



## 2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

(except 1 and 2-family dwellings and townhouses)  
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: AHU Replacement For WSFCS Admin Office  
Address: 435 Corporate Square Dr. Winston-Salem, NORTH CAROLINA Zip Code 27105  
Owner/Authorized Agent: WSFCS Phone # 336-748-4000 E-mail: cshaw@wsfcs.k12.nc.us  
Owned By:  City/County  Private  State  
Code Enforcement Jurisdiction:  City  County  State

**CONTACT:** JAMES M. MALONEY

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	SKA CONSULTING ENGINEERS, INC.	JAMES M. MALONEY	05966	(336)855-0993	jmaloney@skaeng.com
Civil					
Electrical					
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls >5' High					
Other					

**2018 NC BUILDING CODE:**  New Construction  Addition  Renovation  
 1st Time Interior Completion  
 Shell / Core - Contact the local inspection jurisdiction for possible additional procedures and requirements  
 Phased Construction - Shell / Core - contact the local inspection jurisdiction for possible additional procedures and requirements

**2018 NC EXISTING BUILDING CODE: EXISTING:**  Prescriptive  Repair  Chapter 14 Alteration:  Level I  Level II  Level III  Level IV  
 Historic Property  Change of Use

**CONSTRUCTED:** 1980 **CURRENT OCCUPANCY(S) (Ch. 3):** BUSINESS  
**RENOVATED:** \_\_\_\_\_ **PROPOSED OCCUPANCY(S) (Ch. 3):** \_\_\_\_\_

**RISK CATEGORY (Table 1604.5):** Current:  I  II  III  IV  
Proposed:  I  II  III  IV

**BASIC BUILDING DATA:**  
Construction Type:  I-A  II-A  III-A  IV  V-A  
 I-B  II-B  III-B  V-B  
Sprinklers:  No  Partial  Yes  NFPA 13  NFPA 13R  NFPA 13D  
Standpipes:  No  Yes Class  I  II  III  Wet  Dry  
Fire District:  No  Yes **Flood Hazard Area:**  No  Yes  
**Special Inspections Required:**  No  Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

**Gross Building Area Table:**

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor	35,040	0	35,040
2nd Floor	35,040	0	35,040
Mezzanine	0	0	0
1st Floor	35,760	0	35,760
Basement			
<b>TOTAL</b>	<b>105,840</b>	<b>0</b>	<b>105,840</b>

**ALLOWABLE AREA**  
**Primary Occupancy Classification(s):**  
Assembly  A-1  A-2  A-3  A-4  A-5  
Business  B-1  B-2  B-3  B-4  B-5  
Educational  E-1  E-2  E-3  E-4  E-5  
Factory  F-1 Moderate  F-2 Low  
Hazardous  H-1  H-2  H-3  H-4  H-5  H-6  
Institutional  I-1  I-2  I-3  I-4  
Mercantile  M-1  M-2  M-3  M-4  
Residential  R-1  R-2  R-3  R-4  
Storage  S-1 Moderate  S-2 Low  High Piled  
Utility and Miscellaneous  U-1  U-2  U-3  U-4

**Accessory Occupancy Classifications:**  
**Incidental Uses (Table 509):** \_\_\_\_\_  
**Special Uses (Chapter 4 - List Code Sections):** \_\_\_\_\_  
**Special Provisions (Chapter 5 - List Code Sections):** \_\_\_\_\_  
**Mixed Occupancy:**  No  Yes Separation: \_\_\_\_\_ Hr. Exception: \_\_\_\_\_  
 Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.  
 Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.  
$$\frac{\text{Actual Area Of Occupancy A}}{\text{Allowable Area Of Occupancy A}} + \frac{\text{Actual Area Of Occupancy B}}{\text{Allowable Area Of Occupancy B}} \leq 1$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (TABLE 506.2)	(B) TABLE 506.2 AREA	(C) AREA FOR FRONTAGE INCREASE (1)	(D) ALLOWABLE AREA PER STORY (UNLIMITED)
BASEMENT					
FIRST					

**N/A (NO CHANGES TO EXISTING BUILDING FOOTPRINT)**

- Frontage area increases from section 506.3 are computed thus: **N/A (BUILDING UNCHANGED)**  
a. Perimeter which fronts a public way or open space having 20 feet minimum width = N/A (F)  
b. Total Building Perimeter = N/A (P)  
c. Ratio (F/P) = N/A (F/P)  
d. W = Minimum width of public way = N/A (W)  
e. Percent of frontage increase  $I_p = 100 [(F/P) - 0.25] \times W/30$
- Unlimited area applicable under conditions of Sections 507
- Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
- The maximum area of open parking garages must comply with Table 406.5.4.
- Frontage increase is based on the unobstructed area value in Table 506.2.

**ALLOWABLE HEIGHT N/A (BUILDING UNCHANGED)**

ALLOWABLE (TABLE 503)	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3) <sup>2</sup>	Yes	
Building Height in Stories (Table 504.4) <sup>3</sup>	Stories	Stories

- Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
- The maximum height of traffic control towers must comply with Table 412.3.1.
- The maximum height of open parking garages must comply with Table 406.5.4.

**FIRE PROTECTION REQUIREMENTS N/A (BUILDING PROTECTION REQUIREMENTS UNCHANGED)**

BUILDING ELEMENT	FIRE SEPARATION (FEET)	RATING PROVIDED (OR REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses						
Bearing walls						
Exterior						
North						
East						
West						
South						
Interior						
Nonbearing walls and partitions						
Exterior walls						
North						
East						
West						
South						
Interior walls and partitions						
Floor construction including supporting beams and joists						
Floor Ceiling Assembly						
Columns Supporting Floors						
Roof construction including supporting beams and joists						
Roof Ceiling Assembly						
Columns Supporting Roofs						
Shaft Enclosures - Exit						
Shaft Enclosures - Other						
Corridor Separation						
Occupancy/Fire Barrier Separation						
Party/Fire Wall Separation						
Smoke Barrier Separation						
Traveling Stair Use/ Sleeping Unit Separation						
Included Use Separation						

**PERCENTAGE OF WALL OPENING CALCULATIONS**

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	NUMBER OF OPENINGS PER SECTION (TABLE 705.8)	ALLOWABLE AREA (%)

**N/A (BUILDING UNCHANGED)**

**LIFE SAFETY SYSTEM REQUIREMENTS**

Emergency Lighting:  No  Yes  
Exit Signs:  No  Yes  
Fire Alarm:  No  Yes  
Smoke Detection Systems:  No  Yes  
Public Address:  No  Yes

**N/A (LIFE SAFETY SYSTEMS UNCHANGED)**

**LIFE SAFETY PLAN REQUIREMENTS**

Life Safety Plan Sheet #: N/A **N/A (OCCUPANT LOAD EGRESS SYSTEM UNCHANGED)**

- Fire and/or smoke rated wall locations (Chapter 7)
- Assumed and real property line locations (if not on the site plan)
- Exterior wall opening area with respect to distance to assumed property lines (705.4)
- Occupancy Use for each area as it relates to occupant load calculation (Table 1604.1.2)
- Occupant loads for each area
- Exit access travel distances (1017)
- Common path of travel distances (Tables 1006.2.1 & 1006.3.2 (1))
- Dead end lengths (1020.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- Location of doors with panic hardware (1010.1.10)
- Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- Location of doors with electromagnetic egress locks (1010.1.9.9)
- Location of doors equipped with hold-open devices
- Location of emergency escape windows (1030)
- The square footage of each fire area (202)
- The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- Note any code exceptions or table notes that may have been utilized regarding the items above

**ACCESSIBLE DWELLING UNITS N/A - NO CHANGES (SECTION 1107)**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

**ACCESSIBLE PARKING N/A - NO CHANGES (SECTION 1106)**

TOTAL UNITS	TOTAL # OF PARKING SPACES REQUIRED	# OF ACCESSIBLE SPACES PROVIDED	REGULAR # ACCESSIBLE	12' ACCESSIBLE	8' ACCESSIBLE	TOTAL # ACCESSIBLE PROVIDED

**PLUMBING FIXTURE REQUIREMENTS N/A - NO CHANGES (TABLE 2902.1)**

USE	WATER SINKS	URINALS	LAVATORIES	SHOWER TUBS	DRINKING FOUNTAINS
MALE					
FEMALE					
REGULAR					
ACCESSIBLE					

**SPECIAL APPROVALS**  
(Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe)

**ENERGY REQUIREMENTS:**  
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost budget vs annual energy cost for the proposed design.

**Existing building envelope complies with code:**  No  Yes  
**Exempt Building:**  No  Yes (provide code or statutory reference): \_\_\_\_\_  
**Climate Zone:**  3A  4A  5A  
**Method of Compliance:** Energy Code  Performance  Prescriptive  
ASHRAE 90.1  Performance  Prescriptive  
(If "Other" specify source here) \_\_\_\_\_

**THERMAL ENVELOPE (Prescriptive method only)**

**Roof/ceiling assembly (each assembly)**  
Description of assembly \_\_\_\_\_  
U-value of total assembly \_\_\_\_\_  
R-value of insulation \_\_\_\_\_  
Skylights in each assembly \_\_\_\_\_  
U-value of skylight \_\_\_\_\_  
Total square footage of skylights in each assembly \_\_\_\_\_

**Exterior walls (each assembly)**  
Description of assembly \_\_\_\_\_  
U-value of total assembly \_\_\_\_\_  
R-value of insulation \_\_\_\_\_  
Openings (windows or doors with glazing) \_\_\_\_\_  
U-value of assembly \_\_\_\_\_  
Solar heat gain coefficient \_\_\_\_\_  
Projection factor \_\_\_\_\_  
Door R-Values \_\_\_\_\_

**Walls below grade (each assembly)**  
Description of assembly \_\_\_\_\_  
U-value of total assembly \_\_\_\_\_  
R-value of insulation \_\_\_\_\_

**Floors over unconditional space (each assembly)**  
Description of assembly \_\_\_\_\_  
U-value of total assembly \_\_\_\_\_  
R-value of insulation \_\_\_\_\_

**Floors slab on grade**  
Description of assembly \_\_\_\_\_  
U-value of total assembly \_\_\_\_\_  
R-value of insulation \_\_\_\_\_  
Horizontal/vertical requirement \_\_\_\_\_  
slab heated \_\_\_\_\_

**STRUCTURAL DESIGN N/A - NO CHANGES**  
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

**DESIGN LOADS:**

**Importance factors:** Snow (I<sub>s</sub>) \_\_\_\_\_  
Seismic (I<sub>p</sub>) \_\_\_\_\_  
**Live loads:** Roof \_\_\_\_\_ psf  
Mezzanine \_\_\_\_\_ psf  
Floor \_\_\_\_\_ psf

**Ground snow load:** \_\_\_\_\_ psf  
**Wind load:** Ultimate wind speed \_\_\_\_\_ mph (ASCE-7)  
Exposure category \_\_\_\_\_

**SEISMIC DESIGN CATEGORY**  
Provide the following seismic design parameters:  
**Occupancy Category (Table 1604.5)**  I  II  III  IV  
**Spectral Response Acceleration** S<sub>s</sub> \_\_\_\_\_ %g S<sub>1</sub> \_\_\_\_\_ %g  
**Site Classification (ASCE 7)**  A  B  C  D  E  F  
Data Source:  Field Test  Presumptive  Historical Data

**Basic structural system (check one)**  
 Bearing wall  Dual w/special moment frame  
 Building frame  Dual w/intermediate R/C or special steel  
 Moment frame  Inverted pendulum

**Seismic base shear** V<sub>s</sub> = \_\_\_\_\_  
**Analysis Procedure**  Simplified  Equivalent Lateral Force  Dynamic  
**Architectural, Mechanical, Components anchored?**  Yes  No

**LATERAL DESIGN CONTROL:**  Earthquake  Wind  
**SOIL BEARING CAPACITIES:** Field Test (provide copy of test report) \_\_\_\_\_ psf  
Presumptive Bearing capacity \_\_\_\_\_ psf  
File size, type, and capacity \_\_\_\_\_

**MECHANICAL SUMMARY**  
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

**MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT:**

**Thermal zone: 4A**  
winter dry bulb 18 deg F  
summer dry bulb 92 deg F

**Interior design conditions**  
winter dry bulb 70 deg F  
summer dry bulb 75 deg F  
relative humidity 50%

**Building heating load** N/A  
**Building cooling load** N/A

**Mechanical spacing conditioning system**  
Unitary Description of unit **DX SPLIT AIR HANDLING UNITS**  
Heating efficiency (SEE SCHEDULE)  
Cooling efficiency (SEE SCHEDULE)  
Size category of unit (SEE SCHEDULE)  
Boiler Size category. If oversized, state reason: N/A  
Chiller Size category. If oversized, state reason: N/A

**List equipment efficiencies (SEE SCHEDULE)**

**ELECTRICAL SUMMARY**  
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

**ELECTRICAL SYSTEM AND EQUIPMENT**  
**Method of Compliance:** Energy Code  Performance  Prescriptive  
ASHRAE 90.1:  Performance  Prescriptive

**Lighting schedule**  
lamp type required in fixture \_\_\_\_\_  
number of lamps in fixture \_\_\_\_\_  
ballast type used in fixture \_\_\_\_\_  
total wattage per fixture \_\_\_\_\_  
total interior wattage specified vs allowed (whole building or space by space) \_\_\_\_\_  
total exterior wattage specified vs allowed \_\_\_\_\_

**Additional Efficiency Package Options (When using the 2018 NC EEC; not required for ASHRAE 90.1)**  
 C406.2 More Efficient HVAC Equipment Performance  
 C406.3 Reduced Lighting Power Density  
 C406.4 Enhanced Digital Lighting Controls  
 C406.5 On-Site Renewable Energy  
 C406.6 Dedicated Outdoor Air System  
 C406.7 Reduced Energy Use in Service Water Heating

MECHANICAL SPECIFICATIONS

GENERAL: THE WORK SHOWN ON THE DRAWINGS CONSISTS OF PROVIDING A COMPLETE SYSTEM INCLUDING LABOR, MATERIALS, ETC.

THE TERM "PROVIDE" USED THROUGHOUT SPECIFICATIONS AND ON DRAWINGS SHALL MEAN TO "FURNISH, INSTALL AND CONNECT WITH ALL RELATED ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION READY FOR USE."

COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES, LAWS AND REGULATIONS APPLICABLE TO MECHANICAL, HEATING, VENTILATING AND AIR CONDITIONING INSTALLATION.

THE CONTRACTOR SHALL PAY ALL INSPECTION FEES AND SHALL INCLUDE THE COST OF SUCH FEES IN HIS PROPOSAL.

ALL MATERIAL AND EQUIPMENT SHALL BE STRICTLY INSTALLED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ELECTRONIC SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR THE FOLLOWING: AIR HANDLING UNIT, ELECTRIC DUCT HEATER, INSULATION SYSTEMS.

CHECK AND VERIFY WITH THE OWNER, EQUIPMENT SUPPLIERS, AND ALL OTHER DOCUMENTS FOR THE PROJECT THE EXACT REQUIREMENTS FOR PROVIDING REQUIRED AND COMPLETE SERVICES FOR EQUIPMENT, SYSTEMS, ETC. AS SHOWN OR INDICATED. MINOR CHANGES IN PIPE, DUCT, OR EQUIPMENT LOCATIONS MAY BE MADE AT ANY TIME PRIOR TO ROUGH-IN-GING OF THE MECHANICAL WORK AT NO ADDITIONAL COSTS TO THE OWNER.

FURNISH TO ENGINEER ONE SET OF MARKED UP MECHANICAL, PRINTS WITH ALL DEVIATIONS AND CORRECTIONS SHOWING THE AS-BUILT CONDITIONS AND DIMENSIONS. IF NECESSARY, LOCATIONS, ELEVATIONS, ETC. OF ALL PIPING, EQUIPMENT, DUCTS, VALVES, ETC.

SEAL AIR- AND WATER-TIGHT AROUND ALL DUCTWORK. RUN THRU NEW WALLS, PARTITIONS, FLOORS, CEILING, ETC. USE FIRE BARRIER CAULK AND PUTTY EQUAL TO 3M TYPE 303 PUTTY OR TYPE CP-25 CAULK AS APPLICABLE AROUND ALL PENETRATIONS THRU FIRE-RATED WALLS, PARTITIONS, FLOOR, CEILING, ETC.

ARRANGE WORK TO AVOID CUTTING WORK OF OTHER TRADES. WHERE CUTTING IS UNAVOIDABLE, CUT AND PATCH FOR MANNER NOT TO WEAKEN THE STRUCTURE OR ADVERSELY AFFECT THE FINISHED APPEARANCE. REPAIR CUT AREAS TO MATCH ADJACENT WORK.

CONTRACTOR SHALL VERIFY EXISTING CONDITIONS & DUCT SIZES. NEW DUCT SIZES ON DRAWINGS ARE FREE AREA DIMENSIONS.

ALL EQUIPMENT SHALL HAVE UL LABEL AS APPLICABLE.

MATERIALS:

DUCTWORK: GALVANIZED STEEL FABRICATED IN ACCORDANCE WITH LATEST SMACNA AND ASHRAE GUIDE AND STANDARDS. TURNS SHALL BE SQUARE WITH TURNING VANES OR WITH PROPER SIZE RADIUS. USE FOLLOWING GAUGES FOR LOW PRESSURE DUCTWORK: WHERE THE LONGEST SECTION DIMENSION IS 12 INCHES - 26 GAUGE; 13-30 INCHES - 24 GAUGE. NEW DUCTWORK NOT UTILIZING FLANGED & GASKETED JOINTS SHALL BE SEALED WITH NON-VOC SEALANT. DUCTWORK UPSTREAM OF VAV BOXES SHALL COMPLY TO SMACNA SEAL CLASS B.

PROVIDE MANUAL BALANCING DAMPERS IN ALL BRANCH DUCTS. MANUAL DAMPERS SHALL BE RUSON MODEL CD35, MD25 OR MD325, AS APPLICABLE OR EQUAL. ALL MANUAL DAMPERS SHALL BE FURNISHED WITH A MATCHING HEAVY DUTY HAND QUADRANT WITH MINIMUM 1-1/2" CLEARANCE FOR DUCT INSULATION SYSTEMS.

DUCT LINER:

ASTM C-518 GLASS FIBER DUCT LINER FOR THERMAL AND ACOUSTICAL INSULATION. PRODUCT SHALL BE TYPE 1, RESILIENT, EASY-TO-HANDLE IN ROLL FORM WITH MINIMUM DENSITY OF 3.0 LB/CU.FT., 250°F INSULATION SERVICE TEMPERATURE, MINIMUM "K" VALUE OF 0.28 AT 75°F MEAN TEMPERATURE, AND SUITABLE FOR USE IN DUCTWORK WITH MAXIMUM AIR STREAM VELOCITIES OF 4000 FT/MIN. AIR STREAM SIDE OF THE DUCT LINER SHALL BE FACTORY COATED WITH A SMOOTH, BLACK-COLORED MAT PLASTIC COATING OR NEOPRENE SPRAY COATING. DUCT LINER SHALL COMPLY WITH NFPA 90A AND 255, ASTM E84, AND UL 723 REQUIREMENTS FOR MAXIMUM FLAME SPREAD OF 25 OR LESS AND SMOKE DEVELOPED RATING NOT EXCEEDING 50. THE DUCT LINER SHALL MEET THE REQUIREMENTS OF ASTM C-1071 FOR NOISE REDUCTION CRITERIA (NRC). AS A MINIMUM, THE CALCULATED NRC FOR TYPE 1 DUCT LINER ONE INCH THICK (1") SHALL BE 0.45 AND AS A MINIMUM FOR TWO INCH THICK (2") SHALL BE 0.95.

EXISTING DUCTWORK: WHERE EXISTING DUCTWORK HAS BEEN CUT OR OPENED, IT SHALL BE CLOSED, SEALED, & INSULATED WITH SAME MATERIALS TO MATCH EXISTING. CONTRACTOR SHALL EXAMINE EXISTING DUCT FOR OBVIOUS SIGNS OF LEAKAGE. JOINTS FOUND TO BE LEAKING SHALL BE SEALED WITH NON-VOC DUCT SEALANT MASTIC OR EQUIVALENT.

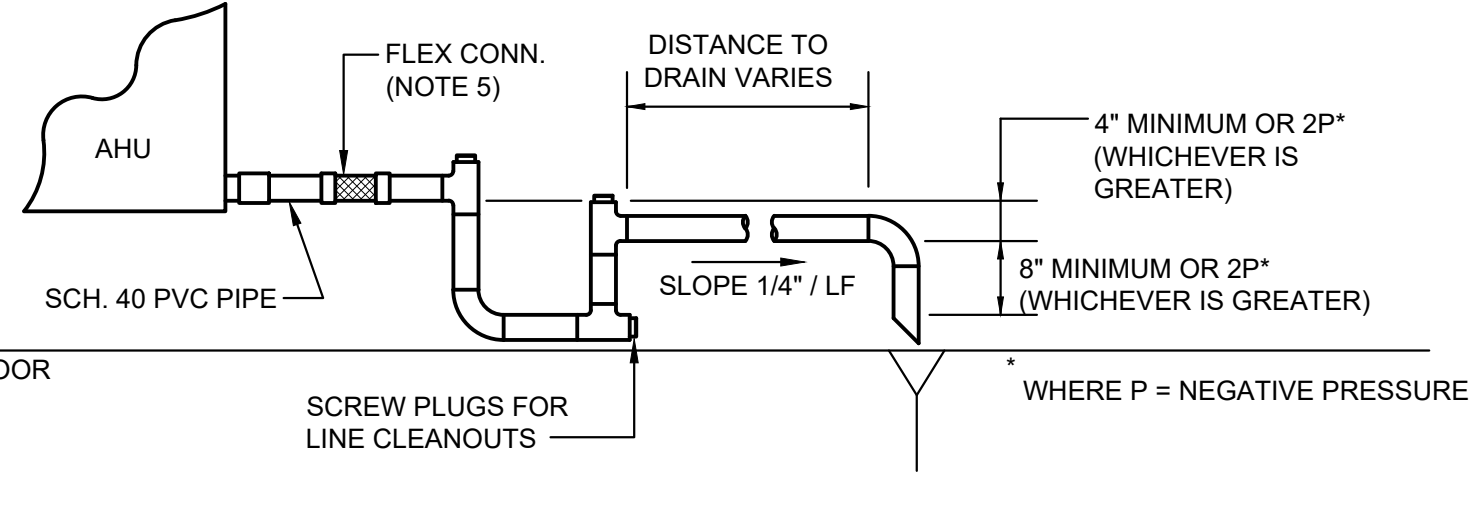
CLEANING, PAINTING: CLEAN ALL HANGERS, DUCTWORK, GRILLES, DIFFUSERS, EQUIPMENT, ETC. AND ALL MARKINGS ON DUCTWORK, AND LEAVE READY FOR USE OR PAINTING.

ANY DUCTWORK, PIPING, EQUIPMENT, CONDUITS, ETC. INSTALLED OR MODIFIED IN THE BUILDING SHALL BE PAINTED BY THE HEATING AND AIR CONDITIONING CONTRACTOR AT HIS EXPENSE TO MATCH ADJACENT AREAS.

PIPE INSULATION: ASTM C-534 CLOSED CELL ELASTOMERIC THERMAL INSULATION. TYPE 1 WATER VAPOR PERMEABILITY OF MAXIMUM 0.20 PER IN PER ASTM E-96, "K" VALUE OF 0.28 AT 75°F MEAN TEMPERATURE, SERVICE TEMPERATURE RANGE OF -40 TO +220°F. INSULATION TO 3/4" THICKNESS SHALL HAVE A FLAME SPREAD RATING OF 25, SMOKE DEVELOPED 50 PER ASTM E-84.

PIPE INSULATION JACKETING: METAL JACKETING SHALL BE 0.016" THICK ALUMINUM OR ALUMINUM ALLOYS CONFORMING TO ASTM B-209. METAL JACKETING INSTALLED OUTDOORS SHALL BE FURNISHED WITH A STUCCO EMBOSSED PATTERN AND 3/16" DEEP CORRUGATED EXTERIOR SURFACE. METAL JACKETING INSTALLED INDOORS SHALL BE SMOOTH, NON-CORRUGATED TYPE. ALL JACKETING SHALL HAVE AN INTEGRALLY BONDED MOISTURE BARRIER COATING OVER THE ENTIRE SURFACE IN CONTACT WITH THE INSULATION. THE MOISTURE BARRIER COATING SHALL BE COMPOSED OF ONE LAYER OF ONE MIL THICK POLYETHYLENE FILM WITH A PROTECTIVE LAYER OF 40 POUND KRAFT PAPER, OR THE EQUIVALENT, TO PREVENT MOISTURE AND CORROSION WITHIN THE INSULATION FROM CONTACTING THE METAL JACKET AND CAUSING A GALVANIC OR CHEMICAL CORROSION.

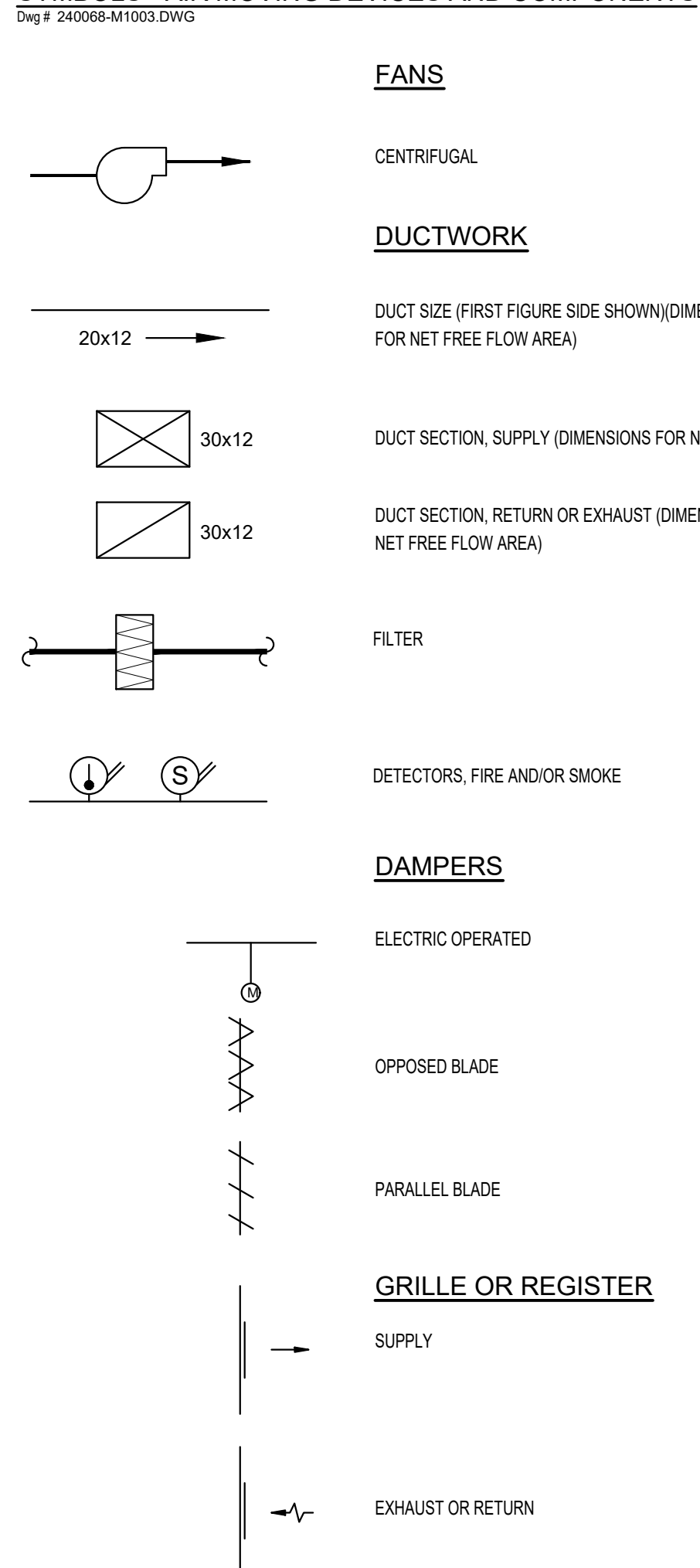
JACKETING FOR STRAIGHT PIPE SHALL HAVE A WEATHERTIGHT (OR WATER TIGHT) SIDE CRIMP CLOSURE. FASTENING DEVICES SHALL BE TYPE T-304 STAINLESS STEEL BANDS, 0.020" THICK, 3/4" WIDE, EQUAL TO FABSTRAPS BY CHILDERS PRODUCTS COMPANY. SEAL ALL LAPS, SEAMS, JOINTS AND RAW EDGES OF ALUMINUM JACKETS INSTALLED ON OUTDOOR PIPING & WHERE REQUIRED FOR INDOOR PIPING JACKETS WITH CAULKING OR SEALANT, CHILDERS CHYL-BYL CP-76, FOSTER 95-44, OR CLEAR SILICONE CAULKING (G.E. 1200, OR EQUAL).



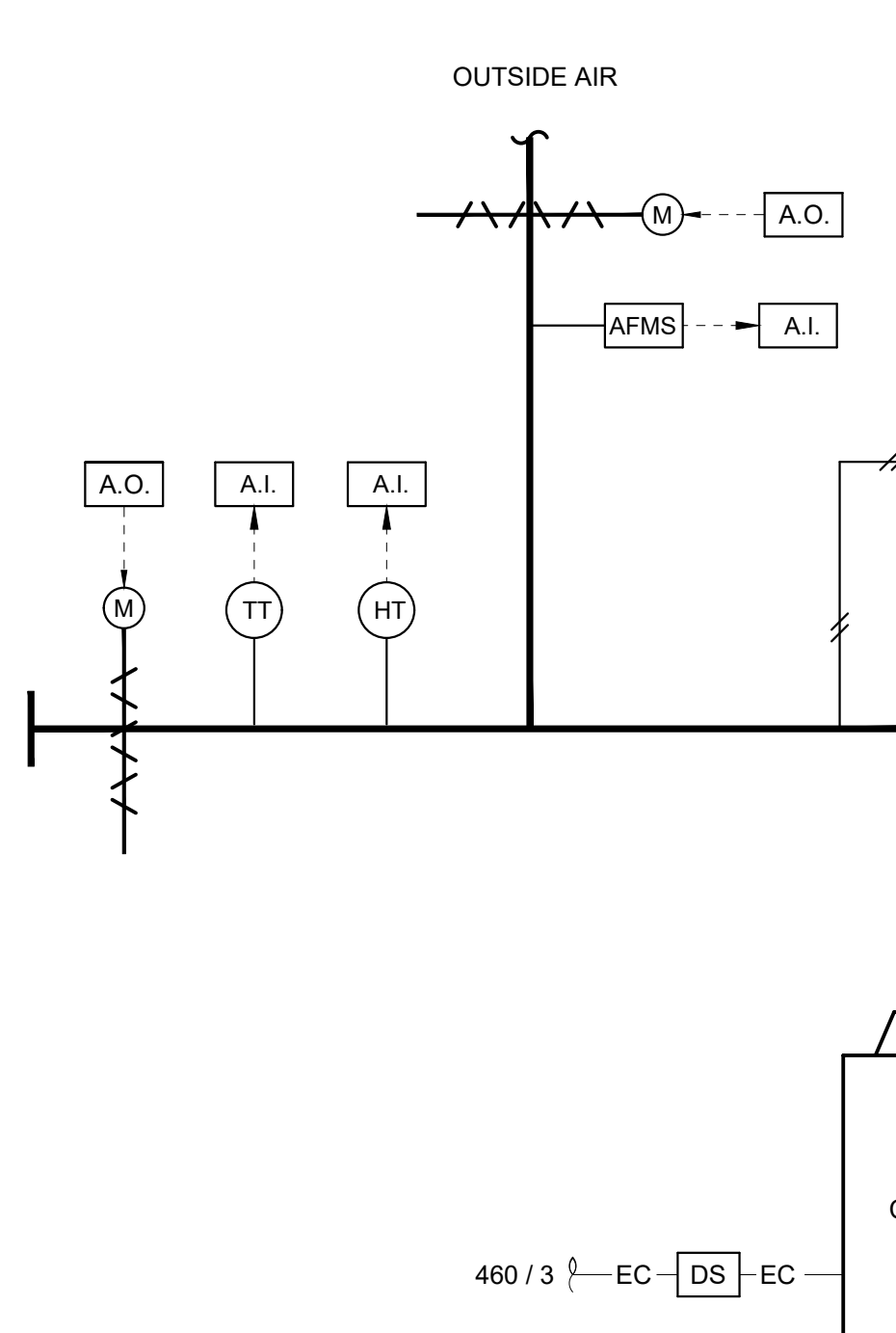
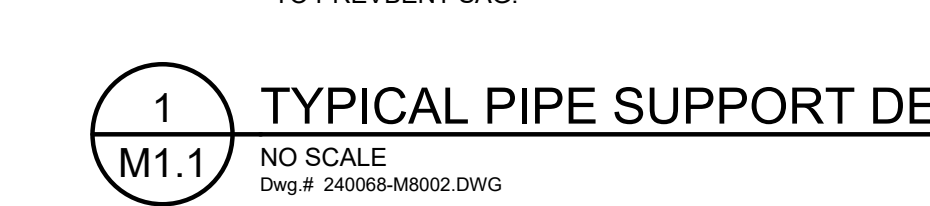
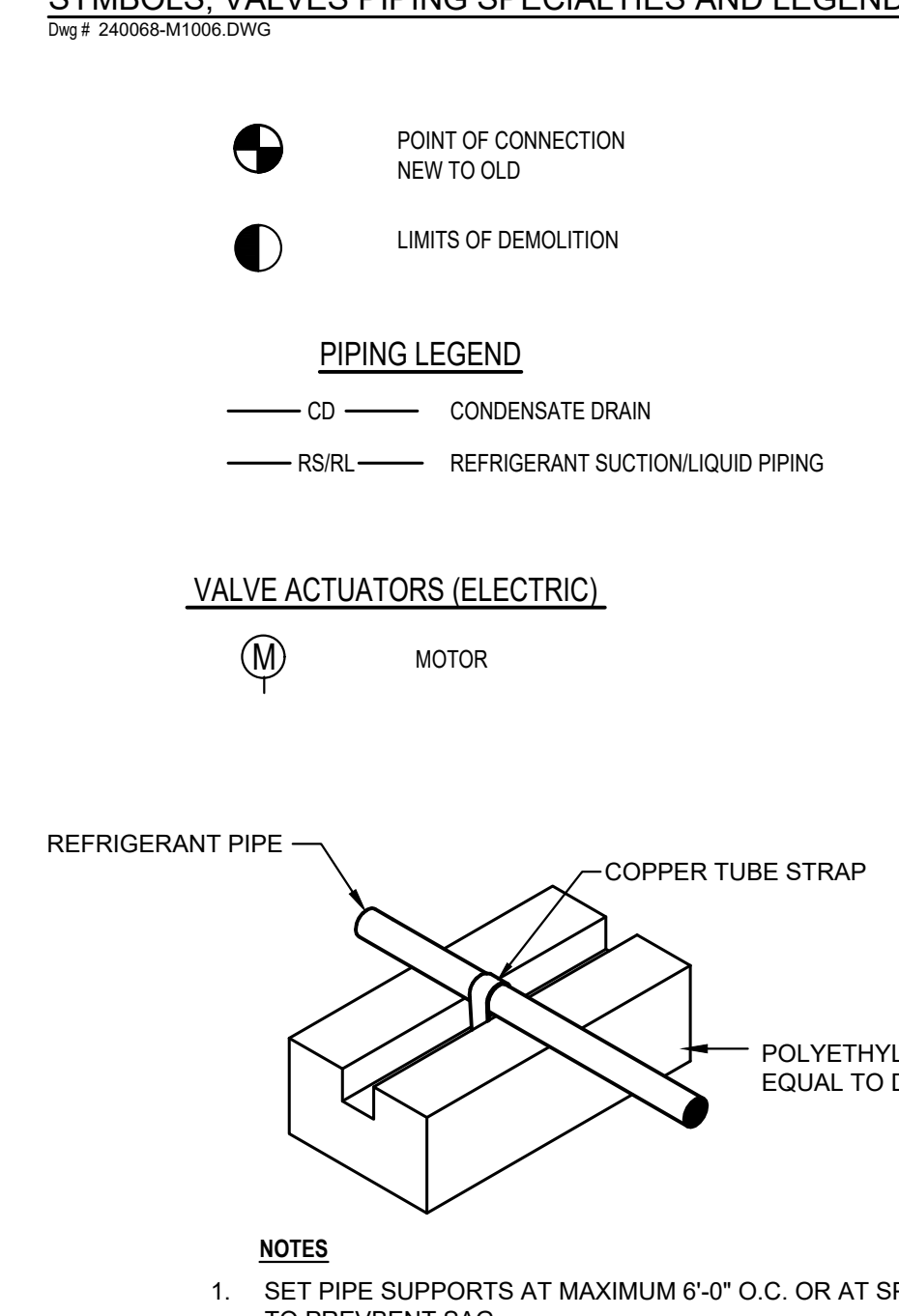
- NOTES: 1. DETAIL IS SHOWN FOR SINGLE DRAIN CONNECTION. ON UNITS WITH TWO DRAIN CONNECTIONS, TRAP EACH INDIVIDUAL DRAIN AND RUN SEPARATELY TO THE NEAREST OR DESIGNATED DRAIN. 2. DETAIL AS SHOWN IS FOR CONDENSATE DRAIN IN THE NEGATIVE STATIC PORTION OF THE CABINET. 3. THE AHU AND DRAIN PAN MUST BE LEVEL TO WITHIN 0.25 INCH SIDE TO SIDE. 4. CONDENSATE DRAIN LINES SHALL HAVE PROVISIONS FOR REGULAR CLEANING TO PREVENT SEDIMENT FROM PLUGGING THE DRAIN AND CAUSING THE DRAIN PAN TO OVERFLOW. 5. FLEX CONNECTION REQUIRED WHERE AHU IS MOUNTED WITH EXTERNAL SPRING VIBRATION CONTROL.

3 AHU CONDENSATE TRAP INSTALLATION DETAIL NO SCALE Dwg # 240098-M8001.DWG

SYMBOLS - AIR MOVING DEVICES AND COMPONENTS

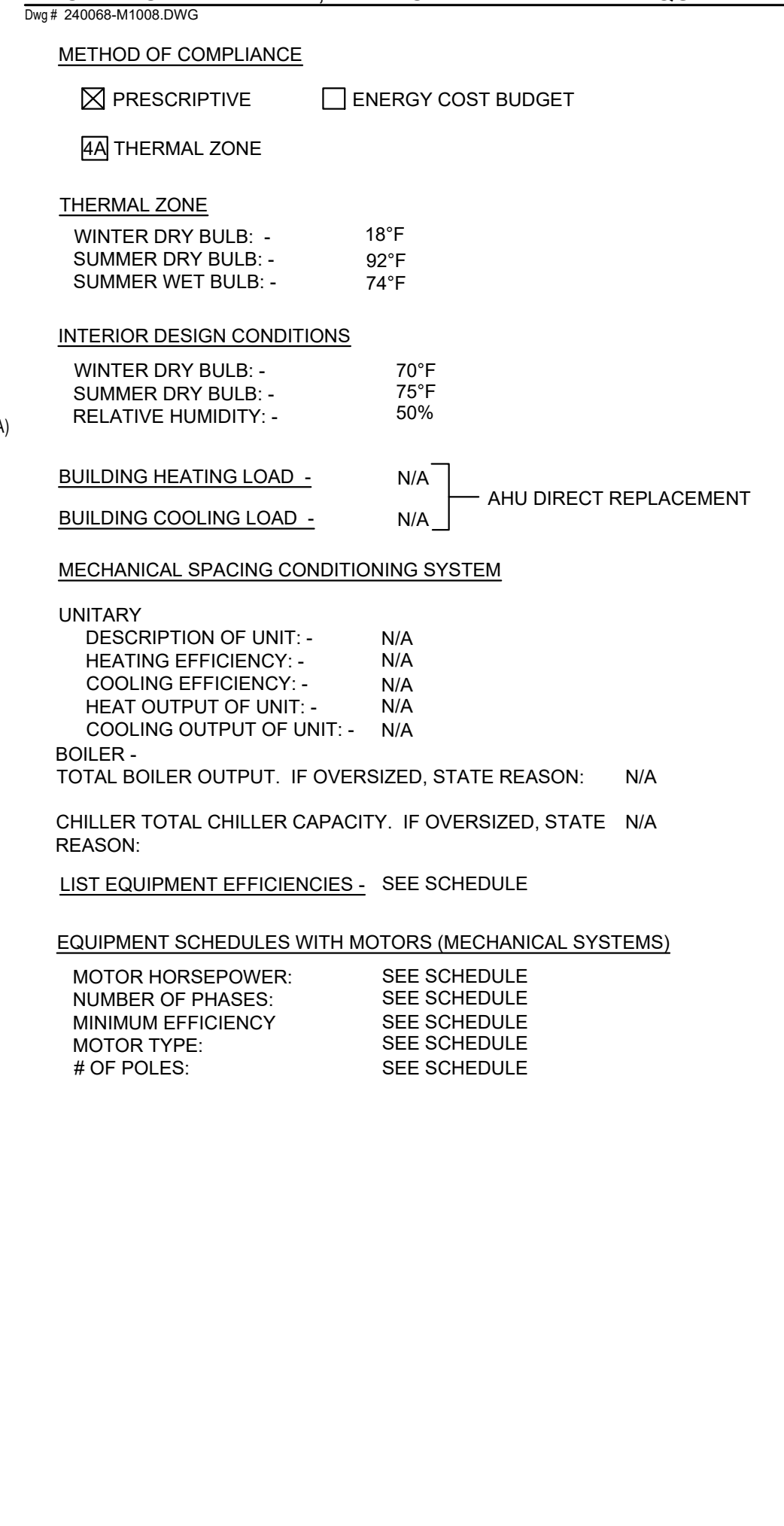


SYMBOLS, VALVES PIPING SPECIALTIES AND LEGEND



4 AHU FLOW AND CONTROL DIAGRAM NO SCALE Dwg # 240098-M7100.DWG

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT



GENERAL DEMOLITION NOTES

- 1. EXISTING PIPING SYSTEMS THAT ARE SHOWN TO BE COMPLETELY OR PARTIALLY REMOVED SHALL BE THOROUGHLY DRAINED, LABEL OR TAG ALL, ABANDONED OR OUT-OF-SERVICE. 2. REMAINING SYSTEMS THAT ARE TO BE ABANDONED IN PLACE SHALL BE PROPERLY CAPPED OR TERMINATED WITH ISOLATION VALVE AND CAP ASSEMBLIES ON THE ENDS. IN GENERAL, PIPING WILL NOT BE ABANDONED ANYWHERE IN THIS FACILITY UNLESS IT EXTENDS INTO AN EXISTING FINISHED SPACE IN THE PLANT THAT IS NOT INCLUDED IN THE RENOVATION WORK OF THIS CONTRACT. 3. WHERE EXISTING PIPING IS NOTED OR OTHERWISE REQUIRED TO BE REMOVED, DEMOLITION SHALL INCLUDE ALL PIPE HANGERS, THREADED ROD, INSULATION ASSEMBLIES, AND THE LIKE, COMPLETE. SUPPORT ATTACHMENTS TO PERMANENT BUILDING STRUCTURAL MEMBERS MAY BE ABANDONED IN PLACE EXCEPT WHERE NOTED OTHERWISE. 4. WHERE EXISTING DUCTWORK IS NOTED OR OTHERWISE REQUIRED TO BE REMOVED, DEMOLITION SHALL INCLUDE ALL DUCT HANGERS, THREADED ROD, INSULATION ASSEMBLIES, AIR DISTRIBUTION, DUCTWORK ACCESSORIES, DUCT HEATERS, AND THE LIKE, COMPLETE. SUPPORT ATTACHMENTS TO PERMANENT BUILDING STRUCTURAL MEMBERS MAY BE ABANDONED IN PLACE EXCEPT WHERE NOTED OTHERWISE. 5. UNDER NO CIRCUMSTANCES SHALL EXISTING EQUIPMENT OR FINISHES BE REMOVED SUCH THAT THE EXISTING BUILDING FINISHES WILL BE EXPOSED TO THE WEATHER OR ACCESSIBLE FOR UNAUTHORIZED ENTRY INTO THE PLANT. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO THE REMOVAL OF EXHAUST FANS, ROOF MOUNTED EQUIPMENT, LOUVERS, AND THE LIKE. WHEN ROOFTOP EQUIPMENT IS REMOVED, ROOF OPENINGS SHALL BE PROPERLY FLAGGED AND CLOSED TO PREVENT INJURY TO PERSONNEL WORKING ABOVE OR BELOW THE ROOF. 6. WHERE CONCRETE HOUSEKEEPING PADS ARE INDICATED FOR REMOVAL, DEMOLITION SHALL INCLUDE REMOVING THE CONCRETE PAD FLUSH WITH THE EXISTING FLOOR SLAB. ALL DOWELS OR ANCHOR BOLTS SHALL BE GROUND OFF FLUSH WITH THE FLOOR SLAB. 7. WHERE CONCRETE PADS ARE INDICATED TO REMAIN AFTER EQUIPMENT IS REMOVED, DEMOLITION SHALL INCLUDE CUTTING AND GRINDING ANCHOR BOLTS FLUSH WITH THE CONCRETE PAD SURFACE. DO NOT LEAVE BOLT STUDS PROJECTING ABOVE THE PAD. 8. WHERE STEEL SUPPORT FRAMES ARE INDICATED FOR REMOVAL, DEMOLITION SHALL INCLUDE REMOVING THE FRAME TO THE EXISTING CONCRETE SUPPORT PIER OR PAD. ALL ANCHOR BOLTS SHALL BE GROUND OFF FLUSH WITH THE CONCRETE SUPPORT PIER OR PAD. UNLESS NOTED OTHERWISE, STEEL SUPPORT FRAMES WILL BE REMOVED BY THE MECHANICAL CONTRACTOR. 9. WHERE EXISTING CONTROLS ARE TO BE DECOMMISSIONED IN EXISTING CONTROL CABINETS (EG: EXISTING AHU AND PUMP STARTERS, LEADLAG SWITCHES, AND THE LIKE), COMPONENTS SHALL BE SAFELY TERMINATED AND/OR REMOVED FROM THE CONTROL CABINET, REMOVE EXISTING LABELS AND RELABEL DEVICE AS OUT OF SERVICE. DO NOT ABANDON "HOT" SWITCHES IN CABINETS. 10. ALL ITEMS REMOVED PER THE DEMOLITION DRAWINGS SHALL, UNLESS SPECIFICALLY NOTED OTHERWISE, BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED PROMPTLY FROM THE SITE. 11. EXISTING MECHANICAL EQUIPMENT AND PIPING SYSTEMS WITH REFRIGERANT CHARGE SHALL BE PROPERLY DECOMMISSIONED IN STRICT ACCORDANCE WITH EPA REGULATIONS CONCERNING CONTAINMENT OF HCFC AND CFC REFRIGERANTS. REFRIGERANT RECLAIM FROM THESE SYSTEMS PRIOR TO DEMOLITION SHALL BE ACCOMPLISHED BY PROPERLY TRAINED, LICENSED CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL REFRIGERANTS BE RELEASED INTO THE ATMOSPHERE AS A MEANS OF PURGING THE EXISTING SYSTEM CHARGE.

GENERAL NOTES:

- 1. MATERIALS, EQUIPMENT AND INSTALLATION SHALL COMPLY WITH ALL REQUIREMENTS OF THE SPECIFICATIONS. 2. CONTRACTOR SHALL PREPARE, SUBMIT AND OBTAIN APPROVAL ON SHOP DRAWINGS. 3. EQUIPMENT SELECTIONS SCHEDULED ON THE DRAWINGS AND IN THE SPECIFICATIONS INDICATE A MINIMUM LEVEL OF ACCEPTABLE PERFORMANCE. 4. ALL DUCT LAYOUTS ARE GENERALLY DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY AND RE-CONFIGURE FOR AVAILABLE SPACE FOR INDICATED DUCTS BASED ON MEASUREMENTS AND SURVEYS TAKEN OF THE AS-BUILT CONDITIONS. 5. ALL PIPE LAYOUTS ARE GENERALLY DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY AND RE-CONFIGURE FOR AVAILABLE SPACE FOR INDICATED PIPES BASED ON MEASUREMENTS AND SURVEYS TAKEN OF THE FIELD CONDITIONS. 6. CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL DUCT AND PIPING TO INTERFACE WITH PLUMBING, FIRE PROTECTION, ELECTRICAL, CONTROLS, STRUCTURAL, AND ALL OTHER WORK, EXISTING OR NEW. 7. COORDINATE DUCTWORK ROUTING AND SIZES WITH NEW PIPING, CONDUIT, STRUCTURES AND OTHER INTERFERENCES TO AVOID CONFLICTS. ADJUST DUCT SHAPE TO FIT OPENINGS. IF SIZE MUST BE CHANGED, USE EQUIVALENT FRICTION METHOD TO SELECT REVISED SIZE. 8. EQUIPMENT CONNECTION SIZES, ELEVATION, AND CONFIGURATIONS ARE SUBJECT TO CHANGE WHEN CERTIFIED VENDOR SHOP DRAWINGS ARE RECEIVED. CONTRACTOR SHALL CHECK CERTIFIED SHOP DRAWINGS PRIOR TO INSTALLATION OF DUCTWORK AND PIPING, AND SHALL MAKE REQUIRED ADJUSTMENTS AT NO ADDITIONAL COST TO THE OWNER. 9. LOCATE ALL CONTROL DEVICES, AND THE LIKE, IN ACCESSIBLE POSITIONS WITH ADEQUATE MAINTENANCE CLEARANCE. COORDINATE AND LOCATE DEVICES SO ACCESS IS NOT BLOCKED BY LIGHTS, GRILLES, DUCTWORK, PIPING, STRUCTURE, CONDUIT AND THE LIKE. 10. MANUAL BALANCING DAMPERS, ACCESS DOORS AND OTHER DUCTWORK ACCESSORIES SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS THE ADJACENT DUCTWORK IN WHICH THEY ARE INSTALLED. 11. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING IN THE FIELD THAT THE MECHANICAL EQUIPMENT AND DUCTWORK FOR THIS PROJECT HAS BEEN INSTALLED IN SUCH MANNER THAT VIBRATIONS SHALL NOT BE TRANSMITTED TO THE BUILDING STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, AVOIDING CONTACT BETWEEN DUCTWORK, DUCTWORK SUPPORTS AND CEILING HANGERS, CONDUIT, WALL STUDS OR BRACES, PIPING AND PIPING HANGERS, AND THE LIKE. 12. UNLESS SPECIFICALLY NOTED OTHERWISE, ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING THE EQUIPMENT COMPLETE. 13. ROUTE CONDENSATE LINES FROM AIR CONDITIONING EQUIPMENT FULL SIZE AT EQUIPMENT CONNECTION TO TERMINATION POINT BUT IN NO CASE LESS THAN 1" PIPE SIZE OR 7/8" TUBING SIZE FOR GRAVITY DRAINS. PROVIDE P TRAPS ON EACH CONDENSATE DRAIN. 14. PROVIDE SLEEVES FOR ALL PIPE AND DUCT THRU WALLS, FLOORS AND CEILING. 15. THE CONTRACTOR MUST HAVE WRITTEN APPROVAL FROM THE ENGINEER PRIOR TO INSTALLING ANY ALTERNATE PRODUCT.

ELECTRIC DUCT HEATER SCHEDULE

Table with columns: DRAWING TAG, LOCATION, SERVICE, MANUFACTURER, MODEL, SIZE, MIN. CFM, ELEC. COIL, VOLTS/PHASE, CAPACITY, KW, TEMP. RISE, DEG. F., ACCESSORIES, REMARKS. Rows for EBH1 and EBH2.

- ACCESSORIES: 1. FULLY INSULATED HOUSING, 2. SCR CONTROL, 3. UNIT MOUNTED ELECTRONIC CONTROLS WITH INTERNAL TRANSFORMER, 4. AIR FLOW PROVING SWITCH, 5. HIGH TEMPERATURE SAFETY SWITCH, 6. DUCT STAT FOR DISCHARGE AIR TEMPERATURE CONTROL.

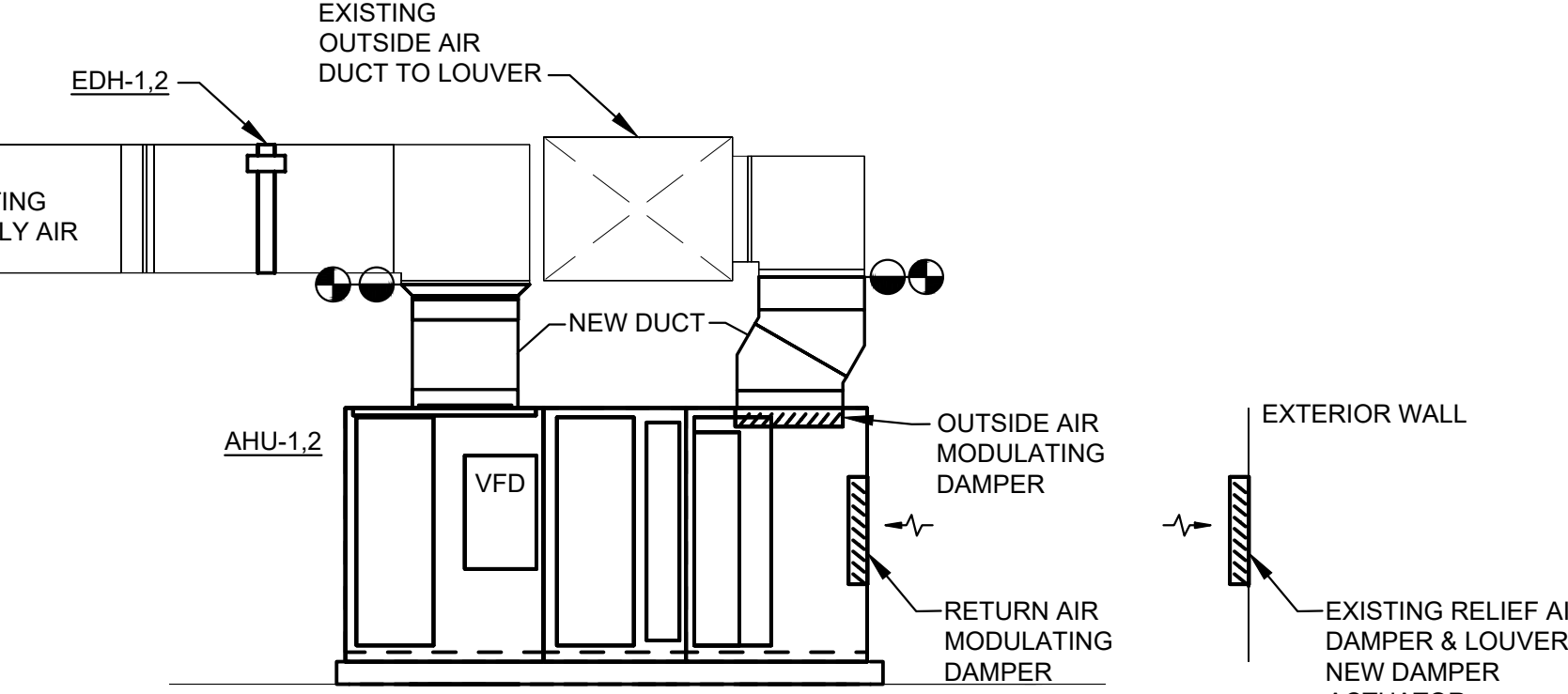
REMARKS: A. SUPPLY TO BE OPEN COIL.

SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

Table with columns: DRAWING TAG, MANUFACTURER, AIR HANDLING UNIT, MODEL, TYPE, OUTDOOR, SUPPLY AIR, CFM, EXT. SP. IN. WG, TOTAL CAPACITY (BTU/H), SENSIBLE CAPACITY (BTU/H), NO. OF ROWS/FPI, COIL ENT. AIR TEMP. F (DBWB), COIL LGV. AIR TEMP. F (DBWB), AIR PRESS. DROP IN. WG, FACE VELOCITY, FPM, DRIVE, VFD, FAN QTY-TYPE, FAN RPM, MOTOR, QTY - HP, VOLTS/PH, MCA, AMPS, MHP, AMP, DIMENSIONS, H x W x L (IN), WEIGHT, LBS, CONDENSING UNIT, TAG NO., MODEL, COMPRESSORS, QTY - TYPE, NUMBER OF REFR. CIRCUITS, CAPACITY, TONS, REFRIG. WGT, LBS (@ 100 F), IER, VOLTS/PH, MCA, AMPS, MHP, AMP, ACCESSORIES, REMARKS.

- ACCESSORIES: 1. MERV 13 FILTERS, 2. REFRIGERATION SERVICE VALVES, 3. SPRING VIBRATION ISOLATORS, 4. REFRIGERANT PIPING KIT, 5. HALL GUARDS, 6. SHPPNG SPLITS AT EACH SECTION, 7. CONDENSING UNIT POWERED GR RECPTA/E, 8. TBM CONTROLS FOR VAV OPERATION, 9. VFD SMALL CONTROL, BOTH FANS. VFD EQUAL TO ABB MODEL ACH580 NEMA 1 ENCL., BA Chet MS7P, 10. OA ECONOMIZER (100%), 11. LOW AMBIENT CONTROL TO 0°F.

REMARKS: A. SEE CONTROL DIAGRAMS FOR CONTROL REQUIREMENTS. B. BVA/R REFRIGERANT. C. ACCEPTABLE MANUFACTURERS: TRANE, CARRIER, DAKIN, YORK.

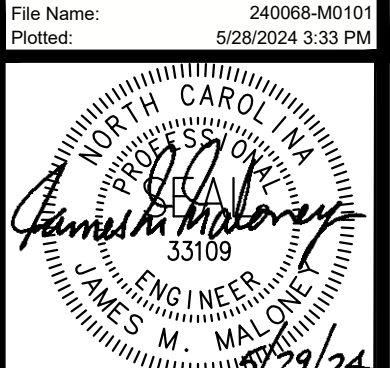


2 MECHANICAL ROOM SECTION N.T.S. Dwg # 240098-M6001.DWG



GREENSBORO, NC 27409-0002  
ASHEVILLE, NC 28701  
CHARLOTTE, NC 28202  
CHARLOTTSVILLE, VA 22902  
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Revision table with columns: No., Description, Date, Mark.

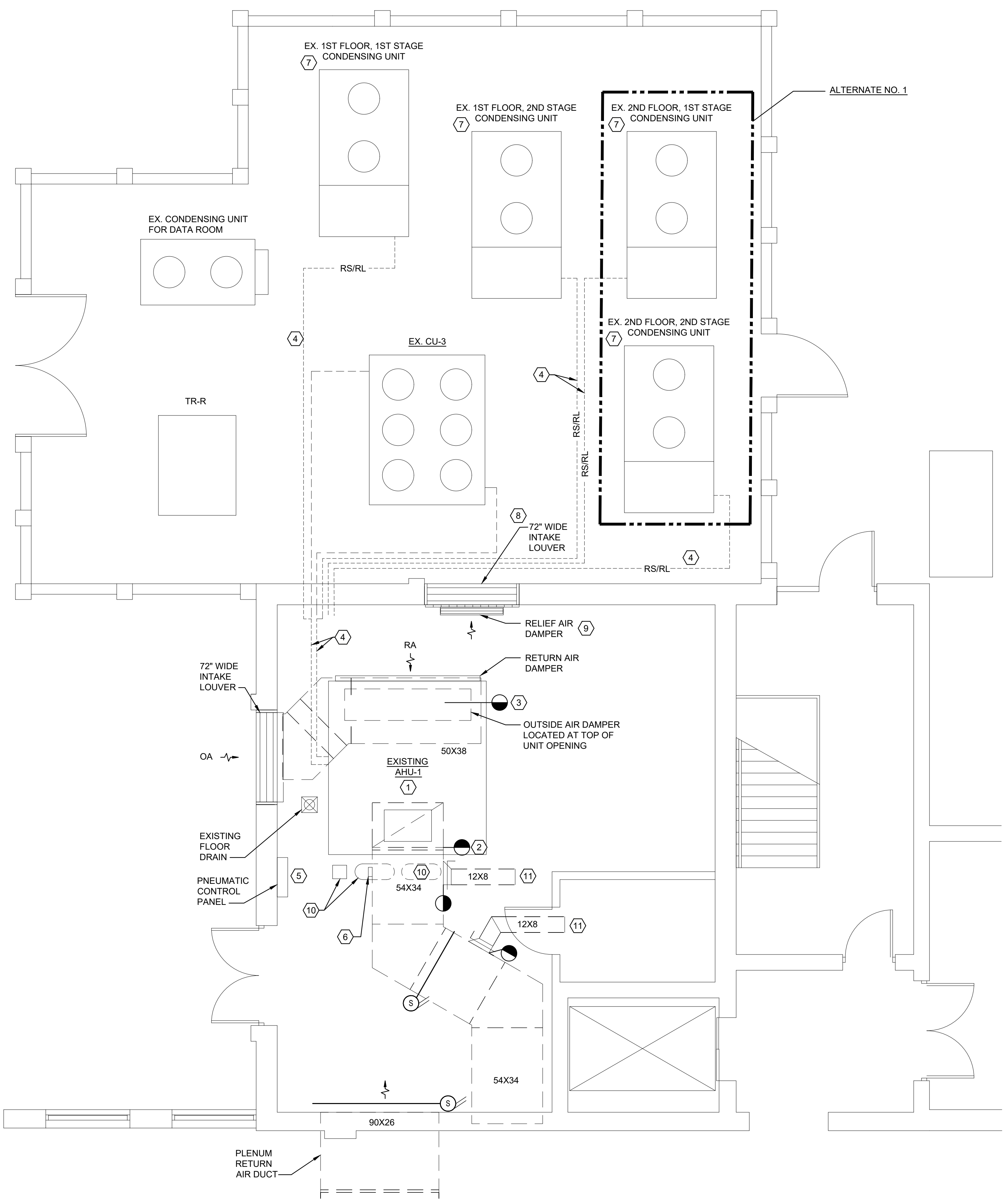
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WINSTON-SALEM, NC  
WSFCS ADMIN OFFICE  
425 CORPORATE SQUARE DR.

FOR CONSTRUCTION  
AHU REPLACEMENT FOR  
WSFCS ADMIN OFFICE  
NOTES, SYMBOLS, SPECIFICATIONS, LEGENDS, CONTROL DIAGRAMS, DETAILS, SECTIONS AND SCHEDULES

Designed By: JMM  
Drawn By: JMM  
Checked By: JMM  
Date: 05-29-2024

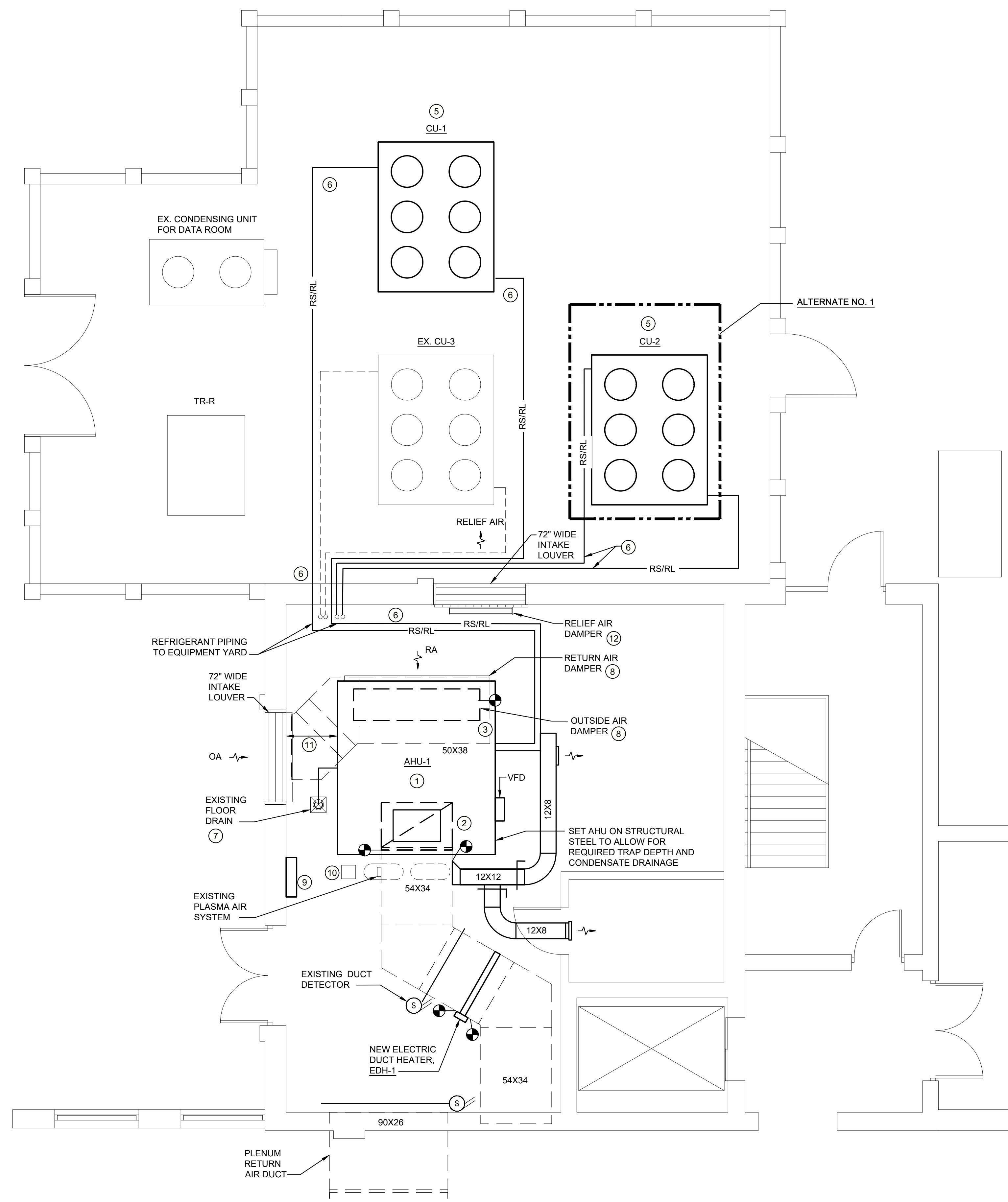
M1.1



**1** FIRST FLOOR AND EQUIPMENT YARD DEMOLITION PLAN  
M2.1 1/4" = 1'-0"  
Dwg # 240008-M2.1.DWG

**DEMOLITION NOTES**  
Dwg # 240008-M2.1.DWG

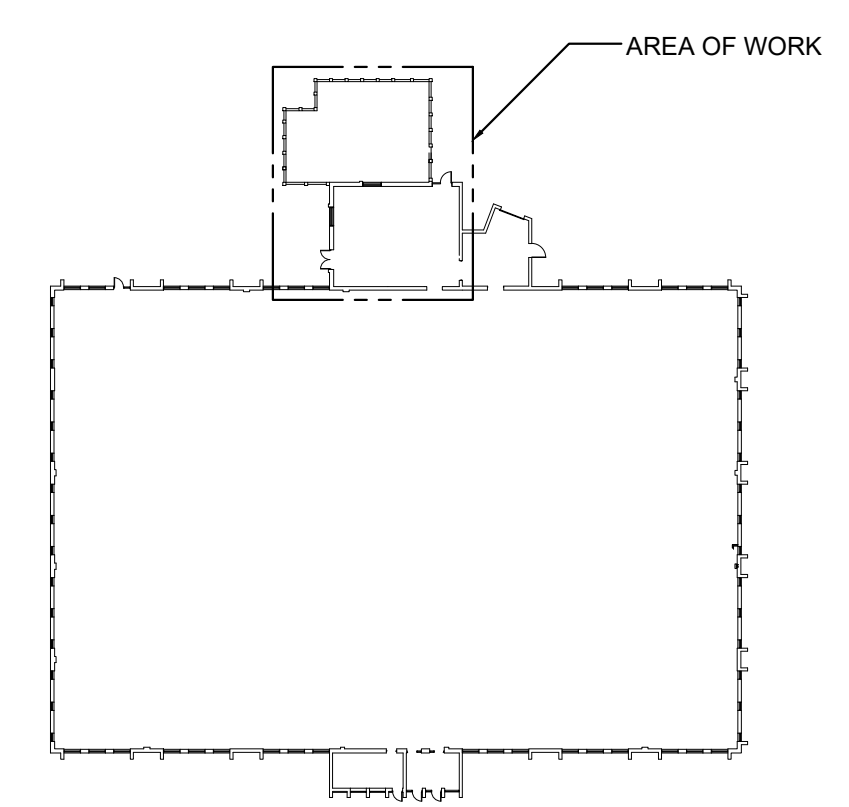
- 1 DEMOLISH EXISTING AIR HANDLING UNIT.
- 2 DEMOLISH SUPPLY AIR DUCT TO POINT SHOWN. KEEP EXISTING DISTRIBUTION INTACT. REFER TO SECTION 1 / M1.1.
- 3 DEMOLISH OUTSIDE AIR DUCT TO POINT SHOWN. REFER TO SECTION 1 / M1.1.
- 4 DEMOLISH REFRIGERANT PIPING.
- 5 DEMOLISH PNEUMATIC CONTROL PANEL AND AIR LINES ASSOCIATED WITH THE AHU.
- 6 EXISTING PLASMA AIR BIPOLAR IONIZATION SYSTEM TO REMAIN.
- 7 DEMOLISH EXISTING CONDENSING UNIT, COMPLETE. INCLUDING UNIT, PIPING, ELECTRICAL CONNECTIONS, ETC.
- 8 EXISTING RELIEF LOUVER TO REMAIN.
- 9 EXISTING RELIEF AIR DAMPER TO REMAIN. DEMOLISH PNEUMATIC DAMPER ACTUATOR.
- 10 EXISTING AIR COMPRESSORS AND DRYER TO REMAIN.
- 11 MEASURE SUPPLY AIR FLOW PRIOR TO DEMOLITION. RE-ESTABLISH CFM FOLLOWING NEW WORK.



**2** FIRST FLOOR AND EQUIPMENT YARD NEW WORK PLAN  
M2.1 1/4" = 1'-0"  
Dwg # 240008-M2.1.DWG

**NEW WORK NOTES**  
Dwg # 240008-M2.1.DWG

- 1 NEW AIR HANDLING UNIT. REFER TO EQUIPMENT SCHEDULE ON SHEET M1.1.
- 2 RECONNECT SUPPLY AIR DUCT TO POINT SHOWN. PROVIDE TRANSITION DUCT.
- 3 RECONNECT OUTSIDE AIR DUCT TO POINT SHOWN. PROVIDE TRANSITION DUCT.
- 4 NOT USED.
- 5 PROVIDE NEW CONDENSING UNIT, COMPLETE. INCLUDING UNIT, PIPING, ELECTRICAL CONNECTIONS, ETC. REFER TO EQUIPMENT SCHEDULE ON SHEET M3.1. SET CONDENSING UNIT ON NEW 4" CONCRETE PAD. EXTEND PAD 6" BEYOND UNIT FOOTPRINT AND CHAMFER ALL EDGES.
- 6 ROUTE NEW REFRIGERANT PIPING FROM NEW AHU TO NEW CONDENSING UNIT. SIZE PIPING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 7 ROUTE FULL SIZE CONDENSATE TO EXISTING FLOOR DRAIN.
- 8 NEW MODULATING DAMPER SHALL BE PROVIDED BY AHU MANUFACTURER. PROVIDE NEW 24 VAC DAMPER MOTOR.
- 9 NEW DDC CONTROL PANEL, 120V.
- 10 EXISTING AIR COMPRESSORS AND DRYER.
- 11 MAINTAIN A MINIMUM OF 3' SERVICE CLEARANCE FOR FILTER MAINTENANCE.
- 12 PROVIDE NEW 24 VAC DAMPER MOTOR.



PLAN NORTH  
**KEY PLAN**  
Dwg # 240008-M2.1.DWG

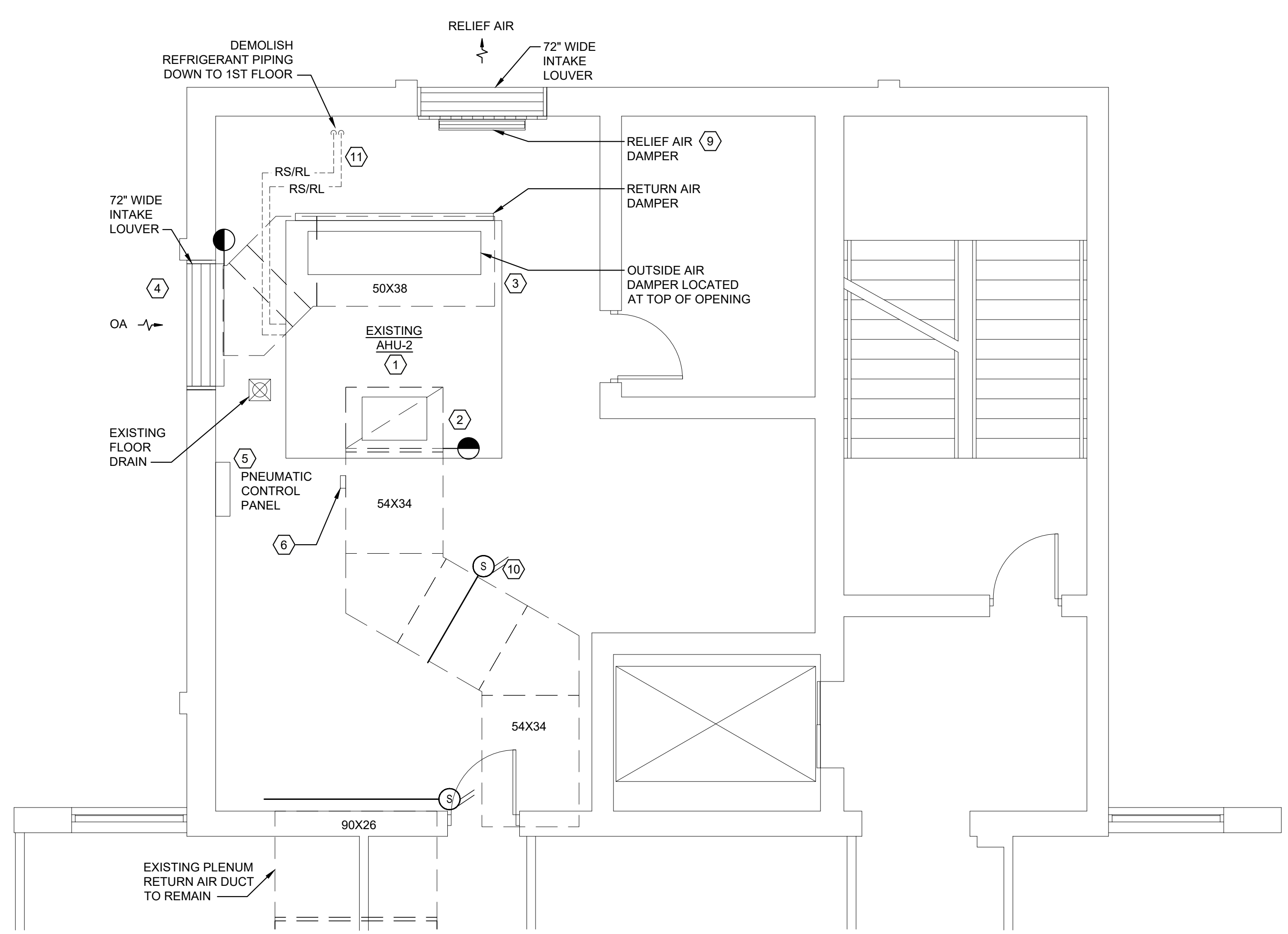
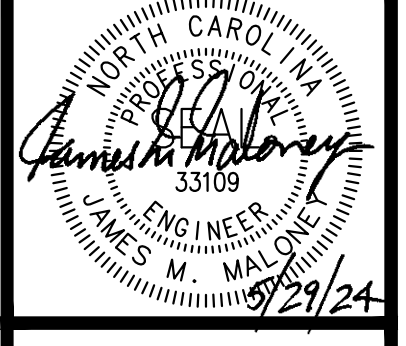
FOR CONSTRUCTION

AHU REPLACEMENT FOR  
**WSFCS ADMIN OFFICE**  
425 CORPORATE SQUARE DR.  
WINSTON-SALEM, NC  
**MECHANICAL FIRST FLOOR DEMOLITION AND NEW WORK PLANS**

Designed By: JMM  
Drawn By: JMM  
Checked By: JMM  
Date: 05-29-2024

**M2.1**

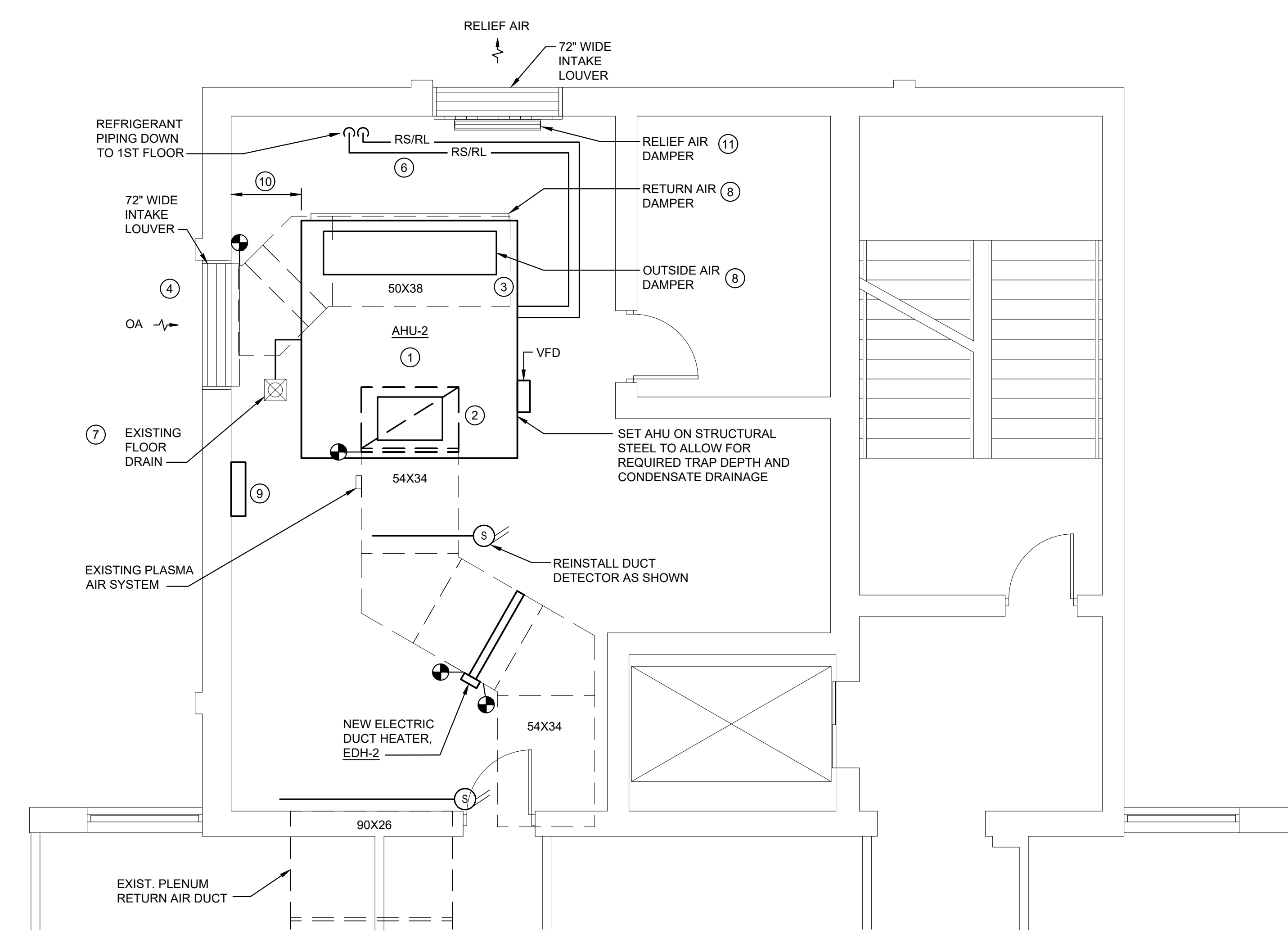
ALL WORK SHOWN ON THIS DRAWING SHALL BE BID ALTERNATE NO. 1



**1 SECOND FLOOR DEMOLITION PLAN**  
M2.2 1/4" = 1'-0"  
Dwg # 240068-M2.2002.DWG

**DEMOLITION NOTES**  
Dwg # 240068-M2.2002.DWG

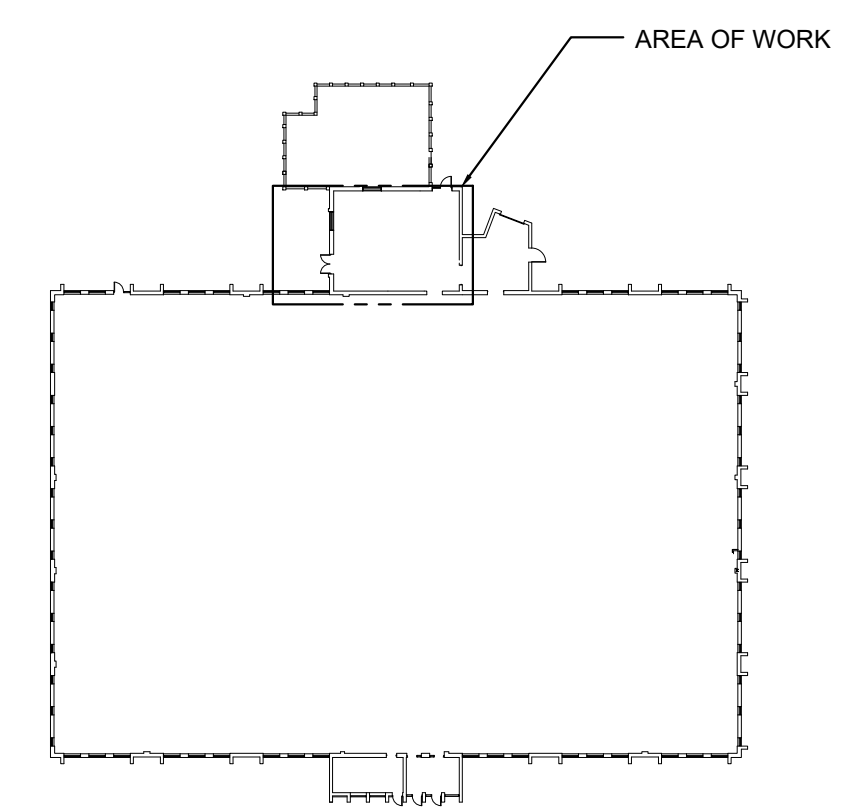
- 1 DEMOLISH EXISTING AIR HANDLING UNIT.
- 2 DEMOLISH SUPPLY AIR DUCT TO POINT SHOWN. KEEP EXISTING DISTRIBUTION INTACT. REFER TO SECTION 1 / M1.1.
- 3 DEMOLISH OUTSIDE AIR DUCT TO POINT SHOWN. REFER TO SECTION 1 / M1.1.
- 4 REMOVE OUTSIDE AIR LOUVER SECTION AND OA PLENUM TO ALLOW REMOVAL OF AHU FROM EQUIPMENT ROOM. ITEMS TO BE REINSTALLED UNDER NEW WORK.
- 5 DEMOLISH PNEUMATIC CONTROL PANEL AND AIR LINES ASSOCIATED WITH THE AHU.
- 6 EXISTING PLASMA AIR BIOPOLAR IONIZATION SYSTEM TO REMAIN.
- 7 DEMOLISH EXISTING CONDENSING UNIT, COMPLETE. INCLUDING UNIT, PIPING, ELECTRICAL CONNECTIONS, ETC. SEE WORK ON M2.1.
- 8 EXISTING RELIEF LOUVER TO REMAIN.
- 9 EXISTING RELIEF AIR DAMPER TO REMAIN. DEMOLISH PNEUMATIC DAMPER ACTUATOR.
- 10 REMOVE SUPPLY AIR DUCT SMOKE DETECTOR. RELOCATE UNDER NEW WORK.
- 11 DEMOLISH REFRIGERANT PIPING (TYP. 2 SETS)



**2 SECOND FLOOR NEW WORK PLAN**  
M2.2 1/4" = 1'-0"  
Dwg # 240068-M2.2002.DWG

**NEW WORK NOTES**  
Dwg # 240068-M2.2002.DWG

- 1 NEW AIR HANDLING UNIT. REFER TO EQUIPMENT SCHEDULE ON SHEET M1.1.
- 2 RECONNECT SUPPLY AIR DUCT TO POINT SHOWN. PROVIDE TRANSITION DUCT.
- 3 RECONNECT OUTSIDE AIR DUCT TO POINT SHOWN. PROVIDE TRANSITION DUCT.
- 4 REINSTALL OUTSIDE AIR LOUVER SECTION AND OA PLENUM AFTER NEW UNIT IS BROUGHT INTO EQUIPMENT ROOM. REINSTALL OUTSIDE TRANSITION DUCT.
- 5 PROVIDE NEW CONDENSING UNIT COMPLETE INCLUDING UNIT, PIPING, ELECTRICAL CONNECTIONS, ETC. REFER TO EQUIPMENT SCHEDULE ON SHEET M3.1.
- 6 ROUTE NEW REFRIGERANT PIPING FROM NEW AHU TO NEW CONDENSING UNIT. SIZE PIPING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SEE WORK ON M2.1.
- 7 ROUTE FULL SIZE CONDENSATE TO EXISTING FLOOR DRAIN.
- 8 PROVIDE NEW MODULATING DAMPER AND 24 VAC DAMPER MOTOR.
- 9 PROVIDE NEW DDC CONTROL PANEL, 120V.
- 10 MAINTAIN A MIN. OF 3' CLEARANCE FOR FILTER MAINTENANCE.
- 11 PROVIDE NEW 24 VAC DAMPER MOTOR.



Revision	Date	Mark

FOR CONSTRUCTION

AHU REPLACEMENT FOR  
**WSFCS ADMIN OFFICE**  
425 CORPORATE SQUARE DR.  
WINSTON-SALEM, NC  
**MECHANICAL SECOND FLOOR DEMOLITION AND NEW WORK PLANS - ALTERNATE NO. 1**

Designed By: JMM  
Drawn By: JAM  
Checked By: JMM  
Date: 05-29-2024

**M2.2**

ELECTRICAL SPECIFICATIONS

Doc # 24008-E1002.DWG

GENERAL:

REFER TO GENERAL AND SPECIAL CONDITIONS, ETC. OF THE CONTRACT REGARDING THE INSURANCE, TEMPORARY UTILITIES, AND OTHER ITEMS AFFECTING THIS CONTRACT.

THE WORK COVERED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS CONSISTS OF PROVIDING A COMPLETE SYSTEM INCLUDING LABOR, MATERIALS, ETC.

THE TERM "PROVIDE" USED THROUGHOUT SPECIFICATIONS AND ON DRAWINGS SHALL MEAN TO FURNISH, INSTALL AND CONNECT WITH ALL RELATED ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION READY FOR USE."

COMPLY WITH ALL CODES, LAWS AND REGULATIONS APPLICABLE TO ELECTRICAL INSTALLATION, INCLUDING LATEST NATIONAL ELECTRICAL AND OTHER APPLICABLE CODES.

THE ENTIRE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE WHICH INCLUDES THE LATEST EDITION OF THE NATIONAL ELECTRICAL AND ALL OTHER APPLICABLE CODES, WITH LATEST REVISIONS.

THIS CONTRACTOR SHALL PAY ALL INSPECTION FEES AND SHALL INCLUDE THE COST OF SUCH FEES IN HIS PROPOSAL.

CHECK AND VERIFY WITH THE OWNER ALL OTHER CONTRACT DOCUMENTS FOR THE PROJECT, THE EXACT REQUIREMENTS FOR THE PROJECT, THE EXACT COMPLETE SERVICES FOR EQUIPMENT, SYSTEMS, ETC., AS SHOWN OR INDICATED. MINOR CHANGES IN OUTLET, LIGHT AND EQUIPMENT LOCATION MAY BE MADE AT ANY TIME PRIOR TO BEGINNING OF THE ELECTRICAL WORK WITHOUT ANY ADDITIONAL COSTS.

SUBMIT ELECTRONIC SUBMITTAL DATA FOR APPROVAL FOR ALL MATERIALS AND EQUIPMENT. PRIOR TO SUBMITTAL, THE CONTRACTOR SHALL STAMP ALL SHOP DRAWINGS AND SUBMITTAL DATA AS "APPROVED" INDICATING FULL COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. SHOP DRAWINGS AND SUBMITTAL DATA WILL NOT BE REVIEWED WITHOUT THE "APPROVED" STAMP.

SHOP DRAWINGS AND SUBMITTAL DATA SHALL BE CLEARLY MARKED AND EQUIPMENT SIZES, CAPACITIES, ETC. INDICATED FOR THE PROJECT. INDICATE CLEARLY THE EXACT REQUIREMENTS FOR ACCESS FOR SERVICE AND MAINTENANCE AND MINIMUM CLEARANCES AS REQUIRED BY THE MANUFACTURERS AND FOR COMPLIANCE WITH ALL APPLICABLE CODES. ALL SHOP DRAWINGS SHALL BE SUBMITTED AT SAME TIME AS SOON AS POSSIBLE AFTER AWARD OF CONTRACT.

NO MATERIALS OR EQUIPMENT SHALL BE PLACED ON THE JOB SITE, OR INSTALLED, WITHOUT PRIOR APPROVAL BY THE ENGINEER.

FURNISH TO THE ENGINEER TWO (2) SETS OF MARKED UP ELECTRICAL PRINTS WITH ALL DEVIATIONS AND CORRECTIONS SHOWING THE AS-BUILT AND DIMENSIONED, IF NECESSARY, LOCATIONS, ELEVATIONS, ETC. OF ALL CONDUITS, EQUIPMENT, BOXES, ETC. UNDERGROUND, IN WALLS, ABOVE CEILINGS AND OTHERWISE CONCEALED, WHICH WILL REQUIRE SERVICE AND MAINTENANCE.

WATERPROOF ALL CONDUITS, ETC. THRU WALLS, FLOORS, ROOF, ETC. AND ALL CUT AND PATCHED AREAS WHICH ARE SUBJECT TO MOISTURE PENETRATION.

CODES AND STANDARDS:

MATERIALS INSTALLED IN THIS CONTRACT SHALL CONFORM TO THE STANDARDS LISTED BELOW WHERE SUCH STANDARDS ARE APPLICABLE AND SHALL BE NEW AND FIRST CLASS IN ALL RESPECTS.

UNDERWRITER'S LABORATORIES, INC. STANDARDS AND APPROVED LISTINGS (UL)

ELECTRICAL TESTING LABORATORIES STANDARDS (ETL)

CERTIFIED BALLAST MANUFACTURER'S STANDARDS (CBM)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION STANDARDS (NEMA)

NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION WHICH INCLUDES THE NATIONAL ELECTRICAL CODE (NEC) WITH LATEST REVISIONS.

INSULATED POWER CABLE ENGINEERS ASSOCIATION STANDARD (IPCEA)

EDISON ELECTRICAL INSTITUTE (EEI)

AMERICAN NATIONAL STANDARDS INSTITUTE STANDARDS (ANSI)

AMERICAN SOCIETY FOR TESTING MATERIALS STANDARDS (ASTM)

ELECTRICAL AND OTHER EQUIPMENT AND/OR MATERIALS THAT ARE DEFECTIVE, OR ARE DAMAGED IN THE COURSE OF CONSTRUCTION, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR AT HIS EXPENSE.

DEPARTURES AND/OR DEVIATIONS FROM THE SPECIFICATIONS SHALL BE REQUESTED IN WRITING BY THE CONTRACTOR FROM THE ENGINEER AND NO SUCH DEPARTURES AND/OR DEVIATIONS SHALL BE MADE WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

WORKMANSHIP SHALL BE OF THE HIGHEST GRADE, PERFORMED BY MECHANICS SKILLED IN THE INSTALLATION OF THIS TYPE OF WORK, AND LICENSED BY THE PROPER AUTHORITIES TO PERFORM THE WORK.

ELECTRICAL DEMOLITION:

UNLESS NOTED OTHERWISE DISCONNECT AND REMOVE EXISTING EQUIPMENT AND/OR DEVICES AS INDICATED ON THE DRAWINGS OR AS REQUIRED TO ACCOMMODATE CONSTRUCTION. REMOVE CONDUCTORS IN CONDUIT COMPLETELY BACK TO THE SOURCE WITHOUT CREATING ADDITIONAL DEMOLITION OR REPAIR WORK FOR OTHER TRADES. FOR BRANCH CIRCUITS THAT ARE REMOVED ENTIRELY, TURN ASSOCIATED CIRCUIT BREAKERS TO THE 'OFF' POSITION AND LABEL AS 'SPARE'. EXISTING CONDUITS AND CONDUCTORS ARE PERMITTED TO BE REUSED TO THE EXTENT PRACTICABLE.

WHEN EXISTING CIRCUITS THAT ARE TO REMAIN IN SERVICE ARE INTERRUPTED BY DEMOLITION, REWORK AND REINSTALL CIRCUITS AS REQUIRED.

TURN ANY DESIRED MATERIAL OVER TO THE OWNER AS DIRECTED. REMOVE AND DISPOSE OF MATERIAL ACCORDING TO APPLICABLE LAW THAT IS NOT TO BE TURNED OVER TO THE OWNER.

PATCH SURFACES TO MATCH AND PROVIDE COVER PLATES WHERE BOXES REMAIN AND ARE MADE SPARE.

WIRING METHODS:

FOR CONNECTIONS TO MOTORS USE LIQUID TIGHT FLEXIBLE CONDUIT.

SUPPORT AND ATTACH ALL CONDUITS, BOXES, ETC. WITH APPROVED HANGERS, CLAMPS, ETC. AS REQUIRED BY CODES. DO NOT SUPPORT CONDUITS OR CABLES FROM DUCTWORK, PIPING, ANY PART OF CEILING TILES OR CEILING SUPPORT SYSTEM, ETC. PROVIDE SUPPLEMENTARY STEEL SUPPORTS BETWEEN JOISTS, BEAMS, OR FURLINS, TRUSSES, ETC. WIRE TYPE OR PERFORATED HANGERS WILL NOT BE PERMITTED.

PROVIDE TYPED CIRCUIT INDEX FOR ALL REVISED PANELS AND EQUIPMENT, SHOWING ALL CIRCUIT DESIGNATIONS, INCLUDING ROOM NAMES, EQUIPMENT AND AREAS SERVED, ETC. AS DESIGNATED.

PROVIDE PROPER GROUNDING FOR ALL RECEPTACLES, LIGHTS, EQUIPMENT, ETC. AS REQUIRED TO COMPLY WITH ARTICLE 250 OF THE LATEST NEC. PROVIDE SEPARATE #12 INSULATED GREEN GROUNDING CONDUCTOR FOR EACH NEW LIGHT, RECEPTACLE AND PIECE OF EQUIPMENT INSIDE AND OUTSIDE THE BUILDING. SIZES OF CONDUCTORS SHALL BE AS SHOWN, BUT SHALL NOT BE SMALLER THAN #12. IF NOT INDICATED, SIZE IN ACCORDANCE WITH CODE.

ALL WIRING DEVICES SHALL BE PERMANENTLY AND SECURELY CONNECTED TO THE ENCLOSURE AND BUILT INTO GROUNDING SYSTEM IN WHICH THEY ARE MOUNTED WITH A COPPER GROUNDING JUMPER.

PROVIDE LAMINATED PLASTIC IDENTIFICATION NAMEPLATES FOR ALL PANELS, SWITCHES, JUNCTION AND PULL BOXES, ETC., FASTENED TO EQUIPMENT WITH SCREWS.

OUTDOOR CONDUITS EXPOSED OR CONCEALED ABOVE GROUND WILL BE GALVANIZED RIGID CONDUIT. INDOOR CONDUITS EXPOSED AND SUBJECT TO SEVERE PHYSICAL DAMAGE OR WET LOCATIONS WILL BE GALVANIZED RIGID CONDUIT. INDOOR CONDUITS EXPOSED AND NOT SUBJECT TO PHYSICAL DANGER, OR CONCEALED IN CEILINGS OR WALLS, WILL BE EMT WITH COMPRESSION FITTINGS.

ALL WIRING SHALL BE COPPER WITH THIN/THIN INSULATION. TEMPERATURE RATING OF WIRE INSULATION SHALL NOT EXCEED THE TEMPERATURE RATING OF CIRCUIT BREAKERS, LUGS, CONNECTORS, ETC. IF WIRE WITH HIGHER TEMPERATURE RATING IS USED, IT SHALL BE DERATED TO THE TEMPERATURE RATING OF EQUIPMENT TO WHICH IT IS CONNECTED.

WIRE MARKERS AROUND THE CONDUCTOR SHALL BE NON-METALLIC PERMANENT TYPE AS MANUFACTURED BY W.H. BRADY OR APPROVED EQUAL.

SPLICING (CIRCUITS OF 600 VOLTS OR LESS): SOLID CONDUCTORS, NAMELY THOSE SIZED #10 AWG COPPER AND SMALLER, SHALL BE SPLICED BY USE OF IDEAL "WIRE-NUTS", 3M CO.'S "SCOTCHLOK", OR T&B "PIGGY" CONNECTORS FOR BRANCH CIRCUIT SPLICES (#10 AND #12) IN JUNCTION BOXES AND LIGHT FIXTURES, EXCEPT RECESSED FIXTURES AS NOTED ABOVE. "STAKON" OR OTHER PERMANENT TYPE CRIMP CONNECTORS SHALL NOT BE USED.

STRANDED CONDUCTORS, NAMELY #8 AWG AND LARGER, SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS PLUS GUM TAPE, PLUS FRICTION OR PLASTIC TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS PROVIDED WITH UL APPROVED INSULATING COVERS MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE.

CONDUCTORS IN ALL CASES SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS AND GUTTERS.

ALL BRANCH CIRCUIT CONDUCTORS SHALL BE FACTORY COLOR CODED AND ALL OTHER CONDUCTORS SHALL BE COLOR-TAPED IN LIKE MANNER THROUGHOUT THE BUILDING TO INDICATE VARIOUS PHASES AND NEUTRAL.

COLOR CODING FOR CONDUCTORS SHALL MATCH EXACTLY THE CODING OF EXISTING SYSTEMS. IN GENERAL, THE COLOR CODING FOR SYSTEMS OF LESS THAN 150 VOLT TO GROUND SHALL BE BLACK-RED-BLUE FOR PHASES A-B-C RESPECTIVELY, WHITE FOR GROUNDED NEUTRAL AND GREEN FOR EQUIPMENT GROUNDING. ON 120/208V, 3 PHASE, 4 WIRE POWER SYSTEMS, CONDUCTORS SHALL BE COLOR CODED BLACK (PHASE A), RED (PHASE B), BLUE (PHASE C), AND WHITE (NEUTRAL). ON 277/480V, 3 PHASE, 4 WIRE POWER SYSTEMS CONDUCTORS SHALL BE COLOR CODED BROWN (PHASE A), ORANGE (PHASE B), YELLOW (PHASE C), AND GRAY (NEUTRAL).

OUTLET BOXES FOR EXPOSED OR SURFACE MOUNTED WORK SHALL BE CAST TYPE FD WITH MATCHING DEVICE PLATE, OF SAME MANUFACTURER AS THE BOX, AND MATCHING THE OUTLINE OF THE BOX.

DISCONNECTS AND FUSES: FUSIBLE TYPE DISCONNECTS SHALL BE HEAVY DUTY, HORSEPOWER RATED, QUICK MAKE, QUICK BREAK TYPES IN NEMA 1 ENCLOSURES WHERE INDOORS, AND NEMA 3R ENCLOSURES WHERE EXPOSED TO THE WEATHER.

FUSES SHALL BE PROVIDED AS INDICATED.

VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY OTHERS AND INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. POWER WIRING BY ELECTRICAL CONTRACTOR, CONTROL WIRING BY MECHANICAL CONTRACTOR IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS.

CLEANING, PAINTING:

CLEAN ALL CONDUITS, HANGERS, SUPPORTS, PANELS, DEVICES, LIGHTS, ETC. AND LEAVE READY FOR USE OR PAINTING. ALL PAINTING IN THE BUILDING WILL BE DONE BY THE GENERAL CONTRACTOR, EXCEPT THAT ANY CONDUITS, OUTLETS, BOXES, PANELS, ETC. INSTALLED OR MODIFIED AFTER PAINTING IN BUILDING IS FINISHED, SHALL BE DONE TO MATCH ADJACENT SURFACES BY THE ELECTRICAL CONTRACTOR OR AT HIS EXPENSE.

TOUCH UP ALL DAMAGED AND SCRATCHED SURFACES ON FACTORY FINISHED EQUIPMENT AND MATERIALS WITH PAINT OF SAME TYPE AND COLOR.

TESTS, INSTRUCTIONS:

PERFORM ALL TESTS AS REQUIRED BY CODES. MEG-TEST ALL PANELS TO ELIMINATE GROUNDS AND SHORTS. TEST ALL LIGHTS, RECEPTACLES, EQUIPMENT, ETC. FOR PROPER CONNECTION AND GROUNDING.

MAKE SURE THAT ALL LUGS ON ALL FEEDERS ARE TIGHT THROUGHOUT THE CONSTRUCTION.

FURNISH TO OWNER TWO (2) BOUND COPIES OF ALL OPERATING AND MAINTENANCE DATA, INCLUDING GUARANTEES AND SPARE PARTS LIST.

GUARANTEE:

GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER AS STATED IN WRITING. REPAIR AND/OR REPLACE, WITHOUT ANY COST TO THE OWNER, ANY DEFECTIVE PART OR PARTS OF THE WORK WITHIN THE GUARANTEE PERIOD FROM THE TIME THE SYSTEM IS PUT INTO OPERATION AS DETERMINED BY THE DATE OF FINAL CERTIFICATE OF PAYMENT WITH EXCEPTIONS AS NOTED.

PROVIDE PERIODICAL INSPECTION AND ADJUSTMENT SERVICE THROUGHOUT THE GUARANTEE PERIOD.

ELECTRICAL SYMBOL LEGEND

Doc # 24008-E1003.DWG

GENERAL



ELECTRICAL PANELBOARD 208/120V



ELECTRICAL PANELBOARD 480/277V



LOW VOLTAGE TRANSFORMER, MOUNTING AS REQUIRED.



BRANCH CIRCUIT HOME RUN - LETTERS AND NUMERALS INDICATE PANEL DESIGNATION AND CIRCUIT NUMBER. ARROWS INDICATE NUMBER OF CIRCUITS UNLESS OTHERWISE NOTED. CIRCUIT NUMBERS SEPARATED BY COMMAS ARE SINGLE-POLE CIRCUITS. CIRCUIT NUMBERS SEPARATED BY SLASHES ARE MULTI-POLE CIRCUITS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INCLUDED IN ALL RUNS OF CONDUIT. PROVIDE DEDICATED NEUTRALS.



BRANCH CIRCUIT CONDUIT INSTALLED CONCEALED IN WALLS AND ABOVE CEILINGS UNLESS OTHERWISE NOTED OR REQUIRED BY SITE CONDITIONS. WILL BE EMT WITH COMPRESSION FITTINGS.



UNLESS NOTED OTHERWISE, BRANCH CIRCUIT CONDUIT INSTALLED CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE.

POWER



MOTOR CONNECTION



HEAVY DUTY FUSIBLE DISCONNECT SWITCH FURNISHED, INSTALLED, AND CONNECTED BY THE ELECTRICAL CONTRACTOR. FIRST NUMERALS INDICATE MAXIMUM AMPERE RATING, SECOND NUMERAL INDICATES NUMBER OF POLES, THIRD NUMERALS INDICATE FUSE SIZE, OR PROVIDE FUSES TO SUIT EQUIPMENT SERVED. "NF" INDICATES NOT FUSED, SUBJECT TO NEMA 3R SWITCHES FOR EXTERIOR APPLICATIONS OR WHERE SUBJECT TO MOISTURE. "FWE" INDICATES FURNISHED WITH EQUIPMENT.



JUNCTION BOX, SURFACE MOUNTED, SIZE AS REQUIRED. "WP" INDICATES WEATHERPROOF.



DUPLEX RECEPTACLE, WALL MOUNTED. ALPHA-NUMERIC OR NUMERIC SUBSCRIPT INDICATES PANELBOARD CIRCUIT. (TYPICAL FOR ALL RECEPTACLES). "SIF" = GROUND FAULT RECEPTACLE. "WIP" = WATER PROOF. RECEPTACLE MOUNTED IN A WATER PROOF (NEMA-3R) WALLPLATE. "FWE" = FURNISHED WITH EQUIPMENT.

FIRE ALARM



ADDRESSABLE SMOKE DETECTOR, CEILING MOUNTED. "ERC" = ELEVATOR RECALL. "DR" = DOOR RELEASE. "D" = DUCT DETECTOR. "FSDR" = FIRE SMOKE DAMPERS. "EVD" = ELEVATOR SMOKE DAMPER. "SB" = SOUNDER BASE.

EXISTING SQUARE D QED SWITCHBOARD

Table with columns: CIRCUIT BREAKER #, TRIP AMPS, LOAD SERVED, FEEDER WIRING, LOAD KVA, FEEDER WIRING, LOAD SERVED, TRIP AMPS, CIRCUIT BREAKER #. Includes main rating, voltage, phase, and AIC rating information.

ALL CIRCUIT BREAKERS ARE EXISTING UNLESS NOTED OTHERWISE. INDICATES EXISTING LOAD REMOVED DURING DEMOLITION. INDICATES EXISTING CIRCUIT BREAKER SHALL BE REMOVED AND NEW CIRCUIT BREAKER SHALL BE INSTALLED IN PREPARED SPACE.

EXISTING SQUARE D NEHB PANELBOARD

Table for Existing Panel: LP2 with columns: CKT, Circuit Description, Branch Circuit Wiring, Trip/Poles, PHASE LOADS (KVA), Trip/Poles, Branch Circuit Wiring, Circuit Description, CKT. Includes location, supply, mounting, enclosure, and main rating information.

Notes: INDICATES EXISTING LOAD REMOVED DURING DEMOLITION. INDICATES EXISTING CIRCUIT BREAKER SHALL BE REMOVED AND NEW CIRCUIT BREAKER SHALL BE INSTALLED IN PREPARED SPACE.

ALL CIRCUIT BREAKERS ARE EXISTING UNLESS NOTED OTHERWISE

DRAWING INDEX:

Doc # 24008-E1001.DWG

Table with columns: Drawing ID, Description. Includes E1.1, E2.1, and E2.2.



GREENSBORO, NC
CORPORATE OFFICE
ASHEVILLE, NC
CHARLOTTE, NC
CHARLOTTSVILLE, VA
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Project Number: 24008
Name: 24008-EDW
Date: 02/20/24 4:48 PM

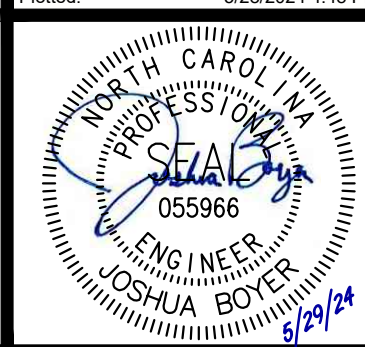


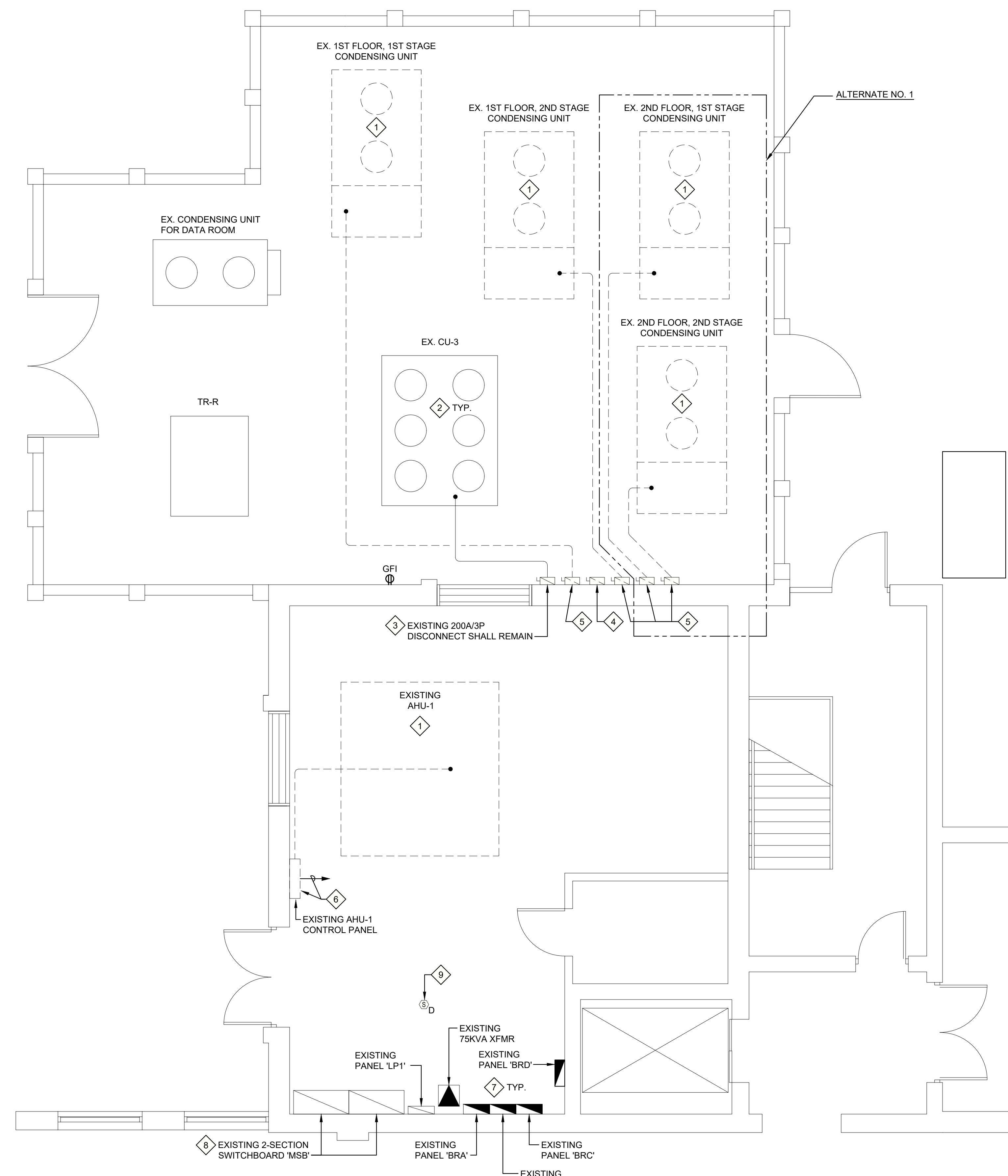
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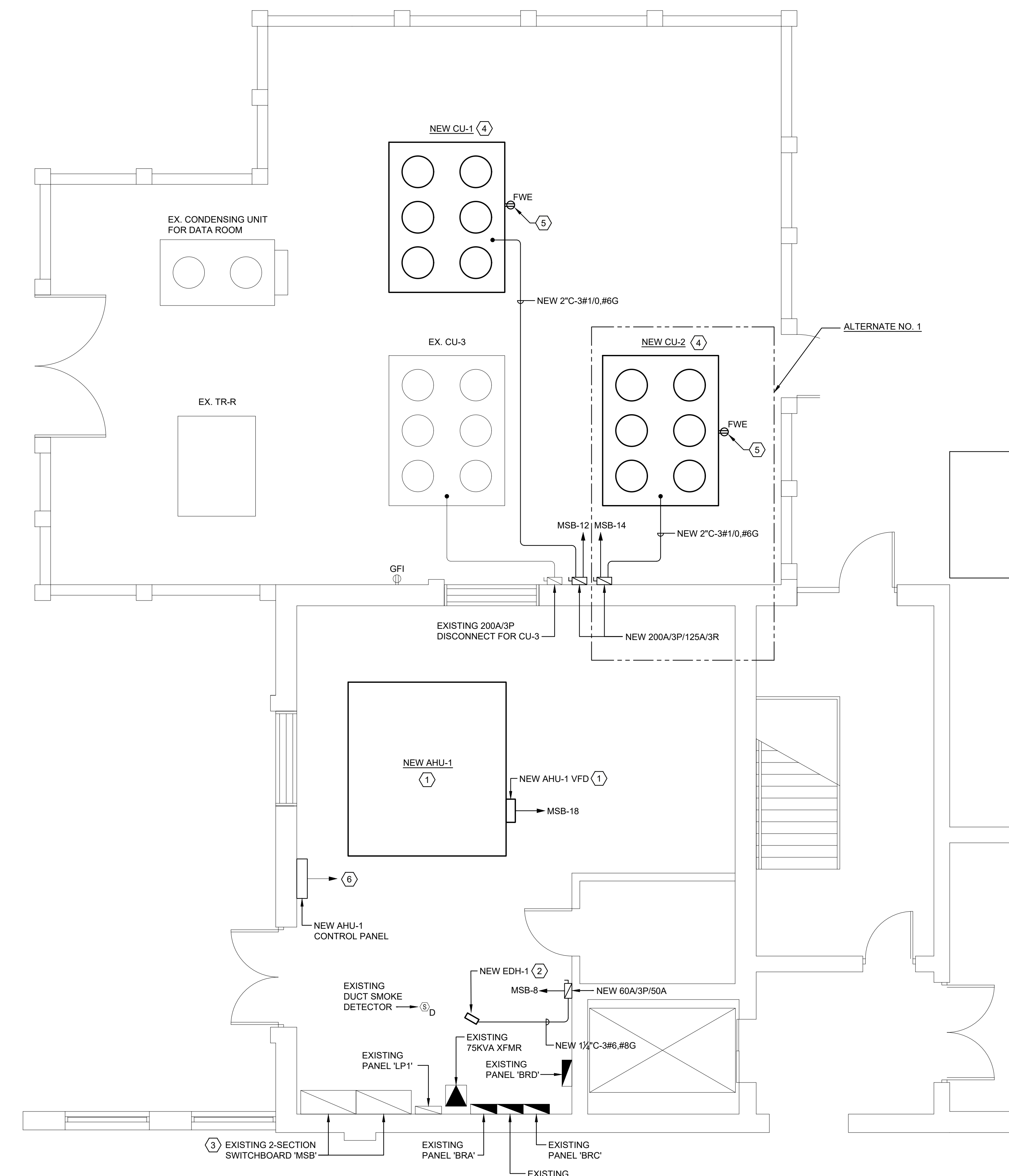
FOR CONSTRUCTION
AHU REPLACEMENT FOR WSFCS ADMIN OFFICE
ELECTRICAL LEGEND, SPECIFICATIONS, AND SCHEDULES
WINSTON-SALEM, NC
LIZ CORPORAATE SQUARE DR.
E1.1

Table with columns: Designed By, Drawn By, Checked By, Date. Includes JMB, MRS, JMB, 05-29-2024.



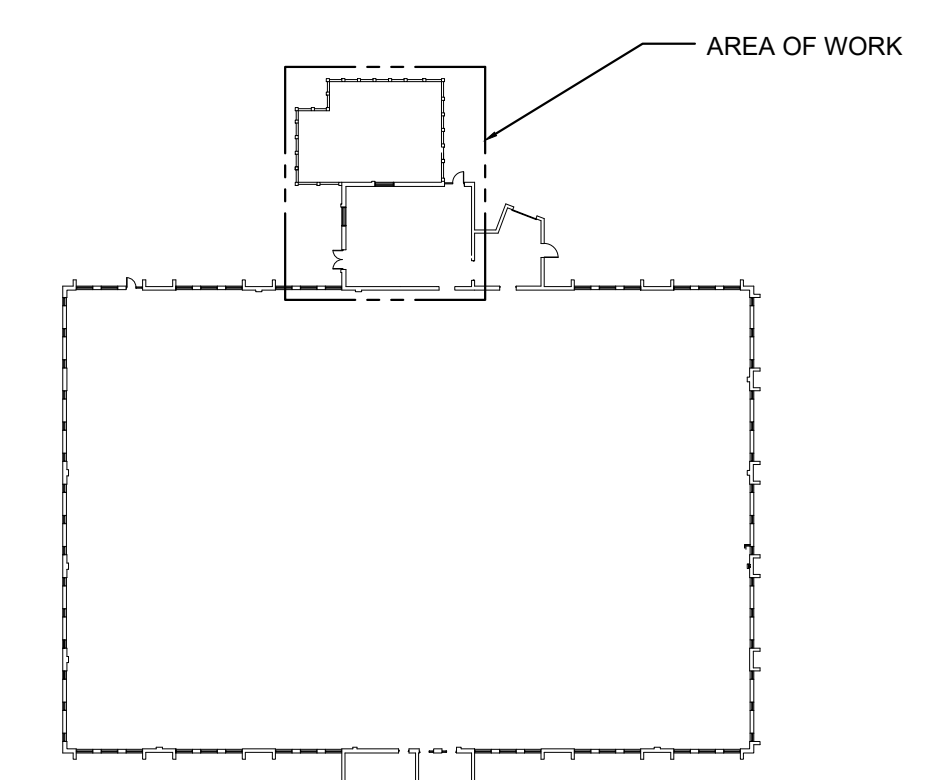
**1**  
**E2.1** FIRST FLOOR AND EQUIPMENT YARD - ELECTRICAL DEMOLITION PLAN  
1/4" = 1'-0"  
Dwg # 240068-E2011.DWG

- KEYED NOTES:**
- ① EXISTING MECHANICAL EQUIPMENT INDICATED BY DASHED LINETYPE SHALL BE DEMOLISHED BY MECHANICAL. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL. ASSOCIATED BRANCH CIRCUIT SHALL BE REMOVED BACK TO SWITCHBOARD 'MSB' AND ASSOCIATED CIRCUIT BREAKER SHALL BE REMOVED TO MAKE SPACE FOR NEW EQUIPMENT CIRCUIT BREAKER. REFER TO 'MSB' PANEL SCHEDULE FOR DETAILS. COORDINATE WITH MECHANICAL.
  - ② EXISTING MECHANICAL EQUIPMENT INDICATED BY SOLID LINETYPE SHALL REMAIN ALONG WITH ALL ASSOCIATED ELECTRICAL.
  - ③ EXISTING 200A/3P DISCONNECT ASSOCIATED WITH CU-3 SHALL REMAIN.
  - ④ EXISTING 200A/3P DISCONNECT NOT IN USE SHALL BE DISCONNECTED AND REMOVED. ASSOCIATED BRANCH CIRCUIT SHALL BE REMOVED BACK TO 'MSB'.
  - ⑤ EXISTING 200A/3P DISCONNECT ASSOCIATED WITH CONDENSING UNITS BEING DEMOLISHED SHALL BE DISCONNECTED AND REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
  - ⑥ EXISTING CONTROL PANEL ASSOCIATED WITH AHU-1 BEING DEMOLISHED SHALL BE REMOVED BY MECHANICAL. ASSOCIATED 120V BRANCH CIRCUIT SHALL REMAIN TO SUPPLY NEW AHU CONTROL PANEL. REFER TO 2/E2.1 FOR DETAILS.
  - ⑦ ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
  - ⑧ CIRCUIT BREAKERS ASSOCIATED WITH DEMOLISHED CONDENSING UNITS SHALL BE REMOVED. REFER TO 'MSB' PANEL SCHEDULE FOR DETAILS.
  - ⑨ EXISTING DUCT MOUNTED SMOKE DETECTOR ASSOCIATED WITH AHU-1 SHALL REMAIN.



**2**  
**E2.1** FIRST FLOOR AND EQUIPMENT YARD - NEW POWER PLAN  
1/4" = 1'-0"  
Dwg # 240068-E2011.DWG

- KEYED NOTES:**
- ① NEW AHU-1 AND ASSOCIATED VFD SHALL BE FURNISHED AND INSTALLED BY MECHANICAL. ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUIT AS SHOWN. COORDINATE WITH MECHANICAL.
  - ② COORDINATE WITH MECHANICAL FOR CONNECTION TO NEW ELECTRIC DUCT HEATER EDH-1.
  - ③ REFER TO PANEL SCHEDULES FOR MODIFICATIONS TO EXISTING PANEL.
  - ④ NEW CU-1 AND CU-2 SHALL BE FURNISHED AND INSTALLED BY MECHANICAL. ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUIT AS SHOWN. COORDINATE WITH MECHANICAL.
  - ⑤ NEW WP/GFI RECEPTACLE FURNISHED WITH AND POWERED FROM EQUIPMENT.
  - ⑥ CONNECT NEW AHU-1 CONTROL PANEL TO EXISTING 120V BRANCH CIRCUIT THAT PREVIOUSLY SUPPLIED DEMOLISHED CONTROL PANEL. EXTEND CONDUIT AND CONDUCTORS AS REQUIRED.





Revision	Date	Mark

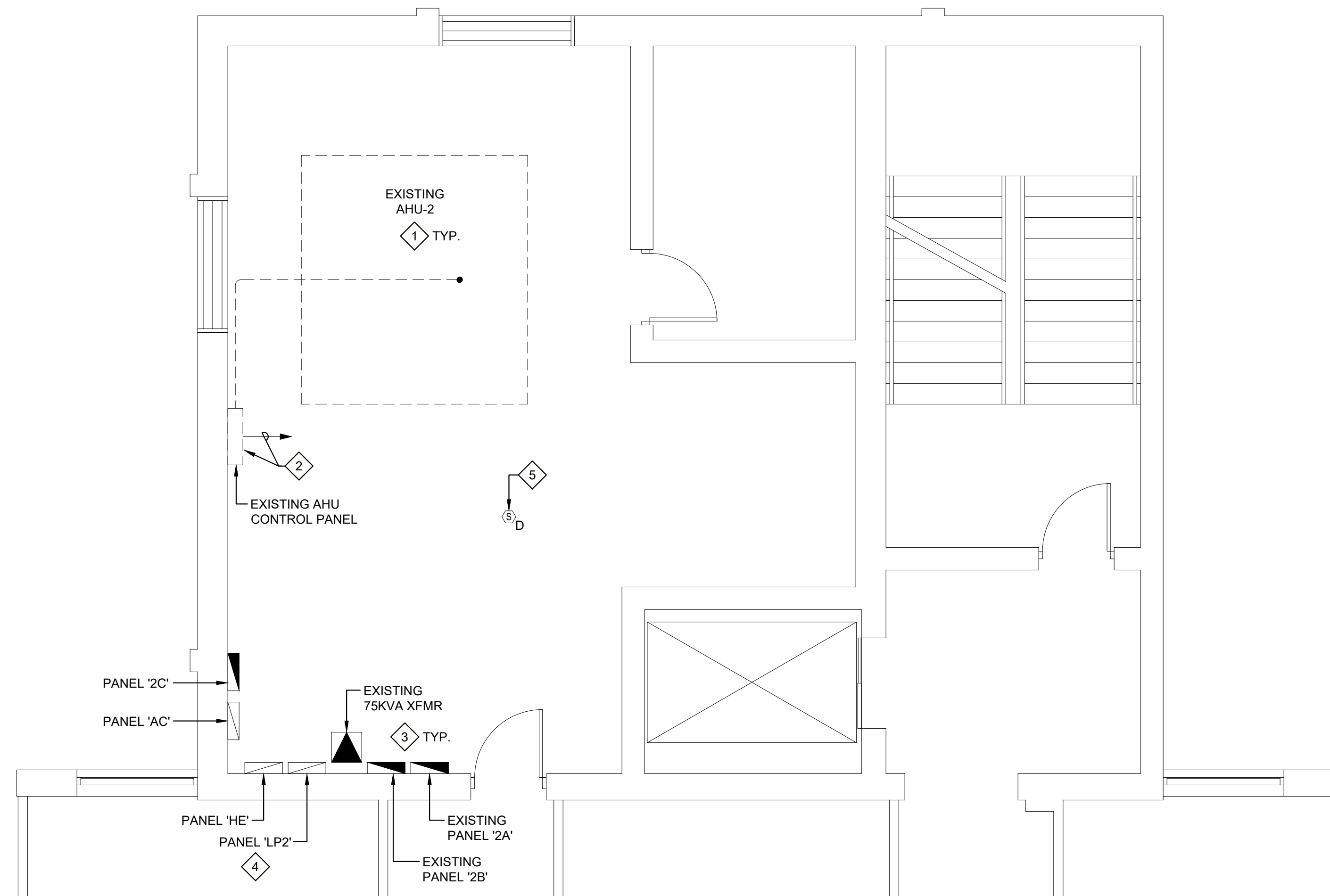
Revision	Date	Mark

WINSTON-SALEM, NC  
1425 CORPORATE SQUARE DR.  
WSFCS ADMIN OFFICE  
AHU REPLACEMENT FOR  
SECOND FLOOR ELECTRICAL PLANS - ALTERNATE NO. 1

Designed By: JMB  
Drawn By: MRS  
Checked By: JMB  
Date: 05-29-2024

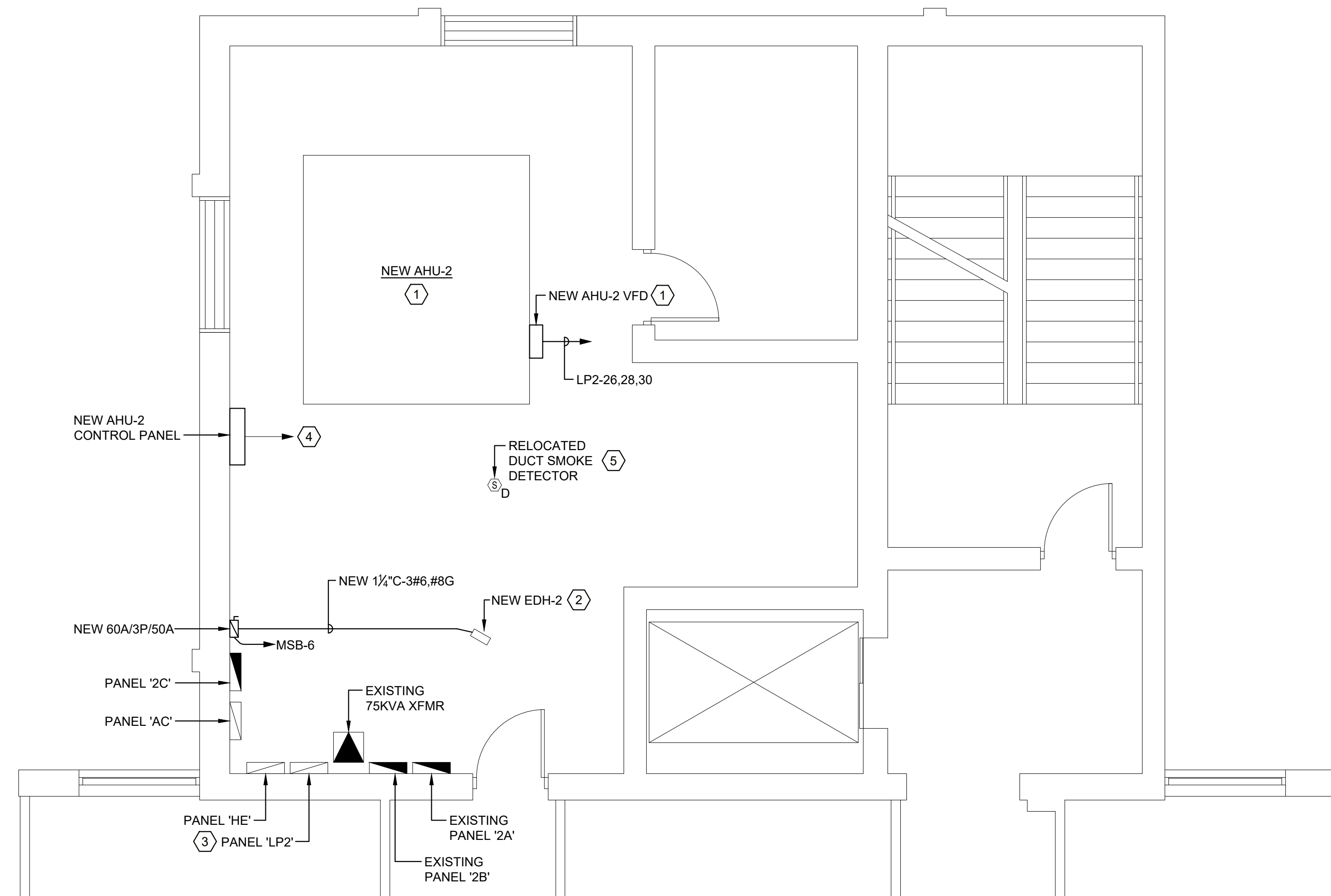
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FOR CONSTRUCTION



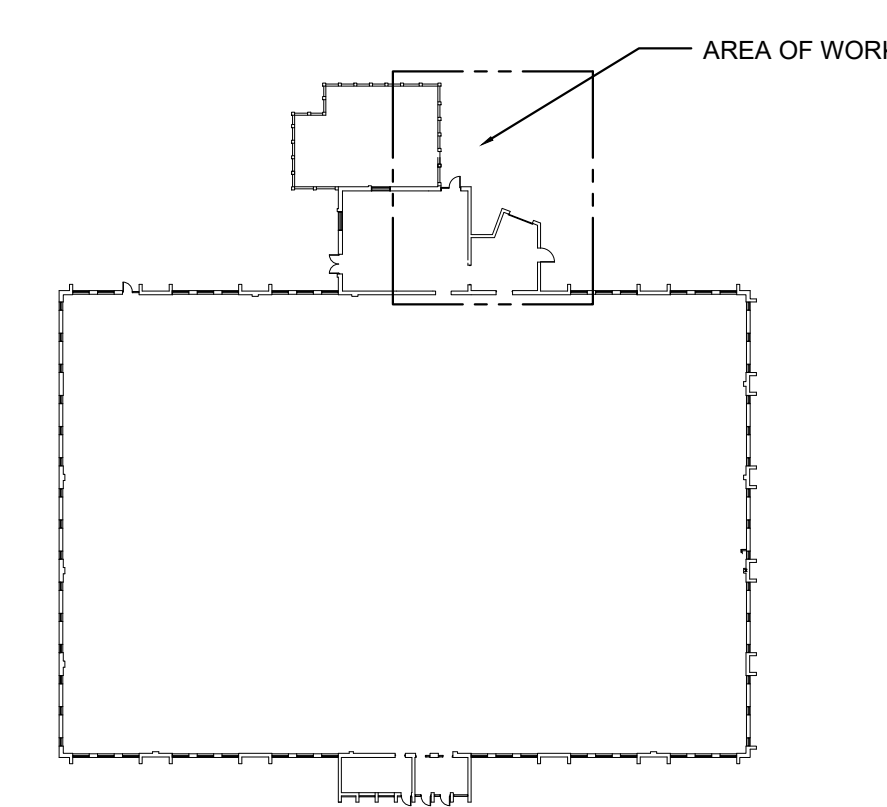
**1**  
**E2.2** SECOND FLOOR - ELECTRICAL DEMOLITION PLAN  
1/4" = 1'-0"  
Dwg # 240088-E2011.DWG

- KEYED NOTES:**
- 1 EXISTING MECHANICAL EQUIPMENT INDICATED BY DASHED LINETYPE SHALL BE DEMOLISHED BY MECHANICAL. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL. ASSOCIATED BRANCH CIRCUIT SHALL BE REMOVED BACK TO PANEL LP2 AND ASSOCIATED CIRCUIT BREAKER SHALL BE REMOVED TO MAKE SPACE FOR NEW EQUIPMENT CIRCUIT BREAKER. REFER TO LP2 PANEL SCHEDULE FOR DETAILS.
  - 2 EXISTING CONTROL PANEL ASSOCIATED WITH AHU-2 BEING DEMOLISHED SHALL BE REMOVED BY MECHANICAL. ASSOCIATED 120V BRANCH CIRCUIT SHALL REMAIN TO SUPPLY NEW AHU CONTROL PANEL. REFER TO 2/E2.2 FOR DETAILS.
  - 3 ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
  - 4 CIRCUIT BREAKER ASSOCIATED WITH DEMOLISHED MECHANICAL EQUIPMENT SHALL BE REMOVED. REFER TO LP2 PANEL SCHEDULE FOR DETAILS.
  - 5 EXISTING DUCT MOUNTED SMOKE DETECTOR ASSOCIATED WITH AHU-2 SHALL BE DISCONNECTED AND RELOCATED. REFER TO 2/E2.2 FOR DETAILS. COORDINATE WITH MECHANICAL.



**2**  
**E2.2** SECOND FLOOR - NEW POWER PLAN  
1/4" = 1'-0"  
Dwg # 240088-E2011.DWG

- KEYED NOTES:**
- 1 NEW AHU-2 AND ASSOCIATED VFD SHALL BE FURNISHED AND INSTALLED BY MECHANICAL. ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUIT AS SHOWN. COORDINATE WITH MECHANICAL.
  - 2 COORDINATE WITH MECHANICAL FOR CONNECTION TO NEW ELECTRIC DUCT HEATER EDH-2.
  - 3 REFER TO PANEL SCHEDULES FOR MODIFICATIONS TO EXISTING PANEL.
  - 4 CONNECT NEW AHU-2 CONTROL PANEL TO EXISTING 120V BRANCH CIRCUIT THAT PREVIOUSLY SUPPLIED DEMOLISHED CONTROL PANEL. EXTEND CONDUIT AND CONDUCTORS AS REQUIRED.
  - 5 EXTEND FIRE ALARM WIRING TO NEW DUCT SMOKE DETECTOR LOCATION. COORDINATE WITH MECHANICAL.



PLAN NORTH  
KEY PLAN  
DATE PLOTTED: 05/29/2024 4:48 PM