

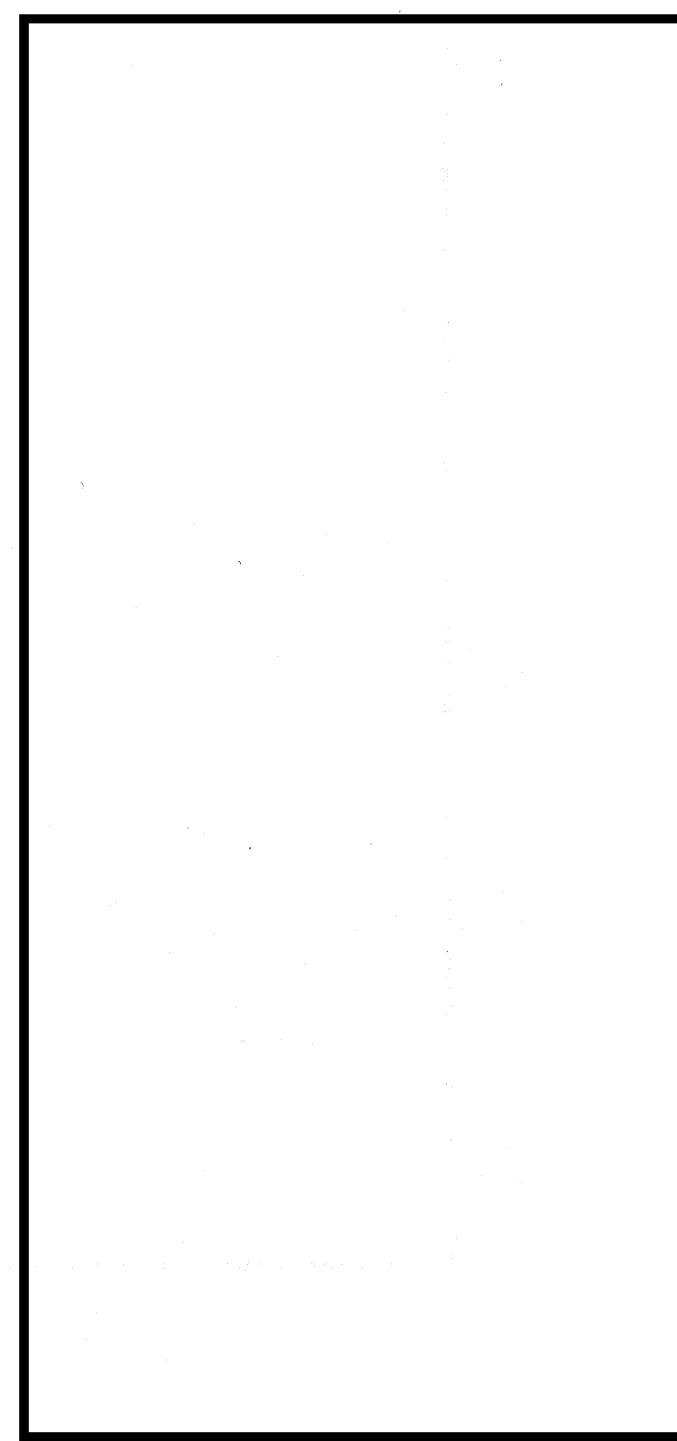
Project Title

**UNIVERSITY OF MAINE SYSTEM DATA CENTER UPGRADES**

Portland, Maine

HA Project No. 09533

Key Plan



Issue Dates	Description	
05-09-2011	ISSUED FOR BID	
04-05-2011	ISSUED FOR 100% REVIEW	
01-24-2011	ISSUED FOR 75% REVIEW	
Mark	Date	Description

Drawing Status

Drawing Title

**LEGEND AND NOTES**

PA / PE: Drawn By:

Drawing Number

**M00.1**

**LEGEND**

AC	AIR CONDITIONING UNIT	HC	HEATING COIL		ACV 2 - WAY
ACC	AIR COOLED CONDENSER	HEDV	HOSE END DRAIN VALVE		ACV 3 - WAY
ACV	AUTOMATIC CONTROL VALVE	HP	HORSEPOWER		BACKDRAFT DAMPER
AD	ACCESS DOOR	HZ	HERTZ (CYCLES PER SECOND)		CAP - PIPE
AFF	ABOVE FINISHED FLOOR	IN.	INCH, INCHES		CHECK VALVE
AFG	ABOVE FINISHED GRADE	LD	LINEAR DIFFUSER		COMBINATION BALANCING, FLOW MEASURING & TIGHT SHUT-OFF VALVE
AHU	AIR HANDLING UNIT	LG	LINEAR GRILLE		DRAIN VALVE WITH 3/4" HOSE CONNECTION, BRASS CAP AND DRAIN
ALD	ACOUSTICALLY LINED DUCT	MAX	MAXIMUM		DUCT SECTION - SUPPLY
ATC	AUTOMATIC TEMPERATURE CONTROL	MBH	1000 BRITISH THERMAL UNITS PER HOUR		DUCT SECTION - RETURN/EXHAUST
BD	BAROMETRIC DAMPER	MD	MOTORIZED DAMPER		DUCT TURNING VANES
BDD	BACKDRAFT DAMPER	MIN	MINIMUM		FIRE DAMPER (1 1/2 HOUR RATED)
BHP	BRAKE HORSEPOWER	MS	MAGNETIC STARTER		ISOLATION VALVE
CBD	COUNTERBALANCED BACKDRAFT DAMPER	N.I.C.	NOT IN CONTRACT		LOUVER
CC	COOLING COIL	OA	OUTSIDE AIR		MANUAL AIR VENT
CD	CEILING DIFFUSER	OED	OPEN ENDED DUCT		MOTORIZED DAMPER
CDR	CONDENSATE DRAIN (FROM COOLING COIL)	PD	PRESSURE DROP		PITCH DOWN
CDRP	CONDENSATE DRAIN PUMP (FOR COOLING COIL)	PH	PREHEAT COIL		PLUG VALVE
CG	CEILING GRILLE	PRD	PRESSURE RELIEF DAMPER		PUMP WITH FLANGES
CFM	CUBIC FEET PER MINUTE	REF	RETURN/EXHAUST FAN		PRESSURE GAUGE (4-INCH DIAL)
CO	CLEANOUT	RET	RETURN		PRESSURE REDUCING VALVE
CPD	CONDENSATE PUMP DISCHARGE	RF	RETURN AIR FAN		PRESSURE RELIEF VALVE
CRAC	COMPUTER ROOM AIR CONDITIONER	RH	REHEAT COIL		PRESSURE RELIEF DAMPER
CTE	CONNECT TO EXISTING	RPM	REVOLUTIONS PER MINUTE		REDUCER - CONCENTRIC
CUH	CABINET UNIT HEATER	RR	RETURN REGISTER		REDUCER - ECCENTRIC
CW	COLD WATER	S	SWITCH		RETURN AIR
D	CONDENSATE DRAIN	SD	SMOKE DAMPER		RETURN AIR DUCT
DDR	DOUBLE DEFLECTION REGISTER	SF	SUPPLY FAN		RETURN PIPING (HEATING WATER, CHILLED WATER HEAT RECOVERY, CONDENSATE RETURN)
DHW	DOMESTIC HOT WATER	SG	SUPPLY GRILLE		SECTION I.D. (SECTION A SHOWN ON DWG. MH101)
EF	EXHAUST FAN	SP	STATIC PRESSURE		STRAINER
EG	EXHAUST GRILLE	SS	STAINLESS STEEL		SUPPLY AIR
ER	EXHAUST REGISTER	SUP	SUPPLY		SUPPLY AIR DUCT
EXG	EXISTING	SV	SOLENOID VALVE		SUPPLY PIPING (HEATING WATER, CHILLED WATER HEAT RECOVERY, STEAM)
EXH	EXHAUST	TD	TRANSFER DUCT		TAKE - OFF FROM BOTTOM OF PIPE
FC	FLEXIBLE CONNECTOR	TF	TRANSFER FAN		TAKE - OFF FROM TOP OF PIPE
FCU	FAN COIL UNIT	TG	TRANSFER GRILLE		TEMPERATURE SENSOR
FD	FIRE DAMPER	UH	UNIT HEATER		THERMOMETER (4-INCH DIAL TYPE)
FOR	FUEL OIL RETURN	VAV	VARIABLE AIR VOLUME BOX		THERMOMETER WELL
FOS	FUEL OIL SUPPLY	VD	VOLUME DAMPER		DUCT MOUNTED SMOKE DETECTOR (BY DIVISION 16)
FPT	FREEZE PROTECTION THERMOSTAT	VF	VENTILATION FAN		THERMOSTAT
FR	FLOOR REGISTER	WC	WATER COLUMN		UNION
FS	FLOW SWITCH	WG	WALL GRILLE		VOLUME DAMPER
FT	FEET	WR	WALL REGISTER		
GPM	GALLONS PER MINUTE	W/	WITH		
GR	GLYCOL RETURN				
GS	GLYCOL SUPPLY				

**GENERAL NOTES**

1. VISIT THE BUILDING SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS, AND TO TAKE MEASUREMENTS AS NECESSARY FOR COMPLETION OF THE WORK ASSOCIATED WITH THE DESIGN INTENT OF THESE CONTRACT DOCUMENTS.
2. COORDINATE WORK OF MECHANICAL SUBCONTRACTOR WITH WORK OF OTHER TRADES.
3. DUCTWORK, PIPING AND EQUIPMENT ARE INDICATED DIAGRAMMATICALLY. FIELD-VERIFY LOCATIONS.
4. PRIOR TO FABRICATING DUCTWORK, COORDINATE WITH OTHER TRADES TO ENSURE THAT THE DUCTWORK CAN BE INSTALLED WITH THE INDICATED SIZES AND LOCATIONS. FIELD-VERIFY EXISTING DUCT SIZES AND CONDITIONS. SUBMIT ANY DISCREPANCIES OR PROPOSED CHANGES.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATIONS OF CEILING DIFFUSERS AND REGISTERS.
6. PROVIDE VOLUME DAMPERS SO THAT EVERY REGISTER, GRILLE, AND DIFFUSER (SUPPLY, RETURN, AND EXHAUST) CAN BE INDIVIDUALLY BALANCED. VERIFY INSTALLATION OF EXISTING VOLUME DAMPERS AT EACH BRANCH IN EXISTING SUPPLY DUCT. PROVIDE ADDITIONAL VOLUME DAMPERS WHERE REQUIRED.
7. LOCATE VOLUME DAMPERS AS FAR AWAY FROM REGISTERS, GRILLES, AND DIFFUSERS AS POSSIBLE TO MINIMIZE NOISE. LOCATE TO BE UNOBSTRUCTED AND EASILY ACCESSIBLE FOR TESTING AND BALANCING. LOCATE ABOVE ACCESSIBLE SUSPENDED CEILINGS WHEREVER POSSIBLE. WHERE VOLUME DAMPERS MUST BE LOCATED ABOVE OFFBOARD CEILINGS, PROVIDE ACCESS PANELS AS SPECIFIED AND NOTIFY THE ARCHITECT VERBALLY AND IN WRITING OF SUCH LOCATIONS. OBTAIN PERMISSION FROM THE ARCHITECT BEFORE INSTALLING ACCESS PANELS.
8. DUCT ELBOWS SHALL BE LONG-RADIUS TYPE (THROAT RADIUS EQUAL TO OR GREATER THAN DUCT WIDTH IN THE PLANE OF THE TURN) WHEREVER SPACE ALLOWS. IF SPACE IS NOT ADEQUATE, PROVIDE MITERED ELBOWS WITH TURNING VANES.
9. PROVIDE 16 GAUGE SINGLE-THICKNESS TURNING VANES AT MITERED DUCT ELBOWS. VANE EDGES (LEADING AND TRAILING) SHALL BE TANGENTIAL TO AIRFLOW.
10. FLEXIBLE DUCTWORK IN NEGATIVE PRESSURE SYSTEMS (RETURN AND EXHAUST) SHALL BE SEMI-RIGID METAL TYPE EQUAL TO BUCKLEY BUCK-DUCT.
11. FLEXIBLE DUCT LENGTHS SHALL NOT EXCEED 5'-0".
12. PAINT DUCTWORK VISIBLE THRU CEILING OPENINGS, DUCT OPENINGS, AND REGISTERS, GRILLES AND DIFFUSERS WITH BLACK PAINT IN ACCORDANCE WITH SECTION 09900 - PAINTING.
13. PIPING INDICATED IN OUTSIDE WALLS SHALL BE RUN ON THE WARM SIDE OF BUILDING INSULATION AND VAPOR BARRIER. BUILDING INSULATION BEHIND SUCH PIPING SHALL BE CONTINUOUS, WITHOUT JOINTS OR GAPS.
14. PIPING SHALL BE CONCEALED EXCEPT IN MECHANICAL ROOMS AND AS INDICATED. WHERE PIPES DROP IN BLOCK WALLS, PROVIDE 1/2" THICK INSULATION MINIMUM.
15. SEAL DUCTWORK AND PIPING THRU MECHANICAL ROOM FLOORS AND PARTITIONS, AND THRU FIRE-RATED ASSEMBLIES, WITH FIRESTOPPING MATERIAL AS SPECIFIED.
16. MOUNT THERMOSTATS AND TEMPERATURE AND HUMIDITY SENSORS AT 48 INCHES AFF TO CENTERLINE OF ITEM. PROVIDE ELECTRICAL WALL BOX ATTACHED TO FRAMING.
17. WHERE THERMOSTATS/TEMPERATURE SENSORS ARE LOCATED NEAR LIGHT SWITCHES, INSTALL SO THAT LIGHT SWITCHES ARE NEARER THE DOOR JAMBES. THE INTENT IS TO LOCATE THERMOSTATS/TEMPERATURE SENSORS SO THEY WILL NOT INTERFERE WITH ACCESSIBILITY OF LIGHT SWITCHES.