CITY OF ST. AUGUSTINE LIFT STATION DETAILS
SINGLE LINE DIAGRAM

ELECTRICAL LEGEND

MCP 80	CIRCUIT BREAKER (FRAME/TRIP RATING – "MCP" MOTOR CIRCUIT PROTECTOR)
FVNR SIZE 2	MAGNETIC TYPE COMBINATION MOTOR STARTER, NEMA SIZE AS INDICATED ("FV" FULL VOLTAGE, "RV" REDUCED VOLTAGE, "NR" NON–REVERSING, "SS" SOLID STATE SOFT START)
30	MOTOR (NUMERAL INDICATES HORSEPOWER)
H	ELAPSED TIME METER (HOURS OF OPERATION)
H O A	HAND OFF AUTO SELECTOR SWITCH
CR	CONTROL RELAY
PM	THREE PHASE POWER MONITOR
AA	AUTOMATIC ALTERNATOR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR

NOTES:

1. DESIGN DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL REQUIREMENTS. ALL EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF ST. AUGUSTINE DESIGN STANDARDS AND SPECIFICATIONS.

2. ALL MATERIAL SHALL BE NEW AND SHALL CONFORM WITH THE STANDARDS OF THE UNDERWRITERS' LABORATORIES, INC., AMERICAN NATIONAL STANDARDS INSTITUTE, NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION, INSULATED POWER CABLE ENGINEERS ASSOCIATION, AND INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR TYPE OF MATERIALS IN QUESTION.

3. THE INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, NATIONAL ELECTRICAL SAFETY CODE, APPLICABLE CITY, STATE, AND LOCAL CODES AND REGULATIONS AND OTHER APPLICABLE CODES, INCLUDING UTILITY COMPANY CODES.

4. ALL PERMITS REQUIRED BY STATE OR LOCAL ORDINANCES SHALL BE OBTAINED AND AFTER COMPLETION OF THE WORK, A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTOR SHALL BE FURNISHED TO THE OWNER. ALL PERMITS FOR INSTALLATION, INSPECTIONS, CONNECTIONS, ETC., SHALL BE TAKEN OUT AND PAID FOR AS PART OF THE WORK UNDER THIS SECTION.

5. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS. ANY PART OF THE SYSTEM CONSIDERED DEFECTIVE BY THE ENGINEER WITHIN THE GUARANTEE PERIOD SHALL BE IMMEDIATELY REPLACED OR CORRECTED TO THE ENGINEER'S SATISFACTION WITHOUT FURTHER EXPENSE TO THE OWNER.

6. THE PROJECTS GROUNDING SYSTEM SHALL CONSIST OF A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC SPECIFICATIONS, BONDED TO A MAIN GROUND BUS INTERCONNECTING ALL POWER DISTRIBUTION EQUIPMENT. GROUND ROD SECTIONS SHALL BE COUPLED AND DRIVEN TO ESTABLISH A MAXIMUM RESISTANCE TO GROUND OF 10 OHMS THROUGHOUT THE GROUNDING SYSTEM.

7. UNLESS OTHERWISE INDICATED, ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA 4X STAINLESS STEEL; CONDUCTORS SHALL BE STRANDED AWG TYPE THWN COPPER; UNDERGROUND CONDUIT SHALL BE PER CODE NEC; EXPOSED CONDUIT SHALL BE RIGID ALUMINUM; INCLUDING LOCATIONS BETWEEN CONTROL PANELS AND EXPLOSION PROOF SEALS SUPPORT CHANNEL AND MOUNTING STRUT SHALL BE MINIMUM 1.5" x 1.5" 316 S.S.

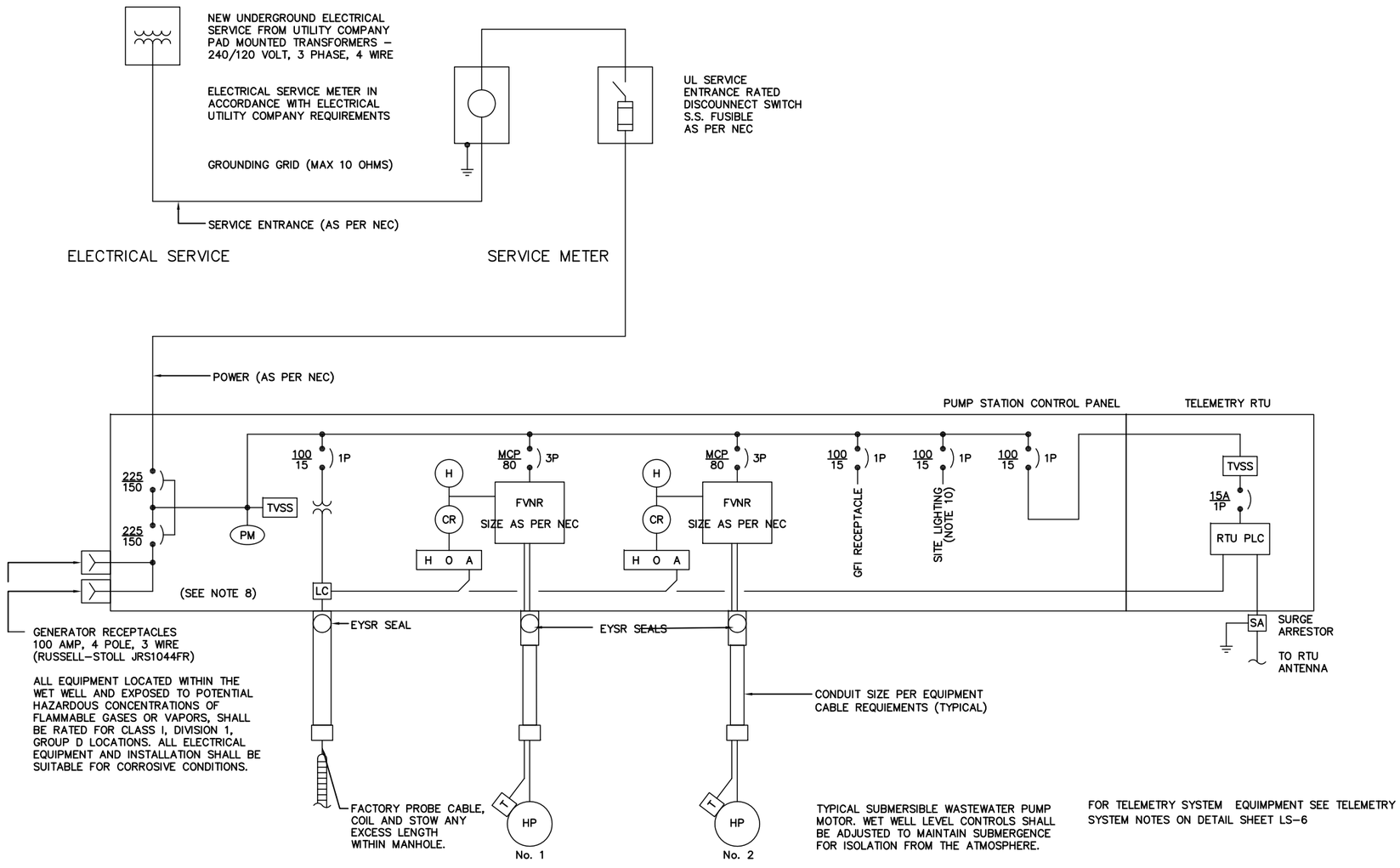
8. THE PUMP STATION CONTROL PANEL WET WELL LEVEL CONTROL SYSTEM SHALL INCLUDE DUPLEX PUMP CONTROLLER AND INTRINSICALLY SAFE SUBMERSIBLE WET WELL LEVEL SENSING PROBE FOR AUTOMATIC LEAD/LAG PUMP CONTROL AND ALTERNATION.

9. DUCT SEAL IS REQUIRED AT ALL CONDUIT CONNECTIONS IN AND OUT OF THE EQUIPMENT CABLE TERMINAL BOXES. ADDITIONALLY, DUCT SEAL IS REQUIRED AT THE CONDUIT ENTRANCES INTO THE PUMP CONTROL PANEL. DUCT SEAL SHALL BE OUTDOOR SERVICE SILICON RTV.

10. PROVIDE SITE LIGHT AND POLE TO MATCH THE STREET LIGHTS. PROVIDE POWER TO THE SITE LIGHT FROM THE PUMP CONTROL PANEL (3#12, 3/4"C). PROVIDE WP LIGHT SWITCH MOUNTED ON THE LIGHT POLE.

11. FOR COORDINATION WITH LATEST CITY OF ST. AUGUSTINE PUMP STATION CONTROL PANEL STANDARDS AND REQUIREMENTS, CONTACT THE CITY OF ST. AUGUSTINE PUBLIC WORKS DEPARTMENT 904–825–1040.

12. FOR COORDINATION WITH LATEST CITY OF ST. AUGUSTINE TELEMETRY SYSTEM RTU STANDARDS AND REQUIREMENTS, CONTACT THE CITY OF ST. AUGUSTINE PUMP MAINTENANCE DEPARTMENT 904–825–1042.



PUMPING STATION PUMPS

NOTE:
THE CITY OF ST. AUGUSTINE IS NOT RESPONSIBLE FOR THE ACCURACY AND CONTENTS OF THIS DRAWINGS. IT IS THE RESPONSIBILITY OF THE USER TO USE THE SERVICE OF A PROFESSIONAL ELECTRICAL / I&C ENGINEER TO DESIGN THE ELECTRICAL / I&C SYSTEMS FOR A SPECIFIC PROJECT

CITY OF ST. AUGUSTINE LIFT STATION DETAILS SINGLE LINE DIAGRAM	REVISION DATE:	FEB 2017
	NOT TO SCALE	LS–4

C.O.S.A.