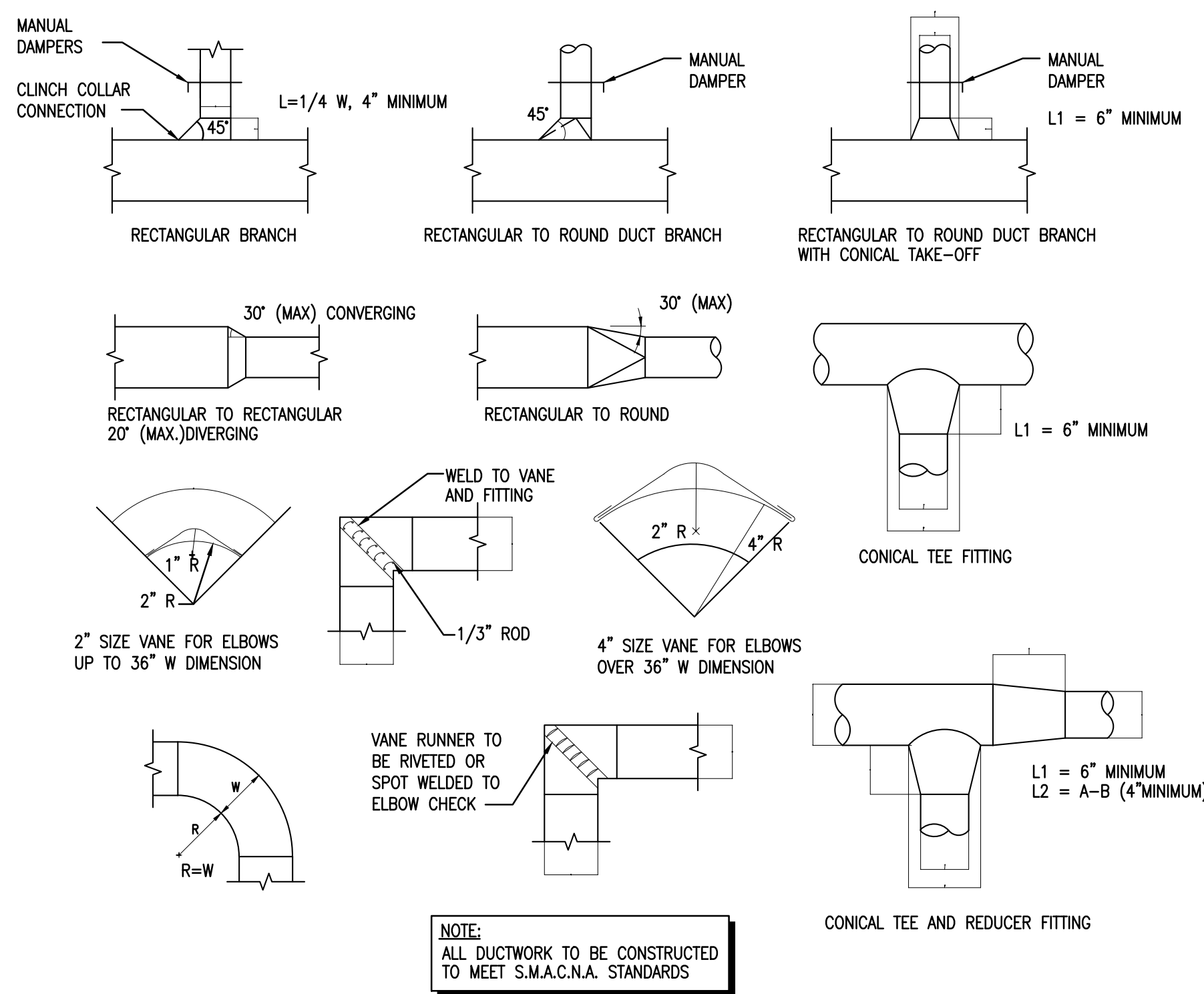
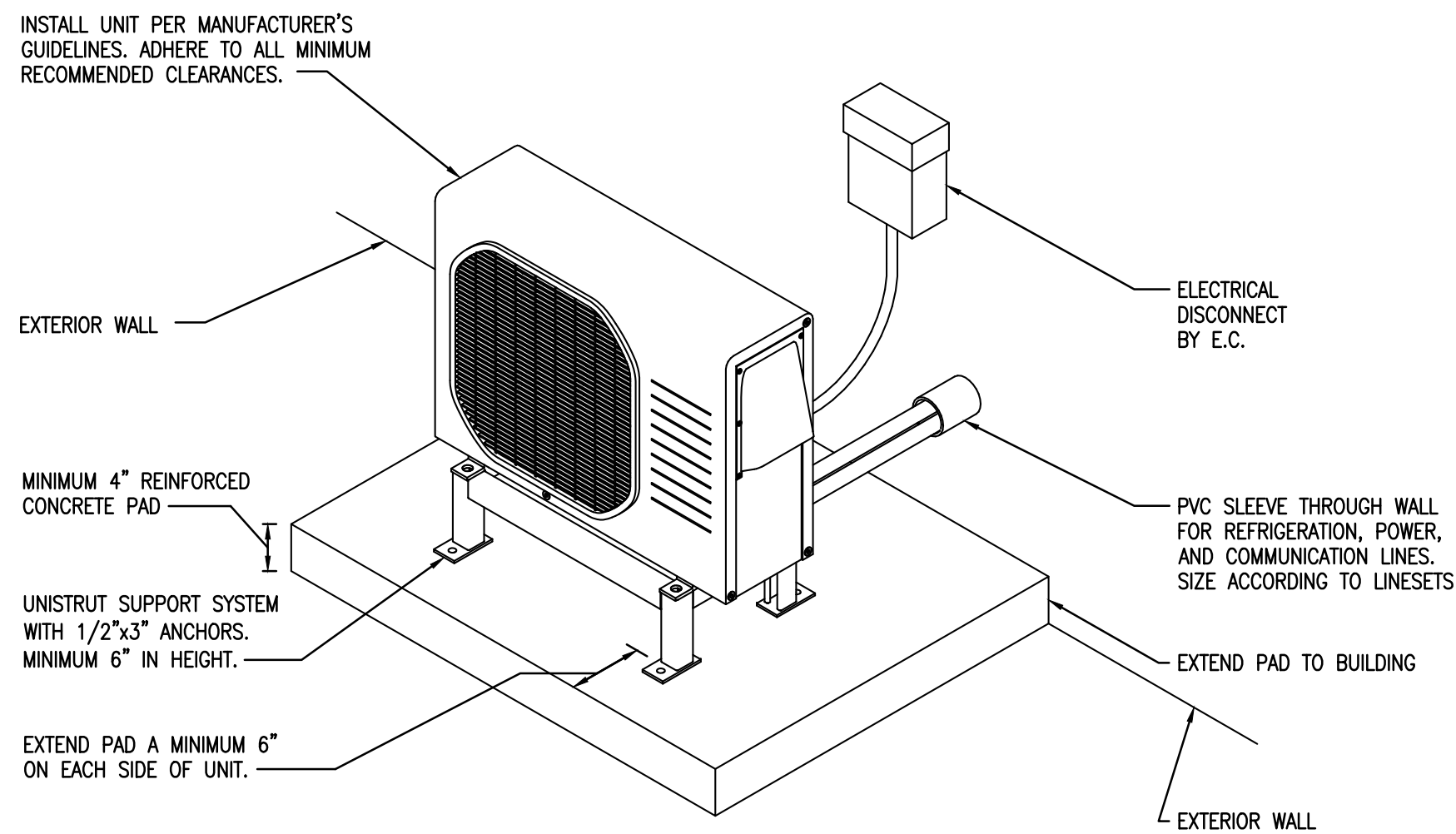


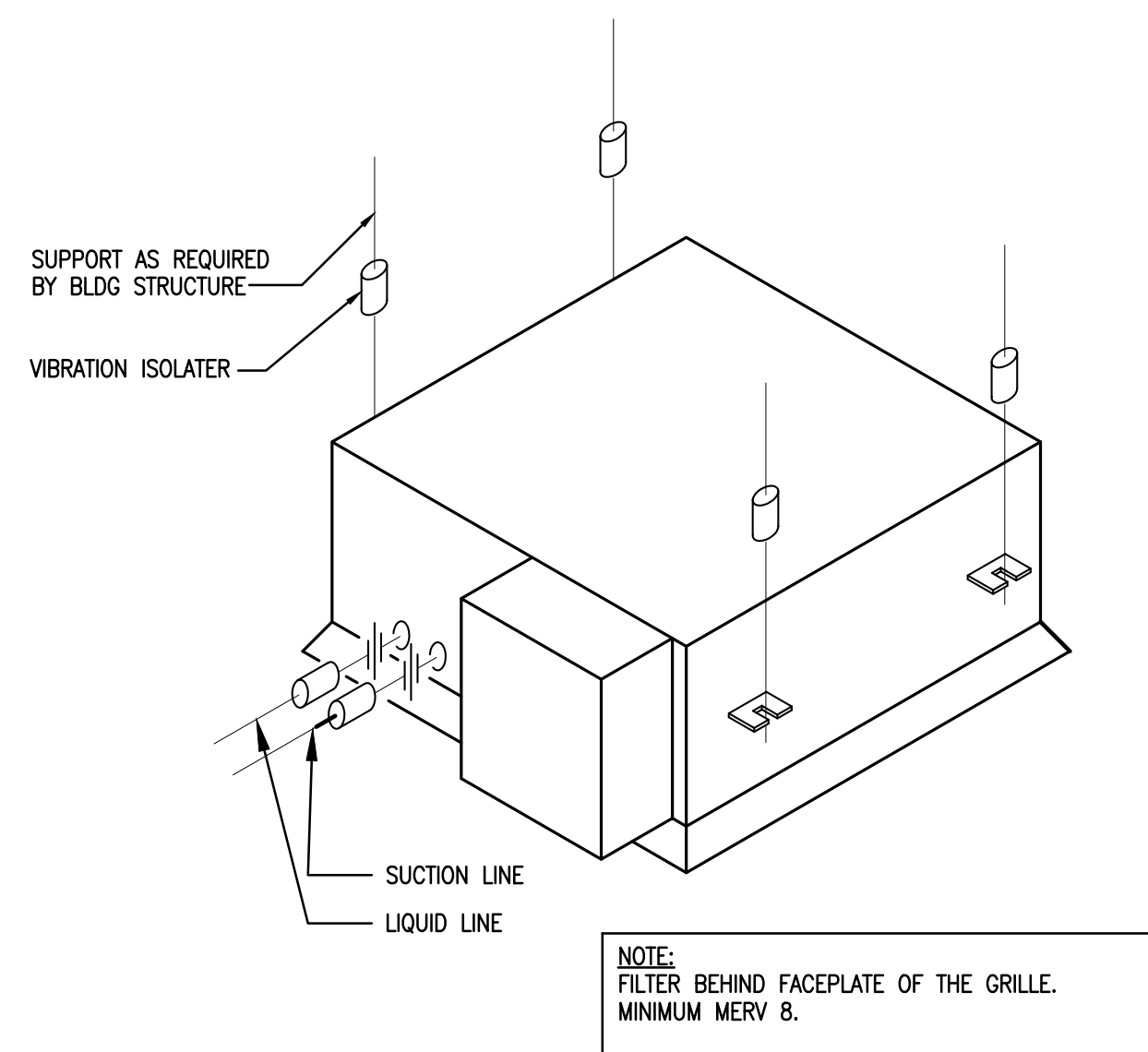
**2 POWER ROOF VENTILATOR DETAIL**  
NOT TO SCALE



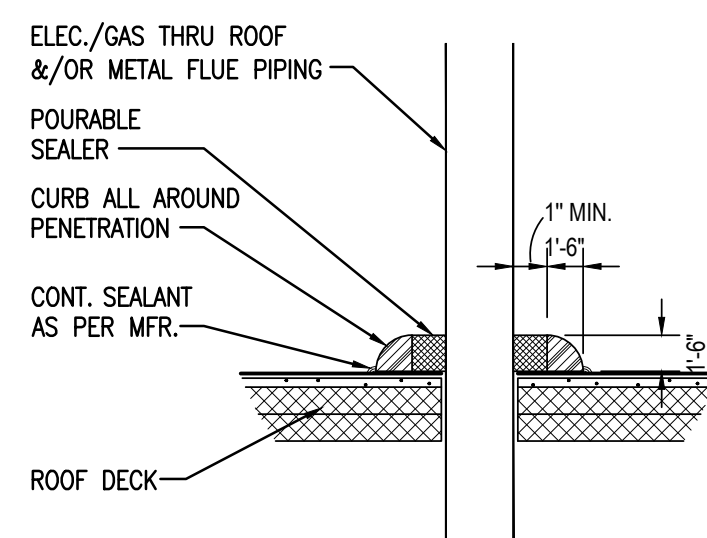
**1 TYPICAL DUCTWORK DETAILS**  
NOT TO SCALE



**4 MINI-SPLIT CONDENSING UNIT DIAGRAM**  
NOT TO SCALE



**3 CEILING CASSETTE FAN-COIL UNIT DETAIL**  
NOT TO SCALE



**5 PENETRATION DAMP/ SEALER POCKET DETAIL**  
NOT TO SCALE

**GENERAL MECHANICAL NOTES**

- ALL WORK SHALL BE IN COMPLIANCE WITH STATE AND LOCAL CODES.
- THE CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, LICENSES, ETC., NECESSARY FOR PROPER COMPLETION OF THE WORK.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- VERIFY ALL EXISTING CONDITIONS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN CONTRACT DRAWINGS AND ACTUAL CONDITIONS.
- EXISTING UTILITIES TO BE ABANDONED SHALL BE PROPERLY DISCONNECTED AND CAPPED AS REQUIRED BY CODE OR LOCAL ORDINANCE.
- THESE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. ADDITIONAL DATA SHALL BE FROM THE ENGINEER THROUGH WRITTEN CLARIFICATION ONLY. VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS BEFORE PROCEEDING WITH ANY PORTION OF ANY WORK. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND TRANSITIONS REQUIRED TO MEET EXISTING CONDITIONS.
- THE CONTRACTOR SHALL PERFORM WORK IN A SKILLED AND PROFESSIONAL MANNER.
- ALL CONTRACTORS ARE RESPONSIBLE TO FIELD COORDINATE WORK SCHEDULE WITH OWNER REPRESENTATIVE.
- THE CONTRACTOR SHALL WORK AND COORDINATE WITH THE OTHER TRADES.
- ALL EQUIPMENT SHALL BE NEW AND IN UNDAMAGED CONDITION. ANY EQUIPMENT FOUND DEFECTIVE SHALL BE IMMEDIATELY REMOVED FROM THE PROJECT.
- PROVIDE 3 COPIES OF AN OPERATION AND MAINTENANCE MANUAL FOR ALL MAJOR EQUIPMENT REQUIRING SERVICE. MAJOR EQUIPMENT INCLUDES BUT IS NOT LIMITED TO COILS, FANS, AND CONTROL WIRING DIAGRAMS. EACH PIECE OF EQUIPMENT SHALL STATE THE CONTRACT DATE AND THE NAME, ADDRESS AND PHONE NUMBER FOR THE PRIME CONTRACTOR, SUBCONTRACTOR PERFORMING THE INSTALLATION, AND THE LOCAL VENDOR FOR SPARE PARTS. THE MANUALS SHALL CONTAIN MAINTENANCE, INSTRUCTIONS REQUIRED FOR THE INSTALLED EQUIPMENT. MANUALS SHALL BE BOUND IN A THREE RING HARD COVER BINDER. O & M MANUALS SHALL BE SUBMITTED TO THE OWNER PRIOR TO FINAL WALK THROUGH OF THE PROJECT.
- PROVIDE 8 HOURS OF OWNER TRAINING FOR THE INSTALLED EQUIPMENT. TRAINING SHALL BE HELD ONLY AFTER ALL OF THE EQUIPMENT IS INSTALLED AND PROPER OPERATION IS VERIFIED.
- CONTRACTOR SHALL SUBMIT A CERTIFIED REPORT INDICATING SYSTEM PERFORMANCE INCLUDING, BUT NOT LIMITED TO, VOLTAGE AND AMPERAGE MEASUREMENTS OF ALL EQUIPMENT GREATER THAN 1/3 H.P., AIR BALANCE MEASUREMENTS OF OUTSIDE AIR DELIVERY, AIR HANDLING UNIT SUPPLY, SUPPLY DIFFUSERS, EXHAUST AND RETURN GRILLES. AIR BALANCE SHALL BE WITHIN 10% OF DESIGN CONDITIONS. THE REPORT CERTIFICATION SHALL BE AS FOLLOWS:  
  
I (name) of (company) CERTIFY THAT ALL MEASUREMENTS, FIGURES AND STATEMENTS INDICATED IN THIS REPORT WERE TAKEN BY ME OR UNDER MY SUPERVISION AND ARE ACCURATE AS OF (date). DESIGN FLOWS WERE BASED UPON PLANS DATED (xx/xx/xx).
- DUCT MATERIAL SHALL BE GALVANIZED OR ALUMINUM CONSTRUCTION IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD 2005 FOR THE PRESSURE AND SEAL CLASS LISTED IN DUCTWORK/INSULATION SCHEDULE.
- DUCT SIZES LISTED ON PLANS ARE THE REQUIRED CLEAR INTERIOR DIMENSIONS.
- SUPPLY AND RETURN BRANCH DUCTS MAY BE INSULATED FLEX DUCT IF THE RUN IS LESS THAN 5 FEET IN LENGTH. ANY LENGTHS OVER 5 FEET SHALL BE RIGID DUCTWORK. DUCT SHALL BE THE SAME SIZE AS THE LISTED DIFFUSER THROAT UNLESS NOTED OTHERWISE.
- PROVIDE VOLUME CONTROL DAMPERS WHERE INDICATED AND AT ALL TAKEOFFS, BOTH SUPPLY AND RETURN SYSTEMS, AND MAJOR DUCT RUNS. DAMPERS SHALL BE FACTORY-FABRICATED WITH ZINC-PLATED, DIE-CAST CONTROL HARDWARE. CONTROL HARDWARE SHALL INCLUDE HEAVY GAUGE DIAL AND HANDLE WITH ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING.
- PROVIDE TURNING VANES IN ALL RECTANGULAR ELBOWS CONFORMING TO SMACNA DUCT CONSTRUCTION STANDARD 2005 FIG. 4-2 TYPE RE-3 WITH STANDARD RADIUS. WHERE SPACE PERMITS, PROVIDE RADIUS ELBOWS IN ACCORDANCE WITH FIGURES 4-2, TYPE RE-1.
- ALL RECTANGULAR MAIN TO RECTANGULAR BRANCH CONNECTIONS, BOTH CONVERGING AND DIVERGING CONFIGURATIONS, SHALL HAVE A 45 DEG. ENTRY TAP CONSTRUCTED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD 2005 FIG. 4-6.
- DIFFUSER PATTERN 4-WAY UNLESS OTHERWISE INDICATED. PROVIDE FIBERGLASS DUCT INSULATION WITH VAPOR BARRIER AS SCHEDULED UNLESS NOTED OTHERWISE.
- MECHANICAL CONTRACTOR TO REPAIR ANY DAMAGE DONE TO THE FIRE PROOFING WHILE INSTALLING THE MECHANICAL TRADES. SEAL ALL PENETRATIONS THROUGH RATED STRUCTURES WITH UL LISTED FIRE SEAL DESIGNED FOR THE SPECIFIED APPLICATION.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OR AS OTHERWISE REQUIRED IN THE SPECIFICATIONS.
- MECHANICAL CONTRACTOR TO INCLUDE THE TEST AND BALANCE, AND ANY PERMIT FEES IN THEIR BID.
- MECHANICAL CONTRACTOR SHALL VERIFY ALL ROOFTOP EQUIPMENT WEIGHTS, SIZES, LOCATIONS AND OPENINGS REQUIRED AND SHALL COORDINATE ANY CHANGES WITH THE ARCHITECT.
- UPON PROJECT COMPLETION, RECORD (AS-BUILT) DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE BUILDING OWNER. ALL CHANGES MADE TO EQUIPMENT, DUCTWORK, AND GENERAL DESIGN SHALL BE NOTED ON THE DRAWINGS. PROVIDE IN PDF FORMAT OR PRINTED SET AT THE OWNER'S REQUEST.

**ABBREVIATIONS**

A	AMP	IN	INCH
ADD	ADDENDUM	LAT	LEAVING AIR TEMPERATURE
ADJ	ADJUSTABLE	LB	POUND
AFF	ABOVE FINISH FLOOR	LWT	LEAVING WATER TEMPERATURE
AHU	AIR HANDLER UNIT	MAX	MAXIMUM
AI	ANALOG INPUT	MBH	1000 BTU PER HOUR
ALT	ALTERNATE	MC	MECHANICAL CONTRACTOR
AO	ANALOG OUTPUT	MCA	MINIMUM CIRCUIT AMPS
APPRX	APPROXIMATE	MECH	MECHANICAL
ARCH	ARCHITECT, ARCHITECTURAL	MIN	MINIMUM
BDD	BACK DRAFT DAMPER	MFR	MANUFACTURER
BLDG	BUILDING	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR	OA	OUTSIDE AIR
C	CENTER	OC	ON CENTER
CD	CEILING DIFFUSER	P	PUMP
CFM	CUBIC FEET PER MINUTE	PC	PLUMBING CONTRACTOR
CO	CLEAN OUT	PLBG	PLUMBING
COND	CONDENSATE	PSI	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	QTY	QUANTITY
COP	COEFFICIENT OF PERFORMANCE	RA	RETURN AIR
DB	DRY BULB	REQD	REQUIRED
DET	DETAIL	REV	REVERSE OR REVISION
DG	DOOR GRILLE	RG	RETURN AIR GRILLE
DI	DIGITAL INPUT	RPM	REVOLUTIONS PER MINUTE
DIA	OR DIAMETER	RTU	ROOF TOP UNIT
DIM	DIMENSION	SA	SUPPLY AIR
DN	DOWN	SQFT	SQUARE FEET
DO	DIGITAL OUTPUT	SG	SUPPLY GRILLE
DWG	DRAWING	SP	STATIC PRESSURE
EA	EXHAUST AIR	SPEC	SPECIFICATIONS
EAT	ENTERING AIR TEMPERATURE	SS	STAINLESS STEEL
EC	ELECTRICAL CONTRACTOR	T&B	TEST AND BALANCE
EER	ENERGY EFFICIENCY RATIO	TEMP	TEMPERATURE OR TEMPORARY
EF	EXHAUST FAN	TG	TRANSFER GRILLE
EG	EXHAUST GRILLE	TYP	TYPICAL
ELEC	ELECTRICAL	V	VOLT
ERV	ENERGY RECOVERY VENTILATOR	VAR	VARIABLE OR VARIES
ESP	EXTERNAL STATIC PRESSURE	VEL	VELOCITY
EWT	ENTERING WATER TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
EXIST	EXISTING	VTR	VENT THRU ROOF
FA	FRESH AIR	W/	WITH
FBM	FEET PER MINUTE	W/IN	WITHIN
FT	FOOT (FEET)	W/O	WITHOUT
GA	GAUGE/GAGE	WB	WET BULB
GALV	GALVANIZED	WC	WATER COLUMN (INCHES OF)
GC	GENERAL CONTRACTOR	WT	WEIGHT
GPM	GALLONS PER MINUTE		
GYP	GYP-SUM		
HORIZ	HORIZONTAL		
HP	HORSEPOWER		
HT	HEIGHT		
I/O	INPUT/OUTPUT		

**MECHANICAL HVAC LEGEND**

EXHAUST AIR DUCT (DOWN)		EXHAUST AIR DUCT (UP)	
RETURN AIR DUCT (DOWN)		RETURN AIR DUCT (UP)	
OUTSIDE OR SUPPLY AIR DUCT (DOWN)		OUTSIDE OR SUPPLY AIR DUCT (UP)	
DUCT SIZE		NEW DUCTWORK	
FLEX DUCT		EXISTING DUCTWORK	
DEMOLITION LINETYPE		SUPPLY AIR CEILING DIFFUSER	
RETURN AIR GRILLE		EXHAUST AIR GRILLE	
DIFFUSER, GRILLE, AND REGISTER CALL-OUTS		SCHEDULED EQUIPMENT TAG	
MANUAL BALANCING DAMPER		PIPE PENETRATION THROUGH FIRE RATED WALL	
FIRE DAMPER		SMOKE DAMPER	
MOTORIZED DAMPER		FIRE/SMOKE DAMPER	
THERMOSTAT		HUMIDISTAT	
REMOTE SENSOR		CARBON DIOXIDE SENSOR	
DUCT SMOKE DETECTOR			

**MECHANICAL SHEET INDEX**

M000	MECHANICAL TITLE SHEET
M001	MECHANICAL SPECIFICATIONS
MD101	MECHANICAL DEMOLITION PLAN
M101	MECHANICAL DUCTWORK PLAN
M201	MECHANICAL ROOF PLAN
M601	MECHANICAL SCHEDULES







**MECHANICAL SPECIFICATIONS**

**PART I: GENERAL**

- A. THE CONTRACTOR SHALL FURNISH, INSTALL, PROVIDE AND MAKE OPERATIVE ALL EQUIPMENT, MATERIALS, SUPERVISION LABOR, AND ANY AND ALL ITEMS NECESSARY FOR THE PROPER INSTALLATION OF A CORRECTLY FUNCTIONING HEATING VENTILATING AND AIR CONDITIONING SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- B. SMALL DETAILS NOT USUALLY INDICATED ON THE DRAWINGS OR SPECIFIED, BUT WHICH ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE MECHANICAL SYSTEM, SHALL BE INCLUDED IN THE WORK AND IN THE CONTRACTOR'S ESTIMATE THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL INSTALL THE EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT WITH THE MANUFACTURER'S RECOMMENDATIONS, IT WILL BE THE CONTRACTOR'S DUTY TO BRING THIS TO THE ATTENTION OF THE ARCHITECT.
- C. ANY ALTERATIONS TO THE PLANS CAUSED BY THE USE OF ALTERNATIVE EQUIPMENT THAT WAS NOT ORIGINALLY SCHEDULED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**PART II: CODE REQUIREMENTS**

- A. ORDINANCES, PERMITS AND CODES: THE WORKMANSHIP AND MATERIALS COVERED BY THESE SPECIFICATIONS SHALL CONFORM TO ALL REGULATIONS OF ALL THE AUTHORITIES HAVING JURISDICTION WHETHER SHOWN ON THE DRAWINGS OR NOT.

**PART III: PERMITS**

- A. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, CONNECTION AND INSPECTION FEES AS REQUIRED FOR THE COMPLETE INSTALLATION OF THE MECHANICAL SYSTEMS.

**PART IV: SPECIFICATIONS AND DRAWINGS**

- A. THE PLANS DEPICT THE LOCATION OF ALL FIXTURES AND EQUIPMENT AND ARE INTENDED TO INDICATE THE GENERAL INTENT OF THE WORK IN SCOPE, LAYOUT AND QUALITY OF WORKMANSHIP. THEY ARE NOT INTENDED TO SHOW IN MINUTE DETAIL EVERY AND ALL ACCESSORIES INTENDED FOR THE PURPOSE OF EXECUTION OF THE WORK, BUT THE CONTRACTOR SHALL UNDERSTAND THAT SUCH DETAILS ARE PART OF THIS WORK.
- B. THE LOCATION OF DUCTS AND EQUIPMENT AS SHOWN ON THE DRAWINGS, IS DIAGRAMMATIC AND SCHEMATIC AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN WORKING LAYOUT TO ELIMINATE ALL STRUCTURAL INTERFERENCES WITHOUT DETRIMENT TO THE STRUCTURAL AND ARCHITECTURAL COMPONENTS OF THE BUILDING.
- C. THE CONTRACTOR SHALL CAREFULLY VERIFY ALL MEASUREMENTS OF THE SITE, DETERMINE THE EXACT LOCATION OF ALL CHASES AND OPENINGS REQUIRED BY HIS WORK AND SHALL FURNISH AND SET ALL SLEEVES, INSERTS AND HANGERS AS REQUIRED FOR THE WORK HEREIN.
- D. ALL CONTRACTORS SUBMITTING PROPOSALS FOR THIS WORK SHALL FIRST EXAMINE THE SITE AND ALL CONDITIONS. ALL PROPOSALS SHALL TAKE INTO CONSIDERATION ALL SUCH CONDITIONS AS MAY THE WORK UNDER THIS CONTRACT.

**PART V: COORDINATION AND CONFLICTS**

- A. THE CONTRACTOR SHALL COORDINATE HIS WORK SO THAT IT DOES NOT INTERFERE WITH THE WORK OF THE OTHER TRADES. IT SHALL BE THE CONTRACTOR'S DUTY TO SEE THAT THE WORK IS PERFORMED IN A TIMELY MANNER.
- B. IN THE EVENT THAT THERE IS A DISCREPANCY OR CONFLICT IN THE PLANS OR SPECIFICATIONS IT SHALL BE THE CONTRACTOR'S DUTY TO NOTIFY THE ARCHITECT OF THIS CONFLICT OR DISCREPANCY PRIOR TO HIS ACCEPTANCE OF THE PROJECT. UNLESS EXPRESSLY STIPULATED, NO ADDITIONAL ALLOWANCES WILL BE MADE IN THE CONTRACTOR'S AND/OR MANUFACTURER'S FAVOR BY VIRTUE OF ERRORS, AMBIGUITIES AND/OR OMISSIONS WHICH WERE KNOWN TO OR WHICH SHOULD HAVE BEEN KNOWN OR DISCOVERED DURING THE PREPARATION OF THE BID ESTIMATE AND DIRECTED TO THE ARCHITECT'S ATTENTION IN A TIMELY MANNER.

**PART VI: EXPERIENCE**

- A. THE CONTRACTOR SHALL BE A REPUTABLE FIRM REGULARLY DOING THIS TYPE OF WORK, WITH SKILLED MECHANICS AND EQUIPMENT CAPABLE OF PROVIDING A FIRST CLASS INSTALLATION IN ACCORDANCE WITH ACCEPTABLE MODERN PRACTICES.

**PART VII: EQUIPMENT**

- A. SUBMITTALS
  - 1. SUBMITTALS MUST BE REVIEWED AND APPROVED BY SUBMITTING CONTRACTOR.
  - 2. SUBMIT FOR ALL EQUIPMENT AND SYSTEMS AS INDICATED IN THE RESPECTIVE SPECIFICATION SECTIONS, MARKING EACH SUBMITTAL WITH THAT SPECIFICATION SECTION NUMBER. MARK GENERAL CATALOG SHEETS AND DRAWINGS TO INDICATE SPECIFIC ITEMS BEING SUBMITTED AND PROPER IDENTIFICATION OF EQUIPMENT BY NAME AND/OR NUMBER, AS INDICATED IN THE CONTRACT DOCUMENTS.
  - 3. SUBMIT ALL SHOP DRAWINGS IN PDF FORMAT.

**B. DEMOLITION**

- 1. PERFORM ALL DEMOLITION AS NEEDED TO ACCOMPLISH NEW WORK.
- 2. REFER TO DEMOLITION SECTION OF SPECIFICATIONS AND TO THE DRAWINGS FOR AREAS AND EQUIPMENT BEING REMODELED.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR ALL CHARGES, FEES ETC. INCURRED AS A RESULT OF THE MECHANICAL PORTION OF THE DEMOLITION.
- 4. PRIOR TO DEMOLITION OF ALTERATION OF STRUCTURES, THE FOLLOWING SHALL BE ACCOMPLISHED:
  - a. COORDINATE SEQUENCING WITH OWNER AND THE OTHER CONTRACTORS.

- b. COORDINATE MEANS TO SEPARATE CONSTRUCTION ZONES FROM NON-RENOVATED ZONES TO PREVENT THE SPREAD OF DUST, FUMES AND DEBRIS.
- c. COORDINATE MEANS TO PROVIDE EXHAUST AND MAKEUP AIR TO MAINTAIN THE CONSTRUCTION ZONE AT AN ADEQUATE NEGATIVE PRESSURE TO CONTAIN ALL CONSTRUCTION DUST AND FUMES.
- d. EXCEPT AS NOTED OTHERWISE, REMOVE FROM THE PREMISES, ALL MATERIALS AND EQUIPMENT REMOVED IN THE DEMOLITION WORK.
- e. EQUIPMENT NOTED TO BE REMOVED AND TURNED OVER TO THE OWNER, SHALL BE DELIVERED TO THE OWNER AT A PLACE AND TIME HE SO DESIGNATES.
- f. WHERE THE MATERIALS ARE TO BE TURNED OVER TO THE OWNER OR REUSED AND INSTALLED BY THE CONTRACTOR, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE CONDITION OF THE MATERIALS AND EQUIPMENT EQUAL TO THAT EXISTING BEFORE WORK BEGAN. DAMAGED MATERIALS OR EQUIPMENT SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- g. SURVEY AND RECORD CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEMOLITION OPERATIONS. AFTER DEMOLITION OPERATIONS ARE COMPLETED, SURVEY CONDITIONS AGAIN AND RESTORE EXISTING FACILITIES TO THEIR PRE-DEMOLITION CONDITION, AT NO ADDITIONAL COST TO THE OWNER.
- h. SALVAGE EQUIPMENT SCHEDULED FOR REUSE IN NEW WORK OR SCHEDULED TO BE DELIVERED TO OWNER'S STORAGE FACILITY.

**C. DUCT PENETRATIONS:**

- 1. ANNULAR SPACE BETWEEN DUCT (WITH OR WITHOUT INSULATION) AND THE NON-RATED PARTITION OR FLOOR OPENING SHALL NOT BE LARGER THAN 2". WHERE EXISTING OPENINGS HAVE AN ANNULAR SPACE LARGER THAN 2", THE SPACE SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION TO WITHIN 2" AROUND THE DUCT. INSULATION TO MAINTAIN CONTINUOUS VAPOR BARRIER THROUGH PENETRATION.
- 2. WHERE SHOWN OR SPECIFIED, PACK ANNULAR SPACE WITH FIBERGLASS BATT INSULATION OR MINERAL WOOL INSULATION. PROVIDE 4" SHEET METAL ESCUTCHEON AROUND DUCT ON BOTH SIDES OF PARTITION OR FLOOR TO COVER ANNULAR SPACE. INSULATION TO MAINTAIN CONTINUOUS VAPOR BARRIER THROUGH PENETRATION.

**D. SEALING AND FIRESTOPPING**

**1. NON-RATED PARTITIONS:**

- a. DUCT PENETRATIONS THROUGH NON-RATED PARTITIONS SHALL REQUIRE SHEET METAL ESCUTCHEONS WITH FIBERGLASS OR MINERAL WOOL INSULATION FILL FOR SPACES THAT INCLUDE JANITOR CLOSETS, TOILET ROOMS, MECHANICAL ROOMS, CONFERENCE ROOMS, PRIVATE CONSULTATION ROOMS, AND WHERE NOTED ON DRAWINGS ELSEWHERE.

**PART VIII: INSULATION**

- A. ALL INSULATION, INCLUDING JACKET, OR FACING AND ADHESIVE USED TO ADHERE FACING OR JACKET TO THE INSULATION SHALL HAVE A COMPOSITE FIRE AND SMOKE HAZARD RATING TESTED BY THE PROCEDURE RECOMMENDED BY ASTM E84, NFPA 255 OR U.L. 723, NOT EXCEEDING FLAME SPREAD 25, SMOKE DEVELOPED 50. ALL INSULATION ACCESSORIES SHALL ALSO HAVE THE RATINGS LISTED ABOVE.
- B. RIGID FIBERGLASS INSULATION: MINIMUM NOMINAL DENSITY OF 3 LBS. PER CU. FT., AND THERMAL CONDUCTIVITY OF NOT MORE THAN 0.23 AT 75 DEGREES F, MINIMUM COMPRESSIVE STRENGTH OF 25 PSF AT 10% DEFORMATION, RATED FOR SERVICE TO 450 DEGREES F.
- C. ALL INSULATION TO CREATE A CONTINUOUS VAPOR BARRIER BETWEEN MAIN AND BRANCH DUCTWORK.
- D. ACCEPTABLE MANUFACTURERS ARE OWENS CORNING, JOHNS MANVILLE, ARMSTRONG, OR CERTAINTED.

**PART IX: DUCTWORK**

- A. ALL DUCTWORK SHALL BE CONSTRUCTED OF THE BEST BLOOM GALVANIZED SHEET METAL SHEETS, FREE FROM BLISTER IMPERFECTIONS, AND WITH GAUGES, JOINTS, BRACING AND SUPPORTS TO BE IN STRICT ACCORDANCE WITH SMACNA STANDARDS, 1993 EDITION. PROVIDE "PAINT GRIP" FINISH FOR DUCTWORK THAT WILL BE PAINTED.
  - 1. GALVANIZED STEEL SHEET: USE ASTM A 653 GALVANIZED STEEL SHEET OF LOCK FORMING QUALITY. GALVANIZED COATING TO BE 1.25 OUNCES PER SQUARE FOOT, BOTH SIDES OF SHEET, G90 IN ACCORDANCE WITH ASTM A90. PROVIDE "PAINT GRIP" FINISH FOR DUCTWORK THAT WILL BE PAINTED.
- B. CROSS BREAK FLAT SIDES OF DUCTS. REDUCTION IN DUCT SIZES SHALL BE MADE WITH A MAXIMUM SLOPE OF 30 DEGREES.
- C. DOUBLE THICKNESS TURNING VANES SHALL BE USED IN ALL 90 DEGREE SUPPLY AIR ELBOWS.
- D. DUCT HANGERS FOR HORIZONTAL DUCT SHALL NOT BE OVER 8'-0" O.C. #16 U.S. GAUGE, ONE INCH WIDE FOR DUCTS 35" INCHES GREATEST DIMENSION, 6'-0" UP TO 59" GREATEST DIMENSION, AND 4'-0" FOR DUCTS OVER 60". DUCT HANGERS SHALL EXTEND TO THE BOTTOM OF THE DUCT. SUPPORTS SHALL BE 18 GAUGE. EACH SECTION OF DUCT SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS.
- E. ALL DUCTWORK SHALL BE MADE AIRTIGHT WITH MASTIC AND PRESSURE SENSITIVE TAPE.
- F. ALL ACCESSORY ITEMS SUCH AS TURNING VANES, DAMPER, ETC., SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS.
- G. ALL EXPOSED DUCTWORK TO BE PAINTED. COLOR BY ARCHITECT. SEAL ALL JOINTS AIR-TIGHT WITH NON-SILICONE SEALANT.
- H. DUCT SEALANT

- 1. SILICONE SEALANTS ARE NOT ALLOWED IN ANY TYPE OF DUCTWORK INSTALLATION.
- 2. INSTALL SEALANTS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, PAYING SPECIAL ATTENTION TO TEMPERATURE LIMITATIONS. ALLOW SEALANT TO FULLY CURE BEFORE PRESSURE TESTING OF DUCTWORK, OR BEFORE STARTUP OF AIR HANDLING SYSTEMS.

**I. GASKETS**

- 9. 2 INCH PRESSURE CLASS AND LOWER: SOFT NEOPRENE OR BUTYL GASKETS IN COMBINATION WITH DUCT SEALANT FOR FLANGED JOINTS.

**PART X: REINFORCEMENT:**

- J. ALL DUCTS REQUIRING REINFORCEMENT SHALL BE REINFORCED ACCORDING TO THE LATEST EDITION OF THE SMACNA MANUAL. MATERIALS FOR THE REINFORCING SHALL BE GALVANIZED STEEL. ALL SCREWS AND WASHERS SHALL BE PLATED OR GALVANIZED.

**PART XI: AIR DISTRIBUTION:**

- A. SHALL BE AS SCHEDULED ON THE DRAWINGS. FINISH SHALL BE WHITE. NC SHALL NOT EXCEED 24. ACCEPTABLE MANUFACTURER SHALL BE TITUS, PRICE, CARNES, KRUEGER.

**B. EGGRATE GRILLE**

- 1. ALUMINUM CONSTRUCTION WITH FRAME TYPE APPROPRIATE TO INSTALLATION.
- 2. GRILLE FACE 1/2" X 1/2" OR 1" X 1" GRID PATTERN 1" DEEP WITH A MINIMUM OF 85% FREE AREA.
- 3. GRILLE SIZES AND FINISHES AS SHOWN ON DRAWINGS AND/OR AS SCHEDULED.
- 4. WHITE, BAKED ENAMEL FINISH OR POWDER COAT FINISH, UNLESS OTHERWISE INDICATED.
- 5. SCREW HOLES ON SURFACE COUNTER SUNK TO ACCEPT RECESSED TYPE SCREWS.

**PART XII: DUCT ACCESS:**

**A. MANUAL VOLUME DAMPERS**

- 1. SHALL BE MANUFACTURED BY RUSKIN, VENT PRODUCTS, AIR BALANCE, OR GREENHECK. SUBSTITUTIONS MUST MEET SPECIFICATIONS AND BE APPROVED PRE BIDDING BY THE ENGINEER.
- 2. DAMPERS MUST BE CONSTRUCTED IN ACCORDANCE WITH SMACNA FIG. 2-12, FIG. 2-13, AND NOTES RELATING TO THESE FIGURES, EXCEPT AS MODIFIED BELOW.
- 3. REINFORCE ALL BLADES TO PREVENT VIBRATION, FLUTTER, OR OTHER NOISE. CONSTRUCT DAMPERS IN MULTIPLE SECTIONS WITH MULLIONS WHERE WIDTH IS OVER 48 INCHES. USE RIVETS OR TACK WELDS TO SECURE INDIVIDUAL COMPONENTS. SHEET METAL SCREWS WILL NOT BE ACCEPTED. PROVIDE OPERATORS WITH LOCKING DEVICES AND DAMPER POSITION INDICATORS FOR EACH DAMPER. USE AN ELEVATED PLATFORM ON INSULATED DUCTS. PROVIDE END BEARINGS OR BUSHINGS FOR ALL VOLUME DAMPER RODS PENETRATING DUCTWORK CONSTRUCTED TO A 3" W.C. PRESSURE CLASS OR ABOVE.

**B. TURNING VANES**

- 1. CONSTRUCT TURNING VANES AND RUNNERS FOR SQUARE ELBOWS IN ACCORDANCE WITH SMACNA FIG. 2-3 AND FIG. 2-4 EXCEPT USE ONLY AIRFOIL TYPE VANES. CONSTRUCT TURNING VANES FOR SHORT RADIUS ELBOWS AND ELBOWS WHERE ONE DIMENSION CHANGES IN THE TURN IN ACCORDANCE WITH SMACNA FIG. 2-5 AND FIG. 2-6.

**PART XIII: TEST AND BALANCE:**

- A. THE CONTRACTOR WILL SEPARATELY CONTRACT WITH AN INDEPENDENT TEST AND BALANCE AGENCY TO PERFORM ALL TESTING, ADJUSTING, AND BALANCING OF AIR SYSTEMS REQUIRED FOR THIS PROJECT. TESTING PROCEDURES TO BE PERFORMED IN ACCORDANCE WITH AABC OR NEBB.

- 1. TEST, ADJUST, AND BALANCE ALL AIR SYSTEMS SO THAT EACH ROOM, PIECE OF EQUIPMENT OR TERMINAL DEVICE MEETS THE DESIGNED REQUIREMENTS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
- 2. PERMANENTLY MARK EQUIPMENT SETTINGS, INCLUDING DAMPER POSITIONS, CONTROL SETTINGS, AND SIMILAR DEVICES ALLOWING SETTINGS TO BE RESTORED. SET AND LOCK MEMORY STOPS.
- 3. QUALIFICATIONS: AN INDEPENDENT FIRM SPECIALIZING IN THE TESTING AND BALANCING OF HVAC SYSTEMS FOR A MINIMUM OF 3 YEARS.
- 4. SUBMIT TESTING, ADJUSTING, AND BALANCING REPORTS BEARING THE SEAL AND SIGNATURE OF THE NEBB OR AABC CERTIFIED TEST AND BALANCE SUPERVISOR. DISTRIBUTE COPIES OF THE REPORT TO THE CONTRACTOR, THE LEAD CONTRACTOR, THE OWNER, AND THE PRIME ARCHITECT/ENGINEER.

**PART XIV: WALK THRU:**

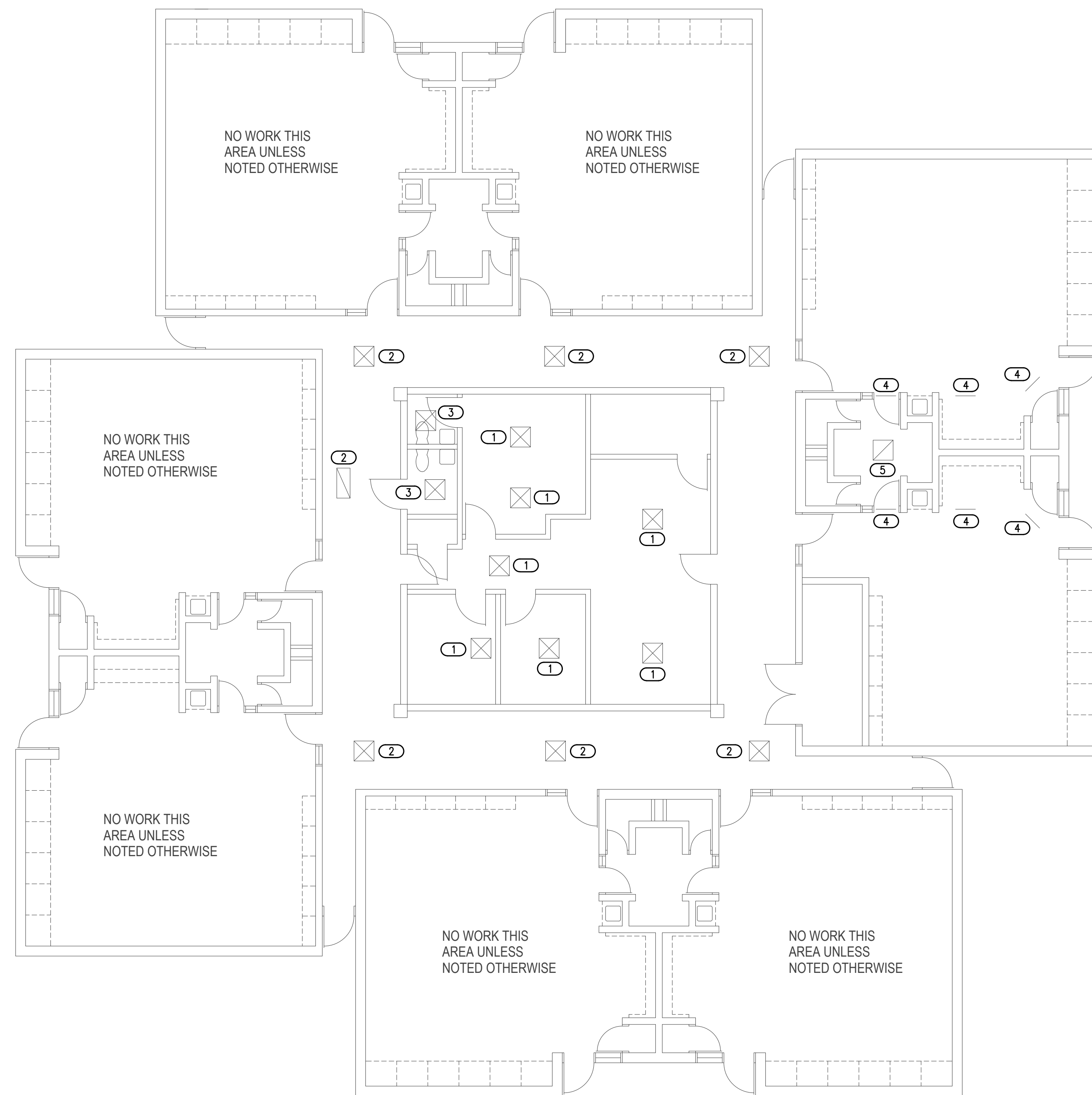
- A. THE GENERAL CONTRACTOR SHALL PERFORM AN INSTRUCTIONAL WALK THRU WITH THE OWNER TO EXPLAIN THE OPERATION OF THE HVAC SYSTEM.
- B. PROVIDE A MINIMUM OF 4 HOURS OF OWNER TRAINING. TRAINING TO INCLUDE HOW TO OPERATE AND MAINTAIN EQUIPMENT.





GENERAL NOTES	
1.	FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
2.	MECHANICAL CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. LOCATIONS OF EXISTING EQUIPMENT ARE DIAGRAMMATICAL IN NATURE.
3.	M.C. SHALL REPAIR AND/OR REPLACE ANY UNINTENDED DAMAGES DONE TO SURROUNDING AREAS DUE TO DEMOLITION.
4.	EXISTING T-STAT TO REMAIN COORDINATE WITH ARCHITECT AND G.C.
5.	M.C. SHALL PERFORM TAB ON EXISTING SYSTEMS TO GET BASELINE FLOWS FOR FUTURE ADJUSTMENTS. REFER TO KEYED NOTE FOR MORE INFORMATION.

KEYED NOTES	
1	DEMOLISH DIFFUSER BACK TO MAIN BRANCH AND CAP FOR FUTURE USE. PRIOR TO DEMOLISHING GRILLE, M.C. SHALL PERFORM TAB TO GET BASELINE AIRFLOW.
2	EXISTING GRILLE TO BE DEMOLISHED AND DUCTWORK CAPPED FOR NEW GRILLES. REFER TO M101 FOR MORE INFORMATION.
3	REMOVE EXHAUST FAN AND DUCTWORK ASSOCIATED WITH RESTROOM.
4	SIDEWALL GRILLE AND DUCTWORK SHALL BE DEMOLISHED BACK TO RTU RISER. PRIOR TO DEMOLISHING GRILLE, M.C. SHALL PERFORM TAB TO GET BASELINE AIRFLOW.
5	DEMOLISH RETURN GRILLE. PRIOR TO DEMOLISHING GRILLE, M.C. SHALL PERFORM TAB TO GET BASELINE AIRFLOW.



**1 MECHANICAL DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"



KS

drawn by

DG

checked by

MAY 2024

date

revisions

MOORE PUBLIC SCHOOLS  
BOARD OF EDUCATION  
MOORE, OKLAHOMA



RED OAK  
ELEMENTARY SCHOOL  
SECURITY UPGRADES

sheet no:

**MD101**

**Salas O'Brien**  
2600 Van Buren St., Suite 2635  
Norman, OK 73072  
Salas O'Brien Registration: CA# 7058  
Expiration Date: 6/30/2023  
Salas O'Brien Project Number: 2024-02321

OWNERSHIP USE OF DOCUMENTS:  
AGP EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS OF ALL PLANS AND DRAWINGS DESIGNED AND/OR PRODUCED. PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED IN ANY FORM OR MANNER WITHOUT THE EXPRESSED WRITTEN CONSENT OF AGP.



KS  
drawn by  
DG  
checked by  
MAY 2024  
date  
revisions

MOORE PUBLIC SCHOOLS  
BOARD OF EDUCATION  
MOORE, OKLAHOMA



RED OAK  
ELEMENTARY SCHOOL  
SECURITY UPGRADES

sheet no:

## M101

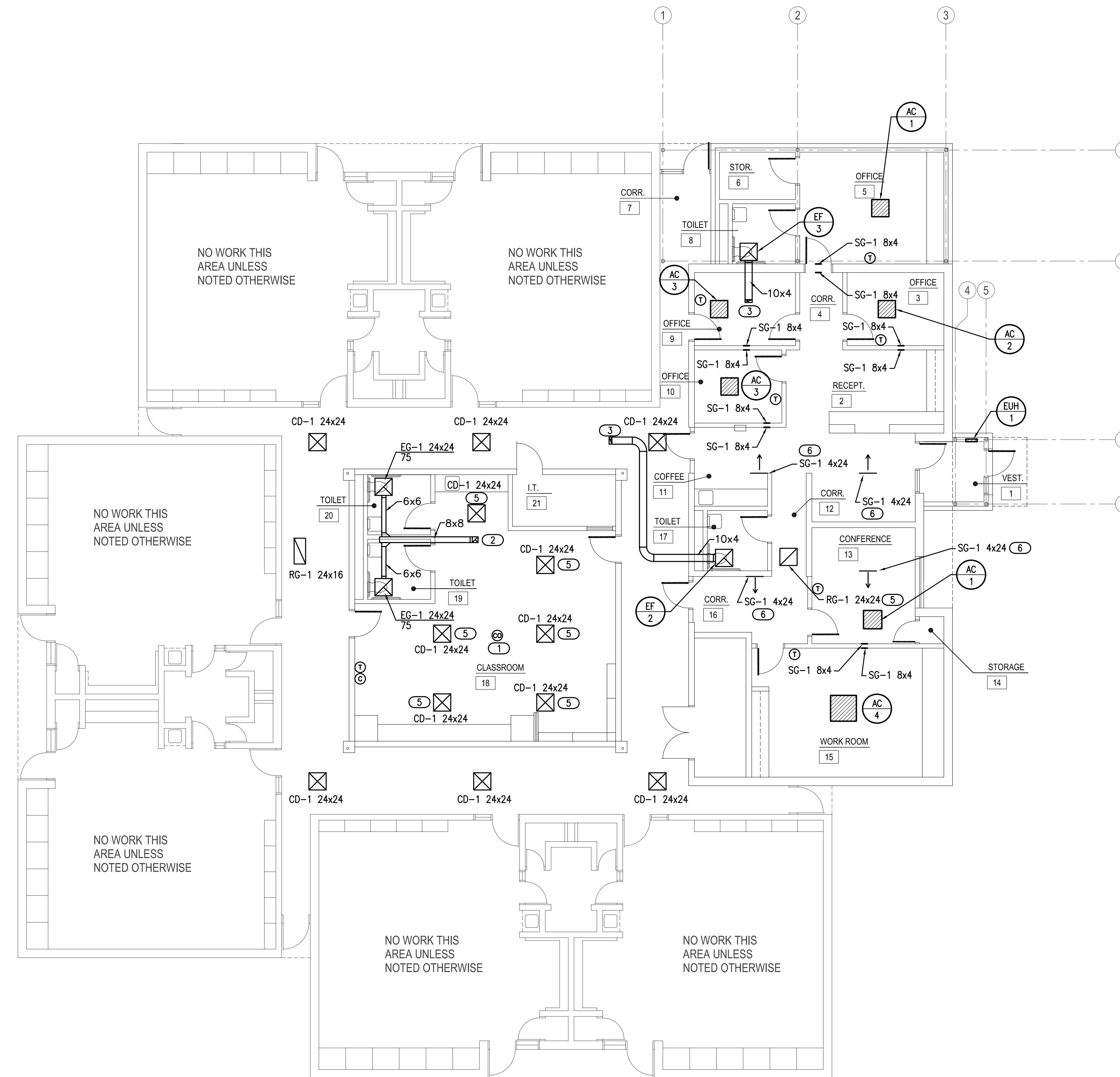
OWNERSHIP USE OF DOCUMENTS:  
AGP EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS OF ALL PLANS AND DRAWINGS DESIGNED AND/OR PRODUCED. PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED IN ANY FORM OR MANNER WITHOUT THE EXPRESSED WRITTEN CONSENT OF AGP.

### GENERAL NOTES

- COORDINATE INSTALLATION OF EQUIPMENT AND DUCTWORK WITH ALL TRADES.
- COORDINATE LOCATION OF THERMOSTATS WITH E.C. ROUGH-IN BY E.C.
- M.C. SHALL PROVIDE CARBON MONOXIDE SENSORS WHERE NEEDED PER CODE FOR EXISTING EQUIPMENT THROUGHOUT THE ENTIRE BUILDING. M.C. IS RESPONSIBLE FOR SURVEYING ENTIRE BUILDING AND LOCATING FUEL BURNING HVAC EQUIPMENT FOR SENSOR LOCATIONS. COORDINATE WITH E.C. FOR POWER CONNECTIONS.
- THERMOSTAT EXISTING TO REMAIN. M.C. SHALL COORDINATE WITH G.C. IN NEW LOCATION IF EXISTING WALL STAT IS DEMOLISHED.
- ALL DOORS IN ADMIN AREA SHALL BE UNDERCUT IN LIEU OF UNDERCUT LOUVER ON DOOR IS REQUIRED. COORDINATE WITH ARCHITECT AND G.C. FOR FINAL DIRECTION.
- ROUTE CONDENSATE LINE TO THE NEAREST OPEN SITE DRAIN. SLOPE PER CODE.
- CASSETTE UNIT SHALL BE A MAXIMUM HEIGHT OF 10". ANY MANUFACTURER UNITS HIGHER THAN 10" WILL NOT FIT IN LIMITED CEILING SPACE. M.C. TO VERIFY PRIOR TO PURCHASE AND INSTALLATION THE MAX HEIGHT OF CASSETTE IN CEILING SPACE.

### KEYED NOTES

- CARBON MONOXIDE DETECTOR TO BE INSTALLED ACCORDING TO ALL APPLICABLE CODES. DETECTOR SHALL BE INSTALLED CENTRALLY ON CEILING. ALSO INCLUDE BATTERY BACKUP IN EVENT PRIMARY POWER IS INTERRUPTED. ALARM SIGNAL SHALL BE ROUTED TO ADMINISTRATION OFFICE. COORDINATE WITH E.C. WITH PRIMARY POWER CONNECTION AND SYSTEM CONNECTION.
- ROUTE 8x8 DUCT UP TO CONNECT TO THROAT OPENING OF EXHAUST FAN.
- ROUTE 10x4 DUCT UP TO CONNECT TO THROAT OPENING OF ROOF CAP.
- M.C. SHALL INSTALL BYPASS DUCTWORK AND MOTORIZED DAMPER CONNECTING SUPPLY AND RETURN DUCTWORK.
- REBALANCE NEW GRILLE CFM.
- REBALANCE NEW SIDEWALL GRILLE CFM.



## 1 MECHANICAL DUCTWORK PLAN

SCALE: 1/8" = 1'-0"





KS

drawn by

DG

checked by

MAY 2024

date

revisions

MOORE PUBLIC SCHOOLS  
BOARD OF EDUCATION  
MOORE, OKLAHOMA



RED OAK  
ELEMENTARY SCHOOL  
SECURITY UPGRADES

sheet no:

## M201

OWNERSHIP USE OF DOCUMENTS:

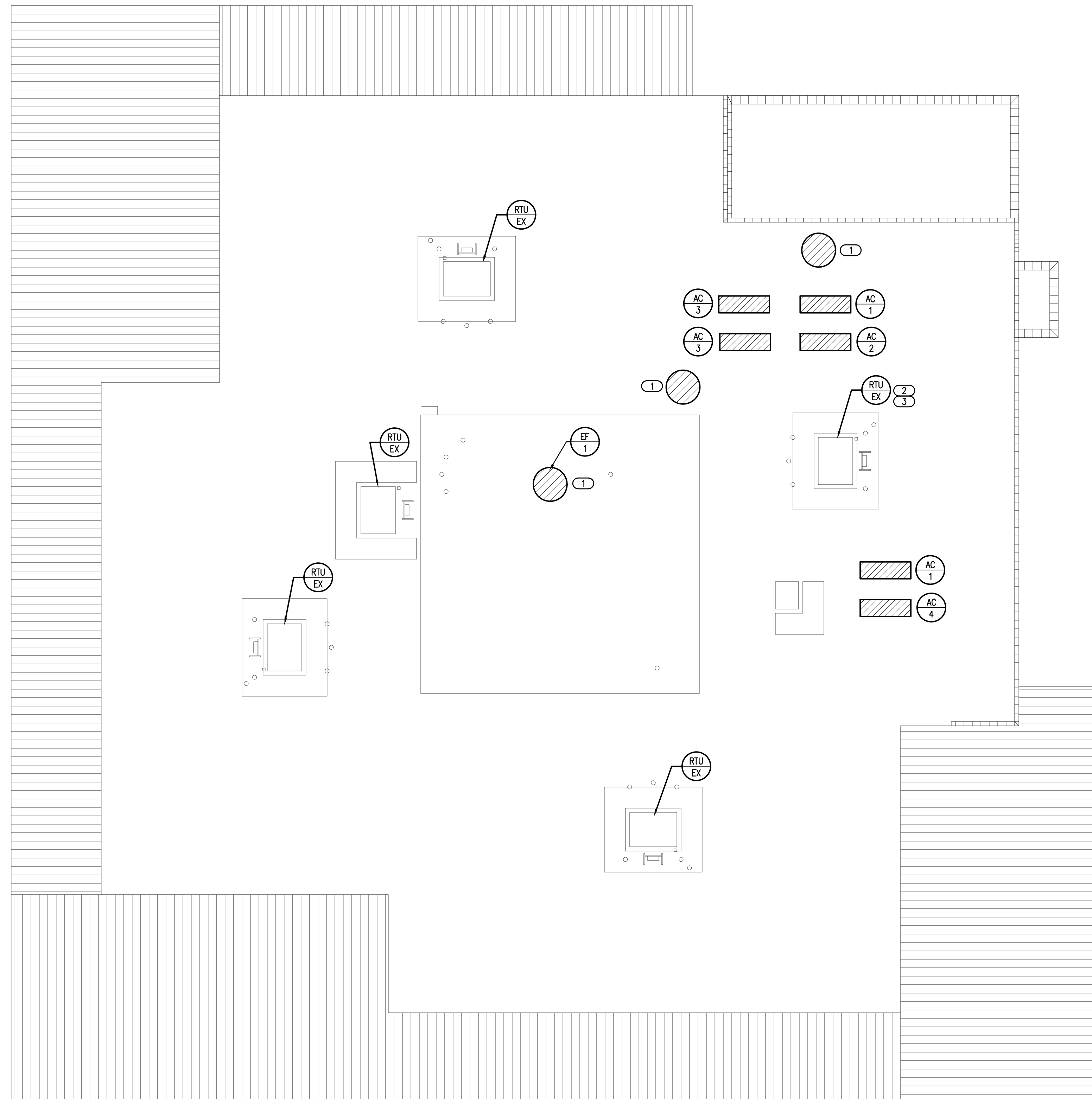
AGP EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS OF ALL PLANS AND DRAWINGS DESIGNED AND/OR PRODUCED. PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED IN ANY FORM OR MANNER WITHOUT THE EXPRESSED WRITTEN CONSENT OF AGP.

### GENERAL NOTES

1. ALL ROOF TOP EQUIPMENT TO BE LOCATED A MINIMUM 10'-0" AWAY FROM ROOF EDGE.
2. MAINTAIN A MINIMUM OF 10'-0" HORIZONTAL CLEARANCE BETWEEN ALL EXHAUST OUTLETS AND ANY FRESH AIR INTAKES.
3. ALL ROOF SUPPORT SYSTEMS ARE TO BE MANUFACTURED FOR THE ROOF MATERIAL/SYSTEM TO BE INSTALLED. REFER TO ARCHITECTURAL PLANS FOR THE ROOF SYSTEM, CURB INSTALLATION TO BE WARRANTED BY ROOFING CONTRACTOR.

### KEYED NOTES

- 1 ROOF CAP, M.C. SHALL PROVIDE CURB AND ROOF CAP GREENHECK GRSI OR APPROVED EQUAL.
- 2 M.C. SHALL PROVIDE AND INSTALL RAWAL APR CONTROL DEVICE TO BE RETROFITTED IN REFRIGERANT SYSTEM FOR MODULATION CAPABILITIES.
- 3 M.C. SHALL REBALANCE EXISTING AIRFLOW TO LOWEST SETTING BASE ON 350 CFM PER TON OF COOLING.



## 1 MECHANICAL ROOF PLAN

SCALE: 1/8" = 1'-0"



2600 Van Buren St., Suite 2635  
Norman, OK 73072  
Salas O'Brien Registration: CA# 7058  
Expiration Date: 6/30/2023  
Salas O'Brien Project Number: 2024-02321





KS  
drawn by  
DG  
checked by  
MAY 2024  
date  
revisions



sheet no:

## M601

GRILLE, REGISTER, AND DIFFUSER SCHEDULE					
PLAN SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NO.	MATERIAL	FINISH	NOISE CRITERIA
CD-1	SQUARE FACE, ROUND NECK, 4-WAY DEFLECTION CEILING DIFFUSER, SPRING LOCK INNER CORE, FOR LAY-IN CEILING INSTALLATION.	PRICE SCD (4C)	STEEL	WHITE	-
SG-1	DOUBLE DEFLECTION SIDEWALL GRILLE, ADJUSTABLE DEFLECTION BLADES, 3/4" O.C. FLAT FRAME WITH 1 1/4" MARGIN, HORIZONTAL FRONT	PRICE 520	STEEL	COLOR BY ARCHITECT	-
RG-1	FIXED CORE OF 1/2"x1/2"x1/2" FABRICATED ALUMINUM SQUARES, FLAT FRAME WITH 1 1/4" MARGIN, FOR CEILING INSTALLATION.	PRICE 80	ALUMINUM	WHITE	-
EG-1	FIXED CORE OF 1/2"x1/2"x1/2" FABRICATED ALUMINUM SQUARES, FLAT FRAME WITH 1 1/4" MARGIN, FOR CEILING INSTALLATION.	PRICE 80	ALUMINUM	WHITE	-
<b>NOTES:</b> SEE PLANS FOR QUANTITY AND SIZES. M.C. TO FIELD VERIFY CEILING TYPE FOR ALL GRD BEFORE PURCHASING EQUIPMENT. PROVIDE REQUIRED MOUNTING.					

DUCTWORK/INSULATION SCHEDULE													
SYSTEM	LOW PRESSURE SEAL			MED. PRESS.		HIGH PRESS.		INSULATION				NOTES	
	MAX. PRES.	A	B	C	MAX. PRES.	SEAL A	MAX. PRES.	SEAL A	INTERNAL	THICKNESS	EXTERNAL		THICKNESS
EXHAUST AIR	2"	-	X	-	-	-	-	-	NO	-	YES	2" FSK	-
<b>NOTES:</b>													

MINI SPLIT HEAT PUMP SCHEDULE - INDOOR & OUTDOOR UNIT															
AC #	NOMINAL TON	OUTDOOR UNIT					INDOOR UNIT							NOTES	
		ELEC. CHAR	SEER	MCA	MOP	COMPRESSOR TYPE	MANUFACTURER & MODEL NUMBER	COOLING/HEATING	CFM	MCA	MOP	TYPE	CONDENSATE PUMP		MANUFACTURER & MODEL NUMBER
1	1.5	208/1	20.5	20	30	INVERTER	LG LUU180HV	BOTH	388	20	30	CASSETTE	YES	LG LCN188HV4	ALL
2	1.0	208/1	19.4	12.3	15	INVERTER	LG LUU120HV	BOTH	247	12.3	15	CASSETTE	YES	LG LCN128HV4	ALL
3	0.75	208/1	20.2	11.9	15	INVERTER	LG LUU090HV	BOTH	230	11.9	15	CASSETTE	YES	LG LCN098HV4	ALL
4	2	208/1	20	22	30	INVERTER	LG LUU240HV	BOTH	600	22	30	CASSETTE	YES	LG LCN249HV	ALL
<b>NOTES:</b> M.C. IS RESPONSIBLE FOR PROVIDING ALL NECESSARY DIMENSION, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT. 1. M.C. PROVIDE DISCONNECTS FOR INSTALLATION BY E.C. 2. PROVIDE AND INSTALL CONDENSATE PUMP. ROUTE CONDENSATE TO NEAREST OPEN SITE. 3. PROVIDE CONDENSER COIL HAIL GUARD. 4. M.C. SHALL PROVIDE HARD WIRED THERMOSTAT. 5. INDOOR UNIT POWERED SEPARATELY FROM OUTDOOR UNIT. COORDINATE POWER REQUIREMENTS WITH E.C.															

EXHAUST FAN SCHEDULE															
EF #	LOCATION	SYSTEM	CFM	SP	FAN RPM	MOTOR H.P.	ELEC CHAR	AMPS	DAMPER BDD OR MOD	DRIVE	FAN TYPE	INTERLOCK/CONTROL	WEIGHT	MANUFACTURER & MODEL NUMBER	NOTES
1	ROOF	RR	150	0.5	1254	1/4	120/1	-	MOD	DIRECT	PRV	LIGHT	45	GREENHECK G-097-VG	1-4
2	CEILING	RR	75	0.5	1140	FRAC.	120/1	-	MOD	DIRECT	CEILING	LIGHT	53	GREENHECK G-097-B	1-4
3	CEILING	RR	75	0.5	1140	FRAC.	120/1	-	MOD	DIRECT	CEILING	LIGHT	53	GREENHECK G-097-B	1-4
<b>NOTES:</b> M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSIONAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT. 1. PROVIDE ELECTRONIC SPEED CONTROL MOUNTED ABOVE ACCESSIBLE CEILING. 2. M.C. SHALL PROVIDE LOW VOLTAGE MOTORIZED DAMPER. 3. OPERATION OF DEVICE ON OCCUPIED MODE OF RTU OR SWITCH WITH LIGHTS. SEE INTERLOCK/CONTROL COLUMN FOR TYPE. 4. PROVIDE WEATHER HOOD AND BIRD SCREEN.															

ELECTRIC FAN FORCED HEATER SCHEDULE												
ETH #	ROOM NO.	CFM	WALL OR CEILING	KW	MOUNTING	ELECTRICAL CHAR	AMPS	SPEEDS	CONTROL	RPM	MANUFACTURER & MODEL NUMBER	NOTES
1	VEST	100	WALL	1.5	RECESSED	208/1	7.2	1	INT STAT	-	BERKO FRC4024	1-3
<b>NOTES:</b> M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSIONAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT. 1. PROVIDE INTERNAL THERMOSTAT. 2. RECESSED MOUNTED UNIT. PROVIDE RECESSED MOUNTING KIT. 3. PROVIDE BUILT-IN DISCONNECT. 4. SURFACE MOUNTED UNIT. PROVIDE SURFACE MOUNTING KIT. 5. PROVIDE WALL MOUNTING BRACKET.												