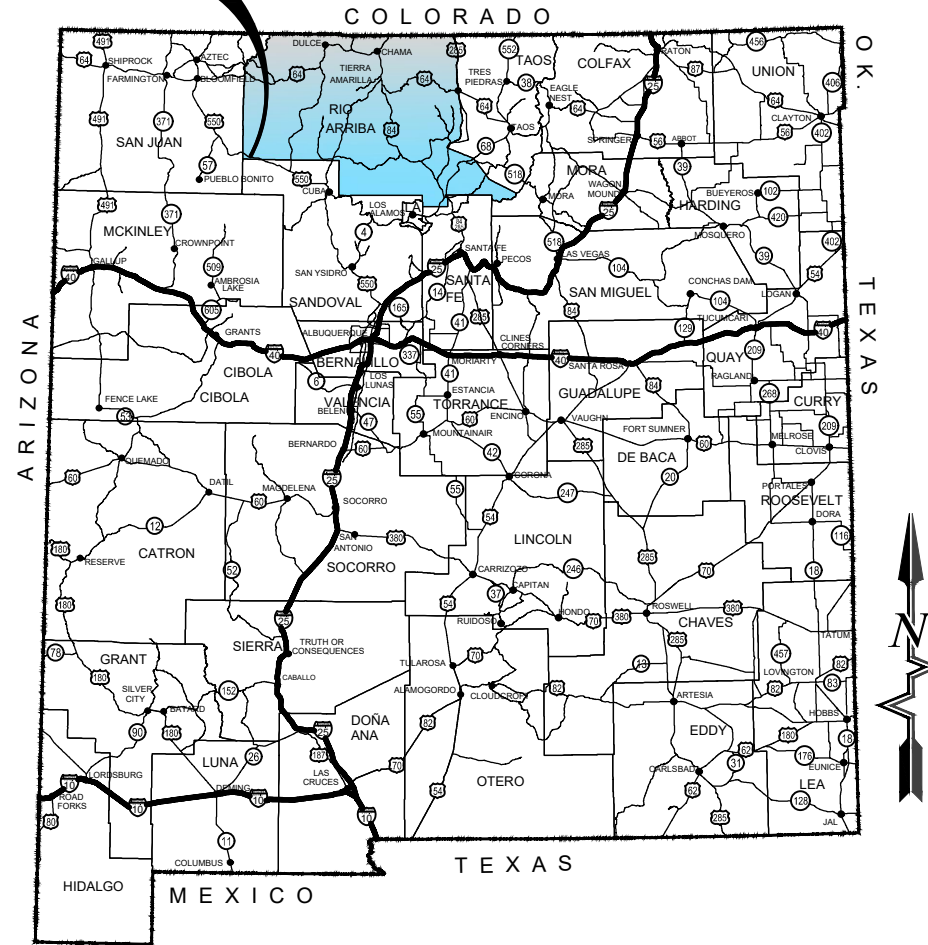


# 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS

LYBROOK, NEW MEXICO  
SEPTEMBER 2020

PROJECT DESCRIPTION:  
THE PROJECT CONSISTS OF THE REPLACEMENT OF TWO PRESSURE REDUCING VALVES & VAULTS, WELL SITE FENCING, AND WATER STORAGE TANK REHABILITATION

PROJECT LOCATION  
NTS



LOCATION MAP  
NTS

## DRAWING LIST

Sheet Number	Sheet Title
G-1	COVER SHEET AND DRAWING LIST
G-2	GENERAL NOTES AND LEGEND
C-1	SURVEY CONTROL
C-2	PROJECT AREA MAP
C-3	FENCING PLAN
C-4	ENLARGED PLAN OF PRV #1
C-5	ENLARGED PLAN OF PRV #2
D-1	CONSTRUCTION DETAILS
D-2	CONSTRUCTION DETAILS
D-3	CONSTRUCTION DETAILS
D-4	CONSTRUCTION DETAILS
D-5	CONSTRUCTION DETAILS

Rev #	Date	Description

**SOUDER, MILLER & ASSOCIATES**  
Serving the Southwest & Rocky Mountains  
401 West Broadway Avenue  
Farmington, NM 87401  
Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
www.soudermiller.com



LYBROOK, NEW MEXICO  
COVER SHEET AND DRAWING LIST  
2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
SECTION 10, T23N, R7W



Designed CMD	Drawn DJB	Checked CMD
Date: September 2020		
Scale: Horiz: N/A Vert: N/A		
Project No: 6928709		
Sheet: G-1		

# GENERAL NOTES

1. THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND IS NOT LIABLE FOR PROBLEMS THAT MAY ARISE FROM CONTRACTOR'S FAILURE TO FOLLOW THESE DRAWINGS, SPECIFICATIONS, AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS ARISING FROM FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS.
2. IF THERE IS A CONFLICT BETWEEN THE PLANS, SPECIFICATIONS AND/OR MANUFACTURER'S RECOMMENDATIONS FOR ANY DEVICE, PART, OR MATERIAL USED IN THE PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER, IN WRITING, FOR CLARIFICATION AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION OF SAID DEVICE, PART, OR MATERIAL.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE LOCATION OF ALL UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE LOCATION OF THE EXISTING FACILITIES IS NOT KNOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL OVERHEAD AND UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE NEW CONSTRUCTION. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR, WORKING WITH THE RESPECTIVE UTILITY COMPANIES, SHALL ACCURATELY LOCATE AND MARK ALL BURIED FACILITIES, INCLUDING SERVICE LINES. ALL EQUIPMENT LABOR, ETC. NECESSARY TO PROPERLY LOCATE THE EXISTING UTILITIES SHALL BE FURNISHED BY THE CONTRACTOR, THE COST OF WHICH SHALL BE INCIDENTAL TO THE WORK.
4. THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS, DAILY LOGS AND SAMPLES FOR THE PROJECT. THESE DOCUMENTS AND SAMPLES SHALL BE KEPT CURRENT AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE ENGINEER THROUGHOUT THE PROJECT. PAYMENT MAY BE WITHHELD UNTIL DOCUMENTS AND SAMPLES ARE CURRENT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ENTRY OF UNWANTED OBJECTS AND CONTAMINANTS INTO THE WATER SYSTEM AT ALL TIMES.
6. CONTRACTOR SHALL REPAIR ANY EXISTING STRUCTURE OR UTILITY PIPELINE DAMAGED DURING THE EXECUTION OF THE PROJECT, AT NO ADDITIONAL COSTS TO THE OWNER.
7. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTING THE PROJECT ACCORDING TO THE PROJECT TECHNICAL SPECIFICATIONS, INCLUDING WHERE PARTICULAR WORK ITEMS ARE NOT SPECIFIED HEREIN.
8. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AS SET FORTH IN THE TECHNICAL SPECIFICATIONS AND CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE ENGINEER REGARDING ANY QUESTION ARISING FROM ANY ASPECT OF THIS PROJECT NOT SPECIFICALLY COVERED IN THE PLANS AND TECHNICAL SPECIFICATIONS, OR ANY CHANGES OR CORRECTIONS TO THE PLANS AND SPECS.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY, WHICH SHALL REMAIN WHOLLY THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL


- (OSHA), STATE, TRIBAL AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P - EXCAVATIONS.
10. CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO ANY LOCAL BUSINESSES AND RESIDENTS AS REQUIRED FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL ADVISE OF AND SCHEDULE ACCESS CLOSURES AT LEAST 24 HOURS IN ADVANCE WITH PROPERTY OWNERS AND THE ENGINEER.
  11. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE CONSTRUCTION LIMITS OF THE PROJECT AND SHALL IN NO WAY ENCROACH ONTO ADJACENT PROPERTIES UNLESS LEGAL EASEMENTS ARE PROVIDED OR SECURED BY THE CONTRACTOR. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO PUBLIC OR PRIVATE PROPERTY, INCLUDING UTILITIES.
  12. IF REQUIRED, THE CONTRACTOR IS WHOLLY RESPONSIBLE TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND IMPLEMENT THE BEST MANAGEMENT PRACTICES (BMPs) REQUIRED THEREIN.
  13. ALL AREAS DISTURBED BY THE CONSTRUCTION ACTIVITIES OF THIS PROJECT SHALL BE RESTORED AND RE-GRADED IN A MANNER ACCEPTABLE TO THE OWNER AND ENGINEER. ALL DISTURBED AREAS SHALL BE RE-SEEDING PER THE CONTRACT DOCUMENTS.
  14. ALL PRESSURE RATINGS GIVEN HEREIN FOR PIPES, VALVES, FITTINGS AND OTHER COMPONENTS REFER TO COLD WATER WORKING PRESSURE RATING, UNLESS OTHERWISE NOTED.
  15. ALL SCALES ARE BASED ON 11" x 17" SHEET SIZE.
  16. ALL WATERLINE APPURTENANCES SHALL BE RESTRAINED PER DETAILS. GENERAL THRUST BLOCK DIMENSIONS ARE SHOWN IN W-11, SEE SHEET D-2.
  17. TRENCHING SHALL BE CONDUCTED PER SPECIFICATIONS AND W-27, SEE D-3.

# CONTACT INFORMATION:

ENGINEER: SOUDER, MILLER & ASSOCIATES  
 COLIN DALY, P.E (OFFICE) (505) 325-7535 (CELL) (734) 347-9866

OWNER: LYBROOK MUTUAL DOMESTIC WATER CONSUMER ASSOCIATION (MDWCA)  
 ODIE CHAPMAN, PRESIDENT (505) 486-6905

# LEGEND

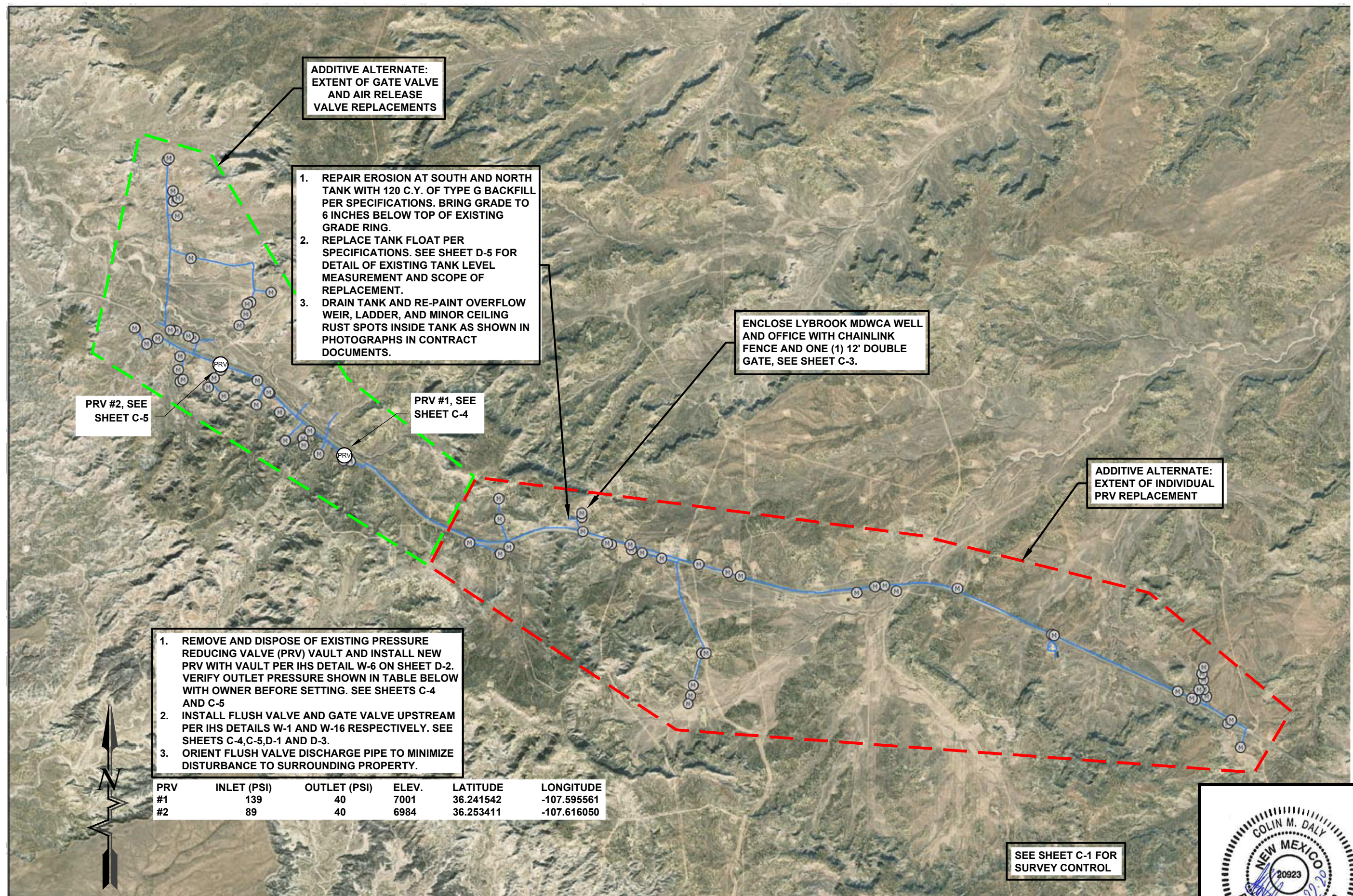
EXISTING		PROPOSED	
— W —	WATERLINE, AS NOTED ON PLAN	— W —	WATERLINE
— X —	FENCELINE	⊗	GATE VALVE
	BUILDING	⊗ ↗	FLUSH VALVE
⊗	GATE VALVE	⊗ (PRV)	PRESSURE REDUCING VALVE
—	APPROXIMATE PROPERTY BOUNDARY	---	LIMITS OF INDIVIDUAL PRV REPLACEMENT
		---	LIMITS OF GATE VALVE AND COMBINATION AIR VALVE REPLACEMENTS
		○	CHAINLINK FENCE



**SOUDER, MILLER & ASSOCIATES**  
 SMA  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

LYBROOK, NEW MEXICO  
 GENERAL NOTES AND LEGEND  
 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
 SECTION 10, T23N, R7W

Designed CMD	Drawn DJB	Checked CMD
Date: September 2020		
Scale: Horiz: N/A Vert: N/A		
Project No: 6928709		
Sheet: G-2		



ADDITIVE ALTERNATE:  
EXTENT OF GATE VALVE  
AND AIR RELEASE  
VALVE REPLACEMENTS

1. REPAIR EROSION AT SOUTH AND NORTH TANK WITH 120 C.Y. OF TYPE G BACKFILL PER SPECIFICATIONS. BRING GRADE TO 6 INCHES BELOW TOP OF EXISTING GRADE RING.
2. REPLACE TANK FLOAT PER SPECIFICATIONS. SEE SHEET D-5 FOR DETAIL OF EXISTING TANK LEVEL MEASUREMENT AND SCOPE OF REPLACEMENT.
3. DRAIN TANK AND RE-PAINT OVERFLOW WEIR, LADDER, AND MINOR CEILING RUST SPOTS INSIDE TANK AS SHOWN IN PHOTOGRAPHS IN CONTRACT DOCUMENTS.

ENCLOSE LYBROOK MDWCA WELL  
AND OFFICE WITH CHAINLINK  
FENCE AND ONE (1) 12' DOUBLE  
GATE, SEE SHEET C-3.

ADDITIVE ALTERNATE:  
EXTENT OF INDIVIDUAL  
PRV REPLACEMENT

PRV #2, SEE  
SHEET C-5

PRV #1, SEE  
SHEET C-4

1. REMOVE AND DISPOSE OF EXISTING PRESSURE REDUCING VALVE (PRV) VAULT AND INSTALL NEW PRV WITH VAULT PER IHS DETAIL W-6 ON SHEET D-2. VERIFY OUTLET PRESSURE SHOWN IN TABLE BELOW WITH OWNER BEFORE SETTING. SEE SHEETS C-4 AND C-5
2. INSTALL FLUSH VALVE AND GATE VALVE UPSTREAM PER IHS DETAILS W-1 AND W-16 RESPECTIVELY. SEE SHEETS C-4, C-5, D-1 AND D-3.
3. ORIENT FLUSH VALVE DISCHARGE PIPE TO MINIMIZE DISTURBANCE TO SURROUNDING PROPERTY.

PRV	INLET (PSI)	OUTLET (PSI)	ELEV.	LATITUDE	LONGITUDE
#1	139	40	7001	36.241542	-107.595561
#2	89	40	6984	36.253411	-107.616050

SEE SHEET C-1 FOR  
SURVEY CONTROL



Rev #	Date	Description

**SOUDER, MILLER & ASSOCIATES**  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

LYBROOK, NEW MEXICO  
 PROJECT AREA MAP  
 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
 SECTION 10, T23N, R7W

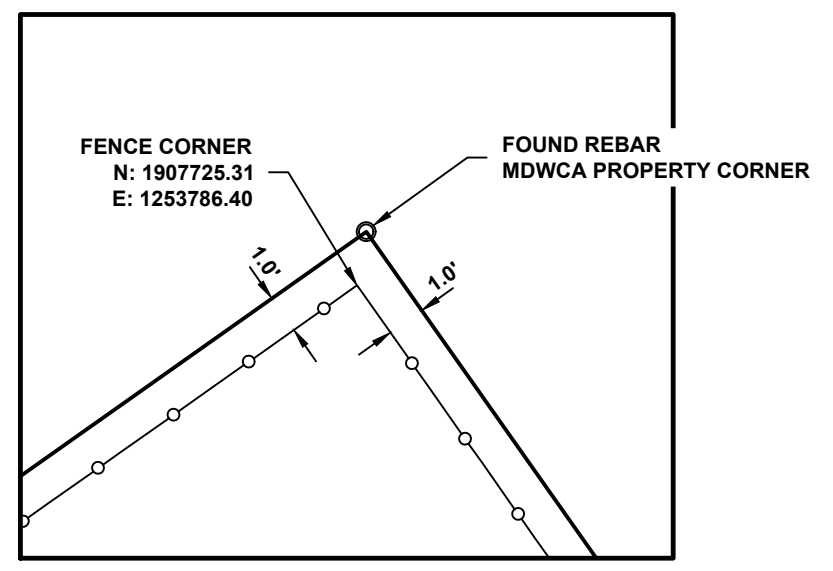
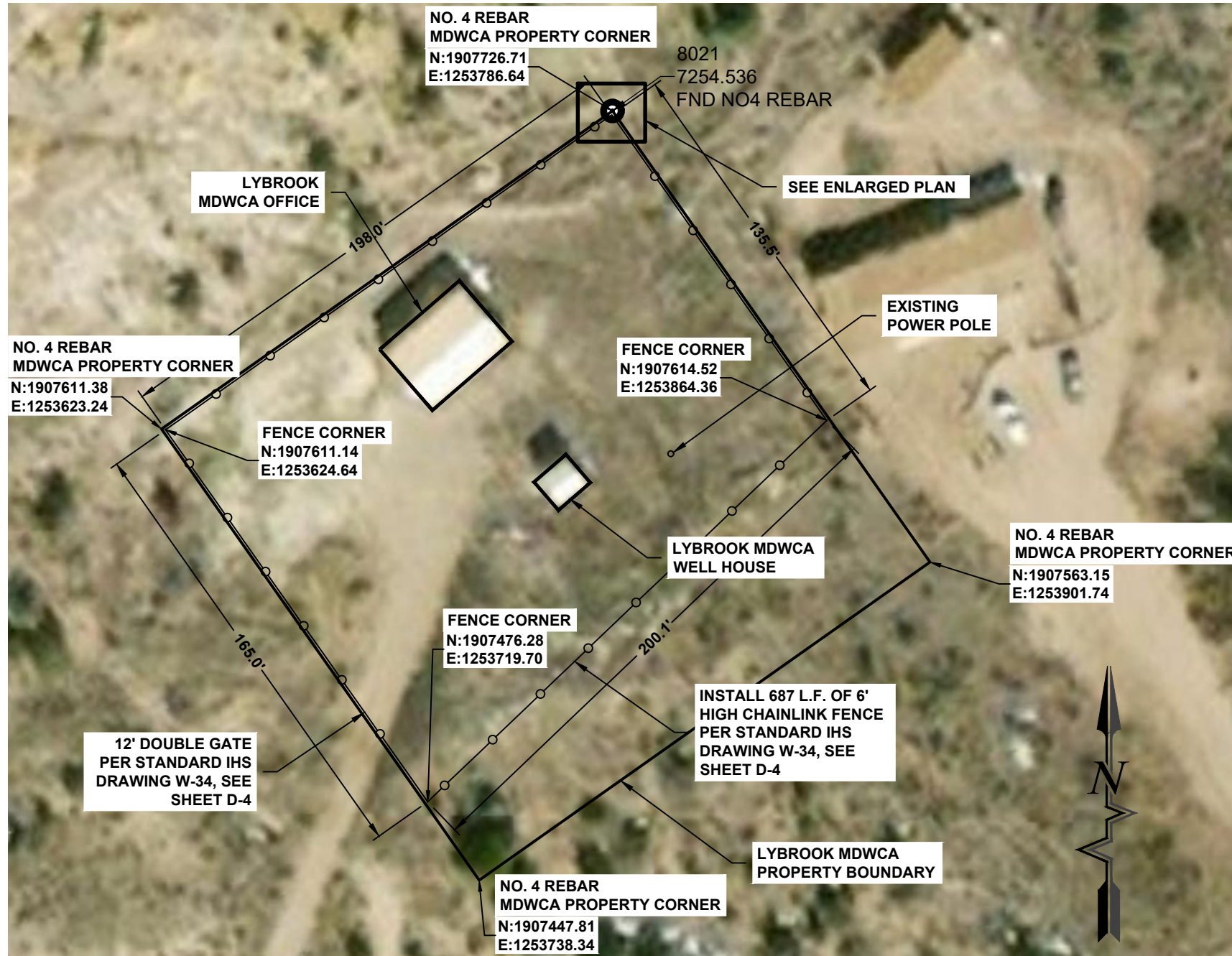
Designed	Drawn	Checked
CMD	DJB	CMD

Date: September 2020

Scale: Horiz: N.T.S.  
Vert: N/A

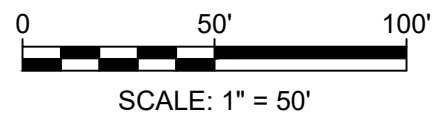
Project No: 6928709

Sheet: C-2



**A** ENLARGED PLAN  
Scale: 1" = 5'

**NOTE:**  
NOTIFY ENGINEER IF FENCE WILL BE WITHIN 5 FEET OF POWER POLE



Rev #	Date	Description

**SOUDER, MILLER & ASSOCIATES**  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

LYBROOK, NEW MEXICO  
**FENCING PLAN**  
 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
 SECTION 10, T23N, R7W

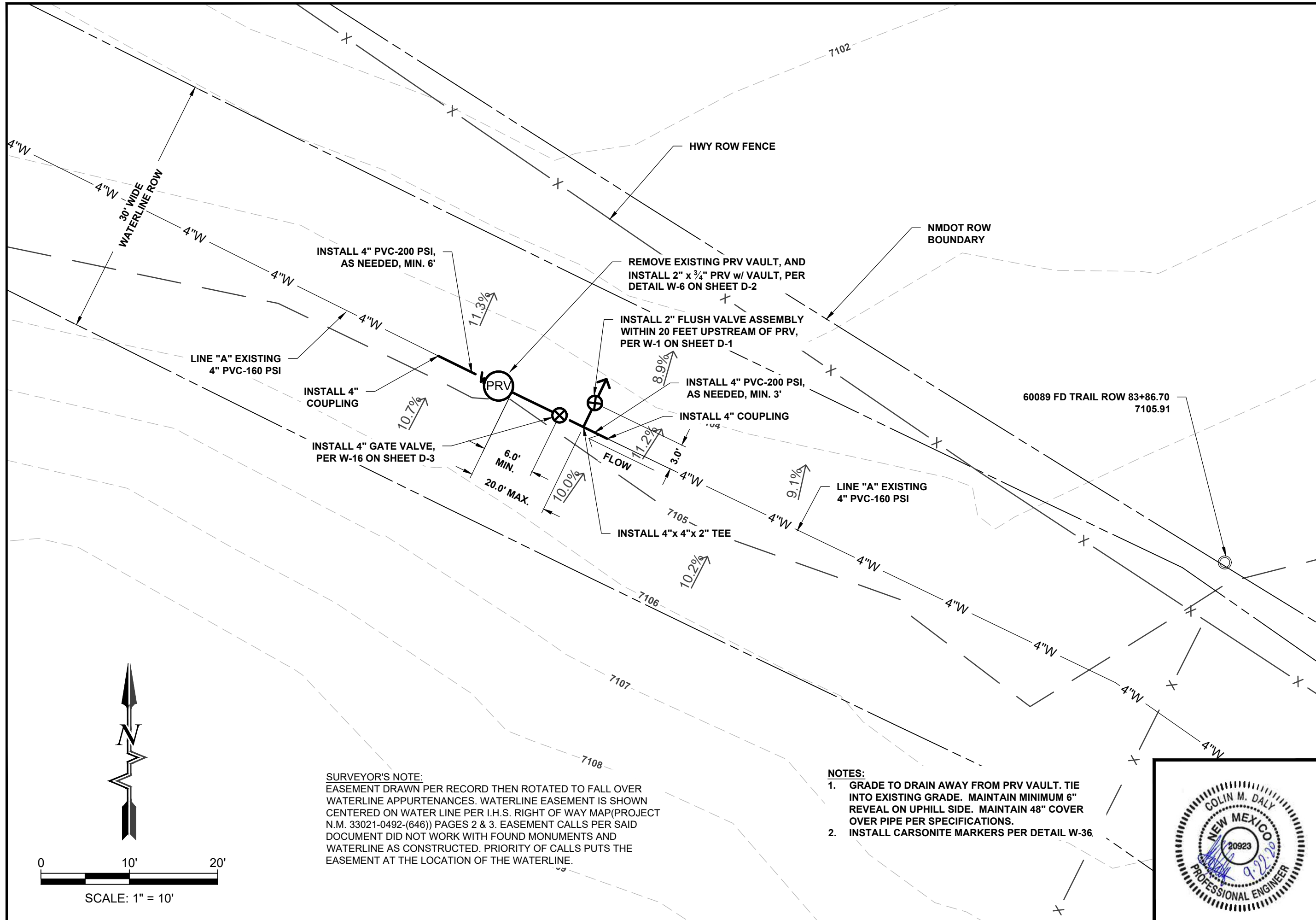
Designed	Drawn	Checked
CMD	DJB	CMD

Date: September 2020

Scale: Horiz: AS NOTED  
Vert: N/A

Project No: 6928709

Sheet: C-3



**SURVEYOR'S NOTE:**  
 EASEMENT DRAWN PER RECORD THEN ROTATED TO FALL OVER WATERLINE APPURTENANCES. WATERLINE EASEMENT IS SHOWN CENTERED ON WATER LINE PER I.H.S. RIGHT OF WAY MAP (PROJECT N.M. 33021-0492-(646)) PAGES 2 & 3. EASEMENT CALLS PER SAID DOCUMENT DID NOT WORK WITH FOUND MONUMENTS AND WATERLINE AS CONSTRUCTED. PRIORITY OF CALLS PUTS THE EASEMENT AT THE LOCATION OF THE WATERLINE.

- NOTES:**
1. GRADE TO DRAIN AWAY FROM PRV VAULT. TIE INTO EXISTING GRADE. MAINTAIN MINIMUM 6" REVEAL ON UPHILL SIDE. MAINTAIN 48" COVER OVER PIPE PER SPECIFICATIONS.
  2. INSTALL CARSONITE MARKERS PER DETAIL W-36.



Rev #	Date	Description

**SOUDER, MILLER & ASSOCIATES**  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

LYBROOK, NEW MEXICO  
**ENLARGED PLAN OF PRV #1**  
**2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS**  
**SECTION 10, T23N, R7W**

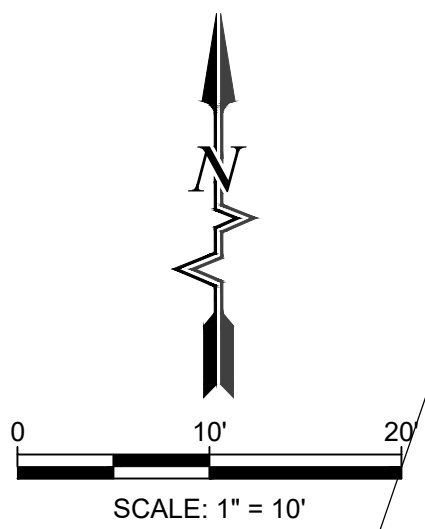
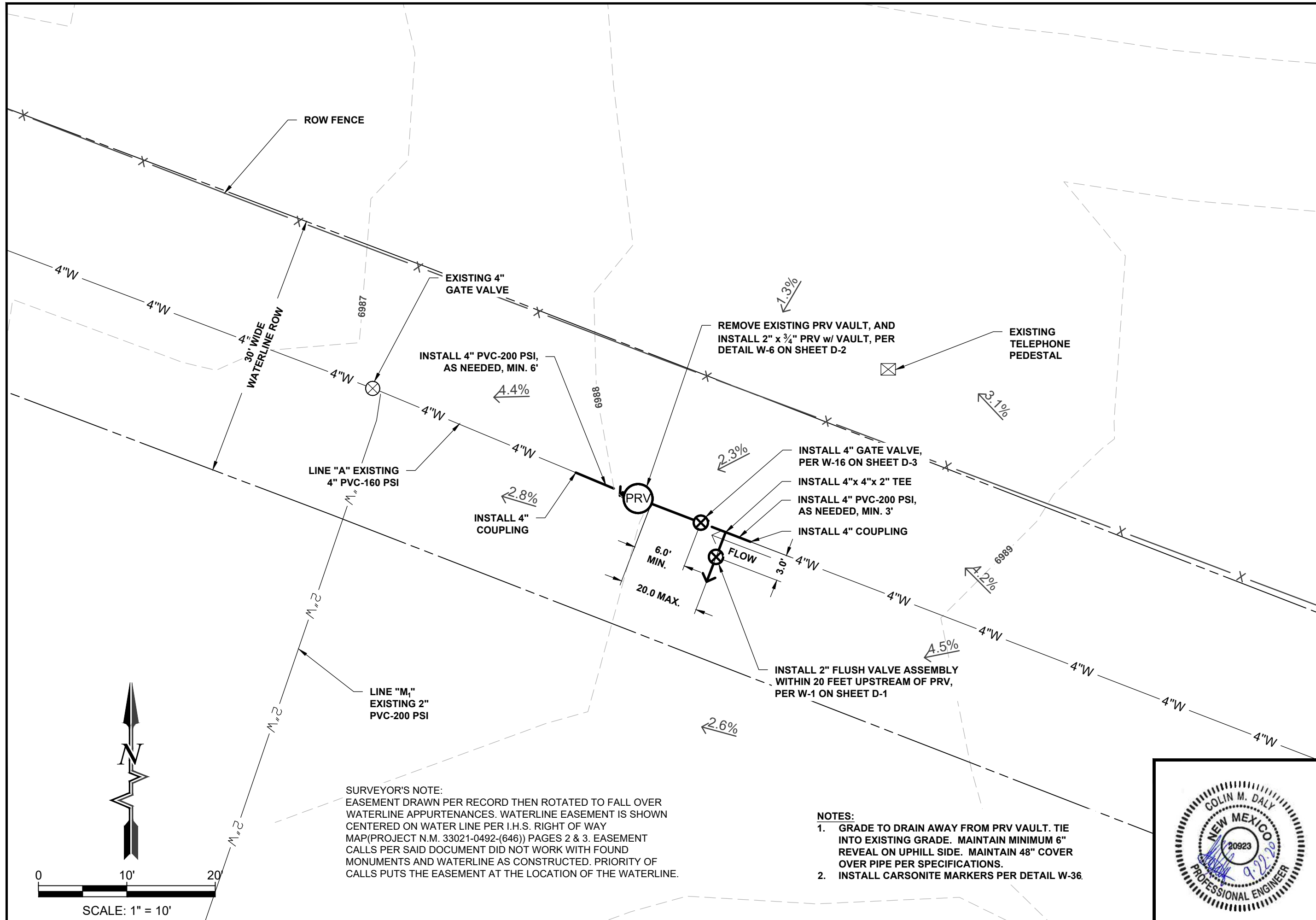
Designed	Drawn	Checked
CMD	DJB	CMD

Date: September 2020

Scale: Horiz: 1" = 10'  
 Vert: N/A

Project No: 6928709

Sheet: C-4



**SURVEYOR'S NOTE:**  
 EASEMENT DRAWN PER RECORD THEN ROTATED TO FALL OVER WATERLINE APPURTENANCES. WATERLINE EASEMENT IS SHOWN CENTERED ON WATER LINE PER I.H.S. RIGHT OF WAY MAP (PROJECT N.M. 33021-0492-(646)) PAGES 2 & 3. EASEMENT CALLS PER SAID DOCUMENT DID NOT WORK WITH FOUND MONUMENTS AND WATERLINE AS CONSTRUCTED. PRIORITY OF CALLS PUTS THE EASEMENT AT THE LOCATION OF THE WATERLINE.

- NOTES:**
1. GRADE TO DRAIN AWAY FROM PRV VAULT. TIE INTO EXISTING GRADE. MAINTAIN MINIMUM 6" REVEAL ON UPHILL SIDE. MAINTAIN 48" COVER OVER PIPE PER SPECIFICATIONS.
  2. INSTALL CARSONITE MARKERS PER DETAIL W-36.



Rev #	Date	Description

**SOUDER, MILLER & ASSOCIATES**  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

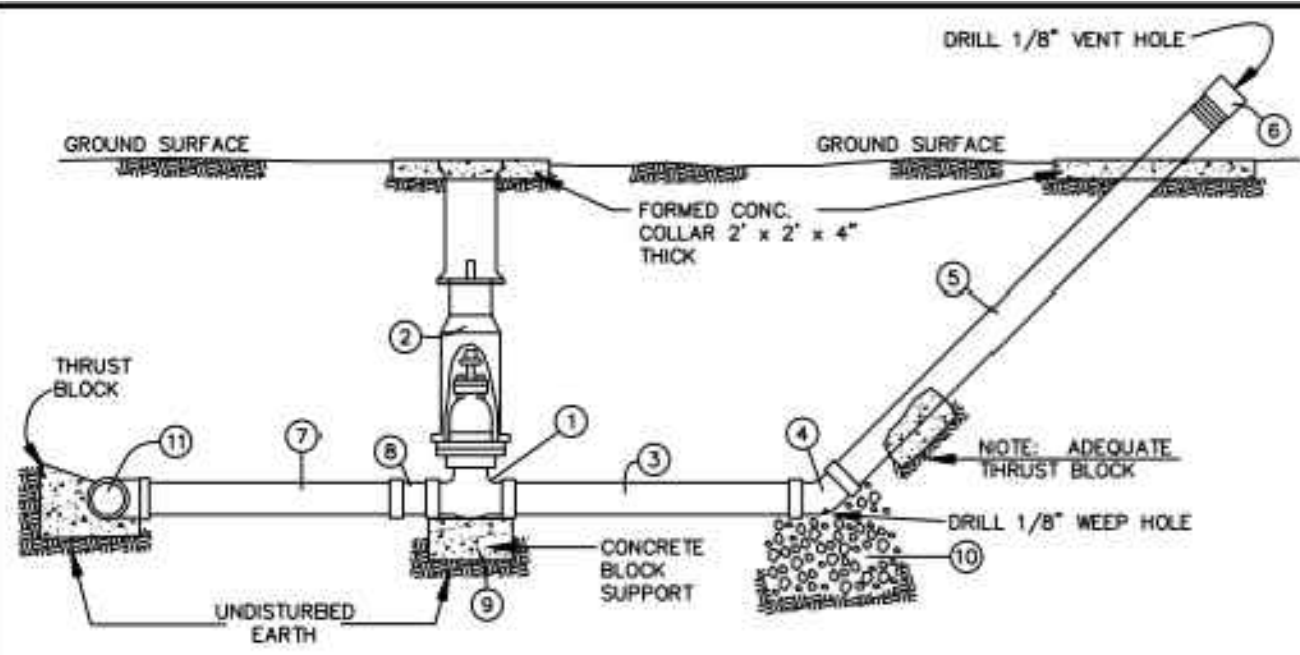
**SMA**

LYBROOK, NEW MEXICO

**ENLARGED PLAN OF PRV #2**  
**2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS**  
**SECTION 10, T23N, R7W**

Designed	Drawn	Checked
CMD	DJB	CMD

Date: September 2020  
 Scale: Horiz: 1" = 10'  
 Vert: N/A  
 Project No: 6928709  
 Sheet: C-5



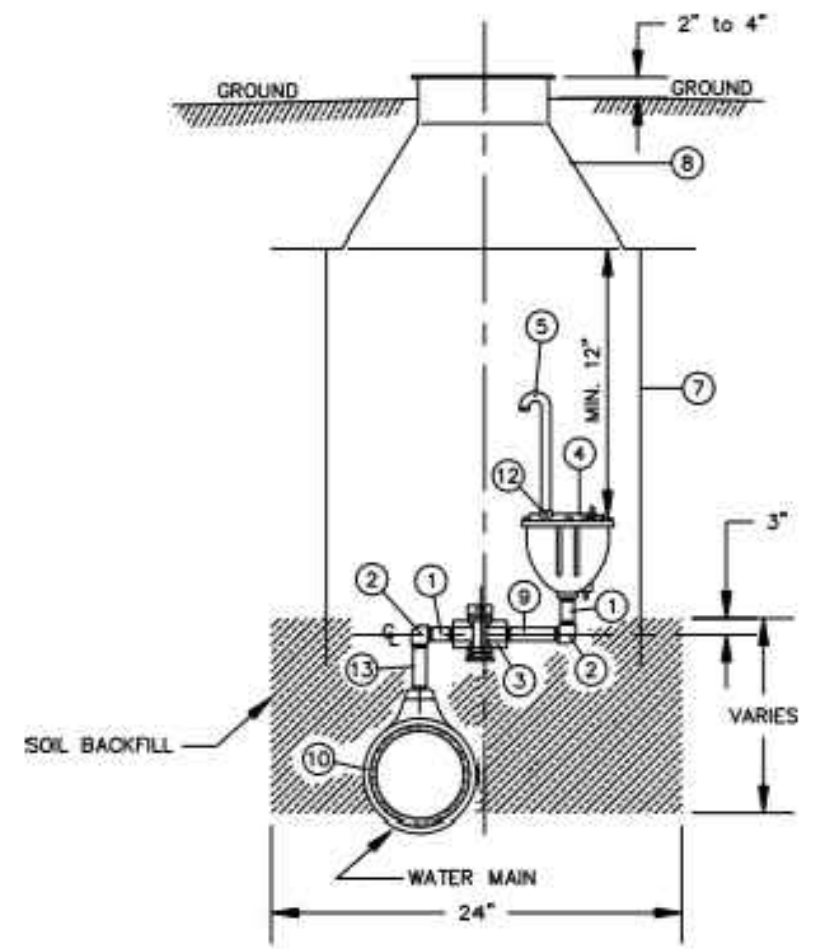
**STANDARD FLUSH VALVE DETAIL**  
NOT TO SCALE

BILL OF MATERIALS		
ITEM	QUAN.	DESCRIPTION
1.	1	VALVE, GATE 2" F.I.P.T. C.I. w/ SQ. NUT
2.	1	VALVE, BOX 5 1/4" C.I., 36"-48"
3.	1	PIPE, 2" x 3' (MIN.), GALV. IRON
4.	1	ELBOW, 2"-45° GALV. IRON w/ 1/8" WEEP HOLE
5.	1	PIPE, 2" GALV. IRON x CUT TO LENGTH AS NEEDED
6.	1	CAP, 2" GALV. IRON w/ 1/8" VENT HOLE
7.	1	PIPE 2" PVC CUT TO LENGTH AS NEEDED
8.	1	ADAPTER, 2" BELL x MIPT, PVC
9.	1	BLOCK SOLID 4" x 8" x 16"
* 10.	1	FILTER ROCK, 12" x 12" x 12" ( 0.037 CU. YD. )
* 11.	1	MAIN LINE, SADDLE OR TEE

\* NOT ON STANDARD LIST

NOTE:  
1. WRAP BURIED GALV. PIPING WITH POLYGEN TAPE.

1	7/99	STANDARD	S.M.
REVISION	DATE	BRIEF	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION  NAVAJO NATION <b>STANDARD DRAWING NO. W-1</b> <b>2" FLUSH VALVE</b> <b>LIST NO. 006502</b>  OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA  DRAWN BY: L.S. CHECKED BY: P.S. APPR. BY: T.M. AUTOCAD DATE: 11/98 DATE: 2/99 DATE: 2/99 DRAWING			



**STANDARD AIR RELEASE VALVE DETAIL**  
NOT TO SCALE

BILL OF MATERIALS		
ITEM	QUAN.	DESCRIPTION
1.	2	NIPPLE, 1" x CLOSE, GALV.
2.	2	ELBOW, 1"-90°, GALV.
3.	1	CURBSTOP VALVE, 1" FIPT
4.	1	AIR RELEASE VALVE, 1" IN x 1/2" OUT BRAND NAME _____
5.	1	3/8" I.D. COPPER PIPE, 12"
7.	1	METER BOX, 20" DIAMETER
8.	1	METER BOX LID WITH FROST COVER
9.	1	NIPPLE, 1" x 3", GALV.
* 10.	1	TEE OR SADDLE, 1" TAP
12.	1	ADAPTER, 1/2" MIPT x 1/2" COMP.
13.	1	NIPPLE, 1" x 6", GALV.

\* NOT ON STANDARD LIST

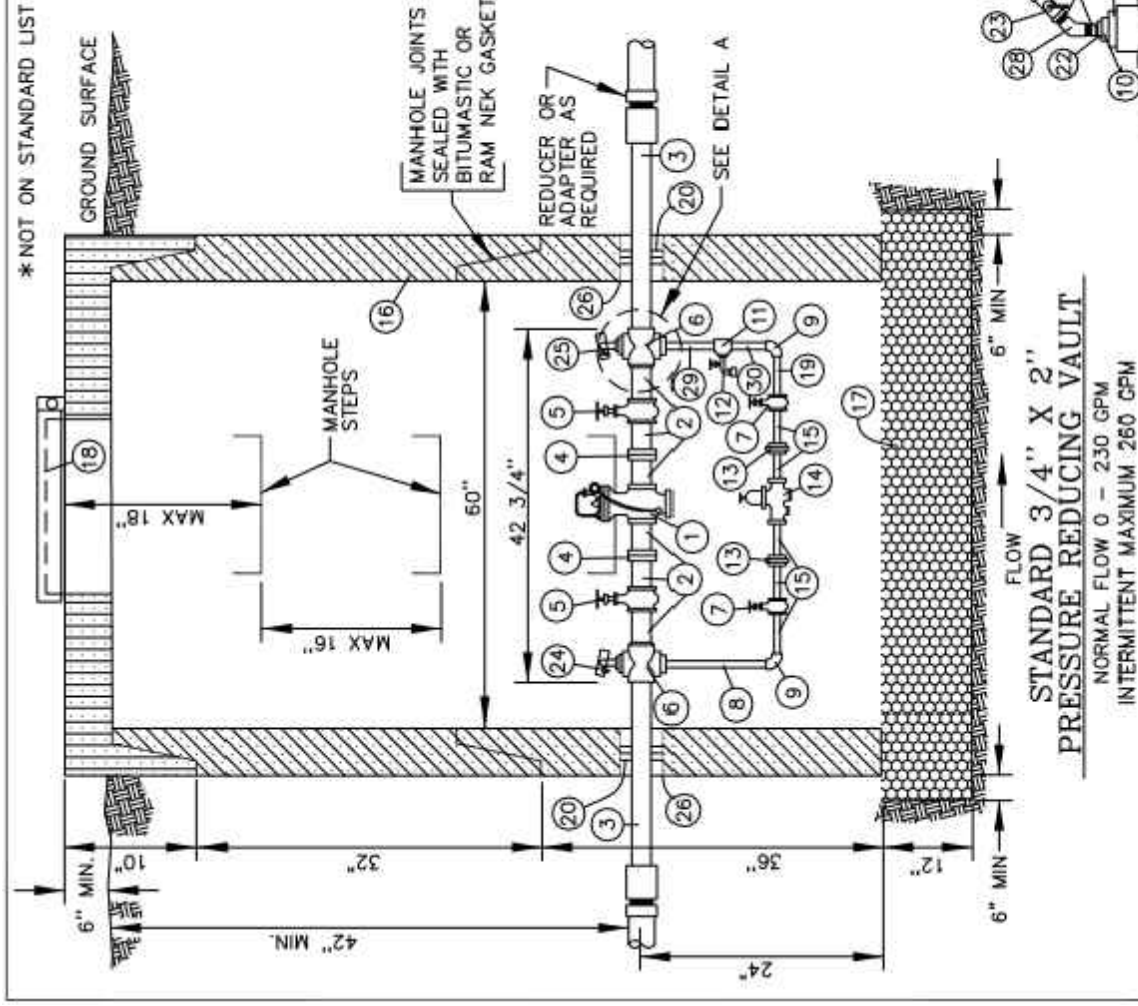
3	8/01	DELETED STATIONARY ROD AND GRWEL	R.S.M.
1	7/99	STANDARD	S.M.
REVISION	DATE	BRIEF	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION  NAVAJO NATION <b>STANDARD DRAWING NO. W-2</b> <b>AIR RELEASE VALVE</b> <b>LIST NO. 001434</b>  OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA  DRAWN BY: L.S. CHECKED BY: P.S. APPR. BY: P.S. AUTOCAD DATE: 11/98 DATE: 2/99 DATE: 2/99 DRAWING			

NOTE:  
WHERE DRAWINGS AND SPECIFICATIONS DIFFER, THE MORE STRINGENT SHALL GOVERN.  
CONTACT ENGINEER IMMEDIATELY REGARDING QUESTIONS OR CONCERNS.

**SMA**  
SOUDER, MILLER & ASSOCIATES  
Serving the Southwest & Rocky Mountains  
401 West Broadway Avenue  
Farmington, NM 87401  
Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045  
www.soudermiller.com

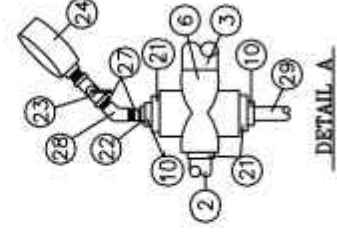
LYBROOK, NEW MEXICO  
CONSTRUCTION DETAILS  
2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
SECTION 10, T23N, R7W

Designed	Drawn	Checked
CMD	DJB	CMD
Date: September 2020		
Scale: Horiz: N.T.S. Vert: N/A		
Project No: 6928709		
Sheet: D-1		



**STANDARD 3/4" X 2" PRESSURE REDUCING VAULT**  
 NORMAL FLOW 0 - 230 GPM  
 INTERMITTENT MAXIMUM 260 GPM

- NOTES:
1. NOT TO BE INSTALLED UPSTREAM OF FIRE HYDRANT.
  2. PAINT INTERIOR GALV. PIPING.
  3. WRAP EXTERIOR GALV. PIPING WITH POLYGEN TAPE.
  4. INSTALL GATE AND FLUSH VALVE WITHIN 25' UPSTREAM.



ITEM	QUAN.	DESCRIPTION
1	1	VALVE, 2" HYDRAULIC PRESSURE REDUCING
		CLA-VAL OR ( )
*2	6	NIPPLE, 2" x CLOSE, GALV.
3	2	PIPE, 4" GALV. x AS-NEEDED **
4	4	FLANGES, COMPANION 6" OR 9" FACE x 2" FIPT
5	2	VALVE, GATE w/ WHEEL 2" IPT, BRASS
6	2	CROSS, 4" IPT, GALV.
7	2	VALVE, GATE w/ WHEEL, 3/4" IPT, BRASS
8	1	PIPE, 3/4" x 12" GALV.
9	2	ELBOW, 3/4" x 3/4" GALV.
10	4	BUSHING, 2" x 3/4" GALV.
11	1	TEE, 3/4" GALV.
12	1	HOSE BIBB, 3/4" BRONZE w/ VACUUM BREAKER
13	2	UNION, 3/4" x 3/4" GALV.
14	1	VALVE, PRESSURE REDUCING, 3/4" w/ STRAINER
15	5	NIPPLE, 3/4" x 3 1/2" GALV.
*16	1	MANHOLE, 60" I.D.
*17	1	GRAVEL
*18	1	MANHOLE COVER, HINGE TYPE
19	1	NIPPLE, 3/4" x 5 1/2" GALV.
20	2	BORE DONUTS, 4" x 8"
21	6	BUSHING, 4" x 2" GALV.
22	2	BUSHING, 3/4" x 1/4" GALV.
23	2	VALVE, PRESSURE COCK, 1/4" IPT.
24	1	PRESSURE GAUGE, 0 - 200 PSI
25	1	PRESSURE GAUGE, 0 - 100 PSI
26	1	CEMENT, NON-SHRINK, 50 LB. BAGS
27	4	NIPPLE, 1/4" x CLOSE, GALV.
28	2	ELBOW, 1/4" x 45° GALV.
29	1	NIPPLE, 3/4" x 6" GALV.
30	1	NIPPLE, 3/4" x 4 1/2" NIPPLE GALV.

\*\* CAN BE CUT BY NECA

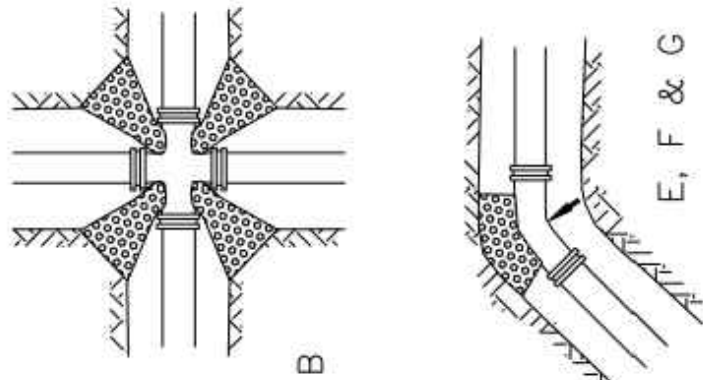
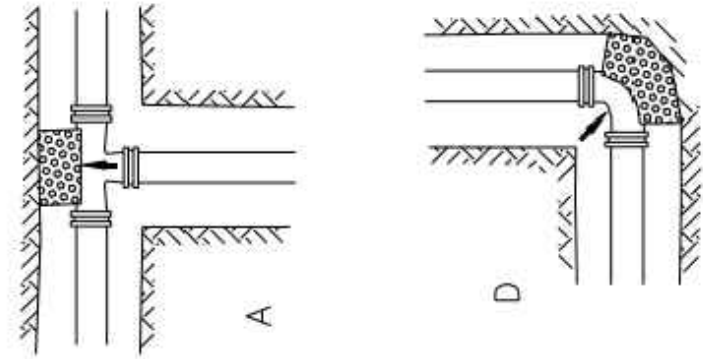
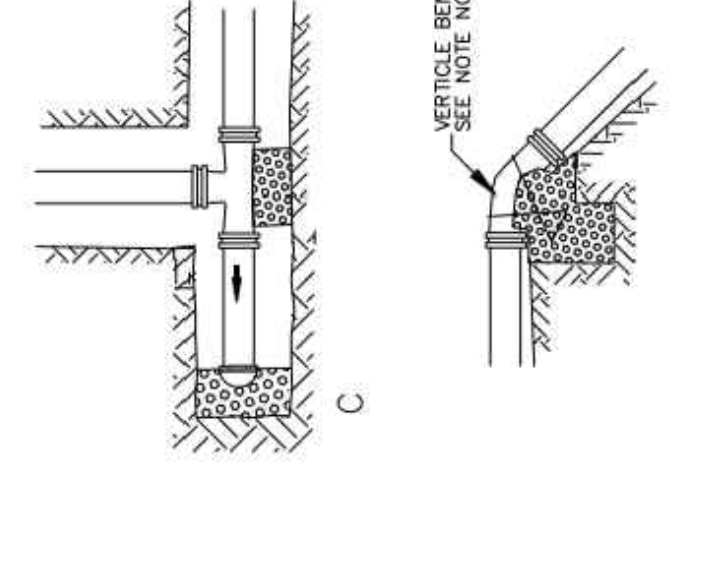
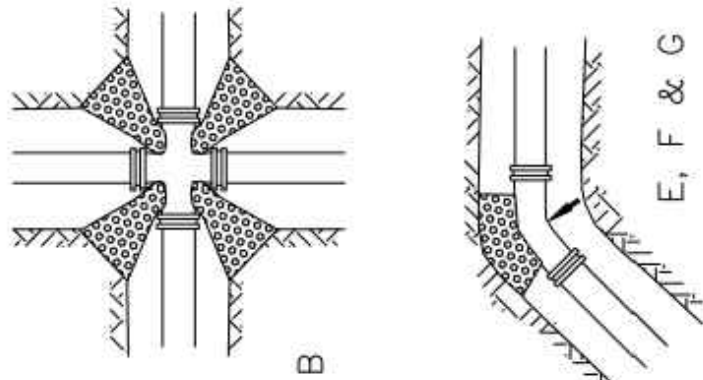
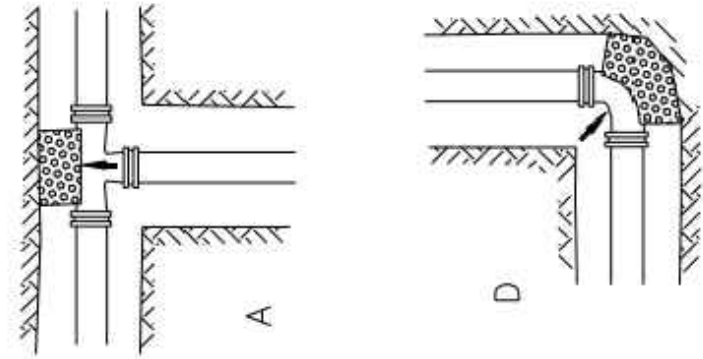
REVISION	DATE	BRIEF	BY
3	2/07	NOTE DATE AND FLUSH VALVE REQUIREMENT	N.M.
2	7/05	Changed unions to flanges on main branch	BM
1	7/99	STANDARDIZED	S.M.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
 PUBLIC HEALTH SERVICE  
 INDIAN HEALTH SERVICE  
 NAVAJO NATION

NAVAJO NATION,  
 STANDARD DRAWING NO. W-6  
 3/4" x 2" PRV  
 LIST NO. 901315

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING  
 NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA

DRAWN BY: L.S. CHECKED BY: P.S. APPR. BY: P.S. AUTOCAD DATE: 1/93 DATE: 2/93 DATE: 2/93 DATE: 2/93 DRAWING



**CONCRETE THRUST BLOCK**

PIPE NOM. SIZE	A TEE OR PLUG	B CROSS (EACH)	C CAP	D 90° BEND	E 45° BEND	F 1/2" BEND	G 1/4" BEND
2"	7" X 7"	6" X 6"	7" X 7"	9" X 9"	6" X 6"	5" X 5"	4" X 4"
4"	14" X 14"	12" X 12"	14" X 14"	16" X 16"	12" X 12"	9" X 9"	6" X 6"
6"	20" X 20"	17" X 17"	20" X 20"	24" X 24"	18" X 18"	13" X 13"	9" X 9"
8"	26" X 26"	22" X 22"	26" X 26"	31" X 31"	23" X 23"	16" X 16"	12" X 12"
10"	33" X 33"	28" X 28"	33" X 33"	39" X 39"	29" X 29"	20" X 20"	14" X 14"
12"	39" X 39"	33" X 33"	39" X 39"	47" X 47"	34" X 34"	25" X 25"	17" X 17"
14"	43" X 43"	36" X 36"	43" X 43"	51" X 51"	37" X 37"	27" X 27"	19" X 19"
16"	49" X 49"	41" X 41"	49" X 49"	58" X 58"	43" X 43"	30" X 30"	22" X 22"
18"	55" X 55"	46" X 46"	55" X 55"	65" X 65"	48" X 48"	34" X 34"	24" X 24"

SIZE OF THRUST FACE

- NOTES:
1. SIZE OF THRUST FACE BASED ON 160 PSI PIPE LINE PRESSURE AND 2000 PSI SOIL BEARING
  2. AT VERTICAL BENDS, PROVIDE SUFFICIENT WEIGHT TO RESIST OUTWARD THRUST
  3. KEEP CONCRETE BEHIND BELL OF FITTING. DO NOT LET IT RUN AGAINST PIPE OR IN JOINT
  4. 48 HOURS IS MINIMUM CONCRETE CURE TIME BEFORE PRESSURIZING WATER MAIN

REVISION	DATE	BRIEF	BY
1	7/99	STANDARDIZED	S.M.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
 PUBLIC HEALTH SERVICE  
 INDIAN HEALTH SERVICE  
 NAVAJO NATION

NAVAJO NATION,  
 STANDARD DRAWING NO. W-11  
 CONCRETE THRUST BLOCK

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING  
 NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA

DRAWN BY: L.S. CHECKED BY: P.S. APPR. BY: P.S. AUTOCAD DATE: 1/93 DATE: 1/93 DATE: 1/93 DATE: 1/93 DRAWING

**NOTE:**  
 WHERE DRAWINGS AND SPECIFICATIONS DIFFER, THE MORE STRINGENT SHALL GOVERN.  
 CONTACT ENGINEER IMMEDIATELY REGARDING QUESTIONS OR CONCERNS.

LYBROOK MDWCA

CONSTRUCTION DETAILS  
 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
 SECTION 10, T23N, R7W

LYBROOK, NEW MEXICO

**SMA**  
 SOUDER, MILLER & ASSOCIATES  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7555 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

Designed	Drawn	Checked
CMD	DJB	CMD

Date: September 2020

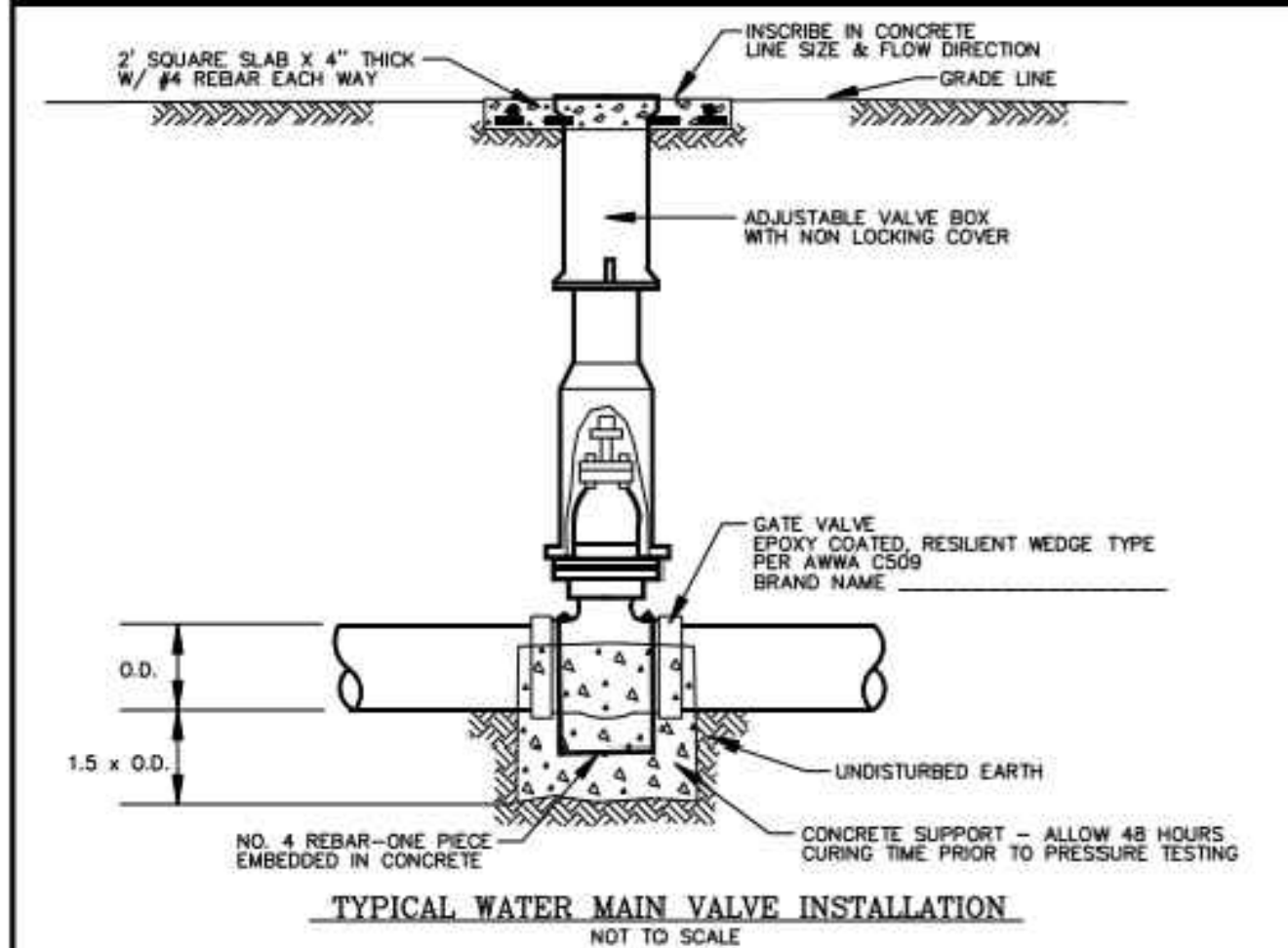
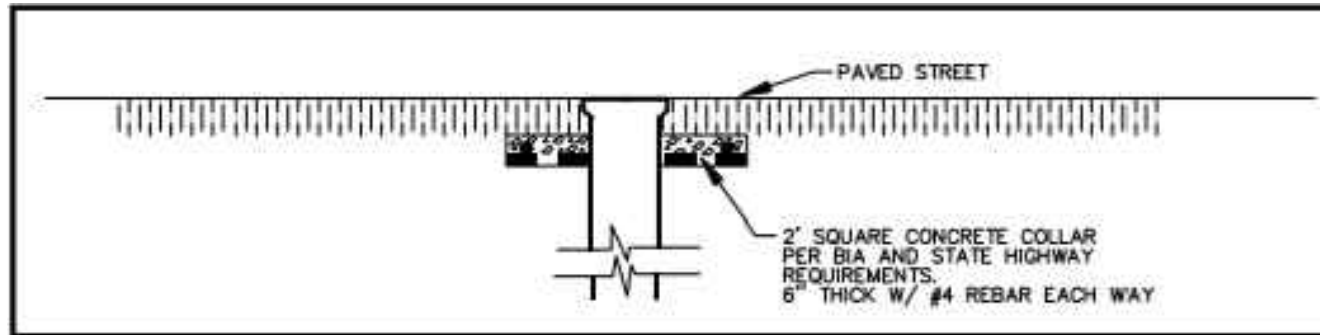
Scale: Horiz. N.T.S.  
 Vert. N/A

Project No: 6928709

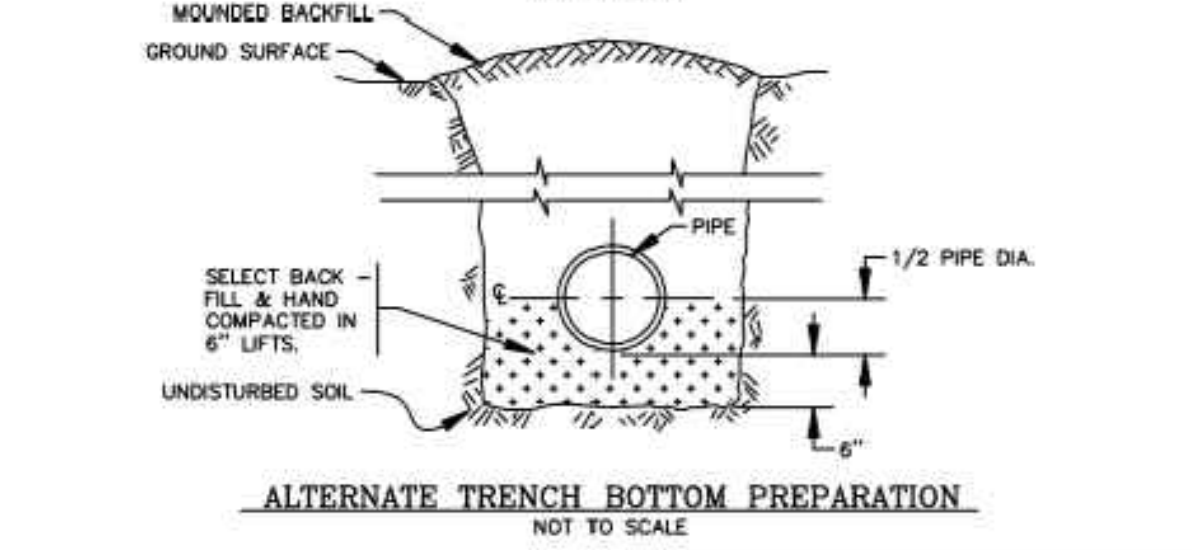
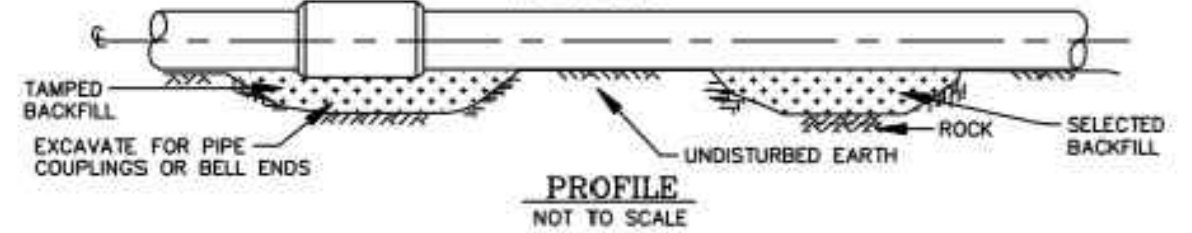
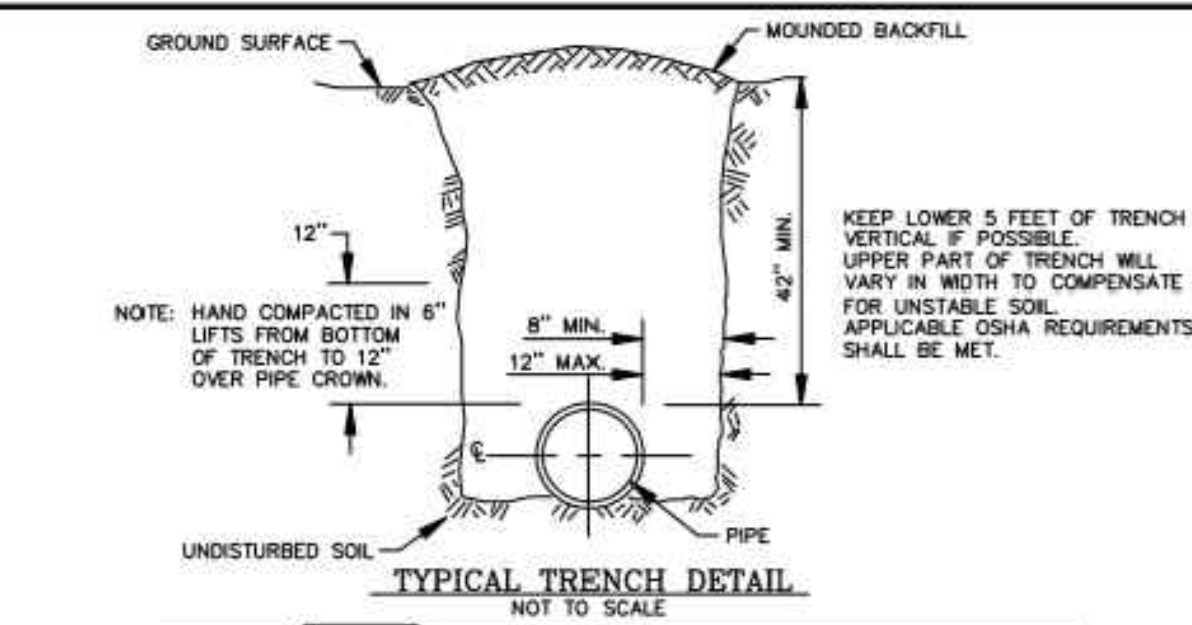
Sheet: D-2

Rev #	Date	Description





01	7/99	STANDARDIZED	S.M.
REVISION	DATE	BRIEF	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION			
NAVAJO NATION, <b>STANDARD DRAWING NO. W-16</b> <b>TYPICAL WATER MAIN VALVE</b> <b>INSTALLATION</b>			
OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA			
DRAWN BY: L.S.	CHECKED BY: L.S.	APPR. BY: P.S.	AUTOCAD
DATE: 12/92	DATE: P.S.	DATE: 12/92	DRAWING

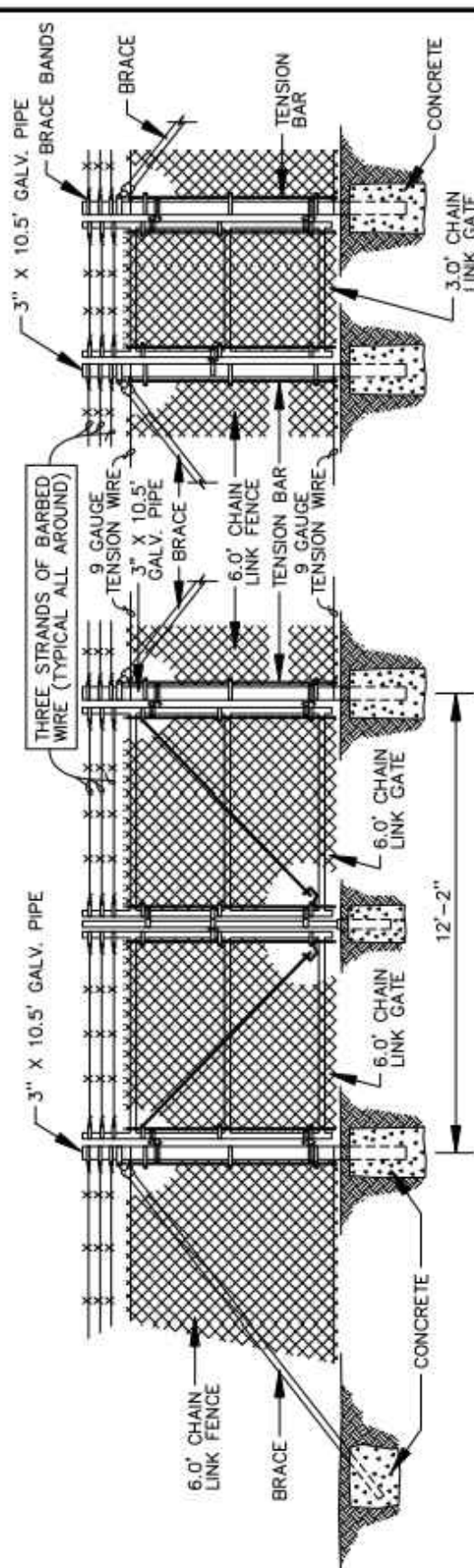


- NOTES:
1. SEE SPECIFICATIONS FOR COMPACTION REQUIREMENTS.
  2. OPEN CUT OF PAVED OR GRAVEL ROADS (IF REQUIRED) BACKFILL MINIMUM COMPACTION 95% OPTIMUM DENSITY IN LIFTS. REPAVING/REGRAVELING PER THE ROAD OWNER'S REQUIREMENTS.

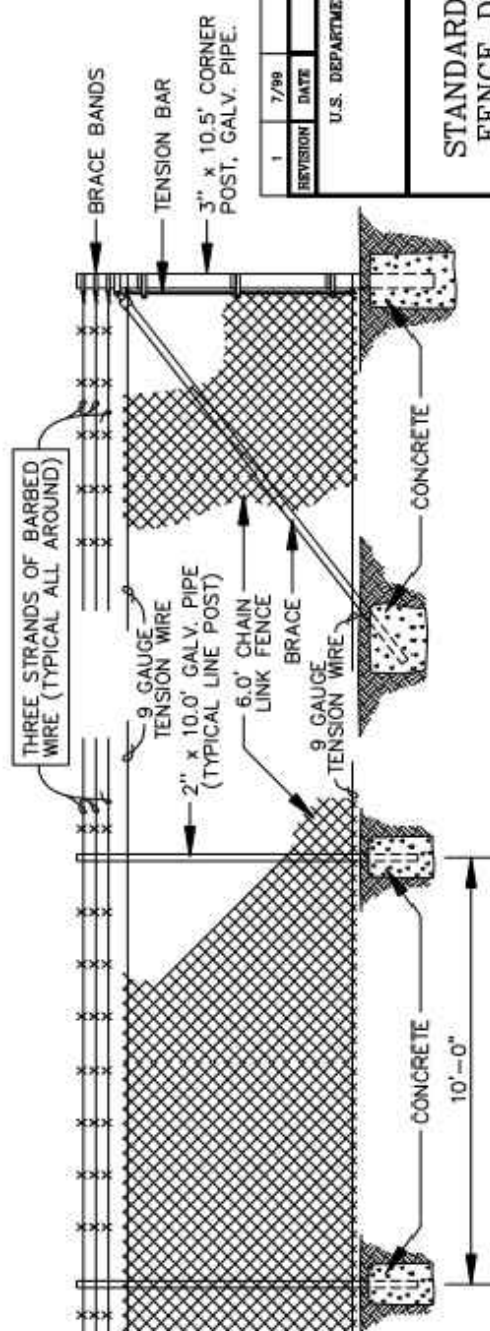
1	7/99	STANDARDIZED	S.M.
REVISION	DATE	BRIEF	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION			
NAVAJO NATION, <b>STANDARD DRAWING NO. W-27</b> <b>TYPICAL TRENCH DETAIL</b>			
OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA			
DRAWN BY: L.S.	CHECKED BY: P.S.	APPR. BY: P.S.	AUTOCAD
DATE: 12/99	DATE: 12/99	DATE: 12/99	DRAWING

**NOTE:**  
WHERE DRAWINGS AND SPECIFICATIONS DIFFER, THE MORE STRINGENT SHALL GOVERN.  
CONTACT ENGINEER IMMEDIATELY REGARDING QUESTIONS OR CONCERNS.

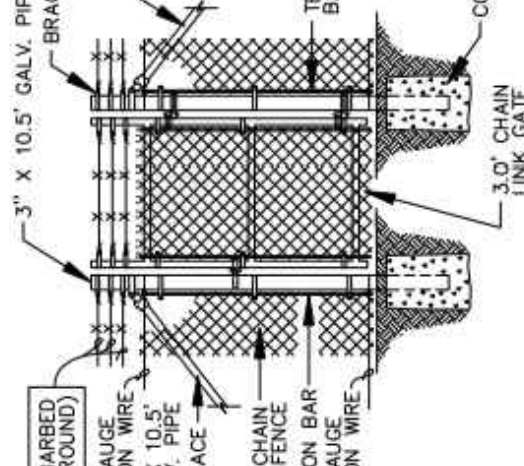
Description	Date	Rev.#
<p><b>SOUDER, MILLER &amp; ASSOCIATES</b> Serving the Southwest &amp; Rocky Mountains 401 West Broadway Avenue Farmington, NM 87401 Phone (505) 325-7555 Toll-Free (800) 519-0098 Fax (505) 326-0045 www.soudermiller.com</p>		
<p>LYBROOK, NEW MEXICO</p>		
<p>CONSTRUCTION DETAILS 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS SECTION 10, T23N, R7W</p>		
Designed	Drawn	Checked
CMD	DJB	CMD
Date: September 2020		
Scale: Horiz: N.T.S. Vert: N/A		
Project No: 6928709		
Sheet: D-3		



**DOUBLE GATE DETAIL**  
NOT TO SCALE



**CORNER POST DETAIL**  
NOT TO SCALE



**SINGLE GATE DETAIL**  
NOT TO SCALE

**LINE POST DETAIL**  
NOT TO SCALE

REVISION	DATE	STANDARDIZED	B.M.
1	7/99		BY

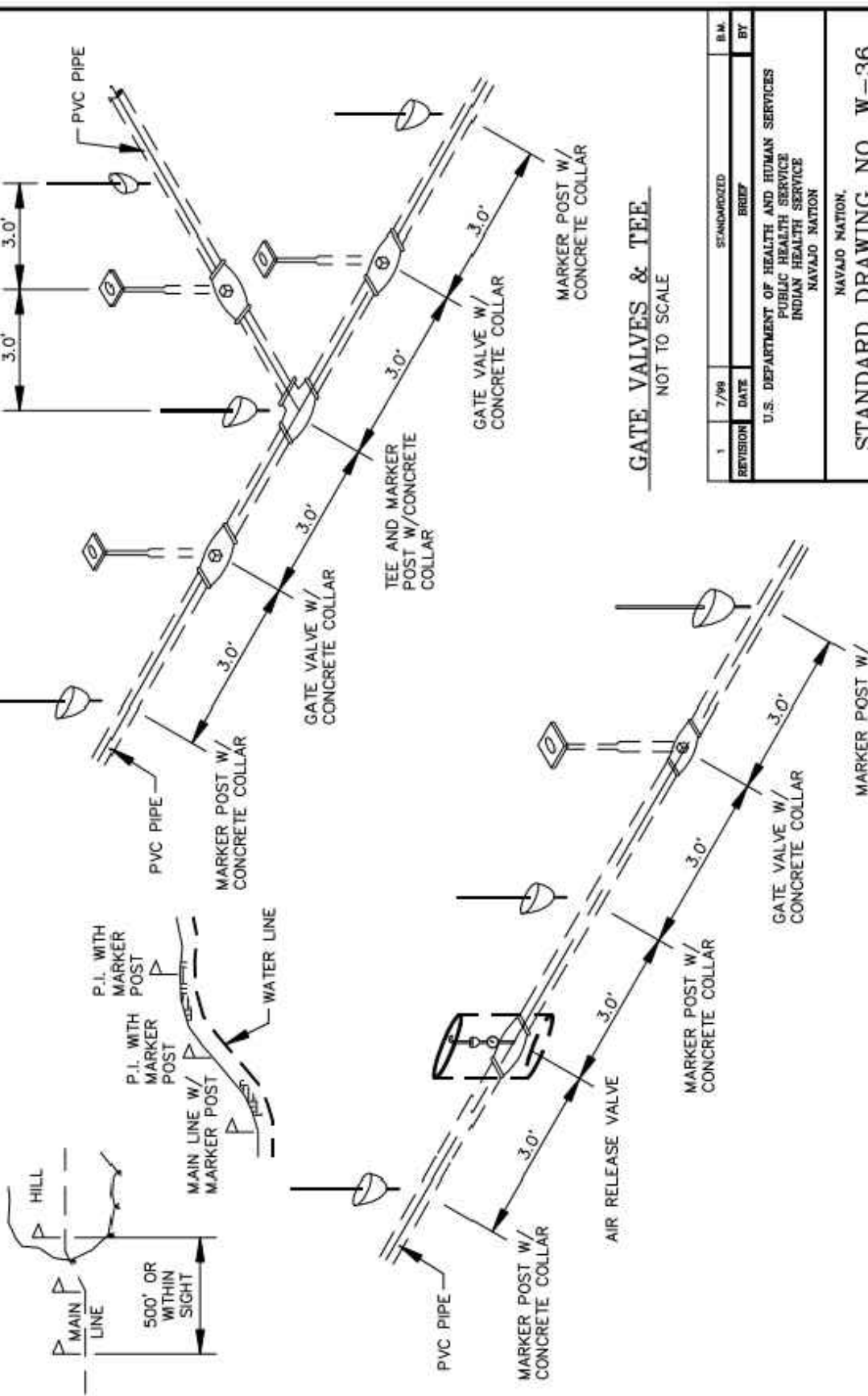
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
INDIAN HEALTH SERVICE  
NAVAJO NATION

NAVAJO NATION,  
STANDARD DRAWING NO. W-34  
FENCE DETAIL FOR STORAGE  
TANK & PUMPHOUSE

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING  
NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA

DRAWN BY: L.S. | CHECKED BY: P.S. | APPR. BY: P.S. | AUTOCAD  
DATE: 12/92 | DATE: 12/92 | DATE: 12/92 | DATE: 12/92

NOTE: MARKER POST ON ALL P.I.  
MARKER POST ON ALL GRADE CHANGE



**AIR RELEASE VALVE & GATE VALVE**  
NOT TO SCALE

REVISION	DATE	STANDARDIZED	B.M.
1	7/99		BY

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
INDIAN HEALTH SERVICE  
NAVAJO NATION

NAVAJO NATION,  
STANDARD DRAWING NO. W-36  
MARKER POST DETAILS FOR  
GATE VALVES, ARV'S, & TEES

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING  
NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA

DRAWN BY: H.M.S. | CHECKED BY: M.M. | APPR. BY: M.M. | AUTOCAD  
DATE: 11/19/93 | DATE: 11/25/93 | DATE: 11/25/93 | DATE: 11/25/93

**NOTE:**  
WHERE DRAWINGS AND SPECIFICATIONS DIFFER, THE MORE STRINGENT SHALL GOVERN.  
CONTACT ENGINEER IMMEDIATELY REGARDING QUESTIONS OR CONCERNS.

LYBROOK MDWCA

CONSTRUCTION DETAILS  
2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
SECTION 10, T23N, R7W

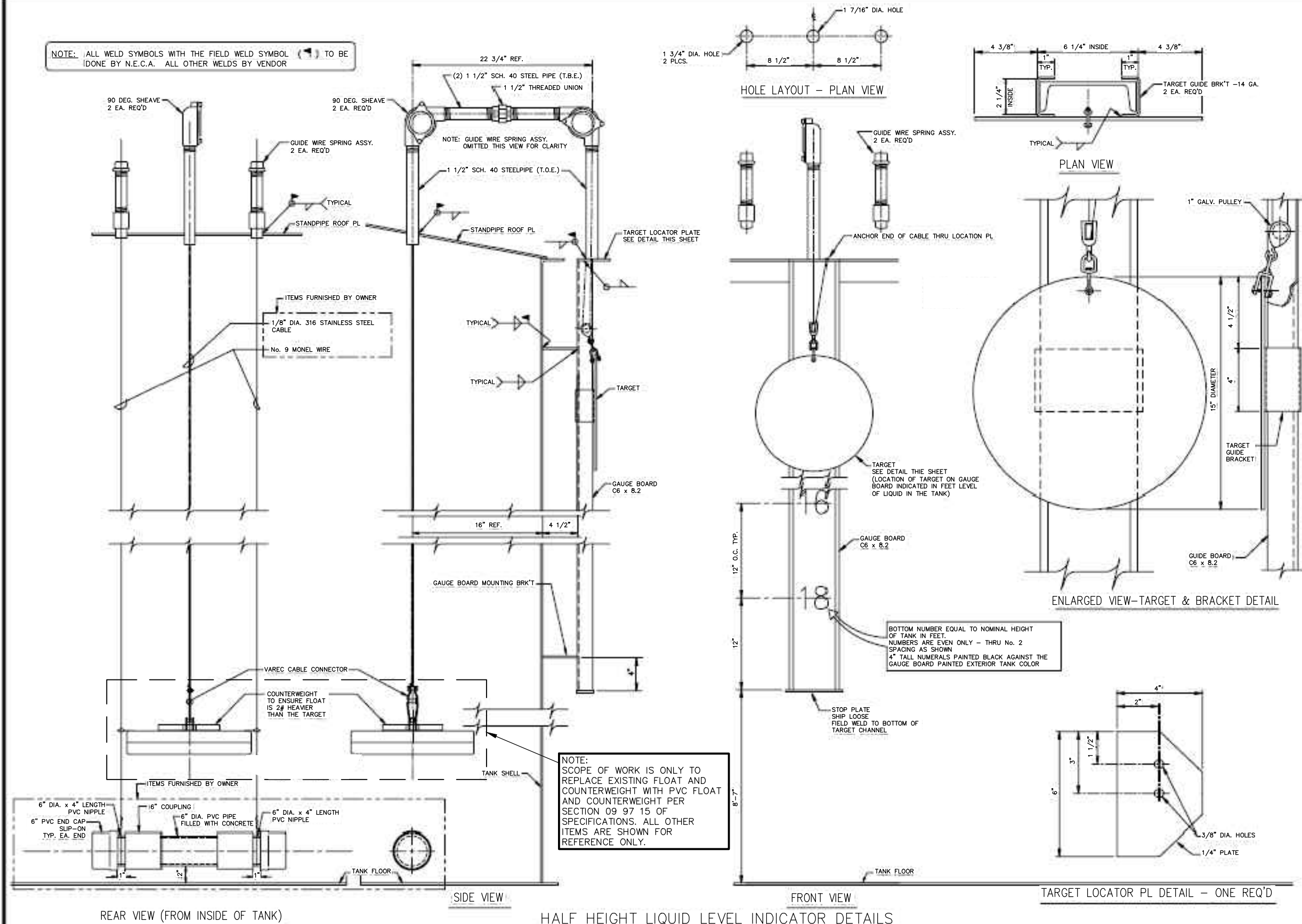
LYBROOK, NEW MEXICO

**SMA**  
SOUDER, MILLER & ASSOCIATES  
Serving the Southwest & Rocky Mountains  
401 West Broadway Avenue  
Farmington, NM 87401  
Phone (505) 325-7555 Toll-Free (800) 519-0098 Fax (505) 326-0045  
www.soudermiller.com

Designed	Drawn	Checked	Rev #	Date	Description
CMD	DJB	CMD			

Date: September 2020  
Scale: Horiz: N.T.S.  
Vert: N/A  
Project No: 6928709  
Sheet: D-4

NOTE: ALL WELD SYMBOLS WITH THE FIELD WELD SYMBOL (↔) TO BE DONE BY N.E.C.A. ALL OTHER WELDS BY VENDOR



NOTE: SCOPE OF WORK IS ONLY TO REPLACE EXISTING FLOAT AND COUNTERWEIGHT WITH PVC FLOAT AND COUNTERWEIGHT PER SECTION 09 97 15 OF SPECIFICATIONS. ALL OTHER ITEMS ARE SHOWN FOR REFERENCE ONLY.

BOTTOM NUMBER EQUAL TO NOMINAL HEIGHT OF TANK IN FEET. NUMBERS ARE EVEN ONLY - THRU No. 2 SPACING AS SHOWN 4\"/>

NO.	DATE	APPR.	DESCRIPTION	REDRAWN BY: J.C. CHECKED BY: R.M. DATE: 1/97	INDIAN HEALTH SERVICE NAVAJO AREA OFFICE OFFICE OF ENVIRONMENTAL HEALTH	DEPARTMENT OF HEALTH & HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE	TITLE: LIQUID LEVEL INDICATOR WATER STORAGE TANK	WINDOW ROCK, ARIZONA
								SHEET 6 OF 11

NOTE: WHERE DRAWINGS AND SPECIFICATIONS DIFFER, THE MORE STRINGENT SHALL GOVERN. CONTACT ENGINEER IMMEDIATELY REGARDING QUESTIONS OR CONCERNS.

SOUDER, MILLER & ASSOCIATES  
 Serving the Southwest & Rocky Mountains  
 401 West Broadway Avenue  
 Farmington, NM 87401  
 Phone (505) 325-7555 Toll-Free (800) 519-0098 Fax (505) 326-0045  
 www.soudermiller.com

LYBROOK, NEW MEXICO  
 LYBROOK, MDWCA  
 CONSTRUCTION DETAILS  
 2019 LYBROOK MDWCA WATER SYSTEM IMPROVEMENTS  
 SECTION 10, T23N, R7W

Designed	Drawn	Checked
CMD	DJB	CMD
Date: September 2020		
Scale: Horiz. N.T.S.		
Vert. N/A		
Project No: 6928709		
Sheet: D-5		