

GENERAL DEMOLITION NOTES

- DEMOLITION DRAWINGS ARE INTENDED TO ONLY GIVE A GENERAL REPRESENTATION OF THE DEMOLITION INVOLVED, AND DO NOT CONSTITUTE A FULL LISTING OF ALL ITEMS REQUIRING REMOVAL. VERIFY W/ OWNER EXTENT OF UNUSED ITEMS IN ATTIC TO BE DEMO'D.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW SITE CONDITIONS AND TO IDENTIFY ALL DEMOLITION WORK, AND INCLUDE IN HIS BID ALL COSTS FOR DEMOLITION & DISPOSAL.
- SEE GENERAL NOTES, DRAWING NOTES & KEYED NOTES WHICH COVER OTHER MISCELLANEOUS MECHANICAL ITEMS TO BE REMOVED.
- ALL EXISTING ITEMS NOT BEING REUSED SHALL BE REMOVED. THIS INCLUDES SUCH ITEMS AS THERMOSTATS, CONTROL DEVICES, DUCTS, FANS, PIPING, GRILLES, SUPPORTS, VALVES, CURBS, AND RELATED ACCESSORIES.
- ABANDONED ITEMS, ANCHORS, INSERTS, PIPE STUBS, AND OTHER PROJECTIONS NOT BEING CONCEALED BY NEW CONSTRUCTION SHALL BE REMOVED TO 1" BELOW THE ADJACENT FINISHED SURFACE, AND THE DISTURBED AREA PATCHED.
- PATCH ALL WALL/FLOOR/CEILING OPENINGS LEFT BY REMOVAL OF EXISTING ITEMS. PATCH SO AS TO MATCH FINISH OF ADJACENT UNDISTURBED AREA.
- PROVIDE TEMPORARY CAP-OFF OF ALL EXIST. SYSTEMS TO ALLOW CONTINUED USE OF ALL SYSTEMS UNTIL THE FINAL SYSTEM COMPONENTS ARE INSTALLED AND CONNECTED.
- VERIFY SIZE & LOCATION OF ALL EXISTING ITEMS TO BE DEMOD.

MECHANICAL GENERAL NOTES

- ALL DUCT WALL PENETRATIONS SHALL BE PROVIDED WITH CLOSURE COLLARS AND BE TIGHTLY SEALED TO PREVENT THE TRANSMISSION OF NOISE OR SMOKE.
- CONTRACTOR SHALL CAREFULLY COORDINATE WORK W/ ALL OTHER TRADES, ESPECIALLY IN CEILING SPACES WHERE SPACE IS TIGHT. SHEET METAL CONTRACTOR SHALL HAVE PRIORITY OVER OTHER MECHANICAL TRADES IN CEILING SPACE WHERE CONFLICTS OCCUR.
- ALL DUCTWORK SHOWN IS SCHEMATIC, CONTRACTOR SHALL PROVIDE ALL OFFSETS/ELBOWS AS REQ'D TO ALLOW ROUTING AROUND STRUCTURE, ELECTRICAL, & OTHER INTERFERENCES.
- FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 8 FEET, AND MAY ONLY BE USED WHERE SPECIFICALLY SHOWN ON THE PLANS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE & SELECT FINAL LOCATIONS OF ALL AIR INLETS/OUTLETS. SHIFT AIR INLETS/ OUTLETS FROM LOCATIONS SHOWN AS REQ'D TO AVOID CONFLICTS W/ STRUCTURE, LIGHTS, & OTHER ITEMS. SUCH SHIFTS SHALL MAINTAIN SYMMETRY OF AIR TERMINALS & SHALL HAVE PRIOR APPROVAL OF ARCHITECT/ENGINEER.
- VARIOUS CEILING AIR INLET/OUTLET CONNS REQUIRE SIDE INLET PLENUM. PROVIDE WHERE REQ'D DUE TO SPACE LIMITATIONS TO PREVENT KINKS IN FLEX. DUCT AND ALLOW PROPER CONN.
- VERIFY LOCATIONS OF ITEMS INSTALLED IN CEILINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO BEGINNING WORK. NOTIFY ARCHITECT OF DISCREPANCIES.
- MECHANICAL EQUIPMENT 1/2 HP AND LESS SHALL HAVE ANY REQUIRED STARTER/CONTROL RELAY PROVIDED BY THE CONTROL CONTRACTOR (EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE).
- PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCTS AND SPLITS IN MAIN DUCTS AND WHERE REQ'D BY BALANCERS; ONLY SOME OF THE REQ'D DAMPERS ARE SHOWN ON THE PLANS.
- UNSIZE DUCTS SHALL MATCH THE SIZE OF THE LARGEST ADJACENT DUCT THAT IS SIZED. WHERE THE ADJACENT DUCT SIZE IS NOT SHOWN, PROVIDE SA, OA, & EA DUCTS SIZED AT 0.08" PD PER 100 FEET; PROVIDE RA & RELIEF AIR DUCTS SIZED AT 0.07" PD PER 100 FEET (OR LARGER AS FAN SP OR NOISE CONSIDERATIONS REQUIRE).
- WHERE RETURN GRILLE CFM'S ARE NOT INDICATED, BALANCER SHALL CALCULATE & SUBMIT FOR ENGINEER REVIEW. RA = SA-OA.
- DRAWINGS SCALES APPLY TO FULL SIZE SHEET ONLY. USE CAUTION IN OBTAINING DIMENSIONS AND QUANTITIES FROM DRAWINGS THAT ARE NOT FULL SIZE; USE DIMENSIONS CALCULATED FROM DIMENSIONS ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS OVER OTHER METHODS OF OBTAINING DIMENSIONS.
- PROVIDE ALL CUTTING/PATCHING TO INSTALL ITEMS AS SHOWN. PATCH TO PRE-CONSTRUCTION CONDITIONS OR BETTER.
- PROVIDE OWNER TRAINING ON ALL NEW CONTROLS AND EQUIPMENT.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PIPE UP	AFF	ABOVE FINISHED FLOOR
	PIPE DOWN	AHU	AIR HANDLING UNIT
	ARCH	APPROX	APPROXIMATELY
	BTU	ARCH	ARCHITECTURAL
	PIPE TEE IN LINE, BRANCH PIPE DOWN	BTU	BRITISH THERMAL UNIT
	DUCT (FIRST FIGURE, SIDE SHOWN)	BTUH	BRITISH THERMAL UNIT/HOUR
	LINED DUCT (DIM. FOR NET FREE AREA)	BLDG	BUILDING
	RISE (R) OR DROP (D) ARROW IN DIRECTION OF FLOW	CAP	CAPACITY
	VOLUME DAMPER (MANUAL)	CFH	CUBIC FEET PER HOUR
	MOTORIZED DAMPER	CFM	CUBIC FEET PER MINUTE
	FLEXIBLE CONNECTION	CLG	CEILING
	FLEXIBLE DUCT	COMP	COMPRESSOR
	CEILING OUTLET	CONN	CONNECTION
	CEILING INLET	CONT	CONTINUE, CONTINUATION
	WALL OUTLET (OR INLET)	DEG F	DEGREE FAHRENHEIT
	THERMOSTAT (7-DAY PROGRAMMABLE TYPE)	Ø	DIAMETER
	SWITCH	DN	DOWN
	DETAIL IDENTIFICATION NUMBER	DWG	DRAWING
	SECTION IDENTIFICATION LETTER	EA	EACH
		EC	ELECTRICAL CONTRACTOR
		ELEC	ELECTRICAL, ELECTRIC
		(E), EXIST	EXISTING
		ETR	EXISTING TO REMAIN
		EXH	EXHAUST
		ESP	EXTERNAL STATIC PRESSURE
		FV	FACE VELOCITY
		FPM	FEET PER MINUTE
		FPS	FEET PER SECOND
		FLEX	FLEXIBLE
		FLA	FULL LOAD AMPS
		FLR	FLOOR
		GALV.	GALVANIZED
		GC	GENERAL CONTRACTOR
		HP	HORSE POWER
		IN	INCH
		KW	KILOWATT
		MFR	MANUFACTURER
		MAX	MAXIMUM
		MFS	MAXIMUM FUSE SIZE
		MBH	THOUSAND BTUH
		MECH	MECHANICAL
		MIN	MINIMUM
		MCA	MINIMUM CIRCUIT AMPS
		MOP	MAXIMUM OVERCURRENT PROTECTION
		NO	NUMBER
		NTS	NOT TO SCALE
		OBD	OPPOSED BLADE DAMPER
		OA	OUTSIDE AIR
		PH	PHASE
		PD	PRESSURE DROP
		RLA	RATED LOAD AMPS
		REF	REFERENCE
		REQ'D	REQUIRED
		RA	RETURN AIR
		RPM	REVOLUTIONS PER MINUTE
		RM	ROOM
		SA	SUPPLY AIR
		SCR	SILICONE CONTROLLED RECTIFIER
		TEMP	TEMPERATURE
		TD	TRANSFER DUCT
		TG	TRANSFER GRILLE
		TSP	TOTAL STATIC PRESSURE
		TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
		V	VOLTS, VOLTAGE
		VFD	VARIABLE FREQUENCY DRIVE
		W	WATT
		W/	WITH
		WSEC	WASHINGTON STATE ENERGY CODE

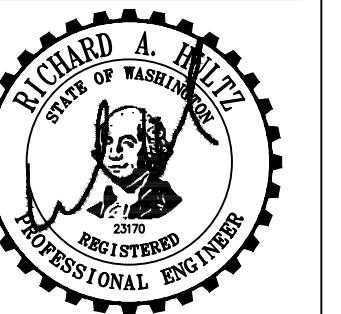
LIST OF MECHANICAL DRAWINGS

- M001 MECHANICAL LEGEND & NOTES
- M002 MECHANICAL SCHEDULES
- M003 ENERGY CODE NOTES
- M401 HVAC FLOOR PLAN
- M402 HVAC ROOF PLAN
- M403 HVAC DETAILS

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Building Planning
Engineering Public Works
Fire Traffic

CATFFEINATED CAFE
TENANT IMPROVEMENT
212 S. MERIDIAN, PUYALLUP, WA 98371



SIGNED
11-28-23

SHEET TITLE: MECHANICAL LEGEND & NOTES
DRAWN: JM CHECKED: RH
DATE: 11.16.23 PROJECT NO. 23-132
REVISIONS:

M001

PRCTI20230139

PERMIT SET 11/28/23

0' 1' 2'
SHEET SIZE IS TRUE SCALE WHEN ABOVE LINE MEASURES AS NOTED

ENERGY CODE NOTES

EQUIPMENT SIZING, PERFORMANCE, AND TYPE

1. LOAD CALCULATIONS, C403.1: LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC C403.1.2.
2. EQUIPMENT AND SYSTEM SIZING, C403.3: OUTPUT CAPACITIES OF HEATING AND COOLING EQUIPMENT AND SYSTEMS ARE NO GREATER THAN THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE CALCULATED LOADS.
3. HVAC EQUIPMENT PERFORMANCE, C403.3.2: EQUIPMENT SCHEDULES ARE INCLUDED WITH THESE PLANS.
4. ELECTRIC MOTOR EFFICIENCY, C405.8: ALL ELECTRIC MOTORS SHALL MEET THE MINIMUM EFFICIENCY OF WSEC TABLES.
5. FAN POWER LIMITATION: FOR ALL HVAC SYSTEMS WITH TOTAL FAN HP > 5HP, MOTOR HP OR BHP SHALL COMPLY WITH FAN POWER LIMITATIONS PER WSEC.
6. MOTOR NAMEPLATE HP: FOR EACH FAN, THE MOTOR SHALL BE NO LARGER THAN THE FIRST AVAILABLE MOTOR SIZE GREATER THAN THE BHP.
7. OUTDOOR AIR, EXHAUST & RELIEF DAMPERS: PROVIDE ALL OUTSIDE AIR, EXHAUST AIR, AND RELIEF AIR OPENINGS WITH CLASS 1 (MAX LEAKAGE OF 4 CFM/SF AT 1.0" W.C.) MOTORIZED DAMPERS.
8. RETURN AIR DAMPERS: PROVIDE RETURN AIR OPENINGS WITH CLASS 1 MOTORIZED DAMPER WHERE USED FOR AIRSIDE ECONOMIZER. WHERE INSTALLED IN UNITARY PACKAGED EQUIPMENT DAMPER, PROVIDE DAMPERS WITH LOWEST LEAKAGE RATE AVAILABLE FROM THE EQUIPMENT MANUFACTURER.

HVAC SYSTEM CONTROLS

9. THERMOSTATIC CONTROLS: WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROL TO PREVENT ADJACENT ZONES FROM OPERATING IN CONFLICTING MODES. WHERE A NON-PERIMETER ZONE IS ADJACENT TO A PERIMETER ZONE, PROVIDE CONTROLS TO ONLY ALLOW COOLING IN THE NON-PERIMETER ZONE WHEN IT IS 5 DEGREES HIGHER THAN THE PERIMETER ZONE.
10. DEADBAND: THERMOSTATIC CONTROLS SHALL BE CONFIGURED WITH 5°F MINIMUM DEADBAND FOR SYSTEMS THAT CONTROL BOTH HEATING AND COOLING.
11. AUTOMATIC SETBACK AND SHUTDOWN: HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES, AND SHALL HAVE MANUAL OVERRIDE CONFIGURED TO OPERATE THE SYSTEM FOR 2 HOURS.
12. AUTOMATIC START: AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM, AND BE CAPABLE OF AUTOMATICALLY ADJUSTING DAILY START TIME IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.
13. OUTDOOR AIR DAMPERS: OUTSIDE AIR INTAKE DAMPERS SHALL AUTOMATICALLY CLOSE WHEN SYSTEM OR SPACES SERVED ARE NOT IN USE OR DURING WARM-UP AND SET BACK.
14. VENTILATION: MECHANICAL VENTILATION AIR SYSTEMS SHALL BE CONFIGURED TO PROVIDE NOT MORE THAN 150%, BUT AT LEAST THE MINIMUM REQUIRED VOLUME OF OUTDOOR AIR TO EACH ZONE PER IMC. SEE MECHANICAL EQUIPMENT SCHEDULES FOR MINIMUM OUTSIDE AIR VALUES.

DUCTING SYSTEMS

15. DUCT CONSTRUCTION, C403.2.8.1: DUCTWORK SHALL BE CONSTRUCTED AND SEALED PER IMC.
16. DUCT INSULATION: MINIMUM DUCT INSULATION PER WSEC IS AS FOLLOWS:

SERVICE	INSULATION LEVEL
OUTSIDE AIR DUCTS AND PLENUMS	PROVIDE INSULATION EQUIVALENT TO ENVELOPE REQUIREMENT FOR METAL FRAMED WALLS (TABLE C402.1.3)

OUTSIDE AIR DUCT SERVING INDIVIDUAL SUPPLY UNIT WITH LESS THAN 2,800 CFM OF SUPPLY AIR

R-7

SUPPLY & RETURN DUCTS IN UNCONDITIONED SPACES

R-6

SUPPLY DUCTS WITHIN CONDITIONED SPACE WHERE SUPPLY AIR IS < 55 DEG F. OR > 105 DEG F.

R-3.3

EXPOSED DUCTWORK WITHIN A ZONE THAT SERVES THAT ZONE

NO INSULATION REQUIRED

SYSTEMS REQUIRING ENERGY RECOVERY

17. ENERGY RECOVERY VENTILATION/EXHAUST: SYSTEMS WITH DESIGN OUTSIDE AIR GREATER THAN 5,000 CFM AND SYSTEMS WITH OUTSIDE AIR PERCENTAGE EXCEEDING THE VALUES OF WSEC TABLE C403.5.1(1) OR (2) SHALL BE PROVIDED WITH AN ENERGY RECOVERY SYSTEM. SEE EQUIPMENT SCHEDULES FOR TYPE AND EFFECTIVENESS.

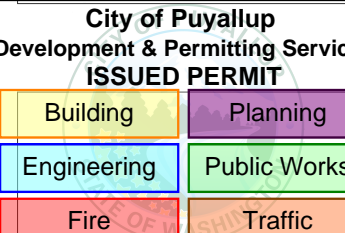
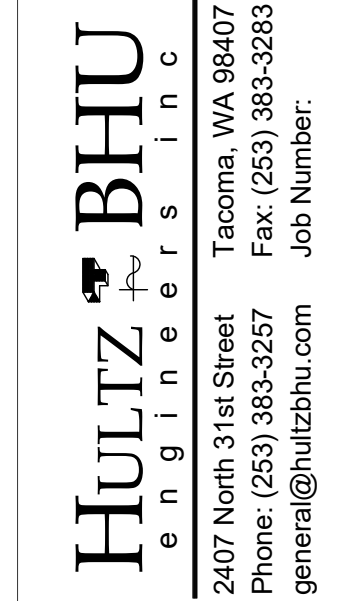
DEDICATED OUTDOOR AIR SYSTEMS (DOAS)

18. DEDICATED OUTDOOR AIR SYSTEMS PROVIDED FOR ALL AREAS (EXCEPT RANGES).
19. ENERGY RECOVERY VENTILATION WITH DOAS: ALL DOAS UNITS SHALL BE PROVIDED WITH EXHAUST HEAT RECOVERY WITH RATED EFFECTIVENESS TO INCREASE OSA ENTHALPHY BY 50% OR MORE BASED ON THE DELTA BETWEEN THE RETURN AIR AND THE OUTSIDE AIR ENTHALPIES AT DESIGN CONDITIONS.
20. HEATING/COOLING SYSTEM CONTROLS WITH DOAS: EQUIPMENT THAT PROVIDES ZONE LEVEL HEATING AND COOLING SHALL BE CONFIGURED WITH FANS AND/OR PUMPS THAT CYCLE OFF AND PRIMARY COOLING AIR SHALL SHUT OFF WHEN THERE IS NO CALL FOR HEATING OR COOLING IN THE ZONES THEY SERVE.

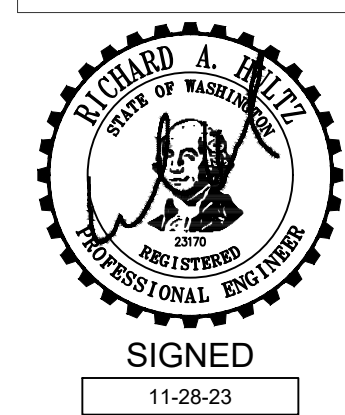
PROJECT CLOSE OUT DOCUMENTATION

21. DOCUMENTATION SUBMITTAL REQUIREMENTS: SUBMIT ALL CLOSEOUT DOCUMENTATION INCLUDING AS-BUILTS AND O&M'S TO OWNER.
22. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS.

Please provide preliminary commissioning reports required by the energy code. WA Energy Code C403.13 Commissioning.



**CATFFEINATED CAFE
TENANT IMPROVEMENT**
212 S. MERIDIAN, PUYALLUP, WA 98371



SIGNED
11-28-23

SHEET TITLE: ENERGY CODE NOTES
DRAWN: JM CHECKED: RH
DATE: 11.16.23 PROJECT NO. 23-132
REVISIONS:

M002

0' 1' 2'
SHEET SIZE IS TRUE SCALE WHEN ABOVE LINE MEASURES AS NOTED

HEAT PUMP UNIT - SPLIT SYSTEM TYPE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	COOLING CAP *		HEATING CAP **		A & B - INDOOR UNIT ***				C - OUTDOOR UNIT ***				MAX. OUTDOOR UNIT WEIGHT	MAX. INDOOR UNIT WEIGHT	UNIT TOTAL ELECTRICAL ****			PIPE SIZES *****		REMARKS		
			CAP. MBH	SEER	CAP. MBH	HSPF	FAN		ELECTRICAL		COMPRESSOR		FAN				ELECTRICAL		MCA	MOP	VOLTS/PH		RG	RL
							CFM	FLA	MCA	VOLTS/PH	QTY	RLA	QTY	FLA			MCA	VOLTS/PH						
HP-1A HP-1B HP-1C	MITSUBISHI MSZ-GS18 MITSUBISHI MSZ-GS12 MITSUBISHI MXZ-3C30	CAFE AREA CAT AREA	28.4	19.0	36	10.6	629 381	0.5 0.5	1 1	208/1 208/1	1	12	1	2.43	22.1	208/1	137 LBS	50 LBS	24.1	25	208/1	3/4"	1/4"	

* COOLING CAPACITY IS AHRI RATING: AT 85° F DB; 66° F WB INDOOR COIL EAT AND 95° F OUTDOOR COIL EAT.
 ** HEATING CAPACITY IS AHRI HI-TEMP RATING: AT 70° F DB INDOOR EAT AND 47° F DB; 43° F WB OUTDOOR COIL EAT.
 *** ON PLANS "A" DESIGNATES INDOOR UNIT, "B" DESIGNATES OUTDOOR UNIT. (E.G. HP-1B IS HP-1 OUTDOOR UNIT).
 **** INDOOR UNIT IS POWERED VIA OUTDOOR UNIT. ALL POWER WIRING/CONNECTIONS BY DIV 16.
 ***** PIPE SIZES ARE PRELIMINARY, VERIFY W/ MFR, SEE SECTION 15830

NOTES: 1. UNITS SHALL OPERATE IN COOLING DOWN TO 0° AMBIENT.
 2. PROVIDE W/ CONDENSATE PUMP.

ENERGY RECOVERY VENTILATOR (DOAS)

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	SUPPLY FAN		EXHAUST FAN		UNIT ELECTRICAL			FILTERS TYPE	MAX UNIT WEIGHT (LBS)	REMARKS	
			CFM	ESP	CFM	ESP	WATTS	MCA	MOP				VOLTS/PH
DOAS-1	RENEWAIRE HE10RT	CATFEINATED CAT	750	0.8	750	0.8	370	3.9	20	208-230/1	MFR STANDARD	216	W/ MFR ROOF CURB, PROGRAMMABLE DIGITAL TIME CLOCK SET FOR CONTINUOUS OPERATION, MFR MOTORIZED ISOLATION DAMPERS

NOTES: 1. UNITS SHALL HAVE MINIMUM HEAT RECOVERY EFFICIENCY PER WSEC AT EXHAUST AIR OF 70°F, 30% RH & EAT OF 20°F, 90% RH.
 2. PROVIDE UNITS OA & EA WITH CLASS-1 MOTORIZED DAMPERS COMPLYING W/ WSEC.
 3. TIME CLOCK TO ALLOW FOR FUTURE UNIT ADJUSTMENT.

FAN SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NUMBER	TYPE	AREA SERVED	CFM	ESP	MAX RPM	WHEEL DIA	ELECTRICAL		DRIVE	CONTROL	MAX WEIGHT (LBS)	REMARKS
								POWER	VOLTS / PH				
EF-50	PANASONIC FV-0511VF1	CEILING FAN	BATHROOMS	50	0.375"	895	-	10 WATTS	115/1	DIRECT	Ⓢ	20	

NOTES: 1. PROVIDE ALL FANS W/ BDD'S.
 2. PROVIDE MOTOR EFFICIENCIES COMPLYING W/ WSEC.
 3. PROVIDE ALL FANS W/ EC MOTORS W/ MANUAL SPEED CONTROL.

HEATER SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA / UNIT SERVED	NOMINAL SIZE	ELECTRICAL		REMARKS
					WATTS	VOLTS/PH	
DH-1	INDEECO QUA	DUCT HEATER	DOAS-1	18x10	6000	208/1	2-STAGE, W/ 7-DAY PROGRAMMABLE THERMOSTAT
EH-1	WALL HEATER	KING "PAW" SERIES	SEATING AREA	-	1500	208/1	W/ 7-DAY PROGRAMMABLE THERMOSTAT

OA VENTILATION CALCULATION - ERV PER IMC 2018

Project: CATFEINATED CAFE
 No: 23-132

Az= zone area sq-ft
 R_p= OA per person
 P/1000 sft= People density
 P_{act}= actual concurrent pop

R_z= OA per sq ft of area
 V_z= breathing zone OA = R_zP/1000 + R_zAz
 = OA before corrections
 E_z= air dilution effectiveness
 V_z_{cor}= zone OA = V_zE_z

HVAC Unit	Zone #	Name	Occup Category	Az (sf)	R _p	P/1000 sft	P _{act}	R _z	R _z Az	OA V _z	E _z	V _z _{cor}	Selected Airflow
DOAS-1	1	CAT ROOM & OFFICE	ANIMAL AREA	490	7.5	10	5	37.5	0.18	88.2	125.7	1	125.7
DOAS-1	2	CAFE BAR	KITCHENS	148	7.5	20	3	22.5	0.12	17.8	40.3	1	40.3
DOAS-1	3	CAFE SEATING & ENTRY	CAFETERIA	411	7.5	100	16	220.0	0.18	74.0	184.0	1	184.0
								24.0	180.0	179.9	359.9		359.9
													750

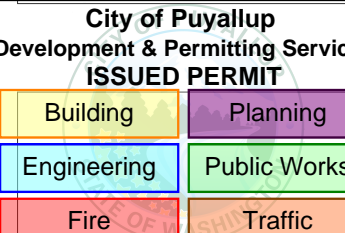
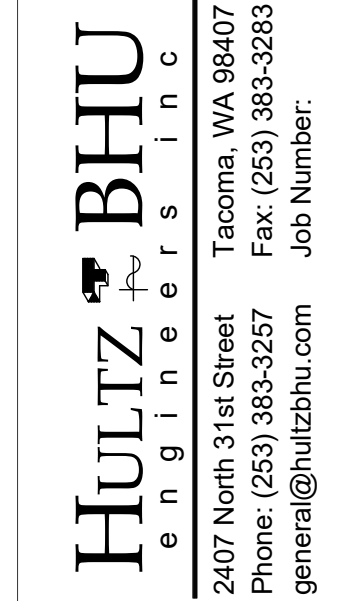
EXHAUST RATES

Name	Occup Category	Az (sf)	Selected Exhaust
CAT ROOM	ANIMAL AREA	342	350
OFFICE	ANIMAL AREA	58	300
CAFE BAR	KITCHENS	118	100
BATHROOM	TOILET ROOM	46	50

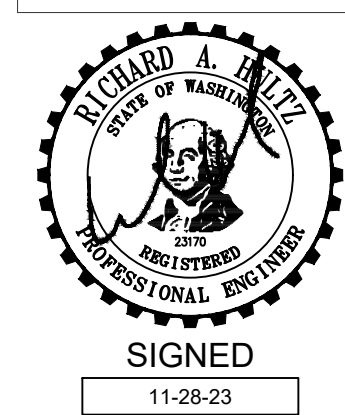
AIR INLET & OUTLET SCHEDULE

SYMBOL	TYPE	MANUFACTURER AND SERIES NUMBER	REMARKS
CD	CEILING SUPPLY DIFFUSER	KRUEGER SERIES 1240	MODULAR CORE SQUARE NECK
CEG	CEILING EXHAUST GRILLE	KRUEGER SERIES EGC-5	1/2"x1/2"x1/2" CUBE CORE
RVR	ROOF VENT RELIEF	GREENHECK WRH	LOUVERED VENT W/CURB & COUNTER BALANCED BDD
DL	DOOR LOUVER	KRUEGER SERIES 600	V-BLADES, 1/2" O.C.

NOTES:
 1. CEILING DIFFUSERS (CD) SHALL HAVE NO. & DIRECTION OF THROWS AS INDICATED ON PLANS. (E.G. CD-3 = 3 WAY THROW)
 2. SEE LEGEND FOR TERMINOLOGY USED IN AIR TERMINAL CALL-OUTS ON DRAWINGS.
 3. SEE ARCH. FINISH SCHEDULE FOR CEILING TYPES, PROVIDE AIR TERMINALS TO MATCH CEILING CONSTRUCTION INSTALLED IN.



CATFEINATED CAFE
 TENANT IMPROVEMENT
 212 S. MERIDIAN, PUYALLUP, WA 98371



SHEET TITLE: MECHANICAL SCHEDULES
 DRAWN: JM CHECKED: RH
 DATE: 11.16.23 PROJECT NO. 23-132
 REVISIONS:

M003

0" 1" 2"
 SHEET SIZE IS TRUE SCALE WHEN ABOVE LINE MEASURES AS NOTED

A | B | C | D | E | F | G | H | J | K

1
2
3
4
5
6
7
8
9
10

GENERAL NOTES:

1. SEE MECHANICAL & DEMOLITION NOTES ON SHEET M001.
2. DEMO ALL (E) DUCT, DIFFUSERS AND GRILLES SERVING THIS PROJECT'S TENANT SPACE. CAP WHERE DUCTS CONNECT TO (E) SYSTEM
3. LOCATE ALL EQUIPMENT DAMPERS, AND ITEMS REQUIRING ADJUSTMENT OR MAINTENANCE TO BE ACCESSIBLE. PROVIDE BUILDING ACCESS DOORS AS REQUIRED. PROVIDE DUCT ACCESS DOORS AT ALL BDD'S AND MOTORIZED DAMPERS.
4. VERIFY SPACE FOR ALL WL'S, GRILLES, & DUCTWORK PRIOR TO FABRICATING OR ORDERING MATERIALS.
5. ROUTE ALL CONDENSATE DRAINS TO TAIL PIECE OF SINK IN OFFICE.

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City of Puyallup
Development & Permitting Services
ISSUED PERMIT

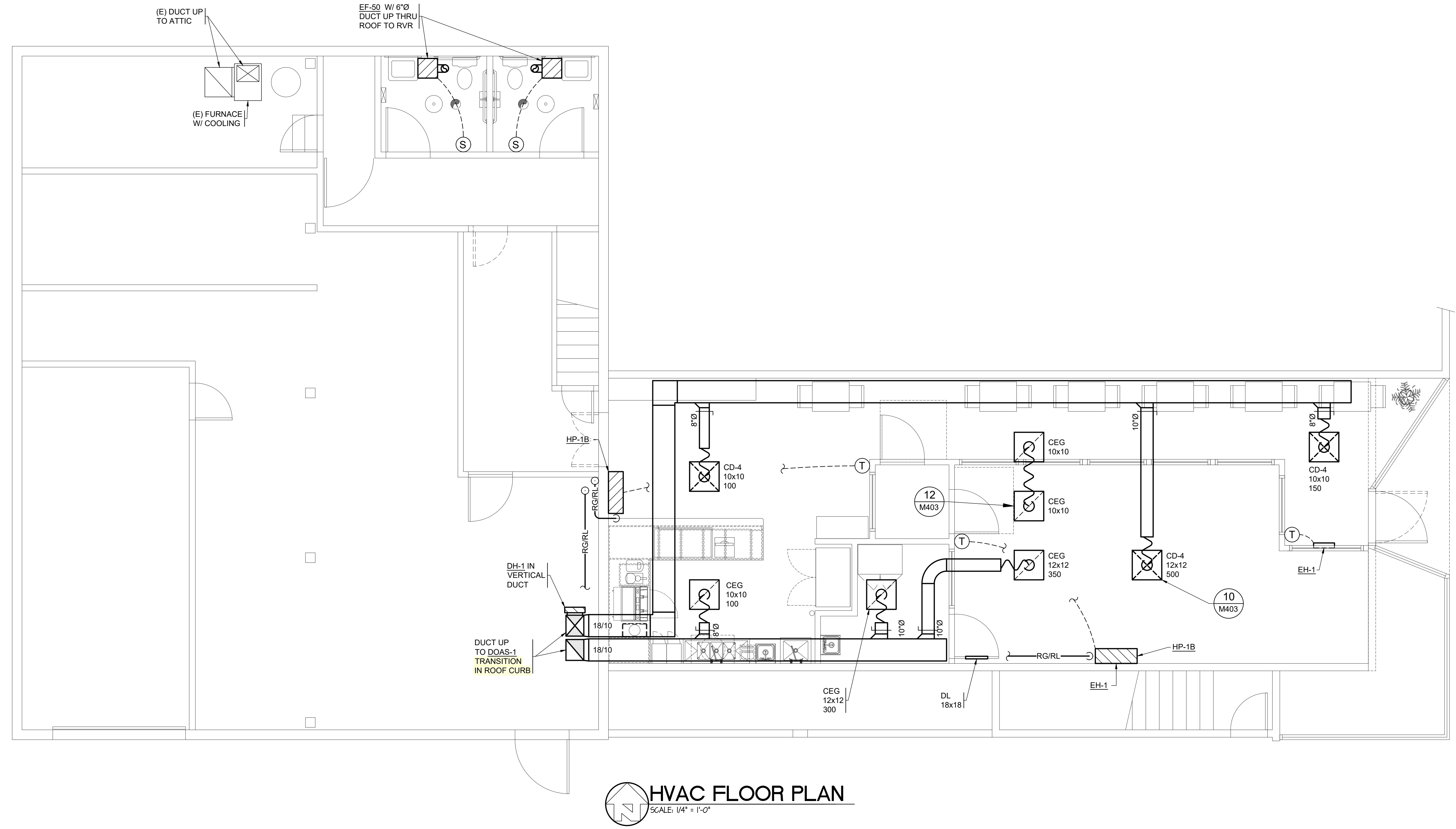
Building	Planning
Engineering	Public Works
Fire	Traffic

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212 S. MERIDIAN, PUYALLUP, WA 98371

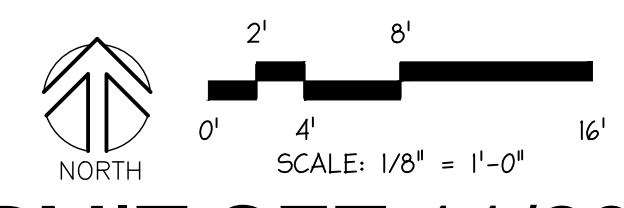
RICHARD A. HULTZ
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
SIGNED
11-28-23

SHEET TITLE: HVAC FLOOR PLAN
DRAWN: JM CHECKED: RH
DATE: 11.16.23 PROJECT NO. 23-132
REVISIONS:

M401



HVAC FLOOR PLAN
SCALE: 1/4" = 1'-0"



PERMIT SET 11/28/23

A | B | C | D | E | F | G | H | J | K

SHEET SIZE IS TRUE SCALE WHEN ABOVE LINE MEASURES AS NOTED

A | B | C | D | E | F | G | H | J | K

1
2
3
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GENERAL NOTES:

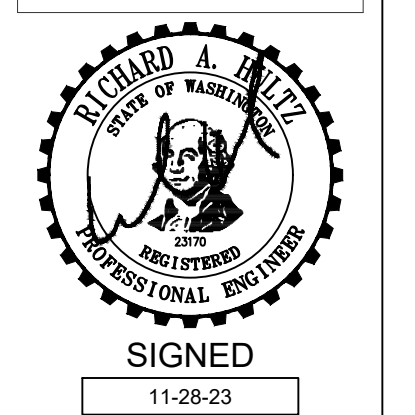
- SEE MECHANICAL NOTES ON SHEET M001.
- VERIFY LOCATION OF (E) PLUMBING VENTS. RELOCATE DOAS-1 (OR RELOCATE PLUMBING VENTS) TO HAVE MINIMUM 15' SEPARATION.

HULTZ & BHU
engineers inc
2407 North 31st Street
Tacoma, WA 98407
Phone: (253) 383-3257
Fax: (253) 383-3283
general@hultzbhu.com
Job Number:

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

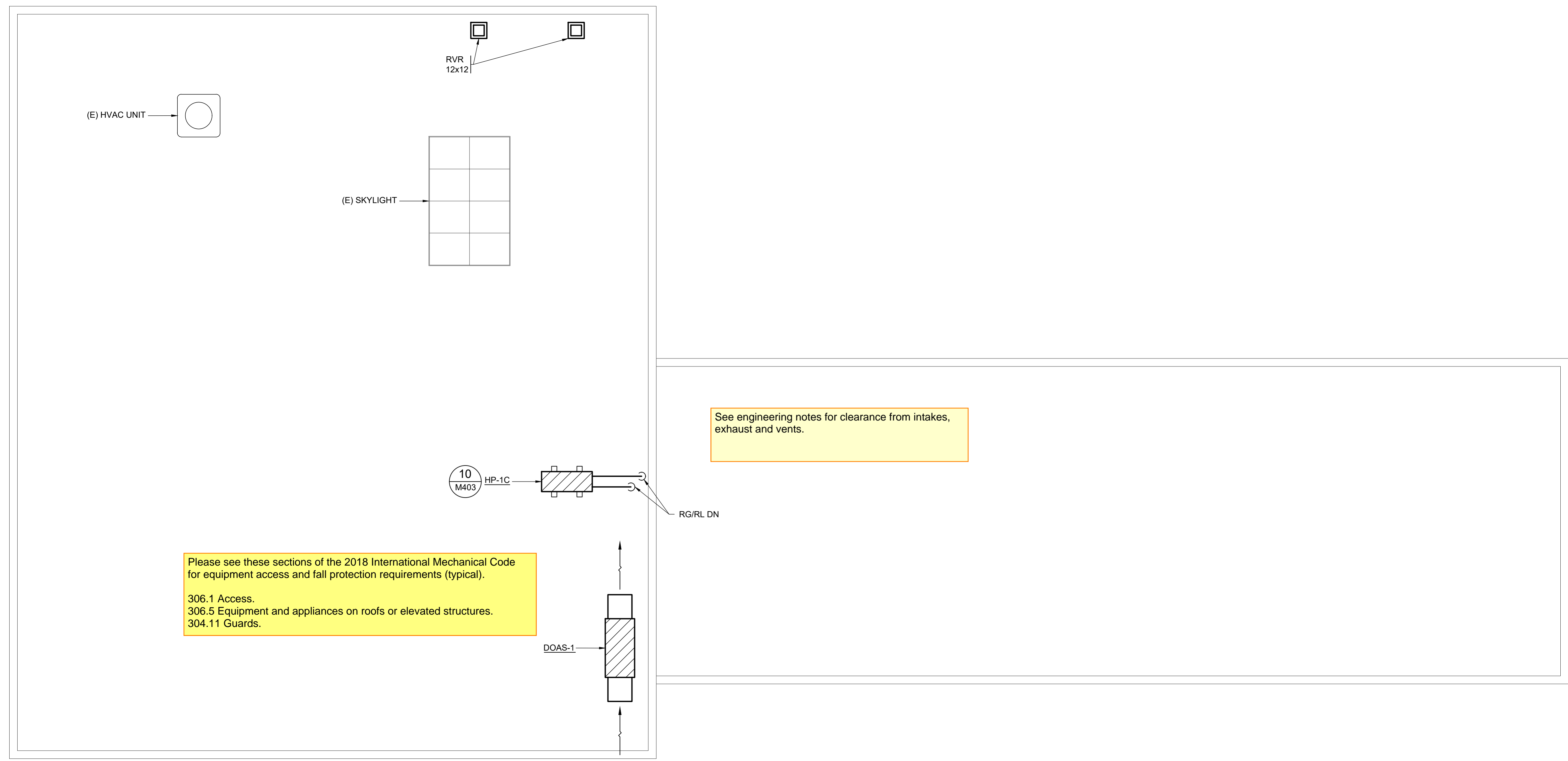
CATFFEINATED CAFE
TENANT IMPROVEMENT
212 S. MERIDIAN, PUYALLUP, WA 98371



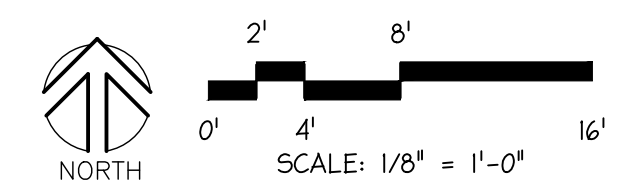
SHEET TITLE: HVAC ROOF PLAN
DRAWN: JM CHECKED: RH
DATE: 11.16.23 PROJECT NO. 23-132
REVISIONS:

M402

SHEET SIZE IS TRUE SCALE WHEN ABOVE LINE MEASURES AS NOTED

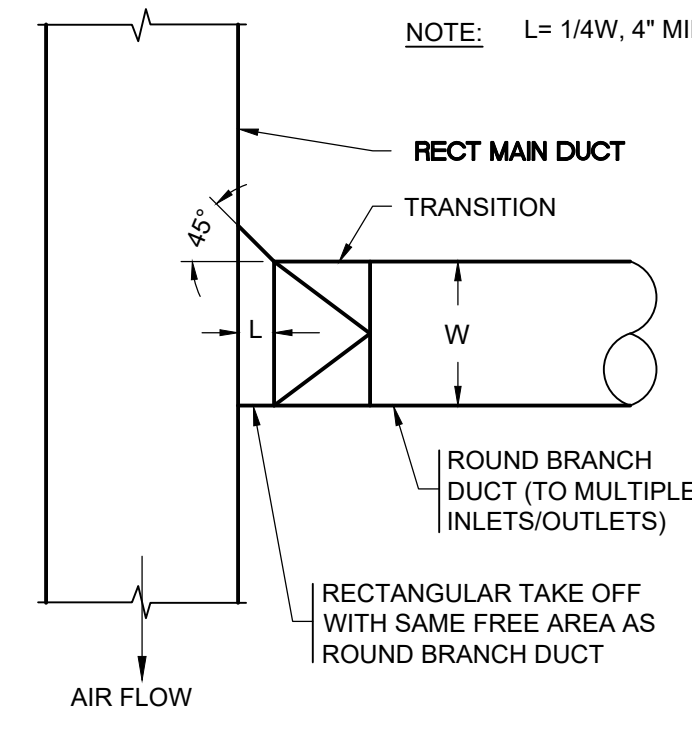


HVAC ROOF PLAN
SCALE: 1/4" = 1'-0"



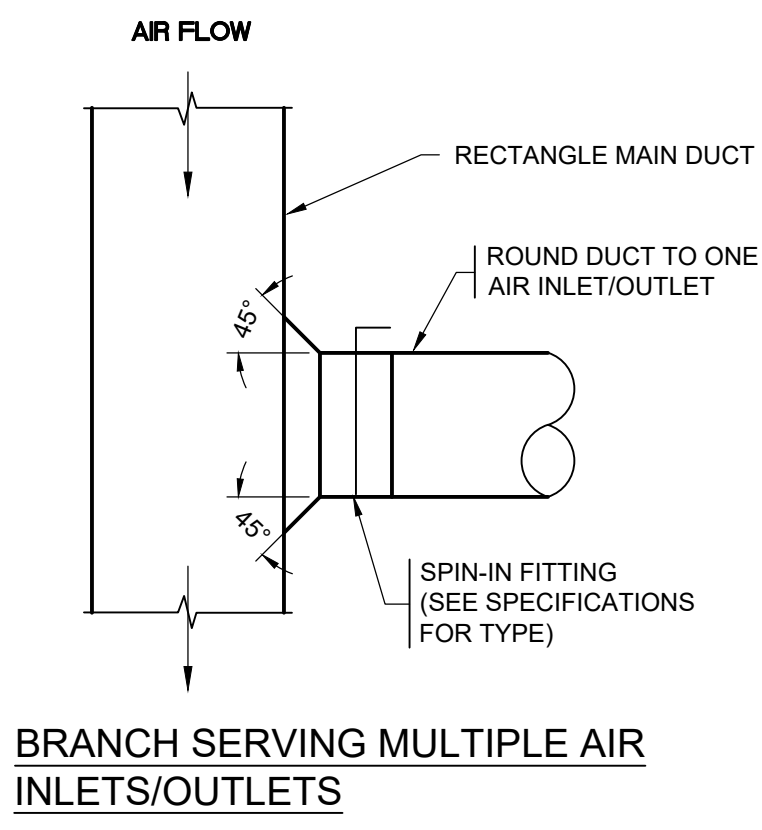
PERMIT SET 11/28/23

A | B | C | D | E | F | G | H | J | K



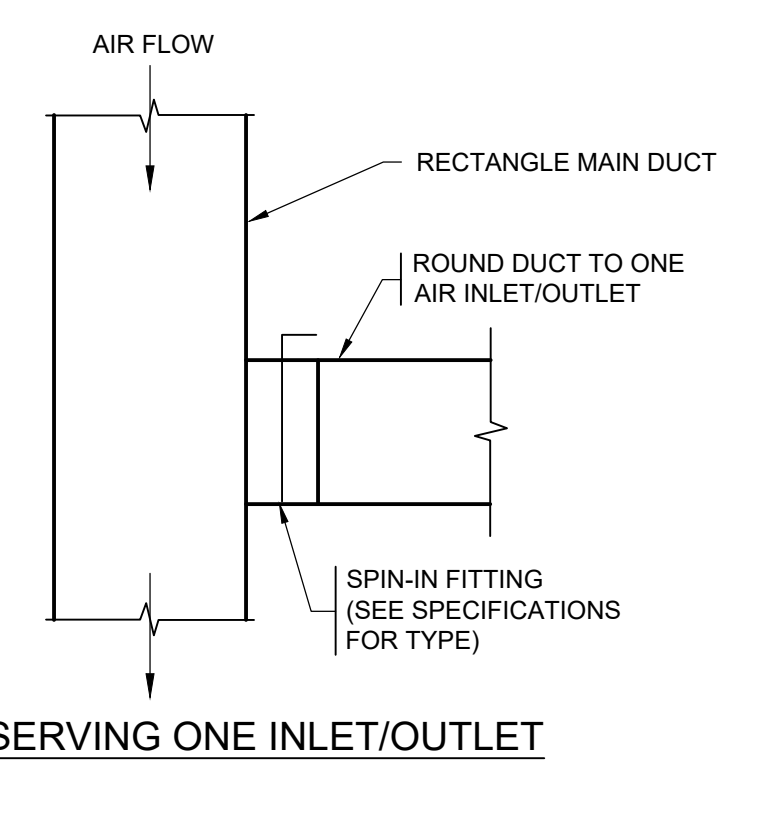
SERVING MULTIPLE INLET/OUTLET, UNO

RECT-TO-ROUND BRANCH DUCT CONNECTION (4) M403



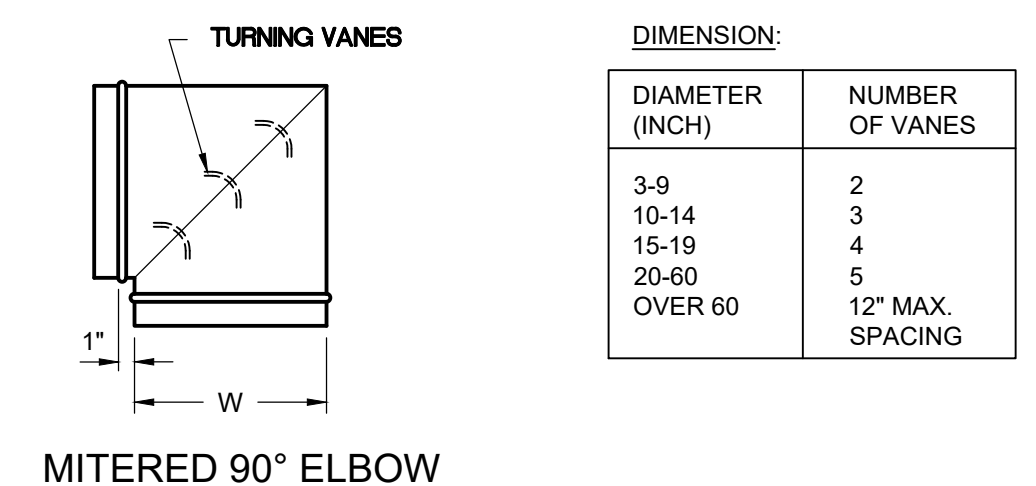
NOTE: WHERE MAIN DUCT DOES NOT HAVE ADEQUATE HEIGHT TO ACCEPT ROUND DUCT, PROVIDE RECTANGULAR CONNECTION, WITH SAME FREE AREA AS ROUND DUCT, AND TRANSITION TO ROUND

RECT-TO-ROUND BRANCH DUCT CONNECTION (3) M403

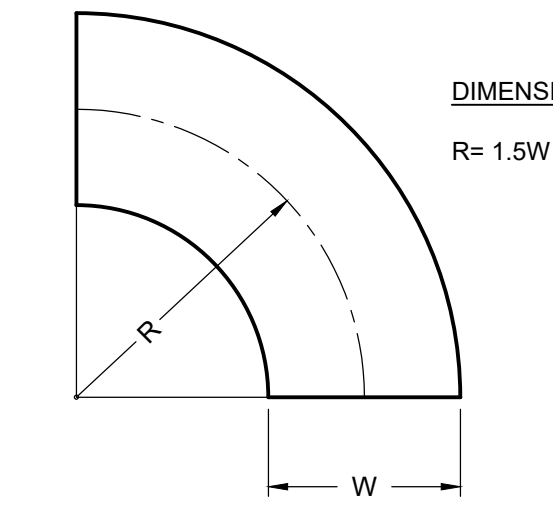


NOTE: WHERE MAIN DUCT DOES NOT HAVE ADEQUATE HEIGHT TO ACCEPT ROUND DUCT, PROVIDE RECTANGULAR CONNECTION, WITH SAME FREE AREA AS ROUND DUCT, AND TRANSITION TO ROUND

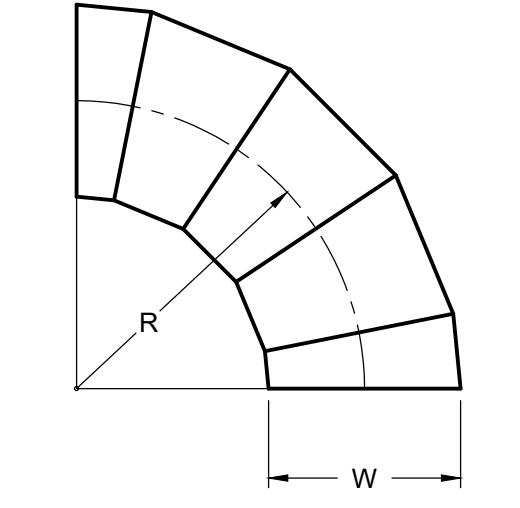
RECT-TO-RECT BRANCH DUCT CONNECTION (2) M403



MITERED 90° ELBOW



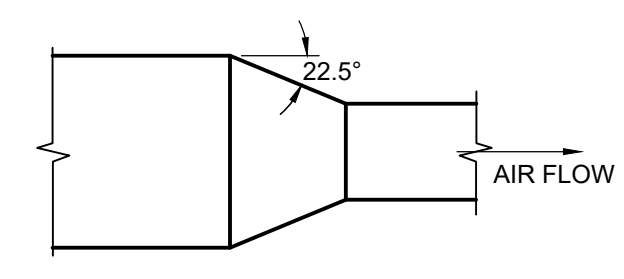
DIE-STAMPED ELBOW



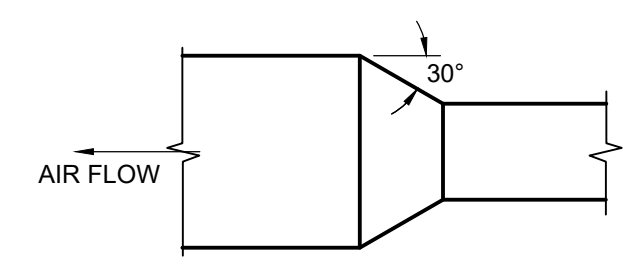
FABRICATED ELBOW

ANGLE	NUMBER OF GORES
0-35°	2
36-71°	3
72-90°	5

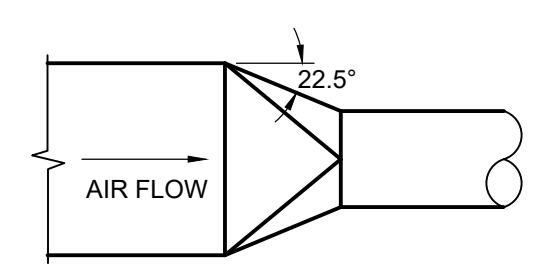
ELBOWS - ROUND (1) M403



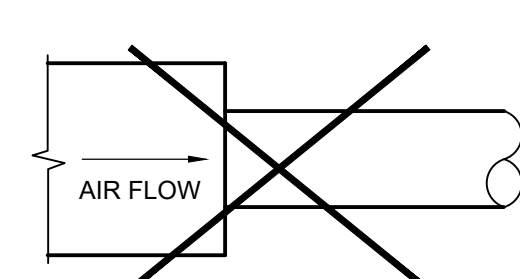
CONCENTRIC TRANSITION (DIVERGING)



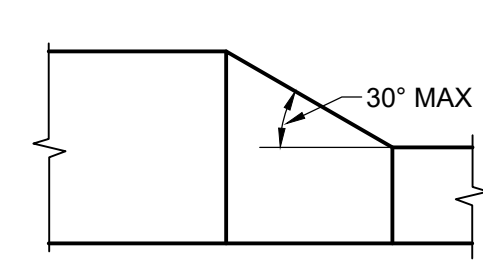
CONCENTRIC TRANSITION (CONVERGING)



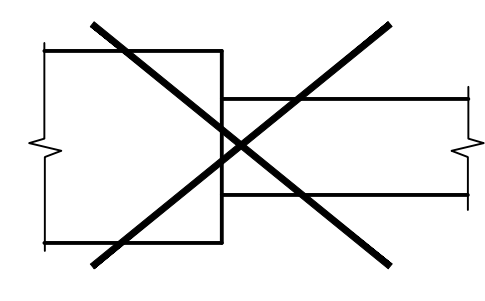
RECT - TO ROUND



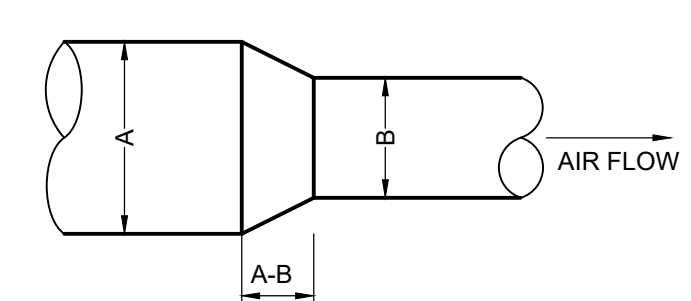
STRAIGHT TAP NOT ALLOWED



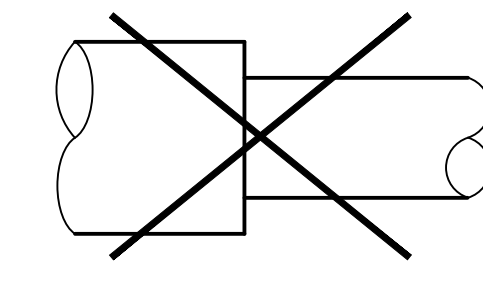
ECCENTRIC TRANSITION



STRAIGHT TAP NOT ALLOWED



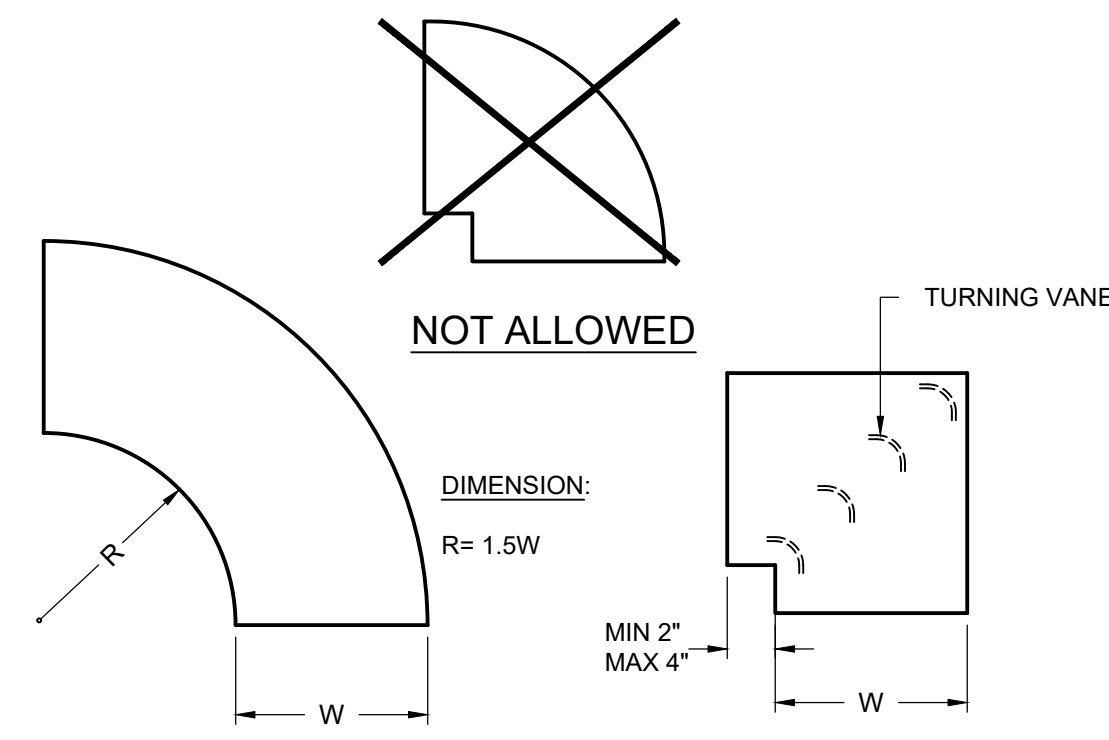
ROUND - TO ROUND



STRAIGHT TAP NOT ALLOWED

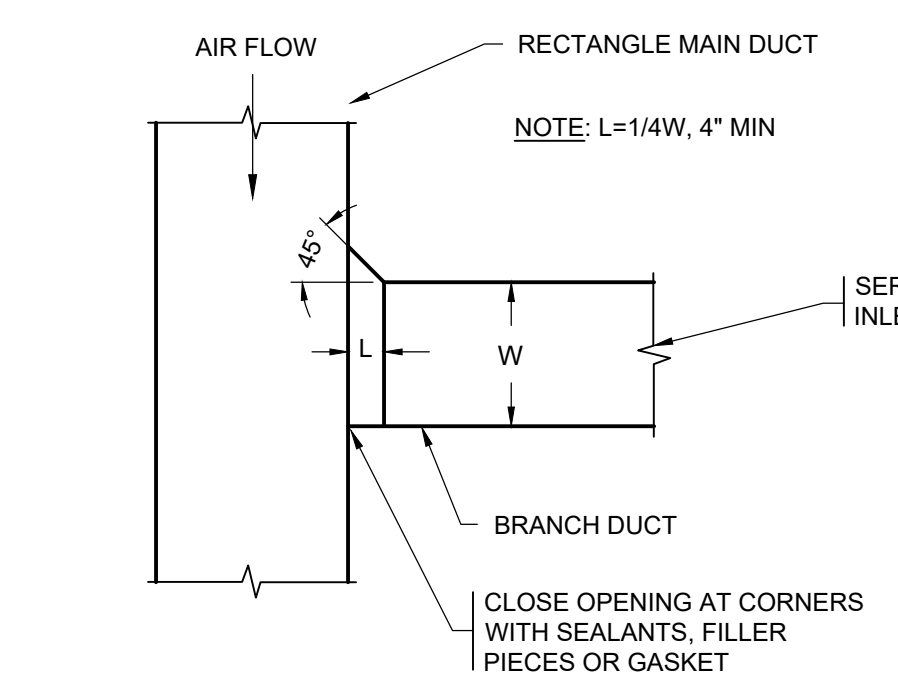
RECT-TO-RECT TRANSITIONS (8) M403

ROUND TRANSITIONS (7) M403

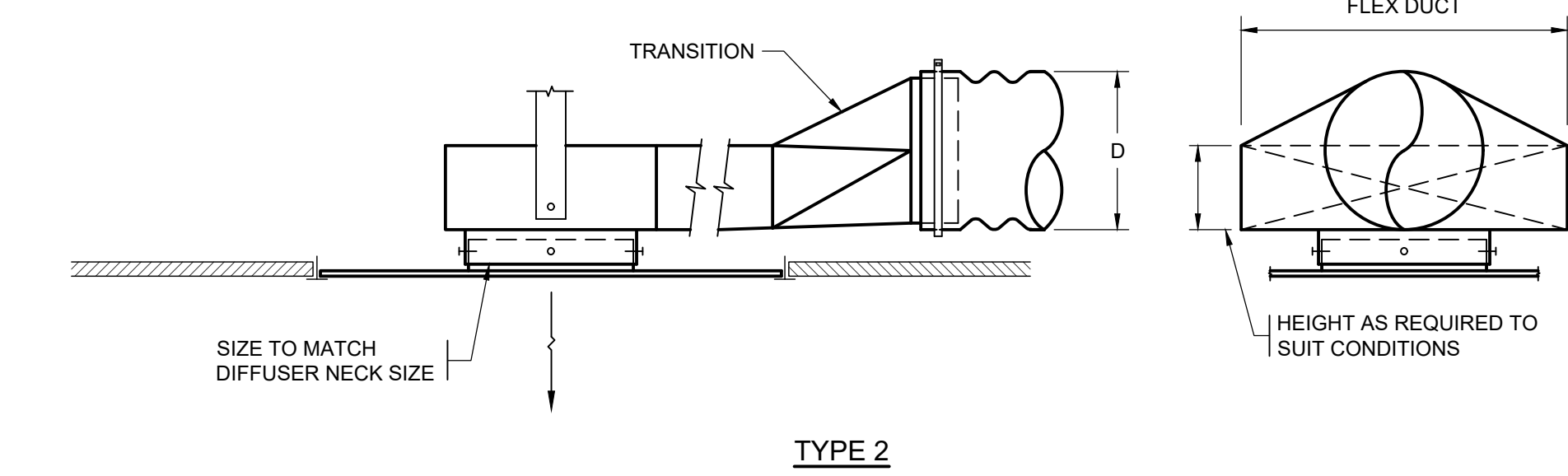
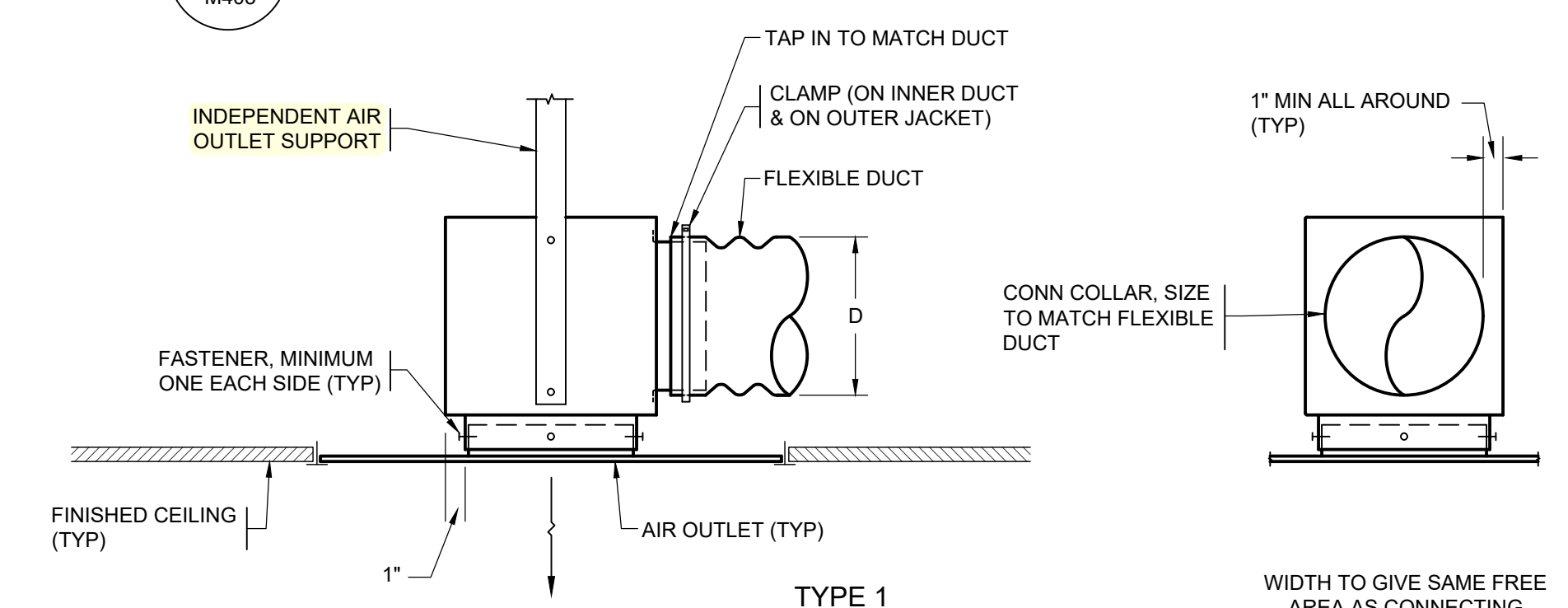


RADIUS ELBOW MITERED ELBOW

ELBOWS - RECTANGULAR (6) M403

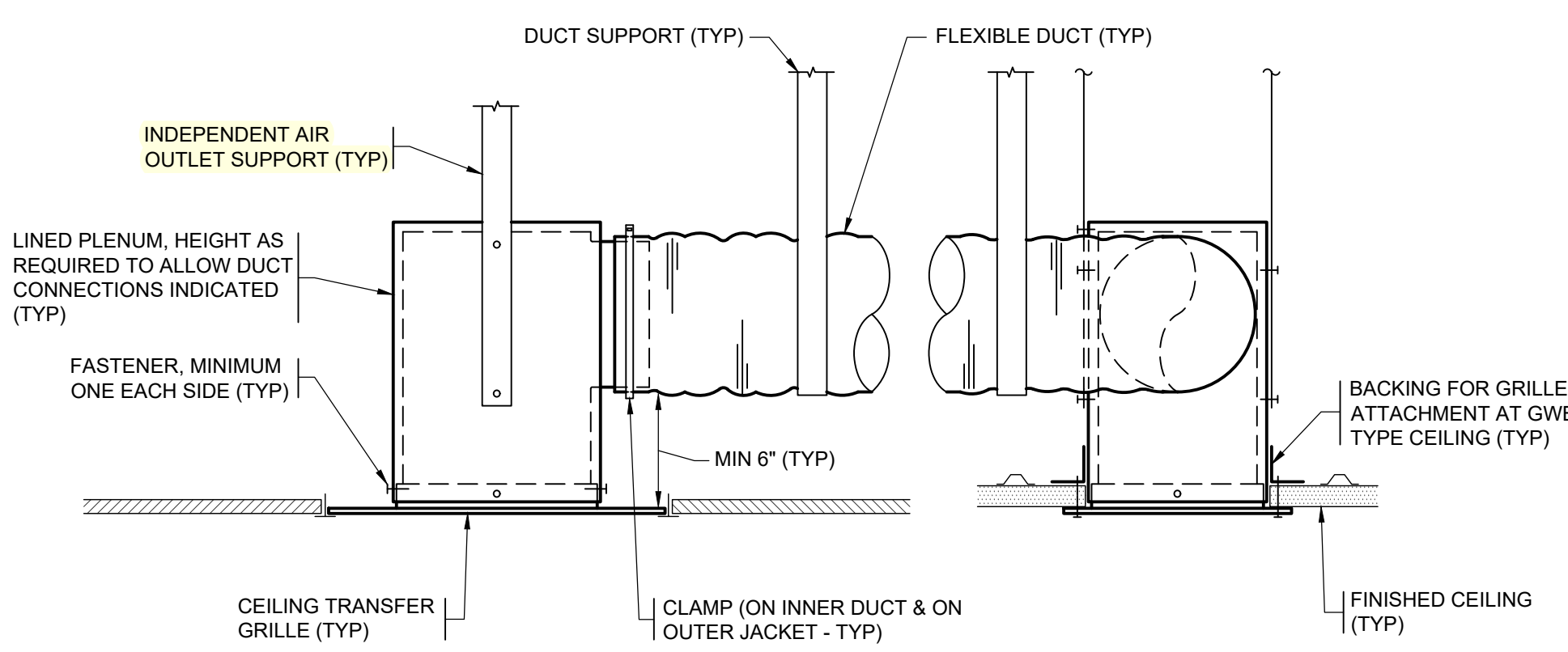


RECT-TO-RECT BRANCH DUCT CONNECTION (5) M403



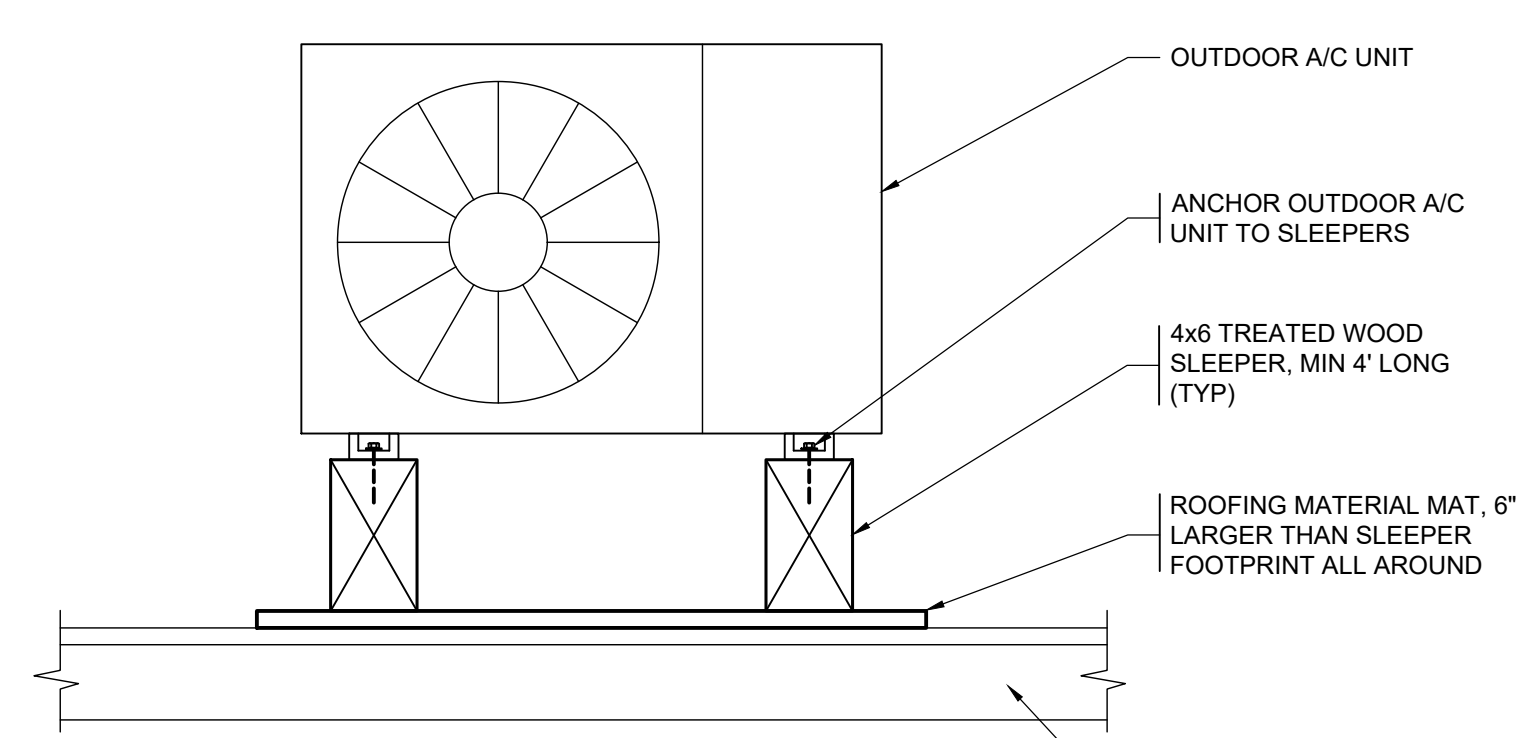
NOTES: 1. PROVIDE TYPE 1 UNLESS BUILDING CONDITIONS REQUIRE LOWER PROFILE - THEN USE TYPE 2. 2. CONSTRUCT PLENUM BOXES OF MIN. 26 GA. GALV. STEEL. 3. NOT ALLOWED AT TRANSFER DUCTS. 4. LINE PLENUM & DUCT TO AIR OUTLET WHERE SO NOTED ON PLANS OR IN SPECIFICATIONS. 5. CEILING TYPE & AIR OUTLET FRAME STYLE MAY VARY FROM THAT DEPICTED.

TIGHT CONDITION - FLEX DUCT AIR OUTLET CONNECTION (9) M403



NOTES: 1. ONLY ALLOWED WHERE FLEXIBLE DUCT IS SHOWN ON PLANS AT TRANSFER DUCTS. 2. CEILING TYPE & AIR INLET FRAME STYLES MAY VARY FROM THAT DEPICTED. 3. ROUTE FLEXIBLE DUCT WITH AT LEAST ONE HORIZONTAL 90-DEGREE TURN TO REDUCE NOISE TRANSFER BETWEEN GRILLES. 4. SEE PLAN FOR SIZE & QUANTITY OF DUCT CONNECTIONS AND TRANSFER GRILLES.

TRANSFER DUCT - FLEXIBLE (11) M403



NOTE: VERIFY ROOF SLOPE. CUT SLEEPERS TO SUIT ROOF SLOPE & PROVIDE LEVEL TOP MOUNTING SURFACE.

SLEEPER DETAIL (10) M403