



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

NOTICE TO BIDDERS

ST. TAMMANY PARISH

Sealed bids will be received by the Department of Procurement, until **2:00 p.m., Wednesday, July 14, 2021**, and then opened and read publicly at that time by the Procurement Staff for the following project:

Bid #21-24-2 – Lift Station and Blower Control Electrical Panels

Each paper bid must be submitted in a sealed envelope. The outside of the envelope shall show the Name and Address of the Bidder, the Bid Name and the Bid Number.

This bid package is available online at <http://www.stpgov.org/> or at www.bidexpress.com.

It is the Vendor's responsibility to check the Parish website or bid express frequently for any possible addenda that may be issued. The Parish is not responsible for a Vendor's failure to download any addenda documents required to complete a submission.

Bids will be received at 21454 Koop Dr., Suite 2F, Mandeville, LA 70471 from each bidder or his agent and given a written receipt, by certified mail with return receipt requested, or electronically at www.bidexpress.com.

Procurement Department

Lift Station and Blower Control Electrical Panels
Bid # 21-24-2

Prices remain in effect through December 31, 2022, with the option to extend for (1) one additional year, by written agreement of both parties. Any delivery and/or service charges must be included in the bid price. Quantities may vary; minimum orders shall not be required. St. Tammany Parish Government (Parish) reserves the right to award materials in whole, in part and/ or to multiple vendors. Bids must be submitted on the Pricing Sheet & Unit Price Sheet provided. **All fields must be filled in, NO blanks will be permitted. If the item is unavailable, enter N/A.**

The Parish reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal, illegible, or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.

Prior Approved Equivalents and Inquiries

All products shall be new and of current manufacture. Where specified on the bid sheets, prices shall be for the **approved Make/Brand or a Prior Approved Equal** by the Parish. Where the specifications do not indicate an Approved Make/Brand for an item, the Parish has no preference. The name of any manufacturer mentioned in the specifications is for the purpose of establishing a minimum acceptable standard of quality desired by the Parish. ***All products bid must have prior approval as “Prior Approved Equivalents”.***

Should the Bidder desire to submit inquiries and/or request approval of an alternative product, Bidder to submit: make, model, supply catalog cut sheets and descriptive literature for the alternative product and a copy of the bid which clearly identifies the item(s) for which the equivalent product is being requested to the Procurement Department, procurement@stpgov.org, by 2:00 PM within seven (7) business days prior to the bid opening. The Parish shall review the inquiry and/or request for an “approved equivalent” and issue an addendum within three (3) business days prior to the bid opening if the prior approval submission is accepted as an equivalent and/or respond to inquiries.

Specifications

The Parish, as a function of Tammany Utilities, owns and operates approximately fifty (50) wastewater treatment plants, forty (40) water wells, over two-hundred (200) sewage lift stations, and miles of water distribution and sewage collection lines.

It is the intent of the Parish to secure pricing for the specified Lift Station and Blower Control Electrical Panels (panels) on the **Unit Price Sheet** for use by the Parish. The Parish intends to replace existing panels and acquire panels for new sites on an ‘as needed’ basis. Panels must be assembled per the specifications (Attachment ‘A’, Attachment ‘B’ or Attachment ‘C’). Panels will be ordered on an ‘as needed’ basis. Panels shall have at least a one (1) year warranty for the repair or replacement of defects. Samples of materials furnished under the bid shall be submitted for approval by the Parish when and as directed.

In the event additional items and/or upgraded items are required by the Parish, the Bidder may provide the items with prior written approval by the Parish.

Delivery

- Tammany Utilities, St. Tammany Parish Government, 636 W. 26th Avenue,
Covington, LA 70433

Lift Station and Blower Control Electrical Panels

Bid # 21-24-2

Specification and Pricing Sheet

Bidder must acknowledge all addenda by entering the number the Parish assigned to EACH of the addenda that the Bidder is acknowledging.

The Bidder acknowledges receipt of the following:

ADDENDA: _____

All fields must be filled in. NO blanks will be permitted. If the item is unavailable please enter N/A.

“Price/Each” shall represent the cost for the specified item as well as any delivery charges (if applicable) to the location(s) indicated in this bid.

Company: _____

Signature: _____

Printed Name: _____

Title: _____

Address: _____

Telephone: _____

Email: _____

Date: _____

Lift Station and Blower Control Electrical Panels

Bid # 21-24-2

Specifications and Pricing Sheet

REF No.	TYPE	WIRING DIAGRAM AND PARTS LIST SPECIFICATIONS	ATTACHMENT	COST PER UNIT
Lift Station Panel-01	240 Volt Control Panel 0 – 2 HP	240 Volt Duplex Lift Station Standard Control Panel	A	\$
Lift Station Panel-02	240 Volt Control Panel 3 HP	240 Volt Duplex Lift Station Standard Control Panel	A	\$
Lift Station Panel-03	240 Volt Control Panel 5 HP	240 Volt Duplex Lift Station Standard Control Panel	A	\$
Lift Station Panel-04	240 Volt Control Panel 7.5 HP	240 Volt Duplex Lift Station Standard Control Panel	A	\$
Lift Station Panel-05	240 Volt Control Panel 11.3 HP	240 Volt Duplex Lift Station Standard Control Panel	A	\$
Lift Station Panel-06	240 Volt Control Panel 15 HP	240 Volt Duplex Lift Station Standard Control Panel	A	\$
Lift Station Panel-07	277/480 Volt Control Panel 0 – 2 HP	480 Volt Duplex Lift Station Standard Control Panel	B	\$
Lift Station Panel-08	277/480 Volt Control Panel 3 HP	480 Volt Duplex Lift Station Standard Control Panel	B	\$
Lift Station Panel-09	277/480 Volt Control Panel 5 HP	480 Volt Duplex Lift Station Standard Control Panel	B	\$
Lift Station Panel-10	277/480 Volt Control Panel 7.5 HP	480 Volt Duplex Lift Station Standard Control Panel	B	\$
Lift Station Panel-11	277/480 Volt Control Panel 11.3 HP	480 Volt Duplex Lift Station Standard Control Panel	B	\$
Lift Station Panel-12	277/480 Volt Control Panel 15 HP	480 Volt Duplex Lift Station Standard Control Panel	B	\$

Lift Station and Blower Control Electrical Panels

Bid # 21-24-2

Specifications and Pricing Sheet

All fields must be filled in, NO blanks will be permitted. If the item is unavailable, enter N/A.

Blower Control Panel -001	480 Volt 3 Phase 1 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -002	480 Volt 3 Phase 2 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -003	480 Volt 3 Phase 3 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -004	480 Volt 3 Phase 5 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -005	480 Volt 3 Phase 7.5 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -006	480 Volt 3 Phase 10 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -007	480 Volt 3 Phase 15 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -008	480 Volt 3 Phase 20 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -009	480 Volt 3 Phase 30 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -010	480 Volt 3 Phase 40 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -011	480 Volt 3 Phase 50 HP	480 Volt Blower Standard Control Panel	C	\$
Blower Control Panel -012	480 Volt 3 Phase 75 HP	480 Volt Blower Standard Control Panel	C	\$

Blower Control Panel -013	480 Volt 3 Phase 100 HP	480 Volt Blower Standard Control Panel	C	\$
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PARTS LIST FOR 120/240 VOLT CONTROL PANEL

1. INCOMING MAIN POWER DISTRIBUTION BLOCK - BLACK PHENOLIC, 3 POLE, 380 AMP, 600VOLT, 100KA WITHSTAND RATING WITH RK5 FUSE PROTECTION, FINGER SAFE GUARDS
 - A. INCOMING WIRE RANGE - 1 PRIMARY PORT PER POLE, #4 TO #500 KCMIL
 - B. DISTRIBUTION WIRE RANGE AND NUMBER - SIX SECONDARY PORTS PER POLE, #14 TO #2/0
 - C. MFGR/CAT#: SQUARE D #9080LBA365106, DIMS: DXHXW=3.1"x5.5"x8.5", WITH CLEAR COVER #9080LB53
2. NEUTRAL BLOCK - 380 AMP, BLACK PHENOLIC, 1P, 380 AMP, 600VOLT, 100KA WITHSTAND RATING, ISOLATED, FINGER SAFE GUARD
 - A. INCOMING WIRE RANGE - 1 PRIMARY PORT PER POLE, #4 TO #500 KCMIL
 - B. DISTRIBUTION WIRE RANGE AND NUMBER - SIX SECONDARY PORTS PER POLE, #14 TO #2/0
 - C. MFGR/CAT#: SQUARE D #9080LBA165106, DIMS: DXHXW=3.1"x5.5"x3.2", WITH CLEAR COVER #9080LB51
3. GROUND TERMINAL STRIP - 20 POSITION, #6 WIRE MAX., MOUNT TO BACKPLANE
4. SURGE CAPACITOR - RATED VOLTAGE 650V, 3 PHASE, 4 WIRE, DELTA # CA-603
5. LIGHTNING ARRESTOR - 600 VOLTS MAX., DELTA TYPE SERVICE, 3 POLE, 4 WIRE, RATED 40KA SURGE PER PHASE, MOUNT ON BRACKET INSIDE CONTROL PANEL. SQUARE D # SDSA3650D, OR DELTA # LA-303.
6. PMP1 PHASE MONITOR PROTECTOR - 3 POLE PHENOLIC FUSE HOLDER WITH 3 - 5 (FIVE) AMP 250 VOLT CLASS R FUSES. SQUARE D #FB3211R.
7. PHASE MONITOR - 3 PHASE, 190-270 VOLT, ADJUSTABLE, WITH GREEN "POWER OKAY" PILOT LIGHT, SPDT 10 AMP RATED CONTACT, UNDERVOLTAGE, PHASE LOSS, PHASE REVERSAL, PLUG IN OCTAL BASE, 8 PIN. RELAY ONLY ALLOWS FOR "A-B-C" ROTATION. DIVERSIFIED ELECTRONICS # SLA-230-ASA
8. PHASE MONITOR BASE - 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR2P-06
9. CB1, CB2 - THERMAL-MAGNETIC SQUARE D, 3 POLE, 600 VOLTS, 25 KAIC AT 240V AMPERAGE RATING, BY PUMP MOTOR HP AS SHOWN IN TABLE A. POWER SHALL BE THROUGH LUGS ON BOTH ENDS.
10. M1, M2 MOTOR STARTER - SQUARE D, FVNR OPEN TYPE, 3 POLE, 600 VOLTS, NEMA SIZE SHOWN IN TABLE B BY PUMP MOTOR HP, 4 NO/NC FORM "C" AUX CONTACTS, 120 VOLT COIL
11. OL1 AND OL2 "HEATERS" - SQUARE D, BUILT INTO STARTER OL FRAME, MELTING ALLOY TYPE, MANUAL RESET, SELECT BASED ON PUMP MOTOR FLA
12. GFI RECEPTACLE, 15 AMP, 125 VOLTS, FLUSH MOUNT IN 1G BOX W/ COVER ON BACKPLANE
13. CB3, THERMAL-MAGNETIC, 15/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR GFI RECEPTACLE. SQUARE D # Q015
14. CB4, THERMAL-MAGNETIC, 15/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR CONTROLS. SQUARE D # Q015
15. R1 - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D # 8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
16. R1 SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK), FOR 3 POLE RELAY, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D # 8501NR61
17. HOA1, HOA2, 3 POSITION MAINTAINED, METALLIC BODY, 22mm DIAMETER, KNOB OPERATOR. LABEL "HAND-OFF-AUTO". SQUARE D HARMONY XB4 METAL, ZB48BD3 (STD BLK 45 DEGREE HANDLE), ZB4BZ105 CONTACT BLOCK (1 NO + 1 NC), 1 ADDITIONAL ZBE505 CONTACT BLOCK (1 NO + 1 NC).
18. ETM1, ETM2, ELAPSED TIME METER, 100,000 HOURS, QUARTZ/DIGITAL WITH 1/8" ANALOG NUMBERS, NON-RESETTABLE, 120 VOLTS AC, NEMA 12/4X, RECTANGULAR HOLE PANEL MOUNT, MOUNT IN DEAD FRONT DOOR PANEL. REDINGTON MODEL 722
19. ALTERNATOR (ALT) WITH LEAD/LAG/OFF TOGGLE SELECTOR SWITCH, 125 VOLT AC, 1PDT, RATED 10 AMPS "CONTINUOUS DUTY", REQUIRES 8 PIN OCTAL BASE. TIMEMARK CAT# 261-ST-120
20. ALT RELAY SOCKET BASE - 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 300 V, 10 AMP. IDEC # SR2P-06, OR SQUARE D # 8501NR51
21. TD1 - TIME DELAY RELAY, FOR START LAG PUMP. ANALOG, TIME DELAY ON, ADJUSTABLE 0.1 SEC-600 HOURS, FORM "C" DPDT CONTACTS RATED 10 AMPS RESISTIVE, 7 AMPS INDUCTIVE, PILOT LIGHTS FOR "ON" AND "TIMING", 120 VOLT COIL. IDEC # RTE-P1AF20, OR SQUARE D CAT #JCK11 (0-10 SEC, KNOB ON TOP, SQ D DIGEST PAGE 23-42)
22. TD1 SOCKET BASE, 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 300 V, 10 AMP. IDEC # SR2P-06, OR SQUARE D # 8501NR51
23. R2, R3 - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D # 8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
24. R2, R3 SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK TERMINALS), 3 POLE, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D # 8501NR61
25. PL1, PL2 - LED TYPE PILOT LIGHTS, 120 VOLT TRANSFORMER INPUT, 22MM RED LENS. LABEL "P1 RUN", "P2 RUN". SQUARE D # XB4BVG4 (ZB4BVG4 [HEAD], ZB4BVO43 [BODY]).
26. ON-OFF-TEST SWITCH, METALLIC BODY, 22mm DIAMETER, KNOB OPERATOR. LABEL "ON-OFF-TEST". SQUARE D, HARMONY XB4 METAL, ZB4BD3 (STD BLK 45 DEGREE HANDLE), ZB4BZ105 CONTACT BLOCK (1 NO + 1 NC), 1 ADDITIONAL ZBE505 CONTACT BLOCK (1 NO + 1 NC).
27. RESET (ALARM) PUSHBUTTON SWITCH, 22mm, NON-ILLUMINATED, 1 POLE, NC, PUSH TO MOMENTARY OPEN, SPRING RETURN TO CLOSED, 120 VOLTS, 10 AMP RATED, CAP COLOR=BLACK, CAP TEXT=RESET. SQUARE D, HARMONY XB4 METAL CAT# ZB4BH02, ZBE205 CONTACT BLOCK (1 NO + 1 NC, SPRING RETURN TO NC).
28. HL, HLA - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D #8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
29. HL, HLA SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK TERMINALS), 3 POLE, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D #8501NR61
30. ALARM SILENCE PUSHBUTTON SWITCH, 22mm, NON-ILLUMINATED, 1 POLE, 120 VOLTS, 10 AMP RATED, CAP COLOR=RED, CAP TEXT=STOP. SQUARE D, HARMONY XB4 METAL CAT# ZB4BH04, ZBE205 CONTACT BLOCK (1 NO + 1 NC, SPRING RETURN TO NC).
31. AS - ALARM SILENCE RELAY, 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D #8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
32. AS SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK TERMINALS), 3 POLE, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622 OR SQUARE D #8501NR61
33. PL3 - LED TYPE PILOT LIGHT, 120 VOLT TRANSFORMER INPUT, 22MM BLUE LENS. LABEL "ALARM SILENCED". SQUARE D # XB4BVG6 (ZB4BVG6 [HEAD], ZB4BVO63 [BODY]).
34. FLASHER, ADJUSTABLE ON AND OFF INTERVALS, 2 POLES, 120 VOLT AC COIL, 10 AMPS, 8 PIN OCTAL BASE. SQUARE D, CAT# JCK51 (0-10 SEC, 2 KNOBS ON TOP FOR ON-TIME + INTERVAL, SQ D DIGEST PAGE 12-42)
35. FLASHER BASE, SQUARE D #8501NR51
36. RED ALARM LIGHT, LED EXTERIOR, NEMA 4X, 120 VOLT.
37. ISBR - INTRINSICALLY SAFE BARRIER RELAY FOR FLOAT SWITCHES AND FOR MOTOR SAFETIES, 8 CHANNEL, 5 AMPS, 120 VOLTS, COMMON AND SEPARATE OUTPUT RELAY WIRING. IDEC CAT# EB3C-RO8A
38. POWER TERMINAL STRIPS (PTS), 30 AMP, 600 VOLT RATED, 10 TERMINALS (AS NEEDED), BLACK PHENOLIC BODY, MARATHON # 672RZ10
39. CONTROL TERMINAL STRIPS (CTS), 20 AMP, 300 VOLT RATED, 10 TERMINALS EACH (3x10), BLACK PHENOLIC BODY, MARATHON # 601GP10
40. DIN RAIL, EXTRUDED ALUMINUM, DIN STD. DIMENSIONS, LENGTHS AS REQUIRED. IDEC CAT# BNDN1000, WITH DIN RAIL END STOPS, CAT# BNLS
41. CB5, THERMAL-MAGNETIC, 15/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR EXTERNAL CELLULAR DEVICE. SQUARE D # Q015
42. CB6, CB7 - THERMAL-MAGNETIC SQUARE D, 3 POLE, 250 VOLTS, 30 AMP, 22 KAIC, SQUARE D # Q0330 VH

GENERAL NOTES:

1. ALL PANEL ITEMS SHALL BE MOUNTED ON THE BACKPLANE EXCEPT AS NOTED OTHERWISE. ITEMS TO BE MOUNTED ON THE INNER DOOR FRONT ARE ALL PILOT LIGHTS, SELECTOR SWITCHES, PUSHBUTTONS, STARTER RESETS, AND CIRCUIT BREAKER HANDLE OPENINGS. THE ALARM SILENCE PUSHBUTTON SHALL BE MOUNTED ON THE EXTERIOR SIDE WALL NEAR THE ALARM LIGHT, WHICH SHALL BE MOUNTED ON THE PANEL TOP.
2. PANEL ENCLOSURE SHALL BE 36"W X 48"H X 12"D, NEMA 4X TYPE 304 STAINLESS STEEL, WITH HASPS ON 3 SIDES, RAISED LIP ON ENCLOSURE TO RECEIVE DOOR GASKET, WHITE STEEL BACKPLANE, DEAD FRONT INNER DOOR WITH 1/4 TURN KNURLED KNOB FASTENING, BOND BOTH DOORS TO ENCLOSURE GROUND STRIP.
3. NOMENCLATURE LABELS FOR ALL ITEMS SHALL BE RED FIELD WITH WHITE CHARACTERS, ENGRAVED LAMINATED NAMEPLATES ATTACHED WITH STAINLESS STEEL MACHINE SCREWS AND NUTS. ALL TEXT SHALL BE MINIMUM 1/8" HIGH.
4. ALL PROPOSED CONTROL PANELS SHALL BE SUBMITTED TO THE PARISH FOR APPROVAL PRIOR TO FABRICATION.
5. THE NAME OF ANY MANUFACTURER, BRAND OR MAKE LISTED ON THE DRAWING IS FOR THE PURPOSE OF ESTABLISHING A MINIMUM ACCEPTABLE STANDARD OF QUALITY DESIRED BY THE PARISH. ALL PRODUCTS BID MUST HAVE PRIOR APPROVAL AS "PRIOR APPROVED EQUIVALENTS".

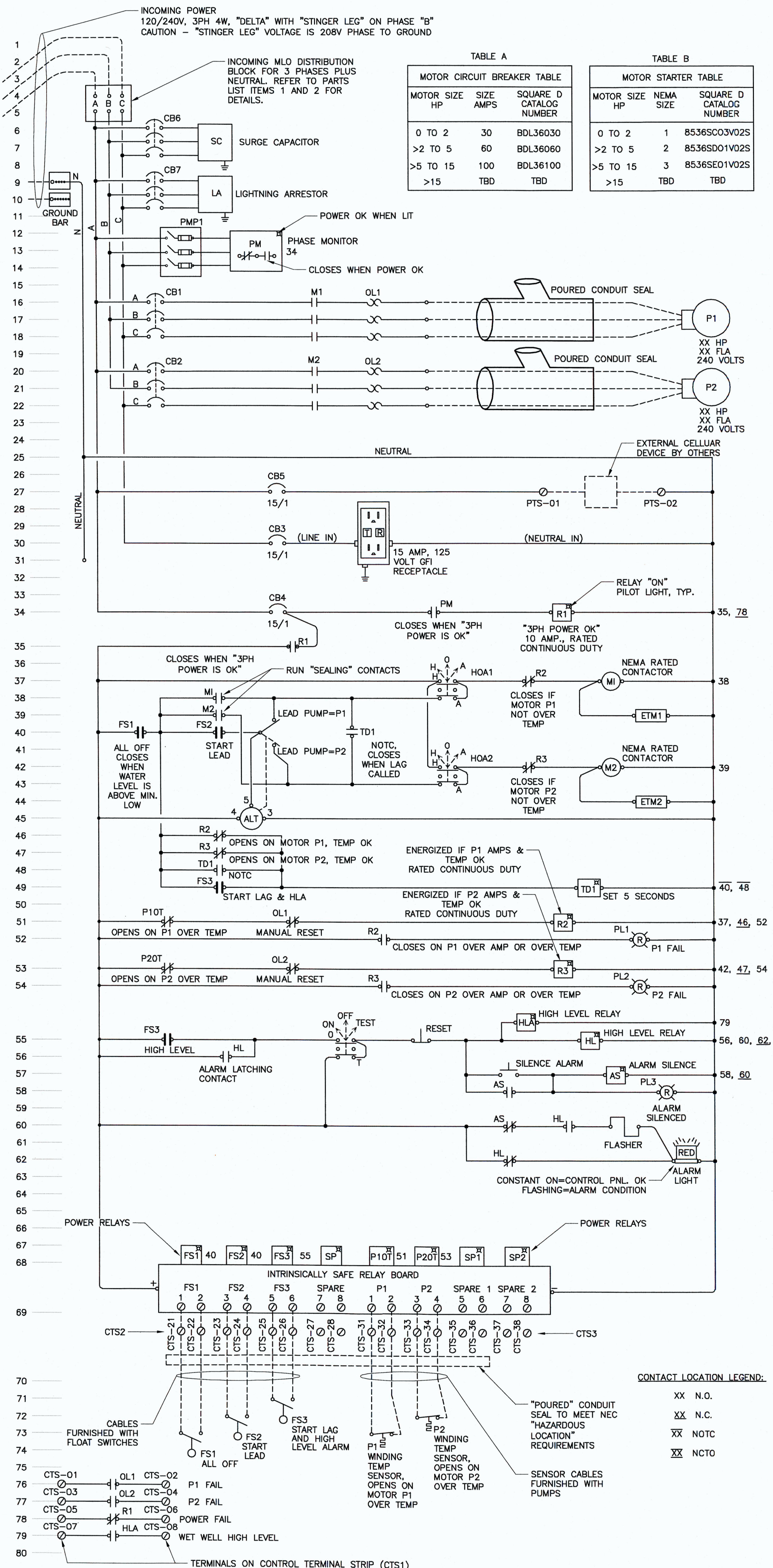


TABLE A

MOTOR CIRCUIT BREAKER TABLE		
MOTOR SIZE HP	SIZE AMPS	SQUARE D CATALOG NUMBER
0 TO 2	30	BDL36030
>2 TO 5	60	BDL36060
>5 TO 15	100	BDL36100
>15	TBD	TBD

TABLE B

MOTOR STARTER TABLE		
MOTOR SIZE HP	NEMA SIZE	SQUARE D CATALOG NUMBER
0 TO 2	1	8536SCO3V02S
>2 TO 5	2	8536SD01V02S
>5 TO 15	3	8536SE01V02S
>15	TBD	TBD

CONTACT LOCATION LEGEND:

- XX N.O.
- XX N.C.
- XX NOTC
- XX NCTO

1 OF 1	<p>240 VOLT DUPLEX LIFT STATION STANDARD CONTROL PANEL ST. TAMMANY PARISH LOUISIANA</p> <p>WIRING DIAGRAM AND PARTS LIST</p>	<p>SCALE: (24x36) N.T.S.</p> <p>SCALE: (11x17) N.T.S.</p> <p>DATE: SEPT. 2018</p>	<p>DESIGNED BY: BDB</p> <p>DRAWN BY: DRC</p> <p>CHECKED BY: BDB</p> <p>JOB NO. 1802-05</p>	<p>PRINCIPAL Engineering, Inc. 1011 N. CAUSEWAY BLVD., SUITE 19 MANDEVILLE, LA 70471</p> <p>PH: (985) 624-5001 info@pi-acc.com www.pi-acc.com</p>		<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DATE:</th> <th>REMARKS:</th> <th>APP'D</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	DATE:	REMARKS:	APP'D				<p>2401-1802-05-DT-186</p>
DATE:	REMARKS:	APP'D											

ATTACHMENT "B"

PARTS LIST FOR 277/480 VOLT CONTROL PANEL

- INCOMING MAIN POWER DISTRIBUTION BLOCK - BLACK PHENOLIC, 3 POLE, 380 AMP, 600 VOLT, 100KA WITHSTAND RATING WITH RK5 FUSE PROTECTION, FINGER SAFE GUARDS
 - INCOMING WIRE RANGE - 1 PRIMARY PORT PER POLE, #4 TO #500 KCMIL
 - DISTRIBUTION WIRE RANGE AND NUMBER - SIX SECONDARY PORTS PER POLE, #14 TO #2/0
 - MFR/CAT#: SQUARE D #9080LBA365106, DIMS: DXHXW=3.1"x5.5"x8.5", WITH CLEAR COVER #9080LB53
- NEUTRAL BLOCK- 380 AMP, BLACK PHENOLIC, 1P, 380 AMP, 600VOLT, 100KA WITHSTAND RATING, ISOLATED, FINGER SAFE GUARD
 - INCOMING WIRE RANGE - 1 PRIMARY PORT PER POLE, #4 TO #500 KCMIL
 - DISTRIBUTION WIRE RANGE AND NUMBER - SIX SECONDARY PORTS PER POLE, #14 TO #2/0
 - MFR/CAT#: SQUARE D #9080LBA165106, DIMS: DXHXW=3.1"x5.5"x3.2", WITH CLEAR COVER #9080LB51
- GROUND TERMINAL STRIP - 20 POSITION, #6 WIRE MAX., MOUNT TO BACKPLANE
- SURGE CAPACITOR - RATED VOLTAGE 650V, 3 PHASE, 4 WIRE, DELTA # CA-603
- LIGHTNING ARRESTOR - 600 VOLTS MAX., DELTA TYPE SERVICE, 3 POLE, 4 WIRE, RATED 40KA SURGE PER PHASE, MOUNT ON BRACKET INSIDE CONTROL PANEL. SQUARE D # SDSA3650D, OR DELTA # LA-303.
- FB1, FB2, FUSE BLOCK, - 3 POLE PHENOLIC 600V FUSE HOLDER WITH 600 VOLT CLASS "CC" FUSES, SIZE AND NUMBER AS SHOWN. SQUARE D # 9080FB3611CC
- PHASE MONITOR - 3 PHASE, 430-480 VOLT, ADJUSTABLE, WITH GREEN "POWER OKAY" PILOT LIGHT, SPDT 10 AMP RATED CONTACT, UNDERVOLTAGE, PHASE LOSS, PHASE REVERSAL, PLUG IN OCTAL BASE, 8 PIN. RELAY ONLY ALLOWS FOR "A-B-C" ROTATION. DIVERSIFIED ELECTRONICS # SLA-440-ASA
- PHASE MONITOR BASE - 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 600 VOLT, 10 AMP. DIVERSIFIED ELECTRONICS SOCKET #OT-08
- CB1, CB2 - THERMAL-MAGNETIC SQUARE D, 3 POLE, 600 VOLTS, 25 KAIC AT 480V AMPERAGE RATING, BY PUMP MOTOR HP AS SHOWN IN TABLE A. POWER SHALL BE THROUGH LUGS ON BOTH ENDS.
- M1, M2 MOTOR STARTER - SQUARE D, FVNR OPEN TYPE, 3 POLE, 600 VOLTS, NEMA SIZE SHOWN IN TABLE B BY PUMP MOTOR HP, 4 NO/NC FORM "C" AUX CONTACTS, 120 VOLT COIL
- OL1 AND OL2 "HEATERS" - SQUARE D, BUILT INTO STARTER OL FRAME, MELTING ALLOY TYPE, MANUAL RESET, SELECT BASED ON PUMP MOTOR FLA
- GFI RECEPTACLE, 15 AMP, 125 VOLTS, FLUSH MOUNT IN 1G BOX W/ COVER ON BACKPLANE
- CB3, THERMAL-MAGNETIC, 10/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR GFI RECEPTACLE. SQUARE D # Q0110
- CB4, THERMAL-MAGNETIC, 15/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR CONTROLS. SQUARE D # Q0115
- R1 - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D # 8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
- R1 SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK), FOR 3 POLE RELAY, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D # 8501NR61
- HOA1, HOA2, 3 POSITION MAINTAINED, METALLIC BODY, 22mm DIAMETER, KNOB OPERATOR. LABEL "HAND-OFF-AUTO". SQUARE D HARMONY XB4 METAL, ZB48BD3 (STD BLK 45 DEGREE HANDLE), ZB4BZ105 CONTACT BLOCK (1 NO + 1 NC), 1 ADDITIONAL ZBE505 CONTACT BLOCK (1 NO + 1 NC).
- ETM1, ETM2, ELAPSED TIME METER, 100,000 HOURS, QUARTZ/DIGITAL WITH 1/8" ANALOG NUMBERS, NON-RESETTABLE, 120 VOLTS AC, NEMA 12/4X, RECTANGULAR HOLE PANEL MOUNT, MOUNT IN DEAD FRONT DOOR PANEL. REDINGTON MODEL 722
- ALTERNATOR (ALT) WITH LEAD/LAG/OFF TOGGLE SELECTOR SWITCH, 125 VOLT AC, 1PDT, RATED 10 AMPS "CONTINUOUS DUTY", REQUIRES 8 PIN OCTAL BASE. TIMEMARK CAT# 261-ST-120
- ALT RELAY SOCKET BASE - 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 300 V, 10 AMP. IDEC # SR2P-06, OR SQUARE D #8501NR51
- TD1 - TIME DELAY RELAY, FOR START LAG PUMP. ANALOG, TIME DELAY ON, ADJUSTABLE 0.1 SEC-600 HOURS, FORM "C" DPDT CONTACTS RATED 10 AMPS RESISTIVE, 7 AMPS INDUCTIVE, PILOT LIGHTS FOR "ON" AND "TIMING", 120 VOLT COIL. IDEC # RTE-P1AF20, OR SQUARE D CAT #JCK11 (0-10 SEC, KNOB ON TOP, SQ D DIGEST PAGE 23-42)
- TD1 SOCKET BASE, 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 300 V, 10 AMP. IDEC # SR2P-06, OR SQUARE D # 8501NR51
- R2, R3 - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D # 8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
- R2, R3 SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK TERMINALS), 3 POLE, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D #8501NR61
- PL1, PL2- LED TYPE PILOT LIGHTS, 120 VOLT TRANSFORMER INPUT, 22MM RED LENS. LABEL "P1 RUN", "P2 RUN". SQUARE D # XB4BVG4 (ZB4BVG4 [HEAD], ZB4BV043 [BODY]).
- ON-OFF-TEST SWITCH, METALLIC BODY, 22mm DIAMETER, KNOB OPERATOR. LABEL "ON-OFF-TEST". SQUARE D, HARMONY XB4 METAL, ZB4BD3 (STD BLK 45 DEGREE HANDLE), ZB4BZ105 CONTACT BLOCK (1 NO + 1 NC), 1 ADDITIONAL ZBE505 CONTACT BLOCK (1 NO + 1 NC).
- RESET (ALARM) PUSHBUTTON SWITCH, 22mm, NON-ILLUMINATED, 1 POLE, NC, PUSH TO MOMENTARY OPEN, SPRING RETURN TO CLOSED, 120 VOLTS, 10 AMP RATED, CAP COLOR=BLACK, CAP TEXT=RESET. SQUARE D, HARMONY XB4 METAL CAT# ZB4BH02, ZBE205 CONTACT BLOCK (1 NO + 1 NC, SPRING RETURN TO NC).
- HL, HLA - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D #8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
- HL, HLA SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK TERMINALS), 3 POLE, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D #8501NR61
- ALARM SILENCE PUSHBUTTON SWITCH, 22mm, NON-ILLUMINATED, 1 POLE, 120 VOLTS, 10 AMP RATED, CAP COLOR=RED, CAP TEXT=STOP. SQUARE D, HARMONY XB4 METAL CAT# ZB4BH04, ZBE205 CONTACT BLOCK (1 NO + 1 NC, SPRING RETURN TO NC).
- AS - ALARM SILENCE RELAY, 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D #8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
- AS SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK TERMINALS), 3 POLE, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622 OR SQUARE D #8501NR61
- PL3- LED TYPE PILOT LIGHT, 120 VOLT TRANSFORMER INPUT, 22MM BLUE LENS. LABEL "ALARM SILENCED". SQUARE D # XB4BVG6 (ZB4BVG6 [HEAD], ZB4BV063 [BODY]).
- FLASHER, ADJUSTABLE ON AND OFF INTERVALS, 2 POLES, 120 VOLT AC COIL, 10 AMPS, 8 PIN OCTAL BASE. SQUARE D, CAT# JCK51 (0-10 SEC, 2 KNOBS ON TOP FOR ON_TIME + INTERVAL, SQ D DIGEST PAGE 12-42)
- FLASHER BASE, SQUARE D #8501NR51
- RED ALARM LIGHT, LED, EXTERIOR, NEMA 4X, 120 VOLT.
- ISBR- INTRINSICALLY SAFE BARRIER RELAY FOR FLOAT SWITCHES AND FOR MOTOR SAFETIES, 8 CHANNEL, 5 AMPS, 120 VOLTS, COMMON AND SEPARATE OUTPUT RELAY WIRING. IDEC CAT# EB3C-RO8A
- POWER TERMINAL STRIPS (PTS), 30 AMP, 600 VOLT RATED, 10 TERMINALS (AS NEEDED), BLACK PHENOLIC BODY, MARATHON # 672RZ10
- CONTROL TERMINAL STRIPS (CTS), 20 AMP, 300 VOLT RATED, 10 TERMINALS (3x10), BLACK PHENOLIC BODY, MARATHON # 601GP10
- DIN RAIL, EXTRUDED ALUMINUM, DIN STD. DIMENSIONS, LENGTHS AS REQUIRED. IDEC CAT# BNDN1000, WITH DIN RAIL END STOPS, CAT# BNL5
- CB5, THERMAL-MAGNETIC, 10/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR EXTERNAL CELLULAR DEVICE. MOUNT WITH CB HANDLE PROTRUDING THRU DEAD FRONT DOOR PANEL. SQUARE D # Q0110
- CB6, CB7, CB8 - THERMAL-MAGNETIC SQUARE D, 3 POLE, 600 VOLTS, 15 AMP, 18 KAIC, SQUARE D # BDL36015
- CONTROL POWER TRANSFORMER (CPT) - 480 VOLT 1P TO 120 VOLT 1P, 2 KVA (2000 VA), SQUARE D # 9070T2000D1, SIZE 6.2"Hx7.1"Wx7.2"D, WT.=47#. PROVIDE WITH FINGER SAFE COVERS # FSC2.

GENERAL NOTES:

- ALL PANEL ITEMS SHALL BE MOUNTED ON THE BACKPLANE EXCEPT AS NOTED OTHERWISE. ITEMS TO BE MOUNTED ON THE INNER DOOR FRONT ARE ALL PILOT LIGHTS, SELECTOR SWITCHES, PUSHBUTTONS, STARTER RESETS, AND CIRCUIT BREAKER HANDLE OPENINGS. THE ALARM SILENCE PUSHBUTTON SHALL BE MOUNTED ON THE EXTERIOR SIDE WALL NEAR THE ALARM LIGHT, WHICH SHALL BE MOUNTED ON THE PANEL TOP.
- PANEL ENCLOSURE SHALL BE 36"W X 48"H X 12"D, NEMA 4X TYPE 304 STAINLESS STEEL, WITH HASPS ON 3 SIDES, RAISED UP ON ENCLOSURE TO RECEIVE DOOR GASKET, WHITE STEEL BACKPLANE, DEAD FRONT INNER DOOR WITH 1/4 TURN KNURLED KNOB FASTENING, BOND BOTH DOORS TO ENCLOSURE GROUND STRIP.
- NOMENCLATURE LABELS FOR ALL ITEMS SHALL BE RED FIELD WITH WHITE CHARACTERS, ENGRAVED LAMINATED NAMEPLATES ATTACHED WITH STAINLESS STEEL MACHINE SCREWS AND NUTS. ALL TEXT SHALL BE MINIMUM 1/8" HIGH.
- ALL PROPOSED CONTROL PANELS SHALL BE SUBMITTED TO THE PARISH FOR APPROVAL PRIOR TO FABRICATION.
- THE NAME OF ANY MANUFACTURER, BRAND OR MAKE LISTED ON THE DRAWING IS FOR THE PURPOSE OF ESTABLISHING A MINIMUM ACCEPTABLE STANDARD OF QUALITY DESIRED BY THE PARISH. ALL PRODUCTS BID MUST HAVE PRIOR APPROVAL AS "PRIOR APPROVED EQUIVALENTS".

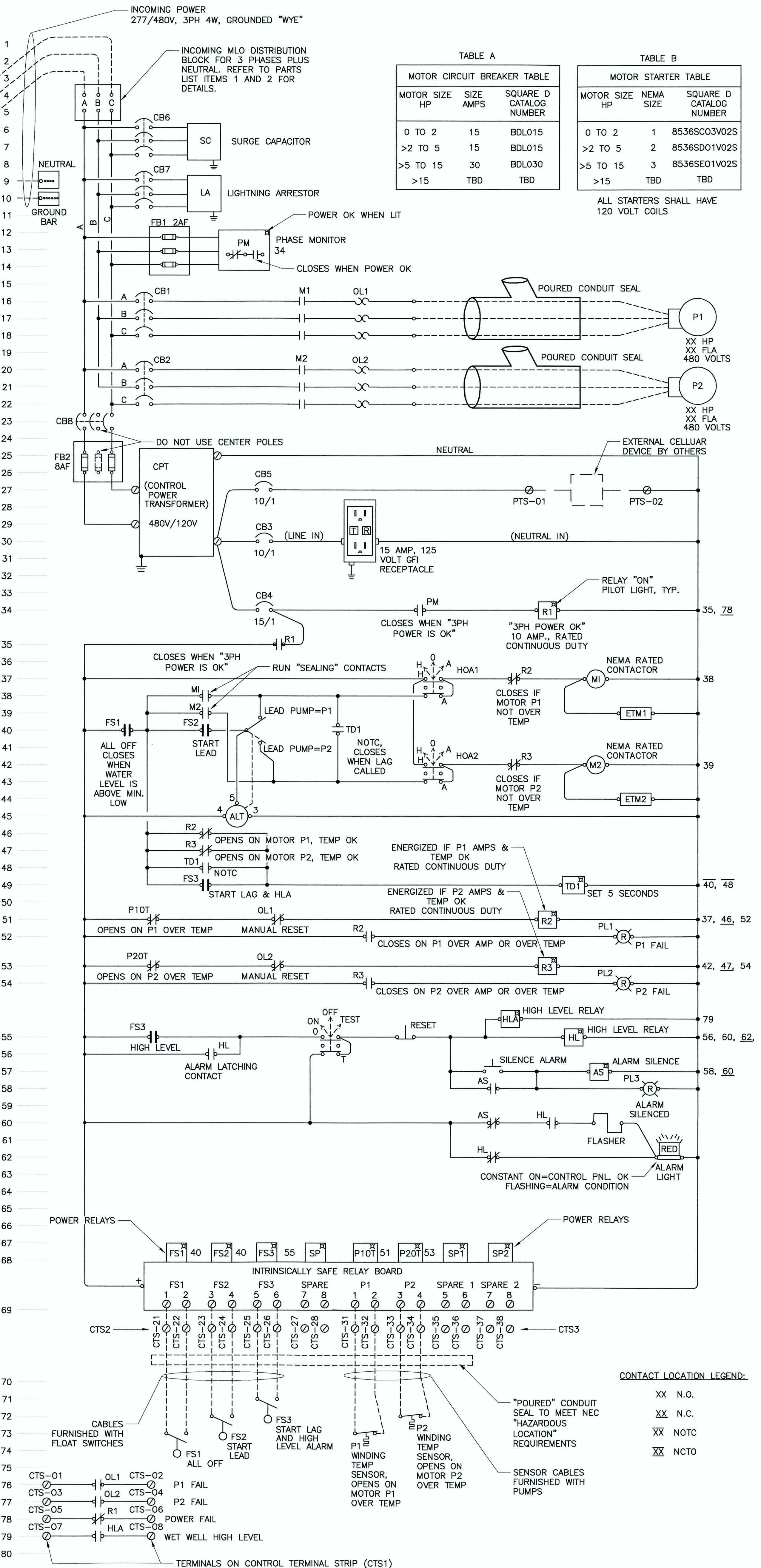


TABLE A

MOTOR CIRCUIT BREAKER TABLE		
MOTOR SIZE HP	SIZE AMPS	SQUARE D CATALOG NUMBER
0 TO 2	15	BDL015
>2 TO 5	15	BDL015
>5 TO 15	30	BDL030
>15	TBD	TBD

TABLE B

MOTOR STARTER TABLE		
MOTOR SIZE HP	NEMA SIZE	SQUARE D CATALOG NUMBER
0 TO 2	1	8536SCO3V02S
>2 TO 5	2	8536SD01V02S
>5 TO 15	3	8536SE01V02S
>15	TBD	TBD

ALL STARTERS SHALL HAVE 120 VOLT COILS

SHEET NO.	480 VOLT DUPLEX LIFT STATION STANDARD CONTROL PANEL ST. TAMMANY PARISH LOUISIANA	SCALE: (24x36) N.T.S.	DESIGNED BY: BDB			REVISIONS		APP'D
		SCALE: (11x17) N.T.S.	DRAWN BY: DRC			DATE:	REMARKS:	
WIRING DIAGRAM AND PARTS LIST		DATE: SEPT. 2018	CHECKED BY: BDB	PRINCIPAL Engineering, Inc. 1011 N. CAUSEWAY BLVD., SUITE 19 MANDEVILLE, LA 70471	PH: (985) 624-5001 info@pi-acc.com www.pi-acc.com			COORD. FILE NAME: 480V-1802-05-D1- Electrical-D

GENERAL NOTES:

- ALL PANEL ITEMS SHALL BE MOUNTED ON THE BACKPLANE EXCEPT AS NOTED OTHERWISE. ITEMS TO BE MOUNTED ON THE INNER DOOR FRONT ARE ALL PILOT LIGHTS, SELECTOR SWITCHES, PUSHBUTTONS, STARTER RESETS, AND CIRCUIT BREAKER HANDLE OPENINGS.
- PANEL ENCLOSURE SHALL BE 36"W X 36"H X 12"D, NEMA 4X TYPE 304 STAINLESS STEEL, WITH HASPS ON 3 SIDES, RAISED LIP ON ENCLOSURE TO RECEIVE DOOR GASKET, WHITE STEEL BACKPLANE, DEAD FRONT INNER DOOR WITH 1/4 TURN KNURLED KNOB FASTENING, BOND BOTH DOORS TO ENCLOSURE WITH GROUNDING STRAP.
- NOMENCLATURE LABELS FOR ALL ITEMS SHALL BE RED FIELD WITH WHITE CHARACTERS, ENGRAVED LAMINATED NAMEPLATES ATTACHED WITH STAINLESS STEEL MACHINE SCREWS AND NUTS. ALL TEXT SHALL BE MINIMUM 1/8" HIGH.
- ALL PROPOSED CONTROL PANELS SHALL BE SUBMITTED TO THE PARISH FOR APPROVAL PRIOR TO FABRICATION.
- THE NAME OF ANY MANUFACTURER, BRAND OR MAKE LISTED ON THE DRAWING IS FOR THE PURPOSE OF ESTABLISHING A MINIMUM ACCEPTABLE STANDARD OF QUALITY DESIRED BY THE PARISH. ALL PRODUCTS BID MUST HAVE PRIOR APPROVAL AS "PRIOR APPROVED EQUIVALENTS".
- EXTERNAL ITEMS WITH DASHED LINES ARE NOT IN CONTROL PANEL SCOPE.

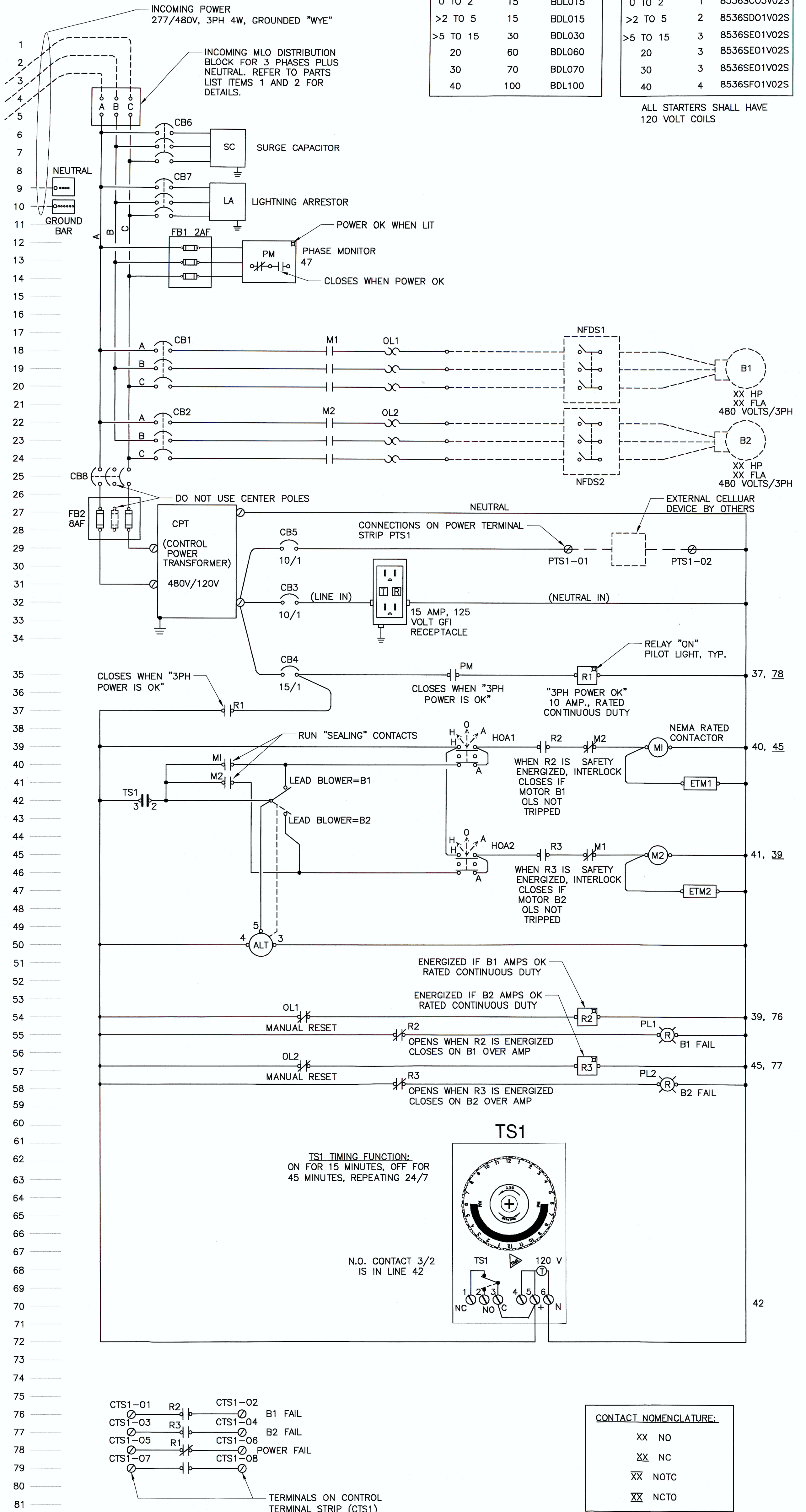
PARTS LIST FOR 277/480 VOLT CONTROL PANEL

- INCOMING MAIN POWER DISTRIBUTION BLOCK - BLACK PHENOLIC, 3 POLE, 380 AMP, 600 VOLT, 100KA WITHSTAND RATING WITH RK5 FUSE PROTECTION, FINGER SAFE GUARDS
 - INCOMING WIRE RANGE - 1 PRIMARY PORT PER POLE, #4 TO #500 KCMIL
 - DISTRIBUTION WIRE RANGE AND NUMBER - SIX SECONDARY PORTS PER POLE, #14 TO #2/0
 - MFGR/CAT#: SQUARE D #9080LBA365106, DIMS.: DXHXW=3.1"x5.5"x8.5", WITH CLEAR COVER #9080LB53
- NEUTRAL BLOCK - 380 AMP, BLACK PHENOLIC, 1P, 380 AMP, 600VOLT, 100KA WITHSTAND RATING, ISOLATED, FINGER SAFE GUARD
 - INCOMING WIRE RANGE - 1 PRIMARY PORT PER POLE, #4 TO #500 KCMIL
 - DISTRIBUTION WIRE RANGE AND NUMBER - SIX SECONDARY PORTS PER POLE, #14 TO #2/0
 - MFGR/CAT#: SQUARE D #9080LBA165106, DIMS.: DXHXW=3.1"x5.5"x3.2", WITH CLEAR COVER #9080LB51
- GROUND TERMINAL STRIP - 20 POSITION, #6 WIRE MAX., MOUNT TO BACKPLANE
- SURGE CAPACITOR - RATED VOLTAGE 650V, 3 PHASE, 4 WIRE, DELTA # CA-603
- LIGHTNING ARRESTOR - 600 VOLTS MAX., DELTA TYPE SERVICE, 3 POLE, 4 WIRE, RATED 40KA SURGE PER PHASE, MOUNT ON BRACKET INSIDE CONTROL PANEL. SQUARE D # SDSA3650D, OR DELTA # LA-303.
- FB1, FB2, FUSE BLOCK, - 3 POLE PHENOLIC 600V FUSE HOLDER WITH 600 VOLT CLASS "CC" FUSES, SIZE AND NUMBER AS SHOWN. SQUARE D # 9080FB3611CC
- PHASE MONITOR - 3 PHASE, 430-480 VOLT, ADJUSTABLE, WITH GREEN "POWER OKAY" PILOT LIGHT, SPDT 10 AMP RATED CONTACT, UNDERVOLTAGE, PHASE LOSS, PHASE REVERSAL, PLUG IN OCTAL BASE, 8 PIN. RELAY ONLY ALLOWS FOR "A-B-C" ROTATION. DIVERSIFIED ELECTRONICS # SLA-440-ASA
- PHASE MONITOR BASE - 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 600 VOLT, 10 AMP. DIVERSIFIED ELECTRONICS SOCKET #OT-08
- CB1, CB2 - THERMAL-MAGNETIC SQUARE D, 3 POLE, 600 VOLTS, 25 KAIC AT 480V, AMPERAGE RATING BY PUMP MOTOR HP AS SHOWN IN TABLE A. POWER SHALL BE THROUGH LUGS ON BOTH ENDS.
- M1, M2 MOTOR STARTER - SQUARE D, FVNR OPEN TYPE, 3 POLE, 600 VOLTS, NEMA SIZE SHOWN IN TABLE B BY BLOWER MOTOR HP, 4 NO/NC FORM "C" AUX CONTACTS, 120 VOLT COIL
- OL1 AND OL2 "HEATERS" - SQUARE D, BUILT INTO STARTER OL FRAME, MELTING ALLOY TYPE, MANUAL RESET, SELECT BASED ON BLOWER MOTOR FLA
- GFI RECEPTACLE, 15 AMP, 125 VOLTS, FLUSH MOUNT IN 1G BOX W/ COVER ON BACKPLANE
- CB3, THERMAL-MAGNETIC, 10/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR GFI RECEPTACLE. SQUARE D # Q0110
- CB4, THERMAL-MAGNETIC, 15/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR CONTROLS. SQUARE D # Q0115
- R1, R2, R3 - 3 POLE "ICE CUBE" RELAY, 120 VOLT AC COIL AND 3PDT CONTACTS, 10 AMP, RATED FOR "CONTINUOUS DUTY", "ON" PILOT LIGHT, 11 PIN OCTAL BASE. IDEC # RR3PA-UL, OR SQUARE D # 8501 KPDR 13P14 V20 (SQ D DIGEST PAGE 23-14)
- R1, R2, R3 SOCKET BASE - 11 PIN OCTAL BASE, (SINGLE STACK), FOR 3 POLE RELAY, SNAPON DIN RAIL MOUNT, 300 VOLT, 10 AMP. IDEC # SR3P-0622, OR SQUARE D # 8501NR61
- HOA1, HOA2, 3 POSITION MAINTAINED, METALLIC BODY, 22mm DIAMETER, KNOB OPERATOR. LABEL "HAND-OFF-AUTO". SQUARE D HARMONY XB4 METAL, ZB48BD3 (STD BLK 45 DEGREE HANDLE), ZB4BZ105 CONTACT BLOCK (1 NO + 1 NC), 1 ADDITIONAL ZBE505 CONTACT BLOCK (1 NO + 1 NC).
- ETM1, ETM2, ELAPSED TIME METER, 100,000 HOURS, QUARTZ/DIGITAL WITH 1/8" ANALOG NUMBERS, NON-RESETTING, 120 VOLTS AC, NEMA 12/4X, RECTANGULAR HOLE PANEL MOUNT, MOUNT IN DEAD FRONT DOOR PANEL. REDINGTON MODEL 722
- ALTERNATOR (ALT) WITH LEAD/LAG/OFF TOGGLE SELECTOR SWITCH, 125 VOLT AC, 1PDT, RATED 10 AMPS "CONTINUOUS DUTY", REQUIRES 8 PIN OCTAL BASE. TIMEMARK CAT# 281-ST-120
- ALT RELAY SOCKET BASE - 8 PIN OCTAL BASE, (SINGLE STACK), SNAPON DIN RAIL MOUNT, 300 V, 10 AMP. IDEC # SR2P-06, OR SQUARE D #8501NR51
- TS1 - TIME SWITCH #1, 24 HOUR MECHANICAL TIMESWITCH WITH 96 PUSH-PULL PINS, EACH TIMING A 15 MINUTE INTERVAL. ONE SPDT CONTACT RATED 40 AMPS. 120 VOLT MOTOR. TORQ/NSI CAT. #8009A.
- POWER TERMINAL STRIPS (PTS), 30 AMP, 600 VOLT RATED, 10 TERMINALS (AS NEEDED), BLACK PHENOLIC BODY, MARATHON # 672RZ10
- CONTROL TERMINAL STRIPS (CTS), 20 AMP, 300 VOLT RATED, 10 TERMINALS (AS NEEDED), BLACK PHENOLIC BODY, MARATHON # 601GP10
- DIN RAIL, EXTRUDED ALUMINUM, DIN STD. DIMENSIONS, LENGTHS AS REQUIRED. IDEC CAT# BNDN1000, WITH DIN RAIL END STOPS, CAT# BNL5
- CB5, THERMAL-MAGNETIC, 10/1, 125 VOLTS, FULL SIZE, 10KAIC, FOR EXTERNAL CELLULAR DEVICE. SQUARE D # Q0110
- CB6, CB7, CB8 - THERMAL-MAGNETIC SQUARE D, 3 POLE, 600 VOLTS, 15 AMP, 18 KAIC, SQUARE D # BDL36015
- CONTROL POWER TRANSFORMER (CPT) - 480 VOLT 1P TO 120 VOLT 1P, 2 KVA (2000 VA), SQUARE D # 9070T2000D1, SIZE 6.2"Hx7.1"Wx7.2"D, WT.=47#. PROVIDE WITH FINGER SAFE COVERS # FSC2.

MOTOR SIZE HP	SIZE AMPS	SQUARE D CATALOG NUMBER
0 TO 2	15	BDL015
>2 TO 5	15	BDL015
>5 TO 15	30	BDL030
20	60	BDL060
30	70	BDL070
40	100	BDL100

MOTOR SIZE HP	NEMA SIZE	SQUARE D CATALOG NUMBER
0 TO 2	1	8536SC03V02S
>2 TO 5	2	8536SD01V02S
>5 TO 15	3	8536SE01V02S
20	3	8536SE01V02S
30	3	8536SE01V02S
40	4	8536SF01V02S

ALL STARTERS SHALL HAVE 120 VOLT COILS



CONTACT NOMENCLATURE:

XX	NO
XX	NC
XX	NOTC
XX	NCTO

SHEET NO. 1	480 VOLT BLOWER STANDARD CONTROL PANEL ST. TAMMANY PARISH LOUISIANA	SCALE: (24x36) N.T.S.	DESIGNED BY: BDB		REVISIONS DATE: 1/28/19 REMARKS: MODIFIED TABLE A & B APP'D: BDB	CADD FILE NAME: 480V Blower CP
		SCALE: (11x17) N.T.S.	DRAWN BY: DLB			
	WIRING DIAGRAM AND PARTS LIST	DATE: NOV. 2018	CHECKED BY: BDB	PRINCIPAL Engineering, Inc. 1011 N. CAUSEWAY BLVD., SUITE 19 MANDEVILLE, LA 70471 PH: (985) 624-5001 info@pi-acc.com www.pi-acc.com	BRUCE D. BARTON REG. No. 12283 PROFESSIONAL ENGINEER ELECTRICAL ENGINEERING 01/28/19	