

GENERAL NOTES

- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS, INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED, THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. INSTALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE.
- F. CONTRACT LANDLORD APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL RELATED ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.
- G. INSTALL EXHAUST FAN A MINIMUM OF 10 FT FROM INTAKE AIR OPENINGS.

MECHANICAL SPECIFICATIONS

PROVIDE EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.

DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.

WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.

COORDINATION: COORDINATE WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

DUCT DIMENSIONS: UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

SHEETMETAL DUCTWORK: PROVIDE SHEETMETAL DUCTWORK FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS, FOR W.G. PRESSURE CLASS. SIZE CLASS "A". SHEETMETAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY, WITH G90 ZINC COATING. SHEET STEEL SHALL COMPLY WITH ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEETMETAL, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEALD) BY THE HOT DIP PROCESS, AND A924 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR SHEET, METALLIC-COATED BY THE HOT DIP PROCESS. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CALKING SEAL. ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES AT ALL 90° ELBOWS.

ROUND SHEETMETAL DUCT: PROVIDE SPIRAL SEAM (ALL SIZES) OR SNAP LOCK (DUCT SIZES UP TO 10") GALVANIZED STEEL COMPLYING WITH SMACNA STANDARDS. SPIRAL SEAM DUCTWORK SHALL HAVE SMACNA SEAM TYPE RL-1.

FLEXIBLE DUCT: PROVIDE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH 1" THICK 1 PCF FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/BARRIER. FLEXIBLE DUCT SHALL MEET NFPA 90A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR MINIMUM 2" W.G. PRESSURE AND 0 TO 250°F TEMPERATURE. PROVIDE SCREW-OPERATED METAL ADJUSTABLE CLAMPING DEVICES. USE TWIST-LOCK TAP COLLARS AT CONNECTIONS INTO SHEETMETAL DUCTWORK. MAXIMUM EXTENDED LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET.

EXPOSED DUCTWORK: EXPOSED DUCTWORK SHALL BE CLEANED OF DEBRIS AND OIL, THEN WIPED DOWN WITH VINEGAR OR OTHER SURFACE PREPARING CHEMICAL TO PREPARE DUCT FOR PAINT.

DUCT SEALANT: PROVIDE WATER BASED SYNTHETIC LATEX EMULSION PERMANENTLY FLEXIBLE HIGH VELOCITY DUCT SEALANT, DUCTMATE INDUSTRIES, INC. PRO SEAL OR EQUAL. SEALANT TO BE LOW VOC LEED COMPLIANT CAPABLE OF 15" W.G., NFPA 90A AND 90B APPROVED, UL 181B-M LISTED AND UL 723 CLASSIFIED. INSTALL PER MANUFACTURER INSTRUCTIONS. SEALANT SHALL BE APPROVED FOR PLENUM INSTALLATIONS AND MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS FOR PLENUM APPLICATIONS.

DUCT INSULATION (ALL MAKE-UP AIR DUCT, ROUND SUPPLY DUCT AND ROUND RETURN DUCT ABOVE CEILING): PROVIDE MINIMUM 1-1/2" THICK BLANKET TYPE FIBERGLASS INSULATION COMPLYING WITH ASTM C-555, TYPE II, WITH FACTORY APPLIED KRAFT BONDED TO ALUMINUM FOIL, REINFORCED WITH FIBERGLASS VAPOR BARRIER/JACKET. JACKET SHALL CONFORM TO ASTM C-1136, TYPE II, INSTALLED R VALUE SHALL BE 4.2 OR HIGHER WITH A 0.75 PCF DENSITY.

DUCT LINER (ALL RECTANGULAR SUPPLY AND RETURN DUCT, AND EXPOSED ROUND DUCT): PROVIDE MINIMUM 1" THICK, 2 PCF DENSITY, LONG TEXTILE FIBER TYPE DUCT LINER, WITH COATING ON THE AIR STREAM SIDE CONFORMING TO NFPA 90A. DUCT LINER SHALL BE SECURED TO DUCT WITH BOTH ADHESIVE AND MECHANICAL FASTENERS. ADHESIVE SHALL BE LEED COMPLIANT LOW VOC AS RECOMMENDED BY DUCT LINER MANUFACTURER, AND SHALL COMPLY WITH ASTM C-916. DUCT LINER FASTENERS SHALL COMPLY WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", LATEST EDITION. THERMAL CONDUCTIVITY SHALL BE EQUAL TO OR LESS THAN 0.24 AT 75°F.

ROUND VOLUME DAMPERS: PROVIDE MINIMUM 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MINIMUM 3/8" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS, WITH LOCKING POSITION REGULATOR. REGULATOR SHALL BE POSITIONED WITH SHEETMETAL BRACKET BEYOND DUCT COVERING. WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE, PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.

RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME, 16 GAUGE GALVANIZED STEEL BLADES, MINIMUM 1/2" HEXAGONAL AXLE, MOLDED SYNTHETIC BEARINGS, WITH 3/8" SQUARE PLATED STEEL CONTROL SHAFT. LINKAGES SHALL BE CONCEALED IN THE FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".

DUCT TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS, CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS". PROVIDE TURNING VANES CONSTRUCTED OF CURVED BLADES, SUPPORTED WITH BARS PERPENDICULAR TO BLADES, AND SET INTO SIDE STRIPS SUITABLE FOR MOUNTING IN DUCTWORK. FOLLOW SMACNA GUIDELINES FOR SPACING SUPPORT, AND CONSTRUCTION. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.

FLEXIBLE DUCT CONNECTORS: PROVIDE U.L. LABELED 30 OUNCE NEOPRENE COATED FIBERGLASS FABRIC DUCT CONNECTORS AT DUCT CONNECTIONS TO ALL VIBRATING EQUIPMENT.

DUCT ACCESS DOORS: PROVIDE HINGED ACCESS DOORS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT. PROVIDE INSULATED ACCESS DOORS FOR INSULATED DUCTWORK. CONSTRUCT OF SAME OR THICKER GAUGE SHEETMETAL AS DUCT IN WHICH IT IS INSTALLED. PROVIDE FLUSH FRAMES FOR UNINSULATED DUCTS, AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTS. PROVIDE CONTINUOUS HINGE ON ONE SIDE, WITH ONE HANDLE-TYPE LATCH FOR ACCESS DOORS 12" HIGH AND SMALLER, AND TWO HANDLE-TYPE LATCHES FOR LARGER ACCESS DOORS.

GREASE EXHAUST DUCTWORK: PROVIDE FACTORY BUILT DOUBLE WALL GREASE EXHAUST DUCT AS MANUFACTURED BY CAPTIVEARE OR APPROVED EQUAL. DUCT SHALL BE ETL LISTED TO UL-1978 AND UL-2221 FOR ZERO CLEARANCE TO COMBUSTIBLES. ALL ELBOWS IN GREASE EXHAUST DUCTWORK SHALL BE RADIUS ELBOWS. NO SQUARE ELBOWS ARE ALLOWED. PROVIDE GREASE DUCT CLEAN-OUT ACCESS DOORS BY DUCT MANUFACTURER AT EVERY CHANGE OF DIRECTION IN DUCT AND/OR EVERY 10 FEET WITH MINIMUM OF 3 FEET OF CLEARANCE IN FRONT OF CLEAN-OUT.

COMPOSITE GREASE DUCT FIRE PROTECTION INSULATION: PROVIDE FLEXIBLE BLANKET-TYPE INSULATION COMPOSED OF FIBER BLANKET ENCAPSULATED IN AN ALUMINUM FOIL SCRIM, PROVIDING A NONCOMBUSTIBLE WRAP TO PROVIDE A VAPOR AND DUST BARRIER. DUCT WRAP SYSTEM SHALL HAVE FLAME SPREAD INDEX OF NOT MORE THAN 5 AND SMOKE DEVELOPED INDEX NOT EXCEEDING 5, WHEN TESTED PER ASTM E-84 METHOD. INSULATION AND JACKET SHALL BE RATED FOR OPERATING TEMPERATURES UP TO 2000°F. DUCT WRAP SYSTEM MUST COMPLY WITH ALL FIVE FIRE TESTS OF STANDARD ASTM E2336, GREASE DUCT ENCLOSURE SYSTEM, AND THE DUCT FIRESTOP SYSTEM SHALL BE ASTM E 814 CLASSIFIED. FABRICATE DUCT WRAP ENCLOSURE WITH (2) LAYERS OF DUCT WRAP TO PROVIDE 2-HOUR FIRE RATING. PROVIDE COMPOSITE GREASE DUCT FIRE PROTECTION INSULATION FROM ONE OF THE FOLLOWING: THERMAL CERAMICS FIREMASTER FASTWRAP XL, UNIFRAX FRYREWRAP ELITE 1.5.

MECHANICAL EQUIPMENT IDENTIFICATION: PROVIDE ENGRAVED PLASTIC LAMINATE LABEL FOR EACH MAJOR ITEM OF MECHANICAL EQUIPMENT AND EACH OPERATIONAL DEVICE. LETTERS TO BE A MINIMUM OF 1/2" HIGH. PROVIDE SIGNS TO INFORM OPERATOR OF OPERATIONAL REQUIREMENTS, TO INDICATE SAFETY AND EMERGENCY PRECAUTIONS, AND TO WARN OF HAZARDS AND IMPROPER OPERATION.

TESTING AND BALANCING: TEST AND ADJUST ALL MECHANICAL SYSTEMS AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH THE MOST CURRENT NEBB OR AABC, AND ASHRAE STANDARDS. ELIMINATE OBJECTIONABLE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. BALANCING CONTRACTOR SHALL BE AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR, WITH NEBB OR AABC CERTIFICATION. SUBMIT COMPLETED AND CERTIFIED TEST AND BALANCE REPORT TO OWNER'S REPRESENTATIVE. BALANCE ALL SYSTEMS TO WITHIN 5% OF AIR FLOWS INDICATED ON THE DRAWINGS, AND REPORT ALL DISCREPANCIES TO HVAC INSTALLER FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH PERMANENT MARKER.

OPERATIONS AND MAINTENANCE MANUALS (O&M): AT COMPLETION OF PROJECT PROVIDE A MINIMUM OF TWO O&M MANUALS IN THREE RING BINDERS TO THE OWNER/TENANT. MANUALS SHALL HAVE TABS LABELED WITH ALL SECTIONS SEPARATED WITH A CLEAR INDEX AT THE FRONT. PROVIDE A WARRANTY LETTER AT THE FRONT OF THE MANUAL STATING DATES OF WARRANTY (START DATE AND END DATE) AND CONTRACTS WITH PHONE NUMBERS FOR WARRANTY WORK. PROVIDE A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE INCLUDING RECOMMENDED SETPOINTS. MANUALS SHALL INCLUDE SUBMITTALS OF ALL EQUIPMENT, SIZE AND OPTIONS SELECTED. PROVIDE ALL BALANCING REPORTS. PROVIDE MANUFACTURER LITERATURE FOR OPERATIONS AND MAINTENANCE FOR ALL THE EQUIPMENT ON THE PROJECT. ALL PERIODIC AND ROUTINE MAINTENANCE SHALL BE CLEARLY IDENTIFIED. PROVIDE A CONTROLS SECTION LISTING SYSTEM OPERATING AND CONTROL INSTRUCTIONS, MAINTENANCE, CALIBRATION, WIRING DIAGRAMS, SCHEMATICS AND CONTROL SEQUENCE DESCRIPTIONS.

SHOP DRAWINGS/SUBMITTALS: SUBMIT ELECTRONIC SUBMITTALS AND SHOP DRAWINGS VIA EMAIL AS PDF ELECTRONIC FILES. PROVIDE SUBMITTALS ON ALL MECHANICAL EQUIPMENT (INCLUDING CONTROLS PACKAGES), AIR DISTRIBUTION DEVICES, DUCTWORK, DAMPERS, AND INSULATION. SUBMITTALS AND SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION:

- PROJECT NAME
- DATE
- NAME AND ADDRESS OF ARCHITECT AND MEP ENGINEER
- NAME OF CONSTRUCTION MANAGER
- NAME OF CONTRACTOR
- NAME OF FIRM OR ENTITY THAT PREPARED SUBMITTAL
- NAMES OF SUBCONTRACTOR, MANUFACTURER, AND SUPPLIER.
- CATEGORY AND TYPE OF SUBMITTAL
- SUBMITTAL PURPOSE AND DESCRIPTION
- MANUFACTURER NAME
- PRODUCT NAME
- DRAWING NUMBER AND DETAIL REFERENCES, AS APPROPRIATE
- INDICATION OF FULL OR PARTIAL SUBMITTAL
- TRANSMITTAL NUMBER
- REMARKS

IDENTIFY DEVIATIONS FROM THE CONTRACT DOCUMENTS ON SHOP DRAWINGS AND SUBMITTALS. FURNISH COPIES OF FINAL SUBMITTALS TO MANUFACTURERS, SUBCONTRACTORS, SUPPLIERS, FABRICATORS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHERS AS NECESSARY FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.

SUBMITTALS SHALL INCLUDE (AS APPLICABLE):

- MANUFACTURER'S CATALOG CUTS
- MANUFACTURER'S PRODUCT SPECIFICATIONS
- STATEMENT OF COMPLIANCE WITH SPECIFIED REFERENCED STANDARDS
- TESTING BY RECOGNIZED TESTING AGENCY
- APPLICATION OF TESTING AGENCY LABELS AND SEALS
- WIRING DIAGRAMS SHOWING FACTORY-INSTALLED WIRING
- PERFORMANCE CURVES
- OPERATIONAL RANGE DIAGRAMS
- CLEARANCES REQUIRED TO OTHER CONSTRUCTION, IF NOT INDICATED ON SHOP DRAWINGS.

FULL SIZE SHOP DRAWINGS SHALL INCLUDE (AS APPLICABLE):

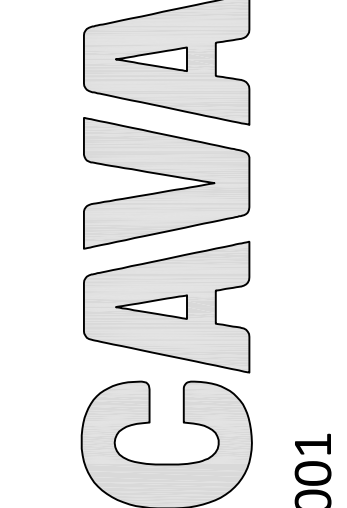
- IDENTIFICATION OF PRODUCTS
- SCHEDULES
- COMPLIANCE WITH SPECIFIED STANDARDS
- NOTATION OF COORDINATION REQUIREMENTS
- NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT
- RELATIONSHIP AND ATTACHMENT TO ADJOINING CONSTRUCTION CLEARLY INDICATED.

MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING DUCT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION AND INSTALLATION.

MECHANICAL SYMBOLS LEGEND

ABBREVIATIONS:		DOUBLE LINE DUCT SYMBOLS:	
AD	ACCESS DOOR		NEW SHEET METAL DUCTWORK
AFF/AFG	ABOVE FINISHED FLOOR/GRADE		SUPPLY OR OUTSIDE AIR DUCT
AHU	AIR HANDLING UNIT		RETURN AIR DUCT
AHJ	AUTHORITY HAVING JURISDICTION		EXHAUST AIR DUCT
BDD	BACKDRAFT DAMPER		DUCTWORK TRANSITION
BOD	BOTTOM OF DUCT		DUCTWORK TRANSITION - RECTANGULAR TO ROUND
BHP	BRAKE HORSEPOWER		SUPPLY DUCT ELBOW UP OR DOWN
BTU	BRITISH THERMAL UNIT		RETURN DUCT ELBOW UP OR DOWN
CD	CONTROL DAMPER		EXHAUST DUCT ELBOW UP OR DOWN
CFM	CUBIC FEET PER MINUTE		DUCT ELBOW WITH FIXED TURNING VANES
DB	DRY BULB		DUCT BRANCH TAKE-OFF
EC	ELECTRICAL CONTRACTOR		ROUND SPIN-IN WITH DAMPER
EA	EXHAUST AIR		SQUARE TO ROUND TAP WITH DAMPER
EAT	ENTERING AIR TEMPERATURE		FLEXIBLE DUCT CONNECTION
ESP	EXTERNAL STATIC PRESSURE		ELECTRIC OPERATED DAMPER
ETR	EXISTING TO REMAIN		VOLUME DAMPER
EWT	ENTERING WATER TEMPERATURE		FLEXIBLE DUCTWORK
FD	FIRE DAMPER		
FFC	FIRE PROTECTION CONTRACTOR		
FSD	COMBINATION FIRE/SMOKE DAMPER		
GC	GENERAL CONTRACTOR		
HZ	FREQUENCY		
LAT	LEAVING AIR TEMPERATURE		
MA	MIXED AIR		
MD	MANUAL DAMPER		
MC	MECHANICAL CONTRACTOR		
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
NC	NOISE CRITERIA		
OA	OUTSIDE AIR		
PC	PLUMBING CONTRACTOR		
PD	PRESSURE DROP		
PSI	POUNDS PER SQUARE INCH		
RA	RETURN AIR		
RLF	RELIEF AIR		
RTU	ROOFTOP UNIT		
SA	SUPPLY AIR		
SD	SMOKE DAMPER		
TSP	TOTAL STATIC PRESSURE		
TYP	TYPICAL		
UNO	UNLESS NOTED OTHERWISE		
WC	WATER COLUMN		
WB	WET BULB		
GRILLES/DIFFUSERS:			SUPPLY DIFFUSER
			SIDEWALL MOUNTED SUPPLY REGISTER
			RETURN GRILLE
			EXHAUST GRILLE
EQUIPMENT:			
			ROOF MOUNTED EXHAUST FAN
			ROOFTOP UNIT
			MAKE-UP AIR UNIT
			THERMOSTAT - ELECTRIC
			TEMPERATURE SENSOR
			HUMIDITY SENSOR
			DUCT SMOKE DETECTOR
GENERAL REFERENCES/NOTATIONS:			
			CONNECT TO EXISTING
			SQUARE NOTE DESIGNATION
			REVISION DESIGNATION
			MECHANICAL EQUIPMENT DESIGNATION
			DIFFUSER DESIGNATION AND CFM

SYMBOLS LEGEND NOTES:
 1. REFER TO SPECIFICATIONS AND PLAN NOTES FOR DETAILED DESCRIPTION OF ALL DEVICES SHOWN IN THIS SCHEDULE, PROVIDED BY THIS CONTRACTOR.



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 FOR CAVA
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AOR PROJECT NUMBER:
 CAV0018

ISSUE	DATE
SD SET	08.25.2023
PERMIT SET	09.06.2024
PERMIT REV 01	01.22.2025
PERMIT COMMENT 01	03.05.2025
ISSUED FOR CONST	06.16.2025

MECHANICAL SPECIFICATIONS,
 NOTES AND LEGEND

SHEET:

M000

2018 INTERNATIONAL MECHANICAL CODE TABLE 403.3.1.1 VENTILATION SUMMARY

OCCUPANCY CATEGORY	PEOPLE	AREA OUTDOOR	OCCUPANCY	OCCUPANCY CLASSIFICATION	CALCULATED OCCUPANCY DENSITY	ZONE OCCUPANCY OVERRIDE	PEOPLE EXPECTED TO OCCUPY THE ZONE - (Pz)	Rp/Pz	Ra/Az	AREA - (Az)	ZONE AIR DISTRIBUTION EFFECTIVENESS - Ez	BREATHING ZONE OUTDOOR AIRFLOW - (Vbz)	ZONE OUTDOOR AIRFLOW (Voz)	ZONE PRIMARY AIRFLOW (Vpz)	PRIMARY OUTDOOR AIR FRACTION (Zp)	OCCUPANT DIVERSITY RATIO (D)	UNCORRECTED OUTDOOR AIR INTAKE (Vou)	SYSTEM VENTILATION EFFICIENCY	CORRECTED OUTDOOR AIRFLOW (Vol)	PROVIDED OUTDOOR AIRFLOW	
	OUTDOOR AIR RATE - (Rp)	AIR RATE - (Ra)	DENSITY																		CFM/PERSON
RTU-X1																					
Kitchen	7.5	0.12	20	KITCHEN	19	---	19	141	113	940	0.8	254	317	3320	0.10		254		254		
Hallway	5.0	0.06	5	OFFICE	0	---	1	5	3	50	0.8	8	10	80			8		8		
				SYSTEM POPULATION INCLUDING DIVERSITY (Ps) =				20							3400	0.10		254	1.00	254	340
RTU-X2																					
Dining	7.5	0.18	70	DINING	76	---	76	570	195	1085	0.8	765	956	2900	0.33		765		933		
Hallway	---	0.06	---	CORRIDOR	---	---	---	---	---	50	0.8	3	4	150			3		4		
Restrooms	---	---	---	TOILET	---	---	---	---	---	96	0.8	---	---	---			---		---		
				SYSTEM POPULATION INCLUDING DIVERSITY (Ps) =				76							3200	0.33		768	0.82	936	940

ROOFTOP UNIT SCHEDULE - LANDLORD PROVIDED

MARK	IDENTIFICATION			PERFORMANCE						DX COOLING DATA				GAS HEAT			ELECTRICAL				PHYSICAL	NOTES
	MANUFACTURER	MODEL	AREA SERVED	NOMINAL TONNAGE	SUPPLY AIR FLOW CFM	OUTSIDE AIR FLOW CFM	AMBIENT O.A.T. °F	EXT. STATIC IN W.C.	EER / IEER	EAT °F DBWB	TOTAL BTUHR	SENSIBLE BTUHR	FUEL TYPE	INPUT BTUHR	OUTPUT BTUHR	MOTOR HP	VOLTS/PH	MCA AMPS	MOCP AMPS	APPROX. WEIGHT LBS		
X1	TRANE	YSL102	KITCHEN	8.5	3400	340	100	0.8	11.0/14.6	78.1/84.0	97.130	79.890	NATURAL GAS	120,000	97,200	3.0	1	208V-3PH	53.0	70	1,300	1.2
X2	TRANE	YSL102	DINING	8.5	3,200	940	100	0.8	11.0/14.6	78.4/86.4	100,340	72,580	NATURAL GAS	200,000	162,000	3.0	1	208V-3PH	53.0	70	1,400	1.2

NOTES:

- EXISTING ROOFTOP UNIT TO REMAIN.
- SET MINIMUM OUTSIDE AIR AS SPECIFIED ABOVE. FIELD SET 2 MINIMUM POSITIONS TO MAINTAIN SCHEDULED OUTSIDE AIR FLOW RATE AT SUPPLY FAN MINIMUM AND MAXIMUM SPEEDS. OUTSIDE AIR DAMPER SHALL FULLY CLOSE ON UNIT SHUTDOWN.

MAKE UP AIR UNIT SCHEDULE

MARK	IDENTIFICATION			CONFIGURATION		PERFORMANCE				DX COOLING DATA			INDIRECT GAS FIRED HEATER			MAU SUPPLY FAN ELECTRICAL				PHYSICAL	ACCESSORIES	NOTES
	MANUFACTURER	MODEL	SERVICE	TYPE	DRIVE TYPE	OUTSIDE AIR FLOW CFM	EXT. STATIC IN W.C.	FAN SPEED RPM	SOUND LEVEL SONES	EAT °F DBWB	TOTAL BTUHR	SENSIBLE BTUHR	FUEL TYPE	INPUT BTUHR	OUTPUT BTUHR	MOTOR HP	VOLTS/PH	MCA AMPS	MOCP AMPS			
1	ECON-AIR	EARTU11200-1S-ST-MPU	HOOD #1	DOWNFLOW	DIRECT	1694	0.75	2,117	87.0/77.3	64,000	29,100	NATURAL GAS	181,616	147,109	2.0	208V-3PH	28.4	30	1,300	1-7	1	

ACCESSORIES:

- FACTORY MOUNTED AND WIRED NEMA 3R DISCONNECT SWITCH.
- FACTORY PROVIDED REMOVABLE ACCESS PANELS.
- FACTORY PROVIDED MOTORIZED INTAKE DAMPER.
- FACTORY PROVIDED WEATHER HOOD AND BIRDSCREEN ON INLET.
- UNIT MOUNTED VARIABLE FREQUENCY DRIVE.
- FACTORY FURNISHED 20" HIGH INSULATED ROOF CURB.
- FACTORY PROVIDED INTAKE, EVAPORATOR, AND DISCHARGE TEMPERATURE SENSORS WITHIN UNIT.

NOTES:

- REFER TO CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.

KITCHEN EXHAUST FAN SCHEDULE

MARK	IDENTIFICATION			CONFIGURATION		PERFORMANCE				ELECTRICAL			PHYSICAL	ACCESSORIES	NOTES	
	MANUFACTURER	MODEL	SERVICE	TYPE	DRIVE TYPE	EXHAUST AIR FLOW CFM	EXT. STATIC IN W.C.	FAN SPEED RPM	SOUND LEVEL SONES	MOTOR HP	VOLTS/PH	MCA AMPS				MOCP AMPS
1	CAPTIVEAIRE	DUBSHFA	HOOD #1	UPBLAST	DIRECT	2,117	1.0	1,479	15.0	1.0	120V-1PH	14.5	25	130	GDC,RC,W/P	1-3

ACCESSORIES:

- GDC-GREASE DRAIN AND CURB, RC-ROOF CURB, WP-NEMA3R DISCONNECT SWITCH.

NOTES:

- FAN IS OWNER FURNISHED. REFER TO CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.
- VARIABLE FREQUENCY DRIVE IS PROVIDED WITH HOOD CONTROL PANEL.
- FAN SHALL BE CONTROLLED BY SWITCH AT CAPTIVEAIRE HOOD. INTERLOCK RTU-X1 AND RTU-X2 TO OPERATE IN OCCUPIED MODE WHILE HOOD EXHAUST FAN IS ENERGIZED.

EXHAUST FAN SCHEDULE - LANDLORD PROVIDED

MARK	IDENTIFICATION			CONFIGURATION		PERFORMANCE				ELECTRICAL			PHYSICAL	NOTES	
	MANUFACTURER	MODEL	SERVICE	TYPE	DRIVE TYPE	EXHAUST AIR FLOW CFM	EXT. STATIC IN W.C.	FAN SPEED RPM	SOUND LEVEL SONES	MOTOR HP	VOLTS/PH	MCA AMPS			MOCP AMPS
EF-X1	LOREN COOK	ACED-90		DOWNBLAST	DIRECT	400	0.25	1,155	4	1.8	120V-1PH	1.8	15	35	

NOTES:

- EXISTING UNIT TO REMAIN.

AIR CURTAIN SCHEDULE

MARK	IDENTIFICATION			PERFORMANCE			ELECTRIC HEATING COIL			ELECTRICAL			PHYSICAL		ACCESSORIES	NOTES
	MANUFACTURER	MODEL	SERVICE	SUPPLY AIR FLOW CFM	INPUT KW	OUTPUT BTUHR	STAGES	MOTOR HP	VOLTS/PH	MCA AMPS	MOCP AMPS	APPROX. WEIGHT LBS	FINISH			
AC-1	MARS	STD242-1EBH-GB		1,150	12	40,920	1	1/2	208V-3PH	47.3	50	70	PER ARCHITECT	DRA,F,MS	1-2	

ACCESSORIES:

- DRA-DECORATIVE REAR ADAPTER, F-FILTER, MS-DOOR MICRO SWITCH.

NOTES:

- PROVIDE WITH THERMOSTAT.
- PROVIDE WITH DISCONNECT SWITCH.

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	NECK SIZE	FACE SIZE	FRAME TYPE	FINISH	NOISE CRITERIA LEVEL	ACCESSORIES
A	TITUS	TMS-AA	SQUARE CONE DIFFUSER	1' X 1/2'	24" X 24"	LAY-IN	PER ARCHITECT	<30	
B	TITUS	FL-20-HT	FLOWBAR DIFFUSER	PER PLAN	(1) 4'-0" SLOT	22	PER ARCHITECT	<30	ECL,SP
C	TITUS	355FL	LOUVERED RETURN GRILLE	10' X 10'	12' X 12'	LAY-IN	PER ARCHITECT	<30	OBD,STR,TRM
D	TITUS	TMS	SQUARE CONE DIFFUSER	SEE PLAN	12' X 12'	LAY-IN	PER ARCHITECT	<30	OBD,TRM
E	TITUS	R-300F	ROUND SUPPLY DIFFUSER	12" ROUND	15" ROUND	DUCT MOUNT	PER ARCHITECT	<30	
F	TITUS	R-300F	ROUND SUPPLY DIFFUSER	10" ROUND	13" ROUND	DUCT MOUNT	PER ARCHITECT	<30	
G	TITUS	355FL	LOUVERED RETURN GRILLE	22" X 22"	24" X 24"	LAY-IN	PER ARCHITECT	<30	OBD,STR,TRM
H	TITUS	355FL	LOUVERED RETURN GRILLE	22" X 22"	24" X 24"	LAY-IN	PER ARCHITECT	<30	STR
I	TITUS	355FL	LOUVERED RETURN GRILLE	10' X 10'	12' X 12'	LAY-IN	PER ARCHITECT	<30	STR

ACCESSORIES:

- EC-END CAPS, LPS-INSULATED LINEAR SLOT PLENUM, OBD-OPPPOSED BLADE DAMPER, STR-SQUARE TO ROUND TRANSITION, TRM-RAPID MOUNT SHEETROCK FRAME.

AIR BALANCE SCHEDULE

MARK	SUPPLY AIR FLOW	OUTSIDE AIR FLOW	EXHAUST AIR FLOW	RETURN AIR FLOW	BUILDING PRESSURE
RTU-X1	3400	340	0	3060	340
RTU-X2	3200	940	0	2260	940
EF-1	0	0	400	0	-400
KEF-1	0	0	2117	0	-2117
MAU-1	0	1694	0	-1694	1694
TOTAL	6600	2974	2517	3626	457



signature
06/13/2025
date
license expires 11-30-2025

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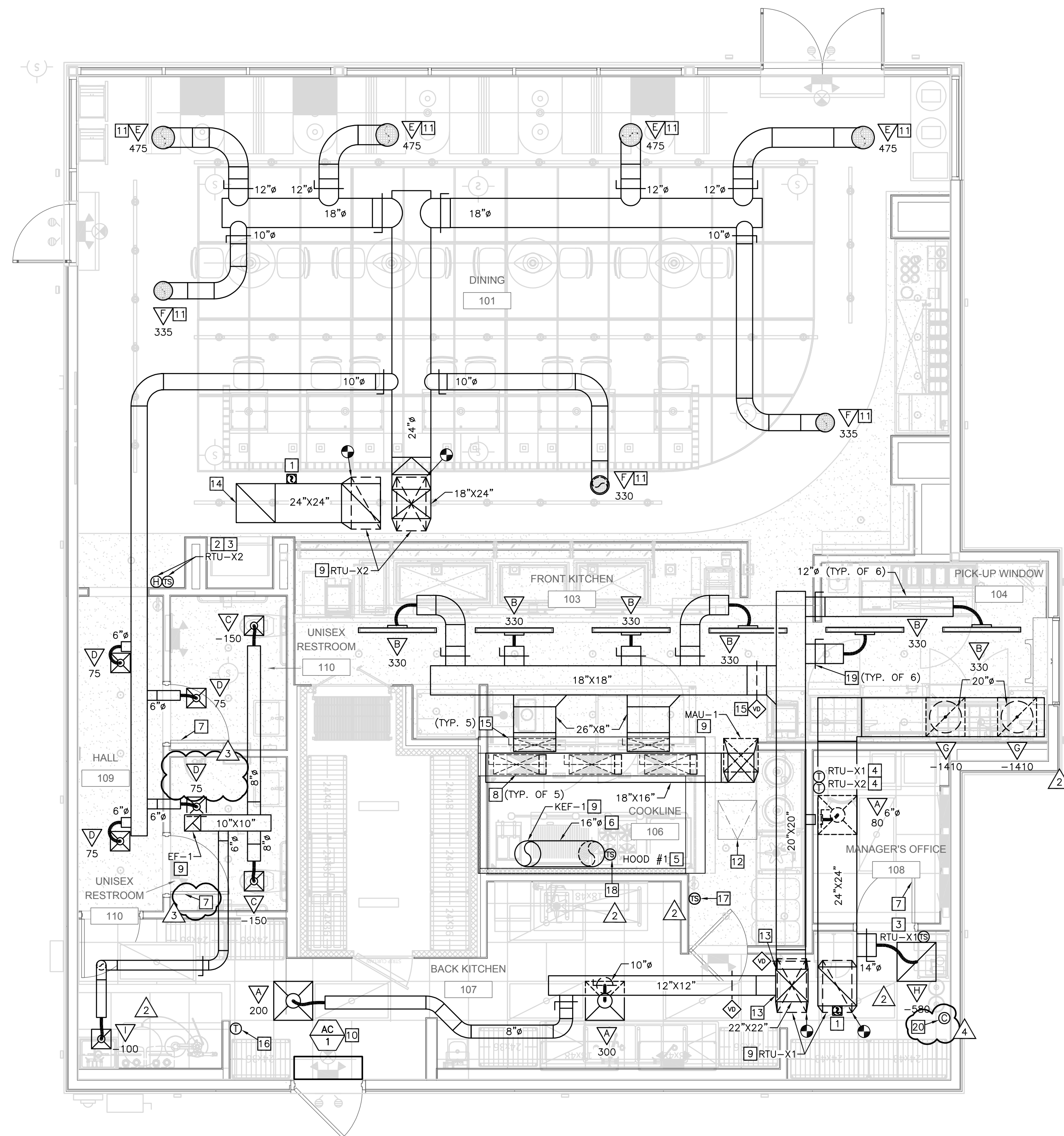
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MECHANICAL SCHEDULES

SHEET:

M001



01 MECHANICAL PLAN
1/4" = 1'-0"

MECHANICAL KEY NOTES

- 1 PROVIDE DUCT MOUNTED SMOKE DETECTOR. DETECTOR SHALL MEET REQUIREMENTS OF U.L. 268A. INTERLOCK SMOKE DETECTOR TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. PROVIDE SMOKE DETECTOR WITH AN ANNUCIATOR WITH PIEZO ALARM AND POWER LEADS FOR VISIBLE AND AUDIBLE ALARM SIGNAL AND VISIBLE TROUBLE SIGNAL. MOUNT ANNUCIATOR ON ROOM SIDE OF CEILING/STRUCTURE.
- 2 PROVIDE HUMIDITY SENSOR. MOUNT SENSOR 48" ABOVE FINISHED FLOOR. HUMIDITY SENSOR SHALL OPERATE REFRIGERATION SYSTEM AND INITIATE HOT GAS REHEAT AS REQUIRED TO MAINTAIN SPACE HUMIDITY AT 55% RH.
- 3 PROVIDE REMOTE TEMPERATURE SENSOR COMPATIBLE WITH THERMOSTAT. MOUNT SENSOR 48" ABOVE FINISHED FLOOR.
- 4 PROVIDE HONEYWELL WI-FI VISION PRO 8000 TOUCHSCREEN 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTO-CHANGEOVER AND AUTOMATIC START CAPABILITY. MOUNT THERMOSTAT 48" ABOVE FINISHED FLOOR. COORDINATE FINAL INSTALLATION LOCATION OF THERMOSTAT WITH OWNER'S REPRESENTATIVE.
- 5 INSTALL OWNER FURNISHED TYPE I GREASE EXHAUST HOOD. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE TRAPZEE HANGERS FOR ALL THREAD SUPPORT UNDER DUCTWORK AS REQUIRED. REFER TO HOOD DRAWINGS IN FOOD SERVICE SET FOR HOOD SPECIFICATION AND ADDITIONAL INFORMATION INCLUDING BALANCE OF MAKEUP AND CONDITIONED SUPPLY AIR TO HOOD.
- 6 INSTALL OWNER FURNISHED UL-2221 LISTED DOUBLE-WALL GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-3R OR 3Z ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL. FROM HOOD SIT FAN ON ROOF. INSTALL EXHAUST DUCT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE CLEANOUTS AT EVERY CHANGE OF DIRECTION IN THE DUCT AND/OR EVERY 10 FEET WITH MINIMUM OF 3 FEET OF CLEARANCE IN FRONT OF CLEAN-OUT. COORDINATE ROUTING OF DUCTWORK WITH OWNER'S CAPTIVEAIRE REPRESENTATIVE.
- 7 UNDERCUT RESTROOM DOOR 1" FOR TRANSFER AIR.
- 8 REFER TO HOOD DRAWINGS FOR BALANCE OF MAKEUP AND CONDITIONED SUPPLY AIR TO HOODS.
- 9 DUCT UP TO EQUIPMENT ON ROOF. REFER TO SHEET M200 FOR EQUIPMENT LOCATION.
- 10 PROVIDE AIR CURTAIN. MOUNT UNIT ON WALL DIRECTLY ABOVE DOOR PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE EXIT SIGN LOCATION WITH ELECTRICAL CONTRACTOR.
- 11 INSTALL BOTTOM OF ROUND DIFFUSER TO MATCH HEIGHT OF CEILING CLOUD.
- 12 CEILING ACCESS PANEL. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. ENSURE DUCTWORK IS ROUTED HIGH ENOUGH ABOVE ACCESS PANEL AS TO NOT HINDER ACCESS TO ITEMS ABOVE CEILING.
- 13 PROVIDE SHOE TAP AT CONNECTION TO DUCT DROP FROM ROOFTOP UNIT.
- 14 ELBOW END OF RETURN DUCT UP 4".
- 15 PROVIDE YOUNG REGULATOR MODEL 830ACC RECTANGULAR CABLE CONTROLLED OPPOSED BLADE BALANCING DAMPER, MODEL 270-301EZ BOWDEN CABLE CONTROL KIT, AND BCW CONTROL WIRE AND CASINGS. COORDINATE INSTALLATION LOCATION WITH ARCHITECT AND MOUNT CABLE CONTROLLER IN CEILING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 16 PROVIDE REMOTE THERMOSTAT FOR AIR CURTAIN. MOUNT THERMOSTAT 48" ABOVE FINISHED FLOOR.
- 17 INSTALL TEMPERATURE SENSOR FURNISHED WITH HOOD FOR AUTOMATIC CONTROL OF KEF-1. INSTALL SENSOR 18" ABOVE FINISHED FLOOR. KEF-1 SHALL ENERGIZE WHENEVER THE TEMPERATURE SENSOR AT THE HOOD EXHAUST COLLAR DETECTS ELEVATED TEMPERATURES.
- 18 FACTORY INSTALLED TEMPERATURE SENSOR AT HOOD EXHAUST COLLAR FOR AUTOMATIC CONTROL OF KEF-1. REFER TO CAPTIVEAIRE DRAWINGS IN FOOD SERVICE SET FOR ADDITIONAL INFORMATION.
- 19 PROVIDE YOUNG REGULATOR MODEL 5020-CC ROUND CABLE CONTROLLED BALANCING DAMPER, MODEL 270-275 BOWDEN CABLE CONTROL KIT, AND BCW CONTROL WIRE AND CASING, OR EQUALS. MOUNT CABLE CONTROLLER IN DIFFUSER PLENUM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 20 PROVIDE CO2 DETECTOR MODEL NUMBER RAD-0102-6-S NEAR CO2 BULK TANKS FOR BEVERAGE SYSTEM. INSTALL 18" ABOVE FINISHED FLOOR.

HVAC COMMISSIONING

GENERAL CONTRACTOR SHALL HIRE A THIRD PARTY REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY TO DEVELOP A COMMISSIONING PLAN THAT SHALL INCLUDE THE FOLLOWING ITEMS:

1. NARRATIVE DESCRIPTION OF ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING PERSONNEL INTENDED TO ACCOMPLISH EACH OF ACTIVITY.
2. LISTING OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF TESTS TO BE PERFORMED.
3. FUNCTIONS TO BE TESTED, INCLUDING BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
4. CONDITIONS UNDER WHICH TEST WILL BE PERFORMED, AT MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY IN ACCORDANCE WITH REQUIREMENTS OF SECTION 04052 OF THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE AND PROVIDED TO PROJECT OWNER. A COPY OF THE REPORT SHALL BE MADE AVAILABLE TO CODE OFFICIAL IF REQUESTED.

FINAL COMMISSIONING REPORT SHALL BE DUE TO PROJECT OWNER WITHIN 90 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.

GENERAL NOTE

WHERE APPLICABLE, PROVIDE ACCESS PANELS IN HARD LID CEILING FOR ACCESS TO DUCT MOUNTED SMOKE DETECTORS, SENSOR, BALANCING DAMPERS, ETC. COORDINATE LOCATION OF ACCESS PANEL TO BE CENTERED IN LINE WITH LIGHT FIXTURES, DIFFUSERS, ETC. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.



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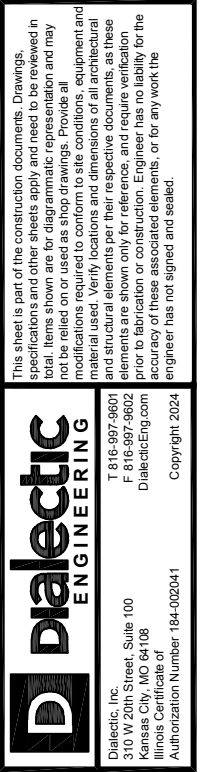
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MECHANICAL PLAN

SHEET:



- MECHANICAL KEY NOTES**
- 1 LANDLORD PROVIDED ROOFTOP UNIT AND CURB. COORDINATE UNIT WITH STRUCTURE. SHIM UNIT AND CURB LEVEL FOR PROPER CONDENSATE DRAINAGE. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN AIR DUCT CONNECTIONS. TRANSITION TO DUCT SIZES SHOWN.
 - 2 INSTALL OWNER FURNISHED MAKEUP AIR UNIT AND ROOF CURB. SHIM UNIT AND CURB LEVEL. PROVIDE FLEXIBLE CONNECTOR ON SUPPLY AIR DUCT CONNECTION. TRANSITION TO DUCT SIZES SHOWN ON SHEET M100.
 - 3 LANDLORD PROVIDED ROOF MOUNTED EXHAUST FAN AND CURB.
 - 4 MAINTAIN A MINIMUM 10'-0" CLEARANCE FROM EXHAUST DISCHARGE TO OUTSIDE AIR INTAKES.
 - 5 PROVIDE ROOF MOUNTED EQUIPMENT SUPPORT RAILS AND INSTALL OWNER FURNISHED REMOTE CONDENSING UNIT FOR WALK-IN COOLER. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, CRANKCASE HEATER, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. PROVIDE ROOF RAILS TO SUPPORT CONDENSING UNIT ON ROOF. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE PIPE CURB ASSEMBLY FOR ROOF PENETRATIONS. SEAL PIPING PENETRATIONS THROUGH COOLER ROOF.



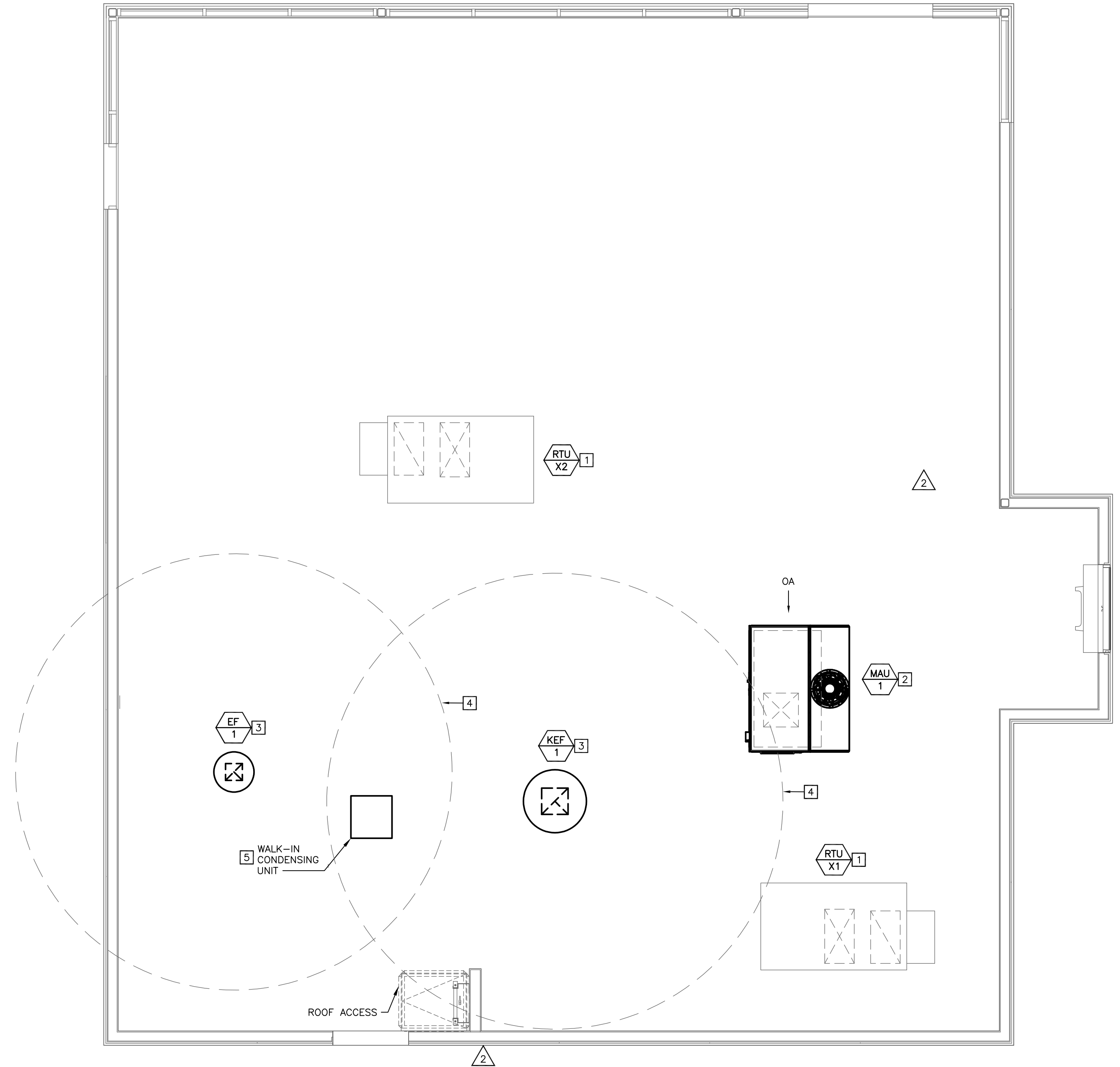
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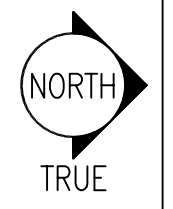
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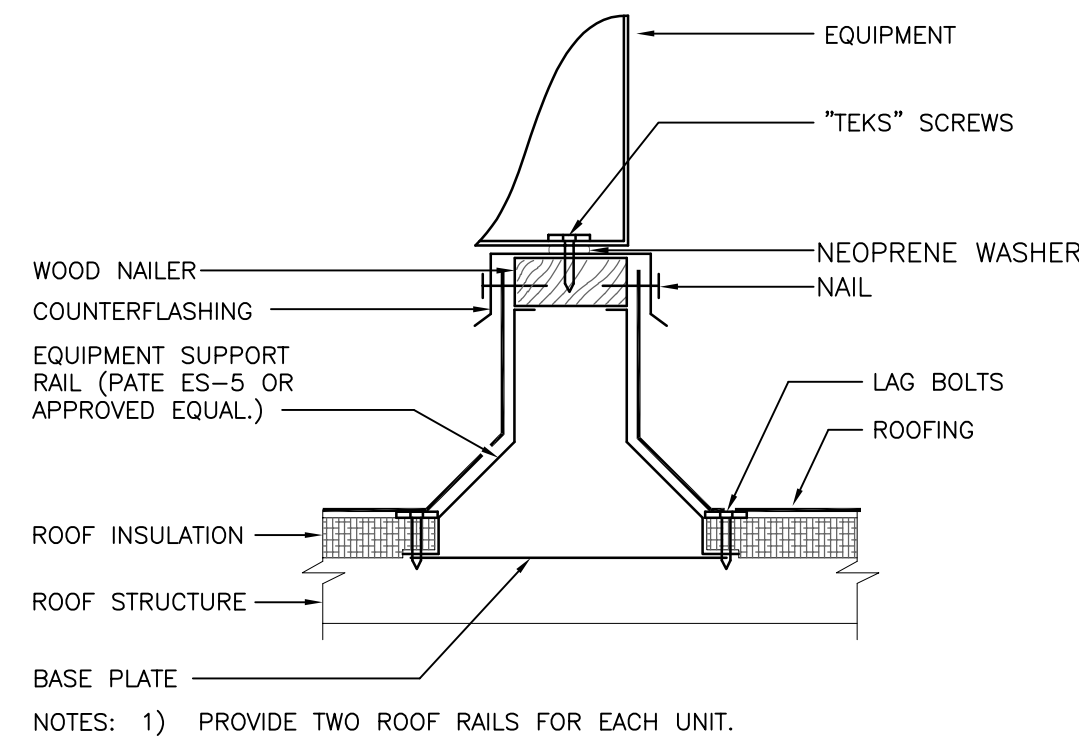
MECHANICAL PLAN - ROOF

SHEET:
M200

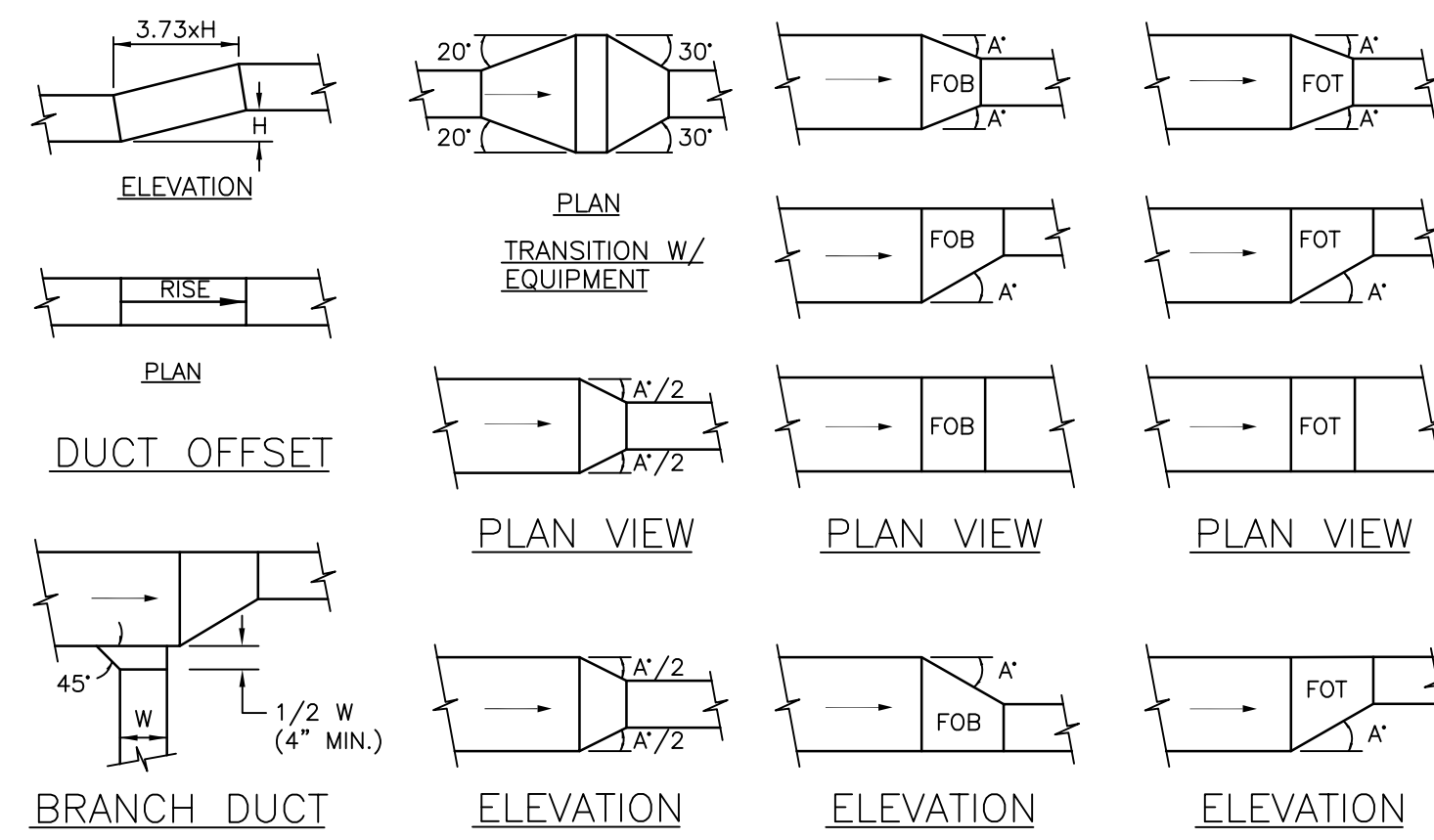


01 MECHANICAL PLAN-ROOF
 1/4" = 1'-0"

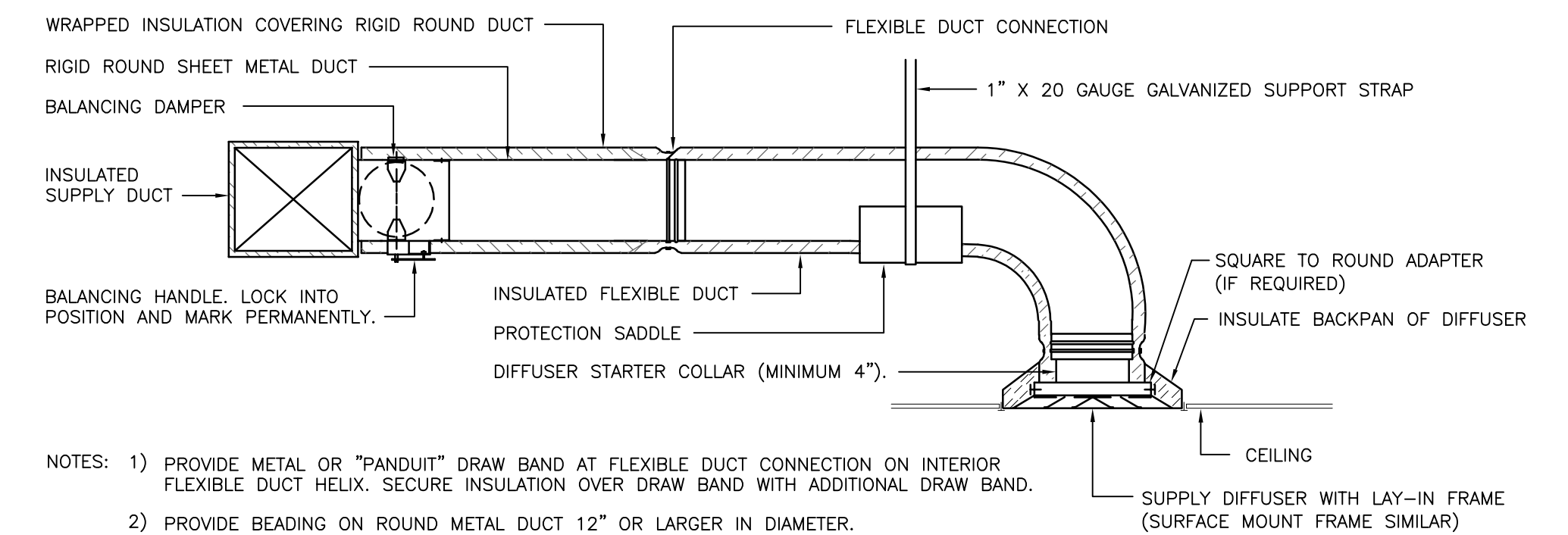




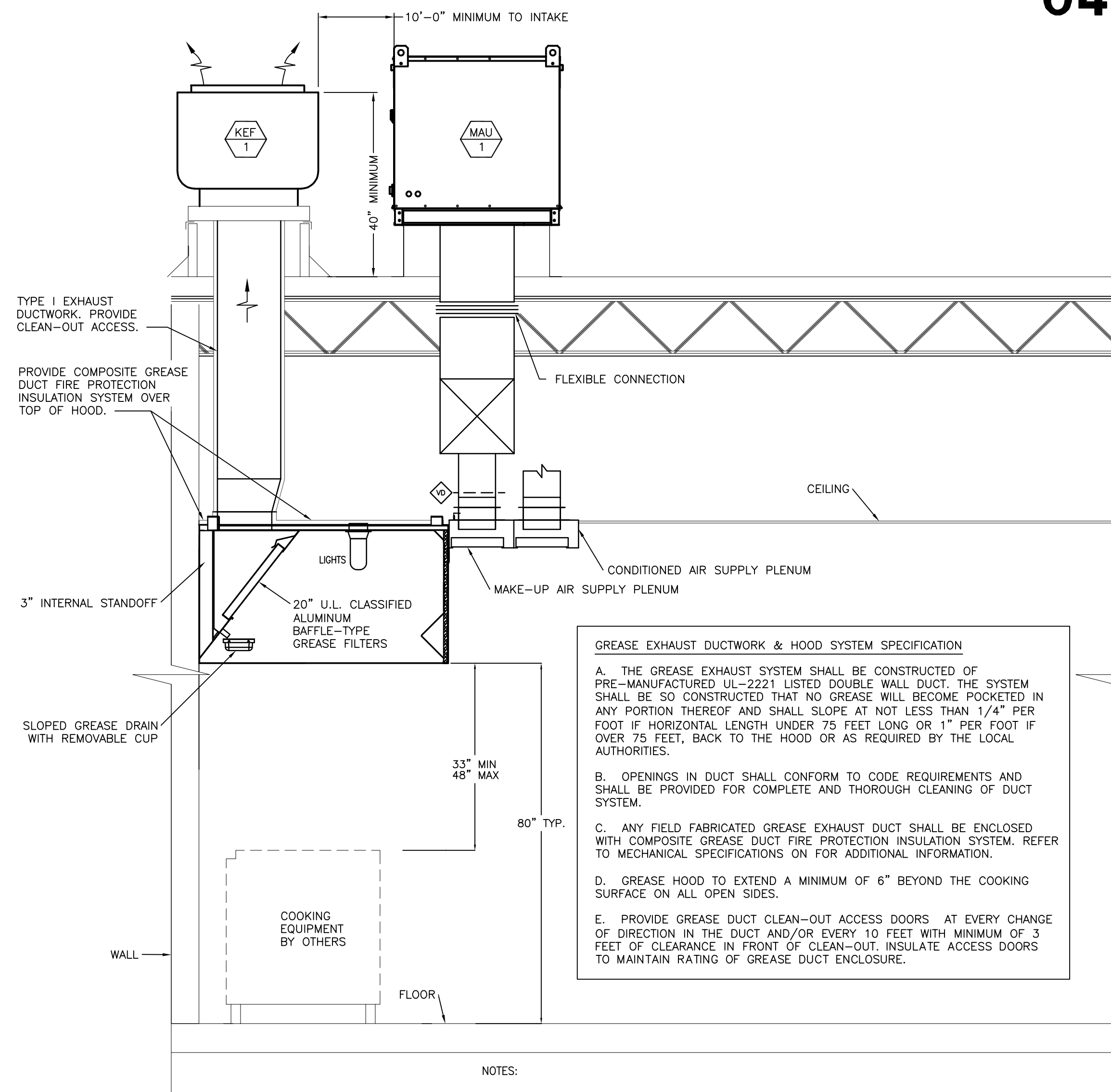
07 EQUIPMENT SUPPORT RAIL DETAIL
NOT TO SCALE



04 LOW VELOCITY DUCT FITTINGS DETAIL
NOT TO SCALE



01 DIFFUSER CONNECTION DETAIL
NOT TO SCALE



GREASE EXHAUST DUCTWORK & HOOD SYSTEM SPECIFICATION

A. THE GREASE EXHAUST SYSTEM SHALL BE CONSTRUCTED OF PRE-MANUFACTURED UL-2221 LISTED DOUBLE WALL DUCT. THE SYSTEM SHALL BE SO CONSTRUCTED THAT NO GREASE WILL BECOME POCKETED IN ANY PORTION THEREOF AND SHALL SLOPE AT NOT LESS THAN 1/4" PER FOOT IF HORIZONTAL LENGTH UNDER 75 FEET LONG OR 1" PER FOOT IF OVER 75 FEET, BACK TO THE HOOD OR AS REQUIRED BY THE LOCAL AUTHORITIES.

B. OPENINGS IN DUCT SHALL CONFORM TO CODE REQUIREMENTS AND SHALL BE PROVIDED FOR COMPLETE AND THOROUGH CLEANING OF DUCT SYSTEM.

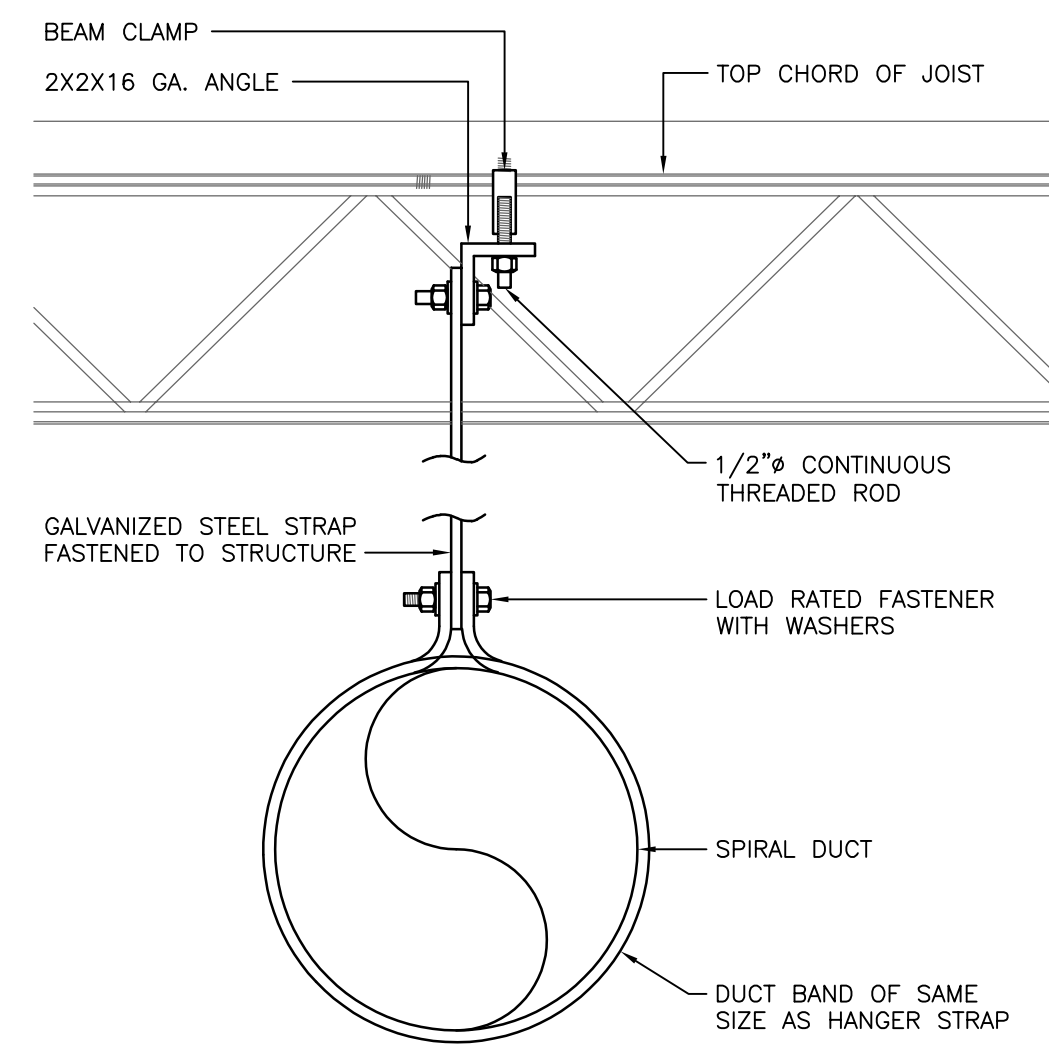
C. ANY FIELD FABRICATED GREASE EXHAUST DUCT SHALL BE ENCLOSED WITH COMPOSITE GREASE DUCT FIRE PROTECTION INSULATION SYSTEM. REFER TO MECHANICAL SPECIFICATIONS ON FOR ADDITIONAL INFORMATION.

D. GREASE HOOD TO EXTEND A MINIMUM OF 6" BEYOND THE COOKING SURFACE ON ALL OPEN SIDES.

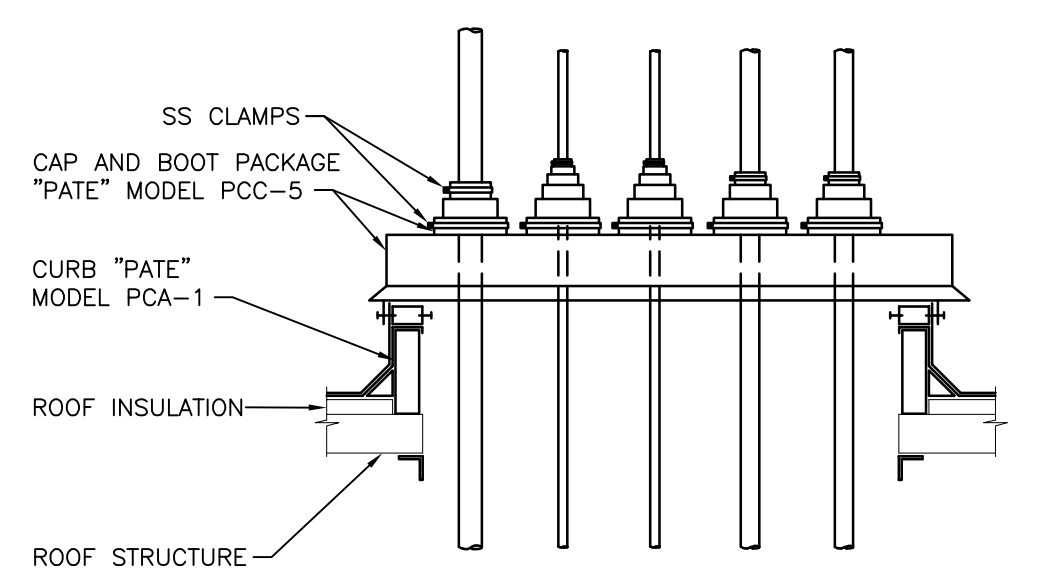
E. PROVIDE GREASE DUCT CLEAN-OUT ACCESS DOORS AT EVERY CHANGE OF DIRECTION IN THE DUCT AND/OR EVERY 10 FEET WITH MINIMUM OF 3 FEET OF CLEARANCE IN FRONT OF CLEAN-OUT. INSULATE ACCESS DOORS TO MAINTAIN RATING OF GREASE DUCT ENCLOSURE.

- NOTES:
1. PROVIDE UL LISTED TYPE I EXHAUST HOOD.
 2. THE GREASE HOOD SHALL MEET THE REQUIREMENTS OF THE MECHANICAL CODE, NSF AND NFPA FOR A TYPE I HOOD.
 3. FIRE DEPARTMENT APPROVAL SHALL BE REQUIRED ON FIRE PROTECTION SYSTEM FOR GREASE HOODS AND DUCTS AS REQUIRED BY THE MECHANICAL CODE AND AS REQUIRED BY THE FIRE CODE.
 4. PROVIDE CHEMICAL FIRE SUPPRESSION SYSTEM AS REQUIRED BY NFPA 17A.
 5. PERFORM LIGHT TEST ON GREASE EXHAUST DUCTWORK AFTER DUCTWORK INSTALLATION IS COMPLETE BUT PRIOR TO DUCTWORK CONCEALMENT PER REQUIREMENTS OF LOCAL CODE AUTHORITIES.

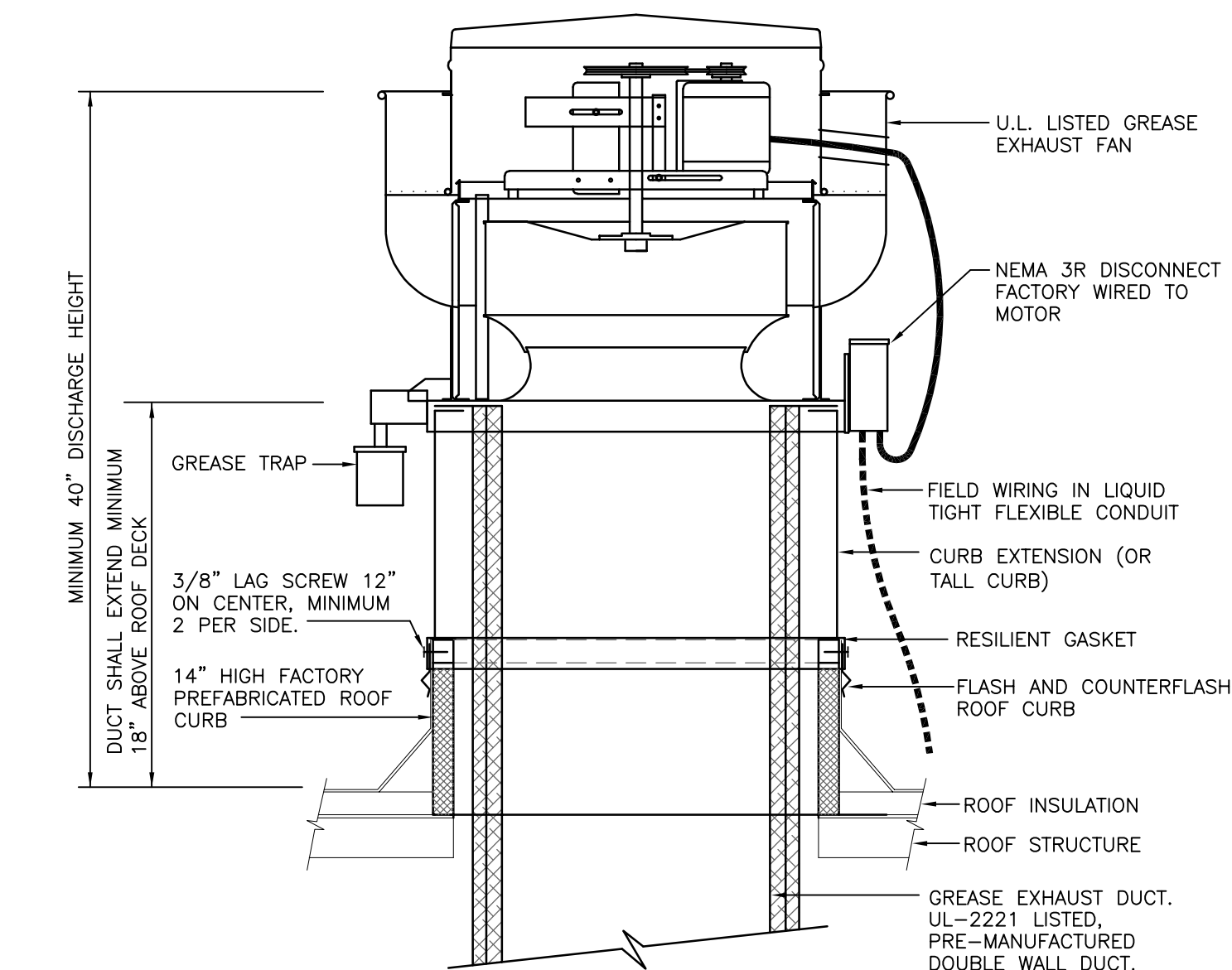
08 KITCHEN HOOD SCHEMATIC
NOT TO SCALE



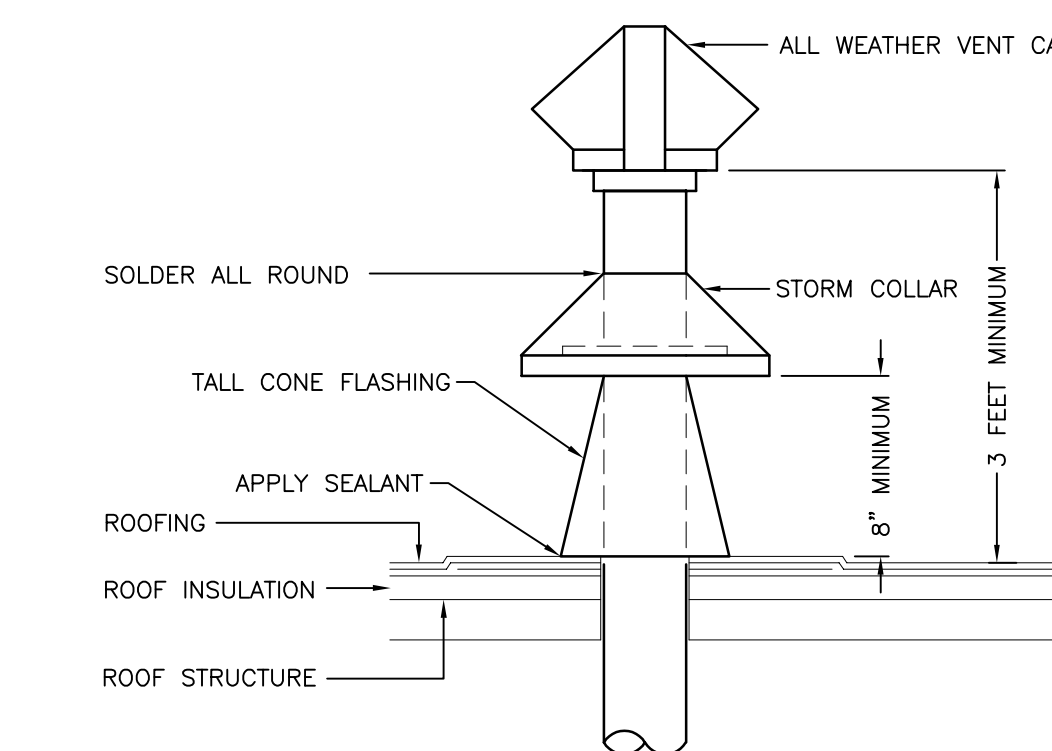
05 SPIRAL DUCT SUPPORT DETAIL
NOT TO SCALE



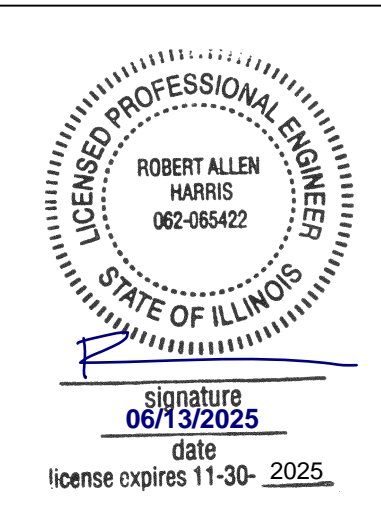
06 PIPE ROOF PENETRATION DETAIL
NOT TO SCALE



02 ROOF MOUNTED GREASE EXHAUST FAN DETAIL
NOT TO SCALE



03 DUCT THROUGH ROOF DETAIL
NOT TO SCALE



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MECHANICAL DETAILS

SHEET:

M300