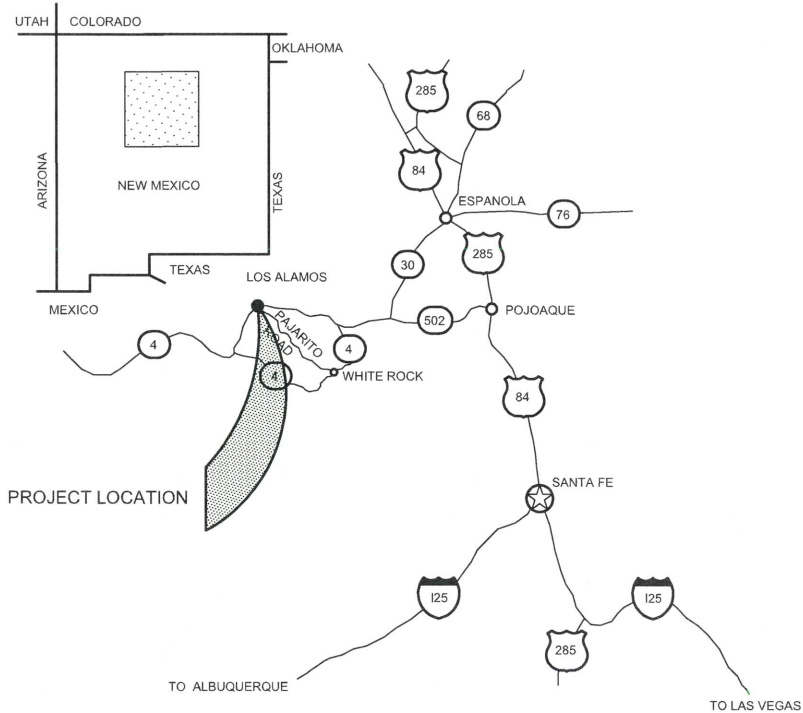


TANK PIPING UPGRADES - PHASE 2

IFB-2026-61

LOS ALAMOS COUNTY - NEW MEXICO

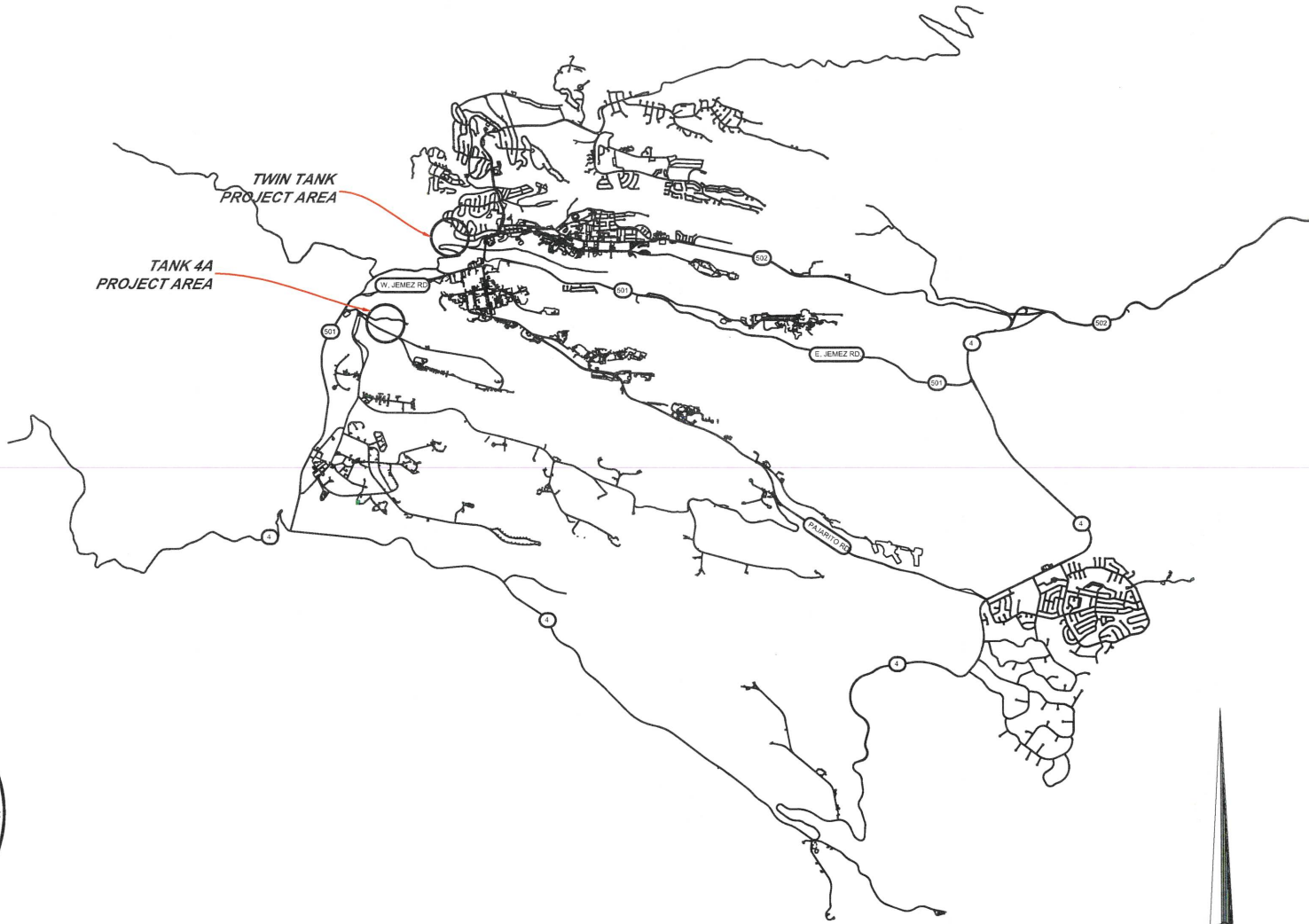


NEW MEXICO REGIONAL MAP

NOT TO SCALE

SHEET INDEX

- TITLE SHEET
- 1 GENERAL NOTES
- 2 TWIN TANK PIPING UPGRADES
- 3 TANK 4A PIPING UPGRADES
- 4 DETAILS



LOS ALAMOS VICINITY MAP

NOT TO SCALE



[Signature]
 DEPARTMENT OF PUBLIC UTILITIES
 DEPUTY UTILITY MANAGER
 DATE 3/25/2026

DEPARTMENT OF PUBLIC UTILITIES
 PROJECT ENGINEER
 DATE

DEPARTMENT OF PUBLIC UTILITIES CONSTRUCTION NOTES

GENERAL

1. ALL WATER, WASTEWATER, GAS AND ELECTRIC UTILITY INSTALLATIONS, RE-CONSTRUCTION OR REPAIR SHALL COMPLY WITH LOS ALAMOS COUNTY DEPARTMENT OF PUBLIC UTILITIES (DPU) CONSTRUCTION STANDARDS AND THE RELEVANT STANDARD DRAWINGS. THE CONSTRUCTION STANDARDS CAN BE FOUND AT:

<https://www.losalamosnm.us/Services/Permitting-Information/Add-or-Modify-Utility-Services>

2. SUBMITTALS FOR ALL GAS, WATER, SEWER, ELECTRIC AND COUNTY OWNED COMMUNICATION INFRASTRUCTURE SHALL BE SUBMITTED TO THE DPU PROJECT MANAGER FOR REVIEW AND APPROVAL PER THE DPU STANDARD SPECIFICATIONS. SUBMITTALS SHALL INCLUDE THE COVER SHEET IN THE DPU CONSTRUCTION STANDARDS.

3. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A NEW MEXICO LICENSED PROFESSIONAL SURVEYOR (NMPS), FOR CONSTRUCTION STAKING, AS WELL AS VERIFICATION OF ALL CRITICAL HORIZONTAL AND VERTICAL CONTROL DATA SHOWN ON THESE CONTRACT DRAWINGS. CONTRACTOR SHALL PROVIDE COORDINATE INFORMATION FOR THE ALL NEW SAS MANHOLES, WATER AND GAS VALVES, ALL BASED ON STATE PLANE COORDINATES.

4. FOR ANY WORK INVOLVING NEW WATER, GAS OR SEWER PIPELINE CONNECTING TO AN EXISTING PIPELINE, CONTRACTOR SHALL OBTAIN A PENETRATION PERMIT FROM THE COUNTY, AT LEAST 48 HOURS IN ADVANCE OF ANY SUCH WORK. THE PERMIT APPLICATION FORM FOR THIS PERMIT CAN BE FOUND AT:

<https://www.losalamosnm.us/Services/Permitting-Information/Add-or-Modify-Utility-Services>

5. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING, TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES, PRIOR TO PERFORMING ANY EXCAVATION WORK.

6. PRIOR TO CONNECTING NEW GAS AND WATER LINES INTO THE EXISTING SYSTEMS THE LOCATE WIRE SHALL BE TESTED AS FOLLOWS. CONTRACTOR WILL ENSURE THAT ALL LOCATE WIRE HAS BEEN INSTALLED AND MADE ACCESSIBLE IN ALL REQUIRED LOCATIONS. CONTRACTOR WILL VERIFY CONTINUITY IN THE LOCATE WIRE WITH THEIR OWN LOCATE EQUIPMENT. THE LOCATED LOCATION WILL BE PAINTED WITH WHITE PAINT AND DPU STAFF WILL THEN VERIFY THE LOCATION AND CONTINUITY OF THE LOCATE WIRE WITH THEIR OWN EQUIPMENT. ANY AREAS WHERE CONTINUITY IS LOST MUST BE REPAIRED AND RE-VERIFIED BY DPU STAFF TO BE LOCATEABLE. CONTRACTOR SHALL COORDINATE THE LOCATE WIRE VERIFICATION WITH DPU PROJECT MANAGER.

7. PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT, CONTRACTOR SHALL SUBMIT ALL RECORD DRAWINGS AND NOTES TO THE DPU PROJECT MANAGER. RECORD DRAWINGS SHALL BE STAMPED BY AN NMPS AND SUBMITTED TO THE DPU PROJECT MANAGER.

8. INFORMATION SPECIFICALLY STATED IN THE CONTRACT DRAWINGS, OR WHEN THE DPU PROJECT MANAGER SPECIFICALLY IDENTIFIES IN THE FIELD, CRITICAL DATA (X, Y, AND Z) RELATED TO WATER VALVES OF ALL KINDS, WATER METERS, FIRE HYDRANTS, CULVERT INLET OR OUTLET INVERTS, WASTEWATER COLLECTION MANHOLE INVERTS AND RIMS, CUSTOMER END OF WASTEWATER SERVICE CONNECTION PIPES/CLEANOUT, SHALL BE COLLECTED BY THE CONTRACTOR'S SURVEYOR FOR THE RECORD DRAWINGS TO BE COMPLETE.

9. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF SURVEY MONUMENTS OR MARKS. IF CONTRACTOR'S ACTIVITIES CAUSED DAMAGE TO ANY OF THESE MARKS, CONTRACTOR SHALL RETAIN, AT THEIR OWN EXPENSE, THE SERVICES OF A NMLPS, TO RE-ESTABLISH THE MARKS IN COMPLIANCE WITH STANDARDS AND PROCEDURES SET FORTH BY THE "GEODETIC MARK PRESERVATION GUIDEBOOK".

10. WORK WITHIN THE PROJECT BOUNDARIES, SUCH AS CLEARING, GRUBBING AND OTHER OPERATIONS, WHICH MAY GENERATE DUST OR CONTAMINATE STREAMS, SHALL BE KEPT TO THE MINIMUM AREA NECESSARY TO EXECUTE THE PROJECT.

11. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE CLEAN WATER ACT, RELATED TO STORM WATERS. CONTRACTOR SHALL PREPARE, EXECUTE AND MAINTAIN A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), IF THE AREA DISTURBED BY THE CONSTRUCTION OPERATIONS IS ONE ACRE OR MORE IN SIZE. WHILE THIS PROJECT IS NOT ONE THAT WILL DISTURB MORE THAN ONE ACRE OF LAND, AND A SWPPP WILL NOT BE NECESSARY, CONTRACTOR SHALL ADOPT AND MAINTAIN POLLUTION PREVENTION MEASURES CONSIDERED BEST MANAGEMENT PRACTICES, UNDER THE CWA, THROUGHOUT THE DURATION OF THE PROJECT. COSTS ASSOCIATED WITH CLEAN WATER ACT COMPLIANCE, INCLUDING BMP'S, SHALL BE INCIDENTAL TO THE PROJECT'S COST.

12. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING STRUCTURES, WHETHER OR NOT THEY ARE SHOWN IN THESE DRAWINGS. THIS SHALL APPLY TO ANY UNDERGROUND UTILITY CONDUITS LOCATED WITHIN AND WITHOUT THE PROJECT BOUNDARIES. ABOVE GROUND STRUCTURES SHALL BE KEPT FREE OF DUST AND/OR CONSTRUCTION DEBRIS AT ALL TIMES DURING THE EXECUTION OF THE PROJECT. CLEANING AND FULL RESTORATION OF SUCH STRUCTURES, TO THEIR ORIGINAL CONDITION OR BETTER, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

13. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE COSTS OF REPAIRING ANY DAMAGE OR ALTERATIONS CAUSED DURING EXECUTION OF THIS PROJECT, TO THE ORIGINAL CONDITION OF THIRD PARTY'S PROPERTY (E.G. STRUCTURES, EXISTING UTILITIES OR UTILITY EASEMENTS) LOCATED WITHIN OR OUT OF THE PROJECT BOUNDARIES.

14. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF ALL PROJECT-RELATED MATERIALS OR EQUIPMENT, BEFORE INSTALLATION, UNTIL FINAL WRITTEN ACCEPTANCE APPROVAL OF THE PROJECT BY THE DPU PROJECT MANAGER AND THE COUNTY.

15. ALL MATERIAL QUALITY TESTS SHALL BE PERFORMED BY A RECOGNIZED LABORATORY. SUCH A LABORATORY SHALL BE OPERATED UNDER THE AUSPICES/DIRECTION OF AN NMPE. NAME AND CONTACT OF THE LABORATORY SHALL BE SUBMITTED BY THE CONTRACTOR TO THE DPU PROJECT MANAGER AS SOON AS PRACTICAL AFTER THE CONTRACTOR'S RECEIPT OF THE NOTICE TO PROCEED.

16. CONTRACTOR SHALL PROVIDE THE INSTALLATION AND MAINTENANCE OF ANY NECESSARY TRAFFIC CONTROL DEVICES AS OTHERWISE REQUIRED BY LOS ALAMOS COUNTY TRAFFIC MANAGER. TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE MOST CURRENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), BUT MAY BE REVISED UNDER WRITTEN DIRECTION FROM THE COUNTY TRAFFIC ENGINEER.

17. CONTRACTOR SHALL NOTIFY THE DPU PROJECT MANAGER, AT LEAST FIVE (5) DAYS IN ADVANCE OF ANY WORK THAT MAY AFFECT THE OPERATION OF THE PUBLIC UTILITY SYSTEMS (WATER, WASTEWATER, GAS AND ELECTRIC).

18. ALL STRUCTURAL OR UTILITY TRENCH FILL OR BACKFILL SHALL BE FREE OF VEGETATION AND DEBRIS AND CONTAIN NO ROCKS LARGER THAN 3-INCHES.

19. ALL AREAS DISTURBED BY THE CONSTRUCTION ACTIVITIES OF THIS PROJECT, INCLUDING ANY TEMPORARY ACCESS ROADS, SHALL BE RESTORED.

WATER PIPELINES

1. NO WATER LINE SHALL BE INSTALLED BEFORE THE FINAL GRADE HAS BEEN ACHIEVED WITHIN THE DESIGNATED WATER UTILITY CORRIDOR (ROAD RIGHT OF WAY OR EASEMENT).

2. THE PIPELINE SHALL BE SUPPLIED AND INSTALLED IN STRICT COMPLIANCE WITH THE DEPARTMENT OF PUBLIC UTILITIES CONSTRUCTION STANDARDS. CONTRACTOR SHALL NOTIFY THE DPU PROJECT MANAGER IMMEDIATELY UPON ENCOUNTERING FILED CONDITIONS THAT MAY REQUIRE DEVIATIONS FROM THESE STANDARDS.

3. CONTRACTOR SHALL INSTALL PIPELINE SO THAT HIGH POINTS ARE NOT CREATED, UNLESS SPECIFICALLY SHOWN ON APPROVED CONSTRUCTION DRAWINGS. THE PIPE SHALL BE PLACED DOWN IN WITH A UNIFORM GRADE.

4. MINIMUM BURY SHALL BE 48 INCHES AT ALL POINTS ALONG THE ALIGNMENT. DEPTH OF TRENCH MAY BE SIGNIFICANTLY LARGER ALONG CERTAIN SEGMENTS OF PIPELINE, TO AVOID THE CREATION OF HIGH POINTS ALONG THE ALIGNMENT.

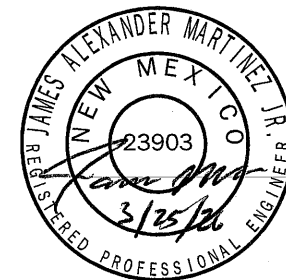
5. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH A MINIMUM 4-FOOT HORIZONTAL CLEARANCE ALL AROUND THEM.

6. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DISINFECTION, CHLORINATION, CHLORINE RESIDUAL TESTING, AND HYDROSTATIC (PRESSURE) TESTING OF ALL WATER PIPES INSTALLED. PRESSURE TEST SHALL BE DOCUMENTED ON FORM INCLUDED IN STANDARD SPECIFICATION. DPU PROJECT MANAGER SHALL WITNESS ALL SUCH TESTING.

QUANTITIES

Item Description	Units	Apprx. Quantity
TWIN TANK PIPE MODIFICATIONS		
Mobilization	LS	1
4" Asphalt Cut & Repair (Incl. Tack Coat)	SQ.YD	78
16" DI waterline, trench and compacted backfill up to 6' in depth	LIN.FT	182
12" DI waterline, trench and compacted backfill up to 6' in depth	LIN.FT	29
Connect existing 18" DIP waterline to new 16" DIP	EACH	1
Connect existing 14" CIP waterline to new 14" DIP	EACH	1
16" Ductile Iron Gate Valve with Box	EACH	3
16" x 16" x 16" DIP tee	EACH	1
Remove and Replace 14" Ductile Iron Gate Valve with Box	EACH	5
Remove and replace remote actuated valve with 8" Cla-Val E-131-22 Electronic Interface Control Valve	LS	1
16" 45 degree DIP bend	EACH	3
Connect new 16" DIP to existing 14" x 16" reducer	EACH	1
16" x 16" x 12" DIP tee	EACH	1
12" Ductile Iron Gate Valve with Box	EACH	1
12" x 12" x 12" DIP tee	EACH	1
16" x 16" x 14" DIP tee	EACH	2
Connect existing 12" CIP waterline to new 12" DIP	EACH	2
Cut and cap existing waterline (various sizes)	EACH	7
Remove existing vault lid and replace per detail F/5	LS	1
Dispose of existing vault and appurtenances	LS	1
Connect new 16" DIP to tank inside existing vault, replace connection with stainless steel body and fastener coupling	LS	1
Remove existing water meter and replace with 16" Krohne Enviromag 2000 flow meter	LS	1

Item Description	Units	Apprx. Quantity
TANK 4A PIPE MODIFICATIONS		
18" DI waterline, trench and compacted backfill up to 12' in depth	LIN.FT	15
18" Ductile Iron Gate Valve with Box	EACH	1
18" 11.25 degree DIP bend	EACH	1
18" x 18" x 18" DIP tee	EACH	2



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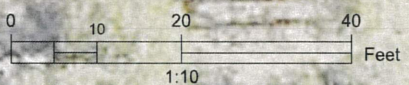
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DRAWN BY:	SH
APPROVED BY:	JAM
DATE:	3/19/2026
SCALE:	

TANK PIPING UPGRADES -
PHASE 2
GENERAL NOTES



INCORPORATED COUNTY
OF LOS ALAMOS
DEPARTMENT OF PUBLIC UTILITIES
1000 CENTRAL AVE., SUITE 130
LOS ALAMOS, NEW MEXICO 87544
(505) 662-8150 FAX: (505) 662-8109

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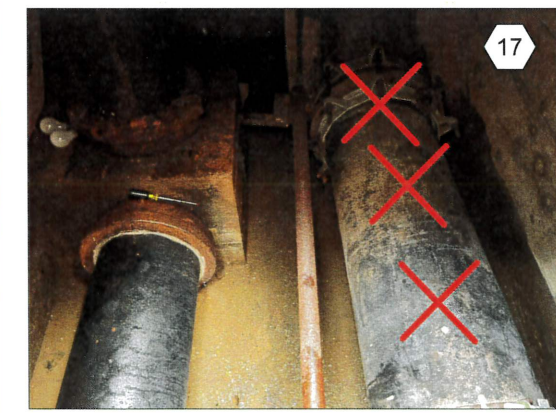
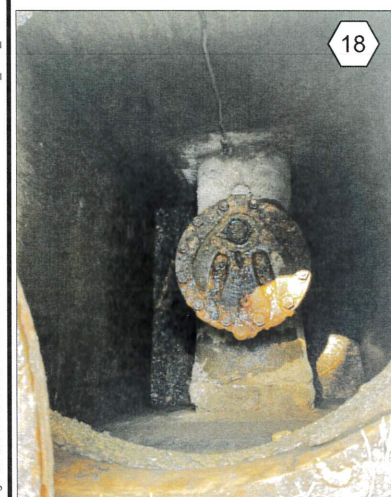
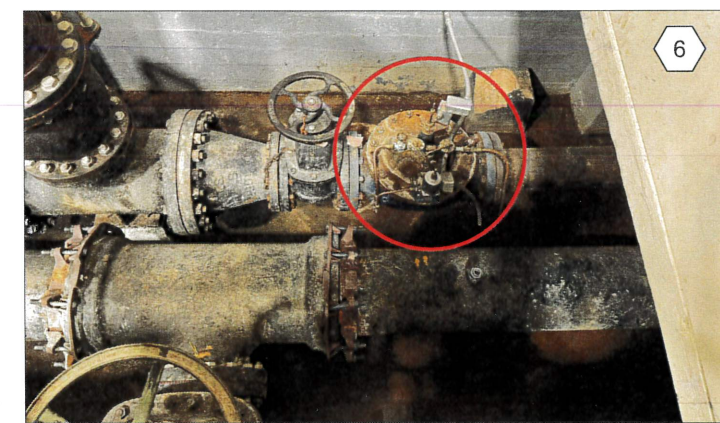


- 1 - CONNECT EXISTING 18" DIP TO NEW 16" DIP
- 2 - 1 - CONNECT NEW 14" DIP TO EXISTING 14" CIP
- 3 - 3 - NEW 16" GATE VALVE & VALVE BOX WITH CONCRETE COLLAR PER DETAIL B/4
- 4 - 1 - NEW 16" X 16" X 16" TEE
- 5 - 5 - REMOVE AND REPLACE EXISTING 14" GATE VALVE WITH NEW 14" GATE VALVE & VALVE BOX WITH CONCRETE COLLAR PER DETAIL B/4
- 6 - REMOVE EXISTING REMOTE ACTUATED VALVE AND REPLACE - FURNISHED BY OWNER
- 7 - 3 - NEW 16" 45° BEND
- 8 - 1 - CONNECT NEW 16" DIP TO EXISTING 14" X 16" REDUCER
- 9 - 1 - 16" X 16" X 12" MJ DIP TEE
- 10 - 1 - NEW 12" GATE VALVE & VALVE BOX WITH CONCRETE COLLAR PER DETAIL B/4
- 11 - 1 - 12" X 12" X 12" MJ DIP TEE
- 12 - 1 - 16" X 16" X 14" MJ DIP TEE
- 13 - 2 - CONNECT NEW 12" DIP TO EXISTING 12" CIP
- 14 - 7 - CUT AND CAP WATERTIGHT (VARIOUS SIZE OF PIPELINE)
- 15 - REMOVE EXISTING VAULT LID AND REPLACE PER DETAIL E/4. RAISE TO 6" ABOVE FINISHED GRADE
- 16 - DISPOSE OF EXISTING VAULT AND APPURTENANCES
- 17 - CONNECT NEW 16" DIP TO TANK INSIDE EXISTING VAULT. REPLACE EXISTING CONNECTION WITH STAINLESS STEEL BODY AND FASTENER COUPLING.
- 18 - REMOVE EXISTING WATER METER AND REPLACE WITH KROHNE ENVIROMAG 2000 FLOW METER

ALL NEW PIPING AND JOINT RESTRAINTS TO BE INSTALLED PER DETAILS A/4, C/4, D/4

WORK TO BE DONE BY DPU IN-HOUSE STAFF:

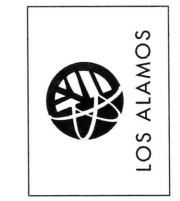
- TANK TO BE DRAINED BACK INTO THE SYSTEM UNTIL 2 FEET OF WATER REMAINS. OPEN 8" DRAIN VALVE AND DRAIN TANK THROUGH DRAIN PIPING.
- ALL ELECTRICAL AND SCADA WORK REQUIRED FOR OPERATION OF NEW FLOW METER AND ELECTRONIC CONTROL VALVE



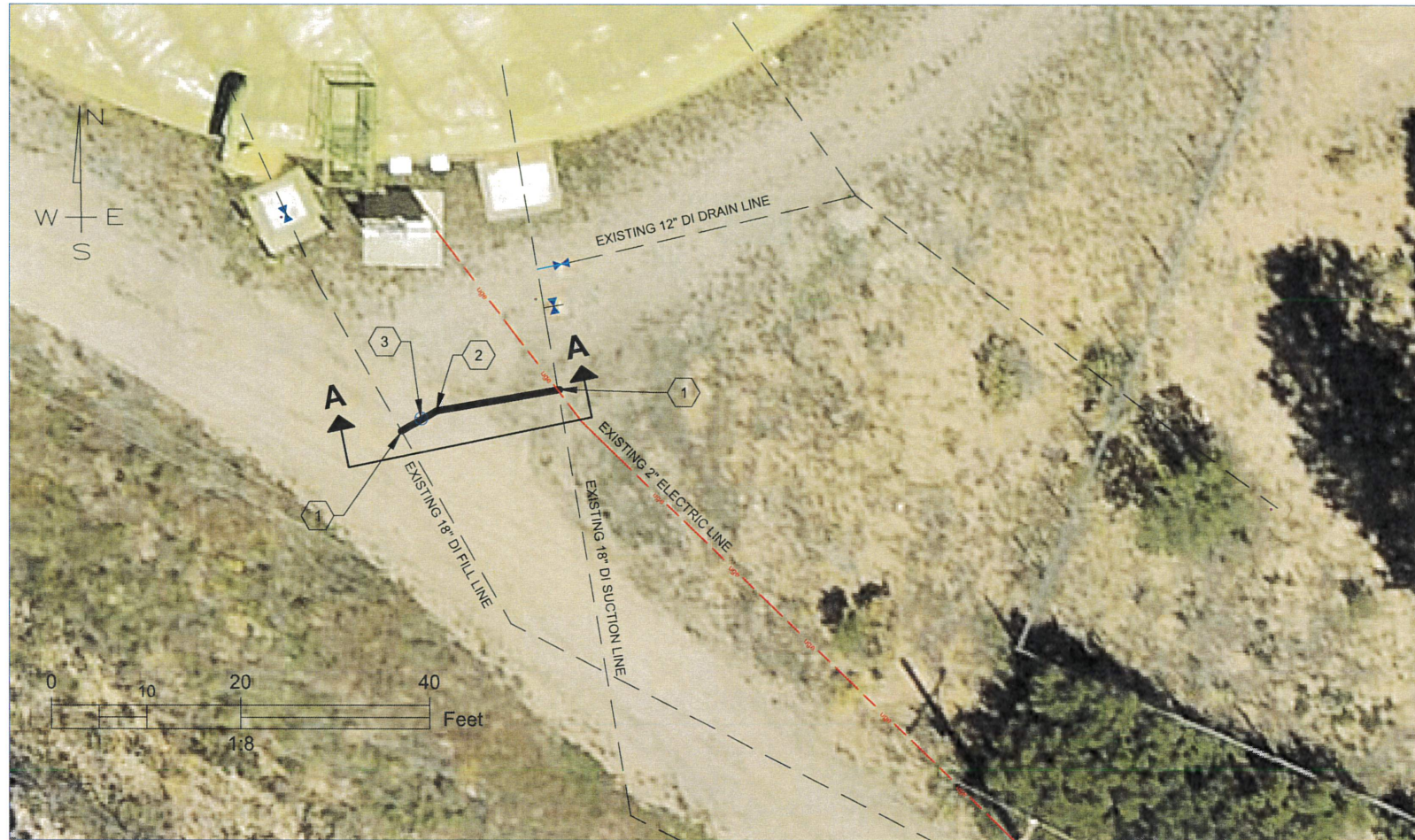
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**TANK PIPING UPGRADES -
PHASE 2
TWIN TANK PIPE MODIFICATIONS**



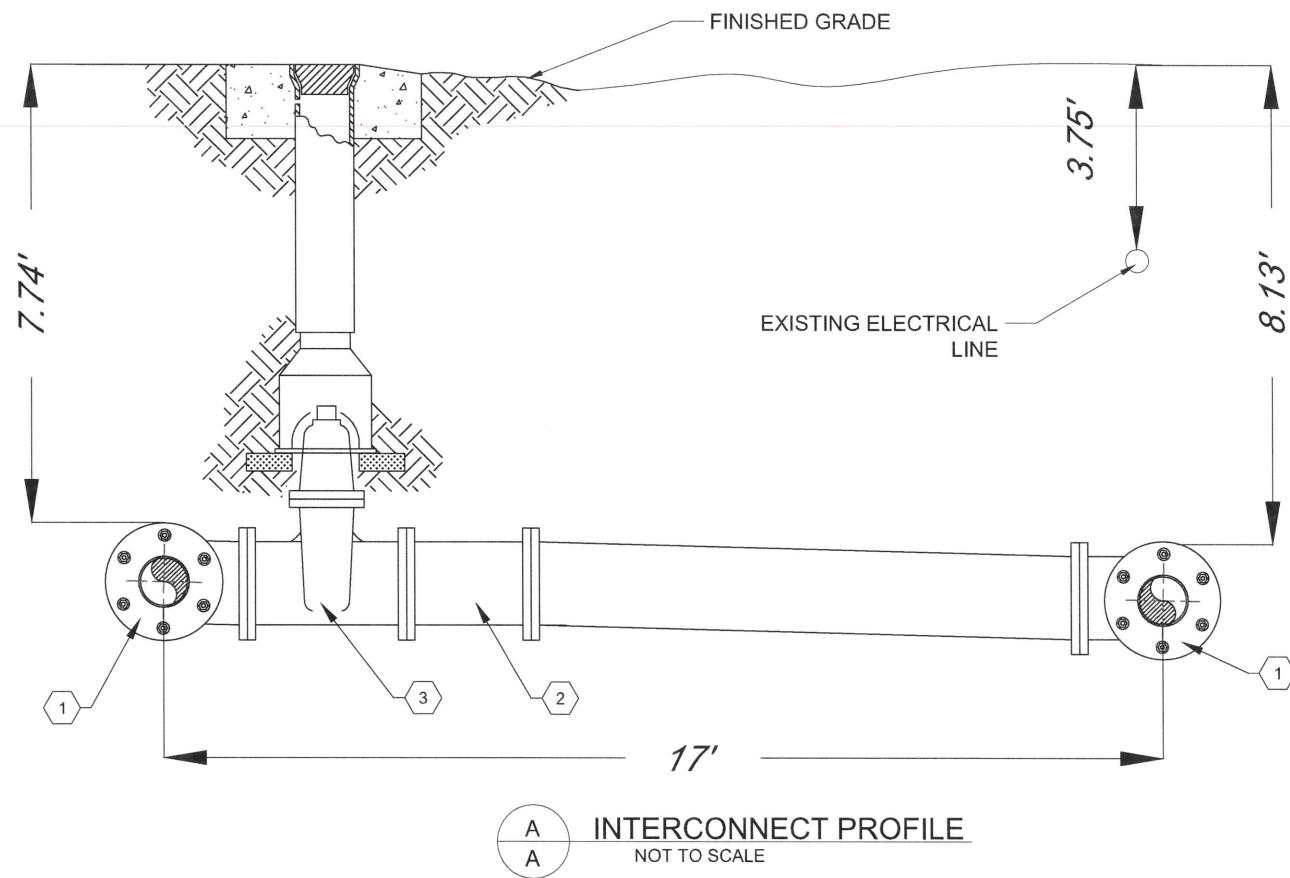
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OF LOS ALAMOS
DEPARTMENT OF PUBLIC UTILITIES
1000 CENTRAL AVE. SUITE 130
LOS ALAMOS, NEW MEXICO 87544
(505) 662-8150 FAX: (505) 662-8109



- 1 - 2 - 18" X 18" X 18" MJ DIP TEE
- 2 - 1 - 18" 22.5° DIP BEND
- 3 - 1 - 18" GATE VALVE & VALVE BOX WITH CONCRETE COLLAR PER DETAIL B/4

ALL NEW PIPING AND JOINT RESTRAINTS TO BE INSTALLED PER DETAILS A/4, C/4, D/4

EXISTING 18" D.I SUCTION LINE IS AT A 45° ANGLE RELATIVE TO FINISHED GRADE AT TIE-IN LOCATION



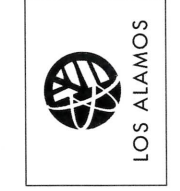
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DATE:	3/9/2026
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TANK PIPING UPGRADES -
PHASE 2
TANK 4A PIPE MODIFICATIONS



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OF LOS ALAMOS
DEPARTMENT OF PUBLIC UTILITIES
1000 CENTRAL AVE., SUITE 130
LOS ALAMOS, NEW MEXICO 87544
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SHEET
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LOS ALAMOS
Department of Public Utilities
Electric, Gas, Water, and Wastewater Services

UTILITY CONSTRUCTION STANDARDS - WATER
JOINT RESTRAINT FOR POLYETHYLENE WRAPPED DUCTILE IRON AND C-900 PVC SECTION 6000 6014

PVC Mechanical Joint Restraint Table

PIPE SIZE	BENDS				TEES				VERTICAL OFFSETS				DEAD ENDS & VALVES
	11 1/4	22 1/2	45	90	LRN = 5	LRN = 10	LRN = 20	45	DOWN	UP	DOWN	UP	
4"	2	4	7	14	1	1	1	1	1	1	1	1	2
6"	2	4	7	14	1	1	1	1	1	1	1	1	3
8"	2	4	7	14	1	1	1	1	1	1	1	1	4
10"	2	4	7	14	1	1	1	1	1	1	1	1	5
12"	2	4	7	14	1	1	1	1	1	1	1	1	6

Ductile Iron/Poly Wrap Mechanical Joint Restraint Table

PIPE SIZE	BENDS				TEES				VERTICAL OFFSETS				DEAD ENDS & VALVES
	11 1/4	22 1/2	45	90	LRN = 5	LRN = 10	LRN = 20	45	DOWN	UP	DOWN	UP	
4"	2	4	7	14	1	1	1	1	1	1	1	1	2
6"	2	4	7	14	1	1	1	1	1	1	1	1	3
8"	2	4	7	14	1	1	1	1	1	1	1	1	4
10"	2	4	7	14	1	1	1	1	1	1	1	1	5
12"	2	4	7	14	1	1	1	1	1	1	1	1	6

1. Restraint lengths provided are in feet.
2. Lr - the minimum attached length of solid pipe without joints, fittings, etc. to extend in each direction along the run of the line.
3. Restraint lengths computed for pipe with 4' of cover from top of pipe.
4. Maximum test pressure of 100 psi.
5. All pipe joints and fittings within the restrained length specified in the table shall be restrained.

DATE: APRIL 2018 APPROVED BY: REVISION: DATE: No.

A
4 JOINT RESTRAINT FOR POLYETHYLENE WRAPPED DUCTILE IRON PIPE AND C-900 DETAIL

LOS ALAMOS
Department of Public Utilities
Electric, Gas, Water, and Wastewater Services

UTILITY CONSTRUCTION STANDARDS - WATER
WATER VALVE BOX SECTION 6000 6013

NOTE: INDICATE ON CONCRETE COLLAR THE TYPE OF MATERIAL USED (W/DFE, W/FE, STEEL, ETC.) AND INDICATE THE DIRECTION OF FLOW AND SIZE OF PIPE.

4000 PSI MINIMUM CONCRETE COLLAR WITH REINFORCING 4"x4"x10 GAUGE WIRE MESH

3000 PSI MINIMUM CONCRETE COLLAR WITH REINFORCING 4"x4"x10 GAUGE WIRE MESH

VALVE BOX, LID AND CONCRETE COLLAR MUST BE LEVEL WITH FINISHED GRADE OF ASPHALT OR CONCRETE SURFACE

LID MUST INDICATE UTILITY MARKED "WATER"

SLOPE/CHAMFER ON ALL COLLARS NOT IN ASPHALT OR CONCRETE AREA TO MATCH UP TO FINISHED GRADE

#10 SOLID COPPER BLUE INSULATED TRACING WIRE

5 1/4" SLIP ZETYPTE ADJUSTABLE PLASTIC VALVE BOX

WATER VALVE

USE BRICKS AS NEEDED TO SUPPORT VALVE BOXES TO KEEP LOADS FROM VALVE AND PIPE

DATE: SEPTEMBER 2022 APPROVED BY: REVISION: DATE: No.

B
4 VALVE BOX ASSEMBLY DETAIL

LOS ALAMOS
Department of Public Utilities
Electric, Gas, Water, and Wastewater Services

UTILITY CONSTRUCTION STANDARDS - WATER
WATER MAIN TRENCH DETAIL SECTION 6000 6009

COMPACTED BACKFILL (SEE NOTE 2)

FINISHED GRADE

WATER WARNING TAPE

48" MIN WATER

6" ABOVE PIPE

COMPACTED BEDDING (SEE NOTE 2)

3" BELOW PIPE

NOTE 3

DATE: FEBRUARY 2022 APPROVED BY: REVISION: DATE: No.

C
4 WATER MAIN TRENCH DETAIL



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DESIGNED BY: SH
DRAWN BY: SH
APPROVED BY: JAM
DATE: 3/9/2026
SCALE:

TANK PIPING UPGRADES - PHASE 2
DETAILS



INCORPORATED COUNTY OF LOS ALAMOS
DEPARTMENT OF PUBLIC UTILITIES
1000 CENTRAL AVE., SUITE 130
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(505) 662-8150 FAX: (505) 662-8109

SHEET
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UTILITY CONSTRUCTION STANDARDS - WATER
CONCRETE BLOCKING SECTION 6000 6015

THRUST BLOCK FOR TEES, CAPS AND PLUGS

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (IN)	REQUIRED BEARING AREA (SQ FT)	90 DEG				45 DEG				22.50 DEG				11.25 DEG				
			3	4	6	8	3	4	6	8	3	4	6	8	3	4	6	8	
3	3.38	1.4																	
4	4.5	2.0																	
6	6.0	3.0																	
8	8.0	4.0																	
10	10.0	5.0																	
12	12.0	6.0																	
14	14.0	7.0																	
16	16.0	8.0																	
18	18.0	9.0																	
20	20.0	10.0																	
24	24.0	12.0																	

NOTE: 1. MAXIMUM TEST PRESSURE = 150 PSI
2. MAXIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
3. BEARING AREA = A x B
4. C SHALL BE GREATER THAN 1/2 AND 3/4
5. THIS DETAIL TO BE USED IN SITUATIONS WHERE EXISTING
6. CONTRACTOR TO USE AFTER APPROVAL BY THE PROJECT MANAGER

THRUST BLOCK FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

DATE: APRIL 2018 APPROVED BY: REVISION: DATE: No.

D
4 CONCRETE BLOCKING DETAIL

UTILITY CONSTRUCTION STANDARDS - WATER
VAULT LID DETAIL SECTION 6000 6015

48" x 48" BILCO TYPE JD DOUBLE LEAF HATCH

EXTEND VAULT WALLS TO OBTAIN A 4" CLEARANCE FROM FINISHED GRADE.

CAST-IN-PLACE CONCRETE VAULT LID SHALL BY 4" THICK CONCRETE WITH #4 REBARS

VAULT LID CONSTRUCTION NOTES

- DOWEL #4 REBARS EVERY 1.5 FEET INTO EXISTING VAULT WALL TO EXTEND WALL VERTICALLY
- BUTYL RUBBER OR NEOPRENE GASKET SEAL REQUIRED BETWEEN NEW VAULT VERTICAL WALL AND NEW LID
- CAST-IN-PLACE CONCRETE VAULT LID SHALL BY 4" THICK CONCRETE WITH #4 REBARS
- INSTALL 6" STEEL PIPE FOR "CANDY CANE" VENT W/ MESH BUG SCREEN
- 48" X 48" BILCO TYPE JD DOUBLE LEAF FRAME AND COVER

DATE: APRIL 2018 APPROVED BY: REVISION: DATE: No.

E
4 VAULT LID DETAIL