

SCADA SYSTEM IMPROVEMENTS

FOR THE CITY OF STOCKBRIDGE

HENRY COUNTY, GEORGIA

JANUARY 2018



4640 NORTH HENRY BLVD, STOCKBRIDGE, GEORGIA 30281

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CITY MANAGER

RANDY KNIGHTON

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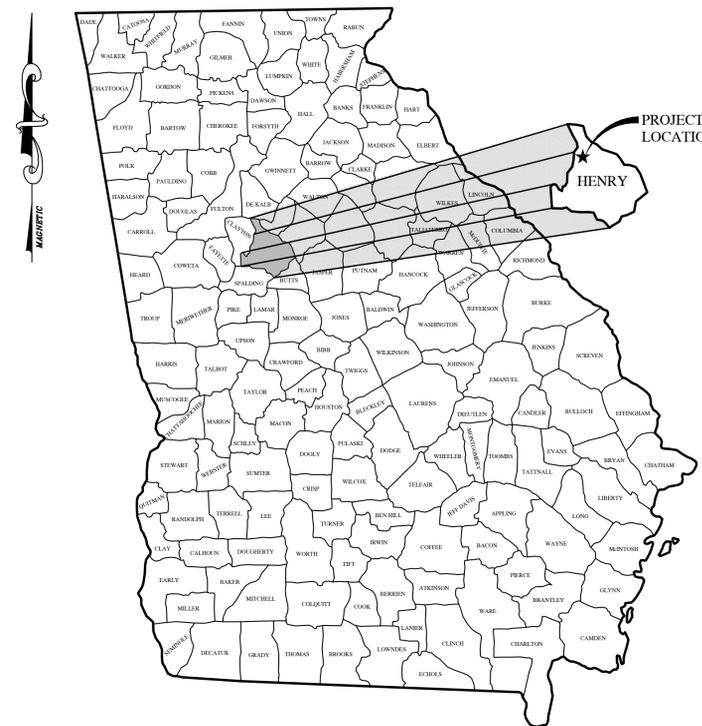
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VICINITY MAP

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REVISION NO.	DESCRIPTION	DATE
A	ISSUED FOR REVIEW	11/06/17
B	ISSUED FOR APPROVAL	11/17/17
C	RELEASE FOR BID	12/29/17

C&S PROJECT NO.: S9100.015



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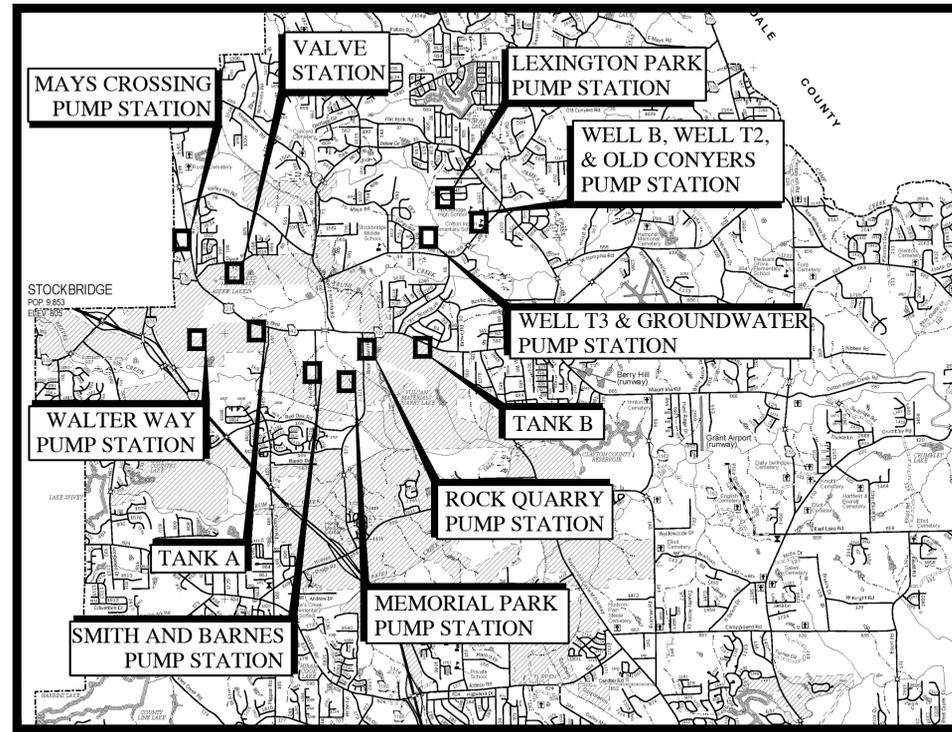
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VICINITY MAP
SCALE: 1" = 1/2 MILE

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO BEGINNING ANY WORK AND ORDERING ANY EQUIPMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. FURTHERMORE, INFORMATION REGARDING UNDERGROUND UTILITIES SHOWN ON THESE PLANS IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. AT LEAST 3 DAYS PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL REQUEST A FIELD UTILITY LOCATE THROUGH GEORGIA'S UTILITY PROTECTION CENTER BY DIALING 811 OR 800-282-7411. THE CONTRACTOR SHALL COMPARE THESE FIELD-MARKED LOCATIONS WITH THE PROJECT PLANS AND NOTIFY THE ENGINEER OF ANY ANTICIPATED PROBLEMS OR NEED FOR CONTRACT CHANGES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE OR CAUSE THE UTILITY OWNER TO EXCAVATE FOR THE PURPOSE OF DETERMINING EXACT ELEVATIONS OR LOCATIONS AT UTILITY CROSSINGS AND OTHER CRITICAL LOCATIONS WELL IN ADVANCE OF THE WORK UNDER THIS CONTRACT.
3. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES AND FACILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPAIR OR REPLACE THEM TO THEIR ORIGINAL CONDITION AND QUALITY, AS APPROVED BY THE ENGINEER.
4. THE CONTRACTOR SHALL MAINTAIN FIELD "AS-BUILT" DRAWINGS AND SHALL MEASURE AND SHOW LOCATION OF ALL PROPOSED IMPROVEMENTS.
5. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF.
6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH CITY OF STOCKBRIDGE.



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GENERAL CONSTRUCTION NOTES

REVISIONS:	
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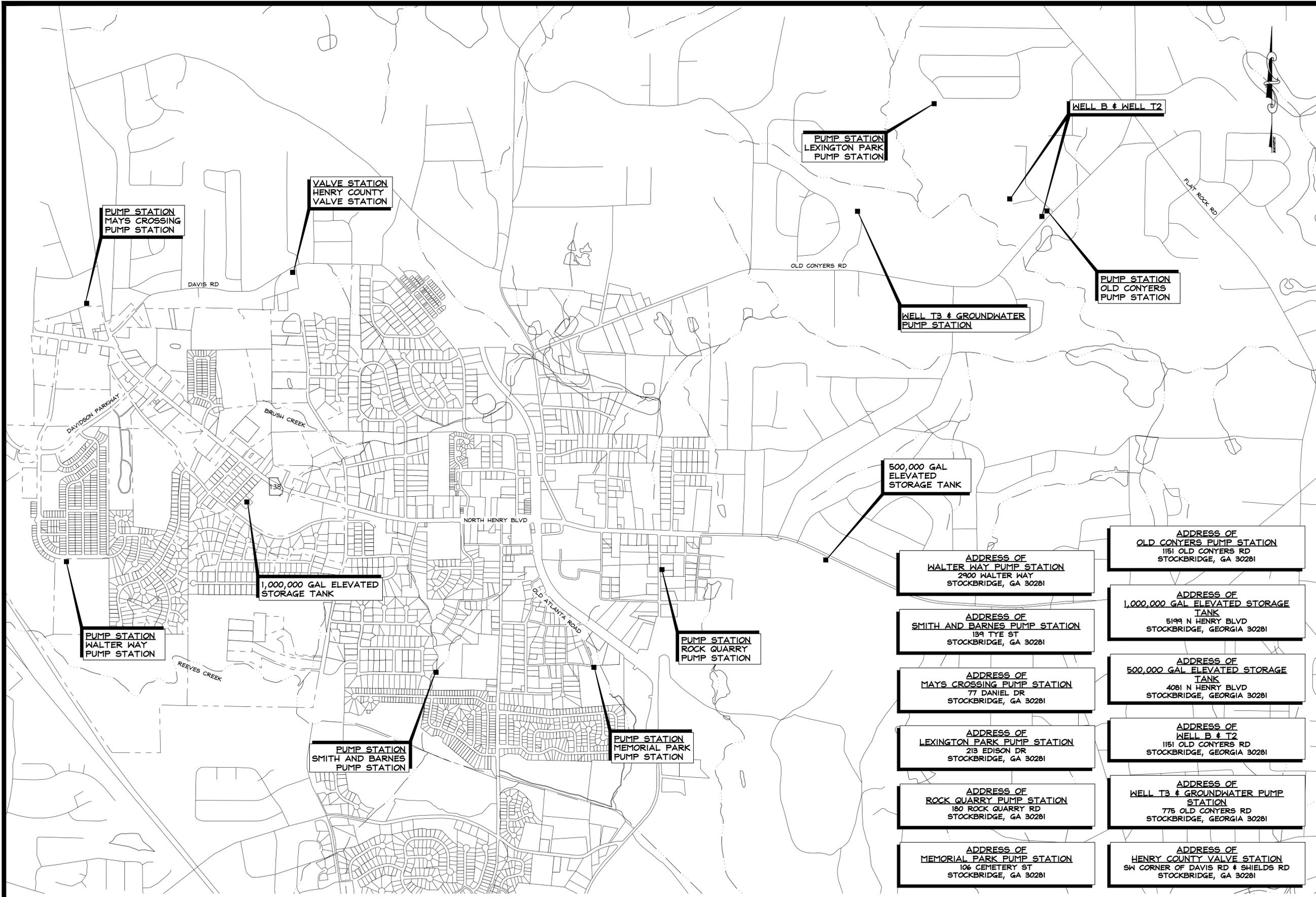
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FOR THE
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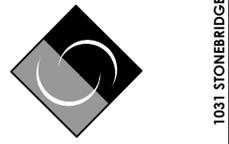
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OVERALL PROJECT MAP



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SCHEMATIC DIAGRAM SYMBOLS	
	CONDUCTORS CONNECTED
	CONDUCTORS NOT CONNECTED
	CONNECTION POINT
	TERMINAL POINT FOR OUTGOING CONDUCTORS, WITH IDENTIFICATION. "XX" DENOTES CONTRACTOR ASSIGNED.
	MCPXXX-XX MAGNETIC-ONLY CIRCUIT BREAKER (MCP), WITH CURRENT RATING
	CBXXX-XX CIRCUIT BREAKER, THERMAL-MAGNETIC UNLESS OTHERWISE NOTED, WITH FRAME SIZE AND TRIP RATING
	FUXXX-XX FUSE WITH SIZE AND OPTIONAL IDENTIFICATION.
	DSXXX-XX DISCONNECT SWITCH, RATING OPTIONAL. 30 AMP, 600V RATED MINIMUM UNLESS OTHERWISE NOTED.
	FUXXX-XX FUSE DISCONNECT SWITCH, RATING OPTIONAL. 30 AMP, 600V MINIMUM UNLESS OTHERWISE NOTED.
	M-XXX MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
	MSR-XXX MOTOR STARTER COIL
	OL-XXX THERMAL MOTOR OVERLOAD
	M-XXX MOTOR CONTACT
	LSXXX-XX LIMIT SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PSXXX-XX PRESSURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	TSXXX-XX TEMPERATURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	FSXXX-XX FLOW SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	FLTXXX-XX LEVEL SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PRSXXX-XX PROXIMITY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PCSXXX-XX PULLCORD SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	SXXX-XX SOLENOID VALVE
	PBXXX-XX MOMENTARY PUSHBUTTON NORMALLY CLOSED AND NORMALLY OPEN
	SSXXX-XX SELECTOR SWITCH NORMALLY NORMALLY CLOSED AND NORMALLY OPEN
	LTXXX-XX PILOT LIGHT X = LENS COLOR A = AMBER B = BLUE G = GREEN R = RED W = WHITE
	CRXXX-XX CONTROL RELAY
	CRXXX-XX CONTROL RELAY CONTACT NORMALLY CLOSED AND NORMALLY OPEN
	ALXXX-XX ALARM LIGHT
	AHXXX-XX ALARM HORN
	TFRXXX-XX CONTROL POWER TRANSFORMER, PRIMARY AND SECONDARY VOLTAGE SHOWN. SIZE AS SHOWN OR SPECIFIED.
	CTXXX-XX CURRENT TRANSFORMER. PRIMARY/SECONDARY TURNS RATIO AS SHOWN.

ONE LINE DIAGRAM SYMBOLS	
	CB-XXX LOW VOLTAGE POWER CIRCUIT AND BREAKER DRAWOUT TYPE, FRAME TRIP SHOWN
	CB-XXX MOLDED CASE CIRCUIT BREAKER, FRAME AND TRIP ID SHOWN
	Lightning symbol LIGHTNING ARRESTOR AND GROUND
	DS-XXX DISCONNECT OR ISOLATING SWITCH: CONTINUOUS RATING SHOWN
	MCP-XXX MAGNETIC-ONLY CIRCUIT BREAKER (MCP), DRAWOUT TYPE, WITH CURRENT RATING
	FS-XXX FUUSED SWITCH: FUSE AND SWITCH CONTINUOUS RATINGS SHOWN
	TFR-XXX POWER TRANSFORMER: PRIMARY & SECONDARY VOLTAGES, %, SIZE SHOWN
	XS CURRENT TRANSFORMER: RATIO SHOWN (3 INDICATES NO. OF CT'S) METER SWITCH, XS: AS - AMMETER SWITCH VS - VOLTMETER SWITCH FS - FREQUENCY SWITCH
	PT POTENTIAL TRANSFORMER PRIMARY & SECONDARY VOLTAGES & WINDINGS SHOWN. (X) UNITS
	METER A - AMMETER W - WATTMETER KWH - WATT-HOUR METER F - FREQUENCY METER VAR - VAR METER V - VOLTMETER
	FVNR SIZE X FULL VOLTAGE, NON-REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
	FVR SIZE X FULL VOLTAGE, REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
	XXHP VFD-XXX VARIABLE FREQUENCY DRIVE. NEMA SIZE INDICATED
	XXHP RVSS-XXX REDUCED VOLTAGE SOLID STATE DRIVE (SOFT START). NEMA SIZE INDICATED
	M-XXX MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
	Generator symbol GENERATOR RECEPTACLE
	MTS-XXX MANUAL TRANSFER SWITCH
	P-XXX-X CABLE TAG: P - POWER CABLE C - CONTROL CABLE S - SHIELDED SIGNAL CABLE
CIRCUIT AND RACEWAY SYMBOLS	
	RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED. (UNLESS OTHERWISE NOTED)
	RACEWAY OR WIRING SYSTEM BELOW FLOOR LEVEL, ABOVE CEILING, HIDDEN, OR EXISTING CABLE/CONDUIT. (UNLESS OTHERWISE NOTED)
	SCHEMATIC DIAGRAM FIELD WIRING. (UNLESS OTHERWISE NOTED)
	ONE LINE DIAGRAM EQUIPMENT ENCLOSURE. (UNLESS OTHERWISE NOTED)
	GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER
	GROUNDING CONDUCTOR (EXPOSED), #4/0 AWG INSULATED COPPER
	HOME RUN - SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5

GENERAL ABBREVIATIONS			
AR	ALARM RELAY	M	MOTOR CONTACTOR
AS	AMMETER SELECTOR SWITCH	mA	MILLIAMPERE
A, AMP	AMP(S), AMPERE(S)	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
AHAP	AS HIGH AS POSSIBLE	MCCP	MOTOR CONTROL PANEL/MOTOR CIRCUIT PROTECTOR
AIC	AMPS INTERRUPTING CAPACITY, SYMM.	MECH	MECHANICAL
AL	ALUMINUM	MFR	MANUFACTURE(R)
AL	ALUMINUM	MH	MANHOLE
AT	AMPERE TRIP	MIC	MICROPHONE
AF	AMPERE FRAME	MIN	MINIMUM
AUTO	AUTOMATIC	MISC	MISCELLANEOUS
AUX	AUXILIARY	MM	MILLIMETER
AWG	AMERICAN WIRE GAUGE	mV	MILLIVOLT
BC	BARE COPPER CONDUCTOR	MCM	MILLI CIRCULAR MILLS
BKR	BREAKER	MOP	MOTOR OPERATOR PANEL
C	CONDUCTOR/CONTACTOR	MPR	MOTOR PROTECTION RELAY
CB	CIRCUIT BREAKER	MCB	MAIN CIRCUIT BREAKER
CJB	CIRCUIT JUNCTION BOX	MTR	MOTOR
CKT	CIRCUIT	MVS	MEDIUM VOLTAGE STARTER
CLG	CEILING	N/A	NOT APPLICABLE
CR	CONTROL RELAY	NC	NORMALLY CLOSED
CND	CONDUIT	NEUT,N	NEUTRAL
CONC	CONCRETE	NIC	NOT IN CONTRACT
CS	CONTROL SWITCH	NO	NORMALLY OPEN
CONT	CONTROL	NOM	NOMINAL
CPT	CONTROL POWER TRANSFORMER	NP	NAMEPLATE
CT	CURRENT TRANSFORMER	NTS	NOT TO SCALE
CU	COPPER	OC	ON CENTER
D	DIAMETER	OD	OUTSIDE DIAMETER
DB	DUCT BANK	OH	OVERHEAD
DC	DIRECT CURRENT	OL	OVERLOADS
DET	DETAIL	OT	OIL TIGHT
DIAG	DIAGRAM	P	POLE
DPSH	DIFFERENTIAL PRESSURE SWITCH	PA	PUBLIC ADDRESS
DS	DISCONNECT SWITCH	PB	PUSHBUTTON, PULL BOX
DWG	DRAWING	PE	PHOTO ELECTRIC CELL
EA	EACH	PF	POWER FACTOR
EC	ELECTRICAL CONTRACTOR	PH	PHASE
EF	EXHAUST FAN	PJB	PROGRAMMABLE JUNCTION BOX
EL	ELEVATION	PLC	PROGRAMMABLE LOGIC CONTROLLER
EL	ELECTRIC(AL)	PNL	PANEL
EMER	EMERGENCY	PP	POWER PANEL
ENCL	ENCLOSURE/ENCLOSED	PR	PRIMARY
EP, E	EXISTING	PS	PRESSURE SWITCH
EA	EACH	PT	POTENTIAL TRANSFORMER
EC	ELECTRICAL CONTRACTOR	PVC	POLYVINYL CHLORIDE
EF	EXHAUST FAN	PWR	POWER
EL	ELEVATION	QSH	SHEAR PIN LIMIT SWITCH
EL	ELECTRIC(AL)	RCPT	RECEPTACLE
EMER	EMERGENCY	RCT	REACTOR
ENCL	ENCLOSURE/ENCLOSED	REF	REFERENCE REQ'D REQUIRED
EP, E	EXISTING	RMS	ROOT MEAN SQUARE
EA	EACH	RTD	RESISTANCE TEMPERATURE DETECTOR
EC	ELECTRICAL CONTRACTOR	SCH	SCHEDULE
EF	EXHAUST FAN	SE	SPEED SENSOR
EL	ELEVATION	SEC	SECONDARY
EL	ELECTRIC(AL)	SEL	SELECTOR
EMER	EMERGENCY	SER	SERVICE ENTRANCE RATED
ENCL	ENCLOSURE/ENCLOSED	SPDT	SINGLE POLE DOUBLE THROW SPECIFICATION
EP, E	EXISTING	SPHT	MOTOR SPACE HEATER
EA	EACH	SPKR	SPEAKER
EC	ELECTRICAL CONTRACTOR	SSL	SPEED SWITCH
EF	EXHAUST FAN	SW	SUBSTATION
EL	ELEVATION	SYM	SYMMETRICAL
EL	ELECTRIC(AL)	SYS	SYSTEM
EMER	EMERGENCY	SV	SOLENOID OPERATED VALVE
ENCL	ENCLOSURE/ENCLOSED	SPB	SIGNAL PULL BOX
EP, E	EXISTING	TB	TERMINAL BOX
EA	EACH	TEL	TELEPHONE
EC	ELECTRICAL CONTRACTOR	TEMP	TEMPERATURE
EF	EXHAUST FAN	TFR	TRANSFORMER
EL	ELEVATION	TH	THERMOSTAT
EL	ELECTRIC(AL)	TJB	TERMINAL JUNCTION BOX
EMER	EMERGENCY	TSH	TEMPERATURE SWITCH HIGH
ENCL	ENCLOSURE/ENCLOSED	TV	TELEVISION
EP, E	EXISTING	TYP	TYPICAL
EA	EACH	TR	TIMING RELAY
EC	ELECTRICAL CONTRACTOR	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
EF	EXHAUST FAN	TSP	TWISTED SHIELDED PAIR
EL	ELEVATION	UG	UNDERGROUND
EL	ELECTRIC(AL)	UH	UNIT HEATER
EMER	EMERGENCY	UON	UNLESS OTHERWISE NOTED
ENCL	ENCLOSURE/ENCLOSED	V	VOLT
EP, E	EXISTING	VA	VOLT AMPERE
EA	EACH	VAR	VOLT AMPERE REACTIVE
EC	ELECTRICAL CONTRACTOR	VFD	VARIABLE FREQUENCY DRIVE
EF	EXHAUST FAN	VSH	VIBRATION SWITCH
EL	ELEVATION	W	WATT, WIRE, WIDE
EL	ELECTRIC(AL)	W/O	WITHOUT
EMER	EMERGENCY	WE	WEIGHT LOAD CELL
ENCL	ENCLOSURE/ENCLOSED	WT	WEIGHT INDICATING TRANSMITTER
EP, E	EXISTING	WP	WEATHERPROOF
EA	EACH	XL	WARNING HORN/LIGHT
EC	ELECTRICAL CONTRACTOR	XT	ANEMOMETER
EF	EXHAUST FAN	ZS	POSITION (LIMIT) SWITCH
EL	ELEVATION	ZSO	POSITION (LIMIT) SWITCH OPEN
EL	ELECTRIC(AL)	ZSC	POSITION (LIMIT) SWITCH CLOSED
EMER	EMERGENCY	ZT	POSITION TRANSMITTER
GROUNDING SYMBOLS			
	GROUND ROD, 3/4" x 10'-0", COPPERCLAD (UNLESS OTHERWISE NOTED)		
	GROUND ROD AND WELL		
	COMPRESSION TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT		
	EXOTHERMIC TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT		

GENERAL NOTES:	
1. SCOPE:	<p>A. FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS REQUIRED TO COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, BOXES, LIGHT FIXTURES, PANELS, SWITCHES, RECEPTACLES, DISCONNECTS, STARTERS, AND ALL OTHER WORK INDICATED ON THE DRAWINGS OR AS SPECIFIED HEREIN.</p> <p>B. OBTAIN ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION AND DELIVER CERTIFICATE OF APPROVAL TO THE GENERAL CONTRACTOR. ALL ASSOCIATED FEES SHALL BE PAID BY THE CONTRACTOR.</p> <p>C. ALL MATERIALS AND EQUIPMENT OF THE ELECTRICAL SYSTEM NECESSARY FOR ITS PROPER AND SAFE OPERATION OR OTHERWISE REQUIRED BY CODE, BUT NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL CHARGE.</p> <p>D. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST STANDARD BUILDING CODE, NFPA 820, ANY OTHER LOCALLY ADOPTED CODES AND LOCAL AUTHORITIES HAVING JURISDICTION.</p>
2. ALL SUBSTITUTIONS FOR EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.	
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AND COORDINATED THE INSTALLATION ACCORDINGLY. THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUIT REQUIRED FOR THE PROPER AND SAFE EQUIPMENT OPERATION.	
4. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM CONDUCTOR SIZE FOR POWER AND LIGHTING WIRING. USE #14 AWG MINIMUM CONDUCTOR FOR SIGNAL WIRING. THE INSULATION FOR ALL CONDUCTORS SHALL BE THWN-2. SERVICE ENTRANCE CONDUCTORS SHALL BE XHHW. ALL CABLE INSTALLED IN CABLE TRAYS SHALL BE TC RATED.	
5. POWER WIRES SIZES #12 AWG AND #10 AWG SHALL BE SOLID TYPE. ALL OTHER SIZES SHALL BE STRANDED. CABLES BETWEEN THE VFD AND ASSOCIATED MOTOR SHALL BE SHIELDED POWER VFD RATED CABLES.	
6. ALL EXPOSED CONDUITS SHALL BE GALVANIZED RIGID STEEL, UNLESS NOTED OTHERWISE ON THE DRAWINGS, MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE PVC-40, MINIMUM OF 1". ALL UNDERGROUND CONDUITS SHALL HAVE RIGID STEEL ELBOWS.	
7. ALL FITTINGS SHALL BE CAST WITH THREADED HUBS. ALL CONNECTIONS SHALL BE COMPRESSION TYPE.	
8. CONTRACTOR SHALL PROVIDE PULL STRING AND IDENTIFICATION LABELS AT EACH CONDUIT END FOR ALL SPARE CONDUITS.	
9. CONTRACTOR SHALL VERIFY ALL EQUIPMENT WITH SHOP DRAWINGS AND SHALL PROVIDE ALL CABLES/CONDUITS AS REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS.	
10. ELECTRICAL EQUIPMENT DIMENSIONS ARE BASED ON THE ENGINEER'S SELECTION. IN CASE THE CONTRACTOR USES THE APPROVED EQUAL EQUIPMENT, THE LAYOUT SHALL BE ADJUSTED TO ACCOMMODATE THE PROPOSED EQUIPMENT. IN CASE THE SELECTED EQUIPMENT REQUIRES DIFFERENT THAN THE SPECIFIED VOLTAGE, THE CONTRACTOR SHALL ADJUST THE POWER DISTRIBUTION EQUIPMENT INCLUDING CIRCUIT BREAKERS, CABLES AND CONDUITS AT NO EXTRA COST TO THE OWNER.	
11. CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED JUNCTION BOXES, PULL BOXES AND ALL ASSOCIATED INSTALLATION HARDWARE TO MEET NEC ARTICLE 314 FOR CABLE PULLS.	
PLAN DRAWING SYMBOLS	
	MOTOR CONNECTION
	MOTOR STARTER, INDIVIDUAL --- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
	COMBINATION MOTOR STARTER/DISCONNECT INDIVIDUAL --- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
	DISCONNECT SWITCH. DISCONNECT SWITCHES ARE HEAVY DUTY, SINGLE THROW, WITH NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED. MOUNT AT 4'-8" TO CENTER OF DISCONNECT.
	FUSED DISCONNECT, NON-FUSED. PROVISION FOR CLASS R FUSES.
	FIELD INSTRUMENT CONNECTION
	START/STOP HAND STATION MOUNTED TO HANDRAIL (NEMA 4X UNLESS OTHERWISE NOTED)
	120V, 20A, 1P TOGGLE SWITCH [BLANK] = 1P TOGGLE SWITCH 2 = 2P TOGGLE SWITCH 3 = 3P TOGGLE SWITCH D = SLIDE DIMMER M = MOTOR RATED S = TOGGLE WITH OCCUPANCY SENSOR
	DUPLX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	CFCI DUPLX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	QUADRAPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	TELEPHONE BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.
	JUNCTION BOX
	60A, 480V, 3PH WELDING RECEPTACLE WITH INTERLOCKED 60A (NEMA 4X FUSED DISCONNECT SWITCH UNLESS OTHERWISE NOTED)

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CITY OF STOCKBRIDGE
FOR THE
WATER AND SEWER SYSTEM SCADA UPGRADE
CITY OF STOCKBRIDGE
HENRY COUNTY, GEORGIA

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CONSULTING ENGINEERS
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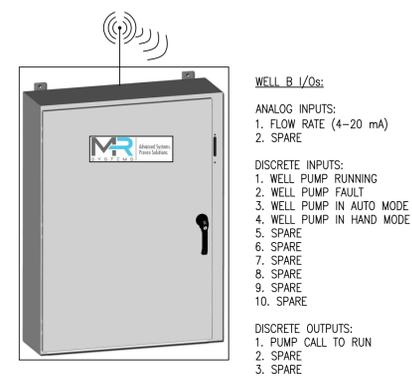
ELECTRICAL LEGEND AND NOTES

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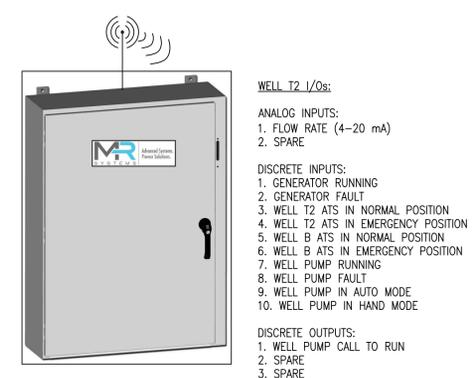


ALL SCADA SYSTEM COMPONENTS SHALL BE PROVIDED BY MR SYSTEMS AS AN ALLOWANCE TO THE BIDDING CONTRACTORS

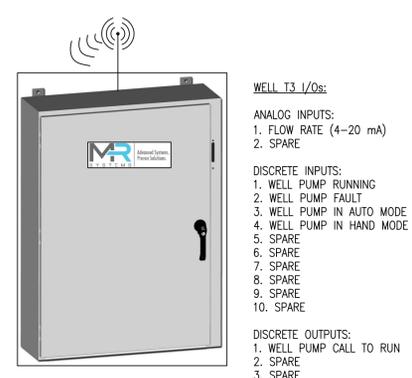
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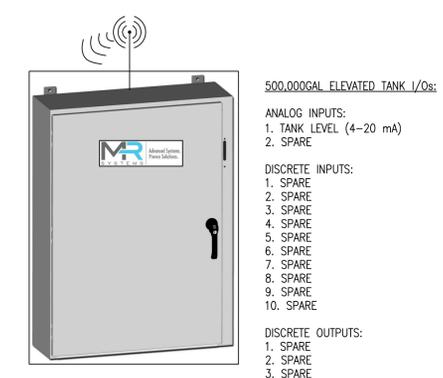
WELL B SCADA RTU-1 (NOTE 1)



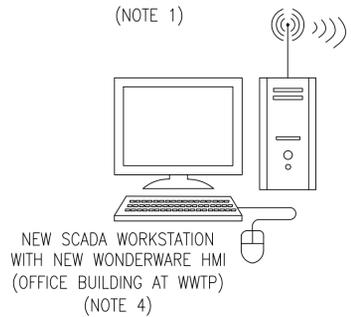
WELL T2 SCADA RTU-2 (NOTE 1)



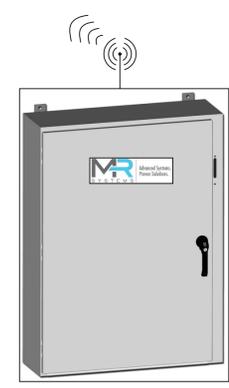
WELL T3 SCADA RTU-3 (NOTE 1)



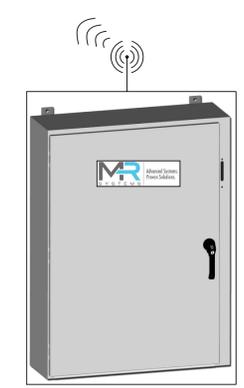
500,000GAL ELEVATED TANK SCADA RTU-4 (NOTE 1)



GROUND WATER PUMPING STATION SCADA RTU-5 (NOTE 1)



HENRY COUNTY VALVE STATION SCADA RTU-6 (NOTE 1)



1,000,000GAL ELEVATED TANK AND GROUND STORAGE TANK SCADA RTU-7 (NOTE 1)

- NOTES:**
- SCADA PANELS SHALL BE PROVIDED BY MR SYSTEMS AND INSTALLED BY CONTRACTOR. SCADA PANELS SHALL CONTAIN ALL COMPONENTS INCLUDING BUT NOT LIMITED TO CELLULAR MODEM, DC BATTERY BACK-UP, SURGE PROTECTION, ETC. AS REQUIRED FOR RELIABLE COMMUNICATION WITH OTHER SCADA SYSTEM PANELS. IT IS THE RESPONSIBILITY OF MR SYSTEMS TO DETERMINE TYPES OF CELLULAR SERVICE AVAILABLE IN AREA AND SELECT APPROPRIATE CELLULAR TRANSCIEVER WHICH WILL PROVIDE MOST RELIABLE CONNECTION.
 - SCADA SYSTEM PROVIDER SHALL FURNISH ANTENNA WITH LONG ENOUGH CABLE TO PROVIDE STABLE AND RELIABLE CELLULAR COMMUNICATION LINK. CONTRACTOR SHALL PROVIDE AND INSTALL 1" GRS CONDUIT FOR THE ANTENNA CABLE ACCORDING TO MR SYSTEMS REQUIREMENTS.
 - MR SYSTEMS SHALL COORDINATE SYSTEM SEQUENCE OF OPERATION WITH PROCESS ENGINEER.
 - MR SYSTEMS SHALL PROVIDE NEW HMI COMPUTER WITH WONDERWARE SOFTWARE TO ACCOMMODATE THE SCADA MODIFICATIONS AND TO CREATE NEW HMI SCREENS AS REQUIRED. THE NEW HMI WORKSTATION SHALL BE LOCATED AT JEFF BLEDSOE'S OFFICE AT THE WASTEWATER TREATMENT PLANT (100 STAPLETON DR., STOCKBRIDGE, GA).
 - CONTRACTOR SHALL COORDINATE ANY DOWNTIME ASSOCIATED WITH THE REPLACEMENT OF THE EXISTING SCADA PANELS WITH THE OWNER AND INCLUDE OPTIONS TO MINIMIZE EQUIPMENT DOWNTIME AS REQUIRED.

1 STOCKBRIDGE WATER SYSTEM SCADA BLOCK DIAGRAM

SCADA BLOCK DIAGRAM

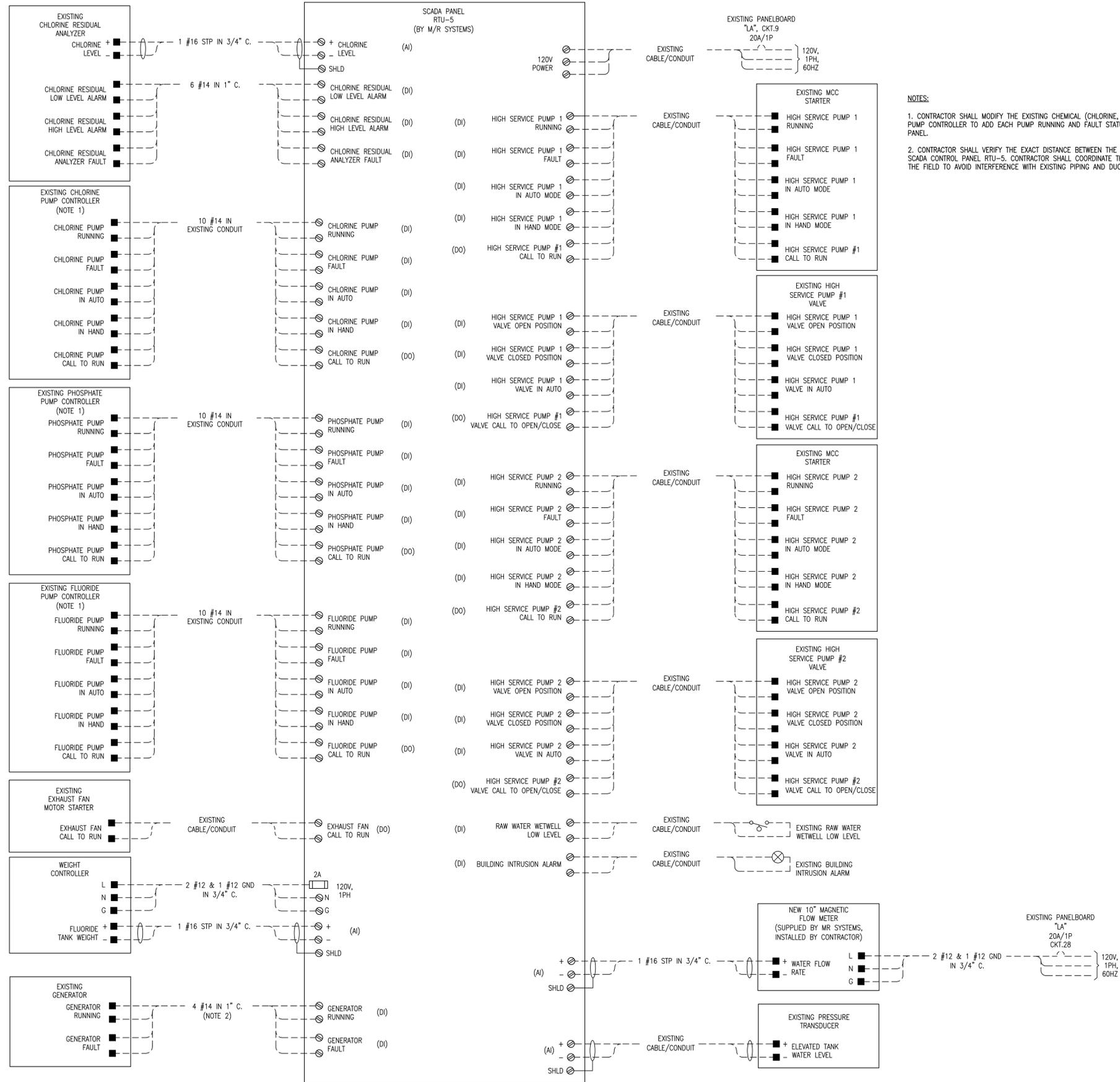
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DSGN:	RV
DRWN:	RV
SCALE:	AS SHOWN
DWG. NAME:	E-1
PROJ. NO.:	S9100.015
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SHEET NO.:	E-1
	OF 19 SHEETS



NOTES:

- CONTRACTOR SHALL MODIFY THE EXISTING CHEMICAL (CHLORINE, PHOSPHATE AND FLUORIDE) PUMP CONTROLLER TO ADD EACH PUMP RUNNING AND FAULT STATUS FOR CONNECTION TO SCADA PANEL.
- CONTRACTOR SHALL VERIFY THE EXACT DISTANCE BETWEEN THE EXISTING GENERATOR AND NEW SCADA CONTROL PANEL RTU-5. CONTRACTOR SHALL COORDINATE THE NEW DUCTBANK ROUTING IN THE FIELD TO AVOID INTERFERENCE WITH EXISTING PIPING AND DUCTBANKS.

REVISIONS:	
A ISSUED FOR REVIEW	11/06/17
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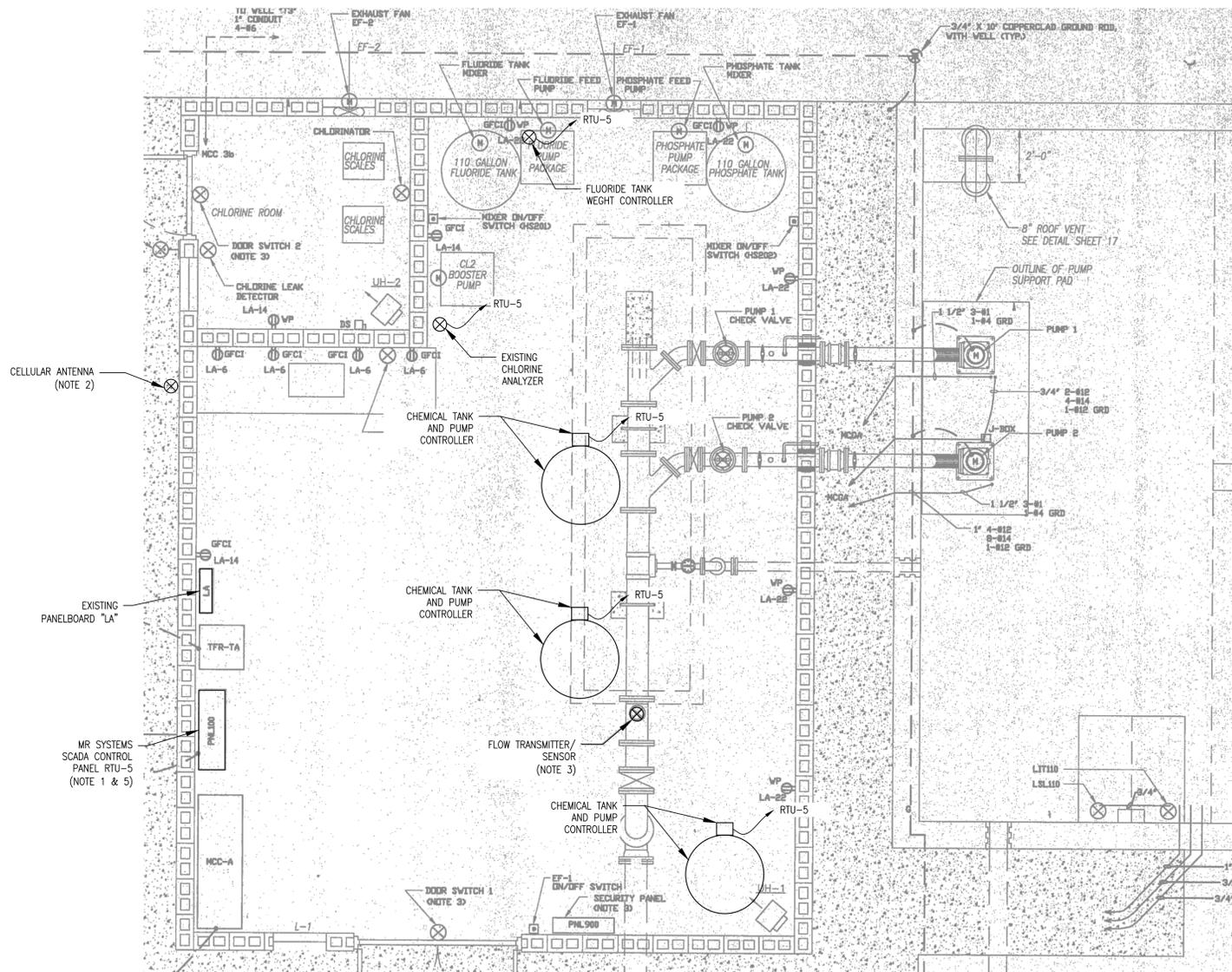
DSGN:	RV
DRWN:	RV
SCALE:	AS SHOWN
DWG. NAME:	E-2
PROJ. NO.:	S9100.015
DATE:	11.06.2017
SHEET NO.:	E-2
	OF 19 SHEETS

GROUND WATER PUMPING STATION SCHEMATIC WIRING DIAGRAM

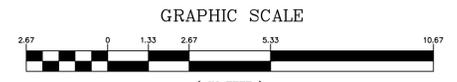

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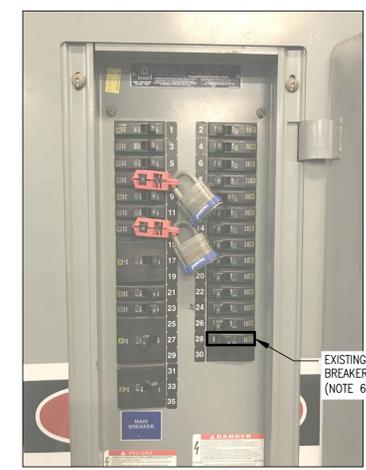
1 GROUND WATER PUMPING STATION ELECTRICAL SITE PLAN



- NOTES:
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING SCADA PANEL AND REPLACE IT WITH NEW SCADA PANEL PROVIDED BY MR SYSTEM. CONTRACTOR SHALL RECONNECT 120VAC POWER AND EXISTING CONTROLS WIRING TO THE NEW PANEL. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED. SEE SHEET E-2 FOR SCHEMATIC WIRING DIAGRAM.
 - SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
 - MR SYSTEMS SHALL SUPPLY AND THE CONTRACTOR SHALL REPLACE EXISTING FLOW TRANSMITTER AND SENSOR WITH NEW COMPACT MOUNTED FLOW TRANSMITTER (SIEMENS MODEL MAC 6000) AND NEW SENSOR (SIEMENS MODEL MAC 5100 W). CONTRACTOR SHALL RUN NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND NEW FLOW TRANSMITTER. SEE DETAIL "1" DWG. E-2.
 - ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
 - SYSTEM SCADA INTEGRATOR SHALL ENSURE THAT THE NEW SCADA CONTROL PANEL WIDTH WILL NOT EXCEED THE AVAILABLE SPACE.
 - CONTRACTOR SHALL REUSE EXISTING 20A, 1P CIRCUIT BREAKER IN EXISTING PANELBOARD "LA" TO FEED NEW FLOW METER.



2 EXISTING INSTALLATION



3 EXISTING PANELBOARD "LA"

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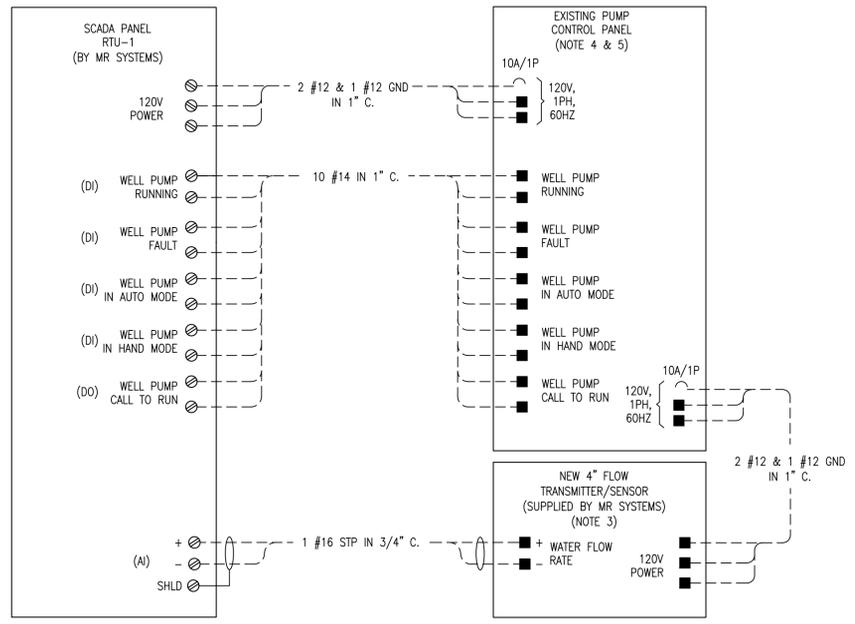
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DSGN:	RV
DRWN:	RV
SCALE:	AS SHOWN
DWG. NAME:	E-3
PROJ. NO.:	S9100.015
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1 WELL B SCHEMATIC WIRING DIAGRAM



2 PROPOSED SCADA PANEL LOCATION



3 EXISTING PUMP CONTROL PANEL

NOTES:

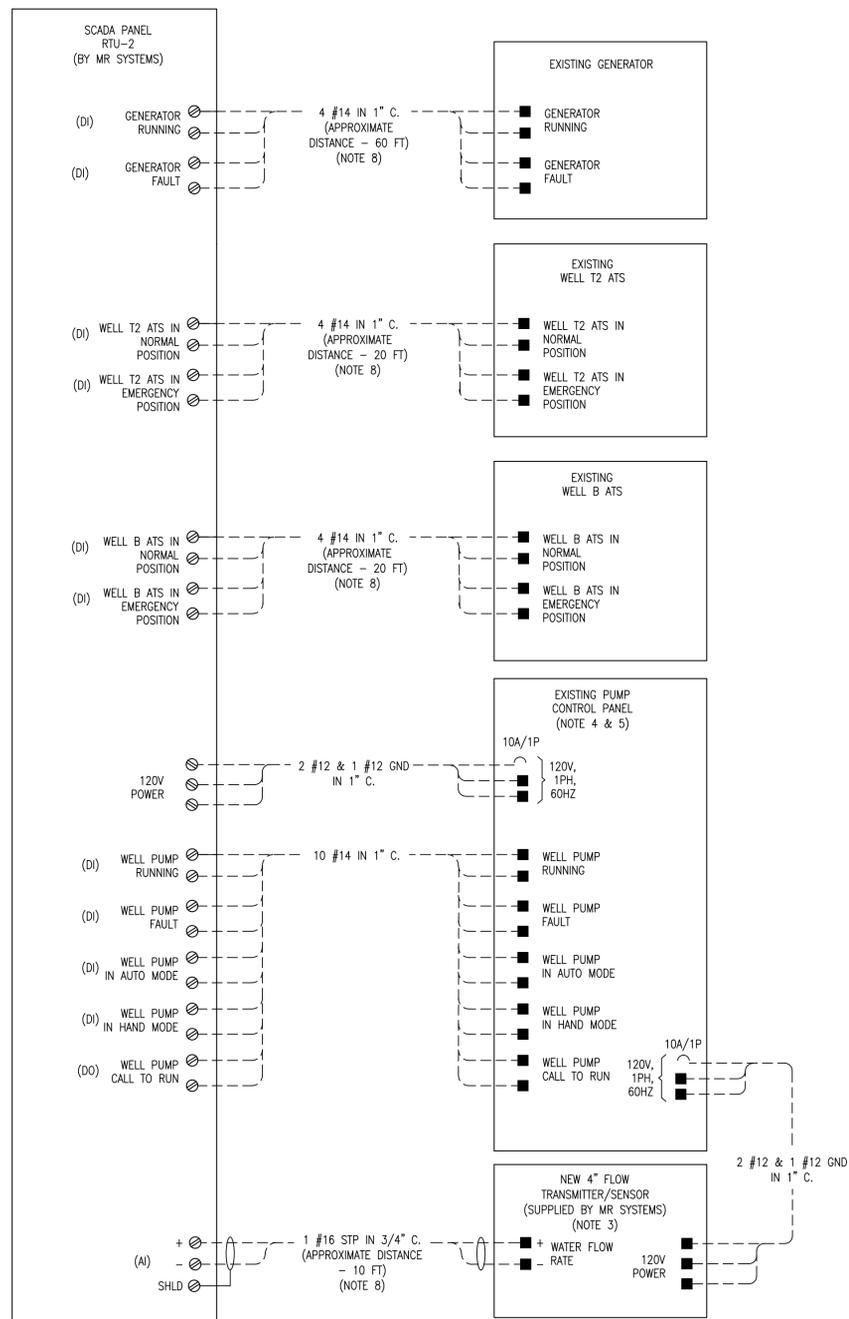
1. M/R SYSTEMS SHALL PROVIDE AND CONTRACTOR SHALL INSTALL NEW SCADA PANEL IN NEMA 4X ENCLOSURE. CONTRACTOR SHALL PROVIDE NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND EXISTING PUMP CONTROL PANEL. CONTRACTOR SHALL CONNECT NEW CABLES TO EXISTING PUMP CONTROL PANEL TO MAINTAIN THE EXISTING I/O's. SEE DETAIL "1" ON THIS SHEET.
2. SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
3. MR SYSTEMS SHALL SUPPLY AND THE CONTRACTOR SHALL REPLACE EXISTING FLOW TRANSMITTER AND SENSOR WITH NEW COMPACT MOUNTED FLOW TRANSMITTER (SIEMENS MODEL MAC 6000) AND NEW SENSOR (SIEMENS MODEL MAC 5100 W). CONTRACTOR SHALL RUN NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND NEW FLOW TRANSMITTER. SEE DETAIL "1" ON THIS SHEET.
4. CONTRACTOR SHALL ADD TWO (2) NEW 10A, 1P, 120V CIRCUIT BREAKERS IN THE EXISTING PUMP CONTROL PANEL FOR NEW SCADA PANEL AND NEW FLOW METER. CIRCUIT BREAKERS SHALL HAVE THE SAME AIC RATING AS THE OTHER BREAKERS.
5. CONTRACTOR SHALL REMOVE CONTROLLER AND ALL ASSOCIATED COMPONENTS AND CABLES INSIDE EXISTING PUMP CONTROL PANEL. COVER THE CONTROLLER DOOR OPENING. CONTRACTOR SHALL MODIFY THE EXISTING PUMP CONTROL PANEL TO PROVIDE THE REQUIRED CONTACTS AND SIGNALS FOR CONNECTION TO SCADA SYSTEM.
6. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
7. CONTRACTOR SHALL PROVIDE STAINLESS STEEL SUN SHIELD FOR THE NEW SCADA PANEL. SEE DETAIL 3 ON DRAWING E-10.
8. CONTRACTOR SHALL VERIFY THE EXACT DISTANCE BETWEEN THE NEW FLOW METER AND NEW SCADA CONTROL PANEL AND EXISTING PUMP CONTROL PANEL. CONTRACTOR SHALL COORDINATE THE NEW DUCTBANK ROUTING IN THE FIELD TO AVOID INTERFERENCE WITH EXISTING PIPING AND DUCTBANKS.
9. CONTRACTOR SHALL PROVIDE A CONCRETE PAD EXTENDED 3FT IN FRONT OF THE NEW SCADA CONTROL PANEL. SEE DETAIL 5 ON DRAWING E-10.

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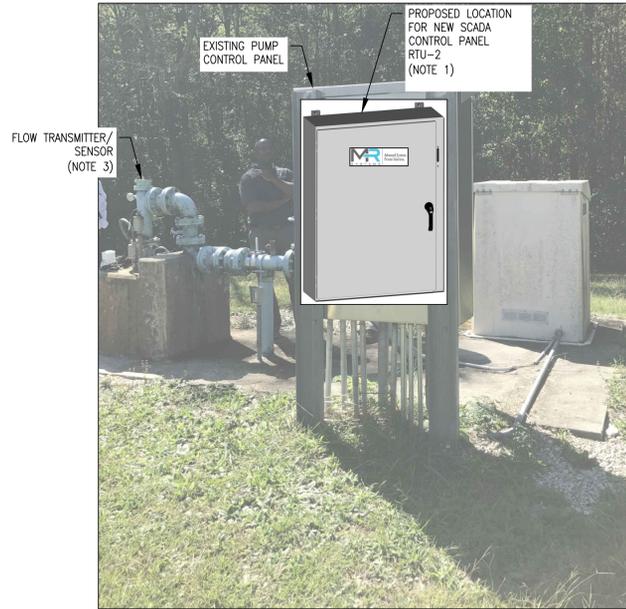
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PROJ. NO.:	S9100.015
DATE:	11.06.2017
SHEET NO.:	E-4 OF 19 SHEETS

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1 WELL T2 SCHEMATIC WIRING DIAGRAM



2 PROPOSED SCADA PANEL LOCATION



3 EXISTING PUMP CONTROL PANEL



4 EXISTING ELECTRICAL EQUIPMENT LAYOUT

NOTES:

1. M/R SYSTEMS SHALL PROVIDE AND CONTRACTOR SHALL INSTALL NEW SCADA PANEL IN NEMA 4X ENCLOSURE. CONTRACTOR SHALL PROVIDE NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND EXISTING PUMP CONTROL PANEL. CONTRACTOR SHALL CONNECT NEW CABLES TO EXISTING PUMP CONTROL PANEL TO MAINTAIN THE EXISTING I/O'S. SEE DETAIL "1" ON THIS SHEET.
2. SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
3. MR SYSTEMS SHALL SUPPLY AND THE CONTRACTOR SHALL REPLACE EXISTING FLOW TRANSMITTER AND SENSOR WITH NEW COMPACT MOUNTED FLOW TRANSMITTER (SIEMENS MODEL MAG 6000) AND NEW SENSOR (SIEMENS MODEL MAG 5100 W). CONTRACTOR SHALL RUN NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND NEW FLOW TRANSMITTER. SEE DETAIL "1" ON THIS SHEET.
4. CONTRACTOR SHALL ADD TWO (2) NEW 10A, 1P, 120V CIRCUIT BREAKERS IN THE EXISTING PUMP CONTROL PANEL FOR NEW SCADA PANEL AND NEW FLOW METER. CIRCUIT BREAKERS SHALL HAVE THE SAME AIC RATING AS THE OTHER BREAKERS.
5. CONTRACTOR SHALL REMOVE PUMP CONTROLLER AND ALL ASSOCIATED COMPONENTS AND CABLES INSIDE EXISTING PUMP CONTROL PANEL. COVER THE CONTROLLER DOOR OPENING. CONTRACTOR SHALL MODIFY THE EXISTING PUMP CONTROL PANEL TO PROVIDE THE REQUIRED CONTACTS AND SIGNALS FOR CONNECTION TO SCADA SYSTEM.
6. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
7. CONTRACTOR SHALL PROVIDE STAINLESS STEEL SUN SHIELD FOR THE NEW SCADA PANEL. SEE DETAIL 3 ON DRAWING E-10.
8. CONTRACTOR SHALL VERIFY THE EXACT DISTANCE BETWEEN THE NEW SCADA CONTROL PANEL RTU-2 AND EXISTING ELECTRICAL EQUIPMENT. CONTRACTOR SHALL COORDINATE THE NEW DUCTBANK ROUTING IN THE FIELD TO AVOID INTERFERENCE WITH EXISTING PIPING AND DUCTBANKS.
9. CONTRACTOR SHALL PROVIDE A CONCRETE PAD EXTENDED 3FT IN FRONT OF THE NEW SCADA CONTROL PANEL. SEE DETAIL 5 ON DRAWING E-10.

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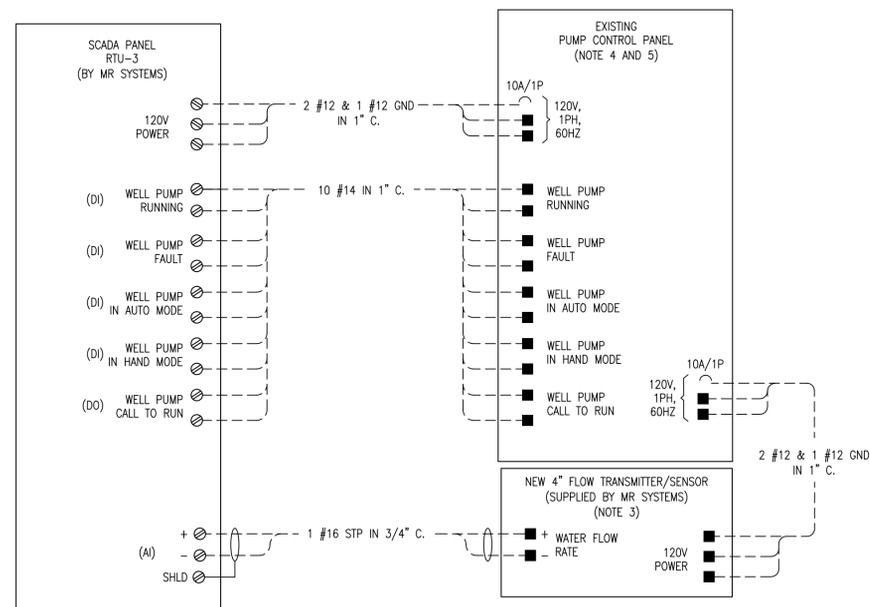


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DATE:	11.06.2017
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	OF 19 SHEETS

WELL T2 SCHEMATIC AND ELECTRICAL SITE PLAN

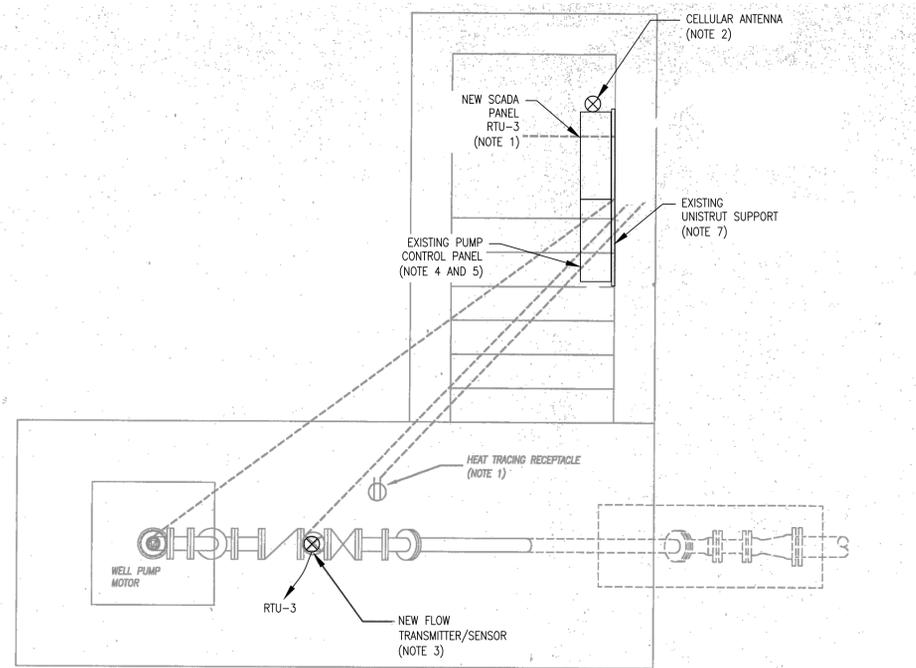
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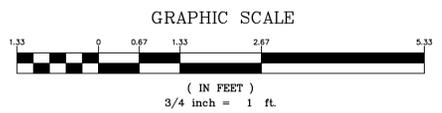
1 WELL T3 SCHEMATIC WIRING DIAGRAM



3 PROPOSED SCADA PANEL LOCATION

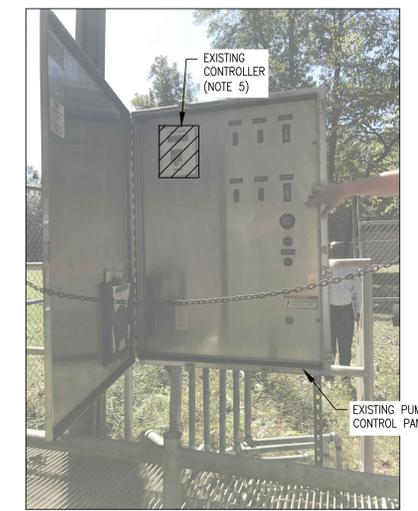


2 WELL T3 ELECTRICAL SITE PLAN



NOTES:

1. M/R SYSTEMS SHALL PROVIDE AND CONTRACTOR SHALL INSTALL NEW SCADA PANEL IN NEMA 4X ENCLOSURE. CONTRACTOR SHALL PROVIDE NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND EXISTING PUMP CONTROL PANEL. CONTRACTOR SHALL CONNECT NEW CABLES TO EXISTING PUMP CONTROL PANEL TO MAINTAIN THE EXISTING I/O's. SEE DETAIL "1" ON THIS SHEET.
2. SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
3. MR SYSTEMS SHALL SUPPLY AND THE CONTRACTOR SHALL REPLACE EXISTING FLOW TRANSMITTER AND SENSOR WITH NEW COMPACT MOUNTED FLOW TRANSMITTER (SIEMENS MODEL MAG 6000) AND NEW SENSOR (SIEMENS MODEL MAG 5100 W). CONTRACTOR SHALL RUN NEW CABLES/CONDUITS BETWEEN NEW SCADA PANEL AND NEW FLOW TRANSMITTER. SEE DETAIL "1" ON THIS SHEET.
4. CONTRACTOR SHALL ADD TWO (2) NEW 10A, 1P, 120V CIRCUIT BREAKERS IN THE EXISTING PUMP CONTROL PANEL FOR NEW SCADA PANEL AND NEW FLOW METER. CIRCUIT BREAKERS SHALL HAVE THE SAME AIC RATING AS THE OTHER BREAKERS.
5. CONTRACTOR SHALL REMOVE PUMP CONTROLLER AND ALL ASSOCIATED COMPONENTS AND CABLES INSIDE EXISTING PUMP CONTROL PANEL. COVER THE CONTROLLER DOOR OPENING. CONTRACTOR SHALL MODIFY THE EXISTING PUMP CONTROL PANEL TO PROVIDE THE REQUIRED CONTACTS AND SIGNALS FOR CONNECTION TO SCADA SYSTEM.
6. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
7. CONTRACTOR SHALL EXTEND THE EXISTING UNISTRUT SUPPORT AS NECESSARY TO MOUNT THE NEW SCADA CONTROL PANEL.
8. CONTRACTOR SHALL PROVIDE STAINLESS STEEL SUN SHIELD FOR THE NEW SCADA PANEL. SEE DETAIL 3 ON DRAWING E-10.
9. CONTRACTOR SHALL COORDINATE THE NEW DUCTBANK ROUTING IN THE FIELD TO AVOID INTERFERENCE WITH EXISTING PIPING AND DUCTBANKS.



4 EXISTING PUMP CONTROL PANEL

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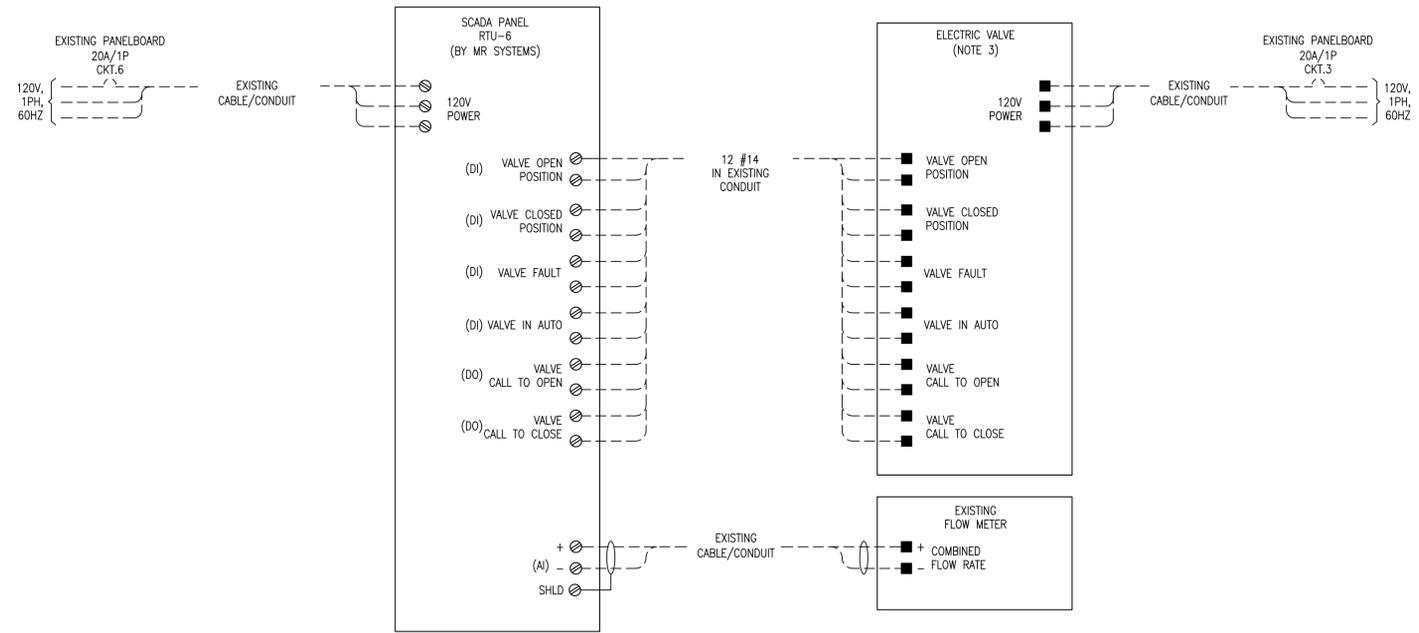
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PROJ. NO.:	S9100.015
DATE:	11.06.2017
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WELL T3 SCHEMATIC AND ELECTRICAL SITE PLAN

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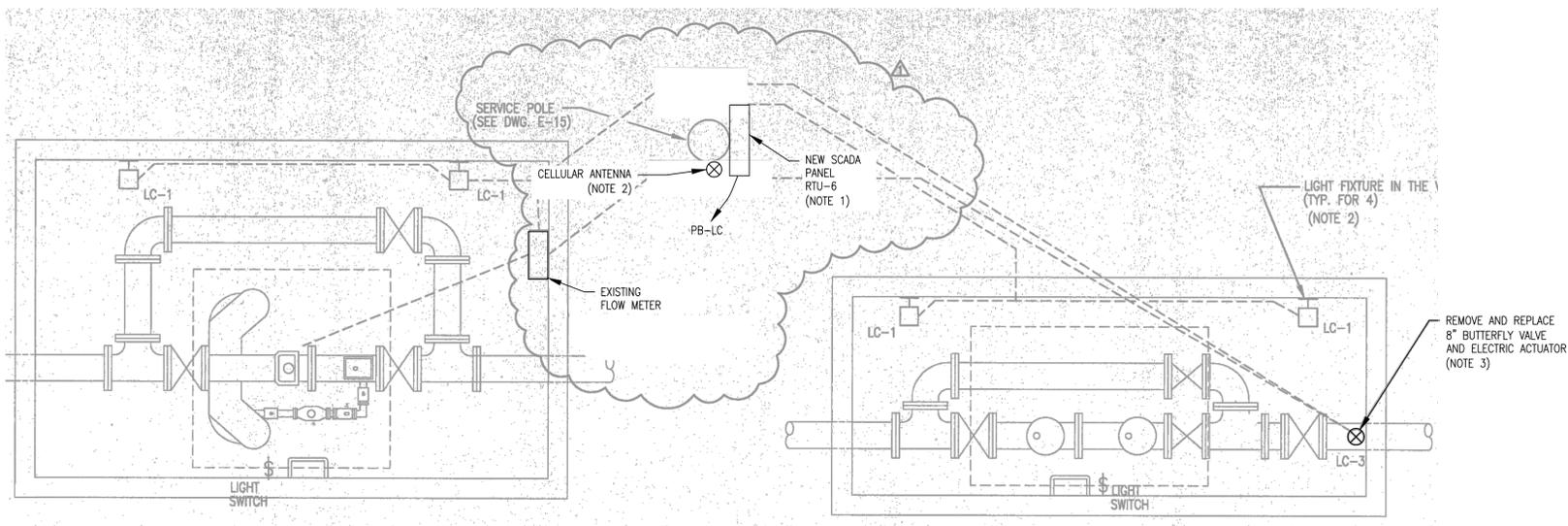
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1 HENRY CO VALVE STATION SCHEMATIC WIRING DIAGRAM

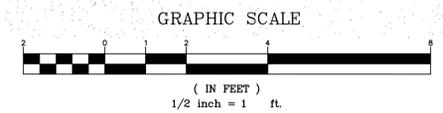


3 EXISTING INSTALLATION



8" COMPACT FIRE LINE IN 13' x 8' VAULT
SCALE: 1/2" = 1'-0"

8" DOUBLE CHECK ASSEMBLY IN 13' x 5' VAULT
SCALE: 1/2" = 1'-0"



NOTES:

- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING SCADA PANEL AND REPLACE IT WITH NEW SCADA PANEL IN NEMA 4X ENCLOSURE PROVIDED BY MR SYSTEMS. CONTRACTOR SHALL RECONNECT 120VAC POWER AND EXISTING CONTROLS WIRING TO THE NEW PANEL. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED.
- SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING 8" BUTTERFLY VALVE AND ELECTRIC ACTIVATOR WITH ASSOCIATED CONTROL WIRING AND REPLACE IT WITH NEW 8" BUTTERFLY VALVE MEETING REQUIREMENTS OF AWWA C504 CLASS 150B, LATEST REVISION SUITABLE FOR DIFFERENTIAL PRESSURE OF 150 PSIG. VALVE SHALL BE RESILIENT SEATED, SHORT BODY DESIGN WITH INTEGRALLY CAST END COMPATIBLE WITH ADJACENT PIPING. FLANGES SHALL BE 125 LB. FACED AND DRILLED PER ANSI B16.1 STANDARD FOR CAST IRON FLANGES WITH FULL-FACE GASKETS. VALVES SHALL BE BY DEZURIK, PRATT OR VAL-MATIC. CONTRACTOR SHALL RECONNECT EXISTING 120VAC POWER CABLES AND SHALL PROVIDE NEW CONTROL WIRING FOR TO THE NEW ELECTRIC ACTIVATOR. SEE DETAIL "1" ON THIS SHEET.
- ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
- CONTRACTOR SHALL PROVIDE STAINLESS STEEL SUN SHIELD FOR THE NEW SCADA PANEL. SEE DETAIL 3 ON DRAWING E-10.
- CONTRACTOR SHALL PROVIDE A CONCRETE PAD EXTENDED 3FT IN FRONT OF THE NEW SCADA CONTROL PANEL. SEE DETAIL 5 ON DRAWING E-10.

2 HENRY CO VALVE STATION ELECTRICAL SITE PLAN

HENRY CO VALVE STATION SCHEMATIC AND ELECTRICAL SITE PLAN

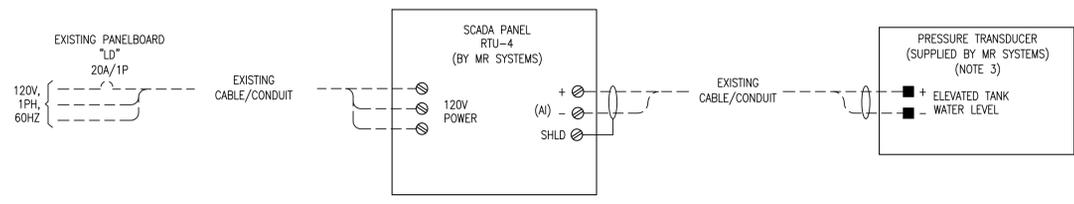


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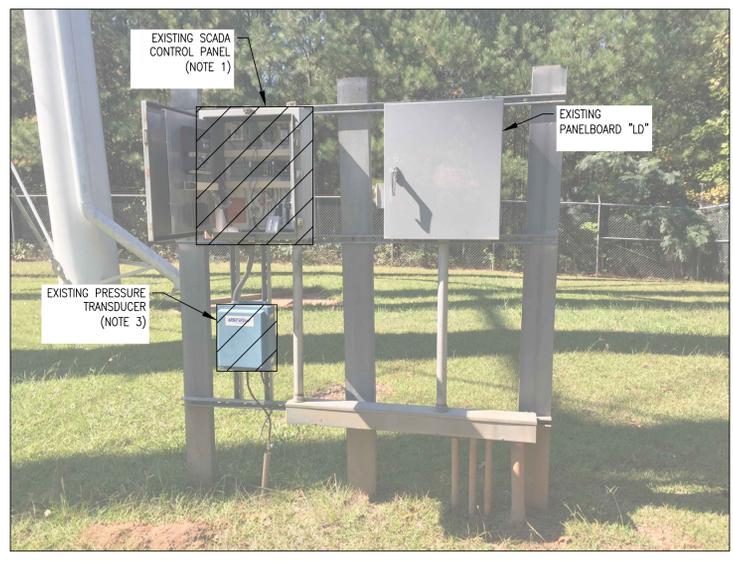
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DWG. NAME:	E-7
PROJ. NO.:	S9100.015
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	OF 19 SHEETS

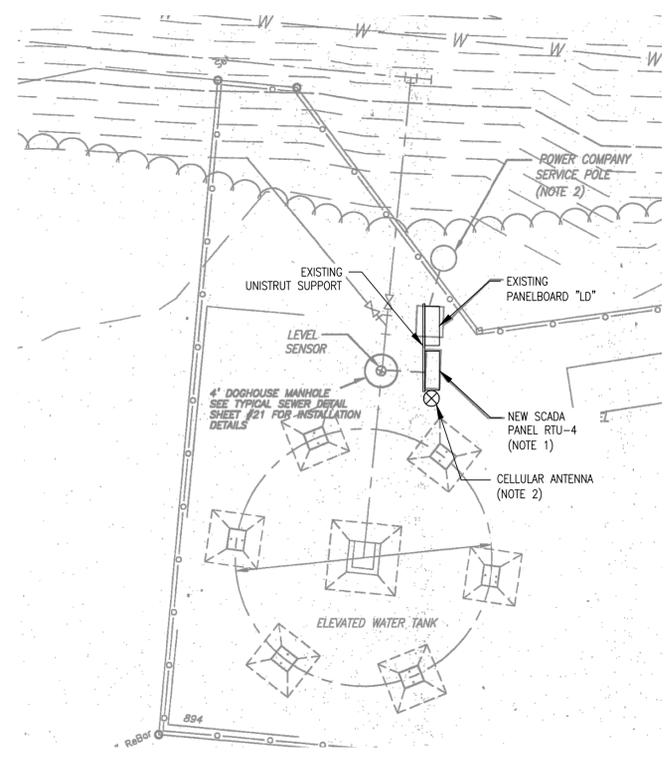
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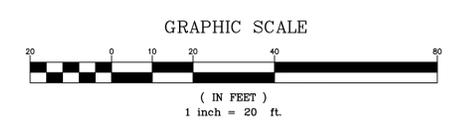
1 500,000 GAL. ELEVATED TANK SCHEMATIC WIRING DIAGRAM



3 EXISTING INSTALLATION



2 500,000 GAL. ELEVATED TANK ELECTRICAL SITE PLAN



- NOTES:
1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING SCADA PANEL AND REPLACE IT WITH NEW SCADA PANEL IN NEMA 4X ENCLOSURE PROVIDED BY MR SYSTEMS. CONTRACTOR SHALL RECONNECT 120VAC POWER AND EXISTING CONTROLS WIRING TO THE NEW PANEL. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED.
 2. SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
 3. MR SYSTEMS SHALL SUPPLY AND THE CONTRACTOR SHALL REPLACE EXISTING ELEVATED TANK PRESSURE TRANSDUCER WITH NEW PRESSURE TRANSDUCER. CONTRACTOR SHALL REUSE AND RECONNECT THE EXISTING CABLES BETWEEN NEW SCADA PANEL AND NEW PRESSURE TRANSDUCER. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED. SEE DETAIL "1" ON THIS SHEET.
 4. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
 5. CONTRACTOR SHALL PROVIDE STAINLESS STEEL SUN SHIELD FOR THE NEW SCADA PANEL. SEE DETAIL 3 ON DRAWING E-10.
 6. CONTRACTOR SHALL PROVIDE A CONCRETE PAD EXTENDED 3FT IN FRONT OF THE NEW SCADA CONTROL PANEL. SEE DETAIL 5 ON DRAWING E-10.

500,000 GAL. ELEVATED TANK SCHEMATIC AND ELECTRICAL SITE PLAN

CITY OF STOCKBRIDGE
 WATER AND SEWER SYSTEM SCADA UPGRADE
 FOR THE
 CITY OF STOCKBRIDGE
 HENRY COUNTY, GEORGIA

Carter & Sloop
 CONSULTING ENGINEERS
 MACON ♦ ALBANY ♦ ATHENS ♦ CANTON
 6310 PEAKE ROAD - MACON, GA 31210 - 478.477.3923 TEL. - 478.477.4691 FAX



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 3069 PEACHTREE IND. BLVD.
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 TEL. (770) 493-8685

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DRWN:	RV
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	OF 19 SHEETS

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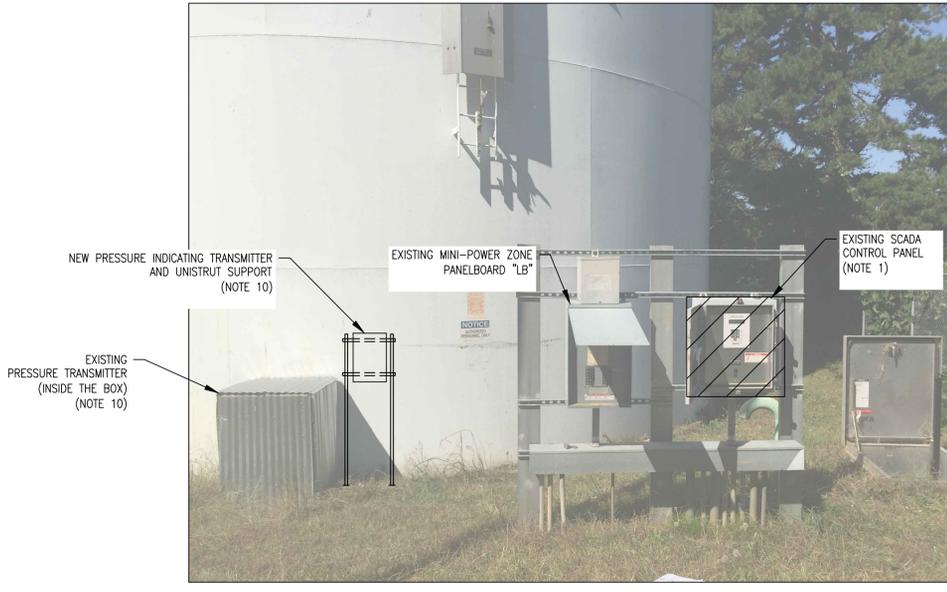
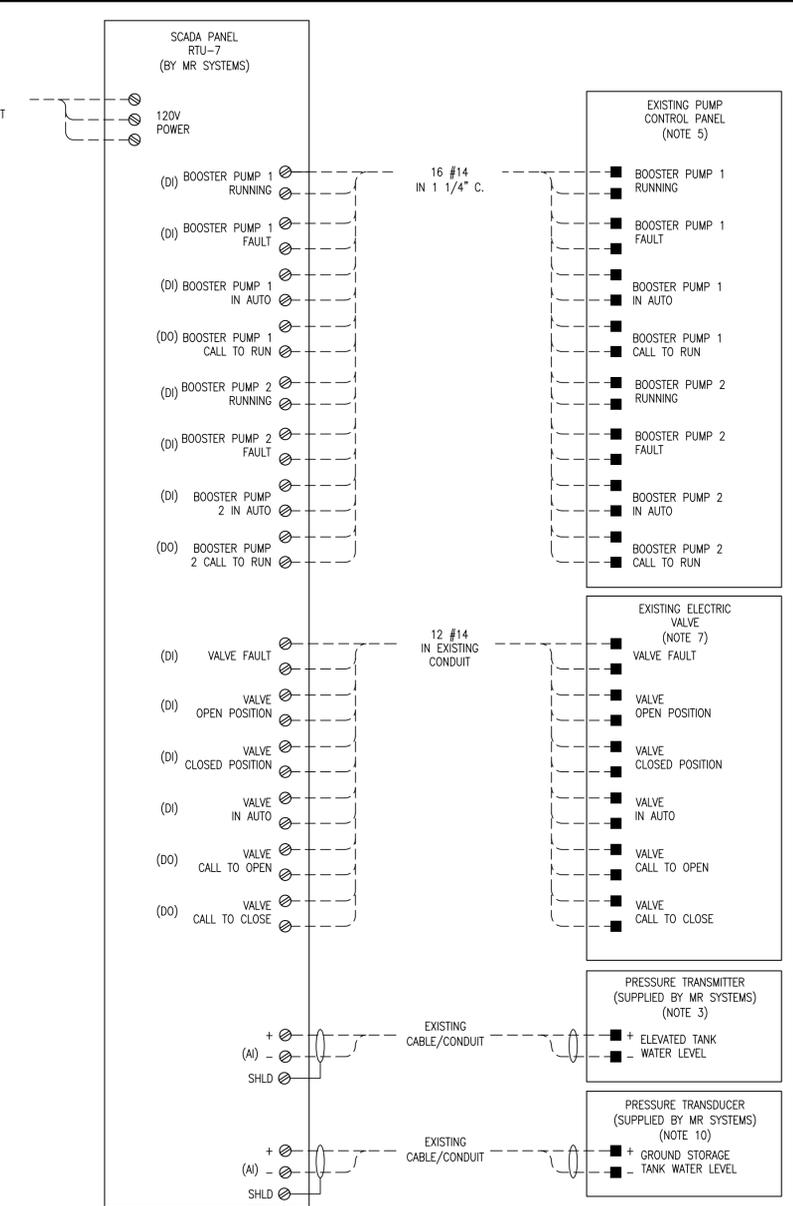
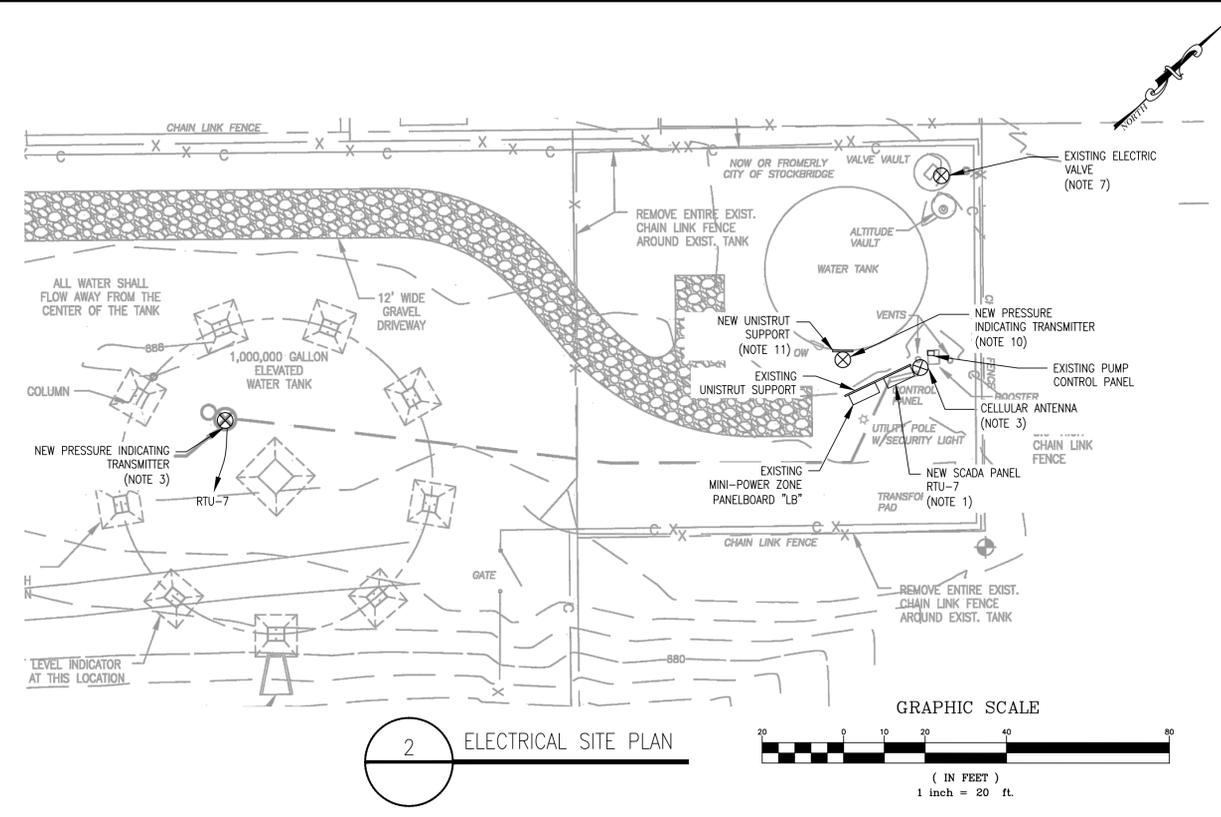
CITY OF STOCKBRIDGE
FOR THE
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1,000,000 GAL, ELEVATED TANK, GROUND STORAGE TANK SCHEMATIC AND ELECTRICAL SITE PLAN

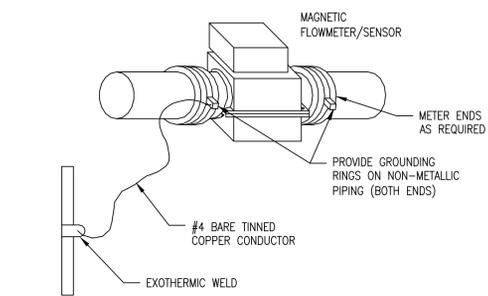
- NOTES:**
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING SCADA PANEL AND REPLACE IT WITH NEW SCADA PANEL IN NEMA 4X ENCLOSURE PROVIDED BY MR SYSTEMS. CONTRACTOR SHALL RECONNECT 120VAC POWER AND EXISTING CONTROLS WIRING TO THE NEW PANEL. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED.
 - SCADA ANTENNA SHALL BE MOUNTED BY ELECTRICAL CONTRACTOR AT THE LOCATION DETERMINED BY MR SYSTEMS. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
 - MR SYSTEMS SHALL SUPPLY AND THE CONTRACTOR SHALL REPLACE EXISTING ELEVATED TANK PRESSURE TRANSMITTER AND GAUGE PANEL WITH NEW PRESSURE INDICATING TRANSMITTER. CONTRACTOR SHALL REUSE AND RECONNECT THE EXISTING CABLES BETWEEN NEW SCADA PANEL AND NEW PRESSURE TRANSMITTER AND REUSE THE EXISTING WATER TAP LINE. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED. PRESSURE INDICATING TRANSMITTER SHALL HAVE NEMA 4X ENCLOSURE, 4-20mA OUTPUT LOOP POWERED SIGNAL AND SHALL BE ROSEMOUNT OR APPROVED EQUAL.
 - ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
 - CONTRACTOR SHALL MODIFY THE EXISTING PUMP CONTROL PANEL TO ADD EACH PUMP RUNNING, FAULT, IN AUTO STATUS AND CALL TO RUN (120VAC, 5AMP RATED DRY CONTACTS) FOR CONNECTION TO SCADA PANEL.
 - CONTRACTOR SHALL PROVIDE STAINLESS STEEL SUN SHIELD FOR THE NEW SCADA PANEL. SEE DETAIL 3 ON DRAWING E-10.
 - CONTRACTOR SHALL MODIFY THE EXISTING VALVE CONTROLLER TO ADD VALVE FAULT AND IN AUTO STATUS FOR CONNECTION TO SCADA PANEL.
 - CONTRACTOR SHALL COORDINATE THE NEW DUCTBANK ROUTING IN THE FIELD TO AVOID INTERFERENCE WITH EXISTING PIPING AND DUCTBANKS.
 - CONTRACTOR SHALL PROVIDE A CONCRETE PAD EXTENDED 3FT IN FRONT OF THE NEW SCADA CONTROL PANEL. SEE DETAIL 5 ON DRAWING E-10.
 - CONTRACTOR SHALL REMOVE EXISTING GROUND STORAGE TANK PRESSURE TRANSMITTER. MR SYSTEMS SHALL SUPPLY AND CONTRACTOR SHALL INSTALL NEW PRESSURE INDICATING TRANSMITTER MOUNTED ON THE UNISTRUT AS SHOWN ON DETAIL 3 THIS DRAWING. CONTRACTOR SHALL EXTEND TAP WATER LINE TO THE LOCATION OF NEW PRESSURE INDICATING TRANSMITTER. CONTRACTOR SHALL REUSE AND RECONNECT THE EXISTING CABLES BETWEEN NEW SCADA PANEL AND NEW PRESSURE INDICATING TRANSMITTER. EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED. PRESSURE INDICATING TRANSMITTER SHALL HAVE NEMA 4X ENCLOSURE, 4-20mA OUTPUT LOOP POWERED SIGNAL AND SHALL BE ROSEMOUNT OR APPROVED EQUAL.
 - CONTRACTOR SHALL PROVIDE UNISTRUT SUPPORT FOR INSTALLATION OF NEW PRESSURE INDICATING TRANSMITTER. SEE DETAIL 8 ON DWG. E-10 FOR TYPICAL INSTALLATION DETAILS.

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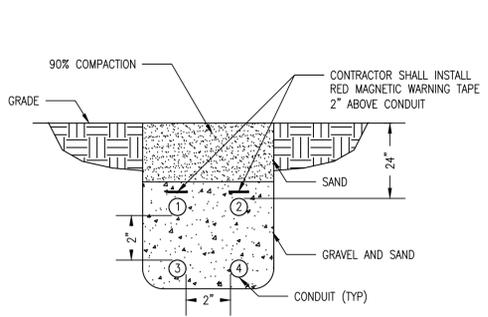
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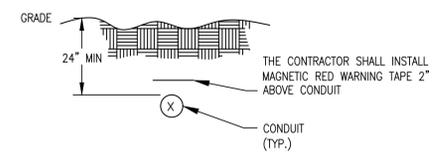


1 MAGNETIC FLOW TRANSMITTER/SENSOR INSTALLATION

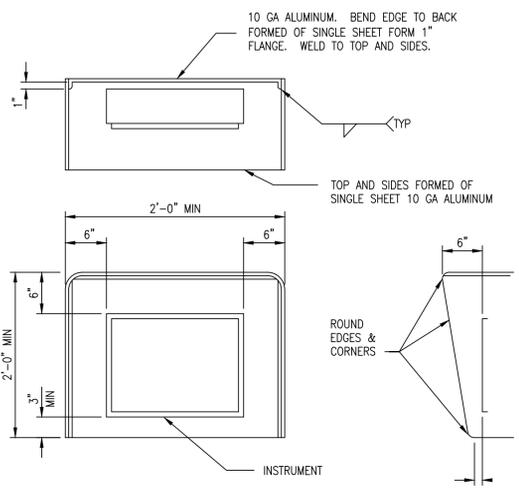
- NOTES:
1. POWER SUPPLY TO MAGNETIC METER PRIMARY DEVICE & TRANSMITTER TO BE FROM SAME SOURCE WITH RESPECT TO VOLTAGE, FREQUENCY AND PHASE
 2. INSTALLATION OF METERS SHALL PROVIDE FOR 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETER DOWNSTREAM, WHERE POSSIBLE



2 CONDUIT SECTION IN TRENCH

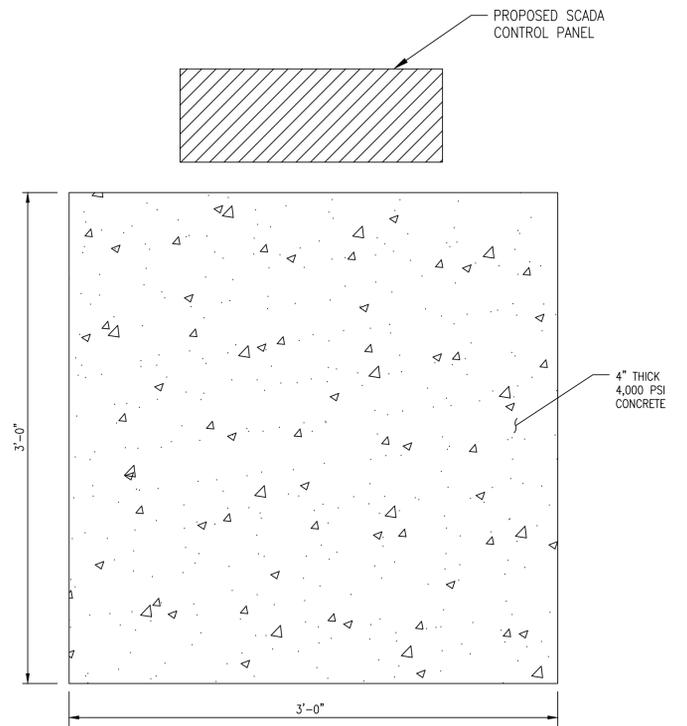


4 DUCTBANK DETAILS



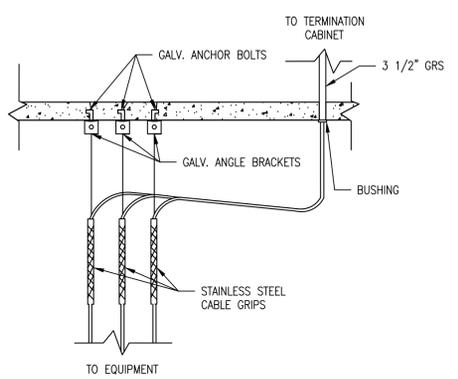
- NOTES:
1. ALL EXPOSED EDGES TO BE GRIND SMOOTH AND BURR FREE.
 2. MOUNT SUN/RAIN SHIELD BETWEEN INSTRUMENT AND STANCHION. USE STAINLESS STEEL BOLTS AND INSULATING WASHERS AND SLEEVES.
 3. ALL OUTDOOR SCADA PANELS AND INSTRUMENTS SHALL INCLUDE SUN/RAIN SHIELD.

3 SUN/RAIN SHIELD DETAIL

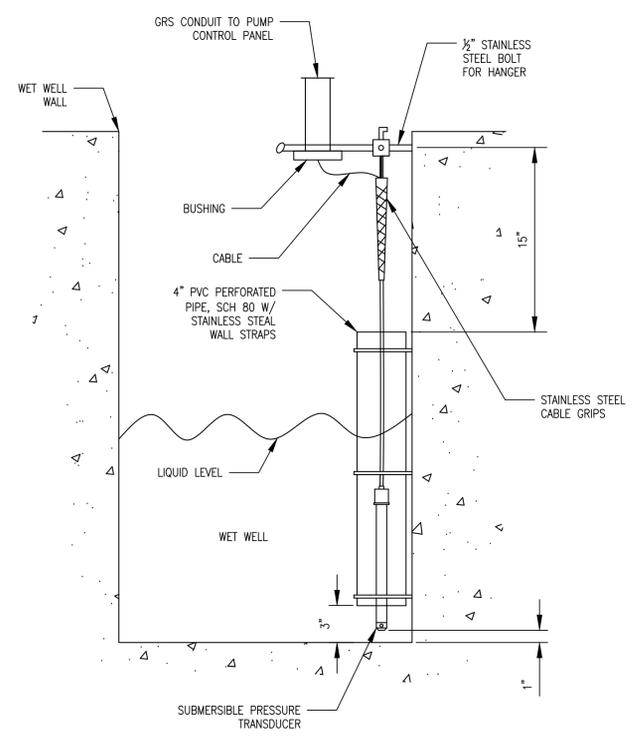


- NOTES:
1. CONTRACTOR SHALL CONSTRUCT A 3FT. X 3FT. CONCRETE PAD IN FRONT OF EACH PROPOSED SCADA PANEL.

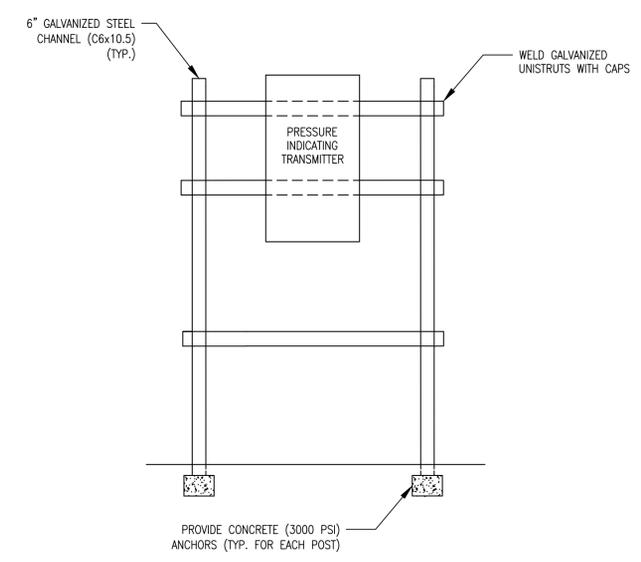
5 CONCRETE PAD DETAIL



6 SUBMERSIBLE CABLE ANCHORS INSTALLATION DETAIL



7 SUBMERSIBLE PRESSURE TRANSDUCER INSTALLATION DETAIL



- NOTES:
1. CONTRACTOR SHALL PROVIDE ANCHORS, CHANNELS AND UNISTRUTS AS REQUIRED TO SUPPORT EQUIPMENT.
 2. SEE ELECTRICAL PLAN DRAWING FOR ACTUAL EQUIPMENT LAYOUT.

8 TYPICAL UNISTRUT LAYOUT

ELECTRICAL INSTALLATION DETAILS

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MAYS CROSSING
SCADA RTU
RTU-MC
(NOTE 1)
(SEE DWG. E-12
FOR MORE DETAILS)

- MAYS CROSSING PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM EXISTING PUMP CONTROLLER) (NOTE 3)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
2. LOW LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
3. PUMP #1 RUNNING
4. PUMP #2 RUNNING
5. PUMP #1 FAULT
6. PUMP #2 FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS



WALTER WAY
SCADA RTU
RTU-WW
(NOTE 1)
(SEE DWG. E-13
FOR MORE DETAILS)

- WALTER WAY PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM EXISTING PUMP CONTROLLER) (NOTE 3)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
2. LOW LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
3. STAGE #1 (PUMP 1 & 2) RUNNING
4. STAGE #2 (PUMP 1 & 2) RUNNING
5. STAGE #1 (PUMP 1 & 2) FAULT
6. STAGE #2 (PUMP 1 & 2) FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS



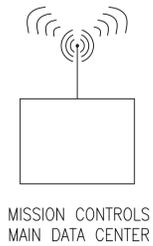
SMITH AND BARNES
SCADA RTU
RTU-SB
(NOTE 1)
(SEE DWG. E-14
FOR MORE DETAILS)

- SMITH AND BARNES PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM EXISTING SUBMERSIBLE PRESSURE TRANSDUCER VIA A NEW SIGNAL SPLITTER) (NOTE 4)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT RELAY) (NOTE 6)
2. LOW LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
3. PUMP #1 RUNNING
4. PUMP #2 RUNNING
5. PUMP #1 FAULT
6. PUMP #2 FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS



MEMORIAL PARK
SCADA RTU
RTU-MP
(NOTE 1)
(SEE DWG. E-15
FOR MORE DETAILS)

- MEMORIAL PARK PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM A NEW SUBMERSIBLE PRESSURE TRANSDUCER) (NOTE 7)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT RELAY) (NOTE 6)
2. LOW LEVEL ALARM (FROM A NEW FLOAT RELAY) (NOTE 6)
3. PUMP #1 RUNNING
4. PUMP #2 RUNNING
5. PUMP #1 FAULT
6. PUMP #2 FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS



ROCK QUARRY
SCADA RTU
RTU-RQ
(NOTE 1)
(SEE DWG. E-16
FOR MORE DETAILS)

- ROCK QUARRY PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM A NEW SUBMERSIBLE PRESSURE TRANSDUCER) (NOTE 7)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT RELAY) (NOTE 6)
2. LOW LEVEL ALARM (FROM A NEW FLOAT RELAY) (NOTE 6)
3. PUMP #1 RUNNING
4. PUMP #2 RUNNING
5. PUMP #1 FAULT
6. PUMP #2 FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS



OLD CONYERS
SCADA RTU
RTU-OC
(NOTE 1)
(SEE DWG. E-17
FOR MORE DETAILS)

- OLD CONYERS PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM A NEW PUMP CONTROLLER) (NOTE 5)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
2. LOW LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
3. PUMP #1 RUNNING
4. PUMP #2 RUNNING
5. PUMP #1 FAULT
6. PUMP #2 FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS



LEXINGTON
SCADA RTU
RTU-LP
(NOTE 1)
(SEE DWG. E-18
FOR MORE DETAILS)

- LEXINGTON PS I/Os:**
- ANALOG INPUTS:**
1. WETWELL LEVEL (4-20 mA FROM EXISTING SUBMERSIBLE PRESSURE TRANSDUCER VIA A NEW SIGNAL SPLITTER) (NOTE 4)
2. SPARE
- DISCRETE INPUTS:**
1. HIGH LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
2. LOW LEVEL ALARM (FROM A NEW FLOAT SWITCH) (NOTE 8)
3. PUMP #1 RUNNING
4. PUMP #2 RUNNING
5. PUMP #1 FAULT
6. PUMP #2 FAULT
7. GENERATOR RUNNING
8. GENERATOR COMMON ALARM
- DISCRETE OUTPUTS:**
1. SPARE
2. SPARE
3. SPARE
- INTERNAL I/O'S:**
1. POWER LOSS

- NOTES:**
- SCADA PANEL SHALL BE MISSION COMMUNICATIONS MyDRO MODEL M850. EACH MyDRO M850 SERIES PANEL SHALL INCLUDE TWO (2) ANALOG INPUTS, EIGHT (8) DIGITAL INPUTS AND THREE (3) REMOTELY CONTROLLABLE, FORM C DRY CONTACT RELAY OUTPUTS, 24-HR BACKUP BATTERY.
 - SCADA SYSTEM PROVIDER SHALL FURNISH ANTENNA WITH LONG ENOUGH CABLE TO PROVIDE STABLE AND RELIABLE CELLULAR COMMUNICATION LINK. CONTRACTOR SHALL PROVIDE AND INSTALL RGS CONDUIT FOR THE ANTENNA CABLE ACCORDING TO SCADA VENDOR REQUIREMENTS.
 - FOR MAYS CROSSING AND WALTER WAY PUMP STATIONS, EQUIPPED WITH GORMAN RUPP EPS 2100 PUMP CONTROLLER, CONTRACTOR SHALL USE 4-20 mA OUTPUT TERMINALS FOR WETWELL LEVEL SIGNAL CONNECTION TO RTU SCADA PANEL.
 - FOR SMITH & BARNES AND LEXINGTON PUMP STATIONS, CONTRACTOR SHALL PROVIDE AND INSTALL 4-20 mA WETWELL LEVEL SIGNAL SPLITTER SPLITTING THE EXISTING 4-20 mA SIGNAL FROM SUBMERSIBLE PRESSURE TRANSDUCER FOR CONNECTION TO THE PUMP CONTROLLER AND RTU SCADA PANEL. SIGNAL SPLITTER SHALL BE BY PHOENIX CONTACT "MINI MCR" TYPE OR APPROVED EQUAL.
 - OLD CONYERS PUMP STATION IS EQUIPPED WITH GORMAN RUPP EPS 2000 PUMP CONTROLLER, CONTRACTOR SHALL REPLACE THE EXISTING CONTROLLER WITH A NEW GORMAN RUPP "INTEGRINEX" CONTROLLER. RECONNECT EXISTING AIR TUBING AND WIRING FROM THE OLD CONTROLLER TO THE NEW ONE FOR PROPER PUMP STATION OPERATION. USE 4-20 mA OUTPUT TERMINALS OF THE NEW CONTROLLER FOR WETWELL LEVEL SIGNAL CONNECTION TO RTU SCADA PANEL. PROGRAM THE NEW CONTROLLER TO DUPLICATE CONTROL SETPOINTS OF THE EXISTING CONTROLLER. CONTACT TEMPLETON & ASSOCIATES 770-614-8550 FOR PRICING.
 - CONTRACTOR SHALL PROVIDE AND INSTALL A 120V COIL RELAY INSIDE PUMP CONTROL PANEL TO MULTIPLY FLOAT SWITCH CONTACT FOR WIRING TO THE RTU SCADA PANEL AND TO EXISTING PUMP CONTROLLER IN PLACE OF THE EXISTING FLOAT SWITCH.
 - FOR MEMORIAL PARK AND ROCK QUARRY PUMP STATIONS, THE CONTRACTOR SHALL PROVIDE AND INSTALL A NEW PRESSURE TRANSDUCER FOR WETWELL WATER LEVEL MONITORING. PRESSURE TRANSDUCER SHALL BE CONNECTED DIRECTLY TO THE RTU SCADA PANEL. PRESSURE TRANSDUCER SHALL BE RATED FOR CLASS 1, DIVISION 1 LOCATIONS AND SHALL BE "ROSEMOUNT"; "WKA" OR APPROVED EQUAL.
 - CONTRACTOR SHALL PROVIDE AND INSTALL NEW FLOAT SWITCHES AS SHOWN ON WIRING DIAGRAMS E-12 THROUGH E-18. NEW FLOAT SWITCHES SHALL BE NON-MERCURY TYPE RATED FOR CLASS 1, DIVISION 1 LOCATIONS. THE NEW FLOAT SWITCHES SHALL BE WIRED DIRECTLY TO THE RTU SCADA PANEL.

1 STOCKBRIDGE SEWAGE PUMP STATIONS SCADA BLOCK DIAGRAM

SEWAGE PUMP STATIONS SCADA BLOCK DIAGRAM

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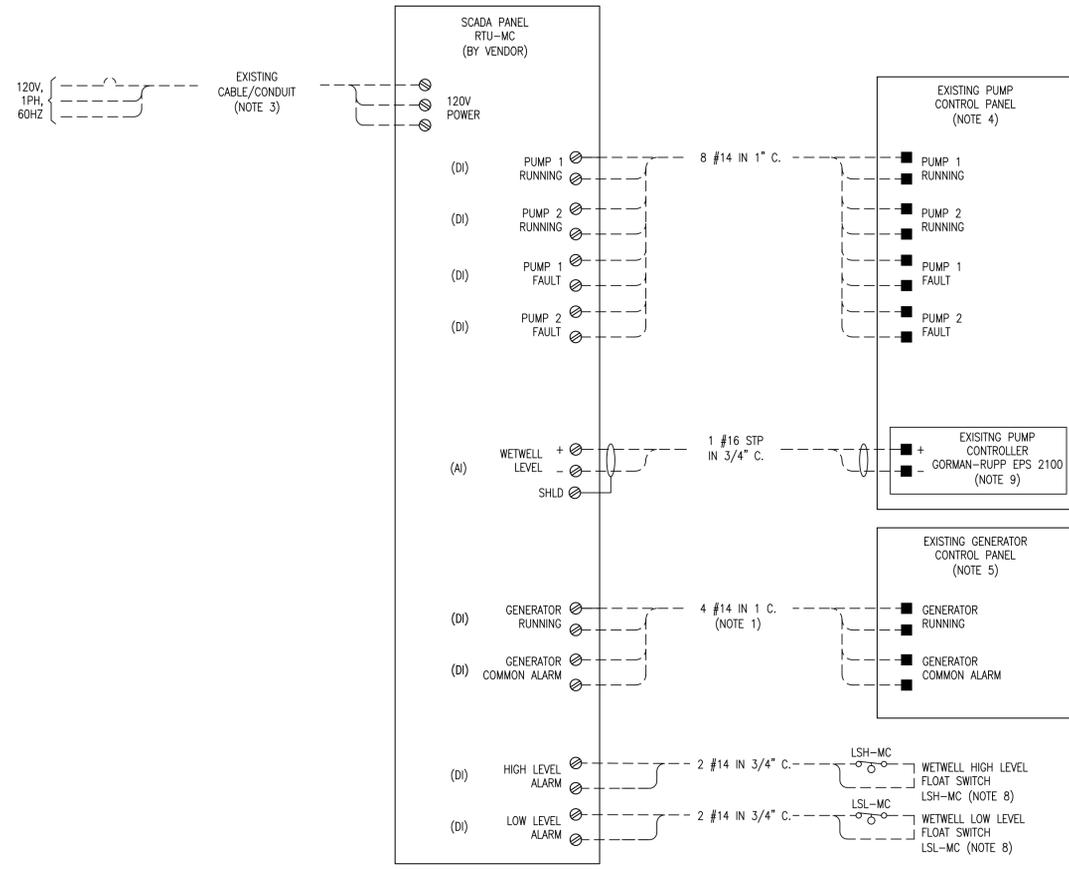
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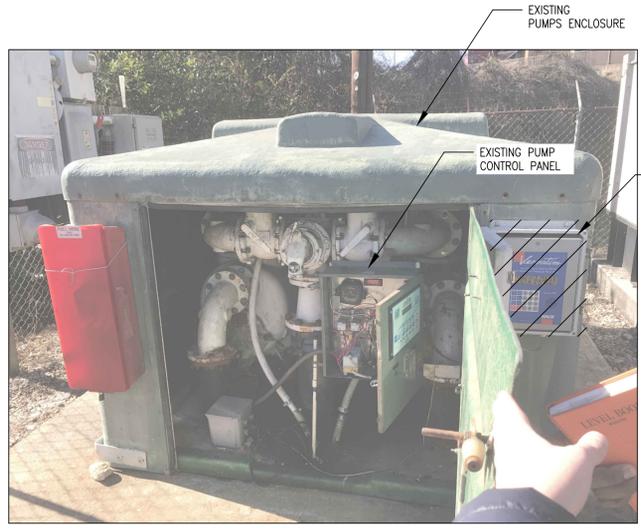
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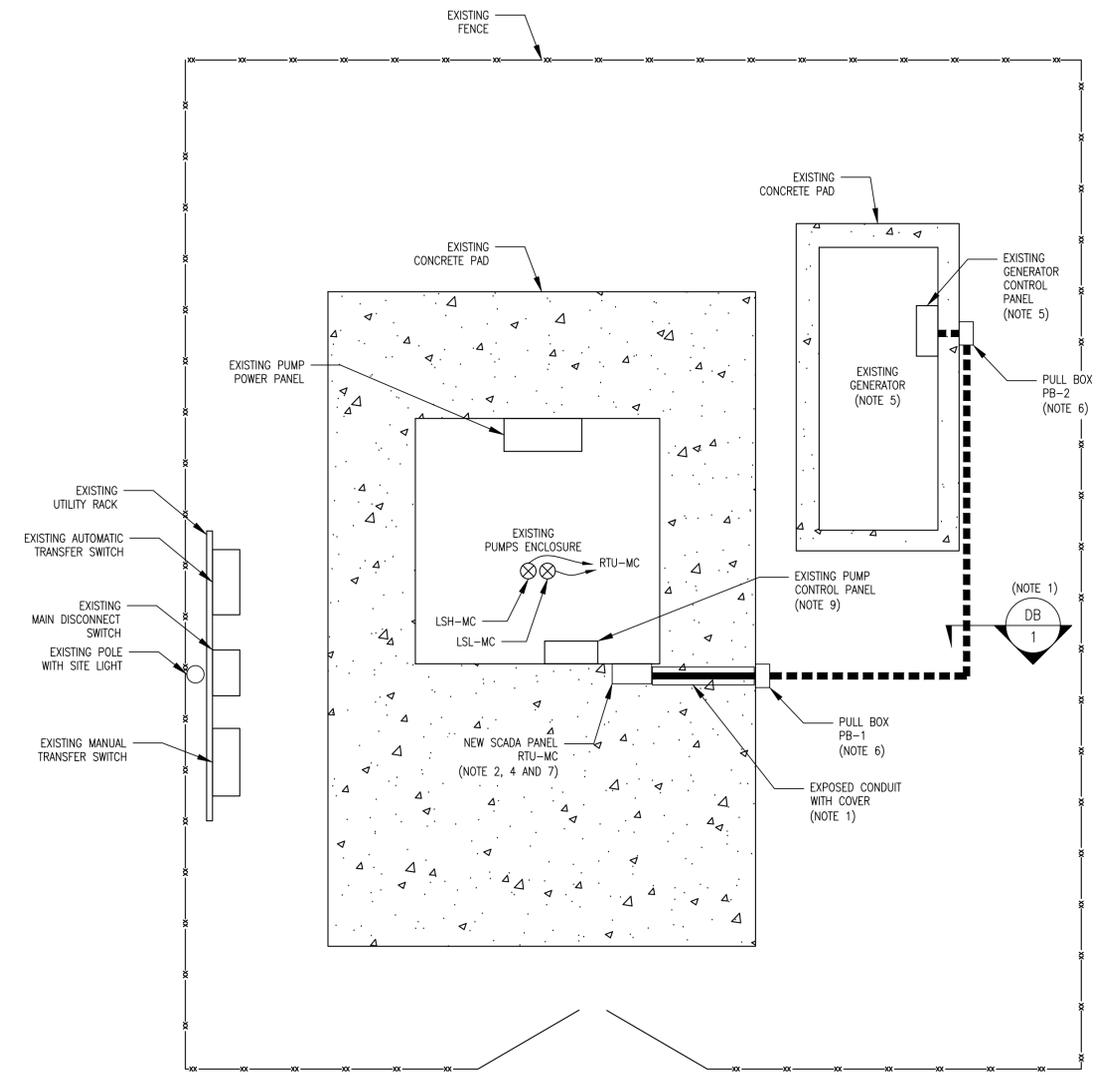
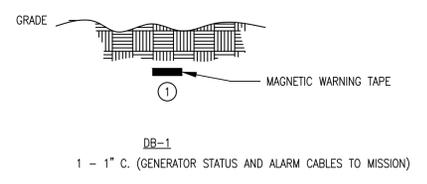
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1 MAYS CROSSING PS SCHEMATIC WIRING DIAGRAM



3 EXISTING INSTALLATION



2 ELECTRICAL SITE PLAN
SCALE: 1/2"=1'-0"

- NOTES:
- CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT BETWEEN THE GENERATOR CONTROL PANEL AND NEW SCADA PANEL AS SHOWN. CONTRACTOR SHALL ROUTE CONDUIT AND CABLES TO AVOID ANY INTERFERENCES WITH EXISTING EQUIPMENT AND PIPING. SEE DETAIL "4" DRAWING E-10 FOR DUCTBANK INSTALLATION DETAILS. CONTRACTOR SHALL PROVIDE STEP-OVER PROTECTION ("SAFEGUARD" HI-TRACTION CONDUIT COVER OR APPROVED EQUAL) FOR EXPOSED CONDUIT TO PREVENT TRIP HAZARD.
 - CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING "RACO VERBATIM" AUTO-DIALER PANEL AND REPLACE IT WITH NEW "MISSION CONTROLS" SCADA PANEL IN NEMA 4X ENCLOSURE. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
 - CONTRACTOR SHALL REUSE AND RECONNECT EXISTING 120VAC POWER CONNECTED TO EXISTING "RACO" AUTODIALER TO NEW MISSION SCADA PANEL. CONTRACTOR SHALL EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED. CONTRACTOR SHALL PROVIDE NEW CONTROL WIRING TO THE NEW PANEL. SEE DETAIL "1" ON THIS SHEET.
 - CONTRACTOR SHALL ADJUST RTU SCADA PANEL INSTALLATION LOCATION IN THE FIELD IN CASE OF INTERFERENCE WITH THE EXISTING EQUIPMENT. PROVIDE AND INSTALL ALL THE REQUIRED HARDWARE TO ENSURE SECURE INSTALLATION AT NO COST TO THE OWNER.
 - CONTRACTOR SHALL MODIFY THE EXISTING GENERATOR CONTROL PANEL TO PROVIDE TWO (2) 120V, 10A RATED DRY CONTACTS FOR GENERATOR RUNNING STATUS AND COMMON ALARM FOR CONNECTION TO NEW SCADA PANEL.
 - CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X SS PULL BOX SIZED IN ACCORDANCE WITH NEC ARTICLE 314.28.
 - SCADA ANTENNA SHALL BE MOUNTED AT THE LOCATION DETERMINED BY ELECTRICAL CONTRACTOR TO PROVIDE THE MOST RELIABLE CONNECTION. ALL ASSOCIATED CABLES, CONDUITS AND SUPPORTS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
 - SEE DRAWING E-11 NOTE 8. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE FLOAT SWITCH INSIDE WETWELL. ROUTE CONTROL CABLE TO THE RTU SCADA PANEL IN 3/4" C. FLOAT SWITCH SHALL BE PROVIDED WITH A PREWIRED CABLE LONG ENOUGH TO REACH RTU SCADA PANEL WITHOUT SPLICING.
 - SEE DRAWING E-11 NOTE 3 FOR MORE DETAILS.

MAYS CROSSING PUMP STATION
SCHEMATIC AND ELECTRICAL SITE PLAN

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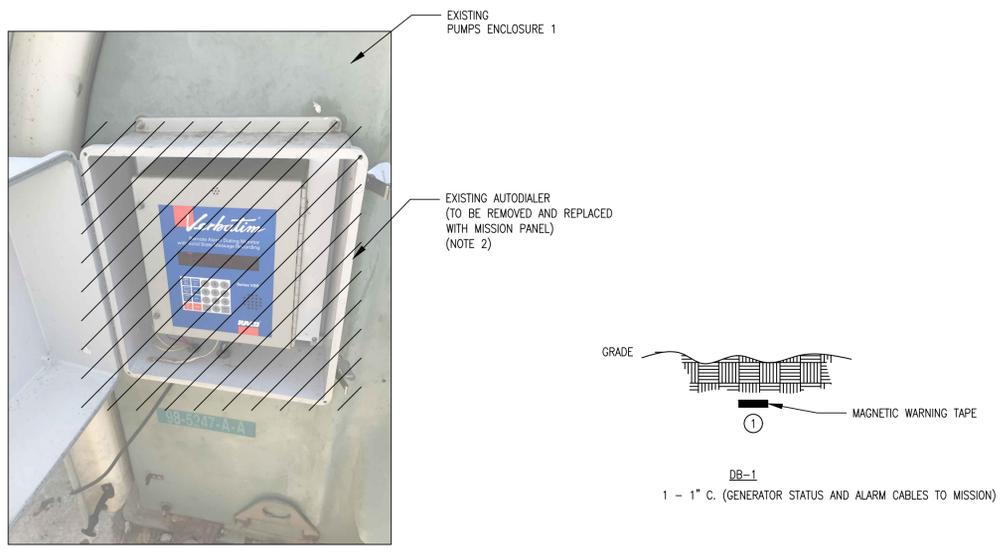
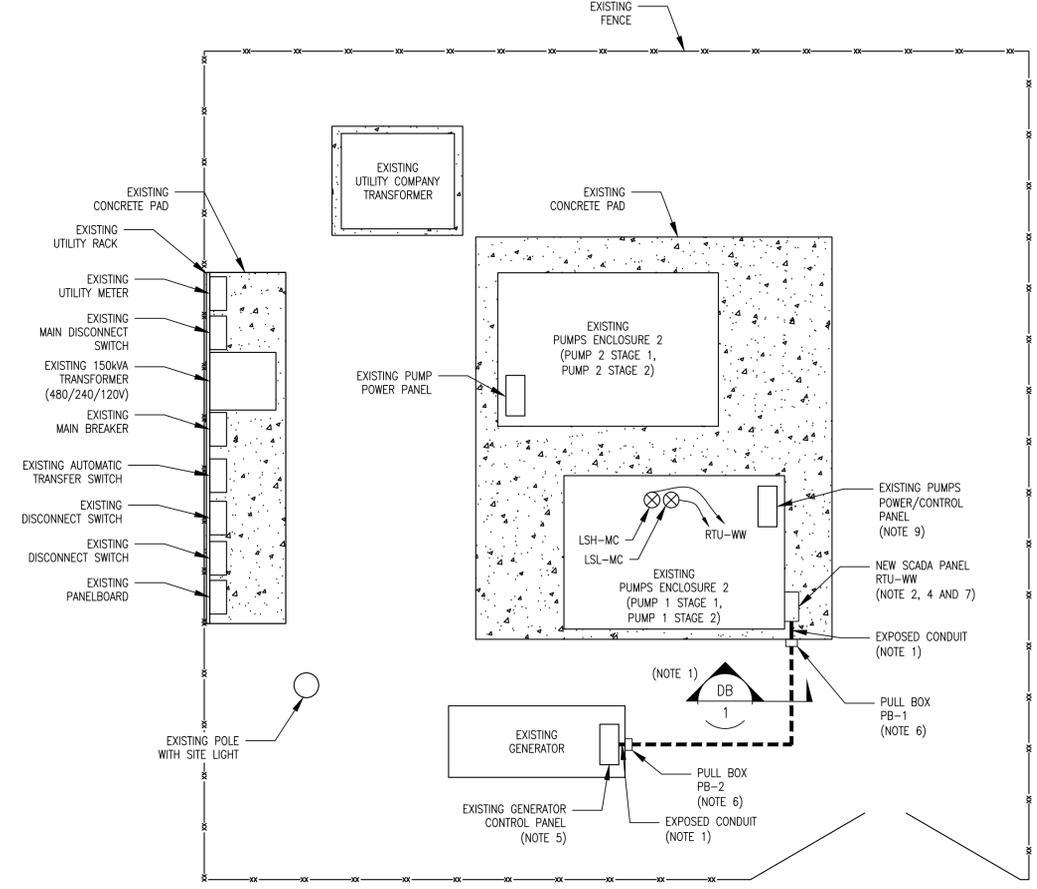
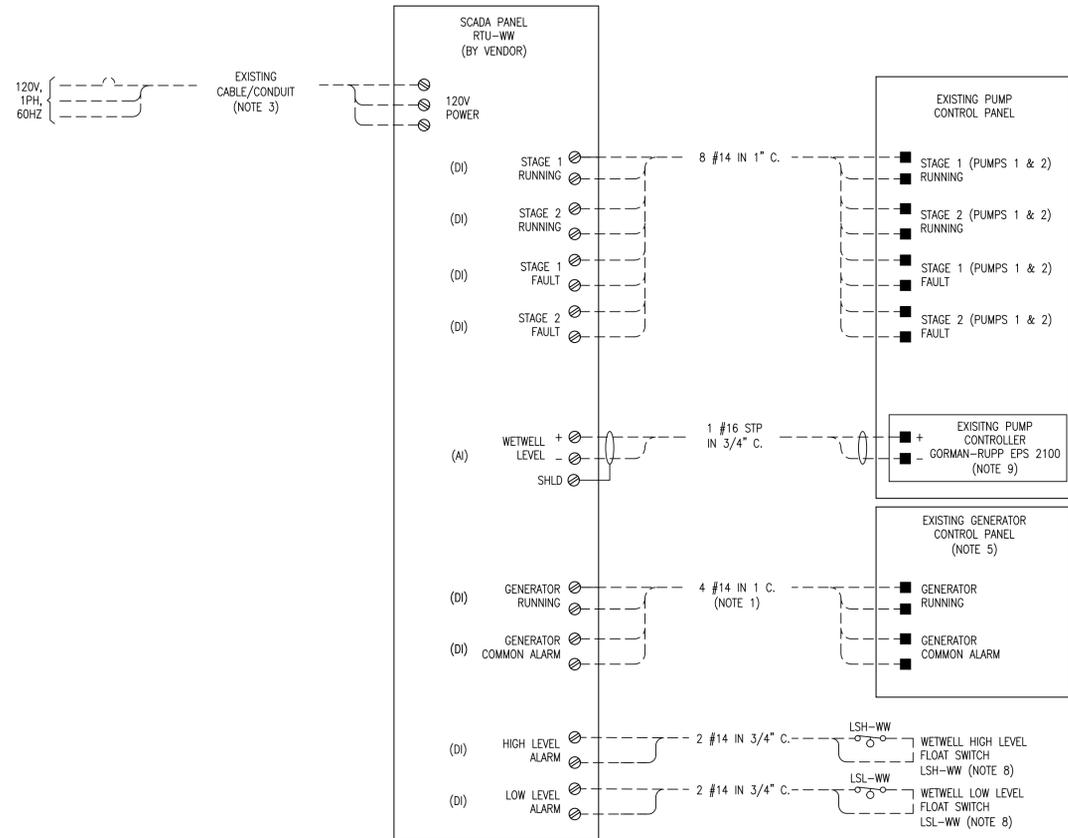


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- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT BETWEEN THE GENERATOR CONTROL PANEL AND NEW SCADA PANEL AS SHOWN. CONTRACTOR SHALL ROUTE CONDUIT AND CABLES TO AVOID ANY INTERFERENCES WITH EXISTING EQUIPMENT AND PIPING. SEE DETAIL "4" DRAWING E-10 FOR DUCTBANK INSTALLATION DETAILS.
 - CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING "RACO VERBATIM" AUTO-DIALER PANEL AND REPLACE IT WITH NEW "MISSION CONTROLS" SCADA PANEL IN NEMA 4X ENCLOSURE. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH THE OWNER FOR RE-USE OR DISPOSAL.
 - CONTRACTOR SHALL REUSE AND RECONNECT EXISTING 120VAC POWER CONNECTED TO EXISTING "RACO" AUTODIALER TO NEW MISSION SCADA PANEL. CONTRACTOR SHALL EXTEND EXISTING CABLES AND CONDUITS AS REQUIRED. CONTRACTOR SHALL PROVIDE NEW CONTROL WIRING TO THE NEW PANEL. SEE DETAIL "1" ON THIS SHEET.
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 - SEE DRAWING E-11 NOTE 8. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE FLOAT SWITCH INSIDE WETWELL, ROUTE CONTROL CABLE TO THE RTU SCADA PANEL IN 3/4" C. FLOAT SWITCH SHALL BE PROVIDED WITH A PREWIRED CABLE LONG ENOUGH TO REACH RTU SCADA PANEL WITHOUT SPLICING.
 - SEE DRAWING E-11 NOTE 3 FOR MORE DETAILS.
 - CONTRACTOR SHALL MODIFY THE EXISTING PUMP CONTROL PANEL TO PROVIDE THE REQUIRED CONTACTS FOR CONNECTION TO NEW SCADA PANEL.

WALTER WAY PUMP STATION
SCHEMATIC AND ELECTRICAL SITE PLAN

EDEC, INC.
 3069 PEACHTREE IND. BLVD.
 SUITE 110
 DULUTH, GEORGIA 30097
 TEL. (770) 493-8685

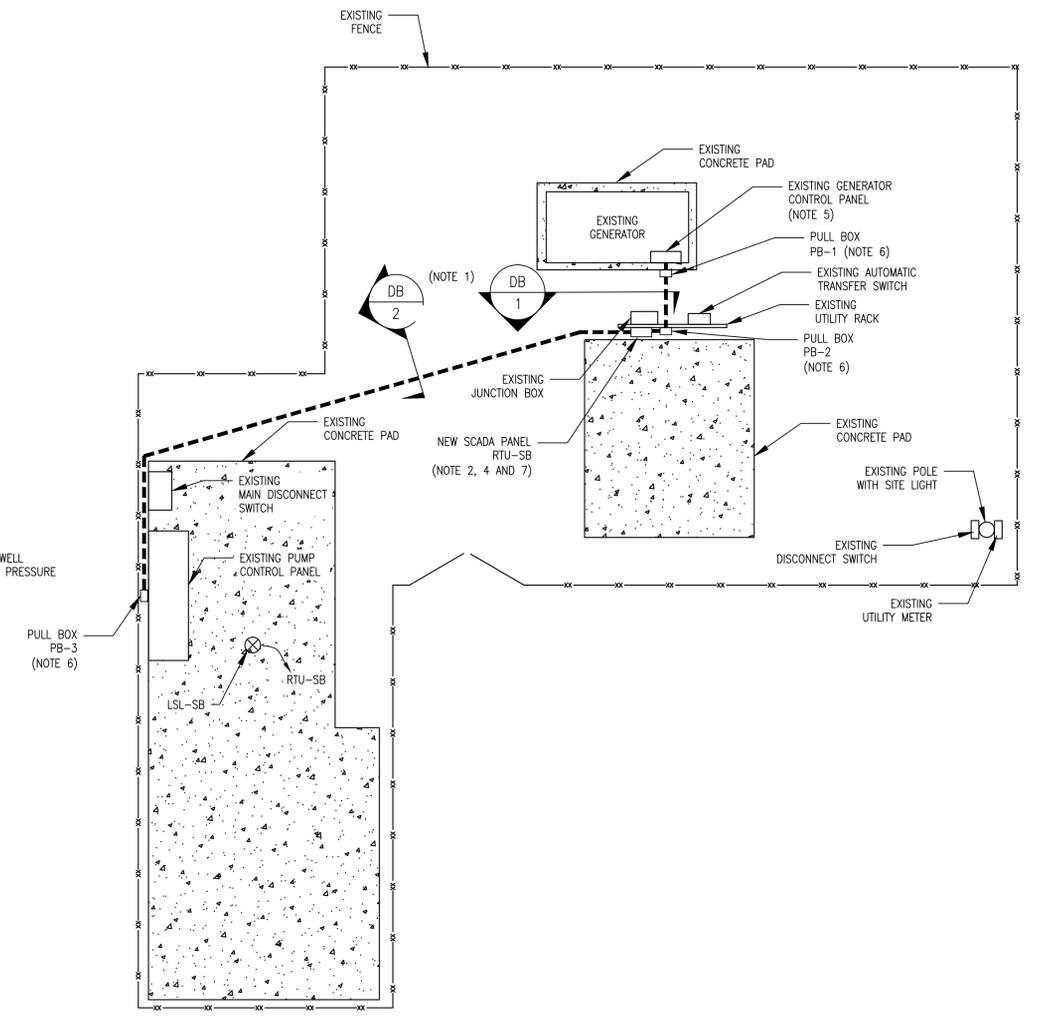
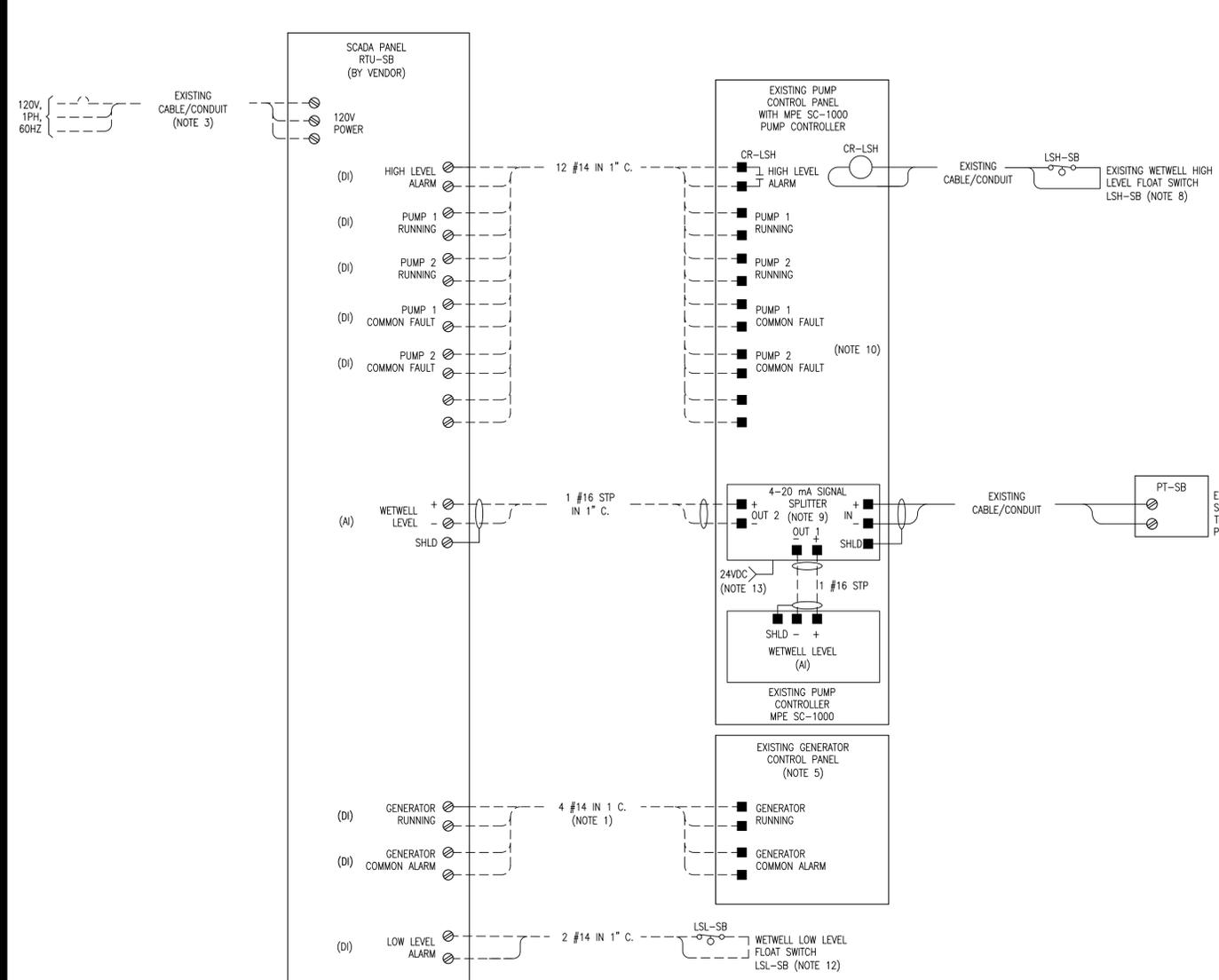


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CITY OF STOCKBRIDGE
FOR THE
CITY OF STOCKBRIDGE
HENRY COUNTY, GEORGIA

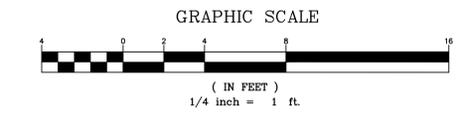
Carter & Sloop
CONSULTING ENGINEERS
MACON ♦ ALBANY ♦ ATHENS ♦ CANTON
6310 PEAKE ROAD - MACON, GA 31210 - 478.477.3923 TEL. - 478.477.4691 FAX

DSGN:	RV
DRWN:	RV
SCALE:	AS SHOWN
DWG. NAME:	E-14
PROJ. NO.:	S9100.015
DATE:	10.02.2017
SHEET NO.:	E-14
	OF 19 SHEETS

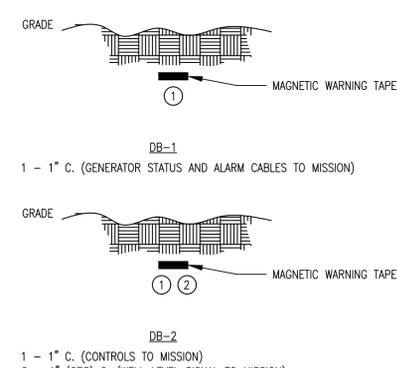


1 SMITH & BARNES PS SCHEMATIC WIRING DIAGRAM

2 ELECTRICAL SITE PLAN
SCALE: 1/4"=1'-0"



3 EXISTING INSTALLATION



NOTES:

- CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT BETWEEN THE ELECTRICAL EQUIPMENT AS SHOWN. CONTRACTOR SHALL ROUTE CONDUIT AND CABLES TO AVOID ANY INTERFERENCES WITH EXISTING EQUIPMENT AND PIPING. SEE DETAIL "4" DRAWING E-10 FOR DUCTBANK INSTALLATION DETAILS.
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- CONTRACTOR SHALL PROVIDE 2 AMP FUSE AND 2 #14 WIRES FROM THE EXISTING 24VDC POWER SUPPLY TO THE 4-20 mA SIGNAL SPLITTER.

SMITH & BARNES PUMP STATION
SCHEMATIC AND ELECTRICAL SITE PLAN

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

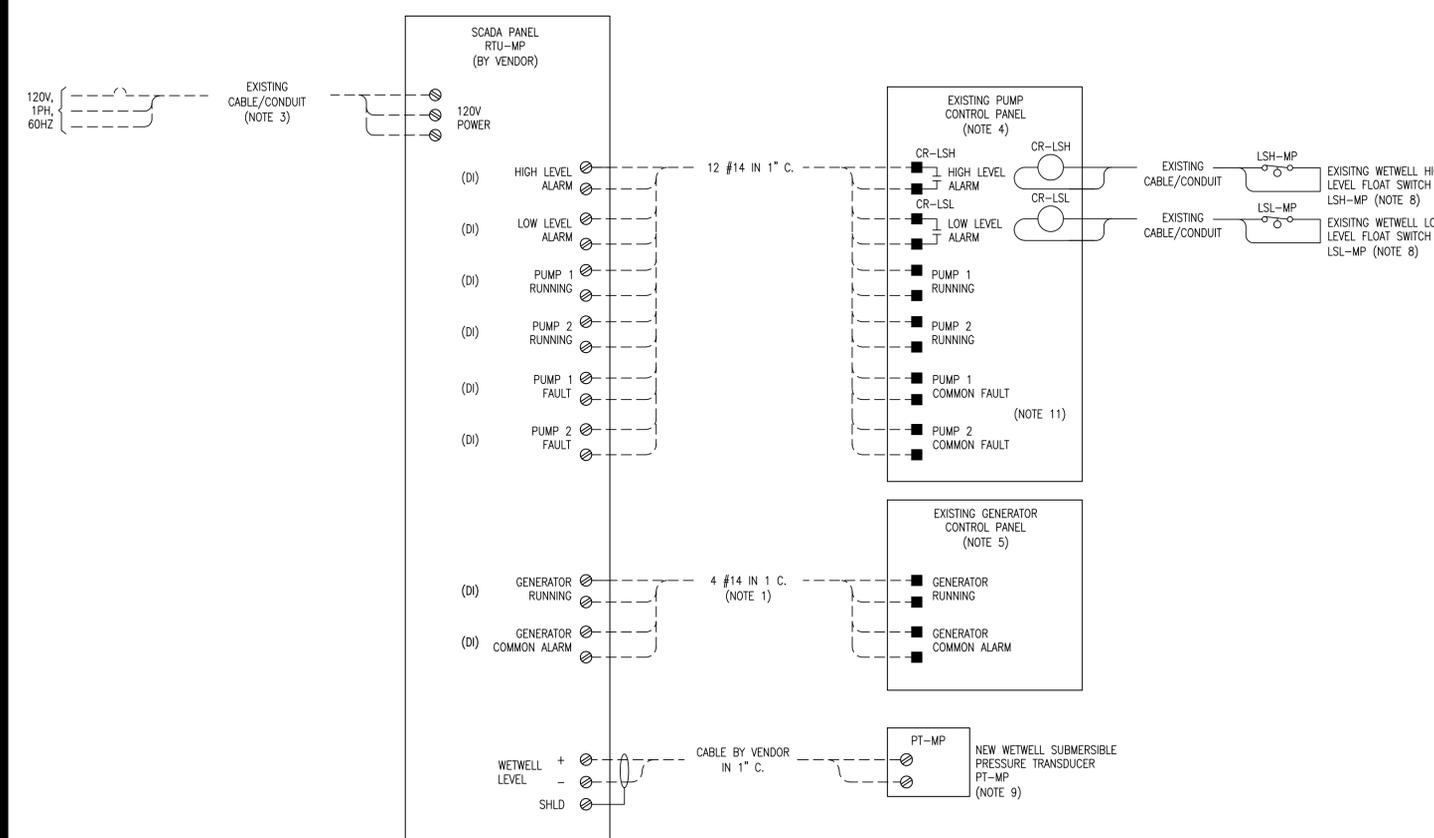


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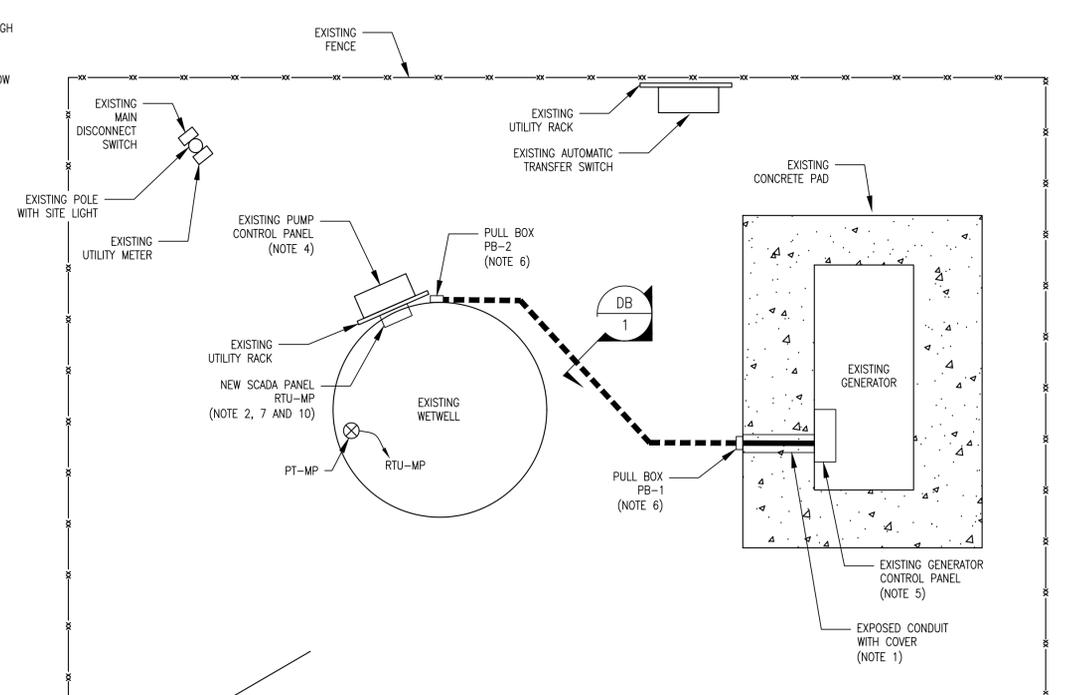
CITY OF STOCKBRIDGE
WATER AND SEWER SYSTEM SCADA UPGRADE
 FOR THE
CITY OF STOCKBRIDGE
 HENRY COUNTY, GEORGIA

Carter & Sloop
CONSULTING ENGINEERS
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 6310 PEAKE ROAD - MACON, GA 31210 - 478.477.3923 TEL. - 478.477.4691 FAX

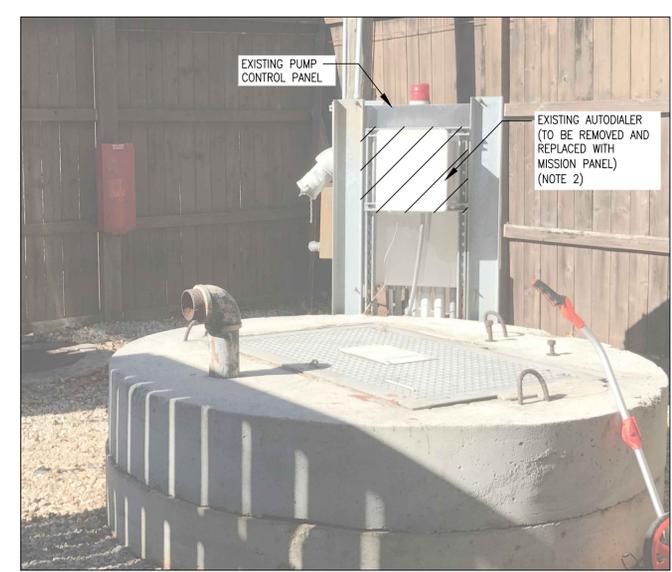
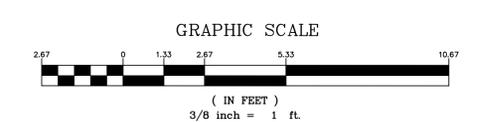
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SCALE:	AS SHOWN
DWG. NAME:	E-15
PROJ. NO.:	S9100.015
DATE:	10.02.2017
SHEET NO.:	E-15
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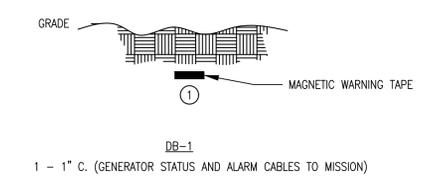
1 MEMORIAL PARK PS SCHEMATIC WIRING DIAGRAM



2 ELECTRICAL SITE PLAN
 SCALE: 3/8"=1'-0"



3 EXISTING INSTALLATION



- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT BETWEEN THE GENERATOR CONTROL PANEL AND NEW SCADA PANEL AS SHOWN. CONTRACTOR SHALL ROUTE CONDUIT AND CABLES TO AVOID ANY INTERFERENCES WITH EXISTING EQUIPMENT AND PIPING. SEE DETAIL "4" DRAWING E-10 FOR DUCTBANK INSTALLATION DETAILS. CONTRACTOR SHALL PROVIDE STEP-OVER PROTECTION (SAFEGUARD HI-TRACTION CONDUIT COVER) FOR EXPOSED CONDUIT TO PREVENT TRIP HAZARD.
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 - SEE DRAWING E-11 NOTE 6 FOR MORE DETAILS.
 - SEE DRAWING E-11 NOTE 7 FOR MORE DETAILS.
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MEMORIAL PARK PUMP STATION
 SCHEMATIC AND ELECTRICAL SITE PLAN

EDEC, INC.
 3069 PEACHTREE IND. BLVD.
 SUITE 110
 DULUTH, GEORGIA 30097
 TEL. (770) 493-8685

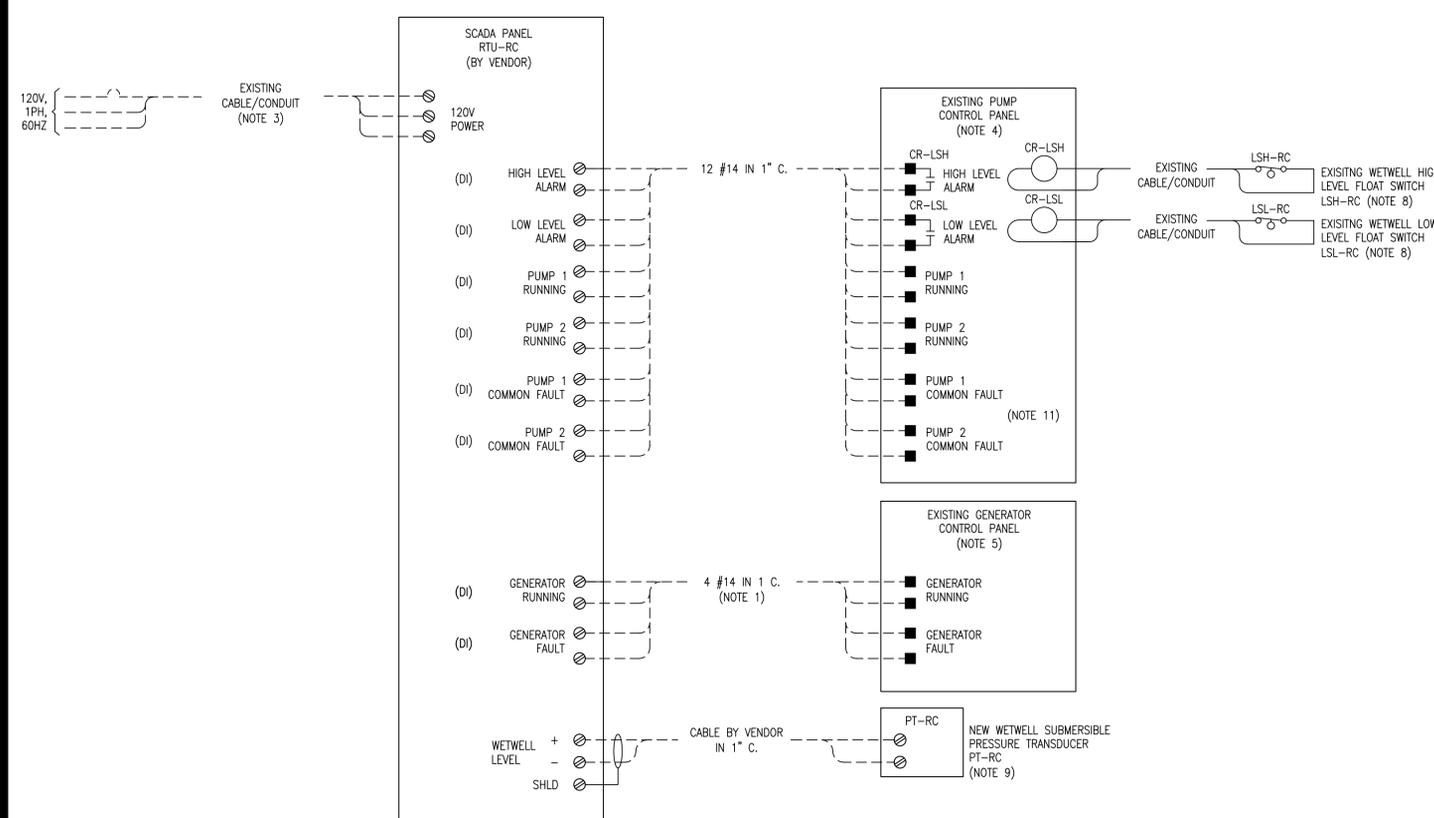


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CONSULTING ENGINEERS
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6310 PEAKE ROAD - MACON, GA 31210 - 478.477.3923 TEL. - 478.477.4691 FAX

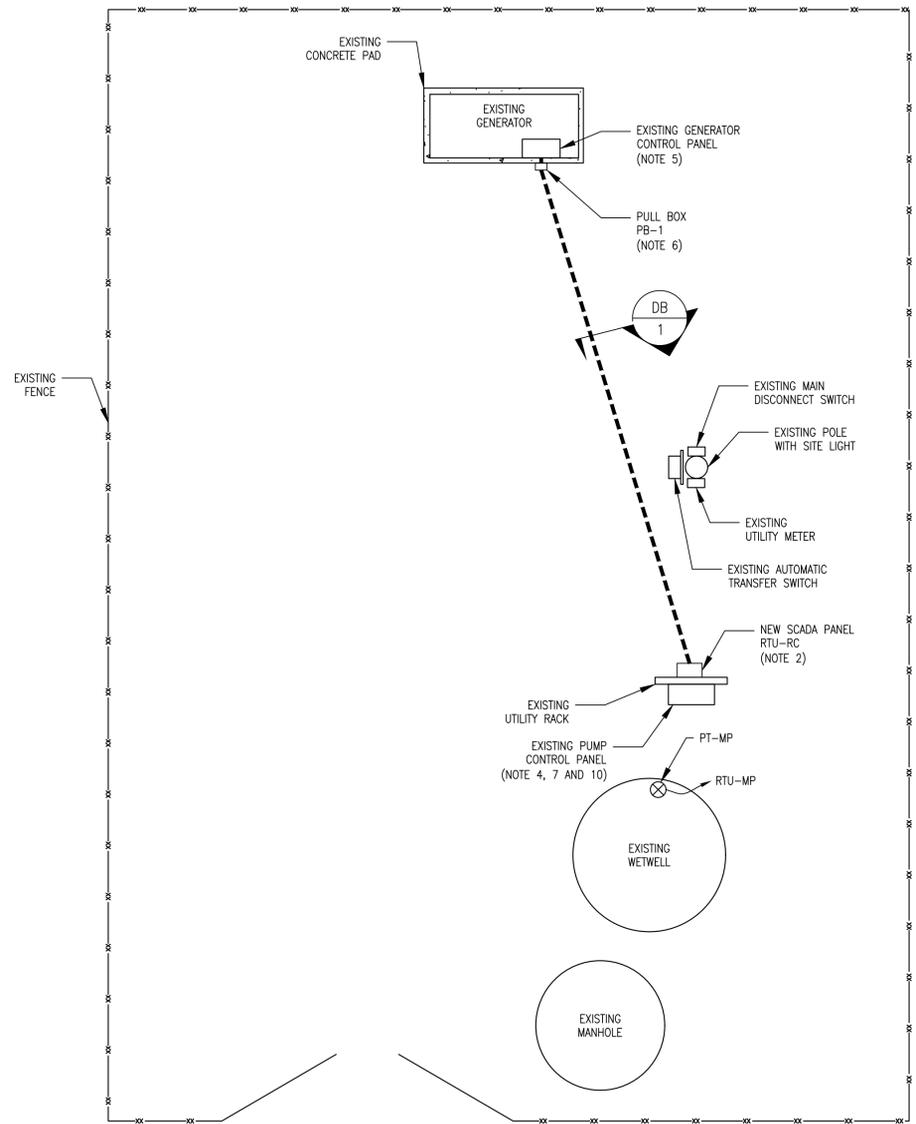
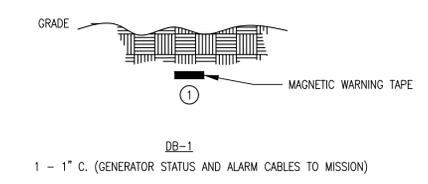
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DWG. NAME:	E-16
PROJ. NO.:	S9100.015
DATE:	10.02.2017
SHEET NO.:	E-16 OF 19 SHEETS



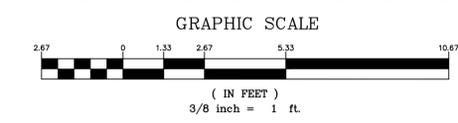
1 ROCK QUARRY PS SCHEMATIC WIRING DIAGRAM



3 EXISTING INSTALLATION



2 ELECTRICAL SITE PLAN
SCALE: 3/8"=1'-0"



- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT BETWEEN THE GENERATOR CONTROL PANEL AND NEW SCADA PANEL AS SHOWN. CONTRACTOR SHALL ROUTE CONDUIT AND CABLES TO AVOID ANY INTERFERENCES WITH EXISTING EQUIPMENT AND PIPING. SEE DETAIL "4" DRAWING E-10 FOR DUCTBANK INSTALLATION DETAILS.
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 - SEE DRAWING E-11 NOTE 7 FOR MORE DETAILS.
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ROCK QUARRY PUMP STATION
SCHEMATIC AND ELECTRICAL SITE PLAN

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

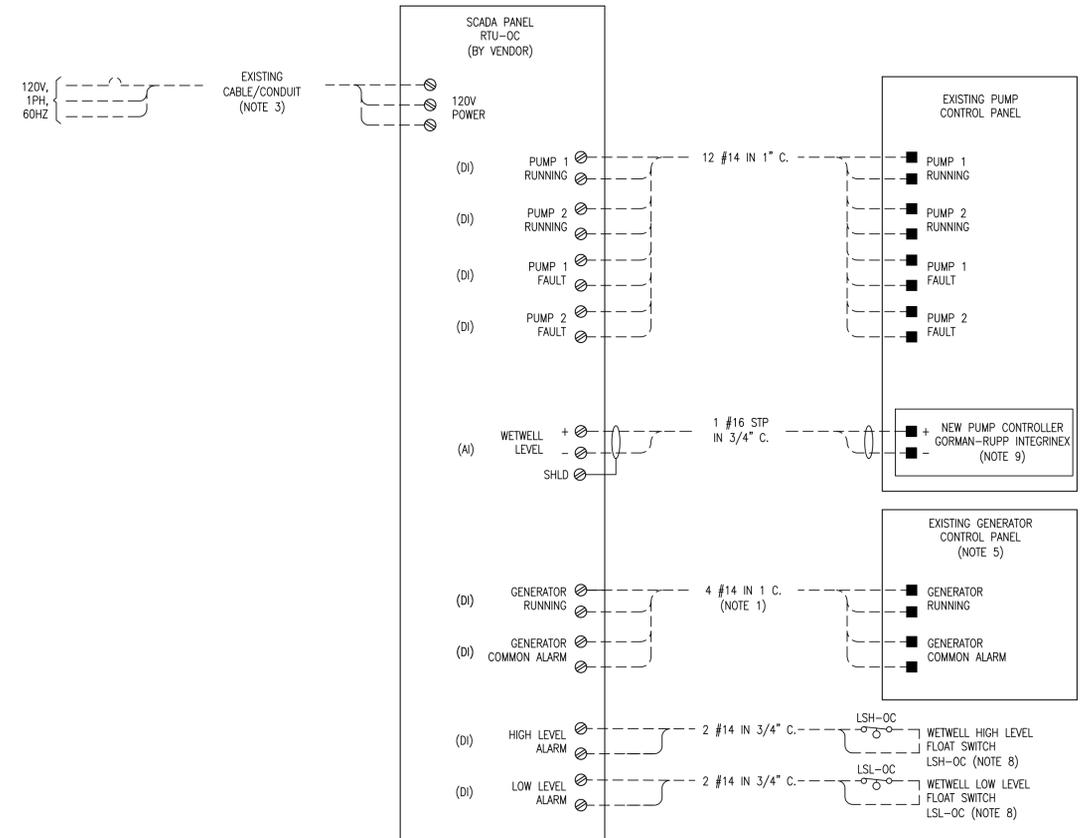


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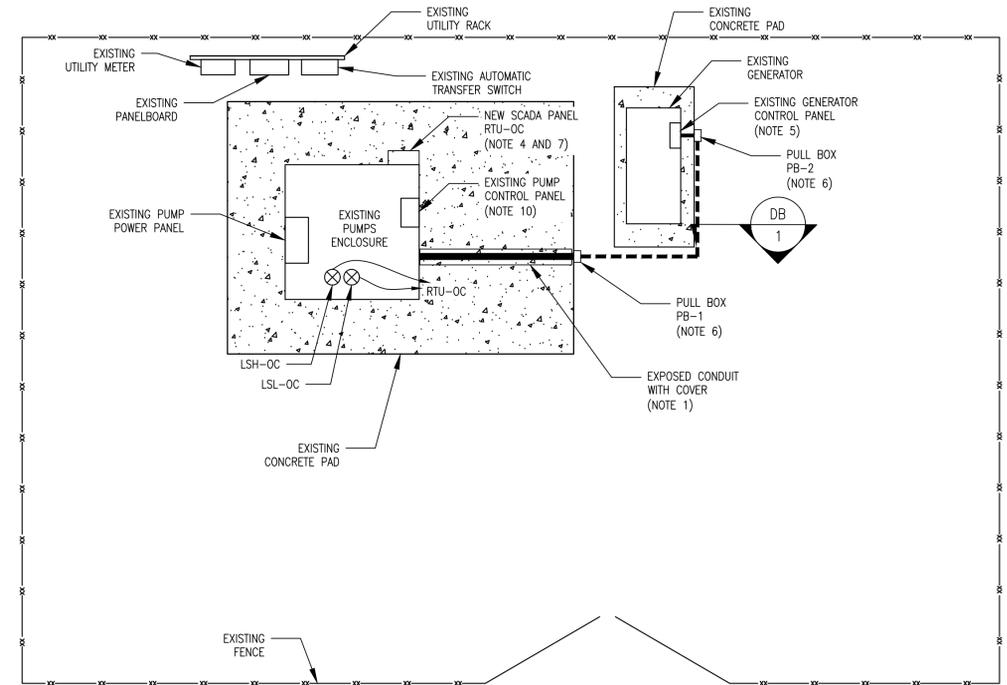
CITY OF STOCKBRIDGE
FOR THE
CITY OF STOCKBRIDGE
HENRY COUNTY, GEORGIA

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MACON ♦ ALBANY ♦ ATHENS ♦ CANTON
6310 PEAKE ROAD - MACON, GA 31210 - 478-477-3923 TEL. - 478-477-4691 FAX

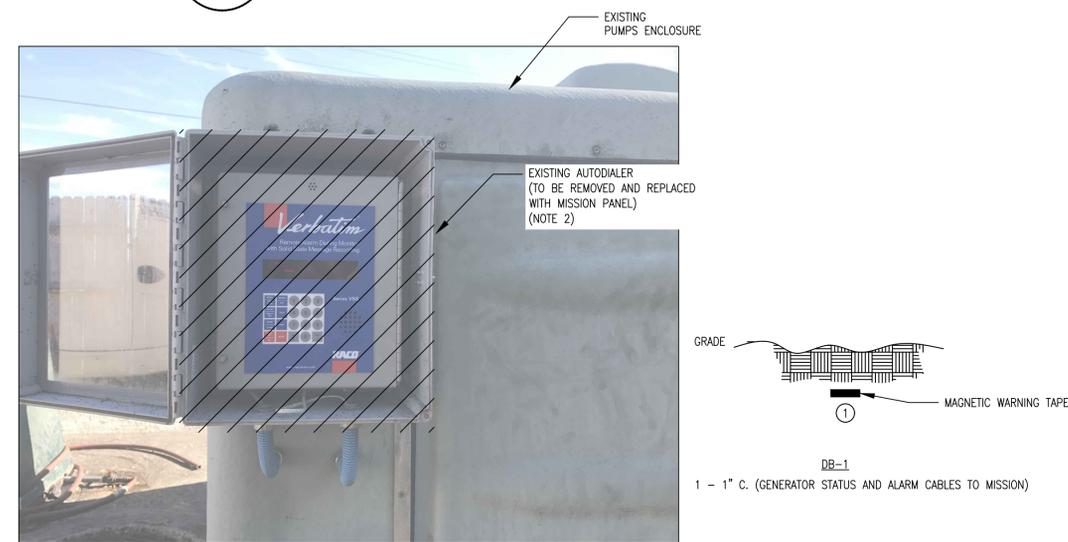
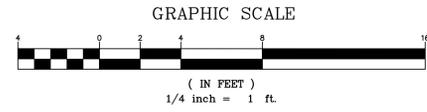
DSGN:	RV
DRWN:	RV
SCALE:	AS SHOWN
DWG. NAME:	E-17
PROJ. NO.:	S9100.015
DATE:	10.02.2017
SHEET NO.:	E-17
	OF 19 SHEETS



1 OLD CONYERS PS SCHEMATIC WIRING DIAGRAM



2 ELECTRICAL SITE PLAN
SCALE: 1/4"=1'-0"



3 EXISTING INSTALLATION

- NOTES:
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OLD CONYERS PUMP STATION
SCHEMATIC AND ELECTRICAL SITE PLAN

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

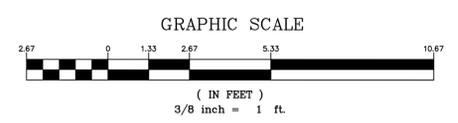
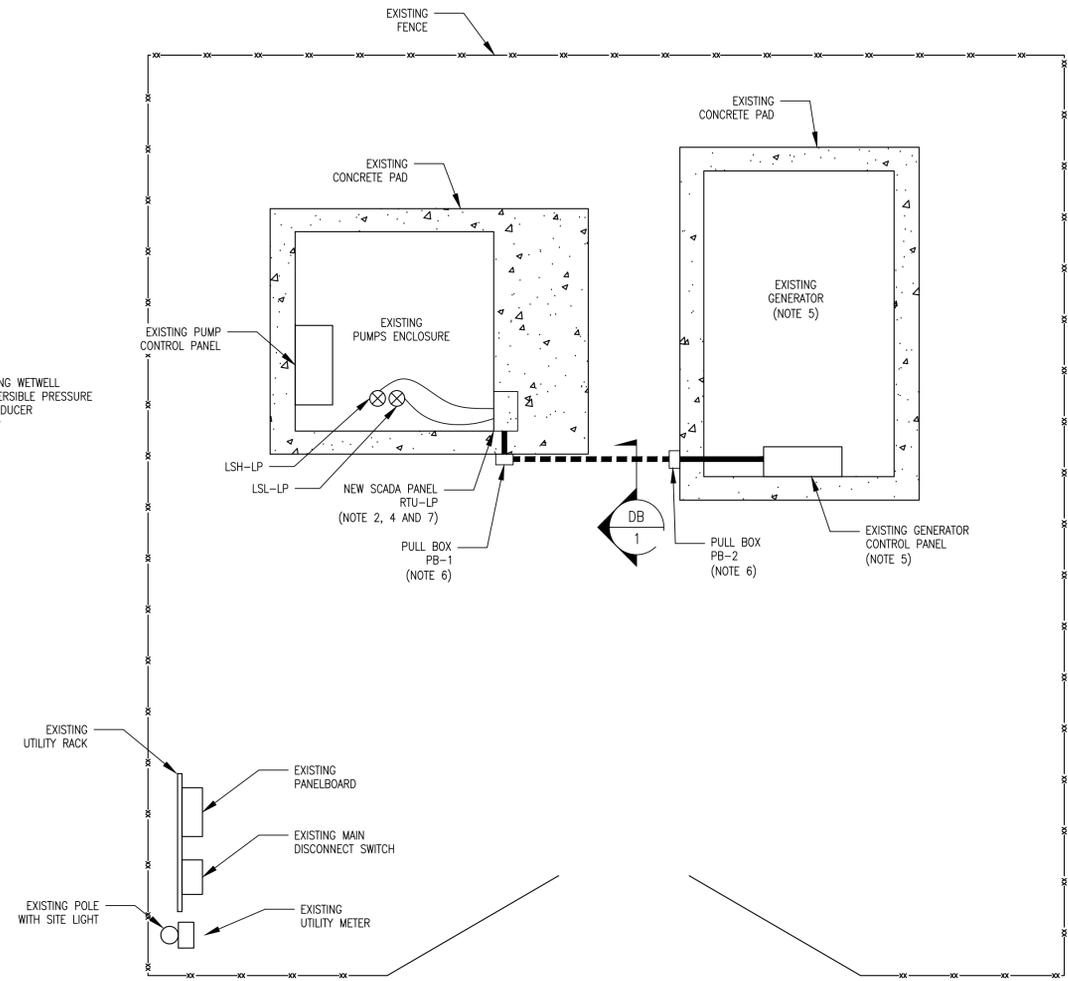
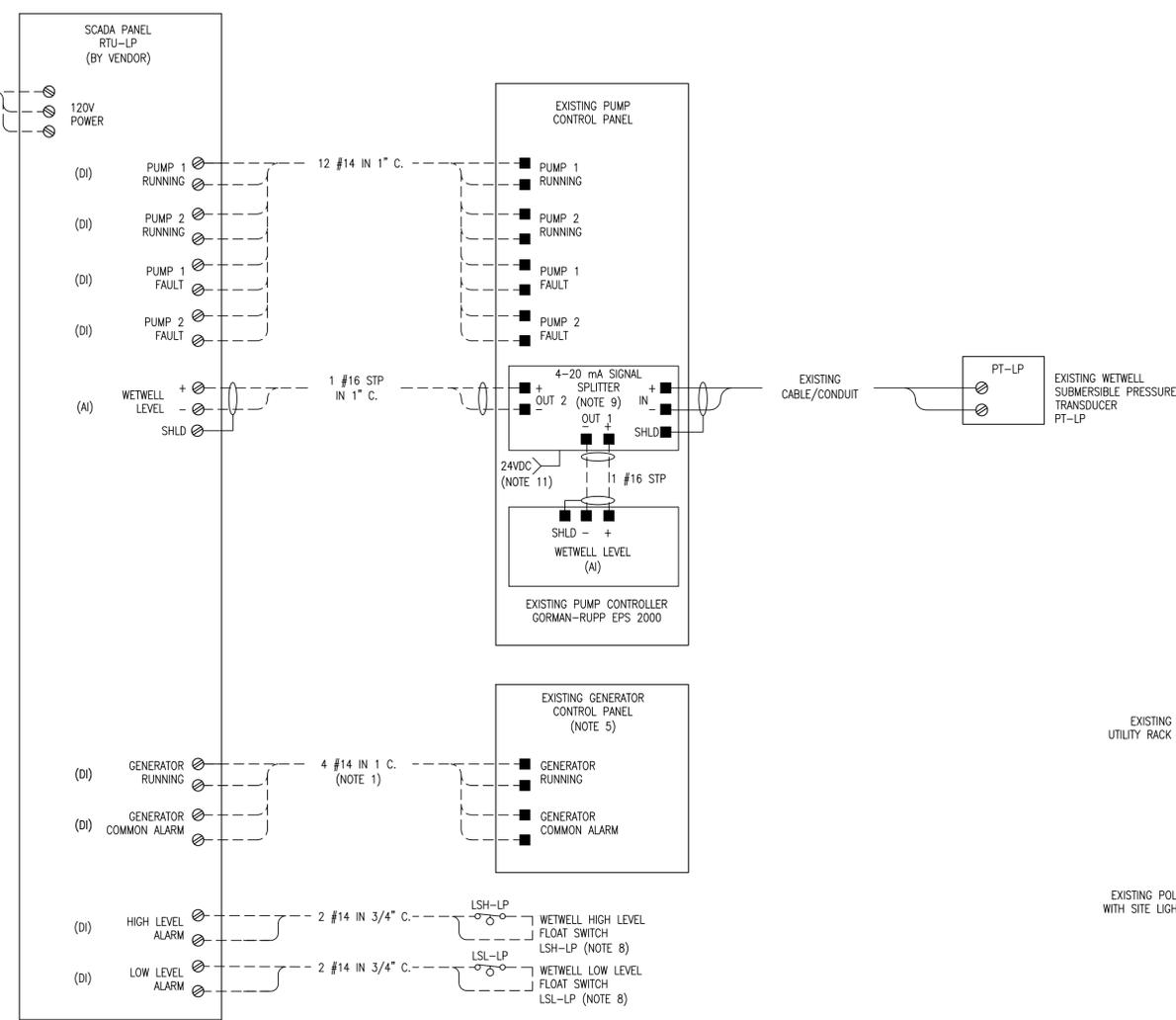


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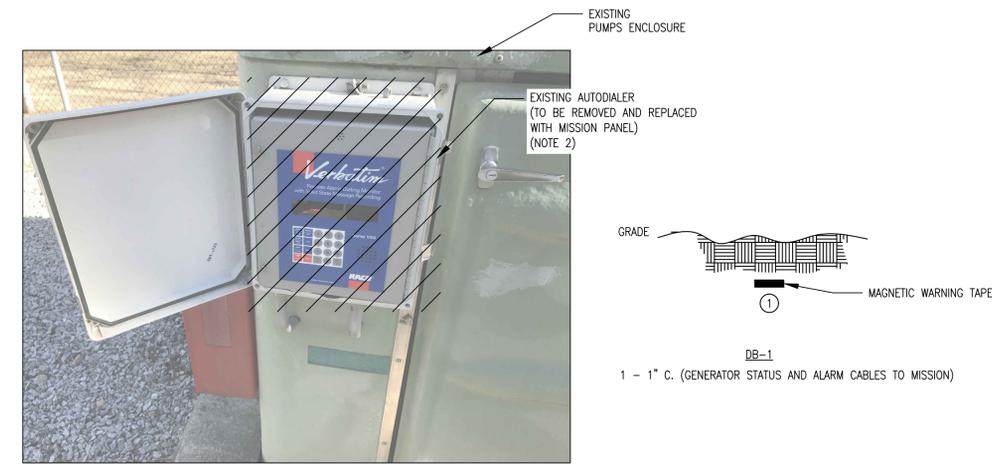
CITY OF STOCKBRIDGE
WATER AND SEWER SYSTEM SCADA UPGRADE
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CITY OF STOCKBRIDGE
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LEXINGTON PARK PUMP STATION
SCHEMATIC AND ELECTRICAL SITE PLAN

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