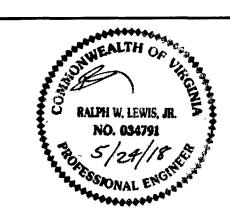
## Issued 02/15/2019

ELECTRICAL LEGEND (SCHEMATICS AND WIRING DIAGRAMS)				A	ABBREVIATIONS	GENERAL NOTES
	PLANS SYMBOLS		SCHEMATIC SYMBOLS		AMPERE AMPS INTERRUPTING CAPACITY ALTERNATING CURRENT	1. INSTALLATION OF ALL WIRING AND CONDUITS SHALL CONFORM WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70 AND LOCAL CODES).
S	SWITCHES SINGLE POLE SWITCH, 20A, 120/277V.	why.	TRANSFORMER	AFF AMP ATS	ABOVE FINISHED FLOOR  AMPERES  AUTOMATIC TRANSFER SWITCH	2. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT.
S <sub>M</sub>	MANUAL MOTOR STARTER SWITCH WITH OVERLOAD, PROVIDE HOA	50A	FUSE WITH RATING	AWG BCSD CB	AMERICAN WIRE GAUGE BARE COPPER SOFT DRAWN CIRCUIT BREAKER	3. PROVIDE ALL REQUIRED PULL BOXES AND JUNCTION BOXES FOR INSTALLATION OF THE WIRING IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS THOUGH THE BOXES MAY NOT BE INDICATED ON THE DRAWINGS.
	LIGHTS  1' x 4' FLUORESCENT CEILING MOUNTED LIGHTING FIXTURE.	PM	PHASE MONITOR	CBP CKT COMM	CITY BOOSTER PUMP CIRCUIT COMMUNICATIONS	4. FINAL LOCATIONS FOR ALL ELECTRICAL EQUIPMENT, INCLUDING RECEPTACLES, JUNCTION BOXES FOR SPECIFIED EQUIPMENT, LIGHTING FIXTURES, SWITCHES, ETC. SHALL BE APPROVED BY THE COUNTY PRIOR T
¤	SITE LIGHTING FIXTURE	<b>&gt;</b>	3 PHASE, 3 WIRE, DELTA	CO CT DWG	CONDUIT ONLY CURRENT TRANSFORMER DRAWING	INSTALLATION.  5. THE WIRING DIAGRAMS, QUANITY AND SIZE OF WIRES AND CONDUITS ARE BASED UPON SELECTED STANDAR COMPONENTS OF FLECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED STANDAR APPROVED BY THE COMPONENTS ARE BASED UPON SELECTED BY THE COMPONENTS ARE BASED UPON BY THE BASED UPON BY T
	RECEPTACLES		3 PHASE, 4 WIRE, GROUNDED WYE GROUND CONNECTION	EC EF ELEC	EMPTY CONDUIT EXHAUST FAN ELECTRIC, ELECTRICAL	COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS APPROVED BY THE COUNTY MAY BE MADE BY TH CONTRACTOR AT HIS EXPENSE TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED.  6. PROVIDE ALL NECESSARY COMPONENTS REQUIRED FOR MAKING FINAL ONNECTION OF ALL EQUIPMENT
PS	LIGHT SWITCH AND GFCI RECEPTACLE INSIDE THE CABINET (ONE FOR EACH CABINET)	SPD	SURGE PROTECTIVE DEVICE	EUHC FBP FDTS FLSCP	ELECTRIC UNIT HEATER CORRISION PROOF FREDERICK COUNTY BOOSTER PUMP FUEL DAY TANK SYSTEM	INSTALLED OR MODIFIED AS PART OF THIS CONTRACT.  7. ALL ALARM INDICATION AND CONTROL WIRING IN JUNCTION BOXES SHALL BE WIRED TO NUMBERED TERMINATION.
		<b>Ø</b> <sub>20</sub>	MOTOR, SUBSCRIPT INDICATES HP.	FVNR GFI	FUEL LEVEL SYSTEM CONTROL PANEL FULL VOLTAGE, NON REVERSING GROUND FAULT INTERRUPTER	STRIPS AND IDENTIFIED AS TO START AND END OF RUN.  8. ALL ELECTRICAL EQUIPMENT ON WALLS SHALL BE INSTALLED WITH A 1/4" SPACE BETWEEN THE EQUIPMENT
•	EQUIPMENT CONNECTIONS JUNCTION BOX	©N	GENERATOR	G, GND GRS HID HOA	GROUND GALVANIZED RIGID STEEL CONDUIT HIGH INTENSITY DISCHARGE LTG HAND OFF AUTO SELECTOR SWITCH	AND THE MOUNTING SURFACE. SPACERS SHALL BE STAINLESS STEEL, PVC OR NYLON.  9. ELECTRICAL ENCLOSURES LOCATED OUTDOORS AND INDOORS IN WET AND DAMP LOCATIONS SHALL BE
$\frac{30}{3}$	DISCONNECT SWITCH, NON-FUSED, SUBSCRIPT INDICATES AMPACITY AND NO. OF POLES, 3P-30A UON		ATS - AUTOMATIC TRANSFER SWITCH	HP HPS IC	HORSE POWER HIGH PRESSURE SODIUM INSULATED CASE	WEATHERPROOF NEMA 4X, UNLESS OTHERWISE NOTED.  10. DRAWINGS ARE DIAGRAMMATIC. ACTUAL LOCATION OF EQUIPMENT TO BE DETERMINED IN THE FIELD. NEW EQUIPMENT SHALL FIT INTO EXISTING AVAILABLE SPACE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO
1 🖾	COMBINATION MAGNETIC STARTER WITH NON-FUSED DISCONNECT SWITCH, NEMA SIZE 1	E [∑]-	ENCLOSED CIRCUIT BREAKER, MOLDED	JB kA kCMIL	JUNCTION BOX KILO AMPERES THOUSAND CIRCULAR MILS	PROVIDE EQUIPMENT WHICH MEETS THE SPACE REQUIREMENT. RELOCATION OF EQUIPMENT TO FIT INTO EXISTING AVAILABLE SPACE SHALL BE ACCOMPLISHED AT NO ADDITIONAL COST TO THE OWNER. PROVIDE REVISED LAYOUT FOR APPROVAL.
F) 15/3	DISCONNECT SWITCH, FUSED, SUBSCRIPT INDICATES FUSE SIZE AND NO. OF POLES		CASE TYPE, 3 POLE TYPE, UON	KAIC KAWC kV kVA	KILOAMPS INTERRUPTING CAPACITY KILOAMPS WITHHOLDING CAPACITY KILOVOLT KILOVOLT AMPERES	11. CONTRACTOR SHALL SUBMIT A LIST OF ALL MAJOR EQUIPMENT AND FIXTURES AS SPECIFIED TO THE ENGINEER FOR REVIEW AND APPROVAL. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT THE PERMISSION OF
		MC	MINICASS RELAY (MOTOR PROTECTIVE DEVICE)	kWH LO LR	KILOWATT HOUR LOCKOUT LINE REACTOR	THE ENGINEER IN WRITING. ALL EQUIPMENT SHALL BE NEW AND BEAR THE MANUFACTURER'S NAME AND TRADE NAME. ALL EQUIPMENT SHALL BE UL LISTED.
<b>⊙</b> B	GROUNDING 3/4" DIA x10' LONG GROUND ROD		THERMOSTAT CABINET	LTG MAX MC	LIGHTING MAXIMUM MINI—CASS MONITOR	12. ALL DRAWINGS ARE PREPARED IN ENGLISH UNITS. WIRE SIZE IS INDICATED IN THE AMERICAN WIRE GAUGE. ALL CONDUIT SIZES ARE INDUSTRY STANDARD.
<b>⊙</b> A	GROUND ROD WITH TEST WELL		HEATER	MCB MCC MDS	MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN DISTRIBUTION SWITCHBOARD	13. THE CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING LOADS AND CORRECTLY PHASING THE CIRCUITS IN PANELBOARD.
	UNDERGROUND SITE WORK	<u>225</u> 200	MOLDED CASE CIRCUIT BREAKER, TRIP VALUE INDICATED BELOW LINE AND FRAME SIZE ABOVE.	MH MIN MOD MPZ	MOUNTING HEIGHT MINIMUM MOTOR OPERATED DAMPER MINI POWER ZONE	14. ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT ARE BASED ON EQUIPMENT SPECIFIED. COORDINAT EXACT REQUIREMENTS WITH MECHANICAL SHOP DRAWINGS PRIOR TO ORDERING AND INSTALLING EQUIPMENT.
	RACEWAY BELOW SLAB OR IN SLAB OR CONCEALED	<u> </u>	3 POLES UNLESS OTHERWISE NOTED.	N NC NC	NEUTRAL NORMALLY CLOSED NOT IN CONTRACT	15. WHERE ELECTRICAL INSTALLATIONS DEPEND UPON WORK OF OTHER TRADES, THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT NECESSARY INSTRUCTIONS, TEMPLATES, MATERIALS, ETC. ARE PROVIDED AND SUPERVIS THE WORK OF THE OTHER TRADES FOR QUALITY AND CODE COMPLIANCE.
<del></del>	RACEWAY EXPOSED, SHOWN WITH CONDUIT SEAL.  RACEWAY TURNED UP OR TOWARDS VIEWER	~	COMBINATION, MAGNETIC MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR	NO NTS P	NORMALLY OPEN, NUMBERS NOT TO SCALE POLE	16. THE CONTRACTOR SHALL VISIT THE JOB SITE AND EXAMINE THE EXISTING CONDITIONS THAT MAY AFFECT HI WORK.
	RACEWAY TURNED DOWN OR AWAY FROM VIEWER	<u></u>		PB STA PNL PSI	PUSHBUTTON STATION PANEL POUNDS PER SQUARE INCH	17. ALL JUNCTION AND PULL BOXES SHALL BE LABELED WITH THEIR VOLTAGE AND USAGE.  18. CUT AND PATCH SLABS, ROADWAY AND OTHER SURFACES AS NECESSARY TO ACCOMPLISH CONSTRUCTION WORK LINDER THIS CONTRACT.
LP-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD, LP DENOTES TO PANEL LP AND NUMERALS IDENTIFY CIRCUIT NUMBERS, #12 AWG CONDUCTORS U.O.N., NO. OF CONDUCTORS AS REQUIRED. PROVIDE GROUND WIRE	PC TC	PHOTOCELL AND TIMER LIGHTING CONTACTOR	PVC RGS	POTENTIAL TRANSFORMER POLYVINYL CHLORIDE RIGID GALVANIZED STEEL	WORK UNDER THIS CONTRACT.  19. COORDINATE AND OBTAIN APPROVAL OF ALL WORK RELATED TO ELECTRICAL SERVICE FROM UTILITY COMPAN
G	IN ALL CONDUIT RUN.			RMS SPD SSS	ROOT MEAN SQUARE SURGE PROTECTIVE DEVICE SOLID STATE STARTER	20. SERIES RATED CIRCUIT BREAKERS SHALL NOT BE ALLOWED.  21. MINIMUM WIRE SIZE SHALL BE #12 UON.
E	GROUND GRID #2 BCSD 98% CONDUCTIVITY 30" BELOW GRADE  UNDERGROUND ELECTRIC			SYMM. SW TB	SYMMETRICAL SWITCH TERMINAL BLOCK	22. MINIMUM CONDUIT SIZE SHALL BE 3/4" UON.  23. PROVIDE SEAL OFF FITTINGS AND CABLE SEALS TO ALL CONDUITS ENTERING WET WELL AND VALVE
	MISCELLANEOUS		<b>~</b> ,	VA VED	UNLESS OTHERWISE NOTED  VOLTS  VOLTS AMPS  VARIABLE EDECLIENCY DRIVE	VAULT IN COMPLIANCE WITH NEC.
1	KEYED CONSTRUCTION NOTE			W WD	VARIABLE FREQUENCY DRIVE WATT WIRE WEATHERPROOF CONSTRUCTION	
(X1)	X1 — DESIGNATION OF PLAN (1, 2, 3,) X2 — DRAWING WHERE PLAN IS LOCATED			XFMR Ø	TRANSFORMER PHASE	
^2	^2					





WESTERN	VIRGINIA	WATER	AUTHORITY
601	South Jefferson	n Street, Su	ite 300
	Roanoke,	VA 24011	

DES:	KKK	SCALE:	AS SHOWN	
DRAWN:	KKK	HORIZ:	N/A	
CHECK:	IHK	VERT:	N/A	
 DATE:	05/24/18			_

SUMMIT VIEW BUSINESS PARK UTILITY IMPROVEMENTS, PHASE 1

REV DATE DESCRIPTION DRAWING SHEET LEGEND, ABBREVIATIONS AND GENERAL NOTES E0.01