

LIGHTING

	2X2 2X4 LIGHTING FIXTURE
	INDUSTRIAL TYPE LIGHTING FIXTURE,
	INDUSTRIAL TYPE EMERGENCY LIGHTING FIXTURE
	2X2 2X4 EMERGENCY LIGHTING FIXTURE
	WALL MOUNTED LIGHTING FIXTURE
	EXIT LIGHTING FIXTURE, ARROW, INDICATES DIRECTION
	EXIT LIGHTING FIXTURE TYPE SYMBOL (SEE LIGHTING FIXTURE SCHEDULE ON DRAWING E-X)

SWITCHES

S	SINGLE POLE SWITCH, 20A, 120-277V
S ₃	THREE WAY SWITCH, 20A, 120-277V

RECEPTACLES

	DUPLEX CONVENIENCE RECEPTACLE, 20A, 125V AC, MOUNT 18" AFF (UON)
	DUPLEX CONVENIENCE RECEPTACLE 20A, 125V AC, SUBSCRIPT "G" INDICATES GFI TYPE, MOUNT 18" AFF (UON)

TELEPHONE/DATA

	DATA OUTLET CONNECTION WITH RJ-45 CONNECTION AND CAT 6 UTP CABLING.
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SAFETY SWITCHED/BREAKERS/STARTERS

	NON-FUSED DISCONNECT SWITCH, SUBSCRIPT INDICATES AMPACITY AND NUMBER OF POLES
	FUSED DISCONNECT SWITCH, SUBSCRIPT INDICATES FUSED SIZE 2, NEMA SIZE 1 STARTER UON
	MAGNETIC MOTOR STARTER, SUBSCRIPT INDICATES NEMA SIZE 2, NEMA SIZE 1 STARTER UON. 60 = SWITCH SIZE AND 3 = NO. OF POLES. 30 AMPS, 3 POLES UON.
	MANUAL MOTOR STARTER SWITCH WITH OVERLOAD. PROVIDE HOA AS REQUIRED.
	VARIABLE FREQUENCY DRIVE, 6 PULSE
	VARIABLE FREQUENCY DRIVE, 18 PULSE

EQUIPMENT CONNECTION

	MOTOR, NUMBER INDICATES HORSEPOWER
	ELECTRIC UNIT HEATER
	JUNCTION BOX
	EQUIPMENT CONNECTION AS NOTED
	VARIABLE AIR VOLUME BOX
	MOTOR OPERATED DAMPER
	CONTROL PANEL

GROUNDING

	GROUND ROD, 3/4" DIAMETER X 10'-0" LONG UON
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SITE

	MANHOLE
	GROUND CONDUCTOR
	UNDERGROUND DUCT/BANK
	HANDHOLE

EMERGENCY SYSTEM

	GENERATOR
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WIRING

	BRANCH CIRCUIT HOMERUN TO PANELBOARD. HPA DENOTES TO PANEL HPA AND NUMERALS IDENTIFY CIRCUIT NUMBERS.
	CONDUIT WITH WIRES, #12 AWG IN 3/4" C. UNLESS OTHERWISE NOTED. NUMBER OF CONDUCTORS AS REQUIRED. PROVIDE SEPARATE NEUTRALS FOR ALL SINGLE PHASE CIRCUITS.
	BRANCH CIRCUIT OR FEEDER WIRING IN CONDUIT. NO TICK MARKS INDICATES 2#12 CONDUCTORS AND 1#12 GROUND IN A 3/4" C (UON)
	INDICATES A CONDUIT RUN CONCEALED IN CEILING WALL, FLOOR, OR ABOVE SUSPENDED CEILING (UON)
	EXPOSED CONDUIT RUN AS INDICATED.
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	GROUNDING CONDUCTOR (BCSD)
	RACEWAY WITH SEALING FITTING

PANELBOARDS

	ELECTRICAL PANELBOARD
	ELECTRICAL PANELBOARD (208Y/120V, 3W+G)
	ELECTRICAL PANELBOARD (480y/277V, 3W+G)

MISCELLANEOUS

	SPECIFIC NOTE NUMBER
	FEEDER DESIGNATION
	SECTION NUMBER
	DRAWING NUMBER
	DETAIL NUMBER
	DRAWING NUMBER WHERE SHOWN

ABBREV.

A	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY, (SYM, RMS AMPS)
AL	ALUMINUM
ANNUN	ANNUNCIATOR
AS	AMMETER SWITCH
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BCSD	BARE COPPER SOFT DRAWN
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COMB	COMBINATION
CLG	CEILING
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
CX	CONNECT TO EXISTING
DC	DIRECT CURRENT
O/D	OUTDOOR
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DWG	DRAWING
EA	EACH
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EH	ELECTRIC HEATER
ELEV	ELEVATION
EMERG.	EMERGENCY
EMH	ELECTRIC MANHOLE
EMT	ELECTRIC METALLIC TUBING
ENCL	ENCLOSURE
E/O	ELECTRICALLY/OPERATED
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWI	ELECTRIC WATER HEATER
EX, EXIST	EXISTING
EXP	EXPLOSION PROOF
F	FUSE
FA	FRAME AMPS
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS UNDER SEPARATE CONTRACT
FC	FAN COIL UNIT
FDR	FEEDER
FL	FLOOR
FLEX	FLEXIBLE
FMC	FLEXIBLE METAL CONDUIT
FS	FLOW SWITCH
FSS	FUSED SAFETY SWITCH
FT	FOOT OR FEET
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GRC	GALVANIZED RIGID CONDUIT
HID	HIGH INTENSITY DISCHARGE
HH	HANDHOLE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
JB	JUNCTION BOX
KAIC	THOUSAND AMPERES INTERRUPTING CAPACITY
KV	KILOVOLT
KVA	KILOVOLT AMPERE
LTG	LIGHTING
LO	LOCKOUT
LP	LIGHTING AND APPLIANCE PANEL
LT/FMC	LIQUID TIGHT/FLEXIBLE METAL CONDUIT

DESCRIPTION

ABBREV.

MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MH	MOUNTING HEIGHT
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOD	MOTOR OPERATED DAMPER
MSP	MOTOR STARTER PANEL
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFSS	NON FUSED SAFETY SWITCH
NO	NORMALLY OPEN
NO	NUMBER
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OL	OVERLOAD
P	POLE OR POLES
PB	PUSH BUTTON
PH	PHASE
PL	PILOT LIGHT
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANELBOARD
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECEPT	RECEPTACLE
REQ'D	REQUIRED
RCS	RIGID GALVANIZED STEEL
RM	ROOM
RMS	ROOT MEAN SQUARE
RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
RX	REMOVE EXISTING
SF	SUPPLY FAN
SIC	SYMMETRICAL INTERRUPTING CURRENT
SS	STAINLESS STEEL
SS	SAFETY SWITCH
ST	SHUNT TRIP
STA	STATION
STP	SHIELDED TWISTED PAIR
STPS	SHIELDED TWISTED PAIR OVER ALL SHIELD
STR	STARTER
STT	SHIELDED TWISTED TRIPLE
S/N	SOLID NEUTRAL
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEM
TA	TRIP AMPS
TC	TIME CLOCK
TDD	TIME DELAY DE-ENERGIZED (OFF)
TDE	TIME DELAY ENERGIZED (ON)
TDC	TIME DELAY CLOSE
TDO	TIME DELAY OPEN
TMH	TELEPHONE MANHOLE
TP	TWISTED PAIR
TPS	TWISTED PAIR SHIELDED
TST	THERMOSTAT SWITCH IN AUTO-TRANSFORMER STARTER
TTB/TTC	TELEPHONE TERMINAL BOARD/CABINET
TYP	TYPICAL
UH	UNIT HEATER
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS OR VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W	WIRE
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
CL	CENTER LINE
ø	PHASE
@	AT
#	NUMBER



WESTERN VIRGINIA WATER AUTHORITY
601 South Jefferson Street, Suite 300 Roanoke, Virginia 24011

DES: EJB	SCALE: NOT TO SCALE
DRAWN: EJB	HORIZ: N/A
CHECK: IHK	VERT: N/A
DATE: 1/24/20	

CRYSTAL SPRING PUMP STATION RELOCATION

ELECTRICAL SYMBOLS AND ABBREVIATIONS

DRAWING E0.01	SHEET 51
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REV	DATE	DESCRIPTION