

STRUCTURAL NOTES:

- S-1. PRE-CAST CONCRETE: ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE AS PER VAULT AND WETWELL CITY SPECIFICATIONS. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF PRE-CAST ELEMENTS FOR REVIEW.
- S-2. WETWELL SHALL BE CONSTRUCTED OF 6'-0" MINIMUM VERTICAL SECTIONS. NO OPENING SHALL BE WITHIN 12" OF THE END OF ANY SECTION (JOINT).
- S-3. CAST IN PLACE CONCRETE: ALL MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI-318 STRUCTURAL CONCRETE REQUIREMENTS. ALL CONCRETE SHALL MEET ALL FEDERAL AND COMMERCIAL SPECIFICATIONS AND STANDARDS, AND BE TESTED IN ACCORDANCE WITH CITY SPECIFICATION 03310 PRIOR TO COATING.
- S-4. CONCRETE STRUCTURES TO HAVE CONCAVE TYPE (POCKET TYPE) LIFTING HOOK ASSEMBLIES TO ACQUIRE A MINIMUM OF A 6 TON ALLOY HOOK OR 7 TON FORGED ALLOY SHACKLE.
*** MANUFACTURES RESPONSIBILITY TO DETERMINE LIFTING REQUIREMENTS ***
- S-5. CONCRETE REINFORCEMENT: REINFORCEMENT SHALL CONFORM TO ASTM A615-GRADE 60 REQUIREMENTS. ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI-315 REQUIREMENTS.
- S-6. ALL PENETRATIONS INTO THE WETWELL AND VALVE VAULT SHALL BE CORE BIT-DRILLED OR CIRCULAR SLEEVED. ANY EXPOSED REINFORCING BARS SHALL BE EPOXY COATED AS PER SPECIFICATIONS. PENETRATIONS WILL BE FILLED WITH TYPE II PORTLAND CEMENT AFTER CONDUITS OR PIPES ARE INSTALLED. SQUARE BOX HOLES ARE NOT ACCEPTABLE. HYDRAULIC CEMENT WILL NOT BE ACCEPTABLE FOR USE ON THE WETWELL DUE TO INCOMPATIBILITY WITH IET COATING.
- S-7. ALL CONCRETE VALVE VAULT STRUCTURES SHALL BE EXTERNALLY COATED AS PER CITY SPECIFICATIONS.

MECHANICAL NOTES:

- M-1. DURING INSTALLATION, THE CONTRACTOR SHALL MAINTAIN THE GROUND WATER ELEVATION BELOW THE BOTTOM OF THE WETWELL UNTIL FULLY BACKFILLED AND COMPACTED TO AVOID FLOTATION. ALL BACKFILL SHALL BE PLACED, COMPACTED AND TESTED IN ACCORDANCE WITH CITY SPECIFICATION 02200 EARTHWORK.
- M-2. AT THE RISER JOINTS, THE "RAM-NECK" SHALL BE SET 1" MINIMUM AWAY FROM THE INSIDE EDGE OF THE WETWELL AND 1" FROM INSIDE EDGE OF TOP BARREL. PRIOR TO BACK FILL, ALL OUTSIDE JOINTS INCLUDING THE BARREL TO LID JOINT SHALL BE BROUGHT LEVEL TO THE OUTSIDE SURFACE OF THE STRUCTURE USING TYPE II PORTLAND SAND MIX. ALL JOINTS SHALL BE COVERED WITH "BIDCO WRAP".
- M-3. ALL STRUCTURES SHALL BE COATED INTERNALLY AS PER CITY SPECIFICATIONS. VALVE VAULTS SHALL BE EXTERNALLY COATED ONLY UNLESS OTHERWISE SPECIFIED. * THE WETWELL FLOOR/PUMP AREA SHALL BE LEVEL AND COATED BEFORE THE STAINLESS STEEL BASE PLATES ARE PERMANENTLY INSTALLED *
- M-4. GROUT FILL ALL LIFTING HOOK HOLES FLUSH.
- M-5. SERIES 316 U.S. MANUFACTURED STAINLESS STEEL (CERTIFICATION REQUIRED) SHALL BE USED IN THE WETWELL AND VALVE VAULT FOR FLANGE BOLTS, BRACKETS, GUIDE RAILS AND ALL OTHER HARDWARE, EXCEPT WHERE OTHERWISE NOTED.
- M-6. ALL NON-STAINLESS STEEL PIPE, PUMPS, AND FITTINGS SHALL BE COATED IN ACCORDANCE WITH SECTION 09800 OF THE SPECIFICATIONS. ALL THREADS ON ALL BOLTS SHALL BE PROTECTED WITH AN ANTISEIZE LUBRICANT SUITABLE FOR SUBMERGED BOLTS. TO MEET GOVERNMENT SPECIFICATION MIL-A-907E. BURIED BOLTS IN POORLY DRAINED SOIL SHALL BE COATED THE SAME AS BURIED PIPE.
- M-7. ALL DISSIMILAR METAL CONNECTIONS REQUIRE DIELECTRIC BARRIERS BETWEEN THE SURFACES.
- M-8. PIPE SHALL BE BLACK HDPE SDR11 DIPS AS SPECIFIED. VENT RISER PIPE SHALL BE BLACK, WITHOUT STRIPES. ALL HDPE PIPES SHALL HAVE MOLDED FITTINGS WITH A FUSED CLOSE RADIUS. ALL FLANGED HDPE TO DUCTILE IRON OR PVC JOINTS, SHALL HAVE 316 STAINLESS STEEL BACK-UP RINGS. HDPE PIPE TO MJ CONNECTIONS OUTSIDE OF VALVE VAULT, SHALL USE A MOLDED MECHANICAL JOINT ADAPTER.

MECHANICAL NOTES (CONT.):

- M-9. ALL LIFT STATION EQUIPMENT DIMENSIONS, SIZES, LOCATIONS, CLEARANCES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- M-10. RISER AND DISCHARGE PIPING IS REQUIRED TO BE A 4" MINIMUM IN ALL LIFT STATIONS.
- M-11. PAINT ALL ABOVE GROUND PIPE IN ACCORDANCE WITH THE SPECIFICATIONS.
- M-12. DISTANCE BETWEEN PUMPS SHALL BE SET BY MANUFACTURER'S RECOMMENDATIONS OR THE DISTANCE BETWEEN DISCHARGE PIPING, WHICHEVER IS GREATER.
- M-13. PUMP ACCESS HATCH CONFIGURATION AND DIMENSIONS SHALL BE CONFIRMED WITH THE HATCH AND PUMP SUPPLIERS.
- M-14. PLUG VALVES 6" AND LARGER, SHALL BE SUPPLIED WITH ACTUATOR AND HANDWHEEL BY SAME MANUFACTURE.
- M-15. ALL DIMENSIONS SHALL BE CONFIRMED WITH MANUFACTURER'S SHOP DRAWINGS.

ELECTRICAL NOTES:

- E-1. RTU SHALL BE HSQ TECHNOLOGY MODEL 2586 TELEMETRY UNIT. ANTENNA: YAGI #DB499K ANDREW W/ HARDWARE, CABLE: 25-FT. BELDEN COAX CABLE #8237, CONNECTORS (EACH END): MALE N-TYPE #82-202 AMPHENOL. (LIGHTING/SURGE ARRESTOR SUPPLIED BY HSQ)
- E-2. CONTRACTOR TO PROVIDE HSQ UNIT AND 2" ANTENNA MAST WITH WELDED BASE (ALUMINUM SCHEDULE 80) 20' LONG AND ANTENNA WITH HARDWARE. PANEL MANUFACTURER TO MOUNT HSQ UNIT INSIDE PANEL. ANTENNA WILL BE INSTALLED BY THE CITY.
- E-3. ELECTRICAL CONTACTS FOR RTU TO INCLUDE; PHASE AND CONTROL CIRCUIT FAILURE, HIGH LEVEL ALARM, RTU HIGH LEVEL ALARM, WETWELL RTU INTRUSION, PUMP STARTS, STATION DISABLE, CONTROL AND REPORT.
- E-4. ALARMS TO BE NON-LATCHING AND CLEAR AUTOMATICALLY AFTER ALARM CONDITION TERMINATES.
- E-5. ALARM LIGHT ASSEMBLY TO BE INGRAM MODEL ALVLRX-40, 40-WATT INCANDESCENT RED GLOBE.
- E-6. ELECTRICAL DISCONNECTS SHALL BE 316 U.S. MANUFACTURED STAINLESS STEEL KNIFE SWITCHES. CIRCUIT BREAKER DISCONNECTS NOT ALLOWED. CONTROL PANEL SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.
- E-7. ELECTRICAL CONDUITS FROM INCOMING POWER SERVICE SHALL BE SEALED WITH ELECTRICAL DUCT SEAL AT ENTRY POINT INTO THE ELECTRICAL DISCONNECT / KNIFE SWITCH AND METER CAN, SPARE CONDUITS SHALL BE CAPPED.
- E-8. CONDUIT EGRESSION FROM LIFT STATION WETWELL INTO THE CONTROL PANEL PAD, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER RATED FOR THE APPLICABLE ELECTRICAL CLASSIFICATION. EXPLOSION-PROOF CONDUIT SEALS SHALL BE INSTALLED IN THE CONTROL PANEL. (CHICO NOT ALLOWED).

GENERAL NOTES:

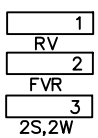
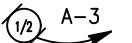
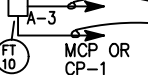
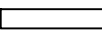
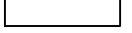
- G-1. ALL LIFT STATION WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTION OF THE CITY OF CAPE CORAL DESIGN PROCEDURES AND TECHNICAL SPECIFICATIONS.
- G-2. REFERENCE, DATA TABLES ON THE LIFT STATION DRAWINGS FOR SPECIFIC SIZING, ELEVATIONS, DIAMETERS, AND OTHER REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ENGINEER.
- G-3. PRIOR TO ACCEPTANCE BY THE CITY OF CAPE CORAL, THE PUMP SUPPLIER SHALL PERFORM THE STATION START-UP PERFORMANCE TEST AND THE CONTRACTOR SHALL PERFORM THE 3-DAY TEST REQUIREMENTS ACCORDING TO CITY SPECIFICATIONS.

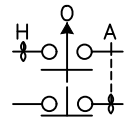
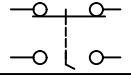
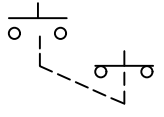
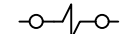
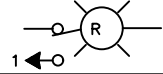
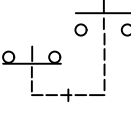
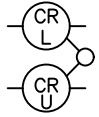
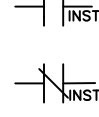
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DUPLEX LIFT STATION STRUCTURAL, MECHANICAL, ELECTRICAL AND GENERAL NOTES

NOT TO SCALE

REVISION DATE	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022		DUPLEX LIFT STATION STRUCTURAL, MECHANICAL, ELECTRICAL AND GENERAL NOTES	S-501
ADOPTION DATE			
08-17-2022			

BACKGROUND PLAN AND ONE LINE SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONTROL SWITCH (SEL. OR P.B.) SEE CIRCUITS FOR SPECIFIC TYPE		LOW VOLTAGE DISCONNECT SWITCH
	SEE CIRCUITS FOR SPECIFIC TYPE FLOAT SWITCH - FLOW SWITCH		LOW VOLTAGE FUSE (BELOW 600V)
	TEMPERATURE - HUMIDISTAT SWITCH (SUBSCRIPT = NO. OF STAGES)		ALL STARTERS SHALL BE FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE INDICATED (FVR) FULL VOLTAGE REVERSING (RV) REDUCED VOLTAGE (2S,2W) TWO SPEED, TWO WINDING
	LIMIT - PRESSURE - VACUUM SWITCH		600V, 3 POLE MOLDED CASE CIRCUIT BREAKER, FRAME & RATING AS SHOWN
	ELECTRICAL OR MECHANICAL ALTERNATOR (SEE WIRING)		SINGLE PHASE, FRACTIONAL HP MOTOR TO LOCATION INDICATED (SEE GEN. NOTE 4)
	OVERLOAD SWITCH OR DEVICE		THREE PHASE LOAD WITH IDENTIFICATION
	TERMINAL BOX		TAG NO. (BALLOON) FOR DEVICE INDICATED
	SOLENOID VALVE		FOR POWER (SEE GEN. NOTE 4) 3/4"C(2/C#18 SHLD.)CONDUIT AND WIRE RUN FROM DEVICE INDICATED TO LOCATION INDICATED
	PHOTOCELL LINE VOLTAGE		CAPACITOR, 3 PHASE, SIZE AS INDICATED
	INTERCOM HANDSET - FLUSH MOUNTED WITH REMOTE SPEAKER AMPLIFIER		DISCONNECT SWITCH (F) = FUSED (C) = CIRCUIT BREAKER
	AS NOTED (LIGHTING PANEL, CONTROL PANEL, DISTRIBUTION PANEL ETC.) WALL MOUNTED		LIGHTNING ARRESTOR
	JUNCTION BOX		LOW VOLTAGE HOME RUNS 120/208 V 120/240 V (SEE GEN. NOTE 4)
	HEATER		NEMA 4
	TRANSFORMER		NEMA 4X
	CONDUIT WITH CONDUIT SEAL FITTING		NEMA 7
	CONDUIT EXPOSED		NEMA 9
	CONDUIT CONCEALED		FLUORESCENT FIXTURE
	DIRECT BURIED CONDUIT		
	DIRECT BURIED CABLE		
	OVERHEAD LINE		
	UNDERGROUND DUCT BANK		
	CONCRETE ENCASED DUCT BANK, WITH CABLE LOCATIONS AND SPARE DUCTS AS INDICATED ON DRAWINGS		

CONTROL CIRCUIT & PILOT DEVICE LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PRESS. ACTUATED SWITCH		SELECTOR SWITCH OPERATOR WITH FUNCTION SHOWN
	FLOAT ACTUATED SWITCH		MOMENTARY PUSHBUTTON OPERATOR-NORMALLY OPEN
	FLOW ACTUATED SWITCH		MOMENTARY PUSHBUTTON OPERATOR-NORMALLY CLOSED
	TEMP. ACTUATED SWITCH		PUSHBUTTON OPERATOR WITH MUSHROOM HEAD
	LIMIT SWITCH- NORMALLY OPEN		FIELD LOCATED STOP BUTTON
	LIMIT SWITCH- NORMALLY CLOSED		MAINTAINED PUSH-PULL OPERATOR
	LIMIT SWITCH-NORMALLY CLOSED-HELD OPEN		MAINTAINED STOP-START PUSHBUTTON OPERATOR
	LIMIT SWITCH-NORMALLY OPEN-HELD CLOSED		SOLENOID OR CLUTCH
	LATCHING CABLE SWITCH		PUSH-TO-TEST INDICATING LIGHT
	TIME-DELAY FUSE		MAINTAINED STOP- MOMENTARY START PUSHBUTTON (JOG)
	CONTROL RELAY COIL		ZERO SPEED OR ANTI- PLUGGING SWITCH
	CONTROL RELAY CONTACT-NORMALLY OPEN		LOCAL TERMINALS WITH EXTERNAL WIRING
	CONTROL RELAY CONTACT-NORMALLY CLOSED		ELAPSED TIME INDICATOR
	TWO COIL LATCHING RELAY		TIMING RELAY INSTANTANEOUS CONTACTS
	TIMING RELAY COIL		
	TIMED CLOSED CONTACT ON ENERGIZATION		
	TIMED OPEN CONTACT ON ENERGIZATION		
	TIMED OPEN CONTACT ON DE-ENERGIZATION		
	TIMED CLOSED CONTACT ON DE-ENERGIZATION		
	120 VAC TRANSFORMER		

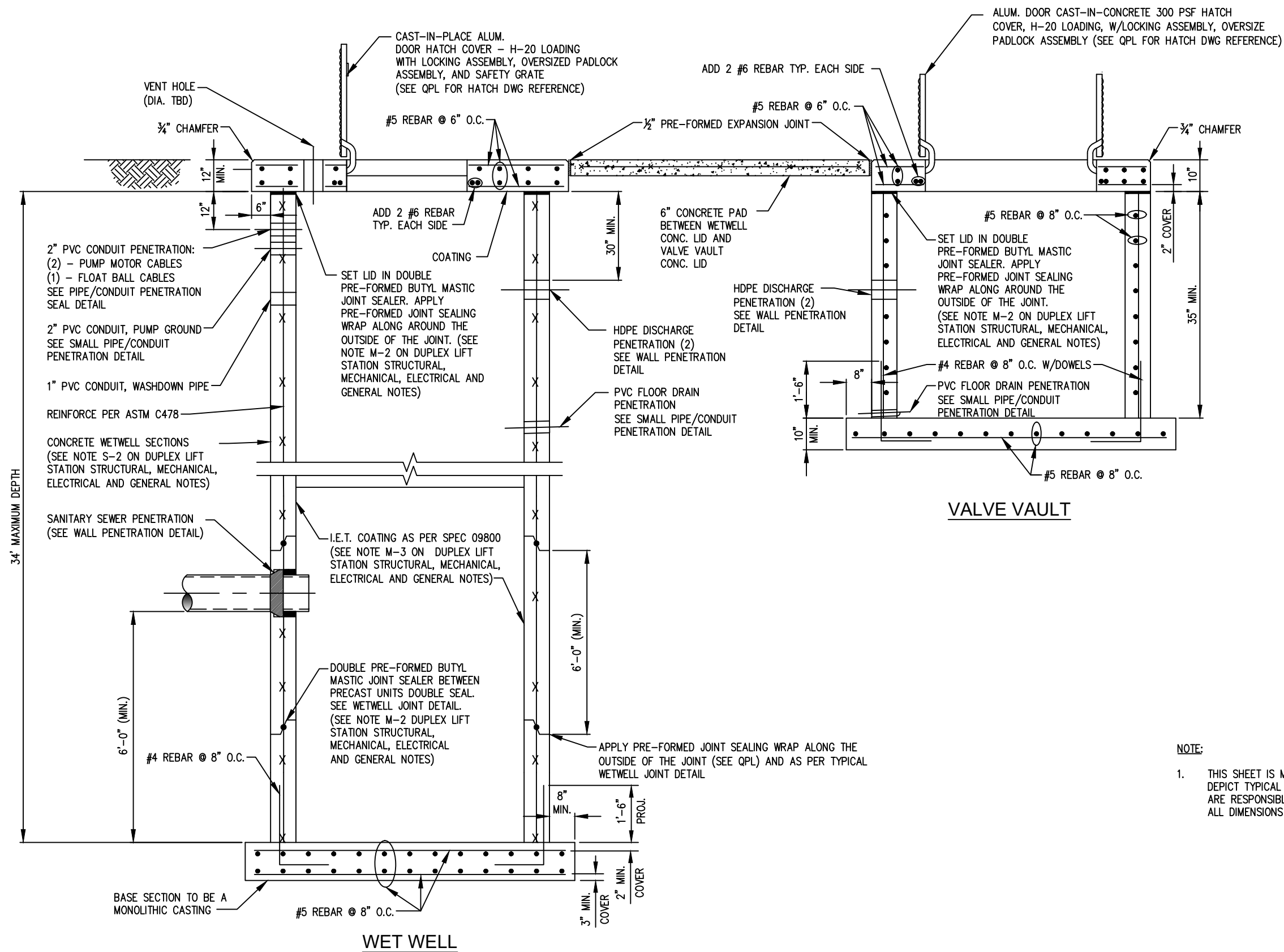
- GENERAL NOTES:
- ELECTRICAL MATERIALS AND EQUIPMENT ITEMS SHOWN IN LIGHT LINE WEIGHTS ON THE DRAWINGS ARE EXISTING ITEMS TO REMAIN. ELECTRICAL MATERIALS AND EQUIPMENT ITEMS SHOWN IN HEAVY LINE WEIGHTS ARE NEW AND SHALL BE PROVIDED UNDER THIS CONTRACT.
 - ITEMS SHOWN CROSSHATCHED ON THE DRAWINGS ARE EXISTING ITEMS TO BE REMOVED.
 - COORDINATE WITH DRAWINGS OF OTHER TRADES (IN PARTICULAR CIVIL AND STRUCTURAL) FOR INTERFERENCE AND FOR LOCATIONS OF MOUNTING FLANGES, CONNECTION POINTS, ETC.
 - INSTALL A SINGLE INSULATED CONDUCTOR (RHW, THHN, OR XHHW) COPPER GROUND WIRE IN EACH CONDUIT, SIZE AS SHOWN ON DRAWINGS OR AS A MINIMUM PER THE NATIONAL ELECTRICAL CODE. THIS GROUND WIRE SHALL BE CONNECTED AT EACH END TO THE EQUIPMENT GROUND.
 - EQUIPMENT SHOWN INSIDE SHALL BE RATED NEMA 12 AND EQUIPMENT SHOWN OUTSIDE SHALL BE RATED NEMA 4X, UNLESS OTHERWISE INDICATED. EQUIPMENT LOCATED WITHIN NEMA 4X AREAS SHALL BE 316-STAINLESS STEEL, UNLESS NOTED OTHERWISE.
 - MINIMUM CONTROL WIRE SIZE SHALL BE EITHER #14 AWG OR 2/C#18SH AND MINIMUM POWER WIRE SIZE SHALL BE #12 AWG, UNLESS OTHERWISE INDICATED.
 - MINIMUM CONDUIT SIZE SHALL BE 3/4", UNLESS OTHERWISE INDICATED.
 - CONTRACTOR WILL CONTACT LEE COUNTY ELECTRIC COOPERATIVE (LCEC) PRIOR TO BID TO COORDINATE LIFT STATION SERVICE LOCATION, SERVICE ROUTING, TERMINATION, AND SERVICE OUTAGE. CONTRACTOR SHALL INCLUDE ALL COSTS ASSOCIATED WITH LCEC REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, SUBMITTING LCEC SERVICE REQUEST AND PAYING FOR LCEC SERVICE PER THE CONTRACT DOCUMENTS. CHANGE ORDERS RELATED TO LCEC REQUIREMENTS SHALL BE PROHIBITED.

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DUPLEX LIFT STATION - ELECTRICAL SYMBOLS, LEGEND AND GENERAL NOTES

NOT TO SCALE

REVISION DATE		DETAIL NAME	DETAIL NO.
07-14-2022		CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	S-502
ADOPTION DATE			
08-17-2022		DUPLEX LIFT STATION ELECTRICAL SYMBOLS, LEGEND AND GENERAL NOTES	



NOTE:

1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL SECTIONS ONLY. ENGINEER AND CONTRACTOR ARE RESPONSIBLE FOR VERIFYING STRUCTURAL SECTIONS AND ALL DIMENSIONS PRIOR TO CONSTRUCTION.

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DUPLEX LIFT STATION WITH VAULT - STRUCTURAL SECTIONS

NOT TO SCALE

A
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REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



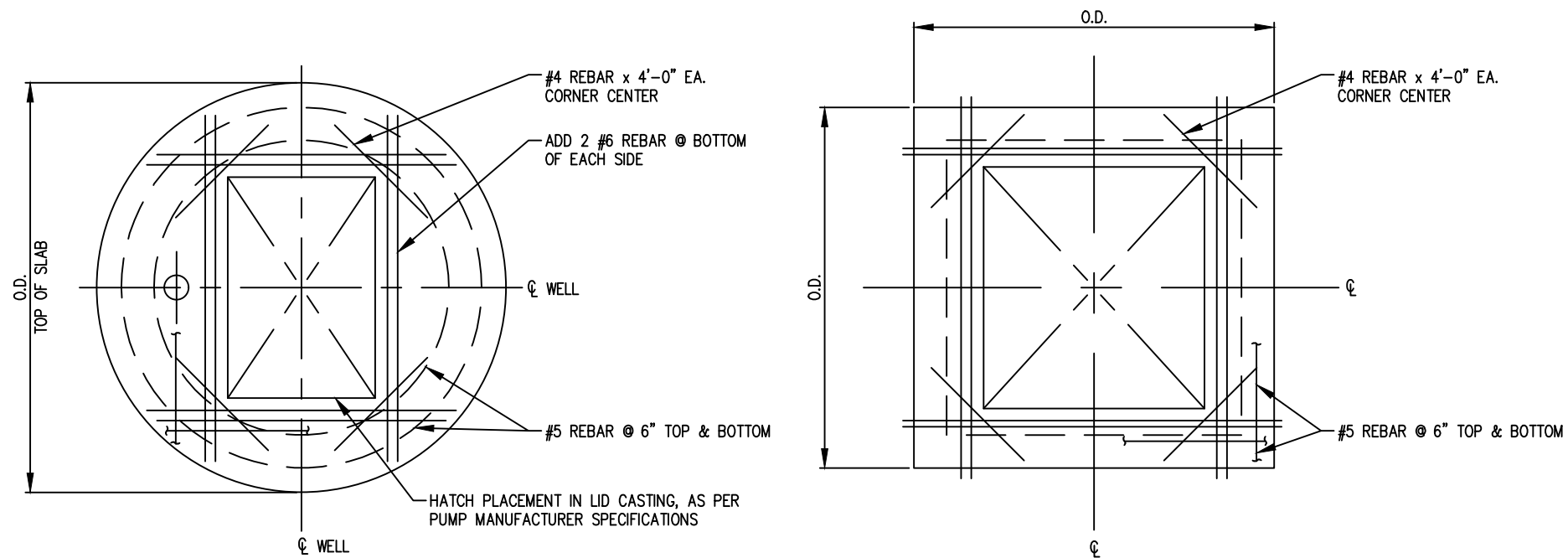
CITY OF CAPE CORAL
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DETAIL NAME

**DUPLEX LIFT STATION WITH VAULT
STRUCTURAL SECTIONS**

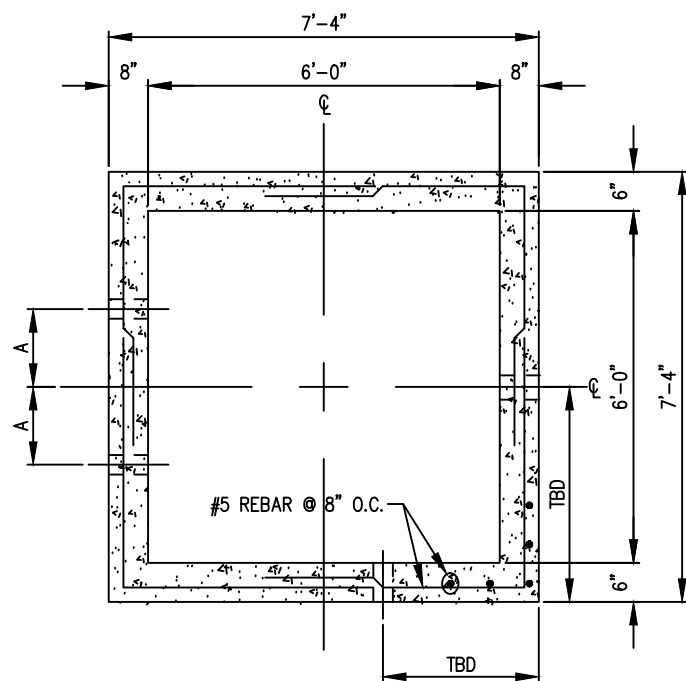
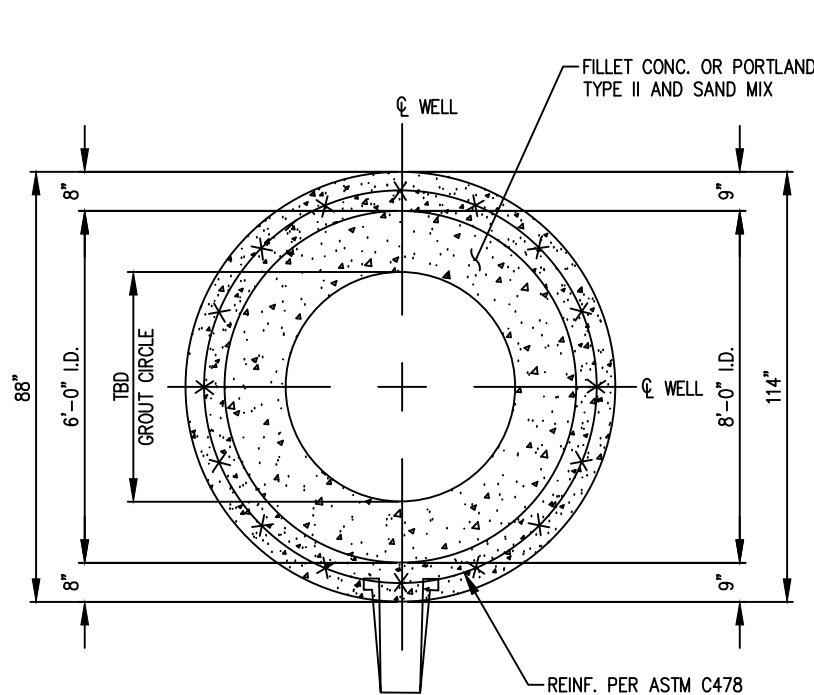
DETAIL NO.

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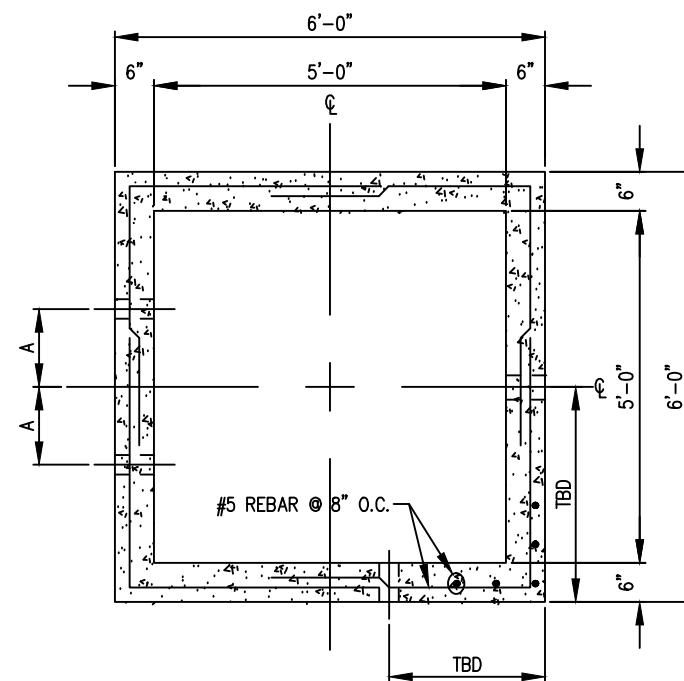


TOP SLAB REINFORCEMENT

C
S-507



STANDARD VALVE VAULT WITH 6' I.D.



STANDARD VALVE VAULT WITH 5' I.D.

SECTIONAL PLAN

B
S-505

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DUPLEX LIFT STATION W/VAULT - STRUCTURAL PLAN

NOT TO SCALE

WET-WELL CONCRETE LID DIMENSIONS

I.D. MEASUREMENT	O.D. MEASUREMENT	LID THICKNESS (MIN.)
6'-0"	100"	12"
6'-0" W/20HP	100"	12"
8'-0"	126"	12"
10'-0"	138"	12"

VALVE VAULT DIMENSIONS

DISCHARGE ASSY. SIZE	O.D. MEASUREMENTS	I.D. MEASUREMENT	LID THICKNESS
4" VALVE ASSEMBLY	6'-0"	60"	10"
4" VALVE ASSEMBLY W/ISO VALVE INSIDE	5'-11" X 7'-2"	55" x 70"	10"
6" VALVE ASSEMBLY	7'-4"	6'-0"	10"
8" VALVE ASSEMBLY	7'-4"	6'-0"	10"

RISER / DISCHARGE ASSY. $\varnothing$ SEPARATION

DISCHARGE ASSY. SIZE	A MEASUREMENTS	REF. MEASUREMENT
4" VALVE ASSEMBLY	1'-1"	26"
6" VALVE ASSEMBLY	1'-4"	32"
8" VALVE ASSEMBLY	1'-6"	36"

NOTE:

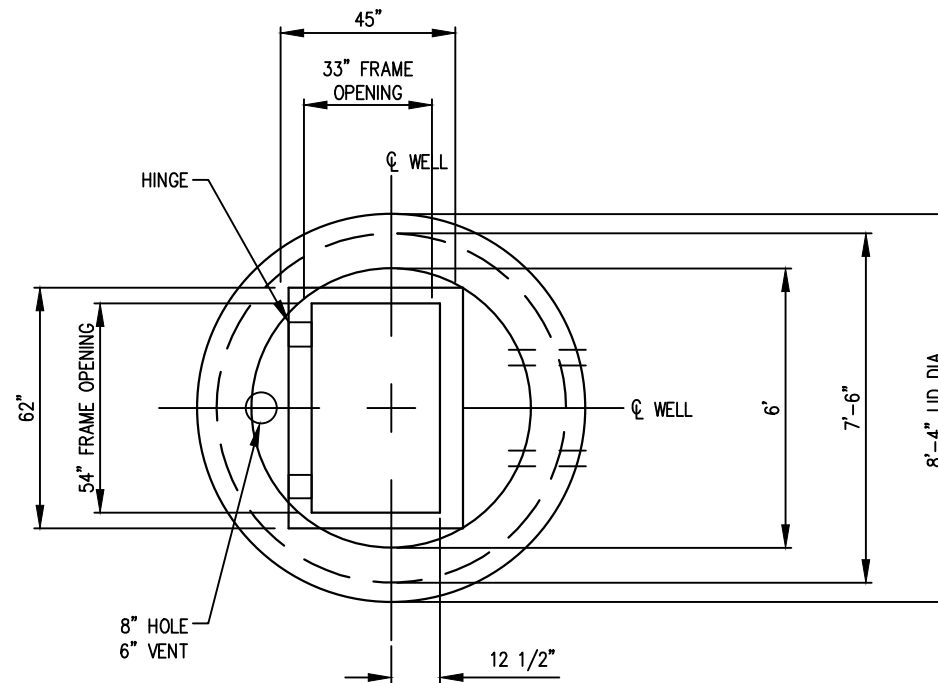
- THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL SECTIONS ONLY. ENGINEER AND CONTRACTOR ARE RESPONSIBLE FOR VERIFYING STRUCTURAL SECTIONS AND ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO VERIFY LID SIZE WITH ENGINEER, HATCH SIZE WITH PUMP SUPPLIER, AND HATCH ORIENTATION WITH CITY PRIOR TO PLACEMENT. REFER TO QUALIFIED PRODUCTS LIST FOR HATCH DWG.# AS PER WET-WELL DIA. AND/OR VALVE VAULT DIMENSIONS.

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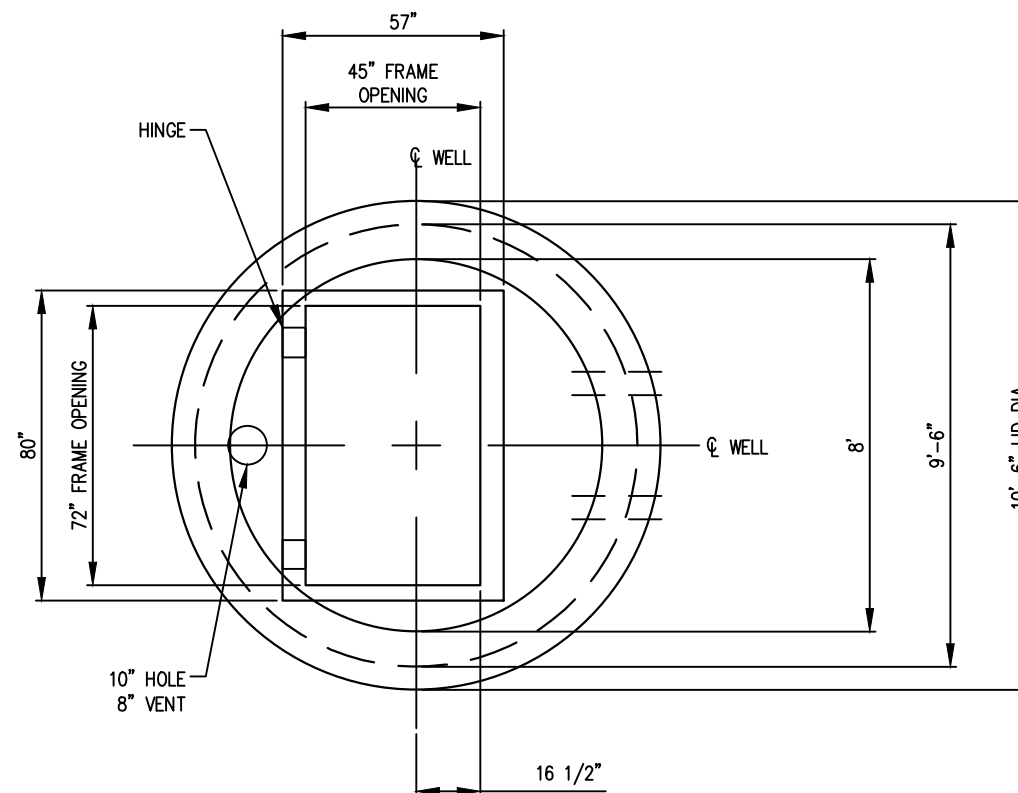


CITY OF CAPE CORAL
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DETAIL NAME	DETAIL NO.
DUPLEX LIFT STATION WITH VAULT STRUCTURAL PLAN	S-506



6' DIA. WETWELL
5, 7.5, & 10 HP PUMPS



8' DIA. WETWELL
5, 7.5, 10, 15, 20, & 25 HP PUMPS

NOTES:

1. THIS DRAWING IS FOR REFERENCE PURPOSES ONLY.
2. ENGINEER AND PUMP MANUFACTURE TO VERIFY HATCH SIZE AND LID DIMENSIONS FOR EACH LIFT STATION.
3. ENGINEER TO VERIFY WITH PUMP MANUFACTURE HATCH OFF SET DIMENSIONS FOR EACH PUMP MODEL AND RISER SIZE, FOR CASTING PURPOSE.
4. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING STRUCTURAL DIMENSIONS PRIOR TO CONSTRUCTION.

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DUPLEX LIFT STATION HATCH/LIDS - CASTING DETAILS

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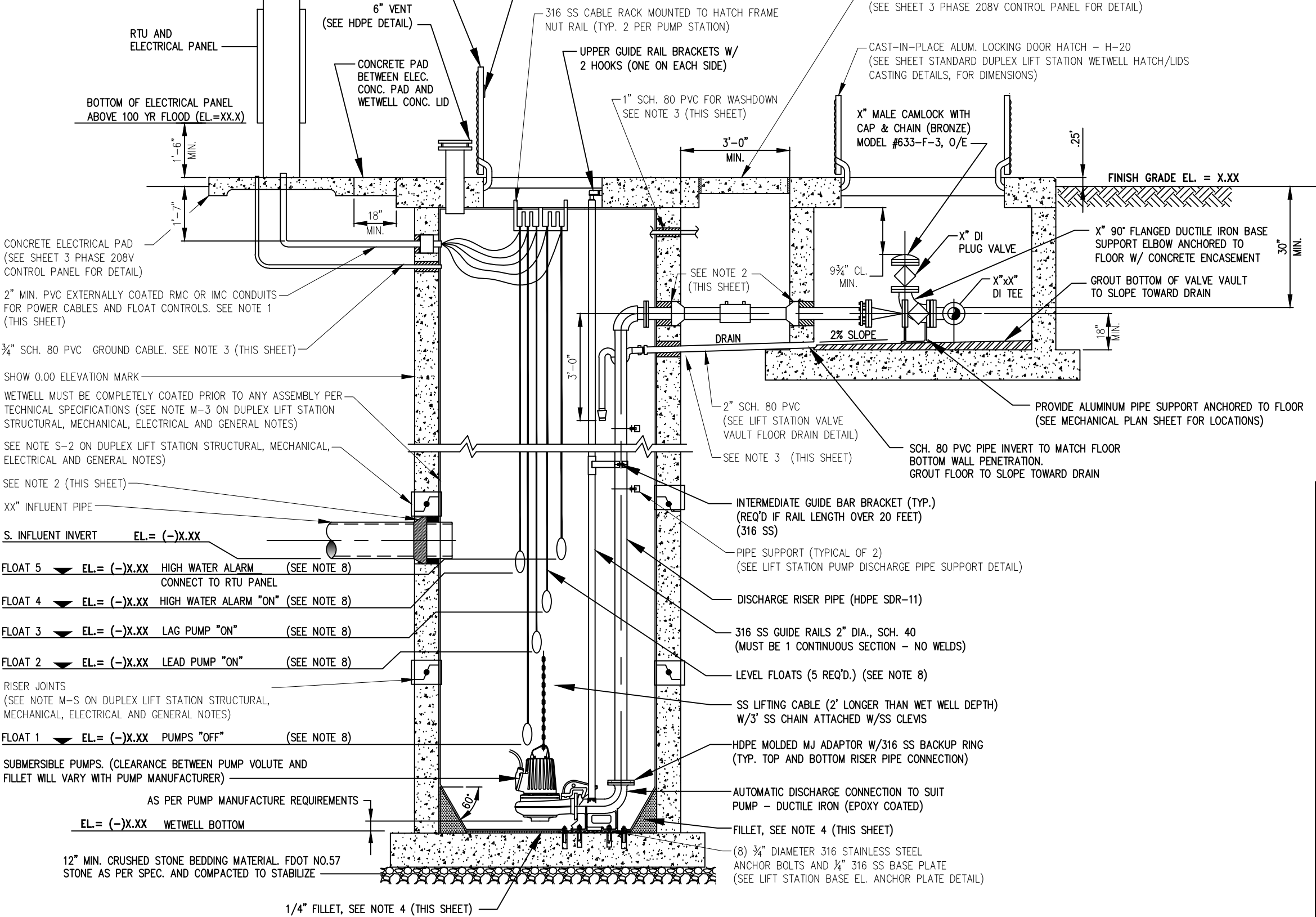
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CITY OF CAPE CORAL
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DETAIL NAME	DETAIL NO.
DUPLEX LIFT STATION HATCH/LIDS CASTING DETAILS	S-507

CAST-IN-PLACE ALUM. DOOR HATCH COVER – H-20 LOADING, WITH LOCKING ASSEMBLY, OVERSIZED PADLOCK ASSEMBLY, AND SAFETY GRATE (SEE QPL FOR HATCH DWG REF)



- NOTES:
- MODULAR, ELASTOMER PIPE SEAL TO BE USED FOR ELECTRICAL CONDUIT PENETRATIONS FOR PUMP CABLES AND FLOAT BALL CABLES. SEE PIPE/CONDUIT PENETRATION SEAL DETAIL. SEE PIPE/CONDUIT PENETRATION SEAL DETAIL.
 - KOR-N-SEAL FLEXIBLE CONNECTION BOOT TO BE USED AT PUMP DISCHARGE PIPE AND GRAVITY SEWER INVERT PENETRATIONS. ANNULAR SPACE BETWEEN PIPE AND CORE HOLE TO BE FILLED WITH MORTAR/GROUT ON INSIDE FACE OF STRUCTURE. SEE WALL PENETRATION DETAIL.
 - SEE SMALL PIPE/CONDUIT PENETRATION DETAIL.
 - WET WELL BOTTOM FILLET TO BE CONSTRUCTED OF CONCRETE OR SAND MIX USING TYPE II PORTLAND CEMENT AND SHALL BE COATED AS PART OF THE WET WELL COATING SYSTEM.
 - ALL CONCRETE, SAND MIX, GROUT, AND MORTAR AS NOTED HEREIN SHALL BE MANUFACTURED WITH TYPE II PORTLAND CEMENT.
 - 100 YR FLOOD ELEVATION X.XX FT..
 - THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.
 - SEE DUPLEX LIFT STATION SECTION WITHOUT VAULT DETAIL FOR ALTERNATE LEVEL TRANSDUCER IN LIEU OF FLOAT BALL LEVEL CONTROL SYSTEM.

LIFT STATION DATA

DESIGN FLOW, GPM	XXX
PUMP DUTY POINT (ALL PUMPS ON)	XXX GPM @ XX FT
-	-
NUMBER OF PUMPS	2
PUMP MANUFACTURER	FLYGT or EBARA
PUMP MODEL NUMBER	XXXX-XXXX
IMPELLER NUMBER	XXX
RATED SPEED	XXXX (RPM)
RATED HORSEPOWER PER PUMP	XX (HP)
VOLTS	XXX
PHASE POWER	3
PUMP DISCHARGE SIZE	X (INCHES)
DIAMETER RISER PIPE	X (INCHES)
DIAMETER PIPE AFTER RISER	X (INCHES)
WETWELL DIAMETER (I.D.)	X'-X" (FEET)
WETWELL DEPTH (MAX DEPTH 34')	X (FEET)
WET WELL RIM ELEVATION	EL. X.XX (FEET)

S-510

DUPLEX LIFT STATION WITH VAULT - SECTIONS

NOT TO SCALE

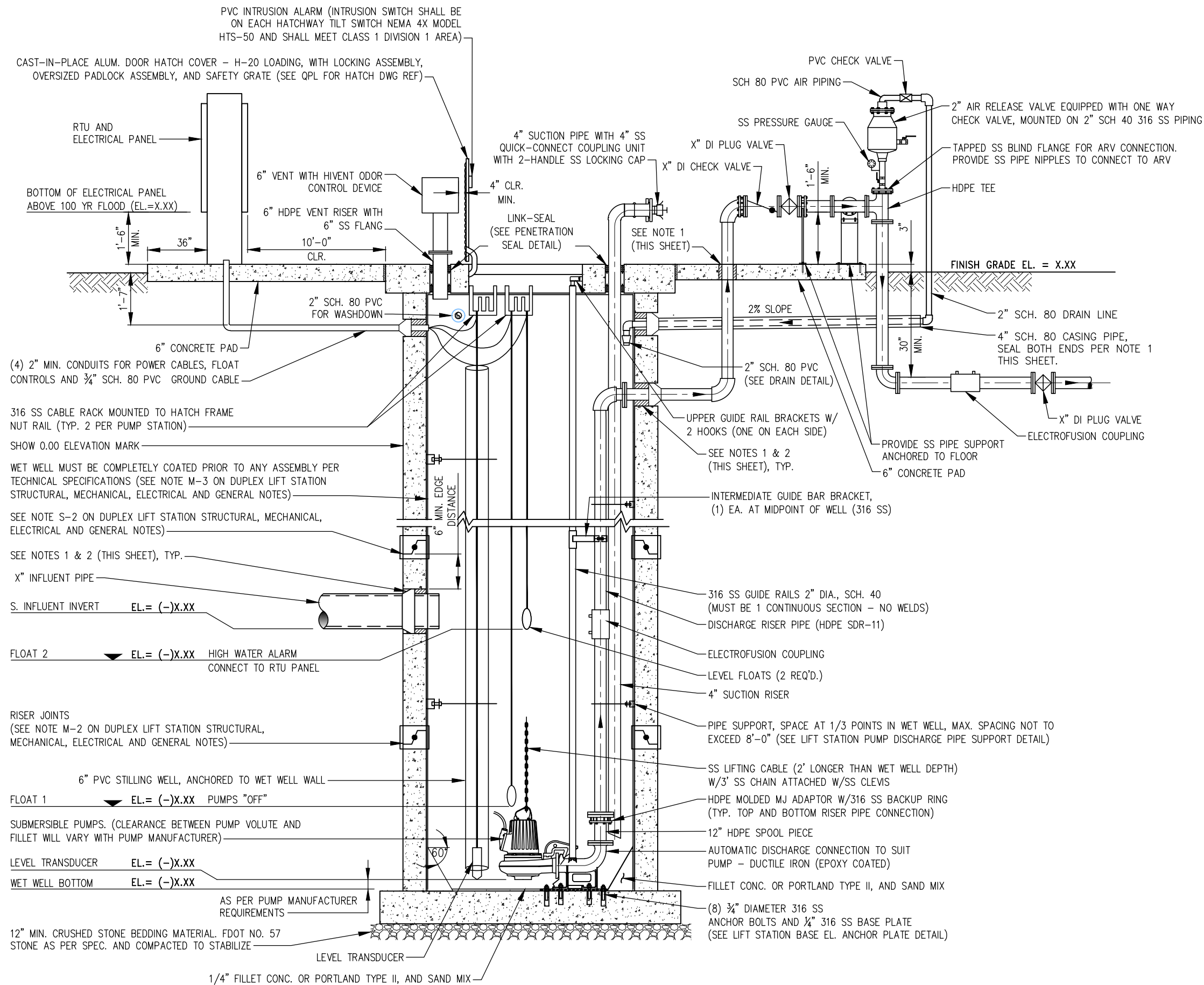
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
DUPLEX LIFT STATION WITH VAULT
SECTIONS

DETAIL NO.
S-510



NOTES:

1. TYPE II PORTLAND CEMENT
2. KOR-N-SEAL FLEXIBLE CONNECTION BOOT
3. 100 YR. FLOOD ELEVATION X.XX FT.
4. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.

LIFT STATION DATA

DESIGN FLOW, GPM	XXX
PUMP DUTY POINT (ALL PUMPS ON)	XXX GPM @ XX FT
-	-
NUMBER OF PUMPS	2
PUMP MANUFACTURER	FLYGT or EBARA
PUMP MODEL NUMBER	XXXX-XXXX
IMPELLER NUMBER	XXX
RATED SPEED	XXXX (RPM)
RATED HORSEPOWER PER PUMP	XX (HP)
VOLTS	XXX
PHASE POWER	3
PUMP DISCHARGE SIZE	X (INCHES)
DIAMETER RISER PIPE	X (INCHES)
DIAMETER PIPE AFTER RISER	X (INCHES)
WET WELL DIAMETER (I.D.)	X'-X" (FEET)
WET WELL DEPTH	X (FEET)
WET WELL RIM ELEVATION	EL. X.XX (FEET)
PUMPS OFF:	EL. X.XX (FEET)
LEAD ON:	EL. X.XX (FEET)
LAG ON:	EL. X.XX (FEET)
HIGH WATER ALARM (LOCAL)	EL. X.XX (FEET)
HIGH WATER ALARM (RTU)	EL. X.XX (FEET)

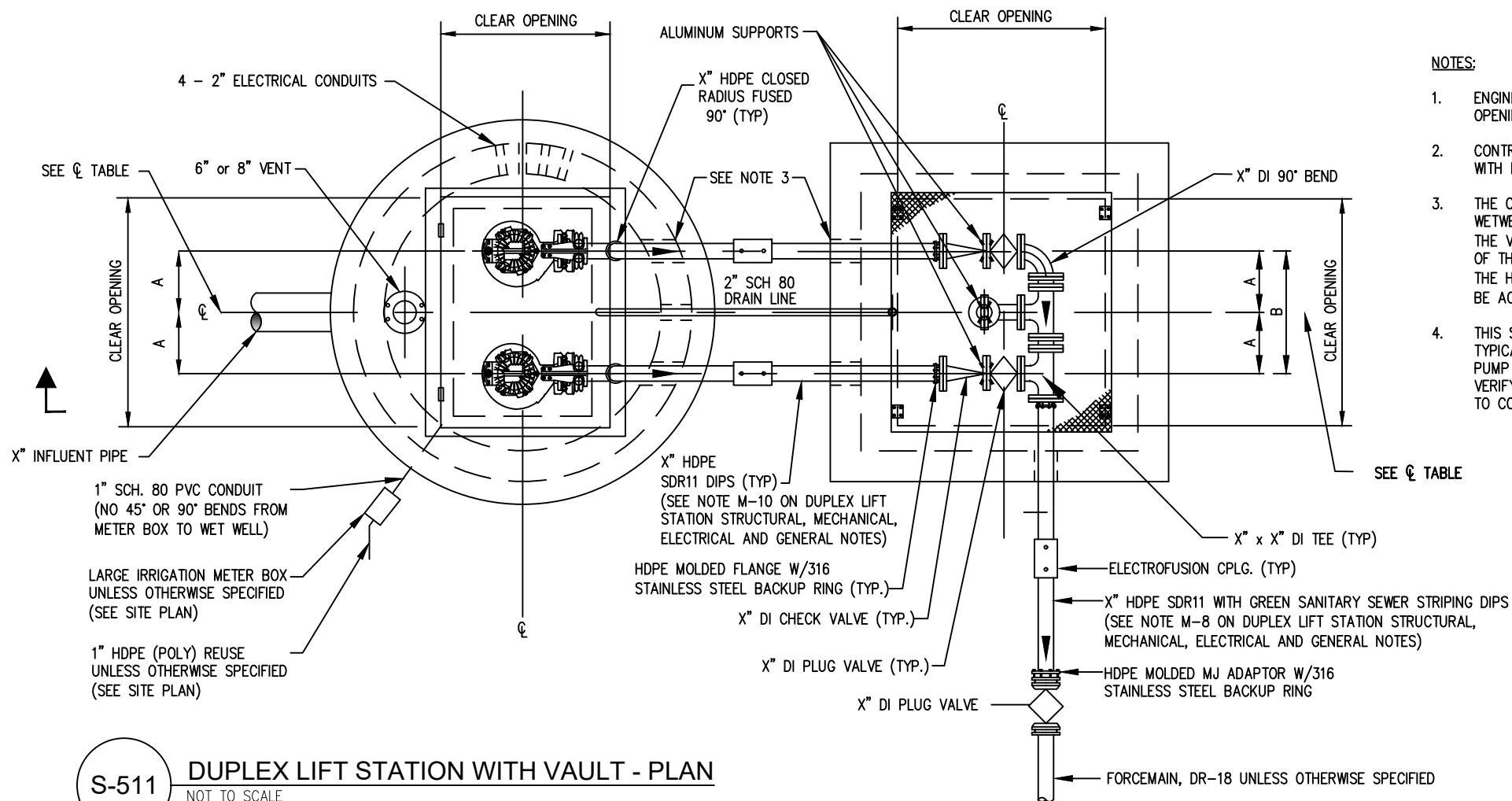
S-510A DUPLEX LIFT STATION - SECTION
NOT TO SCALE

REVISION DATE
07-14-22
ADOPTION DATE
08-17-2022



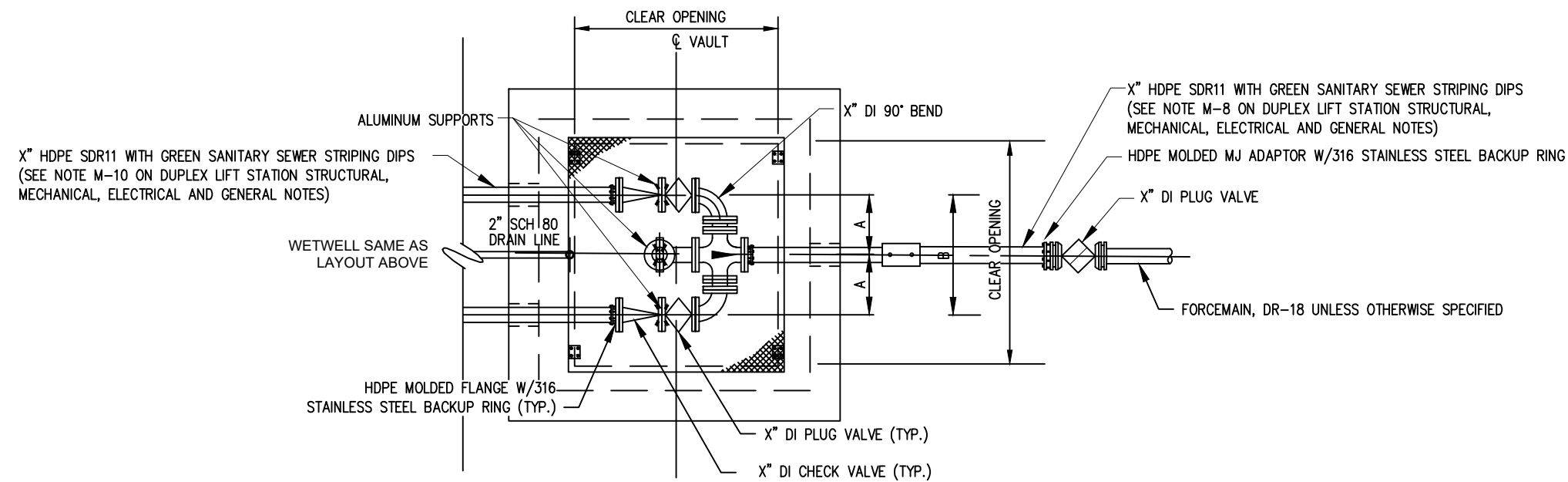
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
DUPLEX LIFT STATION SECTION WITHOUT VALVE VAULT	S-510A



- NOTES:**
- ENGINEER TO VERIFY WITH PUMP MANUFACTURER ALL CLEAR OPENING DIMENSIONS ON THE WETWELL & VALVE VAULT.
 - CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ENGINEER.
 - THE CORE HOLES FOR THE PUMP DISCHARGE PIPING, EXITING THE WETWELL, SHALL BE CO-LINEAR WITH THE CORED HOLES FROM THE VALVE VAULT (I.E. NOT PERPENDICULAR TO THE SURFACE OF THE ROUND BARREL SECTION CAUSING THE CENTER LINE OF THE HOLES TO BE ANGLED OUTWARD). ANY DEVIATION WILL NOT BE ACCEPTED., AND MAY BE AT THE CONTRACTOR'S EXPENSE.
 - THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.

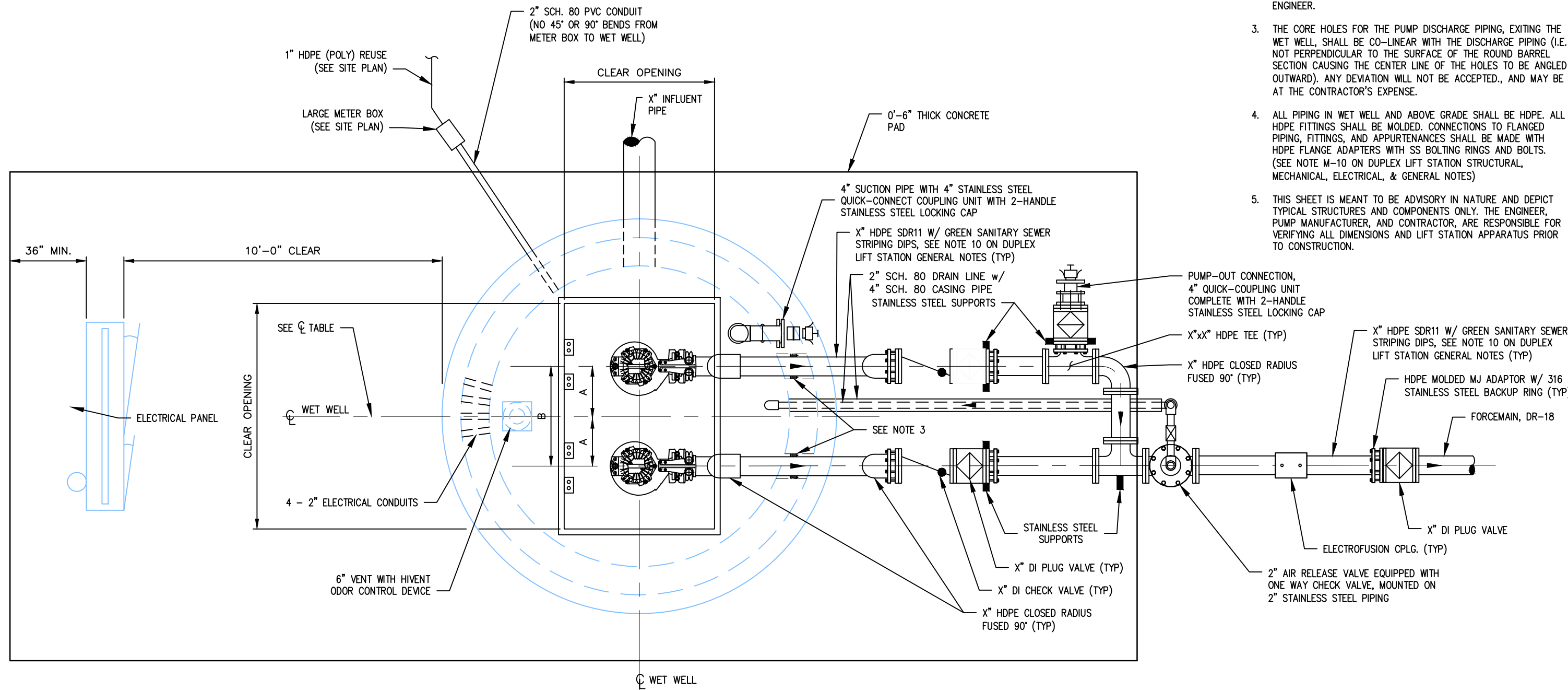
S-511 **DUPLEX LIFT STATION WITH VAULT - PLAN**
NOT TO SCALE



S-511 **OPTIONAL PIPING LAYOUT - PLAN**
NOT TO SCALE

RISER & DISCHARGE ASSY. Ø SEPARATION

DISCHARGE ASSY. SIZE	A MEASUREMENTS	B MEASUREMENTS
4" VALVE ASSEMBLY	1'-1"	26"
6" VALVE ASSEMBLY	1'-4"	32"
8" VALVE ASSEMBLY	1'-6"	36"



NOTES:

1. ENGINEER TO VERIFY WITH PUMP MANUFACTURER ALL CLEAR OPENING DIMENSIONS ON THE WETWELL.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ENGINEER.
3. THE CORE HOLES FOR THE PUMP DISCHARGE PIPING, EXITING THE WET WELL, SHALL BE CO-LINEAR WITH THE DISCHARGE PIPING (I.E. NOT PERPENDICULAR TO THE SURFACE OF THE ROUND BARREL SECTION CAUSING THE CENTER LINE OF THE HOLES TO BE ANGLED OUTWARD). ANY DEVIATION WILL NOT BE ACCEPTED, AND MAY BE AT THE CONTRACTOR'S EXPENSE.
4. ALL PIPING IN WET WELL AND ABOVE GRADE SHALL BE HDPE. ALL HDPE FITTINGS SHALL BE MOLDED. CONNECTIONS TO FLANGED PIPING, FITTINGS, AND APPURTENANCES SHALL BE MADE WITH HDPE FLANGE ADAPTERS WITH SS BOLTING RINGS AND BOLTS. (SEE NOTE M-10 ON DUPLEX LIFT STATION STRUCTURAL, MECHANICAL, ELECTRICAL, & GENERAL NOTES)
5. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.

S-511A **DUPLEX LIFT STATION - PLAN**
NOT TO SCALE

RISER & DISCHARGE ASSY. CL SEPARATION

DISCHARGE ASSY. SIZE	A MEASUREMENTS	B MEASUREMENTS
4" VALVE ASSEMBLY	1'-1"	26"
6" VALVE ASSEMBLY	1'-4"	32"
8" VALVE ASSEMBLY	1'-6"	36"

REVISION DATE
07-14-2022
ADOPTION DATE
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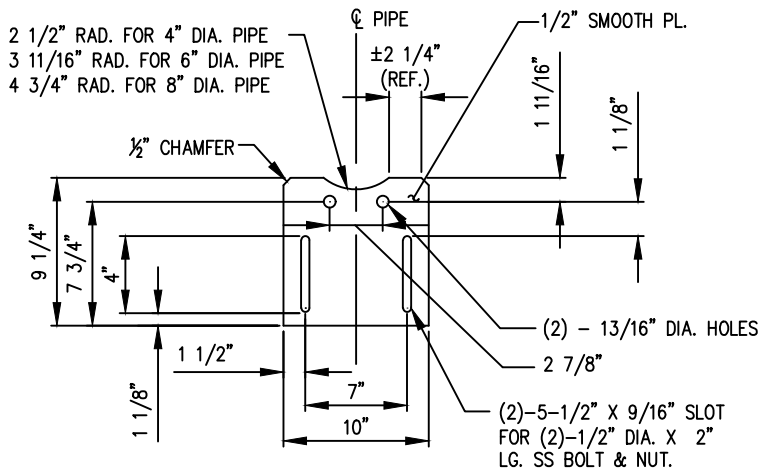
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
DUPLEX LIFT STATION WITHOUT VAULT PLAN

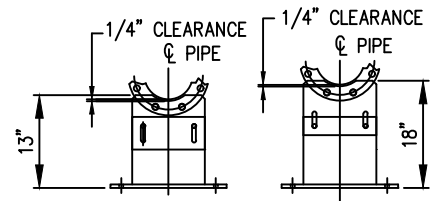
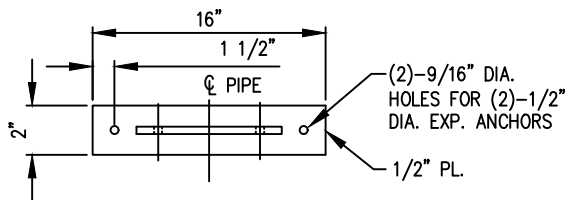
DETAIL NO.
S-511A

NOTE:

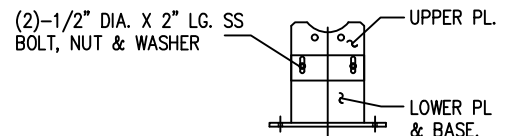
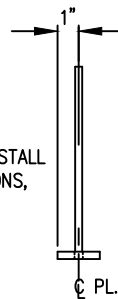
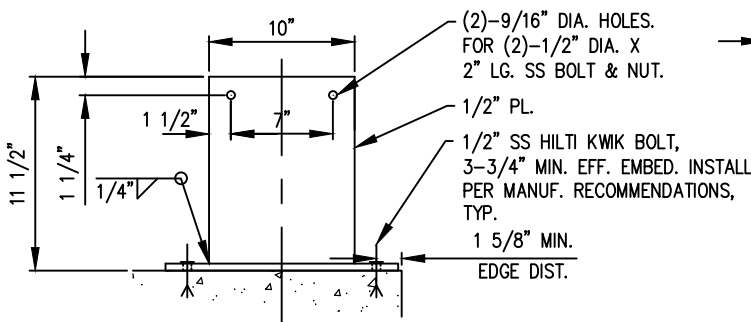
1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.



UPPER PLATE



ADJUSTMENT RANGE



LOWER PLATE AND BASE PIPE SUPPORT

NOTE:

1. MATERIAL: 304 OR 316 STAINLESS STEEL

ASSEMBLY DETAIL

S-512

DUPLEX LIFT STATION - PIPE SUPPORT DETAILS

NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
 UTILITIES DEPARTMENT
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 CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME

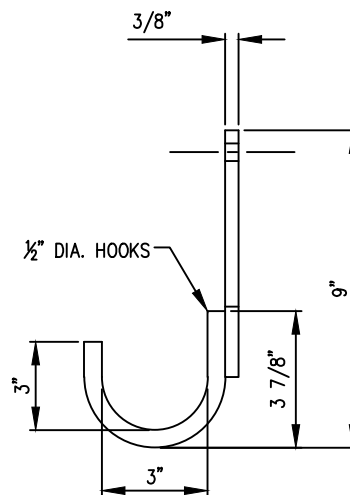
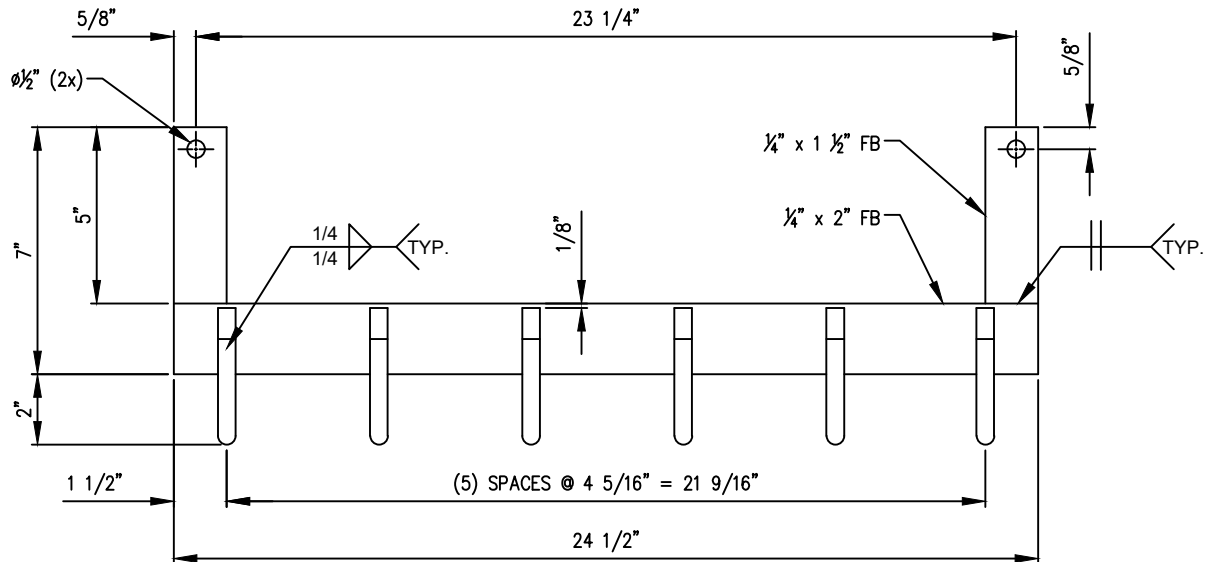
**DUPLEX LIFT STATION
 PIPE SUPPORT DETAILS**

DETAIL NO.

S-512

NOTES:

1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.
2. ALL HARDWARE AND MATERIAL SHALL BE U.S. MANUFACTURED 316 S.S.



S-513

DUPLEX LIFT STATION - CABLE RACK DETAIL

NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



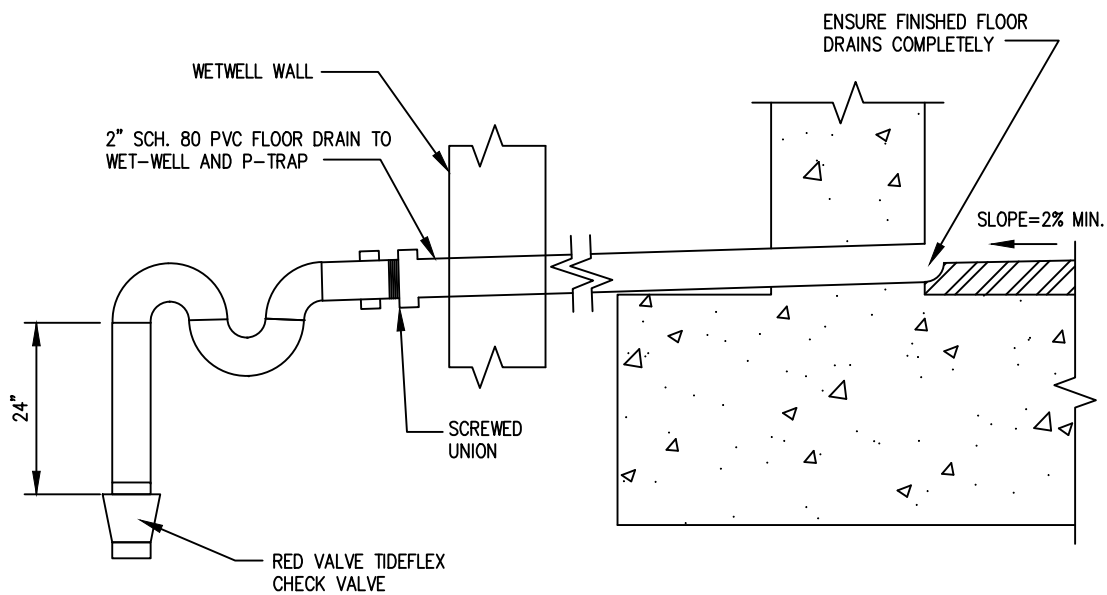
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
 P.O. BOX 150027
 CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
DUPLEX LIFT STATION
CABLE RACK DETAIL

DETAIL NO.
S-513

NOTE:

1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.



S-514

DUPLEX LIFT STATION - VALVE VAULT FLOOR DRAIN DETAIL

NOT TO SCALE

REVISION DATE

07-14-2022

ADOPTION DATE

08-17-2022



CITY OF CAPE CORAL
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P.O. BOX 150027
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DETAIL NAME

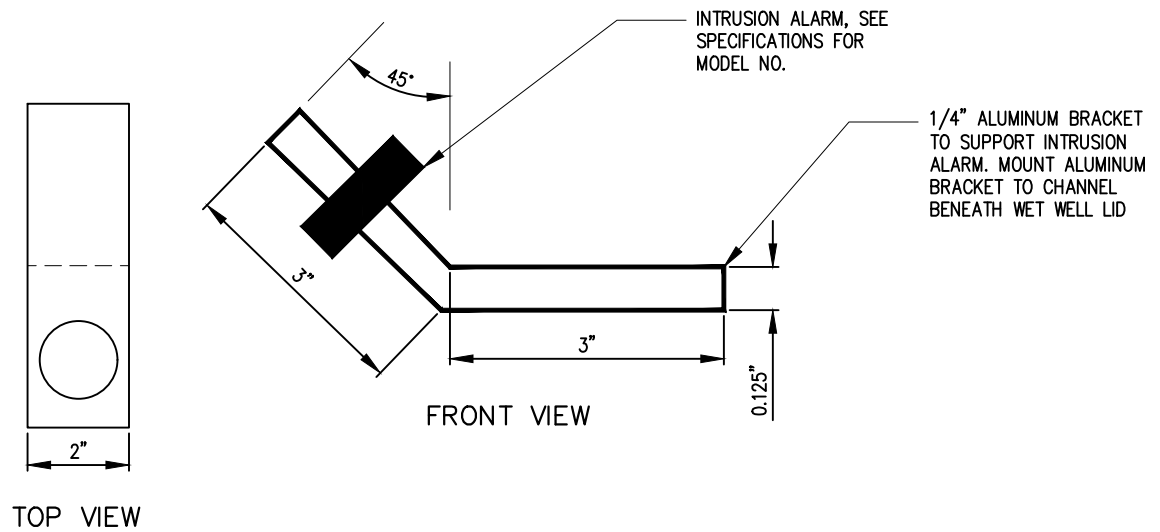
**DUPLEX LIFT STATION
VALVE VAULT FLOOR DRAIN DETAIL**

DETAIL NO.

S-514

NOTE:

1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.



S-515 **DUPLEX LIFT STATION - HATCH INTRUSION ALARM DETAIL**
NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022

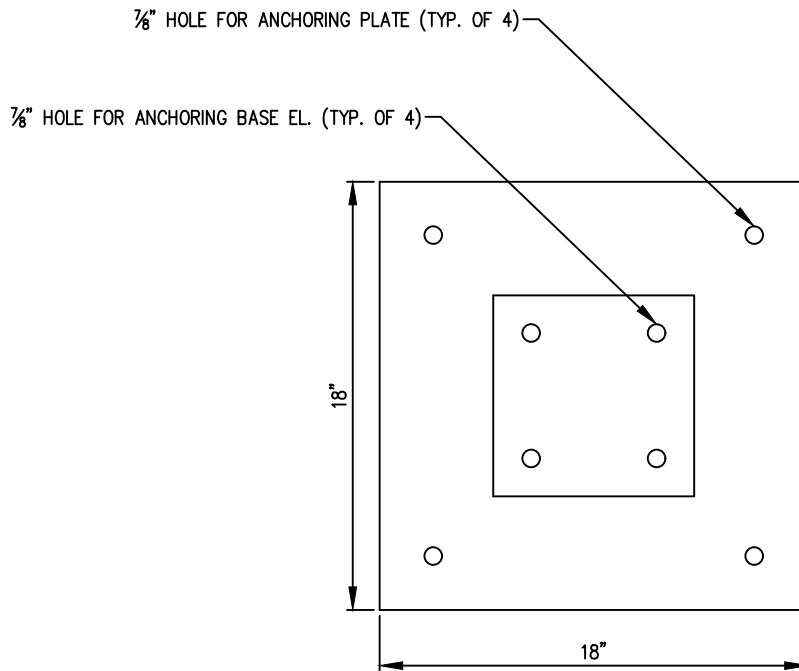


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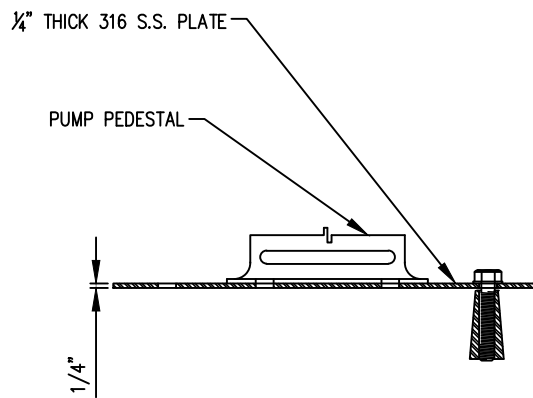
DETAIL NAME	DETAIL NO.
DUPLEX LIFT STATION HATCH INTRUSION ALARM DETAIL	S-515

NOTES:

1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.
2. BOLT HOLES SHALL BE CONCENTRIC.
3. ALL HARDWARE AND MATERIAL SHALL BE U.S. MANUFACTURED 316 S.S.



PLAN



SECTION

S-516

DUPLEX LIFT STATION - BASE EL. ANCHOR PLATE DETAIL
NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



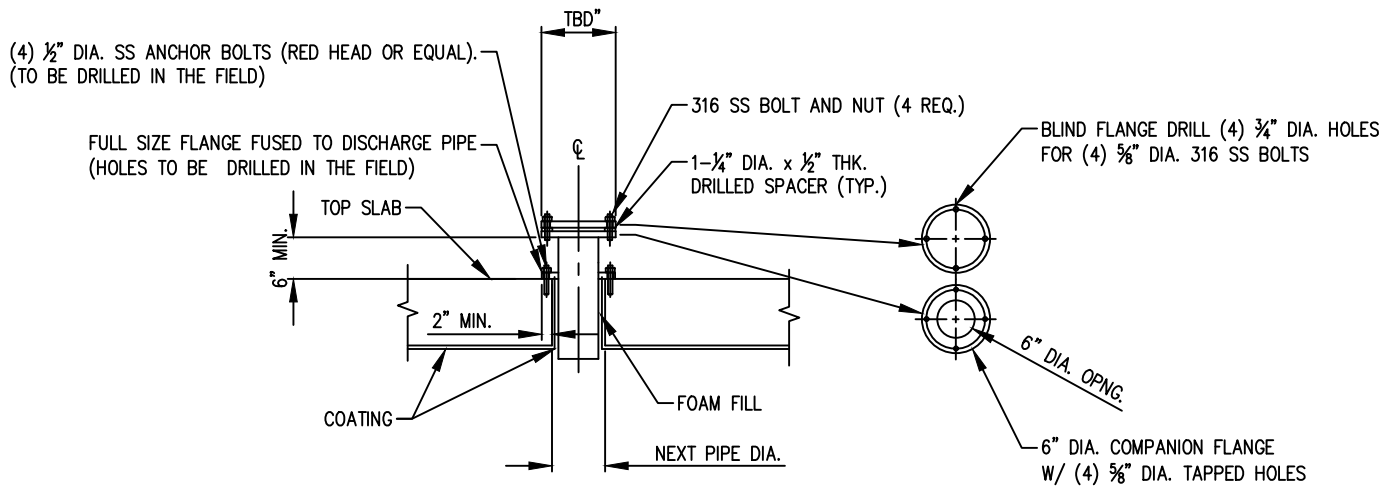
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
DUPLEX LIFT STATION BASE EL. ANCHOR PLATE DETAIL

DETAIL NO.
S-516

NOTES:

1. THIS SHEET IS MEANT TO BE ADVISORY IN NATURE AND DEPICT TYPICAL STRUCTURES AND COMPONENTS ONLY. THE ENGINEER, PUMP MANUFACTURER, AND CONTRACTOR, ARE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LIFT STATION APPARATUS PRIOR TO CONSTRUCTION.
2. FOAM FILL SHALL BE COMPATIBLE WITH LINING OR COATING.
3. ALL HARDWARE (BOLTS, NUTS, WASHERS, ETC.) AND MATERIAL SHALL BE U.S. MANUFACTURED 316 S.S.



HDPE VENT

S-517 **DUPLEX LIFT STATION - HDPE VENT DETAIL**
NOT TO SCALE

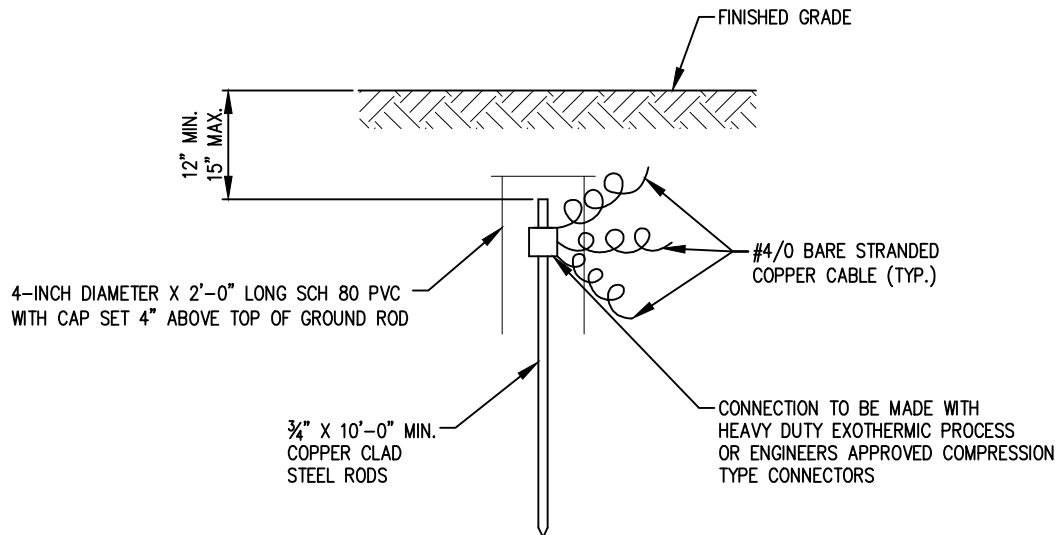
REVISION DATE
07-14-2022
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08-17-2022



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UTILITIES DEPARTMENT
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CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
DUPLEX LIFT STATION
HDPE VENT DETAIL

DETAIL NO.
S-517



S-529

DUPLEX LIFT STATION - GROUND ROD DETAIL

NOT TO SCALE

REVISION DATE

07-14-2022

ADOPTION DATE

08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME

DUPLEX LIFT STATION
GROUND ROD DETAIL

DETAIL NO.

S-529

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 1/2" SCH 80 PVC CONDUIT

225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

DIRECTIONAL DRILL - 4" CONDUIT

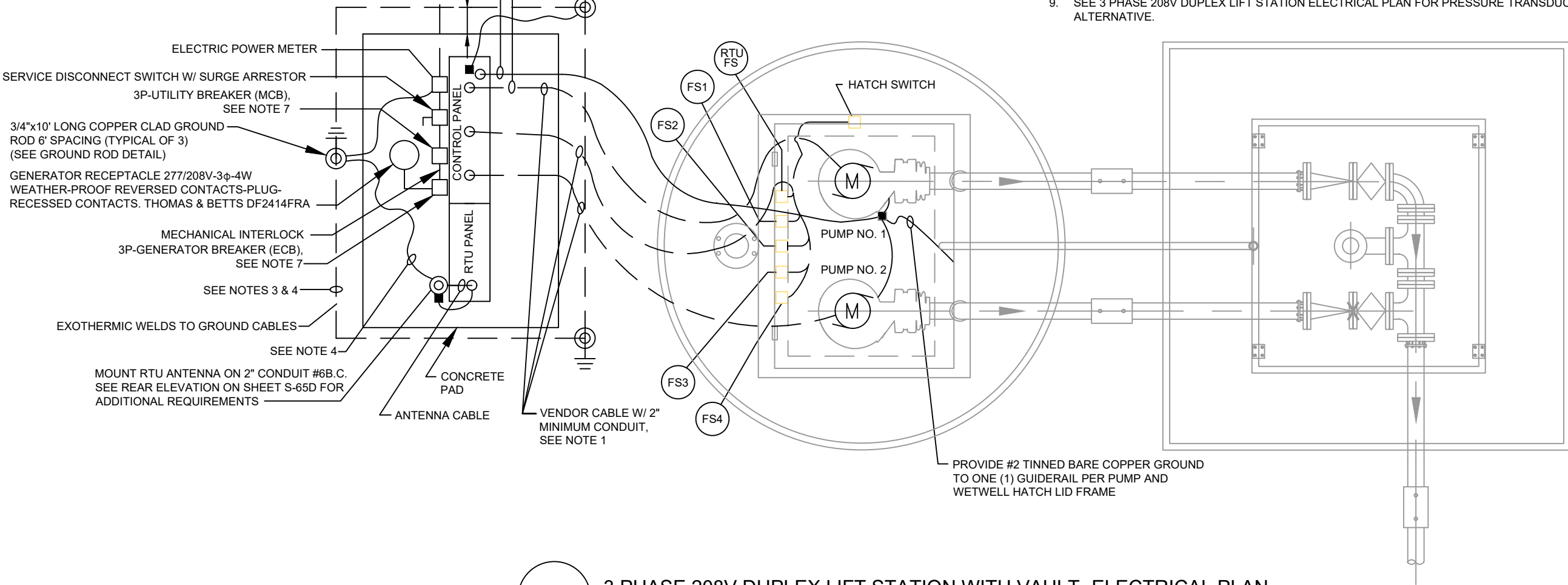
CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

TO LCEC TRANSFORMER 208V, 3PH, 4W (NOTE 2) W/ (2) PVC CONDUITS (SIZE PER TABLE BELOW)

HP	CONDUIT & WIRE
-	-

GROUND IN SEALED 3/4" CONDUIT, CONNECT IN SPACE UNDER PANEL, SEE NOTE 1

2" MINIMUM CONDUIT FROM FLOAT SWITCHES & HATCH SWITCH, SEE NOTE 1



NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.
9. SEE 3 PHASE 208V DUPLEX LIFT STATION ELECTRICAL PLAN FOR PRESSURE TRANSDUCER LEVEL CONTROL ALTERNATIVE.

S-530

3 PHASE 208V DUPLEX LIFT STATION WITH VAULT- ELECTRICAL PLAN

NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
3 PHASE 208V DUPLEX LIFT STATION WITH VAULT ELECTRICAL PLAN

DETAIL NO.
S-530

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 1/2" SCH 80 PVC CONDUIT

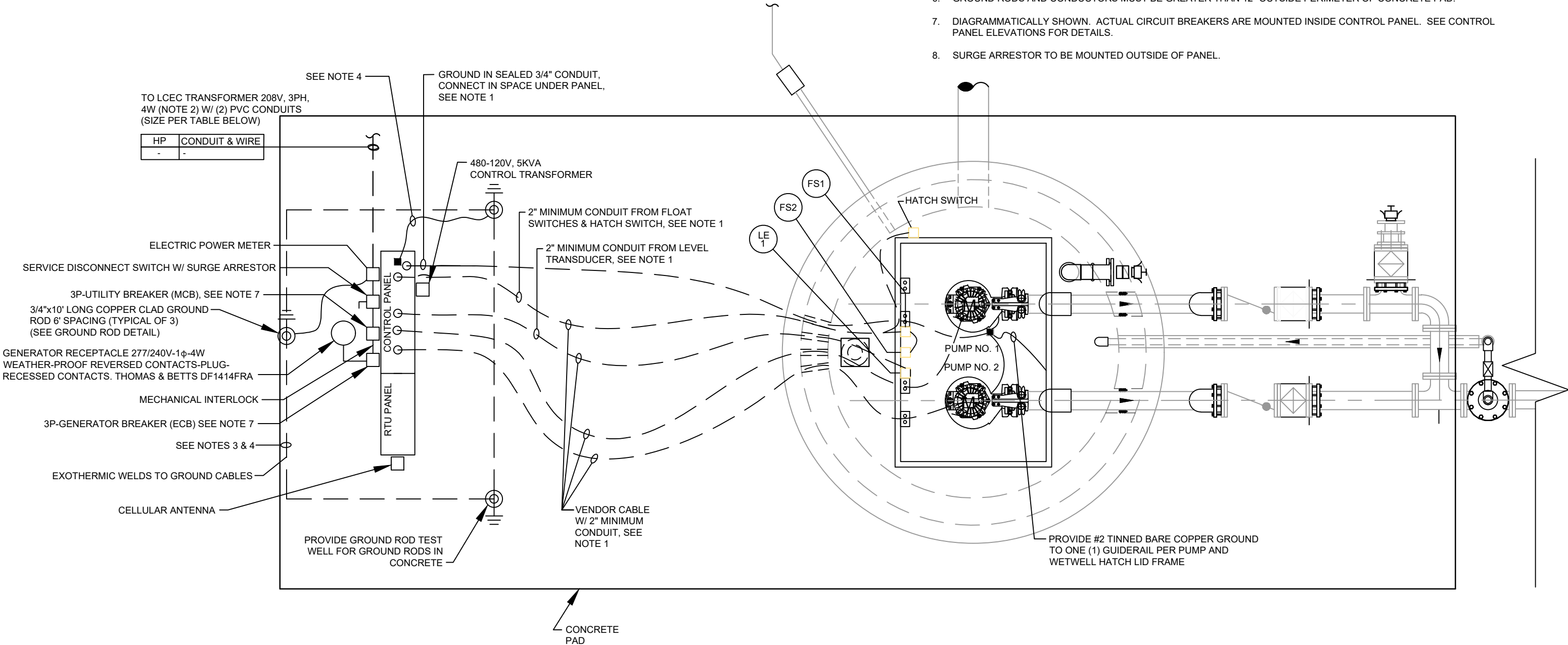
225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

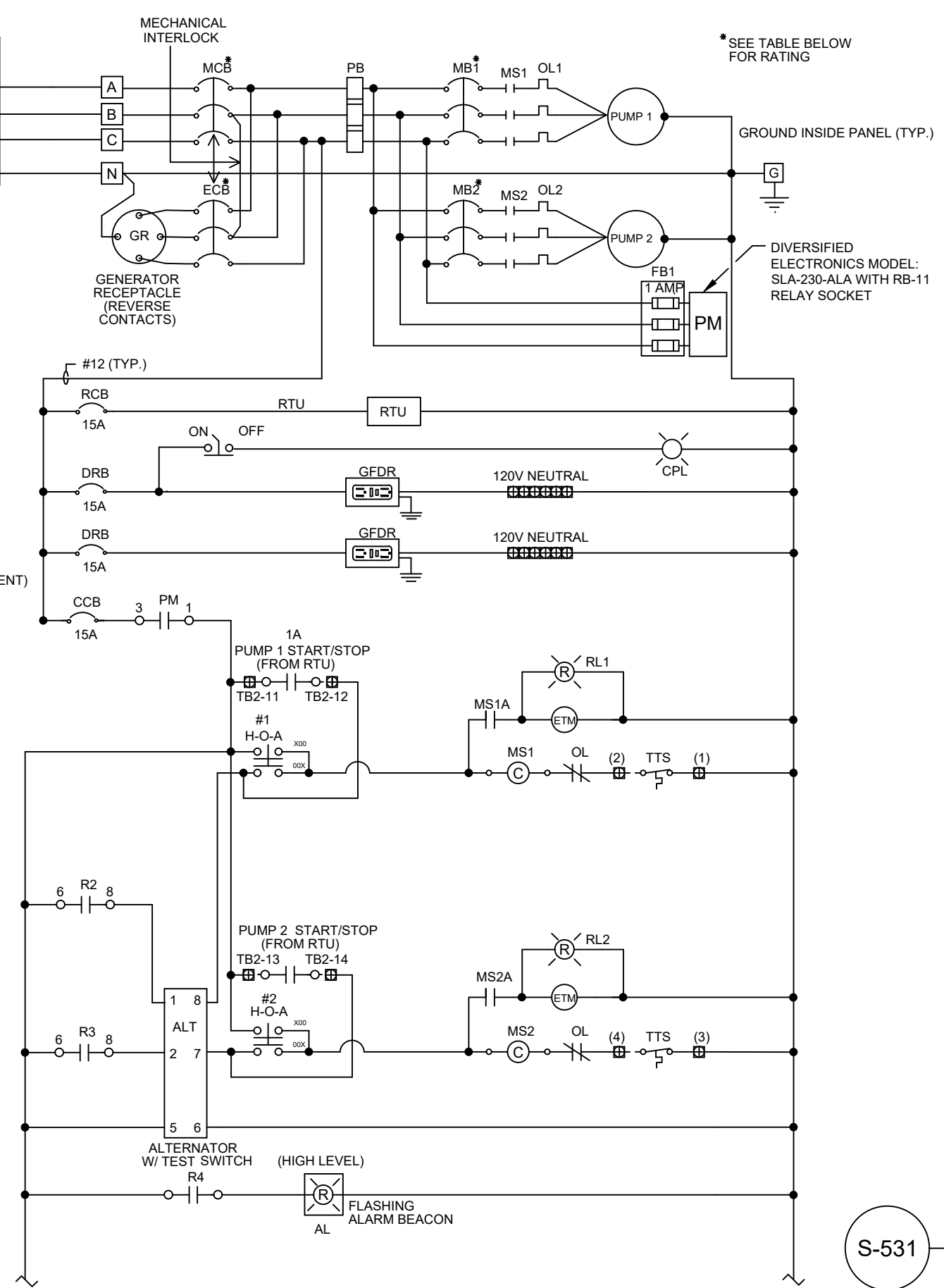
NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.

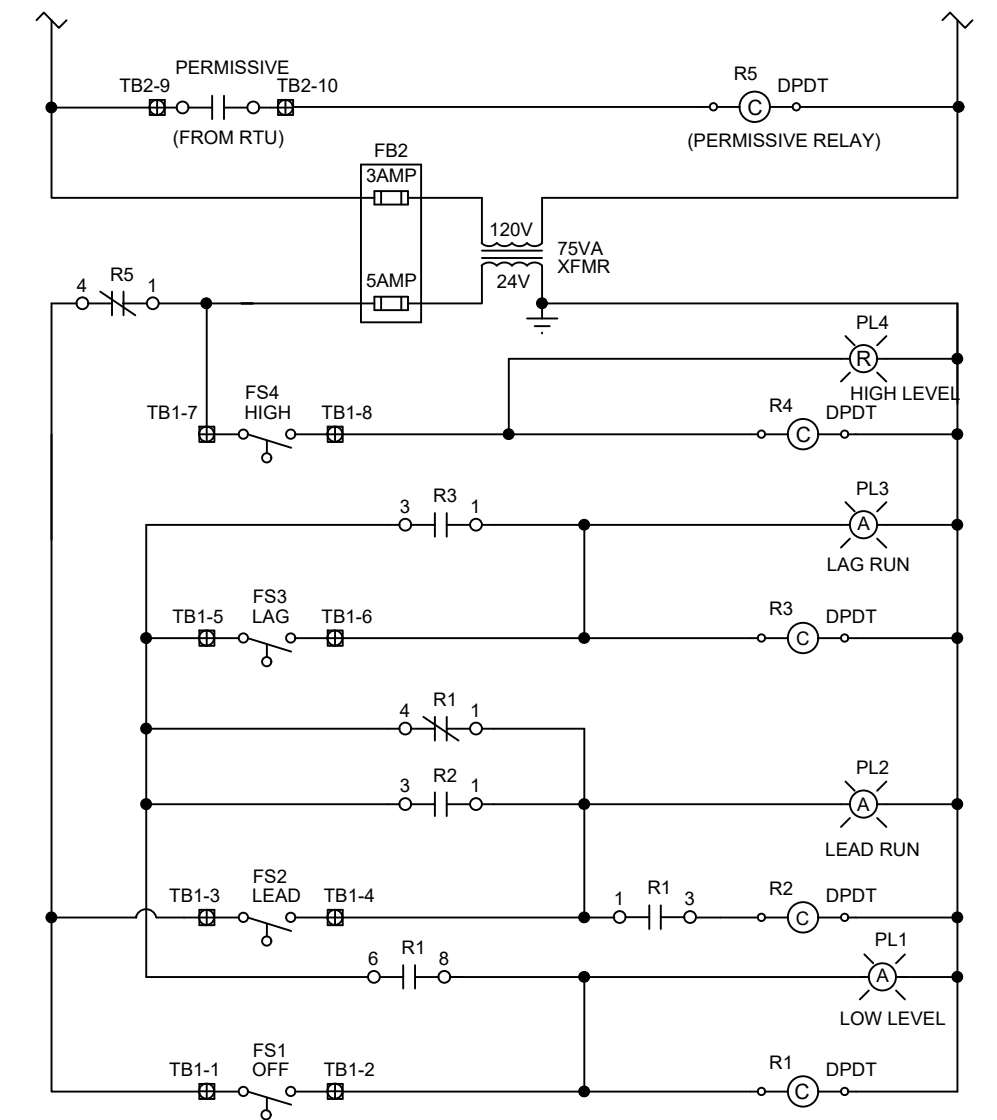


CONTROL PANEL ABBREVIATIONS

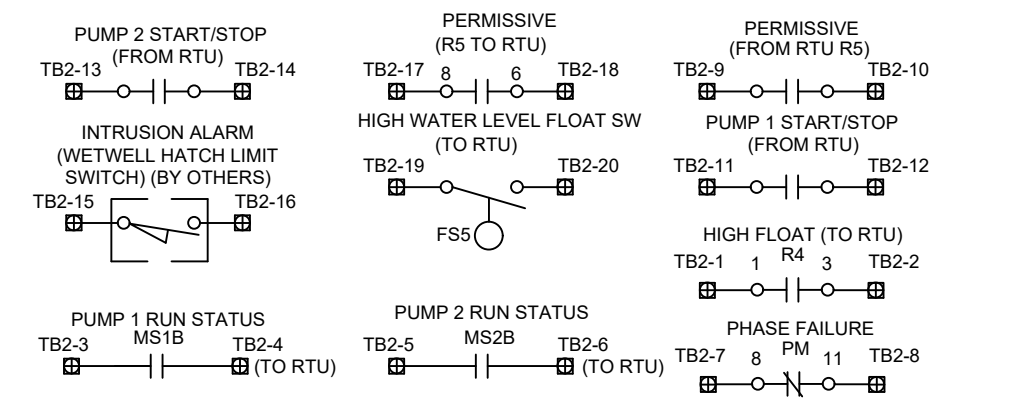
A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
R	RELAY
PR	PERMISSIVE RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMTRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



* SEE TABLE BELOW FOR RATING



TO RTU



S-531 3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

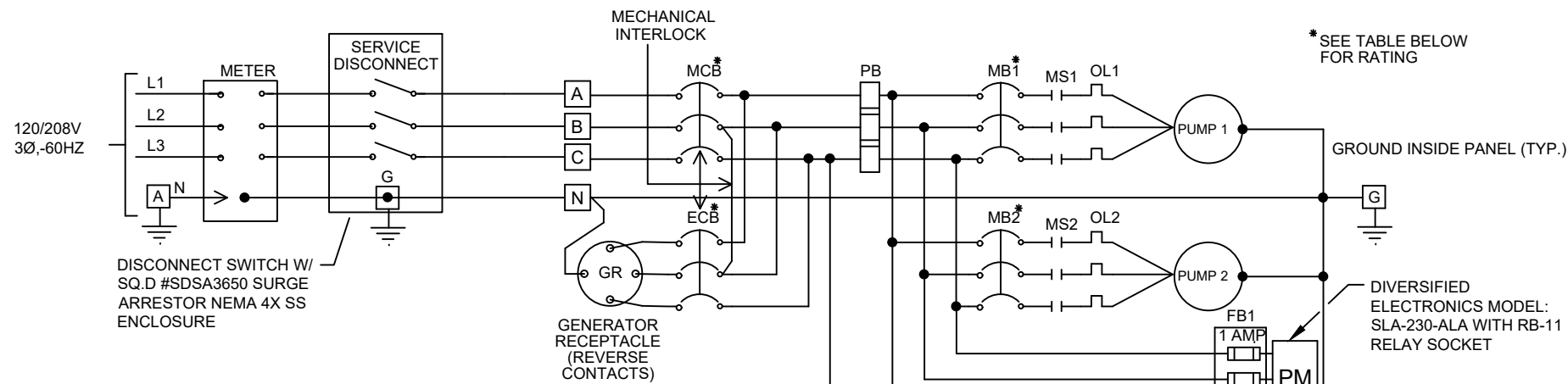
NOTE: FOR PUMPS LESS THAN 25 HP

REVISION DATE
07-14-2022
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08-17-2022



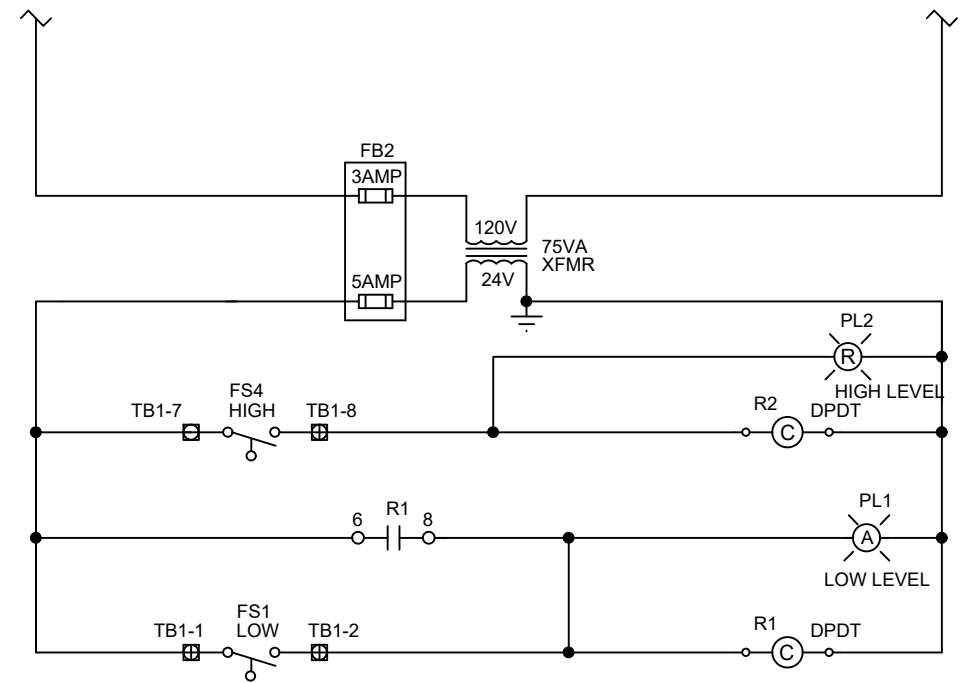
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-531

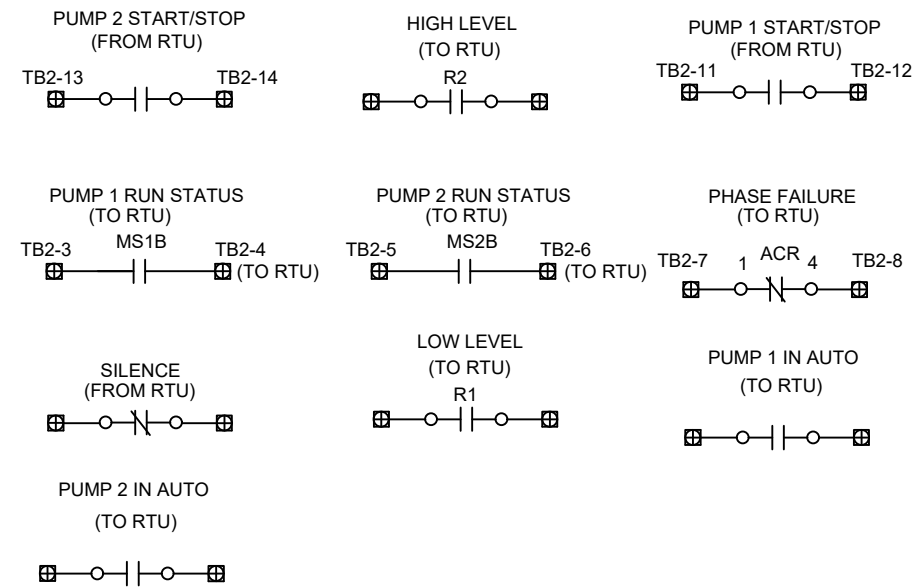


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
R	RELAY
PR	PERMISSIVE RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO/FROM RTU



S-531A 3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

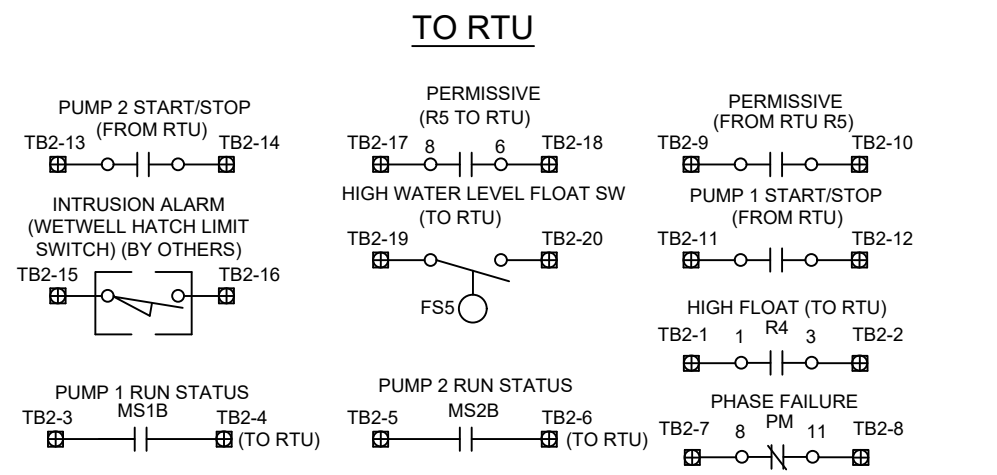
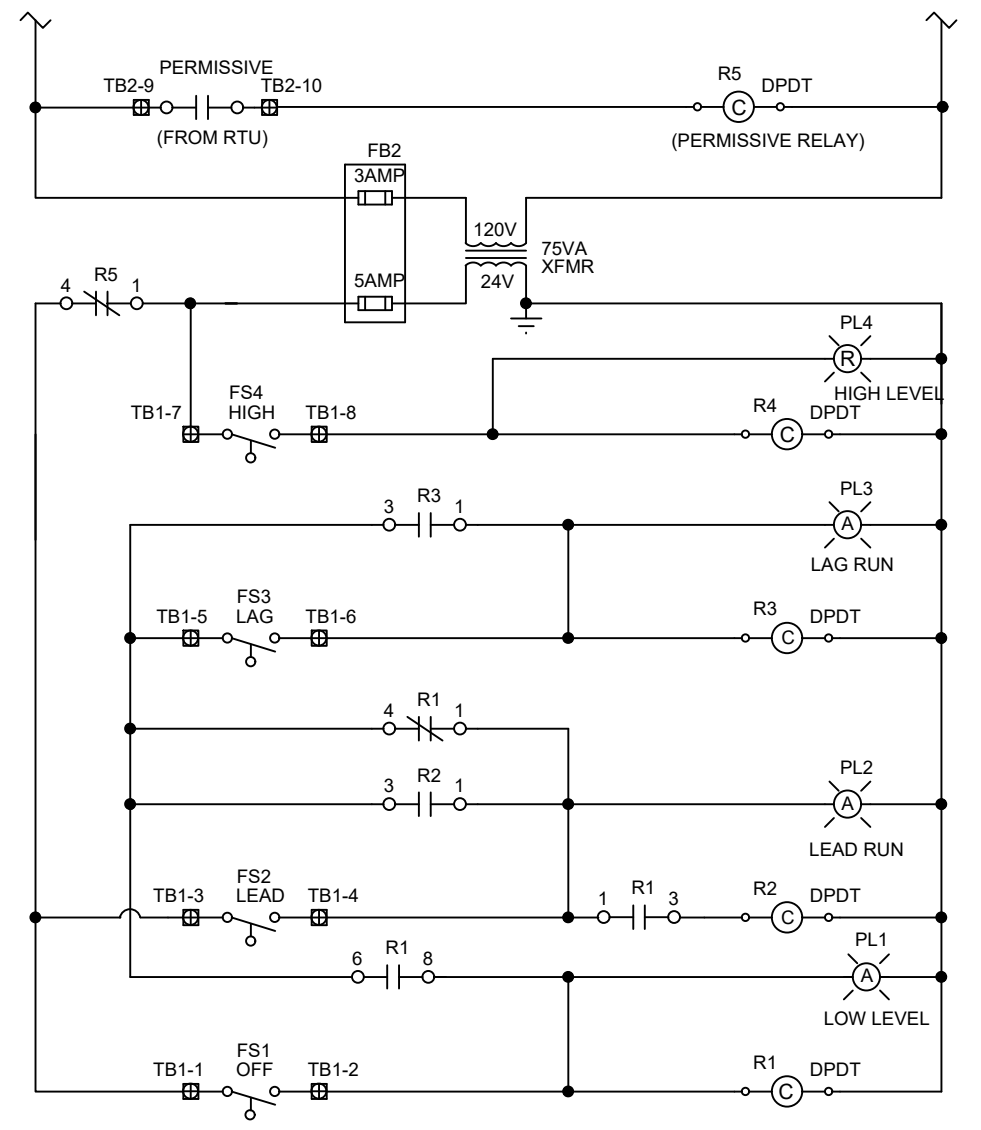
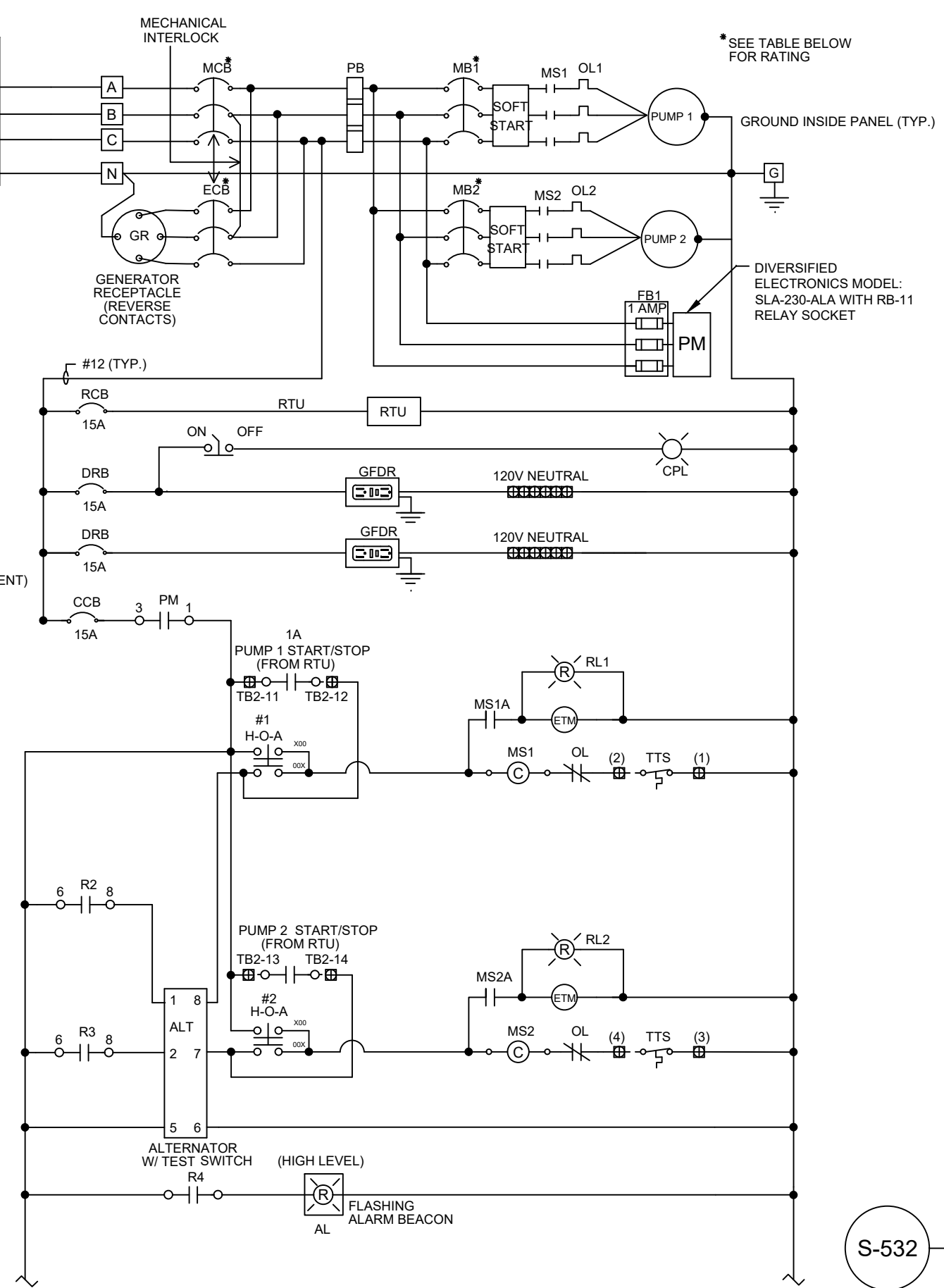
NOTE: FOR PUMPS LESS THAN 25 HP

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

REVISION DATE	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022		3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-531A
ADOPTION DATE			
08-17-2022			

CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMTRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

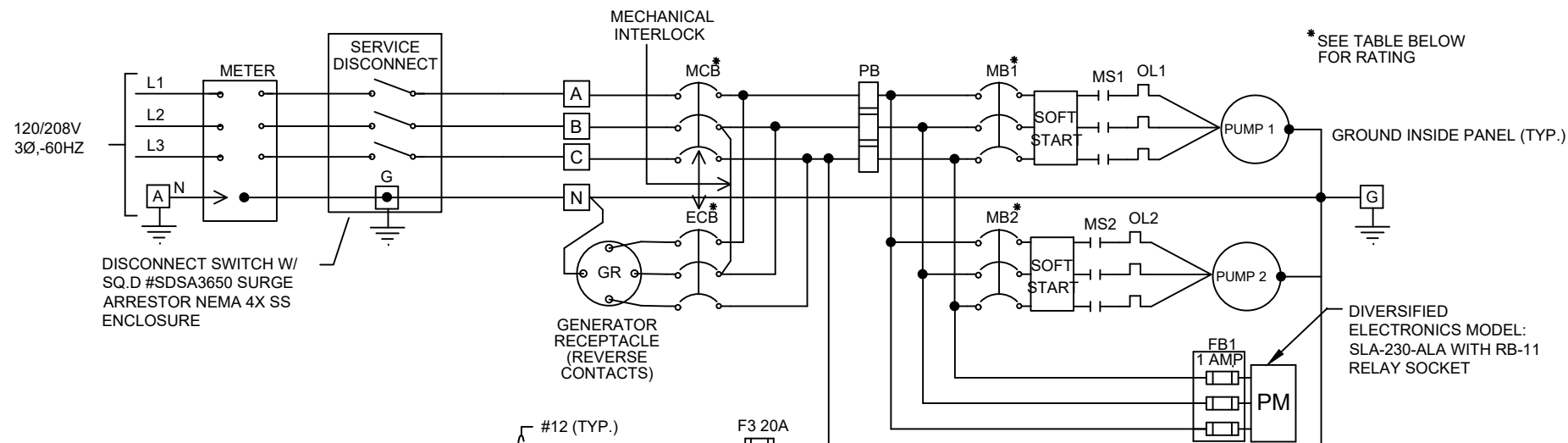
NOTE: FOR PUMPS 25 HP TO 35 HP

REVISION DATE
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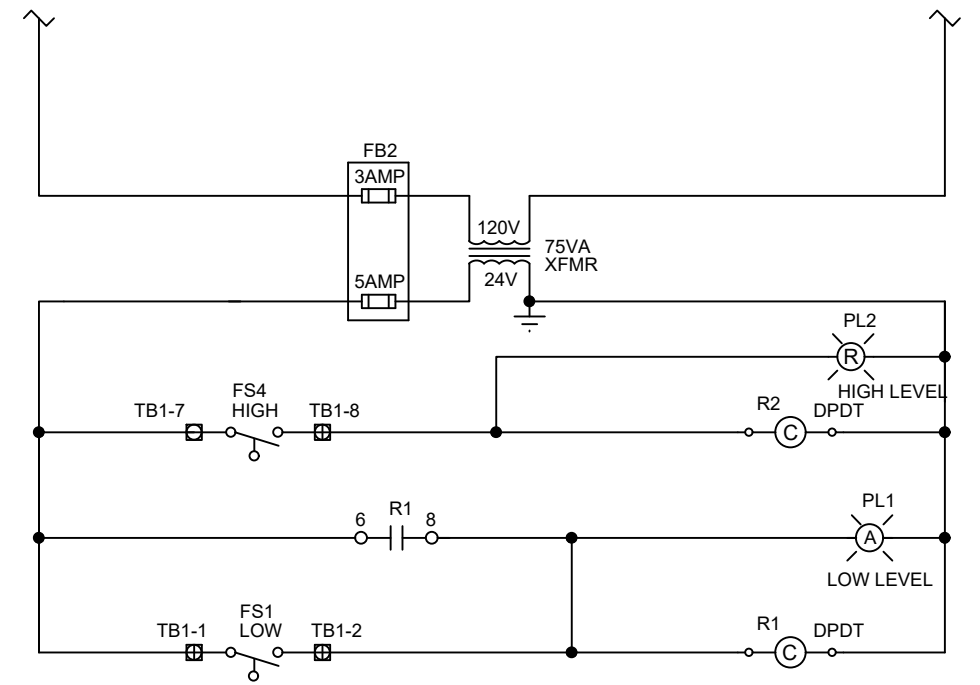
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-532

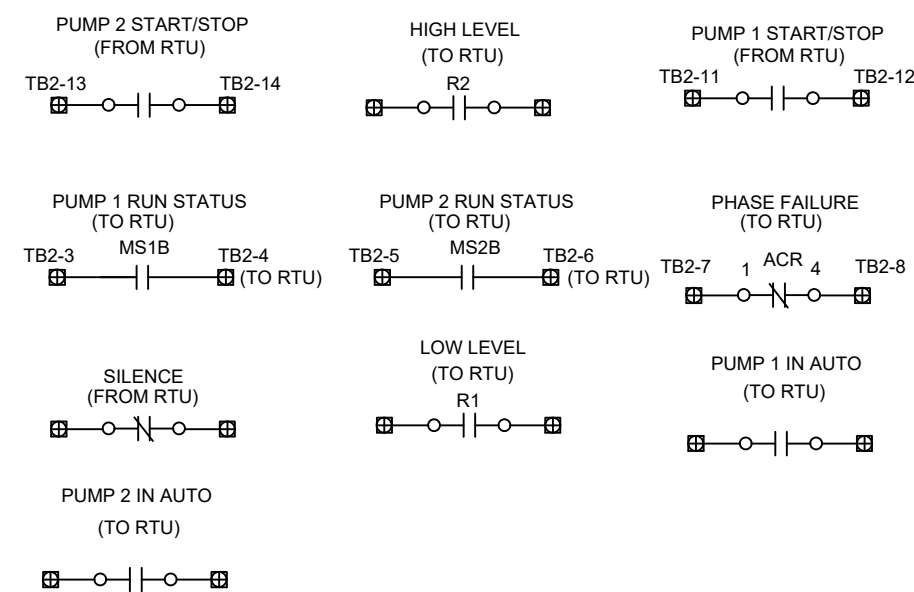


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMTRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO/FROM RTU



S-532A 3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS 25 HP TO 35 HP

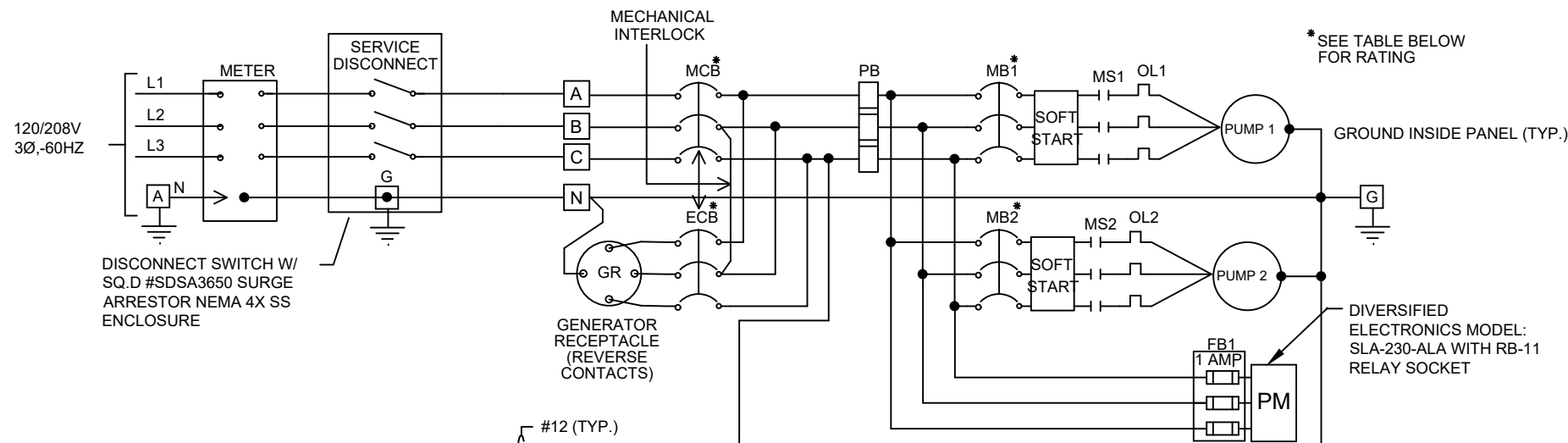
NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



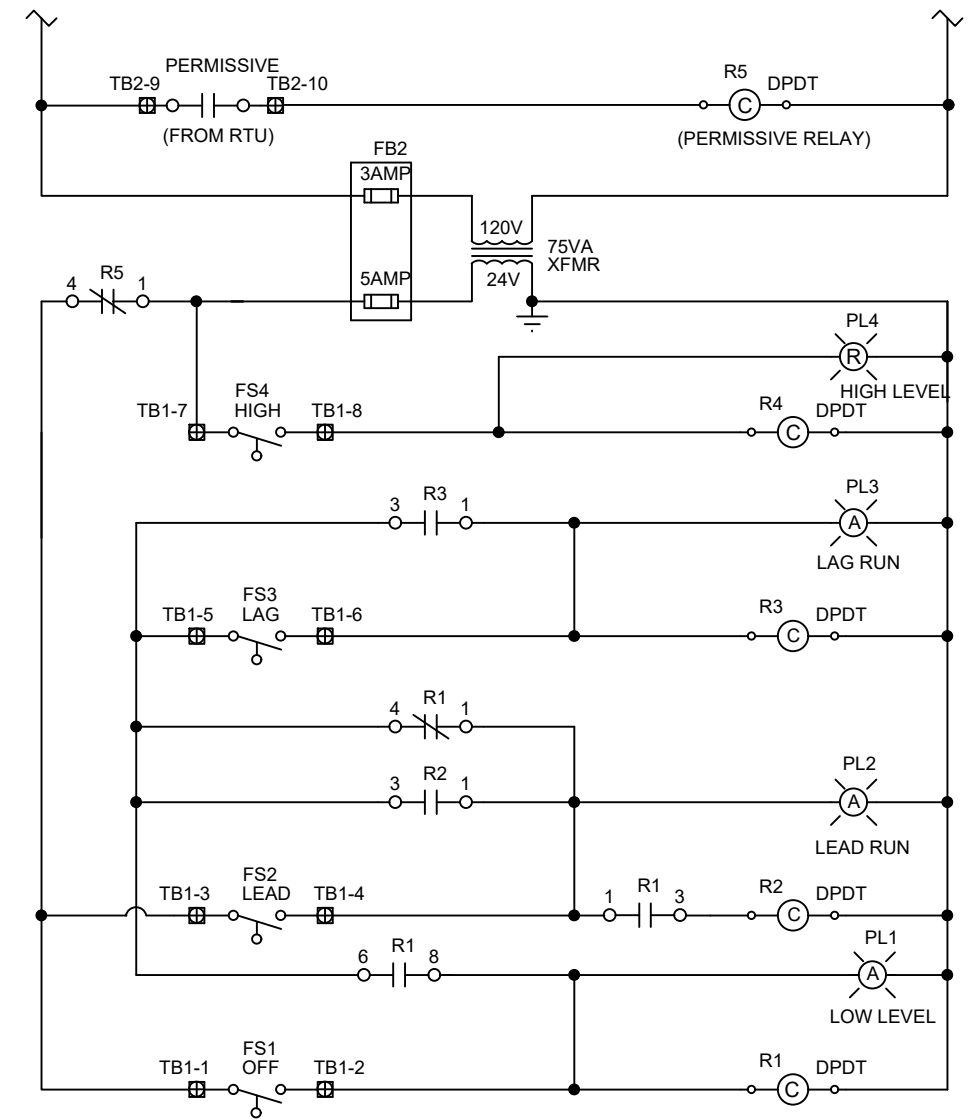
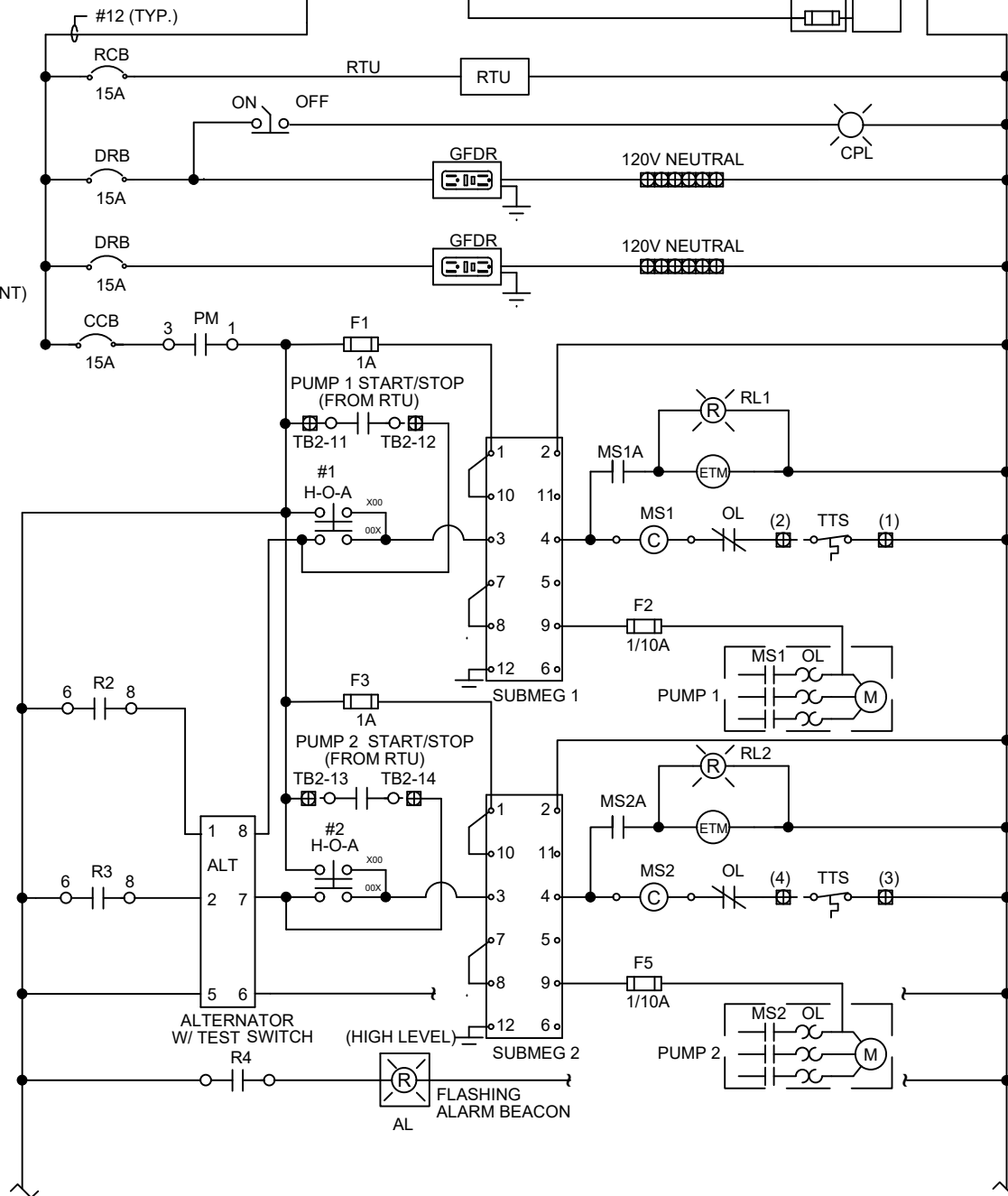
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-532A

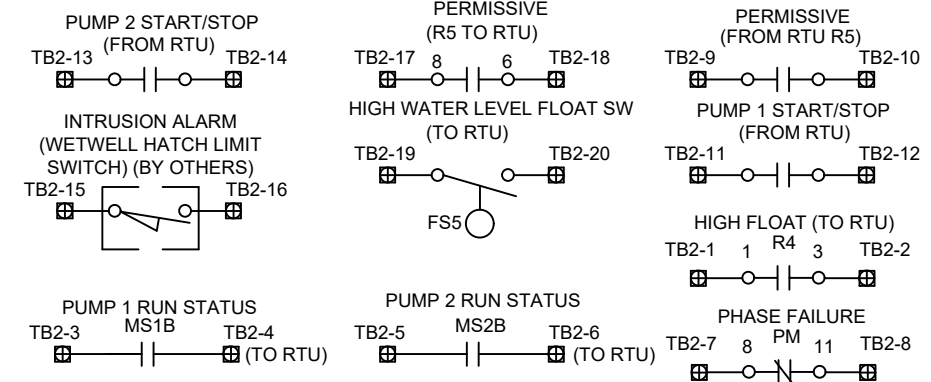


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO RTU



S-533 3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

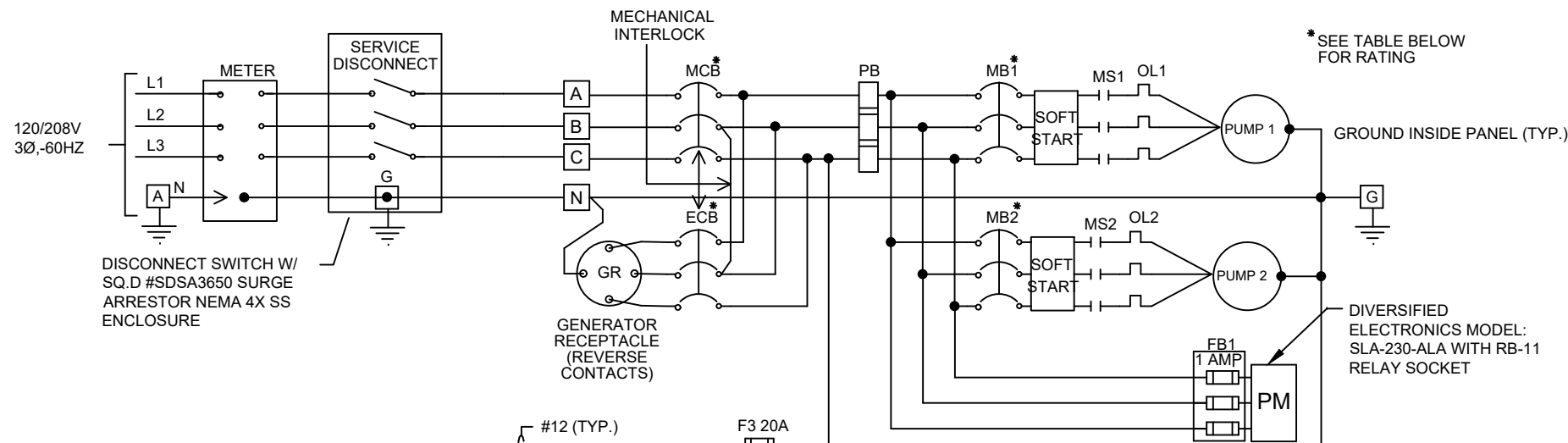
NOTE: FOR PUMPS GREATER THAN 35 HP

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



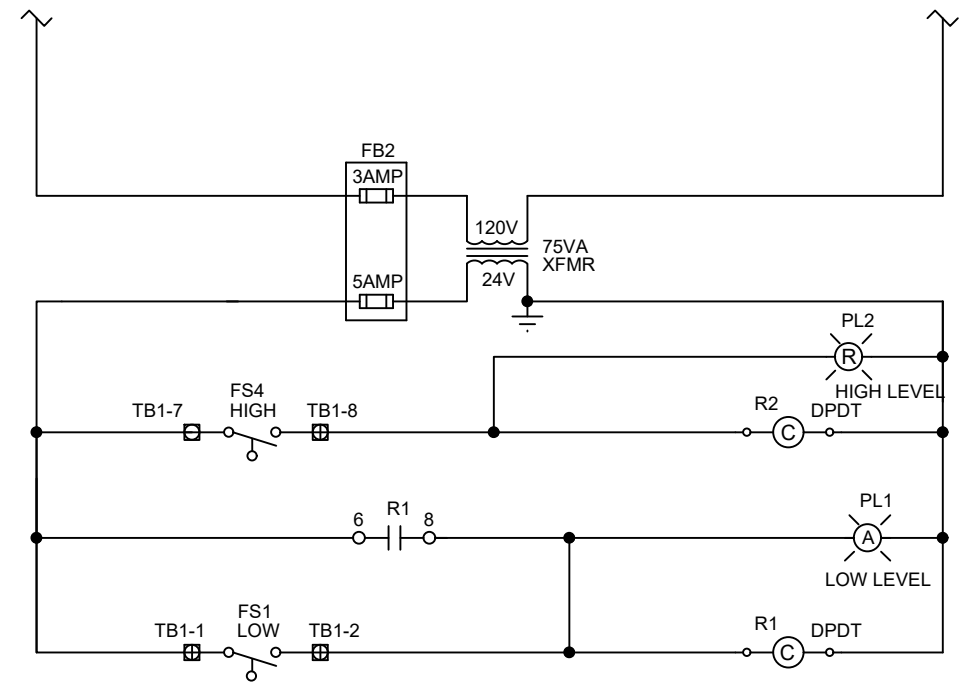
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-533

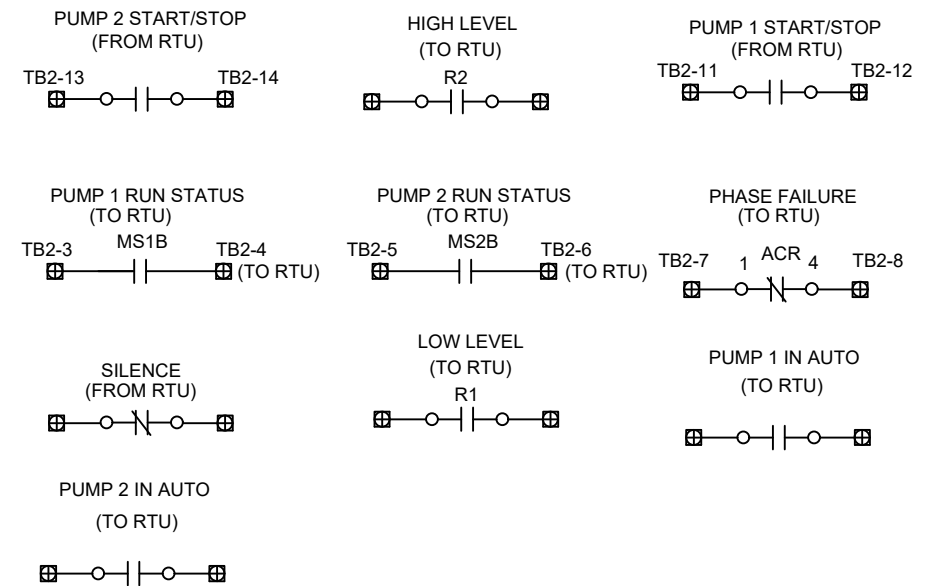


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO/FROM RTU



S-533A 3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS GREATER THAN 35 HP

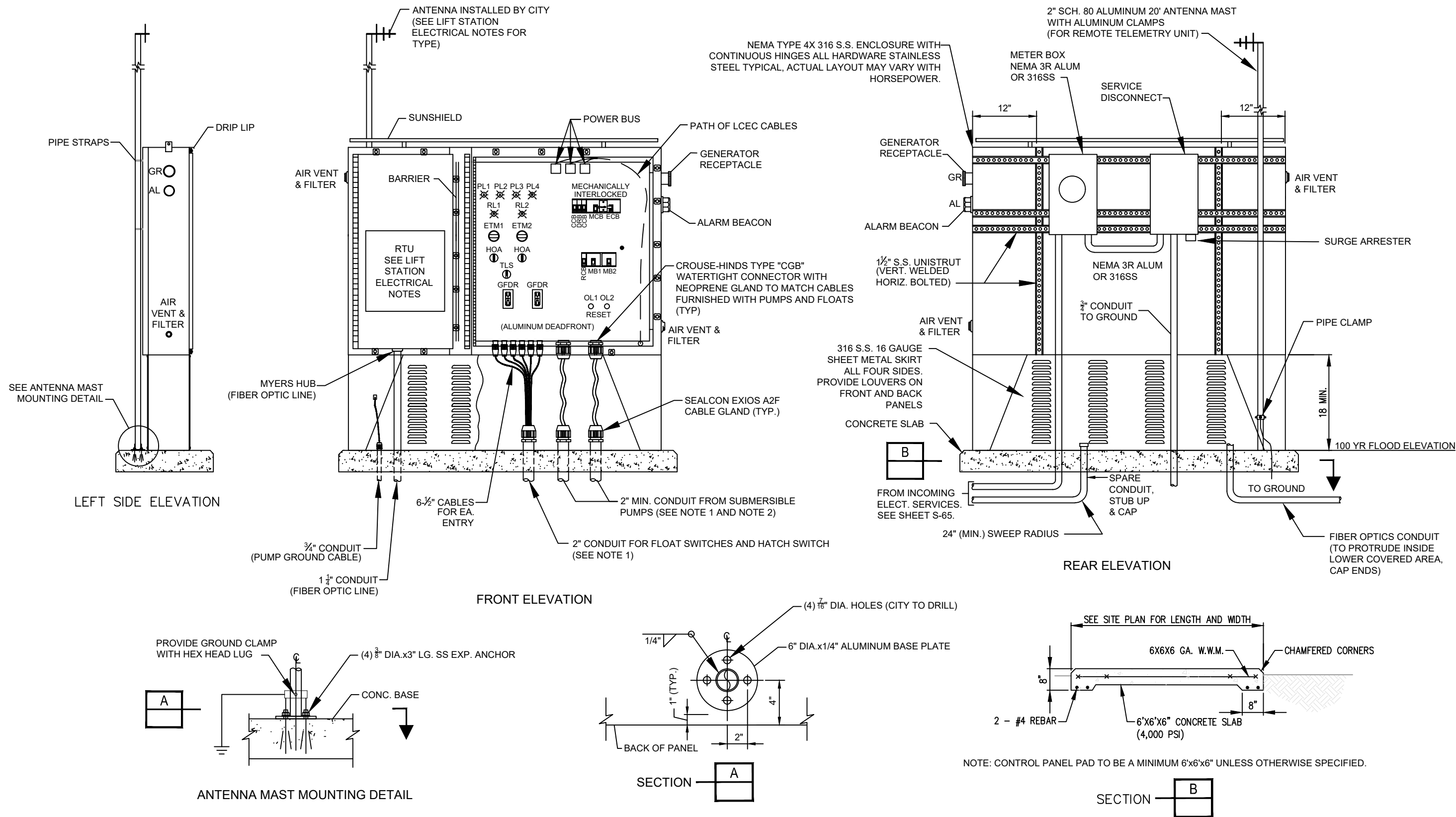
NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-533A



- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR HSQ RTU CONTROL FOR LIFT STATION.

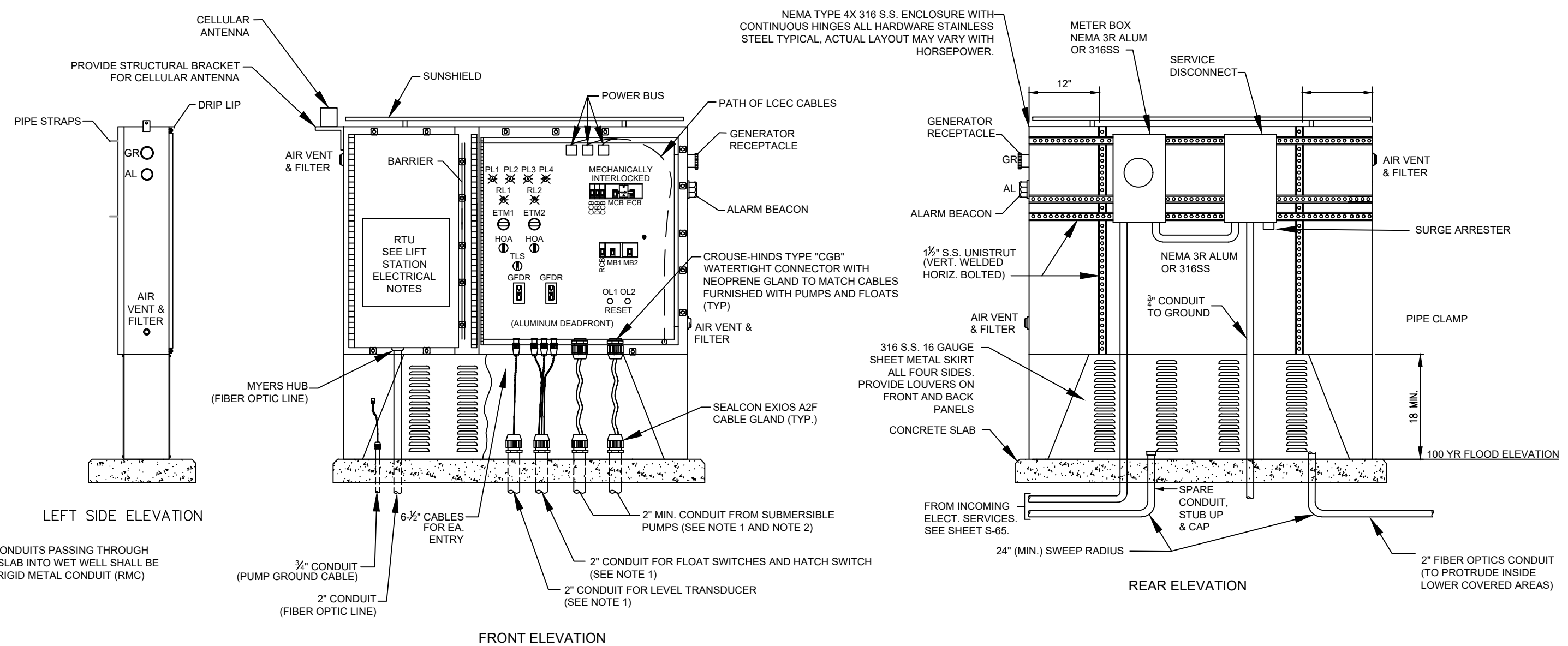
S-534

3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

REVISION DATE		DETAIL NAME	DETAIL NO.
07-14-2022		3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-534
ADOPTION DATE			
08-17-2022			



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027



- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR CELL MODEM/FIBER OPTIC CONTROL FOR LIFT STATION.
 - 4) USE DETAIL FOR PRESSURE TRANSDUCER LEVEL CONTROL.

S-534A

3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

REVISION DATE	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022		3 PHASE 208V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-534A
ADOPTION DATE			
08-17-2022			

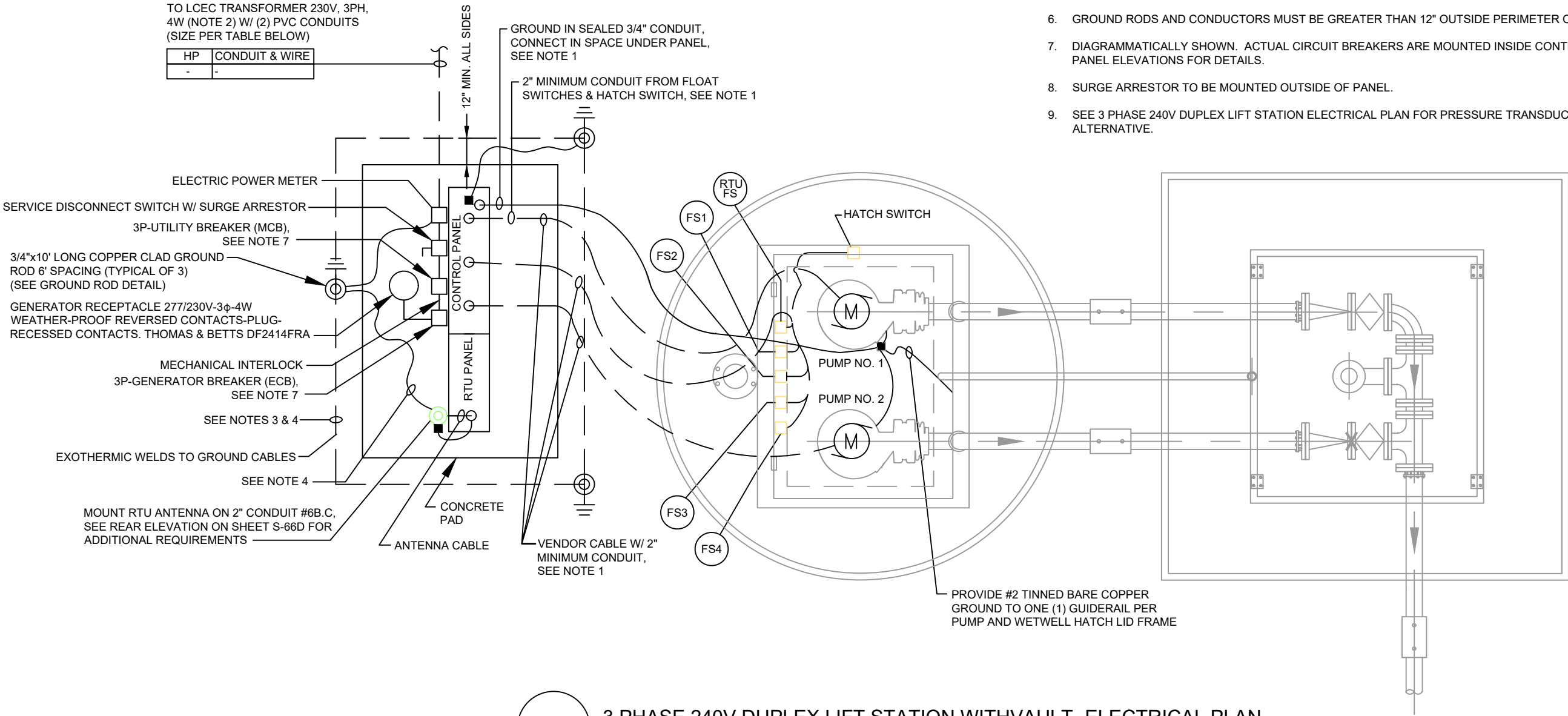
ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 ½" SCH 80 PVC CONDUIT

225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

ALL DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)



NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.
9. SEE 3 PHASE 240V DUPLEX LIFT STATION ELECTRICAL PLAN FOR PRESSURE TRANSDUCER LEVEL CONTROL ALTERNATIVE.

S-535

3 PHASE 240V DUPLEX LIFT STATION WITHVAULT- ELECTRICAL PLAN

NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
3 PHASE 240V DUPLEX LIFT STATION WITH VAULT ELECTRICAL PLAN

DETAIL NO.
S-535

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 ½" SCH 80 PVC CONDUIT

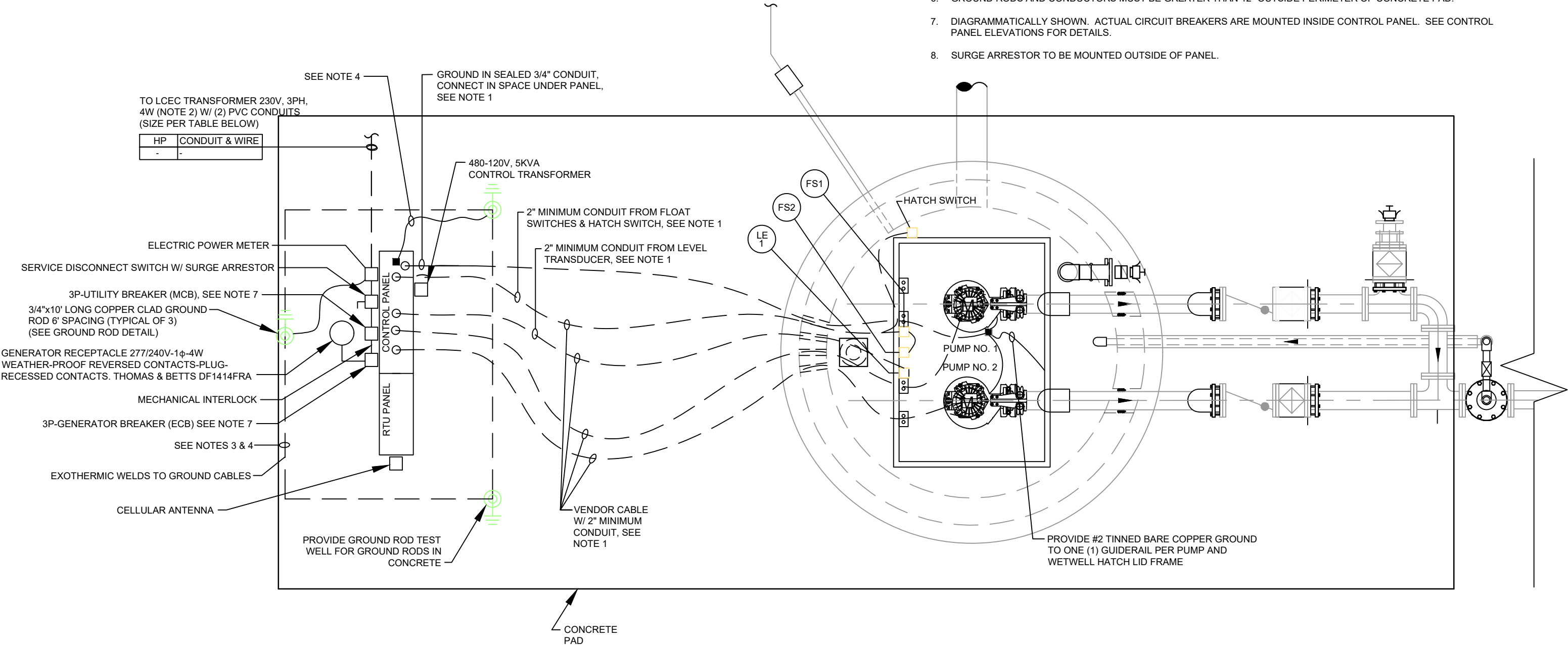
225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

ALL DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.



S-535A

3 PHASE 240V DUPLEX LIFT STATION WITHVAULT- ELECTRICAL PLAN
NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



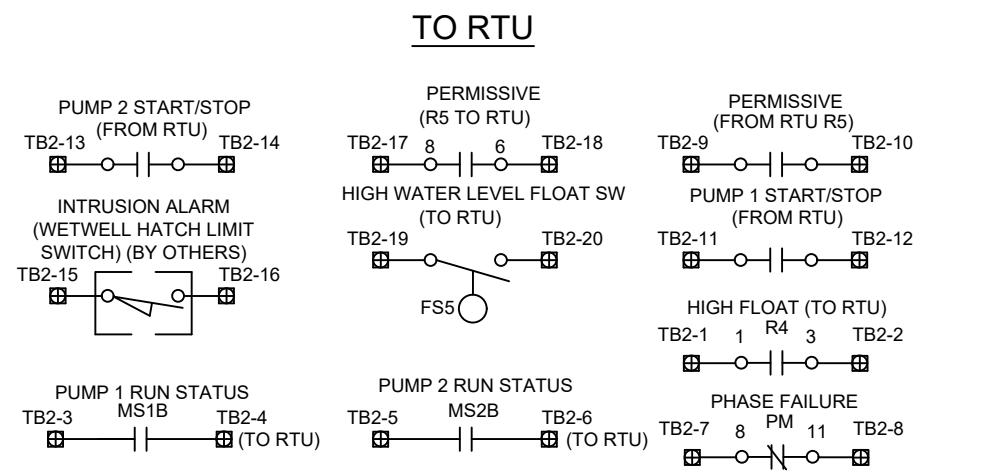
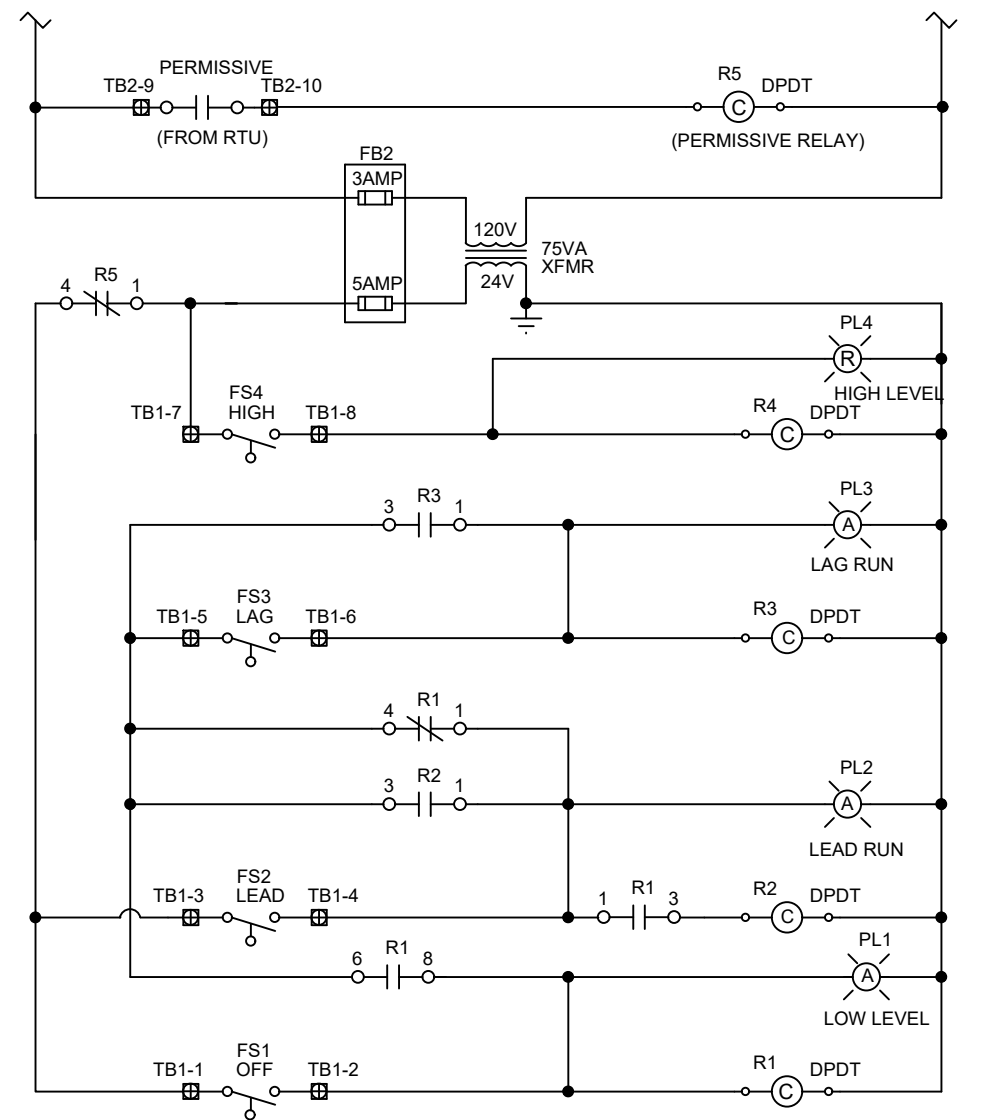
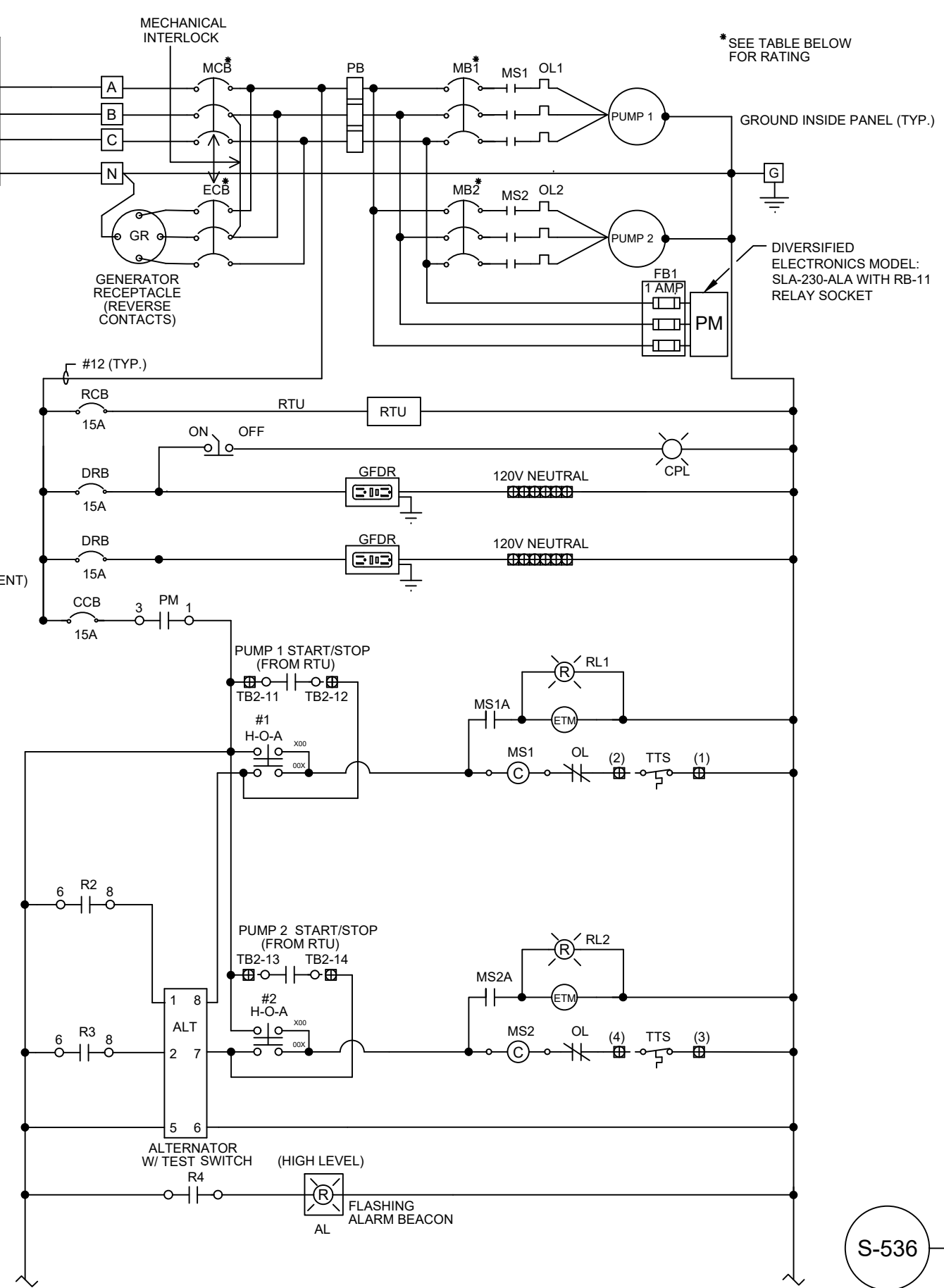
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
3 PHASE 240V DUPLEX LIFT STATION W/O VAULT ELECTRICAL PLAN

DETAIL NO.
S-535A

CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
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GFDR	GROUND FAULT DUPLEX RECEPTACLE
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HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
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MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
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R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



S-536 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

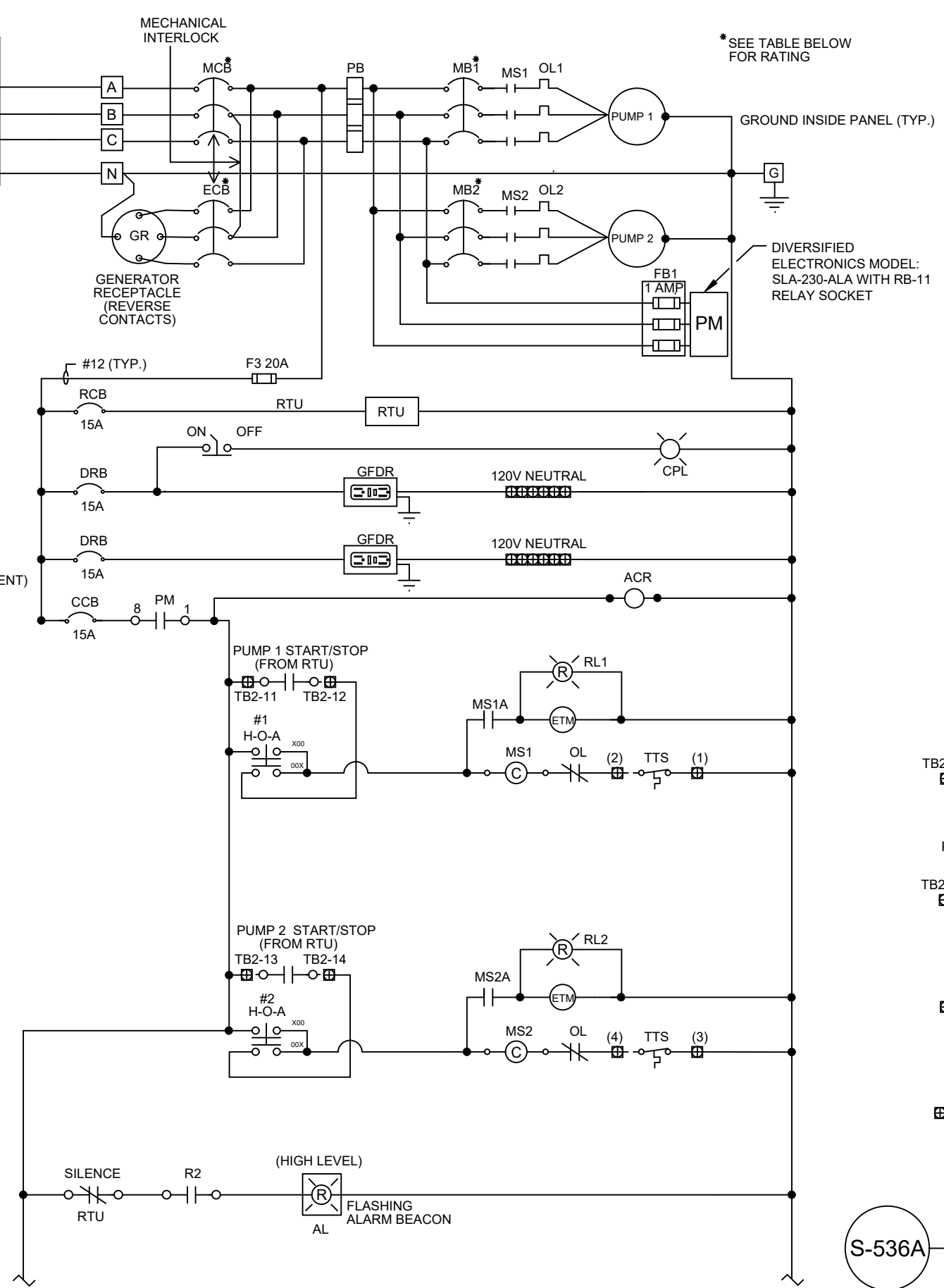
HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS LESS THAN 25 HP

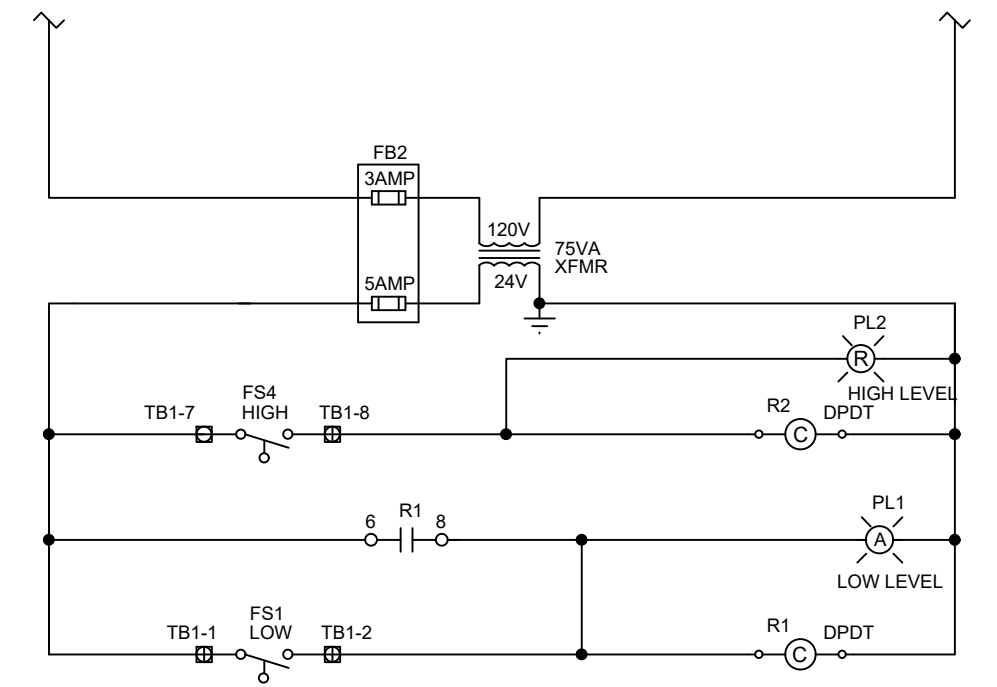
REVISION DATE 07-14-2022 ADOPTION DATE 08-17-2022	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	DETAIL NO. S-536
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CONTROL PANEL ABBREVIATIONS

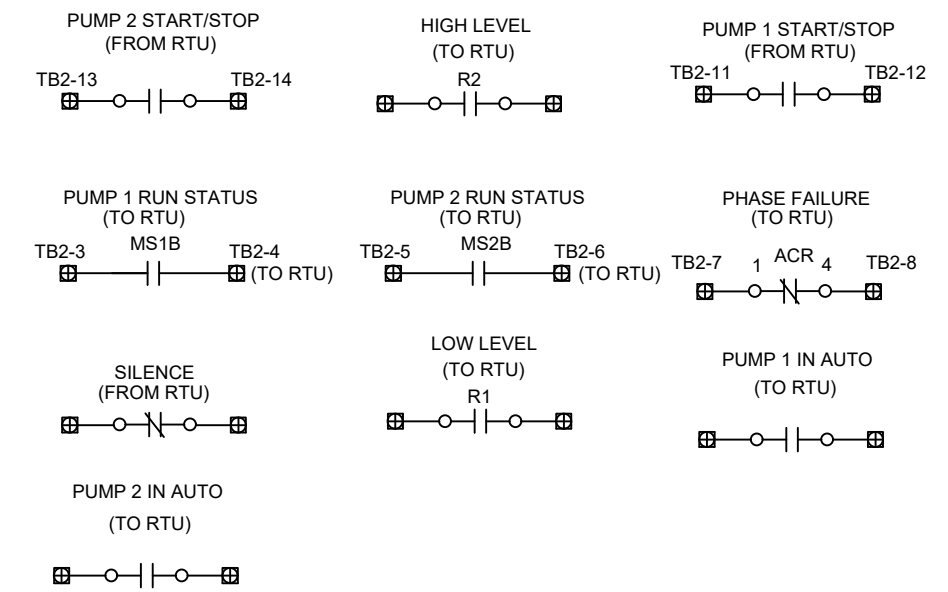
A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
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MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
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PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMTRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



* SEE TABLE BELOW FOR RATING



TO/FROM RTU



S-536A 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS LESS THAN 25 HP

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022

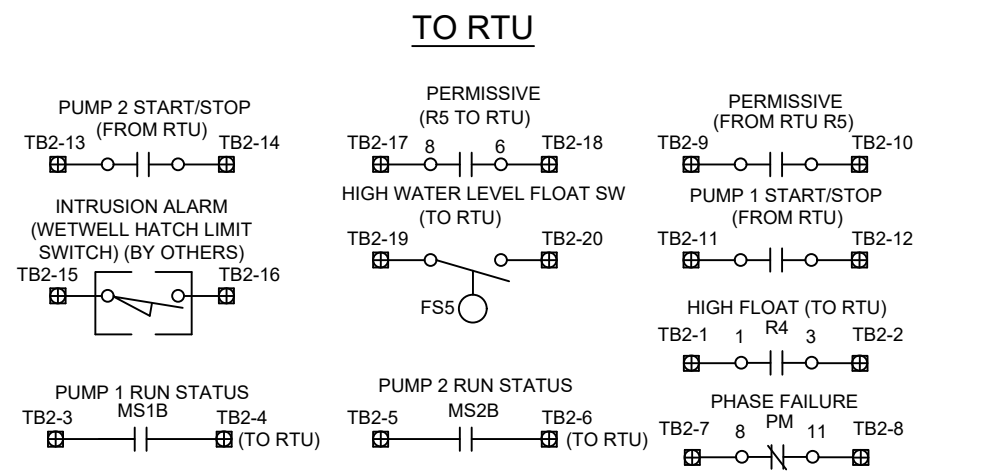
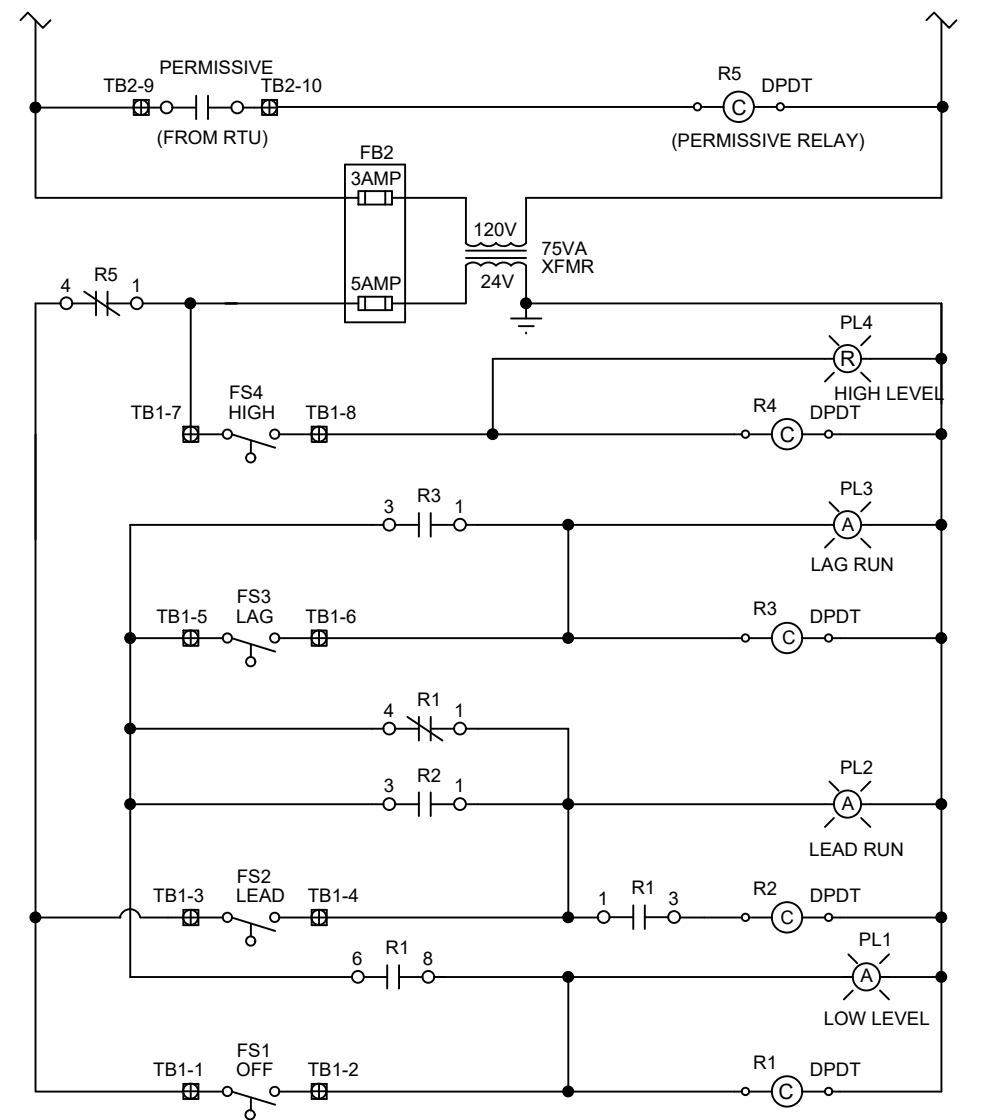
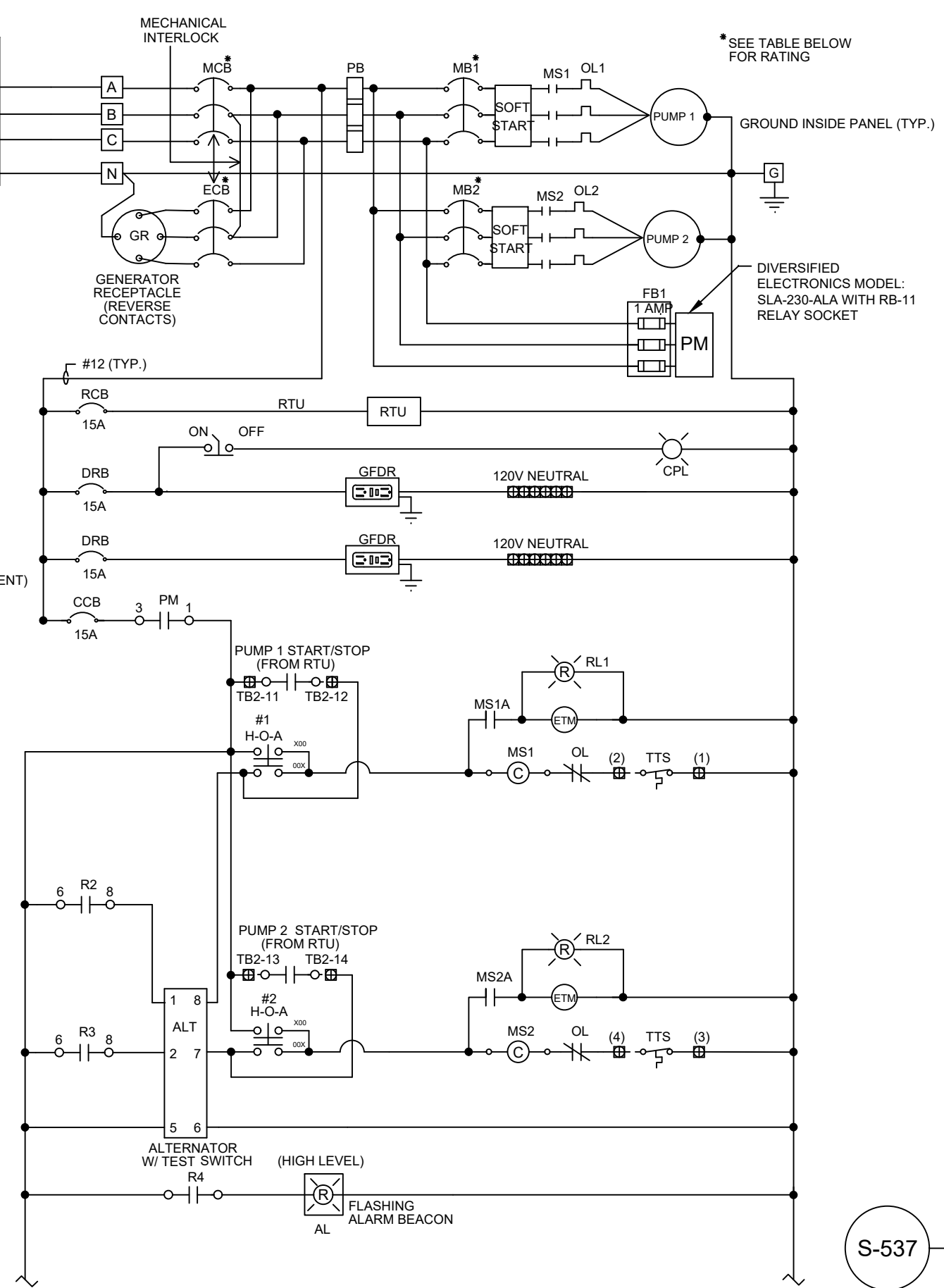


CITY OF CAPE CORAL
UTILITIES DEPARTMENT
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DETAIL NAME	DETAIL NO.
3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-536A

CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMTRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER

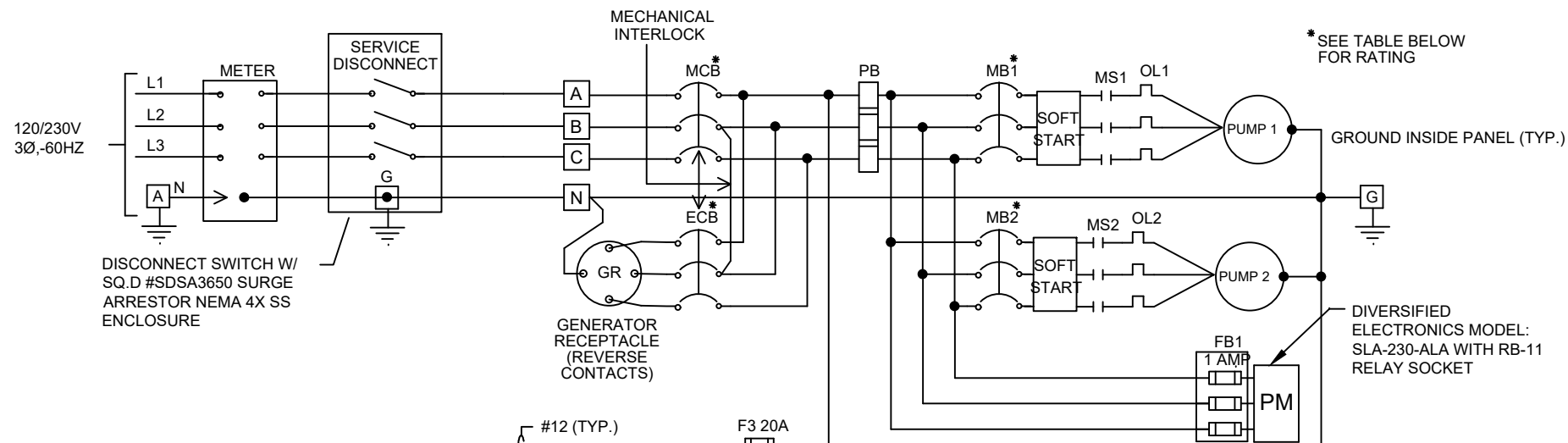


S-537 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

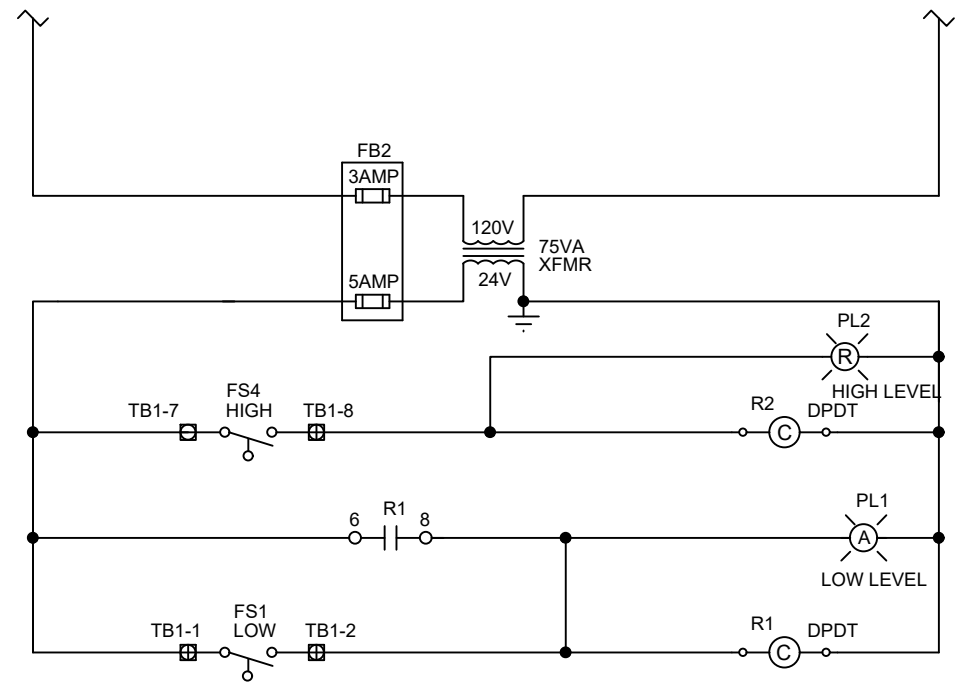
NOTE: FOR PUMPS 25 HP TO 35 HP

REVISION DATE 07-14-2022		CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
ADOPTION DATE 08-17-2022			3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-537

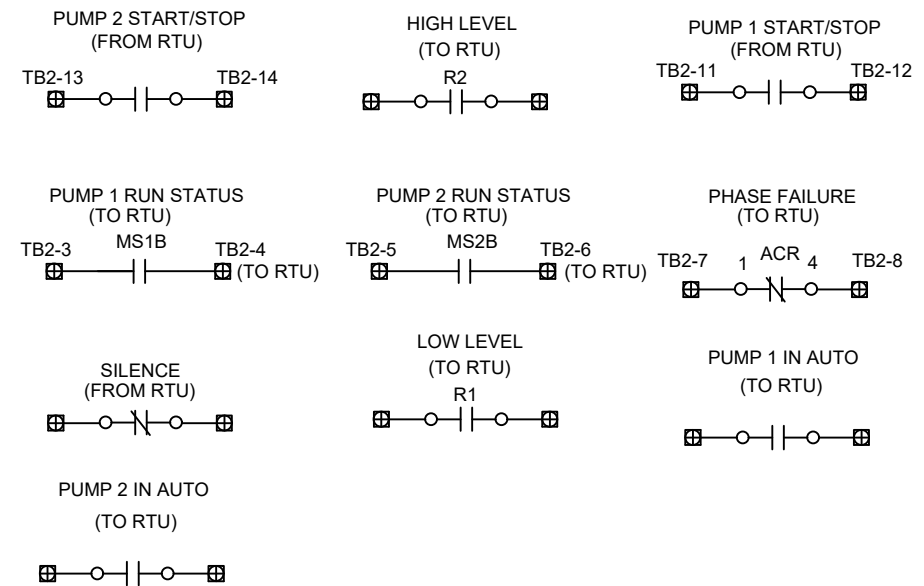


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO/FROM RTU



S-537A 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS 25 HP TO 35 HP

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

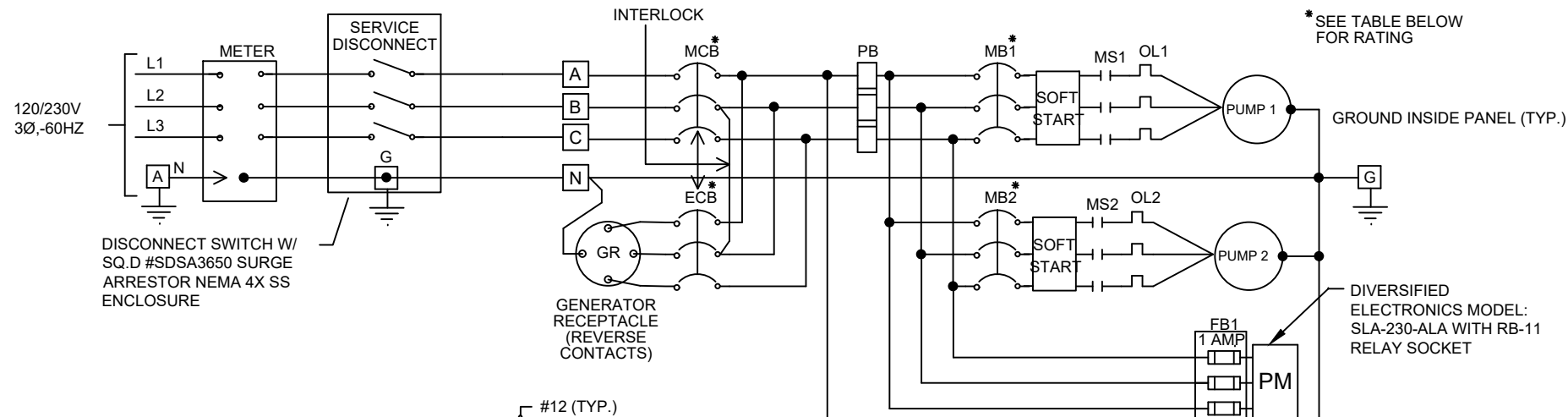
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

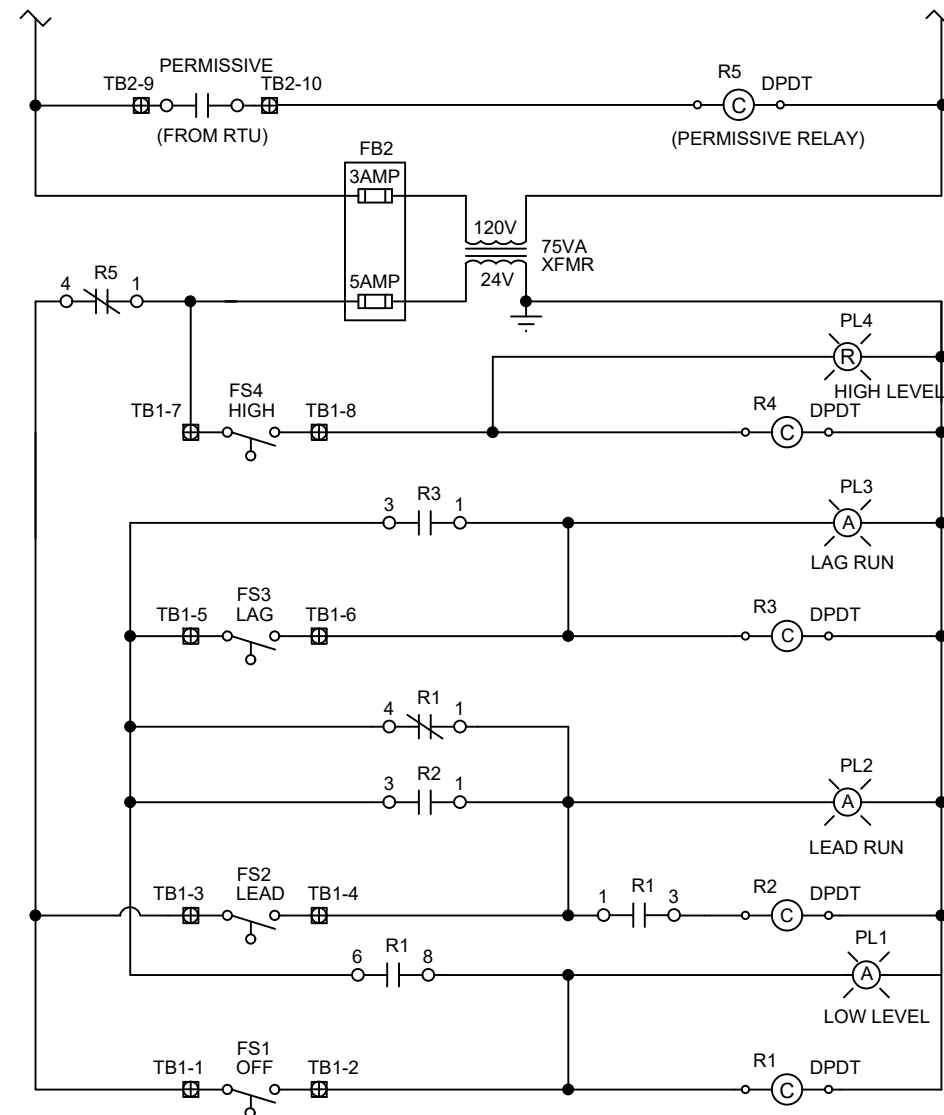
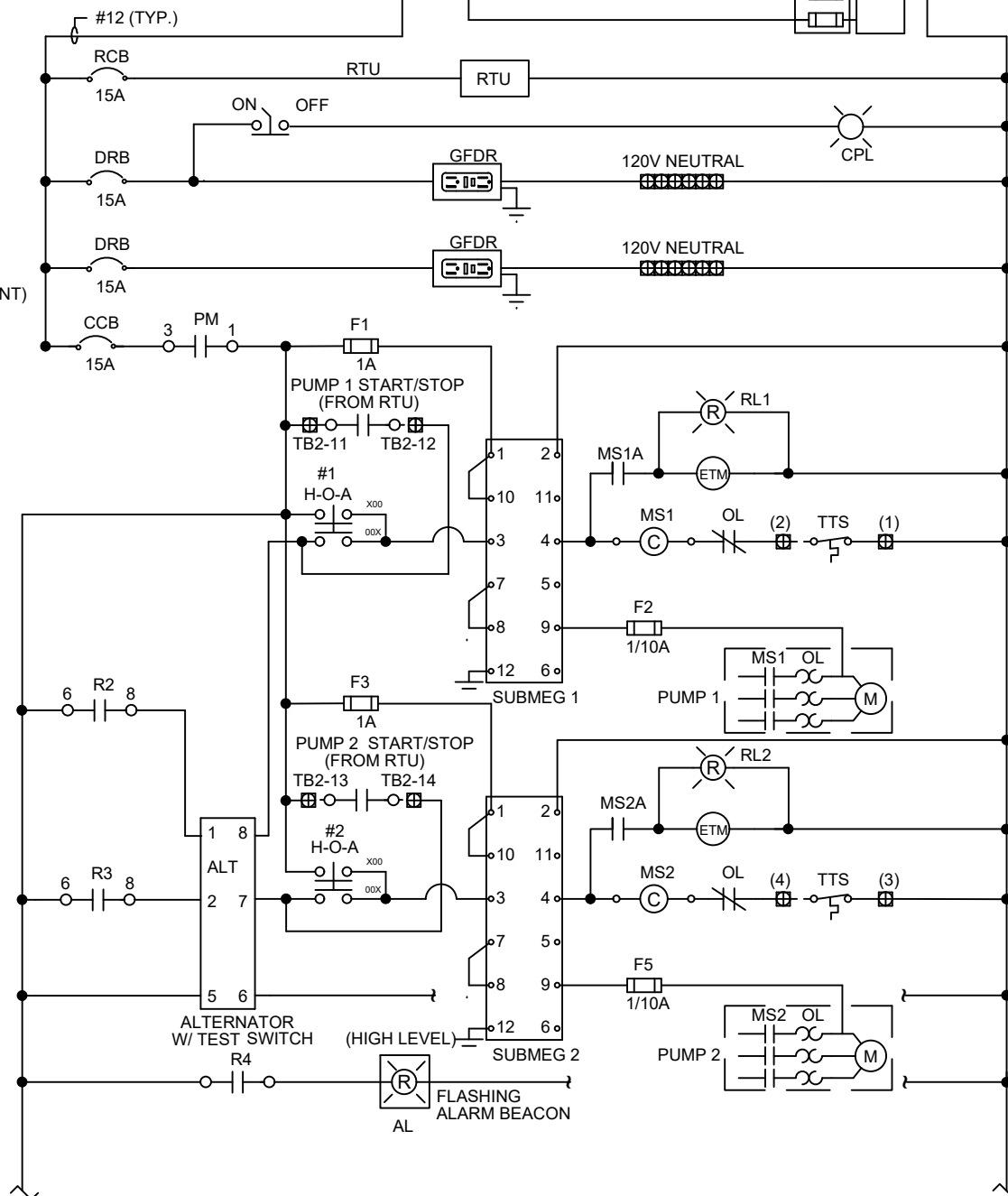
DETAIL NAME
3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION

DETAIL NO.
S-537A

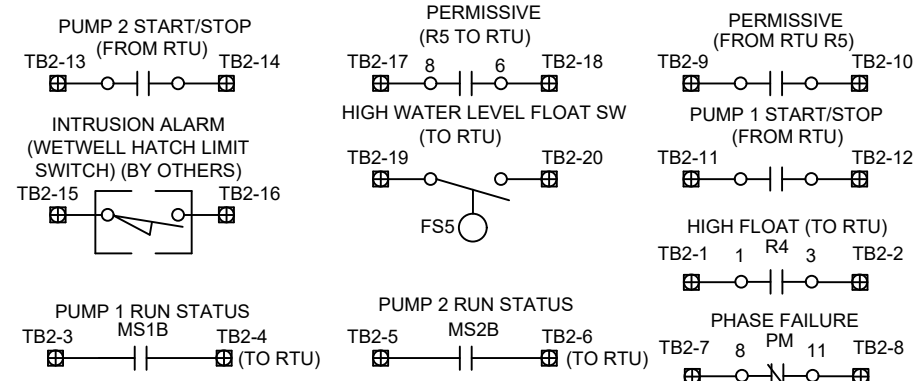


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
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ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
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LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
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RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO RTU



S-538 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS GREATER THAN 35 HP

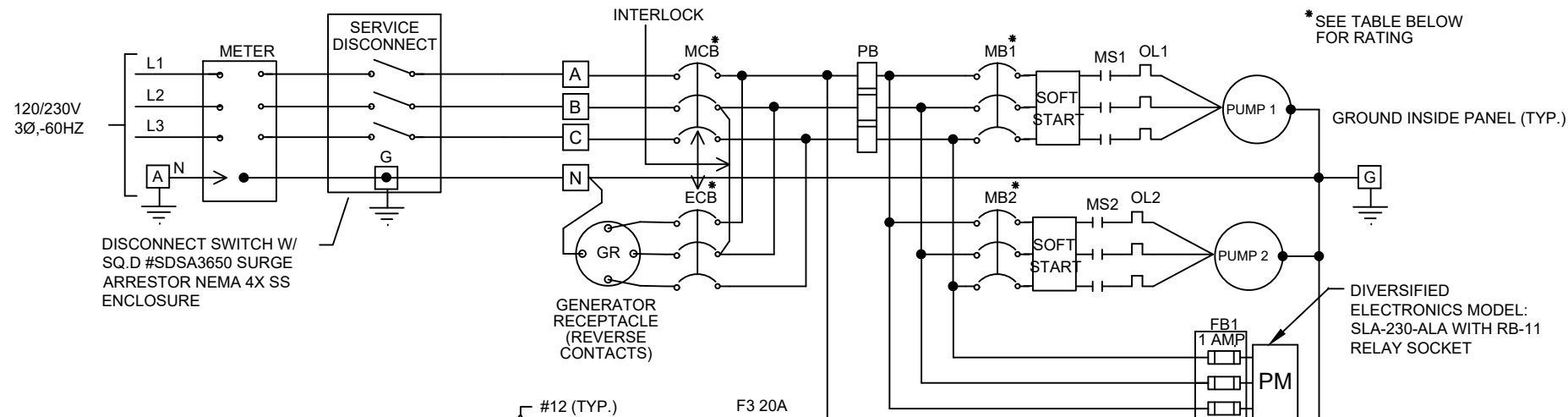
REVISION DATE
07-14-2022
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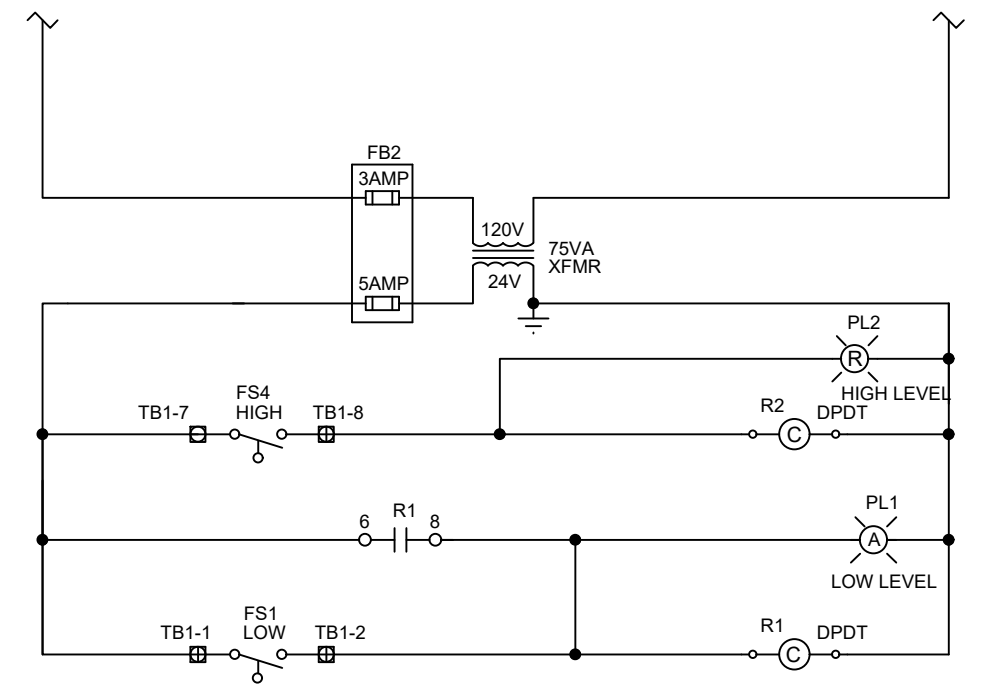
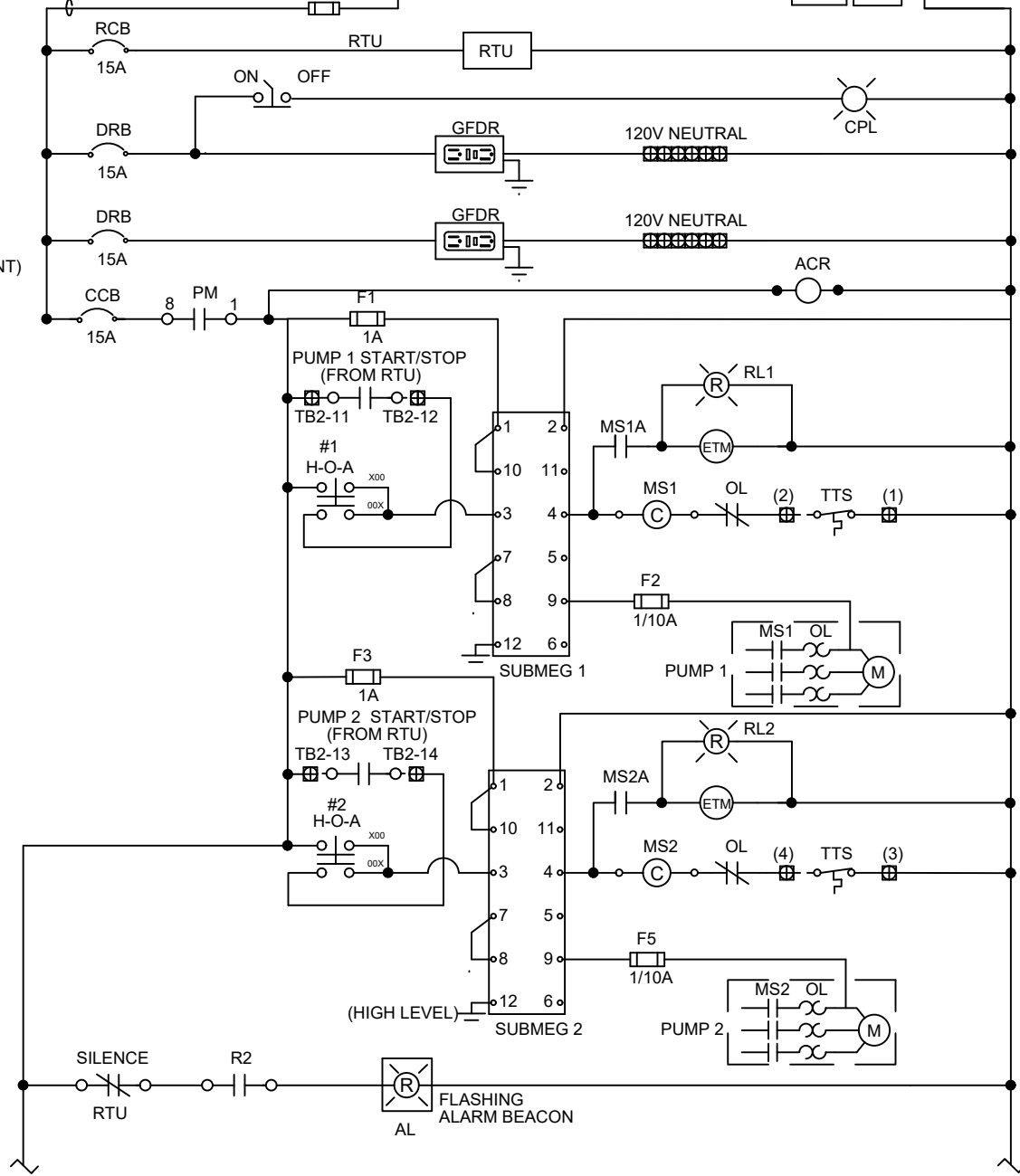
DETAIL NAME
**3 PHASE 240V CONTROL DIAGRAM
FOR DUPLEX LIFT STATION**

DETAIL NO.
S-538

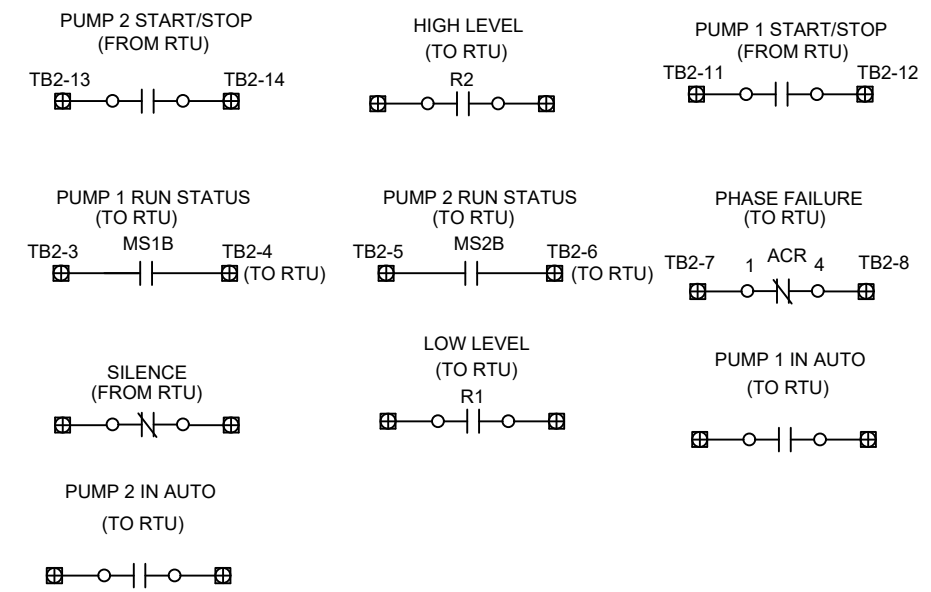


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER



TO/FROM RTU



S-538A 3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

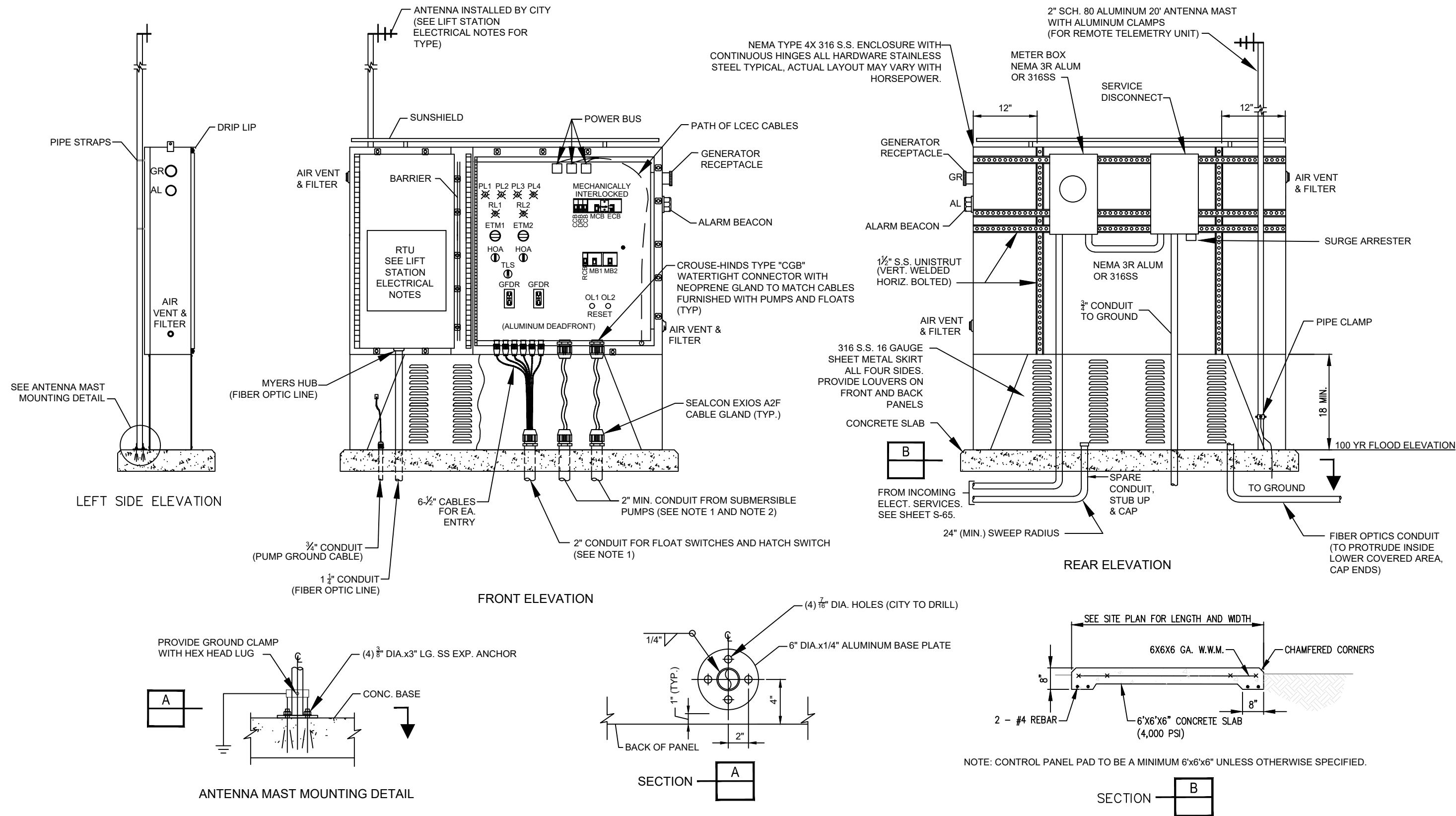
NOTE: FOR PUMPS GREATER THAN 35 HP

REVISION DATE	07-14-2022
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CITY OF CAPE CORAL
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DETAIL NAME	DETAIL NO.
3 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-538A



- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR HSQ RTU CONTROL FOR LIFT STATION.

S-539

3 PHASE 240V CONTROL PANEL FOR DUPLEX LIFT STATION

NOT TO SCALE

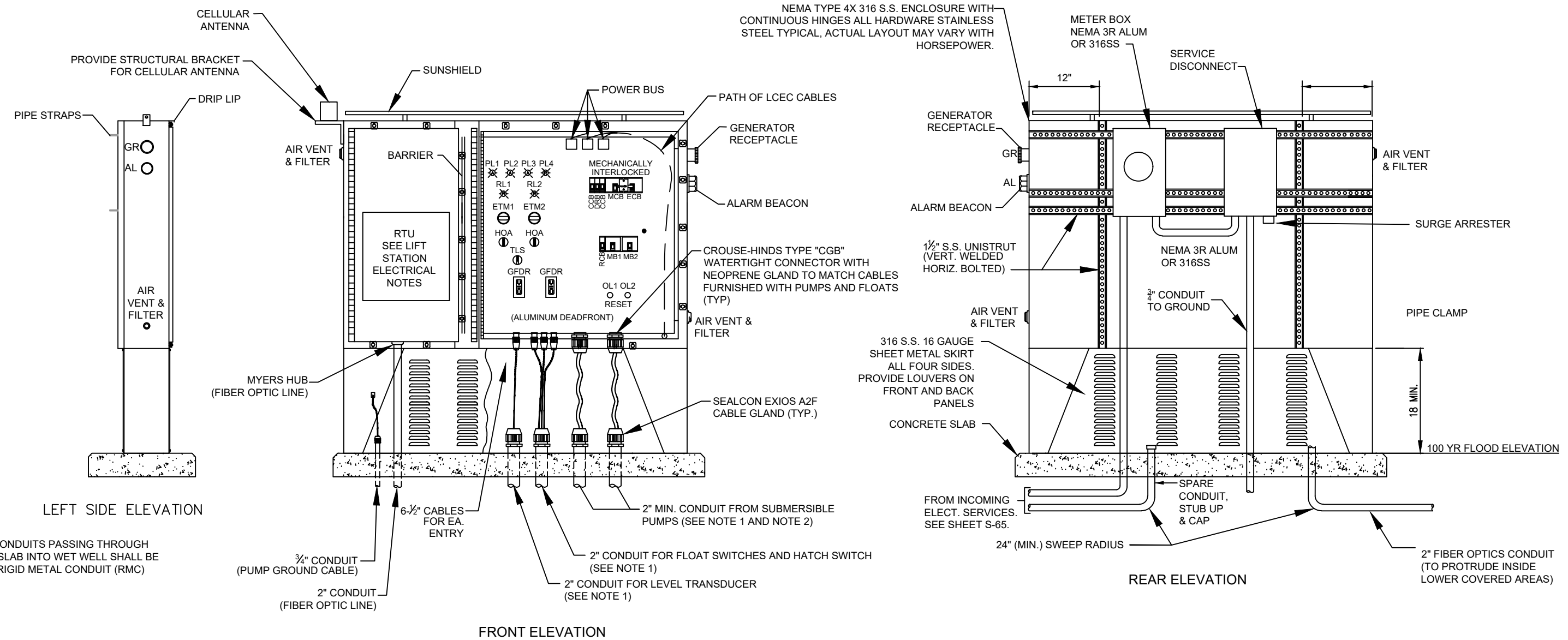
REVISION DATE
07-14-2022
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08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
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CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
**3 PHASE 240V CONTROL PANEL
FOR DUPLEX LIFT STATION**

DETAIL NO.
S-539



- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR CELL MODEM/FIBER OPTIC CONTROL FOR LIFT STATION.
 - 4) USE DETAIL FOR PRESSURE TRANSDUCER LEVEL CONTROL.

S-539A 3 PHASE 240V CONTROL PANEL FOR DUPLEX LIFT STATION
NOT TO SCALE

REVISION DATE	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022		3 PHASE 240V CONTROL PANEL FOR DUPLEX LIFT STATION	S-539A
ADOPTION DATE			
08-17-2022			

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 1/2" SCH 80 PVC CONDUIT

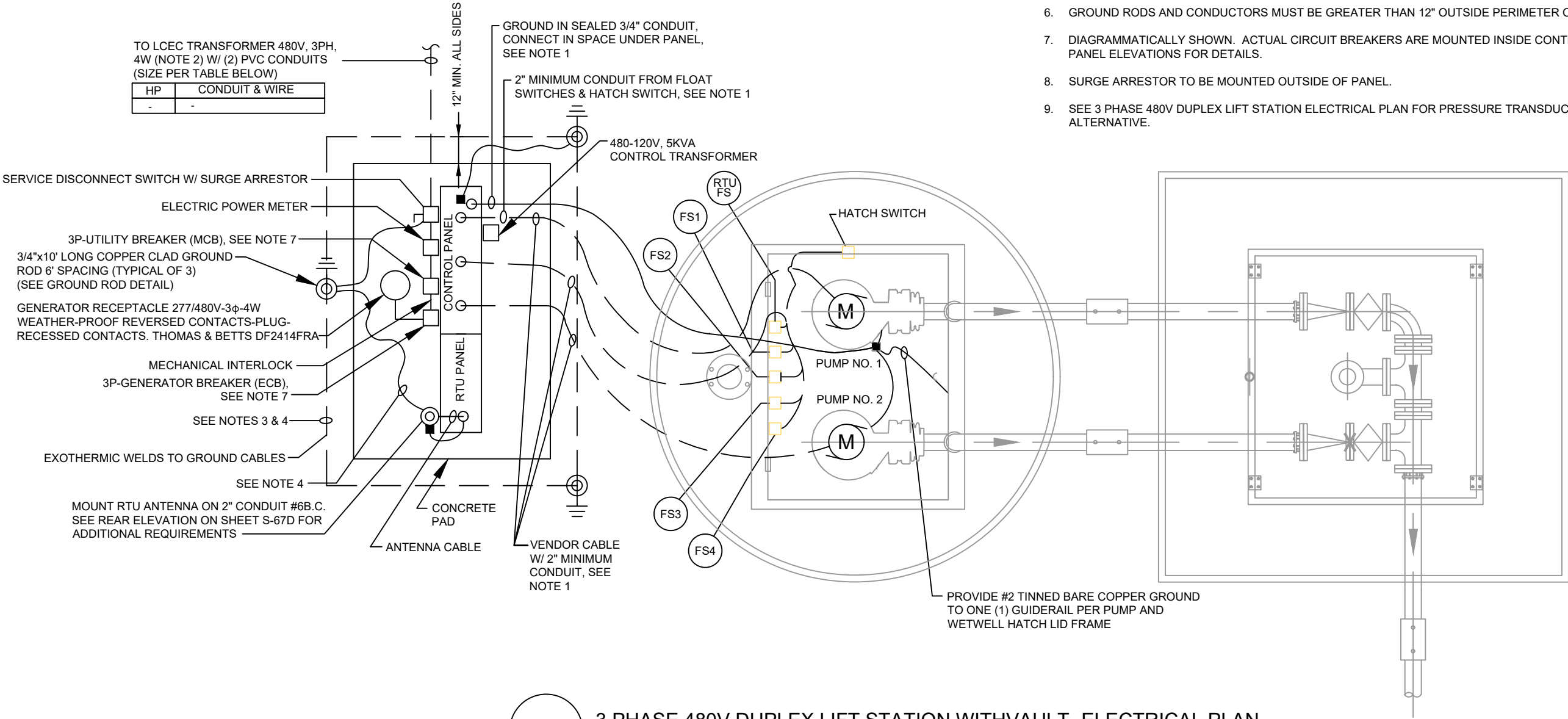
225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

ALL DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.
9. SEE 3 PHASE 480V DUPLEX LIFT STATION ELECTRICAL PLAN FOR PRESSURE TRANSDUCER LEVEL CONTROL ALTERNATIVE.



S-540

3 PHASE 480V DUPLEX LIFT STATION WITHVAULT- ELECTRICAL PLAN

NOT TO SCALE

REVISION DATE
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UTILITIES DEPARTMENT
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DETAIL NAME	DETAIL NO.
3 PHASE 480V DUPLEX LIFT STATION WITH VAULT ELECTRICAL PLAN	S-540

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 1/2" SCH 80 PVC CONDUIT

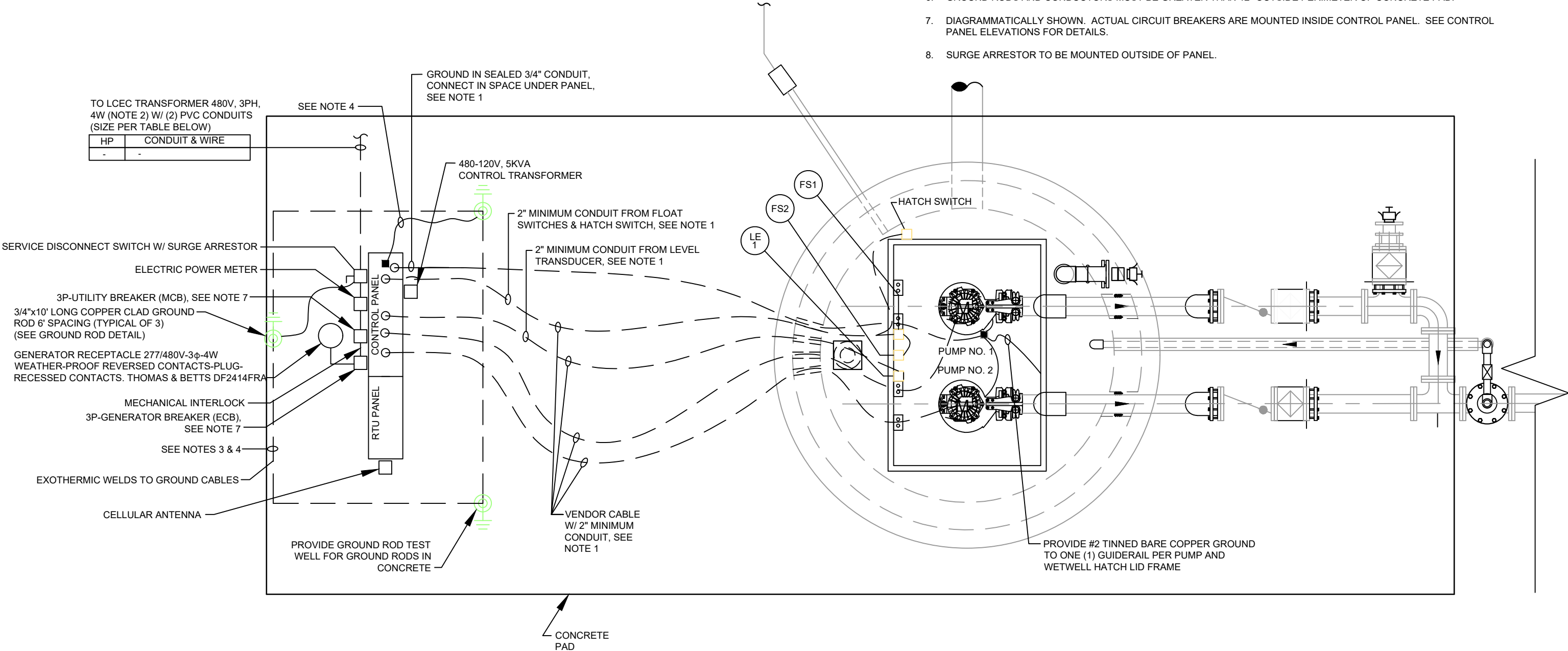
225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

ALL DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6" MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.



S-540A

3 PHASE 480V DUPLEX LIFT STATION WITHOUT VAULT- ELECTRICAL PLAN
NOT TO SCALE

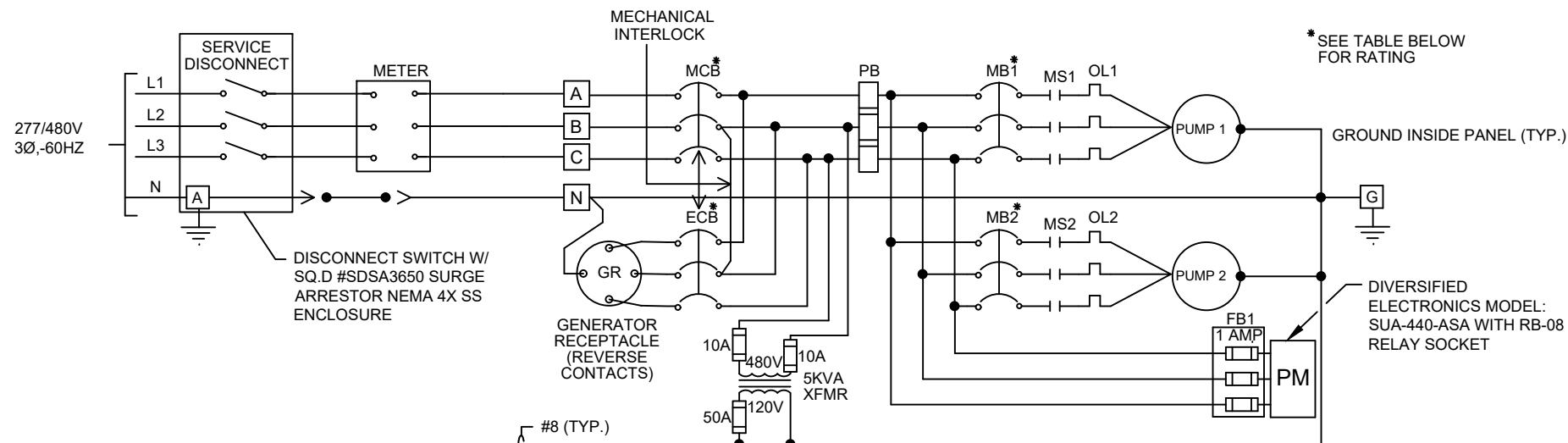
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

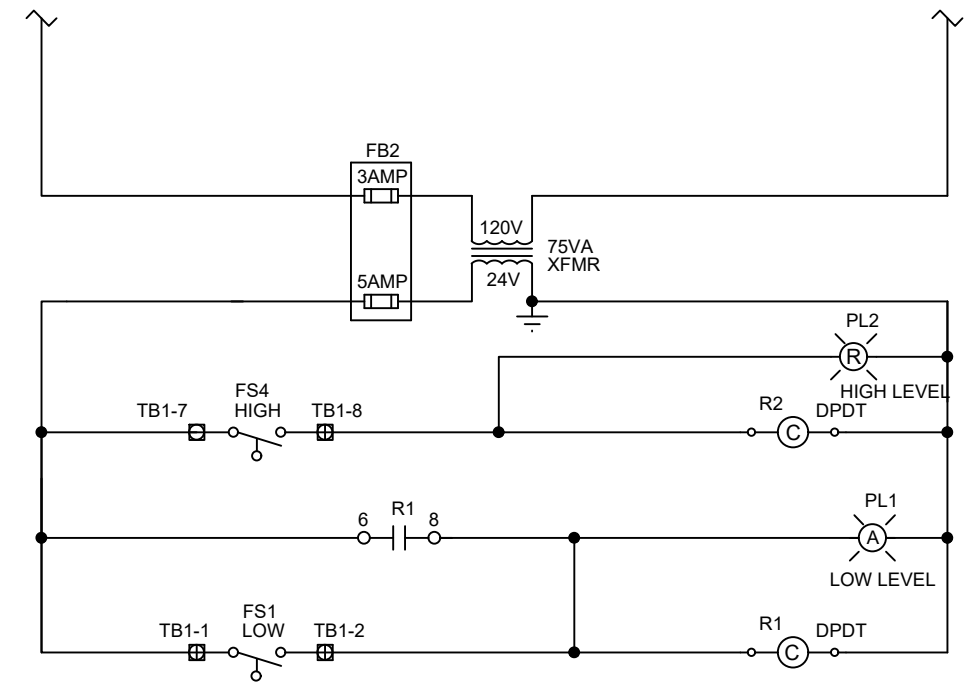
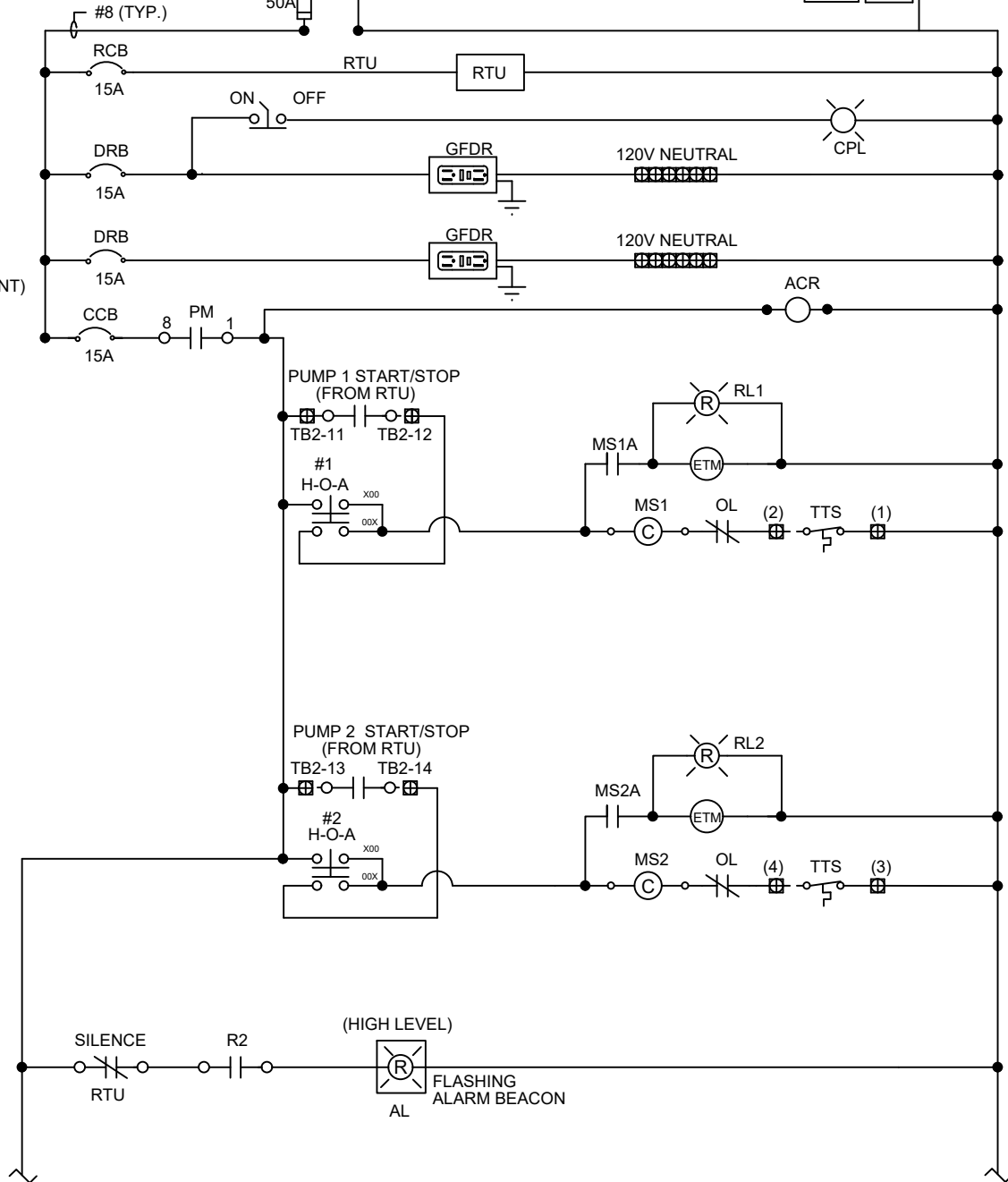
DETAIL NAME
3 PHASE 480V DUPLEX LIFT STATION WITHOUT
VAULT - ELECTRICAL PLAN

DETAIL NO.
S-540A

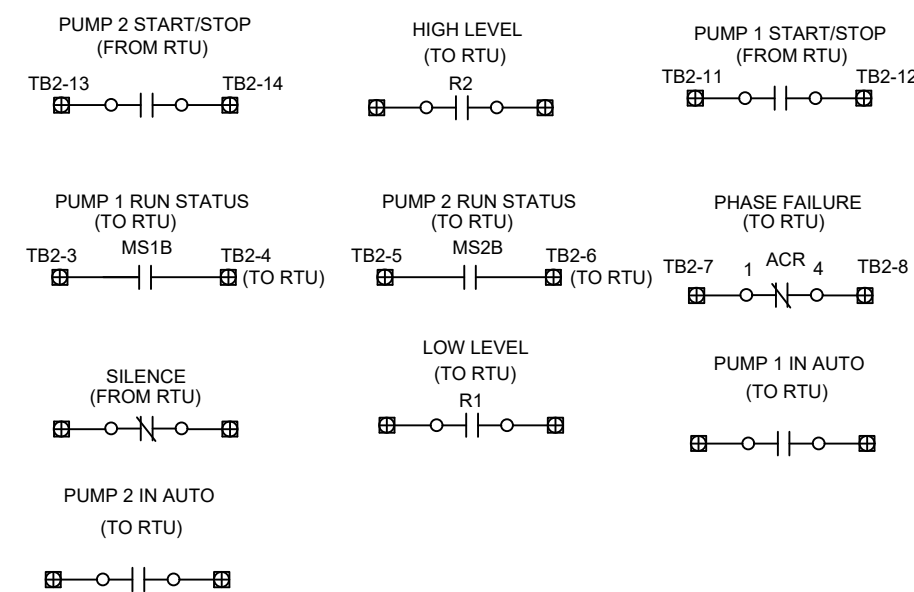


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
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F	FUSE
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LCB	LIGHT CIRCUIT BREAKER
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PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
ACR	AC RELAY



TO/FROM RTU



S-541 3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

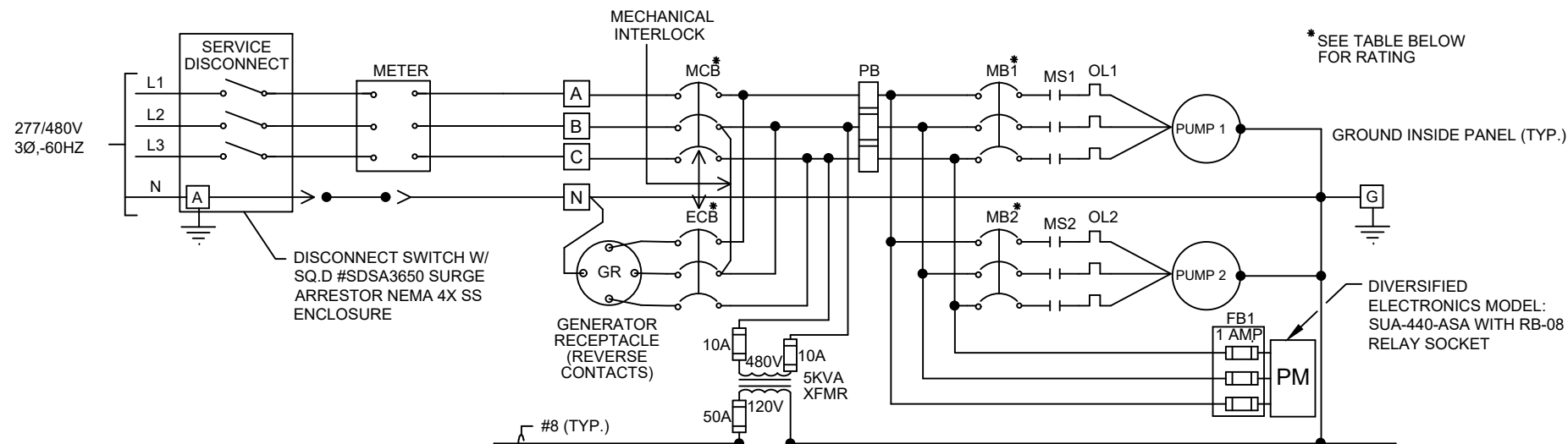
NOTE: FOR PUMPS LESS THAN 25 HP

REVISION DATE
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ADOPTION DATE
08-17-2022



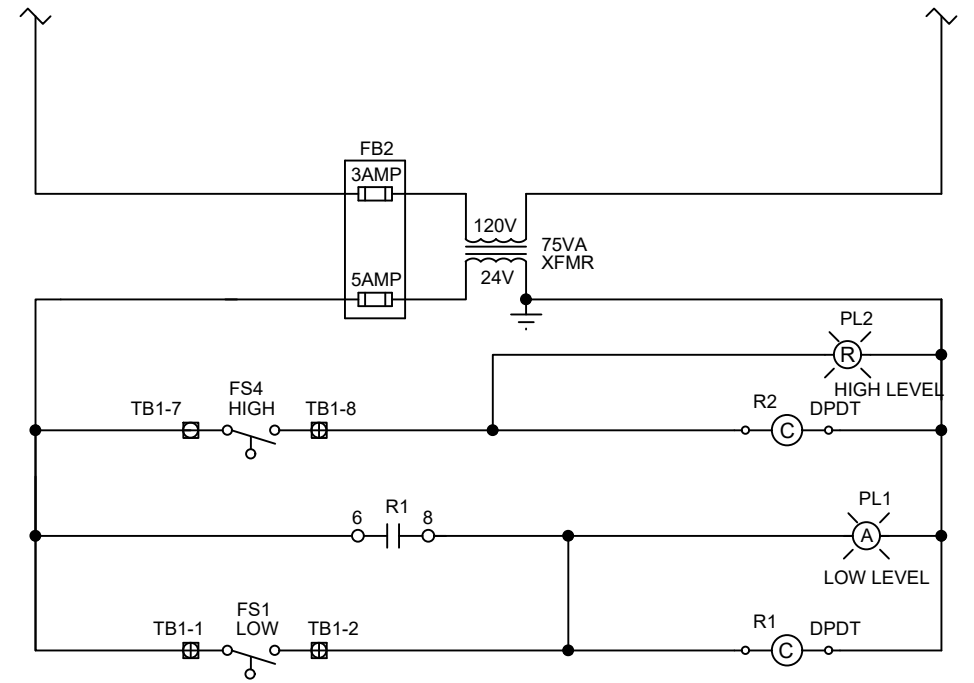
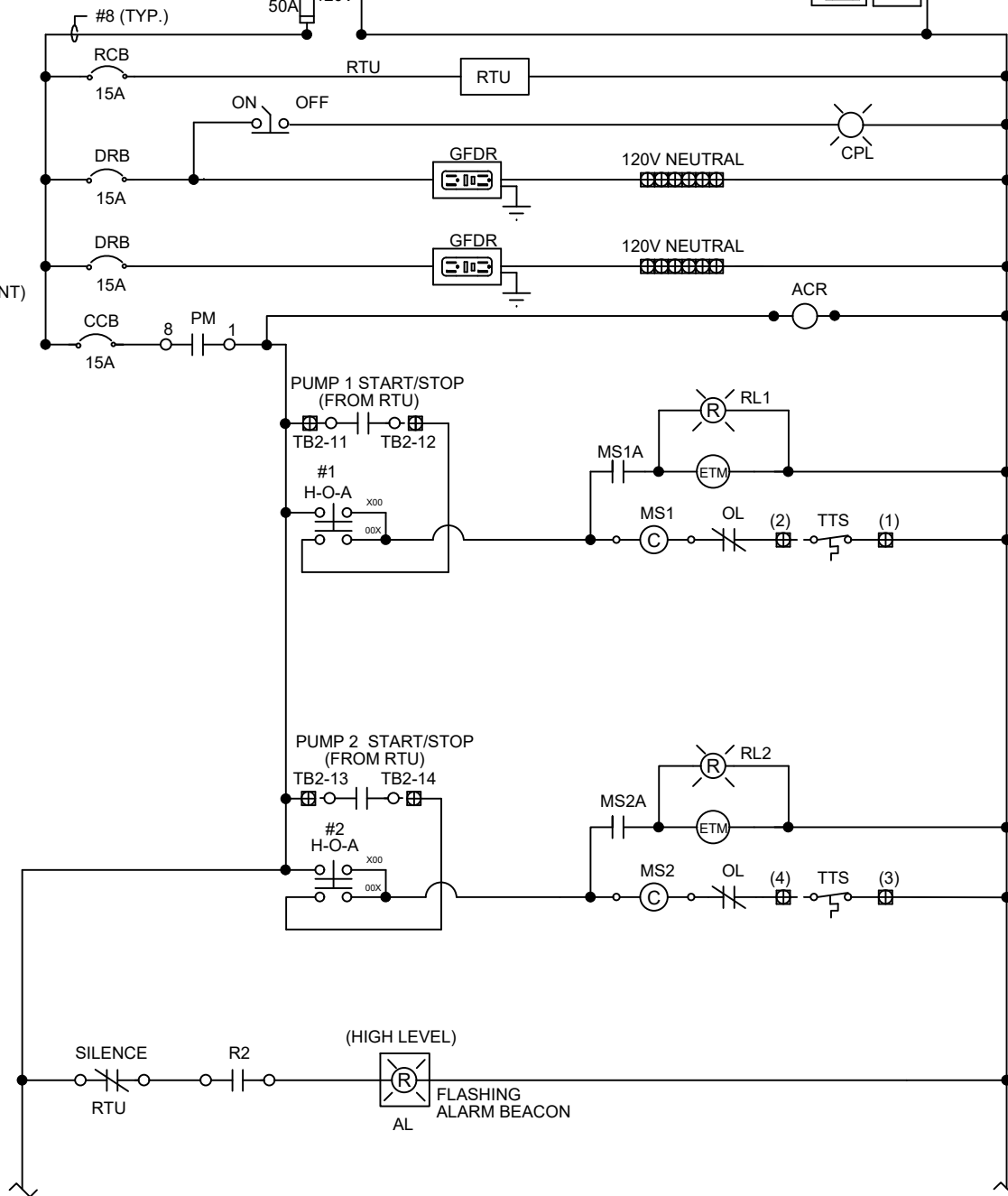
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME	DETAIL NO.
3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	S-541

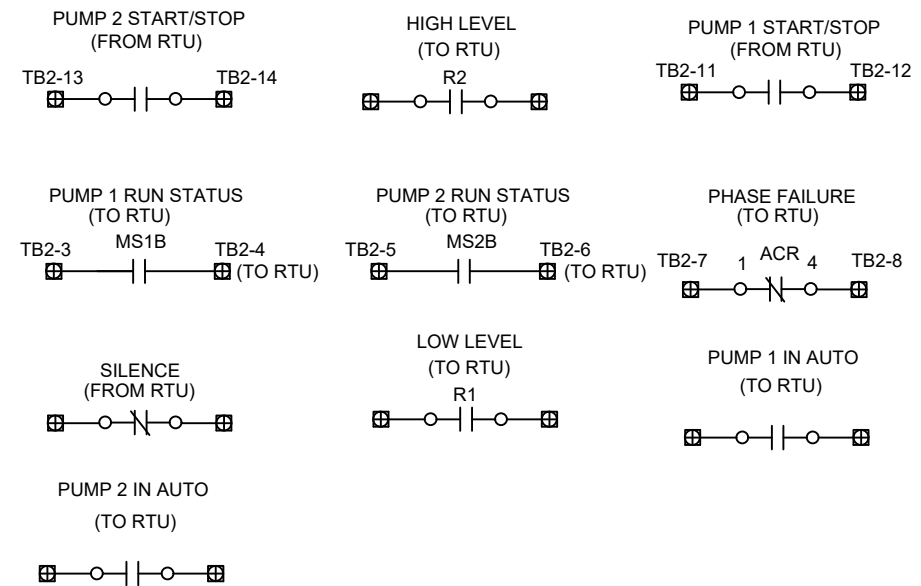


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
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AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
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ETM	ELAPSED TIME METER
F	FUSE
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FL	FLASHER
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G	LEVEL SWITCH INDICATOR / GROUND
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HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
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PL	PILOT LIGHT
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PR	PERMISSIVE RELAY
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RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
ACR	AC RELAY



TO/FROM RTU



S-541A 3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

NOTE: FOR PUMPS LESS THAN 25 HP

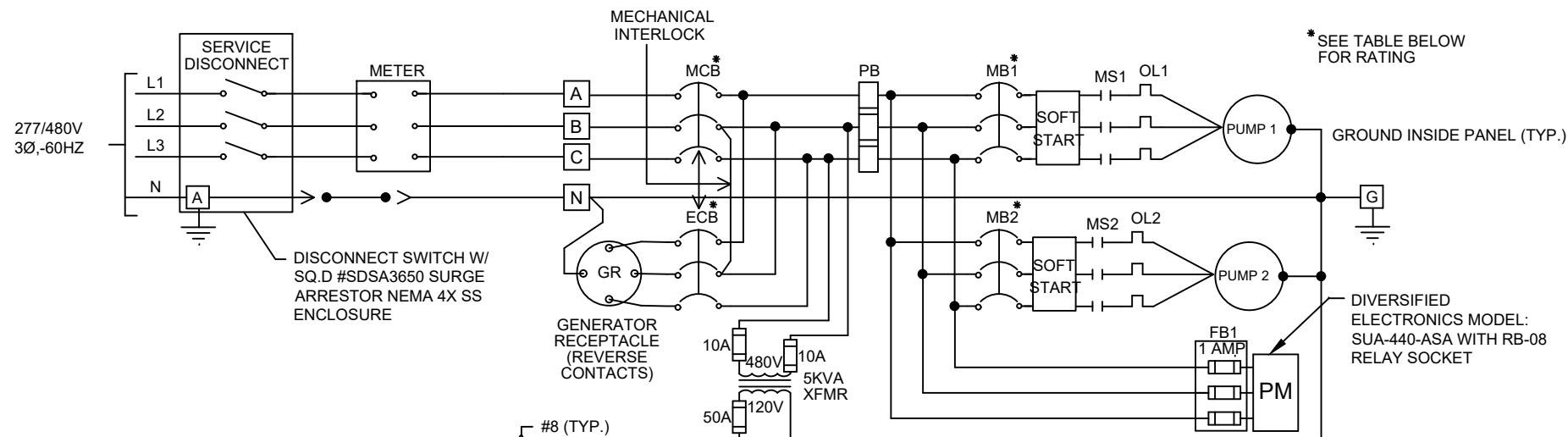
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

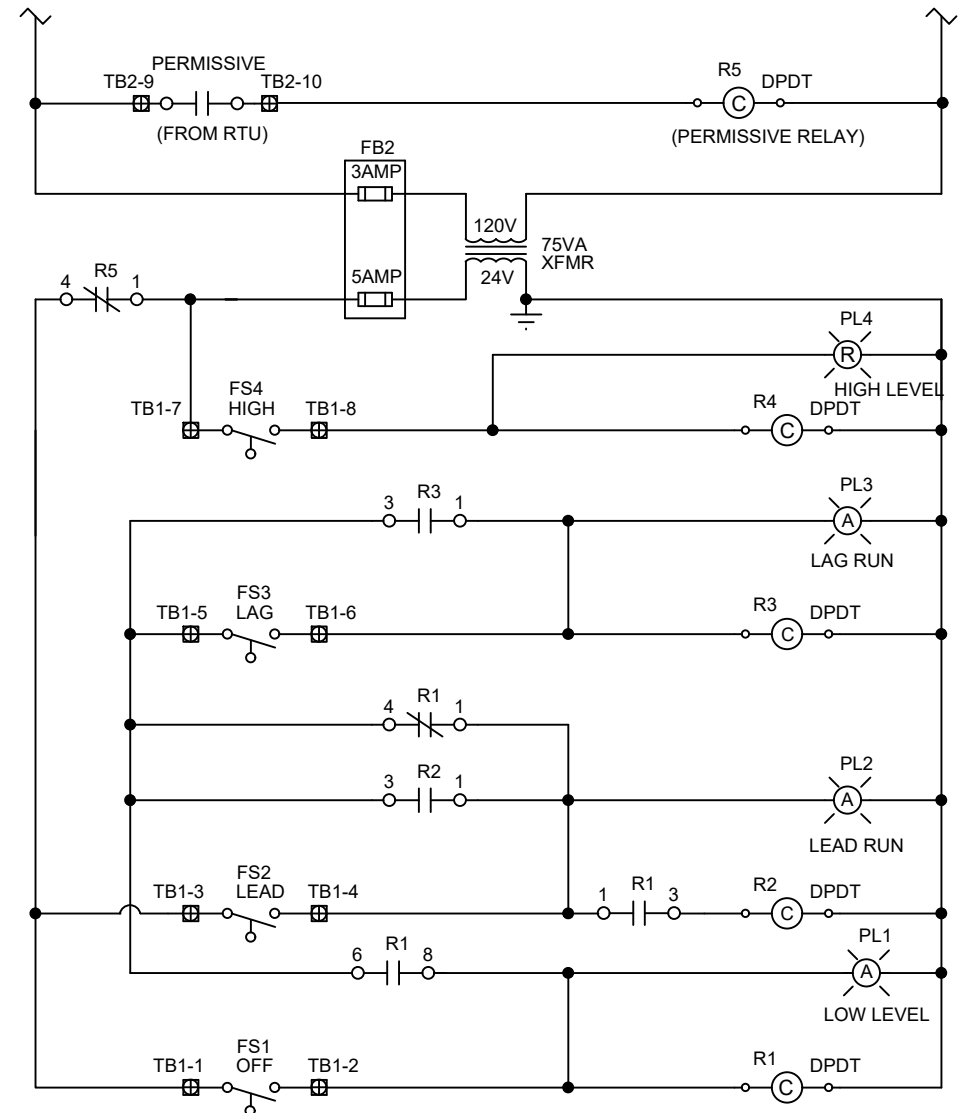
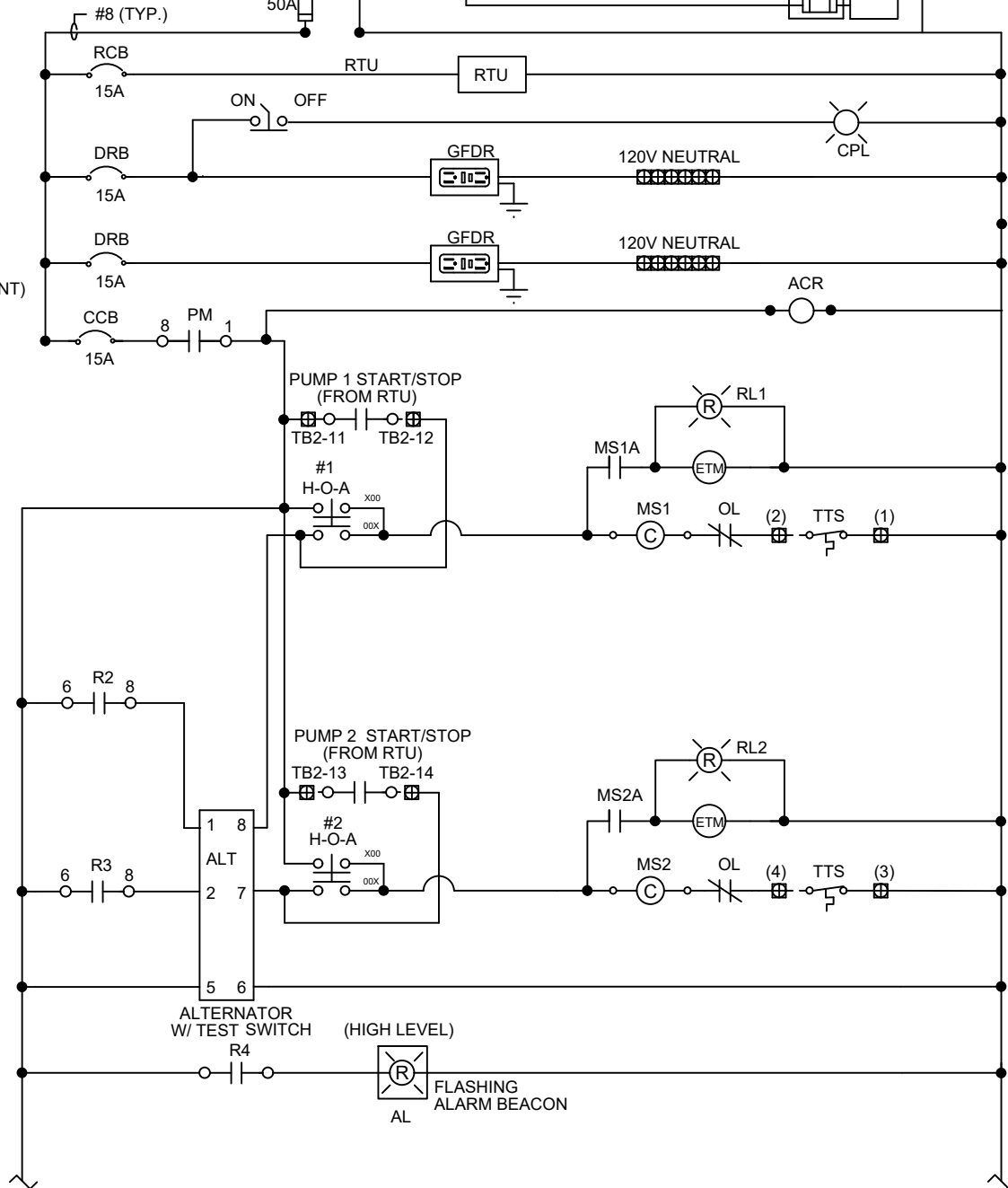
DETAIL NAME
3 PHASE 480V CONTROL DIAGRAM
FOR DUPLEX LIFT STATION

DETAIL NO.
S-541A

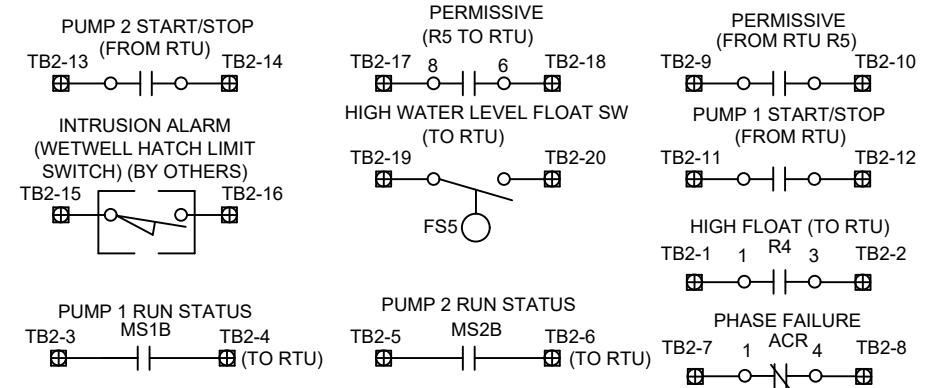


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMTRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
ACR	AC RELAY



TO RTU



S-542

3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION

NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS 25 HP TO 35 HP

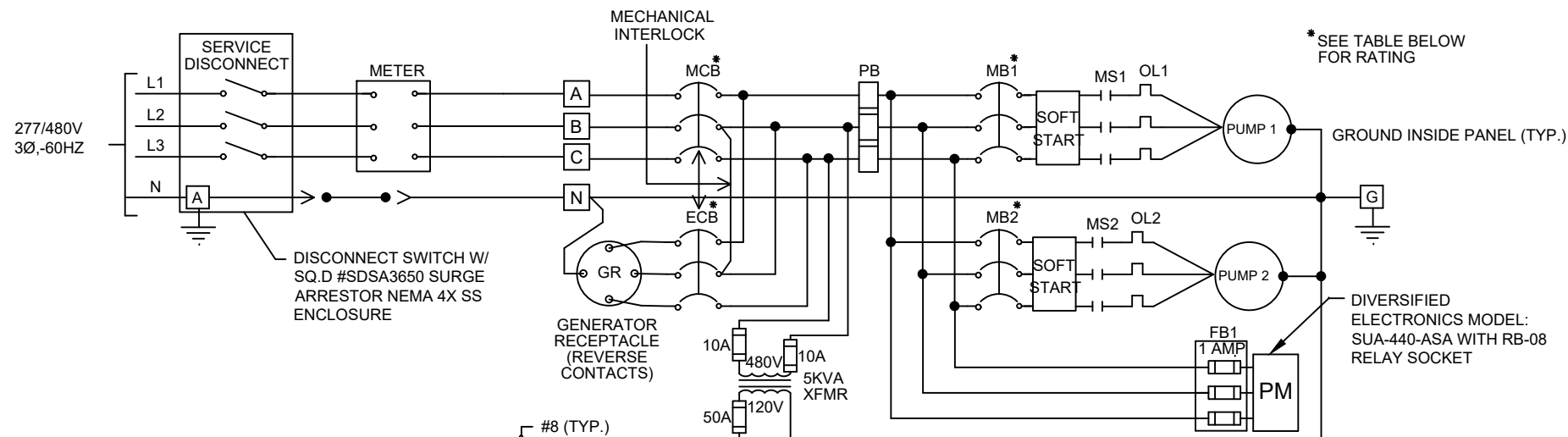
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

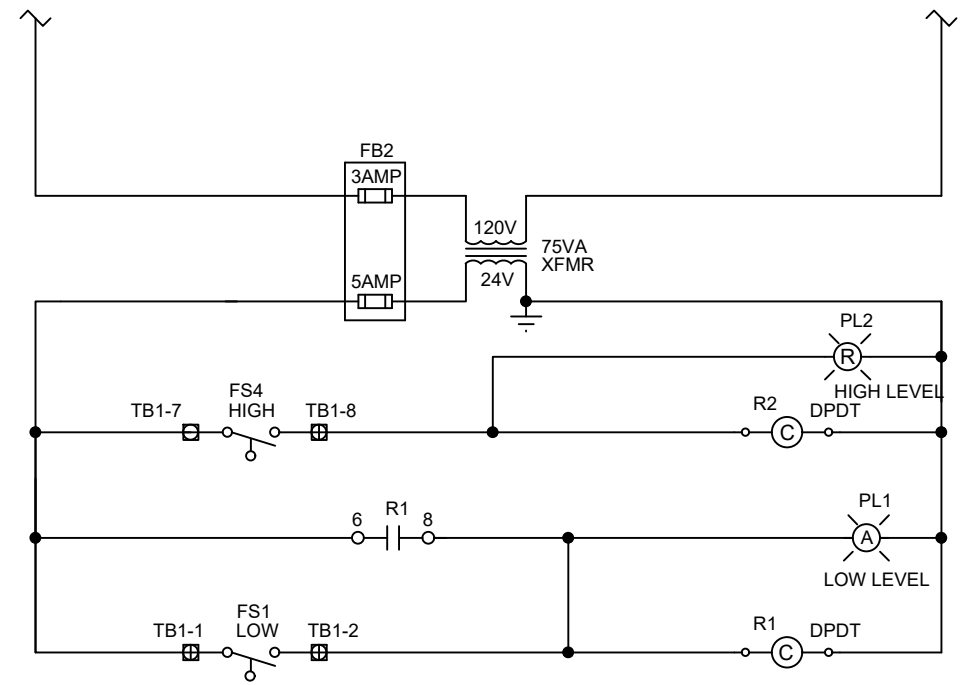
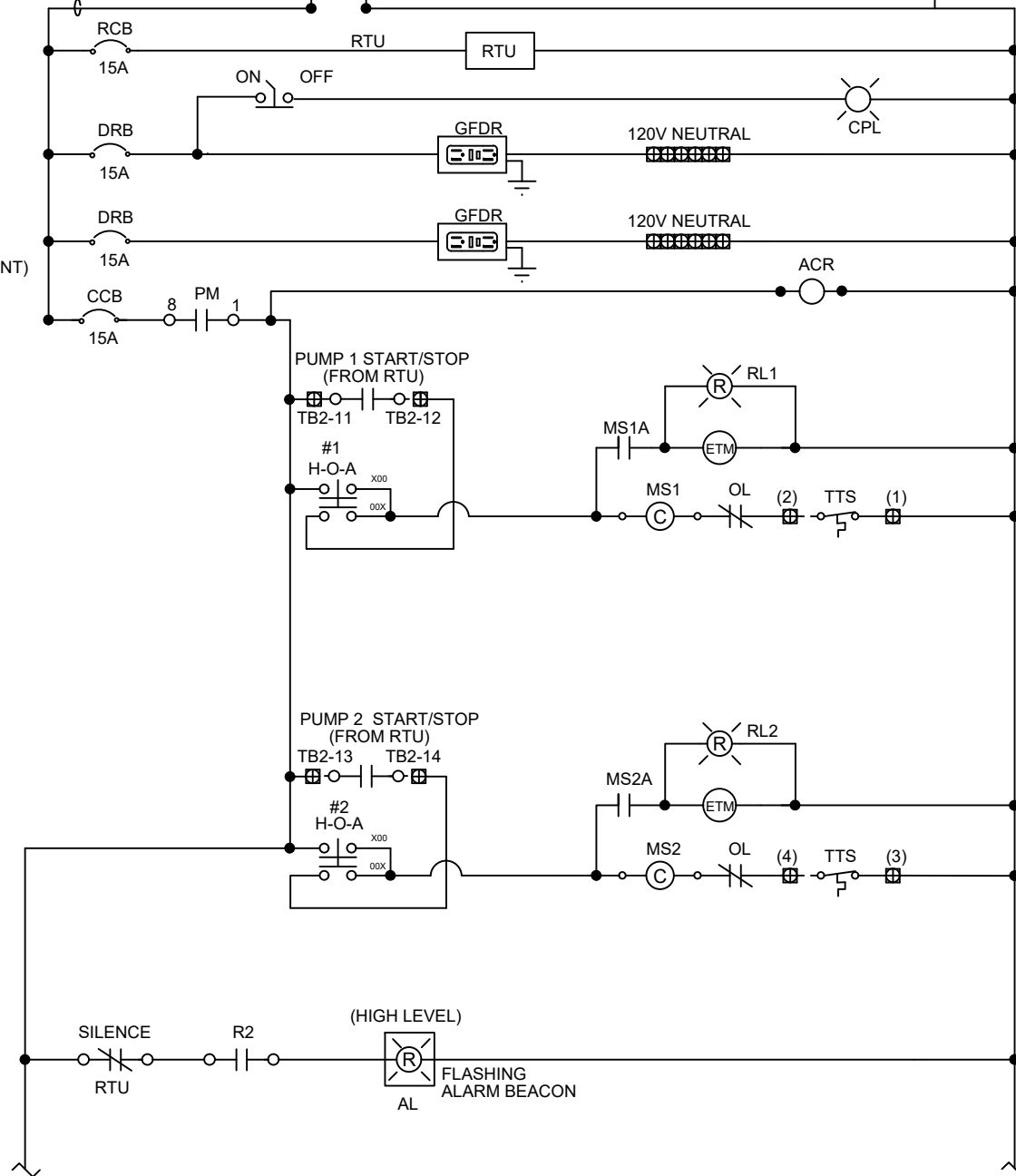
DETAIL NAME
3 PHASE 480V CONTROL DIAGRAM
FOR DUPLEX LIFT STATION

DETAIL NO.
S-542

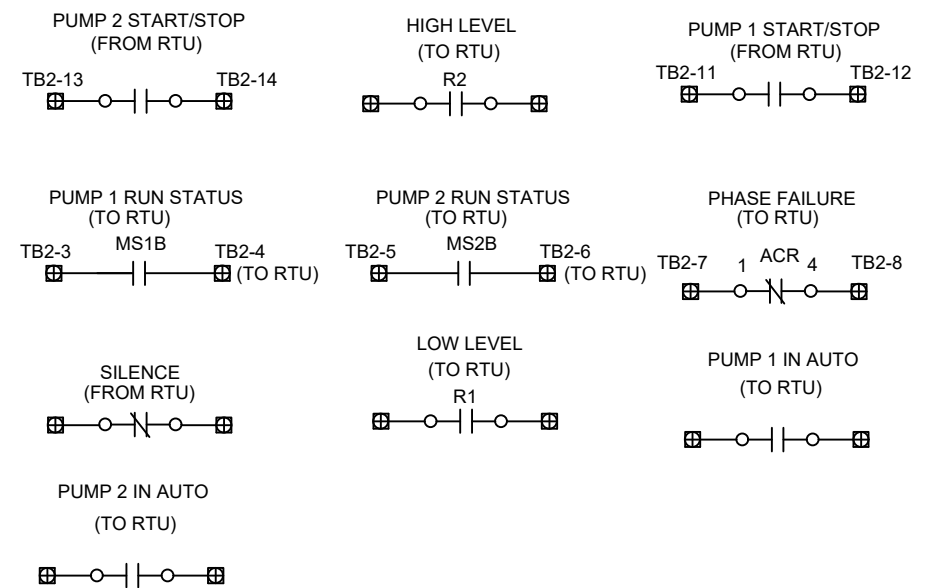


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
ACR	AC RELAY



TO/FROM RTU



S-542A 3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

NOTE: FOR PUMPS 25 HP TO 35 HP

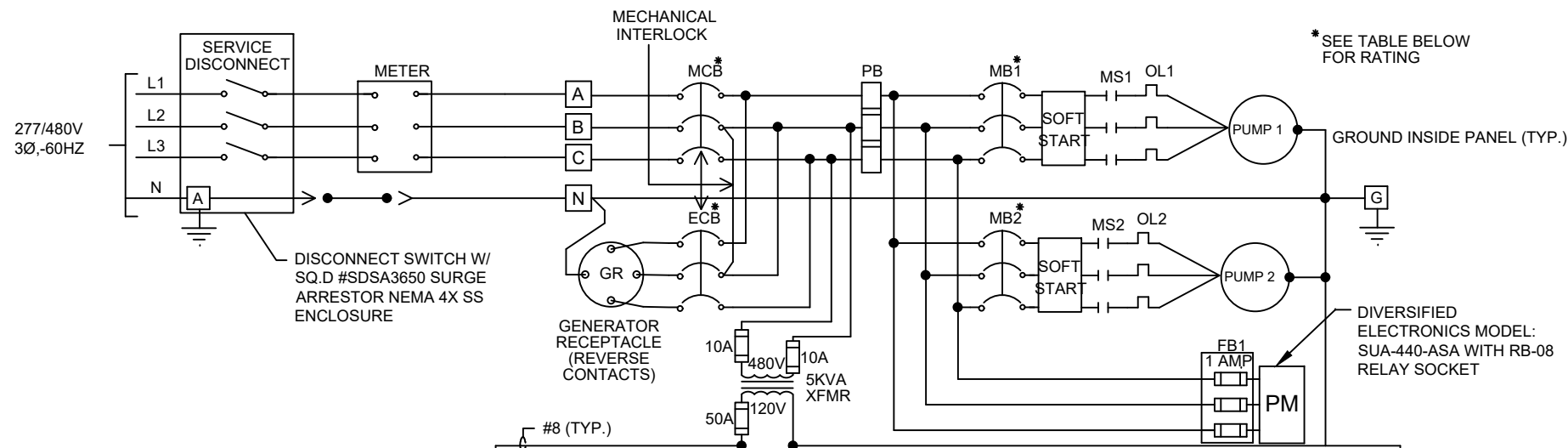
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

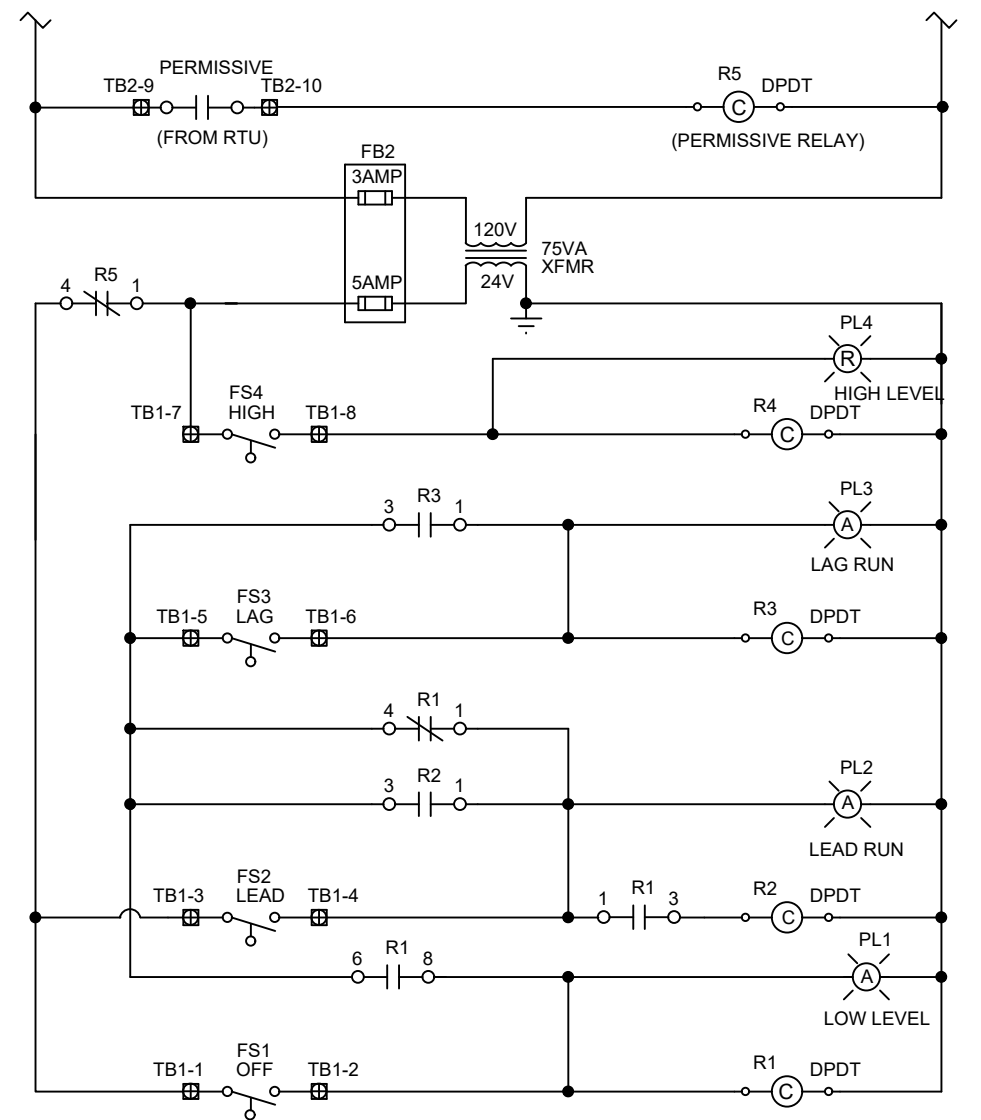
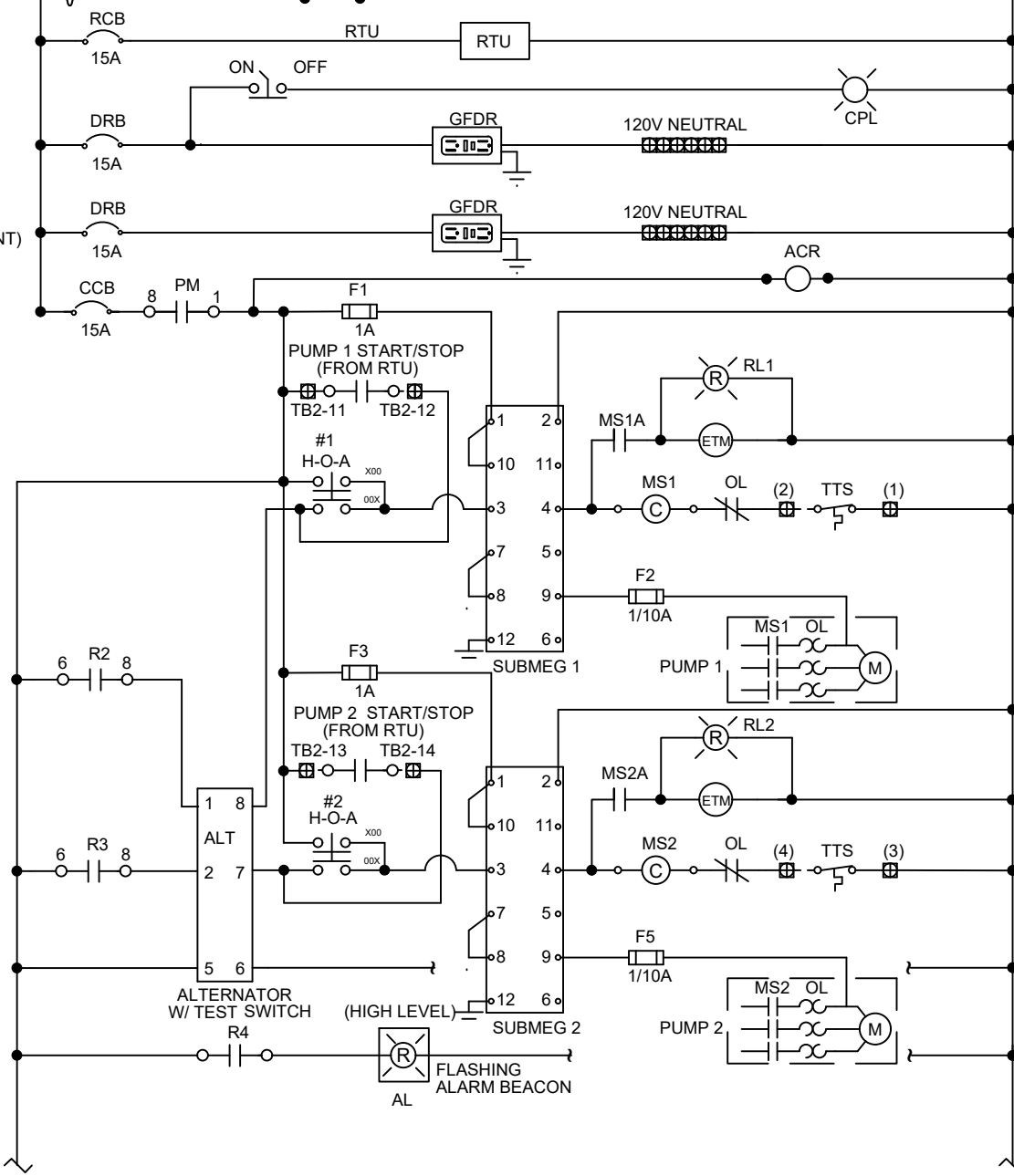
DETAIL NAME
3 PHASE 480V CONTROL DIAGRAM
FOR DUPLEX LIFT STATION

DETAIL NO.
S-542A

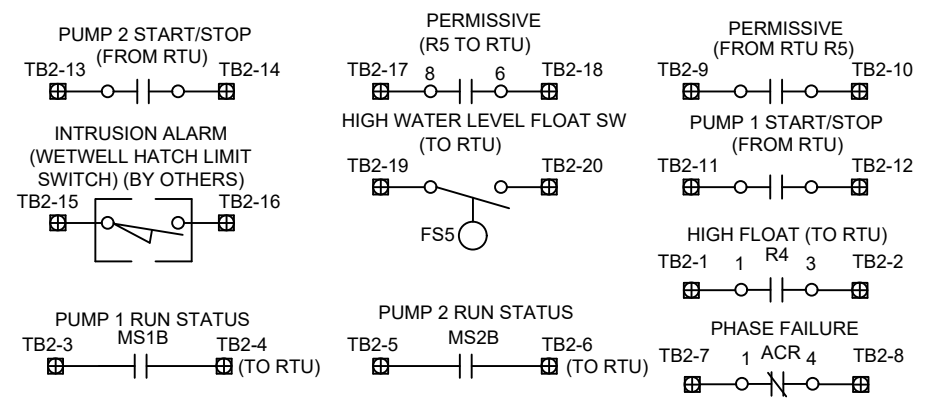


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
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FL	FLASHER
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HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
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MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
ACR	AC RELAY



TO RTU

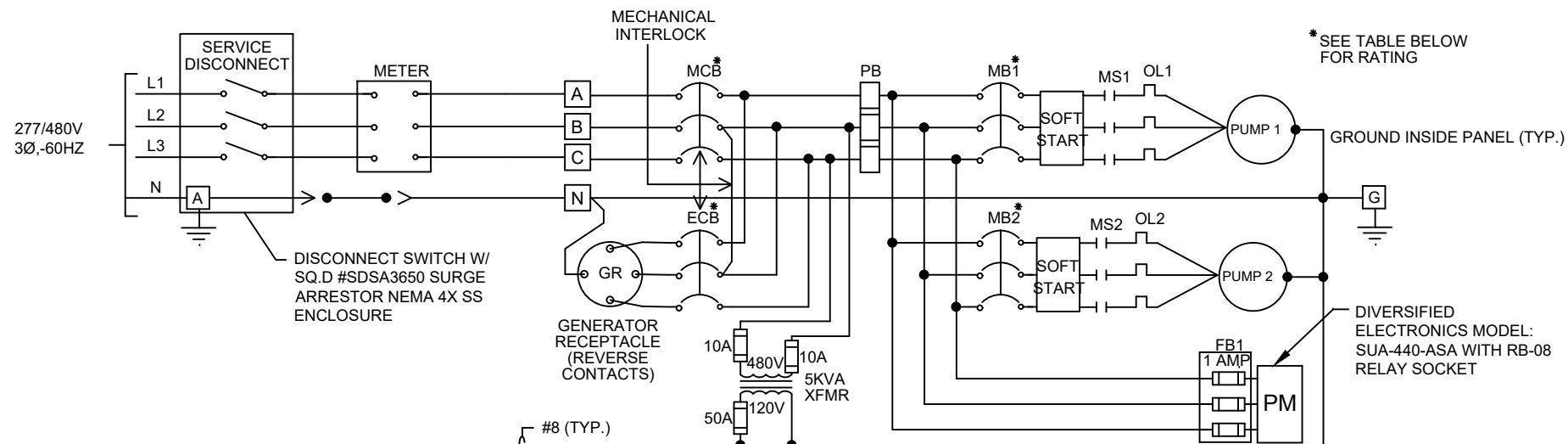


S-543 3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

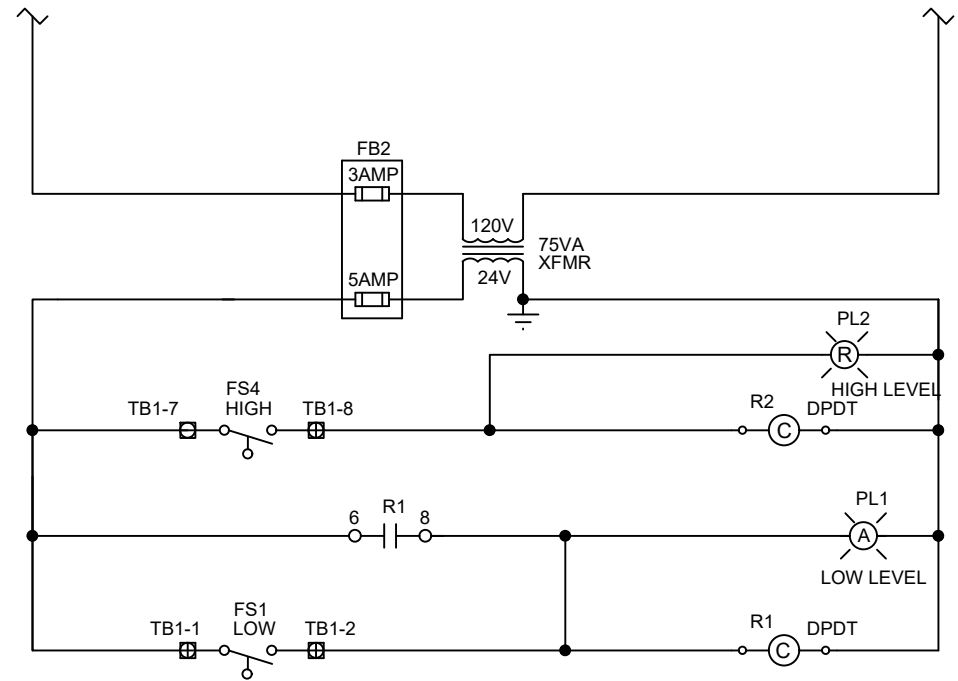
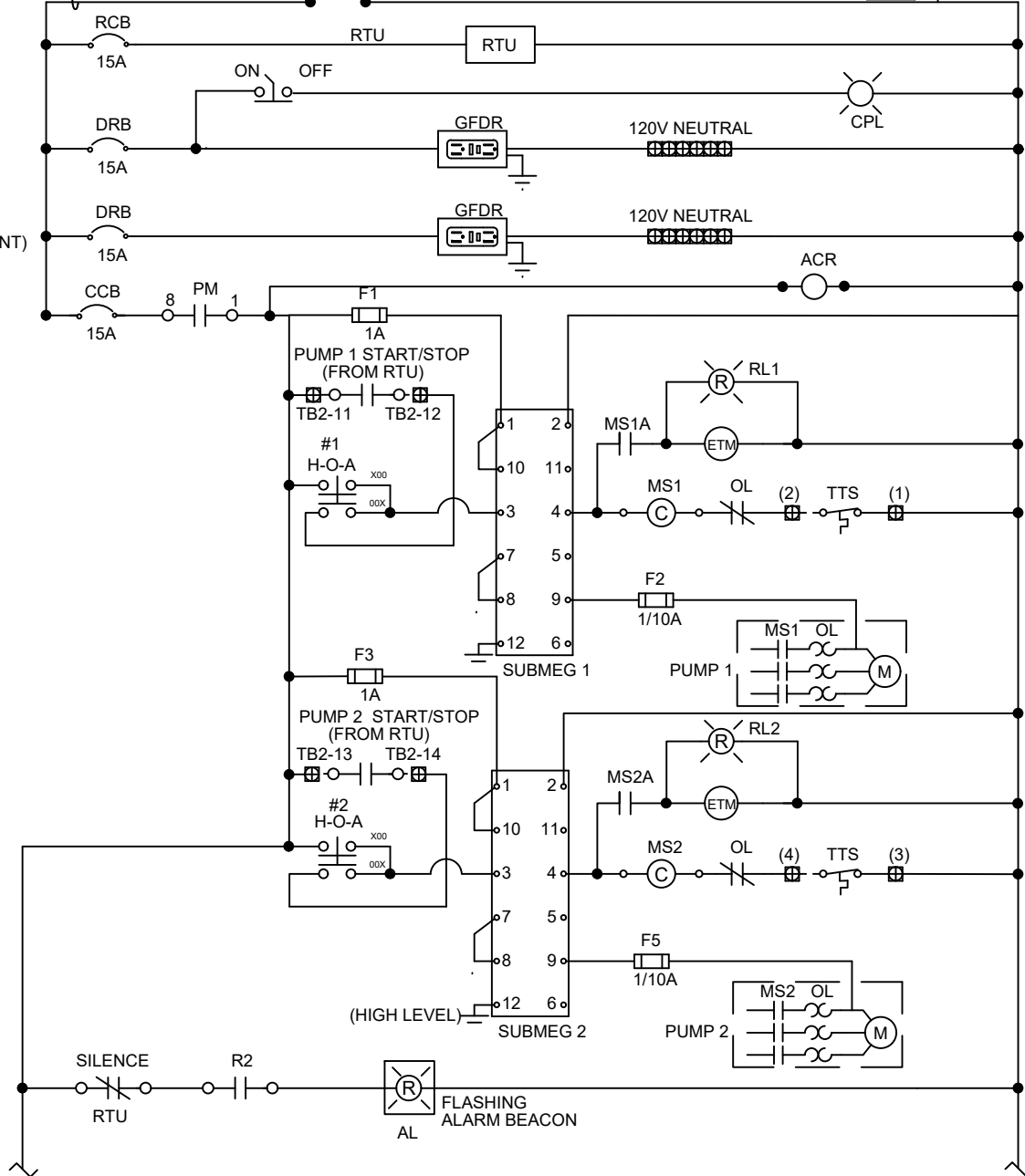
NOTE: FOR PUMPS GREATER THAN 35 HP

REVISION DATE 07-14-2022 ADOPTION DATE 08-17-2022	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME 3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	DETAIL NO. S-543
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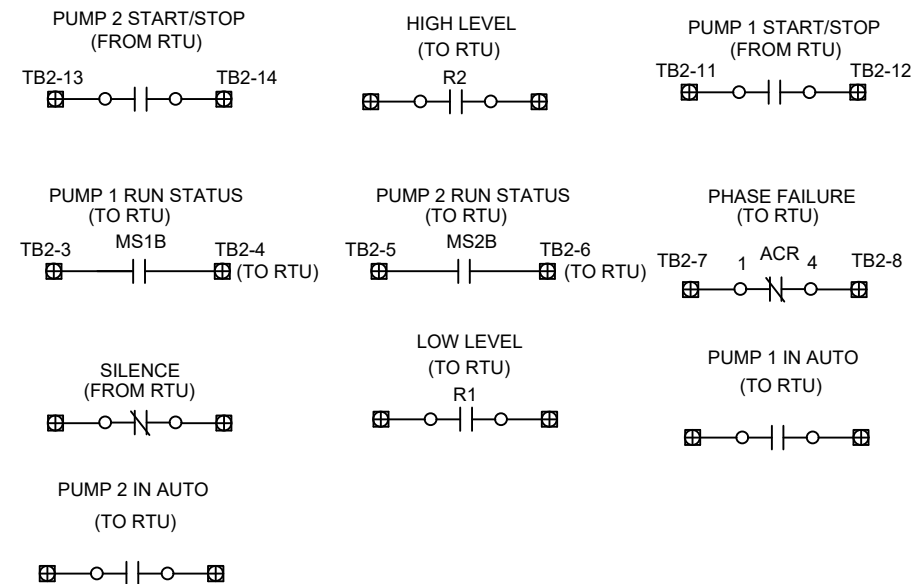


CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
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ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
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MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PM	PHASE MONITOR
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
ACR	AC RELAY



TO/FROM RTU



S-543A 3 PHASE 480V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

NOTE: FOR PUMPS GREATER THAN 35 HP

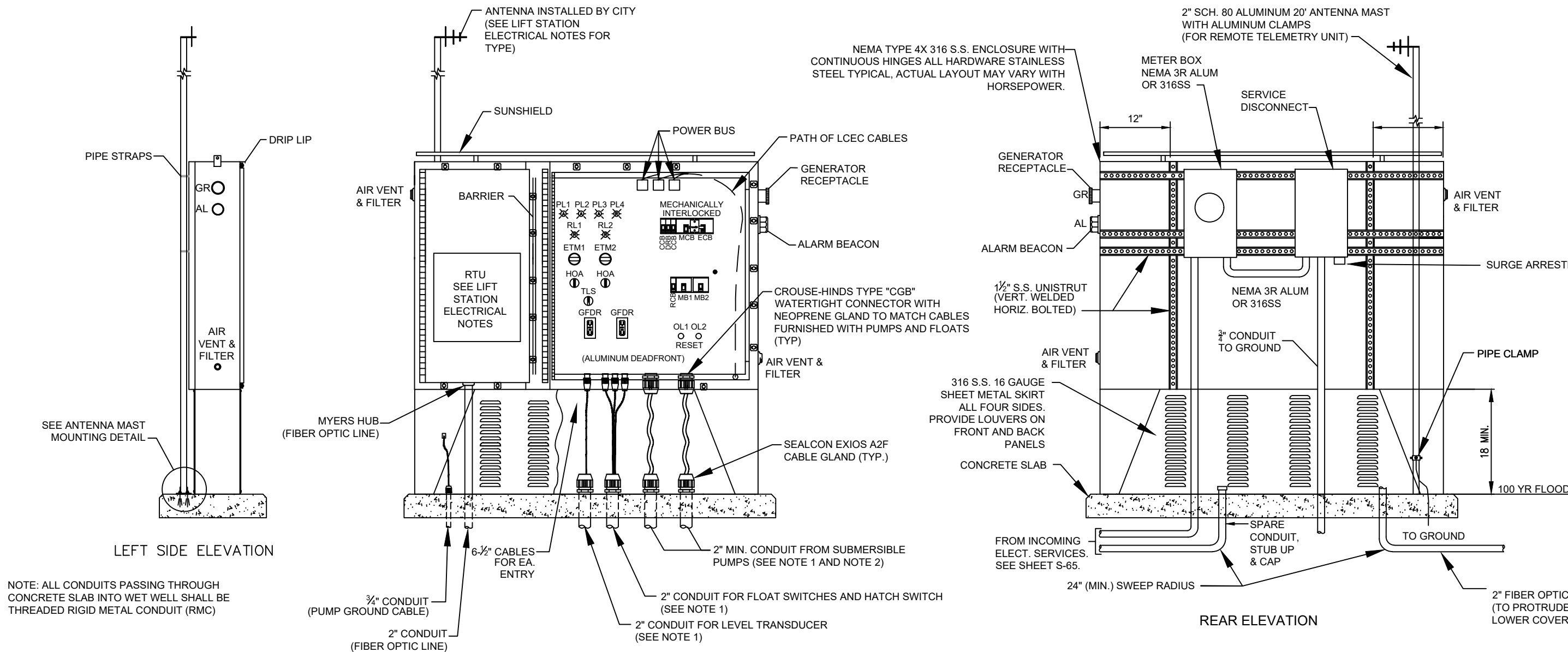
REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



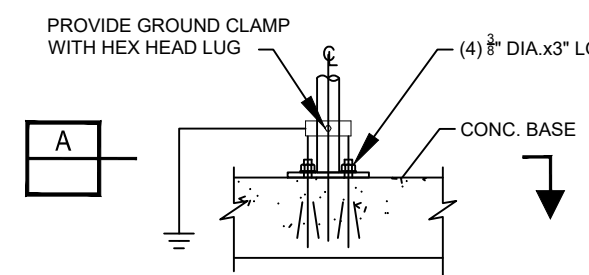
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
3 PHASE 480V CONTROL DIAGRAM
FOR DUPLEX LIFT STATION

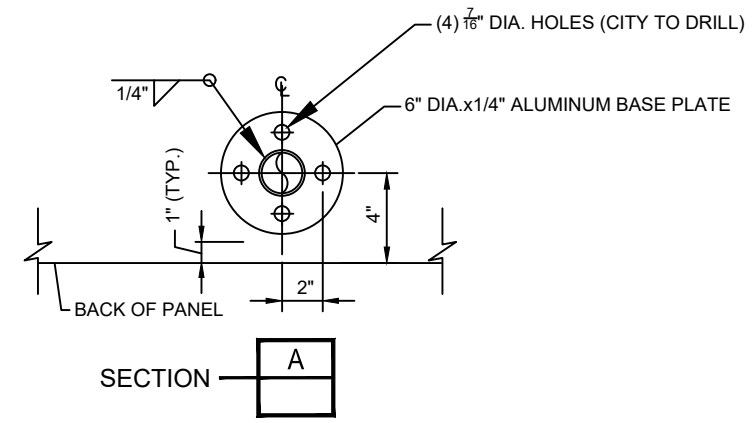
DETAIL NO.
S-543A



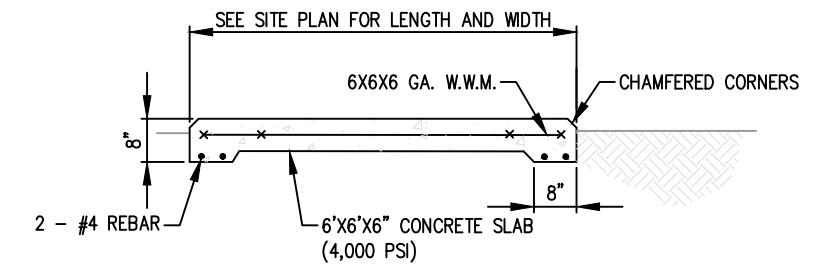
NOTE: ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC)



ANTENNA MAST MOUNTING DETAIL



SECTION A-A



SECTION B-B

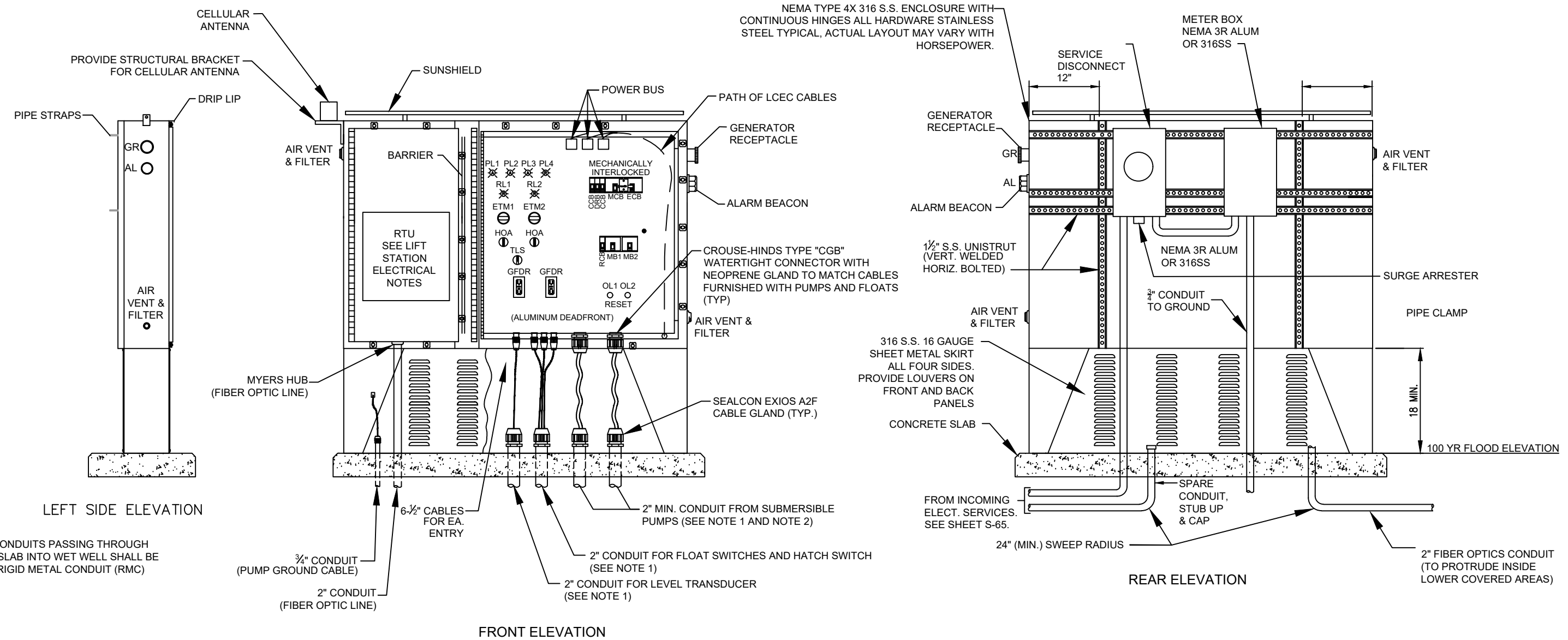
NOTE: CONTROL PANEL PAD TO BE A MINIMUM 6'x6'x6" UNLESS OTHERWISE SPECIFIED.

- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR HSQ RTU CONTROL FOR LIFT STATION.

S-544

3 PHASE 480V CONTROL PANEL FOR DUPLEX LIFT STATION
NOT TO SCALE

REVISION DATE		CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022				
ADOPTION DATE				
08-17-2022			3 PHASE 480V CONTROL PANEL FOR DUPLEX LIFT STATION	S-544



- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR CELL MODEM/FIBER OPTIC CONTROL FOR LIFT STATION.
 - 4) USE DETAIL FOR PRESSURE TRANSDUCER LEVEL CONTROL.

S-544A

3 PHASE 480V CONTROL PANEL FOR DUPLEX LIFT STATION

NOT TO SCALE

REVISION DATE		CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022				
ADOPTION DATE				
08-17-2022			3 PHASE 480V CONTROL PANEL FOR DUPLEX LIFT STATION	S-544A

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 1/2" SCH 80 PVC CONDUIT

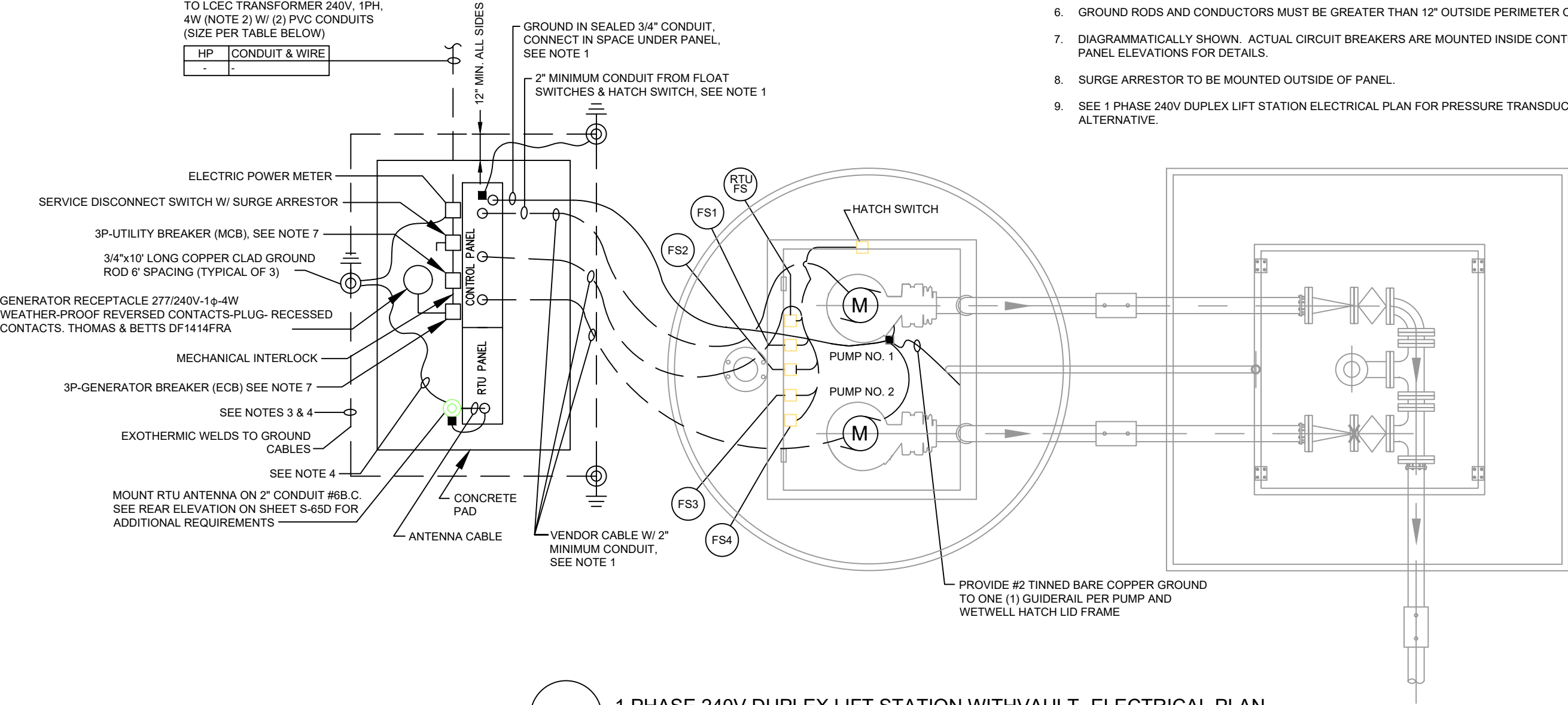
225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

ALL DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.
9. SEE 1 PHASE 240V DUPLEX LIFT STATION ELECTRICAL PLAN FOR PRESSURE TRANSDUCER LEVEL CONTROL ALTERNATIVE.



S-545

1 PHASE 240V DUPLEX LIFT STATION WITHVAULT- ELECTRICAL PLAN

NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME
1 PHASE 240V DUPLEX LIFT STATION WITH VAULT ELECTRICAL PLAN

DETAIL NO.
S-545

ELECTRICAL CONDUIT SIZE REQUIREMENTS

200 AMP OR LESS - 2 1/2" SCH 80 PVC CONDUIT

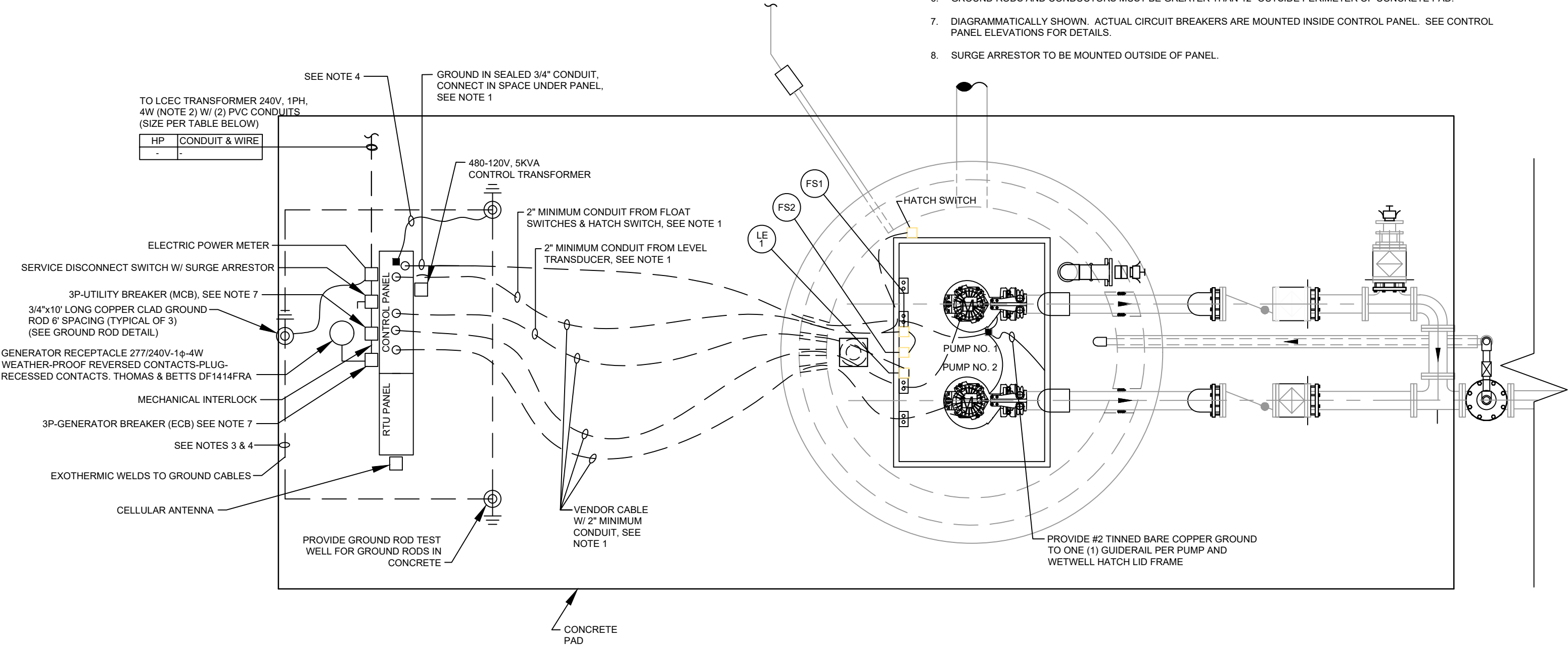
225 AMP OR GREATER - 4" SCH 80 PVC CONDUIT

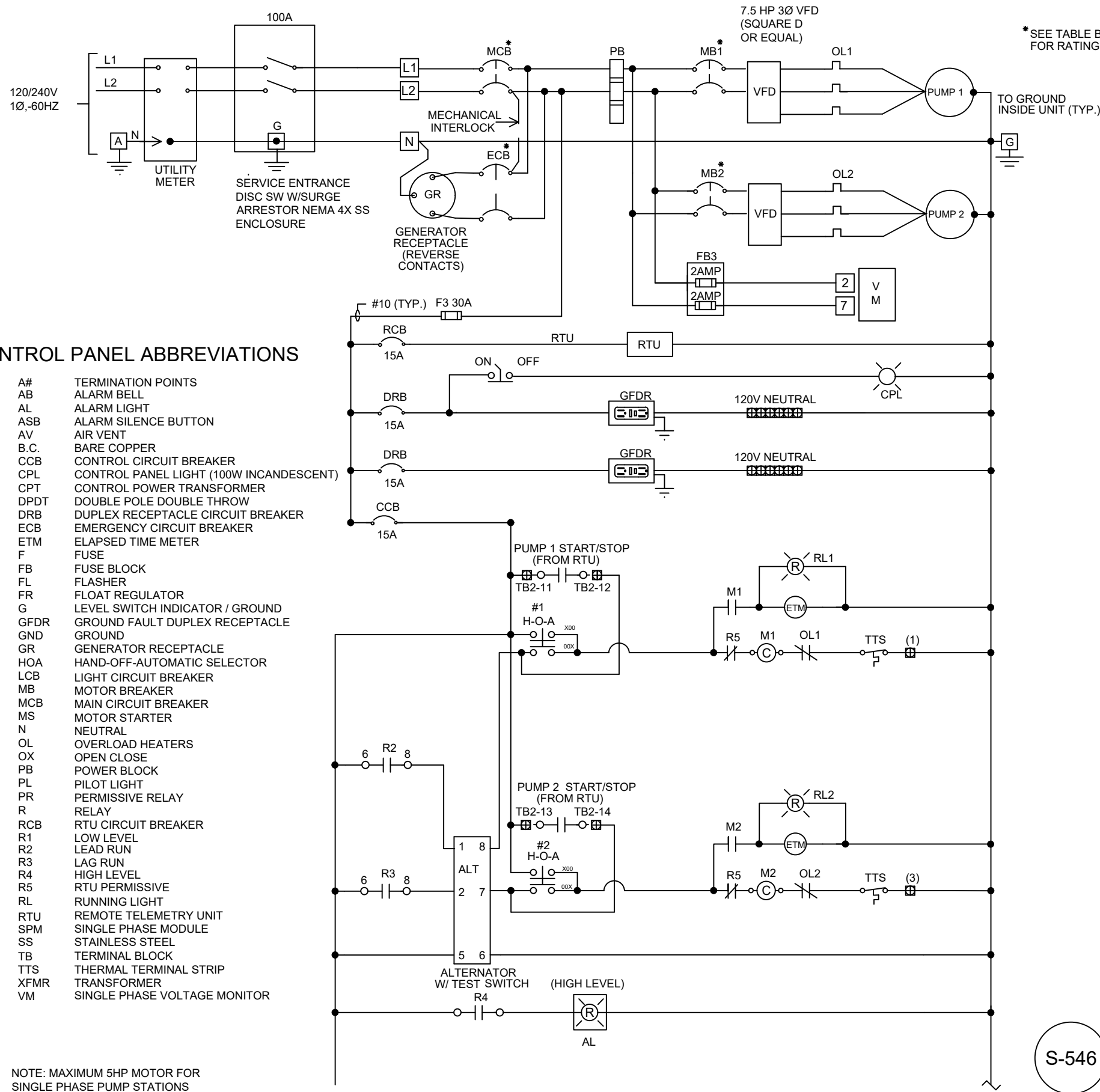
ALL DIRECTIONAL DRILL - 4" CONDUIT

CONDUIT RUNS 100' OR GREATER, OR WITH MORE THAN THREE DIRECTION CHANGES - 4" PVC CONDUIT (UNLESS OTHERWISE SPECIFIED)

NOTES:

1. CONDUIT EGRESSING FROM LIFT STATION WET WELL, SHALL BE FILLED WITH ELECTRICAL FOAM SEALER. (CHICO NOT ALLOWED) SEE SHEET S-58 NOTE E-8
2. THE CITY WILL PROVIDE THE ELECTRICAL SERVICE DROP AS SHOWN ON SITE PLAN. THE SUBCONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE (2 CONDUITS) TO LIFT STATION SITE AS SHOWN ON SITE PLAN.
3. PROVIDE 6' MINIMUM SPACING BETWEEN GROUND RODS - PROVIDE A TRIANGULAR LAYOUT OF THE RODS AS SHOWN
4. PROVIDE #2 TINNED BARE COPPER GROUND, MIN. 30" COVER - EXOTHERMIC WELD TO GROUND RODS. ENCIRCLE CONTROL PANEL SLAB. PROVIDE #2 TINNED BARE COPPER GROUND TO WETWELL HATCH FRAME AND PUMP GUIDE RAILS.
5. IF CABLE LENGTH IS MORE THAN 100', SIZE CABLE IN ACCORDANCE WITH NEC CODE TO ENSURE LESS THAN 3% VOLTAGE DROP.
6. GROUND RODS AND CONDUCTORS MUST BE GREATER THAN 12" OUTSIDE PERIMETER OF CONCRETE PAD.
7. DIAGRAMMATICALLY SHOWN. ACTUAL CIRCUIT BREAKERS ARE MOUNTED INSIDE CONTROL PANEL. SEE CONTROL PANEL ELEVATIONS FOR DETAILS.
8. SURGE ARRESTOR TO BE MOUNTED OUTSIDE OF PANEL.



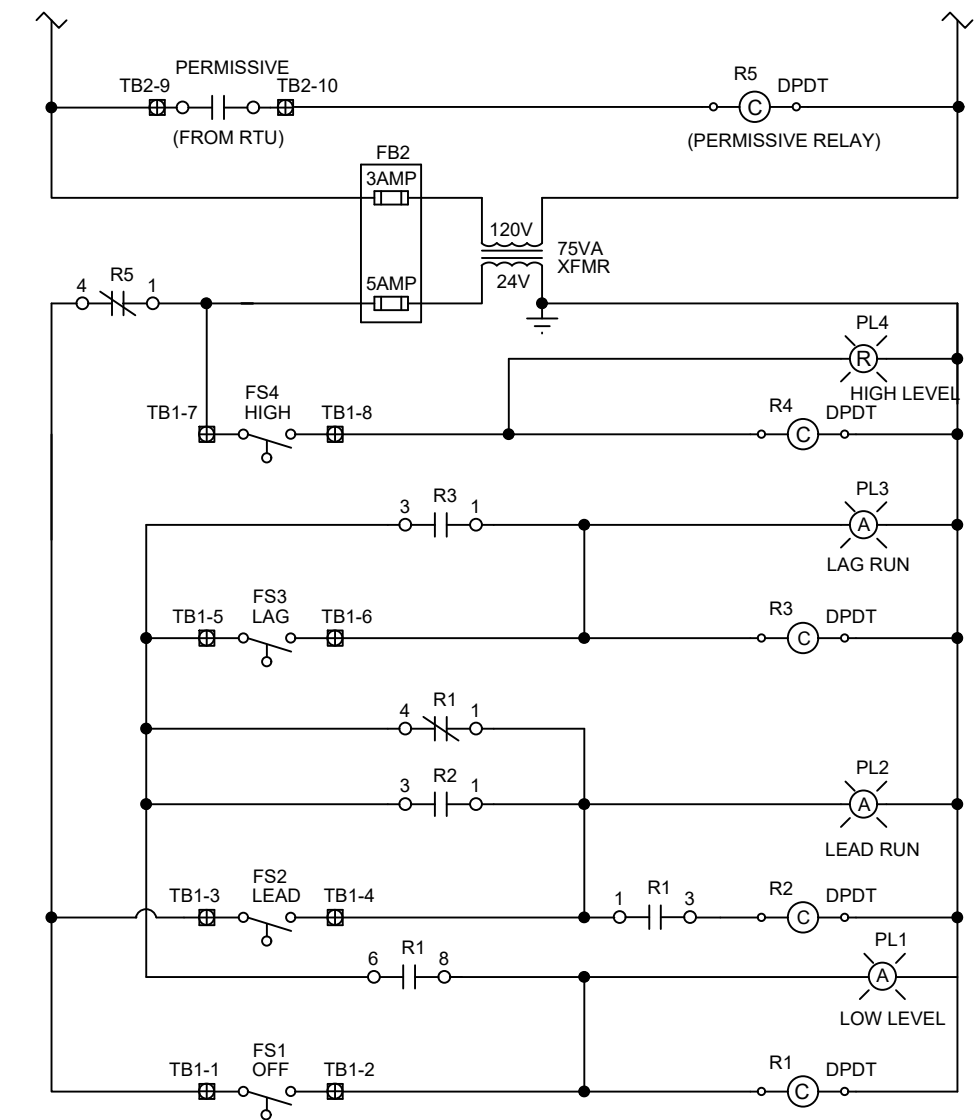


* SEE TABLE BELOW FOR RATING

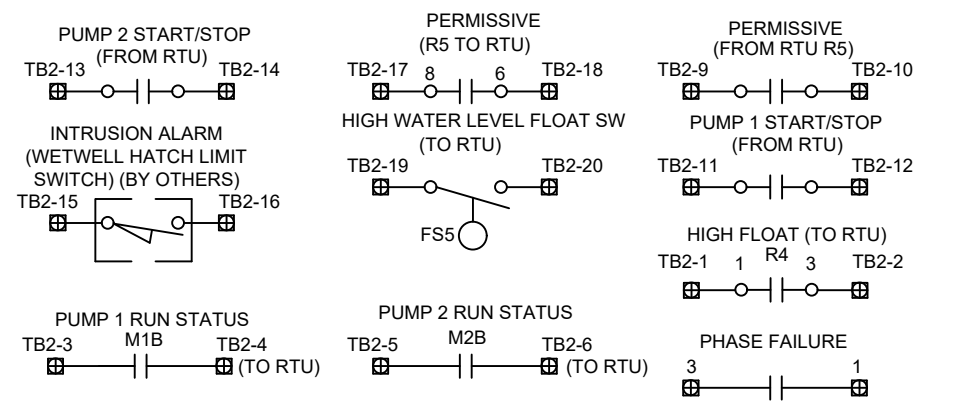
CONTROL PANEL ABBREVIATIONS

- | | |
|------|---|
| A# | TERMINATION POINTS |
| AB | ALARM BELL |
| AL | ALARM LIGHT |
| ASB | ALARM SILENCE BUTTON |
| AV | AIR VENT |
| B.C. | BARE COPPER |
| CCB | CONTROL CIRCUIT BREAKER |
| CPL | CONTROL PANEL LIGHT (100W INCANDESCENT) |
| CPT | CONTROL POWER TRANSFORMER |
| DPDT | DOUBLE POLE DOUBLE THROW |
| DRB | DUPLEX RECEPTACLE CIRCUIT BREAKER |
| ECB | EMERGENCY CIRCUIT BREAKER |
| ETM | ELAPSED TIME METER |
| F | FUSE |
| FB | FUSE BLOCK |
| FL | FLASHER |
| FR | FLOAT REGULATOR |
| G | LEVEL SWITCH INDICATOR / GROUND |
| GFDR | GROUND FAULT DUPLEX RECEPTACLE |
| GND | GROUND |
| GR | GENERATOR RECEPTACLE |
| HOA | HAND-OFF-AUTOMATIC SELECTOR |
| LCB | LIGHT CIRCUIT BREAKER |
| MB | MOTOR BREAKER |
| MCB | MAIN CIRCUIT BREAKER |
| MS | MOTOR STARTER |
| N | NEUTRAL |
| OL | OVERLOAD HEATERS |
| OX | OPEN CLOSE |
| PB | POWER BLOCK |
| PL | PILOT LIGHT |
| PR | PERMISSIVE RELAY |
| R | RELAY |
| RCB | RTU CIRCUIT BREAKER |
| R1 | LOW LEVEL |
| R2 | LEAD RUN |
| R3 | LAG RUN |
| R4 | HIGH LEVEL |
| R5 | RTU PERMISSIVE |
| RL | RUNNING LIGHT |
| RTU | REMOTE TELEMETRY UNIT |
| SPM | SINGLE PHASE MODULE |
| SS | STAINLESS STEEL |
| TB | TERMINAL BLOCK |
| TTS | THERMAL TERMINAL STRIP |
| XFMR | TRANSFORMER |
| VM | SINGLE PHASE VOLTAGE MONITOR |

NOTE: MAXIMUM 5HP MOTOR FOR SINGLE PHASE PUMP STATIONS



TO RTU

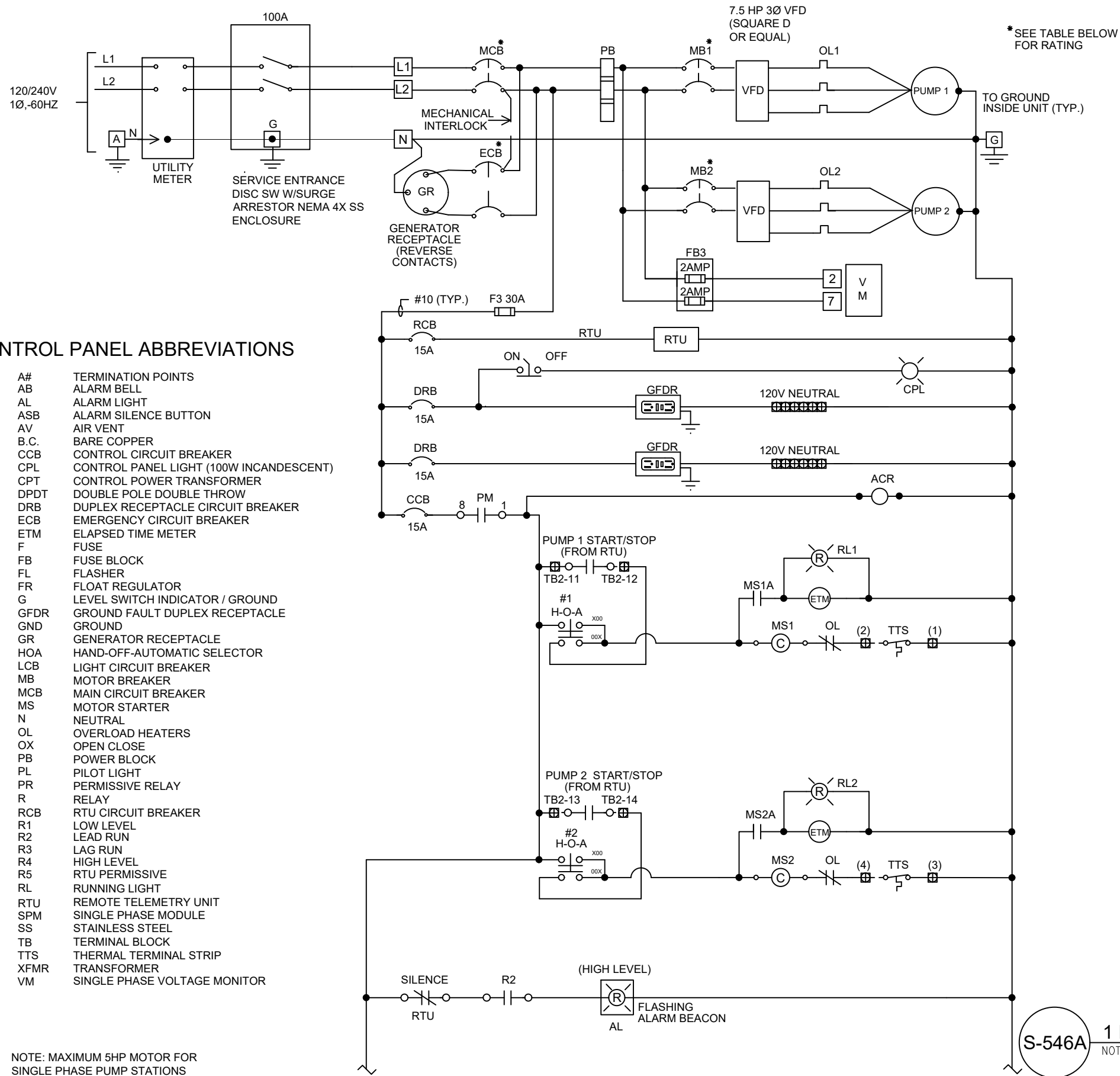


S-546 1 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION
NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS 5 HP OR LESS ONLY

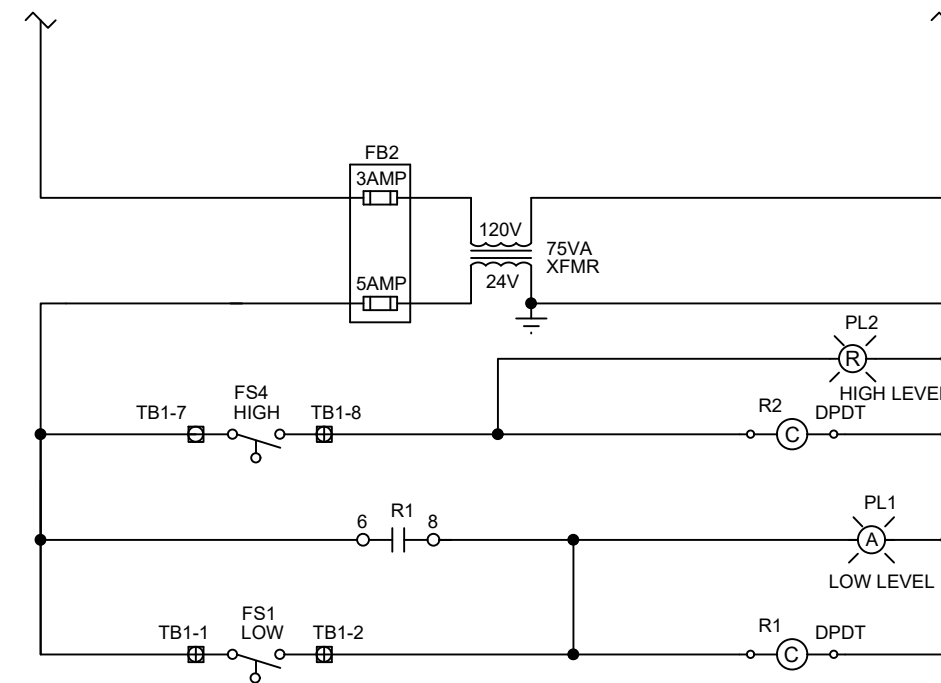
REVISION DATE 07-14-2022 ADOPTION DATE 08-17-2022	 CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME 1 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION	DETAIL NO. S-546
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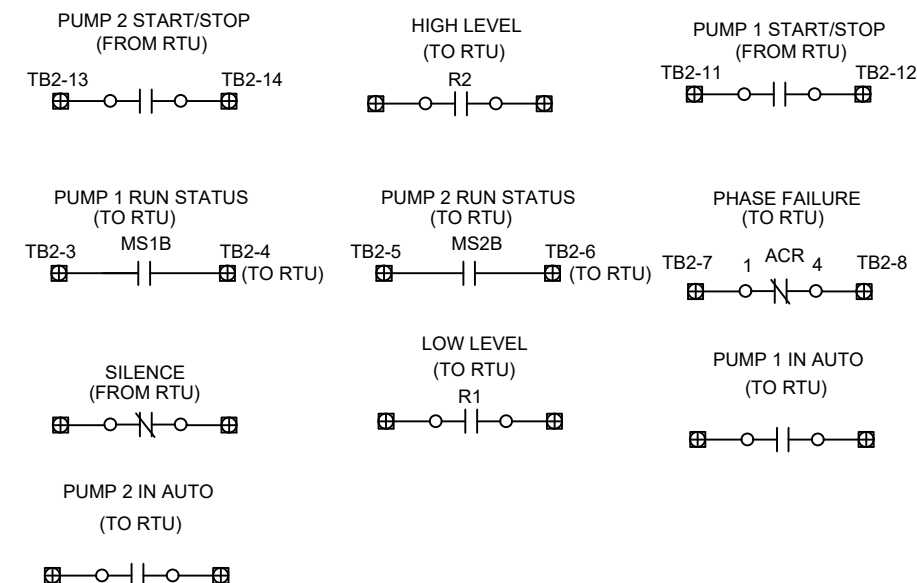
CONTROL PANEL ABBREVIATIONS

A#	TERMINATION POINTS
AB	ALARM BELL
AL	ALARM LIGHT
ASB	ALARM SILENCE BUTTON
AV	AIR VENT
B.C.	BARE COPPER
CCB	CONTROL CIRCUIT BREAKER
CPL	CONTROL PANEL LIGHT (100W INCANDESCENT)
CPT	CONTROL POWER TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW
DRB	DUPLEX RECEPTACLE CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
FL	FLASHER
FR	FLOAT REGULATOR
G	LEVEL SWITCH INDICATOR / GROUND
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HOA	HAND-OFF-AUTOMATIC SELECTOR
LCB	LIGHT CIRCUIT BREAKER
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MS	MOTOR STARTER
N	NEUTRAL
OL	OVERLOAD HEATERS
OX	OPEN CLOSE
PB	POWER BLOCK
PL	PILOT LIGHT
PR	PERMISSIVE RELAY
R	RELAY
RCB	RTU CIRCUIT BREAKER
R1	LOW LEVEL
R2	LEAD RUN
R3	LAG RUN
R4	HIGH LEVEL
R5	RTU PERMISSIVE
RL	RUNNING LIGHT
RTU	REMOTE TELEMETRY UNIT
SPM	SINGLE PHASE MODULE
SS	STAINLESS STEEL
TB	TERMINAL BLOCK
TTS	THERMAL TERMINAL STRIP
XFMR	TRANSFORMER
VM	SINGLE PHASE VOLTAGE MONITOR

NOTE: MAXIMUM 5HP MOTOR FOR
SINGLE PHASE PUMP STATIONS



TO/FROM RTU



S-546A

1 PHASE 240V CONTROL DIAGRAM FOR DUPLEX LIFT STATION

NOT TO SCALE

HP	Motor Voltage	mCB (A)	MB (A)	ECB	Gen. Receptacle

NOTE: FOR PUMPS 5 HP OR LESS ONLY

NOTE: FOR PRESSURE TRANSDUCER LEVEL CONTROL

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



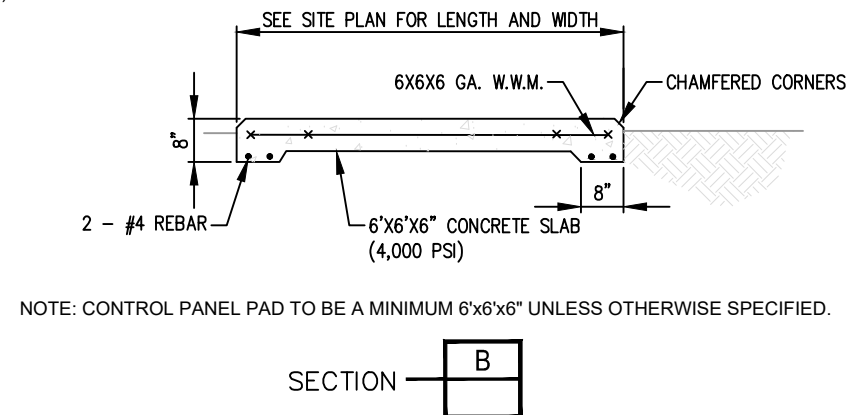
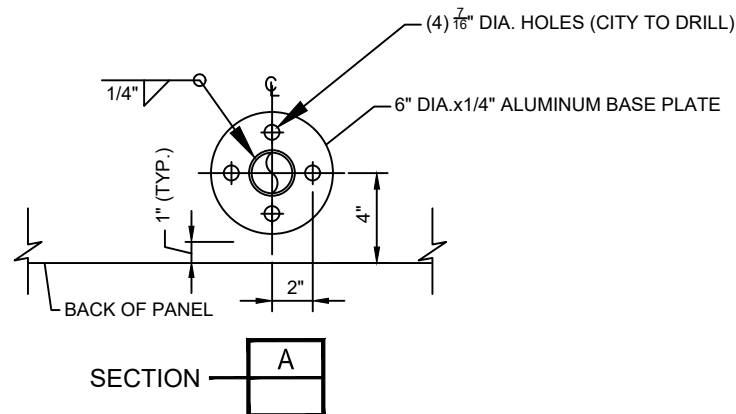
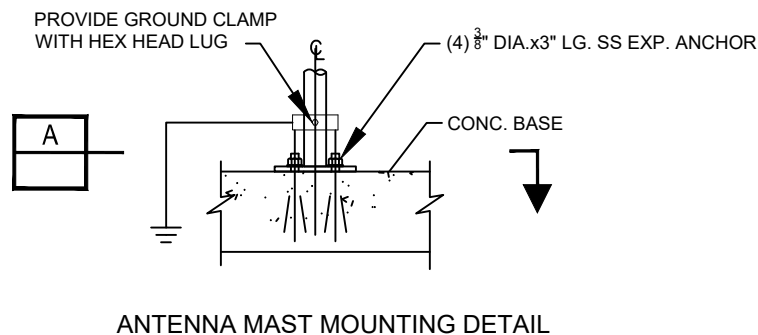
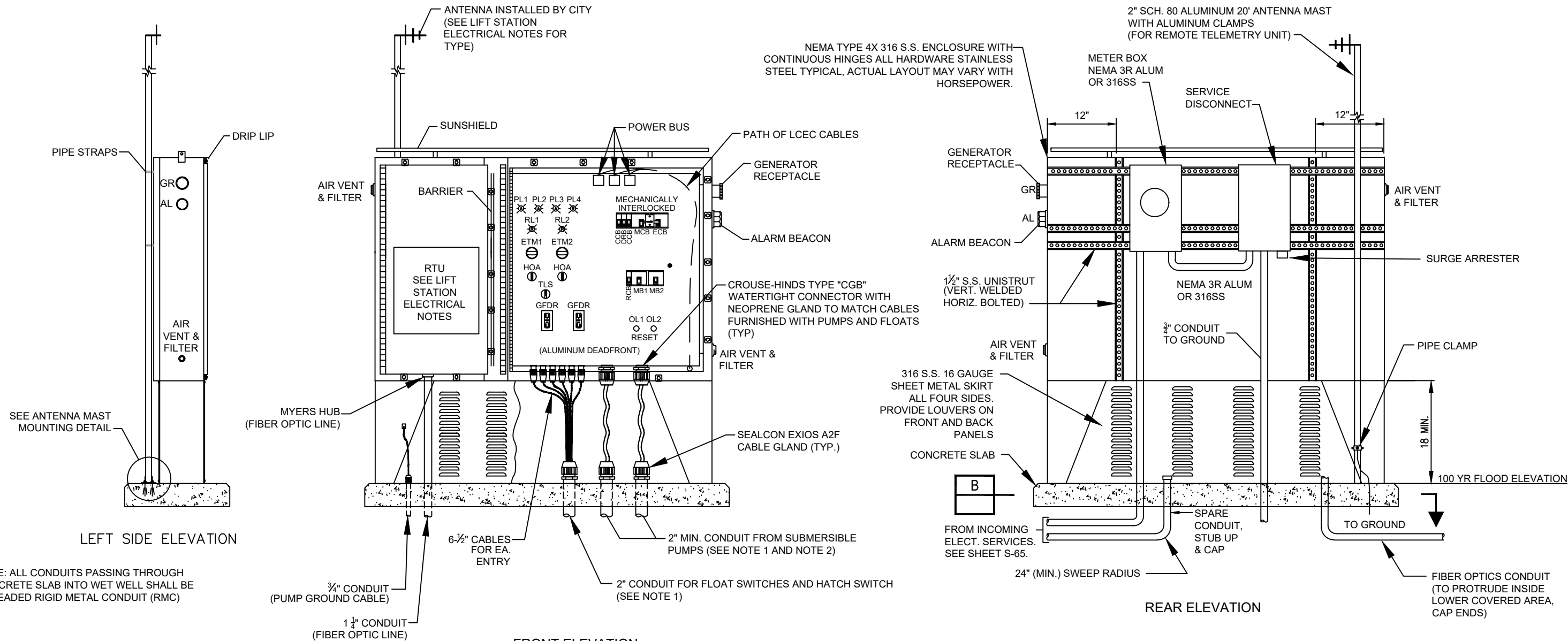
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME

1 PHASE 240V CONTROL DIAGRAM
FOR DUPLEX LIFT STATION

DETAIL NO.

S-546A



NOTE: CONTROL PANEL PAD TO BE A MINIMUM 6'x6'x6" UNLESS OTHERWISE SPECIFIED.

- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR HSQ RTU CONTROL FOR LIFT STATION.

S-547

1 PHASE 240V CONTROL PANEL FOR DUPLEX LIFT STATION NOT TO SCALE

REVISION DATE
07-14-2022
ADOPTION DATE
08-17-2022



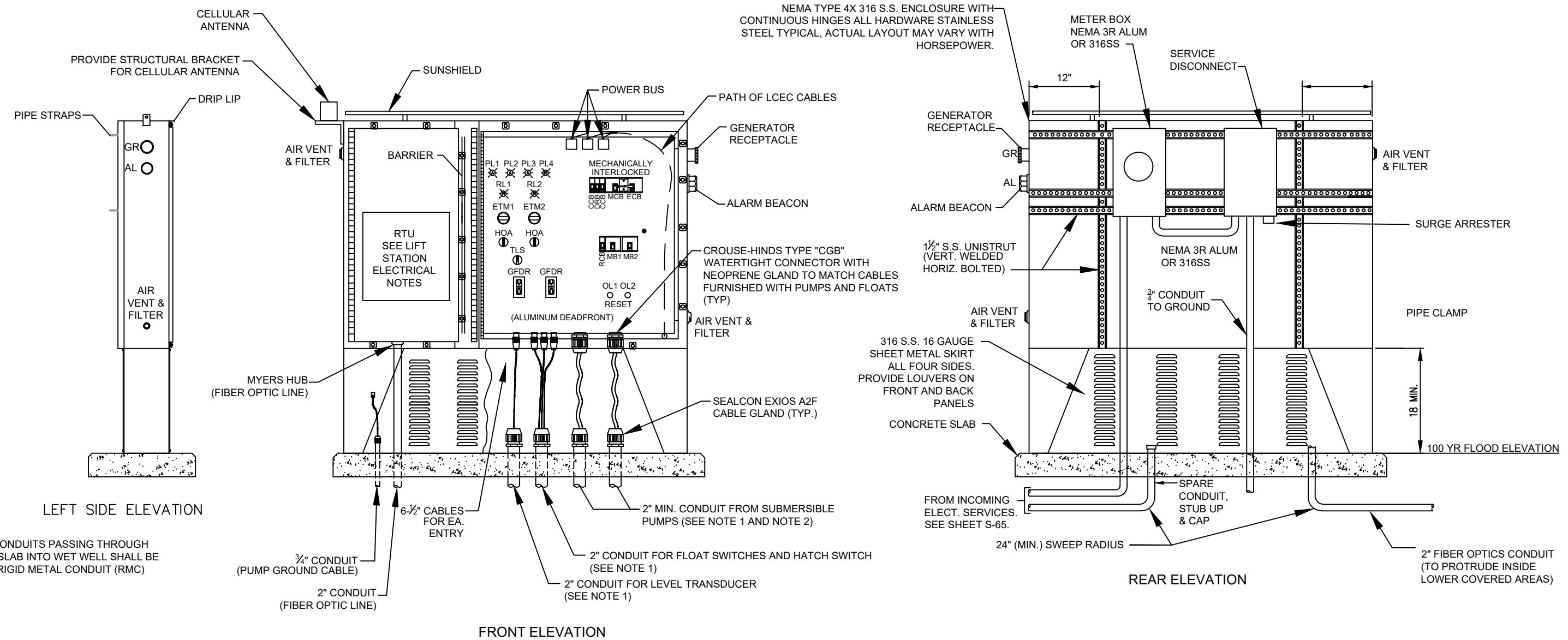
CITY OF CAPE CORAL
UTILITIES DEPARTMENT
P.O. BOX 150027
CAPE CORAL, FLORIDA 33915-0027

DETAIL NAME

1 PHASE 240V CONTROL PANEL
FOR DUPLEX LIFT STATION

DETAIL NO.

S-547



- NOTES:
- 1) ALL CONDUITS PASSING THROUGH CONCRETE SLAB INTO WET WELL SHALL BE THREADED RIGID METAL CONDUIT (RMC).
 - 2) USE OF FLYGT PUMPS REQUIRES ONE CONDUIT FOR EACH PUMP WITH A TOTAL OF TWO REQUIRED. USE OF EBARA PUMPS REQUIRES TWO CONDUITS FOR EACH PUMP WITH A TOTAL OF FOUR.
 - 3) USE DETAIL FOR CELL MODEM/FIBER OPTIC CONTROL FOR LIFT STATION.
 - 4) USE DETAIL FOR PRESSURE TRANSDUCER LEVEL CONTROL.

S-547A 1 PHASE 240V CONTROL PANEL FOR DUPLEX LIFT STATION
NOT TO SCALE

REVISION DATE	CITY OF CAPE CORAL UTILITIES DEPARTMENT P.O. BOX 150027 CAPE CORAL, FLORIDA 33915-0027	DETAIL NAME	DETAIL NO.
07-14-2022		1 PHASE 240V CONTROL PANEL FOR DUPLEX LIFT STATION	S-547A
ADOPTION DATE			
08-17-2022			