VA STANDARD SYMBOLS

GENERAL

- DIRECTION OF PIPE PITCH (DOWN)
- DIRECTION OF FLOW
- ANCHOR
- REDUCER OR INCREASER
- ECCENTRIC REDUCER
- TOP CONNECTION, 45 OR 90
- BOTTOM CONNECTION, 45 OR 90
- SIDE CONNECTION
- CAPPED OUTLET
- RISE OR DROP IN PIPE
- UNION
- ORIFICE UNION
- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- BLAST THERMOSTATIC TRAP
- INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES (SEE STD. DETAIL)
- FLOAT & THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES (SEE STD. DETAIL)
- THERMOSTATIC TRAP
- STRAINER
- MANUAL AIR VENT
- THERMOMETER
- PRESSURE GAGE
- WATER FLOW MEASURING DEVICE
- EXISTING PIPE TO BE REMOVED
- EXISTING DUCTWORK TO BE REMOVED

AIR CONDITIONING

- CWTT — CONDENSER WATER TO TOWER
- CWFT — CONDENSER WATER FROM TOWER
- CH — CHILLED WATER SUPPLY
- CHR — CHILLED WATER RETURN
- MAKE UP WATER
- D — DRAIN LINE
- CO — CONDENSATE DRAIN LINE

HEATING

- HIGH PRESSURE STEAM (60 PSIG & ABOVE)
- HIGH PRESSURE STEAM CONDENSATE RETURN
- MEDIUM PRESSURE STEAM (16–59 PSIG)
- MEDIUM PRESSURE STEAM CONDENSATE RETURN
- LOW PRESSURE STEAM (15 PSIG & BELOW)
- LOW PRESSURE STEAM CONDENSATE RETURN
- VR — VACUUM STEAM CONDENSATE RETURN
- CONDENSATE PUMP DISCHARGE
- FEED WATER PUMP DISCHARGE
- HWH — HOT WATER HEATING SUPPLY
- HWHR — HOT WATER HEATING RETURN
- VENT LINE
- GR — GLYCOL–WATER RUN AROUND SUPPLY
- GRR — GLYCOL–WATER RUN AROUND RETURN

DUCTWORK SYMBOLS

- 10X8 — NEW DUCT – WIDTH X DEPTH
- LOUVER

VALVES

- GATE VALVE
- GLOBE VALVE
- CHECK VALVE
- BALANCING COCK (FOR BALANCING AND SHUT OFF)
- PRESSURE REDUCING VALVE
- STRAIGHT–THRU MODULATING CONTROL VALVE
- THREE WAY MODULATING CONTROL VALVE
- SAFETY VALVE OR PRESSURE RELIEF
- MANUAL AIR VENT
- BUTTERFLY VALVE
- 3/4" GATE VALVE WITH ADAPTER TO 3/4" HOSE THREAD
- ANGLE GATE VALVE
- ANGLE GLOBE VALVE
- TWO WAY CONTROL VALVE TWO POSITION TYPE
- MOTOR OPERATED GATE VALVE
- MOTOR OPERATED GLOBE VALVE
- TEST PLUG (PRESSURE/TEMPERATURE)

MECHANICAL LEGEND (NOT ALL APPLY)

- NEW DUCTWORK
- EXISTING DUCTWORK TO REMAIN
- EXISTING DUCTWORK OR EQUIPMENT TO BE REMOVED
- EXISTING PIPING TO REMAIN
- NEW SUPPLY DIFFUSER, SEE DESIGNATION FOR TYPE
- NEW RETURN GRILLE, SEE DESIGNATION FOR TYPE
- NEW EXHAUST GRILLE, SEE DESIGNATION FOR TYPE
- SQUARE–TO–ROUND DUCT TAKEOFF WITH DAMPER AND INSULATION STANDOFF.
- A — DIFFUSER/GRILLE TAG – SEE SCHEDULE
- DUCT ELBOW WITH TURNING VANES
- VD — MANUAL VOLUME DAMPER
- M — MOTORIZED VOLUME DAMPER
- C — PIPE DROP (CONDENSATE OR REFRIGERANT)
- D.W. — CONDENSATE DRYWELL
- ROOF EXHAUST FAN WITH CURB, SEE SECHEDULE
  ROOF GRAVITY RELIEF OR INTAKE VENT WITH CURB SEE SECHEDULE
- EF — CEILING MOUNTED EXHAUST FAN
- WALL LOUVER/ INTAKE OR EXHAUST BY ARROW DIRECTION
- T — THERMOSTAT
- H — HUMIDISTAT
- T — DUCT MOUNTED TEMPERATURE SENSOR
- H — DUCT MOUNTED HUMIDITY SENSOR
- DSD — DUCT MOUNTED SMOKE DETECTOR
- FD AP — FIRE DAMPER AND ACCESS PANEL
- RADIANT CEILING HEATING/COOLING SYSTEM PIPING

LEGEND AND ABBREVIATIONS (NOT ALL APPLY)

SINGLE LINE	DOUBLE LINE	ABBREVIATION	DESCRIPTION
			EXISTING PIPING/EQUIPMENT BEING REMOVED
			NEW POTABLE WATER PIPING
CWTT	CWTT	CWTT	EXISTING CONDENSER WATER FROM TOWER (SUPPLY)
CWFT	CWFT	CWFT	EXISTING CONDENSER WATER TO TOWER (RETURN)
CH	CH	CH	EXISTING CHILLED WATER SUPPLY (FROM CHILLER)
CHR	CHR	CHR	EXISTING CHILLED WATER RETURN (TO CHILLER)
CWTT	CWTT	CWTT	NEW CONDENSER WATER FROM TOWER (SUPPLY)
CWFT	CWFT	CWFT	NEW CONDENSER WATER TO TOWER (RETURN)
CH	CH	CH	NEW CHILLED WATER SUPPLY (FROM CHILLER)
CHR	CHR	CHR	NEW CHILLED WATER RETURN (TO CHILLER)
		GV	GATE VALVE, FLANGED
		BFV	BUTTERFLY VALVE, FLANGED
			CHECK VALVE, FLANGED
			REDUCER OR INCREASER
			STRAINER WITH BLOWDOWN
			THERMOMETER
AAV		AAV	AUTOMATIC AIR VENT
			PRESSURE GAUGE WITH GAUGE COCK
			UNION
		FC	FLEXIBLE CONNECTION, FLANGED
			COOLING TOWER FLOW CONTROL VALVE
		VFM	FLOW METERING DEVICE (VENTURI–TYPE)
			EXTENT OF REMOVAL/POINT OF CONNECTION
M	M	M	MOTORIZED VALVE OPERATOR
T	T	T	TEMPERATURE SENSOR
P	P	P	PRESSURE SENSOR/TRANSMITTER
TC	TC		TIME CLOCK
C	C	C	CHEMICAL (CHLORINE) SENSOR/TRANSMITTER
M	M	M	MOTORIZED DAMPER OPERATOR
T	T	T	THERMOSTAT
		HT	HEAT TRACE

ABBREVIATIONS (NOT ALL APPLY)

ABBREVIATION	DESCRIPTION
AFG	ABOVE FINISHED GRADE
CT	COOLING TOWER
CH	CHILLER
PCHWP	PRIMARY CHILLED WATER PUMP
SCHWP	SECONDARY CHILLED WATER PUMP
CWP	CONDENSER WATER PUMP
AFD	ADAPTIVE FREQUENCY DRIVE
VFD	VARIABLE FREQUENCY DRIVE
CONC	CONCRETE
AAV	AUTOMATIC AIR VENT
VFM	FLOW METERING DEVICE (VENTURI–TYPE)
VI PAD	VIBRATION ISOLATION PAD
EA	EACH
O.C.	ON CENTER
SCHED.	SCHEDULE
PVC	POLY–VINYL CHLORIDE
TYP.	TYPICAL
EXP.	EXPANSION
EF	EXHAUST FAN
L	LOUVER
UH	UNIT HEATER (ELECTRIC)
CFM	CUBIC FEET PER MINUTE
C.P.	CONTROL PANEL (STANDALONE)
CVCP	CONSTANT VOLUME CONTROL PANEL (PUMP SKID)
APPROX.	APPROXIMATE
FIN.	FINISHED
FT. HD.	FEET OF HEAD
HP	HORSEPOWER
IN.	INCHES
PSI	POUNDS PER SQUARE INCH
EWT	ENTERING WATER TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
GPM	GALLONS PER MINUTE
DIA	DIAMETER
LBS	POUNDS
LRA	LOCKED ROTOR AMPS
RLA	RATED (RUNNING) LOAD AMPS
KW	KILOWATT
MOCP	MAXIMUM OVERCURRENT PROTECTION
MCA	MINIMUM CIRCUIT AMPACITY
NTS	NOT TO SCALE
CW	COLD WATER (DOMESTIC)

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

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