

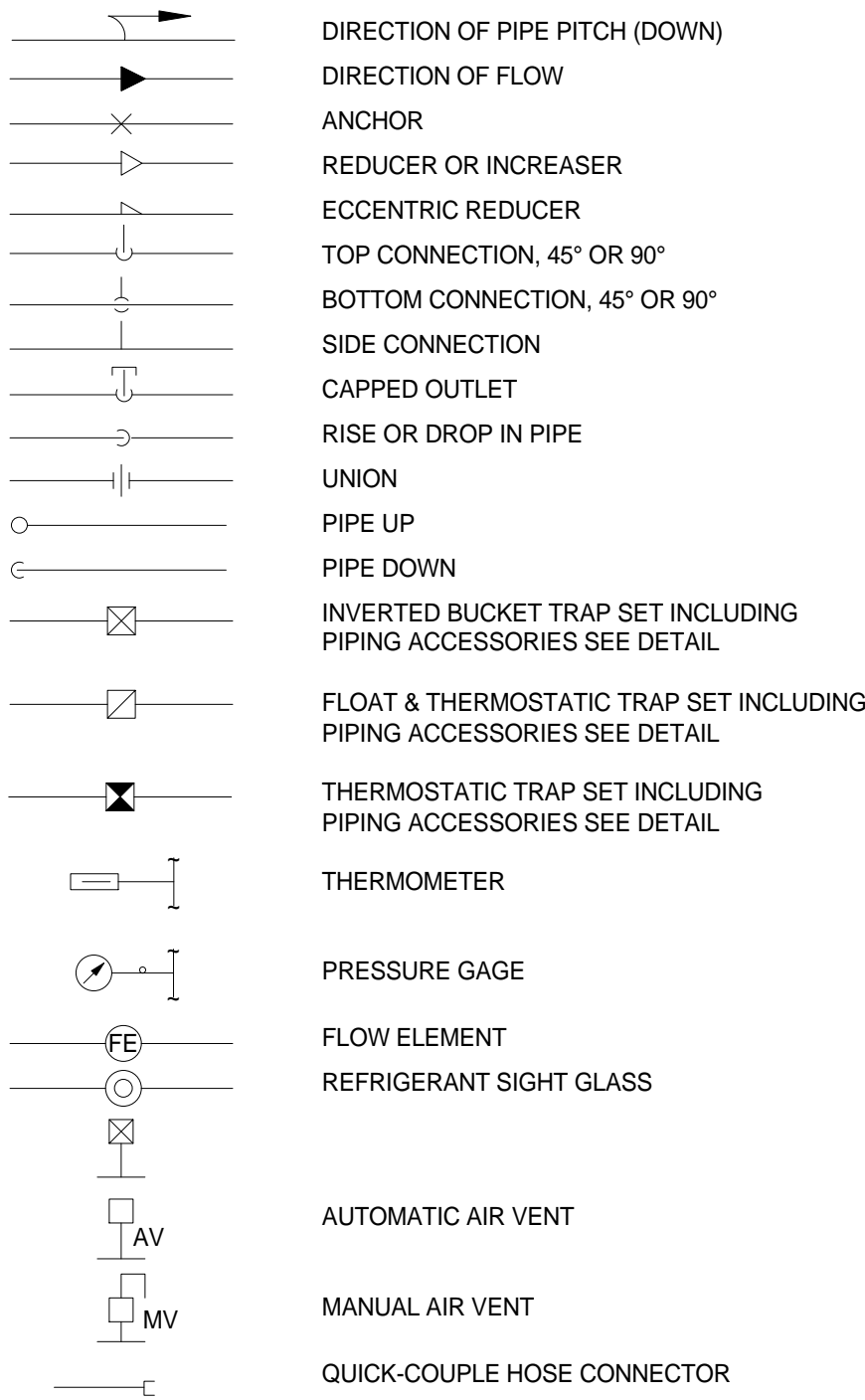
HVAC ABBREVIATIONS

A/E	ARCHITECT / ENGINEER	D	DAMPER - AUTOMATIC	H	HUMIDIFIER	M	METER, SI UNIT	SA	SUPPLY AIR
AAHX	AIR TO AIR HEAT EXCHANGER	D-1	OUTDOOR AIR DAMPER	H&CW	HOT & COLD WATER	M/s	METERS PER SECOND (OR METERS/SECOND)	SAD	SOUND ATTENUATING DEVICE
AB	AIR BLENDER	D-2	RETURN AIR DAMPER	HAC	HOUSEKEEPING AID CLOSET	MA	MIXED AIR	SAT	SUPPLY AIR TEMPERATURE
AAV	AUTOMATIC AIR VENT	DB	DECIBELS	HB	HOSE BIBB	MAT	MIXED AIR TEMPERATURE	SC	SHADING COEFFICIENT
ACC	AIR COOLED CONDENSER	D3	DECIBELS	HC	HEATING COIL	MAU	MAKE-UP AIR UNIT	SCFM	STANDARD CUBIC FEET PER MINUTE
ACH	AIR COOLED CHILLER	Db	DRY-BULB TEMPERATURE	HD	HEAD	MAV	MANUAL AIR VENT	SCI	SPINAL CODE INJURY
ACCU	AIR-COOLED CONDENSING UNIT	DD-1	DESIGN DEVELOPMENT (SUBMISSION1)	HD	HOOD	MAX	MAXIMUM	SCR	SILICON CONTROLLED RECTIFIER
ACU	AIR CONDITIONING UNIT	DD-2	DESIGN DEVELOPMENT (SUBMISSION2)	HOA	HANDOFF/AUTOMATIC	MB	MIXING BOX	SD	SMOKE DETECTOR
ACD	AUTOMATIC CONTROL DAMPER/MODULATING	DDC	DIRECT DIGITAL CONTROLS	HP	HEAT PUMP	MBH	1000 BTUH	SD	SUPPLY AIR DIFFUSER
ACD-TP	AUTOMATIC CONTROL DAMPER, TWO POSITION	DEG	DEGREE	HPB	HIGH PRESSURE BRER	MCA	MINIMUM BRANCH CIRCUIT AMPACITY	SD-1	SCHEMATIC DESIGN (SUBMISSION1)
AD	ACCESS DOOR	DF	DIFFUSER	HPDT	HIGH PRESSURE DRIP TRAP	MER	MECHANICAL EQUIPMENT ROOM	SD-2	SCHEMATIC DESIGN (SUBMISSION2)
AF	AFTER FILTER	DIA	DIAMETER	HPR	HIGH PRESSURE RETURN (STEAM CONDENSATE)	MERV	MINIMUM EFFICIENCY REPORTING VALUE	SDPR	SMOKE DAMPER
AFCV	AIR FLOW CONTROL VALVE	DIAW	DEIONIZED WATER	HPS	HIGH PRESSURE SUPPLY (STEAM)	MH	MANHOLE	SDR	SMOKE DAMPER (RETURN)
AFV	AIR FLOW MEASURING DEVICE	DIP	DEW POINT TEMPERATURE	HRC	HEAT RECOVERY COIL	MHP	MOTOR HORSEPOWER	SDS	SMOKE DAMPER (SUPPLY)
AFW	AIR FOIL WHEEL (FAN)	DP	DIFFUSER PLATE	HRD	HEAT RECOVERY DEVICE	MIN	MINIMUM	SEN	SENSIBLE HEAT
AHU	AIR-HANDLING UNIT	DPA	DIFFERENTIAL PRESSURE ASSEMBLY	HRP	HYDRONIC RADIANT (CEILING) PANEL	MM	MILLIMETER	SF	SUPPLY FAN
AMP	AMPERGE	DPS	DIFFERENTIAL PRESSURE SENSOR	HRW	HEAT RECOVERY WHEEL	MOV	MOTOR OPERATED VALVE	SG	SUPPLY AIR GRILLE
AP	ACCESS PANEL	DX	DIRECT EXPANSION	HSTAT	HUMIDISTAT	MPR	MEDIUM PRESSURE RETURN (STEAM CONDENSATE)	SH	STEAM HUMIDIFIER
APD	AIR PRESSURE DROP	DXXC	DIRECT EXPANSION COOLING COIL	HTM	HUMIDIFIER TERMINAL	MPS	MEDIUM PRESSURE STEAM	SHC	STEAM HEATING COIL
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE	EA	EXHAUST AIR	HUM	HUMIDIFIER UNIT MOUNTED	MK	MAGNETIC RESONANCE IMAGING	SI	SQUARE INCHES
AS	AIR SEPARATOR	EAT	ENTERING AIR TEMPERATURE	HVU	HEATING AND VENTILATING UNIT	MTD	MEAN TEMPERATURE DIFFERENCE	SP	STATIC PRESSURE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	EAC	EVAPORATIVE COOLER	HWT	HOT WATER	MVD	MANUAL VOLUME DAMPER	SP GR	SPECIFIC GRAVITY
AW	AIR WASHER	EC	ENGINEERING CONTROL CENTER	HWC	HOT WATER HEATING COIL	MZ	MULTI-ZONE	SPD	SUPPLY PROCESS AND DISTRIBUTION
AXF	AXIAL FLOW	ECU	EVAPORATIVE CONDENSER UNIT	HWC	HOT WATER HEATING COIL	NA	NOT APPLICABLE	SPRV	STEAM PRESSURE REDUCING VALVE
		EDH	ELECTRIC DUCT HEATER	HWP	HEATING HOT WATER PUMP	NA	NOISE CRITERIA	SPS	STATIC PRESSURE SENSOR
		EER	ENERGY EFFICIENCY RATIO	HWR	HEATING HOT WATER RETURN	NC	NORMALLY CLOSED	SQ FT	SQUARE FOOT (FEET)
		EF	EXHAUST FAN	HWS	HEATING HOT WATER SUPPLY	NG	NATURAL GAS	SR	SUPPLY AIR REGISTER
		EG	EXHAUST GRILLE	HWH	HOT WATER UNIT HEATER	NGFM	NATURAL GAS FLOWMETER	SS	STAINLESS STEEL
		EGS	EMERGENCY GAS SHUTOFF	HVD	HOISTWAY VENT DAMPER	NO	NORMALLY OPEN	SSR	STEAM TO STEAM HEAT EXCHANGER
		EGT	ENTERING GLYCOL TEMPERATURE	HVD	HOISTWAY VENT DAMPER	NOAA	NATIONAL OCEANIC & ATMOSPHERIC	ST	STEAM TRAP
		EJ	EXHAUST HOOD	IBT	INVERTED BUCKET TRAP	NOM	NOMINAL	SUH	STEAM UNIT HEATER
		EJ	EXPANSION JOINT	IBQ	INDOOR AIR QUALITY	NOM	NOMINAL	SV	STEAM PRESSURE REDUCING VALVE
		EMD	END OF MAIN DRAIN (STEAM)	ICF	IN-LINE CENTRIFUGAL FAN	NPLV	NON-STANDARD PART LOAD VALUE	SVS	STEAM VENT SILENCER
		ENT	ENTERING	ICU	INTENSIVE CARE UNIT	NPSH	NET POSITIVE SUCTION HEAD	SWHX	STEAM TO WATER HEAT EXCHANGER
		ER	EXHAUST REGISTER	ID	INSIDE DIAMETER	NTS	NOT TO SCALE		
		ERC	ELECTRIC REHEAT COIL	IFB	INTEGRAL FACE AND BYPASS	OA	OUTSIDE AIR		
		ERF	ELECTRIC RADIANT PANEL	IN	INCHES	OAG	OUTSIDE AIR GRILLE		
		ESP	EXTERNAL STATIC PRESSURE	IN HG	INCHES OF MERCURY	OAI	OUTSIDE AIR INTAKE		
		ET	EXPANSION TANK	IN WC	INCH WATER COLUMN	OED	OPEN ENDED DUCT		
		ETO	ETHYLENE OXIDE	IN WG	INCH WATER GAUGE	OD	OUTSIDE DIAMETER		
		EUH	ELECTRIC UNIT HEATER	IN-LB	INCH-POUND	OPM	OIL FLOWMETER		
		EVC	EVAPORATIVE WATER COOLER	IPLV	INTERGRATED PART LOAD VALUE	OR	OPERATING ROOM		
		EWIT	ENTERING WATER TEMPERATURE	IRH	INTRARED HEATER	P	PUMP		
		EX	EXISTING	IS	INSECT SCREEN	PA	PASCAL		
		F	FAHRENHEIT	IU	INDUCTION UNIT	PC	PUMPED CONDENSATE		
		F&T	FLOAT AND THERMOSTATIC	IU	INLET VANCES	PCF	POUNDS PER CUBIC FOOT (FEET)		
		F&T/SDPR	COMBINATION FIRE SMOKE DAMPER	J	INTENTIONALLY LEFT BLANK	PD	PRESSURE DROP		
		FA	FREE AREA	kg	KILOGRAM	PEF	PROPELLER (TYPE) EXHAUST FAN		
		FC	FLEXIBLE CONNECTION	kgHR	KILOGRAM PER HOUR	PF	PRE-FILTER		
		FCU	FAN COIL UNIT (4 PIPE)	kPa	KILOPASCAL	PG	PRESSURE GAGE		
		FCU	FAN COIL UNIT COOLING ONLY	kPa	KILOPASCAL	PGW	PROPYLENE GLYCOL-WATER (SOLUTION)		
		FCUH	FAN COIL UNIT HEATING ONLY	kWh	KILOWATT	PHC	PREHEAT COIL		
		FCW	FORWARD CURVED WHEEL (FAN)	kW	KILOWATT HOUR	PPM	PARTS PER MILLION		
		FD	FLOOR DRAIN	L	LITER	PRS	PRESSURE REGULATING (VALVE) STATION		
		FD	FIRE DAMPER	L	LITER	PRV	PRESSURE REGULATING VALVE		
		FF	FLUE GAS/FEEDWATER HEAT EXCHANGER	L/h	LITERS PER HOUR (OR LITERS/HOUR)	PSI	POUNDS PER SQUARE INCH		
		FFH	FLUE GAS/FEEDWATER HEAT EXCHANGER	L/m	LITERS PER MINUTE (OR LITERS/MINUTE)	PSIA	POUNDS PER SQUARE INCH - ABSOLUTE		
		FOP	FUEL OIL PUMP	L/s	LITERS PER SECOND (OR LITERS/SECOND)	PSIG	POUNDS PER SQUARE INCH - GAGE		
		FOT	FUEL OIL TANK	LAT	LEAVING AIR TEMPERATURE	PSS	PRIMARY SECONDARY SYSTEM		
		FOHX	FUEL OIL HEAT EXCHANGER	LBSHR	POUNDS PER HOUR	PSV	PRESSURE SAFETY VALVE		
		FOHM	FUEL OIL HEAT EXCHANGER	LF	LINEAR FOOT (FEET)	PTAC	PACKAGED TERMINAL AIR CONDITIONER		
		FPM	FEET PER MINUTE	LGT	LEAVING GLYCOL TEMPERATURE	R/E	RETURN OR EXHAUST		
		FPS	FEET PER SECOND	LH	LATENT HEAT	RA	RETURN AIR		
		FPFU	FAN POWERED TERMINAL UNIT	L/L	LIQUID PROPANE GAS	RAT	RETURN AIR TEMPERATURE		
		FR	FLOOR REGISTER	LPR	LOW PRESSURE RETURN (STEAM CONDENSATE)	RCH	REMOTE CONTROLLED CHILLER		
		FRP	FIBER REINFORCED POLYESTER	LPS	LOW PRESSURE STEAM RETURN (CLEAN)	RCU	RECIROATING CHILLER UNIT		
		FS	FLOOR SWITCH	LPC	LIQUID TO LIQUID HEAT EXCHANGER	RD	REFRIGERANT DISCHARGE		
		FSTAT	FREESTAT	LPRS	LOW PRESSURE STEAM	RD	ROOM DATA SHEETS		
		FT	FEET	LPSC	LOW PRESSURE STEAM (CLEAN)	REA	RELIEF AIR		
		FTD	FOOT-POUND	LSD	LINEAR SLOT DIFFUSER	RF	RETURN FAN		
		FTR	FIN TUBE RADIATION	LTCP	LOCAL TEMPERATURE CONTROL PANEL	RH	RETURN GRILLE		
		FV	FACE VELOCITY	LTV	LEAVING	RHC	REHEAT COIL		
				LVG	LOUVER	RHG	REFRIGERANT HOT GAS		
				LWT	LEAVING WATER TEMPERATURE	RL	REFRIGERANT LIQUID LINE		
						RLA	RUN LOAD AMPERE		
						RO	REVERSE OSMOSIS		
						RPM	REVOLUTIONS PER MINUTE		
						RR	RETURN REGISTER		
						RS	REFRIGERANT SUCTION		
						RTU	ROOF TOP UNIT		
						RV	RELIEF VALVE		

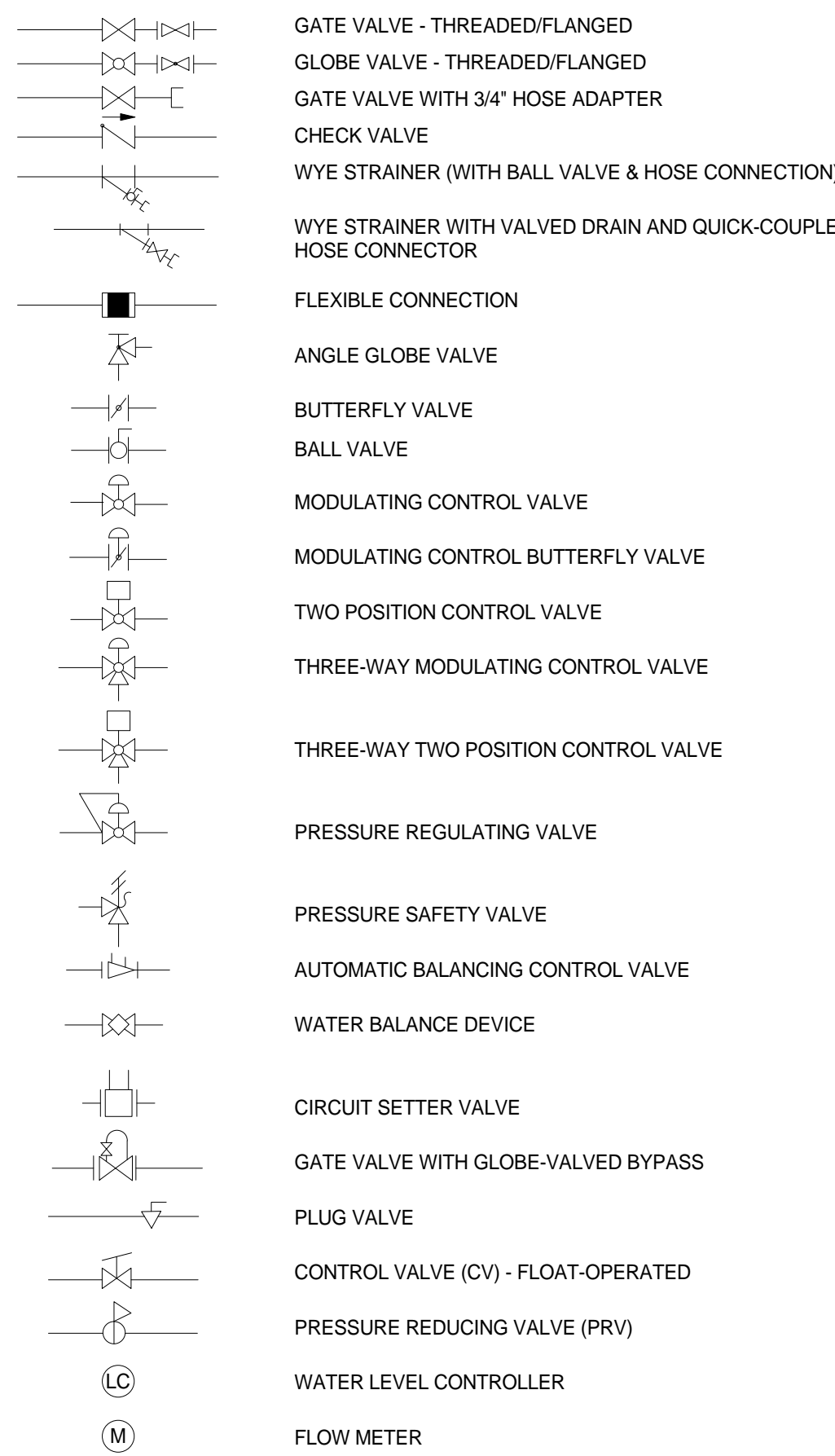
GENERAL NOTES

- ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED. DUCT SIZES ARE NET INSIDE DIMENSIONS.
- ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
- TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- STEAM HEADER SET PRESSURE: 100 PSIG NORMAL / LOW DEMAND PERIODS
- ALTITUDE-BOILER ROOM FLOOR: 100 FT. [M] ABOVE SEA LEVEL
- SEISMIC PROVISIONS NOT REQUIRED REQUIRED. ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED

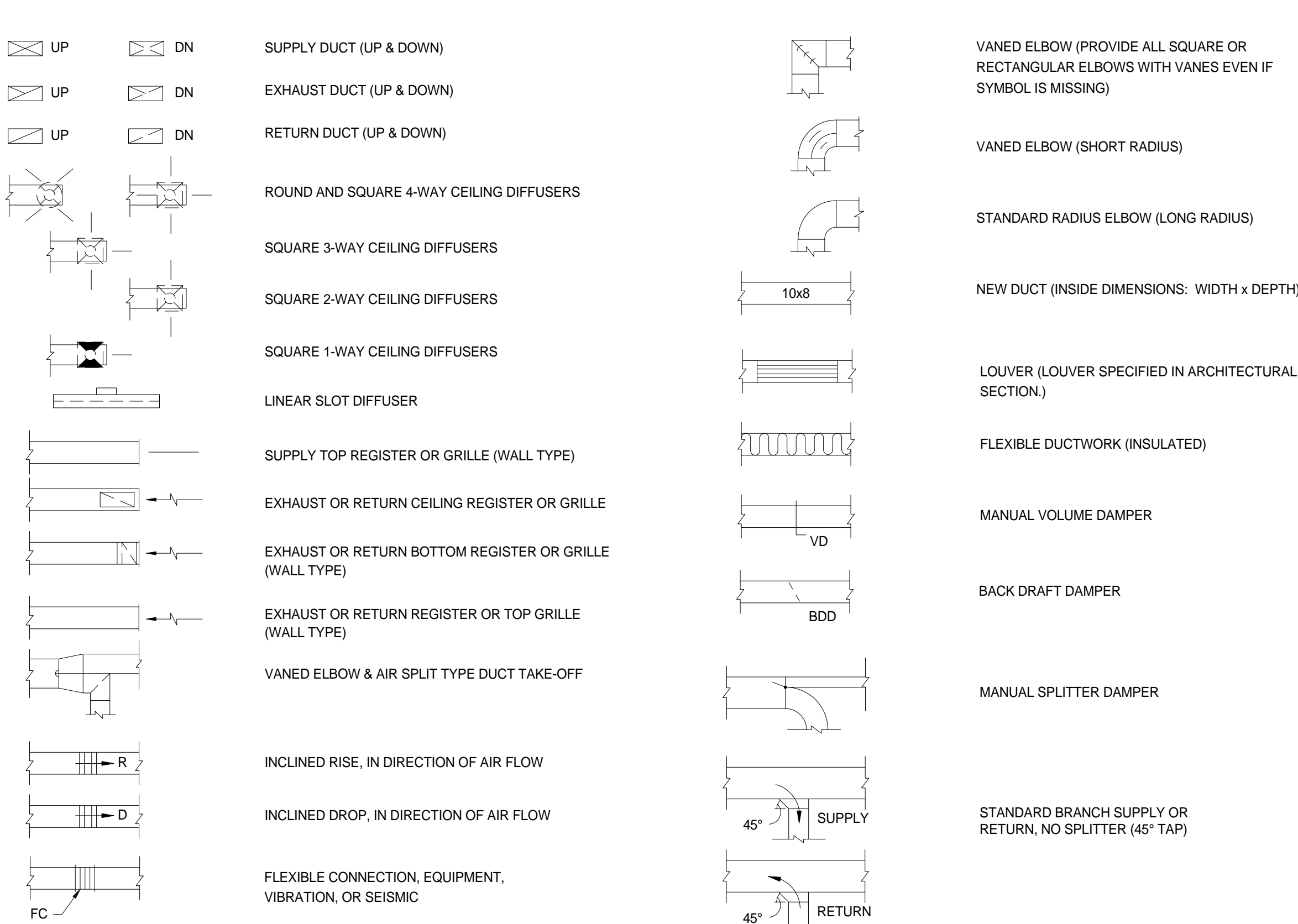
GENERAL PIPING SYMBOLS



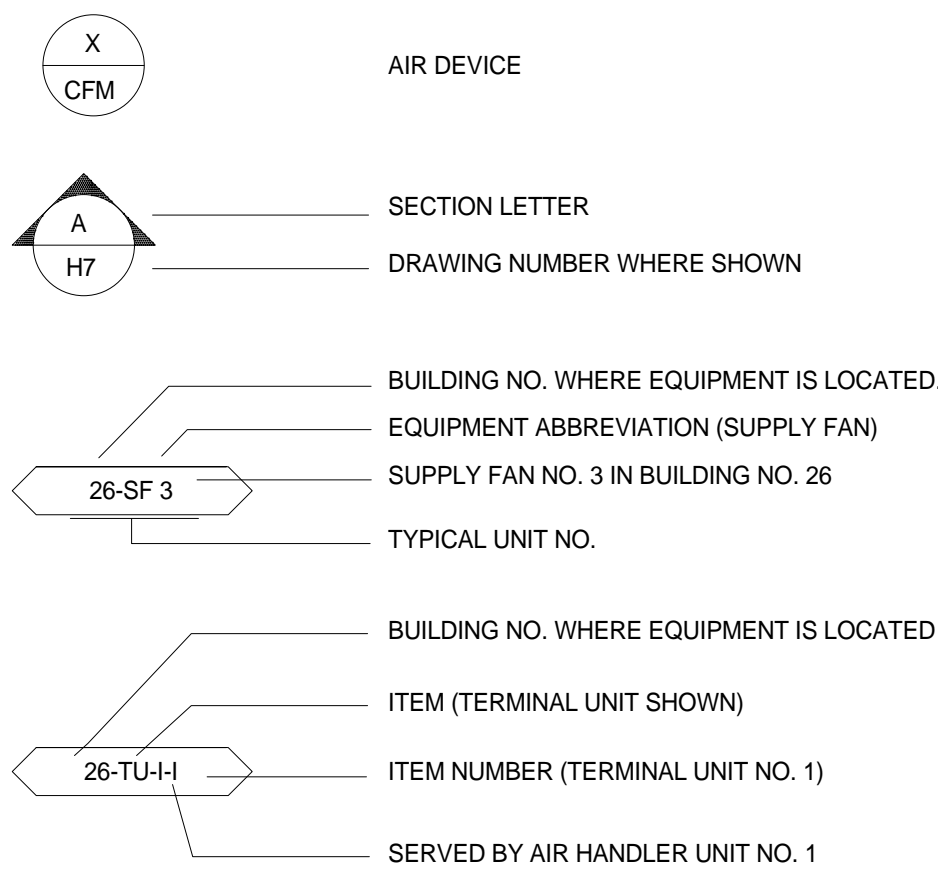
VALVE SYMBOLS



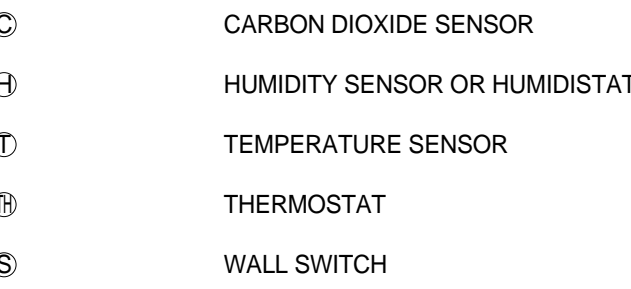
DUCTWORK SYMBOLS



DRAWING SYMBOLS



MISCELLANEOUS SYMBOLS



FINAL DESIGN  
APPROVED FOR CONSTRUCTION

Revisions:		Date	
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