WASHINGTON STATE PARKS & RECREATION COMMISSION

Jason Both 8/7/2024
REGION MANAGER *date*

Kyle Murphy 8/8/2024
CAPITAL PROGRAM MANAGER *date*

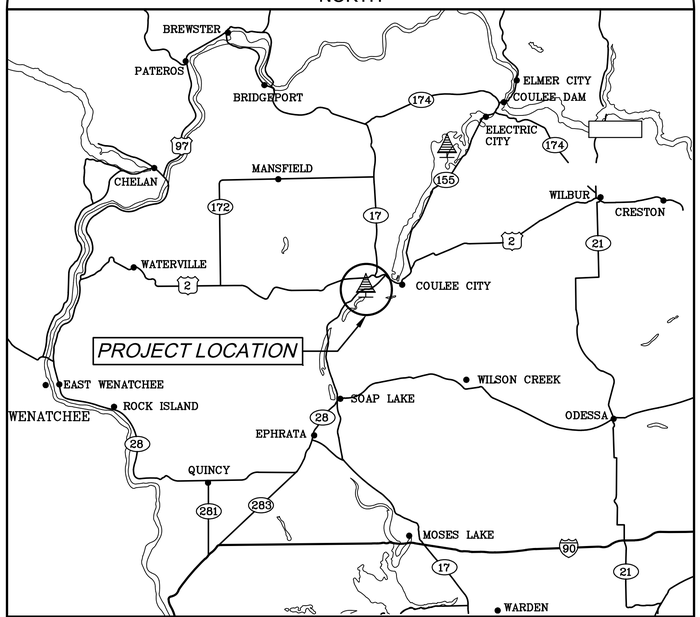
Area Manager: Denis Felton

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

VICINITY MAP

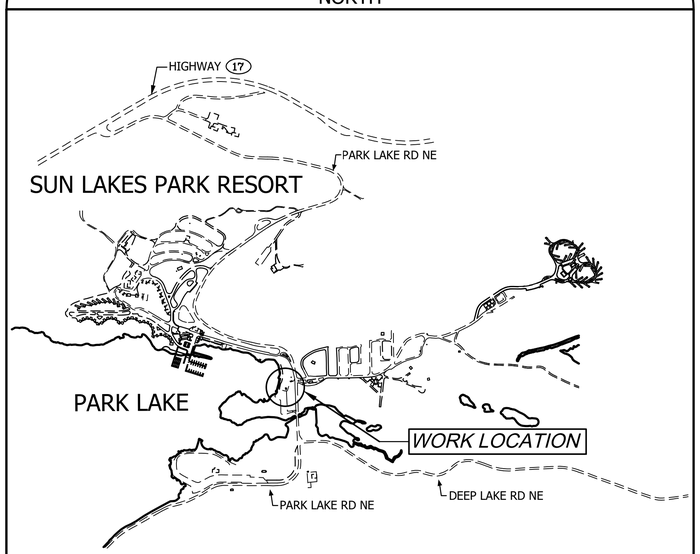
NORTH



LATITUDE 47°51' & LONGITUDE 119°07'

PROJECT LOCATION

NORTH



34228 PARK LAKE RD NE, COULEE CITY, WA 99115
SEC-11 T-24-N R-27-E
GRANT COUNTY TAX PARCEL NUMBER 162124000

INDEX

CAD#: SLLS-P-COV PROJECT TITLE = LIFT STATION RETROFIT

LEGEND

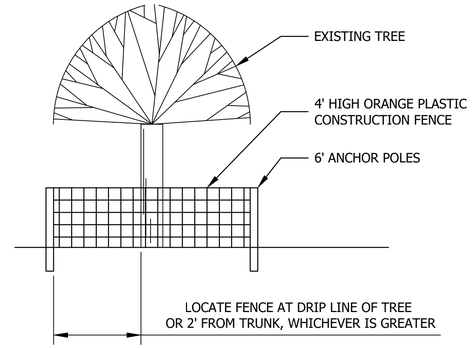
- S — EXISTING GRAVITY SEWER
- F — EXISTING SEWER FORCE MAIN
- UGP — ABANDONED UGP
- W — EXISTING DOMESTIC WATER
- I/W — EXISTING IRRIGATION
- UGP — EXISTING UNDERGROUND ELECTRICAL (PRIMARY)
- UGP — EXISTING UNDERGROUND ELECTRICAL (SECONDARY)
- UGT — EXISTING UNDERGROUND TELEPHONE
- SIG — EXISTING SIGNAL CONDUIT (FOR FUTURE USE)
- UGP — EXISTING UNDERGROUND POWER TO BE ABANDONED
- SIG — EXISTING SIGNAL CONDUIT TO BE ABANDONED
- EXISTING ELECTRICAL TRANSFORMER
- EXISTING IRRIGATION BOX
- EXISTING IRRIGATION VALVE
- EXISTING DRAIN VALVE
- EXISTING SPRINKLER
- EXISTING TREE
- EXISTING PAVEMENT AND CONCRETE
- CONSTRUCTION DISTURBANCE LIMITS
- UGP — UNDERGROUND POWER
- TELM — UNDERGROUND TELMETRY
- P — PROPANE LINE
- YARD HYDRANT DRAIN VALVE
- SILT FENCE
- TREE PROTECTION FENCE
- X — CHAINLINK FENCE

CONSTRUCTION NOTES

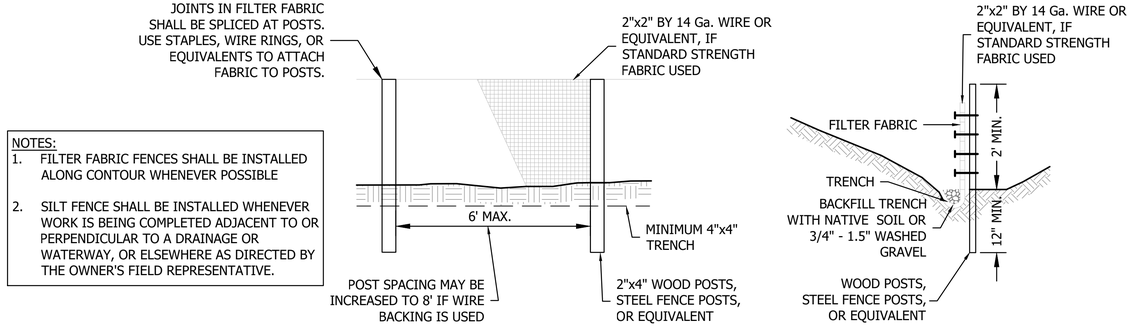
1. EXISTING SITE PLAN WAS DEVELOPED FROM MULTIPLE PRIOR PROJECT RECORDS. NO SURVEY WAS PERFORMED FOR THIS PROJECT. TOPOGRAPHICAL AND UTILITY INFORMATION SHOWN MAY NOT ACCURATELY REFLECT EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF FIELD CONDITIONS VARY FROM THOSE SHOWN.
2. SLOPED-SIDE EXCAVATION IN LIEU OF SHORING FOR WETWELL WILL NOT BE ALLOWED. SHORING MANHOLE BOXES, MANHOLE SHIELDS OR FUNCTIONAL EQUIVALENT MUST BE USED FOR CONSTRUCTION OF THE WETWELL.

ABBREVIATIONS

FL: FLANGED
PE: PLANE END
MJ: MECHANICAL JOINT
RJ: RESTRAINED JOINT
LF: LINEAL FEET
DI: DUCTILE IRON
SS: STAINLESS STEEL
TYP: TYPICAL
GSP: GALVANIZED STEEL PIPE
UGP: UNDERGROUND POWER
F.F.: FINISHED FLOOR



TREE PROTECTION FENCE (1 TYP)
NOT TO SCALE



NOTES:
1. FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE
2. SILT FENCE SHALL BE INSTALLED WHENEVER WORK IS BEING COMPLETED ADJACENT TO OR PERPENDICULAR TO A DRAINAGE OR WATERWAY, OR ELSEWHERE AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.

SILT FENCE (2 TYP)
NOT TO SCALE

0 40 120
20 60
FEET

RH2

CAD NO. slls-p-ov

REVISIONS	DATE	INT.	APP.

NO.

ACTION	BY	DATE
DESIGNED	PNY	6/27/2024
DRAWN	JTR	6/27/2024
CHECKED (FIELD)		
CHECKED (HDQTS.)		

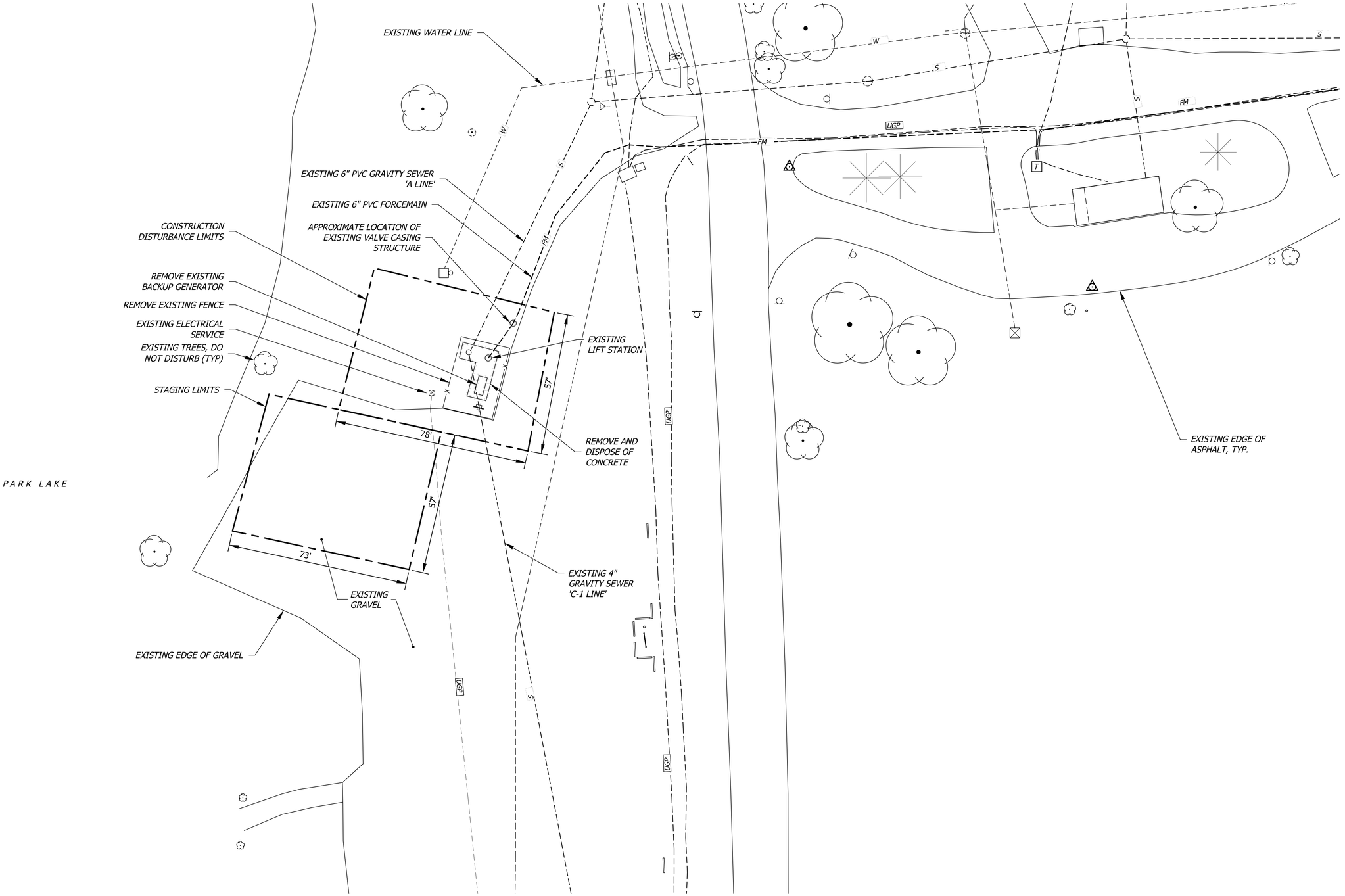
PAUL NATHAN YOUNG — STATE OF WASHINGTON — 53379 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 06/27/2024
PROJECT ENGINEER

WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

GENERAL INFORMATION



CONSTRUCTION NOTE

CONSTRUCTION DISTURBANCE LIMITS AND MATERIALS AND EQUIPMENT STORAGE AREAS SHOWN ON THIS PLAN ENCOMPASS THE MINIMUM AREA THE CONTRACTOR IS ASSUMED TO NEED. THE CONTRACTOR MAY BE ALLOWED TO USE ADDITIONAL AREA WITH APPROVAL FROM THE ENGINEER. ALL AREAS THAT ARE DISTURBED BY THE CONTRACTOR'S ACTIVITIES WILL BE RESTORED BY THE CONTRACTOR UNDER THE ORIGINAL BID PRICE. NO ADDITIONAL PAYMENT WILL BE MADE FOR RESTORATION OF DAMAGE CAUSED BY THE CONTRACTOR.

SUN LAKES - EXISTING SITE PLAN

0 10 20
5 15 40
FEET

CAD NO. slls-p-esite

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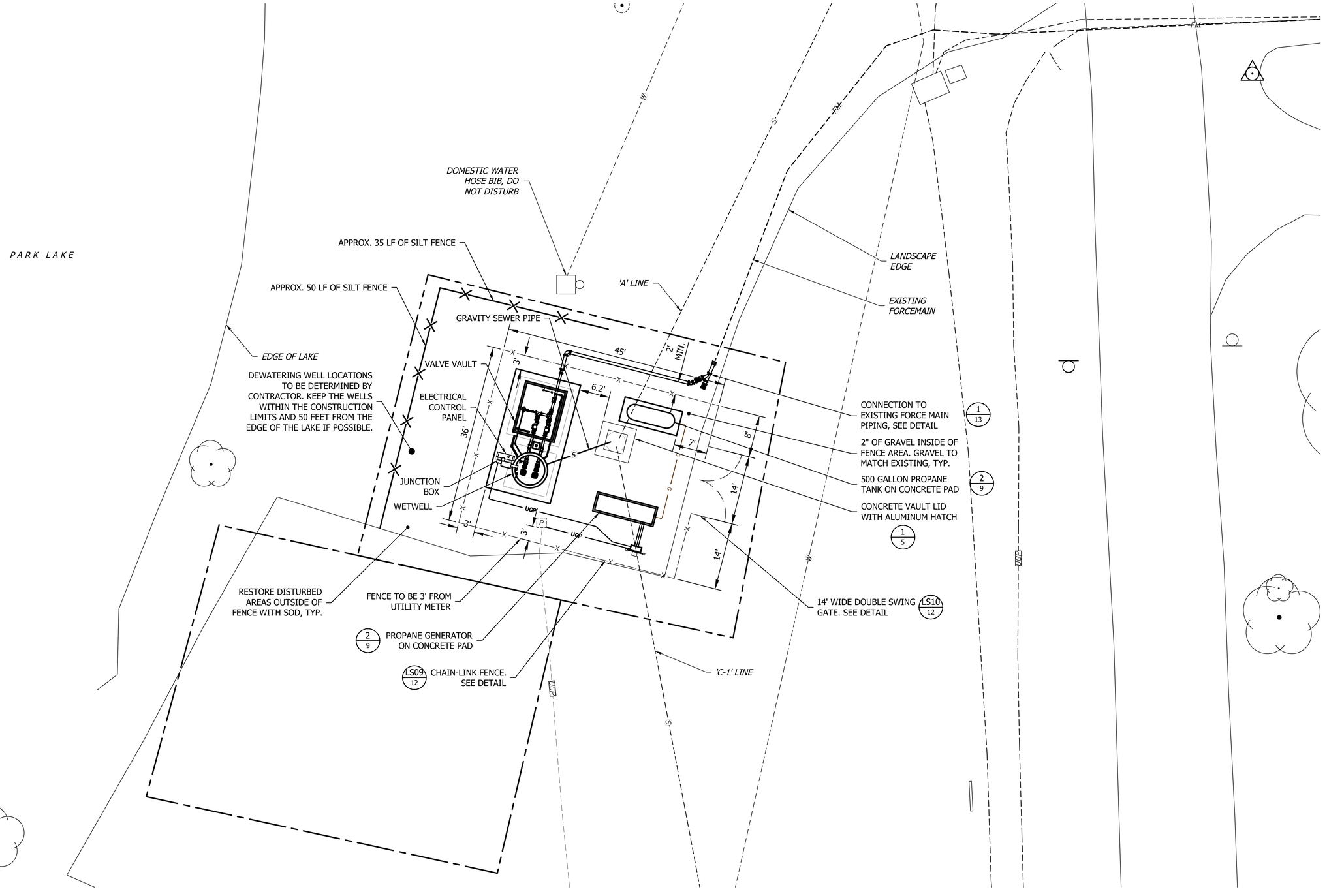
SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

EXISTING SITE PLAN

SHEET 3 OF 20



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GENERAL NOTE

IF GLUED OR THREADED COUPLINGS ARE NOT PRACTICAL FOR REROUTING WATER, IRRIGATION, AND YARD HYDRANT PIPING, PROVIDE COMPRESSION COUPLINGS AND THRUST BLOCKING.

SUN LAKES - LIFT STATION SITE PLAN

0 2 4 6 8 10 20 FEET

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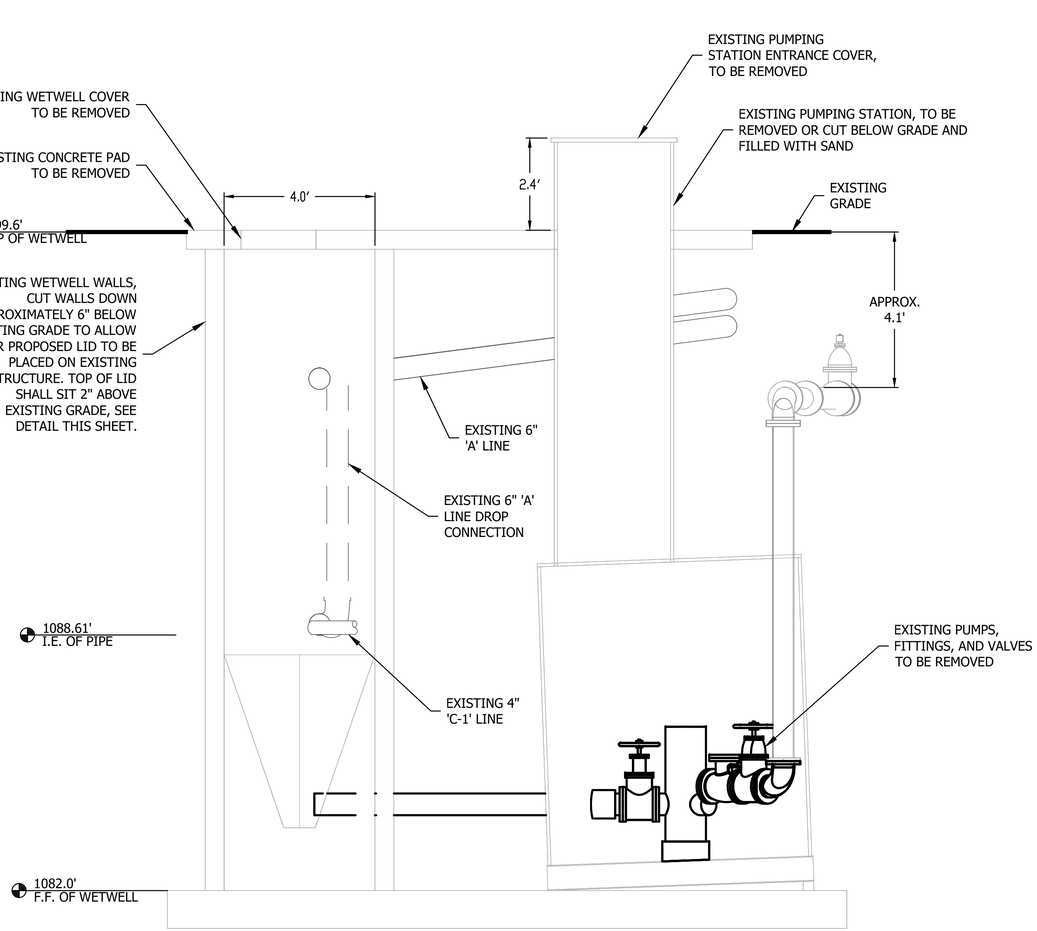
SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

LIFT STATION SITE PLAN

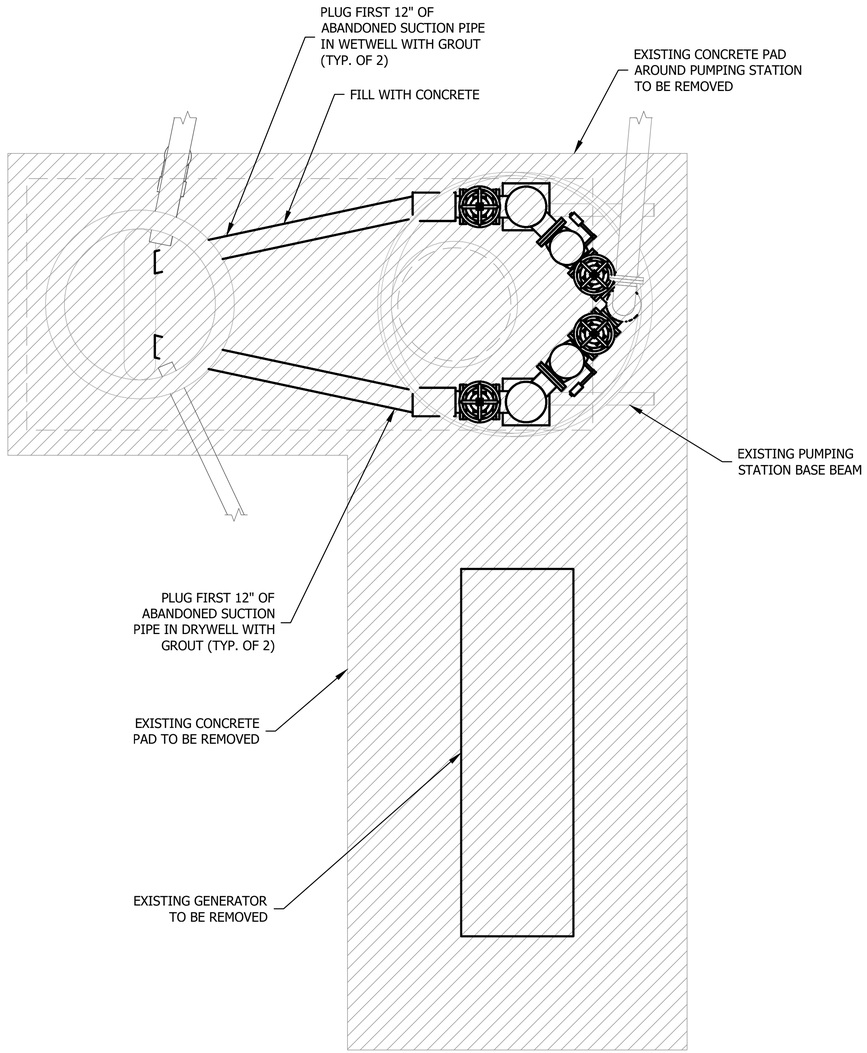
SHEET 4 OF 20

RH2



EXISTING WETWELL MECHANICAL ELEVATION

0 2 FEET 1 4

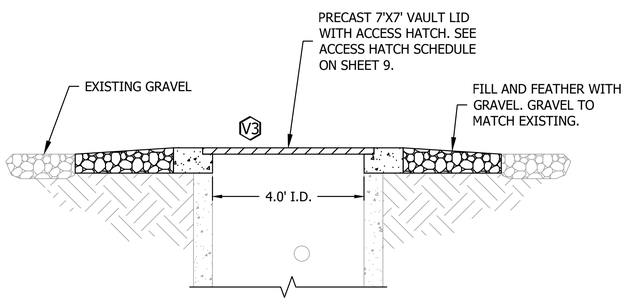


EXISTING LIFT STATION PLAN

0 2 FEET 1 4

CONSTRUCTION SEQUENCING

1. EXISTING LIFT STATION IS TO REMAIN IN SERVICE DURING CONSTRUCTION. THIS DEMOLITION PLAN SHOWS WORK THAT WILL OCCUR AFTER THE NEW STATION IS IN SERVICE.
2. IF CONTRACTOR NEEDS TO TEMPORARILY SHUT DOWN EXISTING LIFT STATION, CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND LABOR TO REMOVE SEWAGE FROM WETWELL AND TRANSPORT IT TO THE PARK LAGOONS DURING THE SHUT DOWN.
3. IF NEW GENERATOR HAS A LONG LEAD TIME, KEEP EXISTING GENERATOR IN PLACE AND TEMPORARILY CONNECT NEW LIFT STATION TO EXISTING GENERATOR. SEE SPECIFICATION SECTION 010000.



EXISTING WETWELL LID REPLACEMENT 1/5

NOT TO SCALE

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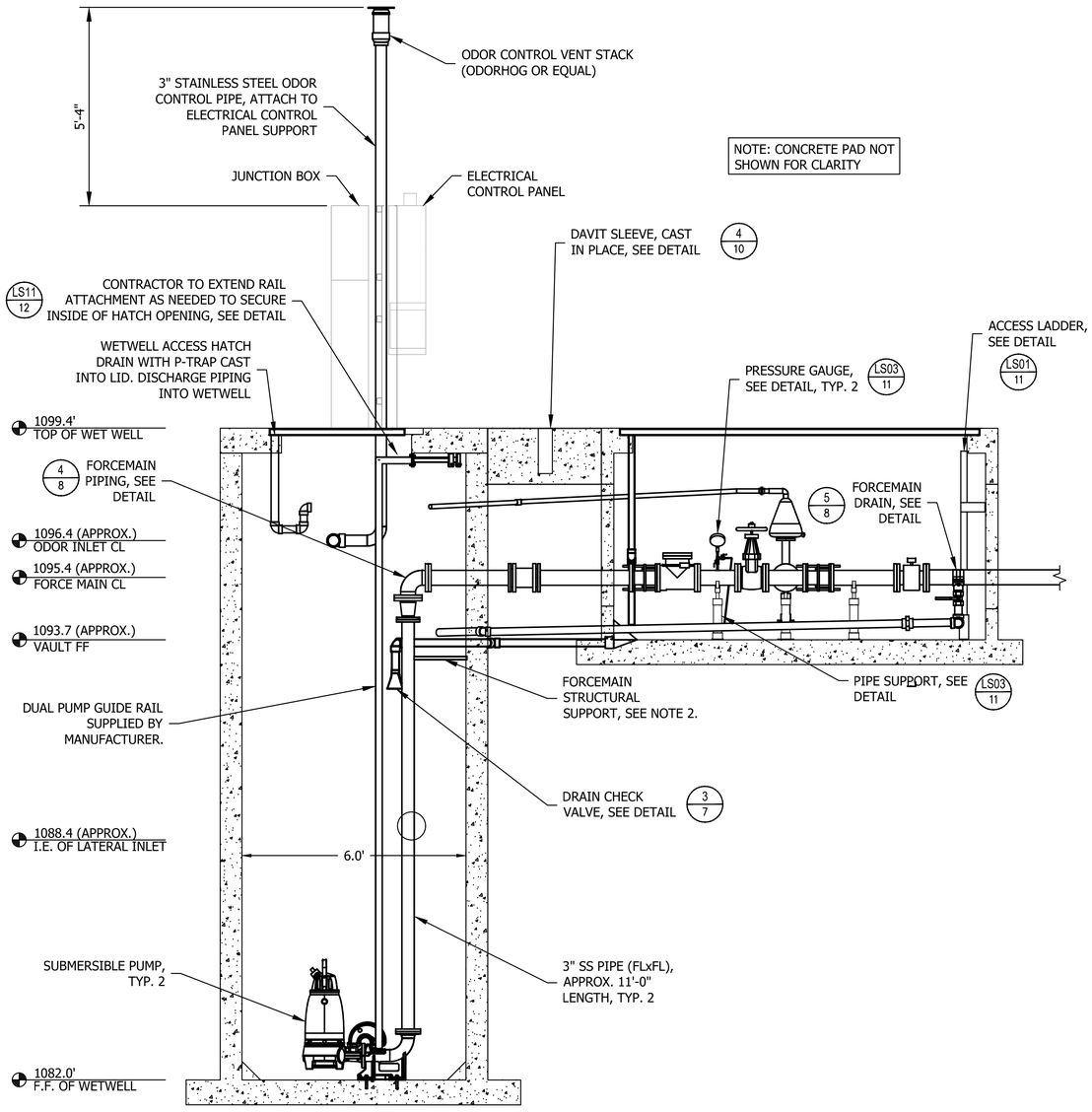
SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

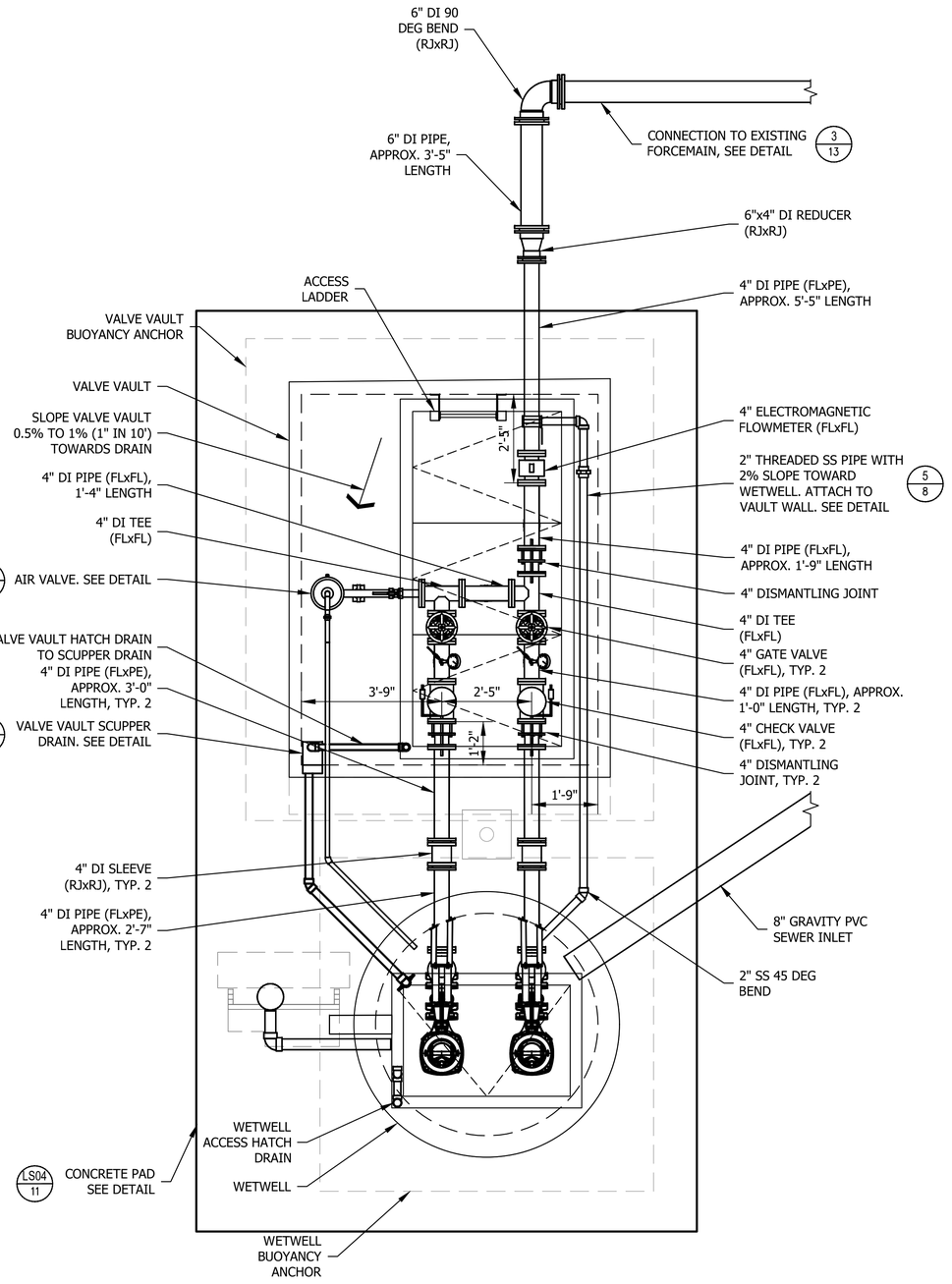
EXISTING MECHANICAL AND DEMOLITION PLAN

SHEET 5 OF 20



MECHANICAL ELEVATION

0 2 FEET
1 4



MECHANICAL PLAN

0 2 FEET
1 4

GENERAL MECHANICAL NOTES

1. ALL PIPING SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO VAULT WALLS OR WETWELL CENTERLINE U.N.O.
2. SUPPORT VERTICAL PORTION OF FORCEMAIN IN WET WELL WITH 2"x2" SS ANGLE BOLTED TO WET WELL WALL AND ATTACH TO PIPE WITH A SS CLAMP.
3. ELEVATIONS, DIAMETERS AND ORIENTATIONS SHOWN FOR EXISTING PIPES HAVE NOT BEEN SURVEYED AND ARE TAKEN FROM PAST RECORDS.

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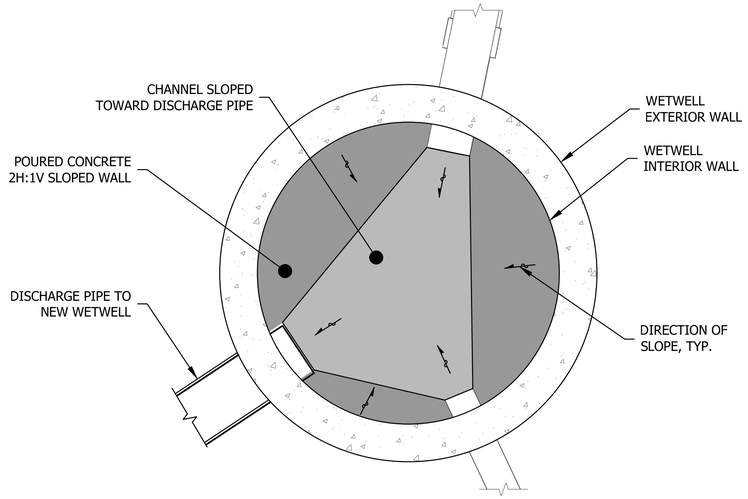
SEWER LIFT STATION REPLACEMENT

MECHANICAL PLAN 1

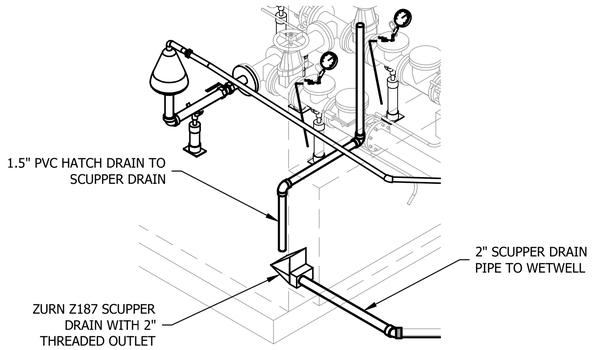
SHEET 6 OF 20



EXISTING WETWELL BASE DETAIL

1/7

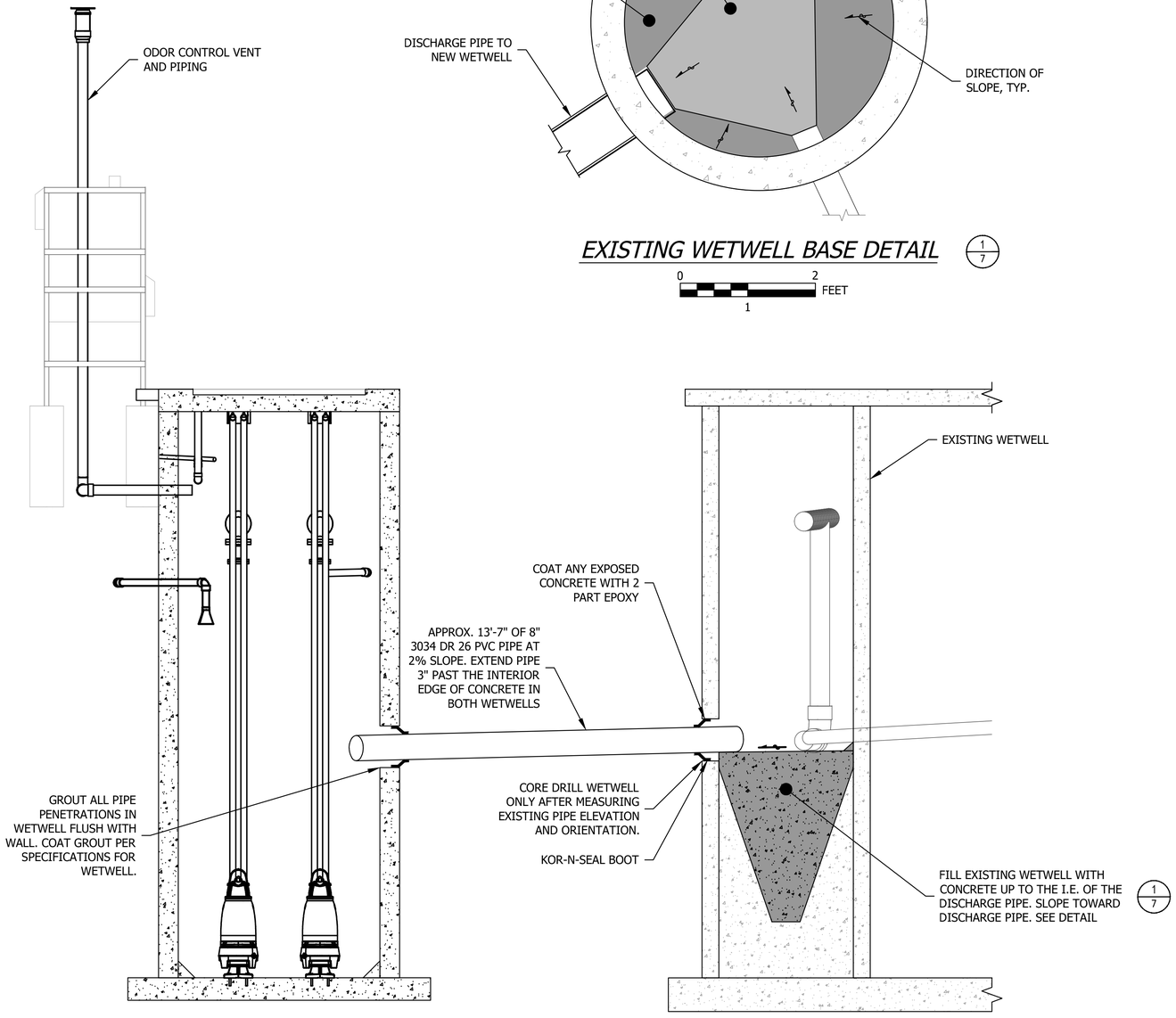
0 2
1
FEET



VALVE VAULT SCUPPER DRAIN

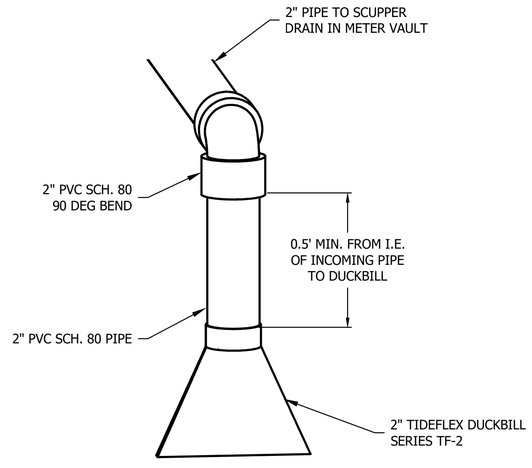
NOT TO SCALE

2/6



MECHANICAL ELEVATION

0 2
1 4
FEET



VALVE VAULT DRAIN DISCHARGE IN WETWELL

NOT TO SCALE

3/6

RH2

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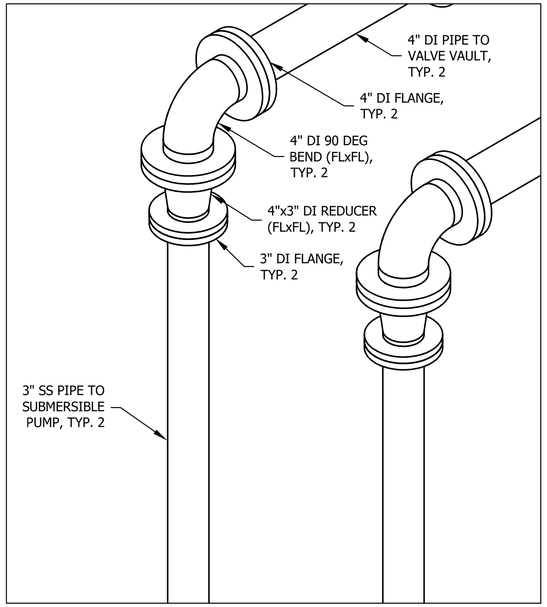
SEWER LIFT STATION REPLACEMENT

MECHANICAL PLAN 2

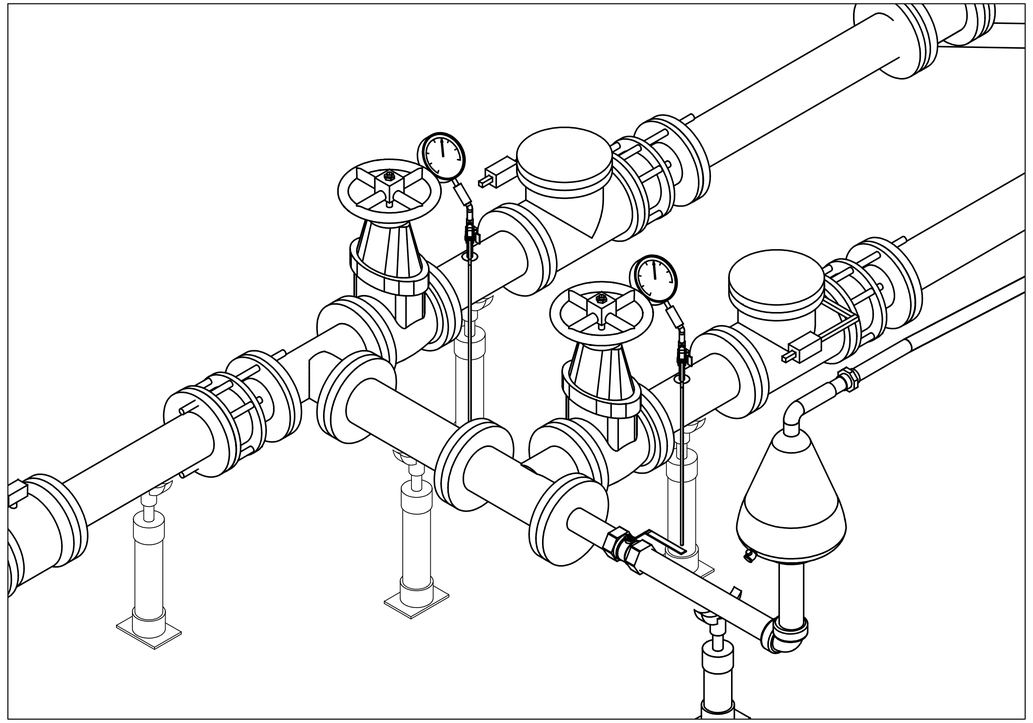
SHEET 7 OF 20



TYPICAL WET WELL FORCEMAIN VERTICAL PIPING OBLIQUE

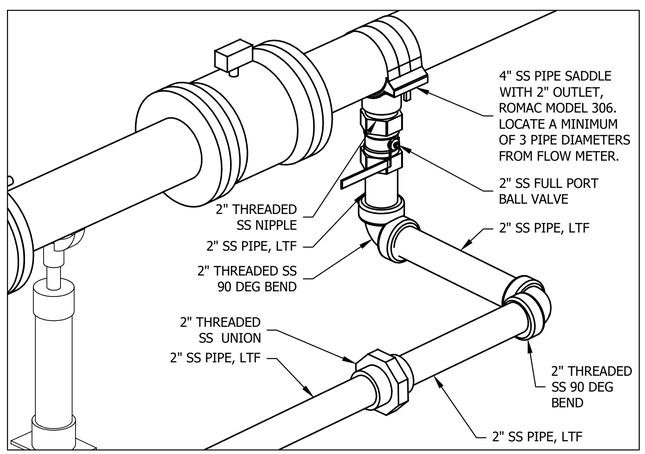
4 TYP

NOT TO SCALE



VALVE VAULT PIPING OBLIQUE

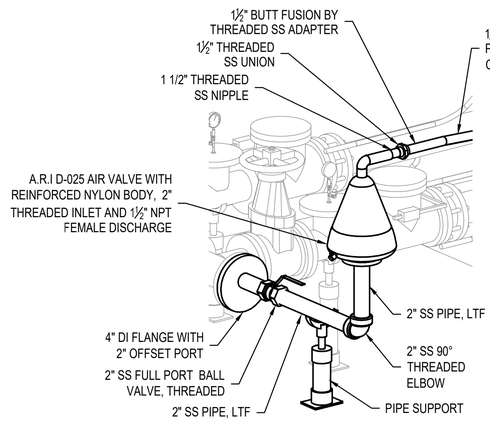
NOT TO SCALE



TYPICAL VALVE VAULT FORCEMAIN DRAIN OBLIQUE

5 6

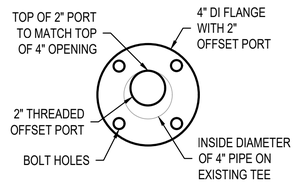
NOT TO SCALE



AIR VALVE OBLIQUE

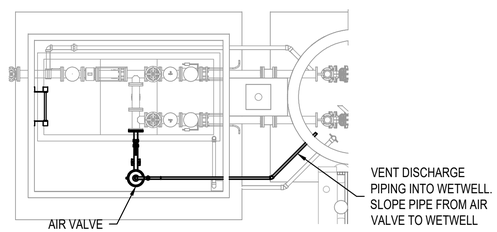
6 TYP

NOT TO SCALE



OFF SET PORT DETAIL

NOT TO SCALE



AIR VALVE PLAN

NOT TO SCALE

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PROJECT ENGINEER

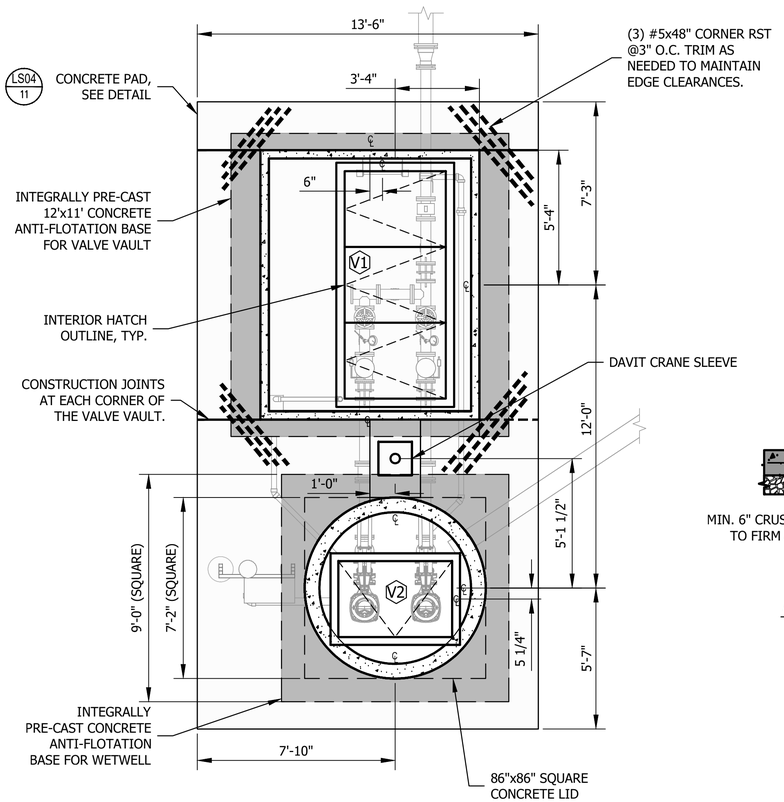
WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

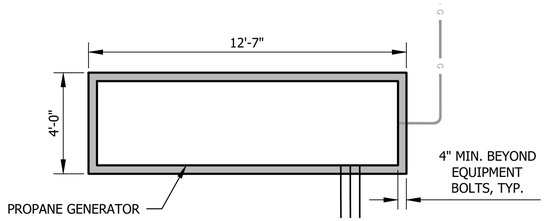
MECHANICAL DETAILS

SHEET 8 OF 20



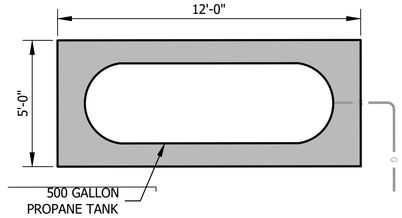
STRUCTURAL PLAN

1 3
0 2 6 FEET



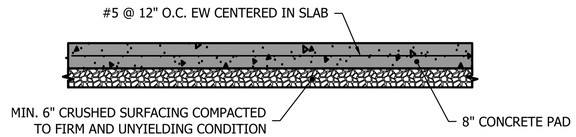
GENERATOR PAD PLAN

1 3
0 2 6 FEET



PROPANE TANK PAD PLAN

1 3
0 2 6 FEET



STANDBY GENERATOR AND PROPANE TANK CONCRETE PAD

2/4

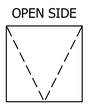
0 4
2 FEET

ACCESS HATCH SCHEDULE								
ID NO.	CLEAR OPENING	NO. OF LEAVES	MATERIAL	RATING	MOUNTING	SAFETY GRATING	GASKET	INSULATION
V1	48" X 108"	3	ALUMINUM	300 LBS/SF	EMBEDDED	NO	STANDARD	YES
V2	54" X 36"	1	ALUMINUM	300 LBS/SF	EMBEDDED	YES	ODOR TIGHT	NO
V3	48" X 48"	2	ALUMINUM	H-20	EMBEDDED	NO	ODOR TIGHT	NO

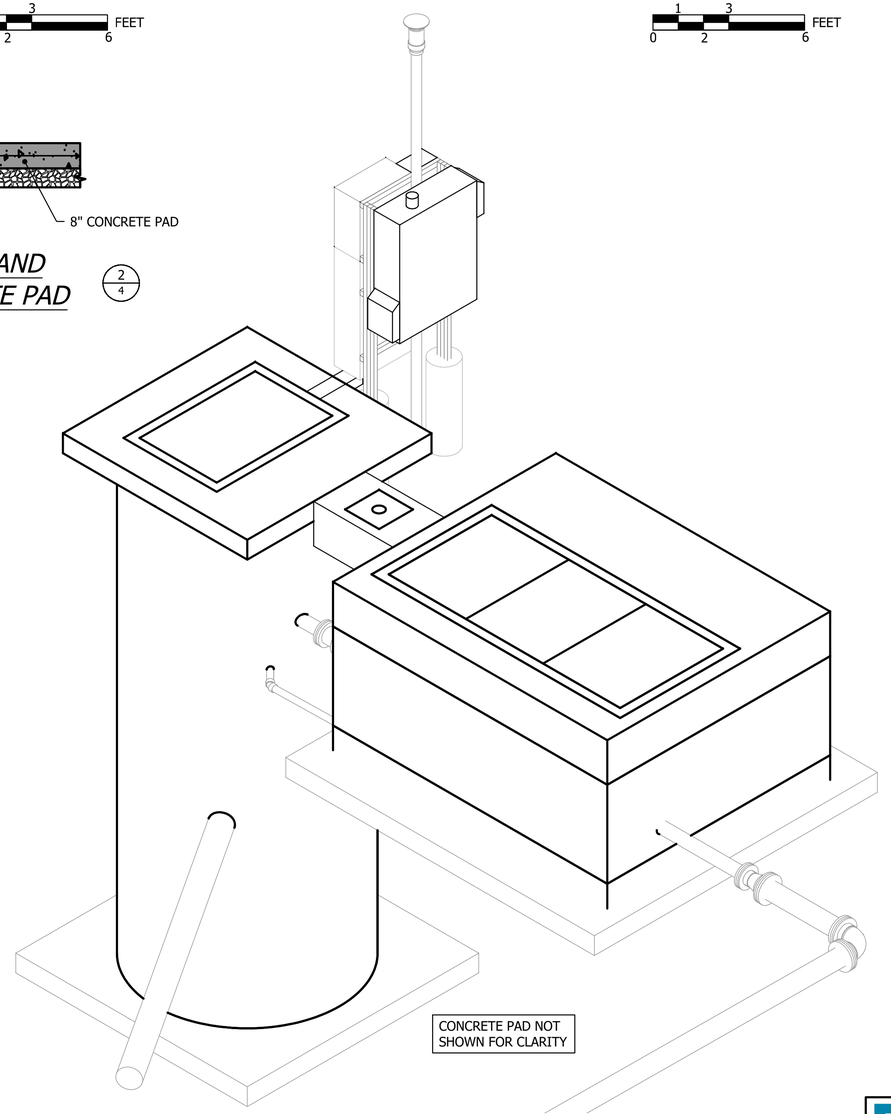
PRECAST CONCRETE VAULT SCHEDULE		
ID NO.	MODEL	APPROX. INTERIOR DIMENSIONS (L X W X H)
V1	H2 PRE-CAST 810 VAULT OR APPROVED EQUAL	10'-0" X 8-0", SEE ELEVATION VIEW FOR DEPTH
V2	H2 PRE-CAST 72" DIAMETER MANHOLE - TYPE 3 OR APPROVED EQUAL	72" DIAMETER, SEE ELEVATION VIEW FOR DEPTH

HATCH NOTES

1. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. WETWELL HATCH FRAME TO BE MODIFIED FOR PUMP CABLE REMOVAL. DEBUR AND GRIND ALL CUT EDGES SMOOTH.



ACCESS HATCH SYMBOL



STRUCTURAL OBLIQUE

NOT TO SCALE

CAD NO. slls-p-struc

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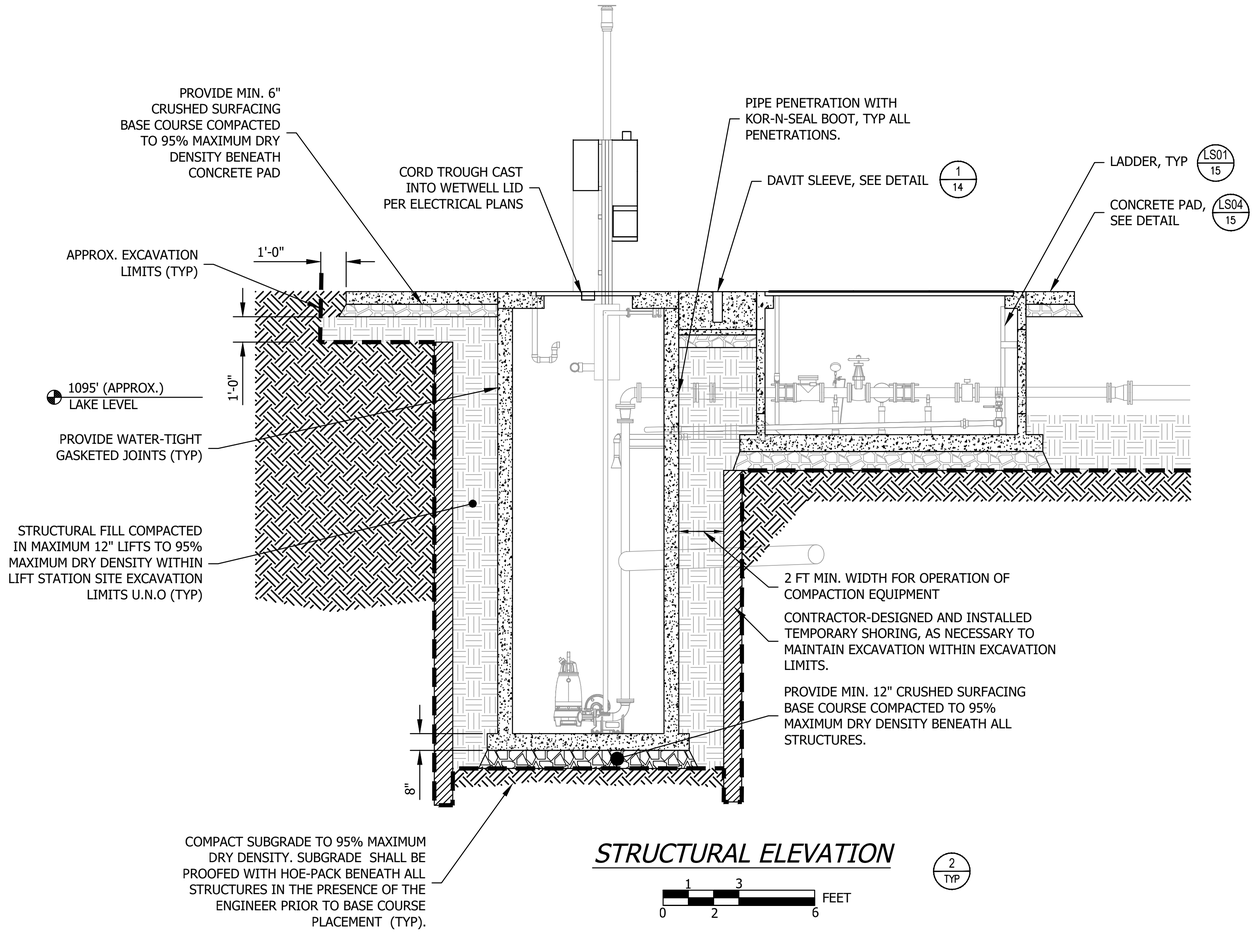
SEWER LIFT STATION REPLACEMENT

STRUCTURAL PLAN

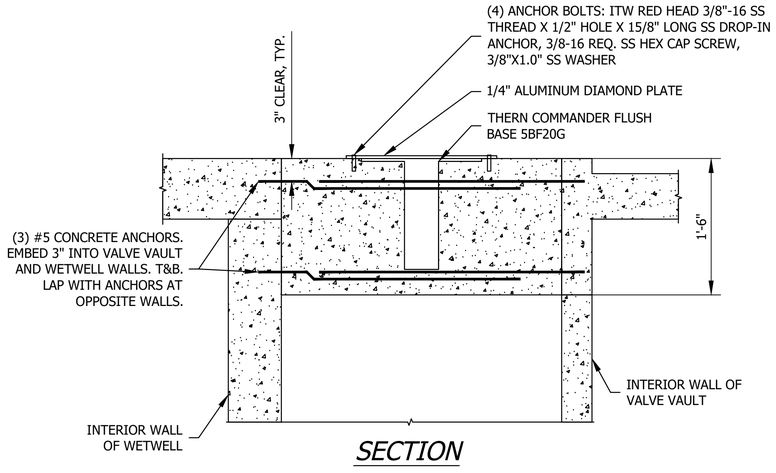
SHEET 9 OF 20



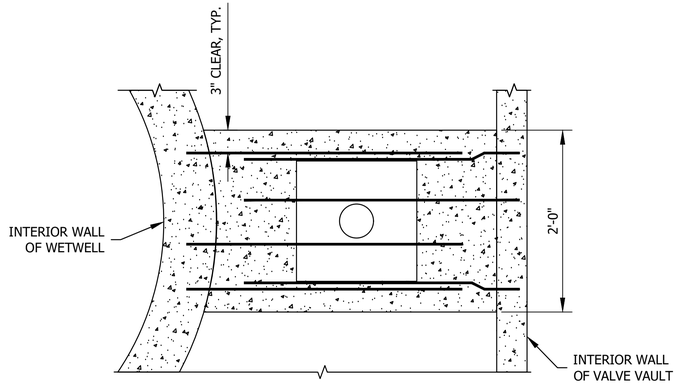
STRUCTURAL ELEVATION

2 TYP

1 0 3 2 6 FEET



SECTION



PLAN

DAVIT SLEEVE DETAILS

4 TYP

NOT TO SCALE

GENERAL NOTES

1. ALL STRUCTURE RIMS SHALL BE SET 2" ABOVE EXISTING GRADE.
2. MAXIMUM DRY DENSITY OF FILL SHALL BE DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D 1557)
3. EXPOSED EXTERIOR ROOFS OF ALL PRECAST STRUCTURES SHALL BE COATED PER THE SPECIFICATIONS.
4. THE INTERIOR OF THE WETWELL SHALL BE COATED PER THE SPECIFICATIONS.
5. CONCRETE ANTI-FLOTATION BASES TO BE PRE-CAST AROUND WETWELL AND VAULT BASES. BOTTOM ELEVATION OF ANTI-FLOTATION BASES TO MATCH BOTTOM ELEVATION OF WETWELL AND VAULT BASES, RESPECTIVELY. PRECAST STRUCTURES TO BE PROVIDED WITH RISERS AS NECESSARY TO MATCH STRUCTURE CLEARANCE HEIGHTS SHOWN ON PLANS.
6. GROUNDWATER IS TO BE EXPECTED IN THE EXCAVATION. CONTROL WATER TO KEEP EXCAVATION DRY DURING INSTALLATION. SEE SPECIFICATIONS DIVISION 31.

BAR SIZE	MINIMUM STRAIGHT DEVELOPMENT LENGTHS		MINIMUM LAP SPLICE LENGTHS	MINIMUM EMBEDMENT LENGTHS
	TENSION BARS		TENSION BARS	END HOOKS
	TOP BARS	OTHER BARS	TOP BARS	ALL BARS
#3	19"	15"	25"	6"
#4	25"	19"	33"	7"
#5	31"	24"	41"	9"
#6	37"	29"	49"	10"
#7	54"	42"	71"	12"
#8	62"	48"	81"	14"
#9	70"	54"	91"	15"
#10	79"	61"	103"	17"

+ "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.
IF CLEAR CONCRETE COVER IS LESS THAN 2x THE DIAMETER OF THE BAR OR THE CENTER-TO-CENTER SPACING IS LESS THAN (4) BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%.

REINFORCEMENT SPLICE AND DEVELOPMENT LENGTH SCHEDULE

CAD NO. slls-p-struc

NO.	REVISIONS	INT.	APP.	DATE

ACTION	BY	DATE
DESIGNED	PNY	6/27/2024
DRAWN	JTR	6/27/2024
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PAUL NATHAN YOUNG STATE OF WASHINGTON 53379 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 06/27/2024

PROJECT ENGINEER

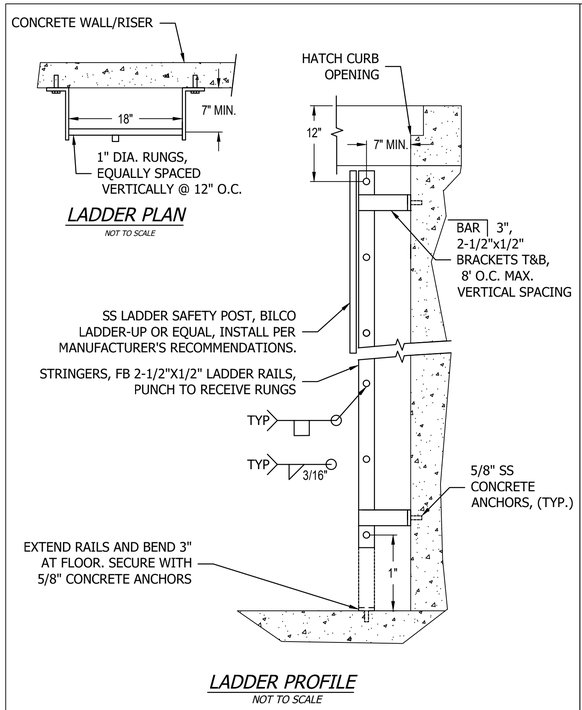
WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

STRUCTURAL ELEVATIONS AND PLAN

SHEET 10 OF 20



LADDER PLAN
NOT TO SCALE

LADDER PROFILE
NOT TO SCALE

LADDER DETAIL
NOT TO SCALE

LS01 TYP

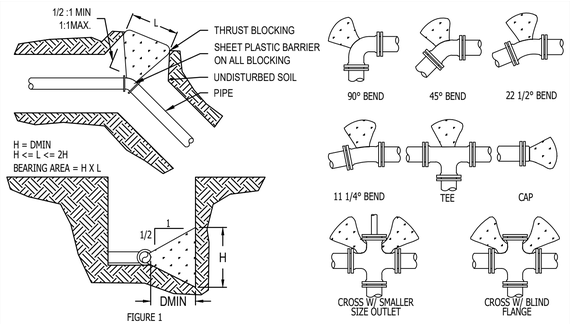


FIGURE 1

CONSTRAINTS
1. SOIL CONDITIONS AND BEARING CHARACTERISTICS ARE TO BE DETERMINED BY THE INSPECTOR.
2. THIS STANDARD DETAIL IS FOR HORIZONTAL THRUST RESTRAINT ONLY.
3. CONCRETE BLOCKING SHALL BE PER APWA SPECIFICATION 7-11.3(13) 1984.
4. CONCRETE THRUST BLOCKING FOR FITTINGS LARGER THAN 16" SHALL BE AS SHOWN ON THE PROJECT PLANS.
5. MAINTAIN 18" MINIMUM GROUND COVER OVER THE TOP OF ALL CONCRETE BLOCKING.
6. WRAP FITTINGS WITH 8 mil THICK POLYETHYLENE

PROCEDURE
1. DETERMINE BEARING FACTOR IN TABLE 1 CORRESPONDING TO APPROPRIATE PIPE SIZE AND TYPE OF FITTING.
2. MULTIPLY THE BEARING FACTOR DETERMINED IN TABLE 1 BY THE MULTIPLICATION FACTOR IN TABLE 2 FOR THE APPROPRIATE SOIL CLASSIFICATION.THE RESULT IS THE REQUIRED AREA OF CONCRETE (IN SQ. FT.) WHICH MUST BEAR AGAINST UNDISTURBED SOIL.
3. USING TABLE 3 LOCATE THE MINIMUM DEPTH OF CONCRETE (Dmin) CORRESPONDING TO THE REQUIRED BEARING AREA.
4. USING Dmin, THE HEIGHT AND LENGTH OF THE THRUST BLOCKING CAN BE DETERMINED FROM THE DIMENSION RELATIONSHIPS ILLUSTRATED IN FIGURE 1 AND DESCRIBED BELOW:
   A. "H" EQUALS "D"
   B. MAX. "L" EQUALS 2 X "H"
   C. MIN. "L" EQUALS "H" SHEETING PRIOR TO POURING CONCRETE.

SIZE	TEST PRESSURE	TEES DEAD ENDS	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3	300	2.25	2.25	2.25	2.25	2.25
4	300	2.25	2.25	2.25	2.25	2.25
6	300	2.83	4.00	2.25	2.25	2.25
8	300	5.00	7.11	3.85	2.25	2.25
10	300	7.86	11.11	6.00	3.06	2.25
12	300	11.31	16.00	8.66	4.41	2.25
14	250	12.83	18.14	9.82	5.00	2.51
16	225	15.08	21.33	11.54	5.88	2.96

* 2.25 BASED ON GEOMETRIC FACTORS

TABLE 1: BEARING FACTOR

SOIL CONDITION	MULTIPLICATION FACTOR
*MUCK, PEAT, ETC.	-
SOFT CLAY	3.0
SAND	1.5
SAND AND GRAVEL	1.0
SAND AND GRAVEL CEMENTED W/ CLAY	0.75
HARD SHALE	0.30

* THRUST BLOCKING SHALL BE DESIGNED BY ENGINEER

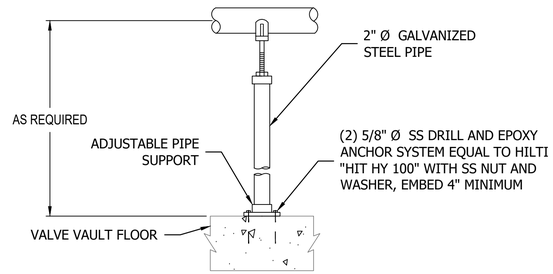
TABLE 2 MULTIPLICATION FACTOR

REQ'D BEARING AREA (SQ. FT.)	MINIMUM DEPTH DMIN
2.25 MIN.- 5.0	1.5'
5.01 - 10.0	2.25'
10.01 - 15.0	3.0'
15.01 - 30.0	4.0'
30.01 - 40.0	4.5'
40.01 - 50.0	5.0'
50.01 - 70.0	6.0'

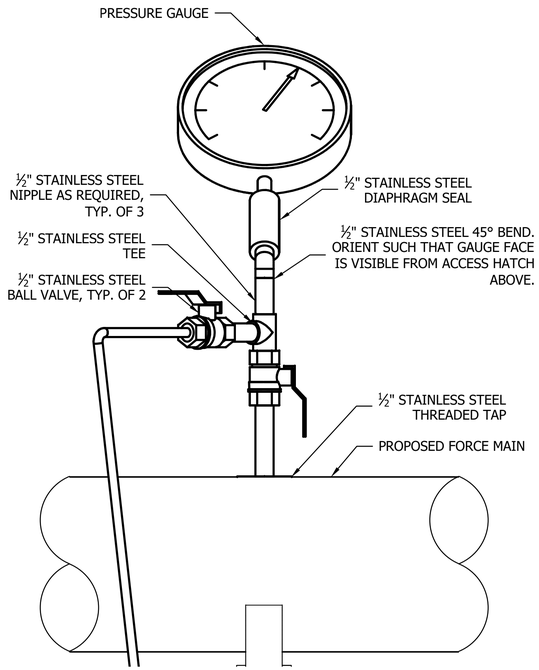
TABLE 3: BLOCK SHAPE

THRUST BLOCK DETAILS
NOT TO SCALE

LS02 TYP



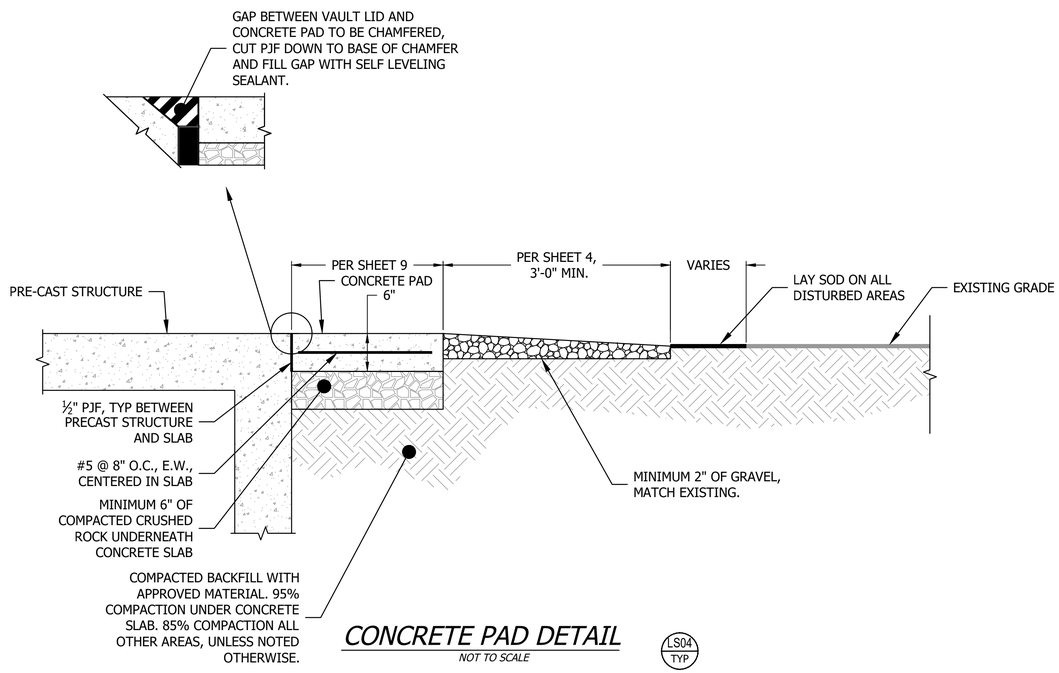
VERTICAL PIPE SUPPORT DETAIL
NOT TO SCALE



PRESSURE GAUGE DETAILS
NOT TO SCALE

VAULT DETAILS
NOT TO SCALE

LS03 TYP



CONCRETE PAD DETAIL
NOT TO SCALE

LS04 TYP

		NO.
CAD NO. slls-p-lsdet		
		DATE
		APP.
		INT.
		REVISIONS

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SIGNED: 06/27/2024

PROJECT ENGINEER

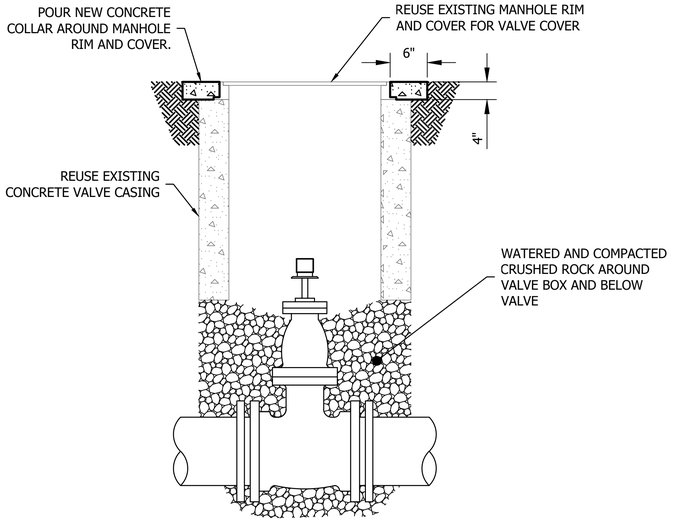
WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

LIFT STATION DETAILS 1

SHEET 11 OF 20



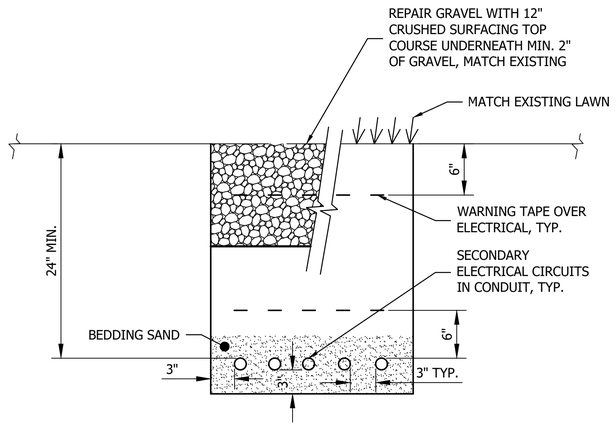
1. ISOLATION VALVES 2" AND LARGER ARE TO BE NRS RESILIENT SEAT GATE VALVES MEETING AWWA C509 OR C515.

2. BACKFILL AROUND VALVE CASING SHALL BE COMPACTED USING A JUMPING JACK.

ISOLATION VALVE INSTALLATION DETAIL

LS07 TYP

NOT TO SCALE

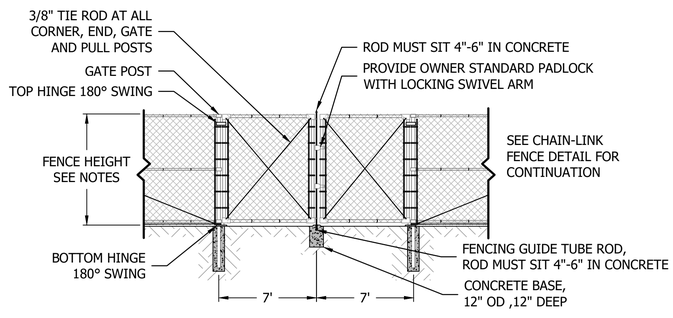


1. WHEN MULTIPLE UTILITIES ARE IN THE SAME TRENCH, THERE SHALL BE 3" SEPARATION BETWEEN LIKE UTILITIES AND 18" BETWEEN DIFFERENT UTILITIES.
2. NO UTILITIES SHALL BE PLACED OVER UNDERGROUND ELECTRICAL.
3. REPAIR LAWN, SEE SPECS.

ELECTRICAL TRENCH DETAIL

LS08 TYP

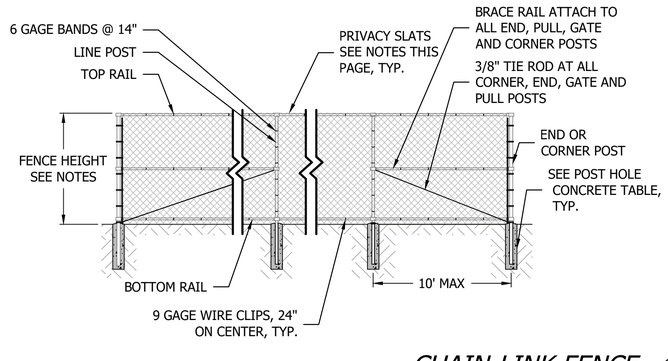
NOT TO SCALE



DOUBLE SWING GATE

LS10 TYP

NOT TO SCALE



CHAIN-LINK FENCE

LS09 TYP

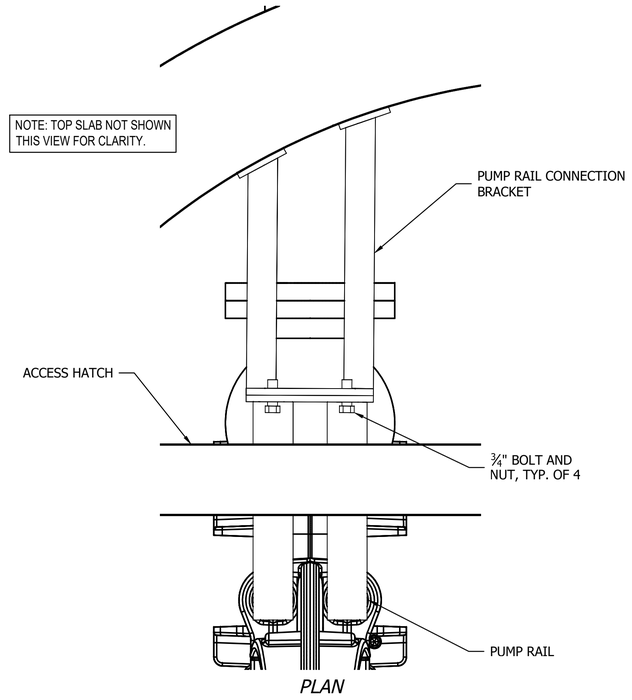
NOT TO SCALE

POST HOLE CONCRETE*		
	GATE AND END POST	LINE POSTS
MIN. DEPTH	60"	60"
MIN. DIAMETER	24"	24"
MIN. POST EMBEDMENT	54"	54"
*FOOTINGS SIZED TO RESTRAIN PRIVACY SLAT FENCE		

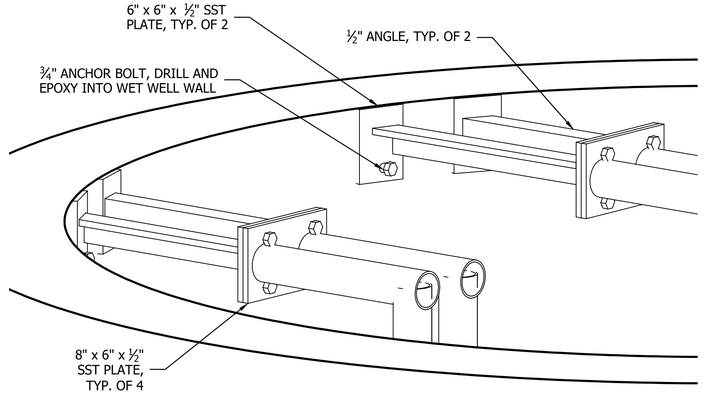
POST AND RAIL SCHEDULE		
END, PULL, GATE, CORNER POSTS	LINE POSTS	TOP, MID AND BOTTOM RAIL
4" OD	2.875" OD	1.66" OD

NOTES:
1. NOTE: MINIMUM DEPTHS BASED ON IBC GRAVEL(GW) OR SANDY GRAVEL(GP) SOIL TYPES PER IBC TABLE 1804.2.
2. CONCRETE FOR ALL FOOTINGS SHALL BE 4000 PSI CONCRETE.
3. ALL CHAIN LINK FENCE SHALL BE VINYL COATED.
4. PROVIDE VERTICAL PRIVACY SLATS WITH VERTICAL LOCKING FEATURE, NEUTRAL COLOR.

NOTE: TOP SLAB NOT SHOWN THIS VIEW FOR CLARITY.



PLAN



OBLIQUE

PUMP RAIL CONNECTION DETAIL

LS11 TYP

NOT TO SCALE

CAD NO. slls-p-lsdet

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PAUL NATHAN LOONEY — STATE OF WASHINGTON — 53379 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 06/27/2024

PROJECT ENGINEER

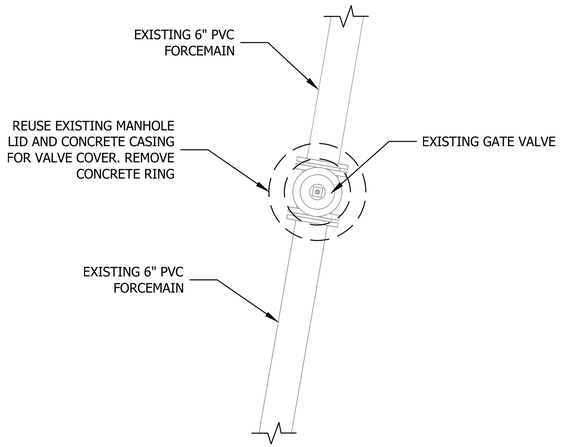
WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

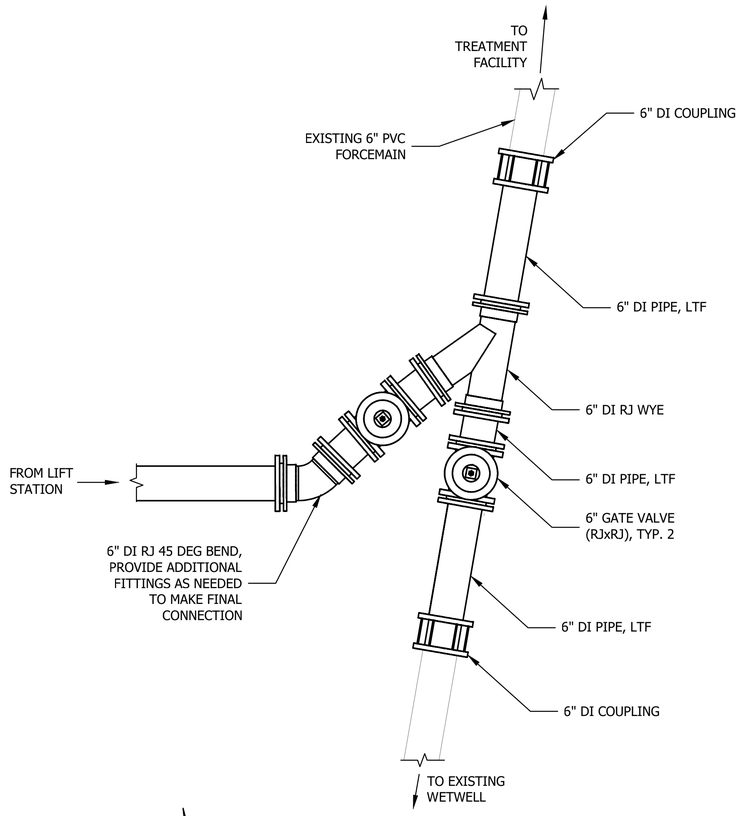
LIFT STATION DETAILS 2

SHEET 12 OF 20



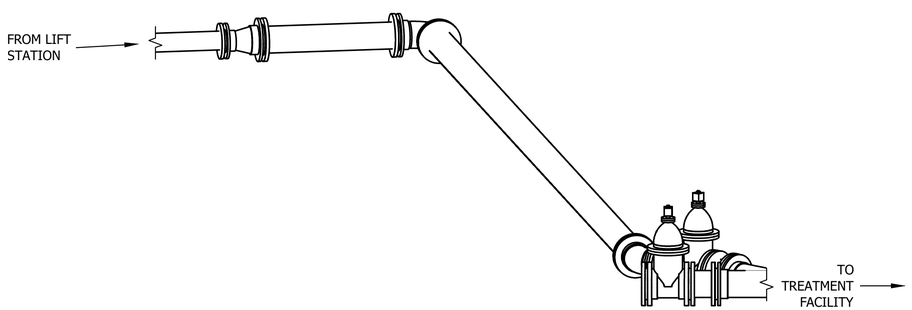
EXISTING CONFIGURATION

NOT TO SCALE



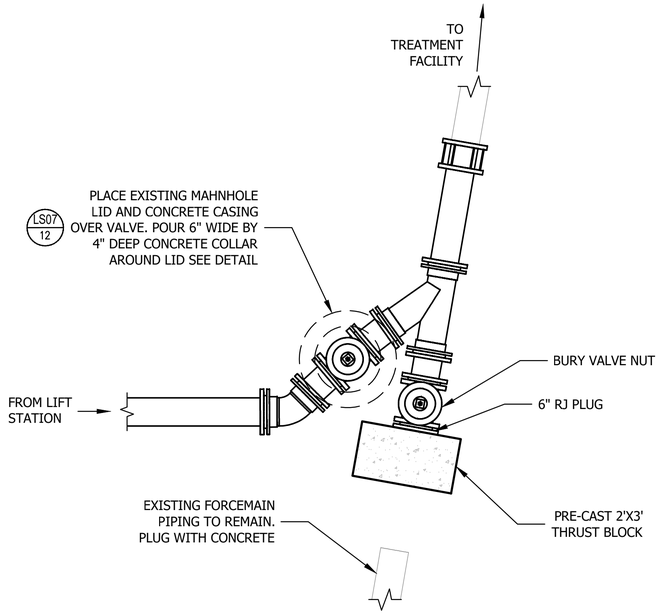
TESTING CONFIGURATION

NOT TO SCALE



CONNECTION DETAIL OBLIQUE

NOT TO SCALE



FINAL CONFIGURATION

1/6

NOT TO SCALE

GENERAL NOTES

1. LOCATION OF EXISTING PIPE IS UNKNOWN. CONTRACTOR TO PROVIDE ANY ADDITIONAL FITTINGS OR THRUST BLOCKING NOT SHOWN IN THESE DETAILS THAT IS REQUIRED TO MAKE THE FINAL CONNECTION TO EXISTING PIPE. CONFIRM LAYOUT WITH OWNER PRIOR TO ORDERING FITTINGS.
2. MATERIALS OF EXISTING FORCEMAIN SHOWN ON THIS PLAN ARE FROM PRIOR RECORDS AND NOT GUARANTEED TO BE ACCURATE. POTHOLE AND CONFIRM PRIOR TO ORDERING FITTINGS.
3. CONNECTION TO EXISTING FORCEMAIN SHALL OCCUR PRIOR TO COMPLETION OF THE NEW LIFT STATION SO THAT WHEN TESTING THE NEW LIFT STATION THE TEST WATER WILL BE PUMPED THROUGH THE FORCE MAIN. WHEN MAKING THE CONNECTION TO EXISTING CLOSE VALVE APPROX. 1350 LF FROM THE EXISTING WET WELL. THE FORCEMAIN (APPROX. 2500 GALLONS) SHALL BE DRAINED BACK TO THE WETWELL. SEWAGE SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE ANY WORK MAY BE PERFORMED.

RH2

CAD NO. slls-p-connection

NO.	REVISIONS	INT.	APP.	DATE

ACTION	BY	DATE
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PAUL NATHAN YOUNG — STATE OF WASHINGTON — 53379 — REGISTERED PROFESSIONAL ENGINEER

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PROJECT ENGINEER

WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

FORCEMAIN CONNECTION DETAIL

SHEET 13 OF 20

ONE-LINE DIAGRAM SYMBOLS

- CIRCUIT BREAKER
  XXX/YY - CB SIZE & NO. OF POLES
  ET - ELECTRONIC TRIP
  TM - THERMAL MAGNETIC BREAKER
  MCP - MOTOR CIRCUIT PROTECTOR
  SE - SERVICE ENTRANCE
  GFI - GROUND FAULT INTERRUPTER
- FUSE
- FUSED DISCONNECT SWITCH
- PLUG-IN CONNECTION
- RTM — RUN TIME METER
- OC — MOTOR OPERATION COUNTER
- SSRVS — SSRVS - SOLID STATE REDUCED VOLTAGE STARTER
- VARIABLE FREQUENCY DRIVE
- MOTOR STARTER
- A B C D — MOTOR STARTER W/ OPERATOR DEVICES
  A - HAND-OFF-AUTO
  B - OPERATIONAL COUNTER
  C - RUN TIME METER
  D - RUN LIGHT
  E - FAIL LIGHT
  F - EMERGENCY STOP
- K — KIRK KEY INTERLOCK
- POWER TRANSFORMER
- CONTROL POWER TRANSFORMER
- TRANSFORMER
- CURRENT TRANSFORMER
- VOLTAGE TRANSFORMER
- CONTACTOR
- CAPACITOR
- ENGINE GENERATOR
- GENERATOR CONNECTION RECEPTACLE
- S N — SOLID NEUTRAL
- TB — TERMINAL BLOCK
- FUSE — SURGE PROTECTION DEVICE
- SPD — SURGE PROTECTION DEVICE (ALTERNATIVE)

GROUNDING SYSTEM SYMBOLS

- GROUND
- METAL PIPE GROUND
- CONNECTION POINT, EXOTHERMIC WELD. CADWELD OR APPROVED EQUAL.
- GROUND ROD SIZED PER N.E.C. USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD.
- PIGTAIL, BARE COPPER, LENGTH AS REQUIRED, 8' MINIMUM.
- CONNECTION POINT, MECHANICAL, COMPRESSION TYPE.

ELECTRICAL SITE PLAN SYMBOLS

- UTILITY POLE AND GUY WIRE
- HH — MANHOLE OR HANDHOLE
- P — BURIED POWER VAULT OR MANHOLE
- T — TELEPHONE VAULT OR PEDESTAL
- F — FIBER OPTICS VAULT OR PEDESTAL
- LUMINAIRE
- PAD-MOUNT TRANSFORMER

PANELBOARDS, SWITCHES, AND EQUIPMENT

- SERVICE ENTRANCE, SWITCHGEAR, MOTOR CONTROL CENTER, OR PANELBOARD
- SURFACE MOUNTED PANELBOARD
- FLUSHED MOUNTED PANELBOARD
- NXX — FIELD CONTROL STATION WITH NEMA REQUIREMENTS.
  N1 - NEMA 1
  N3R - NEMA 3R
  N4 - NEMA 4
  N4SS - NEMA 4 STAINLESS STEEL
  N4F - NEMA 4 FIBERGLASS
  N6 - NEMA 6
  N12 - NEMA 12 GASKETED
- EQUIPMENT MOUNTING STAND
- T — HEATER, WATTAGE NOTED
- EQUIPMENT CONNECTION
- M — SINGLE PHASE MOTOR. HORSEPOWER AS NOTED
- HP — THREE PHASE MOTOR. HORSEPOWER AS NOTED
- HP — SINGLE PHASE MOTOR. HORSEPOWER AS NOTED
- ELECTRICAL PLUG
- DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- COMBINATION MOTOR STARTER AND DISCONNECT SWITCH

RECEPTACLES AND JUNCTION BOX SYMBOLS

- J — CEILING JUNCTION BOX
- J — WALL JUNCTION BOX
- J — FLOOR JUNCTION BOX
- DUPLEX WALL RECEPTACLE , 120V
  WP = WEATHERPROOF
  G = GROUNDED
  IG = ISOLATED GROUND
  GFI = GROUND FAULT INTERRUPTER
- DOUBLE DUPLEX
- SINGLE RECEPTACLE, 120V
- SINGLE RECEPTACLE, 208V
- DUPLEX FLOOR RECEPTACLE, 120V
- SPECIAL PURPOSE WALL RECEPTACLE, RATING AS NOTED
- CP — CLOCK
- TV — TELEVISION
- TELEPHONE
- TELEPHONE/DATA WITH CABLE
- TELEPHONE/DATA WITHOUT CABLE

SWITCH OUTLETS

- S $ — STANDARD SWITCH, 120VAC, 20 AMP
- S 3 $ 3WAY — 3-WAY SWITCH, 120VAC, 20 AMP
- S HOA $ HOA — 3-POSITION SWITCH, 120VAC, 20 AMP, LABEL SWITCH POSITION HAND-OFF-MOTION OR PHOTO

- S DEE — SINGLE-POLE
- S 2 — DOUBLE-POLE
- S 3 — THREE WAY
- S 4 — FOUR WAY
- S D — DIMMER
- S P — PILOT-LIGHTED
- S K — KEY-OPERATED
- S LV — LOW VOLTAGE
- S M — MASTER
- PUSHBUTTON

LIGHTING FIXTURES/DEVICES

- FLUORESCENT FIXTURE
- WALL/CEILING MOUNTED FIXTURE
- EMERGENCY LIGHT WITH SELF CONTAINED BATTERY
- SURFACE OR PENDANT MOUNTED FIXTURE
- RECESSED FIXTURE
- MD — MOTION DETECTOR
- PC — PHOTO CONTROL CELL

FIRE SYSTEM SYMBOLS

- H — HEAT DETECTOR
- S — SMOKE DETECTOR
- D — FIRE ALARM DISPATCH STROBE ALARM
- A — FIRE ALARM AUDIBLE/VISUAL ALARM
- F — FIRE ALARM MANUAL PULL STATION

ADDITIONAL SYMBOLS

- S — SOUND SYSTEM SPEAKER
- V — SOUND SYSTEM VOLUME CONTROL
- B — DOORBELL

VALVE SYMBOLS

- PILOT VALVE SOLENOID
- VALVE
- CHECK VALVE
- CONTROL VALVE

PID FORMAT

SUPERSCRIPT ### — X=MEASURED OR INITIATING VARIABLE; Y=READOUT OR FUNCTION; Z=MODIFIER; ABC=LOOP NUMBER

XYZ ABC — INSTRUMENT BUBBLE

ISA STANDARDS FOR P&ID

	1st LETTER (MEASURED OR INITIATING VARIABLE)	2nd LETTER (READOUT OR FUNCTION)	3rd LETTER (MODIFIER)
A	ANALYSIS	ALARM	
B	BURNER (BATTERY)		
C	COMMUNICATION	CONTROL	(BACK)
D	DENSITY	(DELAY)	CLOSED
E	VOLTAGE		
F	FLOW		FAIL (FLOW)
G	GAS		GREEN BULB
H	HAND	MANUAL	HIGH
	CURRENT (INTRUSION)	INDICATE	
J	POWER (EQUIPMENT)		
K	TIME	CONTROL STATION	
L	LEVEL	LIGHT	LOW
M	MOTION		MIDDLE
N	USERS CHOICE		
O	USERS CHOICE		OPEN
P	PRESSURE	(PUMP)	(PRESSURE)
Q	QUANTITY (EVENT)	TOTALIZE	
R	RADIATION (REQ'D)	RECORD	RED BULB
S	SPEED (SMOKE)	SWITCH	SOLENOID
T	TEMPERATURE	TRANSMITTER	(TRANSMITTER)
U	MULTI VARIABLE	MULTI FUNCTION	
V	VISCOSITY (pH)	VALVE	
W	WEIGHT		
X	UNCLASSIFIED	RELAY (TRANSDUCER)	
Y	USERS CHOICE		
Z	POSITION		

ABBREVIATIONS

SPDT - SINGLE POLE, DOUBLE THROW
SPST - SINGLE POLE, SINGLE THROW
DPST - DOUBLE POLE, SINGLE THROW
WP - WEATHER-PROOF
GFI - GROUND FAULT INTERRUPT
P - POWER
C - CONTROL
J - INSTRUMENTATION
PC - POWER & CONTROL
CJ - CONTROL & INSTRUMENTATION
CKT. - CIRCUIT
C.O. - CONDUIT ONLY
N.L. - NIGHT LIGHT
AL. - ALUMINUM
CU. - COPPER
SST - STAINLESS STEEL

HOA	HAND-OFF-AUTO SWITCH
RTM	RUN TIME METER
OC	OPERATION COUNTER
MRIL	MOTOR RUN INDICATION LIGHT
SFIL	SEAL FAIL INDICATION LIGHT
SFTR	SEAL FAIL TRIP RESET
OTIL	OVER TEMPERATURE INDICATION LIGHT
MOIL	MOTOR OVERLOAD INDICATION LIGHT

INDICATE TYPE BY LETTER	INSTRUMENT METER
V, AH	A - AMMETER VAR - VARMETER AH - AMPERE-HOUR VARH - VARHOUR METER PF - POWER FACTOR W - WATTMETER V - VOLTMETER WH - WATTHOUR METER VA - VOLT AMMETER

RACEWAY LEGEND

SITE PLANE LEGEND

- P — PROPOSED POWER
- TEL — PROPOSED TELEPHONE
- TELM — PROPOSED INSTRUMENTATION
- FO — PROPOSED FIBER OPTICS
- G — PROPOSED GROUNDING
- HOME RUN TO PANELBOARD OR AS INDICATED
- CONDUIT RUN, BROKEN AND CONTINUED SAME SHEET OR AS NOTED
- FLEXIBLE CONDUIT
- CONDUIT RUN. HATCH MARKS INDICATE NUMBER OF CONDUCTORS
- ½" GRC, 2-#12 — CALLOUT INDICATING CONDUIT SIZE, NUMBER AND SIZE OF WIRE.
- XXX — CALLOUT INDICATING CONDUIT PER SCHEDULE
- CONDUIT BENT UP OR TOWARD
- CONDUIT BENT DOWN OR AWAY
- CAPPED CONDUIT

ONE-LINE DIAGRAM INFORMATION

- EXISTING EQUIPMENT AND CONDUIT
- PROPOSED EQUIPMENT AND CONDUIT
- CONDUIT, WIRING OR EQUIPMENT TO BE REMOVED

LADDER LOGIC SYMBOL LEGEND

INDICATOR LIGHT	INDICATOR LIGHT A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE
LIMITSWITCH	LIMIT SWITCH, NORMALLY OPEN
LIMITSWITCH	LIMIT SWITCH, NORMALLY CLOSED
LABEL	TIME DELAY CONTACT, NORMALLY OPEN, TIME TO CLOSE
LABEL	TIME DELAY CONTACT, NORMALLY CLOSED, TIME TO OPEN
LABEL	TIME DELAY CONTACT, NORMALLY OPEN, TIME TO OPEN
LABEL	TIME DELAY CONTACT, NORMALLY CLOSED, TIME TO CLOSE
NAME / NAME	RELAY CONTACT, INSTANTANEOUS CHANGE
PRESSURE	PRESSURE SWITCH, NORMALLY OPEN
PRESSURE	PRESSURE SWITCH, NORMALLY CLOSED
LADDER LOGIC LINETYPES	COMPONENT INSTALLED INSIDE ENCLOSURE COMPONENT INSTALLED ON FRONT OF ENCLOSURE FIELD CONNECTED COMPONENT

RELAY XYX 123	RELAY TR - TIMED RELAY CR - CONTROL RELAY
LABEL	FLOAT SWITCH, NORMALLY OPEN
LABEL	FLOAT SWITCH, NORMALLY CLOSED
PUSHBUTTON	PUSHBUTTON, NORMALLY CLOSED
PUSHBUTTON	PUSHBUTTON, NORMALLY OPEN
THERMOSTAT	THERMO SWITCH, NORMALLY OPEN
THERMOSTAT	THERMO SWITCH, NORMALLY CLOSED
FLOWSWITCH	FLOWSWITCH, NORMALLY OPEN
FLOWSWITCH	FLOWSWITCH, NORMALLY CLOSED
	2 POLE SWITCH
	3 POLE SWITCH

P&ID BUBBLE IDENTIFICATION CHART

EXISTING	FUNCTION
	INSTRUMENT IDENTIFICATION BUBBLE
	FIELD MOUNTED DEVICE OR INSTRUMENT
	FRONT PANEL MOUNTED INSTRUMENT OR DEVICE (LOCAL PANEL)
	BACK PANEL MOUNTED INSTRUMENT OR DEVICE (LOCAL PANEL)
	FRONT PANEL MOUNTED INSTRUMENT OR DEVICE (LAB ROOM PANEL)
	OPERATOR INTERFACE DISPLAY (LOCAL PANEL)
	OPERATOR INTERFACE DISPLAY (LAB ROOM PANEL)

GENERAL NOTES

1. THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS PAGE WILL APPEAR IN THIS SET OF PLANS.

2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE INSTALLATION OF ALL EQUIPMENT SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR REQUIREMENTS.

3. NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS, LACK OF INFORMATION OR ANY OTHER REASON. NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN REVIEWED BY THE ENGINEER.

RH2

CAD NO. slls-d-e01

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CLAYTON C. ANDERSON — STATE OF WASHINGTON — 54350 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/02/2024

PROJECT ENGINEER

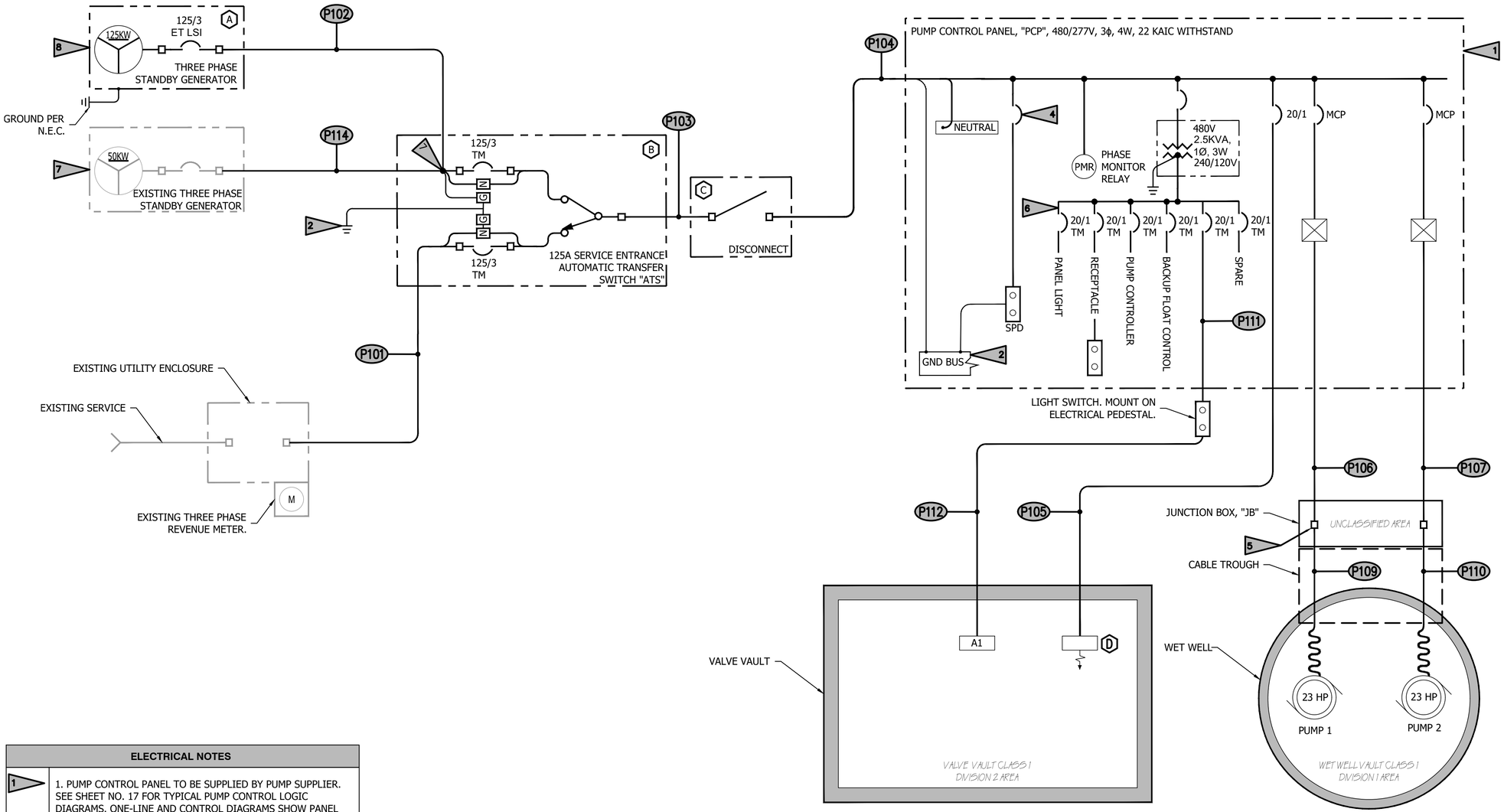
WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

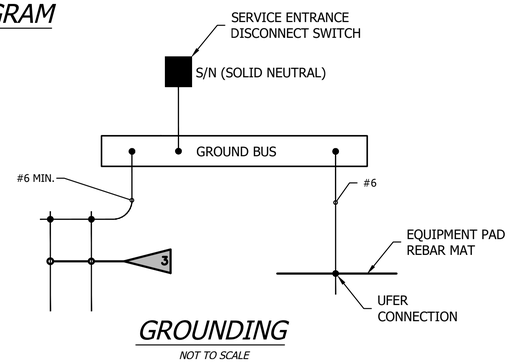
ELECTRICAL LEGEND

SHEET 14 OF 20



ONE-LINE DIAGRAM

NOT TO SCALE



GROUNDING

NOT TO SCALE

ELECTRICAL NOTES	
1	1. PUMP CONTROL PANEL TO BE SUPPLIED BY PUMP SUPPLIER. SEE SHEET NO. 17 FOR TYPICAL PUMP CONTROL LOGIC DIAGRAMS. ONE-LINE AND CONTROL DIAGRAMS SHOW PANEL OPTIONS THAT SHALL BE PROVIDED WITH PANEL.
2	2. SEE GROUNDING DETAIL, THIS SHEET.
3	3. GROUND ROD PER N.E.C. (TYPICAL). SEE SHEET NO. 19 FOR DETAIL.
4	4. FUSING OR CIRCUIT BREAKER PER SPD MANUFACTURER'S RECOMMENDATION. USE SHORTEST CONDUCTORS POSSIBLE TO SPD.
5	5. TERMINAL BLOCKS (TYPICAL). SEE SHEET NO. 19 FOR DETAIL.
6	6. PROVIDE LED MOTION SENSOR PANEL LIGHT. MOUNT TO INSIDE CEILING.
7	7. EXISTING GENERATOR SHALL BE USED UNTIL PROPOSED GENERATOR ARRIVES. EXTEND EXISTING CONDUITS TO PROPOSED "ATS".
	8. SEE ELECTRICAL SITE PLAN FOR OTHER CONTROL DEVICES TO BE INSTALLED IN WET WELL.
XX	9. SEE SHEET NO. 20 FOR CONDUIT AND CONDUCTOR SCHEDULE.
X	10. SEE SHEET NO. 20 FOR ELECTRICAL EQUIPMENT SCHEDULE.
A#	11. SEE SHEET NO. 20 FOR LIGHTING FIXTURE SCHEDULE.

PUMP STATION LOAD CALCULATIONS		
PUMP 1 (23 HP)	31.3A X 1.25 =	39.125 AMPS
PUMP 2 (23 HP)	31.3A X 1.00 =	31.3 AMPS
HEATER (1800 W)	6.5A X 1.00 =	6.50 AMPS
MISCELLANEOUS (2.25 KVA)	5.2A X 1.00 =	5.2 AMPS
TOTAL		82.125 AMPS

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CLAYTON C. ANDERSON
STATE OF WASHINGTON
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SIGNED: 01/02/2024
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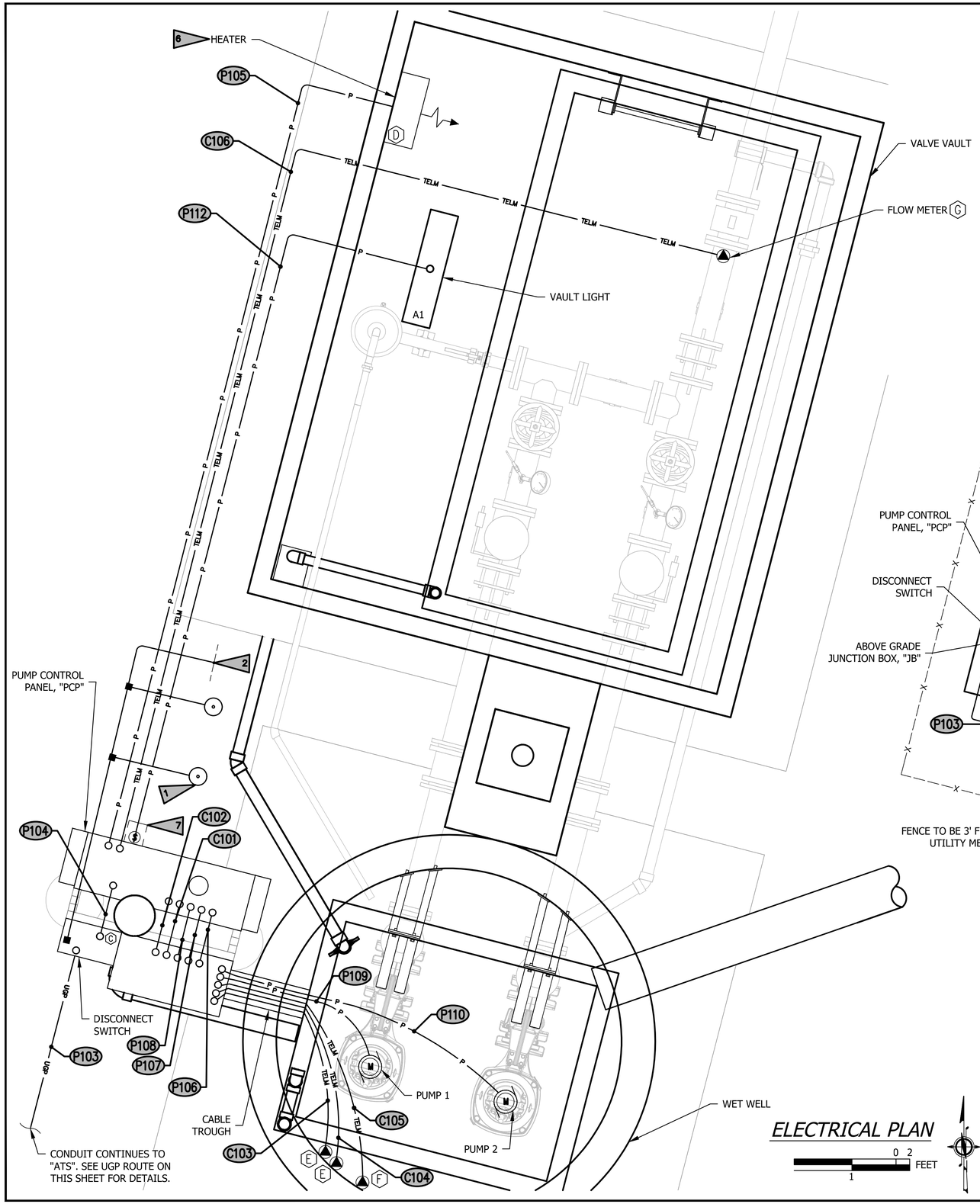
SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

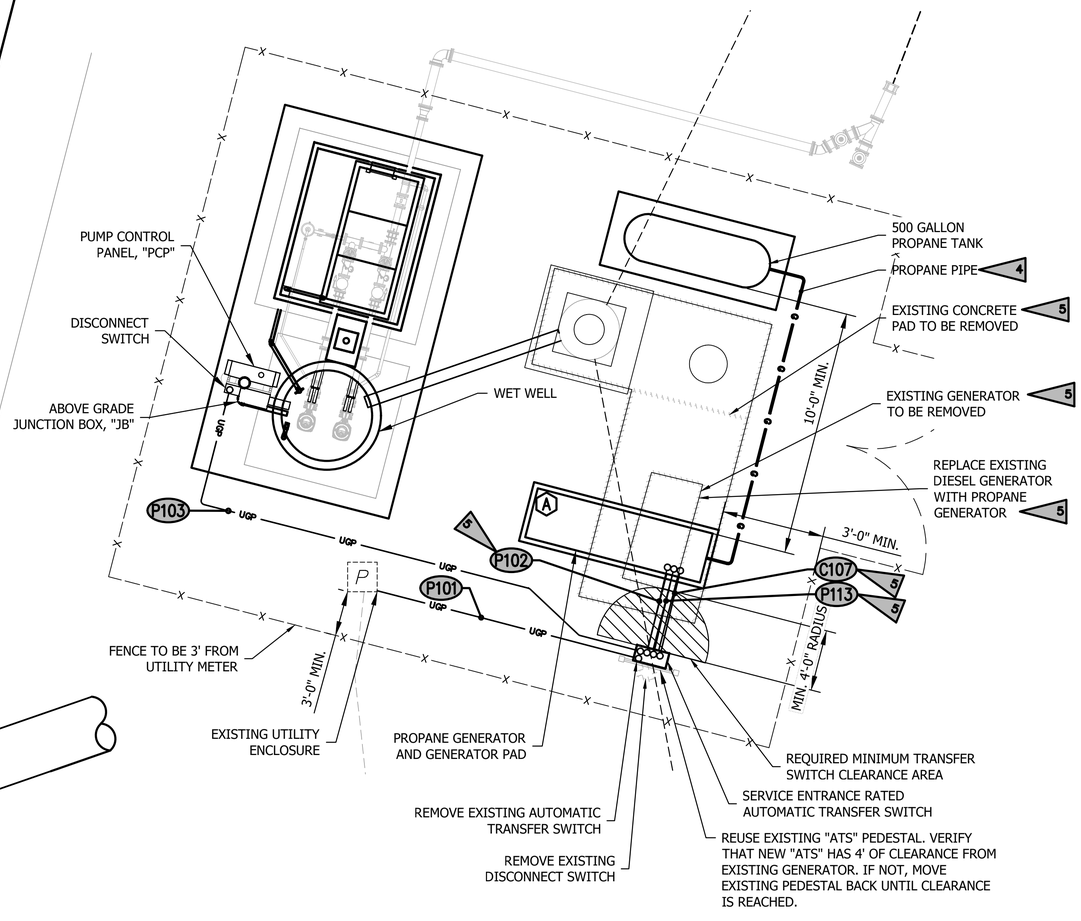
ONE-LINE DIAGRAM

SHEET 15 OF 20



ELECTRICAL NOTES

1	1. GROUND ROD PER N.E.C. (TYPICAL), TYP OF 2. USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD. SEE SHEET NO. 19 FOR ADDITIONAL DETAIL. LOCATE GROUND RODS INSIDE CONCRETE SLAB AND 12" MINIMUM FROM EDGE OF CONCRETE SLAB.
2	2. CONNECTION TO REINFORCEMENT GRID (TYPICAL OF 2 LOCATIONS). SEE SHEET NO. 19 FOR ADDITIONAL DETAIL.
3	3. CONTRACTOR SHALL PROVIDE MINIMUM 4" OF SEPARATION BETWEEN POWER AND CONTROL CABLES.
4	4. PROPANE PIPE SHALL BE 1 1/2" SCHEDULE 40 IRON PIPE. INSTALL PROPANE PIPE ONCE PROPOSED GENERATOR ARRIVES. MINIMUM PIPE BURY DEPTH OF 24-INCHES. PLACE MARKING TAPE MARKED "PROPANE GAS" 12" ABOVE PIPE. PIPE INSTALLATION TO ADHERE TO CHAPTER 4 OF THE INTERNATIONAL FUEL GAS CODE.
5	5. TASK SHOULD ONLY BE COMPLETED ONCE PROPOSED GENERATOR HAS ARRIVED AND IS READY TO BE INSTALLED.
6	6. MOUNT HEATER ON WALL AND AS CLOSE TO CEILING AS ALLOWED PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
7	7. LIGHT SWITCH SHALL BE MOUNTED ON ELECTRICAL PEDESTAL.
XX	8. SEE SHEET NO. 20 FOR CONDUIT AND CONDUCTOR SCHEDULES.
X	9. SEE SHEET NO. 20 FOR ELECTRICAL EQUIPMENT SCHEDULE.
A#	10. SEE SHEET NO. 20 FOR LIGHTING FIXTURE SCHEDULE.



ELECTRICAL PLAN

0 2 FEET
1

UGP ROUTE

10 FEET
5

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SEWER LIFT STATION REPLACEMENT

ELECTRICAL SITE PLAN

SHEET 16 OF 20

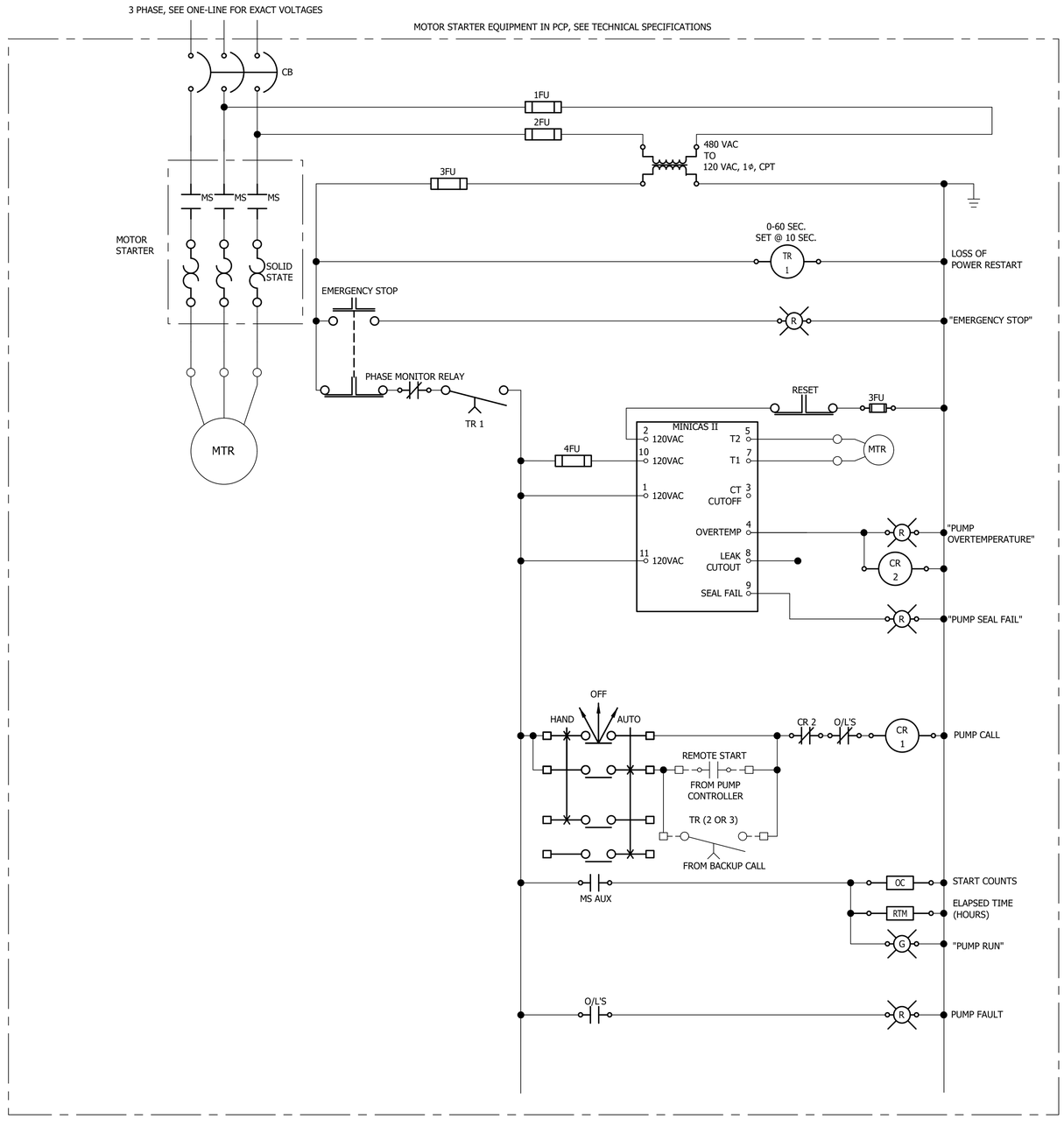

DIAGRAM 1: PUMP 1, PUMP 2

NO SCALE

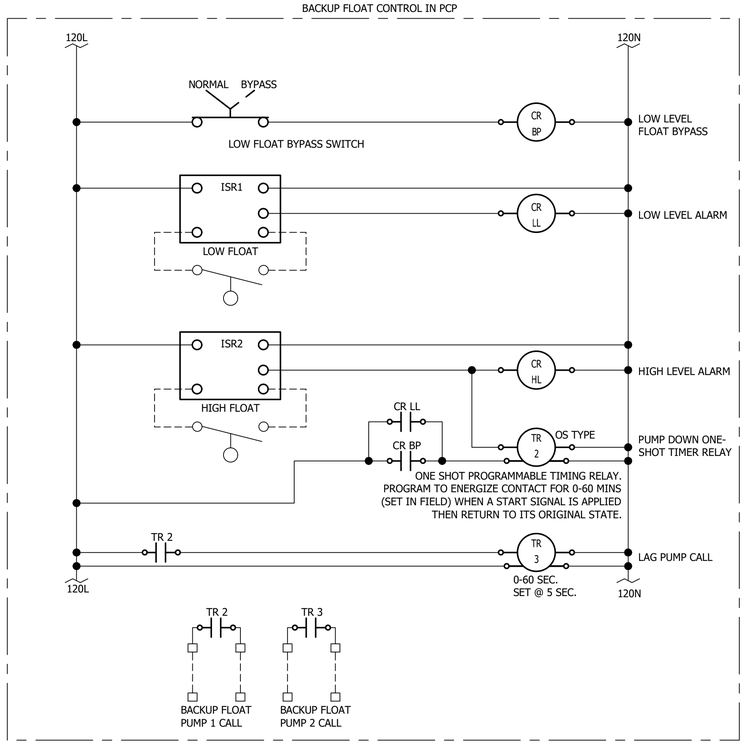

DIAGRAM 2: BACKUP FLOAT CONTROL LOGIC

NO SCALE

ELECTRICAL NOTES	
	1. CONTROL LOGIC DIAGRAMS 1 AND 2 TYPICAL STANDARD BACKUP FLOAT AND PUMP STARTER DIAGRAMS. FINAL LOGIC SHALL BE PER PANEL MANUFACTURER STANDARDS INCLUDING ALL OPTIONS SHOWN (LIGHTS, SWITCHES, RESETS, LOCKOUTS, ETC.). 2. CONTROL PANEL SHALL HAVE A COMMON ALARM CIRCUIT THAT ACTIVATES STROBE LIGHT ON PANEL EXTERIOR. ALL PUMP FAIL, CONTROLLER FAIL, AND BACKUP FLOAT CALLS SHALL ACTIVATE STROBE.

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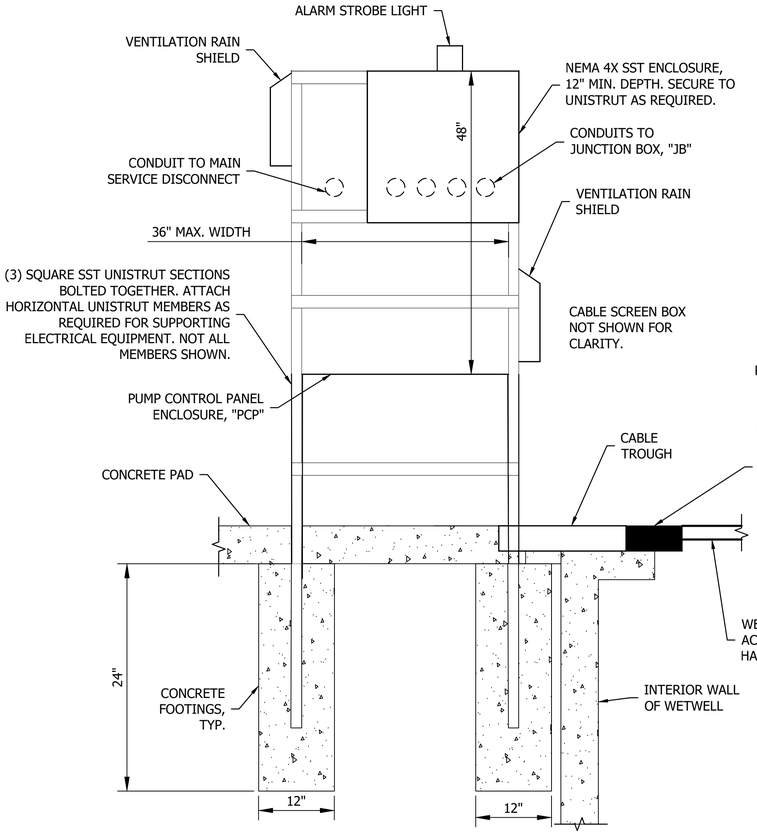
SUN LAKES STATE PARK

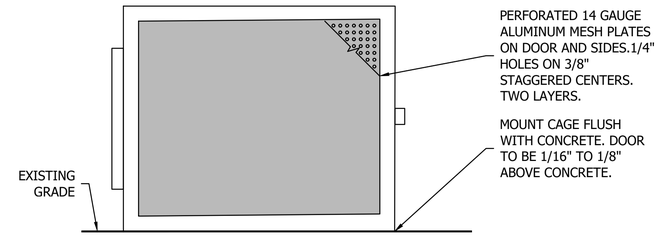
SEWER LIFT STATION REPLACEMENT

CONTROL LOGIC DIAGRAM

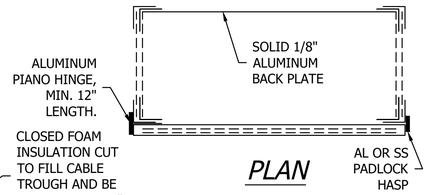
SHEET 17 OF 20



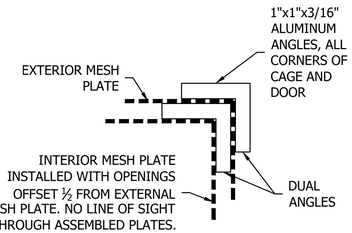
ELECTRICAL PEDESTAL, BACK ELEVATION



ELEVATION



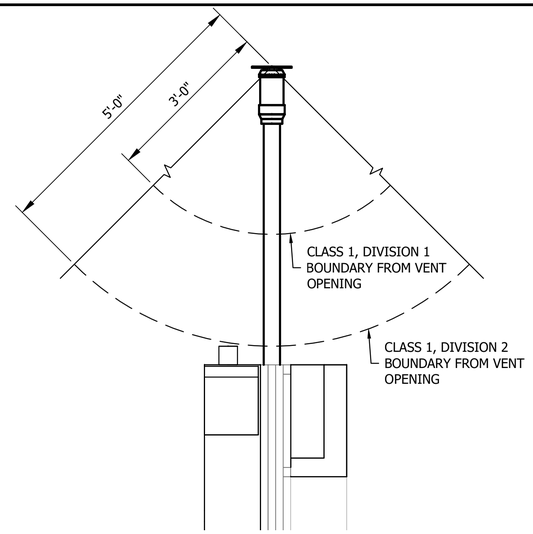
PLAN



CORNER AND SCREEN

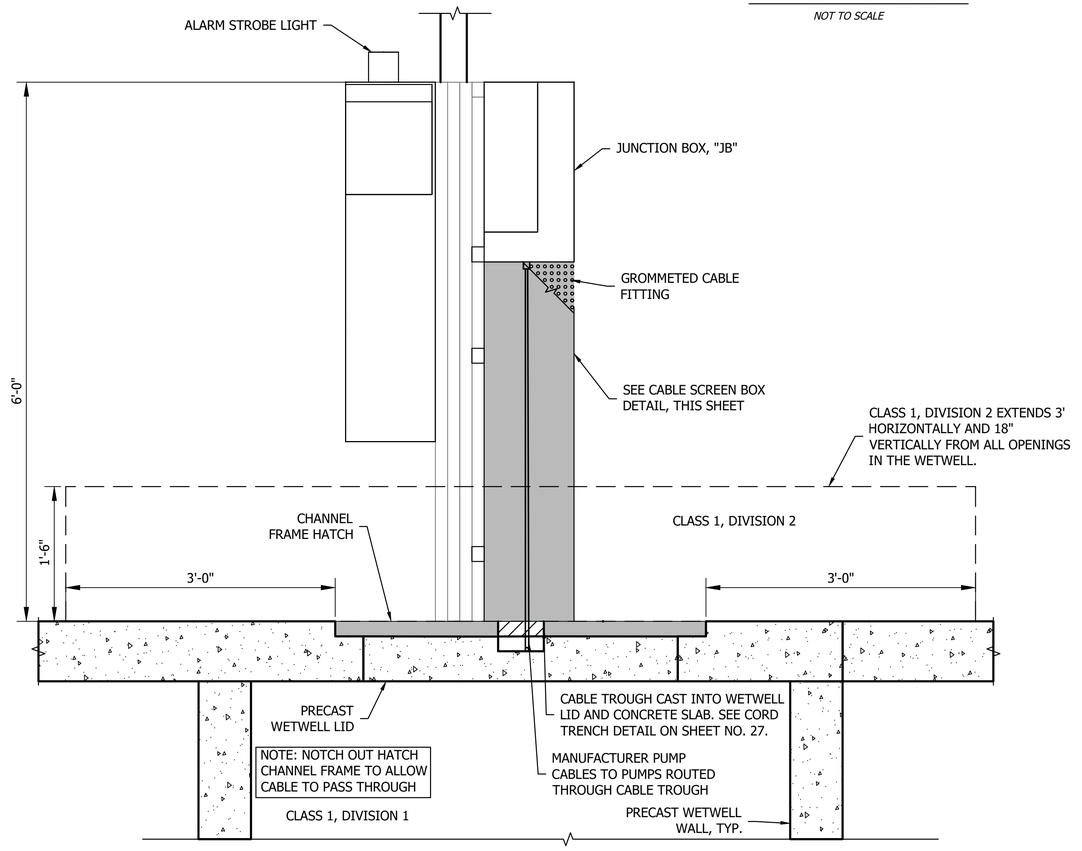
CABLE SCREEN BOX DETAILS

NOT TO SCALE



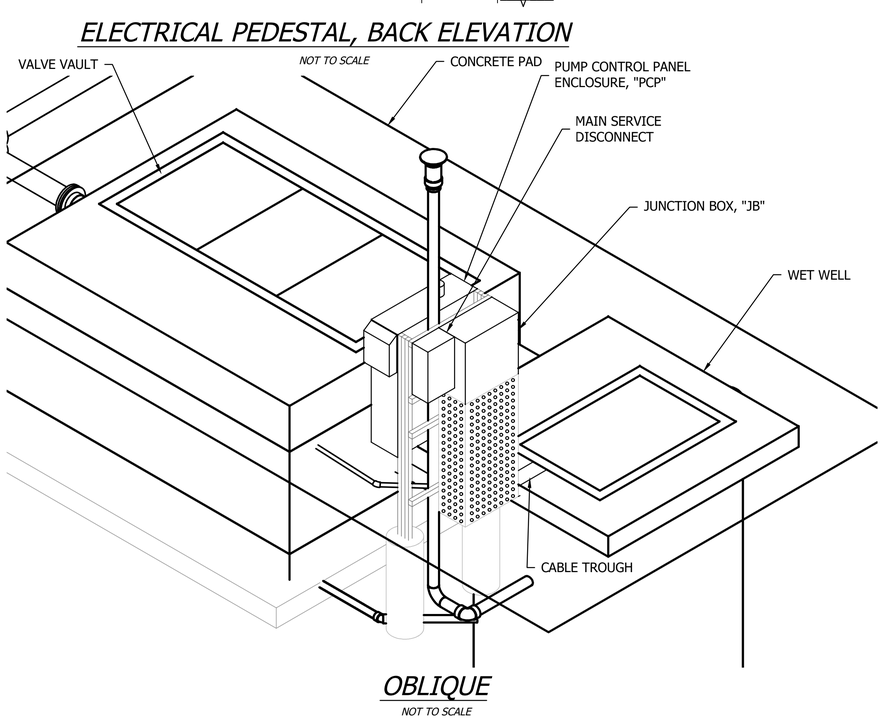
CLASSIFICATION BOUNDARIES AT VENT OPENING

NOT TO SCALE



ELECTRICAL PEDESTAL, SIDE ELEVATION

NOT TO SCALE



OBLIQUE

NOT TO SCALE

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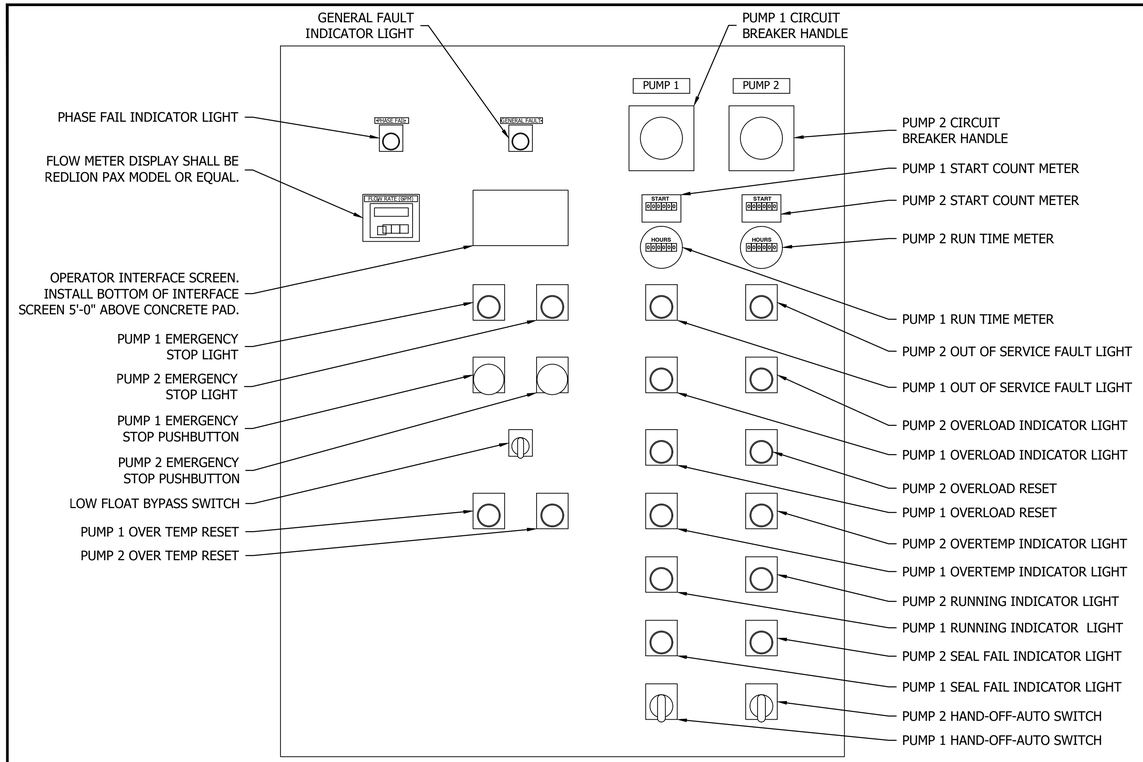
WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

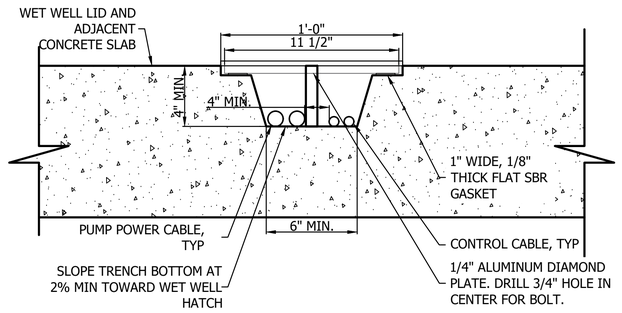
ENCLOSURE DETAILS

SHEET 18 OF 20



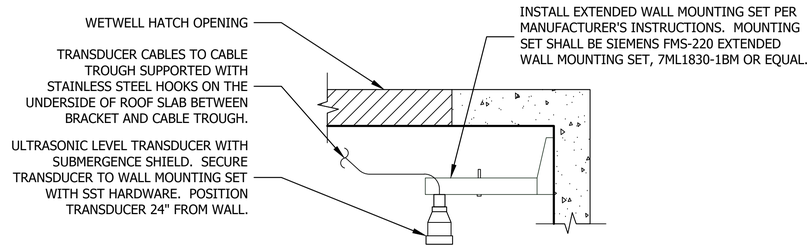
PUMP CONTROL PANEL INTERIOR SWING DOOR LAYOUT

NOT TO SCALE



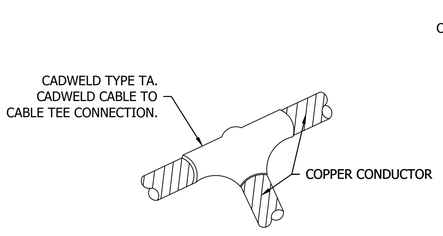
WETWELL CABLE TROUGH DETAIL

NOT TO SCALE



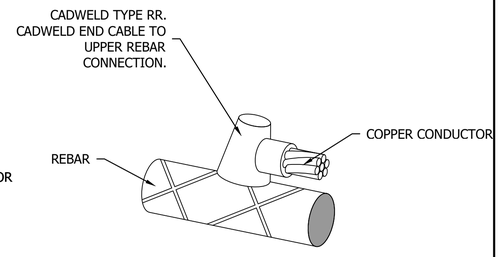
WETWELL LEVEL TRANSDUCER DETAIL

NOT TO SCALE



GROUND TEE DETAIL

NOT TO SCALE



GROUND REBAR DETAIL

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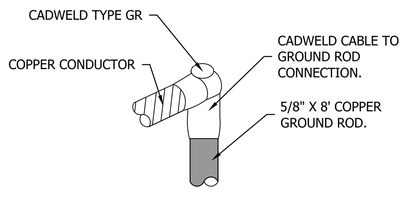

GROUND TEE DETAIL

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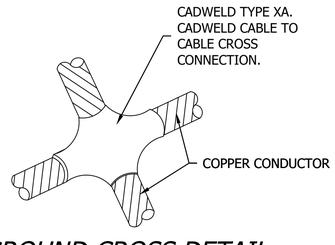

GROUND CROSS DETAIL

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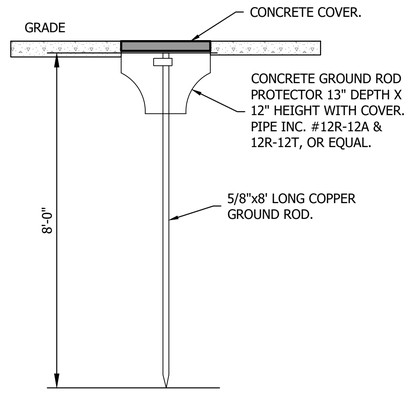
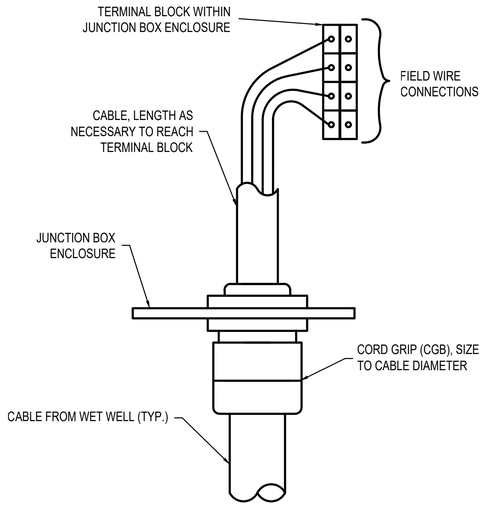


GROUND ROD DETAIL

NOT TO SCALE



CABLE TRANSITION DETAIL (TYPICAL)

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CLAYTON C. ANDERSON — STATE OF WASHINGTON — 54350 — REGISTERED PROFESSIONAL ENGINEER

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WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

ELECTRICAL DETAILS

SHEET 19 OF 20

POWER CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
P101	EXITING UTILITY ENCLOSURE	AUTOMATIC TRANSFER SWITCH, "ATS"	2"	(3) – #1, (1) – #1 NEUTRAL	
P102	STANDYBY GENERATOR	AUTOMATIC TRANSFER SWITCH, "ATS"	2"	(3) – #1, (1) – #1 NEUTRAL, (1) –#6 GND	INSTALLED ONCE NEW GENERATOR ARRIVES
P103	AUTOMATIC TRANSFER SWITCH, "ATS"	DISCONNECT SWITCH	2"	(3) – #1, (1) – #1 NEUTRAL, (1) –#6 GND	
P104	DISCONNECT SWITCH	PUMP CONTROL PANEL, "PCP"	2"	(3) – #1, (1) – #1 NEUTRAL, (1) –#6 GND	
P105	PUMP CONTROL PANEL, "PCP"	VALVE VAULT HEATER	3/4"	(2) – #12, (1) –#12 GND	
P106	PUMP CONTROL PANEL, "PCP"	JUNCTION BOX, "JB"	3/4"	(3) – #8, (1) –#10 GND	PUMP POWER
P107	PUMP CONTROL PANEL, "PCP"	JUNCTION BOX, "JB"	3/4"	(3) – #8, (1) –#10 GND	PUMP POWER
P108	PUMP CONTROL PANEL, "PCP"	JUNCTION BOX, "JB"	3/4"	(6) – #14, (1) –#14 GND	PUMP SEAL FAILURE/OVERTEMP ALARM
P109	JUNCTION BOX, "JB"	PUMP 1	–	MANUFACTURER CABLE	IN CABLE TRENCH
P110	JUNCTION BOX, "JB"	PUMP 2	–	MANUFACTURER CABLE	IN CABLE TRENCH
P111	PUMP CONTROL PANEL, "PCP"	VAULT LIGHT SWITCH	3/4"	(2) – #12, (1) –#12 GND	IN CABLE TRENCH
P112	VAULT LIGHT SWITCH	VAULT LIGHT	3/4"	(2) – #12, (1) –#12 GND	
P113	AUTOMATIC TRANSFER SWITCH, "ATS"	STANDYBY GENERATOR	3/4"	(2) – #12, (1) –#12 GND	GENERATOR BATTERY CHARGER. INSTALLED ONCE NEW GENERATOR ARRIVES
P114	EXISTING STANDYBY GENERATOR	AUTOMATIC TRANSFER SWITCH, "ATS"	N/A	(3) – #1, (1) – #1 NEUTRAL, (1) –#6 GND	EXTEND EXISTING CONDUIT TO NEW "ATS"

CONTROL CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
C101	PUMP CONTROL PANEL, "PCP"	JUNCTION BOX, "JB"	3/4"	(4) – #14, (1) – #14 GND	
C102	PUMP CONTROL PANEL, "PCP"	JUNCTION BOX, "JB"	3/4"	(1) SHIELDED TWISTED PAIR	
C103	JUNCTION BOX, "JB"	WET WELL HIGH LEVEL FLOAT	–	MANUFACTURER CABLE	IN CABLE TROUGH
C104	JUNCTION BOX, "JB"	WET WELL LOW LEVEL FLOAT	–	MANUFACTURER CABLE	IN CABLE TROUGH
C105	JUNCTION BOX, "JB"	WET WELL LEVEL TRANSDUCER	–	MANUFACTURER CABLE	IN CABLE TROUGH
C106	PUMP CONTROL PANEL, "PCP"	VALVE VAULT FLOW METER	1"	(4) – #14, (1) – #14 GND, (1) SHIELDED TWISTED PAIR	
C107	AUTOMATIC TRANSFER SWITCH, "ATS"	STANDYBY GENERATOR	3/4"	(2) – #14, (1) – #14 GND	GENERATOR CALL. INSTALLED ONCE NEW GENERATOR ARRIVES

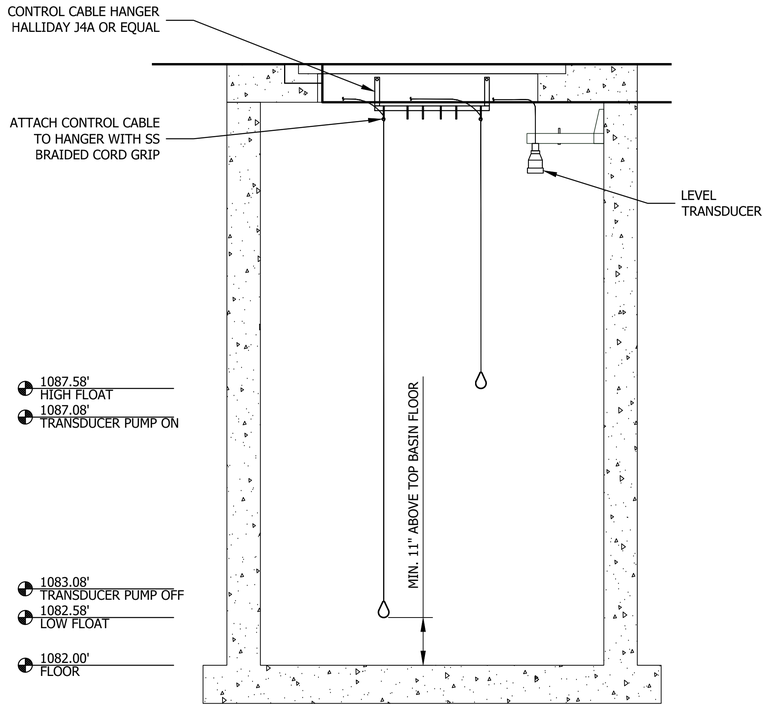
LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL NO.	LAMP QTY.*	LAMP CATALOG NO.
A1	LED LIGHT FIXTURE – 120VAC, 2' LONG, 47 WATT, 5000K COLOR TEMPERATURE, DIFFUSED OPAL UV-STABILIZED POLYCARBONATE VANDAL RESISTANT LENS, PLATINUM COLOR. CLASS 1, DIVISION 2 EXPLOSION PROOF HAZARDOUS LOCATION RATED.	FME LIGHTING OR EQUAL	TSWXP24 4LVCDP	1	47 WATT

ELECTRICAL EQUIPMENT AND INSTRUMENTATION SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
A	STANDBY GENERATOR	SEE SPECIFICATIONS	SEE SPECIFICATIONS
B	SERVICE ENTRANCE AUTOMATIC TRANSFER SWITCH, "ATS"	SEE SPECIFICATIONS	SEE SPECIFICATIONS
C	DISCONNECT, 480V, 200A, NEMA 3R, PAD–LOCKABLE	SQUARE D	HUJ364RB OR EQUAL
D	EXPLOSION–PROOF HEATER, 1 PHASE, 1800 WATT, 277V. WALL MOUNT HARDWARE, BUILT–IN THERMOSTAT	QMARK	ICG18071 OR EQUAL
E	WET WELL LEVEL FLOAT SWITCH	SEE SPECIFICATIONS	SEE SPECIFICATIONS
F	ULTRASONIC TRANSDUCER LEVEL TRANSMITTER	SEE SPECIFICATIONS	SEE SPECIFICATIONS
G	FLOW METER	SEE SPECIFICATIONS	SEE SPECIFICATIONS

TYPICAL NOTE FOR ALL WETWELLS
HIGH FLOAT AND PUMP ON LEVELS MAY BE ADJUSTED ONCE ACCURATE INVERT ELEVATIONS OF INCOMING PIPES HAVE BEEN ESTABLISHED. CONTRACTOR TO LEAVE 4' OF EXTRA CABLE FOR ADJUSTMENT.



FLOAT DETAIL
NOT TO SCALE

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WASHINGTON STATE PARKS AND RECREATION COMMISSION

SUN LAKES STATE PARK

SEWER LIFT STATION REPLACEMENT

ELECTRICAL SCHEDULES

SHEET 20 OF 20