MECHANICAL NOTES

1. CONCEALED DUCTWORK TO BE UL-181, CLASS 1, FIBERGLASS DUCTBOARD. DUCTS SHALL BE SIZED TO LIMIT MAIN DUCTS TO 1000 CFM & SECONDARY DUCTS TO 800 CFM. TO BE INSTALLED PER SMACNA STANDARDS.
2. EXPOSED DUCTWORK TO BE GALVANIZED SHEET METAL PER SMACA STANDARDS. LINE WITH NEOPRENE COATED 1.0," 1.5 POUNDS PER CUBIC FOOT DUCT INSULATION.
3. ROUND FLEXIBLE DUCT TO BE UL-181, CLASS 1, AIR DUCT MATERIALS, MAXIMUM LENGTH 14 FEET.
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 U.L. LISTED 125° 'F' FIRESTAT IN RETURN AIR OF EACH SYSTEM UNDER 2000 CFM TO SHUT DOWN THE FAN IN THE EVENT OF FIRE.
7. PROVIDE U.L. 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 MANUFACTURER'S INSTRUCTIONS.
16. FRESH AIR SHALL BE SUPPLIEDTO 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 CEILINGS.
18. ALL ELECTRICAL, MECHANICAL, AND PLUMBING PENETRATING FIRE WALLS SHALL BE FIRE CAULKED. (PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMESAND HOT GASES WHEN TESTED IN ACCORDANCE WITH ASTM-E8-14).
19. MECHANICAL PLANS ARE DRAWN SCHEMATICALLY. CONTRACTOR TO ROUTE DUCT SYSTEMS PER FIELD CONDITIONS.
20. AREA OF REFUGE SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 92A, TO INCLUDE STAIRWELL PRESSURIZATION SYSTEMS. PROVIDE PROPER ACTIVATION AND CONTROL SYSTEMS.
21. REFRIGERANT LINES SHALL BE $\frac{3}{4}$" TYPE L HARD COPPER.
22. ALL MECHANICAL LAYOUTS ARE DRAWN DIAGRAMMATICALLY.
23. CONTRACTOR SHALL PROVIDE AN AIR BALANCE REPORT TO THE AUTHORITY HAVING JURISDICTION.

NOTE:

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 2006 INTERNATIONAL ENERGY CODE.

EXHAUST FAN SCHEDULE

LOC.- ROOM NO.	CFM	VOLTAGE	TYPE	MANF.	NOTE
WOMENS- 103 (EF-1)	1575	120	VENT	BROAN	#1

NOTES:
1. EXHAUST FAN EF-1 SERVES RESTROOMS, ROOMS 102, 103, 104, 105, 131 & 137.

A/C UNIT SCHEDULE

ZONE	AHU NO.	LOCATION	TOTAL BTU	CFM	O.A.	HEAT (KW)	ELECTRICAL			COMMENTS
							VOLTAGE	MCA	CKT BRKR	
1	1	WORSHIP CENTER ROOM 113	120,000 10 TON	4,000	688	24	480V,3Ø	-	-	ROOFTOP UNIT
	2	WORSHIP CENTER ROOM 113	60,000 5 TON	2,000	200	15	480V,3Ø	-	-	ROOFTOP UNIT
	3	WORSHIP CENTER ROOM 113	120,000 10 TON	4,000	688	24	480V,3Ø	-	-	ROOFTOP UNIT
2	4	CORRIDOR ROOM 138	48,000 4 TON	1,600	375	15	480V,3Ø	-	-	ROOFTOP UNIT
	5	VESTIBULE ROOM 134	48,000 4 TON	1,600	375	15	480V,3Ø	-	-	ROOFTOP UNIT
	6	VESTIBULE ROOM 135	48,000 4 TON	1,600	375	15	480V,3Ø	-	-	ROOFTOP UNIT
3	7	CHILDREN'S WORSHIP ROOM 114	72,000 6 TON	2,400	432	20	480V,3Ø			ROOFTOP UNIT
	8	CHILDREN'S WORSHIP ROOM 114	72,000 6 TON	2,400	432	20	480V,3Ø	-	-	ROOFTOP UNIT
	9	CHILDREN'S WORSHIP ROOM 114	72,000 6 TON	2,400	432	20	480V,3Ø	-	-	ROOFTOP UNIT
4	10	COFFEE SHOP ROOM 101	120,000 10 TON	4,000	525	24	480V,3Ø	-	-	ROOFTOP UNIT
	11	WELCOME CENTER ROOM 126	180,000 15 TON	6,000	550	35	480V,3Ø	-	-	ROOFTOP UNIT
	12	FOYER ROOM 100	120,000 10 TON	4,000	420	24	480V,3Ø	-	-	ROOFTOP UNIT
OFC.	13	VESTIBULE ROOM 136	72,000 6 TON	2,400	45	20	480V,3Ø	-	-	ROOFTOP UNIT
	14	YOUTH WORSHIP ROOM 114	48,000 4 TON	1,600	350	15	480V,3Ø	-	-	ROOFTOP UNIT

AIR BALANCE SCHEDULE

ZONE NO.	ZONE 1			ZONE 2			ZONE 3			ZONE 4				OFFICES	YOUTH CENTER
UNIT NO.	RTU 1	RTU 2	RTU 3	AHU 4	AHU 5	AHU 6	AHU 7	AHU 8	AHU 9	AHU 10	AHU 11	AHU 12	EF-1	A/C 13	A/C 14
OUTSIDE AIR FLOW (CFM)	688	200	688	375	375	375	432	432	432	525	550	420	0	45	350
RETURN AIR FLOW (CFM)	3312	1800	3312	1225	1225	1225	1968	1968	1968	3475	5450	3580	0	755	1250
SUPPLY AIR FLOW (CFM)	4000	2000	4000	1600	1600	1600	2400	2400	2400	4000	6000	4000	0	800	1600
EXHAUST AIR FLOW (CFM)	688	200	688	375	375	375	432	432	432	0	0	420	1575		350
BUILDING PRESSURE (CFM)	0	0	0	0	0	0	0	0	0	525	550	420	-1575	45	0
UNIT QUANTITIES	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL PRESSURIZATIONS	688	200	688	0	0	0	0	0	0	525	550	420	-1575	45	0
REMARKS															
						0			0				0	45	0
RESULTING PRESSURIZATION															-35

DAMMON
ENGINEERING, INC.

CHIEF ENGINEER
EMMETT
DAMMON, P.E.

CHIEF ARCHITECT
ROBERT
WILTSE

1095 FLORIDA AVENUE
SLIDELL, LA. 70458
OFFICE: 985-649-5832
FAX: 985-641-5950

WEBSITE:
WWW.DAMMONENGINEERING.COM

EMAIL:
DAMMONENG@BELLSOUTH.NET

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NOTES
AND
SCHEDULES

367234
REVIEWED FOR
STATE FIRE MARSHAL
AS PER REVIEW LETTER
BY: LAWRENCE J. DELAUNE, ARCHITECT, CBO

REV: #1 06-08-09

SCALE: AS NOTED

JOB#: 1988

DATE: 09-30-08

SHEET

M-4

OF