

## ADDENDUM NO. 2

Date: **22 October 2010**

### San Antonio Water System

Project Name: **LIFT STATIONS REHABILITATION – PHASE 2**

Project No.: **06-2503**

Solicitation No.: **B-10-048-DD**

This addendum, applicable to work referenced above, is an amendment to the bidding documents and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the addendum number and issue date in the space provided in submitted copies of the proposal.

#### **A. Bidding and Contract Requirement Revisions:**

##### **Item 1: Invitation to Bidders (IV-1), paragraph 3**

- a) DELETE the following sentence:

“For questions regarding this solicitation, technical questions or additional information, please contact Diana W. Dwyer, Contract Administrator, in writing via email to: ddwyer@saws.org or by fax to (210) 233-5218 until 4:00 PM (CST) on October 18, 2010. Answers to the questions will be posted to the web site by 4:00 PM (CST) on October 21, 2010 as a separate document or included as part of an addendum”

and REPLACE with the following (changes to original text are indicated by underlining):

“For questions regarding this solicitation, technical questions or additional information, please contact Diana W. Dwyer, Contract Administrator, in writing via email to: ddwyer@saws.org or by fax to (210) 233-5218 until 4:00 PM (CST) on October 18, 2010. Answers to the questions will be posted to the web site by **4:00 PM (CST)** on **October 25, 2010** as a separate document or included as part of an addendum”

##### **Item 2: Specification Section 09917, Structural Lining-Corrosion Protection for Underground Concrete Structures**

- a) DELETE Article 2.01. E. on page 009917-2 in its entirety and REPLACE with the following:  
“E. Mortar mix must have at least **ten** (10) years of successful performance in similar applications and be supplied by an ISO 9001 certified manufacturer. Manufacturer’s ISO 9001 certificate shall be submitted to ENGINEER and OWNER.”

##### **Item 3: Specification Section 01010, Summary of Work**

- a) Clarification: Generators are not proposed at LS# 023, LS #074, LS #156 and LS 218.  
b) Clarification: L# 170 (as indicated on Drawing Sheet 057 of 246), LS #180 (as indicated on Drawing Sheet 083 of 246), and LS #192 (as indicated on Drawing Sheet 089 of 246) will require generators.  
c) DELETE Article 1.02. B. 3. gg. on page 01010-8 in its entirety and REPLACE with the following:  
“gg. Standby Emergency Generators. Emergency generators with automatic transfer switches will be installed at the following lift stations: LS# 057, LS# 148, LS# 165, LS# 170, LS# 175, LS #180, LS # 192, LS# 208, LS# 209, LS# 226, LS# 230, LS# 231, LS# 236, LS# 240. The automatic transfer switch will be housed in a NEMA 4X, 316 SS enclosure and be located on the support rack. Generator enclosures shall have 36” of clearance on both sides for maintenance access.”

## **B. Drawing Revisions:**

### **Item 1: LS# 148: Electrical Site Plan and One Line Diagram**

- a) Clarification: New 480/277V, 3 $\phi$ , 4W is not required. Existing 120/240V, 1 $\phi$ , 3W to remain. Rotary phase converter shall be installed.
- b) DELETE Sheet E-148-1, Sheet 036 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- c) DELETE Sheet E-148-2, Sheet 037 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- d) DELETE Sheet E-148-3, Sheet 038 of 246 and REPLACE with attached revised sheet dated 10/21/2010.

### **Item 2: LS# 206: Electrical Site Plan and One Line Diagram**

- a) Clarification: New 480/277V, 3 $\phi$ , 4W is not required. Existing 120/240V, 1 $\phi$ , 3W to remain. Rotary phase converter shall be installed.
- b) DELETE Sheet E-206-1, Sheet 103 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- c) DELETE Sheet E-206-2, Sheet 104 of 246 and REPLACE with attached revised sheet dated 10/21/2010.

### **Item 3: LS# 223: Electrical Site Plan and One Line Diagram**

- a) Clarification: Drawing has been revised for combined Soft Start-PCP cabinet location and other electrical revisions, including service voltage change.
- b) DELETE Sheet E-223-1, Sheet 134 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- c) DELETE Sheet E-223-2, Sheet 135 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- d) DELETE Sheet E-223-3, Sheet 136 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- e) DELETE Sheet E-223-4, Sheet 137 of 246 and REPLACE with attached revised sheet dated 10/21/2010.
- f) DELETE Sheet E-223-8, Sheet 141 of 246 and REPLACE with attached revised sheet dated 10/21/2010.

### **Item 4: LS# 238: Electrical Site Plan and One Line Diagram**

- a) Provide Hoffman NEMA 4X 316 Stainless Steel 62" x 48" x 12" free standing enclosure and combine both the control panel and soft starters into one enclosure, in lieu of 2 separate enclosures as currently specified and shown on drawings. Locate combined Soft Start-PCP enclosure in same location as existing autodialer and PCP cabinets. Re-direct respective conduits to this combined location.

## **C. Questions Received Prior to the Deadline of 4:00 PM On October 18, 2010:**

Note that Q1 to Q15 were included in Addendum No. 1.

- Q16: Spool pieces from inside wet well to outside wet well are often depicted as FLxFL. In conjunction with these FLxFL spool pieces the contractor is to use Link Seal Systems to seal the pipe to the cored or wall-sleeved hole. The flange end will not pass thru the appropriate size holes for Link Seals to seal. Will we be able to use Flange x Plain End DI pipe with an Ebaa Mega Flange (Restrained Flange Coupling Adapter) to connect to the new or existing flange outside the wetwell. (Submittal Info Attached).**

*Penetration hole may need to be the size of the pipe plus the link seal (not the flange). Yes, contractors are allowed to use FL x PE DI pipe w/restrained flange coupling adapter for DI pipe.*

**Q17: I don't see a specification section that details the types of flexible couplings required outside many of the wet well walls (ie alloy bolts vs stainless steel). Can you provide clarification?**

*Followers: A283, Gr C or Equivalent  
Middle Ring: AISI 1020 Carbon Steel or Equivalent  
Bolts/Nuts: 316 Stainless Steel  
Stops: 316 Stainless Steel  
Gaskets: Grade 42 Buna N  
Coating: Fusion-Bonded Epoxy*

**Q18: Will all Pipe Penetrations in the concrete slab require link seal?**

*No. Link seal is only required for the Pump discharge/suction pipes.*

**Q19: What size will the emergency By-Pass connections need to be? SAWS bypass trucks typically use either 3 or 4 inch connections, which size will be required?**

*The By-pass pumping system will require a 4" branch w/ gate valve and a quick-disconnect male adaptor fitting w/dust cap.*

**Q20: Many of the LS improvements detail a 1" PVC line from the proposed 2x1 Sewage CARV's. These 1" lines route to the Lift Station and typically penetrate the top slab. Will a cored hole with Link Seal be required (can we assume the same for every occurrence)?**

*A cored hole for the CARV pvc line will be required. A link seal will not be required as long as the pipe is grouted or sealed with an approved method/product. Also, please refer to Q18 in Addendum No. 2.*

**Q21: What type of pipe would you like beyond the meter box and customer shut-off valve (Copper or Sch80 PVC)?**

*Pipe shall be PVC Sch 80. Shut- off valve shall be Brass or Copper.*

**Q22: What type of pipe would you like above grade at the Emergency Eyewash/Showers? (Galvanized Steel Pipe or Sch 80 PVC)?**

*Pipe shall be made of PVC Sch 80.*

**Q23: At various sites the use of Spigot x Spigot Flexible Couplings (Dressers) are sited on the discharge/suction lines. Will restraint rods be required over these flexible couplings (FLxPE to Flex Cplg to PExFL)?**

*Restraint rods may be used as necessary.*

**Q24: The majority of sites require rising stem Gate Valves (we are assuming OS&Y) there are a few sites that do not state rising (OS&Y) stem gate valves. Can we assume that all sites will require OS&Y valves on the main header piping and NRS valves for the emergency by pass valve**

*Gate valves shall be of a Non Rising Stem (NRS).*

**Q25: Plans state 316SS bolts and nuts to be used inside the wetwell, Will 316SS bolts and nuts be required on the piping outside the wet well or will black bolts be acceptable**

*Stainless Steel 316 bolts and nuts will be required for inside and outside pipe, valves and fittings.*

**Q26:** Section 11312-3 2.01A2 allows for “ENGINEER/OWNER approved equal” on the submersible pumps. (The other pump sections make a similar statement.) I cannot locate a procedure in the specification documents that allows for ENGINEER/OWNER approved equal prior to bid letting. Section 1600 addresses post-bid submittal by the Contractor for Comparable Product Requests.

Most general contractors will not accept bids on products that are not named or listed by specification. SAWS will lose the advantage of competitive bidding with post-bid approval for equal products.

Is there a procedure whereby [Bidder] may submit and receive ENGINEER/OWNER approval prior to the bid opening?

*Please Refer to Response to Q7 in Addendum No. 1.*

**Q27:** L.S. #175 Cedar Creek, L.S. #203 Mission Foundation, #221 Heritage Elementary,#226 Marshall Rd. & #231 Costco do not have enough information on the drawings to establish the proposed depth of the lift stations. Please provide Lift Station Depths.

*LS#175, Overall depth approx. = 12 ft*

*LS#203, Overall depth approx. = 10 ft*

*LS#221, Overall depth approx. = 13 ft*

*LS#226, Overall depth approx. = 15 ft*

*LS#231, Overall depth approx. = 17 ft*

**Q28:** Lift Station #230 Nickel and Dime does not have a note to be coated per Spec Section 09917. And does [not] reference Note #2 (Comment on all other lift stations) regarding “.....Contractor shall repair any wet well cracks, seal joints .....” Is this correct? Or is the Wet Well / Lift Station to be coated per Spec Section 09917 and repaired per Note #2?

*The existing wet well is already coated.*

**Q29:** Is SAWS looking for a 10 year warranty on the Structural Lining?

*Yes. Note, Addendum No. 2 clarifies this requirement – see Item 1, A. Bidding and Contract Requirement Revisions for more details.*

**Q30:** Drawing E-12 [E-10-S] Drawing, which is typical of the List Station SCADA PANEL DETAILS, has the PLC's I/O wired to terminal blocks. With the M340 as an alternate can the M340 PLC's be wired to terminal blocks also?

*If the Modicon M340 is to be substituted for the specified Allen Bradley, yes it should use terminal block connections also. If there are any variations between the PLC I/O's specified and the PLC I/O supplied or substituted, the contractor is responsible for providing additional terminal blocks, mounting devices, etc., to provide an equivalent installation to that specified in every respect and with same number of spare terminals. During construction, indicate any variations between the two manufacturers with the product submittals. Provide in accordance with specification 16901. This may similarly apply to plan sheets E-10-S, E-11-S, E-10-H, E-11-H*

**Q31:** What material does the emergency By Pass need to be? Alum, SS, Brass

*The quick-disconnect male fitting and the dust cap shall be Aluminum, the Y-fitting and gate valve shall be flanged Ductile Iron.*

**Q32: Panels 223 and 238 have new Benshaw soft starters in separate enclosures. We often put the soft starters in the same enclosure as the main controls. Is this a possibility for these two panels?**

*Yes, except LS #192 shall remain same as currently shown, due to it is existing and in the floodplain. For LS #192, provide Hoffman NEMA 4X 316 Stainless Steel 62" x 48" x 12" free standing enclosure and combine both the control panel and soft starters into one enclosure, in lieu of 2 separate enclosures as currently specified and shown on drawings. For LS #238, locate combined Soft Start-PCP enclosure in same location as existing autodialer and PCP cabinets; re-direct respective conduits to this combined location. This may similarly apply to plan sheets E-223-1, E-223-3, E-223-4, E-238-1 & E-238-4. Note, Addendum No. 2 also addresses Q32 – see Item 3 and Item 4, B. Drawing Revisions for more details.*

**Q33: Will SAWS please consider an addendum for Allen Bradley software part number 9324-RLD250ENE Lite Edition which is equal to Full Edition (9324-RLD600ENE) for the Compact Logix PLC family?**

<b>RSLogix 5000</b>	<b>Lite Edition 9324-RLD250ENE</b>	<b>Full Edition 9324-RLD600xxE</b>
Editions and options	Compact and FlexLogix only	All @ v10 or later
<b>Ladder Editor</b>	Fully supported	Fully supported
<b>Function Block Diagram 9324-RLDFBDENE</b>	Fully supported	Fully supported
<b>Sequential Function Chart 9324-RLDSFCE</b>	Fully supported	Fully supported
<b>Structured Text 9324-RLDSTXE</b>	Fully supported	Fully supported

*The Full Edition version will be required; the Lite Edition will not be acceptable as equal.*

**Q34: Will SAWS please consider an addendum to allow the Allen Bradley PLC to communication modbus with the PLC CPU serial port instead of the Prosoft Module?**

**Communications**

**1. Allen Bradley:**

**a. Modbus communication shall be provided with the use of ProSoft Technology Inc. MVI69-MCM module. The module shall interconnect via RS232 cable.**

**2. Modicon M340:**

**a. Modbus RS232 communication ports shall be provided using the PLC CPU serial ports.**

*The specified Allen Bradley PLC will be required to communicate via the Prosoft Module modbus with the PLC CPU serial port and not by modbus. If the specified Allen Bradley PLC is to be used on this project, the Prosoft Module will be required.*

**Q35: Submersible Level Transducer specified can it be replaced with a Flowline Echospans LU-(81to84)-5101 model Narrow Beam Ultrasonic level transducer? These would provide a non-contact level control system which can be utilized in tight space with its 3" beam.**

*Ultrasonic transducers will not be used on this project.*

**Q36: Level Switch- can a SJE Pump Master Control Float switch be used in place of the specified float switches?**

*SJE Pump Master float switch may be used as long as it is mercury free and meets all the requirements of the Technical Specifications and Plan Drawings of the Contract Documents.*

**Q37: Terminal Blocks – Can Entrelec High Density Terminal blocks be used instead of the specified Phoenix?**

*Entrelec High Density Terminal blocks may be used if it meets all the requirements of the Technical Specifications and Plan Drawings of the Contract Documents.*

**Q38: Mini Power Zone – Can Siemens Sentron 1LPC010SS be used? These have been installed on many other SAWS lift Stations.**

*As long as the Siemens Sentron 1LPC010SS is in a 316 SS enclosure and meets all the requirements of the Technical Specifications and Plan Drawings of the Contract Documents.*

**Q39: The MDS P70 enclosure will not work with the MDS TransNet Radio it must be the P60 Enclosure as per the manufacturer.**

*Per the Plan Drawings of the Contract Drawings, a P70 enclosure will be required. Please note, the manufacturer's product data sheets state either the P70 or P60 enclosure is suitable with the MDS TransNET 900 radio.*

**Q40: Some of the Electrical Rack Canopy's show 36" overhang, SAWS specifications typically require it should be a 4 foot overhang measured from the front of any Enclosure on the rack.**

*Provide a 4 foot overhang measured from the front of the deepest equipment panel unless this interferes with the wetwell, pump pad, etc.*

**Q41: Lift Station #061 and #180 there is no direction whether we reuse the existing Scada Enclosure or Provide a New Enclosure. The Electrical drawings do detail a New Allen Bradley PLC and controls for the sites, what enclosure will house the equipment at these sites?**

*There are no existing SCADA enclosures at these sites. New SCADA Panels must be provided.*

**Q42: Timing Relay – Can an Idec RTE-P2-AF20 Be used in pump control panel?**

*As long as the Idec RTE-P2-AF20 meets all the requirements of the Technical Specifications and Plan Drawings of the Contract Documents, it may be used.*

**Q43: Also notice pump control panel calls out for 2 pole SQ D JCK relays when 4 pole relay could be used to accommodate all inputs signals for SCADA. So is it possible to use 4 pole Idec Relays RU4SA110 instead?**

*Provide relays as shown on the Plan Drawings of the Contract Documents.*

**Q44: In the SCADA panel it calls out to use Idec 2 pole relays for interposing relay, can 1 pole RH1B-UL-120 be used in its place to save space?**

*Provide 2 pole relays as shown on the Plan Drawings of the Contract Documents.*

**Q45: Heat tracing is specified for instrument process sensing lines, we have been involved in installations for multiple SAWS lift station sites and this was deleted from the contract, can it be deleted from this project?**

*Heat tracing will be required for this project.*

**Q46: Site dimensions for each site are not clear, can they be provided?**

*Site plan sheets (for example, Sheet C-004-1) include a scale bar for each site.*

*Contractor needs to determine all dimensions from site visits. These will not be provided.*

**Q47:** Lone Star International Corporation represents Ametek Drexelbrook, a manufacturer of wastewater process level monitoring equipment, and other related equipment. Drexelbrook is an American company based just north of Philadelphia. Regarding the subject project, we respectfully request that you consider Drexelbrook ultrasonics as an approved equal for use in monitoring the thirty-seven [37] liquid level applications. SAWS already uses Drexelbrook ultrasonic units.

I have attached pdf files for your review, and also for passing on to your engineers.

The Drexelbrook ultrasonic units are especially suited for use in lift stations where pipes can normally be a problem with other manufacturer's ultrasonics. Using ultrasonics for monitoring lift station levels is advantages because it eliminates the need for a submersible level sensing device which can either 'clog up' or get sucked into a pump.

All Drexelbrook Ultrasonic Measurement Systems have "AUTOMATIC TANK PROFILING" which eliminates interfering signals from agitators and other internal vessel obstructions such as pipes or ladder rungs **WITHOUT THE NEED TO EMPTY THE VESSEL AND WITHOUT OPERATOR INTERVENTION!**

No other manufacturer in the market today has the ability to automatically ignore unwanted signals from obstructions that surface within the measurement energy beam. Only Drexelbrook possesses this patented feature.

Easily **IGNORES PIPES AND OBSTRUCTIONS** that are in the sonic beam path. Your cost for the Drexelbrook Units will be significantly less than anything **SIEMENS/MILLTONICS** has in comparison.

*Submersible level transducers will be used for this project.*

**Q48:** Please allow at least one more week for us to prepare our bid. We also need more time to submit questions. Currently, we are only being given 4 working days to visit every site, review the plans and specifications, and submit a complete list of questions. Given the number of sites included in the project, we just need more time to visit and evaluate conditions/potential issues at each location - particularly manhole locations and bypass system setup requirements. Additionally, we need more time to find MWDBE firms to meet the current goal - interested firms will likely want to visit the sites prior to quoting the project.

*Please refer to Addendum No. 1 Item 1, Invitation to Bidders (IV-1), paragraph 5, B for updated bid date and time.*

**Q49:** Please confirm that 8 portable project signs will sufficiently meet the spec regarding project signage.

*Contractor shall be responsible for keeping a sign for each site under rehabilitation. Sign should not be relocated until the lift station rehabilitation is complete, operational and accepted by the Owner. Note that Contractor shall be mobilized at no more than 8 lift stations at any time, reference Article 1.08. B of Specification 01010 of the Summary of Work.*

**Q50:** Please confirm the warranty and maintenance bond for each site will begin after acceptance testing at that location.

*Refer to Article IX, 9.2 on Page GC 35 of the General Conditions of the Contract Documents for provisions related to Partial Acceptance and Warranty related to Partially Accepted work.*

**Q51:** Please add an allowance to the bid form for lab testing. Typically, estimates for testing costs are very conservative, both by the contractor and the testing labs quoting the project. An allowance ensures that SAWS pays only actual test costs and gets the savings for underruns.

*All tests required shall be included as a part of the lift station unit price.*

**Q52: Can you provide a bid item and quantity for the crack repairs in the lift station walls. As currently stated on the plans, each bidder must guess at the actual linear footage of cracks, since we cannot lower and investigate each wetwell for an accurate takeoff. If the bid item underruns or is not used, SAWS saves the cost of the bid item in lieu of the contractor.**

*Contractor shall be responsible for repair of existing wetwell cracks, seal joints and penetrations prior to wetwell coating and shall be included as a part of the lift station unit price. Based on previous field inspections, there were no significant cracks or aggregate/rebar exposure; contractor shall expect to provide typical surface preparation as indicated in the specifications and per the Manufacturer's recommendations for wetwell coating.*

**Q53: Is new electrical service placed in the contractors name for billing to the contractor? Since each location is already pumping sewage for SAWS, why not apply for new service in SAWS name? Contractors will just add utility charges to our bid and markup.**

*Any new electrical services will not be required to be placed in the Contractor's name. Please refer to Section 16402 Electrical Service of the Technical Specifications.*

**Q54: If new electrical service must be placed in contractors name, when does SAWS assume responsibility for utility costs? Can you provide an average KW-Hr usage at each site as a basis for adding power consumption cost to our bid?**

*Please see response to Q53 in Addendum No. 2.*

**Q55: The plans include several standard traffic control plans. Which traffic plan will be required at each location, if any.**

*Contractor is responsible for setting up and maintaining any traffic handling devices, detours, flagging operations, etc. necessary to perform the work.*

**Q56: Please confirm contractor can use existing power for bypass pumping.**

*Contractor shall be responsible for any necessary power supply for the By-pass/ flow management system.*

**Q57: Please clarify the pipe insulation requirements? Does DIP get insulated?**

*Plan drawings and contact documents do not call/specify for pipe insulation.*

**Q58: There are several lift stations where the elevation for the bottom of the wetwell is not given. Please provide the wetwell bottom elevation for all lift stations for piping and coating considerations. Do we coat the bottom floor of the wetwells?**

*Please refer to Q27 in Addendum No. 2 for missing lift stations overall depth.*

**Q59: Can materials be stored inside the fenced site at lift station sites while construction is underway at that site?**

*Yes. Contractor is responsible for safeguarding his/her own equipment and materials and Contractor is responsible for site repair/restoration due to damages caused by Contractor. Contractor shall comply with all requirements of the Contract Documents.*

**Q60: Can note 13 under the traffic control be modified to the following or some equivalent. "The contractor shall broom sweep streets bordering only sites where construction is underway and as directed by the inspector." There are many sites for from streets, and many sites where the construction work would not generate the need for street sweeping.**

*The note will not be revised. Contractor shall perform necessary site housekeeping as required.*



**Q61: Are bollards required @ LS 061 – Sheet 028?**

*Yes, Bollards are required as indicated on plan sheet E-061-1, sheet 028 of 246. Location will be verified by SAWS inspector. Refer to Detail B on sheet E-3.*

**Q62: Note #6, Sheet 4, Is this referring to different contract than this?**

*Yes, this is referring to the City of San Antonio E. Lubbock Street Improvements project.*

**Q63: Currently the specifications list on two manufactures for pumps. Are they the only two manufactures allowed to bid this project? If not could you provide acceptable manufactures?**

*Please refer to Q6 in Addendum No. 1 for response.*

**Q64: Section 01010-8 paragraph gg Standby Emergency Generators.  
The above paragraph categorizes the lift stations where generators are to be installed.**

**There are four (4) stations in the list that are in conflict with the single line drawings, LS# 023, LS #074, LS #156 and LS 218 are: in questions. All four of the lift stations are shown on the single line drawings to have a manual transfer switch and no generator. Please clarify if the above listed lift stations are to have generator and ATS and what size.**

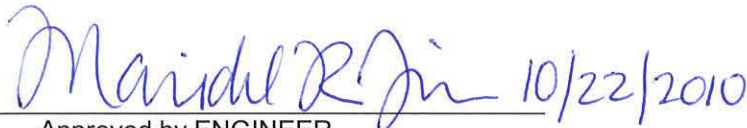
*Generators are not proposed at LS# 023, LS #074, LS #156 and LS 218. L# 170 (as indicated on Drawing Sheet 057/246), LS #180 (as indicated on Drawing Sheet 083/246), and LS #192 (as indicated on Drawing Sheet 089/246) will require generators. Note, Addendum No. 2 also addresses Q64 – see Item 2, Specification Section 01010, Summary of Work for more details.*

**Q65: Section 16100 Emergency Generator - Diesel and Section 16101 Emergency Generator-Natural Gas are both included in the project documents, Please clarify if the generators' are to be natural gas or diesel.**

*Yes, one lift station (LS #231) requires natural gas and the others will be diesel.*

This Addendum, including these 10 pages, is 20 pages with attachments in its entirety.

Each bidder is requested to acknowledge receipt of this Addendum No. 2 by his/her signature affixed hereto and to file same with and attached to his/her bid.

 10/22/2010

Approved by ENGINEER  
WESTON SOLUTIONS, INC.  
TEXAS REGISTERED ENGINEERING FIRM F-3123

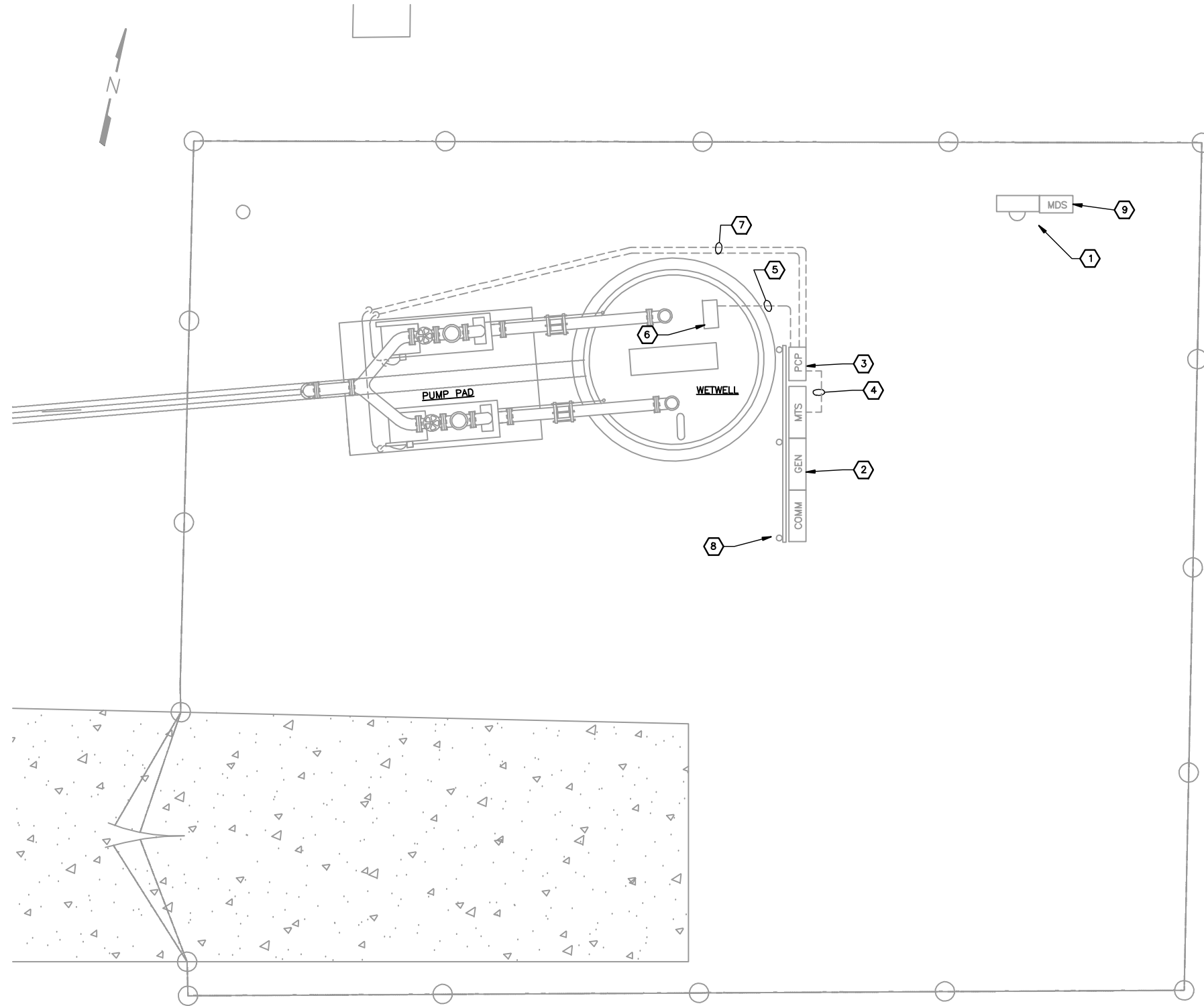


The undersigned acknowledges receipt of this Addendum No. 2 and the bid submitted herewith is in accordance with the information and stipulations set forth.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Bidder

**END OFADDENDUM**



**EXISTING LIFT STATION SITE PLAN**

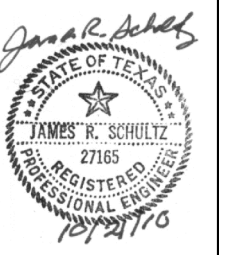
SCALE: N.T.S.

**1**  
E-148-1

**KEYNOTES:**

- ① EXISTING 120/240, 1Ø, 3W, SERVICE POINT TO REMAIN. (EXISTING SOCKET TO BE UPGRADED)
- ② REMOVE 3 COMPARTMENT UNIT.
- ③ REMOVE PUMP CONTROL PANEL
- ④ REMOVE CONDUIT AND WIRE BETWEEN PUMP CONTROL PANEL AND 3 COMPARTMENT UNIT.
- ⑤ REMOVE CONDUIT AND FLOAT SWITCH WIRING.
- ⑥ REMOVE FLOAT SWITCHES AND JBOX.
- ⑦ REMOVE POWER CONDUIT AND WIRING.
- ⑧ REMOVE EXISTING RACK.
- ⑨ REMOVE EXISTING DISCONNECT SWITCH.

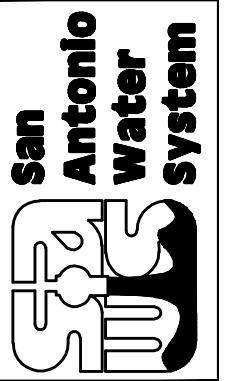
REV. NO.	REV. BY	DATE	REVISION DESCRIPTION



**WESTON**  
TEXAS REGISTERED ENGINEERING FIRM F-3123

**WESTON SOLUTIONS, INC.**  
70 NE LOOP 410, SUITE 600  
SAN ANTONIO, TEXAS 78216-8842

**LIFT STATIONS REHABILITATION - PHASE 2**  
L.S. #148 - INDIAN HILLS  
EXISTING ELECTRICAL SITE PLAN



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010

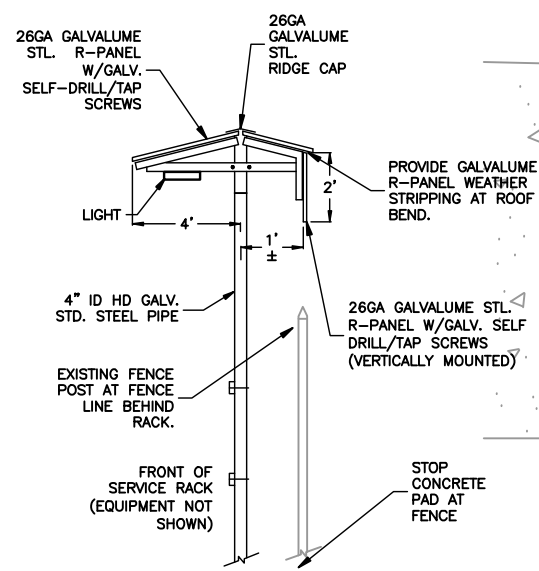
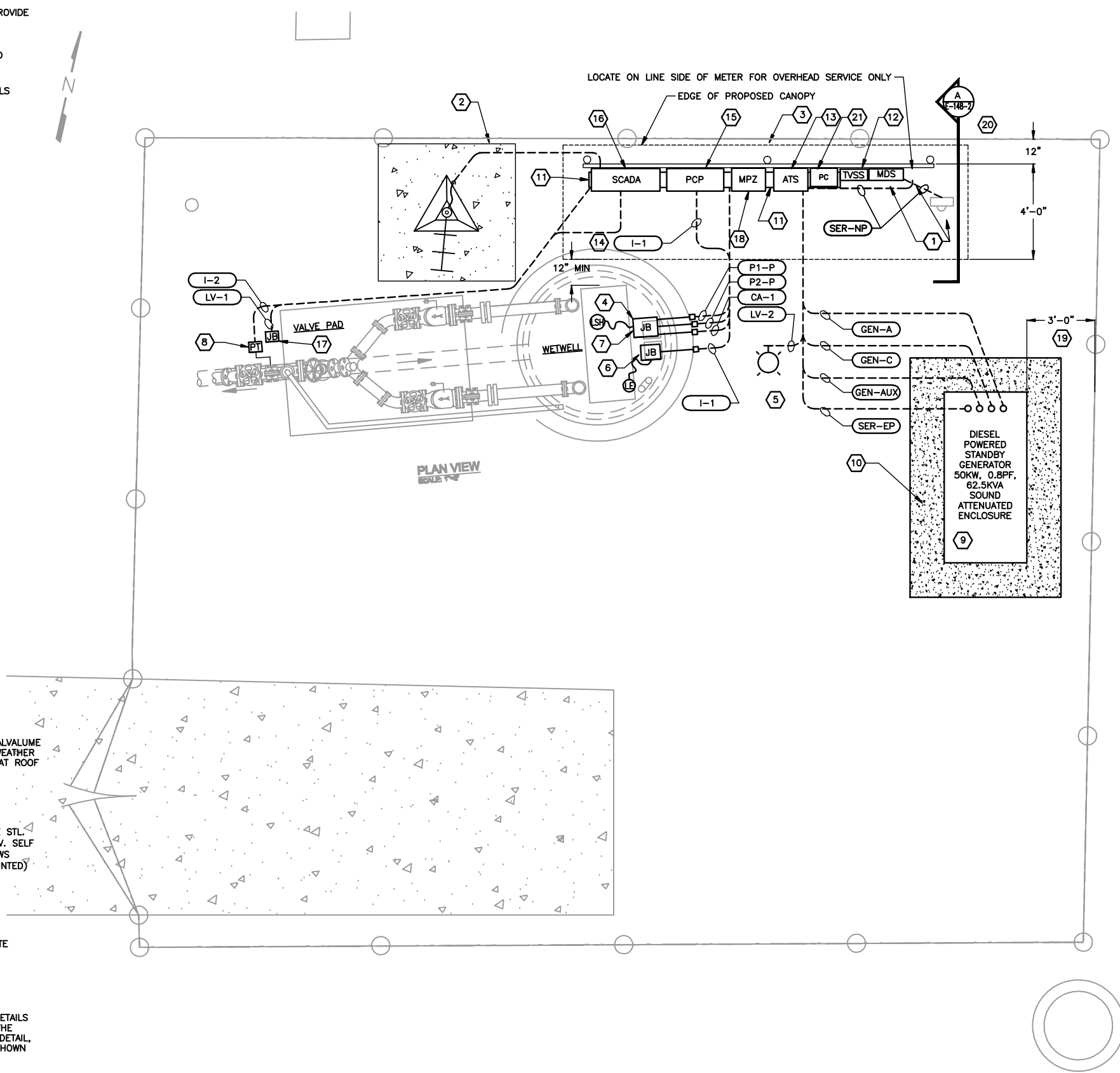
SCALE: AS SHOWN

**JRSA**  
**JAMES R. SCHULTZ & ASSOCIATES**  
Consulting Electrical Engineers  
Texas Engineering Firm Registration # F-3997  
5900 Balcones Drive, Suite 220  
Austin, Texas 78751

SHEET NO. **E-148-1**  
036 OF 246

**KEYNOTES:**

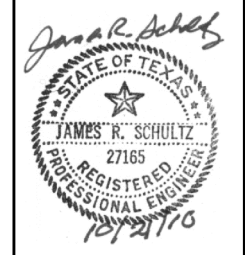
- 1 EXISTING 120/240 V, 1Ø, 3W SERVICE TO REMAIN. REPLACE METER SOCKET AND PROVIDE NEW DISCONNECT ON RACK. (FIELD VERIFY EXACT METER LOCATION)
- 2 INSTALL 20FT. ROHN TOWER. SEE DETAIL 1 SHEET T-03.
- 3 CONSTRUCT ELECTRICAL RACK. SEE DETAIL B, SHEET E-5. EXTEND PAD, RACK AND CANOPY TO INCLUDE MDS AND METER.
- 4 PROVIDE JBOX FOR CONNECTIONS TO SUBMERSIBLE PUMP POWER CABLE, MOISTURE SENSOR/OVERTEMP SWITCH ALARM AND HIGH LEVEL FLOAT CONDUCTORS. SEE DETAILS A, B, H & I SHEET E-2-S.
- 5 INSTALL AREA LIGHT. SEE DETAIL A, SHEET E-4.
- 6 INSTALL SUBMERSIBLE LEVEL TRANSDUCER AND JBOX. ROUTE CKT DIRECTLY TO TRANSMITTER IN PCP (DO NOT ROUTE THRU WIREWAY). SEE DETAIL G, SHEET E-2-S.
- 7 INSTALL NEW HIGH LEVEL FLOAT SWITCH. LOCATE HANGER WITHIN 6" OF THE ACCESS HATCH. SEE DETAILS H & I, SHEET E-2-S. MAKE TERMINATIONS IN PUMP CABLE BOX AND CKT TO PCP.
- 8 PRESSURE TRANSMITTER WITH BLOCK VALVE. SEE DETAIL C, SHEET E-2-S.
- 9 INSTALL GENERATOR. SEE DETAIL 4, SHEET E-3.
- 10 CONSTRUCT 18" WIDE CONCRETE WALKWAY AROUND THE GENERATOR. SEE DETAIL A, SHEET E-3.
- 11 INSTALL 8"X 8" WIREWAY ON RACK BELOW EQUIPMENT. SEE DETAILS, SHEET E-5. ROUTE NEW CKTS INTO WIREWAY AND TO RESPECTIVE EQUIPMENT. (DO NOT ROUTE ANALOG PRESSURE AND LEVEL CKTS THRU WIREWAY.)
- 12 INSTALL TRANSIENT VOLTAGE SURGE SUPPRESSOR IN 316 SS ENCLOSURE AT MAIN DISCONNECT SWITCH. SEE DETAIL E, SHEET E-4.
- 13 INSTALL AUTOMATIC TRANSFER SWITCH. SEE ONE LINE DIAGRAM E-148-3.
- 14 MAINTAIN 12" MINIMUM CLEARANCE FROM WETWELL HATCH OPENING AND CANOPY EDGE.
- 15 INSTALL PUMP CONTROL PANEL. SEE DETAIL 1, SHEET E-6-S.
- 16 INSTALL PROPOSED SCADA PANEL. SEE DETAILS, SHEET E-12.
- 17 PROVIDE JBOX & CKT FOR PRESSURE TRANSMITTER HEAT TRACE. SEE DETAIL C, SHEET E-2-S.
- 18 INSTALL MPZ. SEE TYPICAL PANEL SCHEDULE "LV" SHEET E-13.
- 19 LOCATE GENERATOR AS CLOSE AS POSSIBLE TO FENCE, BUT NOT LESS THAN 3'-0".
- 20 SEE SECTION 'A' FOR CANOPY AND PAD MODIFICATIONS TO CONFORM WITH SITE RESTRICTIONS.
- 21 INSTALL ROTARY PHASE CONVERTER.



NOTE: THIS DETAIL SECTION IS TO ONLY SHOW MODIFICATIONS TO THE DETAILS ON SHEET E-5, SO THAT THE CANOPY AND PAD CAN BE ADAPTED TO THE EXISTING SITE CONDITIONS. UNLESS OTHERWISE NOTED OR SHOWN THIS DETAIL, ALL OTHER RACK SPECIFICATIONS SHALL APPLY IN THEIR ENTIRETY AS SHOWN ON SHEET E5.

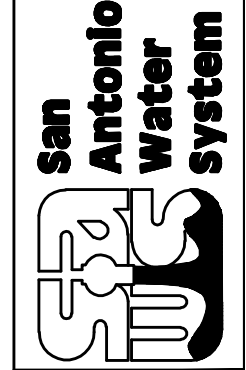
**SECTION 'A'**  
N.T.S. SCALE:

REV. NO.	DATE	REVISION DESCRIPTION



**WESTON SOLUTIONS, INC.**  
70 NE LOOP 410, SUITE 600  
SAN ANTONIO, TEXAS 78216-8842  
TEXAS REGISTERED ENGINEERING FIRM F-3123

**LFT STATIONS REHABILITATION - PHASE 2**  
L.S. #148 - INDIAN HILLS  
PROPOSED ELECTRICAL SITE PLAN



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010

**JRSA**  
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5900 Balcones Drive, Suite 220  
Austin, Texas 78731

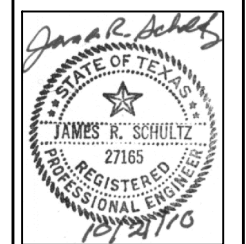
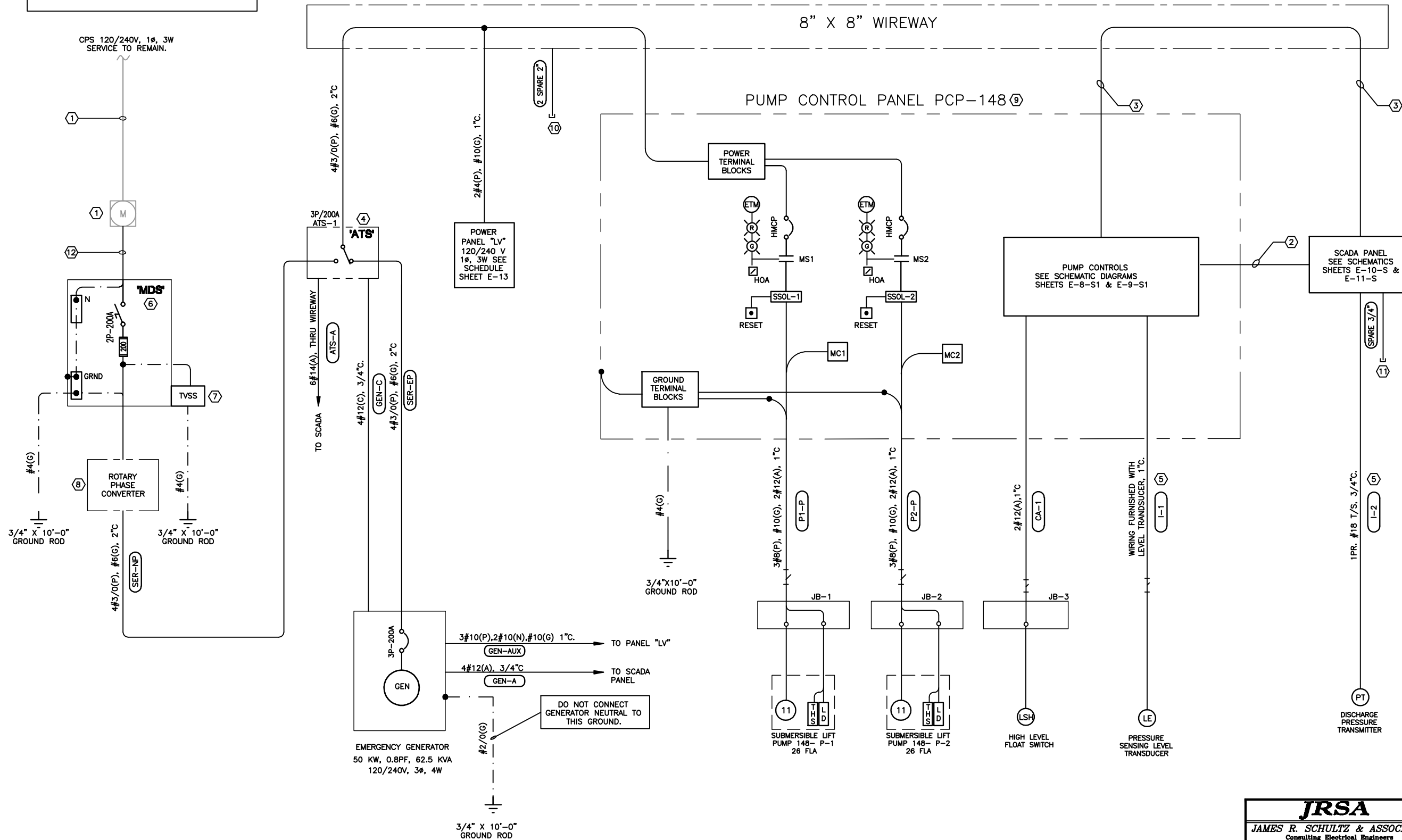
SCALE: AS SHOWN

SHEET NO. **E-148-2**  
037 OF 246

ELECTRICAL LOAD CHART @ 120/240V, 1Ø, 3W SERVICE			
LOAD DESCRIPTION	LOAD CURRENT (AMPERES)		
	INITIAL	FUTURE	
LSP-1	26.0	26.0	
LSP-2	26.0	26.0	
25% LARGEST MOTOR	6.5	6.5	
10 KVA XFMR	20.8	20.8	
TOTAL:	AMPS	79.3	79.3

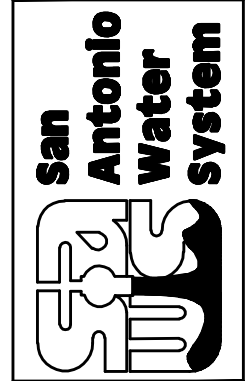
**KEYNOTES:**

- ① EXISTING 120/240V, 1Ø, 3W SERVICE TO REMAIN.
- ② 1PR #18 T/S, 3/4" C (ANALOG I/O)
- ③ 70#14, 2" C & 8"X8" WIREWAY (DISCRETE I/O)
- ④ INSTALL 3 PFR RELAYS IN TRANSFER SWITCH ENCLOSURE. CONNECT ONE TO THE INCOMING NORMAL POWER, ONE TO THE INCOMING EMERGENCY POWER AND ONE TO THE LOAD SIDE OF THE SWITCH. ROUTE WIRING TO THE SCADA PANEL. REFER TO THE SCADA PANEL SCHEMATIC DIAGRAMS.
- ⑤ ROUTE ANALOG CKTS ALONE IN SEPERATE CONDUIT. DO NOT ROUTE WITH OTHER CKTS IN OTHER CONDUITS, WIREWAY, OR THRU WIREWAY. TYPICAL FOR ANALOG CKTS I-1 & I-2.
- ⑥ REPLACE EXISTING "MDS".
- ⑦ INSTALL A TVSS ADJACENT TO THE "MDS".
- ⑧ ROTARY PHASE CONVERTER SHALL BE TEMCO MODEL PC0029, OR APPROVED EQUAL, RATED 29KW/40 HP. STARTER AND CONTROLS SHALL BE INSTALLED IN A NEMA 4X, 316 SS ENCLOSURE.
- ⑨ PROPOSED PUMP CONTROL PANEL.
- ⑩ INSTALL 2 SPARE EMPTY 2" CONDUITS FROM WIREWAY TO BEYOND PAD AND PLUG. SEE RACK DETAILS SHEET E-5 FOR ADDITIONAL INFORMATION.
- ⑪ INSTALL 1 SPARE EMPTY 3/4" CONDUITS FROM SCADA PANEL TO BEYOND PAD AND PLUG (DO NOT ROUTE THROUGH WIREWAY). SEE RACK DETAILS SHEET E-5 FOR ADDITIONAL INFORMATION.
- ⑫ UPGRADE METER SOCKET TO 200 AMP. UPGRADE SERVICE LATERAL FROM METER PEDESTAL TO MDS TO 3 #3/0, 2" C. COORDINATE WITH CPS



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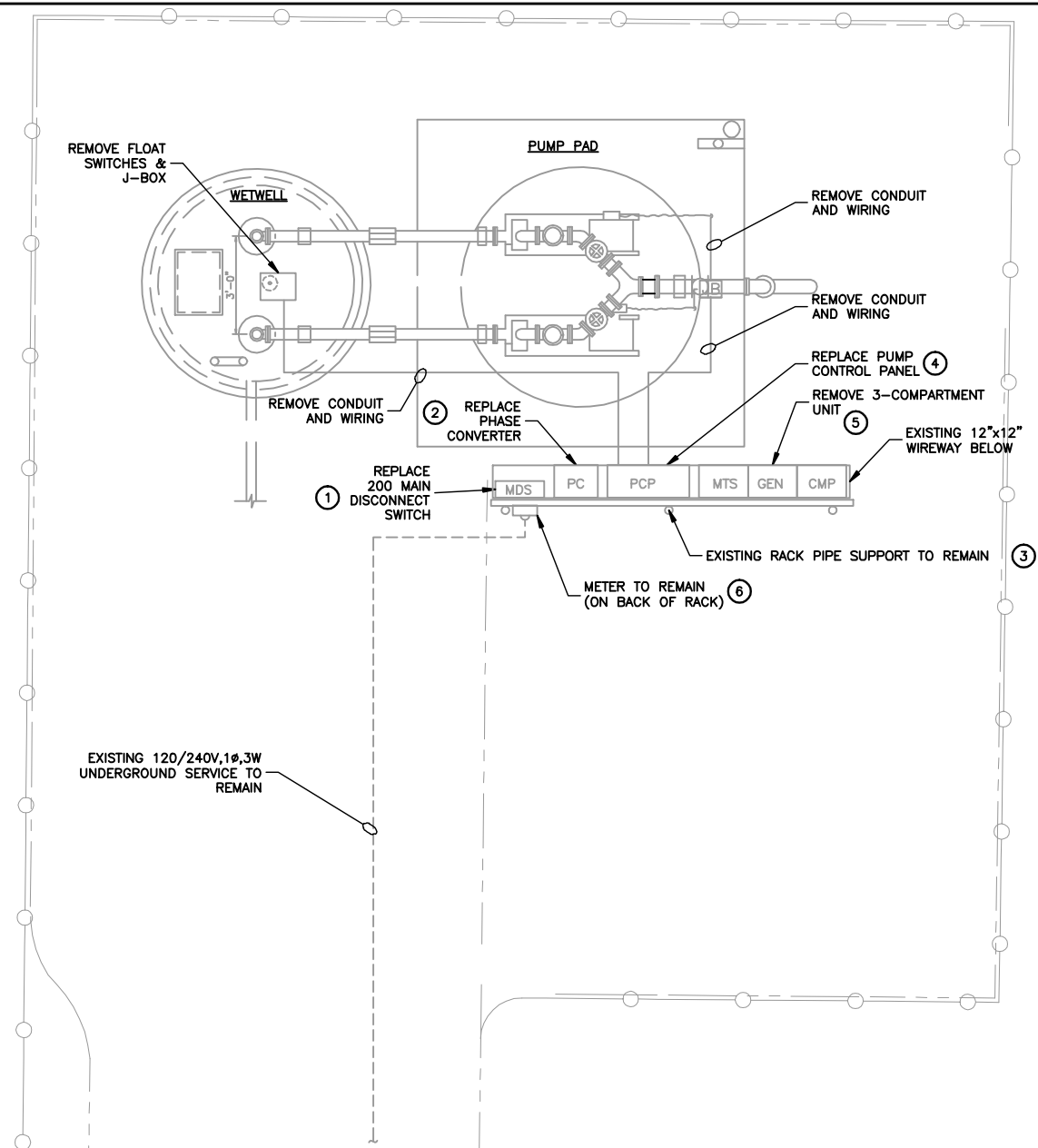
**LFT STATIONS REHABILITATION - PHASE 2**  
 L.S. #148 - INDIAN HILLS  
 ONE LINE DIAGRAM



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010
SCALE:	AS SHOWN	
SHEET NO.	E-148-3	
	038 OF 246	

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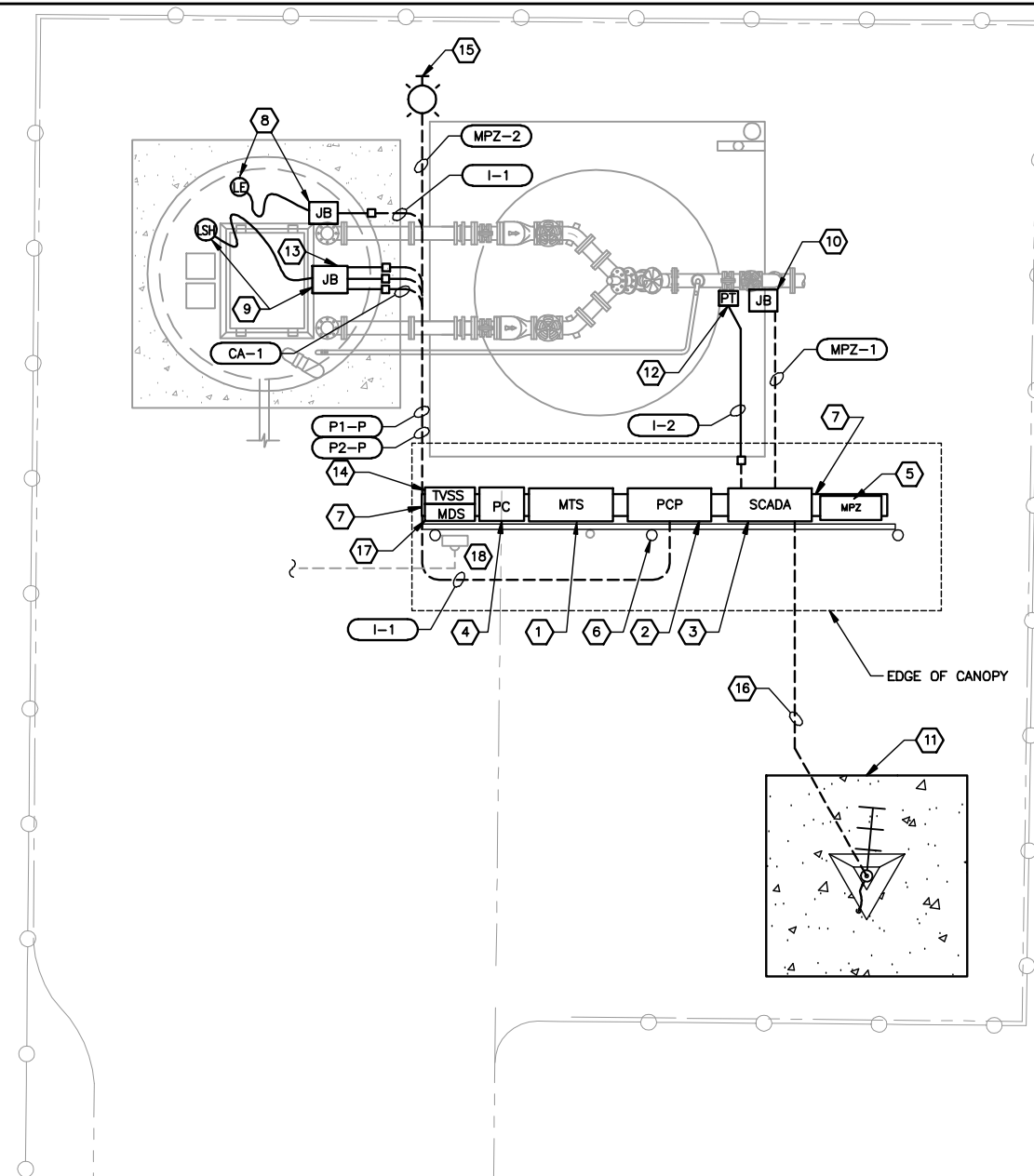
14/09/2010(S)SWS Phase 2 (1)002 (single) Comments: 7-26-10(1)REVISED L.S. NUMBER 1484A SERVA 2005(1)148-1, 120-240V  
 WRTS: 2203 SWS L5 Phase 2 User: James Schultz Printed: October 10, 2010 - 4:04pm Layout: Layout1



**EXISTING LIFT STATION SITE PLAN**

SCALE: N.T.S.

1  
E-206-1



**PROPOSED LIFT STATION SITE PLAN**

SCALE: N.T.S.

1  
E-206-1

**PROPOSED LIFT STATION KEYNOTES:**

- 1) INSTALL MANUAL TRANSFER SWITCH WITH GENERATOR PLUGS. SEE DETAIL, SHEET E-7
- 2) INSTALL PUMP CONTROL PANEL. SEE DETAIL 1, SHEET E-6-S
- 3) INSTALL SCADA PANEL. SEE DETAIL 3, SHEET E-12.
- 4) INSTALL PROPOSED ROTARY PHASE CONVERTER. SEE ONE LINE DIAGRAM, E-206-2
- 5) INSTALL MINI-POWER-ZONE UNIT. SEE SCHEDULE, SHEET E-13.
- 6) UPGRADE EXISTING ELECTRICAL RACK TO MINIMUMS PER DETAILS A, C & D, SHEET E-5.
- 7) INSTALL 8"X 8" WIREWAY ON RACK BELOW EQUIPMENT. SEE DETAILS, SHEET E-5. ROUTE NEW CKTS INTO WIREWAY AND TO RESPECTIVE EQUIPMENT. (DO NOT ROUTE ANALOG PRESSURE AND LEVEL CKTS THRU WIREWAY.)
- 8) INSTALL SUBMERSIBLE LEVEL TRANSDUCER AND JBOX. ROUTE CKT DIRECTLY TO TRANSMITTER IN PCP (DO NOT ROUTE THRU WIREWAY). SEE DETAIL G, SHEET E-2-S.
- 9) INSTALL NEW HIGH LEVEL FLOAT SWITCH. LOCATE HANGER WITHIN 6" OF THE ACCESS HATCH. SEE DETAILS H & I, SHEET E-2-S. MAKE TERMINATIONS IN PUMP CABLE BOX AND CKT TO PCP.
- 10) PROVIDE JBOX & CKT FOR PRESSURE TRANSMITTER HEAT TRACE. SEE DETAIL C, SHEET E-2-S.
- 11) INSTALL 20FT. ROHN ANTENNA TOWER. SEE DETAIL 1, SHEET T-03. FIELD VERIFY LOCATION.
- 12) PRESSURE TRANSMITTER WITH BLOCK VALVE AND HEAT TRACING. SEE DETAIL C, SHEET E-2-S.
- 13) PROVIDE JBOX FOR CONNECTIONS TO SUBMERSIBLE PUMP POWER CABLE, MOISTURE SENSOR/OVERTEMP SWITCH ALARM AND HIGH LEVEL FLOAT CONDUCTORS. SEE DETAILS A, B, H & I SHEET E-2-S.
- 14) INSTALL TRANSIENT VOLTAGE SURGE SUPPRESSOR IN 316 SS ENCLOSURE AT MAIN DISCONNECT SWITCH. SEE DETAIL E, SHEET E-4.
- 15) INSTALL AREA LIGHT. SEE DETAIL A, SHEET E-4. (MAXIMUM HEIGHT NOT TO EXCEED 12'-0" DUE TO NEARBY RESIDENCES)
- 16) (2) 2" COAX CONDUITS FROM TOWER TO SCADA PANEL - (1) 2" EMPTY SPARE & (1) 2" WITH COAX CABLE. (DO NOT ROUTE COAX THROUGH WIREWAY)
- 17) INSTALL NEW 200A MDS. SEE ONE LINE DIAGRAM E-206-2 AND DETAIL "D/E3"
- 18) UPGRADE METER SOCKET PER CPS REQUIREMENTS AND TO FACILITATE INSTALLATION OF NEW ELECTRICAL SERVICE.

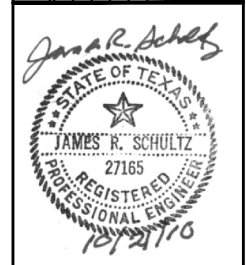


**EXISTING ELECTRICAL RACK**

SCALE: N.T.S.

A  
E-206-1

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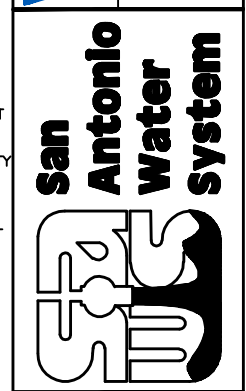


**WESTON SOLUTIONS, INC.**  
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 SAN ANTONIO, TEXAS 78216-8842  
 TEXAS REGISTERED ENGINEERING FIRM F-3123

**LIFT STATIONS REHABILITATION - PHASE 2**

**L.S. #206 - LA SIERRA**

**ELECTRICAL SITE PLANS & DETAILS**



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010

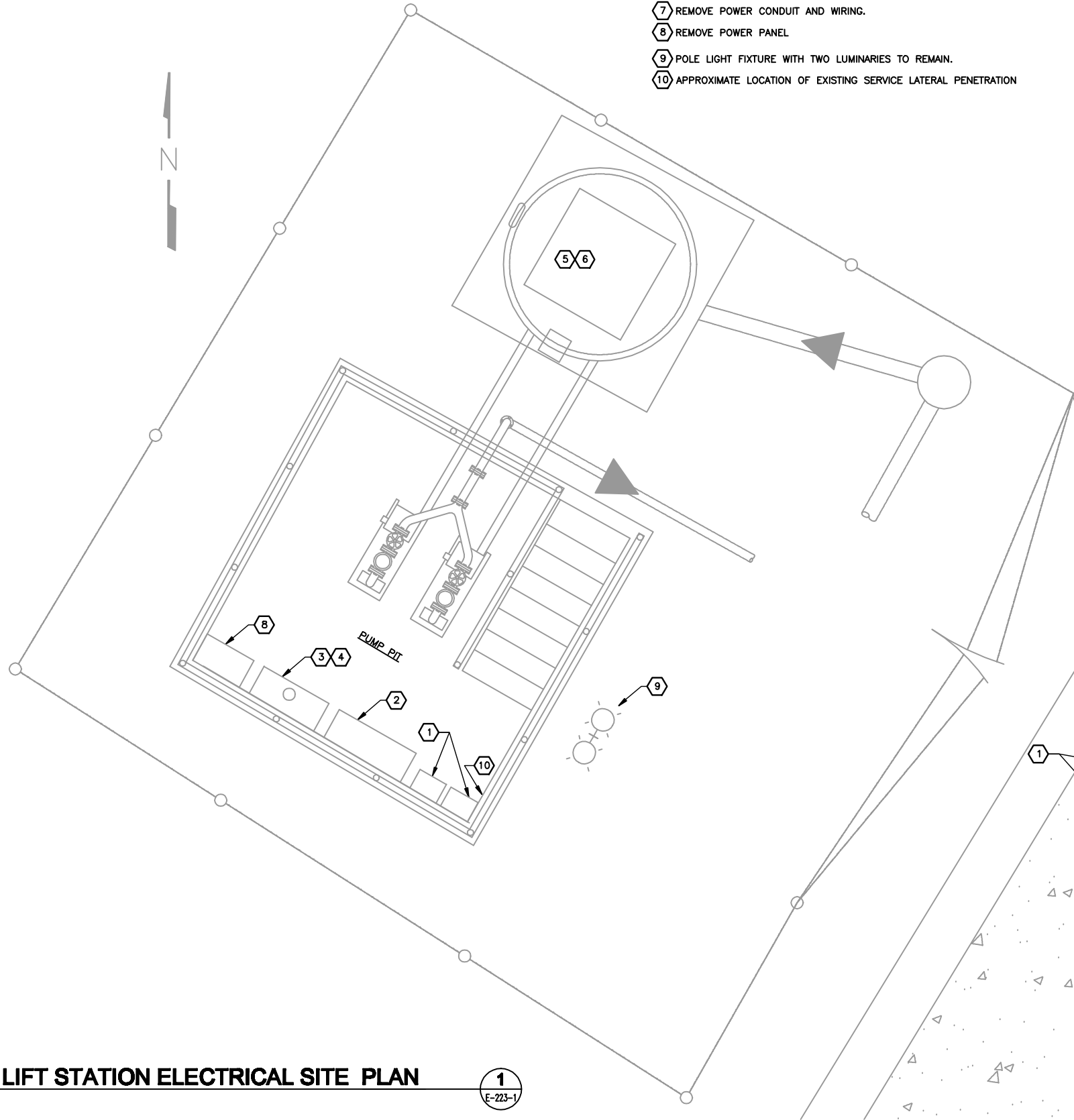
SCALE: AS SHOWN
SHEET NO. <b>E-206-1</b>
103 OF 246

**JRSA**  
**JAMES R. SCHULTZ & ASSOCIATES**  
 Consulting Electrical Engineers  
 Texas Engineering Firm Registration # F-3997  
 5900 Balcones Drive, Suite 220  
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**KEYNOTES:**

- 1 REPLACE UNDERGROUND 120/240, 3 $\phi$ , 4W, SERVICE. REMOVE EXISTING SWITCH & METER. PLUG CONDUITS & COORDINATE REMOVAL OF SERVICE LATERAL CONDUCTORS WITH CPS.
- 2 REMOVE 3 COMPARTMENT UNIT.
- 3 REMOVE PUMP CONTROL PANEL
- 4 REMOVE CONDUIT AND WIRE BETWEEN PUMP CONTROL PANEL AND 3 COMPARTMENT UNIT.
- 5 REMOVE CONDUIT AND FLOAT SWITCH WIRING.
- 6 REMOVE FLOAT SWITCHES AND JBOX.
- 7 REMOVE POWER CONDUIT AND WIRING.
- 8 REMOVE POWER PANEL
- 9 POLE LIGHT FIXTURE WITH TWO LUMINARIES TO REMAIN.
- 10 APPROXIMATE LOCATION OF EXISTING SERVICE LATERAL PENETRATION

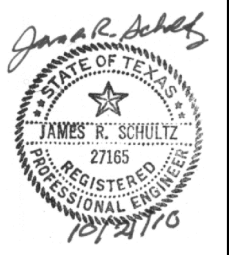


**EXISTING LIFT STATION ELECTRICAL SITE PLAN**  
SCALE: N.T.S.

1  
E-223-1

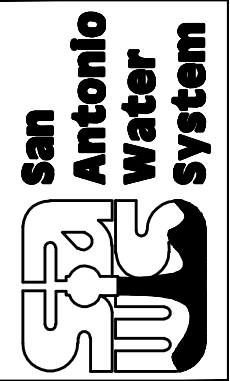
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Austin, Texas 78731

REV. NO.	BY	DATE	REVISION DESCRIPTION



**WESTON**  
WESTON SOLUTIONS, INC.  
70 NE LOOP 410, SUITE 600  
SAN ANTONIO, TEXAS 78216-5842  
TEXAS REGISTERED ENGINEERING FIRM F-3123

**LIFT STATIONS REHABILITATION - PHASE 2**  
L.S. #223 - MISSION TRAILS #2  
EXISTING ELECTRICAL SITE PLAN



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010
SCALE: AS SHOWN		
SHEET NO.	E-223-1 134 OF 246	

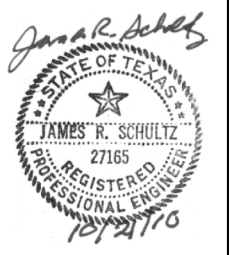
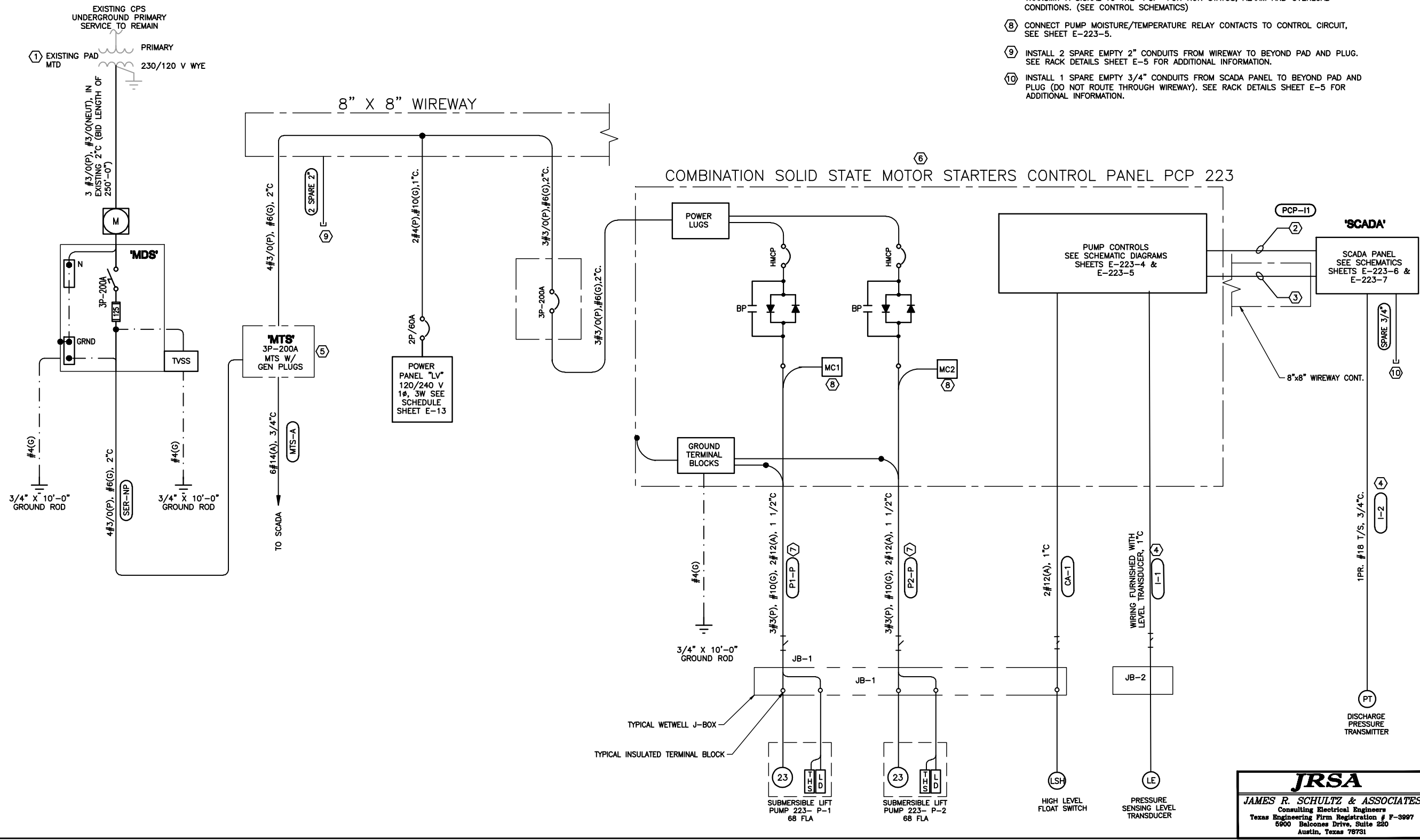




ELECTRICAL LOAD CHART @ 120/240V, 3Ø, 4W SERVICE		
LOAD DESCRIPTION	LOAD CURRENT (AMPERES)	
	INITIAL	FUTURE
LSP-1	68.0	68.0
LSP-2	68.0	68.0
25% LARGEST MOTOR	17.0	17.0
10 KVA XFMR	20.8	20.8
TOTAL:	AMPS	173.8
		173.8

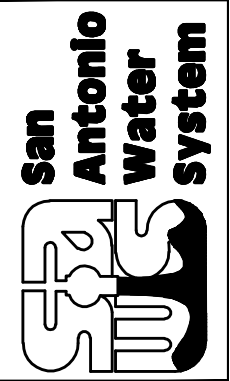
**KEYNOTES:**

- ① COORDINATE WITH CPS FOR CHANGE OUT OF EXISTING 120/240V, 3Ø, 4W SERVICE CONDUCTORS TO NEW 4 #3/0 CU IN EXISTING CONDUIT.
- ② 1PR #18 T/S, 3/4" (ANALOG I/O) (DO NOT ROUTE IN WIREWAY)
- ③ 70#14, 2"C. & 8"x8" WIREWAY, (DISCRETE I/O)
- ④ ROUTE ANALOG CKTS ALONE IN SEPARATE CONDUIT. DO NOT ROUTE WITH OTHER CKTS IN OTHER CONDUITS, WIREWAY OR THRU WIREWAY. TYPICAL FOR ANALOG CKTS I-1 & I-2.
- ⑤ INSTALL 3-PFR RELAYS IN THE TRANSFER SWITCH MONITOR NORMAL POWER, ONE TO MONITOR EMERGENCY POWER AND ONE ON THE LOAD SIDE OF THE MTS. ROUTE WIRING TO SCADA PANEL IN WIREWAY.
- ⑥ COMBINE SOLID STATE REDUCED VOLTAGE MOTOR STARTERS WITHIN THE PUMP CONTROL PANEL. STARTERS SHALL BE BENSCHAW TYPE RB2, OR APPROVED EQUAL, WITH FULL VOLTAGE BYPASS CONTACTOR. SEE SHEET E-223-8 FOR ENCLOSURE DETAIL.
- ⑦ CONNECT START-STOP AND SSRV BYPASS CONTROL SIGNALS FROM "PCP" TO SSRV STARTERS AND BYPASS CONTACTORS. PROGRAM STARTER ALARM RELAYS TO TRANSMIT A SIGNAL TO THE "PCP" FOR RUN STATUS, ALARM AND OVERLOAD CONDITIONS. (SEE CONTROL SCHEMATICS)
- ⑧ CONNECT PUMP MOISTURE/TEMPERATURE RELAY CONTACTS TO CONTROL CIRCUIT, SEE SHEET E-223-5.
- ⑨ INSTALL 2 SPARE EMPTY 2" CONDUITS FROM WIREWAY TO BEYOND PAD AND PLUG. SEE RACK DETAILS SHEET E-5 FOR ADDITIONAL INFORMATION.
- ⑩ INSTALL 1 SPARE EMPTY 3/4" CONDUITS FROM SCADA PANEL TO BEYOND PAD AND PLUG (DO NOT ROUTE THROUGH WIREWAY). SEE RACK DETAILS SHEET E-5 FOR ADDITIONAL INFORMATION.



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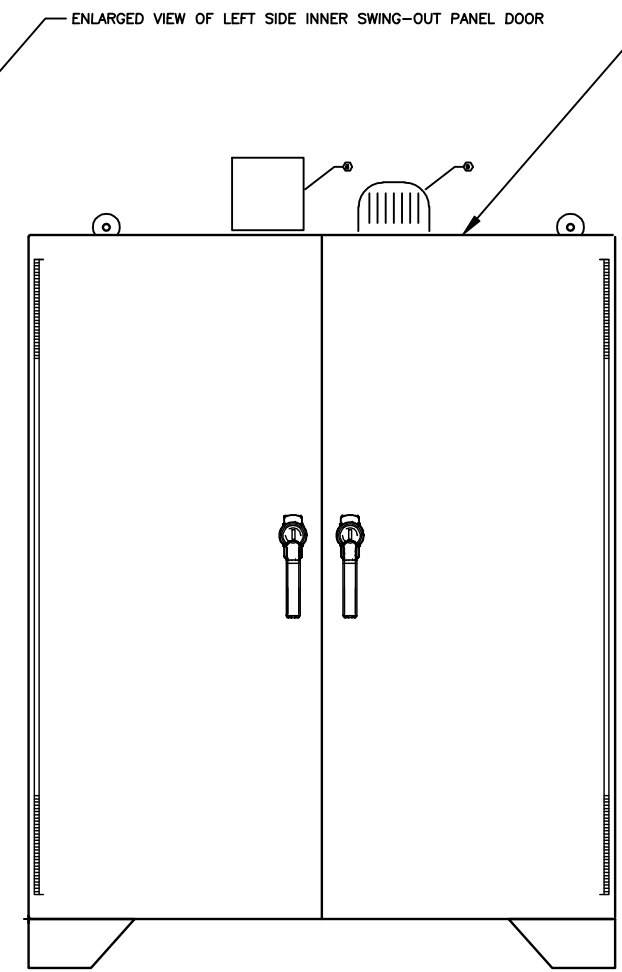
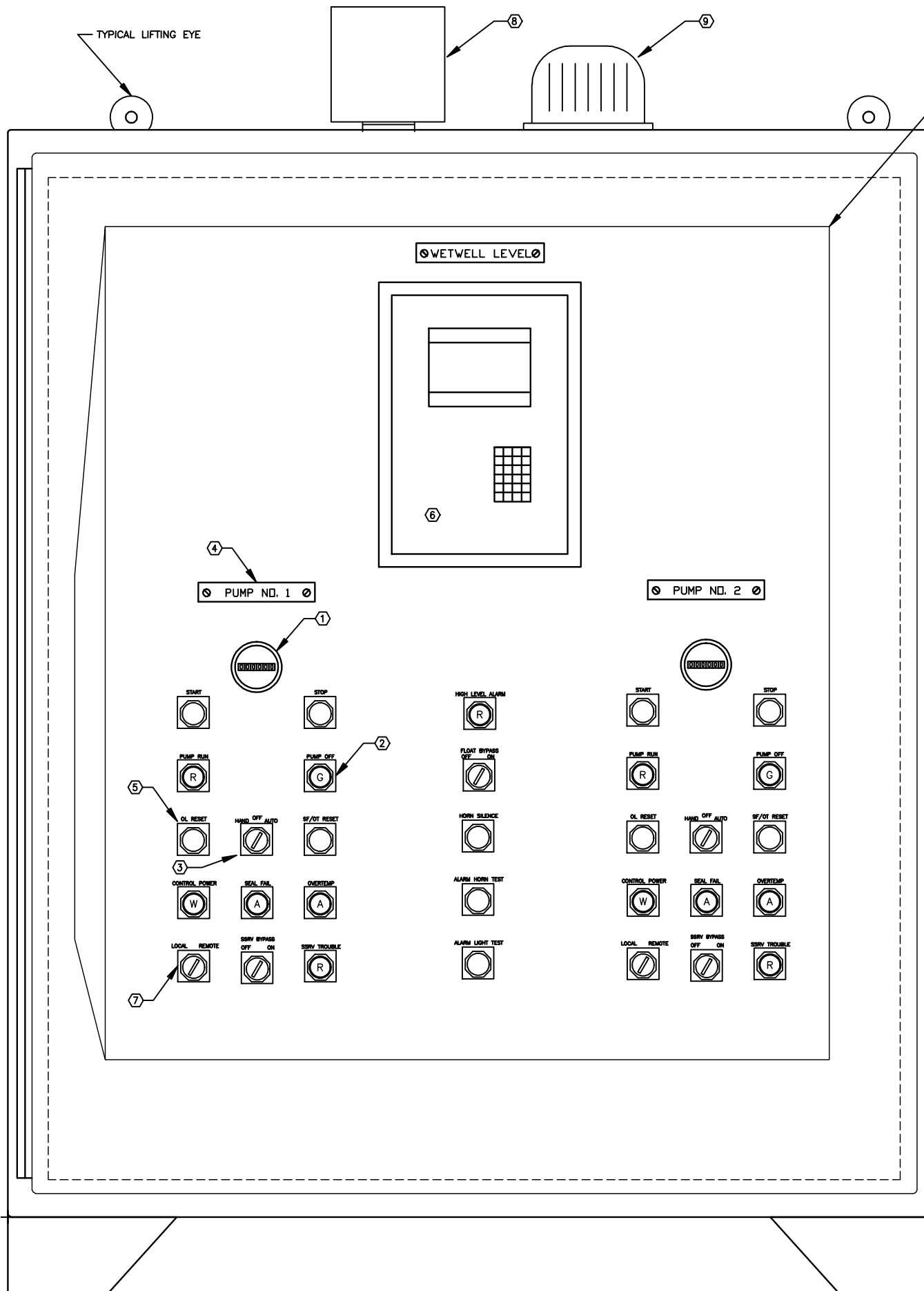
**LFT STATIONS REHABILITATION - PHASE 2**  
**L.S. #223 - MISSION TRAILS #2**  
**ONE LINE DIAGRAM**



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010
SCALE:	AS SHOWN	
SHEET NO.	<b>E-223-3</b> 136 OF 246	

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**PANEL NOTES:**

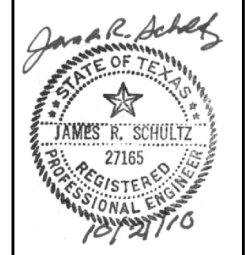
- ALL FIELD WIRING (INCOMING) AND PANEL WIRING SHALL BE TAGGED WITH BRADY OR EQUAL WIRE MARKERS.
- ALL DEVICES SHALL BE IDENTIFIED WITH PLASTIC NAMEPLATES ATTACHED TO THE PANEL DOOR OR BACK PANEL, AS APPLICABLE, WITH BRASS SCREWS.
- PANEL SHALL BE NEMA 4X, 316 SS DEADFRONT CONSTRUCTION WITH TWO DOORS WITH 3 POINT HEAVY DUTY LATCHING MECHANISM.
- ALLOW ENOUGH ROOM ON BACK PANEL FOR 25% EXPANSION.
- WIRING IN PANEL SHALL BE #14 AWG, 19 STRAND COPPER TYPE MTW.
- WIRING TO DOOR MOUNTED DEVICES SHALL BE #14 AWG, 41 STRAND COPPER TYPE SIS. LEAVE SUFFICIENT SLACK TO ALLOW FOR FULL OPENING OF PANEL DOORS.
- PROVIDE 20% SPACE IN ALL WIREWAYS.
- RUN AC AND DC WIRING IN SEPARATE WIREWAYS.
- COLOR CODE WIRING IN PANELS AS FOLLOWS:
  - a. AC OR DC POWER - BLACK
  - b. AC CONTROL CIRCUITS - RED
  - c. DC CONTROL CIRCUITS - BLUE
  - d. EXTERNALLY ENERGIZED INTERLOCK WIRING - YELLOW
  - e. EQUIPMENT GROUNDING CONDUCTORS - GREEN
  - f. NEUTRAL CONDUCTOR- WHITE
  - g. ALARM CIRCUITS - YELLOW
- A MINIMUM OF 20% SPARE TERMINAL BLOCKS SHALL BE PROVIDED FOR 120VAC AND 24VDC WIRING RESPECTIVELY.

**KEYNOTES:**

- ELAPSED TIME METER. 0-99999.9 HRS. NON-RESETTABLE.
- INDICATING LIGHT, PUSH TO TEST, TRANSFORMER TYPE, 30 MM, WITH LED LAMPS. COLOR PER SCHEMATIC DIAGRAM.
- THREE POSITION SELECTOR SWITCH. OIL TIGHT. 30 MM.
- THREE PLY PLASTIC NAMEPLATE. WHITE LETTERS. BLACK BACKGROUND.
- MOMENTARY CONTACT PUSHBUTTON
- HYDRORANGER LEVEL INDICATING CONTROLLER.
- TWO POSITION SELECTOR SWITCH
- ALARM HORN
- FLASHING RED ALARM LIGHT

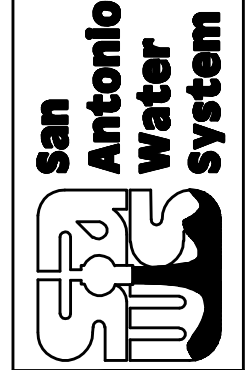
Pump Control Panel Material			
ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER
1	Nema 4X 316 SS Enclosure (62HX48WX12D)	Hoffman	A62H4812SS6LP3PT
2	Enclosure Backpanel	Hoffman	A36P30
3	Swingout Panels	Hoffman	
4	Pad - Lock Type Handles	Hoffman	
5	Heater	Hoffman	DAH1001A
6	Door Stop Kit (316 SS)	Hoffman	ADSTOPKSS6
7	Enclosure Lights (2)	Hoffman	A-LTDA1
8	Pump Controller	Siemens Hydorranger 200	7ML1034-3AA11
10	Surge Protection	Phoenix Contact	28 56 81 2
11	15 Amp Circuit Breakers	Square D	QOU115
12	Terminal Blocks	Phoenix Contact	30 04 36 2
13	120VAC Fused Terminal Blocks	Phoenix Contact	30 04 17 1
14	120 VAC Relays	IDEC	RH2BUL-AC120
15	120 VAC Relay Socket	IDEC	SH2B-05
16	120 VAC Timing Relays	Square D	Type JCK
17	Indicating Lights,LED Type,Push-To-Test	Square D	Type 9001 K
18	Two Position Selector Switch	Square D	Type 9001 K
19	Three Position Selector Swith	Square D	Type 9001 K
20	Momentary Contact Pushbutton	Square D	Type 9001 K
21	HMCP Breaker	Square D	Mag Guard
22	Motor Starter	Square D	Class 8536
23	Solid State Overload Relay	Square D	Motor Logic Plus
24	Outside Alarm Light	Edwards	114ST Series Red Flashing Beacon
25	Outside Alarm Horn	Edwards	876/877 Series
26	Control Power Transformer	Square D	Class 9070

REV. NO.	DATE	REVISION DESCRIPTION



**WESTON SOLUTIONS, INC.**  
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**LIFT STATIONS REHABILITATION - PHASE 2**  
**LS #223 - MISSION TRAILS #2**  
**CONTROL PANEL DETAILS**



NOTES	INITIALS	DATE
DESIGNED BY	BLH	9/17/2010
REVIEWED BY	JRS	9/17/2010

SCALE: AS SHOWN

SHEET NO. **E-223-8**  
141 OF 246

**JRSA**

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