

# LEGEND

AC	AIR CONDITIONING UNIT	FD	FIRE DAMPER
ACC	AIR COOLED CONDENSER	FL	FINNED LENGTH OF RADIATION
ACCU	AIR COOLED CONDENSING UNIT	FM	FLOW METER
ACV	AUTOMATIC CONTROL VALVE	FOR	FUEL OIL RETURN
AD	ACCESS DOOR	FOS	FUEL OIL SUPPLY
AE	AIR EXTRACTOR	FPT	FREEZE PROTECTION THERMOSTAT
AFF	ABOVE FINISHED FLOOR	FR	FLOOR REGISTER
AFG	ABOVE FINISHED GRADE	FS	FLOW SWITCH
AHU	AIR HANDLING UNIT	F&T	FLOAT & THERMOSTATIC TRAP
ALD	ACOUSTICALLY LINED DUCT	GCR	GRID CORE REGISTER
ATC	AUTOMATIC TEMPERATURE CONTROL	GPM	GALLONS PER MINUTE
BBU	BOILER BURNER UNIT	HC	HEATING COIL
BD	BAROMETRIC DAMPER	HE	HEAT EXCHANGER
BDD	BACKDRAFT DAMPER	HEDV	HOSE END DRAIN VALVE
CBD	COUNTERBALANCED BACKDRAFT DAMPER	HEF	HIGH EFFICIENCY FILTER BANK
CC	COOLING COIL	HPCR	HIGH PRESSURE CONDENSATE RETURN ( OVER 30 PSIG)
CD	CEILING DIFFUSER	HPS	HIGH PRESSURE STEAM ( OVER 30 PSIG)
CDR	CONDENSATE DRAIN ( AHU, FC, ETC.)	HRC	HEAT RECOVERY COIL
CDRP	CONDENSATE DRAIN PUMP ( AHU, FC, ETC.)	HRP	HEAT RECOVERY PUMP
CG	CEILING GRILLE	HRR	HEAT RECOVERY RETURN
CFM	CUBIC FEET PER MINUTE	HRS	HEAT RECOVERY SUPPLY
CH	CHILLER UNIT	HUM	HUMIDIFIER
CHWP	CHILLED WATER PUMP	HWP	HEATING WATER PUMP
CHWR	CHILLED WATER RETURN	HWR	HEATING WATER RETURN
CHWS	CHILLED WATER SUPPLY	HWS	HEATING WATER SUPPLY
CO	CLEANOUT	HV	HEATING & VENTILATING UNIT
C	CONVECTOR	LD	LINEAR DIFFUSER
CPD	CONDENSATE PUMP DISCHARGE	LG	LINEAR GRILLE
CR	CONDENSATE RETURN	LPCR	LOW PRESSURE CONDENSATE RETURN ( 0-15 PSIG)
CT	COOLING TOWER	LPS	LOW PRESSURE STEAM ( 0-15 PSIG)
CUH	CABINET UNIT HEATER	LSGV	LOCK SHIELD GATE VALVE
CW	COLD WATER	MAN/LS	MANUAL CONTROL FROM LIGHT SWITCH
CWP	CONDENSER WATER PUMP	MAN/SS	MANUAL CONTROL WITH VARIABLE SPEED SWITCH
CWR	CONDENSER WATER RETURN	MBH	1000 BRITISH THERMAL UNITS PER HOUR
CWS	CONDENSER WATER SUPPLY	MCC	MOTOR CONTROL CENTER
D	CONDENSATE DRAIN	MD	MOTORIZED DAMPER
D&D	DROP AND DRIP	MPCR	MEDIUM PRESSURE CONDENSATE RETURN ( 16 - 30 PSIG)
DDR	DOUBLE DEFLECTION REGISTER	MPS	MEDIUM PRESSURE STEAM ( 16 - 30 PSIG)
DEF	DEFLECTION	MS	MAGNETIC STARTER
DHW	DOMESTIC HOT WATER	OA	OUTSIDE AIR
EF	EXHAUST FAN	OED	OPEN ENDED DUCT
EG	EXHAUST GRILLE	OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
ER	EXHAUST REGISTER	PD	PRESSURE DROP
EXH	EXHAUST	PH	PREHEAT COIL
FC	FLEXIBLE CONNECTOR	PRD	PRESSURE RELIEF DAMPER
FCU	FAN COIL UNIT	PRV	PRESSURE REDUCING VALVE

R/D	RADIATION WITH DAMPER
RCHWP	RESET CHILLED WATER PUMP
RCHWR	RESET CHILLED WATER RETURN
RCHWS	RESET CHILLED WATER SUPPLY
REF	RETURN/EXHAUST FAN
RET	RETURN
RF	RETURN AIR FAN
RH	REHEAT COIL
RHWP	RESET HOT WATER PUMP
RHWR	RESET HOT WATER RETURN
RHWS	RESET HOT WATER SUPPLY
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
S	SWITCH
SA	SOUND ATTENUATOR
SCV	SELF - CONTAINED CONTROL VALVE
SD	SMOKE DAMPER
SDR	SINGLE DEFLECTION REGISTER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SS	STAINLESS STEEL
SUP	SUPPLY
SV	SOLENOID VALVE
TC	TIME CLOCK
TID	THERMALLY INSULATED DUCT
TD	TRANSFER DUCT
TF	TRANSFER FAN
TG	TRANSFER GRILLE
TR	TEMPERATURE RISE
TT	THERMOSTATIC TRAP
UH	UNIT HEATER
UHV	UNIT HEATER
VAV	VARIABLE AIR VOLUME BOX
VB	VACUUM BREAKER
VD	VOLUME DAMPER
VF	VENTILATION FAN
WC	WATER COLUMN
WG	WALL GRILLE
WR	WALL REGISTER
WR	ACOUSTICALLY LINED DUCT
ACV 2	ACV 2 - WAY
ACV 3	ACV 3 - WAY
BV	BALANCE VALVE
BDD	BACKDRAFT DAMPER
CAP	CAP - PIPE
CV	CHECK VALVE

	COMBINATION BALANCING, FLOW MEASURING & TIGHT SHUT-OFF VALVE
	DUCT SECTION - SUPPLY
	DUCT SECTION - RETURN/EXHAUST
	DUCT TURNING VANES
	FIRE DAMPER (1 1/2 HOUR RATED)
	FIRE DAMPER (3 HOUR RATED)
	FLEXIBLE DUCT
	FLOAT & THERMOSTATIC TRAP
	ISOLATION VALVE
	GLOBE VALVE
	HUMIDISTAT
	HUMIDITY SENSOR
	LOCKSHIELD GATE VALVE
	LOUVER
	MANUAL AIR VENT
	MOTORIZED DAMPER
	OCCUPIED/UNOCCUPIED SWITCH
	OS&Y GATE VALVE
	PETCOCK FOR GAUGE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	PITCH DOWN
	PLUG VALVE
	PRESSURE GAUGE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	PRESSURE RELIEF DAMPER
	RADIATION I.D. ( TYPE A, 10'-0" FINNED LENGTH, 10,000 BTU/HR) WITH DAMPER
	RADIATION I.D. ( TYPE A, 10'-0" FINNED LENGTH, 10,000 BTU/HR) WITHOUT DAMPER
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	RETURN AIR
	RETURN AIR DUCT
	RETURN PIPING (HEATING WATER, CHILLED WATER HEAT RECOVERY, CONDENSATE RETURN)
	SECTION I.D. ( SECTION A SHOWN ON DWG. MH101)
	SMOKE DAMPER
	STRAINER
	SUPPLY AIR
	SUPPLY AIR DUCT
	SUPPLY PIPING (HEATING WATER, CHILLED WATER HEAT RECOVERY, STEAM)
	SWITCH WITH PILOT LIGHT
	TAKE - OFF FROM BOTTOM OF PIPE
	TAKE - OFF FROM TOP OF PIPE
	TEMPERATURE SENSOR

	THERMOMETER
	THERMOMETER WELL
	DUCT MOUNTED SMOKE DETECTOR (BY DIVISION 16)
	THERMOSTAT
	THERMOSTAT COOLING
	THERMOSTAT HEATING
	THERMOSTAT - NIGHT
	THERMOSTAT - HEATING/COOLING
	THERMOSTATIC TRAP
	TIMER SWITCH
	UNION
	VARIABLE SPEED SWITCH W/OFF "POSITION"
	VOLUME DAMPER

S ( SUPPLY ) R ( RETURN )  
 E ( EXHAUST ) T ( TRANSFER )  
 SUPPLY DIFFUSER ( TYPE 2 )  
 DIFFUSER DESCRIPTION  
 ( SEE REG., GRILLES & DIFF SCHEDULE )  
 QUANTITY  
  
 400 CFM EA

# GENERAL NOTES

- 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.
- COORDINATE WORK OF MECHANICAL SUBCONTRACTOR WITH WORK OF OTHER TRADES.
- DUCTWORK, PIPING AND EQUIPMENT ARE INDICATED DIAGRAMMATICALLY. FIELD-VERIFY LOCATIONS.
- 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.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATIONS OF CEILING DIFFUSERS AND REGISTERS.
- 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.
- 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 GYPBOARD 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.
- 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.
- PROVIDE 16 GAUGE SINGLE-THICKNESS TURNING VANES AT MITERED DUCT ELBOWS. VANE EDGES (LEADING AND TRAILING) SHALL BE TANGENTIAL TO AIRFLOW.
- FLEXIBLE DUCTWORK IS NOT ALLOWED IN NEGATIVE PRESSURE SYSTEMS. DO NOT USE FLEXIBLE DUCTWORK IN RETURN AND EXHAUST SYSTEMS.
- FLEXIBLE DUCT LENGTHS SHALL NOT EXCEED 5'-0".
- PAINT DUCTWORK VISIBLE THRU CEILING OPENINGS, DUCT OPENINGS, AND REGISTERS, GRILLES AND DIFFUSERS WITH BLACK PAINT IN ACCORDANCE WITH SECTION 09900 - PAINTING.
- 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.
- PIPING SHALL BE CONCEALED EXCEPT IN MECHANICAL ROOMS AND AS INDICATED. WHERE PIPES DROP IN BLOCK WALLS, PROVIDE 1/2" THICK INSULATION MINIMUM.
- SEAL DUCTWORK AND PIPING THRU MECHANICAL ROOM FLOORS AND PARTITIONS, AND THRU FIRE-RATED ASSEMBLIES, WITH FIRESTOPPING MATERIAL AS SPECIFIED.
- MOUNT THERMOSTATS AND TEMPERATURE AND HUMIDITY SENSORS AT 48 INCHES AFF TO CENTERLINE OF ITEM. PROVIDE ELECTRICAL WALL BOX ATTACHED TO FRAMING.
- WHERE THERMOSTATS/TEMPERATURE SENSORS ARE LOCATED NEAR LIGHT SWITCHES, INSTALL SO THAT LIGHT SWITCHES ARE NEARER THE DOOR JAMBS. THE INTENT IS TO LOCATE THERMOSTATS/TEMPERATURE SENSORS SO THEY WILL NOT INTERFERE WITH ACCESSIBILITY OF LIGHT SWITCHES.
- MECHANICAL DEMOLITION SHALL INCLUDE REMOVAL OF EXISTING STEAM BOILER AND ALL ACCESSORIES, OIL TANKS AND ALL ASSOCIATED PIPING AND ACCESSORIES, STEAM PIPING SYSTEM, STEAM RADIATORS, STEAM UNIT HEATER IN CARPENTER SHOP, BOILER ROOM COMBUSTION AIR DUCT, HEAT RECOVERY VENTILATOR AND ALL ASSOCIATED DUCT AND ACCESSORIES.
- OUTSIDE AIR GOOSENECK AND EXHAUST LOUVER SHALL REMAIN AS SHOWN ON PLANS FOR RE-CONNECTION.
- ALL CONTROL COMPONENTS NOT REUSED SHALL BE TURNED OVER TO THE OWNER.
- PRIOR TO DEMOLITION OF BOILER, CONTRACTOR SHALL CHECK WITH OWNER TO SEE IF THEY WANT TO KEEP ANY OF THE EXISTING EQUIPMENT.
- CONTRACTOR SHALL REMOVE ELECTRIC UNIT HEATER AND ASSOCIATED THERMOSTAT FROM SIGN SHOP AND TURN OVER TO OWNER.
- CONTRACTOR SHALL REMOVE ELECTRIC BASEBOARD RADIATION AND TURN OVER TO OWNER IF REQUESTED.

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Project Title

## USM 25 BEDFORD STREET RENOVATION

PORTLAND, ME

HA Project No. 11711

Key Plan

-	04-02-12	ISSUED FOR BID
Mark	Date	Description

Issue Dates

Drawing Status

Drawing Title

## LEGEND AND GENERAL NOTES

PA / PE: CG Drawn By: JSL

Drawing Number

# M00.1