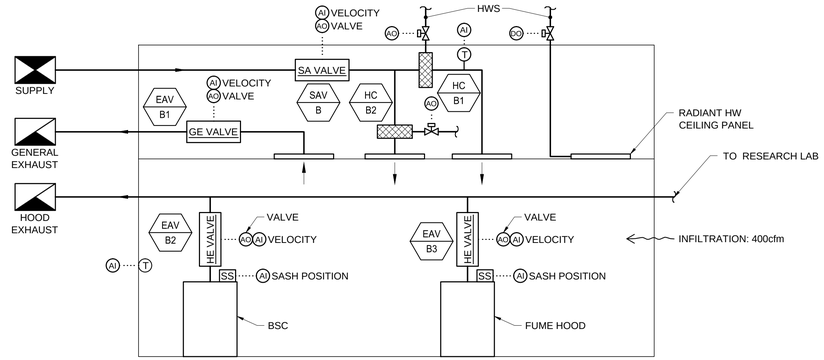
LABORATORY EQUIPMENT SCHEDULE

TAG	EQUIPMENT	STATUS	FURNISHED BY	MANUFACTURER	MODEL	EMER. POWER	MIN-MAX CFM	S.P. (IN. W.C.)	DUCT CONN	BRANCH SIZES							NOTES
										CW W/STOP	HW W/STOP	TW	RO	INDIRECT WASTE	CHEM VENT	CHEM WASTE	
2	"P-2" HAND WASH SINK	NEW	DIV 22	SEE SPEC 224000	SEE SPEC 224000					1/2"	1/2"				1-1/2"	1-1/2"	
11C	-20C UNDER COUNTER FREEZER	NEW	OWNER	VWR SCIENTIFIC	97014-902	Y											33-5/8"H X 21-2/8"W X DD-3/4"D
13	"FH-B" FUME HOOD	NEW	DIV 11	SEE SPEC 115313	SEE SPEC 115313	Y	120 - 600	0.07"	10"								NOTE 1
15	"P-15" COUNTER SINK, S.S.	NEW	DIV 12	SEE SPEC 123553	SEE SPEC 123553					1/2"	1/2"		1/2"		1-1/2"	2"	
16	ULTRAPURE WATER SYSTEM	NEW	OWNER	MILLIPORE	DIRECT-Q-3, 30L RESERVOIR								1/2"	1/2"			NOTE 4
17	-70C FREEZER	NEW	OWNER	THERMO SCIENTIFIC	FORMA 88400	Y											
18	REFRIGERATOR	NEW	OWNER	?	?	Y											STANDARD RESIDENTIAL TYPE
19	SINK - CULTURE, EPOXY	NEW	DIV 12	SEE SPEC 123553	SEE SPEC 123553					1/2"	1/2"				1-1/2"	1-1/2"	
23	"BSC-B" BIOSAFETY CABINET	EXIST	OWNER	BAKER	SG403ATS		360 - 360	0.10"	10"								CLASS II, TYPE A/B3 B.S.C.
26	"LF-B" LAMINAR FLOW CLEAN BENCH	EXIST	OWNER	BAKER	EDGE-GARD EG-5252												
27	INCUBATOR	EXIST	OWNER	PERCIVAL	I-36LLVL	Y											
28	INCUBATOR	EXIST	OWNER	PERCIVAL	I-36LLVL	Y											
30	AUTOCLAVE	EXIST	OWNER	MARKET FORGE	STM-EL					1/2"				1"			NOTE 3
	COMP AIR TURRET	NEW	DIV 12	SEE SPEC 123553	SEE SPEC 123553												1/2" CA BRANCH PIPE
	VAC TURRET	NEW	DIV 12	SEE SPEC 123553	SEE SPEC 123553												1/2" VAC BRANCH PIPE
	NAT GAS TURRET	NEW	DIV 12	SEE SPEC 123553	SEE SPEC 123553												1/2" NG BRANCH PIPE
ES-1	EMER SHOWER - EYEWASH	NEW	DIV 22	SEE SPEC 224000	SEE SPEC 224000							1-1/4"					1" TW FROM UNIT TO HEAD
FD-1	FLOOR DRAIN - AT ES-1	EXIST	EXIST	EXIST	EXIST					1/2"					1-1/2"		NOTE 2
FD-2	FLOOR DRAIN W/FUNNEL -	EXIST	EXIST	EXIST	EXIST										1-1/2"		NOTE 2

NOTES:
1. NO SERVICES (WATER, GAS, ETC), ELEC ONLY; TWO (2) INTEGRAL 120V GFCI OUTLETS. HOOD SHALL HAVE SINGLE POINT JUNCTION BOX ELECTRICAL CONN. PROVIDE ACID BASE CABINET
2. PROVIDED IN RECENT PROJECT FOR SPACE FITUP BELOW. CONTRACTOR SHALL ADJUST FLOOR DRAIN ELEVATION FOR FLUSH FINISH WITH NEW FLOORING; PROVIDE VENT PIPING.
3. PROVIDE AUTOCLAVE HOOKUP: 1" INDIRECT WASTE, 1/2" CW HOOKUP.
4. PROVIDE ULTRAPURE WATER SYSTEM HOOKUP: 1/2" RO, DRAIN.



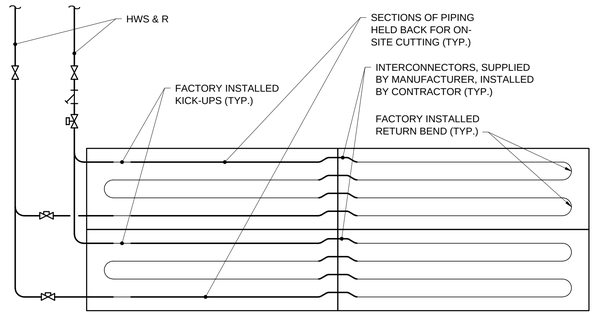
F7 | DETAIL ~ BIOLOGY LAB C393 CONTROL DIAGRAM

NOT TO SCALE

AIR TERMINAL UNIT SCHEDULE - STANDARD AND LAB VALVES

AIR VALVES - SECTION 230995										DUCT HW COILS - SECTION 238216																
TAG	SERVES	MFR	MODEL	MATERIAL	VALVE (QTY), SIZE	CFM MAX	CFM MIN	NOMINAL OUTLET SIZE	MAX RAD. & DISCH. NC	MAX APD AT MAX. COOLING	DUCT HW COIL TAG	MANUFACTURER	SERVES	CFM	COIL WIDTH (IN.)	COIL HEIGHT (IN.)	FACE VEL (FPM)	MBH	GPM	FLUID	MAX WPD	EWT	LWT	EAT	LAT	ROWS	RUNOUT SIZE
SAV-B	SUPPLY	TRIATEK	VV-212-A-I-FA-PC	ALUMINUM	(2) 12"	2,150	1,120	26.5" x 13.5"	30	0.30"	HC-B1	MCQUAY	BIO	1,600	28	15	549	60.5	4.0	30% PG	3'	180	150	55	90	2	1"
											HC-B2	MCQUAY	CULTURE	550	12	12	550	17.8	1.2	30% PG	3'	180	150	55	85	2	3/4"
EAV-B1	GEN EXH	TRIATEK	VV-212-A-I-FA-PC	ALUMINUM	(2) 12"	1,970	460	26.5" x 13.5"	30	0.30"	------	------	-----	------	------	------	------	------	------	------	------	------	------	------	------	------
EAV-B2	BIOSAFETY CABINET	TRIATEK	VV-08-A-I-FA-PC	ALUMINUM	(1) 8"	360	360	8"	30	0.30"	------	------	-----	------	------	------	------	------	------	------	------	------	------	------	------	------
EAV-B3	FUME HOOD	TRIATEK	VV-010-H-I-FA-PC	HERESITE	(1) 10"	600	120	10"	30	0.30"	------	------	-----	------	------	------	------	------	------	------	------	------	------	------	------	------
	LAB INFILTRATION OFFSET = NEGATIVE 300 CFM																									

NOTE: PROVIDE ACOUSTICAL INSULATION (AIR VALVE OPTION) IF REQUIRED TO KEEP NC LEVELS AT 30 OR BELOW.



D8 | DETAIL ~ HW RADIANT CEILING PANEL

NOT TO SCALE

REGISTERS - GRILLES - DIFFUSERS (RGD) SCHEDULE

TAG	PRICE MODEL	TYPE	NECK SIZE	FACE SIZE	CFM RANGE	MAX TOTAL P.D. (IN.W.C.)	MAX NC LEVEL	BORDER TYPE	BLOW	NOTES
S-1	FRFDA	FLUSH FACE RADIAL FLOW ADJUSTABLE DIFFUSER	10" DIA	24"x48"	400 - 550	0.13"	30	LAY-IN	2-WAY, FULL RADIAL, ADJ.	
S-2	FRFDA	FLUSH FACE RADIAL FLOW ADJUSTABLE DIFFUSER	12" DIA	24"x48"	551 - 600	0.09"	28	LAY-IN	2-WAY, FULL RADIAL, ADJ.	
R-1	530	STEEL RETURN GRILLE, 3/4" SPACING, 35 DEG VANES	22"x10"	22"x10"	140-550	0.03"	27	LAY-IN	----------	
R-2	510Z	STEEL RETURN GRILLE, 3/4" SPACING, 0 DEG VANES	22"x22"	22"x22"	851-1900	0.05"	22	LAY-IN		

ROOM PRESSURE BALANCE

Inputs

Exhaust Volume Requirements		
Fume Hood Exhaust Minimum:	120	CFM
Fume Hood Exhaust Maximum:	600	CFM
Additional Exhaust Minimum:	360	CFM -BSC
Additional Exhaust Maximum:	360	CFM -BSC

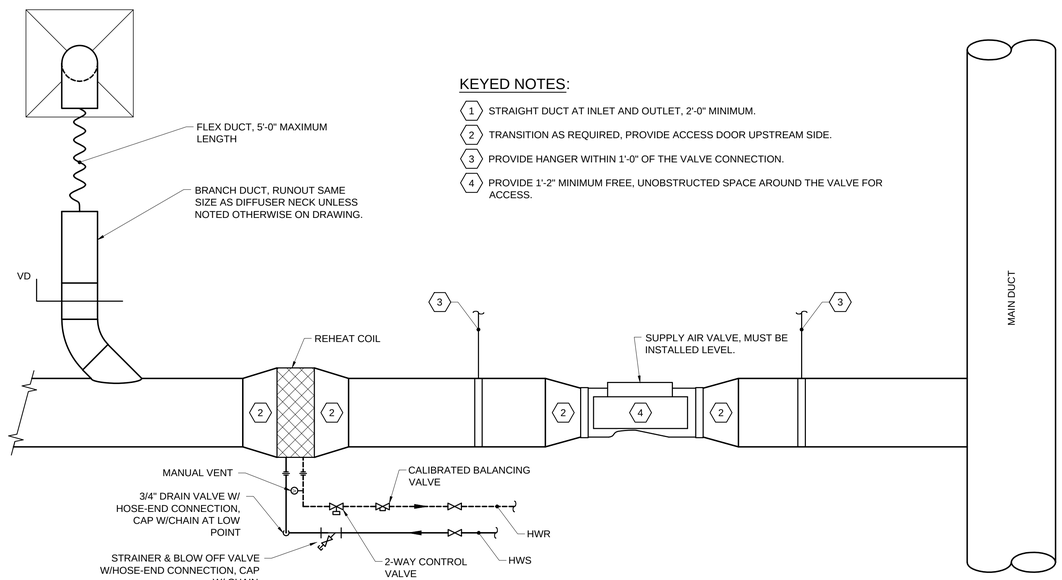
Design Requirements		room = 934 SF
Room Volume:	8,403	CUBIC FEET
Air Changes Per Hour (ACH):	8	
Minimum Supply Cooling Volume:	0	CFM
Maximum Supply Cooling Volume:	2,150	CFM

Outputs

ACH Rate=	1,120	CFM
Minimum Total Supply =	1,120	CFM
Maximum Total Supply =	2,150	CFM
Minimum Total Exhaust =	1,420	CFM
Maximum Total Exhaust =	2,450	CFM
General Exh at Min. Supply and Fume Hd Exh. =	1,300	CFM
General Exh at Max. Supply and Fume Hd Exh. =	1,850	CFM
Minimum General Exhaust =	460	CFM
Maximum General Exhaust =	1,970	CFM
Design Infiltration (Offset):	300	CFM

RADIANT PANEL SCHEDULE (HOT WATER)

TAG	TYPE	PANELS IN SERIES	TUBING SIZE	No. OF PASSES	BTUH	MEAN WATER TEMP	FLUID	GPM	MAX PRESS. DROP	PANEL WIDTH	OVERALL PANEL LENGTH	PIPE RUNOUT SIZE	INSULATION
RP-1	48X24 MODULAR RADIANT	4	5/8"	6	4,960	155	30% PG	1.3	2 FT.	24"	192"	3/4"	1"



A6 | DETAIL ~ VAV BOX SCHEMATIC

NOT TO SCALE

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REVISIONS

NUMBER	DATE	BY	DESCRIPTION

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MECHANICAL DETAILS
SCHEDULES AND CONTROL SCHEMATIC

UNIVERSITY OF SOUTHERN MAINE BIO-SCIENCE
~ 3rd FLOOR LAB FIT-UP
PORTLAND, MAINE

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MH-500

A1 | MECHANICAL SCHEDULES

NONE

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