BILL OF MATERIAL

ITEM	QTY.	MANUFACTURER AND CATALOG NUMBER		DESCRIPTION
1	1	HOFFMAN	A-48H3612SSLP 3PT	ENCLOSURE, NEMA 4X, STAINLESS STEEL, 48"H X 36"W X 12"D MINIMUM, FACTORY WHITE PAINT, 3-POINT LATCHES
	1	HOFFMAN	A-48P36	PANEL, 45"H X 33"W
	1	HOFFMAN	A-NADFK	INNER DOOR KIT
	1	HOFFMAN	CUSTOM	SWING-OUT PANEL, ALUMINUM, 44"H X 33"W
2	2	SQUARE D	8536-SDO1V02H10	FULL VOLTAGE STARTER, SIZE *, * POLE, 120 VAC COIL, SOLID STATE THERMAL OVERLOAD, CLASS 10 TRIP, 15-45 AMP
	2	SQUARE D	9999-SX8	AUXILIARY CONTACT, 1 N.O. & 1N.C. CONTACT
	2	SQUARE D	9066-RA1	MOTOR STARTER RESET BUTTON/MECHANISM
	2	SQUARE D	9999-AC04	AUXILIARY CONTACT FOR OVERLOAD
	2	SQUARE D	9999-SX7	AUXILIARY CONTACT 1-N.C.
3	3	SQUARE D	9001-SKS43BH1	SELECTOR SWITCH, 3 POSITION, NEMA 4X, CONTACT BLOCK, 1 N.O. & 1 N.C. CONTACT
	1	SQUARE D	9001-KA1	CONTACT BLOCK, 1 N.O. & 1 N.C.
4	2	SQUARE D	9001-SKP1G31	PILOT LIGHT, NEMA 4X, TRANSFORMER TYPE, 120 VAC, GREEN LENS
5	2	SQUARE D	9001-SKP1R31	PILOT LIGHT, NEMA 4X, TRANSFORMER TYPE, 120 VAC, RED LENS
6	5	SQUARE D	9001-SKP1A31	PILOT LIGHT, NEMA 4X, TRANSFORMER TYPE, 120 VAC, AMBER LENS
7	1	SQUARE D	QOU 110	CIRCUIT BREAKER, 1 POLE, 10 AMP, 125 VOLT
8	8	IDEC	RR3B-ULAC120	CONTROL RELAY, 3PDT, BLADES, INDICATING LIGHT, 120V COIL, 11 PIN
	8	IDEC	SR3B-05	RELAY SOCKET, 11 BLADES, DIN RAIL MOUNT
9	1	SQUARE D	PK7GTA	GROUND BAR
10	1	SQUARE D	CA2SKE20G7	ALTERNATION RELAY, 120 VOLT, 2 N.O. CONTACTS
12	2	TELEMECANIQUE	RM4LG01F	SEAL FAIL RELAY
13	A/R	PANDUIT	TYPE F	WIRE DUCT, GREY, NON-SLIP COVER (REFER TO DIMENSIONS ON LAYOUT)
14	39	WEIDMUELLER	1020100000	TERMINAL BLOCKS, 600 V, 35 AMPS, TYPE WDU 4, #10-#22 AWG WIRE
15	1	EDWARDS	876-N5	ALARM HORN, 120VAC, NEMA 4X
16	2	ENM	T50B212	COUNTER, 120VAC, 6 1/2 DIGIT
17	1	SQUARE D	9050-JCK15V20	TIMER RELAY, 2PDT, 10 AMP, 8 PIN BASE, 120 VAC 60HZ COIL
	1	IDEC	SR2P-06	RELAY SOCKET, 8 PINS, DIN RAIL MOUNT
18	1	MOTOR SAVER	460-14	PHASE FAILURE RELAY, 3 PH, 480VAC
19	1	BUSSMANN	BM6033PQ	FUSEBLOCK
	3	BUSSMANN	FNQR-1	FUSE, 1 AMP, 600V, TIME DELAY TYPE
20	1	EDWARDS	102PMB5-N5	PIPE MOUNT BASE
	2	EDWARDS	102LM-R	LENS MODULE - RED
	1	EDWARDS	102LS-ST-N5	STROBE LIGHT SOURCE
	1	EDWARDS	102LS-SIN-N5	STEADY ON, INCANDESCENT LIGHT SOURCE
21	1	SQUARE D	SDSA3650	SURGE ARRESTOR, 600 VOLT, 3 PHASE, W/ LED INDICATOR
22	1	SQUARE D	9080-LBA363104	DISTRIBUTION BLOCK, 600 VOLT, 3 POLE, MAIN (1) #6-400 AWG, BRANCH (4) #14-2 AWG
23	1	HEATREX	276-1	HEATER, 120 VAC, 100 WATT WITH FINGER GUARD
24	1	HOFFMAN	ATEMNC	THERMOSTAT, SPST, CLOSE ON FALL, 30-140 DEG.
25	1	BUSMANN	BM6031PQ	FUSE BLOCK, 600 VOLT, 1 POLE, 30 AMP
	1	BUSSMANN	FNM-2	FUSE, 2 AMP, 250V, TIME DELAY TYPE
26	7	SQUARE D	QOU 120	CIRCUIT BREAKER, 1 POLE, 20 AMP, 125 VOLT
27	1	SQUARE D	QOU 115	CIRCUIT BREAKER, 1 POLE, 15 AMP, 125 VOLT
28	2	SQUARE D	FAL3603015M	MOTOR CIRCUIT PROTECTOR, * POLE, * AMP, MAGNETIC TRIP, CIRCUIT BREAKER
29	4	WEIDMUELLER	1020300000	TERMINAL BLOCKS, 600 V, 65 AMPS, TYPE WDU 10, #6-#18 AWG WIRE
30	1	SQUARE D	7400-10S1F	TRANSFORMER, */*-*/* VOLT, 10 KVA, DRY TYPE, NEMA 3R (SEE NOTE #2)
31	1	SQUARE D	FAL24030	CIRCUIT BREAKER, * POLE, * AMP, * VOLT, FEED TO KVA TRANSFORMER
32	1	PASS & SEYMOUR	WIUCAST1	DUPLEX RECEPTACLE COVER, NEMA 3R, CAST WHILE IN USE COVER
	1	LEVITON	8899I	GROUND FAULT RECEPTACLE, DUPLEX, 20 AMP
33	2	BUSSMAN	FNM-3	FUSE, 3 AMP, 250 V, TIME DELAY TYPE
34	2	SQUARE D	QOU 140	CIRCUIT BREAKER, 1 POLE, 40 AMP, 125 VOLT
35	1	SQUARE D	PF7GTA	GROUND BAR
36	2	IDEC	SH4B-ULAC120	CONTROL RELAY, 4PDT, BLADES, INDICATING LIGHT, 120V COIL, 11 PINS
	2	IDEC	SH4B-05	RELAY SOCKET, DIN RAIL MOUNT, 11 PINS
37	A/R	IDEC	BNDN1000	DINRAIL, ALUMINUM, 39.37 INCHES

* ENGINEER TO SPECIFY BASED ON PUMP STATION REQUIREMENTS

Q (FROM SHEET 2 OF 4)

MAIN	MAIN	CONTROL / HEATER 10A	SECURITY LIGHT / GFCI 20A	RTU 15A	GEN BATTERY CHARGER 20A	GEN BLOCK HEATER 20A	DOOR CONTROL UNIT 20A	HEAT TRACE 20A	SPARE 20A	SPARE 20A

ENGRAVING SCHEDULE

ID NO.	QTY.	TYPE	SIZE	PLATE COLOR	LETTER COLOR	FIRST LINE \ SECOND LINE, ETC.
A	1	N P	1-1/2" X 6"	WHITE	BLACK	\ PUMP STATION \ DUPLEX CONTROL PANEL \ * VOLT, *HP
B	2	N P	1" X 3"	WHITE	BLACK	PUMP NO. 1
C	2	N P	1" X 3"	WHITE	BLACK	PUMP NO. 2
D	1	N P	1" X 3"	WHITE	BLACK	ALARM CONTROL
E	1	N P	1" X 2"	WHITE	BLACK	CONTROL \ CIRCUIT
F	2	L P	2-1/4" SQ.	WHITE	BLACK	RUNNING
G	2	L P	2-1/4" SQ.	WHITE	BLACK	STOPPED
H	2	L P	2-1/4" SQ.	WHITE	BLACK	PUMP FAILURE
J	2	L P	2-1/4" SQ.	WHITE	BLACK	HAND OFF AUTO
K	1	L P	2-1/4" SQ.	WHITE	BLACK	LIGHT RESET LIGHT/HORN
L	1	L P	2-1/4" SQ.	WHITE	BLACK	HIGH \ LEVEL
M	1	N P	1" X 3"	WHITE	BLACK	PUMP NO. 1 \ OL RESET
N	1	N P	1" X 3"	WHITE	BLACK	PUMP NO. 2 \ OL RESET
O	2	L P	2-1/4" SQ.	WHITE	BLACK	SEAL \ FAILURE
P	1	N P	1" X 3"	WHITE	BLACK	10KVA \ TRANSFORMER
Q	1	N P	3" X 4-3/4"	WHITE	BLACK	(NOTE: SEE DETAIL "A")

NOTE:
NAMEPLATES ATTACHED WITH STAINLESS STEEL SCREWS

LABEL SCHEDULE

TAG	QTY.	TEXT
LBL1	1	* VOLT
LBL2	1	(REVERE CUSTOM LABEL) TWO * HP MOTOR, * FLA EA. * VAC, * PHASE, 60 HZ * FLA, CONTROL VOLTAGE 120 VAC FILE NUMBER E88854
LBL3	1	RECOMMENDED TORQUE \ 5.31-7.09 IN. LB.
LBL4	2	USE COPPER CONDUCTORS ONLY RATED AT 60°C OR HIGHER
LBL5	1	NEMA TYPE 4X, ENCLOSURE RATING
LBL6	2	TO MAINTAIN ENCLOSURE RATING, USE WATERTIGHT HUBS OR FITTINGS WITH THE SAME ENVIRONMENTAL RATING AS THE ENCLOSURE. O-Z/GEDNEY CHM SERIES HUBS APPLETON HUB SERIES HUBS CROUSE-HINDS STG SERIES HUBS
LBL7	1	DANGER HIGH VOLTAGE
LBL8	1	CAUTION \ THIS EQUIPMENT \ IS SUPPLIED BY \ MORE THAN ONE \ POWER SOURCE.
LBL9	1	FUSE SCHEDULE: TO REDUCE RISK OF FIRE, REPLACE WITH SAME TYPE AND SIZE FUSES.

NO.	MANUF.	TYPE	AMP	VOLTS
214FU	BUSSMANN	FNQ-R	1	600
236FU	BUSSMANN	FNM	2	250

NOTE:
1. ASSEMBLED CONTROL PANEL TO BEAR U.L. 508A LABEL
2. 10 KVA TRANSFORMER ONLY REQUIRED IF UTILITY VOLTAGE IS 240/480 PRIMARY

FULL VOLTAGE MOTOR STARTER TABLE

MOTOR HP	208 V SIZE	240 V SIZE	480 V SIZE
2	1	1	1
5	1	1	1
10	2	2	1
15	3	2	2
20	3	3	2
30	4	3	3
40	4	4	3
50	5	4	3

1-50 HP PUMP STATION ELECTRICAL DIAGRAMS

Revisions
1.1 - DATED 8/26/2013
Added Line 37 to B.o.M.

COUNTY OF BRUNSWICK

PUMP STATION ELECTRICAL DETAILS
1-50 HP DUPLEX CONTROL PANEL
FOR
BRUNSWICK COUNTY
NORTH CAROLINA

Date: 05-16-12
Scale: NTS
Drawn By: JDM
Checked By: WLP