

PHONE #: (512) 923-9160

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DEVELOPER'S NAME: SOUTHSTAR AT VERANO, LLC

ADDRESS: 1118 VINTAGE WAY

STATE: TEXAS CITY: NEW BRAUNFELS

TOTAL LINEAR FOOTAGE OF PIPE:

SAWS BLOCK MAP: N/A

SAWS JOB NO.:

TOTAL EDU'S: 1,795

TOTAL ACREAGE: 232.87

ZIP: 78132

FAX: N/A

	INDEX OF SHEETS
SHT. No.	SHEET TITLE
	GENERAL SHEETS
G-I	COVER SHEET
G-2	INDEX SHEET
G-3	GENERAL NOTES
	LIFT STATION SHEETS
LS-I	LIFT STATION SITE PLAN
LS-2	LIFT STATION GRADING PLAN
LS-3	LIFT STATION PLAN AND SECTIONS
LS-4	CONSTRUCTION DETAILS
LS-5	CONSTRUCTION DETAILS
LS-6	CONSTRUCTION DETAILS
	ELECTRICAL SHEETS
E-001	ELECTRICAL ABBREVIATIONS, LEGENDS AND GENERAL NOTES
E-101	ELECTRICAL SITE PLAN
E-102	ELECTRICAL SITE PLAN - GROUNDING
E-201	ELECTRICAL ONE-LINE DIAGRAM
E-301	ELECTRICAL SCHEDULES SHEET I
E-302	ELECTRICAL SCHEDULES SHEET 2
E-401	ELECTRICAL CONTROL DIAGRAMS SHEET I
E-402	ELECTRICAL CONTROL DIAGRAMS SHEET 2
E-403	ELECTRICAL CONTROL DIAGRAMS SHEET 3
E-404	ELECTRICAL CONTROL DIAGRAMS SHEET 4
E-405	ELECTRICAL CONTROL DIAGRAMS SHEET 5
E-406	ELECTRICAL CONTROL DIAGRAMS SHEET 6
E-407	ELECTRICAL CONTROL DIAGRAMS SHEET 7
E-408	ELECTRICAL CONTROL DIAGRAMS SHEET 8
E-409	ELECTRICAL CONTROL DIAGRAMS SHEET 9
E-501	ELECTRICAL DETAILS SHEET I
E-502	ELECTRICAL DETAILS SHEET 2
E-503	ELECTRICAL DETAILS SHEET 3
E-504	ELECTRICAL DETAILS SHEET 4
E-505	ELECTRICAL DETAILS SHEET 5
E-506	ELECTRICAL DETAILS SHEET 6
E-507	ELECTRICAL DETAILS SHEET 7
E-508	ELECTRICAL DETAILS SHEET 8
E-508	GENERATOR DETAILS SHEET I
E-509	GENERATOR DETAILS SHEET T
E-510 E-600	PROCESS AND INSTRUMENTATION ABBREVIATIONS
E-600	PROCESS AND INSTRUMENTATION ABBREVIATIONS
E-602	PROCESS AND INSTRUMENTATION DIAGRAM SHEET 2
S-1	FOUNDATION PLANS AND DETAILS FOR SITE ELEMENTS
S-2	FOUNDATION PLANS AND DETAILS FOR WET WELL

PHONE #: (512) 923-9160

TOTAL LINEAR FOOTAGE OF PIPE:

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ZIP: 78132

## SAWS GENERAL CONSTRUCTION NOTES

- I. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
- A.CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART I CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART I CHAPTER 290.
- B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
- C.CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION." D.CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION."
- E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- 2. THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE,

HTTPS://APPS.SAWS.ORG/BUSINESS CENTER/SPECS/CONSTSPECS/ UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.

- 3. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 (DURING REGULAR SAWS WORKING HOURS) AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS TWO (2) WEEKS PRIOR TO EXCAVATION. OUTSIDE OF REGULAR SAWS WORKING HOURS THE SAWS EOC SHOULD BE CONTACTED AT 210-704-7297.
- 4. IF NECESSARY, CONTRACTOR WILL COORDINATE USE OF SAWS PREMISES AT NO ADDITIONAL COST TO SAWS. SUCH EFFORTS INCLUDE, BUT ARE NOT LIMITED TO, OBTAINING SECURITY IDENTIFICATION BADGES REQUIRED FOR ACCESS TO SAWS FACILITIES.
- 5. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE, ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- 6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. AS-BUILTS FOR SAWS INFRASTRUCTURE CAN BE OBTAINED AT WEBSITE BELOW. CONTRACTOR SHALL COORDINATE PHYSICAL LOCATES FOR SAWS INFRASTRUCTURE THROUGH THE SAWS INSPECTOR. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS INFRASTRUCTURE. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
  - SAN ANTONIO WATER SYSTEM:
  - REQUEST AS-BUILTS: HTTPS://WWW.SAWS.ORG/SERVICE/LOCATES-SERVICE/ COSA DRAINAGE 210-206-8433 COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720
  - TEXAS STATEWIDE ONE CALL LOCATOR I-800-545-6005 OR 811
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING, AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.
- 8. CONTRACTOR SHALL NOT MAKE USE OF DUMPSTERS OR WASTE BINS THAT ARE INTENDED TO SERVE RESIDENTS AND/OR BUSINESSES.
- 9. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
- 10. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- 11. ALL WORK WITHIN THE 100-YEAR FLOODPLAIN SHALL BE DONE IN ACCORDANCE WITH FLOODPLAIN DEVELOPMENT PERMIT.
- 12.ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.
- 13. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS.
- WEEKEND WORK: CONTRACTORS ARE REQUIRED TO SUBMIT REQUEST TO THE SAWS INSPECTION CONSTRUCTION DEPARTMENT BY 12:00PM ON THE WEDNESDAY PRIOR TO THE WEEKEND BEING REQUESTED. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
- ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION AT NO COST TO SAWS.
- 14.PRE-CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSPI).
- 15. POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.
- 16.CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.
- 17.CONTRACTOR SHALL COMPLY WITH APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE OVERSEEN BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA INFORMATION AND RELATED MATERIALS MAY BE OBTAINED AT HTTPS://WWW.OSHA.GOV/ OR AT THE OSHA SAN ANTONIO OFFICE LOCATED AT FOUNTAINHEAD TOWER, SUITE 605 8200 W. INTERSTATE 10 SAN ANTONIO, TX 78230 WHICH IS ALSO REACHABLE BY PHONE AT (210) 472-5040.
- 18. TRENCH EXCAVATION SAFETY PROTECTION: CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREAS IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

## WATER

- 19.PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION AND/OR SAWS PRODUCTION GROUPS AT LEAST TWENTY-FIVE (25) CALENDAR DAYS IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY. SAWS PRODUCTION CONTROL CENTER 210-233-2016
- 20. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS, PAYMENT FOR SUCH WORK IS TO BE MADE UNDER ITEM NO. 3000, "HANDLING ASBESTOS CEMENT PIPE".
- AC PIPE REMOVED ON CONSTRUCTION PROJECTS FOR TIE-IN(S) SHOULD BE IN LENGTH OF 26 LINEAR FEET (LF). LENGTHS OF 13 LF SHOULD BE REMOVED WHERE AC PIPE IS BEING REMOVED AND CROSSING PIPES, CONDUITS, OR BOXES.
- 21. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

COLLECTION STAFF.

## SEWER

23. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

F. MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA.

- SEQUENCE THE WORK ACCORDINGLY.

26. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS (NSPI).

27. MANHOLE REMOVAL: WHERE EXISTING MANHOLES ARE TO BE REPLACED BY THE CONTRACTOR, THE EXISTING MANHOLES SHALL BE REMOVED. (NSPI)

28. SMART MANHOLE COVERS: THE CONTRACTOR SHALL NOTIFY SAWS EOC AT 210-704- SAWS (210-233-7297) AND EITHER AMERICA ESPINOZA AT 210-233-2934 OR JOSE A. MARTINEZ AT 210-233-3071 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE SMART COVER. ANY DAMAGE DONE TO THE SMART COVER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

29. FLOW METERS IN MANHOLES: THE CONTRACTOR SHALL NOTIFY BOBBY JOHNSON AT 210- 233-3493 OR ABEL BORUNDA AT 210-233-3704 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE FLOW METER IN THE MANHOLE. ANY DAMAGE DONE TO THE FLOW METER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

22. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWENTY-FIVE (25) CALENDAR DAYS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND

A.IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT 210-704-SAWS (210-704-7297). PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW. B. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.

C.CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.

D. CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.

E. CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.

NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.

24. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION ITEM NO. 865, "BYPASS PUMPING SMALL DIAMETER SANITARY SEWER MAINS" AND STANDARD SPECIFICATION ITEM NO. 864, "BYPASS PUMPING LARGE DIAMETER SANITARY SEWER MAINS" AS APPLICABLE. PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE APPROPRIATE BID ITEM ASSOCIATED WITH SANITARY SEWER BYPASS PUMPING IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS 865 AND 864.

25. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 AND/OR SAWS PRODUCTION GROUPS AT LEAST TWO WEEKS OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS: THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY LIFT STATIONS AND FORCE MAINS GENERAL CONSTRUCTION NOTES

- GOVERNMENT STANDARD SPECIFICATIONS.
- PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
- THE NAME OF THE APPROVED PROJECT; - THE ACTIVITY START DATE; AND
- THE CONTACT INFORMATION OF THE PRIME CONTRACTOR
- TO THE APPROPRIATE REGIONAL OFFICE.
- WATER QUALITY FROM THE LIFT STATION.
- IMPACTS TO WATER OUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
- 6. ALL FORCE MAIN LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.68. TESTING METHOD WILL BE:
- A TEMPORARY VALVE FOR PRESSURE TESTING MAY BE INSTALLED NEAR THE DISCHARGE POINT OF A FORCE MAIN AND REMOVED AFTER A TEST IS SUCCESSFULLY COMPLETED.
- A PUMP ISOLATION VALVE MAY BE USED AS AN OPPOSITE TERMINATION POINT.
- A TEST MUST INVOLVE FILLING A FORCE MAIN WITH WATER.
- A PIPE MUST HOLD THE DESIGNATED TEST PRESSURE FOR A MINIMUM OF 4.0 HOURS.
- THE LEAKAGE RATE MUST NOT EXCEED 10.0 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER DAY.

FIGURE: 30 TAC §217.68(G)

EQUATION C.5.

 $L = \frac{SD\sqrt{P}}{155.40}$ 

WHERE:

- DIAMETER PER MILE OF PIPE PER DAY)
- S = LENGTH OF PIPE
- D = NOMINAL DIAMETER OF PIPE (INCHES)
- P = AVERAGE TEST PRESSURE (POUNDS/SQUARE INCH)

SAN ANTONIO REGIONAL OFFICE 14250 JUDSON ROAD SAN ANTONIO, TEXAS 78233-4480 PHONE (210) 490-3096 FAX (210) 545-4329

# ADDRESS:

I. THIS LIFT STATION AND/OR FORCE MAIN MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) EDWARDS AQUIFER RULES, AND ANY LOCAL

2. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED LIFT STATION/FORCE MAIN (LSFM) SYSTEM APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF A LSFM SYSTEM APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL

3. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS

4. UPON COMPLETION OF ANY LIFT STATION EXCAVATION, A GEOLOGIST MUST CERTIFY THAT THE EXCAVATION HAS BEEN INSPECTED FOR THE PRESENCE OF SENSITIVE FEATURES. THE CERTIFICATION MUST BE SIGNED, SEALED, AND DATED BY THE GEOLOGIST PREPARING THE CERTIFICATION. CERTIFICATION THAT THE EXCAVATION HAS BEEN INSPECTED MUST BE SUBMITTED

- IF SENSITIVE FEATURE(S) ARE IDENTIFIED, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY AND MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO

- CONSTRUCTION MAY CONTINUE IF THE GEOLOGIST CERTIFIES THAT NO SENSITIVE FEATURE OR FEATURES WERE PRESENT.

5. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TCEQ OF THE FEATURE DISCOVERY. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING WITHIN TWO WORKING DAYS. THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY TCEQ-0591 (REV. 2-26-2016) PAGE 2 OF 2 ADVERSE

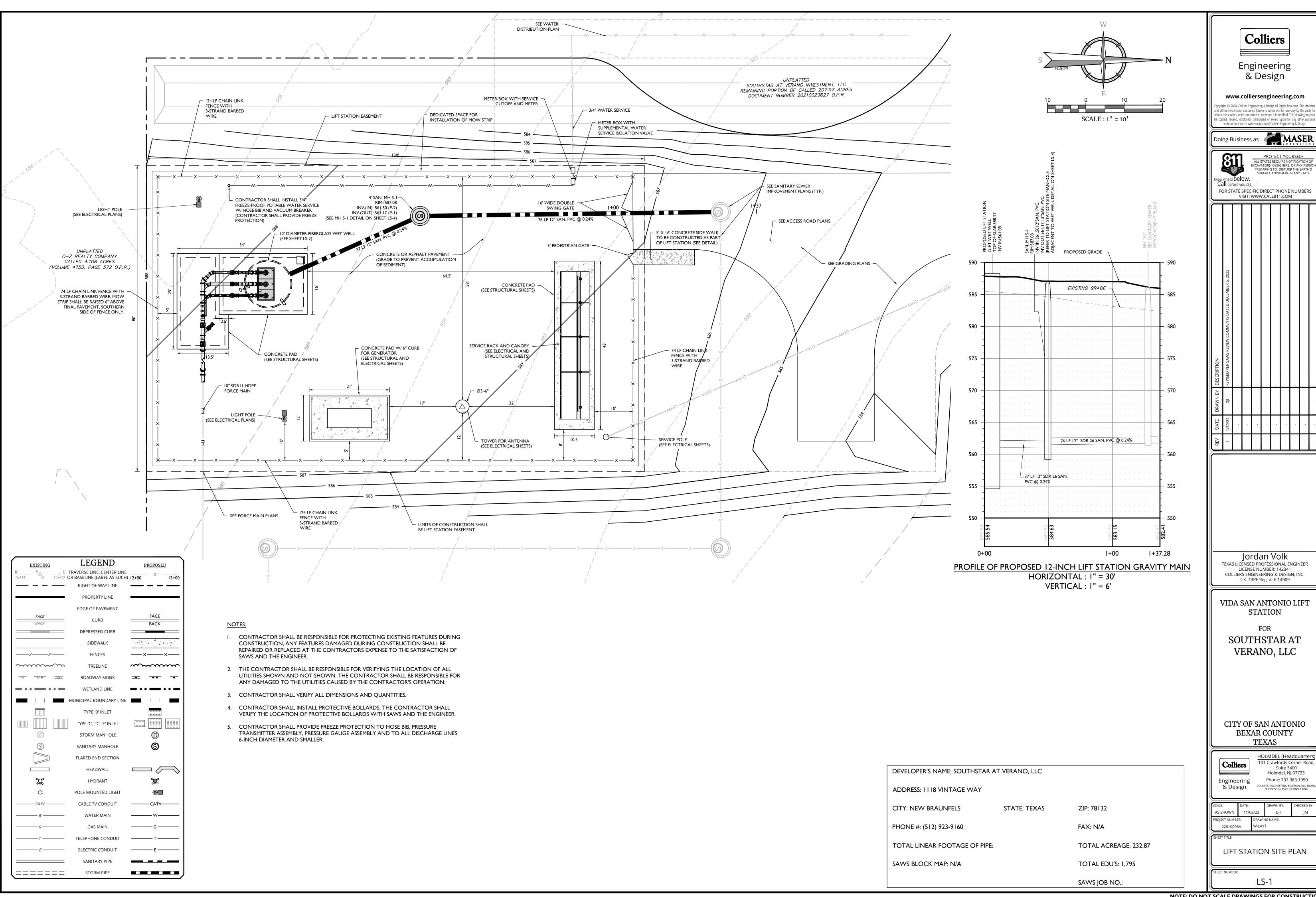
- A PRESSURE TEST MUST USE 50 POUNDS PER SQUARE INCH ABOVE THE NORMAL OPERATING PRESSURE OF A FORCE MAIN.

L = ACCEPTABLE LEAKAGE RATE (GALLONS/HOUR/1,000 FEET OF PIPE, BASED ON A LEAKAGE RATE OF 10.0 GALLONS PER INCH OF

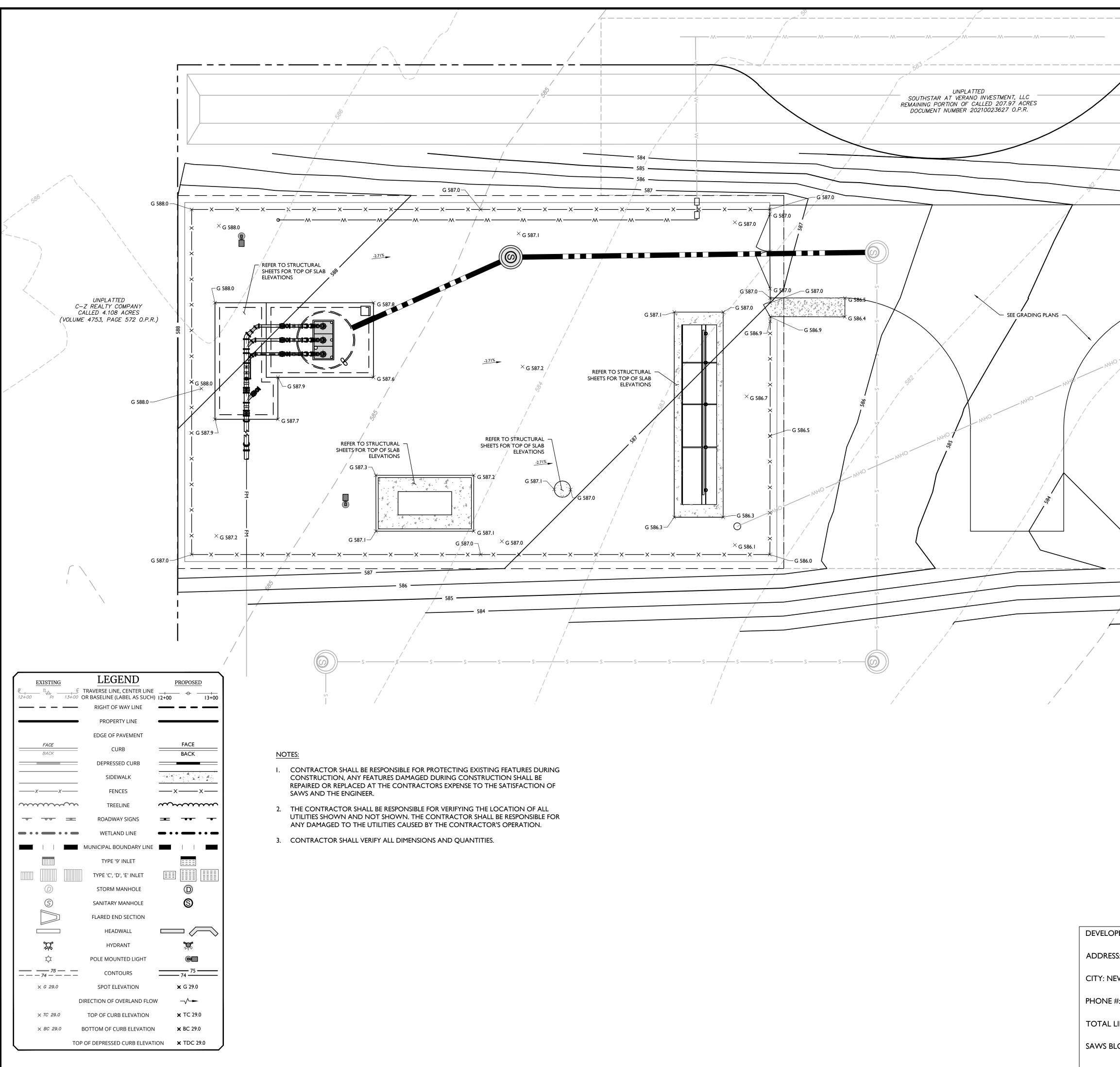
DEVELOPER'S NAME: SOUTHSTAR AT	VERANO, LLC	
ADDRESS: 1118 VINTAGE WAY		
CITY: NEW BRAUNFELS	STATE: TEXAS	ZIP: 78132
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		SAWS JOB NO.:

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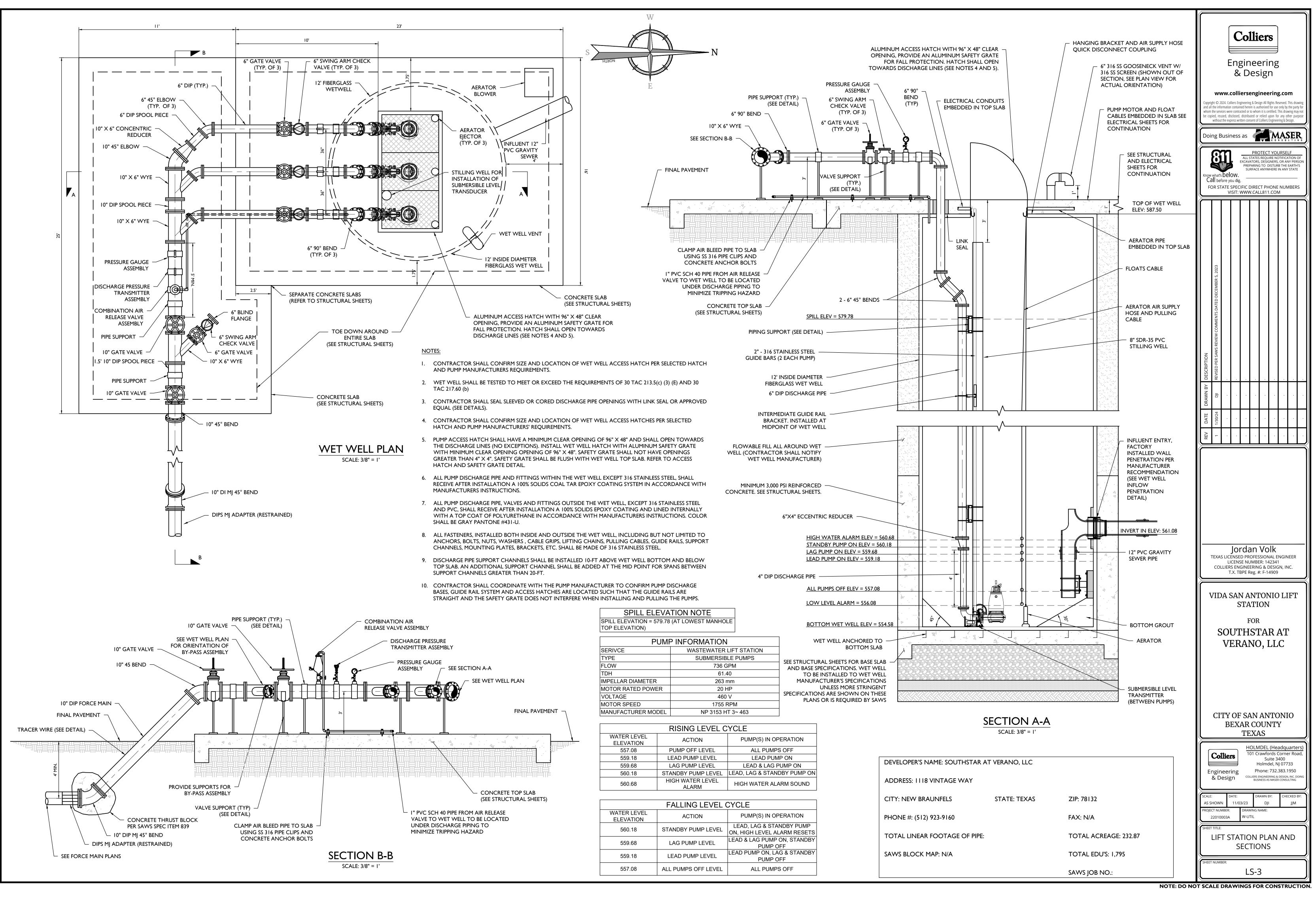
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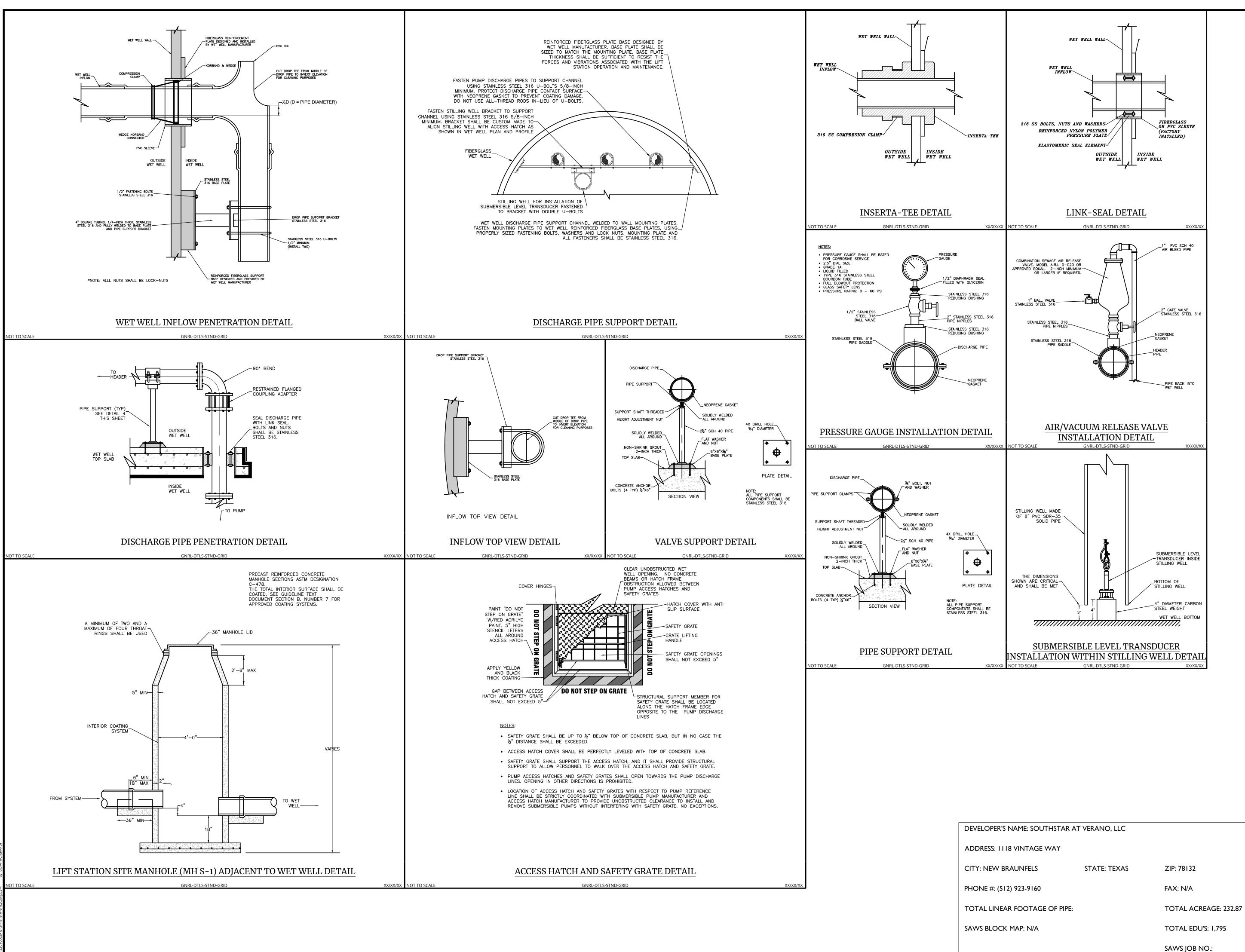
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		Jordan Volk Texas Licensed Professional Engineer License Number: 142341 Colliers Engineering & Design, Inc. T.X. TBPE Reg. #: F-14909
		VIDA SAN ANTONIO LIFT STATION FOR SOUTHSTAR AT VERANO, LLC
		CITY OF SAN ANTONIO BEXAR COUNTY TEXAS
PER'S NAME: SOUTHSTAR AT VERANO, LI S: 1118 VINTAGE WAY	LC	ColliersEngineering & Design& DesignHOLMDEL (Headquarters) 101 Crawfords Corner Road, Suite 3400 Holmdel, NJ 07733 Phone: 732.383.1950 COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING
W BRAUNFELS STATE: TE>	KAS ZIP: 78132	SCALE: DATE: DRAWN BY: CHECKED BY: AS SHOWN 11/03/23 DJI JJM
ŧ: (512) 923-9160	FAX: N/A	PROJECT NUMBER: DRAWING NAME: 22010003A W-LAYT
INEAR FOOTAGE OF PIPE: OCK MAP: N/A	TOTAL ACREAGE: 232.87 TOTAL EDU'S: 1,795	SHEET TITLE: LIFT STATION GRADING PLAN
	SAWS JOB NO.:	SHEET NUMBER: LS-2
	NOTE: DO N	NOT SCALE DRAWINGS FOR CONSTRUCTIO

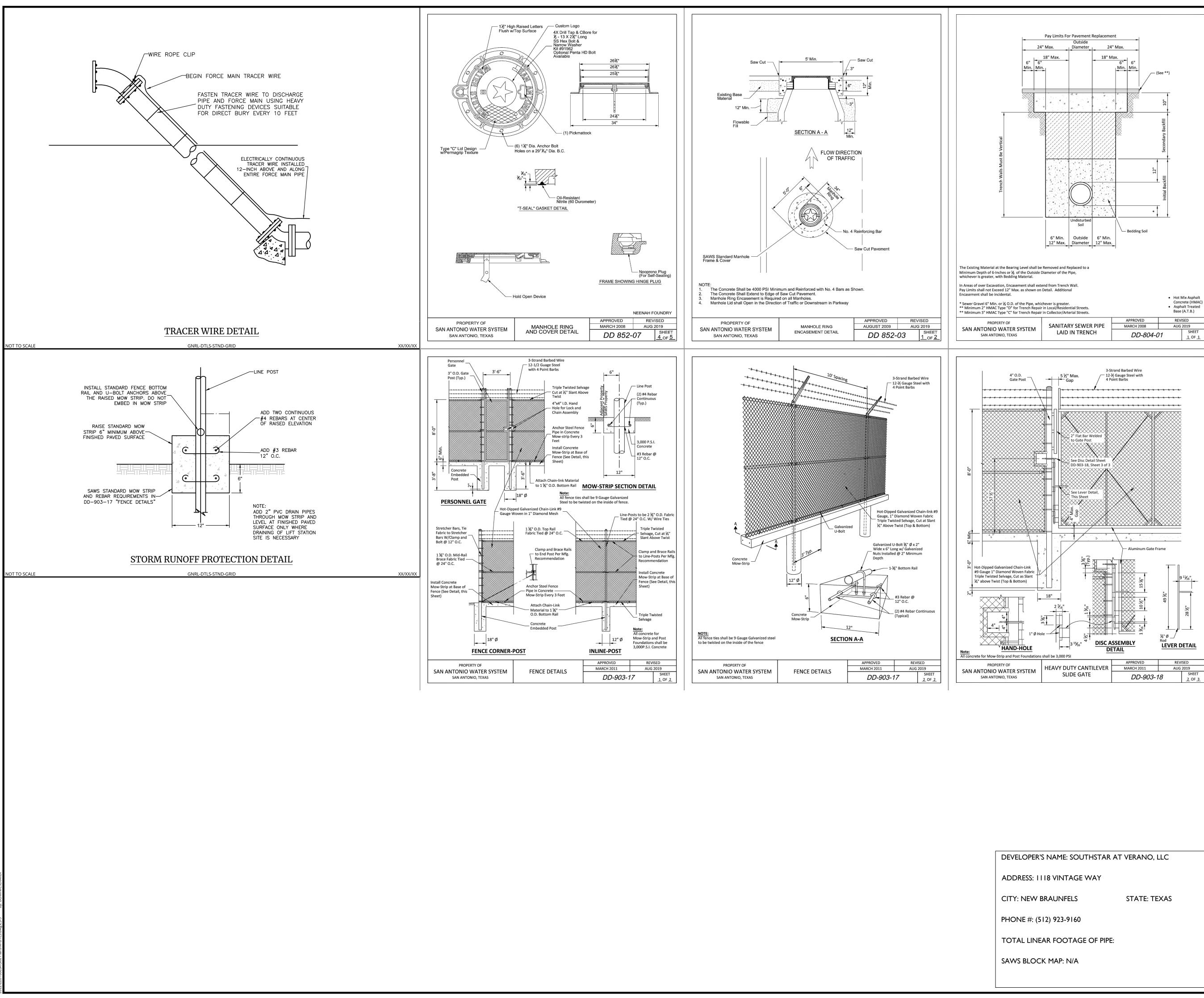


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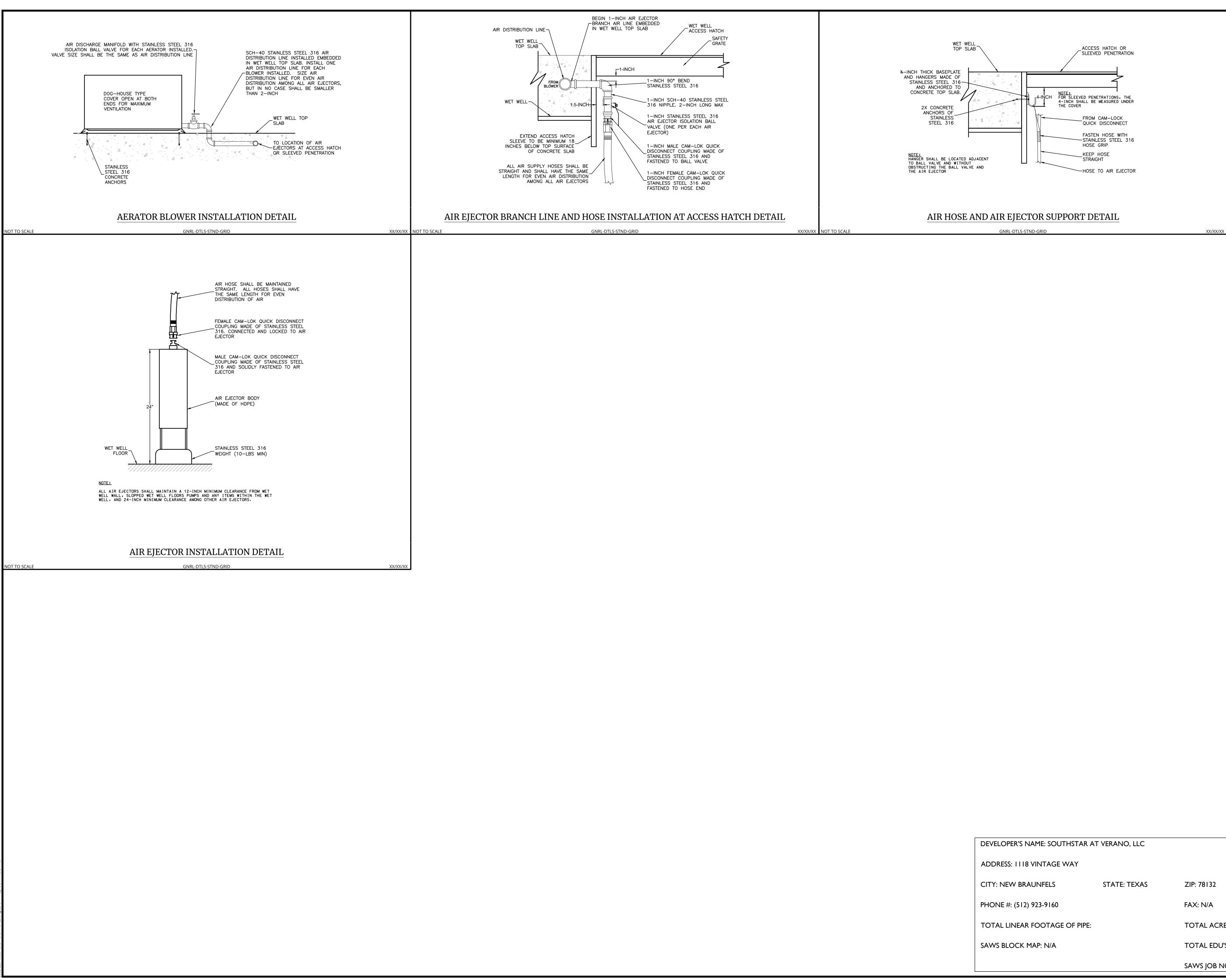
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Jordan Volk TEXAS LICENSED PROFESSIONAL LICENSE NUMBER: 1423 COLLIERS ENGINEERING & DES T.X. TBPE Reg. #: F-149 VIDA SAN ANTONI	- ENGINEER 341 5IGN, INC. 09								
STATION FOR SOUTHSTAR									
Colliers 101 Crawford	<b>ΓΥ</b> leadquarters) s Corner Road, 2 3400 , NJ 07733								
& Design Colliers Engineering Business as MA SCALE: DATE: DRAWN BY: AS SHOWN 11/03/23 DJI	32.383.1950 G & DESIGN, INC. DOING ISER CONSULTING CHECKED BY: JJM								
PROJECT NUMBER: 22010003A SHEET TITLE: CONSTRUCTION D	ETAILS								
SHEET NUMBER: LS-4									



PER'S NAME: SOUTHSTAR A	Γ VERANO, LLC	
S: 1118 VINTAGE WAY		
W BRAUNFELS	STATE: TEXAS	ZIP: 78132
ŧ: (512) 923-9160		FAX: N/A
INEAR FOOTAGE OF PIPE:		TOTAL ACREAGE: 232.87
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		SAWS JOB NO.:

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	8		•	EXCAV	STATES ATORS	REQU	IRE NO GNERS	JRSE DTIFICA , OR AN	ATION NY PER	SON
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	PLAN LEGEND		
<b>+</b>	EQUIPMENT CONNECTION	Ť	GROUND CONN
J	JUNCTION OR CONNECTION BOX	$\dashv\vdash$	NORMALLY OPE
$\square$	STARTER OR LIGHTING CONTACTOR	-1/-	NORMALLY CLC
4	DISCONNECT	<b>_—</b>	CONDUCTOR C
МН	MANHOLE		CIRCUIT BREAK
нн	HANDHOLE		OF POLES (P) S
	KEYED NOTE. NUMBER MATCHES NOTE NUMBER		DISCONNECT S CURRENT RATII SYMBOL
\$	TOGGLE SWITCH, WALL MOUNTED, SINGLE POLE SINGLE THROW. MOUNTED 54" AFF UNLESS OTHERWISE NOTED		DISCONNECT S
\$₄	TOGGLE SWITCH, WALL MOUNTED, FOUR WAY. MOUNTED 54" AFF UNLESS OTHERWISE NOTED		SHOWN NEXT T
\$ <u>M</u>	SWITCH MOTOR RATED WITH TERMINAL OVERLOADS		FUSE. RATING S
◆ <sub>OS</sub>	OCCUPANCY SENSOR		MOTOR STARTE
	TERMINAL BOARD	(CR12)	CONTACTOR OI CONTACTS CON
Y	TELEPHONE OUTLET, PRIVATE. MOUNTED 12" AFF	-0~10	LIMIT SWITCH N
$\bigtriangledown$	DATA OUTLET, SURFACE MOUNTED	-0~0	LIMIT SWITCH N
10	MOTOR LOAD, NUMBER INDICATES HORSEPOWER		MOTOR OPERA
0	POLE	- <u>~</u> 20	PRESSURE SWI
	TRANSFORMER, DRY TYPE, KVA RATING MAY BE DISPLAYED NEXT TO SYMBOL		PRESSURE
$\nabla$	ANTENNA		PRESSURE
$\sim$	HOMERUN. LETTERS INDICATE PANELBOARD, NUMBERS		LEVEL SWITCH
C-1	INDICATE CIRCUIT NUMBER IN PANELBOARD	5	LEVEL SWITCH
	CONDUIT CAPPED FOR FUTURE USE	-070-	FLOW SWITCH I
)			FLOW SWITCH I
0	CONDUIT GOING UP		SPACE HEATER
	CONDUIT ABOVE GROUND		PHASE FAILURE
- E -	CONDUIT RUN UNDERGROUND OR CONCEALED	HANDOFF AUTO	MAINTAINED CC
	CONDUIT BELOW GRADE		MAINTAINED CC
-+++++-	LIQUID TIGHT FLEXIBLE CONDUIT		NORMALLY CLC
F			NORMALLY OPE
÷	120V RECEPTACLE FLUSH MOUNTED	WYE	WYE TRANSFOI
H <del>F</del>	120V RECEPTACLE SURFACE MOUNTED		DELTA TRANSF
<b>+</b>	120V QUAD RECEPTACLE FLUSH MOUNTED	- <u>60</u> 0: 5	CURRENT TRAN
нф	120V QUAD RECEPTACLE SURFACE MOUNTED	AIT	ANALYTICAL TF
<b>e</b>	208V RECEPTACLE FLUSH MOUNTED	(FS)	FLOW OR FLOA
H <del>E</del>	208V RECEPTACLE SURFACE MOUNTED		LEVEL TRANSM
	WELDING OUTLET	(MOV)	MOTOR OPERA
T		PT	PRESSURE TRA
<u>₹</u> т== <u>т</u> - , ,	PANELBOARD FLUSH MOUNTED	(sv)	SOLENOID VAL
	PANELBOARD SURFACE MOUNTED	ETM	ELAPSED TIME
		$- \underbrace{TD}_{TOE}^{O-10} MIN.$	TIME DELAY RE ADJUSTABLE TI
TS SV	TORQUE SWITCH SOLENOID SWITCH	- TD 0-10 MIN. TOD	TIME DELAY RE ADJUSTABLE TI
LS	LIMIT SWITCH	( XXX )	CONDUIT TAG
AS	AMMETER SWITCH		TELEVISION CA
VS	VOLTMETER SWITCH		TORQUE SWITC
PS	PRESSURE SWITCH	(R)	PILOT LIGHT R=
LC	LIGHTING CONTACTOR	480V	CONTROL POW
PC	PHOTO CELL		VOLTAGE INDIC
		-0-	TERMINAL BLOO

ONE-LINE AND CONTRO		ND
JND CONNECTION	-a-}{-a-	INSTRUMENT TRANSFORMER PT=POTENTIAL TRANSFORMER
MALLY OPEN RELAY OR CONTACTOR CONTACTS	480V	PT=POWER TRANSFORMER. VOLTAGE AND KVA RATING AS SHOWN
ALLY CLOSED RELAY OR CONTACTOR CONTACTS	120/240V	LIGHTING ARRESTOR
OUCTOR CONNECTION		SURGE CAPACITOR
JIT BREAKER, MOLDED CASE, TRIP CURRENT AND QUANTITY	)   (A)	AMMETER
DLES (P) SHOWN NEXT TO SYMBOL	$(\mathbf{v})$	VOLTMETER
ONNECT SWITCH NON-FUSED, LOAD BREAK. CONTINUOUS ENT RATING, QUANTITY OF POLES (P) SHOWN NEXT TO	AS	AMMETER SWITCH
	VS	VOLTMETER SWITCH
NNECT SWITCH FUSED, LOAD BREAK. OCNTINUOUS ENT RATING, QUANTITY OF POLES (P), AND FUSE RATING /N NEXT TO SYMBOL	↓ ↑ <sub>\mcp</sub>	MOTOR STARTER
RATING SHOWN NEXT TO SYMBOL	↓ ↓ ↓ SIZE 1	FVNR=FULL VOLTAGE NON-REVERSING VFD=VARIABLE FREQUENCY DRIVE
R STARTER THERMAL OVERLOAD PROTECTOR		RVSS=REDUCED VOLTAGE SOFT START RVNR=REDUCED VOLTAGE NON-REVERSING
ACTOR OR RELAY COIL. LETTERS AND NUMBERS MATCH ACTS CONTROLLED	J J	FVR=FULL VOLTAGE REVERSING MCP=MOTOR CIRCUIT PROTECTOR SIZE=NEMA STARTER SIZE
SWITCH NORMALLY CLOSED		GROUNDING LEGEND
SWITCH NORMALLY OPEN	۲	A = GROUNDING RECEPTACLE, B = GROUND TEST WELL
R OPERATED VALVE GEARED LIMIT SWITCH	— в—	BARE COPPER GROUNDING CONDUCTOR
SURE SWITCH NORMALLY CLOSED OPEN ON INCREASING	<b></b>	GROUNDING CONNECTION
SURE SWITCH NORMALLY OPEN CLOSES ON INCREASING	⊙——— ı	COPPER CLAD GROUND ROD
SWITCH NORMALLY CLOSED OPEN ON INCREASING LEVEL		LIGHTING FIXTURE LEGEND
SWITCH NORMALLY OPEN CLOSES ON INCREASING LEVEL		LETTER IN OR BESIDE FIXTURE IDENTIFIES FIXTURE IN FIXTURE SCHEDULE
SWITCH NORMALLY CLOSED OPENS WITH FLOW	D	LED STRIP LIGHT
SWITCH NORMALLY OPEN CLOSES ON LOSS OF FLOW	D	LED STRIP LIGHT WITH BATTER BACKUP
HEATER		LED FIXTURE, SURFACE OR SUSPENDED, CEILING MOUNTED
FAILURE RELAY	(-(D)	LED FIXTURE, STANCHION MOUNTED
AINED CONTACT START/STOP PUSHBUTTON	нÓ-	LED FIXTURE, WALL MOUNTED
AINED CONTACT HAND-OFF-AUTO SELECTOR SWITCH	, SE	LED LIGHTED EXIT SIGN. ARROWS DENOTE DIRECTION OF EGRESS
ALLY CLOSED MOMENTARY CONTACT PUSHBUTTON	E1	ON EACH SIDE OF FIXTURE. NO ARROW DENOTES NO DIRECTION O EGRESS
ALLY OPEN MOMENTARY CONTACT PUSHBUTTON		POLE MOUNTED LED LUMINAIRE. SEE SCHEDULE OR NOTES FOR
RANSFORMER CONNECTION	<b>□⊂</b>	TYPE. ORIENT FIXTURE FOR CUT-OFF TOWARDS AREA TO BE LIT. ORIENT HOUSE SHIELD TOWARDS BUILDING. SEE DETAILS FOR POL
TRANSFORMER CONNECTION		BASE. PROVIDE POLE BASE GROUND ROD.
ENT TRANSFORMER WITH RATIO SHOWN	НĴр	REMOTE EMERGENCY LIGHTS
YTICAL TRANSMITTER		EMERGENCY LED LIGHT FIXTURE, SELF CONTAINED, BATTERY OPERATED
OR FLOAT SWITCH		PAR LAMP HOLDER. NUMBER OF TRIANGLES INDICATE NUMBER OF FIXTURES
_ TRANSMITTER		

- R OPERATED VALVE
- SURE TRANSMITTER
- NOID VALVE
- ED TIME METER
- DELAY RELAY. TIMES OUT AFTER ENERGIZATION. STABLE TIME DELAY TIME INDICATED NEXT TO SYMBOL
- DELAY RELAY. TIMES OUT AFTER DE-ENERGIZATION. STABLE TIME DELAY TIME INDICATED NEXT TO SYMBOL
- OUIT TAG
- **ISION CAMERA**
- QUE SWITCH
- LIGHT R=RED, B=BLUE, G=GREEN, A=AMBER, Y=YELLOW
- ROL POWER TRANSFORMER. PRIMARY AND SECONDARY AGE INDICATED
- INAL BLOCK

LEGEND & GENERAL NOTES:

 $\bigtriangledown$ 

**D** .

1. BRANCH CIRCUIT NUMBERS MAY BE SHOWN NEXT TO SYMBOLS IN MULTIWIRE CIRCUITS.

POLE MOUNTED FLOOR LIGHT. NUMBER OF TRIANGLES INDICATE

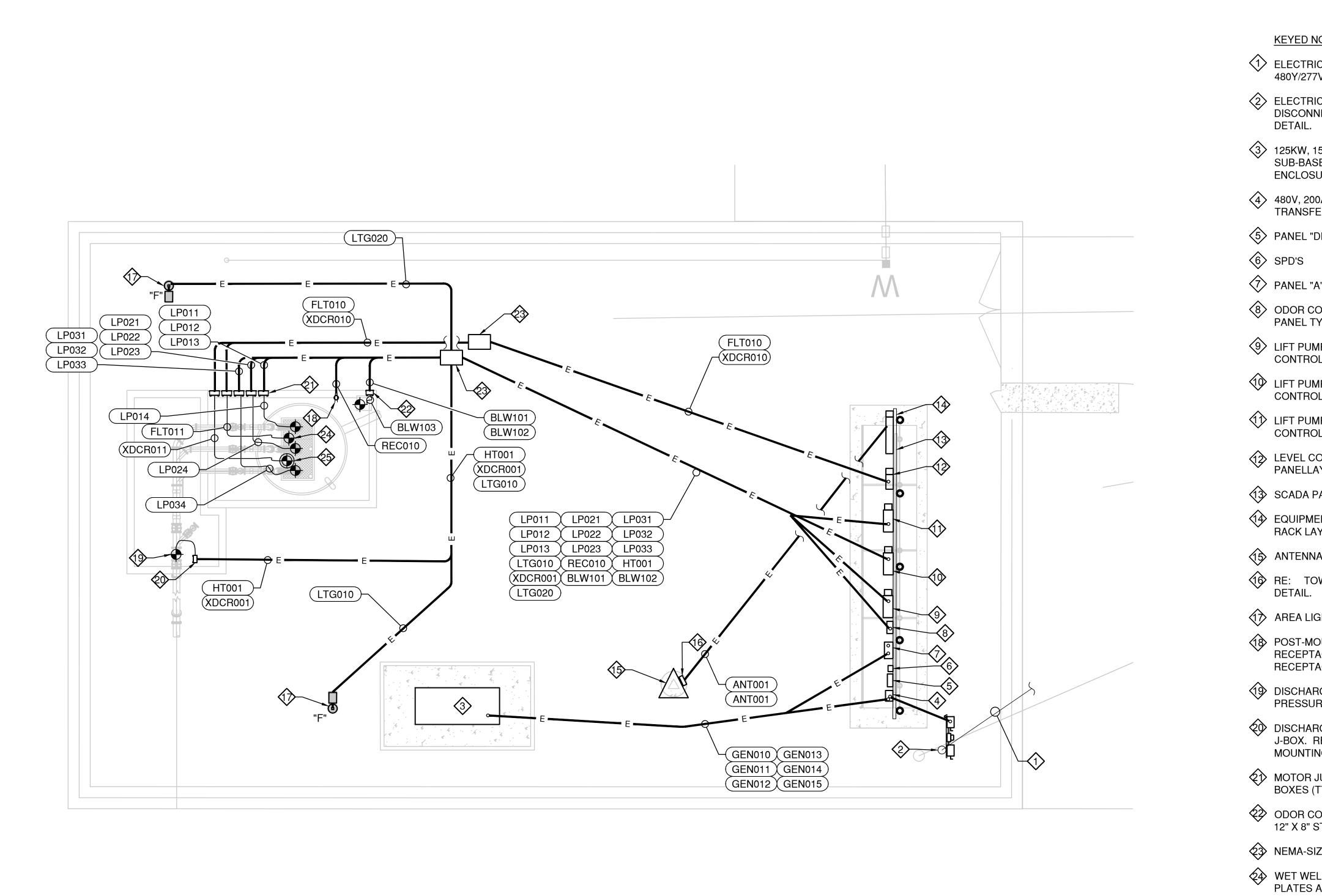
NUMBER OF FIXTURES. ARROW DENOTES FOLDING POLE AND

- 2. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE UNLESS OTHERWISE NOTED.
- 3. LOWER CASE LETTERS NEXT TO SYMBOLS INDICATE FIXTURE(S) CONTROLLED BY THE SWITCH DISPLAYING THE SAME LETTER.
- 4. THIS IS A STANDARD LEGEND LIST. ALL SYMBOLS MAY NOT BE USED.

DIRECTION POLE FOLDS DOWN.

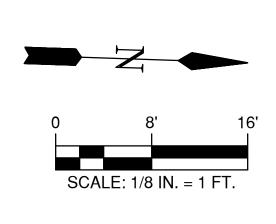
- 5. INSTALLATION SHALL BE PER LATEST VERSION OF NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE LOCAL CODES/ORDINANCES. NOT ALL CODE AND STANDARD REQUIREMENTS MAY BE SHOWN ON PLANS. CONTRACTOR SHALL ADHERE TO CODES AND STANDARDS REGARDLESS OF BEING SHOWN ON PLANS OR SPECIFICATIONS IN DETAILED FASHION.
- 6. REFER TO ENTIRE DRAWING PACKAGE PRIOR TO BID FOR FULL PROJECT REQUIREMENTS.

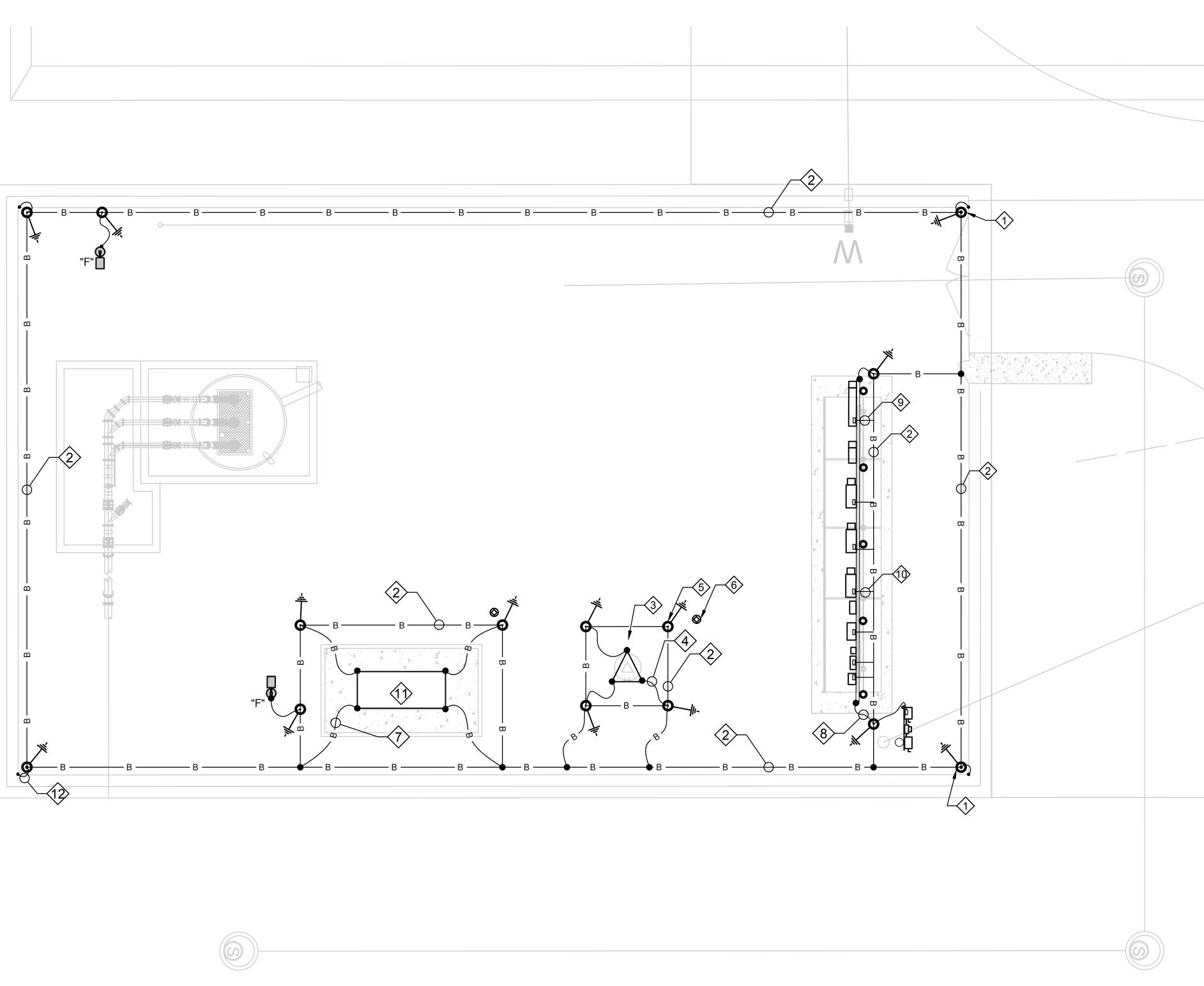
	<u>TIONS</u>	Colliers
A AC	AMPERES OR TRIP AMPERES ALTERNATING CURRENT	Engineering
A/C		& Design
AFF AFG	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	
AIC	SYMMETRICAL AMPERES	www.colliersengineering.com
AWG	INTERRUPTING CAPACITY AMERICAN WIRE GUAGE	Copyright © 2023. Colliers Engineering & Design All Rights Reser This drawing and all the information contained herein is authorized f only by the party for whom the services were contracted or to whor
BLDG	BUILDING	certified. This drawing may not be copied, reused, disclosed, distrit or relied upon for any other purpose without the express written con of Colliers Engineering & Design.
BKR	BREAKER	
C CAP	CONDUIT CAPACITOR	Doing Business as
CKT	CIRCUIT	PROTECT YOURSELF
CONT'D CPT	CONTINUED CONTROL POWER TRANSFORMER	ALL STATES REQUIRE NOTIFICATION EXCAVATORS, DESIGNERS, OR ANY PE PREPARING TO DISTURB THE EART
CFT	CURRENT TRANSFORMER	SURFACE ANYWHERE IN ANY STAT
CU	COPPER	Call before you dig. FOR STATE SPECIFIC DIRECT PHONE NUMBE
DBL DISC SW	DOUBLE DISCONNECT SWITCH	VISIT: WWW.CALL811.COM
DC	DIRECT CURRENT	
EMER		
EMT ENCL	ELECTRICAL METALLIC TUBING ENCLOSURE	
EP	EXPLOSION PROOF	
EQUIP FM	EQUIPMENT FLOW METER	
FS	FLOAT SWITCH	
G GALV	GROUND WIRE GALVANIZED	
GEN	GENERATOR	
GFI	GROUND FAULT INTERRUPTER	
GND	CIRCUIT GROUND	
HDG	HOT DIPPED GALVANIZED	
HPG HPS	HIGH PRESSURE GAUGE HIGH PRESSURE SODIUM	
HPS HT	HEIGHT	
HZ	HERTZ	z
INST KV	INSTRUMENT KILOVOLTS	DESCRIPTION
KVA	KILOVOLT AMPERES	DESCR
KWH	KILOWATT HOURS	
LA L-L	LIGHTNING ARRESTOR LINE TO LINE	Draw Draw Construction of the second se
L-N	LINE TO NUETRAL	
MCC MFR	MOTOR CONTROL CENTER MANUFACTURER	DATE
MIN	MINIMUM	
MTD	MOUNTED	
MTG MRCT	MOUNTING MULTI-RATIO CURRENT	
	TRANSFORMER	
MV N.C.	MERCURY VAPOR NORMALLY CLOSED	
NEC	NATIONAL ELECTRICAL CODE	TEOF TEVE
NEMA	NATIONAL ELECTRICAL	
NEUT	MANUFACTURER'S ASSOCIATION NEUTRAL	
N.O.	NORMALLY OPEN	<b>99971</b>
NTS OC	NOT TO SCALE ON CENTER	CENSE?
OH	OVERHEAD	S SIONALEN S
P	POLE	123124
PC PNL	PHOTOCELL PANEL	
PRI	PRIMARY	
PVC REQ'D	POLYVINYL CHLORIDE REQUIRED	
RS	RUN/STOP	VIDA SAN ANTONIO LIFT
RTD	RESISTANCE TEMPERATURE	STATION
SCH	DETECTOR SCHEDULE	FOR
SEC	SECONDARY	SOUTHSTAR AT
S/N SPACE	SOLID NEUTRAL SPACE(S) ONLY-NO BREAKER OR	VERANO, LLC
	DEVICE	
SPARE SPECS	SPARE BREAKER OR DEVICE SPECIFICATIONS	
	SOFT DRAWN BARE	
	STAINLESS STEEL HARDWARE	
SWBD SWGR	SWITCHBOARD SWITCHGEAR	
ТВ	TERMINAL BLOCK	
TYP UL	TYPICAL UNERWRITERS LABORATORIES	CITY OF SAN ANTONIO BEXAR COUNTY
V	VOLTS	TEXAS
VA	VOLT AMPERES	HOLMDEL (Headquarte
W W/	WATTS WITH	Colliers
W/O	WITHOUT	Red Bank, NJ 07701
WP XFMR	WEATHERPROOF TRANSFORMER	Engineering Phone: 732.383.1950 & Design Colliers Engineering & Design, INC. BUSINESS AS MASER CONSULTING
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1/C 3/C	ONE CONDUCTOR THREE CONDUCTOR	SCALE: DATE: DRAWN BY: CHECKEE AS SHOWN 1/23/24 CS JC
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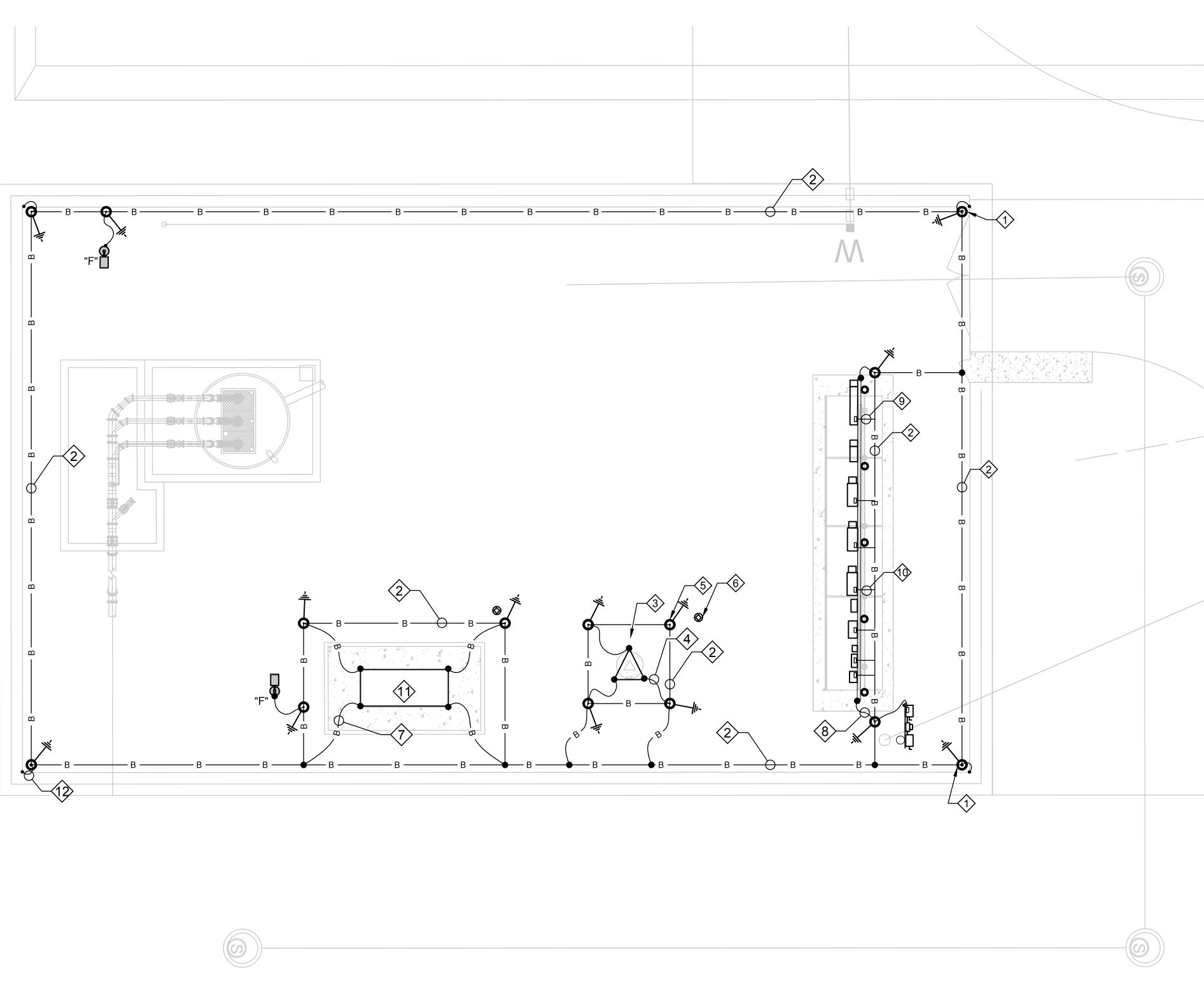


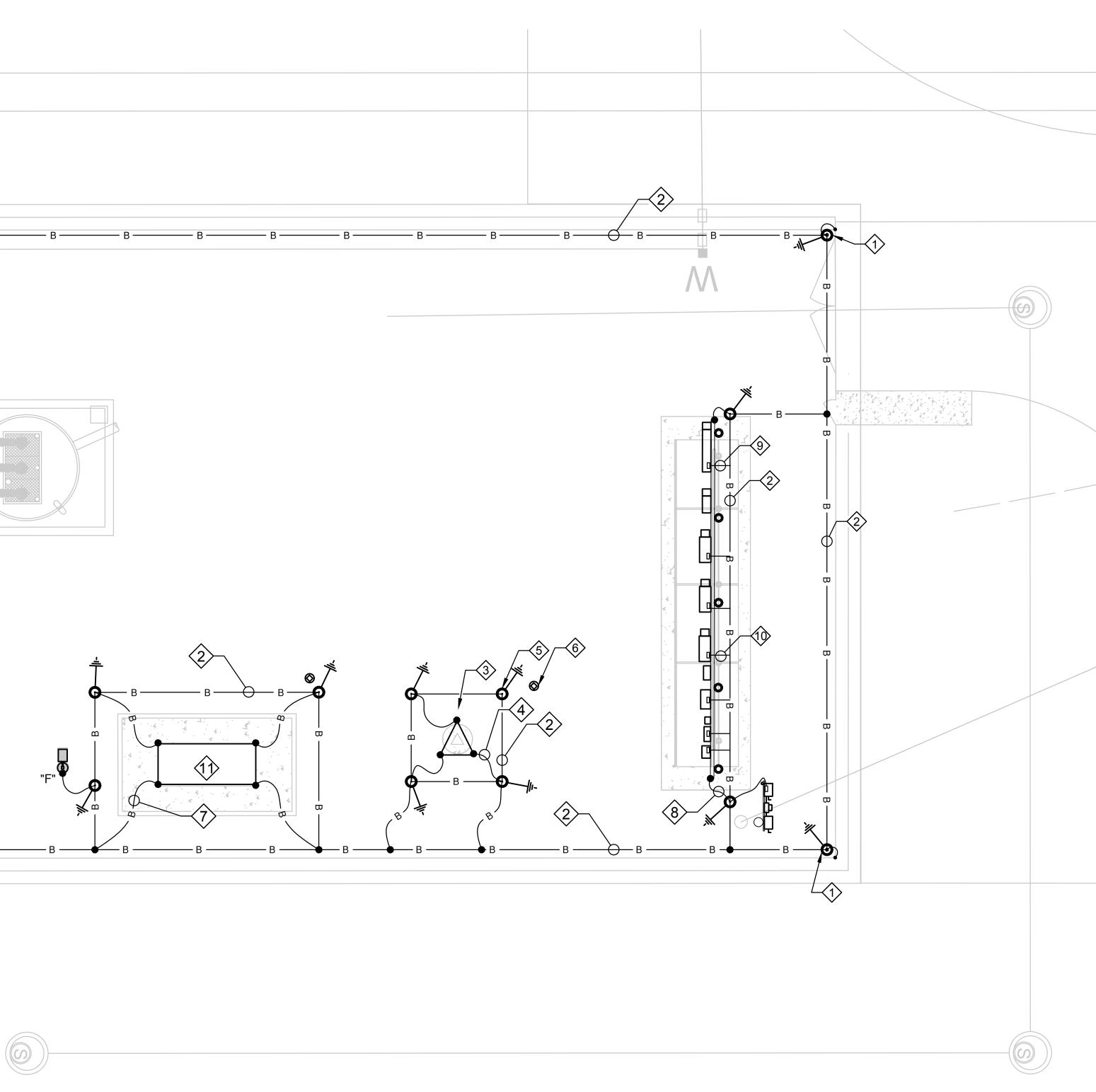
ELECTRICAL SITE PLAN - PROPOSED SCALE: 1/8 IN. = 1 FT.

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$\langle 1 \rangle$	<u>KEYED NOTES:</u> ELECTRICAL SERVICE DROP CONFIGURED FOR 200A,	Cop This d	WWV yright © 202 rawing and a	3. Colliers	Enginee	nginee ring & Des	sign All R	lights Re	served.	9
× A	480Y/277V, 4W ELECTRICAL SERVICE TO SITE.	only b certifi	by the party ed. This dra ed upon for	for whom wing may any other	the servi not be c purpose	ces were o opied, reus	ontracted sed, discl e expres	d or to w losed, di	hom it is stributed	
$\checkmark$	ELECTRICAL SERVICE POLE W/UTILITY METER AND SERVICE DISCONNECT RACK. RE: ELECTRICAL SERVIDE POLE DETAIL.	Doir	ng Bus	iness	as	2	M	<b>A</b> S	<b>ER</b>	)
3	125KW, 156KVA, 480/277V, 3Ø DIESEL GENERATOR W/ SUB-BASE FUEL TANK AND A LEVEL 3 SOUND-ATTENUATING ENCLOSURE.	Know	what's be before	low.	ALL STA XCAVAT PREPA	ROTECT ATES REQ ORS, DESI RING TO ACE ANYV	JIRE NO GNERS, DISTURE	TIFICAT OR ANY 3 THE E/	PERSON ARTH'S	ſ
$\langle 4 \rangle$	480V, 200A, 3P, DELAYED-TRANSITION AUTOMATIC TRANSFER SWITCH IN NEMA 4X STAINLESS STEEL ENCL.		R STATE	SPECI		RECT PI			3ERS	ļ
\$	PANEL "DP-1".									
	SPD'S									
	PANEL "A"									
   	ODOR CONTROL BLOWER PANEL. RE: ODOR CONTROL UNIT PANEL TYPICAL LAYOUT.									
9	LIFT PUMP NO. 1 CONTROL PANEL. RE: LIFT PUMP CONTROL PANEL TYPICAL LAYOUT.									
10	LIFT PUMP NO. 2 CONTROL PANEL. RE: LIFT PUMP CONTROL PANEL TYPICAL LAYOUT.									
	LIFT PUMP NO. 3 CONTROL PANEL. RE: LIFT PUMP CONTROL PANEL TYPICAL LAYOUT.									
12	LEVEL CONTROL PANEL. RE: LEVEL CONTROL PANELLAYOUT.	DESCRIPTION								
(13)	SCADA PANEL. RE: SCADA PANEL INTERIOR LAYOUT.				_					_
14	EQUIPMENT RACK CANOPY. RE: ELECTRICAL EQUIPMENT RACK LAYOUT.	DRAWN BY								
(15)	ANTENNA TOWER. RE: TYPICAL ANTENNA TOWER DETAIL.	DATE		ŀ						-
<b>16</b>	RE: TOWER ENCLOSURE. TYPICAL ANTENNA TOWER DETAIL.	REV								
	AREA LIGHT. RE:AREA LIGHT POLE DETAIL.	$\left[ \right]$								
18	POST-MOUNTED WEATHERPROOF CONVENIENCE RECEPTACLE. RE: POST MOUNTED CONVENIENCE RECEPTACLE DETAIL.			A.	TEQ	F TEX	2000	2		
(19)	DISCHARGE PRESSURE TRANSMITTER. RE: DISCHARGE PRESSURE TRANSMITTER MOUNTING DETAIL.		000000	ONNE	RB.	STURD	IVANT	all a second		
Ø	DISCHARGE PRESSURE TRANSMITTER AND HEAT TRACE J-BOX. RE: DISCHARGE PRESSURE TRANSMITTER MOUNTING DETAIL.		°0	ROLES	99 SION 1/2	NSED.		1997) 2		
$\overline{2}$	MOTOR JUNCTION AND INSTRUMENTATION JUNCTION BOXES (TYP). RE: WET WELL JUNCTION BOX DETAIL.									
$\langle \rangle$	ODOR CONTROL BLOWER J-BOX. PROVIDE MINIMUM 12" X 12" X 8" STAINLESS STEEL NEMA 4X ENCLOSURE.		/IDA	SAN	J AN	ITO	NIO	LI	ET	<b>)</b>
<b>\$</b> 3	NEMA-SIZED HANDHOLE.			S		FION	1			
<b>\$4</b>	WET WELL LEVEL FLOATS. RE: CONDUITS, HANGING PLATES AND CONTROL DEVICES DETAIL.		SC	UT	FC HS	or STA	R A	<b></b> Υ		
\$	SUBMERSIBLE LEVEL TRANSDUCER IN 8"Ø STILLING WELL. RE: SUBMERSIBLE LEVEL TRANSDUCER MOUNTING DETAIL AND CONDUITS, HANGING PLATES AND CONTROL DEVICES DETAIL.		V	ΈR	AN	Ю,	LL	С		
			CITY E	BEX/	AR (	N AN COUI KAS			)	
		Er	<b>Collie</b> nginee & Desi	ring	331 M R	VDEL Jewman Su ed Ban Phone BUSINESS A	n Sprir uite 20 k, NJ 0 : 732.3 ERING & I	ngs Ro 13 17701 383.19 Design, I	950 NC. DOINC	G
		PROJEC	IOWN T NUMBER 2010003A		DRAWIN	DRAWN C: NG NAME: E-CEDL	5		ked by: JC	]
	<b>Z</b> CLEARY ZIMMERMANN	SHEET		CTR	ICAL	. SITE	E PL/	AN		]
	ENGINEERS Firm No. F-9357   ClearyZimmermann.com	SHEET	NUMBER:		E-1	01				Ì



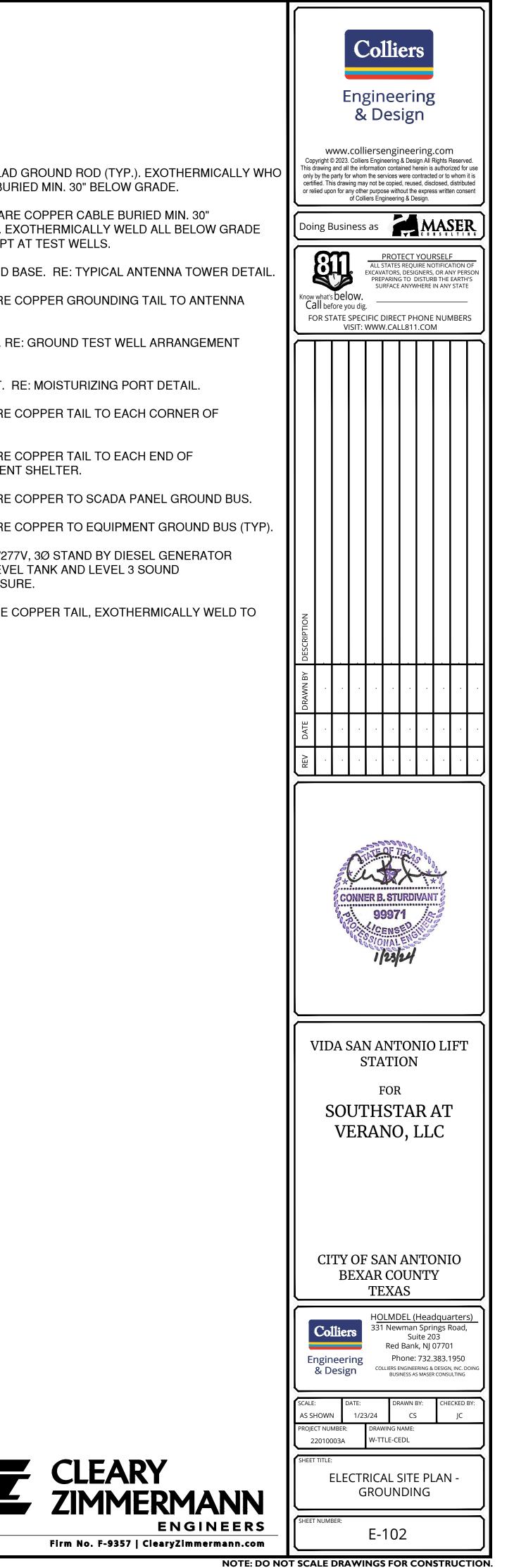




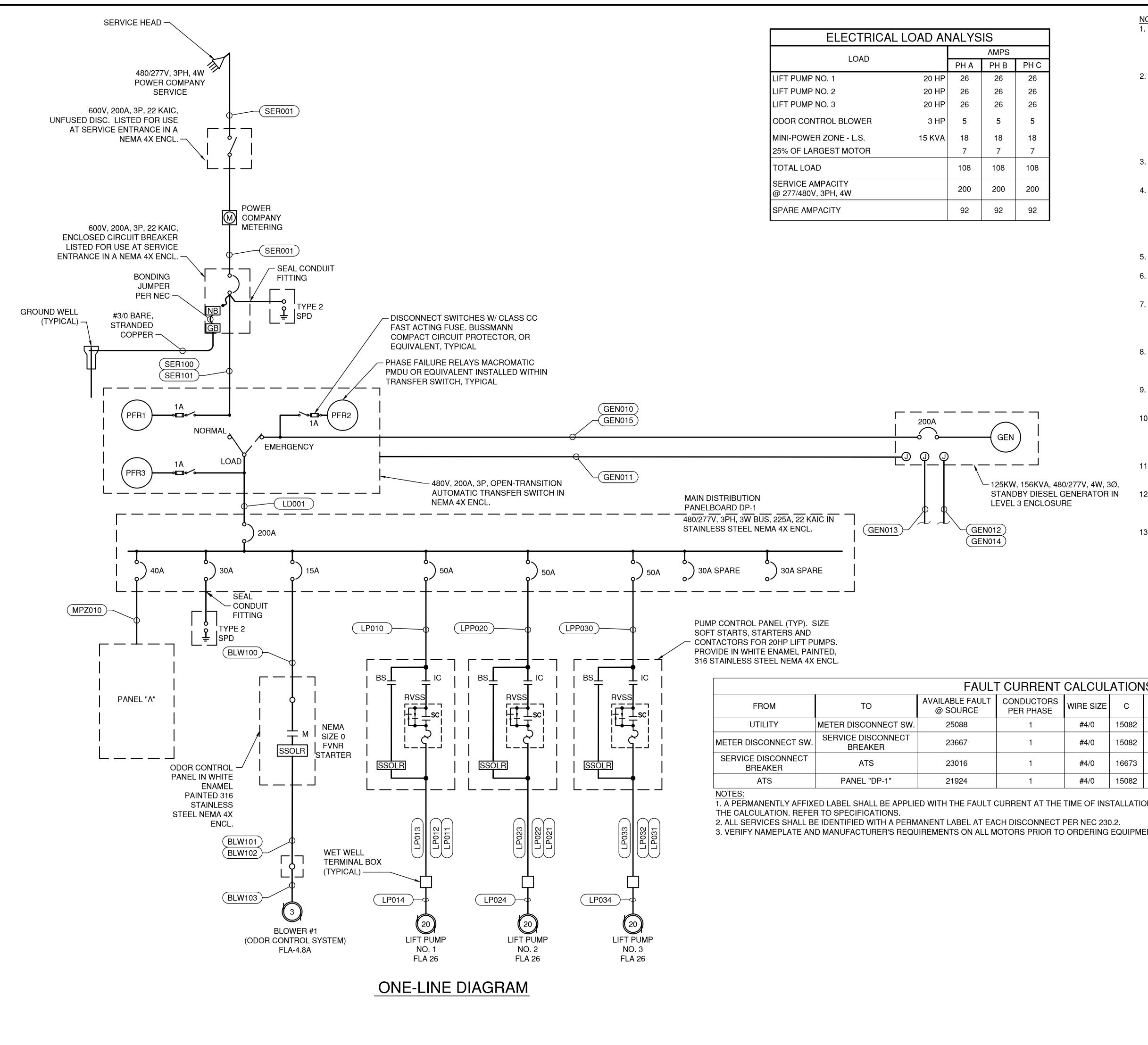


# **ELECTRICAL SITE PLAN - GROUNDING**

SCALE: 1/8 IN. = 1 FT.



- KEYED NOTES:
- 3/4"ØX10' COPPER CLAD GROUND ROD (TYP.). EXOTHERMICALLY WHO TO GROUND CABLE BURIED MIN. 30" BELOW GRADE.
- (2) #4/0 SOFT DRAWN, BARE COPPER CABLE BURIED MIN. 30" BELOW GRADE (TYP). EXOTHERMICALLY WELD ALL BELOW GRADE CONNECTIONS EXCÉPT AT TEST WELLS.
- ANTENNA TOWER AND BASE. RE: TYPICAL ANTENNA TOWER DETAIL
- 4 #6 SOFT DRAWN ,BARE COPPER GROUNDING TAIL TO ANTENNA TOWER (TYP.).
- GROUND TEST WELL. RE: GROUND TEST WELL ARRANGEMENT DETAIL.
- 6 MOISTURIZING POINT. RE: MOISTURIZING PORT DETAIL.
- Image: #6 SOFT DRAWN, BARE COPPER TAIL TO EACH CORNER OF<br/>GENERATOR FRAME.
- (8) #6 SOFT DRAWN, BARE COPPER TAIL TO EACH END OF ELECTRICAL EQUIPMENT SHELTER.
- #6 SOFT DRAWN, BARE COPPER TO SCADA PANEL GROUND BUS.
- #6 SOFT DRAWN, BARE COPPER TO EQUIPMENT GROUND BUS (TYP).
- 125 KW, 156 KVA, 480/277V, 3Ø STAND BY DIESEL GENERATOR W/15HR SUB BASE LEVEL TANK AND LEVEL 3 SOUND ATTENUATED ENCLOSURE.
- #6 SOFT DRAWN BARE COPPER TAIL, EXOTHERMICALLY WELD TO FENCE POST (TYP).



ELECTRICAL LOAD ANALYSIS										
LOAD										
LOAD		PH A	PH B	PH C						
LIFT PUMP NO. 1	20 HP	26	26	26						
LIFT PUMP NO. 2	20 HP	26	26	26						
LIFT PUMP NO. 3	20 HP	26	26	26						
ODOR CONTROL BLOWER	3 HP	5	5	5						
MINI-POWER ZONE - L.S.	15 KVA	18	18	18						
25% OF LARGEST MOTOR		7	7	7						
TOTAL LOAD		108	108	108						
SERVICE AMPACITY @ 277/480V, 3PH, 4W		200	200	200						
SPARE AMPACITY		92	92	92						

<u>NO</u> 1.	POWEF ACCOF	R COMPAN	Y AND	PROV RUPT C	AVAILABLE FAULT IDE EQUIPMENT R APACITY FOR ALL	ATED	Colliers
2.	PROVIE CONDU AND EC AND EC CONDU INSULA AREA/S	DE ALL REC JCTORS FO QUIPMENT QUIPMENT JCTORS MA	QUIREI DR LOC SEE ( SPECI AY BE NG IS	d Alaf Cal Pa One-li Ificat Route 600 VC	RM AND DEVICE PO NELS INSTALLED I NE DIAGRAM, CON IONS FOR REQUIR ED IN POWER CON OLTS AND WHERE ( SEPARATE 1 INCH	NEAR MOTORS ITROL DIAGRAMS EMENTS. DUITS WHERE CONDUIT	Engineering & Design & Design Muthematical Strategy Copyright © 2023. Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.
3.					ZES WITH GENERA ARY LOADS	TOR	Doing Business as
4.	MANUF PROVIE TO NEC RVAT A	ACTURER DE CONDUC C. CAPACIT	BEFOI CTORS ORS S STATE	RE OR S AND SHALL E STAR	UIREMENTS WITH DERING. DO NOT C CONDUITS SIZED A NOT BE DIRECTLY TERS. (USE CONT NTERLOCK WITH S	OVERCORRECT. ACCORDINGLY CONNECTED TO RACTOR, HOA,	PROTECT YOURSELF ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE Know what's below. Call before you dig. FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM
5.	ALL CC	NTROL PA	NELS	TO BE	UL LISTED.		
6.					ENTIRE CONTENTS		
7.	ENTER	ING AND E	XITING	G WET	UIRED FOR ALL RA WELL JUNCTIONS 2123 RE-ENTERAB	BOXES. FILL	
8.	WITH A	MINIMUM	READ	ING OF	ORS SHALL BE ME 50 OHMS TO BE A	CCEPTABLE. ALL	
9.	REFER	TO CONDU			ED BY AN ENGINEE CHEDULE FOR ADE		
10.	ABOVE BELOW	idergrou Ground Grade To	COND D ABO	UITS S VE GR	TS SHALL BE PVC S HALL BE ALUMINU ADE TRANSITIONS IINUM RMC.	M RMC. ALL	DESCRIPTION
11.					ONAL ELECTRICAL	. CODE ARTICLE	DRAWN BY
12.	SERVIC COORE	DINATE ANI	D PAY	FOR A	O LATEST UTILITY		DATE DATE
13.	COORE	DWER COM DINATE ALL FACTURER.			WANCE. DNS TO GENERATO	OR WITH	
							CONNER B. STURDIVANT 99971 GENSE VONALE 1/23/24
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32	480	5	0.03	0.97	24906.00	42	FOR SOUTHSTAR AT
73	480	10	0.05	0.95	22351.00	42	VERANO, LLC
	480		0.05	0.95	21258.00		
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PMEN	IT.						CITY OF SAN ANTONIO BEXAR COUNTY TEXAS
							Colliers Bagineering & Design HOLMDEL (Headquarters) 331 Newman Springs Road, Suite 203 Red Bank, NJ 07701 Phone: 732.383.1950 COLLIERS ENCINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING
							SCALE:       DATE:       DRAWN BY:       CHECKED BY:         AS SHOWN       1/23/24       CS       JC         PROJECT NUMBER:       DRAWING NAME:       22010003A       W-TTLE-CEDL         SHEET TITLE:       SHEET TITLE:       SHEET TITLE:       DRAWING NAME:
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				CABLE AND C	ONDUIT SCHEDULE		
ABLE/CONDUIT TAG CONDU	IT QUANTITY	CONDUIT SIZE	FROM	ТО	CONDUCTOR (EACH CONDUIT)	CABLE TYPE	DESCRIPTION
ANT001	1	2 IN.	SCADA PANEL	ANTENNA TOWER	ETHERNET CABLE	-	RADIO POE
ANT002	1	2 IN.	SCADA PANEL	ANTENNA TOWER	PULL STRING	-	SPARE
ATS001	1	1 IN.	ATS	SCADA PANEL	6#14	XHHW-2	PHASE FAIL RELAY OUTPUTS TO SCADA PANEL
BLW100	1	1 IN.	PANEL "A"	ODOR CONTROL BLOWER PANEL	3#12,1#12G	XHHW-2	ODOR CONTROL BLOWER PANEL FEEDER
BLW101	1	1 IN.	ODOR CONTROL BLOWER PANEL	ODOR CONTROL BLOWER J-BOX	3#12,1#12G	XHHW-2	ODOR CONTROL BLOWER FEEDER
BLW102	1	1 IN.	ODOR CONTROL BLOWER PANEL	ODOR CONTROL BLOWER J-BOX	PULL STRING	-	SPARE
BLW103	1	1 IN.	ODOR CONTROL BLOWER J-BOX	ODOR CONTROL BLOWER	3#12,1#12G	XHHW-2	ODOR CONTROL BLOWER WHIP
FLT010	1	1 & 1/2 IN.	LIFT PUMP CONTROL PANEL	FLOATS/TRANSDUCER TERMINAL BOX	10#12, 1#12G	XHHW-2	FLOATS
FLT011	1	1 & 1/2 IN.	FLOATS/TRANSDUCER TERMINAL BOX	WET WELL	(5) MANUFACTURER'S CABLE	-	FLOATS
GEN010	1	2 IN.	EMERGENCY GENERATOR	AUTOMATIC TRANSFER SWITCH	3#3/0,1#6G	XHHW-2	EMERGENCY POWER
GEN011	1	1 IN.	EMERGENCY GENERATOR	AUTOMATIC TRANSFER SWITCH	2#12	XHHW-2	GENERATOR START/STOP FROM ATS
GEN012	1	1 IN.	EMERGENCY GENERATOR	SCADA PANEL	6#14	XHHW-2	GENERATOR STATUS, LOW FUEL, GENERAL ALARM
GEN013	1	1 IN.	EMERGENCY GENERATOR	PANEL "B"	2#10,4#12,3#12G	XHHW-2	GENERATOR DEVICES (HEATER, BATTERY CHARGER, JACKET HEATER)
GEN014	1	1 IN.	EMERGENCY GENERATOR	SCADA PANEL	ETHERNET CABLE	-	GENERATOR ETHERNET COMMUNICATIONS
GEN015	1	2 IN.	EMERGENCY GENERATOR	AUTOMATIC TRANSFER SWITCH	PULL STRING	-	SPARE
HT001	1	1 IN.	PANEL "A"	HEAT TRACE J-BOX	2#12,1#12G	XHHW-2	PRESSURE TRANSDUCER HEAT TRACE
LD001	1	2 IN.	AUTOMATIC TRANSFER SWITCH	PANEL "DP-1"	3#4/0,1#2G	XHHW-2	FEEDER TO PANEL "DP-1"
LP010	1	1 IN.	PANEL "DP-1"	LIFT PUMP NO. 1 CONTROL PANEL	3#8,1#10G	XHHW-2	LIFT PUMP NO. 1 FEEDER
LP011	1	1 IN.	LIFT PUMP NO. 1 CONTROL PANEL	LIFT PUMP NO. 1 J-BOX	3#8,1#10G	XHHW-2	LIFT PUMP NO. 1 FEEDER
LP012	1	1 IN.	LIFT PUMP NO. 1 CONTROL PANEL	LIFT PUMP NO. 1 J-BOX	14-1 PR., 16 GA. BELDEN #31P1601	XHHW-2	LIFT PUMP NO. 1 CONTROLS
LP013	1	1 IN.	LIFT PUMP NO. 1 CONTROL PANEL	LIFT PUMP NO. 1 J-BOX	PULL STRING	-	SPARE
LP014	1	2 IN.	LIFT PUMP NO. 1 J-BOX	LIFT PUMP NO. 1	MANUFACTURER'S CABLES	-	LIFT PUMP NO. 1 CABLES
LP015	1	1 IN.	LIFT PUMP NO. 1 CONTROL PANEL	SCADA PANEL	18#14	XHHW-2	DISCRETE INPUTS FROM LIFT PUMP #1 CONTROL PANEL
LP016	1	1 IN.	PANEL "A"	LIFT PUMP NO. 1 CONTROL PANEL	2#12,1#12G	XHHW-2	LIFT PUMP #1 CONTROL PANEL POWER
LP020	1	1 IN.	PANEL "DP-1"	LIFT PUMP NO. 2 CONTROL PANEL	3#8,1#10G	XHHW-2	LIFT PUMP NO. 2 FEEDER
LP021	1	1 IN.	LIFT PUMP NO. 2 CONTROL PANEL	LIFT PUMP NO. 2 J-BOX	3#8,1#10G	XHHW-2	LIFT PUMP NO. 2 FEEDER
LP022	1	1 IN.	LIFT PUMP NO. 2 CONTROL PANEL	LIFT PUMP NO. 2 J-BOX	14-1 PR., 16 GA. BELDEN #31P1601	XHHW-2	LIFT PUMP NO. 2 CONTROLS
LP023	1	1 IN.	LIFT PUMP NO. 2 CONTROL PANEL	LIFT PUMP NO. 2 J-BOX	PULL STRING	-	SPARE
LP024	1	2 IN.	LIFT PUMP NO. 2 J-BOX	LIFT PUMP NO. 2	MANUFACTURER'S CABLES		LIFT PUMP NO. 2 CABLES
LP025	1	1 IN.	LIFT PUMP NO. 2 CONTROL PANEL	SCADA PANEL	18#14	XHHW-2	DISCRETE INPUTS FROM LIFT PUMP #2 CONTROL PANEL
LP026	1	1 IN.	PANEL "A"	LIFT PUMP NO. 2 CONTROL PANEL	2#12,1#12G	XHHW-2	LIFT PUMP #2 CONTROL PANEL POWER
LP030	1	1 IN.	PANEL "DP-1"	LIFT PUMP NO. 3 CONTROL PANEL	3#8,1#10G	XHHW-2	LIFT PUMP NO. 3 FEEDER
LP031	1	1 IN.	LIFT PUMP NO. 3 CONTROL PANEL	LIFT PUMP NO. 3 J-BOX	3#8,1#10G	XHHW-2	LIFT PUMP NO. 3 FEEDER
LP032	1	1 IN.	LIFT PUMP NO. 3 CONTROL PANEL	LIFT PUMP NO. 3 J-BOX	14-1 PR., 16 GA. BELDEN #31P1601	-	LIFT PUMP NO. 3 CONTROLS
LP033	1	1 IN.	LIFT PUMP NO. 3 CONTROL PANEL	LIFT PUMP NO. 3 J-BOX	PULL STRING		SPARE
LP034	1	2 IN.	LIFT PUMP NO. 3 J-BOX	LIFT PUMP NO. 3	MANUFACTURER'S CABLES	-	LIFT PUMP NO. 3 CABLES
LP035	1	1 IN.	LIFT PUMP NO. 3 CONTROL PANEL	SCADA PANEL	18#14	XHHW-2	DISCRETE INPUTS FROM LIFT PUMP #3 CONTROL PANEL
LP036	1	1 IN.	PANEL "A"	LIFT PUMP NO. 3 CONTROL PANEL	2#12,1#12G	XHHW-2	LIFT PUMP #3 CONTROL PANEL POWER
LTG010	1	1 IN.	PANEL "A"	AREA LIGHT	2#12,1#12G	XHHW-2	AREA LIGHT
LTG020	1	1 IN.	PANEL "A"	AREA LIGHT	2#12,1#12G	XHHW-2	AREA LIGHT LEVEL CONTROL OPERATIONAL STATUS, CONTROL POWER FAIL, HIGH LEVEL AL
LVL001	1	1 IN.	LEVEL CONTROL PANEL	SCADA PANEL	12#14	XHHW-2	LOW LEVEL ALARM
LVL002	1	1 IN.	LEVEL CONTROL PANEL	PANEL "A"	2#12,1#12G	XHHW-2	LEVEL CONTROL PANEL FEEDER
LVL003	1	3/4 IN.	LEVEL CONTROL PANEL	LIFT PUMP NO. 1 CONTROL PANEL	2#14	XHHW-2	PUMP NO. 1 START CONTROL LOOP FROM LEVEL CONTROL PANEL
LVL004	1	3/4 IN.	LEVEL CONTROL PANEL	LIFT PUMP NO. 2 CONTROL PANEL	2#14	XHHW-2	PUMP NO. 2 START CONTROL LOOP FROM LEVEL CONTROL PANEL
LVL005	1	3/4 IN.	LEVEL CONTROL PANEL	LIFT PUMP NO. 3 CONTROL PANEL	2#14	XHHW-2	PUMP NO. 3 START CONTROL LOOP FROM LEVEL CONTROL PANEL
MPZ010	1	1 IN.	PANEL "DP-1"	PANEL "A"	3#8,1#10G	XHHW-2	PANEL "A" FEEDER
REC010	1	1 IN.	PANEL "A"	WET WELL CONVENIENCE RECEPTACLE	2#12,1#12G	XHHW-2	WET WELL CONVENIENCE RECEPTACLE FEEDER
SER001	1	2 1/2 IN.	SERVICE DROP	SERVICE ENTRANCE DISCONNECT SWITCH	4#4/0	XHHW-2	SERVICE DROP
SER100	1	2 1/2 IN.	SERVICE ENTRANCE DISCONNECT	AUTOMATIC TRANSFER SWITCH	3#4/0,1#2G	XHHW-2	SERVICE DROP
SER101	1	2 1/2 IN.	SERVICE ENTRANCE DISCONNECT	AUTOMATIC TRANSFER SWITCH	PULL STRING	-	SPARE
XDCR001	1	1 IN.	PRESSURE TRANSDUCER	SCADA PANEL	1 PR., 16 GA. BELDEN #31P1601	-	DISCHARGE PRESSURE TRANSDUCER TO SCADA PANEL
XDCR010	1	1 & 1/2 IN.	LEVEL CONTROL PANEL	LEVEL TRANSDUCER TERMINAL BOX	TWISTED PAIR CABLE, 1#12G	-	WET WELL LEVEL TRANSDUCER
XDCR011	1	1 &1/2 IN.	FLOATS/TRANSDUCER TERMINAL BOX	STILLING WELL	MANUFACTURER'S CABLE		WET WELL LEVEL TRANSDUCER



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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

ELECTRICAL SCHEDULES SHEET

E-301

					LIGHTING FIX	TURE SCHEDULE		
MARK	DESCRIPTION	VOLTAGE	VA	LAMP TYPE	MOUNTING	MANUFACTURER	CATALOG FIXTURE NUMBER	POLE DATA
A	VAPORTITE CANOPY LIGHT	120	42	LED	SURFACE	LITHONIA OR EQUAL	VAP 4000LM FST MD MVOLT 40K 80CRI	-
F	LED AREA LIGHT	120	138	LED	POLE	LITHONIA OR APPROVED EQUAL	DSX1LED-P5-40K-T5S-120-SPA-PER-SF	STSH-20-4F-DM29AS-UL-DDB

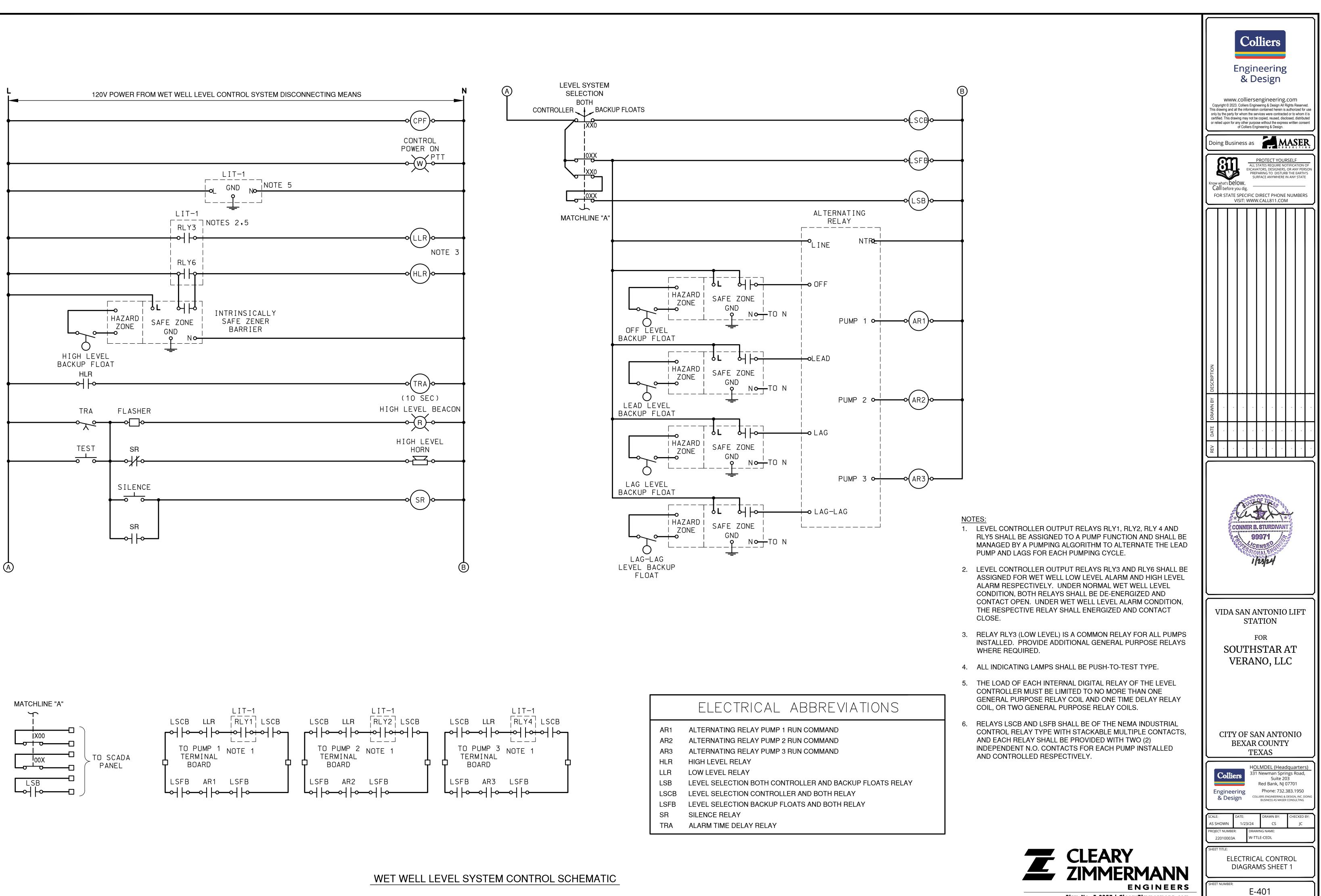
PANELDP-1SERVICE VOLTAGE480VMAIN BREAKER SIZE200A		_	NE SH	HORT CIRCUIT RATING <u>65 KAIC</u> PHA							SIZE _ WIRE SI SE <u>3</u> NTING _				WITH: SOLID NEUTRAL & GROUND ISOLATED GROUND BUS 200% NEUTRAL NOTE: ADJ. CKTS. TO BAL. PNL.
		BREA	KER	V	A/WATT	S	СКТ	СК	- \	VA/WATT	ſS	BREA	KER		
CKT. DESCRIPTION	WIRE	POLE	AMP	А	В	С	NO.	NO	Α	В	С	POLE	AMP	WIRE	CKT. DESCRIPTION
				-			1	2	7205						
SPD	10	3	30		-		3	4		7205		3	50	#8	LIFT PUMP 1 CONTROL PANEL
						-	5	6			7205				
				7205			7	8	7205						
LIFT PUMP 2 CONTROL PANEL	8	3	50		7205		9	10		7205		3	50	#8	LIFT PUMP 3 CONTROL PANEL
						7205	11	12			7205				
				5000			13	14	1330						
PANEL "A"	10	3	40		5000		15	16		1330		3	15	#12	ODOR CONTROL BLOWER
						5000	17	18			1330				
				-			19	20	-						
SPARE	-	3	30		-		21	22		-		3	30	-	SPARE
						-	23	24			-				
TOTAL PHASE A: <u>27945</u> VOLT-AMP TOTAL PHASE B: <u>27945</u> VOLT-AMP TOTAL PHASE C: <u>27945</u> VOLT-AMP											ТО	TAL CC	NNECTED LOAD: <u>83835</u> VA		

PANELASERVICE VOLTAGE120/208VMAIN BREAKER SIZE40A		_	NE SF	HASE BUS RATING EUTRAL BUS RATING HORT CIRCUIT RATING22 KAIC DCATION _ELECTRICAL RACK						NEU V PHAS	SIZE _ WIRE SI E <u>3</u> NTING _	ZE <u></u> #	WITH: SOLID NEUTRAL & GROUND ISOLATED GROUND BUS 200% NEUTRAL NOTE: ADJ. CKTS. TO BAL. PNL.		
CKT. DESCRIPTION	WIRE	BRE	AKER	V	A/WATT	S	СКТ	СКТ	١	/A/WATT	S	BREA	KER	WIRE	CKT. DESCRIPTION
CKT. DESCRIPTION	WIRE	POLE	AMP	А	В	С	NO.	NO.	А	В	С	POLE	AMP		CKT. DESCRIPTION
JACKET WATER HEATER	8	2	30	1500			1	2	180			1	20	12	CONVENIENCE RECEPTACLE
JACKET WATER HEATER	0	2	50		1500		3	4		800		1	20	12	GENERATOR BATTERY CHARGER
SCADA PANEL	12	1	20			1000	5	6			84	1	20	12	CANOPY LIGHTS
PRESSURE XDCR HEAT TRACE	12	1	20	800			7	8	138			1	20	12	YARD LIGHT NO. 1
YARD LIGHT NO. 2	12	1	20		138		9	10		500		1	20	12	ALTERNATOR SPACE HEATER
LIFT PUMP CONTROL PANEL #2	12	1	20			400	11	12			400	1	20	12	LIFT PUMP CONTROL PANEL #1
LEVEL CONTROL PANEL	12	1	20	400			13	14	400			1	20	12	LIFT PUMP CONTROL PANEL #3
ODOR CONTROL BLOWER PANEL	12	1	20		400		15	16		180		1	20	12	WET WELL CONVENIENC RECEPT.
SPARE		1	20			-	17	18			500	1	20	12	SCADA PANEL
SPARE		1	20	-			19	20	-			1	20		SPARE
SPARE		1	20		-		21	22		-		1	20		SPARE
SPARE		1	20			-	23	24			-	1	20		SPARE
TOTAL PHASE A: <u>3418</u> VOLT-AMPS TOTAL PHASE B: <u>3518</u> VOLT-AMPS TOTAL PHASE C: <u>2384</u> VOLT-AMPS				TOTAL PHASE A CURRENT: <u>28</u> AMPS TOTAL PHASE B CURRENT: <u>29</u> AMPS TOTAL PHASE C CURRENT: <u>20</u> AMPS									ТС	DTAL C	ONNECTED LOAD: <u>9320</u> VA

PANEL "A" IS A 15KVA COMBINATION XFMR/PANELBOARD IN A STAINLESS STEEL NEMA 3R ENCL.

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ID NEUTRAL & GROUND LATED GROUND BUS	of Colliers Engineering & Design.
% NEUTRAL ADJ. CKTS. TO BAL. PNL. T. DESCRIPTION VENIENCE RECEPTACLE	Row what's below. Call before you dig. FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM
OR BATTERY CHARGER CANOPY LIGHTS YARD LIGHT NO. 1 RNATOR SPACE HEATER JMP CONTROL PANEL #1 JMP CONTROL PANEL #3 L CONVENIENC RECEPT. SCADA PANEL SPARE SPARE O LOAD: <u>9320</u> VA	
	DESCRIPTION
	DRAWN BY
	A DATE
	CONNER B. STURDIVANT 99971 CENS ONALE UZ3/24
	VIDA SAN ANTONIO LIFT STATION FOR SOUTHSTAR AT VERANO, LLC
	CITY OF SAN ANTONIO BEXAR COUNTY TEXAS HOLMDEL (Headquarters) 331 Newman Springs Road, Suite 203
	Suite 203 Red Bank, NJ 07701 Phone: 732.383.1950 Colliers Engineering & Design Business as Maser consulting
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CLEARY ZIMMERMANN ENGINEERS	SHEET TITLE: ELECTRICAL SCHEDULES SHEET 2 SHEET NUMBER:
ENGINEERS Firm No. F-9357   ClearyZimmermann.com	E-302

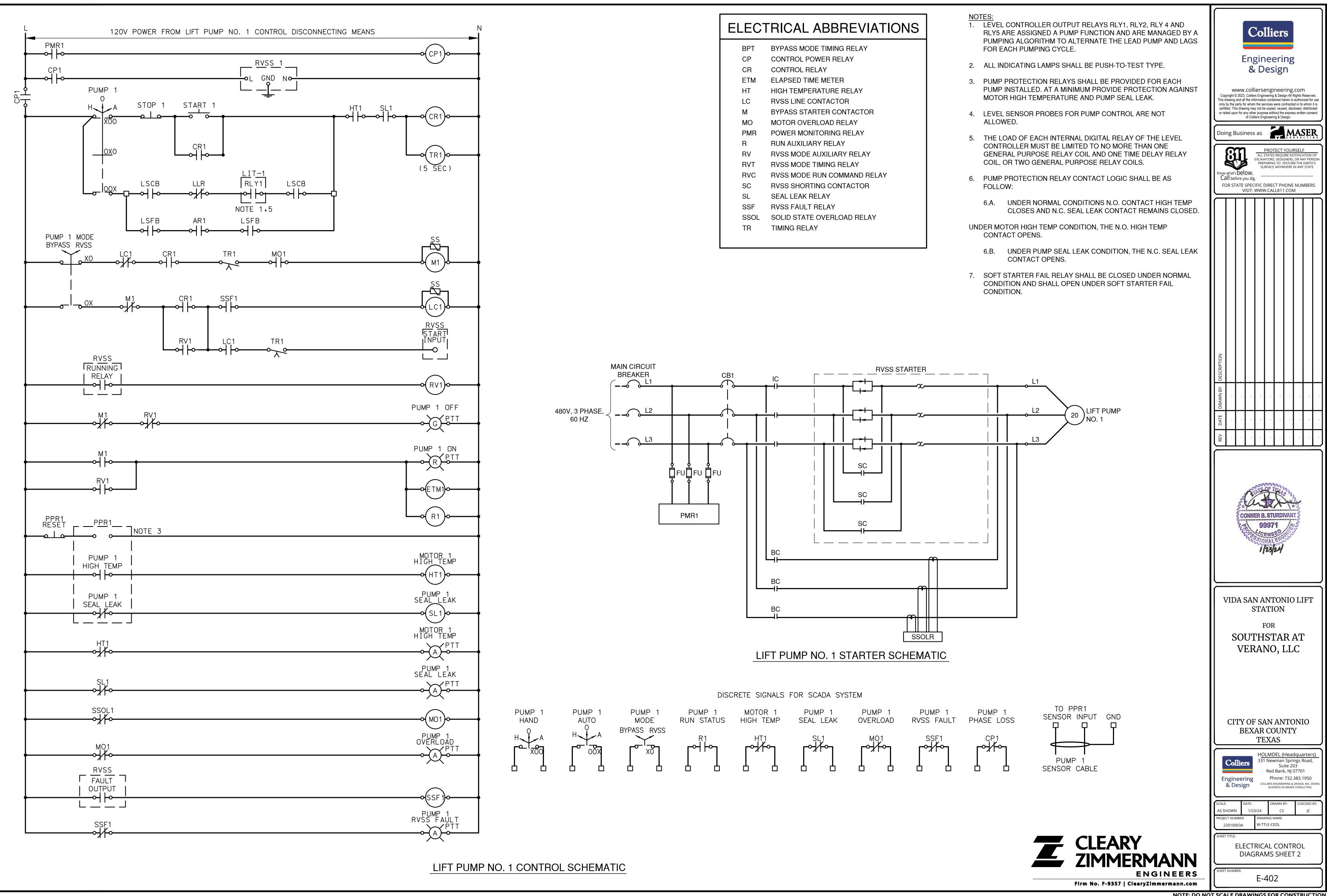




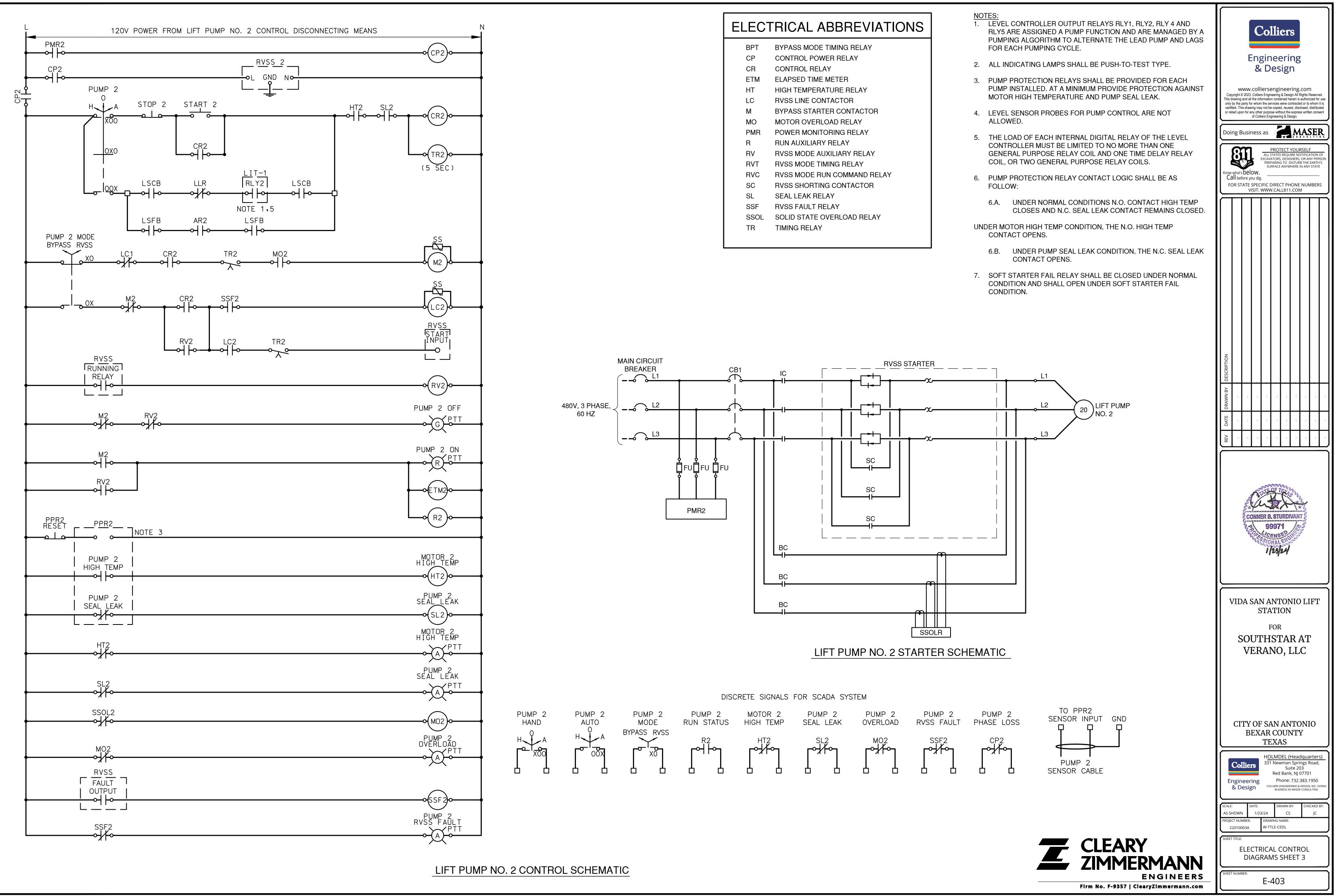


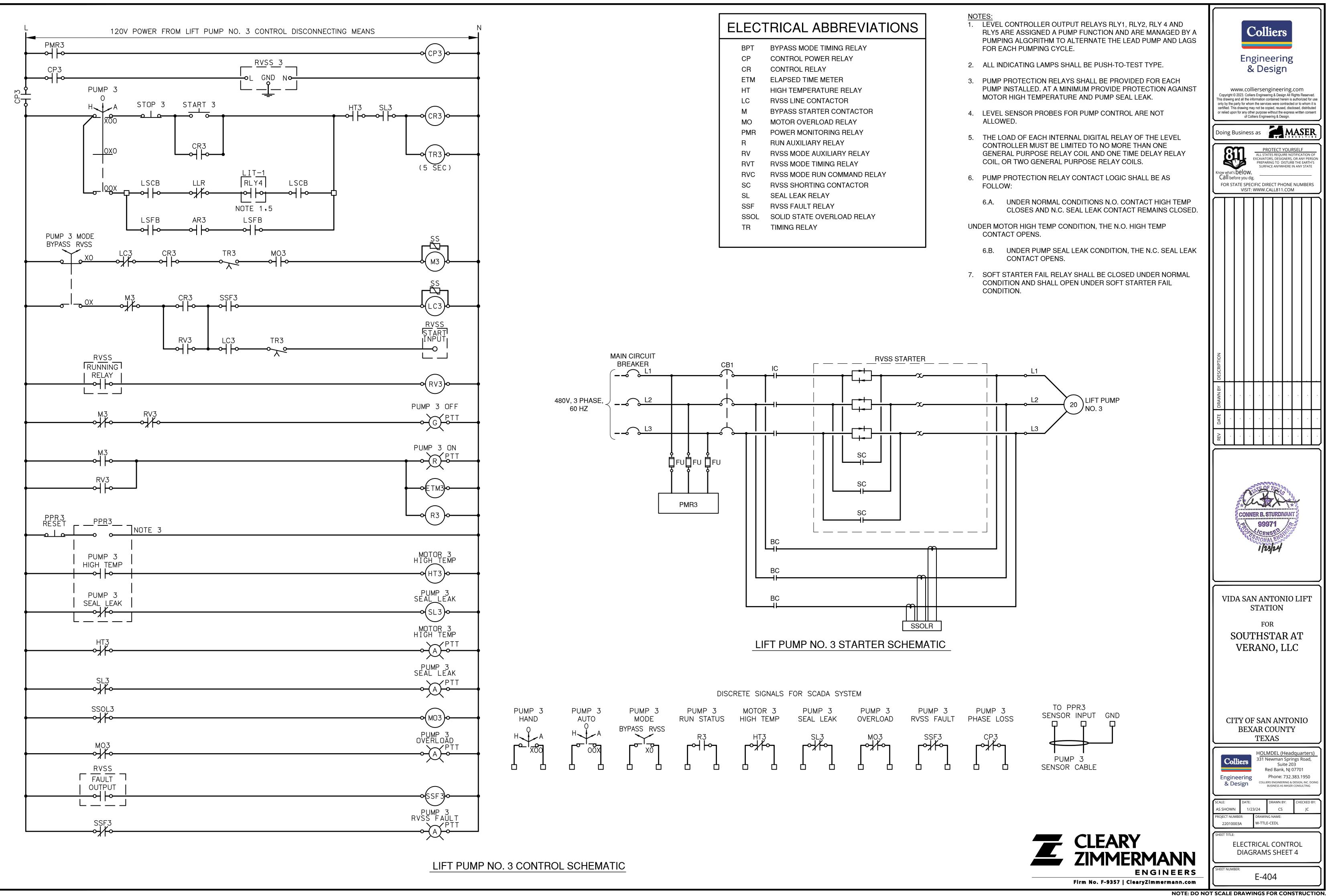
	ELECTRICAL ABBREVIATIONS
AR1	ALTERNATING RELAY PUMP 1 RUN COMMAND
AR2	ALTERNATING RELAY PUMP 2 RUN COMMAND
AR3	ALTERNATING RELAY PUMP 3 RUN COMMAND
HLR	HIGH LEVEL RELAY
LLR	LOW LEVEL RELAY
LSB	LEVEL SELECTION BOTH CONTROLLER AND BACKUP FLOATS RELAY
LSCB	LEVEL SELECTION CONTROLLER AND BOTH RELAY
LSFB	LEVEL SELECTION BACKUP FLOATS AND BOTH RELAY
SR	SILENCE RELAY
TRA	ALARM TIME DELAY RELAY

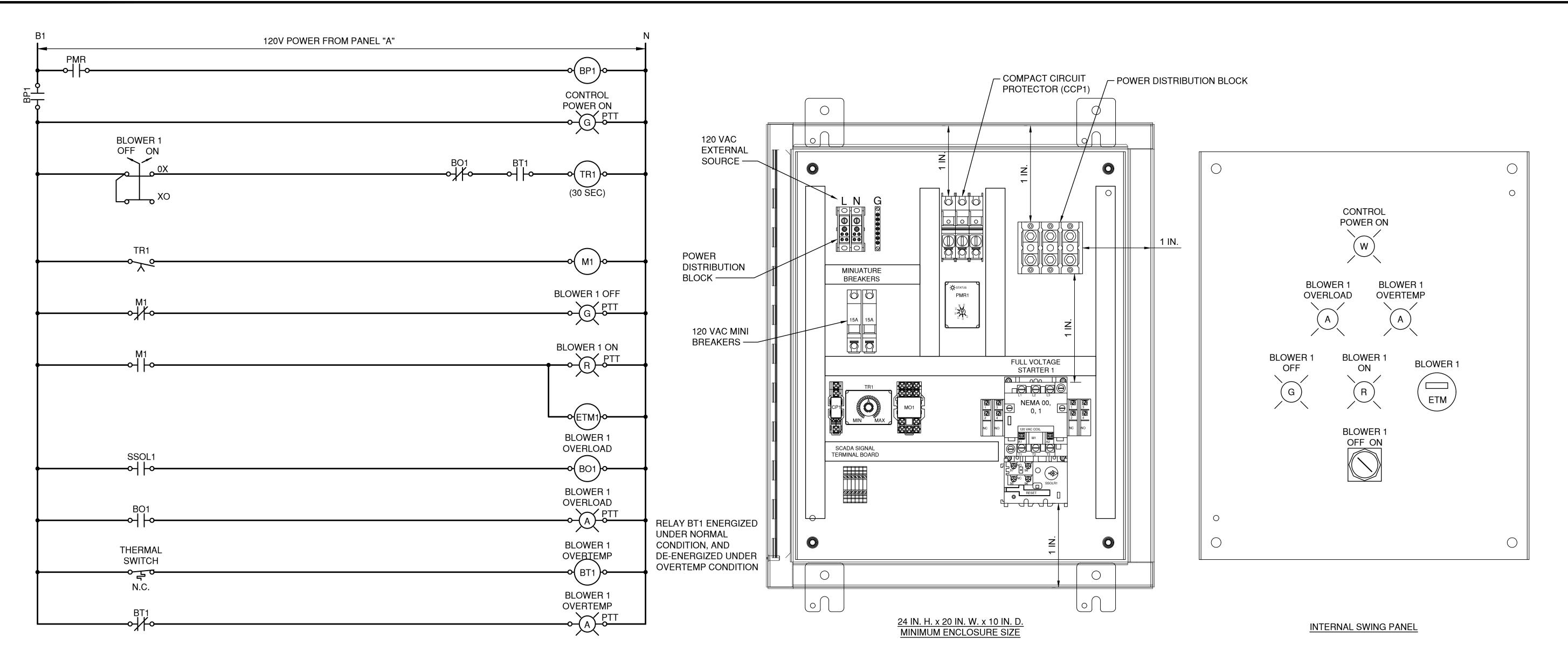
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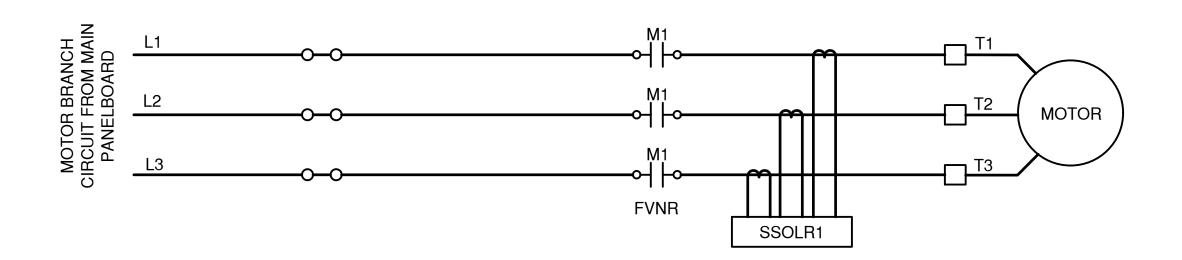
## ODOR CONTROL BLOWER CONTROL SCHEMATIC

NOTES:

- 1. ALL INDICATING LAMPS SHALL BE PUSH-TO-TEST TYPE.
- 2. THE BLOWER INTERNAL THERMAL SWITCH IS CLOSED UNDER NORMAL CONDITION AND SHALL OPEN UNDER BLOWER OVERTEMPERATURE CONDITION.

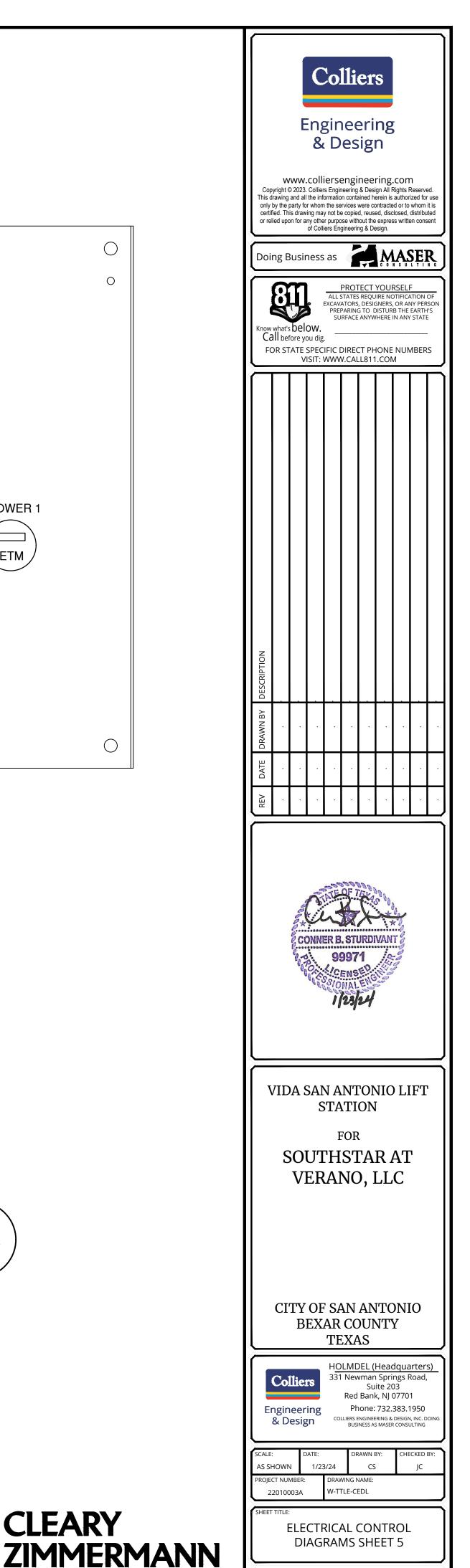
ELEC	TRICAL ABBREVIATIONS
ВО	BLOWER OVERLOAD RELAY
BS	BLOWER FULL VOLTAGE STARTER
ВТ	BLOWER OVER TEMPERATURE RELAY
CP	CONTROL POWER RELAY
CCP	COMPACT CIRCUIT PROTECTOR
ETM	ELAPSED TIME METER
М	STARTER CONTACTOR
MO	MOTOR OVERLOAD RELAY
PMR	PHASE MONITORING RELAY
SS	COIL SURGE SUPPRESSOR
SSOL	SOLID STATE OVERLOAD RELAY
TR	TIMING RELAY

# ODOR CONTROL UNIT PANEL TYPICAL LAYOUT



# ODOR CONTROL BLOWER THREE LINE DIAGRAM





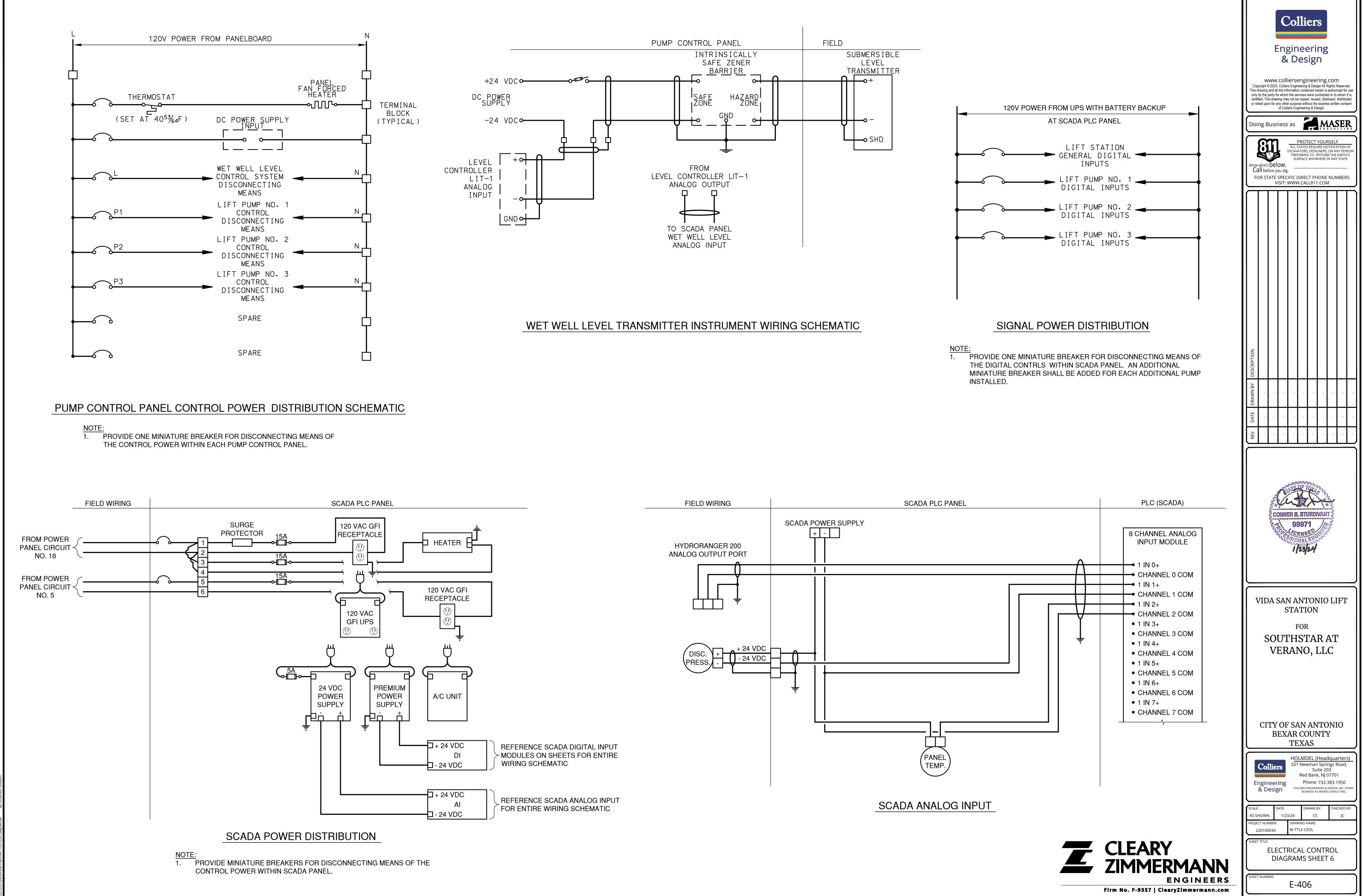
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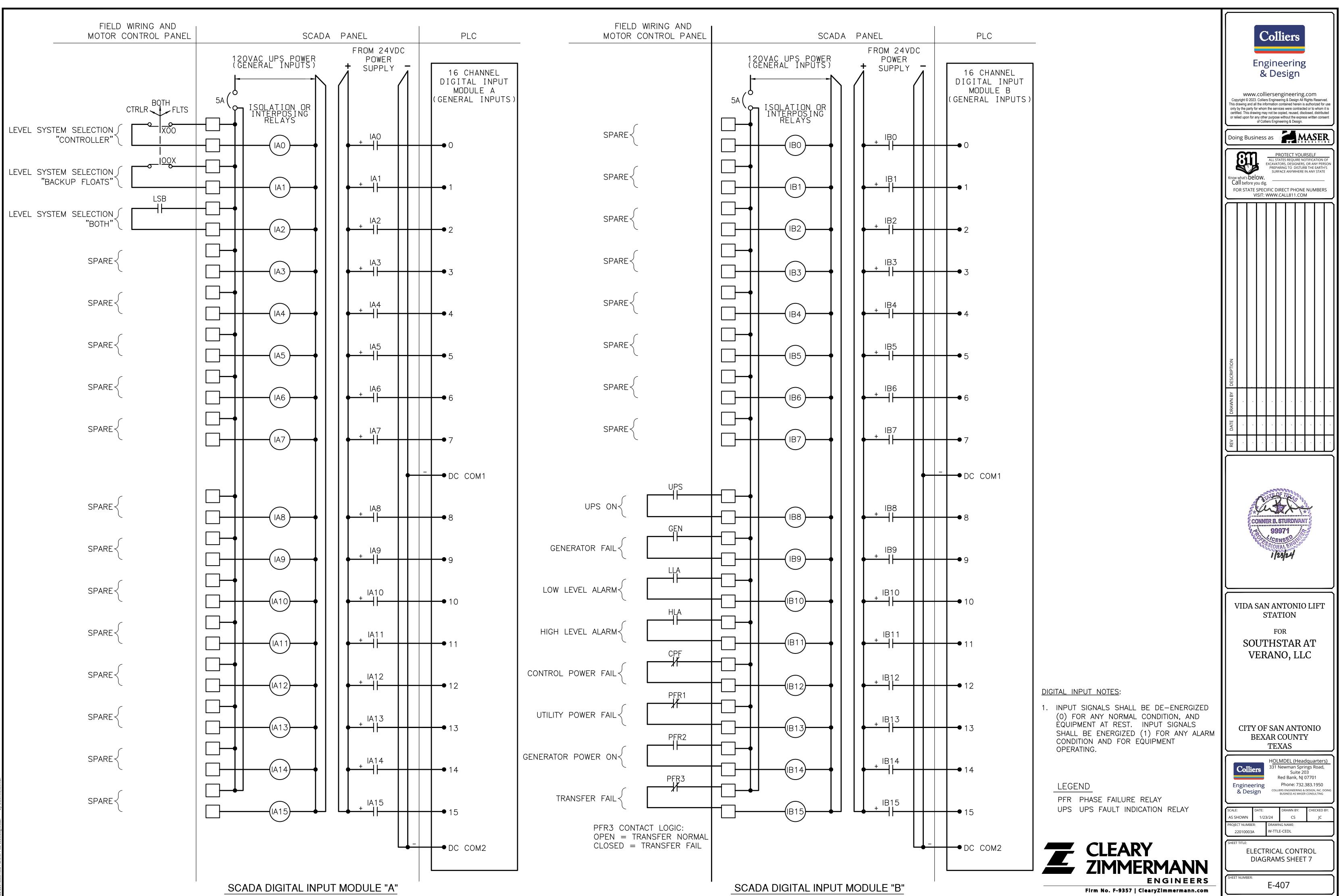
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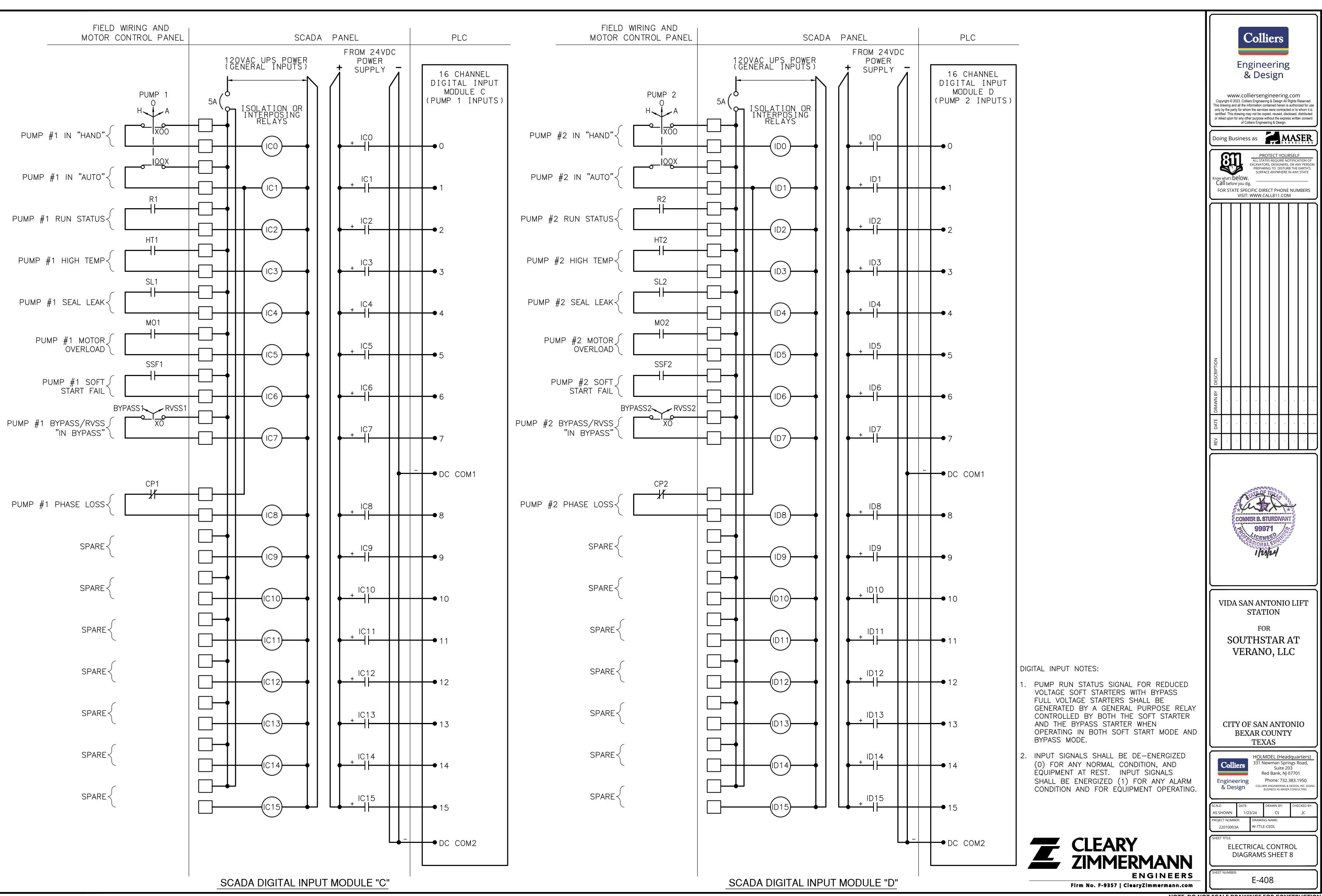
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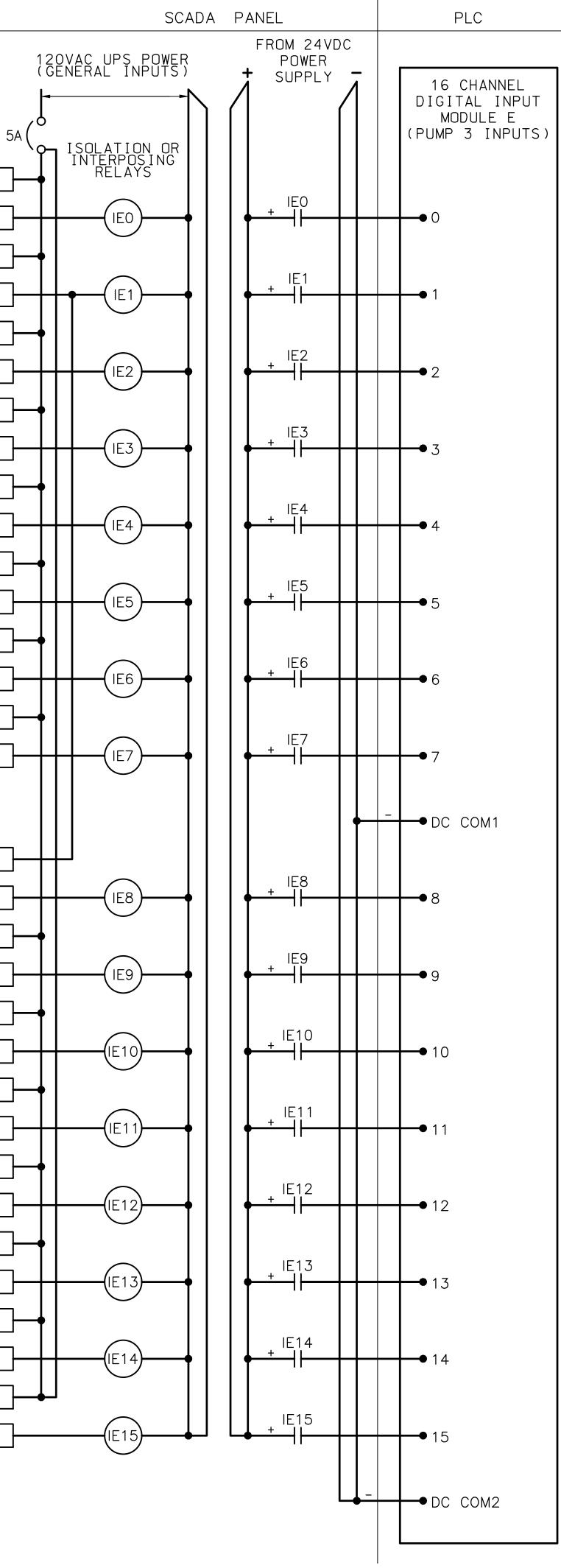


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	WIRING AND ONTROL PANEL	
		5
PUMP #3 IN "HAND"		
PUMP #3 IN "AUTO"		
PUMP #3 RUN STATUS	R3	-
PUMP #3 HIGH TEMP	HT3	
PUMP #3 SEAL LEAK	SL3	
PUMP #3 MOTOR OVERLOAD	MO3	
PUMP #3 SOFT { START FAIL {	SSF3	
BY PUMP #3 BYPASS/RVSS "IN BYPASS"	PASS3 RVSS3	
PUMP #3 PHASE LOSS		-
SPARE		



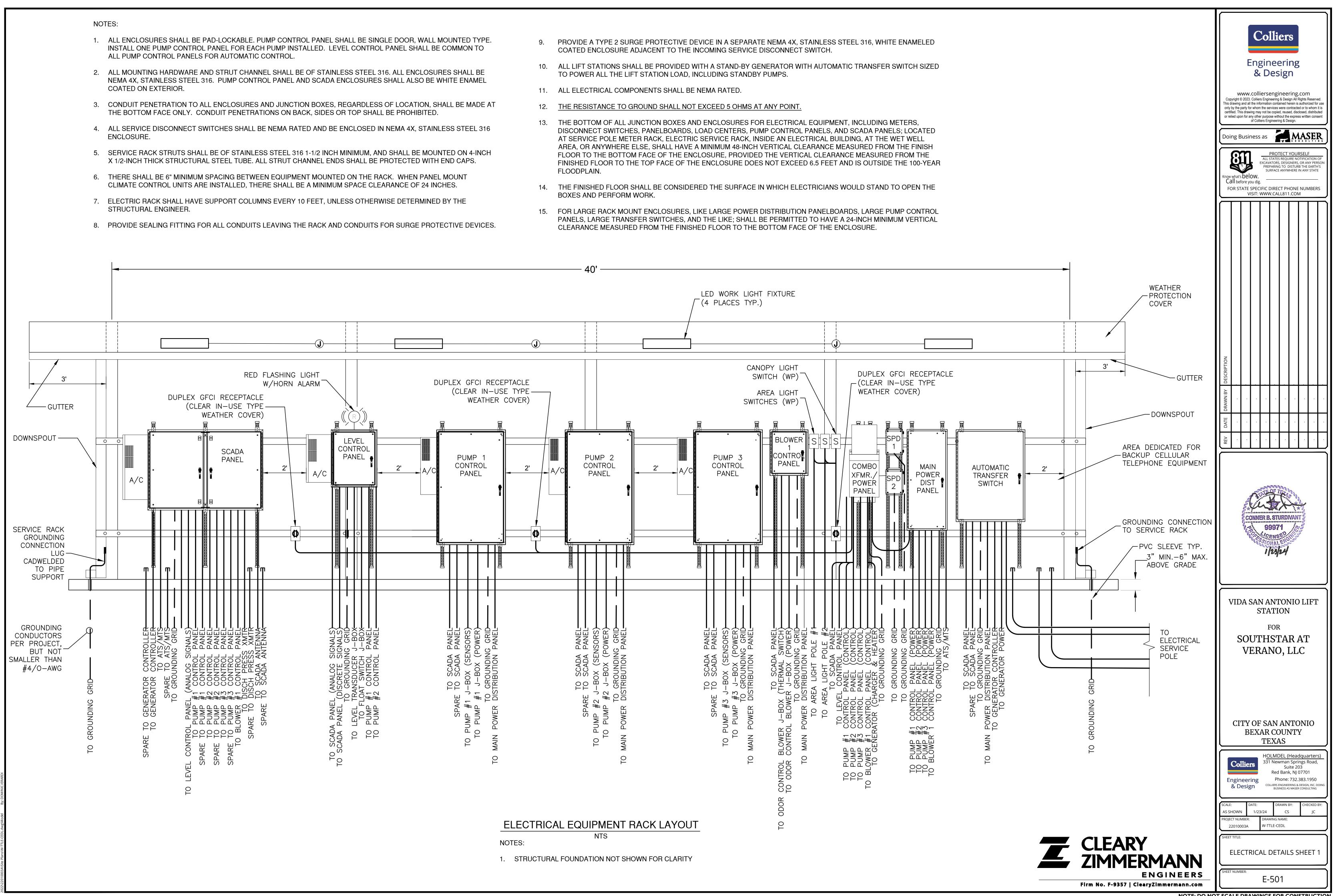
## SCADA DIGITAL INPUT MODULE "E"

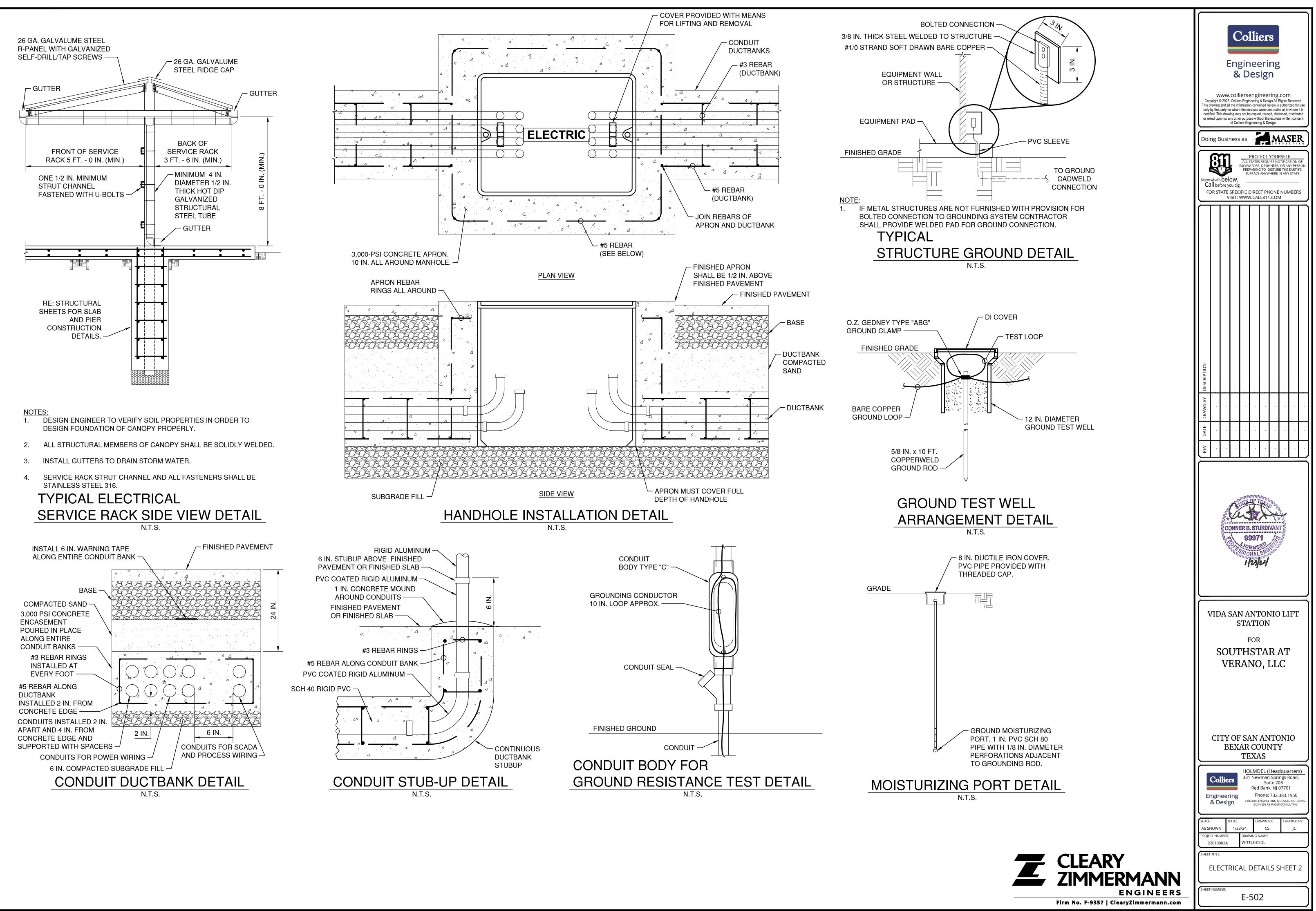
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DIGITAL INPUT NOTES:

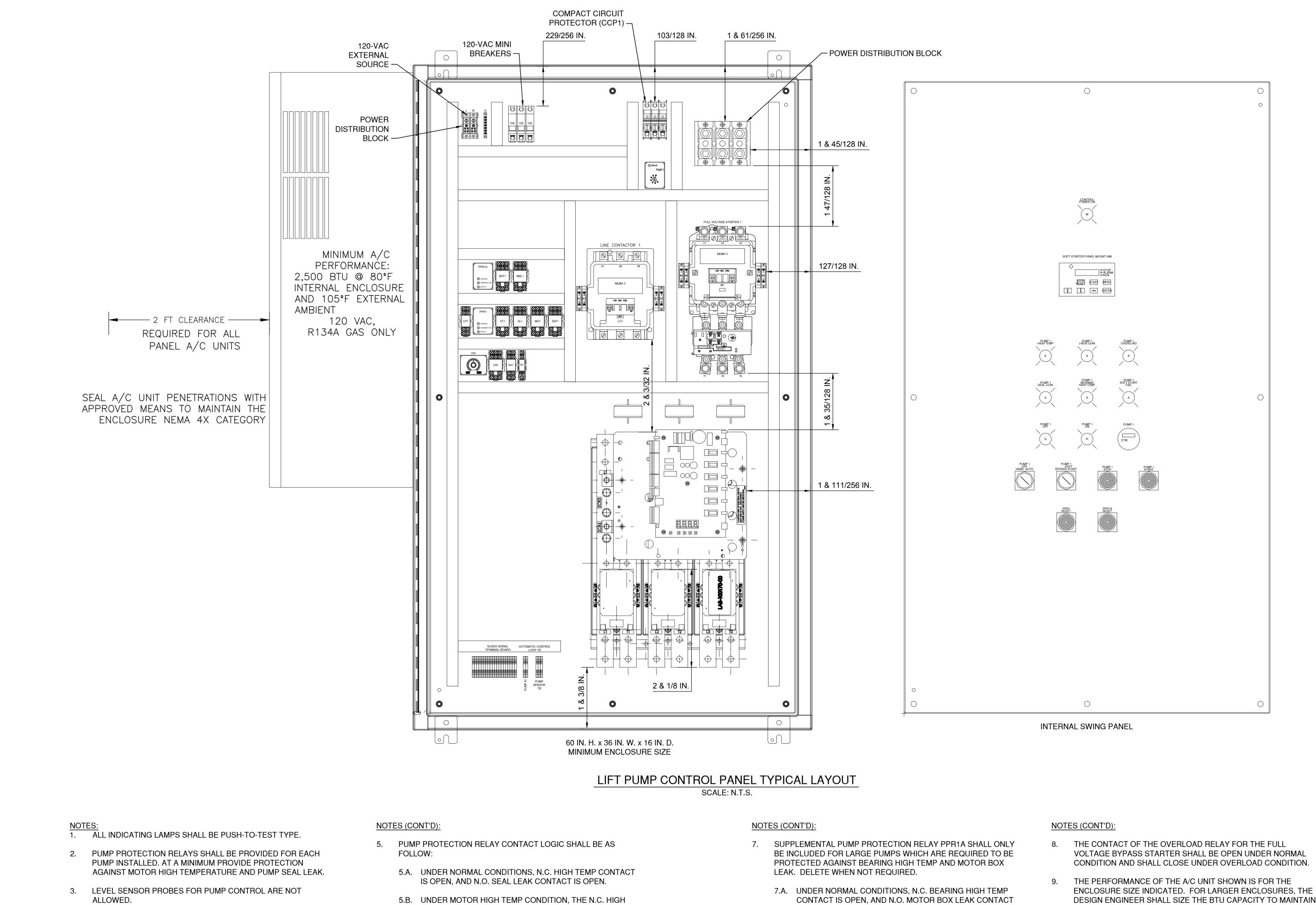
- 1. PUMP RUN STATUS SIGNAL FOR REDUCED VOLTAGE SOFT STARTERS WITH BYPASS FULL VOLTAGE STARTERS SHALL BE GENERATED BY A GENERAL PURPOSE RELAY CONTROLLED BY BOTH THE SOFT STARTER AND THE BYPASS STARTER WHEN OPERATING IN BOTH SOFT START MODE AND BYPASS MODE.
- INPUT SIGNALS SHALL BE DE-ENERGIZED (0) FOR ANY NORMAL CONDITION, AND EQUIPMENT AT REST. INPUT SIGNALS SHALL BE ENERGIZED (1) FOR ANY ALARM CONDITION AND FOR EQUIPMENT OPERATING.







NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



4. THE LOAD OF EACH INTERNAL DIGITAL RELAY OF THE LEVEL CONTROLLER MUST BE LIMITED TO NO MORE THAN ONE GENERAL PURPOSE RELAY COIL AND ONE TIME DELAY RELAY COIL, OR TWO GENERAL PURPOSE RELAY COILS.

FAULT CONDITION.

TEMP CONTACT CLOSES.

5.C. UNDER PUMP SEAL LEAK CONDITION, THE N.O. SEAL LEAK CONTACT CLOSES.

6. SOFT STARTER FAULT OUTPUT RELAY SHALL BE OPEN UNDER NORMAL CONDITION AND SHALL CLOSE UNDER SOFT STARTER

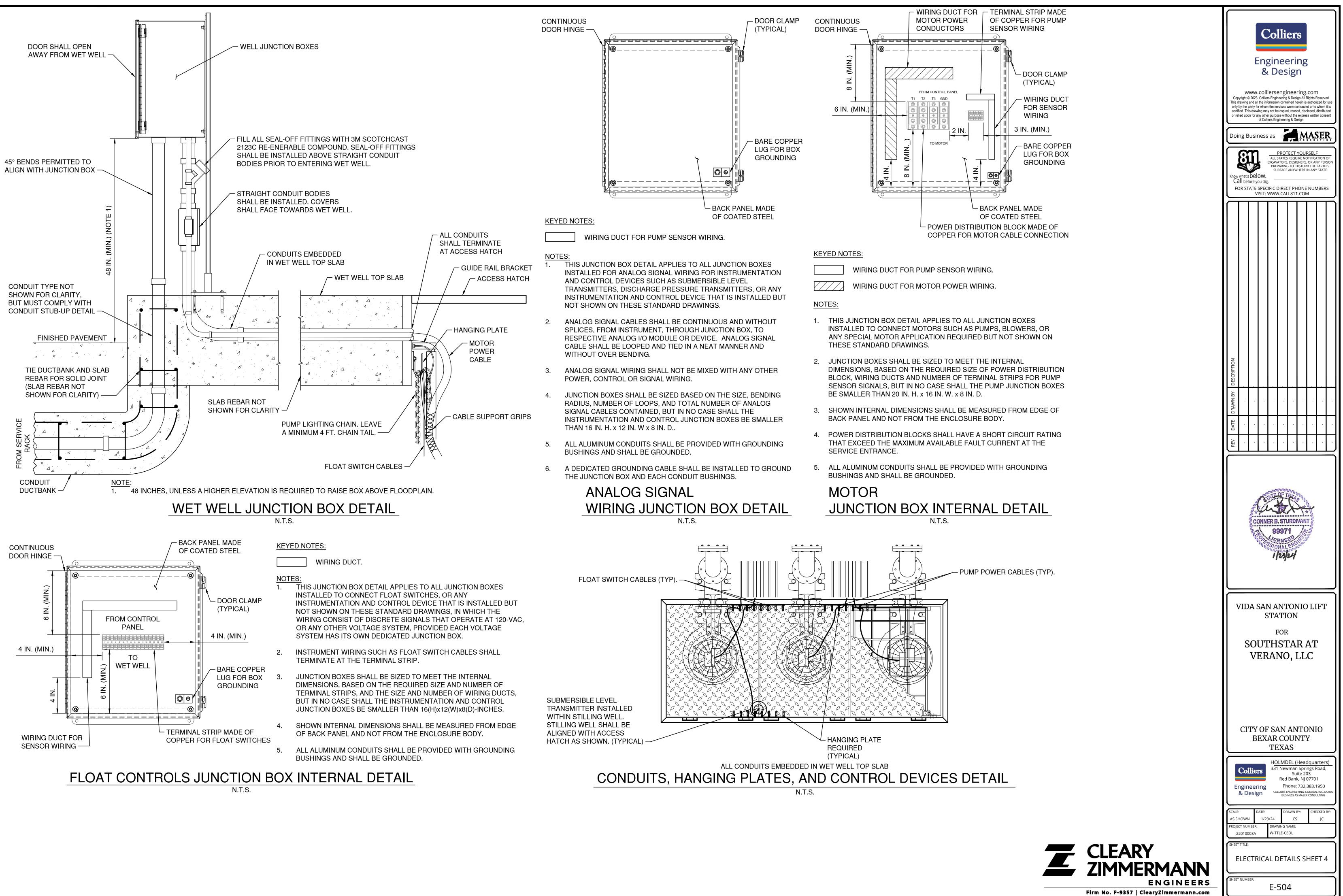
- - IS OPEN.
- 7.B. UNDER PUMP MAIN BEARING HIGH TEMP CONDITION. THE N.C. BEARING HIGH TEMP CONTACT CLOSES.
- 7.C. UNDER MOTOR BOX LEAK CONDITION, THE N.O. MOTOR BOX LEAK CONTACT CLOSES.
- DESIGN ENGINEER SHALL SIZE THE BTU CAPACITY TO MAINTAIN THE SAME TEMPERATURE PERFORMANCE.



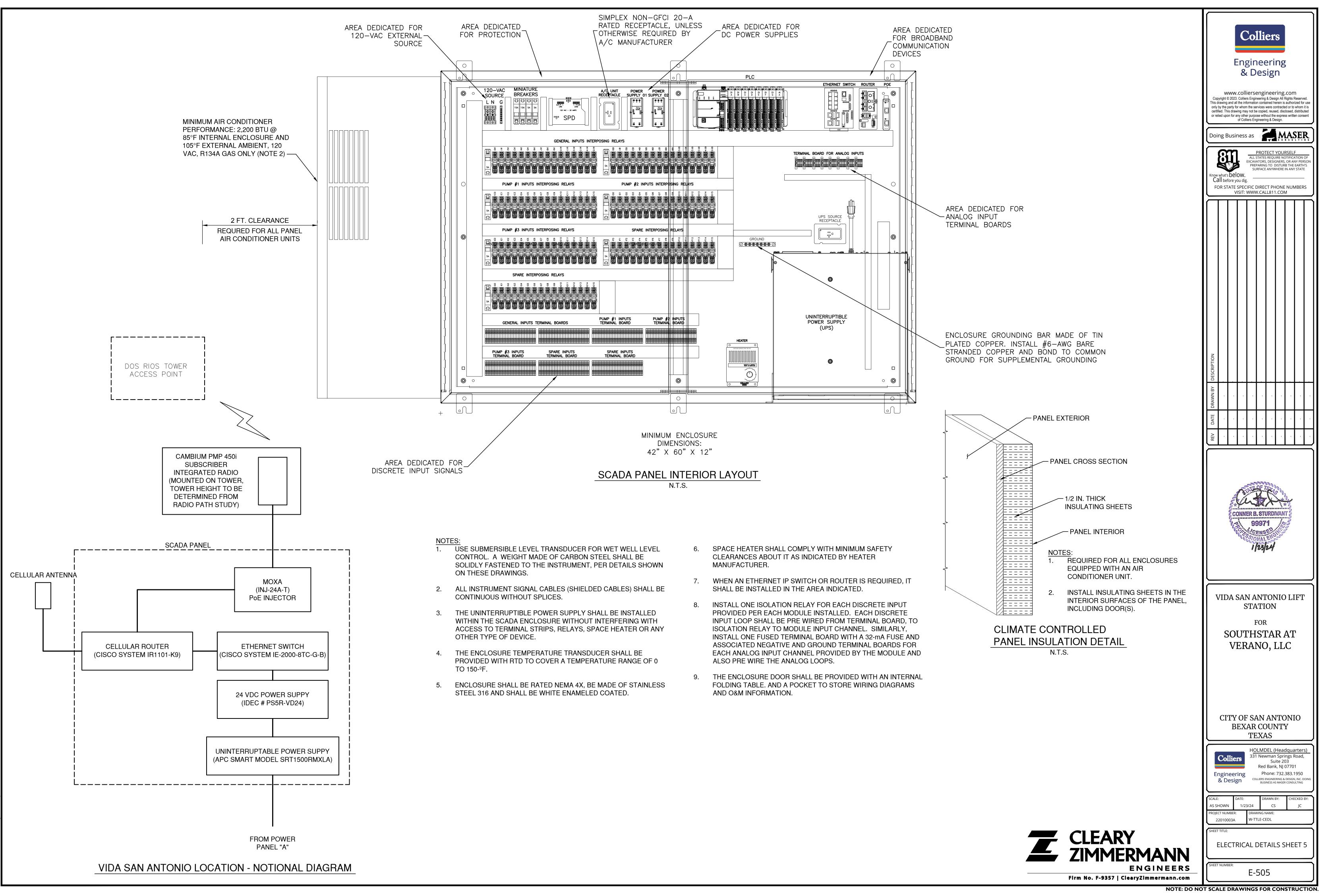
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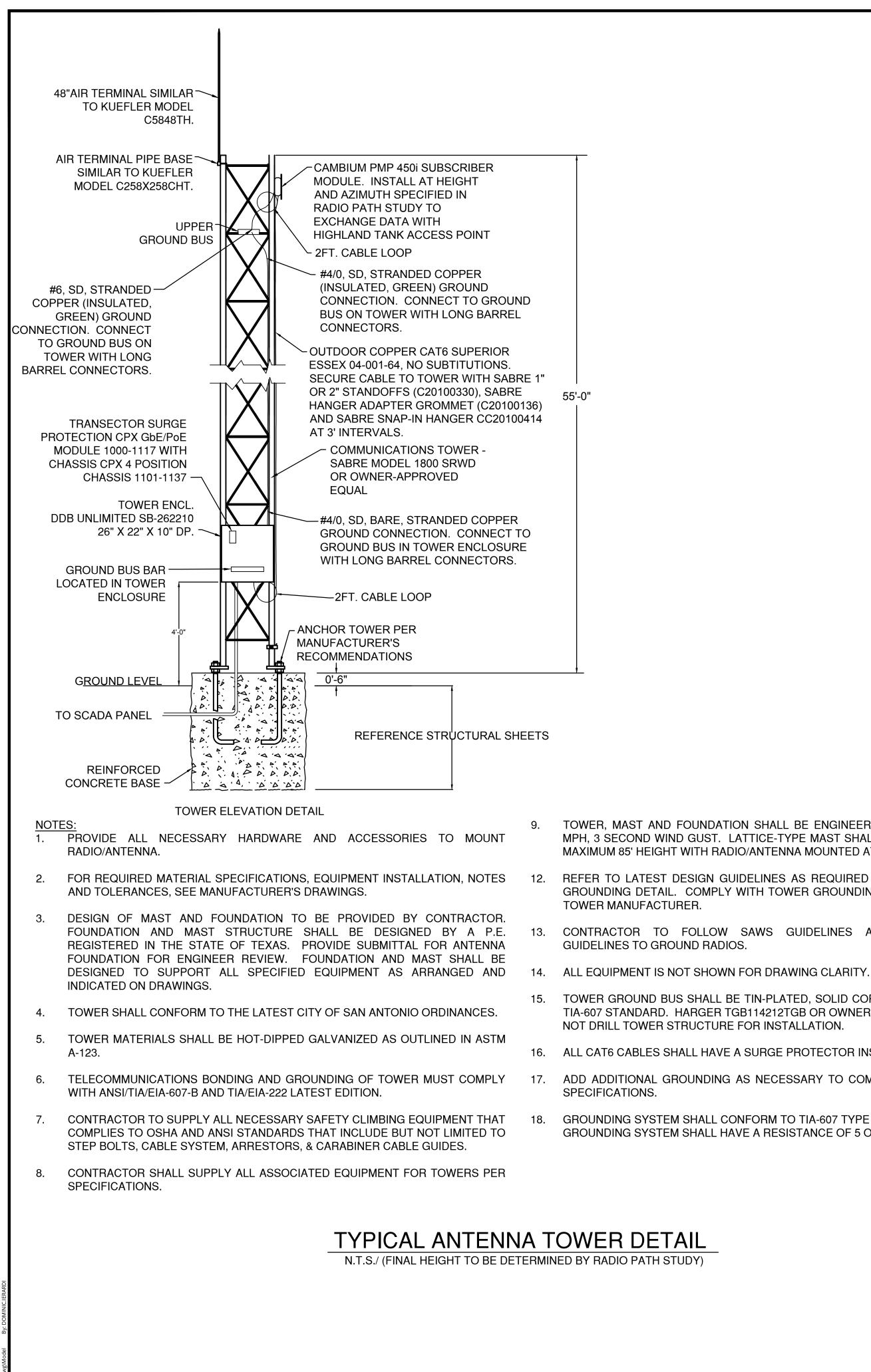
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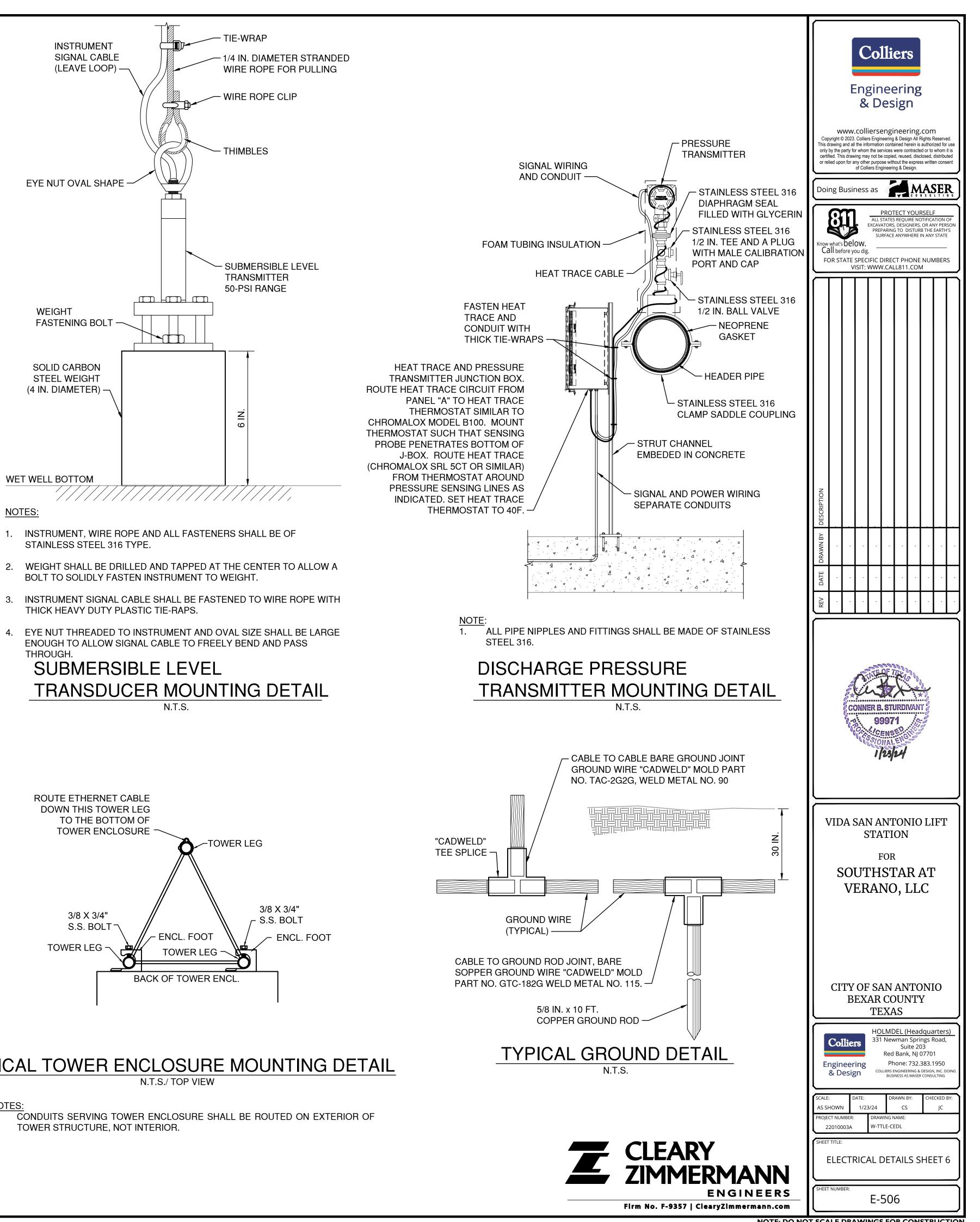
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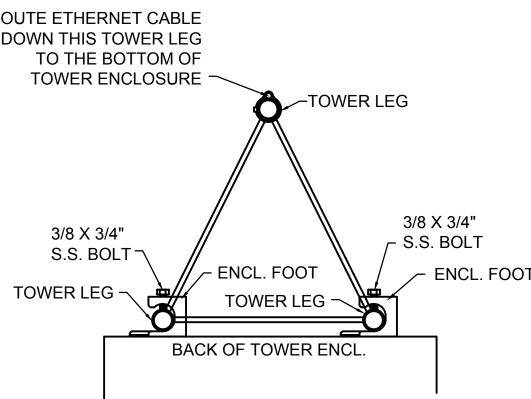
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- 2. WEIGHT SHALL BE DRILLED AND TAPPED AT THE CENTER TO ALLOW A
- 3.
- 4. EYE NUT THREADED TO INSTRUMENT AND OVAL SIZE SHALL BE LARGE



# **TYPICAL TOWER ENCLOSURE MOUNTING DETAIL**

TOWER, MAST AND FOUNDATION SHALL BE ENGINEERED TO WITHSTAND 110 MPH, 3 SECOND WIND GUST. LATTICE-TYPE MAST SHALL BE ENGINEERED FOR MAXIMUM 85' HEIGHT WITH RADIO/ANTENNA MOUNTED AT TOP OF MAST.

REFER TO LATEST DESIGN GUIDELINES AS REQUIRED BY SAWS FOR TOWER GROUNDING DETAIL. COMPLY WITH TOWER GROUNDING REQUIREMENTS PER

CONTRACTOR TO FOLLOW SAWS GUIDELINES AND MANUFACTURERS

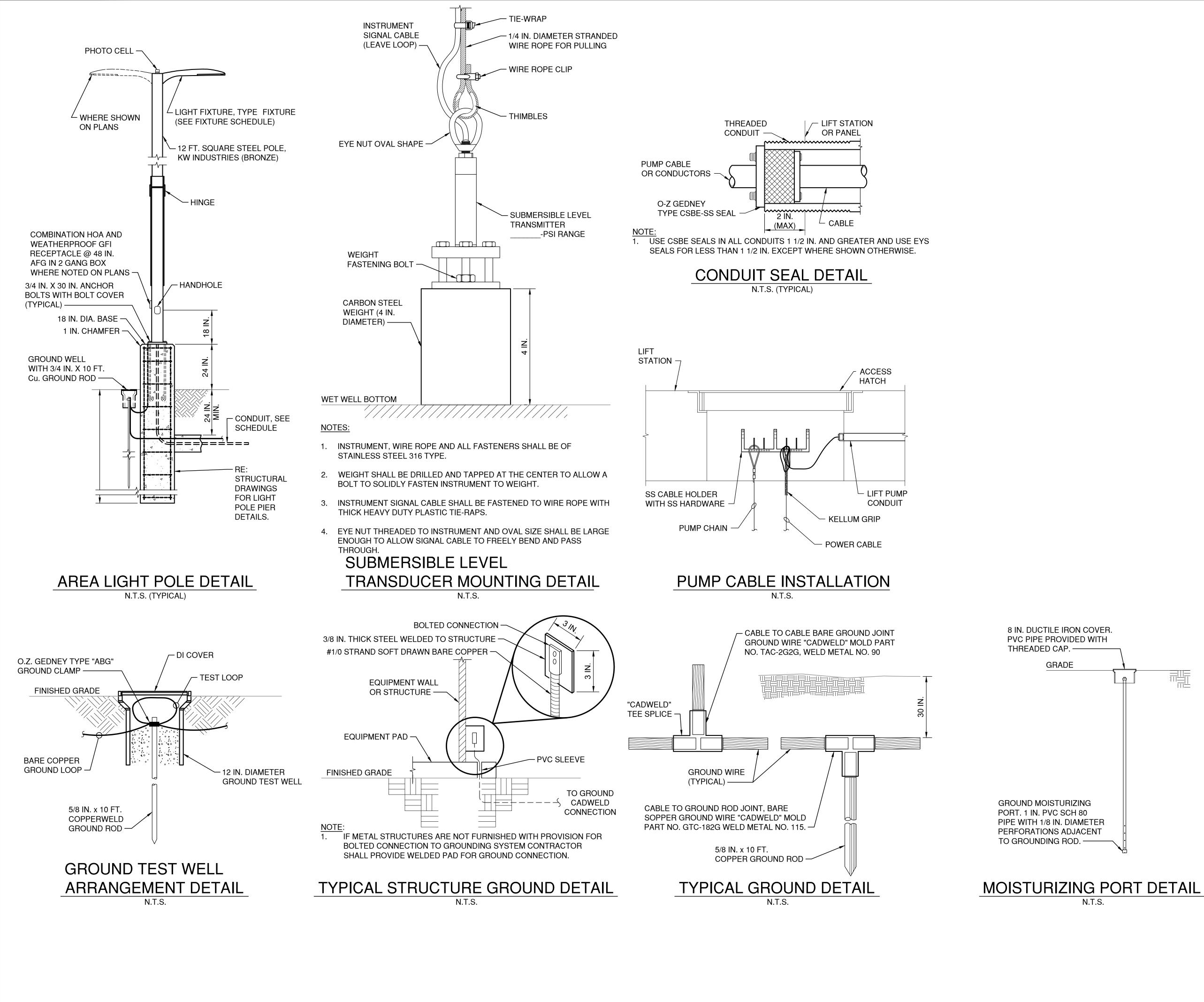
15. TOWER GROUND BUS SHALL BE TIN-PLATED, SOLID COPPER 1/4" x 2" x 12" PER TIA-607 STANDARD. HARGER TGB114212TGB OR OWNER APPROVED EQUAL. DO

16. ALL CAT6 CABLES SHALL HAVE A SURGE PROTECTOR INSIDE THE TOWER ENCL.

17. ADD ADDITIONAL GROUNDING AS NECESSARY TO COMPLY WITH ELECTRICAL

GROUNDING SYSTEM SHALL CONFORM TO TIA-607 TYPE 2 SITE REQUIREMENTS. GROUNDING SYSTEM SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS.

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	CITY OF SAN ANTONIO BEXAR COUNTY TEXAS
	ColliersBank, NJ 07701Engineering & DesignColliers engineering & DesignColliers engineering Business as maser consulting
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	22010003A W-TTLE-CEDL
CLEARY ZIMMERMANN ENGINEERS	ELECTRICAL DETAILS SHEET 7
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8 IN. DUCTILE IRON COVER.

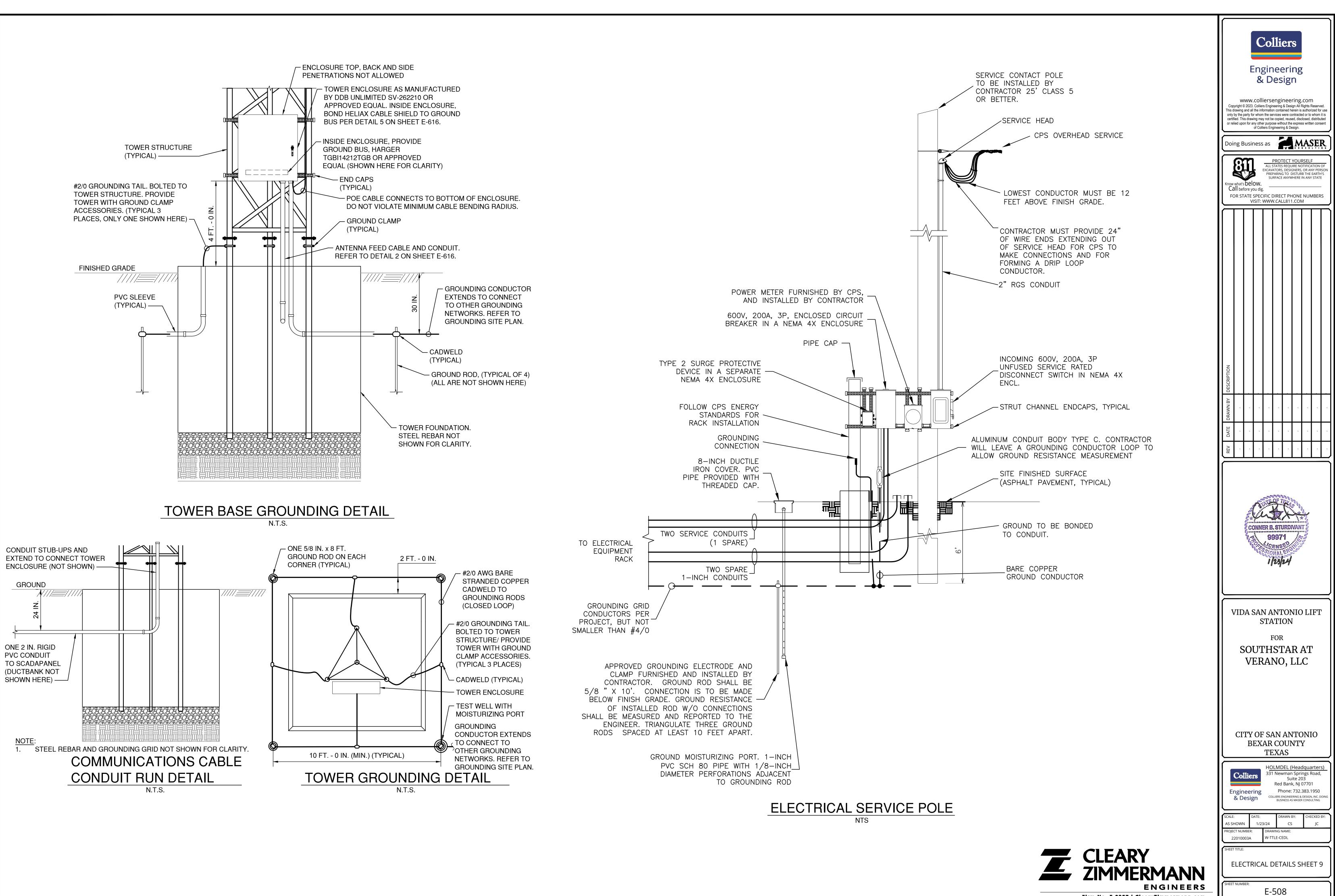
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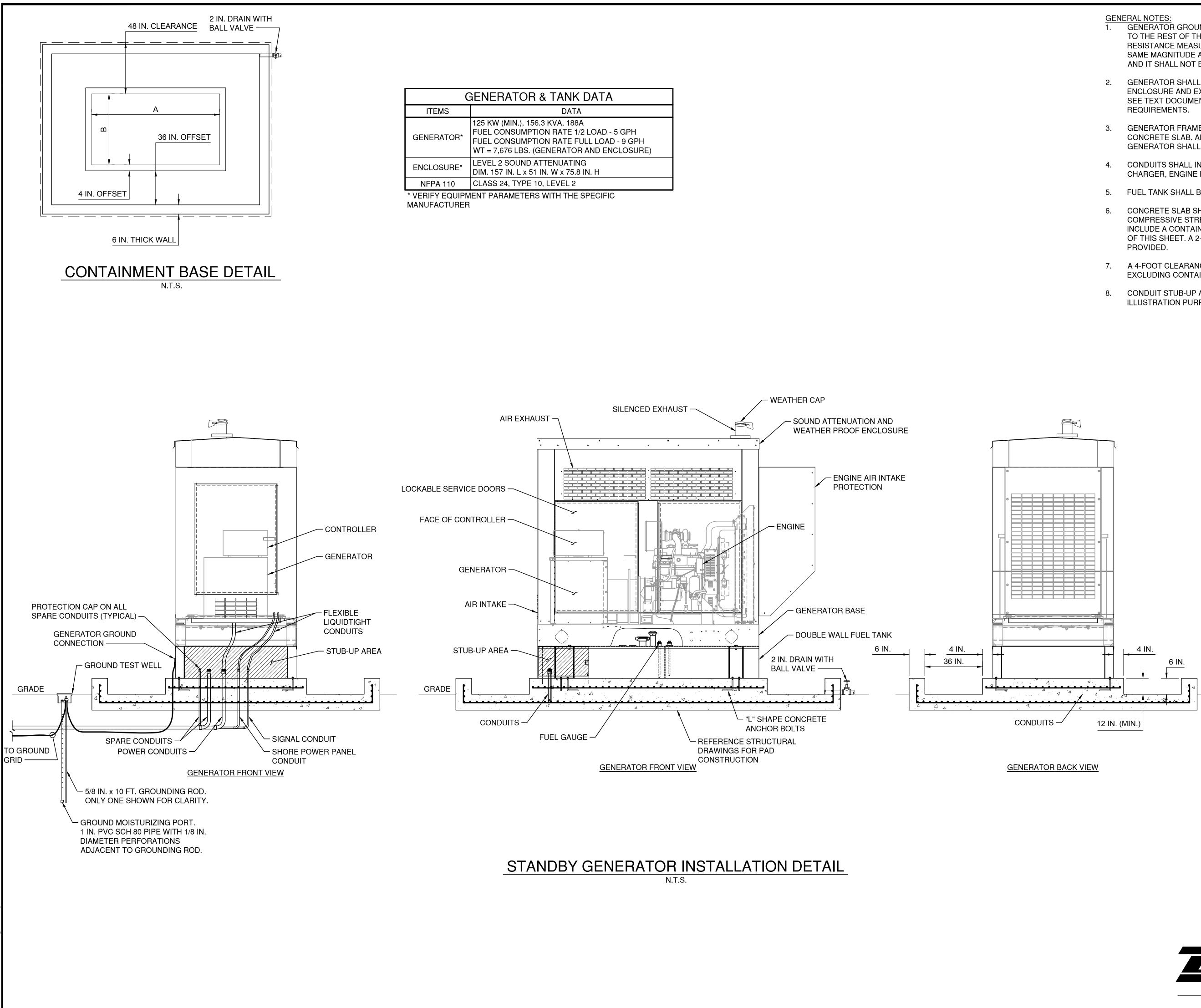
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THREADED CAP. —

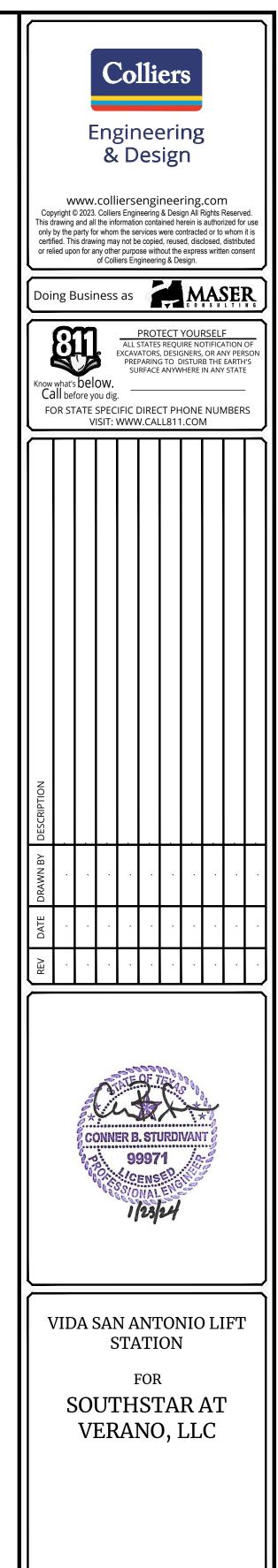
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- GENERATOR GROUND AND FRAME SHALL BE SOLIDLY BONDED TO THE REST OF THE GROUNDING SYSTEM. GROUND RESISTANCE MEASURED AT THE GENERATOR SHALL HAVE THE SAME MAGNITUDE AS THE REST OF THE GROUNDING SYSTEM, AND IT SHALL NOT EXCEED 5 OHMS.
- GENERATOR SHALL BE PROVIDED WITH SOUND ATTENUATION ENCLOSURE AND EXHAUST AND MUST BE WEATHER PROOF. SEE TEXT DOCUMENT FOR OTHER GENERATOR
- GENERATOR FRAME SHALL BE SOLIDLY ANCHORED TO CONCRETE SLAB. ALL COMPONENTS USED TO FASTEN THE GENERATOR SHALL BE MADE OF STAINLESS STEEL 304.
- 4. CONDUITS SHALL INCLUDE SPACE HEATER, BATTERY CHARGER, ENGINE BLOCK HEATER, SIGNAL AND SPARE.
- 5. FUEL TANK SHALL BE DOUBLE WALL TYPE, UL142 RATED.
- CONCRETE SLAB SHALL BE MADE OF CONCRETE MIX WITH A COMPRESSIVE STRENGTH OF 3,000 PSI. CONCRETE SLAB MUST INCLUDE A CONTAINMENT STRUCTURE AS SHOWN IN DETAIL B OF THIS SHEET. A 2-INCH DRAIN PIPE AND BALL VALVE SHALL BE
- 7. A 4-FOOT CLEARANCE AROUND GENERATOR IS REQUIRED, EXCLUDING CONTAINMENT STRUCTURE.
- CONDUIT STUB-UP AREA SHOWN IN THIS DRAWING IS FOR ILLUSTRATION PURPOSES ONLY.



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BEXAR COUNTY
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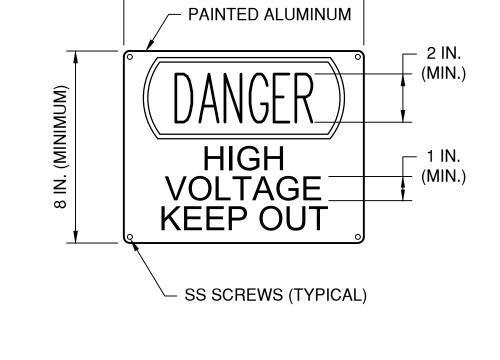
HOLMDEL (Headquarters)

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GENERATOR DETAILS SHEET 1							

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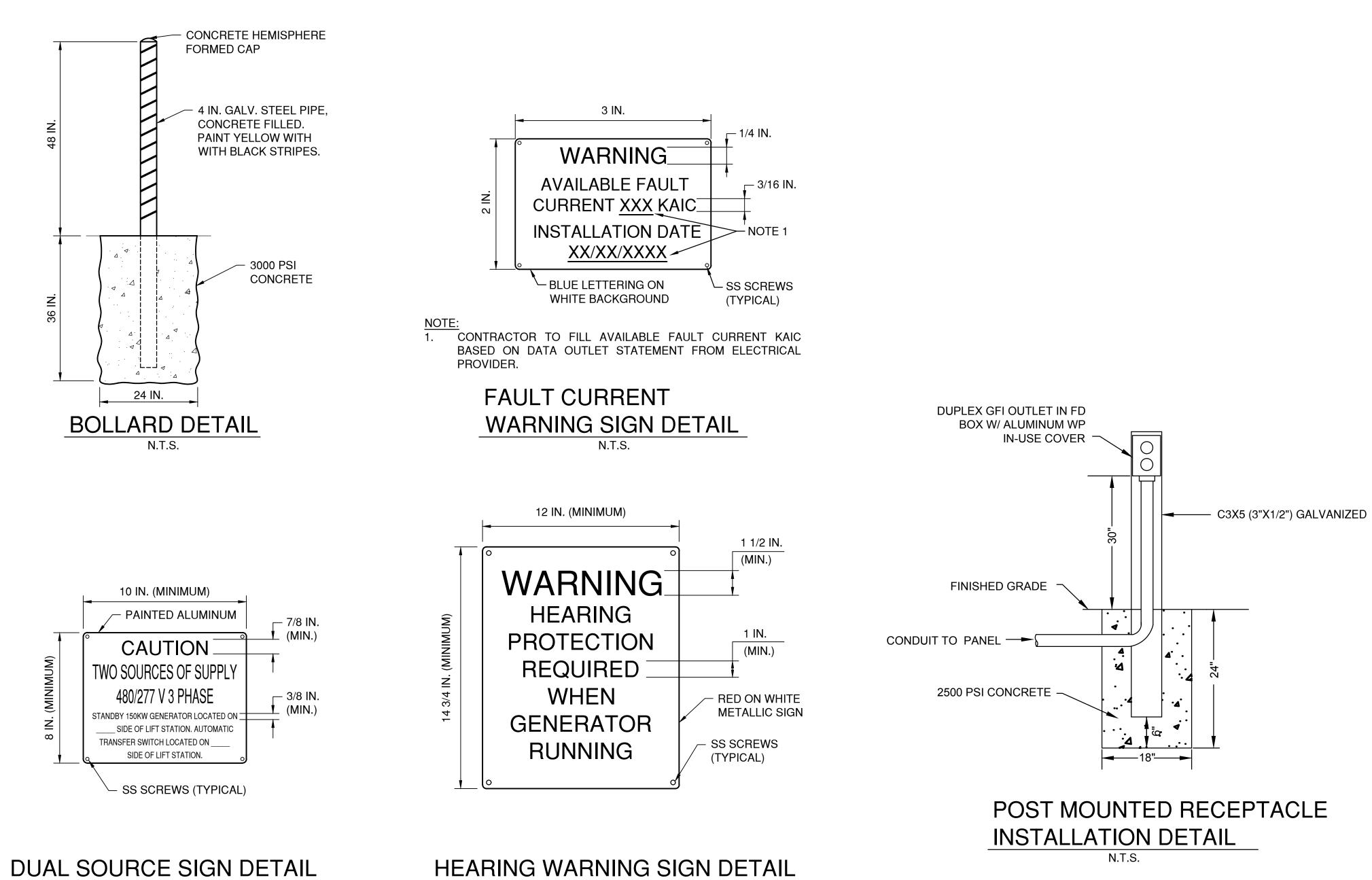
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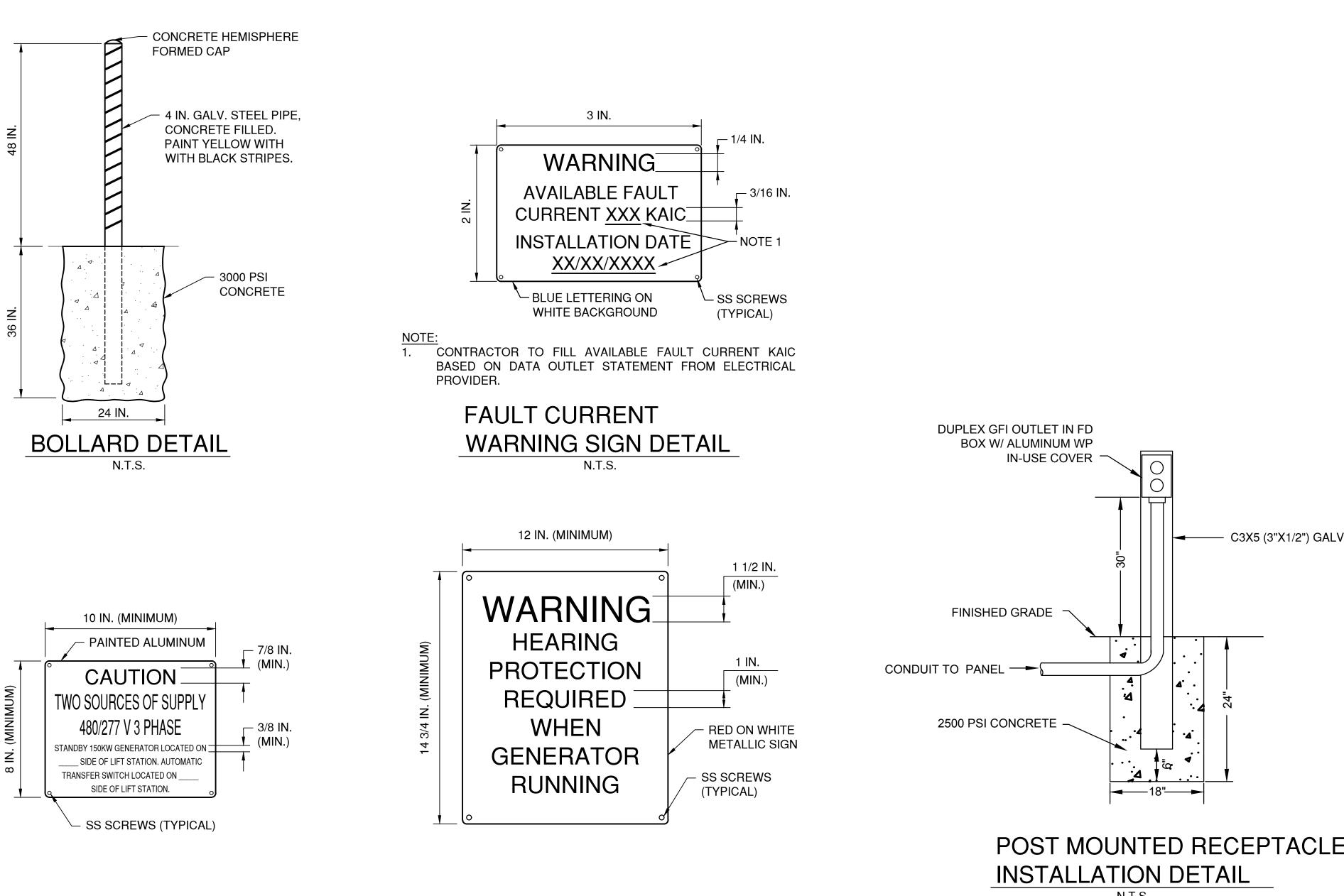


HIGH VOLTAGE SIGN DETAIL

N.T.S.

10 IN. (MINIMUM)





HEARING WARNING SIGN DETAIL N.T.S.

N.T.S.

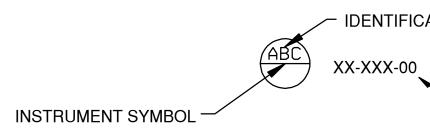
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	Red Bank, NJ 07701         Engineering & Design         Phone: 732.383.1950         Colliers Engineering & Design, INC. DOING BUSINESS AS MASER CONSULTING         SCALE:       DATE:         AS SHOWN       1/23/24         CS       JC         PROJECT NUMBER:       DRAWING NAME:         22010003A       W-TTLE-CEDL
N	SHEET TITLE: GENERATOR & ELECTRICAL DETAILS SHEET 2
RS	SHEET NUMBER: E-510

# N.T.S.



INSTRUMENT IDENTIFICATION LEGEND						
LETTER	PROCESS OR INITIATING VALUE	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER		
А	ANALYSIS (*)	ALARM				
В	BURNER FLAME	USERS CHOICE (*)	USERS CHOICE (*)	USERS CHOICE (*)		
С	CONDUCTIVITY		CONTROL			
D	DENSITY (3.0)					
E	VOLTAGE	PRIMARY ELEMENT				
F	FLOW RATE					
G	GAUGE	GLASS	GATE			
Н	HAND (MANUEL)			HIGH		
	CURRENT	INDICATE				
G	POWER					
K	TIME OR SCHEDULE		CONTROL STATION			
L	LEVEL	LIGHT (PILOT)		LOW		
М	MOTION			MIDDLE		
Ν	USERS CHOICE (*)	USERS CHOICE (*)	USERS CHOICE (*)	USERS CHOICE (*)		
0	USERS CHOICE (*)	ORIFICE				
Р	PRESSURE (OR VACUUM)	POINT (TEST CONNECTION)				
Q	QUANTITY OR EVENT	INTEGRATE				
R		RECORD OR PRINT				
S	SPEED OR FREQUENCY		SWITCH			
Т	TEMPERATURE					
U	MULTIVARIABLE (*)	MULTIFUNCTION (*)	MULTIFUNCTION (*)	MULTIFUNCTION (*)		
V	VISCOSITY		VALVE OR DAMPER			
W	WEIGHT OR FORCE	WELL				
Х	UNCLASSIFIED (*)	UNCLASSIFIED (*)	UNCLASSIFIED (*)	UNCLASSIFIED (*)		
Y	USERS CHOICE(*)		RELAY OR COMPUTE (*)			
Z	POSITION		DRIVE ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT			

(\*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

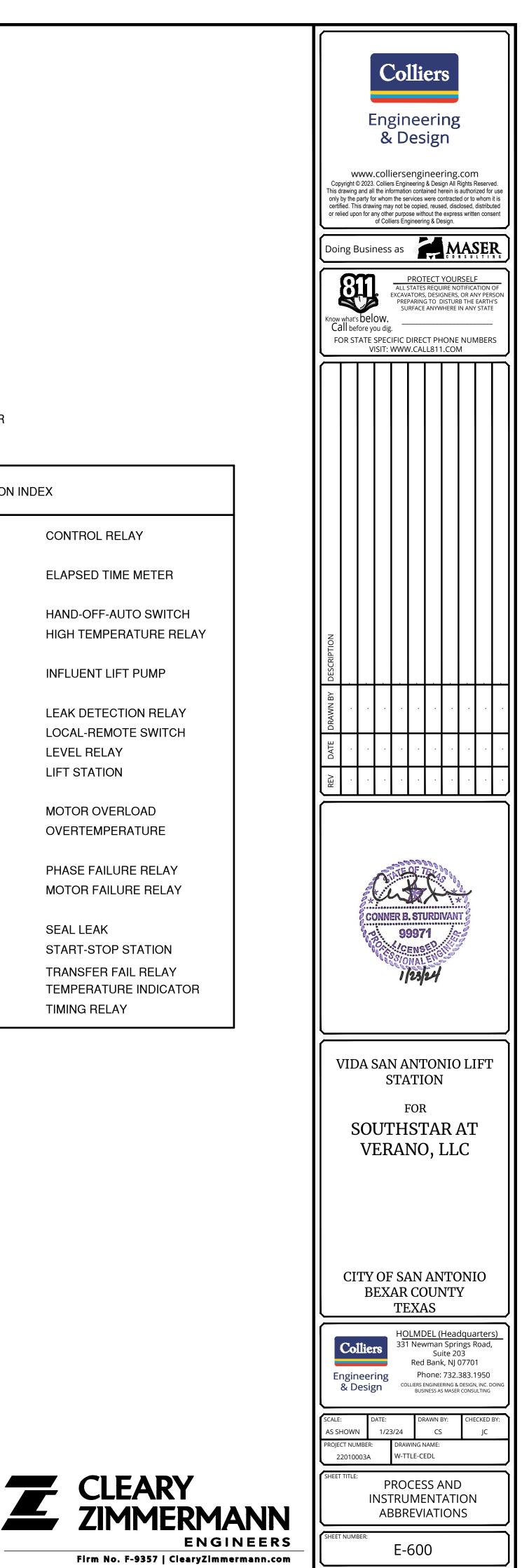


SYMBOL	S		INSTRUMENT	SYMBOLS
SYMBOL N O SYMBOL	S SWING CHECK VALVE GATE VALVE PUMP	LIC PIT	FIT YL YL INSTRUME	FIELD MOU INSTRUMEN LOCAL CON MOUNTED I POINT MON BY SCADA
		LIC	LEVEL ALAF	RM HIGH

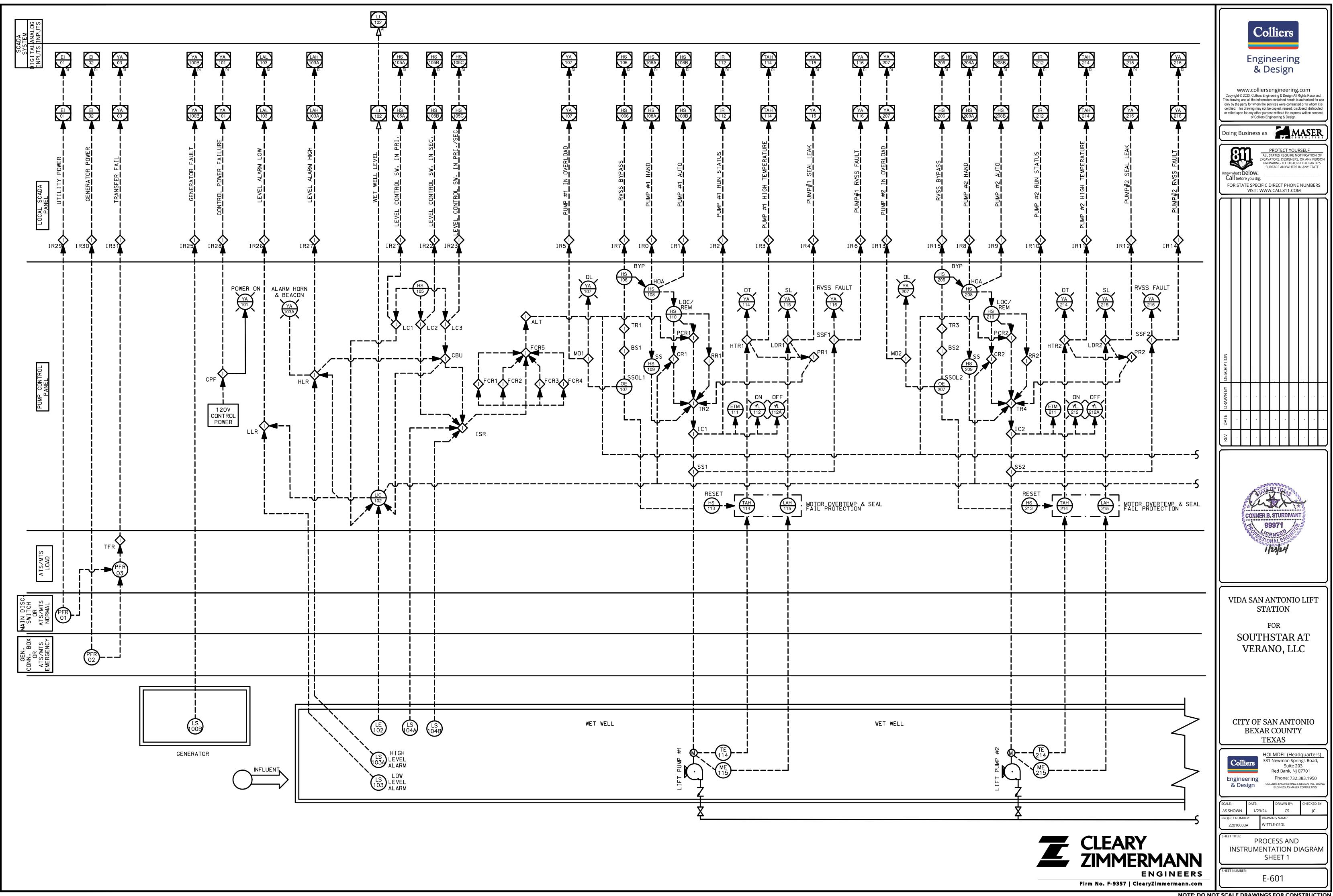
## ✓ IDENTIFICATION LETTERS

└── INSTRUMENT NUMBER

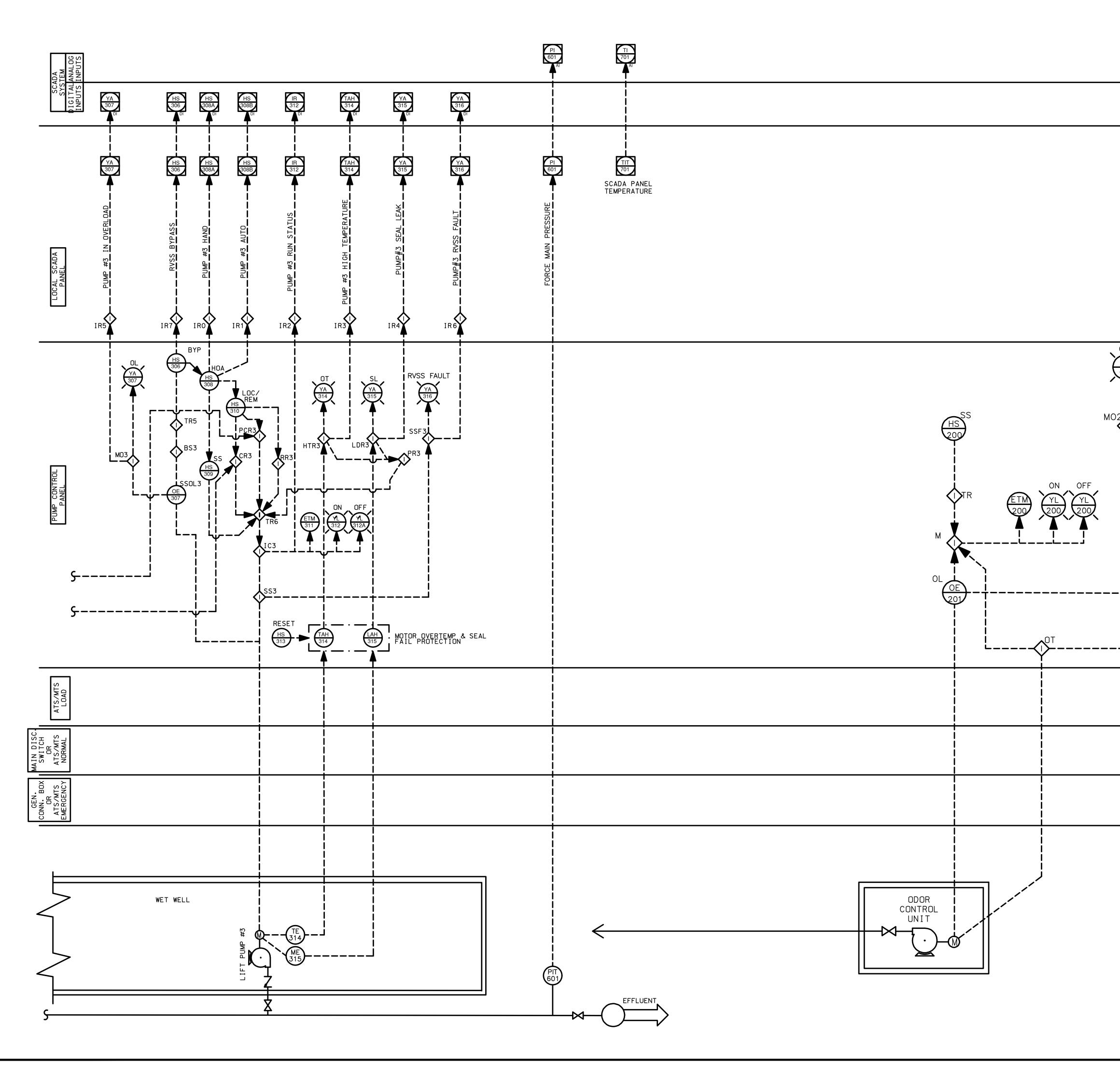
	ABBREVIATION INDEX					
JNTED	CR	CONTROL RELAY				
ENT	EMT	ELAPSED TIME METER				
NTROL PANEL	НОА	HAND-OFF-AUTO SWITCH				
INSTRUMENT	HTR	HIGH TEMPERATURE RELAY				
NITORED	ILP	INFLUENT LIFT PUMP				
-	LDR	LEAK DETECTION RELAY				
	LOC/REM	LOCAL-REMOTE SWITCH				
	LR	LEVEL RELAY				
ATION	LS	LIFT STATION				
	OL	MOTOR OVERLOAD				
ROLLER	ОТ	OVERTEMPERATURE				
RANSMITTER		PHASE FAILURE RELAY				
	PFR PR	MOTOR FAILURE RELAY				
	ГN	MOTOR FAILORE RELAT				
	SL	SEAL LEAK				
	SS	START-STOP STATION				
	TFR	TRANSFER FAIL RELAY				
	TI	TEMPERATURE INDICATOR				
	TR	TIMING RELAY				



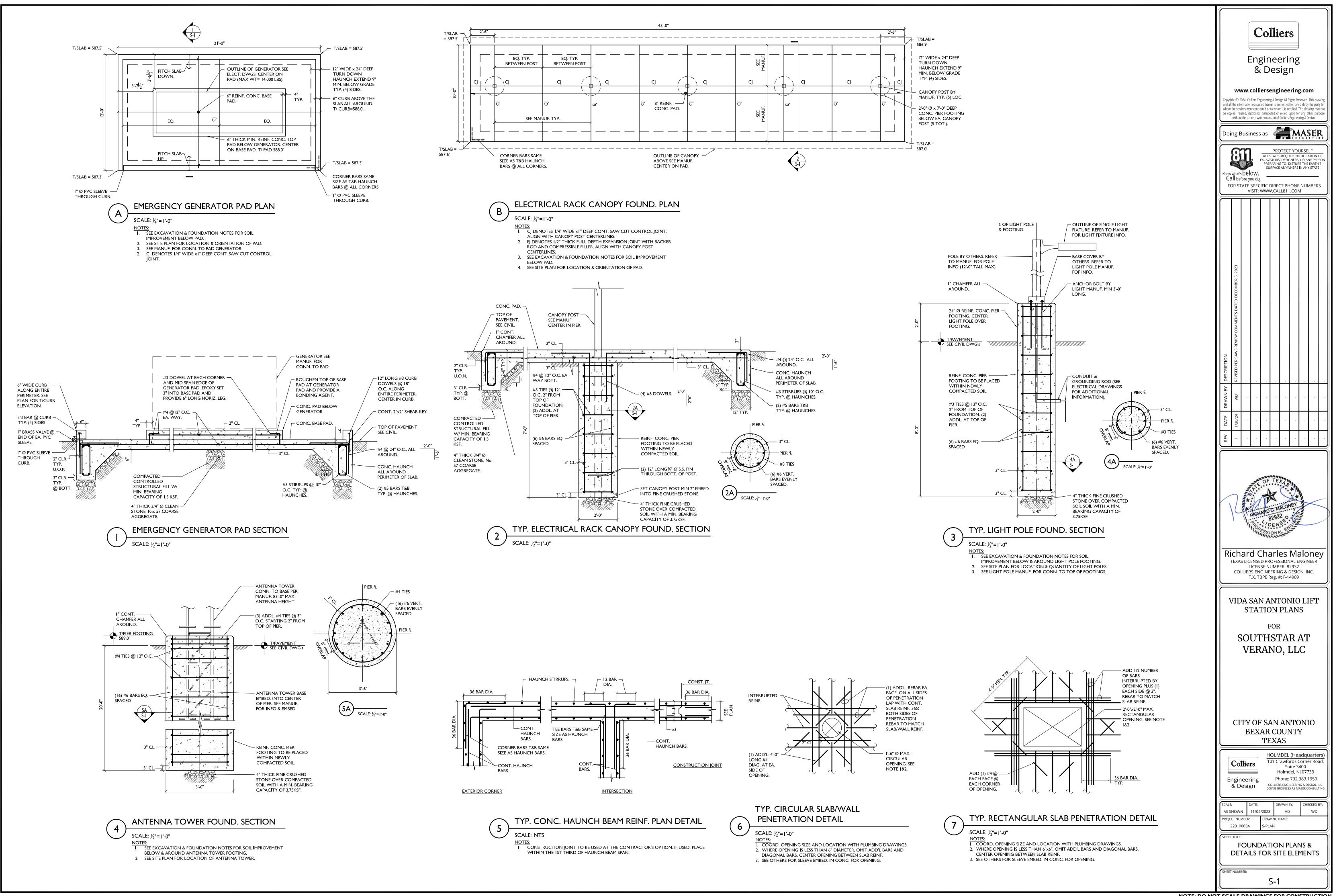
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

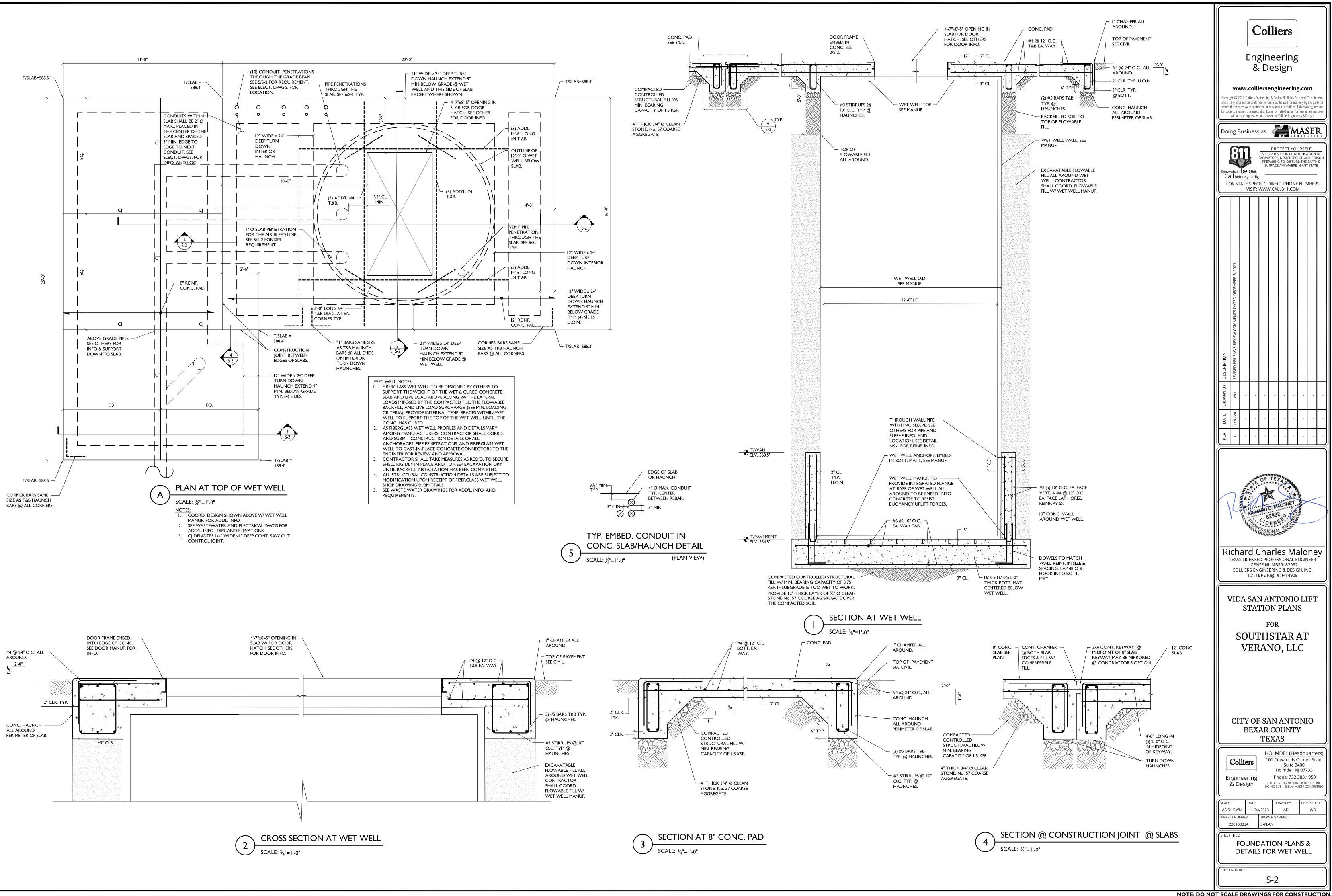


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### **GENERAL NOTES:**

ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS OF CONSTRUCTION, ADOPTED 2021 INTERNATIONAL BUILDING CODE, LOCAL BUILDING CODES, AND OTHER APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

THE CONTRACTOR SHALL OBTAIN ALL PERMITS FROM THE BUILDING DEPARTMENT PRIOR TO THE START OF WORK

IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, AND DETAILS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. COORDINATE THE STRUCTURAL DRAWINGS WITH THE CIVIL AND ELECTRICAL

DRAWINGS. EXISTING CONDITIONS, ELEVATIONS, DIMENSIONS AND SYSTEMS SHOWN ON PLANS

ARE BASED ON LIMITED FIELD OBSERVATIONS. THE CONTRACTOR SHALL FIELD-VERIFY ALL DETAILS, DIMENSIONS AND ASSUMPTIONS PRIOR TO ANY WORK, AND COORDINATE WITH CIVIL AND ELECTRICAL DRAWINGS, FOR FINAL CONSTRUCTION WHERE EXISTING CONDITIONS DIFFER FROM OR PRECLUDE THE EXECUTION OF THE OUTLINED DETAILS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED.

ALL DIMENSIONS AND ELEVATIONS FOR FINAL CONSTRUCTION SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND COORDINATED WITH CIVIL AND ELECTRICAL DRAWINGS. SHOP DRAWINGS SHALL BE BASED ON EXISTING CONDITIONS AND DIMENSIONS.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING AND BRACING REQUIRED FOR PLUMBNESS, STRUCTURAL STABILITY AND SAFETY WHENEVER REQUIRED TO SUPPORT LOADS AS MAY BE IMPOSED UPON THE STRUCTURE DURING CONSTRUCTION. BRACING AND SHORING AND SEQUENCES OF SUCH WORK SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HIS/HER LICENSED ENGINEER REGISTERED IN THE STATE OF TEXAS. ALL SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE.

CONTRACTOR TO PROTECT AT ALL TIMES EQUIPMENT, PIPES AND OTHER EXPOSED OR EMBEDDED ITEMS ON THE SITE AGAINST DAMAGE. COORDINATE WITH CIVIL AND ELECTRICAL DWGS AND REROUTE AS REQUIRED.

SUBMIT SHOP DRAWINGS FOR ALL WORK. DO NOT PROCEED WITH ANY FABRICATION UNTIL THE SHOP DRAWINGS ARE FAVORABLY REVIEWED FOR ALL STRUCTURAL WORK. AND MECHANICAL/ARCHITECTURAL SHOP DRAWINGS RELATED TO THE STRUCTURAL WORK. SHOP DRAWINGS SHALL BE BASED ON FIELD VERIFIED CONDITIONS.

REVIEW OF SHOP DRAWINGS AND SUBMITTALS BY STRUCTURAL ENGINEER OF RECORD SHALL BE TO REVIEW AND TAKE APPROPRIATE ACTION ON SHOP DRAWINGS FOR CONFORMANCE WITH THE STRUCTURAL CONSTRUCTION DOCUMENTS BUT NOT FOR ACCURACY OF DIMENSIONS AND QUANTITIES REQUIRED FOR PROPER CONSTRUCTION, WHICH ARE THE CONTRACTOR'S RESPONSIBILITY.

REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.

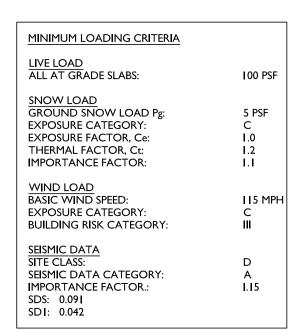
SUBMIT PERIODIC INSPECTION REPORTS WITHIN ONE BUSINESS DAY AFTER RECEIPT BY THE CONTRACTOR TO ENGINEER DURING CONSTRUCTION. SUBMIT FINAL INSPECTION REPORT SUMMARY FOR EACH DIVISION OF WORK, CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER, THAT INSPECTIONS WERE PERFORMED AND THAT WORK WAS PERFORMED IN ACCORDANCE WITH CONTRACT DOCUMENTS.

PROTECT ALL WORK SCHEDULED TO REMAIN AND IF DAMAGED REPAIR TO MATCH EXISTING, INSTALL ANY DUST PROOF PARTITIONS OR SCREENS REQUIRED TO PROTECT AREAS NOT BEING WORKED ON.

ANY ADDITIONAL WORK/FRAMING/FOUNDATIONS NOT SPECIFICALLY SHOWN OR CALLED FOR IN THE DRAWINGS AND SPECIFICATIONS, THAT ARE REQUIRED TO COMPLETE THE INTENT OF THE WORK, SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AS IF INCLUDED IN THE DRAWINGS/SPECIFICATIONS. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF SUCH OCCURRENCES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL AREAS. PROVIDE ANY PROTECTIVE MEASURES DEEMED NECESSARY TO PROTECT PROPERTY AND PREVENT INJURY.

REMOVE ALL DEMOLITION MATERIALS FROM THE SITE PROMPTLY. TRANSPORT AND DISPOSE OF DEBRIS AS REQUIRED BY THE APPROPRIATE CODES.



**EXCAVATION AND FOUNDATION NOTES:** 

PLUMBING REQUIREMENTS

ALL MATERIAL, FABRICATION, INSTALLATION, AND INSPECTION REQUIREMENTS RELATING TO THE FOUNDATIONS SHALL CONFORM TO THE TEXAS STATE AND LOCAL BUILDING CODES. ALL STRUCTURAL WORK SHALL BE COORDINATED AND VERIFIED WITH THE ELECTRICAL AND

THE CONTRACTOR SHALL DEMOLISH AND REMOVE EXISTING ELEMENTS AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REMOVE, TRANSPORT, AND DISPOSE OF ALL DEBRIS PROMPTLY

DEMOLITION SHALL BE DONE CAREFULLY. TAKE SPECIAL CARE NOT TO DAMAGE ANY EXISTING UNDERSLAB UTILITIES OR OTHER ELEMENTS NOT DESIGNATED FOR REMOVAL. EXCAVATION SHALL BE PERFORMED SO AS NOT TO DISTURB EXISTING ADIACENT BUILDINGS. STREETS, AND UTILITY LINES. VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT

THE CONTRACTOR SHALL PROTECT ALL EXCAVATIONS FROM FLOODING AND EXISTING WATER TABLE AND PROVIDE CONTINUOUS PUMPING AS REQUIRED FOR PERFORMANCE OF WORK. THE DEPTH OF EXCAVATION SHALL NOT BE CARRIED DEEPER THAN SPECIFIED IN THE CONTRACT DOCUMENTS WITHOUT THE ENGINEER OF RECORD'S CONSENT.

THE SUBGRADE FOR FOOTINGS AND SLABS SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR OR INSPECTION AGENCY IMMEDIATELY PRIOR TO PLACING FOUNDATION CONCRETE. THE INSPECTOR OR AGENCY SHALL BE ACCEPTABLE TO THE ENGINEER AND OWNER AND PRODUCE REPORTS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS WHICH SHALL BE SUBMITTED TO THE ENGINEER OUTLINING WORK PERFORMED AND TEST RESULTS.

FOOTING SUBGRADES SHOULD BE THOROUGHLY CLEARED OF ALL MUD, DEBRIS AND LOOSE MATERIAL PRIOR TO THE PLACEMENT OF CONCRETE OR CRUSHED STONE. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO CONTROL ICE, FROST, SURFACE AND SUBSURFACE WATER SO THAT THE FOUNDATION WORK IS PERFORMED ON DRY SUBGRADE

THE CONCRETE FOR EACH FOOTING SHALL BE PLACED IN ONE (I) CONTINUOUS PLACEMENT. ALL UNDERPINNING, SHEETING, SHORING OR OTHER SIMILAR CONSTRUCTION REQUIRED SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE SUBJECT TO INSPECTIONS AS

REQUIRED BY THE LOCAL BUILDING CODE. THE CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PROVIDE ALL NECESSARY DESIGNS, REQUIRED INSPECTIONS AND SUBMITTALS CONFORMING TO THE LOCAL BUILDING CODE. DO NOT PLACE CONCRETE WITHOUT FAVORABLY REVIEWED STRUCTURAL SHOP DRAWINGS

THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND SETTLEMENT (HORIZONTAL AND VERTICAL) OF EXISTING OR NEW CONSTRUCTION, INSIDE OR OUTSIDE THE PROJECT LIMITS.

NEW EXCAVATION SHALL NOT UNDERMINE NOR DISTURB ANY EXISTING ADJACENT FOOTINGS. NEW FOOTINGS SHALL BE SUPPORTED IN A MANNER TO MAINTAIN AN EXCAVATION SLOPE OF ONE VERTICAL TO TWO HORIZONTAL BETWEEN THE BOTTOM OF FOOTINGS AND EXCAVATION.

LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D698 AND D-1557. REMOVE UNSUITABLE FILL AND REPLACE WITH CONTROLLED FILL AS REQUIRED FOR SOUND PLACEMENT OF FOUNDATIONS. NEW CONTROLLED FILL SHALL BE CRUSHED STONE, RECYCLED CONCRETE AGGREGATE OR GRANULAR SAND AND GRAVEL WITH LESS THAN 35% PASSING THE #200 SIEVE.

FILL AROUND WET WELL SHALL BE EXCAVATABLE FLOWABLE FILL. FILL SHALL BE PLACED IN A UNIFORM BALANCED MANNER. FILL SHALL MEET THE REQUIREMENTS OF THE TEXAS DEPARTMENT OF TRANSPORTATION ITEM 401: FLOWABLE FILL (80 PSI TO 200PSI MAX.) UP TO APPROXIMATELY 5'-0" BELOW GRADE.

FOUNDATION DESIGN MAY REQUIRE MODIFICATION AFTER EXISTING SOIL BEARING CAPACITY AND SUBSURFACE CONDITIONS HAVE BEEN FIELD VERIFIED BY THE GEOTECHNICAL ENGINEER.

SOIL SUPPORTED AT GRADE SLABS AND PADS SHALL BE FOUNDED UPON UNDISTURBED NATURAL SUBGRADE (OR CONTROLLED COMPACTED FILL) WITH A MINIMUM BEARING CAPACITY OF 1.5 KIPS PER SQUARE FOOT. SOIL SUPPORTED WET WELL BASE MAT AND DRILLED PIERS SHALL BE FOUNDED UPON UNDISTURBED NATURAL SUBGRADE (OR CONTROLLED COMPACTED FILL) WITH A MINIMUM BEARING CAPACITY OF 3.75 KIPS PER SQUARE FOOT. FINAL BEARING CAPACITY SHALL BE FIELD VERIFIED AND APPROVED BY THE INSPECTOR OR INSPECTION AGENCY. THE BOTTOM OF THE FOOTING ELEVATIONS AND BEARING CAPACITIES AS SHOWN ON THE DRAWINGS ARE ESTIMATED AND WILL REQUIRE VERIFICATION. FINAL, EXACT ELEVATIONS AND BEARING CAPACITIES SHALL BE FIELD DETERMINED AND VERIFIED BY THE INSPECTOR OR INSPECTION AGENCY.

THE PERIMETER OF THE GENERAL EXCAVATION SHALL BE RETAINED BY A TEMPORARY SOIL/ROCK RETENTION SYSTEM. THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF SUCH A SYSTEM (WHERE REQUIRED) SHALL BE THE COMPLETE AND SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND SETTI EMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS. CAUSED BY CONSTRUCTION TECHNIQUES OR MOVEMENTS OF THE SOIL/ROCK RETENTION SYSTEM, IS THE RESPONSIBILITY

ALL PERIMETER CONCRETE WALLS SHALL REMAIN LATERALLY BRACED UNTIL THE CONCRETE HAS REACHED IT'S 28 DAY STRENGTH. NO BACKFILLING SHALL BE PERFORMED AGAINST ANY UNBRACED WALLS OR WALLS THAT HAVE NOT REACHED THE CONCRETE'S 28 DAY COMPRESSIVE STRENGTH.

THE CONTRACTOR SHALL COORDINATE ALL ELEMENTS OF THE SOIL/ROCK RETENTION SYSTEM WITH ALL ELEMENTS OF THE PERMANENT BUILDING.

OF THE CONTRACTOR.

ALL EXCAVATION SHALL BE BASED ON ENGINEERING DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS AND RETAINED BY THE CONTRACTOR. THE DRAWINGS SHALL INCLUDE PLANS AND SECTIONS OF EXCAVATION SEQUENCES. THE EXCAVATION SEQUENCES SHALL BE CONTROLLED TO MATCH THE REQUIREMENTS OF THE DESIGN OF THE SOIL RETENTION SYSTEM.

THE GENERAL EXCAVATION SHALL CONSIST OF EXCAVATING AND REMOVING THE EXISTING SURFICIAL FILL MATERIALS TO REACH THE DESIRED SUBGRADE LEVEL. THE EXPOSED SUBGRADE SHOULD BE PROOFROLLED AND COMPACTED TO A FIRM AND UNVIELDING CONSISTENCY. THE EXCAVATION FOR FOOTINGS, PITS, ETC. SHALL BE EXCAVATED ON AN INDIVIDUAL, LOCALIZED BASIS DOWN FROM THE SLAB-ON-GRADE SUBGRADE LEVEL. EACH EXCAVATION SHALL BE A TRIM, LEVEL SURFACE.

THE CONTRACTOR SHALL PROVIDE POSITIVE PROTECTION (MAT/SHEET COVERINGS) FOR ALL EXCAVATION SLOPES TO PROTECT SLOPES FROM INSTABILITY AND DETERIORATION DUE TO RAIN, WIND OR SNOW/ICE. CONCRETE FOR FOUNDATIONS SHALL BE POURED ON THE SAME DAY THE SUBGRADE IS

APPROVED BY THE INSPECTOR OR INSPECTION AGENCY.

UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS. A GEOTECHNICAL INVESTIGATION REPORT HAS BEEN PREPARED BY INTEC DATED APRIL 28, 2023. THE CONTENTS OF THIS REPORT ARE PART OF THE CONTRACT DOCUMENTS AND SHALL BE PART OF THE BID DOCUMENTS.

IF DURING EXCAVATION, CONDITIONS SUCH AS ABUNDANT GRAVEL, FILL MATERIAL, SAND SEAMS, OR SOILS OTHER THAN THOSE REFERENCED IN THE GEOTECHNICAL REPORT ARE DISCOVERED, CONTRACTOR TO NOTIFY ENGINEER.

UNDERLYING CLAY BELOW EQUIPMENT PAD, ELECTRICAL RACK CANOPY PAD, LIGHT POLE FOOTING, ATENNA TOWER FOOTING, AND WET WELL TOP SLAB SHALL BE REMOVED TO A DEPTH OF 5'-0" ± BELOW TOP OF GRADE AND REPLACED WITH COMPACTED SELECT FILL. THE COMPACTED SELECT FILL SHALL EXTEND TO MINIMUM OF 3'-0" OUTSIDE THE PERIMETER OF EACH PAD. SLAB. AND FOOTING, AND SHALL BE COMPACTED IN 6 INCH LIFTS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

CONTRACTOR TO BE RESPONSIBLE FOR ALL DEWATER OPERATIONS AS REQUIRED TO PLACE WET WELL FOUNDATION.

OF WORK, HAND EXCAVATE AROUND AND RESUPPORT UTILITIES AS REOUIRED.

AND MECHANICAL/ARCHITECTURAL SHOP DRAWINGS RELATED TO THE CONCRETE WORK.

ALL FILL REQUIRED BELOW ANY PORTION OF THE STRUCTURE SHALL BE COMPACTED IN 8"

STRUCTURAL CONCRETE NOTES:

ALL WORK SHALL COMPLY TO THE ACI CODE, LATEST EDITION, AS AMENDED BY THE STATE OF TEXAS AND LOCAL BUILDING CODES.

ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WEIGHING 145 PCF HAVING A COMPRESSIVE STRENGTH 4,500 PSI AT 28 DAYS AND A MAXIMUM WATER-CEMENT RATIO OF 0.45.

STRUCTURAL CONCRETE SHALL CONTAIN A WATER REDUCING, PLASTICIZING ADMIXTURE. ALL CONCRETE WITH 6% +/- 1.5% SHALL CONTAIN AN AIR-ENTRAINING ADMIXTURE.

ALL CONCRETE WORK: MIXES, INSPECTIONS, AND FORMWORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE AND ACI CODES.

CONFORM TO ACI HOT AND COLD WEATHER CONCRETING.

CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR DESIGN OF CONCRETE MIXES AND FOR MAINTAINING STRENGTH AND PROPER SLUMP DURING CONSTRUCTION. CONCRETE MIXES SHALL BE DESIGNED IN ACCORDANCE WITH METHOD DESCRIBED IN THE GOVERNING CODE. THE MIX DESIGNS BEARING THE NAME OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE MIXES HAVE BEEN APPROVED BY THE ENGINEER. SUBMIT THE PROPOSED CONCRETE MIX AND CYLINDER BREAKS FOR REVIEW BY ENGINEER OF RECORD.

ALL FORMWORK SHALL BE CONSTRUCTED SO CONCRETE MEMBERS AND STRUCTURES ARE OF SIZE, SHAPE, ALIGNMENT, ELEVATION, AND POSITION INDICATED WITHIN TOLERANCE LIMITS OF ACI 117.

REINFORCING BARS SHALL BE DEFORMED STEEL BARS COMPLYING WITH ASTM A615, GRADE 60.

ALL REINFORCEMENT TO BE CONTINUOUS U.O.N.

REVIEW PRIOR TO FABRICATION.

ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED, PLACING OF CONCRETE SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE INSPECTOR OR INSPECTION AGENCY.

CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED TO THE ENGINEER FOR

REINFORCING BARS, WELDED WIRE FABRIC, TIE WIRES AND ACCESSORIES SHALL BE EPOXY COATED FOR CONCRETE WORKS THAT ARE EXPOSED TO WEATHER OR UNDER WATER IN ACCORDANCE WITH ASTM A-775. DAMAGED EPOXY COATING ON REINFORCING MATERIALS SHALL BE TOUCHED UP TO THE ORIGINAL COATING STANDARDS.

SUBMIT DETAIL DRAWINGS, AFTER COORDINATION WITH LATEST CIVIL AND ELECTRICAL DRAWINGS, SHOWING THE LOCATIONS OF ALL CONSTRUCTION

JOINTS, CURBS, SLAB DEPRESSION, SLEEVES, OPENINGS, ETC. REINFORCING SPLICES SHALL COMPLY WITH ACI 318, BUT SHALL IN NO CASE BE LESS THAN 40 DIAMETERS, UNLESS OTHERWISE NOTED.

MECHANICAL SPLICING IF REQUIRED, SHALL HAVE THE BARS CONNECTED TO DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. IF MECHANICAL SPLICING IS USED, SUBMIT PRODUCT LITERATURE DESCRIBING AND METHOD OF INSTALLATION.

WHERE REQUIRED, DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING AND LAP A MIN. OF 480 (UNLESS OTHERWISE NOTED).

DO NOT PLACE CONCRETE WITHOUT FAVORABLY REVIEWED SHOP DRAWINGS. ALL CONSTRUCTION JOINTS SHALL BE CLEANED AND MOISTENED IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.

BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

CONCRETE SLABS SHALL HAVE A MONOLITHIC FINISH AND SHALL BE SCREEDED, COMPACTED BY ROLLING OR TAMPING, FLOATED OFF AND GRADED AS REQUIRED. AFTER SUFFICIENT HARDENING SLAB SHALL BE PROTECTED AND CURED. START CURING AS SOON AS POSSIBLE WITHOUT MARKING FINISH. COVER SLABS WITH REINFORCED PAPER AS REOUIRED. KEEP SURFACE CONTINUOUSLY MOIST FOR SEVEN DAYS OR USE A CURING COMPOUND.

CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL CONFORM TO ACI 318 REQUIREMENTS, CONDUITS AND PIPES SHALL NOT BE LARGER THAN 1/3 OF THE SLAB/WALL THICKNESS AND SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER. COORDINATE WITH CIVIL AND ELECTRICAL DRAWINGS.

DRY PACK SHALL BE ONE PART SAND, ONE PART CEMENT WITH ENOUGH WATER FOR PLACEMENT

ALL BEARING GROUT SHALL BE NON-SHRINK, NONMETALLIC WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.

WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. HOLES SHALL BE BLOWN CLEAN PRIOR TO PLACING BOLTS OR ADHESIVE ANCHORS PER MANUFACTURE'S RECOMMENDATIONS.

PATCH CONCRETE WHERE REOUIRED. PATCHING CONCRETE SHALL BE SIKA TOP 122 OR 123 WITH EPOXIED PINS WHERE REQUIRED BY MANUFACTURER.

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