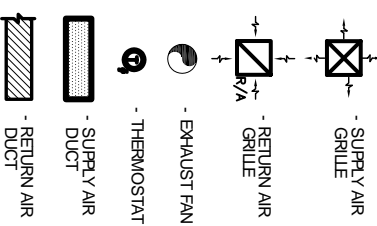


MECHANICAL PLAN  
SCALE 1/8" = 1'

HVAC NOTES

1. CONCEALED DUCTWORK TO BE UL-781, CLASS 1, FIBERGLASS DUCTBOARD. DUCTS SHALL BE SIZED TO LIMIT AIR DUCTS TO 1000 CFM & SECONDARY DUCTS TO 800 CFM. TO BE INSTALLED PER SMACNA STANDARDS.
2. EXPOSED DUCTWORK TO BE GALVANIZED SHEET METAL PER SMACNA STANDARDS. LINE WITH NEOPRENE COATED 1.0" x 1.5 POUNDS PER CUBIC FOOT DUCT INSULATION.
3. ROUND FLEXIBLE DUCT TO BE UL-181, CLASS 1, AIR DUCT MATERIALS.
4. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
5. IN ALL SYSTEMS OVER 2000 CFM AND LESS THAN 15,000 CFM, SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72E IN THE RETURN DUCT DOWNSTREAM OF THE AIR HANDLING UNIT AND ALL FILTERS TO AUTOMATICALLY STOP THE FAN.
6. PROVIDE UL LISTED 125 F. FRESH AIR RETURN AIR OF EACH SYSTEM UNDER 2000 CFM TO SHUT DOWN THE FAN IN THE EVENT OF FIRE.
7. PROVIDE UL RATED FIRE DAMPERS WHERE REQUIRED AT ALL DUCT PENETRATIONS OF FIRE-RATED ASSEMBLIES AND WHERE REQUIRED BY CODE, INCLUDING OUTSIDE AIR INTAKES.
8. CONDENSATE DRAINS TO BE PVC PIPE RUN TO PLUMBERS P-TRAP WITHIN FIVE FEET OF AIR HANDLING UNITS.
9. ALL AIR HANDLING SYSTEMS TO BE BALANCED TO ASSURE PROPER AIR FLOWS PER PLANS.
10. ALL THERMOSTATS TO BE AUTOMATIC CHANGEOVER WITH HEAT SWITCH.
11. EXHAUST FAN EQUAL TO BROAN MODEL NO. 100 CF. OR EQUAL. FAN SHALL BE CONTROLLED BY A SWITCH ON THE WALL IN THE SAME LOCATION AS LIGHT SWITCH(S). PROVIDE BACK DRAFT DAMPER.
12. PROVIDE AND INSTALL WATER PROOF GRILLE VENT IN PROPER ROOF LOCATION FOR PLUMBING FIXTURE EXHAUST.
13. ALL SUPPLY AIR VENTS SHALL BE EQUIPPED WITH AIR CONTROL DAMPERS.
14. LOCATE OUTDOOR UNITS AS SHOWN ON ARCH. DWGS.
15. REFRIGERANT LINES SHALL BE SIZED BY UNIT MANUFACTURER AND INSTALLED ACCORDING TO MANUFACTURERS' INSTRUCTIONS.
16. FRESH AIR SHALL BE SUPPLIED TO EACH AIR HANDLER THROUGH EXTERIOR WALL DUCT SUPPLIED WITH A CONTROL DAMPER.
17. INSTALL FIRE DAMPER WHERE S.A. & R.A. DUCTS PENETRATE 1 HOUR RATED CEILING.
18. ALL ELECTRICAL, MECHANICAL, AND PLUMBING PENETRATING FIRE WALLS SHALL BE FIRE CALKED. PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN TESTED IN ACCORDANCE WITH ASTM-BB-14).
19. ALL MECHANICAL SYMBOLS ARE DRAWN DIAGRAMMATICALLY. CONTRACTOR TO VERIFY WITH OWNER LOCATIONS OF VENTS, DAMPERS, REGISTERS, ETC.
20. REFER TO STRUCTURAL DRAWINGS TO COORDINATE WITH OWNER LOCATIONS OF VENTS, DAMPERS, REGISTERS, ETC.
21. FLEXIBLE DUCTWORK LENGTH NOT TO EXCEED 10'-0".
22. REFER TO REFLECTED CEILING PLAN FOR FINAL GRILLE AND DIFFUSER LOCATIONS AND COORDINATE AS REQUIRED.
23. FINAL LOCATION OF TEMPERATURE CONTROLS TO BE COORDINATED WITH OWNER AT JOB SITE.
24. PROVIDE AND INSTALL SMOKE DETECTORS AS APPROVED BY LOCAL AHJ'S. PLACE NEAR R/A AND S/A OPENINGS OF AHU AND PROVIDE WITH ACCESS PANEL. WIRING BY ELECTRICAL CONTRACTOR.
25. FRESH AIR INTAKES ARE REQUIRED TO HAVE MOTORIZED OR GRAVITY DAMPERS TO SHUT OFF WHEN SYSTEM IS NOT RUNNING. ALL THERMOSTATS MUST BE PROGRAMMABLE. SEE SECTIONS 502.4.4 OR 503.2.4.3 OF THE 2006 INTERNATIONAL ENERGY CODE.

LEGEND



**J D PLAZA - JAMES LEES BEAUTY WORLD HVAC CALCULATIONS**

Project: James Lees Beauty World HVAC Calculations  
Thu Sep 17 13:17:05 EDT 2009

The Bltn Gain for 284 SqFt of North and Shaded Double Pane Glass = 11080  
The Bltn Gain for 27 SqFt of Windows in Doors = 1356.4  
The Bltn Gain for 802 SqFt of Metal Panels, 1/2" Densglas, Metal Studs, R-13, &5/8" Gypsum Wall Number 1 = 3744.6  
The Bltn Gain for 617 SqFt of Metal Studs, R-11 &5/8" Gypsum Wall Number 2 = 3604.2  
The Bltn Gain for 660 SqFt of Metal Panels, 1/2" Densglas, Metal Studs, R-13 &5/8" Gypsum Wall Number 3 = 3518  
The Bltn Gain for 825 SqFt of Stucco, 1/2" Densglas, Metal Studs, R-19 &5/8" Gypsum Wall Number 4 = 3402.5

The Bltn Gain for 4388 SqFt of Ceiling and Roof Combo R-11: Ceiling Number 1 = 48716  
The Bltn Gain for 112 SqFt of Ceiling and Roof Combo R-19: Ceiling Number 2 = 48716  
The Bltn Gain for 53 People = 530  
The Bltn Gain for 4500 SqFt of Area Lighting in a Retail Store = 27000  
The Retail Space Outside Fresh Air #1 = 646 cfm  
The Bltn Gain for Outside Fresh Air #1 = 28300  
The Total Outside Fresh Air CFM = 646  
This is in accordance with International Mechanical Code 2006  
The Total Bltn Gain = 179968.7  
The Total Tons of HVAC needed = 14.99739166666667

**AC UNIT SCHEDULE**

NO.	TOTAL BTU	CFM	O.A.	HEAT ELEC	VOLTAGE	MCA	ELECTRICAL	OKT BRKR	COMMENTS
AC 1	60,000	2,000	198	15 KW	208V, 1Ø	-	LP1-1.3,2.4,1.3,1.5		YORK - ENERGY WITH OWNERS
AC 2	60,000	2,000	198	15 KW	208V, 1Ø	-	LP1-5.7,6.8,1.4,1.6		
AC 3	60,000	2,000	250	10 KW	208V, 1Ø	-	LP1-9,11,10,12,17,19		

**EXHAUST FAN SCHEDULE**

NO.	LOCATION	CFM	VOLTAGE	TYPE	MANF.
EF1	RESTROOM	75	120	VENT	BROAN
EF2	RESTROOM	75	120	VENT	BROAN

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WEST SUDDLE, LA

MECHANICAL PLAN

REV: \_\_\_\_\_  
SCALE: AS NOTED  
JOB#: 2037  
DATE: 10-01-09  
SHEET 16

**M-1**

OF 19