



Sea-Tac International Airport

Facilities and Infrastructure System
Mechanical System Standards

APPENDIX A

Mechanical Legend Symbols Abbreviations General Notes

Revised January 22, 2020

ABBREVIATION

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AC	AIR CONDITIONING	KH	KITCHEN HOOD
AC	ALTERNATING CURRENT	KW	KILOWATT
AF	AIRFOIL	KWH	KILOWATT HOURS
AFF	ABOVE FINISHED FLOOR		
AH	AIR HANDLING UNIT	LAT	LEAVING AIR TEMPERATURE
AMB	AMBIENT	LB/HR	POUNDS PER HOUR
AMP	AMPS	LBS	POUNDS
ARCH	ARCHITECTURAL	LD	LINEAR DIFFUSER
		LF	LINEAR FEET
BD	BALANCING DAMPER	LVG	LEAVING
BDD	BACKDRAFT DAMPER	LWT	LEAVING WATER TEMPERATURE
BF	BLIND FLANGE		
BFP	BACKFLOW PREVENTER	MA	MAKE-UP AIR
BFW	BOILER FEED WATER	MATL	MATERIAL
BHP	BRAKE HORSEPOWER	MAV	MANUAL AIR VENT
BI	BACKWARD INCLINED	MAX	MAXIMUM
BLDG	BUILDING	MBH	THOUSAND BTU PER HOUR
BOD	BOTTOM OF DUCT	MCC	MOTOR CONTROL CENTER
BOP	BOTTOM OF PIPE	MOD	MOTOR OPERATED DAMPER
BTU/HR	BRITISH THERMAL UNIT PER HOUR	MTR	MOTOR
		MVD	MEDIUM VELOCITY DAMPER
		MZU	MULTI-ZONE UNIT
CAP	CAPACITY	N/A	NOT APPLICABLE
CB	CATCH BASIN	N/C	NORMALLY CLOSED
CC	COOLING COIL	NC	NOT IN CONTRACT
CD	CEILING DIFFUSER	NO	NORMALLY OPEN
CF	CABINET FAN	NOM	NOMINAL
CFM	CUBIC FEET PER MINUTE	NPW	NON POTABLE WATER
CFP	CHEMICAL FEED PUMP		
CFT	CHEMICAL FEED TANK	Ø	DIAMETER
CHLR	CHILLER	OA	OUTSIDE AIR
CHM	CHEMICAL	OAT	OUTSIDE AIR TEMPERATURE
CHWP	CHILLED WATER PUMP	OBD	OPPOSED BLADE DAMPER
CI	CAST IRON	OC	ON CENTER
CLG	CEILING/COOLING	OPER	OPERATING
CMPSRSR	COMPRESSOR	OSA	OUTSIDE AIR
CND	CONDENSER	OV	OUTLET VELOCITY
CNDS	CONDENSATE		
CNTFGL	CENTRIFUGAL	PBD	PARALLEL BLADE DAMPER
CO	CLEAN-OUT	PD	PRESSURE DISCHARGE
COP	COEFFICIENT OF PERFORMANCE	PFT	PARALLEL FAN TERMINAL
CP	CIRCULATING PUMP	PH	PHASE
CU	CONDENSING UNIT	POC	POINT OF CONNECTION
CU.FT.	CUBIC FEET	PRESS	PRESSURE
Cv	FLOW COEFFICIENT	PRV	PRESSURE RELIEF VALVE
CVTR	CONVERTER	PRV	PRESSURE REDUCING VALVE
CW	COLD WATER	PSF	POUNDS PER SQUARE FOOT
CWP	CONDENSER WATER PUMP	PSI	POUNDS PER SQUARE INCH
		PSIG	PSI GAUGE
D	DRAIN	PW	PUMPED WASTE
DB	DRY BULB/DECIBELS		
DCVA	DOUBLE CHECK VALVE ASSEMBLY	RA	RETURN AIR
DCW	DOMESTIC COLD WATER	REF	REFERENCE
DIA	DIAMETER	RF	RETURN FAN
DIFF	DIFFUSER	RG	RETURN GRILLE
DISCH	DISCHARGE	RA	RETURN AIR
DMPR	DAMPER	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
DN	DOWN		
DWDI	DOUBLE WIDTH DOUBLE INLET	RWL	RAIN WATER LEADER
EAT	ENTERING AIR TEMPERATURE	SA	SUPPLY AIR
EER	ENERGY EFFICIENCY RATIO	SCFM	STANDARD CUBIC FEET PER MINUTE
EF	EXHAUST FAN	SDS	STORM DRAINAGE SYSTEM
EFF	EFFICIENCY	SF	SUPPLY FAN
EG	EXHAUST GRILLE	SFD	SMOKE FIRE DAMPER
EJ	EXPANSION JOINT	SFT	SERVICES FAN TERMINAL
EL	ELEVATION	SG	SUPPLY GRILLE
ENT	ENTERING	SH	SENSIBLE HEAT
ELEC	ELECTRICAL	SP	STATIC PRESSURE/SEWAGE PUMP
ESP	EXTERNAL STATIC PRESSURE	SS	SANITARY SEWER
EW	ELECTRIC WATER COOLER	STIA	SEATAC INTERNATIONAL AIRPORT
EWT	ENTERING WATER TEMPERATURE	STM	STEAM
EXT	EXTERNAL	STRUCT	STRUCTURAL
		SUCT	SUCTION
F	FAHRENHEIT	SW	SERVICE WATER
FC	FOWARD CURVED	SWSI	SINGLE WIDTH SINGLE INLET
FCO	FLOOR CLEANOUT		
FD	FIRE DAMPER/FLOOR DRAIN	T	THERMOMETER/TRAP
FDC	FIRE DEPARTMENT CONNECTION	TCV	TEMPERATURE CONTROL VALVE
FLA	FULL LOAD AMPS	TDH	TOTAL DYNAMIC HEAD
FLR	FLOOR	TG	TRANSFER GRILLE
FOR	FUEL OIL RETURN	TI	TOP INVERT
FOS	FUEL OIL SUPPLY	TOD	TOP OF DUCT
FOV	FUEL OIL TANK VENT	TOS	TOP OF STEEL
FBM	FEET PER MINUTE	TP	TOTAL PRESSURE/TRAP PRIMER
FT	FEET	TSP	TOTAL STATIC PRESSURE
FT2	SQUARE FEET	T*STAT	THERMOSTAT
FV	FACE VELOCITY	TWR	TOWER
		TYP	TYPICAL
GA	GAUGE		
GAL	GALLONS	UBC	UNIFORM BUILDING CODE
GALV	GALVANIZED STEEL	UC	UNDERCUT
GI	GREASE INTERCEPTOR	UH	UNIT HEATER
GPD	GALLONS PER DAY	UMC	UNIFORM MECHANICAL CODE
GPH	GALLONS PER HOUR	UPC	UNIFORM PLUMBING CODE
GPM	GALLONS PER MINUTE		
GSM	GALVANIZED SHEET METAL	V	VENT/VOLT
		VAC	VACUUM
HB	HOSE BIBB	VEL	VELOCITY
HC	HEATING COIL	VFD	VARIABLE FREQUENCY DRIVE
HD	HEAVY DUTY	VOL	VOLUME
HDR	HEADER	VTR	VENT THROUGH ROOF
HOA	HAND-OFF-AUTOMATIC		
HP	HORSEPOWER		
HPS	HIGH PRESSURE STEAM		
HW	HOT WATER	W/	WITH
HWC	HOT WATER CIRCULATING	WAC	WITHINNING ADMINISTRATIVE CODE
HWCP	HOT WATER CIRCULATING PUMP	WB	WET BULB
HWP	HEATING WATER PUMP	WCO	WALL CLEAN OUT
HX	HEAT EXCHANGER	WG	WATER GAGE
		WH	WALL HYDRANT
IE	INVERT ELEVATION	WH	WATER HEATER
IMP	IMPELLER	WS	WASTE STACK
IN	INCH	WSEC	WASHINGTON STATE ENERGY CODE
IPL	INTEGRATED PART LOAD VALUE		

MECHANICAL LEGEND

SYMBOLS	ABBREVIATION	DESCRIPTION	SYMBOLS	ABBREVIATION	DESCRIPTION	SYMBOLS	ABBREVIATION	DESCRIPTION
		HEAVY LINE INDICATES NEW WORK		CAP	CAP		VD	MANUAL VOLUME DAMPER
		LIGHT LINE INDICATES EXISTING WORK OR BACKGROUND		BF	BLIND FLANGE		BDD	BACKDRAFT DAMPER
		CENTERLINE		RD	ROOF DRAIN		MOD	MOTOR OPERATED DAMPER
		MATCHLINE		HB	HOSE BIBB		AMU	AIR MEASURING UNIT (PROVIDE ACCESS DOOR UPSTREAM AND DOWNSTREAM)
		WORK TO BE REMOVED		WH	WALL HYDRANT (NON FREEZE)		HC/CC	HEATING OR COOLING COIL
		PIPELINE – NORMAL DIRECTION OF FLOW			HOSE END DRAIN VALVE		SL	SOUND LINED DUCT
	SA	FLOW ARROW (SUPPLY AIR SHOWN)		GV	GATE VALVE			FLEXIBLE CONNECTION
	1	NOTE CALLOUT			GLOBE VALVE			TURNING VANES (USE ONLY ON DISCHARGE SIDE OF RETURN/EXHAUST FANS)
	P-1	PLUMBING FIXTURE OR DRAIN CALLOUT, SEE SCHEDULE			GAS COCK		CD	CEILING DIFFUSER (FOUR-WAY DIRECTIONAL AIRFLOW)
	I-CWS-40	PIPE CALLOUT:		POC	POINT OF CONNECTION		CD	CEILING DIFFUSER (THREE-WAY DIRECTIONAL AIRFLOW WITH BLANK-OFF SHOWN)
		GPM (REFERENCED FOR INFORMATION ONLY)		PRV	PRESSURE REGULATING VALVE		LD	LINEAR DIFFUSER (FLOW ARROW SHOWN ONLY IF AIRFLOW IS ONE DIRECTIONAL)
		PIPE SIZE (IN)			BALANCING VALVE		RG/EG/TG	CEILING PLENUM RETURN AIR/ EXHAUST CEILING GRILLE/ TRANSFER GRILLE
	HCP.AH01	EQUIPMENT CALLOUT, SEE SCHEDULE			WATER HAMMER ARRESTER (PDI SIZE "C" SHOWN)		SG	SUPPLY WALL GRILLE
		EQUIPMENT IDENTIFICATION NUMBER			RELIEF VALVE		RG	RETURN WALL GRILLE
		UNIT LOCATION SYSTEM			BALL VALVE			UNIT HEATER, SEE SCHEDULE
	CD2-300	DIFFUSER OR GRILLE CALLOUT, SEE SCHEDULE			BUTTERFLY VALVE			PUMP, SEE SCHEDULE
		VOLUME FLOW RATE (CFM), NONE INDICATED FOR TRANSFER GRILLE			PRESSURE REDUCING VALVE			TERMINAL UNIT, SEE SCHEDULE
		DIFFUSER OR GRILLE TYPE, SEE SCHEDULE			UNION			IN-LINE FAN, SEE SCHEDULE
	TE	TOP ELEVATION			FLEXIBLE CONNECTION			VANE AXIAL FAN, SEE SCHEDULE
	IE	INVERT ELEVATION			PIPE ANCHOR			PROPELLER FAN, SEE SCHEDULE
		PIPE TURNING UP OR TOWARD			PIPE GUIDE		T	SPACE TEMP SENSOR
		PIPE TURNING DOWN OR AWAY			PRESSURE GAGE		A	INDOOR AIR QUALITY SENSOR
	SS	SANITARY SEWER			THERMOMETER		H	SPACE HUMIDITY SENSOR
	ST	STORM SEWER			SIGHT GLASS		AMU	AIR MEASURING UNIT
	S OR W	SOIL OR WASTE		XX	STEAM TRAP ASSEMBLY F&T = FLOAT & THERMOSTATIC F = FLOAT; T = THERMOSTATIC B = BUCKET; IB = INVERTED BUCKET LB = LBS/HR RATING		AUX	AUXILIARY DEVICE OR CONTACT
	S OR W	SOIL OR WASTE BURIED			REDUCER CONCENTRIC		CR	CONTROL RELAY
	V	VENT			REDUCER ECCENTRIC		CS	CURRENT SENSING RELAY
	RWL	RAIN WATER LEADER			BASKET STRAINER		CT	CURRENT SENSOR/TRANSMITTER
	ORL	OVERFLOW RAIN LEADER			WYE STRAINER		DPH	DIFFERENTIAL PRESSURE SWITCH (HIGH)
	IWS	INDUSTRIAL WASTE SYSTEM			CHECK VALVE		DPL	DIFFERENTIAL PRESSURE SWITCH (LOW)
	CW	DOMESTIC COLD WATER			AUTOMATIC CONTROL VALVE (PNEUMATIC OPERATOR)		DPS	DIFFERENTIAL PRESSURE SENSOR /TRANSMITTER
	HW	DOMESTIC HOT WATER			AUTOMATIC CONTROL VALVE (ELECTRIC OPERATOR)		FCV	FLOW CONTROL VALVE
	HWC	DOMESTIC HOT WATER CIRCULATION			STRAINER WITH BLOW-DOWN VALVE		FM	FLOW METER
	A	COMPRESSED AIR		BFP	BACKFLOW PREVENTER RBPB= REDUCED PRESSURE BACKFLOW PREVENTER DCV = DOUBLE CHECK VALVE AUTOMATIC FLOW CONTROL VALVE		FPT	FREEZE PROTECTION THERMOSTAT
	G	NATURAL GAS		P/T	PRESSURE/TEMPERATURE TEST PORT		FS	FLOW SWITCH
	PD	PRESSURE DISCHARGE		MAV	MANUAL AIR VENT		ICV	ISOLATION CONTROL VALVE
	D	CONDENSATE DRAIN		AAV	AUTOMATIC AIR VENT		LSH	LEVEL SWITCH (HIGH)
	SW	SERVICE WATER			ROUND DUCT (UP)		LSL	LEVEL SWITCH (LOW)
	MPS	MEDIUM PRESSURE STEAM			ROUND DUCT (DOWN)		LT	LEVEL SENSOR/TRANSMITTER
	MPC	MEDIUM PRESSURE CONDENSATE			90° ELBOW (RADIUS = 1.5 x ELBOW DIAMETER)		MOD	MOTOR OPERATED DAMPER
	LPS	LOW PRESSURE STEAM			DUCT: 1ST SIZE (IN) INDICATES SIDE SHOWN, 2ND SIZE (IN) INDICATES SIDE NOT SHOWN, INSIDE FREE AREA		PSH	PRESSURE SWITCH (HIGH)
	C	CONDENSATE			ACCESS DOOR (AD) OR ACCESS PANEL (AP)		PSL	PRESSURE SWITCH (LOW)
	PR	PUMPED RETURN			SUPPLY AIR DUCT (UP)		PT	PRESSURE SENSOR/TRANSMITTER
	PW	PUMPED WASTE			SUPPLY AIR DUCT (DOWN)		RH	HUMIDITY SENSOR/TRANSMITTER
	HWS	HEATING WATER SUPPLY			EXH. OR RET. AIR DUCT (UP)		SD	SMOKE DETECTOR
	HWR	HEATING WATER RETURN			EXH. OR RET. AIR DUCT (DOWN)		TBV	TOWER BYPASS VALVE
	HPS	HIGH PRESSURE STEAM		SFD	COMBINATION SMOKE/FIRE DAMPER (PROVIDE ACCESS)		TCV	TEMPERATURE CONTROL VALVE
	HPC	HIGH PRESSURE CONDENSATE		FD	FIRE DAMPER (PROVIDE ACCESS)		TS	TEMPERATURE SENSOR/ TRANSMITTER (PIPE/DUCT)
	SCHS	SECONDARY CHILLED WATER SUPPLY					VFD	VARIABLE FREQUENCY DRIVE
	SCHR	SECONDARY CHILLED WATER RETURN						
	CHS	CHILLED WATER SUPPLY						
	CHR	CHILLED WATER RETURN						
	CWS	CONDENSER WATER SUPPLY						
	CWR	CONDENSER WATER RETURN						
	GCHS	GLYCOL CHILLED WATER SUPPLY						
	GCHR	GLYCOL CHILLED WATER RETURN						
	GHWS	GLYCOL HEATING WATER SUPPLY						
	GHWR	GLYCOL HEATING WATER RETURN						
	TP	TRAP PRIMER						
		METER						
	FD	FLOOR DRAIN						
	FCO	FLOOR CLEANOUT						
	GCO	GRADE CLEANOUT						
	WCO	WALL CLEANOUT						

REVISIONS

[illegible]PROJECT MANAGER:

PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:



Port
of Seattle

SEA-TAC INTERNATIONAL AIRPORT

PROJECT:

MECHANICAL STANDARDS

WORK PROJECT NO.

CONSULTANT'S NO.
