

**CITY OF BATON ROUGE  
PARISH OF EAST BATON ROUGE  
DEPARTMENT OF ENVIRONMENTAL SERVICES**

September 7, 2016

**ADDENDUM NO. 5**

**TO:** ALL BIDDERS

**SUBJECT:** FLORIDA BOULEVARD PUMP STATION IMPROVEMENTS  
CITY-PARISH PROJECT NO. 11-PS-MS-0003

**ORIGINAL BID DATE:** Tuesday, August 16, 2016 at 2:00 PM

**CURRENT BID DATE:** Tuesday, September 13, 2016 at 2:00 PM

The following revisions shall be incorporated in and take precedence over any conflicting part of the original contract documents:

**PART 1 – UNIFORM CONSTRUCTION BID FORMS:**

1. For paper sealed bidders, with reference to page UCBF 1 of 4 of Part 1, Uniform Construction Bid Form, the Bidder shall indicate the receipt of this addendum in the space provided. For online Bid Express bidders, an acknowledgement of this addendum will be prompted by the electronic bidding program prior to formally submitting the bid. Failure to indicate the receipt of this addendum shall be cause for the bid to be rejected.

**PART 2 – SPECIAL PROVISIONS AND CONTRACT DOCUMENTS:**

1. For paper sealed bidders, with reference to page UCBF 1 of 4 of Part 1, Uniform Construction Bid Form, the Bidder shall indicate the receipt of this addendum in the space provided. For online Bid Express bidders, an acknowledgement of this addendum will be prompted by the electronic bidding program prior to formally submitting the bid. Failure to indicate the receipt of this addendum shall be cause for the bid to be rejected.

**SPECIAL PROVISIONS**

1. Section 1019: Delete Paragraph 1019-8, Item f. and Replace with the following:

f. Candidate Manufacturers and Products:

- f. A.R.I USA, Inc. Model D-023 or 025;
- g. Val-Matic Valve, Series 800;
- h. Or equal.

2. Section 1019: Add Item g. to paragraph 1019-8 as follows:

g. Combination air valves shall meet the design requirements listed in Table 1 below:

**Table 1. Combination Air Valves Design Requirements**

Station No.	Station Type	No. of CARVs	Location	Design Requirements																		
				Non-Slam / Throttling Attach.	Min. Inflow (scfm) / Pressure Diff.(psi)			Max. Outflow (scfm) / Pressure Diff. (psi)			Max. Outflow with Non-slam / throttling Attach. (scfm)											
<b>Pressure Differential Across Valve (psi)</b>				<b>4.6</b>	<b>1.8</b>	<b>0.7</b>	<b>4.2</b>	<b>1.2</b>	<b>0.7</b>	<b>4.3</b>	<b>18.9</b>	<b>48.6</b>										
PS 16	Duplex	2	Each pump discharge pipe between pump and check valve	No	74	44	29	103	44	29	3	9	15									
		1	Common discharge header	Yes																		
PS 18	Duplex	2	Each pump discharge pipe between pump and check valve	No																		
		1	Common discharge header	Yes																		
PS 21	Triplex	3	Each pump discharge pipe between pump and check valve	No																		
PS 66	Duplex	2	Each pump discharge pipe between pump and check valve	No																		
PS 101	Duplex	2	Each pump discharge pipe between pump and check valve	No																		
PS 151	Duplex	2	Each pump discharge pipe between pump and check valve	No																		
		1	Common discharge header	Yes																		
<b>Pressure Differential Across Valve (psi)</b>				<b>5.2</b>										<b>1.9</b>	<b>0.7</b>	<b>4.4</b>	<b>2.5</b>	<b>1.0</b>	<b>3.2</b>	<b>8</b>	<b>13.3</b>	
PS 31	Program	4	Each pump discharge pipe between pump and check valve	Yes										1,177	589	294	883	589	284	15	29	44
		2	Common discharge header	Yes																		
PS 50	Program	4	Each pump discharge riser between pump and check valve	Yes																		
		2	Common discharge header	Yes																		

## **DRAWINGS**

1. Insert attached Sheet No. 101-C-08.
2. Sheet 101-C-02, Demolition Plan – Existing PS 101, Delete callout for existing sanitary north of PS 101 and Replace with “Existing Sewer Line to Remain”.
3. Sheet 101-C-02, Add Note 11 as follows:

Existing wet well shall be converted to manhole. Remove top three (3) feet as shown and replace with new cone, frame and cover in accordance with Section 803. Fill with 4000 psi concrete to existing invert elevation 26.3 (field verify) and form invert. Concrete and invert shall meet the requirements of Section 803.
4. Insert attached Sheet Nos. 311-E-01, 311-E-02, and 311-E-03.
5. Insert attached Sheet Nos. 336-E-01, 336-E-02, and 336-E-03.

RECOMMENDED:



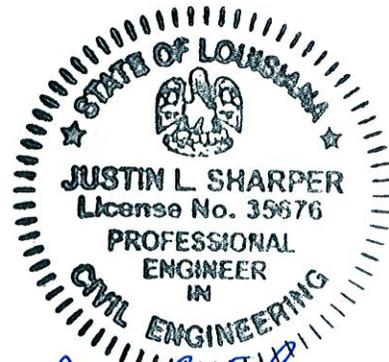
9/7/16

  
Scott A. Hall, P.E.



9/7/16

Jarrod C. Tramonte, P.E.



  
Justin L. Sharper, P.E.

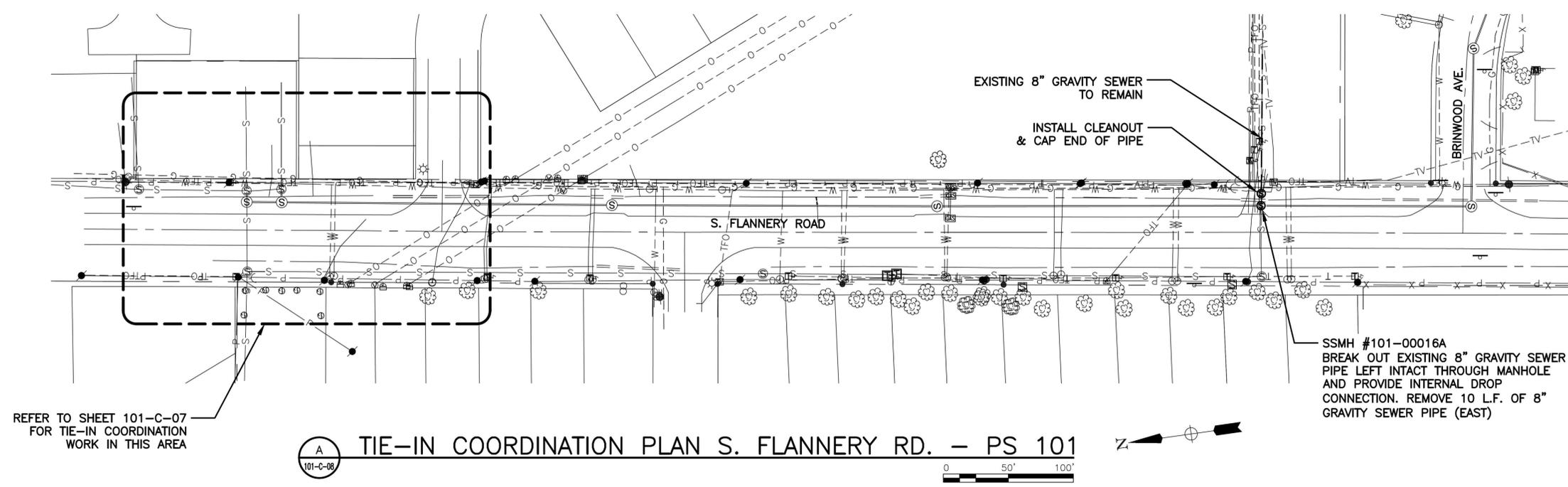
APPROVED:

  
Adam M. Smith, P.E.

NO.	DATE	REVISION DESCRIPTION	BY

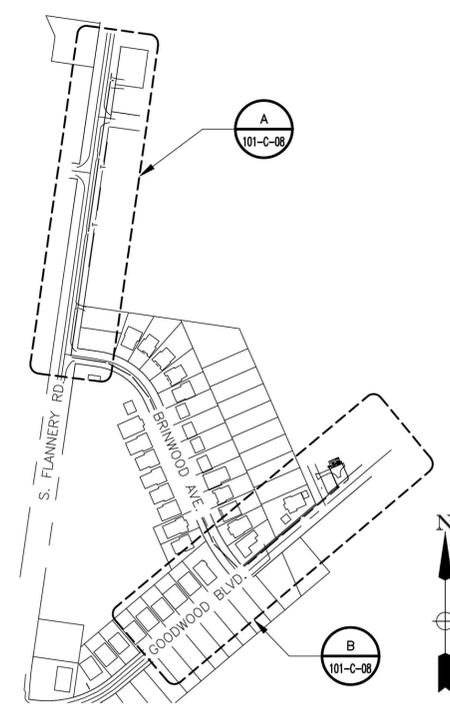


FLORIDA BOULEVARD PUMP  
STATION IMPROVEMENTS  
PUMPING STATION 101  
TIE-IN COORDINATION PLAN

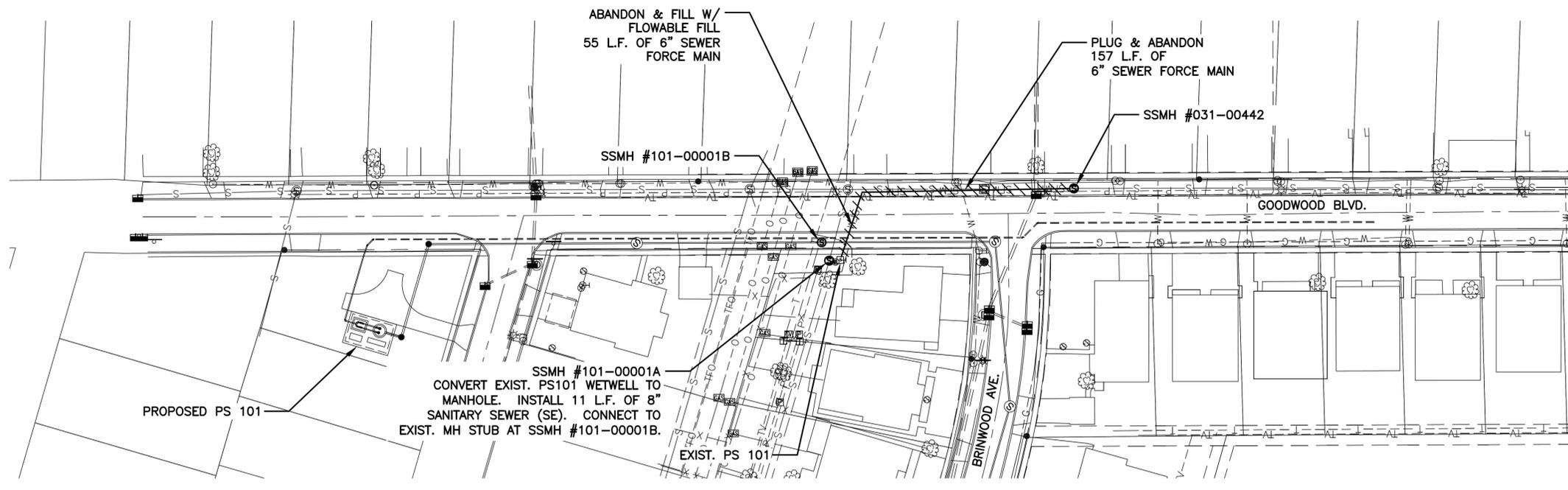
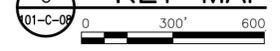


REFER TO SHEET 101-C-07  
FOR TIE-IN COORDINATION  
WORK IN THIS AREA

**A** TIE-IN COORDINATION PLAN S. FLANNERY RD. - PS 101  
101-C-08



**C** KEY MAP  
101-C-08



**B** TIE-IN COORDINATION PLAN GOODWOOD BLVD. - PS 101  
101-C-08



NOTES:

- ALL WORK SHOWN ON THIS SHEET SHALL BE PAID UNDER ITEM #8200007, DEMOLITION AND SITE RESTORATION OF PUMP STATION (PS NO. 101).
- BASE INFORMATION SHOWN WAS TAKEN FROM CONSTRUCTION DRAWINGS FOR PROJ. NO. 11-FM-MS-0005 DATED 12/01/2015 AS PREPARED BY FORTE & TABLADA.
- TIE-IN COORDINATION WORK SHOWN OR REFERENCED HEREON SHALL BE COMPLETED ONLY AFTER NEW PS101 IS OPERATIONAL.

**Call before you dig.**  
PRIOR TO WORK COMMENCEMENT, THE CONTRACTOR IS RESPONSIBLE FOR FINAL VERIFICATION OF THE LOCATION OF THE UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CALL LOUISIANA ONE CALL (811 OR 800-272-3020) AND CITY PARISH DEPARTMENT OF PUBLIC WORKS TO THE UTILITIES LOCATED PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES FOR ALL AREAS OF CONSTRUCTION.

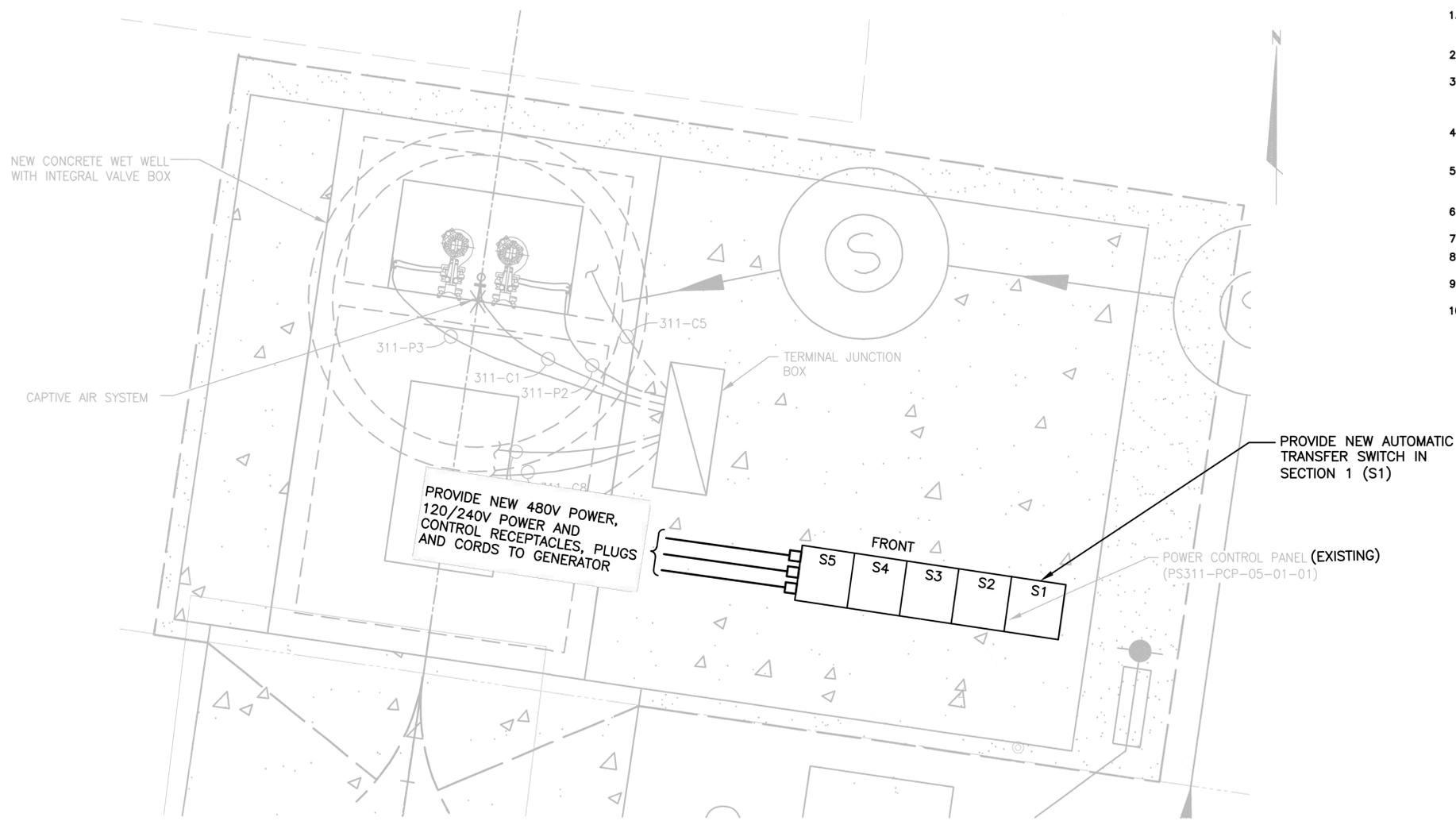


**NEW WORK BY CONTRACTOR GENERAL INFORMATION:**

1. THE EXISTING PUMP CONTROL PANEL CONSISTS OF 5 SECTIONS. THE LEFT MOST CABINET, SECTION 1, CONTAINS THE SERVICE ENTRANCE WIRING AND MECHANICALLY INTERLOCKED NORMAL AND GENERATOR POWER SOURCE SELECTION CIRCUIT BREAKERS. A GENERATOR POWER RECEPTACLE IS LOCATED ON CABINET, SECTION 5 ON THE RIGHT END. THIS SECTION ALSO CONTAINS THE PLC AND I/O EQUIPMENT. SECTION 2 CONTAINS THE 480 - 120/240 STEPDOWN TRANSFORMER AND 120/240V POWER DISTRIBUTION EQUIPMENT. SECTIONS 3 AND 4 CONTAIN THE PUMP VFDS.
2. THE PUMP CONTROL PANEL (PCP) IS AN INDUSTRIAL CONTROL PANEL AND REQUIRES THE APPROPRIATE UL LABEL. THE CONTRACTOR SHALL PERFORM THE MODIFICATIONS TO THIS CONTROL PANEL IN A FASHION THAT RETAINS ITS UL LISTING AND A NEW UL508A LABEL SHALL BE APPLIED TO THE MODIFIED PCP SECTIONS. AS MAY BE NECESSARY, THE WORK SHALL BE DONE BY A CONTRACTOR OR PANEL SHOP LICENSED BY UL TO APPLY THE UL508A LABEL.
3. NEW WORK IS SHOWN WITH HEAVY LINES AND TEXT. EXISTING EQUIPMENT IS SHOWN WITH LIGHT LINES AND TEXT.
4. ALL EXISTING INFORMATION SHOWN ON THE DRAWINGS WAS OBTAINED FROM EXISTING DRAWINGS AND FIELD OBSERVATIONS. IT MAY NOT BE COMPLETE OR 'AS-BUILT'. CONTRACTOR SHALL CHECK EXISTING CONDITIONS BEFORE BEGINNING WORK.

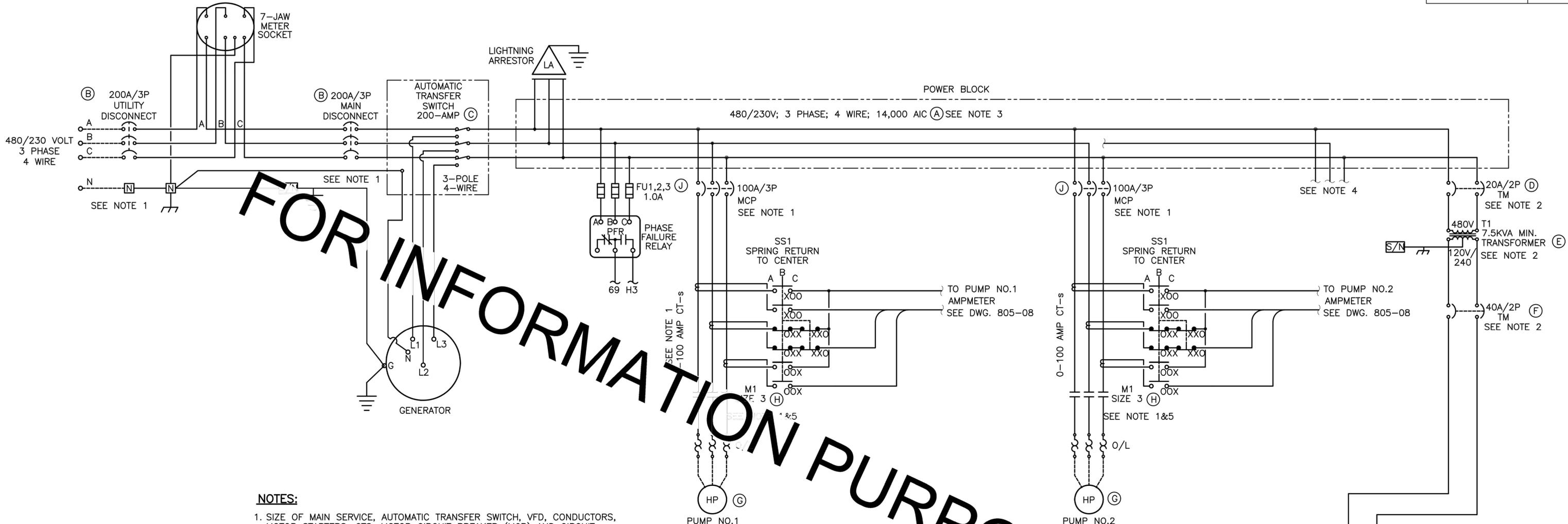
**NEW WORK BY CONTRACTOR DESCRIPTION:**

1. PROVIDE NEW AUTOMATIC TRANSFER SWITCH (ATS), CABLES, PLUGS, CORDS, RECEPTACLES AND ACCESSORIES IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, AND AS REQUIRED TO COMPLETE THE INSTALLATION.
2. DISCONNECT AND REMOVE OR REUSE EXISTING WIRING AND COMPONENTS AS REQUIRED FOR INSTALLING THE ATS.
3. MOUNT NEW ATS INSIDE THE EXISTING POWER CONTROL PANEL (PCP) AND WIRE INTO ITS POWER CIRCUITS AND CONTROL SYSTEM CIRCUITS. ATS POWER CIRCUITS SHALL BE WIRED TO BE AS SHOWN ON THE STANDARD THREE LINE DIAGRAM, 805-09, SHEET 1 OF 2. ATS CONTROL WIRING SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
4. PROVIDE REPLACEMENT RECEPTACLE FOR GENERATOR 480V MAIN POWER RECEPTACLE MOUNTED ON PCP. RECONNECT EXISTING CABLES TO NEW RECEPTACLE. PROVIDE NEW MATCHING PLUG AND POWER CORD FROM PCP TO GENERATOR.
5. PROVIDE NEW CIRCUIT BREAKERS, 120/240V POWER CABLES, WEATHERPROOF PLUG AND 120/240V AUXILIARY POWER RECEPTACLE, AND CORD FROM EXISTING 120/240V POWER PANEL RACK IN PCP TO GENERATOR FOR BATTERY CHARGER AND JACKET WATER HEATER.
6. PROVIDE NEW CONTROL CABLES, WEATHERPROOF PLUG AND CONTROL SIGNAL RECEPTACLE, AND CORD FROM PCP TO GENERATOR FOR CONTROL AND STATUS CIRCUITS.
7. CONNECT CABLES AND CORDS TO PCP, RECEPTACLES, PLUGS AND GENERATOR AS REQUIRED.
8. PROVIDE NEW CONTROL WIRING WITHIN THE PCP FOR ATS AND GENERATOR STATUS CIRCUIT MONITORING BY PLC IN PCP.
9. MAKE PENETRATIONS ON THE PCP ENCLOSURE FOR NEW RECEPTACLES AS REQUIRED TO CLEAR INTERNAL COMPONENTS AND MAINTAIN THE NEMA 4X RATING OF THE ENCLOSURE.
10. SEE DRAWING 311-E-03 FOR EQUIPMENT REQUIREMENTS AND WIRING INSTRUCTIONS.



1  
311-E-01 **PS 311 PUMP CONTROL PANEL MODIFICATION TO ADD AUTOMATIC TRANSFER SWITCH**  
NOT TO SCALE

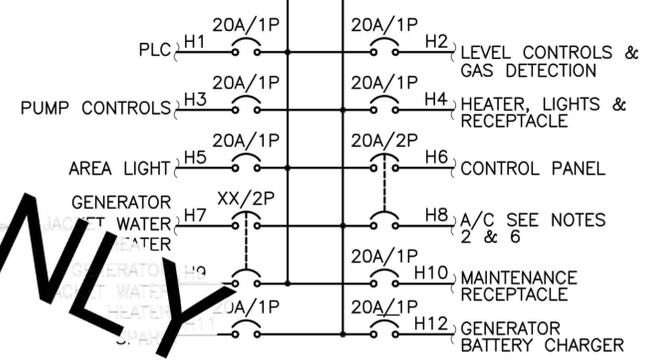




FOR INFORMATION PURPOSES ONLY

- NOTES:**
1. SIZE OF MAIN SERVICE, AUTOMATIC TRANSFER SWITCH, VFD, CONDUCTORS, MOTOR STARTERS, CTS, MOTOR CIRCUIT BREAKER (MCB) AND CIRCUIT BREAKERS ARE TO BE DETERMINED BY HORSEPOWER ON PUMP SELECTION. SEE TABLE 805-09 FOR COMPONENT SIZING.
  2. COORDINATE TRANSFORMER AND BREAKER SIZES ON CONNECTED LOAD, GENERATOR JACKET WATER HEATER AND AIR CONDITIONER.
  3. VERIFY AVAILABLE SHORT CIRCUIT CURRENT WITH SERVING ELECTRICAL UTILITY.
  4. PROVIDE MOTOR CONTROLS TYPICAL OF PUMP NO.1 AND NO.2 FOR TRIPLEX PUMP STATIONS.
  5. THE DRAWING SHOWS PUMP STATION WITH FIXED SPEED PUMPS. FIXED SPEED PUMP CONTROLS ARE SHOWN ON DRAWING 805-08. FOR PUMP STATIONS WITH VARIABLE SPEED PUMPS, PROVIDE VARIABLE FREQUENCY DRIVE PUMP CONTROLS AS SHOWN ON DRAWING 805-06.
  6. FOR PUMP STATIONS WITH VARIABLE SPEED PUMPS, PROVIDE AIR CONDITIONING TO REMOVE HEAT GENERATED BY VARIABLE FREQUENCY DRIVE.

THREE LINE POWER DIAGRAM



STANDARD PLAN NO. 805-09	DATED AUGUST 1, 2011	SHEET NO. 1 OF 2
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**THREE LINE POWER DIAGRAM  
(TYPE I STATION)**

ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE			
DESIGNED A. SCHULZE	DRAWN G. VANNICE	CHECKED R. WRIGHT	APPROVED B. HARMON



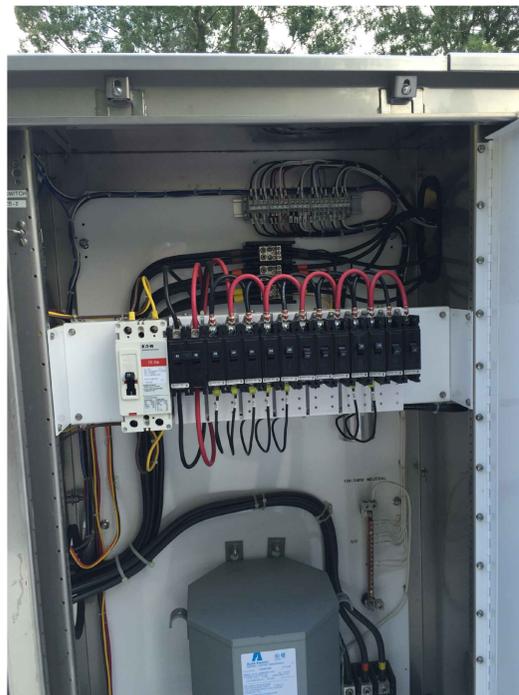
FRONT ELEVATION



SECTION 1 ELEVATION



SECTION 1 INTERIOR



SECTION 2 INTERIOR



SECTION 5 INTERIOR



GENERATOR RECEPTACLE

**ELECTRICAL EQUIPMENT NOTES AND REQUIREMENTS:**

- CONTRACTOR SHALL PROVIDE AUTOMATIC TRANSFER SWITCH, CABLES AND CORDS, RECEPTACLES AND PLUGS AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS, AND AS DESCRIBED HEREIN FOR PUMP STATION.
- AUTOMATIC TRANSFER SWITCH (ATS) SHALL BE OPEN TRANSITION, 3 POLE TYPE COMPLETE WITH MICROPROCESSOR CONTROL AND DISPLAY PANEL. UNIT SHALL BE RATED 150A AT 480V WITH SOLID NEUTRAL. UNIT SHALL BE OPEN TYPE FOR WALL MOUNTING. UNIT SHALL BE MOUNTED WITHIN SECTION 1 OF THE EXISTING POWER CONTROL PANEL IN ACCORDANCE WITH ALL NEC, NEMA AND UL REQUIREMENTS.
- ATS SHALL BE ASCO SERIES 7000, MODEL 7ATS3150N5X WITH OPTIONAL ACCESSORIES 18B, 18G, 37B AND 7000 MICROPROCESSOR CONTROLLER OR ENGINEERING APPROVED EQUAL. MINIMUM ENCLOSURE SIZE REQUIREMENT OF ATS PROVIDED MUST BE EQUAL TO OR LESS THAN THE SIZE OF THE CABINET SPACE IT IS MOUNTED IN.
- GENERATOR MAIN POWER RECEPTACLE IS EXISTING. IT IS A 3 WIRE, 4 POLE, 200A, 600V COOPER CROUSE-HINDS ARKITE CAT# AR2042 UNIT. REPLACEMENT UNIT SHALL BE A 4 WIRE, 4 POLE PLUS SEPARATE GROUND WIRE CONNECTION, 200A, 600V COOPER CROUSE-HINDS CAT# AR2041 WITH WEATHREPROOF COVER. REUSE ANGLE ADAPTOR IF IT MATCHES NEW RECEPTACLE; OTHERWISE REPLACE IT WITH UNIT MATCHING RECEPTACLE.
- NEW PLUG SHALL MATCH REPLACEMENT RECEPTACLE AND BE SUPPLIED WITH 50 FOOT OF PORTABLE EXTRA HARD USAGE CORD FOR CONNECTION TO OWNERS GENERATOR POWER OUTPUT TERMINALS. PORTABLE CORD SHALL BE TYPE W PLUS A WATER RESISTANT RATING, CONSISTING OF 5/C #1/0 AWG COPPER CONDUCTORS (3 PHASE, 1 NEUTRAL, 1 GROUND). CORD SHALL BE SOUTHWIRE/CCI ROYAL 2000V PORTABLE CABLE, PART NUMBER 830286 OR ENGINEER APPROVED EQUAL.
- OWNERS GENERATOR RATING SHALL NOT EXCEED 100KW AT 480V AND SHALL INCLUDE AN OUTPUT CIRCUIT BREAKER SET TO TRIP AT NOT GREATER THAN 150A. TRIP SETTING IS BASED ON #1/0 AWG SIZE OF GENERATOR RECEPTACLE CABLE WITHIN THE POWER CONTROL PANEL PER EXISTING PROJECT DRAWINGS.
- ALL NEW WIRE AND CABLE SHALL HAVE COPPER CONDUCTORS WITH 600V INSULATION.
- SEE PROJECT STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- SEE EXISTING PS-311 AND PS-336 PROJECT DRAWINGS FOR INFORMATION ON EXISTING EQUIPMENT AND SITE CONDITIONS.

**ATS ADDITION WIRING INSTRUCTIONS:**

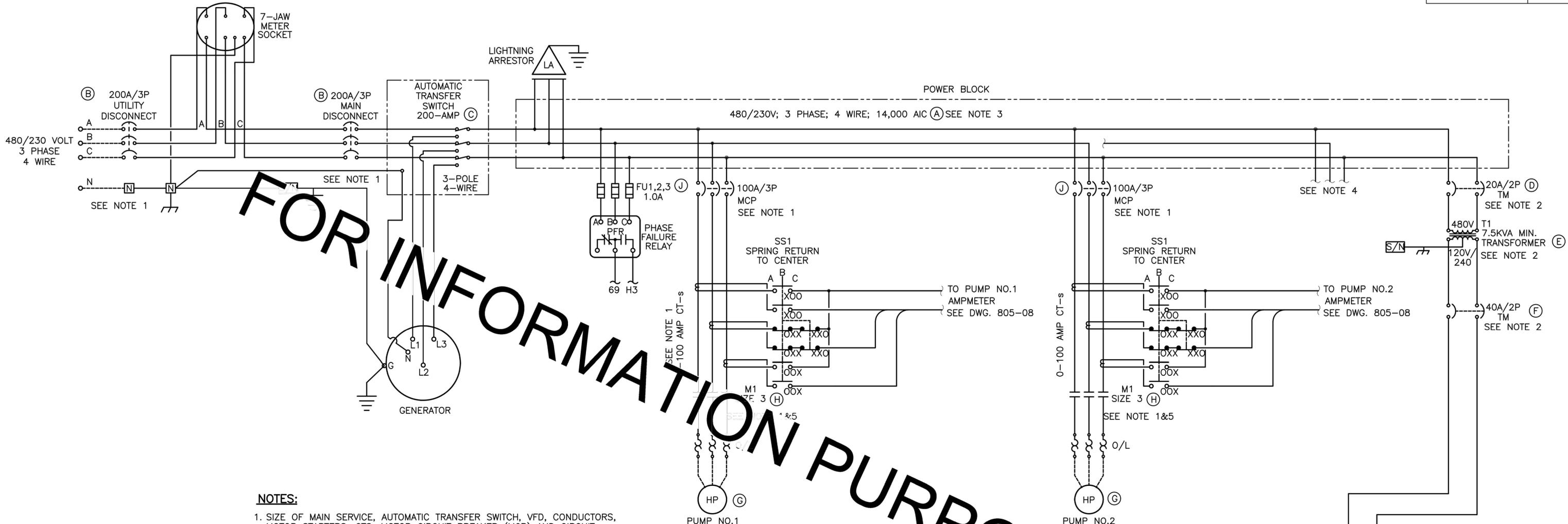
- THE FOLLOWING WIRING METHODOLOGY IS THE RECOMMENDED SCHEME. CONTRACTOR MAY SUBMIT ALTERNATE SCHEME FOR REVIEW AND APPROVAL BY ENGINEER.
- MOUNT NEW AUTOMATIC TRANSFER SWITCH (ATS) INSIDE POWER CONTROL PANEL, SECTION 1 (LEFT CABINET) BEHIND DEADFRONT PANEL. MOUNT ATS CONTROL/STATUS DISPLAY ON DEADFRONT PANEL CUT OPENING IN DEADFRONT PANEL AS REQUIRED FOR MOUNTING AND VIEWING DISPLAY. DO NOT CUT OR MODIFY PCP OUTER DOOR.
- REMOVE AND RELOCATE EXISTING OVER/UNDER VOLTAGE RELAY INSIDE SECTION 1 AS REQUIRED TO CLEAR SPACE FOR ATS. IF ATS HAS ITS OWN OVER/UNDER VOLTAGE OR PHASE LOSS ALARM WITH CONTACT CLOSURE OUTPUT, THAT ALARM CONTACT MAY BE WIRED TO THE EXISTING PLC INPUT WIRES AS SUBSTITUTE FOR THE EXISTING OVER/UNDER VOLTAGE ALARM, AND EXISTING ALARM MODULE DISCONNECTED AND REMOVED.
- DISCONNECT POWER CABLES COMING FROM THE LOAD SIDE OF SERVICE DISCONNECT CIRCUIT BREAKER (MAIN CB) IN POWER CONTROL PANEL (PCP) SECTION 1, GOING TO THE POWER TERMINAL BLOCK IN PCP SECTION 2, AT THAT TERMINAL BLOCK. TRIM CABLE AS REQUIRED AND CONNECT TO NORMAL (UTILITY) INPUT OF ATS IN PCP SECTION 1.
- DISCONNECT POWER CABLES COMING FROM THE LOAD SIDE OF GENERATOR DISCONNECT CIRCUIT BREAKER (GEN CB) IN POWER CONTROL PANEL (PCP) SECTION 1, GOING TO THE POWER TERMINAL BLOCK IN PCP SECTION 2, AT THAT TERMINAL BLOCK. TRIM CABLE AS REQUIRED AND CONNECT TO EMERGENCY (GENERATOR) INPUT OF ATS IN PCP SECTION 1.
- PROVIDE NEW POWER CABLES FROM ATS LINE OUTPUT TO TERMINAL BLOCK IN SECTION 2 WHERE ABOVE NOTED CABLES WERE DISCONNECTED FROM. MATCH DISCONNECTED CABLE SIZE AND TYPE. MAINTAIN EXISTING PHASING.
- PROVIDE NEW CABLE FROM ATS NEUTRAL LUG TO EXISTING 480V NEUTRAL BUS BAR IN PCP SECTION 1. MATCH PHASE CABLE SIZE AND TYPE. RETAIN EXISTING BONDING FROM 480V NEUTRAL BUS BAR TO GROUND BUS BAR.
- REPLACE GENERATOR RECEPTACLE MOUNTED ON PCP SECTION 5 (RIGHT SIDE) CABINET. RECONNECT THREE (3) DISCONNECTED PHASE POWER CABLES TO NEW RECEPTACLE PINS AND GROUNDING CABLE TO RECEPTACLE GROUND TERMINAL. (REPLACE GROUNDING CABLE WITH #4 AWG COPPER CONDUCTOR IF TOO LARGE TO FIT RECEPTACLE GROUND TERMINAL). PROVIDE NEW NEUTRAL CABLE FROM GENERATOR RECEPTACLE NEUTRAL PIN TO 480V NEUTRAL BUS BAR IN PCP SECTION 1. MATCH PHASE CABLE SIZE AND TYPE.
- PROVIDE MATCHING PLUG FOR REPLACEMENT RECEPTACLE MENTIONED ABOVE AND 50 FEET OF CORD PER ELECTRICAL EQUIPMENT NOTES AND REQUIREMENTS. CONNECT CORD TO PLUG AND GENERATOR POWER OUTPUT TERMINALS ON LOAD SIDE OF ITS GENERATOR MOUNTED MAIN CB.
- PROVIDE 8 #14AWG CONTROL WIRES FROM ATS STATUS CONTACTS TO OWNERS EXISTING PLC I/O CARD TERMINALS FOR NORMAL POWER AVAILABLE, GENERATOR POWER FAIL, ATS IN NORMAL POSITION, AND ATS IN EMERGENCY POSITION (2 WIRES EACH). MATCH EXISTING CONTROL WIRE TYPE.
- USE EXISTING SPARE 1 POLE, 20A CB IN PCP SECTION 2, 120/240V POWER RACK AND CONNECT TO GENERATOR BATTERY CHARGER. REMOVE 2 SPARE 1 POLE, 20A CB AND PROVIDE REPLACEMENT 2 POLE, 20A CB IN PCP SECTION 2, 120/240V POWER RACK AND CONNECT TO GENERATOR JACKET WATER HEATER. PROVIDE 5 - #12 AWG WIRES WITHIN PCP AND 50 FOOT OF 1 - 5C #10AWG HEAVY DUTY EXTENSION CORD TYPE 'SOOW' AND WEATHER PROOF LOCKING RECEPTACLE/PLUG, L-22-30 WITH IN-USE NEMA 4X WEATHER PROOF HOUSING. MOUNT RECEPTACLE ON PCP SECTION 5 NEAR GENERATOR RECEPTACLE. ATTACH PLUG TO EXTENSION CORD AND CONNECT OTHER END OF EXTENSION CORD TO GENERATOR BATTERY CHARGER AND WATER HEATER TERMINALS. CONNECT 1 CONDUCTOR TO 120/240V GROUND BUS BAR AT EACH END OF CIRCUIT. IN PCP MATCH EXISTING 120/240V WIRE TYPE.
- PROVIDE 50 FOOT OF 1 - 7C #12AWG HEAVY DUTY EXTENSION CORD TYPE 'SOOW' FROM GENERATOR TO PCP SECTION 5. PROVIDE 6 POLE PLUG AND RECEPTACLE FOR CONNECTING THIS EXTENSION CORD TO 6 #14AWG NEW CONTROL WIRES WITHIN PCP FOR GENERATOR STATUS AND CONTROL. RECEPTACLE SHALL BE PHOENIX CONTACT TYPE HC-HS 6-EUBS-12 WITH HC-B 16-TFL-45/01M25G NEMA 4X ENCLOSURE WITH COVER. PLUG SHALL BE TYPE HC-HS 6-ESTS-12. MOUNT RECEPTACLE ON PCP SECTION 5 NEAR GENERATOR RECEPTACLE. ATTACH PLUG TO EXTENSION CORD AND CONNECT OTHER END OF EXTENSION CORD TO GENERATOR START/RUN TERMINALS (2 WIRES), AND GENERATOR RUN, FAIL, FUEL LEAK AND COMMON ALARM TERMINALS (1 WIRE EACH). INSIDE PCP, CONNECT NEW CONTROL WIRES TO ATS START CONTACT (2 WIRES) TERMINALS, AND EXISTING PLC HDIO MODULE TERMINALS FOR GENERATOR RUN, FAIL, FUEL LEAK AND COMMON ALARM INPUTS (1 WIRE EACH). CORD HAS 1 SPARE CONDUCTOR. IN PCP MATCH EXISTING CONTROL WIRE TYPE.
- PROVIDE GROUNDING ROD AND GROUNDING WIRE FOR GROUNDING OWNERS PORTABLE GENERATOR FRAME AT LOCATION DETERMINED DURING INSTALLATION. SIZE GROUND WIRE (USE MINIMUM SIZE OF #4 AWG BARE COPPER CONDUCTOR) AND PROVIDE COPPER CLAD STEEL, 10' LONG, 3/4" DIAMETER GROUND ROD IN ACCORDANCE WITH NEC REQUIREMENTS.
- PROVIDE ENGRAVED NAMEPLATE WITH WHITE LETTERS ON RED BACKGROUND, 3" HIGH X 6" WIDE WITH 3/8" HIGH LETTERS, PERMANENTLY MOUNTED ON THE EXTERIOR OF PCP SECTION 5 NEAR GENERATOR RECEPTACLE WITH THE FOLLOWING WORDING-  

CAUTION  
INTERNAL EQUIPMENT RATED 150A AT 480V  
GENERATOR SHALL HAVE ITS OWN MAIN CIRCUIT BREAKER  
SET TO TRIP AT A MAXIMUM VALUE OF 150 AMPS
- AT COMPLETION OF WORK, REMOVE MECHANICAL INTERLOCK BAR BETWEEN MAIN CB AND GEN CB.
- CONNECT OWNER FURNISHED PORTABLE GENERATOR AND TEST FOR PROPER OPERATION. AT COMPLETION OF TESTING, DISCONNECT OR LEAVE CONNECTED AS DIRECTED BY OWNER.



SHEET NUMBER	311-E-03	PARISH	EAST BATON ROUGE	CITY	BATON ROUGE	PROJECT	11-PS-MS-0003
DESIGNED	JM	CHECKED	SLW	DATE	SEPTEMBER 2016	SHEET	003 OF 006
FLORIDA BOULEVARD PUMP STATION IMPROVEMENTS		PS 311 ELEVATIONS, SECTIONS, NOTES, AND WIRING INSTRUCTIONS		REVISION DESCRIPTION		NO. DATE	





FOR INFORMATION PURPOSES ONLY

- NOTES:**
1. SIZE OF MAIN SERVICE, AUTOMATIC TRANSFER SWITCH, VFD, CONDUCTORS, MOTOR STARTERS, CTS, MOTOR CIRCUIT BREAKER (MCB) AND CIRCUIT BREAKERS ARE TO BE DETERMINED BY HORSEPOWER ON PUMP SELECTION. SEE TABLE 805-09 FOR COMPONENT SIZING.
  2. COORDINATE TRANSFORMER AND BREAKER SIZES ON CONNECTED LOAD, GENERATOR JACKET WATER HEATER AND AIR CONDITIONER.
  3. VERIFY AVAILABLE SHORT CIRCUIT CURRENT WITH SERVING ELECTRICAL UTILITY.
  4. PROVIDE MOTOR CONTROLS TYPICAL OF PUMP NO.1 AND NO.2 FOR TRIPLEX PUMP STATIONS.
  5. THE DRAWING SHOWS PUMP STATION WITH FIXED SPEED PUMPS. FIXED SPEED PUMP CONTROLS ARE SHOWN ON DRAWING 805-08. FOR PUMP STATIONS WITH VARIABLE SPEED PUMPS, PROVIDE VARIABLE FREQUENCY DRIVE PUMP CONTROLS AS SHOWN ON DRAWING 805-06.
  6. FOR PUMP STATIONS WITH VARIABLE SPEED PUMPS, PROVIDE AIR CONDITIONING TO REMOVE HEAT GENERATED BY VARIABLE FREQUENCY DRIVE.

THREE LINE POWER DIAGRAM



STANDARD PLAN NO. 805-09	DATED AUGUST 1, 2011	SHEET NO. 1 OF 2
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**THREE LINE POWER DIAGRAM  
(TYPE I STATION)**

ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE			
DESIGNED A. SCHULZE	DRAWN G. VANNICE	CHECKED R. WRIGHT	APPROVED B. HARMON

DATE	DESCRIPTION REVISIONS	BY



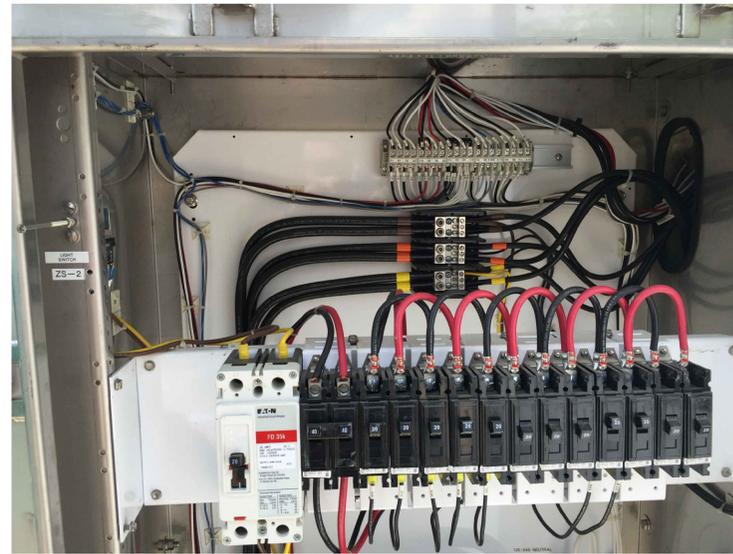
**FRONT ELEVATION**



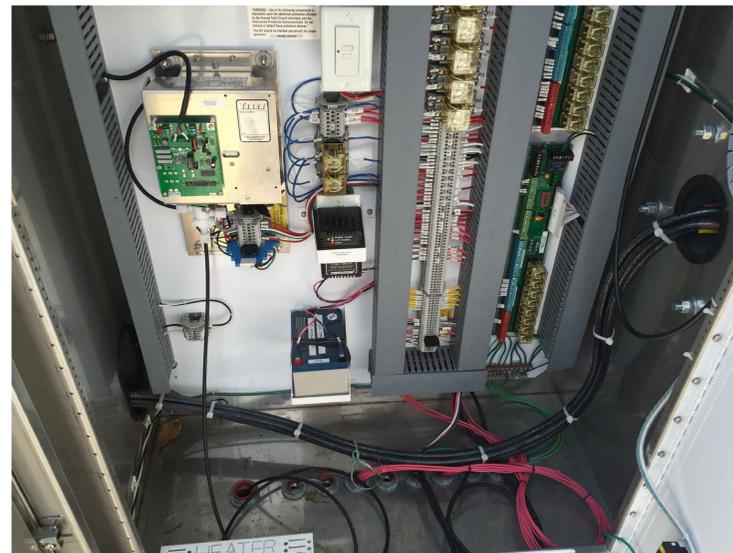
**SECTION 1 ELEVATION**



**SECTION 1 INTERIOR**



**SECTION 2 INTERIOR**



**SECTION 5 INTERIOR**



**GENERATOR RECEPTACLE**

**ELECTRICAL EQUIPMENT NOTES AND REQUIREMENTS:**

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- AUTOMATIC TRANSFER SWITCH (ATS) SHALL BE OPEN TRANSITION, 3 POLE TYPE COMPLETE WITH MICROPROCESSOR CONTROL AND DISPLAY PANEL. UNIT SHALL BE RATED 150A AT 480V WITH SOLID NEUTRAL. UNIT SHALL BE OPEN TYPE FOR WALL MOUNTING. UNIT SHALL BE MOUNTED WITHIN SECTION 1 OF THE EXISTING POWER CONTROL PANEL IN ACCORDANCE WITH ALL NEC, NEMA AND UL REQUIREMENTS.
- ATS SHALL BE ASCO SERIES 7000, MODEL 7ATS3150N5X WITH OPTIONAL ACCESSORIES 18B, 18G, 37B AND 7000 MICROPROCESSOR CONTROLLER OR ENGINEERING APPROVED EQUAL. MINIMUM ENCLOSURE SIZE REQUIREMENT OF ATS PROVIDED MUST BE EQUAL TO OR LESS THAN THE SIZE OF THE CABINET SPACE IT IS MOUNTED IN.
- GENERATOR MAIN POWER RECEPTACLE IS EXISTING. IT IS A 3 WIRE, 4 POLE, 200A, 600V COOPER CROUSE-HINDS ARKITE CAT# AR2042 UNIT. REPLACEMENT UNIT SHALL BE A 4 WIRE, 4 POLE PLUS SEPARATE GROUND WIRE CONNECTION, 200A, 600V COOPER CROUSE-HINDS CAT# AR2041 WITH WEATHREPROOF COVER. REUSE ANGLE ADAPTOR IF IT MATCHES NEW RECEPTACLE; OTHERWISE REPLACE IT WITH UNIT MATCHING RECEPTACLE.
- NEW PLUG SHALL MATCH REPLACEMENT RECEPTACLE AND BE SUPPLIED WITH 50 FOOT OF PORTABLE EXTRA HARD USAGE CORD FOR CONNECTION TO OWNERS GENERATOR POWER OUTPUT TERMINALS. PORTABLE CORD SHALL BE TYPE W PLUS A WATER RESISTANT RATING, CONSISTING OF 5/C #1/0 AWG COPPER CONDUCTORS (3 PHASE, 1 NEUTRAL, 1 GROUND). CORD SHALL BE SOUTHWIRE/CCI ROYAL 2000V PORTABLE CABLE, PART NUMBER 830286 OR ENGINEER APPROVED EQUAL.
- OWNERS GENERATOR RATING SHALL NOT EXCEED 100KW AT 480V AND SHALL INCLUDE AN OUTPUT CIRCUIT BREAKER SET TO TRIP AT NO GREATER THAN 150A. TRIP SETTING IS BASED ON #1/0 AWG SIZE OF GENERATOR RECEPTACLE CABLE WITHIN THE POWER CONTROL PANEL PER EXISTING PROJECT DRAWINGS.
- ALL NEW WIRE AND CABLE SHALL HAVE COPPER CONDUCTORS WITH 600V INSULATION.
- SEE PROJECT STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- SEE EXISTING PS-311 AND PS-336 PROJECT DRAWINGS FOR INFORMATION ON EXISTING EQUIPMENT AND SITE CONDITIONS.

**ATS ADDITION WIRING INSTRUCTIONS:**

- THE FOLLOWING WIRING METHODOLOGY IS THE RECOMMENDED SCHEME. CONTRACTOR MAY SUBMIT ALTERNATE SCHEME FOR REVIEW AND APPROVAL BY ENGINEER.
- MOUNT NEW AUTOMATIC TRANSFER SWITCH (ATS) INSIDE POWER CONTROL PANEL, SECTION 1 (LEFT CABINET) BEHIND DEADFRONT PANEL. MOUNT ATS CONTROL/STATUS DISPLAY ON DEADFRONT PANEL CUT OPENING IN DEADFRONT PANEL AS REQUIRED FOR MOUNTING AND VIEWING DISPLAY. DO NOT CUT OR MODIFY PCP OUTER DOOR.
- REMOVE AND RELOCATE EXISTING OVER/UNDER VOLTAGE RELAY INSIDE SECTION 1 AS REQUIRED TO CLEAR SPACE FOR ATS. IF ATS HAS ITS OWN OVER/UNDER VOLTAGE OR PHASE LOSS ALARM WITH CONTACT CLOSURE OUTPUT, THAT ALARM CONTACT MAY BE WIRED TO THE EXISTING PLC INPUT WIRES AS SUBSTITUTE FOR THE EXISTING OVER/UNDER VOLTAGE ALARM, AND EXISTING ALARM MODULE DISCONNECTED AND REMOVED.
- DISCONNECT POWER CABLES COMING FROM THE LOAD SIDE OF SERVICE DISCONNECT CIRCUIT BREAKER (MAIN CB) IN POWER CONTROL PANEL (PCP) SECTION 1, GOING TO THE POWER TERMINAL BLOCK IN PCP SECTION 2, AT THAT TERMINAL BLOCK. TRIM CABLE AS REQUIRED AND CONNECT TO NORMAL (UTILITY) INPUT OF ATS IN PCP SECTION 1.
- DISCONNECT POWER CABLES COMING FROM THE LOAD SIDE OF GENERATOR DISCONNECT CIRCUIT BREAKER (GEN CB) IN POWER CONTROL PANEL (PCP) SECTION 1, GOING TO THE POWER TERMINAL BLOCK IN PCP SECTION 2, AT THAT TERMINAL BLOCK. TRIM CABLE AS REQUIRED AND CONNECT TO EMERGENCY (GENERATOR) INPUT OF ATS IN PCP SECTION 1.
- PROVIDE NEW POWER CABLES FROM ATS LINE OUTPUT TO TERMINAL BLOCK IN SECTION 2 WHERE ABOVE NOTED CABLES WERE DISCONNECTED FROM. MATCH DISCONNECTED CABLE SIZE AND TYPE. MAINTAIN EXISTING PHASING.
- PROVIDE NEW CABLE FROM ATS NEUTRAL LUG TO EXISTING 480V NEUTRAL BUS BAR IN PCP SECTION 1. MATCH PHASE CABLE SIZE AND TYPE. RETAIN EXISTING BONDING FROM 480V NEUTRAL BUS BAR TO GROUND BUS BAR.
- REPLACE GENERATOR RECEPTACLE MOUNTED ON PCP SECTION 5 (RIGHT SIDE) CABINET. RECONNECT THREE (3) DISCONNECTED PHASE POWER CABLES TO NEW RECEPTACLE PINS AND GROUNDING CABLE TO RECEPTACLE GROUND TERMINAL. (REPLACE GROUNDING CABLE WITH #4 AWG COPPER CONDUCTOR IF TOO LARGE TO FIT RECEPTACLE GROUND TERMINAL). PROVIDE NEW NEUTRAL CABLE FROM GENERATOR RECEPTACLE NEUTRAL PIN TO 480V NEUTRAL BUS BAR IN PCP SECTION 1. MATCH PHASE CABLE SIZE AND TYPE.
- PROVIDE MATCHING PLUG FOR REPLACEMENT RECEPTACLE MENTIONED ABOVE AND 50 FEET OF CORD PER ELECTRICAL EQUIPMENT NOTES AND REQUIREMENTS. CONNECT CORD TO PLUG AND GENERATOR POWER OUTPUT TERMINALS ON LOAD SIDE OF ITS GENERATOR MOUNTED MAIN CB.
- PROVIDE 8 #14AWG CONTROL WIRES FROM ATS STATUS CONTACTS TO OWNERS EXISTING PLC I/O CARD TERMINALS FOR NORMAL POWER AVAILABLE, GENERATOR POWER FAIL, ATS IN NORMAL POSITION, AND ATS IN EMERGENCY POSITION (2 WIRES EACH). MATCH EXISTING CONTROL WIRE TYPE.
- USE EXISTING SPARE 1 POLE, 20A CB IN PCP SECTION 2, 120/240V POWER RACK AND CONNECT TO GENERATOR BATTERY CHARGER. REMOVE 2 SPARE 1 POLE, 20A CB AND PROVIDE REPLACEMENT 2 POLE, 20A CB IN PCP SECTION 2, 120/240V POWER RACK AND CONNECT TO GENERATOR JACKET WATER HEATER. PROVIDE 5 - #12 AWG WIRES WITHIN PCP AND 50 FOOT OF 1 - 5C #10AWG HEAVY DUTY EXTENSION CORD TYPE 'SOOW' AND WEATHER PROOF LOCKING RECEPTACLE/PLUG, L-22-30 WITH IN-USE NEMA 4X WEATHER PROOF HOUSING. MOUNT RECEPTACLE ON PCP SECTION 5 NEAR GENERATOR RECEPTACLE. ATTACH PLUG TO EXTENSION CORD AND CONNECT OTHER END OF EXTENSION CORD TO GENERATOR BATTERY CHARGER AND WATER HEATER TERMINALS. CONNECT 1 CONDUCTOR TO 120/240V GROUND BUS BAR AT EACH END OF CIRCUIT. IN PCP MATCH EXISTING 120/240V WIRE TYPE.
- PROVIDE 50 FOOT OF 1 - 7C #12AWG HEAVY DUTY EXTENSION CORD TYPE 'SOOW' FROM GENERATOR TO PCP SECTION 5. PROVIDE 6 POLE PLUG AND RECEPTACLE FOR CONNECTING THIS EXTENSION CORD TO 6 #14AWG NEW CONTROL WIRES WITHIN PCP FOR GENERATOR STATUS AND CONTROL. RECEPTACLE SHALL BE PHOENIX CONTACT TYPE HC-HS 6-EUBS-12 WITH HC-B 16-TFL-45/01M25G NEMA 4X ENCLOSURE WITH COVER. PLUG SHALL BE TYPE HC-HS 6-ESTS-12. MOUNT RECEPTACLE ON PCP SECTION 5 NEAR GENERATOR RECEPTACLE. ATTACH PLUG TO EXTENSION CORD AND CONNECT OTHER END OF EXTENSION CORD TO GENERATOR START/RUN TERMINALS (2 WIRES), AND GENERATOR RUN, FAIL, FUEL LEAK AND COMMON ALARM TERMINALS (1 WIRE EACH). INSIDE PCP, CONNECT NEW CONTROL WIRES TO ATS START CONTACT (2 WIRES) TERMINALS, AND EXISTING PLC HDIO MODULE TERMINALS FOR GENERATOR RUN, FAIL, FUEL LEAK AND COMMON ALARM INPUTS (1 WIRE EACH). CORD HAS 1 SPARE CONDUCTOR. IN PCP MATCH EXISTING CONTROL WIRE TYPE.
- PROVIDE GROUNDING ROD AND GROUNDING WIRE FOR GROUNDING OWNERS PORTABLE GENERATOR FRAME AT LOCATION DETERMINED DURING INSTALLATION. SIZE GROUND WIRE (USE MINIMUM SIZE OF #4 AWG BARE COPPER CONDUCTOR) AND PROVIDE COPPER CLAD STEEL, 10' LONG, 3/4" DIAMETER GROUND ROD IN ACCORDANCE WITH NEC REQUIREMENTS.
- PROVIDE ENGRAVED NAMEPLATE WITH WHITE LETTERS ON RED BACKGROUND, 3" HIGH X 6" WIDE WITH 3/8" HIGH LETTERS, PERMANENTLY MOUNTED ON THE EXTERIOR OF PCP SECTION 5 NEAR GENERATOR RECEPTACLE WITH THE FOLLOWING WORDING-  

CAUTION  
INTERNAL EQUIPMENT RATED 150A AT 480V  
GENERATOR SHALL HAVE ITS OWN MAIN CIRCUIT BREAKER  
SET TO TRIP AT A MAXIMUM VALUE OF 150 AMPS
- AT COMPLETION OF WORK, REMOVE MECHANICAL INTERLOCK BAR BETWEEN MAIN CB AND GEN CB.
- CONNECT OWNER FURNISHED PORTABLE GENERATOR AND TEST FOR PROPER OPERATION. AT COMPLETION OF TESTING, DISCONNECT OR LEAVE CONNECTED AS DIRECTED BY OWNER.



SHEET NUMBER	336-E-03	PARISH	EAST BATON ROUGE	CITY	BATON ROUGE	PROJECT	11-PS-MS-0003
DESIGNED	JM	CHECKED	SLW	DATE	SEPTEMBER 2016	DATE	006 OF 006
BY		NO.		DATE		REVISION DESCRIPTION	
<b>FLORIDA BOULEVARD PUMP STATION IMPROVEMENTS</b> <b>PS 336 ELEVATIONS, SECTIONS, NOTES, AND WIRING INSTRUCTIONS</b>							
<b>BUCHART HORN</b> PROFESSIONAL ENGINEERS BATON ROUGE, LA 70809 Ph: (225) 785-2120							