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# COX

Research and Technology, Inc.

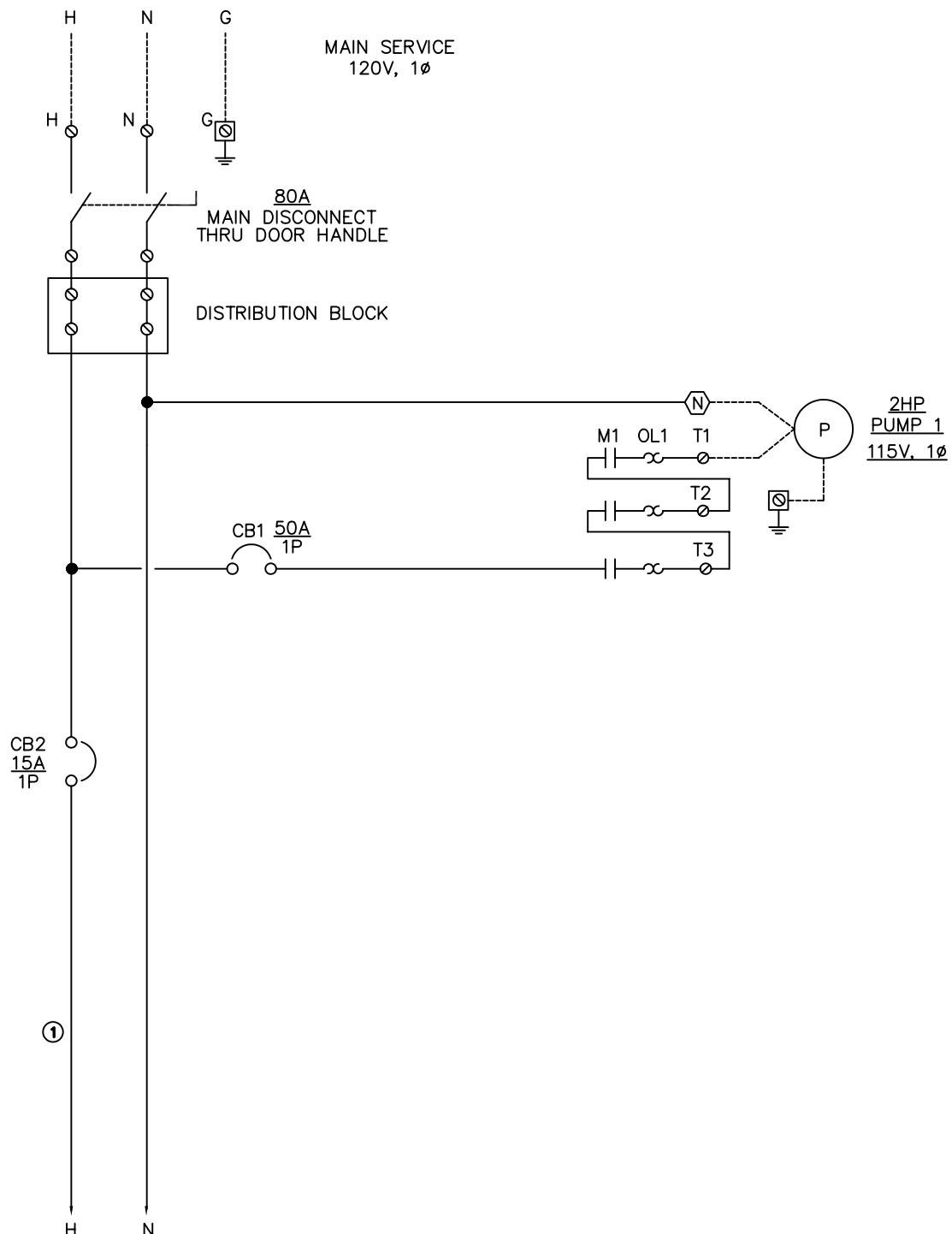
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## LOCKPORT TANK BOOSTER PUMP CONTROL PANEL

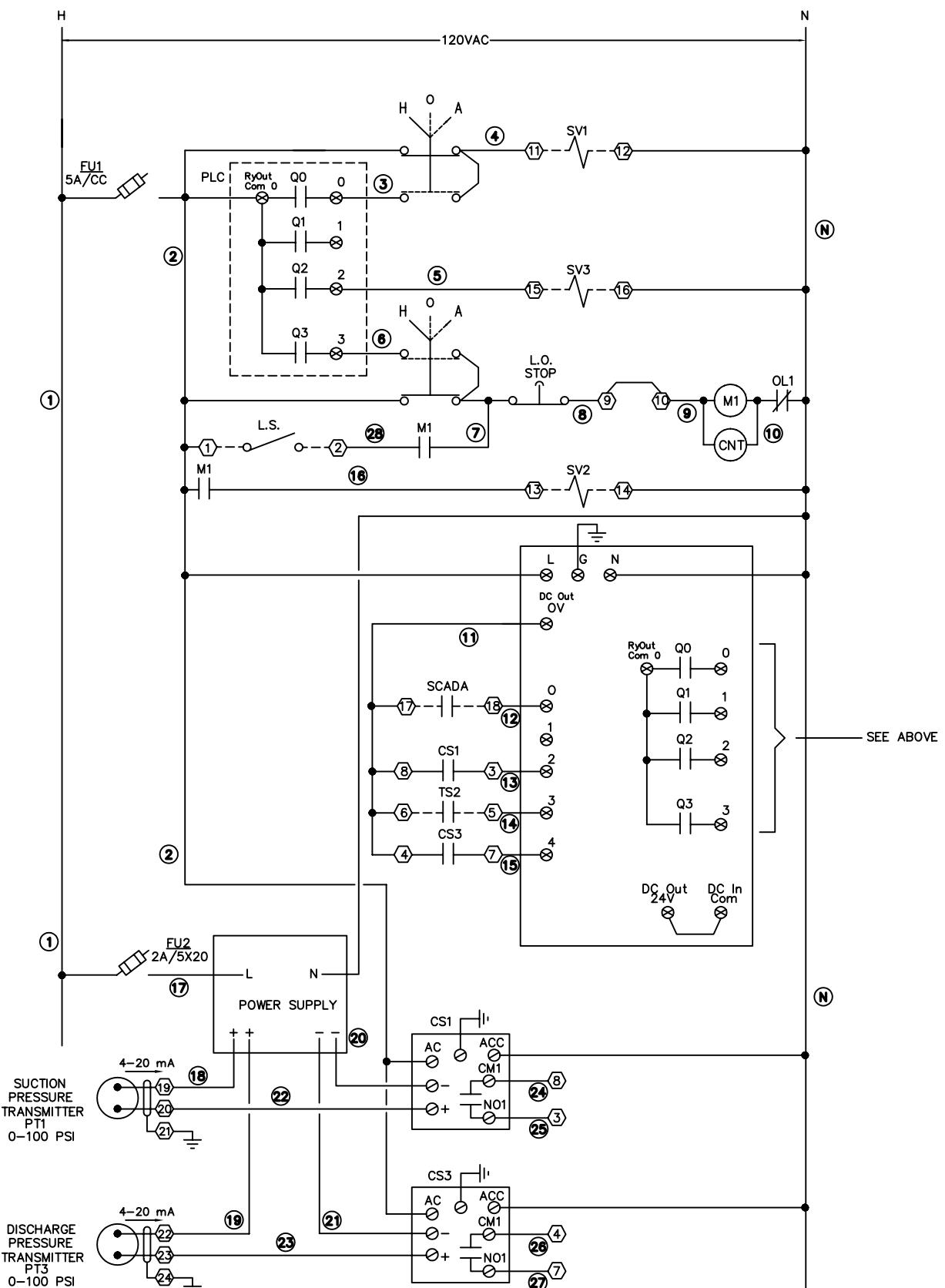
Cox Research and Technology, Inc.  
14697 S. Harrells Ferry Road  
Baton Rouge, LA. 70816  
(225) 756-3271 Fax (225) 755-1030

CP-1765



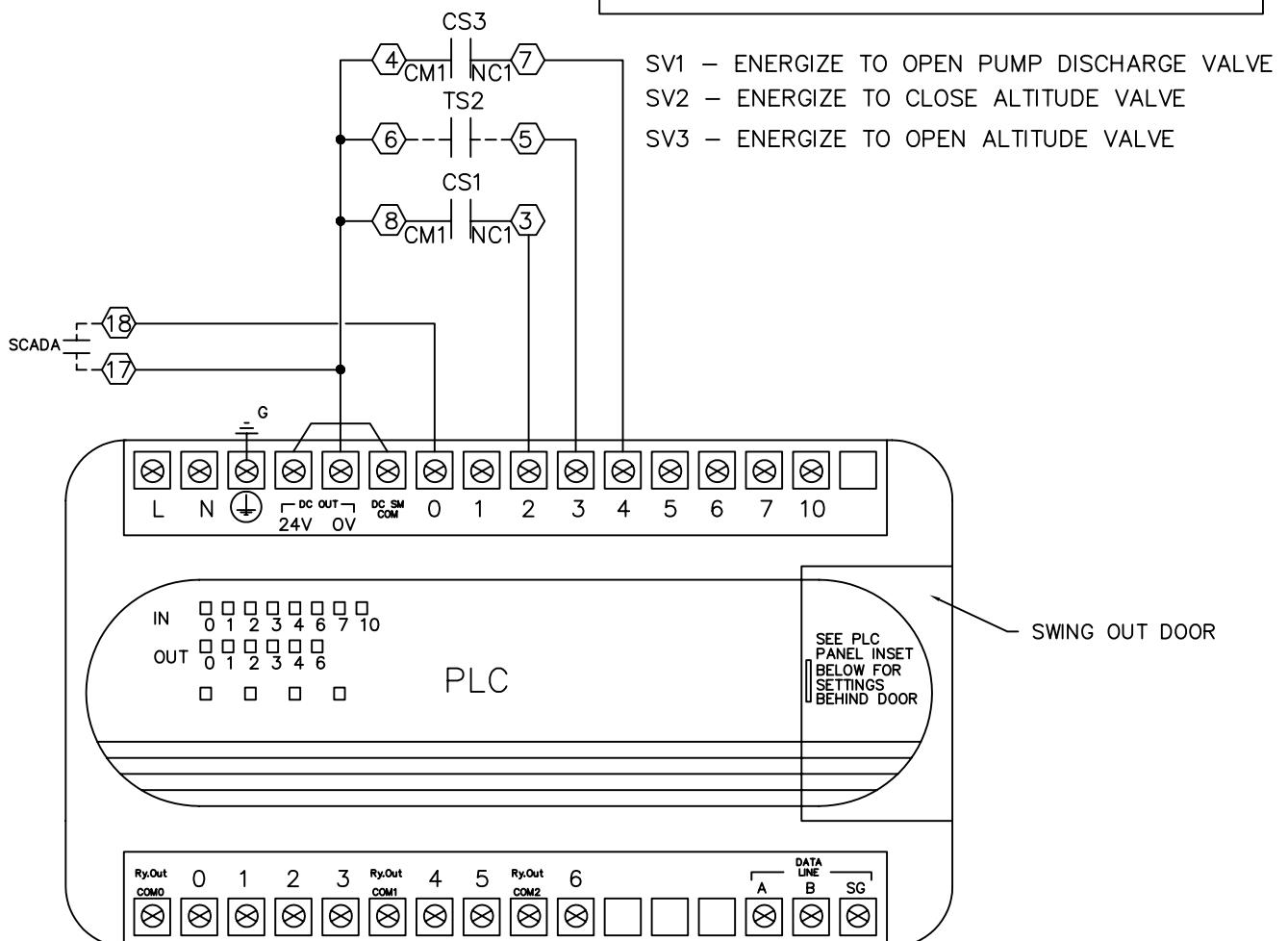
PROGRAM : PIPETECH 1/17/97

	Drawing Title				
	POWER DIAGRAM				
DATE 3/09/04	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL	DATE APPROVED BY DATE
Project Title	COX Research and Technology, Inc.			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)756-1030	PURCHASE ORDER NUMBER  DRAWING NUMBER CP-1765 SHEET NUMBER 1
BOOSTER PUMP CONTROL PANEL					



	Drawing Title  CONTROL DIAGRAM				
		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL
DATE 03/09/04					DATE APPROVED BY DATE
	Project Title  BOOSTER PUMP CONTROL PANEL	COX Research and Technology, Inc.	P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)756-1030	PURCHASE ORDER NUMBER  DRAWING NUMBER CP-1765 SHEET NUMBER 2	

CS1 – ELEVATED TANK PRESSURE CURRENT SWITCH  
 OPEN AT 45 PSIG DECREASING (11.2ma)  
 CS3 – LOW SYSTEM PRESSURE CURRENT SWITCH  
 OPEN AT 55 PSIG DECREASING (12.8ma)  
 TS2 – HIGH PUMP TEMPERATURE THERMAL SWITCH  
 (N.C.) OPEN AT HIGH TEMP INCREASING  
 LS1 – LIMIT SWITCH ON PUMP DISCHARGE VALVE  
 OPEN @ 95–100% VALVE CLOSED



PLC PANEL INSERT

ADJUSTABLE TIME DELAY 0–5 MINUTES  
 TS2 OVERRIDE DURING PUMP START

ADJUSTABLE TIME DELAY 0–20 MINUTES  
 PUMP RESTART AFTER TS2 SHUTDOWN OR POWER OUTAGE

DASHED LINES DENOTE FIELD WIRING

Drawing Title

## CONTROL DIAGRAM

DATE  
03/09/04

Project Title

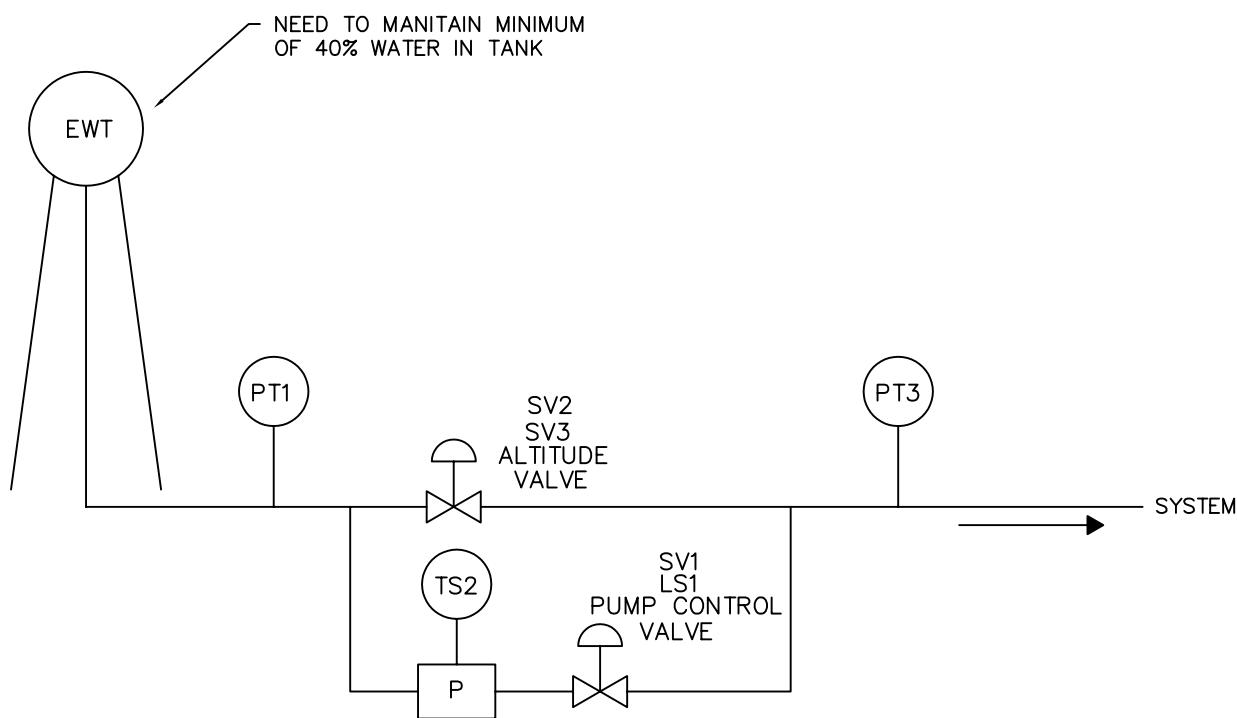
BOOSTER PUMP  
CONTROL PANEL

REFERENCE DRAWING NO. REVISION-LOCATION ECN DATE BY  
 S/N Sales Engineer Application Engineer DRAWN APPROVED  
 C.C. R.C. BY C. RACHAL BY DATE

**COX**  
Research and Technology, Inc.

P.O. Box 77808  
Baton Rouge, LA  
70809  
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PURCHASE ORDER NUMBER  
  
 DRAWING NUMBER CP-1765  
  
 SHEET NUMBER 3



SV1 – ENERGIZE TO OPEN PUMP DISCHARGE VALVE.

SV2 – ENERGIZE TO CLOSE ALTITUDE VALVE WHEN PUMP IS RUNNING.

SV3 – ENERGIZE TO OPEN ALTITUDE VALVE IF PT3 IS LOW. ALTITUDE VALVE OPENS AND PUMP TURN OFF.

TS2 – IF PUMP DEADHEADS, TURN PUMP OFF AND RECHECK EVERY 15 MINUTES + -

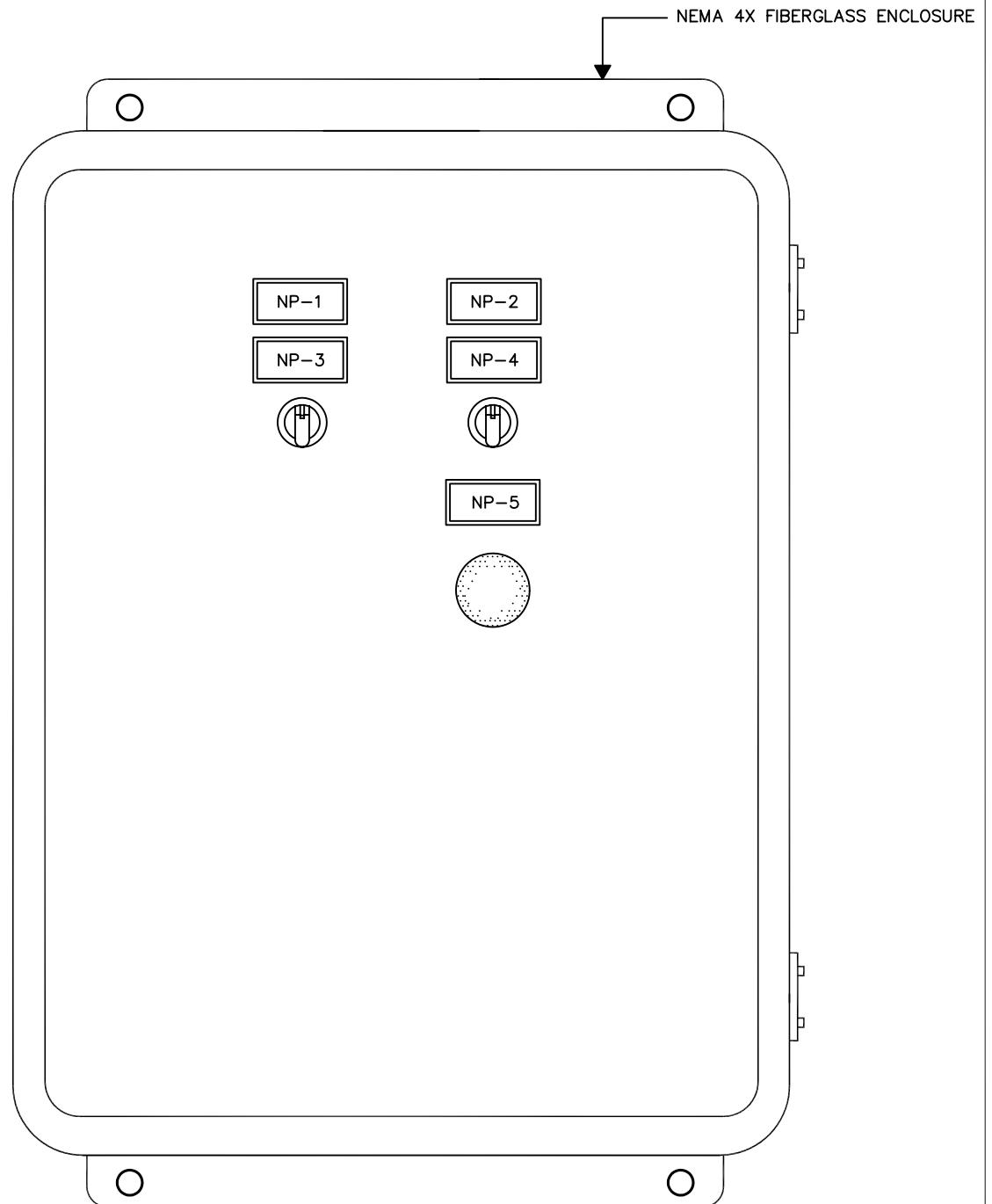
PT1 – STOPS PUMP. WILL NOT RESET UNTIL CALLED FOR BY SCADA.

PURPOSE IS TO PUMP OUT TANK ONE TIME PER DAY.

IF PT3 IS TOO LOW, PUMP STOPS, ALTITUDE VALVE OPENS.

WILL START SEQUENCE WHEN CALLED FOR BY SCADA.

IF PT1 IS TOO LOW OR GETS LOW TURN PUMP OFF.



FRONT OF ENCLOSURE

NAMEPLATE SCHEDULE

NP-1	SOLENOID VALVE 1
NP-2	SOLENOID VALVE 2
NP-3	HOA
NP-4	HOA
NP-5	LOCK OUT/STOP

**NOTE:**  
SEWER GASSES WILL DESTROY COMPONENTS IN PANEL.  
PROPER SEALS MUST BE INSTALLED EXTERNAL TO THE  
PANEL TO PREVENT ENTRY OF GASSES.

	Drawing Title					
	ENCLOSURE					
DATE 03/09/04	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL	DATE APPROVED BY	BY
	COX					
	Project Title BOOSTER PUMP CONTROL PANEL		P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)756-1030	PURCHASE ORDER NUMBER DRAWING NUMBER CP-1765 SHEET NUMBER 4		

# BILL OF MATERIALS

ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	VYNCKIER	VJ1412HWPL2	ENCLOSURE
1a	1	VYNCKIER	MP1412A	BACKPLATE
2	1	IDEA	OT63E3	PLC
3	1	SIEMENS		POWER SUPPLY
4	2	MOORE IND.	ECA/4-20ma/DH1L1/117AC/DIN	CURRENT SENSOR
5	2	ACI	JR22PCM20B	HOA
6	1	ABB	A2630-10-84	M1
7	1	ABB	TA25DU25	O.L. (18-25A)
8	2	MARATHON	1321580	DISTRIBUTION BLOCK
9	1	ABB	OT63E3	DISCONNECT SWITCH
10	1	SQUARE D	QOU150	CB1
11	1	SQUARE D	QOU115	CB2
12	1	REDINGTON	V24816	COUNTER
13	1	ACI	JR22GN11R	L.O. STOP
14				
15				
16				
17				
18				
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24				
25				

Drawing Title  <b>BILL OF MATERIALS</b>						
	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL	DATE APPROVED BY	BY
DATE 03/09/04						
Project Title  <b>BOOSTER PUMP CONTROL PANEL</b>	<hr/> <b>COX</b> <hr/> Research and Technology, Inc. <hr/>			P.O. Box 77808 Baton Rouge, LA 70809	PURCHASE ORDER NUMBER  DRAWING NUMBER CP-1765	
				Ph. (225)756-3271 Fax (225)756-1030	SHEET NUMBER 5	