CITY OF SOUTH DAYTONA
LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA, FLORIDA

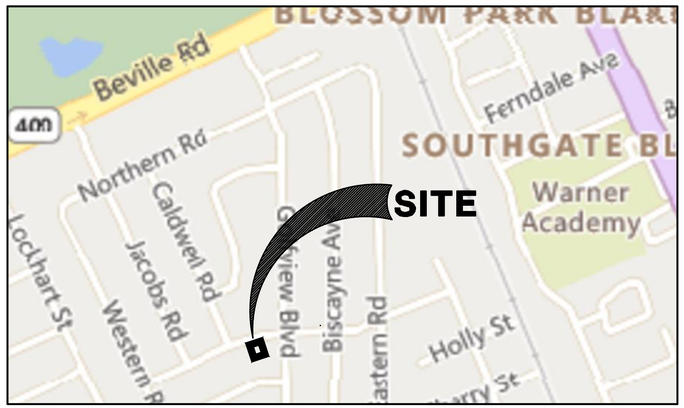
BID SET
BID # 24-B-003

GENERAL NOTES

1. THE CITY'S PUBLIC WORKS DEPARTMENT (386-322-3080) SHALL BE GIVEN A MINIMUM OF 48 HOURS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION.

2. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.

CITY COUNCIL
WILLIAM HALL - MAYOR
JAMES GILLIS, JR - CITY MANAGER
BRANDON YOUNG - COUNCILMAN, SEAT 1
DOUG QUARTIER - COUNCILMAN, SEAT 2
LISA O'NEAL - COUNCILWOMAN, SEAT 3
ERIC SANDER - COUNCILMAN, SEAT 4, VICE MAYOR



VICINITY MAP

PROJECT DESCRIPTION:
LIFT STATION MAINTENANCE AND WET WELL REPLACEMENT. CONSTRUCT NEW WET WELL WITH SUBMERSIBLE PUMPS, NEW ODOR CONTROL, AND A BACKUP GENERATOR

SHEET INDEX

GENERAL INFORMATION:

OWNER:
CITY OF SOUTH DAYTONA
CONTACT: JAMES L. GILLIS JR., CITY MANAGER
1770 SEAGRAVE
SOUTH DAYTONA 32119
386-322-3080
EMAIL: lgillis@southdaytona.org

ENGINEER/LANDSCAPE ARCHITECT:
PARKER MYNCHENBERG & ASSOCIATES, INC.
KEVIN LEE, P.E. #71501,
STEVEN R. BUSWELL, P.E. #53985, R.L.A. #6667011
CERTIFICATE OF AUTHORIZATION NUMBER: 00003910
1729 RIDGEWOOD AVENUE
HOLLY HILL, FLORIDA 32117
386-677-6891 FAX 386-677-2114
EMAILS: info@parkermynchenberg.com
klee@parkermynchenberg.com

ELECTRICAL ENGINEER:
JOHN M. PATTERSON P.E. #54181
ELECTRICAL CONSULTANT
1291 JOHN ANDERSON DRIVE
ORMOND BEACH, FL 32176
386-441-2382

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
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KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

COVER SHEET

1
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23-36
SCALE: NONE

Digitally signed by Kevin Lee
Date: 2025.05.01 10:01:32 -04'00'

SEAL

BOUNDARY AND TOPOGRAPHIC SURVEY

FOR

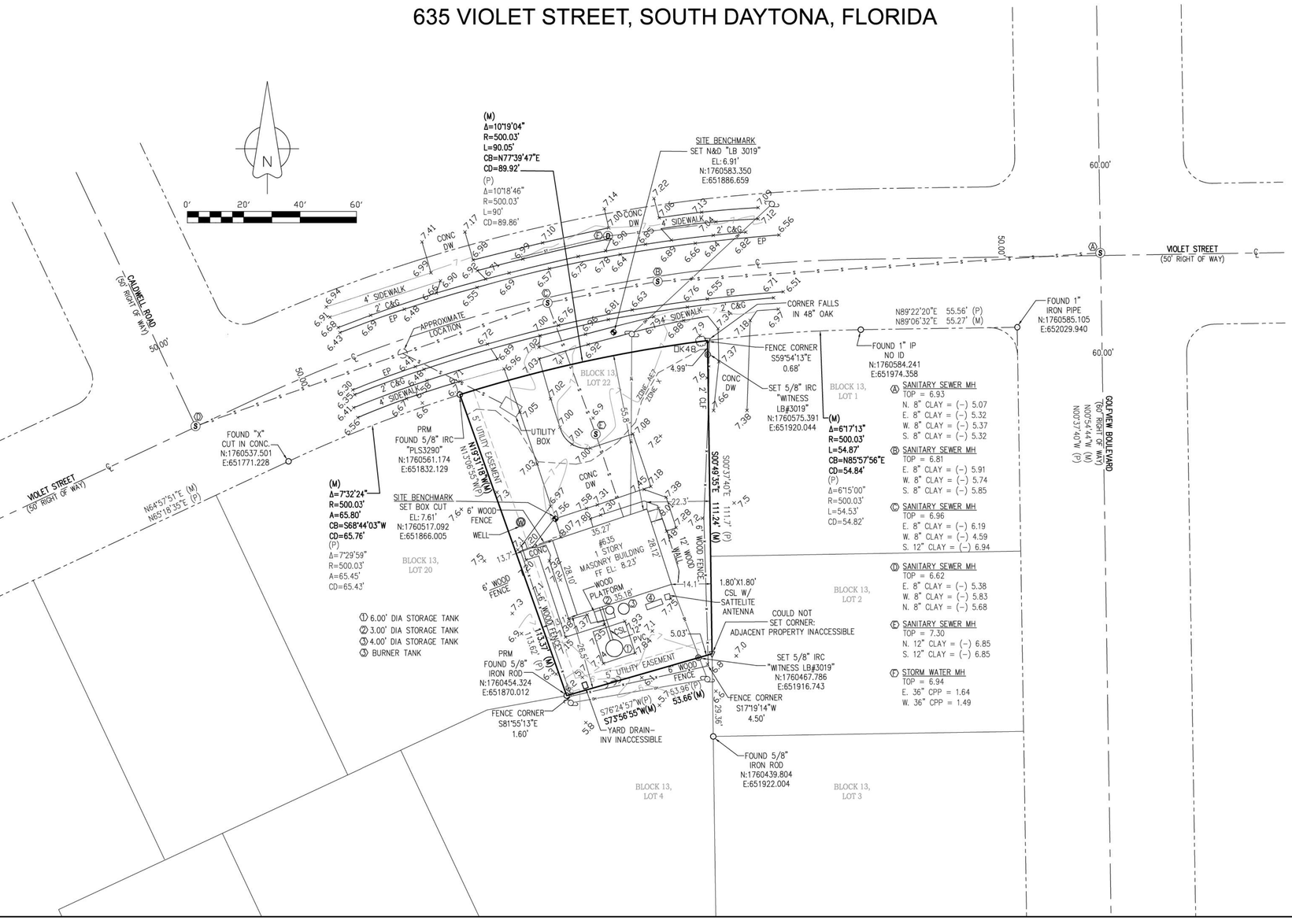
PARKER MYNCHENBERG & ASSOCIATES, INC.

A PORTION OF

SECTION 29 – TOWNSHIP 15 SOUTH – RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

LOCATION

635 VIOLET STREET, SOUTH DAYTONA, FLORIDA



NOTE:

THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 TO 2

SEE SHEET 1 OF 2 FOR:

LEGEND
ABBREVIATIONS
SURVEYORS NOTES
BOUNDARY DESCRIPTION

FILE: K:\23\23O726 CSD LIFT STA NO 5\23O726.DWG

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
LICENSED BUSINESS CERTIFICATION NUMBER 3019

No.	Date	Revision	Approved
1			
2			
3			
4			
5			

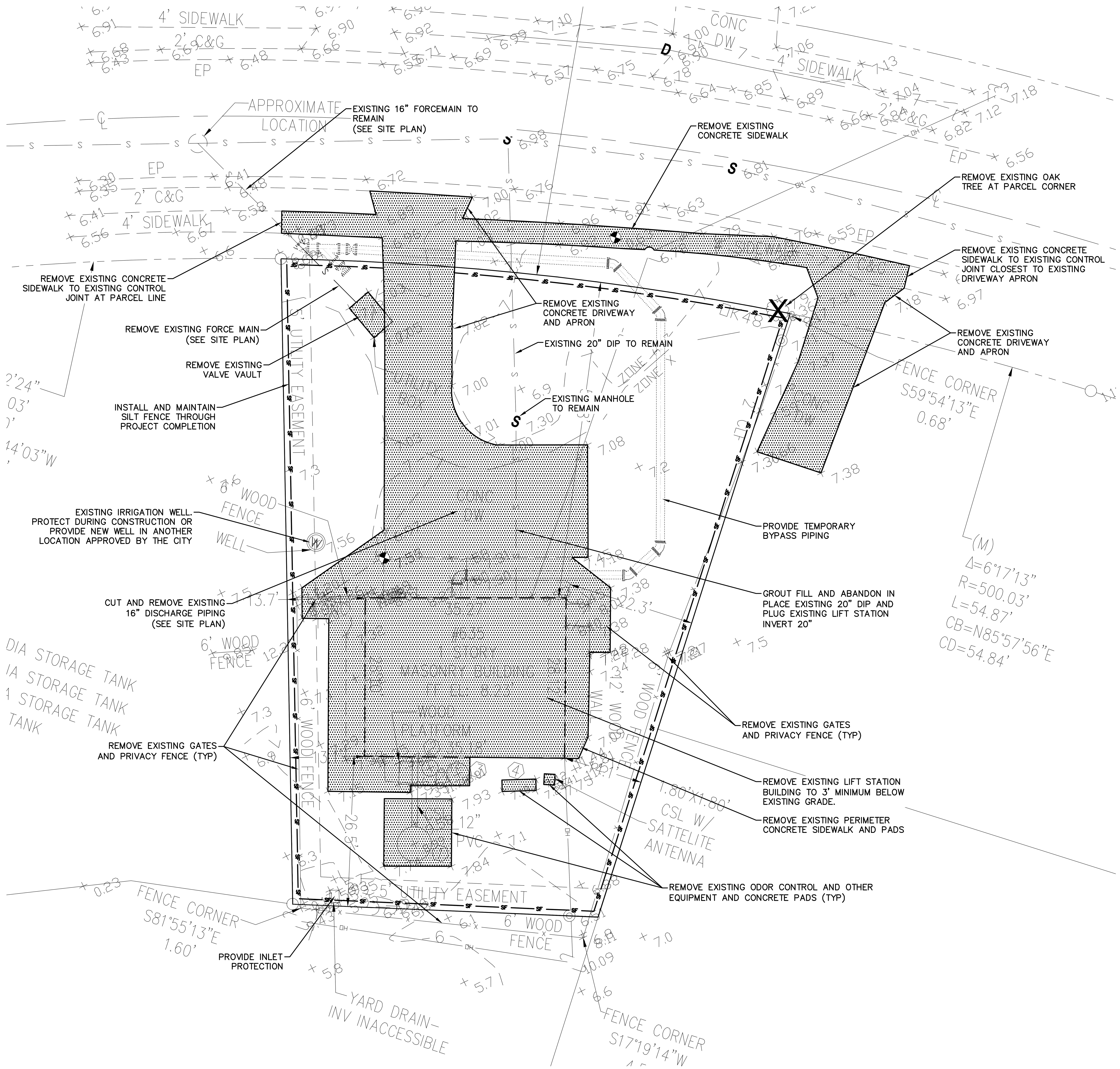
FIELD DATE: AUG. 25, 2023
PARTY CHIEF: S. STRICKLAND
DRAWN BY: D. GENTRY
CHECKED BY: J. HATTENDORF
FIELD BOOK:1425
PAGE (S):50-51

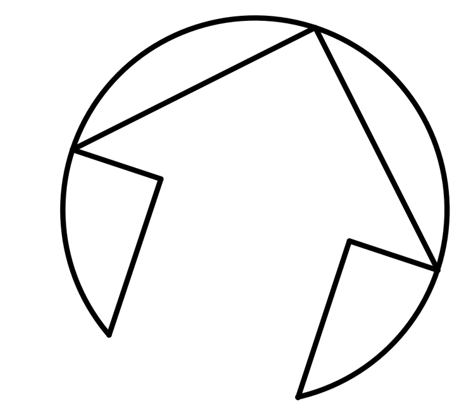
BOUNDARY AND TOPOGRAPHIC SURVEY

ADDRESS:635 VIOLET STREET
SOUTH DAYTONA, FLORIDA

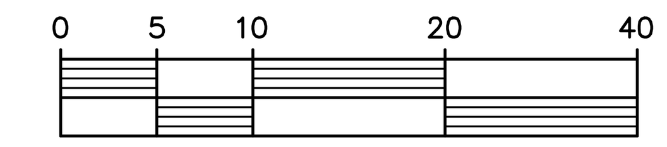
CLIENT: PARKER MYNCHENBERG & ASSOCIATES, INC

PROJECT: 01078
JOB: 23-0726
SCALE: 1" = 20'
SHEET: 2 OF 2





GRAPHIC SCALE



SCALE: 1" = 10'

DEMOLITION NOTES:

1. BID PROPOSALS FOR DEMOLITION WILL BE ACCEPTED AND APPROVED ONLY FOLLOWING A SITE VISIT AND DETAILED INSPECTION
2. DEMOLITION OF EXISTING LIFT STATION TO BE PERFORMED ONLY UPON CONSTRUCTION, START-UP AND DEMONSTRATION OF PROPOSED LIFT STATION.
3. REMOVE ALL EXISTING PUMPS, PIPING, ELECTRICAL GEAR AND ALL OTHER EQUIPMENT FROM EXISTING LIFT STATION BUILDING.
4. REMOVE EXISTING LIFT STATION BUILDING TO 3' MINIMUM BELOW EXISTING GRADE.
5. BACK FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND CLEAN COMPACTED FILL
6. UPON COMPLETION OF PROJECT, RESTORE ALL DISTURBED AREAS

= TO BE REMOVED

OK48 X EXISTING TREE TO BE REMOVED

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #32645 R.L.A. #0001553
STEVE BUSWELL P.E. #53985 R.L.A. #LA6667001
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

DEMOLITION PLAN

2
SHEET NO.

DRAWN BY: ADK

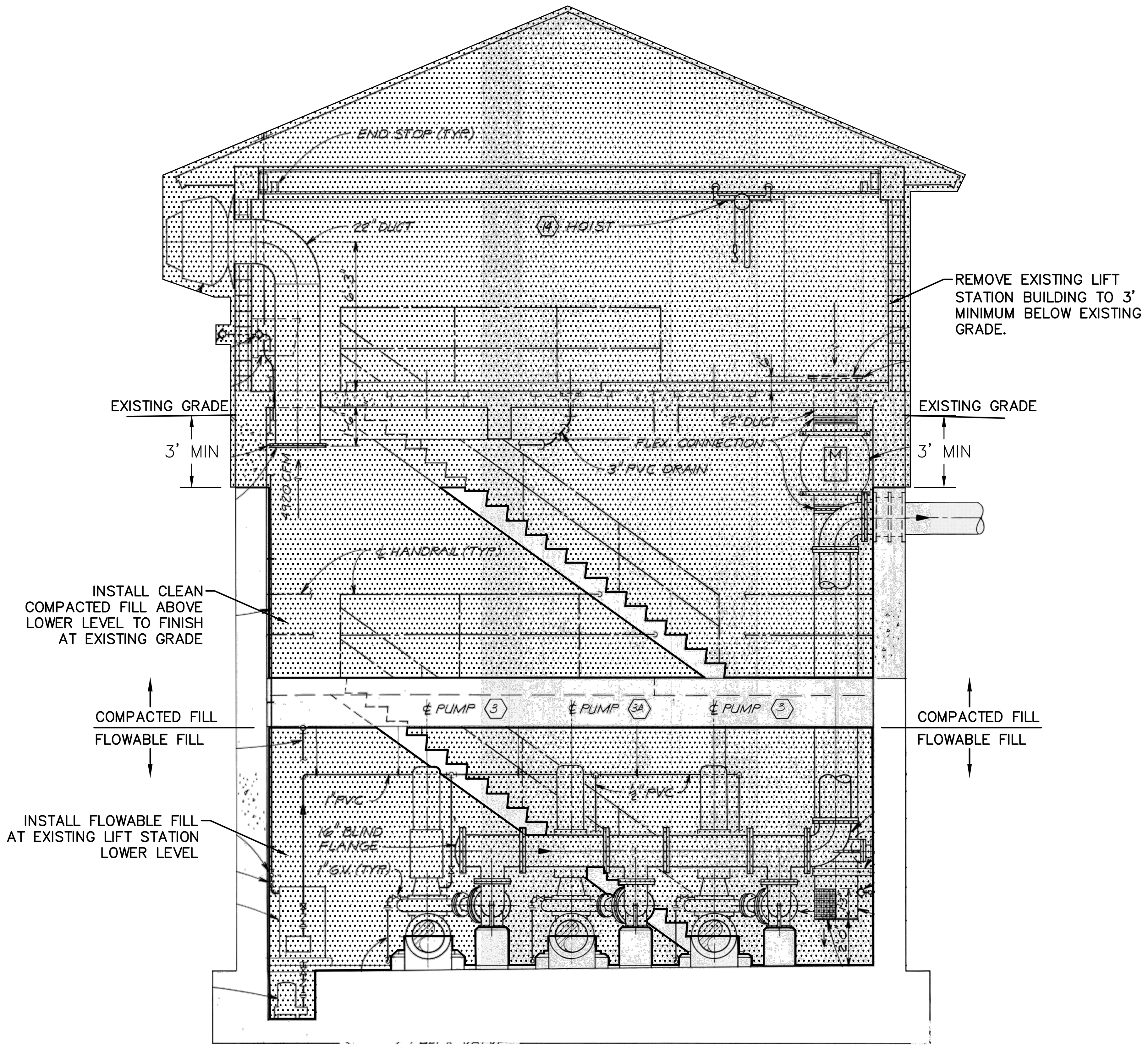
DATE: 04/09/2024

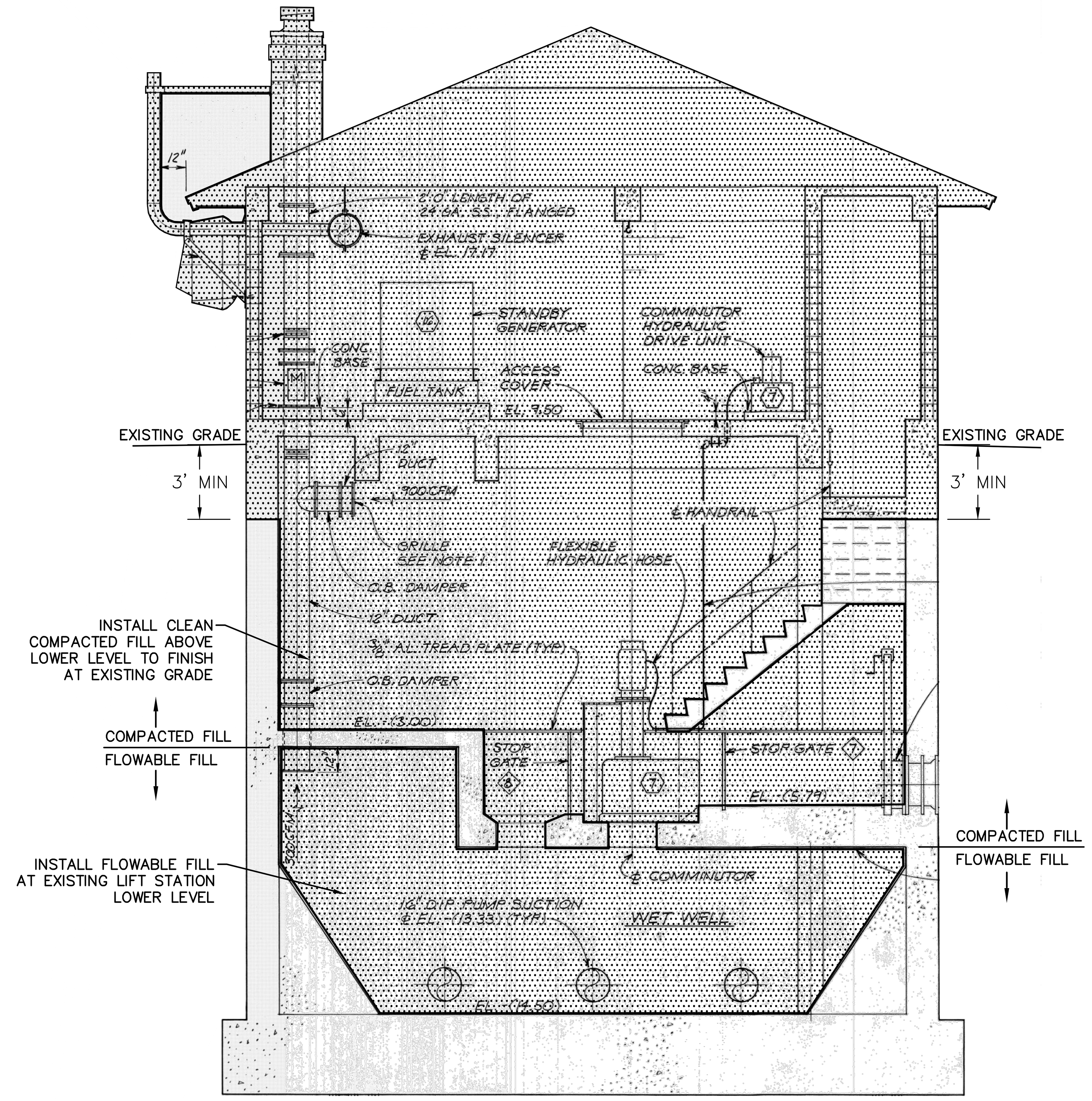
JOB NO. 23-36

SCALE: 1"=10'

Digitally signed by Kevin Lee
Date: 2025.05.01 10:02:12 -04'00'

SEAL





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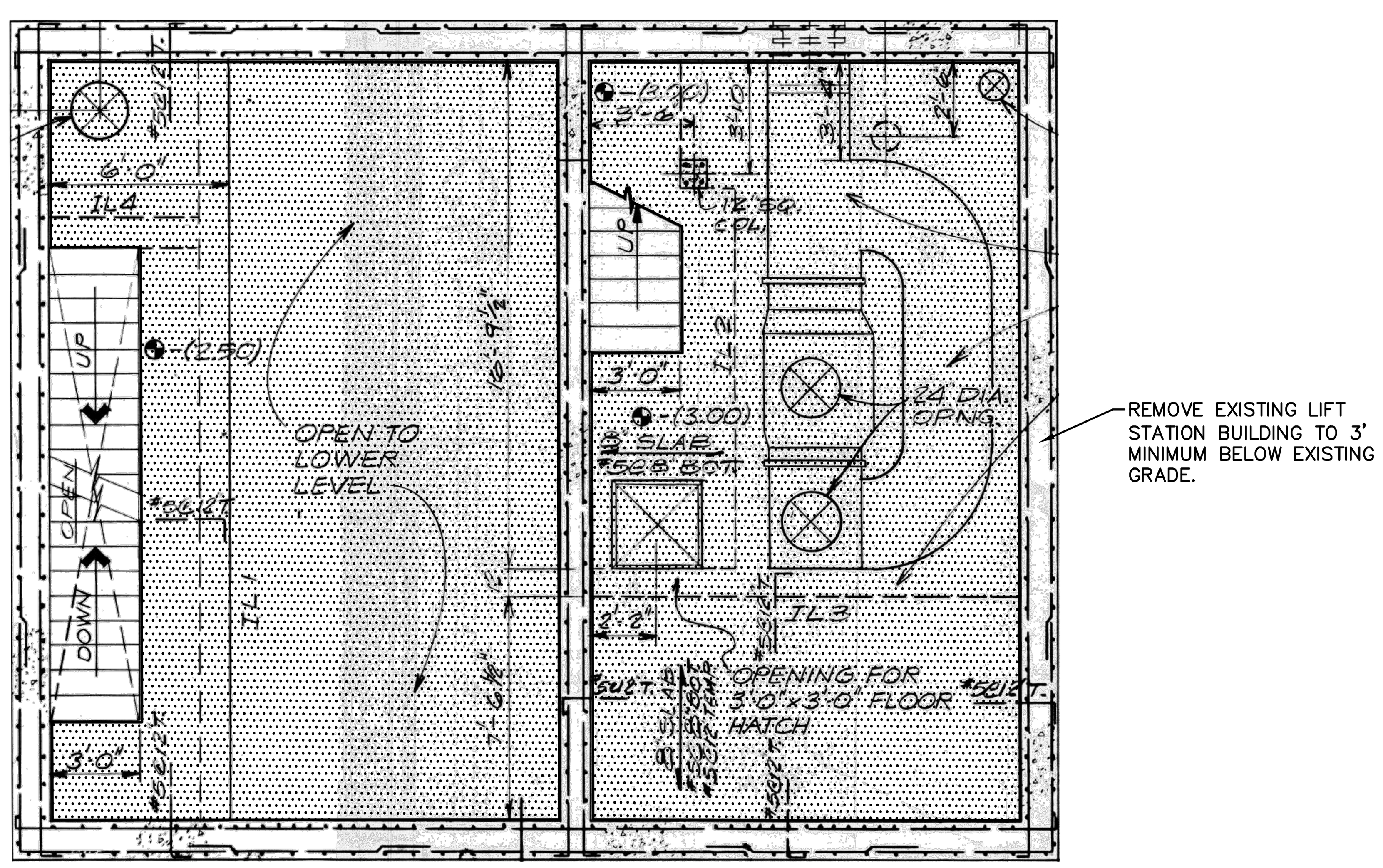
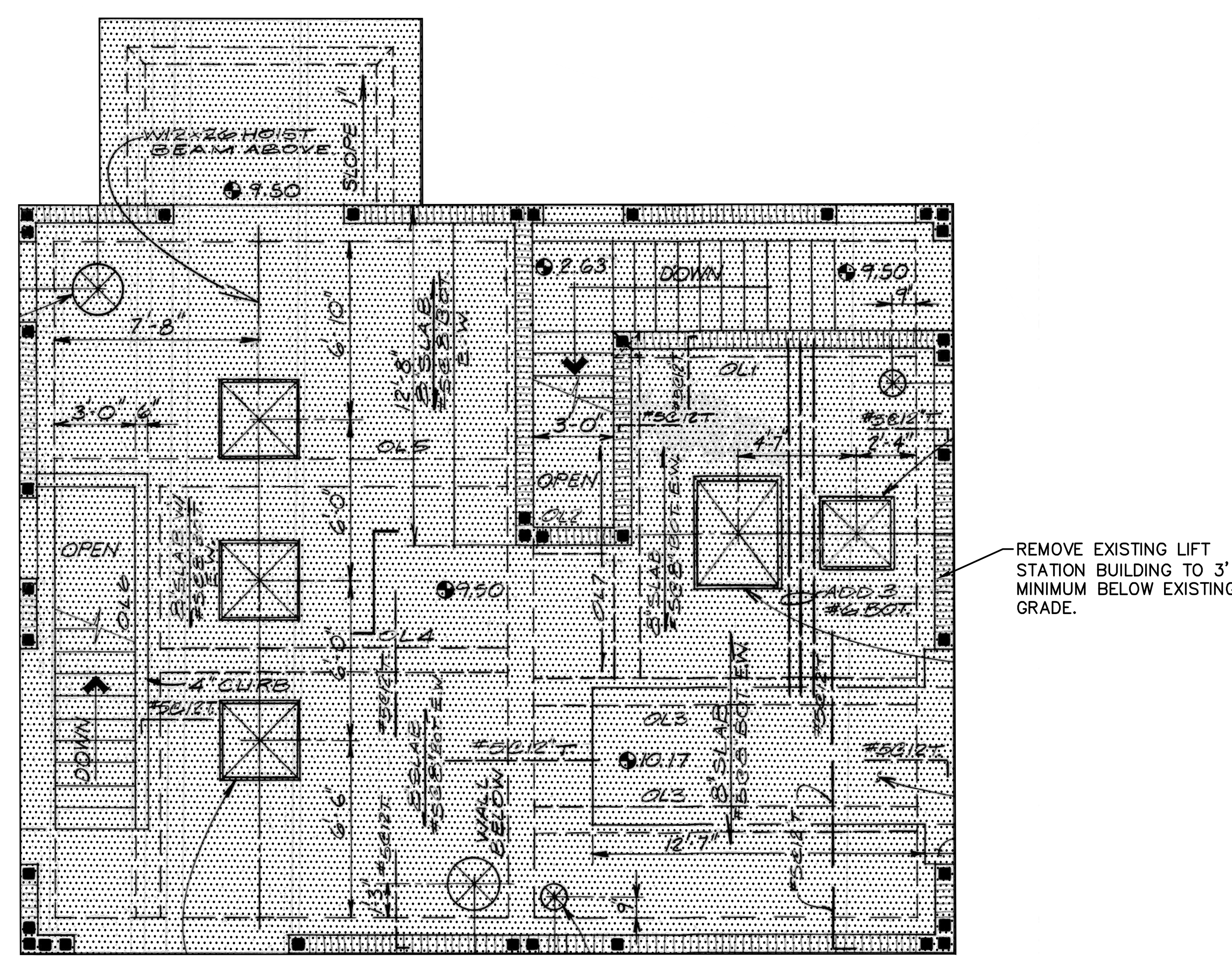
2. DEMOLITION OF EXISTING LIFT STATION TO BE PERFORMED ONLY UPON CONSTRUCTION, START-UP AND DEMONSTRATION OF PROPOSED LIFT STATION.
3. REMOVE ALL EXISTING PUMPS, PIPING, ELECTRICAL GEAR AND ALL OTHER EQUIPMENT FROM EXISTING LIFT STATION BUILDING.
4. REMOVE EXISTING LIFT STATION BUILDING TO 3' MINIMUM BELOW EXISTING GRADE.
5. BACK FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND CLEAN COMPACTED FILL
6. UPON COMPLETION OF PROJECT, SOD ALL DISTURBED AREAS TO MATCH EXISTING.

= TO BE REMOVED





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		REVISIONS	

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STEVE BUSWELL P.E. #53985 R.L.A. #LA6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

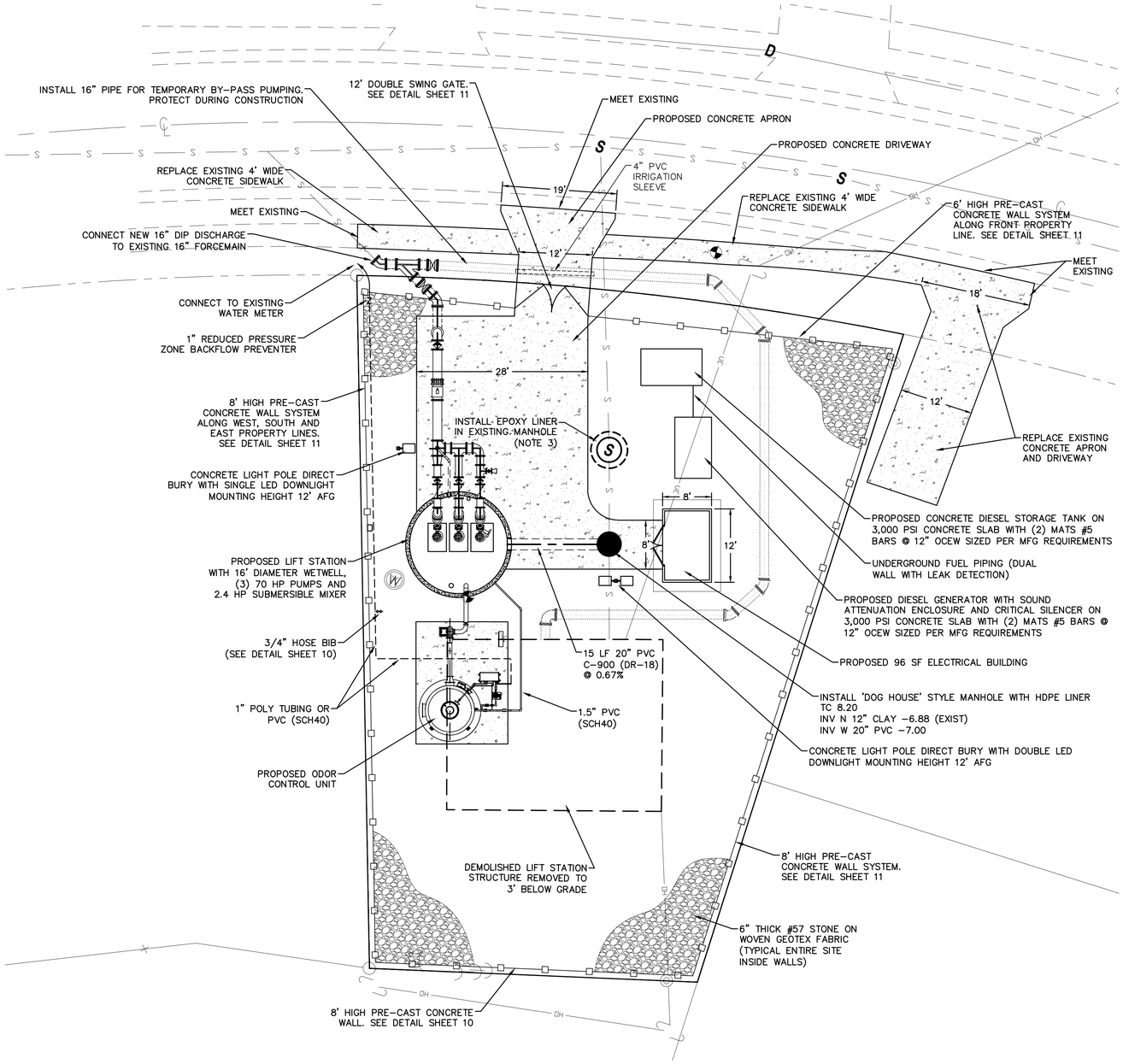
DEMOLITION DETAILS

3
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23-36
SCALE: 3/8"=1'

Digitally signed by Kevin Lee Date: 2025.05.01 10:02:33 -04'00'

SEAL



GRAPHIC SCALE

0 5 10 20 40

SCALE: 1" = 10'

LEGEND

6" CONCRETE (3,000 PSI) ON STABILIZED BASE (FBV 75 PSI)

6" THICK #57 STONE ON WOVEN GEOTEX FABRIC

CONSTRUCTION NOTES:

1. EXISTING LIFT STATION TO REMAIN IN SERVICE UNTIL PROPOSED LIFT STATION IS COMPLETE WITH START UP AND DEMONSTRATION FOR 2 WEEKS
2. PROTECT EXISTING UNDERGROUND ELECTRICAL SERVICE DURING CONSTRUCTION. ABANDON AFTER CONSTRUCTION AND TESTING OF NEW LIFT STATION IS COMPLETED
3. REPAIR EXISTING FIBERGLASS LINER IN EXISTING MANHOLE

SEQUENCE OF CONSTRUCTION:

1. INSTALL TEMPORARY FORCE MAIN AND FORCE MAIN TIE-IN PRIOR TO CONSTRUCTION OF NEW LIFT STATION
2. CONSTRUCT NEW WET WELL, PUMPS, PIPING, ELECTRICAL BUILDING, GENERATOR AND FUEL TANK FOR COMPLETE LIFT STATION STARTUP AND DEMONSTRATION
3. DEMOLISH EXISTING LIFT STATION BUILDING AND RESTORE SITE TO GRADE UPON COMPLETION OF NEW LIFT STATION DEMONSTRATION PERIOD
4. COMPLETE CONSTRUCTION OF ODOR CONTROL SYSTEM
5. COMPLETE SITE WORK AND RESTORATION

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #29464 L.A. #0001055
STEVE BUSHELL P.E. #53585 R.L.A. #6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

LIFT STATION SITE PLAN

4
SHEET NO.

DRAWN BY: ADK

DATE: 04/09/2024

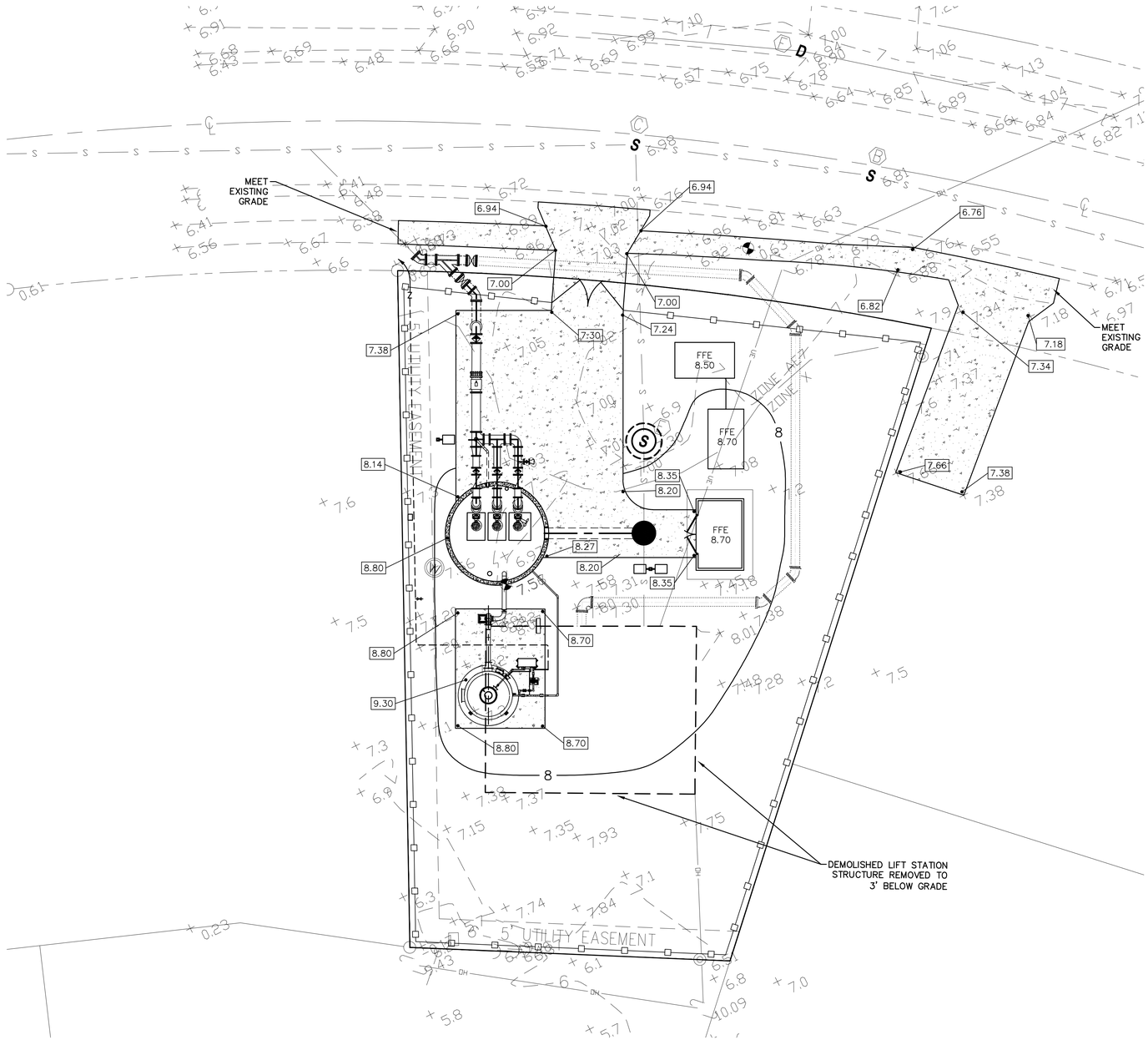
JOB NO. 23-36

SCALE: 1"=10'

KEVIN A. LEE LICENSE No 71501 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Kevin Lee
Date: 2025.05.01 10:03:05 -04'00'

SEAL



GRAPHIC SCALE

0 5 10 20 40

SCALE: 1" = 10'

LEGEND

- EXISTING GRADE
- EXISTING CONTOUR
- PROPOSED GRADE
- PROPOSED CONTOUR
- DENOTES DRAINAGE FLOW

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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PARKER MYNCHENBERG, P.E. #39655 KEVIN A. LEE, P.E. #71501
STEVE BUSNELL P.E. #53585 R.L.A. #6667011
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT

SOUTH DAYTONA * FLORIDA

CIVIL PLAN

5
SHEET NO.

DRAWN BY: ADK

DATE: 04/09/2024

JOB NO. 23-36

SCALE: 1"=10'

KEVIN A. LEE LICENSE No 71501 STATE OF FLORIDA PROFESSIONAL ENGINEER

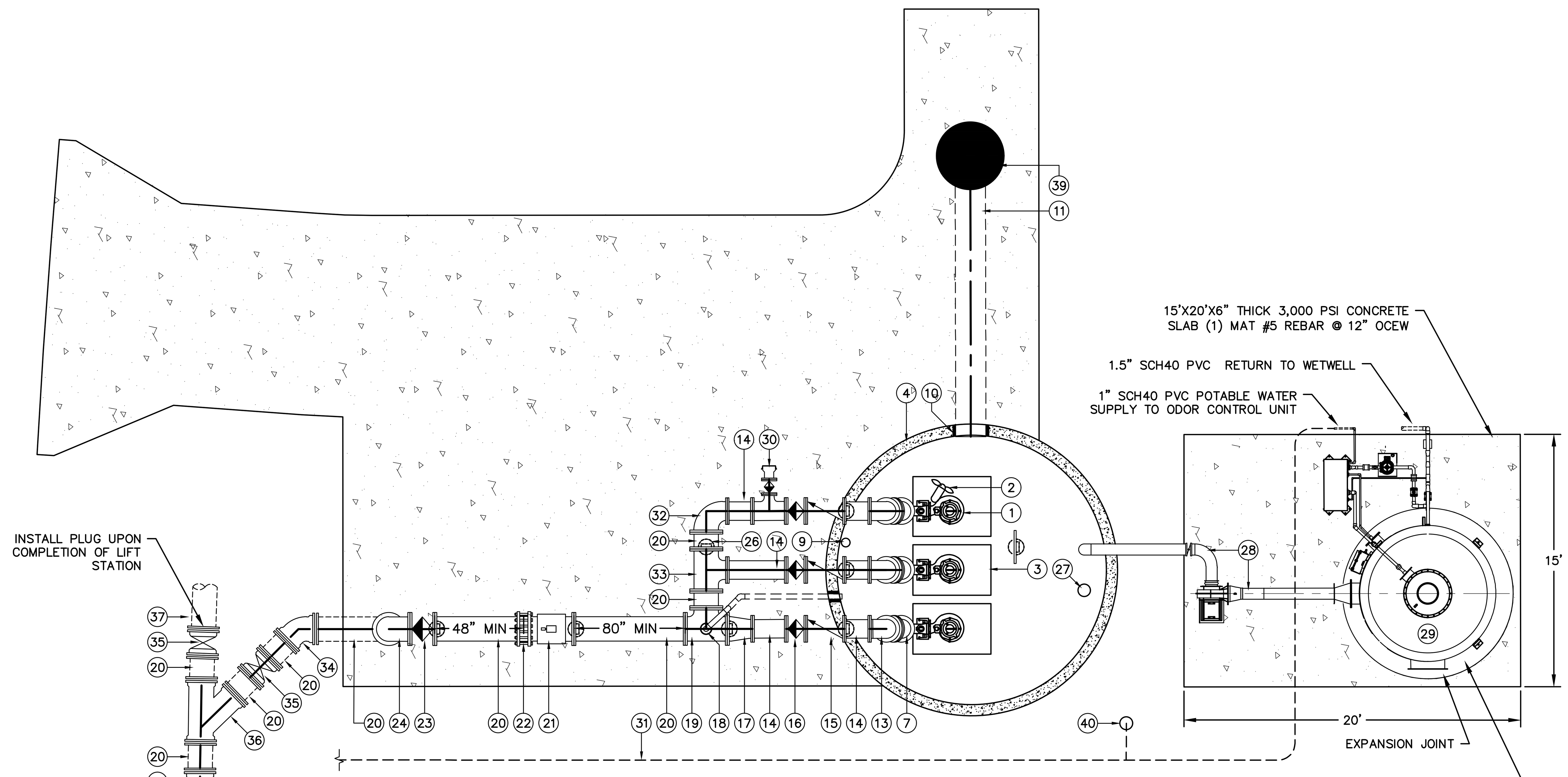
Digitally signed by Kevin Lee
Date: 2025.05.01 10:03:28 -04'00'

SEAL

PROPOSED LIFT STATION OPERATION DATA
ESTIMATED DAILY FLOW = 500,000–1,000,000 GPD (EXISTING)
ESTIMATED AVERAGE RUN TIME = 3–4 HOURS/DAY

PUMP FLOAT SCHEDULE

FLOAT	EL	ACTION	NOTES
1	–15.0	ALL PUMPS OFF	ADJUST PER OWNER/MANUFACTURER
2	–9.0	PUMP #1 ON	ADJUST PER OWNER/MANUFACTURER
3	–8.5	PUMP #2 ON	ADJUST PER OWNER/MANUFACTURER
4	–8.0	PUMP #3 ON	ADJUST PER OWNER/MANUFACTURER
5	–7.5	HIGH LEVEL	ADJUST PER OWNER

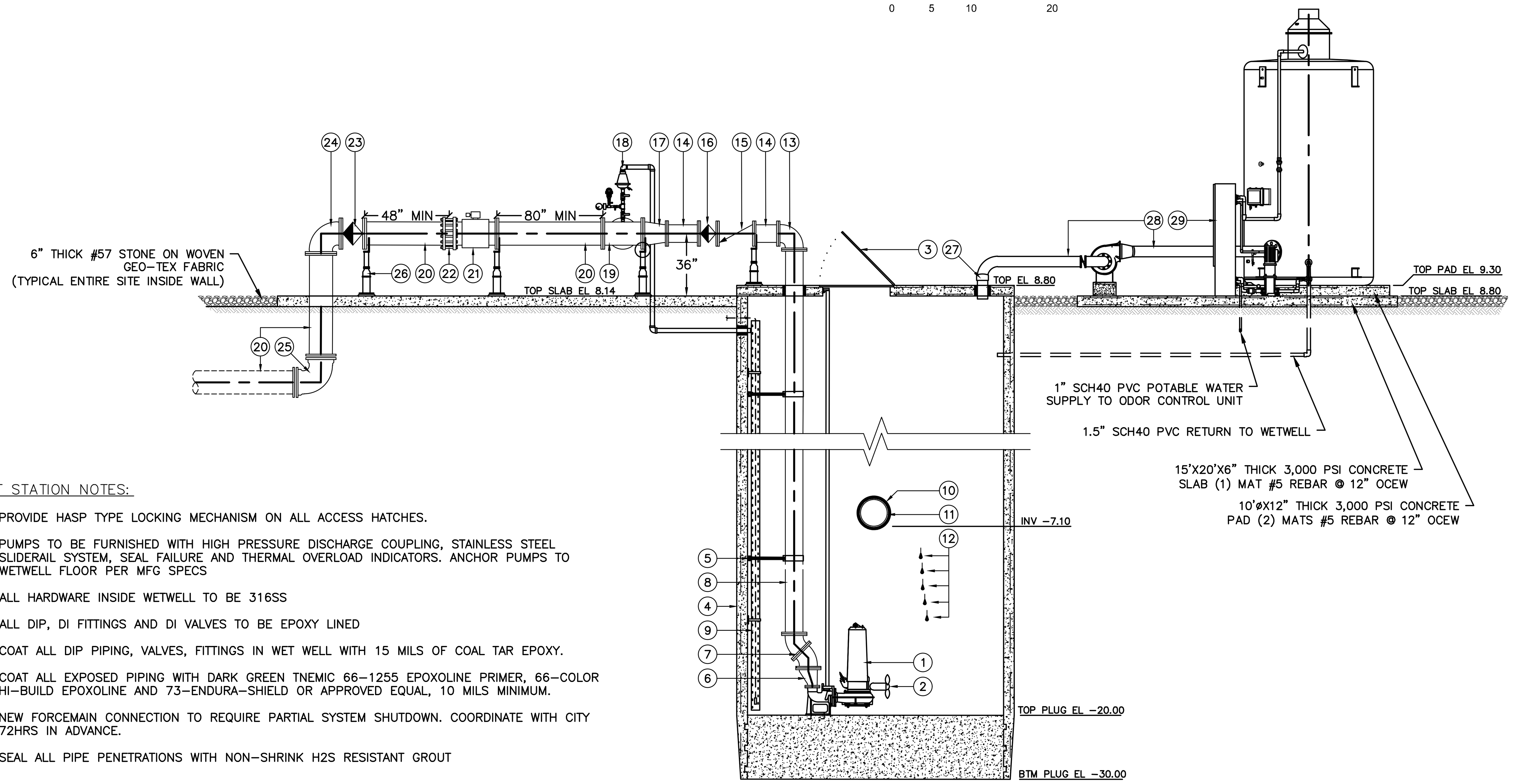


PLAN NORTH

PLAN VIEW

1" = 10'

0 5 10 20



SECTION

1" = 10'

LIFT STATION NOTES:

1. PROVIDE HASP TYPE LOCKING MECHANISM ON ALL ACCESS HATCHES.
2. PUMPS TO BE FURNISHED WITH HIGH PRESSURE DISCHARGE COUPLING, STAINLESS STEEL SLIDERAIL SYSTEM, SEAL FAILURE AND THERMAL OVERLOAD INDICATORS. ANCHOR PUMPS TO WETWELL FLOOR PER MFG SPECS
3. ALL HARDWARE INSIDE WETWELL TO BE 316SS
4. ALL DIP, DI FITTINGS AND DI VALVES TO BE EPOXY LINED
5. COAT ALL DIP PIPING, VALVES, FITTINGS IN WET WELL WITH 15 MILS OF COAL TAR EPOXY.
6. COAT ALL EXPOSED PIPING WITH DARK GREEN TNEMIC 66–1255 EPOXOLINE PRIMER, 66–COLOR HI–BUILD EPOXOLINE AND 73–ENDURA–SHIELD OR APPROVED EQUAL, 10 MILS MINIMUM.
7. NEW FORCEMAIN CONNECTION TO REQUIRE PARTIAL SYSTEM SHUTDOWN. COORDINATE WITH CITY 72HRS IN ADVANCE.
8. SEAL ALL PIPE PENETRATIONS WITH NON–SHRINK H2S RESISTANT GROUT

EQUIPMENT KEY

(1) (3) PROPOSED SULZER XFP–155J–CB2 SUBMERSIBLE PUMPS (MATCH EXISTING PUMPS) 70HP, 1784 RPM, 1,300GPM @ 120', 3ϕ, 60Hz, 480V.
PUMP ASSEMBLIES TO INCLUDE (3) 2" 316SS DUAL GUIDE BARS AND FLOAT HANGERS. ALL ATTACHMENT HARDWARE TO BE 316SS

(2) (1) PROPOSED SULZER XRW210 SUBMERSIBLE MIXER
2.4 HP, 1750 RPM, 480V, 3PH, 60HZ
MIXER TO BE MOUNTED TO THE EASTERLY PUMP (ORIENTATION PER CITY)

(3) (3) WET WELL SPRING ASSISTED ACCESS HATCHES BILCO OR HALLIDAY. COORDINATE ACCESS HATCH LOCATION WITH PUMP MOUNTING LOCATIONS TO PROVIDE CLEARANCE ALL SIDES OF PUMP FOR REMOVAL. ALL HARDWARE TO BE 316SS

(4) PROPOSED 16' I.D. CONCRETE WET WELL. FURNISH AND INSTALL NEW PRECAST CONCRETE WET WELL WITH HDPE AGRU LINER OR EQUAL

(5) 316SS WALL MOUNTED PIPE SUPPORTS (6 TYP)

(6) 12"x6" ECCENTRIC REDUCER (3 TYP)

(7) 12" FL DIP 45° BEND (6 TYP)

(8) 12" HDPE DISCHARGE PIPES (3 TYP)

(9) LEVEL TRANSDUCER IN 6" PVC STILLING WELL WITH 1/2" HOLES AS SHOWN. 316SS SUPPORT BRACKETS (2) TYPICAL

(10) SEAL AROUND PIPING WITH H2S RESISTANT NON–SHRINK GROUT (TYPICAL)

(11) 20" PVC GRAVITY SEWER C–900 (DR–18) (MH INV –7.00) (WETWELL INV –7.10)

(12) PUMP CONTROL FLOATS PER PUMP MFG. SEE FLOAT SCHEDULE THIS SHEET

(13) 12" FL DI 90° BEND (3 TYP)

(14) 12" DIP

(15) 12" FL CUSHIONED CHECK VALVE WITH SWING ARM (3 TYP)

(16) 12" FL DI PLUG VALVE (3 TYP)

(17) 16"x12" FL DI REDUCER

(18) 2" AIR RELEASE VALVE & PRESSURE GAUGE ASSEMBLY WITH 2" SH80 PVC VENT TO WETWELL (SEE DETAIL SHEET 10)

(19) 16" DI TEE TAPPED FOR 2" ARV

(20) 16" DIP EPOXY LINED

(21) 16" MAGNETIC FLOW METER

(22) MEGA–FLANGE ADAPTER

(23) 16" FL DI PLUG VALVE

(24) 16" FL DI 90° BEND

(25) 16" MJ DI 90° BEND

(26) 316SS ADJUSTABLE PIPE SUPPORT (7 TYPICAL)

(27) 6" SCH80 PVC WET WELL VENT WITH CAP. PIPE AND FITTINGS TO BE DRY–FIT, NOT GLUED 6" PIPE SLEEVE TO BE CAST INTO WET WELL TOP

(28) 6" SHC40 PVC INSTALLED PER ODOR CONTROL MFG SPECS

(29) HIBOCS–200 VERTICAL BIO–SCRUBBER ODOR CONTROL UNIT WITH A 2 HP BLOWER AND RECIRCULATION PUMP

(30) 12"x6" TEE FL WITH 6" PLUG VALVE AND CAMLOCK EMERGENCY PUMP CONNECTION WITH DUST CAP

(31) POTABLE WATER SERVICE.

(32) 16"x12" FL DI 90° BEND

(33) 16"x12" FL DI TEE

(34) 16" MJ DI 45° BEND

(35) 16" MJ GATE VALVE (2 TYP)

(36) 16" MJ DI WYE

(37) 16" TEMPORARY BY–PASS PIPING TO EXISTING LIFT STATION (SEE SITE PLAN)

(38) EXISTING 16" DIP FORCE MAIN

(39) 'DOGHOUSE' STYLE MANHOLE WITH HDPE AGRU LINER OR EQUAL. CORE INV 20" PVC EL –7.00

(40) HOSE BIBB (SEE DETAIL SHEET 10)

NO.	DATE	DESCRIPTION	BY

REVISIONS

PARKER MYNCHENBERG & ASSOCIATES, INC.
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1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
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LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

LIFT STATION PLAN

6
SHEET NO.

DRAWN BY: ADK

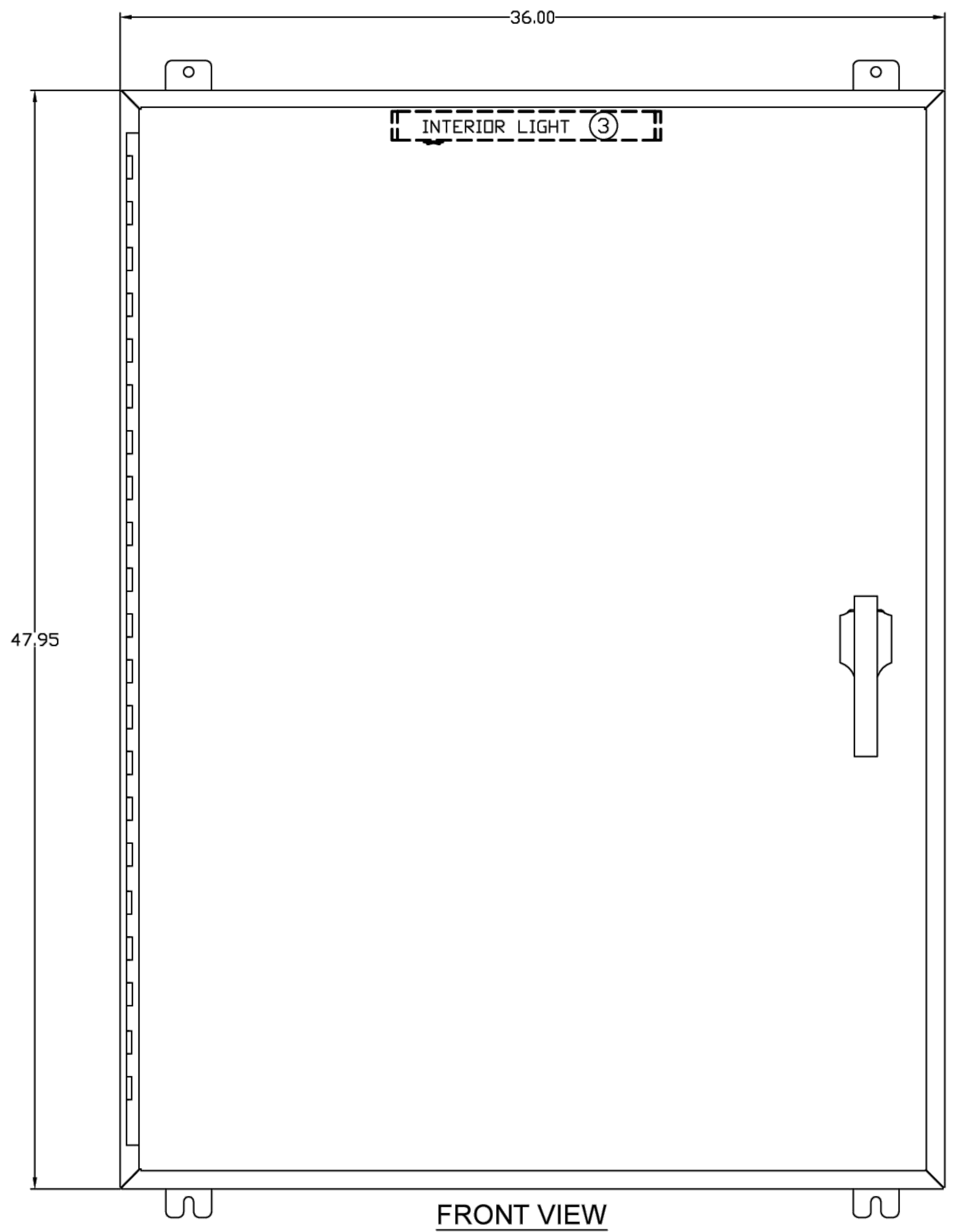
DATE: 04/09/2024

JOB NO. 23–36

SCALE: 1"=10'

Digitally signed by Kevin Lee
Date: 2025.05.01 10:04:02 -04'00'

SEAL



HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
ENCLOSURE

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 1 OF 15	

LINE#	QTY	U/M	MFG	NUMBER	DESCRIPTION
1	1	EA	SCHAEFER	SPN4SS6-483612-1025	48"H X 36"W X 12"D ENCLOSURE, 316SS, NEMA 4X, w/DEADFRONT
2	1	EA	SCHAEFER	SPP-4836	45"H X 33"W BACKPLATE
3	1	EA	BANNER	WLB32ZC285PBQMB	LED LIGHT, 120VAC, 285mm, w/INTEGRAL SWITCH, 90-264VAC
4					
5	3	EA	ABB	ADR6	GROUND LUG, 14-6 AWG
6	1	EA	SQUARE D	PK9GTA	GROUND BAR, 9POINT, ALUMINUM
7					
8					
9	3	EA	SQUARE D	QOU115	CIRCUIT BREAKER, MINIATURE, 15AMP, 1POLE, 120/240VAC
10	1	EA	HUBBELL	GFRST15GY	RECEPTACLE, GFCI, 15AMP, GRAY
11					
12	4	EA	SQUARE D	9001SKS43B	SELECTOR SWITCH, 3 POSITION, 30mm, NEMA 4X
13	4	EA	SQUARE D	9001KA1	CONTACT BLOCK, 1 N.O. AND N.C. CONTACT, FINGERSAFE
14	4	EA	SQUARE D	9001SKP38LGG31	PILOT LIGHT, LED, GREEN, 120VAC/DC, 1.4VA, HEAVY DUTY, NEMA 4X, 30mm
15	4	EA	SQUARE D	9001SKP38LYY31	PILOT LIGHT, LED, YELLOW, 120VAC/DC, 1.4VA, HEAVY DUTY, NEMA 4X, 30mm
16	7	EA	SQUARE D	9001SKP38LRR31	PILOT LIGHT, LED, RED, 120VAC/DC, 1.4VA, HEAVY DUTY, NEMA 4X, 30mm
17					
18	4	EA	ENM	T50A2	ELAPSED TIME METER, 120VAC
19					
20	4	EA	SULZER	16907006	CA462 OVERTEMP/SEAL FAIL RELAY, 120V
21					
22					
23					
24					
25					
26					
27					
28					
29	6	EA	IDEC	RH2B-ULCAC120V	CONTROL RELAY, DPDT, 120VAC COIL, w/LIGHT, w/TEST BUTTON, 10A CONTACTS
30	6	EA	IDEC	SH2B-05	SOCKET, DIN RAIL MOUNTABLE
31	1	EA	IDEC	RH4B-ULCAC120V	CONTROL RELAY, 4PDT, 120VAC COIL, w/LIGHT, w/TEST BUTTON, 10A CONTACTS
32	1	EA	IDEC	SH4B-05	SOCKET, DIN RAIL MOUNTABLE
33					
34					
35	1	EA	SQUARE D	9070T75D23	TRANSFORMER, 75VA, 120X240/24VAC
36					
37					
38	3	EA	IDEC	RH2B-ULCAC24V	CONTROL RELAY, DPDT, 24VAC COIL, w/LIGHT, w/TEST BUTTON, 10A CONTACTS
39	3	EA	IDEC	SH2B-05	SOCKET, DIN RAIL MOUNTABLE

HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
BOM

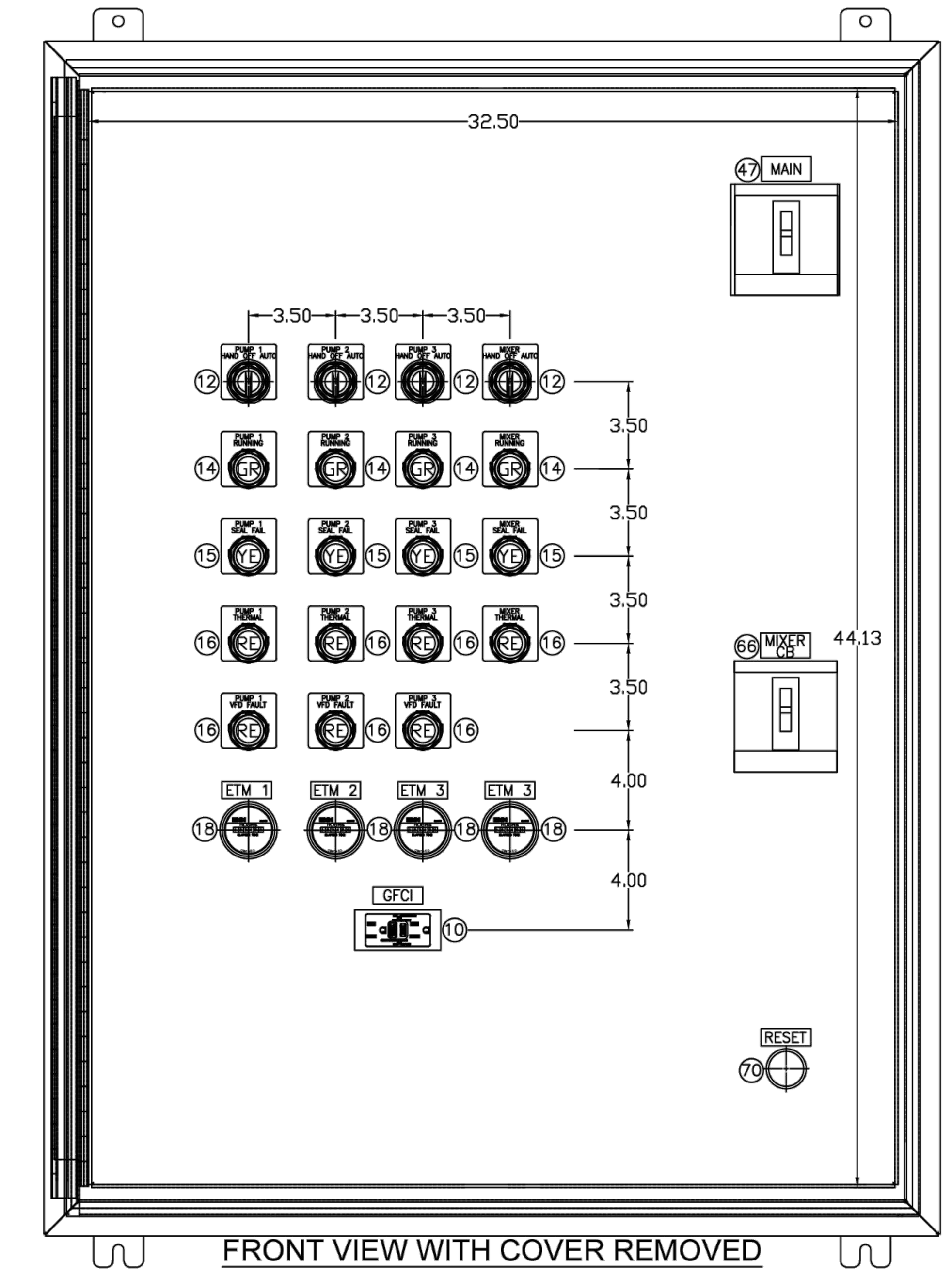
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 2 OF 15	

LINE#	QTY	U/M	MFG	PART NUMBER	DESCRIPTION
40	1	EA	SQUARE D	9070TF2000D1	TRANSFORMER, 1500VA, 240/480-120VAC, w/FUSE BLOCK
41	2	EA	BUSSMAN	FNQ-R-10	FUSE, TIME-DELAY, CLASS CC, 10A, 600V, 13/32 x 1-1/2 (10 x 38mm)
42	1	EA	BUSSMAN	FNM-20	FUSE, TIME-DELAY, 20A, 250V, 13/32 x 1-1/2 (10 x 38mm)
43	1	EA	SQUARE D	9070FSC2	TRANSFORMER FINGER SAFE COVER
44	1	EA	SQUARE D	9070FP1	TRANSFORMER FUSE PULLER
45					
46					
47	1	EA	SQUARE D	HDL36020	CIRCUIT BREAKER, MOLDED CASE, THERMAL-MAGNETIC TRIP, 20AMP, 18kA @ 480VAC, 3POLE
48	1	EA	HYDRA SERVICE	CUSTOM	MAIN & EMERGENCY CBS UP THOUGH THE DEADFRONT
49					
50	1	EA	SQUARE D	SDSA3650	SURGE PROTECTIVE DEVICE, 600VAC, 3-PHASE, 4-WIRE, NEMA 4X
51	1	EA	SQUARE D	QOSAMK	SURGE PROTECTIVE DEVICE MOUNTING BRACKET
52	1	EA	SQUARE D	9080LBA362104	POWER DISTRIBUTION BLOCK, 3POLE, MAIN – (1)#14-2/0, BRANCH – (4)#14-4
53	1	EA	SQUARE D	9080LB23	POWER DISTRIBUTION BLOCK, FINGER SAFE COVER
54					
55	1	EA	MACROMATIC	PMPU-FA8	PHASE MONITOR RELAY, 208-480V 3PHASE, PHASE LOSS, PHASE REVERSAL, PHASE UNBALANCE
56	1	EA	MACROMATIC	70169-D	RELAY SOCKET, 8PIN OCTAL, DIN RAIL MOUNTABLE
57	1	EA	ABB	E93/32	FUSE HOLDER, 690V, 10A, 3POLE, 18-10 AWG, HOLDS 10 X 38mm FUSES
58	3	EA	BUSSMAN	FNQ-1	FUSE, TIME-DELAY, 1A, 500V, 13/32 X 1-1/2 (10 x 38mm)
59					
60					
61					
62					
63					
64					
65					
66	1	EA	SQUARE D	HDL36015	CIRCUIT BREAKER, MOLDED CASE, THERMAL-MAGNETIC TRIP, 125AMP, 18kA @ 480VAC, 3POLE
67					
68	1	EA	SQUARE D	8536SBO2V02S	STARTER, NEMA SIZE 0, 5HP @ 460V, 18AMP
69	3	EA	SQUARE D	B 12.8	HEATER UNITS
70	1	EA	SQUARE D	9066RA1	EXTERNAL RESET MECHANISM FOR OVERLOAD RELAYS, FOR NEMA1 & NEMA12 ENLCOSURES, 1 ROD
71	1	EA	SQUARE D	9999SX6	STARTER AUX CONTACTS, 1N.O.
72					
73	1	EA	INTERMATIC	FM1STUZH-120U	24HOUR TIMER, 120VAC
74	1	EA	INTERMATIC	FM-SU	SM1 SURFACE/DIN RAIL KIT
75					
76					
77	1	EA	MACROMATIC	ATP120A7R	TRIPLEX ALTERNATING RELAY W/SWITCH, 120V
78	1	EA	MACROMATIC	SD12-PC	12PIN SQUARE SOCKET
79	4	EA	SQUARE D	RE17RAMU	TIMER, 24VDC, 24-240VAC, 8AMP CONTACTS, SPDT, ON-DELAY
80					
81					
82	2	EA	PHOENIX CONTACT	1201099	ANGLED BRACKETS, 30° Angle, 46mm high, type BG/SH
83	8	EA	PHOENIX CONTACT	3045198	TERMINAL BLOCK, FEED THROUGH, UT 6, WHITE, 600V, 24-8 AWG
84	8	EA	PHOENIX CONTACT	3045185	TERMINAL BLOCK, FEED THROUGH, UT 6, RED, 600V, 24-8 AWG
85	24	EA	PHOENIX CONTACT	3044131	TERMINAL BLOCK, FEED THROUGH, UT 6, GRAY, 600V, 24-8 AWG
86	13	EA	PHOENIX CONTACT	3044102	TERMINAL BLOCK, FEED THROUGH, UT4, GRAY, 600V, 26-10 AWG
87	43	EA	PHOENIX CONTACT	3045101	TERMINAL BLOCK, FEED THROUGH, UT4, ORANGE, 600V, 26-10 AWG
88	17	EA	PHOENIX CONTACT	0800886	TERMINAL BLOCK END CLAMP, E/NS 35 N, GRAY
89	8	EA	PHOENIX CONTACT	3047028	TERMINAL BLOCK END COVER, D-UT 2,5/10
90					
91	12	FT	PANDUIT	F1.5X3LG6	WIRE DUCT, TYPE F, 1.5"W X 3"H
92	12	FT	PANDUIT	C1.5LG6	WIRE DUCT COVER, 1.5"W
93	12	FT	PANDUIT	F2X3LG6	WIRE DUCT, TYPE F, 2"W X 3"H
94	12	FT	PANDUIT	C2LG6	WIRE DUCT COVER, 2"W

HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
BOM 2

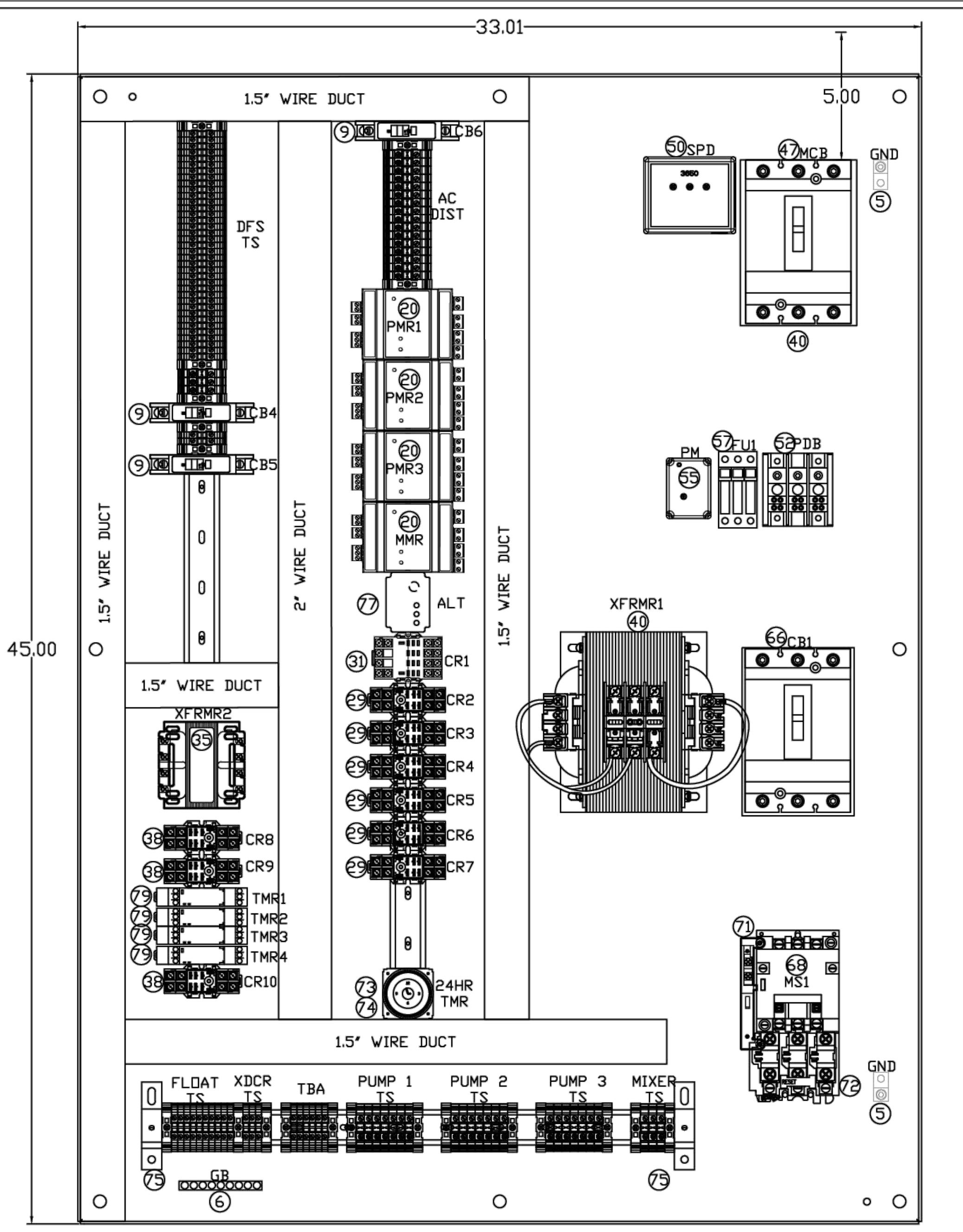
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 3 OF 15	



HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
DEADFRONT

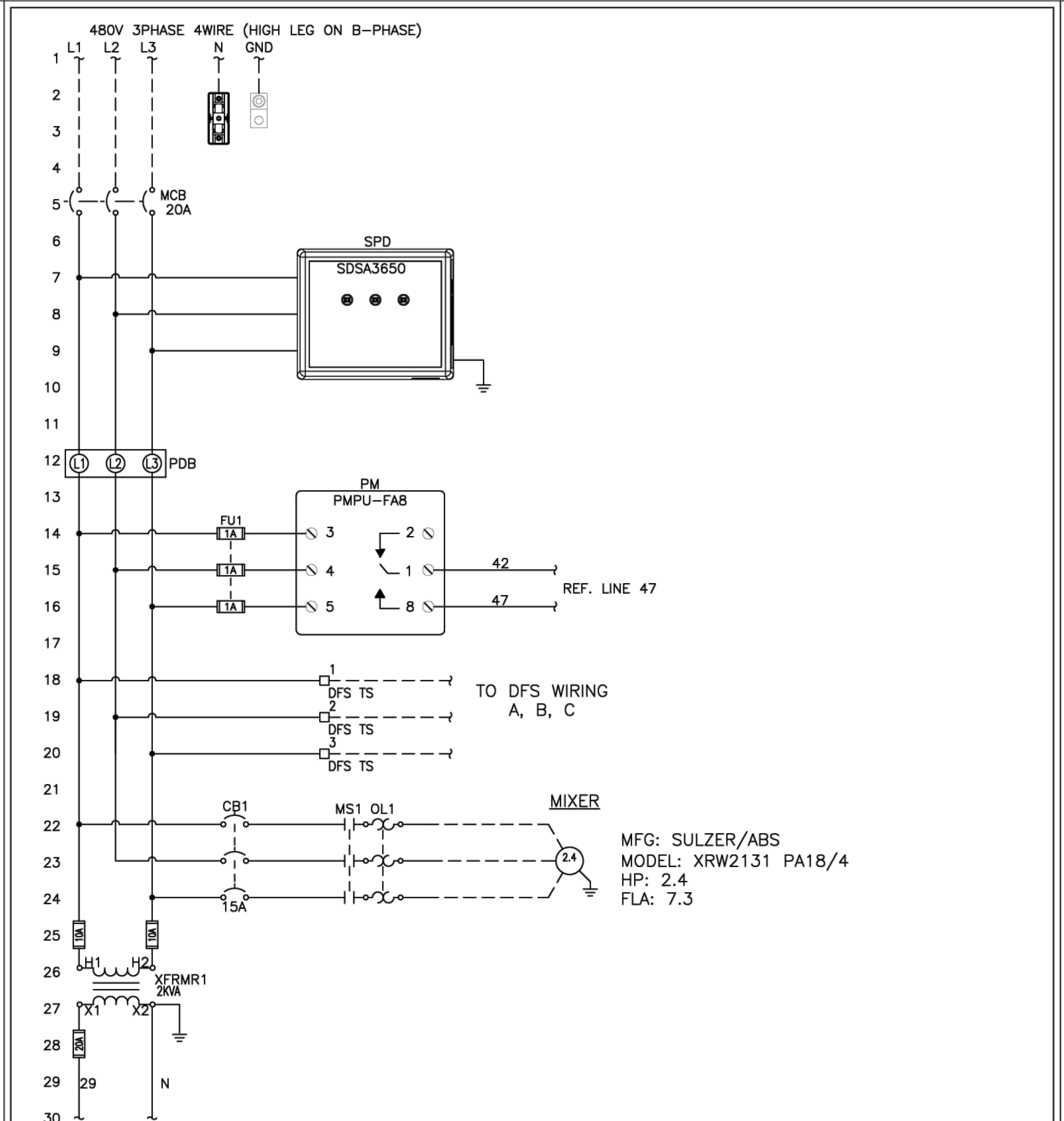
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 4 OF 15	



HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
LAYOUT

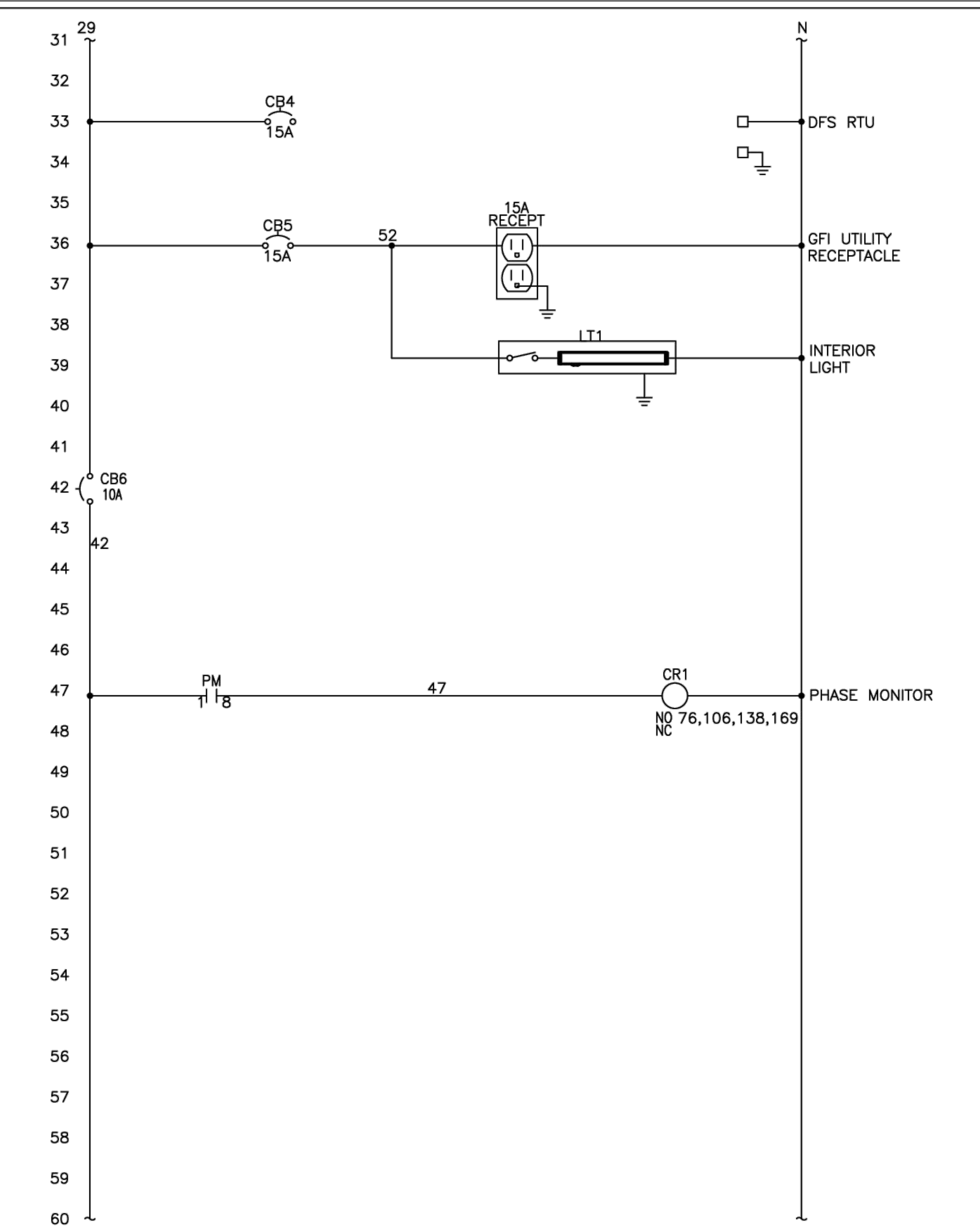
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 5 OF 15	



HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 1

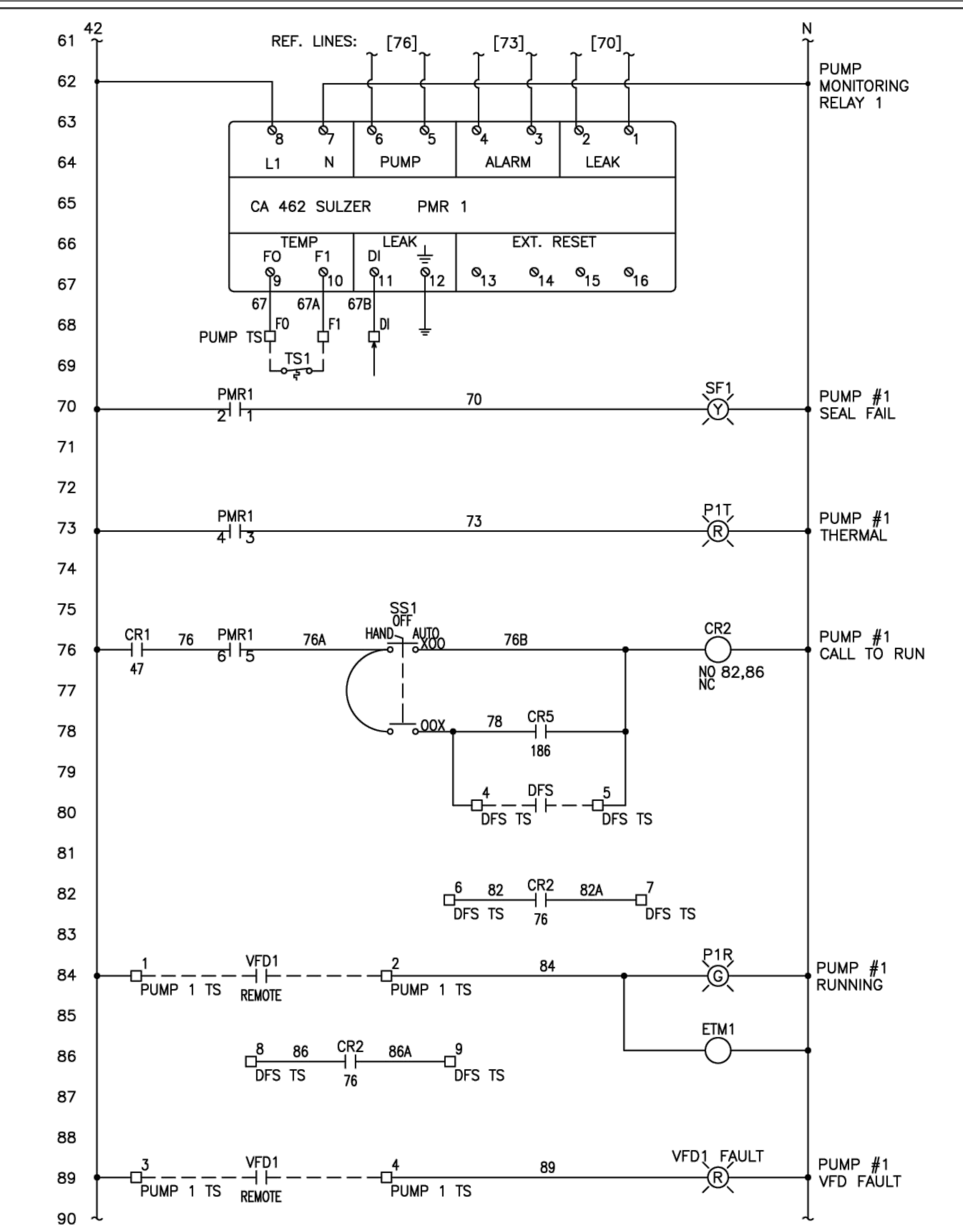
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 6 OF 15	



HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 2

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 7 OF 15	



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SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 3

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 8 OF 15	

NO.	DATE	DESCRIPTION	BY

REVISIONS

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #32645 R.L.A. #0001553
STEVE BUSWELL P.E. #53985 R.L.A. #LA6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

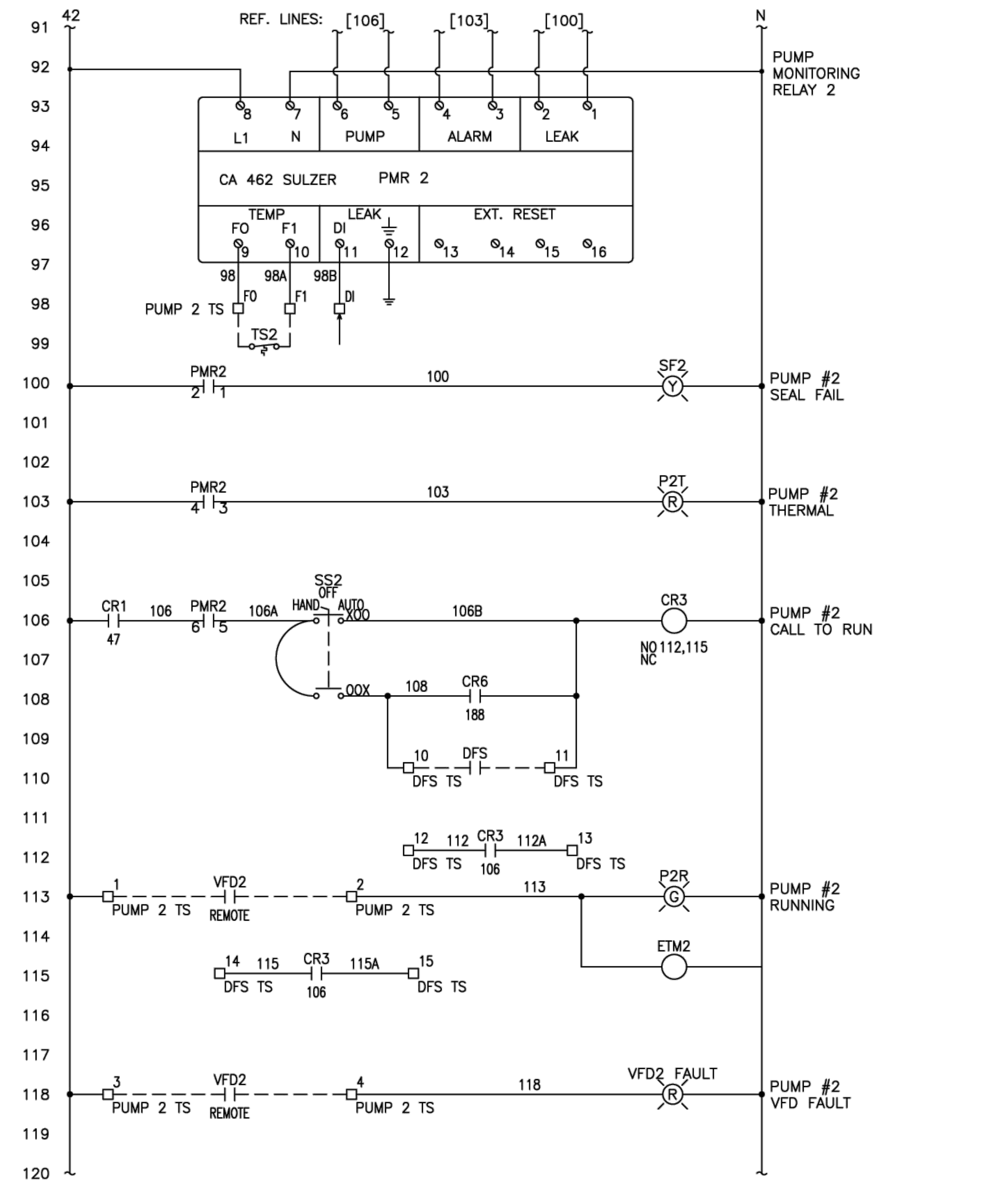
LIFT STATION TYPICAL DETAILS

7
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23–36
SCALE: 1"=10'

Digitally signed by Kevin Lee
Date: 2025.05.01 10:04:25 -04'00'

KEVIN A. LEE LICENSE No 71501 STATE OF FLORIDA PROFESSIONAL ENGINEER
SEAL



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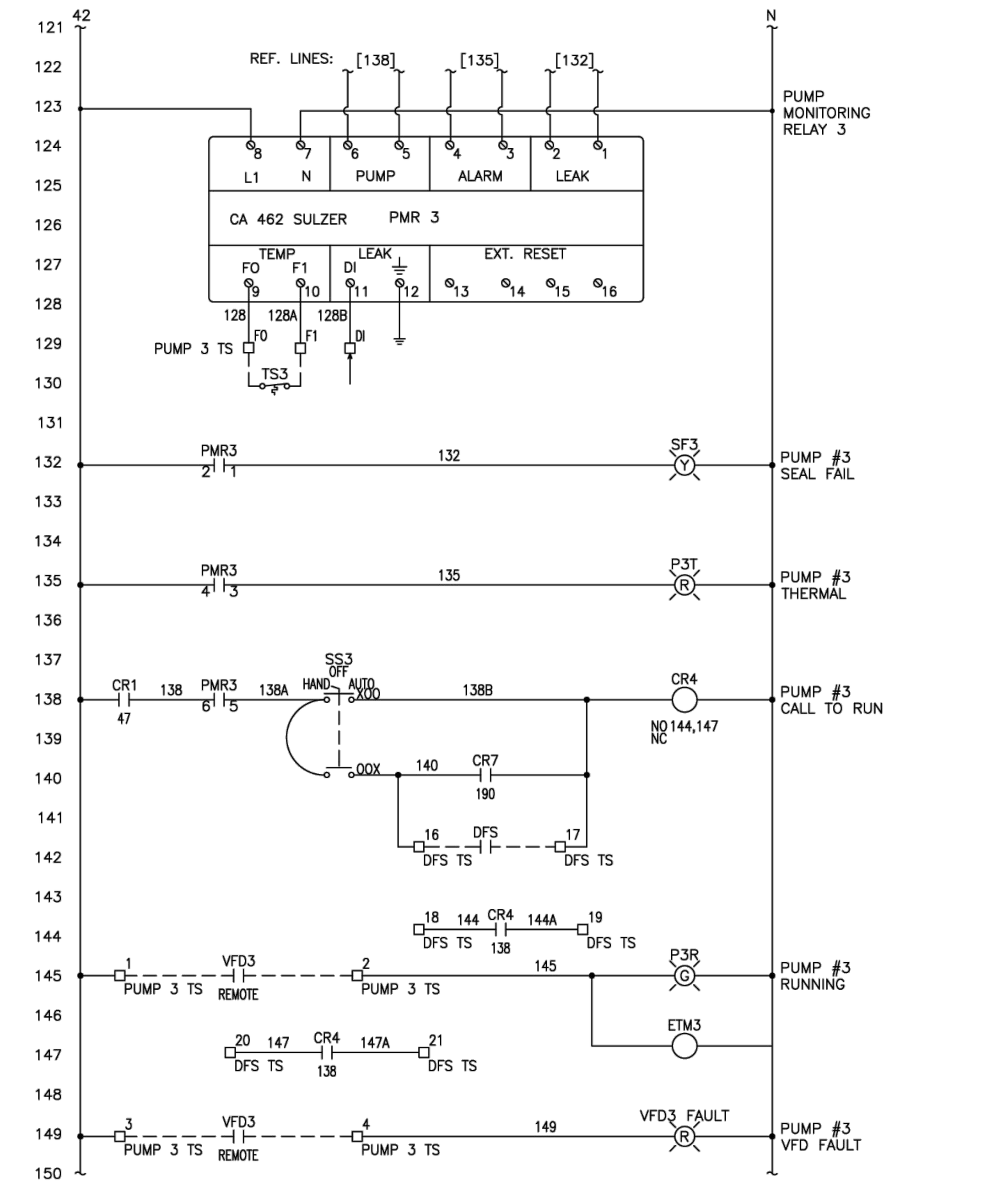
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 4

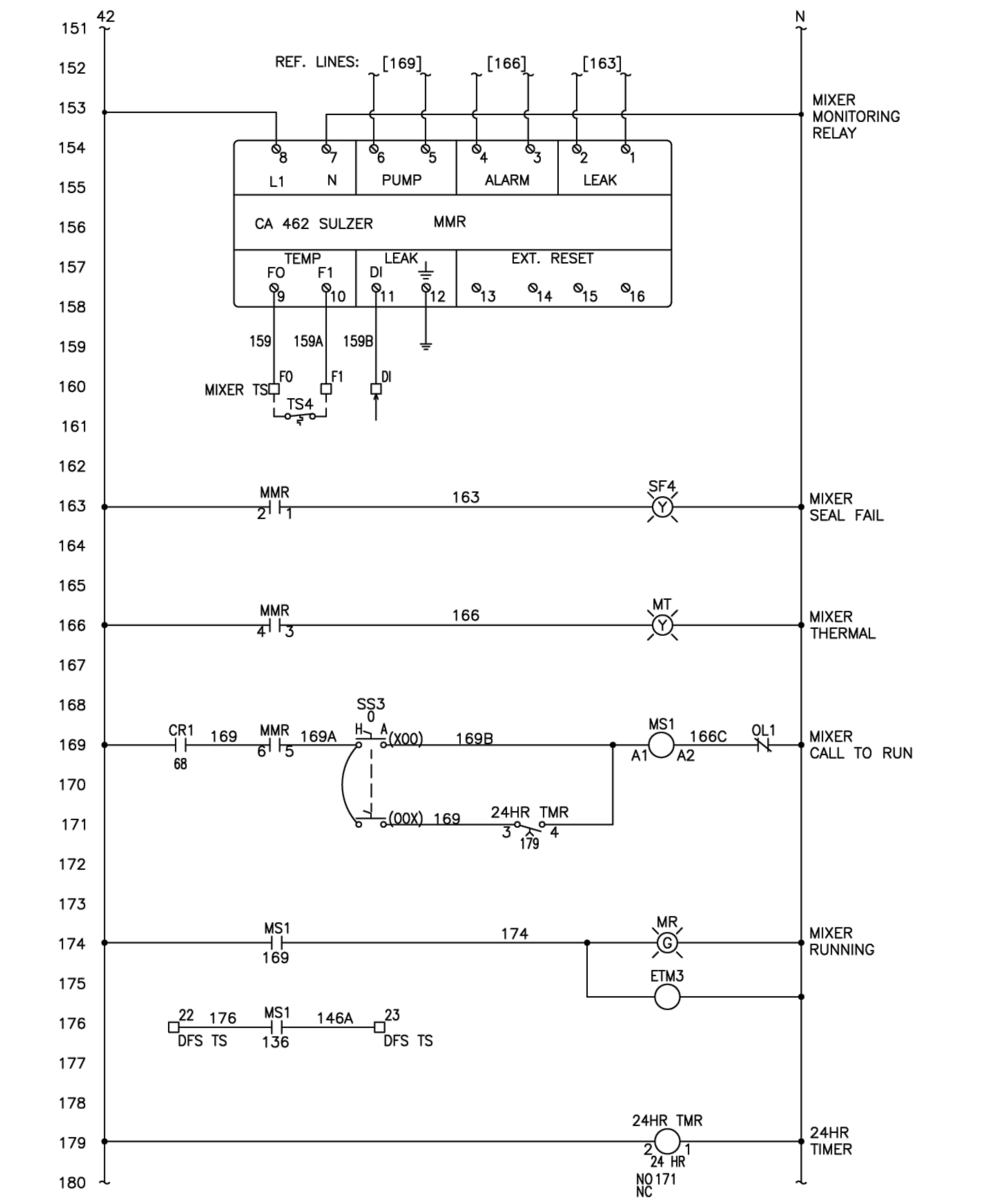
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 9 OF 15	



HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 4

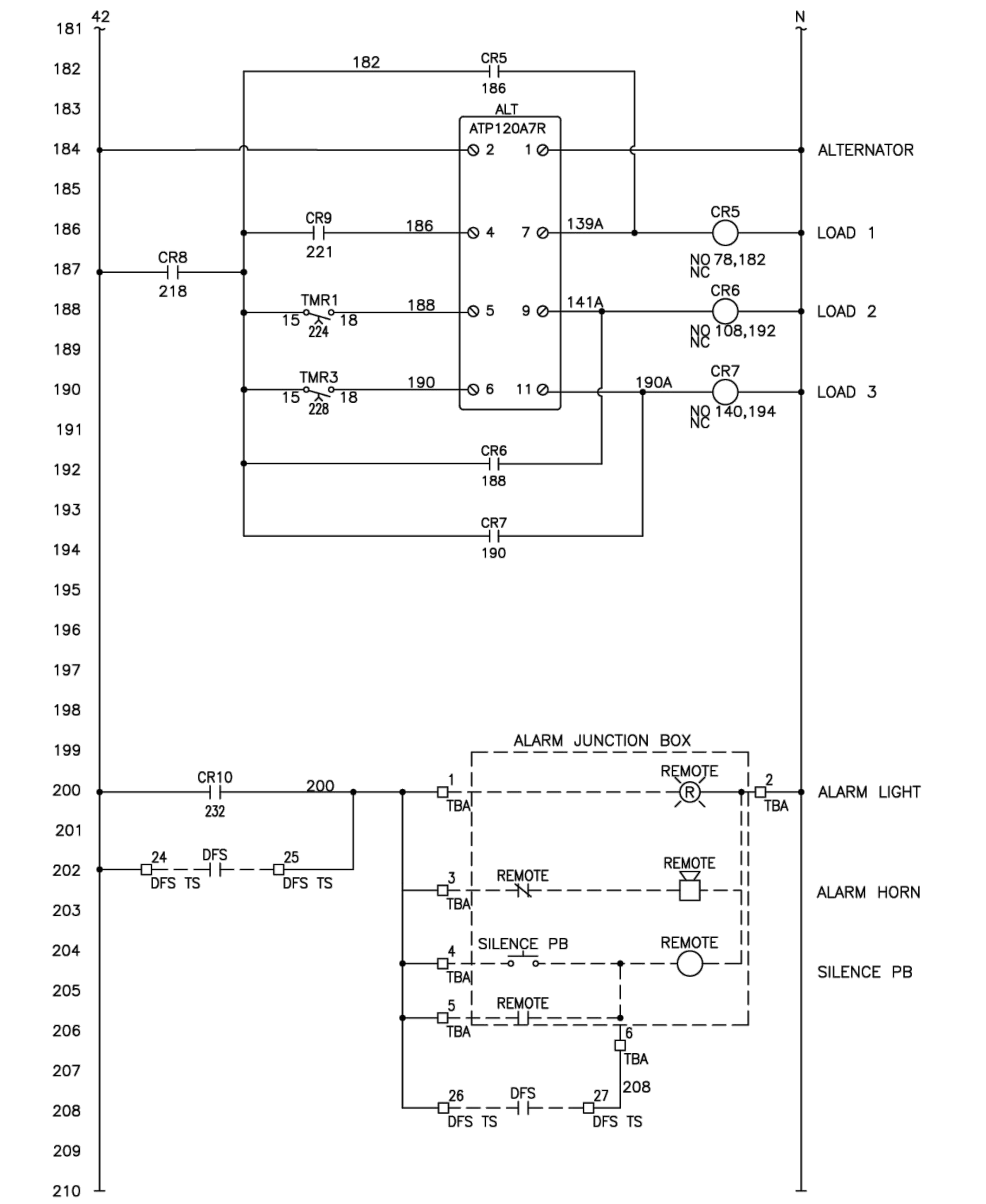
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 9 OF 15	



HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 5

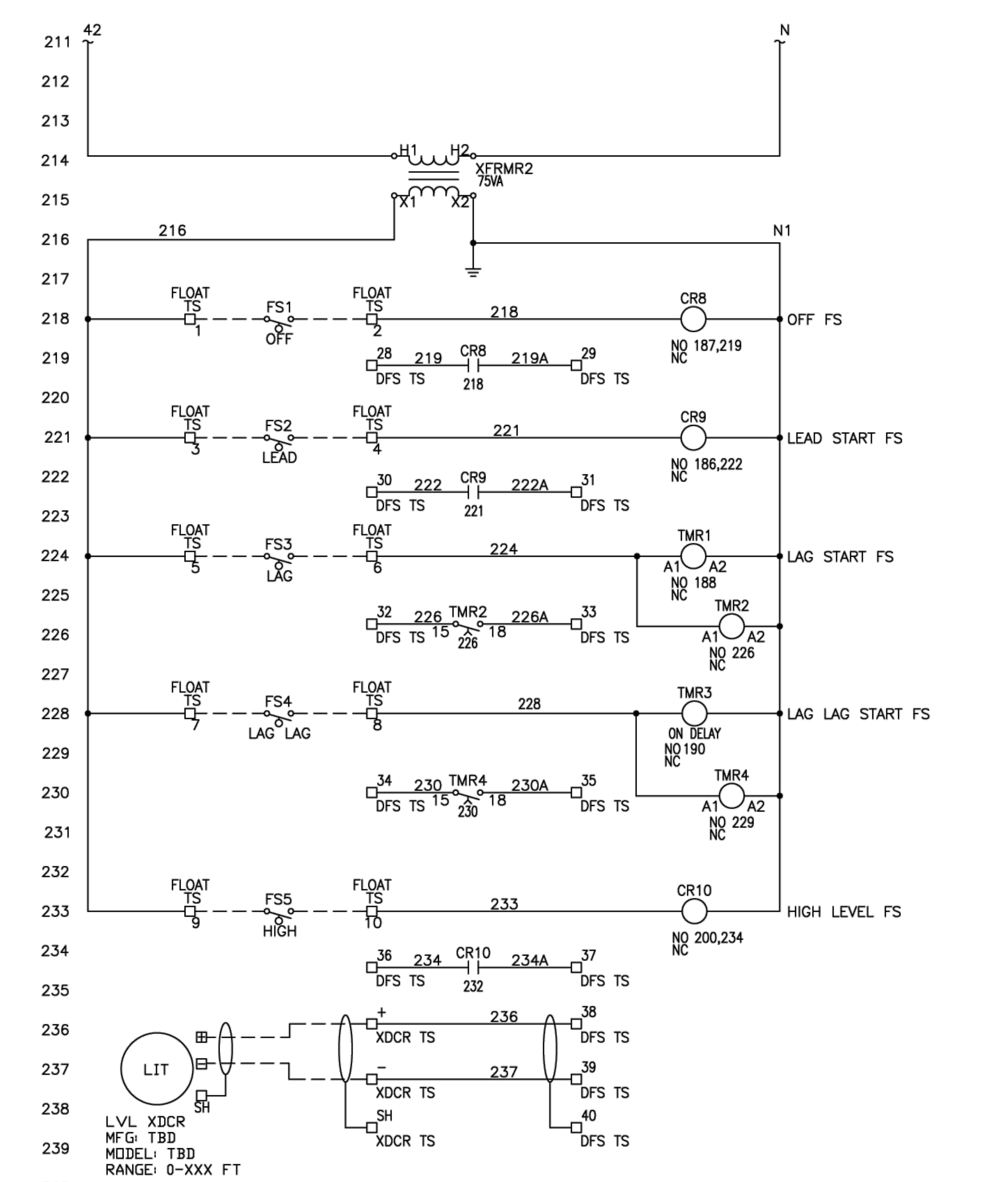
DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 10 OF 15	



HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 6

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 11 OF 15	

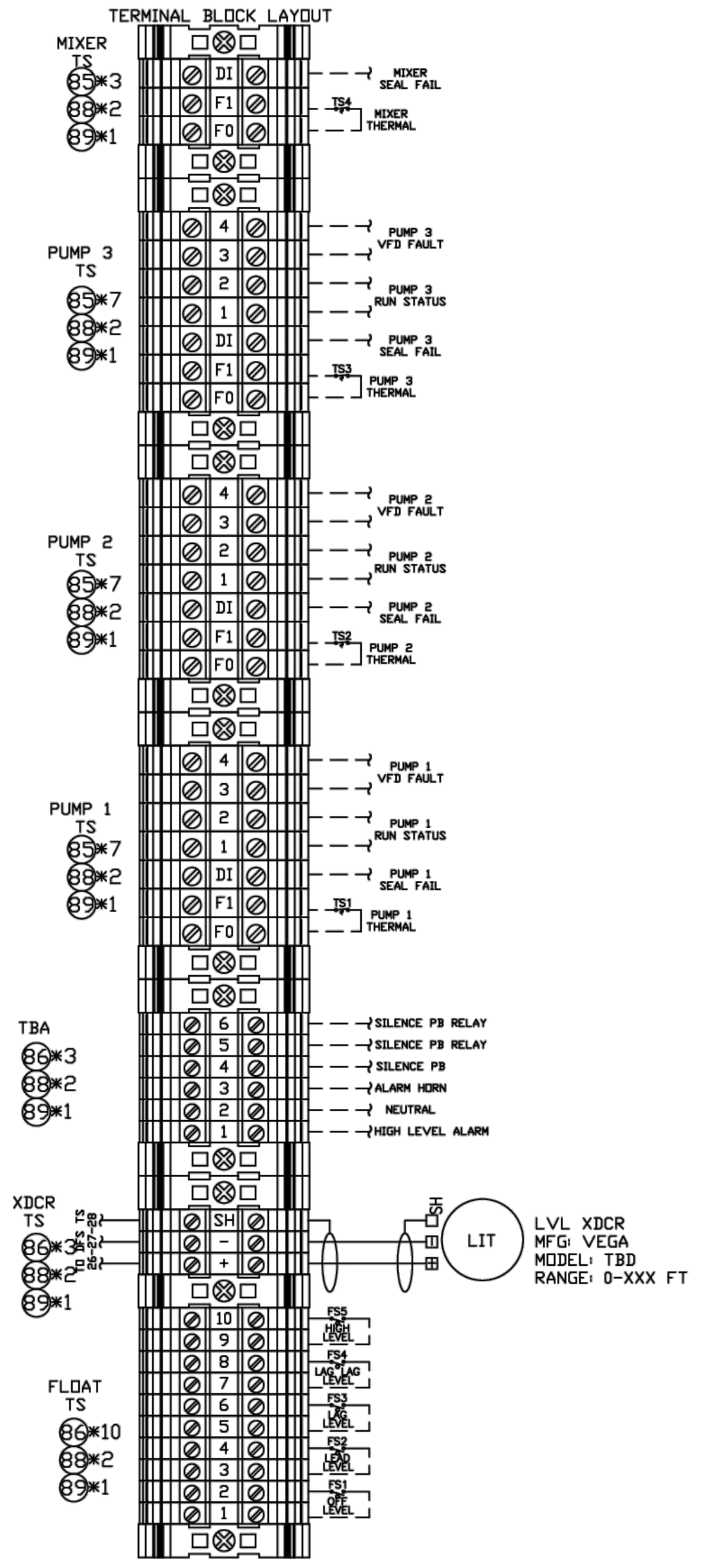


HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
CONTROLS 7

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 12 OF 15	

TERMINAL BLOCK LAYOUT



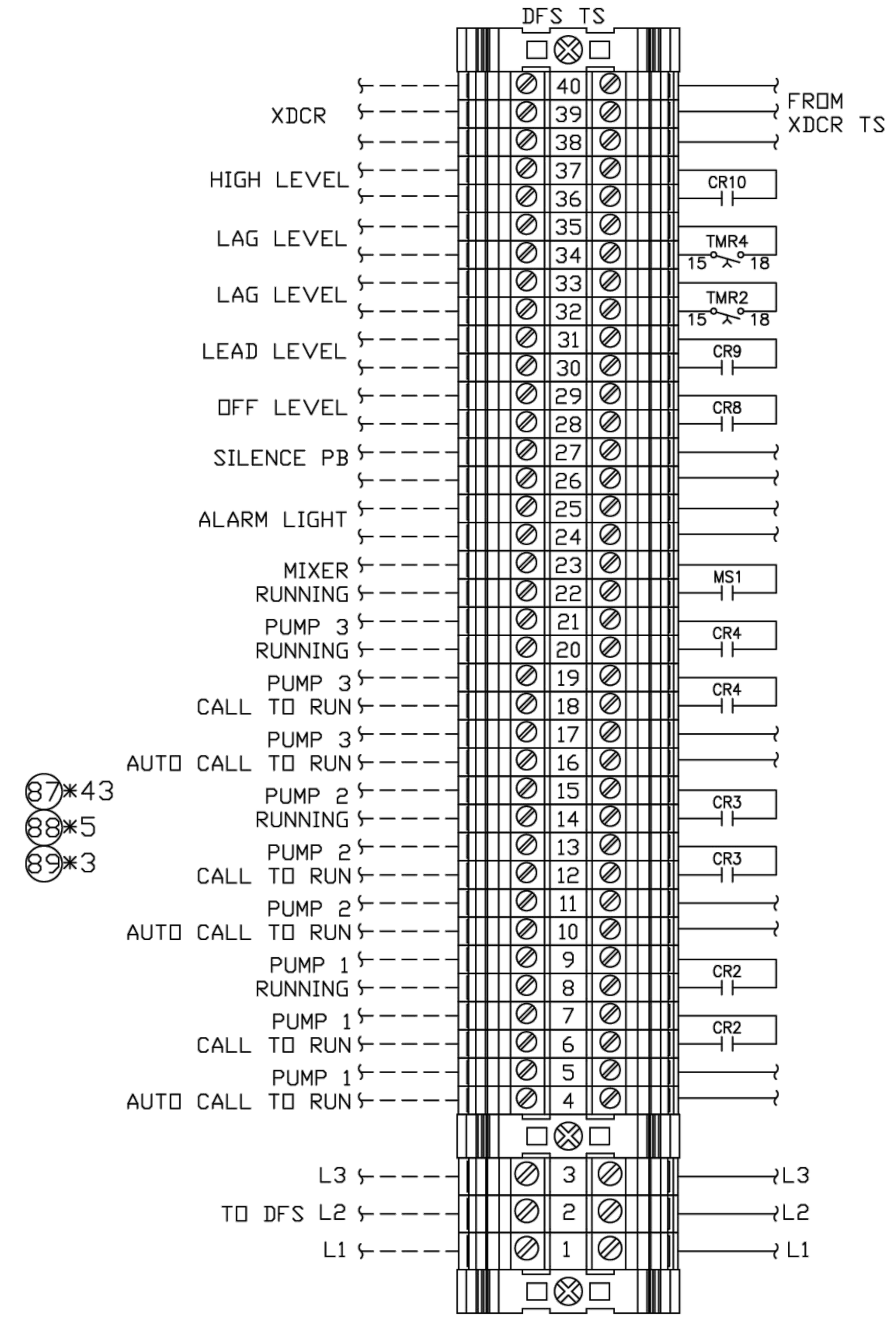
HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
TERMINAL LAYOUT

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 13 OF 15	

TERMINAL BLOCK LAYOUT

DFS TS



HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
TERMINAL LAYOUT

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 14 OF 15	

WIRING KEY (UNLESS OTHERWISE NOTED)			
120V			MTW, 600V @ 90C
SUPPLY	BLACK	12 AWG	MTW, 600V @ 90C
RETURN	WHITE	12 AWG	MTW, 600V @ 90C
GROUNDED	GREEN	12 AWG	MTW, 600V @ 90C
SIGNAL/CONTROL	RED	16 AWG	MTW, 600V @ 90C
SIGNAL/CONTROL RETURN	WHITE	16 AWG	MTW, 600V @ 90C
EXTERNAL SOURCE	ORANGE	14 AWG	MTW, 600V @ 90C
SEAL FAIL	PURPLE	16 AWG	MTW, 600V @ 90C
24VDC			TYPE
SUPPLY	BLUE	16 AWG	MTW, 600V @ 90C
RETURN	WHITE W/ BLUE STRIP	16 AWG	MTW, 600V @ 90C
GROUNDED	GREEN	16 AWG	MTW, 600V @ 90C
CONTROL	BLUE	16 AWG	MTW, 600V @ 90C
SIGNAL	BLACK/WHITE	18 AWG/SHLD	MTW, 600V @ 90C
PANEL WIRING	————————		
FIELD WIRING	– – – – – – – –		

LABEL 1 — RECOMMENDED TIGHTENING TORQUE – 32IN-LBS

LABEL 2 — USE COPPER CONDUCTORS ONLY RATED @ 60°C

LABEL 3 — RECOMMENDED TIGHTENING TORQUE – 7IN-LBS

LABEL 4 — RECOMMENDED TIGHTENING TORQUE – FIELD TERMINAL BLOCKS #1-6 16 IN-LBS FIELD TERMINAL BLOCKS #7-14 7 IN-LBS

LABEL 5 — TYPE 4X ENCLOSURE TO MAINTAIN ENCLOSURE RATING, USE HUBS OR FITTINGS WITH THE SAME ENVIRONMENTAL RATING

HYDRA SERVICE INC.
2104 HWY 160
WARRIOR AL 35180
(205)647-5326

SOUTH DAYTONA LS5 – CONTROL PANEL
480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A
LABELS

DRAWN BY: C. CAMPBELL	SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON	SCALE	DATE 3/24/2025	SHEET 15 OF 15	

NO.	DATE	DESCRIPTION REVISIONS	BY

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #32645 R.L.A. #0001553
STEVE BUSWELL P.E. #53985 R.L.A. #LA6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

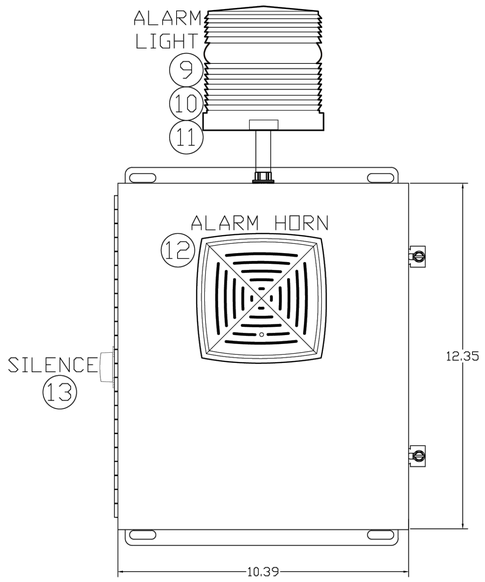
LIFT STATION TYPICAL DETAILS

8
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23-36
SCALE: 1"=10'

Digitally signed by Kevin Lee
Date: 2025.05.01 10:04:50 -04'00'

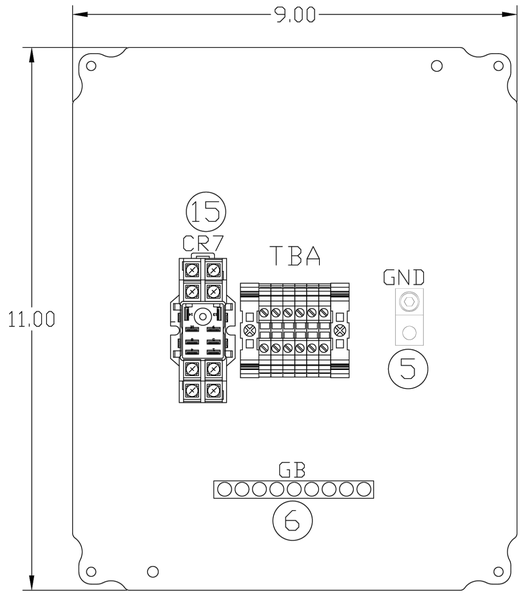
SEAL



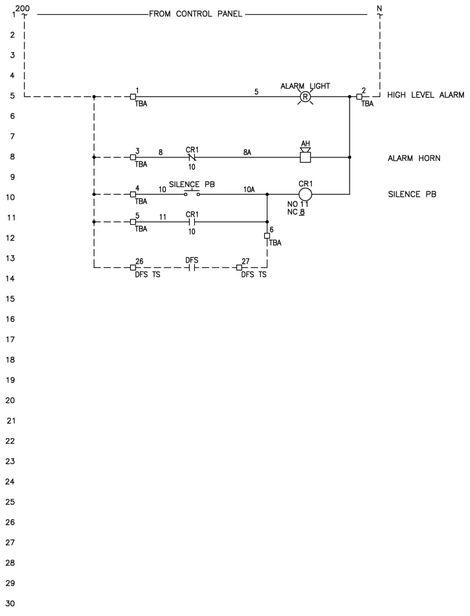
HSI	HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326	SOUTH DAYTONA LS5 – REMOTE ALARM BOX			
		480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A			
		ENCLOSURE			
DRAWN BY: C. CAMPBELL		SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON		SCALE	DATE 3/24/2025	SHEET 1 OF 5	

LINE#	QTY	U/M	MFG	NUMBER	DESCRIPTION
1	1	EA	SCHAEFER	SCE-12108CHNFSS6	JUNCTION ENCLOSURE, TYPE 4X 316SS, 12"H X 10"W X 8"D
2	1	EA	SCHAEFER	SCE-12P10	BACKPLATE, 11"H X 9"W
3					
4					
5	3	EA	ABB	ADR6	GROUND LUG, 14-6 AWG
6	1	EA	SQUARE D	PK9GTA	GROUND BAR, 9POINT, ALUMINUM
7					
8					
9	1	EA	EDWARDS	48FINR-N5-24WH	ALARM BEACON, NEMA 4X, HALOGEN, FLASHING, RED, 120VAC, 0.2AMP
10	1	EA	CAL-BRITE	S40S20CN00	304SS CLOSE NIPPLE, 1/2", 2"LONG
11	1	EA	ABB	H050GRSST	GROUNDING MYERS HUB, 1/2", NEMA 4X (316 SS)
12	1	EA	EDWARDS	B70P-N5	ALARM HORN, NEMA 4X, 120VAC, 0.13A
13	1	EA	SQUARE D	9001SKR1J	PUSHBUTTON, MOMENTARY, UNIVERSAL COLORS, FULL GUARD, 30mm, NEMA 4X
14	1	EA	SQUARE D	9001KA2	CONTACT BLOCK, 1 N.O., FINGERSAFE
15	1	EA	IDEC	RH2B-ULCAC120V	CONTROL RELAY, DPDT, 120VAC COIL, w/LIGHT, w/TEST BUTTON, 10A CONTACTS
16	1	EA	IDEC	SH2B-05	SOCKET, DIN RAIL MOUNTABLE
17					
18					
19					
20	2	EA	PHOENIX CONTACT	1201099	ANGLED BRACKETS, 30° Angle, 46mm high, type BG/SH
21					
22	4	EA	PHOENIX CONTACT	3045185	TERMINAL BLOCK, FEED THROUGH, UT 6, RED, 600V, 24-8 AWG
23	4	EA	PHOENIX CONTACT	3045198	TERMINAL BLOCK, FEED THROUGH, UT 6, WHITE, 600V, 24-8 AWG
24	4	EA	PHOENIX CONTACT	0800886	TERMINAL BLOCK END CLAMP, E/NS 35 N, GRAY
25	3	EA	PHOENIX CONTACT	3047028	TERMINAL BLOCK END COVER, D-UT 2,5/10

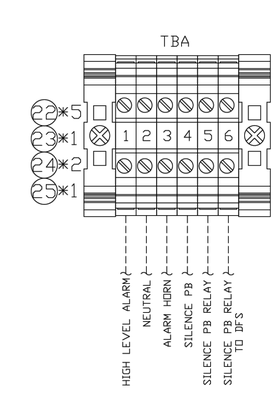
HSI	HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326	SOUTH DAYTONA LS5 – REMOTE ALARM BOX			
		480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A			
		BOM			
DRAWN BY: C. CAMPBELL		SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON		SCALE	DATE 3/24/2025	SHEET 2 OF 5	



HSI	HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326	SOUTH DAYTONA LS5 – REMOTE ALARM BOX			
		480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A			
		LAYOUT			
DRAWN BY: C. CAMPBELL		SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON		SCALE	DATE 3/24/2025	SHEET 3 OF 5	



HSI	HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326	SOUTH DAYTONA LS5 – REMOTE ALARM BOX			
		480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A			
		CONTROLS 6			
DRAWN BY: C. CAMPBELL		SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON		SCALE	DATE 3/24/2025	SHEET 4 OF 5	



WIRING KEY (UNLESS OTHERWISE NOTED)			
	120V		MTW, 600V @ 90C
SUPPLY	BLACK	12 AWG	MTW, 600V @ 90C
RETURN	WHITE	12 AWG	MTW, 600V @ 90C
GROUNDED	GREEN	12 AWG	MTW, 600V @ 90C
SIGNAL/CONTROL	RED	16 AWG	MTW, 600V @ 90C
SIGNAL/CONTROL RETURN	WHITE	16 AWG	MTW, 600V @ 90C
EXTERNAL SOURCE	ORANGE	14 AWG	MTW, 600V @ 90C
SEAL FAIL	PURPLE	16 AWG	MTW, 600V @ 90C
	24VDC		TYPE
SUPPLY	BLUE	16 AWG	MTW, 600V @ 90C
RETURN	WHITE W/ BLUE STRIP	16 AWG	MTW, 600V @ 90C
GROUNDED	GREEN	16 AWG	MTW, 600V @ 90C
CONTROL	BLUE	16 AWG	MTW, 600V @ 90C
SIGNAL	BLACK/WHITE	18 AWG/SHLD	MTW, 600V @ 90C
PANEL WIRING	————		
FIELD WIRING	- -		

RECOMMENDED TIGHTENING TORQUE - 32IN-LBS — LABEL 1

USE COPPER CONDUCTORS ONLY RATED @ 60°C — LABEL 2

RECOMMENDED TIGHTENING TORQUE - 7IN-LBS — LABEL 3

RECOMMENDED TIGHTENING TORQUE - FIELD TERMINAL BLOCKS #1-6 16 IN-LBS FIELD TERMINAL BLOCKS #7-14 7 IN-LBS — LABEL 4

TYPE 4X ENCLOSURE TO MAINTAIN ENCLOSURE RATING, USE HUBS OR FITTINGS WITH THE SAME ENVIRONMENTAL RATING — LABEL 5

HSI	HYDRA SERVICE INC. 2104 HWY 160 WARRIOR AL 35180 (205)647-5326	SOUTH DAYTONA LS5 – REMOTE ALARM BOX			
		480V 3PH TRIPLEX W/ MIXER 2.4HP 3.5A			
		TERMINAL LAYOUT			
DRAWN BY: C. CAMPBELL		SIZE	FSCM NO	DRAWING NUMBER TBD	REV
CHECKED BY: J. OLSON		SCALE	DATE 3/24/2025	SHEET 5 OF 5	

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
17229 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #39643 L.A. #6666555
STEVE BUSKELL P.E. #53585 R.L.A. #6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

LIFT STATION TYPICAL DETAILS

9
SHEET NO.

DRAWN BY: ADK

DATE: 04/09/2024

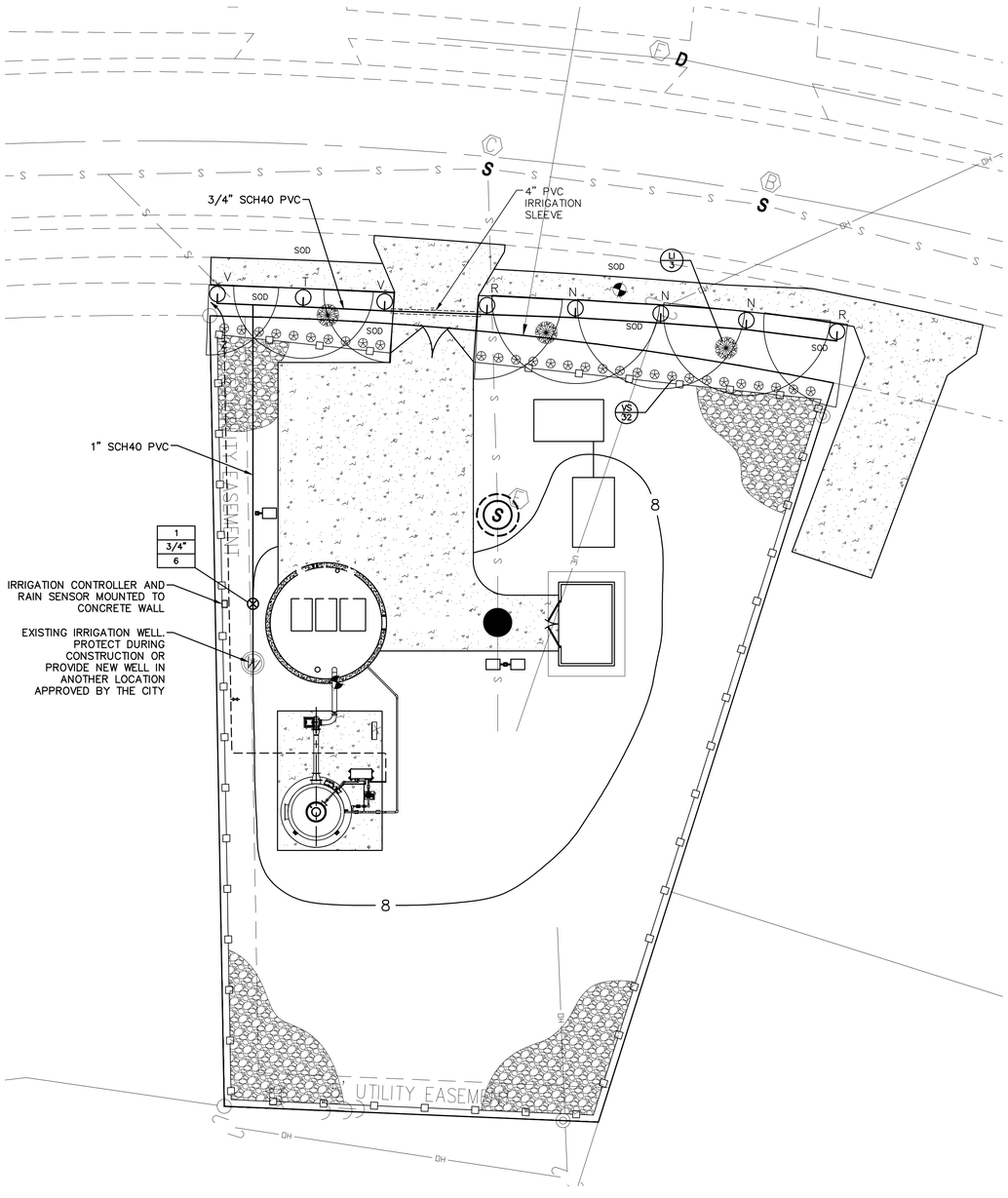
JOB NO. 23-36

SCALE: 1"=10'

Digitally signed by Kevin Lee
Date: 2025.05.01 10:05:18 -04'00'

SEAL

PLANT LIST					
SYMBOL	ABB.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
⊛	VS	32	VIBURNUM SUSPENSUM	SANDANKWA VIBURNUM	3 GAL., 30" O.C. 24" HT., MIN.
✺	LI	3	LAGERSTROEMIA INDICA	CRAPE MYRTLE	15 GAL. MIN., MULTI-TRUNK 8' HT. MIN.
SOD	ST. AUGUSTINE "FLORATAM" SOLID SOD (SQ. FT.)				



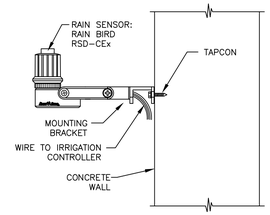
GENERAL IRRIGATION NOTES

1. THE CONTRACTOR SHALL REFER TO THE LANDSCAPING PLAN WHEN TRENCHING TO LAY PIPE TO AVOID NEW & EXISTING TREES & LARGE SHRUBS.
2. ALL WIRING FROM THE IRRIGATION CONTROLLER TO THE REMOTE CONTROL VALVES SHALL BE UF-14/1 DIRECT BURIAL CABLE. ALL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING ONLY RAIN BIRD CONNECTORS & SEALANT.
3. UNLESS OTHERWISE INDICATED, PIPING TO A SINGLE SPRAY HEAD SHALL BE 1/2" PVC PIPING. UNLESS OTHERWISE INDICATED, PIPING TO A SINGLE ROTOR HEAD SHALL BE 3/4" PVC PIPING.
4. ALL MAIN LINE PIPING SHALL BE BURIED TO HAVE A MINIMUM COVER OF 18". ALL LATERAL PIPING DOWNSTREAM OF THE MAIN LINE SHALL BE BURIED TO HAVE A MINIMUM COVER OF 12".
5. THE CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE ARCHITECT ON THE EXACT LOCATION OF THE IRRIGATION CONTROLLERS.
6. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS & DIMENSIONS SHOWN ON PLANS AT THE SITE PRIOR TO COMMENCEMENT OF WORK UNDER THIS CONTRACT.
7. ALL IRRIGATION INSTALLATION SHALL CONFORM TO LOCAL CODES & REGULATIONS.
8. ALL PIPING ON THE PLANS IS DIAGRAMMATICALLY ROUTED FOR CLARITY & SHALL BE ROUTED TO AVOID PLANTS. DESIGN MODIFICATIONS SHALL ONLY BE MADE AS NECESSARY TO MEET FIELD CONDITIONS & ONLY UPON APPROVAL OF THE LANDSCAPE ARCHITECT. PIPING SHOWN RUNNING PARALLEL UNDER SIDEWALKS ADJACENT TO PLANTED AREAS IS FOR DESIGN CONVENIENCE ONLY & SHALL BE INSTALLED WITHIN THE PLANTED AREA.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL ADJUSTMENT OF THE SPRINKLERS ARC & RADIUS TO ASSURE 100 PERCENT COVERAGE.
10. 115 VOLT, SINGLE PHASE ELECTRICAL POWER FOR THE IRRIGATION CONTROLLERS SHALL BE COORDINATED BY THE IRRIGATION CONTRACTOR WITH THE ELECTRICAL ENGINEERING DRAWINGS. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL HOOK-UP INCLUDING ELECTRICAL MATERIALS.
11. VALVES LOCATED OUTSIDE OF RIGHT-OF-WAY ARE FOR DESIGN PURPOSES ONLY & SHALL BE LOCATED INSIDE OF RIGHT-OF-WAY.
12. ANY CHANGES TO IRRIGATION ZONE PIPING TO BE APPROVED BY THE CITY LANDSCAPE ARCHITECT PRIOR TO WORK BEING DONE.
13. ALL XERIC IRRIGATION ZONES SHALL HAVE RUN TIMES REDUCED OR ELIMINATED AFTER SUFFICIENT PLANT ESTABLISHMENT. THIS NOTE TO APPEAR INSIDE THE CONTROLLER FOR MAINTENANCE PERSONNEL INFORMATION.

SPECIFIC IRRIGATION NOTES

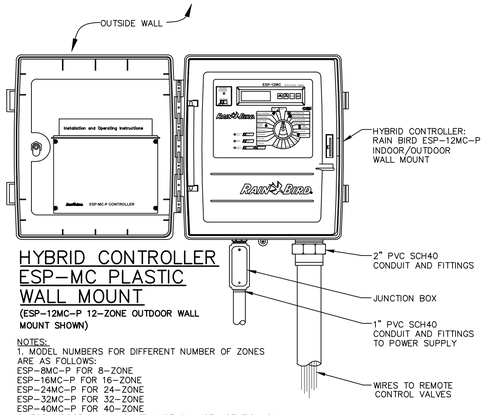
1. IRRIGATION SPRAY HEADS SHALL BE PRESSURE REGULATING.
2. SYSTEM SUPPLY REQUIREMENTS ARE: 40 GPM @ 40 PSI AT WATER SOURCE. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF DESIGN FLOW RATE AND PRESSURE DOES NOT EXIST.
3. LATERAL PIPES SHALL BE SIZED SUCH THAT THE WATER VELOCITY DOES NOT EXCEED 5 FEET/SECOND. CONTRACTOR SHALL APPLY THE FOLLOWING TABLE:

PIPE SIZE (MIN)	FLOW
1/2"	<6 GPM
3/4"	<10 GPM
1"	<15 GPM
1-1/4"	<26 GPM
1-1/2"	<36 GPM
2"	<50 GPM
2-1/2"	<80 GPM
3"	<120 GPM
4"	<200 GPM



MODEL RSD-CEx MOUNTING

RAIN SENSOR MOUNTING DETAILS

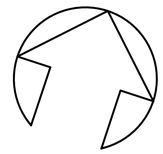


HYBRID CONTROLLER ESP-MC PLASTIC WALL MOUNT

(ESP-12MC-P 12-ZONE OUTDOOR WALL MOUNT SHOWN)

NOTES:
1. MODEL NUMBERS FOR DIFFERENT NUMBER OF ZONES ARE AS FOLLOWS:
ESP-8MC-P FOR 8-ZONE
ESP-16MC-P FOR 16-ZONE
ESP-24MC-P FOR 24-ZONE
ESP-32MC-P FOR 32-ZONE
ESP-40MC-P FOR 40-ZONE
2. FOR INDOOR WALL MOUNT, JUST CHANGE NOTATION ON DETAIL.
3. CONTRACTOR MAY SUBSTITUTE STEEL WALL MOUNT IN LIEU OF PLASTIC WALL MOUNT AT NO ADDITIONAL COST TO THE OWNER.

RAIN BIRD MPR SERIES NOZZLE SELECTION CHART					
SYM	SPEC	PSI	GPM	RADIUS	PATTERN
A	15F	30	3.7	15'	FULL
B	15TQ	30	2.78	15'	THREE QUARTER
C	N/A	–	–	–	N/A
D	15H	30	1.85	15'	HALF
E	15T	30	1.23	15'	THIRD
F	15Q	30	0.92	15'	QUARTER
G	15EST	30	0.61	4'x15'	END STRIP
H	15CST	30	1.21	4'x30'	CENTER STRIP
J	15SST	30	1.21	4'x30'	SIDE STRIP
K	12F	30	2.6	12'	FULL
L	12TQ	30	1.95	12'	THREE QUARTER
M	N/A	–	–	–	N/A
N	12H	30	1.3	12'	HALF
O	5Q-B	30	0.50	5'	BUBBLER
P	12T	30	0.87	12'	THIRD
R	12Q	30	0.65	12'	QUARTER
S	10F	30	1.58	10'	FULL
T	10H	30	0.79	10'	HALF
V	10Q	30	0.39	10'	QUARTER
W	8F	30	1.05	8'	FULL
X	8H	30	0.52	8'	HALF
Y	8T	30	0.35	8'	THIRD
Z	8Q	30	0.26	8'	QUARTER
5F	5F	30	0.41	5'	FULL
5H	5H	30	0.20	5'	HALF
5T	5T	30	0.13	5'	THIRD
5Q	5Q	30	0.10	5'	QUARTER



GRAPHIC SCALE

0 5 10 20 40

SCALE: 1" = 10'

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #29644 L.A. #0001553
STEVE BUSHELL P.E. #53585 R.L.A. #6667011
KEVIN A. LEE P.E. #71500
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

LANDSCAPE & IRRIGATION PLAN

10
SHEET NO.

DRAWN BY: ADK

DATE: 04/09/2024

JOB NO. 23-36

SCALE: 1"=10'

Parker Mynchenberg, R.L.A. LA0001553
Digitally signed by Parker Mynchenberg, R.L.A. LA0001553
Date: 2025.05.01 10:06:13 -04'00'

SEAL

IN ORDER TO ENSURE THAT NEW DEVELOPMENTS WITHIN THE CITY ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS "AS-BUILT" DRAWINGS ARE REQUIRED:

THE FOLLOWING INFORMATION IS REQUIRED ON ALL PAVING AND DRAINAGE "AS-BUILT" DRAWINGS:

1. PAVEMENT AND CURB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK. ALL RADII AT INTERSECTIONS SHALL BE VERIFIED AND DIMENSIONED. THIS INFORMATION TO CLEARLY INDICATE IT AS AS BEING "AS-BUILT" INFORMATION.
2. ROADWAY ELEVATIONS SHALL BE RECORDED AT ALL GRADE CHANGES OR OTHER INTERVALS AS NEEDED ALONG ALL STREETS. STREET CENTERLINE AND CURB INVERT ELEVATIONS SHALL BE RECORDED AS NOTED. THE "AS-BUILT" CENTERLINE PROFILE OF ALL STREETS SHALL ALSO BE SHOWN ON THE PLAN AND PROFILE SO IT MAY BE COMPARED TO THE EXISTING AND DESIGNED PROFILE GRADE LINES. ALL STREET CENTERLINES ON "AS-BUILTS" SHALL BE LABELED WITH STREET NAME AND RIGHT-OF-WAY WIDTH ON EVERY PAGE.
3. STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND/OR DIMENSIONED FROM CENTERLINES OR LOT LINES AS APPROPRIATE.
4. STORM DRAINAGE PIPE INVERT AND STRUCTURE TOP AND BOTTOM ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS "AS-BUILT" INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND "AS-BUILT" INFORMATION WRITTEN NEXT TO IT.
5. STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE MEASURED AND/OR VERIFIED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
6. ALL APPLICABLE TOPOGRAPHIC INFORMATION, PERTINENT TO THE ON SITE DRAINAGE SYSTEM SUCH AS DITCHES, LAKES, CANALS, ETC. THAT ARE DEEMED APPROPRIATE BY THE CITY SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100 FEET AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACQUIRE THE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES. WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
7. RETENTION AREAS SHALL HAVE THEIR TOP-OF-BANK AND BOTTOM ELEVATIONS RECORDED. ACTUAL MEASUREMENTS SHALL BE TAKEN AND DIMENSIONS RECORDED OF THE SIZE OF ALL RETENTION AREAS. MEASUREMENTS SHALL BE DONE FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED. SEPARATE CALCULATIONS SHALL BE SUBMITTED TO INDICATE REQUIRED AND PROVIDED RETENTION VOLUMES.
8. STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE SHALL BE RECORDED EVERY 100 FEET.
9. ANY SPECIAL FEATURES SUCH AS CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE A PART OF THE APPROVED CONSTRUCTION DRAWINGS SHOULD ALSO BE LOCATED AND DIMENSIONED.
10. ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE "AS-BUILT".

THE FOLLOWING INFORMATION IS REQUIRED ON ALL WATER AND SEWER "AS-BUILT" DRAWINGS:

11. SANITARY SEWER MANHOLES SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. ALL RIM AND INVERT ELEVATIONS SHALL BE VERIFIED AND RECORDED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
12. SANITARY SEWER LINE LENGTHS, SIZES, MATERIAL, SLOPE, ETC., SHALL BE VERIFIED AND RECORDED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
13. SEWER LATERALS SHALL BE VERIFIED AND RECORDED AT THEIR CLEAN-OUT LOCATIONS. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARDS UPSTREAM MANHOLES.
14. LIFT STATIONS AND FORCE MAINS SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. FORCE MAIN DEPTH AND LOCATION INCLUDING VALVES WILL BE PROVIDED AND TIED TO PERMANENT ABOVE GRADE FEATURES EVERY 500 FEET. DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED PLAN SHALL BE VERIFIED AND RECORDED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED AND LABELED.
15. CURB CUTS OR METAL TABS, USED TO MARK SEWER LATERALS, WATER SERVICES AND WATER VALVES, SHALL BE VERIFIED FOR PRESENCE AND ACCURACY OF LOCATION.
16. WATER MAIN LINES SHALL BE DIMENSIONED OFF THE BACK OF CURB OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. WATER MAIN LINE MATERIAL, SIZE, LENGTH AND DEPTH PLACED SHALL ALSO BE NOTED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
17. WATER VALVES, TEES, ALL SERVICES, BLOW – OFFS AND FIRE HYDRANTS SHALL BE LOCATED BY TYING THEM TO SANITARY SEWER MANHOLES, STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TO UPSTREAM MANHOLES.

THE FOLLOWING INFORMATION IS GENERAL REQUIREMENTS OF ALL "AS-BUILT" DRAWINGS:

18. FOR PERPENDICULAR CROSSINGS OF STORM WATER, SANITARY SEWER, POTABLE WATER, OR RECLAIMED WATER, THE "AS-BUILT" PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES, AS NECESSARY.
19. WHEN STORM WATER, POTABLE WATER, RECLAIMED WATER, OR SANITARY SEWER IMPROVEMENTS ARE LOCATED WITHIN AN EASEMENT, THE "AS-BUILT" SHALL ACCURATELY DEPICT THE LOCATION OF THE EASEMENT ITSELF AS WELL AS THE EXACT LOCATION OF THE IMPROVEMENTS WITHIN THE EASEMENT. THIS IS REQUIRED IN ORDER TO VERIFY THAT THE IMPROVEMENTS HAVE BEEN PROPERLY LOCATED AND TO ENSURE THAT FUTURE SUBSURFACE EXCAVATION TO PERFORM REMEDIAL REPAIR CAN BE ACCOMPLISHED WITHOUT DISTURBANCE BEYOND THE EASEMENT. SUCH DOCUMENTATION AND THE ASSOCIATED PROPOSED EASEMENT DOCUMENT WITH LEGAL DESCRIPTION SHALL BE SUBMITTED FOR CITY REVIEW AND APPROVAL PRIOR TO RECORDATION OF SAID EASEMENT. UPON CITY APPROVAL, THE EASEMENT SHALL BE RECORDED VIA A SEPARATE LEGAL INSTRUMENT AND SHALL NOT BE INCLUDED AS PART OF HOMEOWNER COVENANTS AND RESTRICTIONS.
20. SUBMIT CERTIFIED PAPER PRELIMINARY "AS-BUILT" (24"x36") WITH REQUEST FOR FINAL INSPECTION. SUBMIT 3 SETS SHOWING WATER FACILITIES, 3 SETS WITH SEWER FACILITIES, AND 3 SETS WITH PAVING AND DRAINAGE FACILITIES. PRELIMINARY "AS-BUILT" MAY BE SUBMITTED IN DIGITAL FORMAT. FOLLOWING FINAL INSPECTION AND COMMENTS, THE CONTRACTOR SHALL REVISE AS-BUILTS TO ADDRESS CITY COMMENTS AND SUBMIT 3 SETS CERTIFIED FINAL "AS-BUILTS" ALONG WITH 1 SET CERTIFIED MYLARS AND 1 CD-ROM CONTAINING AUTO-CAD FILES AND PDF VERSIONS SHOWING ALL "AS-BUILT" SHEETS. ALL "AS-BUILT" DRAWINGS SHALL BE CERTIFIED BY A REGISTERED LAND SURVEYOR AND ENGINEER OF RECORD. ALL DIGITAL FILES SHALL HAVE A DIGITAL SIGNATURE OF SURVEYOR AND/OR ENGINEER OF RECORD.
21. INDICATE VERTICAL DATUM REFERENCE ON ALL SHEETS.
22. CAD FILE OF "AS-BUILTS" SHALL BE IN STATE PLANE COORDINATES; FILE SHOULD INCLUDE REFERENCE TO PROJECTION. (FLORIDA EAST, NAD83)
23. ALL "AS-BUILT" DRAWINGS SHALL BE PREPARED BY A FLORIDA REGISTERED LAND SURVEYOR USING THE FINAL APPROVED SITE DESIGN PREPARED BY THE ENGINEER OF RECORD. LINE WEIGHTS, LINETYPES, AND ANNOTATION SHALL BE MANAGED IN A MANNER THAT CLEARLY DISTINGUISHES DESIGN INFORMATION FROM "AS-BUILT" INFORMATION.
24. ALL "AS-BUILT" SHEETS SHALL INCLUDE A TITLE BLOCK AND CLEARLY STATE PROJECT NAME, PROJECT SURVEYOR, DATE OF FIELD WORK, AS WELL AS PROJECT CERTIFICATION BLOCK FROM THE ENGINEER OF RECORD.

NOTE: REFERENCES TO WATER SHALL MEAN BOTH POTABLE AND RECLAIMED WATER.

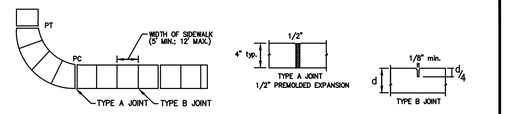
SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL REQUIREMENTS FOR "AS-BUILT" DRAWINGS	INDEX M-1A OCT 2021

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL REQUIREMENTS FOR AS BUILT DRAWINGS	INDEX M-1B OCT 2021

GENERAL NOTES:

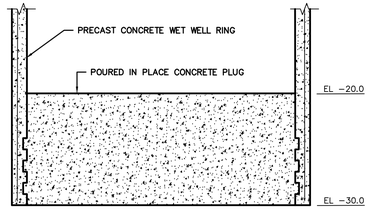
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF SOUTH DAYTONA'S LAND DEVELOPMENT CODE REQUIREMENTS, AND THE STANDARD CONSTRUCTION DETAILS AND CONSTRUCTION SPECIFICATIONS (SCDCS). AN ENGINEERING PERMIT AND TREE REMOVAL PERMIT IS REQUIRED PRIOR TO STARTING CONSTRUCTION.
2. NO LAND SHALL BE CLEARED, EXCAVATED OR FILLED AND NO STRUCTURE SHALL BE ERECTED, REPAIRED OR DEMOLISHED WITHOUT PROPER PERMIT(S) AS REQUIRED BY THE CITY OF SOUTH DAYTONA.
3. NOTIFY THE CITY OF SOUTH DAYTONA 48 HOURS PRIOR TO THE START OF CONSTRUCTION AT COMMUNITYDEVELOPMENT@SOUTHDAYTONA.ORG.
4. ANY CONSTRUCTION CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO THE CITY OF SOUTH DAYTONA FOR APPROVAL PRIOR TO PERFORMING THE WORK.
5. ROAD CONSTRUCTION, PIPE INSTALLATION, COMPACTION, AND DENSITY TESTING SHALL CONFORM TO THE CITY OF SOUTH DAYTONA'S MINIMUM REQUIREMENTS. CERTIFIED COPIES OF TEST REPORTS SHALL BE SUBMITTED TO THE CITY INSPECTOR AND THE CITY'S ENGINEERING DIVISION.
6. A PRE-PAVING UTILITY INSPECTION MUST BE REQUESTED AND COMPLETED PRIOR TO THE PAVING OF ALL ROADS, STREETS, AND PARKING AREAS.
7. A FINAL INSPECTION, TO BE CONDUCTED BY THE CITY OF SOUTH DAYTONA, SHALL BE PERFORMED ON ALL CONSTRUCTION. WHEN REQUESTING A FINAL INSPECTION, THE DESIGN ENGINEER SHALL NOTIFY THE CITY OF SOUTH DAYTONA AT COMMUNITYDEVELOPMENT@SOUTHDAYTONA.ORG.
8. THREE COMPLETE SETS OF AS-BUILT DRAWINGS (5 FOR SUBDIVISIONS) ARE REQUIRED TO BE SUBMITTED TO THE CITY OF SOUTH DAYTONA PRIOR TO REQUESTING A FINAL INSPECTION. AS-BUILT DRAWINGS MAY BE SUBMITTED IN DIGITAL FORMAT WITH DIGITAL SIGNATURE OF SURVEYOR AND/OR ENGINEER OF RECORD.
9. THE CITY HAS A CONTRACTOR FOR ROLL OFF SERVICE. NO OTHER CONTRACTOR SHALL BE PERMITTED TO PROVIDE THIS SERVICE. VERIFY COMPANY UNDER CONTRACT WITH THE CITY.
10. CONSTRUCTION SITES THAT DISTURB ONE ACRE OR MORE WILL BE REQUIRED TO SEEK COVERAGE UNDER THE GENERIC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES. IN ACCORDANCE WITH THIS REQUIREMENT, A STORM WATER POLLUTION PREVENTION PLAN (SWPP) MUST BE SUBMITTED TO THE CITY OF SOUTH DAYTONA AT COMMUNITYDEVELOPMENT@SOUTHDAYTONA.ORG PRIOR TO CONSTRUCTION TO BE IN COMPLIANCE WITH THE PERMIT.
11. CONTRACTOR WILL FOLLOW REQUIRED WASTE MANAGEMENT PRACTICES
12. SEEDING OR SODDING SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
13. ANY FIELD MODIFICATIONS OR DEVIATIONS TO THIS CONSTRUCTION PLAN REQUIRES WRITTEN APPROVAL BY BOTH THE ENGINEER OF RECORD AND THE CITY OF SOUTH DAYTONA.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL GENERAL CONSTRUCTION NOTES	INDEX M-2 OCT 2021

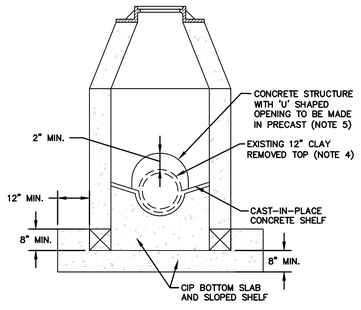


1. SIDEWALKS, BIKEPATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH A MAXIMUM SLUMP OF 3 INCHES, A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 2500 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS. SIDEWALKS SHALL BE 5 FOOT WIDE UNLESS OTHERWISE SHOWN ON PLANS.
2. SIDEWALKS AND BIKE PATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT-OF-WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE PAVEMENT REMAINS WITHIN THE RIGHT-OF-WAY, IS NOT DIMINISHED IN WIDTH, AND REMAINS AT LEAST 4 FEET FROM THE EDGE OF THE STREET PAVEMENT, UNLESS OTHERWISE APPROVED BY THE CITY.
3. THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
4. ALL WALKS SHALL HAVE A CROSS SLOPE OF 1/4 INCH PER FOOT AND SHALL NOT EXCEED A LONGITUDINAL SLOPE OF 1:20, EXCEPT AT DESIGNATED RAMPS THAT SHALL NOT EXCEED 1:12. PROVIDE A TACTIBLE WARNING SURFACE AT ALL RAMPS PER A.D.A. THE CONTRACTOR SHALL INSURE THAT ALL PROVISIONS OF A.D.A AND FLORIDA ACCESSIBILITY CODE ARE MET.*
5. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100 FEET IN SIDEWALKS AND BIKEPATHS. JOINT MATERIAL SHALL BE SPECIFIED IN FDOT STANDARDS AND SPECIFICATIONS AND SHALL BE RUBBER, PLASTIC OR OTHER APPROVED NON-BIODEGRADABLE ELASTOMERIC MATERIAL. WOOD IS PROHIBITED.
6. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB, AT MINIMUM SPACING OF 5', MAX SPACING OF 12'.
7. THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF THE EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
8. THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED WITH A VIBRATORY OR IMPACT COMPACTION MACHINE IN MAXIMUM 12 INCH LIFTS OR COMPACTED WITH A HAND TAMPER IN MAXIMUM 4 INCH LIFTS. THE CITY SHALL REQUIRE A COMPACTION TEST FOR EACH LIFT IF THE TOTAL FILLED SECTION IS MORE THAN 12 INCHES DEEP OR IF THE SUBSURFACE HAS BEEN DISTURBED MORE THAN 12 INCHES DEEP. WHERE SUCH TEST IS REQUIRED, THE RESULTS SHALL SHOW A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
9. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SLAB IN ACCORDANCE WITH THE CITY CODE. ANY SLAB SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
11. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
12. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, REGRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY **FLUSH WITH THE ADJACENT GRADE.**

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL SIDEWALK, RAMP, AND DRIVEWAY APRON CONSTRUCTION REQUIREMENTS NTS	INDEX M-3 OCT 2021

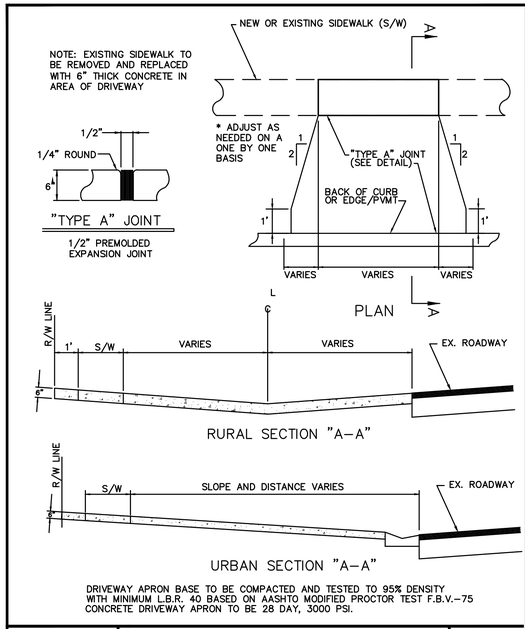


TREMIE WET WELL DETAIL
NOT TO SCALE



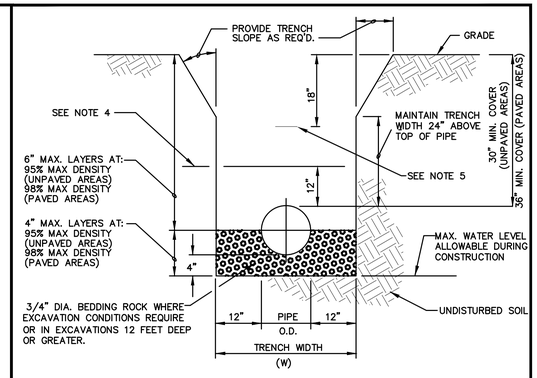
NOTES:
1. DOGHOUSE MANHOLE TO STRADDLE EXISTING 12" CLAY PIPE ON CENTER. CONTRACTOR TO PROVIDE SHOP DRAWING OF PRECAST STRUCTURE FOR REVIEW BY ENGINEER.
2. CONCRETE SLAB AND SLOPED SHELF TO BE CAST IN PLACE AND PROVIDE FLOW LINE TO PROPOSED 20" PVC TO WETWELL
3. CORE MANHOLE FOR PROPOSED 20" PVC TO WETWELL INV -7.00
4. EXISTING TOP OF PIPE TO BE REMOVED FLUSH WITH INVERT SHELF.
5. STRUCTURE AND SLOT TO STRADDLE EXISTING 12" CLAY PIPE TO BE MADE WITHOUT BOTTOM SLAB. STRUCTURE WITH STRADDLE TO BE MANUFACTURED IN PRECAST.
6. CONTRACTOR TO NOTIFY ENGINEER OF RECORD IF FIELD CONDITIONS REQUIRE DEVIATION FROM DETAIL.

DOGHOUSE MANHOLE DETAIL
NOT TO SCALE



DRIVEWAY APRON BASE TO BE COMPACTED AND TESTED TO 95% DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO MODIFIED PROCTOR TEST F.B.V.-75 CONCRETE DRIVEWAY APRON TO BE 28 DAY, 3000 PSI.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL RESIDENTIAL DRIVEWAY APRON DRAWINGS NTS	INDEX M-7 OCT 2021



PIPE INSTALLATION DETAIL

NOTES:
1. WHERE SOIL CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
3. COMPACTION PERCENTAGES SHOWN REFER TO A.A.S.H.T.O. T-180. PROVIDE COPIES OF CERTIFIED TEST REPORTS TO CITY INSPECTOR.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL.
5. INSTALL METALLIC TAPE OVER FULL LENGTH OF PIPE.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL PIPE INSTALLATION NTS	INDEX M-9 OCT 2021

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG, P.E. #36555
STEVE BUSNELL P.E. #53685 R.L.A. #6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

STANDARD CONSTRUCTION DETAILS

11
SHEET NO.

DRAWN BY: ADK

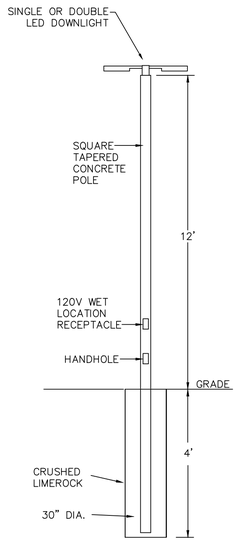
DATE: 04/09/2024

JOB NO. 23-36

SCALE: NONE

Digitally signed by Kevin Lee
Date: 2025.05.01 10:07:04 -04'00'

SEAL



DIRECT BURIAL
LIGHT POLE DETAIL
NOT TO SCALE

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER– STORY HABITAT, WHICHEVER IS NEAREST TO THE CONSTRUCTION ACTIVITY.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED. SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE THROUGHOUT PROJECT CONSTRUCTION.
6. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED. ANY PROJECT THAT IS INACTIVE FOR A PERIOD OF 30 DAYS OR MORE THE AREA SHALL BE STABILIZED TO THE SATISFACTION OF THE CITY OF SOUTH DAYTONA
8. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN TWO WEEKS THE CITY MAY REQUIRE THE CONTRACTOR TO RE–SEED OR A NON–VEGETATIVE OPTION MAY BE EMPLOYED.
9. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES NTS	INDEX M–16A OCT 2021

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

10. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
11. A SIGNED, DATED, AND SEALED LETTER FROM A SOILS ENGINEER OR THE ENGINEER OF RECORD CERTIFYING THAT THE AREAS TO BE FILLED HAVE BEEN STRIPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.
10. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T–180).
11. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE–FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
12. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T–180 MODIFIED PROCTOR METHOD.
13. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT MEASURED FROM THE ORIGINAL GRADE. AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDED AND MULCHED IMMEDIATELY UPON PLACEMENT OF THE FINAL LIFT. STOCKPILE AREA IS TO BE SURROUNDED BY SILT FENCE FROM THE INITIAL LIFT.
14. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.
15. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
16. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 5.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.
17. OWNER SHALL FILE A "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES" WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS REQUIRED BY DEP. CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH ALL PROVISIONS OF THE GENERIC PERMIT INCLUDING BUT NOT LIMITED TO:
    A. PROVIDE SUCH EROSION AND SEDIMENT CONTROL MEASURES AS MAY BE NECESSARY TO PREVENT DISCHARGE OF POLLUTANTS FROM THE SITE FROM THE START OF CONSTRUCTION UNTIL THE FINAL GROUND COVER HAS BEEN ESTABLISHED.
    B. EMPLOY A DEP CERTIFIED INSPECTOR TO MAKE WEEKLY INSPECTIONS / REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES.
    C. EMPLOY A DEP CERTIFIED INSPECTOR TO MAKE INSPECTIONS / REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES WITHIN 24 HOURS OF EVERY RAINFALL EVENT EXCEEDING ONE–HALF INCH.
    D. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION.
    E. ADD EROSION AND SEDIMENT CONTROL MEASURES AS SITE CONDITIONS CHANGE.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES NTS	INDEX M–16B OCT 2021

SANITARY SEWER CONSTRUCTION GENERAL NOTES

24. ALL MANHOLES CONSTRUCTED IN SIDE YARDS, BACKYARDS, AND EASEMENTS OFF THE RIGHT–OF–WAY SHALL BE OUTFITTED WITH FIBERGLASS LINERS OR OTHER TYPES OF LINERS OR COATINGS APPROVED BY THE CITY. IN ADDITION THE CITY MAY REQUIRE LINERS OR COATINGS TO BE INSTALLED IN OTHER AREAS WHERE THE PUBLIC UTILITY DEPARTMENTS BELIEVE THE NEED IS JUSTIFIED.
25. ALL SEWER LINES WHICH ARE CONSTRUCTED OFF PUBLIC RIGHTS–OF–WAY WITHIN SIDEYARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF C–900 PVC. ABSOLUTELY NO USE OF PLASTIC STYRENE FITTINGS SHALL BE ALLOWED.
26. SEWER LATERAL LOCATIONS SHALL BE MARKED ALONG THE OUTSIDE OF THE CURB WITH A SAW CUT V, OR BY A METAL TAB SET INTO THE PAVEMENT.
27. EZ–WRAP PLASTIC, AS MANUFACTURED BY PRESS–SEAL GASKET CORPORATION OR APPROVED EQUAL, SHALL BE USED ON THE OUTSIDE OF ALL MANHOLE AND WET WELL JOINTS. APPLY ONE LAYER OF 9" WRAP CENTERED ON EACH JOINT. A CITY INSPECTOR SHALL PERSONALLY INSPECT ALL JOINT SEALS PRIOR TO BACKFILLING OPERATIONS .
28. ALL PROPOSED SEWER MAINS, 4" OR GREATER, SHALL BE FLUSHED AND CLEANED WITH A POLY PIG IN ACCORDANCE WITH LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
29. ALL SEWER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES AND A MAXIMUM DEPTH OF 18' TO ANY MANHOLE OR 22' TO ANY WETWELL. IN SPECIAL CASES WHERE IT IS IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER C900/C905 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY.
30. FORCE MAIN SYSTEMS SHALL BE PRESSURE TESTED AT 100 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS. TESTS SHALL BE CONDUCTED BEFORE FINAL PAVING AND IN THE PRESENCE OF THE CITY'S INSPECTOR. SUBMIT FOR FDEP CLEARANCE BEFORE PAVING.
31. DURING CONSTRUCTION, CONTRACTOR SHALL ISOLATE NEW SANITARY SEWER CONSTRUCTION FROM EXISTING SANITARY SEWER MAINS. THIS ISOLATION MAY BE BY INSTALLATION OF A BLADDER/PLUG PLACED AT POINT OF CONNECTION OR BY OTHER METHODS. THE PURPOSE OF THIS ISOLATION IS TO ENSURE SURFACE WATER IS NOT RELEASED TO THE TREATMENT PLANT. SURFACE WATER SHALL BE REMOVED PRIOR TO THE BLADDER BEING REMOVED.

FORCE MAIN & REUSE MAIN STANDARDS

DIAMETER	MATERIAL	STANDARD
2" – 4"	PVC 1120 / SDR 21	ASTM D 2241
> 4" – 12"	PVC 1120 / CLASS 100	AWWA C 900
14" – 36" (16"– 24" ⟶ DR – 18) (30"– 36" ⟶ DR – 21)	PVC 1120	AWWA C 905
ALL SIZES	HDPE (DIPS) DR 13.5	ASTM F 714

NOTE: PVC PIPE COLOR SHALL BE GREEN FOR SEWER FORCE MAIN, AND PURPLE FOR REUSE MAIN.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL GENERAL NOTES SANITARY SEWER CONSTRUCTION	INDEX S–1C OCT 2021

SANITARY SEWER CONSTRUCTION GENERAL NOTES

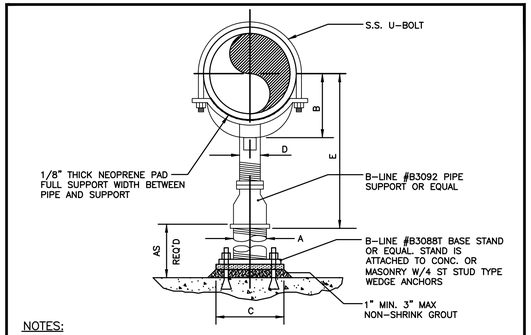
1. THE CITY'S PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED PRIOR TO BEGINNING ANY SEWER CONSTRUCTION.
2. ALL GRAVITY SANITARY SEWER LINES SHALL BE A MINIMUM OF 8" IN DIAMETER. SERVICE LATERALS SHALL BE A MINIMUM OF 4" DIAMETER (RESIDENTIAL) OR A MINIMUM OF 6" DIAMETER (COMMERCIAL)
3. ALL SANITARY SEWER LINES SHALL BE PVC SDR 26. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, C–900 GREEN PVC DR–25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED.
4. MINIMUM ALLOWABLE SANITARY SEWER SLOPES ALLOWED ARE:
    8" PIPE 0.40%
    10" PIPE 0.30%
    12" PIPE 0.22%
5. SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT.
6. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING, DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH.
7. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES WILL NOT BE ACCEPTED. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY.
8. TRENCHES SHALL BE BACKFILLED WITH CLEAN GRANULAR MATERIAL IN MAX. 1' LIFTS WITH A MINIMUM COMPACTION OF 98 PERCENT (ASSHTO–T180) IN PAVED AREAS AND 95 PERCENT IN UNPAVED AREAS.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TEST BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET, AND TO FURNISH COPIES OF TEST REPORTS PROMPTLY TO THE CITY INSPECTOR.
10. EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING OF EXCAVATION WORK OR USE OF TRENCH BOX IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELL AS REPRESENTATIVES OF THE CITY, THE DESIGN ENGINEER, AND THE DEVELOPER.
11. THE CONTRACTOR SHALL INSTALL A METALLIZED FOIL LOCATER TAPE, OR SIMILAR DEVICE AS MAY BE APPROVED BY THE CITY FOR THE FULL LENGTH OF ALL PVC WATER, RECLAIMED WATER AND SEWAGE FORCE MAINS. THIS PIPE LOCATER AID SHALL BE INSTALLED (15) INCHES BELOW FINISHED GRADE OR AS DIRECTED BY THE MANUFACTURER AND IS IN ADDITION TO THE LOCATER WIRE REQUIRED IN THE UTILITY PIPE LOCATION MATERIALS DETAIL (MISCELLANEOUS DETAILS SECTION – M10).
12. MANHOLES SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 400 FEET.
13. MANHOLE RIMS SHALL MATCH FLUSH WITH THE FINISH GRADE ELEVATION IN PAVED AREAS AND A MINIMUM OF 0.2 FEET ABOVE GRADE IN UNPAVED AREAS.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL GENERAL NOTES SANITARY SEWER CONSTRUCTION	INDEX S–1A OCT 2021

SANITARY SEWER CONSTRUCTION GENERAL NOTES

14. THE CONTRACTOR SHALL CONSTRUCT SANITARY SEWER MANHOLES IN SUCH A WAY THAT SEWER LINES DO NOT INTERSECT SEALED JOINTS BETWEEN SECTIONS OF THE MANHOLE.
15. RUBBER BOOTS AND STAINLESS STEEL BANDS SHALL BE UTILIZED IN THE CONNECTION OF THE SEWER MAIN TO THE MANHOLES (SEE RUBBER BOOT AND PRECAST JOINT CONNECTION DETAIL).
16. DOGHOUSE TYPE MANHOLES ARE NOT PERMITTED WITHIN THE CITY OF SOUTH DAYTONA
17. INDIVIDUAL SANITARY SERVICE CONNECTORS ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, BUT TO SEWER MAIN LINES BY USE OF WYE CONNECTIONS.
18. FOR SINGLE FAMILY HOMES, SINGLE FOUR INCH SEWER SERVICES SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS TO BE USED ON ALL LINES, NO GLUED JOINTS.
19. FOR MULTI–FAMILY AND COMMERCIAL SITES, SIX INCH MINIMUM SEWER SERVICES AND CLEANOUTS SHALL BE PROVIDED AS APPROVED BY THE CITY.
20. SANITARY SEWER LATERALS LONGER THAN 70 FEET, MEASURED FROM THE SEWER MAIN TO THE RIGHT–OF–WAY LINE MAY BE APPROVED ON A CASE BY CASE BASIS. SUCH LATERALS SHALL BE D.I.P. EPOXY LINED OR C–900 PVC.
21. SANITARY SEWER MANHOLES WHICH HAVE SEWER FORCE MAINS DISCHARGING DIRECTLY INTO THEM, OR ANY MANHOLE WITHIN 200 FEET OF A LIFT STATION, SHALL BE FIBERGLASS OR PVC LINED. RETRO–FITTING OF MANHOLES WITH LINERS SHALL BE REQUIRED WHEN NEW CONNECTIONS SUCH AS THIS ARE MADE. LINING SHALL BE AGRU SURE–GRIP, RAVEN, SEWPERCOAT, GREEN MONSTER, OR PRE–APPROVED EQUAL.
22. SEE CHART ON DETAIL INDEX S–1C FOR FORCE MAIN AND REUSE PIPE SIZE AND MATERIALS.
23. THE CITY OF SOUTH DAYTONA REQUIRES THE DEVELOPER/CONTRACTOR TO TELEVISE ALL SANITARY SEWER MAINS AND LATERALS PRIOR TO ACCEPTANCE AND RESERVES THE RIGHT TO REQUEST WATER AND AIR TESTING. A REPUTABLE COMPANY THAT ENGAGES IN THIS TYPE OF WORK SHALL CONDUCT THE TELEVISING PROCESS. THE DVD AND/OR DIGITAL FILE SHALL BE NON STOP WITH AUDIO DESCRIBING WHAT IS BEING REVIEWED. WRITTEN DVD LOGS DESCRIBING THE CONDITION OF THE LINES SHALL ACCOMPANY THE DVD SUBMISSION TO THE CITY. THIS PROCESS SHALL BE WITNESSED BY A REPRESENTATIVE OF THE CITY OF SOUTH DAYTONA.

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL GENERAL NOTES SANITARY SEWER CONSTRUCTION	INDEX S–1B OCT 2021



NOTES:

1. PROVIDE HALF ROUND RIGID INSULATION & INSULATION PROTECTION SHIELD, SIMILAR TO GRINNED FIG.167 OR ELENA FIG.219 WHEN PIPING IS INSULATED.
2. FOR BASE, HEIGHT, & FLANGE DIMENSIONS, SEE TABLE TO RIGHT. ALL DIMENSIONS IN INCHES.
3. ALL COMPONENTS OF PIPE SUPPORT SHALL BE STAINLESS STEEL.

PIPE SIZE	A	B	C	D	E MIN.	E MAX.
2 1/2	2 1/2	3 1/2	9	1 1/2	8	13
3	2 1/2	3 3/4	9	1 1/2	8 1/4	13 1/4
3 1/2	2 1/2	4	9	1 1/2	8 1/2	13 1/2
4	3	4 1/4	9	2 1/2	9 1/4	14
5	3	4 7/8	9	2 1/2	10	14 3/4
6	3	5 1/2	9	2 1/2	10 1/2	15 1/4
8	3	6 7/8	9	2 1/2	11 3/4	16 1/2
10	3	8 1/2	9	2 1/2	13 1/2	18 1/4
12	3	9 15/16	9	2 1/2	15	19 3/4
14	4	10 15/16	11	3	16 1/4	20 3/4
16	4	12 3/8	11	3	17 3/4	22 1/4
18	6	13 7/8	13 1/2	3 1/2	19 1/2	24
20	6	15 3/8	13 1/2	3 1/2	21	25 1/2
24	6	17 15/16	13 1/2	4	23 3/4	28 1/4

SOUTH DAYTONA FLORIDA	STANDARD CONSTRUCTION DETAIL ADJUSTABLE PIPE SUPPORT NT.	INDEX M–22 OCT 2021

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
17229 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677–6891 FAX (386) 677–2114 E–MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #36855 KEVIN A. LEE P.E. #71501
STEVE BUSNELL P.E. #36385 R.L.A. #A6667011
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

STANDARD CONSTRUCTION DETAILS

12
SHEET NO.

DRAWN BY: ADK

DATE: 04/09/2024

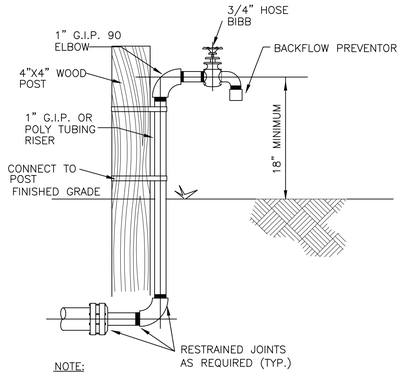
JOB NO. 23–36

SCALE: NONE

KEVIN A. LEE LICENSED No. 71501 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Kevin Lee
Date: 2025.05.01 10:07:32 -04'00'

SEAL



NOTE:
1. PROVIDE SUPPORT OR PROTECTIVE POSTS.

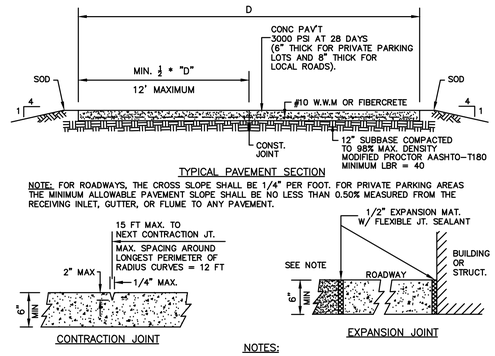
HOSE BIBB WITH BACKFLOW PREVENTER
NOT TO SCALE

GENERAL NOTES
LIFT STATION CONSTRUCTION

1. NEW WET WELLS SHALL BE CONSTRUCTED USING CONCRETE PROTECTIVE LINERS (AGRU SURE GRIP OR EQUIVALENT). EXISTING WET WELLS SHALL BE LINED WITH SPECTRA-SHIELD, SEWPERCOAT, GREEN MONSTER OR APPROVED EQUAL. WET WELL EXTERIOR SHALL BE COATED WITH COAL TAR EPOXY.
2. BASE AND FIRST RISER UNIT TO BE CAST MONOLITHIC.
3. VALVE VAULT AND ACCESS COVERS SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE.
4. VALVE VAULT SHALL HAVE SEALED FLOOR W/DRAIN TO WET WELL – TRAP REQUIRED.
5. ALL LOCATIONS WHERE PIPES ENTER OR LEAVE THE WET WELL OR VALVE VAULT SHALL BE MADE WATERTIGHT WITH WALL SLEEVE OR NON-SHRINK GROUT.
6. PUMP LIFTING DEVICE SHALL BE 304 SS LIFTING CABLE.
7. THERE SHALL BE NO ELECTRICAL JUNCTION BOXES IN WET WELL OR VALVE VAULT.
8. CHECK VALVES SHALL BE OUTSIDE LEVER & SPRING.
9. WET WELL & VALVE VAULT COVERS SHALL BE ALUMINUM WITH 304S.S HARDWARE, AS RECOMMENDED AND REQUIRED BY PUMP MANUFACTURER (LOADING 300 P.S.F.) AND PROVIDED WITH RECESSED LOCKS.
10. CONTROL PANEL SHALL BE AS MANUFACTURED BY THE PUMP SUPPLIER OR APPROVED EQUAL.
11. WET WELL DIAMETER SHALL BE 6' NOMINAL.
12. ACCESS HATCH DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE PUMPING EQUIPMENT, PIPING AND CONCRETE STRUCTURES TO ENSURE ADEQUATE ACCESS OPENINGS FOR INSTALLATION, OPERATION AND MAINTENANCE OF ALL EQUIPMENT.
13. VALVE VAULT AND WET WELLS SHALL BE PRECAST CONCRETE. SUBMIT SHOP DRAWINGS WITH REINFORCING DETAILS FOR APPROVAL PRIOR TO FABRICATION.
14. IF CITY FORCEMAIN IS INSTALLED PRIOR TO LIFT STATION COMPLETION, PROVIDE NECESSARY WET TAP AND ALL MATERIAL AND LABOR FOR CONNECTION IN ACCORDANCE WITH CITY STANDARDS. IF FORCEMAIN HAS NOT BEEN INSTALLED PRIOR TO COMPLETION, CAP FORCEMAIN INSTALLED UNDER THIS PROJECT AT R.O.W. LINE AND PROVIDE 4x4 POST MARKER. ISSUE OWNER CREDIT FOR WET TAP AND CONNECTION.
15. PROVIDE LOCKS KEYED TO THE CITY'S MASTER KEY.
16. CHAIN LINK FENCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
    A. POSTS SHALL BE SCHEDULE 40, GALVANIZED STEEL (2" OUTSIDE DIAMETER MIN.), MAXIMUM 10 FOOT SPACING
    B. FABRIC FOR FENCING AND GATES SHALL BE 9 GAUGE 2" MESH, CLASS 1, CONFORMING TO A.S.T.M. A-392D, 1.2 OZ. GALVANIZED COATING.
    C. POSTS SHALL BE SET IN 2500 PSI CONCRETE IN AN 8" DIAMETER HOLE WITH A DEPTH OF 36 INCHES.
    D. FENCING SHALL BE SCREENED WITH PVC SLATS, WINGED-SLATS OR APPROVED EQUAL. COLOR SHALL BE GREEN.
18. PUMPS SHALL BE XYLEM / FLYGT, GRUNDFOS, ABS OR COMPARABLE
19. MIX & FLUSH VALVE SHALL BE INSTALLED ON ONE PUMP.
20. FURNISH & INSTALL E-Z WRAP FILTER FABRIC AROUND JOINTS OF WET WELL RISER RING & TOP SLAB.
21. COAL TAR EPOXY SHALL BE APPLIED TO THE CONCRETE, DUCTILE IRON PIPE, AND VALVES WITHIN THE VALVE VAULT
22. FURNISH AND INSTALL EMERGENCY GENERATOR CONNECTION WITH MALE END COMPATIBLE WITH CITY OF SOUTH DAYTONA EQUIPMENT.
23. SEAL GRAVITY PIPE AT WET WELL WITH RUBBER BOOT SEAL

CITY OF SOUTH DAYTONA
LIFT STATION REQUIREMENTS

1. AUXILIARY POWER CONNECTION:
    A. FOR PUMPS < 10HP – CROUSE-HINDS CAT. NO. AR1042, 100 AMP, 230 VOLT WITH AJA5 ANGLE ADAPTER OR APPROVED EQUAL
    B. FOR PUMPS ≥ 10HP – CROUSE-HINDS CAT. NO. 2042, 200 AMP, 600 VAC, 3 POLE, 4 WIRE WITH AJA1 ANGLE ADAPTER OR APPROVED EQUAL
    C. RECEPTACLE SHALL BE FITTED WITH MALE END.
2. PUMP STATION MUST HAVE ACCESS AT ALL TIMES FOR CITY MAINTENANCE VEHICLES.
3. HAND – (ON-OFF) – AUTOMATIC SWITCHES ON ALL PUMPS.
4. MANUAL – (ON-OFF) – SWITCH ON ALL ALTERNATORS.
5. ONE ELAPSED TIME METER FOR EACH PUMP.
6. 120 VOLT RECEPTACLE INSIDE CONTROL BOX.
7. 3 PHASE CURRENT (WILL NOT ACCEPT ADD A PHASE OR CAPACITOR PHASE CHANGERS).
8. SWITCH FROM PLC TO BYPASS ON CONTROL PANEL.
9. THERE SHALL BE A SEPARATE CONDUIT FOR EACH PUMP POWER CABLE. CONTROL CABLE SHALL BE IN A SEPARATE CONDUIT.
10. LIQUID FILLED PRESSURE GAUGE ON FORCE MAIN.
11. THE CITY WILL NOT ACCEPT 120 VOLT TO FLOAT SWITCHES, AND MUST BE TRANSFORMER ISOLATED-24 VOLT MAX. ALL CONNECTIONS MUST TERMINATE IN CONTROL PANEL OUTSIDE OF WET WELL.
12. AS-BUILTS ON UNDERGROUND POWER SERVICE IF NOT INSTALLED BY F.P.& L.
13. MUST HAVE APPROVED LIFT STATION MANUALS, SHOP DRAWINGS, ETC.
14. KNIFE SWITCH DISCONNECT BETWEEN F.P.& L. AND LIFT STATION CONTROL PANEL – STAINLESS STEEL.
15. FURNISH FOR SOUTH DAYTONA STANDARD RTU, MOUNTED AND CONNECTED IN CONFORMANCE WITH CITY STANDARDS TYPICAL SCADA WIRING INTERFACE AT LIFT STATION:
    A. PUMP STATUS: NORMALLY OPEN DRY CONTACT ON EACH MOTOR STARTER.
    B. PHASE ALARM: NORMALLY OPEN DRY CONTACT ON PHASE FAILURE RELAY.
    C. HIGH LEVEL ALARM: NORMALLY OPEN DRY CONTACT ON HIGH LEVEL ALARM RELAY.
    D. IF AVAILABLE – PROVIDE CURRENT TRANSFORMER AND TRANSMITTER TO PROVIDE 4-20 mA OUTPUT PROPORTIONAL TO THE TOTAL STATION AMPERAGE. (SELECT ONE LEAD OF 3-PHASE POWER).
    E. PROVIDE 120 VAC SOURCE – 5 AMPS – FOR RTU POWER.
    F. ALL CONNECTIONS BROUGHT TO BARRIER TERMINAL STRIP.
16. PUMP CONTROL AND MONITORING ACCOMPLISHED THROUGH RTU.
17. THE ELECTRICAL SUBCONTRACTOR AND/OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR AN RF PATH STUDY BETWEEN THE PROPOSED SITE AND THE ELEVATED TANK AT THE WATER PLANT. THE STUDY IS TO ESTABLISH THE REQUIRED ANTENNAE HEIGHT, AZIMUTH AND ESTIMATED SIGNAL STRENGTH (MINIMUM OF -85DBM).
18. THE ELECTRICAL SUBCONTRACTOR SHALL COORDINATE WORK WITH THE CONTRACTOR TO ENSURE THAT ALL RADIO TRANSMISSION SIGNALS ARE PROPERLY TRANSMITTED AND RECEIVED WITHOUT ERRORS. RADIO TRANSMISSION SIGNALS MUST BE A MINIMUM OF -85 DBM.
19. BACK-UP FLOAT SYSTEM FOR PUMP CONTROL SHALL BE INSTALLED AND CONNECTED TO THE PUMP CONTROL PANEL THIS SYSTEM SHALL BE AUTOMATICALLY ACTIVATED IN THE EVENT OF LOSS OF CONTROL FROM THE RTU.

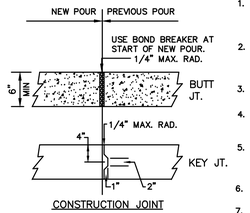


TYPICAL PAVEMENT SECTION

NOTE: FOR ROADWAYS, THE CROSS SLOPE SHALL BE 1/4" PER FOOT. FOR PRIVATE PARKING AREAS THE MINIMUM ALLOWABLE PAVEMENT SLOPE SHALL BE NO LESS THAN 0.50% MEASURED FROM THE RECEIVING INLET, GUTTER, OR FLUME TO ANY PAVEMENT.

CONTRACTION JOINT

EXPANSION JOINT



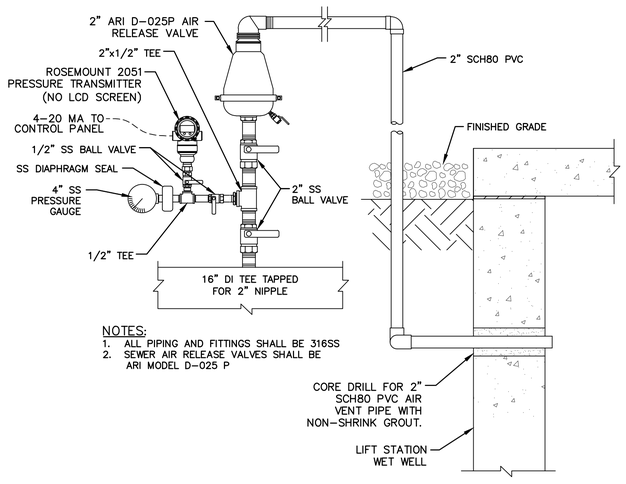
CONSTRUCTION JOINT

NOTES:
1. CONTRACTION JTS. MAY BE HAND FORMED, SAWED OR CONSTRUCTED W/ A 1/4" PREMOLDED FILLER JT. JOINTS MUST BE SAWED BETWEEN 4 AND 18 HOURS AFTER CONCRETE HAS BEEN PLACED.
2. EXPANSION JOINTS TO BE PLACED BETWEEN ROADWAY AND CURB. ALSO AT ANY PERMANENT STRUCTURE ABUTTING OR WITHIN THE PAVED AREA INCLUDING SIDEWALKS.
3. USE OF WOOD IS NOT AN ACCEPTABLE ALTERNATIVE TO FLEXIBLE JOINT SEALANTS.
4. PROPOSED PLAN FOR JOINT LAYOUT FOR EVERY ROADWAY INTERSECTION SHALL BE PROVIDED IN CONSTRUCTION PLANS.
5. FINAL DETERMINATION OF CONSTRUCTION JOINT SELECTION AND APPLICATION SHALL BE MADE BY THE ENGINEER OF RECORD BASED ON PROJECT REQUIREMENTS AND LOCATION.
6. CONSTRUCTION JOINTS WITHIN THE SLAB AREA SHOULD NOT CONTAIN PREMOLDED EXPANSION JOINT FILLER.
7. CONCRETE PAVEMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH A.C.I. PUBLICATION ACI 330R-87.

STANDARD CONSTRUCTION DETAIL GENERAL NOTES LIFT STATION CONSTRUCTION	INDEX	SLS-1A
	OCT 2021	

STANDARD CONSTRUCTION DETAIL CITY OF SOUTH DAYTONA LIFT STATION REQUIREMENTS	INDEX	SLS-1B
	OCT 2021	

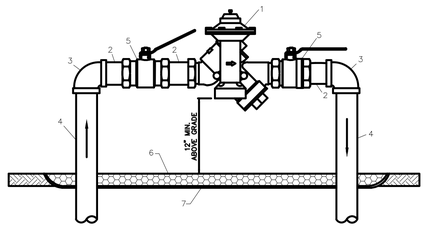
STANDARD CONSTRUCTION DETAIL CONCRETE PAVEMENT DETAILS NTS	INDEX	R-11A
	OCT 2021	



NOTES:
1. ALL PIPING AND FITTINGS SHALL BE 316SS
2. SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025 P

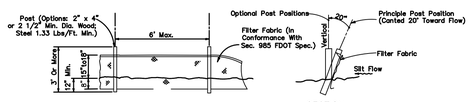
AIR RELEASE VALVE, PRESSURE GAUGE & VENT PIPE DETAIL
NOT TO SCALE

ACCEPTABLE MANUFACTURERS:
WILKINS MODEL 975XL, WATTS MODEL 009 QTS, APOLLO MODEL RPLF4A



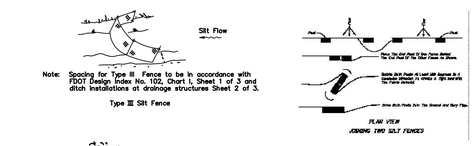
ITEM	QUANT.	DESCRIPTION
1	1	3/4", 1", 1-1/2" OR 2" BACKFLOW PREVENTER ASSEMBLY
2	3	3/4", 1", 1-1/2" OR 2" x NOM. NIPPLES – BRASS
3	2	3/4", 1", 1-1/2" OR 2" x 90° ELBOWS – PVC., BRASS, OR COPPER
4	2	3/4", 1", 1-1/2" OR 2" x VARIES RISER – PVC., BRASS, OR COPPER
5	2	3/4", 1", 1-1/2" OR 2" BALL VALVE
6	*	PEA GRAVEL
7	*	PLASTIC LINER

NOTE: -FIELD ADJUST AND CUT ITEM 4 TO THE PROPER LENGTH.
-NO GALVANIZED FITTINGS OR PIPE ALLOWED.
-A COPY OF THE ASSEMBLY CERTIFICATION SHALL BE SUBMITTED TO THE COMMUNITY DEVELOPMENT/BUILDING DEPARTMENT BEFORE FINAL INSPECTION.
-ASSEMBLY SHOULD HAVE ADEQUATE LANDSCAPING AROUND IT TO OBSCURE VIEW.
-ASSEMBLY SHALL BE PAINTED FOREST GREEN
-WILKINS ASSEMBLIES ARE REQUIRED FOR CITY OWNED FACILITIES

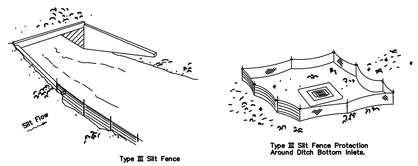


Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE

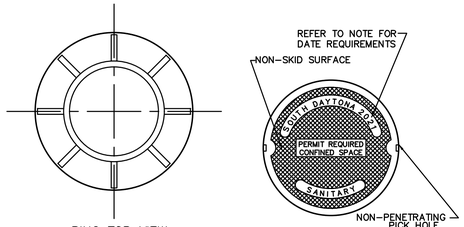


Note: Spacing for Type III Fence to be in accordance with FDOT Design Index No. 102, Chart I, Sheet 1 of 3 and ditch installations at drainage structures Sheet 2 of 3.

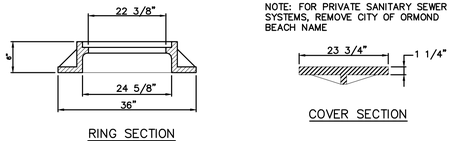


Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

SILT FENCE APPLICATIONS



NOTE: FOR PRIVATE SANITARY SEWER SYSTEMS, REMOVE CITY OF ORMOND BEACH NAME



NOTE: MANHOLE RING AND COVER SHALL CONFORM TO FDOT STANDARD INDEX 201, SHEET 1 OF 6, AS SHOWN IN ROADWAY TRAFFIC DESIGN STANDARDS.

NOTE: YEAR STAMP TO MATCH CASTING YEAR

U. S. FOUNDRY 195E-ORS ("O" RING SEAL) OR APPROVED EQUAL

COVER TYPE	LOAD RATING	COVER WEIGHT	TOTAL WEIGHT
BJ	HEAVY DUTY	200	350

FOR MANHOLES IN FL. D.O.T. R/W OR AS DETERMINED BY THE CITY. THE COVER TYPE SHALL BE – BJ HEAVY DUTY 200 LBS W/ ORS.

STANDARD CONSTRUCTION DETAIL REDUCED PRESSURE BACKFLOW PREVENTER (POTABLE WATER & COMMERCIAL PROPERTY IRRIGATION) – 3/4", 1", 1 1/2", OR 2" NTS	INDEX	W-5D
	OCT 2021	

STANDARD CONSTRUCTION DETAIL EROSION CONTROL – SILT FENCE NTS	INDEX	M-15
	OCT 2021	

STANDARD CONSTRUCTION DETAIL MANHOLE RING AND COVER DETAIL NTS.	INDEX	S-9B
	OCT 2021	

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #24644 LARRY GRESS
STEVE BUSNELL P.E. #53585 R.L.A. #6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

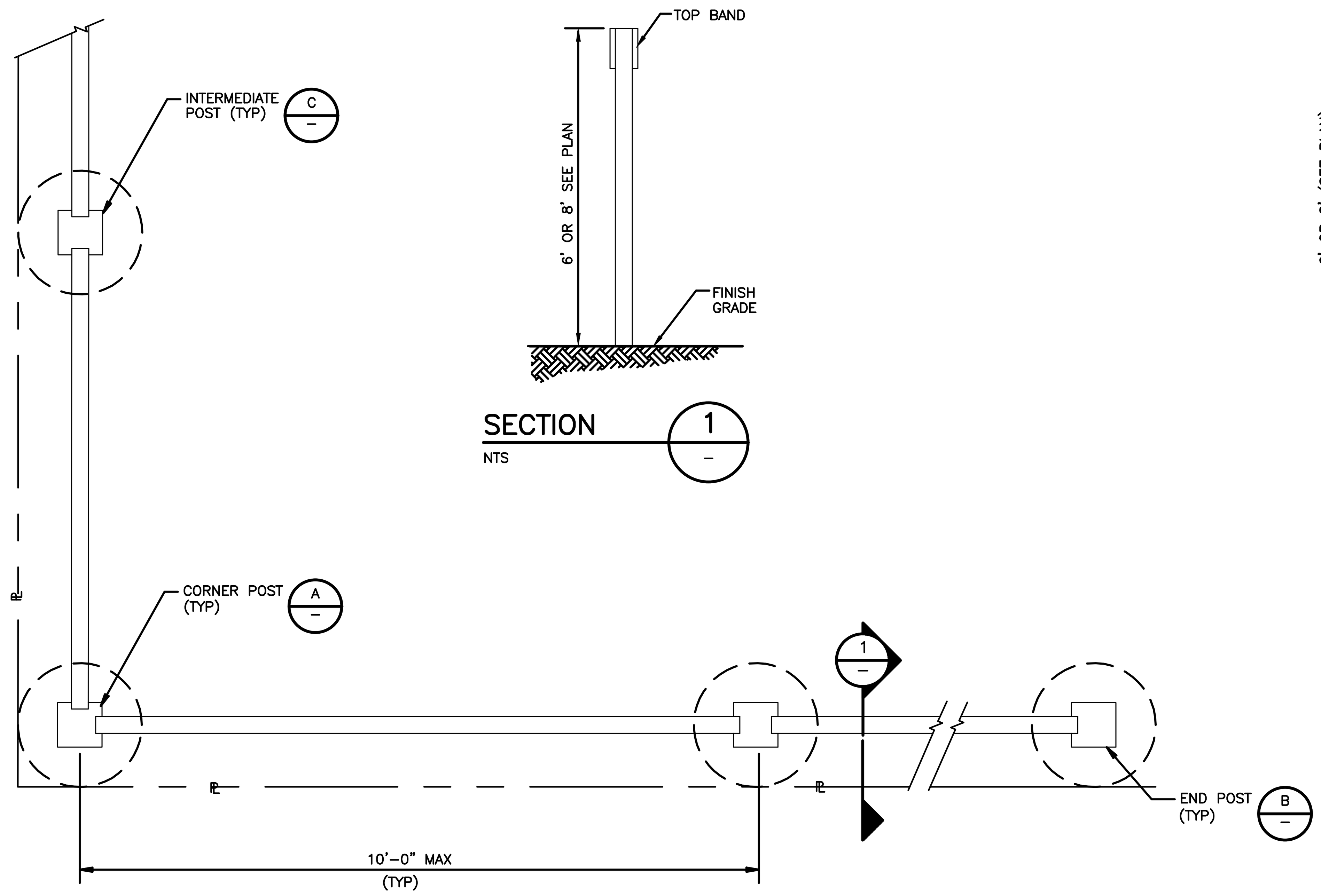
LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

STANDARD CONSTRUCTION DETAILS

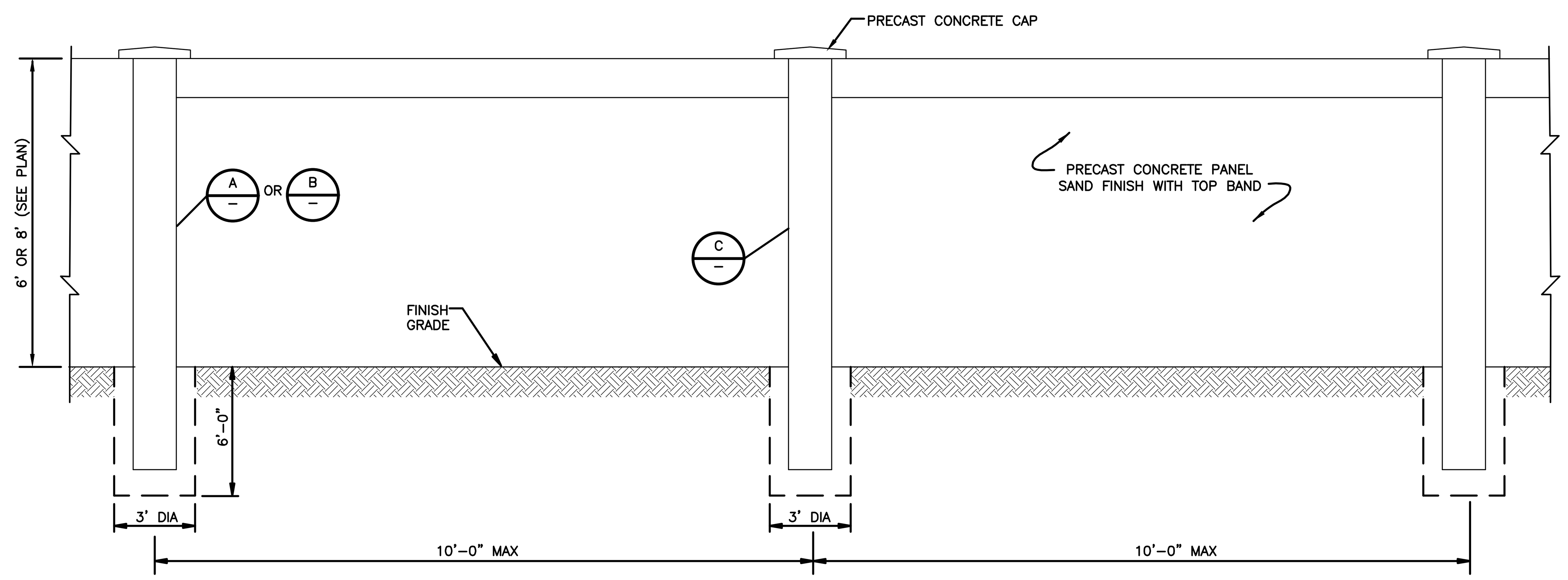
13
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23-36
SCALE: NONE

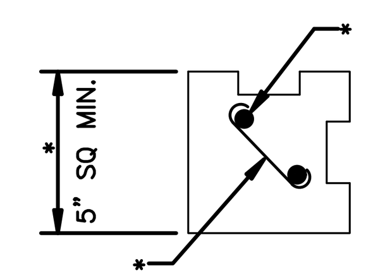
Digitally signed by Kevin Lee
Date: 2025.05.01 10:08:01 -04'00'
SEAL



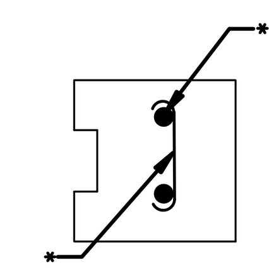
SECTION 1
NTS



PRE-CAST CONCRETE WALL ELEVATION
NOT TO SCALE

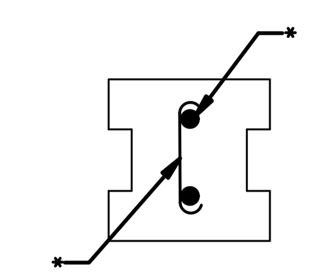


CORNER POST
DETAIL A
NTS



END POST
DETAIL B
NTS

* PER WALL MANUFACTURER'S RECOMMENDATIONS

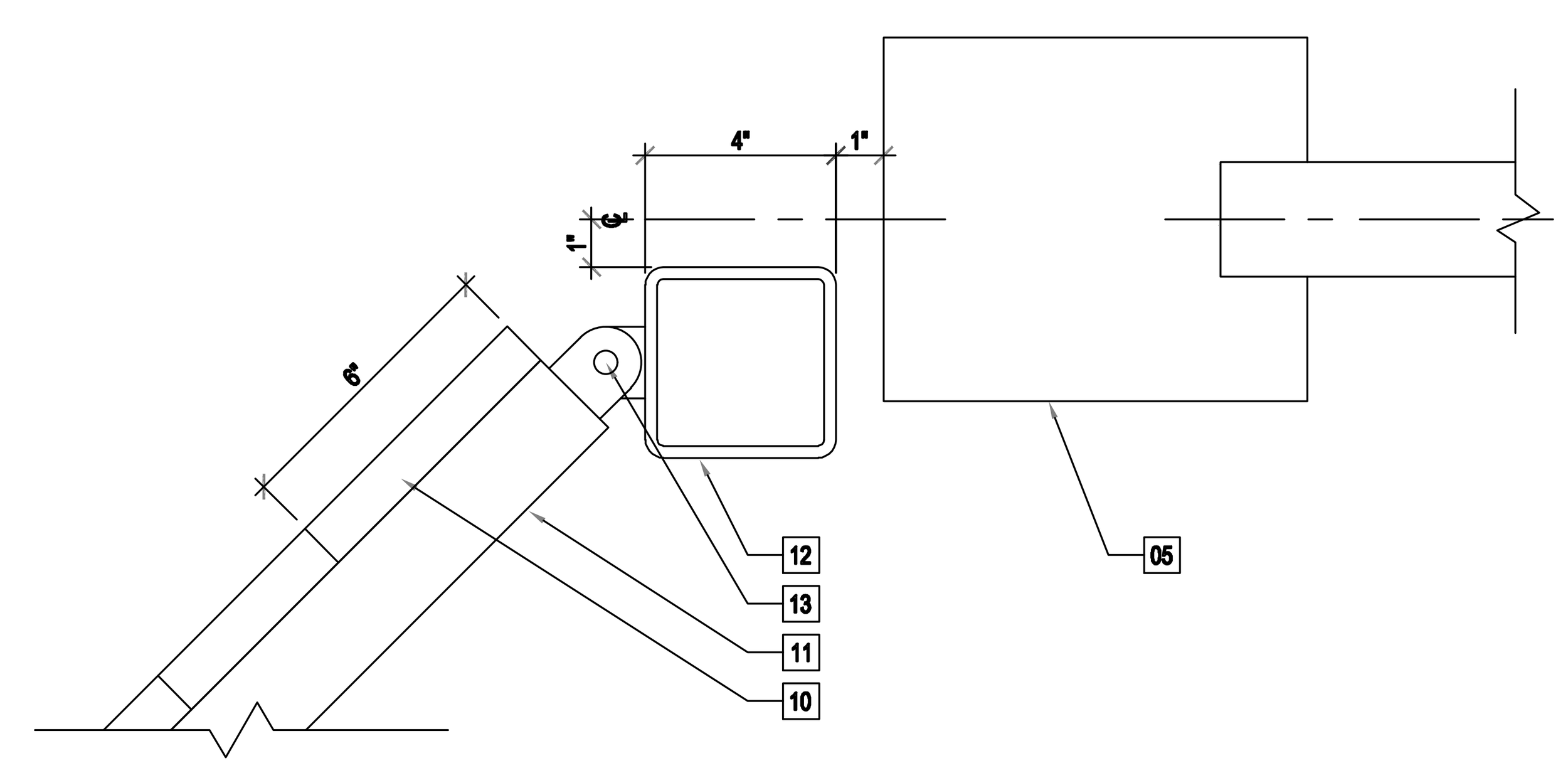


INTERMEDIATE POST
DETAIL C
NTS

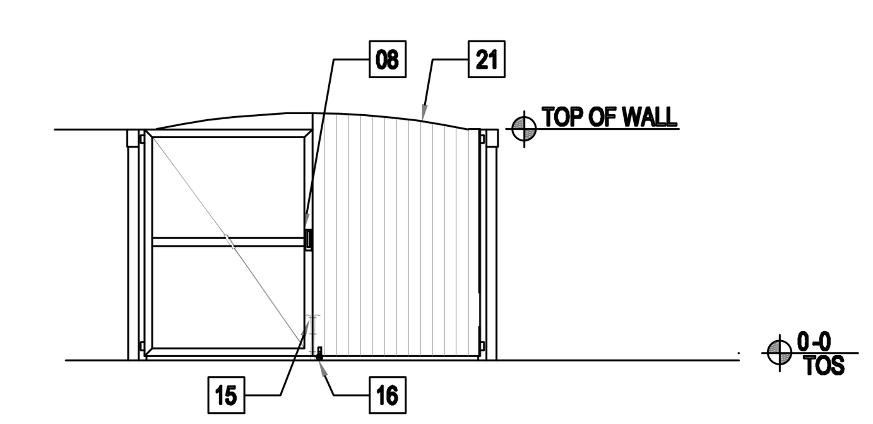
PRE-CAST CONCRETE WALL
SAND FINISH WITH TOP BAND

KEY NOTES

05 WALL SYSTEM END POST
06 STAINLESS STEEL LATCH
10 1X6 TREX BOARD
11 2"X4" TUBE STEEL GATE FRAME, PAINTED
12 4" STEEL SUPPORT POST, PAINTED
13 HEAVY DUTY HINGE ASSEMBLY
15 CANE BOLT. PROVIDE SLOTS IN SLAB AT OPEN & CLOSE POSITIONS
16 INDUSTRIAL GRADE STEEL WHEELS
20 1/2" THREADED ROD W/ TURNBUCKLE, EACH GATE
21 TREX BOARD OPAQUE GATE



Hinge Detail
3" = 1'-0"



Front Elevation
1/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

PERIMETER WALL DETAILS

14
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23-36
SCALE: NONE

Digitally signed by Kevin Lee
Date: 2025.05.01 10:08:32 -04'00'

SEAL

ROOM FINISH SCHEDULE					
SPACE	FLOOR	BASE	INTERIOR WALLS	WALLS	CEILING
ELECTRICAL ROOM	SEALED CONCRETE FLOOR	NONE	CONCRETE	SEALED AND PAINTED	SEALED AND PAINTED
1. REFER TO SPEC. SECTION 9900 FOR PAINTING/COATING/SEALING REQUIREMENTS					

DOOR SCHEDULE				
MARK	SIZE	DESCRIPTION	QUANTITY	REMARKS
①	6'-0"x6'-8"x1-3/4" DBL. DOOR	ALUMINUM DOOR AND FRAME W/ WINDOW PANIC EXIT DEVICE, U.L. 305, NFPA 101 LISTED	1	CLINE SERIES 100-BE OR EQUAL KYNAR FINISH

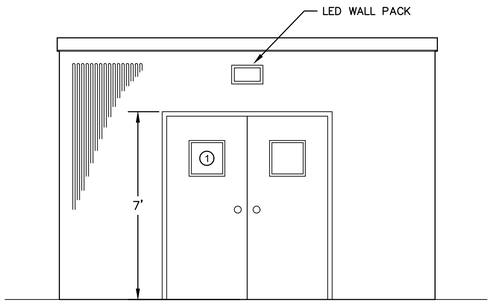
NOTES:
- REFER TO PROJECT SPECIFICATIONS SECTION 08710 FOR MATERIAL PERFORMANCE STANDARDS, SUBMITTAL REQUIREMENTS AND APPROVED MANUFACTURERS.
- DOORS REQUIRING PANIC HARDWARE SHALL NOT BE EQUIPPED WITH ANY LOCKING DEVICE, SET SCREW OR OTHER ARRANGEMENT WHICH CAN BE USED TO PREVENT THE RELEASE OF THE LATCH WHEN PRESSURE IS APPLIED TO THE BAR.
- ALL HARDWARE SHALL BE A.D.A. AND F.A.C.B.C. COMPLIANT.
- ALL COLORS TO BE SELECTED BY OWNER

HARDWARE REQUIREMENTS ALL EXTERIOR DOORS:
1 & 1/2 PAIR HINGES, EXIT DEVICE, CLOSER, FLOOR MOUNTED STOP/HOLDER, KICK PLATE, WEATHER STRIPPING, THRESHOLD, LOCKSET (ENTRANCE)

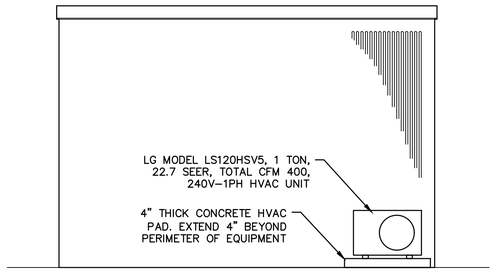
PRECAST CONCRETE STRUCTURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF FLORIDA.

DESIGN WIND LOADS ARE IN ACCORDANCE WITH ASCE 7-10 AND THE FLORIDA BUILDING CODE (MOST RECENT EDITION) USING THE FOLLOWING CRITERIA:

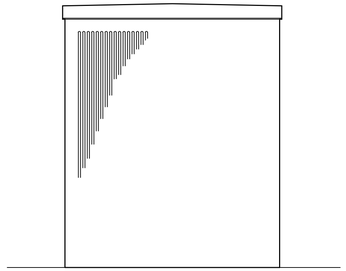
ENCLOSED CONDITION		
RISK CATEGORY	III	(ASCE TABLE 1.5-1)
ULTIMATE DESIGN WIND SPEED (VULT)	150 MPH	(ASCE FIG. 26.5-1B)
EXPOSURE CATEGORY	C	(ASCE SECT 26.7.3)
TOPOGRAPHIC FACTOR (KZT)	1.00	(ASCE FIG. 26.8-1)
COMPONENT AND CLADDING PRESSURES		
ROOF	-44.9 PSF OR +28.3 PSF	
WALLS	-53.2 PSF OR +49.0 PSF	



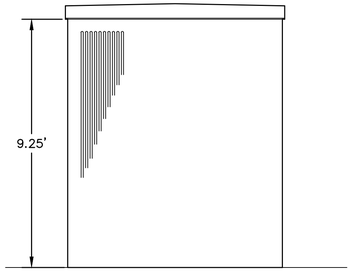
FRONT/WEST ELEVATION
3/8" = 1'-0"
0 2' 4' 6'



REAR/EAST ELEVATION
3/8" = 1'-0"
0 2' 4' 6'



SIDE/SOUTH ELEVATION
3/8" = 1'-0"
0 2' 4' 6'



SIDE/NORTH ELEVATION
3/8" = 1'-0"
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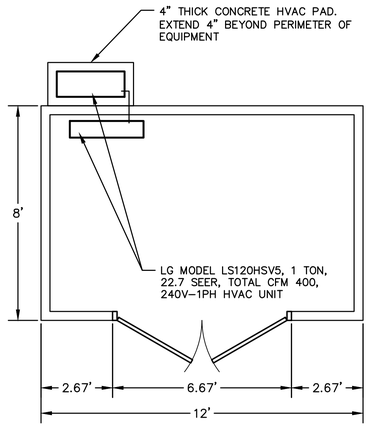
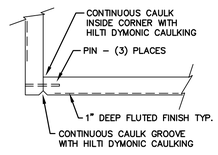
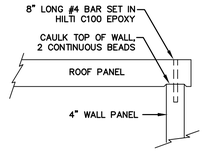


PLAN NORTH

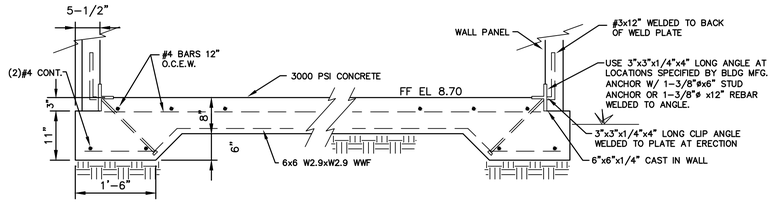
ELECTRICAL BUILDING PLAN
3/8" = 1'-0"
0 2' 4' 6'



PLAN DETAIL - WALL/WALL
NOT TO SCALE



SECTION - ROOF/WALL
NOT TO SCALE



TYPICAL SECTION THRU FLOOR SLAB
SCALE: 3/4" = 1'-0"

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
17229 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #36904 L.A. #6666555
STEVE BUSKELL P.E. #53585 R.L.A. #6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

ELECTRICAL BUILDING PLAN AND DETAILS

15
SHEET NO.

DRAWN BY: ADK

DATE: 04/09/2024

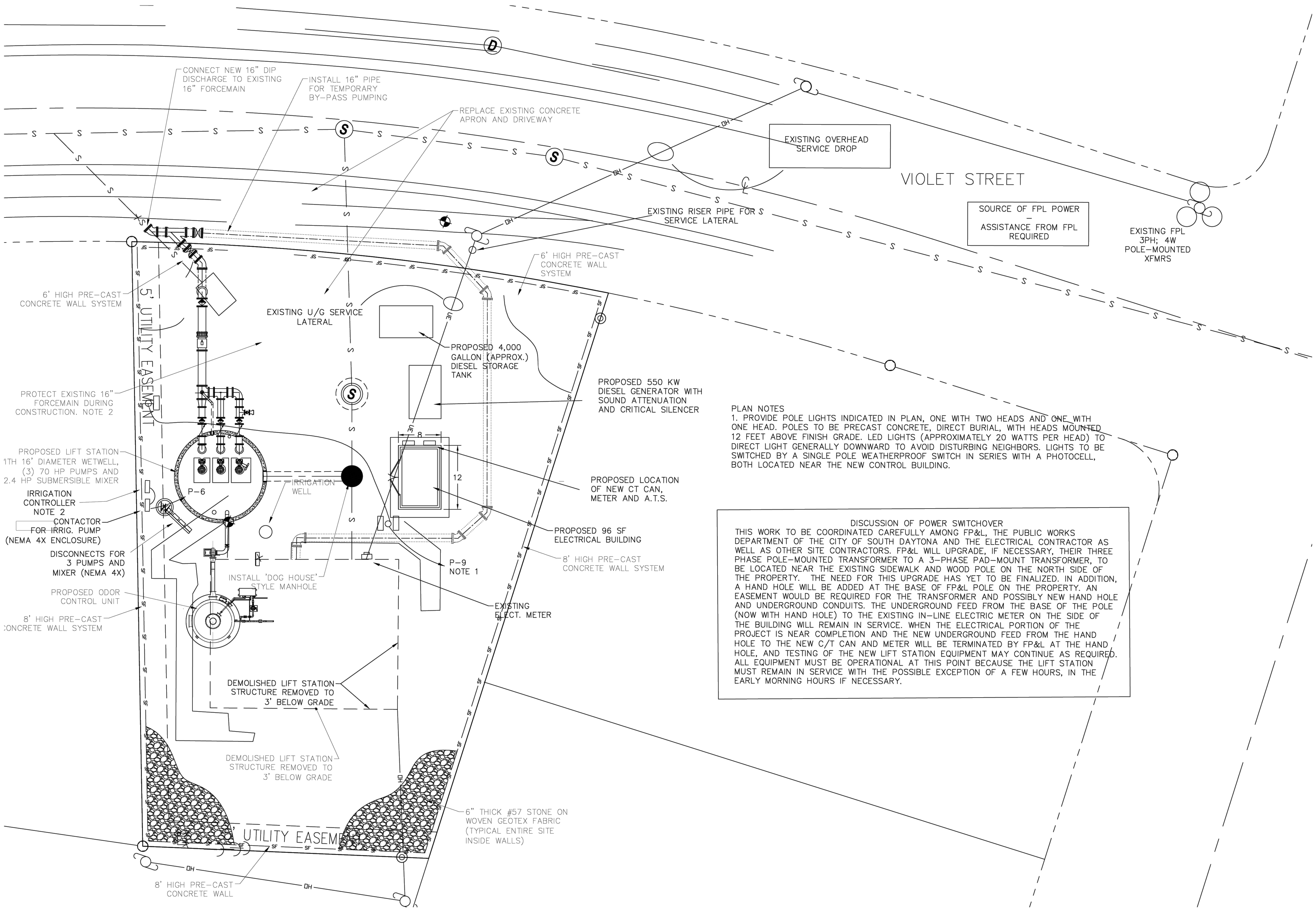
JOB NO. 23-36

SCALE:

KEVIN A. LEE LICENSE No 71501 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Kevin Lee
Date: 2025.05.01 10:09:05 -04'00'

SEAL



PLAN NOTES
1. PROVIDE POLE LIGHTS INDICATED IN PLAN, ONE WITH TWO HEADS AND ONE WITH ONE HEAD. POLES TO BE PRECAST CONCRETE, DIRECT BURIAL, WITH HEADS MOUNTED 12 FEET ABOVE FINISH GRADE. LED LIGHTS (APPROXIMATELY 20 WATTS PER HEAD) TO DIRECT LIGHT GENERALLY DOWNWARD TO AVOID DISTURBING NEIGHBORS. LIGHTS TO BE SWITCHED BY A SINGLE POLE WEATHERPROOF SWITCH IN SERIES WITH A PHOTOCELL, BOTH LOCATED NEAR THE NEW CONTROL BUILDING.

DISCUSSION OF POWER SWITCHOVER

THIS WORK TO BE COORDINATED CAREFULLY AMONG FP&L, THE PUBLIC WORKS DEPARTMENT OF THE CITY OF SOUTH DAYTONA AND THE ELECTRICAL CONTRACTOR AS WELL AS OTHER SITE CONTRACTORS. FP&L WILL UPGRADE, IF NECESSARY, THEIR THREE PHASE POLE-MOUNTED TRANSFORMER TO A 3-PHASE PAD-MOUNT TRANSFORMER, TO BE LOCATED NEAR THE EXISTING SIDEWALK AND WOOD POLE ON THE NORTH SIDE OF THE PROPERTY. THE NEED FOR THIS UPGRADE HAS YET TO BE FINALIZED. IN ADDITION, A HAND HOLE WILL BE ADDED AT THE BASE OF FP&L POLE ON THE PROPERTY. AN EASEMENT WOULD BE REQUIRED FOR THE TRANSFORMER AND POSSIBLY NEW HAND HOLE AND UNDERGROUND CONDUITS. THE UNDERGROUND FEED FROM THE BASE OF THE POLE (NOW WITH HAND HOLE) TO THE EXISTING IN-LINE ELECTRIC METER ON THE SIDE OF THE BUILDING WILL REMAIN IN SERVICE. WHEN THE ELECTRICAL PORTION OF THE PROJECT IS NEAR COMPLETION AND THE NEW UNDERGROUND FEED FROM THE HAND HOLE TO THE NEW C/T CAN AND METER WILL BE TERMINATED BY FP&L AT THE HAND HOLE, AND TESTING OF THE NEW LIFT STATION EQUIPMENT MAY CONTINUE AS REQUIRED. ALL EQUIPMENT MUST BE OPERATIONAL AT THIS POINT BECAUSE THE LIFT STATION MUST REMAIN IN SERVICE WITH THE POSSIBLE EXCEPTION OF A FEW HOURS, IN THE EARLY MORNING HOURS IF NECESSARY.

ELECTRICAL SITE PLAN

1"=10'

GRAPHIC SCALE

0 5 10 20 40

SCALE: 1" = 10'

CONSTRUCTION NOTES:

1. EXISTING LIFT STATION TO REMAIN IN SERVICE UNTIL PROPOSED LIFT STATION IS COMPLETE WITH START UP AND DEMONSTRATION FOR 2 WEEKS
2. PROTECT EXISTING UNDERGROUND ELECTRICAL SERVICE DURING CONSTRUCTION. ABANDON AFTER CONSTRUCTION AND TESTING OF NEW LIFT STATION IS COMPLETED
3. REPAIR EXISTING FIBERGLASS LINER IN EXISTING MANHOLE

SEQUENCE OF CONSTRUCTION:

1. INSTALL TEMPORARY FORCE MAIN AND FORCE MAIN TIE-IN PRIOR TO CONSTRUCTION OF NEW LIFT STATION
2. CONSTRUCT NEW WET WELL, PUMPS, PIPING, ELECTRICAL BUILDING, GENERATOR AND FUEL TANK FOR COMPLETE LIFT STATION STARTUP AND DEMONSTRATION
3. DEMOLISH EXISTING LIFT STATION BUILDING AND RESTORE SITE TO GRADE UPON COMPLETION OF NEW LIFT STATION DEMONSTRATION PERIOD
4. COMPLETE CONSTRUCTION OF ODOR CONTROL SYSTEM
5. COMPLETE SITE WORK AND RESTORATION

NO.	DATE	DESCRIPTION REVISIONS	BY

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #32645 R.L.A. #0001553
STEVE BUSWELL P.E. #53985 R.L.A. #LA6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

ELECTRICAL SITE PLAN

E-1
SHEET NO.

DRAWN BY: ADK/JMP
DATE: 01/24/2025
JOB NO. 23-36
SCALE: AS SHOWN

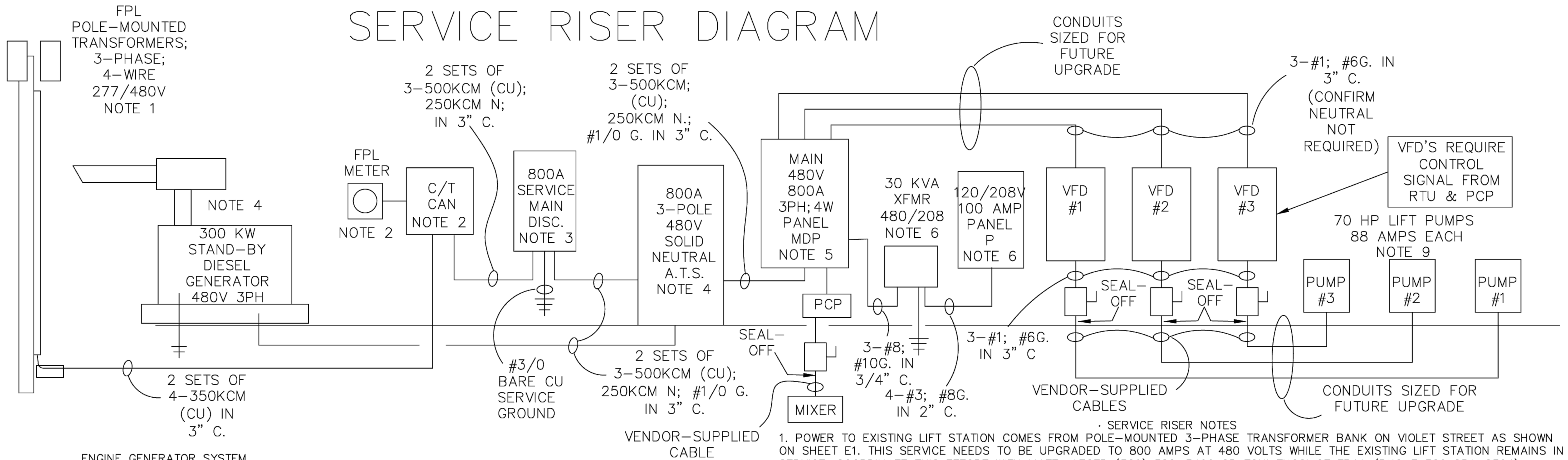
JOHN MICHAEL PATTERSON LICENSE No 54181 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by John M Patterson
Date: 2025.03.21 20:54:40 -04'00'

JOHN M. PATTERSON, P.E.
ELECTRICAL CONSULTANT
1291 JOHN ANDERSON DR.
ORMOND BEACH, FL 32176
386 441-2382
FL. REG. PE # 54181

SEAL

SERVICE RISER DIAGRAM



SERVICE RISER NOTES

1. POWER TO EXISTING LIFT STATION COMES FROM POLE-MOUNTED 3-PHASE TRANSFORMER BANK ON VIOLET STREET AS SHOWN ON SHEET E1. THIS SERVICE NEEDS TO BE UPGRADED TO 800 AMPS AT 480 VOLTS WHILE THE EXISTING LIFT STATION REMAINS IN SERVICE. COORDINATE THIS EFFORT WITH MATT JAEGER (386) 322-3406 OR TONI TUCCI OF FP&L (PHONE 386 254-2304)
2. PROVIDE FPL-APPROVED C/T CAN AND METER CAN SUITABLE FOR 800 AMP 3-PHASE SERVICE AT 480 VOLTS.
3. PROVIDE NEW 480 VOLT, 3-POLE, SOLID NEUTRAL DISCONNECT SWITCH FUSED INITIALLY AT 600 AMPS TO SERVE AS SERVICE MAIN DISCONNECT. AIC TO BE 42,000 AMPS AT 480 VOLTS. ENCLOSURE TO BE NEMA 3R. IDENTIFY THIS EQUIPMENT AS "SERVICE MAIN DISCONNECT". IN THE FUTURE THIS DISCONNECT SWITCH TO BE UPGRADED TO 800 AMPS WHEN LIFT PU,MP SIZES ARE INCREASED.
4. 550 KW (687.5 KVA), 480 VOLT, 3-PHASE, 4-WIRE STAND-BY DIESEL-POWERED GENERATOR. SEE DETAILED SPECIFICATIONS ELSEWHERE ON THIS SHEET FOR GENERATOR, FUEL STORAGE AND AUTOMATIC TRANSFER SWITCH. GENERATOR TO HAVE 800 AMP LOAD SIDE CIRCUIT BREAKER. THE DESIGN BASIS GENERATOR IS A CATERPILLAR C18-550-600 KW.
5. MAIN PANEL "MDP" TO BE A 800 AMP, 3-PHASE, 4-WIRE MCB PANEL IN NEMA 1 ENCLOSURE. SEE PANEL SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION AND PROPOSED CIRCUIT ASSIGNMENTS, AND PROVIDE ACCURATE PANEL DIRECTORY UPON COMPLETION OF WORK.
6. PROVIDE 30 KVA, 480-208/120V 3-PHASE STEP-DOWN, DRY TYPE TRANSFORMER TO FEED 100 AMP, 3-PHASE 120/208V PANEL "P" IN NEMA 1 ENCLOSURE. PROVIDE PANEL DIRECTORY AT COMPLETION OF WORK
7. VFD'S FURNISHED BY PUMP SUPPLIER. PROVIDE ONE SPARE VFD.
8. AT THE COMPLETION OF ALL WORK, THE EXISTING STRUCTURE AND ALL EXISTING ELECTRICAL FROM THE NEW HAND HOLE TO THE BUILDING AND INSIDE THE BUILDING ARE TO BE CLEANLY AND SAFELY REMOVED.
9. INITIAL PUMP SIZE IS 70 HP FOR EACH OF THREE PUMPS. IN THE FUTURE, THE PUMPS ARE TO BE UPGRADED TO AS MUCH AS 140 HP EACH. THE INTENT OF THIS DESIGN IS TO MAKE THAT UPGRADE AS STRAIGHTFORWARD AND SIMPLE AS POSSIBLE. THE FEEDS TO THESE PUMPS IS SIZED FOR 140 HP PUMPS, BUT THE CIRCUITS ARE INITIALLY PROTECTED FOR 70 HP PUMPS.

ENGINE GENERATOR SYSTEM

PROVIDE A COMLETE FACTORY ASSEMBLED ENGINE GENERATOR UNIT TO PROVIDE AUTOMATIC STAND-BY ELECTRICAL POWER FOR THE PUMPING STATION. AN AUTOMATIC TRANSFER SWITCH (ATS) SHALL ALSO BE PROVIDED TO SENSE LOSS OF UTILITY POWER AND INITIATE AUTOMATIC START OF THE ENGINE-GENERATOR UNIT AND THE TRANSFER OF POWER FROM THE UTILITY FEED. ALSO PROVIDE DRY CONTACT ENGINE START ENABLE TO RECEIVE A RUN SIGNAL FROM AN EXTERNAL SOURCE.

PROVIDE COMPLETE ENGINE FUEL SYSTEM, ELECTRONIC GOVERNOR SYSTEM, ENGINE COOLING SYSTEM, ELECTRIC STARTING SYSTEM COMPLETE WITH BATTERIES AND CHARGING SYSTEM, EXHAUST SYSTEM WITH SILENCER. VIBRATION ISOLATION SYSTEM DIGITAL (MICROPROCESSOR-BASED) ELECTRONIC CONTROLS, OUTPUT METERING (RMS VOLTAGE, CURRENT, FREQUENCY, POWER FACTOR, AND KW HOURS), SOUND INSULATED OUTDOOR WEATHERPROOF ENCLOSURE, AND OTHER REQUIRED APPURTENANCES ALL OF WHICH SHALL BE MOUNTED ON A CAST IN PLACE CONCRETE FOUNDATION AS SHOWN.

THE ENGINE SHALL BE A DIESEL FUELED (ASTM D975 #2 DIESEL FUEL). RADIATOR AND FAN-COOLED. ENGINE SHALL BE 6-CYLINDER AND TURBO CHARGED. THE HORSEPOWER RATING OF THE ENGINE AT ITS MINIMUM TOLERANCE LEVEL SHALL BE SUFFICIENT TO DRIVE THE ALTERNATOR AND ALL CONNECTED ACCESSORIES.

THE AC GENERATOR SHALL BE: SYNCHRONOUS, FOUR-POLE, WITH $\frac{2}{3}$ PITCH STATOR WINDINGS. REVOLVING FIELD, DRIP-PROOF CONSTRUCTION, PRE-LUBRICATED SEALED BEARING, AIR COOLED BY A DIRECT DRIVE, CENTRIFUUGAL BLOWER FAN, AND DIRECTLY CONNECTED TO THE ENGINE WITH FLEXIBLE DRIVE DISC. ALL INSULATION SYSTEM COMPONENTS SHALL MEET NEMA MG1 TEMPERATURE LIMITS FOR CLASS H INSULATION SYSTEM. ACTUAL TEMPERATURE RISE MEASURED BY RESISTANCE METHOD AT FULL LOAD SHALL NOT EXCEED 105 DEGREES CENTIGRADE.

THE GENERATOR SET SHALL BE PROVIDED WITH AN OUTDOOR, ALUMINUM SOUND-ATTENUATED ENCLOSURE. THE SILENCERS SHALL BE INSIDE THE ENCLOSURE. THE ENCLOSURE SHALL REDUCE THE SOUND LEVEL OF THE GENERATOR SET WHILE OPERATING AT FULL RATED LOAD TO A MAXIMUM OF 85 DBA AT ANY LOCATION 21 FEET FROM THE GENERATOR SET IN A FREE-FIELD ENVIRONMENT. THE ENCLOSURE PACKAGE SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE FOR ALL WIRING METHODS AND COMPONENT SPACING. ALL DOORS SHALL BE LOCKABLE AND INCLUDE RETAINERS TO HOLD THE DOOR OPEN DURING SERVICE. OPENINGS SHALL BE SCREENED TO LIMIT ACCESS OF RODENTS INTO THE ENCLOSURE. PROVIDE COLOOR CHART OF AVAILABLE COLOR SELECTIONS FOR SELECTION OF ENCLOSURE COLOR BY OWNER.

ALL ELECTRICAL POWER AND CONTROL INTERCONNECTIONS SHALL BE MADE WITHIN THE PERIMETER OF THE ENCLOSURE. A FACTORY MOUNTED EXHAUST SILENCER SHALL BE INSTALLED INSIDE THE ENCLOSURE. ALL SHEET METAL SURFACES SHALL BE PRIMED FOR CORROSIOIN PROTECTION AND FINISH PAINTED WITH THE MANUFACTURERS STANDARD USING A TWO-STEP ELECTROCOATING PAINT PROCESS. THE PAINTING PROCESS SHALL RESULT IN A COATING THAT MEETS THE FOLLOWING REQUIREMENTS:

PRIMER THICKNESS, 0.5 TO 2.0 MILS
TOP COAT THIKNESS, 0.8 TO 1.2 MILS
GLOSS PER ASTM D523-89, 80%±LUS RO MINUS 5%
SALT SPRAY, PERR ASTM B117-90, 1000+ HOURS
HUMIDITY, PER ASTM D2247-92, 1000+ HOURS

THE ENGINE GENERATOR UNIT SHALL INCLUDE THE NECESSARY FEATURES TO MEET THE REQUIREMENTS OF NFPA70, NFPA110 AND IEEE 446. THE UNIT SHALL BE MANUFACTURED BY CATERPILLAR OR CUMMINS.

SIZING CALCULATIONS MUST BE SIGNED AND SEALED BY A REGISTERED ELECTRICAL ENGINEER.

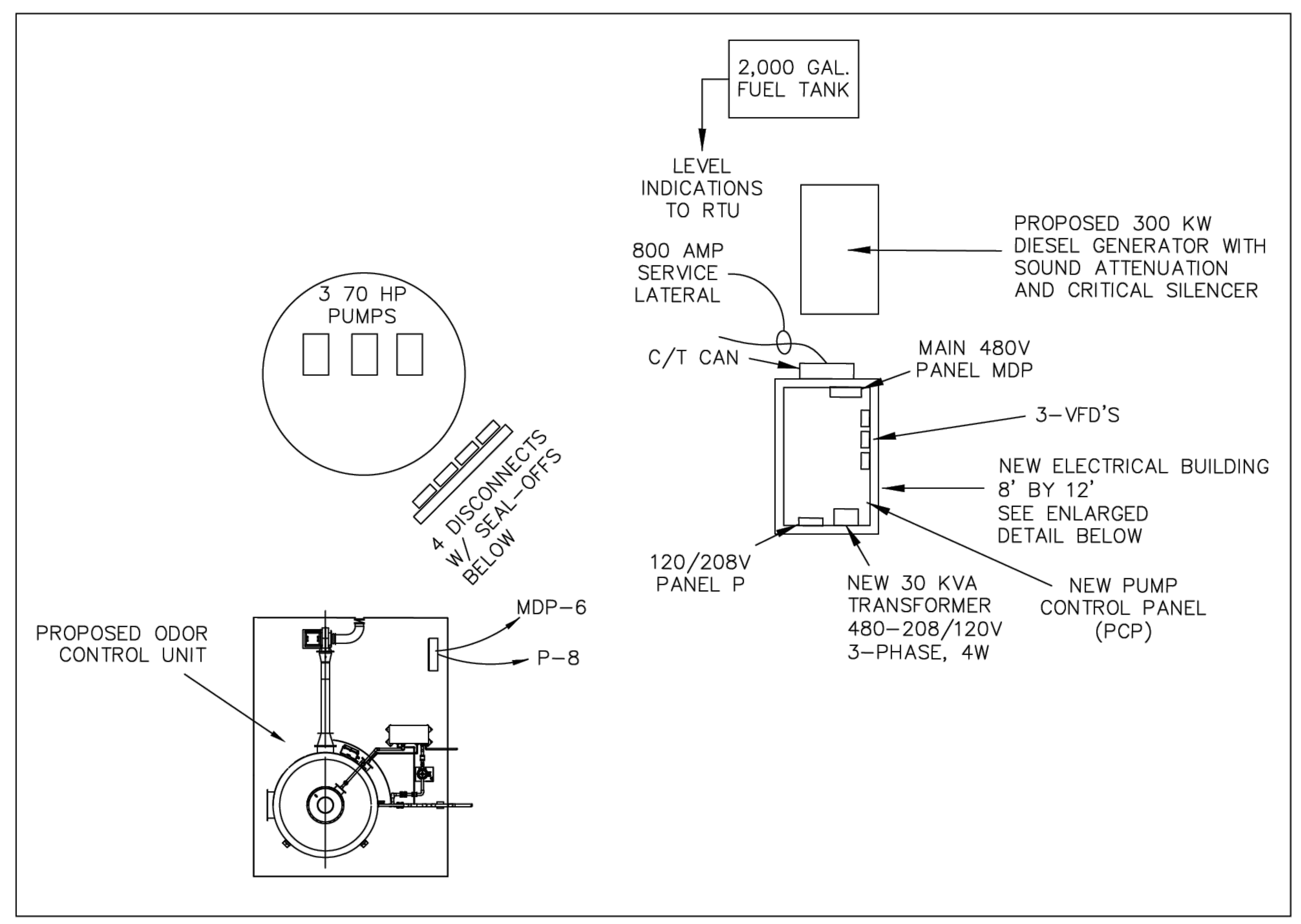
UNDER VFD OPERATION, THE GENSET MUST BE SIZED TO HANDLE THREE PUMPS RUNNING WITHOUT EXCEEDING 60% OF ITS RATED CAPACITY. THIS REQUIREMENT IS TO LIMIT HARMONIC DISTORTION.

OUTPUT VOLTAGES	3-PHASE, 60 HZ; 4-WIRE;
RATED SPEED	1800 RPM
FUEL CAPACITY	72 HOURS
VOLTAGE REGULATION, NO LOAD TO FULL LOAD	+/- 1.0%
RANDOM VOLTAGE REGULATION	+/- 1.0%
FREQUENCY REGULATION	ISOCHRONOUS
RANDOM FREQUENCY VARIATION	+/- 0.6%
MUST OPERATE AT FULL LOAD AT	100 DEGREES F (40 DEG. C) AT MEAN SEA LEVEL
EXCITATION	PMG (PERMANENT MAGNET GENERATOR OR SPECIFY)

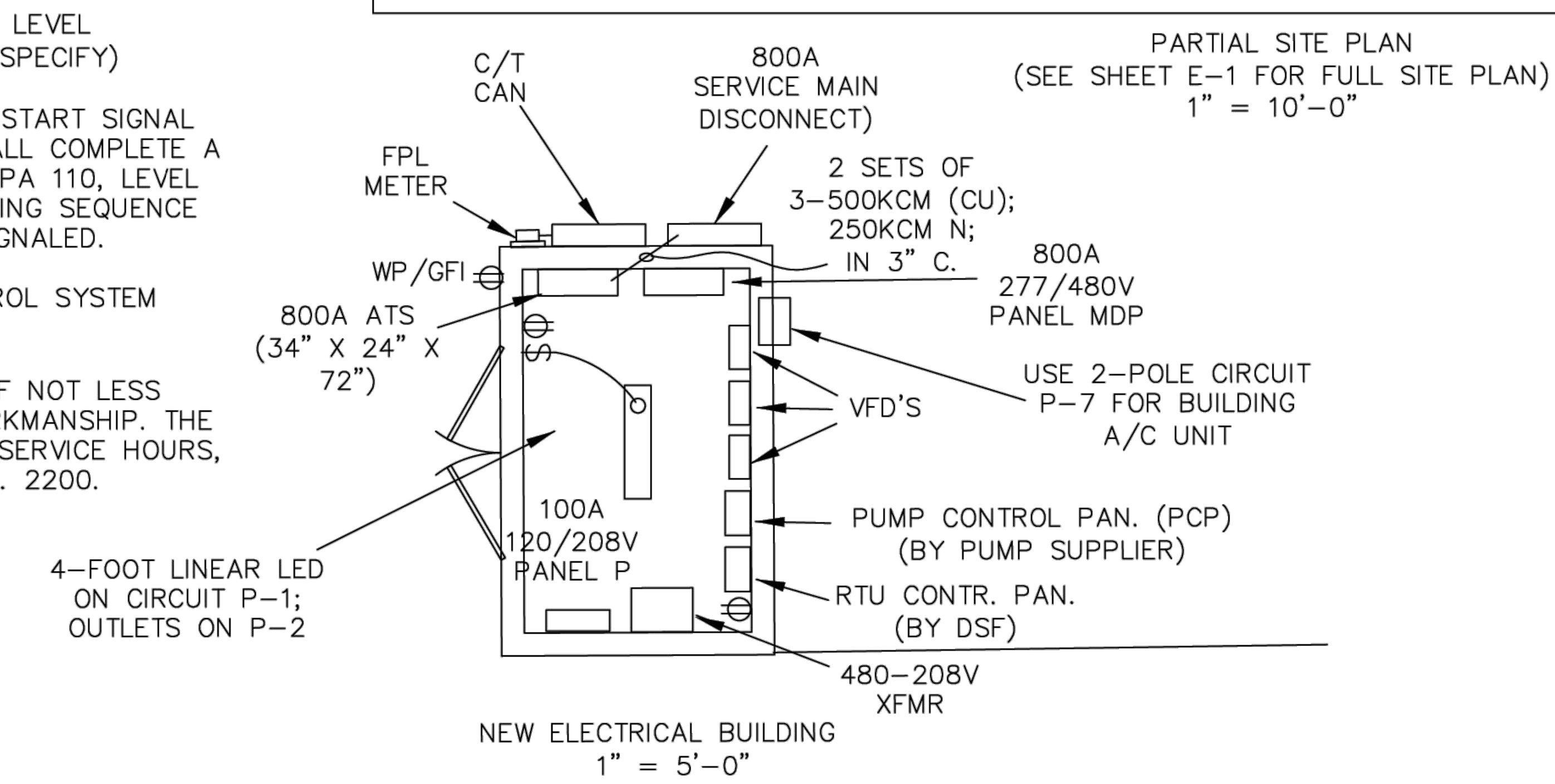
THE ENGINE-GENERATOR SHALL START ON RECEIPT OF A START SIGNAL FORM THE ATS. THE START SIGNAL SHALL BE VIA HARDWIRED CONNECTION TO THE GENERATOR SET CONTROL, AND THE UNIT SHALL COMPLETE A TIME DELAY START PERIOD AS PROGRAMMED INTO THE CONTROLSTART TIME: COMPLY WITH NFPA 110, LEVEL 1, TYPE 10 SYSTEM REQUIREMENTS. THE GENERATOR SET CONTROL SHALL INITIATE THE STARTING SEQUENCE WHICH SHALL INCLUDE VERIFICATION THAT THE ENGINE IS ROTATING WHEN THE STARTER IS SIGNALED.

FI THE ENGINE DOES NOT START IT SHALL BE SHUT DOWN AND LOCKED OUT, AND THE CONTROL SYSTEM SHALL INDICATE "FAILURE TO START".

THE GENERATOR SET AND ASSOCIATED EQUIPMENT SHALL BE WAWARRANTED FOR A PERIOD OF NOT LESS THAN 5 YEARS FROM THE DATE OF COMMISSIONING AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE WARRANTY SHALL BE COMPREHENSIVE. NO DEDUCTIBLES SHALL BE ALLOWED FOR TRAVELIME, SERVICE HOURS, REPAIR PARTS COST, ETC. GENERATOR SHALL MEET THE REQUIREMENTS OF ISO 9001 AND U.L. 2200.



PARTIAL SITE PLAN
(SEE SHEET E-1 FOR FULL SITE PLAN)
1" = 10'-0"



NEW ELECTRICAL BUILDING
1" = 5'-0"

DIESEL STORAGE SYSTEM

PROVIDE A DIESEL STORAGE SYSTEM FOR THE SITE CONFIGURATION SHOWN. THE SYSTEM SHALL MEET THE REQUIREMENTS OF THE DIESEL FUEL CODE, APPLICABLE PROVISIONS OF FLORIDA STATUTES, CHAPTER 206.874, AND FLORIDA ADMINISTRATIVE CODE, CHAPTER SF-2.001 DIESEL. FUEL TANK TO BE SIZED FOR 72 HOURS OF CONTINUOUS FUEL SUPPLY AT MAXIMUM DESIGN LOAD AND SHALL MEET THE REQUIREMENTS FOR A COMPLETE INSTALLATION AS PER STATE AND FEDERAL REQUIREMENTS.
THE GENERATOR SET AND ENCLOSURE SHALL BE SHIPPED TO THE SITE WITH PROVISIONS FOR CRANE UNLOADING OF THE COMPLETE PACKAGE SHALL BE DESIGNED INTO THE UNIT. THE ENCLOSURE ASSEMBLY SHALL ALLOW ROOM WITHIN THE PACKAGE TO MOUNT AND MAINTAIN THE BATTERY CHARGER, ENGINE STARTING BATTERIES, RACKS, AND CABLES, MAIN LINE CIRCUIT BREAKER, ENGINE GENERATOR CONTROL PANEL, AND OTHER ITEMS AS SPECIFIED OR AS SHOWN ON THE DRAWINGS.

AUTOMATIC TRANSFER SWITCH

PROVIDE AN AUTOMATIC TRANSFER SWITCH (ATS) AS SHOWN. THE 800 AMP SERVICE ENTRY RATED ATS SHALL HAVE FAULT CURRENT RATINGS OF 42,000 AMPS AT 480 VOLTS, 3-PHASE.

THE ATS SHALL BE A DOUBLE THROW, MECHANICALLY AND ELECTRICALLY INTERLOCKED, AND MECHANICALLY HELD IN THE SOURCE 1 AND SOURCE 2 POSITIONS. THE TRANSFER SWITCH SHALL BE SPECIFICALLY DESIGNED TO STOP IN THE BEST POSITION IF IT INADVERTENTLY STOPS IN A NEUTRAL POSITION. ALL WIRING SHALL BE TAGGED TO MATCH THE SCHEMATIC, AND SHALL BE UL LISTED 105 DEGREE C, 600 VOLT RATED, AND SIZED AS REQUIRED.
THE ATS SHALL INCORPORATE ADJUSTABLE TIME DELAYS FOR GENERATOR SET START (ADJUSTABLE IN A RANGE FROM 0 TO 15 SECONDS); TRANSFER (ADJUSTABLE IN A RANGE FROM 0 TO 120 SECONDS); RETRANSFER (ADJUSTABLE IN A RANGE FROM 0 TO 30 MINUTES) AND GENERATOR STOP (COOLDOWN: ADJUSTABLE IN A RANGE FROM 0 TO 30 MINUTES), AND SHALL BE CONFIGURABLE TO CONTROL THE OPERATION TIME FROM SOURCE TO SOURCE (PROGRAM TRANSITION OPERATION) IN OPEN TRANSITION MODE. THE CONTROL SYSTEM SHALL BE CAPABLE OF ENABLING OR DISABLING THIS FEATURE, AND ADJUSTING THE TIME PERIOD TO A SPECIFIC VALUE. A PHASE BAND MONITOR OR SIMILAR FEATURE IS NOT AN ACCEPTABLE ALTERNATE FOR THIS FEATURE.

THE ATS SHALL BE PROVIDED WITH RELAY CONTACTS TO INDICATE THE FOLLOWING CONDITIONS: SOURCE 1 AVAILABLE; LOAD CONNECTED TO SOURCE 1; SOURCE 2 AVAILABLE; LOAD CONNECTED TO SOURCE 2.

THE ATS ENCLOSURE SHALL BE NEMA 4X 316 STAINLESS STEEL, UL LISTED AND SHALL PROVIDE NEC REQUIRED WIRE BEND SPACE. THE CABINET DOOR SHALL BE KEY LOCKING. MANUAL OPERATING HANDLES AND ALL CONTROL SWITCHES (OTHER THAN KEY OPERATED SWITCHES) SHALL BE ACCESSIBLE TO AUTHORIZED PERSONNEL ONLY BY OPENING THE LOCKING CABINET DOOR.

FACTORY TESTING: THE TRANSFER SWITCH SUPPLIER SHALL PERFORM A COMPLETE OPERATIONAL TEST ON THE TRANSFER SWITCH PRIOR TO SHIPPING FROM THE FACTORY. A CERTIFIED TEST REPORT SHALL BE AVAILABLE UPON REQUEST. TEST PROCESS SHALL INCLUDE DEMONSTRATION OF RECENT CALIBRATION OF INSTRUMENTATION.

AFTER INSTALLATION, THE SUPPLIER SHALL CONDUCT A COMPLETE OPERATION, BASIC MAINTENANCE AND EMERGENCY SERVICE SEMINAR FOR UP TO 10 PERSONS EMPLOYED BY THE CITY. THE SEMINAR SHALL INCLUDE INSTRUCTION ON OPERATION OF THE TRANSFER EQUIPMENT, NORMAL TESTING AND EXERCISE, ADJUSTMENTS TO THE CONTROL SYSTEM AND EMERGENCY OPERATION PROCEDURES. THE CLASS DURATION SHALL BE AT LEAST 4 HOURS IN LENGTH AND INCLUDE PRACTICAL OPERATION WITH THE INSTALLED EQUIPMENT.

PANEL: MDP
SQ D OR MFG. SIEMENS — VOLTAGE 277/480 — PHASE 3 — WIRE 4
CAT. VARIES — AMPS. 600 — SYM. A.I.C. (I.E.R.) 42,000
MOUNT SURFACE NEMA 1 — MAIN 800/3 C/B — GRD. BUS X
* FED FROM ATS IN SAME ROOM

CT	DESCRIPTION	POLE	AMPS	WIRE	COND	ØA	ØB	ØC	
1	PMP 1 VIA VFD	3	125	#1	1&1/2"	88	88	88	
2	PMP 2 VIA VFD	3	125	#1	1&1/2"	88	88	88	
3	PMP 3 VIA VFD	3	125	#1	1&1/2"	88	88	88	
4	PMP CONT PAN (PCP)	3	20	#12	3/4"	6	6	6	
5	30 KVA XFMR	3	45	#8	3/4"	10	10	10	
6	HIBOCS SKID	3	15	#12	3/4"	3	3	3	ODOR CONTR
7	FUTURE	3	225	–	–	172	172	172	*
8	FUTURE	3	225	–	–	172	172	172	*
9	FUTURE	3	225	–	–	172	172	172	*
10	SPARE	3	60						

* PROVIDE 225 AMP BREAKERS UNDER CURRENT CONTRACT FOR FUTURE USE.

PANEL: P
SQ D OR MFG. SIEMENS — VOLTAGE 208/120 — PHASE 3 — WIRE 4
CAT. VARIES — AMPS. 100 — SYM. A.I.C. (I.E.R.) 10,000
MOUNT SURFACE NEMA 1 — MAIN 100/3 C/B — GRD. BUS X

CT	DESCRIPTION	POLE	AMPS	WIRE	COND	ØA	ØB	ØC
1	ELECT BLDG LTS	1	20	#12	1/2"			
2	OUTLETS	1	20	#12	1/2"			
3	RTU PANEL	1	20	#12	1/2"			
4	SPARE	1	20	–	–			
5	SPARE	1	20	–	–			
6	IRRIG. CONTR.	2	20	#12	1"			
7	A/C	2	20	#12	1/2"			
8	ODOR CONTROL	1	20	#10	1"			
9	POLE LIGHTS	1	20	#10	1"			
10–12	SPARE							

Digitally signed by John M Patterson
Date: 2025.03.21 20:55:53 -04'00'

JOHN M. PATTERSON, P.E.
ELECTRICAL CONSULTANT
1291 JOHN ANDERSON DR.
ORMOND BEACH, FL 32176
386 441-2382
FL. REG. PE # 54181

NO. | DATE | DESCRIPTION | BY
REVISIONS

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
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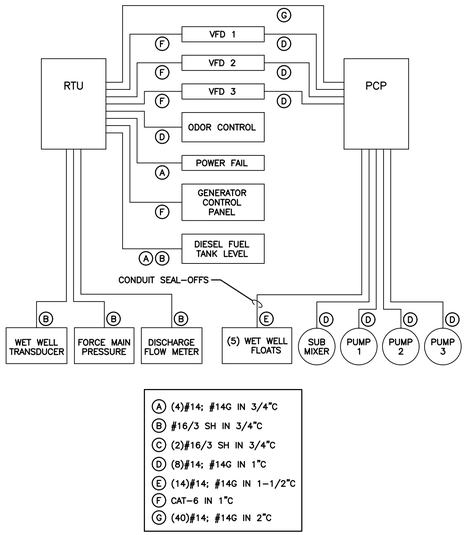
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

ELECTRICAL NOTES & PANEL SCHEDULES

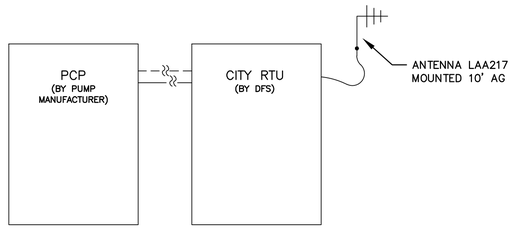
E-2
SHEET NO.
DRAWN BY: ADK/JMP
DATE: 01/24/2025
JOB NO. 23-36
SCALE: AS SHOWN

SEAL



RTU CONTROL PANEL (BY DFS)
I/O SCHEDULE

DIGITAL INPUT	DIGITAL OUTPUT	ANALOG INPUT	ANALOG OUTPUT
PUMP 1 RUN/FAIL	PUMP 1 START/STOP	DISCHARGE FLOW METER	PUMP 1 SPEED
PUMP 2 RUN/FAIL	PUMP 2 START/STOP	FORCE MAIN PRESSURE	PUMP 2 SPEED
PUMP 3 RUN/FAIL	PUMP 3 START/STOP	DIESEL TANK LEVEL	PUMP 3 SPEED
GENERATOR STATUS		PUMP 1 SPEED	
GENERATOR PRE-ALARM		PUMP 2 SPEED	
GENERATOR ALARM		PUMP 3 SPEED	
GENERATOR LOW FUEL		GENERATOR CONTROL PANEL	
ODOR CONTROL RUN/FAIL		WETWELL LEVEL TRANS.	
FLOAT HIGH ALARM			
FLOAT LOW LEVEL			
SUB. MIXER RUN/FAIL			



NOTE
CONTRACTOR SHALL COORDINATE THE ELECTRICAL AND CONTROL CONNECTIONS WITH EACH MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE ALL REQUIRED CONDUITS AND WIRING. CONTRACTOR SHALL REVIEW EQUIPMENT SUBMITTALS AND PROVIDE CONDUIT/WIRING BASED ON MANUFACTURER'S SUBMITTAL.

CONTRACTOR COORDINATION NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE P.I.C.S. SYSTEM INTEGRATOR AND THE ELECTRICAL SUBCONTRACTOR TO COORDINATE THE INSTALLATION OF ALL CONTROL WIRING, INTERFACES AND CONNECTIONS REQUIRED FOR THIS PROJECT, AND TO INSURE COMPATIBILITY AND PROPER OPERATION OF ALL CONTROL SYSTEMS. THE PROJECT GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR RESOLVING POSSIBLE AREAS OF CONFLICT OR OVERLAP BETWEEN SUBCONTRACTORS IN ORDER TO PROVIDE THE CITY WITH A FULLY OPERATIONAL CONTROL SYSTEM.
2. WIRE COUNTS AND SIZING SHOWN FOR INFORMATIONAL PURPOSES ONLY. ELECTRICAL AND P.I.C.S. SYSTEM INTEGRATOR ARE RESPONSIBLE FOR ACTUAL WIRE COUNTS AND WIRE SIZING FOR CONTROL SYSTEM.

SYSTEM INTEGRATOR NOTES:

1. THE PICS SYSTEM INTEGRATOR IS RESPONSIBLE FOR ALL ELEMENTS OF THE INSTRUMENTATION AND TELEMETRY COMPONENTS. IT IS THE INTEGRATOR'S RESPONSIBILITY TO INSURE THAT ALL COMPONENTS SUPPLIED ARE COMPATIBLE AND MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
2. THE PICS SYSTEM INTEGRATOR SHALL COORDINATE WITH THE ELECTRICAL SUBCONTRACTOR AND COUNTY STAFF TO VERIFY THAT ALL CONTROL WIRING REQUIRED TO SERVE ALL EXISTING AND PROPOSED COMPONENTS ARE COMPATIBLE WITH THAT SHOWN ON THE ELECTRICAL PLANS. CONTRACTOR TO VERIFY THIS COORDINATION.
3. THE PICS SYSTEM INTEGRATOR IS RESPONSIBLE FOR ALL SIGNAL ISOLATION AND LIGHTNING/SURGE SUPPRESSION REQUIRED TO ADEQUATELY PROTECT ALL EQUIPMENT PROVIDED AND/OR INSTALLED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. ALL HARDWARE AND SOFTWARE SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FOLLOWING THE INSTALLATION AND ACCEPTANCE OF THE SYSTEM. THE SYSTEM INTEGRATOR IS RESPONSIBLE FOR THE PRODUCTS AND PERFORMANCE OF ANY SUPPLIERS AND SUBCONTRACTORS AND IS THE SINGLE POINT OF CONTACT REGARDING ALL WARRANTY ISSUES PERTAINING TO THE INSTRUMENTATION SYSTEM COMPONENTS.
5. THE PICS IS RESPONSIBLE FOR SCALING ALL FLOW METERS AND LEVEL SENSORS WITH PROPOSED ANALOG INDICATORS AND REMOTE MMI INTERFACE LOCATION. THE SYSTEM INTEGRATOR SHALL VERIFY THE SCALING, QUALITY AND TYPE OF SIGNAL BEING RECEIVED BY PROPOSED EQUIPMENT. ANY CONVERTERS AND/OR MODIFICATIONS ARE THE RESPONSIBILITY OF THE PICS.

NO.	DATE	DESCRIPTION	BY

REVISIONS

PARKER MYNCHENBERG & ASSOCIATES, INC.
PROFESSIONAL ENGINEERS * LANDSCAPE ARCHITECTS
1729 RIDGEWOOD AVENUE HOLLY HILL, FLORIDA 32117
(386) 677-6891 FAX (386) 677-2114 E-MAIL: info@parkermynchenberg.com
PARKER MYNCHENBERG P.E. #36665 L.A. #0001555
STEVE BUSNELL P.E. #53585 R.L.A. #6667011
KEVIN A. LEE P.E. #71501
CERTIFICATE OF AUTHORIZATION NUMBER 00003910

LIFT STATION 5 REPLACEMENT
SOUTH DAYTONA * FLORIDA

INSTRUMENTATION

I-1
SHEET NO.

DRAWN BY: ADK
DATE: 04/09/2024
JOB NO. 23-36
SCALE: NONE

KEVIN A. LEE LICENSE No 71501 STATE OF FLORIDA PROFESSIONAL ENGINEER
Digitally signed by Kevin Lee
Date: 2025.05.01 10:12:19 -04'00'

SEAL