

AIR HANDLING UNIT SCHEDULE (INSIDE)

TAG	LOCATION	SA (CFM)	MIN OA (CFM)	MAX EA (CFM) (3)	SUPPLY FAN									EXHAUST FAN									COIL DATA								
					FAN TYPE	CFM	T.S.P. (IN. WC)	E.S.P. (IN. WC)	FAN DIA (INCHES)	RPM	HP	BHP	VFD	FAN TYPE	CFM	T.S.P. (IN. WC)	E.S.P. (IN. WC)	FAN DIA (INCHES)	RPM	HP	BHP	VFD	DX COOLING COIL (R-410A)								
																							TOTAL MBH	SENS MBH	FACE AREA SQ. FT.	ROWS	EAT °F DB/WB	LAT °F DB/WB	APD IN-W.C.	SUCTION TEMP	LIQUID TEMP
AHU-1	MEZZANINE	6000	2100	6000	AF	6000	4.4	2	20	2048	7.5	6.3	YES	AF	6000	1.2	1	15	2019	5	4.5	YES	183.3	149.3	13.7	6	75.7/63	53/52.4	0.56	47	115

NOTES: 1. THREE POWER CIRCUITS ARE TO BE PROVIDED: ONE FOR BOTH FANS, ONE FOR ELECTRIC HEATER, AND ONE FOR LIGHTS, SWITCH, AND RECEPTACLE
 2. VARIABLE FREQUENCY DRIVES TO BE FACTORY MOUNTED AND WIRED BY EQUIPMENT MANUFACTURER.
 3. MAXIMUM EXHAUST IS BASED ON UNIT OPERATING IN ECONOMIZER MODE

AIR HANDLING UNIT SCHEDULE (CONT.)

COIL DATA (CONT.)											PRE-FILTERS (SA & RA)	FINAL-FILTERS (SA)	ELECTRICAL REQUIREMENTS				MAXIMUM SOUND POWER (Dd RE:10-12 WATTS) OCTAVE BAND AND CENTER FREQUENCY (HZ)								MODEL NO.	NOTES:	
ELECTRIC HEATING COIL													ELECTRICAL REQUIREMENTS				SOUND SOURCE	1	2	3	4	5	6	7			8
MBH	KW	FACE AREA SQ. FT.	EAT °F	LAT °F	APD IN-W.C.	VOLTAGE/PHASE	FLA (AMPS)	MCA	MOP	FUSE SIZE	V/PH	FLA	MCA	MOP	63	125		250	500	1000	2000	4000	8000				
201.8	59	11.7	44	75	0.13	460/3	73.8	74.3	92.7	100	2" - MERV 8	12" - MERV 15	460/3	17.4	25.5	40	FRONT DISCHARGE	88	74	74	77	71	74	72	68	TRANE PERFORMANCE CLIMATE CHANGER SIZE 14	1, 2, 3
																	DUCTED INLET	82	83	75	74	66	65	59	52		
																	CASING	78	75	72	71	73	53	35	28		

AIR COOLED CONDENSING UNIT SCHEDULE

TAG	LOCATION	SERVES	NOM. TONS	MBH	SST °F	AMBIENT TEMP	ELECTRICAL DATA							WT (LB)	EER	TYPICAL UNIT MFG & MODEL NO.	NOTES:	
							FAN DATA			COMPRESSOR								MCA
							NO.	FLA	VOLTS/Ø	HP	QTY	RLA	VOLTS/Ø					
ACCU-1	GRADE	AHU-1	15	186	47	95	2	2.5	460/3	7.5	2	2@12.2	460/3	32.5	850	11	TRANE TTA180	1,2

NOTES: 1. PROVIDE FACTORY MOUNTED NON-FUSED DISCONNECT SWITCH.
 2. PROVIDE HOT GAS BYPASS FOR EACH REFRIGERANT CIRCUIT

REGISTER, DIFFUSER & GRILL SCHEDULE

TAG	MAX CFM	NECK SIZE	TYPE	ΔP	MAX NC	TYPICAL UNIT MFG & MODEL NO.	NOTES
S-1	80	6"ø	SUPPLY	0.04	<20	PRICE SPD 12X12	1
E/R-1	80	6"ø	RETURN	0.04	<20	PRICE PDDR	1
E/R-2	240	10x10	SIDEWALL	0.06	<20	PRICE 535	2,3
E/R-3	400	14x14	SIDEWALL	0.04	<20	PRICE 535	2,3
E/R-4	1440	18x30	SIDEWALL	0.06	25	PRICE 535	2,3

NOTES: 1. PROVIDE BORDER FOR LAY-IN CEILING INSTALLATION, 24x24 CEILING GRID
 2. SIDEWALL MOUNTED ON FRP CLEANROOM PANELS.
 3. PROVIDE INTEGRAL OPPOSED BLADE DAMPER.

FAN POWERED HEPA FILTER MODULES

TAG	SERVICE	NOM. SIZE WxL (IN.)	CFM @ 90 FPM	EXT. SP (IN. W.G.)	TOTAL SP (IN. W.G.)	FILTER AREA/SQ. FT			ELECTRICAL DATA				WEIGHT LBS.	TYPICAL UNIT MFG & MODEL NO.	NOTES:	
						99.99 HEPA			30% PRE FILTER	VOLTS / PH	FAN MOTOR					
						NO	WxL	SQ. FT			NO	MAX KW				MAX AMP
FFU-1	CLEAN ROOM	24x24	315	0.3	0.75	AS SHOWN ON PLANS	23-5/8 x 23-5/8	3.5	N/A	277 / 1	1	0.33	1.20	41	ENVIRCO MAC 10 ORIGINAL	1, 2, 3
FFU-2	CLEAN ROOM	48x24	650	0.3	0.75	AS SHOWN ON PLANS	23-5/8 x 47-5/8	7.2	N/A	277 / 1	1	0.33	1.20	66	ENVIRCO MAC 10 ORIGINAL	1, 2, 3

NOTES: 1. MAXIMUM SOUND LEVEL SHALL BE 51 dBA AT 90 FPM FACE VELOCITY
 2. PROVIDE SOLID STATE SPEED CONTROL.
 3. PROVIDE FACTORY-MOUNTED DISCONNECT.

FAN SCHEDULE (ALTERNATE #1)

TAG	LOCATION	SERVICE	TYPE	ROOF OPENING	CFM	SP W.G.	DIAMETER IN.	RPM	ELECTRICAL DATA				TYPICAL UNIT MFG & MODEL NO.	NOTES:
									BHP / HP	VOLTS	PH	VFD (DIV. 16)		
EF-1	ROOF	ALCOHOL EXHAUST	UTILITY	12" ROUND	500	0.5	10"	2349	0.27/33	120	1	NO	LOREN COOK 70CPA	1,2,3

NOTES: 1. FAN TO BE SPARK PROOF CONSTRUCTION
 2. PROVIDE BACKDRAFT DAMPER
 3. PROVIDE FACTORY DISCONNECT SWITCH

LOUVER SCHEDULE

TAG	SERVICE	FREE AREA (FT^2)	CFM	SP (IN WG)	SIZE W&H (IN)	TYPICAL UNIT MFG. & MODEL NO.	NOTES
L-1	AHU-1 (INTAKE)	11.6	6000	0.04	78X48	RUSKIN EMES20DD	

NOTES:

Hobbes Construction Corp
 100 John L. Diabari Sq.
 No. Andover, MA 02783
 908-885-1100 (P) 908-885-3101 (F)

HC
 HOBBS CONSTRUCTION CORP

ARCHITECTURE
 ENGINEERING
 PLANNING
 INTERIOR DESIGN
 COMMISSIONING

SMRTI
 144 Fern Street
 P.O. Box 618
 Portland, Maine 04104

tel. (207) 772-3846
 fax. (207) 772-1070
 www.smrti.com

STATE OF MAINE
 RONNIE M. WILLEY
 NO. 11029
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1/1/14

IMMUCELL CORPORATION
 CLEANROOM RENOVATION
 PORTLAND, ME

ISSUED FOR PERMIT
 1-9-14

CURRENT ISSUE STATUS:

REV	DATE	DESCRIPTION
0	1-9-14	ISSUED FOR PERMIT

GRAPHIC SCALE:
 0" 1"

SCALE: NONE
 PROJECT MANAGER: RAB
 JC/DRAWN BY: KPB
 A/E OF RECORD: RMW
 CAD FILE: 13157-M-601
 PROJECT NO: 13157
 DATE: 1-9-14

SHEET TITLE:
 HVAC SCHEDULES

SHEET No.
M-601
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