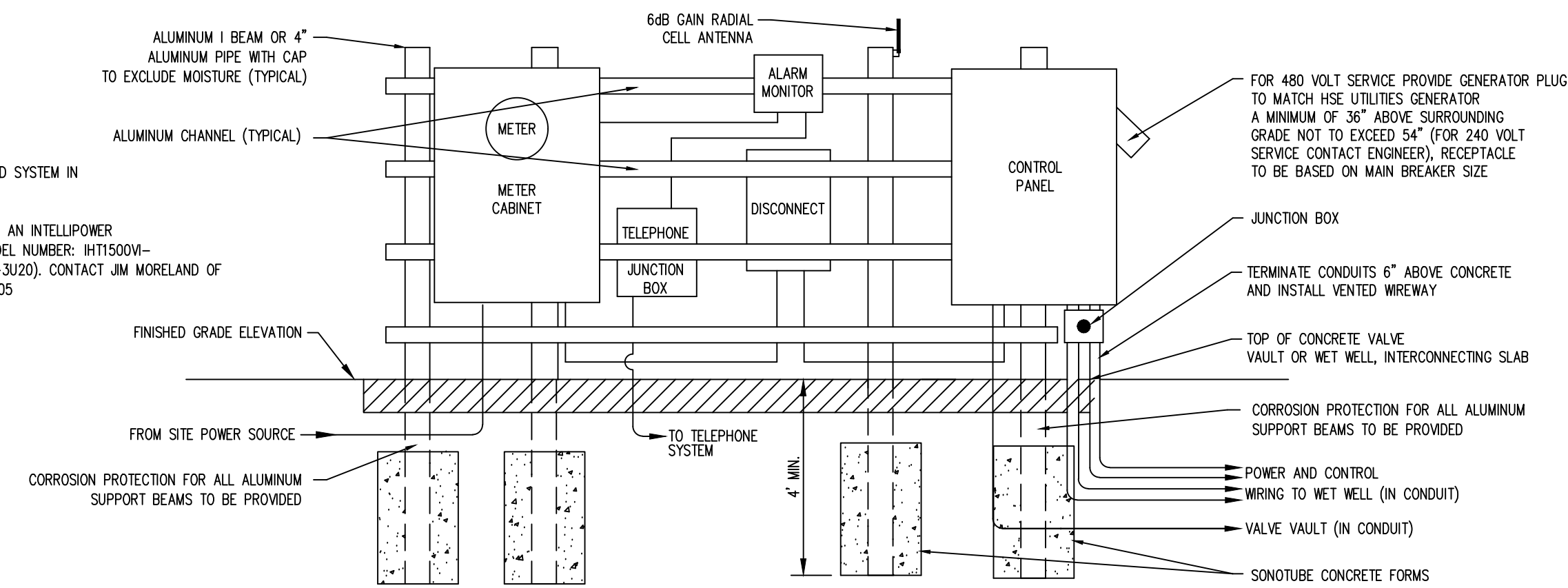


ADDITIONAL NOTES:

- GROUNDING IS TO BE THREE (3) ROD SYSTEM IN UNDISTURBED OR COHESIVE SOIL.
- LIFT STATION TO BE EQUIPPED WITH AN INTELLIPOWER UNINTERRUPTIBLE POWER SYSTEM (MODEL NUMBER: HT1500P-1.05K-120V-60-1500-120V-7.0-15-3020). CONTACT JIM MORELAND OF INTELLIPOWER, INC. (714-921-1580 X 205)



NOTE: ALL ENCLOSURES TO BE WEATHER PROOF NEMA TYPE 4X FABRICATED OF 14 GAUGE 304 STAINLESS STEEL.

CONTROL PANEL DETAIL

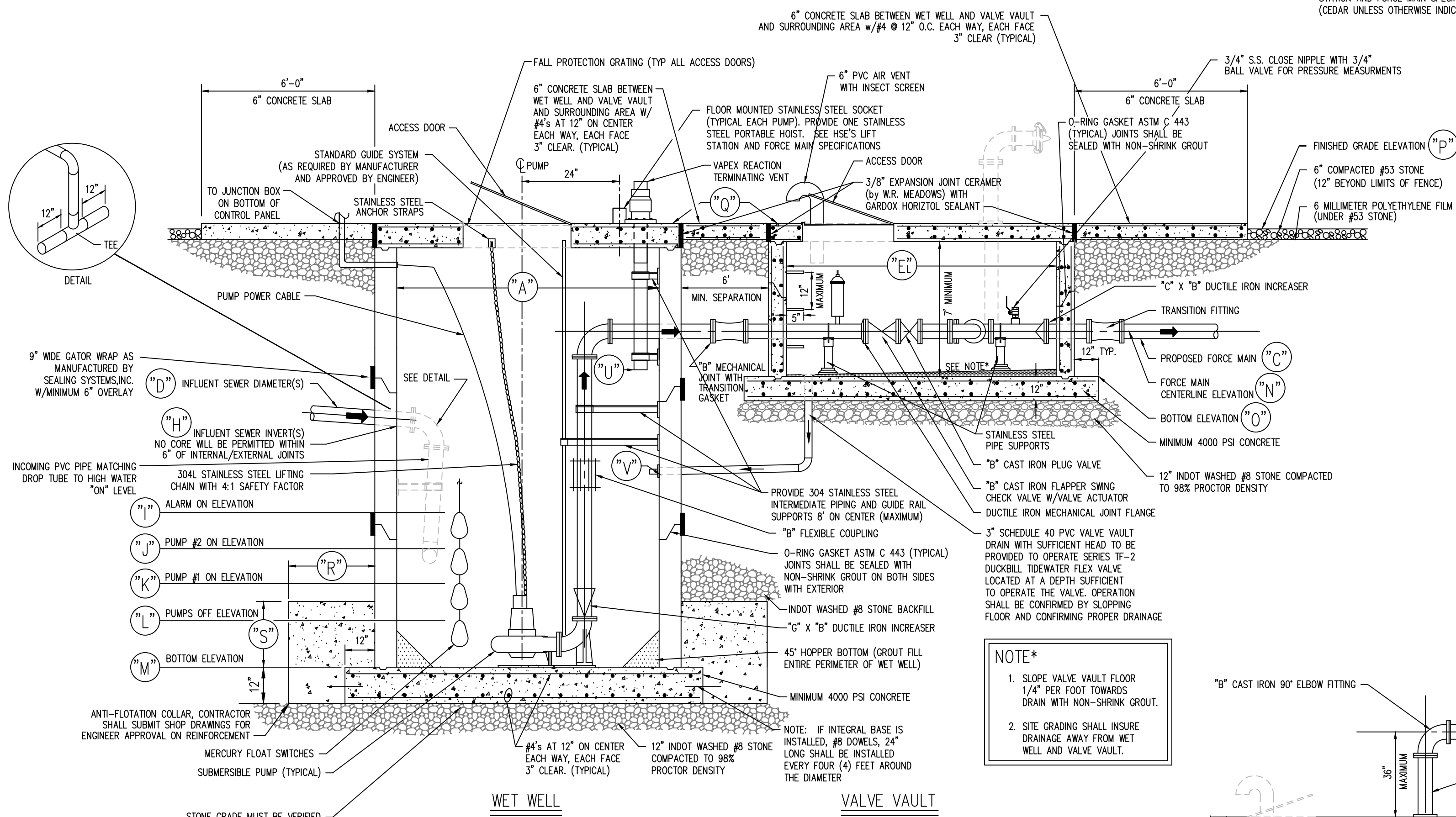
NO SCALE (CONCEPTUAL)

NOTES:

- AN EMERGENCY PUMP BYPASS CONNECTION ASSEMBLY SHALL BE PROVIDED ON THE LIFT STATIONS DISCHARGE HEADER COMPLETE WITH ISOLATION PLUG VALVE AND A BAUER FITTING WITH PLUG. THE DISCHARGE LINES SHALL CONNECT TO DISCHARGE MANFOLD IN SUCH A WAY TO ALLOW A PORTABLE PUMP TO BE CONNECTED TO THE MANFOLD AND PUMP INTO THE FORCE MAIN AS IF IT WERE A NORMAL STATION PUMP. PROVIDE FEMALE BAUER COUPLING FITTING.
- ALL LIFT STATIONS SHALL BE FITTED WITH AN EMERGENCY STANDBY KOHLER OR MTU PORTABLE EMERGENCY GENERATOR UNLESS DIRECTED OTHERWISE BY ENGINEER. FUEL PREFERENCE IS NATURAL GAS, PROPANE, OR DIESEL (WHEN GAS FUEL SOURCE IS NOT APPLICABLE). TRANSFER SWITCH, SIZE, VOLTAGE, AND FUEL WILL BE DEPENDENT ON STATION DESIGN CRITERIA AND LOCATION CHARACTERISTICS. FINAL DESIGN AND SPECIFICATIONS OF THE UNIT SHALL BE APPROVED BY HSE AND ARE TO INCLUDE APPROPRIATE ARC FLASH RATINGS AND POSTINGS.
- REFER TO ELECTRICAL PLANS FOR ALL GENERATOR REQUIREMENTS.
- ONE (1) YARD HYDRANT WITH BACK FLOW PREVENTION TO BE PROVIDED COMPLIANT WITH WATER UTILITY REQUIREMENTS IS TO BE PROVIDED.
- PVC CONDUIT TO BE INSTALLED FOR LED LIGHTING FROM CONTROL PANEL TO VALVE VAULT
- 3/4" WATERLINE WITH METER AND BACK FLOW PREVENTER IS TO BE EXTENDED TO THE VAPEX ODOR CONTROL UNIT AND YARD HYDRANT. THE BACK FLOW PREVENTER DEVICE IS TO BE HOUSED IN A HUBBELL QUARTZ ENCLOSURE AND PROVIDED WITH A 110V GFI OUTLET. COMPLIANT WITH WATER UTILITY REQUIREMENTS.
- CONCRETE SLAB TO BE INTERCONNECTED BETWEEN WET WELL, VALVE VAULT, CONTROL PANEL, GENERATOR PAD AND ODOR CONTROL EQUIPMENT PAD. CONCRETE MUST EXTEND BEYOND THE WET WELL, VALVE VAULT, AND CONTROL PANEL A MINIMUM OF 6"(6X3) FEET IN ALL DIRECTIONS.
- ALL VALVES TO BE VAL-MATIC OR DEZURK VALVES WITH FUSION BONDED EPOXY (FBE) COATING. REFER TO SECTION 1, PART 1, SUB-SECTION 1.05 "VALVES AND VALVE BOXES" IN HSE'S LIFT STATION AND FORCE MAIN SPECIFICATIONS FOR FURTHER INFORMATION.
- 20" GATE. SEE HSE'S LIFT STATION AND FORCE MAIN DETAILS SHEET AND LIFT STATION AND FORCE MAIN SPECIFICATIONS FOR FURTHER INFORMATION.
- FENCE: SEE HSE'S LIFT STATION AND FORCE MAIN DETAILS SHEET AND LIFT STATION AND FORCE MAIN SPECIFICATIONS FOR FURTHER INFORMATION. (CEDAR UNLESS OTHERWISE INDICATED)

NOTES: (CON'T)

- SITE GRADING SHALL ALLOW 120" OPENING OF GATES TO HOLD OPEN WEDGE
- MAINTAIN A MINIMUM OF 35' (feet) DISTANCE BETWEEN THE GATE FACE AND RIGHT-OF-WAYS.
- DISTANCE BETWEEN CONTROL PANEL OPEN DOOR AND CLOSEST HATCH SHALL BE A MINIMUM OF 6'.
- MINIMUM OF 12" OF INDOT #8 WASHED STONE UNDER ENTIRE SLAB.
- STILLING WELL FOR TRANSDUCER, CONSTRUCTED OF 8" SCH 40 PVC PIPE, AT THE MINIMUM AND SUSPENDED BY STAINLESS STEEL CHAIN, STABILIZED BY INTERMEDIATE STAINLESS STEEL WALL BRACKETS (8-10 FT APART) AND SUSPENDED 18" OFF WELL WELL FLOOR.
- PROVIDE DIRECT ACCESS TO GENERATOR PAD.
- VAPEX ODOR CONTROL UNIT SOUND/WEATHER COVER REQUIRES A PAD AREA 12" X 15" L. THE COVER OPENS AS A UNIT, WITH THE OPEN COVER RESTING ON THE SLAB, THE ASSEMBLY EXTENDS APPROXIMATELY 10" THE SOUND/WEATHER ENCLOSURE IS TO BE CLEAR OF THE CONTROL PANEL AND OTHER ELECTRICAL COMPONENTS BY A MINIMUM OF 5'.
- CONNECTING PIPING AND TUBING BETWEEN THE WET WELL AND VAPEX UNIT IS TO BE BENEATH THE SLAB THROUGH 2 IN. SCHEDULE 40 PVC PIPE. NO 90-DEGREE ELBOWS ARE TO BE USED. THE DISPERSION NOZZLE IS TO BE SECURELY MOUNTED AND EASILY ACCESSIBLE FOR SERVICE PER THE MANUFACTURER'S INSTALLATION INSTRUCTION.
- ANY PLANTINGS ON THE EXTERIOR ARE TO BE SET A MINIMUM OF 5 FT. FROM THE FENCE EXTERIOR AND MAINTAIN A TRIMMED CLEARANCE OF 3 FT. FROM THE FENCE.
- ACCESS DRIVE PAVING IS TO EXTEND TO THE GENERATOR PAD AND INTERCONNECTING PAD.
- A MINIMUM OF THREE (3) FEET SEPARATION SHALL BE MAINTAINED BETWEEN FENCE COMPONENTS AND REAR OF ELECTRICAL PANEL MOUNTING STRUCTURE AS WELL AS INTERCONNECTING WET WELL/VALVE VAULT SLAB, GENERATOR PAD AND ODOR CONTROL PAD.
- IF ELECTRICAL COMPONENTS ARE TO BE MOUNTED ON REAR OF SUPPORT STRUCTURE, MAINTAIN FOUR (4) FROM FACE OF COMPONENTS AND SERVICE
- GRAVEL SHALL COVER NON-PAVED AREAS INSIDE OF FENCE TO ONE (1) FOOT BEYOND FENCE PERIMETER.
- CONTRACTOR TO PROVIDE NECESSARY EQUIPMENT TO ENSURE COATING THICKNESSES ADHERE TO MANUFACTURER'S SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY ENGINEER IN WRITING.

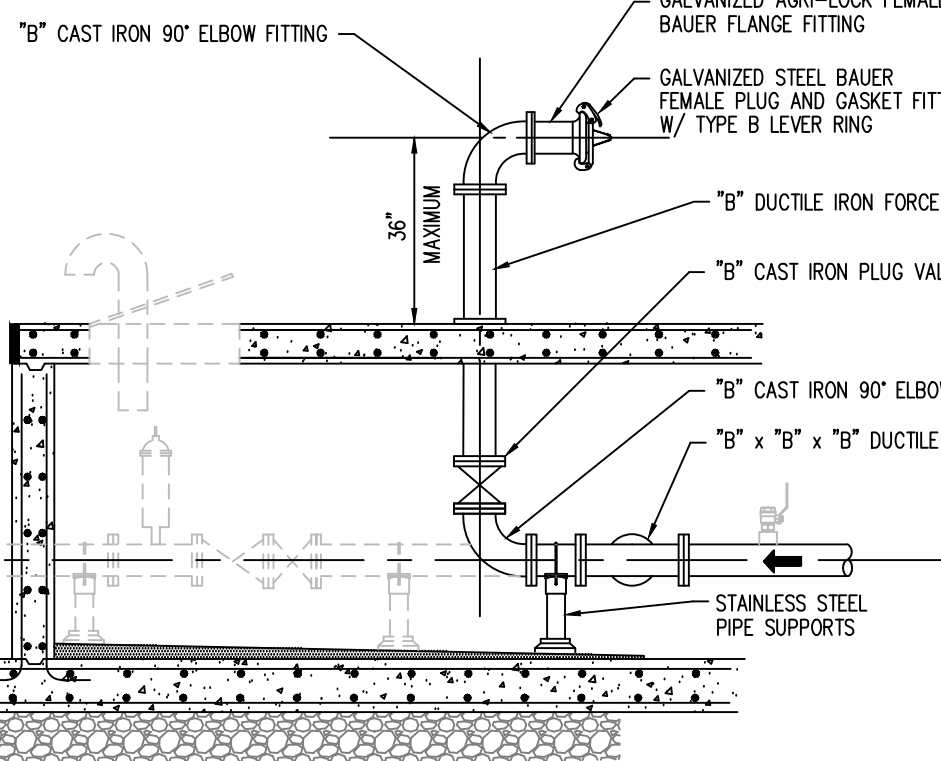


WET WELL VALVE VAULT SECTION A

NO SCALE (CONCEPTUAL)

NOTE:

ALL JOINTS SHALL BE SEALED BY AN O-RING GASKET PLUS 1/2" OR 3/4" KENTSEAL CONCRETE SEALANT (ROPE) CONFORMING TO ASTM C 990. COMPOSITION AND THICKNESS OF MATERIAL SHALL BE DEPENDENT ON SEASON OF INSTALLATION AND AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL GROUT ALL INTERNAL JOINTS WITH NON-SHRINK GROUT.



BY-PASS PUMPING DETAIL SECTION B

NO SCALE (CONCEPTUAL)

NOTES:

- SEE HSE'S LIFT STATION AND FORCE MAIN SPECIFICATIONS SHEET FOR DETAILS OF EQUIPMENT
- THIS PLAN IS FOR DESIGN PURPOSES ONLY. THREE SETS OF SHOP DRAWINGS MUST BE SUBMITTED BY LIFT STATION MANUFACTURER. FINAL SHOP DRAWINGS TO BE APPROVED BY ENGINEER AND APPLICABLE GOVERNMENT AGENCIES.
- ALL EXPOSED BOLTS, CHAINS OR OTHER COMPONENTS EXPOSED TO WEATHER OR SEWAGE MUST BE CONSTRUCTED OF STAINLESS STEEL. THE GUIDE RAILS MUST BE STAINLESS STEEL.
- ACCESS DRIVE FROM NEAREST PUBLIC RIGHT-OF-WAY TO LIFT STATION MUST BE PROVIDED.
- THE ACCESS DRIVE MUST HAVE A MINIMUM OF 14' OF CLEARANCE FROM ALL UTILITY OR POWER POLES.
- ALL STATION PIPING MUST BE DUCTILE IRON.
- ELEVATIONS BASED ON BENCH MARK LOCATED AT _____ ELEVATION _____ VERTICAL DATUM _____ ELEVATION _____

NOTE:

** DENOTES DIMENSIONS TO BE SUBMITTED WITH SHOP DRAWINGS AND APPROVED BY SAMCO.

REMINDER

FOR LIFT STATION SITE PLAN DATA PROJECT ENGINEER SHALL PROVIDE:

- WET WELL AND VALVE VAULT ORIENTATION
- CONTROL PANEL LOCATION
- FENCING AND GATE LOCATIONS
- ASPHALT ACCESS DRIVE FROM PUBLIC RIGHT-OF-WAY
- PARKING STOPS
- GRADING AND DRAINAGE ARROWS
- BOUNDARY OF LIFT STATION PARCEL TO BE GRANTED TO HSE
- ODOR CONTROL FACILITIES
- AREA FOR EMERGENCY GENERATOR
- LIMITS OF COMPACTED #53 STONE AND POLYETHYLENE FILM
- ALL OTHER INFORMATION THAT WILL ALLOW FOR A DETAILED REVIEW OF THE SITE PLAN
- LED DOWN LIGHTING PLAN
- PLAN VIEW OF ALL ELECTRICAL CONDUIT
- WATER LINE, ODOR CONTROL PIPING WITH MATERIAL TYPE AND SIZE INDICATED.

DISCLAIMER

HSE'S LIFT STATION PLAN, LIFT STATION AND FORCE MAIN DETAILS AND LIFT STATION AND FORCE MAIN SPECIFICATIONS ARE COMPLEMENTARY IN NATURE AND SHOULD NOT BE INTERPRETED INDIVIDUALLY WITHOUT REFERENCE TO THE OTHER SHEETS.

REVISED 12/15/2017

NOTE:

CONTRACTOR SHALL CONTACT THE UTILITIES ENGINEER PRIOR TO PURCHASING ANY EQUIPMENT FOR THIS LIFT STATION TO VERIFY PROPER INTERPRETATION OF SPECIFICATIONS AND PLANS.

UTILITIES ENGINEER

SAMCO
11905 LAKESIDE DRIVE
FISHERS, INDIANA 46038
(317) 577-1150

DIMENSION CHART

(A)	WET WELL DIAMETER
(B)	STATION PIPING SIZE
(C)	FORCE MAIN SIZE
(D)	INFLUENT SANITARY SEWER DIAMETER(S)
(E)	VALVE VAULT DIMENSIONS
(F)	CENTER OF WET WELL TO CENTER OF VALVE VAULT
(G)	PUMP DISCHARGE SIZE
(R)	WIDTH OF ANTI-FLOATATION COLLAR
(S)	DEPTH OF ANTI-FLOATATION COLLAR

ELEVATION CHART

(H)	INFLUENT SANITARY SEWER INVERT(S)
(I)	INITIAL ALARM "ON" ELEVATION
(J)	FUTURE ALARM "ON" ELEVATION
(K)	INITIAL PUMP #2 "ON" ELEVATION
(L)	FUTURE PUMP #2 "ON" ELEVATION
(M)	INITIAL PUMP #1 "ON" ELEVATION
(N)	FUTURE PUMP #1 "ON" ELEVATION
(O)	PUMPS "OFF" ELEVATION
(P)	BOTTOM ELEVATION - WET WELL
(Q)	FUTURE BOTTOM ELEVATION - WET WELL
(R)	FORCE MAIN CENTERLINE ELEVATION
(S)	BOTTOM ELEVATION - VALVE VAULT
(T)	FINISHED GRADE
(U)	TOP OF WET WELL AND VALVE VAULT
(V)	BOTTOM OF WET WELL AIR VENT (SUPPLIED BY VAPEX)
(W)	DRAIN PIPE INVERT

Township: _____ Township: _____ Range: _____
 Section: _____
 Project: _____
 Location: _____
 Pump Data: Discharge Size "G"
 Initial TDH (FT) _____ @ GPM _____
 Future TDH (FT) _____ @ GPM _____
 HP (Minimum) _____
 RPM _____
 Voltage _____
 Phase _____
 Station Pipe Size "B" : _____
 Force Main Size "C" : _____
 Initial Impeller Size (Install) _____
 Future Impeller Size (Supply) _____
 Pump (Manufacturer and Model Number) _____

REVISIONS
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: 12/15/2017
 UPDATED FOR: 2017

CERTIFIED

SAMCO
Sanitary Management & Engineering Company, Inc.
FISHERS, INDIANA 46038
317-577-1150 Fax 317-577-3642

JOB NO. _____

PREPARED FOR: **Hamilton Southeastern Utilities, INC.**
 TITLE: **TYPICAL DUPLEX LIFT STATION AND DETAILS**
 SCALE: **NO SCALE**

SHEET