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PLUMBING ABBREVIATIONS

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

PLUMBING VALVE SYMBOLS

GLOBE VALVE

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

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

PLUMBING PIPING SYMBOLS

DOMESTIC COLD WATER, COLD WATER

DOMESTIC HOT WATER, HOT WATER

DOMESTIC HOW WATER RETURN, HOT WATER RETURN

MEDICAL AIR

MEDICAL VACUUM

SANITARY SEWER

STORM WATER

FILTERED COLD WATER

NITROUS OXIDE

OXYGEN

NITROGEN

NATURAL GAS

DRAWING SYMBOLS

DETAIL NUMBER

DRAWING NUMBER WHERE DRAWN

SECTION LETTER

DRAWING NUMBER WHERE SHOWN

EQUIPMENT ABBREVIATION (PUMP)

PUMP NO. 3

TYPICAL UNIT NO.

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

A

B

C

D

E

F

| | | | | | | | | | | |
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| | | CONSULTANT: | CONSULTANT: | ARCHITECT/ENGINEERS: | Drawing Title PLUMBING ABBREVIATIONS / LEGEND | Project Title COMMUNITY LIVING CENTER | Project Number 442-12-357 | Office of Construction and Facilities Management | | |
| | | | | | Approved: Project Director SYLVIE RUPP - CFM DIRECTOR FACILITIES/ENGINEERING PHONE: 307-778-7550x7267 FAX: 307-287-9725 | Location CHEYENNE, WYOMING | Building Number COWBOY | | | |
| | | | | | | Date MARCH 2016 | Checked PFM | Drawn CDL | Drawing Number P001 | Department of Veterans Affairs |
| | | | | | | | | | Dwg. of | |

ADDENDUM (CONSTRUCTION DOCUMENTS)

AUGUST 2016

ADDENDUM (CONSTRUCTION DOCUMENTS)

MARCH 2016

Revisions:

Date

VA FORM 09-6231