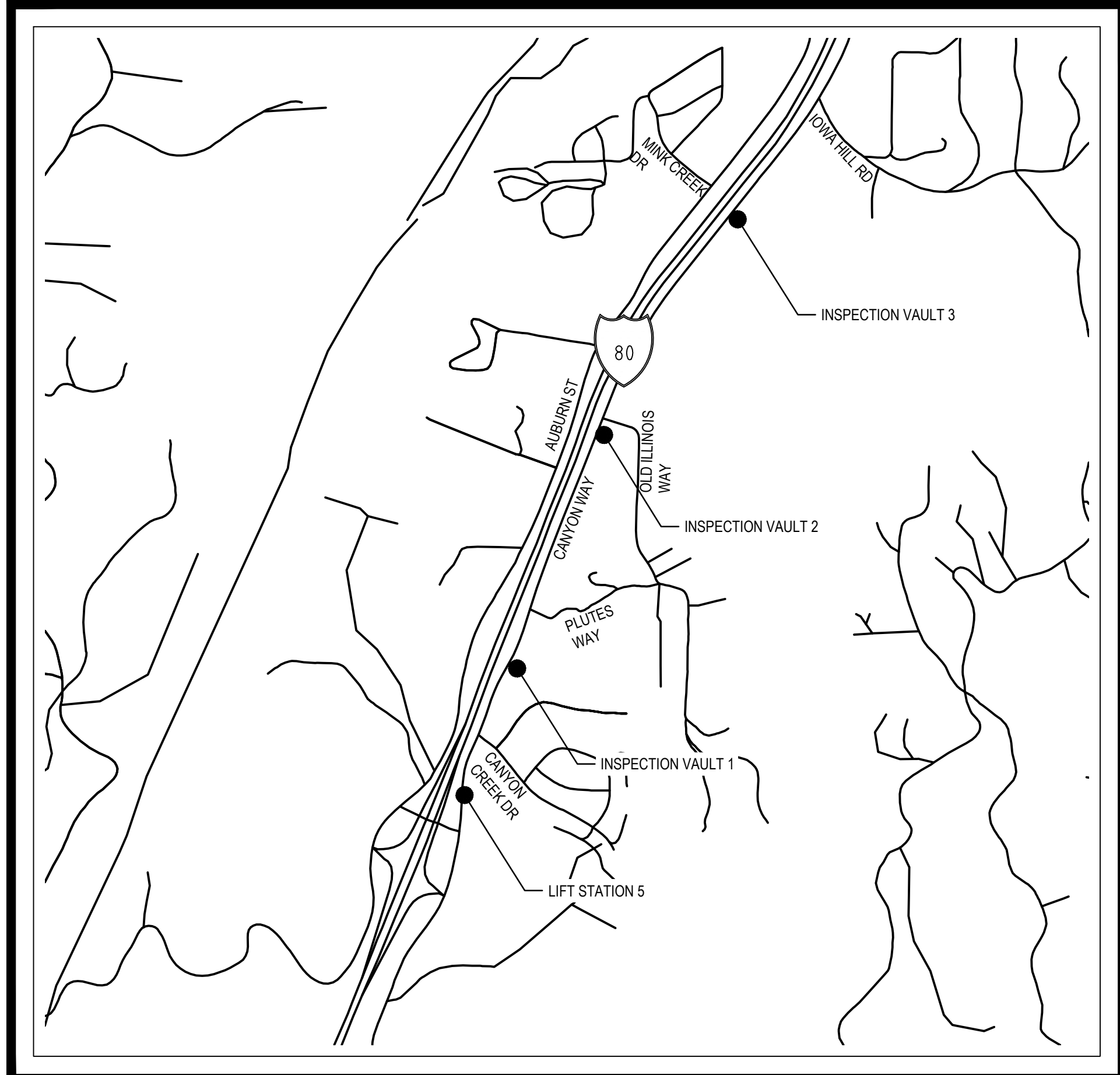
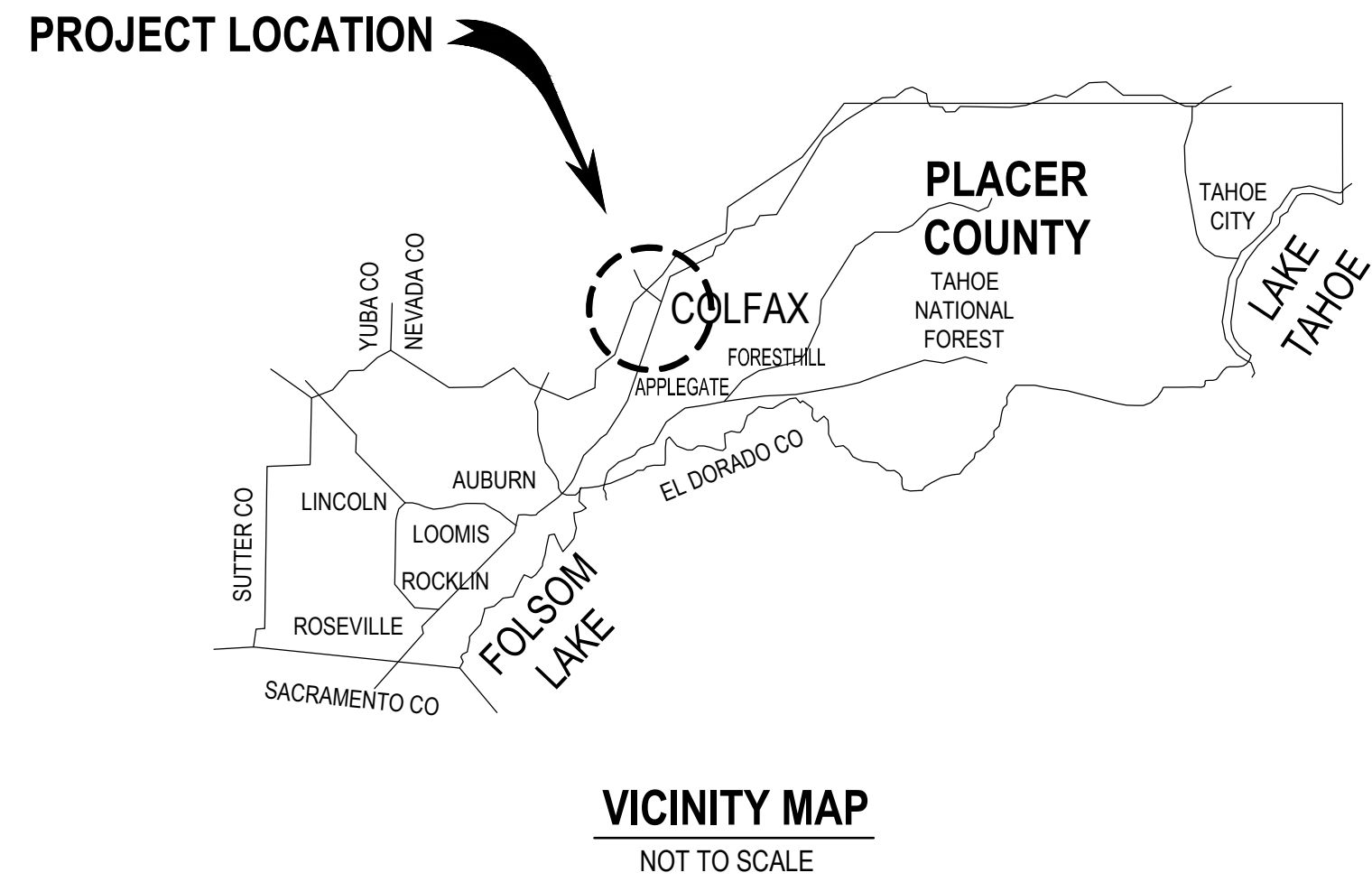


# PROJECT PLANS FOR CITY OF COLFAX LIFT STATION 5 FORCE MAIN IMPROVEMENTS

## SEPTEMBER 2021 CITY OF COLFAX PLACER COUNTY, CALIFORNIA

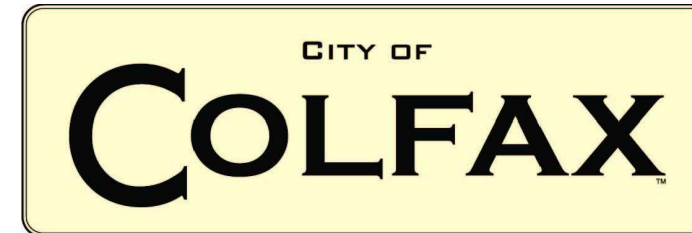


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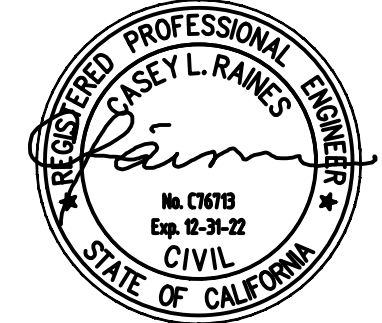
SHEET NO.	DRAWING NO.	DRAWING TITLE
1	G1	COVER SHEET
2	G2	NOTES, LEGEND, AND ABBREVIATIONS
3	C1	INSPECTION VAULT LOCATION PLAN
4	C2	EXISTING 6" FORCE MAIN AND INSPECTION VAULT DETAIL PLAN
5	M1	DETAILS
6	E1	ELECTRICAL SITE PLAN
7	E2	ELECTRICAL DETAILS
8	I1	LIFT STATION 5 P&ID

CITY OF COLFAX	
APPROVED BY _____	DATE _____
CARL MOORE City Engineer RCE 62181	

No.	Issue	Checked	Approved	Date

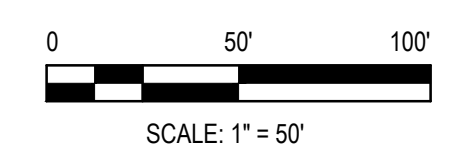
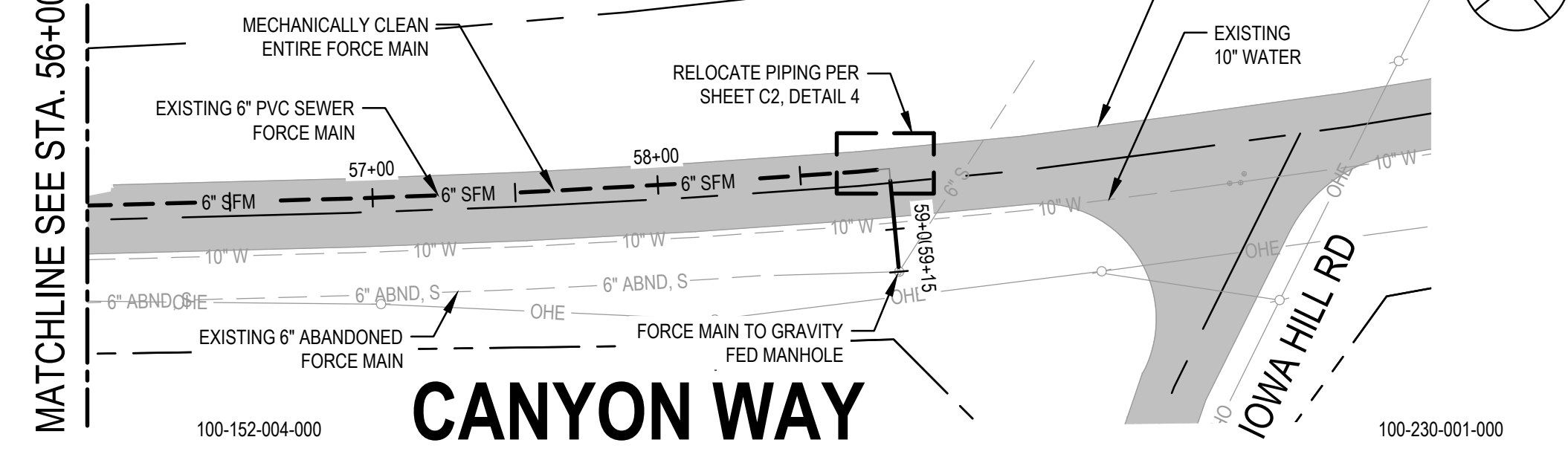
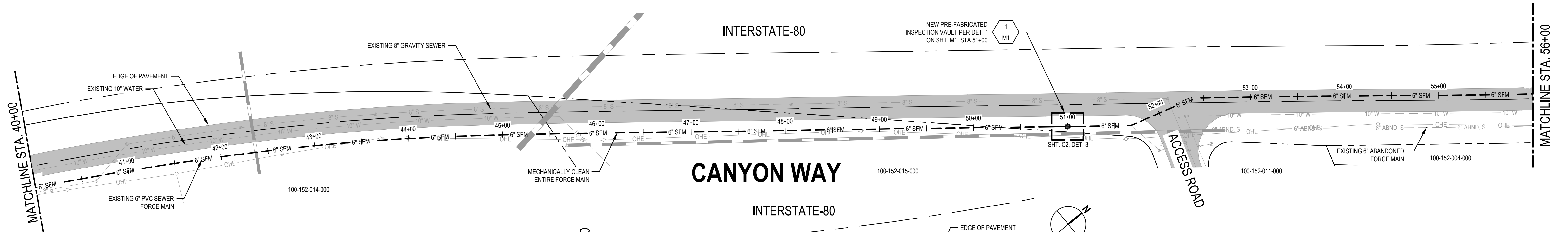
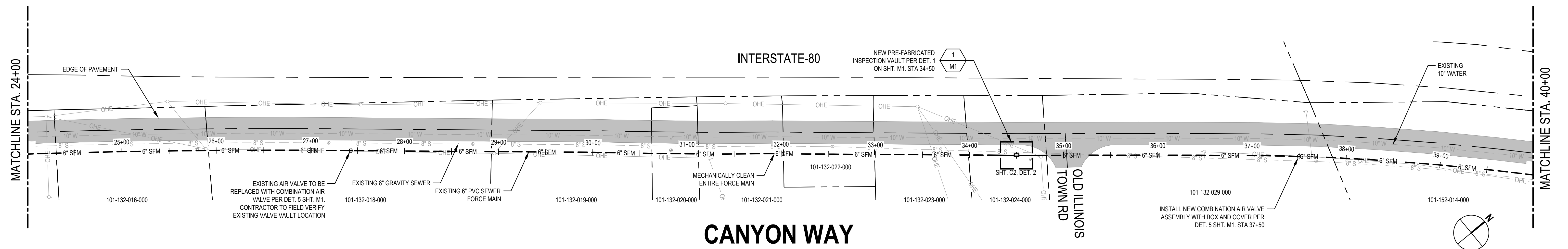
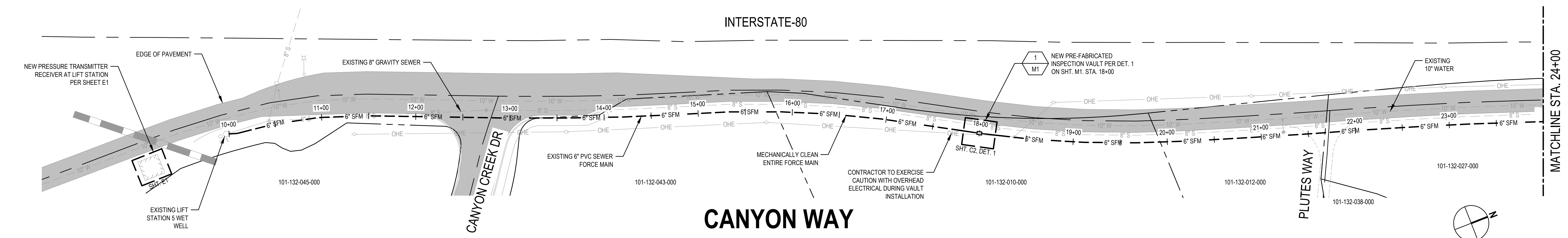
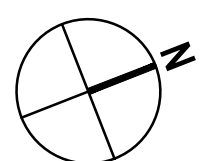


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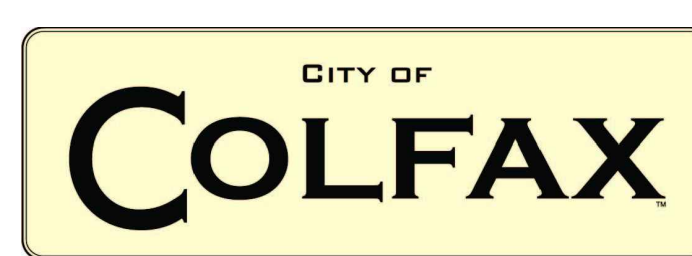


Client	<b>CITY OF COLFAX</b>	Title	<b>COVER SHEET</b>
Project	<b>LIFT STATION 5 FORCE MAIN IMPROVEMENTS</b>	Project No.	<b>11201706</b>
Date	<b>SEPTEMBER 2021</b>	Scale	<b>AS SHOWN</b>

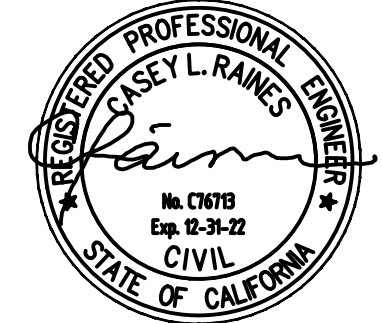




No.	Issue	Checked	Approved	Date	
Author	PE	Drafting Check	SD	Project Manager	CR
Designer	SD	Design Check	FG	Project Director	LW



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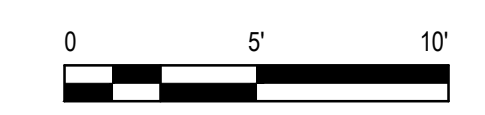
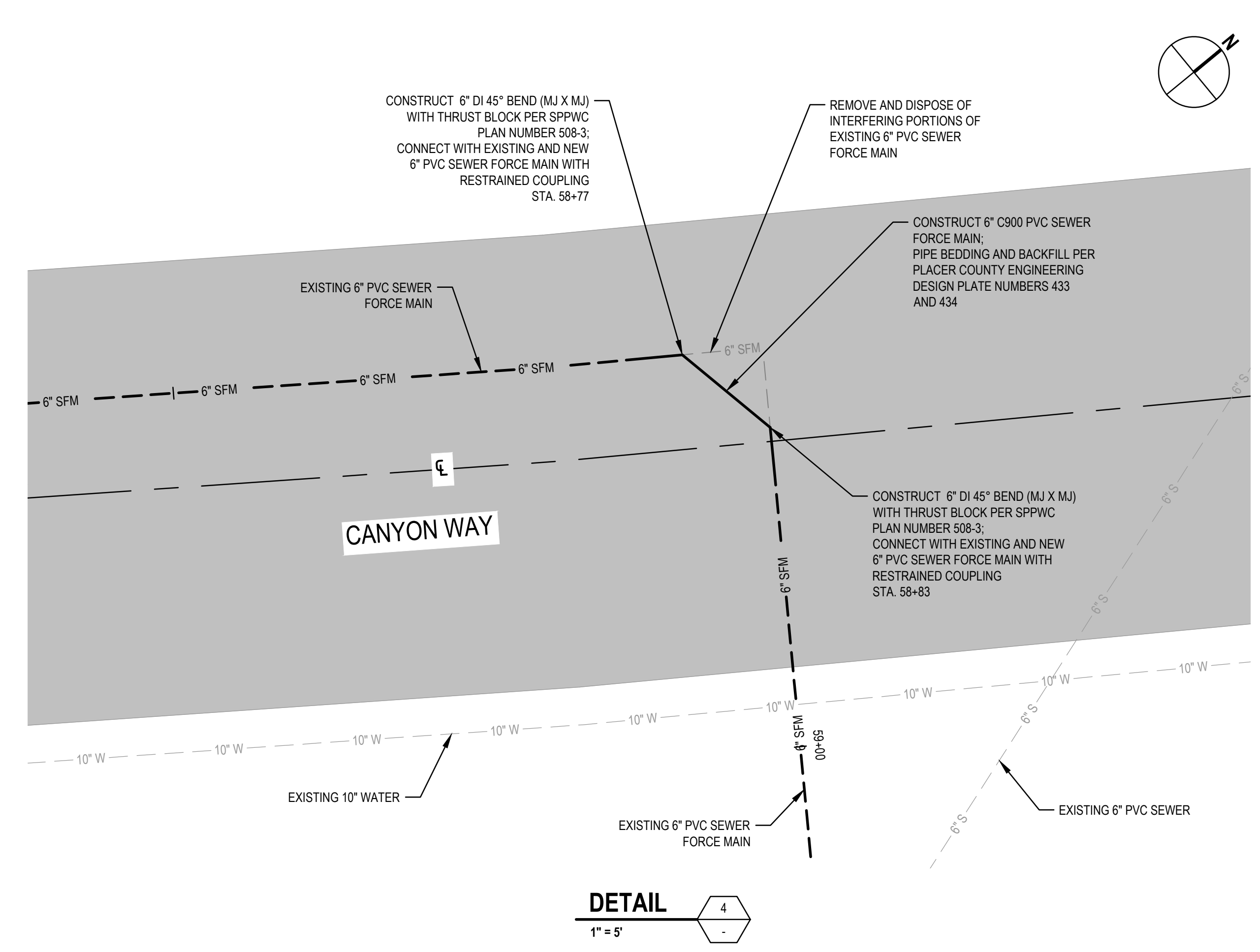
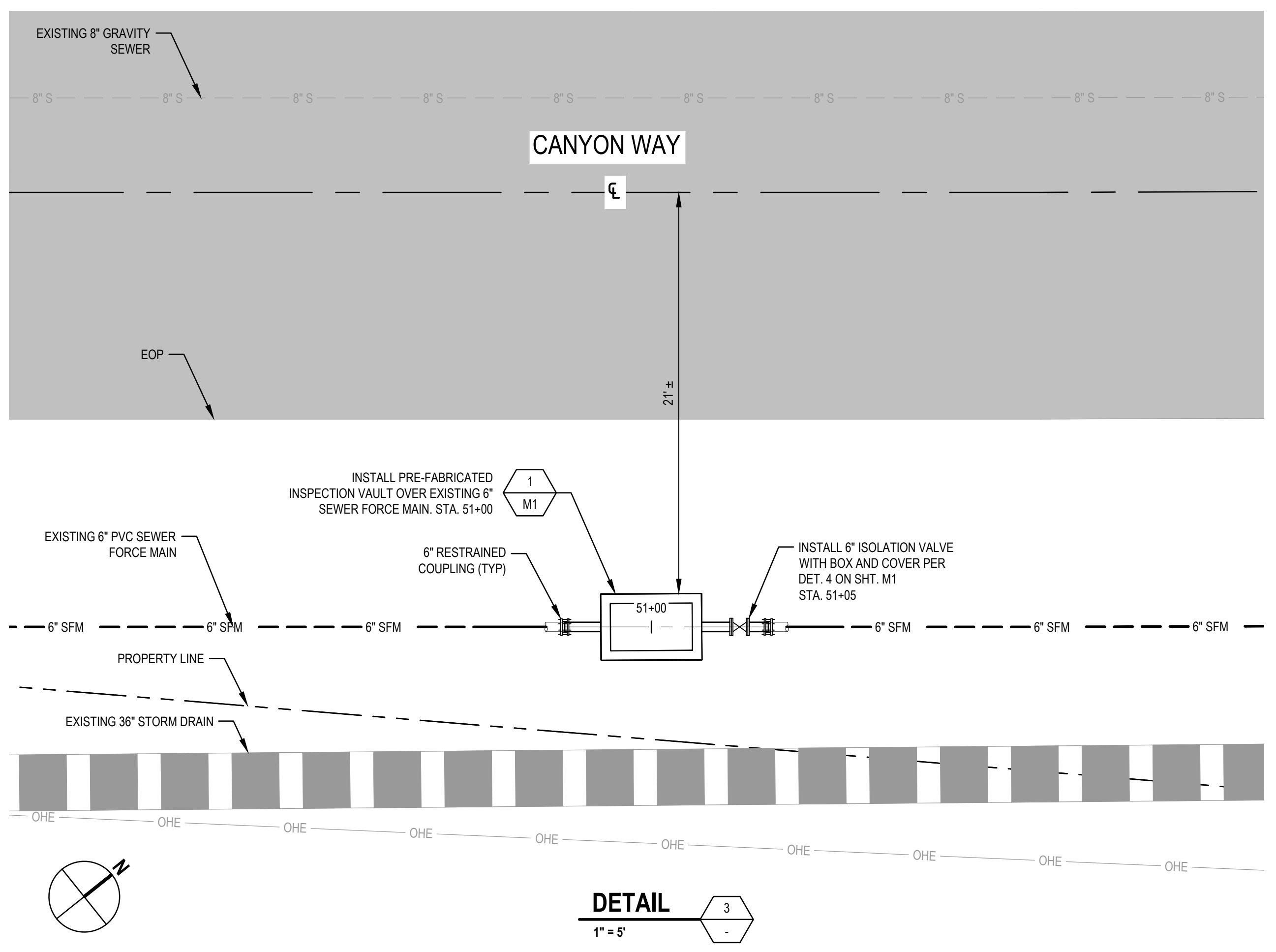
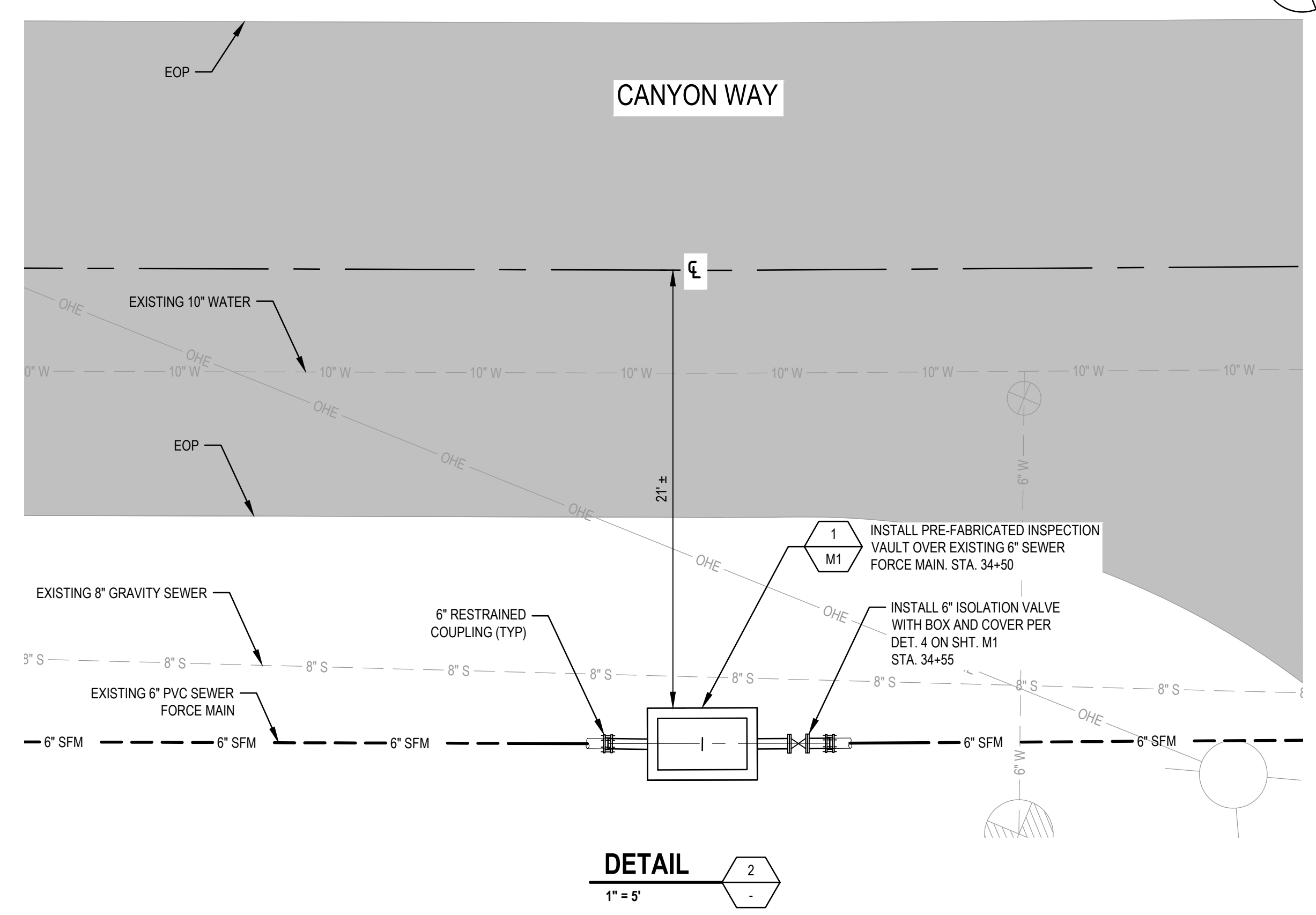
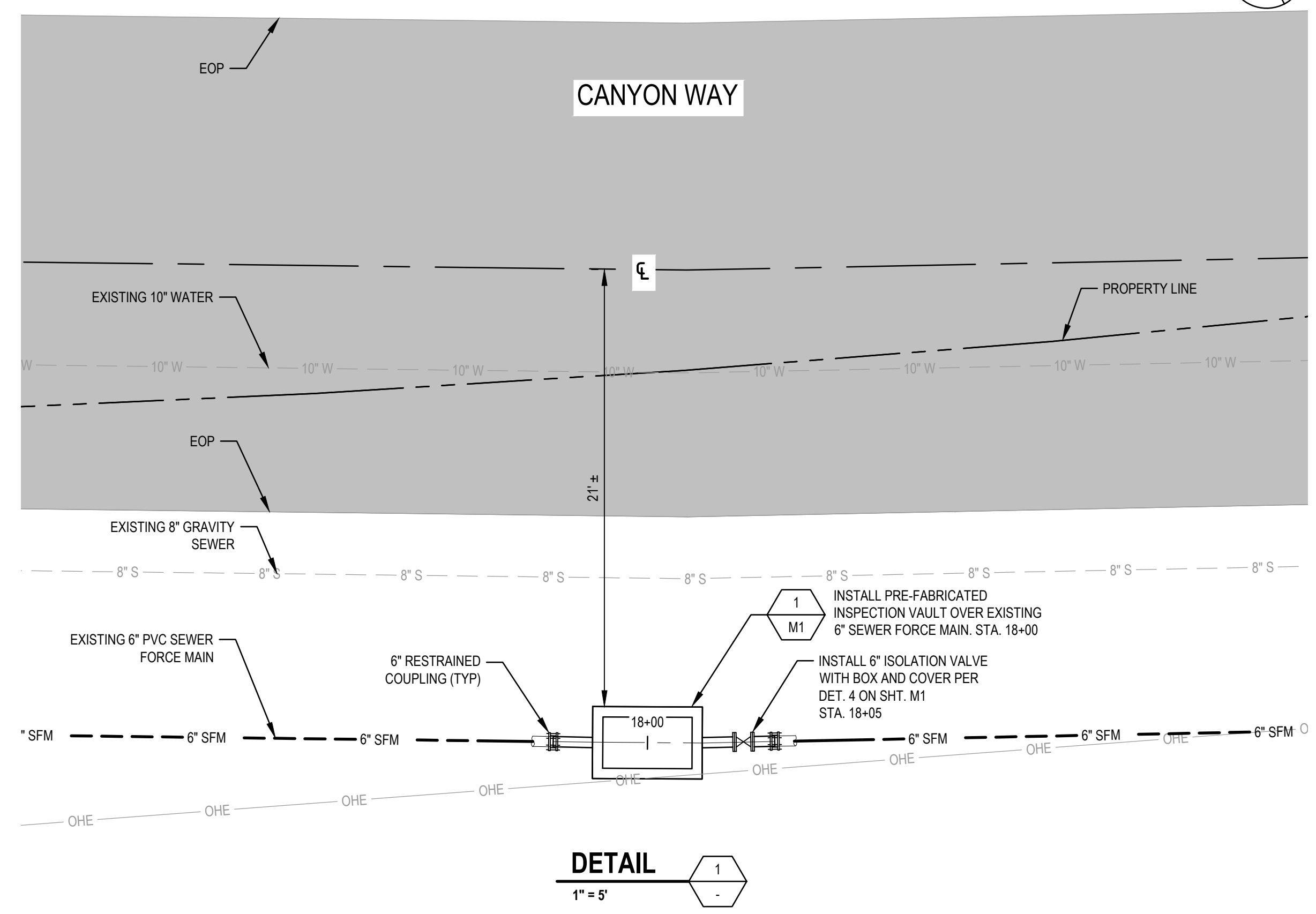


Client	CITY OF COLFAX	Title	INSPECTION VAULT LOCATION PLAN
Project	LIFT STATION 5 FORCE MAIN IMPROVEMENTS	Scale	AS SHOWN
Project No.	11201706	Date	SEPTEMBER 2021

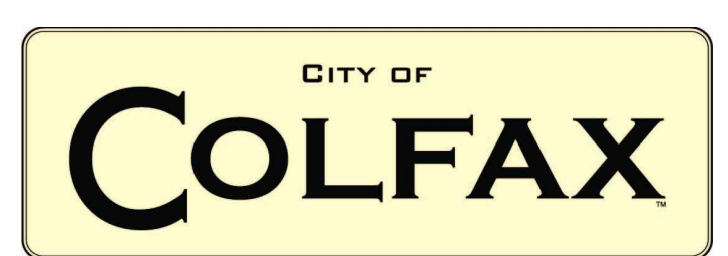
Sheet No.	C1	Sheet	3 of 8
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**SHEET GENERAL NOTES**

- EXISTING SEWER FORCE MAIN TO BE MECHANICALLY CLEANED FOLLOWING VAULT INSTALLATION. CLEANING SHALL BE PER THE PROJECT SPECIFICATIONS.
- ISOLATION VALVES ARE TO BE INSTALLED IN ACCORDANCE TO SPECIFICATION SECTION 15112.
- 3'-6" x 5'-4" PRE-FABRICATED VAULT BY JENSEN PRECAST OR APPROVED EQUAL. VAULT COVER SHALL BE RATED FOR H-20. TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH DET. 3 ON SHT. M1.
- CONTRACTOR TO VERIFY FIELD DIMENSIONS AND EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.



No.	Issue	Checked	Approved	Date	
Author	PE	Drafting Check	SD	Project Manager	CR
Designer	SD	Design Check	FG	Project Director	LW

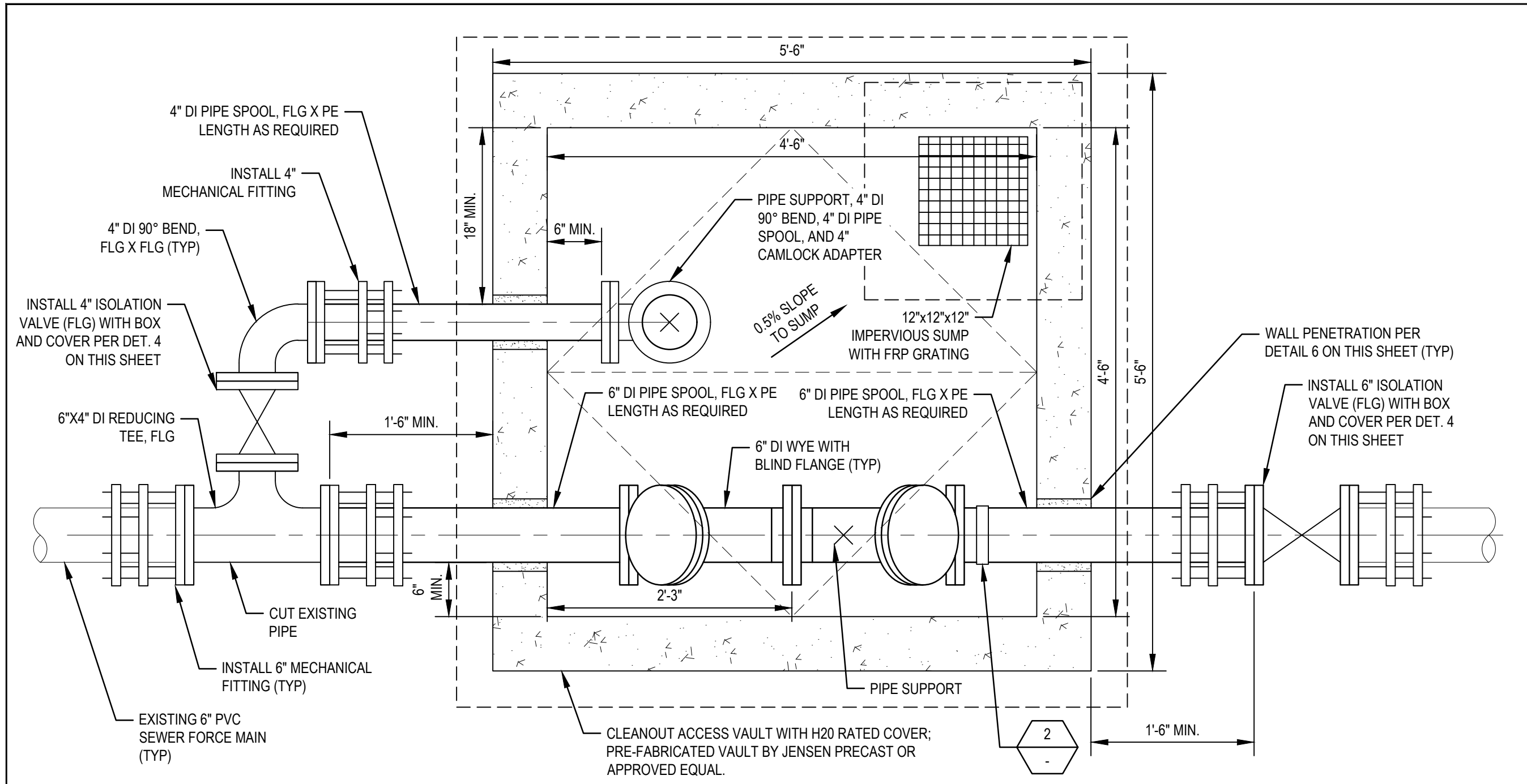


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Client **CITY OF COLFAX**  
Project **LIFT STATION 5 FORCE MAIN IMPROVEMENTS**  
Project No. **11201706**  
Date **SEPTEMBER 2021**  
Scale **AS SHOWN**

Title **EXISTING 6" FORCE MAIN AND INSPECTION VAULT DETAIL PLAN**  
Sheet No. **C2**  
Sheet **4 of 8**

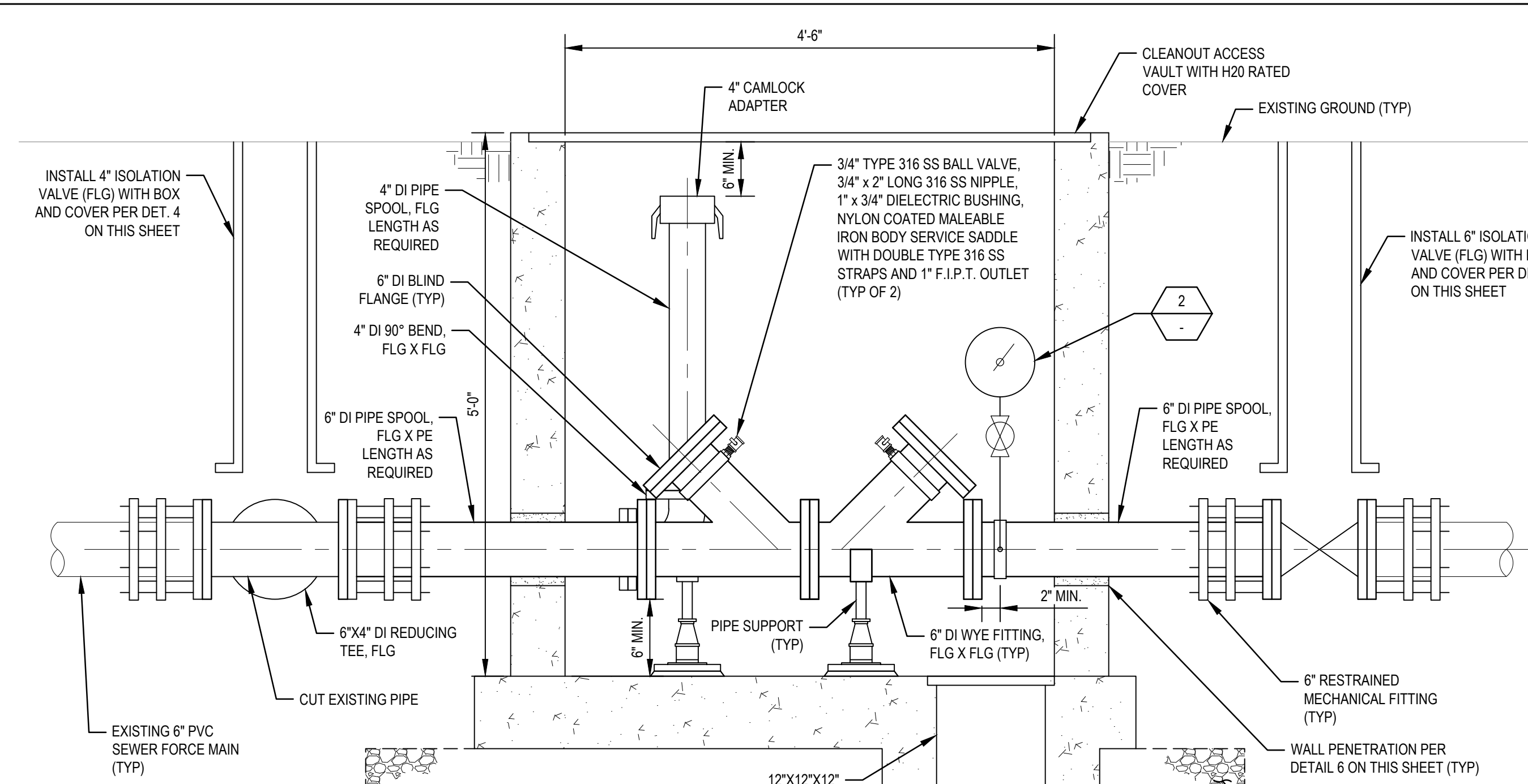


**PLAN**

1" = 1'-0"

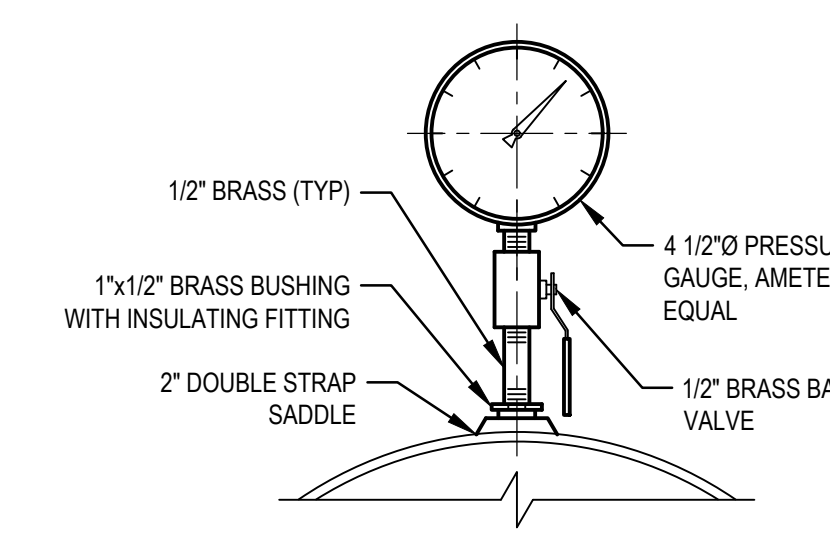
**NOTES:**

- CONTRACTOR SHALL POT HOLE AND VERIFY THE DEPTH OF THE EXISTING SEWER FORCE MAIN AT THE PROPOSED VAULT LOCATIONS PRIOR TO VAULT FABRICATION.
- TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH DET. 3 ON THIS SHEET.
- FIBERGLASS GRATING SHALL BE ONE PIECE CONSTRUCTION, PULTRUDED FIBERGLASS GRATING BY GRATING PACIFIC, 3651 SAUSALITO STREET, LOS ALAMITOS, CA 90720, (800) 321-4314. PULTRUDED FIBERGLASS GRATING SHALL BE FIRE RETARDANT, 1-6015 1-1/2" DEEP "I" SERIES WITH VEFT RESIN. GRATING SHALL BE SUPPLIED WITH CONCAVE SKID-RESISTANT WALKING SURFACE. ALL CUT OR SANDED SURFACES SHALL BE SEALED WITH RESIN PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE WITH OWNER FOR FASTENING OF GRATING TO SUPPORTING STRUCTURE. DESIGN LOAD = 100 PSF.



**PROFILE**

1" = 1'-0"

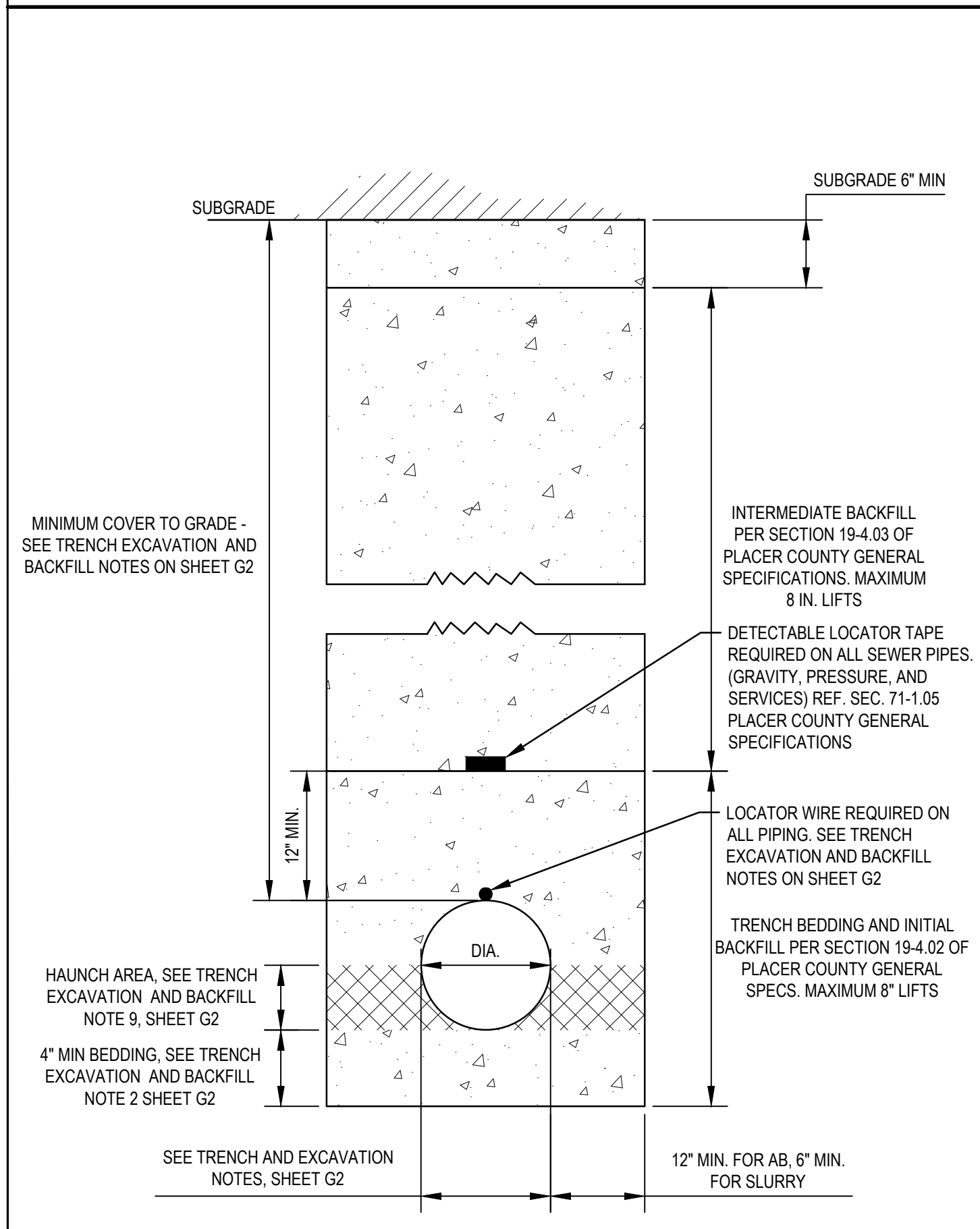


**NOTES:**

- FOR S.S., GALV., AND PVC 2 1/2" AND SMALLER, USE A BUSHING IN A TEE.
- MAX. INDICATING RANGE ON SCALE SHALL NOT EXCEED 2X OF NORMAL MAX OPERATION PRESSURE.
- CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR TO POSITION GAUGE SO THAT IT DOES NOT INTERFERE WITH CCTV EQUIPMENT ACCESS.

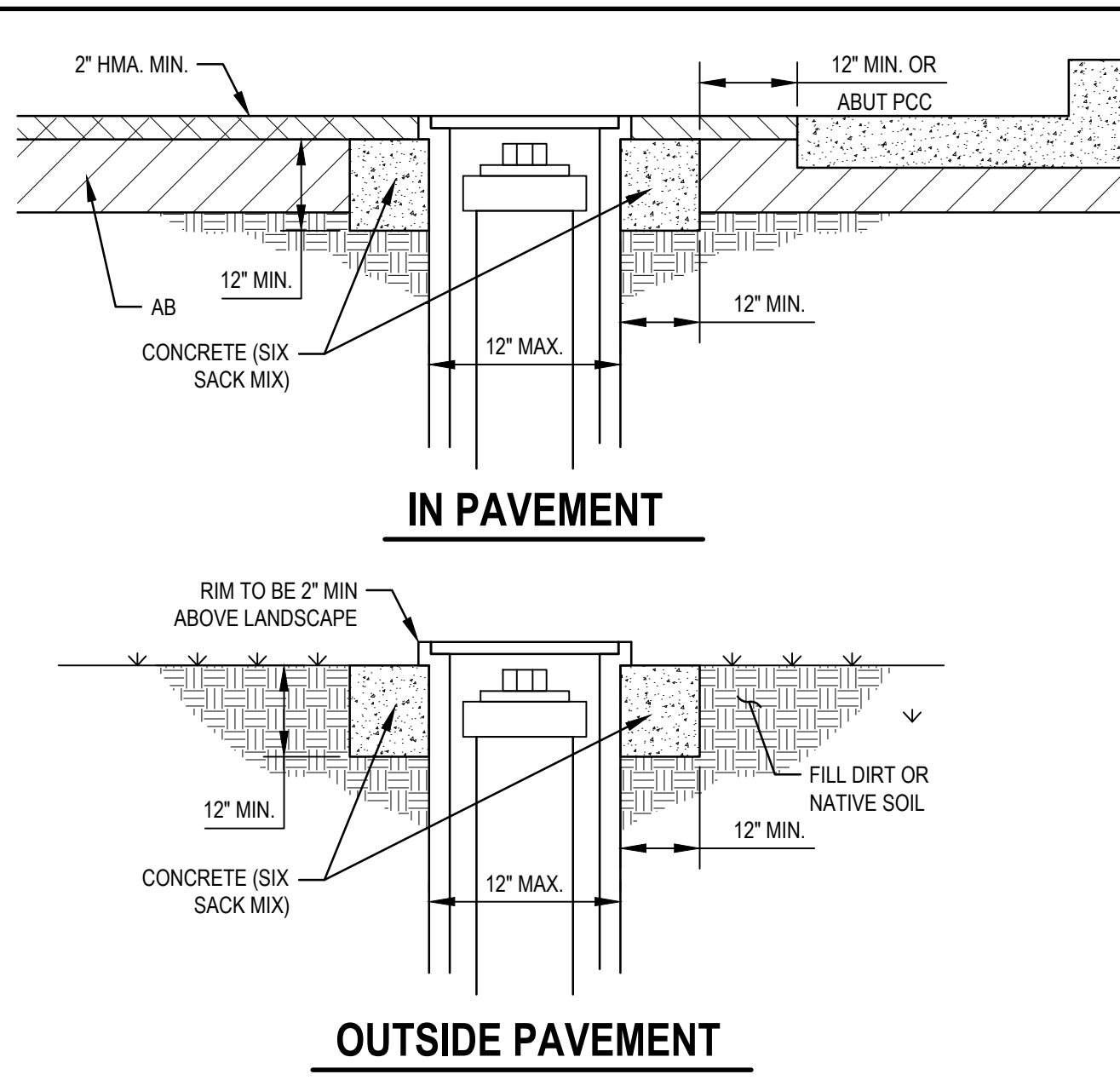
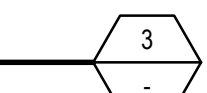
**PRESSURE GAUGE**

1" = 1'-0"



**TRENCH EXCAVATION AND BACKFILL**

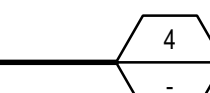
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**OUTSIDE PAVEMENT**

**VALVE BOX DETAIL**

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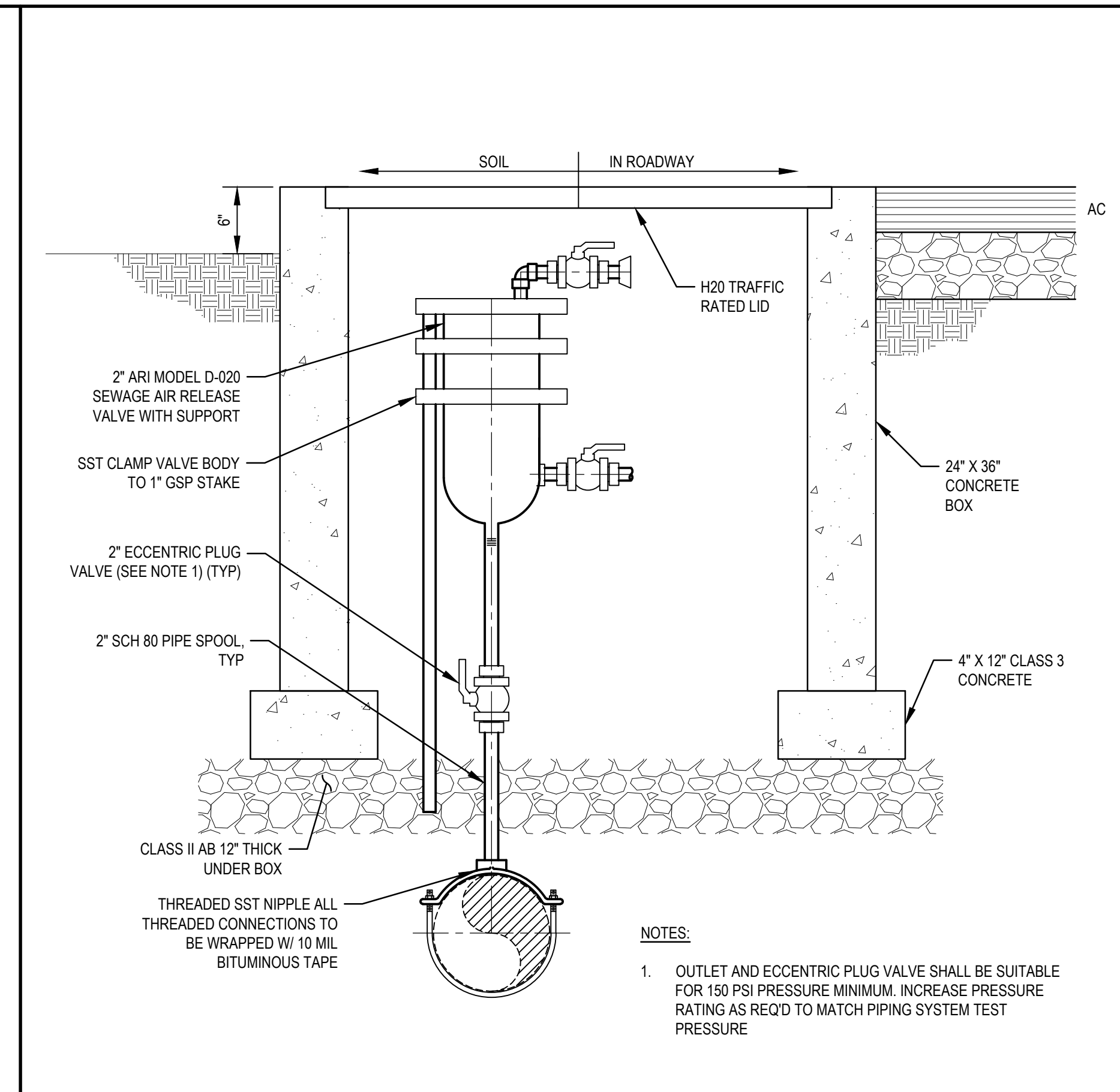


**NOTES:**

- TOP OF BOX IN PAVEMENT TO BE RECESSED BY 0.5 IN WHEN ABOVE 2,000 FT. ELEVATION.
- BOXES TO BE RAISED AFTER FINAL PAVING.
- BOX AND LID SHALL BE G05 WITH A METAL LID WITH SEWER WELDED ON THE LID.
- BOXES GREATER THAN 12" OUTER DIAMETER WILL REQUIRE APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION.
- ALL RECTANGULAR UTILITY BOXES SHALL BE LOCATED OUTSIDE OF THE PAVEMENT AND NOT WITHIN TWO FEET OF A ROAD SIDE DITCH UNLESS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- LOCATE OUTSIDE OF VEHICLE WHEEL PATH.
- BOXES LOCATED OUTSIDE PAVEMENT SHALL BE 2" MINIMUM ABOVE THE LANDSCAPE MATERIAL.
- METAL LIDS ARE REQUIRED ON ALL BOXES.

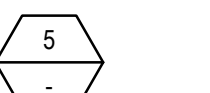
**VAULT DETAIL**

1" = 1'-0"



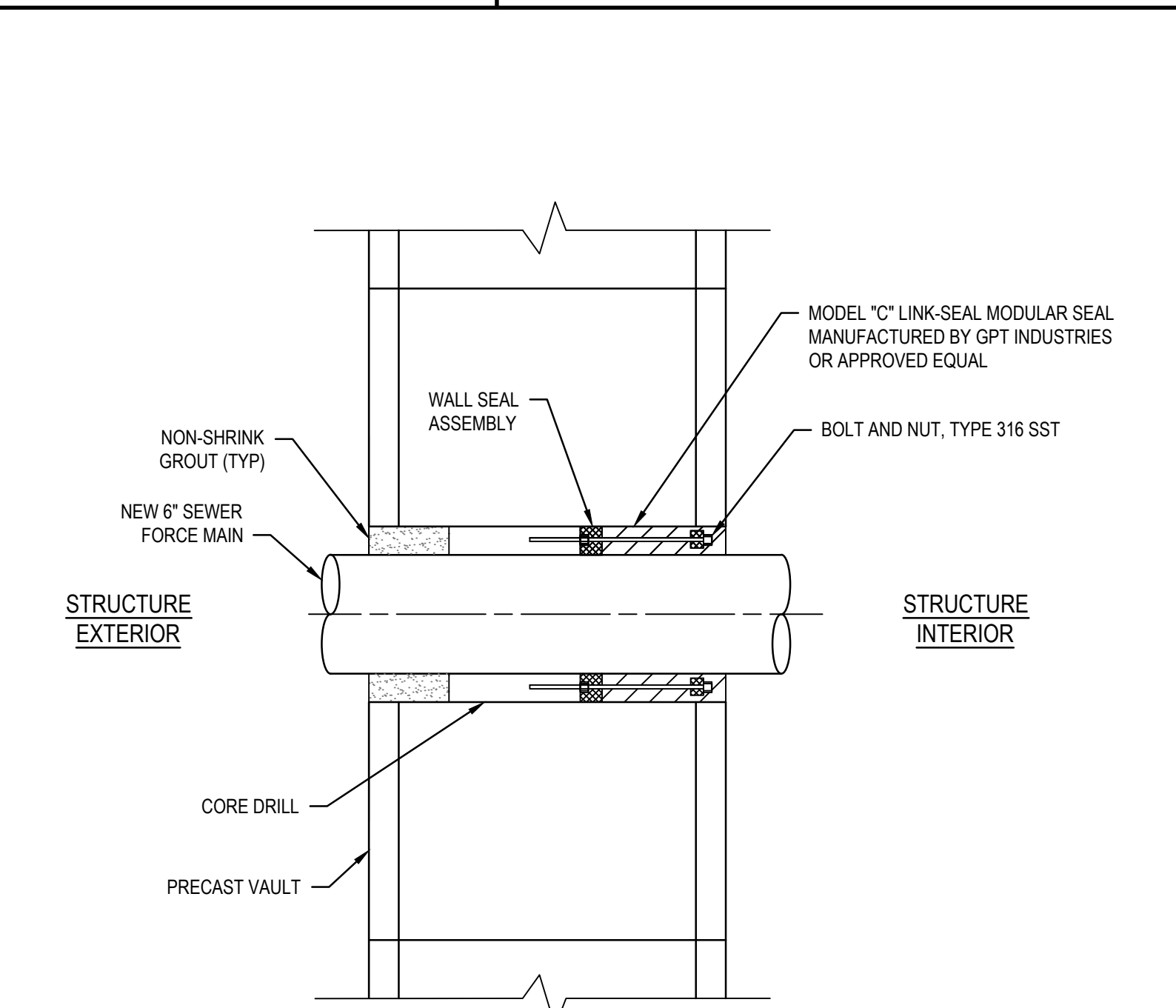
**BURIED SEWAGE AIR/VACUUM RELEASE VALVE**

NTS



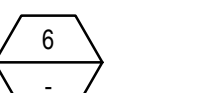
**NOTES:**

- OUTLET AND ECCENTRIC PLUG VALVE SHALL BE SUITABLE FOR 150 PSI PRESSURE MINIMUM. INCREASE PRESSURE RATING AS REQD TO MATCH PIPING SYSTEM TEST PRESSURE



**WALL PENETRATION**

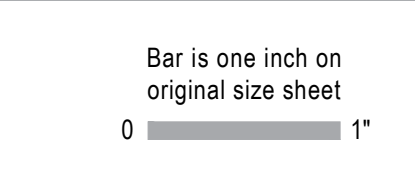
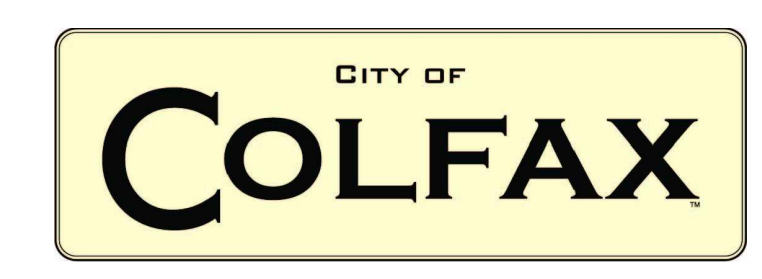
1" = 1'-0"



**NOTES:**

- INSIDE DIAMETER OF EACH WALL OPENING SHALL BE OF THE SIZE RECOMMENDED BY THE SEAL MANUFACTURER TO FIT THE PIPE OR CONDUIT AND TO ENSURE A WATER-TIGHT JOINT.
- WALL SEAL ASSEMBLY SHALL BE OF THE MODULAR MECHANICAL TYPE, CONSISTING OF INTERLOCKING SYNTHETIC RUBBER LINKS SHAPED TO FILL THE ANNULAR SPACE BETWEEN THE PIPE AND THE WALL OPENING. A PRESSURE PLATE SHALL BE PROVIDED UNDER EACH BOLT HEAD AND NUT, WITH THE SEAL CONSTRUCTED TO PROVIDE ELECTRICAL INSULATION BETWEEN WALL AND PIPE. WALL SEAL ASSEMBLY SHALL BE LINK SEAL AS MANUFACTURED BY GPT INDUSTRIES OR APPROVED EQUAL. ALL HARDWARE SHALL BE STAINLESS STEEL, GRADE 316.

No.	Issue	Checked	Approved	Date	
Author	PE	Drafting Check	SD	Project Manager	CR
Designer	SD	Design Check	FG	Project Director	LW

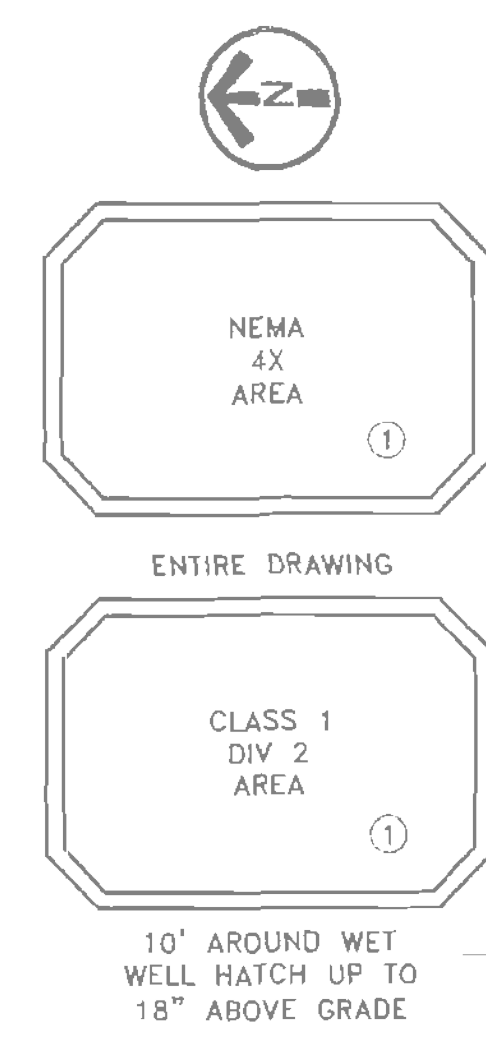


Client	CITY OF COLFAX	Title	DETAILS
Project	LIFT STATION 5 FORCE MAIN IMPROVEMENTS	Scale	AS SHOWN
Project No.	11201706	Date	SEPTEMBER 2021

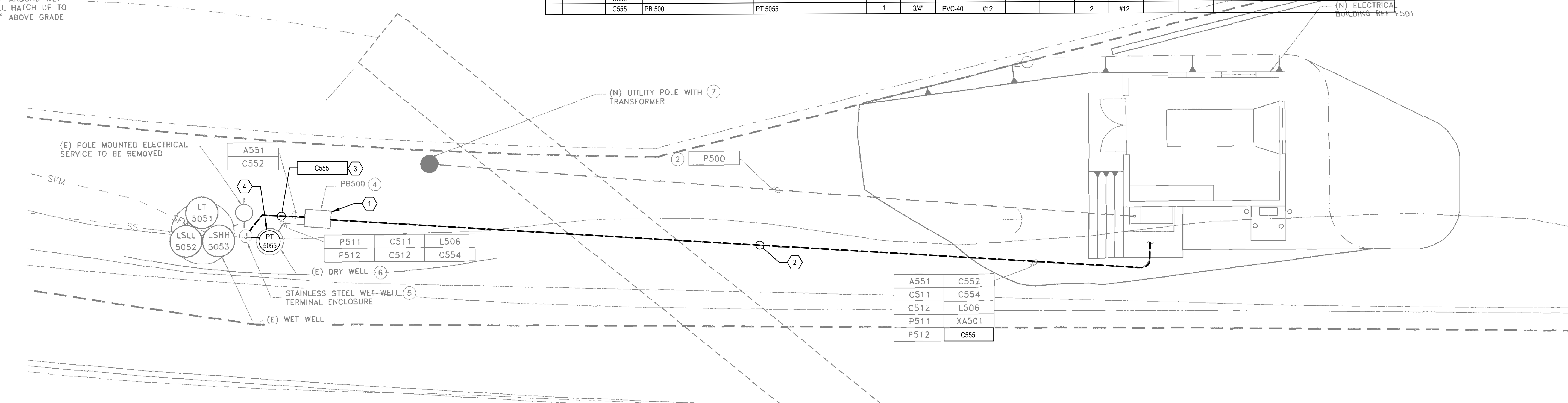
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REVISION	DESCRIPTION	BY	APP	CITY	DATE

REV	PLAN DWG	CONDUIT	FROM	TO	QTY	SIZE	TYPE	GROUND WIRE	POWER QTY	CONTROL QTY	SIGNAL QTY	REMARKS
E500	A551	CONTROL PANEL	WET WELL VIA PB 500		1	1"	GRS-PVC	#12	-	-	1	#16TSPR
E501	C502	GENERATOR	ATS		1	1"	PVC-40	#12	-	6	#14	
E501	C503	GENERATOR	FILL ALARM PANEL		1	1"	PVC-40	-	-	-	-	MFG CABLE
E501	C504	GENERATOR	CONTROL PANEL		1	1"	PVC-40	#12	-	8	#14	
E501	C505	GENERATOR	MOTORIZED LOUVER		1	1"	PVC-40	#12	2	#12	-	MFG CABLE
E500	C511	MCC	DRY WELL PMP 511 VIA PB 500		1	1"	PVC-40	#12	-	6	#14	
E500	C512	MCC	DRY WELL PMP 512 VIA PB500		1	1"	PVC-40	#12	-	6	#14	
E500	C552	CONTROL PANEL	WET WELL VIA PB 500		1	1"	PVC-40	#12	-	4	#14	
E501	C554	PB 500	LSHH5054		1	1"	PVC-40	#12	-	2	#14	FLOOD SWITCH, INSTALL PER A/E042
E501	D600	CONTROL PANEL	ANTENNA		1	2"	GRS-PVC	-	-	-	1	COAX
E501	D501	CONTROL PANEL	J-BOX		1	1"	PVC-40	-	-	-	-	PULL ROPE
E500	L504	LIGHTING PANEL	EXHAUST FAN		1	1"	PVC-40	#12	2	#12	-	
E500	L505	LIGHTING PANEL	GENERATOR		1	1"	PVC-40	#12	4	#10	-	
E500	L506	LIGHTING PANEL	DRY WELL VIA PB 500		1	1"	PVC-40	#12	4	#10	-	DRY WELL LIGHTS/RECEPT
E500	L510	LIGHTING PANEL	EUH-5000		1	1"	PVC-40	#12	2	#10	-	
E501	L516	LIGHTING PANEL	FILL STATION		1	1"	PVC-40	#12	2	#12	-	
E500	P500	(N) UTILITY POLE	UTILITY METER		1	5"	PVC-40	-	-	-	-	PER UTILITY REQUIREMENTS/ENGINEERED DWGS
E501	P501	ATS	MCC		2	3"	PVC-40	#4	3	3/0	-	
E501	P502	GENERATOR	ATS		2	3"	PVC-40	#4	3	3/0	-	
E500	P511	MCC	DRY WELL PMP 511		1	2"	PVC-40	#4	3	1/0	-	
E500	P512	MCC	DRY WELL PMP 512		1	2"	PVC-40	#4	3	1/0	-	
E500	XA501	CONTROL PANEL	PB 500		1	1"	GRS-PVC	-	-	-	-	PULL ROPE
	C555	CONTROL PANEL	PB 500		1	3/4"	PVC-40	#12	-	2	#12	
	C555	PB 500	PT 5055		1	3/4"	PVC-40	#12	-	2	#12	



10' AROUND WET WELL HATCH UP TO 18" ABOVE GRADE

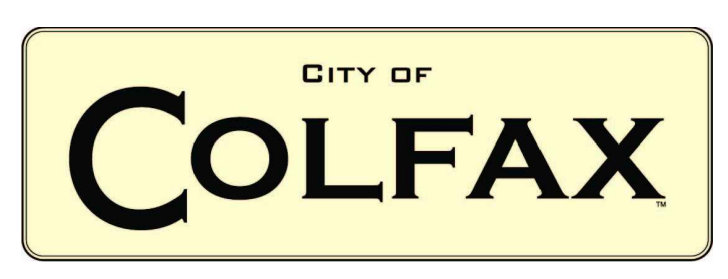


A551	C552
C511	C554
C512	L506
P511	XA501
P512	C555

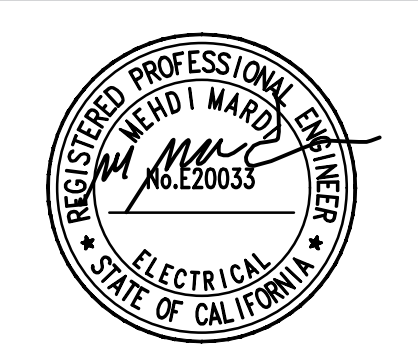
- NOTES:**
- AREA CLASSIFICATION SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLAN'S AND SPECIFICATIONS.
  - (N) UTILITY SECONDARY CONDUIT, CONTRACTOR TO INSTALL PER UTILITY ENGINEERED DRAWING.
  - (N) CONDUITS INSTALLED PER A/E41. INCLUDE AWG #2/0 BARE COPPER BOND WIRE FROM SYSTEM GROUND TO PUMP DRY WELL ENCLOSURE.
  - (N) 24"x30" PULL BOX, PB 500. INSTALL PER C/E41. NEW CONDUITS TO PENETRATE DRY WELL ABOVE GRADE USING CONDULETES. ALL CONDUITS IN IN DRY WELL TO BE GRS-PVC SIZED PER CONDUIT SCHEDULE AND MOUNTED ON STAINLESS STEEL UNISTRUT SECURED WITH STAINLESS STEEL HARDWARE. CONDUIT STUB UP PER D/E42.
  - 24"HX24"WX12"D MIN. INSTALL ISR'S & ISB PER P&ID IN SEPARATE NEMA 1 ENCLOSURE INSIDE SS JB. PROVIDE TERMINALS FOR MOTOR LEADS. MOUNT JB ON DOUBLE SIDED STAINLESS STEEL UNISTRUT MIN 18". PROVIDE GRS-PVC CONDUIT CHASES TO WET WELL ABOVE TOP OF WET WELL PROVIDE CONDUIT SEAL OFFS PER NEC.
  - CONNECT NEW CONDUITS TO (E) MOTOR AND LIGHTING DEVICES. USE FLEX FOR FINAL CONNECTIONS AS NECESSARY. DEMO (E) MOTOR CONTROLS AND DISTRIBUTION EQUIPMENT.
  - UTILITY POLE & TRANSFORMER INSTALLED BY UTILITY.

- SHEET KEYNOTES**
- PROVIDE INTRINSICALLY SAFE RELAY IN JUNCTION BOX FOR PRESSURE TRANSMITTER.
  - USE EXISTING SPARE CONDUIT XA501 AND ROUTE (2) #12 AND (1) #12 GND FROM CP-LS-5 TO JUNCTION BOX. FIELD VERIFY SPARE 1" CONDUIT XA501.
  - PROVIDE 3/4" AND ROUTE (2) #12 AND (1) #12 GND FROM PB500 THROUGH THE JUNCTION BOX TO DRY WELL PRESSURE TRANSMITTER.
  - PROVIDE LB FITTING FOR DRY WELL CONNECTION FROM JUNCTION BOX TO PRESSURE TRANSMITTER.

No.	Issue	Checked	Approved	Date



Bar is one inch on original size sheet  
0 1"



**GHD**  
GHD Inc.  
943 Reserve Drive, Suite 100  
Roseville California 95678 USA  
T 1 916 782 8688



Client	<b>CITY OF COLFAX</b>	Title	<b>ELECTRICAL SITE PLAN</b>
Project	<b>LIFT STATION 5 FORCE MAIN IMPROVEMENTS</b>	Project No.	<b>11201706</b>
Date	<b>SEPTEMBER 2021</b>	Scale	<b>NTS</b>

Sheet No.	<b>E1</b>	Sheet	<b>6 of 8</b>
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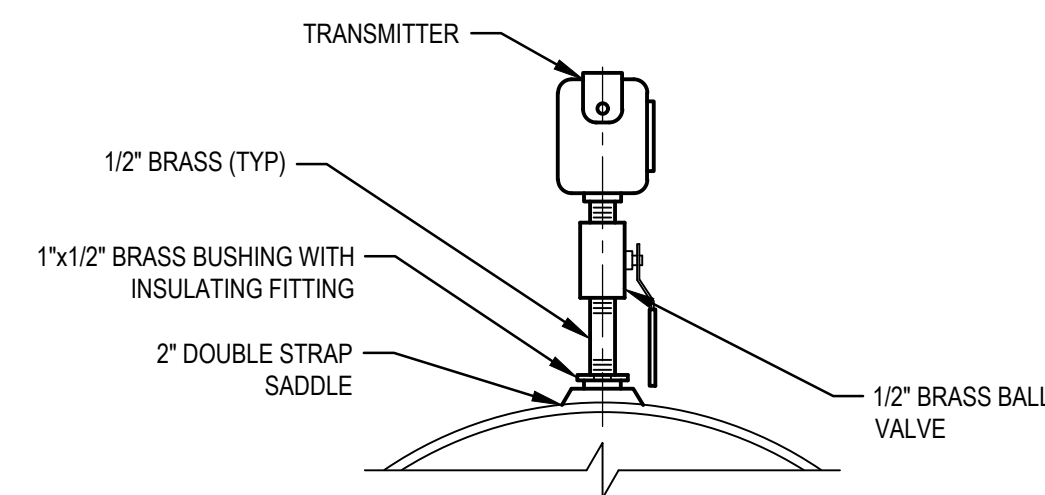
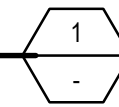
**SHEET KEYNOTES**

1. PROVIDE INTRINSICALLY SAFE RELAY IN JUNCTION BOX.



**CP-LS-5 CONTROL PANEL**

NTS

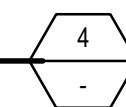


**NOTES:**

1. FOR S.S., GALV., AND PVC 2 1/2" AND SMALLER.
2. MAX. INDICATING RANGE ON SCALE SHALL NOT EXCEED 2X OF NORMAL MAX OPERATION PRESSURE.
3. ROSEMOUNT 3051S PRESSURE TRANSMITTER OR APPROVED EQUAL.

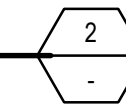
**PRESSURE TRANSMITTER**

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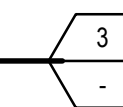
**JUNCTION BOX**

NTS

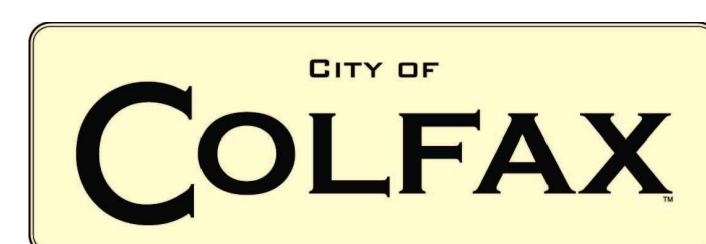


**DRY WELL**

NTS



No.	Issue	Checked	Approved	Date	
Author	JH	Drafting Check	MM	Project Manager	CR
Designer	JH	Design Check	MM	Project Director	LW



Bar is one inch on original size sheet  
0 1"



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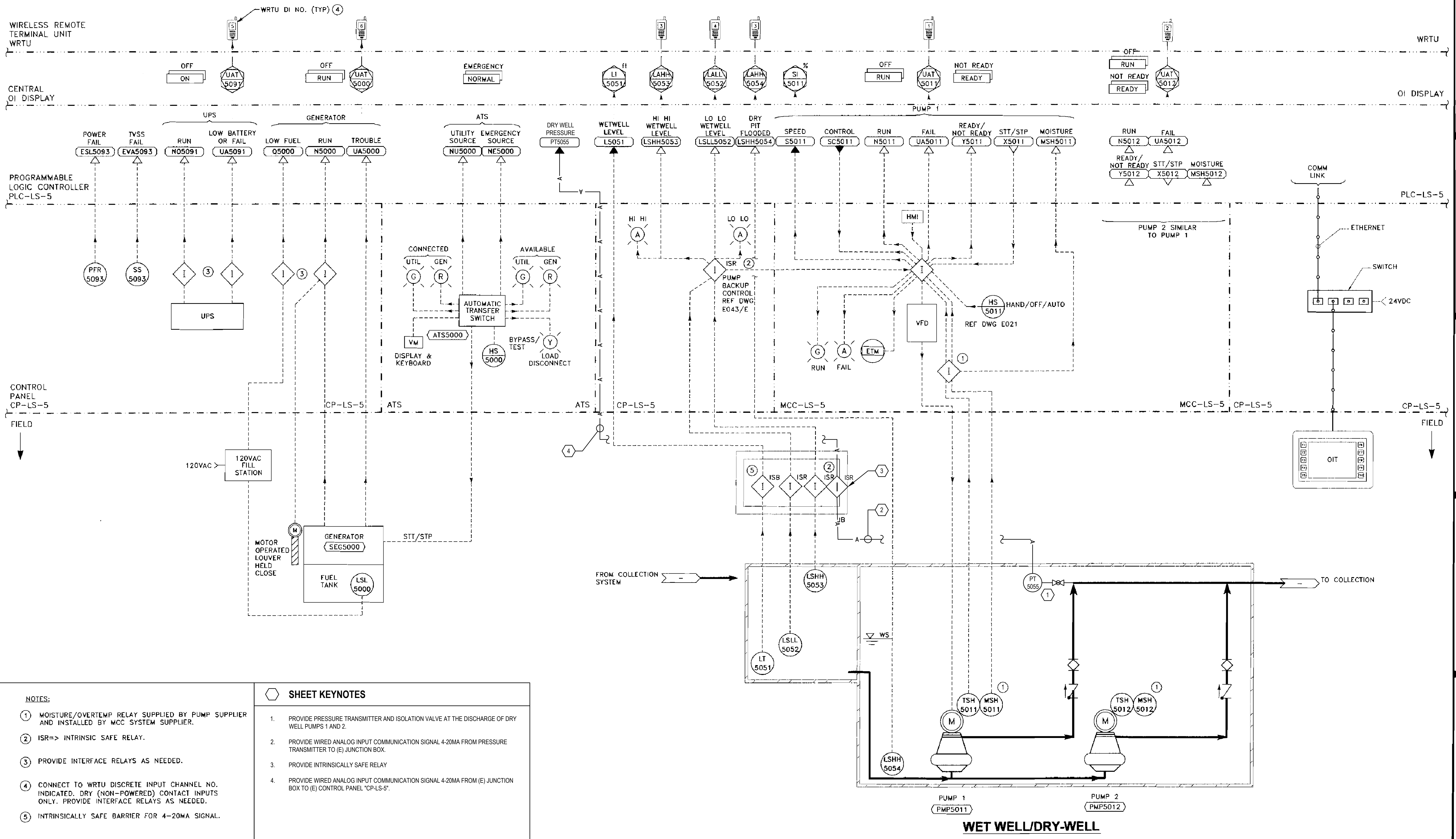


Client	<b>CITY OF COLFAX</b>	Title	<b>ELECTRICAL DETAILS</b>
Project	<b>LIFT STATION 5 FORCE MAIN IMPROVEMENTS</b>	Scale	NTS
Project No.	<b>11201706</b>	Date	<b>SEPTEMBER 2021</b>

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Sheet No.  
**E2**  
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REVISION	DESCRIPTION	BY	APP	CITY	DATE

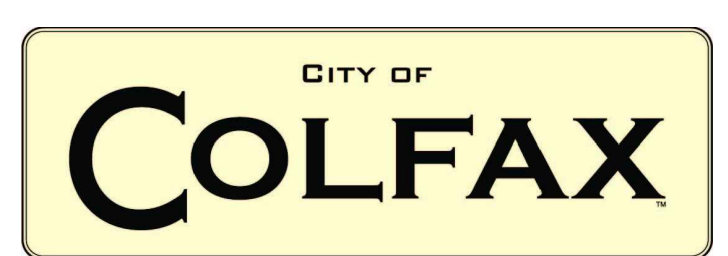


- NOTES:**
1. MOISTURE/OVERTEMP RELAY SUPPLIED BY PUMP SUPPLIER AND INSTALLED BY MCC SYSTEM SUPPLIER.
  2. ISR=> INTRINSIC SAFE RELAY.
  3. PROVIDE INTERFACE RELAYS AS NEEDED.
  4. CONNECT TO WRTU DISCRETE INPUT CHANNEL NO. INDICATED. DRY (NON-POWERED) CONTACT INPUTS ONLY. PROVIDE INTERFACE RELAYS AS NEEDED.
  5. INTRINSICALLY SAFE BARRIER FOR 4-20MA SIGNAL.

- SHEET KEYNOTES**
1. PROVIDE PRESSURE TRANSMITTER AND ISOLATION VALVE AT THE DISCHARGE OF DRY WELL PUMPS 1 AND 2.
  2. PROVIDE WIRED ANALOG INPUT COMMUNICATION SIGNAL 4-20MA FROM PRESSURE TRANSMITTER TO (E) JUNCTION BOX.
  3. PROVIDE INTRINSICALLY SAFE RELAY.
  4. PROVIDE WIRED ANALOG INPUT COMMUNICATION SIGNAL 4-20MA FROM (E) JUNCTION BOX TO (E) CONTROL PANEL "CP-LS-5".

No.	Issue	Checked	Approved	Date

Author: JH    Drafting Check: MM    Project Manager: CR  
 Designer: JH    Design Check: MM    Project Director: LW



Bar is one inch on original size sheet  
 0 1"



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Client: **CITY OF COLFAX**  
 Project: **LIFT STATION 5 FORCE MAIN IMPROVEMENTS**  
 Project No.: 11201706    Date: SEPTEMBER 2021    Scale: AS SHOWN

Title: **LIFT STATION 5 P&ID**