

LIST OF ABBREVIATIONS

| | | |
|-----------------------------------|--|---------------------------------|
| A, AMP AMPERES OR AMPLIFIER | H HEIGHT | REIN REINFORCE (D) (ING) (MENT) |
| ABAN ABANDONED | HB HOSE BIB | REQ'D REQUIRED |
| AC ALTERNATING CURRENT | HDPE HIGH DENSITY POLYETHYLENE | RMJ RESTRAINED MECHANICAL JOINT |
| ALT ALTERNATE | HORIZ HORIZONTAL | RPM REVOLUTIONS PER MINUTE |
| ALUM ALUMINUM | HP HIGH POINT OR HORSEPOWER | RPO RESTRAINED PUSH-ON JOINT |
| AFF ABOVE FINISH FLOOR | HVAC HEATING, VENTILATING & AIR CONDITIONING | RS RISING STEM |
| APPROX APPROXIMATE | HWL HIGH WATER LEVEL | SAN SANITARY OR SANITARY SEWER |
| ARCH ARCHITECTURAL | HWO HANDWHEEL OPERATED | SECT SECTION |
| ARV AIR RELEASE VALVE | HX HEAT EXCHANGER | SF SQUARE FOOT |
| | HYD HYDRAULIC | SHT SHEET |
| | HZ HERTZ | SI SQUARE INCH |
| BEL BELOW | ID INSIDE DIAMETER | SPEC SPECIFICATION |
| BFP BACKFLOW PREVENTER | IE INVERT ELEVATION | SQ SQUARE |
| BFG BELOW FINISHED GRADE | IN INCHES | SQ FT SQUARE FEET |
| BFV BUTTERFLY VALVE | INJ INJECTION | SST STAINLESS STEEL |
| BLDG BUILDING | INSTR INSTRUMENT | STC SLEEVE-TYPE COUPLING |
| BOT BOTTOM | INV INVERT | STL STEEL |
| BPV BACK PRESSURE VALVE | IP IRON PIPE | STRUC STRUCTURAL |
| BV BALL VALVE | IPS IRON PIPE SIZE | SW SOLVENT WELD JOINT |
| BYP BYPASS | | SY SQUARE YARD |
| | | SYM SYMMETRICAL |
| C/C CENTER TO CENTER | JT JOINT | TBA TO BE ABANDONED |
| CFM CUBIC FEET PER MINUTE | KW KILOWATT | TBE THREAD BOTH ENDS |
| CI CAST IRON | KWH KILOWATTS PER HOUR | TBR TO BE REMOVED |
| CIP CAST IRON PIPE | | TEMP TEMPERATURE |
| CL CENTER LINE | LAB LABORATORY | THD THREADED |
| CLR CLEAR | LBS POUNDS | THK THICK, THICKNESS |
| CONN CONNECTION | LF LINEAR FOOT | TYP TYPICAL |
| CONST CONSTRUCTION | LG LONG | UG UNDERGROUND |
| CONT CONTINUOUS, CONTINUATION | LIN LINEAR | UON UNLESS OTHERWISE NOTED |
| CONTR CONTRACTOR | LP LOW POINT | UV ULTRAVIOLET |
| CPLG COUPLING | LWL LOW WATER LEVEL | |
| CU COPPER | MAX MAXIMUM | VAC VACUUM |
| CU FT CUBIC FEET | MECH MECHANICAL | VC VICTAULIC COUPLING |
| CYL CYLINDER | MFGR MANUFACTURER | VERT VERTICAL |
| CV CHECK VALVE | MGD MILLION GALLONS PER DAY | VFD VARIABLE FREQUENCY DRIVE |
| | MIN MINIMUM | |
| D DEPTH, DRAIN | N/A NOT APPLICABLE | W/ WITH |
| dB DECIBEL | NC NORMALLY CLOSED | W/L WATER LEVEL |
| DEMO DEMOLITION | NEMA NATIONAL ELECTRICAL | W/O WITHOUT |
| DEPT DEPARTMENT | MANUFACTURER'S ASSOCIATION | W WIDE, WIRE |
| DET DETAIL | N, NEUT NEUTRAL | WC WATER CLOSET |
| DIA DIAMETER | NIC NOT IN CONTRACT | WD WIDTH |
| DIP DUCTILE IRON PIPE | NO NORMALLY OPEN | WM WATER MAIN |
| DIV DIVISION | NO. NUMBER | WSP WELDED STEEL PIPE |
| DN DOWN | NPS NOMINAL PIPE SIZE | WWTP WASTEWATER TREATMENT PLANT |
| DR DRAIN | NPT NATIONAL PIPE THREAD | |
| | NRS NON-RISING STEM | X-SECT CROSS SECTION |
| EA EACH | NTS NOT TO SCALE | XFMR TRANSFORMER |
| ECC ECCENTRIC | NWL NORMAL WATER LEVEL | |
| ED EQUIPMENT DRAIN | | |
| EF EACH FACE | O/O OUT TO OUT | |
| EL ELEVATION | OC ON CENTER | |
| ELEC ELECTRIC | OD OUTSIDE DIAMETER | |
| ENGR ENGINEER | OPER OPERATOR, OPERATING | |
| EQUIP EQUIPMENT | OPNG OPENING | |
| EST ESTABLISHED | OPP OPPOSITE | |
| EW EACH WAY | ORIG ORIGINAL | |
| EXH EXHAUST | | |
| EXIST EXISTING | P PUMP | |
| EXP EXPANSION | PC PRECAST | |
| EXT EXTERIOR | PCCP PRECAST CONCRETE CYLINDER PIPE | |
| | PCF POUNDS PER CUBIC FOOT | |
| F/F FACE TO FACE | PE PLAIN END OR POLYETHYLENE | |
| FAC FREE AVAILABLE CHLORINE | PERIM PERIMETER | |
| FD FLOOR DRAIN | PERP PERPENDICULAR | |
| FDN FOUNDATION | PG PRESSURE GAUGE | |
| FFE FINISHED FLOOR ELEVATION | PID PROPORTIONAL INTEGRAL DERIVATIVE | |
| FGL FIBERGLASS | PLATE PLATE | |
| FIN FINISH | POLYETHYLENE POLYETHYLENE | |
| FL FLOOR | PREAB PREFABRICATED | |
| FLEX FLEXIBLE | PRV PRESSURE RELIEF VALVE | |
| FLG FLANGE | PRV PRESSURE REGULATING VALVE | |
| FM FORCE MAIN | PS PUMPING STATION | |
| FPC FLEXIBLE PIPE COUPLING | PSF POUNDS PER SQUARE FOOT | |
| FPM FEET PER MINUTE | PSI POUNDS PER SQUARE INCH | |
| FRP FIBERGLASS REINFORCED PLASTIC | PSIG POUNDS PER SQUARE INCH GAUGE | |
| FT FEET | PV PLUG VALVE | |
| FTG FITTING | PVC POLYVINYL CHLORIDE PIPE | |
| | QTY QUANTITY | |
| GA GAUGE | | |
| GAL GALLON | RAD, R RADIUS | |
| GALV GALVANIZED | RCP REINFORCED CONCRETE PIPE | |
| GFI GROUND FAULT INTERRUPTER | RCY RECYCLE | |
| GND GROUND | RED REDUCER | |
| GPD GALLONS PER DAY | | |
| GPH GALLONS PER HOUR | | |
| GPM GALLONS PER MINUTE | | |
| GS GALVANIZED STEEL PIPE | | |
| GV GATE VALVE | | |

PIPING SCHEDULE LEGEND

| | |
|---------------------------------------|--------------------------------|
| AI AIR INSTRUMENT / VALVE | NAB SODIUM BISULFITE |
| AL ALUMINUM SALT | NAH SODIUM HYDROXIDE |
| ALK ALKALINITY | NG NATURAL GAS |
| ASH SODA ASH | NPW NON-POTABLE WATER |
| BWS BACKWASH SUPPLY | OF OVERFLOW |
| CAR SUPPLEMENTAL CARBON | PA PROCESS AIR (LOW PRESSURE) |
| CHLOR CHLORINE | PDS PRIMARY DIGESTED SLUDGE |
| CO2 CARBON DIOXIDE | PE PRIMARY EFFLUENT |
| CO CARBON MONOXIDE | PLE PLANT EFFLUENT |
| CU CAUSTIC SODA | PLY POLYMER |
| DAS DIGESTED ACTIVATED SLUDGE | PRO IN-PLANT TREATMENT PROCESS |
| DG DIGESTER GAS | PIPE PIPE |
| DR DRAIN | PW POTABLE WATER |
| DS DIGESTED SLUDGE | RAS RETURN ACTIVATED SLUDGE |
| EF EFFLUENT | RW REJECT WATER |
| F FILTRATE | RA REUSE WATER |
| FC FERRIC CHLORIDE | SA SAMPLE |
| FE FILTER EFFLUENT | SAN SANITARY SEWER |
| FI FILTER INFLUENT | SD STORM DRAIN |
| GS GRIT SLURRY | TAS THICKENED ACTIVATED SLUDGE |
| HPNPW HIGH PRESSURE NON-POTABLE WATER | V VENT |
| HYPO SODIUM HYPOCHLORITE | W POTABLE WATER |
| MET METHYL ALCOHOL (METHANOL) | WAS WASTE ACTIVATED SLUDGE |

REFER TO SPECIFICATION SECTION 15200 FOR PIPE MATERIAL AND INSTALLATION INFORMATION.

CONTROL ABBREVIATIONS

| | |
|--|---|
| ADJ ADJUSTABLE | MAV MANUAL AIR VENT |
| AHU AIR HANDLING UNIT | MIN MINIMUM |
| AI ANALOG INPUT | MS HUMIDITY SENSOR |
| AIT ANALOG INDICATING TRANSMITTER | MT HUMIDITY TRANSMITTER |
| AO ANALOG OUTPUT | NC NORMALLY CLOSED PORT |
| BAS BUILDING AUTOMATION SYSTEM | NO NORMALLY OPEN PORT |
| C COMMON | NS SMOKE DETECTOR |
| CO2 CARBON DIOXIDE | PI PRESSURE INDICATOR |
| DDC DIRECT DIGITAL CONTROLLER | PDI PRESSURE DIFFERENTIAL INDICATOR |
| DI DIGITAL INPUT | PDSH PRESSURE DIFFERENTIAL SWITCH HIGH |
| DO DIGITAL OUTPUT | PDT PRESSURE DIFFERENTIAL TRANSMITTER |
| DPI DIFFERENTIAL PRESSURE INDICATOR | PT PRESSURE TRANSMITTER |
| DPS DIFFERENTIAL PRESSURE SWITCH | PS PRESSURE SWITCH |
| DPSH DIFFERENTIAL PRESSURE SWITCH HIGH | PWM PULSE WIDTH MODULE |
| DPST DIFFERENTIAL PRESSURE TRANSMITTER | RH RELATIVE HUMIDITY |
| EX EXHAUST | SC SPEED CONTROLLER |
| F FARENHEIT | SCR SILICONE CONTROL RECTIFIERS |
| FE FLOW ELEMENT | SPSH STATIC PRESSURE SWITCH HIGH |
| FIT FLOW INDICATING TRANSMITTER | SPT STATIC PRESSURE TRANSMITTER |
| FS FLOW SWITCH | T THERMOSTAT |
| FT FOOT | TC TEMPERATURE CONTROLLER |
| HOA HAND-OFF-AUTOMATIC | TE TEMPERATURE ELEMENT |
| HS HAND SWITCH | TEMP TEMPERATURE |
| IS CURRENT SWITCH | TSL TEMPERATURE SWITCH LOW (FREEZESTAT) |
| ISL CURRENT INDICATING LOW | TT TEMPERATURE TRANSMITTER |
| JS POWER SWITCH (MOTOR STARTER) | VFD VARIABLE FREQUENCY DRIVE |
| LD LIQUID DETECTOR | VSH VIBRATION SWITCH HIGH |
| LLS LOW LEVEL SENSOR | WG WATER GAUGE |
| LT LEVEL TRANSMITTER | ZS POSITION SWITCH |
| LS LEVEL SWITCH | |

CONTROL DIAGRAM LEGEND

| | | | |
|--|---|--|-------------------------------|
| | FIELD MOUNTED DEVICE | | ELECTRIC OR ELECTRONIC SIGNAL |
| | HARDWARE LOGIC FUNCTION OR DEVICE MOUNTED IN TEMPERATURE CONTROL PANEL UNLESS OTHERWISE NOTED | | DAMPER OPERATOR |
| | SWITCH MOUNTED AT MOTOR CONTROL CENTER UNLESS OTHERWISE NOTED | | 2 WAY VALVE |
| | SOFTWARE FUNCTION | | 3 WAY VALVE |
| | PNEUMATIC SIGNAL | | MOTOR |

SYMBOLS LEGEND

| | |
|--|----------------------------------|
| | PIPE - TO BE ABANDONED |
| | PIPE - TO BE REMOVED |
| | NEW TO EXISTING CONNECTION POINT |
| | PIPE DOWN SLOPE DIRECTION |
| | DIRECTION OF PIPE FLOW |
| | GENERIC VALVE OR GATE VALVE |
| | PLUG VALVE |
| | KNIFE VALVE |
| | BALL VALVE |
| | SCREWED BALL VALVE |
| | GLOBE VALVE |
| | NEEDLE VALVE |
| | DIAPHRAGM VALVE |
| | PINCH VALVE |
| | SWING CHECK VALVE |
| | BALL CHECK VALVE |
| | PRESSURE RELIEF VALVE |
| | AIR AND/OR VACUUM RELEASE VALVE |
| | PRESSURE CONTROL VALVE |
| | PRESSURE REGULATOR |
| | BACKFLOW PREVENTER |
| | CONCENTRIC REDUCER |
| | ECCENTRIC REDUCER |
| | UNION |
| | FLOWMETER |
| | Y-STRAINER |
| | PRESSURE GAUGE |
| | SAMPLE POINT |
| | MOTOR ACTUATED VALVE |
| | POSITIVE DISPLACEMENT PUMP |
| | CENTRIFUGAL PUMP |
| | PUMP |

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

Order Plans

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| Approved: Chief of Facility Management Svc. | | Approved: Chief of Staff | | Approved: Associate Director | | Approved: Medical Center Director | | Building Number Checked MCP | | Drawn MCT | | Project No. 658-15-101 | | DRAWING SET 2592 | |
| Revisions | | Date | | CONSTRUCTION DOCUMENTS | | Approved: GEMS Coordinator | | Approved: Medical Center Director | | Location VA MEDICAL CENTER, SALEM, VA 24153 | | Dwg. 8 Of 155 | | Veterans Affairs | |