

	SUPPLY AIR DUCT SECTION		SUPPLY AIR DIFFUSER
	RETURN AIR DUCT SECTION		RETURN AIR GRILLE OR REGISTER
	SQUARE SHEETMETAL DUCTWORK (DIMENSIONS ARE IN INCHES)		EXHAUST AIR GRILLE OR REGISTER
	ROUND SHEETMETAL DUCTWORK (DIMENSIONS ARE IN INCHES)		DIFFUSER SYMBOL - LETTER=TYPE, NUMBER=CFM
	TRANSITION		FIRE DAMPER
	SQUARE-TO-ROUND TRANSITION		MANUAL OPERATED DAMPER
	DUCT TURNING UP		DUCT MOUNTED SMOKE DETECTOR
	DUCT TURNING DOWN		THERMOSTAT (INSTALL 60\" data-bbox="741 571 951 601"/>
	SQUARE ELBOW WITH MULTIPLE TURNING VANES		
	SPIN-IN FITTING WITH SCOOP EXTRACTOR AND BALANCING DAMPER WITH LOCKING QUADRANT		
	FLEXIBLE DUCT		

[illegible]

EQUIPMENT DESIGNATION	EQUIPMENT DESCRIPTION	EQUIPMENT FURN. BY	VOLTAGE/ PHASE	KW	HP	MCA	MOCBP	DISCONNECT FURN. BY	STARTER FURN. BY	CONTROLS	REMARKS
AHU-1	SPLIT-SYS AIR HANDLER	M.C.	480/3	12.0	---	20	25	E.C.	N/A	T'STAT	--
HP-1	SPLIT-SYS HEAT PUMP	M.C.	480/3	---	---	11.3	15	E.C.	N/A	--	--
AHU-2	SPLIT-SYS AIR HANDLER	M.C.	480/3	8.0	---	14	20	E.C.	N/A	T'STAT	--
HP-2	SPLIT-SYS HEAT PUMP	M.C.	480/3	---	---	7.9	15	E.C.	N/A	--	--
AHU-3	SPLIT-SYS AIR HANDLER	M.C.	480/3	14.7	---	26	30	E.C.	N/A	T'STAT	--
HP-3	SPLIT-SYS HEAT PUMP	M.C.	480/3	---	---	12.8	20	E.C.	N/A	--	--
AHU-4	SPLIT-SYS AIR HANDLER	M.C.	480/3	12.0	---	21	25	E.C.	N/A	T'STAT	--
HP-4	SPLIT-SYS HEAT PUMP	M.C.	480/3	---	---	9.7	15	E.C.	N/A	--	--
EF-1	IN-LINE EXHAUST FAN	M.C.	480/3	---	1/20	---	---	W/EQUIP	N/A	W/LIGHTS	--
EF-2	IN-LINE EXHAUST FAN	M.C.	120/1	---	1/20	---	---	W/EQUIP	N/A	W/LIGHTS	--
EF-3	CEILING EXHAUST FAN	M.C.	120/1	45 WATTS	---	---	---	W/EQUIP	N/A	W/LIGHTS	--
EF-4	CEILING EXHAUST FAN	M.C.	120/1	45 WATTS	---	---	---	W/EQUIP	N/A	W/LIGHTS	--
EF-5	CEILING EXHAUST FAN	M.C.	120/1	45 WATTS	---	---	---	W/EQUIP	N/A	W/LIGHTS	--
EF-6	CEILING EXHAUST FAN	M.C.	120/1	--	1/6	---	---	W/EQUIP	N/A	T'STAT	--
EF-7	IN-LINE EXHAUST FAN	M.C.	208/1	--	1/30	---	---	W/EQUIP	N/A	T'STAT	--

		INDOOR UNIT										OUTDOOR UNIT					
MARK	TONNAGE	CFM	MIN. O.A.	HEATING			COOLING		VOLT/Ø	FAN E.S.P.	MANUFACTURER	MODEL	MARK	MANUFACTURER	MODEL	VOLT/Ø	REMARKS
				MBH	AUX. KW	# STAGES	TOTAL CAP.	SENSIBLE CAP.									
AHU-1	3.5	1,400	690	42.5	12	2	39.9 MBH	28.1 MBH	480/3	0.5"	CARRIER	FB4C042	HP-1	CARRIER	38YCC042	480/3	1, 2, 3
AHU-2	3.0	1,200	330	28.8	8	1	34.2 MBH	25.1 MBH	480/3	0.5"	CARRIER	FB4C036	HP-3	CARRIER	38YCC036	480/3	1, 2, 3
AHU-3	5.0	2,000	555	60.5	14.7	2	56.0 MBH	42.0 MBH	480/3	0.5"	CARRIER	FB4C060	HP-2	CARRIER	38YCC060	480/3	1, 2, 3
AHU-4	4.0	1,600	465	45.5	12	2	46.0 MBH	34.3 MBH	480/3	0.5"	CARRIER	FB4C048	HP-4	CARRIER	38YCC048	480/3	1, 2, 3

NOTES:

1. PROVIDE AUTOCHANGEOVER PROGRAMMABLE THERMOSTAT.
2. PROVIDE UNIT WITH EMERGENCY SHUT-OFF SWITCH. PROVIDE SWITCH WITH ENGRAVED NAMEPLATE THAT STATES "AHU EMERGENCY SHUT-OFF". MOUNT EMERGENCY SHUT-OFF SWITCH DIRECTLY BELOW UNIT 1"STAT.
3. PROVIDE UNIT WITH CONTROLS FOR LOW AMBIENT TEMPERATURES.

MARK	LOCATION	FREE AREA	PRESS. DROP	CFM	WIDTH	HEIGHT	MATERIAL	SCREEN	MFG.	MODEL	REMARKS
L-1	AHU-1	1.73	.05	690	24"	24"	ALUMINUM	YES	GREENHECK	ESJ-401	
L-2	AHU-2	1.24	.05	555	24"	18"	ALUMINUM	YES	GREENHECK	ESJ-401	

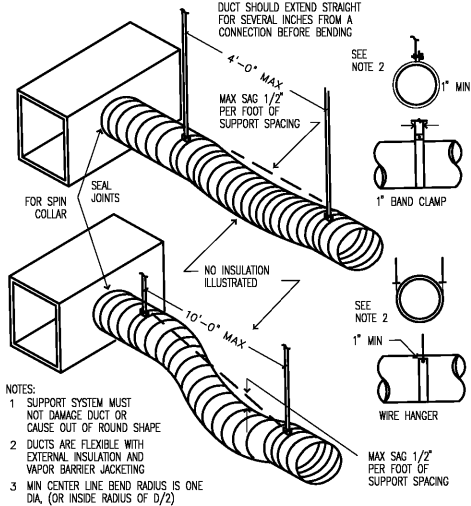
MARK.	LOCATION	FREE AREA	PRESS. DROP	CFM	NECK	CURB CAP	INTAKE/ EXHAUST	MFG.	MODEL	REMARKS
HOOD-1	ROOF	2.25	0.04*	1,020	20x20	30x30	INTAKE	GREENHECK	GRS-20	PROVIDE ROOF CURB AND BIRDSCREEN
HOOD-2	ROOF	3.25	0.04	150	8x10	19x19	INTAKE	GREENHECK	GRS-8	PROVIDE ROOF CURB AND BIRDSCREEN
HOOD-3	ROOF	2.25	0.04*	1,070	20x20	30x30	INTAKE	GREENHECK	GRS-20	PROVIDE ROOF CURB AND BIRDSCREEN
HOOD-4	ROOF	.57	0.05*	300	10x10	19x19	RELIEF	GREENHECK	GRSR-10	PROVIDE ROOF CURB AND BIRDSCREEN
HOOD-5	ROOF	.57	0.05*	225	10x10	19x19	RELIEF	GREENHECK	GRSR-10	PROVIDE ROOF CURB AND BIRDSCREEN

AHU DUCT DETECTORS SHALL BE PURCHASED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. DUCT DETECTORS SHALL SELF CONTAINED TYPE. UPON ACTIVATION OF THE DUCT DETECTOR A AUDIO/VISUAL SIGNAL WILL ACTIVATE IN A APPROVED LOCATION. A TROUBLE CONDITION WILL ACTIVATE A AUDIO/VISUAL SIGNAL IN A APPROVED LOCATION AND SHALL BE LABELED AS A AIR DUCT DETECTOR TROUBLE. DUCT DETECTORS SHALL BE WIRED/PROGRAMMED TO SHUTDOWN ALL THE HVAC UNITS IN THE EVENT OF AN ALARM CONDITION.

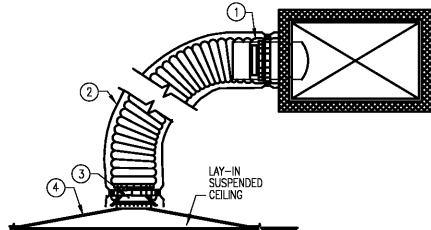
MARK	MANUFACTURER	MODEL	TYPE	CFM	E.S.P.	ELECTRICAL			REMARKS
						VOLT/Ø	AMPS	WATTS	
EF-1	GREENHECK	SQ-90	INLINE EXHAUST FAN	400	0.50	120/1	-	-	1,2,3,4
EF-2	GREENHECK	SQ-85	INLINE EXHAUST FAN	325	0.50	120/1	-	-	1,2,3,4
EF-3	GREENHECK	SP-7	CEILING MNTD EXHAUST FAN	75	0.375	120/1	-	-	1,2,3,4
EF-4	GREENHECK	SP-7	CEILING MNTD EXHAUST FAN	75	0.375	120/1	-	-	1,2,3,4
EF-5	GREENHECK	SP-7	CEILING MNTD EXHAUST FAN	75	0.375	120/1	-	-	1,2,3,4
EF-6	GREENHECK	G 121-B	ROOF EXHAUST FAN	1075	0.125	120/1	-	-	1,2,3,5
EF-7	GREENHECK	SQ-70-D	INLINE EXHAUST FAN	250	0.125	120/1	-	-	1,2,3,5,6

REMARKS:		
1. PROVIDE SINGLE POINT ELECTRICAL CONNECTION	3. PROVIDE WITH BIRD/INSECT SCREEN	5. PROVIDE THERMOSTAT
2. PROVIDE WITH BACKDRAFT DAMPER	4. INTERLOCK FAN WITH LIGHTS - COORD. WITH E.C.	6. PROVIDE WALL CAP

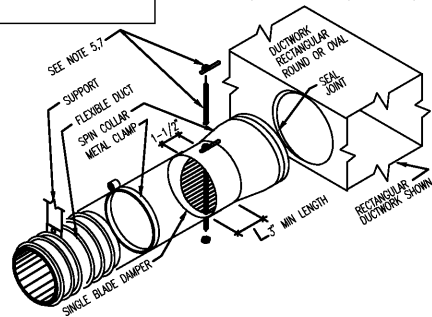
MARK	MANUFACTURER	MODEL	CFM RANGE	TYPE	PANEL SIZE	NECK SIZE
A	METALAIR	7600-6	0-120	LAY-IN, PERFORATED FACE 4-WAY BLOW, SUPPLY DIFFUSER	24x24	6"
B	METALAIR	7600-6	125-200	LAY-IN, PERFORATED FACE 4-WAY BLOW, SUPPLY DIFFUSER	24x24	8"
C	METALAIR	7600-6	225-400	LAY-IN, PERFORATED FACE 4-WAY BLOW, SUPPLY DIFFUSER	24x24	10"
D	METALAIR	7650-6	150-225	LAY-IN, PERFORATED FACE RETURN GRILLE	24x24	6"
E	METALAIR	7650-6	225-400	LAY-IN, PERFORATED FACE RETURN GRILLE	24x24	8"
F	METALAIR	7650-6	400-600	LAY-IN, PERFORATED FACE RETURN GRILLE	24x24	10"
G	METALAIR	7650-6	600-800	LAY-IN, PERFORATED FACE RETURN GRILLE	24x24	12"



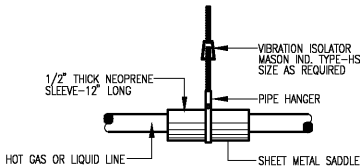
DETAIL	2
NOT TO SCALE	M922



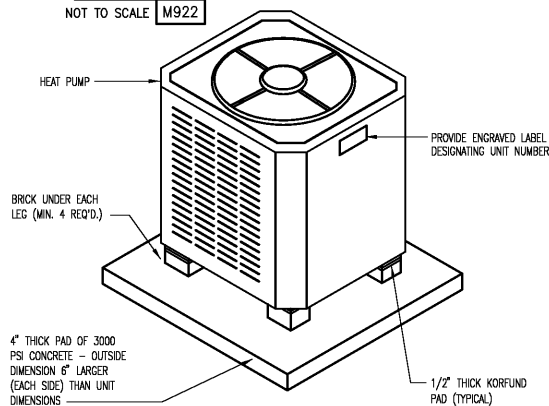
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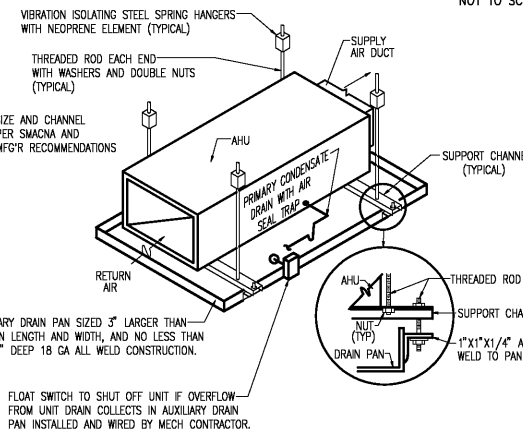
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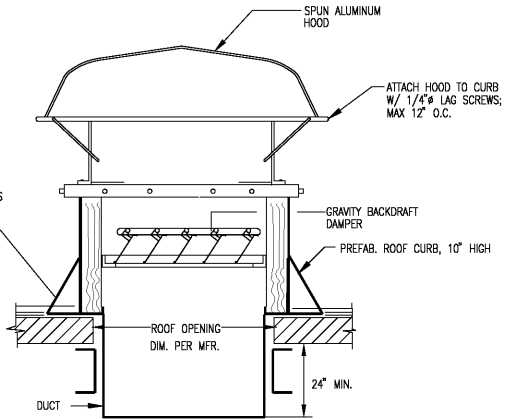
DETAIL	1
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DETAIL	5
NOT TO SCALE	M922



DETAIL	6
NOT TO SCALE	M922



DETAIL	7
NOT TO SCALE	M922

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CITY OF ROANOKE
VIRGINIA

REGIONAL WATER POLLUTION CONTROL PLANT ADMINISTRATION AND MAINTENANCE BUILDINGS

ADMINISTRATION BUILDING

MECHANICAL

SCHEDULES AND DETAILS

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.	DATE JANUARY 2004	
	H & S JOB NUMBER	30788C
	CONTRACT NUMBER C	DRAWING NUMBER M922