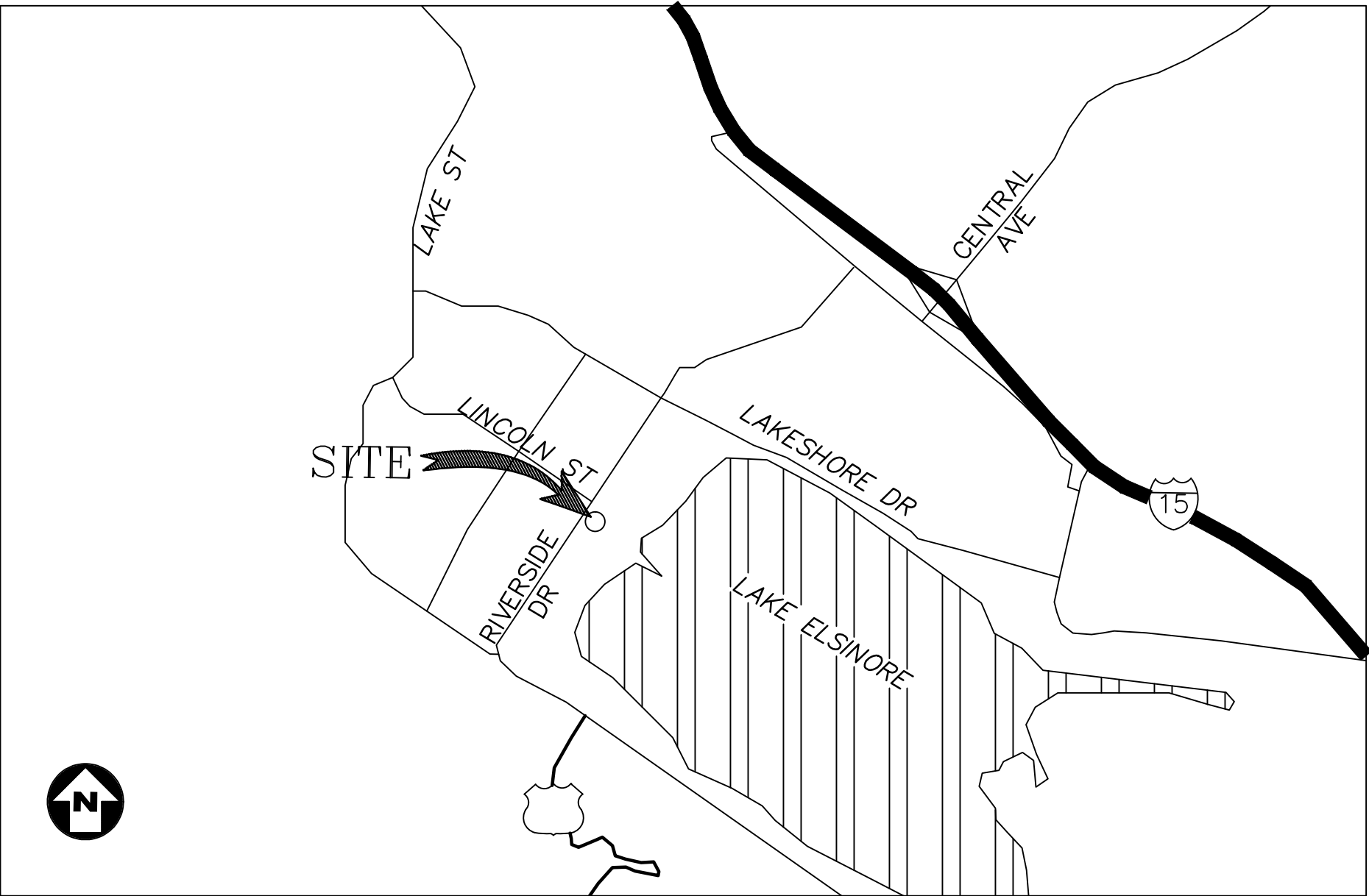
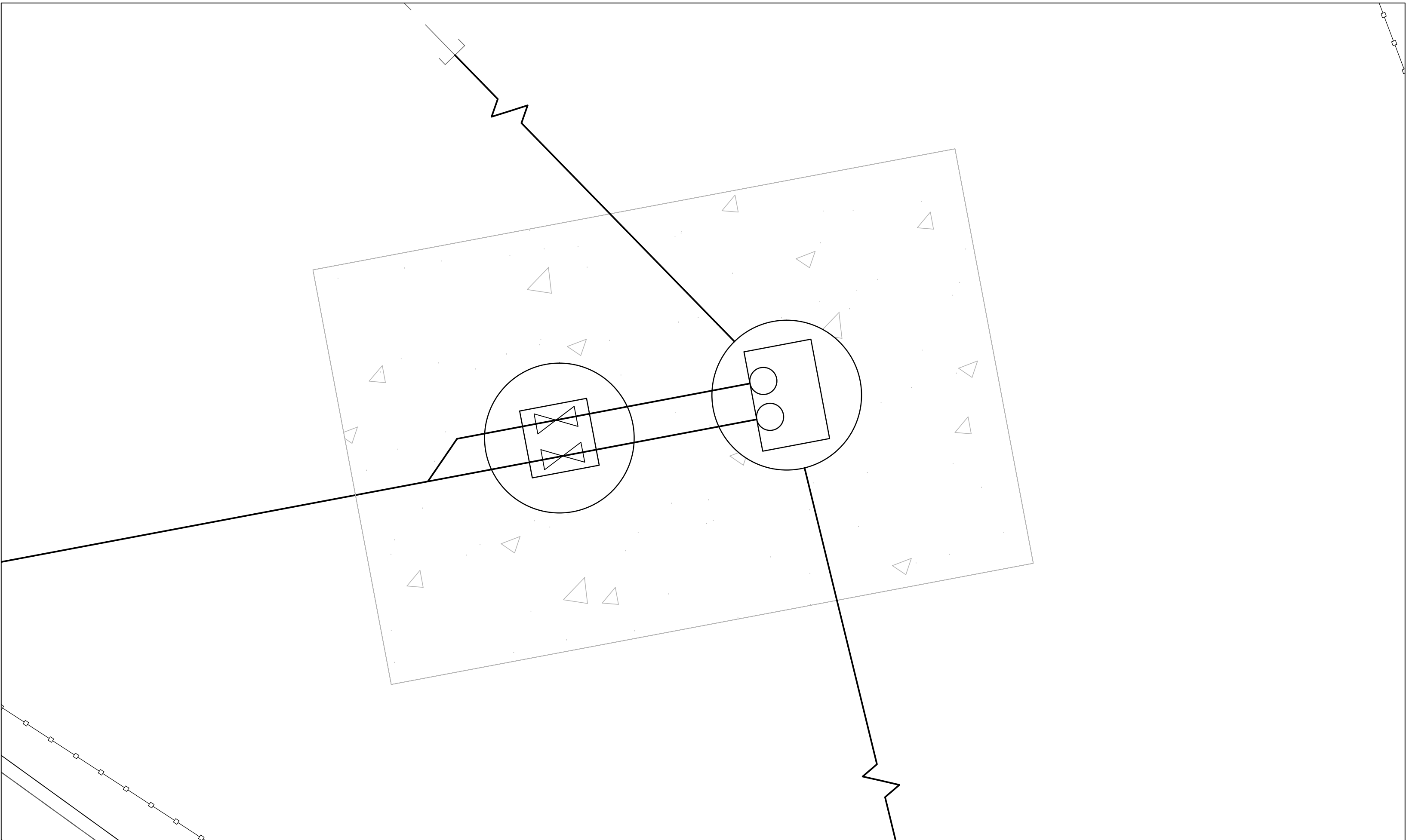


CITY OF LAKE ELSINORE



VICINITY MAP
N.T.S.



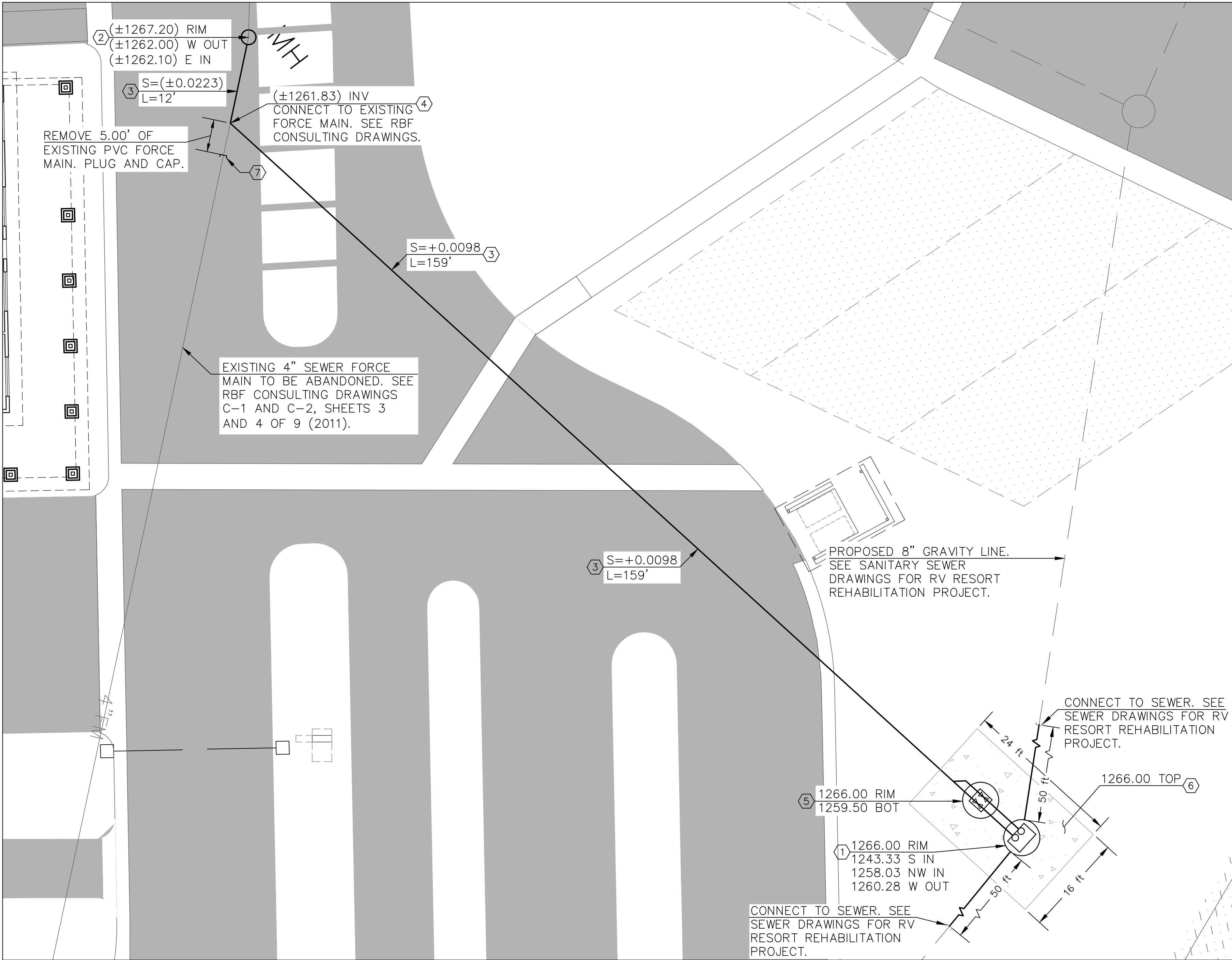
LIST OF DRAWINGS

INDEX MAP	1
LIFT STATION PLAN AND DETAIL	2

Drawing name: S:\ADMIN\16007001 - La Laguna RV Resort\Lift Station\Lift Station - 16007001.dwg Oct 19, 2017 - 2:05pm

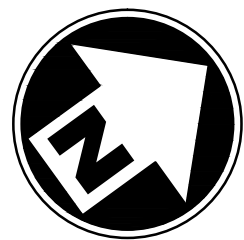
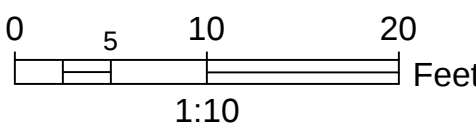
MARK	REVISIONS	APPR.	DATE	THESE PLANS HAVE BEEN REVIEWED FOR COMPLIANCE WITH THE APPROPRIATE CONDITIONS OF DEVELOPMENT AND/OR CITY AND STATE LAWS AND HAVE BEEN FOUND ACCEPTABLE	PREPARED BY: E NGINEERING R ESOURCES OF SOUTHERN CALIFORNIA, INC. 3550 E. Florida Avenue, Suite B Hemet, California 92544 (951) 765-6622 Fax (951) 765-6621		SCALE: AS SHOWN	CITY OF LAKE ELSINORE	SHEET 1
								RV RESORT REHABILITATION PROJECT LIFT STATION	OF 2 SHEETS
				BRADLEY W. FAGRELL, RCE No. 43920 CITY ENGINEER CITY OF LAKE ELSINORE	DATE		DATE: 10/11/2017		FILE No.

Drawing name: S:\ADMIN\16007001 - La Laguna RV Resort\Lift Station\Lift Station - 16007001.dwg Oct 19, 2017 - 2:01pm



LIFT STATION AND FORCE MAIN PLAN

SCALE: 1" = 10'



CONSTRUCTION NOTES

(LIFT STATION PLAN)

- 1 DUPLEX PACKAGED SEWAGE LIFT STATION. SEE LIFT STATION DRAWINGS LSD-1 AND LSD-2.
- 2 EXISTING MANHOLE
- 3 4" SCH. 80 PVC PIPE FORCE MAIN
- 4 60" SCH 80 PVC FITTING
- 5 VALVE BOX. SEE LIFT STATION DRAWINGS LSD-1 AND LSD-2.
- 6 6" CONCRETE PAD, 24'x16'. PROVIDE #3 BARS CENTERED @ 12" O.C. E.W.
- 7 4" PVC END CAP

QUANTITIES

(LIFT STATION PLAN)

- | |
|--------|
| 1 EA |
| 1 EA |
| 271 ft |
| 1 EA |
| 1 EA |
| 1 EA |
| 1 EA |

WATER AND SEWER GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE ELSINORE VALLEY MUNICIPAL WATER DISTRICT (EVMWD) DESIGN AND CONSTRUCTION STANDARDS FOR WATER, RECYCLED WATER AND SANITARY SEWER FACILITIES.
2. CONSTRUCTION MATERIALS TESTING AND INSPECTION SHALL COMPLY WITH STANDARDS AND SPECIFICATIONS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE GOVERNING AGENCY, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREEN BOOK") AND THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS. FAILURE TO MEET ANY OF THE ABOVE REQUIREMENTS SHALL BE CAUSE FOR REJECTION.
3. THE CONTRACTOR SHALL NOTIFY EVMWD (5) FIVE WORKING DAYS PRIOR TO BEGINNING WORK (951) 674-3146.
4. DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES SHALL BE DETERMINED BY THE CONTRACTOR BY POTHOLES AND A FIELD SURVEY OF ELEVATIONS AND SHALL BE GIVEN TO THE INSPECTOR PRIOR TO TRENCHING. THE CONTRACTOR SHALL ALSO CONTACT UNDERGROUND SERVICE ALERT (811) PRIOR TO ANY EXCAVATION WORK.
5. ALL CONSTRUCTION AND OPERATIONS BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS.
6. THE CONTRACTOR SHALL KEEP A COMPLETE RECORD OF ALL CONSTRUCTION CHANGES AND SHALL MAKE INFORMATION AVAILABLE TO THE INSPECTOR FOR PREPARATION OF "AS BUILT" DRAWINGS. THE "AS BUILT" DRAWINGS SHALL BE SUBMITTED TO EVMWD FOR REVIEW PRIOR TO FINAL REVIEW AND ACCEPTANCE OF THE PROJECT.
7. WHERE THE WATER MAIN AND SEWER CROSS STORM DRAINS, OTHER PIPELINES, TELEPHONE AND ELECTRIC DUCTS, OR SIMILAR INSTALLATIONS, A MINIMUM OF 12 INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN THE MAIN OR SEWER AND OTHER INSTALLATIONS UNLESS OTHERWISE DIRECTED BY EVMWD PERSONNEL.
8. SEPARATION OF SEWER AND WATER LINES MUST COMPLY WITH EVMWD STANDARD PLANS S-3 OR W-2 AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DEPARTMENT OF PUBLIC HEALTH TITLE 22, CHAPTER 16, ARTICLE 4, SECTION 64572.
9. CONNECTIONS TO EXISTING EVMWD SEWER OR WATER LINES SHALL BE IN ACCORDANCE WITH STANDARD EVMWD PROCEDURES AND SHALL NOT BE MADE UNLESS EVMWD INSPECTOR IS PRESENT.
10. UNLESS WAIVED BY EVMWD AN INSULATED COPPER SOLID CORE 10 GAGE TRACER WIRE SHALL BE PLACED WITH EACH SEWER MAIN TO ASSIST WITH FUTURE LOCATION. WARNING TAPE SHALL BE PLACED AT LEAST 6" ABOVE SEWER MAIN & SEWER LATERALS, BUT NOT DEEPER THAN 24" BELOW THE EXISTING FINISHED GRADE. WATER MAINS SHALL ALSO HAVE TRACER WIRE AND WARNING TAPE INSTALLED IN THE TRENCH.
11. THE LENGTH OF OPEN TRENCH AT ANY ONE TIME SHALL BE LIMITED TO 600 FEET ALONG ROAD RIGHT-OF-WAY UNLESS OTHERWISE AGREED TO IN WRITING BY EVMWD. TRENCH SHALL BE BACKFILLED AND COMPACTED AT THE CONCLUSION OF EACH DAY. OPEN TRENCH LIMITS ARE SUBJECT TO CITY REQUIREMENTS.
12. SURFACE IMPROVEMENTS DAMAGED OR REMOVED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RECONSTRUCTED BY THE CONTRACTOR TO THE LOCAL GOVERNING AGENCY'S REQUIREMENTS AT THE CONTRACTOR'S EXPENSE.
13. ALL REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY EVMWD ENGINEERING MANAGER.
14. IT IS THE PROJECT ENGINEER'S RESPONSIBILITY TO TIE OUT ANY EXISTING STREET MONUMENTATION EITHER VISIBLE OR BURIED, PRIOR TO CONSTRUCTION.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ANY STREET MONUMENTATION IN PLACE. IF ANY MONUMENT IS DISTURBED OR DESTROYED, THE CONTRACTOR WILL BE REQUIRED TO CONTRACT WITH A REGISTERED LAND SURVEYOR FOR THE RE-ESTABLISHMENT AND MAPPING OF THE DESTROYED MONUMENT AT THE CONTRACTOR'S EXPENSE.
16. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF EVMWD KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT ON RECORD OR NOT SHOWN ON THESE PLANS OR MARKED ON THE GROUND BY UNDERGROUND SERVICE ALERT.
17. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR CONTRACTOR TO APPLY FOR ANY NECESSARY ENCROACHMENT PERMIT FROM ALL GOVERNING AGENCIES.
18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO STAMP A 2" HIGH "S", "W" OR "W" ON THE CURB FACE FOR ALL SEWER, WATER, AND IRRIGATION LATERALS AT THE LOCATION WHERE THE LATERAL PASSES BENEATH THE CURB. A "V" SHALL BE STAMPED ON THE CURB FACE AT ALL VALVES.
19. A STEEL ROD OR STAKE 6" ABOVE THE GROUND OR 10 GAGE COPPER WIRE WITH 2" COPPER TAG, SHALL BE INSTALLED AT THE END OF EACH SEWER LATERAL TO ASSIST IN LOCATING AT A LATER DATE. IN NEW TRACT DEVELOPMENT A 3"x8" PVC PIPE OR 2"x4"x8" BOARD SHALL BE USED TO MARK THE ENDS OF LATERALS.
20. ALL SEWERS SHALL BE BALLED, AIR TESTED, MANDREL TESTED AND CCTV INSPECTED PRIOR TO ACCEPTANCE BY THE DISTRICT. AIR TEST SHALL BE PER UNI-B-6; MANDREL TEST SHALL BE IN ACCORDANCE WITH SECTION 306-1.2.12 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION AND CLOSED CIRCUIT TELEVISION INSPECTION PER DISTRICT STANDARDS.
21. A PROPERTY LINE CLEANOUT WILL BE INSTALLED, 51/2' DEEP MINIMUM, OUTSIDE OF RIGHT-OF-WAY LINE. THE 1/8 BEND AND 45' WYE CONNECTION SHALL BE POLYVINYL CHLORIDE (PVC) OR ACRYLONITRILE BUTADIENE STYRENE (ABS).
22. PROTECT PIPE, JOINTS, LINING AND COATING, AND BED PIPE CAREFULLY TO PROVIDE CONTINUOUS BEARING AND PREVENT UNEVEN SETTLEMENT. PIPE SHALL BE PROTECTED AGAINST FLOTATION AT ALL TIMES. OPEN ENDS OF THE INSTALLED SEWER PIPE SHALL BE SEALED AT ALL TIMES WHEN CONSTRUCTION IS NOT IN PROCESS.
23. PIPE JOINTS SHALL NOT BE DEFLECTED GREATER THAN 80% OF THE MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURER.
24. SEWER AND WATER PIPE TRENCH BACKFILL SHALL BE IN ACCORDANCE WITH EVMWD STANDARD DRAWINGS S-1 & W-3 AND THE GOVERNING AGENCY. A FULL TIME SOILS TECHNICIAN MUST BE ONSITE DURING BACKFILLING AND COMPACTION.
25. ALL SERVICE LATERALS SHALL BE LOCATED AT RIGHT ANGLES TO THE MAIN UNLESS OTHERWISE INDICATED ON THE PLANS AND ACCEPTED BY EVMWD. MATERIALS FOR LATERALS SHALL MEET EVMWD SPECIFICATIONS. SEWER ELEVATIONS SHOWN ARE FLOWLINE (CONDUIT INVERT).
26. MINIMUM COVER FOR ALL WATER MAINS LESS THAN 12 INCHES IN DIAMETER SHALL BE 3.5 FEET. WATER MAINS 12 INCHES AND GREATER SHALL HAVE A MINIMUM COVER OF 4 FEET. MAXIMUM COVER FOR WATER MAINS SHALL BE 8 FEET, UNLESS ACCEPTED BY THE EVMWD ENGINEERING MANAGER.
27. WHEREVER VALVES ARE TO BE INSTALLED, THE INVERT SLOPE OF THE MAIN SHALL NOT EXCEED SIX PERCENT. VALVES SHALL BE LOCATED SO THAT THERE WILL BE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN THE TOP OF THE VALVE AND THE BOTTOM OF THE VALVE BOX COVER AT STREET SECTIONS.
28. THE MINIMUM CLEARANCE BETWEEN FIRE HYDRANTS AND UTILITY POLES, LIGHT STANDARDS AND SIGN POSTS SHALL BE 3 FEET.
29. NO WATER METER BOXES SHALL BE INSTALLED IN DRIVEWAYS OR SIDEWALKS. METER BOXES SHALL BE SET AT HIGH GRADE TO ELIMINATE WATER RUNOFF. INSTALL REDUCED PRESSURE PRINCIPLE OR BACK FLOW DEVICE AFTER IRRIGATION METER. INSTALL A PRESSURE REGULATOR ON HOMES OR BUSINESS IF THE PRESSURE IS OVER 80 PSI. A PRESSURE REGULATOR SHALL BE INSTALLED PRIOR TO ENTERING THE HOUSE/BUILDING PLUMBING.
30. RESTRAIN ALL JOINTS AND FITTINGS, IN LIEU OF THRUST BLOCKS.
31. AIR VALVES SHALL BE INSTALLED AT HIGH POINTS AND BLOWOFFS AT ALL LOW POINTS ON THE LINE AS PER EVMWD STANDARD DRAWINGS W-16, W-17, AND W-19.
32. IF REQUIRED, A RESERVOIR AND BOOSTER PUMP STATION WILL HAVE TO BE CONSTRUCTED AND IN SERVICE BEFORE ANY SERVICE CAN BE PROVIDED TO THE UNITS CONSTRUCTED WITHIN THIS SUBDIVISION.
33. PRIOR TO PAVING THE STREET SECTION, ALL UNDERGROUND FACILITIES WITH LATERALS, INCLUDING BUT NOT LIMITED TO SEWER, WATER, TELEPHONE, ELECTRIC POWER, GAS, CABLE TELEVISION AND DRAINAGE FACILITIES SHALL BE IN PLACE, TESTED AND ACCEPTED BY THE RESPONSIBLE UTILITY/AGENCY.
34. HOUSE SLAB ELEVATIONS THAT ARE LOWER THAN THE UPSTREAM MANHOLE RIM ELEVATION SHALL BE EQUIPPED WITH BACKFLOW VALVES. THE PROJECT ENGINEER SHALL INDICATE ON THE SEWER LATERAL TABLE WHICH LOTS ARE INVOLVED.
35. PRIOR TO THE CONSTRUCTION OF ANY BACKFLOW PROTECTION DEVICE, THE CONTRACTOR SHALL NOTIFY THE DISTRICT BACKFLOW ASSEMBLY INSPECTOR 24 HOURS PRIOR TO THE CONSTRUCTION OF ASSEMBLY. THE DISTRICT BACKFLOW INSPECTOR SHALL PROVIDE FINAL INSPECTION, TESTING AND ACCEPTANCE PRIOR TO TURNING ON THE WATER SUPPLY.
36. SURVEY STAKING FOR WATER PIPELINES IS AT 50-FOOT INTERVALS PLUS ALL APPURTENANCES, HORIZONTAL ALIGNMENT CHANGES AND VERTICAL ALIGNMENT CHANGES. SURVEY STAKING FOR SEWER PIPELINES IS AT 25-FOOT INTERVALS PLUS ALL LATERALS, MANHOLES IN AND OUT, APPURTENANCES, CLEANOUTS, HORIZONTAL & VERTICAL ALIGNMENT CHANGES, BEGINNING OF CURVES, AND END OF CURVES.
37. ALL WATER VALVES IN UNPAVED AREAS SHALL BE SURROUNDED BY AN ASPHALT PAD INSTALLED IN ACCORDANCE WITH EVMWD STANDARD DRAWING W-27. A VALVE MARKER SHALL BE INSTALLED IN UNPAVED AREAS IN ACCORDANCE WITH EVMWD STANDARD DRAWING W-28.
38. ALL MANHOLES INSTALLED IN UNPAVED AREAS SHALL BE SURROUNDED BY AN ASPHALT PAD INSTALLED IN ACCORDANCE WITH EVMWD STANDARD DRAWING S-10.
39. ALL FACILITIES LOCATED DOWNSTREAM OF THE WATER METER AND FIRE DETECTOR CHECK METER ARE PRIVATE AND ARE TO BE MAINTAINED BY THE OWNER.

MARK	REVISIONS	APPR.	DATE

THESE PLANS HAVE BEEN REVIEWED FOR COMPLIANCE WITH THE APPROPRIATE CONDITIONS OF DEVELOPMENT AND/OR CITY AND STATE LAWS AND HAVE BEEN FOUND ACCEPTABLE

BRADLEY W. FAGRELL, RCE No. 43920
CITY ENGINEER
CITY OF LAKE ELSINORE

DATE

PREPARED BY: **ENGINEERING RESOURCES**
OF SOUTHERN CALIFORNIA, INC.
3550 E. Florida Avenue, Suite B
Hemet, California 92544
(951) 765-6622 Fax (951) 765-6621

DATE



SCALE: AS SHOWN

DATE: 10/11/2017

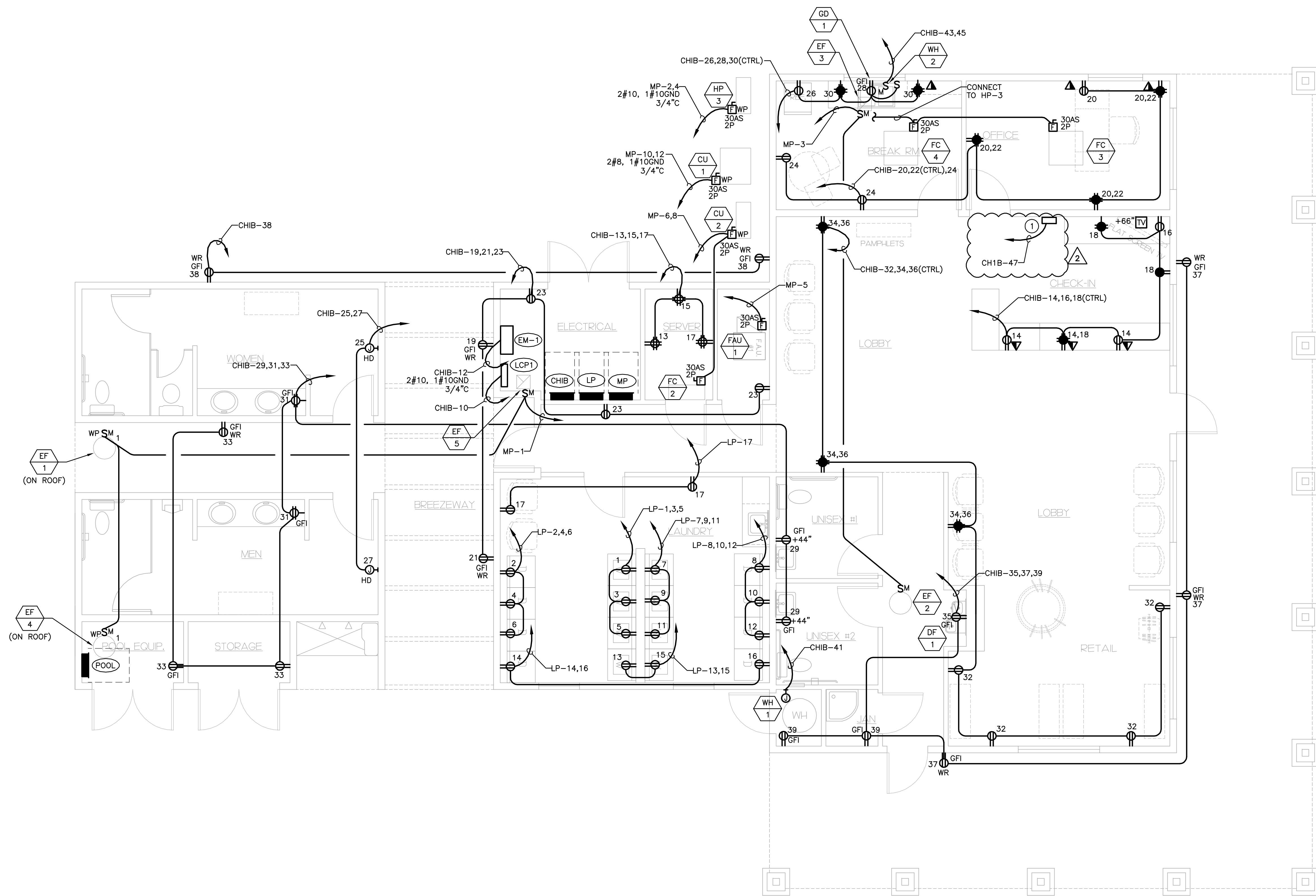
CITY OF LAKE ELSINORE

RV RESORT
REHABILITATION PROJECT
LIFT STATION

SHEET 2

OF 2 SHEETS

FILE No.

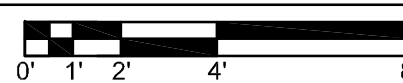
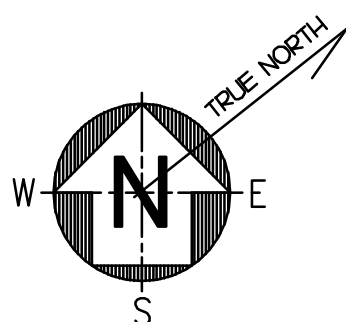


GENERAL NOTES

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.
- CONTRACTOR SHALL VERIFY EXACT QUANTITIES, LOCATIONS AND HEIGHTS OF ALL OUTLETS WITH TENANT AND ARCHITECT PRIOR TO START OF WORK.
- CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND REQUIREMENTS PRIOR TO START OF WORK.
- MECHANICAL EQUIPMENT FUSE SIZE RATINGS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- ALL MECHANICAL EQUIPMENT FUSED DISCONNECTS AND MOTOR RATED SWITCHES EXPOSED TO WEATHER SHALL BE WEATHERPROOF RATED.

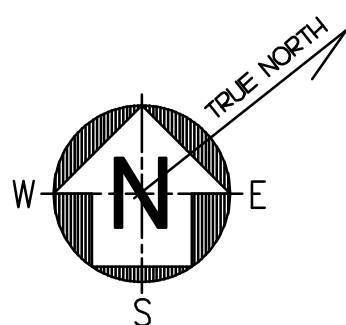
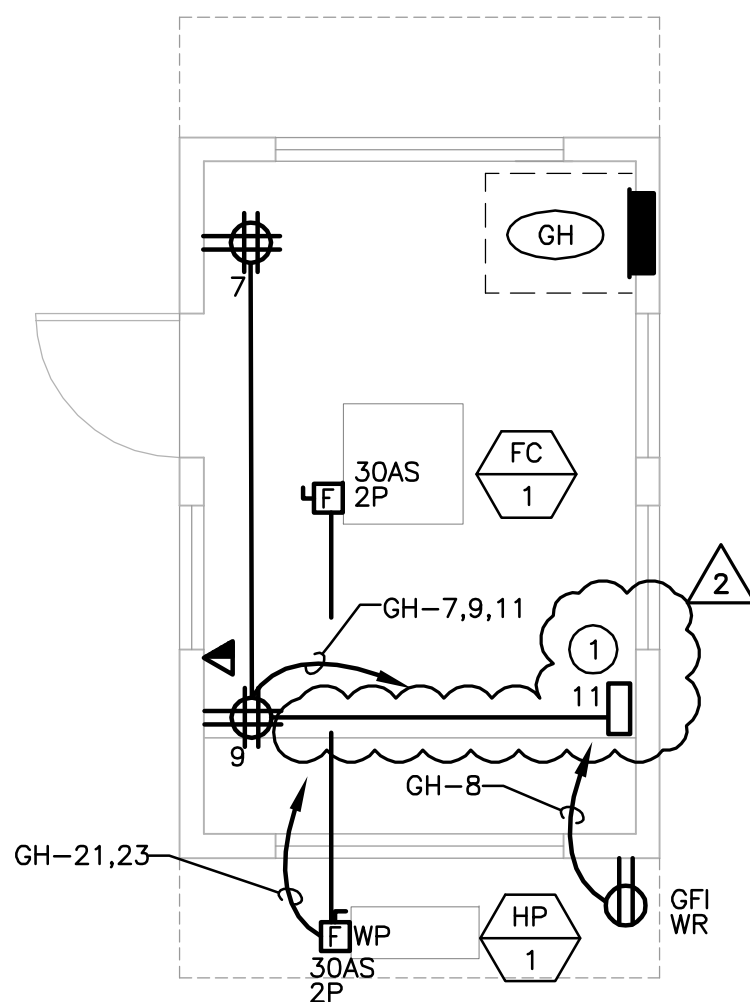
KEY NOTES

- EMERGENCY GENERATOR ANNUNCIATOR PANEL, RUN TO EMERGENCY GENERATOR WITH 3/4" O.D. AS REQUIRED. (TROUBLE SIGNAL)



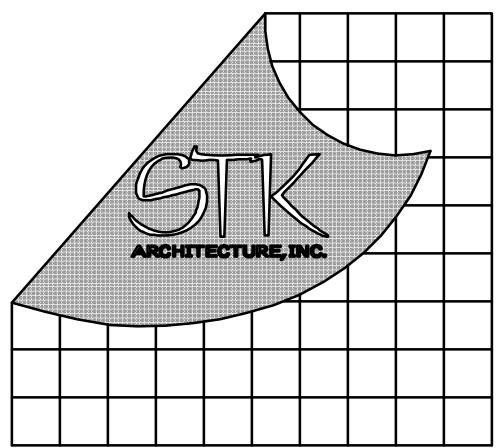
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1



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

2



40500 DEVO DR. TEMECULA, CALIFORNIA 92590-5780
Phone: 951.296.9110 Fax: 951.296.8079 Email: stk@stkinc.com

CONSULTANT:

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#16212

10-03-17
www.tsqared.com
E-Mail: admin@tsquared.com

PROJECT FOR:

CITY OF LAKE ELSINORE

130 SOUTH MAIN ST.
LAKE ELSINORE, CA 92530

PROJECT NAME:

RV RESORT

33040 RIVERSIDE DRIVE
LAKE ELSINORE, CA 92530

ISSUE INFORMATION:

DATE:	INFORMATION:
04-3-2017	PLAN CHECK
05-1-2017	PLAN CHECK 2
MAY-2017	PLAN CHECK 3
06-29-17	COORDINATION
09-29-17	LIFT STATION COORD.

SHEET INFORMATION:

STK PROJECT NO.: 316-08-15
SCALE: AS NOTED
DATE: APRIL 2017
PLOT DATE: -
DRAWING NAME:

SEAL:



SHEET TITLE:

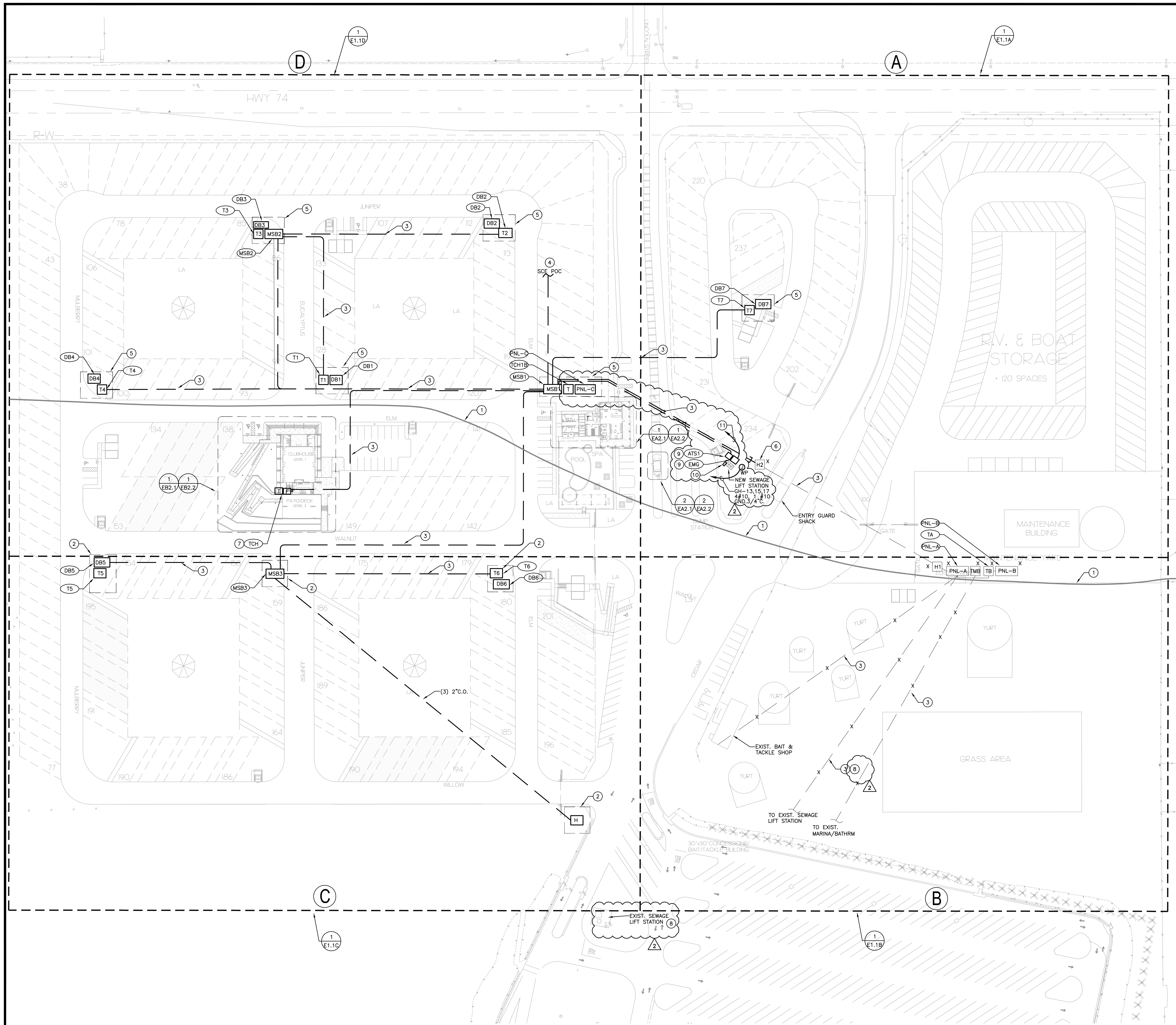
ELECTRICAL
POWER PLANS
CHECK-IN &
GUARD KIOSK

SHEET NO.:

EA-2.2

ELECTRICAL POWER PLAN CHECK-IN BUILDING

ELECTRICAL POWER PLAN GUARD KIOSK BUILDING

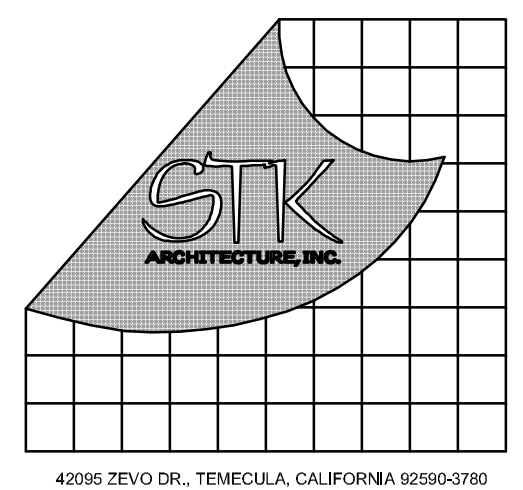


GENERAL NOTES

A. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.

KEY NOTES

- 1 FLOOD PLAIN ZONE 1265.
- 2 EQUIPMENT TO BE MOUNTED ON ELEVATED PLATFORM ABOVE THE FLOOD PLAIN ZONE 12-65. REFER TO CIVIL & STRUCTURAL DRAWINGS FOR DETAILS.
- 3 REFER TO SINGLE LINE DIAGRAM FOR FEEDERS AND CONDUIT SIZES.
- 4 SCE INCOMING SERVICE, CONTRACTOR TO COORDINATE WITH SCE FOR POINT OF CONNECTION AND REQUIREMENTS.
- 5 PROVIDE BOLLARDS AROUND THE PERIMETER OF THE PAD MOUNTED EQUIPMENT WHERE VEHICULAR TRAFFIC MAY CAUSE DAMAGE. MAINTAIN CLEAR AREA IN FRONT OF PADMOUNT EQUIPMENT DOOR WITH WORKING CLEARANCES AS REQUIRED. PAINT BOLLARDS "SAFETY YELLOW" AND INSTALL REFLECTIVE SAFETY TAPE.
- 6 INTERCEPT AND EXTEND FEEDER TO NEW MAIN DISTRIBUTION BOARD "MSB1".
- 7 DISCONNECT AND TRANSFORMER LOCATED INSIDE CLUBHOUSE ELECTRICAL ROOM.
- 8 DISCONNECT AND REMOVE ALL DEVICES, EQUIPMENT AND WIRES ASSOCIATED WITH THE EXIST SEWER LIFT STATION AFTER THE NEW SEWER LIFT STATION IS ENERGIZED AND OPERATIONAL.
- 9 SEWAGE LIFT STATION EMERGENCY GENERATOR AND AUTOMATIC TRANSFER SWITCH "ATS1". COORDINATE EXACT LOCATION WITH ARCHITECT. PROVIDE WITH CONCRETE HOUSEKEEPING PAD AS REQUIRED.
- 10 SEWAGE LIFT STATION CONTROL PANEL BY OTHERS. SEE SINGLE LINE DIAGRAM.
- 11 (2) 3/4"C.O. TO GUARD STATION AND TO CHECK-IN BLDG. EMERGENCY GENERATOR ANNUNCIATOR PANEL (TROUBLE SIGNAL).



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PROJECT FOR:
CITY OF LAKE ELSINORE

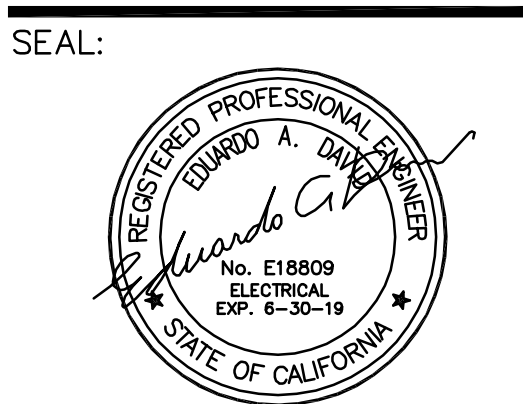
130 SOUTH MAIN ST.
LAKE ELSINORE, CA 92530

PROJECT NAME:
RV RESORT

32040 RIVERSIDE DRIVE
LAKE ELSINORE, CA 92530

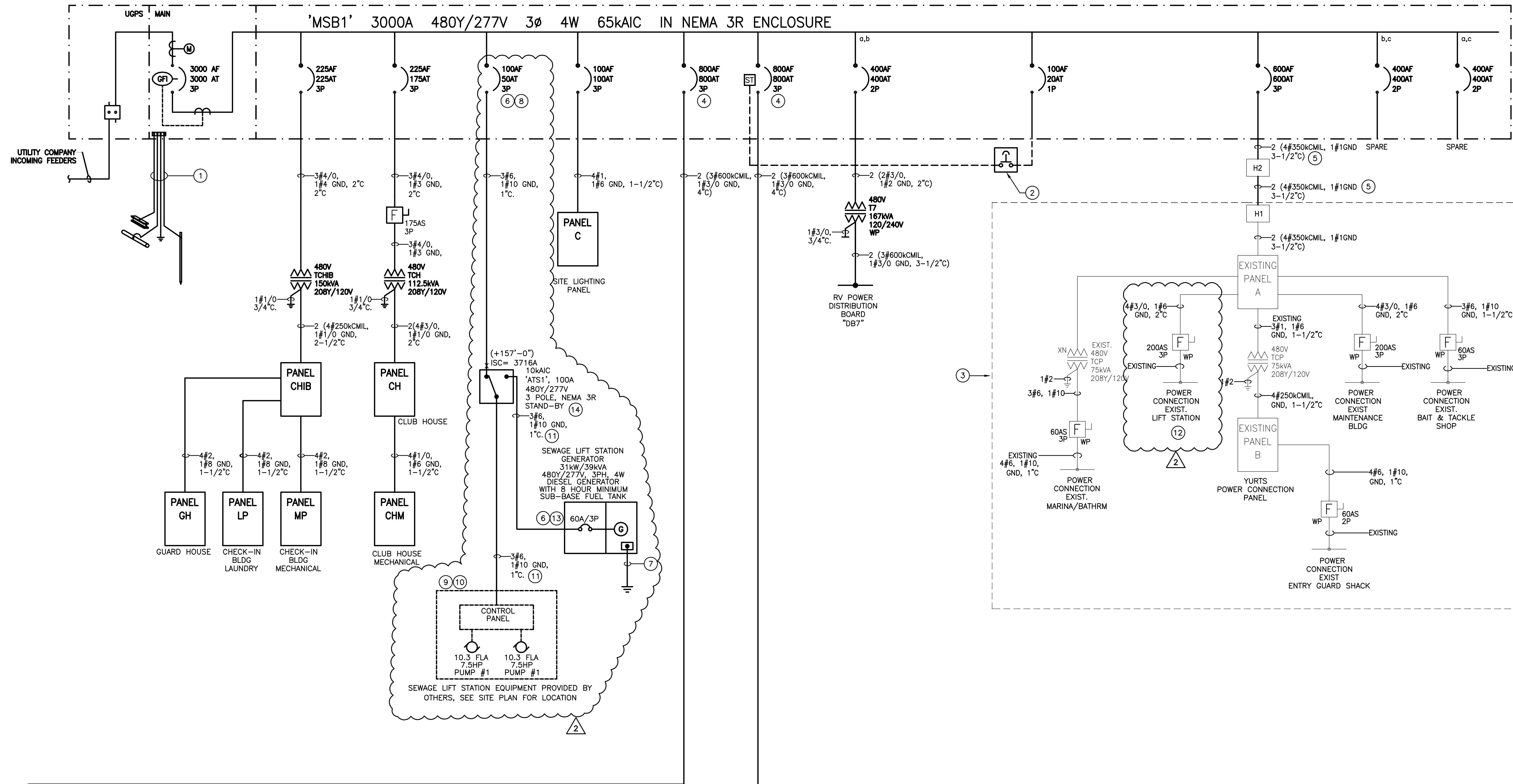
ISSUE INFORMATION:	
DATE:	INFORMATION:
04-3-2017	PLAN CHECK
05-1-2017	PLAN CHECK 2
MAY-2017	PLAN CHECK 3
06-29-17	COORDINATION
09-29-17	LIFT STATION COORD.

SHEET INFORMATION:
STK PROJECT NO.: 316-08-15
SCALE: AS NOTED
DATE: APRIL 2017
PLOT DATE:
DRAWING NAME:



SHEET TITLE:
**ELECTRICAL
OVERALL
SITE PLAN**

SHEET NO.:
E-1.1



GENERAL NOTES

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.
- ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED.
- CONTRACTOR TO PROVIDE LOAD SIDE LUGS TO ACCOMMODATE FEEDERS.

KEY NOTES

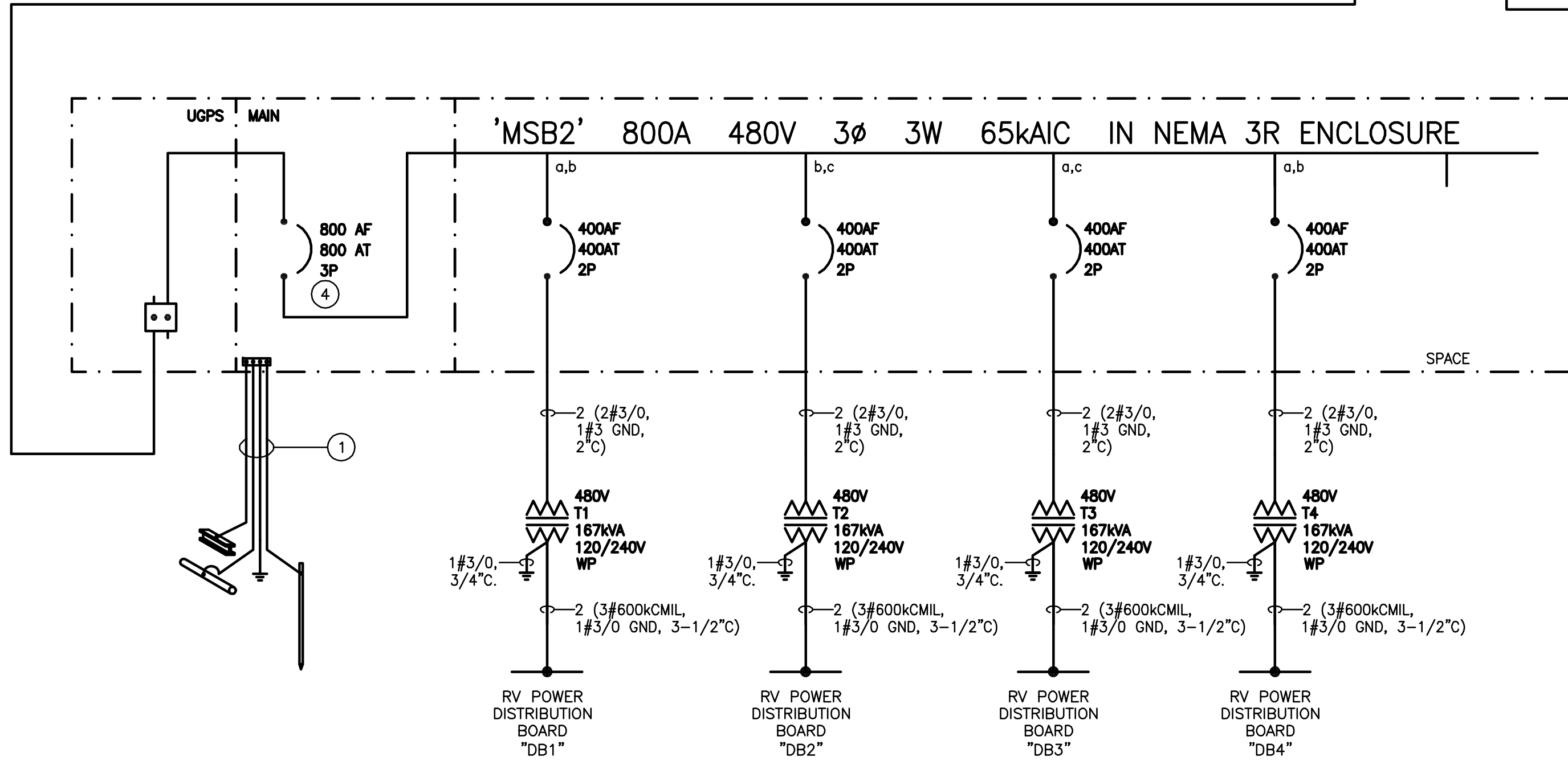
- GROUNDING ELECTRODE SYSTEM:
1#3/0 CU UFER
1#3/0 CU COLD WATER BOND
1#3/0 CU TO BUILDING STEEL
1#3/0 CU TO COPPER CLAD 3/4" DIA X 10'-0" GROUND ROD AND AS REQUIRED BY CEC ARTICLE 250 AND LOCAL JURISDICTION
- KEYED SWITCH FOR SHUNT TRIPS IN WEATHERPROOF ENCLOSURE. MOUNT TO SWITCHBOARD ENCLOSURE IN A READILY ACCESSIBLE LOCATION. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO START OF WORK.
- EXISTING WORK TO REMAIN.
- PROVIDE 100% RATED CIRCUIT BREAKER.
- PROVIDE FEEDERS IN THE EXISTING 3-1/2"C.
- PROVIDE REQUIRED PLAQUES AND LABELING REQUIRED BY CEC 230.2(E) AND COORDINATE LOCATION REQUIREMENTS WITH CEC 230.72(B) AND LOCAL AUTHORITIES AS REQUIRED.
- 1#4 AWG (CU), 3/4" CONDUIT UFER GROUND AS PER NEC ARTICLE #250.
- THE SEWAGE LIFT STATION CONTROL PANEL DISCONNECTING MEANS SHALL BE IN ACCORDANCE WITH CEC 695.4(3)(a)(b)(c).
- ALL GENERATOR AND SEWAGE LIFT STATION CONTROL PANEL WIRING SHALL BE IN ACCORDANCE WITH CEC 695.14(E) AS APPLICABLE.
- SEWAGE LIFT STATION CONTROL PANEL SIZE SHOWN IS WORST CASE AND SHALL INCLUDE ALL ASSOCIATED PUMP MOTORS AND CONTROL POWER REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM PROVIDED BY DEFERRED SUBMITTAL.
- ALL GENERATOR POWER WIRING SHALL BE IN ACCORDANCE WITH CEC 695.6(A)(2) AS APPLICABLE.
- DISCONNECT AND REMOVE ALL DEVICES, EQUIPMENT AND WIRES ASSOCIATED WITH THE EXIST SEWER LIFT STATION AFTER THE NEW SEWER LIFT STATION IS ENERGIZED AND OPERATIONAL.
- EMERGENCY GENERATOR: IN SOUND ATTENUATED, NEMA 3R WEATHERPROOF ENCLOSURE, "KOHLER" #305RE02K SERIES WITH REMOTE ANNUNCIATOR PANELS.
- AUTOMATIC TRANSFER SWITCH: "KOHLER" #KCS SERIES IN NEMA 3R ENCLOSURE.

LOAD SUMMARY

SWITCHBOARD 'MSB1'

PANEL 'CHIB'	=	60.70 kVA
PANEL 'CH'	=	46.76 kVA
LIFT STATION	=	24.90 kVA
PANEL 'C'	=	5.95 kVA
DISTRIBUTION BOARD 'MSB2'	=	555.26 kVA
DISTRIBUTION BOARD 'MSB3'	=	280.51 kVA
RV DISTRIBUTION 'DB7'	=	0.15 kVA
EXISTING PANEL 'A'	=	357.58 kVA

TOTAL LOAD
1337.60 kVA @ 480Y/277V, 3PH, 4W
1608.89 AMPS

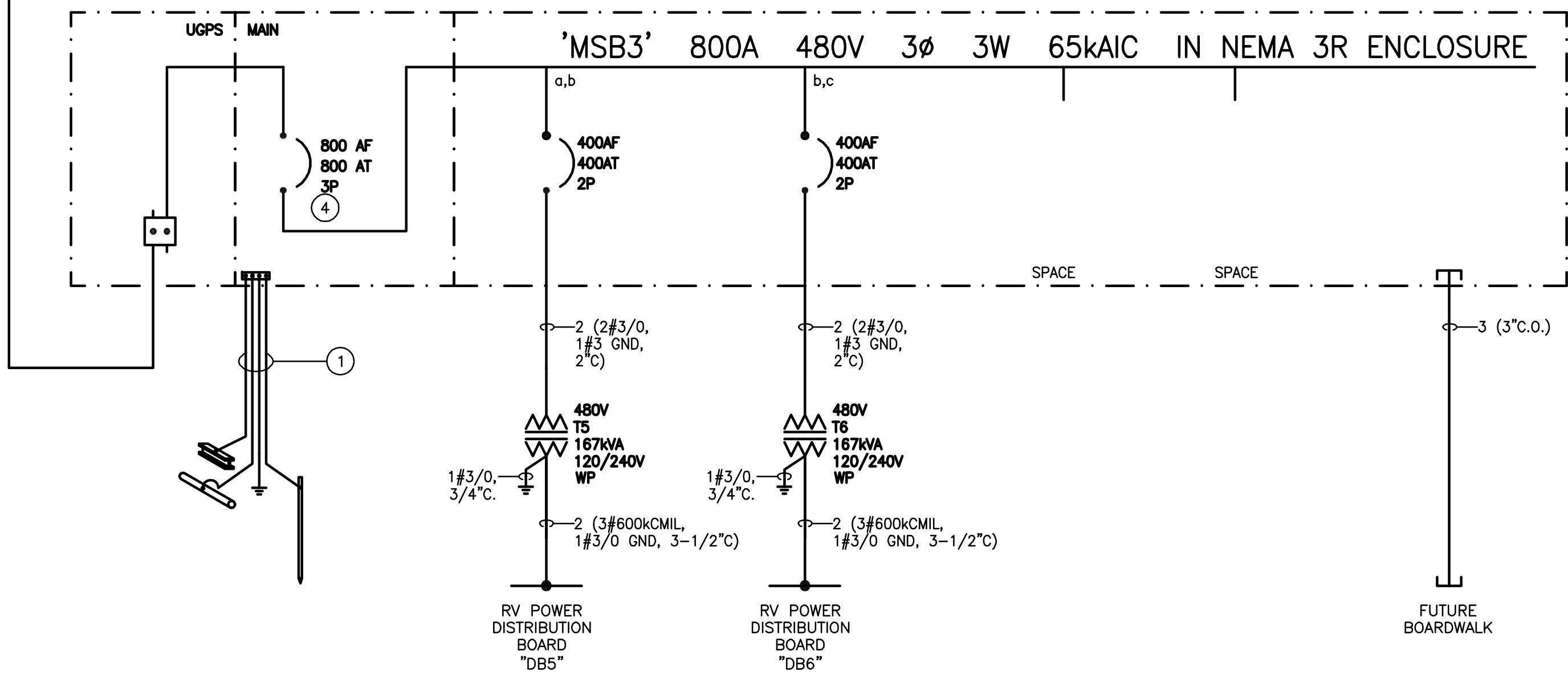


LOAD SUMMARY

DISTRIBUTION BOARD 'MSB2'

RV DISTRIBUTION "DB1"	=	133.06 kVA
RV DISTRIBUTION "DB2"	=	141.70 kVA
RV DISTRIBUTION "DB3"	=	140.26 kVA
RV DISTRIBUTION "DB4"	=	140.26 kVA

TOTAL LOAD
555.26 kVA @ 480V, 3PH, 3W
667.88 AMPS

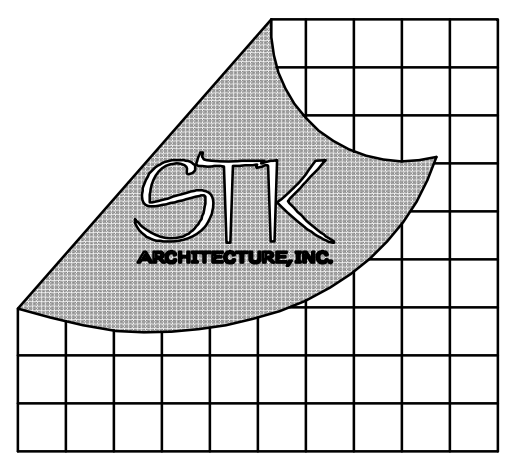


LOAD SUMMARY

DISTRIBUTION BOARD 'MSB3'

RV DISTRIBUTION "DB5"	=	133.06 kVA
RV DISTRIBUTION "DB6"	=	147.46 kVA

TOTAL LOAD
280.51 kVA @ 480V, 3PH, 3W
337.40 AMPS



CONSULTANT:

MECHANICAL, PLUMBING & ELECTRICAL



PROJECT FOR:

CITY OF LAKE ELSINORE

130 SOUTH MAIN ST.
LAKE ELSINORE, CA 92530

PROJECT NAME:

RV RESORT

32040 RIVERSIDE DRIVE
LAKE ELSINORE, CA 92530

ISSUE INFORMATION:

DATE:	INFORMATION:
04-3-2017	PLAN CHECK
05-1-2017	PLAN CHECK 2
MAY-2017	PLAN CHECK 3
06-29-17	COORDINATION
09-29-17	LIFT STATION COORD.

SHEET INFORMATION:

STK PROJECT NO.: 316-08-15
SCALE: AS NOTED
DATE: APRIL 2017
PLOT DATE:
DRAWING NAME:

SEAL:



SHEET TITLE:

SINGLE LINE
DIAGRAM

SHEET NO.:

E-4.2

PANEL: LP		LOCATION:		SEE PLANS		MAIN: 100A/3P		BUS: 125A		NEMA 1				
VOLTAGE: 208 / 120		AIC RATING: 10000		FEED: TOP		MTG: SURFACE								
PHASE: 3		CIRCUIT CODE:												
WIRE: 4		blank=NON-CONTINUOUS, N=NON-COINCIDENTAL, L=LONG CONTINUOUS, R=RECEPT (NEC ART. 220-44), K=KITCHEN												
NOTE	DESCRIPTION	CODE	BKR	P	#	VA	PHASE	VA	#	P	BKR	CODE	DESCRIPTION	NOTE
1a	WASHER		20	1	1	900	A	1655	2	1	20		DRYER	1d
1a	WASHER		20	1	3	900	B	1655	4	1	20		DRYER	1d
1a	WASHER		20	1	5	900	C	1655	6	1	20		DRYER	1d
1b	WASHER		20	1	7	900	A	1655	8	1	20		DRYER	1e
1b	WASHER		20	1	9	900	B	1655	10	1	20		DRYER	1e
1b	WASHER		20	1	11	900	C	1655	12	1	20		DRYER	1e
1c	WASHER		20	1	13	900	A	1655	14	1	20		DRYER	1f
1c	WASHER		20	1	15	900	B	1655	16	1	20		DRYER	1f
	CONV. RECEPT		20	1	17	360	C		18	1	20		SPARE	
	SPARE		20	1	19		A		20	1	20		SPARE	
	SPARE		20	1	21		B		22	1	20		SPARE	
	SPARE		20	1	23		C		24	1	20		SPARE	
	SPARE		20	1	25		A		26	1	20		SPARE	
	SPARE		20	1	27		B		28	1	20		SPARE	
	SPARE		20	1	29		C		30	1	20		SPARE	
	SPACE		31				A		32				SPACE	
	SPACE		33				B		34				SPACE	
	SPACE		35				C		36				SPACE	
	SPACE		37				A		38				SPACE	
	SPACE		39				B		40				SPACE	
	SPACE		41				C		42				SPACE	
CONNECTED VA @ A		7665	CONNECTED VA ()		20800	PANEL CONN. AMPS WITH LCL		57.74	PANEL DEMAND KVA WITH LCL		20.80			
CONNECTED VA @ B		7665	CONNECTED VA (L)		0	CONNECTED VA WITH LCL (L)		0	PANEL DEMAND AMPS WITH LCL		57.74			
CONNECTED VA @ C		5470	CONNECTED VA (R)		0	DEMAND VA (R)		0	PANEL CONNECTED AMPS		57.74			
TOTAL VA		20800	CONNECTED VA (K)		0	DEMAND VA (K)		0	DEMAND HIGH @ AMPS WITH LCL		63.83			
1	PROVIDE LISTED HANDLE-TIE DEVICE		6		SPECIAL NOTES:									
2			7											
3			8											
4			9											
5			10											

PANEL: CHIB		LOCATION: SEE PLANS		MAIN: 500A/3P		BUS: 600A		NEMA 1						
VOLTAGE: 208 / 120		AIC RATING: 35000		FEED: BOTTOM		MTG: SURFACE								
PHASE: 3		CIRCUIT CODE:												
WIRE: 4		blank=NON-CONTINUOUS, N=NON-COINCIDENTAL, L=LONG CONTINUOUS, R=RECEPT (NEC ART. 220-44), K=KITCHEN												
NOTE	DESCRIPTION	CODE	BKR	P	#	VA	PHASE	VA	#	P	BKR	CODE	DESCRIPTION	NOTE
	2 EXTERIOR LTS	L	20	1	1	190	A	1002	2	1	20	L	POOL POLE LIGHTS	2
2	EXTERIOR LTS	L	20	1	3	566	A	100	4	1	20	L	CANOPY LIGHTS	2
	RESTROOMS/SUPPORT RM LTS	L	20	1	5	454	A	C	6	1	20		SPARE	
	LOBBY LTG	L	20	1	7	600	A		8	1	20		SPARE	
	LOBBY LTG	L	20	1	9	400	B		10	1	20		LOP1	
	ENTRY LIGHT	L	20	1	11	1000	C		12	1	30		EM INVERTER	
SPLIT BUS														
1a	SERVER		20	1	13	500	A	540	14	1	20		CHECK IN COUNTER	1f
1a	SERVER		20	1	15	500	B	180	16	1	20		CHECK IN TV	1f
1a	SERVER		20	1	17	500	C	360	18	1	20		CHECK IN REC (CTRL)	1f
1b	ICE MAKER		20	1	19	1800	A	540	20	1	20		OFFICE	1g
1b	VENDING		20	1	21	1800	B	540	22	1	20		OFFICE (CTRL)	1g
1b	CONV. RECEPTACLES		20	1	23	540	C	360	24	1	20		BREAKRM RECEPTACLES	1g
1c	HAND DYER		20	1	25	1800	A	900	26	1	20		BREAKRM REF.	1h
1c	HAND DYER		20	1	27	1800	B	1200	28	1	20		BREAKRM GD	1h
1d	RESTRM GFI		20	1	29	360	C	360	30	1	20		BREAKRM REC. (CTRL)	1h
1d	RESTRM GFI		20	1	31	360	A	720	32	1	20		RETAIL RECEPTACLE	1i
1d	CONV. RECEPTACLES		20	1	33	540	B	540	34	1	20		LOBBY RECEPTACLE	1i
1e	DRINKING FOUNTAIN		20	1	35	900	C	540	36	1	20		LOBBY RECEPTACLE (CTRL)	1i
1e	EXTERIOR GFI REC		20	1	37	540	A	360	38	1	20		EXTERIOR RECEPTACLE	
1e	INTERIOR GFI REC		20	1	39	360	B	40	1	20			SPARE	
	WATER HEATER (WH-1)		20	1	41	100	C		42	1	20		SPARE	
	WATER HEATER (WH-2)		20	2	43	2080	A		44	1	20		SPARE	
	EM GEN ANNUN PANEL		20	1	47	100	B		46	1	20		SPARE	
	SPARE		20	1	49		A		48	1	20		SPARE	
	SPARE		20	1	51		B		50	1	20		SPARE	
	SPARE		20	1	53		C		52	1	20		SPARE	
	SPARE		20	1	55		A	1650	54	1	20		SPARE	
	SPARE		20	1	57		B	2158	56	3	100		PANEL GH	
	SPARE		20	1	59		C	1998	58				-	
	MECH. PANEL "MP"		100	3	61	4980	A	7665	62	3	100		LAUNDRY PANEL "LP"	
	-				63	6639	B	7665	64				-	
	-				65	6131	C	5470	66				-	
CONNECTED VA @ A		26227	CONNECTED VA ()		56555	PANEL CONN. AMPS WITH LCL		203.45	PANEL DEMAND KVA WITH LCL		60.70			
CONNECTED VA @ B		27068	CONNECTED VA WITH LCL (L)		3312	CONNECTED VA WITH LCL (L)		4140	PANEL DEMAND AMPS WITH LCL		168.47			
CONNECTED VA @ C		19173	CONNECTED VA (R)		0	DEMAND VA (R)		0	PANEL CONNECTED AMPS		201.15			
TOTAL VA		72468	CONNECTED VA (K)		0	DEMAND VA (K)		0	PANEL DEMAND HIGH @ AMPS WITH LCL		227.62			
1	PROVIDE LISTED HANDLE-TIE DEVICE	6	SPECIAL NOTES:											
2	BRANCH CIRCUIT CONTROLLED VIA RELAY IN LCP1	7	VOLTAGE DROP											
3		8												
4		9												
5		10												

PANEL: CH		LOCATION: SEE PLANS		MAIN: 400A/3P		BUS: 400A		NEMA 1								
VOLTAGE: 208 / 120		AIC RATING: 10000		FEED: BOTTOM		MTG: SURFACE										
PHASE: 3		CIRCUIT CODE: blank=NON-CONTINUOUS, N=NON-COINCIDENTAL, L=LONG CONTINUOUS, R=RECEPT (NEC ART. 220-44), K=KITCHEN														
WIRE: 4																
NOTE	DESCRIPTION	CODE	BKR	P	#	VA	PHASE	VA	#	P	BKR	CODE	DESCRIPTION	NOTE		
2	SCONCES, WALL GRAZERS	L	20	1	1	204	A	608	2	1	20	L	INTERIOR LTS			
2	PATIO WALL SCONCES	L	20	1	3	88	B	1200	4	1	20	L	LARGE CHANDELIERS			
2	RAMP POST TOPS	L	20	1	5	1338	A	360	6	1	20	L	SMALL CHANDELIERS			
2	BOLLARDS	L	20	1	7	130	A	945	8	1	20	L	LED GREAT RM UPLIGHTS			
2	SMALL CHANDELIERS PATIO	L	20	1	9	1080	B	500	10	1	20	L	LOP2			
	SPARE		20	1	11		C		12	1	30		EM INVERTER			
SPLIT BUS																
1a	KITCHEN REF (FUTURE)		20	1	13	1000	A	360	14	1	20		CONV. RECEPTACLES	1d		
1a	KITCHEN REF (FUTURE)		20	1	15	1000	B	360	16	1	20		CONV. RECEPTACLES	1d		
1a	KITCHEN REF (FUTURE)		20	1	17	1000	C	360	18	1	20		CONV. RECEPTACLES	1d		
	ICE MAKER (FUTURE)		20	1	19	1800	A	180	20	1	20		TV OUTLET	1e		
1b	KITCHEN GD (FUTURE)		20	1	21	1000	B	360	22	1	20		FIRE PLACE IGNITOR	1e		
1b	KITCHEN DW (FUTURE)		20	1	23	1200	C	180	24	1	20		AV EQPT/ELECTRICAL	1e		
	KITCHEN MICROW (FUTURE)		20	1	25	1500	A	360	26	1	20		RESTROOM GFI			
	KITCHEN RANGE (FUTURE)		20	1	27	500	B	360	28	1	20		SECOND FLR RECEPTACLES	1f		
1c	KITCHEN COUNTERTOP (FUTURE)		20	1	29	540	C	360	30	1	20		SECOND FLR RECEPTACLES	1f		
1c	KITCHEN COUNTERTOP (FUTURE)		20	1	31	720	A	360	32	1	20		SECOND FLR RECEPTACLES	1f		
	WATER HEATER (WH-2)		20	2	33	2080	B		34	1	20		SPARE			
	-				35	2080	C		36	1	20		SPARE			
	F1 CEILING FAN		20	1	37	168	A		38	1	20		SPARE			
	WATER HEATER (WH-2)		20	2	39	2080	B		40	1	20		SPARE			
	-				41	2080	C		42	1	20		SPARE			
	F2,F3 CEILING FAN		20	1	43	336	A		44	1	20		SPARE			
	SPARE		20	1	45		B		46	1	20		SPARE			
	SPARE		20	1	47		C		48	1	20		SPARE			
	SPACE				49		A		50				SPACE			
	SPACE				51		B		52				SPACE			
	SPACE				53		C		54				SPACE			
	SPACE				55		A		56				SPACE			
	SPACE				57		B		58				SPACE			
	SPACE				59		C		60				SPACE			
	MECH. PANEL "CHM"		150	3	61	9853	A		62				SPACE			
	-				63	9643	B		64				SPACE			
	-				65	9100	C		66				SPACE			
CONNECTED VA @ A		18524	CONNECTED VA ()		42320	PANEL CONN. AMPS WITH LCL		163.38	PANEL DEMAND KVA WITH LCL			49.76				
CONNECTED VA @ B		20251	CONNECTED VA (L)		5951	CONNECTED VA WITH LCL (L)		7439	PANEL DEMAND AMPS WITH LCL			138.12				
CONNECTED VA @ C		18596	CONNECTED VA (R)		0	DEMAND VA (R)		0	PANEL CONNECTED AMPS			159.25				
TOTAL VA		57371	CONNECTED VA (K)		0	DEMAND VA (K)		0	DEMAND HIGH @ AMPS WITH LCL			173.56				
1	PROVIDE LISTED HANDLE DEVICE		6											SPECIAL NOTES:	VOLTAGE DROP	0.57 %
2	BRANCH CIRCUIT CONTROLLED VIA RELAY IN LCP2		7													
3			8													
4			9													
5			10													

LA LAGUNA RV RESORT
LAKE ELSINORE, CA

SE-1&2: PACKAGE SEWAGE LIFT STATION

SCOPE OF SUPPLY:

Furnish and install complete pre-packaged sewage pump lift station model # PSI-ERS81717 as manufactured by Pacific Southwest Ind. No exceptions to this specification may be taken without engineers approval.

The lift station shall incorporate a quick removal system that does not require the use of o-rings or gaskets to make a seal between the vortex pump and the pre-mounted quick removal discharge base. The vortex pumps shall be guided to the discharge base by the use of two stainless steel guide rails for each pump. The diameter of the guide rails shall be no less than 2" and shall extend from the discharge base to the upper guide bracket mounted on the cover. Lifting chain or cable shall be attached to the top of the pump and to the cover adjacent to the upper guide bracket for easy access and pump removal. The internal discharge plumbing shall be pre-plumbed in schedule 80 PVC and extend , in parallel, 12" beyond the wet well side wall for contractor connection to the valve box and then combine into one 4" force main. Each pump discharge line shall include one non-slammng check valve and one true union ball valve in a detached valve box. The valve vault will be pre-plumbed with flanged check and plug valves. The lift station shall include a submersible transducer for primary level control and 2 float back up system, pre-set and ready to be installed the wet well. The duplex control panel shall be surface mountable adjacent to the lift station. The pumps, quick removal system, and level sensors shall be housed in a fiberglass wet well 60" in diameter and 330" in length and shall incorporate an oversized steel anti-flotation flange.

PUMPS: Each pump model number 100UZ45.5 shall deliver 270 GPM each at 35.17 FT TDH.

The pump(s) shall be a recessed vortex designed to pump wastewater, sewage or effluent containing solids(3.94" spherical without damage during operation. The pump(s) shall be designed so that the shaft power required (BHP)/(KW) shall not exceed the motor rated output throughout the entire operating range of the pump performance curve.

MATERIALS OF CONSTRUCTION

All major parts of the pumping unit(s) including casing, Impeller, discharge elbow, and motor frame shall be manufactured from gray cast iron, ASTM A48 CLASS 35. Internal and external surfaces coming into contact with the pumpage shall be protected by a fused polymer coating. All exposed fasteners shall be stainless steel. All units shall be furnished with a discharge elbow with 150 lb. (10 Kg./Cm2) flat face flange and 4" ANSI flange. Impellers shall be of the multi-vane vortex design, equipped with back pump out vanes, tungsten carbide vane tip and shall be slip fit to the shaft and key driven.

MECHANICAL SEAL

All units shall be furnished with a dual inside mechanical shaft seal located completely out of the pumpage, running in a separate oil filled chamber and further protected by an exclusionary oil seal located between the bottom seal faces and the fluid being pumped. The oil chamber shall be fitted with a device that shall provide positive lubrication of the top mechanical seal, (down to one third of the standard oil level). The device shall not consume any additional electrical power. Mechanical seals shall be rated to preclude the incursion of water up to 42.6 PSI (98.4 Ft.). Units shall have silicon carbide versus silicon carbide upper and lower mechanical seal faces. Mechanical seal hardware shall be stainless steel. Units designed to exceed 42.6 PSI at shut off head shall incorporate seal pressure relief ports.

MOTOR

The pump motor(s) shall be 7.5 HP, 5.5 kW., 230/460 V. 3 Phase 60 Hz and shall be NEMA MG-1, Design Type B equivalent. Motor(s) shall be rated at 20.5/10.2 full load amps. Motor(s) shall have a 1.15 service factor and shall be rated for 20 starts per hour. Motor(s) shall be air filled, copper wound, class F insulated with built in thermal and over current protection for each winding. Motor shaft shall be 420 stainless steel and shall be supported by two permanently lubricated, high temperature ball bearings, with a B-10 life rating at best efficiency point of 60,000 hours. The bottom bearing on units 7.5 HP (5.5 KW) and below shall be a single row, double shielded, C3, deep groove type ball bearing. Units 10 Hp. (7.5 KW) and larger shall have a double row, double shielded, C3, angular contact type bottom bearing. The top bearing on all units shall be a single row, double shielded, C3, deep groove type ball bearing.

POWER CABLE AND CABLE ENTRANCE

The pump power cable shall be suitable for submersible pump applications and shall be field replaceable utilizing standard submersible pump cable. The cable entrance shall incorporate built-in strain relief and a combination three-way mechanical compression sealing with a fatigue reducing/thermal expansion boot. The cable entrance assembly shall contain an anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.

DUPLEX ALTERNATING CONTROL PANEL
(MAIN LEVEL CONTROL BY SUBMERSIBLE PROBE LEVEL SENSORS)

The control panel shall have a NEMA 4X door -in -door dead front locale fiberglass enclosure suitable for wall mounting. A integral motor starter with short circuit protection and over load protection shall be provided for each pump. An alternating relay shall be provided to alternate pumps on each successive cycle of operation. The starter shall have auxiliary contacts to operate both pumps in an override condition. The control circuit shall not be affected in the event that either pump trips the pump circuit breaker. H.O.A. switches, run lights for each pump, motor overload light for each pump, elapsed time meter for each pump, thermal cut out terminals with over temperature lights, control circuit breaker or fuse, 15 amp convenience outlet breaker, 2KVA control circuit transformer with fused primary, 15 amp 120 volt convenience outlet (GFI) grounded and bonded and mounted on inner door, lighting arrester, surge capacitor, phase monitor, time delay for no simultaneous pump starting and alarm test switch for light and buzzer operation only (no contact closure)shall be provide as a minimum. A terminal strip shall be provided to terminate all incoming power, pump, transducer, level sensors and remote alarm wiring. The control panel shall offer a high water alarm light, top mounted for 360 degree visibility. An external push button shall be provided to silence the audible alarm. The control panel shall be optioned with a generator hook up receptacle, 60 amp manual transfer switch and matching plug. Provide single pole double throw auxiliary contacts for power loss to the lift station or high water alarm condition. One set of contacts will provide for both events.

The control panel will be equipped with a 4 channel Auto Dialer (OR RTU'S for city telemetry system) to be used for monitoring the following conditions: High Water Alarm, Power Loss, Pump 1 Failure, Pump 2 Failure.

FIBERGLASS WET WELL AND VALVE BOX:

The fiberglass wet well shall be suitable for high water table installations and shall have a steel anti-flotation flange bottom shall be provided by the wet well manufacturer. The wet well shall be no less than 60" inside diameter and be 330" in length. The fiberglass tank will be fitted with an oversized anti flotation collar 78" outside diameter. The capacity of the wet well below the lowest inlet is to be ~735 gallons (operating capacity). The laminate shall have a barcol hardness of a least 90% of the resin manufactures minimum specified hardness for cured resin on both the interior and exterior surfaces. The minimum wall thickness of the wet well shall not be less than 3/8". The wet well manufacturer shall encapsulate in the bottom of the wet well studs for the mounting of the quick removal system. The top rim flange must be no less than 3" wider than the ID of the wet well (66" O.D.). The wet well must be provided with 2- 8" inlet fitting for field installation by the contractor at the elevation and location as indicated on the plans. All other penetrations shall be sealed by using "Uniseal" fitting or "Flex boot" fittings. The valve box shall be manufactured with the same process as the wet well. The valve box shall have an inside diameter of 60" with a depth of 78" and be fitted with and oversized anti flotation flange 78" outside diameter. The valve box shall include two non-slammng check valves(Model# Valmatic 504MIK), 2- 4" cast iron plug valves (Model# Valmatic5804) and a 3" emergency bypass piping with shut off valve and appropriate cam-lock fittings.

ALUMINUM DIAMOND COVERS WITH HATCH ACCESS:

The covers of the wet well and valve box shall be no less than 1/4" thick aluminum diamond tread suitable for load up to 300 psf. The covers must have a clear access opening for pump removal and valve access as recommended by the pump manufacturer. The access covers shall be hinged with a hold open arm at 90 degrees. The covers will be equipped with a slam lock feature.

SEWAGE LIFT STATION PROFILE & CALCULATIONS
LA LAGUNA RV & RESORT
LAKE ELSINORE, CA

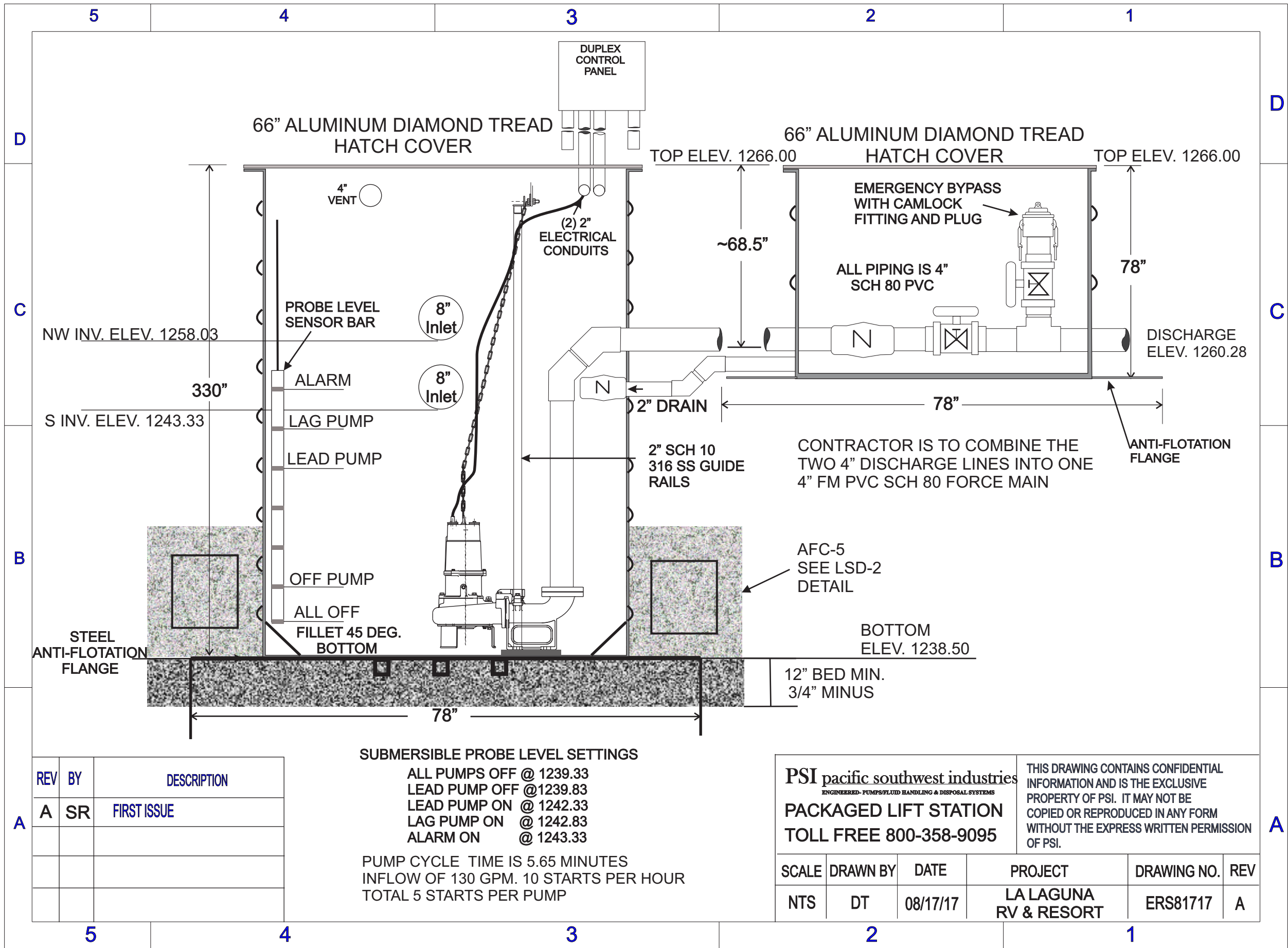
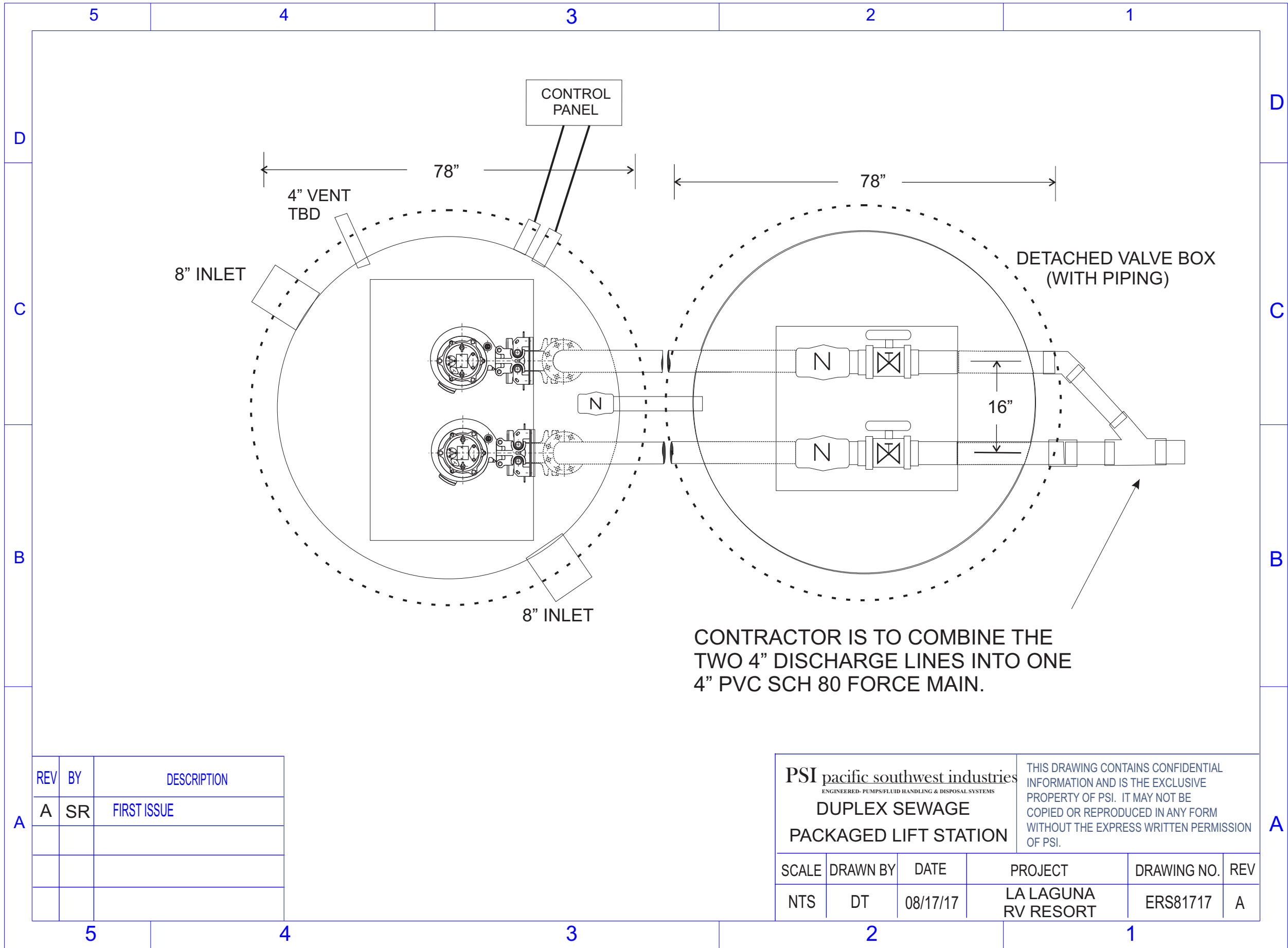
FIXED CONDITIONS:

STATIC HEAD	21.27 FEET
LENGTH OF RUN	171.0 FEET
TYPE OF PIPE	PLASTIC
SIZE OF FORCE MAIN	4 INCH
TYPE OF FLUID	RAW UNSCREENED SEWAGE
VOLTAGE	230/460
PHASE	3
GRAVITY INLET SIZE	2- 8 INCH
INLET ELEVATION	S 272.04 INCHES , NW 95.64 INCHES

CALCULATIONS:

STATIC HEAD	21.27 FEET
TOTAL FRICTION HEAD	13.90 FEET

CALCULATED TOTAL DYNAMIC HEAD 35.17 FEET
MAINTAINED VELOCITY OF 7.33FEET PER SECOND @ 270 GPM PER PUMP



NOTICE TO THE CONTRACTOR

This lift station and controls will be owner specified, contractor furnished, and delivered to the site. The successful bidder will furnish all other materials and labor to install the lift station and its controls and ensure its proper operation. It is the contractor's responsibility to install the lift station per this plan as indicated and make all connections, plumbing and electrical, in an approved manner as required by this drawing and local codes. The contractor's responsibilities are as follows: receiving the lift station and off loading, excavation and setting, all plumbing connections (inlet, vent, wet well to valve box, force main run thereafter to the point of city connection of receiving manhole or force main), all electrical conduit from the wet well to control panel, provide proper backfill and compaction procedures. The contractor will be required to lower the pumps into place and perform the system start up. A startup procedure form will be provided and it must be filled out and returned to the lift station supplier prior to the owners possession date via fax or email. Fax #951-678-7163 email- info@psipumps.com

Receiving / offloading instructions and preparation before setting

Receiving the lift station

Inspect the entire shipment for damage before the lift station is taken off the truck. If there is damage, note as specifically as possible including clear photos of damage on the bill of lading as to any damage, then offload. Contact the shipper at once and have the bill of lading with you. Call 800-358-9095 for further instructions.

Preparing the lift station

The lift station has been made ready to travel several hundred miles. The main wet well will contain bracing that needs to be removed before it is set in place. The lift station is to remain horizontal and on the pallet until the day it is to be set in place. On that day open the main hatch and remove the control panel, basin fittings, transducer housing and float tree. Remove all lumber bracing, wire ties and duct tape. Check all flange bolts and tighten as necessary. Check all flange bolts in the valve box as well, tighten as necessary.

Setting the lift station

The best way to set the wet well is to use two cinch straps of equal length. Place the straps right under the rim so they will tighten as the wet well is lifted. If the straps are properly positioned the wet will hang level and secure. If you have experience in this area use your own discretion.

BASIN INSTALLATION INSTRUCTIONS

- Excavation Dimensions: Excavation shall be 6" deeper than the depth of the basin, below finish grade and done in such a manner as to preserve the undisturbed state of bearing soils at the bottom. Diameter of excavation shall be sufficient to allow for necessary external pipe connections with a minimum 12" greater than the basin diameter.
- Backfill Materials:
 - The backfill materials shall be in inert, free flowing granular soil such as clean sand or gravel (1/4" mesh or finer).
 - Acceptable backfill includes "stone dust" from rock crushing operation provided it possesses all the characteristics of free flowing sand and contains less than 20% by weight passing the No. 200 mesh sieve. Soil fines must be non-plastic.
 - Silts, clays, organic soil, granulated cinder, slag and similar corrosive material shall not be used. Backfill shall be free of organic material, loam, trash, snow, ice, stones, rubble, etc.
- Pipe Connections: Make necessary pipe connection in approved manner. Note: connection may be threaded, caulked lead joints or other specified approved method, NOTE: BACKFILL SHOULD BE DONE AS SOON AS THE WET WELL IS SET AND LEVEL.
- Backfill as follows:
 - If the hole is flooded, the water level shall be pumped down to a maximum depth of 3 inches before preparing the bed and placing the basin. Water level shall be maintained below bottom of the basin until the excavation is backfilled and until there is adequate safety against uplift. The first layer of backfill is the base for the basin and shall be at least 6" thick. Place the basin on the bed and after aligning and leveling, push additional fill under and around the basin and compact by tamping to a uniform depth of 12" around the basin. This insures that the established grade and level of the basin will be maintained during remainder of the backfilling operation.
 - Backfill shall be continued in one foot layers with specified sand backfill uniformly distributed around the basin and compacted around the basin.
 - Concrete encasement may be used in lieu of backfill as described above, if the whole excavation does not exceed 12" in diameter larger than the basin to be installed.
- Cover: The cover shall be bolted in place with an approved gasket material to effect a gas-tight seal.

Instructions to remove a reinforcing rib to install the inlet

This procedure is required only if the gravity inlet lands on a rib!

Measure the length of the rib to be removed. Using a sawzall cut the rib lengthwise on the top and bottom of the rib. Keep in mind that the rib is hollow. Make the end cut between the top and bottom of the rib. Note: take care not to damage the underlying wall of the wet well. Remove the cut rib and the foam underneath. Use a circular sander to reduce the ridges left by the removal of the rib. What should remain is the uniform wall thickness of the wet well where the inlet is to be installed. Note: it is ok to remove a little more rib than to just fit the inlet fitting. Six inches on each side of the inlet is fine.

INSTALLATION OF THE FLOAT TREE AND THE SUBMERSIBLE TRANSDUCER HOUSING

Installing the submersible transducer housing and transducer
(The transducer is very sensitive to shock - be very careful with it!)

The housing has been cut to fit prior to leaving the factory. Slip the bottom of the housing over the pre-installed strainer at the bottom of the wet well. At the top under the small hatch there will be a clamp holding a short 2" pipe. Discard the short pipe and use the clamp to secure the top of the housing. Make sure the housing is plumb. The transducer will be located behind the outer door of the control panel. Remove all packing material and slowly lower the transducer into the housing until it reaches the bottom, then pull back 2" of cable, loop the cable over the housing and secure with the wire ties provided, use two. The cable is color coded and will correspond with the connection locations in the control panel. The clear tube will connect to the aneroid bellows in the control panel.

Installing the float tree

The floats have been preset - no adjustment is necessary. Lower the float tree through the small hatch on the main wetwell cover. Insert the bottom end of the tree into the floor flange installed at the bottom of the wetwell. The short 1" pipe in the clamp will be discarded. The clamp will be used to secure the top of the float tree. Once installed, rotate the float tree to ensure free movement of the floats. The floats need to float up and down without touching anything. The tags on the floats will correspond with the connection locations in the control panel - do not remove the tags.

SEWAGE PUMP SYSTEM

PSI pacific southwest industries

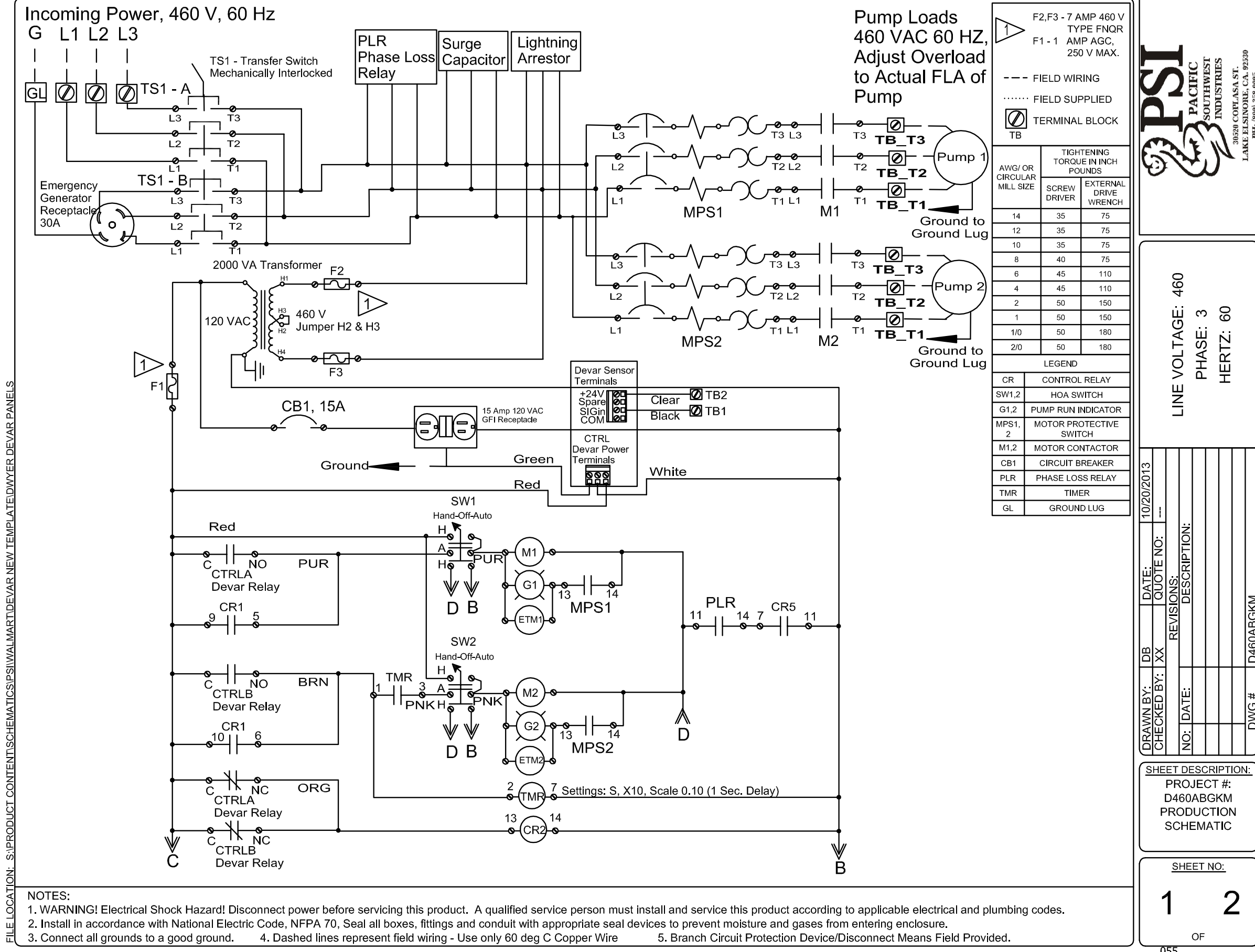
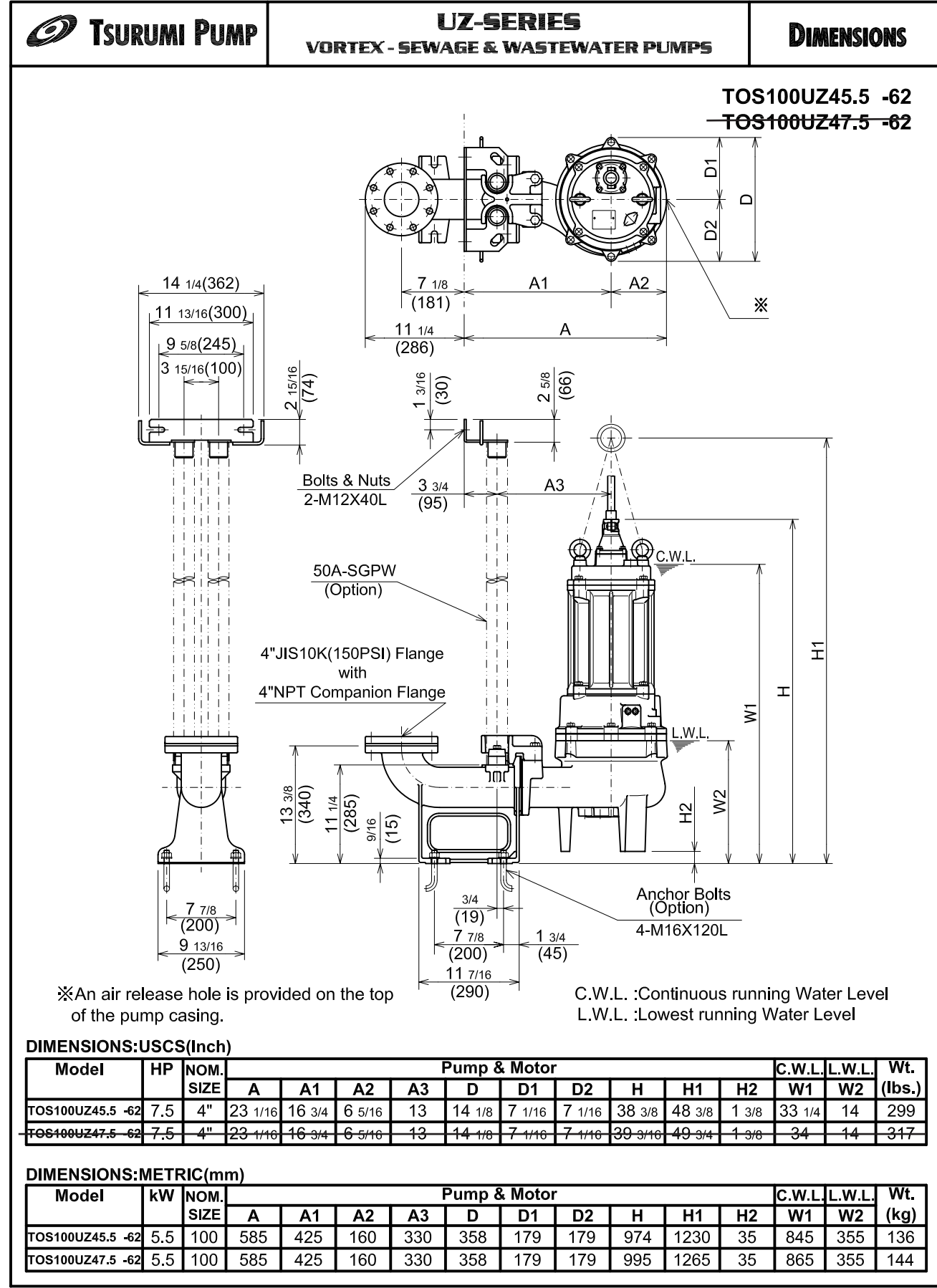
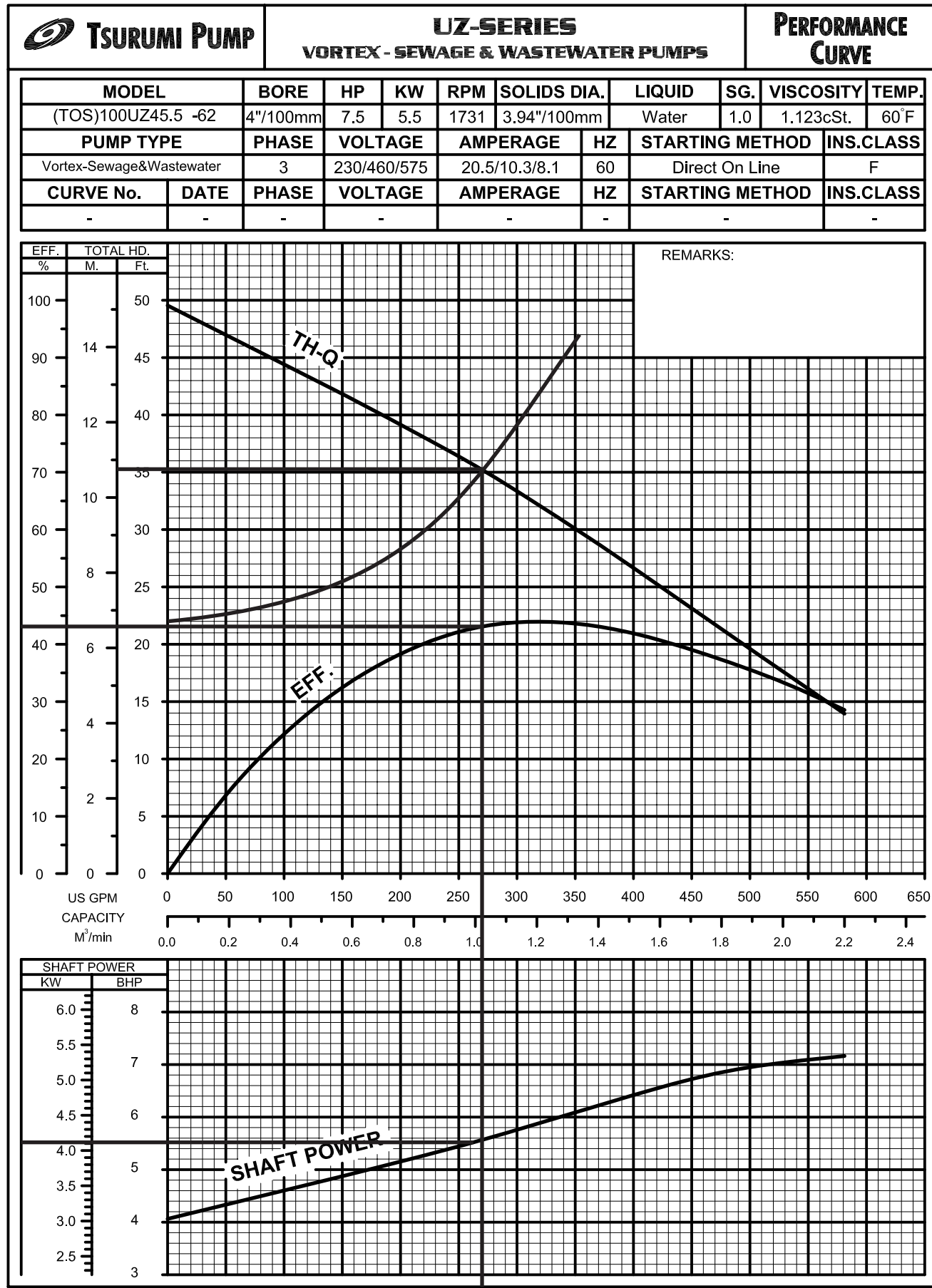
ENGINEER- PUMPS/FLUID HANDLING & DISPOSAL SYSTEMS
30520 COPLASA ST., LAKE ELSINORE, CA 92530 PH: 800 358-9095

Revisions:		Description					
		Date					
No.							

LIFT STATION DETAILS
LA LAGUNA RV & RESORT
RIVERSIDE DR
LAKE ELSINORE, CA

Date: 08/17/17 Drawn by: DT Job no: ERS81717
Scale: NTS Checked by: SR Sheet no: 1 of 2

LSD-1



PSI
PACIFIC
SOUTHWEST
INDUSTRIES

Submersible Pump System Calculation

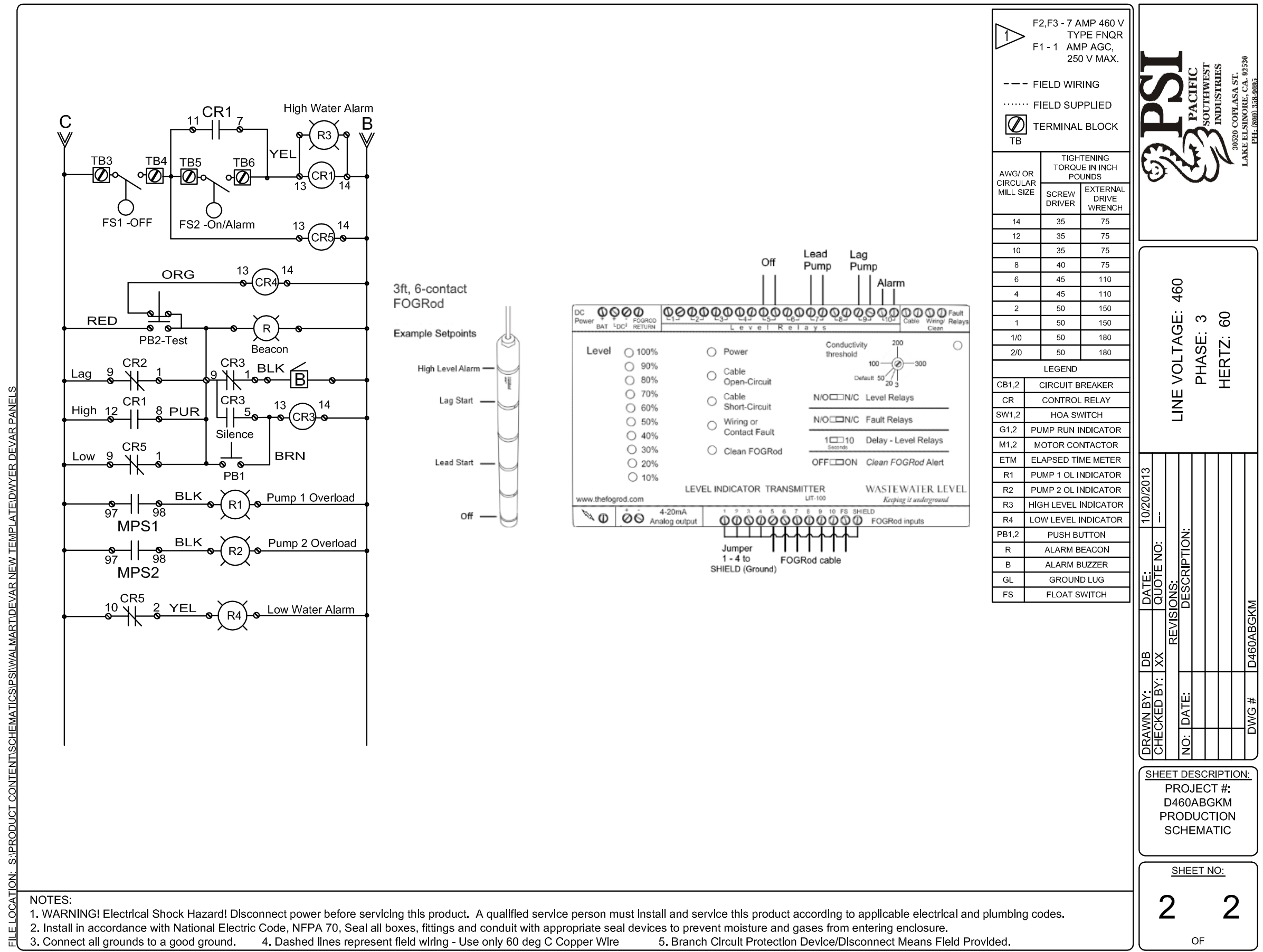
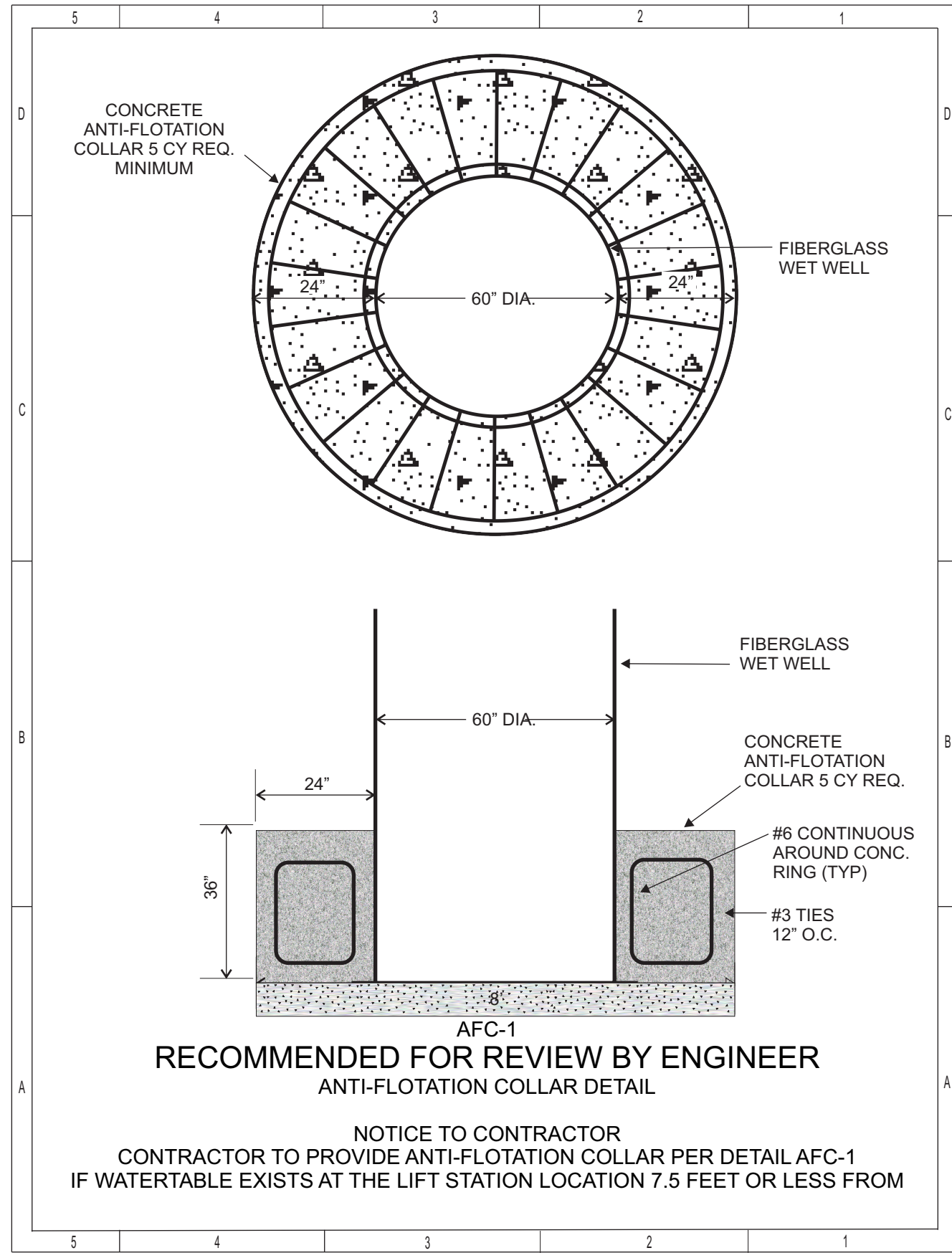
DATE: 10/11/17

PROJECT NAME: La Laguna RV Resort

CUSTOMER: ERSC- Trent

PEAK STATION, INFLOW-GPM	135.0	NUMBER OF PUMPS	1
PUMP CAPACITY EACH - GPM	270	TOTAL DYNAMIC HEAD-FT.	35.17
PUMP CAPACITY TOTAL - GPM	270	STATIC HEAD-FT.	21.27
DISCHARGE PIPE SIZE-IN.	4	PIPE FRICTION LOSS-FT.	8.96
DISCHARGE PIPE MATERIAL	PLASTIC	FITTINGS FRICT. LOSS-FT.	4.06
DISCHARGE PIPE AGE-YRS	0	OTHER F.L.-FT.	0.00
DISCHARGE PIPE SCHEDULE #	80	VELOCITY HEAD - FT.	0.88
ASPHALT DIPPED CI USE SCH 50		PIPE I.D.-IN.	3.83
DISCHARGE PIPE LENGTH-FT.	200.00	VELOCITY F/PS.	7.52
NUMBER OF FITTINGS	FLANGED	SCREWED	F.L.-FT.
SWING TYPE CHECK VALVE	1	0	0.79
BALL TYPE CHECK VALVE	0	0	0.00
GATE VALVES	1	0	0.14
TEES	0	0	0.00
LONG RADIUS 90 DEG. "L"	0	0	0.00
SHORT RADIUS 90 DEG. "L"	0	1	0.60
45 DEG. "L"	0	2	0.49
COUPLINGS	SLIP	SCREWED	
SLP/THD ADAPTERS	0	*****	0.00
INCREASERS:	SMALL DIA	LARGE DIA	NUMBER
SIZE - IN.	6	8	0
PIPE EXIT TO STILL WATER OR ATMOSPHERE			1
		FITTINGS F/L TOTAL FT.	4.06

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SEWAGE PUMP SYSTEM

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LIFT STATION DETAILS
LA LAGUNA RV & RESORT
RIVERSIDE DR
LAKE ELSINORE, CA

LSD-2

Date: 08/17/17 Drawn by: DT Job no: ERSC81717
Scale: NTS Checked by: SR Sheet no: 2 of 2