

A

3

C

D

U

V

F

three inches = one foot

one and one half inches = one foot

one inch = one foot

three quarters inch = one foot

one half inch = one foot

three eighths inch = one foot

one quarter inch = one foot

one eighth inch = one foot


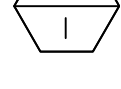
### TERMINAL UNIT SCHEDULE - TYPE IV, V, VI, VII, VIII (NOTE 3)

UNIT SYMBOL (NOTE 2)	CFM		INLET DUCT SIZE IN. (NOTE 1)	MAX. S.P. WITH DAMPER OPEN	ENT. WATER TEMP. °F	GPM	ENT. AIR TEMP. °F	HEAT CAPACITY MIN. MBH LOW & HIGH (NOTE 4)	HWH & HWHR RUNOUT SIZES
	MAX.	MIN.							
A	200	70	6ø	0.30	160	1.0	55	3.63 - 5.90	3/4"
B	200	70	6ø	0.35	160	1.0	55	5.20 - 9.45	3/4"
C	400	201	8ø	0.30	160	1.5	55	6.60 - 8.60	3/4"
D	400	201	8ø	0.50	160	1.5	55	10.80 - 15.80	3/4"
E	800	401	10ø	0.30	160	2.0	55	11.50 - 15.80	3/4"
F	800	401	10ø	0.50	160	2.0	55	19.10 - 25.60	3/4"
G	1200	801	12ø	0.35	160	2.5	55	18.50 - 21.00	3/4"
H	1200	801	12ø	0.50	160	3.0	55	31.50 - 37.00	3/4"
I	1600	1201	14ø	0.35	160	2.5	55	22.40 - 24.50	3/4"
J	1600	1201	14ø	0.50	160	5.0	55	52.10 - 59.50	1"
K	2100	1601	14ø	0.40	160	4.0	55	33.00 - 37.00	1"
L	2100	1601	14ø	0.60	160	4.0	55	53.60 - 59.20	1"
R	800	401	10ø	0.35	160	2.0	55	24.85 - 33.32	3/4"
S	1200	801	12ø	0.60	160	2.0	55	36.75 - 44.30	3/4"

### TERMINAL UNIT SCHEDULE - TYPE I, II, III (NOTES 3 AND 5)

UNIT SYMBOL (NOTE 2)	CFM		INLET DUCT SIZE IN. (NOTE 1)	MAX. S.P. WITH DAMPER OPEN
	MAX.	MIN.		
M	200	70	6ø	0.15
N	400	201	8ø	0.25
O	800	401	10ø	0.30
P	1200	801	12ø	0.30
Q	1600	1201	14ø	0.30

















#### NOTES:

- INLET DUCT SIZE IS RUNOUT SIZE AND NOT NECESSARILY THE BOX INLET SIZE. PROVIDE INSULATED TRANSITION AT BOX IF REQUIRED.
- UNIT SYMBOL INDICATED ON DRAWINGS AS  
 <--- TERMINAL SIZE  
 <--- TERMINAL UNIT CONTROL TYPE
- IN GENERAL, TERMINAL ACCESS SHALL BE FROM TOP OF UNIT. BOTTOM ACCESS WILL BE REQUIRED IN NON-INTERSTITIAL SPACE AND ELSEWHERE INDICATED ON DRAWINGS.
- EXAMPLE OF DETERMINING REQUIRED HEATING CAPACITY: UNIT SYMBOL "C" 300 CFM, 7.6 MBH REQUIRED BY INTERPOLATION.
- TYPE II BOXES ARE CONSTANT VOLUME.

### AIR FILTERS (HEPA TYPE) SCHEDULE

FILTER NO.	CFM	SYSTEM	AREA SERVED	MAX. S.P. DROP		CARTRIDGES		
				INITIAL	FINAL	NO.	SIZE (INCHES)	ARRANGEMENT
1-HEPA 1	285	EF-2	ISOLATION ROOM 1D-109	1.0"	2.0"	1	12 x 12 x 11 1/2	1 WIDE x 1 HIGH
1-HEPA 2	275	EF-3	ISOLATION ROOM 1D-106	1.0"	2.0"	1	12 x 12 x 11 1/2	1 WIDE x 1 HIGH
1-HEPA 3	245	EF-4	ISOLATION ROOM 1D-153	1.0"	2.0"	1	12 x 12 x 11 1/2	1 WIDE x 1 HIGH

### AIR DEVICE SCHEDULE

UNIT DESIGNATION	SYMBOL	TYPE	CFM RANGE	FACE SIZE	NECK SIZE	NOISE CRITERIA	REMARKS
A		SQUARE CEILING DIFFUSER	0-100	12x12	6"ø	<30	PERFORATED FACE SUPPLY
B		SQUARE CEILING DIFFUSER	101-175	12x12	6"ø	<30	PERFORATED FACE SUPPLY
C		SQUARE CEILING DIFFUSER	176-275	12x12	8"ø	<30	PERFORATED FACE SUPPLY
D		SQUARE CEILING DIFFUSER	276-400	12x12	10"ø	<35	PERFORATED FACE SUPPLY
E		RETURN AIR GRILLE	0-110	8x4	-	25	FIXED BAR DEFLECTED
F		RETURN AIR GRILLE	111-140	10x6	-	25	FIXED BAR DEFLECTED
G		RETURN AIR GRILLE	141-200	12x6	-	25	FIXED BAR DEFLECTED
H		RETURN AIR GRILLE	201-250	10x8	-	25	FIXED BAR DEFLECTED
I		RETURN AIR GRILLE	251-300	18x6	-	25	FIXED BAR DEFLECTED
J		RETURN AIR GRILLE	301-370	12x12	-	25	FIXED BAR DEFLECTED
K		RETURN AIR GRILLE	371-550	18x12	-	25	FIXED BAR DEFLECTED
L		RETURN AIR GRILLE	551-650	16x16	-	25	FIXED BAR DEFLECTED
M		EXHAUST AIR GRILLE	0-100	8x4	-	25	FIXED BAR DEFLECTED
N		EXHAUST AIR GRILLE	101-150	8x6	-	25	FIXED BAR DEFLECTED
O		EXHAUST AIR GRILLE	151-210	12x6	-	25	FIXED BAR DEFLECTED
P		LINEAR SLOT DIFFUSER	0-300	4 FT. LENGTH	-	25	4 - 3/4" SLOTS AND 2 AIRFLOW DIRECTIONS

#### GENERAL NOTES:

- ALL AIR DEVICES SHALL BE MADE OF ALUMINUM MATERIALS.
- PROVIDE FRAME/BORDER TO ACCOMMODATE INTENDED CEILING TYPE.
- RUN-OUTS TO ALL AIR OUTLETS TO MATCH NECK SIZE.
- ALL FINISH SELECTIONS SHALL BE BY ARCHITECT.
- ALL SUPPLY AIR DIFFUSER/REGISTER SHALL BE PROVIDED WITH OPPOSED BLADE DAMPER.

SUPPLY AIR DEVICE PERFORMANCE DATA INDICATED BASIS OF DESIGN:  
TITUS MFR'S CO-MODEL NO. PAS SERIES (OR) APPROVED EQUAL

RETURN/EXHUST AIR DEVICE PERFORMANCE DATA INDICATED BASIS OF DESIGN:  
TUTTLE & BAILEY MFR'S CO-MODEL NO. A70 SERIES (OR) APPROVED EQUAL

LINEAR SLOT DIFFUSER PERFORMANCE DATA INDICATED BASIS OF DESIGN:  
TUTTLE & BAILEY MFR'S CO-MODEL 4000 SERIES (OR) APPROVED EQUAL

### AIR HANDLING UNIT SCHEDULE

UNIT NO.	LOCATION	AREA SERVED	CFM		FAN MOTOR			ELECTRICAL			EXTERNAL STATIC PRESSURE (NOTE 1) IN	FAN TOTAL S.P. (NOTE 4) IN	TYPE SYSTEM
			SUPPLY	MIN. O.A.	V/HZ/PH	NOM. HP	SPEED RPM	MIN. CIRCUIT AMPACITY	MAX. FUSE SIZE	FULL LOAD AMPS			
AHU-1	1ST FLOOR INTERSTITIAL SPACE	ENROLLMENT CENTER	4,000	20%	460/60/3	3	1030	6	15 A	4.8	1.5	2.154	VAV

#### NOTES:

- EXTERNAL STATIC PRESSURE REQUIRED AT DUCT CONNECTIONS TO INLET & OUTLET OF AHU. MEASUREMENTS SHALL BE TAKEN WITHIN 3 FT. [1.0 M] OF INLET AND OUTLET AT A POINT OF MAX. ACCURACY.
- TOTAL OF MAX. PRESSURE DROPS OF COMPONENTS WHICH ARE SPECIFIED SEPARATELY, IE., PREFILTERS, AFTER FILTERS, HEATING & COOLING COILS, DIFFUSER PLATE, AND SOUND ATTENUATORS.
- INTERNAL LOSS ALLOWANCE SHALL INCLUDE LOSSES DUE TO ENTRANCE & EXIT OF AHU, VAV BOXES, DIFFUSER SECTION (OTHER THAN DIFFUSER PLATE) INCLUDING LOSSES DUE TO FAILURE TO PROPERLY CONVERT FAN DISCHARGE VELOCITY PRESSURE TO STATIC PRESSURE, FAN INLET CONDITIONS, CASINGS, HUMIDIFIERS, DAMPERS, ETC.
- TOTAL FAN S.P. = EXTERNAL STATIC PRESSURE + SPECIFIED INTERNAL LOSSES + UNSPECIFIED INTERNAL LOSSES. MANUFACTURER SHALL PROVIDE SUBMITTAL SHOWING ACTUAL LOSSES OF ALL EQUIPMENT PROVIDED. REFER TO FAN SCHEDULE FOR ADDITIONAL FAN SELECTION INFORMATION.

### FAN SCHEDULE

FAN NO.	LOCATION	SERVING AREA	CFM	E.S.P. IN	FAN TYPE	ARRANGEMENT, ROTATION & DISCHARGE	WHEEL		MAX. RPM	DRIVE	OPERATING POWER HP	MOTOR		WEIGHT, (LBS)	REMARKS
							TYPE	MIN. DIA. INCH				NOM. HP	PHASE VOLT.		
EF-1	CEILING CAVITY	ENROLLMENT CENTER	100	0.3	CEILING EXHAUST	-	FORWARD CURVED	-	950	DIRECT	-	80 WATTS	1/120	10	①
RF-1	INTERSTITIAL SPACE	ENROLLMENT CENTER	4000	0.5	IN-LINE	-	BACKWARD INCLINED ALUMINUM WHEEL	-	1725	DIRECT	1.19	2	3/460	160	①
EF-2	7TH FLOOR PENTHOUSE	ISOLATION AREAS	285	3.25	INDUSTRIAL	UPBLAST	INDUSTRIAL AIR HANDLING	8.75	2800	BELT	-	0.5	3/460	-	① ②
EF-3	7TH FLOOR PENTHOUSE	ISOLATION AREAS	275	3.25	INDUSTRIAL	UPBLAST	INDUSTRIAL AIR HANDLING	8.75	2800	BELT	-	0.5	3/460	-	① ②
EF-4	7TH FLOOR PENTHOUSE	ISOLATION AREAS	245	3.25	INDUSTRIAL	UPBLAST	INDUSTRIAL AIR HANDLING	8.75	2800	BELT	-	0.5	3/460	-	① ②

#### NOTE:

- SCHEDULED MAX. BHP IS FOR SCHEDULED SP PLUS TEN PERCENT.
- PROVIDE HEPA FILTER AND DUCT ASSEMBLY.

THE EXHAUST FAN PERFORMANCE DATA INDICATED BASIS OF DESIGN:  
GREENHECK MFR'S CO-MODEL NO GB SERIES (OR) APPROVED EQUAL

### VAV TERMINAL UNIT CONTROL TYPE

UNIT SYMBOL	DESCRIPTION
I	FULL SHUTOFF WITHOUT REHEAT
II	CONSTANT VOLUME
III	MINIMUM AIRFLOW 25%
IV	MINIMUM AIRFLOW AND REHEAT COIL
V	-
VI	MINIMUM AIR FOR COOLING AND INCREASING AIRFLOW FOR HEATING
VII	CONSTANT VOLUME TERMINAL REHEAT
VIII	CONSTANT VOLUME TERMINAL REHEAT WITH HUMIDIFIER

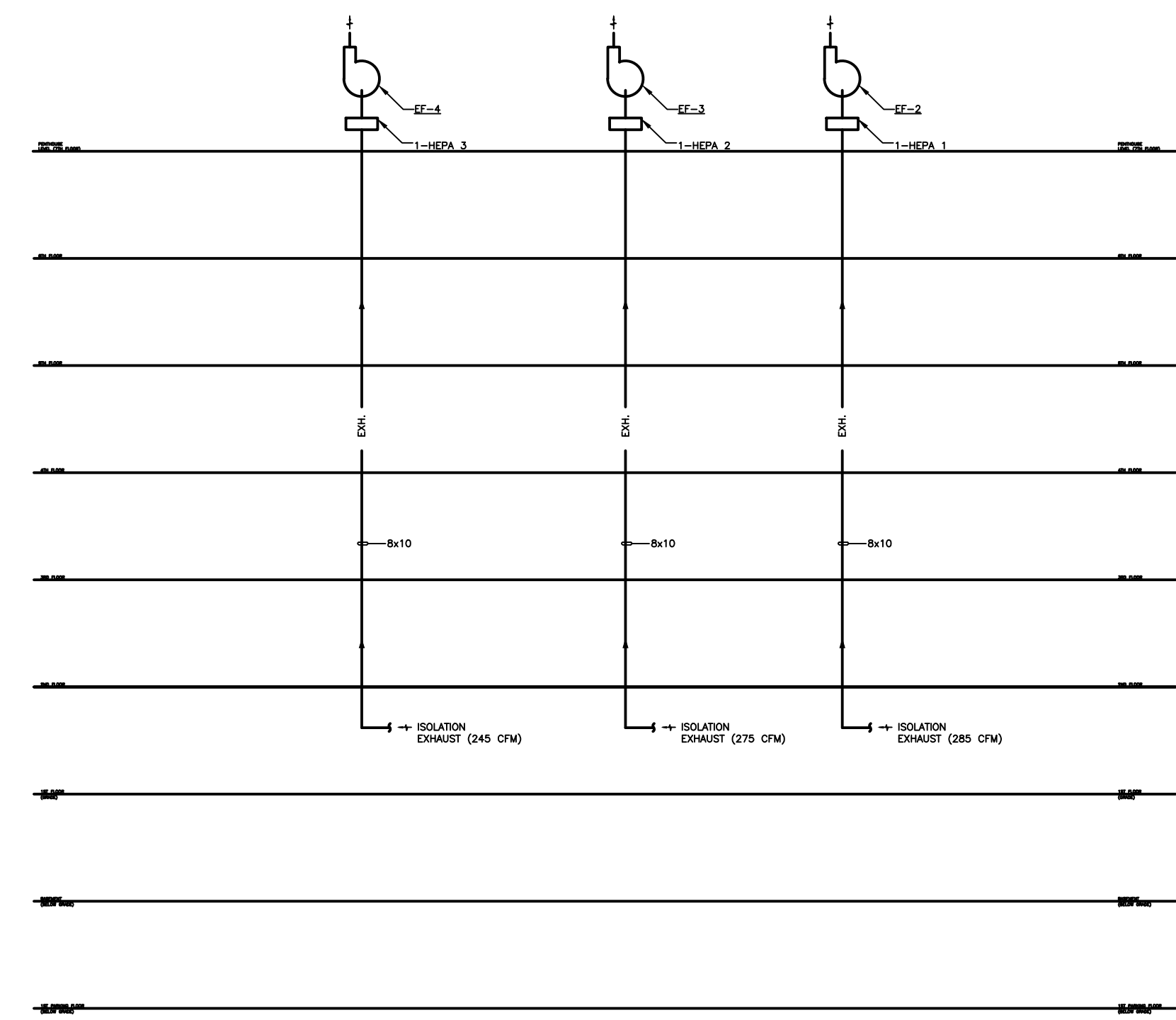
### AIR FLOW CONTROL VALVE (TERMINAL UNIT)

UNIT NUMBER	SYSTEM	CFM		S.P. AT MAX. CFM	SPACE NC	SERVICE
		MAX.	MIN.			
1-AFCV1	EF-2	315	255	0.30	35	ISOLATION ROOM 1D-109
1-AFCV2	EF-3	305	245	0.30	35	ISOLATION ROOM 1D-106
1-AFCV3	EF-4	275	215	0.30	35	ISOLATION ROOM 1D-153

#### NOTES:

- FOR ISOLATION EXHAUST CFM SEE FLOOR PLAN.

### EXHAUST AIR FLOW DIAGRAM



FOR BIDDING PURPOSES ONLY  
FINAL SUBMISSION  
FULLY SPRINKLERED

Revisions	50% CONSTRUCTION DOCUMENT	01/18/12
Date		

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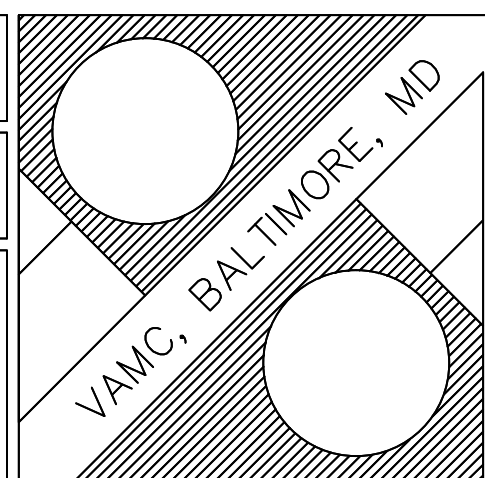
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Approved: Project Director	Date 8/17/2012	Drawing Number MH-601
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