferences with appurtenances requiring servicing. Support all four corners of suspension systems at fluorescent light fixtures.
 - 2. Wall Molding
 - a. Provide edge trim molding at perimeter of acoustical ceiling installation and intermediate vertical surfaces. Use maximum lengths. Miter trim corners to provide tight, accurate joint. Connect moldings securely to substrate surfaces.
 - 1) Health Care Facilities: Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
 - b. Connect moldings to substrate at intervals not over 16" on center and not more than 3" from ends, leveling with ceiling suspension system to tolerance of 1/8" in 12'-0".
 - 3. Hold-Down Clips: Provide at rated ceiling assemblies.
 - 4. Retention Clips: Provide on all tiles in areas listed herein.
- C. Acoustical Units
 - 1. Install acoustical lay-in panels level, in uniform plane, with joints accurately cut to ensure a snug and square fit. All panel faces and edges to be free from damage or soiling.
 - a. Fit border units accurately at borders and penetrations.
 - b. Recreate tegular and decorative edges at wall cuts and other cuts.
 - c. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and perimeter moldings.
 - d. For reveal-edged panels on suspension-system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.

- e. For reveal-edged panels on suspension-system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension-system surfaces and panel faces flush with bottom face of runners.
 - f. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.
2. Coordinate suspension systems grid layout with electrical lighting fixture lay-out and installation.

3.04 CLEANING

- A. After installation, clean soiled or discolored surfaces of acoustical units and exposed suspension members. Comply with manufacturer's recommendations for cleaning and touch-up of minor finish damage.
- B. Adjust all sags and twists which develop in ceiling systems. Remove and replace units which are improperly installed and damaged units which cannot be successfully cleaned and repaired to eliminate evidence of damage.

END OF SECTION 09 51 13

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SHEET NUMBER	SHEET NAME
GENERAL	
G000	COVER SHEET
G001	DRAWING INDEX
G010	CODE DATA - BUILDING A-C
G010D	CODE DATA - CLUBHOUSE
G010G	CODE DATA & LIFE SAFETY - GARAGES
G011	CODE SITE PLAN
G020	RATED ASSEMBLIES
G021	RATED ASSEMBLIES
G022	RATED ASSEMBLIES
G023	RATED ASSEMBLIES
G024	RATED ASSEMBLIES
G025	RATED ASSEMBLIES
G030	FRAMING DETAILS
G031	FRAMING DETAILS
G100A	BUILDING A - LIFE SAFETY
G100B	BUILDING B - LIFE SAFETY
G100C	BUILDING C - LIFE SAFETY
G100D	CLUBHOUSE - LIFE SAFETY
G150	SIGNAGE SCHEDULE
G200	BUILDING ASSEMBLIES SCHEDULE
G300A	BUILDING A - GROSS SQUARE FOOTAGE
G300B	BUILDING B - GROSS SQUARE FOOTAGE
G300C	BUILDING C - GROSS SQUARE FOOTAGE
G300D	CLUBHOUSE - GROSS SQUARE FOOTAGE
G300G	GARAGE G1 & G2 - AREA PLANS
G400A	BUILDING A - GROSS AREA
G400B	BUILDING B - GROSS AREA
G400C	BUILDING C - GROSS AREA
G400D	CLUBHOUSE - GROSS AREA
G500A	BUILDING A - AREA PLANS - NET
G500B	BUILDING B - AREA PLANS - NET
G500C	BUILDING C - AREA PLANS - NET
G500D	CLUBHOUSE - AREA PLANS - NET
33	
CIVIL	
C101	OVERALL STALKING PLAN
C102	STALKING PLAN
C103	STALKING PLAN

C104	STALKING PLAN
C105	STALKING PLAN
C106	STALKING PLAN
C107	STALKING PLAN
C108	STALKING PLAN
C201	TITLE SHEET
C202	GENERAL NOTES
C204	OVERALL STORM SEWER & GRADING PLAN
C205	STORM SEWER & GRADING PLAN
C206	STORM SEWER & GRADING PLAN
C207	STORM SEWER & GRADING PLAN
C208	STORM SEWER & GRADING PLAN
C209	STORM SEWER & GRADING PLAN
C210	STORM SEWER DETAILS
C211	STORM SEWER DETAILS
C212	STORM SEWER DETAILS
C214	STORM SEWER PROFILES
C215	STORM SEWER PROFILES
C216	STORM SEWER PROFILES
C217	OVERALL EROSION AND SEDIMENT CONTROL PLAN
C218	EROSION AND SEDIMENT CONTROL PLAN
C219	EROSION AND SEDIMENT CONTROL PLAN
C220	EROSION AND SEDIMENT CONTROL PLAN
C221	EROSION AND SEDIMENT CONTROL PLAN
C222	EROSION AND SEDIMENT CONTROL PLAN
C223	EROSION AND SEDIMENT CONTROL DETAILS
C224	EROSION AND SEDIMENT CONTROL DETAILS
C225	DRIVE DETAILS
C226	GRADING DETAIL
C301	TITLE SHEET
C302	TRIBUTARY MAP
C303	SANITARY PLAN
C304	SANITARY PLAN
C305	SANITARY PLAN
C306	SANITARY PLAN
C307	SANITARY PLAN
C308	SANITARY PLAN
C309	SANITARY DETAILS
C401	OVERALL UTILITY PLAN
C402	WATER SERVICE PLAN
C403	WATER SERVICE PLAN
C404	WATER SERVICE PLAN
C405	WATER SERVICE PLAN
C406	WATER SERVICE PLAN

C407	WATER SERVICE PLAN & PROFILE
C408	UTILITY NOTES AND DETAILS
C409	UTILITY DETAILS
C410	WATER SERVICE PLAN & PROFILE
C411	WATER SERVICE PLAN & PROFILE
C412	WATER SERVICE PLAN & PROFILE
53	
LANDSCAPE	
L1.01	LANDSCAPE PLAN - OVERALL SITE
L1.02	LANDSCAPE PLAN - NORTH
L1.03	LANDSCAPE PLAN - SOUTH
L1.04	LANDSCAPE DETAILS
L1.05	SITE DETAILS
5	
STRUCTURAL	
S001	GENERAL STRUCTURE INFORMATION
S002	TYPICAL DETAILS
S101-A	FOUNDATION PLAN AND 2ND FLOOR FRAMING PLAN- BLDG. A
S102-A	3RD FLOOR AND ROOF FRAMING PLAN- BLDG. A
S103-B	FOUNDATION PLAN AND 2ND FLOOR FRAMING PLAN- BLDG. B
S104-B	3RD FLOOR AND ROOF FRAMING PLAN- BLDG. B
S105-C	FOUNDATION PLAN AND 2ND FLOOR FRAMING PLAN- BLDG. C
S106-C	3RD FLOOR AND ROOF FRAMING PLAN- BLDG. C
S107-D	FOUNDATION PLAN AND 2ND FLOOR FRAMING PLAN- BLDG. D
S108-D	ROOF FRAMING PLAN- BLDG. D
S109-G	FOUNDATION AND ROOF FRAMING PLAN - GARAGE
S200	SHEAR WALL SCHEDULE AND DETAILS
S300	FOUNDATION DETAILS
S310	FRAMING DETAILS
S311	FRAMING DETAILS
S320	FRAMING DETAILS
16	
ARCHITECTURAL	
A001	ARCHITECTURAL SITE PLAN
A101A	BUILDING A - LEVEL 01 & 02 FLOOR PLANS
A102A	BUILDING A - LEVEL 03 / ROOF PLAN
A103B	BUILDING B - LEVEL 01 & 02 FLOOR PLANS
A104B	BUILDING B - LEVEL 03 & ROOF PLANS

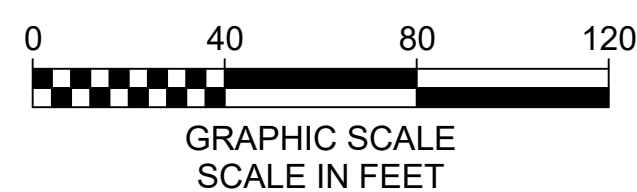
A105C	BUILDING C - LEVEL 01 02 03 FLOOR / ROOF PLANS
A106D	CLUBHOUSE - FLOOR & ROOF PLANS
A110G	GARAGE BUILDING G1 & TYP. DETAILS
A111G	GARAGE BUILDING G2
A201A	BUILDING A - LEVEL 01 & 02 RCP
A202A	BUILDING A - LEVEL 03 RCP
A203B	BUILDING B - LEVEL 01 & 02 RCP
A204B	BUILDING B - LEVEL 03 RCP
A205C	BUILDING C - LEVEL 01 02 & 03 RCP
A206D	CLUBHOUSE - LEVEL 01 & 02 RCP
A301	AXONOMETRIC BLDG VIEWS
A310A	BUILDING A - EXTERIOR ELEVATIONS
A310B	BUILDING B - EXTERIOR ELEVATIONS
A310C	BUILDING C - EXTERIOR ELEVATIONS
A310D	CLUBHOUSE - EXTERIOR ELEVATIONS
A350A	ALTERNATE BUILDING A ELEVATIONS
A350B	ALTERNATE BUILDING B ELEVATIONS
A350C	ALTERNATE BUILDING C ELEVATIONS
A350D	ALTERNATE CLUBHOUSE ELEVATIONS
A351	ALTERNATE BUILDING DETAILS
A401A	BUILDING A - SECTIONS
A402B	BUILDING B - SECTIONS
A403C	BUILDING C - SECTIONS
A404D	CLUBHOUSE - SECTIONS
A420	WALL SECTIONS - BUILDING A THRU C
A421	WALL SECTIONS - BUILDING A - C & CLUBHOUSE
A422	WALL SECTIONS - CLUBHOUSE
A423	WALL SECTIONS - CLUBHOUSE
A440	EXTERIOR DETAILS - SECTION
A441	EXTERIOR DETAILS - SECTION
A442	EXTERIOR DETAILS
A443	EXTERIOR DETAILS
A444	EXTERIOR DETAILS
A460	ROOF DETAILS
A470	DUMPSTER ENCLOSURE DETAILS
A500	MOUNTING HEIGHTS
A501	ENLARGED UNIT PLANS - 1 BED
A502	ENLARGED UNIT PLANS - 2 BED
A503	ENLARGED UNIT PLANS - 2 BED 2 BA
A504	ENLARGED UNIT PLANS - 3 BED
A505	ENLARGED UNIT PLANS - 1 BED ANSI TYPE A
A506	ENLARGED UNIT PLANS - 2 BED ANSI TYPE A
A507	ENLARGED UNIT PLANS - 3 BED ANSI TYPE A
A508	ENLARGED UNIT PLANS - CLUBHOUSE

A509	ENLARGED UNIT PLANS - CLUBHOUSE
A512	ENLARGED PLANS ELEVATIONS & CASEWORK DETAILS - CLUBHOUSE
A513	ENLARGED PLANS ELEVATIONS & CASEWORK DETAILS - CLUBHOUSE
A521	UNIT DETAILS
A522	UNIT DETAILS
A601	BUILDING A-C STAIR PLANS AND SECTIONS
A603	CLUBHOUSE STAIR PLANS AND SECTIONS
A610	STAIR & RAILING DETAILS
A700	DOOR & WINDOW SCHEDULES
A710	DOOR DETAILS
A711	DOOR DETAILS
A800A	FINISH SCHEDULE/LEGEND
A801D	CLUBHOUSE - INTERIOR 3D VIEWS
A825	INTERIOR DETAILS - BUILDINGS A-C
A825D	INTERIOR DETAILS - CLUBHOUSE
A900D	CLUBHOUSE - FINISH PLAN - OVERALL
65	
FIRE PROTECTION	
FP100	FIRE PROTECTION SITE PLAN
FP101-A	BUILDING A - LEVEL 01 & 02 FIRE PROTECTION PLANS
FP102-A	BUILDING A - LEVEL 03 & ROOF FIRE PROTECTION PLANS
FP103-B	BUILDING B - LEVEL 01 & 02 FIRE PROTECTION PLANS
FP104-B	BUILDING B - LEVEL 03 & ROOF FIRE PROTECTION PLANS
FP105-C	BUILDING C - LEVEL 01 & 02 FIRE PROTECTION PLANS
FP106-D	BUILDING D - LEVEL 01 & 02 FIRE PROTECTION PLANS
FP201	FIRE PROTECTION - ENLARGED PLAN AND DETAILS
FP301	FIRE PROTECTION - NOTES SCHEDULES AND DETAILS
9	
PLUMBING	
P100	PLUMBING SITE PLAN
P101-A	BUILDING A LEVEL 01 & 02 PLUMBING PLANS
P102-A	BUILDING A LEVEL 03 & ATTIC PLUMBING PLANS
P103-B	BUILDING B - LEVEL 01 & 02 PLUMBING PLANS
P104-B	BUILDING B - LEVEL 03 & ROOF PLUMBING PLANS
P105-C	BUILDING C - PLUMBING PLANS
P106-D	BUILDING D - LEVEL 01 & 02 PLUMBING PLANS
P107-D	BUILDING D LEVEL 01 & 02 PLUMBING SUPPLY PLANS
P200	ENLARGED UNIT - PLUMBING PLANS
P201	ENLARGED UNIT - PLUMBING PLANS
P202	ENLARGED UNIT - PLUMBING PLANS

P301	PLUMING NOTES SCHEDULES & LEGENDS
P401	PLUMBING DETAILS
P402	PLUMBING DETAILS
P500-A	BUILDING A - STACK DIAGRAMS
P500-B	BUILDING B - STACK DIAGRAMS
P500-C	BUILDING C - STACK DIAGRAMS
17	
MECHANICAL	
H100	HVAC SITE PLAN
H101-A	BUILDING A LEVEL 01 & 02 HVAC PLANS
H102-A	BUILDING A - LEVEL03 & ROOF HVAC PLANS
H103-B	BUILDING B LEVEL 01 & 02 HVAC PLANS
H104-B	BUILDING B LEVEL 03 & ROOF HVAC PLANS
H105-C	BUILDING C LEVEL 01 & 02 HVAC PLANS
H106-C	BUILDING C LEVEL 03 & ROOF HVAC PLANS
H107-D	BUILDING D LEVEL 01 & 02 HVAC PLANS
H-200	ENLARGED UNITS - HVAC PLANS
H-201	ENLARGED UNITS - HVAC PLANS
H-202	ENLARGED UNITS - HVAC PLANS
H-300	HVAC SCHEDULES
H-301	HVAC DETAILS
H-302	HVAC DETAILS
14	
ELECTRICAL	
E100	ELECTRICAL SITE PLAN
E101	ELECTRICAL CLUBHOUSE PLAN
E101-A	BUILDING A LEVEL 01 & 02 ELECTRICAL PLANS
E102-A	BUILDING A - LEVEL03 & ROOF ELECTRICAL PLANS
E103-B	BUILDING B LEVEL 01 & 02 ELECTRICAL PLANS
E104-B	BUILDING B LEVEL 03 & ROOF ELECTRICAL PLANS
E105-C	BUILDING C LEVEL 01 & 02 ELECTRICAL PLANS
E106-C	BUILDING C LEVEL 03 & ROOF ELECTRICAL PLANS
E107-D	BUILDING D - LEVEL 01 & 02 ELECTRICAL PLANS
E-108	GARAGE BUILDING - ELECTRICAL PLAN
E-200	ENLARGED UNITS ELECTRICAL PLANS
E-201	ENLARGED UNITS ELECTRICAL PLANS
E-202	ENLARGED UNITS ELECTRICAL PLANS
E-300	ELECTRICAL ONE-LINE DIAGRAMS
E-301	ELECTRICAL ONE-LINE DIAGRAMS
E-302	ELECTRICAL PANEL SCHEDULES & APARTMENT LOAD TABULATIONS

E-400	ELECTRICAL DETAILS
E-401	ELECTRICAL DETAILS
18	
POOL	
PL-1	POOL DECK PLAN SECTIONS & DETAILS
PL-2	POOL CONSTRUCTION DETAILS
PL-3	POOL EXTERIOR PIPING PLAN & COMPONENT DETAILS
PL-4	POOL EQUIPMENT ROOM PLAN & EQUIPMENT DETAILS
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Grand total: 234	

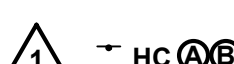
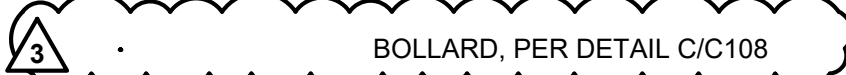
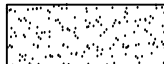
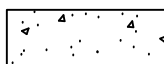
GENERAL NOTES		
1. X		
#	DATE	CHANGE DESCRIPTION
1	06/11/25	ADDENDUM# 01
2	06/25/25	ADDENDUM# 02
3	07/10/25	ADDENDUM# 03
COLUMBUS METROPOLITAN HOUSING AUTHORITY (COMMUNITY. COMMITMENT. COLLABORATION.) THE FALLS ON REFUGEE ROAD 3355 REFUGEE ROAD, COLUMBUS, OH 43232 FOR CMHA		
Moody Nolan 300 SPRUCE STREET SUITE 300 COLUMBUS, OHIO 43215 PHONE: 614-461-4664 CERT. NO: FIRM 00197475		
DRAWING TITLE:		
DRAWING INDEX		
PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025	
	23446	
	G001	
	CD PROGRESS SET	



EXISTING

- | | |
|---|---|
|  | PROPERTY LINE |
|  | RIGHT-OF-WAY |
|  | BUILDING WALL |
|  | CURB |
|  | PAVEMENT |
|  | WALK |
|  | SETBACK |
|  | EASEMENT |
|  | SURVEY CONTROL POINT |
|  | BENCHMARK |
|  | MONUMENT FOUND, NO. 5 RE-
UNLESS OTHERWISE NOTED |

PROPOSED

- | | |
|---|--|
|  | RIGHT-OF-WAY |
|  | EASEMENT |
|  | BUILDING/WALL |
|  | STRAIGHT CURB PER DETAIL L/C107 |
|  | PAVEMENT/WALK |
|  | FENCE PER LANDSCAPING PLANS |
|  | PAINTED WHEELCHAIR SYMBOL |
|  | HANDICAPPED PARKING SIGN
PER DETAIL B/C108 |
|  | BOLLARD, PER DETAIL C/C108 |
|  | HEAVY DUTY ASPHALT PER DETAIL B/C107 |
|  | LIGHT DUTY ASPHALT PER DETAIL A/C107 |
|  | CONCRETE SIDEWALK PER COC STD.
DWG. 2300 |
|  | HEAVY DUTY CONCRETE PAVEMENT
PER DETAIL C/C107 |
|  | DETECTABLE WARNING PER COC STD.
DWG. 2319 AND CMSC 808. |

GENERAL NOTES:

1. DIMENSIONS AND COORDINATES ARE GIVEN TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
2. CURBS AND SIDEWALK RAIL SHALL BE 5'-0" UNLESS OTHERWISE NOTED.
3. PROVIDE STRIPING AND SYMBOLS AS SHOWN PER DOT ITEM 641 AND 642. PROVIDE STRIPING PAINT WITH GLASS BEADS. PROVIDE TYPE I OR TYPE II A PAINT IN ACCORDANCE WITH 0404.62 DEPENDING ON TEMPERATURE.
4. DIMENSIONS AT THE TIME OF APPLICATION. TYPICAL LINE WIDTH SHALL BE 4 INCHES. COLOR WHITE. PROVIDE TWO COATS.
5. STANDARD PARKING STRIP, DIMENSIONS ARE 9'-0" IN WIDTH BY 18'-0" IN LENGTH UNLESS OTHERWISE NOTED.
6. PROVIDE 8' HANDICAP ACCESSIBLE PARKING SPACES WITH 5' CLEARANCE TO CURB AND 5' CLEARANCE TO DRIVEWAY.
7. PROVIDE 8' HANDICAP ACCESSIBLE PARKING SIGNS AND 1 V CAN ACCESSIBLE PARKING SIGNS. FINAL LOCATION OF SIGNS TO BE DETERMINED BY ARCHITECT.
8. MAINTAIN PEDESTRIAN ACCESS TO REGULAR ACCESS TO ADJACENT BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SITE SIGNAGE NOT SHOWN ON THIS SHEET.
10. BUILDING COORDINATES PROVIDED FOR BUILDING LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR MAINTAINING

#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03



THE FALLS ON REFUGEE ROAD
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA



Moody Nolan

300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

CERT. NO: FIRM 00197475

DRAWING TITLE

OVERALL STAKING PLAN

05/01/2025

23446

C101

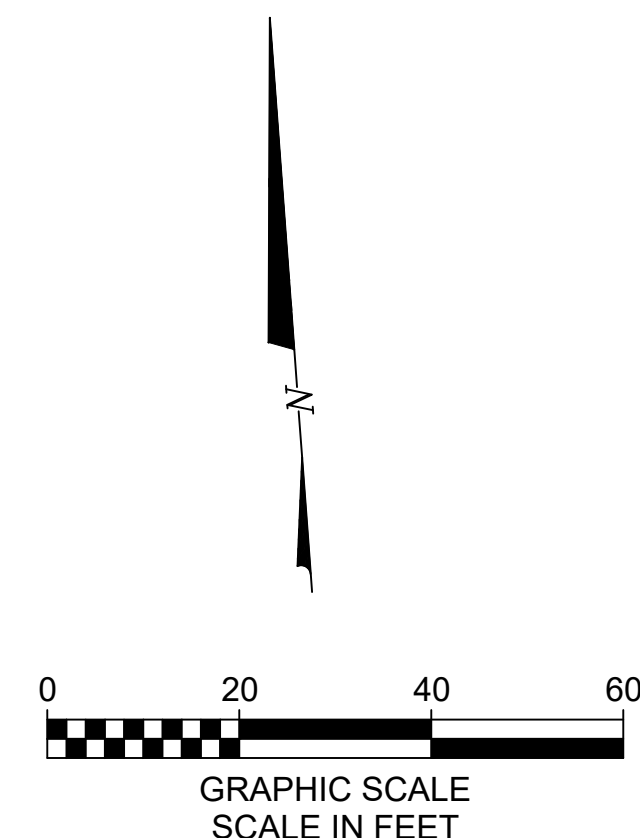
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PROGRESS
DRAWING
NOT FOR
CONSTRUCTION



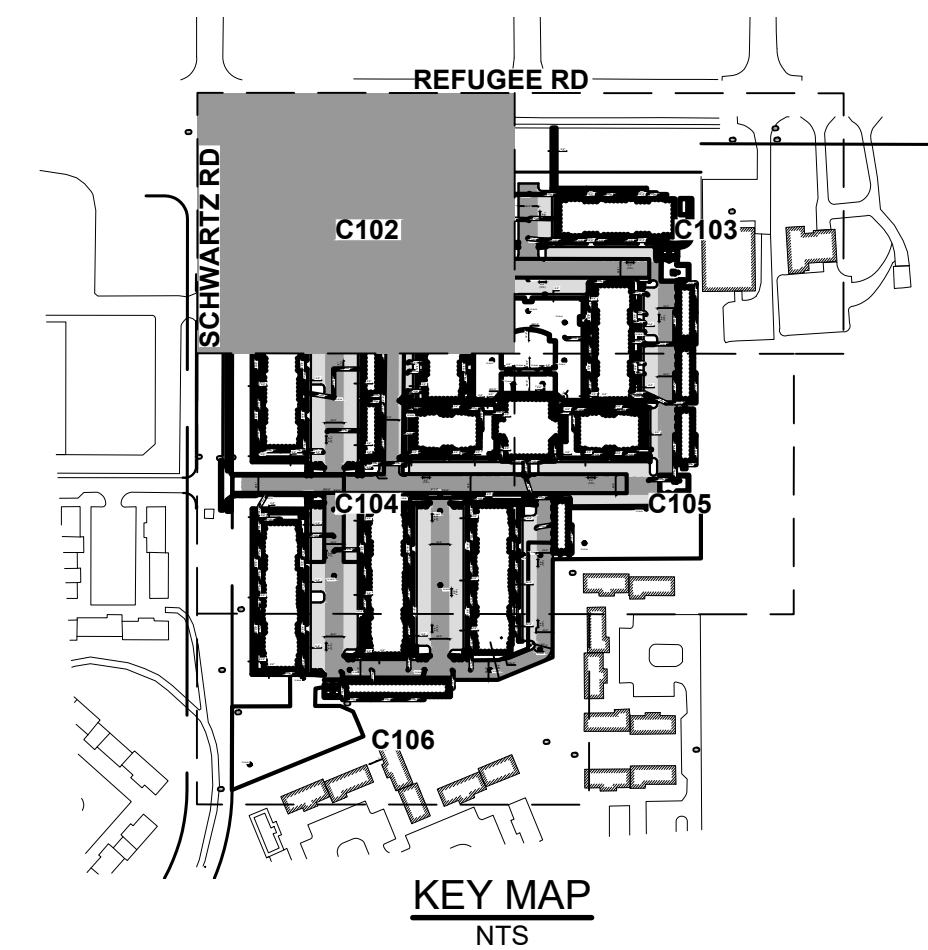
KORDA / NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	EAM
DESIGNED BY:	EAM
CHECKED BY:	EJW
PROJECT NUMBER:	2022-0431



	RIGHT-OF-WAY
	EASEMENT
	BUILDING/WALL
	STRAIGHT CURB PER DETAIL C/107
	PAVEMENT/WALK
	FENCE PER LANDSCAPING PLANS
	PAINTED WHEELCHAIR SYMBOL
	HANDICAPPED PARKING SIGN PER DETAIL B/C108
	BOLLARD, PER DETAIL C/C108
	HEAVY DUTY ASPHALT PER DETAIL B/C107
	LIGHT DUTY ASPHALT PER DETAIL A/C107
	CONCRETE SIDEWALK PER COC STD. DWG. 2300
	HEAVY DUTY CONCRETE PAVEMENT PER DETAIL C/C107
	DETECTABLE WARNING PER COC STD. DWG. 2319 AND CMSC 608.

1. SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES. MATCH EXISTING PAVEMENT GRADE AT THIS POINT.
2. BOLLARD, PER DETAIL C/C108, (4) TYP.
3. PROPOSED REFUSE ENCLOSURE. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
4. SITE SIGN, REFER TO ARCHITECTURAL PLANS FOR DETAILS.



#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03



THE FALLS ON REFUGEE ROAD
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA



Moody Nolan

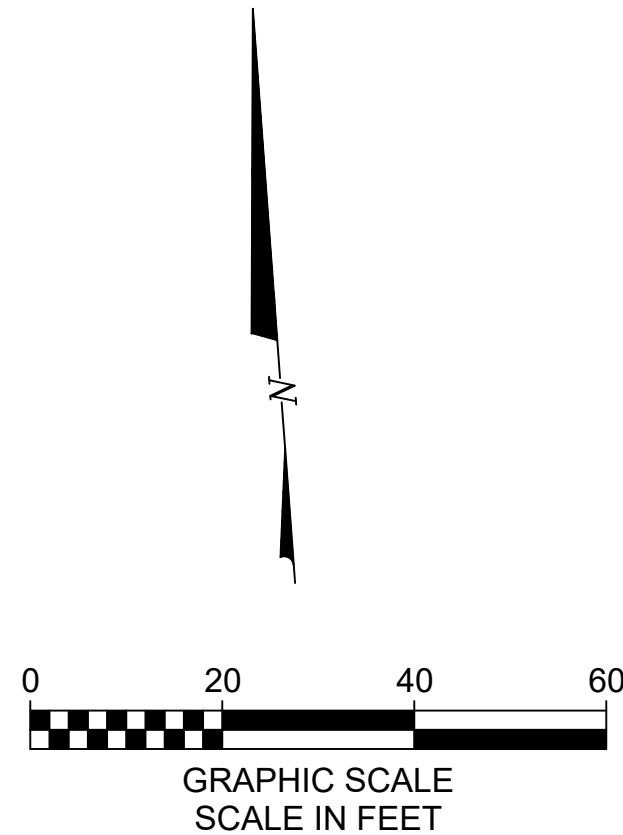
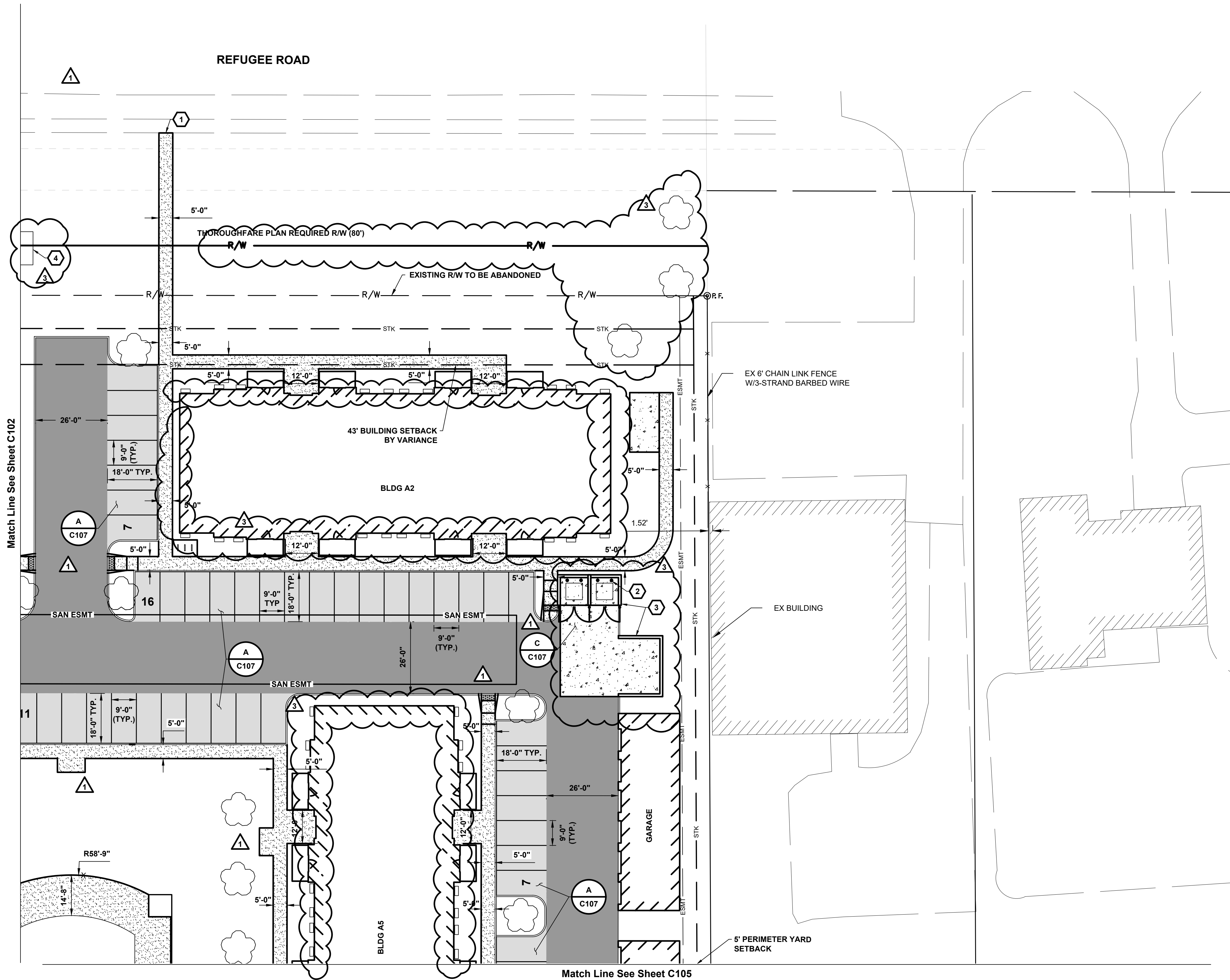
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

CERT. NO: FIRM 00197475

DRAWING TITLE:

STAKING PLAN

	05/01/2025
	23446
	C102
	CD PROGRESS SET



STAKING LEGEND

EXISTING

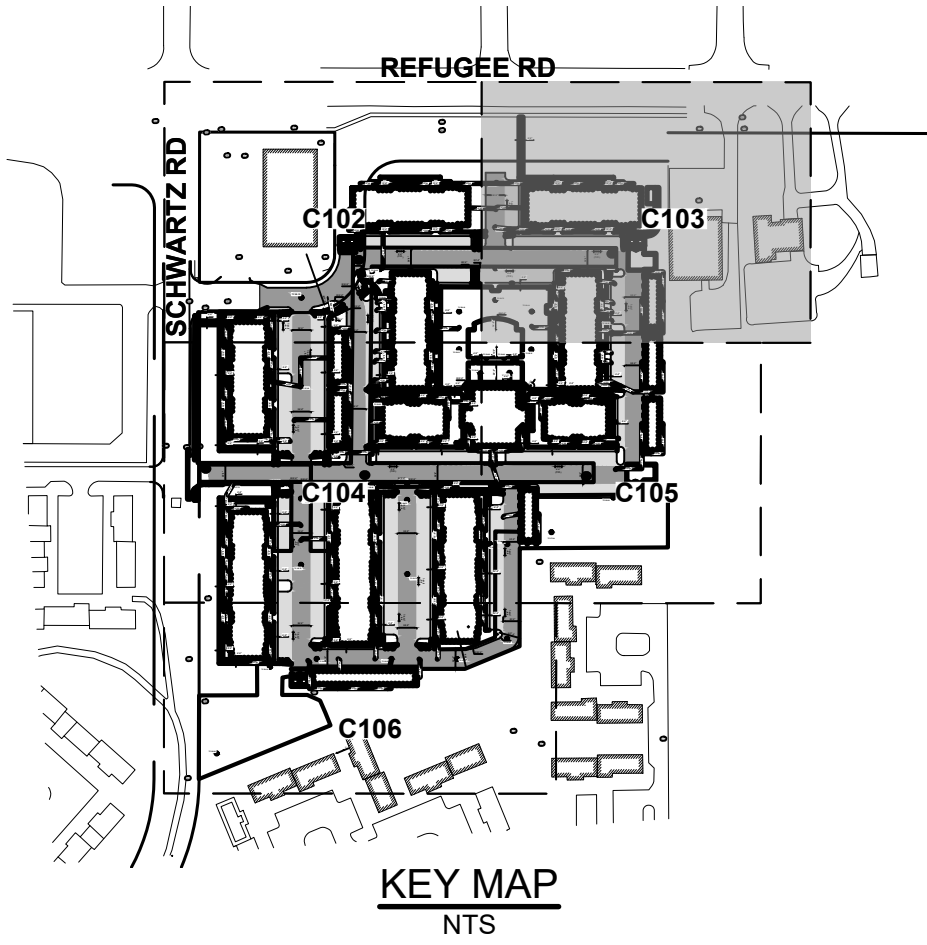
REFER TO SHEET TS1

PROPOSED

- R/W RIGHT-OF-WAY
- ESMT EASEMENT
- BUILDING/WALL
- STRAIGHT CURB PER DETAIL E & U/C107
- PAVEMENT/WALK
- FENCE PER LANDSCAPING PLANS
- PAINTED WHEELCHAIR SYMBOL
- Hc HANDICAPPED PARKING SIGN PER DETAIL B/C108
- BOLLARD, PER DETAIL C/C108
- HEAVY DUTY ASPHALT PER DETAIL B/C107
- LIGHT DUTY ASPHALT PER DETAIL A/C107
- CONCRETE SIDEWALK PER COC STD. DWG. 2300
- HEAVY DUTY CONCRETE PAVEMENT PER DETAIL C/C107
- DETECTABLE WARNING PER COC STD. DWG. 2319 AND CMSC 608.

CODED NOTES:

- SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES. MATCH EXISTING PAVEMENT GRADE AT THIS POINT.
- BOLLARD, PER DETAIL C/C108. (4) TYP.
- PROPOSED REFUSE ENCLOSURE. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
- SITE SIGN, REFER TO ARCHITECTURAL PLANS FOR DETAILS.



#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

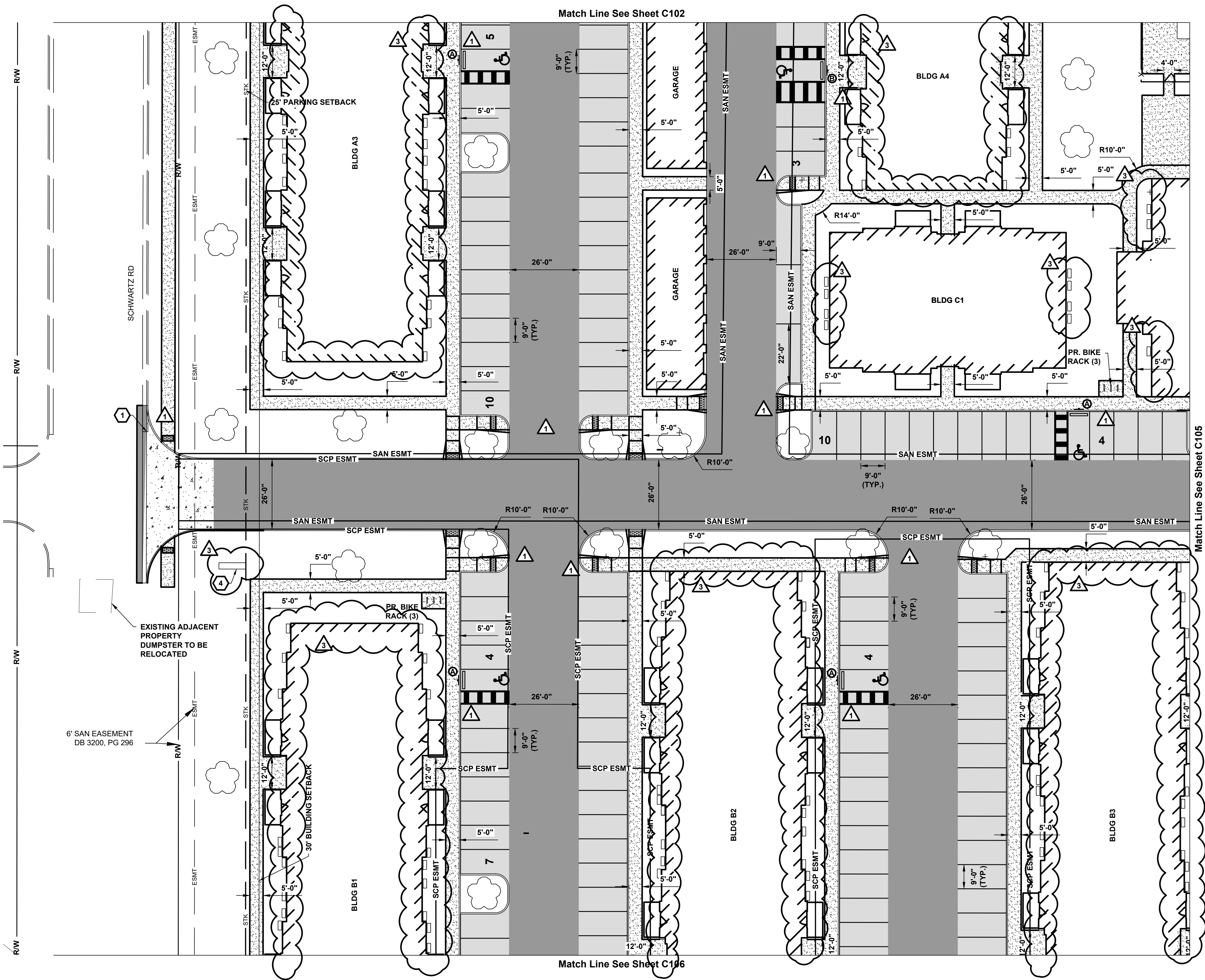
Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:

STAKING PLAN

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	C103
	CD PROGRESS SET

KORDA
KORDA, NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EAM
PROJECT NUMBER: 2022-0431



STAKING LEGEND

EXISTING

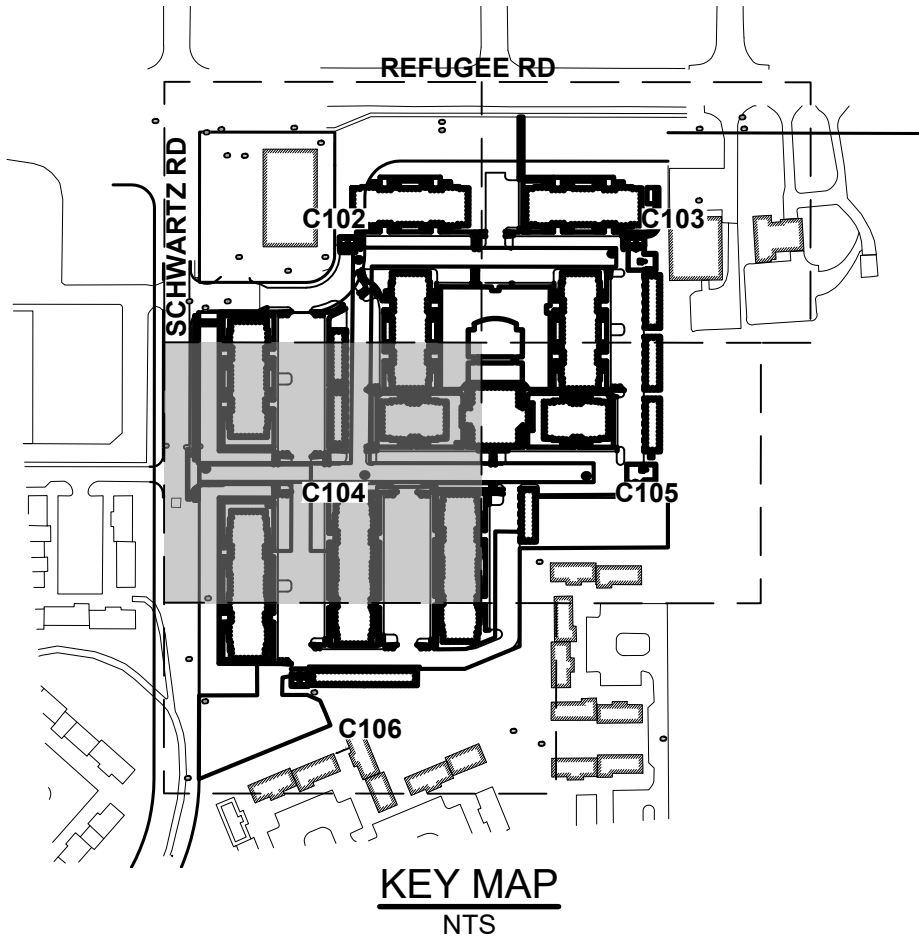
REFER TO SHEET C101

PROPOSED

	RIGHT-OF-WAY
	EASEMENT
	BUILDING/WALL
	STRAIGHT CURB PER DETAIL E & U/C107
	PAVEMENT/WALK
	FENCE PER LANDSCAPING PLANS
	PAINTED WHEELCHAIR SYMBOL
	HANDICAPPED PARKING SIGN PER DETAIL B/C108
	HEAVY DUTY ASPHALT PER DETAIL B/C107
	LIGHT DUTY ASPHALT PER DETAIL A/C107
	CONCRETE SIDEWALK PER COC STD. DWG. 2300
	HEAVY DUTY CONCRETE PAVEMENT PER DETAIL C/C107
	DETECTABLE WARNING PER COC STD. DWG. 2319 AND CMSC 608.

CODED NOTES:

1. SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES. MATCH EXISTING PAVEMENT GRADE AT THE POINT.
2. BOLLARD, PER DETAIL C/C108. (4) TYP.
3. PROPOSED REFUSE ENCLOSURE. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
4. SITE SIGN, REFER TO ARCHITECTURAL PLANS FOR DETAILS.



#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	08/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

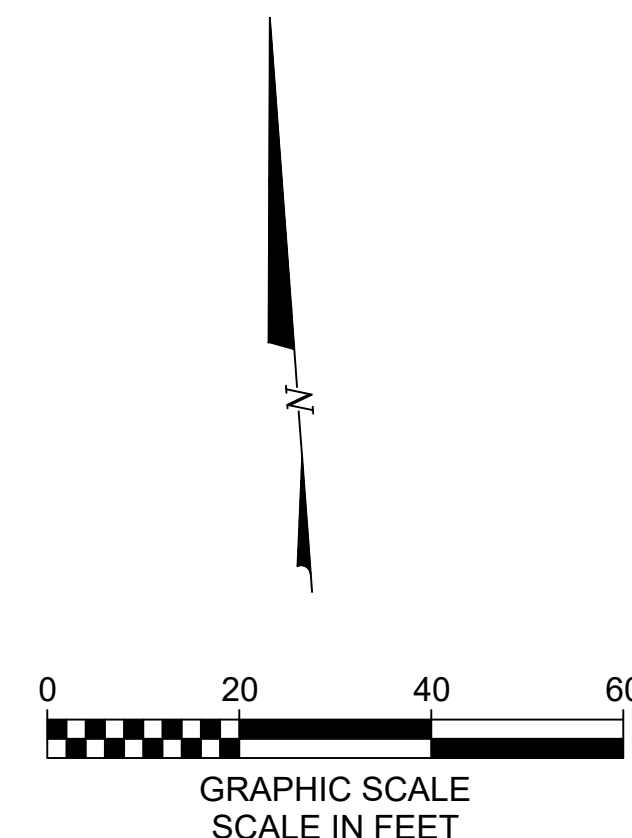
Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:

STAKING PLAN

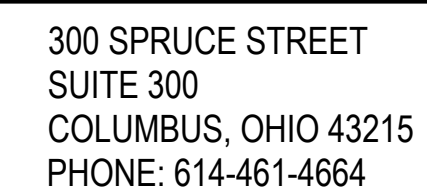
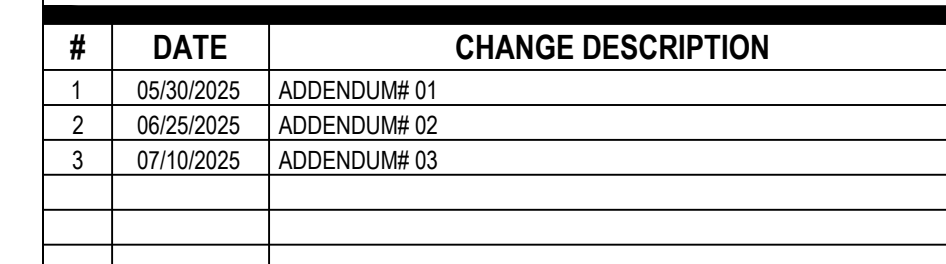
	05/01/2025
	23446
	C104
	CD PROGRESS SET

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EAM
PROJECT NUMBER: 2022-0431



DETECTABLE WARNING PER COC STD.
DWG. 2319 AND CMSC 608.

1. SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES MATCH EXISTING PAVEMENT GRADE AT THIS POINT.
2. BOLLARD, PER DETAIL C/C108 (4) TYP.
3. PROPOSED REFUSE ENCLOSURE. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
4. SITE SIGN, REFER TO ARCHITECTURAL PLANS FOR DETAILS.

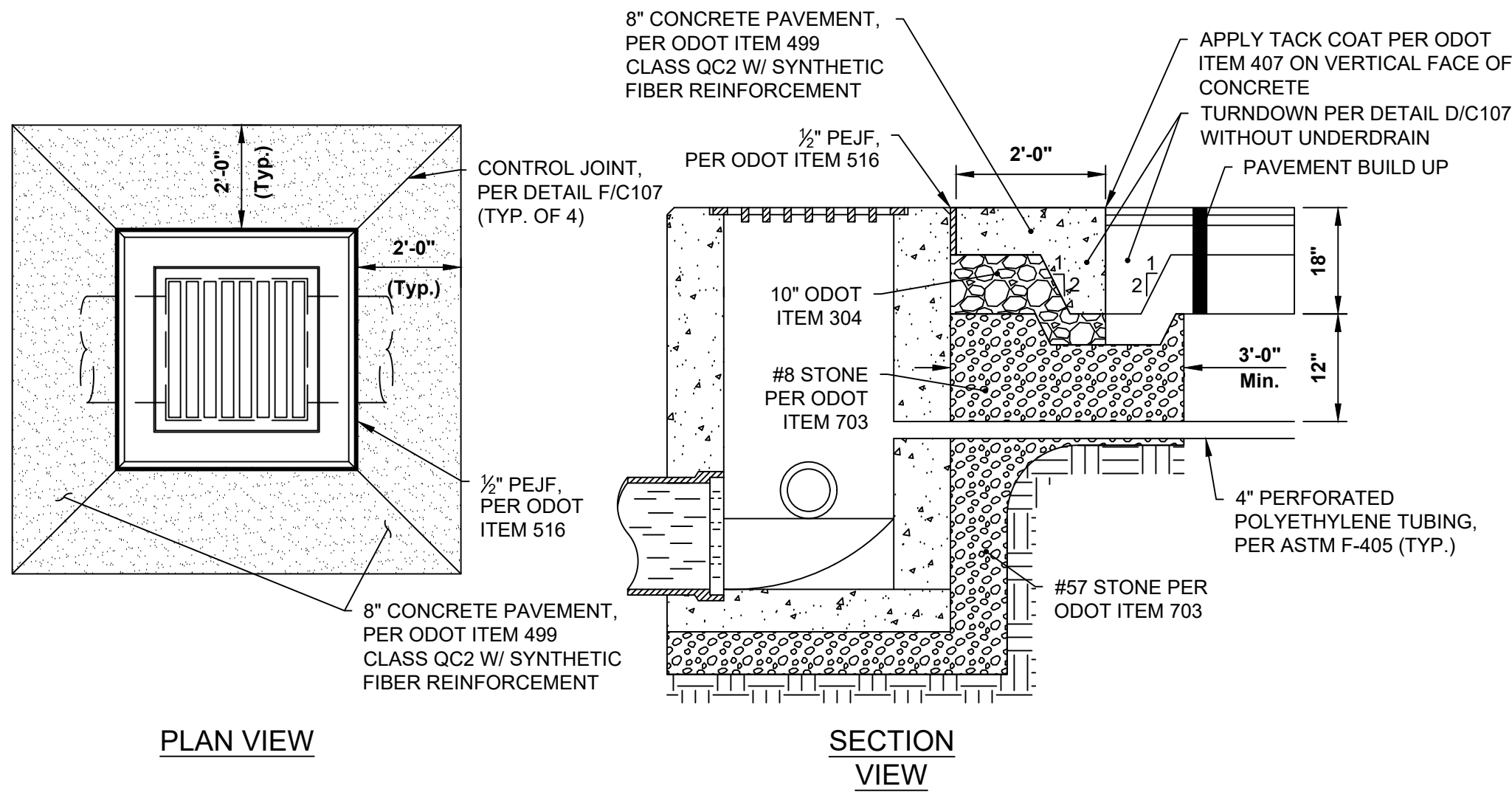


CERT. NO: FIRM 00197475

23446

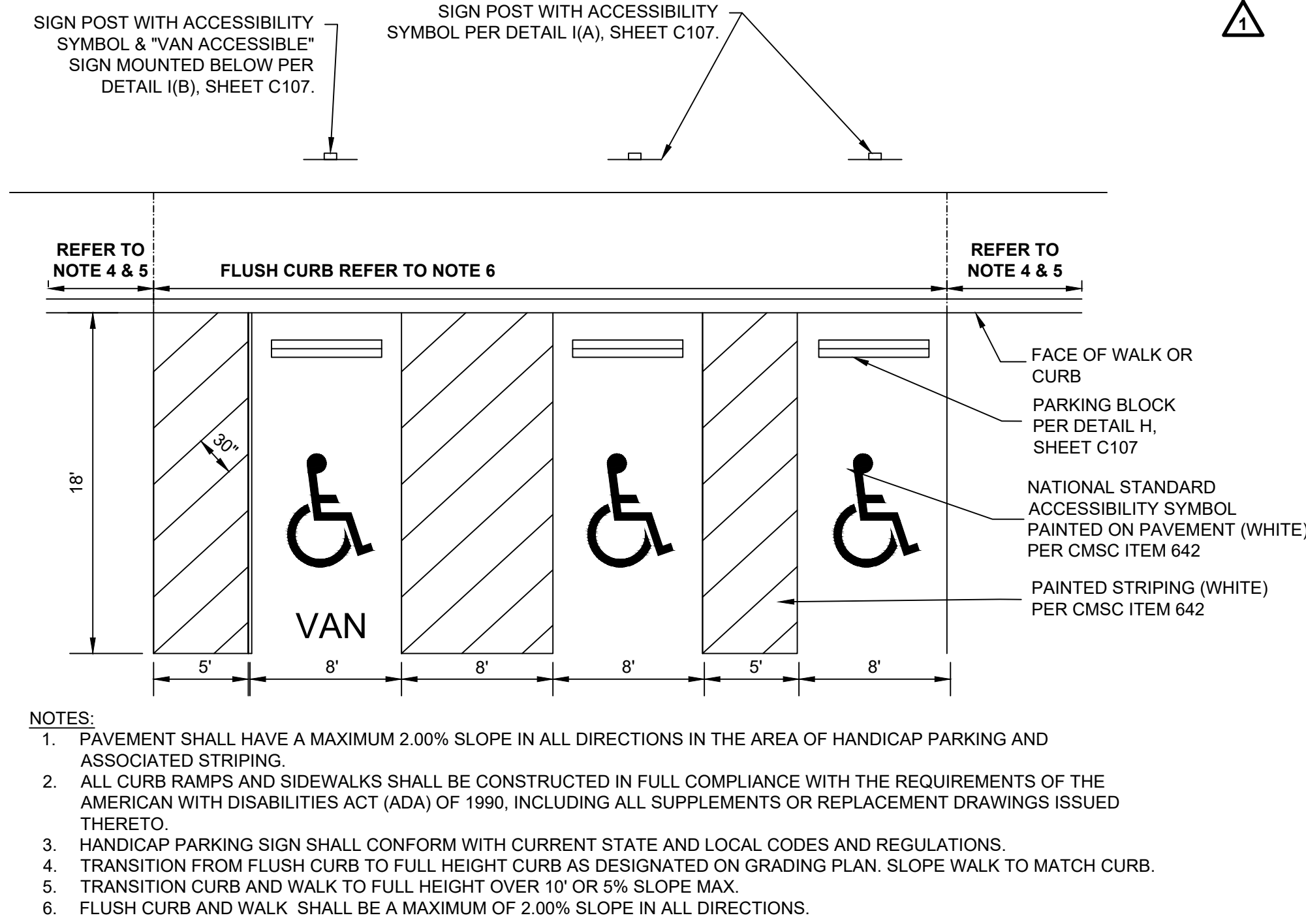
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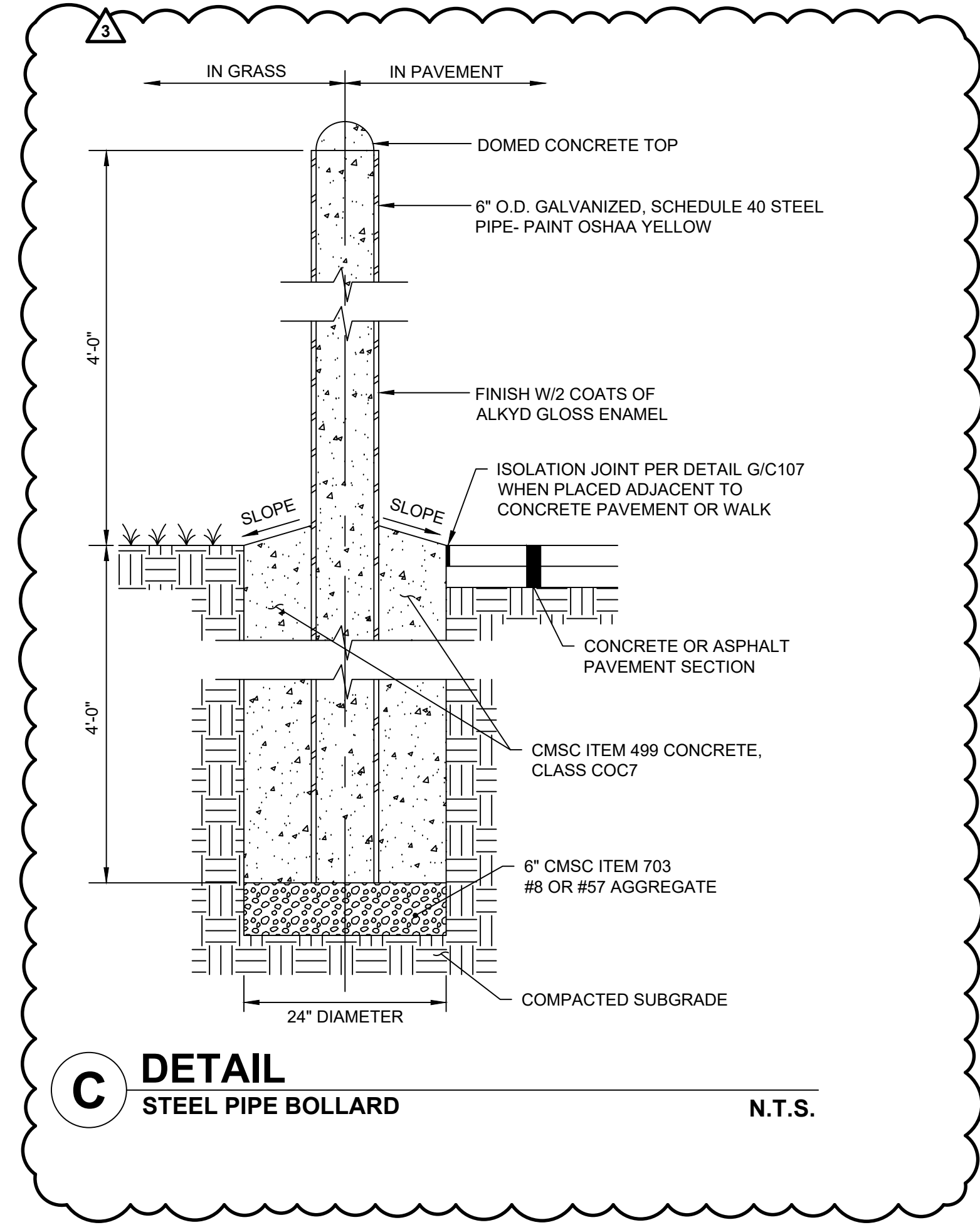


- NOTES:
1. SYNTHETIC FIBER REINFORCEMENT: ASTM C1116-97 AND ASTM C1018-97. ACCEPTABLE PRODUCTS INCLUDE:
 - a. NYCON NYLON FIBERS
 - b. FORTA NYLO-MONO FIBERS
 - c. FIBERMESH FIBERMIX STEALTH POLYPROPYLENE FIBERS
 - d. GRACE POLYPROPYLENE FIBERSSYNTHETIC FIBER REINFORCEMENT SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DOSAGE RATE SHALL BE AS RECOMMENDED BY THE MANUFACTURER, BUT NOT LESS THAN 1 POUND PER CUBIC YARD.
 2. DISSIPATING CURING COMPOUND: COMPLY WITH ASTM C309-98A, TYPE 1, CLASS B (CLEAR), EXCEPT MOISTURE LOSS NOT TO EXCEED 0.40 KG/M² IN 72 HOURS. COMPOUND SHALL COMPLY WITH EPA'S VOC REQUIREMENTS. APPLY AT THE MANUFACTURER'S WRITTEN RECOMMENDED APPLICATION RATE. COMPLETELY REMOVE CURING COMPOUND PRIOR TO APPLICATION OF PENETRATING SEALER.
 3. PENETRATING SEALER: ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO:
 - a. L&M CONSTRUCTION CHEMICALS - AQUAPEL PLUS 40
 - b. PROSOSSO - SALTGUARD WB
 - c. HULS AMERICA INC. - CHEM-TRETE BSM 40
 - d. MASTER BUILDERS INC. - MASTERSEAL SL 40
 - e. LYMTAL INTERNATIONAL - ISO-FLEX 618-50 WB
 - f. BASF - ENVIROSEAL 40 OR HYDROZO SILANE 40
 - g. TEX-COTE - RAINSTOPPER RS140
 4. PROVIDE CONCRETE COLLAR AT ALL CATCH BASINS AND MANHOLES WITHIN PROPOSED PAVEMENT.

A **DETAIL**
CONCRETE COLLAR AT CATCH BASINS/MANHOLES N.T.S.



B **DETAIL**
ADA PARKING STRIPING N.T.S.



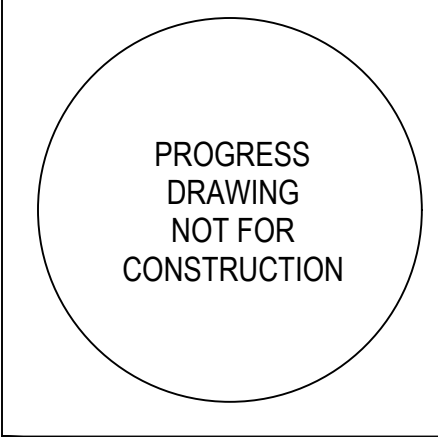
C **DETAIL**
STEEL PIPE BOLLARD N.T.S.

#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

 **THE FALLS ON REFUGEE ROAD**
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

 **Moody Nolan**
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
STAKING DETAILS

	05/01/2025
	23446
	C108
	CD PROGRESS SET



KEY MAP
NTS

EASEMENT REFERENCE				REVISIONS			PLAN PREPARED BY: KORDA KordaNerzeth Engineering, Inc. - Consulting Engineers 9550 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7010 TEL 614-487-1650 • FAX 614-487-9981 • WEB www.korda.com	STORM SEWER & GRADING PLAN	PROJECT TITLE PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR CMHA REFUGEE ROAD 3355 REFUGEE ROAD	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY			
CITY NO.	COUNTY RECORDER	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE	DIVISION USE ONLY				OWNER			
	VOL.		PAGE										

STORM SEWER & GRADING PLAN

PROJECT TITLE

**PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR
CMHA REFUGEE ROAD
3355 REFUGEE ROAD**

**CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE AND DRAINAGE**

DIVISION USE ONLY

DIVISION USE ONLY				OWNER	
				CONTRACTOR	
				INSPECTOR	
				AGREEMENT	
				COMPLETED	
RPD		CKD		CID	
				CON.DR.	
				INDEX DETAIL	
				RECORD FILE	

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CONTRACT DRAWING NO. CC-20647	RECORD PLAN NO.

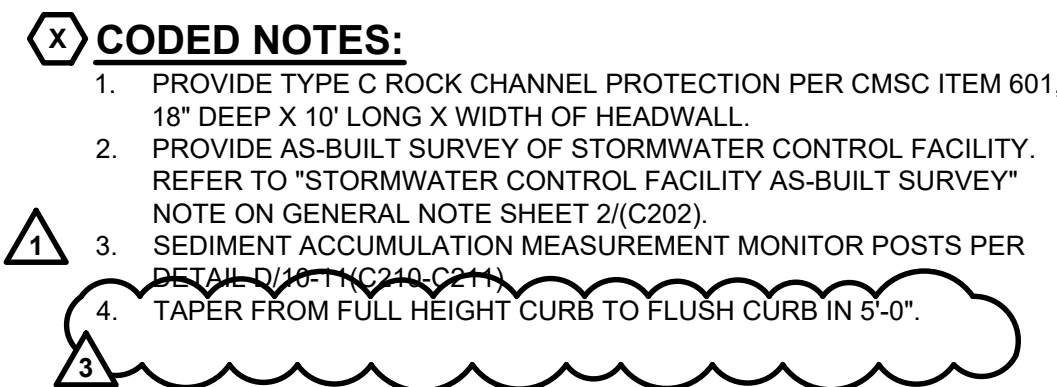
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2	06/23/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

 **THE FALLS ON REFUGEE ROAD**
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA


Moody Nolan
 300 SPRUCE STREET
 SUITE 300
 COLUMBUS, OHIO 43215
 PHONE: 614-461-4664
 CERT. NO: FIRM 00197475

DRAWING TITLE:
STORM SEWER & GRADING PLAN

	05/01/2025
	23446
	C206
	CD PROGRESS SET



A detailed architectural key map of the NTS facility. The map shows a complex arrangement of rooms and corridors. Rooms are labeled with numbers in parentheses: 5(C205), 6(C206), 7(C207), 8(CSM), 9(C208), and 9(C209). The map includes a north arrow pointing towards the top right. A dashed line indicates the boundary of the facility. The map is titled "KEY MAP" in bold, underlined letters, with "NTS" written below it.

PLAN PREPARED BY:

KORDA

Korda/Nemeth Engineering, Inc. - Consulting Engineers
1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7010
TEL. 614-487-1650 • FAX 614-487-8981 • WEB www.korda.com

PROJECT TITLE

**PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR
CMHA REFUGEE ROAD
3355 REFUGEE ROAD**

**CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE AND DRAINAGE**

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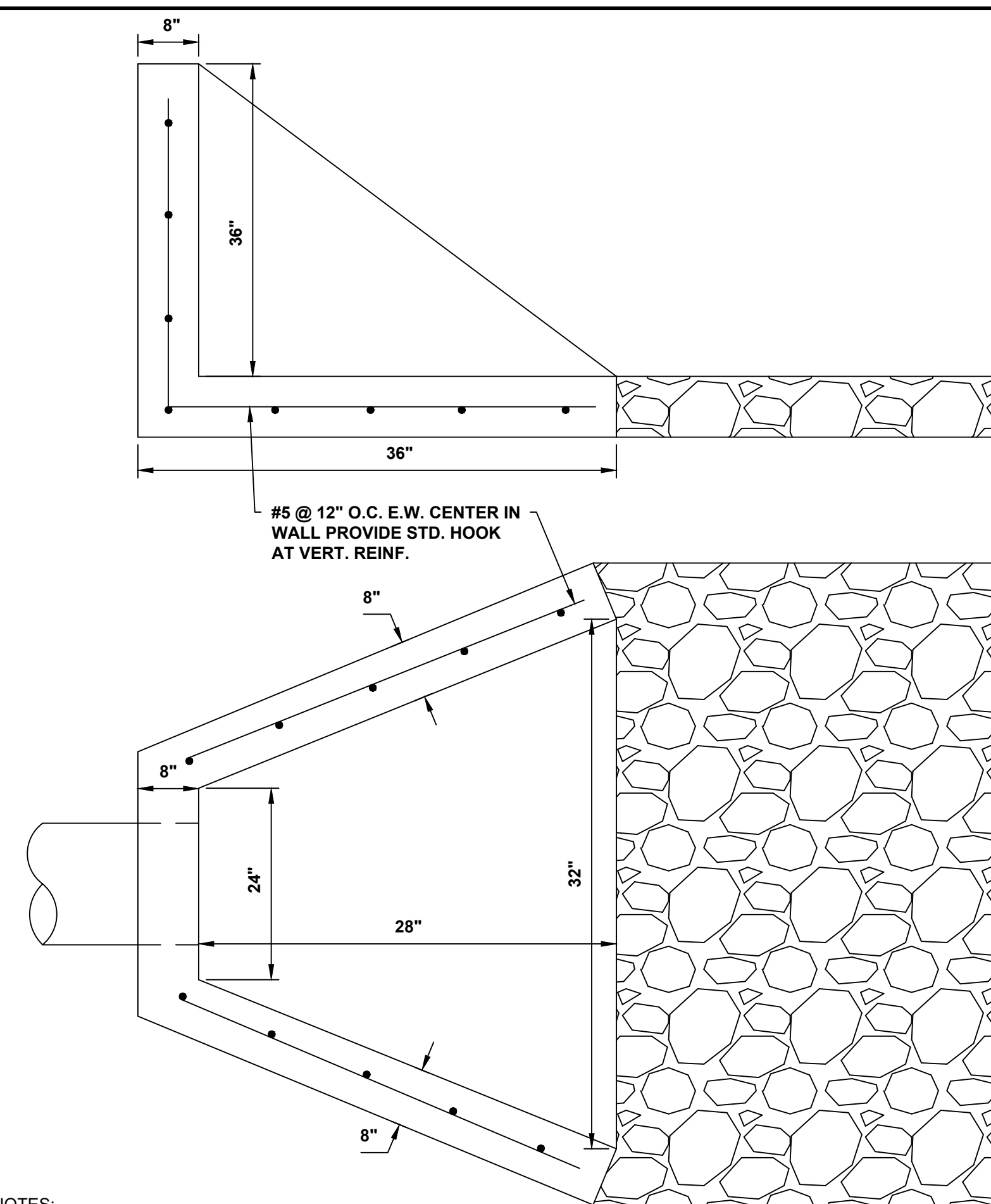
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**COLUMBUS METROPOLITAN
HOUSING AUTHORITY**
 COMMUNITY. COMMITMENT. COLLABORATION.

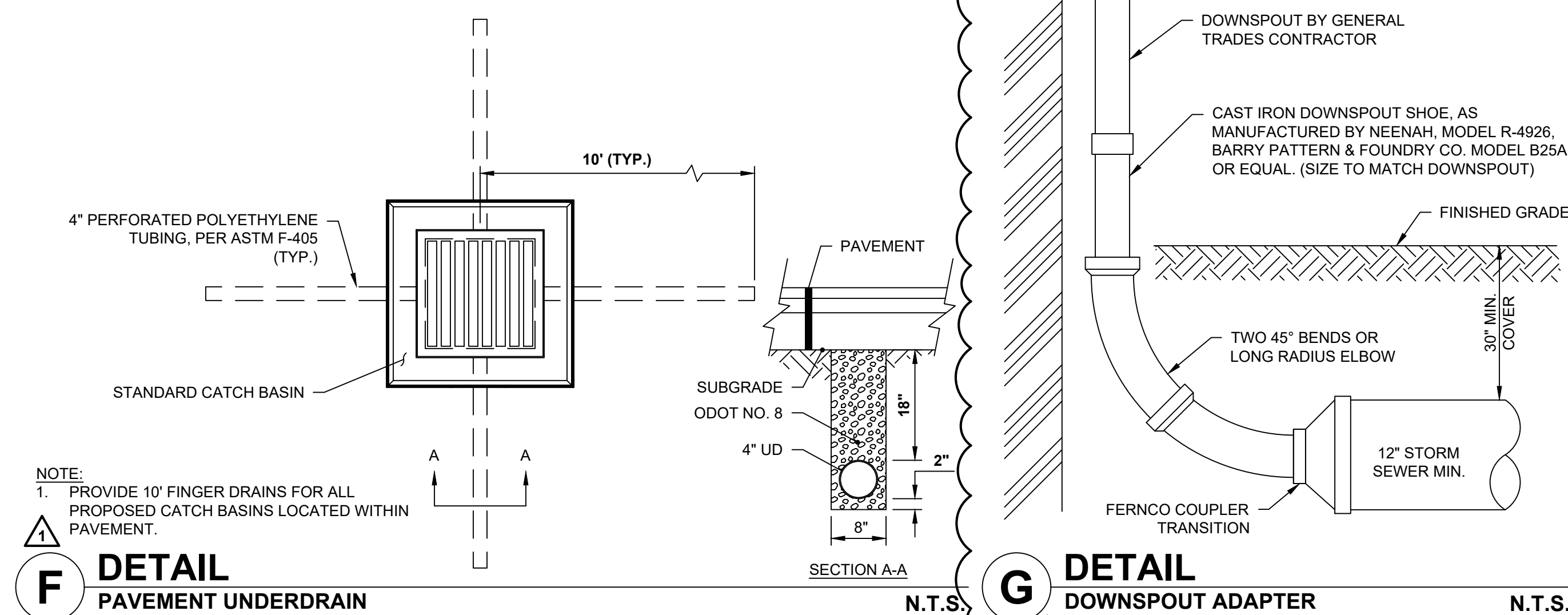
Moody Nolan
 300 SPRUCE STREET
 SUITE 300
 COLUMBUS, OHIO 43215
 PHONE: 614-461-4664
 CERT. NO: FIRM 00197475

DRAWING TITLE:
STORM SEWER & GRADING PLAN

	05/01/2025
	23446
	C208
	CD PROGRESS SET



E **DETAIL**
HEADWALL

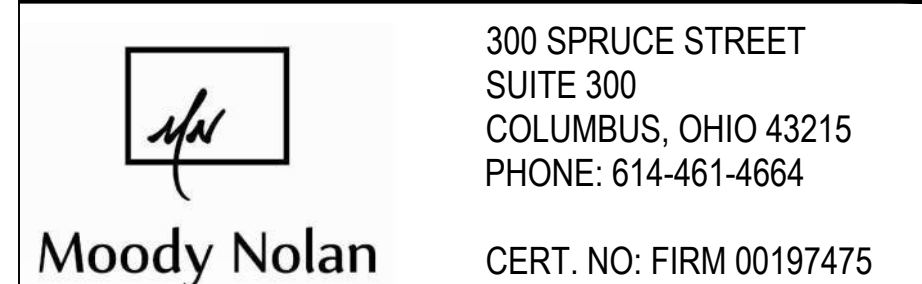
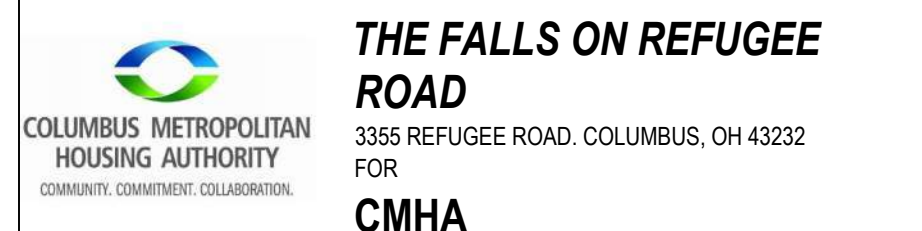


DETAIL
PAVEMENT UNDERDRAIN

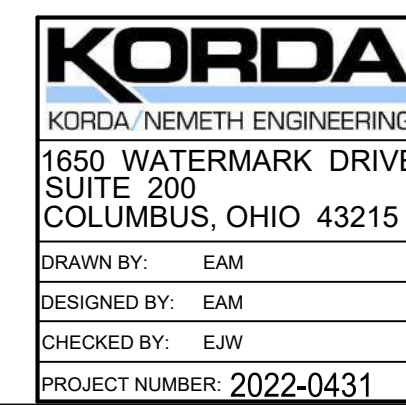
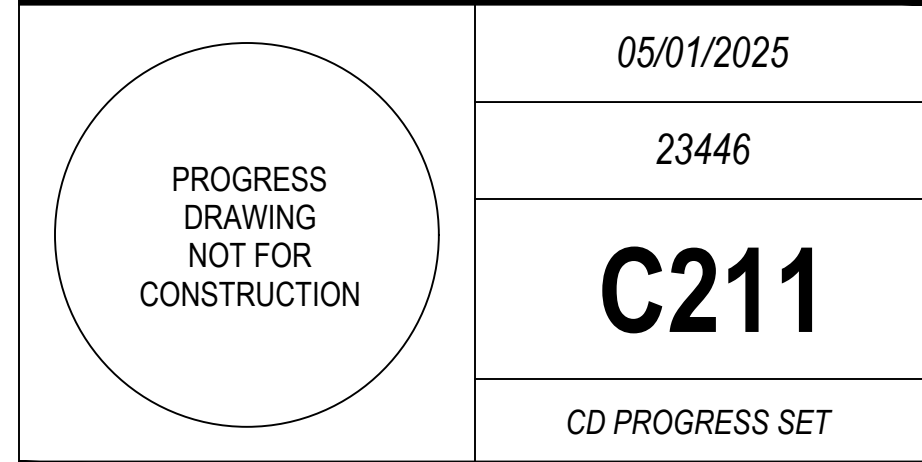
G	DETAIL	
	DOWNSPOUT ADAPTER	N.T.S.

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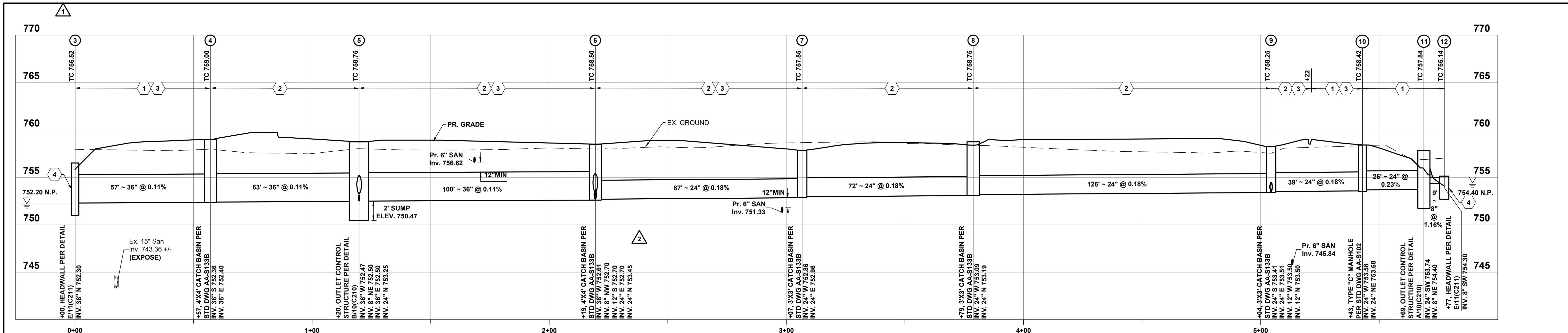
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3	07/10/2025	ADDENDUM# 03



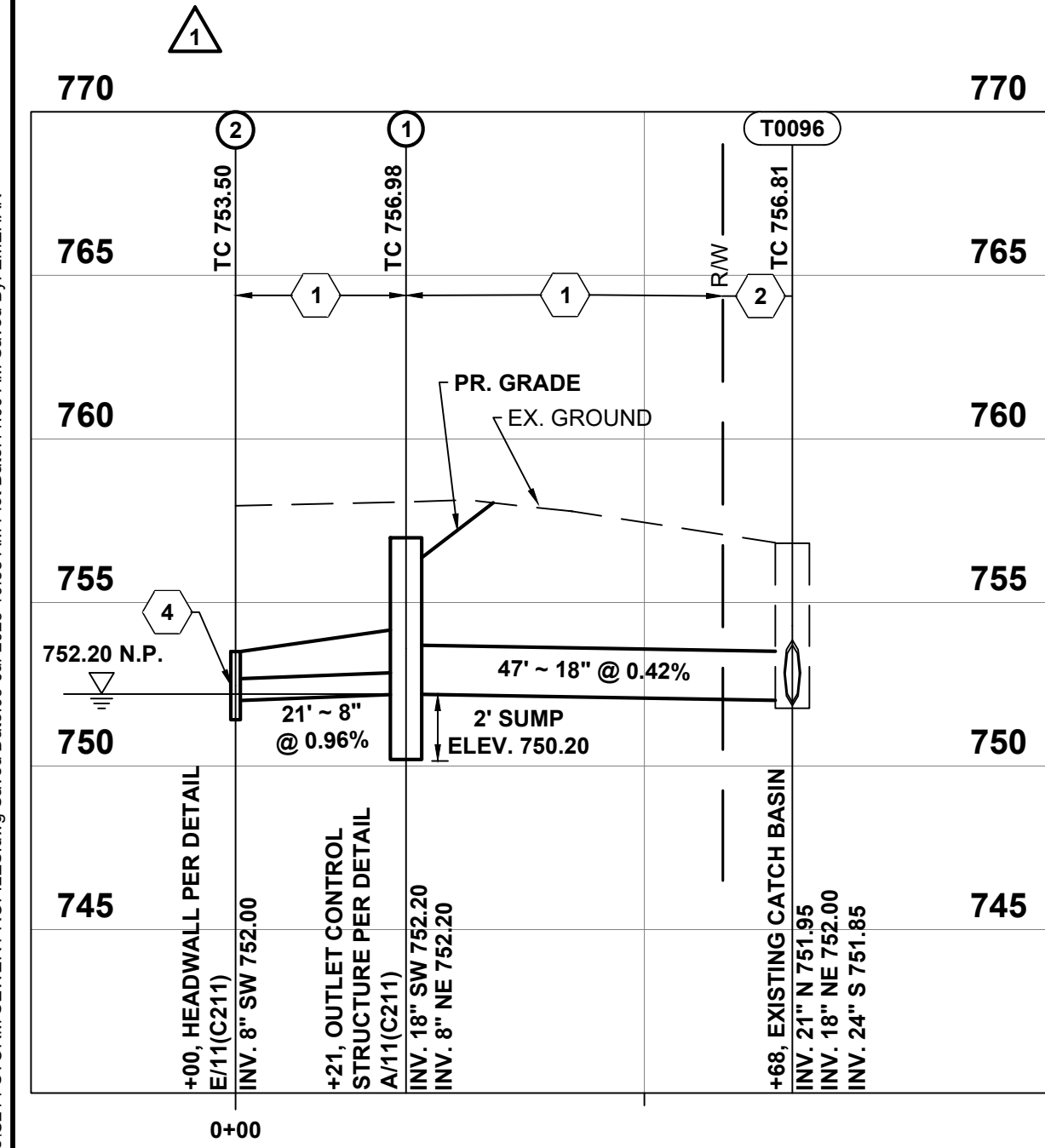
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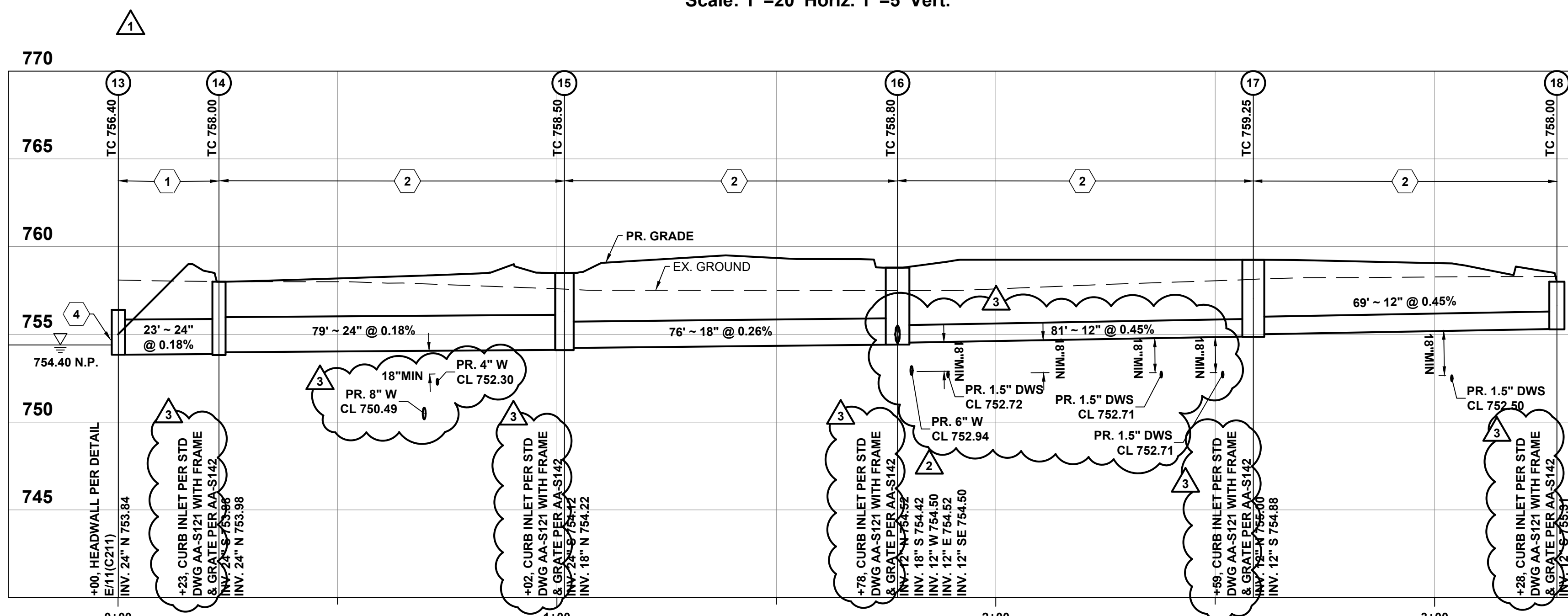
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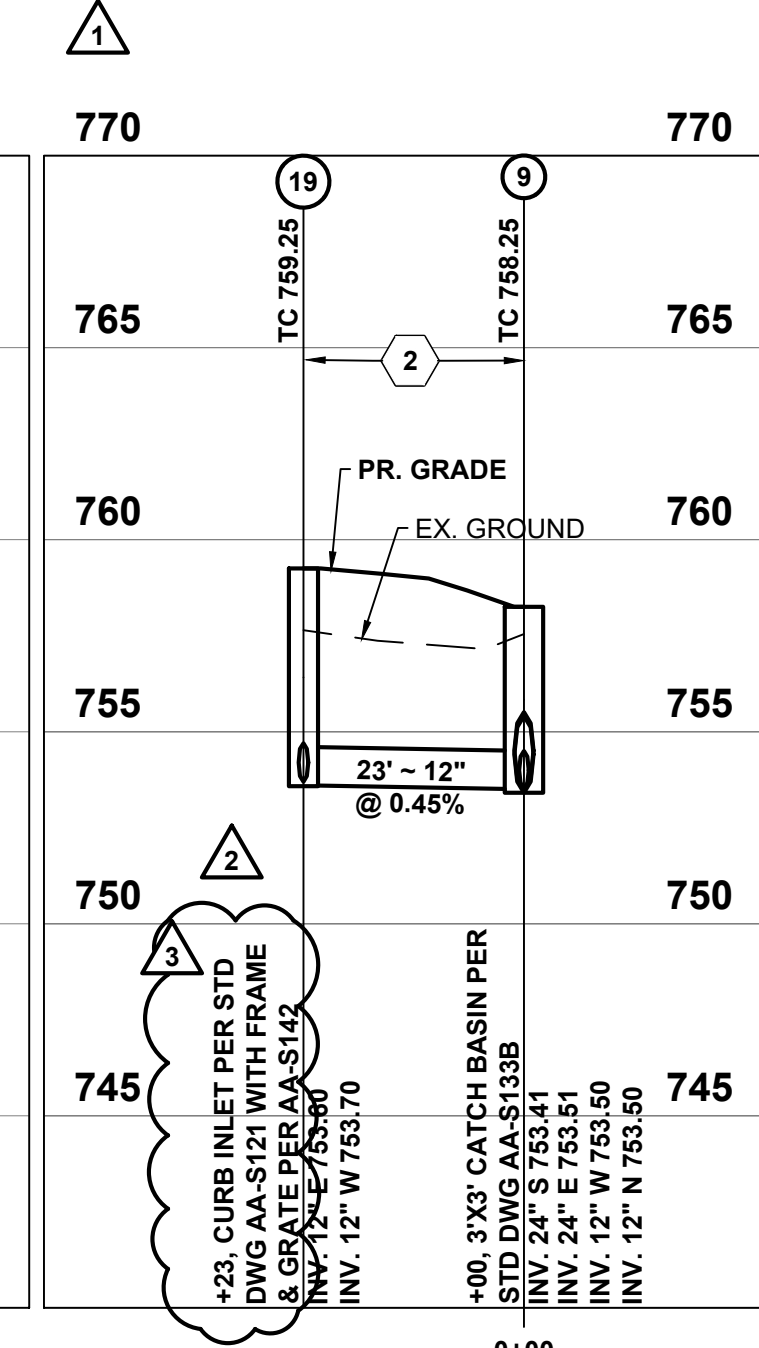
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STORM T0096-2 Profile
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STORM 13-18 Profile
Scale: 1"=20' Horiz. 1"=5' Vert.



STORM 9-19 Profile
Scale: 1"=20' Horiz. 1"=5' Vert.

CODED NOTES:

- BACKFILL WITH COMPACTED BACKFILL PER CMSC ITEM 911
- BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912
- SEWER PIPE TO HAVE WATERTIGHT JOINTS PER CMSC ITEM 901.15 AND TRENCH DAMS PER CMSC ITEM 901
- PROVIDE TYPE C ROCK CHANNEL PROTECTION PER CMSC ITEM 601, 18" DEEP X 10' LONG X WIDTH OF HEADWALL.

EASEMENT REFERENCE				REVISIONS			PLAN PREPARED BY: KORDA Korda/Nemeth Engineering, Inc. - Consulting Engineers 1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7010 TEL 614-487-1650 - FAX 614-487-8981 - WEB www.korda.com	PROJECT TITLE PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR CMHA REFUGEE ROAD 3355 REFUGEE ROAD				CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY			
CITY NO.	COUNTY RECORDER		GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE									
	VOL.	PAGE													
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				INSPECTOR											
				AGREEMENT	COMPLETED										
				RPD	CKD	CID					CON.DR.	CONTRACT DRAWING NO.		SCALE: HORIZ 1" = 20'-0" VERT 1" = 5'-0"	
								INDEX DETAIL	RECORD FILE	CC-20647		RECORD PLAN NO.			

STORM SEWER PROFILES

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2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

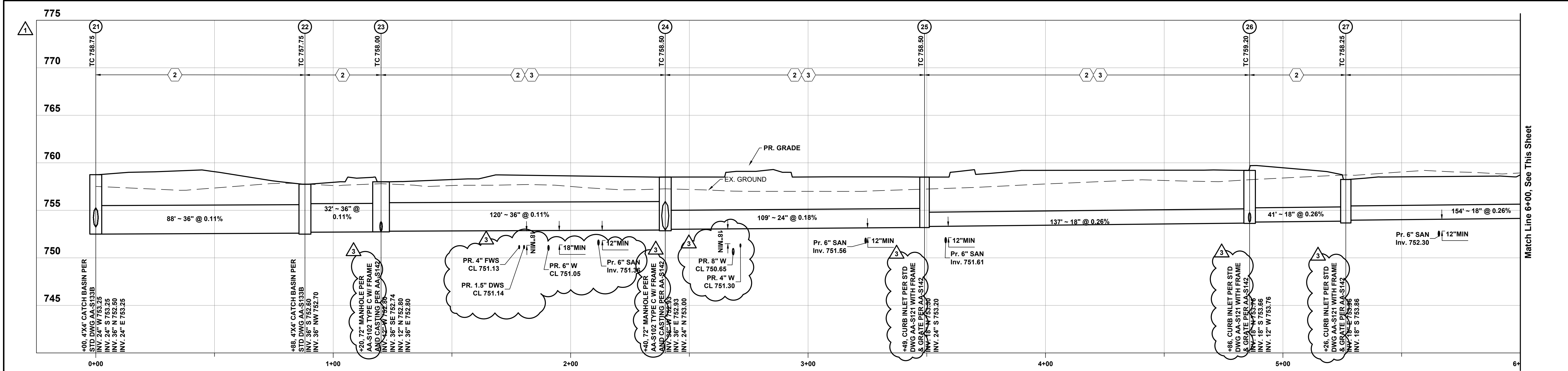
THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

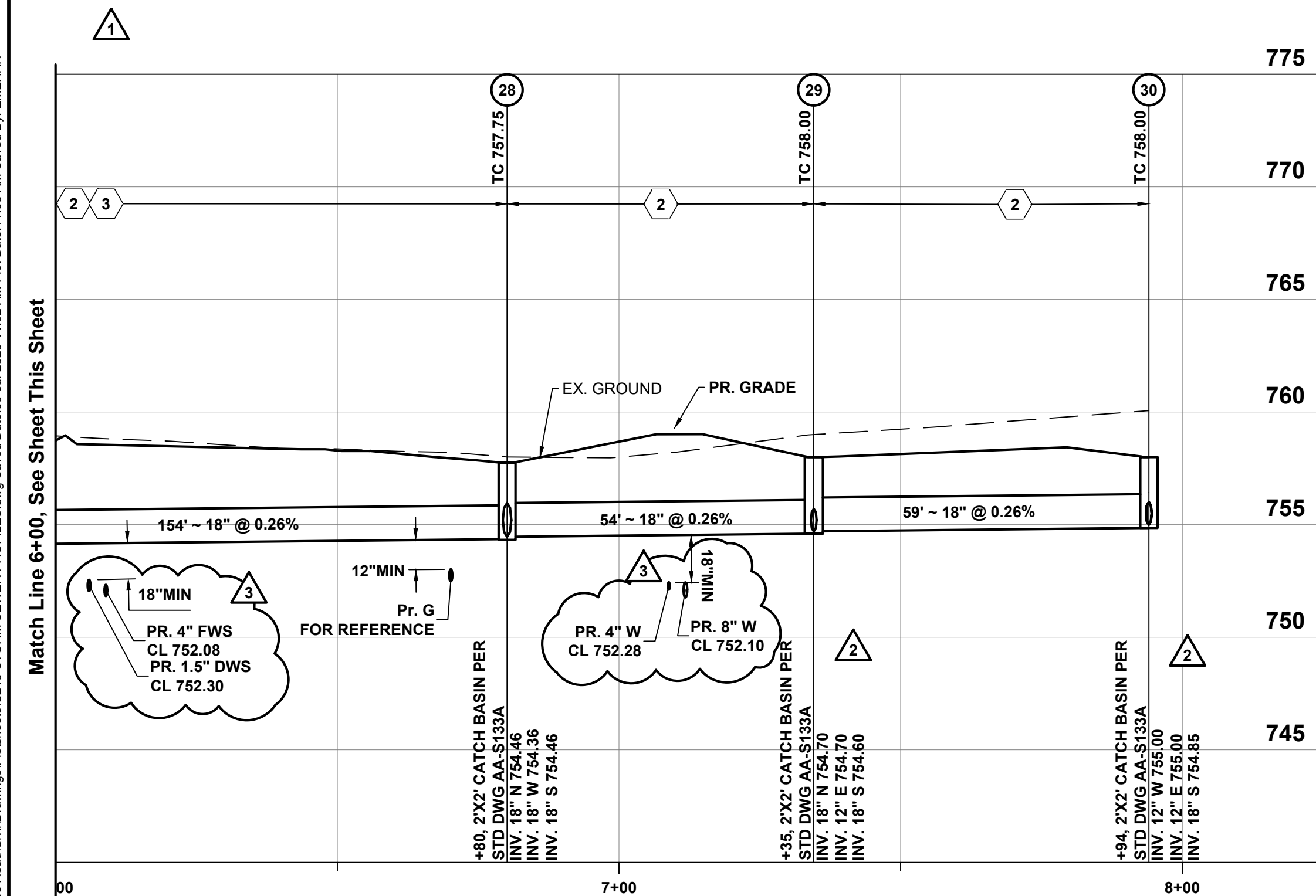
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05/01/2025
23446
C214
CD PROGRESS SET

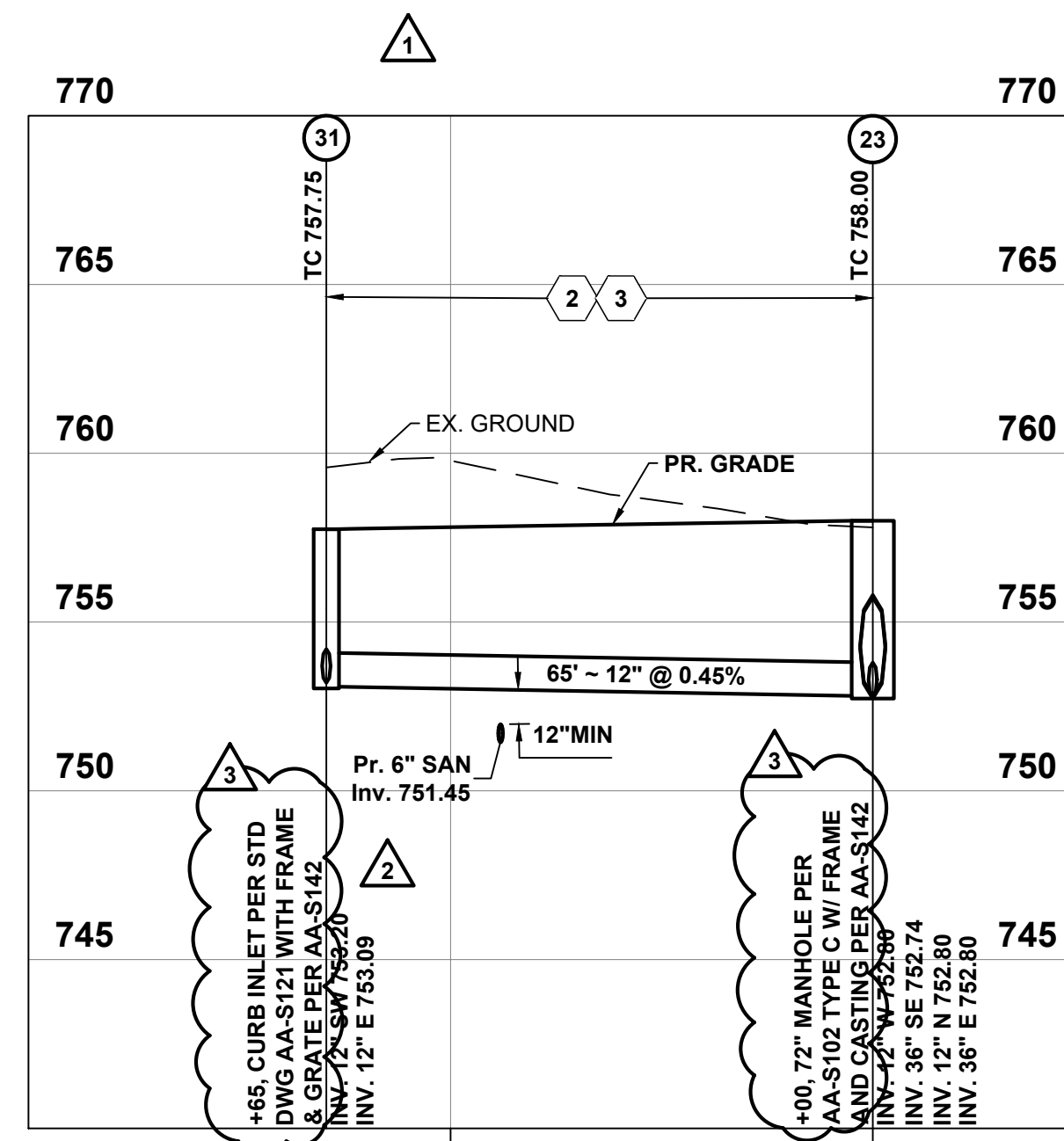
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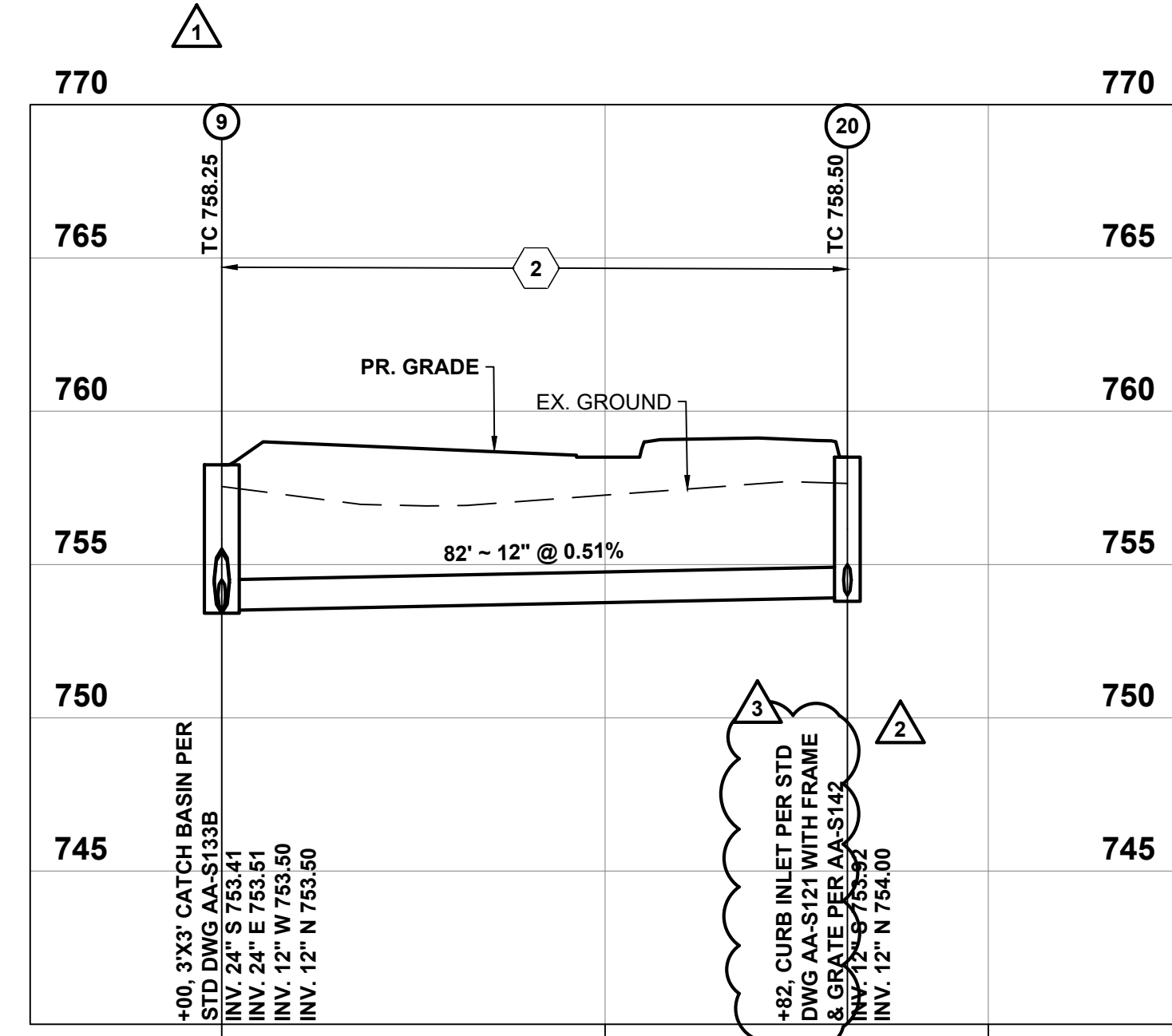
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STORM 21-30 Profile
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STORM 23-31 Profile
Scale: 1"=20' Horiz. 1"=5' Vert.



STORM 9-20 Profile
Scale: 1"=20' Horiz. 1"=5' Vert.

- CODED NOTES:**
- BACKFILL WITH COMPACTED BACKFILL PER CMSC ITEM 911
 - BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912
 - SEWER PIPE TO HAVE WATERTIGHT JOINTS PER CMSC ITEM 901.15 AND TRENCH DAMS PER CMSC ITEM 901.
 - PROVIDE TYPE C ROCK CHANNEL PROTECTION PER CMSC ITEM 601, 18" DEEP X 10' LONG X WIDTH OF HEADWALL.

EASEMENT REFERENCE				REVISIONS			PLAN PREPARED BY: KORDA Korda/Nemeth Engineering, Inc. - Consulting Engineers 1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7010 TEL 614-487-1650 • FAX 614-487-8981 • WEB www.korda.com	STORM SEWER PROFILES	PROJECT TITLE PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR CMHA REFUGEE ROAD 3355 REFUGEE ROAD	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY			
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	VOL.	PAGE								CONTRACTOR		INSPECTOR	
										AGREEMENT	COMPLETED		

#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

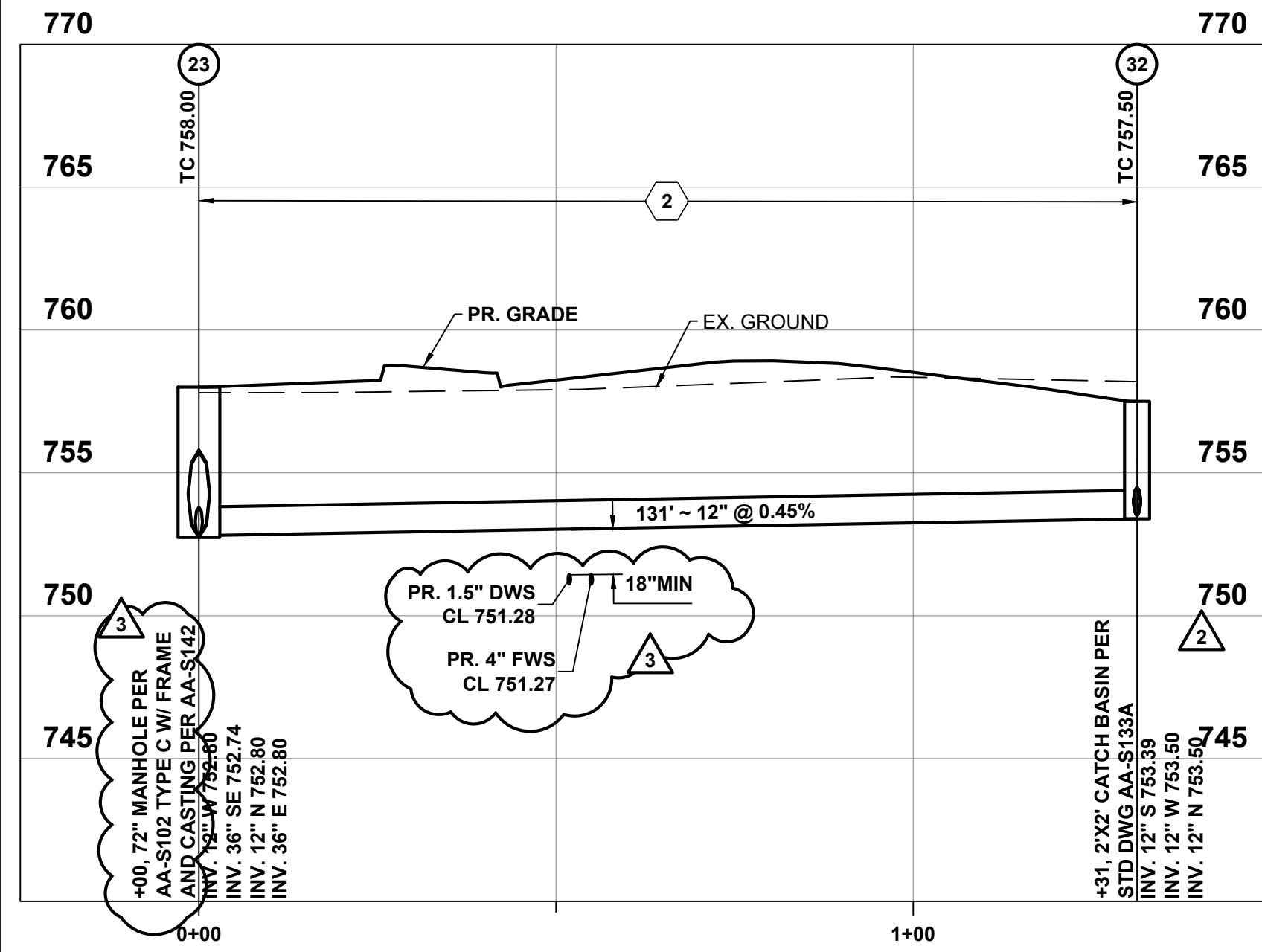
Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
STORM SEWER PROFILES

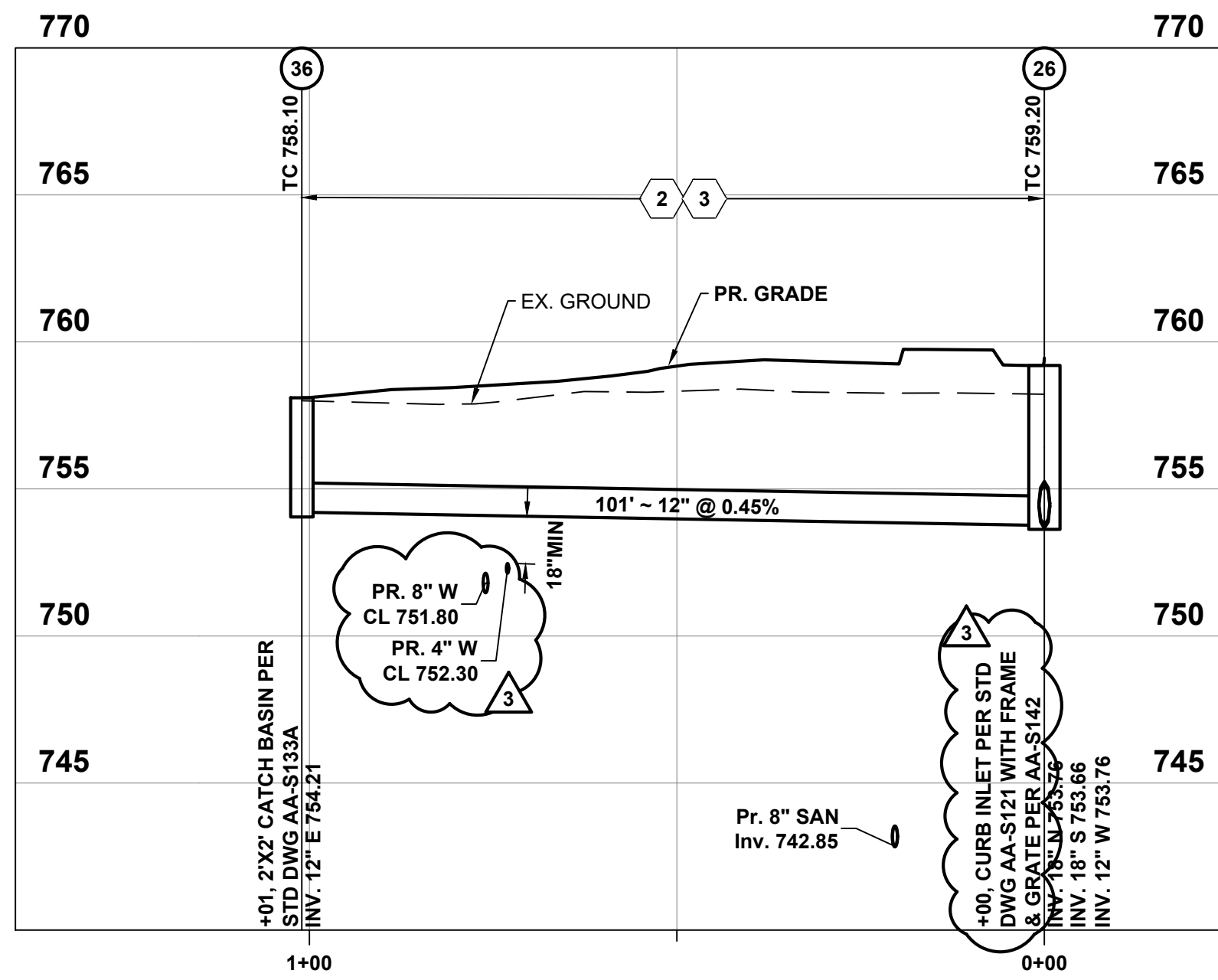
05/01/2025
23446
C215
CD PROGRESS SET

KORDA
KORDA, NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EAM
PROJECT NUMBER: 2022-0431

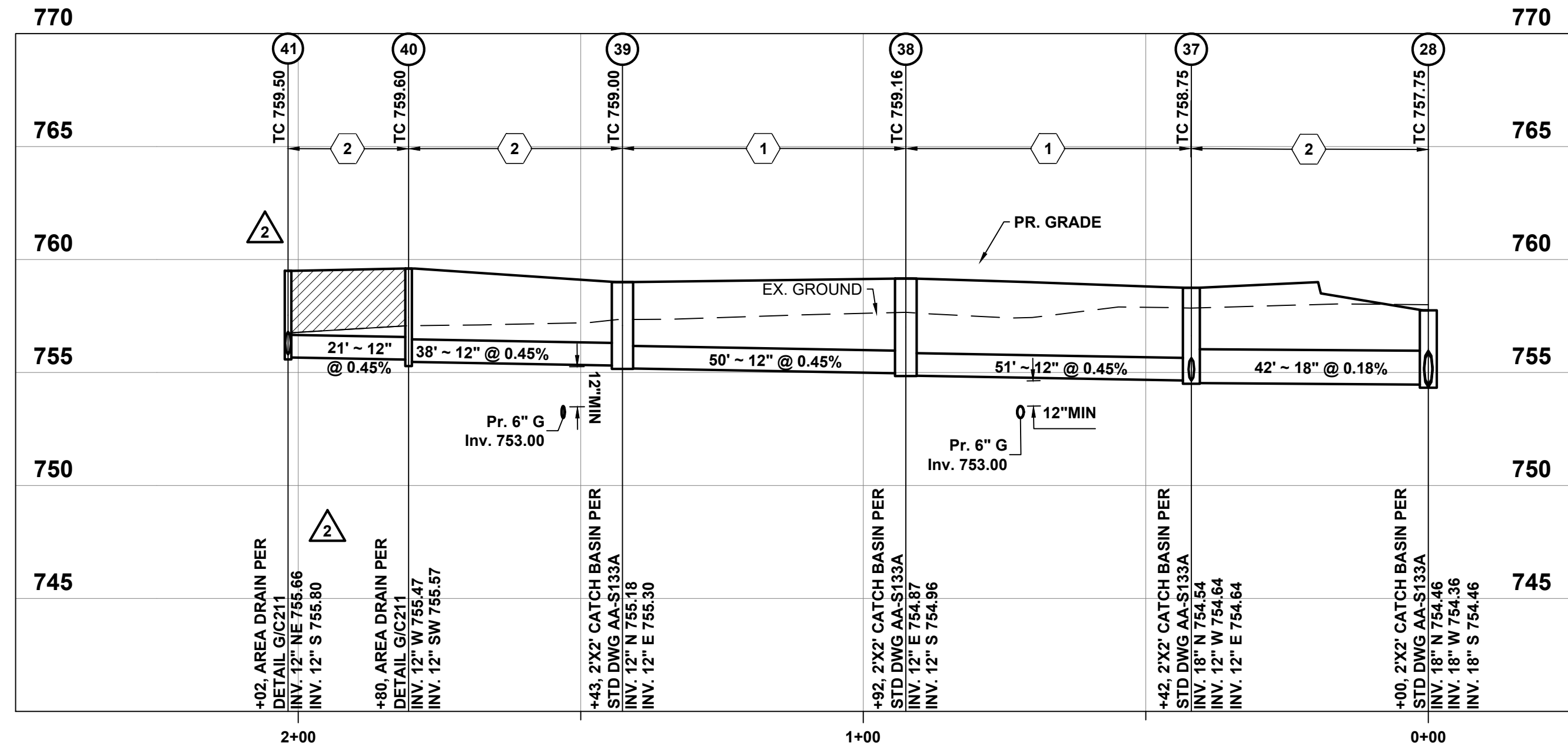
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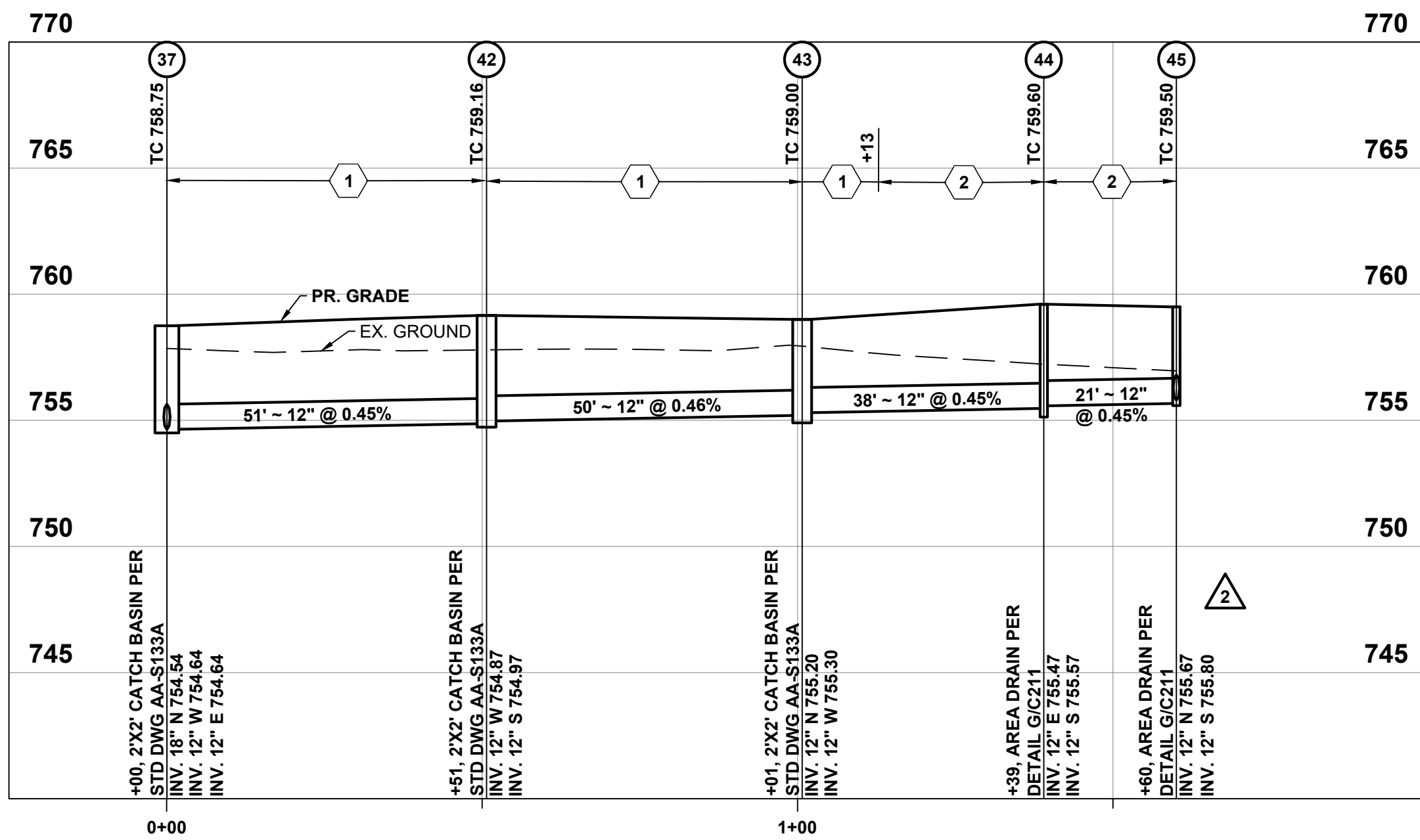
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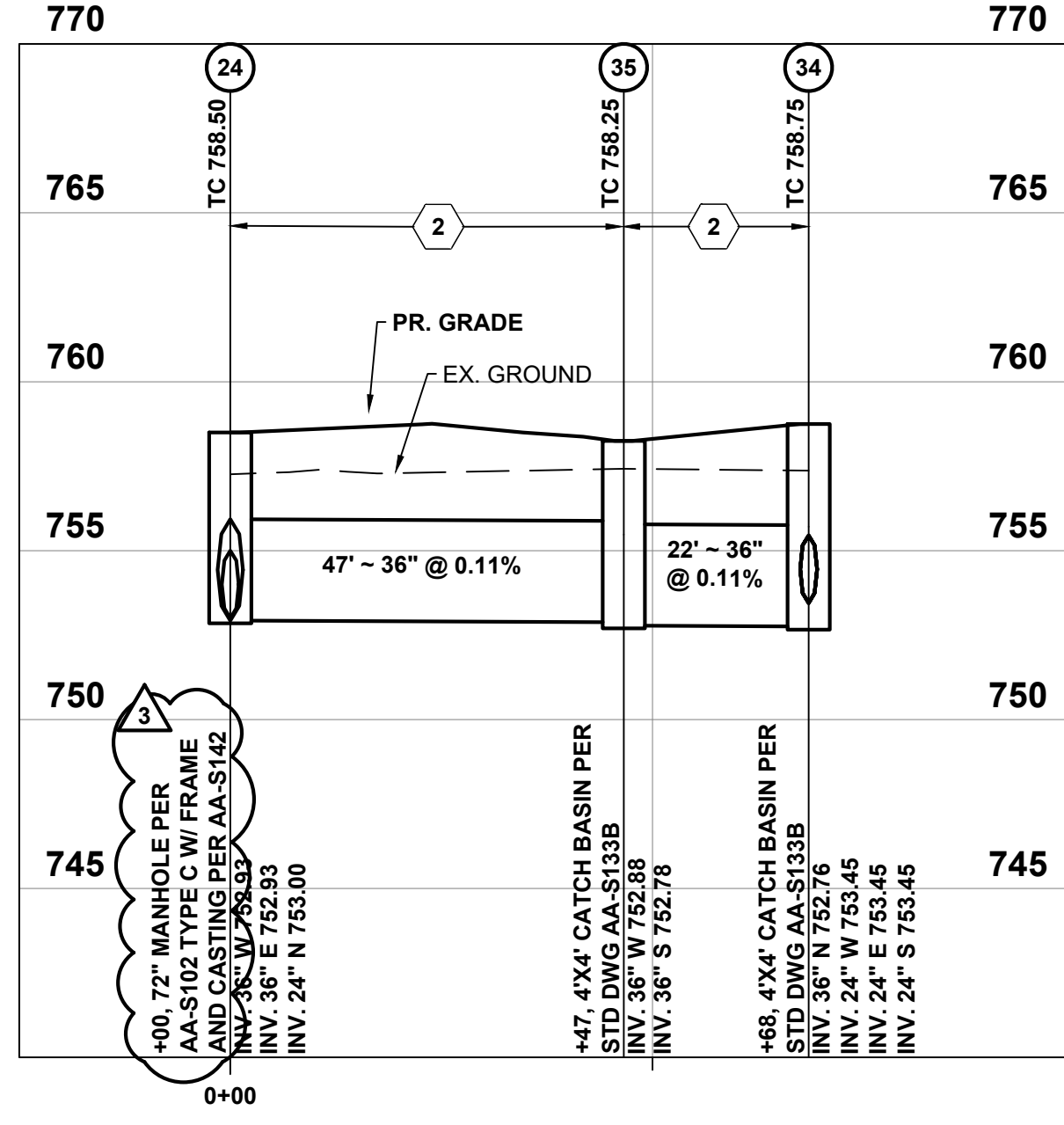
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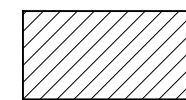
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STORM 34-24 Profile
Scale: 1"=20' Horiz. 1"=5' Vert.



LEGEND



COMPACTED FILL AREA ITEM 203. PIPE INSTALLED IN AREAS OF FILL SHALL REQUIRE THE COMPACTED FILL TO BE PLACED 2.5' ABOVE THE TOP OF PIPE OR TO PROPOSED GRADE, WHICHEVER IS LESS, PRIOR TO PIPE INSTALLATION (SEE FILL AREAS ON PROFILES OF SUCH KNOWN LOCATIONS).

CODED NOTES:

- BACKFILL WITH COMPACTED BACKFILL PER CMSC ITEM 911
- BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912
- SEWER PIPE TO HAVE WATERTIGHT JOINTS PER CMSC ITEM 901.15 AND TRENCH DAMS PER CMSC ITEM 901
- PROVIDE TYPE C ROCK CHANNEL PROTECTION PER CMSC ITEM 601, 18" DEEP X 10' LONG X WIDTH OF HEADWALL.

EASEMENT REFERENCE				REVISIONS			PLAN PREPARED BY: KORDA Korda/Nemeth Engineering, Inc. - Consulting Engineers 1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7010 TEL 614-487-1650 • FAX 614-487-8981 • WEB www.korda.com	PROJECT TITLE PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR CMHA REFUGEE ROAD 3355 REFUGEE ROAD				CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY			
CITY NO.	COUNTY RECORDER		GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE									
	VOL.	PAGE													

STORM SEWER PROFILES											
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DIVISION USE ONLY				OWNER			
				CONTRACTOR			
				INSPECTOR			
				AGREEMENT		COMPLETED	
RPD	CKD	CID	CON.DR.				
				INDEX DETAIL		RECORD FILE	

SCALE: HORIZ 1" = 20'-0" VERT 1" = 5'-0"	SHEET: 16 / 25
CONTRACT DRAWING NO. CC-20647	RECORD PLAN NO.

STORM SEWER PROFILES

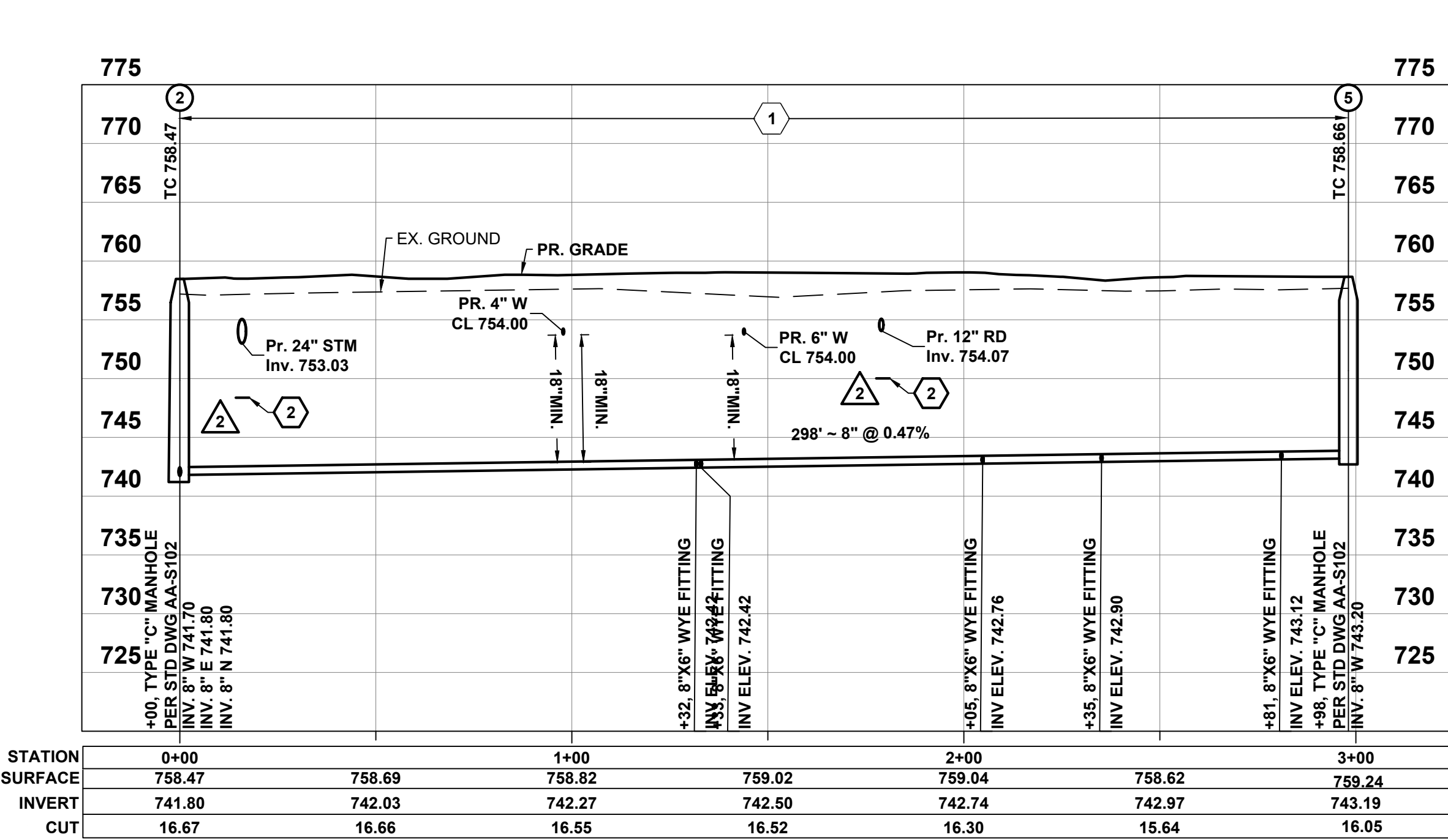
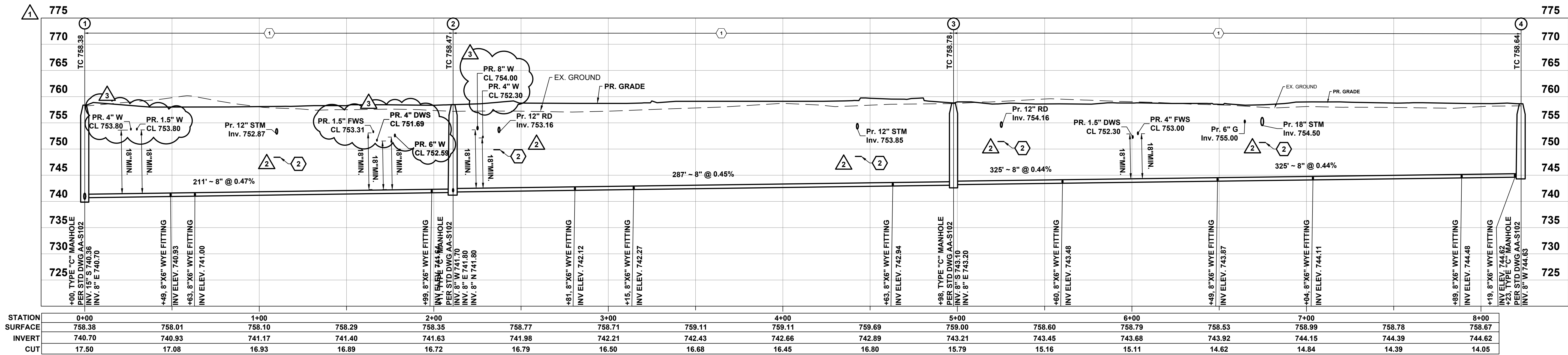
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3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

STORM SEWER PROFILES

05/01/2025
23446
C216
CD PROGRESS SET



- CODED NOTES:**
- BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912
 - PROVIDE ANTI-INFILTRATION BARRIER PER DETAIL A/6(C306).

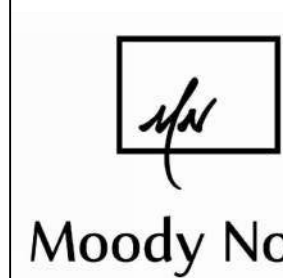
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CITY NO.	COUNTY RECORDER		GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE																												
	VOL.	PAGE																																
							SANITARY PROFILES				SANITARY SEWERS FOR CMHA REFUGEE ROAD 3355 REFUGEE ROAD				SCALE: HORIZ 1" = 30'-0" VERT 1" = 10'-0"				SHEET: 5 / 6															
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							SANITARY PROFILES				DIVISION USE ONLY				CONTRACTOR				INSPECTOR				AGREEMENT COMPLETED											

SANITARY PROFILES

#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

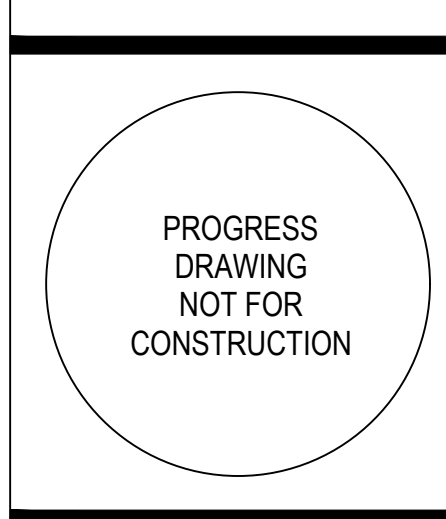


THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA



Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
SANITARY PROFILES



05/01/2025

23446

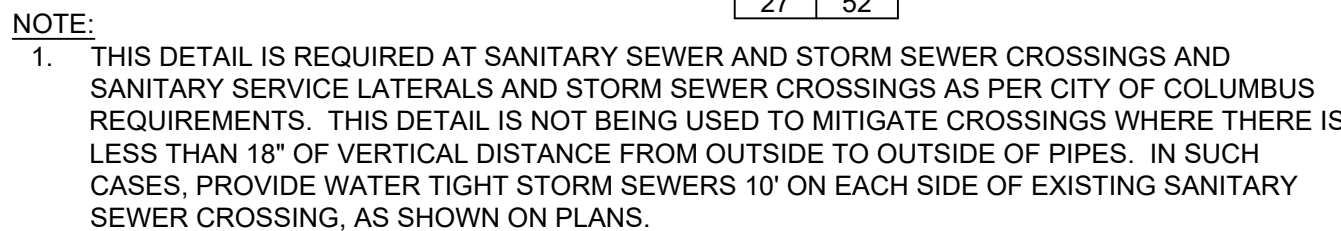
C305

CD PROGRESS SET



KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EAM
PROJECT NUMBER: 2022-0431

^aSANITARY SERVICE SHARES A COMMON WYE CONNECTION



NOTE:

1. THIS DETAIL IS REQUIRED AT SANITARY SEWER AND STORM SEWER CROSSINGS AND SANITARY SERVICE LATERALS AND STORM SEWER CROSSINGS AS PER CITY OF COLUMBUS REQUIREMENTS. THIS DETAIL IS NOT BEING USED TO MITIGATE CROSSINGS WHERE THERE IS LESS THAN 18" OF VERTICAL DISTANCE FROM OUTSIDE TO OUTSIDE OF PIPES. IN SUCH CASES, PROVIDE WATER TIGHT STORM SEWERS 10" ON EACH SIDE OF EXISTING SANITARY SEWER CROSSING, AS SHOWN ON PLANS.

DETAIL

ANTI INFILTRATION & INFLOW BARRIER

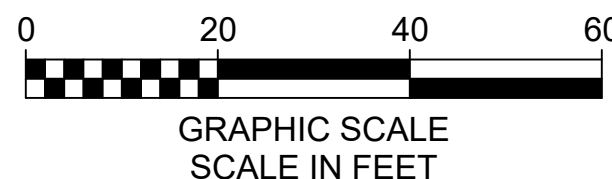
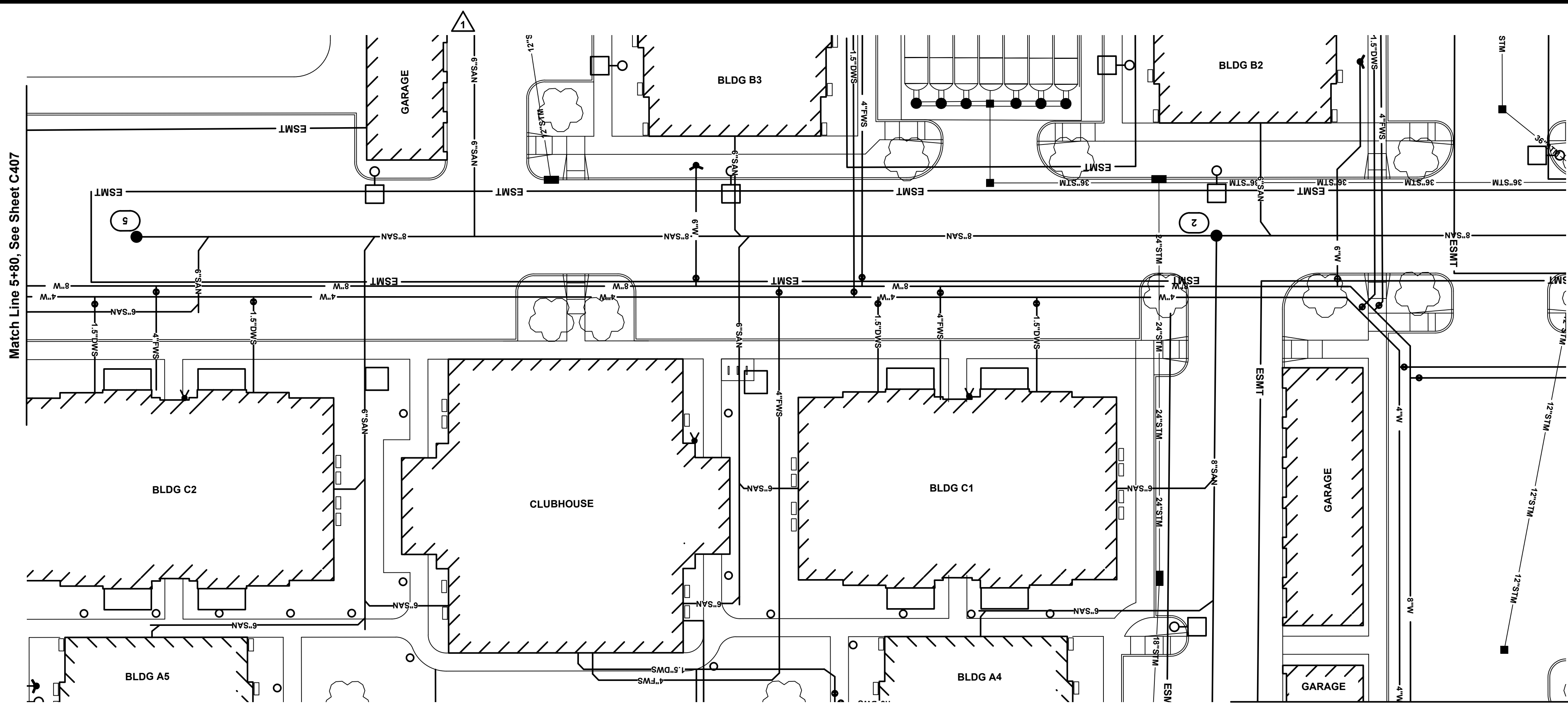
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#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

Moody Nolan
 300 SPRUCE STREET
 SUITE 300
 COLUMBUS, OHIO 43215
 PHONE: 614-461-4664
 CERT. NO: FIRM 00197475

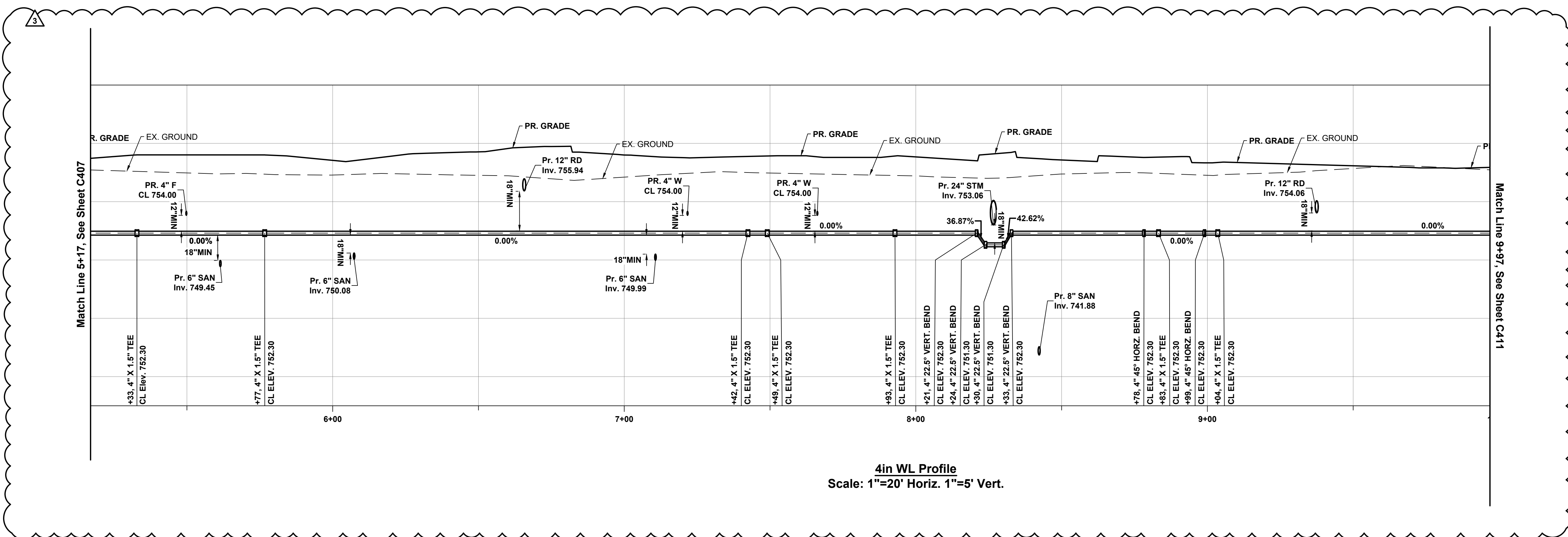
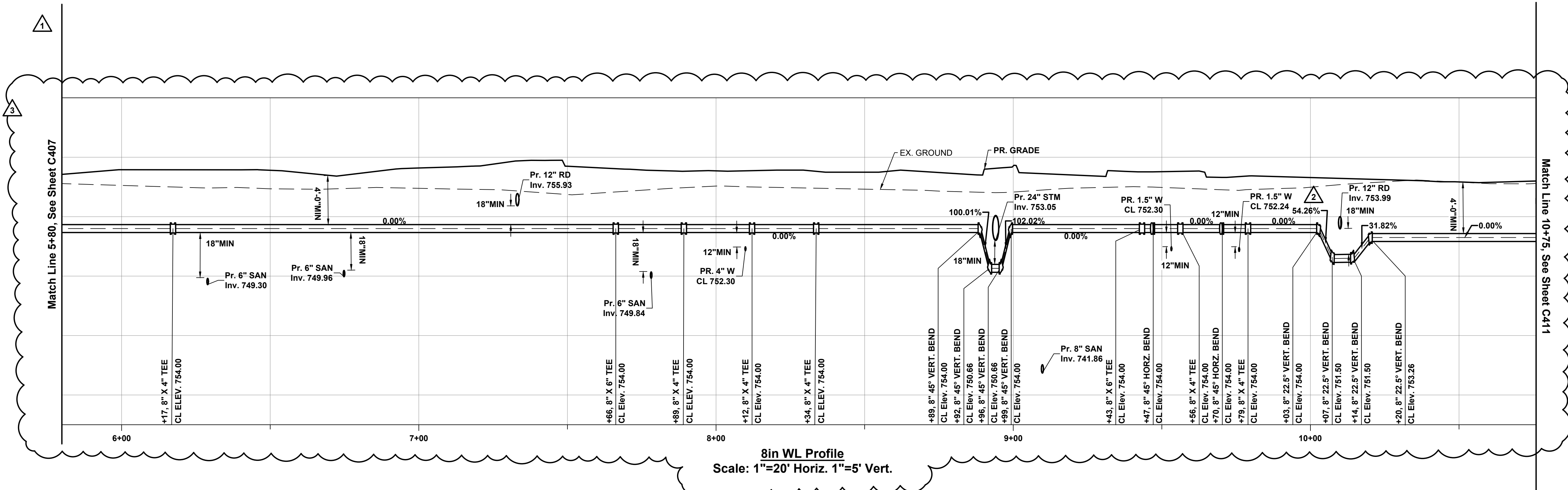
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SANITARY DETAILS	
	05/01/2025
	23446
	 C306
	CD PROGRESS SET

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EJW
PROJECT NUMBER: 2022-0431



CODED NOTES:

1. BACKFILL WITH COMPACTED BACKFILL PER CMSC ITEM 911.
2. BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912.
3. PVC PIPE PER SPEC SECTION 331100.
4. DUCTILE IRON PIPE PER SPEC SECTION 331100.



KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EAM
PROJECT NUMBER: 2022-0431

#	DATE	CHANGE DESCRIPTION
1	05/30/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

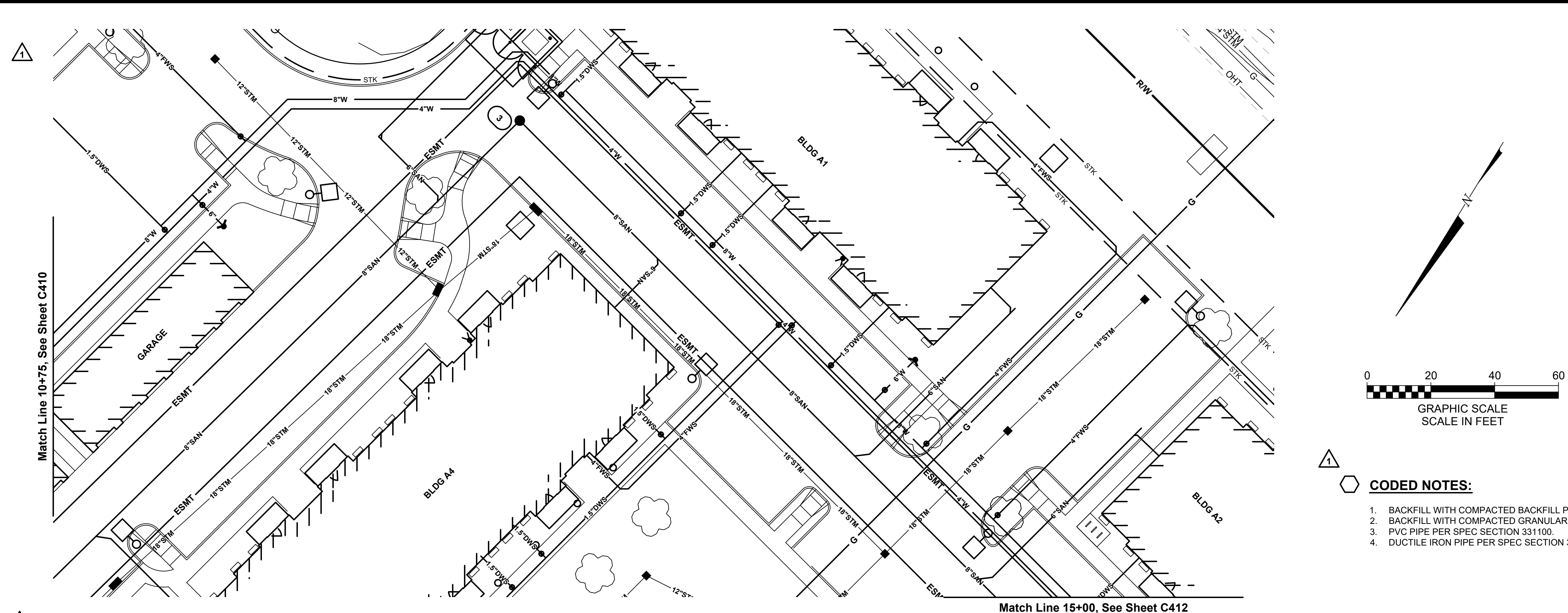
THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

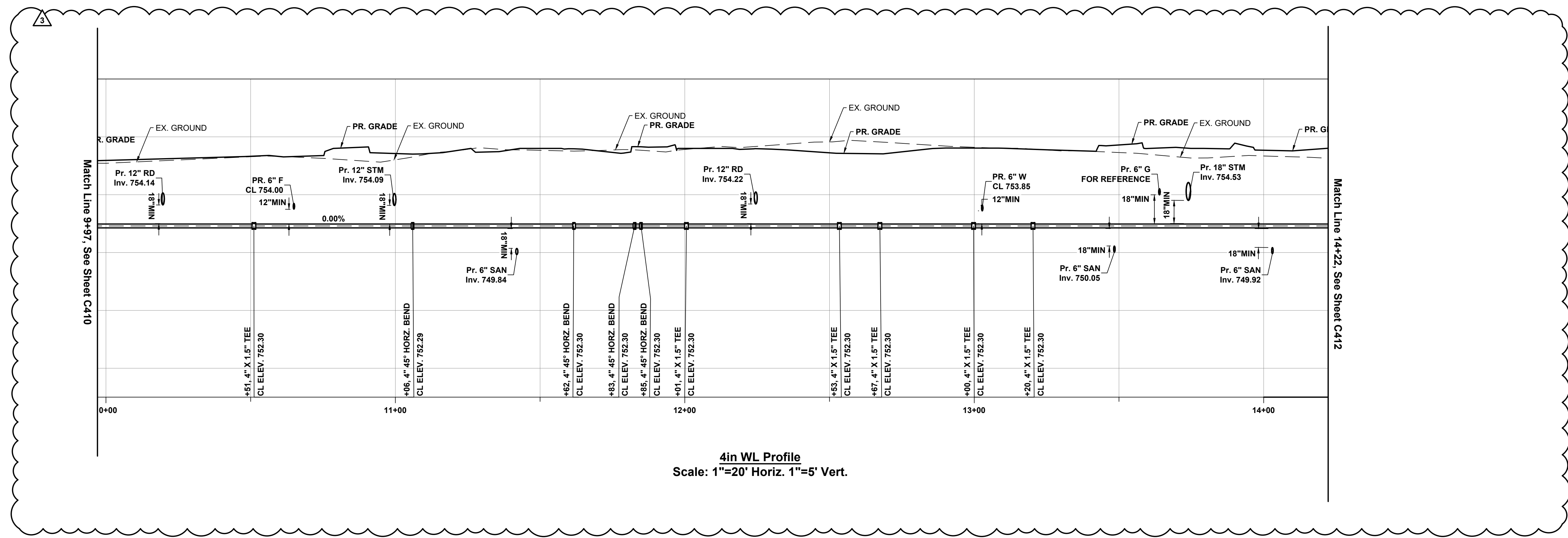
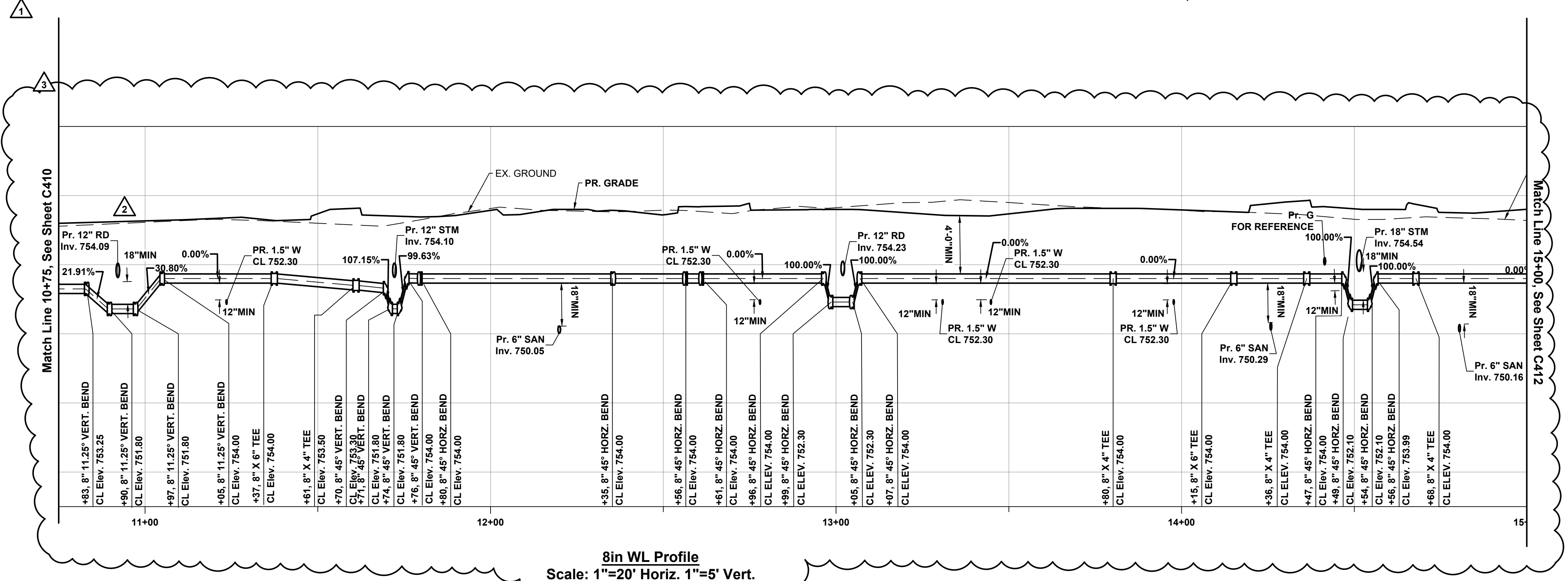
DRAWING TITLE:

WATER SERVICE PLAN & PROFILE

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	C410
CD PROGRESS SET	



- CODED NOTES:**
1. BACKFILL WITH COMPACTED BACKFILL PER CMSC ITEM 911.
 2. BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912.
 3. PVC PIPE PER SPEC SECTION 331100.
 4. DUCTILE IRON PIPE PER SPEC SECTION 331100.



#	DATE	CHANGE DESCRIPTION
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2	08/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

WATER SERVICE PLAN & PROFILE

PROGRESS
DRAWING
NOT FOR
CONSTRUCTION

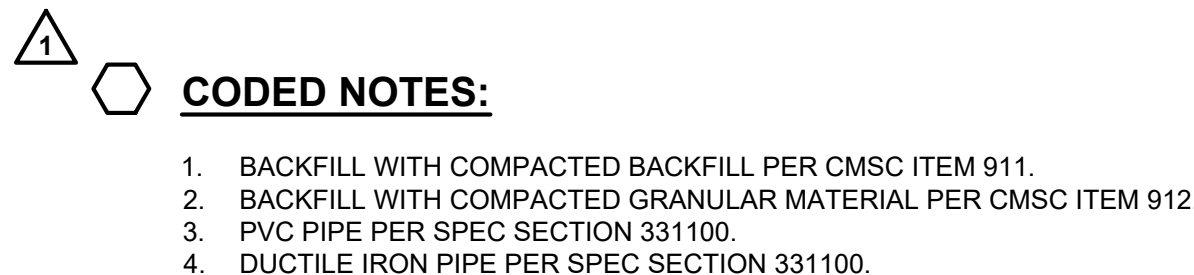
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23446

C411

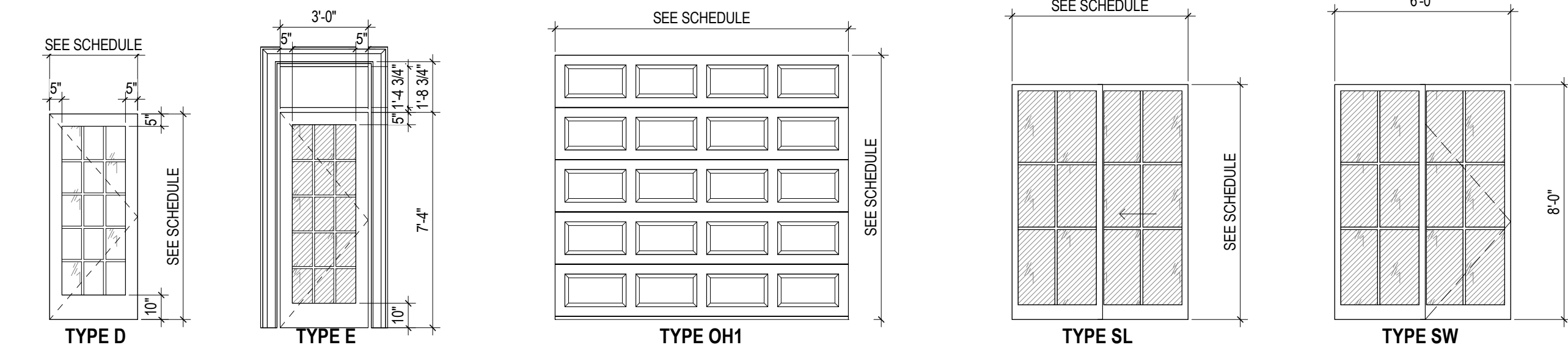
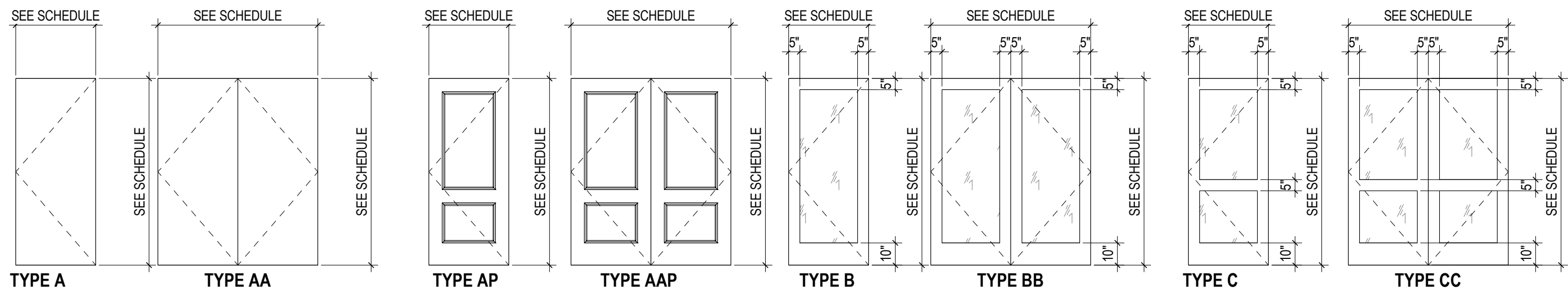
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KORDA
KORDA, NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: EAM
PROJECT NUMBER: 2022-0431

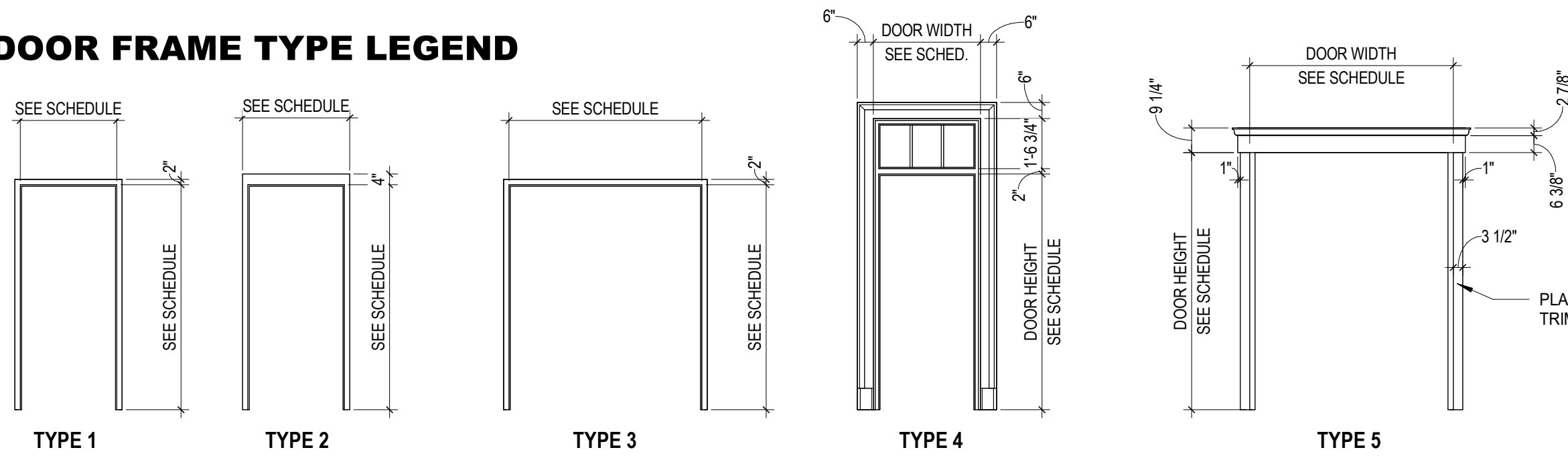


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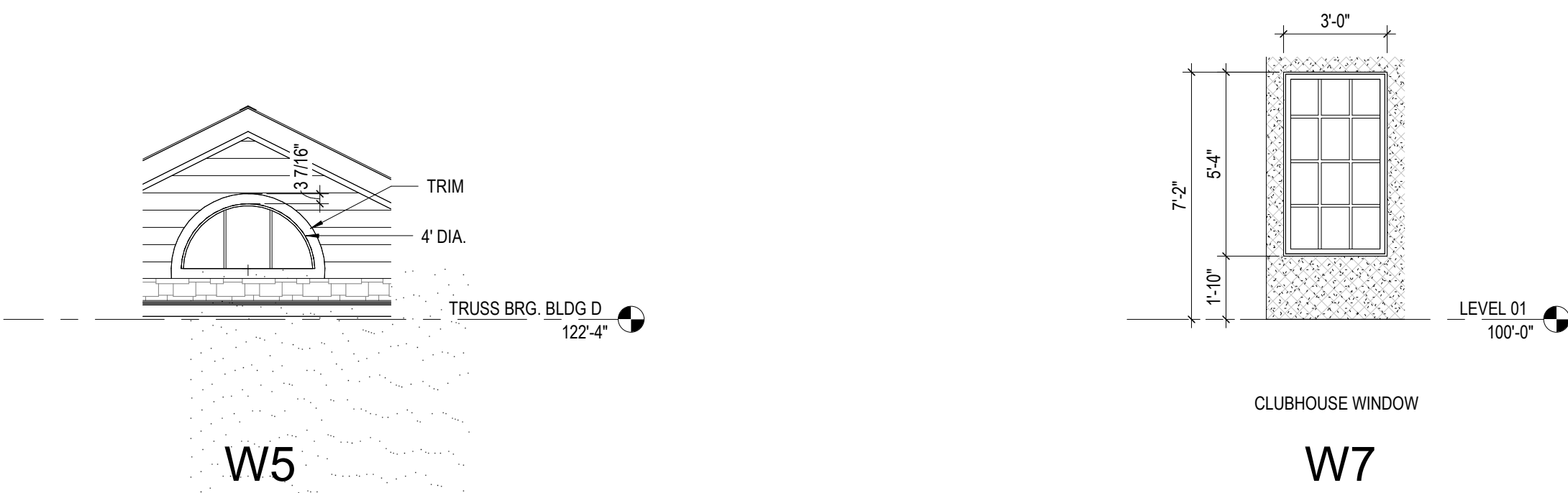
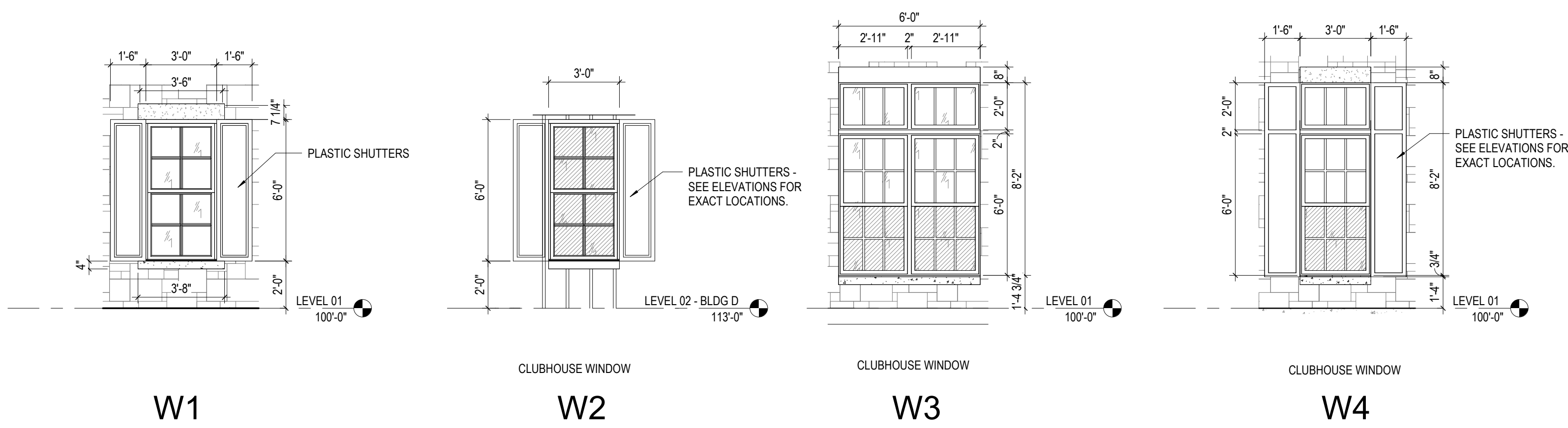
DOOR PANEL TYPE LEGEND



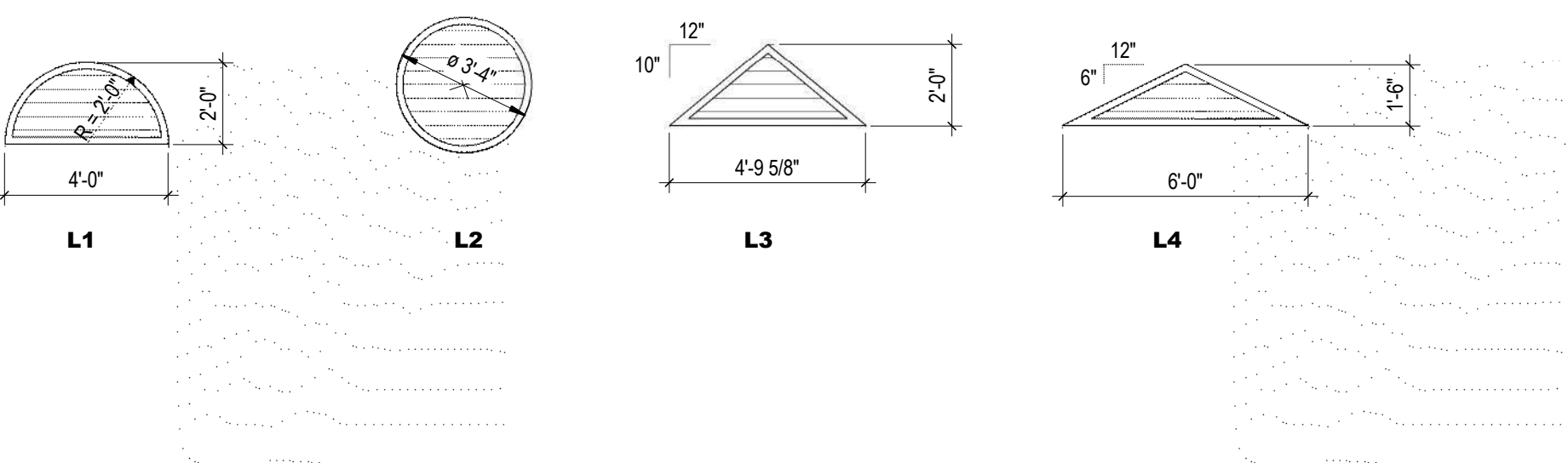
DOOR FRAME TYPE LEGEND



WINDOW TYPE LEGEND



LOUVER TYPE LEGEND



DOOR SCHEDULE - EXTERIOR ELEC CLOSET DOOR @ BUILDING A,B,C											
DOOR		FRAME		FIRE		HDW SET		DETAILS - SHEET A710 (U.N.O.)			
NUMBER	ROOM NAME	WIDTH	HEIGHT	MATERIAL	ELEV	MATERIAL	ELEV	HEAD	JAMB	SILL	
E1	FIRE SPRINKLER / RISER ROOM	6'-0"	7'-0"	HM	AA	HM	1	1/3 HR	3	1/A444	2/A443
E3	FIRE SPRINKLER / RISER ROOM	6'-0"	7'-0"	HM	AA	HM	1	1/3 HR	3	1/A444	2/A443
E5	FIRE SPRINKLER / RISER ROOM	6'-0"	7'-0"	HM	AA	HM	1	1/3 HR	3	1/A444	2/A443

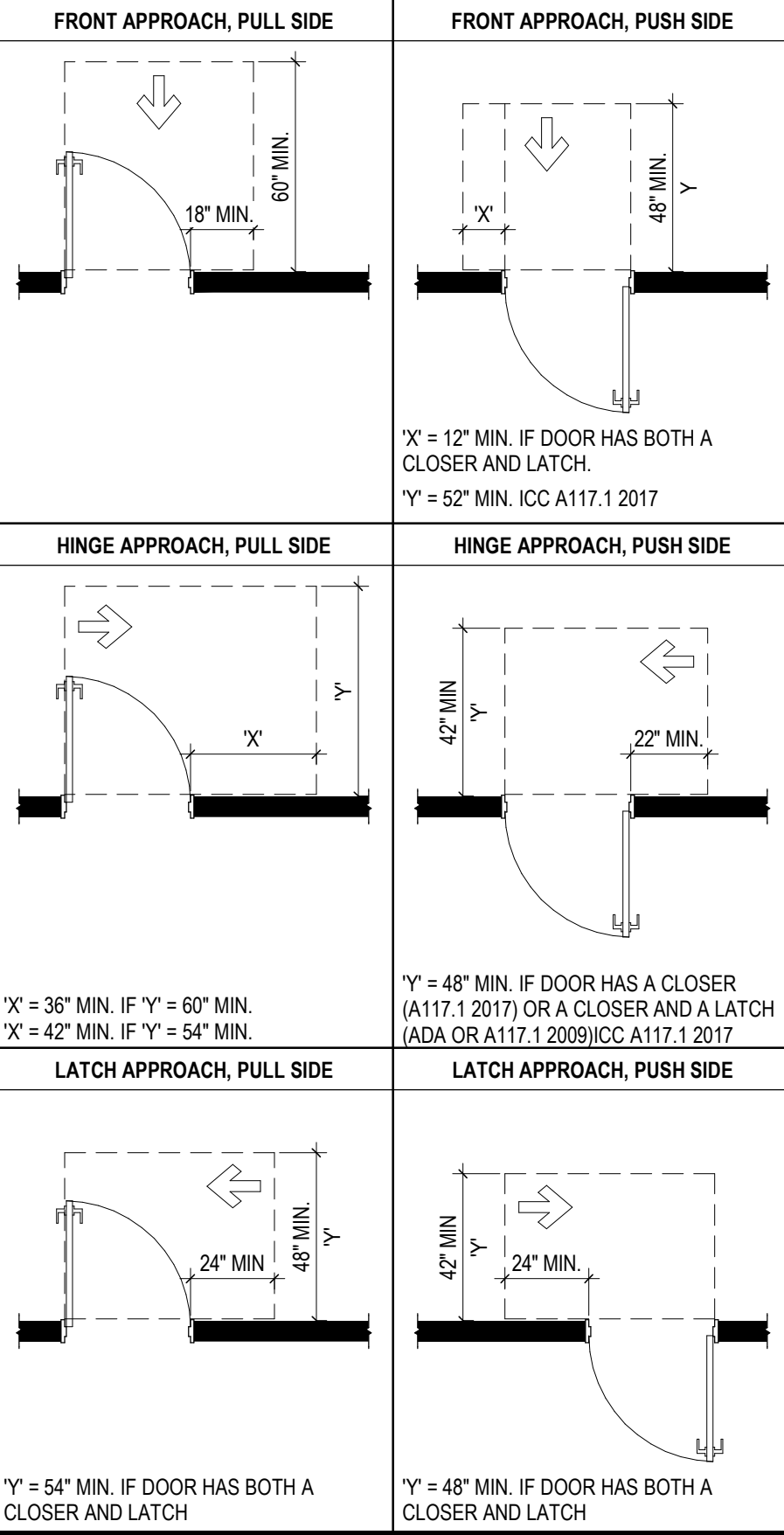
DOOR SCHEDULE - GARAGE BUILDING											
DOOR		FRAME		FIRE		HDW SET		DETAILS - SHEET A710 (U.N.O.)			
NUMBER	ROOM NAME	WIDTH	HEIGHT	MATERIAL	ELEV	MATERIAL	ELEV	HEAD	JAMB	SILL	
G01	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G1A	GARAGE	3'-0"	7'-0"	HM	A	HM	1	--	3.1	16	19
G02	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G2A	GARAGE	3'-0"	7'-0"	HM	A	HM	1	--	3.1	18	19
G28	GARAGE	3'-0"	7'-0"	HM	A	HM	1	--	3.1	18	19
G03	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G04	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G05	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G06	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G07	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G09	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G11	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G13	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G15	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G17	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G19	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G21	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G23	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G25	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G27	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15
G29	GARAGE	8'-0"	7'-0"	ST	OH1	--	--	--	1.0	16	15

DOOR SCHEDULE - BUILDING D (CLUBHOUSE)													
		DOOR				FRAME		FIRE		DETAILS - SHEET A710 (U.N.O.)			
NUMBER	ROOM NAME	WIDTH	HEIGHT	MATERIAL	ELEV	GLAZING	MATERIAL	ELEV	RATING	HDW SET	HEAD	JAMB	SILL
D101	FRONT LOBBY	3'-0"	7'-4"	FG/GL	E	IG-1A	FG	4		2.1	8/A441	17/A711	7/A441
D103	CONFERENCE & CLOSING	3'-0"	7'-0"	WD/GL	C	GL-1	HM	1	1/3 HR	9.0	6	7	1
D104	RESTROOM	3'-0"	7'-0"	WD	A		HM	1	1/3 HR	5.0	6	7	1
D104A	MECH	3'-0"	7'-0"	WD	A		HM	1		7.0	6	7	1
D106	MARKETING	3'-0"	7'-0"	WD/GL	C	GL-1	HM	1	1/3 HR	9.0	6	7	1
D107	GALLERY	3'-0"	7'-0"	WD	A	GL-1	HM	1	1/3 HR	10.0	6	7	1
D108B	CLUB	3'-0"	7'-0"	WD	C		HM	1		8.1	6	7	1
D109	FITNESS	3'-0"	7'-0"	WD	C		HM	1		4.0	6	7	1
D111	REAR LOBBY	3'-0"	7'-4"	FG/GL	E	IG-1A	FG	4		2.0	8/A441	17/A711	7/A441
D113	MEN'S RR	3'-0"	7'-0"	WD	A		HM	1		11.0	6	7	1
D114	WOMEN'S RR	3'-0"	7'-0"	WD	A		HM	1		11.0	6	7	1
D115	PARCEL RM	3'-0"	7'-0"	WD	A		HM	1		5.0	6	7	1
D116	MECH / JAN.	3'-0"	7'-0"	WD	A		HM	1		6.0	6	7	1
D117	POOL EQUIP.	6'-0"	7'-0"	HM	AA		HM	1		3.0	21	20	5

NOTE TO CONTRACTOR:
THE SAME DOOR SCHEDULE FOR INTERIOR UNIT IS ALSO SHOWN ON ENLARGED FLOOR PLANS (A500 SERIES) FOR EASE OF REFERENCE.

DOOR SCHEDULE - TYPICAL INTERIOR UNIT																																						
REVISION		MARK	DOOR		WIDTH	HEIGHT	MATERIAL	ELEV	GLAZING	FRAME		FIRE	HDW SET	DETAILS-SHEET A710-711 (U.N.O.)			REMARKS																					
										MATERIAL	ELEV			HEAD	JAMB	SILL																						
		A1	UNIT ENTRY (INT.)	3'-0"	7'-0"	HM	AP			HM	1	1/3 HR	12	10	9	5	8																					
01		B1	BEDROOM	3'-0"	7'-0"	HWC	AP			WD	1	-	13	4	5	1																						
01		C1	CLOSET	3'-0"	7'-0"	HWC	AP			WD	1	-	14	4	5	1																						
01		C2	CLOSET	2'-8"	7'-0"	HWC	AP			WD	1	-	14	4	5	1																						
01		C3	CLOSET	2'-0"	7'-0"	HWC	AP			WD	1	-	14	4	5	1																						
01		C4	CLOSET - PAIR	5'-0"	7'-0"	HWC	AAP			WD	1	-	15	4	5	1																						
01		T1	TOILET	3'-0"	7'-0"	HWC	AP			WD	1	-	13	4	5	1																						
02		P1	BALCONY	6'-0"	8'-0"	FG/GL	SL	IG-1A		FG	5	-	16	-	-	-																						
02		P2	BALCONY - SWING	6'-0"	7'-0"	FG/GL	SW	IG-1A		FG	5	-	16	-	-	-																						
• PROVIDE DOOR STOPS (BASE OR HIDGE) PER HARDWARE SET SPECIFICATIONS. • ALL DOOR WIDTHS IN OCCUPIED ROOMS OF BUILDING TO BE 32" MIN CLEAR. • ALL DOORS PROVIDING ACCESS TO RESIDENTIAL SPACES TO BE PAINTED. • ALL FULL LITE BALCONY DOORS TO RECEIVE WINDOW SHADES. • SENSORY UNITS TO RECEIVE ROOM ANNUNCIATOR, HORN/STROBE, TRANSFORMER, & PUSH BUTTON (BOD: EDWARDS SIGNALING)														<table><tr><th>Division</th><th colspan="2">Schedule Abbreviation</th></tr><tr><td>08 11 13</td><td>Hollow Metal Doors and Frames</td><td>(HM)</td></tr><tr><td>08 14 00</td><td>Hollow Wood Door</td><td>(HWC)</td></tr><tr><td>08 16 13</td><td>Fiberglass Doors</td><td>(FG)</td></tr><tr><td>08 52 00</td><td>Sliding Glass Doors</td><td>(SG)</td></tr><tr><td>08 36 13</td><td>Steel Sectional Doors</td><td>(ST)</td></tr><tr><td>08 41 13</td><td>Aluminum-Framed Entrances and Storefronts</td><td>(SF)</td></tr></table>				Division	Schedule Abbreviation		08 11 13	Hollow Metal Doors and Frames	(HM)	08 14 00	Hollow Wood Door	(HWC)	08 16 13	Fiberglass Doors	(FG)	08 52 00	Sliding Glass Doors	(SG)	08 36 13	Steel Sectional Doors	(ST)	08 41 13	Aluminum-Framed Entrances and Storefronts	(SF)
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08 36 13	Steel Sectional Doors	(ST)																																				
08 41 13	Aluminum-Framed Entrances and Storefronts	(SF)																																				

DOOR CLEARANCES

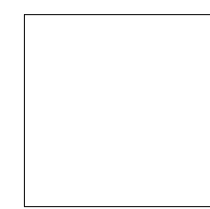


X" = 12" MIN. IF DOOR HAS BOTH A CLOSER AND LATCH.
Y" = 52" MIN. ICC A117.1 2017

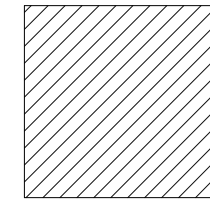
X" = 36" MIN. IF Y" = 60" MIN.
X" = 42" MIN. IF Y" = 54" MIN.

Y" = 48" MIN. IF DOOR HAS A CLOSER (A117.1 2017) OR A CLOSER AND A LATCH (ADA OR A117.1 2009)/ICC A117.1 2017

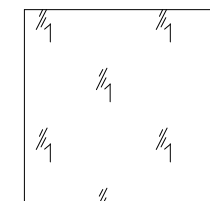
GLAZING TYPES



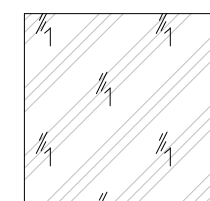
GL-1 INTERIOR GLAZING
(CLEAR TEMPERED)



GL-2 INTERIOR GLAZING
(CLEAR LAMINATED)



IG-1 EXTERIOR GLAZING
(CLEAR)



IG-1A EXTERIOR GLAZING
(CLEAR TEMPERED)

#	DATE	CHANGE DESCRIPTION
1	06/11/25	ADDENDUM # 01
2	06/25/25	ADDENDUM # 02
3	07/10/25	ADDENDUM # 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

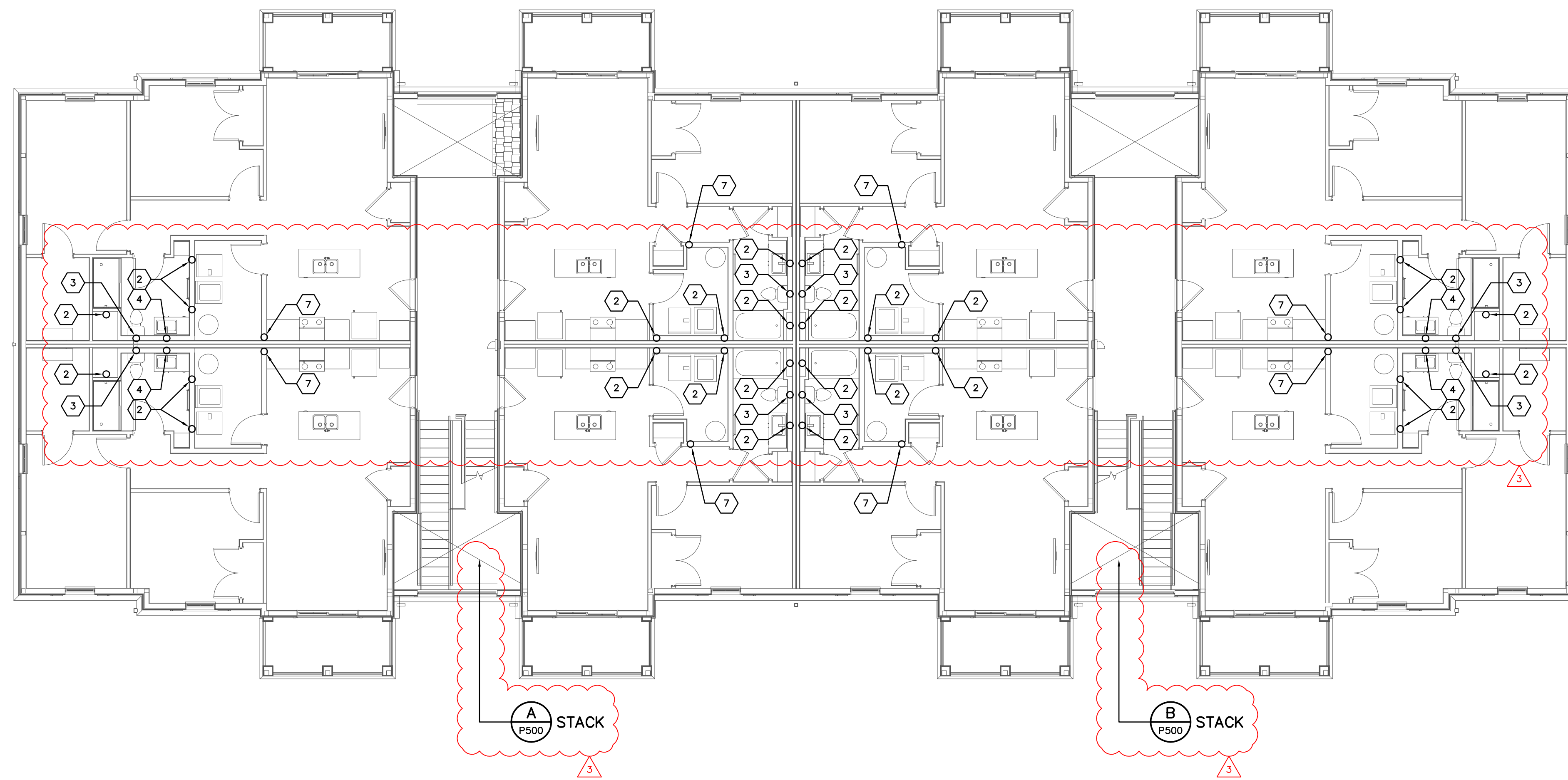
CERT. NO: FIRM 00197475

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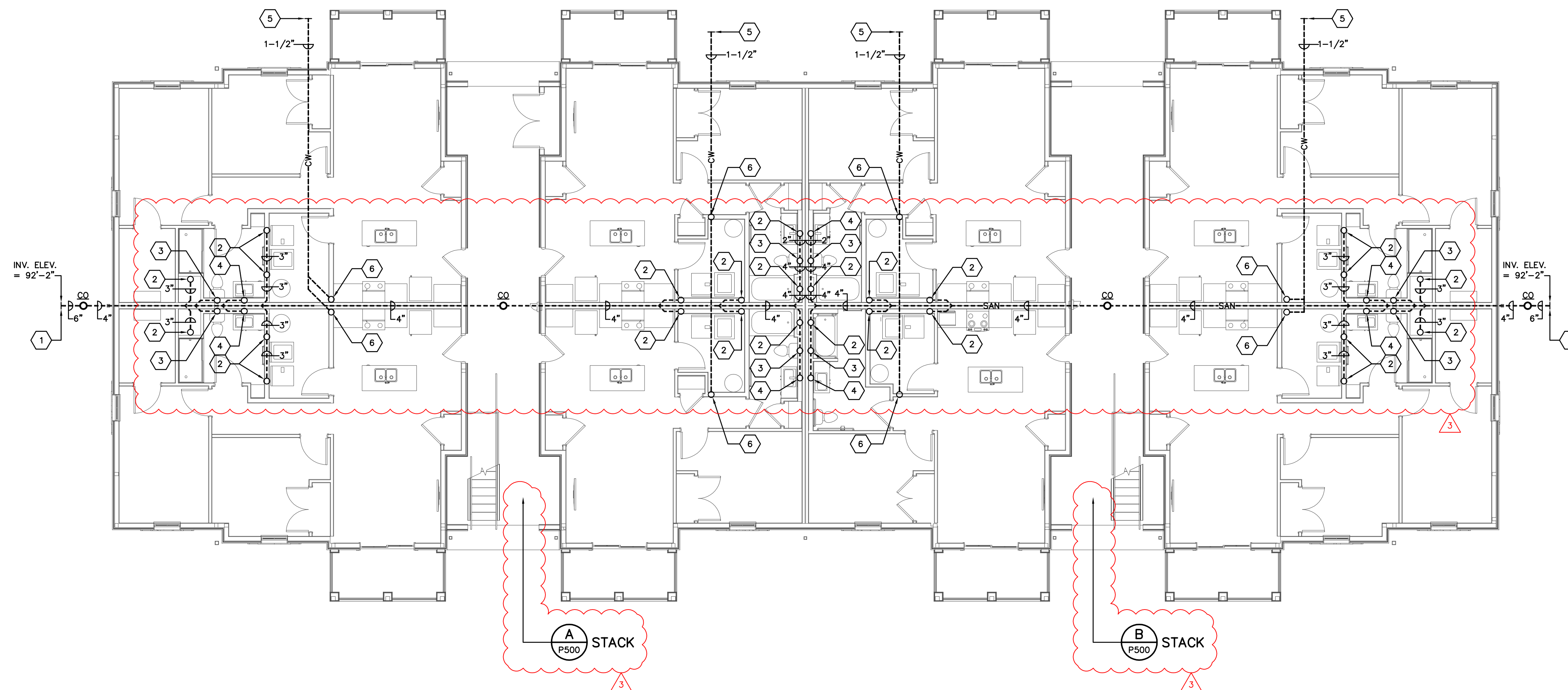
DOOR & WINDOW SCHEDULES

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	A700
	CD PROGRESS SET

CD PROGRESS SET



LEVEL 02 PLUMBING PLAN – BUILDING A
SCALE: 1/8"=1'-0"



LEVEL 01 PLUMBING PLAN – BUILDING A
SCALE: 1/8"=1'-0"

P101-A-24217.DWG

PRATER
Engineering Associates, Inc.

6130 Wilcox Road
Dublin, Ohio 43016

DESIGNED BY
B.BURNS

DRAWN BY
B.BURNS

CHECKED BY
C.ANDERSON

JOB NUM.
24217

(614) 766 4896
FAX: (614) 766 2354

CODED NOTES

- 6" SAN TO 5'-0" BEYOND PERIMETER OF BUILDING BY PLUMBING CONTRACTOR FOR CONNECTION TO AND CONTINUATION BY SITE UTILITY CONTRACTOR. COORDINATE PIPE MATERIAL TO MATCH WITH SITE UTILITY CONTRACTOR. COORDINATE POINT OF CONNECTION AND DEPTH OF PIPING WITH SITE UTILITY CONTRACTOR AND CONSTRUCTION MANAGER. INVERT ELEVATION: 92'-2" (F.F.E. = 100.0').
- 3" WASTE STACK VENT SYSTEM.
- 4" SINGLE STACK VENT SYSTEM.
- 2" WASTE STACK VENT SYSTEM.
- 1-1/2" DOMESTIC WATER SERVICE (DWS) FROM SITE WATER SERVICE LOOP TO 5'-0" OUTSIDE BUILDING PERIMETER BY SITE UTILITY CONTRACTOR. PLUMBING CONTRACTOR SHALL CONNECT TO AND EXTEND 1-1/2" DWS INTO BUILDING. REFER TO ENLARGED RISER ROOM FIRE PROTECTION PLAN ON SHEET P202 FOR CONTINUATION. COORDINATE PIPE MATERIAL TO MATCH WITH SITE UTILITY CONTRACTOR. COORDINATE CONNECTION AND DEPTH OF PIPING WITH SITE UTILITY CONTRACTOR AND CONSTRUCTION MANAGER.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM BELOW SLAB IN WALL STRUCTURE TO SECOND FLOOR. SEE ENLARGED UNIT PLUMBING PLANS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM SECOND FLOOR TO THIRD FLOOR. SEE ENLARGED UNIT PLUMBING PLANS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY COMPASSION COLLABORATOR

3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

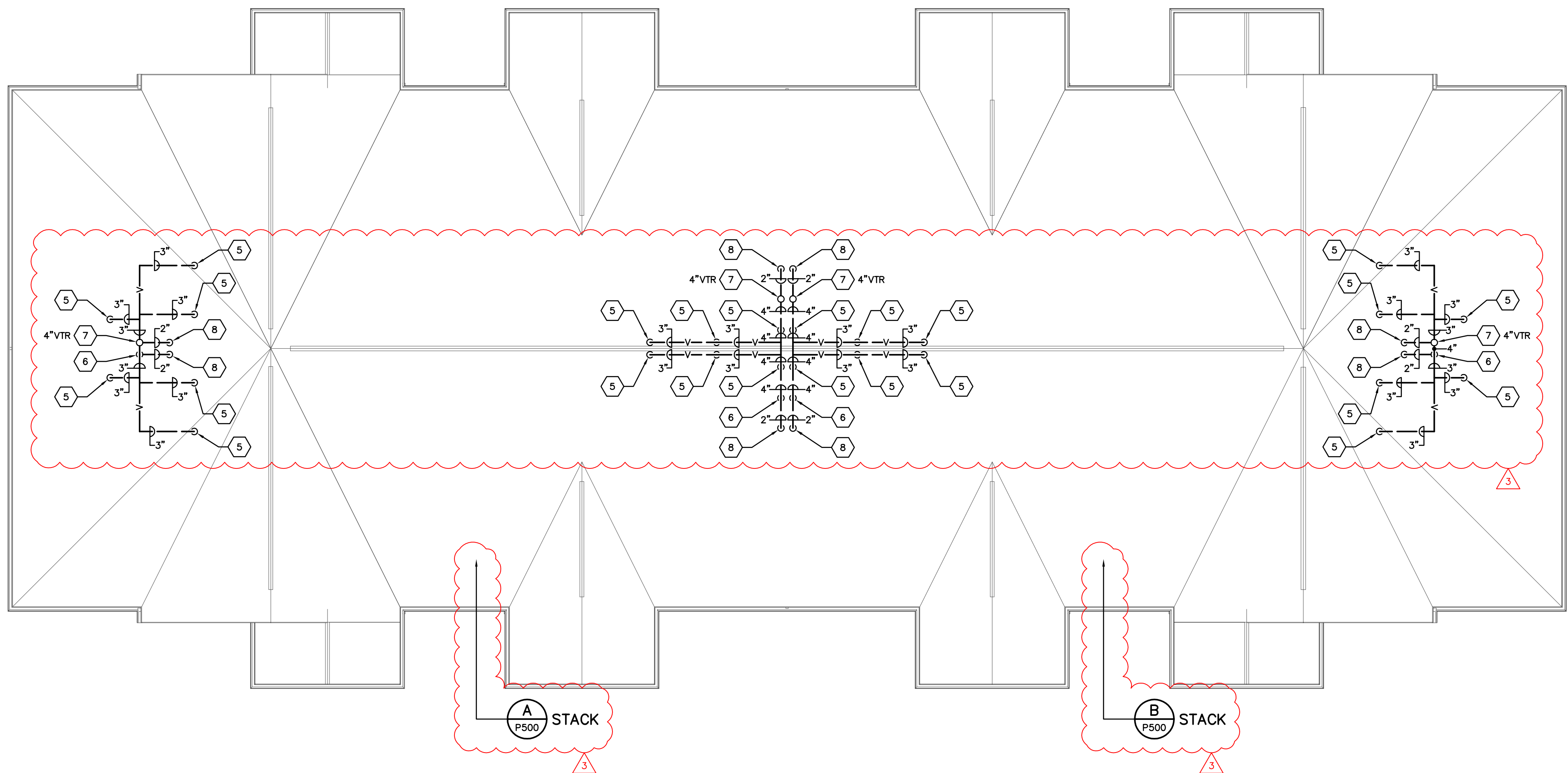
Moody Nolan

300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

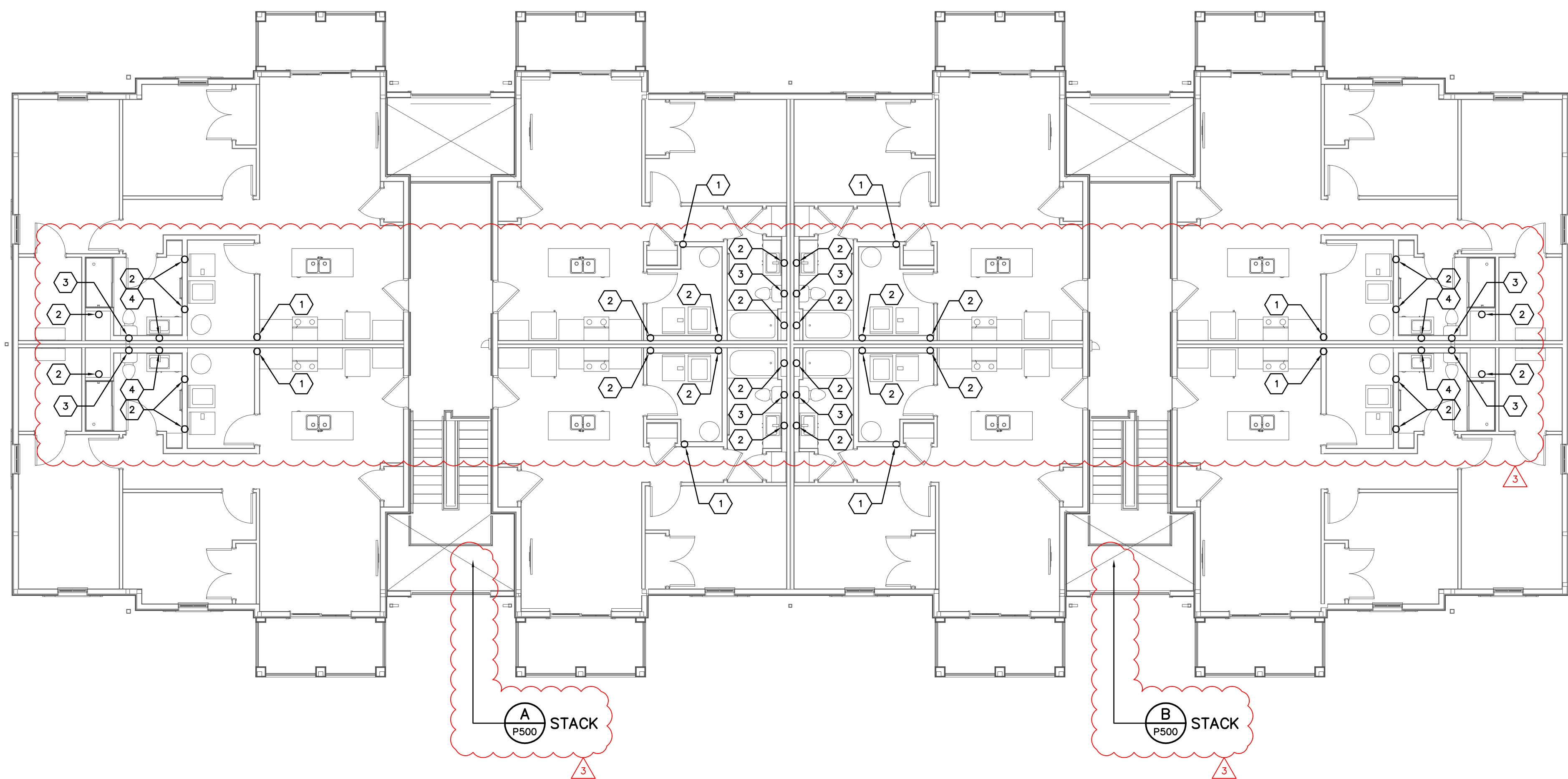
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING A - LEVEL 01 & 02
PLUMBING PLANS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	P101-A
	CD PROGRESS SET



ATTIC PLUMBING PLAN — BUILDING A
SCALE: 1/8"=1'-0"



LEVEL 03 PLUMBING PLAN — BUILDING A
SCALE: 1/8"=1'-0"

P102-A-24217.DWG

PRATER
Engineering Associates, Inc.

6130 Wilcox Road
Dublin, Ohio 43016

DESIGNED BY
B.BURNS

DRAWN BY
B.BURNS

CHECKED BY
C.ANDERSON

JOB NUM.
24217

(614) 766 4896
FAX: (614) 766 2354

CODED NOTES

- RISE 1-1/2" DOMESTIC WATER SERVICE FROM SECOND FLOOR TO THIRD FLOOR AND CAP WATER TIGHT 6" ABOVE 1" BRANCH TO UNIT. SEE ENLARGED UNIT PLUMBING PLANS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- 3" WASTE STACK VENT SYSTEM DOWN. RISE 3" STACK VENT FULL SIZE TO ATTIC SPACE.
- 4" SINGLE STACK VENT SYSTEM DOWN. RISE 4" STACK VENT TO ATTIC SPACE.
- 2" SINGLE STACK VENT SYSTEM DOWN. RISE 2" STACK VENT TO ATTIC SPACE.
- 3" STACK VENT IN ATTIC FROM THIRD FLOOR. CONNECT TO BUILDING VENT SYSTEM.
- 4" STACK VENT IN ATTIC FROM THIRD FLOOR. CONNECT TO BUILDING VENT SYSTEM.
- 4" STACK VENT IN ATTIC FROM THIRD FLOOR. RISE TO 4" VENT-THRU-ROOF (VTR).
- 2" STACK VENT IN ATTIC FROM THIRD FLOOR. CONNECT TO BUILDING VENT SYSTEM.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING A - LEVEL 03 & ATTIC
PLUMBING PLANS**

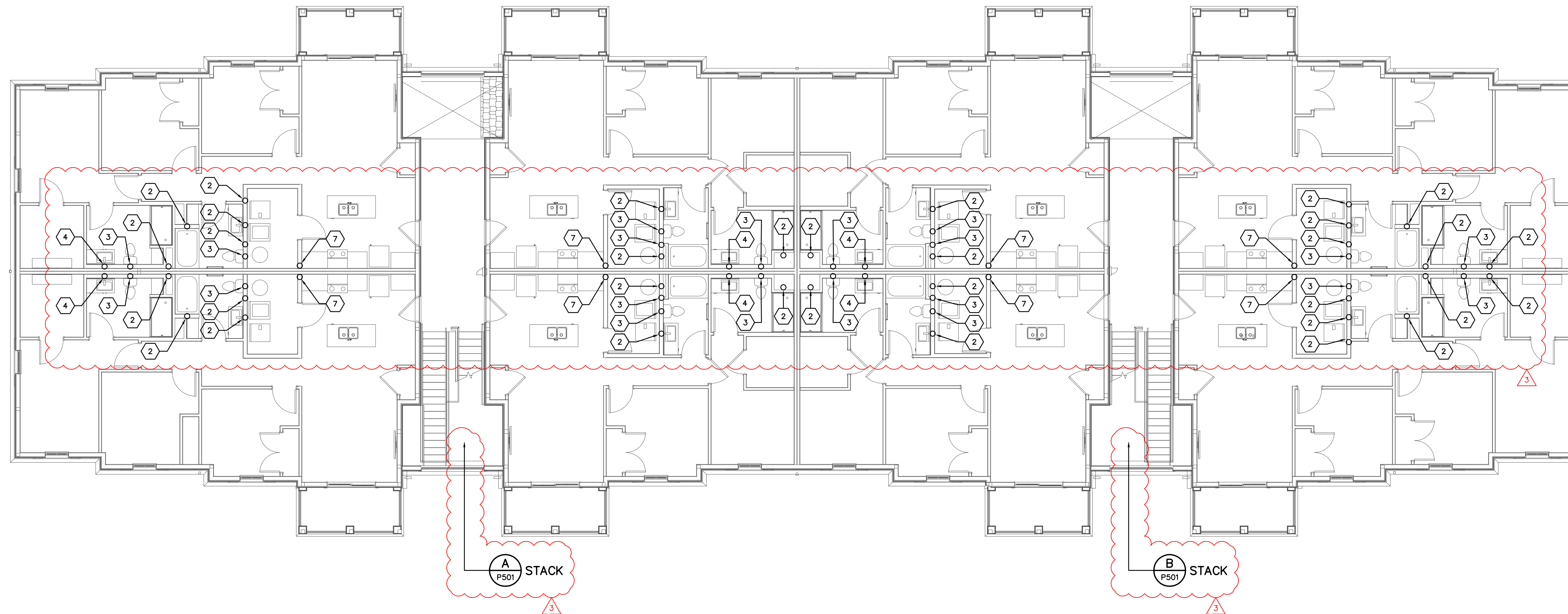
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DRAWING
NOT FOR
CONSTRUCTION

05/01/2025

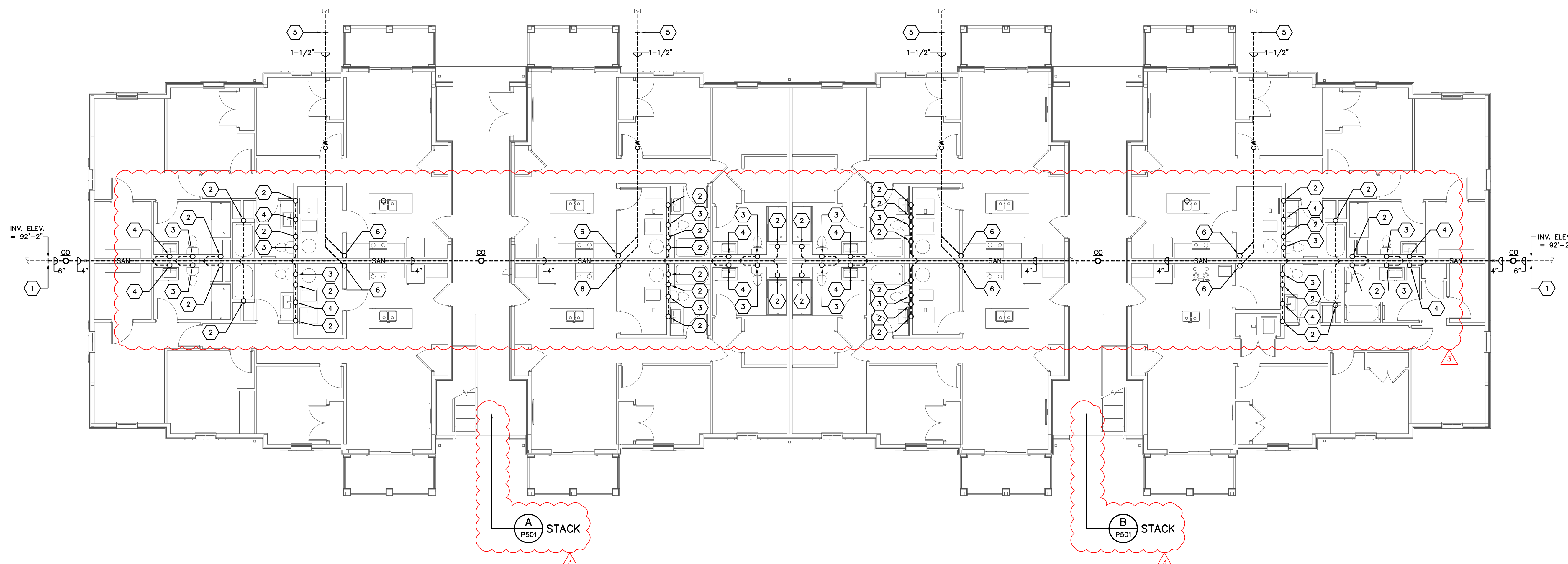
23446

P102-A

CD PROGRESS SET



LEVEL 02 PLUMBING PLAN - BUILDING B
SCALE: 1/8"=1'-0"



LEVEL 01 PLUMBING PLAN - BUILDING B
SCALE: 1/8"=1'-0"

P103-B-24217.DWG

PRATER
Engineering Associates, Inc.

6130 Wilcox Road
Dublin, Ohio 43016

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B.BURNS

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C.ANDERSON

JOB NUM.
24217

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FAX: (614) 766 2354

CODED NOTES

- 6" SAN TO 5'-0" BEYOND PERIMETER OF BUILDING BY PLUMBING CONTRACTOR FOR CONNECTION TO AND CONTINUATION BY SITE UTILITY CONTRACTOR. COORDINATE PIPE MATERIAL TO MATCH WITH SITE UTILITY CONTRACTOR. COORDINATE POINT OF CONNECTION AND DEPTH OF PIPING WITH SITE UTILITY CONTRACTOR AND CONSTRUCTION MANAGER. INVERT ELEVATION: 92'-2" (F.F.E. = 100.0').
- 3" WASTE STACK VENT SYSTEM.
- 4" SINGLE STACK VENT SYSTEM.
- 2" WASTE STACK VENT SYSTEM.
- 1-1/2" DOMESTIC WATER SERVICE (DWS) FROM SITE WATER SERVICE LOOP TO 5'-0" OUTSIDE BUILDING PERIMETER BY SITE UTILITY CONTRACTOR. PLUMBING CONTRACTOR SHALL CONNECT TO AND EXTEND 1-1/2" DWS INTO BUILDING. REFER TO ENLARGED RISER ROOM FIRE PROTECTION PLAN ON SHEET P202 FOR CONTINUATION. COORDINATE PIPE MATERIAL TO MATCH WITH SITE UTILITY CONTRACTOR. COORDINATE CONNECTION AND DEPTH OF PIPING WITH SITE UTILITY CONTRACTOR AND CONSTRUCTION MANAGER.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM BELOW SLAB IN WALL STRUCTURE TO SECOND FLOOR. SEE ENLARGED UNIT PLUMBING PLANS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM SECOND FLOOR TO THIRD FLOOR. SEE ENLARGED UNIT PLUMBING PLANS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY COMPASSION COLLABORATIVE

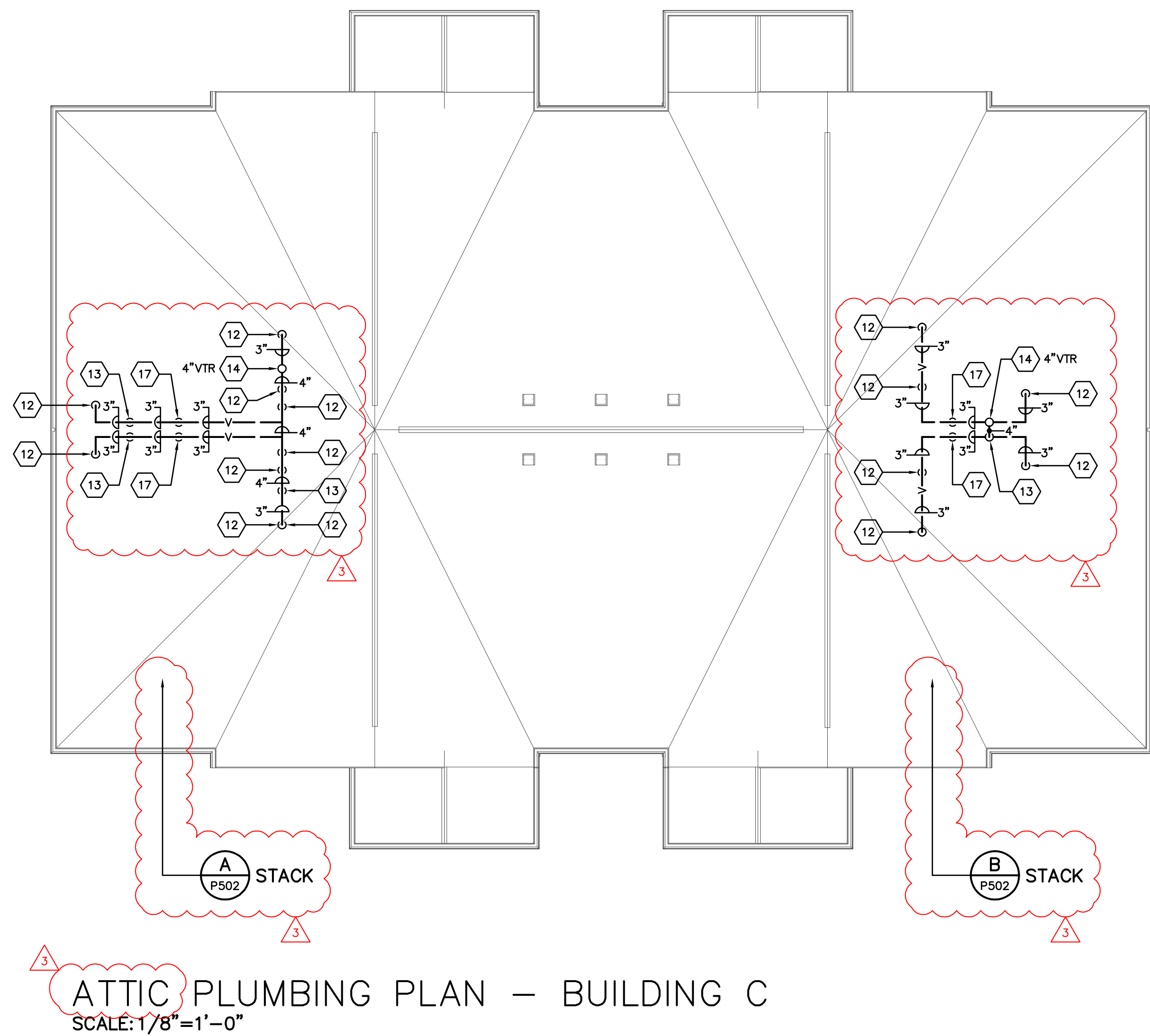
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

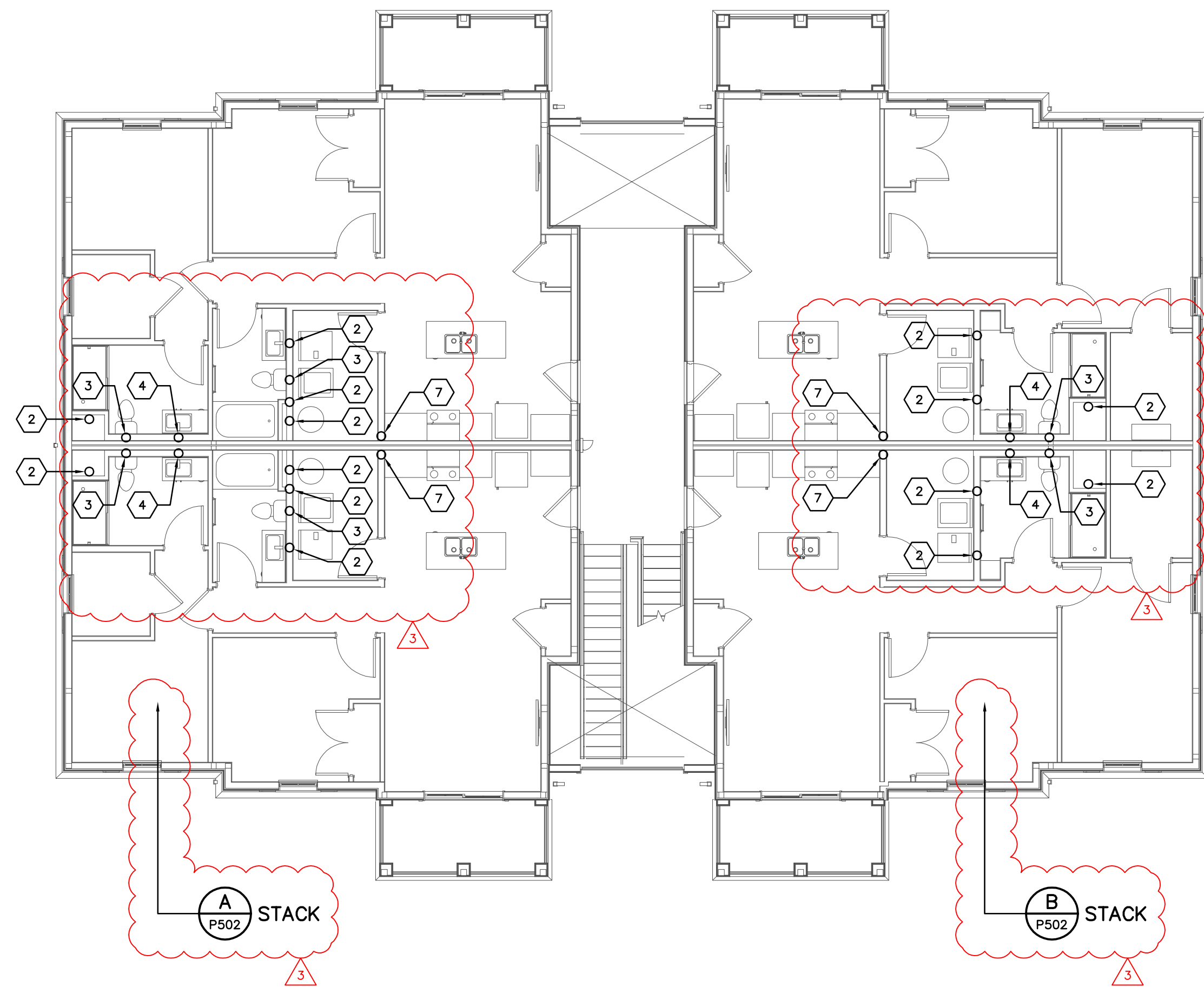
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING B - LEVEL 01 & 02
PLUMBING PLANS**

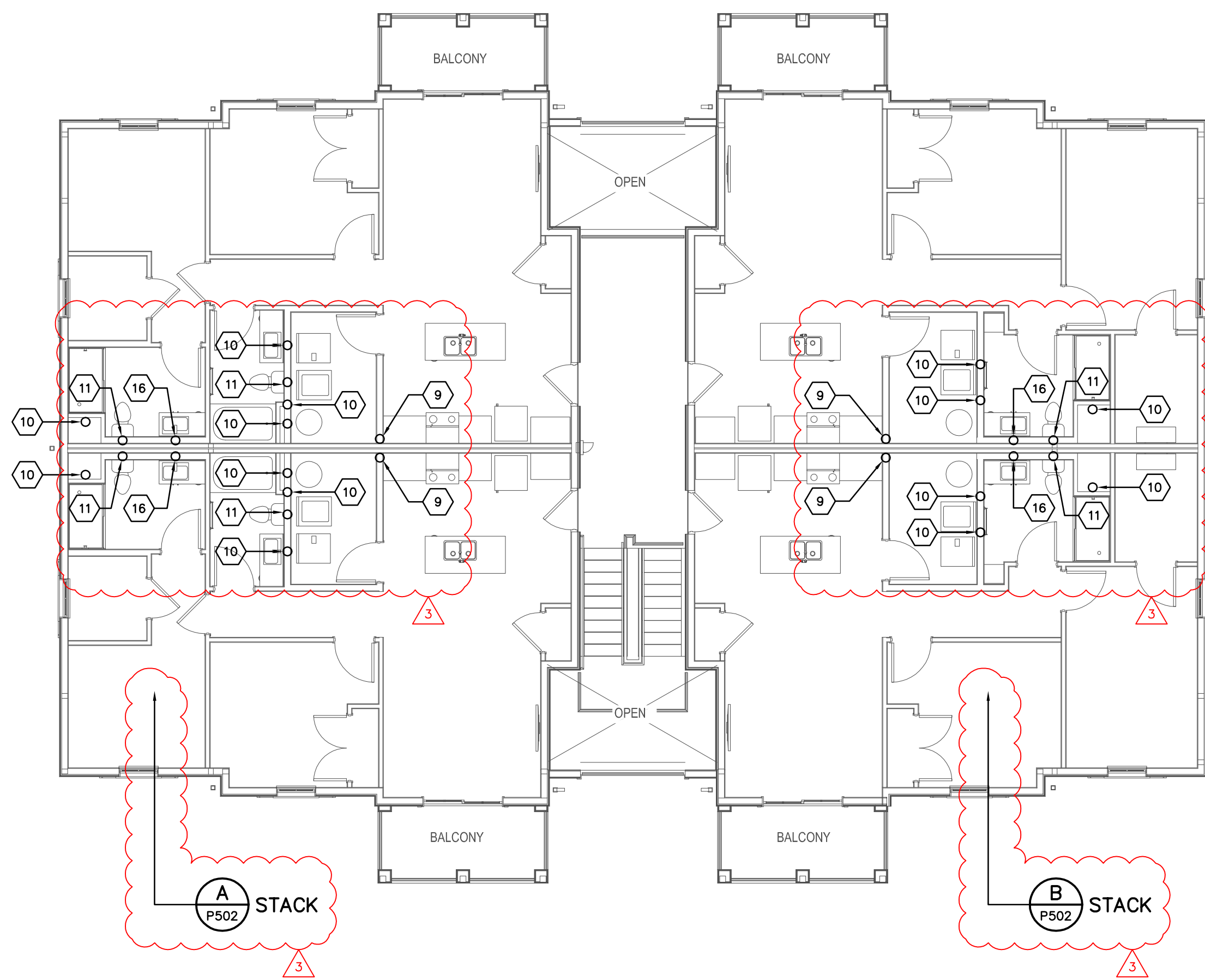
PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	P103-B
	CD PROGRESS SET



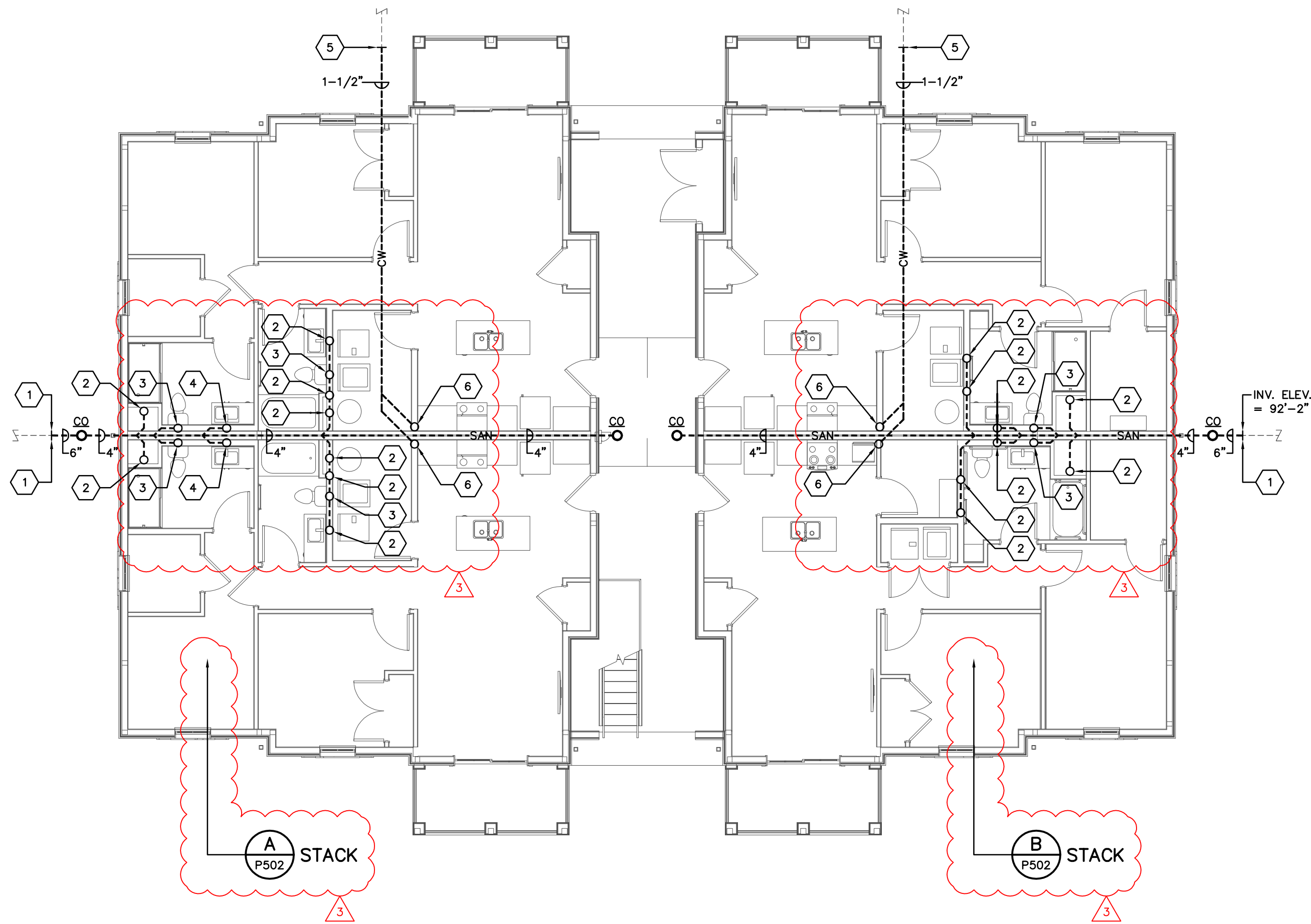
ATTIC PLUMBING PLAN — BUILDING C
SCALE: 1/8"=1'-0"



LEVEL 02 PLUMBING PLAN — BUILDING C
SCALE: 1/8"=1'-0"



LEVEL 03 PLUMBING PLAN — BUILDING C
SCALE: 1/8"=1'-0"



LEVEL 01 PLUMBING PLAN — BUILDING C
SCALE: 1/8"=1'-0"

CODED NOTES

- 6" SAN TO 5'-0" BEYOND PERIMETER OF BUILDING BY PLUMBING CONTRACTOR FOR CONNECTION TO AND CONTINUATION BY SITE UTILITY CONTRACTOR. COORDINATE PIPE MATERIAL TO MATCH WITH SITE UTILITY CONTRACTOR. COORDINATE POINT OF CONNECTION AND DEPTH OF PIPING WITH SITE UTILITY CONTRACTOR AND CONSTRUCTION MANAGER. INVERT ELEVATION: 92'-2" (F.F.E. = 100.0').
- 3" WASTE STACK VENT SYSTEM DOWN AND UP.
- 4" SINGLE STACK VENT SYSTEM DOWN AND UP.
- 2" WASTE STACK VENT SYSTEM DOWN AND UP.
- 1-1/2" DOMESTIC WATER SERVICE (DWS) FROM SITE WATER SERVICE LOOP TO 5'-0" OUTSIDE BUILDING PERIMETER BY SITE UTILITY CONTRACTOR. PLUMBING CONTRACTOR SHALL CONNECT TO AND EXTEND 1-1/2" DWS INTO BUILDING. REFER TO ENLARGED RISER ROOM FIRE PROTECTION PLAN ON SHEET P202 FOR CONTINUATION. COORDINATE PIPE MATERIAL TO MATCH WITH SITE UTILITY CONTRACTOR. COORDINATE CONNECTION AND DEPTH OF PIPING WITH SITE UTILITY CONTRACTOR AND CONSTRUCTION MANAGER.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM BELOW SLAB IN WALL STRUCTURE TO SECOND FLOOR.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM SECOND FLOOR TO THIRD FLOOR.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM SECOND FLOOR TO THIRD FLOOR.
- RISE 1-1/2" DOMESTIC WATER SERVICE FROM SECOND FLOOR TO THIRD FLOOR AND CAP WATER TIGHT 6" ABOVE 1" BRANCH TO UNIT. SEE ENLARGED UNIT PLUMBING PLANS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- 3" WASTE STACK VENT SYSTEM DOWN. RISE 3" STACK VENT TO ATTIC SPACE.
- 4" SINGLE STACK VENT SYSTEM DOWN. RISE 4" STACK VENT TO ATTIC SPACE.
- 3" STACK VENT IN ATTIC FROM THIRD FLOOR. CONNECT TO BUILDING VENT SYSTEM.
- 4" STACK VENT IN ATTIC FROM THIRD FLOOR. CONNECT TO BUILDING VENT SYSTEM.
- 4" STACK VENT IN ATTIC FROM THIRD FLOOR. RISE TO 4" VENT-THRU-ROOF (VTR).
- RISE 4" STACK VENT TO 4" VENT-THRU-ROOF (VTR).
- 2" WASTE STACK VENT SYSTEM DOWN. RISE 2" STACK VENT TO ATTIC SPACE.
- 3" STACK VENT IN ATTIC FROM THIRD FLOOR. CONNECT TO BUILDING VENT SYSTEM.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

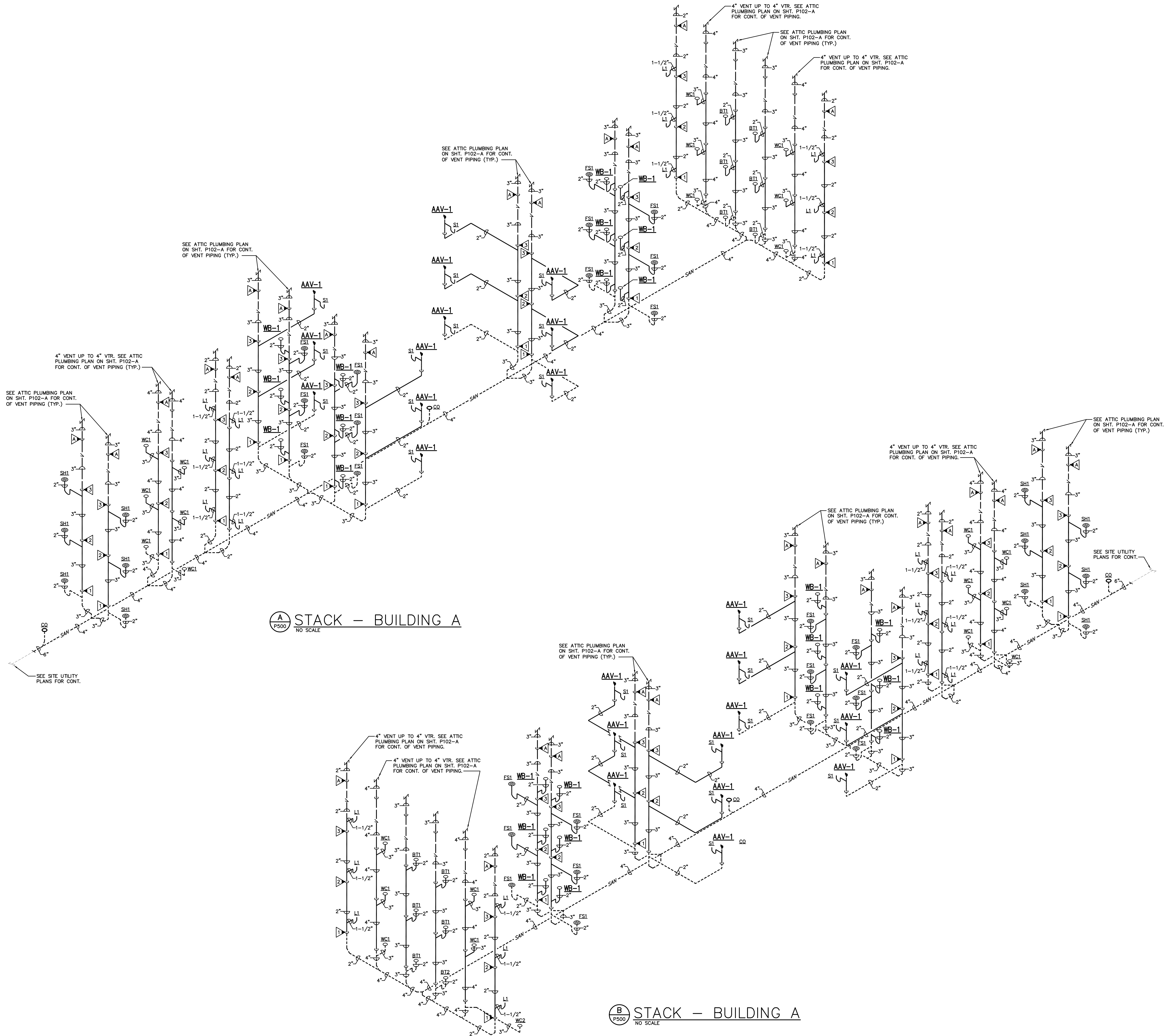
THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY COMPASSION COLLABORATOR
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING C
PLUMBING PLANS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	P105-C
	CD PROGRESS SET

P105-C-24217.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
DESIGNED BY
B.BURNS
DRAWN BY
B.BURNS
CHECKED BY
C.ANDERSON
JOB NUM.
24217
(614) 766 4896
FAX: (614) 766 2354



B STACK - BUILDING A
NO SCALE

P500-A-24217.DWG

PRATER
Engineering Associates, Inc.

6130 Wilcox Road
Dublin, Ohio 43016

DESIGNED BY
B.BURNS

DRAWN BY
B.BURNS

CHECKED BY
C.ANDERSON

JOB NUM.
24217

(614) 766 4896
FAX: (614) 766 2354

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

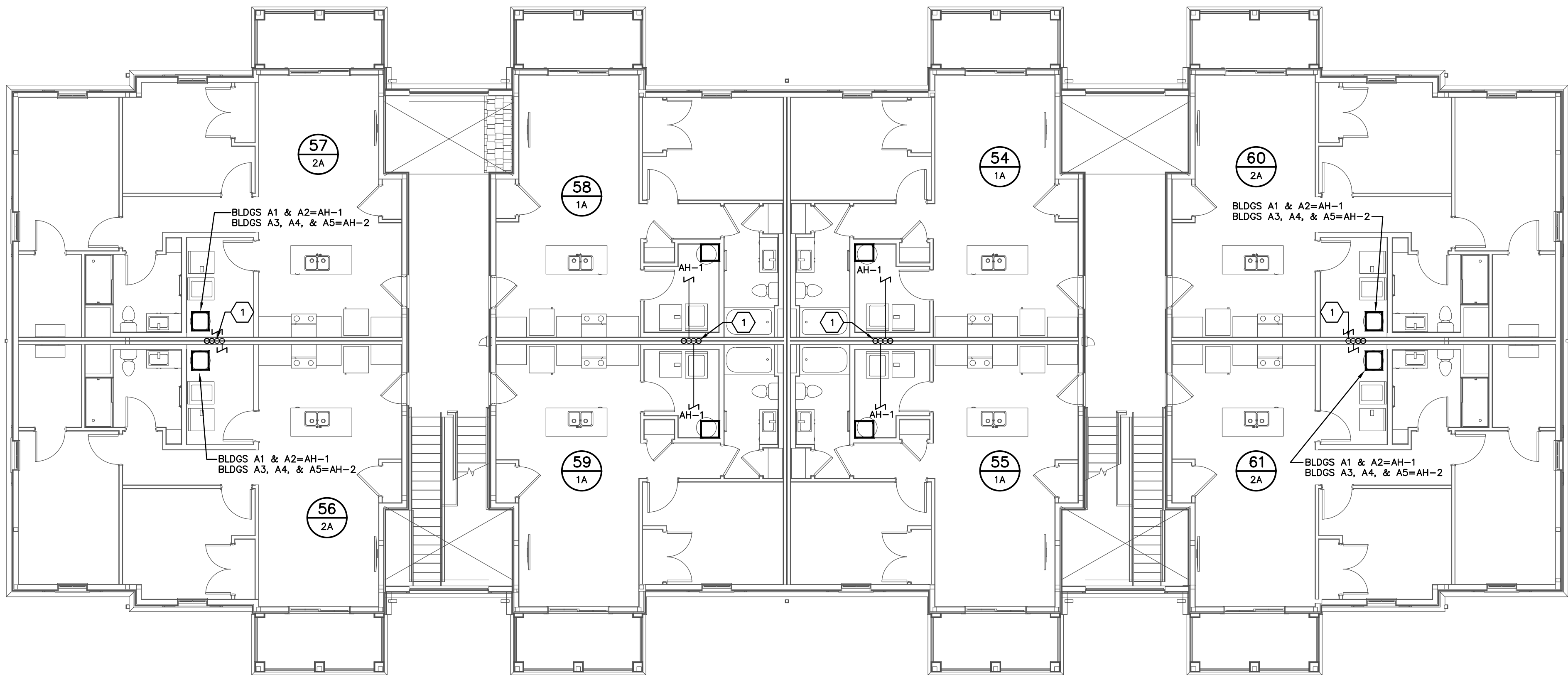
**THE FALLS ON REFUGEE ROAD**
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

**Moody Nolan**
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

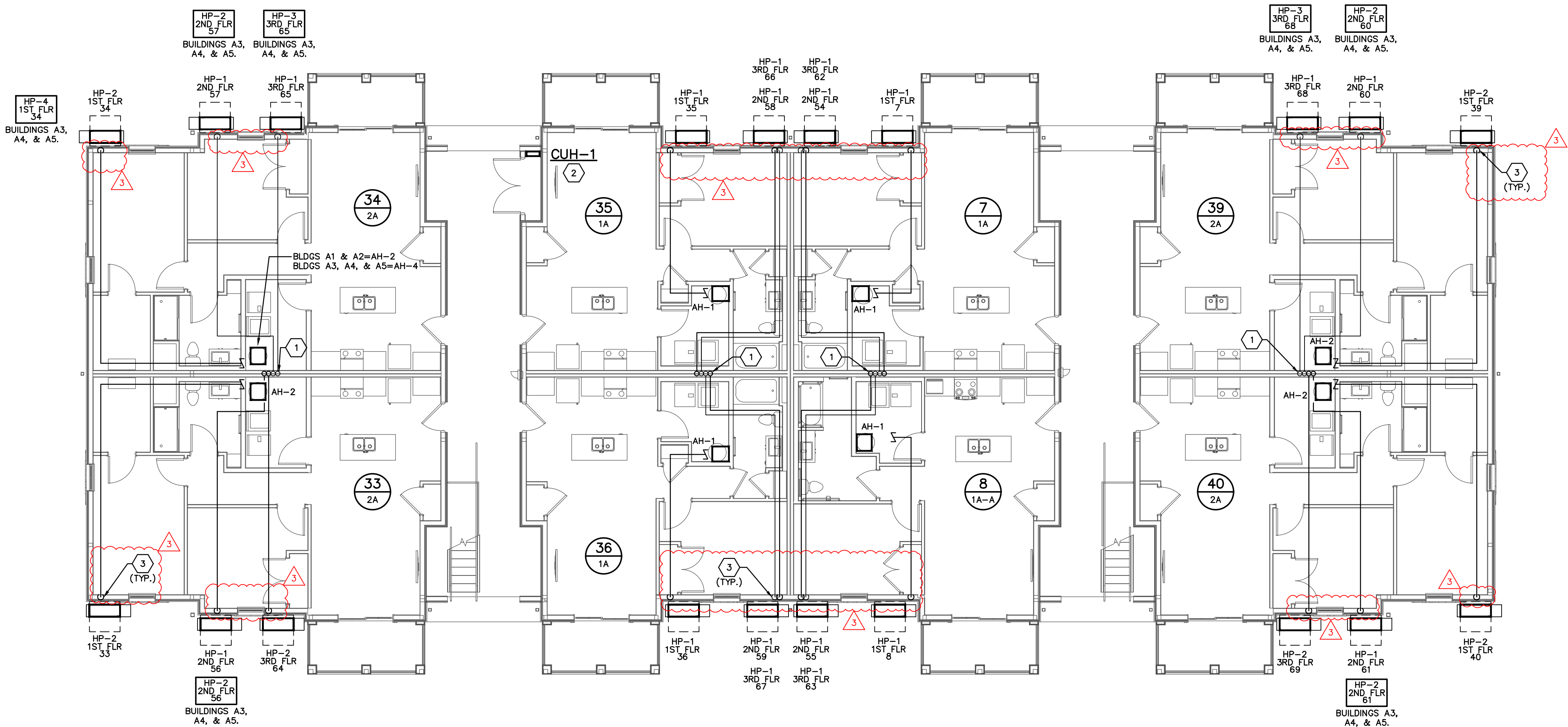
DRAWING TITLE:
**BUILDING A
STACK DIAGRAMS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	NEW SHEET ISSUED P500
	CD PROGRESS SET

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	NEW SHEET ISSUED P501
	CD PROGRESS SET 3



LEVEL 02 HVAC PLAN – BUILDING A
SCALE: 1/8"=1'-0"



LEVEL 01 HVAC PLAN – BUILDING A
SCALE: 1/8"=1'-0"

H101-A-24217.DWG

PRATER
Engineering Associates, Inc.

6130 Wilcox Road
Dublin, Ohio 43016

DESIGNED BY
B. MCFERRIN

DRAWN BY
B. MCFERRIN

CHECKED BY
J. LOCKARD, P.E.

JOB NUM.
24217

(614) 766 4896
FAX: (614) 766 2354

CODED NOTES

1. REFRIGERANT PIPING DOWN INSIDE WALL CAVITY FROM ABOVE TO OUTDOOR UNITS ON GRADE. PIPE PER THE DETAILS ON SHEET H301 (TYP.).
2. COORDINATE CUH LOCATION PRIOR TO ROUGH IN WITH P/TP DRAWINGS. CUH ONLY TO BE IN CLOSETS WITH PLUMBING OR FIRE PROTECTION PIPING EXPOSED. MAINTAIN ALL NEC CLEARANCES FOR ANY ELECTRICAL PANELS WITHIN CLOSETS.
3. REFRIGERANT PIPING DOWN INSIDE WALL CAVITY BETWEEN CYP. AND BATT. INSULATION. SHIELD W/ 16 GAUGE STEEL SHIELDING PLATES.

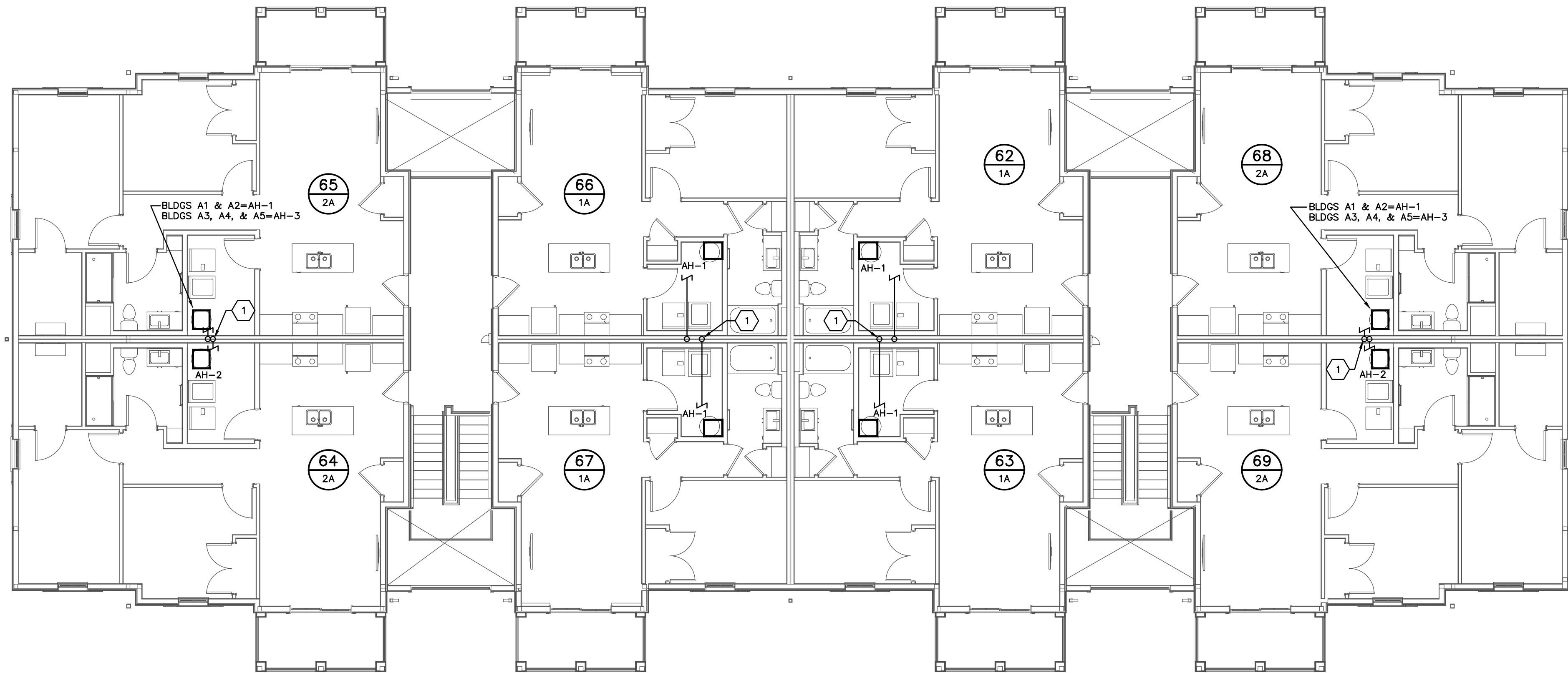
#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING A - LEVEL 01 & 02
HVAC PLANS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	H101-A
	CD PROGRESS SET



LEVEL 03 HVAC PLAN – BUILDING A
SCALE: 1/8"=1'-0"

H102-A-24217.DWG

PRATER
Engineering Associates, Inc.

6130 Wilcox Road
Dublin, Ohio 43016

DESIGNED BY
B. MCFERRIN

DRAWN BY
B. MCFERRIN

CHECKED BY
J. LOCKARD, P.E.

JOB NUM
24217

(614) 766 4896
FAX: (614) 766 2354

CODED NOTES

1. REFRIGERANT PIPING DOWN INSIDE WALL CAVITY FROM ABOVE TO OUTDOOR UNITS ON GRADE. PIPE PER THE DETAILS ON SHEET H301 (TYP.).

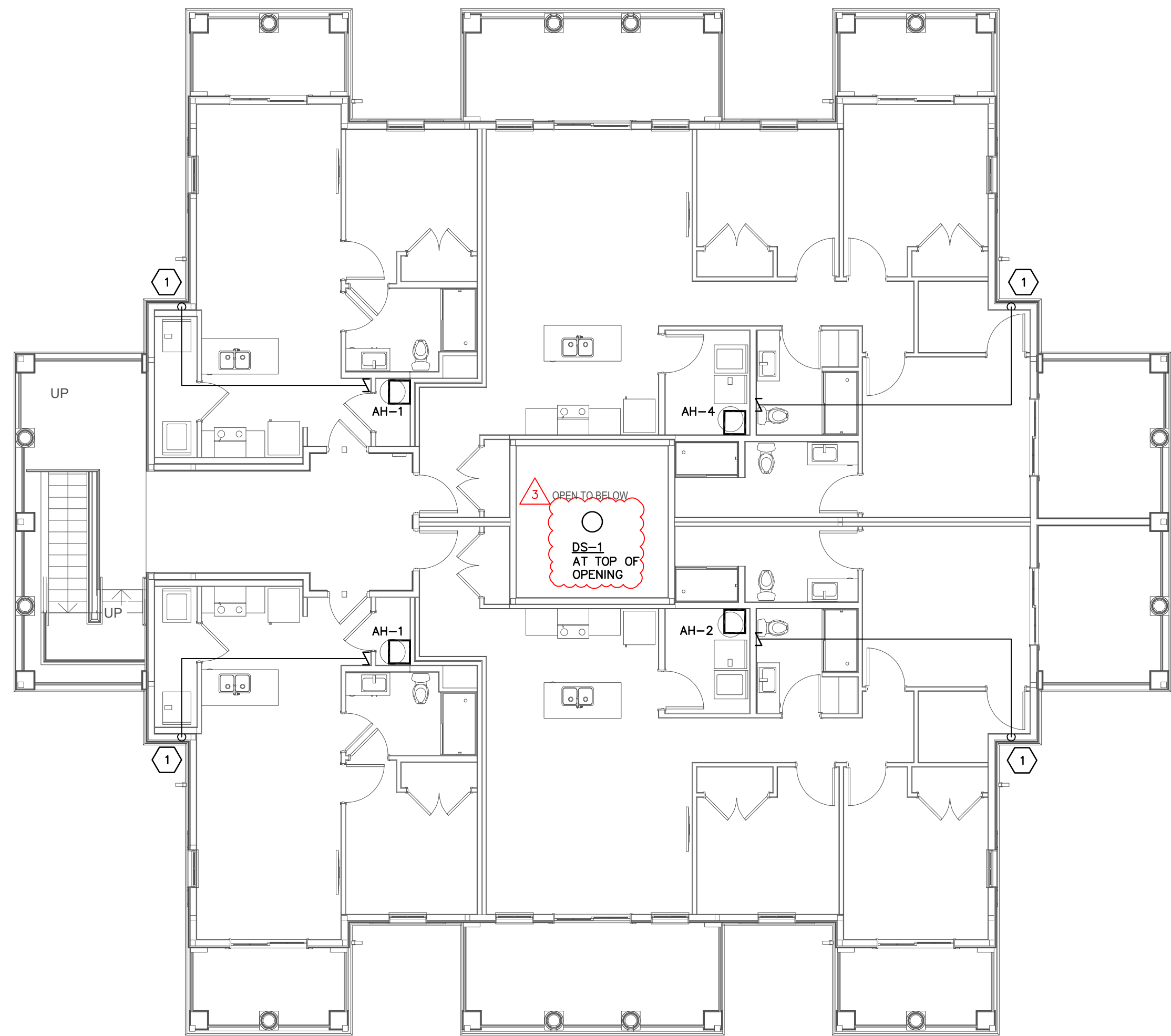
#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

**THE FALLS ON REFUGEE ROAD**
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

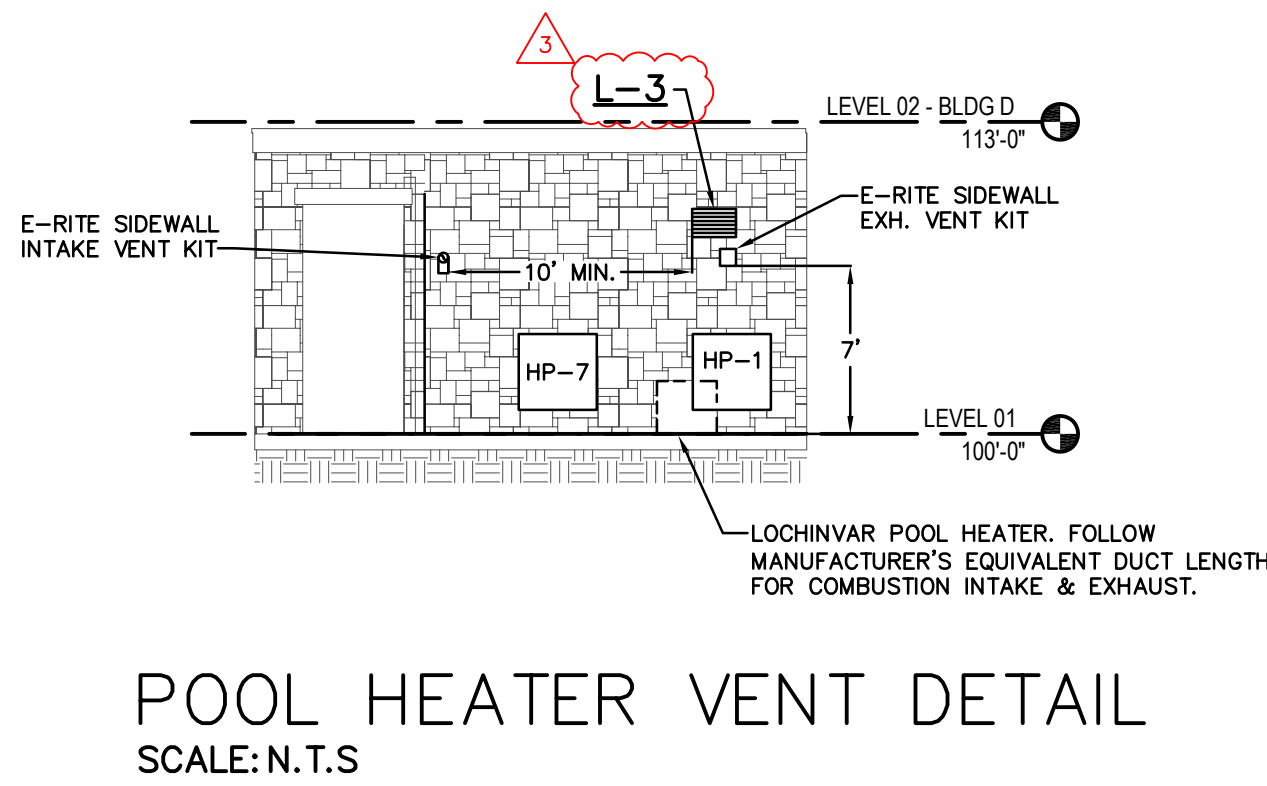
**Moody Nolan**
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING A - LEVEL 03
HVAC PLANS**

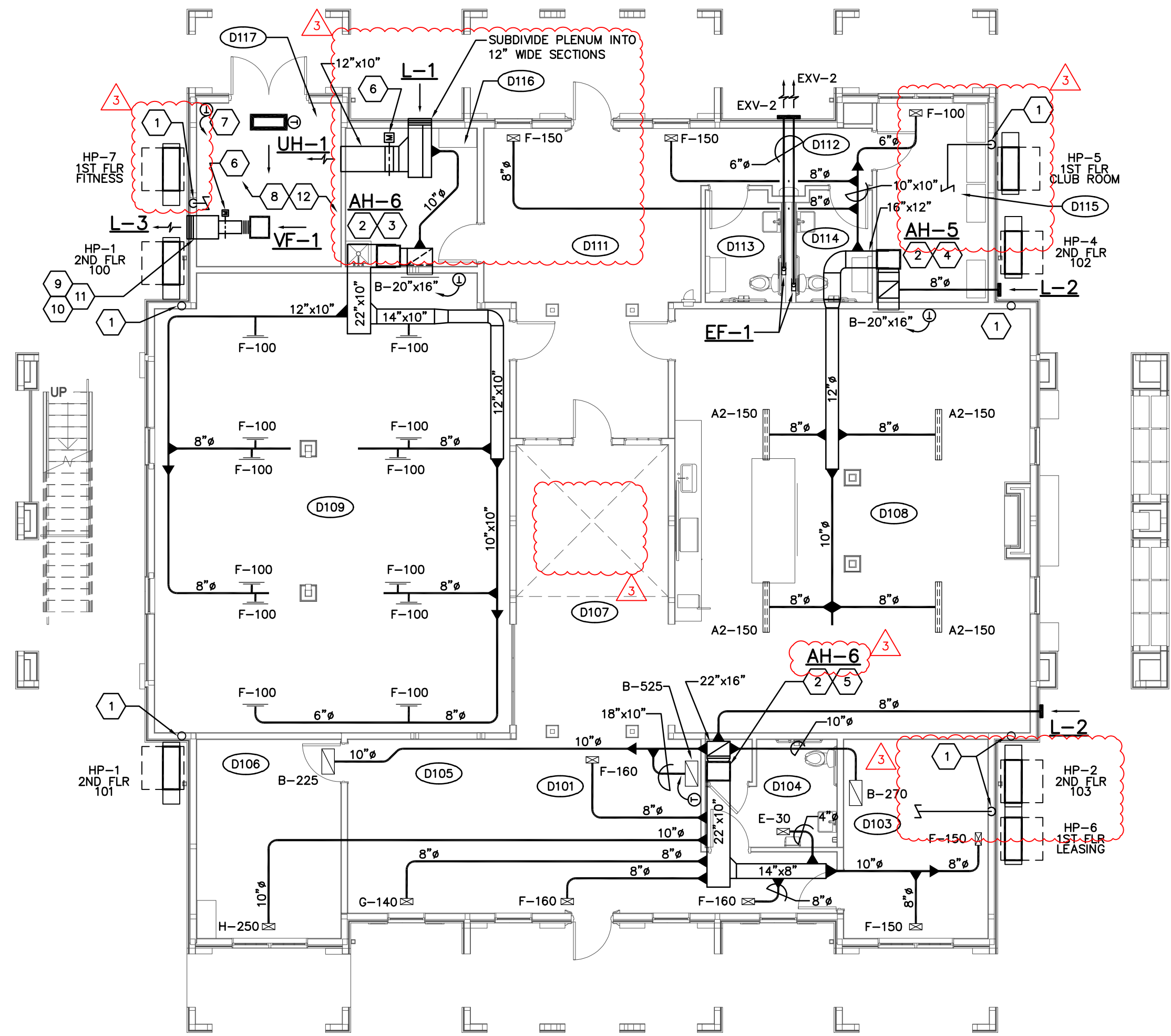
PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	H102-A
	CD PROGRESS SET



LEVEL 02 HVAC PLAN – BUILDING D
SCALE: 1/8"=1'-0"



POOL HEATER VENT DETAIL
SCALE: N.T.S.



LEVEL 01 HVAC PLAN – BUILDING D
SCALE: 1/8"=1'-0"

CODED NOTES

1. REFRIGERANT PIPING DOWN INSIDE WALL CAVITY FROM ABOVE TO OUTDOOR UNITS ON GRADE. PIPE PER THE DETAILS ON SHEET H301 (TYP).
2. INSTALL AIR HANDLING UNIT, REFRIGERANT PIPING, PRIMARY DRAIN LINE, AND CONDENSATE OVERFLOW SHUT-OFF SWITCH PER THE DETAILS ON SHEET H301.
3. BALANCE OUTSIDE AIR DUCT TO 330 CFM. BALANCE R.A. DUCT TO 870 CFM.
4. BALANCE OUTSIDE AIR DUCT TO 180 CFM. BALANCE R.A. DUCT TO 820 CFM.
5. BALANCE OUTSIDE AIR DUCT TO 130 CFM. BALANCE R.A. DUCT TO 1070 CFM.
6. MOTOR OPERATED DAMPER INTERLOCKED W/ VENTILATION FAN (VF-1).
7. LINE VOLTAGE COOLING ONLY THERMOSTAT FOR CONTROL OF VENTILATION FAN. THERMOSTAT SHALL BE WIRED TO TURN ON FAN WHEN THE SPACE TEMPERATURE IS ABOVE THE THERMOSTAT SET POINT.
8. COORDINATE HVAC EQUIPMENT LOCATIONS & ROUTING OF DUCTS/PIPES IN THE POOL EQUIPMENT & WATER ROOMS WITH THE WORK OF ALL OTHER TRADES.
9. POOL ROOM HVAC DESIGN IS BASED ON LOCHINVAR MODEL ERN252A POOL HEATER. VERIFY POOL HEATER MANUFACTURER & MODEL WITH CONSTRUCTION MANAGER PRIOR TO PROCURING ANY EQUIPMENT OR MATERIALS. COORDINATE EXACT LOCATION OF POOL HEATER WITH POOL EQUIPMENT SUPPLIER / INSTALLER. PROVIDE CONDENSATE TRAP & EXTEND 3/4" PIPE FROM HEATER CONNECTION TO FLOOR DRAIN. INSTALL CONDENSATE TREATMENT KIT FURNISHED WITH HEATER INLINE WITH CONDENSATE DRAIN.
10. EXTEND 4" VENT PIPE FROM POOL HEATER CONNECTION THROUGH EXTERIOR WALL & TERMINATE WITH FLUE EXHAUST VENT CAP FURNISHED WITH HEATER. VENT PIPING SHALL BE SOLVENT WELDED SCHEDULE F441 CPVC.
11. INSTALL DIRECT AIR INTAKE KIT AND EXTEND 4" COMBUSTION AIR PIPE THROUGH EXTERIOR WALL. TERMINATE USING WALL OPERATED AIR INLET DAMPER INLINE WITH THE DUCT TO PREVENT CIRCULATION OF COLD AIR THROUGH THE HEATER WHEN NOT IN USE. DAMPER SHALL BE INTERLOCKED WITH THE HEATER. COMBUSTION AIR PIPING SHALL BE SOLVENT WELDED SCHEDULE F441 CPVC.
12. ALL DUCTWORK, FLENUMS, AND DAMPERS IN THIS ROOM SHALL BE ALUMINUM CONSTRUCTION.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

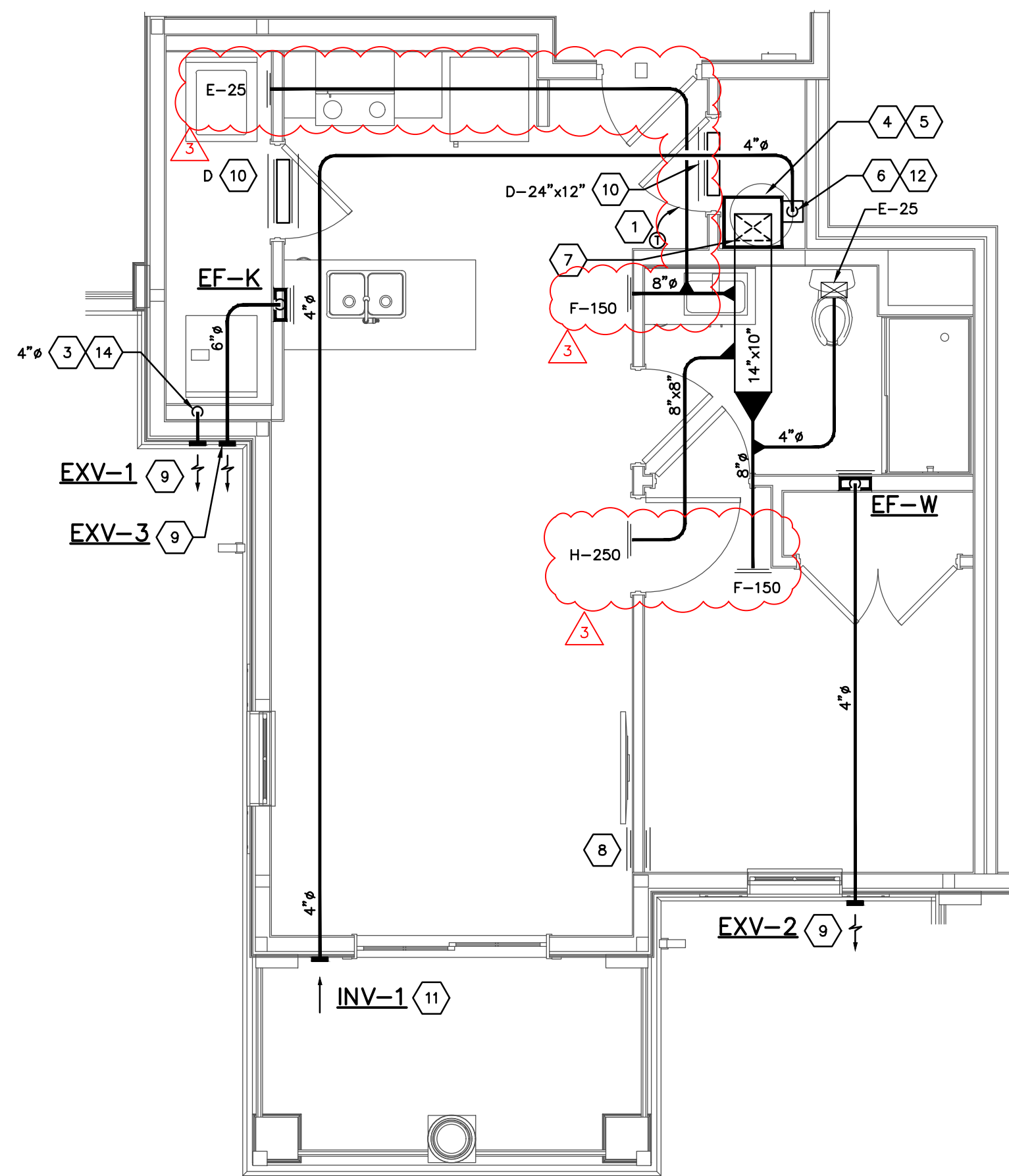
Moody Nolan
300 SPRUCE STREET
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CERT. NO: FIRM 00197475

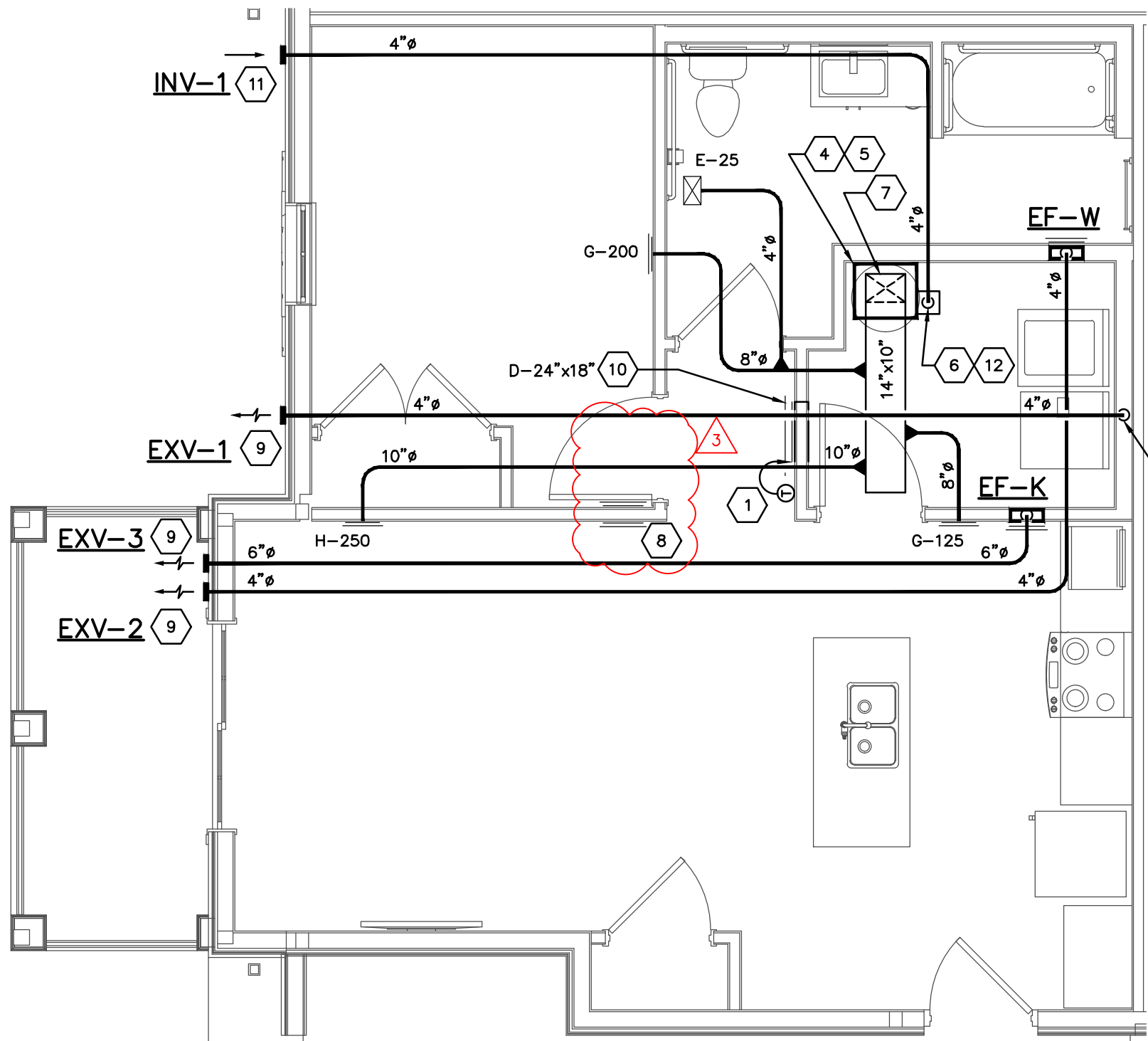
DRAWING TITLE:
**BUILDING D - LEVEL 01 & 02
HVAC PLANS**

05/01/2025
23446
H107-D
CD PROGRESS SET

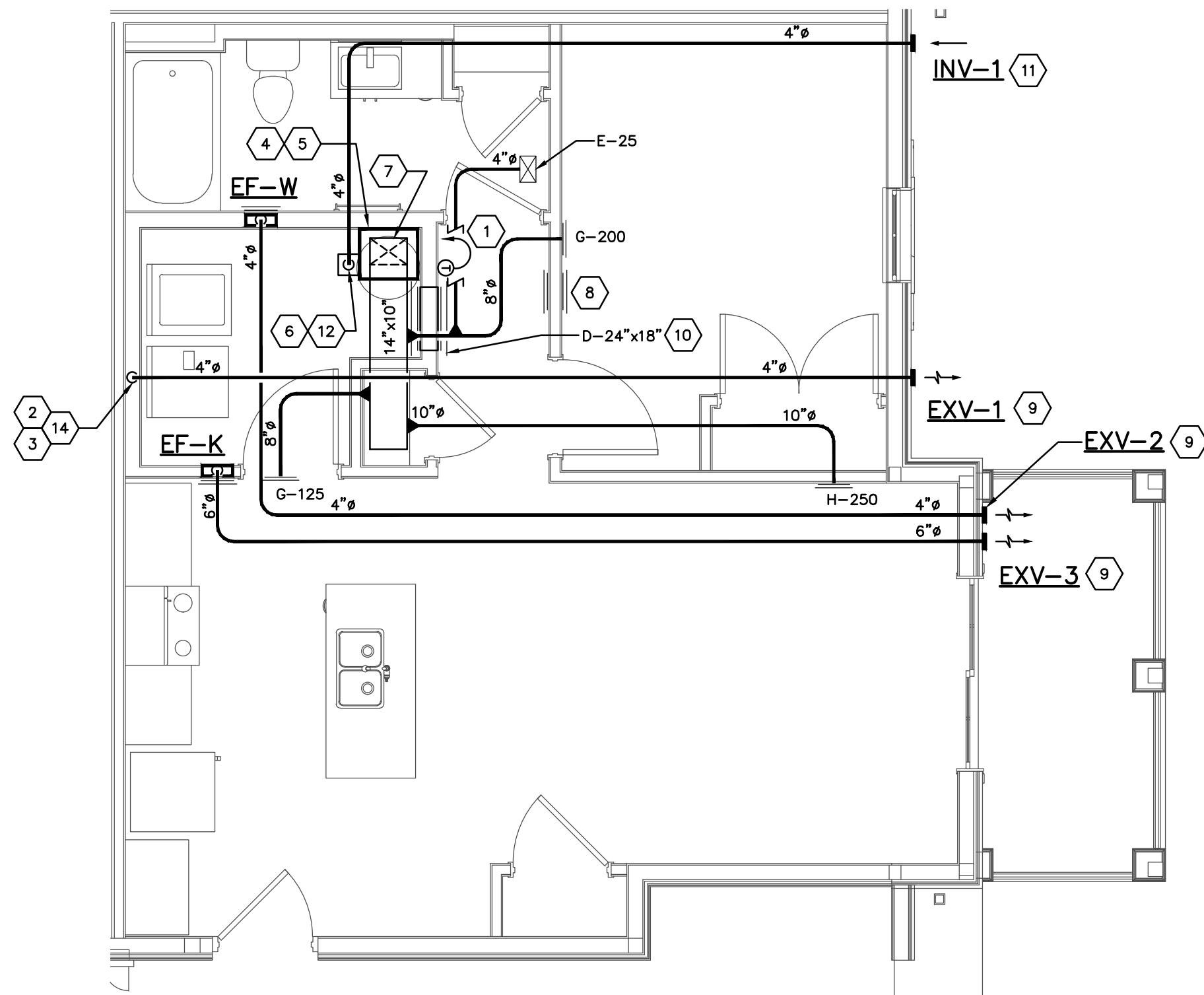
H107-D-24217.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
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DESIGNED BY
B. MCFERRIN
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CHECKED BY
J. LOCKARD, P.E.
JOB NUM.
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1 BEDROOM CLUBHOUSE
HVAC UNIT PLAN
SCALE: 1/4"=1'-0"



1 BEDROOM ANSI TYPE A
HVAC UNIT PLAN
SCALE: 1/4"=1'-0"



1 BEDROOM ANSI TYPE B
HVAC UNIT PLAN
SCALE: 1/4"=1'-0"

H-200-24217.DWG

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CODED NOTES

- ELECTRONIC PROGRAMMABLE THERMOSTAT FURNISHED AND WIRED BY HVAC CONTR. MOUNT THERMOSTAT AT 48" A.F.F. EXACT LOCATION SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
- REFER TO DRYER EXHAUST ROUGH-IN DETAIL ON SHEET H301. FIRESTOP DUCT PENETRATION THROUGH THE CEILING MEMBRANE. INSTALL 4" FLEXIBLE EXHAUST DUCT BETWEEN END OF RIGID EXHAUST DUCT & DRYER EXHAUST CONNECTION. VERIFY EXACT DRYER LOCATION PRIOR TO INSTALLING DRYER EXHAUST DUCT.
- DRYER DUCT EQUIVALENT LENGTH IS TO BE PERMANENTLY LABELED WITHIN SIX (6) FEET OF DRYER DUCT CONNECTION.
- AIR HANDLING UNIT LOCATED ABOVE WATER HEATER. INSTALL AIR HANDLING UNIT, REFRIGERANT PIPING, DRAIN PIPING, CONDENSATE OVERFLOW SHUT-OFF SWITCH, ETC. PER THE DETAILS ON SHEET H301. REFER TO 1/8" SCALE HVAC DRAWINGS FOR AIR HANDLING UNIT DESIGNATION. MAINTAIN N.E.C. REQUIRED CLEARANCE FOR AIR HANDLING UNIT.
- ROUTE 3/4" DRAIN LINE FROM AIR HANDLING UNIT DRAIN CONNECTION TO FLOOR DRAIN PROVIDED BY PLUMBING CONTRACTOR IN MECHANICAL CLOSET.
- ELECTRICAL CONTRACTOR WILL PROVIDE RM4 SMOKE ALARM ACCESSORY RELAY IN MECHANICAL CLOSET NEAR AIR HANDLING UNIT. HVAC CONTRACTOR SHALL PROVIDE 24V WIRING BETWEEN RM4 RELAY & OUTSIDE AIR FAN WIRE RELAY TO SHUT OFF OUTSIDE AIR FAN DURING SMOKE ALARM CONDITION.
- EXTEND DUCT UP INTO SOFFIT CEILING SPACE. PROVIDE TURNING VANES IN ELBOW.
- PROVIDE TYPE "D" RETURN AIR GRILLES FOR RETURN AIR TRANSFER THROUGH THE WALL STUD SPACE. THE RETURN GRILLE ON THE LIVING ROOM SIDE SHALL BE 6" ABOVE THE FLOOR. THE RETURN GRILLE ON THE BEDROOM SIDE SHALL BE 6" BELOW THE CEILING.
- INSULATE ALL BATHROOM EXHAUST & DRYER EXHAUST DUCTS LOCATED WITHIN 10 FT. OF AN EXTERIOR WALL OR ROOF PENETRATION.
- SLEEVED TRANSFER DUCT WITH RETURN AIR GRILLE ON BOTH SIDES OF WALL. TOP OF GRILLE 2" BELOW CEILING.
- INSULATE ENTIRE LENGTH OF OUTSIDE AIR DUCTWORK.
- O.A. DUCT DOWN FROM TRUSS SPACE TO UNIT CONNECTION. PROVIDE CEILING RADIATION DAMPER AT CEILING MEMBRANE PENETRATION. PROVIDE MOTORIZED AND MANUAL DAMPERS IN VERTICAL DROP BELOW CEILING. REFER TO DETAIL ON SHEET H301.
- PROVIDE TYPE "D" RETURN AIR GRILLES CENTERED ABOVE THE DOOR. THE RETURN GRILLE ON THE BEDROOM SIDE SHALL BE 2" ABOVE THE DOOR FRAME. THE RETURN GRILLE ON THE OPPOSITE SIDE SHALL BE 2" BELOW THE CEILING.
- ESTIMATED DRYER EQUIVALENT DUCT LENGTH EXCEEDS 35 FEET. PROVIDE A PERMANENT LABEL/TAG WITH DRYER DUCT EQUIVALENT LENGTH LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECT. SEE SHEET H300 FOR ESTIMATED EQUIVALENT DRYER DUCT LENGTH. CONFIRM EQUIVALENT DUCT LENGTH AFTER INSTALLING DRYER EXHAUST DUCT.

DUCT LOCATION / STRUCTURAL COORDINATION

- ALL S.A. DISTRIBUTION DUCTWORK FOR APARTMENT UNITS SHALL BE LOCATED IN THE SOFFIT SPACE BENEATH THE FIRE RATED CEILING MEMBRANE.
- REMOVED.
- ALL FIELD CUT OPENINGS THROUGH RIM BOARDS SHALL BE MADE IN ACCORDANCE WITH THE STRUCTURE SUPPLIERS GUIDELINES & INSTRUCTIONS. CAREFUL COORDINATION WITH THE STRUCTURE SUPPLIER IS REQUIRED. REFER TO THE STRUCTURAL DRAWINGS FOR LOCATIONS OF RIM BOARDS.
- COORDINATE FINAL LOCATIONS OF EXHAUST/INTAKE TERMINALS WITH ARCHITECTURAL ELEVATIONS.

COORDINATION NOTE:

THE HVAC CONTRACTOR SHALL CONFORM TO THE DUCT CONFIGURATION INDICATED ON THIS DRAWING AS CLOSELY AS POSSIBLE. NOTE THAT FIELD COORDINATION WITH OTHER TRADES WILL BE NECESSARY TO ACHIEVE THE CEILING HEIGHTS INDICATED ON THE ARCHITECTURAL DRAWINGS. COORDINATION WITH THE PLUMBING CONTRACTOR WILL BE ESPECIALLY IMPORTANT DUE TO VARIATIONS IN THE SANITARY PIPING CONFIGURATIONS. PROVIDE ADDITIONAL DUCT OFFSETS WHERE REQUIRED DUE TO FIELD CONDITIONS AND COORDINATION WITH OTHER TRADES.

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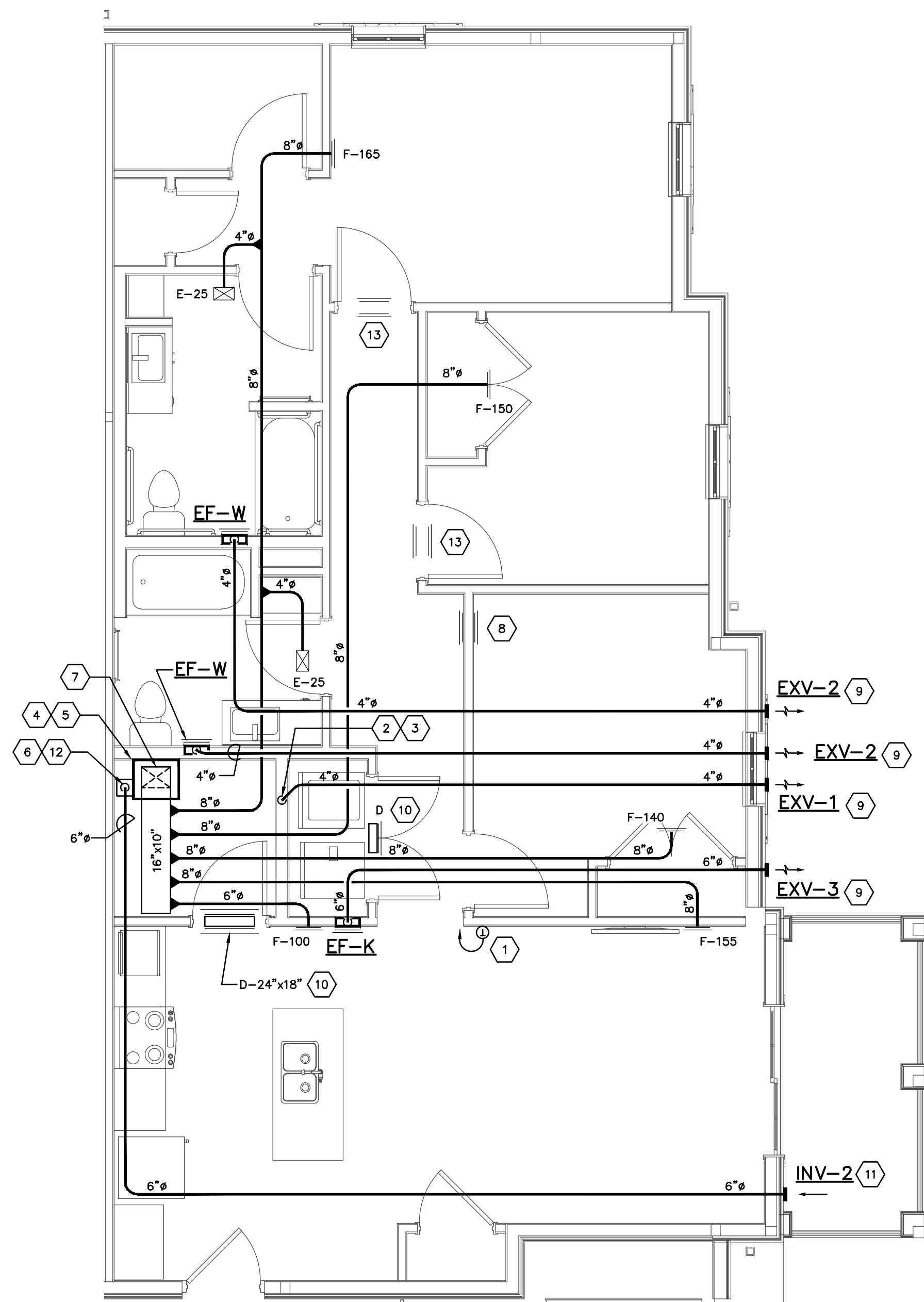
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Moody Nolan CERT. NO: FIRM 00197475

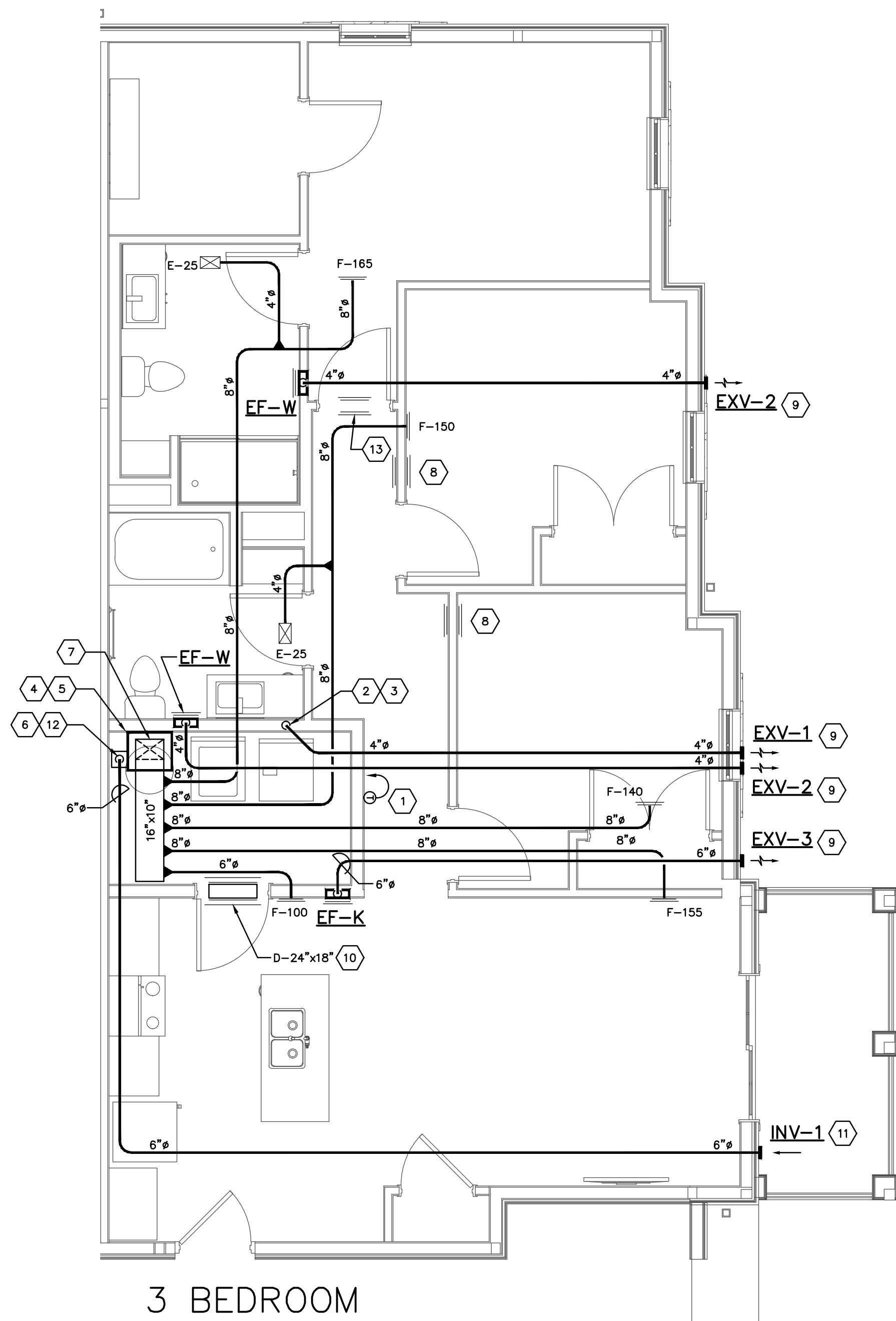
DRAWING TITLE:
**ENLARGED UNIT
HVAC PLANS**

05/01/2025
23446
H-200
CD PROGRESS SET

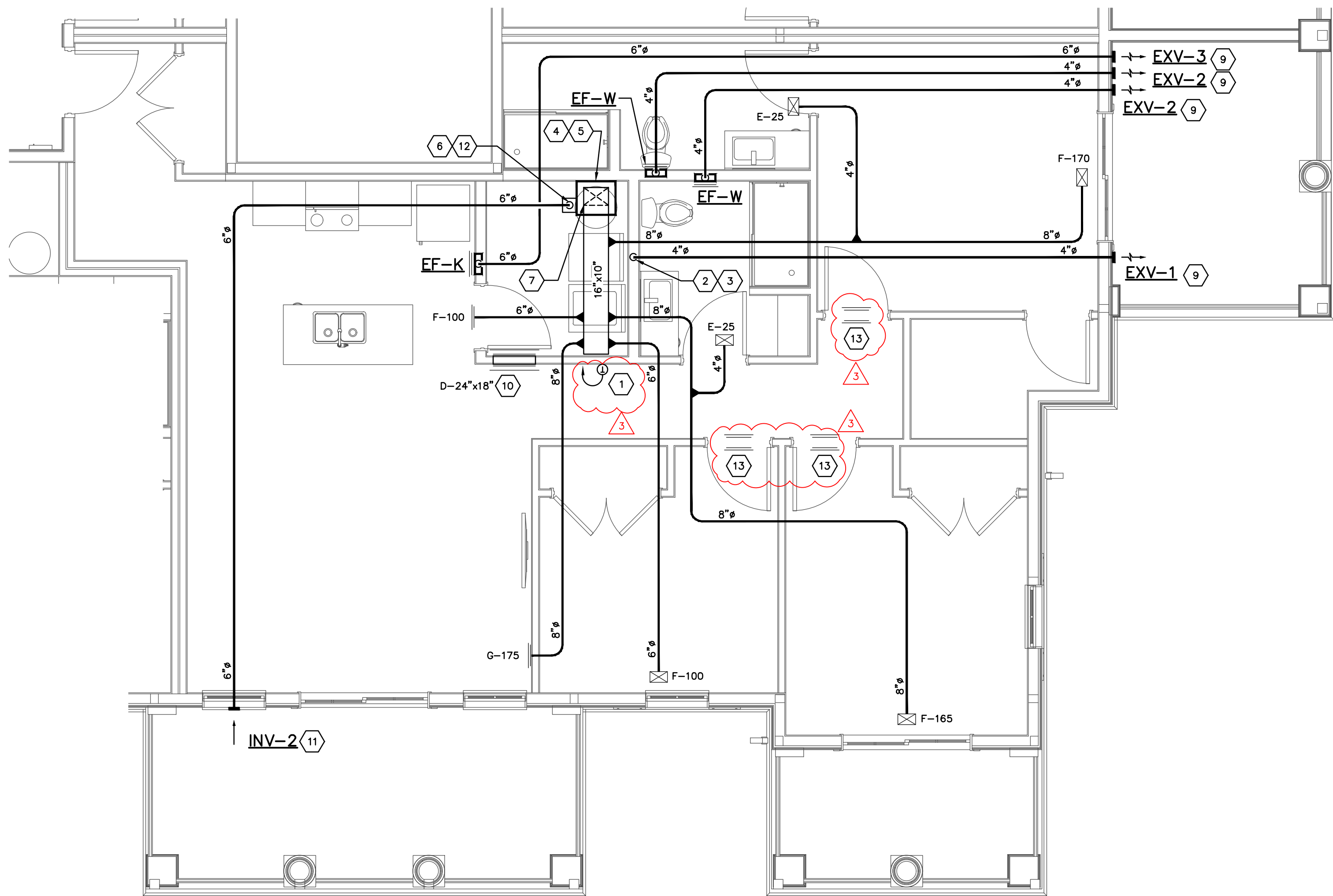
PROGRESS
DRAWING
NOT FOR
CONSTRUCTION



3 BEDROOM ANSI TYPE A
HVAC UNIT PLAN
SCALE: 1/4"=1'-0"



3 BEDROOM
HVAC UNIT PLAN
SCALE: 1/4"=1'-0"



3 BEDROOM CLUBHOUSE
HVAC PLAN
SCALE: 1/4"=1'-0"

H-202-24217.DWG

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- REMOVED.
- REMOVED.

DUCT LOCATION / STRUCTURAL COORDINATION

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COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
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PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**ENLARGED UNIT
HVAC PLANS**

05/01/2025
23446
H-202
CD PROGRESS SET

FAN SCHEDULE

MANUFACTURER'S MODEL NUMBER BASED ON GREENHECK UNLESS OTHERWISE NOTED.
KEY: CENT.-CENTRIFUGAL; PROP.-PROPELLER; F.C.-FORWARD CURVED; B.I.-BACKWARD INCLINE;
A.F.-AIR FOIL; A.T.L.-ACROSS THE LINE; VFD-VARIABLE FREQUENCY DRIVE

FAN NO.	LOCATION	FUNCTION	MFOR. MODEL NUMBER	FAN TYPE	WHEEL TYPE & SIZE	CFM	EXT. S.F. W.G.	R.P.M.	TIP SPEED F.P.M.	OUTLET VELOCITY F.P.M.	MAX. SOUND RATING	MOTOR H.P.	BHP REQ'D	VOLT	PHASE	TYPE MOTOR STARTING	DAMPER DRIVE	REMARKS
EF-W	WALL MOUNTED	APARTMENT BATHROOMS	GREENHECK SP-LP0511-1	LOW PROFILE WALL MTD.	F.C.	50	0.4"	685	1009	555	2.3 SONES	N/A	0.01	115	1	A.T.L.	●	1 4 5
EF-K	WALL MOUNTED	APARTMENT KITCHENS	GREENHECK SP-LP0511-1	LOW PROFILE WALL MTD.	B.I. 7.75"	100	0.35"	1040	1654	93	3.5 SONES	1/15	0.02	115	1	A.T.L.	●	1 4 5
OAF-1	FITNESS CENTER	FITNESS CENTER O.A.	FANTECH FG 8XL	INLINE SUPPLY	F.C.	330	0.5"	3031	----	----	----	N.A.	147 WATTS	120	1	A.T.L.	●	1 6 7
OAF-2	CLUB ROOM	CLUB ROOM O.A.	FANTECH FG 8XL	INLINE SUPPLY	F.C.	180	0.5"	3031	----	----	----	N.A.	147 WATTS	120	1	A.T.L.	●	1 6 7
OAF-3	LEASING	LEASING O.A.	FANTECH FG 8XL	INLINE SUPPLY	F.C.	130	0.5"	3031	----	----	----	N.A.	147 WATTS	120	1	A.T.L.	●	1 6 7
OAF-4	APARTMENT UNITS	APARTMENT O.A.	FANTECH FG 8	INLINE SUPPLY	F.C.	-	0.5"	2866	----	----	----	N.A.	72 WATTS	120	1	A.T.L.	●	1 6 7 10
VF-1	CEILING SPACE	POOL ROOM VENT.	GREENHECK SQ-80-VG	INLINE EXHAUST	F.C.	300	0.3"	1589	4524	300	7.6 SONES	1/8	0.06	115	1	A.T.L.	●	2 3 8 9
EF-1	CLUBHOUSE	RESTROOM EXHAUST	GREENHECK SP-LP0511-1	LOW PROFILE WALL MTD.	F.C.	50	0.4"	685	1009	555	2.3 SONES	N.A.	0.01	115	1	A.T.L.	●	4 5

- 1 SUPPORT FAN W/ ROOS & AUXILIARY STEEL FROM STRUCTURE ABOVE OR ADJACENT WALL. 2 SUPPORT FAN FROM OVERHEAD STRUCTURE W/ RUBBER IN SHEAR VIBRATION ISOLATORS, ROOS & AUXILIARY STEEL. 3 FAN TO BE FURNISHED W/ FACTORY MOUNTED VARIABLE SPEED SWITCH FOR BALANCING. 4 FAN SHALL BE CONTROLLED BY LIGHT SWITCH. 5 INTEGRAL GRILLE & METAL DAMPER / DUCT CONNECTOR. 6 FURNISH W/ WC 15 SPEED CONTROL FOR BALANCING. MOUNT SPEED CONTROL TO WALL ADJACENT TO FAN.
- 7 HVAC CONTR. SHALL INTERLOCK O.A. FAN W/ AIR HANDLING UNIT SUPPLY FAN. O.A. FAN SHALL OPERATE ONLY WHEN AHU FAN IS RUNNING. 8 CONTROLLED BY WALL MOUNTED LINE VOLTAGE THERMOSTAT. 9 ALUMINUM WHEEL MATERIAL, INSULATED HOUSING. 10 SEE DWELLING UNITS O.A. FOR FAN CFM.

HVAC NOTES

- DUCT LAYOUTS ARE BASED ON COORDINATION WITH PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL AND OTHER TRADES TO ACHIEVE THE CEILING HEIGHTS INDICATED ON THE ARCHITECTURAL DRAWINGS. CAREFUL COORDINATION BETWEEN ALL TRADES WILL BE REQUIRED ON THE JOB SITE TO ATTAIN THESE CEILING HEIGHTS. PROVIDE ADDITIONAL OFFSETS WHERE REQUIRED DUE TO FIELD CONDITIONS.
- DUCT LAYOUT IS ONLY SCHEMATIC, EXACT LOCATION OF PIPES AND DUCTS TO BE COORD. ON JOB W/BLDG. STRUCTURE, AND WORK OF OTHER CONTRS.
- INSTALL BALANCING DAMPERS AS SHOWN AND AS REQ'D FOR PROPER BALANCING OF AIR HANDLING SYSTEMS. REFER TO THE SPECIFICATIONS FOR AIR BALANCING REQUIREMENTS.
- THERMOSTATS SHALL BE MOUNTED AT 48" A.F.F. COORDINATE EXACT LOCATIONS WITH THE CONSTRUCTION MANAGER.
- INSTALL ALL EQUIPMENT W/ CODE REQUIRED CLEARANCE IN FRONT OF ALL ELECTRICAL AND CONTROL PANELS.
- ALL DUCTS AND PIPES AB. CLG. UNLESS OTHERWISE NOTED.
- NO DUCTWORK, PIPING OR EQUIPMENT MAY BE LOCATED AB. ELEC. OR TELE. EQUIP.
- MOUNT CABINET UNIT HEATERS W/ 8" AB. FLR., UNLESS OTHERWISE NOTED.
- ALL DUCTS IN APARTMENT UNITS SHALL BE INSTALLED WITH FLAT SLIP TYPE CONNECTORS TO MINIMIZE DUCT HEIGHTS.
- NOTIFY GEN. CONTR. OF SIZE AND LOCATION OF ALL RECESSES AND OPNGS. REQ'D FOR HVAC WORK.
- REMOVED.
- RUN ALL DRAIN LINES INDIRECT TO NEAREST FLOOR DRAIN OR HUB DRAIN.
- THE HVAC CONTR. IS RESPONSIBLE FOR FIRESTOPPING AT ALL HVAC RELATED PENETRATIONS OF FIRE AND SMOKE RATED STRUCTURES, FLOORS AND PARTITIONS. REFER TO ARCHITECTURAL FLR. PLANS FOR LOCATIONS OF ALL RATED STRUCTURES. REFER TO THIS SHEET FOR FIRESTOPPING DETAILS.
- REMOVED.
- REMOVED.
- REMOVED.
- REMOVED.
- ALL DUCT PENETRATIONS THRU STRUCTURAL BEARING WALLS SHALL BE RIGID DUCT. FLEXIBLE DUCTWORK SHALL NOT PENETRATE STRUCTURAL BEARING WALLS. FIRESTOP EACH DUCT PENETRATION. REFER TO THE FIRESTOPPING DETAILS.

EQUIPMENT NOTES

- EXV-1**
DEFLECTO MODEL HS4B BROWN VENT HOOD W/ OPERABLE LOUVERS & 4" DUCT CONNECTION.
- EXV-2**
DEFLECTO MODEL HS4B BROWN VENT HOOD W/ OPERABLE LOUVERS, BIRD BARS & 4" DUCT CONNECTION.
- EXV-3**
DEFLECTO MODEL HS4B BROWN VENT HOOD W/ OPERABLE LOUVERS, BIRD BARS & 6" DUCT CONNECTION.
- INV-1**
DEFLECTO MODEL HSM6B BROWN FRESH AIR INTAKE HOOD W/ FIXED LOUVERS, BIRD GRID & 4" DUCT CONNECTION.
- INV-2**
DEFLECTO MODEL HSM6B BROWN FRESH AIR INTAKE HOOD W/ FIXED LOUVERS, BIRD GRID & 6" DUCT CONNECTION.
- DS-1**
AIRIUS DESIGNER SERIES 60-P4 DESTRATIFICATION FAN. PROVIDE CONTROLS WIRING, DIAL, AND MOUNTING HARDWARE. COORDINATE COLOR/FINISH WITH ARCHITECT.
- ATTACH INTAKE & VENT TERMINALS TO THE EXTERIOR WALL PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
SEAL ALL DUCT PENETRATIONS THROUGH EXTERIOR WALLS WEATHER TIGHT.

DWELLING UNIT O.A.

BASED ON EQUATION 4-9 IN OMC 2024

UNIT TYPE	# OF BEDROOMS	FLOOR AREA (H ²)	CFM REQUIRED	ADJUSTED CFM
1 BED CLUBHOUSE	1	673	21.73	25
1 BED ANSI TYPE A	1	673	21.73	25
1 BED ANSI TYPE B	1	673	21.73	25
2 BED 2 BA	2	945	31.95	35
2 BED ANSI TYPE A	2	945	31.95	35
2 BED ANSI TYPE B	2	945	31.95	35
3 BED ANSI TYPE A	3	1209	42.09	45
3 BED	3	1209	42.09	45
3 BED CLUBHOUSE	3	1209	42.09	45

DRYER EQUIVALENT LENGTHS CALCULATIONS

UNIT TYPE	HORIZONTAL DUCT LENGTH (FT.)	VERTICAL DUCT LENGTH (FT.)	# 45° ELBOWS	# 90° ELBOWS	TOTAL # 90° ELBOWS	TOTAL STRAIGHT DUCT LENGTH (FT.)	TOTAL EQUIVALENT LENGTH (FT.)
1 BED CLUBHOUSE	1	7	0	1	1	8	13
1 BED ANSI TYPE A	25	7	0	1	1	32	37
1 BED ANSI TYPE B	25	7	0	1	1	32	37
2BED 2 BATH	20	7	1	1	2	27	35
2 BED ANSI TYPE A	20	7	0	1	1	27	32
2 BED ANSI TYPE B	20	7	1	1	2	27	35
3 BED ANSI TYPE A	20	7	1	1	2	27	35
3 BED	20	7	1	1	2	27	35
CLUBHOUSE 3 BED	23	3	0	1	1	26	31

SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

ITEM	AH-1 HP-1	AH-2 HP-2	AH-3 HP-3	AH-4 HP-4	AH-5 HP-5	AH-6 HP-6
AIR HANDLER MANUFACTURER	BRYANT	BRYANT	BRYANT	BRYANT	BRYANT	BRYANT
AIR HANDLER MODEL NUMBER	FMA5X1800AL	FMA5X1800AL	FMA5X2400AL	FMA5X2400AL	FJ5ANXB30LD0	FJ5ANXB36LD0
UNIT CONFIGURATION	VERT. UPFLOW	VERT. UPFLOW	VERT. UPFLOW	VERT. UPFLOW	VERT. UPFLOW	VERT. UPFLOW
COIL FACE AREA (SQ. FT.)	2.2	2.2	2.2	2.2	3.96	3.96
SUPPLY AIR CFM	600	600	760	760	1000	1200
EXTERNAL STATIC PRESSURE	0.5"	0.5"	0.5"	0.5"	0.5"	0.5"
FAN MOTOR HP	1/5	1/5	1/3	1/3	1/2	1/2
FAN FLA	1.9	1.9	1.9	1.9	4.2	4.2
ELECTRIC HEATER CAPACITY (KW) @ 240V	5.0	7.5	5.0	7.5	10.0	15.0
MIN. CIRCUIT AMPS (MCA)	27.4	41.5	27.4	41.5	56.9	81.5
MAX. OVERCURRENT PROTECTION (MOCP)	30	45	30	45	60	90
VOLTS/PHASE	240/1#	240/1#	240/1#	240/1#	240/1#	240/1#
HEAT PUMP UNIT MANUFACTURER	BRYANT	BRYANT	BRYANT	BRYANT	BRYANT	BRYANT
MODEL NUMBER	37MUHAQ18AA3	37MUHAQ18AA3	37MUHAQ24AA3	37MUHAQ24AA3	37MUHAQ30AA3	37MUHAQ36AA3
NOMINAL TONNAGE	1.5	1.5	2.0	2.0	2.5	3.0
TOTAL COOLING CAP. MBTU @ AHRI	17.7	17.7	22.6	22.6	29.2	35.2
SENSIBLE COOLING MBTU @ AHRI	13.3	13.3	17.0	17.0	21.9	26.4
SYSTEM EER2 / SEER2 @ AHRI	10.5 / 16.5	10.5 / 16.5	11.0 / 17.0	11.0 / 17.0	9.8 / 15.5	9.5 / 15.5
HEATING CAP. MBTU @ 47°F	19.8	19.8	21.4	21.4	36.8	38.0
COP @ 5°F	1.92	1.92	2.10	2.10	1.75	2.2
HSPF2	8.5	8.5	9.0	9.0	8.5	8.5
FAN FLA	0.9	0.9	1.0	1.0	1.5	1.5
COMPRESSOR LRA	-	-	-	-	-	-
COMPRESSOR RLA (HTG. / CLG.)	7.6 / 6.6	7.6 / 6.6	9.5 / 9.0	9.5 / 9.0	12.4 / 11.4	13.1 / 13.4
MINIMUM CIRCUIT AMPACITY	16	16	19	19	29.5	29
MAXIMUM FUSE SIZE	20	20	20	20	30	30
VOLTS/PHASE	240/1#	240/1#	240/1#	240/1#	240/1#	240/1#

NOTES:

- HEATING & COOLING CAPACITIES BASED ON AHRI DATA.
- ALL INDOOR FAN COIL UNITS SHALL HAVE A SINGLE POINT WIRING CONNECTION, UNLESS NOTED OTHERWISE.
- PROVIDE ALL OUTDOOR HEAT PUMP UNITS WITH THE FOLLOWING ACCESSORIES FOR LONG LINE LENGTH APPLICATIONS: ACCUMULATOR, COMPRESSOR START ASSIST CAPACITOR AND RELAY, HARD SHUTOFF TXY, CRANKCASE HEATER, LIQUID LINE SOLENOID VALVE AND ALL OTHER ACCESSORIES NECESSARY FOR LONG LINE LENGTH APPLICATIONS.
- ALL INDOOR UNITS SHALL BE FURNISHED WITH AN ECM TYPE FAN MOTOR.
- APARTMENTS -- FURNISH EACH SPLIT SYSTEM WITH A DIGITAL ELECTRONIC 7 DAY PROGRAMMABLE, AUTO CHANGEOVER, HARD WIRED THERMOSTAT W/ BUILT IN CYCLE PROTECTOR.
- EACH FAN COIL UNIT SHALL BE FURNISHED W/ A FILTER RACK CAPABLE OF HOUSING 1" THICK FILTERS.
- ALL APARTMENT FAN COIL UNITS SHALL BE WALL MOUNT TYPE FURNISHED W/ WALL MOUNT HARDWARE & FRONT RETURN AIR GRILLE PANEL.
- OUTDOOR UNITS SHALL BE INSTALLED AS DESCRIBED IN SPECIFICATION SECTION 23 62 14.
- TOTAL COOLING CAPACITY SHALL NOT BE DEPRATED BY MORE THAN 5% DUE TO A 40 FT. ELEVATION DIFFERENCE BETWEEN INDOOR & OUTDOOR UNITS & A MAX. EQUIVALENT LENGTH OF 150 FT.
- VERTICAL INDOOR UNITS SHALL BE INSTALLED PER THE SPLIT SYSTEM AIR HANDLING UNIT DETAIL ON SHEET H301.
- REFER TO REFRIGERANT PIPING DETAILS ON SHEET H301.
- COMMON AREAS -- SPLIT SYSTEMS SERVING CORRIDORS, AMENITY AREAS, LOBBIES, ADMINISTRATIVE SPACES, ETC. SHALL BE CONTROLLED BY AN ECOBEE SMART THERMOSTAT FURNISHED & INSTALLED BY THE HVAC CONTRACTOR.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—A—	AIR LINE	Y-T	Y-T STRAINER
—COMB—	COMBINED SEWER	—CBAL—	COMB. BALANCE & STOP VALVE
—D—	DRAIN LINE	—BALL—	BALL VALVE
—F—	FIRE PROTECTION LINE	—W/M—	BALL VALVE W/MEMORY STOP
—HC—	HOT GAS LINE	—GATE—	GATE VALVE (SCREWED BODY)
—LIQ—	LIQUID LINE	—DRAIN—	DRAIN VALVE WITH HOSE END
—SAN—	SANITARY LINE	—GLOBE—	GLOBE VALVE
—STM—	STORM LINE	—GATE—	GATE VALVE (FLANGED BODY)
—SUCT—	SUCTION LINE	—AUTO—	AUTO CONTROL VALVE
—TW—	DOMESTIC TEMPERED WATER	—SOLENOID—	SOLENOID VALVE
—V—	VENT LINE	—CHECK—	CHECK VALVE
—W—	WATER SERVICE LINE	—GAS COOK—	GAS COOK OR BALANCE VALVE
—180°—	DOMESTIC 180° WATER	—METERED—	METERED BALANCE VALVE
—RETURN RISER—	RETURN RISER	—BUTTERFLY—	BUTTERFLY VALVE
—SUPPLY RISER—	SUPPLY RISER	—UPRIGHT—	UPRIGHT TYPE SPRINKLER HEAD
—PENDANT—	PENDANT TYPE SPRINKLER HEAD	—P-TRAP—	P-TRAP (PLAN VIEW)
—UPRIGHT—	UPRIGHT TYPE SPRINKLER HEAD	—AIR VENT—	AIR VENT - PLAN VIEW
—P-TRAP—	P-TRAP (PLAN VIEW)	—CAPPED—	CAPPED LINE
—AIR VENT—	AIR VENT - PLAN VIEW	—HOSE BBB—	HOSE BBB
—CAPPED—	CAPPED LINE	—EXISTING—	EXISTING WORK TO REMAIN
—HOSE BBB—	HOSE BBB	—EXISTING WORK—	EXISTING WORK TO BE REMOVED
—EXISTING—	EXISTING WORK TO REMAIN	—HEATING WATER RETURN—	HEATING WATER RETURN
—EXISTING WORK—	EXISTING WORK TO BE REMOVED	—HEATING WATER SUPPLY—	HEATING WATER SUPPLY
—HEATING WATER RETURN—	HEATING WATER RETURN	—COLD AIR—	COLD AIR HIGH PRESSURE DUCT
—HEATING WATER SUPPLY—	HEATING WATER SUPPLY	—HOT AIR—	HOT AIR HIGH PRESSURE DUCT
—COLD AIR—	COLD AIR HIGH PRESSURE DUCT	—RISE OR DROP—	RISE OR DROP
—HOT AIR—	HOT AIR HIGH PRESSURE DUCT	—SUPPLY DUCT UP—	SUPPLY DUCT UP
—RISE OR DROP—	RISE OR DROP	—SUPPLY DUCT DOWN—	SUPPLY DUCT DOWN
—SUPPLY DUCT UP—	SUPPLY DUCT UP	—R.A., O.A., OR EXH. DUCT UP—	R.A., O.A., OR EXH. DUCT UP
—SUPPLY DUCT DOWN—	SUPPLY DUCT DOWN	—R.A., O.A., OR EXH. DUCT DOWN—	R.A., O.A., OR EXH. DUCT DOWN
—R.A., O.A., OR EXH. DUCT UP—	R.A., O.A., OR EXH. DUCT UP	—ROUND DUCT—	ROUND DUCT
—R.A., O.A., OR EXH. DUCT DOWN—	R.A., O.A., OR EXH. DUCT DOWN	—FLAT OVAL DUCT—	FLAT OVAL DUCT
—ROUND DUCT—	ROUND DUCT	—SPIN-IN FITTING—	SPIN-IN FITTING WITH BALANCE DAMPER
—FLAT OVAL DUCT—	FLAT OVAL DUCT	—ELBOW—	ELBOW WITH TURNING VANES
—SPIN-IN FITTING—	SPIN-IN FITTING WITH BALANCE DAMPER	—FIRE DAMPER—	FIRE DAMPER
—ELBOW—	ELBOW WITH TURNING VANES	—MAN. DAMPER—	MAN. DAMPER
—FIRE DAMPER—	FIRE DAMPER	—ACCESS DOOR—	ACCESS DOOR
—MAN. DAMPER—	MAN. DAMPER	—TEE WITH NIPPLE & CAP—	TEE WITH NIPPLE & CAP
—ACCESS DOOR—	ACCESS DOOR	—PLUGGED TEE—	PLUGGED TEE
—TEE WITH NIPPLE & CAP—	TEE WITH NIPPLE & CAP		
—PLUGGED TEE—	PLUGGED TEE		

MECHANICAL ABBREVIATIONS

AB.	ABOVE	H.B.	HOSE BBB
A.D.	ACCESS DOOR	HTR.	HEATER
A.F.F.	ABOVE FINISHED FLOOR	H.TG.	HEATING
APPROX.	APPROXIMATELY	H & A/C	HEATING & AIR CONDITIONING
AUTO. CONT.	AUTOMATIC CONTROL	INV. ELEV.	INVERT ELEVATION
BN.	BOTTOM	A.R.	AIR RECEPTOR
BLDG.	BUILDING	LAV.	LAVATORY
CAB.	CABINET	MAN. DPR.	MANUAL DAMPER
CAP.	CAPACITY	M. H.	MANHOLE
C.B.	CATCH BASIN	MFR.	MANUFACTURER
CL.	CASE IRON	MEDH.	MECHANICAL
CLG.	CEILING	M. A.	MIXED AIR
CONC.	CONCRETE	MTD.	MOUNTED
C.O.	CLEAN OUT	NOM.	NORMAL
CONN.	CONNECT	OPNG.	OPENING
CONTR.	CONTRACTOR	O.A.	OUTSIDE AIR
CONT.	CONTINUATION	P.C.	PLUMBING CONTRACTOR
COORD.	COORDINATE	PLBG.	PLUMBING
DTL.	DETAIL	PRESS.	PRESSURE
DIA.	DIAMETER	PROP.	PROPELLER
DIFF.	DIFFUSER	REG.	REGISTER
DISCH.	DISCHARGE	RHC.	REHEAT COIL
DN.	DOWN	REQD.	REQUIRED
D.S.	DOWNSPOUT	REL.	RELIEF
ELEC.	ELECTRICAL	R.A.	RETURN AIR
E.W.C.	ELECTRIC WATER COOLER	R.D.	ROOF DRAIN
ELEM.	ELEMENT	RM.	ROOM
ELEV.	ELEVATION	SCHED.	SCHEDULE
EXH.	EXHAUST	S.D.	SHOWER DRAIN
EXIST.	EXISTING	SHT.MTL.	SHEET METAL
FT. HD.	FEET OF HEAD	SIL.	SURFACE INLET
FIN. RAD.	FINISHED RADIATION	S.S.	SERVICE SINK
F. DPR.	FIRE DAMPER	STAT.	THERMOSTAT
F. L.	FIRE EXTINGUISHER	S.A.	SUPPLY AIR
FLEX.	FLEXIBLE	TEMP.	TEMPERATURE
FLR.	FLOOR	TPY.	TYPICAL
F.D.	FIRE DAMPER	T.C.C.	TEMP. CONTROL CONTRACTOR
FURN.	FURNISH	VIB. ISOL.	VIBRATION ISOLATOR
GA.	GAGE	W.	WASTE
GEN.	GENERAL	W/	WITH
GR.	GRILLE		

DRYER VENTING NOTES

- EXHAUST DUCTS SHALL BE ASSEMBLED SO THE INTERIOR SURFACES ARE SMOOTH W/ JOINTS RUNNING IN THE DIRECTION OF AIRFLOW SO AS TO PREVENT ACCUMULATION OF LINT INSIDE THE DUCT. EACH JOINT SHALL BE SECURED WITH METAL FOIL TAPE. DO NOT USE SCREWS OR RIVETS.
- CLOTHES DRYER EXHAUST DUCTS SHALL BE CONSTRUCTED OF RIGID GALVANIZED STEEL, MINIMUM 26 GAUGE THICKNESS -- DO NOT UTILIZE FLEXIBLE DUCTWORK FOR CLOTHES DRYER EXHAUST DUCTS, EXCEPT FLEXIBLE METAL DUCT IS PERMITTED IN THE UTILITY ROOM, OUTSIDE OF THE WALL CONSTRUCTION FOR FINAL CONNECTION TO DRYER OUTLET.
- EXHAUST DUCTS SHALL BE SUPPORTED AT 4 FT INTERVALS AND SECURED IN PLACE. THE INSERT END OF EACH DUCT SECTION SHALL EXTEND INTO THE ADJOINING DUCT OR FITTING IN THE DIRECTION OF AIRFLOW.
- PROTECTIVE SHIELD PLATES SHALL BE PLACED ON THE FINISHED FACE OF ALL FRAMING MEMBERS WHERE THERE IS LESS THAN 1-1/4" BETWEEN THE DUCT AND THE FINISHED FACE OF THE FRAMING MEMBER. PROTECTIVE SHIELD PLATES SHALL BE CONSTRUCTED OF STEEL, HAVE A THICKNESS OF 0.062" AND EXTEND A MINIMUM OF 2" ABOVE SOLE PLATES AND BELOW TOP PLATES.
- DRYER EXHAUST DUCT ELBOWS SHALL HAVE A MINIMUM CENTERLINE RADIUS OF 4".
- REFER TO DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL VENTING REQUIREMENTS.
- THE DEVELOPER IS FURNISHING DRYERS WITH VENTING CAPACITIES AS NOTED ABOVE. THIS CONTRACTOR SHALL INSTALL PERMANENTLY LABELED SIGNAGE WITHIN SIX (6) FEET OF THE DRYER DUCT CONNECTION. THE SIGNAGE SHALL STATE THE DRYER DUCT LENGTH & NUMBER OF ELBOWS PER THE AS-BUILT CONDITION FOR EACH UNIT SO THAT REPLACEMENT APPLIANCES WITH APPROPRIATE VENTING CAPACITIES CAN BE PROVIDED AS NEEDED IN THE FUTURE.
- HVAC CONTRACTOR SHALL CAREFULLY COORDINATE ROUTING OF DRYER EXHAUST DUCTS TO MINIMIZE OFFSETS & THE RESULTING OVERALL EQUIVALENT VENT LENGTH. COORDINATE W/ OTHER TRADES SO THAT INSTALLATION OF THE DRYER EXHAUST DUCTWORK IS GIVEN PRECEDENCE.

H300-24217.DWG

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DRAWN BY: B. McFERRIN
CHECKED BY: J. LOCKARD, P.E.
JOB NUM: 24217

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY CONNECTIONS COLLABORATIVE

3355 REFUGEE ROAD, COLUMBUS, OH 43232

FOR

CMHA



Moody Nolan

300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

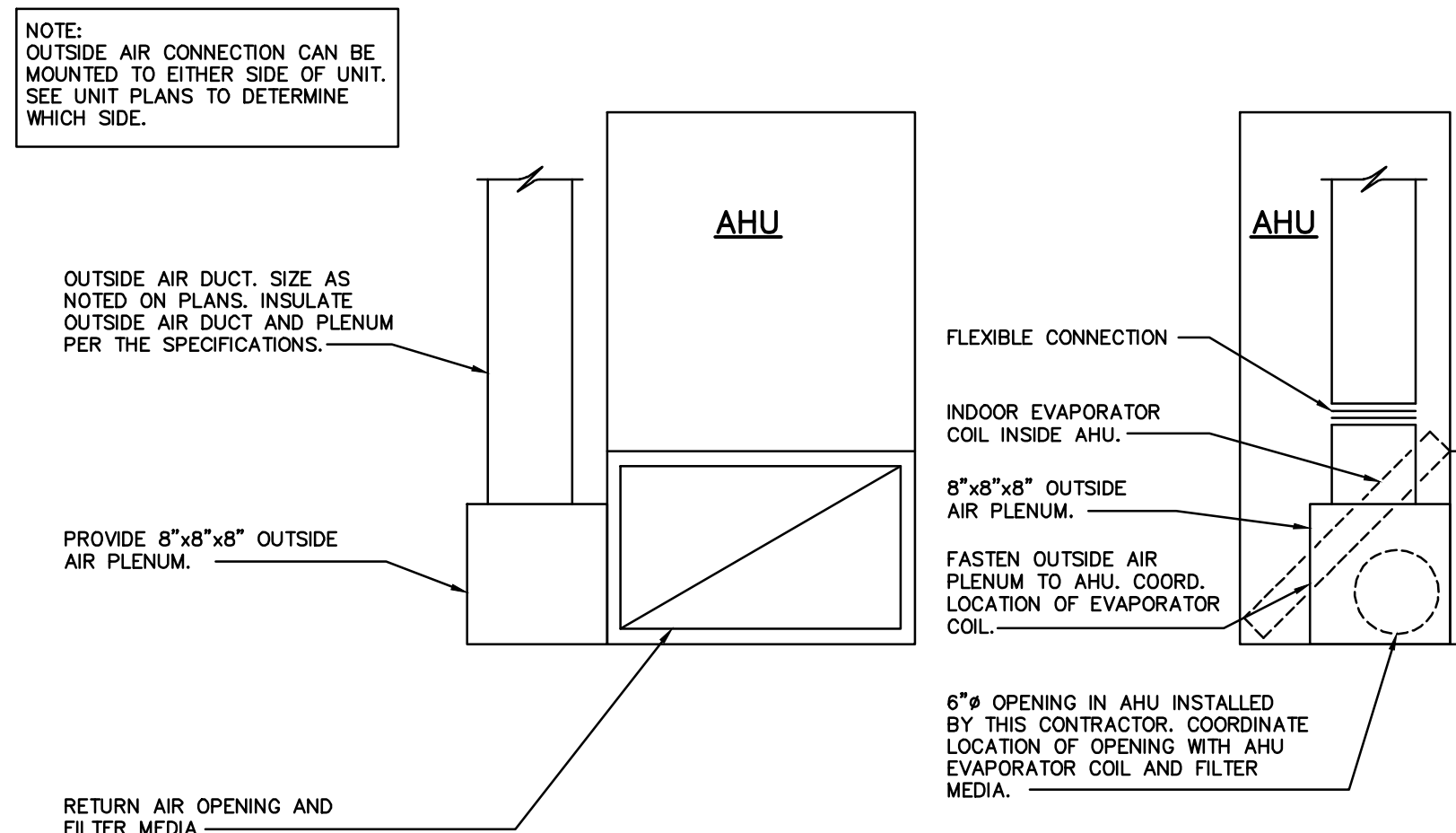
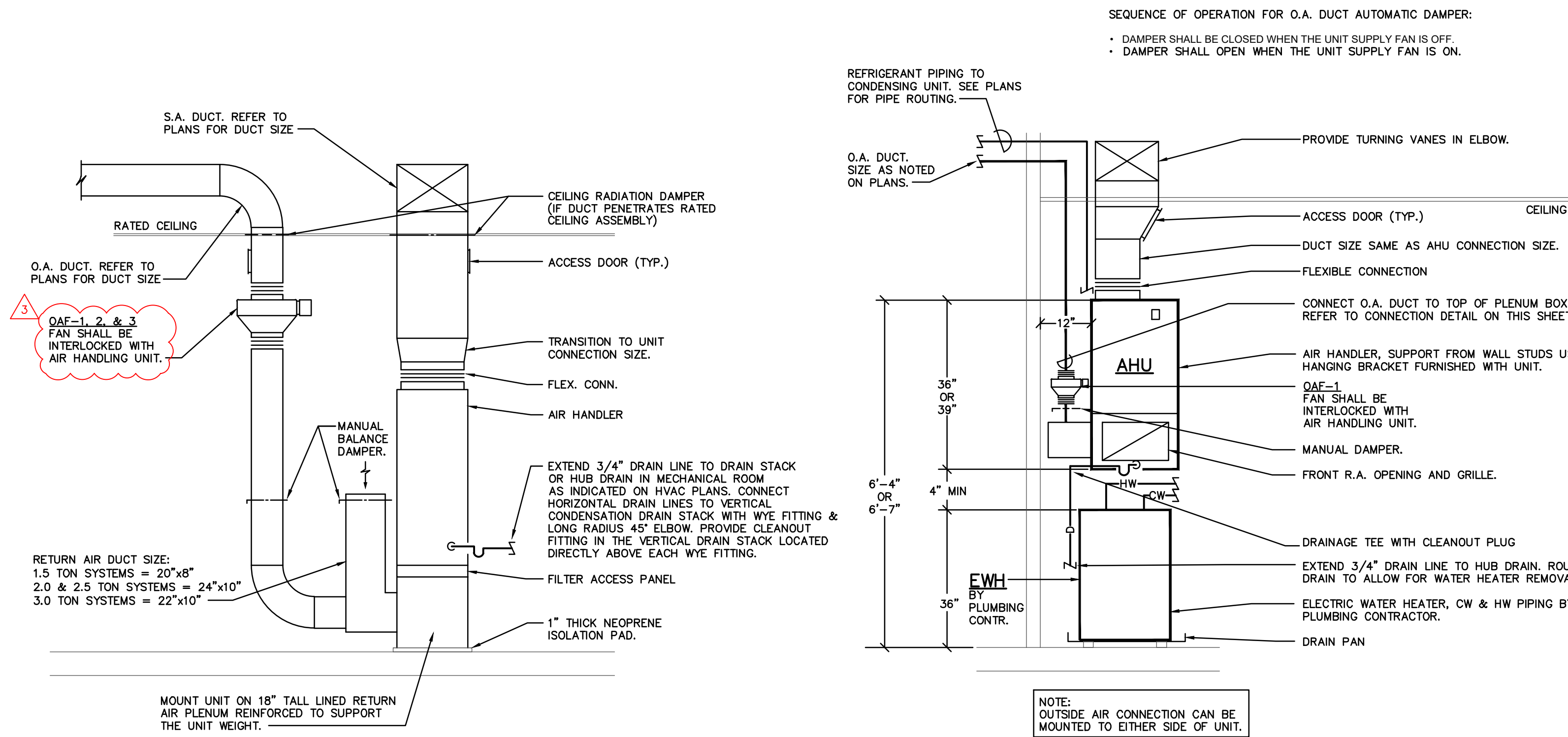
CERT. NO: FIRM 00197475

DRAWING TITLE:

HVAC SCHEDULES

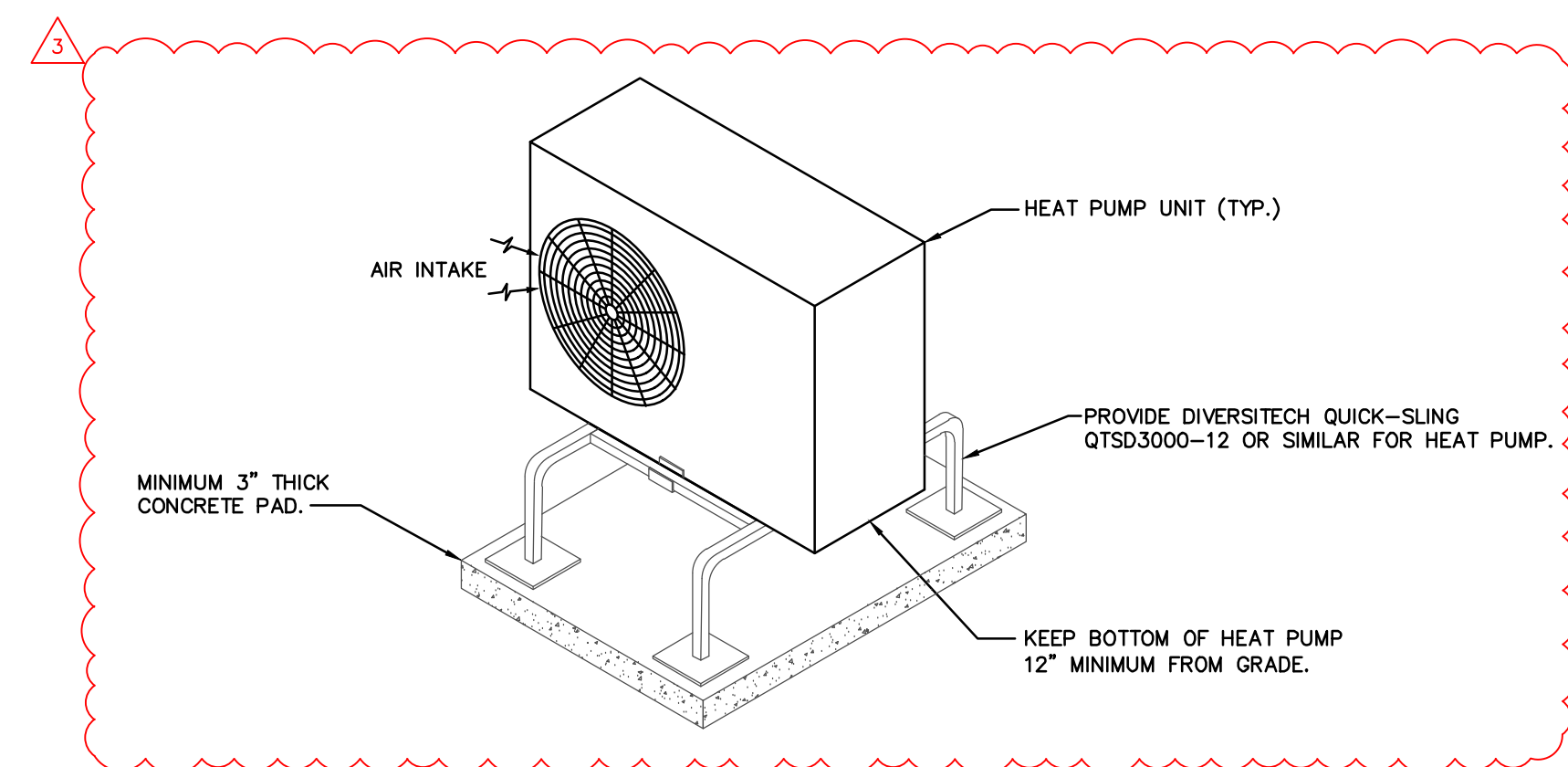
05/01/2025

23446



APARTMENT AIR HANDLING UNITS
OUTSIDE AIR/AHU CONNECTION DETAIL
N.T.S.

AMENITY SPACE SPLIT
SYSTEM AHU DETAIL
SCALE: 1/2"=1'-0"

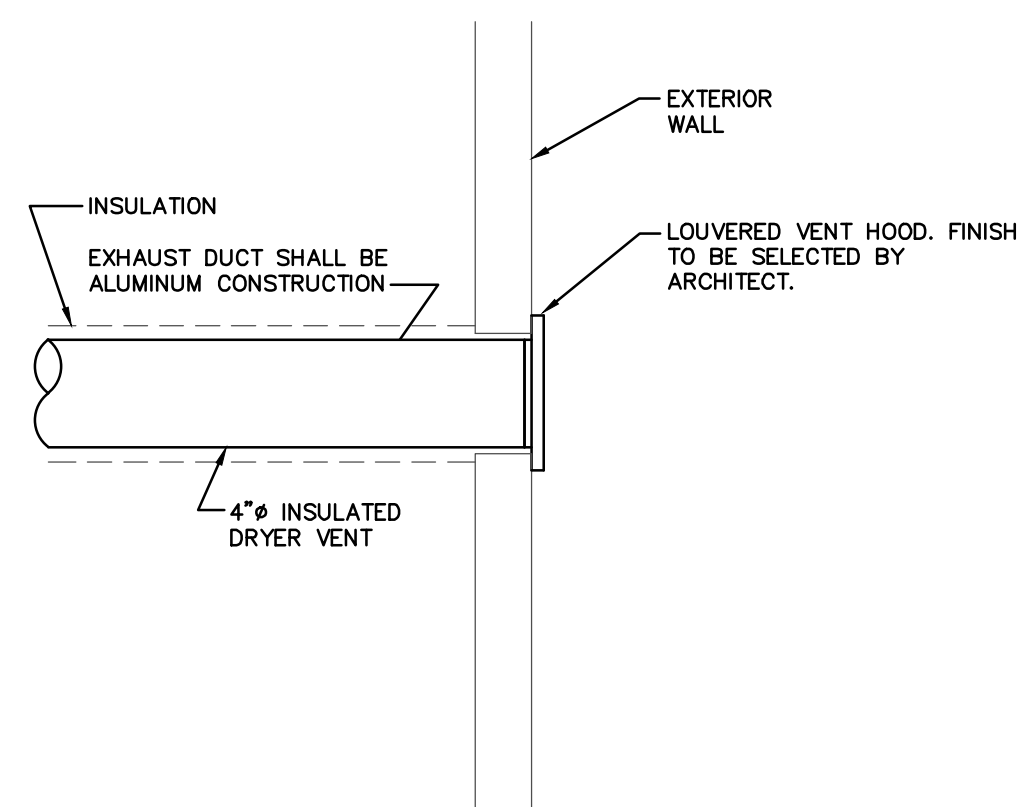


HEAT PUMP UNIT MOUNTING DETAIL
N.T.S.

NOTES:

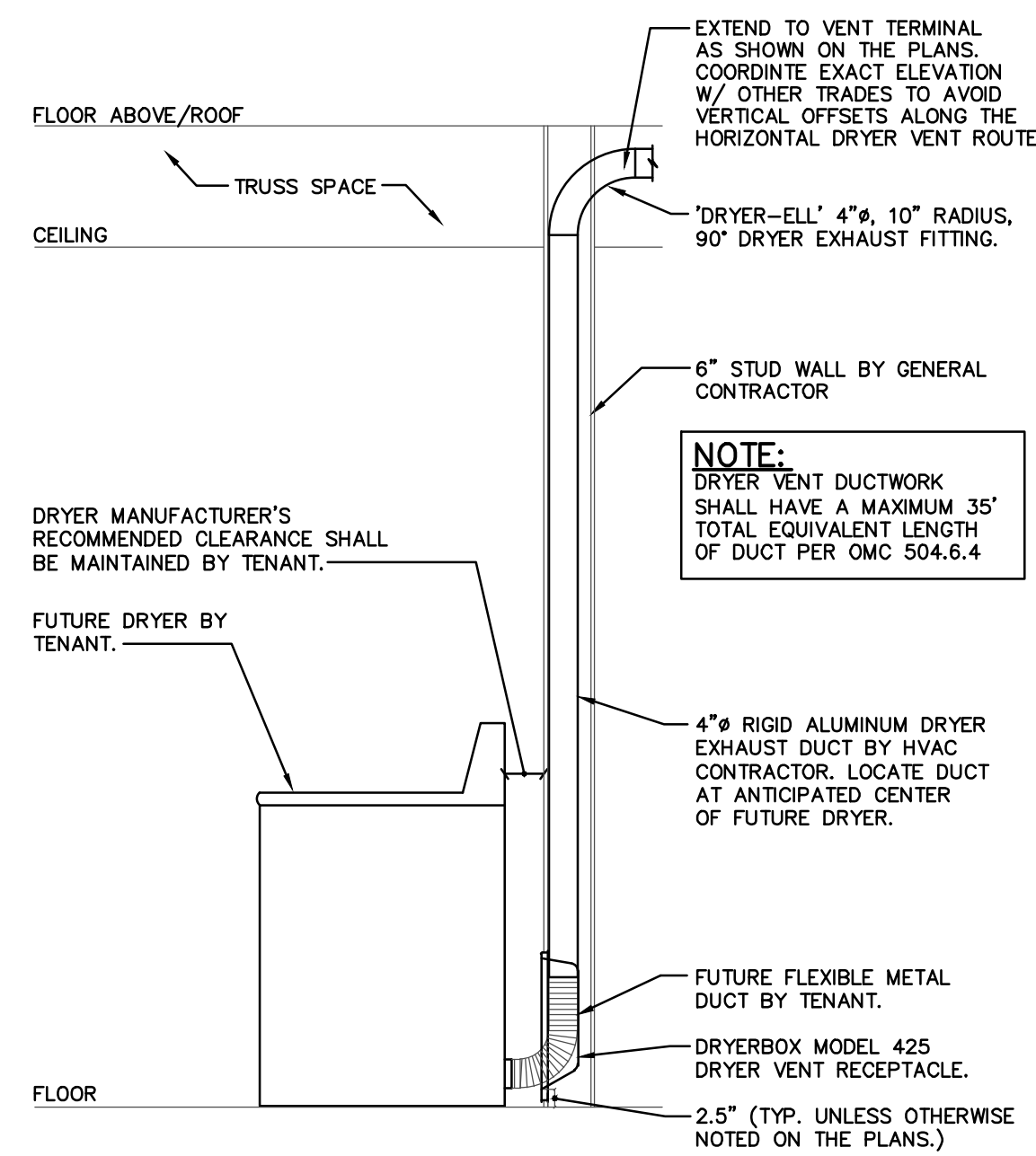
- ALL DRAIN LINES SHALL BE TRAPPED PER THIS DETAIL.
- EXTEND A 3/4" DRAIN LINE FROM EACH AIR HANDLING UNIT PRIMARY DRAIN CONNECTION TO THE HUB DRAIN LOCATED IN THE SAME ROOM OR ELSEWHERE AS NOTED ON THE DRAWINGS. TERMINATE PRIMARY DRAIN LINE INDIRECT TO HUB DRAIN PROVIDED BY PLUMBING CONTR.
- HVAC CONTRACTOR SHALL FURNISH, INSTALL & WIRE A LOW VOLTAGE A/C CONDENSATE OVERFLOW SHUT-OFF SWITCH. SWITCH SHALL BE INSTALLED IN THE UNIT SECONDARY DRAIN OUTLET & WIRED TO SHUT OFF THE AIR HANDLER IN THE EVENT OF A PRIMARY DRAIN LINE MALFUNCTION.

AIR HANDLING UNIT
CONDENSATION DRAIN SYSTEMS
SCALE:N.T.S.

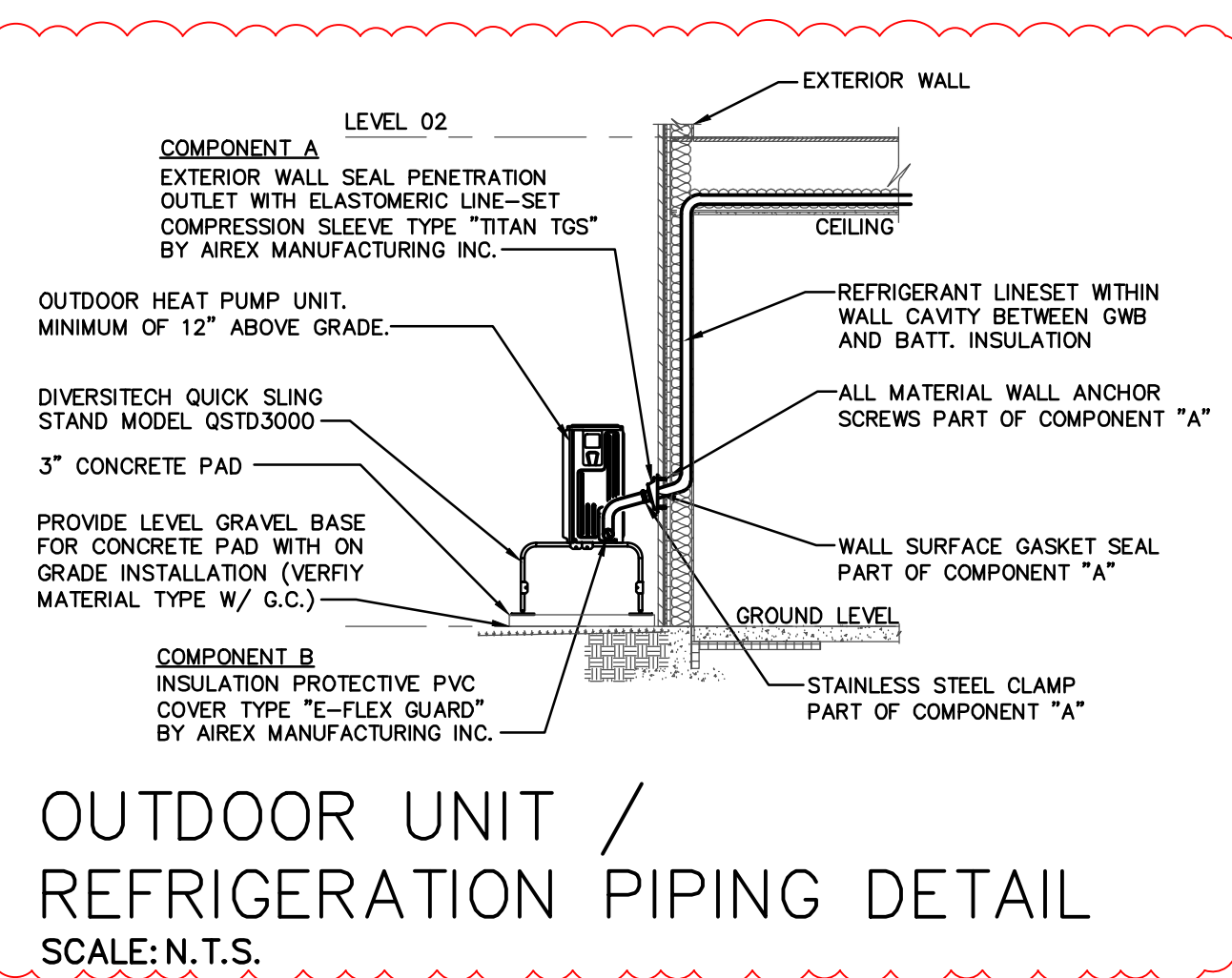


DRYER EXHAUST
TERMINATION DETAIL
SCALE:N.T.S.

APARTMENT SPLIT SYSTEM
MECHANICAL CLOSET DETAIL
SCALE: 1/2"=1'-0"



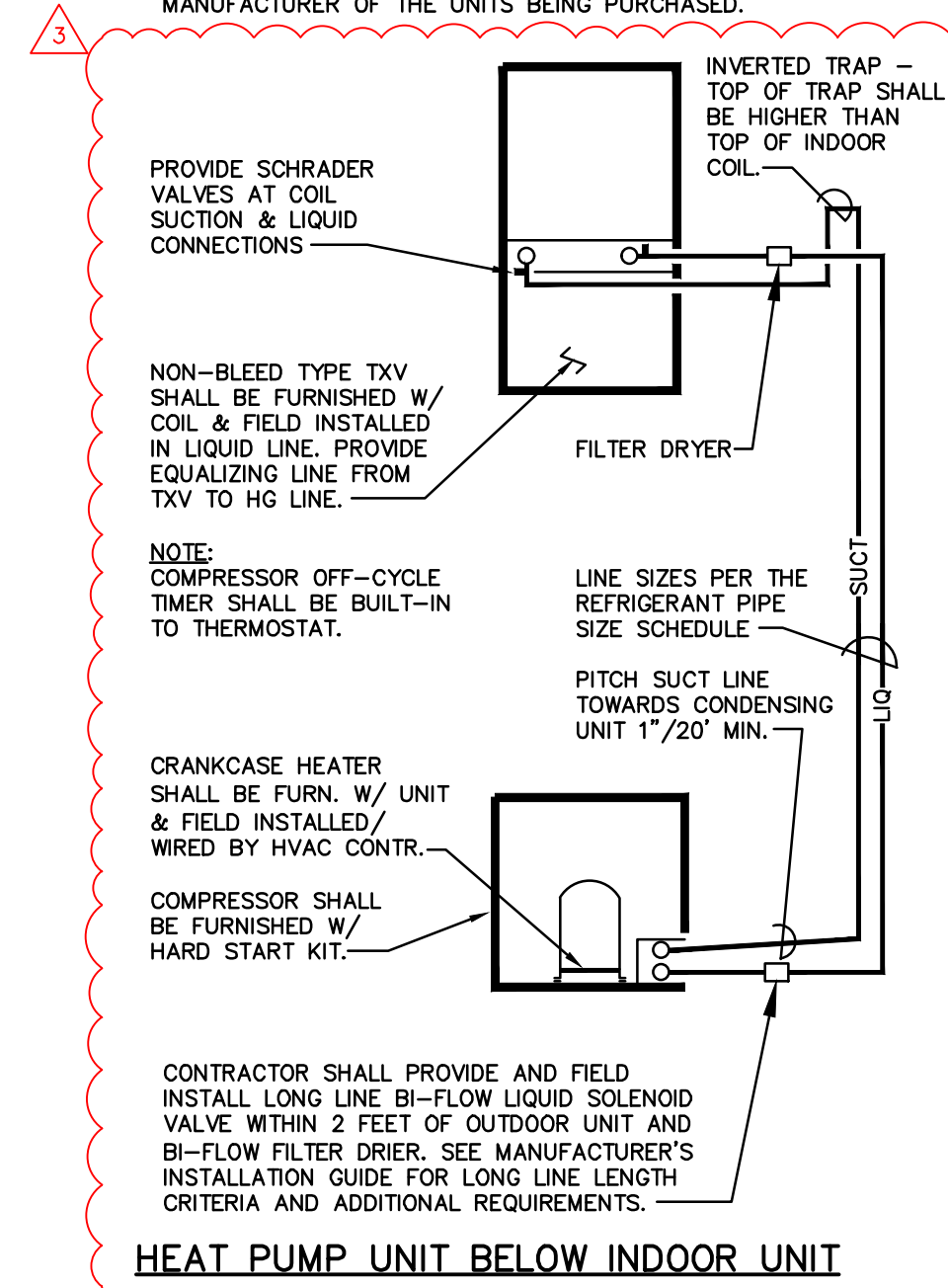
DRYER EXHAUST ROUGH-IN DETAIL
SCALE:N.T.S.



OUTDOOR UNIT /
REFRIGERATION PIPING DETAIL
SCALE:N.T.S.

TONS	PIPE SIZE SCHEDULE		INDOOR UNIT LOCATION
	SUCTION	LIQUID	
1.5	5/8"	3/8"	ALL FLOORS
2.0	3/4"	3/8"	ALL FLOORS
3.0	3/4"	3/8"	ALL FLOORS

NOTE:
REFRIGERANT PIPE SIZING SHALL BE COORDINATED WITH THE MANUFACTURER OF THE UNITS BEING PURCHASED.



HEAT PUMP UNIT BELOW INDOOR UNIT

DUCTED SPLIT SYSTEMS
REFRIGERANT PIPING DETAILS
SCALE:N.T.S.

H301-24217.DWG

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JOB NUM.
24217

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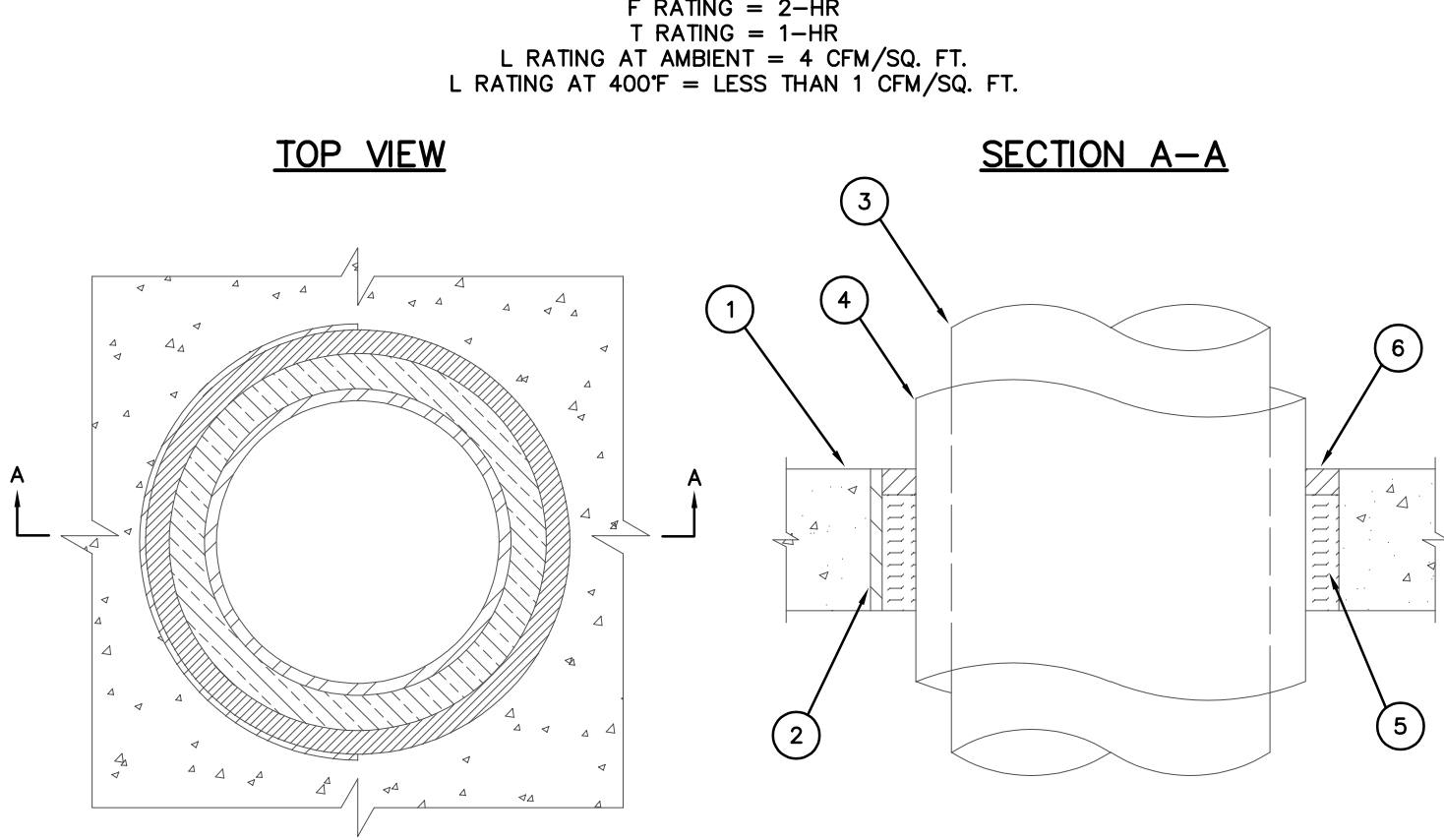
THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
HVAC DETAILS

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	H301
	CD PROGRESS SET

UL/CUL SYSTEM NO. CAJ5091
INSULATED METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

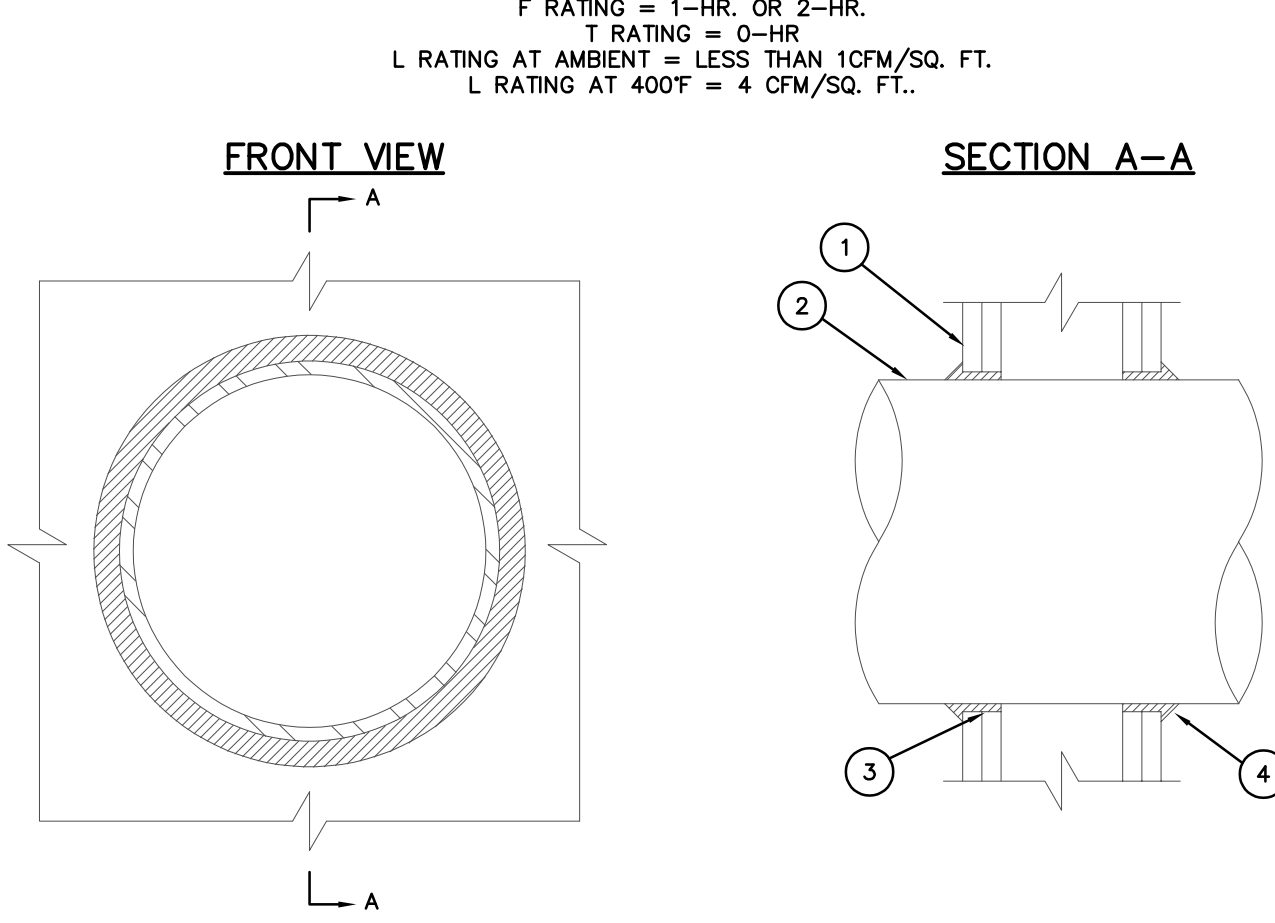


- CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING):
A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
A. MAXIMUM 10" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
B. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
D. MAXIMUM 4" NOMINAL DIAMETER EMT.
- BACKER ROD, HILTI OF 128 FILLER FOAM, OR MINERAL WOOL TO BE USED AS BACKER.
- MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
- MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 20".
- ANNULAR SPACE = MINIMUM 1/2". MAXIMUM 2-1/4".
- MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL.

UL/CUL SYSTEM NO. WJ1085
METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

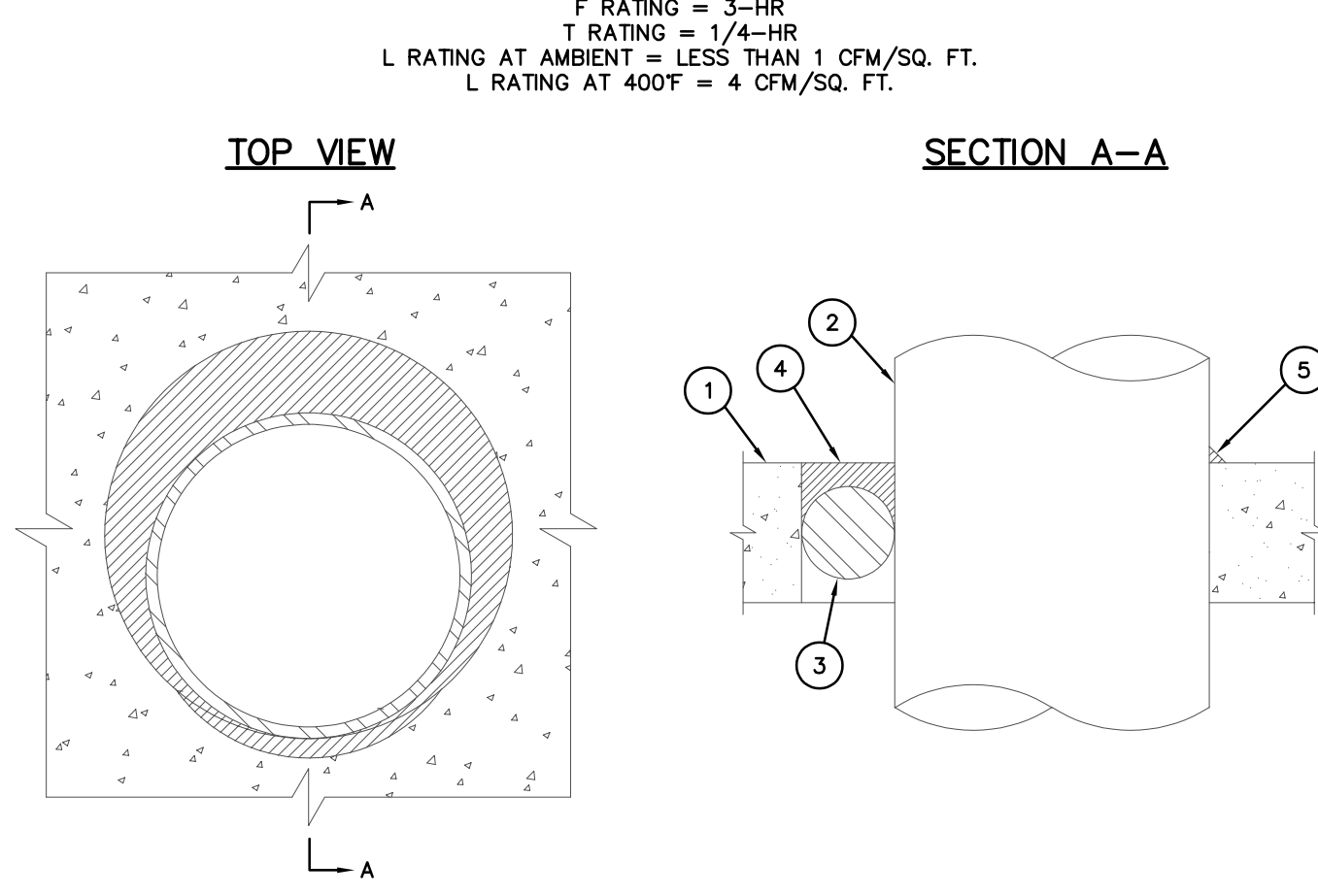


- GYPSUM WALL ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR OR 2-HR FIRE-RATING) (2-HR SHOWN).
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
B. MAXIMUM 12" NOMINAL DIAMETER CAST IRON PIPE.
C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
D. MAXIMUM 6" NOMINAL DIAMETER EMT.
E. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
- HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT FORCED INTO ANNULAR SPACE TO MAXIMUM EXTENT POSSIBLE.
- MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT TO BE INSTALLED AROUND PIPE, LAPPING 1/4" BEYOND PERIPHERY OF OPENING.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 13-1/4".
- ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/4".

UL/CUL SYSTEM NO. CAJ1154
METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

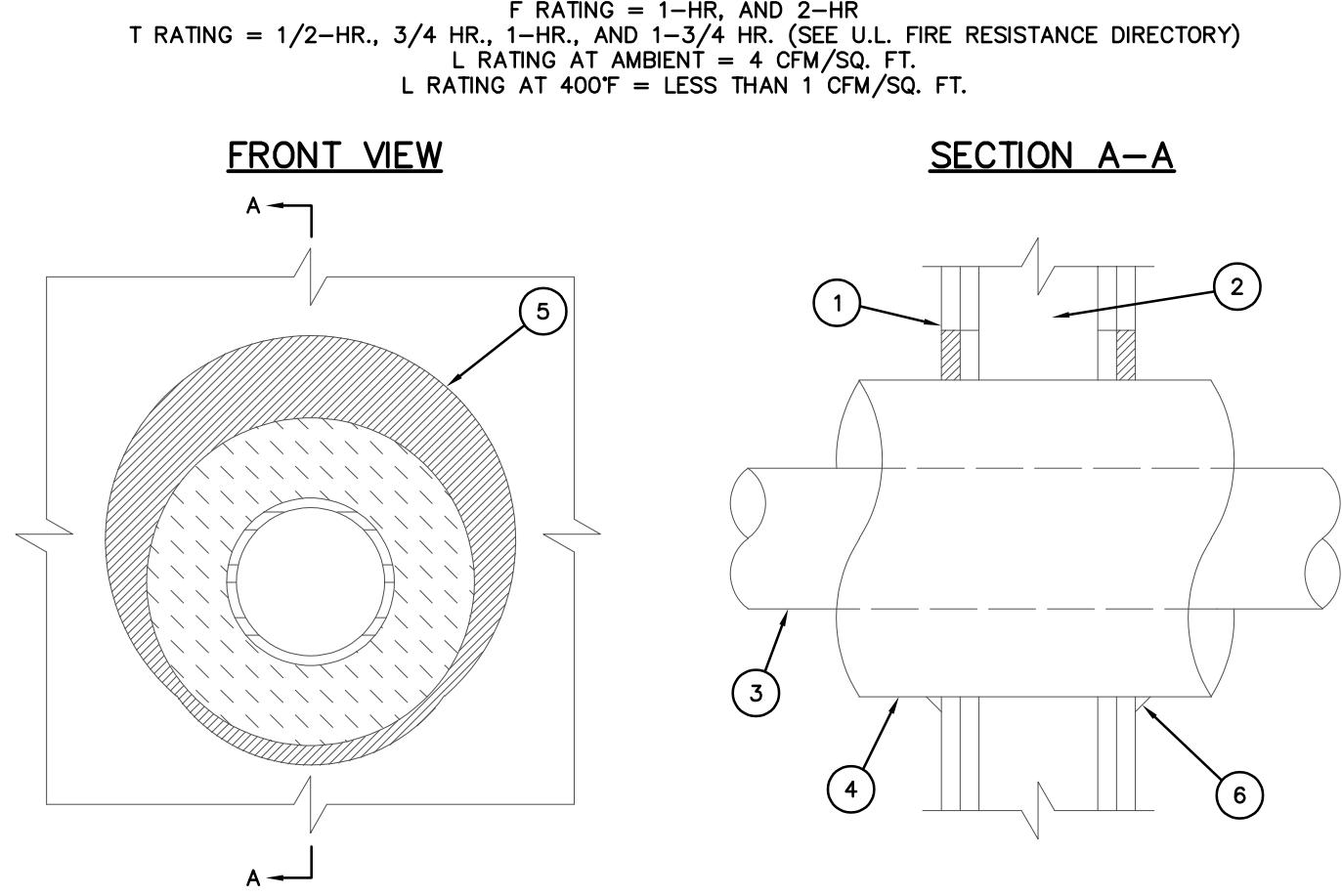


- CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING):
A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
A. MAXIMUM 10" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
B. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
D. MAXIMUM 4" NOMINAL DIAMETER EMT.
- BACKER ROD, HILTI OF 128 FILLER FOAM, OR MINERAL WOOL TO BE USED AS BACKER.
- MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
- MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 14".
- ANNULAR SPACE = MINIMUM 0". MAXIMUM 3-1/4".
- MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.

UL/CUL SYSTEM NO. W-L-5029
INSULATED METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

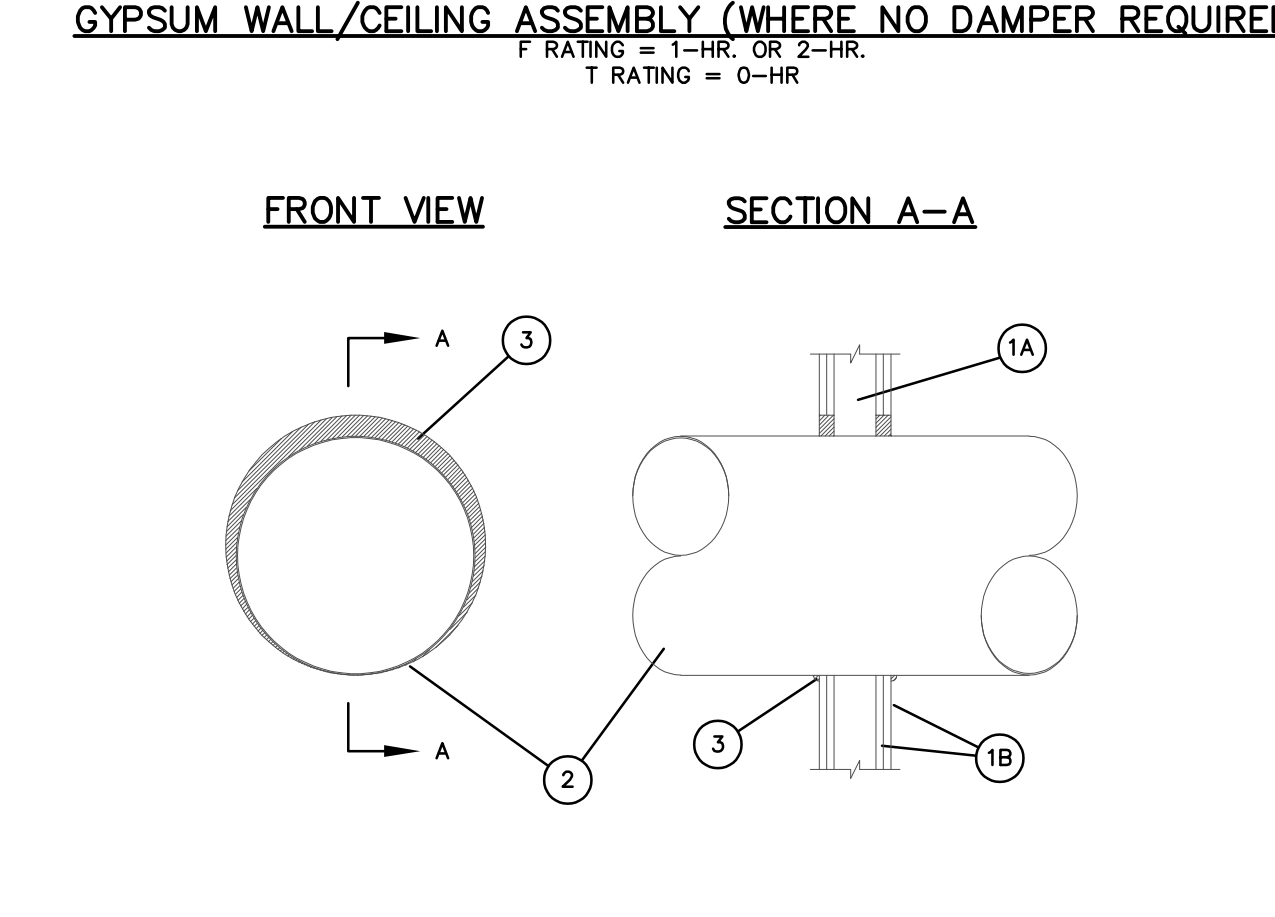


- GYPSUM WALL ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
- (NOT SHOWN). WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE.
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 20 OR HEAVIER).
B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
D. MAXIMUM 4" NOMINAL DIAMETER EMT.
- MAXIMUM 2" THICK GLASS-FIBER PIPE INSULATION.
- MINIMUM 5/8" DEPTH HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT.
- MINIMUM 1/2" BEAD HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 18".
- ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-7/8".

UL/CUL SYSTEM NO. WJ7042
ROUND SHEETMETAL DUCT THROUGH 1-HR. OR 2-HR. GYPSUM WALL/CEILING ASSEMBLY (WHERE NO DAMPER REQUIRED)

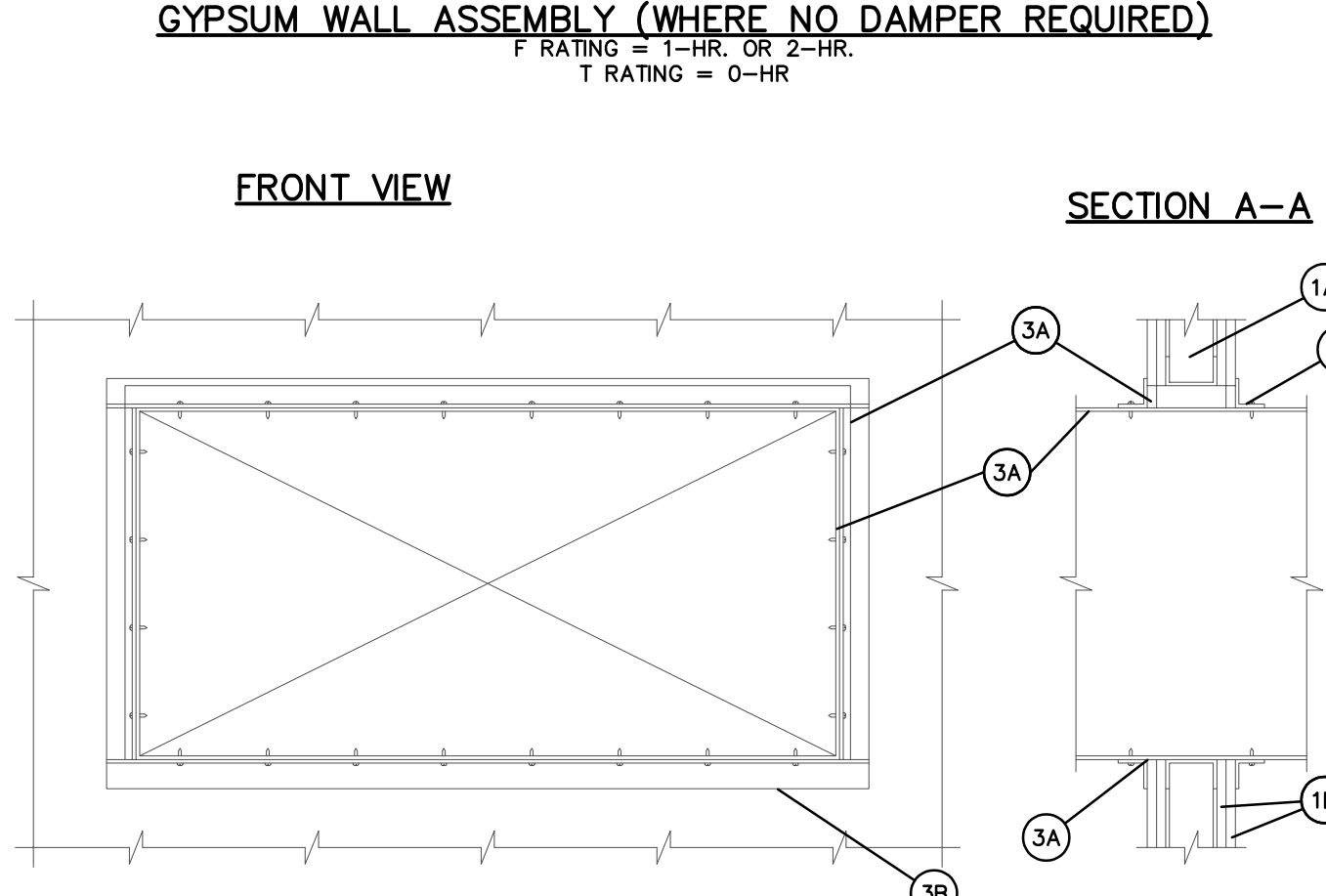


- GYPSUM WALL/CEILING ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR OR 2-HR FIRE-RATING) (2-HR SHOWN).
A. MINIMUM 2-1/2" STUDS SPACED MAX 24" O.C.
B. GYPSUM WALLBOARD, 5/8" THICK.
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
A. MAXIMUM 20"Ø, MINIMUM 24 GAUGE GALVANIZED STEEL SPIRAL WOUND DUCT.
B. MAXIMUM 12"Ø, MINIMUM 28 GAUGE GALVANIZED STEEL DUCT.
- FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
A. MINIMUM 5/8" THICK HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.

NOTES:

- MAXIMUM SPIRAL ROUND DIAMETER = 20"Ø.
- MAXIMUM SHEETMETAL ROUND DIAMETER = 12"Ø.
- UN-INSULATED DUCT.

UL/CUL SYSTEM NO. WJ7040
SHEETMETAL DUCT THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY (WHERE NO DAMPER REQUIRED)



- GYPSUM WALL ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR OR 2-HR FIRE-RATING) (2-HR SHOWN).
A. MINIMUM 2-1/2" STUDS SPACED MAX 24" O.C.
B. GYPSUM WALLBOARD, 5/8" THICK.
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
A. MAXIMUM 24"x48", MINIMUM 24 GAUGE STEEL DUCT.
- FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
A. MINIMUM 5/8" THICK HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
B. NO. 18 MSG GALVANIZED STEEL, ANGLES WITH 2" OVERLAP ON THE DUCT AND MINIMUM 1" OVERLAP ON THE GYPSUM BOARD ASSEMBLY ON BOTH SURFACES OF WALL. 2" LEG OF ANGLE TO BE SECURED TO DUCT WITH MINIMUM NO. 8x3/4" LONG SHEET METAL SCREWS, SPACED MAXIMUM OF 6" O.C.
- MINIMUM 5/8" THICK HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 24"x48".
- UN-INSULATED DUCT.

H302-24217.DWG.

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B. MCFERRIN

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B. MCFERRIN

CHECKED BY

JOB NUM.
24217

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

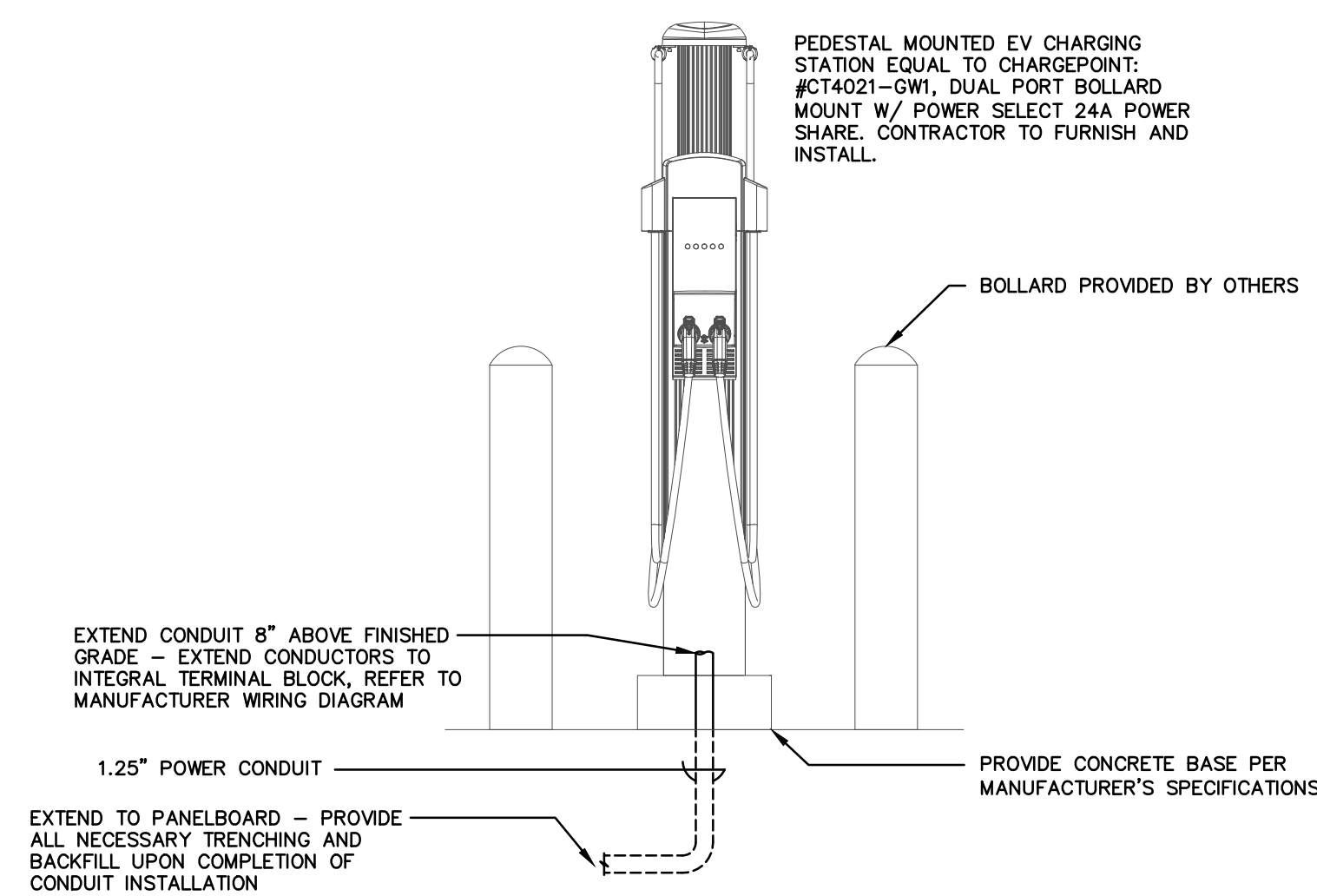
THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY-CONSCIOUS COLLABORATION
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

CERT. NO: FIRM 00197475

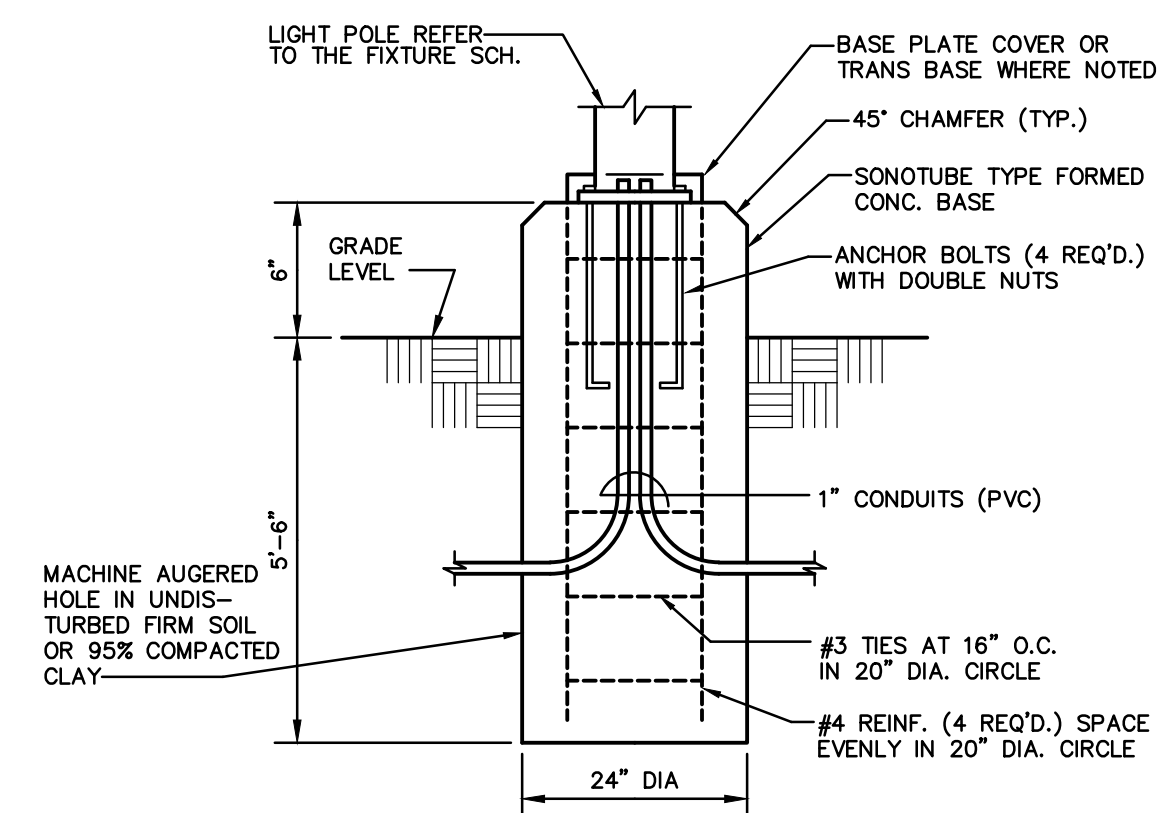
DRAWING TITLE:
HVAC DETAILS

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	H302
	CD PROGRESS SET

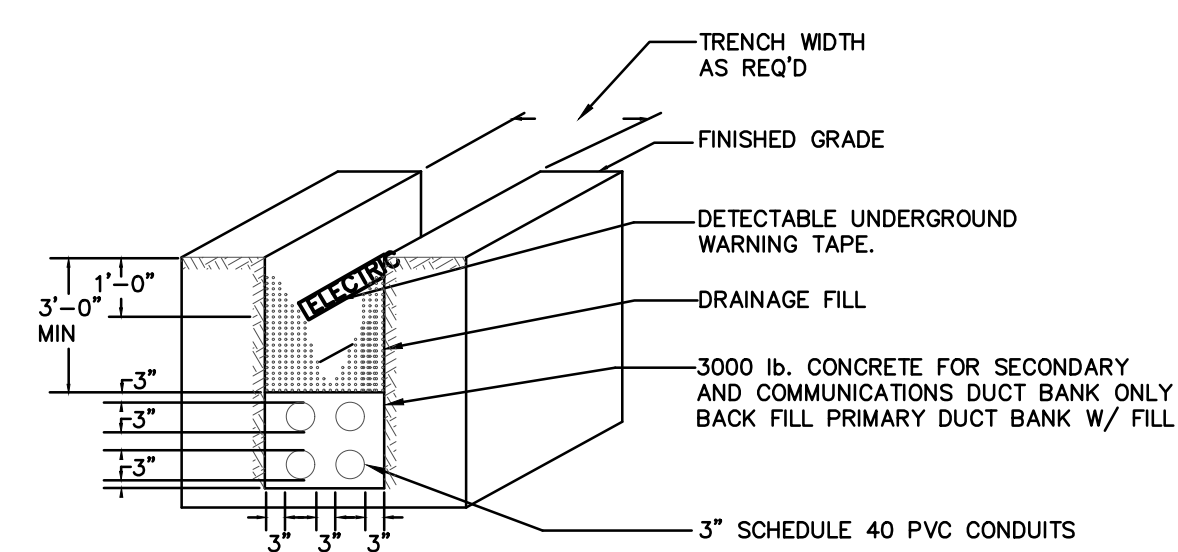


EV CHARGER INSTALLATION DETAIL

SCALE: NONE

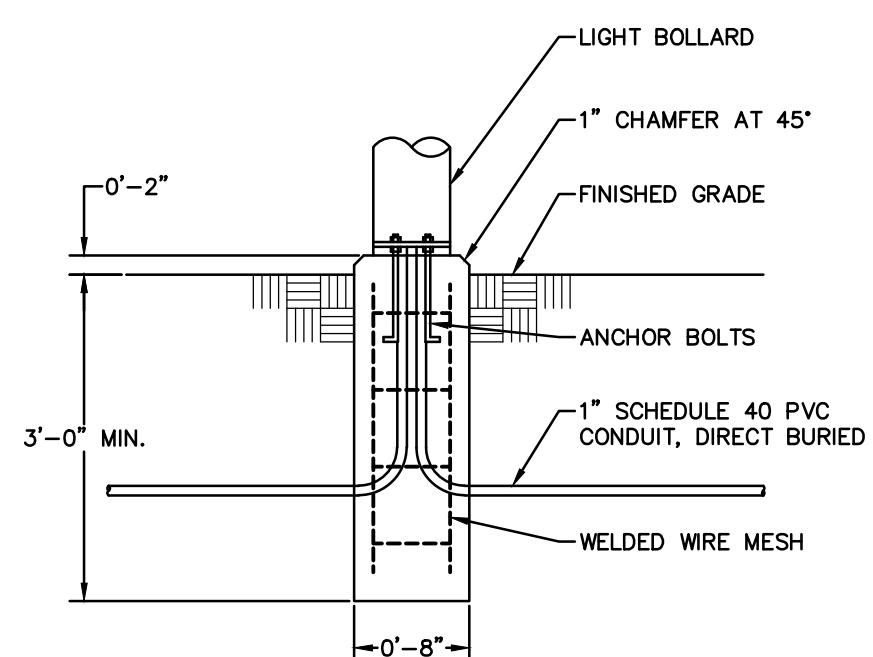


POLE BASE DETAIL
SCALE: NONE

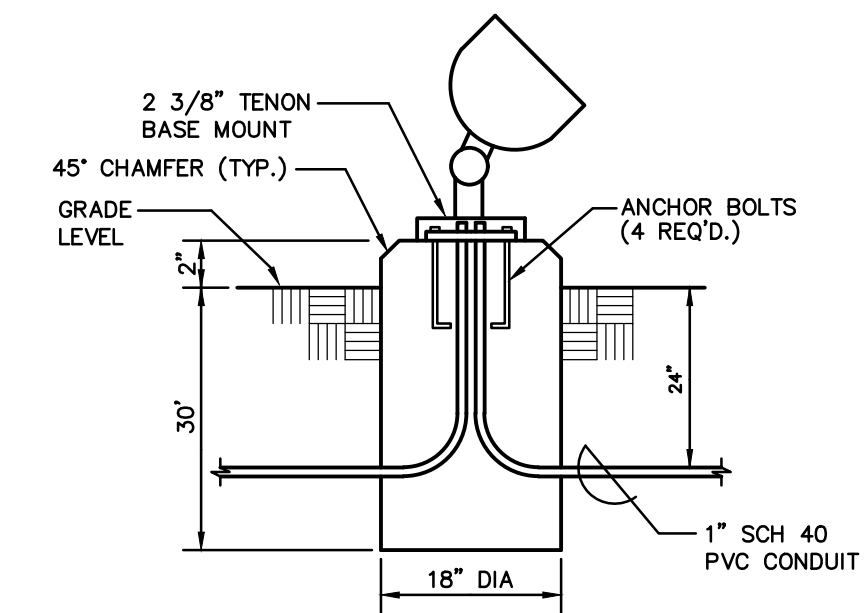
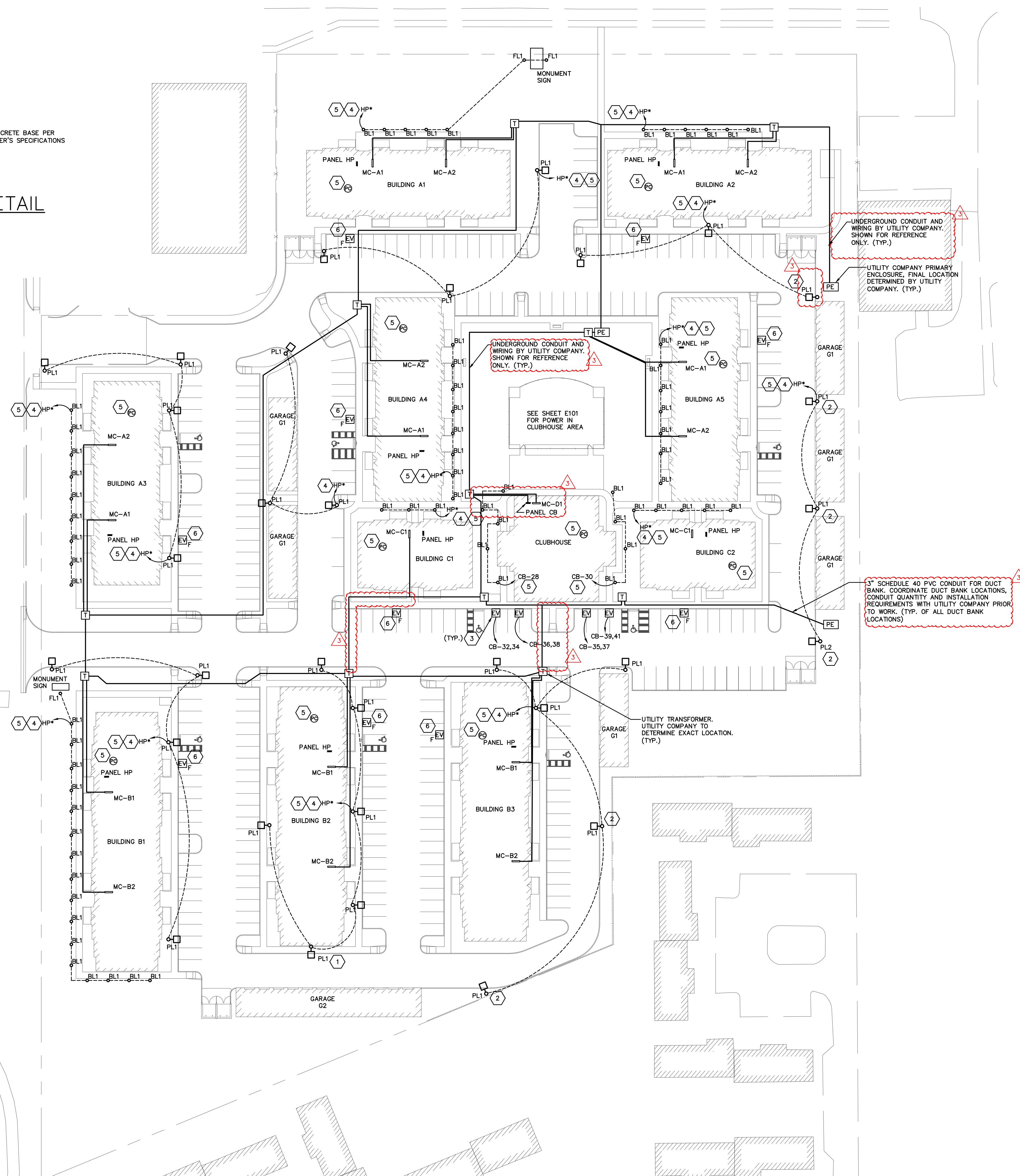


DUCT BANK DETAIL

SCALE: NONE



LIGHTING BOLLARD BASE DETAIL
SCALE: NONE



FLOOD LTG BASE DETAIL
SCALE: NONE

GENERAL NOTES

- D. COORDINATE WITH ALL UTILITY COMPANIES PRIOR TO BIDDING. THE ELECTRICAL SITE PLAN IS DIAGRAMMATIC ONLY AND DOES NOT REFLECT THE LOCATION OF EXISTING AND UTILITY SPECIFICATIONS. THE SEPARATE UTILITY COMPANIES SHALL PROVIDE THE REQUIRED SPECIFICATIONS AND EQUIPMENT SIZES UPON REQUEST.
- E. THE ELECTRICAL SITE PLAN DOES NOT SHOW ALL EXISTING OR EXISTING TO BE EXISTING EQUIPMENT. THE EXISTING UNDERGROUND SERVICES THIS CONTRACTOR SHALL LOCATE PRIOR TO THE START OF WORK. PRIOR TO EXCAVATING. COORDINATE WITH ALL UTILITY COMPANIES AND CLEARLY IDENTIFY LOCATIONS.
- F. COORDINATE WITH UTILITY COMPANY TO EXTEND THE PRIMARY POWER FROM THE EXISTING TRANSFORMER TO THE NEW EQUIPMENT TO THE NEW POWER COMPANY TRANSFORMERS.
- G. PAD MOUNTED TRANSFORMERS PROVIDED AND INSTALLED BY UTILITY COMPANY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE NECESSARY WORK TO COMPLY WITH THE POWER COMPANY SITE SPECIFICATIONS.
- H. WIRING TO ALL SITE LIGHTING SHOWN ON THIS SHEET SHALL BE 120V, 1Ø, 60 HZ. #8 GROUND IN 1" CONDUIT FOR ENTIRE LENGTH OF CIRCUIT.
- I. ALL MEP CONTRACTORS SHALL CAREFULLY COORDINATE THE LOCATION OF ALL EXISTING AND NEW LIGHTING, SMOKE DETECTORS, HEAT PUMP CONDENSING UNITS, GAS METERS, EXHAUST FANS, AND OTHER MECHANICAL EQUIPMENT WITH THE ARCHITECT AND OWNER REPRESENTATIVE. SEE ARCHITECTURAL, MECHANICAL AND LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
- J. SEE SHEET E108 FOR EXISTING GARAGE PLANS.

CODED NOTES

1. WALL MOUNT FIXTURE AT 25'-0" A.F.F.
2. PROVIDE POLE FIXTURE WITH HOUSE SIDE RUGH-IN TO PREVENT LIGHT SPILLAGE ONTO ADJACENT PROPERTIES
3. PROVIDE 1.25" CONDUIT FOR EACH EV CHARGER BRANCH CIRCUIT. COORDINATE WITH ELECTRICAL ENGINEER FOR REPRESENTATIVE AND CIVIL ENGINEER prior TO ROUGH-IN. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS FOR INFORMATION. REFER TO EV CHARGING INSTALLATION DETAIL ON THIS SHEET.
4. ORCUT EXTERIOR LIGHTING ORCUT TO NEAREST BUILDING WOOD PANEL "HP". SEE HP PANEL SCHEDULE ON SHEET E-302.
5. RUN CUPRIT THROUGH EXTERIOR PHOTOCELL AND EXTERIOR LIGHTING CONTACTOR FOR AUTOMATIC CONTROL. PROVIDE EXTERIOR LIGHTING PULLBOX WITH TWO (2) LIGHT FIXTURES, each TO PRECISION #5-18, MOUNT HIGH ON SIDE OF HOUSE TO DIRECT LIGHT TOWARD HOUSE TO SUN AND OUT OF SITE FROM PUBLIC. COORDINATE FINAL LOCATION WITH THE ARCHITECT PRIOR TO ROUGH-IN. REFER TO EXTERIOR LIGHTING CONTROL DETAIL ON SHEET E401.
6. HUBBLE BOX FOR FUTURE EV CHARGER CABLE TO PROVIDE PULLBX 8"x12"x2" PLAST QUATZE BOX. PROVIDE (1) 1/2" SCH 40 STEEL SCHED PIPE TO RUN TO HOUSE WOOD PANEL. COORDINATE EXACT LOCATION OF PULLBOX WITH ARCHITECT AND CIVIL AND THE ARCHITECT prior TO INSTALLATION.

LINE TYPE LEGEND

- LINE TYPE INDICATES NEW ELECTRICAL EQUIPMENT/DEVICES TO BE PROVIDED.
- LINE TYPE INDICATES BELOW GROUND ELECTRICAL WIRING

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03



Moody Nolan CERT. NO: FIRM 00197475

DRAWING TITLE:

ELECTRICAL SITE PLAN

05/01/2025

23446

E100

CD PROGRESS SET

PROGRESS
DRAWING
NOT FOR
CONSTRUCTION

E100-24217.DWG

PRATER
Engineering Associates, Inc.

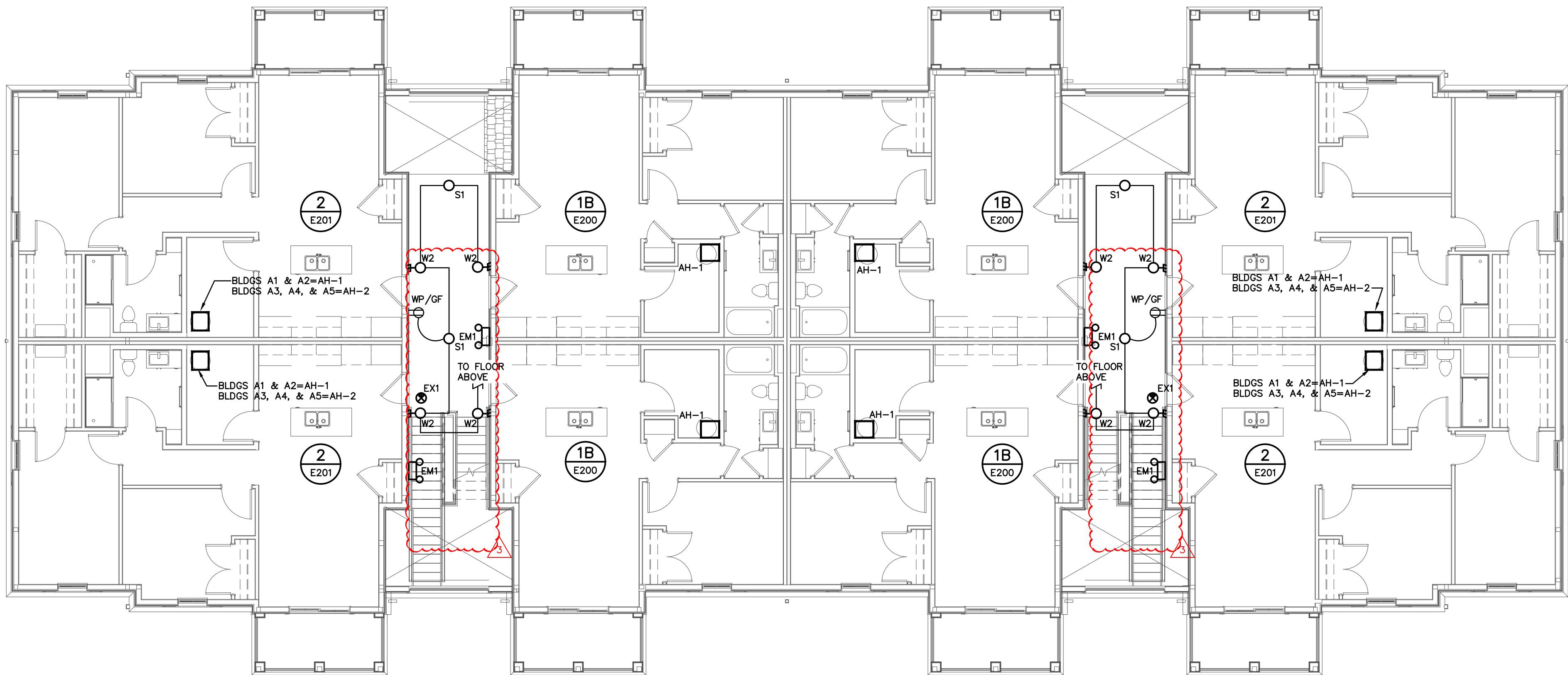
6130 Wilcox Road (614) 766 4896

Dublin, Ohio 43016 FAX: (614) 766 2354

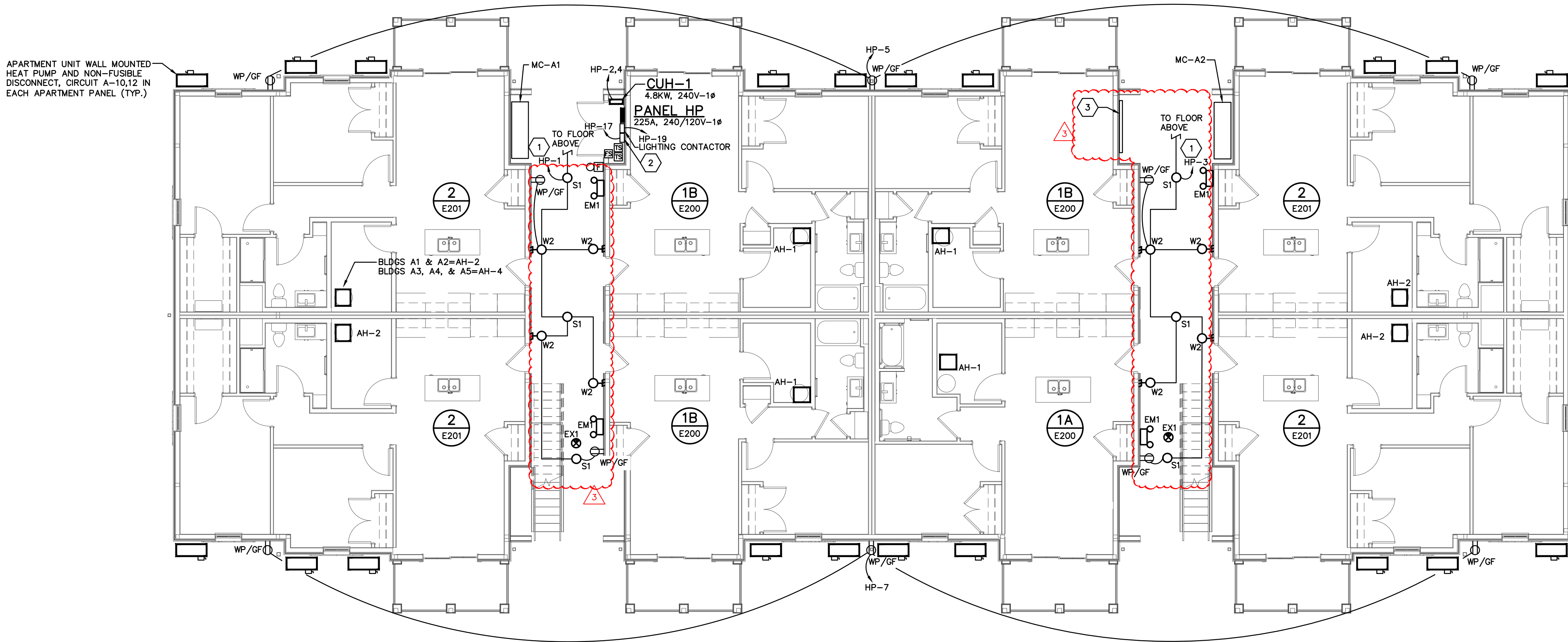
DESIGNED BY M. BUCCELLI	DRAWN BY M. BUCCELLI	CHECKED BY D. DOMENICI	JOB NUM. 24217
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N. RUSSELL	N. RUSSELL	D. POWELL	24217
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ELECTRICAL SITE PLAN
SCALE: 1"=40'-0"



LEVEL 02 ELECTRICAL PLAN – BUILDING A
SCALE: 1/8"=1'-0"



LEVEL 01 ELECTRICAL PLAN – BUILDING A
SCALE: 1/8"=1'-0"

GENERAL NOTES

- COORDINATE THE MOUNTING HEIGHT AND LOCATIONS OF THE ELECTRICAL DEVICES WITH ARCHITECTURAL ELEVATIONS AND GENERAL TRADES CONTRACTOR PRIOR TO ROUGH-IN. RECEPTACLES LOCATED WITHIN (6) SIX FEET OF A SINK SHALL BE GROUND FAULT INTERRUPTER (GFI) TYPE. RECEPTACLES, ALL RECEPTACLES IN KITCHENS, BREAK ROOMS, KITCHENETTES, ETC. SHALL BE GFI PROTECTED. RECEPTACLES NOT READILY ACCESSIBLE THAT REQUIRE GFI PROTECTION SHALL BE 30 AT THE CIRCUIT BREAKER.
- ALL BACKBOXES LOCATED IN RATED WALLS SHALL BE ENCASED IN FIRE PUTTY/SEALANT. ALL CONDUITS THAT PASS THROUGH RATED WALLS MUST BE FIRE SEALED ON BOTH SIDES OF THE WALL. COORDINATE WITH THE ARCHITECT'S DRAWINGS FOR LOCATIONS OF THE RATED WALLS.
- VERIFY ALL NEMA CONFIGURATIONS OF ALL 240 VOLT RECEPTACLES PRIOR TO ORDERING/ROUGH-IN.
- COORDINATE ALL RECEPTACLE AND SWITCH LOCATIONS IN AND ABOVE CABINETS WITH OWNER/DEVELOPER AND ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
- COORDINATE WALL THICKNESS WITH GENERAL TRADES CONTRACTOR. PROVIDE ADAPTER RING APPROPRIATE FOR WALL THICKNESS AND CABINET BACK PANEL.
- PROVIDE A JUNCTION BOX FOR ALL CAMERAS, WAPS, AND CARD READERS TO MOUNT TO. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT WITH OWNER. COORDINATE ALL ACCESS CONTROL REQUIREMENTS WITH SECURITY CONTRACTOR PRIOR TO ROUGH-IN.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT UNLESS OTHERWISE NOTED.
- COORDINATE ALL ELECTRICAL CONNECTIONS FOR POOL EQUIPMENT WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
- REFER TO E200 SERIES SHEETS FOR ENLARGED UNIT PLANS.
- OUTLET BOXES FOR LIGHT FIXTURES SHALL BE STANDARD OCTAGONAL.
- REFER TO ARCHITECTURAL UNIT RCP'S, CORRIDORS, AND AMENITY SPACES FOR THE EXACT LOCATIONS OF ALL LIGHT FIXTURES. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS OF WALL MOUNTED LIGHT FIXTURES/SCENES.
- UNLESS OTHERWISE NOTED OR SHOWN SWITCHED, ALL EMERGENCY FIXTURES AND EXIT SIGNS SHALL BE WIRED AHEAD OF ROOM SWITCHING TO MONITOR THE LOCAL LIGHTING CIRCUIT. EMERGENCY FIXTURES SHALL AUTOMATICALLY ILLUMINATE UPON THE LOSS OF UTILITY POWER. WIRE LIGHTING FIXTURES AND EXIT SIGNS IN THE BREEZEWAYS TO REMAIN ILLUMINATED AS NIGHT LIGHTS.
- REFER TO SITE PLAN FOR LOCATIONS OF METER CENTERS AND EQUIPMENT ROOM IN BREEZEWAYS. LOCATION MAY VARY PER BUILDING.

CODED NOTES

- WIRE FIXTURES THROUGH EXTERIOR LIGHTING PHOTOCELL AND LIGHTING CONTACTOR FOR AUTOMATIC LIGHTING CONTROL. ELECTRICAL CONTRACTOR SHALL PROVIDE PHOTOCELL (EQUAL TO PRECISION MULTIPLE #ST-15) AND COORDINATE FINAL LOCATION WITH OWNER BASED ON BUILDING ORIENTATION. PHOTOCELL SHALL BE MOUNTED HIGH ON ROOF AND AIM NORTH. SEE EXTERIOR LIGHTING CONTROL DETAIL ON SHEET E401 FOR MORE INFORMATION.
- PROVIDE FIRE ALARM SPRINKLER MONITORING PANEL. PROVIDE 2 PHONE LINES TO PANEL. COORDINATE INSTALLATION WITH OWNER. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- PROVIDE A 24" X 48" TELECOM BACKBOARD FOR TELECOM PROVIDER EQUIPMENT. COORDINATE LOCATION OF BACKBOARD WITH TELECOM PROVIDER PER BUILDING. AS LOCATION MAY VARY PER BUILDING. PAINT BACKBOARD PER THE DIRECTION OF THE ARCHITECT.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

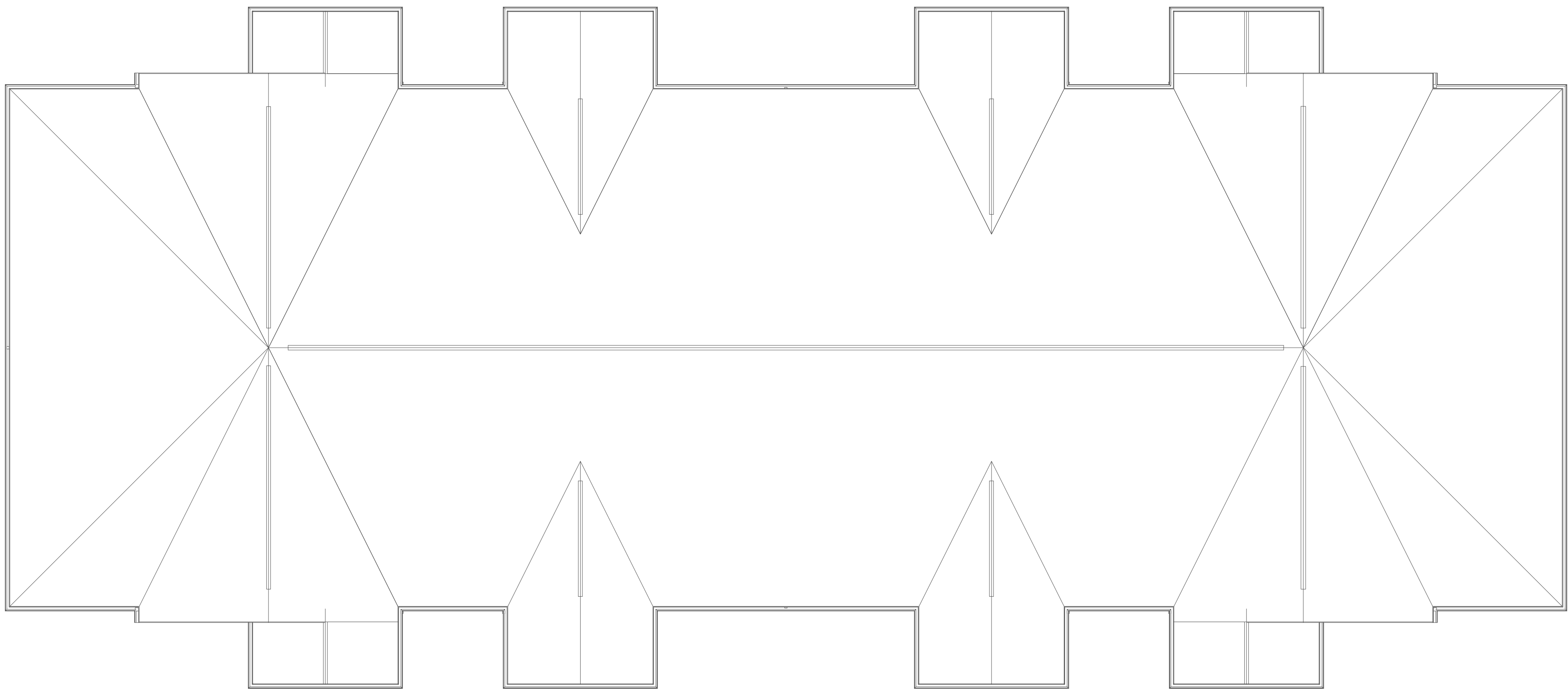
Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

CERT. NO: FIRM 00197475

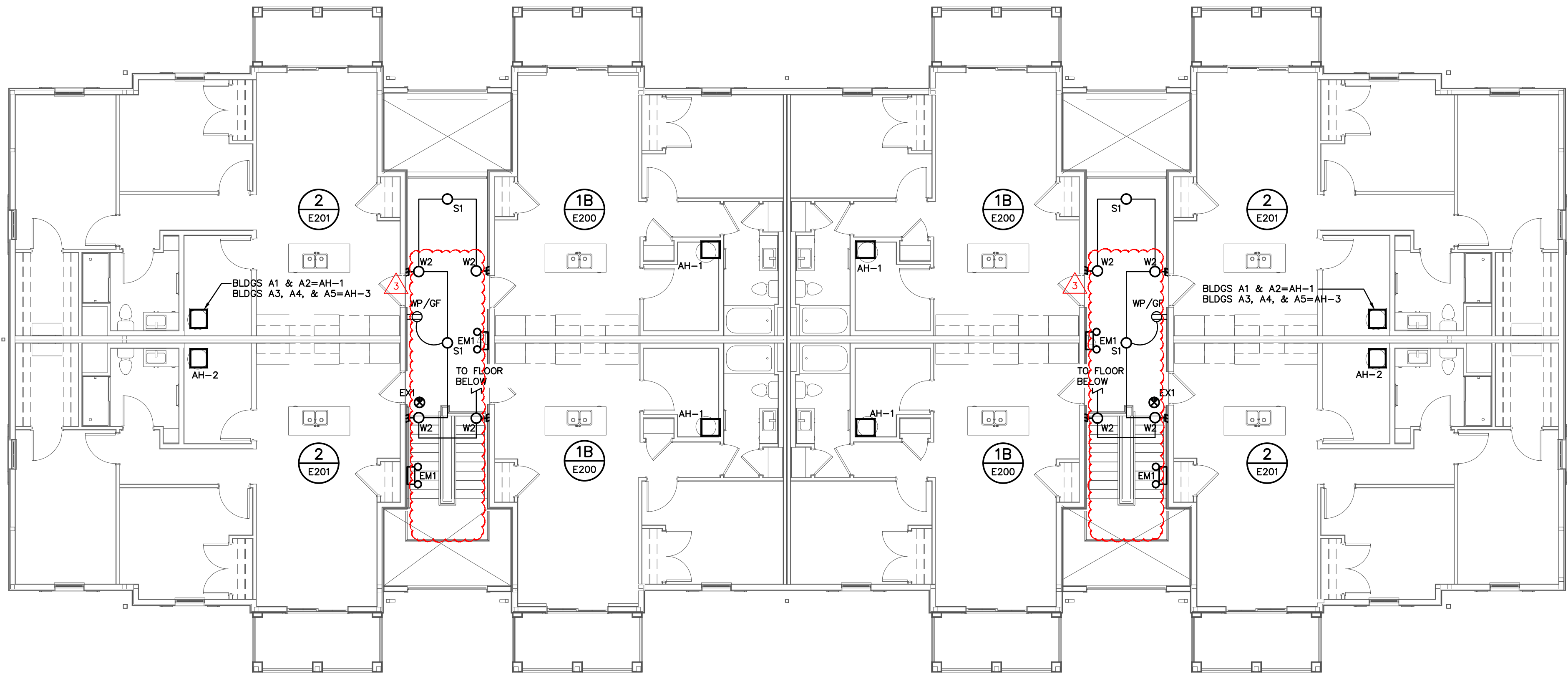
DRAWING TITLE:
**BUILDING A - LEVEL 01 & 02
ELECTRICAL PLANS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	E101-A
	CD PROGRESS SET

E101-A-24217.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
DESIGNED BY: N. RUSSELL
DRAWN BY: N. RUSSELL
CHECKED BY: -
JOB NUM: 24217
(614) 766 4896
FAX: (614) 766 2354



ROOF ELECTRICAL PLAN – BUILDING A
SCALE: 1/8"=1'-0"



LEVEL 03 ELECTRICAL PLAN – BUILDING A
SCALE: 1/8"=1'-0"

E102-A-24217.DWG

PRATER
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N. RUSSELL

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N. RUSSELL

CHECKED BY
-

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24217

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GENERAL NOTES

- A. COORDINATE THE MOUNTING HEIGHT AND LOCATIONS OF THE ELECTRICAL DEVICES WITH ARCHITECTURAL ELEVATIONS AND GENERAL TRADES CONTRACTOR PRIOR TO ROUGH-IN. RECEPTACLES LOCATED WITHIN (6) SIX FEET OF A SINK SHALL BE GROUND FAULT INTERRUPTER (GFI) TYPE RECEPTACLES. ALL RECEPTACLES IN KITCHENS, BREAK ROOMS, KITCHNETTES, ETC. SHALL BE GFI PROTECTED. RECEPTACLES NOT READILY ACCESSIBLE THAT REQUIRE GFI PROTECTION SHALL BE SO AT THE CIRCUIT BREAKER.
- B. ALL BACKBOXES LOCATED IN RATED WALLS SHALL BE ENCASED IN FIRE PUTTY/SEALANT. ALL CONDUITS THAT PASS THROUGH RATED WALLS MUST BE FIRE SEALED ON BOTH SIDES OF THE WALL. COORDINATE WITH THE ARCHITECT'S DRAWINGS FOR LOCATIONS OF THE RATED WALLS.
- C. VERIFY ALL NEMA CONFIGURATIONS OF ALL 240 VOLT RECEPTACLES PRIOR TO ORDERING/ROUGH-IN.
- D. COORDINATE ALL RECEPTACLE AND SWITCH LOCATIONS IN AND ABOVE CABINETRY WITH OWNER/DEVELOPER AND ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
- E. COORDINATE WALL THICKNESS WITH GENERAL TRADES CONTRACTOR. PROVIDE ADAPTER RING APPROPRIATE FOR WALL THICKNESS AND CABINET BACK PANEL.
- F. PROVIDE A JUNCTION BOX FOR ALL CAMERAS, WAPS, AND CARD READERS TO MOUNT TO. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT WITH OWNER. COORDINATE ALL ACCESS CONTROL REQUIREMENTS WITH SECURITY CONTRACTOR PRIOR TO ROUGH-IN.
- G. ALL RECEPTACLES SHALL BE TAMPER RESISTANT UNLESS OTHERWISE NOTED.
- H. COORDINATE ALL ELECTRICAL CONNECTIONS FOR POOL EQUIPMENT WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
- I. REFER TO E200 SERIES SHEETS FOR ENLARGED UNIT PLANS.
- J. OUTLET BOXES FOR LIGHT FIXTURES SHALL BE STANDARD OCTAGONAL.
- K. REFER TO ARCHITECTURAL UNIT RCP'S, CORRIDORS, AND AMENITY SPACES FOR THE EXACT LOCATIONS OF ALL LIGHT FIXTURES. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS OF WALL MOUNTED LIGHT FIXTURES/SCENES.
- L. UNLESS OTHERWISE NOTED OR SHOWN SWITCHED, ALL EMERGENCY FIXTURES AND EXIT SIGNS SHALL BE WIRED AHEAD OF ROOM SWITCHING TO MONITOR THE LOCAL LIGHTING CIRCUIT. EMERGENCY FIXTURES SHALL AUTOMATICALLY ILLUMINATE UPON THE LOSS OF UTILITY POWER. WIRE LIGHTING FIXTURES AND EXIT SIGNS IN THE BREEZEWAYS TO REMAIN ILLUMINATED AS NIGHT LIGHTS.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

**THE FALLS ON REFUGEE ROAD**
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY COMMERCIAL COLLABORATION

3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

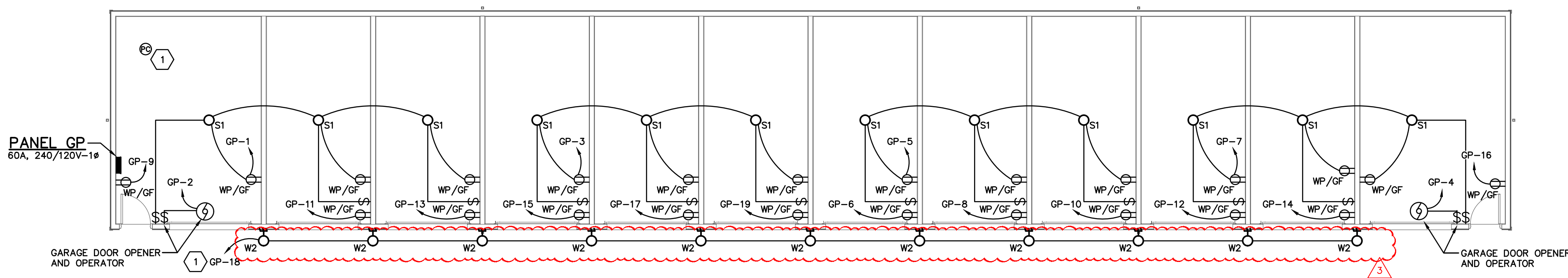
**Moody Nolan**

300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

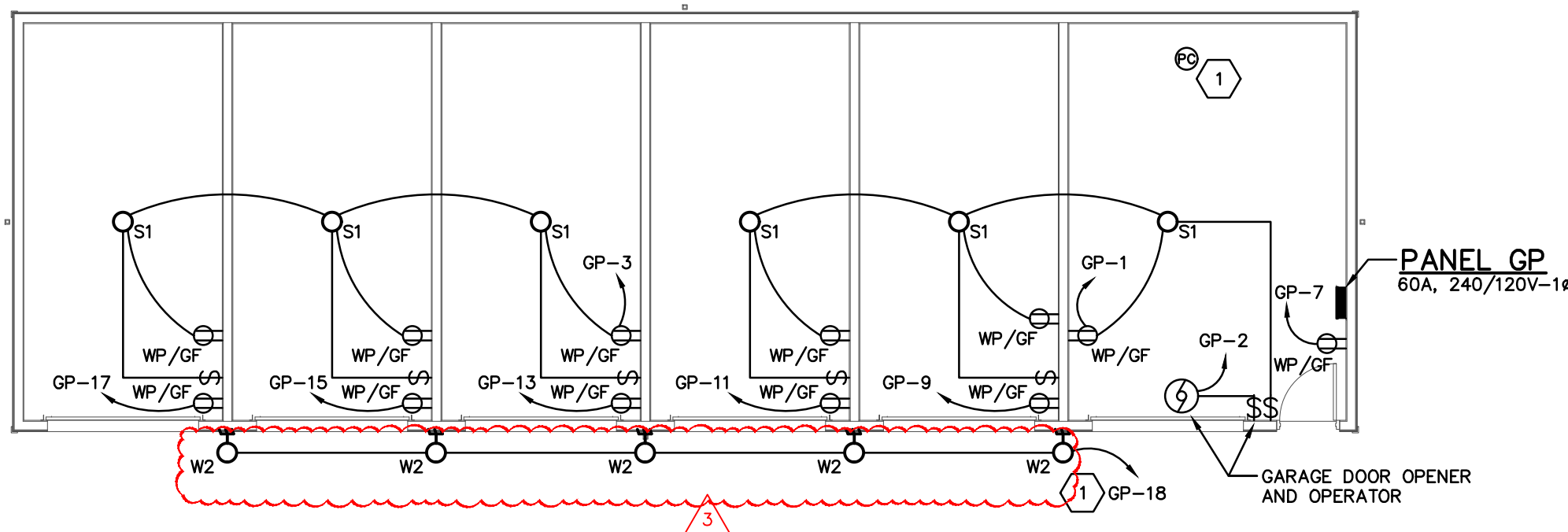
CERT. NO: FIRM 00197475

DRAWING TITLE:
**BUILDING A - LEVEL 03 & ROOF
ELECTRICAL PLANS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	E102-A
	CD PROGRESS SET



LEVEL 01 ELECTRICAL PLAN – GARAGE G2
SCALE: 1/8"=1'-0"



LEVEL 01 ELECTRICAL PLAN – GARAGE G1
SCALE: 1/8"=1'-0"

GENERAL NOTES

- BRANCH CIRCUITS HOMERUNS TO BE IN MC CONDUIT.
- ALL EXPOSED CONDUIT IN ROOMS HAVING NO CEILING/EXPOSED STRUCTURE TO BE MC CONDUIT RUN MINIMUM OF 1.5" BELOW ROOF.
- ALL BRANCH CIRCUIT CONDUCTORS/RACEWAY SHALL BE NEW, BACK TO SOURCE PANELBOARD.

CODED NOTES

- RUN CIRCUIT THROUGH EXTERIOR PHOTOCELL FOR AUTOMATIC CONTROL. PROVIDE EXTERIOR LIGHTING PHOTOCELL TO CONTROL EXTERIOR FIXTURES, EQUAL TO PRECISION #ST-15. MOUNT HIGH ON THE NORTH SIDE OF THE BUILDING FOR MAXIMUM EXPOSURE TO SUN AND OUT OF SITE FROM PUBLIC. COORDINATE FINAL LOCATION WITH THE ARCHITECT PRIOR TO ROUGH-IN.

#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**GARAGE BUILDING
ELECTRICAL PLANS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	E-108
	CD PROGRESS SET

E108-G-24217.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
DESIGNED BY: N. RUSSELL
DRAWN BY: N. RUSSELL
CHECKED BY: -
JOB NUM: 24217
(614) 766 4896
FAX: (614) 766 2354

CONDUIT & WIRE SCHEDULE
BRANCH CIRCUITS

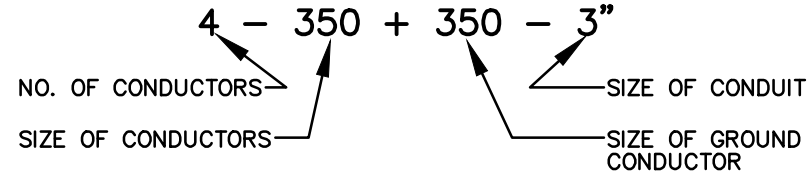
WIRE SIZE	2 WIRE+GROUND	3 WIRE+GROUND	4 WIRE+GROUND
15A	#12 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
20A	#12 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
25A	#10 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
30A	#10 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
35A	#8 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
40A	#6 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
45A	#6 GRD. 3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
50A	#6 GRD. 3/4" CONDUIT	3/4" CONDUIT	1" CONDUIT
60A	#4 GRD. 1" CONDUIT	1" CONDUIT	1-1/4" CONDUIT
70A	#4 GRD. 1-1/4" CONDUIT	1-1/4" CONDUIT	1-1/4" CONDUIT
80A	#2 GRD. 1-1/4" CONDUIT	1-1/4" CONDUIT	1-1/4" CONDUIT
90A	#2 GRD. 1-1/4" CONDUIT	1-1/4" CONDUIT	1-1/4" CONDUIT

NOTES:
WIRE SIZE BASED UPON THWN COPPER WIRING, EMT CONDUIT.
PROVIDE WIRE FOR EACH PHASE, NEUTRAL, AND GROUND AS NOTED.
BRANCH CIRCUIT WIRING SHALL MATCH CIRCUIT BREAKER/FUSE SIZE.
VOLTAGE DROP: 120V, 20A BRANCH CIRCUITS (3% VD)
USE #12 FOR UP TO 60 FT, #10 FROM 61 FT TO 100 FT,
#8 FROM 101 FT TO 150 FT.

FEEDER SCHEDULE

DESIG.	C.B. OR FUSE SIZE	FEEDER SIZE
①		(2) EMPTY 4" CONDUITS URD SERVICE CABLE BY AEP COORDINATE WITH AEP
②		(2) EMPTY 3" CONDUITS URD PRIMARY CABLE BY AEP COORDINATE WITH AEP
③	225 AMP	3 - 300 KCMIL ALU. + 2 - 2.5"
④	600 AMP	2 SETS OF (3 - 500 KCMIL ALU. + 2/0 - 4")
⑤	60 AMP	3 - #3 CU. + #8 CU. - 1.25"

WIRING LEGEND



GENERAL NOTES

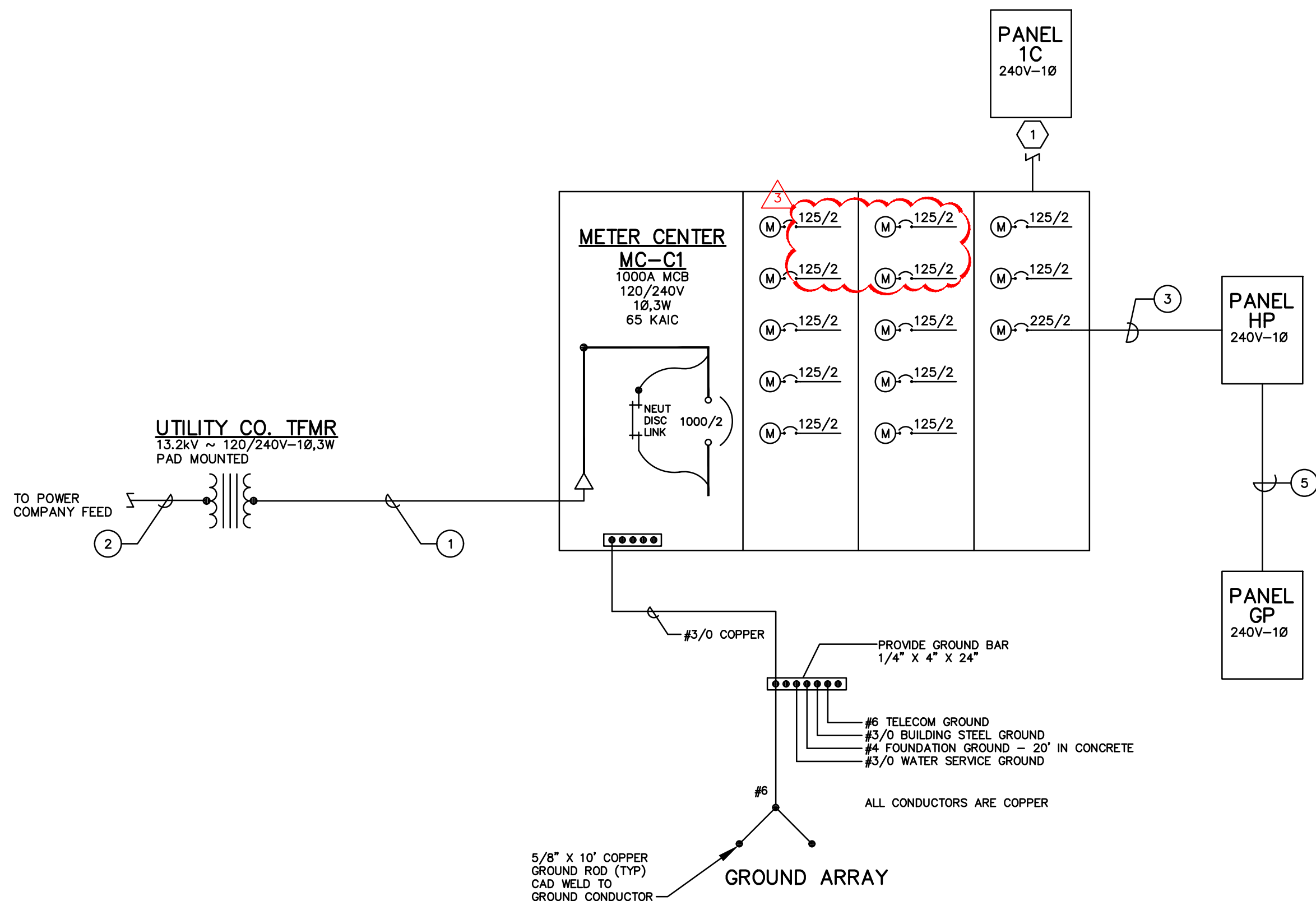
A. COMPACT ALUMINUM MAY BE USED FOR PANEL FEEDERS WHERE APPROVED BY OWNER IN WRITTEN DISCUSSIONS. EC SHALL SIZE FEEDER WIRING AND CONDUIT AS NECESSARY TO MATCH BASIS OF DESIGN COPPER AMPS, AND SHALL COORDINATE ALL EQUIPMENT LUG SIZES WITH MANUFACTURER TO ENSURE PROPER FIT.

CODED NOTES

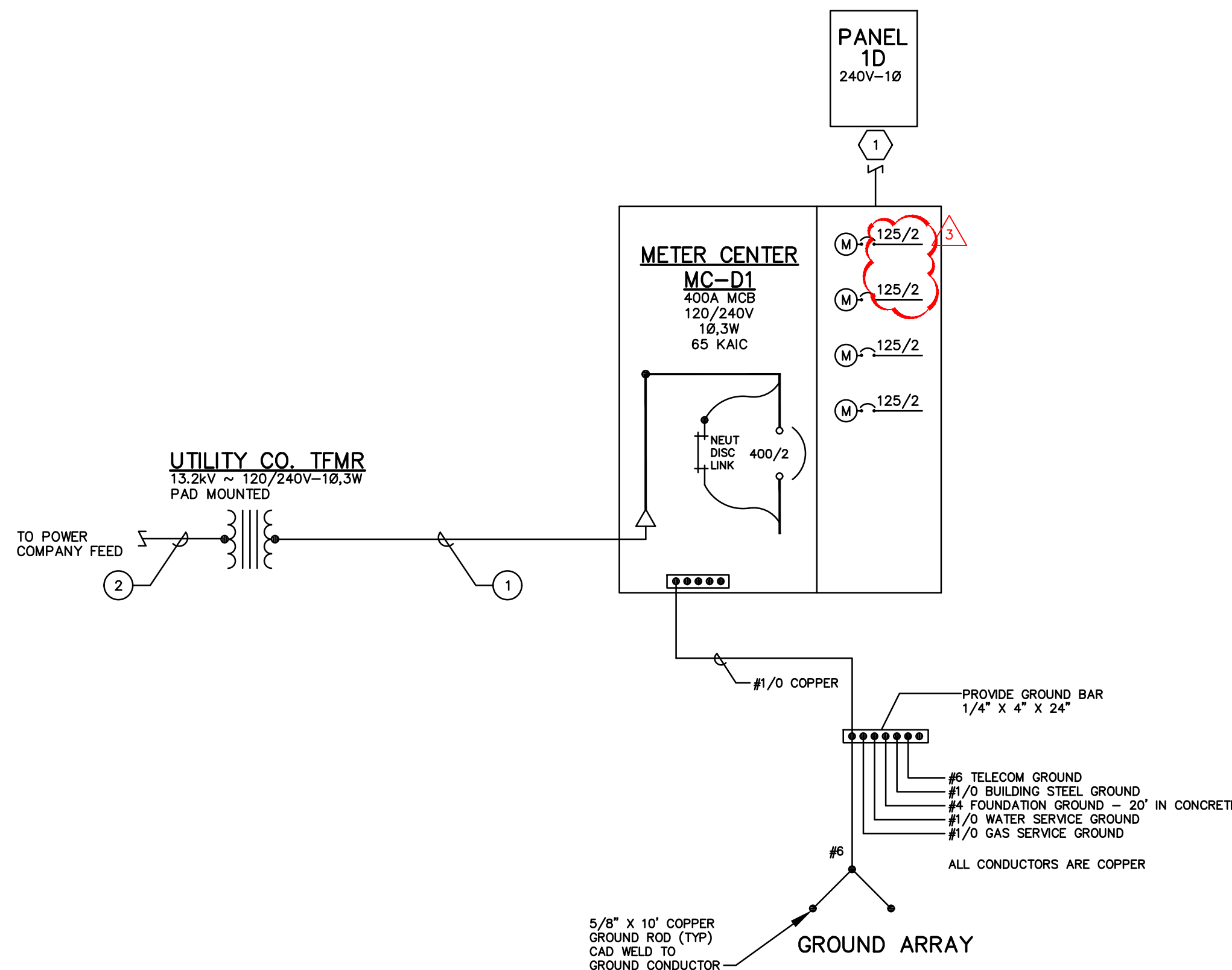
1. PROVIDE A FEEDER TO EACH APARTMENT. SEE APARTMENT FEEDER NOTES ON THIS SHEET.

APARTMENT FEEDERS

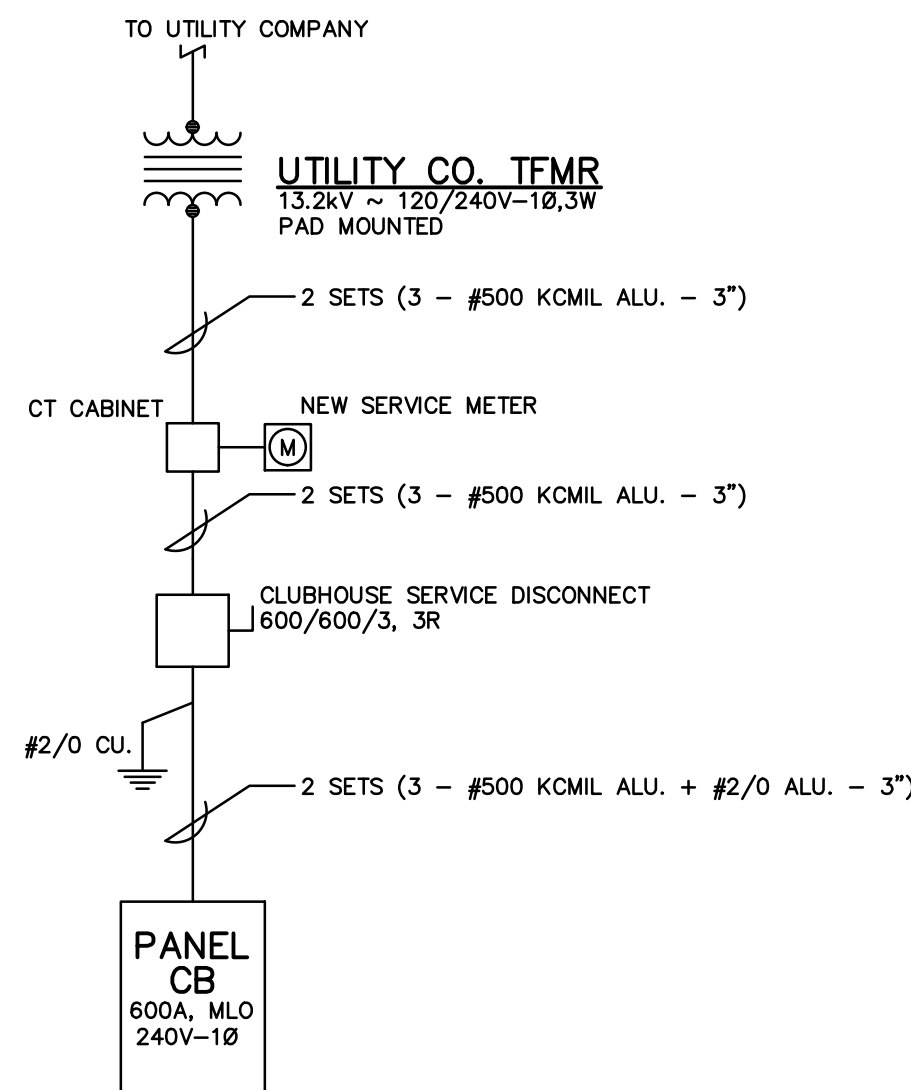
- ALL 125 AMP APARTMENTS FEEDERS UNDER 150' IN LENGTH SHALL BE FED WITH (3) #1/0 ALUM WITH (1) #4 ALUM GROUND SER. CABLE.
 - ALL 125 AMP APARTMENT FEEDERS BETWEEN 150' AND 200' IN LENGTH SHALL BE FED WITH (3) #2/0 ALUM WITH (1) #4 ALUM GROUND SER. CABLE.
 - ALL 150 AMP APARTMENT FEEDERS UNDER 150' IN LENGTH SHALL BE FED WITH (3) #2/0 ALUM WITH (1) #4 ALUM GROUND SER. CABLE.
 - ALL 150 AMP APARTMENT FEEDERS BETWEEN 150' AND 200' IN LENGTH SHALL BE FED WITH (3) #3/0 ALUM WITH (1) #4 ALUM GROUND SER. CABLE.
- THIS CONTRACTOR IS RESPONSIBLE FOR TORQUING ALL ALUMINUM CONDUCTORS PER MANUFACTURER'S PUBLISHED TORQUE REQUIREMENTS. THIS CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LUG SIZES TO ACCEPT FEEDER CONDUCTORS NOTED ABOVE, OR TRANSITION TO STANDARD SIZE CONDUCTORS WITHIN EQUIPMENT GUTTERS/SPLICE COMPARTMENTS.



TYPICAL BUILDING C
ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



CLUBHOUSE
ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



#	DATE	CHANGE DESCRIPTION
1	06/10/2025	ADDENDUM# 01
2	06/25/2025	ADDENDUM# 02
3	07/10/2025	ADDENDUM# 03

THE FALLS ON REFUGEE ROAD
COLUMBUS METROPOLITAN HOUSING AUTHORITY
3355 REFUGEE ROAD, COLUMBUS, OH 43232
FOR CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
CERT. NO: FIRM 00197475

DRAWING TITLE:
**ELECTRICAL
ONE-LINE DIAGRAMS**

PROGRESS DRAWING NOT FOR CONSTRUCTION	05/01/2025
	23446
	E-301
	CD PROGRESS SET

E-301-24217.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
DESIGNED BY N. RUSSELL
DRAWN BY N. RUSSELL
CHECKED BY -
JOB NUM 24217
(614) 766 4896
FAX: (614) 766 2354

UL/CUL SYSTEM NO. CAJ1154
METAL PIPE THROUGH CONCRETE FLOOR/ WALL OR BLOCK WALL
 F RATING = 3-HR
 T RATING = 1/4-HR
 L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
 L RATING AT 400°F = 4 CFM/SQ. FT.

TOP VIEW

SECTION A-A

- CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING):
 A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 B. ANY UL/CUL CLASSIFIED CONCRETE BLOCK WALL.
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
 A. MAXIMUM 10" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 B. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
 C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
 D. MAXIMUM 4" NOMINAL DIAMETER EMT.
- BACKER ROD, HILTI OF 128 FILLER FOAM, OR MINERAL WOOL TO BE USED AS BACKER.
- MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
- MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 14".
- ANNUAL SPACE = MINIMUM 0", MAXIMUM 5-1/4".
- MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.

UL/CUL SYSTEM NO. W1085
METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY
 F RATING = 0-HR
 T RATING = 1-HR OR 2-HR
 L RATING AT AMBIENT = LESS THAN 1CFM/SQ. FT.
 L RATING AT 400°F = 4 CFM/SQ. FT.

FRONT VIEW

SECTION A-A

- GYPSUM WALL ASSEMBLY (UL/CUL CLASSIFIED U300 OR U400 SERIES) (1-HR OR 2-HR FIRE-RATING) (2-HR SHOWN).
- PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
 A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 B. MAXIMUM 12" NOMINAL DIAMETER CAST IRON PIPE.
 C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
 D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
- HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT FORCED INTO ANNULAR SPACE TO MAXIMUM EXTENT POSSIBLE.
- MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT TO BE INSTALLED AROUND PIPE, LAPPING 1/4" BEYOND PERIPHERY OF OPENING.

NOTES:

- MAXIMUM DIAMETER OF OPENING = 13-1/4".
- ANNUAL SPACE = MINIMUM 0", MAXIMUM 1/4".

ELECTRICAL ABBREVIATIONS			
AWG	AMERICAN WIRE GAUGE	G.C.	GENERAL CONTRACTOR
A	ABOVE COUNTER	GRD	GROUND
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
CLG	CEILING	MECH	MECHANICAL
C	CONDUIT	PNL	PANEL
E.C.	ELECTRICAL CONTRACTOR	REC	RECEPTACLE
E	EXISTING TO REMAIN	TYP	TYPICAL
FIX	FIXTURE	WP	WEATHER PROOF

LIGHTING CONTROL NOTES

1. ENCLOSED OFFICES AND MULTIPURPOSE ROOMS SHALL BE MANUAL ON, AUTO OFF, AND MANUAL DIM.
2. LOBBIES, CORRIDORS, & RESTROOMS SHALL BE AUTO ON TO 100% AUTO OFF, AND SHALL INCLUDE ONE READILY ACCESSIBLE MANUAL CONTROL. CORRIDORS SHALL BE DIMMABLE (SEE NOTE SHOWN ON DRAWING).
3. APARTMENT CORRIDORS SHALL BE ON AT ALL TIMES FOR SECURITY.
4. AUTOMATIC SHUTOFF IS NOT REQUIRED FOR LIGHTING REQUIRED FOR 23 HOUR SAFETY OR SECURITY, AND FOR SPACES WHERE AUTOMATIC SHUTOFFS ENDANGER THE SAFETY OR SECURITY OF OCCUPANTS OR ENDANGER OCCUPANTS (INCLUDING ELECTRICAL ROOMS, MECHANICAL ROOMS).
5. ALL OTHER SPACES SHALL BE MANUAL ON, AUTO OFF, UNLESS NOTED/SHOWN OTHERWISE. REFER TO LIGHTING CONTROL LEGEND FOR DEVICE TYPES AND ASSOCIATED CONTROL LOGIC.
6. STRAIGHT LINES BETWEEN DEVICES/LUMINAIRES INDICATE SWITCHED CIRCUIT. ARCED LINES INDICATE UNSWITCHED CIRCUIT. LOWER CASE LETTERS DENOTE LIGHTING ZONES.
7. EXTERIOR LIGHTING SHALL BE ON DURING THE DAY, 100% OUTPUT DURING PEAK NIGHT HOURS FOR TENANT SECURITY.
8. POWER PAKS & WIRING ARE SHOWN ON THE DRAWINGS FOR SPECIFIC CIRCUITING & SWITCHING, EXCEPT WHEN CONTROL INTENT IS CLEAR (EX-BOUNDED BY A ROOM). WHEN THE INTENT OF THE CIRCUITING IS NOT CLEAR, THE CONTRACTOR SHALL BE REQUIRED. IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE & FUNCTIONAL BIDDING OFFER OF WIRING & CONTROL SYSTEM IS FURNISHED & INSTALLED.

