

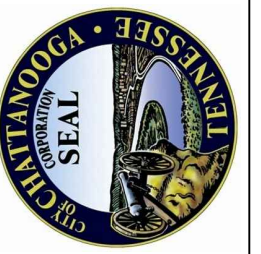
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1 VALVES AND PIPING		3 ABBREVIATIONS		6		8					
<p><b>VALVE OPERATOR SYMBOLS</b></p> <p>  CYLINDER   FLOAT   MOTOR   SOLENOID                 </p>		<p><b>EQUIPMENT</b></p> <p>  SUBMERSIBLE PUMP   GRINDER                 </p>		<p><b>MISCELLANEOUS</b></p> <p>                     BXS BELL AND SPIGOT                      CL CENTERLINE                      DI DUCTILE IRON                      DIA DIAMETER                      DJ DISMANTLING JOINT                      DN DOWN                      EBPS EMERGENCY BACKUP PUMP STATION                      EL ELEVATION                      FT FEET                      FCA FLANGED COUPLING ADAPTER                      GR GRINDER                      INV INVERT                      MGD MILLION GALLONS PER DAY                      MJ MECHANICAL JOINT                      NPW NON-POTABLE WATER                      PE PLAIN END                      PS PIPE SUPPORT                      PD POSITIVE DISPLACEMENT                      RJ RESTRAINED JOINT                      SW SOCKET WELD                      TYP TYPICAL                      UV ULTRAVIOLET                      WP WALL PIPE                 </p>		<p><b>PIPING</b></p> <p>                     CS CARBON STEEL                      CIP CAST IRON PIPE                      CPVC CHLORINATED POLYVINYL CHLORIDE                      DIP DUCTILE IRON PIPE                      FLG FLANGE                      GALV GALVANIZED                      HDPE HIGH DENSITY POLYETHYLENE                      LR LONG RADIUS                      PVC POLYVINYL CHLORIDE                      RCP REINFORCED CONCRETE PIPE                      RMJ RESTRAINED MECHANICAL JOINT                      SST STAINLESS STEEL                 </p> <p><b>VALVES</b></p> <p>                     BFV BUTTERFLY VALVE                      BV BALL VALVE                      CAV COMBINATION AIR VALVE                      CTV CONTROL VALVE                      CV CHECK VALVE                      GV GATE VALVE                      HV HAND VALVE                      MV MIXING VALVE                      NC NORMALLY CLOSED                      PRV PRESSURE RELIEF VALVE                      PV PLUG VALVE                 </p> <p><b>EQUIPMENT</b></p> <p>                     P PUMP                      SG SLIDE GATE                      WT WASTE TANK                 </p>		<p><b>INSULATION TYPE CODES</b></p> <p>                     AC ACOUSTIC CONTROL INSULATION                      CC COLD SERVICE INSULATION                      CJ CHILLED FLUID JACKETED                      CP CONDENSATION CONTROL                      CT CHILLED FLUID TRACED                      ET ELECTRIC TRACED                      FP FIRE PROTECTION INSULATION                      HC HEAT CONSERVATION INSULATION                      HJ HOT FLUID JACKETING                      HT HOT FLUID TRACED                      PF PREVENTION FROM FREEZING INSULATION                      PP PERSONNEL PROTECTION INSULATION                      PS PROCESS STABILITY INSULATION                      SJ STEAM JACKETED                      ST STEAM TRACED                 </p>		<p><b>DRIVERS</b></p> <p>  MOTOR   TURBINE DRIVER   DIESEL ENGINE                 </p>	
<p><b>VALVE OPERATOR SYMBOLS</b></p> <p>  GATE VALVE   GLOBE VALVE   BUTTERFLY VALVE   CHECK VALVE   PLUG VALVE   3-WAY PLUG VALVE (2-PORT)   3-WAY PLUG VALVE (3-PORT)   3-WAY VALVE   ANGLE VALVE   PRESSURE RELIEF OR SAFETY VALVE   HOSE GATE DRAIN VALVE   PINCH VALVE   NEEDLE VALVE   DIAPHRAGM VALVE   BALL VALVE   BALL CHECK VALVE   SELF-CONTAINED PRESSURE REDUCING (REGULATING VALVE)   CONTROL VALVE BACK PRESSURE VALVE   SURGE RELIEF VALVE   KNIFE GATE VALVE   CORPORATION STOP   FILTER ELEMENT   BLIND FLANGE   CLEANOUT   YARD HYDRANT   AIR COCK   HOSE BIBB   AIR RELEASE VALVE   VACUUM VALVE   AIR AND VACUUM VALVE   CONTROL VALVE STEM                 </p>		<p><b>VALVES AND PIPING</b></p> <p>  BACKFLOW PREVENTER   VACUUM BREAKER   MOISTURE SEPARATOR   IN-LINE FLOW METER   FLEXIBLE CONNECTION   FLEXIBLE HOSE   EXHAUST TO ATMOSPHERE (INSIDE)   EXHAUST TO ATMOSPHERE (OUTSIDE)   EXPANSION ELEMENT (JOINT)   BASKET TYPE STRAINER   Y-TYPE STRAINER   DUPLEX STRAINER   SLEEVE COUPLING (SC)   HARNESSED SLEEVE COUPLING (HSC)   INSULATED SLEEVE COUPLING (ISC)   FLANGED COUPLING ADAPTER (FCA)   DRAINER ASSEMBLY   RESTRICTING ORIFICE   STRAIGHTENING VANE   RUPTURE DISK   PIPE GUIDE   PIPE WITH HEATING CABLE   DRIP POCKET ASSEMBLY   UNION   PIPE ANCHOR   REDUCER (CONCENTRIC)   REDUCER (ECCENTRIC)   DISCHARGE ELBOW ASSEMBLY   REMOVABLE PLUG   REMOVABLE CAP   WELDED CAP   WALL HYDRANT   QUICK DISCONNECT COUPLING                 </p>		<p><b>ABBREVIATIONS</b></p> <p><b>NOTE:</b></p> <p>1. THIS LEGEND IS TAKEN FROM A STANDARD PROCESS LEGEND AND NOT ALL ITEMS OR EQUIPMENT AS DESIGNATED HEREON ARE USED ON THIS PROJECT.</p>							



CITICO PUMP RELIABILITY IMPROVEMENTS

CITY OF CHATTANOOGA, TN  
CONSENT DECREE PROGRAM



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PROJECT NO: 95307

DATE: 04/14/17

DISC. LEAD:	DESIGNER:	CHECKER:
PMB	SDA	ALW

SHEET TITLE  
PROCESS

PROCESS LEGEND SHEET 1

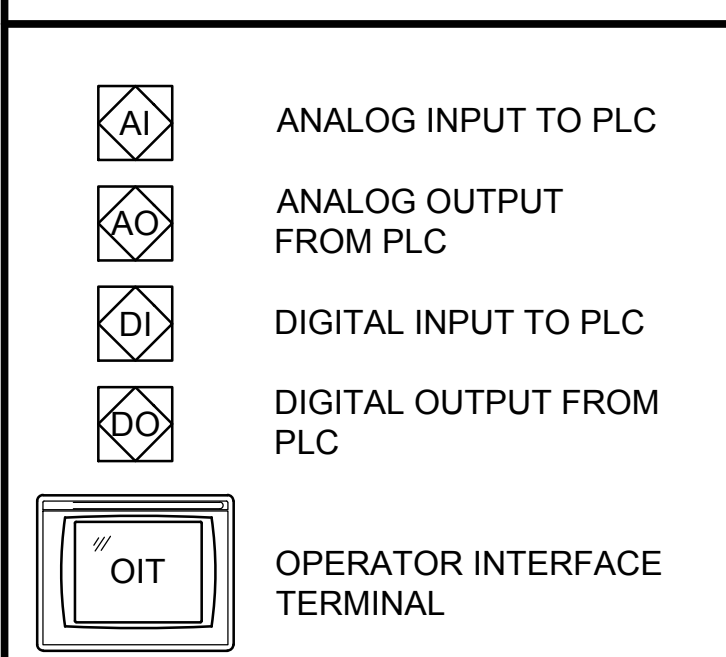
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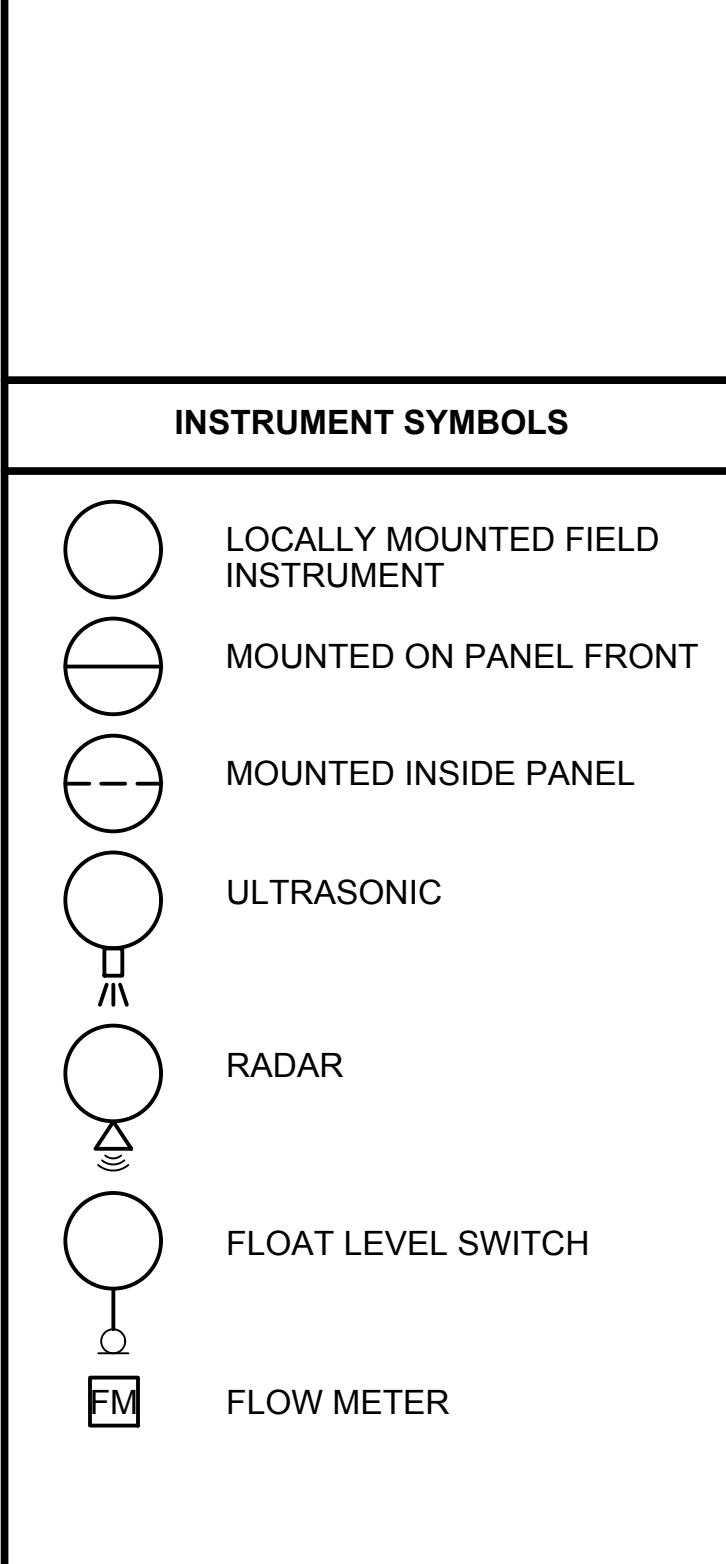
INSTRUMENT SOCIETY OF AMERICA					
LETTER	FIRST LETTER(S)		SUCCEEDING LETTER		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (*)		ALARM		
B	BURNER, COMBUSTION		USERS CHOICE (*)	CLOSE, STOP, DECREASE	USERS CHOICE (*)
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY (SG)	DIFFERENTIAL		OPEN, START, INCREASE	
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)	EMERGENCY	
F	FLOW RATE	RATIO/BIAS			
G	GAUGE		GLASS, VIEWING	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (AMPS)		INDICATE		
J	POWER	SCAN			
K	TIME, SCHEDULE	RATE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE, MOTOR	MOMENTARY			MIDDLE, INTRMDT
N	TORQUE		USERS CHOICE (*)	ISOLATOR	ON, OPERATE
O	USERS CHOICE (*)		ORIFICE		OPENED
P	PRESSURE, VAC		POINT (TEST CONN)		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD, PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (*)		MULTIFUNCTIONAL (*)		
V	VIBRATION			VALVE, DAMPER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED (*)	X-AXIS	UNCLASSIFIED (*)	TRANSDUCER	
Y	EVENT, STATE (*)	Y-AXIS		RELAY, COMPUTER	
Z	POSITION	Z-AXIS		DRIVE, ACTUATOR	

(\*) WHEN USED EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL.

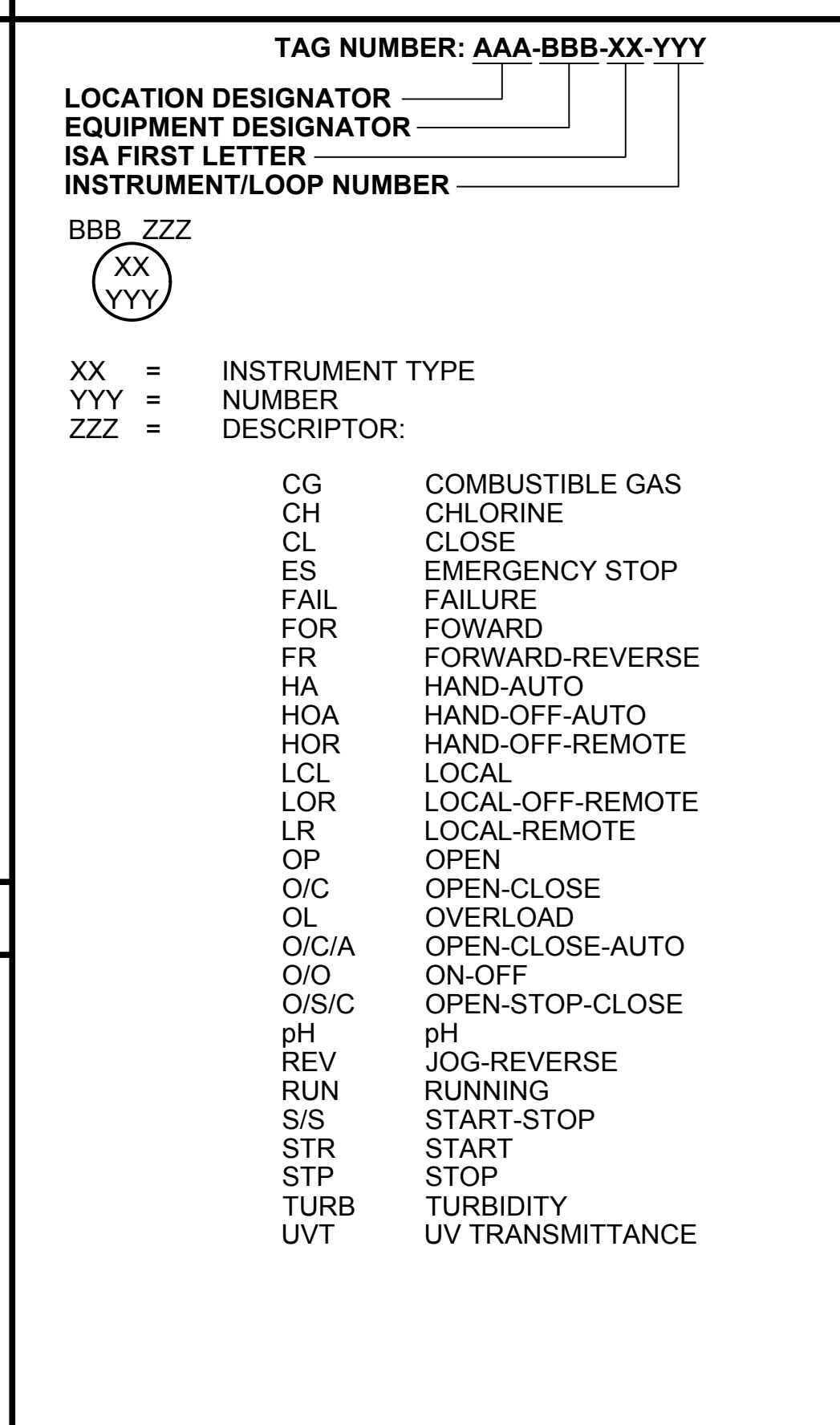
**PLC I/O SYMBOLS**



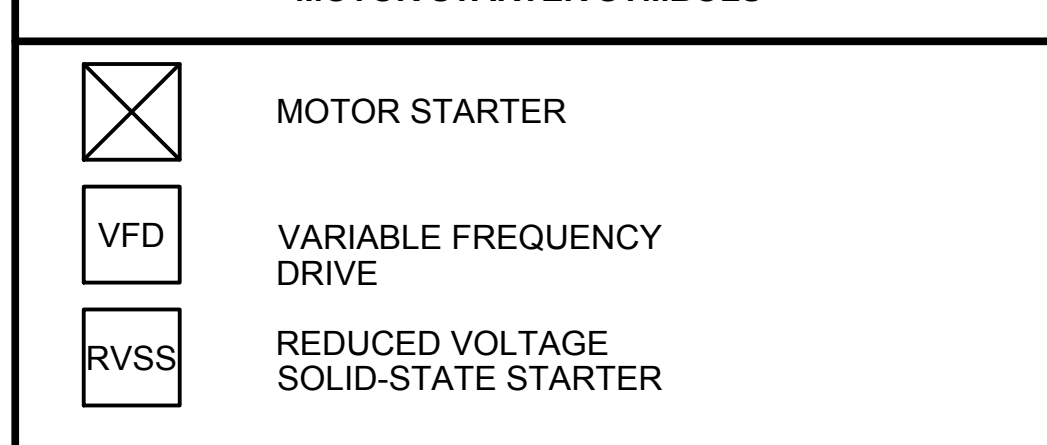
**INSTRUMENT SYMBOLS**



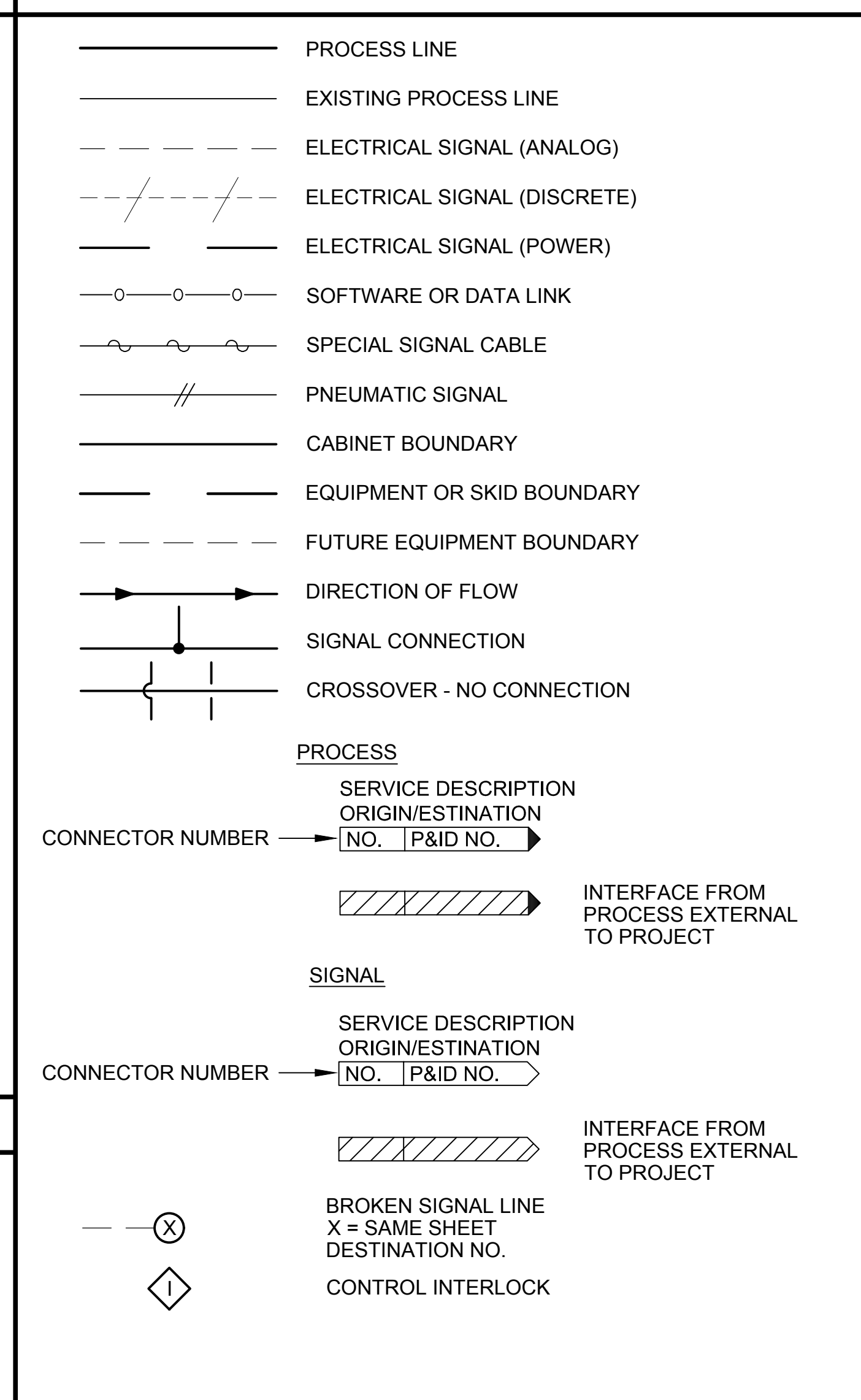
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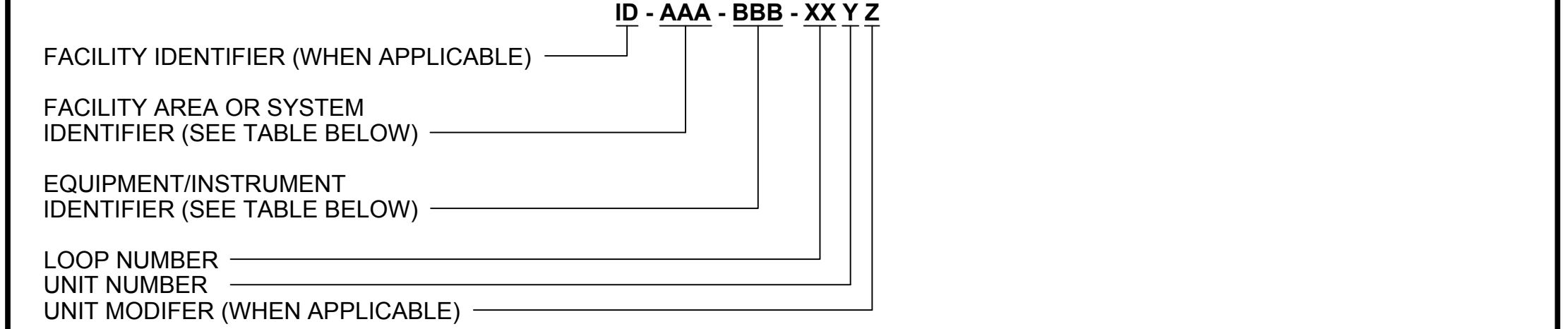
**MOTOR STARTER SYMBOLS**



**LINESTYLES AND INTERFACE SYMBOLS**



**EQUIPMENT TAG NAME STRUCTURE**



**FACILITY IDENTIFIER**

IDENTIFIER (ID)	IDENTIFIER DESCRIPTION
TP1	DUCKETT CREEK TREATMENT PLANT 1
TP2	DUCKETT CREEK TREATMENT PLANT 2

**FACILITY AREA OR SYSTEM IDENTIFIER**

IDENTIFIER (AAA)	IDENTIFIER DESCRIPTION	IDENTIFIER (AAA)	IDENTIFIER DESCRIPTION
ADM	ADMINISTRATION (CONTROL & MAINTENANCE) BUILDING	RWPS	RAS/WAS PUMP STATION
AD1, AD2	AEROBIC DIGESTER NO. 1 AND NO. 2	SSB	SLUDGE STORAGE BASIN
BLW	BLOWER AREA	SHB	SOLIDS HANDLING BUILDING
DEC	DECANTER	TLB	TRUCK LOADING BAY
FC1, FC2	FINAL CLARIFIER NO. 1 AND NO. 2	UVD	UV DISINFECTION
GAR	GARAGE AREA	WT	WASTE TANK
HW	HEADWORKS	YD	YARD PIPING
OPS	OPERATIONS BUILDING		
OD1, OD2	OXIDATION DITCH NO.1 AND NO. 2		

**EQUIPMENT IDENTIFIER**

IDENTIFIER (BBB)	IDENTIFIER DESCRIPTION	IDENTIFIER (BBB)	IDENTIFIER DESCRIPTION
AC	AIR COMPRESSOR	MOD	UV MODULE
AF	AIR FILTER	MS	MOTOR STARTER
AHU	AIR HANDLING UNIT	MXR	MIXER
AS	ACOUSTIC SILENCER	NER	NETWORK EQUIPMENT RACK
B	AERATION BLOWERS	NSW	NETWORK SWITCH
BV	BALL VALVE	OCF	ODOR CONTROL FAN
BFP	BELT FILTER PRESS	P	PUMP
BFV	BUTTERFLY VALVE	PAC	PACKAGED AIR CONDITIONER
BS	BAR SCREEN	PB	PUSH-BUTTON STATION
C	COMPRESSOR	PC	PERSONAL COMPUTER WORKSTATION
CAM	CAMERA	PD	PULSATION DAMPER
CC	CALIBRATION COLUMN	PDC	POWER DISTRIBUTION CABINET (UV)
CD	CONTROL DAMPER	PF	POLYMER FEEDER
CDR	CONDENSER	PHC	PHOTOCCELL
CH	CHILLER	PHP	PACKAGED HEAT PUMP
CLA	CLASSIFIER (GRIT CLASSIFIER)	PLC	PROGRAMMABLE LOGIC CONTROLLER
CLO	CHLORINATOR	PLG	PLUG AND RECEPTACLE
CMP	COMPACTOR	PP	POWER PANEL
CNV	CONVEYOR	PRV	POWER ROOF VENTILATOR
CP	CONTROL PANEL	RCV	AIR RECEIVER
CST	CONTROL STATION	REG	REGULATOR
CU	CONDENSING UNIT	RO	ROTAMETER
DEH	DEHUMIDIFIER	SB	SLUDGE BLOWER
DRV	DRIVE	SCP	SCUM PUMP
DS	DISCONNECT SWITCH	SD	SMOKE DETECTOR
DVR	DIGITAL VIDEO RECORDER	SF	SUPPLY FAN
DWW	DRY WEATHER WET WELL	SLG	SLIDE GATE
EDH	ELECTRIC DUCT HEATER	SMP	SAMPLER
EF	EXHAUST FAN	SP	SUMP PUMP
EPS	EMERGENCY PULL SWITCH	SRV	SERVER
EUH	ELECTRIC UNIT HEATER	SSCP	SCREEN SYSTEM CONTROL PANEL
EWC	ELECTRIC WATER COOLER	SSL	ZERO SPEED SWITCH
EWV	ELECTRIC WALL HEATER	SSOL	SOLID STATE OVERLOAD
FCU	FAN COIL UNIT	ST	STRAINER
FOP	FIBER OPTIC PATCH PANEL	STR	COMBINATION MOTOR STARTER
FS	FINE SCREEN	SV	SOLENOID VALVE
G	GATE	SWC	SCREENING WASHER COMPACTOR
GA	GATE ACTUATOR	SWG	SWITCHGEAR
GBT	GRAVITY BELT THICKENER	T	THERMOSTAT
GEN	ENGINE GENERATOR	TCF	TUBULAR CENTRIFUGAL FAN
GR	GRINDER	TNK	TANK
GSCP	GRIT SYSTEM CONTROL PANEL	TS	THERMAL SWITCH
HST	HOIST	UPS	UNINTERRUPTIBLE POWER SUPPLY
JB	JUNCTION BOX	UVC	UV CHANNEL
LC	LIGHTING CONTACTOR	V	VALVE (ALL TYPES)
LCP	LOCAL CONTROL PANEL	VFD	VARIABLE FREQUENCY DRIVE
LP	LIGHTING PANEL	WG	ADJUSTABLE WEIR GATE
LS	LIMIT SWITCH	WH	WATER HEATER
M	MOTOR, ELECTRIC	WWW	WET WEATHER WET WELL
MAU	MAKE-UP AIR UNIT	XF	TRANSFORMER
MCC	MOTOR CONTROL CENTER		
MCV	MOTOR OPERATED CONTROL VALVE		

**NOTE:**

- THIS LEGEND IS TAKEN FROM A STANDARD PROCESS LEGEND AND NOT ALL ITEMS OR EQUIPMENT AS DESIGNATED HEREON ARE USED ON THIS PROJECT.
- SEE DRAWING D001 FOR PIPING AND VALVE SYMBOLS.
- SOME ABBREVIATIONS MAY NOT BE USED.



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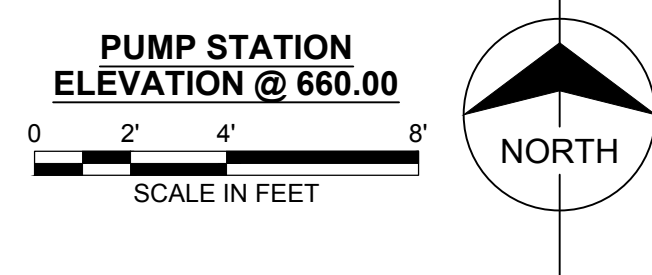
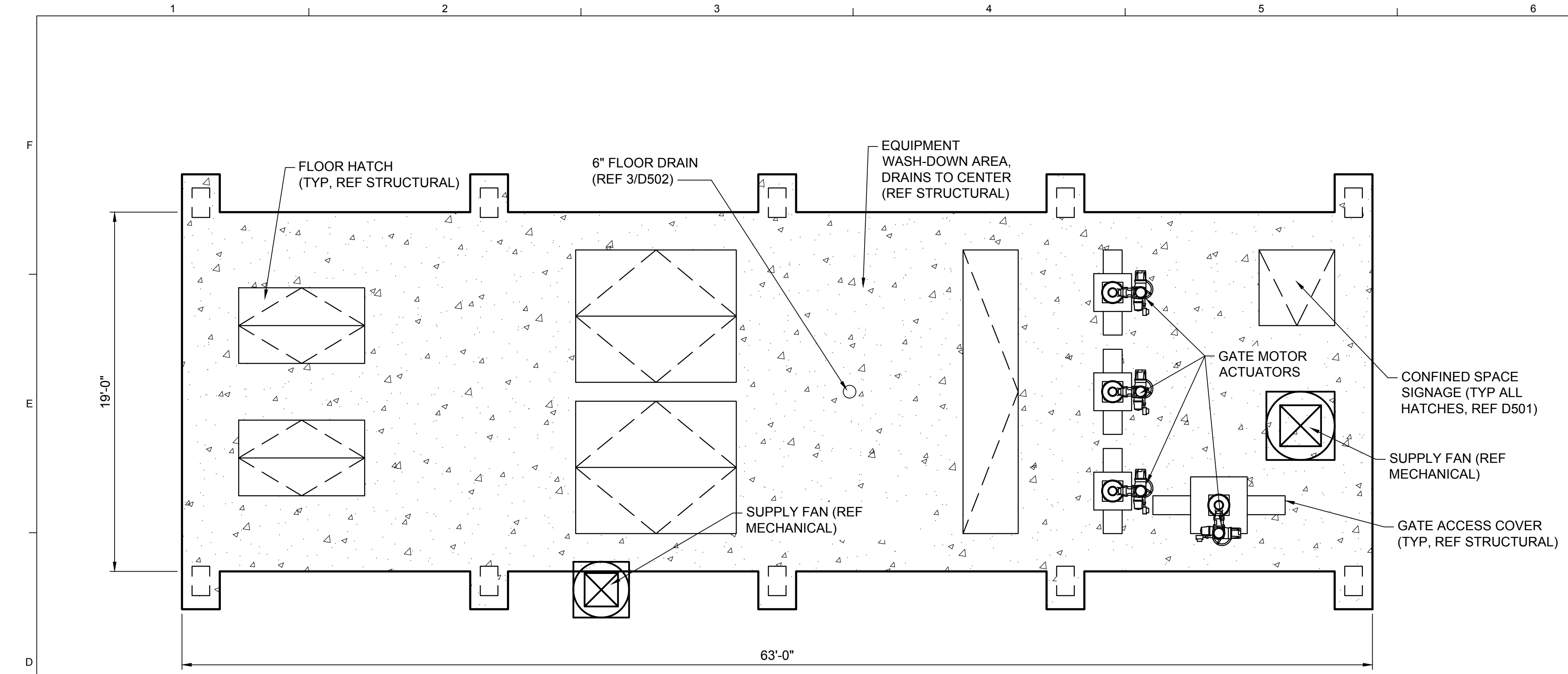
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PROCESS LEGEND SHEET 2

SHEET **D002** REV **0**

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# VALVE SCHEDULE

MARK	TYPE	MATERIAL	SIZE	TAG
4	PLUG VALVE	DI	24"	EBPS-PV-101
5	PLUG VALVE	DI	24"	EBPS-PV-102
6	CHECK VALVE	DI	24"	EBPS-CV-101
7	CHECK VALVE	DI	24"	EBPS-CV-102
8	COMBINATION AIR VALVE	DI	6"	EBPS-CAV-101
9	COMBINATION AIR VALVE	DI	6"	EBPS-CAV-102

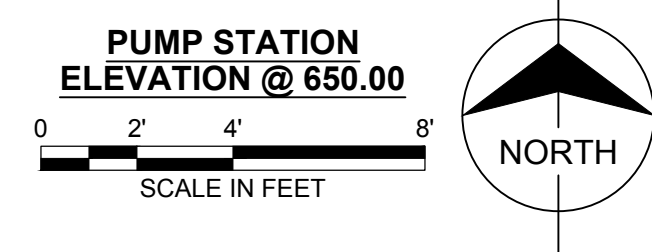
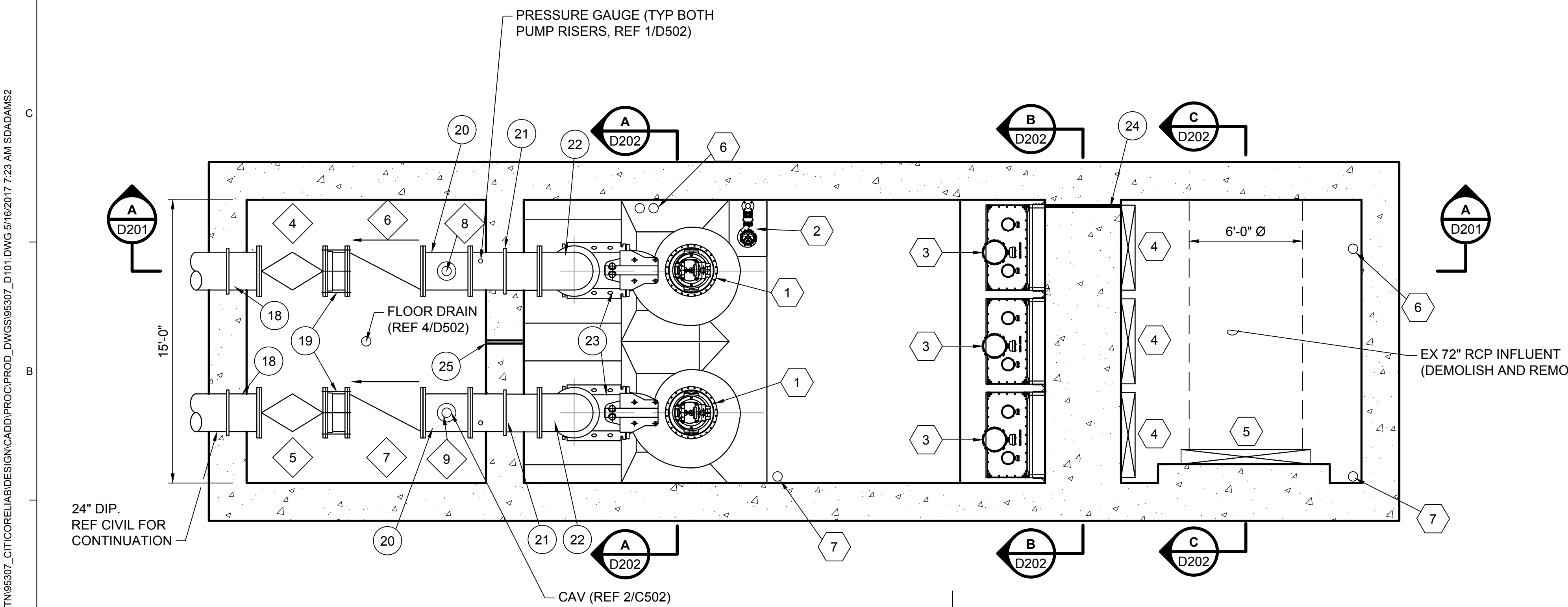
# PIPE FITTING SCHEDULE

MARK	TYPE	MATERIAL	SIZE	COUNT
18	WP-2 WALL PIPE (1)	DI	24"-24"	2
19	DISMANTLING JOINT	DI	24"-24"	2
20	FLG TEE	DI	24"-24"-6"	2
21	WP-1 WALL PIPE (1)	DI	24"-24"	2
22	90° FLG ELBOW	DI	24"-24"	2
23	PUMP DISCHARGE ELBOW (2)	DI	24"-24"	2
24	WP-3 WALL PIPE (1)	PVC	3"-3"	2
25	WP-3 WALL PIPE (1)	CI	2"	1

(1) REFER TO WALL PIPE DETAILS, D501  
 (2) TO BE PROVIDED BY PUMP MANUFACTURER. CONTRACTOR SHALL VERIFY PUMP DISCHARGE DIMENSIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCHARGE PIPING DIMENSION VARIES FROM DESIGN.

- NOTES:**
- REFER TO PROCESS DETAILS, SHEETS D501 AND D502.
  - REFER TO STRUCTURAL DRAWINGS FOR CONCRETE STRUCTURE DIMENSIONS.
  - ALL ANCHORING HARDWARE TO BE TYPE 316 STAINLESS STEEL.

- KEYED NOTES:**
- EMERGENCY BACKUP SUBMERSIBLE PUMPS. FLYGT XYLEM MODEL "CP 3602/776 3~ 1440" SHOWN IN DRAWING. REFER TO SPECIFICATIONS, SECTION 33 32 22, FOR REQUIREMENTS.
  - SUBMERSIBLE SUMP PUMP. EBARA MODEL "80LDMFU63.7" SHOWN IN DRAWING. REFER TO SPECIFICATIONS, SECTION 33 32 22.01, FOR REQUIREMENTS.
  - WASTEWATER GRINDERS. JWC ENVIRONMENTAL MODEL "CHANNEL MONSTER CDD-5020-XDM" SHOWN IN DRAWING. REFER TO SPECIFICATIONS, SECTION 33 32 23, FOR REQUIREMENTS.
  - 42" W x 84" H SLIDE GATE. STAINLESS STEEL OR APPROVED EQUAL MATERIAL. REFER TO SPECIFICATIONS, SECTION 35 20 16, FOR REQUIREMENTS. REFER TO STRUCTURAL DRAWINGS FOR CHANNEL OPENING DIMENSIONS. CONTRACTOR SHALL COORDIANTE FINAL GATE PRODUCT SELECTION WITH STRUCTURAL ENGINEER FOR REQUIRED LEAVE-OUTS FOR GATE EMBED.
  - 72" BY 72" SLIDE GATE. STAINLESS STEEL OR APPROVED EQUAL MATERIAL. REFER TO SPECIFICATIONS, SECTION 35 20 16, FOR REQUIREMENTS. REFER TO STRUCTURAL DRAWINGS FOR CHANNEL OPENING DIMENSIONS. CONTRACTOR SHALL COORDIANTE FINAL GATE PRODUCT SELECTION WITH STRUCTURAL ENGINEER FOR REQUIRED LEAVE-OUTS FOR GATE EMBED.
  - LEVEL FLOATS, REFER TO E106
  - RADAR LEVEL SENSORS, REFER TO E106



**BURNS MEDONNELL**  
 3650 MANSELL ROAD, SUITE 300  
 ALPHARETTA, GA 30022  
 770-587-4776

CITICO PUMP RELIABILITY IMPROVEMENTS  
 CITY OF CHATTANOOGA, TN  
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 SHEET TITLE: PROCESS

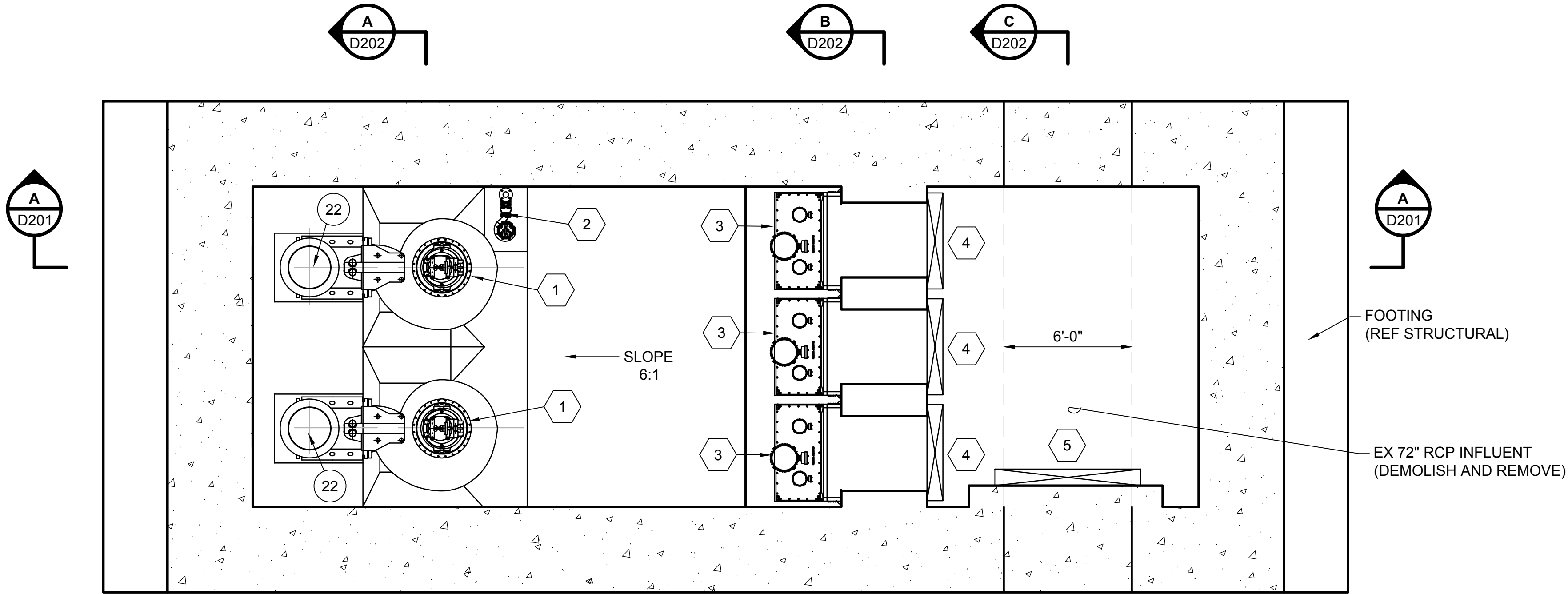
PUMP STATION PLANS 1  
 SHEET **D101** REV **0**

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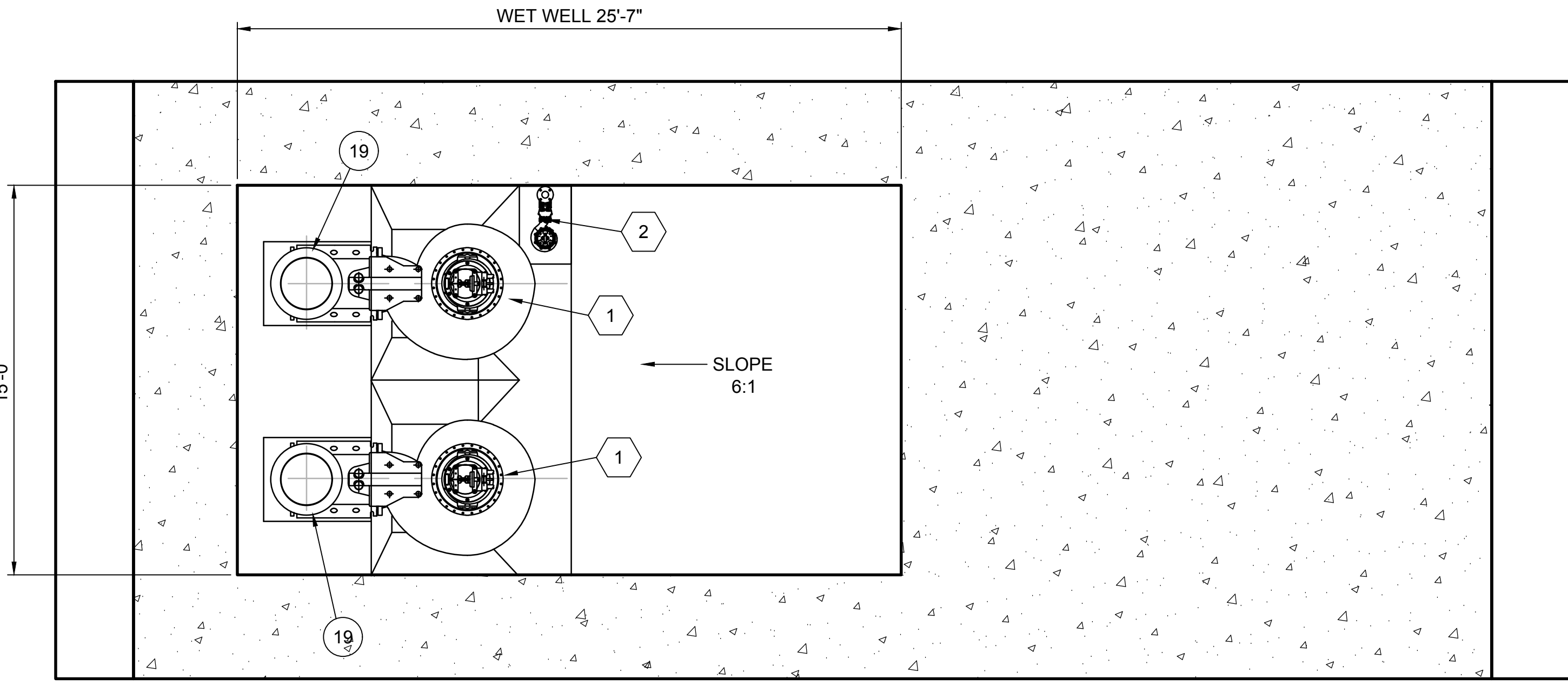
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**NOTES:**

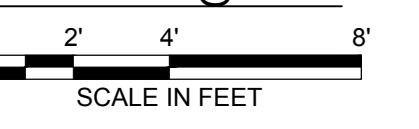
1. REFER TO VALVE AND PIPE FITTING SCHEDULES, SHEET D101.
2. REFER TO KEYED NOTES, SHEET D101.
3. REFER TO PROCESS DETAILS, SHEETS D501 AND D502.
4. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE STRUCTURE DIMENSIONS.
5. ALL ANCHORING HARDWARE TO BE TYPE 316 STAINLESS STEEL.



**PUMP STATION  
ELEVATION @ 634.00**

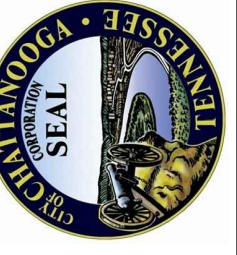


**PUMP STATION  
ELEVATION @ 621.00**



**BURNS  
MEDONNELL**  
3650 MANSELL ROAD, SUITE 300  
ALPHARETTA, GA 30022  
770-587-4776

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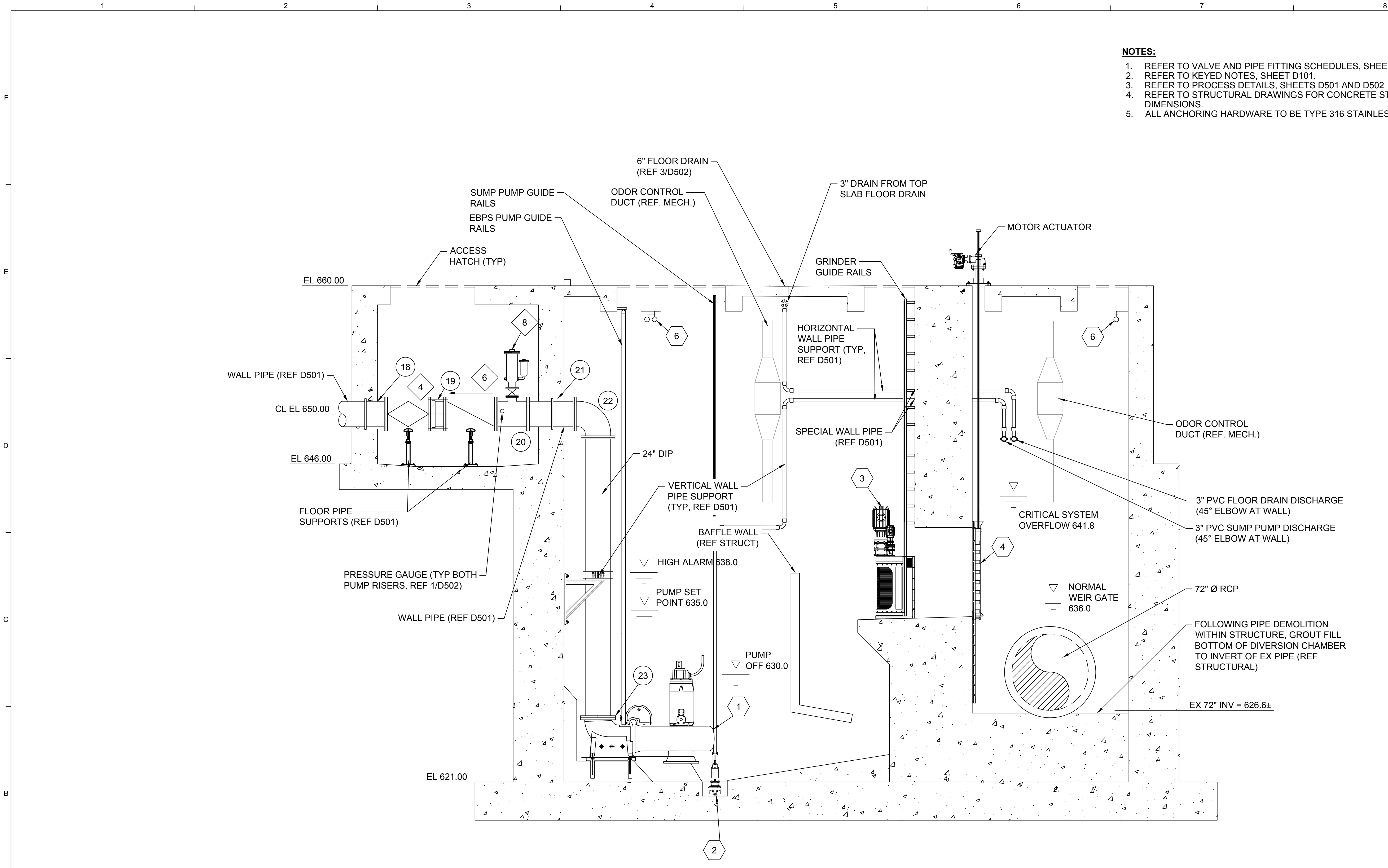
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**PUMP STATION  
PLANS 2**

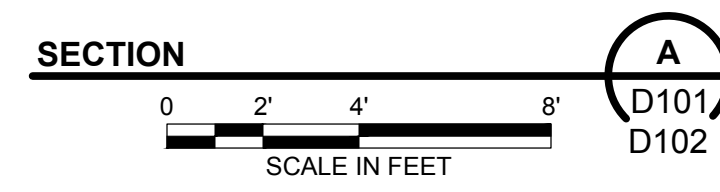
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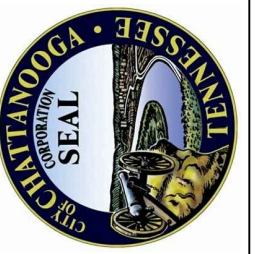


- NOTES:**
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  2. REFER TO KEYED NOTES, SHEET D101.
  3. REFER TO PROCESS DETAILS, SHEETS D501 AND D502
  4. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE STRUCTURE DIMENSIONS.
  5. ALL ANCHORING HARDWARE TO BE TYPE 316 STAINLESS STEEL.



**BURNS MEDONNELL**  
 3650 MANSELL ROAD, SUITE 300  
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SHEET TITLE  
**PROCESS**

**PUMP STATION SECTIONS 1**

SHEET **D201** REV **0**

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**NOTES:**

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4. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE STRUCTURE DIMENSIONS.
5. ALL ANCHORING HARDWARE TO BE TYPE 316 STAINLESS STEEL.

**BURNS  
MEDONNELL**  
3650 MANSSELL ROAD, SUITE 300  
ALPHARETTA, GA 30022  
770-587-4776

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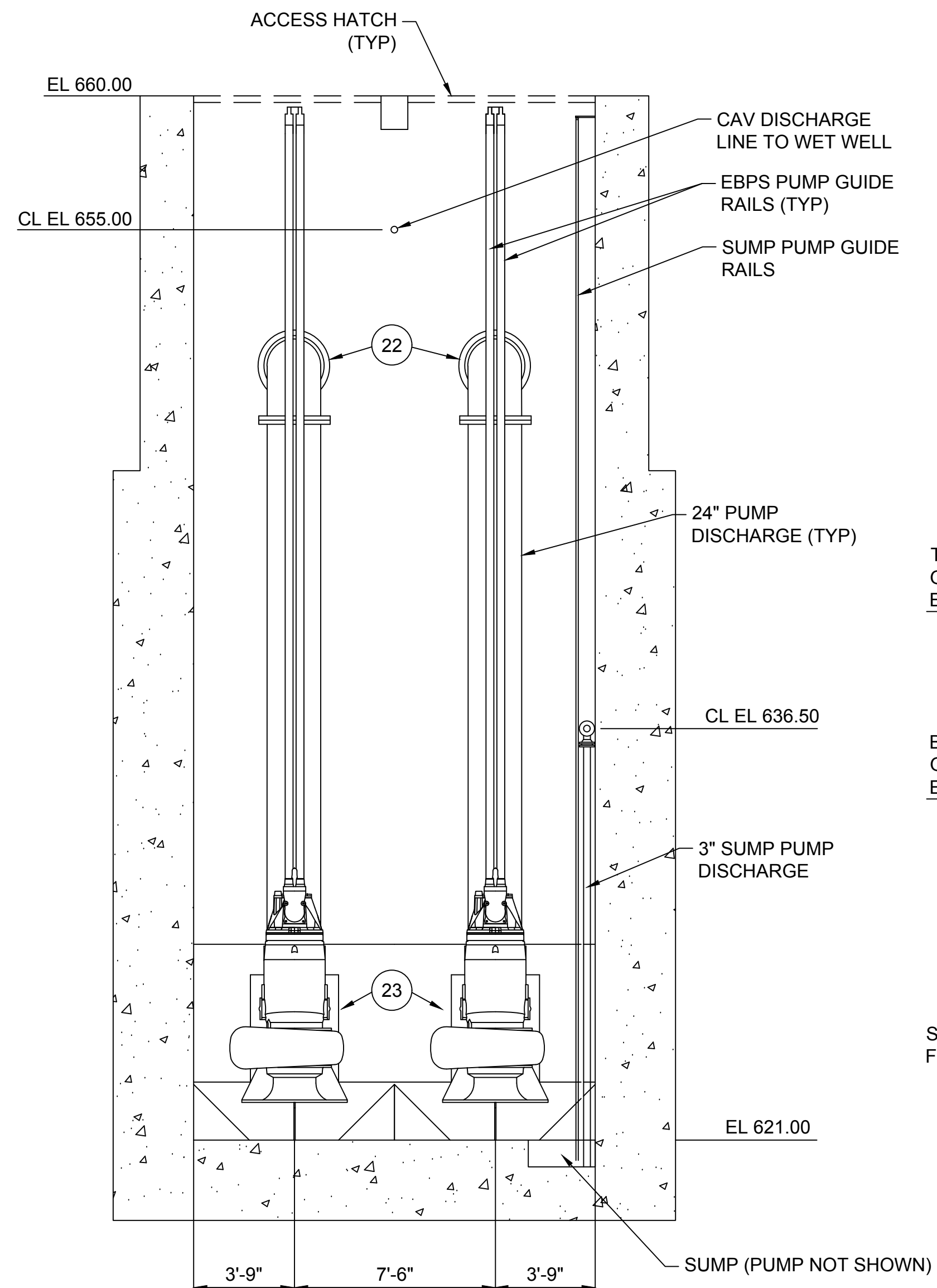
DATE: 04/14/17

DISC. LEAD:	DESIGNER:	CHECKER:
PMB	SDA	ALW

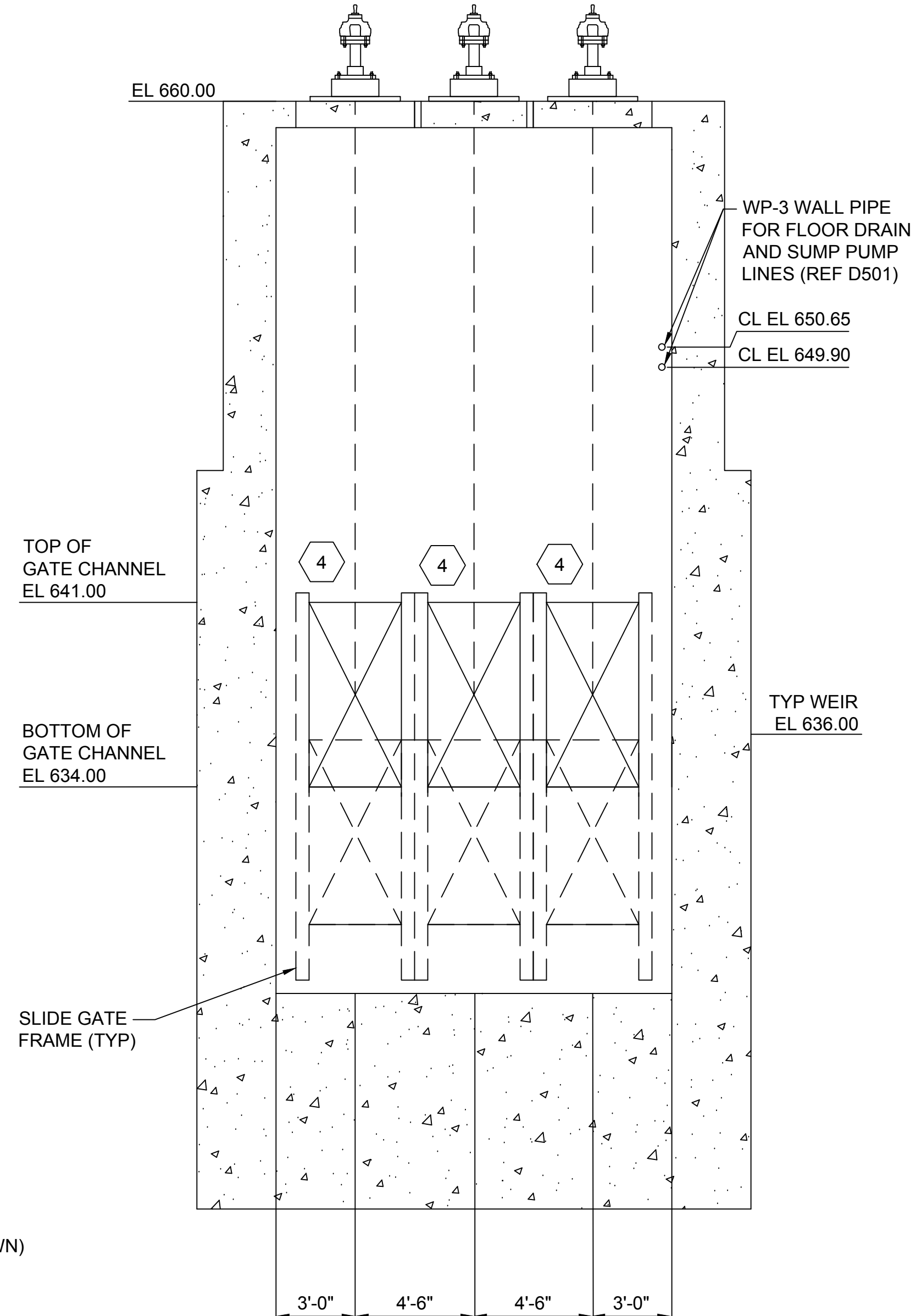
SHEET TITLE  
PROCESS

PUMP STATION  
SECTIONS 2

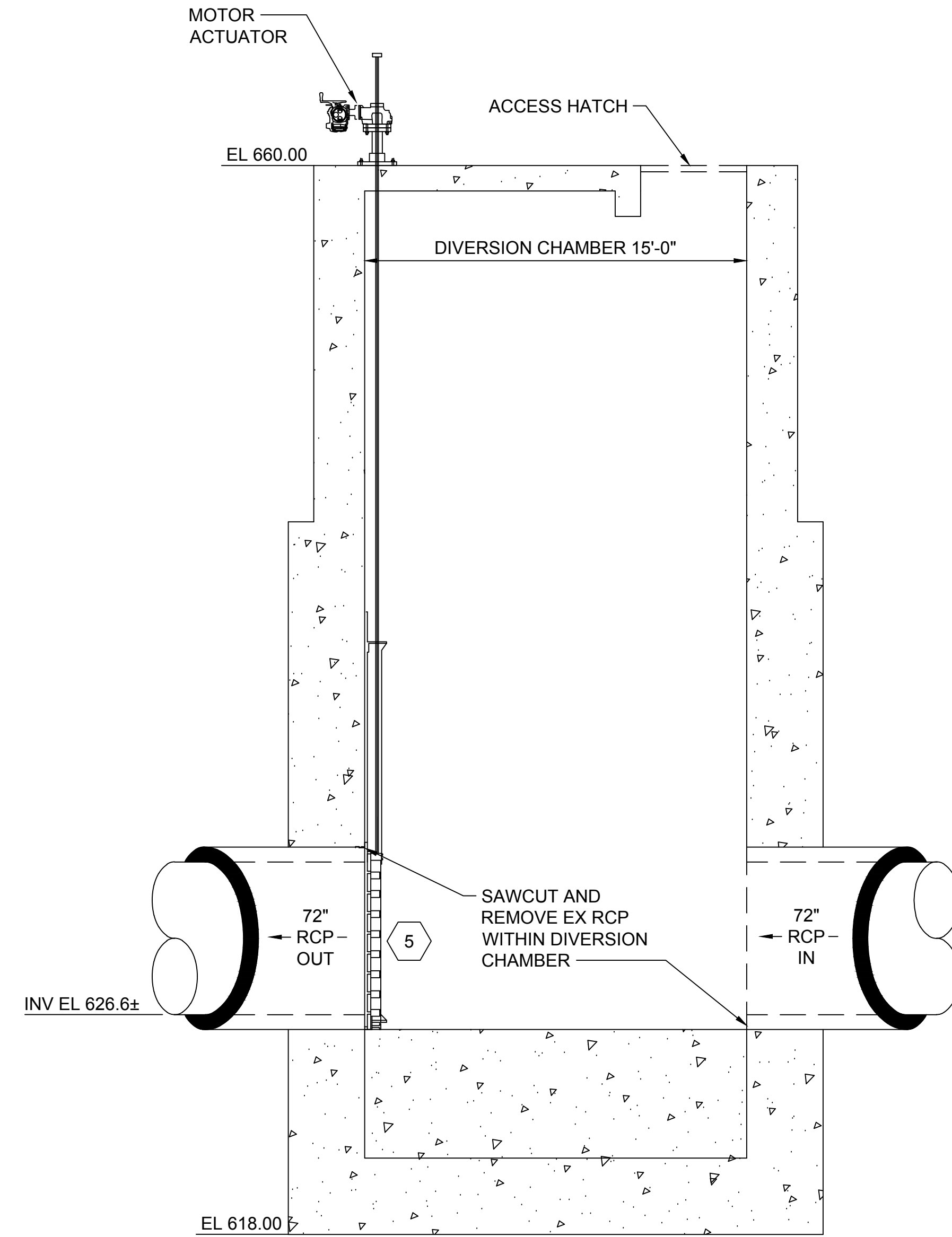
SHEET **D202** REV **0**



**SECTION A**  
SCALE IN FEET  
D101  
D102

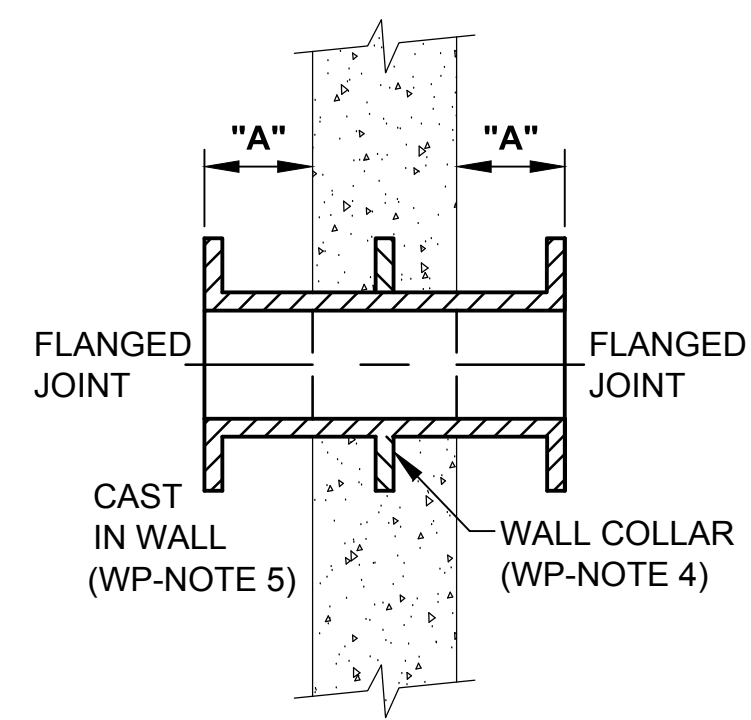


**SECTION B**  
SCALE IN FEET  
D101  
D102

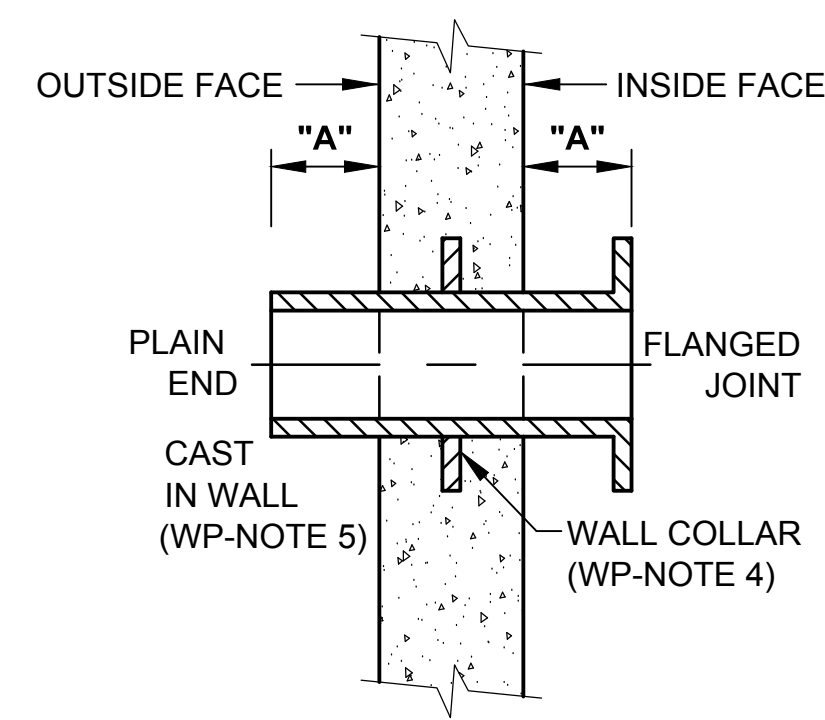


**SECTION C**  
SCALE IN FEET  
D101  
D102

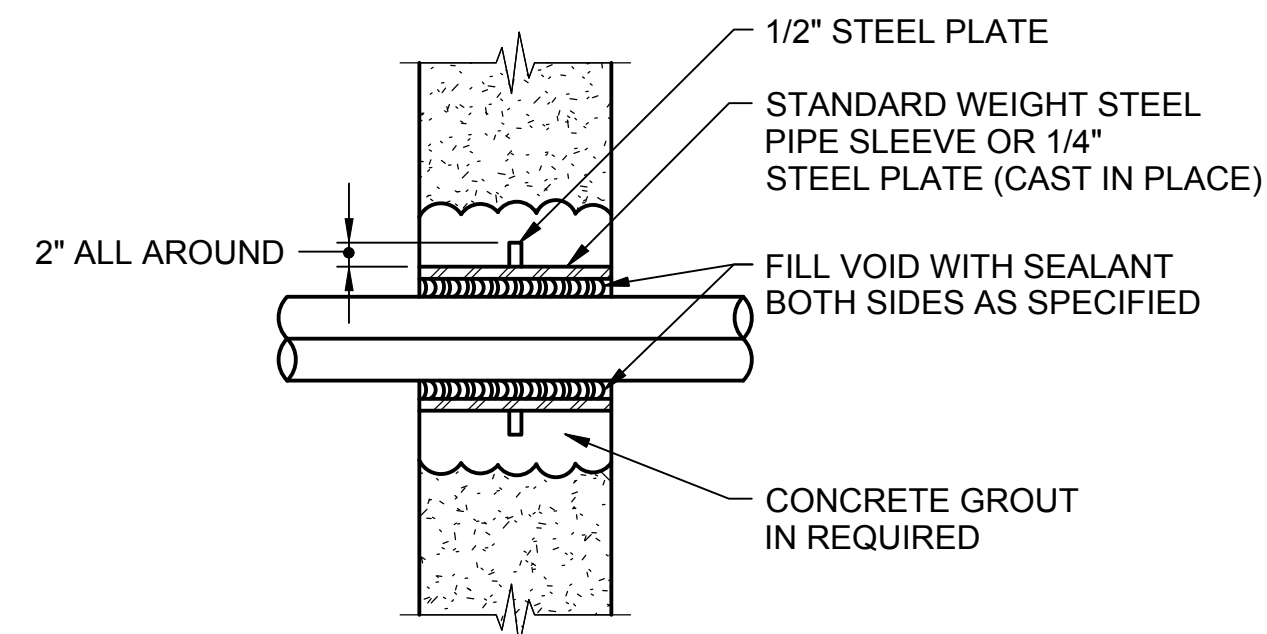




**TYPE WP-1 (NEW WALL)**  
NOT TO SCALE



**TYPE WP-2 (NEW WALL)**  
NOT TO SCALE



**TYPE WP-3 (NEW WALL)**  
NOT TO SCALE

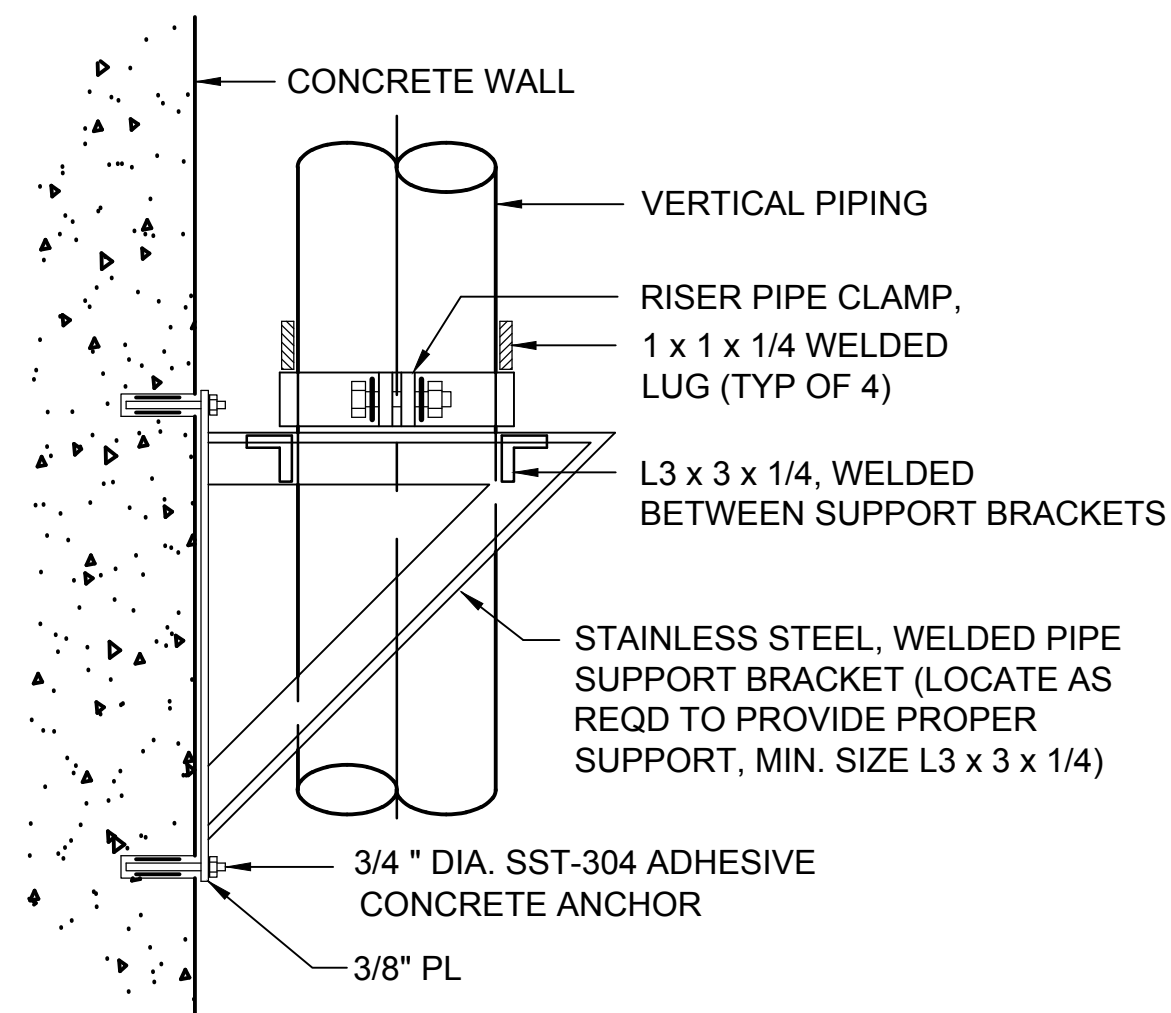
WALL PIPE SCHEDULE		
PIPE DIAMETER	"A" *	"B" *
24"	10"	10"

\* UNLESS NOTED OTHERWISE

**WALL PIPE NOTES:**

- BREAK OUT, OR CORE DRILL WALL, A MINIMUM OF TWO (2) INCHES LARGER THAN WALL COLLAR, OR SYNKO-FLEX PLASTIC WATER STOP; THEN, INSTALL WALL PIPE AND/OR SYNKO-FLEX PLASTIC WATER STOP AND GROUT IN PLACE.
- EPOXY BONDING AGENT SHALL BE APPLIED TO ALL CONCRETE SURFACES TO BE GROUTED.
- IF PRECAST WALL WITH LEAVE-OUT, PROVIDE SYNKO-FLEX PLASTIC WATER STOP. LOCATE ON THE INSIDE FACE "SIDE" OF THE PIPE PENETRATION. LOCATE BETWEEN OUTSIDE DIAMETER OF PIPE AND INSIDE EDGE OF WALL SURFACE.
- ALL COLLAR SHALL BE LOCATED IN CENTER OF THE WALL.
- AT CONTRACTOR'S OPTION,

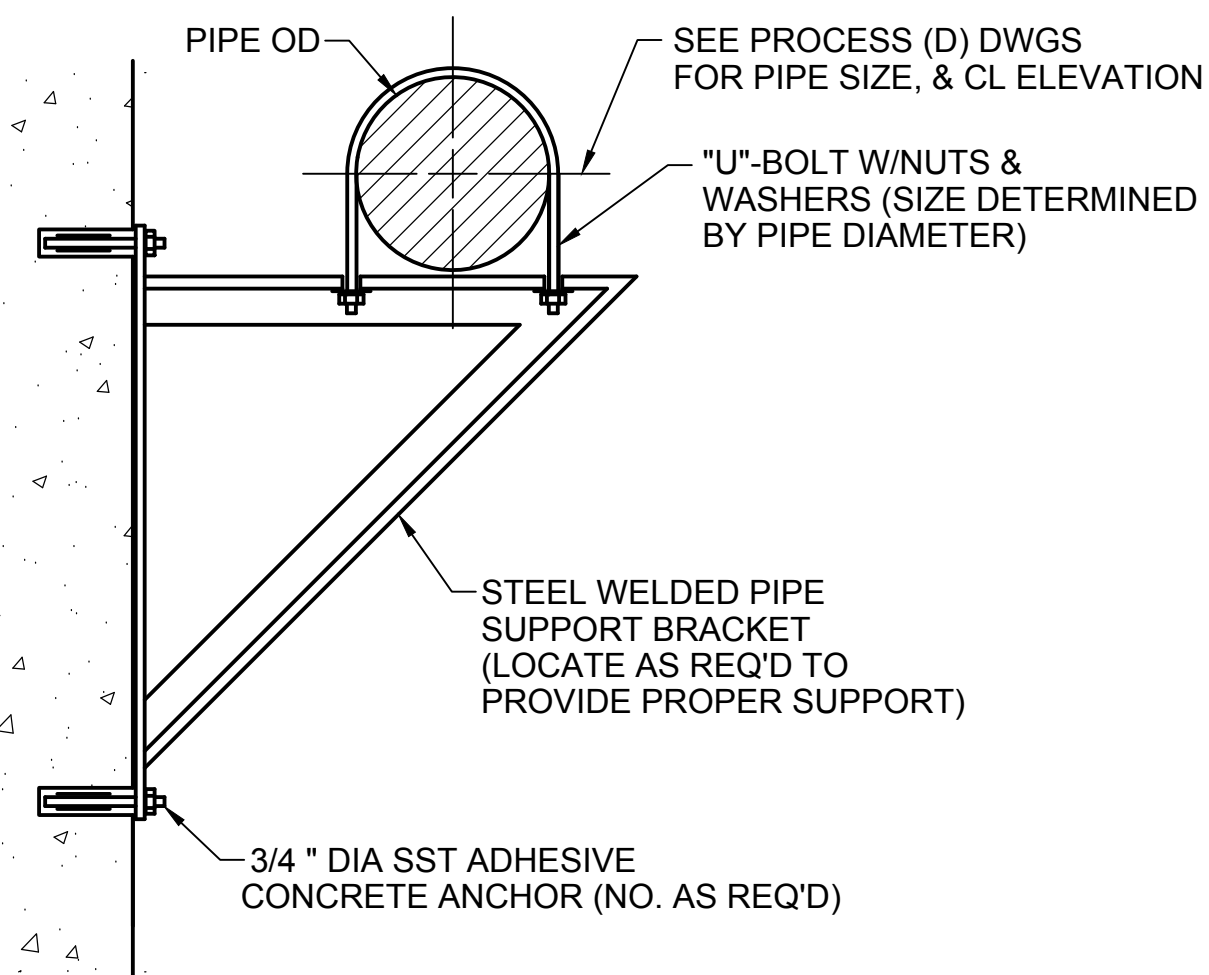
**WALL PIPE PENETRATION DETAILS**  
NOT TO SCALE



**NOTES:**

- CAST IRON AND DUCTILE IRON PIPE: MIN. OF ONE (1) HANGER PER PIPE SECTION CLOSE TO JOINT ON THE BARREL. ALSO AT CHANGE OF DIRECTION AND BRANCH CONNECTIONS. PRESSURE PIPE: 12 FT. MAX. SPACING. PLASTIC PIPE: FOLLOW PIPE MANUFACTURER'S RECOMMENDATIONS FOR SPACING AND SERVICE CONDITIONS.

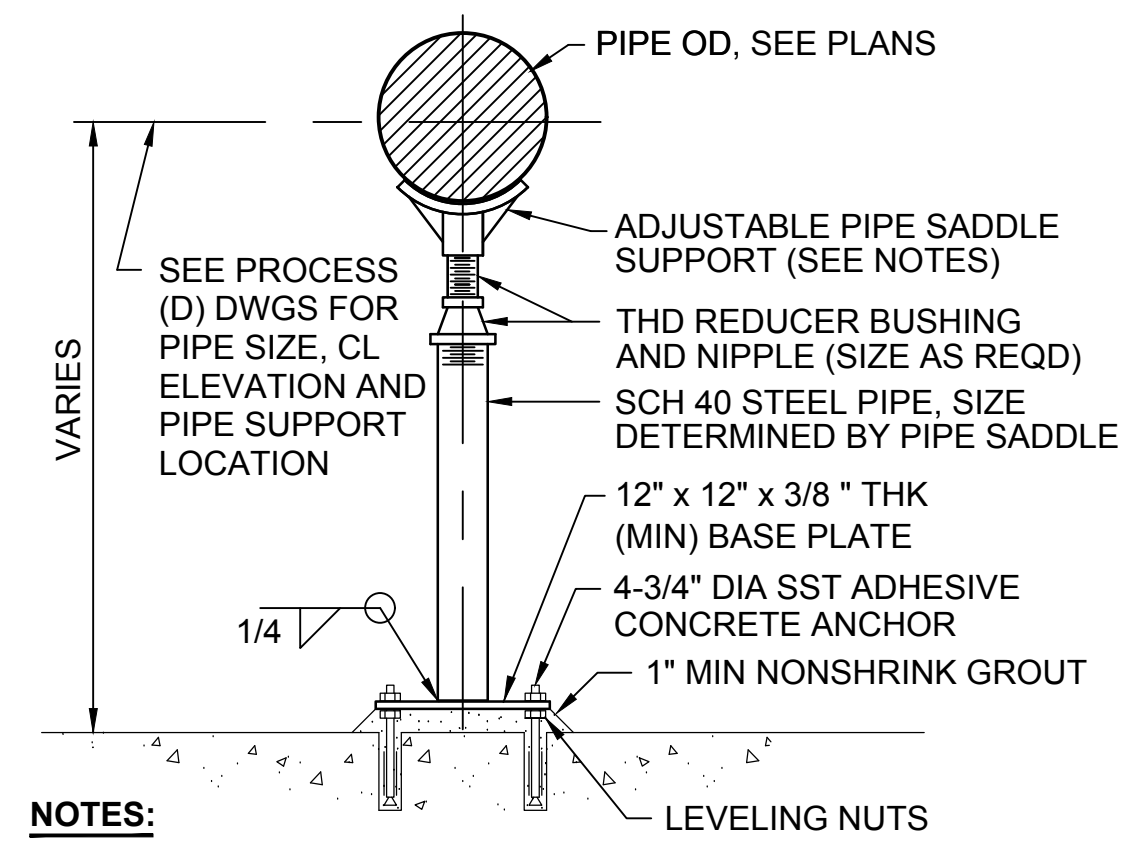
**VERTICAL WALL PIPE SUPPORT**  
NOT TO SCALE



**NOTES:**

- CAST IRON AND DUCTILE IRON PIPE: MIN. OF ONE (1) HANGER PER PIPE SECTION CLOSE TO JOINT ON THE BARREL. ALSO AT CHANGE OF DIRECTION AND BRANCH CONNECTIONS. 12 FT. MAX. SPACING.
- PLASTIC PIPE: FOLLOW PIPE MANUFACTURER'S RECOMMENDATIONS FOR SPACING AND SERVICE CONDITIONS.

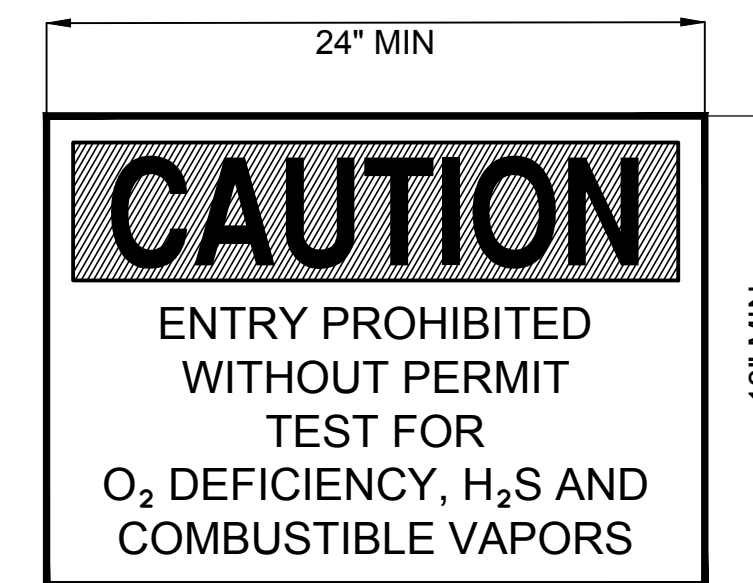
**HORIZONTAL WALL PIPE SUPPORT**  
NOT TO SCALE



**NOTES:**

- WHERE PIPE SUPPORT IS INDICATED TO BE LOCATED UNDER VALVE, PROVIDE ADJUSTABLE PLATE SUPPORT IN LIEU OF SADDLE SUPPORT.
- COAT PIPE SYSTEM USING SYSTEM E-3 AS SPECIFIED IN SECTION 099000.

**FLOOR PIPE SUPPORT**  
NOT TO SCALE



**NOTES:**

- PROVIDE EMEDCO., INC. INDUSTRIAL CONFINED SPACES SIGN OR APPROVED EQUAL.
- PROVIDE MINIMUM (1) SIGN PER FLOOR HATCH ON EBPS. FASTEN SIGN TO HATCH TO BE READABLE/UPRIGHT WHEN HATCH IS OPEN.

**CONFINED SPACE ENTRY SIGN**  
NOT TO SCALE

**BURNS MEDONNELL**  
3650 MANSSELL ROAD, SUITE 300  
ALPHARETTA, GA 30022  
770-587-4776

CITICO PUMP RELIABILITY IMPROVEMENTS  
CITY OF CHATTANOOGA, TN  
CONSENT DECREE PROGRAM



REV	DATE	ISSUED FOR CONSTRUCTION	REVISION DESCRIPTION
0	5/15/17		

THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE.  
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PROJECT NO: 95307  
DATE: 04/14/17  
DISC. LEAD: DESIGNER: CHECKER:  
PMB SDA ALW  
SHEET TITLE  
PROCESS

PROCESS DETAILS 1

SHEET **D501** REV **0**

**CITICO PUMP RELIABILITY IMPROVEMENTS**  
 CITY OF CHATTANOOGA, TN  
 CONSENT DECREE PROGRAM



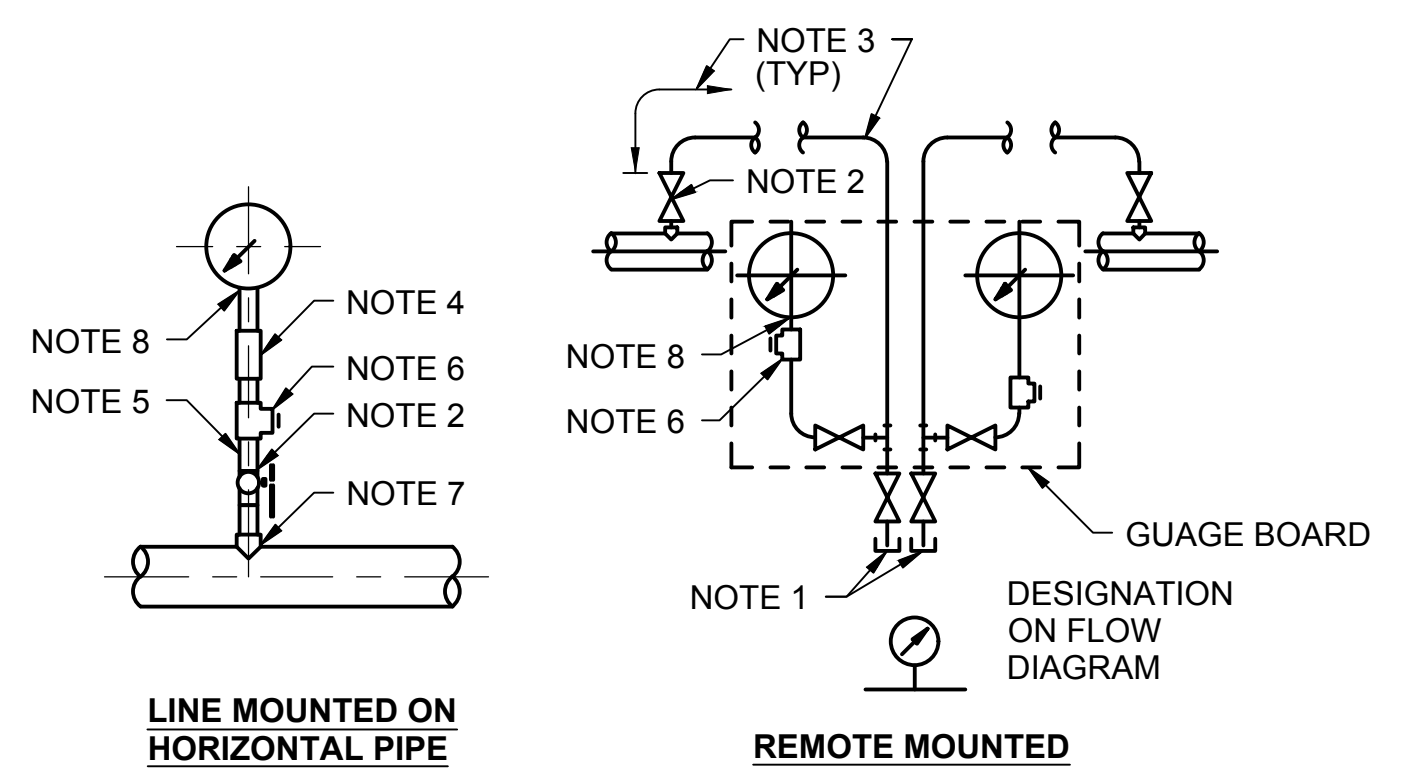
REV	DATE	REVISION DESCRIPTION
0	5/15/17	ISSUED FOR CONSTRUCTION

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PROJECT NO: 95307  
 DATE: 04/14/17  
 DISC. LEAD: PMB    DESIGNER: SDA    CHECKER: ALW

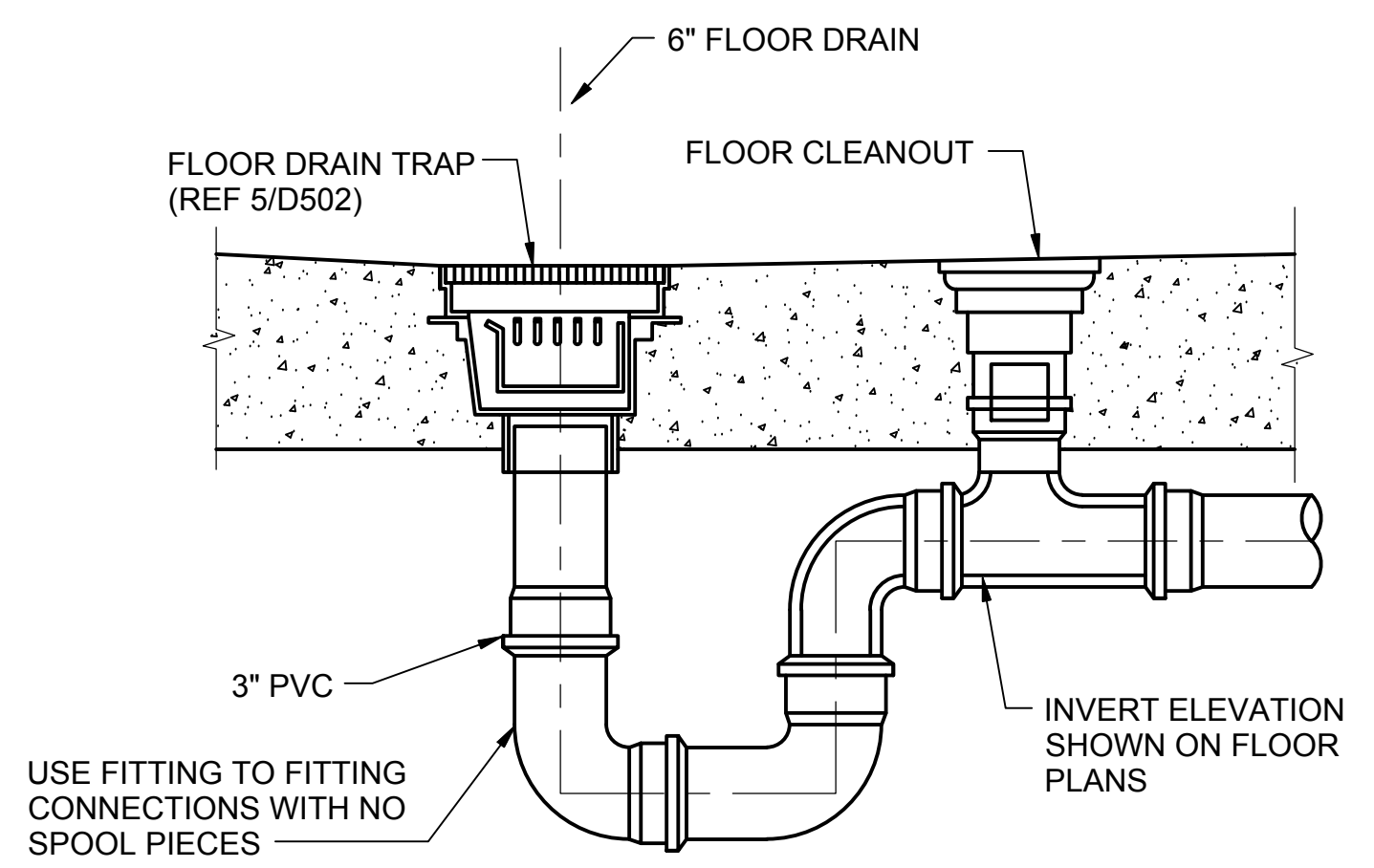
SHEET TITLE: PROCESS

PROCESS DETAILS 2

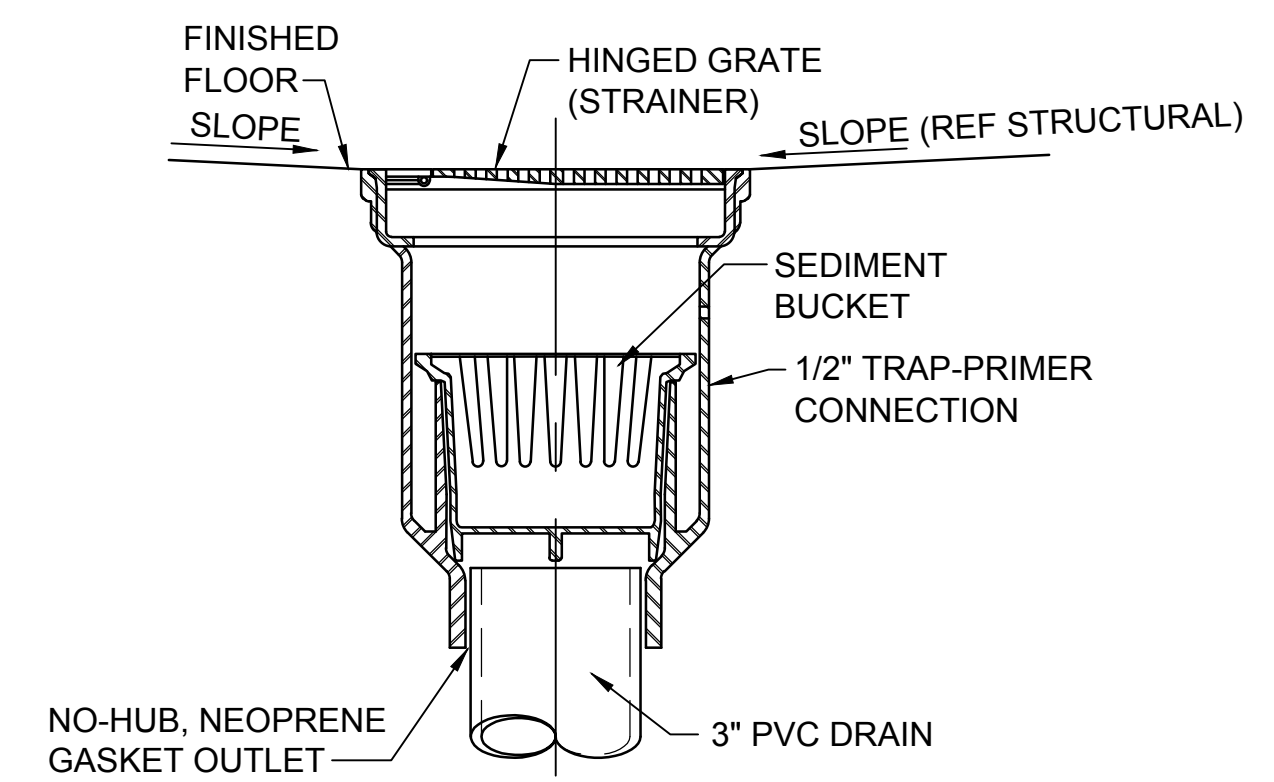


- NOTES:**
1. BLOWDOWN VALVE, TYPE AND QUANTITY (ONE OR TWO IN TANDEM) AS SPECIFIED.
  2. PIPING AND VALVES AS SPECIFIED FOR MAIN LINE. (1/2")
  3. INSTRUMENT SENSING LINE AS SPECIFIED. (3/8" MIN. SIZE)
  4. PULSATION DAMPER AS SPECIFIED.
  5. PROVIDE PIGTAIL SIPHON LOOP ON ALL STEAM LINES.
  6. TEST TEE WITH PLUGGED BRANCH, 1/4" MIN. SIZE.
  7. WELD-O-LET OR THREAD-O-LET AS SPECIFIED FOR MAIN LINE.
  8. REDUCE AS REQUIRED TO FIT PRESSURE GAUGE.

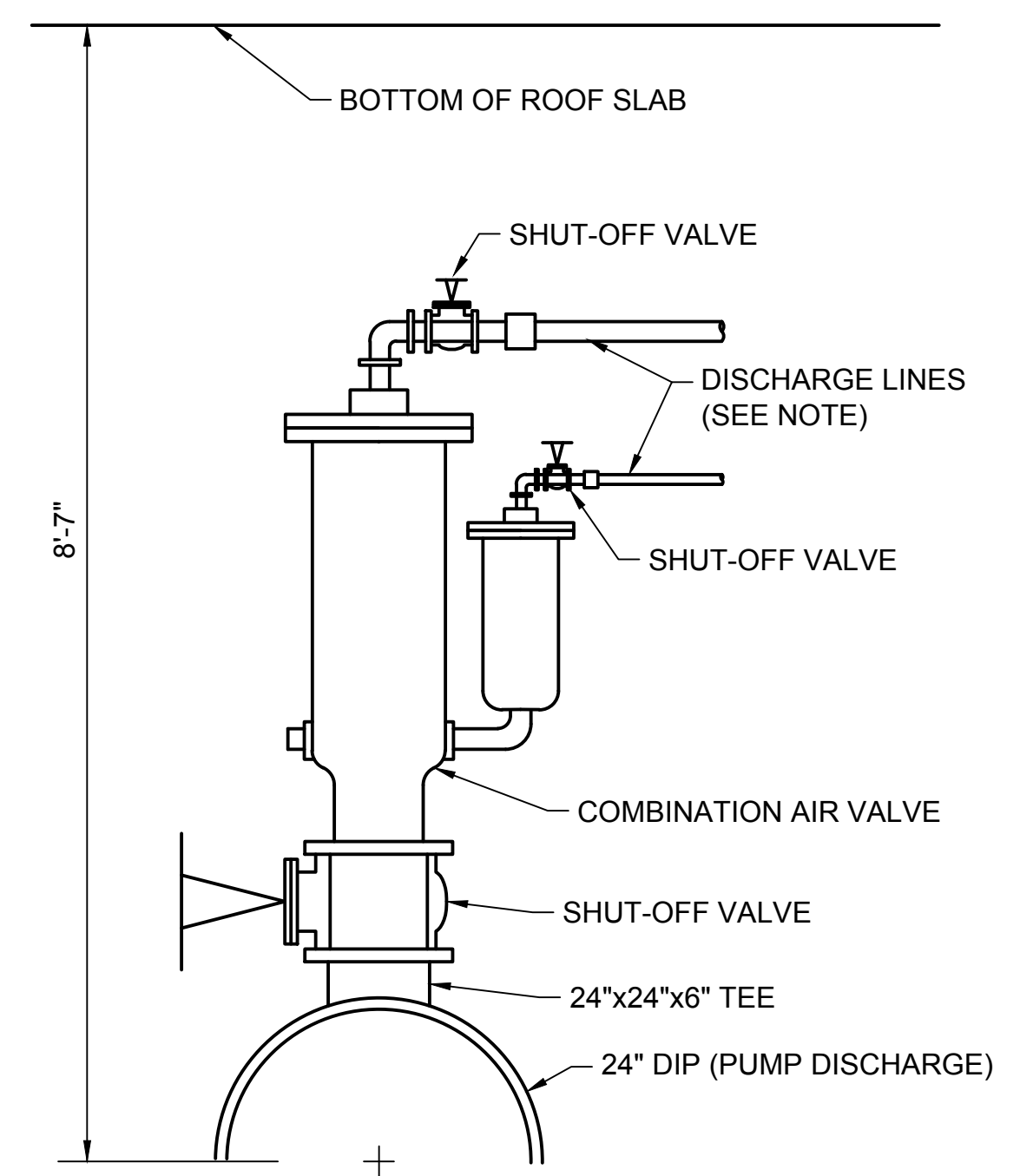
**DETAIL 1**  
**D101**  
 TYPICAL PRESSURE GAUGE INSTALLATION  
 NOT TO SCALE



**DETAIL 3**  
**D101 D201**  
 TOP SLAB FLOOR DRAIN  
 NOT TO SCALE

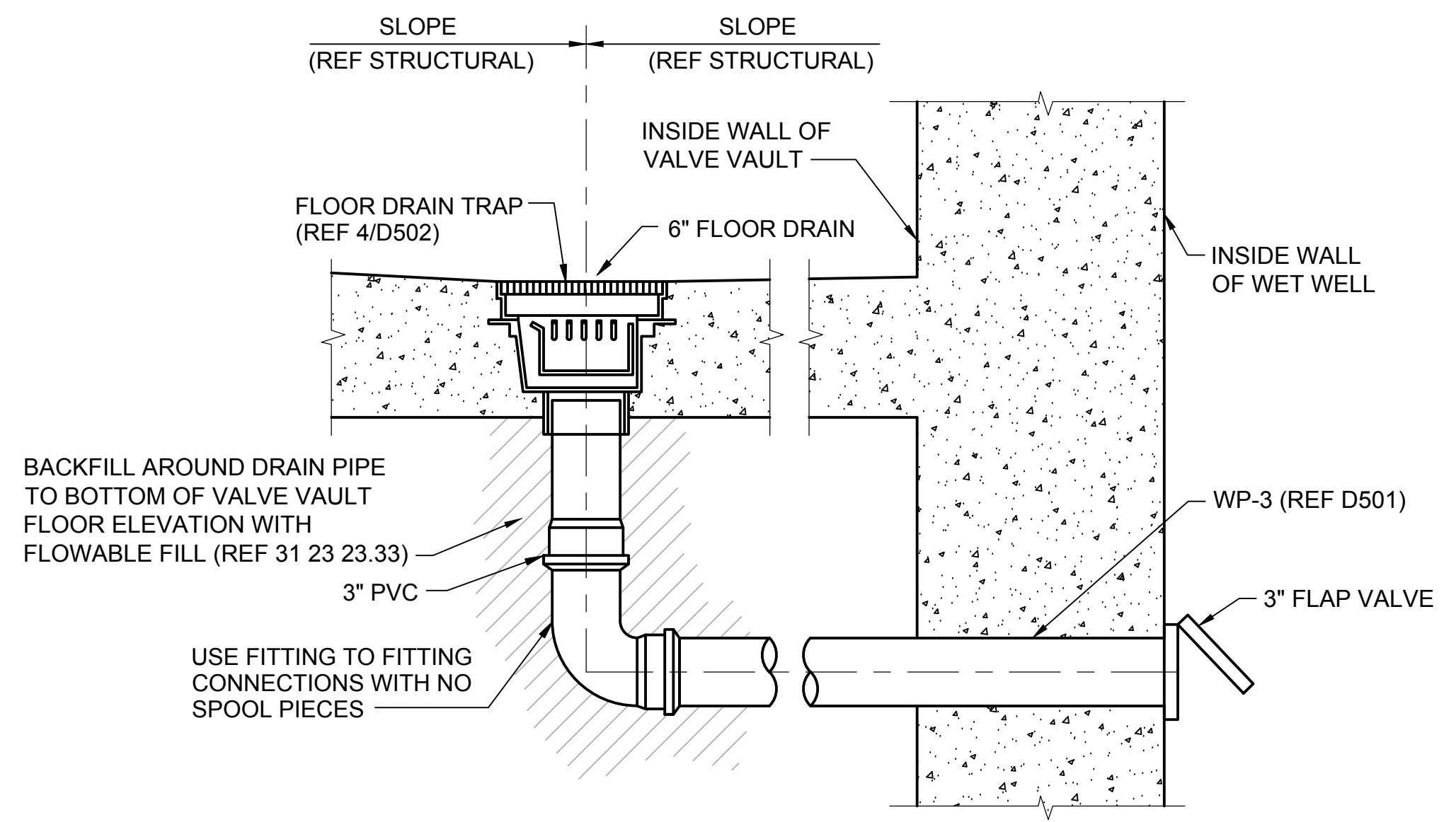


**DETAIL 5**  
**D502**  
 FLOOR DRAIN TRAP  
 NOT TO SCALE

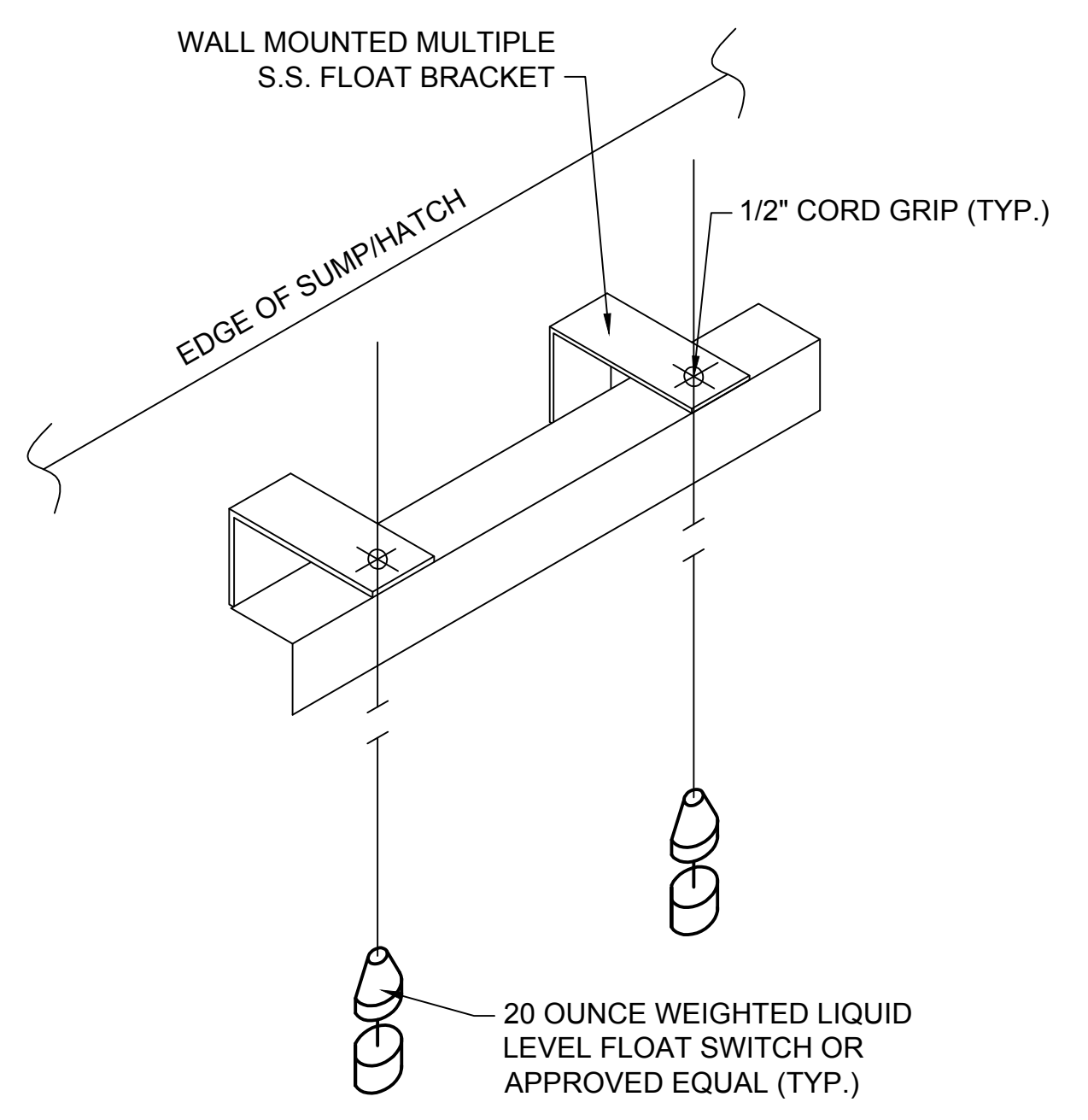


- NOTES:**
1. CONTRACTOR SHALL PROVIDE PIPING CONNECTION FROM BOTH COMBINATION AIR VALVE DISCHARGES ON BOTH PUMP HEADERS AND TIE TO SINGLE DISCHARGE PIPE THROUGH VALVE VAULT WALL INTO EBPS WET WELL. PIPING SHALL BE SUPPORTED PER MANUFACTURER'S RECOMMENDATIONS.

**D101**  
**2**  
**D101**  
 COMBINATION AIR VALVE INSTALLATION  
 NOT TO SCALE



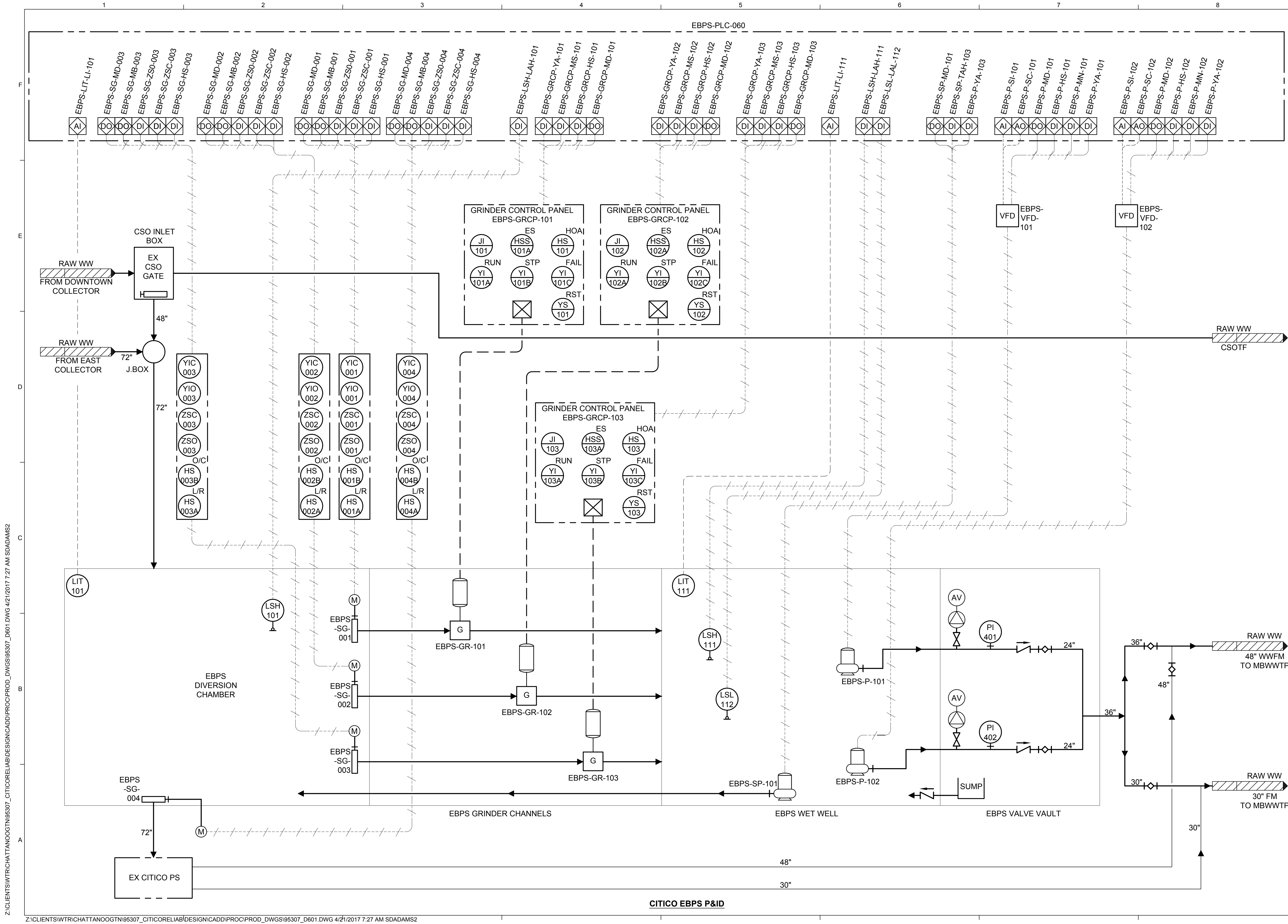
**DETAIL 4**  
**D101**  
 VALVE VAULT FLOOR DRAIN  
 NOT TO SCALE



**LIQUID LEVEL FLOAT SWITCH BRACKET**  
 NOT TO SCALE

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CITICO EBPS P&ID



CITICO PUMP RELIABILITY IMPROVEMENTS  
CITY OF CHATTANOOGA, TN  
CONSENT DECREE PROGRAM

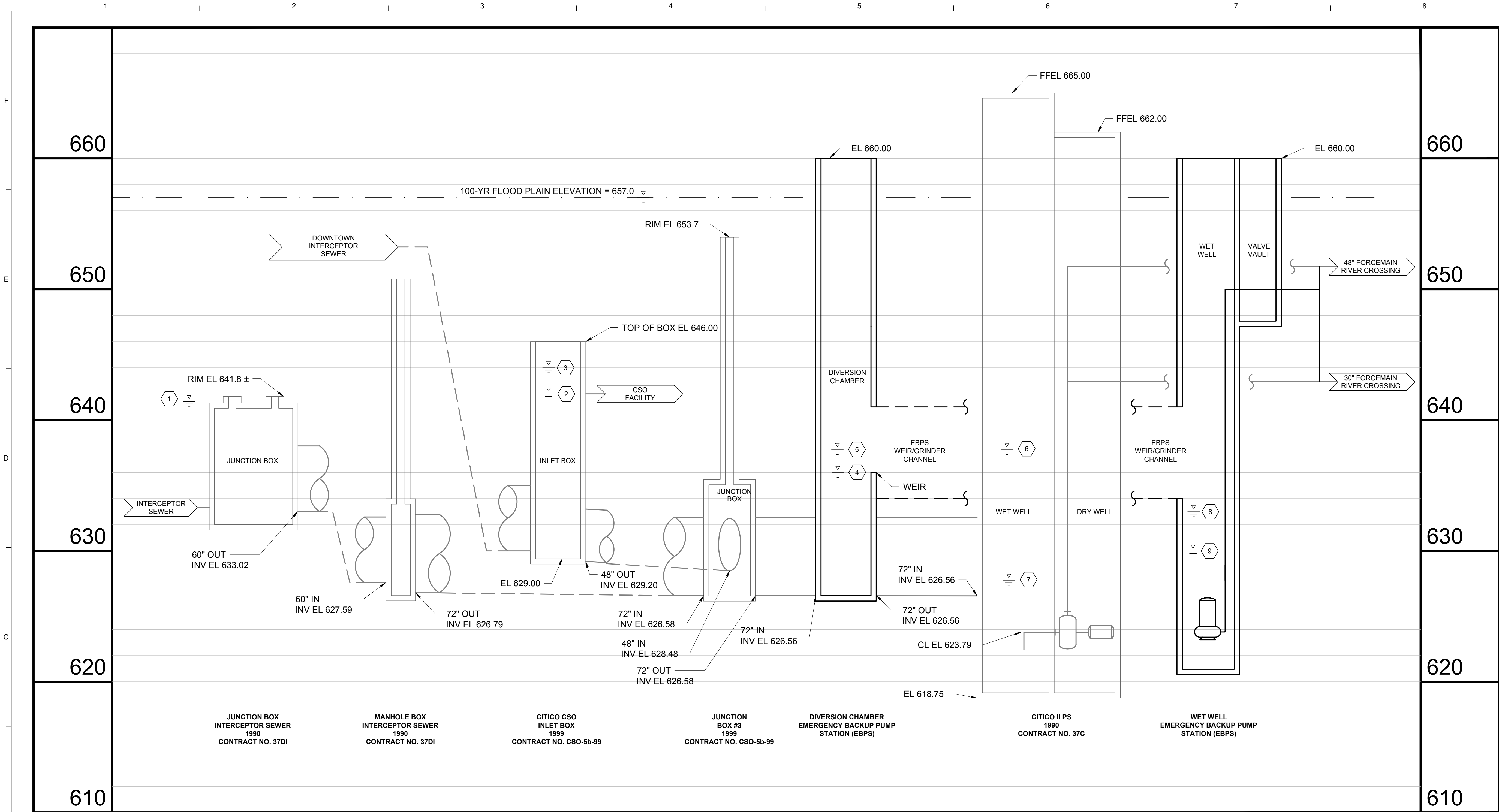


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PROJECT NO: 95307  
DATE: 04/14/17  
DISC. LEAD: PMB    DESIGNER: SDA    CHECKER: ALW

SHEET TITLE: PROCESS  
PIPING AND INSTRUMENTATION DIAGRAM


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- KEYED NOTES:**
- 1 OVERFLOW ELEVATION AT JUNCTION BOX = 641.8
  - 2 WEIR ELEVATION OF FLOW TO CSO FACILITY = 642.00
  - 3 EMERGENCY OVERFLOW WEIR TO CSO FACILITY = 644.00
  - 4 NORMAL WEIR ELEVATION (ADJUSTABLE), EBPS = 636.00
  - 5 HIGH WATER LEVEL, DIVERSION CHAMBER, EBPS = 637.75
  - 6 EMERGENCY WATER LEVEL, CITICO II PS = 637.75
  - 7 NORMAL OPERATING LEVEL SET POINT, CITICO II PS = 627.75
  - 8 NORMAL OPERATING LEVEL SET POINT, EBPS = 635.00
  - 9 LOW WATER LEVEL, EBPS = 630.00

**BURNS MEDONNELL**  
 3650 MANSELL ROAD, SUITE 300  
 ALPHARETTA, GA 30022  
 770-587-4776

CITICO PUMP RELIABILITY IMPROVEMENTS  
 CITY OF CHATTANOOGA, TN  
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PROJECT NO: 95307  
 DATE: 04/14/17  
 DISC. LEAD: PMB    DESIGNER: SDA    CHECKER: ALW

SHEET TITLE  
 PROCESS

SYSTEM PROFILE

SHEET **D801** REV **C**