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**SMART**  
 INTERIORS  
 ENERGY

PROJECT NO. 17033 PROJECT MGR. JCDRAWN JAE OF RECORD  
 DRL JC KOD

ISSUED FOR CONSTRUCTION	DATE: 12/21/17
STATUS:	BY:
0	12/21/17

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PROJECT NO.	DESIGN	CHKD	DRAWN
17033			

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**MECHANICAL LEGEND AND ABBREVIATIONS**  
 OF:  
**VERTICAL CIRCULATION IMPROVEMENTS**  
 1001 WESTBROOK STREET  
 PORTLAND, MAINE 04102

DATE	SCALE
12/21/17	NOT TO SCALE

**2.M-001**

### AIR DISTRIBUTION SYMBOLS

	RECTANGULAR DUCT. (FIRST NUMBER IS SIDE SHOWN) DIMENSIONS IN INCHES
	12 INCH ROUND DUCT
	MOTORIZED DAMPER
	FLEXIBLE DUCT
	DUCT FLEXIBLE CONNECTOR (FC)
	DUCT DROPS AND RISES IN DIRECTION OF AIR FLOW
	RETURN DUCT TURNED UP OR DOWN (DASHED)
	SUPPLY DUCT TURNED UP OR DOWN (DASHED)
	EXHAUST DUCT TURNED UP OR DOWN (DASHED)
	ACOUSTICAL LINING (DUCT DIM. FOR NET FREE AREA)
	ROUND DUCT ELBOW DOWN
	ROUND DUCT ELBOW UP
	TRANSITION
	CAP (DUCT AND/OR PIPE)
	INDICATES DUCT, PIPING, EQUIPMENT TO BE REMOVED.
	EXHAUST AIR
	RETURN AIR
	SUPPLY AIR
	VOLUME DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	COMBINATION FIRE/SMOKE DAMPER
	RECTANGULAR ELBOW W/TURNING VANES
	DIRECTION OF AIR FLOW (IN)
	DIRECTION OF AIR FLOW (OUT)
	HUMIDISTAT OR HUMIDITY SENSOR
	THERMOSTAT (T'STAT) OR TEMP. SENSOR
	SMOKE DETECTOR
	AIR TERMINAL I.D.
	DIFFUSER, REGISTER OR GRILLE TAG
	CFM AIR FLOW
	QUANTITY

### PIPING SYMBOLS

	UNION		PG PRESSURE GAUGE AND COCK
	FLANGE		THERMOMETER AND WELL
	PIPE ANCHOR		TEMPERATURE AND PRESSURE TAP (PETE'S PLUG)
	PIPE GUIDE OR SLEEVE		HOSE END DRAIN VALVE WITH CAP
	PIPE ELBOW TURNED DOWN		ORIFICE FLOWMETER
	PIPE ELBOW TURNED UP		FLEXIBLE CONNECTOR
	PIPING TEE-DOWN		EXPANSION JOINT
	PIPING TEE-UP		STEAM TRAP (FLOAT AND THERMOSTATIC INDICATED T.T. THERMOSTAT, B.T. BUCKET TRAP, T.D. THERMODYNAMIC TRAP)
	PIPE RISER		CONCENTRIC REDUCER/INCREASER
	PIPE PITCHES DOWN		ECCENTRIC REDUCER/INCREASER
	GATE VALVE		DIRECTION OF FLOW
	BALL VALVE		PUMP
	BUTTERFLY VALVE (MANUAL)		FINNED TUBE BASEBOARD
	2-WAY CONTROL VALVE		HUMIDIFIER
	3-WAY CONTROL VALVE		DP DIFFERENTIAL PRESSURE TRANSMITTER
	BALANCING VALVE (CIRCUIT SETTER)		FTR-1 FINNED TUBE I.D.
	CHECK VALVE		10'-0" FINNED TUBE RADIATION TAG
	PLUG VALVE		2 GPM LENGTH OF FINNED ELEMENT
	GLOBE VALVE		FLOW
	NEEDLE VALVE		
	BACKFLOW PREVENTER		
	SOLENOID VALVE		
	PRESSURE REGULATING VALVE		
	PRESSURE RELIEF VALVE		
	STRAINER		
	STRAINER W/ BLOWDOWN		
	MANUAL AIR VENT		
	AUTOMATIC AIR VENT		
	PRESSURE SWITCH		
	FLOW SWITCH		
	VALVE WITH TAMPER SWITCH		

### GENERAL SYMBOLS

	DETAIL I.D.
	DETAIL TAG
	KEYED NOTE
	MECHANICAL EQUIPMENT TAG
	LIMIT OF DEMOLITION
	CONNECTION OF NEW WORK TO EXISTING

### ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	ENC	ENCLOSURE	PSE	PROCESS SOLVENT EXHAUST
ACC	AIR COOLED CONDENSER	ER	EXHAUST REGISTER	PP	POLY-PROPYLENE
ACU	AIR CONDITIONING UNIT	(E)	EXISTING	PPE	PREPURCHASED EQUIPMENT
AD	ACCESS DOOR	EXIST	EXISTING	PRS	PRESSURE REDUCING STATION
AE	ACID EXHAUST	FBO	FURNISHED BY OWNER	PRV	PRESSURE REDUCING VALVE
AFF	ABOVE FINISHED FLOOR	FBP	FACE AND BYPASS	PVD	PNEUMATIC VOLUME DAMPER
AFMS	AIR FLOW MEASURING STATION	FC	FLEXIBLE CONNECTOR	(R)	REMOVE
AHU	AIR HANDLING UNIT	FD	FIRE DAMPER	RA	RETURN AIR
ATC	AUTOMATIC TEMPERATURE CONTROL	FG	FIBERGLASS	(REL)	RELOCATED
AV	AIR VENT	F&T	FLOAT AND THERMOSTATIC	RF	RETURN FAN
BB	BASEBOARD	FO	FLAT OVAL	RG	RETURN GRILLE
BDD	BACKDRAFT DAMPER	FTR	FINNED TUBE RADIATION	RHC	REHEAT COIL
BG	BLAST GATE	FS	FLOW SWITCH	RM	ROOM
BLDG	BUILDING	GC	GENERAL CONTRACTOR	RR	RETURN REGISTER
BOD	BOTTOM OF DUCT	GPM	GALLONS PER MINUTE	RV	RELIEF VALVE
BOP	BOTTOM OF PIPE	H	HUMIDIFIER	SA	SUPPLY AIR
BTU	BRITISH THERMAL UNIT	HB	HOSE BIBB	SCV	SELF CONTAINED VALVE
CBD	COUNTER BALANCED DAMPER	HRRU	HEAT RECOVERY UNIT	SD	SMOKE DETECTOR
CD	CEILING DIFFUSER	HTR	HEATER	SF	SUPPLY FAN
CFF	CAPPED FOR FUTURE	H & V	HEATING AND VENTILATING	SG	SUPPLY GRILLE
CFM	CUBIC FEET PER MINUTE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	SR	SUPPLY REGISTER
CLG	CEILING	HW	HOT WATER	SS	STAINLESS STEEL
CONT	CONTINUATION	HX	HEAT EXCHANGER	TE	TEMPERATURIZED ELEMENT (SENSOR)
CONV	CONVECTOR	IN WG	INCHES WATER GAUGE	TG	TRANSFER GRILLE
COORD	COORDINATION	MAU	MAKEUP AIR UNIT	TOD	TOP OF DUCT
CT	COOLING TOWER	MAX	MAXIMUM	TOP	TOP OF PIPE
CTE	CONNECT TO EXISTING	MBH	1000 BTU/HR	TTS	TIGHT TO STEEL
CU	COPPER	MD	MOTORIZED DAMPER	TV	TURNING VANE(S)
CUH	CABINET UNIT HEATER	ME	MECHANICAL ENGINEER	TYP	TYPICAL
CV	CONTROL VALVE	MFR	MANUFACTURER	UH	UNIT HEATER
CW	COLD WATER	MIN	MINIMUM	UIC	UP IN CHASE
DC	DOUBLE CONTAINED	MPV	MULTI-PURPOSE VALVE	UIW	UP IN WALL
DDC	DIRECT DIGITAL CONTROL	MTD	MOUNTED	UV	UNIT VENTILATOR
DIA	DIAMETER	MUA	MAKE UP AIR	VAV	VARIABLE AIR VOLUME BOX
DIC	DOWN IN CHASE	NPW	NON-POTABLE WATER	VB	VACUUM BREAKER
DIW	DOWN IN WALL	NTS	NOT TO SCALE	VCFV	VALVED AND CAPPED FOR FUTURE
DN	DOWN	OA	OUTSIDE AIR	VD	MANUAL VOLUME DAMPER
DT	DROP AND TRANSITION	OBD	OPPOSED BLADE DAMPER	VFD	VARIABLE FREQUENCY DRIVE
DWG	DRAWING	OED	OPEN ENDED DUCT	VRF	VARIABLE REFRIGERANT FLOW
DWH	DOMESTIC WATER HEATER	PAE	PROCESS ACID EXHAUST	VOC	VOLATILE ORGANIC COMPOUND
EA	EXHAUST AIR	PHE	PROCESS HEAT EXHAUST	VTR	VENT THROUGH ROOF
EF	EXHAUST FAN			W/	WITH

**GENERAL NOTE:**  
 1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL MECHANICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION INTO THE DESIGN.

### PIPING SYSTEMS

	CONDENSATE DRAIN		HOT GAS		REFRIGERANT LIQUID
	CHILLED WATER SUPPLY		HIGH PRESSURE STEAM		REFRIGERANT SUCTION
	CHILLED WATER RETURN		HIGH PRESSURE CONDENSATE RETURN		TEMPERED CHILLED WATER SUPPLY
	CONDENSER WATER SUPPLY		HOT WATER SUPPLY		TEMPERED CHILLED WATER RETURN
	CONDENSER WATER RETURN		HOT WATER RETURN		ZONE VALVE BOX
	DISTRIBUTION VALVE BOX		LOW PRESSURE STEAM		
	FREE COOLING SUPPLY		LOW PRESSURE RETURN		
	FREE COOLING RETURN		MEDIUM PRESSURE STEAM		
	FUEL OIL SUPPLY		MEDIUM PRESSURE RETURN		
	FUEL OIL RETURN		NON POTABLE COLD WATER		
	FUEL OIL VENT		PROCESS COOLING WATER RETURN		
	GRAVITY STEAM CONDENSATE RETURN		PUMPED STEAM CONDENSATE		
	GLYCOL		PUMPED DISCHARGE		
	HOT/CHILLED WATER RETURN		POTABLE WATER		
	HOT/CHILLED WATER SUPPLY		RELIEF LINE		