

## PLUMBING ABBREVIATIONS

A/E	ARCHITECT / ENGINEER	L/S	LITER PER SECOND
AD	AREA DRAIN	LA	LABORATORY AIR
AFF	ABOVE FINISH FLOOR	LAV	LAVATORY
AG	ABOVE FINISH GRADE	LBS/HR	POUNDS PER HOUR
AP	AIR GAP	LCW	LABORATORY COLD WATER
AS	ACCESS PANEL	LHW	LABORATORY HOT WATER
ASD	AUTOMATIC SPRINKLER	LNG	LIQUID NATURAL GAS
ASD	ADJUSTABLE SPEED DRIVES	LOX	LIQUID OXYGEN
ASD	AUTOMATIC SPRINKLER DRAIN	LV	LABORATORY VACUUM
ASHRAE	AMERICAN SOCIETY HEATING, REFRIGERATION, AIR CONDITIONING ENGINEERS	LW	LOW WATER
		M	METER
ASME	AMERICAN SOCIETY MECHANICAL ENGINEERS	MA	MEDICAL AIR
ASPE	AMERICAN SOCIETY PLUMBING ENGINEERS	MAV	MANUAL AIR VENT
ASR	AUTOMATIC SPRINKLER RISER	MBH	1000 BTUH
AV	ACID VENT	MED	MEDICAL
AW	ACID WASTE	MER	MECHANICAL EQUIPMENT ROOM
BFP	REDUCED PRESSURE BACKFLOW PREVENTER	MH	MANHOLE
BHP	BREAK HORSEPOWER	MOU	MEMORANDUM OF UNDERSTANDING
BSP	BLACK STEEL PIPE	MSB	MOP SERVICE BASIN
BT	BATHTUB	MV	MEDICAL VACUUM
BTU	BRITISH THERMAL UNIT	N2	NITROGEN
BTUH	BRITISH THERMAL UNIT PER HOUR	N2O	NITROUS OXIDE
C	CELSIUS	NC	NORMALLY CLOSED
CGA	COMPRESSED GAS ASSOCIATION	NG	NATURAL GAS
CI	CAST IRON	NIC	NOT IN CONTRACT
CO	CLEANOUT	NO	NORMALLY OPEN
CS	CLINICAL SINK	NOM.	NOMINAL
CV	CONTROL VALVE	NPW	NON POTABLE WATER
		NTC	NOT TO SCALE
		O2	OXYGEN
DCW	DOMESTIC COLD WATER	OC	ON CENTER
DHW	DOMESTIC HOT WATER	OD	OUTSIDE DIAMETER
DHWR	DOMESTIC HOT WATER RETURN	OFD	OVERFLOW DRAIN
DHWR	DOMESTIC WATER RETURN	OR	OPERATING ROOM
DHWS	DOMESTIC HOT WATER SUPPLY	OVFL	OVERFLOW
DI	DEIONIZED WATER		
DN	DOWN	PA	PASCAL
DOE	DEPARTMENT OF ENERGY	PD	PRESSURE DROP OR DIFFERENCE
DS	DOWNSPOUT	PDI	PLUMBING AND DRAINAGE INSTITUTE
DW	DISHWASHER	PG	PRESSURE GAGE
DWG	DRAWING	PP	PLUMBING PUMP
DWH	DOMESTIC WATER HEATER	PPM	PARTS PER MILLION
DWR	DRINKING WATER RETURN	PRS	PRESSURE REDUCING STATION
DWS	DRINKING WATER SUPPLY	PRV	PRESSURE REDUCING VALVE
DWV	DRAIN WASTE VENT	PSI	POUNDS PER SQUARE INCH
EL	ELEVATION	PSIA	POUNDS PER SQUARE INCH ATMOSPHERE
EMCS	ENERGY MONOSERRAT AND CENTRAL SYSTEM	PSIG	POUNDS PER SQUARE INCH GAUGE
EPA	ENVIRONMENTAL PROTECTION AGENCY	PTRV	PRESSURE TEMPERATURE RELIEF VALVE
EPACT	ENERGY POLICY ACT		
ESC	ESCUTCHEON	PW	POTABLE WATER
ESH	EMERGENCY SHOWER		
ET	EXPANSION TANK	RD	ROOF DRAIN
EW	ELECTRIC WATER COOLER	RDL	ROOF DRAIN LEADER
EW	ELECTRIC WATER HEATER	RL	ROOF LEADER
EWS	EYE WASH STATION	RO	REVERSE OSMOSIS WATER
EX	EXISTING	RWL	RAIN WATER LEADER
F	FAHRENHEIT	SAN	SANITARY SEWER
FCO	FLOOR CLEANOUT	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
FCW	FILTERED COLD WATER		
FD	FLOOR DRAIN	SCFM	STANDARD CUBIC FOOT/MINUTE
FDC	FIRE DEPARTMENT (HOSE) CONNECTION	SCW	SOFTENED COLD WATER
FM	FLOW METER	SDMH	STORM DRAIN MANHOLE
FOP	FUEL OIL PUMP	SP	SUMP PUMP
FOR	FUEL OIL RETURN	SPR	SPRINKLER LINE
FOS	FUEL OIL SUPPLY	SOFT	SQUARE FEET
FOV	FUEL OIL VENT	SS	STAINLESS STEEL
FS	FLOOR SINK	ST	STORAGE TANK
FS	FLOW SWITCH	SW	STORM WATER
FU	FIXTURE UNITS		
		TCV	TEMPERATURE CONTROL VALVE
GAL	GALLON	TD	TEMPERATURE DIFFERENCE
GCD	GRADE CLEANOUT	TD	TRENCH DRAIN
GPD	GALLONS PER DAY	TDH	TOTAL DYNAMIC HEAD
GPH	GALLONS PER HOUR	TEMP	TEMPERATURE
GPM	GALLONS PER MINUTE	TMV	THERMOSTATIC MIXING VALVE
GPR	GAS PRESSURE REGULATOR	TP	TRAP PRIMER
GRS	GAS REGULATOR STATION	TSTAT	THERMOSTAT
GT	GREASE TRAP	TWR	TEMPERED WATER RETURN
GVTR	GAS VENT THROUGH ROOF	TWS	TEMPERED WATER SUPPLY
GW	GAS FIRED WATER HEATER	TYP	TYPICAL
H&CW	HOT AND COLD WATER	UPC	UNIFORM PLUMBING CODE
HB	HOSE BIBB		
HD	HUB DRAIN	V	VENT
HEX	HEAT EXCHANGER	VAC	VACUUM
HP	HORSEPOWER	VB	VACUUM BREAKER
HS	HAND SINK	VCO	VACUUM CLEANER OUTLET
HST	HOT WATER STORAGE TANK (DOMESTIC)	VP	VACUUM PUMP
HWB	HOT WATER BOILER	VS	VENT STACK
HWCP	HOT WATER CIRCULATING PUMP	VTR	VENT THROUGH ROOF
HWP	HOT WATER PUMP		
HYD	HYDRANT	W	WASTE
ICW	INDUSTRIAL COLD WATER	WC	WALL CLOSET
INV	INVERT	WCO	WALL CLEANOUT
IPC	INTERNATIONAL PLUMBING CODE	WG	WATER GAGE
IRW	IRRIGATION WATER	WH	WALL HYDRANT
IW	INDIRECT WASTE	WH	WATER HEATER
IWH	INSTANTANEOUS WATER HEATER	WH	WATER HAMMER ARRESTER
IWR	INDUSTRIAL WATER RETURN	WL	WATER LINE
IWS	INDUSTRIAL WATER SUPPLY	WM	WATER METER
		WPD	WATER PRESSURE DROP
KW	KILOWATT	WS	WASTE STACK
KWHR	KILOWATT-HOUR	YCO	YARD CLEANOUT
		YH	YARD HYDRANT

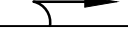




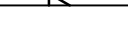
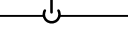
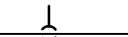

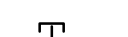
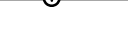
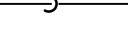
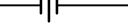

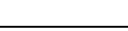

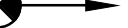




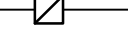

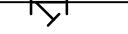
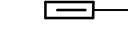
## GENERAL NOTES

1. THE PLUMBING SYSTEM SHALL CONFORM TO INTERNATIONAL PLUMBING CODE 2006.
2. FOR HOT WATER HEATING AND SUPPLY, PROVIDE A MAXIMUM TEMP OF 122-126 DEG. F AT THE FIXTURE (PER ADA SPECS), UNLESS SPECIFIC APPLIANCES OR EQUIPMENT SPECIFICALLY REQUIRE HIGHER TEMPERATURE WATER SUPPLY. THE TEMPERATURE DROP ACROSS THE SYSTEM SHALL BE NO MORE THAN 6' F.
3. UNLESS OTHERWISE SPECIFIED OR DIRECTED, PROVIDE IN ACCORDANCE WITH ASHRAE HANDBOOK SERIES (APPROPRIATE CHAPTERS), ASHRAE STANDARD 90.1, AND THE ENERGY CONSERVATION REQUIREMENTS OF THE CONTRACT. SIZE AND PLACE EQUIPMENT SO THAT IT IS EASILY ACCESSIBLE AND REMOVABLE FOR REPAIR OR REPLACEMENT.
4. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.
5. COORDINATE PLUMBING PIPING WITH AIR CONDITIONING DUCTS, ELECTRICAL CONDUIT AND ALL TRADES.
6. CONTRACTOR SHALL VERIFY DISTANCE TO CONNECTION TO EXISTING UTILITIES PRIOR TO BID.
7. REFER TO UNITED FACILITIES CODE (UFC) 3-420-01 AND 4-510-01.

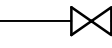
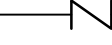
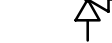
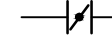
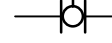
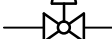
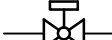
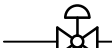
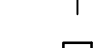



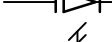


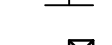

## PLUMBING PIPING SYMBOLS

---	---	DOMESTIC COLD WATER, COLD WATER
---	---	DOMESTIC HOT WATER, HOT WATER
-----	-----	DOMESTIC HOW WATER RETURN, HOT WATER RETURN
MA	MA	MEDICAL AIR
MV	MV	MEDICAL VACUUM
LA	LA	LABORATORY AIR
LV	LV	LABORATORY VACUUM
OA	OA	ORAL EVACUATION
IA	IA	INDUSTRIAL AIR
D	D	DRAIN
SAH	SAN	SANITARY SEWER
SS	SS	SANITARY SEWER (OPTIONAL)
SAN	SAN	SANITARY SEWER, BELOW GRADE
---	---	SANITARY SEWER VENT
SD	SD	STORM WATER
SD	SD	STORM WATER, BELOW GRADE
SCW	SCW	SOFTEN COLD WATER
FCW	FCW	FILTERED COLD WATER
DWS	DWS	DRINKING WATER SUPPLY
DWR	DWR	DRINKING WATER RETURN
TWS	TWS	TEMPERED WATER SUPPLY
TWR	TWR	TEMPERED WATER RETURN
NO	NO	NITROUS OXIDE
O	O	OXYGEN
NL	NL	NITROGEN
NG	NG	NATURAL GAS
NG	NG	NATURAL GAS, BELOW GRADE
FOO	FOO	FUEL OIL DISCHARGE
FOS	FOS	FUEL OIL SUPPLY
FOV	FOV	FUEL OIL VENT
FOR	FOR	FUEL OIL RETURN

## GENERAL PLUMBING SYMBOLS

	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
	PIPE UP
	PIPE DOWN
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	LIMIT OF DEMOLITION
	INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES
	FLOAT & THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES
	STRAINER
	THERMOMETER
	PRESSURE GAGE
	FLOW ELEMENT
	CLEAN OUT
	HOSE BIB (FROSTPROOF)
	FLOOR DRAIN W/ TRAP PRIMER
	WATER HAMMER ARRESTOR

## PLUMBING VALVE SYMBOLS



	GATE VALVE
	GLOBE VALVE
	GATE VALVE WITH 3/4 " HOSE ADAPTER
	CHECK VALVE
	ANGLE GLOBE VALVE
	BUTTERFLY VALVE
	BALL VALVE
	MODULATING CONTROL VALVE
	TWO POSITION CONTROL VALVE
	THREE-WAY MODULATING CONTROL VALVE
	THREE-WAY TWO POSITION CONTROL VALVE
	PRESSURE REGULATING VALVE
	AUTOMATIC FLOW CONTROL VALVE
	PRESSURE RELIEF VALVE
	MANUAL AIR VENT
	TEST PLUG (PRESSURE/TEMPERATURE)
	AUTOMATIC AIR VENT

FINAL SUBMISSION  
APRIL 9, 2013

IF SHEET IS LESS THAN (30"x42") IT IS  
A REDUCED PRINT; SCALE ACCORDINGLY

P001



 <p>766 MIDDLE ST., FAIRHOPE, AL 36532 251-990-5778</p> <p>ARCH. &amp; ENGR. SEAL</p> 	<b>NATURAL RESOURCES &amp; ENVIRONMENTAL AFFAIRS</b> SATISFACTORY TO DATE		P.W. DWG. NO.		DEPARTMENT OF THE NAVY <b>NAVAL SUPPORT ACTIVITY</b> PANAMA CITY, FLORIDA	
	<b>SAFETY DEPARTMENT</b> SATISFACTORY TO DATE		DRAWN BY JLL		CONSTRUCT NAVAL BRANCH HEALTH CLINIC PANAMA CITY  PLUMBING LEGEND, ABBREVIATIONS AND SYMBOLS	
	<b>FIRE DEPARTMENT</b> SATISFACTORY TO DATE		CHECKED BY WWB			
	<b>PUBLIC WORKS SUPERVISOR</b> SATISFACTORY TO DATE		SUPERVISOR WWB			
			APPROVED DATE			
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