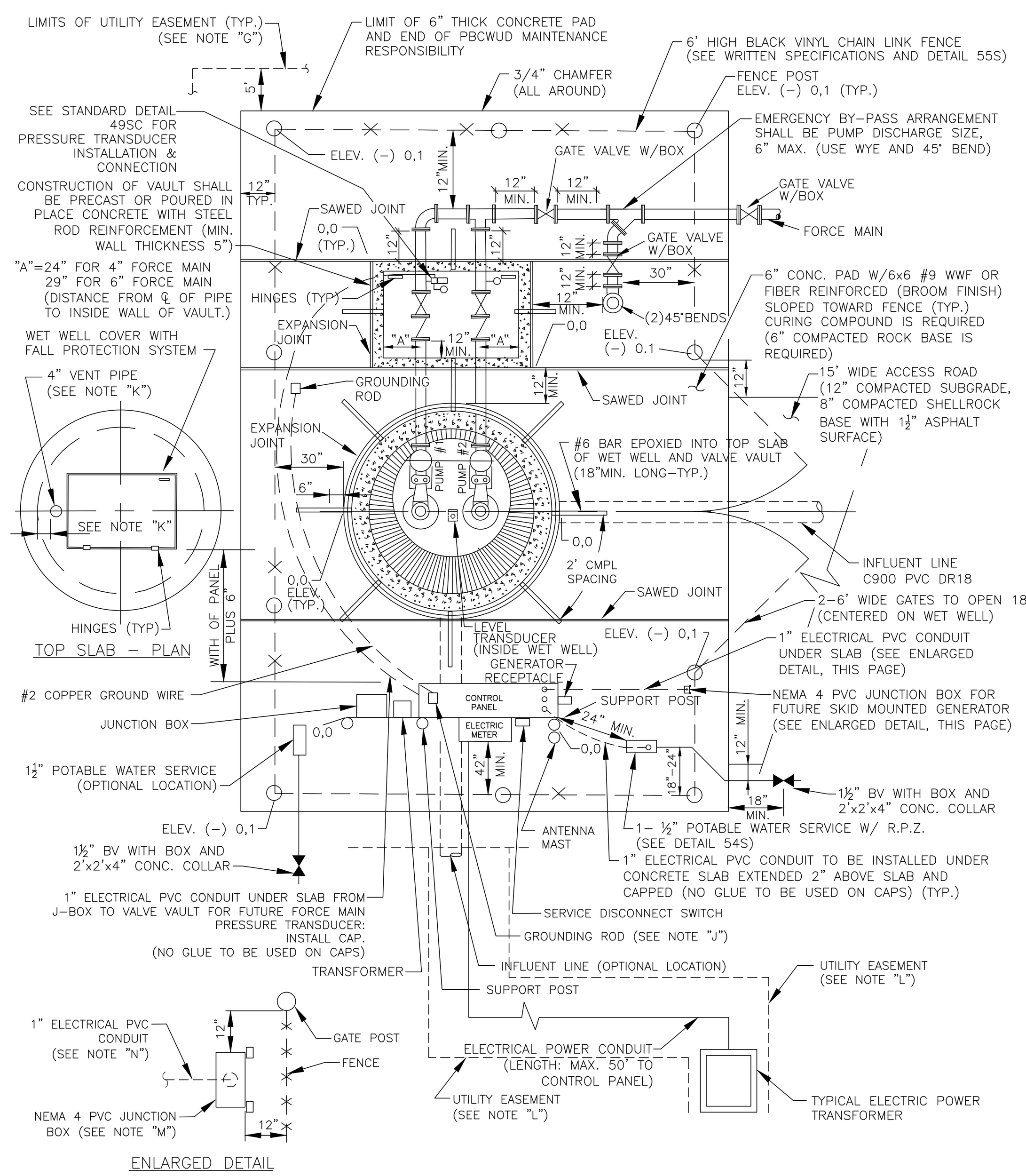


NOTE: SEE DETAIL 48S FOR NOTES RELATED TO 47S

TYPICAL LIFT STATION SITE PLAN DETAIL ✳ 47S

NOTES:

A. ENGINEER SHALL DESIGN SITE PLAN USING THE "TYPICAL LIFT STATION SITE PLAN DETAIL". "SITE PLAN LOCATION" DETAIL SHALL BE DRAWN TO SCALE NOT SMALLER THAN 1"=10' WITH:
   1. NORTH ARROW, STREET NAME.
   2. FENCE WITH 2-6' WIDE GATES.
   3. INFLUENT LINE ENTRY LOCATION WITH MANHOLE AND GRAVITY MAIN DATA.
   4. HINGE LOCATION (HINGES FOR WET WELL COVER MUST BE LOCATED ON THE CONTROL PANEL SIDE; HINGED FOR VALVE VAULT COVER SHALL BE LOCATED ON DISCHARGE SIDE OF FORCE MAIN.)
   5. POWER SERVICE FEED (WITH "AS BUILTS"). MAXIMUM LENGTH OF ELECTRICAL SERVICE FROM THE TRANSFORMER / HANDHOLE TO CONTROL PANEL SHALL BE 50 FEET.
   6. EMERGENCY PUMP OUT LOCATION (SHALL BE SAME SIZE AS PUMP DISCHARGE).
   7. THE STATION SHALL BE POSITIONED SO THE FRONT OF CONTROL PANEL DOES NOT FACE WEST OR SOUTH (NORTH AND EAST ARE PREFERED)

B. HORIZONTAL DISTANCE FROM PANEL FRONT TO WET WELL OPENING. SHALL BE: WIDTH OF CONTROL PANEL PLUS 6".

C. DESIGN TO BE COORDINATED WITH "TYPICAL LIFT STATION PLAN DETAIL".

D. FENCED AREA TO BE COVERED WITH 2 PLY 4.0 (FOUR) MIL VISQUEEN AND A 6" CONCRETE PAD WITH #9 WIRE MESH (6" x 6") – BROOM FINISH REQUIRED. CONCRETE PAD TO EXTEND 12" BEYOND FENCED AREA.

E. INFLUENT MAIN SHALL BE CLEAR OF VAULT.

F. LANDSCAPE AREA ADJACENT TO LIFT STATION SITE MAY BE SUBJECT TO PRIOR APPROVAL BY THIS DEPARTMENT. ONLY HEDGES WITH NON-AGGRESSIVE ROOT SYSTEM WILL BE APPROVED. HEDGES ARE REQUIRED TO BE FIVE (5) FEET MINIMUM FROM THE EDGE OF THE CONCRETE PAD AND/OR DRIVEWAY. TREES ARE REQUIRED TO BE TEN (10) FEET MINIMUM FROM THE DRIVEWAY ONLY WITH PRIOR APPROVAL BY THIS DEPARTMENT. THE DEVELOPER AND SUCCESSOR SHALL BE RESPONSIBLE FOR ALL LANDSCAPE MAINTENANCE INCLUDING ALL SODDED AREAS. APPROVED HEDGES ARE: EUGENIA, SURINAM CHERRY, WAX MYRTLE, SIMPSON STOPPER, AND SOUTHERN RED CEDAR. NO WOODEN FENCES ARE PERMITTED WITHIN THE LIFT STATION EASEMENT AREA GRANTED BY PLAT OR BY SEPERATE INSTRUMENT.

G. A PLATTED LIFT STATION EASEMENT OR EXCLUSIVE PALM BEACH COUNTY UTILITY EASEMENT (PBCUE) BY SEPERATE INSTRUMENT IS REQUIRED TO EXTEND FIVE (5) FEET MINIMUM PAST THE LIFT STATION CONCRETE PAD.

H. ALL EXPOSED (NOT BURIED) JOINTS SHALL BE FLANGED, BURIED JOINTS SHALL BE MECHANICAL JOINT TYPE WITH MEGALUGS OR EQUAL.

I. VALVE VAULT DIMENSIONS (INSIDE):
   1. 4" PIPING: 4'(L) X 6'(W) X 4'(D)
   2. 6" PIPING: 5'(L) X 7'(W) X 4'(D)

J. MINIMUM TWO GROUNDING RODS SHALL BE MIN. 6' APART AND SHALL BE RECESSED THROUGH 6" PVC SLEEVES IN CONCRETE SLAB. THE RODS SHALL BE CONNECTED WITH A #2 BARE TINNED COPPER GROUNDING WIRE.

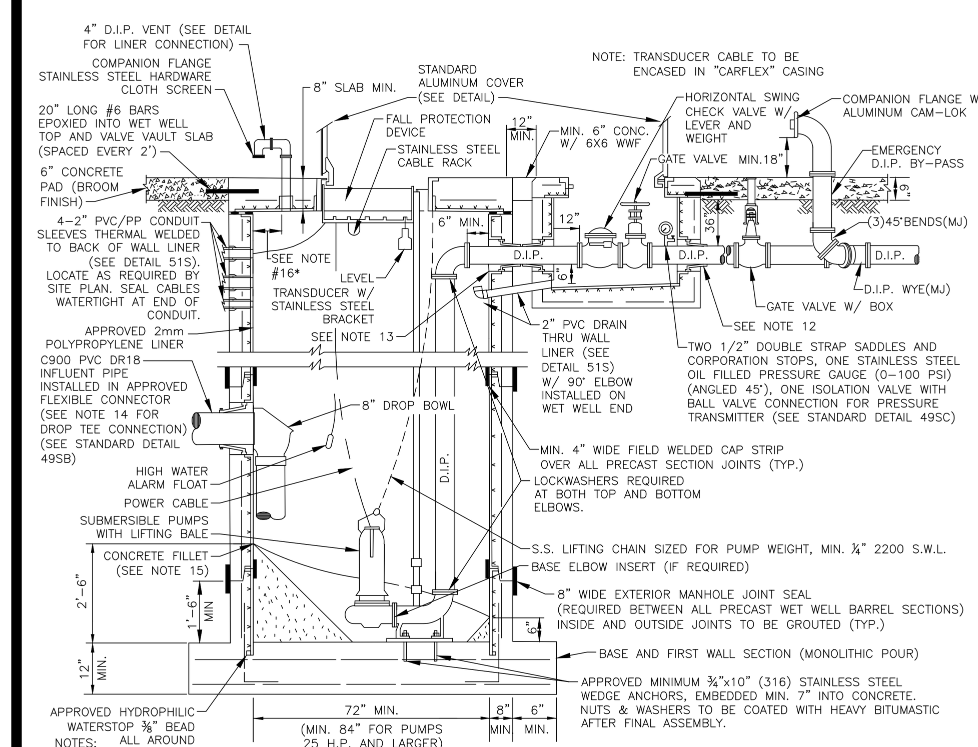
K. WETWELL VENT PIPE SHALL BE INSTALLED SO NOT TO INTERFERE WITH ACCESS TO THE WETWELL AND INSTALLED OPPOSITE OF GATE.

L. THE ELECTRIC POWER SERVICE FEED FROM THE POWER TRANSFORMER TO THE CONTROL PANEL SHALL BE LOCATED WITHIN AN UTILITY EASEMENT.

M. NEMA 4 – 4"X4"X4" PVC JUNCTION BOX TO BE MOUNTED ON 316 STAINLESS STEEL UNISTRUT SUPPORT 24" ABOVE SLAB WITH 316 STAINLESS STEEL HARDWARE.

N. 1" PVC ELECTRICAL CONDUIT TO BE INSTALLED UNDER THE SLAB FROM THE CONTROL PANEL TO JUNCTION BOX AT THE FENCE LINE.

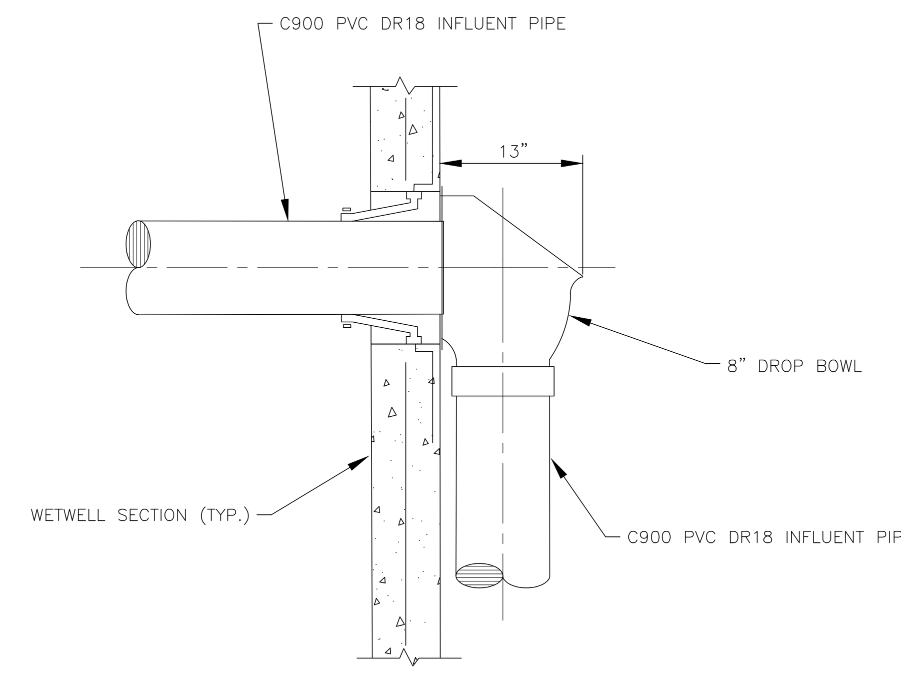
TYPICAL LIFT STATION SITE PLAN NOTES ✳ 48S



NOTES:

1. INSTALL APPROVED GASKET MATERIAL AT ALL SECTION JOINTS PER GASKET MANUFACTURER'S SPECIFICATIONS. SHOP DRAWINGS TO IDENTIFY THE SIZE AND PLACEMENT OF JOINT SEALANT. JOINT PRIMER SHALL BE APPLIED BY THE PRECASTER.
2. PIPING IN WET WELL AND VALVE VAULT TO RECEIVE 2 COATS OF KOPPERS BITUMASTIC 300M, 8-10 MILS EA. COAT, OR APPROVED EQUAL.
3. ALL STEEL IN WET WELL SHALL BE STAINLESS STEEL, INCLUDING GUIDE BARS, LIFTING CHAIN, CABLE SUPPORTS, CABLE HOLDER, AND GUIDE BAR BRACKET (TYPE 316).
4. TYPE II REINFORCED CONCRETE (#4 BARS THROUGHOUT), 4000 P.S.I. CALCAREOUS AGGREGATE REQUIRED (MIN. $CaCO_3$ CONTENT: 65% IN LARGE AGGREGATE, 50% IN CONCRETE SCREENING).
5. SEE PLAN FOR CORRECT ORIENTATION OF PIPES, VENT, AND OTHER FIXTURES.
6. ALL HARDWARE INSIDE AND OUTSIDE OF WET WELL AND VALVE PIT SHALL BE STAINLESS STEEL (TYPE 316).
7. A. INSTALL ⅜" THICK STAINLESS STEEL PLATE THAT EXTENDS MIN. 3" AROUND PERIMETER OF BASE ELBOW.
   B. BASE ELBOW ANCHORS SHALL BE MIN. ¾"x10" (316) S.S., DOUBLE NUTTED, MIN. 2" THREAD LENGTH, TORQUED TO 150 FOOT POUNDS.
8. THREADED AREAS OF CORPORATION STOP SHALL BE SPIRAL WRAPPED WITH TWO WRAPS OF TEFLON TAPE.
9. INTERIOR OF A NEW WET WELL SHALL BE LINED WITH ANY APPROVED SOLID CAST-IN LINER SYSTEM. LINERS MAY ONLY BE WELDED BY WELDERS CERTIFIED BY THE LINER MANUFACTURER AND CAST INTO THE STRUCTURE BY A PRECASTER CERTIFIED BY THE LINER MANUFACTURER. VALVE VAULT MAY BE LINED WITH ANY APPROVED CORROSION BARRIER SYSTEM.
10. WALL THICKNESS AND REINFORCING ARE PER ASTM C-478 LATEST REVISION.
11. ALL DRAIN LINES, CONDUITS, AND VENT PIPES WILL BE CONNECTED TO THE CAST-IN LINER PER THE MFG'S. SPECIFICATIONS (SEE DETAILS). ALL PIPE CONNECTIONS SHALL BE GAS TIGHT AND WATERTIGHT WITH NO EXPOSED CONCRETE SURFACES.
12. CAST OPENINGS SHALL BE MANUFACTURED WITH A CAST-IN POLYPROPYLENE SLEEVE. APPROVED FLEXIBLE CONNECTORS SHALL BE USED AT INFLUENT AND DISCHARGE PIPE CONNECTIONS. HOLE SIZE BY BOOT MFG'S. SPECIFICATIONS. DOUBLE PIPE CLAMPS MUST BE INSTALLED ON FLEXIBLE CONNECTORS WHERE REQUIRED BY BOOT MFG'S. INSTALLATION INSTRUCTIONS (SEE DETAIL).
13. CORED PIPE OPENINGS SHALL BE INSTALLED PER DETAIL. APPROVED FLEXIBLE CONNECTORS WILL BE INSTALLED ONTO POLYPROPYLENE WALL SLEEVE. WALL SLEEVE SHALL BE EPOXIED INTO CORED OPENING AND THERMAL WELDED TO WALL LINER (SEE DETAIL). WELDING SHALL BE PERFORMED EXCLUSIVELY BY LICENSED CERTIFIED WELDERS.
14. ALL BOLT PENETRATIONS THROUGH LINER SHALL BE SEALED WITH AN APPROVED HYDROPHILIC RUBBER CAULKING AND PLACED SO THAT A COMPRESSION SEAL WILL DEVELOP IN THE PRESENCE OF MOISTURE (SEE DETAIL).
15. SEAL LINER/FILLET INTERFACE WITH 3M WEATHERBAN 5354 SEALANT TAPE OR AN APPROVED EQUAL.
16. VENT PIPE TO BE LOCATED 3 INCHES ON 6 FOOT DIAMETER WET WELL AND 4 INCHES ON 8 FOOT DIAMETER WET WELL FROM THE INTERIOR WET WELL WALL.*

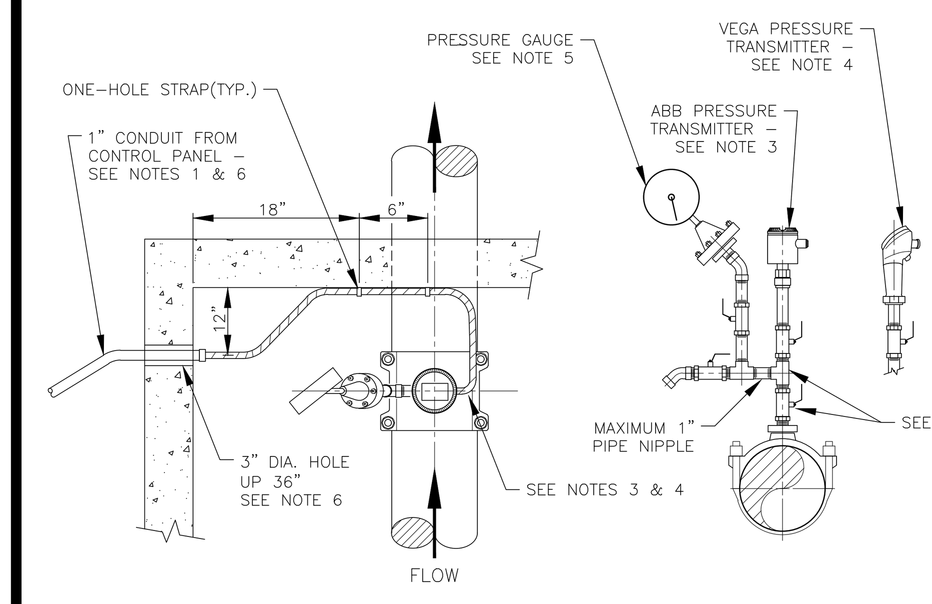
TYPICAL LIFT STATION SECTION WITH CAST-IN LINER ✳ 49SA



NOTES:

1. C900 INFLUENT PIPE TO EXTEND INTO WET WELL TO CONNECT TO AN 8" DROP BOWL
2. 8" DROP BOWL
3. CONNECT INFLUENT PIPE TO COMPACT TEE USING SOLID RING MECHANICAL JOINT RESTRAINING DEVICE FOR PVC PIPE.
4. ALL HARDWARE (BOLTS,NUTS,ETC.) TO BE STAINLESS STEEL TYPE 316.

TYPICAL LIFT STATION SECTION DROP PIPE DETAIL & NOTES ✳ 49SB



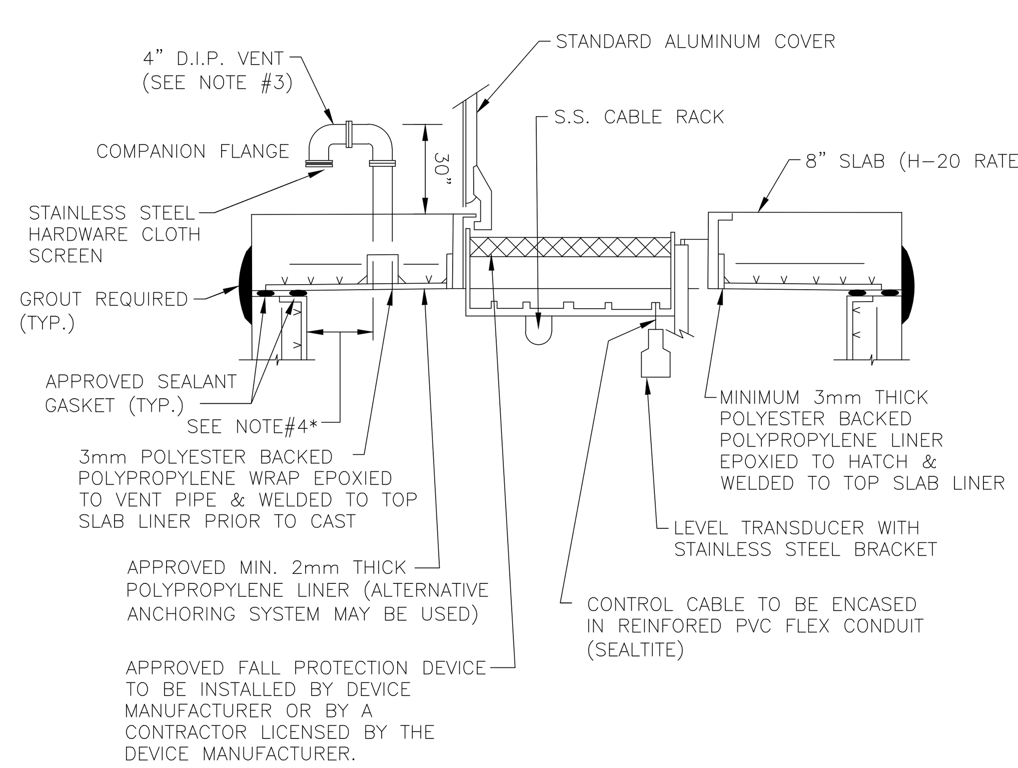
PLAN PROFILE

NOTES:

1. 1" CONDUIT FROM THE LIFT STATION CONTROL PANEL IS STUBBED OUT (3) THREE INCHES INTO THE VALVE VAULT FOR CONNECTION TO FLEX LIQUID TIGHT CONDUIT FROM THE PRESSURE TRANSMITTER.
2. ALL PIPES, FITTINGS, AND BALL VALVES ARE TO BE 1" IN SIZE AND EITHER ALL BRASS OR ALL STAINLESS STEEL PER EACH INSTALLATION. A 1" X 1/2" REDUCER BUSHING IS REQUIRED TO CONNECT AN ABB PRESSURE TRANSMITTER TO THE 1" PIPE.
3. ON AN ABB PRESSURE TRANSMITTER CONNECT A 3/4" FLEX LIQUID TIGHT CONDUIT FROM THE TRANSMITTER TO THE 1" CONDUIT FROM THE LIFT STATION CONTROL PANEL AND IT IS TO BE ANCHORED TO THE VALVE VAULT WALL WITH (2) TWO ONE-HOLE STAINLESS STEEL STRAPS USING 1/4" STAINLESS STEEL SCREW ANCHORS.
4. ON A VEGA PRESSURE TRANSMITTER CONNECT A VEGA M12 CONNECTION CABLE (LENGTH AS REQUIRED) FROM THE TRANSMITTER TO THE LIFT STATION CONTROL PANEL THROUGH A 1/2" FLEX TIGHT CONDUIT TO THE 1" CONDUIT FROM THE LIFT STATION CONTROL PANEL. THE 1/2" FLEX TIGHT CONDUIT IS TO BE ANCHORED TO THE VALVE VAULT WITH (2) TWO ONE-HOLE STAINLESS STEEL STRAPS USING 1/4" STAINLESS STEEL SCREW ANCHORS.
5. PRESSURE GAUGE MUST BE INSTALLED ON AN ANGLE SO IT CAN BE READ OUTSIDE THE VALVE VAULT.
6. 1" CONDUIT TO BE GROUTED IN PLACE IN THE VALVE VAULT WALL PRIOR TO CONNECTING IT TO THE FLEX LIQUID TIGHT CONDUIT FROM THE PRESSURE TRANSMITTER.

TYPICAL LIFT STATION VALVE VAULT PRESSURE TRANSMITTER DETAIL & NOTES ✳ 49SC

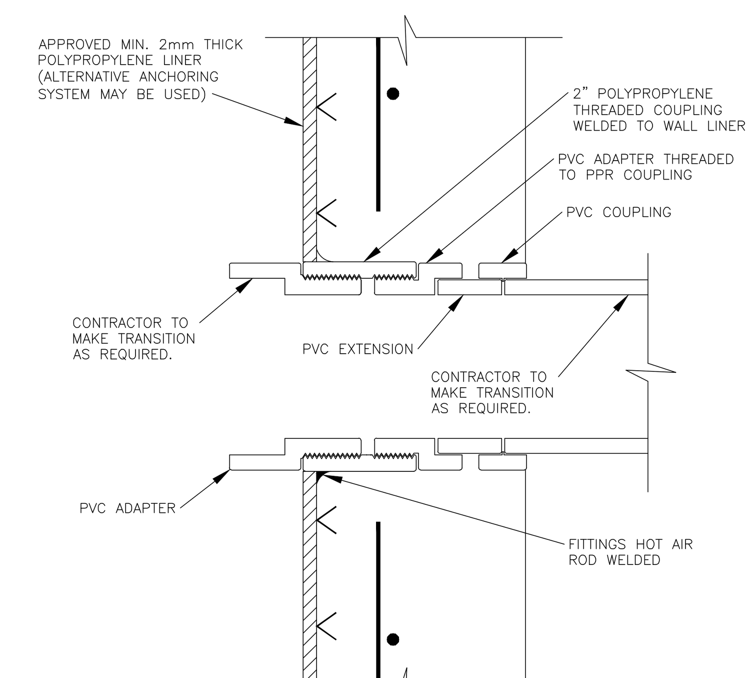
SITE PLAN



NOTES:

1. A FIELD WELDED CAP STRIP OVER THE WETWELL/TOP SLAB JOINT IS NOT REQUIRED.
2. THE LEVEL TRANSDUCER SHALL BE LOCATED NEAR THE CORNER OF THE ACCESS OPENING, OPPOSITE OF PUMP GUIDE RAILS AND OPPOSITE OF SEWER INFLOW INVERT. THE CONTROL WIRE SHALL BE ENCASED IN 3/4" CONDUIT SEALTITE.
3. THE WETWELL VENT SHALL BE LOCATED OPPOSITE OF THE ACCESS GATE.
4. VENT PIPE TO BE LOCATED 3 INCHES ON A 6 FOOT DIAMETER WET WELL AND 6 INCHES ON A 8 FOOT DIAMETER WET WELL FROM THE INTERIOR WET WELL WALL.✳

LIFT STATION TOP SLAB 50S



LINER TREATMENT FOR MISC. SMALL PIPE CONNECTIONS

LIFT STATION 2" DIAMETER CONDUIT CONNECTION 51S

WET WELL DATA

	PROPOSED	AS-BUILT			
STATION NUMBER			HIGH WATER ALARM		
DIAMETER			STANDBY PUMP ON		
TOP SLAB ELEV.			DUTY PUMP ON		
BASE SLAB ELEV.			BOTH PUMPS OFF		
INFLUENT ELEV.			FINISHED GRADE		
			LOCATED ON SHEET		

PUMP DATA

PUMP STATION NUMBER			
PUMP NUMBER			
MAX./MIN. G.P.M.			
MIN./MAX. T.D.H			
MANUFACTURER			
MODEL			
IMPELLER NUMBER			
R.P.M.			
H.P.			
SIZE			
MAX. SOLID SIZE			
PHASE			
CYCLE			
VOLTS			

RTU RECORD DATA

ADDRESS		LOCATION DESCRIPTION (DISTANCES AND DIRECTIONS FROM CENTERLINES AND/OR INTERSECTIONS OF STREETS, CANALS OR EQUAL)	
GEOGRAPHICAL LOCATION	LAT. 26° ' "N		
	LONG. 80° ' "W		
HEIGHT OF ANTENNA ABOVE SLAB	FEET		
FREQUENCY	MHZ		
POWER	WATTS		
P.B.C. LIFT STATION No.			

LIFT STATION MECHANICAL STANDARD DETAILS, 1 OF 2

CONSULTANT:

IT'S THE LAW ! CALL 48 HOURS BEFORE YOU DIG **1-800-432-4770** SUNSHINE STATE ONE CALL OF FLORIDA, INC. UTILITIES NOTIFICATION CENTER

DESIGNED BY: WUD
DRAWN BY: M. BUCKNER
CHECKED BY: J. LAMMERT
APPROVED BY: WUD

Palm Beach County
Water Utilities Department
P.O.Box 16097
West Palm Beach, FL 33416-6097

SEAL

Sep 19, 2024

WUD PROJECT No. 00-000

WUD PROJECT NAME

PALM BEACH COUNTY · FLORIDA

PALM BEACH COUNTY
WATER UTILITIES DEPARTMENT
P.O. BOX 16097
WEST PALM BEACH, FL 33416
(561)493-6000

NO.	DATE	REVISION / REMARKS	BY
	DEC 2021	GENERAL REVISION	J.L.
	JAN 2023	GENERAL REVISION	J.L.
	OCT 2024	✳ GENERAL REVISION	J.L.

LS MECH M-1

SHEET NUMBER 0 OF 0

Drawing: W:_WUD 2024 STD DTL REVS\WUD 2023 STD DTLS - LIFT STATION (6 SHTS).dwg\1_WUD LS_M1 - Last Modified: Thu, Sep 19, 2024 - 1:11pm