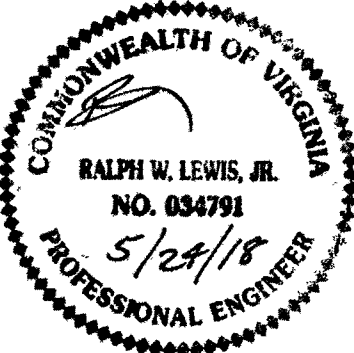


ELECTRICAL LEGEND (SCHEMATICS AND WIRING DIAGRAMS)		ABBREVIATIONS	GENERAL NOTES
PLANS SYMBOLS	SCHEMATIC SYMBOLS	<div><div><div>A</div><div>AIC</div><div>AC</div><div>AFF</div><div>AMP</div><div>ATS</div><div>AWG</div><div>BCSD</div><div>CB</div><div>CBP</div><div>CKT</div><div>COMM</div><div>CO</div><div>CT</div><div>DWG</div><div>EC</div><div>EF</div><div>ELEC</div><div>EUHC</div><div>FBP</div><div>FDTs</div><div>FLSCP</div><div>FVNR</div><div>GFI</div><div>G, GND</div><div>GRS</div><div>HID</div><div>HOA</div><div>HP</div><div>HPS</div><div>IC</div><div>JB</div><div>KA</div><div>KCMIL</div><div>KAIC</div><div>KAWC</div><div>KV</div><div>KVA</div><div>KWH</div><div>LO</div><div>LR</div><div>LTG</div><div>MAX</div><div>MC</div><div>MCB</div><div>MCC</div><div>MDS</div><div>MH</div><div>MIN</div><div>MOD</div><div>MPZ</div><div>N</div><div>NC</div><div>NIC</div><div>NO</div><div>NTS</div><div>P</div><div>PB STA</div><div>PNL</div><div>PSI</div><div>PT</div><div>PVC</div><div>RGS</div><div>RMS</div><div>SPD</div><div>SSS</div><div>SYMM.</div><div>SW</div><div>TB</div><div>UON</div><div>V</div><div>VA</div><div>VFD</div><div>W</div><div>W</div><div>WP</div><div>XFMR</div><div>ø</div></div><div><div>AMPERE</div><div>AMPS INTERRUPTING CAPACITY</div><div>ALTERNATING CURRENT</div><div>ABOVE FINISHED FLOOR</div><div>AMPERES</div><div>AUTOMATIC TRANSFER SWITCH</div><div>AMERICAN WIRE GAUGE</div><div>BARE COPPER SOFT DRAWN</div><div>CIRCUIT BREAKER</div><div>CITY BOOSTER PUMP</div><div>CIRCUIT</div><div>COMMUNICATIONS</div><div>CONDUIT ONLY</div><div>CURRENT TRANSFORMER</div><div>DRAWING</div><div>EMPTY CONDUIT</div><div>EXHAUST FAN</div><div>ELECTRIC, ELECTRICAL</div><div>ELECTRIC UNIT HEATER CORROSION PROOF</div><div>FREDERICK COUNTY BOOSTER PUMP</div><div>FUEL DAY TANK SYSTEM</div><div>FUEL LEVEL SYSTEM CONTROL PANEL</div><div>FULL VOLTAGE, NON REVERSING</div><div>GROUND FAULT INTERRUPTER</div><div>GROUND</div><div>GALVANIZED RIGID STEEL CONDUIT</div><div>HIGH INTENSITY DISCHARGE LTG</div><div>HAND OFF AUTO SELECTOR SWITCH</div><div>HORSE POWER</div><div>HIGH PRESSURE SODIUM</div><div>INSULATED CASE</div><div>JUNCTION BOX</div><div>KILO AMPERES</div><div>THOUSAND CIRCULAR MILS</div><div>KILOAMPS INTERRUPTING CAPACITY</div><div>KILOVOLT</div><div>KILOVOLT AMPERES</div><div>KILOWATT HOUR</div><div>LOCKOUT</div><div>LINE REACTOR</div><div>LIGHTING</div><div>MAXIMUM</div><div>MINI-CASS MONITOR</div><div>MAIN CIRCUIT BREAKER</div><div>MOTOR CONTROL CENTER</div><div>MAIN DISTRIBUTION SWITCHBOARD</div><div>MOUNTING HEIGHT</div><div>MINIMUM</div><div>MOTOR OPERATED DAMPER</div><div>MINI POWER ZONE</div><div>NEUTRAL</div><div>NORMALLY CLOSED</div><div>NOT IN CONTRACT</div><div>NORMALLY OPEN, NUMBERS</div><div>NOT TO SCALE</div><div>POLE</div><div>PUSHBUTTON STATION</div><div>PANEL</div><div>POUNDS PER SQUARE INCH</div><div>POTENTIAL TRANSFORMER</div><div>POLYVINYL CHLORIDE</div><div>RIGID GALVANIZED STEEL</div><div>ROOT MEAN SQUARE</div><div>SURGE PROTECTIVE DEVICE</div><div>SOLID STATE STARTER</div><div>SYMMETRICAL</div><div>SWITCH</div><div>TERMINAL BLOCK</div><div>UNLESS OTHERWISE NOTED</div><div>VOLTS</div><div>VOLTS AMPS</div><div>VARIABLE FREQUENCY DRIVE</div><div>WATT</div><div>WIRE</div><div>WEATHERPROOF CONSTRUCTION</div><div>TRANSFORMER</div><div>PHASE</div></div></div>	<div><div><div>1. INSTALLATION OF ALL WIRING AND CONDUITS SHALL CONFORM WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70 AND LOCAL CODES).</div><div>2. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT.</div><div>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.</div><div>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 TO INSTALLATION.</div><div>5. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS ARE BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS APPROVED BY THE COUNTY MAY BE MADE BY THE CONTRACTOR AT HIS EXPENSE TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED.</div><div>6. PROVIDE ALL NECESSARY COMPONENTS REQUIRED FOR MAKING FINAL ONNECTION OF ALL EQUIPMENT INSTALLED OR MODIFIED AS PART OF THIS CONTRACT.</div><div>7. ALL ALARM INDICATION AND CONTROL WIRING IN JUNCTION BOXES SHALL BE WIRED TO NUMBERED TERMINAL STRIPS AND IDENTIFIED AS TO START AND END OF RUN.</div><div>8. ALL ELECTRICAL EQUIPMENT ON WALLS SHALL BE INSTALLED WITH A 1/4" SPACE BETWEEN THE EQUIPMENT AND THE MOUNTING SURFACE. SPACERS SHALL BE STAINLESS STEEL, PVC OR NYLON.</div><div>9. ELECTRICAL ENCLOSURES LOCATED OUTDOORS AND INDOORS IN WET AND DAMP LOCATIONS SHALL BE WEATHERPROOF NEMA 4X, UNLESS OTHERWISE NOTED.</div><div>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 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.</div><div>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 THE ENGINEER IN WRITING. ALL EQUIPMENT SHALL BE NEW AND BEAR THE MANUFACTURER'S NAME AND TRADE NAME. ALL EQUIPMENT SHALL BE UL LISTED.</div><div>12. ALL DRAWINGS ARE PREPARED IN ENGLISH UNITS. WIRE SIZE IS INDICATED IN THE AMERICAN WIRE GAUGE. ALL CONDUIT SIZES ARE INDUSTRY STANDARD.</div><div>13. THE CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING LOADS AND CORRECTLY PHASING THE CIRCUITS IN PANELBOARD.</div><div>14. ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT ARE BASED ON EQUIPMENT SPECIFIED. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL SHOP DRAWINGS PRIOR TO ORDERING AND INSTALLING EQUIPMENT.</div><div>15. WHERE ELECTRICAL INSTALLATIONS DEPEND UPON WORK OF OTHER TRADES, THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT NECESSARY INSTRUCTIONS, TEMPLATES, MATERIALS, ETC. ARE PROVIDED AND SUPERVISE THE WORK OF THE OTHER TRADES FOR QUALITY AND CODE COMPLIANCE.</div><div>16. THE CONTRACTOR SHALL VISIT THE JOB SITE AND EXAMINE THE EXISTING CONDITIONS THAT MAY AFFECT HIS WORK.</div><div>17. ALL JUNCTION AND PULL BOXES SHALL BE LABELED WITH THEIR VOLTAGE AND USAGE.</div><div>18. CUT AND PATCH SLABS, ROADWAY AND OTHER SURFACES AS NECESSARY TO ACCOMPLISH CONSTRUCTION WORK UNDER THIS CONTRACT.</div><div>19. COORDINATE AND OBTAIN APPROVAL OF ALL WORK RELATED TO ELECTRICAL SERVICE FROM UTILITY COMPANY.</div><div>20. SERIES RATED CIRCUIT BREAKERS SHALL NOT BE ALLOWED.</div><div>21. MINIMUM WIRE SIZE SHALL BE #12 UON.</div><div>22. MINIMUM CONDUIT SIZE SHALL BE 3/4" UON.</div><div>23. PROVIDE SEAL OFF FITTINGS AND CABLE SEALS TO ALL CONDUITS ENTERING WET WELL AND VALVE VAULT IN COMPLIANCE WITH NEC.</div></div></div>



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

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

SUMMIT VIEW BUSINESS PARK UTILITY IMPROVEMENTS,  
PHASE 1

LEGEND, ABBREVIATIONS AND GENERAL NOTES

DRAWING  
**E0.01**

SHEET  
**59**

AS-BUILT		
REV	DATE	DESCRIPTION