PUMP STATION WETWELL DATA

DIMENSIONS AND ELEVATIONS											PIPE DIA		HATCH DIM		
PS#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
											4" (MIN)		32"	48"	26"
											4" (MIN)		32"	48"	26"
											4" (MIN)		32"	48"	26"
											4" (MIN)		32"	48"	26"

PUMP DESIGN DATA						DESIGN FLOW DATA			FLOOD ELEV. DATA	
PS#	MODEL #	IMPELLER #	H.P.	RPM	PHASE ϕ / VOLTAGE V	DWELLING UNITS SERVED	AVERAGE DAILY FLOW (GPM)	PEAK DESIGN FLOW (GPM)	25 YR FL. ELE.	100 YR FL. ELE.

NETWORK/SYSTEM CALCULATIONS AND WET WELL STORAGE CALCULATIONS TO BE SUBMITTED TO B.S.U.

PS-10

GENERAL NOTES

1. INSTALLATION OF COVER, PUMP ANCHOR BOLTS, GUIDE RAILS, ETC. MUST BE COORDINATED WITH THE DETAILS AND SPECIFICATIONS AS RECOMMENDED BY THE MANUFACTURER.
2. ALL ELEVATIONS ARE BASED ON N.A.V.D. 88 (NORTH AMERICAN VERTICAL DATUM).
3. PUMP STATION SHALL INCLUDE WETWELL COMPLETE WITH WALL AND SLAB CONSTRUCTION, ACCESS FRAMES AND DOORS AND ALL OTHER APPURTENANT CONSTRUCTION ITEMS AND MATERIALS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES FOR CONSTRUCTION AND MAINTENANCE OF ALL EQUIPMENT AND PARTS, INCLUDING BOLT AND ARM REMOVAL.
5. ALL WIRING INCLUDING ELECTRIC SERVICE SHALL BE COPPER.
6. ELECTRICAL COMPONENTS SHALL BE EQUIPPED WITH NATIONAL ELECTRIC CODE AND BUILDING DEPARTMENT APPROVED CONDUIT PIPE "SEAL-OFF" BETWEEN CONTROL PANEL AND WETWELL.
7. ALL HARDWARE FOR INTERIOR WETWELL (NUTS, BOLTS ETC.) SHALL BE STAINLESS STEEL.
8. THE ELECTRIC SERVICE WIRING TO THE PUMP STATION CONTROL PANEL SHALL BE SIZED BY THE ELECTRICAL CONTRACTOR TO PROVIDE A VOLTAGE DROP NOT GREATER THAN 5% OF THE LINE VOLTAGE FROM POWER COMPANY WHEN ALL PUMPS ARE AT MAXIMUM START-UP LOAD.
9. THE CONTRACTOR SHALL SUBMIT THE FINAL LOCATIONS OF TRANSFORMER, ELECTRICAL, SERVICE CONDUITS, PUMP STATION PIPING AND CONTROL PANEL LOCATIONS ON THE PLAN SET PRIOR TO CONSTRUCTION. FINAL APPROVAL REQUIRED BY BSU.
10. CHECK VALVES, PLUG VALVES, 3 WAY PLUG VALVES 6" OR LARGER TO MATCH PUMP DISCHARGE.
11. PATCH LEAKS, CRACKS AND JOINTS WITH PORTLAND CEMENT OR EQUIVALENT.
12. SHOP DRAWING SUBMITTALS REQUIRED FOR EACH PUMP STATION TO BSU.
13. ALL ABOVE GROUND PIPING WILL BE PAINTED WITH A UL RATED PAINT (REFER TO SPECIFICATIONS).
14. A REDUCED-PRESURE PRINCIPLE ASSEMBLY (RPZ) AND WATER SERVICE IS REQUIRED.
15. 10' COPPER GROUNDING ROD – GROUNDING SYSTEM REQUIRED FOR ALL MASTER PUMP STATIONS WITH GENERATORS. MORE MAY BE REQUIRED IF NO GROUND SHOWN ON METER.

PS-11

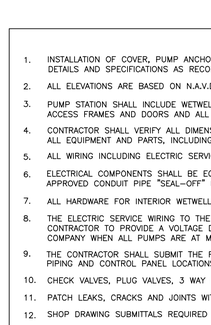
EQUIPMENT SPECIFICATIONS

MARK	QTY.	
1	2	DISCHARGE SUBMERSIBLE SEWAGE PUMPS
2	2	LIQUID LEVEL REGULATORS (FLOAT BALLS)
3	1	ACCESS HATCH
4	1	CONTROL PANEL
5	1	4" PVC VENT PIPE FOR 6' WET WELL (FINAL DETERMINATION BY BSU)
6	1	WETWELL, REINFORCED CONCRETE
7	2	4" CHECK VALVE
8	1	4" PLUG VALVE
9	1	3-WAY 4" PLUG VALVE – 3 PORT (EMERGENCY PORT TO BE 3", FACING THE OUTSIDE – OPERATING NUT TO BE LOCATED ON TOP)
10	1	3" QUICK-COUPLING UNIT COMPLETE. CONNECT TO THIRD PORT 3-WAY VALVE WITH A BRONZE MALE THREAD ADAPTOR
11	2	AIR RELEASE VALVE, ARI MODEL # ARI-D-040
12	2	STAINLESS STEEL SADDLE
13	2	HDPE BUTT FUSED MJ ADAPTER W/AN MJ ACCESSORY KIT
14	2	MECHANICAL JOINT FLANGED COUPLING ADAPTERS
15	1	ULTRA SONIC LEVEL INDICATOR (TRANSDUCER)

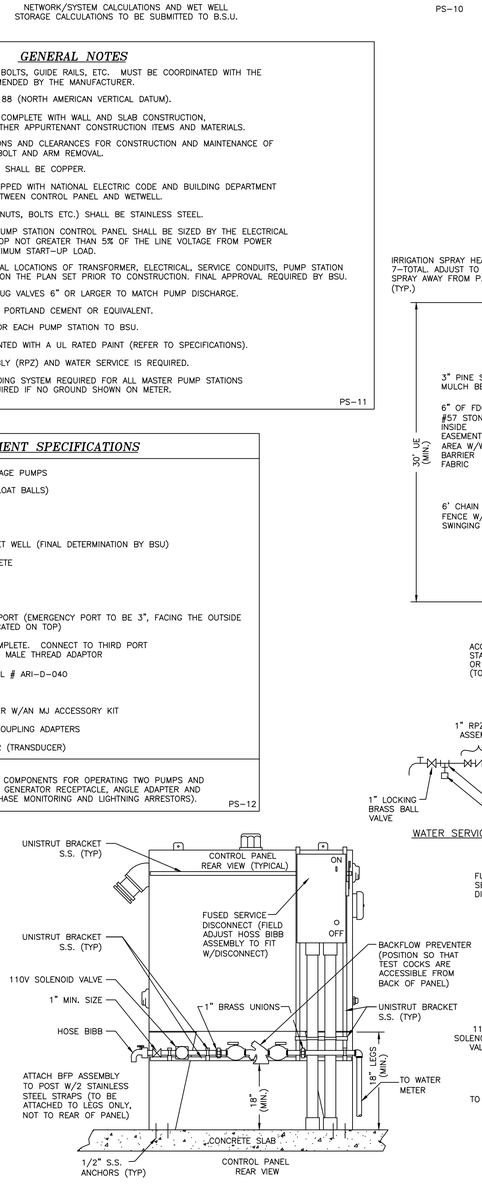
FDEP REQUIREMENTS

CONTROL PANEL SHALL BE (3 PHASE) WITH ALL COMPONENTS FOR OPERATING TWO PUMPS AND LIQUID LEVEL REGULATORS, ALTERNATOR RELAYS, GENERATOR RECEPTACLE, ANGLE ADAPTER AND NEMA 4X STAINLESS STEEL ENCLOSURE (WITH PHASE MONITORING AND LIGHTNING ARRESTORS).

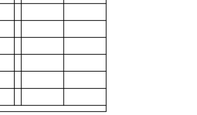
PS-12



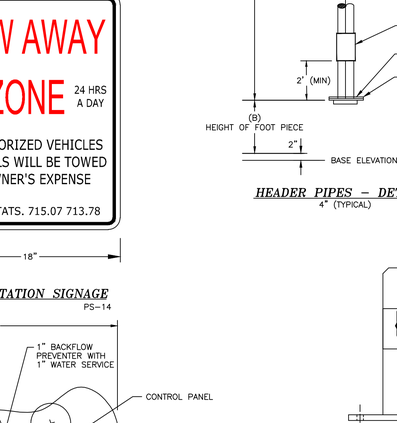
ELECTRIC METER POST
PS-9



CONTROL PANEL (REAR)
PS-3

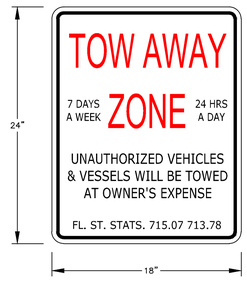


WATER SERVICE

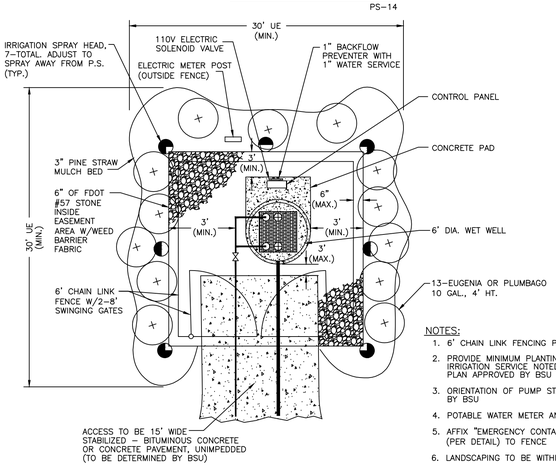


OUTER DOOR REMOVED TO SHOW DEADFRONT LAYOUT NEMA TYPE 4X S.S. ENCLOSURE WITH CONT. HINGE. ALL HARDWARE STAINLESS STEEL TYPICAL. ACTUAL LAYOUT AND SIZE MAY VARY WITH HORSEPOWER

CONTROL PANEL (FRONT)
(FREE STANDING)
PS-4

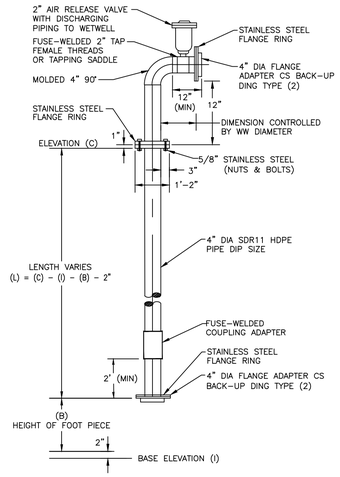


PUMP STATION SIGNAGE
PS-14

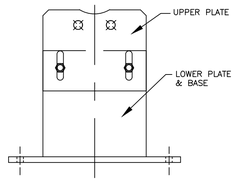


NOTES:
1. 6' CHAIN LINK FENCING PER BSU SPECIFICATIONS
2. PROVIDE MINIMUM PLANTING SCHEDULE AND IRRIGATION SERVICE NOTED ABOVE OR DEVELOPER PLAN APPROVED BY BSU
3. ORIENTATION OF PUMP STATION TO BE PROVIDED BY BSU
4. POTABLE WATER METER AND BOX LOCATION PER BSU
5. AFFIX "EMERGENCY CONTACT" & "NO PARKING" SIGNS (PER DETAIL) TO FENCE
6. LANDSCAPING TO BE WITHIN EASEMENT

PUMP STATION SITE LAYOUT AND LANDSCAPE PLAN
PS-5

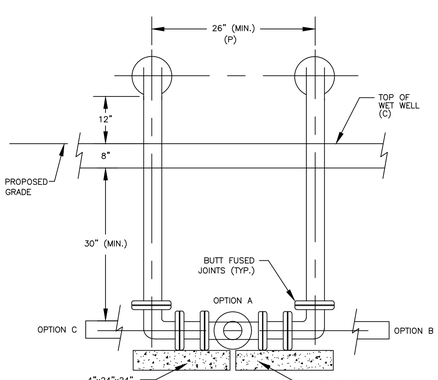


HEADER PIPES – DETAIL 1
4" (TYPICAL) PS-7



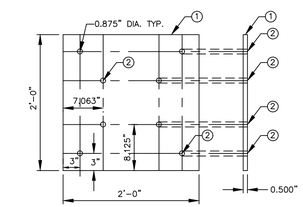
NOTES:
1. IF THE PIPE SUPPORT CANNOT BE ANCHORED TO THE WET WELL SLAB, THEN AN ADDITIONAL SLAB WILL BE REQUIRED. THE ADDITIONAL SLAB WILL NEED TO BE PINNED TO THE WET WELL SLAB.
2. CAN BE USED FOR LARGE METER ASSEMBLIES AND BACKFLOW PREVENTERS

PIPE SUPPORT
PS-13



NOTES:
1) SEE PUMP STATION DESIGN TO DETERMINE WHICH OPTION TO USE FOR DISCHARGE PIPING
2) ALL DISCHARGE PIPING TO BE CONTINUOUS PRE-ENGINEERED HDPE PIPE WITH DUCTILE IRON O.D.
3) HDPE BUTT FUSED MJ ADAPTER WITH MJ ACCESSORY KIT TO BE PROVIDED AT THE END OF THE HDPE HEADER PIPE FOR CONNECTION TO VALVE

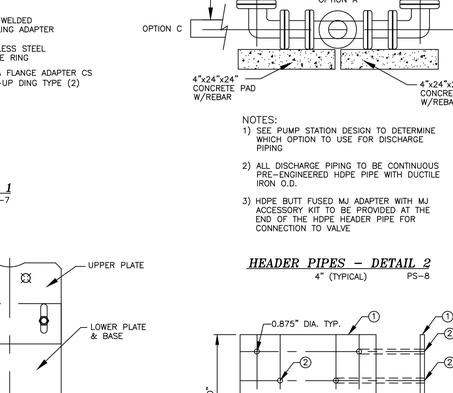
HEADER PIPES – DETAIL 2
4" (TYPICAL) PS-8



① 316 STAINLESS STEEL BASE PLATE
② 3/4" DIA. X8" STAINLESS STEEL WEDGE BOLT SCREW ANCHORS, (8 EA.)

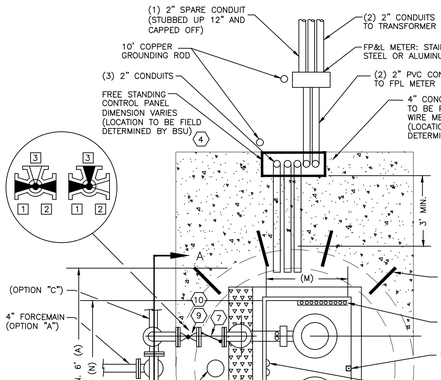
ISOMETRIC VIEW

4" DIAMETER PUMP DISCHARGE BASE PLATE
PS-16



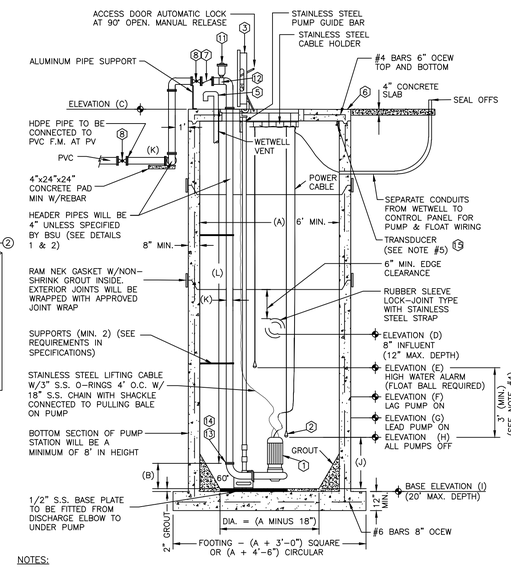
54" x 48" ALUMINUM ACCESS HATCH
PS-1

DETAIL PS-15 DELETED



NOTES:
1. DISCHARGE PIPE LENGTH SHORTER ON SIDE WITH 3-WAY VALVE.
2. FIELD LOCATION OF PAD, PANEL & VENT BY BSU ENGINEERING DEPT. PRIOR TO CONSTRUCTION.
3. FORCE MAIN ORIENTATION OPTION "A", "B" OR "C" BY BSU ENGINEERING DEPT.

PUMP STATION DETAIL
PS-2



NOTES:
1. PRIOR AUTHORIZATION REQUIRED BY BSU FOR ANY WET WELL SIZE OTHER THAN 6'
2. ALL SURFACES WILL BE PREPARED BY SAND BLASTING PRIOR TO PAINTING OR COATING
3. STAINLESS STEEL U-BOLT AND BRACKET PIPE SUPPORTS SHALL BE REQUIRED TO SUPPORT ALL HEADER PIPES
4. LIQUID LEVEL REGULATORS (FLOAT BALLS) ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY (HIGH LEVEL FLOAT BALL REQUIRED)
5. ULTRA SONIC LEVEL INDICATOR (TRANSDUCER) WILL BE MOUNTED AND POSITIONED SO AS TO NOT READ THE TOP OF THE PUMPS. MOUNTING BRACKETS WILL BE SUPPLIED BY BSU.

6' WET WELL
PS-6

CONSULTANTS COMMENTS:

B.S.U. DETAIL SHEETS MUST REMAIN AS IS (NO ALTERATIONS)
IF ADDITIONAL DETAILS ARE REQUIRED SUBMIT ON SEPERATE SHEET

CLIENT:

PROJECT:

Bonita Springs Utilities, Inc.

TITLE: PUMP STATION DETAILS

SCALE: NOT TO SCALE

DATE: JANUARY 2018

11900 E. TERRY STREET
BONITA SPRINGS, FLORIDA 34135
PHONE: (239) 992-0711 FAX: (239) 992-9223

DWG #: PSDET.DWG

SHEET OF