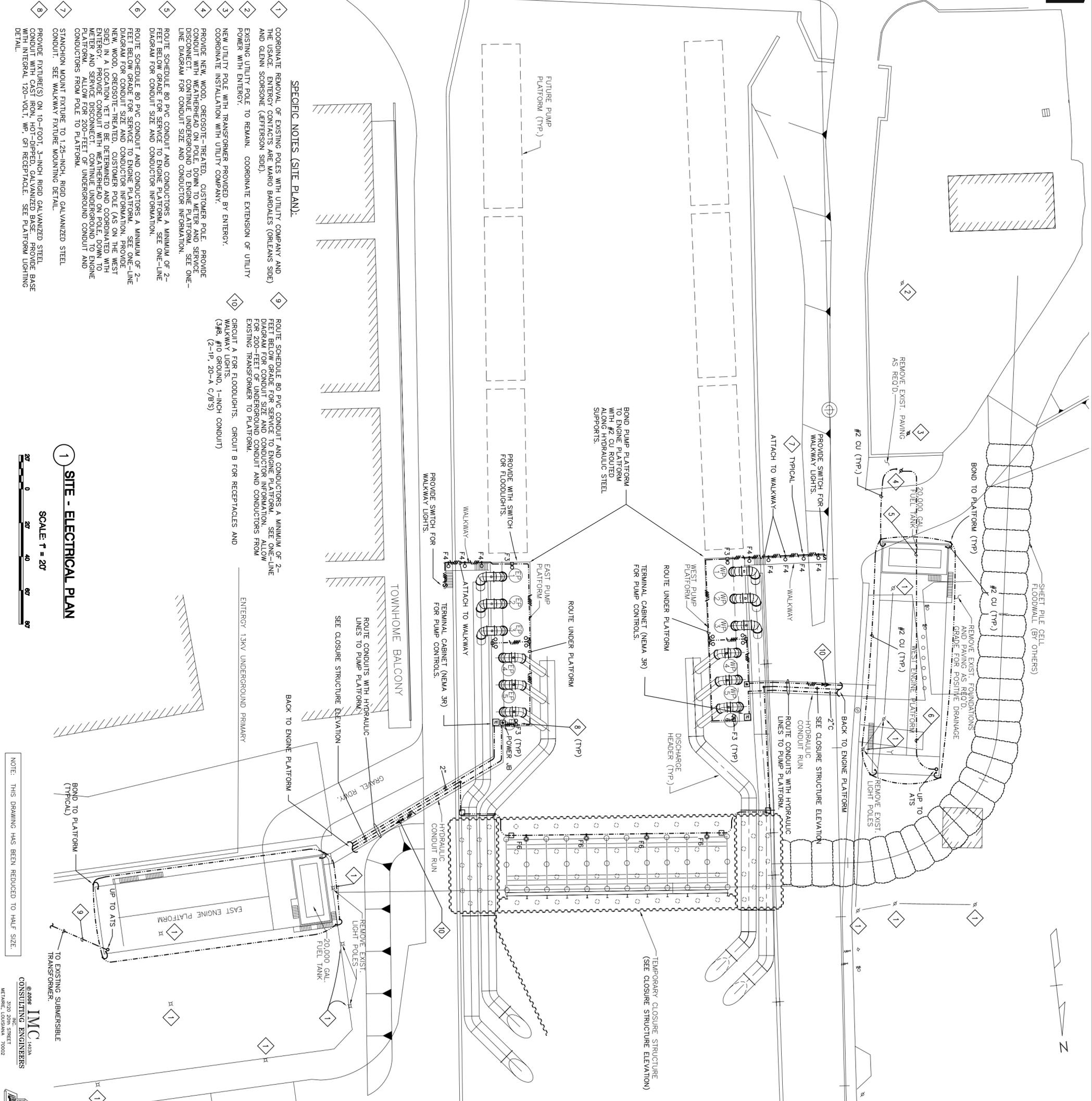


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**SPECIFIC NOTES (SITE PLAN):**

- 1 COORDINATE REMOVAL OF EXISTING POLES WITH UTILITY COMPANY AND THE USAGE. ENERGY CONTRACTS ARE MARIO BARDALES (ORLEANS SIDE) AND GLENN SCORSONE (JEFFERSON SIDE).
- 2 EXISTING UTILITY POLE TO REMAIN. COORDINATE EXTENSION OF UTILITY POWER WITH ENERGY.
- 3 NEW UTILITY POLE WITH TRANSFORMER PROVIDED BY ENERGY. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- 4 PROVIDE NEW, WOOD, CREOSOTE-TREATED, CUSTOMER POLE. PROVIDE CONDUIT WITH WEATHERHEAD ON POLE, DOWN TO METER AND SERVICE DISCONNECT, CONTINUE UNDERGROUND TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION.
- 5 ROUTE SCHEDULE 80 PVC CONDUIT AND CONDUCTORS A MINIMUM OF 2- FEET BELOW GRADE FOR SERVICE TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION.
- 6 ROUTE SCHEDULE 80 PVC CONDUIT AND CONDUCTORS A MINIMUM OF 2- FEET BELOW GRADE FOR SERVICE TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION.
- 7 FEED BELOW GRADE FOR SERVICE TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION. NEW, WOOD, CREOSOTE-TREATED, CUSTOMER POLE (AS ON THE WEST SIDE) IN A LOCATION, YET TO BE DETERMINED AND COORDINATED WITH ENERGY. PROVIDE CONDUIT WITH WEATHERHEAD ON POLE, DOWN TO METER AND SERVICE DISCONNECT, CONTINUE UNDERGROUND TO ENGINE PLATFORM. ALLOW FOR 200- FEET OF UNDERGROUND CONDUIT AND CONDUCTORS FROM POLE TO PLATFORM.
- 8 STANCHION MOUNT FIXTURE TO 1.25-INCH, RIGID GALVANIZED STEEL CONDUIT. SEE WALKWAY FIXTURE MOUNTING DETAIL.
- 9 PROVIDE FIXTURE(S) ON 10-FOOT, 3-INCH RIGID GALVANIZED STEEL CONDUIT WITH CAST IRON, HOT-DIPPED, GALVANIZED BASE. PROVIDE BASE WITH INTEGRAL 120-VOLT, WP, GFI RECEPTACLE. SEE PLATFORM LIGHTING DETAIL.
- 10 ROUTE SCHEDULE 80 PVC CONDUIT AND CONDUCTORS A MINIMUM OF 2- FEET BELOW GRADE FOR SERVICE TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION. ALLOW EXISTING TRANSFORMER TO PLATFORM.

- 9 ROUTE SCHEDULE 80 PVC CONDUIT AND CONDUCTORS A MINIMUM OF 2- FEET BELOW GRADE FOR SERVICE TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION. ALLOW EXISTING TRANSFORMER TO PLATFORM.
- 10 ROUTE SCHEDULE 80 PVC CONDUIT AND CONDUCTORS A MINIMUM OF 2- FEET BELOW GRADE FOR SERVICE TO ENGINE PLATFORM. SEE ONE-LINE DIAGRAM FOR CONDUIT SIZE AND CONDUCTOR INFORMATION. ALLOW EXISTING TRANSFORMER TO PLATFORM.

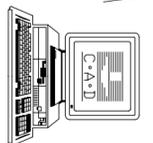
**1 SITE - ELECTRICAL PLAN**

SCALE: T = 20'



NOTE: THIS DRAWING HAS BEEN REDUCED TO HALF SIZE.

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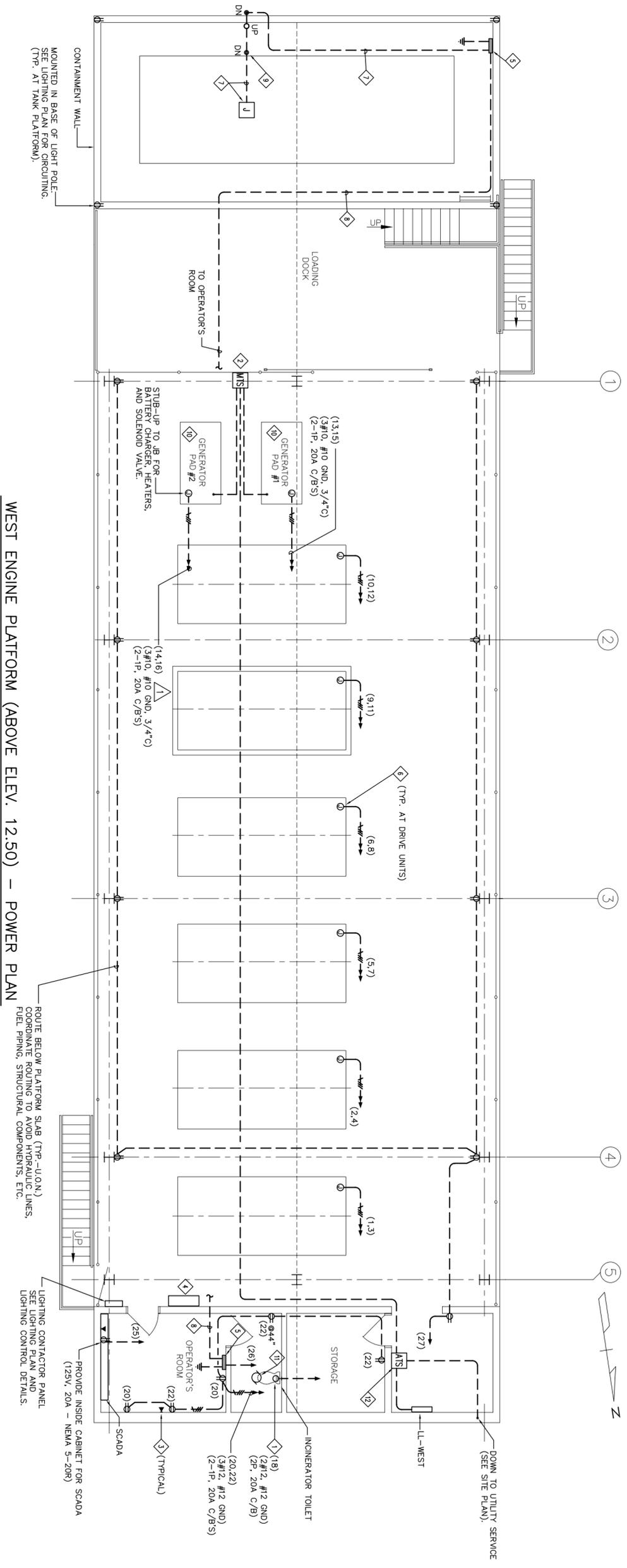
**U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS**  
 CORPS OF ENGINEERS  
 NEW ORLEANS, LOUISIANA

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CHECKED BY: KMCL			SUBMITTED BY: LINFIELD, HUNTER & JUNIUS, INC.
DRAWN BY: KLH			DESIGN ENGINEER
DATE: 03-08-06			SOLICITATION NO.

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1	NEW DRAWING	3/17/06					



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WEST ENGINE PLATFORM (ABOVE ELEV. 12.50) - POWER PLAN

SCALE: 1/4" = 1'-0"

SPECIFIC NOTES (POWER AND COMMUNICATION PLAN):

- 1 PROVIDE 2-POLE, 20-AMP, NEMA 6-20R RECEPTACLE FOR INCINERATOR TOILET.
- 2 PROVIDE MANUAL, 2-POLE, DOUBLE THROW, UNFUSED, LOAD-MAKE / LOAD-BREAK, CENTER-OFF, 200-AMP SHELL SWITCH IN NEMA 4X ENCLOSURE. PROVIDE WITH ONE SET OF AUXILIARY, NORMAL OPEN CONTACTS PER CLOSED SWITCH POSITION (2 TOTAL) THAT CLOSE WHEN THE SWITCH IS PLACED IN THAT POSITION. SEE GENERATOR STARTING CIRCUIT DETAIL. MOUNT ON UNISTRUT SUPPORT.
- 3 PROVIDE TELEPHONE OUTLET AS INDICATED. ROUTE CONDUIT AND CATEGORY 5 CABLE TO UTILITY COMPANY TELEPHONE PEDESTAL CONTACT AND COORDINATE INSTALLATION WITH TELEPHONE UTILITY PROVIDER.
- 4 LOCAL, HYDRAULIC PUMP CONTROL PANEL PROVIDED BY PUMP SUPPLIER. PROVIDE 1" CONDUITS WITH PULL STRINGS FROM PANEL, UNDER THE PLATFORM, TO EACH DIESEL ENGINE PUMP DRIVER UNIT. COORDINATE STUB-UP LOCATIONS AND CONTROL PANEL LOCATIONS WITH PUMP SUPPLIER. PROVIDE A 2" CONDUIT WITH PULL STRING FROM THE LOCAL PANEL TO THE MASTER CONTROL PANEL. PROVIDE A 2" CONDUIT WITH PULL STRING FROM THE LOCAL PANEL TO THE HYDRAULIC PUMP PLATFORM TERMINAL CABINET. SEE HYDRAULIC PUMP FACEWAY SYSTEM RISER DETAIL.
- 5 INTRINSICALLY SAFE FUEL MONITORING SYSTEM FURNISHED AND INSTALLED BY OTHERS. SEE PLUMBING DRAWINGS FOR EXACT EQUIPMENT LOCATION. PROVIDE 120-VOLT POWER AND DEDICATED GROUND AS INDICATED. BOND DEDICATED GROUND ROD TO SERVICE GROUND. GROUND RESISTANCE SHALL BE LESS THAN 1 OHM, IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6 STUB-UP TO JUNCTION BOX FOR DIESEL ENGINE DRIVE UNIT BATTERY CHARGER AND FUEL PUMP. COORDINATE EXACT LOCATION WITH ENGINE SUPPLIER IN THE FIELD. MAKE FINAL CONNECTIONS TO EQUIPMENT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 7 PROVIDE JUNCTION BOX AND FACEWAY SYSTEM WITH PULL STRING FOR FUEL LEVEL SENSORS AND ASSOCIATED WIRING TO BE PROVIDED BY THE MECHANICAL CONTRACTOR.

GENERAL NOTES

1. ALL HOMERUNS ARE TO PANEL LL-WEST.
2. ALL RECEPTACLES SHALL BE WP/9F1-TYPE.
3. PROVIDE (2) CONDUITS - (1) 0.5-INCH FOR POWER AND (1) 1-INCH WITH PULL STRING FOR CONTROL WIRING BY THE MECHANICAL CONTRACTOR.
4. COORDINATE CONDUIT SUPPORTS WITH STRUCTURAL STEEL PROVIDED ON THE SIDE OF THE TANK AND WITH THE MECHANICAL CONTRACTOR.
5. FURNISH AND INSTALL ONAN MODEL 058B (OR EQUAL), 36KW, 120/240-VOLT, SINGLE-PHASE, 60HZ DIESEL GENERATOR SET WITH THE SPECIFICATIONS LISTED HERE AND DETAILED IN THE SPECIFICATIONS:
  1. ALTERNATOR: FULL OUTPUT AT SINGLE PHASE; RE-CONNECTABLE; 105-DEGREE C RISE.
  2. EXCITATION: PMG
  3. PROTECTION: FURNISH WITH 200-AMP MAIN CIRCUIT BREAKER AND AMP-SENTRY (OR EQUAL) DIGITAL ALTERNATOR PROTECTION.
  4. BATTERY CHARGER: 4 STAGE (ABSORPTION, FLOAT, TRICKLE, BULK)
  5. HEATERS: ALTERNATOR, COOLANT, LUBE OIL; T-STAT CONTROLLED.
  6. MUFFLER: CRITICAL GRADE
  7. HOUSING: ALUMINUM, RATED FOR 150MPH WINDS; SOUND ATTENUATED; QUIET-SITE II OR EQUAL.
  8. FUEL TANK AND CONTROLS, SUB-BASE, DUAL WALL, 24-HOUR DAY TANK, LOW FUEL SWITCH, BASIN RUPTURE SWITCH, TANK LEVEL CONTROLS (DRY CONTACT) TO CLOSE FOR CONTROL OF 120-VOLT SOLENOID VALVE IN FUEL LINE FROM MAIN FUEL TANK.
6. EXHAUST FAN BY DIVISION 15. INTERLOCK WITH LIGHT SWITCH.
7. PROVIDE 2-POLE, CENTER-OFF, PROGRAMMED TRANSITION, 200-A AUTOMATIC TRANSFER SWITCH IN NEMA 3R ENCLOSURE. PROVIDE WITH ONE SET OF AUXILIARY CONTACTS THAT CLOSE WHENEVER THE SWITCH IS CONNECTED TO THE ALTERNATE SOURCE. SEE GENERATOR STARTING CIRCUIT DETAIL.

ROUTE BELOW PLATFORM SLAB (TYP.-U.O.N.)  
COORDINATE ROUTING TO AVOID HYDRAULIC LINES,  
FUEL PIPING, STRUCTURAL COMPONENTS, ETC.

PROVIDE INSIDE CABINET FOR SCADA  
(125V, 20A - NEMA 5-20R)

DOWN TO UTILITY SERVICE  
(SEE SITE PLAN)

INVERTER TOILET

SCADA

LL-WEST

STORAGE

OPERATOR'S ROOM

GENERATOR PAD #1

GENERATOR PAD #2

LOADING DOCK

TO OPERATOR'S ROOM

UP

DOWN

CONTAINMENT WALL

MOUNTED IN BASE OF LIGHT POLE -  
SEE LIGHTING PLAN FOR CIRCUITING.  
(TYP. AT TANK PLATFORM).



NOTE: THIS DRAWING HAS BEEN REDUCED TO HALF SIZE.

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INTERIM DRAINAGE PUMP STATION  
17TH STREET CANAL  
NEW ORLEANS, LOUISIANA  
WEST ENGINE PLATFORM (ABOVE ELEV. 12.50)  
POWER PLAN

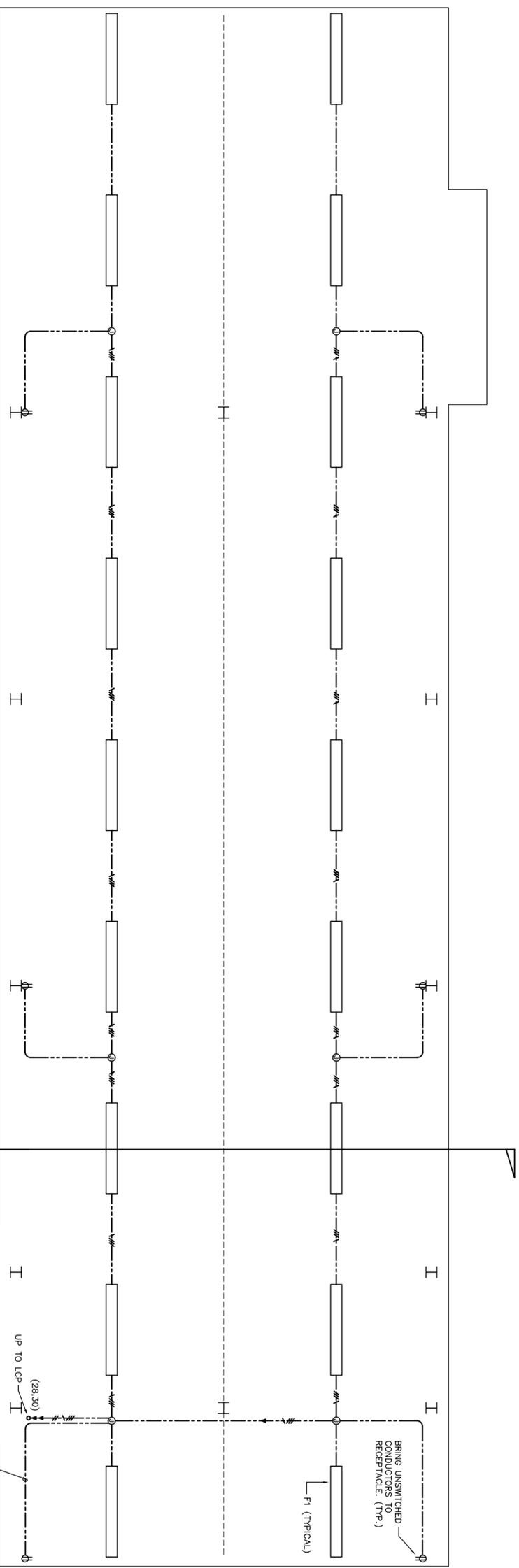
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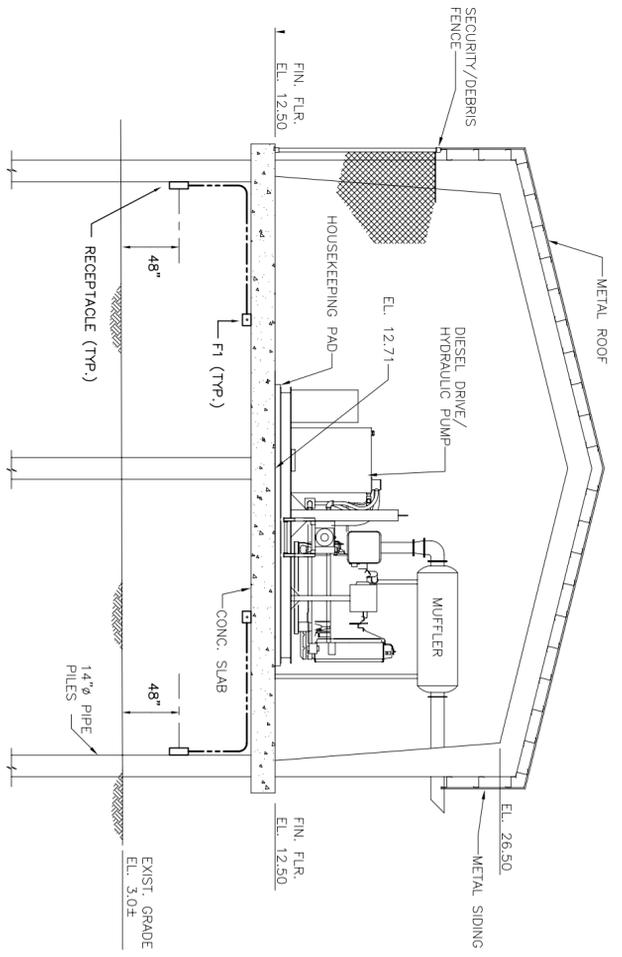
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WEST ENGINE PLATFORM (BELOW ELEV. 12.50) - ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

- GENERAL NOTES**
1. ALL HOMERUNS ARE TO PANEL LT-WEST.
  2. ALL RECEPTABLES SHALL BE WP/GFI-TYPE.



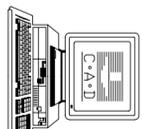
WEST ENGINE PLATFORM - SECTION - ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

NOTE: THIS DRAWING HAS BEEN REDUCED TO HALF SIZE.



2806  
@ 2806  
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17TH STREET CANAL  
NEW ORLEANS, LOUISIANA  
WEST ENGINE PLATFORM (BELOW ELEV.12.50)  
ELECTRICAL PLAN

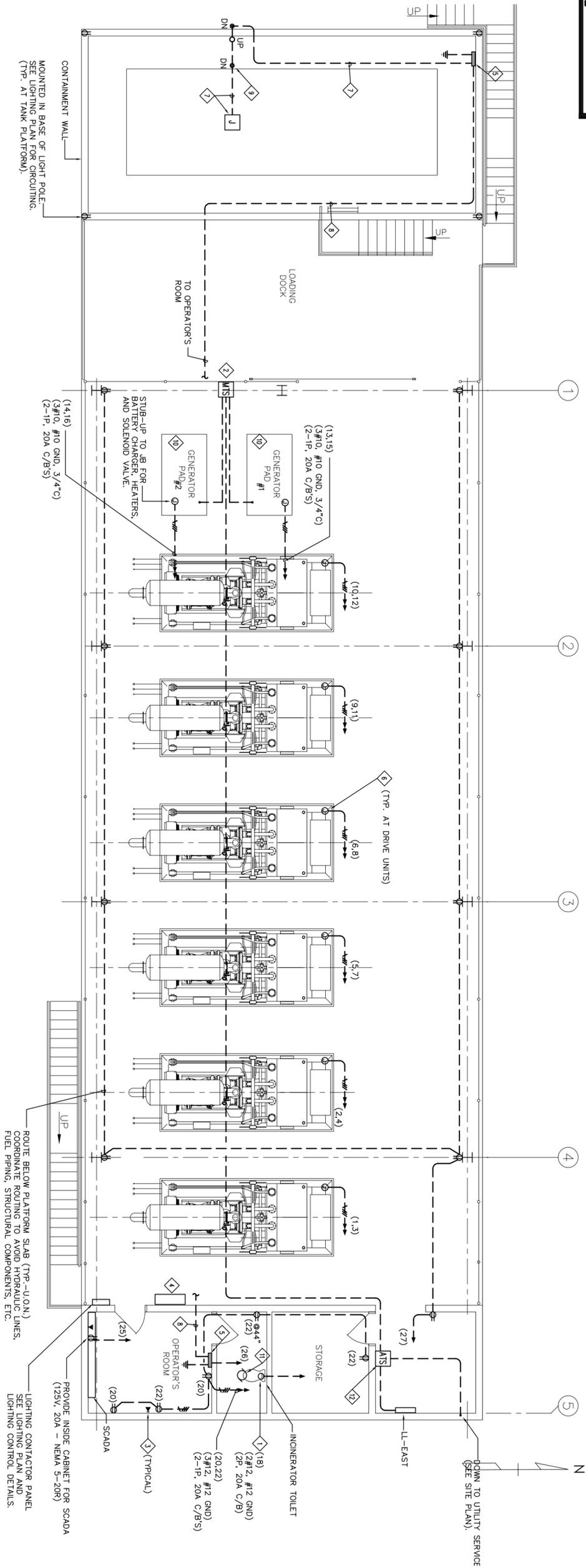
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**EAST ENGINE PLATFORM (ABOVE ELEV. 12.50) - POWER PLAN**

SCALE: 1/4" = 1'-0"

**SPECIFIC NOTES (POWER AND COMMUNICATION PLAN):**

- 1 PROVIDE 2-POLE, 20-AMP, NEMA 6-20R RECEPTACLE FOR INCINERATOR TOILET.
- 2 PROVIDE MANUAL, 2-POLE, DOUBLE THROW, UNFUSED, LOAD-MAKE / LOAD-BREAK, CENTER-OFF, 200-AMP SET, UL-SURTY, NEMA 3B, OPEN CONTACTS PER CLOSED SWITCH POSITION (2 TOTAL) THAT CLOSE WHEN THE SWITCH IS PLACED IN THAT POSITION. SEE GENERATOR STARTING CIRCUIT DETAIL. MOUNT ON UNISTRUT SUPPORT.
- 3 PROVIDE TELEPHONE OUTLET AS INDICATED. ROUTE CONDUIT AND CATEGORY 5 CABLE TO UTILITY COMPANY TELEPHONE PEDestal CONTACT AND COORDINATE INSTALLATION WITH TELEPHONE UTILITY PROVIDER.
- 4 LOCAL, HYDRAULIC PUMP CONTROL PANEL PROVIDED BY PUMP SUPPLIER. PROVIDE 1" CONDUITS WITH PULL STRINGS FROM PANEL, UNDER THE PLATFORM, TO EACH DIESEL ENGINE PUMP DRIVER UNIT. COORDINATE STUB-UP LOCATIONS AND CONTROL PANEL LOCATIONS WITH PUMP SUPPLIER. PROVIDE A 2" CONDUIT WITH PULL STRING FROM THE LOCAL PANEL TO THE MASTER CONTROL PANEL. PROVIDE A 2" CONDUIT WITH PULL STRING FROM THE LOCAL PANEL TO THE HYDRAULIC PUMP PLATFORM TERMINAL CABINET. SEE HYDRAULIC PUMP FACEWAY SYSTEM RISER DETAIL.
- 5 INTRINSICALLY SAFE FUEL MONITORING SYSTEM FURNISHED AND INSTALLED BY OTHERS. SEE PLUMBING DRAWINGS FOR EXACT EQUIPMENT LOCATION. PROVIDE 120-VOLT POWER AND DEDICATED GROUND AS INDICATED. BOND DEDICATED GROUND ROD TO SERVICE GROUND. GROUND RESISTANCE SHALL BE LESS THAN 1 OHM, IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6 STUB-UP TO JUNCTION BOX FOR DIESEL ENGINE DRIVE UNIT BATTERY CHARGER AND FUEL PUMP. COORDINATE EXACT LOCATION WITH ENGINE SUPPLIER IN THE FIELD. MAKE FINAL CONNECTIONS TO EQUIPMENT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 7 PROVIDE JUNCTION BOX AND FACEWAY SYSTEM WITH PULL STRING FOR FUEL LEVEL SENSORS AND ASSOCIATED WIRING TO BE PROVIDED BY THE MECHANICAL CONTRACTOR.

**GENERAL NOTES**

1. ALL HOMERUNS ARE TO PANEL LL-EAST.
2. ALL RECEPTACLES SHALL BE WP/9FL-TYPE.
3. PROVIDE (2) CONDUITS - (1) 0.5-INCH FOR POWER AND (1) 1-INCH WITH PULL STRING FOR CONTROL WIRING BY THE MECHANICAL CONTRACTOR.
4. COORDINATE CONDUIT SUPPORTS WITH STRUCTURAL STEEL PROVIDED ON THE SIDE OF THE TANK AND WITH THE MECHANICAL CONTRACTOR.
5. FURNISH AND INSTALL ONAN MODEL 068B (OR EQUAL), 36KW, 120/240- VOLT, SINGLE-PHASE, 60HZ DIESEL GENERATOR SET WITH THE SPECIFICATIONS LISTED HERE AND DETAILED IN THE SPECIFICATIONS:
  1. ALTERNATOR: FULL OUTPUT AT SINGLE PHASE; RE-CONNECTABLE; 105-DEGREE C RISE.
  2. EXCITATION: PMG
  3. PROTECTION: FURNISH WITH 200-AMP MAIN CIRCUIT BREAKER AND AMP-SENTRY (OR EQUAL) DIGITAL ALTERNATOR PROTECTION.
  4. BATTERY CHARGER: 4 STAGE (ABSORPTION, FLOAT, TRICKLE, BULK)
  5. HEATERS: ALTERNATOR, COOLANT, LUBE OIL; T-STAT CONTROLLED
  6. MUFFLER: CRITICAL GRADE
  7. HOUSING: ALUMINUM, RATED FOR 150MPH WINDS; SOUND ATTENUATED; QUIET-SITE II OR EQUAL.
  8. FUEL TANK AND CONTROLS, SUB-BASE, DUAL WALL, 24-HOUR DAY TANK; LOW FUEL SWITCH; BURN RUPTURE SWITCH; TANK LEVEL CONTROLS (DRY CONTACT) TO CLOSE FOR CONTROL OF 120-VOLT SOLENOID VALVE IN FUEL LINE FROM MAIN FUEL TANK.
6. EXHAUST FAN BY DIVISION 15; INTERLOCK WITH LIGHT SWITCH.
7. PROVIDE 2-POLE, CENTER-OFF, PROGRAMMED TRANSITION, 200-A AUTOMATIC TRANSFER SWITCH IN NEMA 3B ENCLOSURE. PROVIDE WITH ONE SET OF AUXILIARY CONTACTS THAT CLOSE WHENEVER THE SWITCH IS CONNECTED TO THE ALTERNATE SOURCE. SEE GENERATOR STARTING CIRCUIT DETAIL.

ROUTE BELOW PLATFORM SLAB (TYP. -U.O.N.) COORDINATE ROUTING TO AVOID HYDRAULIC LINES, FUEL PIPING, STRUCTURAL COMPONENTS, ETC.

PROVIDE INSIDE CABINET FOR SCADA (125V, 20A - NEMA 5-20R)

LIGHTING CONTRACTOR PANEL SEE LIGHTING PLAN AND LIGHTING CONTROL DETAILS.



NOTE: THIS DRAWING HAS BEEN REDUCED TO HALF SIZE.

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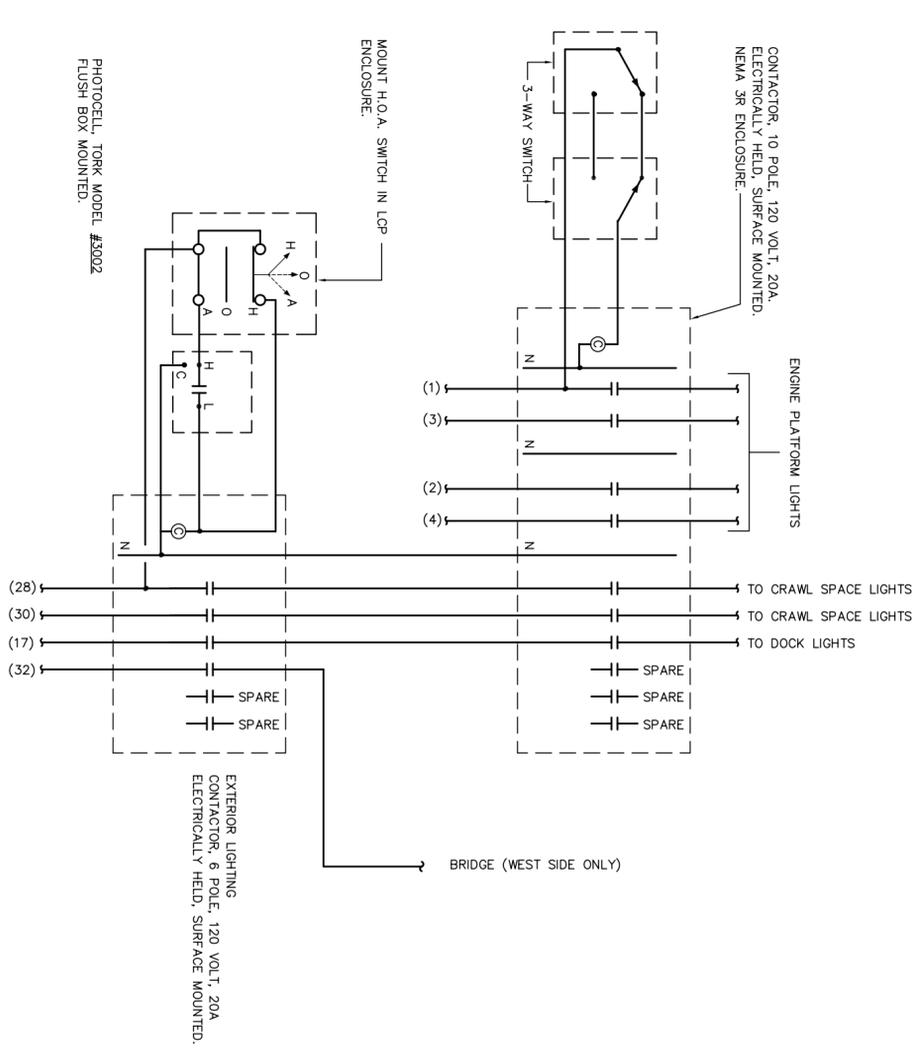
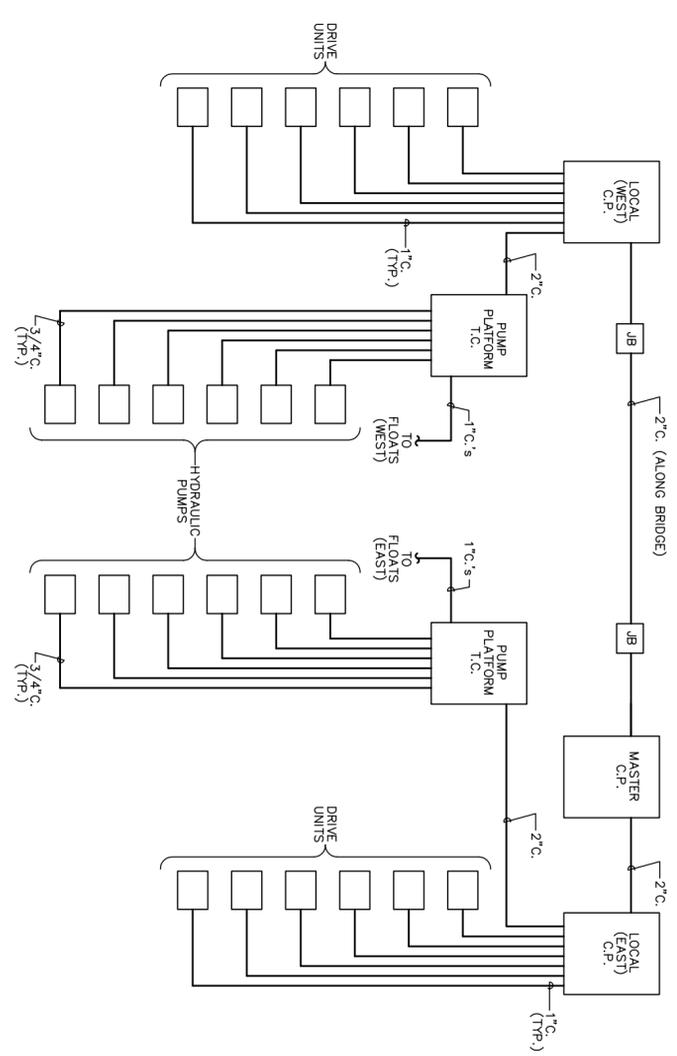
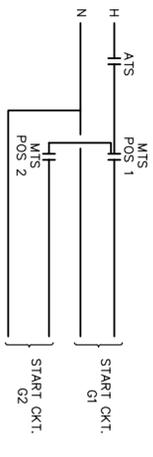
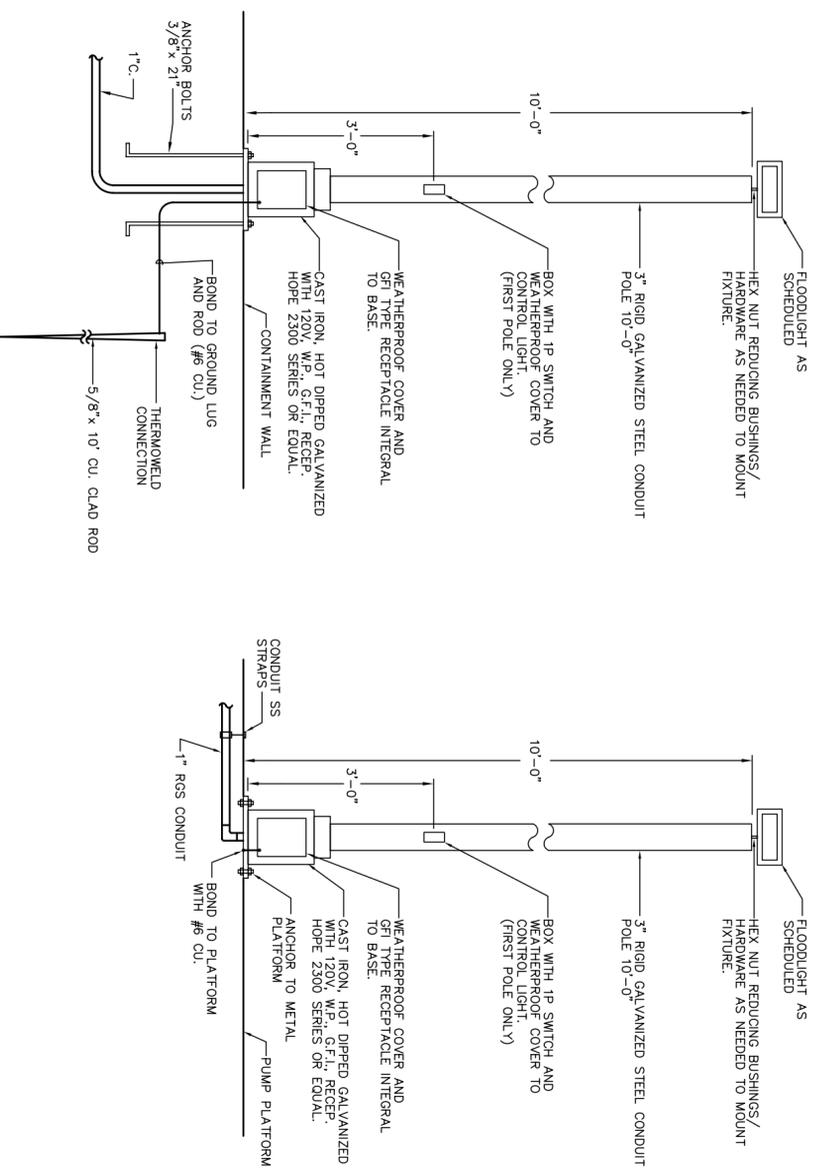
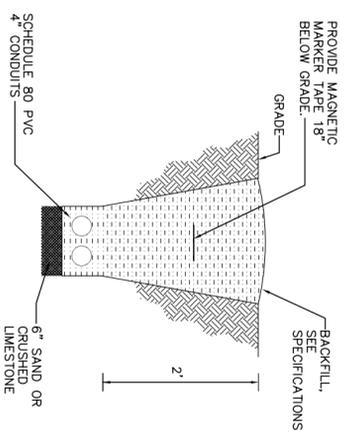
LAKE PONTCHATRIN AND VICINITY  
INTERIM DRAINAGE PUMP STATION  
17TH STREET CANAL  
NEW ORLEANS, LOUISIANA  
**EAST ENGINE PLATFORM (ABOVE ELEV. 12.50)**  
**POWER PLAN**

**U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS**  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

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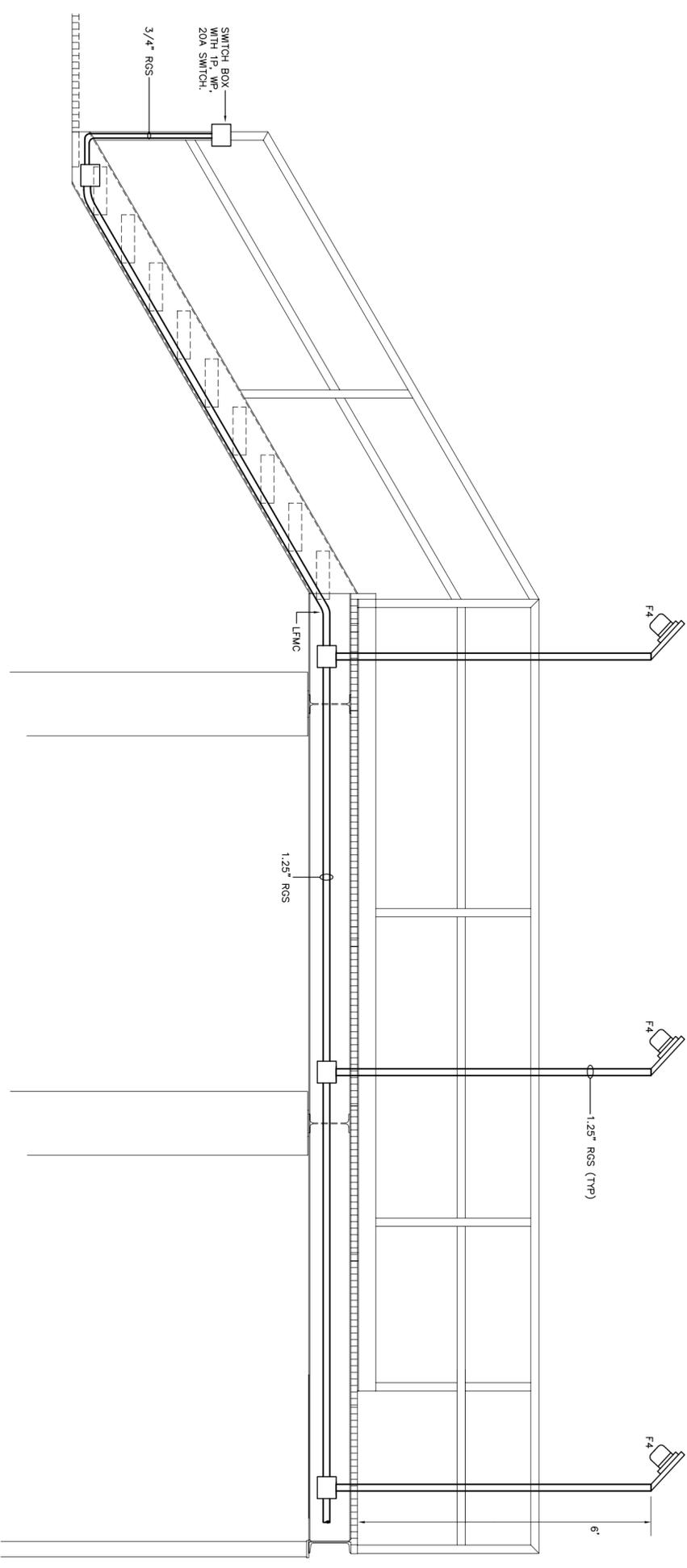


FILE NUMBER  
E10  
DWG. X OF XX

LAKE PONTCHATRIN AND VICINITY  
INTERIM DRAINAGE PUMP STATION  
17TH STREET CANAL  
NEW ORLEANS, LOUISIANA

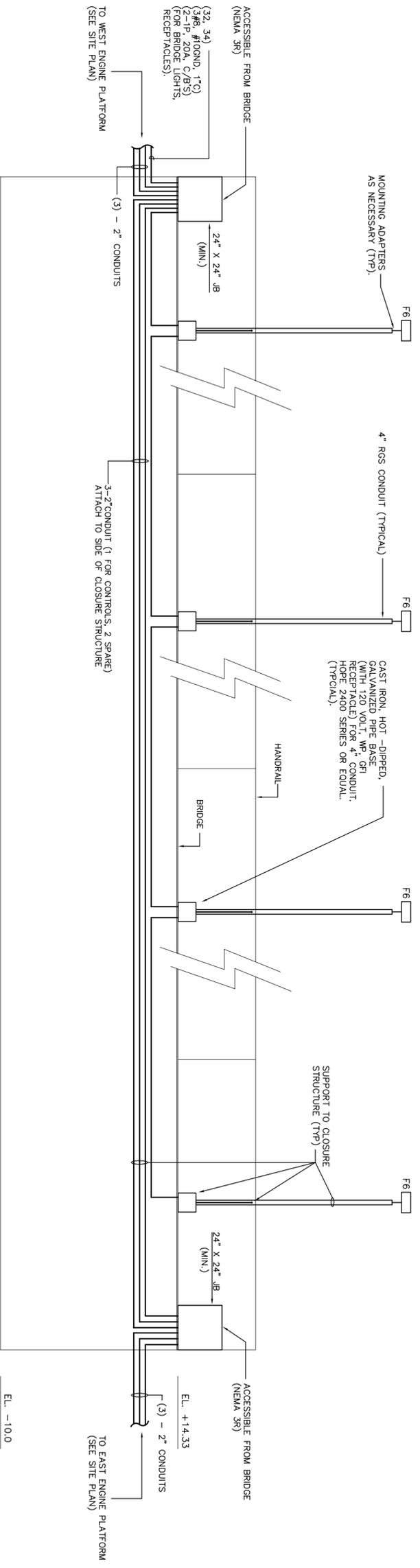
ELECTRICAL DETAILS

Safety is a Part  
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**WALKWAY FIXTURE MOUNTING DETAIL**

SCALE: NO SCALE



**CLOSURE STRUCTURE ELEVATION - ELECTRICAL PLAN**

SCALE: NO SCALE



NOTE: THIS DRAWING HAS BEEN REDUCED TO HALF SIZE.

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LAKE PONTCHATRAIN AND VICINITY  
INTERIM DRAINAGE PUMP STATION  
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**ELECTRICAL DETAILS**

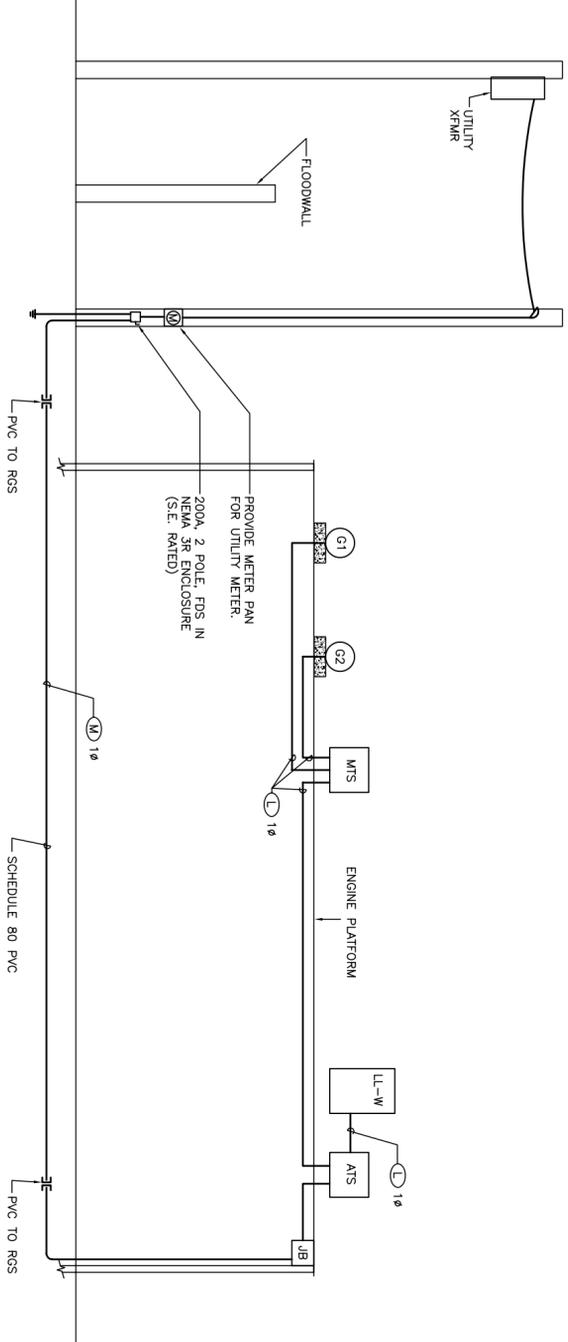
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DATE: 03-08-06			SOLICITATION NO.

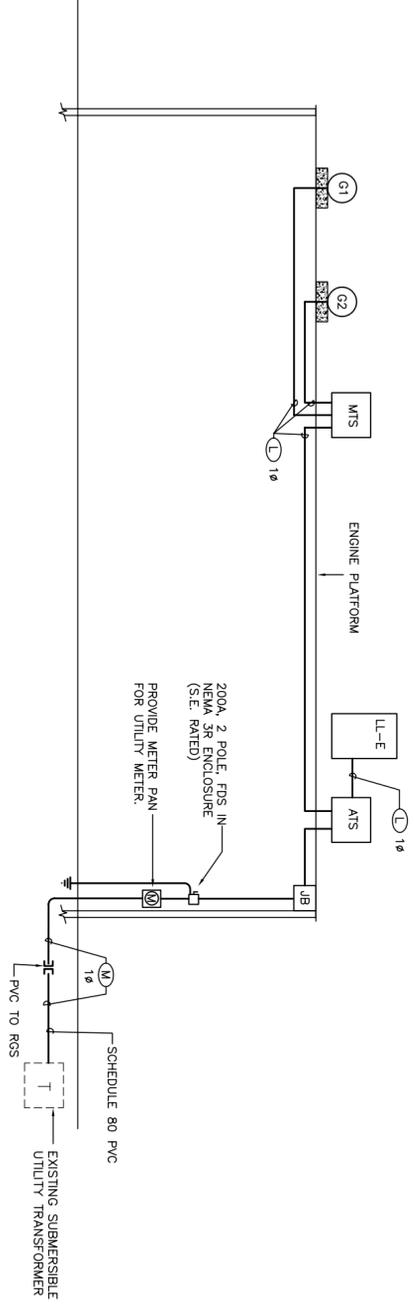
MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR
1	NEW DRAWING	3/17/06					





ELECTRICAL ONE-LINE DIAGRAM - WEST SIDE

SCALE: NONE



ELECTRICAL ONE-LINE DIAGRAM - EAST SIDE

SCALE: NONE

FEEDER SCHEDULE - NOT ALL LABELS ARE NECESSARILY USED.			
LABEL NO.	SIZE	GND.	CONDUIT
(A)	3 #12	#12	1/2"
(AI)	4 #12	#12	1/2"
(B)	3 #10	#10	3/4"
(BI)	4 #10	#10	3/4"
(C)	3 #8	#10	1"
(CI)	4 #8	#10	1"
(D)	3 #6	#8	1"
(DI)	4 #6	#8	1"
(E)	3 #4	#8	1-1/4"
(EI)	4 #4	#8	1-1/4"
(F)	3 #3	#8	1-1/4"
(FI)	4 #3	#8	1-1/4"
(G)	3 #2	#6	1-1/4"
(GI)	4 #2	#6	1-1/4"
(H)	3 #1	#6	1-1/2"
(HI)	4 #1	#6	1-1/2"
(I)	3 #1/0	#6	1-1/2"
(II)	4 #1/0	#6	1-1/2"
(J)	3 #2/0	#6	2"
(JI)	4 #2/0	#6	2"
(K)	3 #3/0	#6	2"
(KI)	4 #3/0	#6	2"
(L)	3 #4/0	#4	2"
(LI)	4 #4/0	#4	2-1/2"
(M)	3 #250 MCM	#4	2-1/2"
(MI)	4 #250 MCM	#4	2-1/2"
(N)	3 #350 MCM	#3	3"
(NI)	4 #350 MCM	#3	3"
(O)	3 #500 MCM	#3	3-1/2"
(OI)	4 #500 MCM	#3	3-1/2"
(P)	(2)3 #350 MCM	#1	3"(2 SETS)
(PI)	(2)4 #350 MCM	#1	3"(2 SETS)
(R)	(2)3 #500 MCM	#1/0	4"(2 SETS)
(RI)	(2)4 #500 MCM	#1/0	4"(2 SETS)
(S)	(3)3 #350 MCM	#2/0	3"(3 SETS)
(SI)	(3)4 #350 MCM	#2/0	3"(3 SETS)
(T)	(3)3 #500 MCM	#2/0	4"(3 SETS)
(TI)	(3)4 #500 MCM	#2/0	4"(3 SETS)
(U)	(2)3 #600 MCM	#3/0	4"(2 SETS)
(UI)	(2)4 #600 MCM	#3/0	4"(2 SETS)
(V)	(3)3 #600 MCM	#3/0	4"(3 SETS)
(VI)	(3)4 #600 MCM	#3/0	4"(3 SETS)
(W)	(4)4 #600 MCM	#3/0	4"(4 SETS)
(WI)	(5)4 #600 MCM	#3/0	4"(5 SETS)
(Z)	4 #600 MCM	#3/0	4"
(XX)	SEE DRY TRANSFORMER SCHEDULE		



NOTE: THIS DRAWING HAS BEEN REDUCED TO HALF SIZE.

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CONSULTING ENGINEERS  
3120 20th STREET  
METAIRIE, LOUISIANA 70002



LINFIELD, HUNTER & JUNIUS, INC.  
CONSULTING ENGINEERS AND ARCHITECTS  
3608 18th Street, Suite 200  
Metairie, Louisiana 70002

ASSOCIATES, INC.  
CONSULTING ENGINEERS  
ARCHITECTS, LTD.  
ARCHITECTS & PLANNERS  
2780 LAKE VILLA DRIVE METAIRIE, LA 70002

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

DESIGNED BY: PV	PLOT SCALE: 2	PLOT DATE: 3-08-06	DESIGN FILE NAME: J1403A/ELEC/E12
CHECKED BY: KMCL			SUBMITTED BY: LINFIELD, HUNTER & JUNIUS, INC.
DRAWN BY: KLH			DESIGN ENGINEER
DATE: 03-08-06			SOLICITATION NO.

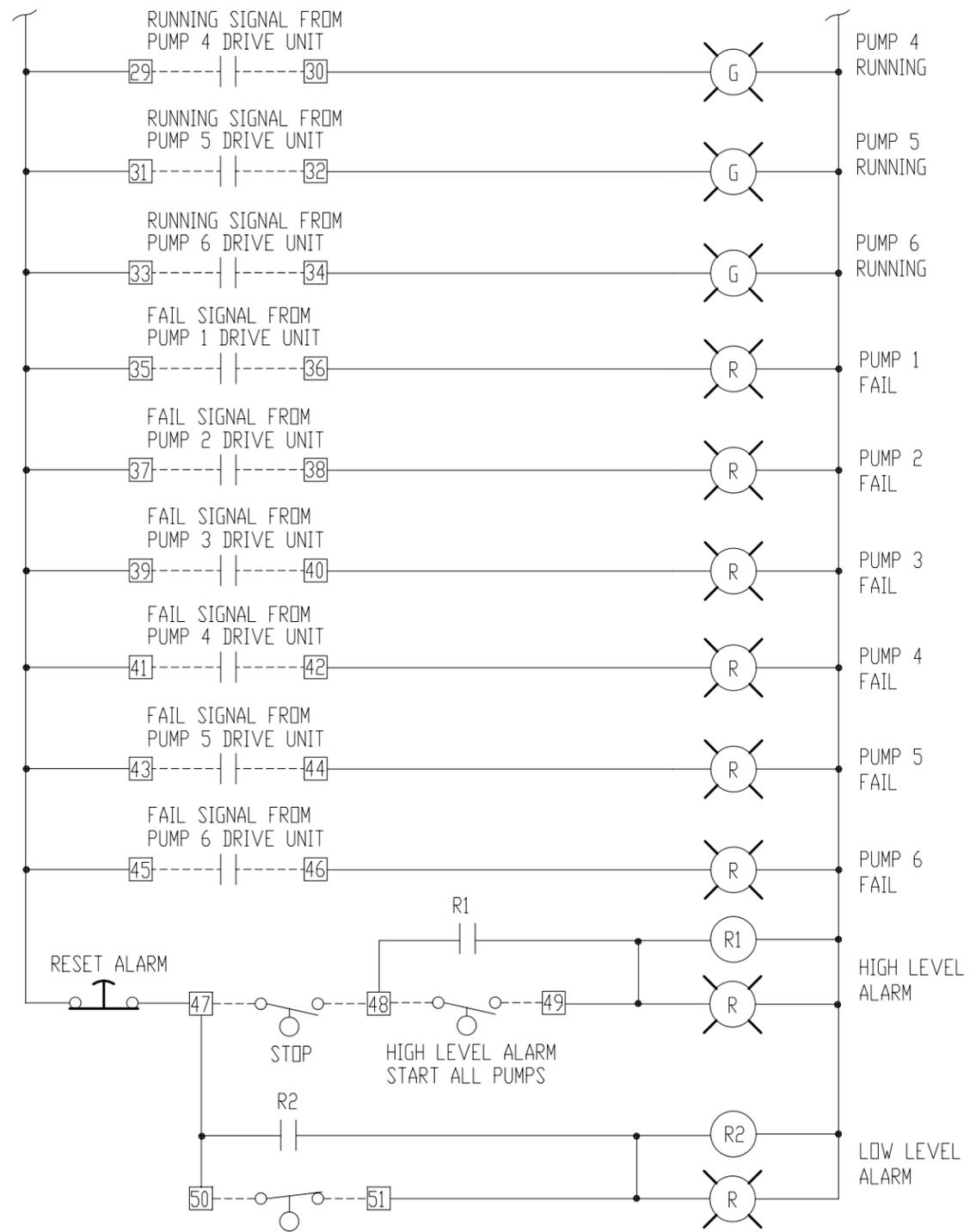
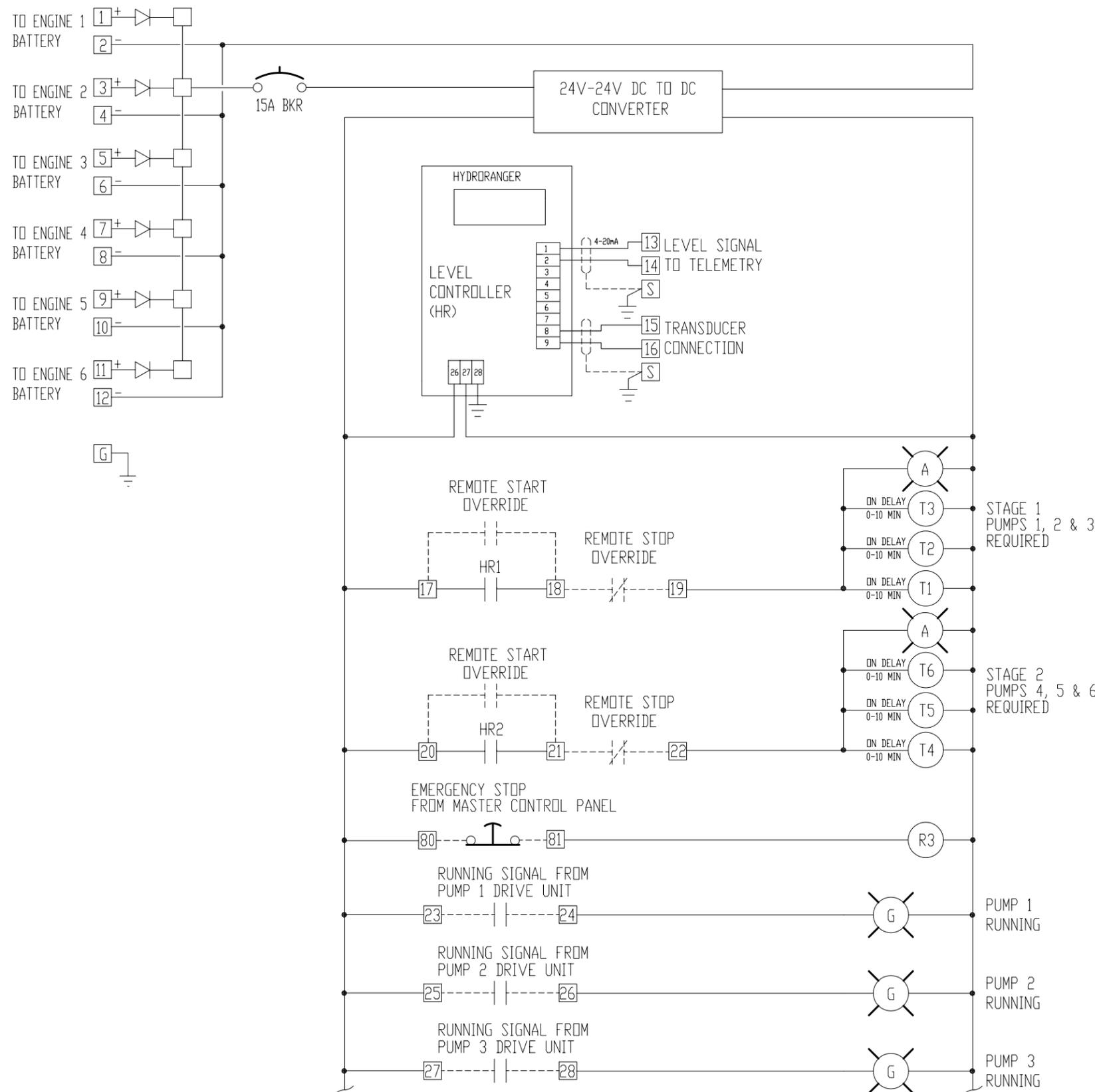
MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR



FILE NUMBER  
E12  
DWG. X OF XX

LAKE PONTCHATRIN AND VICINITY  
INTERIM DRAINAGE PUMP STATION  
17TH STREET CANAL  
NEW ORLEANS, LOUISIANA  
ELECTRICAL RISER DIAGRAM

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D
1	HYDRORANGER LEVEL CONTROL ADDED	3/8/06	ES
2	HDA'S ADDED AND EMERGENCY STOP	3/8/06	ES
3	HDA'S AND EMERGENCY STOP WIRING CHANGED	3/20/06	ES



**NOTES**

DASHED LINES INDICATE WIRING TO REMOTE DEVICES OUTSIDE OF PANEL  
 PILOT LIGHTS TO BE LED TYPE  
 USE SEPARATE CONDUITS FOR EACH LEVEL TRANSMITTER

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APPROVALS	DATE	CUSTOMER
DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION
DRAWN BY EJS	13 MAR 06	
CHECKED BY		PROJECT LONDON AVE CANAL & 17th STREET CANAL PUMP STATIONS
JOB NUMBER	06015	

TITLE	PUMP CONTROL PANEL	
DWG No.	E06015-1	SHEET 1 OF 3

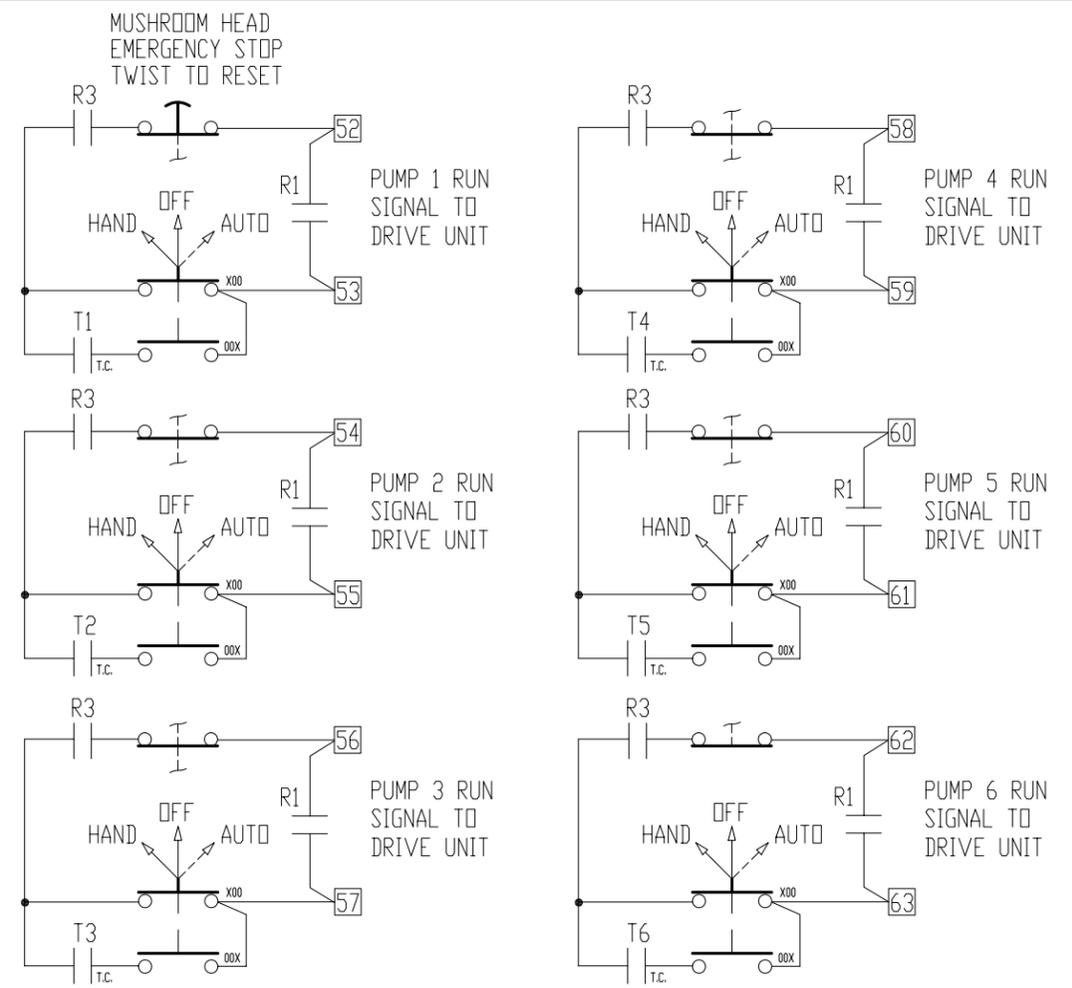
MOVING WATER INDUSTRIES

201 NORTH FEDERAL HWY  
DEERFIELD BEACH, FL 33441  
www.nwicorp.com

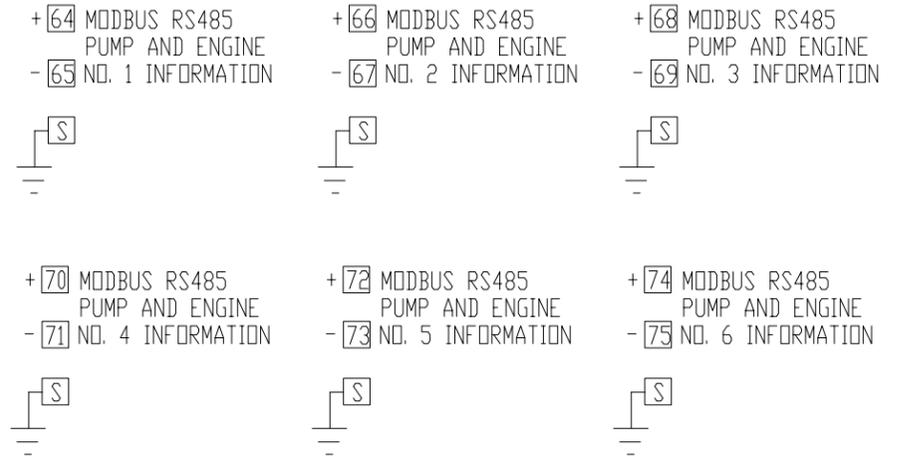


ESTABLISHED 1926

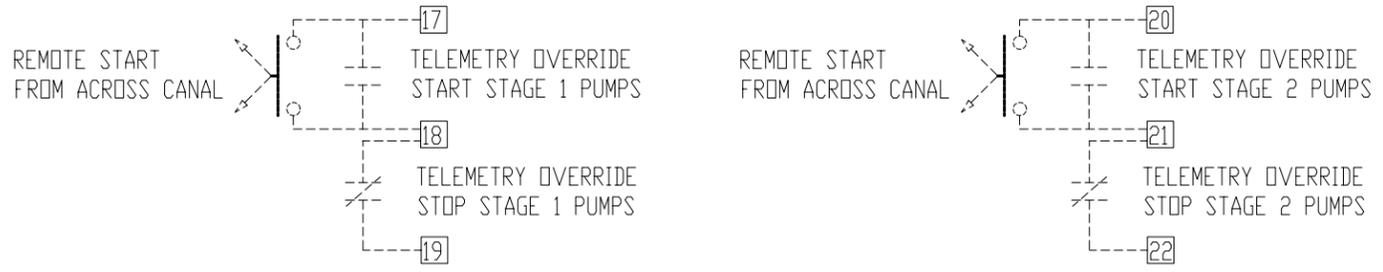
FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D



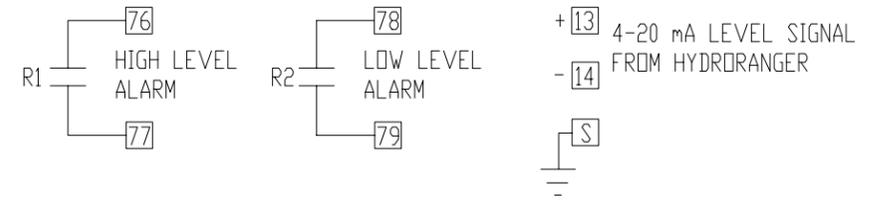
**PUMP START SIGNALS TO DRIVE UNITS**



**PUMP INFORMATION SIGNALS TO TELEMETRY**



**CONTROL SIGNALS FROM TELEMETRY**



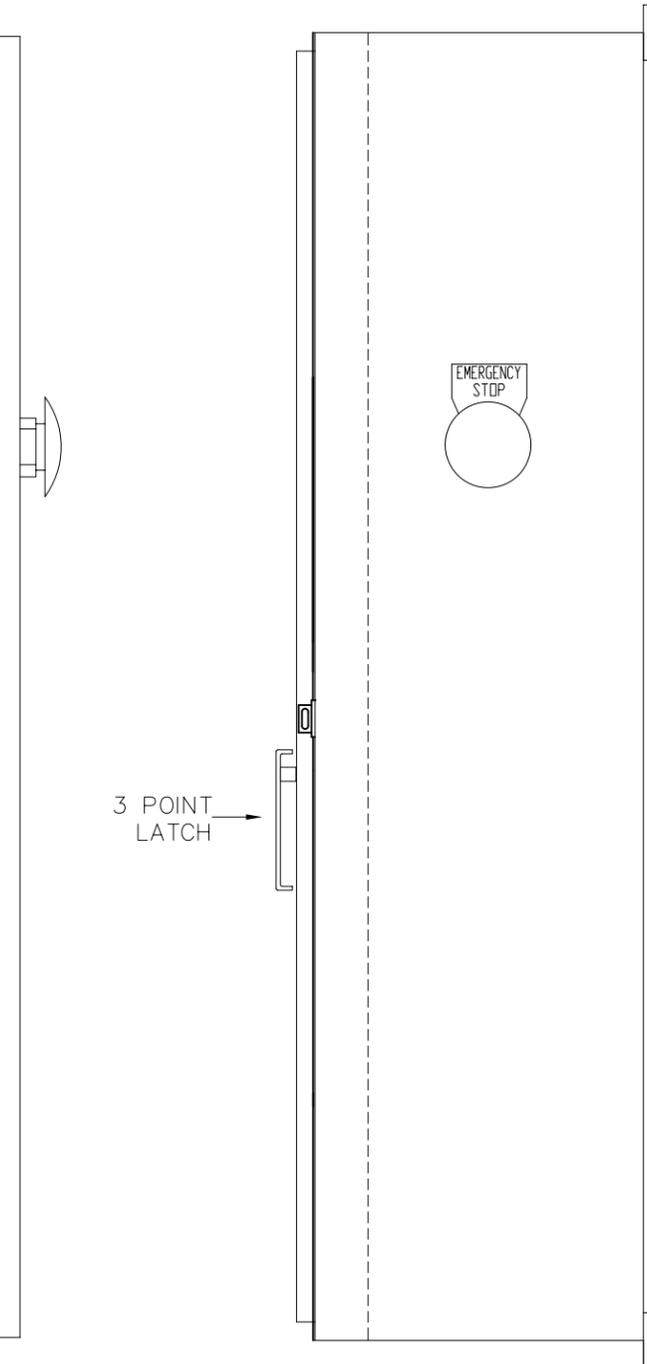
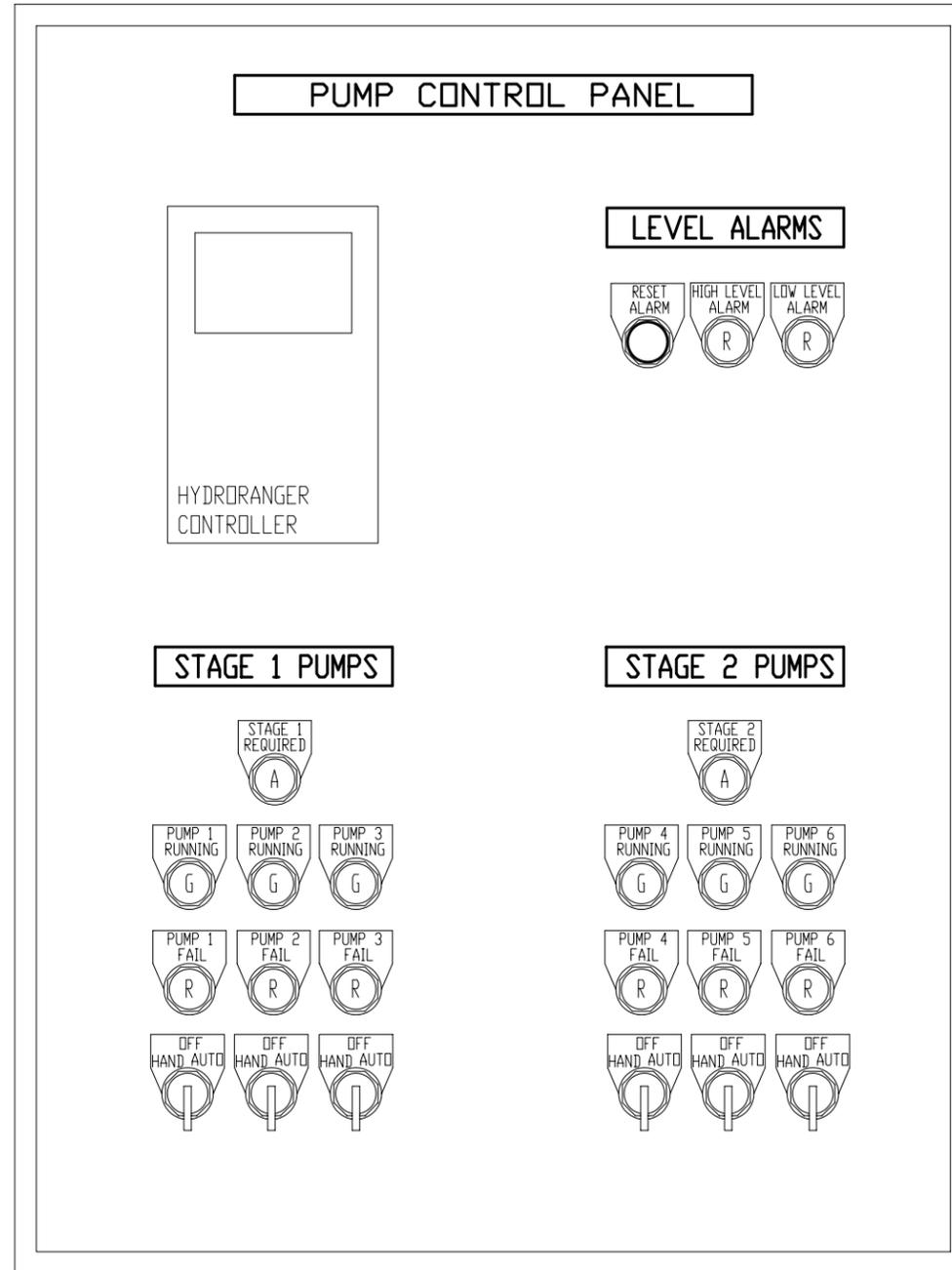
**LEVEL INFORMATION SIGNALS TO TELEMETRY**

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	DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION	PUMP CONTROL PANEL	
	DRAWN BY EJS	13 MAR 06	PROJECT	DWG No.	SHEET
	CHECKED BY		LONDON AVE CANAL & 17th STREET CANAL PUMP STATIONS	E06015-1	2 OF 3
JOB NUMBER 06015			MOVING WATER INDUSTRIES 201 NORTH FEDERAL HWY DEERFIELD BEACH, FL 33441 <small>www.mwicorp.com</small> 		

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D

### SEQUENCE OF OPERATION

1. ALL 6 PUMPS WILL BE STARTED IN 2 STAGES AND WILL STOP AT A COMMON STOP LEVEL.
2. STAGE 1 WILL START PUMP NO. 1 AND AFTER AN ENGINE WARM UP PERIOD THE PUMP WILL RAMP UP TO SPEED OVER A PERIOD OF APPROXIMATELY ONE MINUTE. FOLLOWING A TIME DELAY OF 1 TO 2 MINUTES, PUMP 2 WILL START, WARM UP AND RAMP UP TO SPEED. FOLLOWING ANOTHER TIME DELAY PUMP 3 WILL START. SHOULD THE LEVEL DECREASE TO THE STOP FLOAT, ALL 3 PUMPS WILL SHUT DOWN BUT THE ENGINES WILL CONTINUE TO RUN FOR A COOL DOWN PERIOD.
3. SHOULD THE LEVEL CONTINUE TO RISE AFTER STAGE 1 HAS STARTED, STAGE 2 PUMPS WILL START IN THE SAME MANNER.
4. THE PUMP CONTROL PANEL WILL BE POWERED BY THE ENGINE BATTERIES. DIODES WILL BE USED TO ISOLATE AN ENGINE WHILE IT'S CRANKING.
5. A PUMP CONTROLLER HAS BEEN FURNISHED TO CHANGE THE STARTING SEQUENCE AFTER EACH PUMPING CYCLE.
6. NOTE THAT 3 PUMPS MUST RUN TO ESTABLISH A SIPHON IN THE MANIFOLD PIPE AND THEREFORE THE GROUPING OF THE 3 PUMPS IN 2 STAGES WAS SELECTED.
7. THE PUMP CONTROL SYSTEM MAY BE OVERRIDDEN BY THE TELEMETRY SYSTEM AND PUMPS CAN BE STARTED OR STOPPED AT ANY TIME.
8. FLOAT SWITCHES HAVE BEEN PROVIDED FOR BACK UP CONTROL AND WILL START ALL THE PUMPS ON A HIGH LEVEL ALARM. THE PUMPS WILL RUN UNTIL THE LEVEL REACHES THE STOP FLOAT SWITCH.

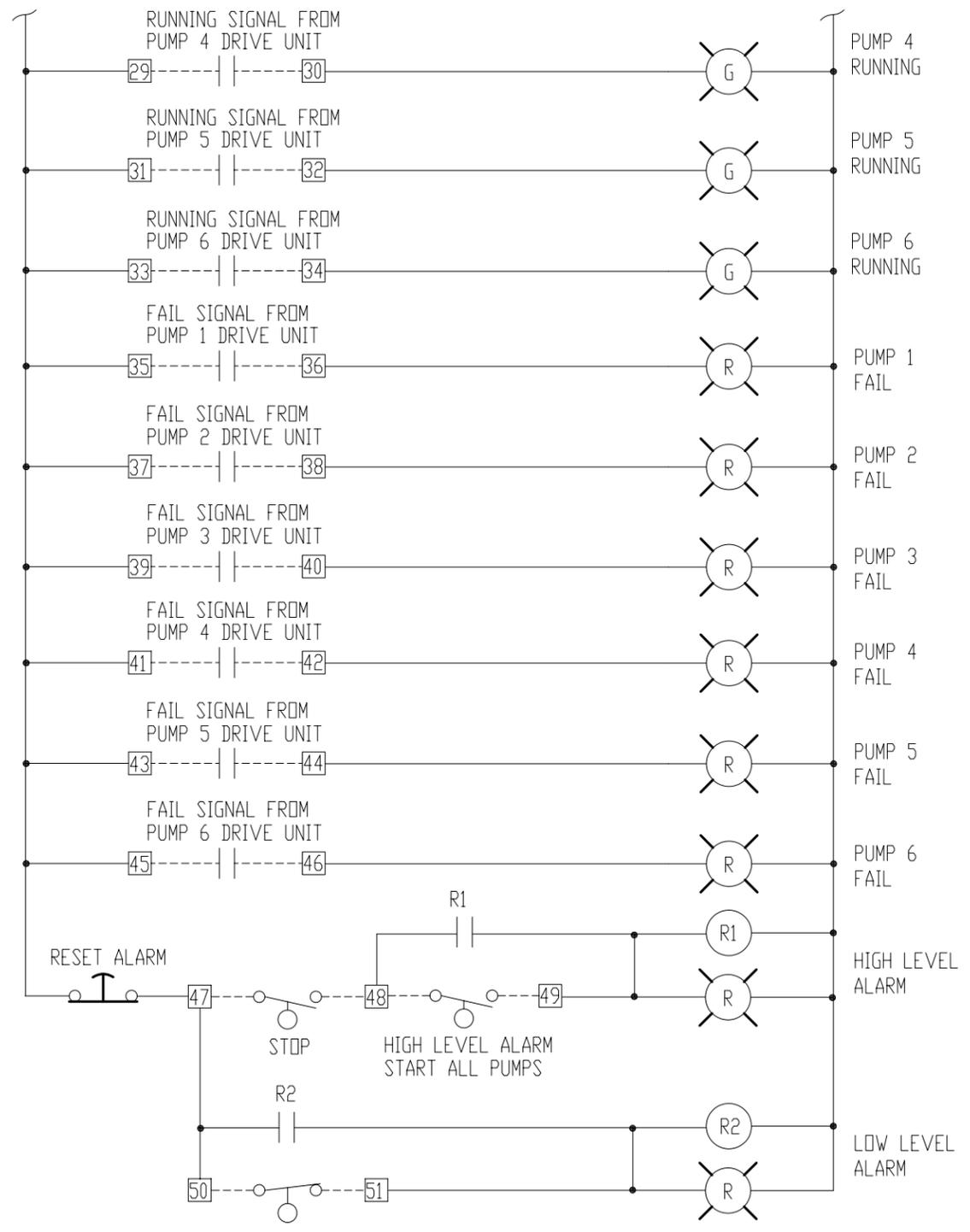
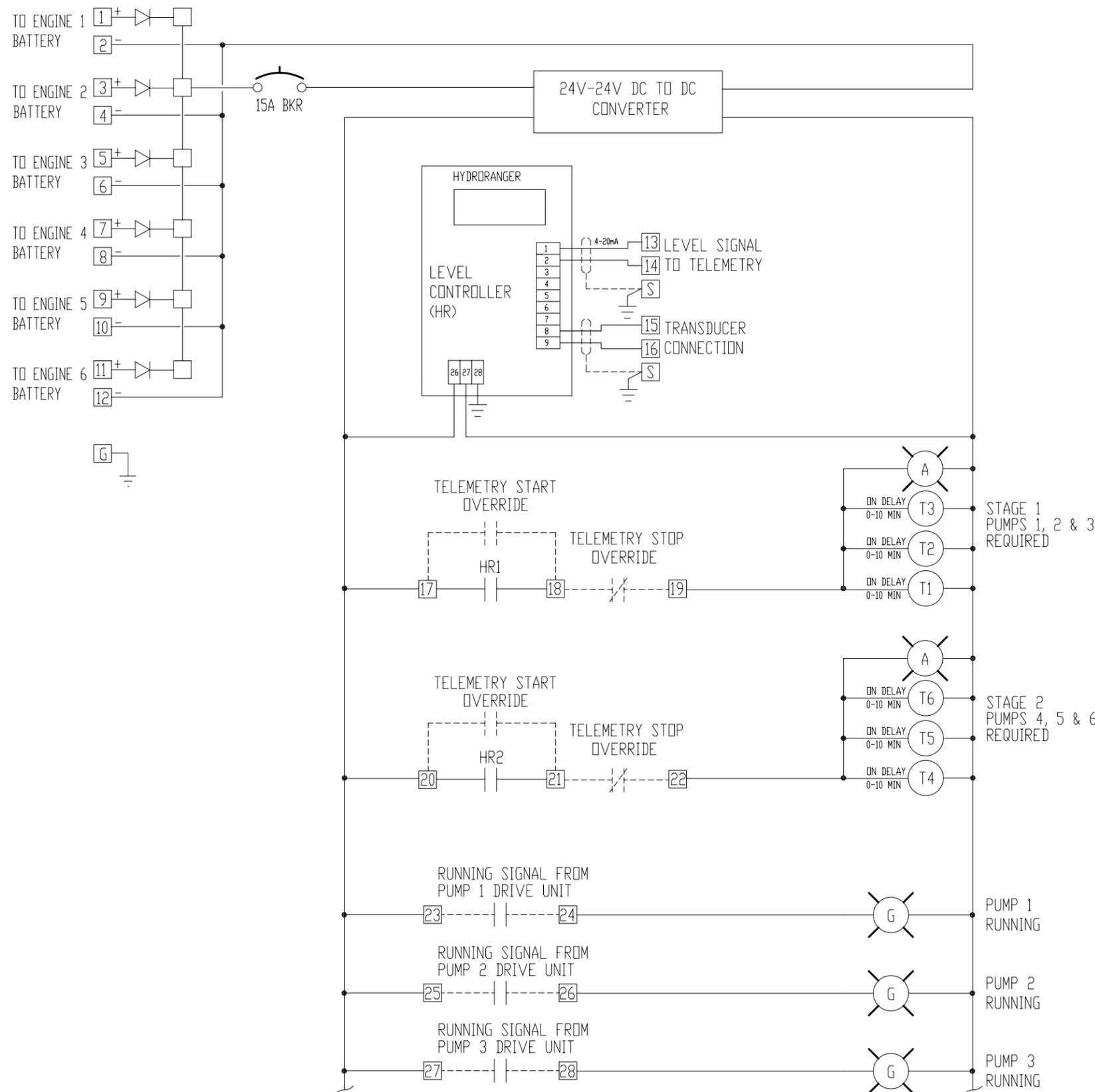


**SWING PANEL LAYOUT**

NEMA 4X DEADFRONT ENCLOSURE WITH LOCKABLE OUTER DOOR. TYPE 304 STAINLESS STEEL

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	DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION	PUMP CONTROL PANEL	
	DRAWN BY EJS	13 MAR 06	PROJECT LONDON AVE CANAL & 17th STREET CANAL PUMP STATIONS		
	CHECKED BY			DWG No. E06015-1	

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D
1	HYDRORANGER LEVEL CONTROL ADDED	3/8/06	ES
2	HDA'S ADDED AND EMERGENCY STOP	3/8/06	ES
3	HDA'S AND EMERGENCY STOP WIRING CHANGED	3/20/06	ES



**NOTES**

DASHED LINES INDICATE WIRING TO REMOTE DEVICES OUTSIDE OF PANEL  
 PILOT LIGHTS TO BE LED TYPE  
 USE SEPARATE CONDUITS FOR EACH LEVEL TRANSMITTER

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APPROVALS	DATE	CUSTOMER
DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION
DRAWN BY EJS	13 MAR 06	
CHECKED BY		PROJECT LONDON AVE CANAL & 17th STREET CANAL PUMP STATIONS
JOB NUMBER	06015	

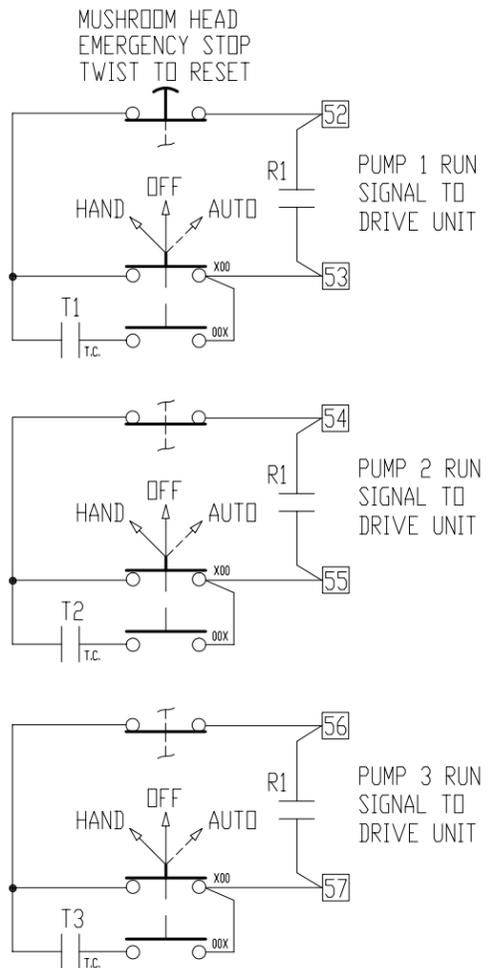
TITLE	PUMP CONTROL PANEL AND TELEMETRY HUB	
DWG No.	E06015-3	SHEET 1 OF 3

MOVING WATER INDUSTRIES

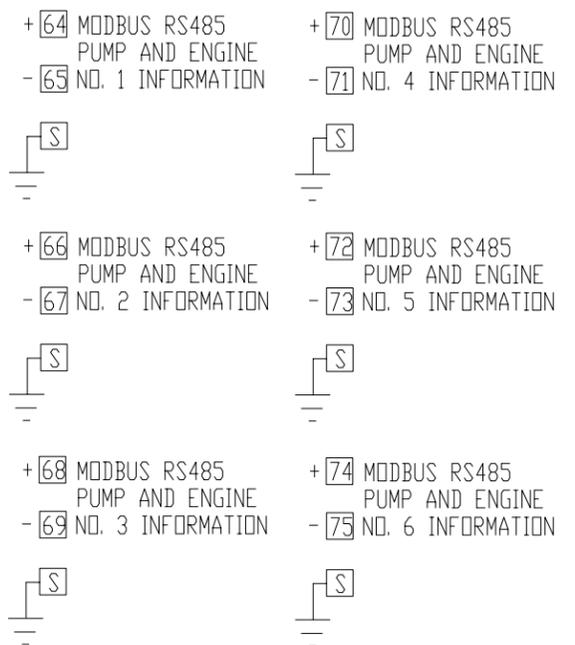
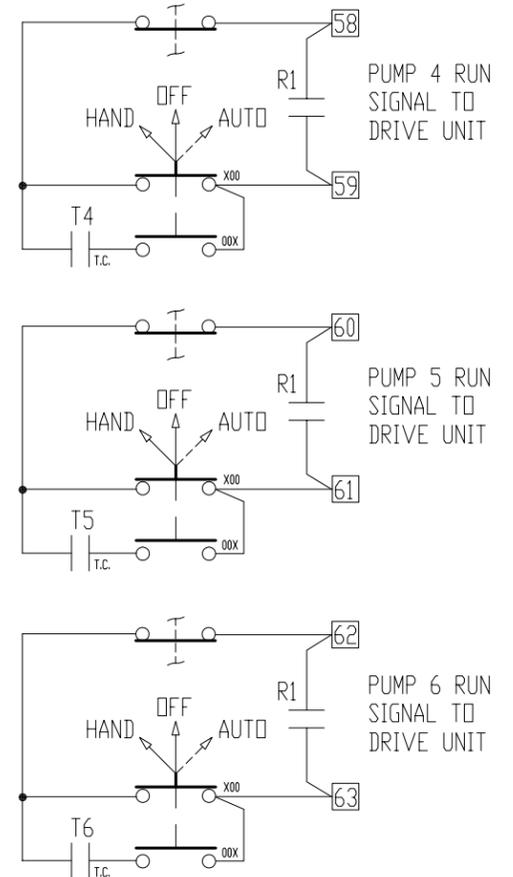
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DEERFIELD BEACH, FL 33441  
www.mwicorp.com

ESTABLISHED 1926

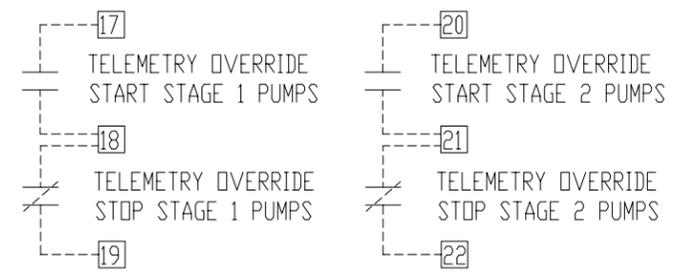
FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D



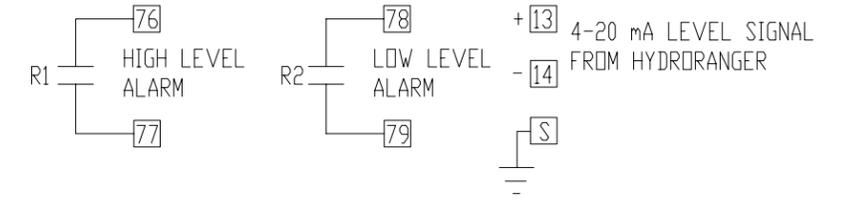
**PUMP START SIGNALS TO DRIVE UNITS**



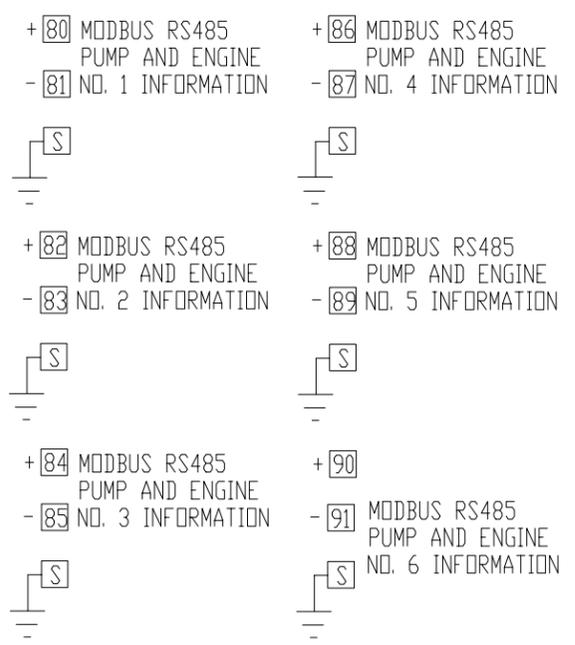
**PUMP INFORMATION SIGNALS TO TELEMETRY**



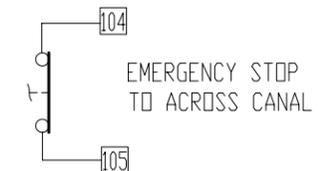
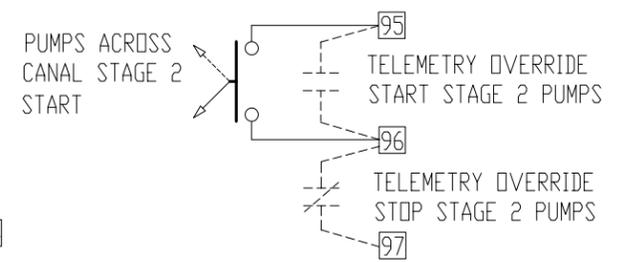
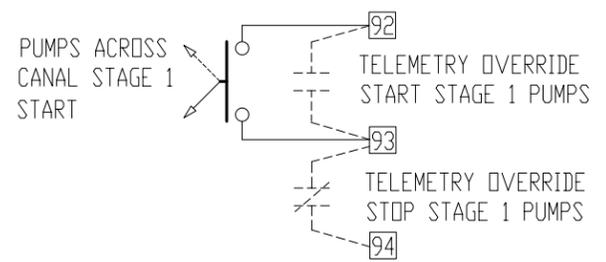
**CONTROL SIGNALS FROM TELEMETRY**



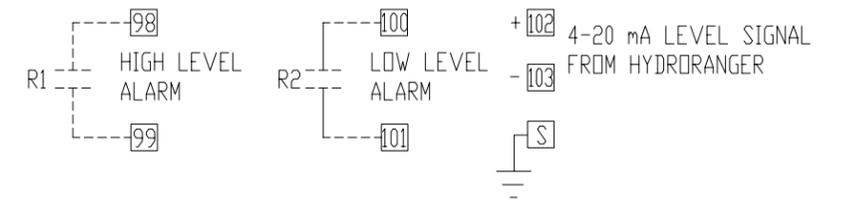
**LEVEL INFORMATION SIGNALS TO TELEMETRY**



**PUMP INFORMATION SIGNALS TO TELEMETRY**



**CONTROL SIGNALS FROM TELEMETRY**



**LEVEL INFORMATION SIGNALS TO TELEMETRY**

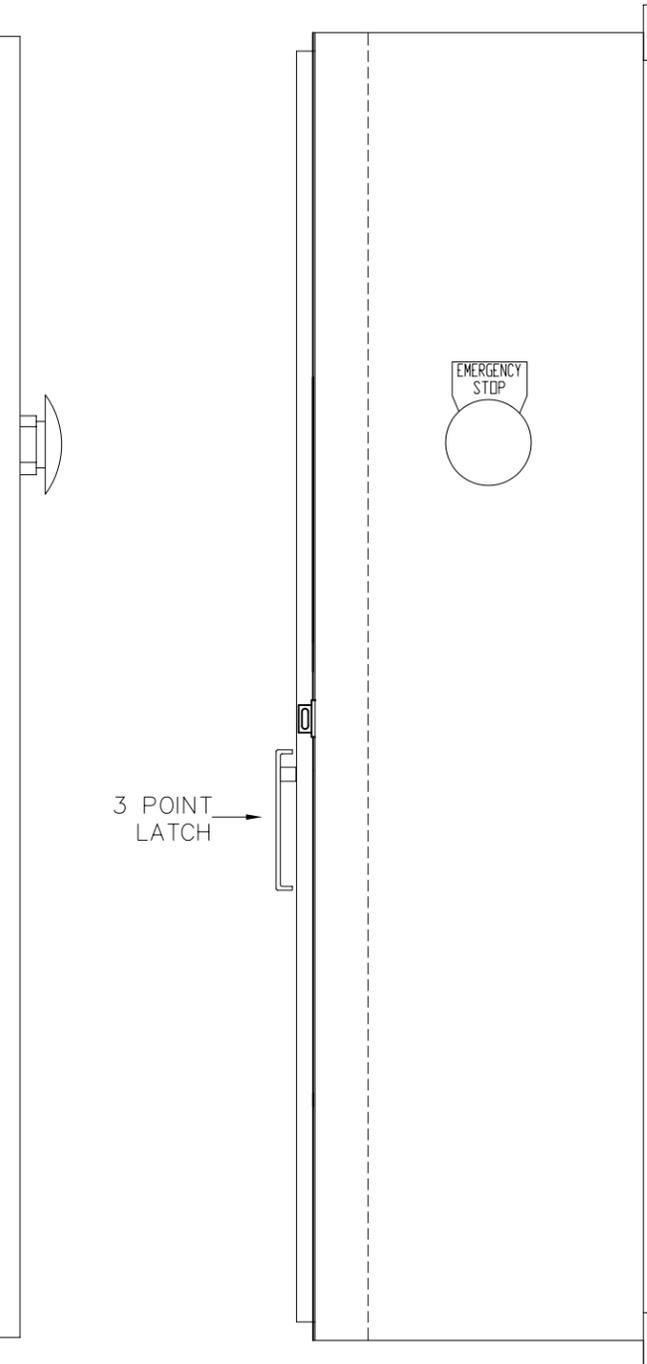
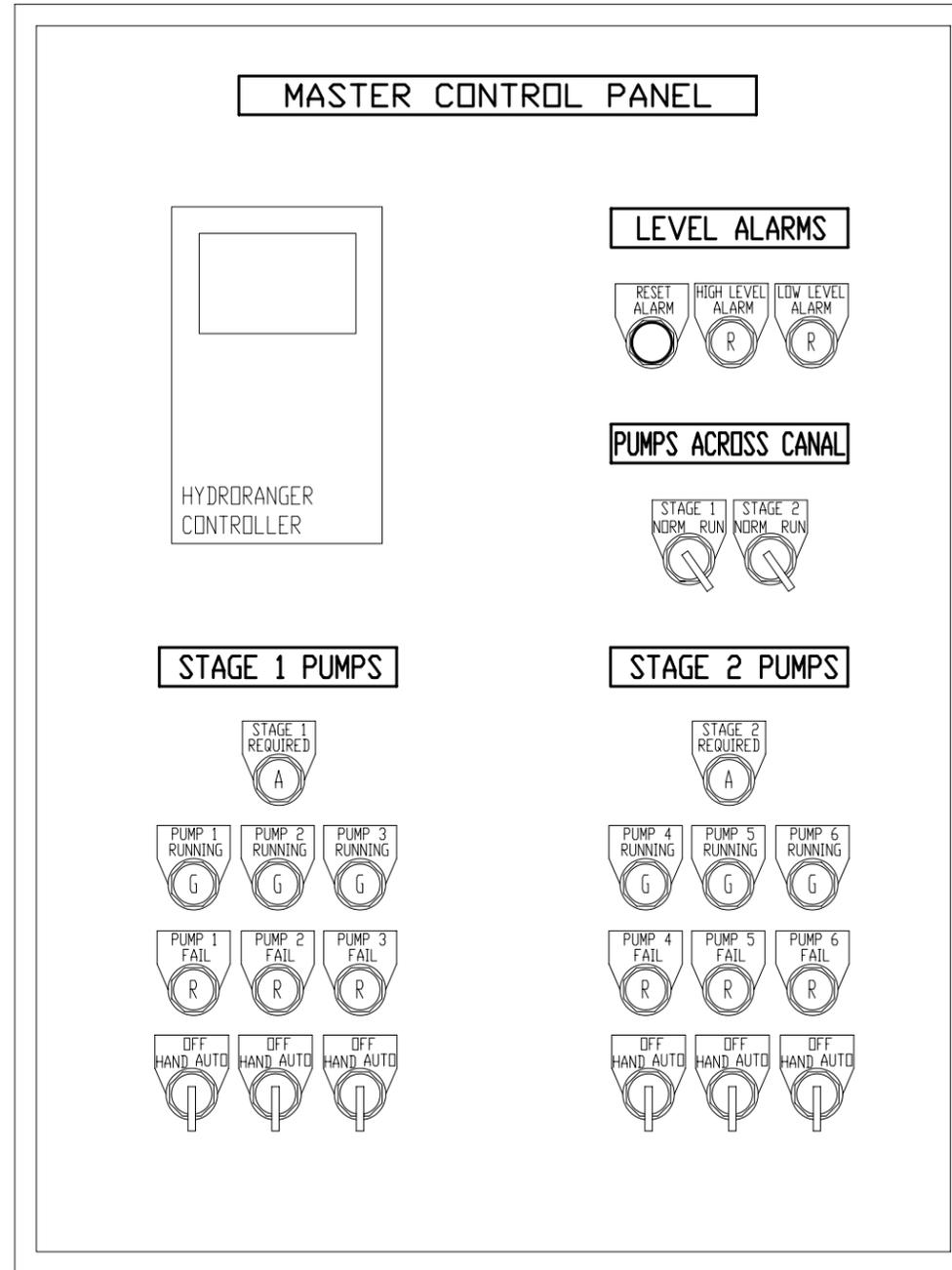
**TELEMETRY SIGNALS FROM ACROSS CANAL**

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	DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION	PUMP CONTROL PANEL AND TELEMETRY HUB	
	DRAWN BY EJS	13 MAR 06	PROJECT LONDON AVE CANAL & 17th STREET CANAL PUMP STATIONS	DWG No. E06015-3	
	CHECKED BY			SHEET 2 OF 3	
	JOB NUMBER 06015				

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D

### SEQUENCE OF OPERATION

1. ALL 6 PUMPS WILL BE STARTED IN 2 STAGES AND WILL STOP AT A COMMON STOP LEVEL.
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SWING PANEL LAYOUT

NEMA 4X DEADFRONT ENCLOSURE WITH LOCKABLE OUTER DOOR. TYPE 304 STAINLESS STEEL

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	DESIGNED BY	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION	PUMP CONTROL PANEL AND TELEMETRY HUB	
	DRAWN BY	13 MAR 06	PROJECT		
	CHECKED BY		LONDON AVE CANAL & 17th STREET CANAL PUMP STATIONS	DWG No. E06015-3	
JOB NUMBER	06015				







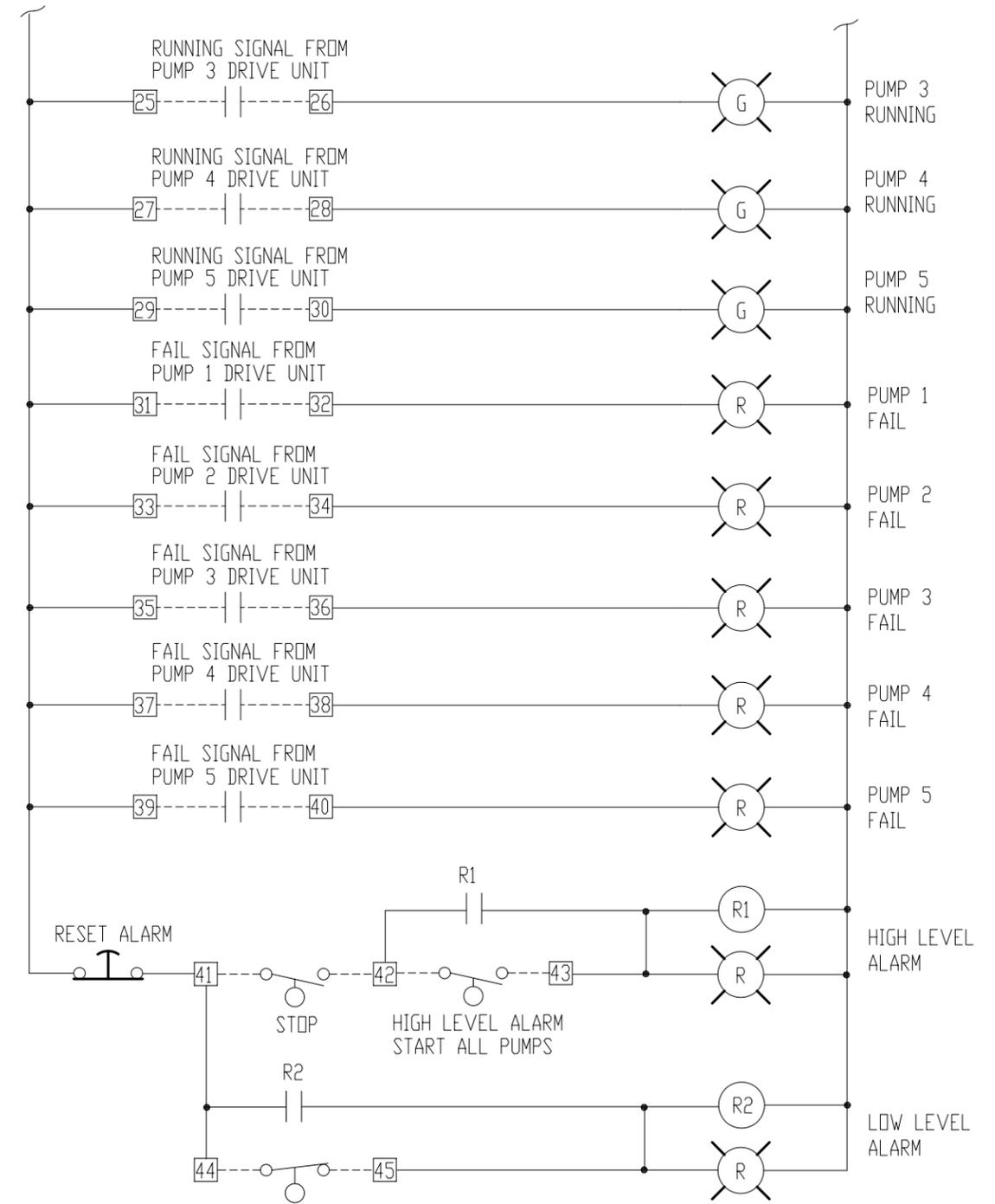
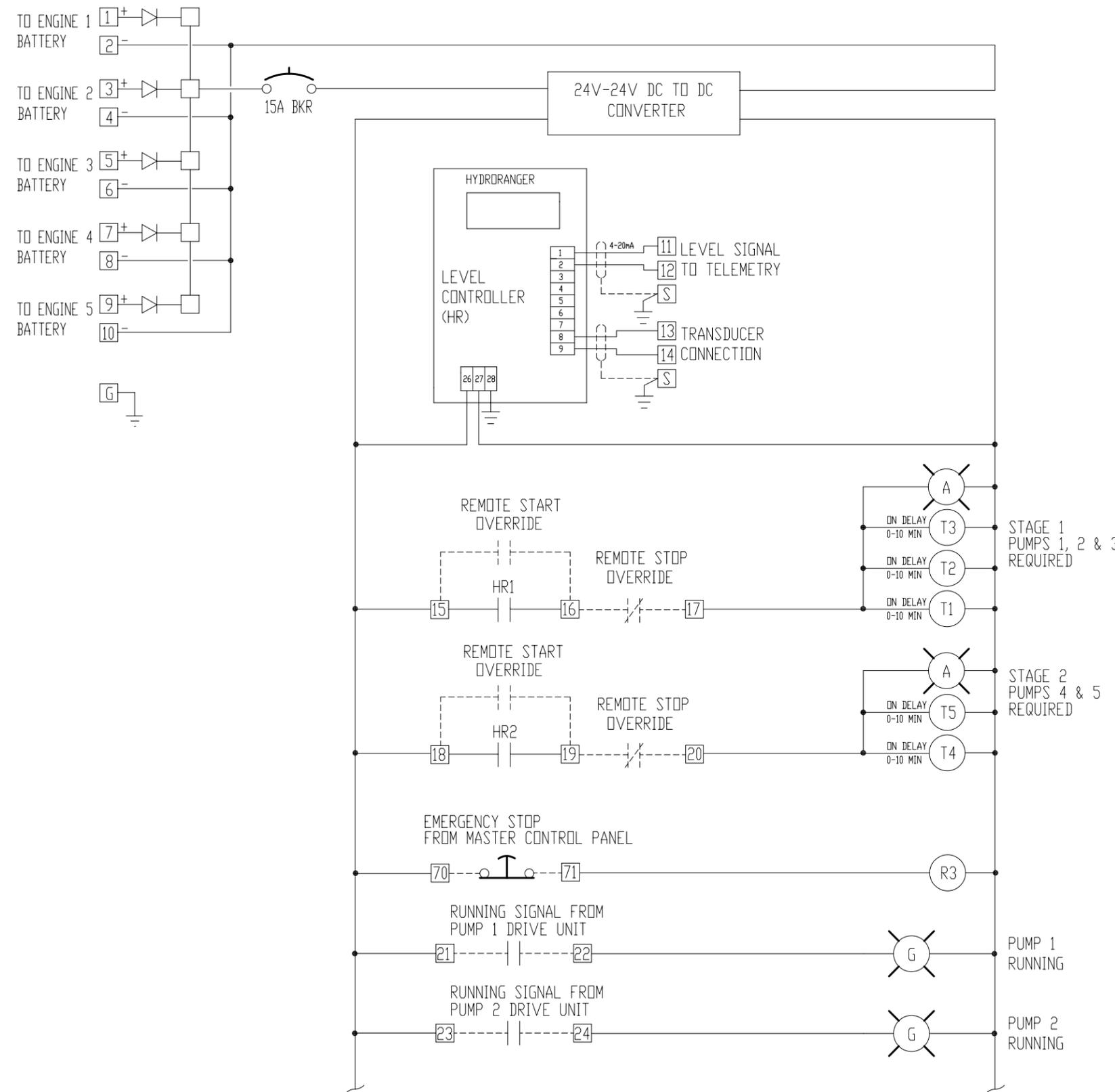








FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D
1	HYDRORANGER LEVEL CONTROL ADDED	3/8/06	ES
2	HDA'S AND EMERGENCY STOP ADDED	3/21/06	ES



**NOTES**

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 PILOT LIGHTS TO BE LED TYPE  
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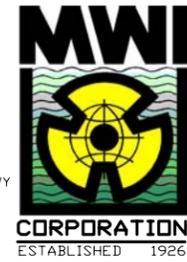
APPROVALS	DATE	CUSTOMER
DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION
DRAWN BY EJS	13 MAR 06	
CHECKED BY		PROJECT
JOB NUMBER	06015	ORLEANS AVE CANAL PUMP STATION

TITLE	PUMP CONTROL PANEL	
DWG No.	E06015-2	SHEET 1 OF 3

MOVING WATER INDUSTRIES

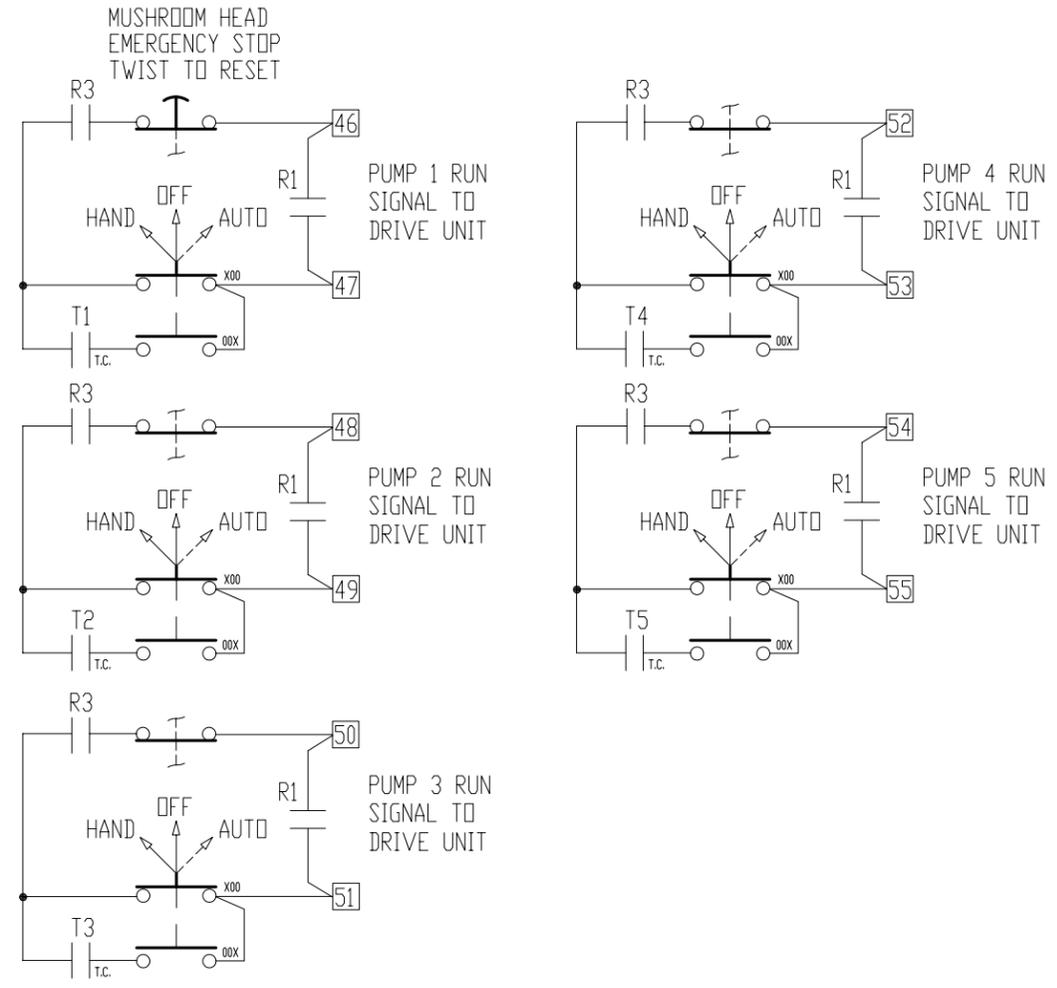
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www.mwicorp.com

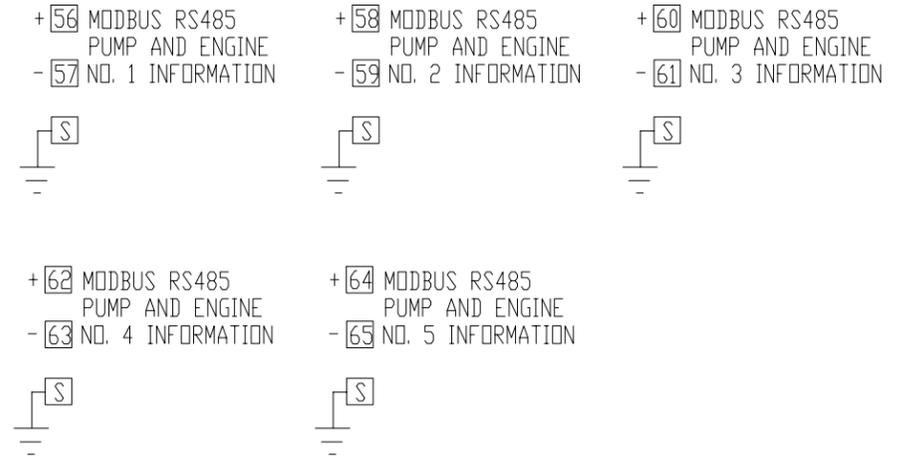


ESTABLISHED 1926

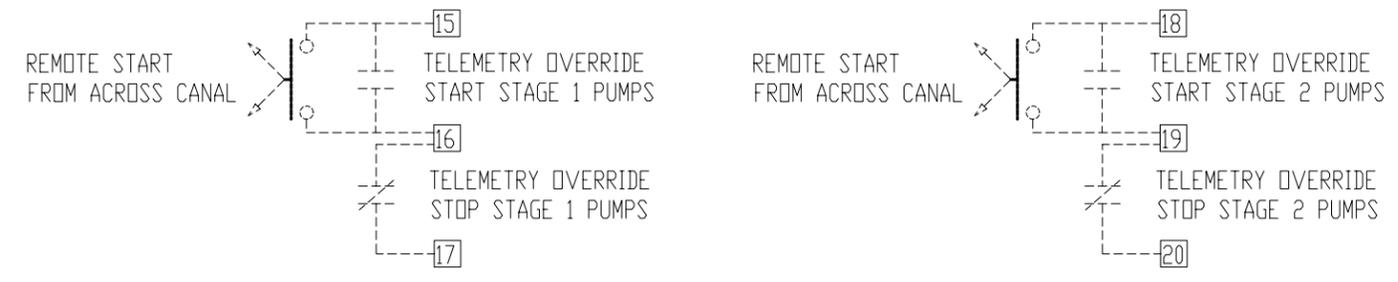
FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D



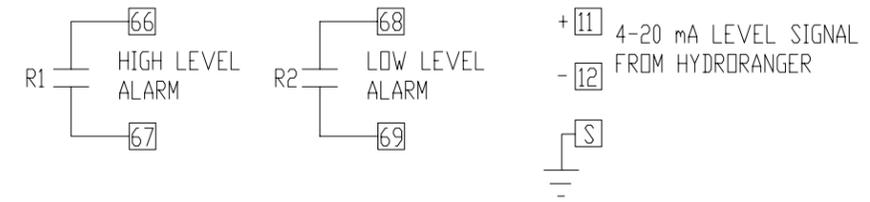
**PUMP START SIGNALS TO DRIVE UNITS**



**PUMP INFORMATION SIGNALS TO TELEMETRY**



**CONTROL SIGNALS FROM TELEMETRY**



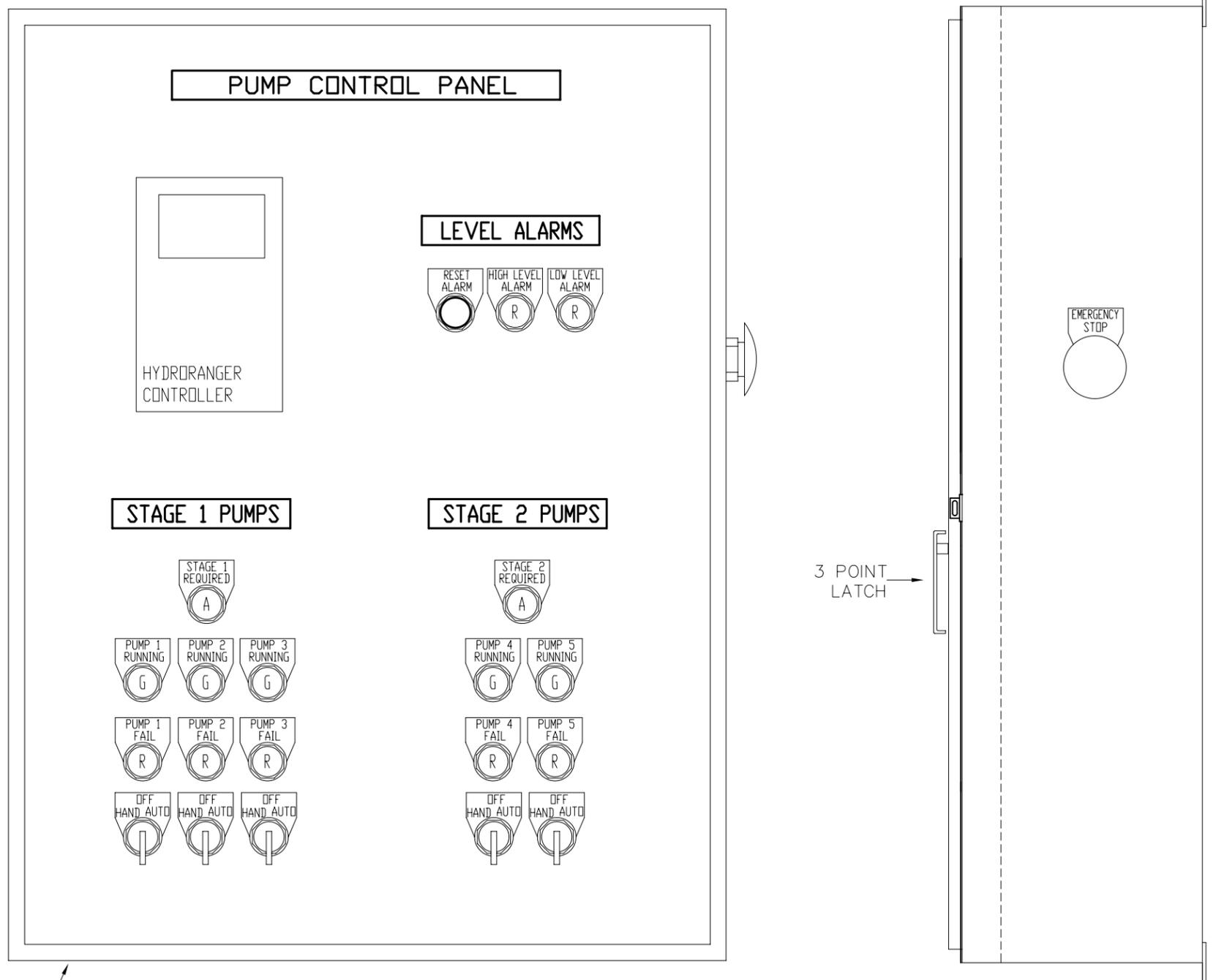
**LEVEL INFORMATION SIGNALS TO TELEMETRY**

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	DESIGNED BY	13 MAR 06	ARMY CORPS OF ENGINEERS	PUMP CONTROL PANEL	
	DRAWN BY	13 MAR 06	NEW ORLEANS DIVISION		
	CHECKED BY		PROJECT		
JOB NUMBER	06015		ORLEANS AVE CANAL PUMP STATION	DWG No. E06015-2	SHEET 2 OF 3

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D

### SEQUENCE OF OPERATION

1. ALL 5 PUMPS WILL BE STARTED IN 2 STAGES AND WILL STOP AT A COMMON STOP LEVEL.
2. STAGE 1 WILL START PUMP NO. 1 AND AFTER AN ENGINE WARM UP PERIOD THE PUMP WILL RAMP UP TO SPEED OVER A PERIOD OF APPROXIMATELY ONE MINUTE. FOLLOWING A TIME DELAY OF 1 TO 2 MINUTES, PUMP 2 WILL START, WARM UP AND RAMP UP TO SPEED. FOLLOWING ANOTHER TIME DELAY PUMP 3 WILL START. SHOULD THE LEVEL DECREASE TO THE STOP FLOAT, ALL 3 PUMPS WILL SHUT DOWN BUT THE ENGINES WILL CONTINUE TO RUN FOR A COOL DOWN PERIOD.
3. SHOULD THE LEVEL CONTINUE TO RISE AFTER STAGE 1 HAS STARTED, STAGE 2 PUMPS WILL START IN THE SAME MANNER.
4. THE PUMP CONTROL PANEL WILL BE POWERED BY THE ENGINE BATTERIES. DIODES WILL BE USED TO ISOLATE AN ENGINE WHILE IT'S CRANKING.
5. A PUMP CONTROLLER HAS BEEN FURNISHED TO CHANGE THE STARTING SEQUENCE AFTER EACH PUMPING CYCLE.
6. NOTE THAT PUMPS IN THE COMMON MANIFOLD PIPE MUST RUN TOGETHER TO ESTABLISH A SIPHON IN THE MANIFOLD PIPE AND THEREFORE THE GROUPING OF THE 3 OR 2 PUMPS IN 2 STAGES WAS SELECTED.
7. THE PUMP CONTROL SYSTEM MAY BE OVERRIDDEN BY THE TELEMETRY SYSTEM AND PUMPS CAN BE STARTED OR STOPPED AT ANY TIME.
8. FLOAT SWITCHES HAVE BEEN PROVIDED FOR BACK UP CONTROL AND WILL START ALL THE PUMPS ON A HIGH LEVEL ALARM. THE PUMPS WILL RUN UNTIL THE LEVEL REACHES THE STOP FLOAT SWITCH.

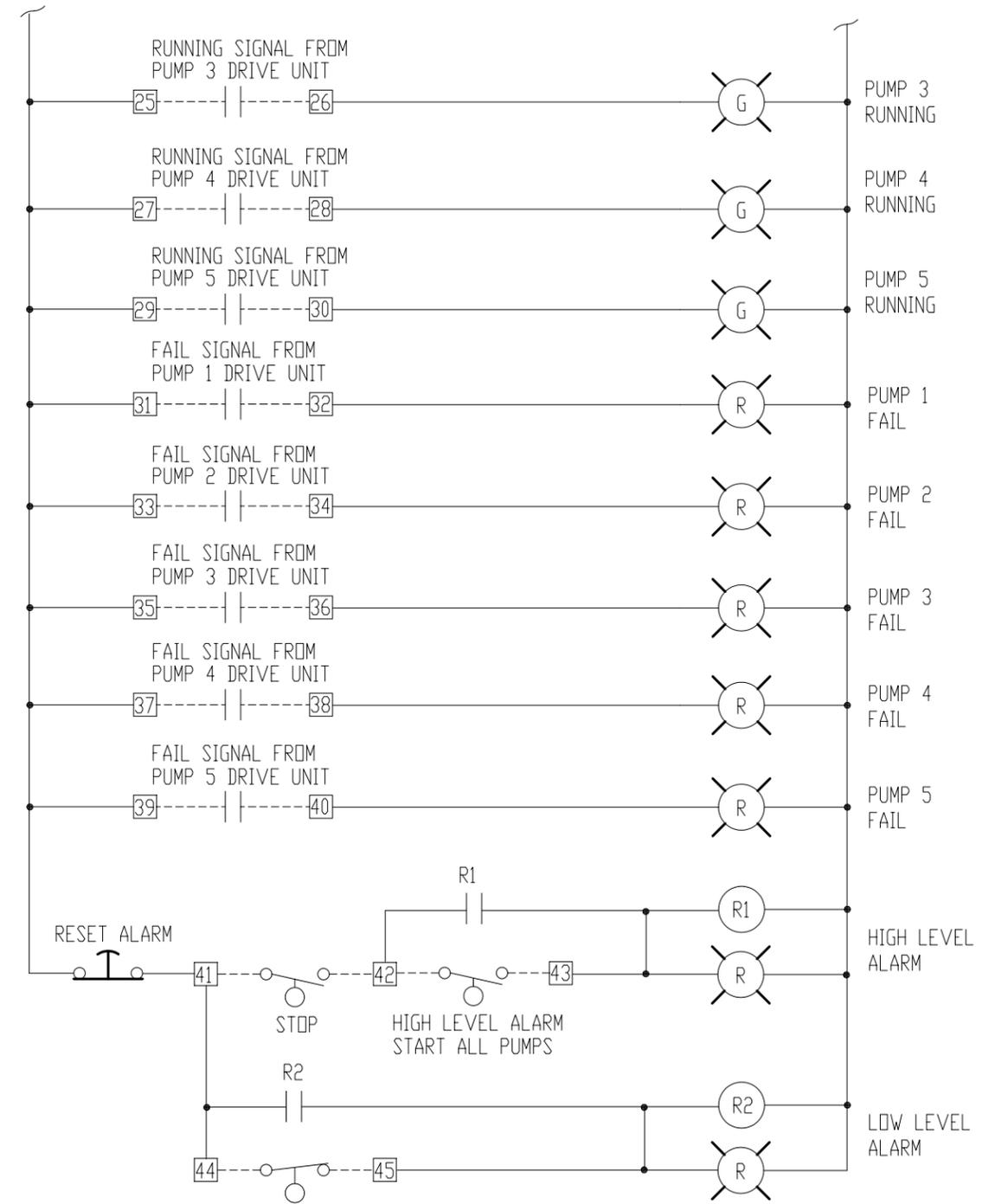
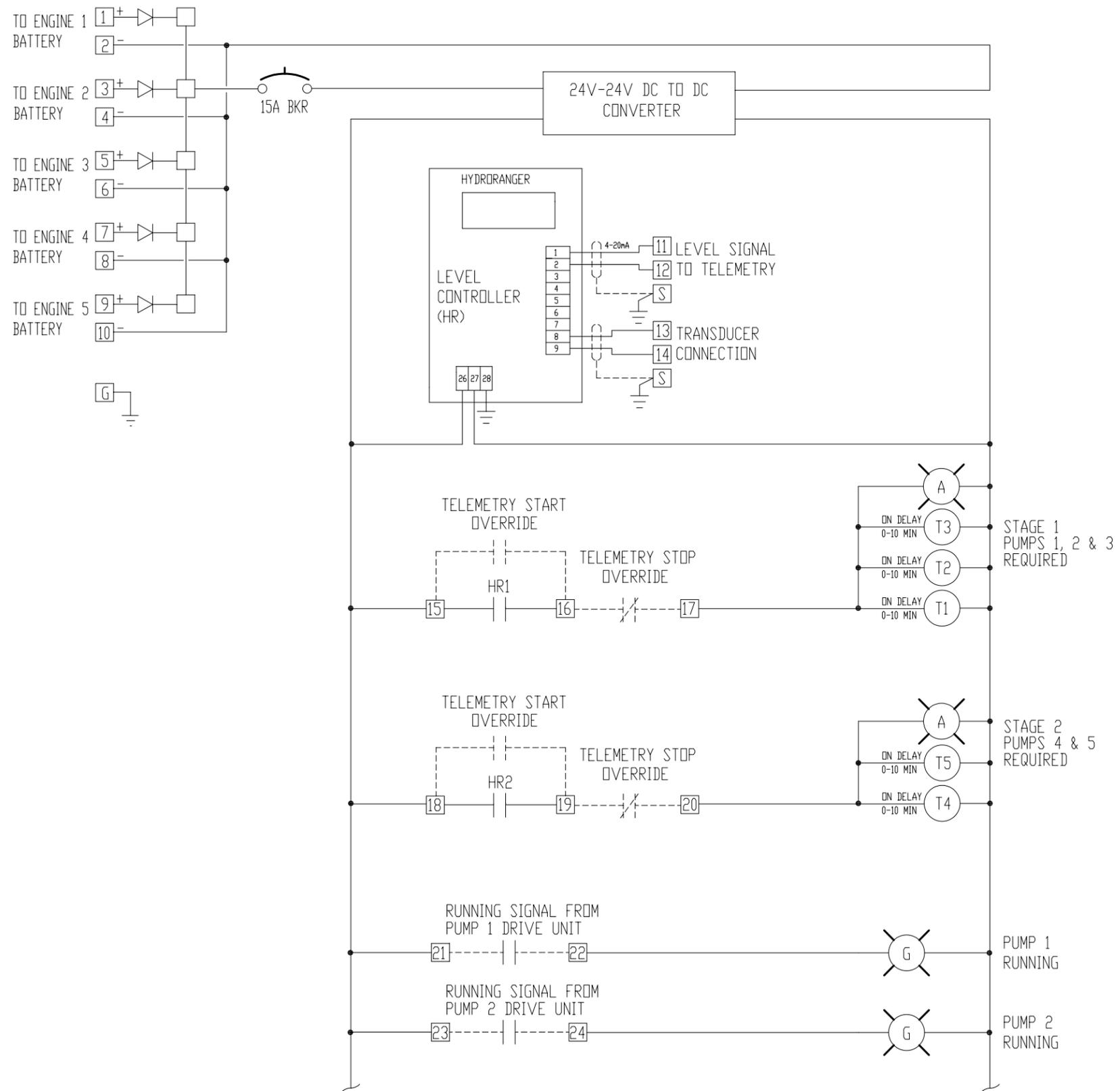


SWING PANEL LAYOUT

NEMA 4X DEADFRONT ENCLOSURE WITH LOCKABLE OUTER DOOR. TYPE 304 STAINLESS STEEL

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	DESIGNED BY	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION	PUMP CONTROL PANEL	
	DRAWN BY	13 MAR 06	PROJECT	DWG No.	
	CHECKED BY		ORLEANS AVE CANAL PUMP STATION	E06015-2	
JOB NUMBER	06015			SHEET	3 OF 3

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D
1	HYDRORANGER LEVEL CONTROL ADDED	3/8/06	ES
2	HOA'S AND EMERGENCY STOP ADDED	3/22/06	ES



**NOTES**

DASHED LINES INDICATE WIRING TO REMOTE DEVICES OUTSIDE OF PANEL  
 PILOT LIGHTS TO BE LED TYPE  
 USE SEPARATE CONDUITS FOR EACH LEVEL TRANSMITTER

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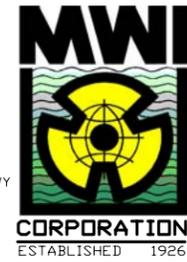
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DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION
DRAWN BY EJS	13 MAR 06	PROJECT
CHECKED BY		ORLEANS AVE CANAL PUMP STATION
JOB NUMBER	06015	

TITLE	PUMP CONTROL PANEL AND TELEMETRY HUB	
DWG No.	E06015-4	SHEET 1 OF 3

MOVING WATER INDUSTRIES

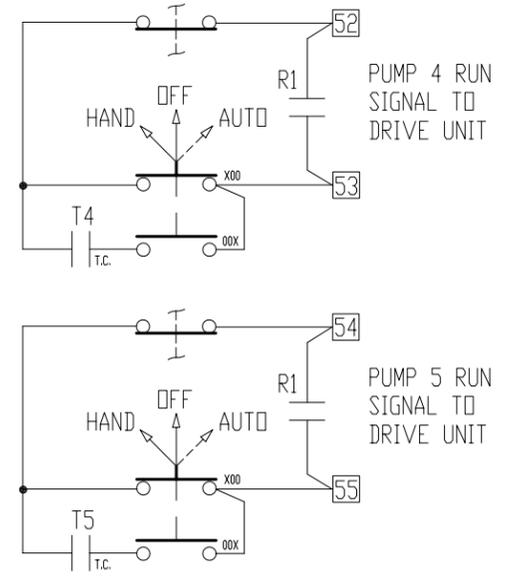
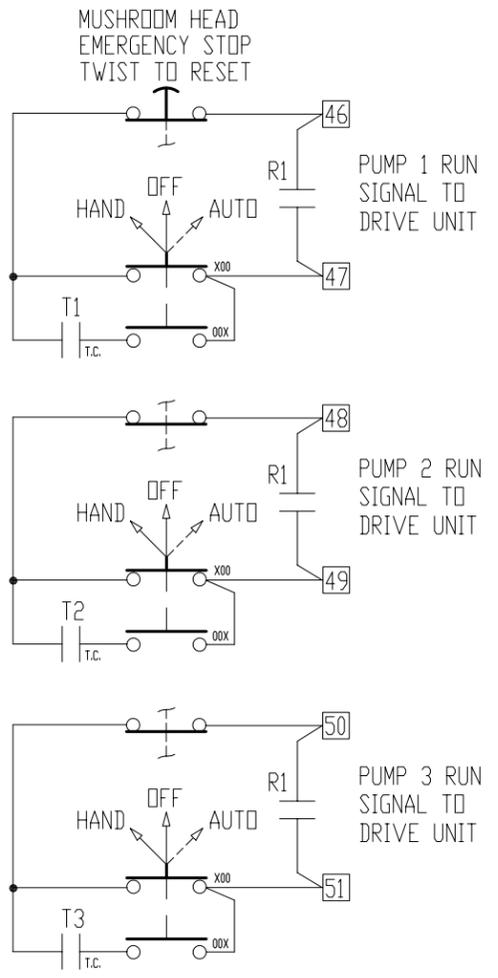
201 NORTH FEDERAL HWY  
DEERFIELD BEACH, FL 33441

www.mwicorp.com

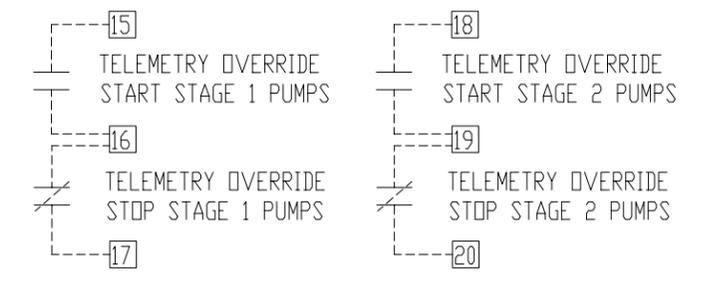


ESTABLISHED 1926

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D



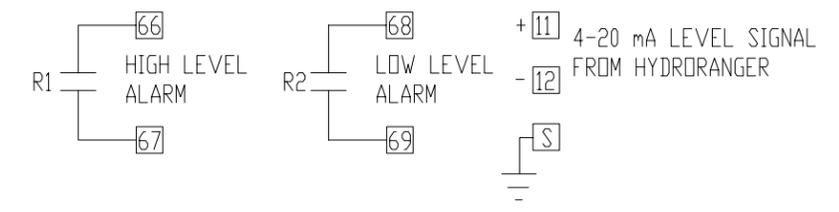
- + [56] MODBUS RS485 PUMP AND ENGINE
- [57] NO. 1 INFORMATION
- + [62] MODBUS RS485 PUMP AND ENGINE
- [63] NO. 4 INFORMATION
- + [58] MODBUS RS485 PUMP AND ENGINE
- [59] NO. 2 INFORMATION
- + [64] MODBUS RS485 PUMP AND ENGINE
- [65] NO. 5 INFORMATION
- + [60] MODBUS RS485 PUMP AND ENGINE
- [61] NO. 3 INFORMATION



**CONTROL SIGNALS FROM TELEMETRY**

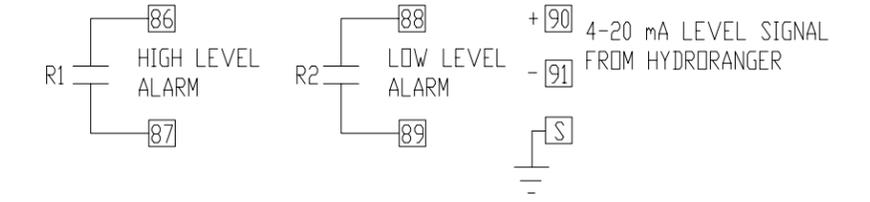
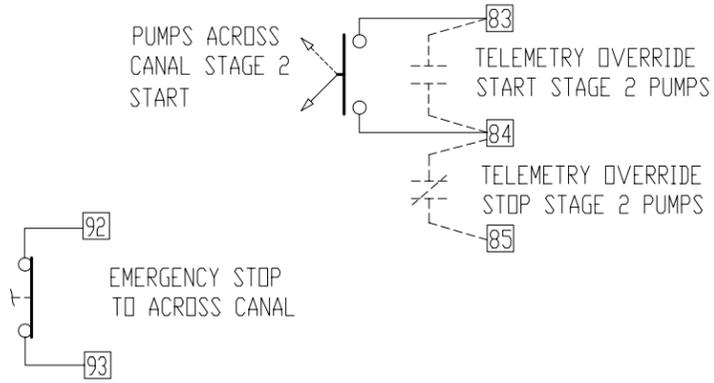
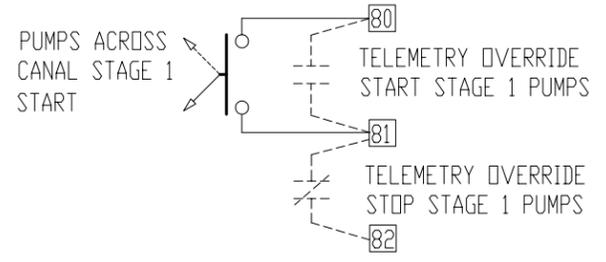
**PUMP START SIGNALS TO DRIVE UNITS**

**PUMP INFORMATION SIGNALS TO TELEMETRY**



**LEVEL INFORMATION SIGNALS TO TELEMETRY**

- + [70] MODBUS RS485 PUMP AND ENGINE
- [71] NO. 1 INFORMATION
- + [76] MODBUS RS485 PUMP AND ENGINE
- [77] NO. 4 INFORMATION
- + [72] MODBUS RS485 PUMP AND ENGINE
- [73] NO. 2 INFORMATION
- + [78] MODBUS RS485 PUMP AND ENGINE
- [79] NO. 5 INFORMATION
- + [74] MODBUS RS485 PUMP AND ENGINE
- [75] NO. 3 INFORMATION



**LEVEL INFORMATION SIGNALS TO TELEMETRY**

**CONTROL SIGNALS FROM TELEMETRY**

**TELEMETRY SIGNALS FROM ACROSS CANAL**

**PUMP INFORMATION SIGNALS TO TELEMETRY**

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APPROVALS	DATE	CUSTOMER
DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION
DRAWN BY EJS	13 MAR 06	PROJECT ORLEANS AVE CANAL PUMP STATION
CHECKED BY		
JOB NUMBER	06015	

TITLE	
PUMP CONTROL PANEL	
DWG No.	E06015-4
SHEET	2 OF 3

MOVING WATER INDUSTRIES

201 NORTH FEDERAL HWY  
DEERFIELD BEACH, FL  
33441

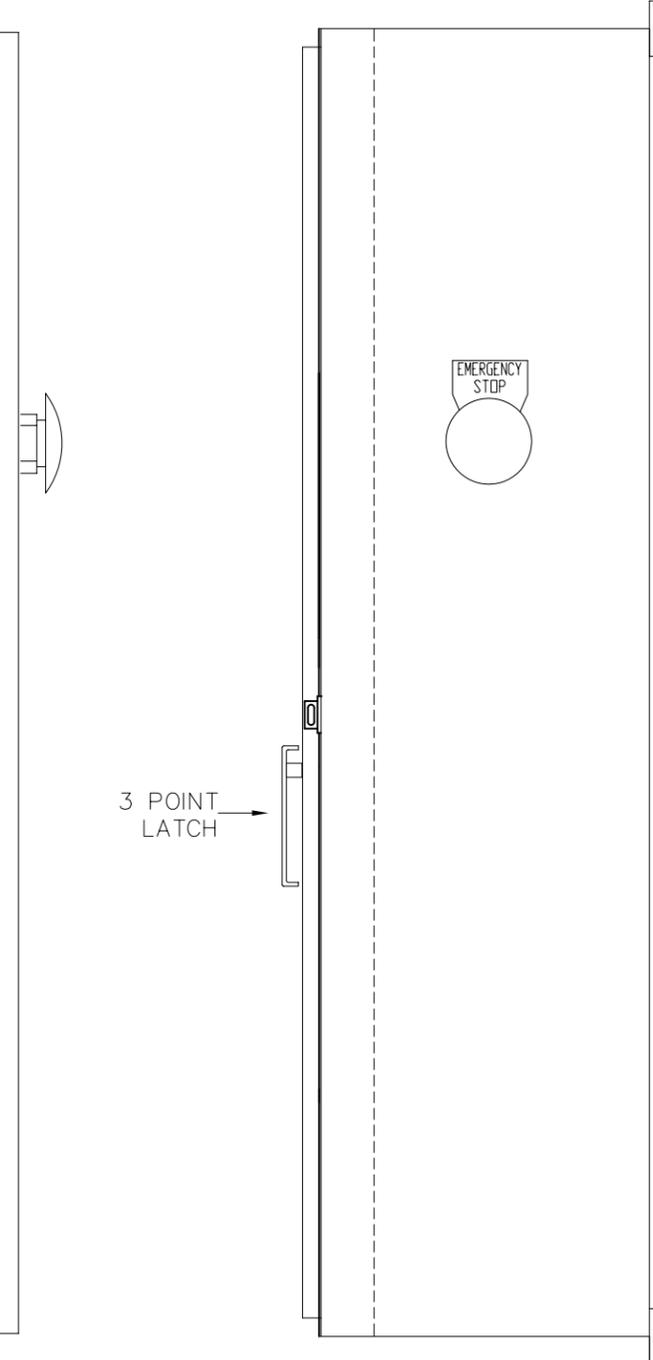
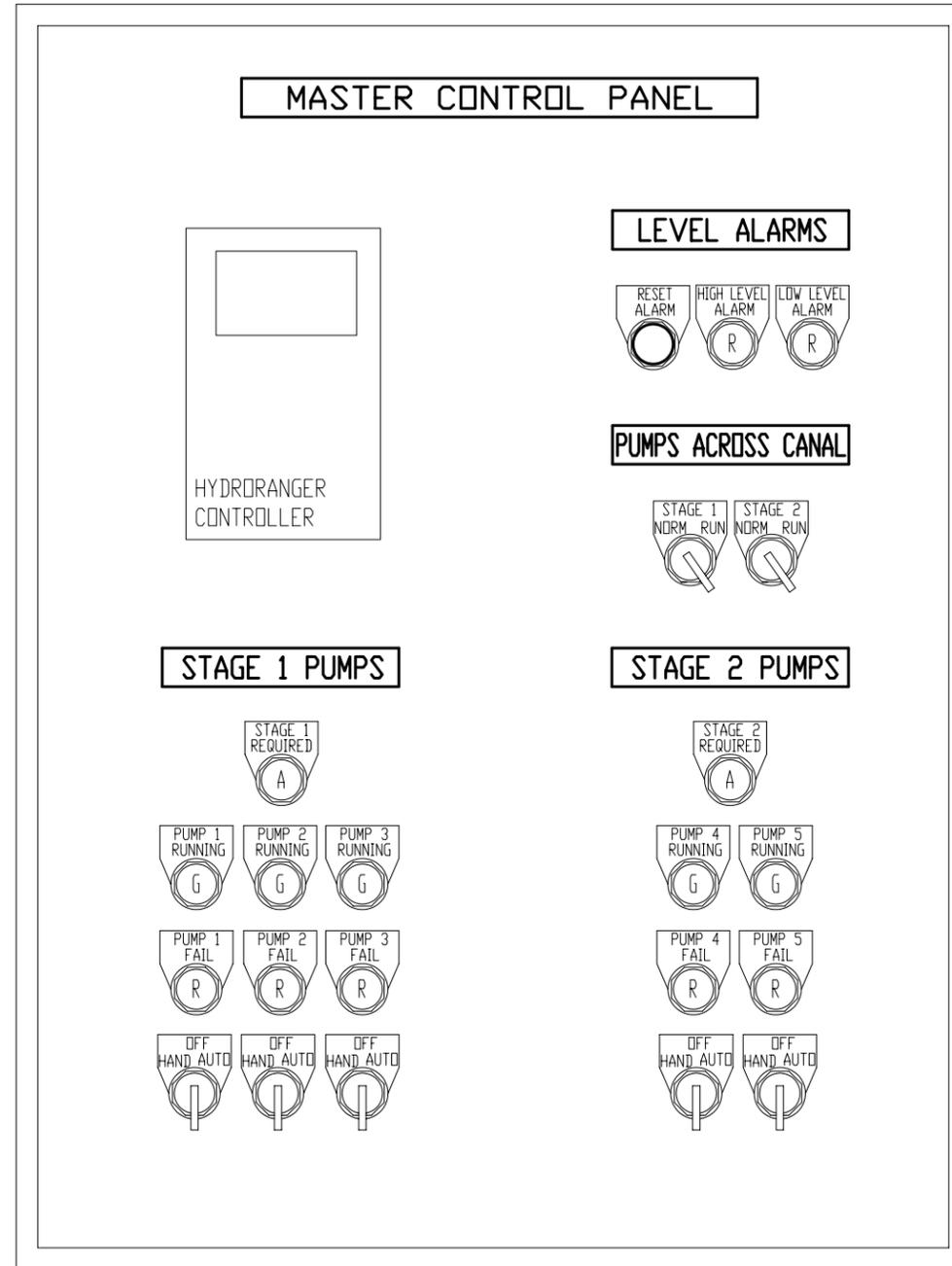
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ESTABLISHED 1926

FORWARD REVISIONS TO ENGINEERING			
REV	DESCRIPTION	DATE	APP'D

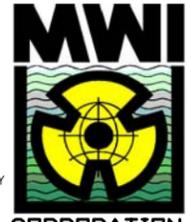
### SEQUENCE OF OPERATION

1. ALL 5 PUMPS WILL BE STARTED IN 2 STAGES AND WILL STOP AT A COMMON STOP LEVEL.
2. STAGE 1 WILL START PUMP NO. 1 AND AFTER AN ENGINE WARM UP PERIOD THE PUMP WILL RAMP UP TO SPEED OVER A PERIOD OF APPROXIMATELY ONE MINUTE. FOLLOWING A TIME DELAY OF 1 TO 2 MINUTES, PUMP 2 WILL START, WARM UP AND RAMP UP TO SPEED. FOLLOWING ANOTHER TIME DELAY PUMP 3 WILL START. SHOULD THE LEVEL DECREASE TO THE STOP FLOAT, ALL 3 PUMPS WILL SHUT DOWN BUT THE ENGINES WILL CONTINUE TO RUN FOR A COOL DOWN PERIOD.
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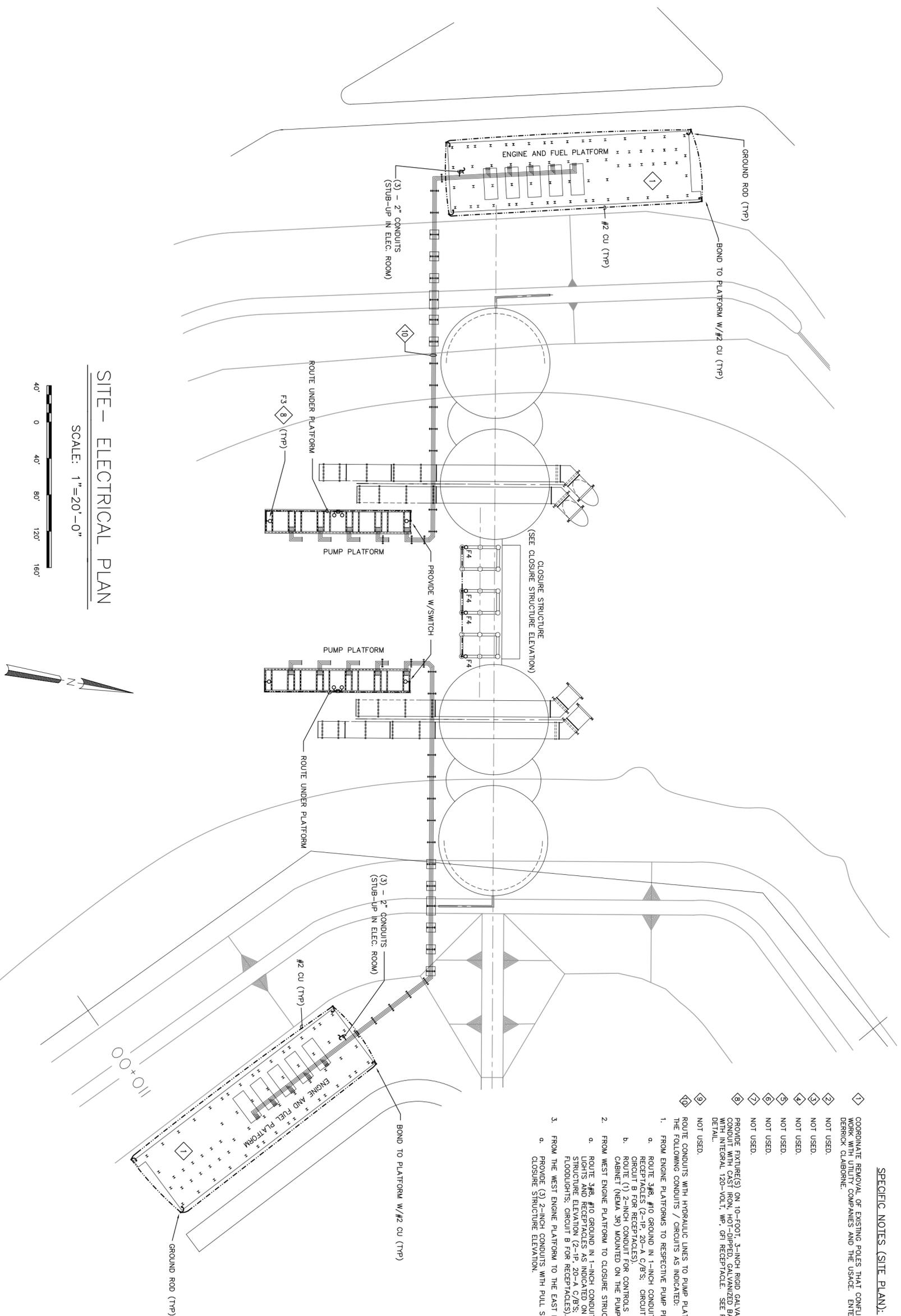


SWING PANEL LAYOUT

NEMA 4X DEADFRONT ENCLOSURE WITH LOCKABLE OUTER DOOR. TYPE 304 STAINLESS STEEL

<small>THIS DRAWING IS THE PROPERTY OF MWI CORPORATION, 201 NFD HWY, DEERFIELD BEACH, FL, 33441 AND IS LOANED WITH THE EXPRESS UNDERSTANDING THAT IT IS SUBJECT TO RETURN ON DEMAND.</small> <small>THE ENGINEERING KNOW-HOW AND DESIGN INFORMATION HEREON ARE INCLUDED IN THE PRICE OF OUR PROPOSAL AND MAY NOT BE REVEALED, USED OR TRANSMITTED TO OTHERS EXCEPT IN ACCORD WITH CONTRACT OR WRITTEN PERMISSION OF MWI CORPORATION.</small> <small>© 1998 MWI CORPORATION.</small>	APPROVALS	DATE	CUSTOMER	TITLE	<b>MOVING WATER INDUSTRIES</b>  <small>201 NORTH FEDERAL HWY DEERFIELD BEACH, FL 33441</small>  <small>www.mwicorp.com</small> <b>ESTABLISHED 1926</b>
	DESIGNED BY EJS	13 MAR 06	ARMY CORPS OF ENGINEERS NEW ORLEANS DIVISION	PUMP CONTROL PANEL AND TELEMETRY HUB	
	DRAWN BY EJS	13 MAR 06	PROJECT ORLEANS AVE CANAL PUMP STATION	DWG No. E06015-4	
	CHECKED BY			SHEET 3 OF 3	
	JOB NUMBER 06015				

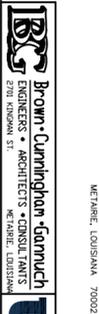
NOTE:  
UTILITY SERVICE CONNECTIONS TBD.



SITE - ELECTRICAL PLAN  
SCALE: 1" = 20' - 0"

SPECIFIC NOTES (SITE PLAN):

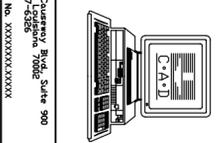
1. COORDINATE REMOVAL OF EXISTING POLES THAT CONFLICT WITH NEW WORK WITH UTILITY COMPANIES AND THE USAGE. ENERGY CONTACT IS DERRICK CLABRINE.
2. NOT USED.
3. NOT USED.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. NOT USED.
8. PROVIDE FIXTURE(S) ON 10'-FOOT, 3/4"-THICK RIGID GALVANIZED STEEL CONDUIT WITH CAST IRON, HOT-DIPPED, GALVANIZED BASE. PROVIDE BASE WITH INTEGRAL 120-VOLT, WP, GFI RECEPTACLE. SEE PLATFORM LIGHTING DETAIL.
9. NOT USED.
10. ROUTE CONDUITS WITH HYDRAULIC LINES TO PUMP PLATFORM. PROVIDE THE FOLLOWING CONDUITS / CIRCUITS AS INDICATED:
  1. FROM ENGINE PLATFORMS TO RESPECTIVE PUMP PLATFORMS:
    - a. ROUTE 3#8, #10 GROUND IN 1-INCH CONDUIT FOR LIGHTS AND RECEPTABLES (2-1P, 20-A C/B'S; CIRCUIT A FOR FLOODLIGHTS; CIRCUIT B FOR RECEPTABLES).
    - b. ROUTE (1) 2-INCH CONDUIT FOR CONTROLS TO A TERMINAL CABINET (NEMA 3R) MOUNTED ON THE PUMP PLATFORM.
  2. FROM WEST ENGINE PLATFORM TO CLOSURE STRUCTURE (BRIDGE):
    - a. ROUTE 3#8, #10 GROUND IN 1-INCH CONDUIT FOR BRIDGE LIGHTS AND RECEPTABLES AS INDICATED ON THE CLOSURE STRUCTURE ELEVATION (2-1P, 20-A C/B'S; CIRCUIT A FOR FLOODLIGHTS; CIRCUIT B FOR RECEPTABLES).
  3. FROM THE WEST ENGINE PLATFORM TO THE EAST ENGINE PLATFORM:
    - a. PROVIDE (3) 2-INCH CONDUITS WITH PULL STRINGS. SEE THE CLOSURE STRUCTURE ELEVATION.



MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR

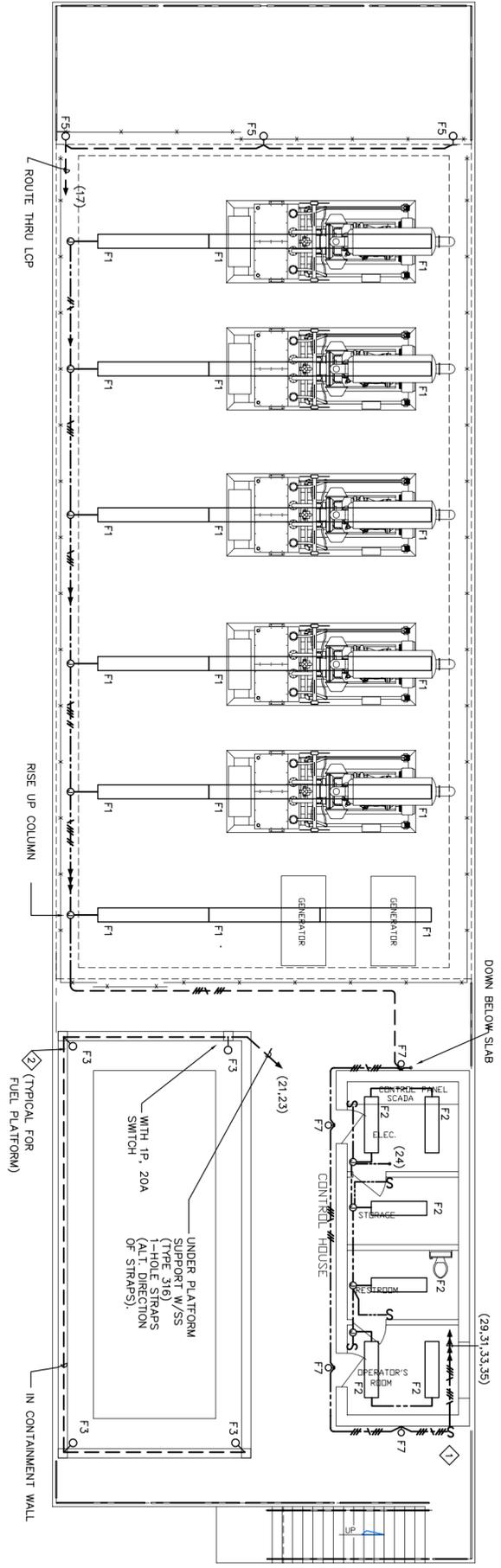


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FILE NUMBER  
E3  
DWG. X OF X

Safety is a Part  
of Your Contract



EQUIPMENT PLATFORM LIGHTING LAYOUT  
WEST PLATFORM SHOWN  
EAST PLATFORM OPPOSITE HAND  
SCALE: 1" = 5'

- SPECIFIC NOTES (LIGHTING PLAN):**
- 1. PROVIDE WP WALL SWITCH ADJACENT TO LIGHTING CONTRACTOR PANEL. SEE LIGHTING CONTROLS DETAIL.
  - 2. PROVIDE FIXTURE ON 10-FOOT, 3-INCH RIGID GALVANIZED STEEL CONDUIT WITH CAST IRON HOI-DIPPED, GALVANIZED BASE. PROVIDE BASE WITH INTEGRAL 120-VOLT, WP, GFI RECEPTACLE. SEE PLATFORM LIGHTING DETAIL.

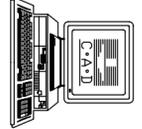
- GENERAL NOTES:**
- 1. ALL HOMERUNS ARE TO PANEL LL-WEST. (LL-EAST FOR EAST PLATFORM)



**IMC**  
1481  
CONSULTING ENGINEERS  
3120 20th STREET  
METairie, LOUISIANA 70002

**Brown-Cunningham-Gannuch**  
ENGINEERS • ARCHITECTS • CONSULTANTS  
2701 KINGMAN ST.  
METairie, LOUISIANA

**URS**  
2500 N. Causeway Blvd, Suite 200  
Covington, LA 70424  
PROJECT No. XXXXXXXXXX



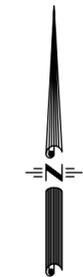
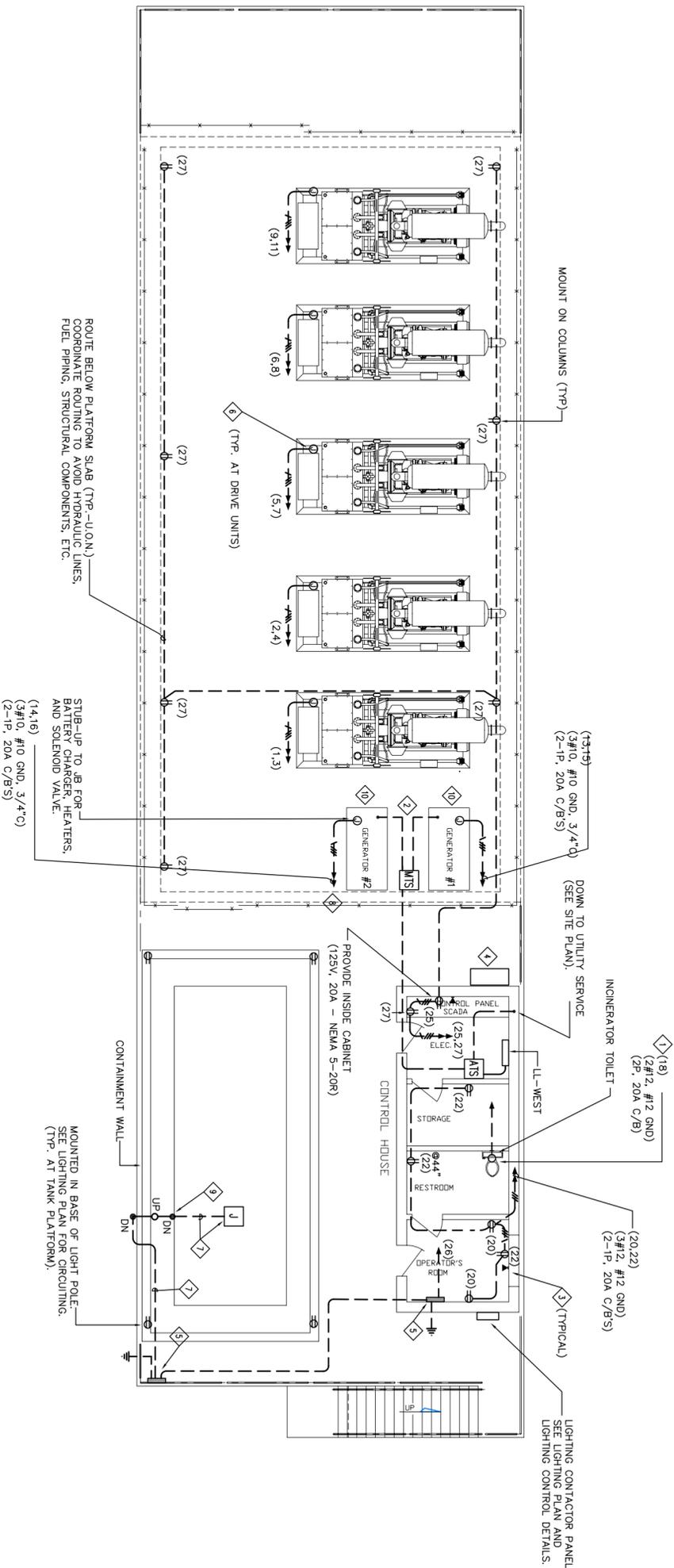
LAKE PONTCHARTRAIN, LA. AND VICINITY  
ORLEANS PARISH, LOUISIANA  
**ORLEANS AVE. CANAL**  
LIGHTING PLAN

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

DESIGNED BY: PV	PLOT DATE: MARCH 2006	DESIGN FILE NAME: J1480/ELEC/E4	SOLICITATION NO: W912P8-06-0097
CHECKED BY: KMCL	DATE: MARCH 2006	SUBMITTED BY: X	DESIGN ENGINEER
DRAWN BY: KLH	DATE: MARCH 2006		

MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR





EQUIPMENT PLATFORM POWER LAYOUT  
WEST PLATFORM OPPOSITE HAND  
SCALE: 1" = 5'



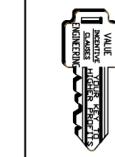
**SPECIFIC NOTES (POWER AND COMMUNICATION PLAN).**

- 1 PROVIDE 2-POLE, 20-AMP, NEMA 6-20R RECEPTACLE FOR INCINERATOR TOILET.
- 2 PROVIDE MANUAL, 2-POLE, DOUBLE THROW, UNFUSED, LOAD-MAKE / LOAD-BREAK, CENTER-OFF, 200-AMP SAFETY SWITCH IN NEMA 3R ENCLOSURE. PROVIDE WITH ONE SET OF AUXILIARY, NORMALLY OPEN CONTACTS PER CLOSED SWITCH POSITION (2 TOTAL) THAT CLOSE WHEN THE SWITCH IS PLACED IN THAT POSITION. SEE GENERATOR STARTING CIRCUIT DETAIL. MOUNT ON UNISTRUT SUPPORT.
- 3 PROVIDE TELEPHONE OUTLET AS INDICATED. ROUTE CONDUIT AND CATEGORY 5 CABLE TO UTILITY COMPANY TELEPHONE PEDESTAL, CONTACT, AND COORDINATE INSTALLATION WITH TELEPHONE UTILITY PROVIDER.
- 4 LOCAL, HYDRAULIC PUMP CONTROL PANEL PROVIDED BY PUMP SUPPLIER. PROVIDE 1" CONDUITS WITH PULL STRINGS FROM PANEL, UNDER THE PLATFORM, TO EACH DIESEL ENGINE PUMP DRIVER UNIT. COORDINATE STUB-UP LOCATIONS AND CONTROL PANEL LOCATIONS WITH PUMP SUPPLIER. PROVIDE A 2" CONDUIT WITH PULL STRING FROM THE LOCAL PANEL TO THE MASTER CONTROL PANEL. PROVIDE A 2" CONDUIT WITH PULL STRING FROM THE LOCAL PANEL TO THE HYDRAULIC PUMP PLATFORM TERMINAL CABINET. SEE HYDRAULIC PUMP RACEWAY SYSTEM RISER DETAIL.
- 5 INTRINSICALLY SAFE FUEL MONITORING SYSTEM FURNISHED AND INSTALLED BY OTHERS. SEE PUMPING DRAWINGS FOR EXACT EQUIPMENT LOCATION. PROVIDE 120-VOLT POWER AND DEDICATED GROUND AS INDICATED. BOND DEDICATED GROUND ROD TO SERVICE GROUND. GROUND RESISTANCE SHALL BE LESS THAN 1 OHM, IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6 STUB-UP TO JUNCTION BOX FOR DIESEL ENGINE DRIVE UNIT BATTERY CHARGER AND FUEL PUMP. COORDINATE EXACT LOCATION WITH ENGINE SUPPLIER IN THE FIELD. MAKE FINAL CONNECTIONS TO EQUIPMENT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 7 PROVIDE JUNCTION BOX AND RACEWAY SYSTEM WITH PULL STRING FOR FUEL LEVEL SENSORS AND ASSOCIATED WIRING TO BE PROVIDED BY THE MECHANICAL CONTRACTOR.

- 8 PROVIDE (2) CONDUITS - (1) 0.5-INCH, FOR POWER AND (1) 1-INCH WITH PULL STRING FOR CONTROL WIRING BY THE MECHANICAL CONTRACTOR.
- 9 COORDINATE CONDUIT SUPPORTS WITH STRUCTURAL STEEL PROVIDED ON THE SIDE OF THE TANK AND WITH THE MECHANICAL CONTRACTOR.
- 10 FURNISH AND INSTALL OMAN MODEL DGBB (OR EQUAL), 35KW, 120/240-VOLT, SINGLE-PHASE, 60Hz DIESEL GENERATOR SET WITH THE SPECIFICATIONS, OPTIONS, AND FEATURES LISTED HERE AND DETAILED IN THE SPECIFICATIONS:
  1. ALTERNATOR: FULL OUTPUT AT SINGLE PHASE; RE-CONNECTABLE; 105-DEGREE C RISE.
  2. EXCITATION: PMG
  3. PROTECTION: FURNISH WITH 200-AMP MAIN CIRCUIT BREAKER AND AMP-SENTRY (OR EQUAL) DIGITAL ALTERNATOR PROTECTION.
  4. BATTERY CHARGER: 4 STAGE (ABSORPTION, FLOAT, TRICKLE, BULK)
  5. HEATERS: ALTERNATOR, COOLANT, LUBE OIL; T-STAT CONTROLLED.
  6. MUFFLER: CRITICAL GRADE
  7. HOUSING: ALUMINUM, RATED FOR 150MPH WINDS; SOUND ATTENUATED; QUIET-SITE II OR EQUAL.
  8. FUEL TANK AND CONTROLS: SUB-BASE, DUAL WALL, 24-HOUR DAY TANK; LOW FUEL SWITCH; BASIN RUPTURE SWITCH; TANK LEVEL CONTROLS (DRY CONTACT TO CLOSE FOR CONTROL OF 120-VOLT SOLENOID VALVE IN FUEL LINE FROM MAIN FUEL TANK.

**GENERAL NOTES**

1. ALL HOMERUNS ARE TO PANEL, LL-WEST. (LL-EAST FOR EAST PLATFORM).
2. ALL RECEPTACLES SHALL BE WP/GFI-TYPE.



1

2

3

4

A

B

C

D

LAKE PONTCHARTRAIN, LA AND VICINITY  
NEW ORLEANS PLAN EMERGENCY RESTORATION  
ORLEANS AVENUE CANAL  
POWER PLAN

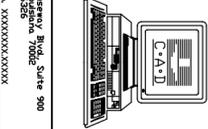
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

DESIGNED BY: PV	PLOT DATE: MARCH 2006	DESIGN FILE NAME: J1480/ELEC/ES
CHECKED BY: KMCL	DATE: MARCH 2006	SUBMITTED BY: [Signature]
DRAWN BY: KLH	DATE: MARCH 2006	SOLICITATION NO: W912PB-06-0097
DATE: MARCH 2006	DESIGN ENGINEER	

MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR



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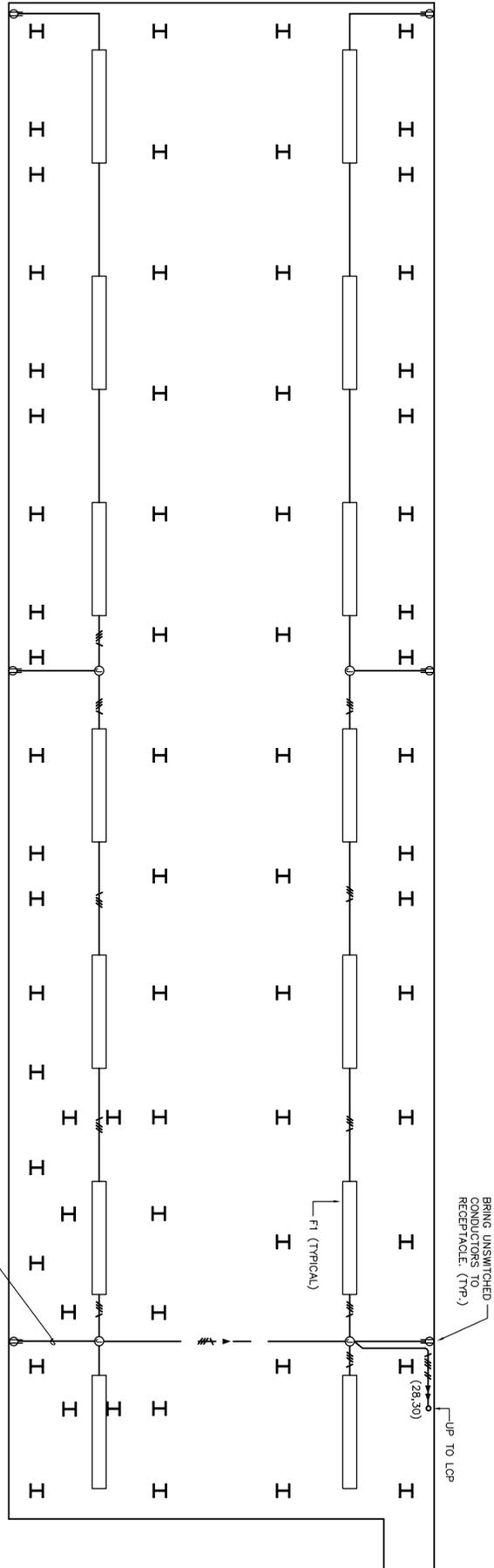


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ENGINEERS • ARCHITECTS • CONSULTANTS  
2701 KINGMAN ST.  
METairie, LOUISIANA 70002

URRS  
3821 N. Causeway Blvd, Suite 900  
Metairie, Louisiana 70002  
504-887-8288  
PROJECT No. XXXXXXXXXXXXX

FILE NUMBER  
E5  
DWG. X OF X

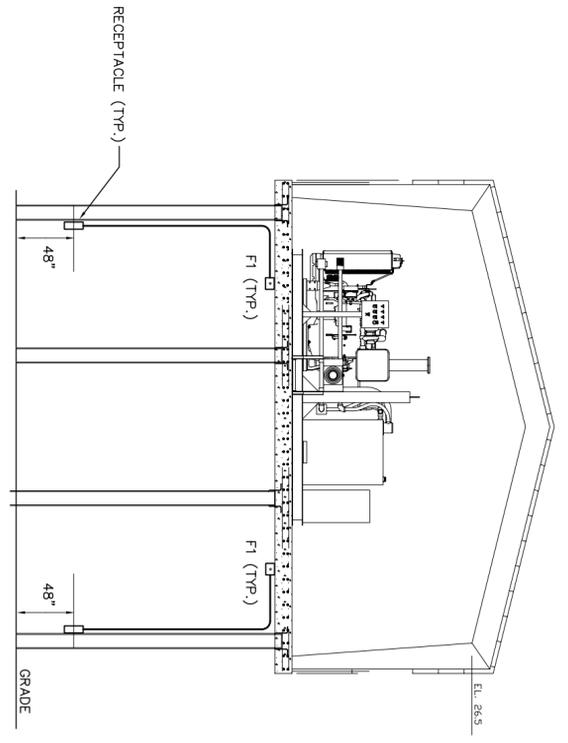
Safety is a Part  
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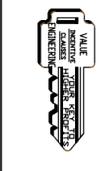
EQUIPMENT PLATFORM (BELOW) ELECTRICAL LAYOUT  
WEST PLATFORM SHOWN  
EAST PLATFORM OPPOSITE HAND  
SCALE: 1" = 5'



- GENERAL NOTES**
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  2. ALL RECEPTACLES SHALL BE WP/GR-TYPE.



SECTION B  
PLATFORM - SECTION - ELECTRICAL PLAN  
SCALE: NO SCALE



LAKE PONTCHARTRAIN, LA. AND VICINITY  
NEW ORLEANS PLAN EMERGENCY RESTORATION  
ORLEANS AVENUE CANAL  
EQUIPMENT PLATFORM (BELOW)  
ELECTRICAL LAYOUT

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

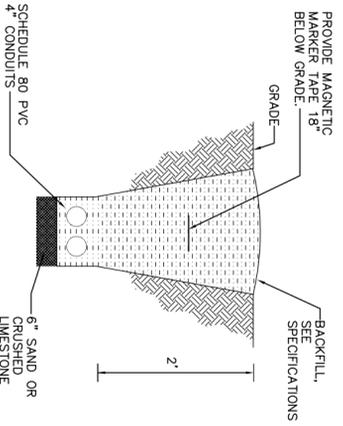
DESIGNED BY: PV	PLOT DATE: MARCH 2006	DESIGN FILE NAME: J1480/ELEC/E6	SOLICITATION NO. W912P8-06-0097
CHECKED BY: KMCL	DATE: MARCH 2006	SUBMITTED BY: X	DESIGN ENGINEER
DRAWN BY: KLH	DATE: MARCH 2006		

MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR



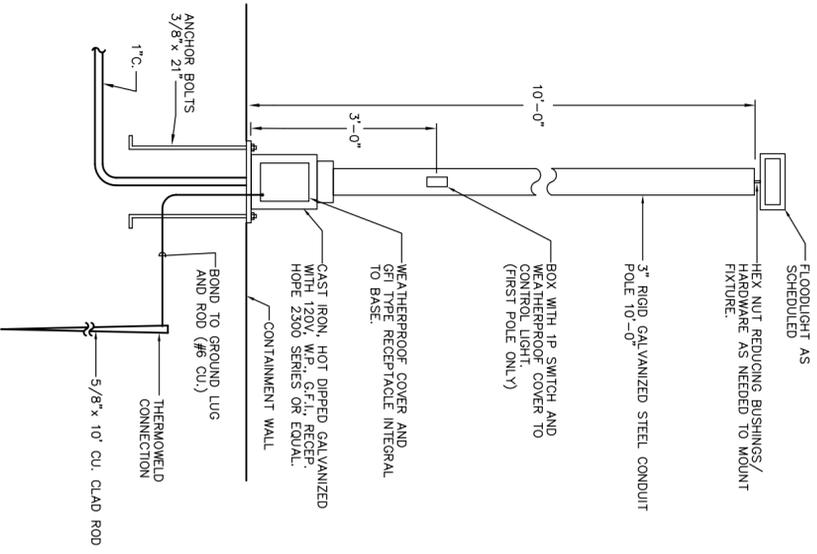
FILE NUMBER E6  
DWG. X OF X

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of Your Contract



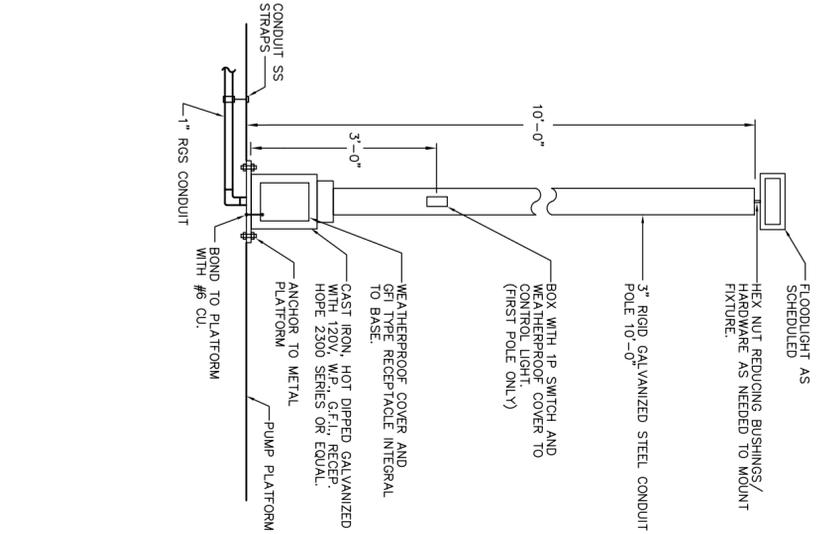
SECTION THROUGH DUCT BANK MAIN ELECTRICAL SERVICE

SCALE: NONE



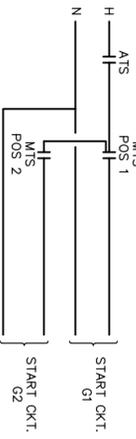
FUEL PLATFORM LIGHTING

SCALE: NONE



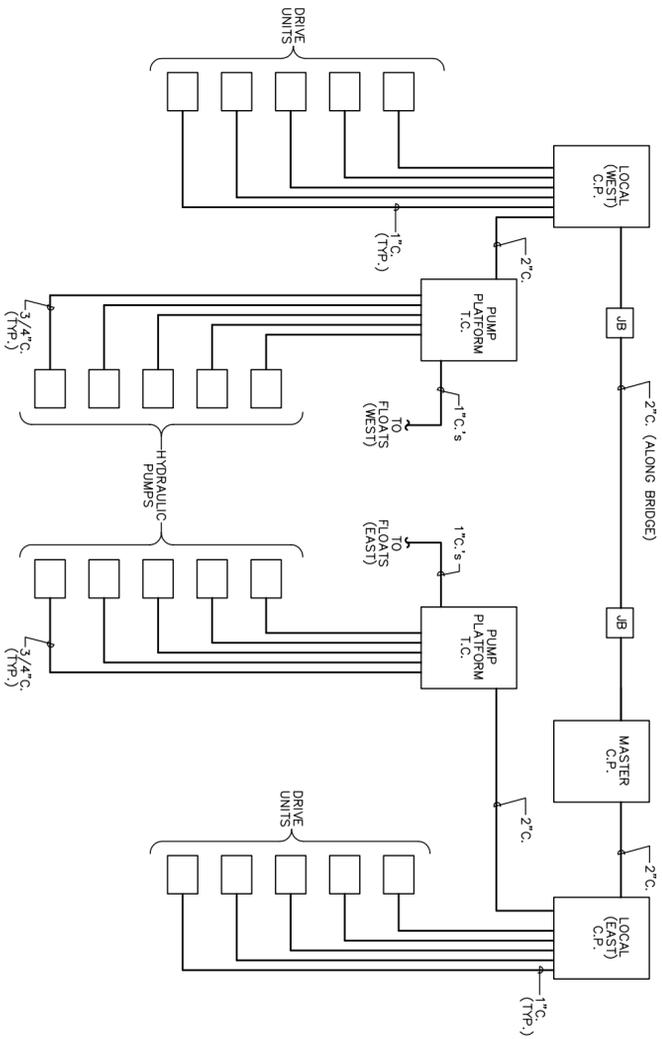
PUMP PLATFORM LIGHTING

SCALE: NONE



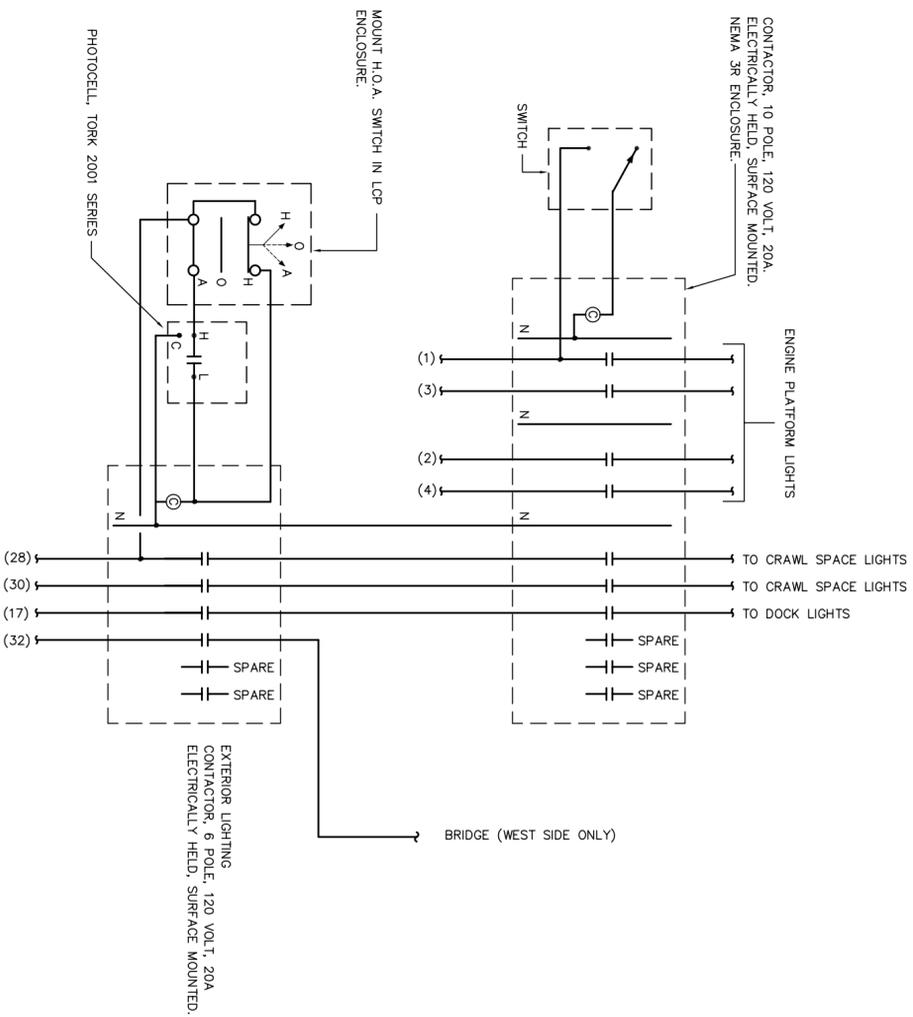
GENERATOR STARTING CIRCUIT CONNECTION DETAIL

SCALE: NONE



HYDRAULIC PUMP RACEWAY SYSTEM RISER

SCALE: NONE



LIGHTING CONTROLS

SCALE: NONE



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2701 KENYON ST.  
METairie, LOUISIANA 70002

IMC  
CONSULTING ENGINEERS  
3120 20th STREET  
METairie, LOUISIANA 70002



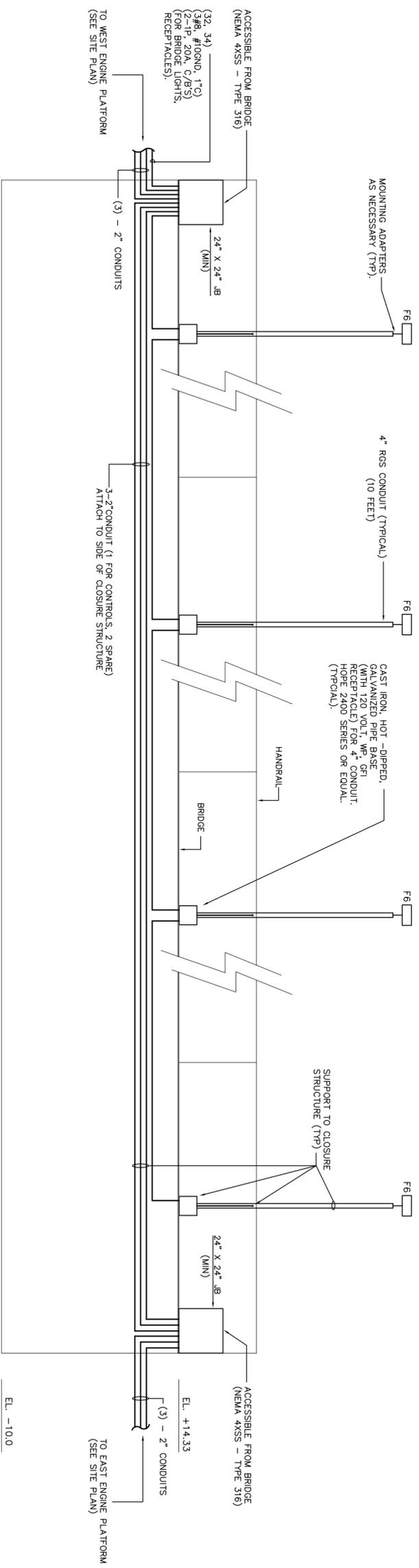
LAKE PONTCHARTRAIN, LA. AND VICINITY  
NEW ORLEANS PLAN EMERGENCY RESTORATION  
ORLEANS AVE. CANAL  
ELECTRICAL DETAILS

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA  
DESIGNED BY: PV  
CHECKED BY: KMCL  
DRAWN BY: KLH  
DATE: MARCH 2006  
PLOT DATE: MARCH 2006  
DESIGN FILE NAME: J1480/ELEC/E7  
SUBMITTED BY: X  
DESIGN ENGINEER  
SOLICITATION NO. W912P8-06-0097

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.



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of Your Contract

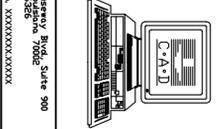


CLOSURE STRUCTURE ELEVATION - ELECTRICAL PLAN

SCALE: NO SCALE



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NEW ORLEANS PLAN EMERGENCY RESTORATION  
ORLEANS AVENUE CANAL  
ELECTRICAL DETAILS

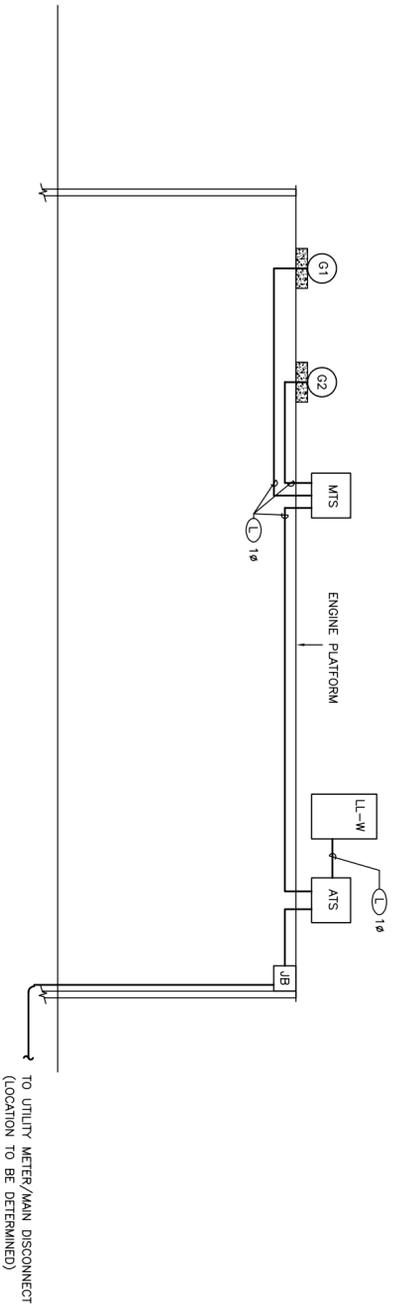
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

DESIGNED BY: P.V. KMCL	PLOT DATE: 2	DESIGN FILE NAME: J1480/ELEC/EB
CHECKED BY: KLH	DATE: MARCH 2006	SUBMITTED BY: X
DRAWN BY: DATE: MARCH 2006		DESIGN ENGINEER: W912P8-06-0097

MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR

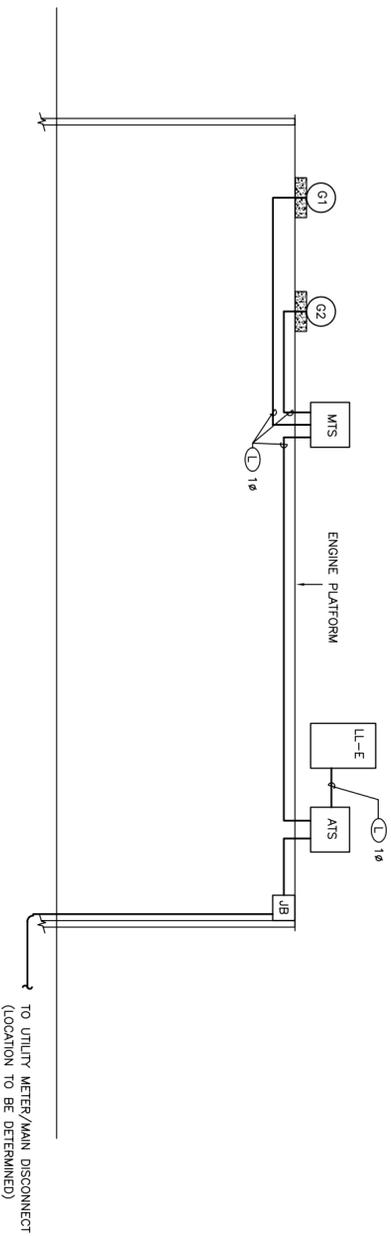


Safety is a Part  
of Your Contract



ELECTRICAL ONE-LINE DIAGRAM - WEST SIDE

SCALE: NONE



ELECTRICAL ONE-LINE DIAGRAM - EAST SIDE

SCALE: NONE

FEEDER SCHEDULE (TYPICAL SCHEDULE - NOT ALL LABELS ARE NECESSARILY USED)			
LABEL NO.	SIZE	GND.	CONDUIT
(A)	3 #12	#12	1/2"
(A1)	4 #12	#12	1/2"
(B)	3 #10	#10	3/4"
(B1)	4 #10	#10	3/4"
(C)	3 #8	#10	1"
(C1)	4 #8	#10	1"
(D)	3 #6	#8	1"
(D1)	4 #6	#8	1"
(E)	3 #4	#8	1-1/4"
(E1)	4 #4	#8	1-1/4"
(F)	3 #3	#8	1-1/4"
(F1)	4 #3	#8	1-1/4"
(G)	3 #2	#6	1-1/4"
(G1)	4 #2	#6	1-1/4"
(H)	3 #1	#6	1-1/2"
(H1)	4 #1	#6	1-1/2"
(I)	3 #1/0	#6	1-1/2"
(I1)	4 #1/0	#6	1-1/2"
(J)	3 #2/0	#6	2"
(J1)	4 #2/0	#6	2"
(K)	3 #3/0	#6	2"
(K1)	4 #3/0	#6	2"
(L)	3 #4/0	#4	2"
(L1)	4 #4/0	#4	2-1/2"
(M)	3 #250 MCM	#4	2-1/2"
(M1)	4 #250 MCM	#4	2-1/2"
(N)	3 #350 MCM	#3	3"
(N1)	4 #350 MCM	#3	3"
(O)	3 #500 MCM	#3	3-1/2"
(O1)	4 #500 MCM	#3	3-1/2"
(P)	(2)3 #350 MCM	#1	3"(2 SETS)
(P1)	(2)4 #350 MCM	#1	3"(2 SETS)
(R)	(2)3 #500 MCM	#1/0	4"(2 SETS)
(R1)	(2)4 #500 MCM	#1/0	4"(2 SETS)
(S)	(3)3 #350 MCM	#2/0	3"(3 SETS)
(S1)	(3)4 #350 MCM	#2/0	3"(3 SETS)
(T)	(3)3 #500 MCM	#2/0	4"(3 SETS)
(T1)	(3)4 #500 MCM	#2/0	4"(3 SETS)
(U)	(2)4 #600 MCM	#3/0	4"(2 SETS)
(U1)	(3)4 #600 MCM	#3/0	4"(3 SETS)
(V)	(3)4 #600 MCM	#3/0	4"(3 SETS)
(V1)	(4)4 #600 MCM	#3/0	4"(4 SETS)
(W)	(5)4 #600 MCM	#3/0	4"(5 SETS)
(W1)	4 #600 MCM	#3/0	4"
(X)	SEE DRY TRANSFORMER SCHEDULE		



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METairie, LOUISIANA

**URS**  
2500 N. Causeway Blvd, Suite 900  
Metairie, LA 70002  
Phone: (504) 887-8888  
Project No. XXXXXXXXXXXXX

LAKE PONTCHARTRAIN, LA. AND VICINITY  
NEW ORLEANS PLAN EMERGENCY RESTORATION  
ORLEANS PARISH, LOUISIANA  
**ORLEANS AVE. CANAL**  
ELECTRICAL RISER DIAGRAM

FILE NUMBER  
E9  
DWG. X OF X

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LOUISIANA

DESIGNED BY: PV  
CHECKED BY: KMCL  
DRAWN BY: KLH  
DATE: MARCH 2006

PLOT DATE: MARCH 2006

DESIGN FILE NAME: J14080/ELEC/E9  
SUBMITTED BY: X  
DESIGN ENGINEER

SOLICITATION NO. W912P8-06-0097

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

