

HVAC GENERAL NOTES	
DESCRIPTIONS	
1. ALL HVAC GENERAL NOTES, SYMBOLS LISTS & DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL HVAC DRAWINGS FOR THIS PROJECT.	
2. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND EXACT LOCATIONS AND ARRANGEMENTS OF EXIST./NEW EQUIPMENT, DUCTWORK, PIPING AND OTHER COMPONENTS SHALL BE DETERMINED IN THE FIELD WITH DUE CONSIDERATION OF STRUCTURAL, ELECTRICAL AND ARCHITECTURAL SYSTEMS. EXISTING STRUCTURAL SYSTEMS SHALL NOT BE MODIFIED WITHOUT THE EXPRESS PERMISSION OF THE ENGINEER.	
3. THE PROJECT SHALL BE PHASED IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED PHASING PLAN. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER FOR THE SEQUENCING AND TIMING OF OPERATIONS PRIOR TO COMMENCING WORK. SEE SPECIFICATIONS.	
4. CONTRACTOR IS TO MAINTAIN SERVICE TO ROOMS OUTSIDE THE PROJECT SCOPE OF WORK AND PHASING SCHEDULE. IF INTERRUPTION OF SERVICE IS REQUIRED COORDINATE SHUTDOWN WITH OWNER. NOTIFY THE OWNER A MINIMUM OF 96 HOURS PRIOR TO SHUT-DOWN.	
5. CARE SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SYSTEMS AND SURFACES TO REMAIN. RESTORE DAMAGED AREAS THAT ARE BEYOND THE SCOPE OF THIS CONTRACT TO THEIR ORIGINAL CONDITION.	
6. WHERE INDICATED ON THE DRAWINGS, REMOVE OR RELOCATE EXISTING COMPONENTS AS REQUIRED TO ACCOMMODATE THE NEW WORK. REMOVALS SHALL INCLUDE ALL ASSOCIATED OFF-SITE DISPOSAL COSTS.	
7. COORDINATE REMOVALS AND RELOCATIONS INCLUDING SELECTIVE CUTTING AND PENETRATIONS WITH ARCHITECTURAL, MECHANICAL, STRUCTURAL AND ELECTRICAL CONTRACTORS.	
8. MOST PARTITIONS ARE FULL HEIGHT AND REQUIRE UTILITIES PENETRATIONS TO BE SEALED. SEE ARCHITECTURAL DWGS FOR PARTITION HEIGHTS. UTILITIES SHOWN FOR CLARITY THAT MAY RUN PARALLEL TO WALL PARTITIONS WILL REQUIRE LOCATING IN THE FIELD TO MINIMIZE CONFLICT WITH PARTITIONS.	
9. COORDINATE THE LOCATIONS OF ALL WALL MOUNTED TEMPERATURE SENSORS WITH OWNER'S FINAL EQUIPMENT/FURNITURE LAYOUT.	
10. MANUFACTURERS NAME & MODEL NUMBER ARE USED FOR DESCRIPTIVE PURPOSES ONLY & ARE INTENDED TO INDICATE THE STANDARD OF MATERIAL OR ARTICLES REQUIRED.	
11. INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND GOOD PRACTICE NORMAL TO THE TRADE. INSTALLATION SHALL INCLUDE PROVISIONS FOR ACCESS TO NORMAL MAINTENANCE ITEMS SUCH AS BELTS, BEARINGS, FILTERS AND MOTORS. PROVIDE ADEQUATE STRUCTURAL SUPPORTS AND SECURE MOUNTING METHODS WITH PROVISIONS FOR VIBRATION ISOLATION AND EXPANSION WHERE REQUIRED.	
12. PROVIDE VOLUME DAMPERS AT EACH BRANCH TO AN INDIVIDUAL REGISTER OR DIFFUSER IN SUPPLY, RETURN AND EXHAUST DUCTS IRRESPECTIVE OF WHETHER OR NOT A DAMPER IS INDICATED ON THE PLANS.	
13. DIFFUSER SIZES INDICATED ARE NECK SIZES. REGISTERS & GRILLES ARE INDICATED AS NOMINAL SIZES.	
14. PERFORM ALL TESTS BEFORE INSULATING.	
15. PIPING AND DUCTWORK SHALL BE CONCEALED UNLESS OTHERWISE NOTED.	
16. INSTALLATION SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT OF EQUIPMENT PROVIDED. PROVIDE ACCESS PANELS TO GAIN ACCESS TO SYSTEMS COMPONENTS THAT REQUIRE MAINTENANCE ACCORDING TO MANUFACTURER'S LITERATURE.	
17. PROVIDE DUCTWORK WITH OFFSETS AND TRANSITIONS AS REQUIRED TO FIT UNDER STRUCTURAL STEEL OR OTHER OBSTRUCTIONS. FLAT OVAL OR ROUND SIZES MAY BE USED INTERCHANGEABLY BY THE CONTRACTOR. MAINTAIN DUCT CROSS SECTIONAL AREA. CHANGES SHALL BE ONLY IN ACCORDANCE WITH APPROVED SHOP DRAWINGS OR WRITTEN PERMISSION OF THE VA PROJECT SECTION.	
18. PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS & GUIDES AS NECESSARY TO PREVENT UNDUE STRAIN ON PIPING.	
19. SEE DETAILS & PIPING DIAGRAMS FOR ADDITIONAL VALVES & FITTINGS NECESSARY FOR COMPLETE PIPING SYSTEM.	
20. MECHANICAL CONTRACTOR TO COORDINATE ALL WORK WITH OTHER BUILDING TRADES. SOME RELOCATION OF EXISTING UTILITIES MAY BE NECESSARY TO ACCOMMODATE INSTALLATION OF NEW EQUIPMENT OR DUCTWORK.	
21. PROVIDE FIRE OR FIRE/SMOKE DAMPERS WHERE INDICATED ON PLANS & WHERE REQUIRED BY APPLICABLE CODES FOR DUCTS & OPENINGS THROUGH FLOORS, FIRE WALLS & FIRE PARTITIONS. DAMPERS SHALL BE ENCLOSED IN #14 GAUGE STEEL SLEEVE. PROVIDE ACCESS DOORS LOCATED SO THAT FUSIBLE LINK & OTHER DAMPER COMPONENTS MAY BE INSPECTED REPLACED AND/OR SERVICED.	
22. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.	
23. AT THE END OF EACH WORKING DAY, THE CONSTRUCTION SITE SHALL BE LEFT IN A CLEAN AND NEAT CONDITION.	
24. FIELD VERIFY EXISTING EQUIPMENT, DUCTWORK AND PIPING PRIOR TO REMOVAL OR REUSE. CONFIRM WITH OWNER THAT ALL EQUIPMENT, DUCTWORK AND PIPING DESIGNATED TO BE REMOVED IS NO LONGER IN SERVICE PRIOR TO ITS REMOVAL.	
25. EXISTING EQUIPMENT, DUCTWORK AND PIPING TO REMAIN IN SERVICE SHALL BE INSPECTED. ANY EQUIPMENT FOUND TO BE INOPERABLE SHALL BE REPORTED TO OWNER AND ENGINEER.	
26. INFILL ALL NEW OR EXISTING ABANDONED FLOOR SLAB PENETRATIONS WITH GROUT. FULL THICKNESS OF SLAB. MAINTAIN 2 HR FIRE RATING. ALL EXISTING CONCRETE FLOORS AND CHASES ARE 2 HOUR FIRE RATED.	
27. FILL AND PATCH ALL OPENINGS IN WALLS WHERE CONDUITS, PIPES, DUCTS ETC. ARE OR HAVE BEEN REMOVED WITH UL LISTED FIRE ASSEMBLY APPROVED BY THE ARCHITECT. MAINTAIN 2 HR FIRE RATING WHERE APPLICABLE.	
28. ALL UNUSED (ABANDONED) DUCTWORK, PIPING AND EQUIPMENT INDICATED TO BE REMOVED SHALL BE REMOVED AND CAPPED.	
29. ALL EXISTING PIPING, DUCTWORK AND EQUIPMENT NOT SHOWN ON DWGS. SHALL REMAIN WITH NO CHANGE UNLESS NOTED OTHERWISE.	
30. TIE-IN POINT LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE EXACT LOCATIONS IN THE FIELD BASED ON EXISTING CONDITIONS.	

GENERAL ABBREVIATIONS	
ABBREVIATIONS	DESCRIPTIONS
A	AIR
AD	DUCT ACCESS DOOR
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
AP	ACCESS PANEL
AS	AIR SEPARATOR
ATC	AUTOMATIC TEMPERATURE CONTROL
BEL	BELOW
BFP	BACK FLOW PREVENTER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CLOSED
C&HW	COLD & HOT WATER
CA	CAPACITY
CAP	COMBUSTION AIR RELIEF
CAR	COMBUSTION AIR SUPPLY
CAS	COOLING COIL
CC	CEILING
CD	CUBIC FEET PER MINUTE
CFM	CEILING
CLG	COLUMN
COL	CONNECT
CONN	CONTROL PANEL
CP	CURRENT TRANSFORMER
CT	CONTROL VALVE
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DOC	DIRECT DIGITAL CONTROL
DA	DAMETER
DN	DOWN
DO	DIGITAL OUTPUT
DWG OR DWGS	DRAWINGS
E, EX OR (E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECU	EVAPORATIVE CONDENSING UNIT
EF	EXHAUST FAN
EG	EXHAUST AIR GRILLE
EL	EXPANSION LOOP
EMS	ENERGY MANAGEMENT SYSTEM
ER	EXHAUST AIR REGISTER
ERV	EXHAUST ON ROOF
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETO	EXISTING TO BE REMOVED
ETR	ETHYLENE OXIDE
EMT	EMERGING WATER TEMPERATURE
EXH	EXHAUST
FA	FREE AREA
FAI	FRESH AIR INTAKE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FLR	FLOOR
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FSD	COMBINATION FIRE AND SMOKE DAMPER
FT	FEET
FTT	FIM TUBE RADIATION
GAL	GALLONS
GC	GENERAL CONTRACTOR
GE	GENERAL EXHAUST
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HC	HEATING COIL
HE	HOOD EXHAUST
HP	HORSE POWER
HVAC	HEATING, VENTILATION AND AIR COND.
HW	HOT WATER
ID	INSIDE DIAMETER
IH	INTAKE HOOD
IN	INCHES
KE	KITCHEN EXHAUST
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF B.T.U.'S PER HOUR
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MTD	MOUNTED
N.C. OR NC	NORMALLY CLOSED
N.O. OR NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
O.A. OR OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OB	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
REF	RETURN EXHAUST FAN
RF	RETURN FAN
RG	RETURN AIR GRILLE
RHWR	REHEAT WATER RETURN
RHWS	REHEAT WATER SUPPLY
RM	ROOM
RR	RETURN AIR REGISTER
RV	RELIEF VALVE
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SF	SQUARE FEET
SP	STATIC PRESSURE
SPD	SPEED
SPEC	SPECIFICATION
SR	SUPPLY AIR REGISTER
SS	STAINLESS STEEL
TG	TRANSFER AIR GRILLE
TOD	TOP OF DUCT
TSTAT	THERMOSTAT
TYP	TYPICAL
U.G.	UNDER GRADE
U.S.	UNDER SLAB
UC	UNDERCUT DOOR
V	VENT
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
W/	WITH
WB	WET BULB TEMPERATURE (°F)
WH	WALL HEATER
WMS	WIRE MESH SCREEN

PIPING SYMBOLS		
SYMBOLS	ABBREVIATIONS	DESCRIPTIONS
— G —	G	GAS PIPING
— GRS —	GRS	GLYCOL RUN-AROUND LOOP SUPPLY
— GRR —	GRR	GLYCOL RUN-AROUND LOOP RETURN
— RS —	RS	REFRIGERANT SUCTION
— RL —	RL	REFRIGERANT LIQUID
— RHG —	RHG	REFRIGERANT HOT GAS
— D —	D	A.C. CONDENSATE DRAIN
— MUW —	MUW	MAKE UP WATER
— PC —	PC	PUMPED CONDENSATE
— HPC —	HPC	HIGH-PRESSURE CONDENSATE
— BBD —	BBD	BOILER BLOWDOWN
— FOD —	FOD	FUEL OIL DISCHARGE
— FOG —	FOG	FUEL OIL GAGE
— FOS —	FOS	FUEL OIL SUCTION
— FOR —	FOR	FUEL OIL RETURN
— FOV —	FOV	FUEL OIL TANK VENT
— MTWS —	MTWS	MEDIUM-TEMPERATURE HOT WATER SUPPLY
— HTWS —	HTWS	HIGH-TEMPERATURE HOT WATER SUPPLY
— MTWR —	MTWR	MEDIUM-TEMPERATURE HOT WATER RETURN
— HTWR —	HTWR	HIGH-TEMPERATURE HOT WATER RETURN
— SAN —	SAN	SANITARY DRAIN ABOVE FLOOR OR GRADE
— CHEM —	CHEM	CHEMICAL SUPPLY PIPES
— CHWS —	CHWS	CHILLED WATER SUPPLY PIPING
— CHWR —	CHWR	CHILLED WATER RETURN PIPING
— CWS —	CWS	CONDENSER WATER SUPPLY
— CWR —	CWR	CONDENSER WATER RETURN
— HPS —	HPS	HIGH PRESSURE STEAM
— HWS —	HWS	HOT WATER SUPPLY PIPING
— HWR —	HWR	HOT WATER RETURN PIPING
— RHWS —	RHWS	REHEAT HOT WATER SUPPLY PIPING
— RHWR —	RHWR	REHEAT HOT WATER RETURN PIPING
— LPC —	LPC	LOW PRESSURE CONDENSATE RETURN
— LPS —	LPS	LOW PRESSURE STEAM
— MPC —	MPC	MEDIUM PRESSURE CONDENSATE RETURN
— MPS —	MPS	MEDIUM PRESSURE STEAM
— CW —	CW	COLD WATER PIPING
— HW —	HW	HOT WATER PIPING
— HWR —	HWR	HOT WATER RETURN PIPING
— V —	V	VENT PIPING
—		PIPE DROP
—		PIPE RISER
—		PIPE TEE - DOWN
—		PIPE TEE - UP
—		PIPE CONNECTION
—		PIPE BREAK - TO CONTINUE
—		DIRECTION OF FLOW
—	ANCHOR	PIPE ANCHOR
—		PIPE CAP
—	GUIDE	PIPE GUIDE
—		EXPANSION JOINT
—	WHA	WATER HAMMER ARRESTOR
—	U	UNION
—	BLV	BALL VALVE
—	BFV	BUTTERFLY VALVE
—	SCV	SWING CHECK VALVE
—	CBV	CIRCUIT BALANCE VALVE
—	ACV	2-WAY AUTOMATIC CONTROL VALVE
—	ACV	3-WAY AUTOMATIC CONTROL VALVE (MIXING PATTERN)
—	GV	GATE VALVE
—	GLV	GLOBE VALVE
—	MPV	MULTIPURPOSE VALVE
—	PRV	PRESSURE REGULATING VALVE
—	T	THERMOMETER
—	LCV	LIFT CHECK VALVE
—	FLG	FLANGE
—		STRAINER W/DRAIN VALVE AND CAP
—		DRAIN VALVE AND CAP
—	RSV	RELIEF OR SAFETY VALVE
—	PGV	PLUG VALVE
—	QC	QUICK CLOSING, FUSIBLE LINK
—	QO	QUICK OPENING
—	SHC	SQUARE HEAD COCK
—	RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
—	CRD	CONCENTRIC REDUCER (ENLARGER)
—	ERD	ECCENTRIC REDUCER (ENLARGER)
—		PIPE SLOPE

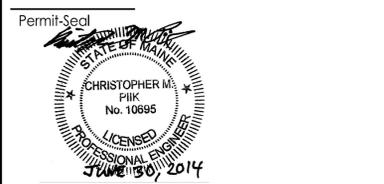
GENERAL SYMBOLS		
SYMBOLS	ABBREVIATIONS	DESCRIPTIONS
—		POINT OF CONNECTION TO EXISTING
S-1 250		DIFFUSER, REGISTER OR GRILLE TAG, WITH CFM AIRFLOW
△		REVISION TAG
○		REVISION CLOUD
RH-1		EQUIPMENT DESIGNATION
①		NOTE CALL OUT
⊗		PRESSURE GAUGE W/PETCOCK
⊕		DUCT STATIC PRESSURE SENSOR
⊙		ISOLATION ROOM PRESSURIZATION CONTROLLER
⊚		DUCT MOUNTED SMOKE DETECTOR, MTD BY HVAC CONTR. SUPPLIED AND WIRED BY ELECTRICAL CONTR.
F		FLOW SWITCH
PS		PRESSURE SWITCH
⊘		THERMOMETER W/IMMERSION WELL
T		PNEUMATIC TEMPERATURE SENSOR/CONTROLLER
⊖		ELECTRONIC TEMPERATURE SENSOR
⊕		CARBON DIOXIDE SENSOR
⊖		ELECTRONIC HUMIDITY SENSOR
⊖		ELECTRONIC TEMPERATURE SENSOR W/TAMPERPROOF GUARD
V		AUTOMATIC AIR VENT
V		MANUAL AIR VENT
PP		PRESSURE PORT ("PETE'S PLUG")
F&T		FLOAT & THERMOSTATIC TRAP
○		HUMIDIFIER
12", 12x12		DUCT SIZE
12"		PIPE SIZE
12" S UP 14" DN 1-1/2"		PIPE SIZE, GANG
⊗		ROOF EXHAUST - EXISTING
⊗		ROOF EXHAUST - REMOVED
⊗		ROOF EXHAUST - NEW
—		MANUAL VOLUME DAMPER
BD		BACKDRAFT DAMPER
FD		FIRE DAMPER
FSD		COMBINATION FIRE SMOKE DAMPER
SD		SMOKE DAMPER
—		RETURN PIPING RUN IN CABINET
M		MOTOR-OPERATED DAMPER

DIFFUSER SYMBOLS		
SYMBOLS	ABBREVIATIONS	DESCRIPTIONS
□	RG, RR	RETURN AIR GRILLE, REGISTER
▨	EG, ER	EXHAUST AIR GRILLE, REGISTER
⊗	SD, SR, SG	SUPPLY AIR 4 WAY DIFFUSER, REGISTER, GRILLE
⊗	SD, SR, SG	SUPPLY AIR 3 WAY DIFFUSER, REGISTER, GRILLE
⊗	SD, SR, SG	SUPPLY AIR 2 WAY DIFFUSER, REGISTER, GRILLE
⊗	SD, SR, SG	SUPPLY AIR 2 WAY DIFFUSER, REGISTER, GRILLE
⊗	SD, SR, SG	SUPPLY AIR 1 WAY DIFFUSER, REGISTER, GRILLE

DUCTWORK SYMBOLS		
SYMBOLS	ABBREVIATIONS	DESCRIPTIONS
12x8		EXISTING RECTANGULAR DUCT RUN W/ SIZE DESIGNATION
12x		EXISTING CIRCULAR DUCT RUN W/ SIZE DESIGNATION
12x8		EXISTING FLEX DUCT RUN W/ SIZE DESIGNATION
12x8		DEMOLITION RECTANGULAR DUCT RUN W/ SIZE DESIGNATION
12x		DEMOLITION CIRCULAR DUCT RUN W/ SIZE DESIGNATION
12x8		DEMOLITION FLEX DUCT RUN W/ SIZE DESIGNATION
12x8		NEW RECTANGULAR DUCT RUN W/ SIZE DESIGNATION
12x		NEW CIRCULAR DUCT RUN W/ SIZE DESIGNATION
16x10		SHADED DUCTWORK SHALL BE 16 GAUGE SHEETMETAL
12x8		NEW FLEX DUCT RUN W/ SIZE DESIGNATION
12x8		NEW RECTANGULAR DUCT - UP
12x8		NEW CIRCULAR DUCT RUN - UP
12x8		NEW RECTANGULAR DUCT - DOWN
12x8		NEW CIRCULAR DUCT RUN - DOWN
12x8		ACOUSTICALLY LINED DUCT RUN
12x8		RECTANGULAR TO RECTANGULAR DUCTWORK TRANSITION
12x8		RECTANGULAR TO RECTANGULAR DUCTWORK TRANSITION
12x8		RECTANGULAR TO CIRCULAR DUCTWORK TRANSITION
12x8		ELEVATION CHANGE IN DUCTWORK - UP
12x8		ELEVATION CHANGE IN DUCTWORK - DOWN
12x8		DUCTWORK BREAK - TO CONTINUE

ISSUED FOR BID	CMP	CMP	14.06.30
By	W/	Appd.	YY.MM.DD

File Name: 198801289-AA-001.dwg



Client/Project
YORK COUNTY
COMMUNITY COLLEGE
MAINE BGS PROJECT # 2410
C WING HVAC UNITS
Wells, Maine

Title
HVAC LEGEND AND GENERAL NOTES

Project No. 198801289	Scale AS NOTED
Drawing No.	Sheet Issued