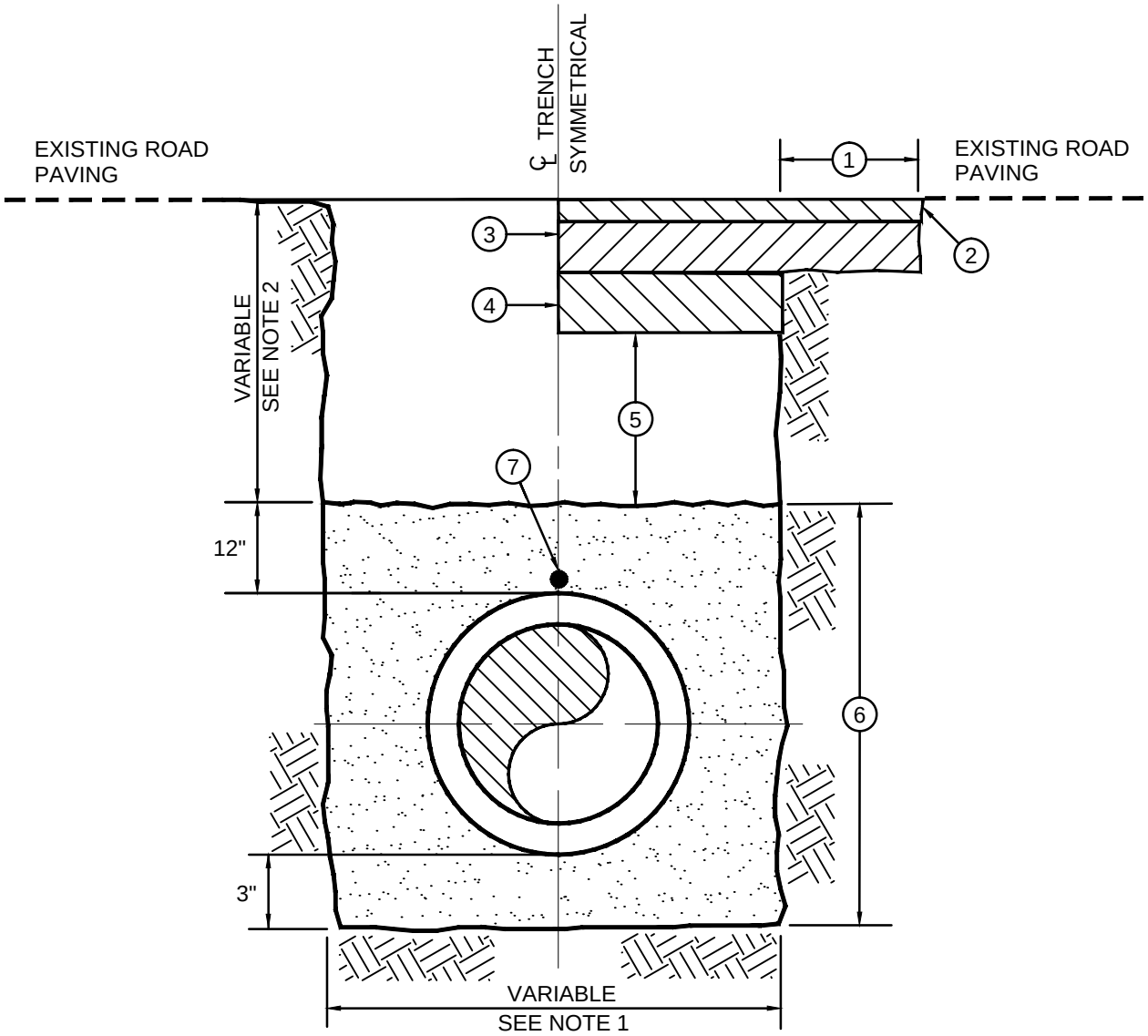
DISTRICT DRAWINGS

West Valley Water District

INDEX OF STANDARD DRAWINGS

DRAWINGS NO.	TITLE
W-1	Typical Trench Detail
W-2	Fire Hydrant Assembly
W-3A, B, C & D	Concrete Thrust Block Details
W-4	Water Service Detail – ¾" and 1" Meter
W-5	Water Service Detail – 1 1/2" and 2" Meter
W-6A & B	Air Valve Installation
W-7A & B	4" and 6" Blow-Off Assembly
W-8A & B	2" and 4" Dead-End Flush-Out
W-9	Water Service Detail – 3" and Larger Meters
W-10	Temporary Hydrant Meter Assembly
W-11	Valve and Valve Box Installation Detail
W-12	Guard Post Installation Detail
W-13	Bonding Clip Detail
W-14	Butt Strap Detail
W-15	Fire Service Installation Detail
W-16	Chain Link Fence Detail
W-17	Chain Link Fence Gate Detail
W-18	Tapping Outlet for Steel Pipe – 1" and 2"
W-19	Tapping Outlet for Steel Pipe – 3" and Larger
W-20	Backflow Preventer (R.P.) Installation Detail
W-21	Sample Station Detail
W-22	Pressure Regulation Station Detail
W-23	Conductor Tube
W-24	Concrete Blanket
W-25	Siphon Detail
W-26	Inverted Siphon Detail
W-27	Concrete Encasement
W-28	New Lateral Installation – 3" and Larger
W-29	Water Service Abandonment
W-30	Restrained Joint Detail



ITEM DESCRIPTION:

1. SAWCUT OR COLD PLANE 12" FROM TRENCH CUTS.
2. 1" TO 1 1/2" AC CAP PAVEMENT.
3. 3" AC BASE PAVEMENT.
4. CLASS 2 ROAD BASE (6" MIN).
5. TRENCH TO BE BACKFILLED IN LAYERS NOT EXCEEDING 3' IN DEPTH PER DISTRICT SPECIFICATIONS. SEE NOTE 5 FOR MATERIAL.
6. BACKFILL TO 12" OVER TOP OF PIPE USING GRANULAR MATERIAL WITH A SAND EQUIVALENT 30.
7. LOCATOR WIRE.

NOTES:

1. WIDTH OF TRENCH: MIN. = PIPE O.D. + 12", MAX. = PIPE O.D. + 16".
2. REPLACE A.C. PAVEMENT AND ROAD BASE IN ACCORDANCE WITH CITY OF COUNTY EXCAVATION PERMIT.
3. FLOW LINE GRADE SHALL BE PER PLAN.
4. LOCATOR WIRE TO BE SECURED TO PIPE WITH TAPE, DOUBLE WRAPPED AROUND PIPE WITH TWO PER JOINT.
5. EXCAVATED/NATIVE MATERIAL CAN BE USED FOR BACKFILL WHEN APPROVED BY THE DISTRICT. WHEN EXCAVATED MATERIAL CANNOT BE USED, BACKFILL WITH CLASS 2 BASE OR 3" MINUS SCREENED MATERIAL.
6. SAND BEDDING SHALL BE UNIFORM BEARING FOLLOWING THE CURVATURE OF THE PIPE.
7. A MINIMUM 90% COMPACTION RATING IS REQUIRED IN SAND BEDDING AND 95% IN BASE BACKFILL.
8. ALL PIPE SHALL BE WRAPPED IN POLYETHYLENE PROTECTIVE WRAPPING PER DISTRICT SPECIFICATIONS.

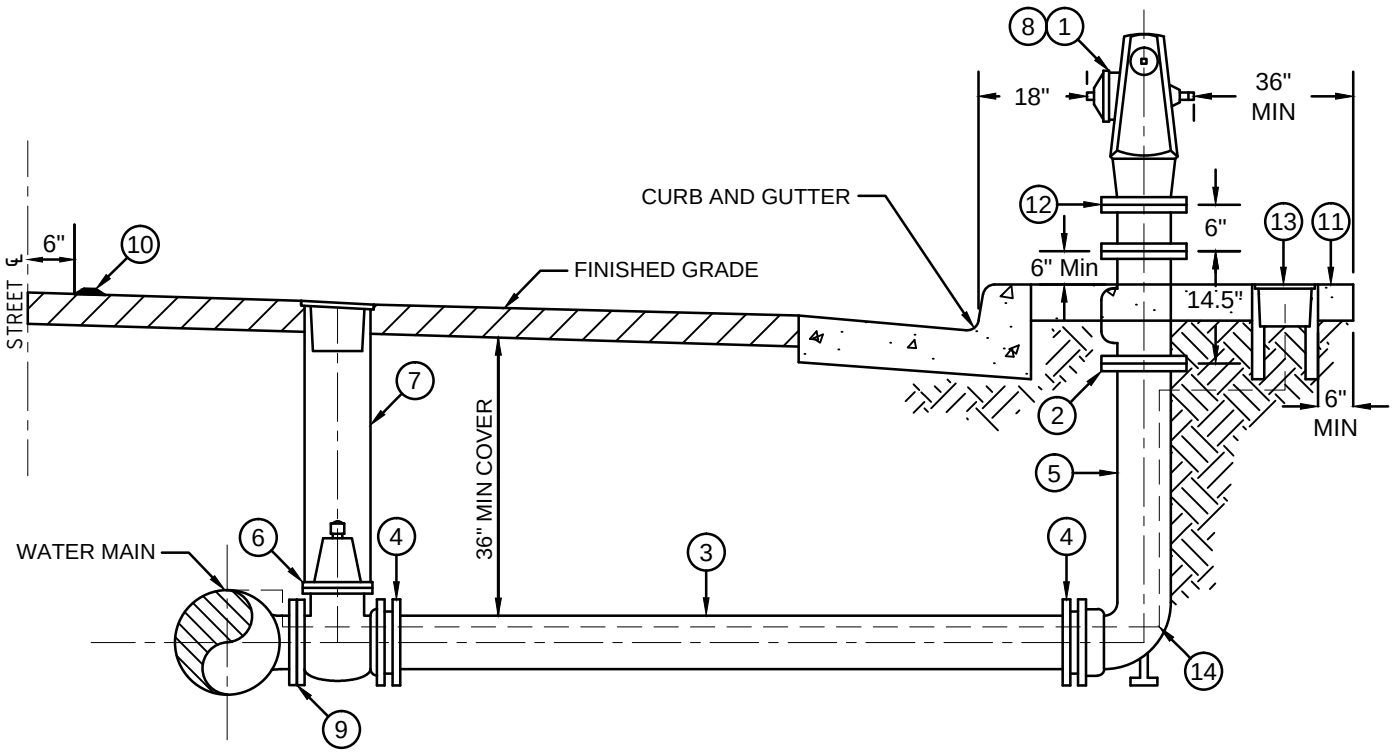
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

TYPICAL TRENCH DETAIL

DRAWING NUMBER

W-1



ITEM DESCRIPTION:

1. CLOW VALVE CO. MODEL F850 WET BARREL FIRE HYDRANT WITH 6" FLG INLET, 4" HOSE OUTLET AND ONE 2-1/2" HOSE OUTLET. INSTALLED WITH 8-HOLE PATTERN BASE FLG.
2. CLOW VALVE CO. MODEL LBI 400A BREAK OFF CHECK VALVE WITH 8-HOLE DRILL PATTERN.
3. 6" D.I PIPE, PRESSURE CLASS 350.
4. RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5. 6" X REQUIRED LENGTH, D.I HYDRANT BURY WITH M.J INLET AND FLG. OUTLET
6. 6" RESILIENT-SEATED GATE VALVE (FLG. X M.J.) PER DISTRICT STANDARD W-11
7. VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
8. PAINT HYDRANT SAFETY YELLOW PER DISTRICT SPECIFICATIONS.
9. D.I. TEE, MAIN SIZE X 6" (M.J. X M.J. X FLG), FOR EXISTING MAIN SEE DISTRICT STANDARD W-19 OR W-28.
10. INSTALL BLUE DOT PAVEMENT MARKER 6" FROM EDGE OF PAINTED CENTER LINE ON THE SIDE NEAREST THE HYDRANT. BLUE DOT REFLECTOR PER CALTRANS 85-105 WITH STIMSONITE 88AB EPOXY.
11. 3' X 3' X 6" CLASS IV CONCRETE PAD.
12. 6" BREAK OFF SPOOL.
13. J&R CONCRETE VALVE BOX AND LID, MODELS V1-R AND V1-RT. FLUSH WITH CONCRETE PAD. PLACED EVERY 1,000 FT PER INSPECTORS DIRECTION.
14. LOCATING WIRE.

NOTES:

1. TYP. LOCATION FOR HYDRANT IS 18" BEHIND CURB FACE. IF THERE IS NO CURB, LOCATE HYDRANT 24" BEHIND PROPERTY LINE.
2. IF 3' CLEAR IS NOT POSSIBLE BEHIND HYDRANT, PLACE HYDRANT BEHIND SIDEWALK IN PARKWAY
3. IF THERE IS NO CURB, EACH HYDRANT SHALL HAVE TWO GUARD POSTS PER DISTRICT STANDARD W-12.
4. 4" STEAMER OUTLET SHALL BE PLACED PERPENDICULAR TO CURB AND GUTTER, FACING THE STREET.
5. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.

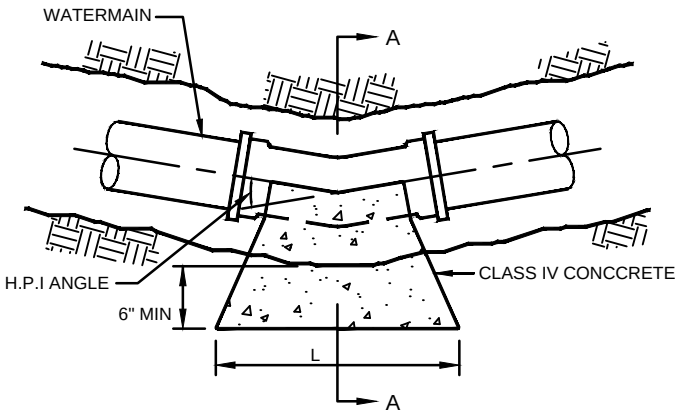
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

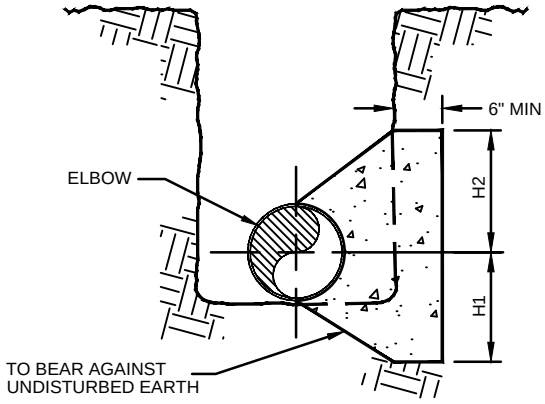
FIRE HYDRANT ASSEMBLY

DRAWING NUMBER

W-2



PLAN



SECTION A-A

HORIZONTAL THRUST BLOCK

PIPE DIA.	H1	H2	L	H.P.I. ANGLE
6" & LESS	1/2 O.D.	1/2 O.D.	2'-0"	≤11.25°
6" & LESS	6"	6"	4'-0"	≤22.50°
6" & LESS	9"	9"	4'-0"	≤45°
6" & LESS	12"	12"	4'-0"	≤67.50°
6" & LESS	1'-3"	1'-3"	4'-0"	≤90°
8"	1/2 O.D.	1/2 O.D.	2'-0"	≤11.25°
8"	8"	8"	4'-0"	≤22.50°
8"	1'-2"	1'-2"	4'-0"	≤45°
8"	1'-8"	1'-8"	4'-0"	≤67.50°
8"	2'-0"	2'-0"	4'-0"	≤90°
10"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
10"	10"	10"	4'-0"	≤22.50°
10"	1'-8"	1'-8"	4'-0"	≤45°
10"	2'-2"	2'-2"	4'-0"	≤67.50°
10"	2'-2"	2'-2"	6'-0"	≤90°
12"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
12"	12"	12"	4'-0"	≤22.50°
12"	2'-0"	2'-0"	4'-0"	≤45°
12"	2'-3"	2'-3"	4'-0"	≤67.50°
12"	2'-3"	2'-3"	6'-0"	≤90°
16"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
16"	1'-6"	1'-6"	4'-0"	≤22.50°
16"	2'-8"	2'-8"	6'-0"	≤45°
16"	2'-8"	2'-8"	8'-0"	≤67.50°
16"	2'-8"	2'-8"	10'-0"	≤90°
18"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
18"	1'-6"	1'-6"	5'-0"	≤22.50°
18"	3'-0"	3'-0"	8'-0"	≤45°
18"	3'-0"	3'-0"	10'-0"	≤67.50°
18"	3'-0"	3'-0"	12'-0"	≤90°
20"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
20"	2'-0"	2'-0"	5'-0"	≤22.50°
20"	3'-0"	3'-0"	9'-0"	≤45°
20"	3'-0"	3'-0"	11'-0"	≤67.50°
20"	3'-0"	3'-0"	13'-0"	≤90°
24"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
24"	2'-0"	2'-0"	5'-0"	≤22.50°
24"	3'-0"	3'-0"	10'-0"	≤45°
24"	3'-0"	3'-0"	16'-0"	≤67.50°
24"	3'-0"	3'-0"	18'-0"	≤90°
30"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
30"	3'-6"	3'-3"	8'-0"	≤22.50°
30"	3'-6"	3'-3"	12'-0"	≤45°
30"	3'-9"	3'-9"	18'-0"	≤67.50°
30"	3'-9"	3'-9"	21'-0"	≤90°
36"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
36"	3'-9"	3'-9"	8'-0"	≤22.50°
36"	3'-9"	3'-9"	14'-0"	≤45°
36"	3'-9"	3'-9"	20'-0"	≤67.50°
36"	4'-2"	4'-2"	22'-0"	≤90°

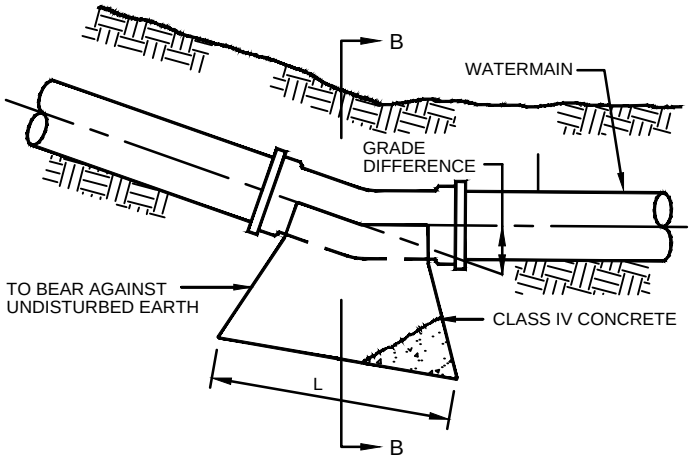
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

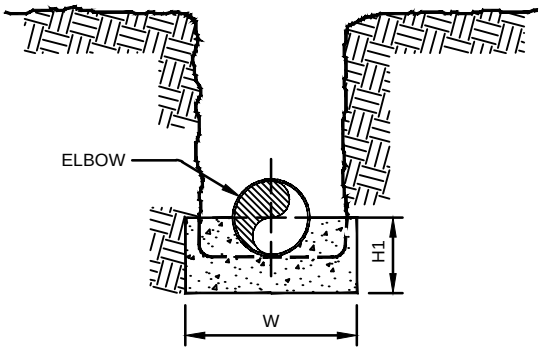
HORIZANTAL THRUST BLOCK FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

W-3A



ELEVATION



SECTION B-B

VERTICAL BEARER BLOCK

PIPE DIA.	W	H1	L	GRADE % DIFF.
8" & LESS	2'-6"	1'-0"	1'-6"	5 TO 15
8" & LESS	2'-6"	1'-0"	1'-6"	16 TO 25
8" & LESS	2'-6"	1'-0"	1'-6"	26 TO 35
8" & LESS	2'-6"	1'-0"	1'-6"	36 TO 45
8" & LESS	2'-6"	1'-0"	2'-0"	46 TO 55
10"	2'-6"	1'-0"	2'-0"	5 TO 15
10"	2'-6"	1'-0"	2'-0"	16 TO 25
10"	2'-6"	1'-0"	2'-0"	26 TO 35
10"	2'-6"	1'-0"	2'-0"	36 TO 45
10"	2'-6"	1'-0"	2'-0"	46 TO 55
12"	2'-6"	1'-3"	2'-0"	5 TO 15
12"	2'-6"	1'-3"	2'-0"	16 TO 25
12"	2'-6"	1'-3"	2'-0"	26 TO 35
12"	2'-6"	1'-3"	2'-0"	36 TO 45
12"	2'-6"	1'-3"	2'-6"	46 TO 55
16"	3'-0"	1'-6"	2'-0"	5 TO 15
16"	3'-0"	1'-6"	2'-0"	16 TO 25
16"	3'-0"	1'-6"	2'-0"	26 TO 35
16"	3'-0"	1'-6"	2'-0"	36 TO 45
16"	3'-0"	1'-6"	3'-0"	46 TO 55
18"	3'-0"	1'-6"	2'-0"	5 TO 15
18"	3'-0"	1'-6"	2'-0"	16 TO 25
18"	3'-0"	1'-6"	2'-6"	26 TO 35
18"	3'-0"	1'-6"	3'-0"	36 TO 45
18"	3'-0"	1'-6"	5'-0"	46 TO 55
20"	3'-6"	1'-6"	2'-0"	5 TO 15
20"	3'-6"	1'-6"	2'-0"	16 TO 25
20"	3'-6"	1'-6"	2'-6"	26 TO 35
20"	3'-6"	1'-6"	3'-0"	36 TO 45
20"	3'-6"	1'-6"	5'-0"	46 TO 55
24"	4'-0"	1'-8"	2'-0"	5 TO 15
24"	4'-0"	1'-8"	2'-6"	16 TO 25
24"	4'-0"	1'-8"	3'-0"	26 TO 35
24"	4'-0"	1'-8"	3'-6"	36 TO 45
24"	4'-0"	1'-8"	5'-0"	46 TO 55
30"	4'-6"	2'-0"	2'-0"	5 TO 15
30"	4'-6"	2'-0"	3'-0"	16 TO 25
30"	4'-6"	2'-0"	4'-0"	26 TO 35
30"	4'-6"	2'-0"	5'-0"	36 TO 45
30"	4'-6"	2'-0"	6'-6"	46 TO 55
36"	5'-6"	2'-0"	2'-0"	5 TO 15
36"	5'-6"	2'-0"	3'-6"	16 TO 25
36"	5'-6"	2'-0"	5'-0"	26 TO 35
36"	5'-6"	2'-0"	6'-6"	36 TO 45
36"	5'-6"	2'-0"	8'-0"	46 TO 55

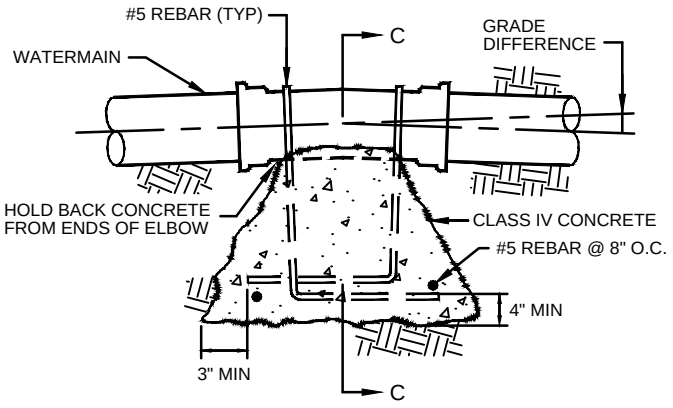
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

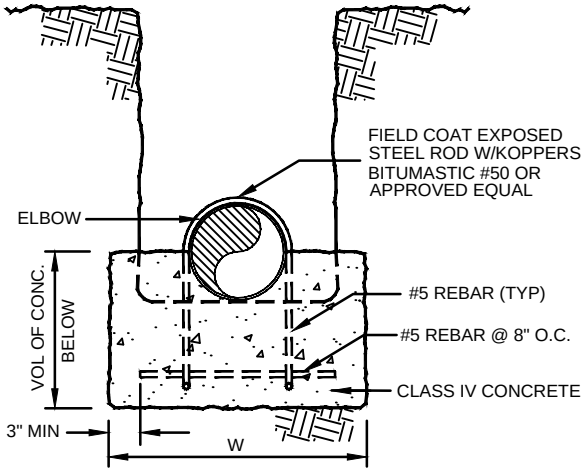
VERTICAL BEARER THRUST BLOCK FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

W-3B



SECTIONAL ELEVATION



SECTION C-C

VERTICAL ANCHOR BLOCK

PIPE DIA.	W	VOLUME OF CONC (cu ft)	GRADE % DIFF.
6" & LESS	2'-6"	7.6	5 TO 15
6" & LESS	2'-6"	11.4	16 TO 25
6" & LESS	2'-6"	15.2	26 TO 35
6" & LESS	2'-6"	22.8	36 TO 45
6" & LESS	2'-6"	31.0	46 TO 55
8"	2'-6"	10.3	5 TO 15
8"	2'-6"	15.5	16 TO 25
8"	2'-6"	20.6	26 TO 35
8"	2'-6"	31.0	36 TO 45
8"	2'-6"	41.3	46 TO 55
10"	3'-0"	27.6	5 TO 15
10"	3'-0"	36.8	16 TO 25
10"	3'-0"	55.3	26 TO 35
10"	3'-0"	73.7	36 TO 45
10"	3'-0"	92.1	46 TO 55
12"	3'-6"	30.0	5 TO 15
12"	3'-6"	45.0	16 TO 25
12"	3'-6"	67.5	26 TO 35
12"	3'-6"	75.0	36 TO 45
12"	3'-6"	97.5	46 TO 55
16"	4'-0"	48.0	5 TO 15
16"	4'-0"	72.0	16 TO 25
16"	4'-0"	84.0	26 TO 35
16"	4'-0"	130.0	36 TO 45
16"	4'-0"	168.0	46 TO 55
18"	4'-0"	81.0	5 TO 15
18"	4'-0"	108.0	16 TO 25
18"	4'-0"	135.0	26 TO 35
18"	4'-0"	192.5	36 TO 45
18"	4'-0"	270.0	46 TO 55
20"	4'-3"	108.0	5 TO 15
20"	4'-3"	162.0	16 TO 25
20"	4'-3"	189.0	26 TO 35
20"	4'-3"	216.0	36 TO 45
20"	4'-3"	297.0	46 TO 55
24"	4'-6"	120.0	5 TO 15
24"	4'-6"	150.0	16 TO 25
24"	4'-6"	210.0	26 TO 35
24"	4'-6"	270.0	36 TO 45
24"	4'-6"	330.0	46 TO 55
30"	5'-0"	168.0	5 TO 15
30"	5'-0"	294.0	16 TO 25
30"	5'-0"	378.0	26 TO 35
30"	5'-0"	462.0	36 TO 45
30"	5'-0"	546.0	46 TO 55
36"	5'-6"	196.0	5 TO 15
36"	5'-6"	a	16 TO 25
36"	a	490.0	26 TO 35
36"	5'-6"	637.0	36 TO 45
36"	5'-6"	784.0	46 TO 55

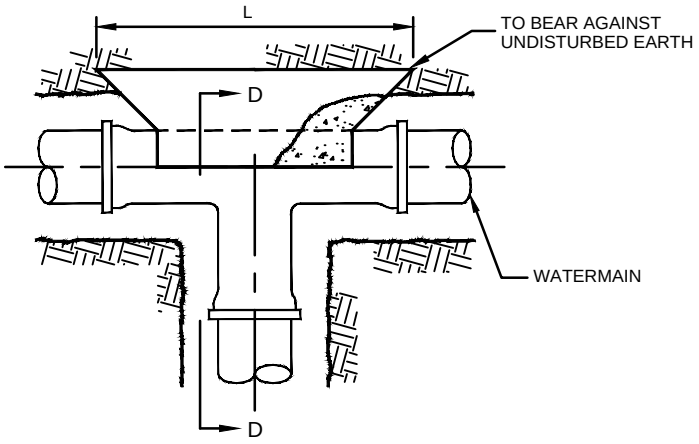
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

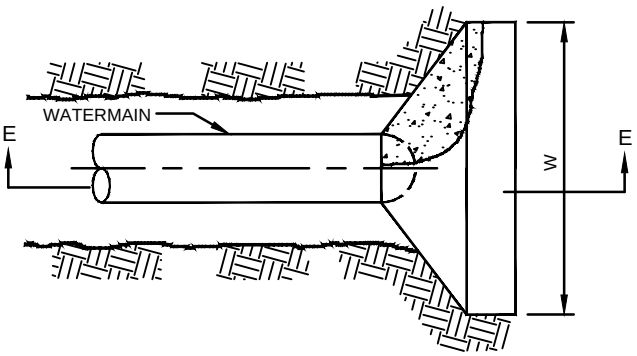
VERTICAL ANCHOR THRUST BLOCK FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

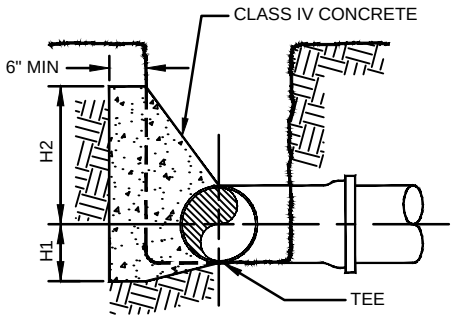
W-3C



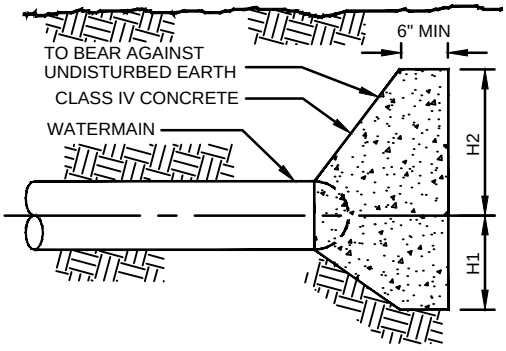
PLAN



PLAN



SECTION D-D



SECTION E-E

*PIPE DIA.	H1	H2	L
4"	1'-0	1'-0"	3'-6"
6"	1'-0"	1'-0"	4'-0"
8"	1'-0"	2'-3"	4'-0"
10"	1'-0"	2'-6"	4'-0"
12"	1'-0"	3'-0"	5'-0"
16"	1'-4"	3'-0"	4'-0"
18"	1'-6"	3'-0"	4'-0"
20"	1'-8"	3'-6"	4'-0"
24"	2'-0"	4'-0"	5'-0"
30"	2'-6"	4'-6"	4'-0"
36"	3'-0"	5'-0"	4'-0"

* USE OUTLET PIPE DIAMETER

TEE THRUST BLOCK

PIPE DIA.	H1	H2	L
4"	1'-0	1'-0"	3'-6"
6"	1'-0"	1'-0"	4'-0"
8"	1'-0"	2'-3"	4'-0"
10"	1'-0"	2'-6"	4'-0"
12"	1'-0"	3'-0"	5'-0"
16"	1'-4"	3'-0"	4'-0"
18"	1'-6"	3'-0"	4'-0"
20"	1'-8"	3'-6"	4'-0"
24"	2'-0"	4'-0"	5'-0"
30"	2'-6"	4'-6"	4'-0"
36"	3'-0"	5'-0"	4'-0"

END THRUST BLOCK

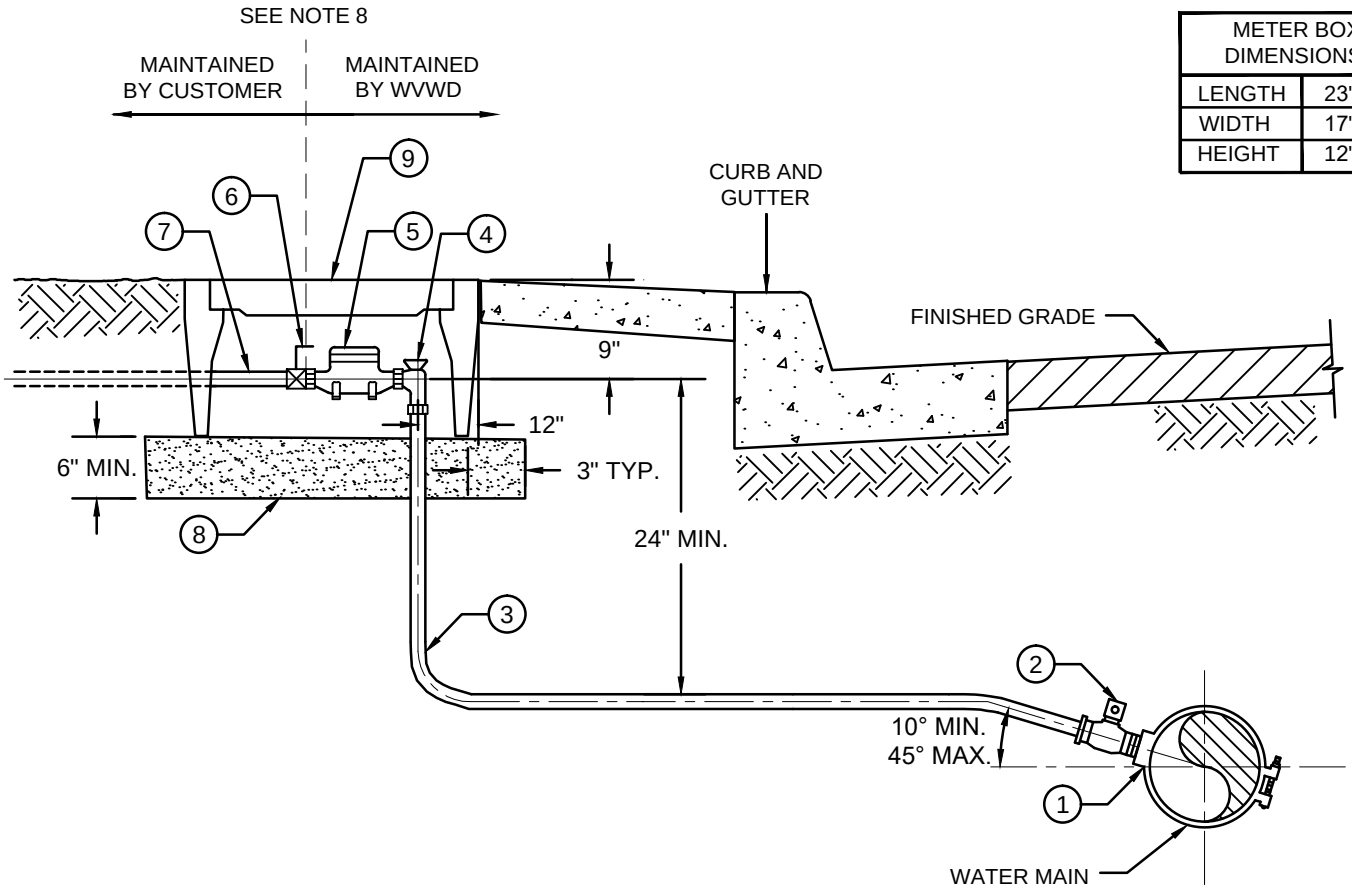
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

TEE AND END THRUST BLOCKS FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

W-3D



METER BOX DIMENSIONS	
LENGTH	23"
WIDTH	17"
HEIGHT	12"

ITEM DESCRIPTION:

1. DOUBLE STRAP SERVICE SADDLE WITH 1" I.P.T OUTLET. FORD F202, MUELLER DR2A, ROMAC 202S, AND SMITH BLAIR 313. WHERE STEEL PIPE IS INSTALLED, USE TAPPING OUTLET PER DISTRICT STANDARD W-18.
2. 1" CORPORATION STOP (I.P.T X P.J). FORD B84-444-NL-R OR MUELLER P25122N-3.
3. 1" COPPER WATER SERVICE, TYPE "K", SOFT TEMPER, PER ASTM B-88.
4. 1" OR 3/4" ANGLE METER VALVE (P.J X METER SWIVEL NUT). FORD BA43-444WR-NL OR MUELLER P24258N-3.
5. 1" OR 3/4" METER (SUPPLIED BY DISTRICT).
6. 1" OR 3/4" CUSTOMER BALL VALVE WITH HANDLE (SUPPLIED BY DISTRICT). FORD B13-444WR-NL OR MUELLER B24351-3.
7. 1" OR 3/4" THREADED PIPE (MALE). INSTALLED BY PRIVATE CONTRACTOR PER NOTE 8.
8. IMPORTED SAND BASE.
9. METER BOX (SUPPLIED BY DISTRICT). OLDCASTLE PRECAST FL12 BOX.

NOTES:

1. CHISEL 1" HIGH "W" ON TOP OF CURB DIRECTLY OVER WATER SERVICE LATERAL.
2. ALL SERVICE VALVES SHALL BE 360° TURN (LESS STOP) FROM WATER MAIN TO CUSTOMER VALVE.
3. METER BOXES SHALL BE LOCATED 12" BEHIND CURB IN A PARKWAY OR 12" BEHIND SIDEWALK.
4. METER BOXES SHALL NOT BE LOCATED IN DRIVEWAY APPROACHES OR DRIVE AISLES.
5. ALL SERVICE LATERALS SHALL EXTEND 90° PERPENDICULAR WITH THE WATER MAIN IN THE STREET.
6. SPLICING OF SERVICES WILL NOT BE ALLOWED.
7. WATER LATERAL SHALL NOT EXTEND OVER 3" ABOVE THE TOP OF MAIN AT POINT OF CONNECTION.
8. CONNECTION TO OR INSTALLATION OF CUSTOMER PIPING SHALL BE DONE BY PRIVATE CONTRACTOR, UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND OTHER APPURTENANCES AFTER CUSTOMER SHUT OFF VALVE.
9. WHERE STATIC WATER PRESSURES EXCEED 80PSI, AN APPROVED PRESSURE REGULATOR SHALL BE REQUIRED AT THE BUILDING POINT OF CONNECTION.
10. TAPPING SADDLES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE.

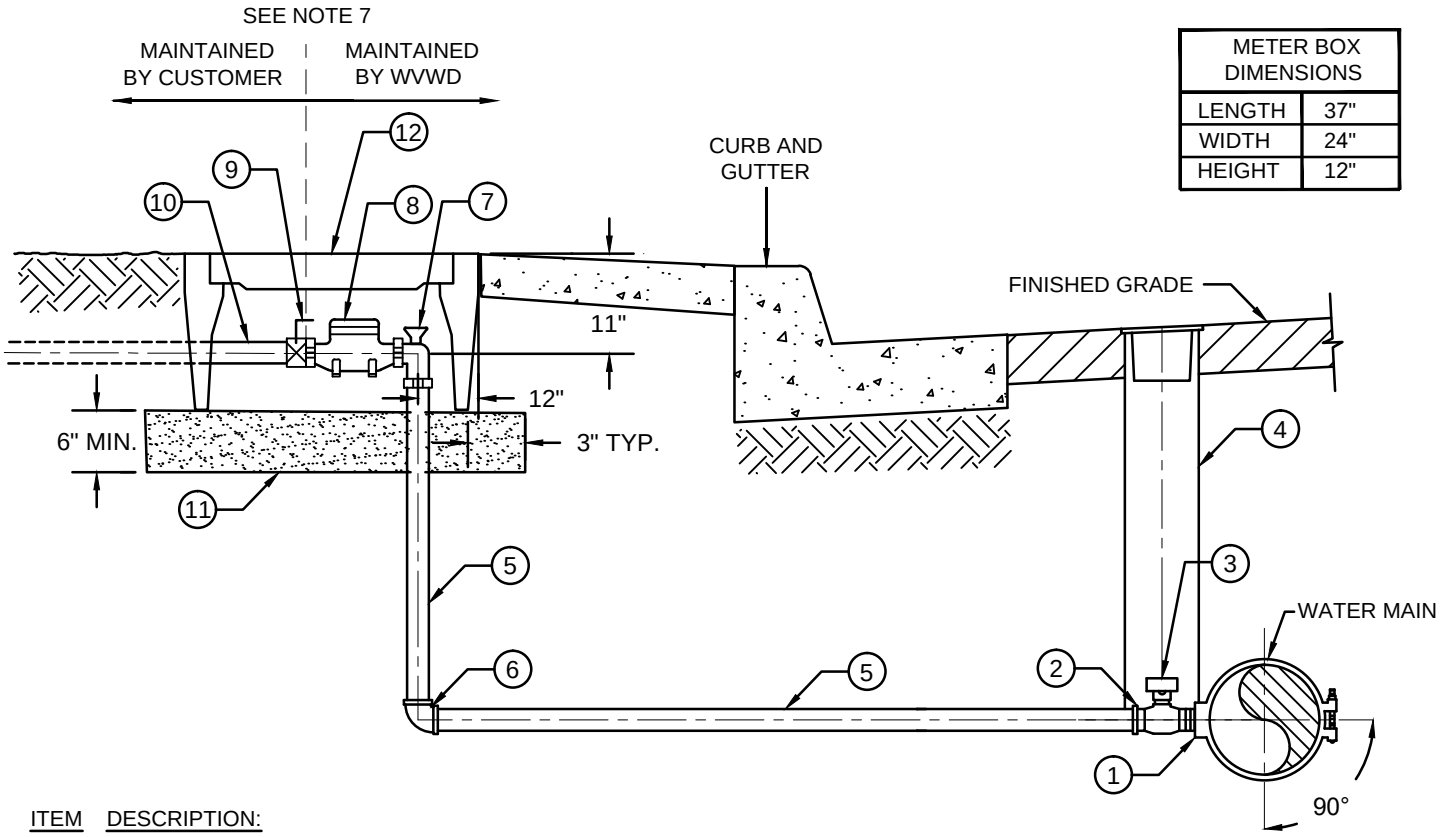
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

WATER SERVICE DETAIL 3/4" & 1" METER

DRAWING NUMBER

W-4



METER BOX DIMENSIONS	
LENGTH	37"
WIDTH	24"
HEIGHT	12"

ITEM DESCRIPTION:

1. DOUBLE STRAP SERVICE SADDLE WITH 2" I.P.T OUTLET. FORD F202, MUELLER DR2A, ROMAC 202S, AND SMITH BLAIR 313. WHERE STEEL PIPE IS INSTALLED, USE TAPPING OUTLET PER DISTRICT STANDARD W-18.
2. 2" CORPORATION STOP (I.P.T X P.J). FORD B84-777-NL-R OR MUELLER P25122N-3.
3. 2" SQUARE OPERATING NUT ADAPTOR. FORD QT67 OR MUELLER B20299.
4. VALVE RISER AND COVER PER DISTRICT STANDARD W-11 (WITH REDWOOD BLOCKS FRAMING OPERATING NUT).
5. 2" COPPER WATER SERVICE, TYPE "K", SOFT TEMPER, PER ASTM B-88.
6. 2" SOLDERED ELBOW OR 90° COMPRESSION ELBOW.
7. 2" ANGLE METER VALVE (P.J X METER FLANGE). FORD BFA43-777WR-NL OR MUELLER P24276N-3.
8. 2" OR 1-1/2" METER (SUPPLIED BY DISTRICT).
9. 2" CUSTOMER BALL VALVE WITH HANDLE (SUPPLIED BY DISTRICT). FORD B13-777WR-NL OR MUELLER B24337N-3.
10. 2" THREADED PIPE (MALE). INSTALLED BY PRIVATE CONTRACTOR PER NOTE 7.
11. IMPORTED SAND BASE.
12. METER BOX (SUPPLIED BY DISTRICT). OLDCASTLE PRECAST FL36T BOX.

NOTES:

1. CHISEL 1" HIGH "W" ON TOP OF CURB DIRECTLY OVER WATER SERVICE LATERAL.
2. ALL SERVICE VALVES SHALL BE 360° TURN (LESS STOP) FROM WATER MAIN TO CUSTOMER VALVE.
3. METER BOXES SHALL BE LOCATED 12" BEHIND CURB IN A PARKWAY OR 12" BEHIND SIDEWALK.
4. METER BOXES SHALL NOT BE LOCATED IN DRIVEWAY APPROACHES OR DRIVE AISLES.
5. ALL SERVICE LATERALS SHALL EXTEND 90° PERPENDICULAR WITH THE WATER MAIN IN THE STREET.
6. SPLICING OF SERVICES WILL NOT BE ALLOWED.
7. CONNECTION TO OR INSTALLATION OF CUSTOMER PIPING SHALL BE DONE BY PRIVATE CONTRACTOR, UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND OTHER APPURTENANCES AFTER CUSTOMER SHUT OFF VALVE.
8. WHERE STATIC WATER PRESSURES EXCEED 80PSI, AN APPROVED PRESSURE REGULATOR SHALL BE REQUIRED AT THE BUILDING POINT OF CONNECTION.
9. TAPPING SADDLES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE.

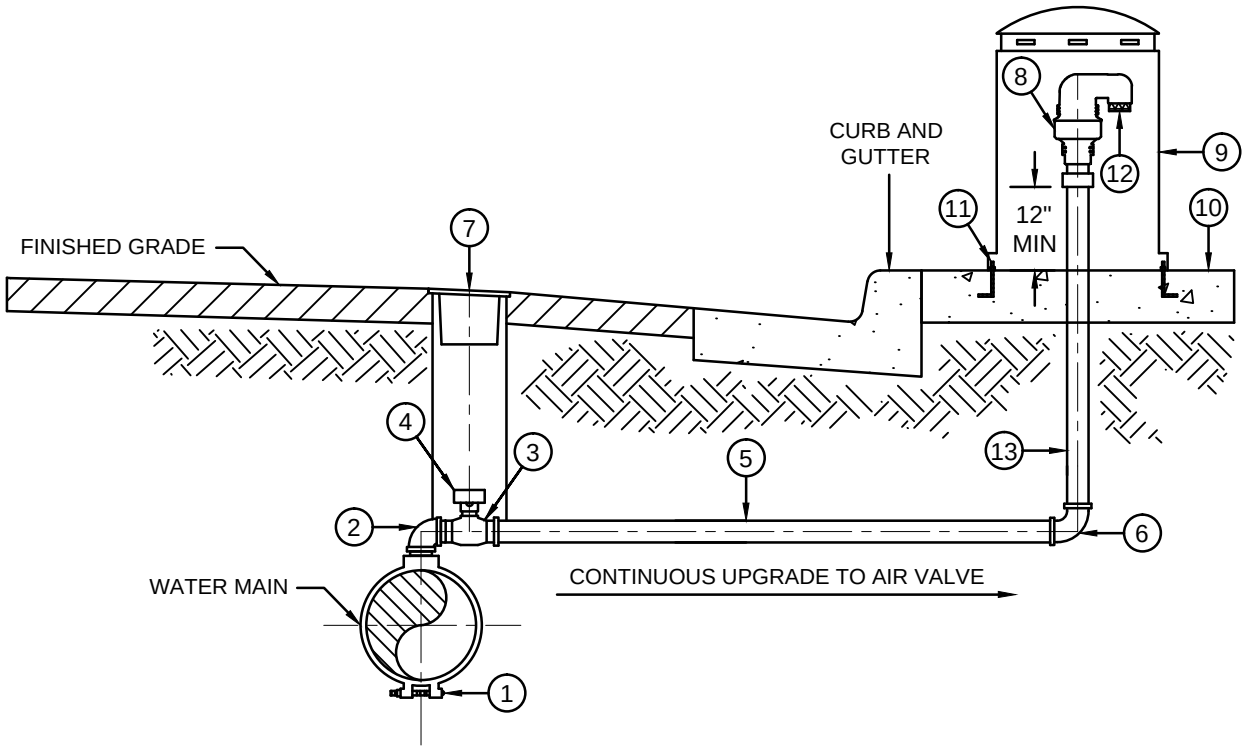
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

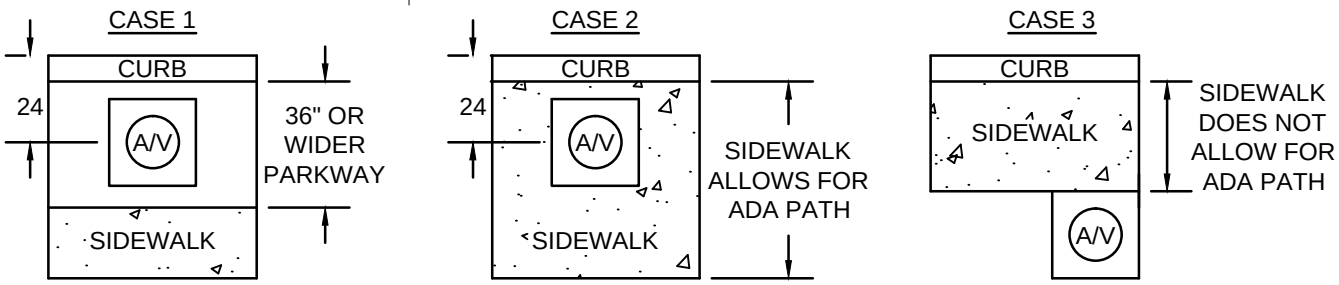
West Valley Water District

WATER SERVICE DETAIL 1-1/2" & 2" METER

DRAWING NUMBER

W-5





ITEM	DESCRIPTION:
1	PIPE SIZE, SERVICE SADDLE PER DISTRICT STANDARD W-4 OR W-5.
2	1" OR 2" 90° ELBOW (M.I.P X F.I.P).
3	1" OR 2" CURB BALL VALVE PER DISTRICT STANDARD W-4 OR W-5.
4	2" BRASS OPERATING NUT PER DISTRICT STANDARD W-5 (2" AIR VALVE ONLY).
5	1" OR 2" TYPE-K SOFT COPPER.
6	1" OR 2" 90° ELBOW (P.J X F.I.P).
7	VALVE RISER AND COVER PER DISTRICT STANDARD W-11 (2" AIR VALVE ONLY).
8	1" A.R.I D-040-C OR 2" D-060-C COMBINATION AIR VALVE.
9	PIPELINE PRODUCTS, VCAS-1830 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
10	3' X 3' X 6" CLASS IV CONCRETE PAD. TOP OF PAD SHALL MATCH TOP OF CURB OR SIDEWALK.
11	3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
12	AIR VENT/EXHAUST SCREEN.
13	1" OR 2" THREADED BRASS PIPE.

NOTES:

1. AIR VALVES INSTALLED IN AREAS WITHOUT CURBS SHALL HAVE GUARD POSTS PER DISTRICT STANDARD W-12.
2. ASSEMBLY SHALL BE LOCATED IN EASEMENTS AND RIGHT-OF-WAYS AND 7' FROM BCR OR DRIVEWAY APPROACHES.
3. PIPE THREADS SHALL BE CLEAN AND SHARP AND SEALED WITH AN APPROVED JOINT COMPOUND.
4. 8" AND SMALLER PIPE REQUIRES - 1" AIR VALVE. 12" PIPE REQUIRES - 2" AIR VALVE.

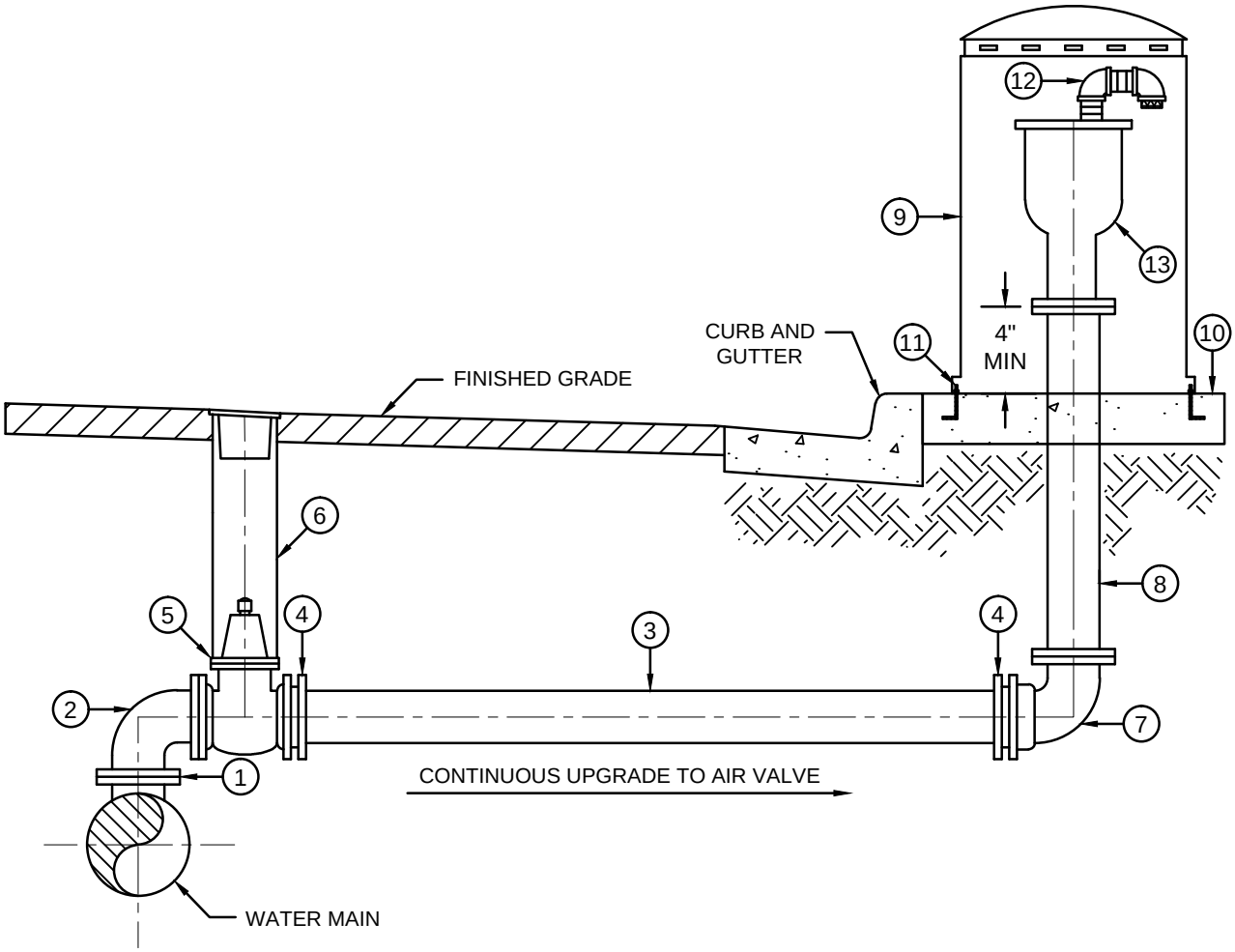
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

1" AND 2" AIR VALVE INSTALLATION DETAIL

DRAWING NUMBER

W-6A



ITEM DESCRIPTION:

1. D.I TEE, MAIN SIZE X 4" OR 6" FLG.
2. 4" OR 6" D.I 90° ELBOW, FLG.
3. 4" OR 6" D.I PIPE, PRESSURE CLASS 350, 18" MIN.
4. RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5. 4" OR 6" RESILIENT-SEATED GATE VALVE (FLG X M.J.), PER DISTRICT STANDARD W-11.
6. VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
7. 4" OR 6" D.I 90° ELBOW, (FLG X M.J.).
8. 4" OR 6" D.I. or SCH. 40 STEEL SPOOL, FLG. ORDER TO FIT.
9. PIPELINE PRODUCTS, VCAS-2436 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
10. 3' X 3' X 6" CLASS IV CONCRETE PAD. TOP OF PAD SHALL MATCH TOP OF CURB OR SIDEWALK.
11. 3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
12. 2 - GALV. THREADED NIPPLES, 2 - GALV. 90° ELBOWS AND EXHAUST SCREEN. ORIENTED TO CLEAR ASSEMBLY.
13. 4" OR 6" COMBINATION AIR RELEASE VALVE. SEE DISTRICT SPECIFICATIONS FOR APPROVED MODELS.

NOTES:

1. AIR VALVES INSTALLED IN AREAS WITHOUT CURBS SHALL HAVE GUARD POSTS PER DISTRICT STANDARD W-12.
2. ASSEMBLY SHALL BE LOCATED IN EASEMENTS AND RIGHT-OF-WAYS AND 7' FROM BCR OR DRIVEWAY APPROACHES.
3. SEE DISTRICT STANDARD W-6A FOR APPROVED LOCATIONS.
4. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
5. 14" TO 24" PIPE REQUIRES - 4" AIR VAC. PIPE LARGER THAN 24" REQUIRES - 6" AIR VAC.

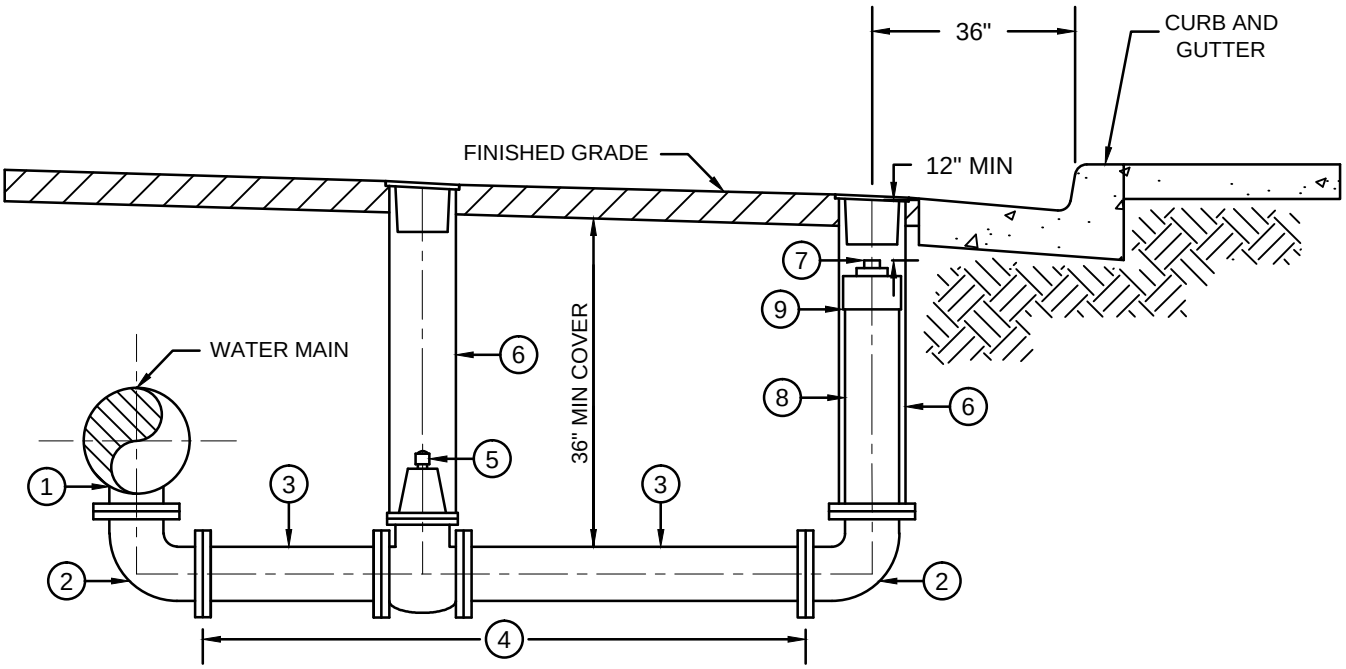
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

4" AND 6" AIR VALVE INSTALLATION DETAIL

DRAWING NUMBER

W-6B



ITEM	DESCRIPTION:
1	D.I TEE, MAIN SIZE X 4" OR 6" FLG.
2	4" OR 6" SCH. 40 STEEL - 90° ELBOW (FLG. X FLG.).
3	4" OR 6" SCH. 40 STEEL PIPE, 18" MIN (FLG. X FLG.).
4	8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
5	4" OR 6" RESILIENT-SEATED GATE VALVE (FLG. X FLG.) PER DISTRICT STANDARD W-11.
6	VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
7	MALE PVC PLUG, PER NSF 61.
8	2" OR 4" SCH 40. STEEL PIPE, 18" MIN (FLG. X THREADED).
9	4" OR 6" GALVANIZED IRON PIPE COUPLING WITH METAL THREADS. COUPLER SHALL BE WELDED TO RISER.

NOTES:

1. 4" BLOW-OFF REQUIRED FOR 6" - 12" WATER MAIN AND 6" BLOW-OFF REQUIRED FOR 12" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE BLOW-OFF REQUIRED.

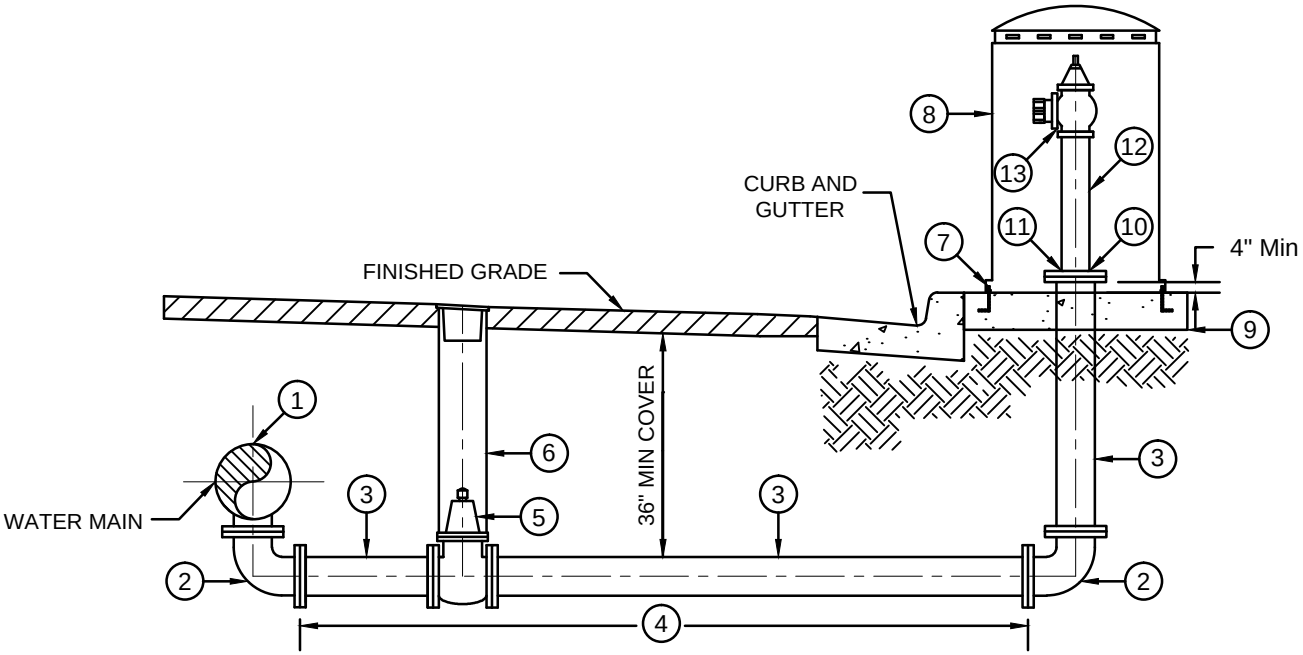
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

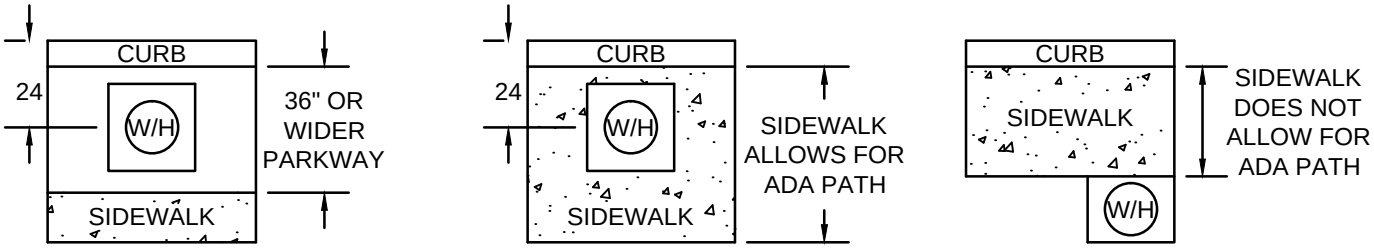
West Valley Water District

4" AND 6" BLOW-OFF ASSEMBLY

DRAWING NUMBER

W-7A





ITEM	DESCRIPTION:
1	D.I TEE, MAIN SIZE X 4" OR 6" FLG.
2	4" OR 6" SCH. 40 STEEL - 90° ELBOW (FLG. X FLG.).
3	4" OR 6" SCH. 40 STEEL PIPE, 18" MIN (FLG. X FLG.).
4	8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
5	4" OR 6" RESILIENT-SEATED GATE VALVE (FLG. X FLG.) PER DISTRICT STANDARD W-11.
6	VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
7	3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
8	PIPELINE PRODUCTS, VCAS-2436 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
9	3' X 3' X 6" CLASS IV CONCRETE PAD.
10	4" OR 6" COMPANION FLANGE WITH 4" THREADED OUTLET OR 4" SCH. 40 STEEL PIPE (FLG X THREADED).
11	3/4" HEX HEAD BREAK OFF BOLTS, ZINC PLATED WITH 1/16" RING TYPE GASKET.
12	4" SCH. 40 STEEL PIPE, 18" MIN (FLG X THREADED).
13	4" X 2-1/2" JONES WHARF HEAD (J-344HP) WITH CAP AND CHAIN. SEE NOTES 3 THROUGH 7.

NOTES:

1. 4" BLOW-OFF REQUIRED FOR 6" - 12" WATER MAIN AND 6" BLOW-OFF REQUIRED FOR 12" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE BLOW-OFF REQUIRED.
3. WHARF HEAD ASSEMBLIES SHALL ONLY BE INSTALLED WHEN APPROVED BY THE DISTRICT.
4. USE CASE 1 - 3 WHEN LOCATION IS NOT SPECIFIED ON PLAN OR IN FIELD.
5. A WHARF HEAD SHALL NOT BE USED IN PLACE OF A FIRE HYDRANT FOR FIRE SUPPRESSION REQUIREMENTS.
6. WHARF HEAD ASSEMBLIES SHALL BE PAINTED SAFETY YELLOW PER DISTRICT SPECIFICATIONS.
7. LATERAL VALVE SHALL REMAIN IN THE CLOSED POSITION WHEN INSTALLED.

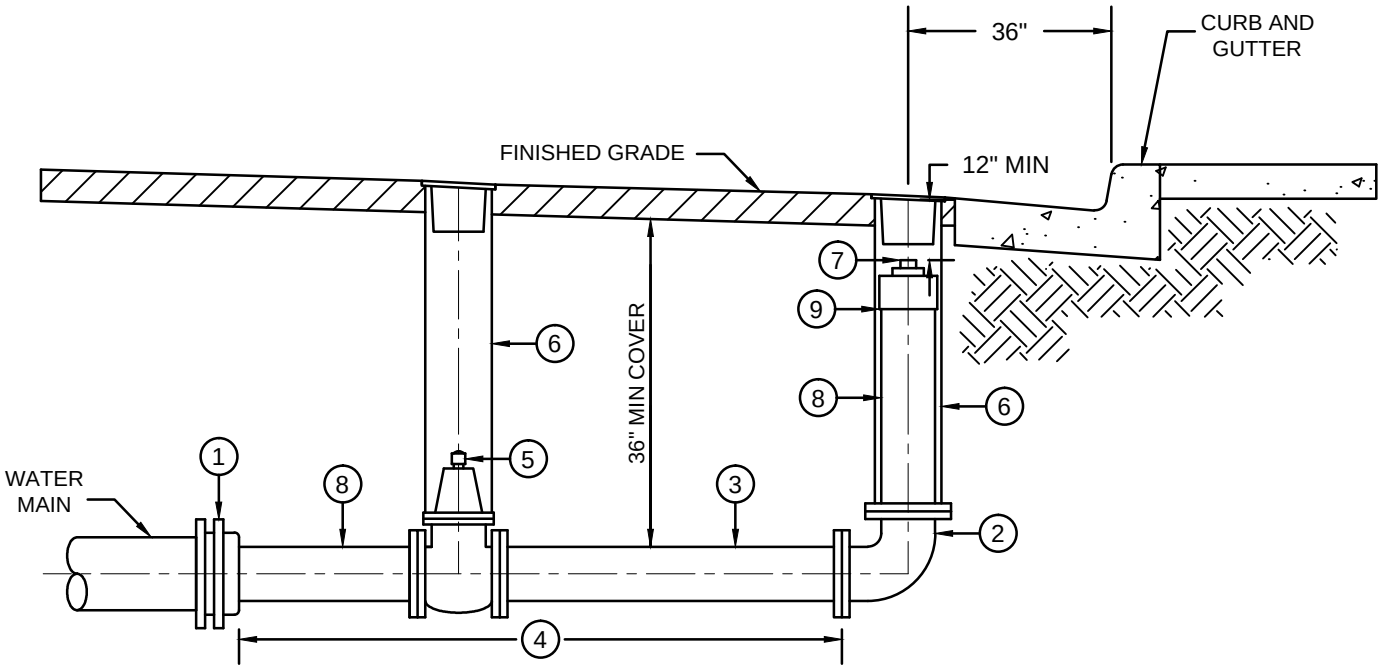
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

4" AND 6" BLOW-OFF ASSEMBLY

DRAWING NUMBER

W-7B



ITEM	DESCRIPTION:
1	D.I RESTRAINED PLUG OR M.J CAP, MAIN SIZE X 2" OR 4" THREADED OUTLET
2	2" OR 4" SCH. 40 STEEL - 90° ELBOW (FLG. X FLG.).
3	2" OR 4" SCH. 40 STEEL PIPE, 18" MIN (FLG. X FLG.).
4	8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
5	2" OR 4" RESILIENT-SEATED GATE VALVE (FLG. X FLG.), PER DISTRICT STANDARD W-11.
6	VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
7	MALE PVC PLUG, PER NSF 61.
8	2" OR 4" SCH 40. STEEL PIPE, 18" MIN (FLG. X THREADED).
9	2" OR 4" GALVANIZED IRON PIPE COUPLING WITH METAL THREADS. COUPLER SHALL BE WELDED TO RISER.

NOTES:

1. 2" FLUSH-OUT REQUIRED FOR 6" AND SMALLER WATER MAIN.
2. 4" FLUSH-OUT REQUIRED FOR 8" AND LARGER WATER MAIN.
3. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE FLUSH-OUT REQUIRED.

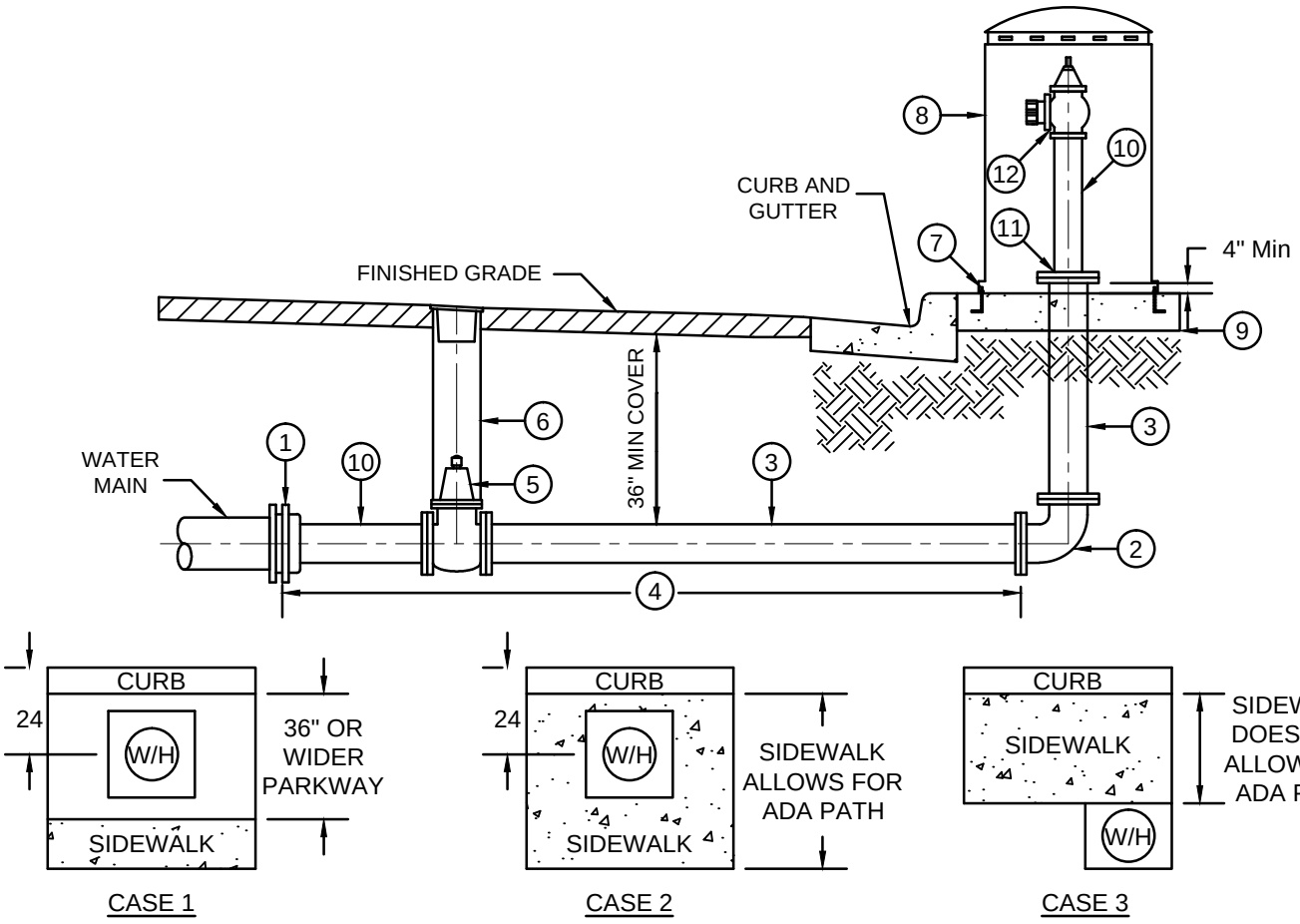
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

2" & 4" DEAD-END FLUSH-OUT

DRAWING NUMBER

W-8A



ITEM	DESCRIPTION:
1	D.I RESTRAINED PLUG OR M.J CAP, MAIN SIZE X 4" THREADED OUTLET
2	4" SCH. 40 STEEL - 90° ELBOW (FLG. X FLG.).
3	4" SCH. 40 STEEL PIPE, 18" MIN (FLG. X FLG.).
4	8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
5	4" RESILIENT-SEATED GATE VALVE (FLG. X FLG.), PER DISTRICT STANDARD W-11.
6	VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
7	3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
8	PIPELINE PRODUCTS, VCAS-2436 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
9	3' X 3' X 6" CLASS IV CONCRETE PAD.
10	4" SCH 40. STEEL PIPE, 18" MIN (FLG. X THREADED).
11	3/4" HEX HEAD BREAK OFF BOLTS, ZINC PLATED WITH 1/16" RING TYPE GASKET.
12	4" X 2-1/2" JONES WHARF HEAD (J-344HP) WITH CAP AND CHAIN. SEE NOTES 3 THROUGH 7.

NOTES:

1. 4" FLUSH-OUT REQUIRED FOR 8" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE FLUSH-OUT REQUIRED.
3. WHARF HEAD ASSEMBLIES SHALL ONLY BE INSTALLED ON 4" FLUSH-OUTS WHEN APPROVED BY THE DISTRICT.
4. USE CASE 1 - 3 WHEN LOCATION IS NOT SPECIFIED ON PLAN OR IN FIELD.
5. A WHARF HEAD SHALL NOT BE USED IN PLACE OF A FIRE HYDRANT FOR FIRE SUPPRESSION REQUIREMENTS.
6. WHARF HEAD ASSEMBLIES SHALL BE PAINTED SAFETY YELLOW PER DISTRICT SPECIFICATIONS.
7. LATERAL VALVE SHALL REMAIN IN THE CLOSED POSITION WHEN INSTALLED.

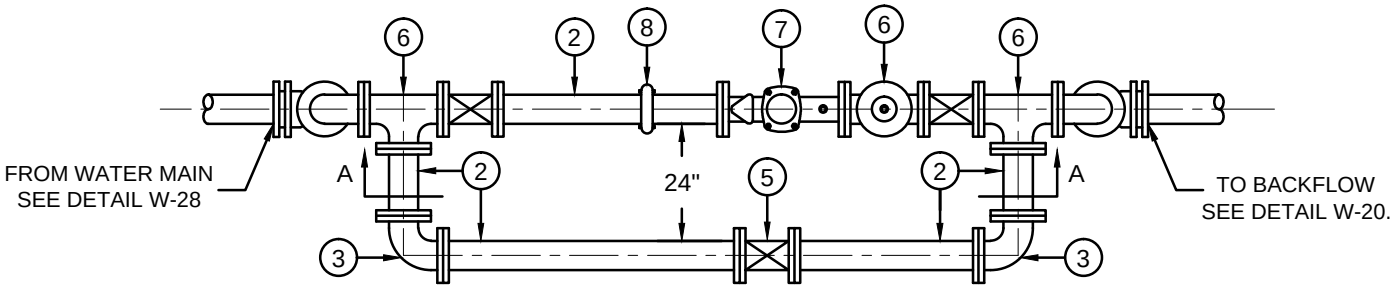
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

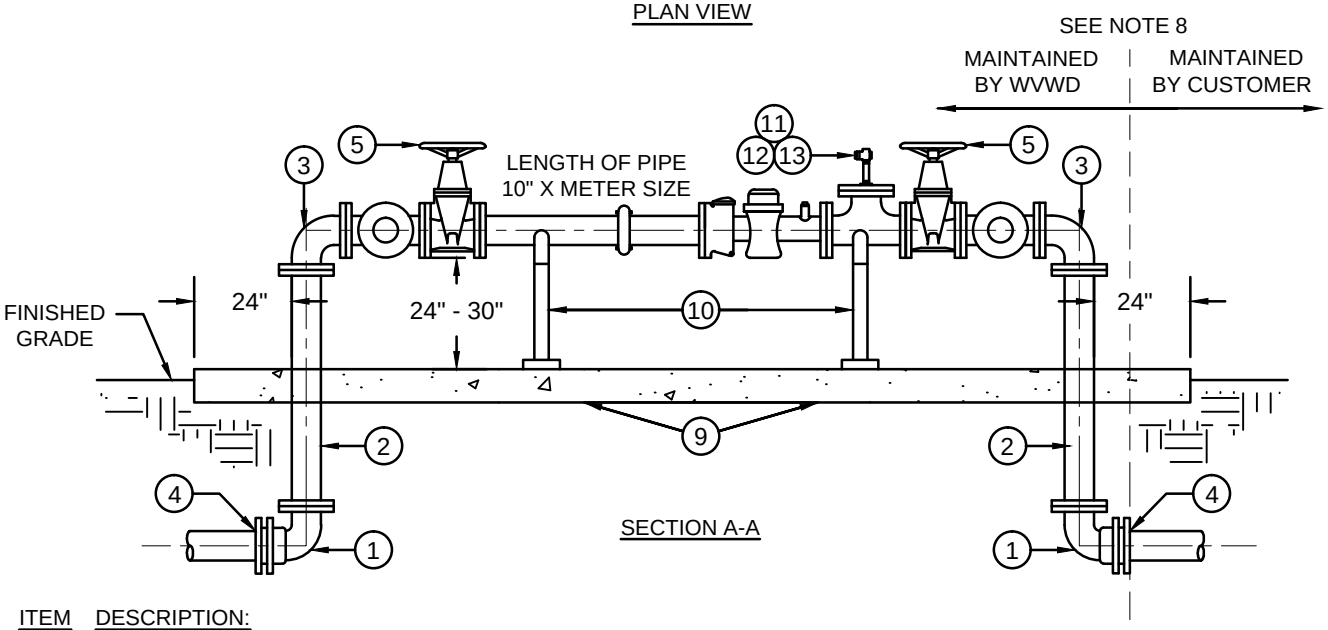
4" DEAD-END FLUSH-OUT

DRAWING NUMBER

W-8B



PLAN VIEW



SECTION A-A

ITEM	DESCRIPTION:
1	D.I 90° ELBOW (FLG. X M.J.).
2	D.I OR SCH. 40 STEEL PIPE (FLG. X FLG.), ORDER TO FIT.
3	D.I OR SCH. 40 STEEL - 90° ELBOW (FLG. X FLG.)
4	RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5	RESILIENT-SEATED GATE VALVE WITH HAND WHEEL AND NRS, FLG.
6	D.I OR SCH. 40 STEEL TEE, FLG.
7	COMPOUND OR TURBINE METER TO BE FURNISHED BY DISTRICT.
8	VICTAULIC COUPLING.
9	4" THICK CLASS IV CONCRETE PAD.
10	ADJUSTABLE PIPE SADDLE SUPPORT.
11	D.I BLIND FLANGE WITH 2" THREADED OUTLET.
12	2" X 6" LONG GALVANIZED NIPPLE. THREADED AT BOTH ENDS.
13	2" BALL VALVE - F.I.T. WITH 360° TURN. FORD B11-777M-NL OR MUELLER B-20200-3N. WITH 2" BRASS PLUG.

NOTES:

1. DIAMETER OF PIPING, FITTINGS AND VALVES, BELOW AND ABOVE GROUND MUST MATCH METER SIZE.
2. PAINT METER ASSEMBLY HUNTER GREEN PER DISTRICT SPECIFICATIONS.
3. 24" MINIMUM CLEARANCE REQUIRED AROUND METER ASSEMBLY.
4. METER ASSEMBLY SHALL BE INSTALLED ABOVE GROUND AND PARALLEL TO PROPERTY LINE.
5. METER ASSEMBLY SHALL BE INSTALLED AWAY FROM SIDEWALK AND NOT OBSTRUCT THE PATH OF TRAVEL.
6. METER ASSEMBLY SHALL BE INSTALLED WITHIN RIGHT-OF-WAY OR WITHIN AN EASEMENT DEDICATED TO WVWD.
7. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
8. CONNECTION TO OR INSTALLATION OF CUSTOMER PIPING SHALL BE DONE BY PRIVATE CONTRACTOR, UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND OTHER APPURTENANCES AFTER BOTTOM 90° ELBOW.

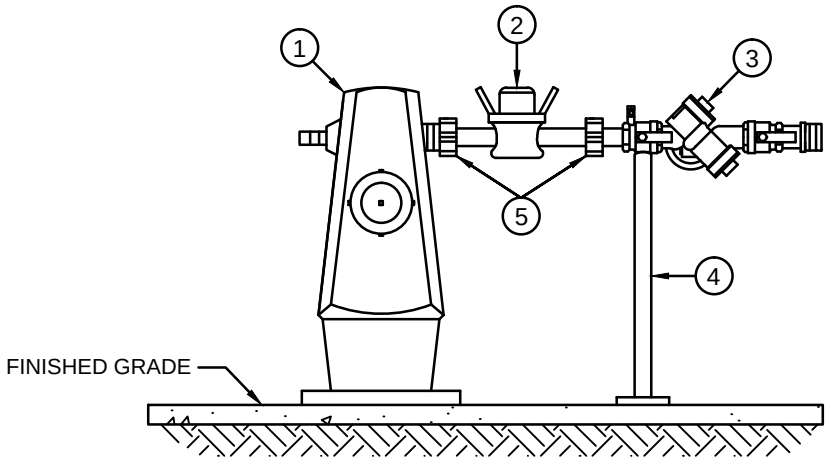
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

WATER SERVICE DETAIL 3" & LARGER METERS

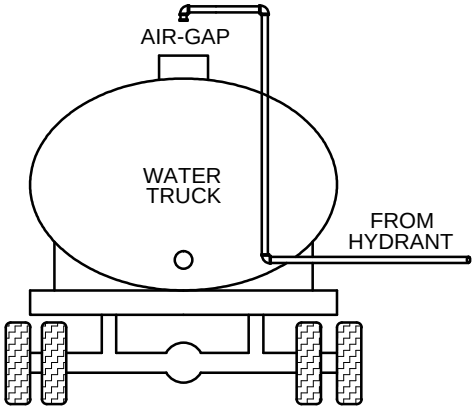
DRAWING NUMBER

W-9

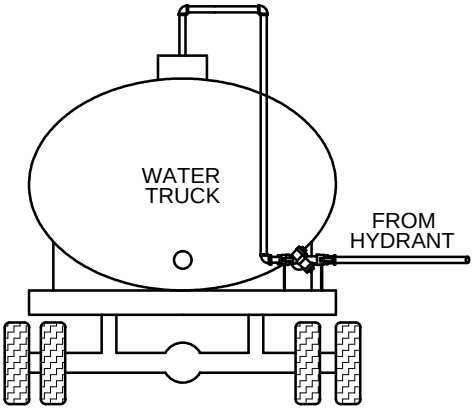


ITEM DESCRIPTION:

1. DISTRICT HYDRANT WITH 4" AND 2-1/2" OUTLETS.
2. 4" OR 2-1/2" CONSTRUCTION METER WITH HYDRANT THREAD OUTLET (PROVIDED BY DISTRICT).
3. 4" OR 2-1/2" RP BACKFLOW DEVICE WITH HYDRANT THREAD OUTLET (PROVIDED BY DISTRICT IF AVAILABLE).
4. PIPE SUPPORT (PROVIDED BY DISTRICT IF AVAILABLE).
5. CLAM SHELL LOCKING DEVICE OR LOCKING CHAIN (PROVIDED BY DISTRICT).



AIR-GAP PROTECTION



BACKFLOW PROTECTION

WATER TRUCKS AND TANKS

WATER TRUCKS AND TANKS WILL NOT BE ALLOWED TO OPERATE UNLESS THEY ARE FILLED FROM THE TOP WITH AN APPROPRIATE AIR-GAP SEPARATION AND PROPER PIPING MATERIALS AS APPROVED BY THE DISTRICT. THE AIR-GAP SEPARATION SHALL BE A MINIMUM OF TWICE (2X) THE DIAMETER OF THE WATER SUPPLY LINE ABOVE THE WATER TANK. WATER TANKS AND TRUCKS MAY ALSO BE REQUIRED TO HAVE A FLOW CONTROL VALVE OR ADDITIONAL BACKFLOW PROTECTION AT THE INLET CONNECTION AS REQUIRED BY THE DISTRICT.

NOTES:

1. INSTALLATION AND RELOCATION OF CONSTRUCTION METER SHALL BE DONE BY DISTRICT STAFF.
2. ANY CONNECTION TO A DISTRICT HYDRANT WITHOUT A METER IS NOT PERMITTED.
3. APPLICANTS WHO PROVIDE THEIR OWN BACKFLOW SHALL HAVE THE DISTRICT TEST AND CERTIFY THE DEVICE PRIOR TO BEGINNING WATER SERVICE. USE OF PRIVATE BACKFLOWS MUST BE APPROVED BY THE DISTRICT.
4. APPLICANT IS RESPONSIBLE FOR LOSS OR DAMAGE TO HYDRANT, METER, BACKFLOW AND/OR FITTINGS REGARDLESS OF CAUSE.

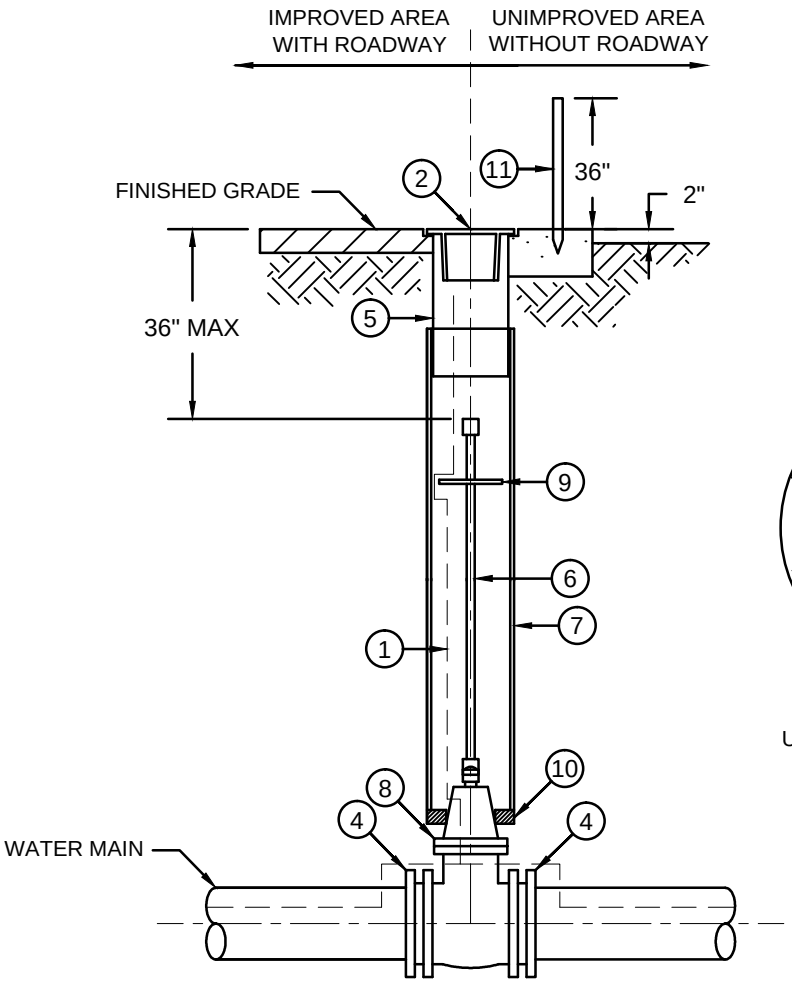
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

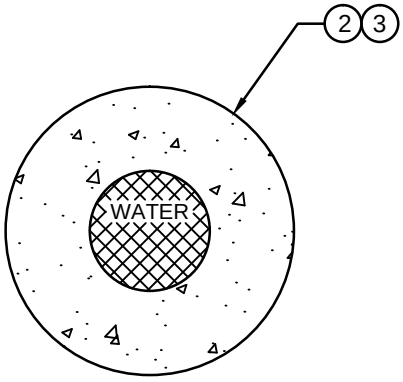
West Valley Water District

TEMPORARY HYDRANT METER ASSEMBLY

DRAWING NUMBER

W-10





PLAN VIEW
UNIMPROVED OR CONCRETE
SURFACE AREAS ONLY

ITEM	DESCRIPTION:
1	LOCATING WIRE.
2	8" CAST IRON COVER MARKED "WATER". ALHAMBRA FOUNDRY NO-29608, OR APPROVED EQUAL.
3	6" THICK X 20" DIAMETER CLASS IV CONCRETE COLLAR.
4	RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5	8" O.D. X 12 GA, GALVANIZED STEEL SLIP CAN. TOP SECTION SLIP CAN LENGTH IS 18" OR AS REQUIRED.
6	1" DIAMETER BLACK PIPE ASTM-120 VALVE EXTENSION. WITH 2" SQ. OPERATING NUT.
7	8" C900 OR SDR 35 PVC PIPE.
8	GATE VALVE OR BUTTERFLY VALVE PER AWWA C509 AND C504. TYPE, OUTLET, AND SIZE OF VALVE PER PLAN AND DISTRICT SPECIFICATIONS.
9	6" X 1/4" STEEL DISK. TACK WELDED TO EXTENSION.
10	2" X 4" X 1" REDWOOD BLOCK. (DO NO REST ON VALVE).
11	BLUE "CARSONITE" MARKER MARKED "WATER VALVE".

NOTES:

1. VALVE MARKER SHALL BE INSTALLED AS DIRECTED BY DISTRICT INSPECTOR IN UNIMPROVED AREAS.
2. VALVE EXTENSION REQUIRED WHERE DEPTH OF OPERATING NUT EXCEEDS 5-FEET.
3. FINAL RIM ELEVATION TO BE 1/8" TO 1/4" BELOW FINAL STREET GRADE.
4. VALVES SMALLER THAN 12" OR TAPPING VALVES SHALL BE GATE VALVES. VALVES 12" AND LARGER SHALL BE BUTTERFLY VALVES.

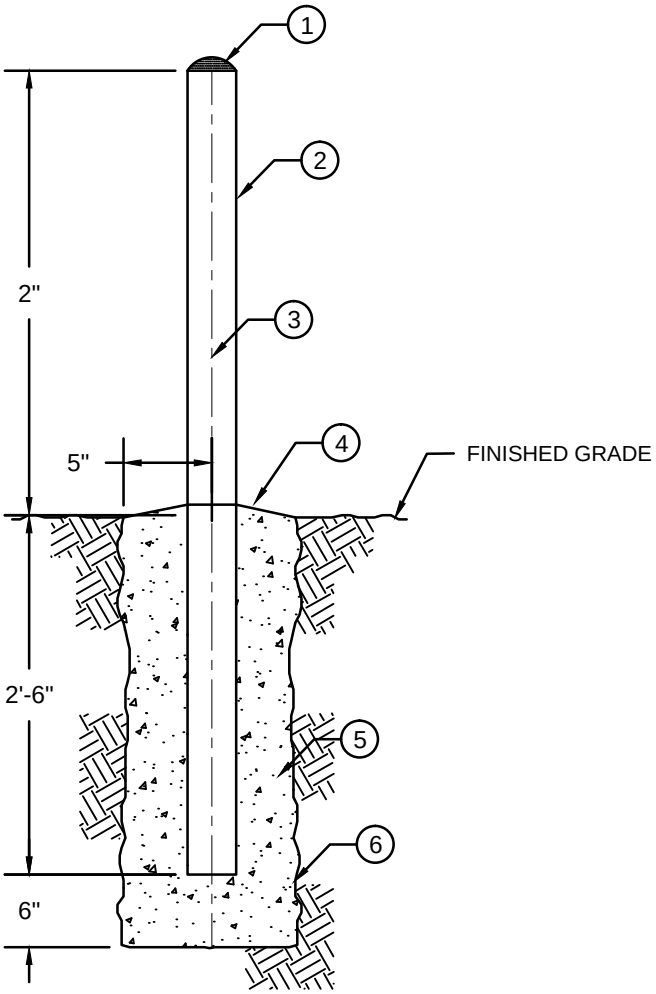
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

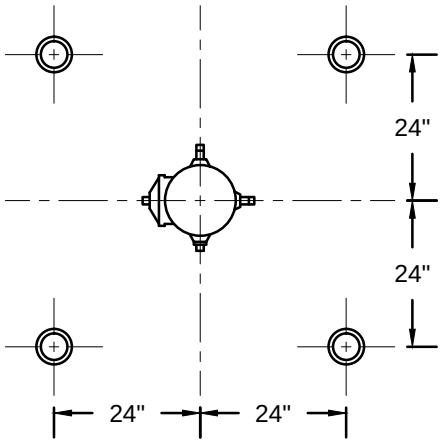
VALVE AND VALVE BOX INSTALLATION DETAIL

DRAWING NUMBER

W-11



ELEVATION VIEW



PLAN VIEW

ITEM DESCRIPTION:

1. ROUND OVER CONCRETE TO FORM CAP.
2. 4" X 5'-6" LONG SCH. 40 STEEL PIPE PAINTED SAFETY YELLOW PER DISTRICT SPECIFICATIONS
3. #4 RE-BAR, FULL-LENGTH, CENTERED IN PIPE, AND FILLED WITH CLASS 1V CONCRETE
4. SLOPE 1" DOWN TO DRAIN
5. CLASS IV CONCRETE FOOTING, 10" DIA.
6. POUR AGAINST UNDISTURBED OR WELL COMPACTED EARTH, 90% MIN.

NOTES:

1. LOCATION SHALL BE PER PLAN, OR AS DIRECTED IN THE FIELD BY THE DISTRICT INSPECTOR OR ENGINEER.

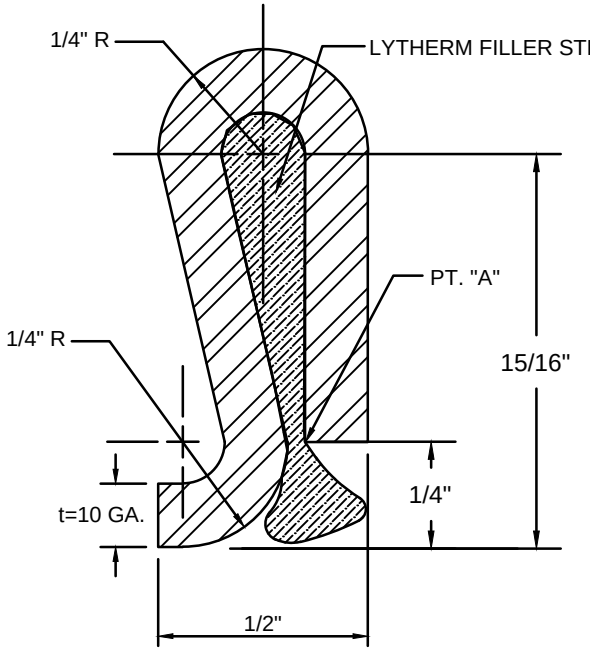
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

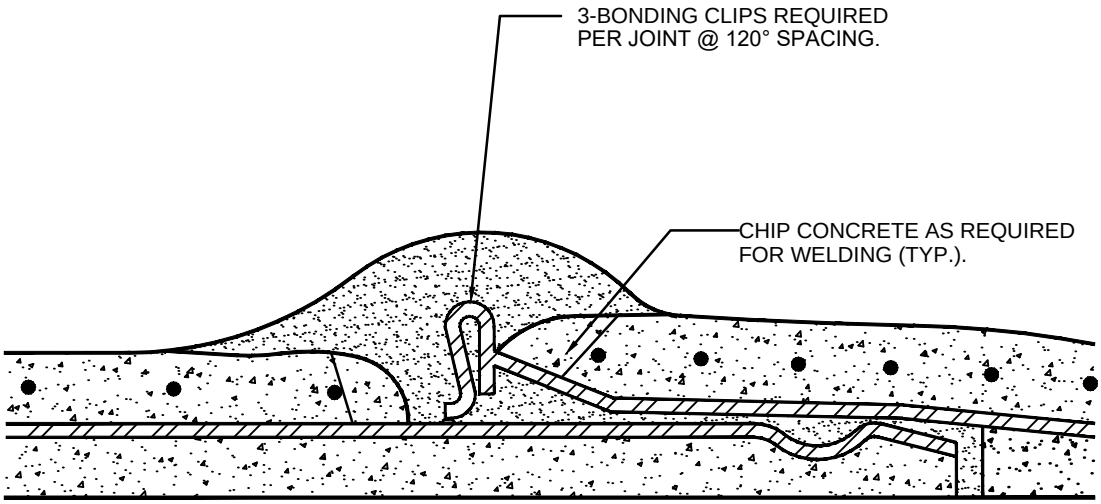
West Valley Water District

GUARD POST INSTALLATION DETAIL

DRAWING NUMBER

W-12





FIELD INSTALLATION

NOTES:

1. STEEL BONDING CLIP:
   MATERIAL SPECIFICATION: ASTM A366 (COMMERCIAL QUALITY).
   CUT LENGTH: 2-1/2" ± 1/16"
   WIDTH: 1-1/4" ± 1/16"
2. LYTHERM FILLER STRIP TO BE 1" x 1-1/2" WIDE TO OVERLAP SIDES OF CLIP.
3. CRIMP BONDING CLIP OVER FILLER AT "A" TO COMPRESS FILLER.

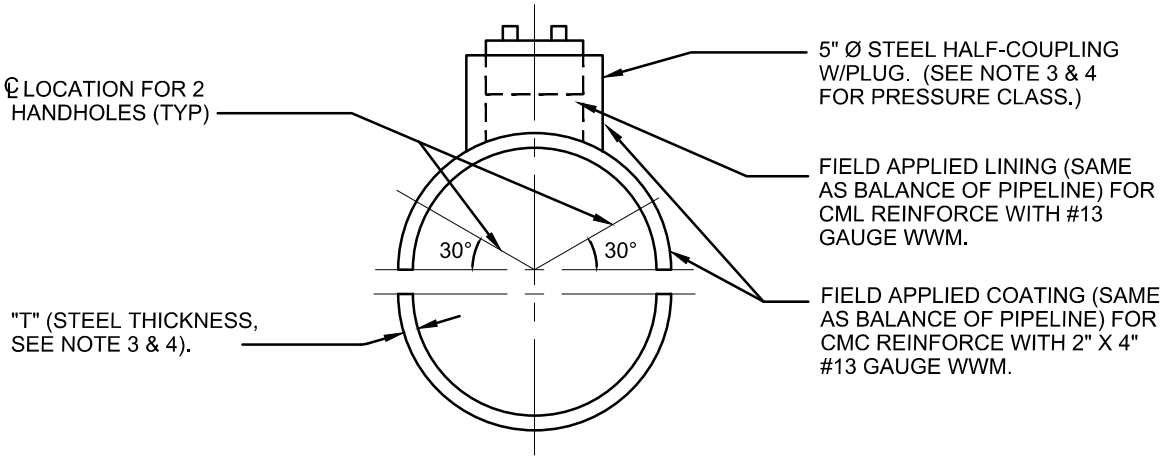
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

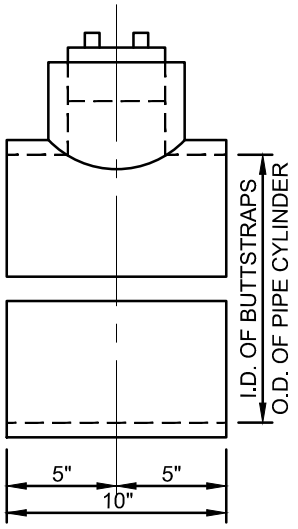
BONDING CLIP DETAIL

DRAWING NUMBER

W-13



END VIEW



SIDE VIEW

NOTES:

1. 1 HANDHOLE REQUIRED FOR 4" Ø PIPE THROUGH 18" Ø PIPE.
2. 2 HANDHOLES REQUIRED FOR 20" Ø PIPE THROUGH 30" Ø PIPE.
3. UP TO CLASS 200 PIPELINES
   "T"=3/16" FOR 4" Ø THROUGH 24" Ø.
   "T"=1/4" FOR 30" Ø
   5"-BLACK,HALF-COUPLING,CLASS 150,CRANE OR APPROVED EQUAL.
   5"-BLACK,CORED,BAR PLUG,CLASS 150,CRANE OR APPROVED EQUAL.
4. GREATER THAN CLASS 200 THROUGH CLASS 350 PIPELINES:
   "T"=3/16" FOR 4" Ø THROUGH 14" Ø.
   "T"=1/4" FOR 16" Ø THROUGH 20" Ø.
   "T"=5/16" FOR 24" Ø.
   "T"=3/8" FOR 30" Ø.
   5"+BLACK,HALF-COUPLING,CLASS 300,CRANE OR APPROVED EQUAL
   5"+BLACK,SOLID,BAR PLUG,CLASS 300,CRANE OR APPROVED EQUAL..
5. SEAL THREADS WITH A NON-TOXIC COMPOUND.

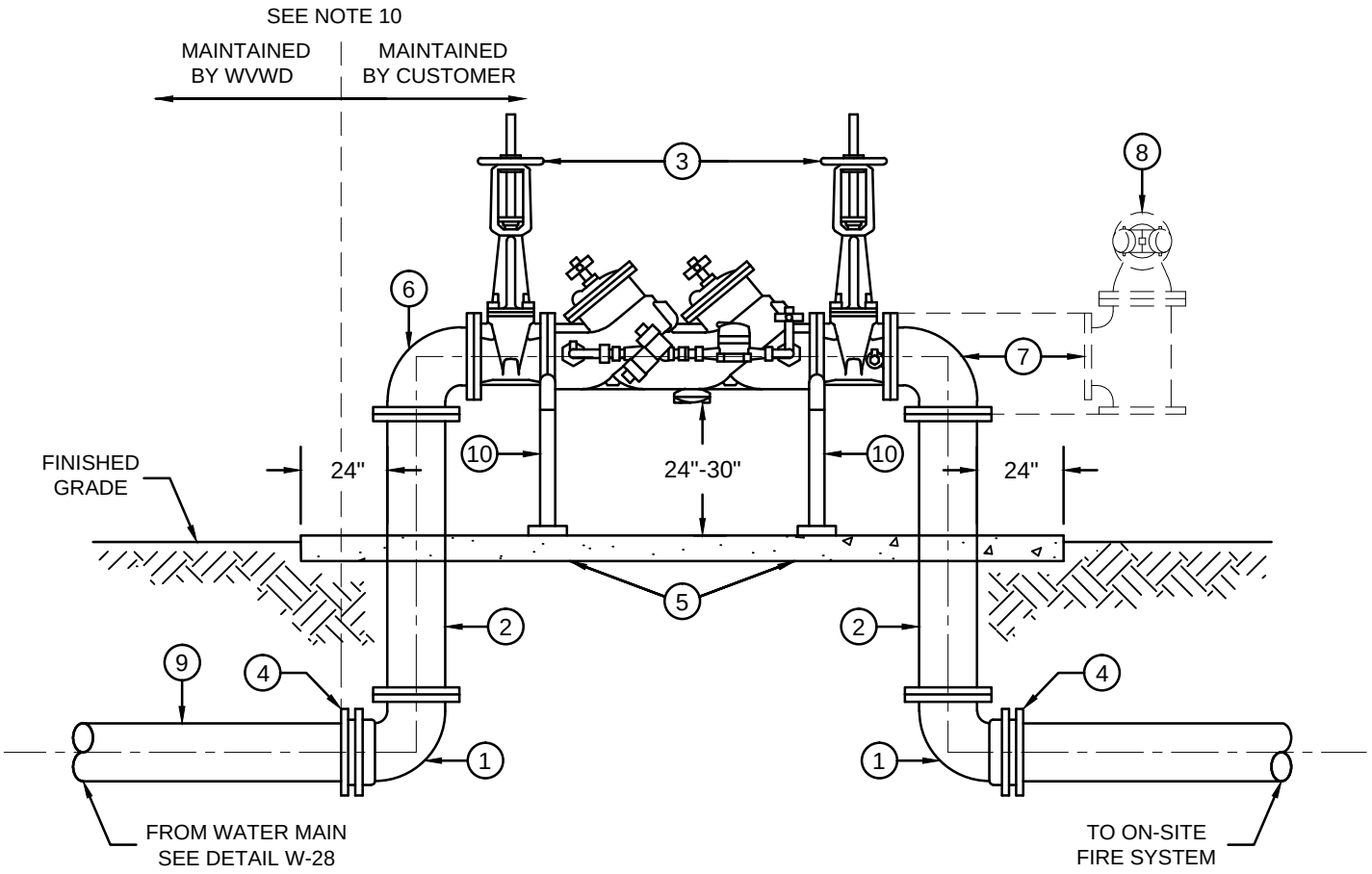
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

BUTT STRAP DETAIL

DRAWING NUMBER

W-14



ITEM DESCRIPTION:

1. D.I 90° ELBOW (FLG. X M.J.).
2. D.I OR SCH. 40 STEEL PIPE, FLG, ORDER TO FIT.
3. DOUBLE CHECK DETECTOR ASSEMBLY. SIZE AS INDICATED ON PLAN.
4. RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5. 4" THICK CLASS IV CONCRETE PAD.
6. D.I OR SCH. 40 STEEL - 90° REDUCING ELBOW, FLG. INLET MUST BE 2" LARGER THAN OUTLET.
7. D.I OR SCH. 40 STEEL - 90° ELBOW, FLG. OR TEE, FLG (WHEN FDC IS REQUIRED).
8. FIRE DEPARTMENT CONNECTION (FDC). AS APPROVED BY FIRE AUTHORITY.
9. FIRE SERVICE LATERAL. SEE NOTE 2 FOR SIZING INSTRUCTIONS.
10. ADJUSTABLE PIPE SADDLE SUPPORT.

NOTES:

1. DCDA MUST BE USC CROSS-CONNECTION CONTROL HYDRAULIC RESEARCH STANDARDS APPROVED.
2. SERVICE LATERAL FROM DISTRICT MAIN TO 90° REDUCING ELBOW MUST BE 2" LARGER THAN SIZE OF DCDA.
3. PAINT DCDA ASSEMBLY HUNTER GREEN PER DISTRICT SPECIFICATIONS.
4. DEPENDING ON RIGHT-OF-WAY, ASSEMBLY MUST BE INSTALLED ABOVE GROUND AND PARALLEL TO PROPERTY LINE.
5. 24" MINIMUM CLEARANCE REQUIRED AROUND ENTIRE ASSEMBLY.
6. DCDA ASSEMBLY SHALL BE LOCATED 24" FROM PROPERTY LINE.
7. DCDA MUST BE TESTED AND CERTIFIED BEFORE WATER SERVICE CAN BE TURNED ON.
8. IF A FIRE PUMP IS USED ON-SITE, A BREAK TANK SHALL BE REQUIRED PER ARTICLE 8 OF DISTRICT REGULATIONS.
9. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
10. INSTALLATION OF FIRE SERVICE AND DCDA SHALL BE DONE BY DISTRICT APPROVED CONTRACTOR. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, DCDA AND OTHER APPURTENANCES AFTER BOTTOM 90° ELBOW.

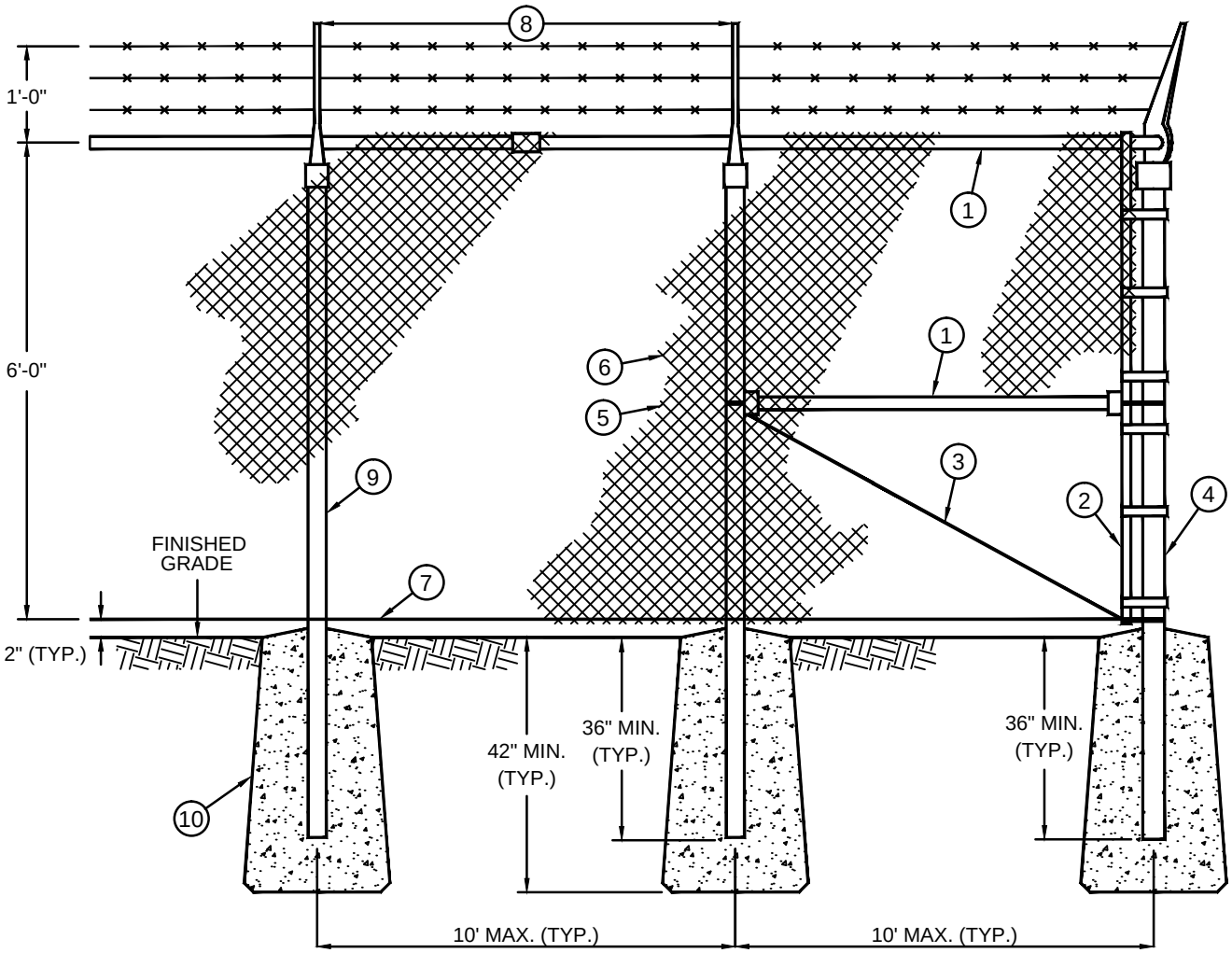
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

FIRE SERVICE INSTALLATION DETAIL

DRAWING NUMBER

W-15



ITEM	DESCRIPTION:
1	1-5/8" O.D. SCH. 40 GALVANIZED PIPE.
2	1/4" X 3/4" STRETCHER BAR.
3	3/8" DIAMETER ADJUSTABLE TRUSS ROD.
4	CORNER POST 4" O.D. WITH SCH. 40 GALVANIZED PIPE.
5	REDWOOD SLATS, AS REQUIRED.
6	9 GAUGE GALVANIZED FABRIC.
7	7 GAUGE TENSION WIRE.
8	GALVANIZED COMBINATION POST TOP AND BARBED WIRE SUPPORTING ARM.
9	2-3/8" O.D. SCH. 40 GALVANIZED PIPE.
10	CLASS IV CONCRETE FOOTING (6 SACKS).

NOTES:

1. DIAMETER OF CONCRETE FOOTING SHALL BE 3 TIMES O.D. OF POST OR 8" MINIMUM.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY THE DISTRICT.

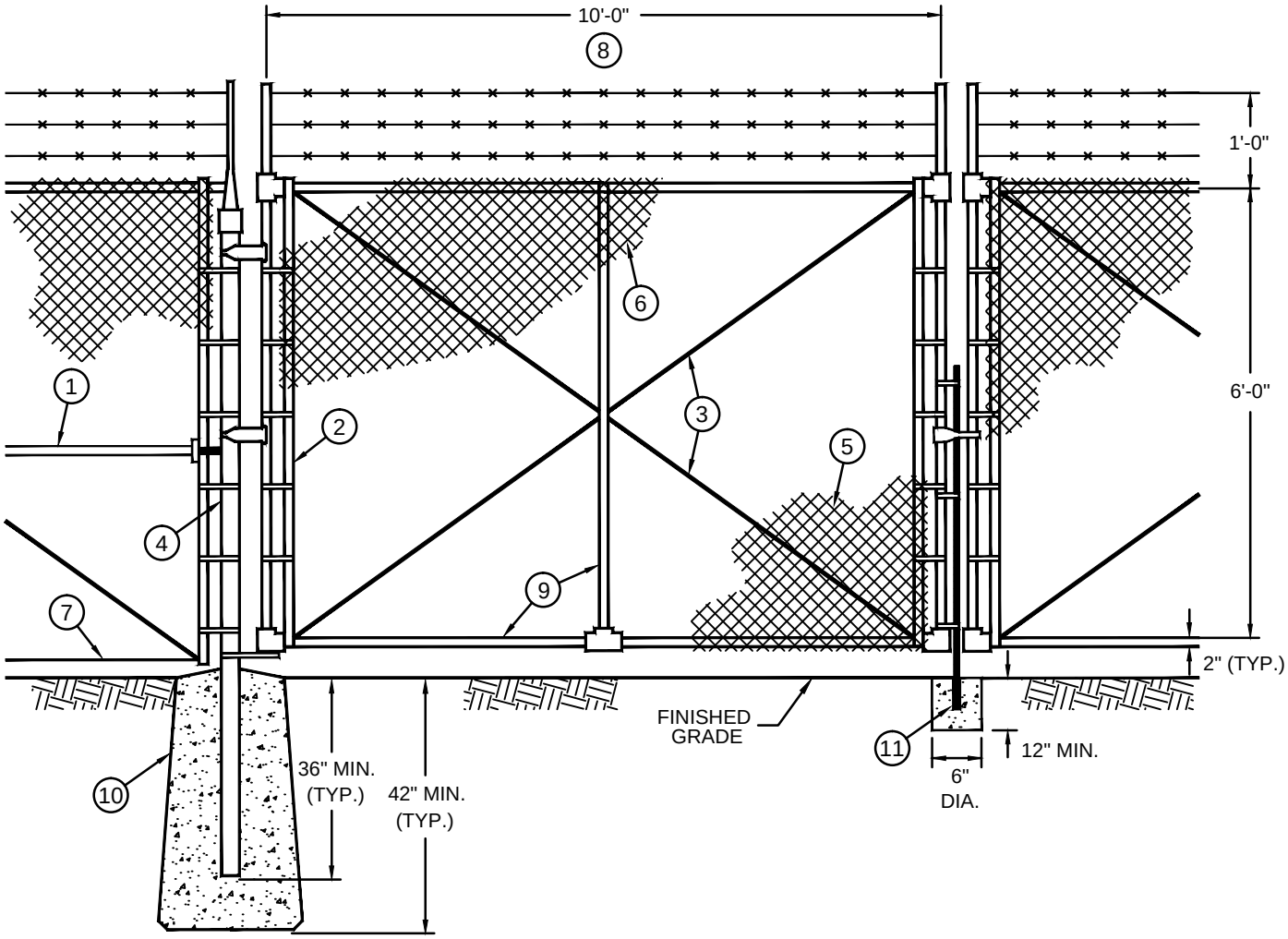
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

CHAIN LINK FENCE DETAIL

DRAWING NUMBER

W-16



ITEM	DESCRIPTION:
1	1-5/8" O.D. SCH. 40 GALVANIZED PIPE.
2	1/4" X 3/4" STRETCHER BAR.
3	3/8" DIAMETER ADJUSTABLE TRUSS ROD.
4	4" O.D. WITH SCH. 40 GALVANIZED PIPE.
5	REDWOOD SLATS, AS REQUIRED.
6	9 GAUGE GALVANIZED FABRIC.
7	7 GAUGE TENSION WIRE.
8	GALVANIZED COMBINATION POST TOP AND BARBED WIRE SUPPORTING ARM.
9	1-9/10" O.D. SCH. 40 GALVANIZED PIPE.
10	CLASS IV CONCRETE FOOTING (6 SACKS).
11	CENTER CATCH SET IN CONCRETE.

NOTES:

1. DIAMETER OF CONCRETE FOOTING SHALL BE 3 TIMES O.D. OF POST OR 8" MINIMUM.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY THE DISTRICT.

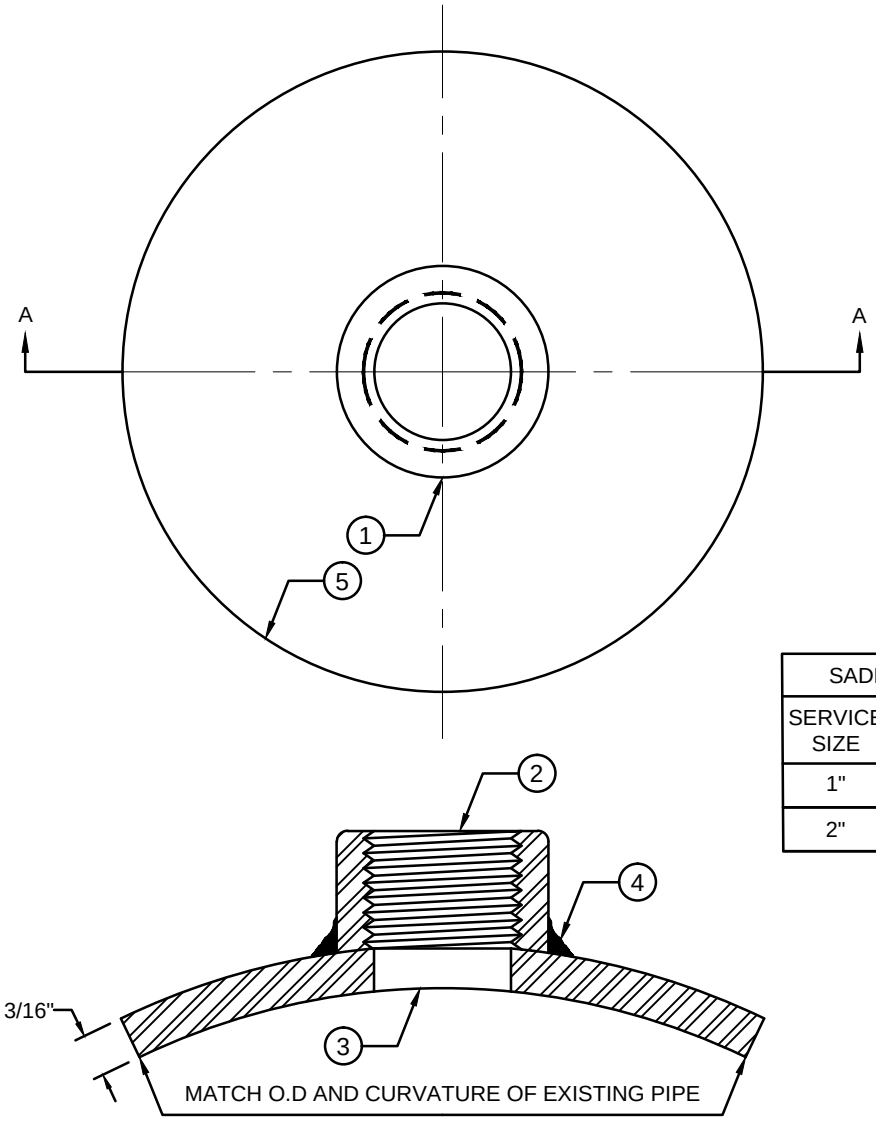
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

CHAIN LINK FENCE GATE DETAIL

DRAWING NUMBER

W-17



SADDLE DIMENSIONS			
SERVICE SIZE	D1	D2	D3
1"	2"	5"	1"
2"	3"	7"	2"

SECTION A-A

ITEM	DESCRIPTION:
1	SCHEDULE 80 STEEL EXTRA HEAVY HALF COUPLING. SEE D1 IN DIMENSION CHART.
2	STANDARD I.P THREAD OUTLET. SEE D3 IN DIMENSION CHART.
3	DRILL HOLE. SEE SERVICE SIZE IN DIMENSION CHART.
4	3/16" TAPER FROM SADDLE TO OUTLET.
5	REINFORCING STEEL TAPPING SADDLE. SEE D2 FOR O.D. IN DIMENSION CHART.

NOTES:

1. USE DOUBLE-PASS WELDS FOR FABRICATION & FIELD WELDS.
2. SADDLE CURVATURE TO BE FORMED TO MEET DISTRICT PIPE DIAMETERS.
3. WHEN INSTALLED, OUTLET TO BE COATED WITH SAME COATING AS PIPE.
4. SEE DISTRICT STANDARD W-4 OR W-5 FOR CORPORATION STOP (I.P.T X P.J).
5. THE CONDITION, MATERIAL AND USE OF PIPE MAY REQUIRE ADDITIONAL REINFORCEMENT FOR THE SERVICE TAP. THE DISTRICT SHALL DETERMINE IN FIELD THE TAPPING REQUIREMENTS OF THE PIPE.
6. TAPPING SADDLES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE.

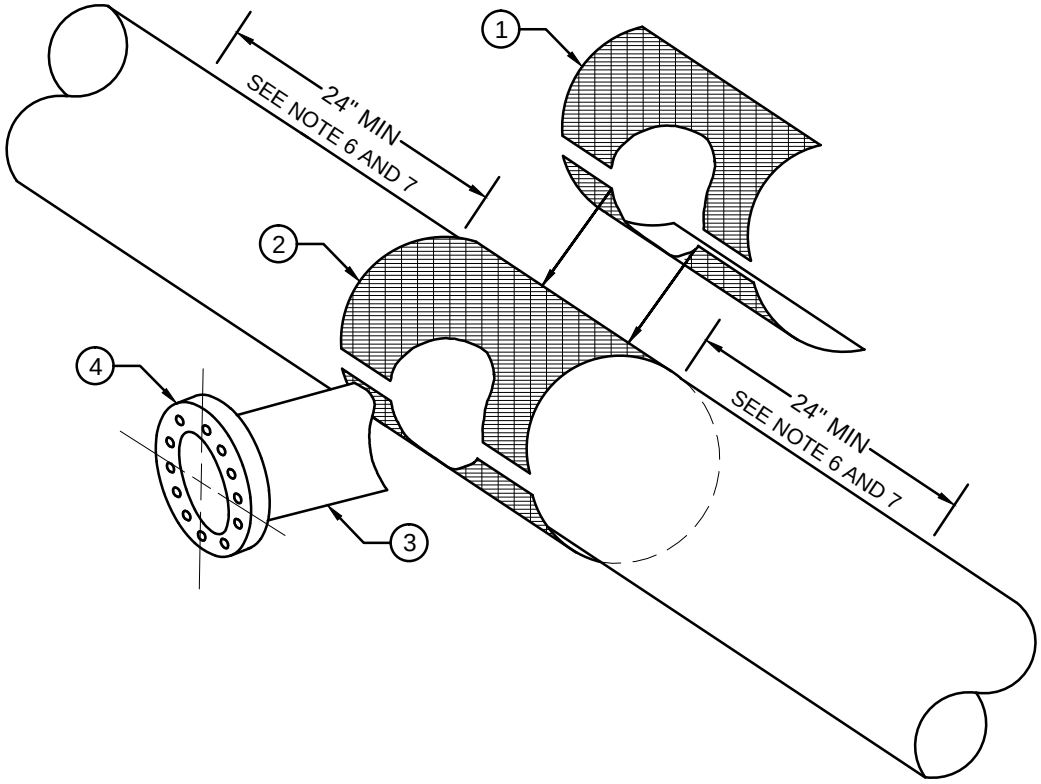
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

TAPPING OUTLET FOR STEEL PIPE 1" AND 2"

DRAWING NUMBER

W-18



ITEM DESCRIPTION:

1. PIPE COLLAR REINFORCEMENT (WHEN OUTLET TO MAIN RATIO IS 50% OR LESS). SEE NOTE 1.
2. FULL PIPE WRAP REINFORCEMENT (WHEN OUTLET TO MAIN RATIO IS GREATER THAN 50%). SEE NOTE 1.
3. SCHEDULE 40 STEEL OUTLET NOZZLE (MAIN SIZE X LATERAL SIZE OUTLET).
4. FLANGE CONNECTION TO TAPPING VALVE. SEE DISTRICT STANDARD W-11 AND W-28 FOR NEW INSTALLATIONS.

NOTES:

1. REINFORCEMENT DESIGN IS BASED ON THE STEEL AREA REMOVED FROM THE MAIN LINE AND THE OPERATING PRESSURE OF THE SYSTEM. THE CONDITION, MATERIAL AND USE OF PIPE MAY REQUIRE ADDITIONAL REINFORCEMENT FOR THE SERVICE TAP. THE DISTRICT SHALL DETERMINE IN FIELD IF ADDITIONAL REINFORCEMENT IS REQUIRED.
2. JOB SPECIFICATIONS/DETAILS FOR REINFORCEMENT SHALL GOVERN IF IN EXCESS OF NOTES 1, 2 AND 3 ABOVE.
3. ALL METAL SURFACES SHALL BE PAINTED PER SPECIFICATIONS. OUTLET TO BE COATED WITH SAME COATING AS PIPE.
4. OUTLET NOZZLE SHOULD BE POSITIONED AND WELDED ON TO WATER MAIN PRIOR TO WELDING ON THE REQUIRED REINFORCEMENT AT A 90° PERPENDICULAR ANGLE TO THE WATER MAIN.
5. FLANGE SHALL BE ATTACHED WITH BOLT HOLES CENTERED ABOUT THE VERTICAL AXIS OF THE PIPE UNLESS OTHERWISE NOTED.
6. CONTRACTOR MUST EXPOSE 24" ON EITHER SIDE OF TAPPING SLEEVE TO ENSURE CLEARANCE FROM ADJACENT COLLARS AND PIPE JOINTS.
7. TAPPING SLEEVES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE.

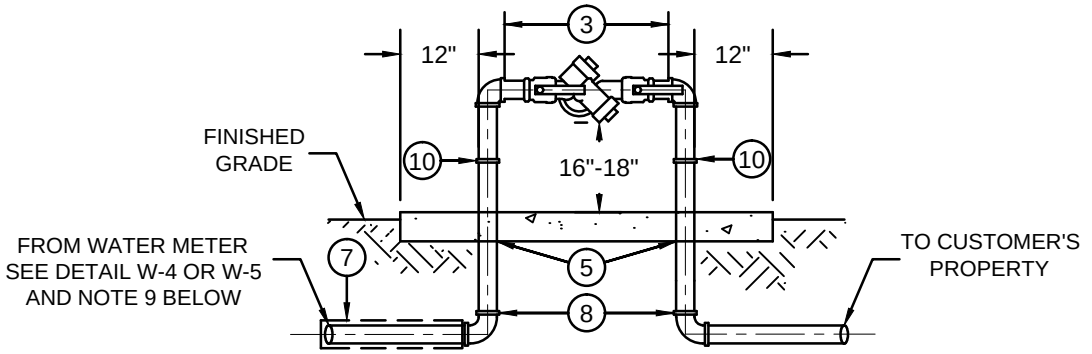
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

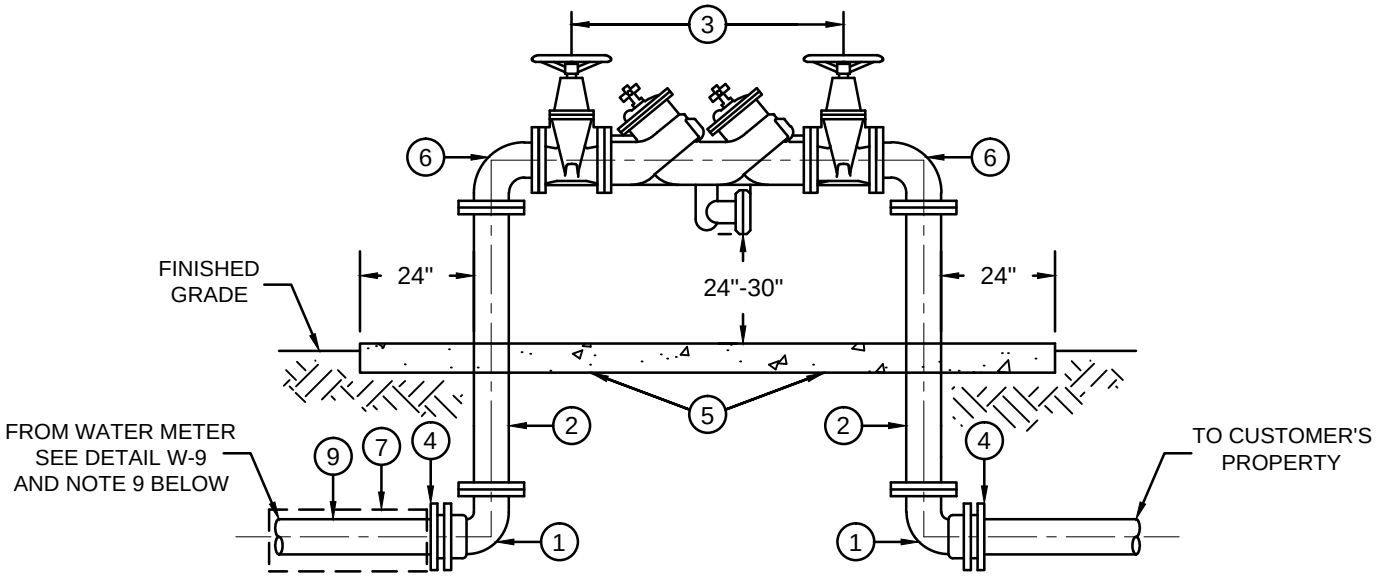
TAPPING OUTLET FOR STEEL PIPE 3" AND LARGER

DRAWING NUMBER

W-19



2" AND SMALLER RP BACKFLOWS



3" AND LARGER RP BACKFLOWS

ITEM	DESCRIPTION:
1	D.I 90° ELBOW (FLG. X M.J.).
2	D.I OR SCH. 40 STEEL PIPE, FLG, ORDER TO FIT.
3	RP BACKFLOW PREVENTER. SIZE AS INDICATED ON PLAN.
4	RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5	4" THICK CLASS IV CONCRETE PAD.
6	D.I OR SCH. 40 STEEL - 90° ELBOW, FLG.
7	SCH. 40 STEEL SLEEVE. (WHEN BACKFLOW IS NOT LOCATED WITHIN 18" OF WATER METER).
8	ALL FITTINGS AND PIPE SHALL BE BRASS FROM METER TO BACKFLOW.
9	D.I PIPE, SIZE TO MATCH METER ASSEMBLY.
10	BRASS UNION.

NOTES:

1. BACKFLOW MUST BE USC CROSS-CONNECTION CONTROL HYDRAULIC RESEARCH STANDARDS APPROVED.
2. NO CONNECTIONS, HOSE BIBS, STRAINERS, PRVS, OR TEES ARE ALLOWED BETWEEN METER AND BACKFLOW DEVICE.
3. PAINT BACKFLOW ASSEMBLY HUNTER GREEN PER DISTRICT SPECIFICATIONS.
4. BACKFLOW MUST BE INSTALLED ABOVE GROUND, AND DEPENDING ON RIGHT-OF-WAY, PARALLEL TO PROPERTY LINE.
5. 24" MINIMUM CLEARANCE REQUIRED AROUND ENTIRE ASSEMBLY. DISTRICT SHALL APPROVE FINAL LOCATION.
6. BACKFLOW MUST BE TESTED AND CERTIFIED BEFORE WATER SERVICE CAN BE TURNED ON.
7. R.P DEVICES SHALL HAVE TEST COCKS SIZED AS FOLLOWS: 2" & SMALLER (1/4"), 2" TO 4" (1/2"), 6" & LARGER (3/4").
8. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
9. INSTALLATION OF BACKFLOW SHALL BE DONE BY PRIVATE CONTRACTOR UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND OTHER APPURTENANCES AFTER METER ASSEMBLY.

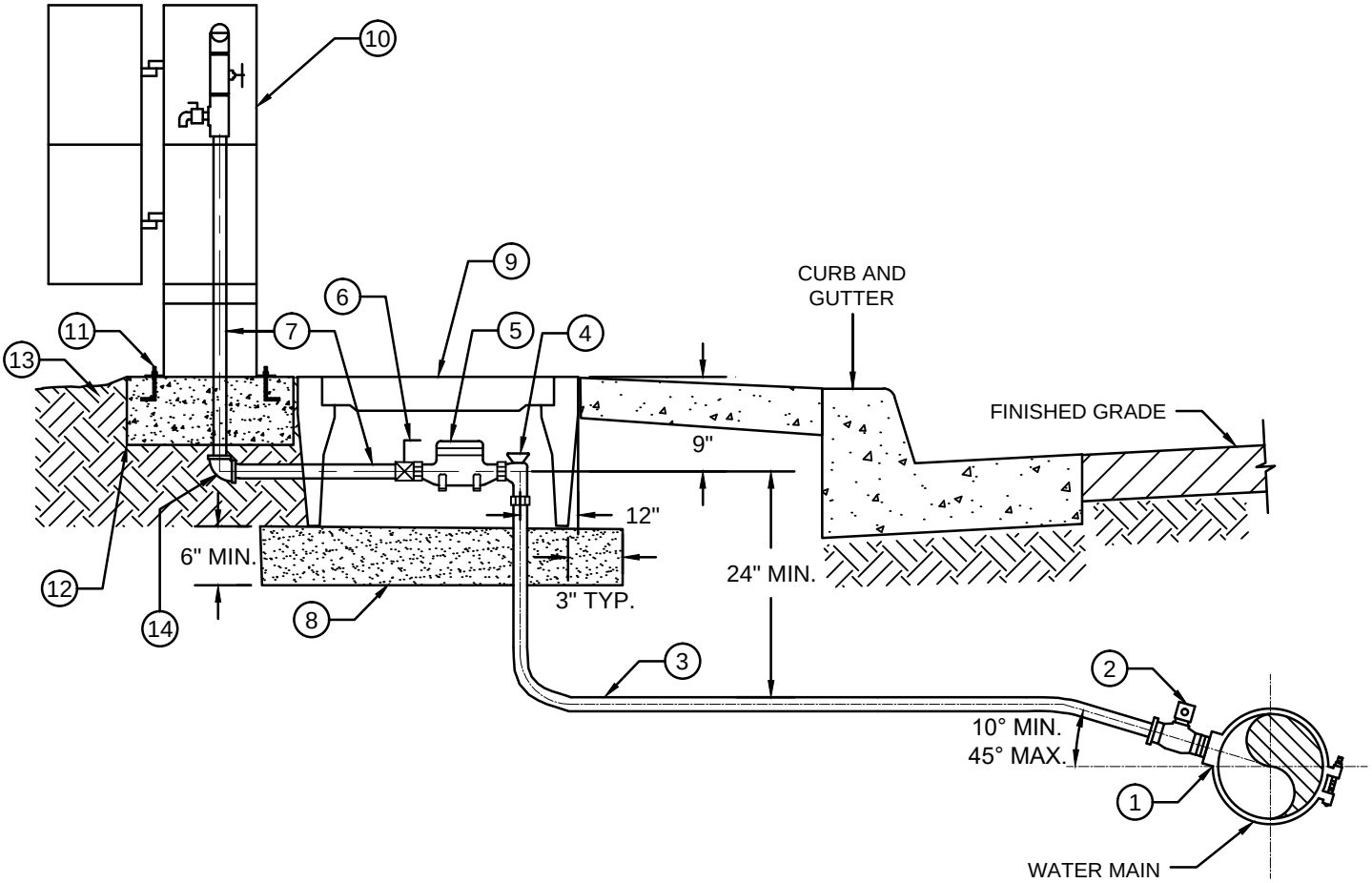
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

BACKFLOW PREVENTER (RP) INSTALLATION DETAIL

DRAWING NUMBER

W-20



ITEM DESCRIPTION:

1. DOUBLE STRAP SERVICE SADDLE WITH 1" I.P.T OUTLET. FORD FS202, MUELLER DR2A, ROMAC 202S, AND SMITH BLAIR 313. WHERE STEEL PIPE IS INSTALLED, USE TAPPING OUTLET PER DISTRICT STANDARD W-18.
2. 1" CORPORATION STOP (I.P.T X P.J). FORD B84-444-NL-R OR MUELLER P25122N-3.
3. 1" COPPER WATER SERVICE, TYPE "K", SOFT TEMPER, PER ASTM B-88.
4. 1" OR 3/4" ANGLE METER VALVE (P.J X METER SWIVEL NUT). FORD BA43-444WR-NL OR MUELLER P24258N-3.
5. 1" OR 3/4" METER (SUPPLIED BY DISTRICT).
6. 1" OR 3/4" CUSTOMER BALL VALVE WITH HANDLE (SUPPLIED BY DISTRICT). FORD B13-444WR-NL OR MUELLER B24351-3.
7. 1" OR 3/4" BRASS THREADED PIPE (MALE).
8. IMPORTED SAND BASE.
9. METER BOX (SUPPLIED BY DISTRICT). OLDCASTLE PRECAST FL12 BOX.
10. AMERICAN-MC SAMPLE STATION (EZ-01 - 44" MODEL) COLOR RAL6017.
11. 4 - 304L STAINLESS STEEL #6 AND #10 FASTENERS.
12. 3' X 3' X 6" CLASS IV CONCRETE PAD. TOP OF PAD SHALL MATCH TOP OF CURB OR SIDEWALK.
13. COMPACTED BASE MATERIAL
14. 1" OR 3/4" ELBOW (P.J X F.I.T).

NOTES:

1. WATER SERVICE INSTALLATION FROM MAIN TO CUSTOMER VALVE SHALL BE PER DISTRICT STANDARD W-4.

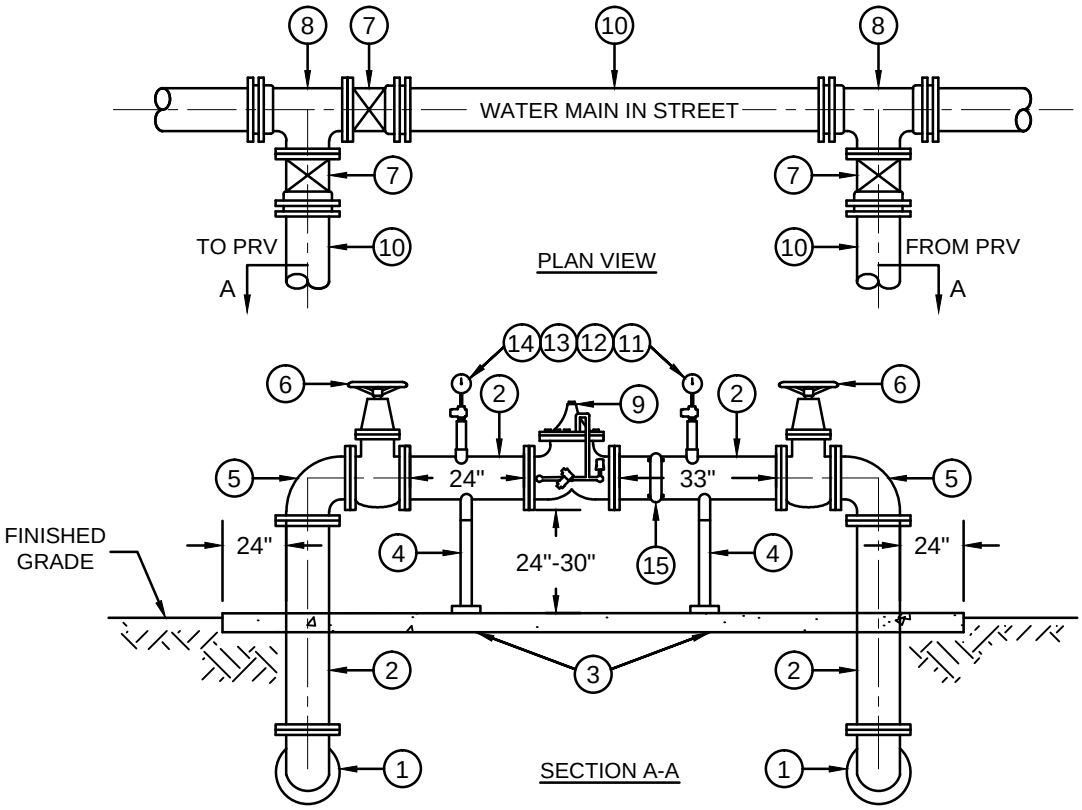
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

SAMPLE STATION DETAIL

DRAWING NUMBER

W-21



ITEM	DESCRIPTION:
1	D.I 90° ELBOW (FLG. X M.J.).
2	D.I OR SCH. 40 STEEL PIPE, FLG, ORDER TO FIT.
3	4" THICK CLASS IV CONCRETE PAD.
4	ADJUSTABLE PIPE SADDLE SUPPORT.
5	D.I OR SCH 40 STEEL - 90° ELBOW, FLG.
6	RESILIENT-SEATED GATE VALVE WITH HAND WHEEL AND NRS, FLG.
7	RESILIENT-SEATED GATE VALVE (FLG. X M.J.) PER DISTRICT STANDARD W-11.
8	D.I TEE (FLG. X M.J. X M.J.) OR (FLG. X M.J X FLG.).
9	PRESSURE REDUCING VALVE WITH FLANGED CONNECTIONS. (CLA-VAL 90-01KC)
10	D.I PIPE, PER DISTRICT STANDARD W-28. SIZE INDICATED ON PLAN.
11	1" X 4" LONG GALVANIZED NIPPLE THREADED AT BOTH ENDS.
12	1" BALL VALVE - F.I.T. WITH 360° TURN. FORD B11-444M-NL OR MUELLER B-20200-3N.
13	1" SCH. 40 STEEL COUPLING WELDED TO PIPE.
14	1" X 1/4" BRASS BUSHING WITH PRESSURE GAUGE (CLA-VAL X141)
15	VICTAULIC COUPLING.

NOTES:

1. ALL PIPING AND FITTINGS SHALL MATCH THE SIZE OF THE PRV.
2. PRV STATION MUST BE 24" BEHIND SIDEWALK AND ABOVE GROUND.
3. WHEN SPECIFIED BY THE DISTRICT, PRV STATION SHALL BE ENCLOSED WITH 6' HIGH CHAIN LINK FENCE PER DISTRICT STANDARD W-16 AND W-17 WITH 3' ACCESS GATE.
4. PAINT PRV ASSEMBLY HUNTER GREEN PER DISTRICT SPECIFICATIONS.
5. 30" MINIMUM CLEARANCE REQUIRED AROUND ENTIRE ASSEMBLY.
6. ALL JOINTS, BENDS AND FITTINGS SHALL BE RESTRAINED WITH APPROVED RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
9. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.

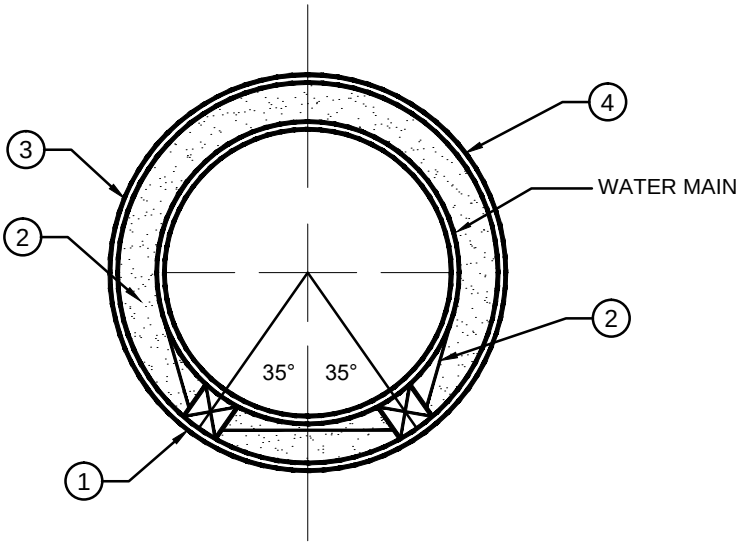
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

PRESSURE REGULATION VALVE INSTALLATION DETAIL

DRAWING NUMBER

W-22



ITEM DESCRIPTION:

1. 4" X 4" ROUGH REDWOOD SKID, CUT TO BEAR ON CONDUCTOR TUBE
2. 3/4" WIDE X 0.045" THICK STAINLESS STEEL BAND
3. BLOWN SAND
4. STEEL CONDUCTOR TUBE (SEE DISTRICT SPECIFICATIONS AND NOTES FOR SIZING).

NOTES:

1. MINIMUM 4" CLEARANCE IS REQUIRED BETWEEN INNER WALL OF CONDUCTOR TUBE AND OUTER WALL OF WATER MAIN.
2. THE INSIDE DIAMETER OF THE CONDUCTOR TUBE SHALL BE THE OUTER DIAMETER OF WATER MAIN PLUS 12" MINIMUM.
3. THE MINIMUM WALL THICKNESS OF THE CONDUCTOR TUBE SHALL BE 1/4" FOR PIPE DIAMETERS 28" AND SMALLER; 1/2' FOR PIPE DIAMETERS 30" TO 38"; AND 3/4" FOR PIPE DIAMTERS 40" TO 72".

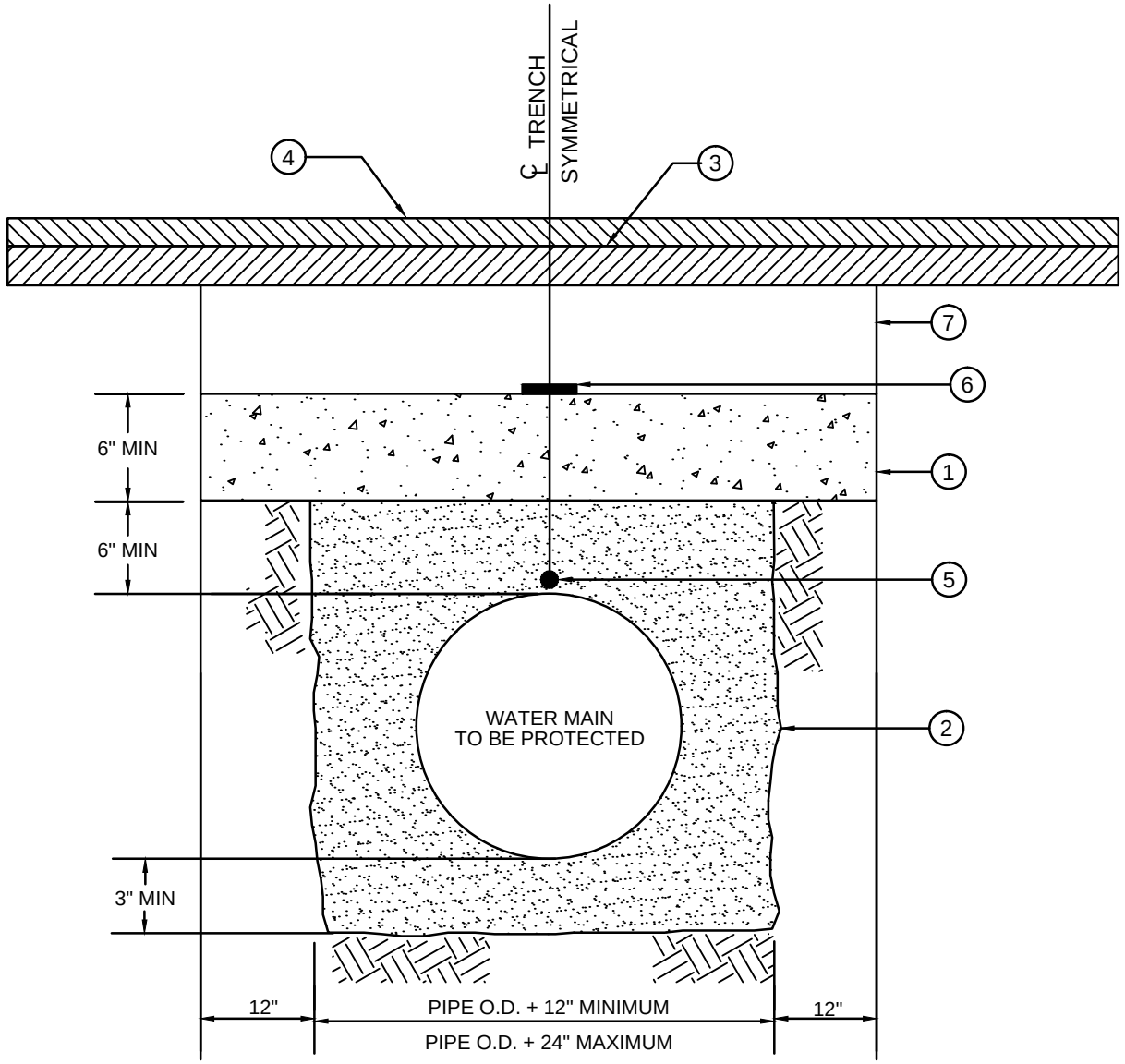
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

CONDUCTOR TUBE DETAIL

DRAWING NUMBER

W-23



ITEM DESCRIPTION:

1. TYPE IV CONCRETE BLANKET OR SLURRY BACKFILL (WHEN APPROVED BY THE DISTRICT).
2. PIPE SAND BEDDING.
3. 3" AC BASE PAVEMENT.
4. 1" TO 1/2" AC CAP PAVEMENT.
5. LOCATOR WIRE
6. 6" WIDE BLUE WARNING TAPE ("CAUTION WATER LINE BELOW").
7. SEE DISTRICT STANDARD W-1 FOR BACKFILL REQUIREMENTS.

NOTES:

1. CONCRETE BLANKET SHALL ONLY BE USED WHEN APPROVED BY THE DISTRICT.
2. CONCRETE BLANKET SHALL BE INSTALLED AT LOCATIONS WHERE PIPE LINE HAS LESS THAN 30 INCHES OF COVER, AND EXTEND THE ENTIRE SHALLOW LENGTH OF PIPE.
3. REFER TO DISTRICT STANDARD W-1 FOR ALL TRENCH CONSTRUCTION AND BACKFILL REQUIREMENTS.

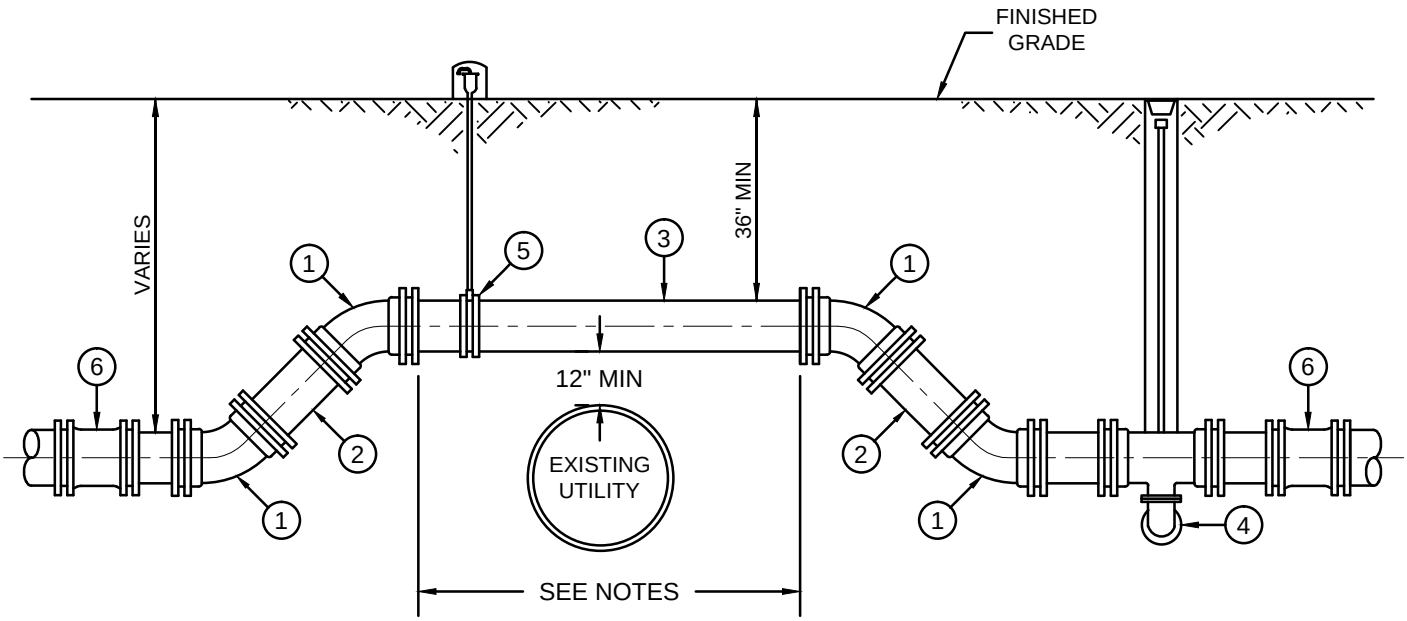
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

CONCRETE BLANKET DETAIL

DRAWING NUMBER

W-24



ITEM DESCRIPTION:

1. D.I 45° ELBOW, M.J.
2. D.I PIPE, 18" MIN.
3. D.I PIPE, SEE NOTES 2 AND 3 FOR LENGTH REQUIREMENTS.
4. BLOW-OFF ASSEMBLY PER DISTRICT STANDARD W-7 AT LOWEST POINT.
5. COMBINATION AIR VALVE ASSEMBLY PER DISTRICT STANDARD W-6 AT HIGHEST POINT.
6. PIPE SIZE, RESTRAINED FLEX COUPLING (WHEN CUTTING INTO EXISTING PIPE).

NOTES:

1. USE OF SIPHON MUST BE APPROVED BY WVWD.
2. FOR CROSSING SEWER AND STORM DRAINS, MINIMUM PIPE LENGTH IS 9' CENTERED ON THE UTILITY. NO JOINTS IN PIPE.
3. FOR ALL OTHER UTILITIES, MINIMUM PIPE LENGTH IS 4' CENTERED ON THE UTILITY. NO JOINTS IN PIPE.
4. ALL JOINTS, BENDS AND FITTINGS SHALL BE RESTRAINED WITH APPROVED RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5. MINIMUM 12" CLEARANCE IS REQUIRED BETWEEN OUTER WALL OF WATER MAIN AND OUTER WALL OF CONFLICTING UTILITY.
6. SEE DISTRICT STANDARD W-24 FOR CONCRETE BLANKETS WHEN 36" COVER CANNOT BE OBTAINED ON TOP OF PIPE OR WHEN 12" CLEARANCE CANNOT BE OBTAINED BETWEEN CONFLICTING UTILITY. CONCRETE BLANKETS CAN ONLY BE USED WHEN APPROVED BY DISTRICT ENGINEER.
7. FULLY WELDED CMLC SIPHON CAN BE USED WITH APPROVAL FROM DISTRICT ENGINEER.

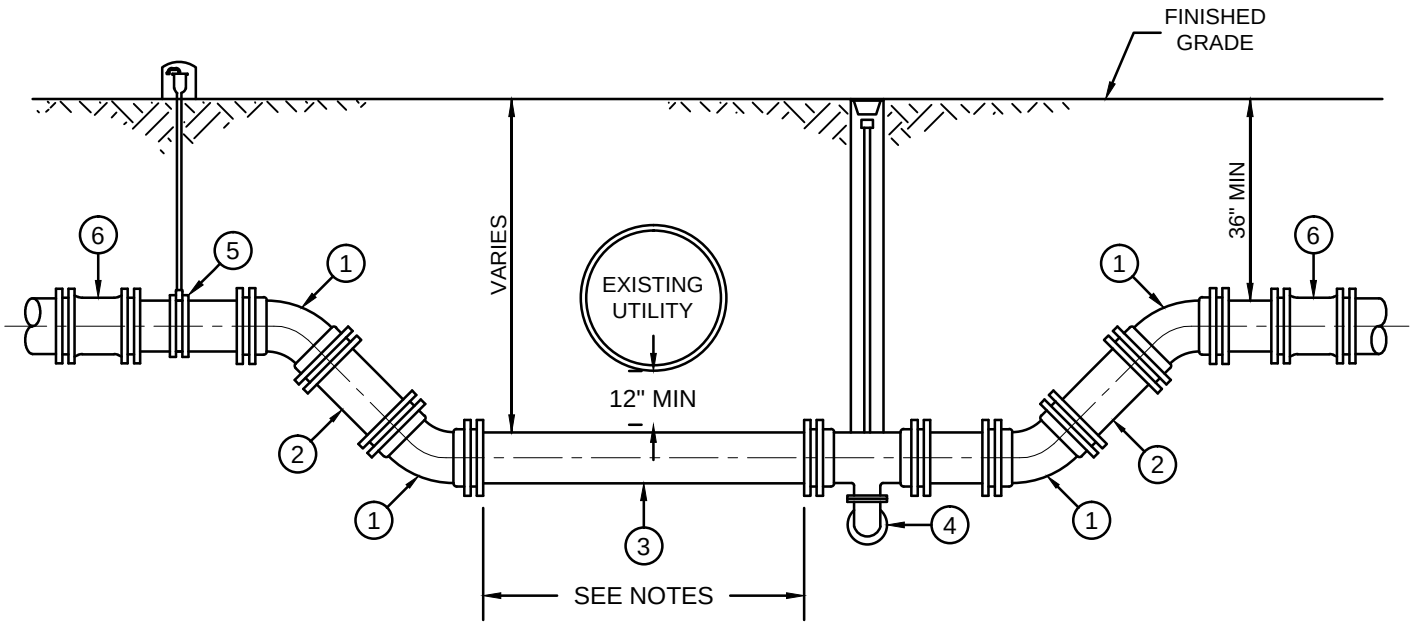
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

SIPHON DETAIL

DRAWING NUMBER

W-25



ITEM DESCRIPTION:

1. D.I 45° ELBOW, M.J.
2. D.I PIPE, 18" MIN.
3. D.I PIPE, SEE NOTES 2 AND 3 FOR LENGTH REQUIREMENTS.
4. BLOW-OFF ASSEMBLY PER DISTRICT STANDARD W-7 AT LOWEST POINT.
5. COMBINATION AIR VALVE ASSEMBLY PER DISTRICT STANDARD W-6 AT HIGHEST POINT.
6. PIPE SIZE, RESTRAINED FLEX COUPLING (WHEN CUTTING INTO EXISTING PIPE).

NOTES:

1. USE OF INVERTED SIPHON MUST BE APPROVED BY WVWD.
2. FOR CROSSING SEWER AND STORM DRAINS, MINIMUM PIPE LENGTH IS ONE FULL STICK OF PIPE (18' FOR D.I) CENTERED ON THE UTILITY. NO JOINTS IN PIPE.
3. FOR ALL OTHER UTILITIES, MINIMUM PIPE LENGTH IS 4' CENTERED ON THE UTILITY. NO JOINTS IN PIPE.
4. ALL JOINTS, BENDS AND FITTINGS SHALL BE RESTRAINED WITH APPROVED RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5. MINIMUM 12" CLEARANCE IS REQUIRED BETWEEN OUTER WALL OF WATER MAIN AND OUTER WALL OF CONFLICTING UTILITY.
6. SEE DISTRICT STANDARD W-24 FOR CONCRETE BLANKETS WHEN 36" COVER CANNOT BE OBTAINED ON TOP OF PIPE OR WHEN 12" CLEARANCE CANNOT BE OBTAINED BETWEEN CONFLICTING UTILITY. CONCRETE BLANKETS CAN ONLY BE USED WHEN APPROVED BY DISTRICT ENGINEER.
7. FULLY WELDED CMLC INVERTED SIPHON CAN BE USED WITH APPROVAL FROM DISTRICT ENGINEER.

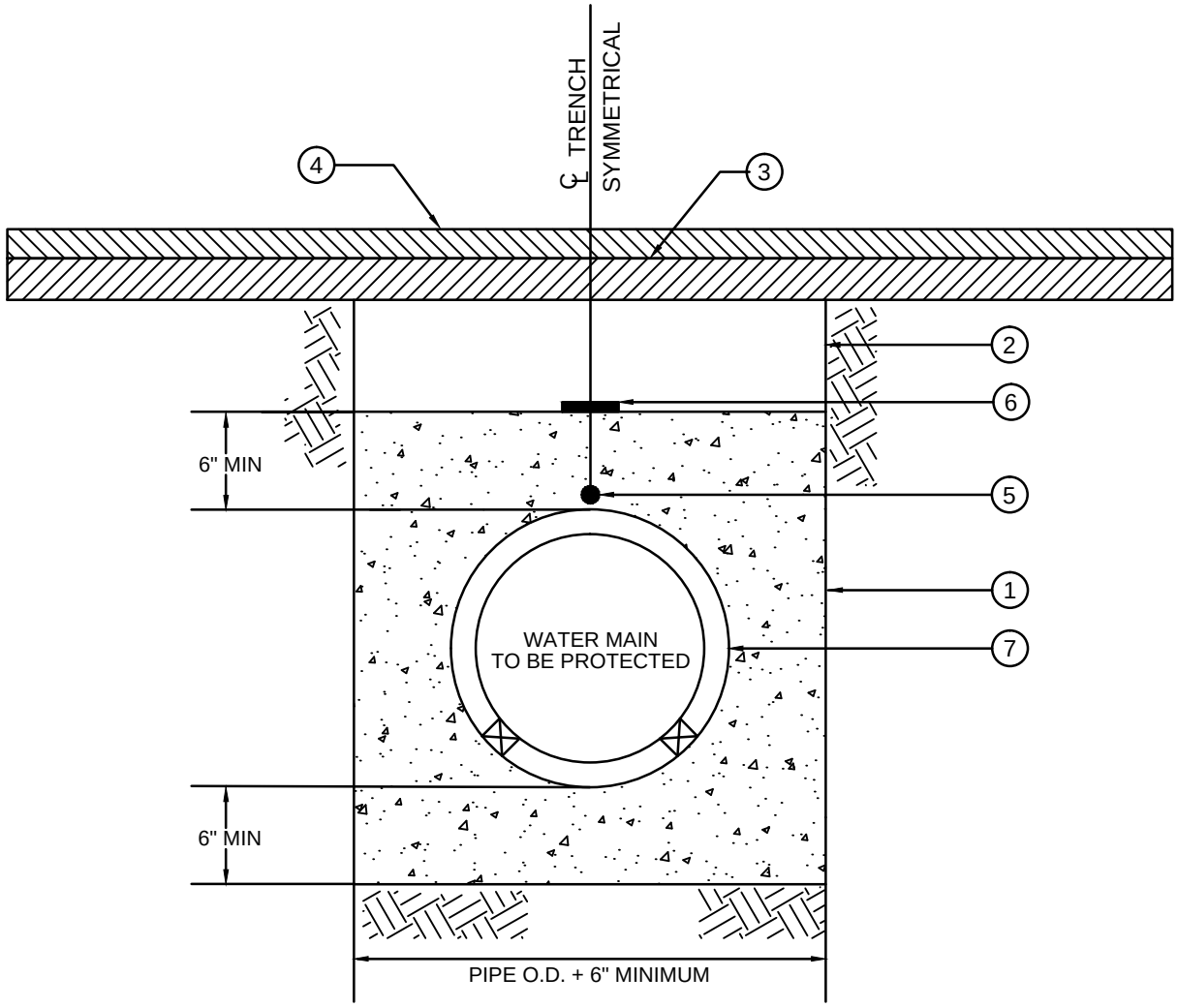
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

INVERTED SIPHON DETAIL

DRAWING NUMBER

W-26



ITEM DESCRIPTION:

1. TYPE IV CONCRETE ENCASEMENT.
2. SEE DISTRICT STANDARD W-1 FOR BACKFILL REQUIREMENTS.
3. 3" AC BASE PAVEMENT.
4. 1" TO 1/2" AC CAP PAVEMENT.
5. LOCATOR WIRE
6. 6" WIDE BLUE WARNING TAPE ("CAUTION WATER LINE BELOW").
7. CONDUCTOR TUBE PER DISTRICT STANDARD W-23.

NOTES:

1. CONCRETE ENCASEMENT SHALL ONLY BE USED WHEN APPROVED BY THE DISTRICT.
2. CONCRETE ENCASED PIPE SHALL BE FULLY WELDED STEEL WITH NO JOINTS OR FITTINGS WITHIN THE ENCASEMENT. DUCTILE IRON MAY BE USED IF ENCASEMENT IS NOT USED ON BELL AND SPIGOT SECTION OR ON JOINTS AND FITTINGS.
3. CONCRETE ENCASEMENT SHALL BE INSTALLED AT LOCATIONS WHERE PIPE LINE HAS LESS THAN 30 INCHES OF COVER, AND EXTEND THE ENTIRE SHALLOW LENGTH OF PIPE.
4. REFER TO DISTRICT STANDARD W-1 FOR ALL TRENCH CONSTRUCTION AND BACKFILL REQUIREMENTS.

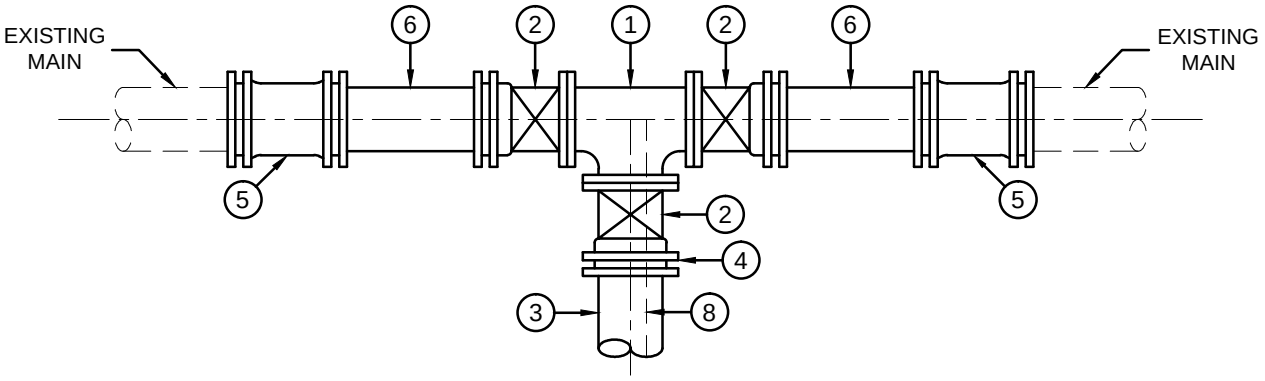
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

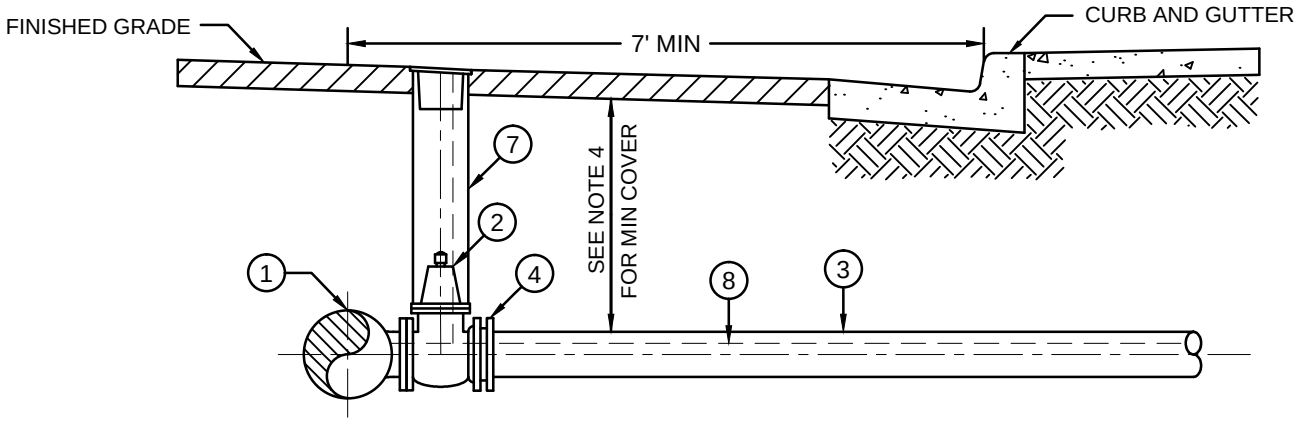
CONCRETE ENCASEMENT

DRAWING NUMBER

W-27



CUT IN TEE



HOT TAP OR NEW DUCTILE IRON TEE

ITEM	DESCRIPTION:
1	FLG. D.I. TEE, MAIN SIZE X LATERAL SIZE FOR NEW MAIN INSTALLATION. SEE CHART FOR HOT TAPPING EXISTING MAIN.
2	RESILIENT-SEATED GATE VALVE (FLG. X M.J.) PER DISTRICT STANDARD W-11.
3	D.I PIPE FOR NEW LATERAL OR MAIN. SEE NOTE 3 FOR PRESSURE AND THICKNESS CLASS.
4	RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5	RESTRAINED FLEX COUPLING.
6	D.I PIPE, 18" MIN. SEE NOTE 3 FOR PRESSURE AND THICKNESS CLASS.
7	VALVE RISER AND COVER. PER DISTRICT STANDARD W-11.
8	LOCATING WIRE.

PIPE MATERIAL	HOT TAP METHOD
DUCTILE, CAST PVC*	FORD FTSS, MUELLER H-304SS, ROMAC SSTIII, SMITH-BLAIR 665
ACP*	MUELLER H-619
STEEL	SEE DISTRICT STANDARD W-19
SIZE X SIZE IS NOT PERMITTED ON ACP OR PVC	

NOTES:

1. ALL D.I PIPE SHALL HAVE 8 MILL POLYWRAP PER DISTRICT SPECIFICATIONS.
2. A MINIMUM OF 24" OF PIPE SHALL BE BETWEEN EACH HOT TAP AND TEE FOR NEW AND EXISTING SERVICES.
3. PRESSURE CLASS 350 FOR 4" - 8", THICKNESS CLASS 50 FOR 10" THROUGH 22" AND CMLC FOR 24" AND LARGER.
4. DEPTH OF COVER FOR WATER LATERALS SHALL BE 30" MIN. DEPTH OF COVER FOR 10" MAINS AND SMALLER SHALL BE 36" MIN. DEPTH OF COVER FOR 12" MAINS AND LARGER SHALL BE 42" MIN.
5. ALL WATER MAINS AND LATERALS SHALL BE INSTALLED IN PUBLIC RIGHT-OF-WAYS OR DEDICATED EASEMENTS APPROVED BY THE DISTRICT.
6. ALL NEWLY INSTALLED LATERALS AND MAINS SHALL HAVE LOCATING WIRE INSTALLED AND TIED INTO EXISTING.
7. CONTRACTOR MUST EXPOSE 24" ON EITHER SIDE OF TAPPING SLEEVE TO ENSURE CLEARANCE FROM ADJACENT COLLARS AND PIPE JOINTS.

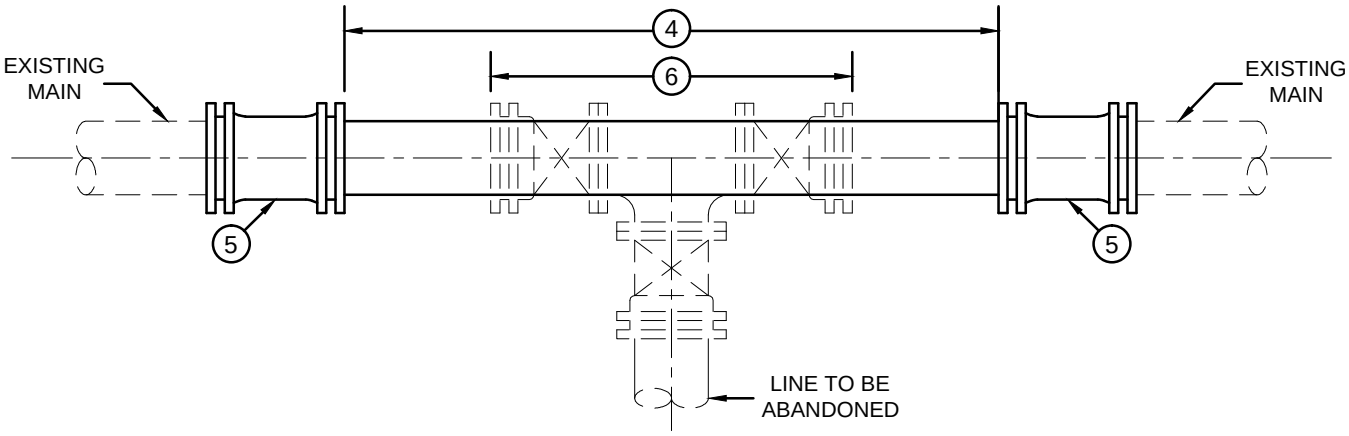
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

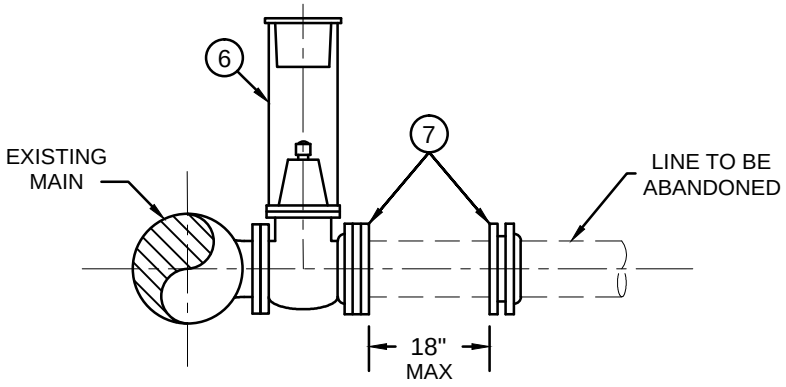
NEW LATERAL INSTALLATION 3" AND LARGER

DRAWING NUMBER

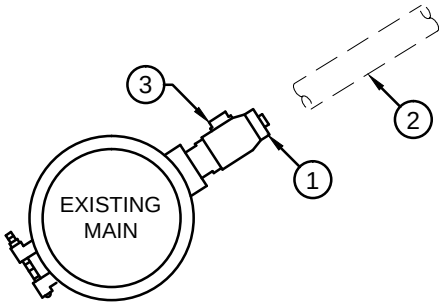
W-28



3" AND LARGER WATER SERVICE AND FITTING ABANDONMENT



3" AND LARGER ABANDONMENT AT VALVE



3/4" THROUGH 2" WATER SERVICE ABANDONMENT

ITEM DESCRIPTION:

1. THREADED BRONZE CAP ON CORP STOP, FEMALE OR SOLDERED CAP.
2. CUT AND REMOVE 12" OF SERVICE LATERAL.
3. CLOSE EXISTING CORP STOP.
4. INSTALL D.I PIPE, CUT TO FIT. (PIPE SIZE).
5. RESTRAINED FLEX COUPLING (PIPE SIZE).
6. CUT AND REMOVE EXISTING PIPE, VALVE, VALVE CAN, LID AND THRUST BLOCK AS REQUIRED.
7. D.I BLIND FLANGE AT VALVE OR M.J CAP ON 18" MAX PUB. SEE NOTE 6 FOR INSTRUCTIONS.

NOTES:

1. REMOVE APPURTENANCES AND RETURN METER AND BOX TO DISTRICT. FOR METERS REMOVED IN PARKWAY, BACKFILL WITH SELECT MATERIAL AND COMPACT TO = 85% DENSITY. FOR METERS REMOVED IN SIDEWALK, REPLACE SIDEWALK PER JURISDICTION'S STANDARDS TO NEAREST CONSTRUCTION JOINT.
2. DISTRICT ENGINEER OR INSPECTOR TO MAKE DETERMINATION OF APPROPRIATE MATERIALS TO USE AND HOW APPURTENANCES ARE ABANDONED.
3. IF EXISTING PIPE AND TEE ARE STEEL, USE FLEX COUPLINGS FOR RECONNECTION. IF EXISTING PIPE AND TEE ARE CAST OR DUCTILE IRON, USE D.I. M.J. SLEEVES OR FLEX COUPLINGS.
4. THIS STANDARD DRAWING MAY BE USED FOR IN-LINE VALVE REMOVAL OR OTHER IN-LINE APPURTENANCES AS DIRECTED BY THE DISTRICT.
5. POTHOLE EXISTING WATER SERVICES AND TEE CONNECTIONS PRIOR TO CUTTING PIPE.
6. AN EXISTING FLANGE VALVE MAY BE REMOVED AND A BLIND FLANGE INSTALLED IF APPROVED BY THE ENGINEER. WHEN EXISTING FLANGE BOLTS ARE IN POOR CONDITION AND/OR THE EXISTING TEE JOINTS ARE CAULKED, THEN REMOVAL OF TEE AND VALVE IS REQUIRED PER W-29.
7. REPAIR OR REPLACE A.C PAVEMENT AND ROAD BASE IN ACCORDANCE WITH EXCAVATION PERMIT. BACKFILL AND COMPACT PER DISTRICT STANDARD W-1.

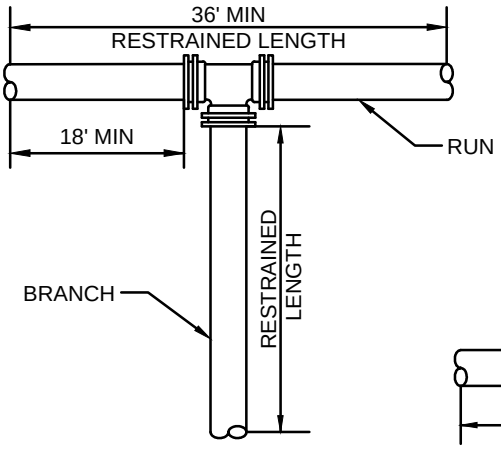
REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

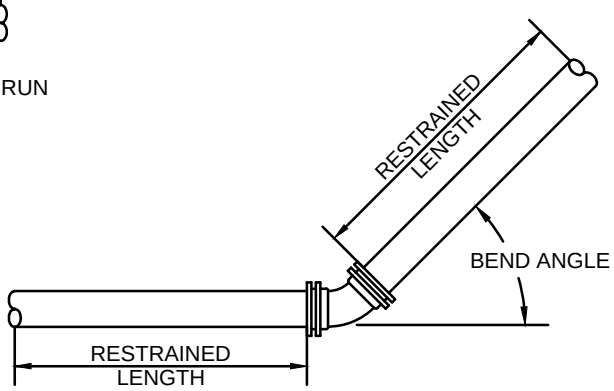
WATER SERVICE ABANDONMENT

DRAWING NUMBER

W-29



TEE



BEND

DEAD END

PIPE SIZE	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE*	DEAD END
4"	2'	5'	10'	24'	11'	50'
6"	3'	7'	14'	34'	31'	70'
8"	4'	9'	18'	43'	51'	90'
10"	5'	10'	21'	52'	69'	109'
12"	6'	12'	25'	60'	86'	127'
16"	7'	15'	31'	75'	120'	161'

*BRANCH LENGTH

NOTES:

1. ALL DUCTILE IRON PIPE JOINTS, FITTINGS AND VALVES SHALL BE MECHANICALLY RETRAINED EXTERNALLY.
2. DUCTILE IRON PIPE SHALL BE INTERNALLY RESTRAINED WITH PUSH-ON TYPE LOCKING GASKETS AS REQUIRED IN THE CHART ABOVE.
3. USE THE FOLLOWING GUIDELINES WHEN OTHER PIPE JOINTS ARE WITHIN 10 FEET OF THE JOINT BEING RESTRAINED:

   A) USE THE "DEAD END" LENGTH FOR CONNECTIONS TO ANY MATERIAL EXCEPT DUCTILE IRON AND CAST IRON.
   B) USE THE "DEAD END" LENGTH WHEN ANOTHER PIPE JOINT IS WITHIN 10 FEET OF A BEND BEING RESTRAINED.
   C) USE THE "90 BEND" LENGTH WHEN ANOTHER PIPE JOINT IS WITHIN 10 FEET OF A TEE BEING RESTRAINED.

4. DIVIDE RESTRAINED LENGTH BY 0.85 FOR SILTY SOIL.
5. THIS TABLE IS BASED ON THE ASSUMPTION THAT THE TRENCH IS BACKFILLED TO A MINIMUM DEPTH OF 2.5 FEET WITH A SILTY SAND WHICH HAS BEEN LIGHTLY COMPACTED.
6. FOR PIPE DIAMETERS LARGER THAN 16", OR FOR CONDITIONS OTHER THAN THOSE DESCRIBED ABOVE, PLEASE REFER TO DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES FOR CALCULATING RESTRAINED LENGTH. CALCULATIONS MUST BE SUBMITTED FOR APPROVAL.
7. RESTRAINED LENGTH ON TEES ASSUMES THE SAME SIZE BRANCH AND RUN. TEES WHICH HAVE BRANCH DIAMETERS LESS THAN THE DIAMETER OF THE RUN MAY REQUIRE A SHORTER RESTRAINED LENGTH. CALCULATIONS MUST BE SUBMITTED JUSTIFYING A SHORTER RESTRAINED LENGTH.
8. ALL PIPELINES LARGER THAN 16" DIAMETER REQUIRE RESTRAINED LENGTH CALCULATIONS INCLUDING SOILS REPORT.
9. INSPECTOR SHALL DETERMINE IN THE FIELD IF ADDITIONAL RESTRAINTS, GASKETS OR THRUST BLOCKS WILL BE REQUIRED.

REVISIONS	
DATE	BY
09-2019	DAG
SCALE: NONE	

West Valley Water District

RESTRAINED JOINT DETAIL

DRAWING NUMBER

W-30