

Loucks Engineering, Inc. All Rights Reserved © 2024, Printed 06.25.24 08:45 AM by LEI-100, Saved in E:\2024\2401-24100\2499 PSL Pain Clinic - Claren\Drawings on 06.21.24 12:15 PM by PAGE FAMILY

***ALL EXHAUST AIR IS TO BE ENVIRONMENTAL, NO EXPLOSIVE, FLAMMABLE VAPORS, FUMES OR DUSTS ALLOWED. VENTS ARE TO BE SIZED PER MANUFACTURER INSTALLATION INSTRUCTIONS. MAINTAIN FOR ALL ENVIRONMENTAL AIR EXHAUST: 3 FEET FROM PROPERTY LINES; 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS FOR ALL OCCUPANCIES, AND 10 FEET FROM MECHANICAL AIR INTAKES. SUCH EXHAUST SHALL NOT BE CONSIDERED HAZARDOUS OR NOXIOUS. VERIFY EXACT TERMINATION LOCATIONS PRIOR TO BEGINNING WORK.

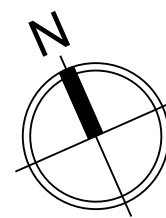
REMOVE EXISTING RETURN GRILLES AND EXTEND NEW RETURN DUCT AS SHOWN.
LABCONCO 4" PROTECTOR PREMIERE HOOD VENT CONNECTION.

LAB SPECIFIC EQUIPMENT AND VENTING TO BE REUSED FROM PREVIOUS TENANT LOCATION. EXISTING DUCT SIZES AND EXHAUST FAN TO BE VERIFIED AND REUSED. CONTRACTOR TO PROVIDE LIST OF EQUIPMENT TO BE REUSE FOR REVIEW BY ARCHITECT/ENGINEER PRIOR TO BEGINNING WORK.

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MECHANICAL PLAN

SCALE: 1/4"=1'-0"

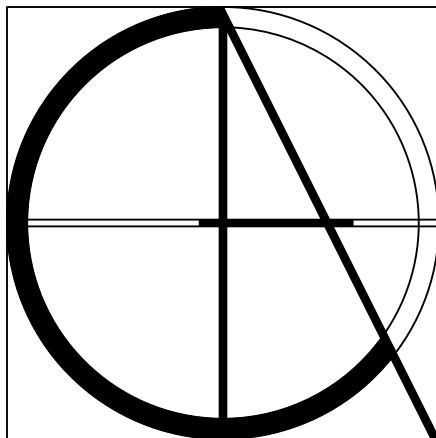


H.V.A.C. LEGEND

EXISTING (RIGID DUCT)	== ==
EXISTING (RIGID DUCT REMOVED)	== ==
NEW (RIGID DUCT)	==
EXISTING FLEX	- - - -
EXISTING FLEX TO BE REMOVED	- - - -
NEW FLEX TO MATCH EXISTING WITH SPIN IN COLLARS/M.V.D.	- -
NEW OR RELOCATED DIFFUSER	⊠
EXISTING DIFFUSER	⊠
NEW OR RELOCATED RETURN AIR GRILLE	⊠
EXISTING RETURN AIR GRILLE	⊠
DIFFUSER TO BE RELOCATED/REMOVED	⊠
RETURN TO BE REMOVED/RELOCATED	⊠
NEW OR RELOCATED EXHAUST FAN	⊠
NEW OR RELOCATED EXHAUST GRILLE	⊠
LINEAR GRILLE (EXISTING)	⊠
LINEAR GRILLE (NEW)	⊠
SPIN IN COLLAR W/M.V.D.	+
SMOKE DETECTOR	⊠
THERMOSTAT	⊠
TEST SWITCH	⊠
TRANSFER GRILLE	⊠
SIDE WALL DIFFUSER	⊠
RETURN AIR FIRE DAMPER (EXIST.)	⊠
RETURN AIR FIRE DAMPER (NEW)	⊠
FIRE DAMPER (NEW)	⊠
FIRE DAMPER (EXIST)	⊠
COLD WATER RETURN	⊠
COLD WATER SUPPLY	⊠
CO2 SENSOR -SUBMIT SHOP DWGS PROVIDE SENSOR & CONTROLLER	⊠
MOTORIZED DAMPER	⊠
EXISTING TO REMAIN THE SAME	ERS
RETURN AIR GRILLE	R.A.G.
FIRE DAMPER	FD
RETURN AIR FIRE DAMPER	RAFD
RETURN AIR OPENING	RAO
EXHAUST FAN	EF
LINEAR DIFFUSER	LD
LINEAR RETURN	LR
REMOVE	REM
RELOCATE	REL
EXISTING	(E)
NEW	(N)

NOTE: SOME ITEMS MAY NOT BE USED IN THE DRAWING

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Tenant Improvements for:

PSL Pain Clinic

2300 SE Veterans Memorial Pkwy
Port St. Lucie, Florida 34952

PROJECT #	24-018
DATE	6-21-2024
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GENERAL MECHANICAL NOTES

- ALL WORK EXECUTED UNDER THESE OFFICIAL DOCUMENTS SHOULD BE PERFORMED BY A LICENSED AND INSURED MECHANICAL CONTRACTOR AND BE IN COMPLIANCE WITH THE LATEST FLORIDA BUILDING CODE (FBC), SHEET METAL & AIR CONDITIONING CONTRACTOR'S ASSOCIATION (SMACNA) STANDARDS, AND ALL OTHER APPLICABLE STATE AND LOCAL CODE.
- ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANSHIP MANNER TO PRODUCE A COMPLETE SYSTEM THAT IS FULLY BALANCED, AND ADHERES TO ALL APPLICABLE CODES AND REGULATIONS.
- MECHANICAL CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE THAT THE COMPLETE SYSTEM INSTALLED IS FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF A YEAR AFTER THE WORK IS COMPLETE AND TURNED OVER TO THE OWNER.
- THE MECHANICAL CONTRACTOR IS RESPONSIBLE TO OBTAIN HIS OWN PERMIT AND PAY ALL PERMIT AND INSPECTION FEES.
- AT THE COMPLETION OF THE PROJECT THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A SET OF PRINTS CLEARLY MARKED, DEPICTING ALL AS-BUILT CONDITIONS TO THE ENGINEER FOR RECORD.
- CONTRACTOR SHALL PAY SPECIAL ATTENTION TO OWNER EQUIPMENT, FURNITURE, AND CARPETING TO PREVENT CONTAMINATION BY COVERING AND WRAPPING FURNITURE AND EQUIPMENT. ALL WASTE AND DEBRIS SHALL BE REMOVED AT THE END OF EACH DAY TO MAINTAIN ACCEPTABLE INDOOR AIR QUALITY LEVEL DURING THE CONSTRUCTION.
- ANY PORTION OF EXISTING BUILDING (FLOOR, WALL, CEILING, OR ROOF) THAT IS AFFECTED BY EITHER REMOVAL, RELOCATION OR INSTALLATION OF A NEW EQUIPMENT SHALL BE REPAIRED AND MATCHED FINISHED EXISTING CONDITIONS ACCORDING TO ARCHITECTURAL DRAWINGS OR SPECIFICATIONS.
- WHEREVER DUCT RUNS THROUGH STRUCTURAL ELEMENT SUCH AS BEAM PRECAUTION SHALL BE TAKEN TO COORDINATE WITH OTHER TRADES TO RELOCATE OR TO PROVIDE NECESSARY SLEEVE BEFORE CONCRETE IS BEING POURED.
- SUPPLY 6 COPIES OF SHOP DRAWINGS FOR REVIEW TO ARCHITECT. NO EQUIPMENT IS TO BE ORDERED PRIOR TO THEIR APPROVAL.
- MECHANICAL CONTRACTOR TO PROVIDE TWO (2) COMFORT BALANCE VISITS TO SUIT THE NEEDS OF THE CLIENTS.
- OPENINGS AND DUCT TRAVELING THROUGH FIRE RATED WALL, TENANT DEMISING WALL, MECHANICAL AND ELECTRICAL ROOM, WALL AND FLOOR PARTITION, FLOOR AND ROOF SLAB SHALL BE INSTALLED WITH "B"-FIRE DAMPER.
- MOTORIZED DAMPERS REQUIRED ON EXHAUST AND OUTDOOR SUPPLY DUCTS THAT WILL AUTOMATICALLY SHUT OFF WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. PER FBC 2023 - 403.2.4.3 ENERGY CONSERVATION
- H.V.A.C. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULLY OPERATIONAL AND BALANCED SYSTEM THAT ADHERES TO ALL APPLICABLE CODES AND REGULATIONS.
- CONTRACTOR TO PROVIDE CERTIFIED TEST AND BALANCE FOR ALL SYSTEMS
- IN CEILINGS BEING USED AS A PLENUM, COMBUSTIBLES OR COMBUSTIBLE CONSTRUCTION SHALL NOT BE ALLOWED.

SITE VISIT

- MECHANICAL CONTRACTOR IS DULY REQUIRED TO VISIT PROJECT SITE AND VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. HE OR SHE SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY AT ONCE. FAILURE TO DO SO, THE MECHANICAL CONTRACTOR IS PROCEEDING AT HIS OWN RISK.
- DESIGN THAT IS CALLED FOR NEW DUCT OR PIPING TO BE CONNECTED TO EXISTING SYSTEM REQUIRES THE CONTRACTOR TO VERIFY EXISTING DUCT & PIPING SIZE BEFORE FABRICATION AND INSTALLATION.
- WHENEVER INTERFERENCE OR CONFLICT OCCURS WITH THE PROPOSED DESIGN, BEFORE PROCEEDING TO ANY CHANGE OR DEVIATION FROM THE EXISTING BID, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR THE CHANGE INCLUDED A DETAILED DRAWING FOR APPROVAL FROM ARCHITECT/ ENGINEER.
- CONTRACTOR SHALL CONSULT WITH STRUCTURAL ENGINEER WHEN CUTTING OR MAKING OPENING IN ANY BUILDING COMPONENT. CONTRACTOR SHALL VERIFY THAT STRUCTURAL INTEGRITY OF THE BUILDING IS NOT BEING COMPROMISED.
- POST TENSION STRUCTURAL SLAB: NO CUTTING OR DRILLING SHALL BE TAKEN PLACE WITHOUT THE X-RAY OF THE SLAB AND THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF THE BUILDING.

EXISTING HVAC SYSTEM

- MECHANICAL CONTRACTOR MUST CHANGE THE AIR FILTER IN ALL WORKING AIR CONDITIONING UNIT DURING CONSTRUCTION EVERY 21 DAYS OR LESS DEPENDING ON THE AMBIENT ENVIRONMENT TO PREVENT AIR CONTAMINATION, EQUIPMENT FAILURE SUCH AS BEARING FAILURE, DAMPER MALFUNCTION, ETC...
- AFTER CONSTRUCTION MECHANICAL CONTRACTOR IS TO VACUUM THOROUGHLY THE MECHANICAL ROOM TO REMOVE ALL DUSTY PARTICLES, INSPECT AND REPLACE AIR FILTERS, BEARINGS OR BELTS FOR OPTIMAL UNIT OPERATION.
- WHEN REUSING EXISTING AIR CONDITIONING THE CONTRACTOR MUST CLEAN THE COOLING AND THE CONDENSER COILS, CHECK AND ADJUST REFRIGERANT CHARGE TO ENSURE PROPER UNIT FUNCTION, VERIFY THE EXISTING CONDENSATE PIPING IS IN GOOD WORKING CONDITION, AND MAKE NECESSARY REPAIR. CONTRACTOR SHALL CHECK ALL ELECTRICAL COMPONENTS, TIGHTEN ALL ELECTRICAL CONNECTIONS FOR PROPER OPERATION.
- DETERIORATED DUCTWORK AND CEILING INSULATION SHALL BE REPLACED. ALL EXISTING DUCTWORK SHALL BE THOROUGHLY INSPECTED AND REPAIRED REMOVED EQUIPMENT THAT IS NOT BEING USED SHALL BE RETURNED TO THE OWNER.
- ANY EQUIPMENT THAT WAS TEMPORARILY DISCONNECTED WITH RESPECT TO A REMOVAL OF ANY OTHER DEVICE IT SHALL BE RECONNECTED TO THE EXISTING SYSTEM AND VERIFIED THAT IT IS FULLY OPERATIONAL.
- CONTRACTOR SHALL VERIFY EXISTING AIR CONDITIONING AND HEATING SYSTEMS ARE FUNCTIONING PROPERLY, ITS PERFORMANCE RANGE WITH RESPECT TO ITS VOLUME CAPACITY.
- EQUIPMENT THAT IS LOCATED EXTERIOR OF THE BUILDING SHALL BE PROPERLY TIED DOWN AND BE ABLE TO WITHSTAND A 170 MILES/HR FORCE WIND.

SPECIFICATION NOTES:

A/C: EXISTING ROOFTOP PACKAGED UNITS.

DUCTWORK:

RIGID - FOIL FACED BACKED FIBERGLASS R=6 AT 1.5", SUPPORTED 48" O.C., AT ALL TURNS, TURNS AND TRANSITIONS. TAPED AND MASTIC SEALED ALL SEAMS.

FLEX- U.L. CLASS ONE AIR DUCT, R6 SUPPORT 48" O.C., PROVIDE SPIN IN COLLARS WITH M.V.D. WHEN ACCESSIBLE OR WITH SCOOP WHEN NOT ACCESSIBLE. TIE WRAP INNER LINER TWICE AND TAPE AND MASTIC SEAL OUTER LINER TAKING CARE NOT TO COMPRESS INSULATION.

TYPICAL SUPPLY BRANCH WITH CONICAL TAP, ROUND TO RECTANGULAR TRANSITION TO RECTANGULAR DIFFUSER.

PROVIDE A VOLUME DAMPER ON THE SUPPLY, RETURN AND EXHAUST DUCTWORK ABOVE LAIY-IN-CEILING OR AS INDICATED ON PLANS.

ALL DUCT WORK DIMENSIONS ARE INTERIOR DIMENSIONS. ALLOW FOR 2 INCH INSULATION THICKNESS FOR EXTERIOR DIMENSIONS.

EXHAUST/OUTDOOR AIR DUCT:

GALVANIZED RECTANGLE DUCT OR ROUND SNAP LOCK METAL DUCT WILL BE INSTALLED WITH DUCT SUPPORTS AT 48 INCHES ON CENTER, INSULATE WITH R=6 FOIL FACED INSULATION WRAP U/L AS REQUIRED.

NOTE: ALL FRESH AIR, OUTSIDE MAKE AIR TO BE INSULATED WITH 1.5" DUCT WRAP, PROVIDE COLLARS AT BRANCH TAKE OFF'S.

DIFFUSER:

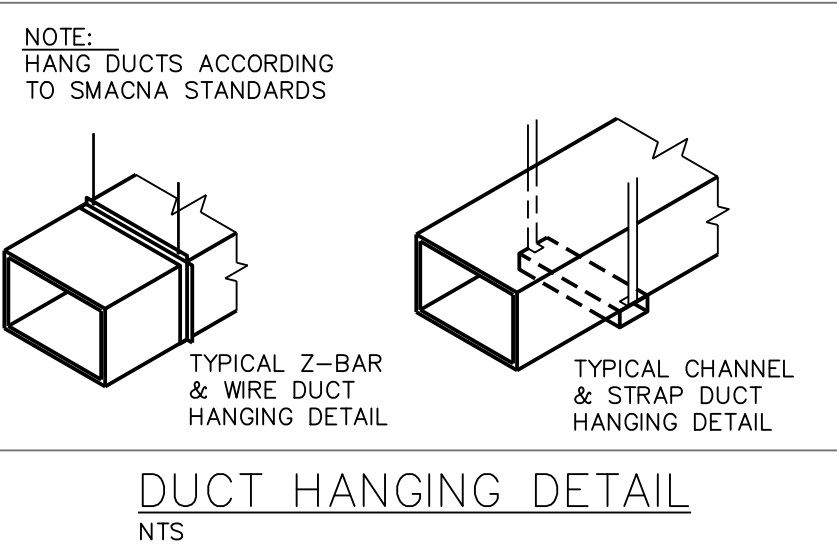
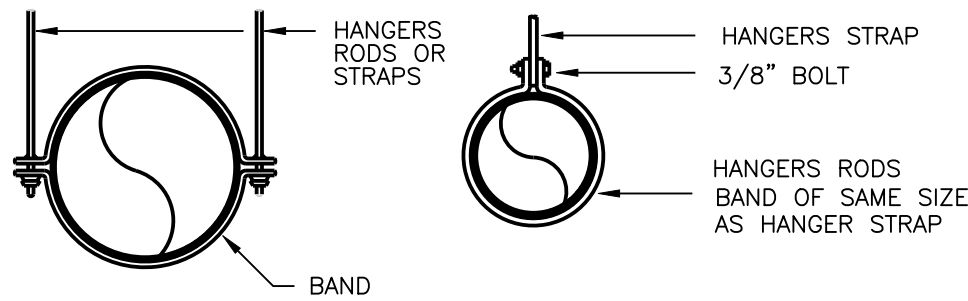
T-GRID LAY IN MOUNT - METALARE 5800
CEILING SURFACE MOUNT - METALARE 5500 W/ OPPOSED BLADE DAMPER, SEE PLANS FOR NECK SIZE.

RETURN GRILLE: METALARE RH

THERMOSTAT: COMMERCIAL 24/7 PROGRAMMABLE HONEYWELL. PROVIDE CLEAR LOCKABLE BOX. MOUNT AT 48" A.F.F. MAX PER ADA 308.2

SMOKE DETECTORS:
IONIZATION TYPE CARRIER, BRK. WIRE UNIT FOR SHUTDOWN UPON ACTIVATION. PROVIDE TEST SWITCH, VISUAL AND AUDIBLE ALARM.

DUCT HANGER SUPPORT-DETAIL



DUCT HANGING DETAIL

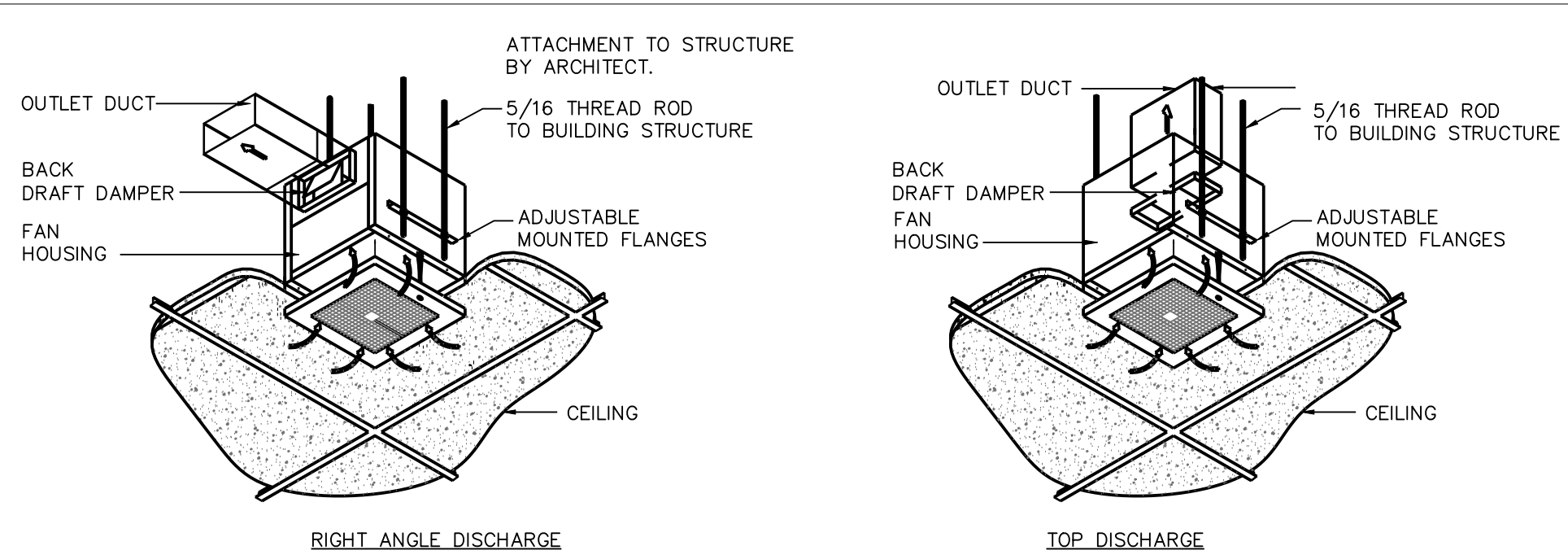
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VENTILATION REQUIREMENTS FMC TABLE 403.3.1.1

UNIT	SPACE	FLOOR AREA (SQ.FT.)	DEFAULT OCCUPANCY (P/1000SQ.FT.)	TOTAL OCCUPANTS (P)	REQUIRED OUTDOOR AIR (CFM/P)	REQUIRED OUTDOOR AIR (CFM/SQ.FT.)	TOTAL OUTDOOR AIR REQUIRED (CFM)
RTU-1	WAITING/RECEP	589	30	17.7	5	0.06	123.7
	OFFICE	864	5	4.3	5	0.06	73.4
	HALL	267	-	-	-	0.06	16.0
							213.1
RTU-2	OFFICE	1182	5	4.3	5	0.06	100.5
	HALL/STOR	375	-	-	-	0.06	22.5
							123.0

FAN SCHEDULE

TAG	TYPE	AIR FLOW (CFM)	SP (IN WC)	MOTOR		FAN RPM	SONES	MANUFACTURER & MODEL NO.
				HP OR WATTS OR AMPS	VOLTAGE & PHASE			
EF-1	CEILING CABINET	80	0.25	16.9W	120/1	870	0.4	GREENHECK SP-A90
EF-2	CEILING CABINET	54	0.25	15.6W	120/1	790	<0.3	GREENHECK SP-A70

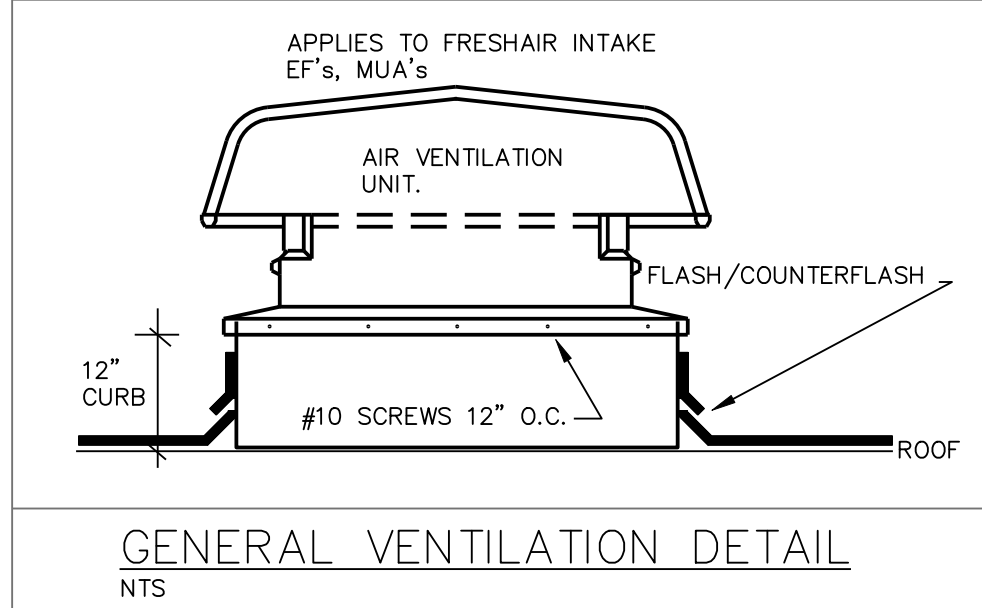
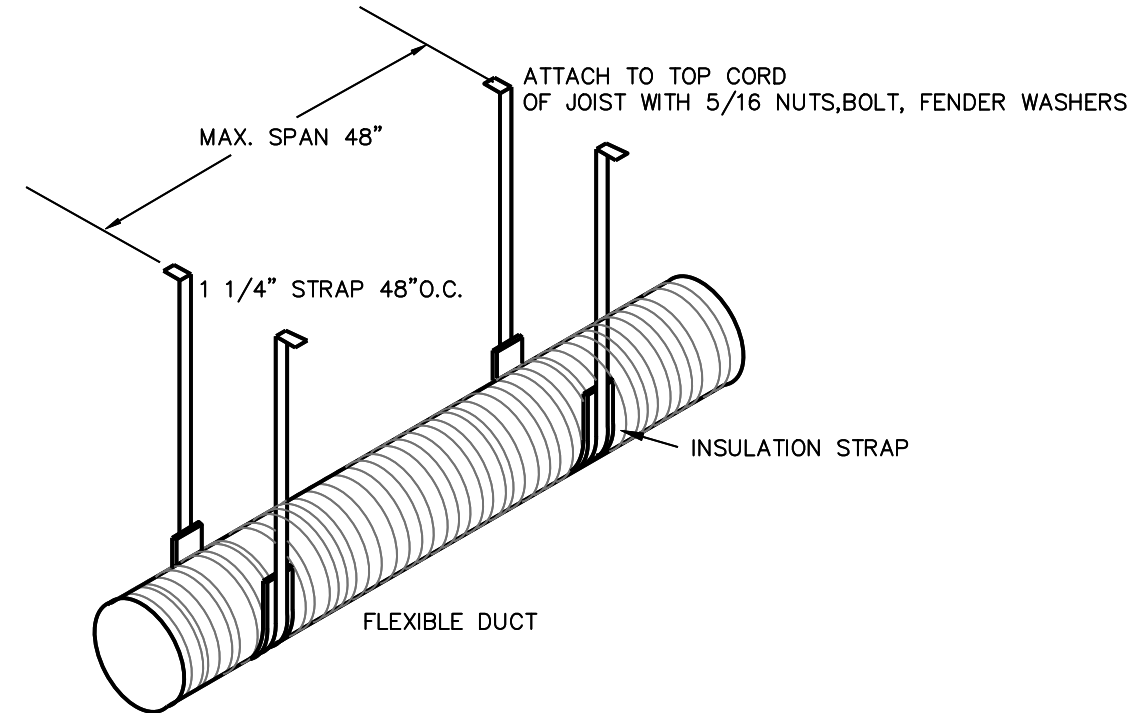


CEILING EXHAUST FAN DETAIL

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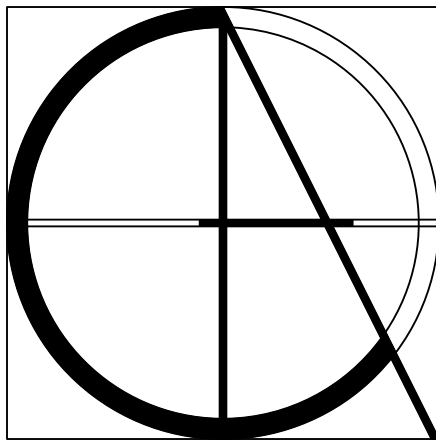
ROUND FLEX DUCT HANGING DETAIL

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GENERAL VENTILATION DETAIL

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