

**ADDENDUM NO. 2
TO THE CONTRACT PROVISIONS AND CONTRACT PLANS**

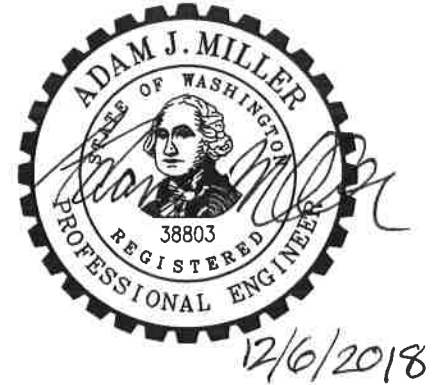
FOR

**CITY OF CHELAN
LIFT STATION IMPROVEMENTS - REBID**

G&O #18041

ISSUED THIS DATE: TUESDAY, DECEMBER 4, 2018

**BID OPENING: 10:00 A.M. (LOCAL TIME) ON
WEDNESDAY, DECEMBER 11, 2018
CITY OF CHELAN
135 EAST JOHNSON AVENUE
P.O. BOX 1669
CHELAN, WASHINGTON 98816**



Bidder shall acknowledge receipt of this Addendum on Page P-12 of the Proposal.

TO PROSPECTIVE BIDDERS:

The attention of all prospective bidders on the above project is directed to the following additions and modifications to the Contract Provisions and Contract Plans.

I. ADDITIONS, MODIFICATIONS, AND/OR DELETIONS TO THE TECHNICAL SPECIFICATIONS

ITEM NO. 1:

Page 01200-10, Specification Section 01200-1.4 A., SITE 1 – LIFT STATION NO. 16

REVISE as shown below (added text is italicized, deleted text is shown as strike out):

- “26. Grout Manhole
- a. Measurement: Shall be measured per each.
 - b. Payment: The unit price bid per each for GROUT MANHOLE shall include all costs for labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete all Work to include but not be limited to grout material, grout testing, grout pumping, ventilation and safety control measures and any other incidentals for a complete installation as shown on the Plans and specified ~~herein~~ *in Section 02534.*”

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FOR

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 - b. Payment: The unit price bid per each for GROUT MANHOLE shall include all costs for labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete all Work to include but not be limited to grout material, grout testing, grout pumping, ventilation and safety control measures and any other incidentals for a complete installation as shown on the Plans and specified ~~herein~~ *in Section 02534.*”

ITEM NO. 2:

Page 01200-24, Specification Section 01200-1.4 B., SITE 3 – LIFT STATION NO. 7

REVISE as shown below (added text is italicized, deleted text is shown as strike out):

- “17. Grout Lift Station No. 7 Wetwell
- a. Measurement: Shall be measured by lump sum.
 - b. Payment: the lump sum contract price for GROUT LIFT STATION NO. 7 WETWELL shall include all costs for labor, materials, *tools, and equipment, transportation, supplies, and incidentals required to complete all Work to include but not be limited to grout material, grout testing, grout pumping, ventilation and safety control measures and any other incidentals* to grout the existing Lift Station No. 7 wetwell as shown on the Plans and as specified ~~herein~~ *in Section 02534.*”

ITEM NO. 3:

Page 02530-4, Specification Section 02530-3.1, MANHOLES

REVISE the eighth paragraph as shown below (added text is italicized, deleted text is shown as strike out):

“The interior and exterior of all manholes shall be coated with a corrosion resistant sealant system *per Specification Section 09900*. Grout all joints, pipe penetrations, lift holes, and hardware pockets prior to coatings with Tnemec Series 218 ~~or 219 MortarClad~~. *SSPC SP13 Abrasive blast for concrete surface shall meet a fine grit standard profile on all concrete surface to be coated, Abrasive blast shall open bug holes and surface voids to accept surface filler, Apply Tnemec Series 218 MortarClad as required to fill bug holes and surface voids flush to plane of concrete to a 1/32-inch minimum thickness.*”

ITEM NO. 4:

Page 02530-5, Specification Section 02530-3.2, PRECAST VAULTS

ADD the following new paragraph to the beginning of this section:

“The interior and exterior of all precast vaults shall be coated with a corrosion resistant sealant system *per Specification Section 09900*. Grout all joints, pipe penetrations, lift holes, and hardware pockets prior to coatings with Tnemec Series 218. *SSPC SP13 Abrasive blast for concrete surface shall meet a fine grit standard profile on all concrete surface to be coated, Abrasive blast shall open bug holes and surface voids to accept surface filler, Apply Tnemec Series 218 MortarClad as required to fill bug*

holes and surface voids flush to plane of concrete to a 1/32-inch minimum thickness.”

ITEM NO. 5:

Page 13424-1, Specification Section 13424 – Pressure (Level) Transmitters.

DELETE the Section in its entirety.

ITEM NO. 6:

ADD the attached New Specification Section 13423 – Ultrasonic Level Sensors.

II. ADDITIONS, MODIFICATIONS, AND/OR DELETIONS TO THE CONTRACT PLANS

ITEM NO. 1:

SHEET M1-1, SITE NO. 1 – LIFT STATION NO. 16 PLAN AND SECTIONS

DELETE the entire Sheet and **REPLACE** with the attached Sheet M1-1R.

ITEM NO. 2:

SHEET M2-1, SITE NO. 2 – LIFT STATION NO. 10 PLAN AND SECTIONS

DELETE the entire Sheet and **REPLACE** with the attached Sheet M2-1R.

ITEM NO. 3:

SHEET M3-1, SITE NO. 3 – LIFT STATION NO. 7 PLAN AND SECTIONS

ADD a note to the sheet that states:

“NOTE:

1. COAT INTERIOR AND EXTERIOR SURFACES OF THE NEW VAULT PER SPECIFICATION SECTION 09900.”

ITEM NO. 4:

SHEET MD-1, MECHANICAL DETAILS

DELETE the entire Sheet and **REPLACE** with the attached Sheet MD-1R.

ITEM NO. 5:

SHEET MD-2, MECHANICAL DETAILS

DELETE the Sheet in its entirety.

ITEM NO. 6:

SHEET E1-1, ELECTRICAL PLAN – SITE NO. 1 LIFT STATION NO. 16

REVISE the pressure level transducer to be an ultrasonic level transducer. Revise the mounting to match the mounting detail added in this addendum.

ITEM NO. 7:

SHEET E1-2, ONE LINE DIAGRAM – SITE NO. 1 LIFT STATION NO. 16

REVISE the callout on the circuit from the generator receptacle to the manual transfer switch to be 3#2+1#2N+1#8G, 1 1/2”C in lieu of what is shown.

REVISE NOTE 7 to read. “PROVIDE ARKTITE AREA204127 OR EQUAL TO MATCH EXISTING CITY CONNECTOR.”

ITEM NO. 8:

**SHEET E1-5, ELEMENTARY WIRING DIAGRAM AND ELEVATIONS
CONROL PANEL – SITE NO. 1 LIFT STATION NO. 16**

REMOVE the intrinsically safe barrier from the control panel elevation and add a Hydromanger to the interior swing panel elevation.

ITEM NO. 9:

**SHEET E1-6, ELEMENTARY WIRING DIAGRAM CONTROL PANEL –
SITE NO. 1 LIFT STATION NO. 16**

REVISE lines LS16CP-85 to 87 to remove the intrinsic safety barrier and the intrinsically safe wiring and replace with a Hydromanger.

ITEM NO. 10:

SHEET E2-1, ELECTRICAL PLAN – SITE NO. 2 LIFT STATION NO. 10

REVISE the pressure level transducer to be an ultrasonic level transducer. Revise the mounting to match the mounting detail added in this addendum.

ITEM NO. 11:

SHEET E2-2, ONE LINE DIAGRAM – SITE NO. 2 LIFT STATION NO. 10

REVISE the callout on the circuit from the generator receptacle to the manual transfer switch to be 3#3/0+1#3/0N+1#6G, 2”C in lieu of what is shown.

REVISE the callout from the manual transfer switch to the pump control panel to be 3#3/0+1#3/0N+1#6G, 2”C in lieu of what is shown.

REVISE the power distribution block to be a 3P, 4W. Remove the 5 kva transformer and supply the 120 volt loads from the power distribution block.

REVISE NOTE 7 to read. "PROVIDE ARKTITE AREA204127 OR EQUAL TO MATCH EXISTING CITY CONNECTOR."

ITEM NO. 12:

**SHEET E2-5, ELEMENTARY WIRING DIAGRAM AND ELEVATIONS
CONTROL PANEL – SITE NO. 2 LIFT STATION NO. 10**

REMOVE the intrinsically safe barrier from the control panel interior elevation and add a hydroranger to the interior swing panel elevation.

ITEM NO. 13:

**SHEET E2-6, ELEMENTARY WIRING DIAGRAM CONTROL PANEL –
SITE NO. 2 LIFT STATION NO. 10**

REVISE lines LS10CP-85 to 87 to remove the instrinsic safety barrier and the intrinsically safe wiring and replace with a hydroranger.

SECTION 13423

ULTRASONIC LEVEL SENSORS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes furnishing and installing ultrasonic level sensors and associated equipment as shown on the Plans and as specified herein. The ultrasonic level sensors shall include all necessary accessories and hardware for a complete and workable installation.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01200	Measurement and Payment
01300	Submittals
01800	Testing, Commissioning, and Training
11000	Equipment General Provisions
Division 16	Electrical

1.3 EQUIPMENT LIST

Equipment numbers are as follows:

<u>Item</u>	<u>Equipment Number</u>
Site 1 – Lift Station No. 16 Transducer No. 1	01 LT 01
Site 2 – Lift Station No. 10 Transducer No. 1	02 LT 01

1.4 PERFORMANCE REQUIREMENTS

The ultrasonic level sensors shall be provided with the following operating range for the specified application and location.

Equipment Number	Parameter
Measurement Range (feet)	1 – 14
Transducer level accuracy (percent)	+/- 0.25
Resolution (percent)	0.1
Analog accuracy (percent)	+/- 0.5

The ultrasonic level sensors shall be configured to measure the liquid level or flow as required based on its application and its mounting location.

1.5 DELIVERY, STORAGE AND HANDLING

All equipment shall be completely factory assembled, crated and delivered to protect against damage during shipment.

All equipment delivered to the site shall be stored as specified in accordance with the manufacturer's instructions.

1.6 WARRANTY

In addition to the warranty required in the General Conditions, the equipment manufacturer shall provide an extended warranty covering defects in material and workmanship for 2 years following the date of substantial completion. The warranty shall be in printed form, shall apply to all similar units, and shall include parts and labor.

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

The Ultrasonic Level Sensor shall be a HydroRanger 200 as manufactured by Siemens or equivalent equipment manufactured by Endress & Hauser. No other manufacturers shall be accepted.

2.2 ULTRASONIC LEVEL TRANSMITTER AND TRANSDUCER

The level transmitters shall have microprocessor-based electronics, a front panel menu-driven keyboard, and produce an isolated 4-20 mA DC signal. The level sensor shall be self-compensating for ambient temperature conditions. The unit shall be capable of simulating level without any external devices for verifying outputs and calibrations.

The transducers shall transmit and receive an acoustic signal to accurately measure fluid depth at the monitoring site. The different sites at which level will be measured by the transducer/transmitter have different characteristics. These characteristics shall be taken into consideration by the manufacturer and the actual transducer model applied at each location and the mounting and/or location of the transducer shall be as recommended by the Manufacturer. If the unit fails to adequately meet the listed performance requirements, the Contractor shall replace and/or relocate the transducer until satisfactory performance is obtained. The sensor shall be capable of an indefinite submergence of 30 feet without degradation. The sensor shall function over an ambient temperature of -20 degrees F to 160 degrees F.

ADDENDUM NO. 2

The transmitter shall contain all necessary circuitry to utilize the signal from the ultrasonic level sensor and shall produce an accurate 4-20 mA DC level or flow signal. The transmitter shall be supplied with an LCD indicator to display level, flow rate and flow total, and their respective flow units and multipliers as required for the application. The display shall indicate if there is a fault or an alarm condition. The transmitter shall also have six relay outputs (Form A and C, rated 5 Amps at 250 Vac) for pump control, level alarms or flow totalization depending on the application, and two isolated 4-20 mA outputs. The unit shall be enclosed in an indoor housing in a panel mount configuration for mounting in an enclosure on a subpanel backboard at the location indicated on the Plans. The unit shall function over an ambient temperature range of -5 to 149.

Accuracy of the unit shall be unaffected by temperature changes within the specified ambient temperature range. Sampling shall be a minimum of 30 samples per second and the unit shall be able to operate with as few as 2 percent of the samples taken successfully. In the event of prolonged loss of acoustic signaling, the unit shall indicate the condition by a flashing status indication on the front display panel. The unit shall be 24 VDC powered. All wiring connections shall be made via well-marked terminal blocks.

The unit shall display the measured level or flow on the front of the unit enclosure and shall have a menu-driven keyboard on the front panel of the transmitter. An infrared hand-held programmer shall be provided to allow the unit to be programmed in the field. Provide at least one hand-held programmer for every ten units.

The ultrasonic level sensors shall be listed as NEMA 4X.

The level sensors (transducers and transmitters) shall be listed and labeled by a electrical testing laboratory recognized by the Washington State Department of Labor and Industries or be acceptable to the Washington State Department of Labor and Industries for installation on this project.

2.3 ANALOG INSTRUMENTATION

The level transmitter shall be of the manufacturer's latest design. The equipment shall have 4 to 20 milliamperes standard DC (direct current) isolated floating outputs and shall conform to ISA Standard S 50.1.

Each device output shall be provided with adjustments for gain and bias. The resultant output shall be 4-20 mA DC into approximately 750 ohms.

Analog instruments shall operate without loss of loop accuracy due to electromagnetic interference, resistive or inductive losses or similar problems

related to field interconnection of components when connected with shielded 2/conductor #18 gauge copper wire in the manner shown on the Plans.

2.4 SPARE PARTS

The Contractor shall provide one complete spare level transmitter and one spare ultrasonic level sensor of each type.

All spare parts shall be suitably identified and effectively protected from moisture and corrosion with appropriate wrappings or coatings or a combination thereof. All parts shall be furnished in sturdy labeled boxes.

2.5 FACTORY TESTING

The equipment shall be fully tested at the manufacturer's plant before shipment. Tests shall insure that the equipment will operate as desired under anticipated field conditions. Certified copies of test report(s) shall be submitted to the Engineer prior to shipment.

PART 3 EXECUTION

3.1 INSTALLATION

The ultrasonic level sensors shall be installed as shown on the Plans and in strict accordance with Manufacturer's recommendations and instructions. The ultrasonic level transducer shall be permanently mounted at the measuring site and positioned according to the Manufacturer's approved method using a sensor mounting adapters supplied by the Manufacturer.

The electrical signaling cable, supplied by the Manufacturer, shall be connected from the sensor to the transmitter housing.

The flow transmitter shall be installed in a control panel or enclosure and located as shown on the Plans.

All mounting hardware and supports including Type 316 stainless steel fasteners shall be provided by the Contractor.

3.2 FIELD TESTING

The Contractor shall perform the field testing described in Sections 01800 and 11000.

The field test shall insure that the equipment will operate as desired under field conditions. The manufacturer shall provide a formal test procedure and report

ADDENDUM NO. 2

forms for recording data. The Contractor shall submit the report forms to the Engineer prior to operational testing.

Any defects in the equipment or failure to meet requirements of the Specification shall be promptly corrected by the Contractor.

3.3 MANUFACTURER'S SERVICES

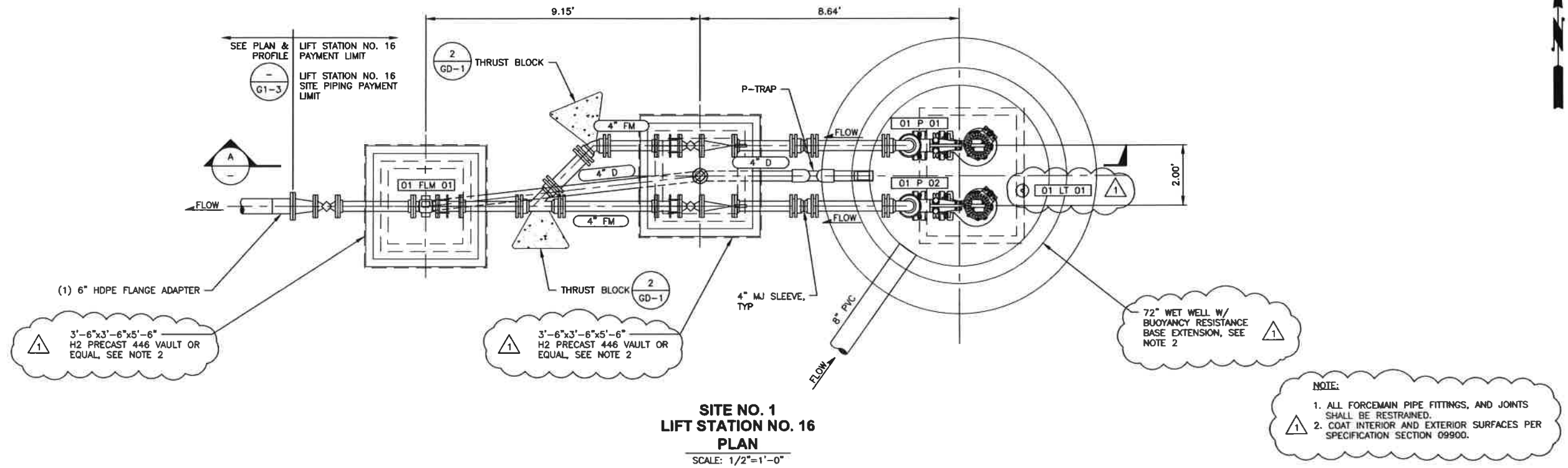
The services of a factory-trained representative of the ultrasonic level sensor manufacturer shall be provided. Services shall include a minimum of 1 day on site. Services shall include inspection of the installation, initial configuration, programming, startup, and adjustments and instruction of the Owner's personnel in operation and maintenance for the pressure transmitters. Instruction and training of the Owner's personnel shall not take place until startup is completed and the pressure transmitters are fully operational and shall be at a time and location agreed to by the Owner. The cost of these services shall be included in the bid price.

The representative shall provide for two additional service calls during the initial 2 years of equipment operation.

***** END OF SECTION *****

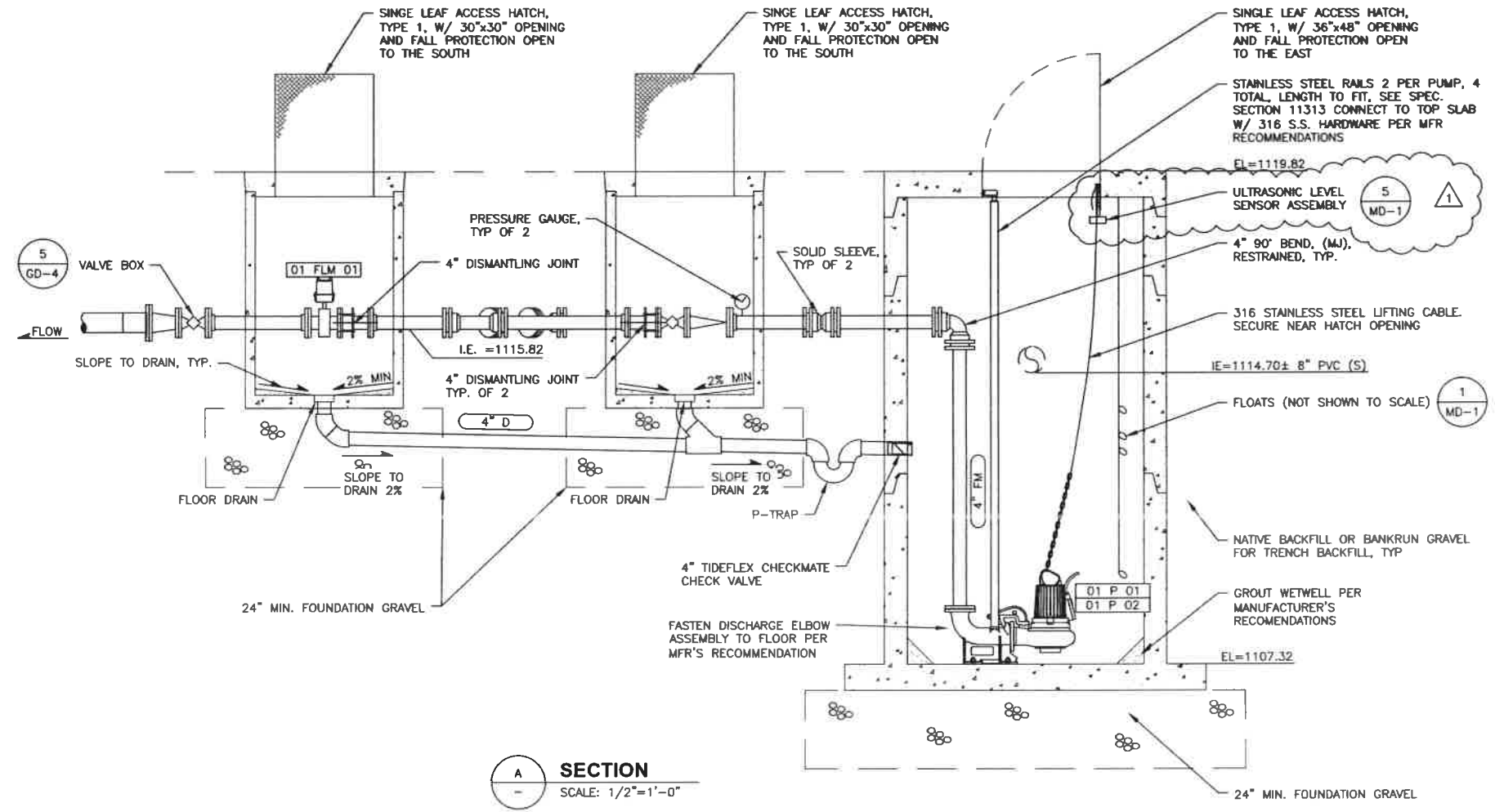
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ADDENDUM NO. 2	REVISION	DATE	APPD
		12/4	AJM
1	No.		



NOTE:
 1. ALL FORCEMAIN PIPE FITTINGS, AND JOINTS SHALL BE RESTRAINED.
 2. COAT INTERIOR AND EXTERIOR SURFACES PER SPECIFICATION SECTION 09900.

**SITE NO. 1
 LIFT STATION NO. 16
 PLAN**
 SCALE: 1/2"=1'-0"



SECTION A
 SCALE: 1/2"=1'-0"

0 1" 2"
 TWO INCHES AT FULL SCALE.
 IF NOT, SCALE ACCORDINGLY

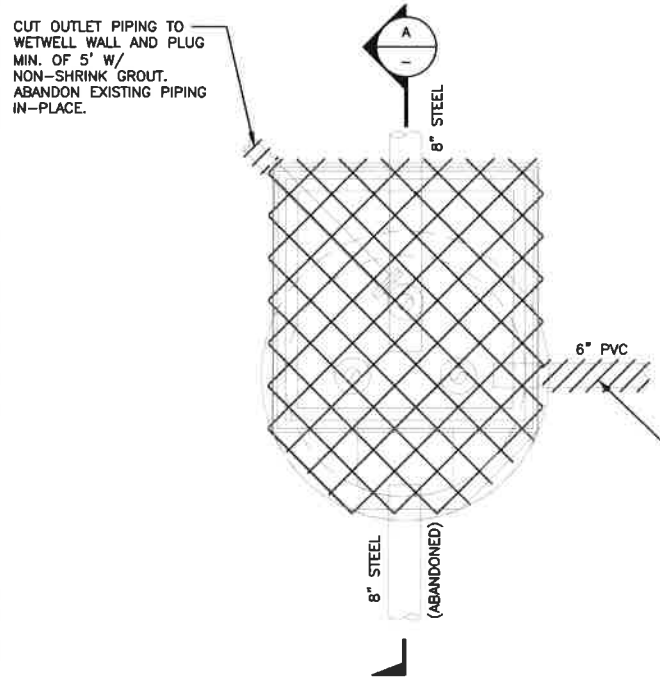
**SITE NO. 1 - LIFT STATION NO. 16
 CONTROL SET POINTS**

DESCRIPTION	CONTROL SET POINT	ELEVATION	NOTES
RIM ELEVATION	NO	1119.82	
4" PIPE INVERT (OUT)	NO	1115.82	
6" PIPE INVERT (IN)	NO	1114.70±	
HIGH LEVEL ALARM/ ALL PUMPS ON	YES	1114.70	FLOAT
START LAG PUMP	YES	1114.20	FLOAT
START LEAD PUMP	YES	1113.70	FLOAT
OPERATOR-ADJUSTABLE HIGH LEVEL ALARM	YES	1113.70	
LAG PUMP ON	YES	1113.42	
LEAD PUMP ON	YES	1112.92	
ALL PUMPS OFF	YES	1109.82	
ALL PUMPS OFF	YES	1109.32	FLOAT
OPERATOR-ADJUSTABLE LOW LEVEL ALARM	YES	1109.32	
FLOOR OF WETWELL	NO	1107.32	

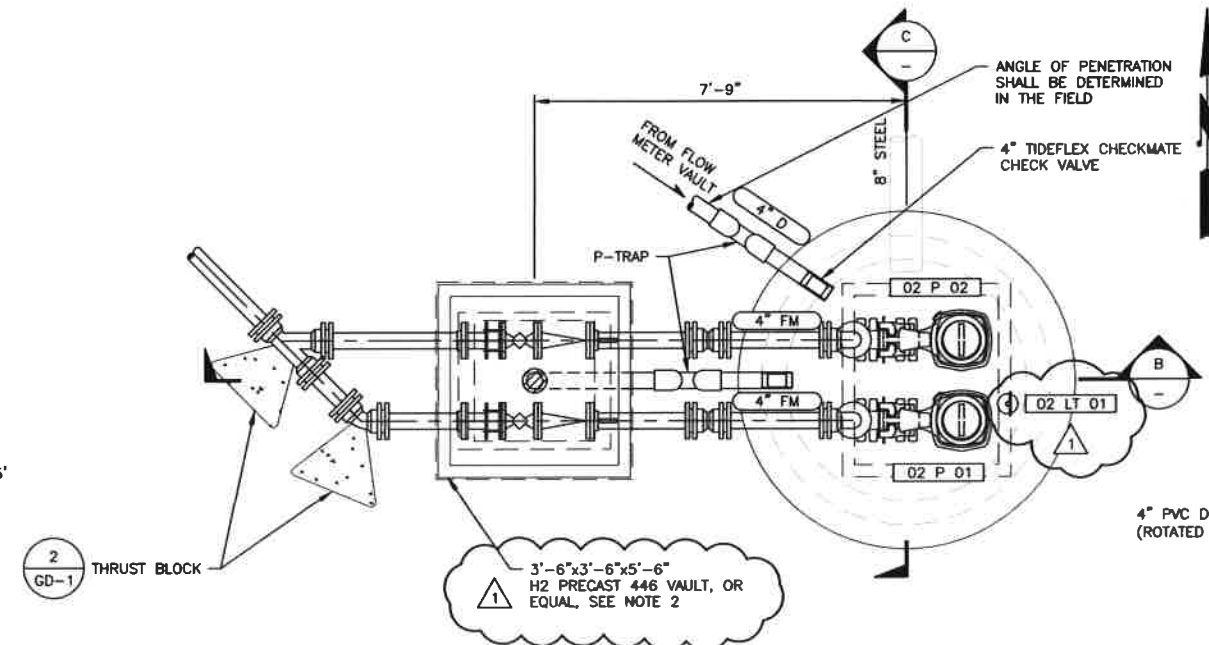


CITY OF CHELAN
 CHELAN COUNTY WASHINGTON
LIFT STATION IMPROVEMENTS - REBID
 SITE NO. 1 - LIFT STATION NO. 16
 PLAN AND SECTIONS

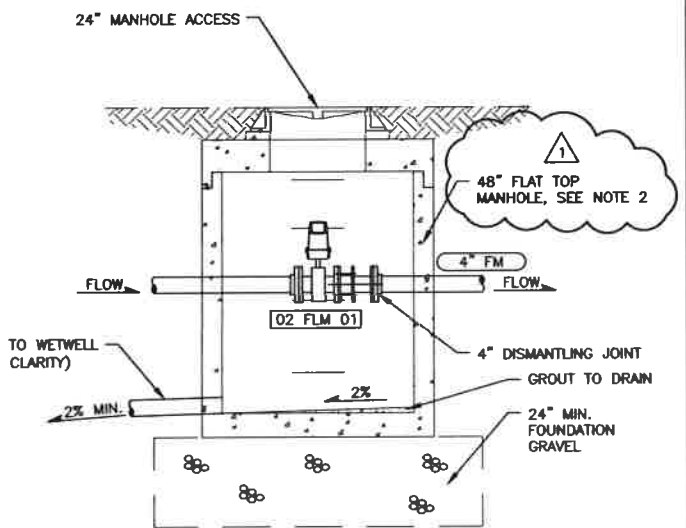
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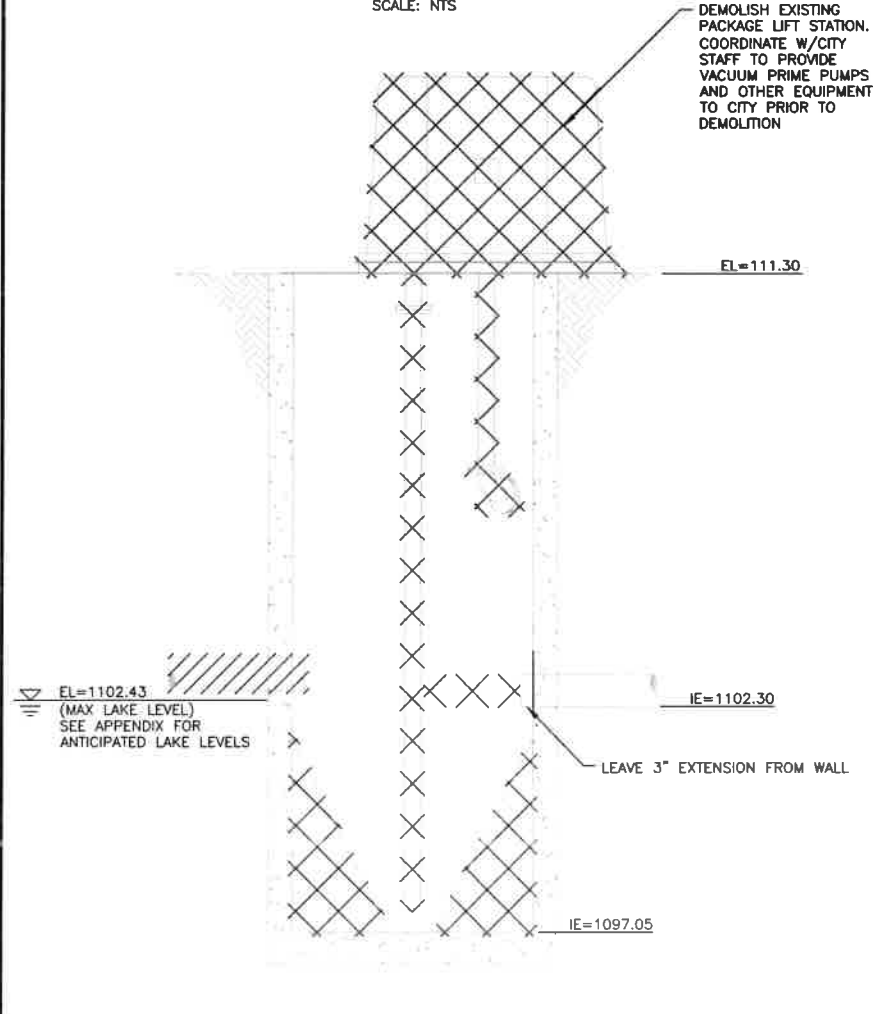
EXISTING LS NO. 10 PLAN
SCALE: NTS



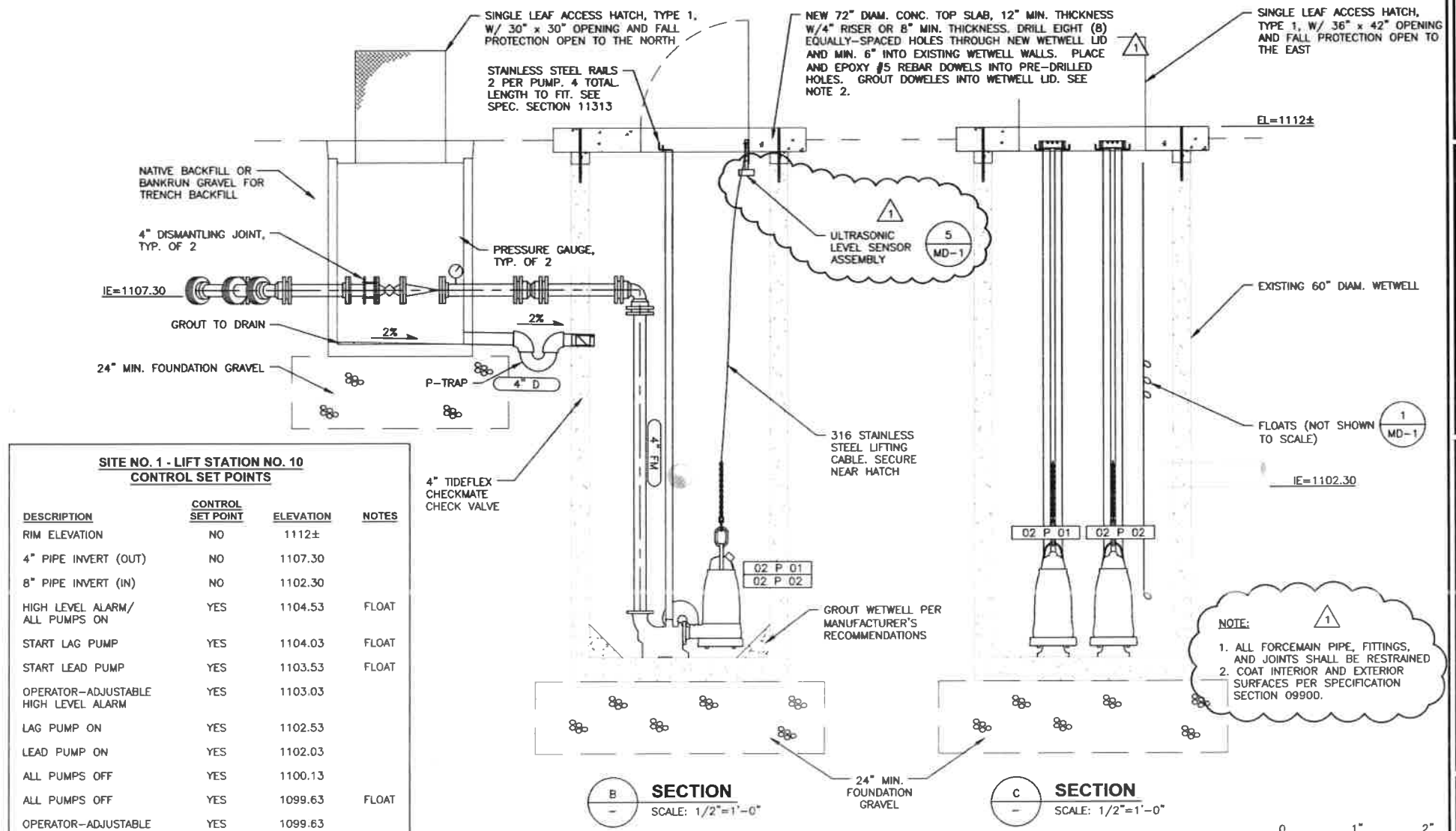
1 SITE NO. 2 - LS NO. 10 PLAN
SCALE: 1/2"=1'-0"



2 SITE NO. 2 - LS NO. 10 FLOW METER VAULT
SCALE: 1/2"=1'-0"



A SECTION
SCALE: NTS



B SECTION
SCALE: 1/2"=1'-0"

C SECTION
SCALE: 1/2"=1'-0"

SITE NO. 1 - LIFT STATION NO. 10 CONTROL SET POINTS

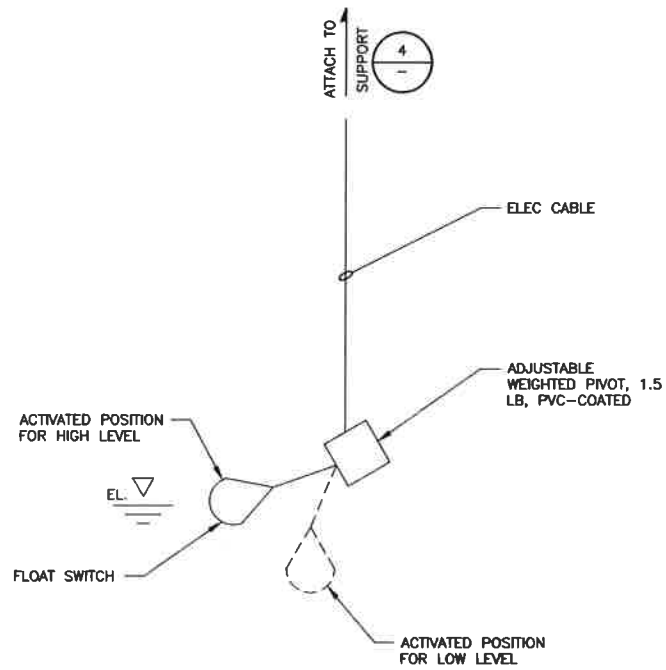
DESCRIPTION	CONTROL SET POINT	ELEVATION	NOTES
RIM ELEVATION	NO	1112±	
4" PIPE INVERT (OUT)	NO	1107.30	
8" PIPE INVERT (IN)	NO	1102.30	
HIGH LEVEL ALARM/ ALL PUMPS ON	YES	1104.53	FLOAT
START LAG PUMP	YES	1104.03	FLOAT
START LEAD PUMP	YES	1103.53	FLOAT
OPERATOR-ADJUSTABLE HIGH LEVEL ALARM	YES	1103.03	
LAG PUMP ON	YES	1102.53	
LEAD PUMP ON	YES	1102.03	
ALL PUMPS OFF	YES	1100.13	
ALL PUMPS OFF	YES	1099.63	FLOAT
OPERATOR-ADJUSTABLE LOW LEVEL ALARM	YES	1099.63	
FLOOR OF WETWELL	NO	1097.63	

NOTE:

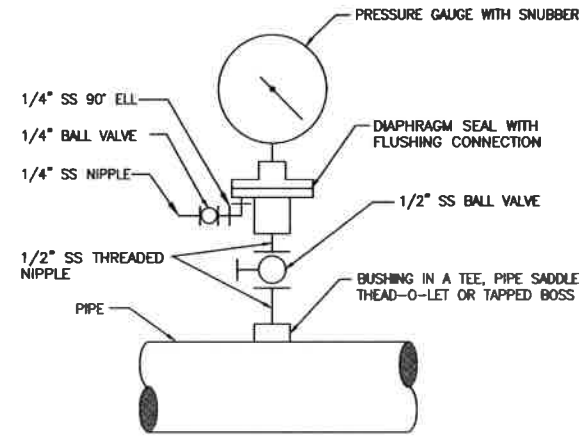
1. ALL FORCEMAIN PIPE, FITTINGS, AND JOINTS SHALL BE RESTRAINED
2. COAT INTERIOR AND EXTERIOR SURFACES PER SPECIFICATION SECTION 09900.

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

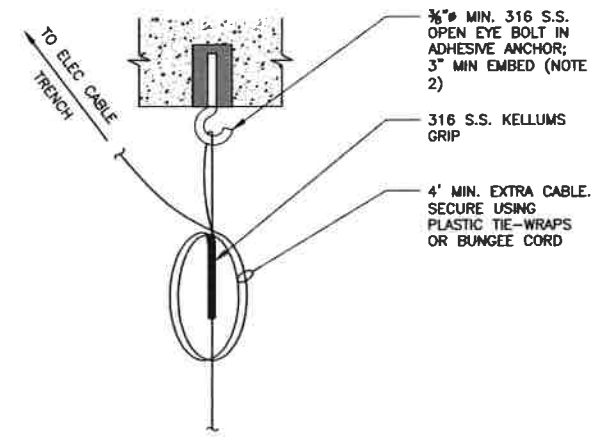
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1
TYP
FLOAT DETAIL
NOT TO SCALE

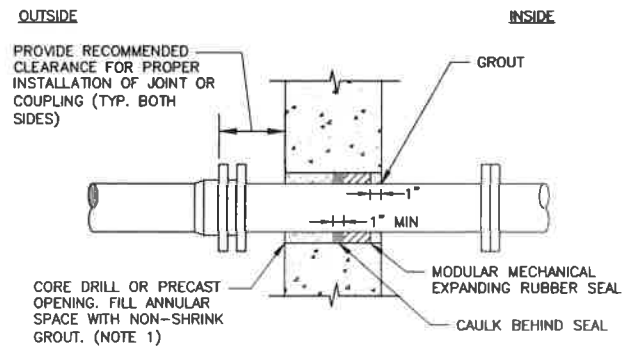


2
TYP
PRESSURE GAUGE (LIQUID SERVICE) DETAIL
NOT TO SCALE



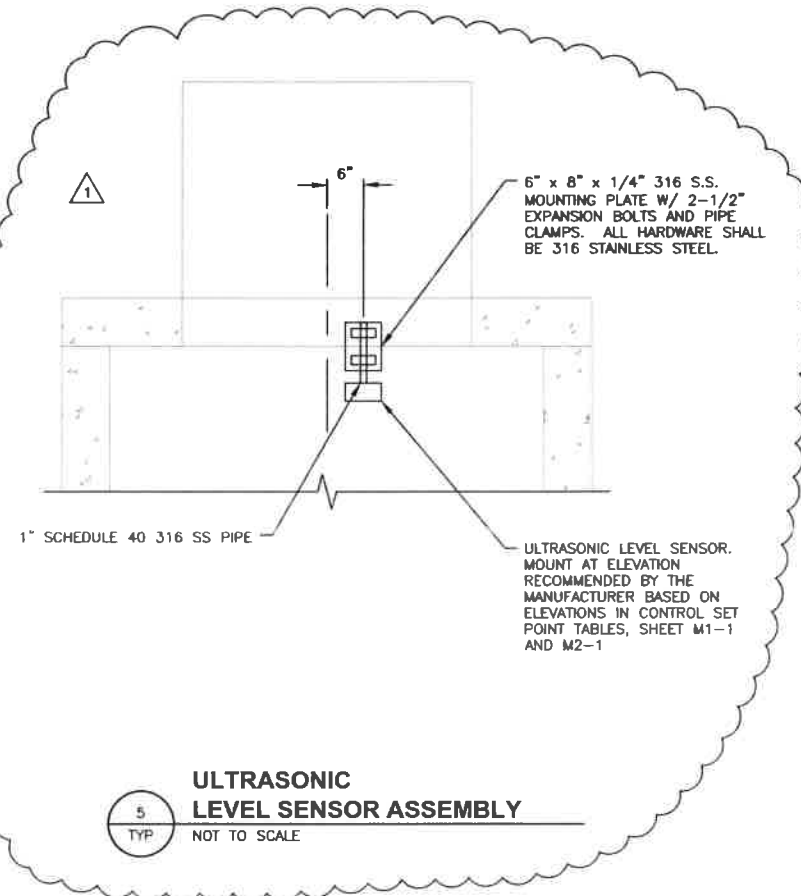
- NOTES:
1. PROVIDE ONE SUPPORT FOR EACH LEVEL TRANSDUCER & FLOAT SWITCH, WITHIN 8" OF HATCH OPENING U.N.O.
 2. ATTACH EYE BOLT USING TYPE C PIPE SUPPORT WHERE BOLT CANNOT BE ATTACHED TO LID, AS APPROVED BY ENGINEER.

3
TYP
WET WELL LEVEL CABLE SUPPORT DETAIL
NOT TO SCALE



4
TYP
PIPE PENETRATIONS THROUGH CONCRETE WALLS AND SLABS
NOT TO SCALE

- NOTES:
1. AN OPENING SHALL BE PROVIDED OF ADEQUATE SIZE TO ALLOW FOR INSTALLATION OF PENETRATION SHOWN.
 2. ROUGHEN CORE-DRILLED OPENING BEFORE FILLING ANNULAR SPACE WITH GROUT.



5
TYP
ULTRASONIC LEVEL SENSOR ASSEMBLY
NOT TO SCALE

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

DATE: NOV 2018	SCALE: NOTED	DSS	WRK	AJM
DRAWN:	CHECKED:	APPROVED:		

ADDENDUM NO. 2	12/4	AJM
	DATE	APPD
REVISION		
No.		



CITY OF CHELAN
CHELAN COUNTY WASHINGTON
LIFT STATION IMPROVEMENTS - REBID
MECHANICAL DETAILS

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