

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY IBC 2018 EDITION AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (2018) AND THE AMERICANS WITH DISABILITIES ACT.

A. GENERAL NOTES

- 1. ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
2. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
3. PROTECT AND KEEP IN SERVICE ACTIVE UNDERGROUND UTILITIES, PIPES, OR CONDUITS, WHETHER INDICATED ON THE DRAWINGS OR NOT, UNLESS SPECIFICALLY CALLED FOR TO BE REMOVED, RELOCATED, OR DISCONNECTED AND ABANDONED.
4. CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
5. NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
6. DO NOT SCALE DRAWINGS, DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
7. VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.
8. WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT HAS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASE BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.
9. THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES. BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.

B. MISCELLANEOUS AND DEMOLITION NOTES

- 1. COORDINATE PENETRATIONS AND/OR SLEEVES REQUIRED IN WALLS, FLOORS, CEILINGS OR ROOFS FOR MECHANICAL AND ELECTRICAL WORK REQUIRED BY ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
2. SEAL WITH UL APPROVED MATERIALS PENETRATIONS OF DUCTWORK, CONDUIT AND PIPES THROUGH FIRE-RATED ASSEMBLIES. TO MAINTAIN THE RATING INTEGRITY OF THOSE ASSEMBLIES, PROVIDE FIRE DAMPERS AS INDICATED ON THE DRAWINGS.
3. SEAL WITH ACOUSTICAL SEALANT PENETRATIONS OF DUCTWORK, CONDUIT AND PIPES THROUGH NON-RATED FLOORS, FULL-HEIGHT WALLS/PARTITIONS, ACOUSTICALLY INSULATED WALLS/PARTITIONS, AND SOUND-RATED WALLS/PARTITIONS, TO MAINTAIN THE ACOUSTICAL INTEGRITY OF THOSE ASSEMBLIES.
4. APPLY APPROPRIATE & COMPATIBLE SEALANT MATERIALS AS REQUIRED TO SEPARATE DISSIMILAR METALS, FILL GAPS IN EXISTING ASSEMBLIES OR WHERE NEW AND EXISTING ASSEMBLIES MEET OR WHERE OTHERWISE REQUIRED BY THE SPECIFICATIONS.
5. BRING ANY UNFORESEEN OR CONFLICTING CONDITIONS TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. REPAIR, PATCH, OR REPLACE FINISH MATERIALS OR VISIBLE ASSEMBLIES THAT ARE SOILED, CUT OR DAMAGED IN ANY FASHION DURING THE COURSE OF THE WORK. PERFORM PATCHING SUCH THAT EDGES BLEND INTO CONTIGUOUS SURFACES SMOOTHLY, MATCHING TEXTURE AND COLOR OF ADJACENT SURFACES.

C. BIDDING NOTES

- 1. GENERAL CONTRACTOR TO PROVIDE A \$15,000 ALLOWANCE IN HIS/HER BID FOR UNFORESEEN/MISCELLANEOUS CONDITIONS. WHEN FIGURING THIS ALLOWANCE IN THE BID, CONTRACTOR IS TO INCLUDE ALL NECESSARY OVERHEAD AND PROFIT. THIS ALLOWANCE IS NOT FOR THE CONTRACTOR'S BENEFIT, AND IS ONLY AUTHORIZED TO CHARGE AGAINST THIS ALLOWANCE WHEN DIRECTED AND APPROVED BY JOLIET JUNIOR COLLEGE. THE CONTRACTOR WILL BE ALLOWED TO INVOICE FOR MATERIAL AND RAW LABOR COST ONLY.

STANDARD ABBREVIATIONS

Table with 4 columns of abbreviations and their corresponding full names. Includes terms like AT ANCHOR BOLT, EWH ELECTRIC WATER HEATER, PTN PARTITION, etc.

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT. ABBREVIATIONS MAY APPEAR WITH PERIODS OR OTHER PUNCTUATION SEPARATING CHARACTERS ON THE DRAWINGS; THE MEANING REMAINS THE SAME.

DRAFTING SYMBOLS AND MATERIALS LEGEND

Table of drafting symbols and materials legend. Includes items like DETAIL NUMBER, COLUMN NO., ROOM NUMBER, TOILET ACCESSORY IDENTIFICATION, SPOT ELEVATION, CONCRETE, BRICK MASONRY IN PLAN, etc.



PROJECT

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INDEX OF DRAWINGS

Table with 2 columns: Drawing Number and Description. Includes G100 COVER SHEET, AME310 PARTIAL ARCHITECTURAL, MECHANICAL & ELECTRICAL FLOOR PLANS, M410 MECHANICAL SCHEDULES, DETAILS, & TEMPERATURE CONTROLS.

APPLICABLE CODES

- 2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL AND GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2018 NATIONAL FIRE CODE
2020 NATIONAL ELECTRICAL CODE
LOCAL AMENDMENTS TO THE ABOVE CODES
2014 ILLINOIS PLUMBING CODE
2021 ILLINOIS ENERGY CONSERVATION CODE (2021 INTERNATIONAL ENERGY CONSERVATION CODE W/STATE AMENDMENTS)
2018 ILLINOIS ACCESSIBILITY CODE

SEALS & CERTIFICATIONS

Three professional seals for Architect, Mechanical Engineer, and Electrical Engineer. Each seal includes the name, license number, and expiration date.

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2018 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.

KLUBER, INC. ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-001284



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Table with 2 columns: Issued and Drawn. Shows dates and names for various drawing stages.

JOB NO. 24-292-1573
DRAWN DDW
CHECKED DDW
APPROVED DDW

SHEET TITLE
COVER SHEET, GENERAL NOTES, SYMBOLS AND DRAWING INDEX

SHEET NUMBER
G100



# SLAB SCHEDULE AND NOTES & DETAILS

MARK	THICK (t)	CONCRETE STRENGTH (F <sub>c</sub> )	CONCRETE TYPE (NW or LW)	REINFORCING STEEL	GENERAL LOCATIONS	SPECIAL COMMENTS OR ADDITIONAL LOCATIONS
SLAB S1	6"	4,500 PSI	NW	#5 BAR @ 12" O.C. E.W.	EXTERIOR EQUIPMENT PAD FOR NEW MAU-3	

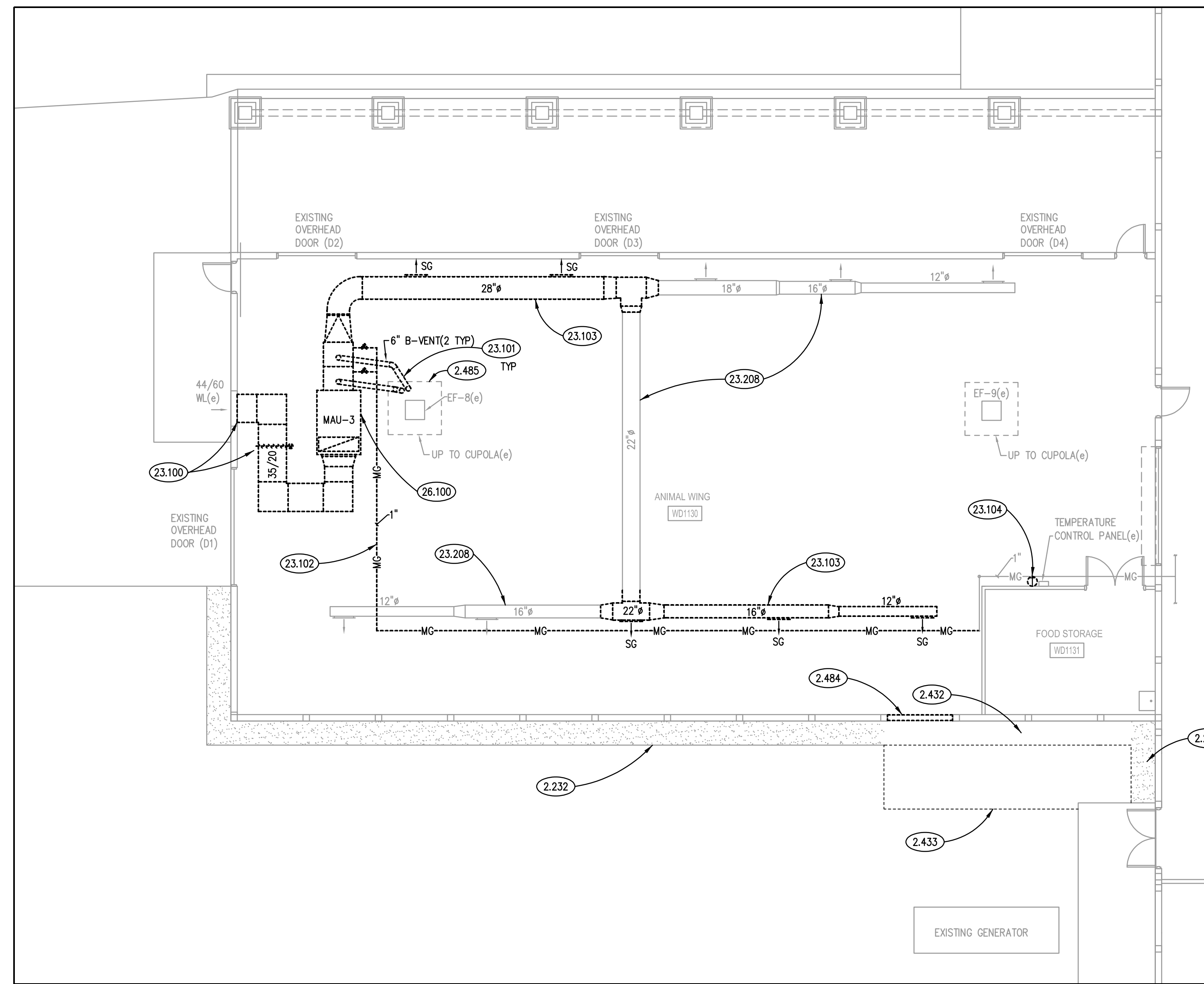
  

**NOTES:**

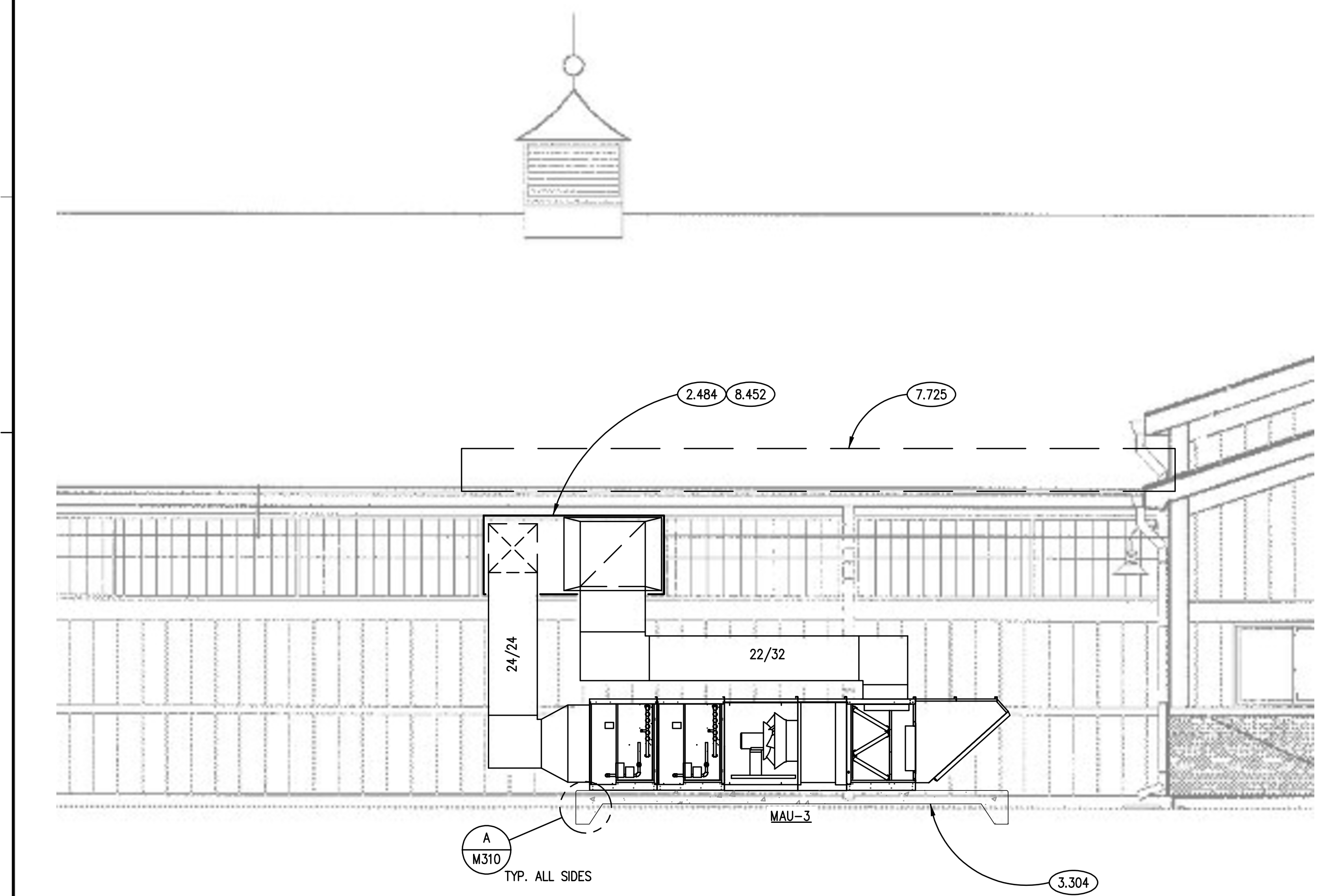
- CONCRETE WORK: CONFORM TO REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
- HOT WEATHER CONCRETE: IN ACCORDANCE WITH ACI 305.
- COLD WEATHER CONCRETE: IN ACCORDANCE WITH ACI 306.
- SEE PROJECT SPECIFICATIONS FOR DETAILED MIX DESIGNS.
- PLACE SLABS ON GRADE OVER 6" OF CLEAN, WELL GRADED GRANULAR MATERIAL PROVIDED.
- CONCRETE COVER FOR REINFORCEMENT: 3" FOR ALL SLAB WORK AND 2" WITHIN ANY FORM WORK PROVIDED.
- SEE PLANS AND DETAILS FOR LOCATIONS OF REINFORCING STEEL.
- SUPPORT REINFORCING STEEL AS REQUIRED TO MAINTAIN THE DETAILED POSITIONS NOTED ON THE CONTRACT DOCUMENTS DURING PLACEMENT OF THE CONCRETE.
- NORMAL WEIGHT CONCRETE (NWC): MAXIMUM DENSITY OF 145 PCF.
- ALUMINUM MATERIALS OF ANY KIND ARE PROHIBITED FROM BEING CAST, EMBEDDED OR IN CONTACT WITH THE CONCRETE WORK.
- REINFORCING BARS: ASTM A615 GRADE 60, DEFORMED.
- EXTERIOR CONCRETE: 6% AIR ENTRAINMENT.
- ACCEPTABLE INJECTION EPOXY ADHESIVE PRODUCTS INCLUDE THE FOLLOWING:
  - MILTI HIT-RES-50 INJECTION ADHESIVE SYSTEM
  - SIMPSON STRONG-TIE SET-XP HIGH-STRENGTH ANCHORING ADHESIVE SYSTEM
  - POWERS FASTENERS PE 1000+ EPOXY INJECTION ADHESIVE ANCHORING SYSTEM.

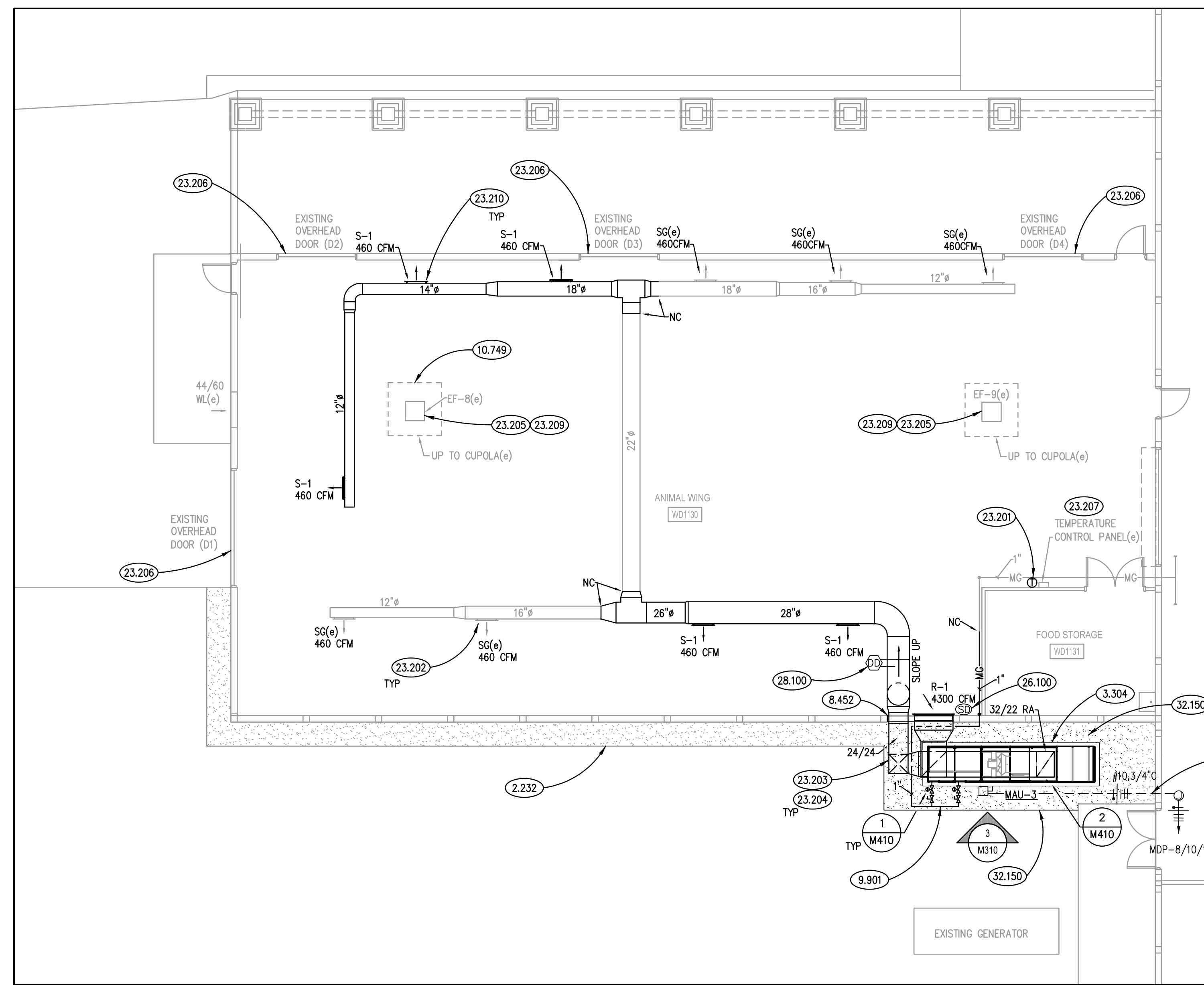
**TYPICAL EXTERIOR PAD**  
SCALE: 3/4" = 1'-0"



**PARTIAL FIRST FLOOR MECHANICAL DEMOLITION PLAN - AREA 'A'**  
SCALE: 1/8" = 1'-0"



**ELEVATION DETAIL**  
SCALE: NTS



**PARTIAL FIRST FLOOR MECHANICAL PLAN - AREA 'A'**  
SCALE: 1/8" = 1'-0"

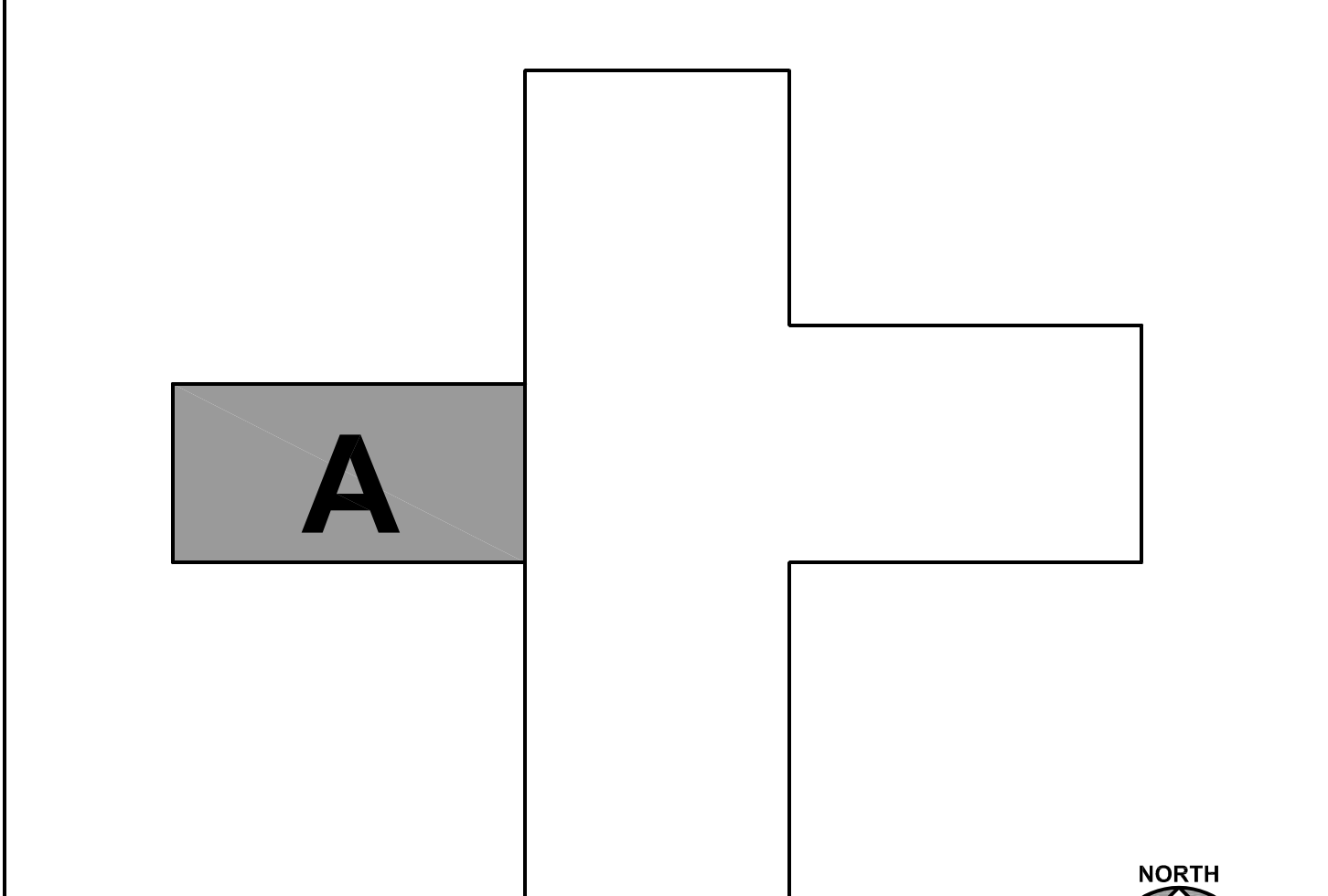
# KEYNOTES

- KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UNKEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.
- EXISTING CRUSHED STONE MAINTENANCE STRIP.
  - REMOVE EXISTING CRUSHED STONE MAINTENANCE STRIP AS REQUIRED TO ACCOMPLISH EXCAVATION FOR MECHANICAL EQUIPMENT PAD.
  - REMOVE EXISTING SOO AND EXCAVATE TOPSOIL AS REQUIRED FOR MECHANICAL EQUIPMENT PAD.
  - TEMPORARILY REMOVE EXISTING KALWALL FIBERGLASS-SANDWICH WALL PANEL. SEE KEYNOTE 8.452 FOR ADDITIONAL INFORMATION.
  - REMOVE EXISTING CUPOLA NORTH LOUVERED FACER PENETRATED BY VENTS.
  - CONCRETE FORMING AND ACCESSORIES: ACCESSORY: CONTINUOUS 1/2" RADIUS EDGE U.N.O.
  - CONCRETE REINFORCING: REINFORCING STEEL MAT, #5 @ 12" O.C. EACH WAY U.N.O.
  - CONCRETE REINFORCING: CONTINUOUS REINFORCING BAR, #5 U.N.O. QUANTITY AS DEPICTED.
  - CONCRETE REINFORCING: #5 DOMESL @ 1'-0" O.C. HORIZONTAL LEG= 2'-4". VERTICAL LEG= AS DEPICTED.
  - CAST-IN-PLACE CONCRETE: EXTERIOR SLAB-ON-GRADE. REFER TO SPECIFICATIONS FOR MIX TYPE AND FINISH.
  - CONCRETE EQUIPMENT PAD. REFER TO DETAIL A ON DRAWING AME310.
  - ROOF ACCESSORY: METAL SNOW GUARDS; PROVIDE IN THIS AREA; TWO (2) ROWS OF SNOW GUARDS - FIRST ROW 1'-0" UP-SLOPE FROM EAVE, SECOND ROW 2'-0" UPSLOPE FROM FIRST ROW; SPACE SNOW GUARDS 1'-0" O.C. HORIZONTALLY; LOCATE GUARDS CENTERED BETWEEN MAJOR RIBS OF ROOF PANELS; MATERIAL AND COLOR AS SPECIFIED.
  - FIBERGLASS-SANDWICH-PANEL ASSEMBLY: SHOP MODIFY/RE-FABRICATE WALL PANEL WITH OPENINGS AS REQUIRED TO ACCOMMODATE NEW DUCTWORK; RE-INSTALL MODIFIED KALWALL PANEL; FLASH NEW DUCTWORK THROUGH MODIFIED PANEL IN ACCORDANCE WITH KALWALL DETAILS AND REQUIREMENTS.
  - PAINT EXTERIOR GAS PIPING; SAFETY YELLOW COLOR.
  - CUPOLA ASSEMBLY: PROVIDE NEW LOUVERED CUPOLA FACE, CUSTOM-MANUFACTURED TO MATCH EXISTING LOUVERED CUPOLA FACES IN CONFIGURATION AND COLOR.
  - REMOVE OUTSIDE AIR DUCTWORK BACK TO EXISTING WALL LOUVER AND PROVIDE INSULATED METAL PANEL OVER EXISTING LOUVER OPENING. REMOVE OUTSIDE AIR MOTORIZED DAMPER AS SHOWN.
  - REMOVE GAS FURNACE VENTING IN ITS ENTIRETY INCLUDING VENTING INSIDE EXISTING CUPOLA. PATCH VENT OPENINGS BETWEEN ROOF AND CUPOLA USING LIKE MATERIALS.
  - REMOVE GAS PIPING BACK TO LOCATION AS SHOWN AND PROVIDE TEMPORARY CAP FOR NEW CONNECTION.
  - REMOVE SUPPLY DUCTWORK BACK TO LOCATIONS AS SHOWN. PROVIDE TEMPORARY CAP FOR NEW CONNECTION.
  - REMOVE EXISTING SPACE TEMPERATURE SENSOR.
  - PROVIDE NEW SPACE TEMPERATURE SENSOR FOR MAKE-UP AIR UNIT.
  - TEST AND BALANCE ENTIRE ALL NEW AND EXISTING DIFFUSERS IN THE SPACE.
  - PROVIDE INSULATED SUPPLY AND RETURN DUCTWORK ON THE EXTERIOR OF THE BUILDING. REFER TO SPECIFICATIONS FOR INSULATION TYPE.
  - ROUTE NEW DUCTWORK THROUGH EXISTING WINDOW PANEL. REFER TO EXTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
  - INTERFACE OPERATION OF EXISTING EXHAUST FANS INTO THE EXISTING BUILDING AUTOMATION SYSTEM. REFER TO SEQUENCE OF OPERATION.
  - PROVIDE INTERLOCK ON OVERHEAD GARAGE DOOR. REFER TO SEQUENCE OF OPERATION.
  - THE NEW EQUIPMENT INTO EXISTING DELTA CONTROLS BUILDING AUTOMATION SYSTEM. MODIFY ALL GRAPHICS AND SEQUENCES TO REMOVE DEMOLISHED EQUIPMENT AND ADD NEW EQUIPMENT.
  - THOROUGHLY CLEAN THE INSIDE OF ALL SUPPLY DUCTWORK TO REMAIN IN THE SPACE PRIOR TO CONSTRUCTION. REFER TO SPECIFICATIONS.
  - TEST AND BALANCE EXISTING EXHAUST FAN. REFER TO EXISTING EXHAUST FAN SCHEDULE.
  - PROVIDE NEW SUPPLY DIFFUSER AS SCHEDULED. MOUNT DIFFUSER AT 30 DEGREE ANGLE DOWN FROM HORIZONTAL. MATCHING EXISTING DIFFUSERS IN THE SPACE.
  - DEMOLISH BRANCH CIRCUIT TO MAU-3 FROM PANEL MDP IN ITS ENTIRETY.
  - PROVIDE NEW BRANCH CIRCUIT FROM PANEL MDP AND EQUIPMENT CONNECTION TO MAU-3 (4#0, #00, 3/4" GRS CONDUIT). PROVIDE LIQUIDTIGHT FLEXIBLE CONDUIT CONNECTION AT UNIT.
  - ROUTE BRANCH CIRCUIT UNDERGROUND IN GREEN SPACE EXTERIOR AND CONCEALED OVERHEAD IN FINISHED AREAS INTERIOR.
  - REPLACE 30/3 AMPERE BREAKER AT PANEL MDP FOR NEW MAU-3 EQUIPMENT (SQUARE D FA BREAKER, 65KAIC) WITH NEW 25/3 AMPERE BREAKER.
  - PANEL MDP LOCATED IN ADJACENT ELECTRICAL CLOSET TO MECHANICAL ROOM.
  - PROVIDE NEW DUCT DETECTOR IN SUPPLY DUCT. PROVIDE NEW VELOCITY RATED DUCT DETECTOR AT RETURN OPENING.
  - EXCAVATION FILL: ENGINEERED GRANULAR FILL.
  - AGGREGATE SURFACING: CRUSHED STONE MAINTENANCE STRIP; MATCH WIDTH AND BEDDING DEPTH OF EXISTING CRUSHED STONE MAINTENANCE STRIP. REFER TO SPECIFICATIONS.

# GENERAL NOTES

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
- EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
- ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
- SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
- DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.
- REPAIR/RESTORE TURF GRASS AREAS DISTURBED OR DESTROYED BY DEMOLITION OR CONSTRUCTION OPERATIONS.

# KEY PLAN



# AME310

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**WEITENDORF MAKE-UP AIR UNIT REPLACEMENT**

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ISSUED	
01/08/25	BID DOCUMENTS
JOB NO. 24-292-1573	
DRAWN JNB	
CHECKED BWG	
APPROVED BWG	
SHEET TITLE	
PARTIAL ARCHITECTURAL, MECHANICAL, & ELECTRICAL FLOOR PLANS	
SHEET NUMBER	
<b>AME310</b>	

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.

### INDIRECT-FIRED MAKE UP AIR UNIT SCHEDULE

MARK	AIR FLOW (CFM)	MINIMUM OA (CFM)	HEATING				SUPPLY FAN (HP)	EXTERNAL STATIC PRESS (IN WG)	ELECTRICAL		MAX OPERATING WEIGHT (LB)	MODEL	NOTES	
			ENT AIR TEMP (db °F)	LVG AIR TEMP (db °F)	GAS INPUT (MBH)	GAS OUTPUT (MBH)			MODULATION TURNDOWN	VIPH/Hz				MCA
MAU-3	4,600	0-4,600	-10	87.7	600.0	486.0	32:1	3.0	1.5	208/3/60	15.7	1,700	GK-P116-H22-MF-0	1, 2, 3, 4

**NOTES:**  
 1. MODEL BASED ON GREENHECK.  
 2. PROVIDE WITH LOW LEAK RE-CIRCULATION DAMPER.  
 3. PROVIDE WITH BACNET IP COMMUNICATIONS CARD.  
 4. PROVIDE WITH 14-INCH ROOF CURB FOR MOUNTING ON CONCRETE PAD.

### EXISTING EXHAUST FAN SCHEDULE

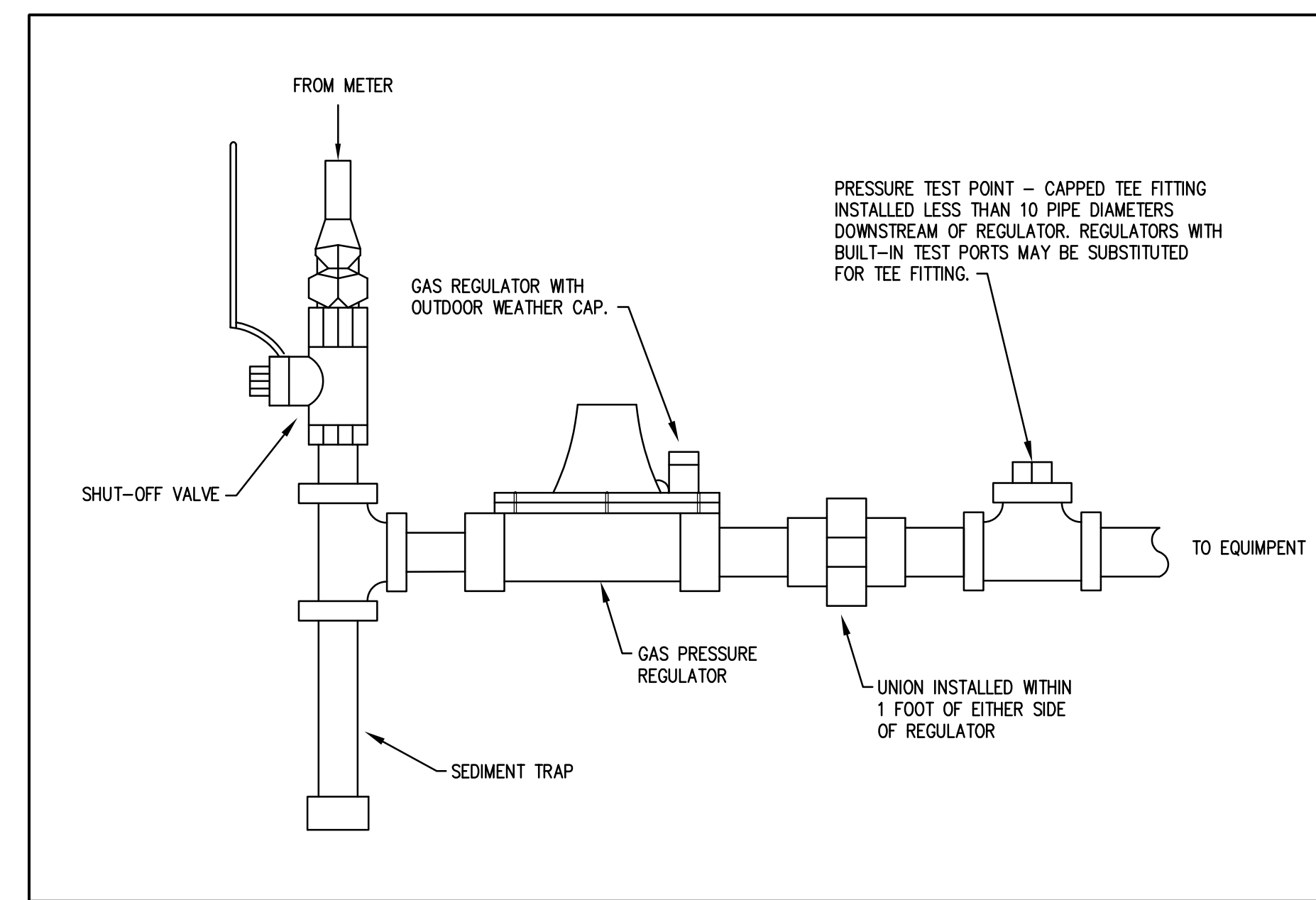
MARK	AIR FLOW RATE (CFM)	EXTERNAL S.P. (IN WG)	DRIVE TYPE	MOTOR (HP)	ELECTRICAL (V/PH/Hz)	NOTES
EF-8(e)	2,385	0.25	DIRECT	3/4	120/1/60	1
EF-9(e)	2,385	0.25	DIRECT	3/4	120/1/60	1

**NOTES:**  
 1. EXISTING EXHAUST FANS FOR INFORMATION/BALANCING PURPOSES ONLY.

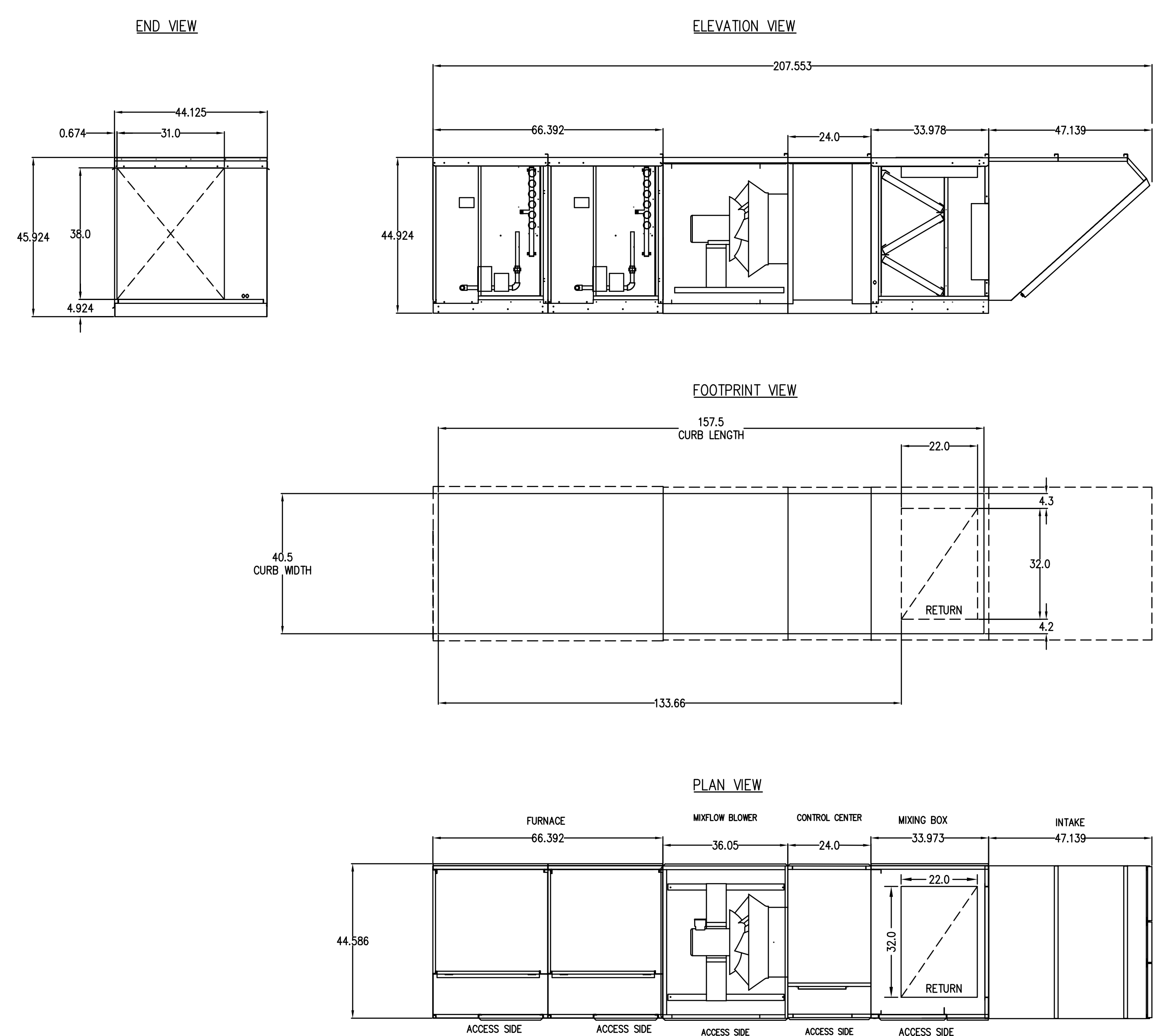
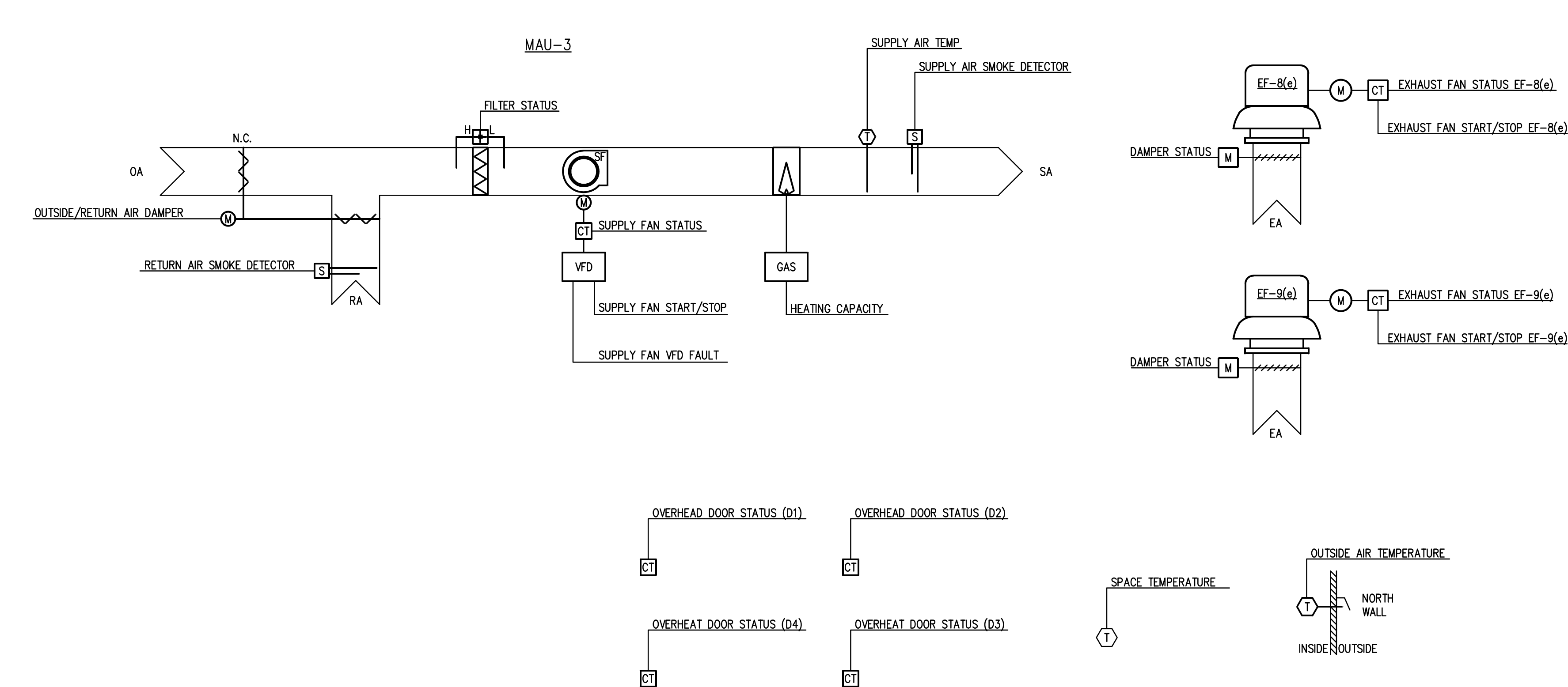
### DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

MARK	MODEL	SIZE	NECK	DAMPER	MATERIAL	REMARKS
S-1	HCD	24 X 6	-	OBD	ST	1, 2
R-1	530FTL2	48 X 36	48 X 36	-	ST	1, 3

**NOTES:**  
 1. MODEL BASED ON PRICE INDUSTRIES.  
 2. PROVIDE WITH VCS HEAVY DUTY OPPOSED BLADE DAMPER AND SDFG SPIRAL DUCT FRAME.  
 3. PROVIDE WITH 2-INCH DEEP FILTER.



### ANIMAL WING CONTROL SCHEMATIC



### SEQUENCE OF OPERATIONS

**MAKE-UP AIR UNIT & EXHAUST FANS (MAU-3, EF-8(e), EF-9(e))**  
 OCCUPIED / UNOCCUPIED MODE SHALL BE DETERMINED BY THE BUILDING AUTOMATION SYSTEM.

**OCCUPIED MODE:**  
 WHEN IN OCCUPIED MODE THE MAKE-UP AIR UNIT AND EXHAUST FAN'S EF-8(e) & EF-9(e) SHALL BE ENERGIZED. THE MAKE-UP AIR UNIT'S OUTSIDE AIR DAMPER SHALL OPEN TO 100% AND THE RETURN DAMPER SHALL CLOSE. THE GAS BURNER SHALL STAGE AND MODULATE AS REQUIRED TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT OF 70° (ADJ.). IF THERE IS A CALL FOR HEAT, THE GAS BURNER SHALL STAGE AND MODULATE AS REQUIRED TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 90° (ADJ.). IF THERE IS NO CALL FOR HEAT AND THE OUTSIDE AIR TEMPERATURE IS LESS THAN 65° (ADJ.), THE SUPPLY AIR TEMPERATURE SHALL BE 70° (ADJ.). THE GAS BURNER SHALL BE LOCKED OUT IF THE OUTSIDE AIR TEMPERATURE IS GREATER THAN 65° (ADJ.), AN ALARM SHALL BE GENERATED IN THE BUILDING AUTOMATION SYSTEM AND THE UNIT SHALL SHUT DOWN IF THE SUPPLY AIR TEMPERATURE DROPS BELOW 35°.

OVERHEAD DOOR STATUS - IF ANY OF THE OVERHEAD DOORS ARE OPEN FOR GREATER THAN 5 MINUTES (ADJ.) AND THERE IS NO CALL FOR HEAT, THE MAKE-UP AIR UNIT SHALL BE DE-ENERGIZED. WHEN ALL OVERHEAD DOORS ARE CLOSED, THE MAKE-UP AIR UNIT SHALL BE RE-ENERGIZED.

**UNOCCUPIED MODE:**  
 MAU-3 SHALL BE ENERGIZED INTERMITTENTLY AS REQUIRED TO MAINTAIN AN UNOCCUPIED SPACE TEMPERATURE SETPOINT OF 65° (ADJ.). THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND THE RETURN AIR DAMPER SHALL OPEN FULLY. THE GAS BURNER SHALL STAGE AND MODULATE AS REQUIRED TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 90° (ADJ.).

PROVISIONS SHALL BE MADE FOR MANUALLY ENERGIZING EACH EXHAUST FAN INDIVIDUALLY, THE MAKE-UP AIR UNIT, AND MODULATING THE OUTSIDE AIR DAMPER FOR SUMMER VENTILATION.

### POINTS LIST

MAU-3	HARDWARE				SOFTWARE			
	AI	AO	DI	DO	SCHED	TREND	ALARM	GRAPHIC
OCCUPIED / UNOCCUPIED MODE				X	X			X
MAU-3 FAN START/STOP				X				X
MAU-3 FAN STATUS			X				X	X
MAU-3 OUTSIDE/RETURN AIR DAMPER		X				X		X
OUTSIDE AIR TEMPERATURE	X					X		X
SUPPLY AIR TEMPERATURE	X					X	X	X
SUPPLY AIR TEMPERATURE SETPOINT	X	X				X	X	X
SPACE TEMPERATURE					X			X
SPACE TEMPERATURE SETPOINT	X	X				X		X
HEATING CAPACITY					X			X
FILTER STATUS			X				X	X
MAU-3 ALARM			X				X	X
OVERHEAD DOOR STATUS (4 TYPICAL)			X					X
EXHAUST FAN START/STOP (EF-8(e))				X	X			X
EXHAUST FAN STATUS (EF-8(e))			X					X
EXHAUST FAN DAMPER STATUS (EF-8(e))			X					X
EXHAUST FAN START/STOP (EF-9(e))				X	X			X
EXHAUST FAN STATUS (EF-9(e))			X					X
EXHAUST FAN DAMPER STATUS (EF-9(e))			X					X
SMOKE DETECTOR STATUS (SUPPLY AND RETURN)			X					X

### MAKE-UP AIR UNIT DETAIL

### M410

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.