

## 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.
- DIFUSER 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 Ø	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	TC	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	GYPSONUM		
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

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**M000**

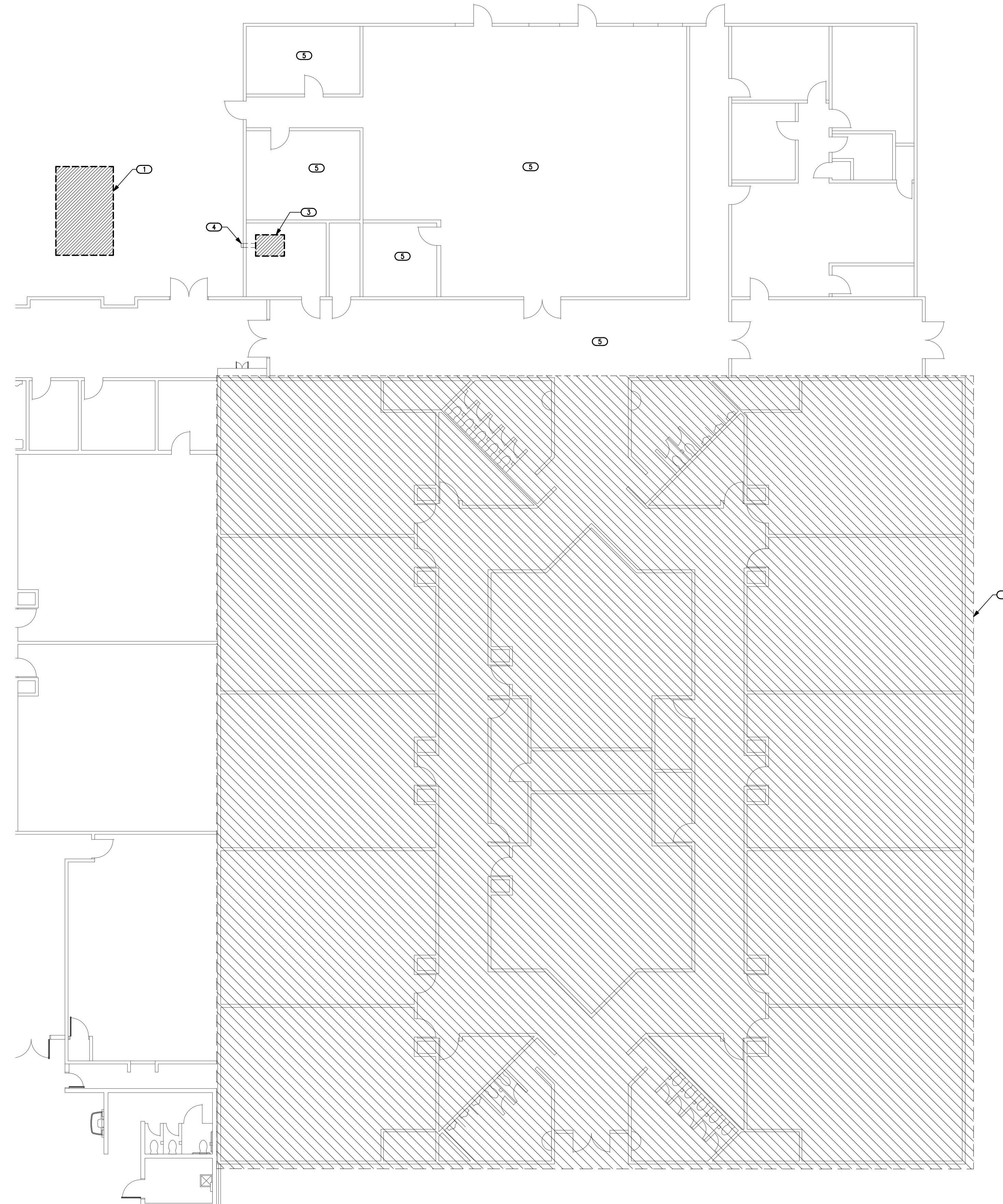
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GENERAL NOTES	
1.	COORDINATE DEMOLITION OF EQUIPMENT WITH ALL TRADES, CONSTRUCTION MANAGER, AND ARCHITECT.
2.	CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. LOCATIONS OF EXISTING EQUIPMENT ARE DIAGRAMMATICAL IN NATURE.
3.	CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY UNINTENDED DAMAGES TO SURROUNDING AREAS DUE TO DEMOLITION.
4.	OWNER SHALL HAVE FIRST SALVAGE RIGHTS OF DEMOLISHED EQUIPMENT. DISPOSE OF EQUIPMENT ACCORDING TO CODE. RECYCLE ALL RECYCLABLE MATERIALS.

KEYED NOTES	
①	REMOVE CHILLER AND ASSOCIATED HYDRONIC PIPING.
②	REMOVE ALL FAN COIL UNITS, SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK, AND AIR DEVICES IN AREA SHOWN. EXHAUST SYSTEMS AND UNIT HEATERS ARE EXISTING TO REMAIN.
③	REMOVE BOILER AND GAS PIPING. COORDINATE WITH PLUMBING CONTRACTOR.
④	DEMOLISH BOILER VENT THRU WALL. CAP AND INSULATE WALL PENETRATION WEATHER TIGHT. COORDINATE WITH GENERAL CONTRACTOR.
⑤	DUCTWORK IN MEDIA CENTER IS EXISTING TO REMAIN. CLEAN DIFFUSERS AND GRILLES.



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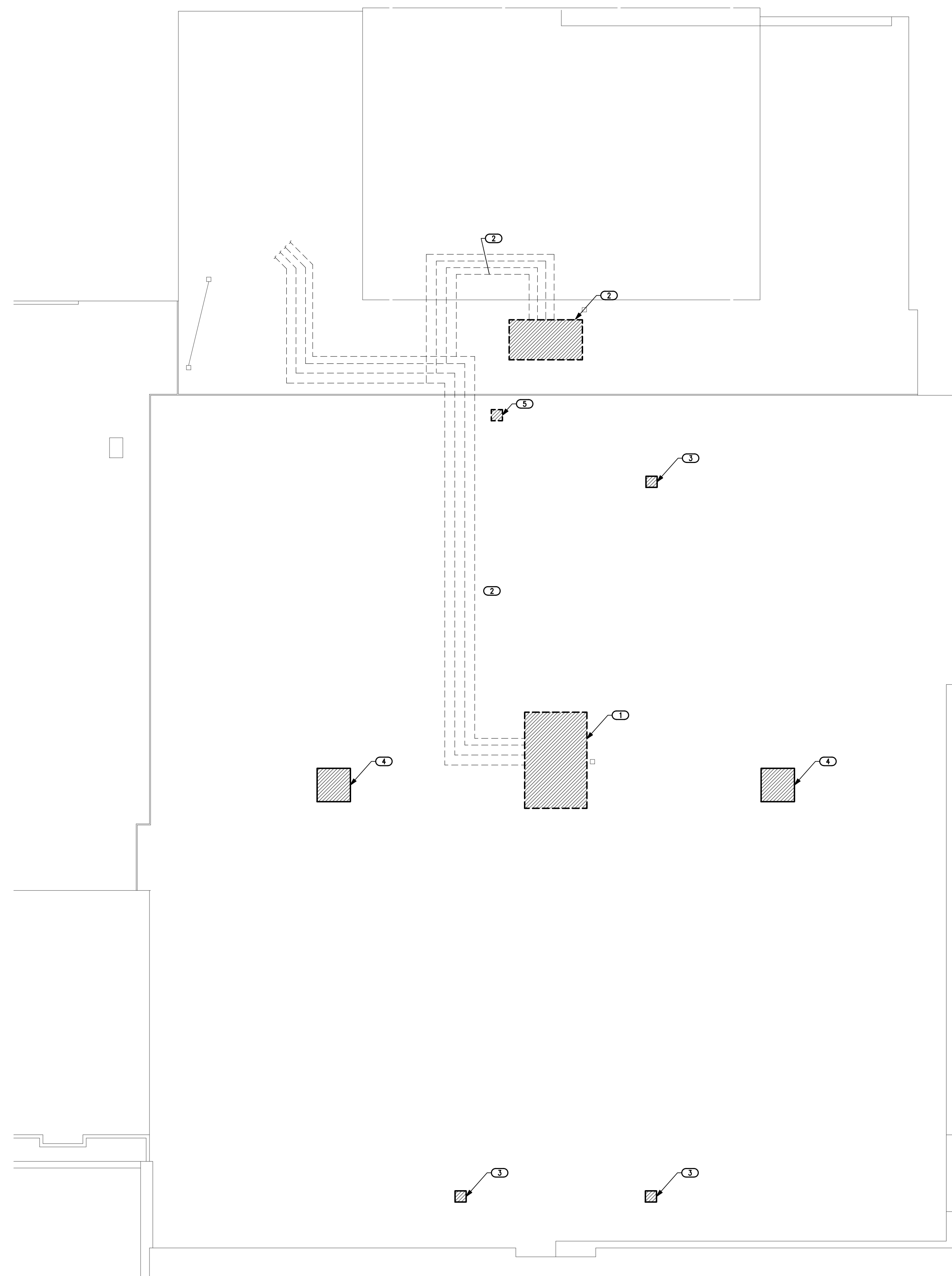
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**MD101**

**1 MECHANICAL DEMOLITION FLOORPLAN**  
SCALE: 3/32" = 1'-0"



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**1** MECHANICAL DEMOLITION ROOF PLAN  
SCALE: 3/32" = 1'-0"



**GENERAL NOTES**

1. COORDINATE DEMOLITION OF EQUIPMENT WITH ALL TRADES, CONSTRUCTION MANAGER, AND ARCHITECT.
2. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. LOCATIONS OF EXISTING EQUIPMENT ARE DIAGRAMMATICAL IN NATURE.
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4. OWNER SHALL HAVE FIRST SALVAGE RIGHTS OF DEMOLISHED EQUIPMENT. DISPOSE OF EQUIPMENT ACCORDING TO CODE. RECYCLE ALL RECYCLABLE MATERIALS.

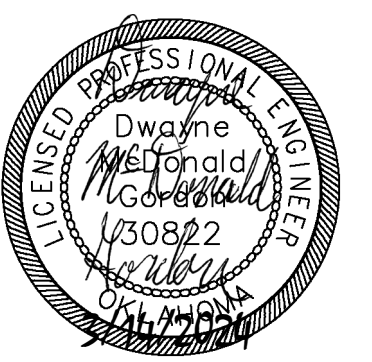
**KEYED NOTES**

- ① REMOVE AIR HANDLING UNIT AND ROOF PIPING BACK TO CHILLER. PATCH AND INSULATE ROOF PENETRATIONS TO MATCH EXISTING.
- ② REMOVE AIR HANDLING UNIT AND ROOF PIPING. ROOF PENETRATIONS TO BE REUSED IN NEW WORK.
- ③ EXHAUST FANS ARE EXISTING TO REMAIN.
- ④ REMOVE ROOF HOOD. PATCH AND SEAL ROOF PENETRATION.
- ⑤ EXHAUST FAN TO BE RELOCATED. PATCH AND SEAL ROOF PENETRATION AND PREPARE DUCTWORK FOR NEW CONNECTION.

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**GENERAL NOTES**

1. COORDINATE INSTALLATION OF EQUIPMENT AND DUCTWORK WITH ALL TRADES.
2. COORDINATE LOCATION OF THERMOSTATS WITH E.C. ROUGH-IN BY E.C.
3. CONNECT NEW EVAPORATOR COILS CONDENSATE TO EXISTING NEARBY CONDENSATE PIPES. REFER TO PLUMBING PLANS FOR CONNECTIONS.

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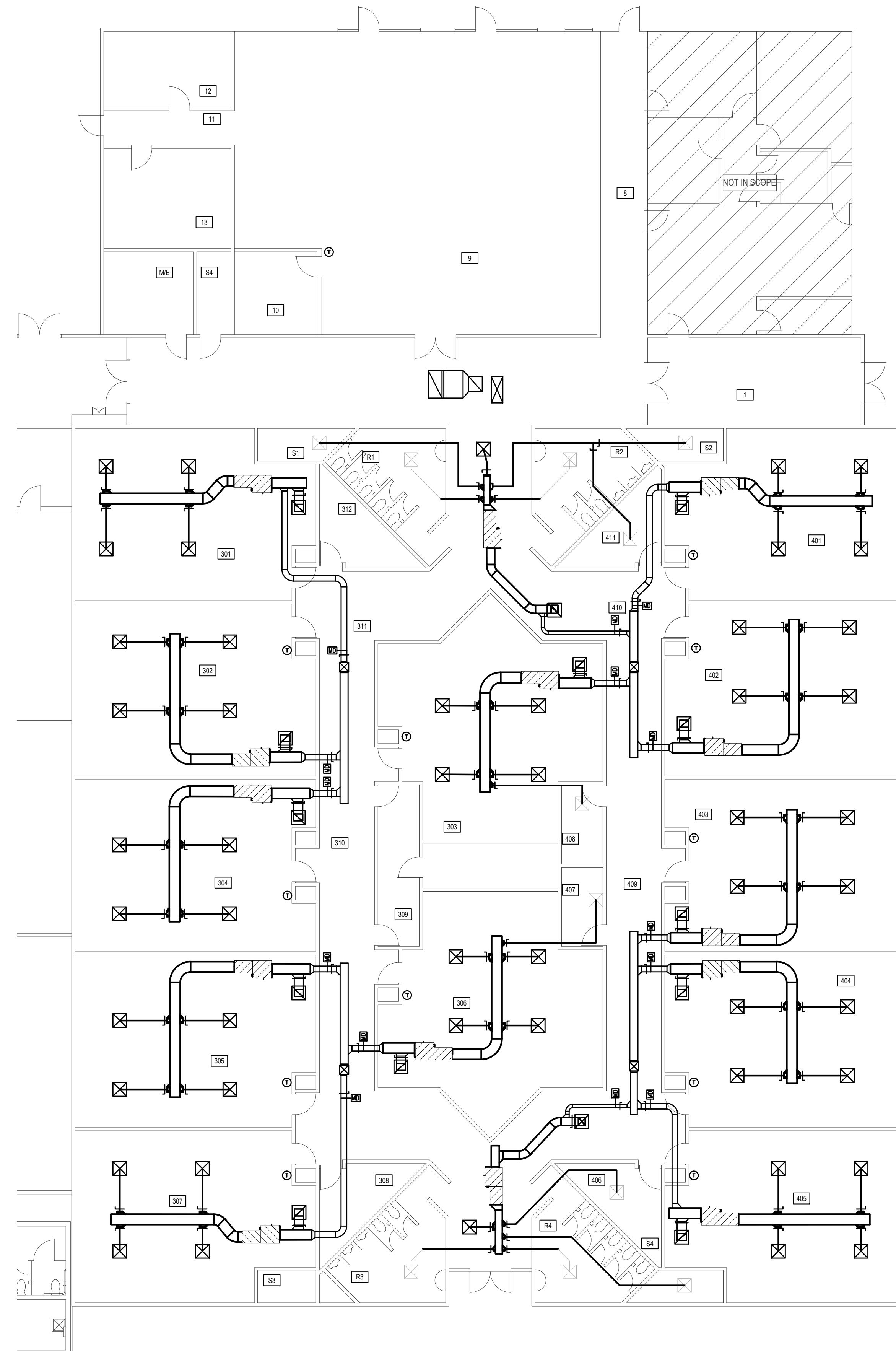


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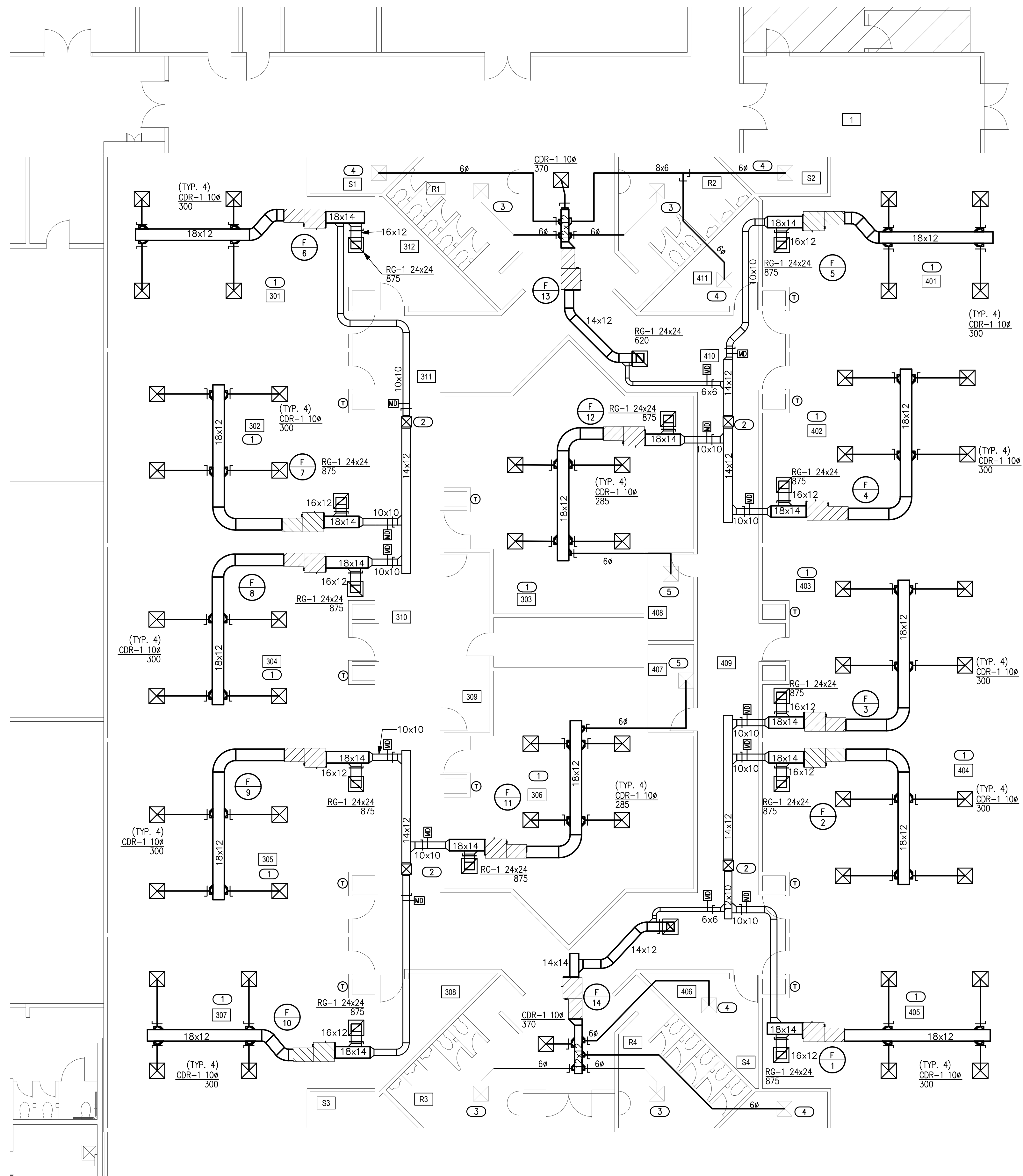
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**1 MECHANICAL OVERALL PLAN**  
SCALE: 3/32" = 1'-0"



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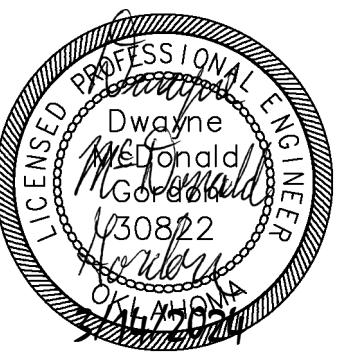


- GENERAL NOTES**
- COORDINATE INSTALLATION OF EQUIPMENT AND DUCTWORK WITH ALL TRADES.
  - COORDINATE LOCATION OF THERMOSTATS WITH E.C. ROUGH-IN BY E.C.
  - COORDINATE CARBON DIOXIDE SENSOR LOCATION WITH EARTHSMART PRIOR TO INSTALLATION.
  - M.C. SHALL PROVIDE CARBON MONOXIDE SENSORS WHERE NEEDED PER 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.
  - CONNECT NEW EVAPORATOR COILS CONDENSATE TO EXISTING NEARBY CONDENSATE PIPES. REFER TO PLUMBING PLANS FOR CONNECTIONS.

- 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.
  - DUCT UP 16x16 TO CONNECT TO THROAT OPENING OF ROOF HOOD.
  - CLEAN AND CONNECT EXISTING DIFFUSER TO NEW 6" DIA. SUPPLY DUCT. BALANCE TO 125 CFM.
  - CLEAN AND CONNECT EXISTING DIFFUSER TO NEW 6" DIA. SUPPLY DUCT. BALANCE TO 50 CFM.
  - CLEAN AND CONNECT EXISTING DIFFUSER TO NEW 6" DIA. SUPPLY DUCT. BALANCE TO 60 CFM.

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



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2.	COORDINATE LOCATION OF THERMOSTATS WITH E.G. ROUGH-IN BY E.C.

KEYED NOTES	
①	PROVIDE DUCT TRANSITION AS NEEDED TO CONNECT EXISTING SUPPLY DUCT TO NEW RTU.
②	CONNECT 24X28 RETURN DUCT TO RTU.

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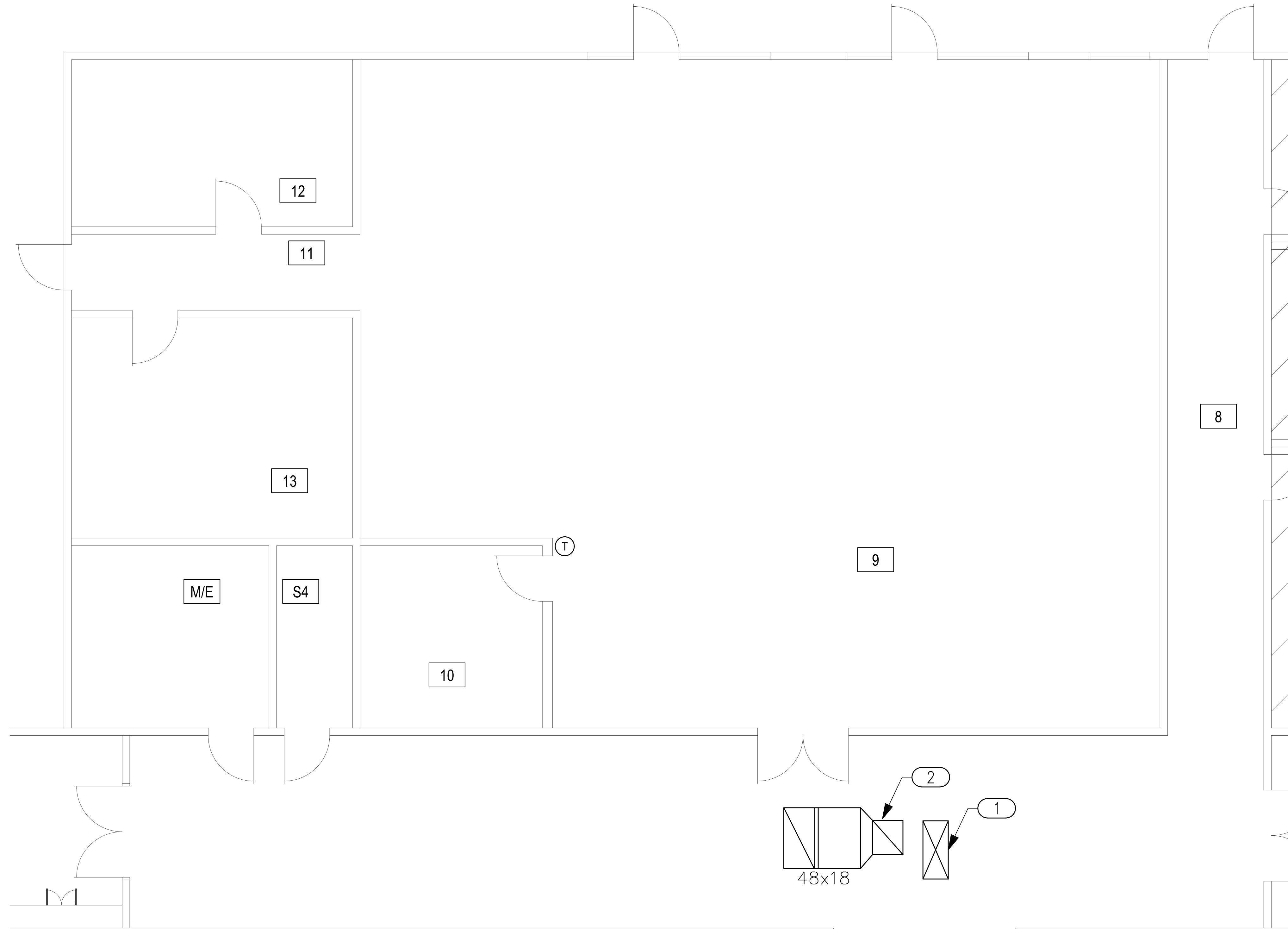
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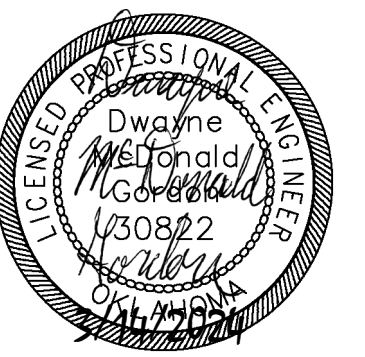


**1** MECHANICAL FLOOR PLAN - MEDIA CENTER  
SCALE: 1/4" = 1'-0"



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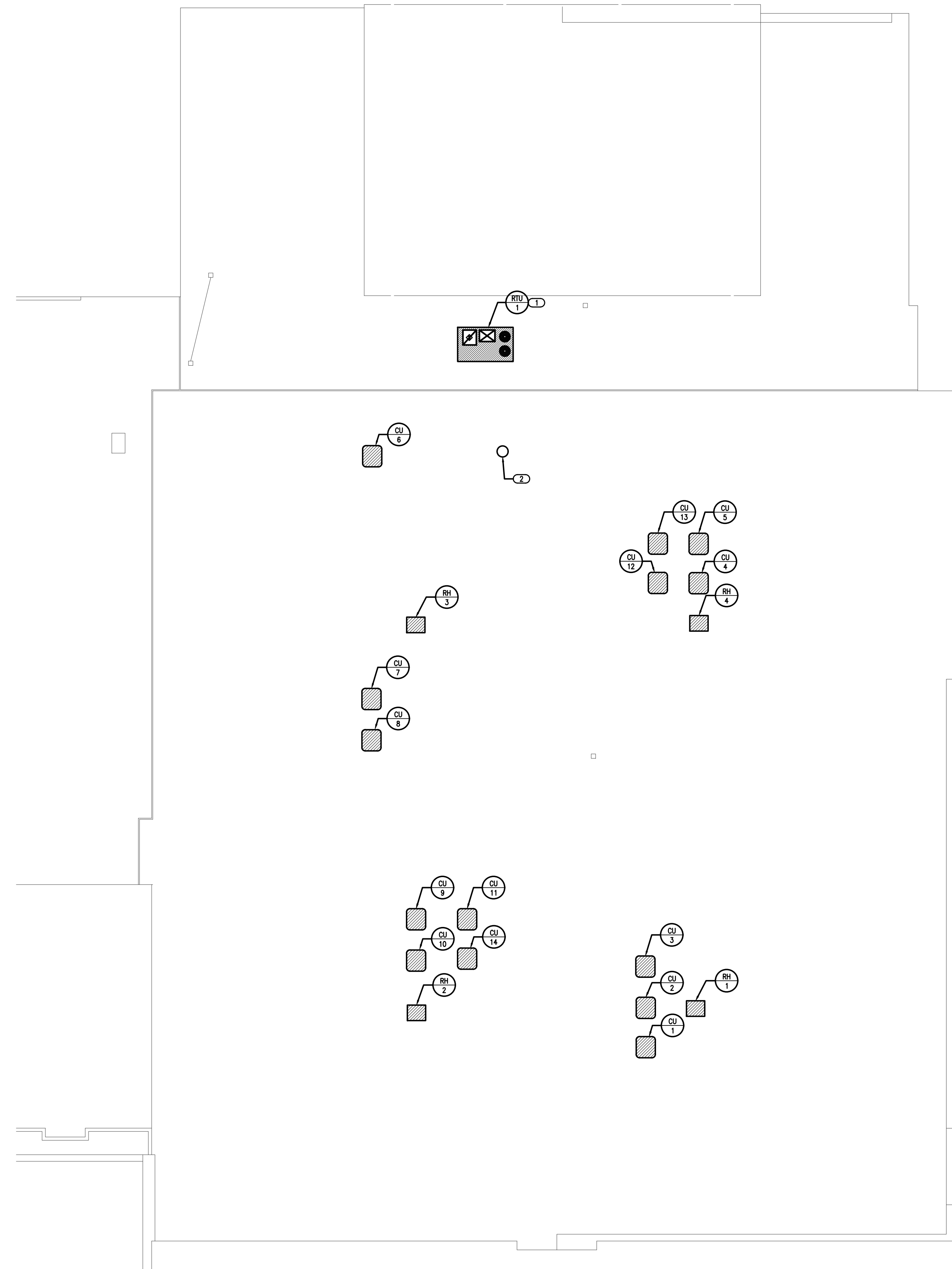
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### GENERAL NOTES

- ALL ROOF TOP EQUIPMENT TO BE LOCATED A MINIMUM 10'-0" AWAY FROM ROOF EDGE.
- MAINTAIN A MINIMUM OF 10'-0" HORIZONTAL CLEARANCE BETWEEN ALL EXHAUST OUTLETS AND ANY FRESH AIR INTAKES.
- 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

- REUSE SUPPLY DUCT ROOF PENETRATION FOR RTU 1. PROVIDE NEW ROOF PENETRATION FOR RETURN DUCT.
- RELOCATE EXHAUST FAN TO BE AT LEAST 10'0" FROM OUTSIDE AIR INTAKE OF RTU 1 PER IMC CODE REQUIREMENTS. PROVIDE NEW ROOF PENETRATION AND DUCTWORK AS NEEDED TO RECONNECT TO BATHROOM EXHAUST.



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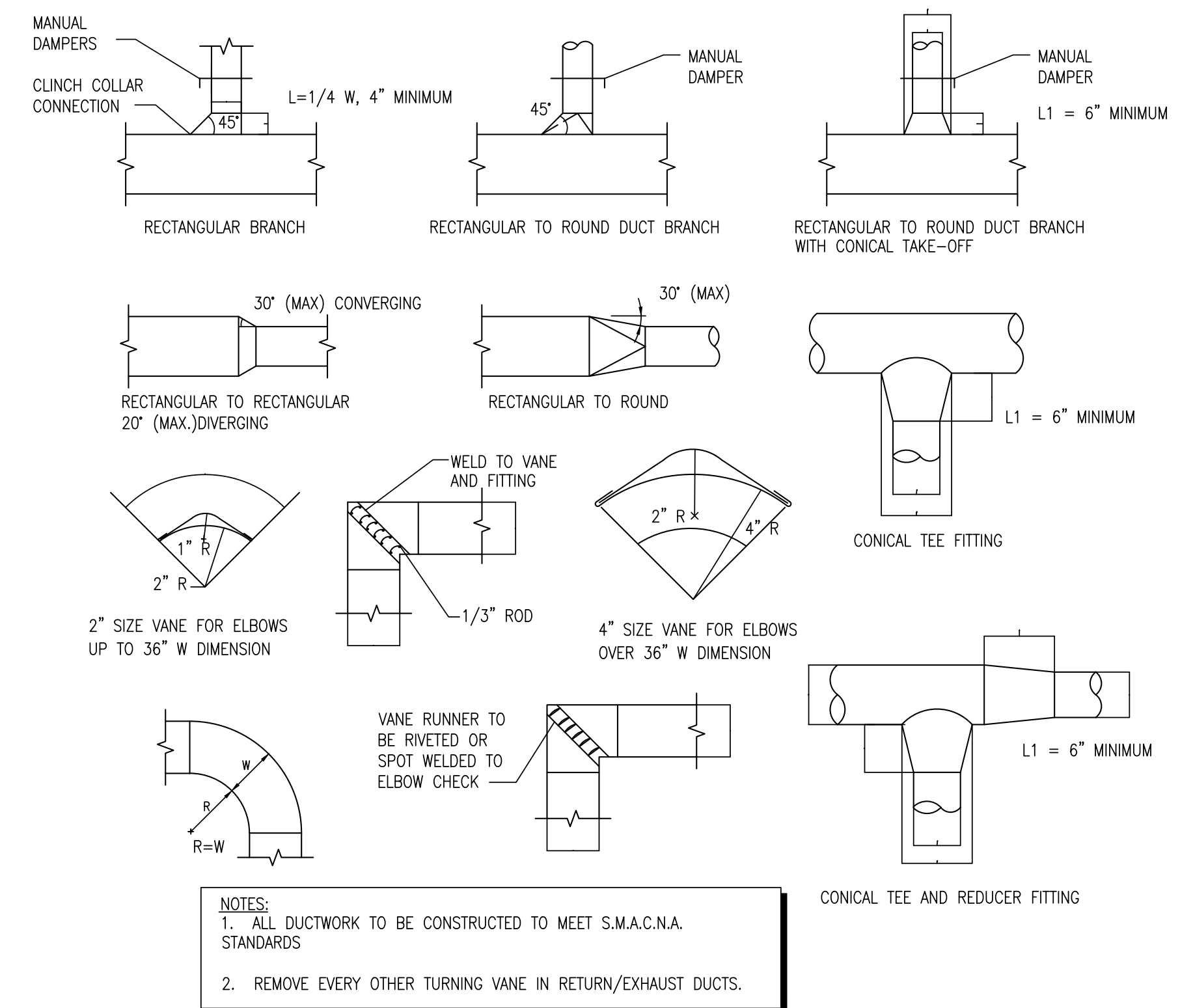
## M501

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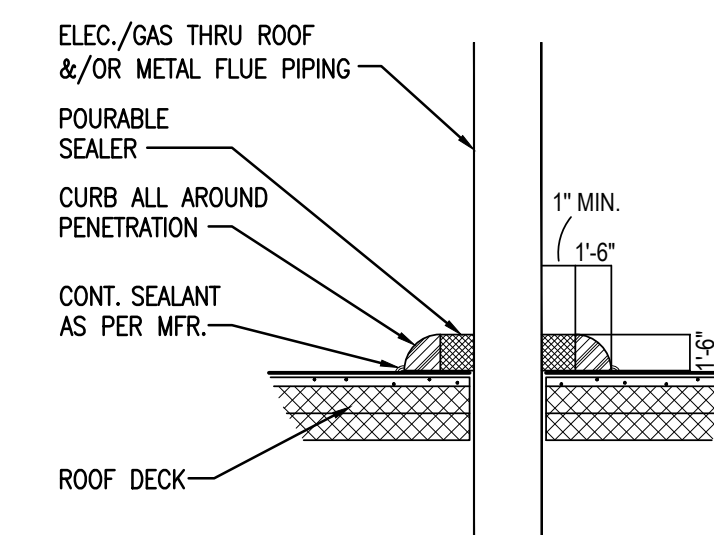


2600 Van Buren St., Suite 2635  
Norman, OK 73072  
Salas O'Brien Registration: CA# 7058  
Expiration Date: 6/30/2025  
Salas O'Brien Project Number: 2024-01144-00



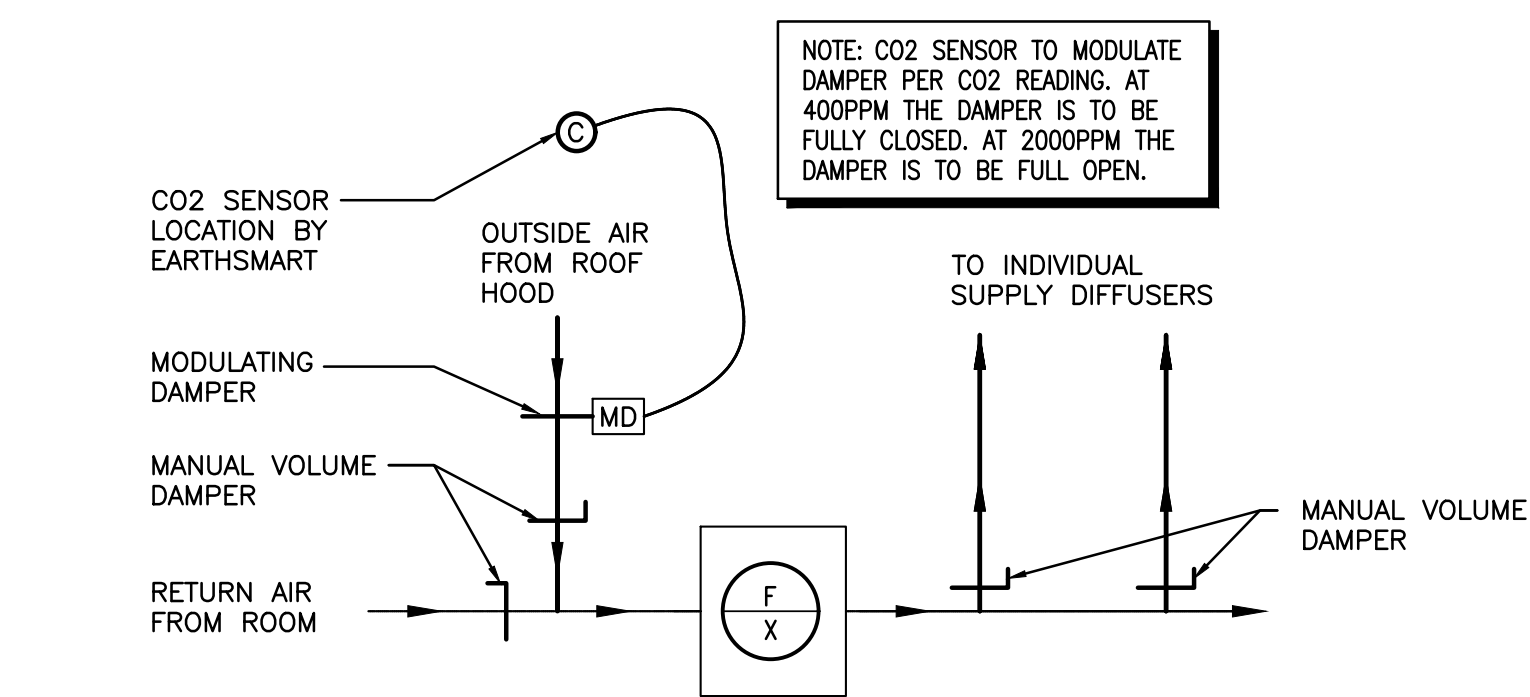
### 1 TYPICAL DUCTWORK DETAILS

NO SCALE



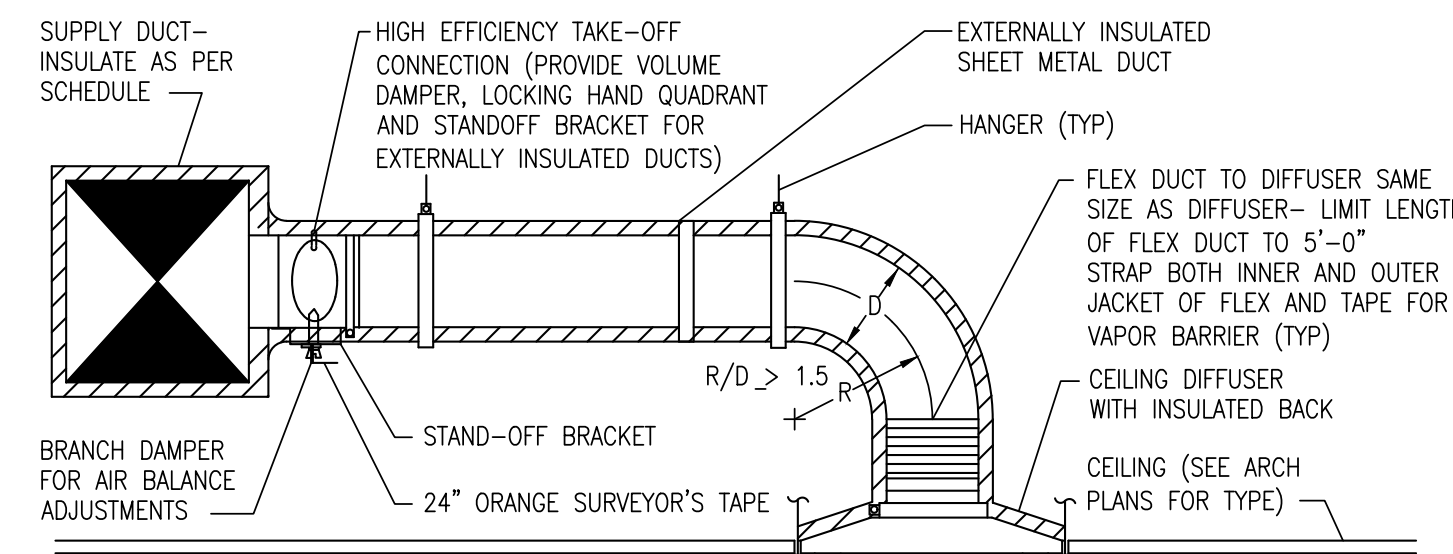
### 6 PENETRATION DAM/ SEALER POCKET DETAIL

NOT TO SCALE



### 7 TYPICAL FURNACE AIR BALANCING SCHEMATIC

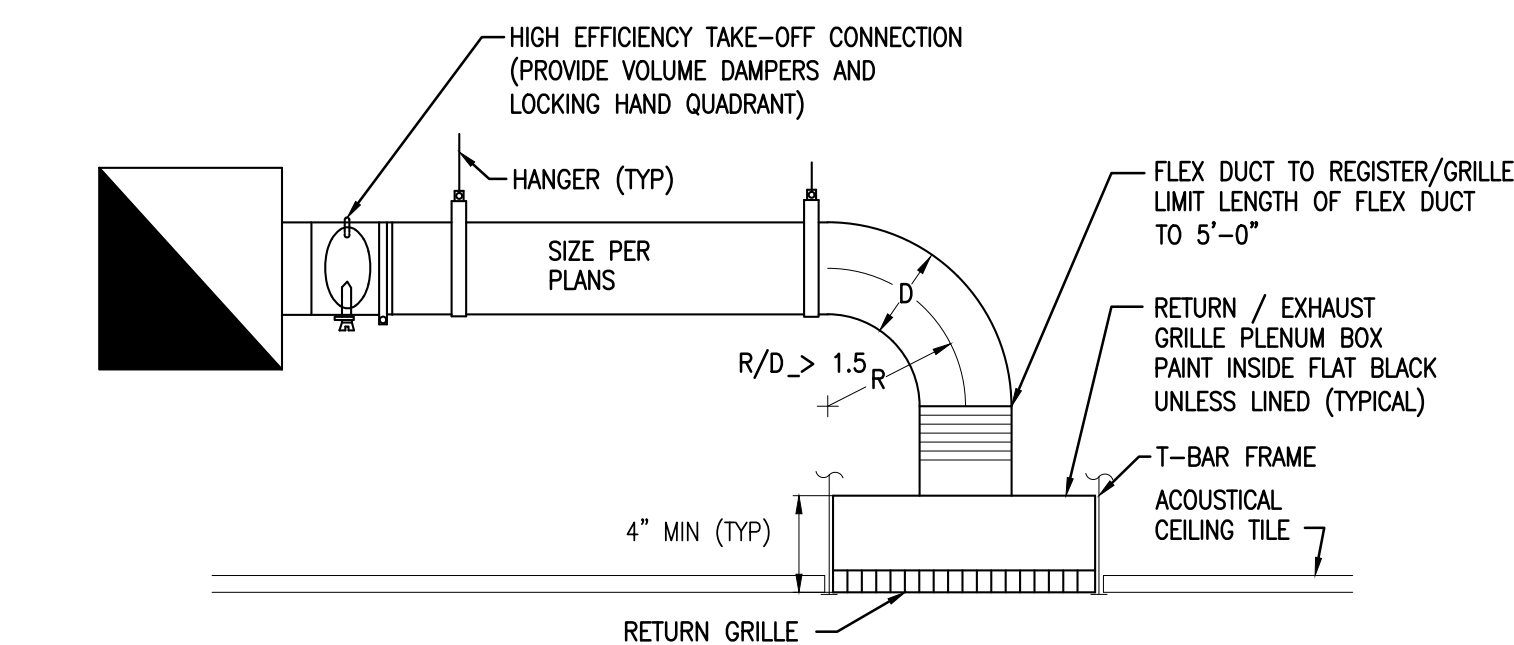
NOT TO SCALE



NOTE: COORDINATE DIFFUSER MOUNTING TYPE WITH CEILING TYPE.

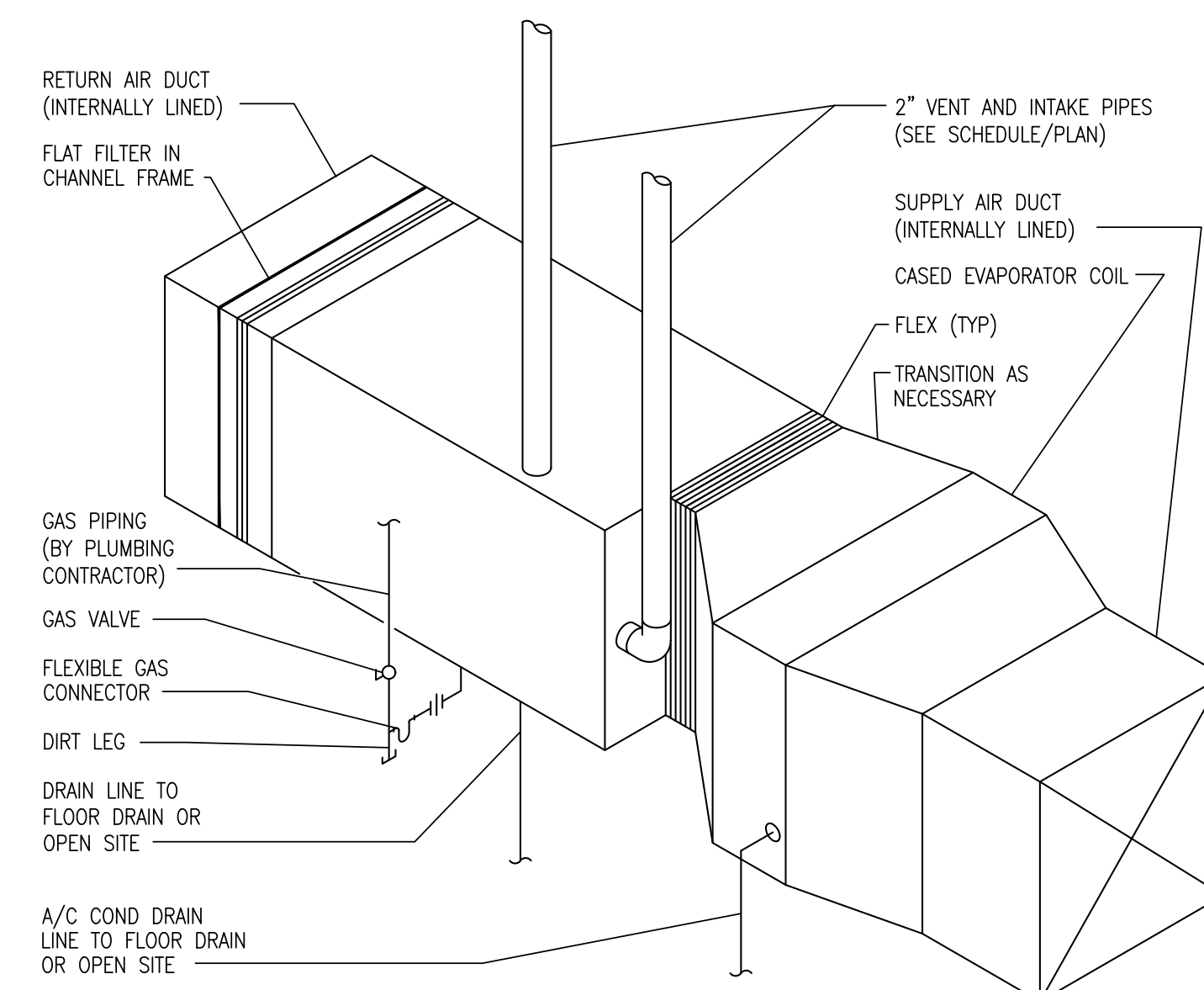
### 3 CEILING DIFFUSER DETAIL

NOT TO SCALE



### 2 RETURN / EXHAUST AIR GRILLE PLENUM BOX

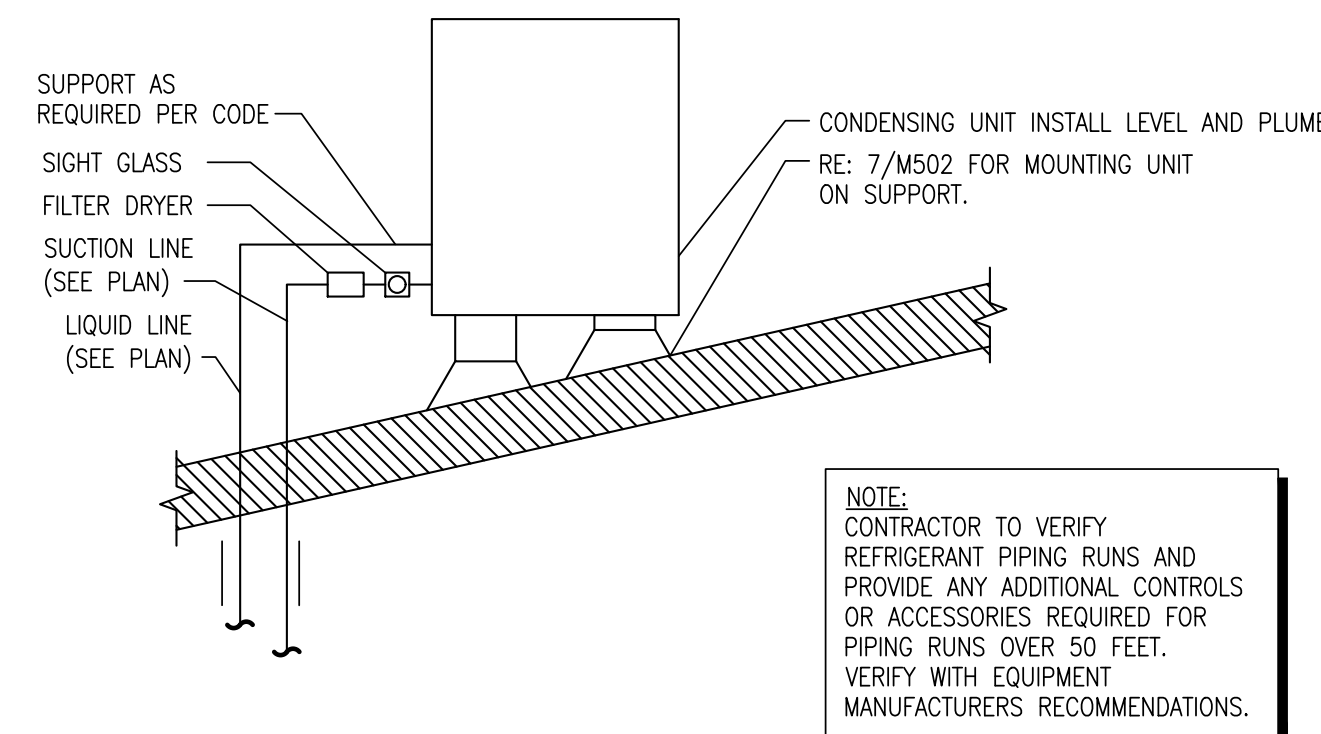
NOT TO SCALE



NOTE: OPEN SITE OR FLOOR DRAIN BY PLUMBING CONTRACTOR

### 8 HORIZONTAL GAS FURNACE DETAIL

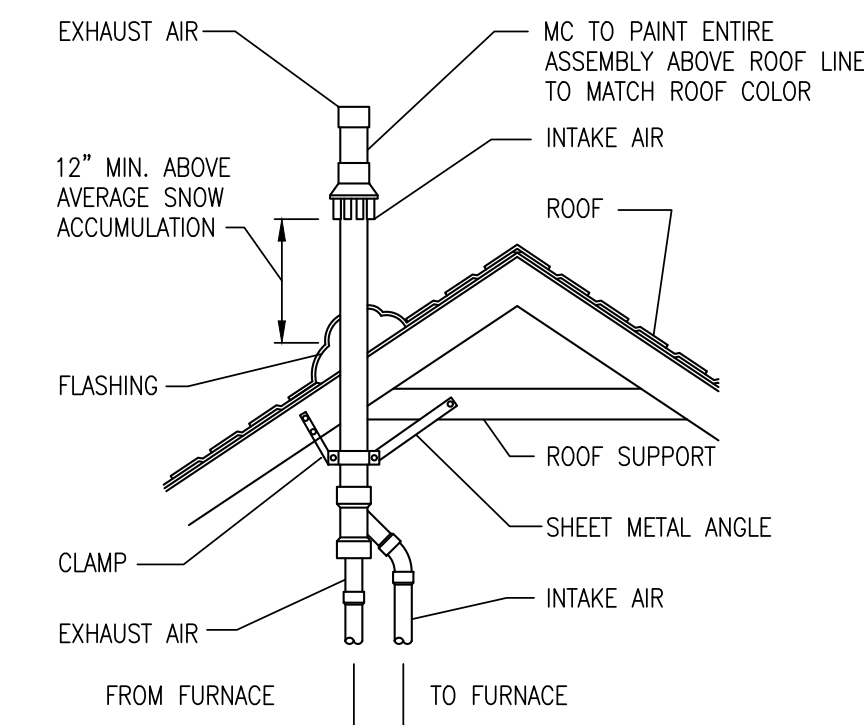
NOT TO SCALE



NOTE: CONTRACTOR TO VERIFY REFRIGERANT PIPING RUNS AND PROVIDE ANY ADDITIONAL CONTROLS OR ACCESSORIES REQUIRED FOR PIPING RUNS OVER 50 FEET. VERIFY WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS.

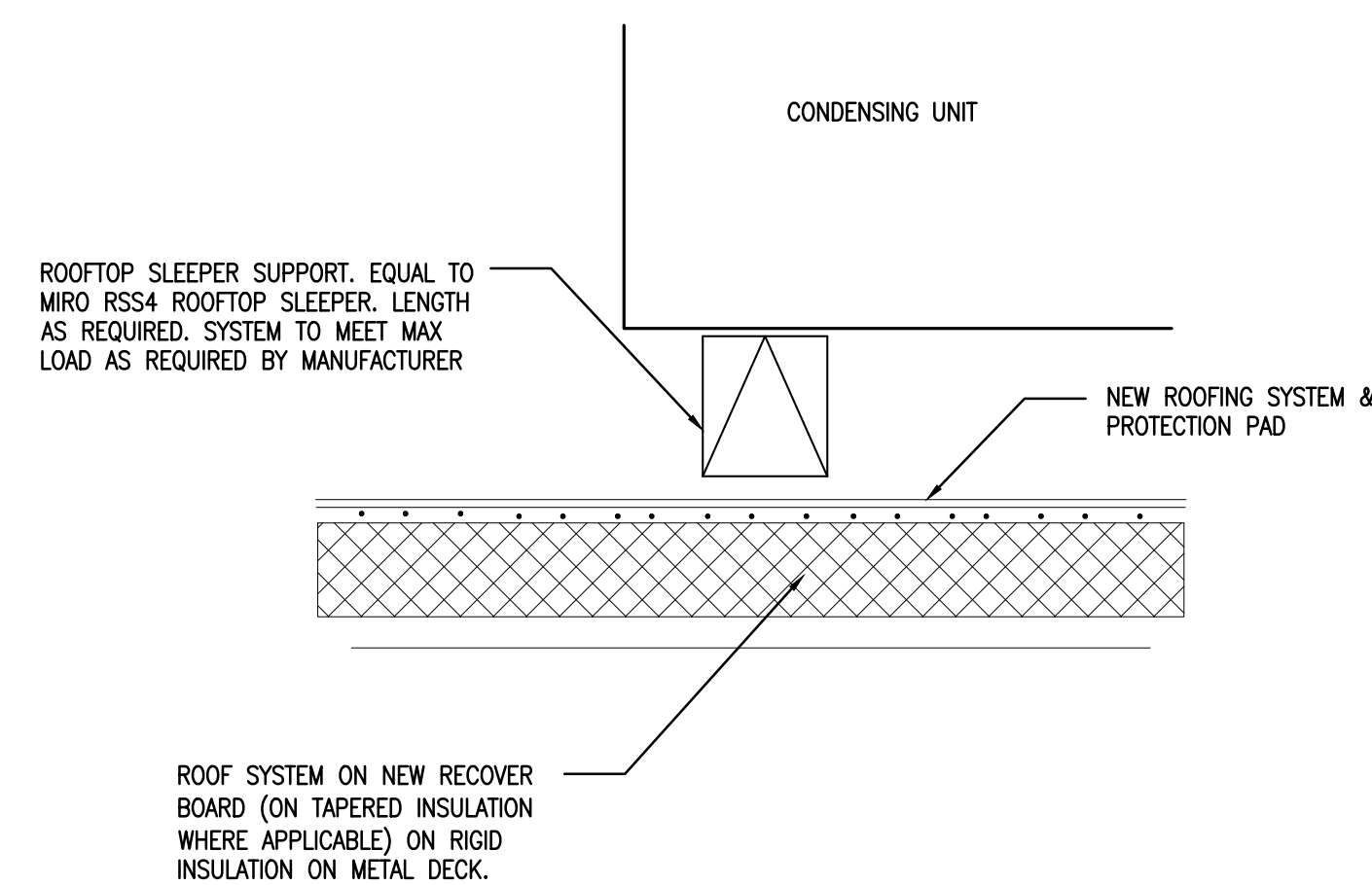
### 4 CONDENSING UNIT PIPING DETAIL

NOT TO SCALE



### 5 VENT TERMINATION DETAIL

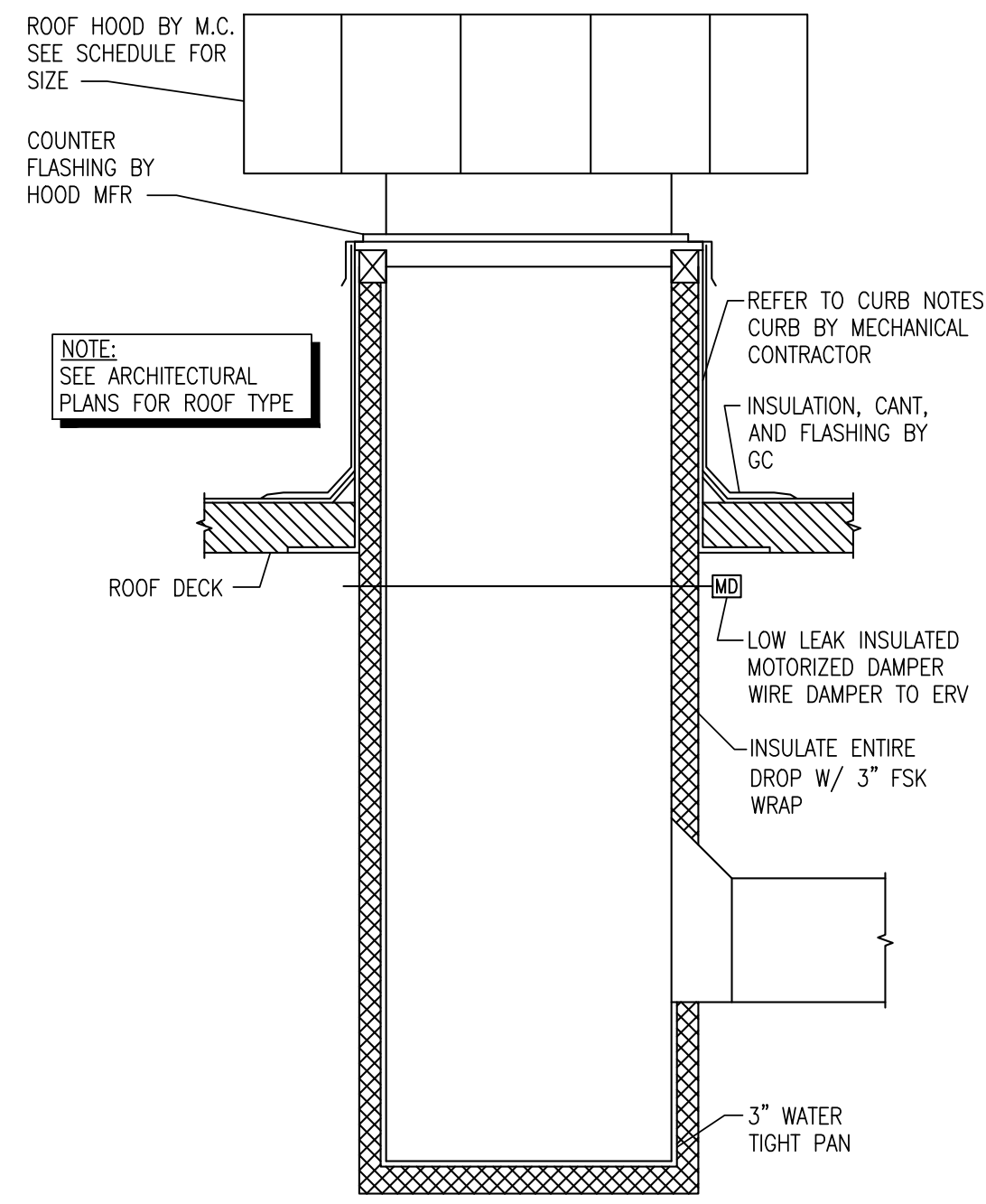
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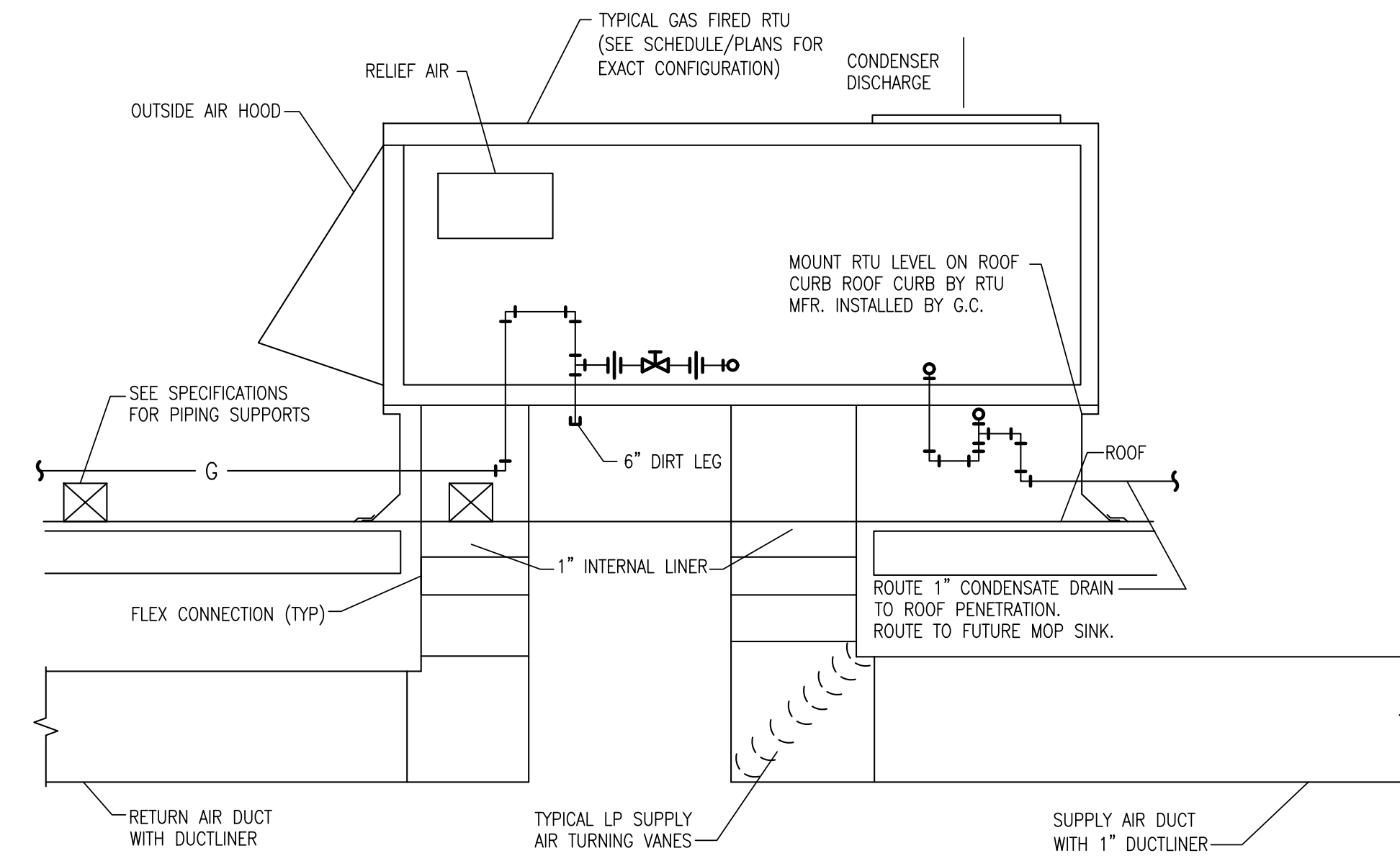
### 9 CONDENSING UNIT ROOF SUPPORT

NOT TO SCALE

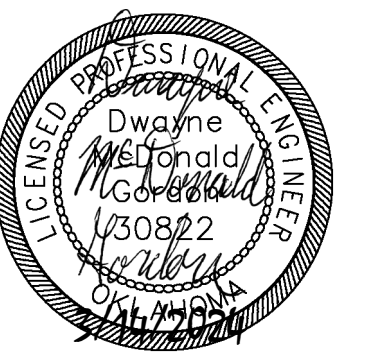




**2** ROOF HOOD DETAIL  
NOT TO SCALE



**1** TYPICAL ROOF TOP UNIT DETAIL  
NOT TO SCALE



KF  
drawn by  
DG  
checked by  
MARCH 2024  
date  
revisions

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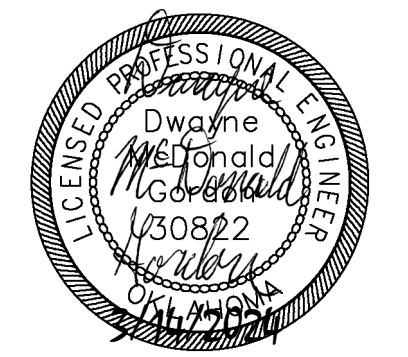
HVAC REPLACEMENT  
KINGSGATE  
ELEMENTARY SCHOOL

sheet no:

M502

**Salas O'Brien**  
2600 Van Buren St., Suite 2635  
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Salas O'Brien Registration: CA# 7058  
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sheet no:

**M601**

GAS FURNACE SCHEDULE																
F	TYPE	INPUT MBH	OUTPUT MBH	CFM	MIN FA.	S.P.	HEAT EXCH. MTL.	BLOWER				PILOT	VENT	FILTER MERV 8 MIN.	MANUFACTURER & MODEL NO.	NOTES
								SIZE	DRIVE	H.P.	ELEC. CHAR.					
1	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
2	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
3	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
4	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
5	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
6	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
7	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
8	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
9	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
10	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
11	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
12	HORZ	66	62	1200	325	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH070XV36B	1-4
13	HORZ	44	42	720	100	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH045V36B	1-4
14	HORZ	44	42	720	100	0.5	ALUMINIZED STL	11X11	DIRECT	0.5	120/1	HOT S	3"	2" TA	LENNOX ML296UH045V36B	1-4

NOTES:  
M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSION, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT.  
1. PROVIDE CONCENTRIC VENT. INSTALL PER MANUFACTURER INSTRUCTIONS. MAINTAIN MINIMUM CLEARANCES: 36" BETWEEN VENTS, 10'-0" FROM ANY FRESH AIR INTAKE.  
2. PROVIDE CO<sub>2</sub> SENSOR. INSTALLATION BY CONTROLS CONTRACTOR. INTERLOCK CO<sub>2</sub> SENSOR WITH MOTORIZED DAMPER IN OUTSIDE AIR DUCT.  
3. PROVIDE FURNACE WITH 2 STAGE HEATING.  
4. DUCT SMOKE DETECTOR AND REMOTE TEST STATION PROVIDED BY AND INSTALLED BY E.C. REMOTE TEST STATION TO BE LOCATED IN OCCUPIED SPACE AND CONNECTION TO FIRE ALARM SYSTEM BY E.C. COORDINATE WITH E.C.

CONDENSING UNIT SCHEDULE														
CU	CONDENSING UNIT							EVAPORATOR UNIT						
	NOMINAL TONNAGE	ELEC. CHAR	MCA	MOP	S.E.E.R	WEIGHT (LBS)	MANUFACTURER & MODEL NO.	CFM	MAX S.P.	BLOWER MOTOR	ELEC. CHAR	MCA	MANUFACTURER & MODEL NO.	NOTES
1	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
2	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
3	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
4	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
5	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
6	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
7	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
8	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
9	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
10	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
11	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
12	3	208/1	17	30	16	200	LENNOX ML17XC1-036-230	1805	0.3	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-30B-6F	1-7
13	1.5	208/1	12	15	17	155	LENNOX ML17XC1-018-230	1200	0.5	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-24B-6F	1-7
14	1.5	208/1	12	15	17	155	LENNOX ML17XC1-018-230	1200	0.5	-	SEE FURNACE SCHEDULE	-	LENNOX CHX35-24B-6F	1-7

NOTES:  
M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSIONAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT.  
1. E.C. TO PROVIDE AND INSTALL POWER DISCONNECT FOR UNIT. COORDINATE WITH M.C.  
2. M.C. TO INCLUDE PRE-CHARGED LINE KIT. INSULATE SUCTION LINE.  
3. TWO STAGE COOLING.  
4. FOR LINE LENGTH EXCEEDING 50', M.C. MUST PROVIDE FACTORY DESIGNED AND FACTORY OR FIELD FABRICATED REFRIGERANT PIPING.  
5. MOUNT UNITS ON CONDENSING UNIT SUPPORTS RE: 10/M501 FOR MORE INFORMATION.  
6. INSULATE SUCTION LINE WITH 5/8" AP ARMAFLEX INSULATION OR EQUAL. SEAL ALL JOINTS WATER TIGHT TO PREVENT CONDENSATE IN THE CEILING.  
7. PROVIDE UNIT WITH HAIL GUARD.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE					
PLAN SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NO.	MATERIAL	FINISH	NOISE CRITERIA
CDR-1	SQUARE FACE, ROUND NECK, 4-WAY DEFLECTION CEILING DIFFUSER, SPRING LOCK INNER CORE, FOR LAY-IN CEILING INSTALLATION.	PRICE SCD (4C)	STEEL	WHITE	-
RG-1	SQUARE PATTERN GRILLE, FIXED CORE OF 1/2"x1/2"x1/2" FABRICATED ALUMINUM SQUARES, FLAT FRAME WITH 1 1/4" MARGIN, FOR LAY-IN CEILING INSTALLATION.	PRICE 80	ALUMINUM	WHITE	-

NOTES:  
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			MED. PRESS.		HIGH PRESS.		INSULATION			
	MAX. PRES.	SEAL A	SEAL B	MAX. PRES.	SEAL A	MAX. PRES.	SEAL A	INTERNAL THICKNESS	EXTERNAL THICKNESS	NOTES	
SUPPLY AIR WITHIN 10' OF UNIT	2"	X	-	-	-	-	-	YES	1"	NO	-
SUPPLY AIR BEYOND 10' OF UNIT	2"	X	-	-	-	-	-	NO	-	YES	2" FSK
RETURN AIR WITHIN 10' OF UNIT	2"	-	X	-	-	-	-	YES	1"	NO	-
RETURN AIR BEYOND 10' OF UNIT	2"	-	X	-	-	-	-	NO	-	YES	2" FSK
OUTSIDE AIR/MIXED AIR	2"	-	X	-	-	-	-	NO	-	YES	3" FSK
EXHAUST AIR	2"	-	X	-	-	-	-	NO	-	YES	2" FSK

NOTES:  
M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSIONAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT.

ROOF HOOD SCHEDULE - BASE DESIGN							
RH	THROAT SIZE DIMENSION (IN)	THROAT AREA (FP)	DAMPER BDD OR MOD	CONSTRUCTION	MANUFACTURER & MODEL NO.	COMMENTS	NOTES
1	16X16	1.78	MOD	ALUMINUM	GREENHECK FGJ	COLOR BY ARCHITECT	1-3
2	16X16	1.78	MOD	ALUMINUM	GREENHECK FGJ	COLOR BY ARCHITECT	1-3
3	16X16	1.78	MOD	ALUMINUM	GREENHECK FGJ	COLOR BY ARCHITECT	1-3
4	16X16	1.78	MOD	ALUMINUM	GREENHECK FGJ	COLOR BY ARCHITECT	1-3

NOTES:  
M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSIONAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT.  
1. M.C. TO PROVIDE ROOF HOOD WITH ALUMINUM BROSSCREEN.  
2. M.C. SHALL PROVIDE ROOF CURB. CURB INSTALLATION BY G.C.  
3. M.C. SHALL PROVIDE LOW VOLTAGE MOTORIZED DAMPER.

PACKAGED ROOFTOP GAS/ELECTRIC UNIT SCHEDULE															
RTU	LOCATION	INPUT MBH	OUTPUT MBH	COOLING NOMINAL TONS	MIN EER	CAPACITY STAGES	TOTAL CFM	MIN F.A. CFM	ELEC. CHAR	MCA	MOP	ESP (M)	WEIGHT	MANUFACTURER & MODEL NUMBER	NOTES

NOTES:  
M.C. IS RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY DIMENSIONAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL ALTERATIONS NECESSITATED BY PROVIDING ALTERNATE EQUIPMENT.  
1. PROVIDE CONDENSER COIL HAIL GUARD.  
2. PROVIDE FACTORY-INSTALLED UNIT DISCONNECT SWITCH.  
3. PROVIDE FACTORY-INSTALLED RETURN DUCT SMOKE DETECTOR WITH REMOTE TEST STATION TO BE LOCATED IN OCCUPIED SPACE. INSTALLATION OF REMOTE TEST STATION AND CONNECTION TO FIRE ALARM SYSTEM BY E.C.  
4. PROVIDE FACTORY-INSTALLED 120V GFCI CONVENIENCE OUTLET. GFCI POWERED FROM UNIT. RECEPTACLE SHALL BE COMPLIANT WITH NEC 210.6.3.  
5. PROVIDE ANTI-SHORT CYCLE TIMER AND LOW AMBIENT CONTROLS.  
6. PROVIDE FACTORY ROOF CURB SO THAT THE BOTTOM OF THE ROOFTOP UNIT IS A MINIMUM OF 14" ABOVE FINISHED ROOF. MOUNT LEVEL ON SLOPED ROOF.  
7. PROVIDE HINGED AND TOOL-LESS ACCESS DOORS.  
8. PROVIDE PHASE MONITOR.  
9. PROVIDE FULL ENTHALPY ECONOMIZER WITH POWERED EXHAUST.  
10. PROVIDE DIGITAL, WI-FI ACCESSIBLE 7-DAY PROGRAMMABLE THERMOSTAT WITH OCCUPIED/UNOCCUPIED SETTINGS CAPABLE OF CONTROLLING THE H/C STAGES OF SPECIFIED UNIT.  
11. PROVIDE UNIT WITH HGRH.  
12. MODULATE OUTSIDE AIR BASED ON DEMAND REPORTED BY CO2 SENSOR.