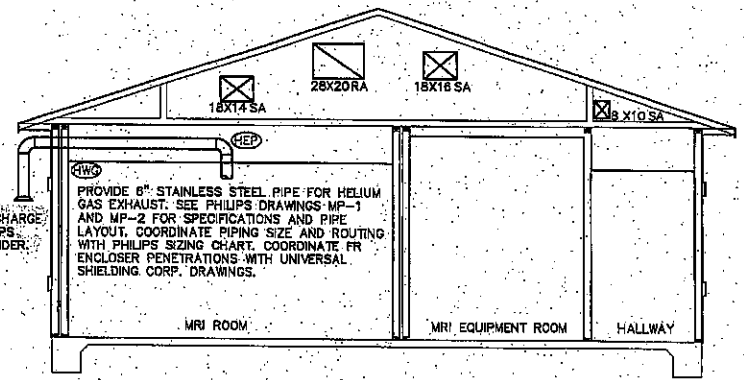
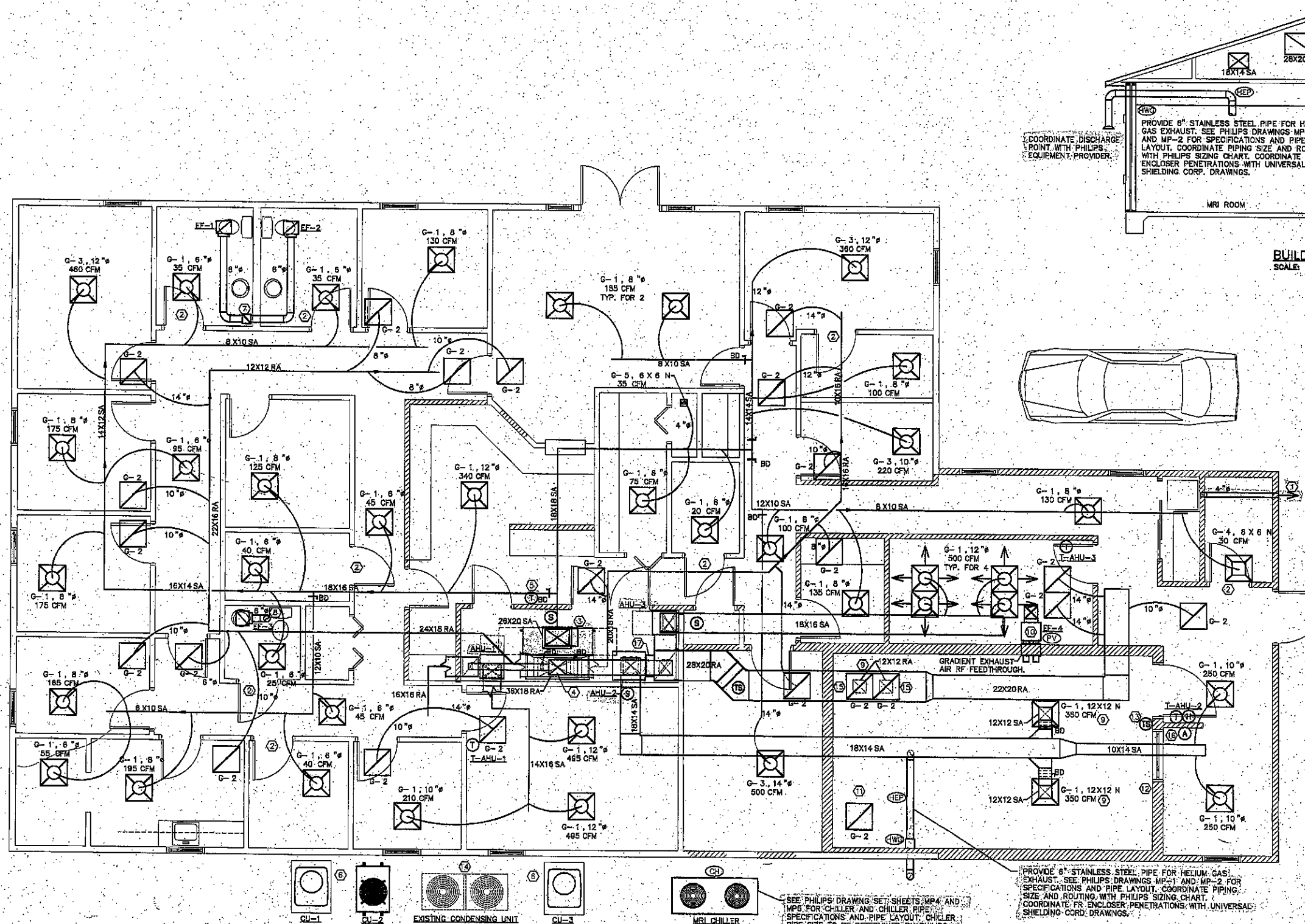


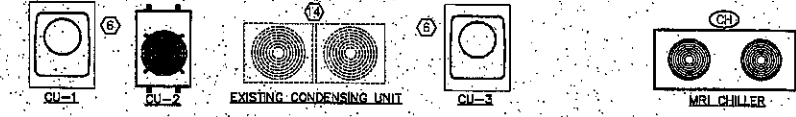
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**BUILDING SECTION**  
SCALE: 1/4" = 1'-0"

**FLAG NOTES:**

- 1) ROUTE DRYER EXHAUST DUCT UP ABOVE CEILING TO WALL CAP.
- 2) PROVIDE 1" UNDERCUT FOR RETURN PATH.
- 3) RELOCATE EXISTING AHU AS SHOWN; MODIFY EXISTING REFRIGERANT LINES AS NEEDED; ROUTE CONDENSATE TO EXISTING FLOOR DRAIN; MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SMOKE DETECTOR FOR EXISTING AHU.
- 4) 16x14 OA DUCT FROM COOK PR-12 ROOF CAP; 12x8 OA DUCT TO EXISTING AIR HANDLER WITH BALANCE DAMPER SET AT 250 CFM; 6x4 OA DUCT TO AHU-1 WITH BALANCE DAMPER SET AT 60 CFM; 14x12 OA DUCT TO COMMON RETURN FOR AHU-2 AND 3 WITH BALANCE DAMPER SET AT 680 CFM; PROVIDE TWO POSITION MOTORIZED DAMPER IN 16x14 OA DUCT SET AT 870 CFM; DAMPER INTERLOCKED WITH EXISTING AIR HANDLER; DAMPER TO BE OPEN DURING OCCUPIED MODE AND CLOSED DURING UNOCCUPIED MODE.
- 5) RELOCATE EXISTING THERMOSTAT.
- 6) ROUTE REFRIGERANT LINES THROUGH EXTERIOR WALL TO ATTIC SPACE.
- 7) 8x8 EA DUCT UP TO GOOSE NECK ON ROOF.
- 8) 6" EA DUCT UP TO GOOSE NECK ON ROOF.
- 9) SUPPLY AND RETURN DUCT TO HAVE RF AIR VENT AT EACH RF ENCLOSURE PENETRATION; RF AIR VENT PROVIDED BY RF ENCLOSURE SUPPLIER; SEE UNIVERSAL SHIELDING CORP. DETAIL 12.
- 10) EF-4 INLINE EXHAUST FAN; COORDINATE MOUNTING WITH PHILIPS AND UNIVERSAL SHIELDING CORP.; CONTRACTOR TO SUPPLY VENTILATION HOSES FOR CONNECTION TO MRI MACHINE HOSES TO BE PURCHASED FROM PHILIPS; COORDINATE RF SHIELD PENETRATIONS WITH RF CONTRACTOR; PROVIDE 12x12 EA DUCT TO GOOSENECK ON ROOF.
- 11) RF ENCLOSURE CONTRACTOR TO PROVIDE EMERGENCY AIR ESCAPE OPENING IN RF SHIELD.
- 12) RF ENCLOSURE CONTRACTOR TO PROVIDE AIR ESCAPE TO ACCOMMODATE HIGH LOW PRESSURE CHANGE IN WALL OF RF SHIELD.
- 13) PROVIDE REMOTE WALL MOUNTED TEMPERATURE SENSOR; COORDINATE LOCATION AND MOUNTING WITH PHILIPS AND UNIVERSAL SHIELDING CORP.
- 14) FIELD VERIFY EXISTING CONDENSING UNIT LOCATION; CONDENSING UNIT TO REMAIN IN EXISTING LOCATION; INSPECT EXISTING REFRIGERANT LINE CONNECTIONS AND INSULATION; REPAIR OR REPLACE AS NEEDED.
- 15) PROVIDE MANUAL BALANCE DAMPER.
- 16) PROVIDE DUCT MOUNTED TEMPERATURE SENSOR INTERLOCKED WITH WALL MOUNTED ALARM; WALL MOUNTED ALARM TO HAVE VISUAL AND AUDIBLE WARNING ALERT; ALARM TO BE ACTIVATED WHEN RETURN AIR EXCEEDS 80°F.
- 17) PROVIDE FLANDERS PRECISION CELL 60-65% 24X24X4 FILTER; PROVIDE FILTER RACK IN RETURN AIR DUCT; REMOVE FILTER PROVIDED WITH AIR HANDLER.



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

SEE PHILIPS DRAWING SET SHEETS MP-1 AND MP-2 FOR CHILLER AND CHILLER PIPE SPECIFICATIONS AND PIPE LAYOUT; CHILLER PIPE SIZE TO BE DETERMINED BY PHILIPS; COORDINATE FR ENCLOSURE PENETRATIONS WITH UNIVERSAL SHIELDING CORP. DRAWINGS.

PROVIDE 6" STAINLESS STEEL PIPE FOR HELIUM GAS EXHAUST; SEE PHILIPS DRAWINGS MP-1 AND MP-2 FOR SPECIFICATIONS AND PIPE LAYOUT; COORDINATE FR ENCLOSURE PENETRATIONS WITH UNIVERSAL SHIELDING CORP. DRAWINGS.

EXISTING DUCTWORK TO BE EVALUATED BY MECHANICAL CONTRACTOR FOR REUSE; PROVIDE FIELD REPORT TO MECHANICAL ENGINEER ON DUCT LOCATIONS AND CONDITIONS; EXISTING AIR HANDLER TO BE REUSED AS INDICATED ON DRAWINGS; NEW DUCTWORK SHOWN FOR CFM AND STATIC REQUIREMENTS; CONTRACTOR TO COORDINATE DUCT LOCATIONS WITH AVAILABLE SPACE IN ATTIC.

4/19/07  
1290M1

WALL TYPE LEGEND	
NON RATED:	_____
1 HR. RATED:	_____
2 HR. RATED:	_____

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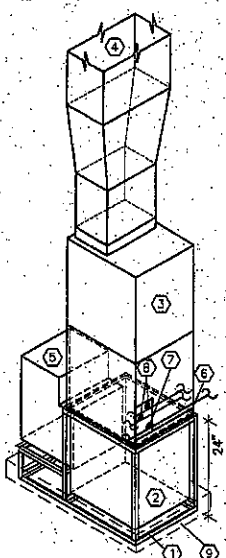
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HVAC FLOOR PLAN									M1

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EQUIPMENT SCHEDULE - SPLIT SYSTEMS			
APPROVED MANUFACTURER	CARRIER		
DESIGN TEMPERATURE	OUTDOOR WINTER 98°F DB/77°F WB	SUMMER 98°F DB/77°F WB	INDOOR WINTER 72°F *ADDITION
TYPE (HEAT PUMP OR A/C)	H/P	A/C	HP
EQUIPMENT NUMBER	CU-1	CU-2	CU-3
INDOOR UNIT	AHU-1	AHU-2	AHU-3
COOLING CAPACITY	ENT. AIR DB/WB TEMP. 80°F/67°F	80°F/67°F	80°F/67°F
	27.4	39.4	36.9
	35.1	62.5	48.6
HEATING CAPACITY (AT 47°F) - MBH	32.3		48.5
AUXILIARY HEAT	ELECTRIC	ELECTRIC	ELECTRIC
CAPACITY	5 KW	7.5 KW	5 KW
FAN DRIVE	CENTRIF.	CENTRIF.	CENTRIF.
HP	DIRECT	DIRECT	DIRECT
EXT. S.P.	0.8"	0.5"	0.8"
TOTAL CFM	1200	1200	1500
OUTSIDE AIR	50	500	60
ELECTRICAL DATA	208V/1#	208V/1#	208V/1#
INDOOR UNIT FAN	208V/1#	208V/1#	208V/1#
HEATER	208V/1#	208V/1#	208V/1#
MODEL NUMBERS	25HN636	RC84	25HN648
INDOOR UNIT	FV4BNF03	VCH84	FV4BNF05
EER OR (SEER) - MIN.	(10)	(13)	(15.5)
GOP AT 47°F (HSPF) - MIN.	3.6		3.6
ACCESSORIES	(1)(2)(3)(4)(5)(6)	(1)(5)(6)(7)	(1)(2)(3)(4)(5)(6)

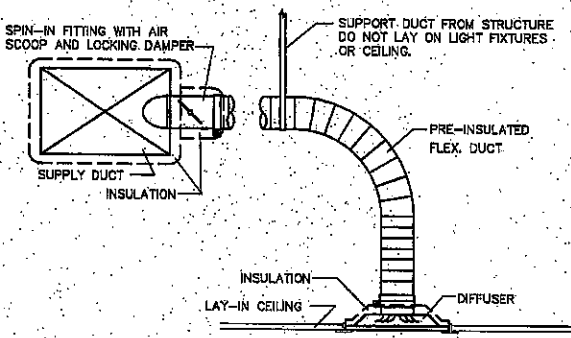
NOTE: SIZE REFRIGERATION LINES PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS BASED ON EQUIPMENT SIZE AND PIPING ROUTE. CONTRACTOR IS RESPONSIBLE FOR PROVIDING OPTIONS AND ACCESSORIES RECOMMENDED BY MANUFACTURER FOR LONG-LINE OR BURIED LINE APPLICATIONS.

NOTE:  
 (1) SINGLE POINT POWER CONNECTION.  
 (2) PROVIDE VARIABLE SPEED AIR HANDLER.  
 (3) PROVIDE 2-SPEED CONDENSING UNIT.  
 (4) ROUTE CONDENSATE TO EXISTING FLOOR DRAIN IN MECHANICAL ROOM.  
 (5) OUTSIDE AIR MOTORIZED DAMPER TO BE OPEN IN OCCUPIED MODE AND CLOSED IN UNOCCUPIED MODE.  
 (6) CONDENSING UNITS SHALL BE PROVIDED WITH CORROSION PROTECTION SYSTEM. CORROSION PROTECTION SYSTEM SHALL BE BRONZE GLOW HERESITE ADSIL-OR-PRE-APPROVED EQUAL, APPLIED ONLY BY APPLICATORS CERTIFIED AND/OR LICENSED BY SYSTEM MANUFACTURER.  
 (7) PROVIDE UNIT WITH HOT GAS REHEAT AND WALL MOUNTED HUMIDISTAT.



- ① 1-1/2"x1-1/2"x1/4" GALV. STEEL FRAME FOR AHU AND RA DUCT RISER SUPPORT. ANCHOR FRAME TO FLOOR WITH 1/2" ANCHOR BOLTS AT FOUR CORNERS. FASTEN AHU ONTO THE FRAME WITH BOLTS TO PREVENT MOVEMENT.
- ② SHEET METAL RA PLENUM WITH EXTERNAL INSULATION. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS
- ③ AHU. SEE SCHEDULE FOR SIZE AND PLAN FOR LOCATION
- ④ CONNECT TO SA DUCT, SEE PLAN FOR SIZE AND LOCATION
- ⑤ CONNECT TO RA DUCT, SEE PLAN FOR SIZE AND LOCATION. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS
- ⑥ FILTER ACCESS PANEL. "DO NOT BLOCK"
- ⑦ CONNECT TO CONDENSATE TRAP. SEE CONDENSATE TRAP DETAIL FOR ADDITIONAL REQUIREMENTS. DO NOT BLOCK FILTER ACCESS PANEL.
- ⑧ REFRIGERANT LINE TO CONDENSER. SEE PLAN FOR CONDENSER LOCATION. DO NOT BLOCK FILTER ACCESS PANEL.
- ⑨ SECONDARY DRAIN PAN UNDER STEEL MOUNTING FRAME. SEE SPECIFICATION FOR ADDITIONAL INFORMATION

DETAIL - AHU FLOOR SUPPORT  
NOT TO SCALE



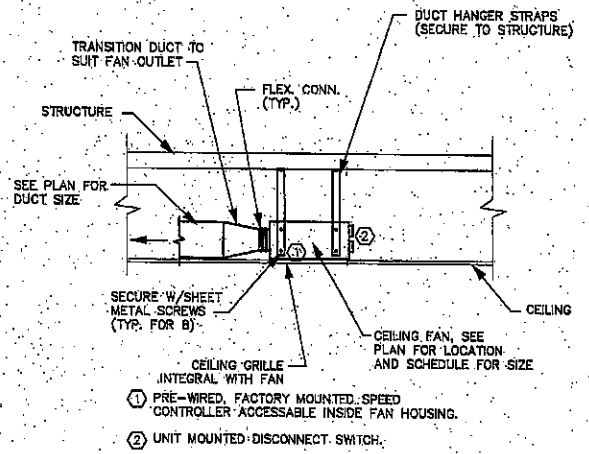
DIFFUSER INSTALLATION DETAIL  
N.T.S.

EQUIPMENT SCHEDULE - FAN			
APPROVED MANUFACTURER	LOREN COOK CO.		
EQUIPMENT NUMBER	EF-1	EF-2	EF-3
MOUNTING TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
DRIVE	DIRECT	DIRECT	DIRECT
RPM	1057	1057	923
CFM	75	75	50
S.P.	0.25"	0.25"	0.25"
HP	.009	.009	.009
VOLTS/PHASE	120V/1#	120V/1#	120V/1#
MODEL NUMBER	GC-140	GC-140	GC-140
ACCESSORIES/REMARK	(1)(2)(3)	(1)(2)(3)	(1)(2)(3)

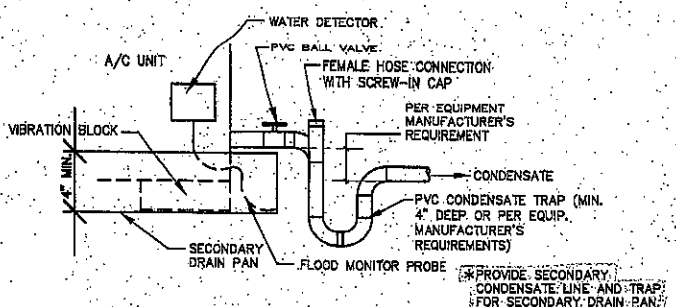
NOTE:  
 (1) SPEED CONTROLLER  
 (2) UNIT MOUNTED DISCONNECT  
 (3) LIGHT SWITCHED CONTROLLED

EQUIPMENT SCHEDULE - DIFFUSERS, GRILLES & REGISTERS			
APPROVED MANUFACTURER	TITUS (EXCEPT AS NOTED *)		
EQUIP. NO.	MOUNTING TYPE	MODEL NUMBER	ACCESSORIES/REMARKS
G-1	LAY-IN CEILING (SUPPLY)	TC (24X24)	(1)
G-2	LAY-IN CEILING (RETURN)	PAR (24X24)	(1)
G-3	LAY-IN CEILING	TF-HC (24X24)	*ACCUATHERM VAV DIFFUSER (1)
G-4	LAY-IN (SUPPLY)	250-NT	AG-15 DAMPER
G-5	SURFACE (SUPPLY)	250	AG-15 DAMPER

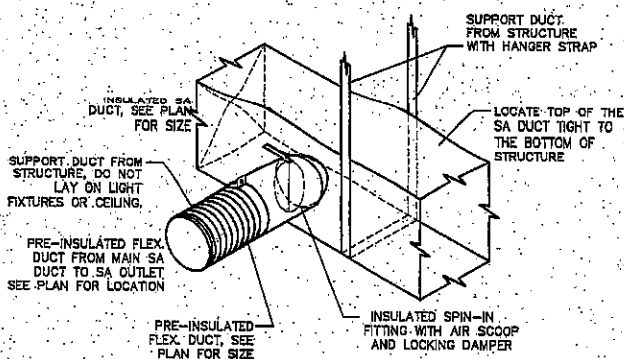
(1) WHERE USED IN GYP BOARD CEILINGS, PROVIDE ANGLE FRAME FOR CUT OPENING AND USE LAY-IN TYPE DIFFUSER.



TYPICAL CEILING FAN MOUNTING DETAIL  
N.T.S.



SECONDARY DRAIN PAN & CONDENSATE DRAIN DET.  
N.T.S.



DETAIL - SUPPLY AIR BRANCH  
N.T.S.

HVAC LEGEND

- DUCT W/ SIZE SHOWN
- SUPPLY DUCT
- RETURN/EXHAUST DUCT
- DUCT ELEMENT CHANGE
- R-RISE/O-DOWN
- ELBOW W/ TURNING VANES
- DUCT TRANSITION
- SUPPLY DIFFUSER/GRILLE
- RETURN DIFFUSER/GRILLE
- FLEX DUCT
- SA SUPPLY AIR
- RA RETURN AIR
- EA EXHAUST AIR
- EF EXHAUST FAN
- DA OUTSIDE AIR
- BD BALANCE DAMPER
- CU CONDENSING UNIT
- AHU AIR HANDLING UNIT
- T THERMOSTAT
- S SMOKE DETECTOR
- TS REMOTE TEMPERATURE SENSOR
- H HUMIDISTAT

WALL TYPE LEGEND

4/19/07  
1290M2

NON RATED: \_\_\_\_\_  
1 HR. RATED: \_\_\_\_\_  
2 HR. RATED: \_\_\_\_\_

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↑

NORTH FLORIDA IMAGING  
2380 SOUTH THIRD STREET  
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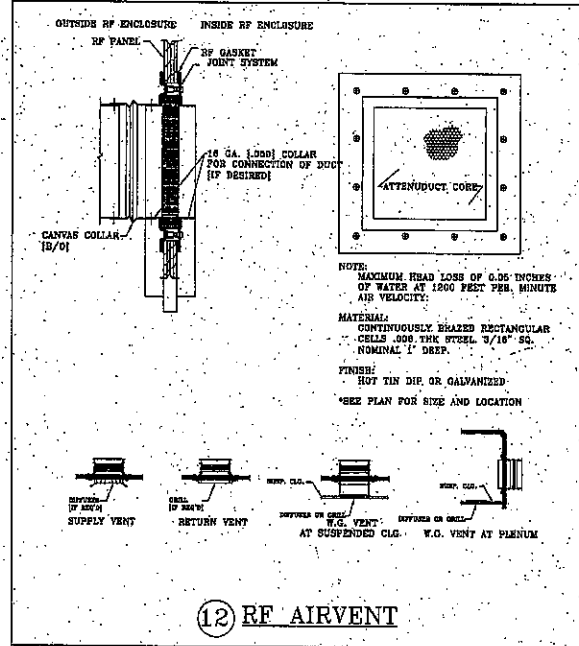
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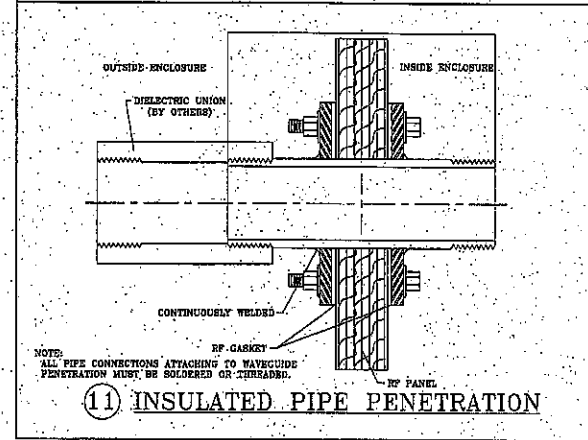
HVAC LEG. DETAILS + SCH. M2

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SEE UNIVERSAL SHIELDING CORP. DRAWINGS



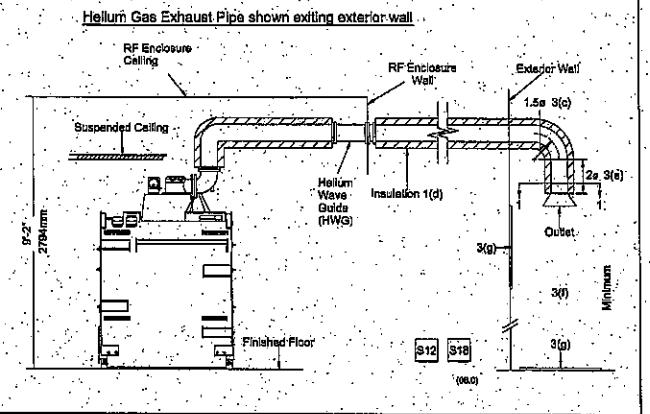
SEE UNIVERSAL SHIELDING CORP. DRAWINGS



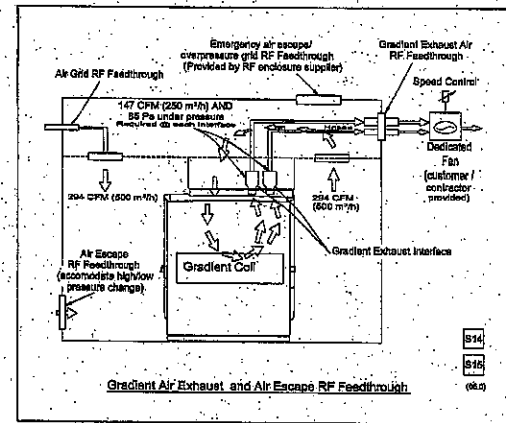
SEE PHILIPS MP-1

Exhaust Pipe Building Block	Diameter = 4" (100 mm)	Diameter = 6" (150 mm)	Diameter = 8" (200 mm)	Diameter = 12" (300 mm)
Pressure Drop (mBar)	5.25	1.00	0.25	0.08
one 18" bend	3.50	0.75	0.25	0.20
one 30" bend	10.0	2.00	0.50	0.30
one 45" bend	16.0	3.00	1.00	0.50
one 60" bend	22.0	4.25	1.50	0.70
one 90" bend	24.0	4.75	1.50	0.80

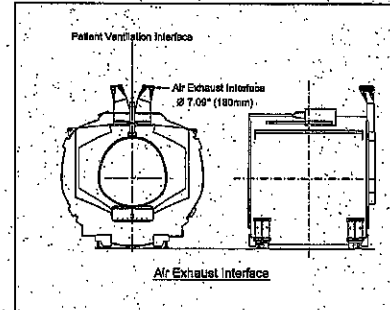
Maximum allowed pressure drop over exhaust pipe outside RF enclosure is 0.725 PSI (50 mBar)



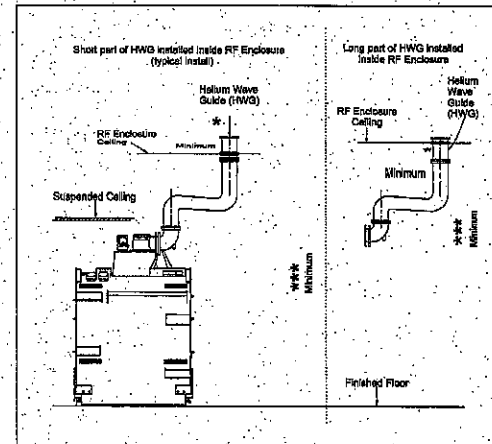
SEE PHILIPS MP-3



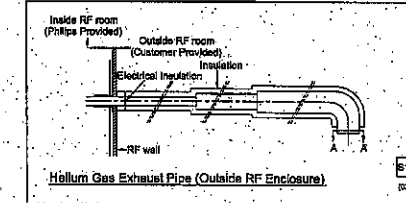
SEE PHILIPS MP-3



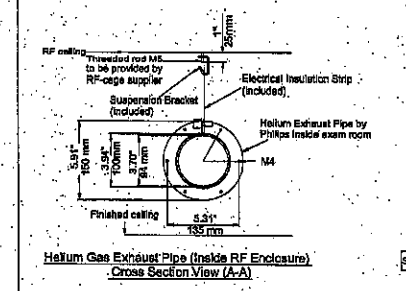
SEE PHILIPS MP-2



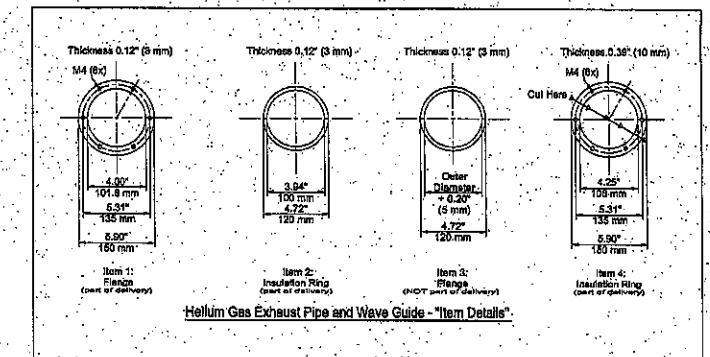
SEE PHILIPS MP-2



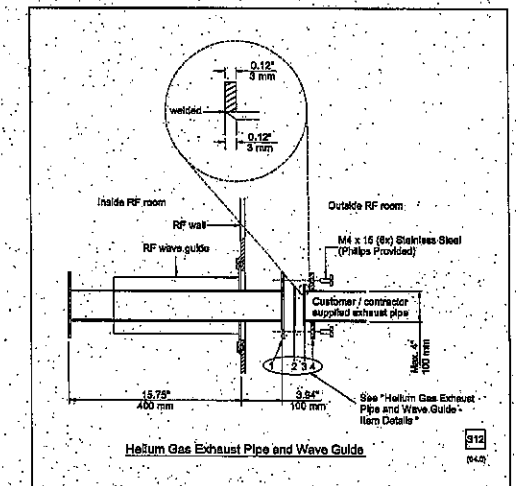
SEE PHILIPS MP-2



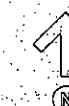
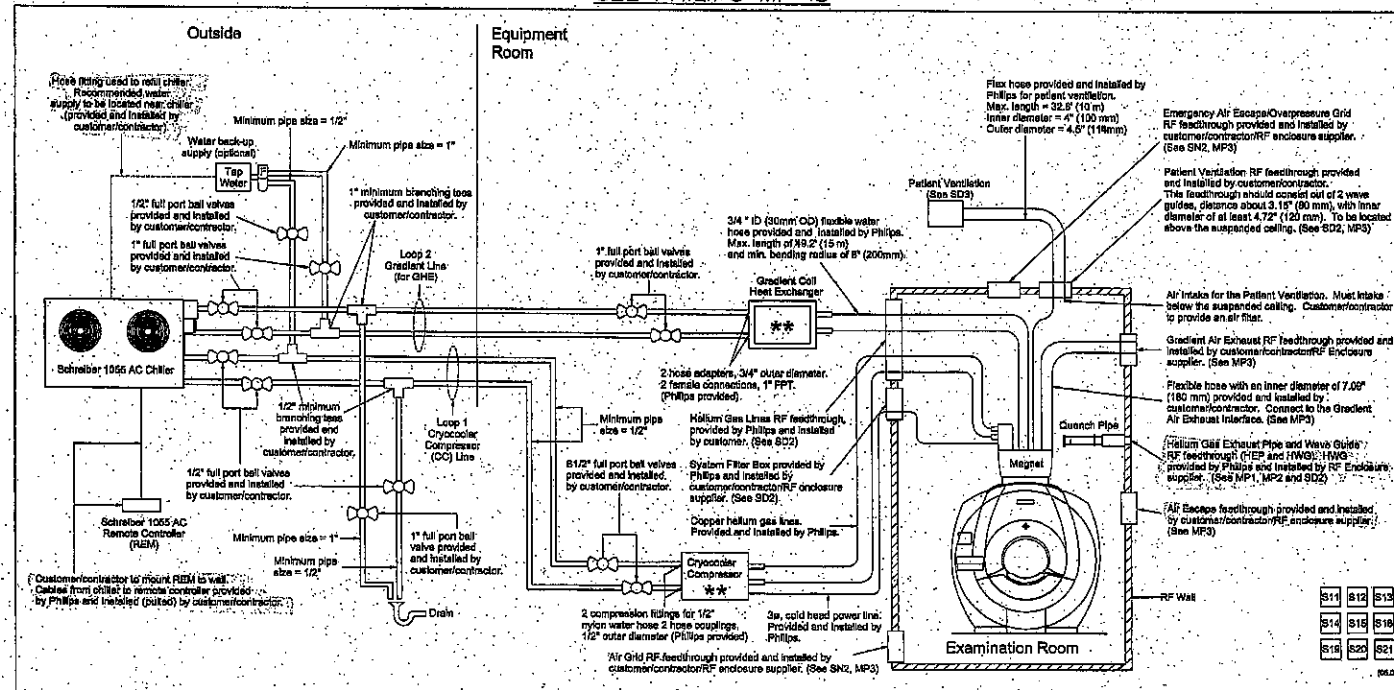
SEE PHILIPS MP-2



SEE PHILIPS MP-2



SEE PHILIPS MP-5



WALL TYPE LEGEND

3/15/07  
1290M3

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DATE: 4/19/07

HVAC LEG. DETAILS + SCH. **M3**