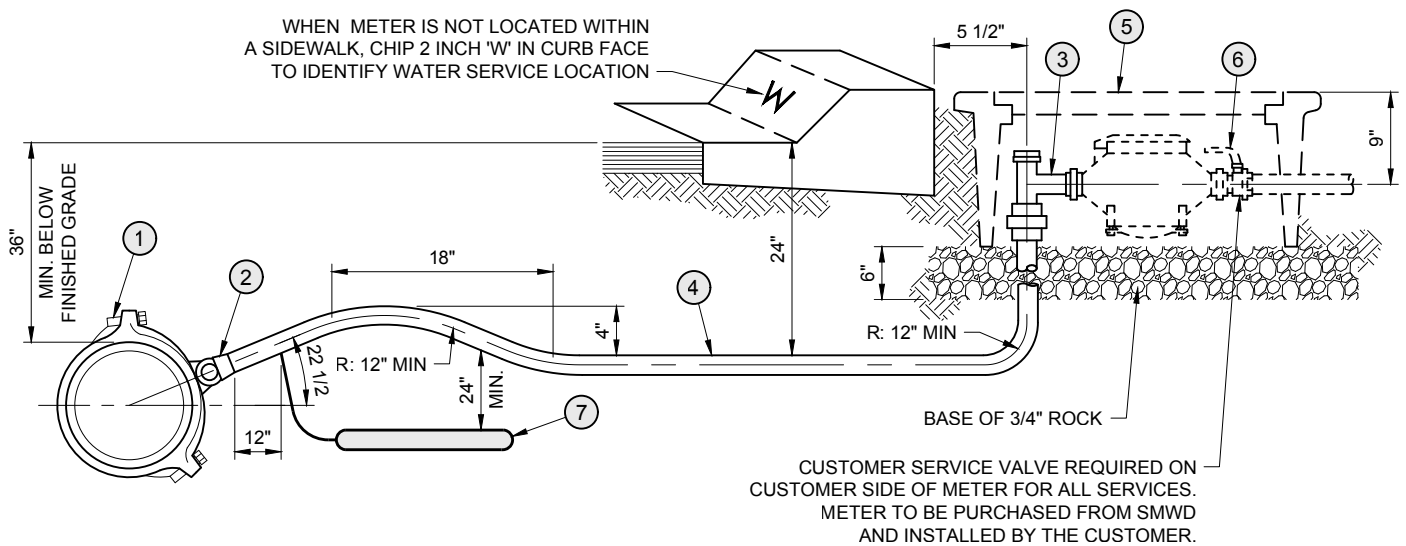


WHEN METER IS NOT LOCATED WITHIN A SIDEWALK, CHIP 2 INCH "W" IN CURB FACE TO IDENTIFY WATER SERVICE LOCATION



NOTES

1. DOUBLE STRAP SERVICE SADDLE REQUIRED FOR ALL MAINS.
2. INSTALL CORPORATION STOP TAP WITH KEY SIDEWAYS, IN OPEN POSITION.
3. THE CORPORATION STOP TAP WILL BE SPECIFIED BY THE PIPE MANUFACTURER, ALL DRY TAPS WILL BE MADE USING MACHINE WITH GUIDE OR PILOT TAP.
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
5. NO TAP TO MAIN SHALL BE WITHIN 12" OF A COUPLING OR WITHIN 18" OF ANOTHER TAP.
6. METER BOXES SHALL BE INSTALLED DIRECTLY BEHIND CURB WHETHER SIDEWALK IS ADJACENT TO CURB OR NOT. ANGLE METER STOP SHALL BE POSITIONED TO ALLOW FULL OPERATION OF BOTH VALVES.
7. NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
8. ALL LIDS AND COVERS SHALL BE RATED FOR H20 TRAFFIC LOADING. ARMORCAST A6000H9-PLUG SHALL BE INSTALLED WITH MANUAL READ METERS. J&R CONCRETE W4 1/2 CONCRETE BOX & P-W4 1/2-20K 2 PIECE POLYMER COVER WITH QUICK READ PORT & POLYMER READING LID OR ARMORCAST A6000485SA POLYMER CONCRETE BOX, A6000484T-H9 20K 1 PIECE POLYMER CONCRETE COVER WITH NEPTUNE ANTENNA CAVITY.
9. IF REQUIRED BACKFLOW PREVENTER SHALL BE INSTALLED ON CUSTOMER SIDE OF METER AND INSTALLED AND CERTIFIED PRIOR TO ACTIVATION OF THE WATER METER.
10. FOR SERVICE TAP OF STEEL MAINS, SEE STANDARD DRAWING W6.
11. FOR METERS IN SLOPES, SEE STANDARD DRAWING W28.
12. CONTACT THE DISTRICT FOR APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
13. ANODE LEAD WIRE SHALL BE CLAMPED TO COPPER TUBING. CLAMP SHALL BE DIRECT BURIAL TYPE OF RED BRASS WITH BRASS SCREWS.
14. COPPER TUBING SHALL BE DOUBLE POLYETHYLENE ENCASED WITH 8 MIL. MINIMUM THICKNESS, AND ALL OPENINGS IN THE SLEEVES SHALL BE TAPED SHUT WITH POLYKEN # 900 TAPE WRAP, OR APPROVED EQUAL. TAPE SHALL BE APPLIED IN STRICT CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
15. INSTALL SACRIFICIAL ANODE CONSISTING OF 15 LB. HIGH PURITY ZINC BAR BAGGED IN A BACKFILL OF CALCIUM, BENTONITE AND GYPSUM, WITH NO.12 SOLID COPPER LEAD WIRE. BURY ANODE IN SERVICE LINE TRENCH. SATURATE ANODE WITH WATER PRIOR TO BACKFILLING TRENCH. TEST ANODE PER THE MANUFACTURER RECOMMENDATIONS FOR CONFIRMATION OF PROPER INSTALLATION AND SUBMIT THE RESULTS TO DISTRICT INSPECTOR FOR REVIEW.
16. ALL DUCTILE IRON FITTINGS AND BENDS SHALL BE DOUBLE POLYETHYLENE ENCASED PER AWWA STANDARD C-105.

CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH IP THR'D	FORD MUELLER	202BS BR2S
②	1" BRONZE CORPORATION STOP	MUELLER FORD	B-25025N FB700-4-NL
③	1" x 3/4" BRONZE ANGLE METER STOP WITH LOCKWING	MUELLER	B24255

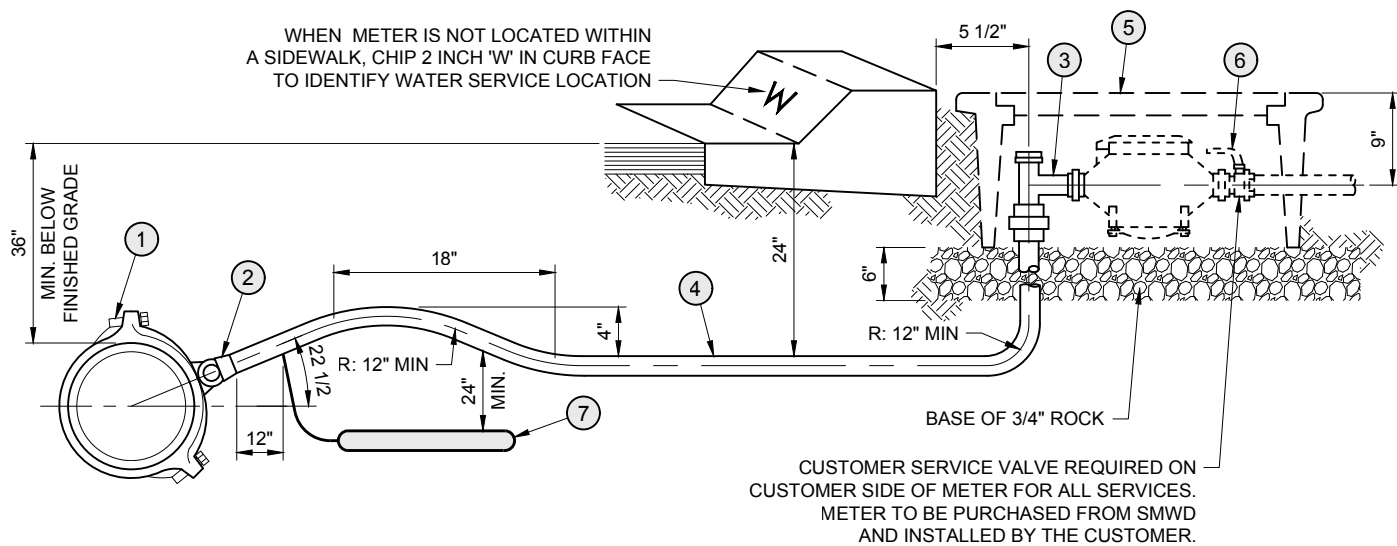
CONSTRUCTION ITEMS / MATERIALS LIST (Cont.)			
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
④	1" COPPER TUBING WITH FLARED ENDS AND POLYETHYLENE SLEEVE	SEE NOTE 14	TYPE "K" SOFT
⑤	METER BOX (WITH READING LID)	J&R CONCRETE PRODUCTS OR ARMORCAST	SEE NOTE 8
⑥	CUSTOMER BALL VALVE	MUELLER	B-24351N
⑦	15 LB ZINC ANODE		

Santa Margarita Water District

REVISION	DECEMBER 2021	
Date	Aprvd	APPROVED:
03/22	PAB	<i>Patricia Butler</i>
11/23	PAB	6/24
PATRICIA A. BUTLER RCE C57880 DATE CHIEF ENGINEER, Engineering Department		

1 INCH WATER SERVICE WITH 3/4 INCH METER

SMWD
STD DWG NO.
W1
1 OF 1



NOTES

1. DOUBLE STRAP SERVICE SADDLE REQUIRED FOR ALL MAINS.
2. INSTALL CORPORATION STOP TAP WITH KEY SIDEWAYS, IN OPEN POSITION.
3. THE CORPORATION STOP TAP WILL BE SPECIFIED BY THE PIPE MANUFACTURER, ALL DRY TAPS WILL BE MADE USING MACHINE WITH GUIDE OR PILOT TAP.
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
5. NO TAP TO MAIN SHALL BE WITHIN 12" OF A COUPLING OR WITHIN 18" OF ANOTHER TAP.
6. METER BOXES SHALL BE INSTALLED DIRECTLY BEHIND CURB WHETHER SIDEWALK IS ADJACENT TO CURB OR NOT. ANGLE METER STOP SHALL BE POSITIONED TO ALLOW FULL OPERATION OF BOTH VALVES.
7. NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
8. ALL LIDS AND COVERS SHALL BE RATED FOR H20 TRAFFIC LOADING. ARMORCAST A6000H9-PLUG SHALL BE INSTALLED WITH MANUAL READ METERS. J&R CONCRETE W4 1/2 CONCRETE BOX & P-W4 1/2-20K 2 PIECE POLYMER COVER WITH QUICK READ PORT & POLYMER READING LID OR ARMORCAST A6000485SA POLYMER CONCRETE BOX, A6000484T-H9 20K 1 PIECE POLYMER CONCRETE COVER WITH NEPTUNE ANTENNA CAVITY.
9. IF REQUIRED BACKFLOW PREVENTER SHALL BE INSTALLED ON CUSTOMER SIDE OF METER AND INSTALLED AND CERTIFIED PRIOR TO ACTIVATION OF THE WATER METER.
10. FOR SERVICE TAP OF STEEL MAINS, SEE STANDARD DRAWING W6.
11. FOR METERS IN SLOPES, SEE STANDARD DRAWING W28.
12. CONTACT THE DISTRICT FOR APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
13. ANODE LEAD WIRE SHALL BE CLAMPED TO COPPER TUBING. CLAMP SHALL BE DIRECT BURIAL TYPE OF RED BRASS WITH BRASS SCREWS.
14. COPPER TUBING SHALL BE DOUBLE POLYETHYLENE ENCASED WITH 8 MIL. MINIMUM THICKNESS, AND ALL OPENINGS IN THE SLEEVES SHALL BE TAPED SHUT WITH POLYKEN # 900 TAPE WRAP, OR APPROVED EQUAL. TAPE SHALL BE APPLIED IN STRICT CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
15. INSTALL SACRIFICIAL ANODE CONSISTING OF 15 LB. HIGH PURITY ZINC BAR BAGGED IN A BACKFILL OF CALCIUM, BENTONITE AND GYPSUM, WITH NO.12 SOLID COPPER LEAD WIRE. BURY ANODE IN SERVICE LINE TRENCH. SATURATE ANODE WITH WATER PRIOR TO BACKFILLING TRENCH. TEST ANODE PER THE MANUFACTURER RECOMMENDATIONS FOR CONFIRMATION OF PROPER INSTALLATION AND SUBMIT THE RESULTS TO DISTRICT INSPECTOR FOR REVIEW.
16. ALL DUCTILE IRON FITTINGS AND BENDS SHALL BE DOUBLE POLYETHYLENE ENCASED PER AWWA STANDARD C-105.

CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH IP THR'D	FORD MUELLER	202BS BR2S
②	1" BRONZE CORPORATION STOP	MUELLER FORD	B-25025N FB700-4-NL
③	1" BRONZE ANGLE METER STOP WITH LOCKWING	MUELLER	B-24255N

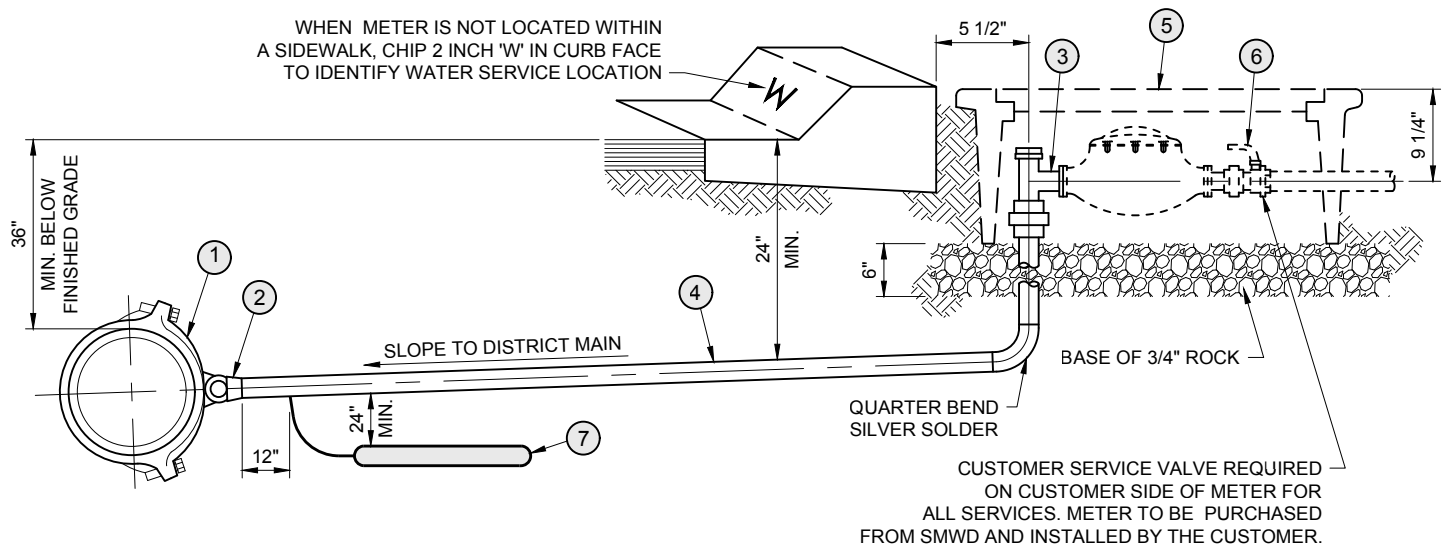
CONSTRUCTION ITEMS / MATERIALS LIST (Cont.)			
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
④	1" COPPER TUBING WITH FLARED ENDS AND POLYETHYLENE SLEEVE	SEE NOTE 14	TYPE "K" SOFT
⑤	METER BOX (WITH READING LID)	J&R CONCRETE PRODUCTS OR ARMORCAST	SEE NOTE 8
⑥	CUSTOMER BALL VALVE	MUELLER	B-24351N
⑦	15 LB ZINC ANODE		

Santa Margarita Water District

REVISION		DECEMBER 2021	
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03/22	PAB		
11/23	PAB		
		PATRICIA A. BUTLER	RCE C57880
		DATE	
		CHIEF ENGINEER, Engineering Department	

1 INCH WATER SERVICE WITH 1 INCH METER

SMWD
STD DWG NO.
W1A
1 OF 1



NOTES

- DOUBLE STRAP SERVICE SADDLE REQUIRED FOR ALL MAINS.
- INSTALL CORPORATION STOP TAP WITH KEY SIDEWAYS, IN OPEN POSITION.
- THE CORPORATION STOP TAP WILL BE SPECIFIED BY THE PIPE MANUFACTURER, ALL DRY TAPS WILL BE MADE USING MACHINE WITH GUIDE OR PILOT TAP.
- THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
- NO TAP TO MAIN SHALL BE WITHIN 12" OF A COUPLING OR WITHIN 24" OF ANOTHER TAP.
- METER BOXES SHALL BE INSTALLED DIRECTLY BEHIND CURB WHETHER SIDEWALK IS ADJACENT TO CURB OR NOT. ANGLE METER STOP SHALL BE POSITIONED TO ALLOW FULL OPERATION OF BOTH VALVES.
- SILVER SOLDER COUPLING SHALL BE USED FOR SPLICES.
- ALL LIDS AND COVERS SHALL BE RATED FOR H20 TRAFFIC LOADING. ARMORCAST A6000H9-PLUG SHALL BE INSTALLED WITH MANUAL READ METERS. J&R CONCRETE W6B SERIES CONCRETE BOX & P-W6B H20 2 PIECE POLYMER CONCRETE COVER WITH QUICK READ PORT & POLYMER READING LID, OR ARMORCAST A6001640PCX12 POLYMER CONCRETE BOX, A6001947TDZ-H9 20K POLYMER CONCRETE COVER WITH NEPTUNE ANTENNA CAVITY A6000482T 20K POLYMER CONCRETE COVER.
- IF REQUIRED BACKFLOW PREVENTER SHALL BE INSTALLED ON CUSTOMER SIDE OF METER AND INSTALLED AND CERTIFIED PRIOR TO ACTIVATION OF THE WATER METER.
- FOR SERVICE TAP OF STEEL MAINS, SEE STANDARD DRAWING W6.
- FOR METERS IN SLOPES, SEE STANDARD DRAWING W28.
- CONTACT THE DISTRICT FOR APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
- ANODE LEAD WIRE SHALL BE CLAMPED TO COPPER TUBING. CLAMP SHALL BE DIRECT BURIAL TYPE OF RED BRASS WITH BRASS SCREWS.
- COPPER TUBING SHALL BE DOUBLE POLYETHYLENE ENCASED WITH 8 MIL. MINIMUM THICKNESS, AND ALL OPENINGS IN THE SLEEVES SHALL BE TAPED SHUT WITH POLYKEN # 900 TAPE WRAP, OR APPROVED EQUAL. TAPE SHALL BE APPLIED IN STRICT CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- INSTALL SACRIFICIAL ANODE CONSISTING OF 15 LB. HIGH PURITY ZINC BAR BAGGED IN A BACKFILL OF CALCIUM, BENTONITE AND GYPSUM, WITH NO.12 SOLID COPPER LEAD WIRE. BURY ANODE IN SERVICE LINE TRENCH. SATURATE ANODE WITH WATER PRIOR TO BACKFILLING TRENCH. TEST ANODE PER THE MANUFACTURER RECOMMENDATIONS FOR CONFIRMATION OF PROPER INSTALLATION AND SUBMIT THE RESULTS TO DISTRICT INSPECTOR FOR REVIEW.
- ALL DUCTILE IRON FITTINGS AND BENDS SHALL BE DOUBLE POLYETHYLENE ENCASED PER AWWA STANDARD C-105.

CONSTRUCTION ITEMS / MATERIALS LIST

ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH IP THR'D	FORD MUELLER	202BS BR2S
②	1 1/2" BRONZE CORPORATION STOP	MUELLER FORD	B-25025N FB700-6-NL
③	1 1/2" BRONZE ANGLE METER STOP WITH LOCKWING	MUELLER	B-24277N

CONSTRUCTION ITEMS / MATERIALS LIST (Cont.)

ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
④	1 1/2" COPPER TUBING W/ FLARED ENDS & POLYETHYLENE SLEEVE	SEE NOTE 14	TYPE "K" SOFT
⑤	METER BOX (WITH READING LID)	J&R CONCRETE PRODUCTS OR ARMORCAST	SEE NOTE 8
⑥	CUSTOMER BALL VALVE	MUELLER	B-24337-N
⑦	15 LB ZINC ANODE		

Santa Margarita Water District

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11/23	PAB	PATRICIA A. BUTLER RCE C57880 DATE	
		CHIEF ENGINEER, Engineering Department	

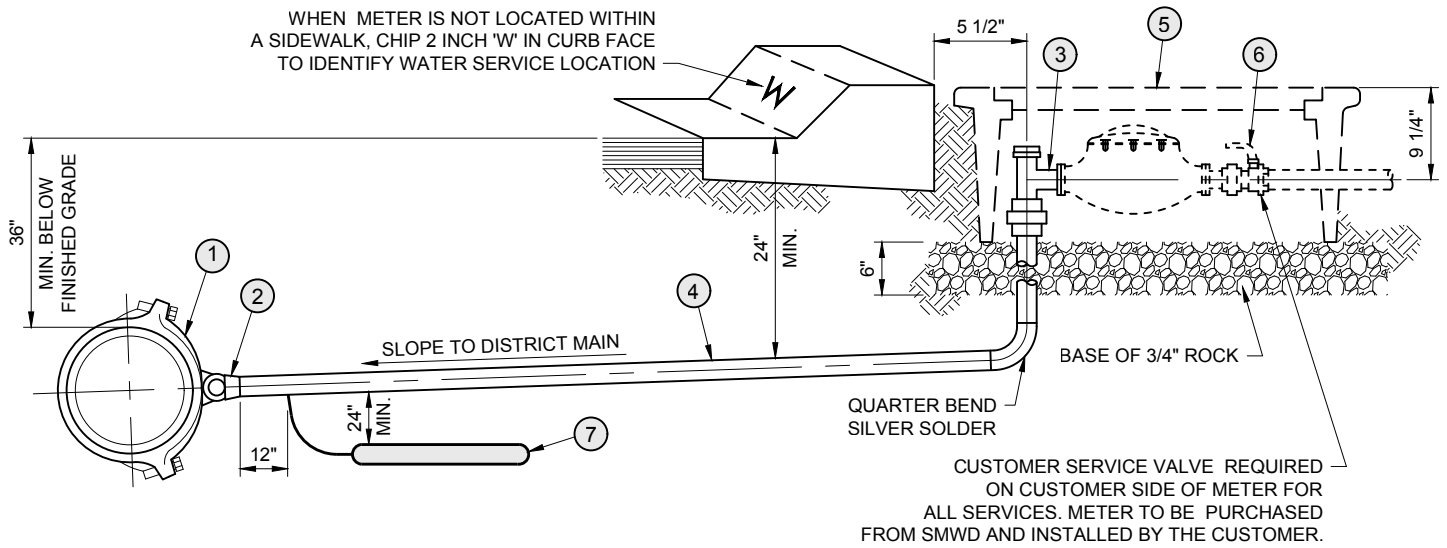
1-1/2 INCH WATER SERVICE

SMWD
STD DWG NO.

W2

1 OF 1

WHEN METER IS NOT LOCATED WITHIN A SIDEWALK, CHIP 2 INCH 'W' IN CURB FACE TO IDENTIFY WATER SERVICE LOCATION



NOTES

1. DOUBLE STRAP SERVICE SADDLE REQUIRED FOR ALL MAINS.
2. INSTALL CORPORATION STOP TAP WITH KEY SIDEWAYS, IN OPEN POSITION.
3. THE CORPORATION STOP TAP WILL BE SPECIFIED BY THE PIPE MANUFACTURER, ALL DRY TAPS WILL BE MADE USING MACHINE WITH GUIDE OR PILOT TAP.
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5. NO TAP TO MAIN SHALL BE WITHIN 12" OF A COUPLING OR WITHIN 24" OF ANOTHER TAP.
6. METER BOXES SHALL BE INSTALLED DIRECTLY BEHIND CURB WHETHER SIDEWALK IS ADJACENT TO CURB OR NOT. ANGLE METER STOP SHALL BE POSITIONED TO ALLOW FULL OPERATION OF BOTH VALVES.
7. SILVER SOLDER COUPLING SHALL BE USED FOR SPLICES.
8. ALL LIDS AND COVERS SHALL BE RATED FOR H20 TRAFFIC LOADING. ARMORCAST A6000H9-PLUG SHALL BE INSTALLED WITH MANUAL READ METERS. J&R CONCRETE W6B SERIES CONCRETE BOX & P-W6B H20 2 PIECE POLYMER CONCRETE COVER WITH QUICK READ PORT & POLYMER READING LID, OR ARMORCAST A6001640PCX12 POLYMER CONCRETE BOX, A6001947TDZ-H9 20K POLYMER CONCRETE COVER WITH NEPTUNE ANTENNA CAVITY A6000482T 20K POLYMER CONCRETE COVER.
9. IF REQUIRED BACKFLOW PREVENTER SHALL BE INSTALLED ON CUSTOMER SIDE OF METER AND INSTALLED AND CERTIFIED PRIOR TO ACTIVATION OF THE WATER METER.
10. FOR SERVICE TAP OF STEEL MAINS, SEE STANDARD DRAWING W6.
11. FOR METERS IN SLOPES, SEE STANDARD DRAWING W28.
12. CONTACT THE DISTRICT FOR APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
13. ANODE LEAD WIRE SHALL BE CLAMPED TO COPPER TUBING. CLAMP SHALL BE DIRECT BURIAL TYPE OF RED BRASS WITH BRASS SCREWS.
14. COPPER TUBING SHALL BE DOUBLE POLYETHYLENE ENCASED WITH 8 MIL. MINIMUM THICKNESS, AND ALL OPENINGS IN THE SLEEVES SHALL BE TAPED SHUT WITH POLYKEN # 900 TAPE WRAP, OR APPROVED EQUAL. TAPE SHALL BE APPLIED IN STRICT CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
15. INSTALL SACRIFICIAL ANODE CONSISTING OF 15 LB. HIGH PURITY ZINC BAR BAGGED IN A BACKFILL OF CALCIUM, BENTONITE AND GYPSUM, WITH NO.12 SOLID COPPER LEAD WIRE. BURY ANODE IN SERVICE LINE TRENCH. SATURATE ANODE WITH WATER PRIOR TO BACKFILLING TRENCH. TEST ANODE PER THE MANUFACTURER RECOMMENDATIONS FOR CONFIRMATION OF PROPER INSTALLATION AND SUBMIT THE RESULTS TO DISTRICT INSPECTOR FOR REVIEW.
16. ALL DUCTILE IRON FITTINGS AND BENDS SHALL BE DOUBLE POLYETHYLENE ENCASED PER AWWA STANDARD C-105.

CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH IP THR'D	FORD MUELLER	202BS BR2S
②	2" BRONZE CORPORATION STOP	MUELLER FORD	B-25025N FB700-7-NL
③	2" BRONZE ANGLE METER STOP WITH LOCKWING	MUELLER	B-24277N

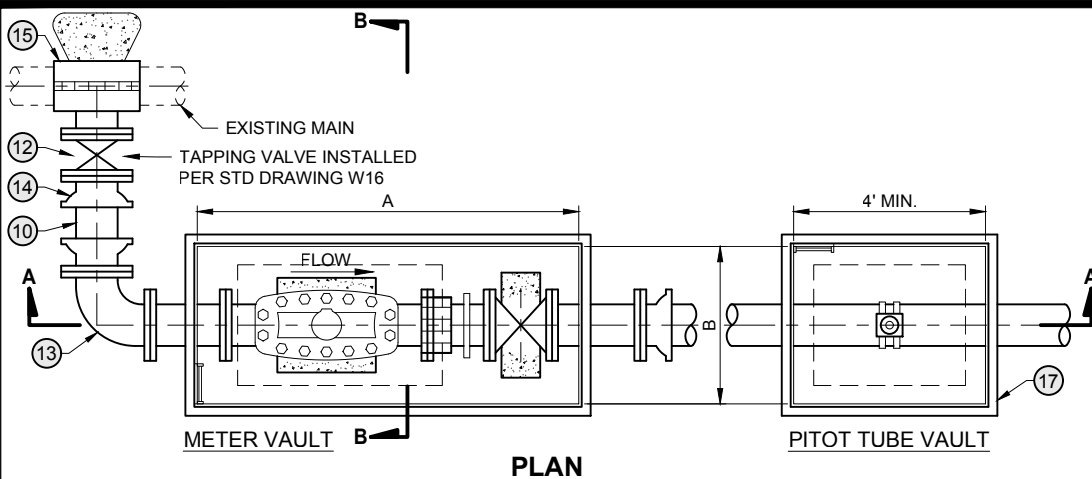
CONSTRUCTION ITEMS / MATERIALS LIST (Cont.)			
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
④	2" COPPER TUBING WITH FLARED ENDS AND POLYETHYLENE SLEEVE	SEE NOTE 14	TYPE "K" SOFT
⑤	METER BOX (WITH READING LID)	J&R CONCRETE PRODUCTS OR ARMORCAST	SEE NOTE 8
⑥	CUSTOMER BALL VALVE	MUELLER	B-24337-41-N
⑦	15 LB ZINC ANODE		

Santa Margarita Water District

REVISION		DECEMBER 2021	
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03/22	PAB	PATRICIA A. BUTLER RCE C57880 DATE CHIEF ENGINEER, Engineering Department	
11/23	PAB		

2 INCH WATER SERVICE

SMWD
STD DWG NO.
W3
1 OF 1



NOTES

1. EACH INSTALLATION OF METER ASSEMBLIES 3" LARGER SHALL BE SUBJECT TO DISTRICT APPROVAL.
 2. A TURBO METER SHALL BE PROVIDED FOR CONSTANT FLOW IRRIGATION SERVICE.
 3. SET TOP OF METER BOX ADJACENT TO AND AT CURB ELEVATION WHERE SIDEWALKS ARE NOT ADJACENT TO CURBS. PRECISE LOCATION TO BE ESTABLISHED AND APPROVED ON PLANS.
 4. MINIMUM SERVICE CONNECTION FOR A 3" METER SHALL BE 4" IN SIZE.
 5. EASEMENTS MUST BE PROVIDED IF INSTALLATION IS ON PRIVATE PROPERTY. EASEMENT SHALL BE MIN. 20'-0" WIDE AND EXTEND 10'-0" MIN. BEYOND PITOT TUBE VAULT END.
 6. FOR METERS IN SLOPES, SEE STANDARD DRAWING W28.
 7. PITOT TUBE CONNECTION SHALL BE INSTALLED ON METERS 6" AND LARGER.
 8. ADD ANODES PER DISTRICT STANDARDS AT ALL DIP FITTINGS.
- SEAL ANNUAL SPACE AROUND PIPE WITH POLYSULFIDE SEALING COMPOUND (TYP)

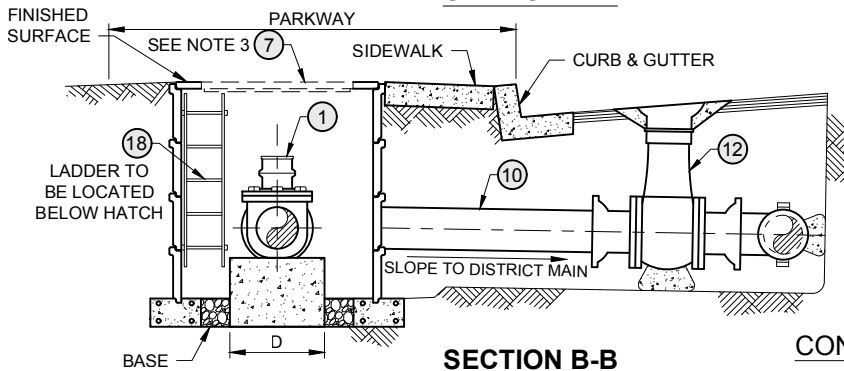
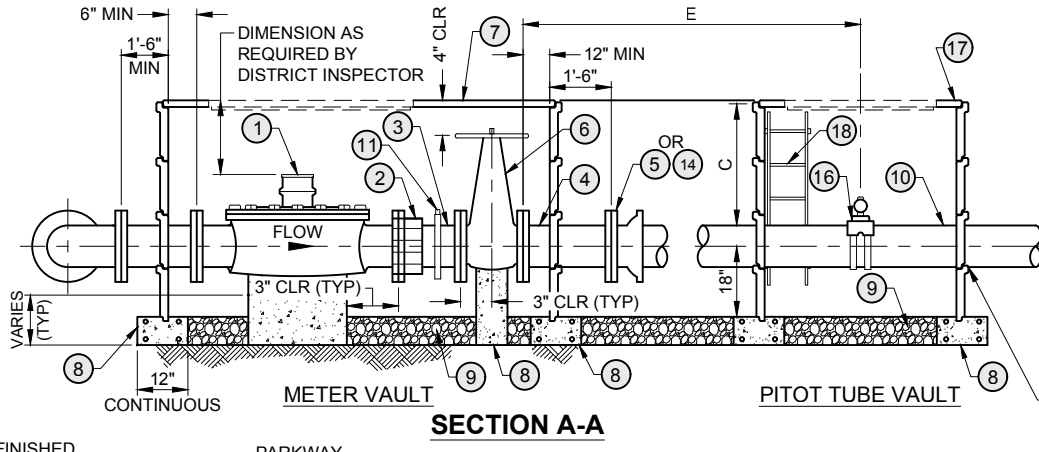


TABLE OF SIZES AND DIMENSIONS					
METER SIZE	A	B	C (MIN)	D	E
3"	5'-0"	3'-0"	AS REQ'D	1'-0"	----
4"	5'-0"	3'-0"	AS REQ'D	1'-2"	----
6"	8'-0"	6'-0"	3'-0"	1'-6"	10'-0"
8"	10'-0"	6'-0"	3'-0"	2'-8"	14'-0"
10"	10'-0"	6'-0"	3'-0"	1'-6"	17'-0"

CONSTRUCTION ITEMS / MATERIALS LIST

- ① WATER METER AS PURCHASED FROM SANTA MARGARITA WATER DISTRICT
- ② FLANGED COUPLING ADAPTER, BAKER SERIES 601 OR APPROVED EQUAL
- ③ DUCTILE IRON SPOOL FLG x PE 1'-0" LONG
- ④ DUCTILE IRON FLANGED SPOOL
- ⑤ DUCTILE IRON BLIND FLANGE
- ⑥ RESILIENT WEDGE (RW) GATE VALVE
- ⑦ PRECAST CONCRETE VAULT SHALL BE J&R, JENSEN PRECAST OR APPROVED EQUAL, WITH TORSION ASSISTED STAINLESS STEEL SPRINGS, HINGED ALUMINUM HATCH WITH S.S. HARDWARE BILCO CO. OR APPROVED EQUAL WITH TOUCH READ CONSTRUCTION OR QUICK READ PORT AS REQUIRED BASED ON METER TYPE.
- ⑧ CONCRETE SUPPORTS, CLASS 560-C-3250
- ⑨ 3/4" ROCK, 12" MINIMUM THICKNESS

CONSTRUCTION ITEMS / MATERIALS LIST (Cont.)

- ⑩ PVC DR 14 MINIMUM FOR 6", 8" AND 10". DUCTILE IRON PIPE FOR 3" AND 4" METER ASSEMBLY
- ⑪ I.P. SERVICE SADDLE, MUELLER H-10400 SERIES, WITH 1 1/2" CORPORATION STOP, JONES J-41, OR APPROVED EQUAL FOR 3" & 4" METER ONLY.
- ⑫ TAPPING VALVE, FLANGED AND VALVE BOX
- ⑬ DUCTILE IRON FLANGED 90° BEND
- ⑭ DUCTILE IRON FLG x PUSHON ADAPTER
- ⑮ TAPPING SLEEVE, PER STANDARD DRAWING W16
- ⑯ SERVICE SADDLE & 1" CORPORATION STOP PER STD DWG W1
- ⑰ PRECAST CONCRETE VAULT SHALL BE J&R, JENSEN PRECAST OR APPROVED EQUAL, WITH TORSION ASSISTED STAINLESS STEEL SPRINGS, HINGED ALUMINUM HATCH WITH S.S. HARDWARE BILCO OR APPROVED EQUAL.
- ⑱ WHEN DEPTH FROM FINISHED SURFACE TO BASE IS GREATER THAN 5' A PERMANENT AFFIXED LADDER UP SHALL BE PROVIDED IN EACH VAULT.

Santa Margarita Water District

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		CHIEF ENGINEER, Engineering Department	

**3 (SEE NOTE 4), 4, 6, 8 & 10 INCH
WATER SERVICE
& METER ASSEMBLY**

SMWD
STD DWG NO.
W4
1 OF 1

1", 1/2" OR 2" COPPER
WATER SERVICE PER
STANDARD DRAWING
W1, W1A, W2, W3,
RW1, RW2, RW2A

INSTALL TRACER WIRE WITH
LAST SERVICE LATERAL

12"

TRACER WIRE
(BELOW)

15# BUILDING PAPER

4" AWWA C900 DR 14 PVC
(UNLESS OTHERWISE
SPECIFIED)

TIE TO PIPE WITH
PLASTIC ADHESIVE TAPE

COLLAR

EPOXY LINED AND COATED CAST-IRON
OR DIP PLUG WITH ANODE PER
SMWD STANDARD DRAWING W1

CONCRETE THRUST BLOCK
PER STANDARD DRAWING
W12 CONDITION III

NOTE

1. IN TRACT CUL-DE-SAC OR DEAD END STREET, INSTALL 2" BLOW OFF ON TAPPED DIP CAP WITH 316 STAINLESS STEEL STREET ELBOW AND NIPPLE INSIDE A 24" DIAMETER MANHOLE (5'-0" MIN. FROM CURB FACE). INSTALL A LOCHINVAR COUPLING AND A BRASS 2" BALL VALVE OFF NIPPLE END. MANHOLE COVER TO INDICATE "BO" ON LID WITH MINIMUM DEPTH 18" TO BLOW OFF AND GRAVEL BASE.

Santa Margarita Water District

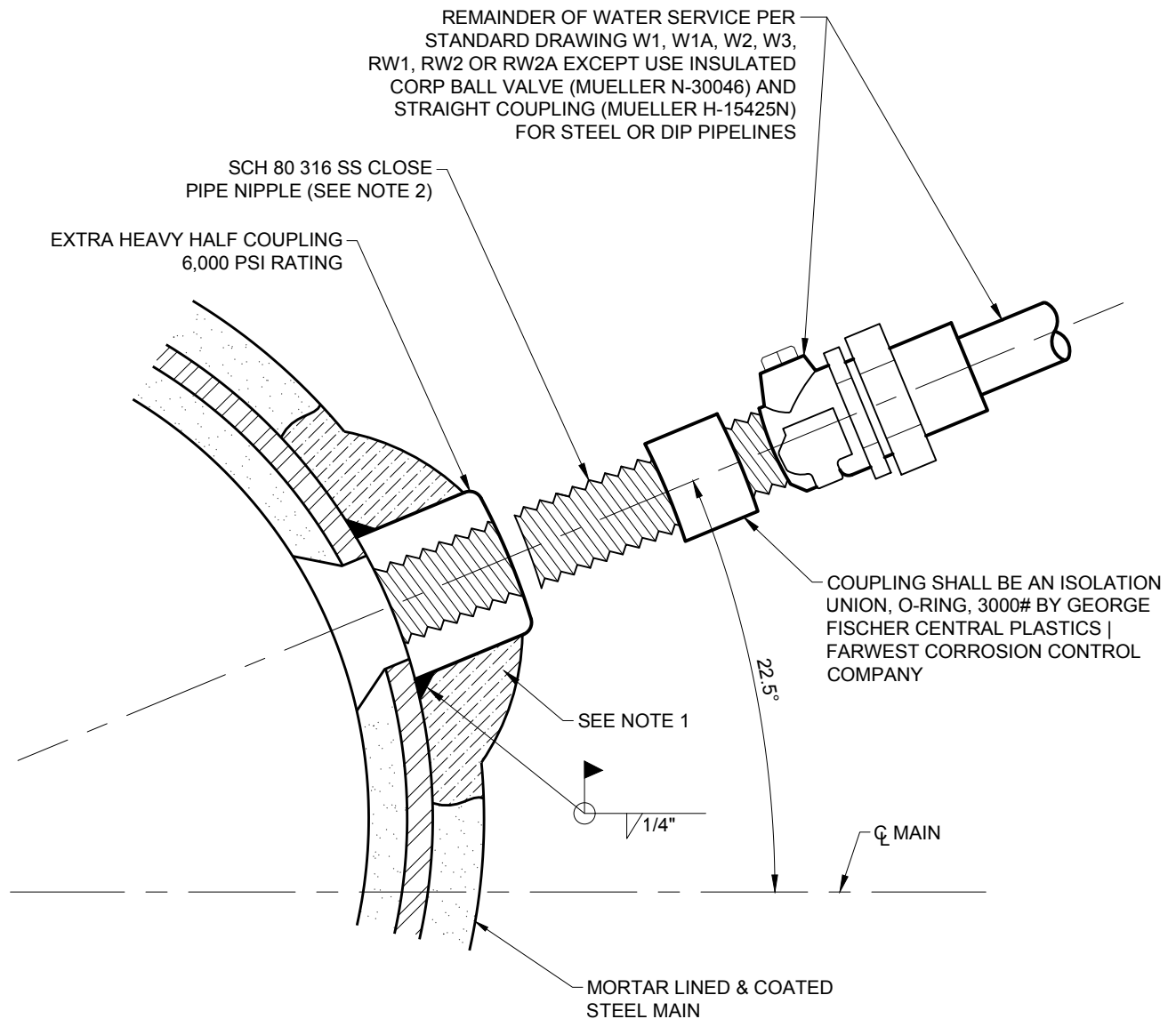
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		CHIEF ENGINEER, Engineering Department	

SERVICE CONNECTIONS AT DEAD END MAINS

SMWD
STD DWG NO.

W5

1 OF 1



NOTES

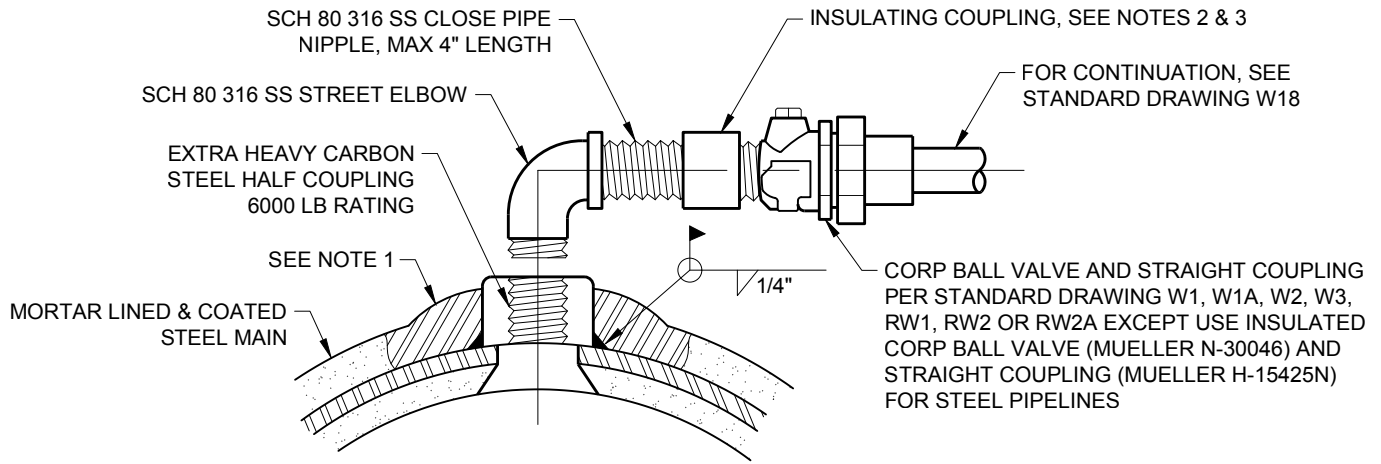
1. ALL LINING AND COATING DAMAGED OR REMOVED FOR INSTALLATION OF THE SERVICE TAP SHALL BE REPLACED TO THE ORIGINAL CONDITION UPON COMPLETION.
2. COAT EXPOSED PORTIONS OF HALF COUPLING, STAINLESS STEEL PIPE AND INSULATING COUPLING WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
3. THIS INSTALLATION SHALL BE USED FOR SERVICES UP TO 2 INCHES ONLY. FOR LARGER SIZES, SEE STANDARD DRAWING W17.

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11/23	PAB	<i>Patricia Butler</i> 6/24
		PATRICIA A. BUTLER RCE C57880 DATE CHIEF ENGINEER, Engineering Department

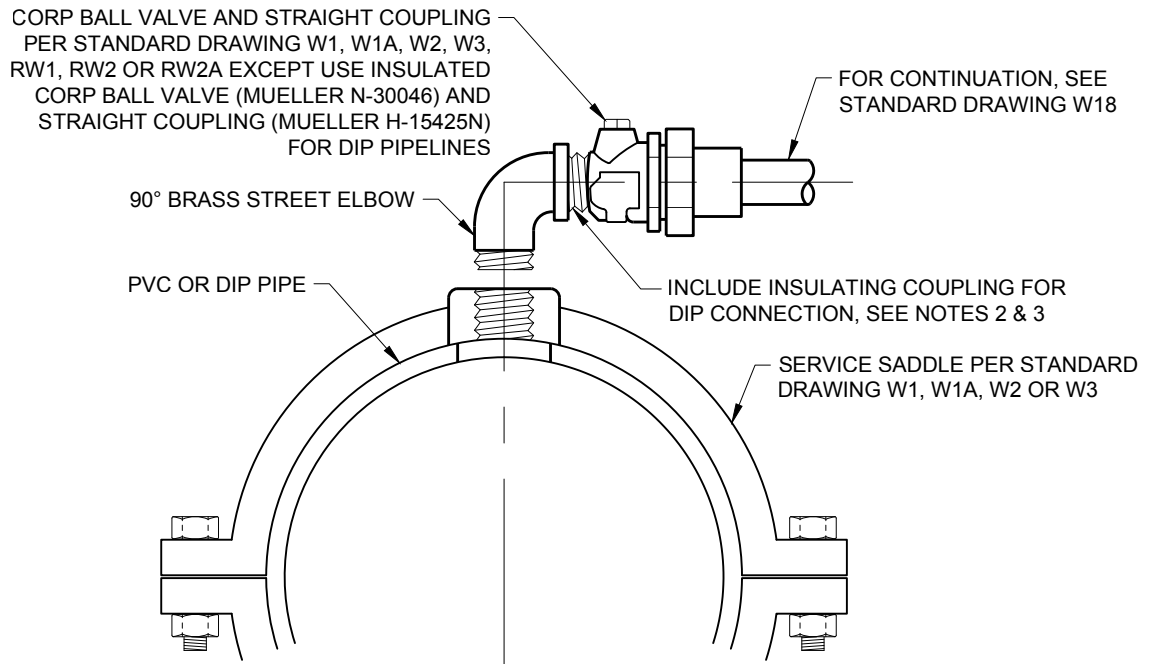
SERVICE TAP OF STEEL MAINS

SMWD
STD DWG NO.
W6
1 of 1



AIR VACUUM CONNECTION FOR STEEL MAINS

N.T.S.



AIR VACUUM CONNECTION FOR PVC OR DIP

N.T.S.

NOTES

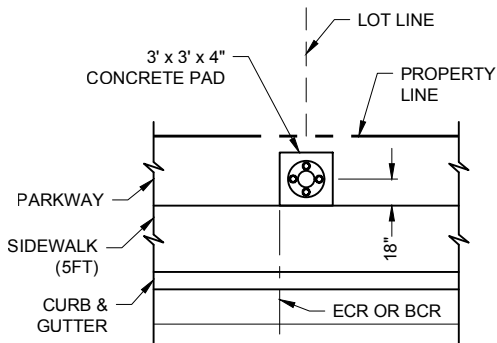
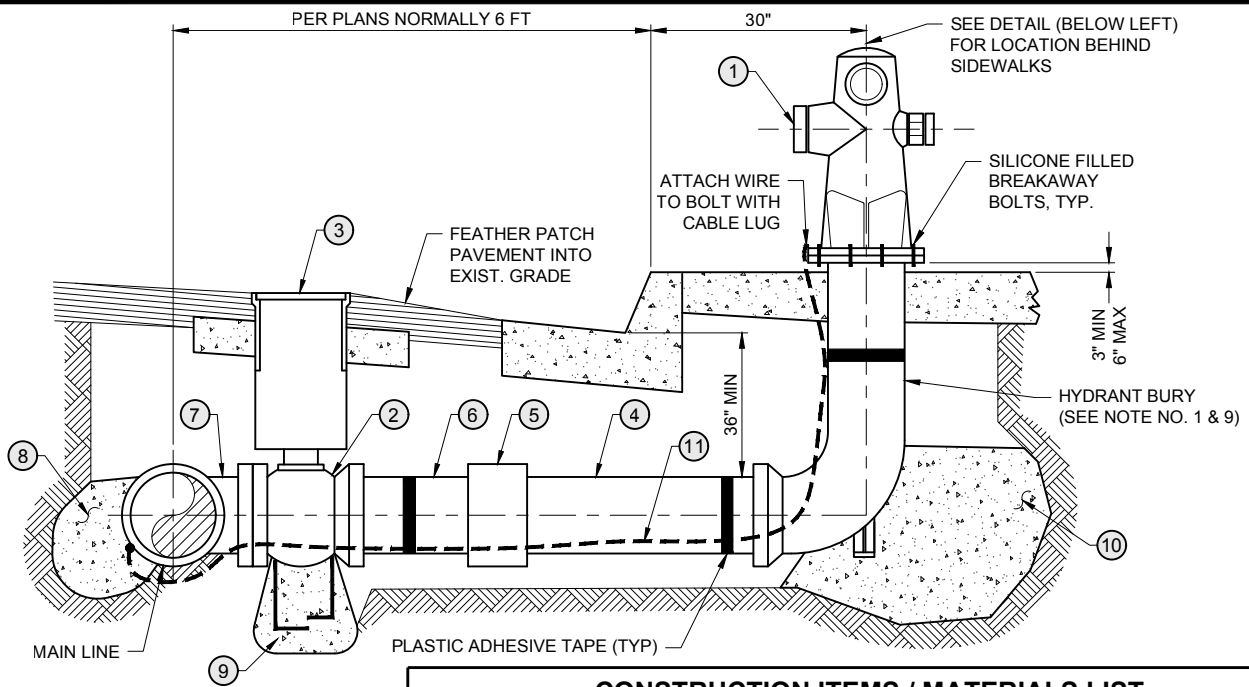
1. ALL LINING AND COATING DAMAGED OR REMOVED FOR INSTALLATION OF THE SERVICE TAP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE SMWD INSPECTOR.
2. COUPLING SHALL BE AN ISOLATION UNION, O-RING, 3000# BY GEORGE FISCHER CENTRAL PLASTICS | FARWEST CORROSION CONTROL COMPANY.
3. COAT EXPOSED PORTIONS OF HALF COUPLING, GALVANIZED STEEL PIPE, DIP AND INSULATING COUPLING WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
4. THIS INSTALLATION SHALL BE USED FOR AV CONNECTIONS UP TO 2 INCHES ONLY.
5. BACKFILL ENTIRE AIR/VACUUM LATERAL WITH 2 SACK CEMENT SLURRY.

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REVISION		DECEMBER 2021	
Date	Aprvd	APPROVED:	
11/23	PAB	<i>Patricia Butler</i>	
			6/24
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**WATER MAIN TAPS FOR
AIR/VACUUM ASSEMBLY**

SMWD
STD DWG NO.
W6A
1 of 1



**LOCATION OF HYDRANT
WHERE SIDEWALK IS
ADJACENT TO THE CURB**

CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM	DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	FIRE HYDRANT, 2 1/2" AND 4" OUTLETS, 1 1/2" PENTAGONAL OPERATING NUTS AND 6 MOUNTING BOLTS, "BREAKAWAY" TYPE. (SEE NOTE #8)	CLOW	MODEL 850
②	6" RW GATE VALVE, FLG x PUSHON	----	----
③	VALVE BOX ASSEMBLY AND LID (PER W9, CONSTRUCTION ITEMS 2, 4 AND 5)	SOUTH BAY FOUNDRY	PER W9
④	6" AWWA C900 DR 14 PVC PIPE, SHORT LENGTH, MACHINED EACH END	----	----
⑤	PVC COUPLING	----	----
⑥	6" AWWA C900 DR 14 PVC PIPE	----	----
⑦	"TEE" AS REQUIRED	----	----
⑧	THRUST BLOCK	----	PER W12, CONDITION I
⑨	ANCHOR BLOCK (NOT REQ'D WHEN VALVE IS FLANGED TO TEE)	----	PER W9
⑩	THRUST BLOCK	----	PER W12, CONDITION II
⑪	TRACER WIRE CONNECTED TO MAINLINE TRACER WIRE ON PVC OR TO STEEL PIPE	----	PER SMWD STANDARD SPECIAL PROVISIONS

NOTES

- HYDRANT BURY SHALL BE INSTALLED SO THAT THE HYDRANT MOUNTING FLANGE IS NOT LESS THAN 3" NOR MORE THAN 6" ABOVE FINISHED GRADE. NO MOUNTING EXTENSION SPOOLS WILL BE ALLOWED.
- FIRE HYDRANT SHALL BE INSTALLED WITH 4" OUTLET PERPENDICULAR TO THE CURB FACE.
- ALL BURIED BOLTS SHALL BE 316 S.S. AND COATED WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
- IN AREAS WHERE NO CURB OR BERM EXISTS, OR THERE IS ONLY ROLLED CURB AND GUTTER AND WHEN LOCATED ALONG ACCESS ROAD, INSTALL ONE 3" GALVANIZED STEEL POST (PAINTED WITH TWO COATS OF RUSTOLEUM, OIL BASED, SAFETY YELLOW OR APPROVED EQUAL) AT EACH CORNER OF CONCRETE PAD ON TRAFFIC SIDE, EMBED POSTS IN 24" OF CONCRETE 2' BELOW GRADE AND EXTEND 3' ABOVE GRADE.
- FIRE HYDRANTS TO BE PAINTED WITH TWO COATS OF RUSTOLEUM, OIL BASED, SAFETY YELLOW OR APPROVED EQUAL.
- FOR HYDRANTS IN SLOPES, SEE STANDARD DRAWING W28.
- IF SIDEWALK IS ADJACENT TO CURB AND IS WIDER THAN 6 FEET, HYDRANT IS TO BE SET 30" BEHIND CURB FACE.
- CAST IRON HYDRANT BODY SHALL BE FUSION BONDED EPOXY COATED AND INTERIOR LINED. BREAKAWAY BOLTS MUST BE SILICONE FILLED.
- HYDRANT BURY SHALL BE DOUBLE POLYETHYLENE ENCASED PER AWWA STANDARD C-105.

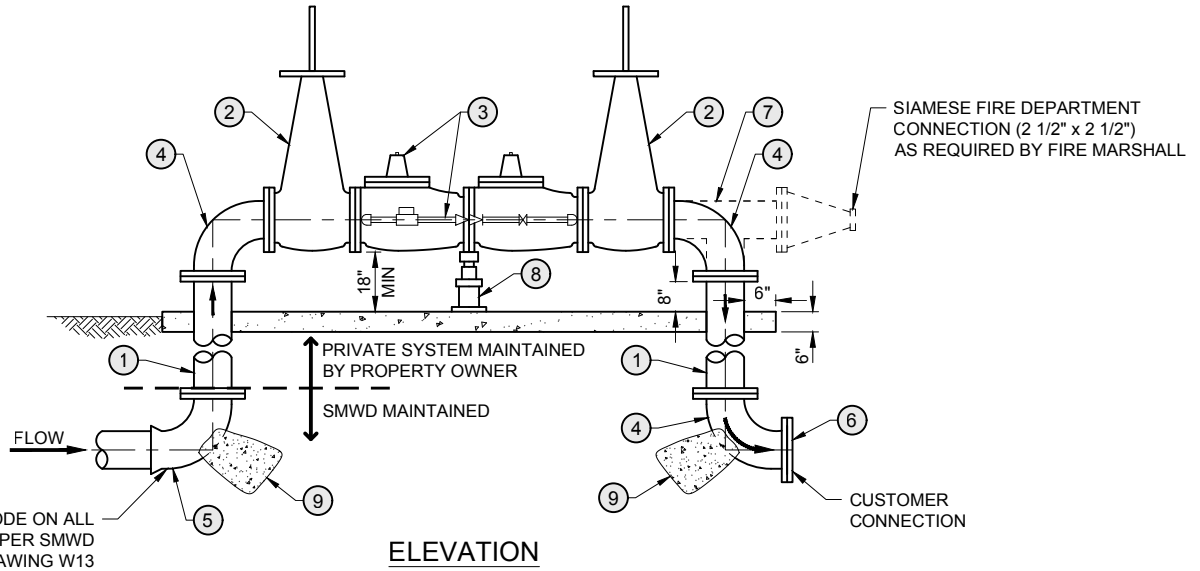
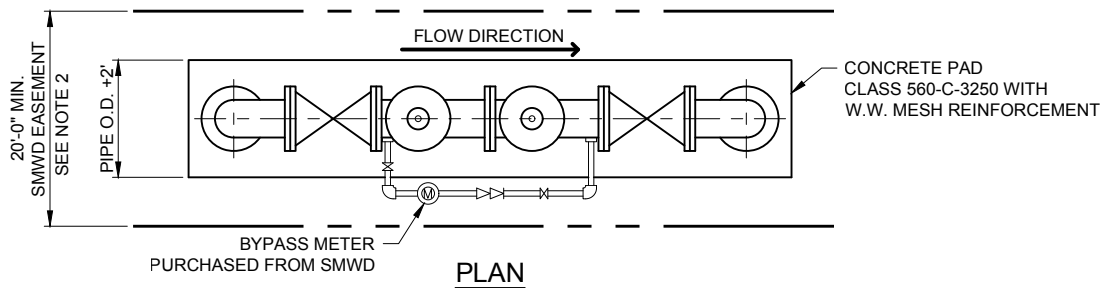
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REVISION	DECEMBER 2021	
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		6/24
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FIRE HYDRANT ASSEMBLY

SMWD
STD DWG NO.

W7



TYPICAL - INSTALL ANODE ON ALL BURIED 90° DIP ELBOW PER SMWD STANDARD DRAWING W13

ELEVATION

CONSTRUCTION ITEMS / MATERIALS LIST

ITEM	DESCRIPTION
①	DUCTILE-IRON PIPE, FLG x FLG, MORTAR LINED
②	RESILIENT WEDGE GATE VALVE, OS&Y, FLG x FLG
③	DETECTOR CHECK ASSEMBLY, BACKFLOW PREVENTION DEVICE (REDUCED PRESSURE PRINCIPLE OR DOUBLE CHECK TYPE AS REQUIRED BY SMWD)
④	90° DIP ELBOW, FLG x FLG, MORTAR LINED

CONSTRUCTION ITEMS / MATERIALS LIST (Cont.)

ITEM	DESCRIPTION
⑤	90° DIP ELBOW, FLG x PUSH ON, MORTAR LINED
⑥	BLIND FLANGE
⑦	OPTIONAL DIP TEE, MORTAR LINED AND 2 1/2" SIAMESE FIRE DEPARTMENT CONNECTION
⑧	ADJUSTABLE PIPE SUPPORT
⑨	THRUST BLOCK PER STANDARD DRAWING W12, CONDITION II

NOTES

- ONLY THOSE BACKFLOW PREVENTION ASSEMBLIES APPROVED BY THE CALIFORNIA STATE DEPARTMENT OF HEALTH SERVICES SHALL BE ACCEPTABLE FOR USE IN THE DISTRICT.
- FIRE SERVICE DETECTOR CHECK AND BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED IN AN EASEMENT, PER SECTION A-3.2 OF DISTRICT STANDARDS, DEDICATED TO THE DISTRICT IF LOCATION IS NOT IN PUBLIC RIGHT-OF-WAY.
- CONNECTION TO DISTRICT OWNED FACILITIES WILL NOT BE PERMITTED UNTIL ALL NECESSARY EASEMENTS HAVE BEEN DEDICATED TO THE DISTRICT, ALL FEES PAID AND PLANS APPROVED.
- CONNECTION TO DISTRICT OWNED FACILITIES WILL NOT BE PERMITTED UNTIL THE ON-SITE SYSTEMS HAVE BEEN TESTED AND DISINFECTED IN ACCORDANCE WITH DISTRICT STANDARDS.
- ALL FERROUS METAL SURFACES, EXCLUSIVE OF STAINLESS STEEL, IN THE WATER PASSAGES OF DETECTOR CHECK ASSEMBLY SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIAL PROVISIONS.
- THE FIRE DEPT. CONNECTION (IF USED) SHALL BE CLEANED, PRIMED AND PAINTED WITH TWO (2) COATS OF OSHA RED, AS REQUIRED BY FIRE MARSHALL.
- EXTERIOR MAINTENANCE OF THE ABOVE GROUND PIPING AND VALVES SHALL BE THE RESPONSIBILITY OF THE CUSTOMER.
- OPERATION, MAINTENANCE AND ANNUAL OPERATION CERTIFICATION SHALL BE THE RESPONSIBILITY OF THE CUSTOMER.
- BYPASS METER TO BE PURCHASED FROM SMWD.
- THE DISTRICT'S CROSS-CONNECTION INSPECTOR MUST BE NOTIFIED PRIOR TO INSTALLATION.

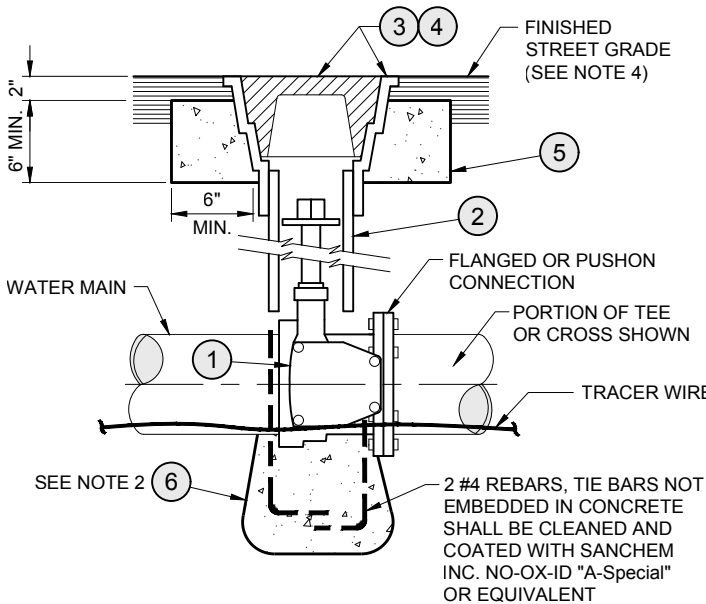
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REVISION	DECEMBER 2021	
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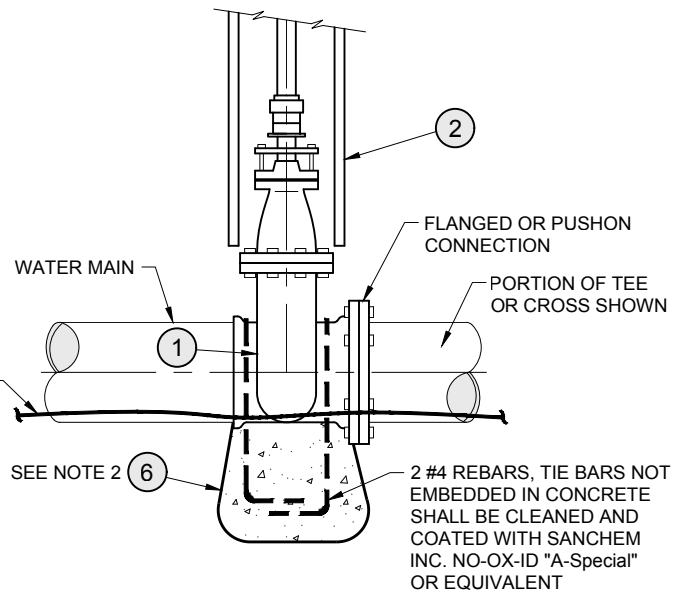
**PRIVATE FIRE SERVICE
(DETECTOR CHECK)**

SMWD
STD DWG NO.

W8



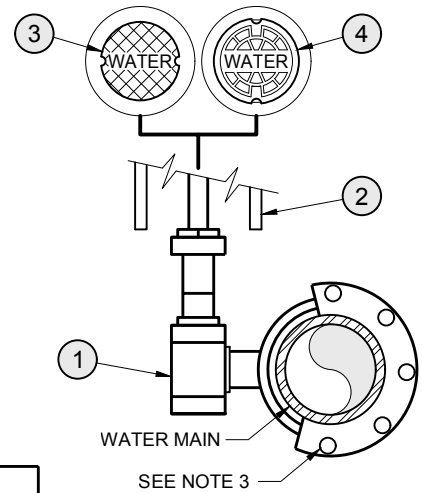
BUTTERFLY VALVE



GATE VALVE

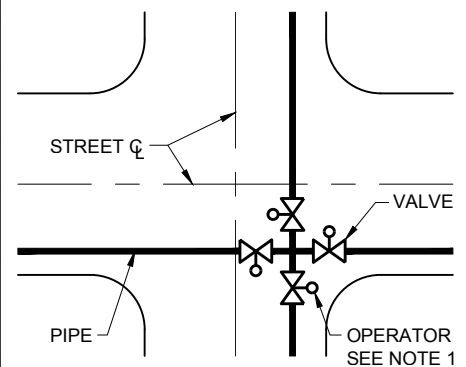
NOTES

1. BUTTERFLY VALVE OPERATORS SHALL BE LOCATED ON THE LEFT HAND SIDE OF THE VALVE WHEN STANDING ON THE FLANGED END OF THE VALVE (AT THE TEE OR CROSS) AND LOOKING THROUGH THE VALVE TOWARD THE PIPE END. AT STREET INTERSECTIONS WHERE VALVE BOX LOCATION MAY INTERFERE WITH PROPOSED CONCRETE CROSS GUTTER, PIPELINE SHALL BE MOVED AWAY FROM STANDARD LOCATION AS REQUIRED.
2. ANCHOR BLOCK REQUIRED ONLY WHEN VALVE IS NOT FLANGED TO TEE OR CROSS. INSTALL IN UNDISTURBED SOIL OR 95% DENSITY COMPACTED TRENCH BOTTOM.
3. ALL BURIED BOLTS SHALL BE COATED WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL. VALVES SHALL BE DOUBLE POLYETHYLENE ENCASED.
4. REFER TO STANDARD DRAWING S1, SHEET 5 FOR NOTES APPLICABLE TO RESURFACING PROJECTS



CONSTRUCTION ITEMS / MATERIALS LIST

ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
1	BUTTERFLY VALVE OR RESILIENT WEDGE GATE VALVE	-----	SEE SPECIFICATIONS
2	5" PVC PIPE	-----	-----
3	5 1/4" RISER AND COVER (BOX LID) RESIDENTIAL STREETS & UNIMPROVED AREAS	TYLER	6855 FLANGED BOTTOM FRAME, HEAVY DUTY; WITH UPC 145325 "WATER" LID
4	5 1/4" RISER AND COVER (BOX LID) ARTERIAL STREETS / HIGH TRAFFIC	SOUTH BAY FOUNDRY	1208N FLANGED BOTTOM FRAME, HIGH TRAFFIC / HEAVY DUTY; WITH 1208N "SMWD WATER" LID
5	CONCRETE RING, CLASS 560-C-3250	-----	PER OCPW STD PLAN 1509
6	ANCHOR BLOCK, 12" DEEP MIN. x 12" WIDE x VALVE LENGTH MIN.	-----	PER W12, CONDITION IX



BUTTERFLY VALVE OPERATOR POSITIONS

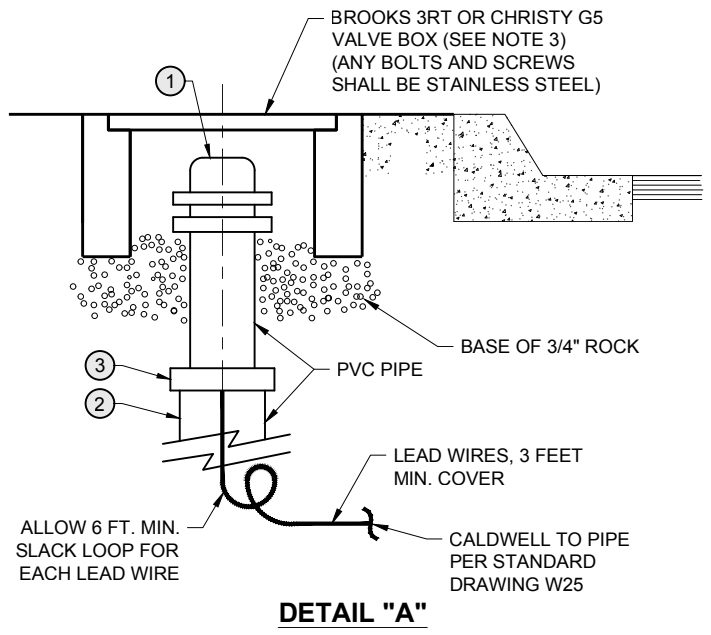
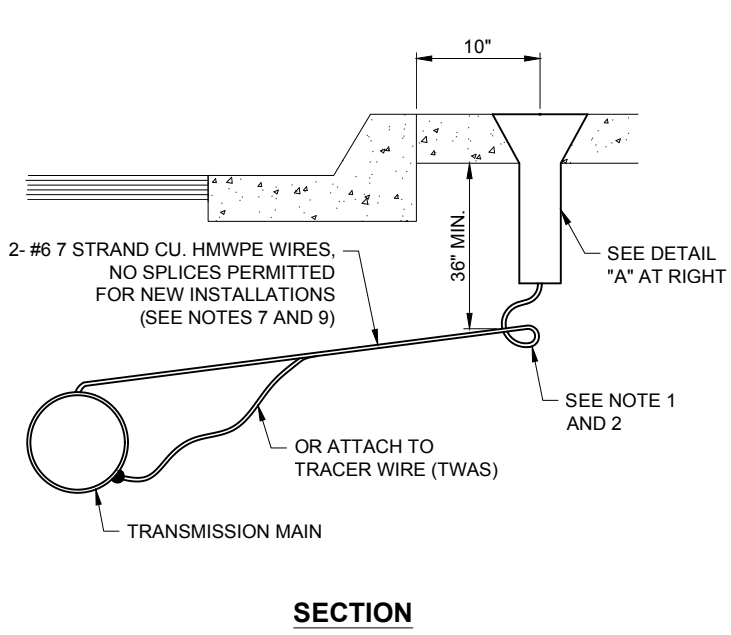
Santa Margarita Water District

REVISION		DECEMBER 2021	
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11/23	PAB	<i>Patricia Butler</i> 6/24	
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VALVE, VALVE BOX & COVER

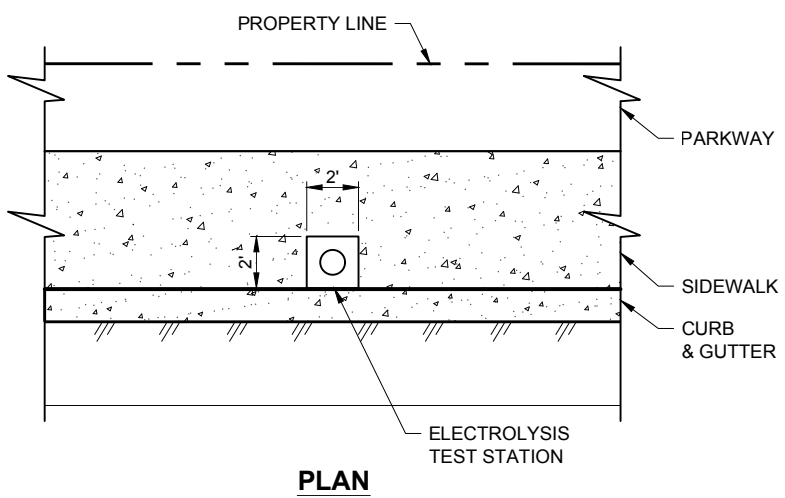
SMWD
STD DWG NO.

W9



SECTION

DETAIL "A"



PLAN

CONSTRUCTION ITEMS / MATERIALS LIST	
ITEM	DESCRIPTION
①	CATHODIC PROTECTION TEST STATION BOX WITH MIN. 5 LEAD TERMINAL BLOCK (COTT MFG. CO., "BIG FINK")
②	PVC WELL CASING PLASTIC PIPE
③	WATERTIGHT CONNECTION

NOTES

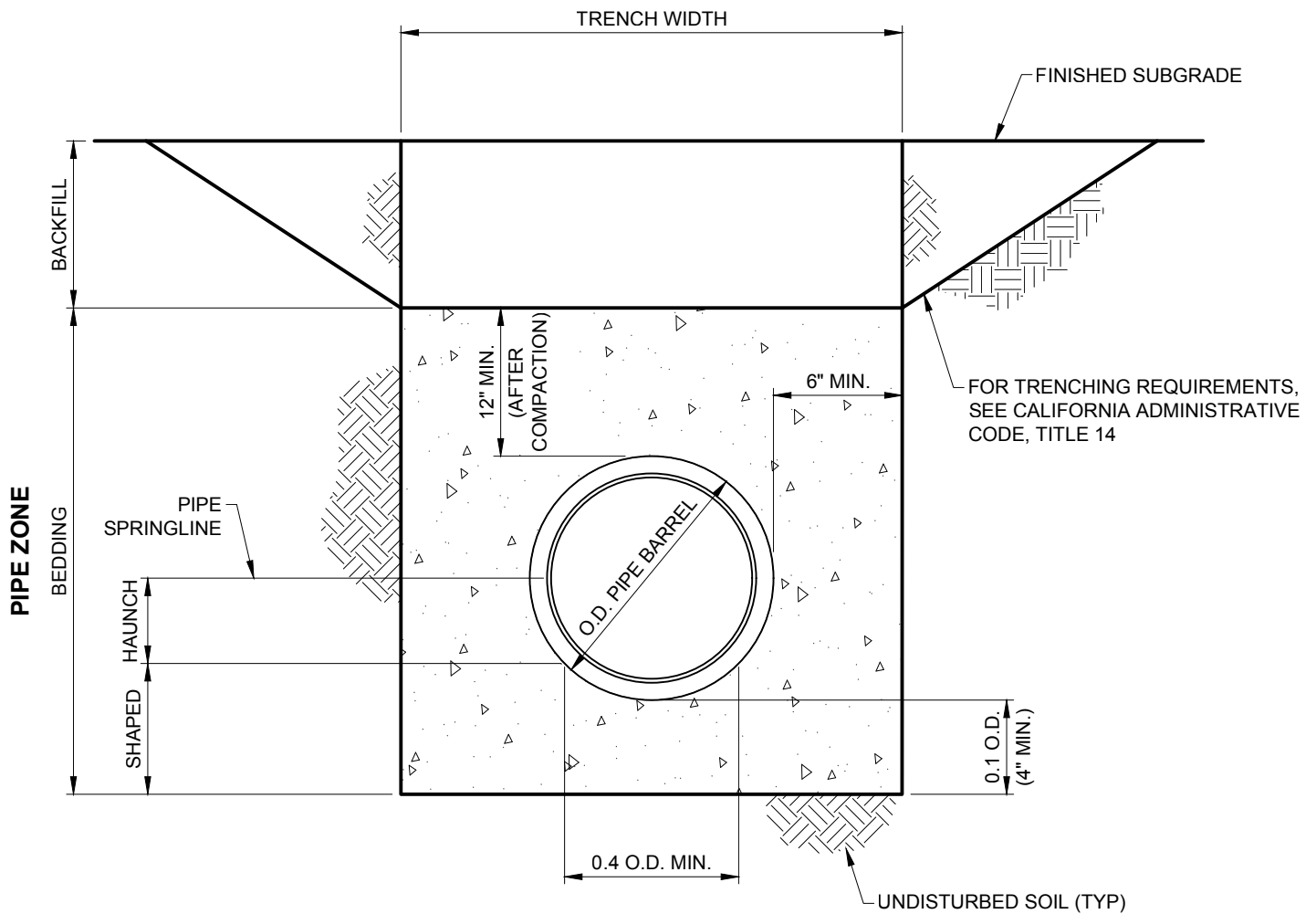
- WIRES SHALL BE PROTECTED DURING BACKFILL OPERATION.
- LOOP AND ALLOW 6' WIRE SLACK PER LEAD.
- IDENTIFY TEST STATION AS DOMESTIC OR RECYCLED WATER WITH "DW ETS" OR "RW ETS" OR "DW TWAS" OR "RW TWAS" ON ETS OR TWAS BOX LID. ONLY USE "ND ETS" OR "ND TWAS" BOX LID FOR NON-DOMESTIC WATER PIPELINES.
- WHERE SIDEWALK IS ADJACENT TO CURB, PLACE TEST STATION IN A 2' x 2' x 4" CONCRETE SQUARE BLOCK-OUT, CLASS 560-C-3250.
- IN OPEN SPACE AREAS, INSTALL BOX IN 2' x 2' x 6" CONCRETE PAD, CLASS 560-C-3250 WITH GALVANIZED METAL CHANNEL POST WITH AN 8" x 2'-0" TARGET PLATE LABELED "SMWD ETS" OR "SMWD TWAS".
- IN STREETS WHERE NO CURB OR BERM EXISTS, OR THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL ONE 3" GALVANIZED STEEL POST (PAINTED WITH HIGH VISIBILITY OSHA YELLOW) AT ONE CORNER OF CONCRETE PAD ON TRAFFIC SIDE, IMBED POST IN 24" OF CONCRETE 2' BELOW GRADE AND EXTEND 3' ABOVE GRADE.
- FOR REPAIR OF EXISTING ETS OR TWAS WIRES, USE "SCOTCH CAST" #72-N1 SPLICE KIT AS MANUFACTURED BY 3M CO.
- IF ETS OR TWAS IS NOT LOCATED WITHIN A SIDEWALK, CHIP "ETS" OR "TWAS" INTO CURB FACE.
- FOR DOMESTIC ETS AND TWAS, USE BLACK WIRE. FOR RECYCLED/NON-DOMESTIC ETS, OR TWAS USE RED WIRE.

Santa Margarita Water District

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11/23	PAB
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ELECTROLYSIS TEST STATION & TRACER WIRE ACCESS STATION (TWAS)

SMWD
STD DWG NO.
W10
1 of 1



NOTES

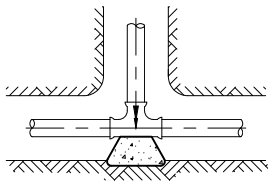
1. TRENCH WIDTH SHALL BE O.D. + 12" MIN., O.D. + 20" MAX., INCLUDING THE THICKNESS OF TRENCH SHORING OR SHEETING.
2. WHEN THE MAX. TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL DRAWINGS WITH SUBSTANTIATING ENGINEERING CALCULATIONS FOR THOSE MODIFICATIONS OF PIPE STRENGTH AND/OR BEDDING WHICH WILL PROVIDE AND IN-PLACE OF SAFETY EQUIVALENT TO THAT REQUIRED BY SPECIFICATIONS.
3. WHERE WET, UNSTABLE OR RUNNING SOIL IS ENCOUNTERED, SOLID SHEETING IS REQUIRED FOR ALL VERTICAL TRENCH WALLS.
4. TRENCH SHEETING OR SHORING SHALL BE A MINIMUM OF 6 INCHES FROM THE PIPE BARREL AT SPRINGLINE.
5. BEDDING SHALL BE SE 30 PER STANDARD SPECIFICATIONS, HAUNCH BEDDING SHALL BE SOAKED OR JETTED WITH WATER REACH 90% RELATIVE COMPACTION MIN. FOR PVC AND ALL OTHER FLEXIBLE PIPE INSTALLATIONS. THIS METHOD IS TO BE COMPLETED IN LIFTS THROUGH THE ENTIRE BEDDING ZONE.
6. ALL EXCAVATIONS AND TRENCHES SHALL BE PROTECTED IN ACCORDANCE WITH THE CALIFORNIA DEPT. OF INDUSTRIAL RELATIONS (Ca/OSHA) CODE OF REGULATIONS TITLE 8, SUBCHAPTER 4 "CONSTRUCTION SAFETY ORDERS".

Santa Margarita Water District

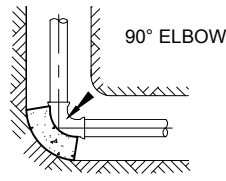
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PIPE TRENCHING AND BEDDING

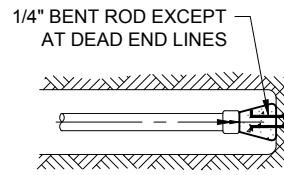
SMWD
STD DWG NO.
W11
1 of 1



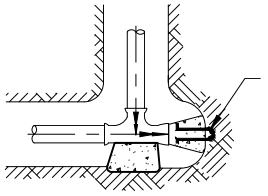
CONDITION I



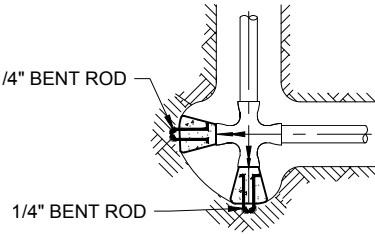
CONDITION II



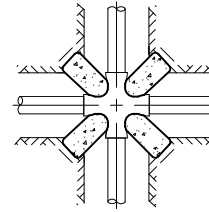
CONDITION III



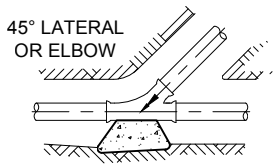
CONDITION IV



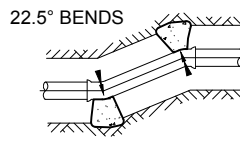
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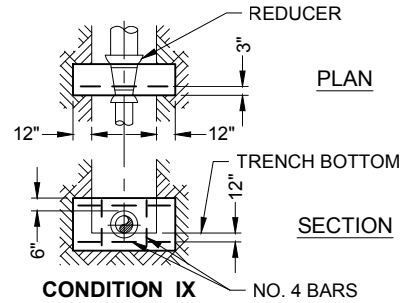
CONDITION VI



CONDITION VII



CONDITION VIII



CONDITION IX

THRUST BLOCK BEARING AREA IN SQUARE FEET

PIPE SIZE	CONDITION								
	I	II	III	IV	V	VI	VII	VIII	IX
4"	2.0	2.9	2.0	2 @ 2.0	2 @ 2.0	4 @ 1.6	2.0	2 @ 1.6	2 @ 1.6
6"	4.3	6.0	4.3	2 @ 4.3	2 @ 4.3	4 @ 3.3	4.3	2 @ 3.3	2 @ 3.3
8"	7.4	10.5	7.4	2 @ 7.4	2 @ 7.4	4 @ 5.7	7.4	2 @ 5.7	2 @ 5.7
10"	12.1	17.1	12.1	2 @ 12.1	2 @ 12.1	4 @ 9.3	12.1	2 @ 9.3	2 @ 9.3
12"	17.2	24.3	17.2	2 @ 17.2	2 @ 17.2	4 @ 13.2	17.2	2 @ 13.2	2 @ 13.2
14"	20.7	29.3	20.7	2 @ 20.7	2 @ 20.7	4 @ 15.8	20.7	2 @ 15.8	2 @ 15.8
16"	26.7	37.8	26.7	2 @ 26.7	2 @ 26.7	4 @ 20.5	26.7	2 @ 20.5	2 @ 20.5

NOTES

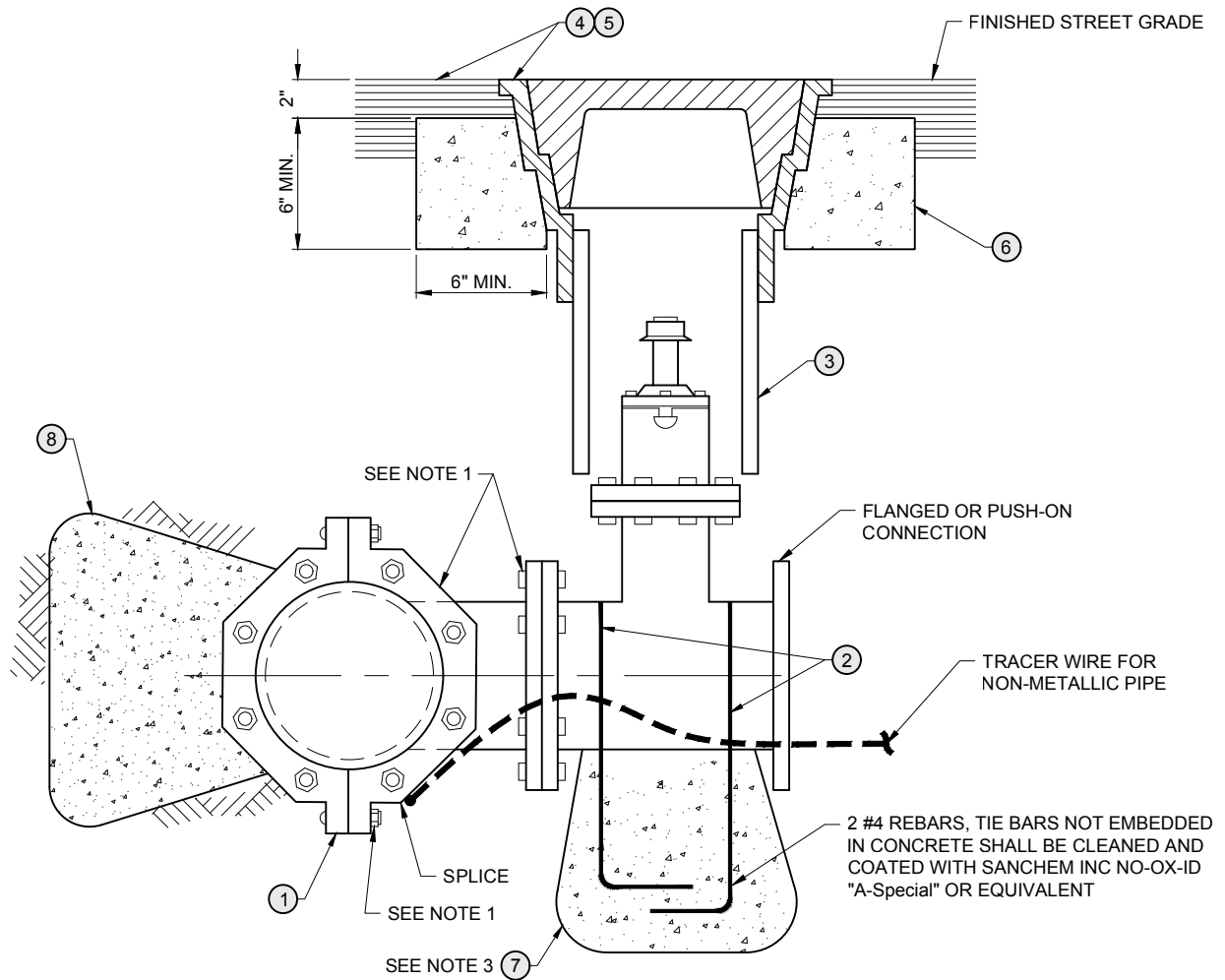
- ALL BURIED BOLTS SHALL BE COATED WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
- THRUST BLOCK AREAS BASED ON 225 PSI PRESSURE AND 2,000 PSF ALLOWABLE SOIL PRESSURE WITH 2 1/2 FEET OF COVER MINIMUM. ADDITIONAL BEARING AREA REQUIRED FOR SPECIAL CONDITIONS SHALL BE APPROVED BY THE DISTRICT ENGINEER.
- THRUST BLOCK BEARING FACES SHALL BE PLACED AGAINST UNDISTURBED SOIL, APPROVED COMPACTED BACKFILL OR CLASS 100-E-100 SLURRY.
- THRUST BLOCKS SHALL BE CLASS 560-C-3250 CONCRETE, UNLESS SPECIFIED OTHERWISE. TO FACILITATE FUTURE REMOVAL OF THRUST BLOCKS AND LINE EXTENSIONS:
 - INSTALL 1/4" BENT ROD HANDLES.
 - USE CARDBOARD SEPARATORS BETWEEN BLOCKS, IF NEEDED.

Santa Margarita Water District

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THRUST BLOCK INSTALLATION

SMWD
STD DWG NO.
W12
1 of 1



CONSTRUCTION ITEMS / MATERIALS LIST

ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MANUFACTURER CATALOG NO. OR SPEC.
① ②	TAPPING SLEEVE AND VALVE	KOPPLE, MUELLER, CLOW OR APPROVED EQUAL	----
③	5" PVC PIPE	----	----
④	5 1/4" RISER & COVER (BOX LID) RESIDENTIAL STREETS & UNIMPROVED AREAS	TYLER	6855 FLANGED BOTTOM FRAME, HEAVY DUTY; WITH UPC 145325 "WATER" LID
⑤	5 1/4" RISER & COVER (BOX LID) ARTERIAL STREETS / HIGH TRAFFIC	SOUTH BAY FOUNDRY	1208N FLANGED BOTTOM FRAME, HIGH TRFFIC/HEAVY DUTY; W/ 1208N "SMWD WATER" LID
⑥	CONCRETE RING, CLASS 560-C-3250	----	PER OCPW STD PLAN 1509
⑦	ANCHOR BLOCK	----	PER STD DWG W12, CONDITION 9
⑧	THRUST BLOCK	----	PER STD DWG W12, CONDITION 1

NOTES

- ALL BURIED BOLTS SHALL BE COATED WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
- TAP ON EXISTING MAIN SHALL BE ONE SIZE LESS AND EDGE OF TAPPING SLEEVE SHALL BE MIN. 18" FROM A COUPLING OR SERVICE.
- INSTALL ANCHOR BLOCK IN UNDISTURBED SOIL OR 95% DENSITY COMPACTED TRENCH BOTTOM.

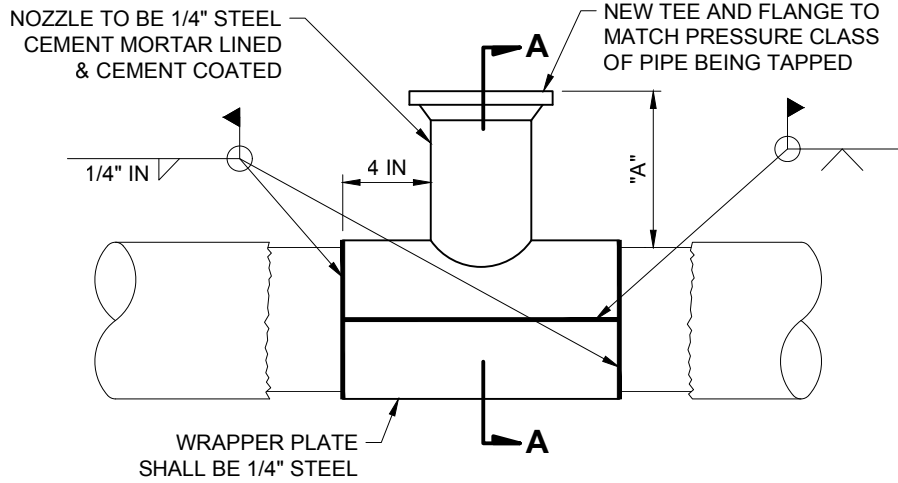
Santa Margarita Water District

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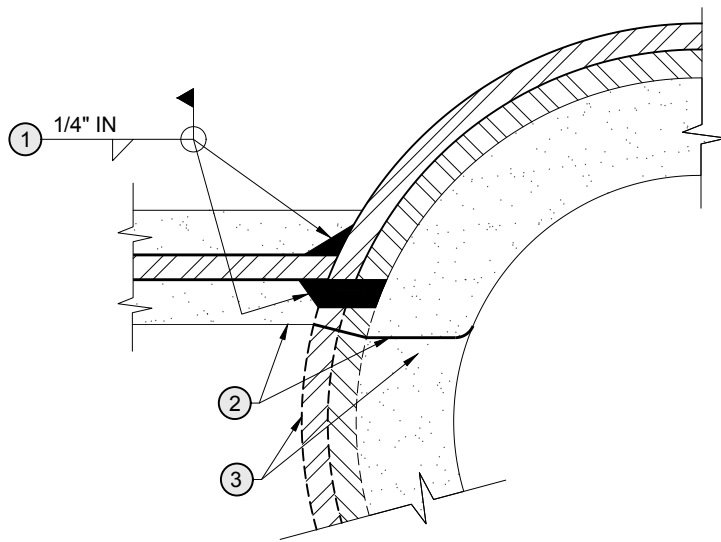
TAP OF ACP, PVC OR DIP MAINS

SMWD
STD DWG NO.

W16



PLAN



SECTION A-A

NOZZLE DIMENSIONS	
* TAP SIZE	DIMENSION "A"
4 Inches	5 Inches.
6 Inches	6 Inches.
8 Inches	6 3/4 Inches.
10 Inches	7 Inches.
12 Inches	7 1/2 Inches.

TAP SIZE LARGER THAN 12" REQUIRES DETAIL DRAWING.

CONSTRUCTION STEPS

- ① WELD NOZZLE TO WRAPPER PLATE & EXTEND WELD TO EXISTING PIPE EDGE IN TAP CUT AREA
- ② CEMENT MORTAR LINE NOZZLE INTERIOR & ALL CUT STEEL (3/8" MIN THICKNESS)
- ③ TAP PIPE & COVER CUT STEEL AREA WITH CEMENT MORTAR

* SIZE ON SIZE TAPS ARE NOT PERMITTED

* COLD TAPS SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY ENGINEER.

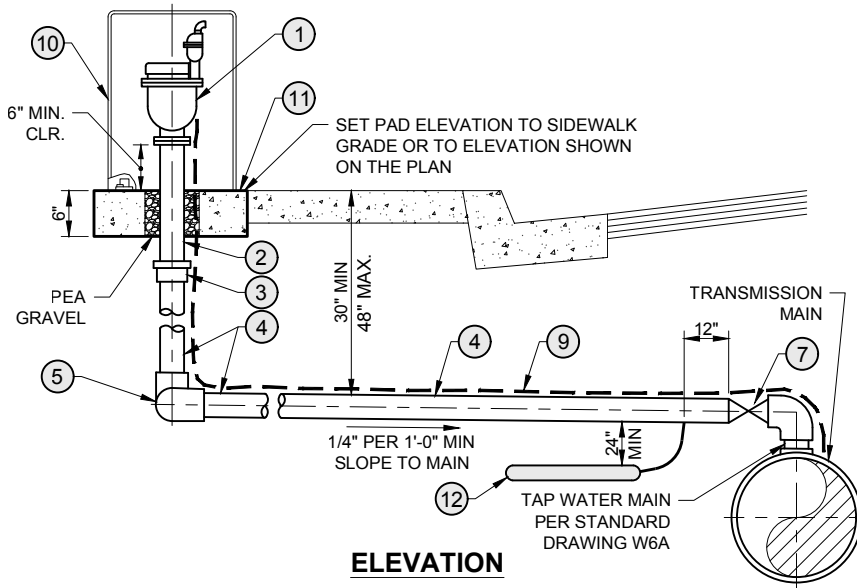
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			6/24
PATRICIA A. BUTLER RCE C57880 DATE CHIEF ENGINEER, Engineering Department			

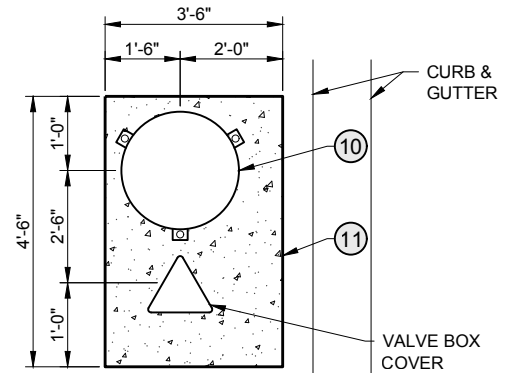
TAP OF STEEL MAINS

SMWD
STD DWG NO.

W17

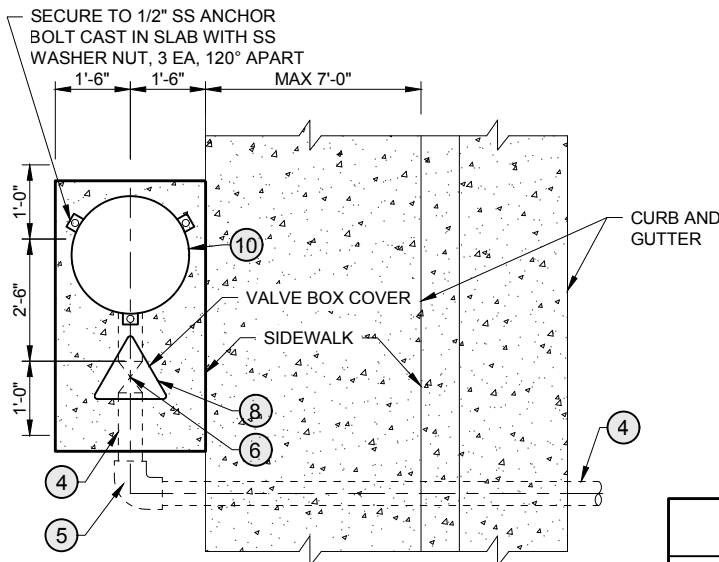


ELEVATION

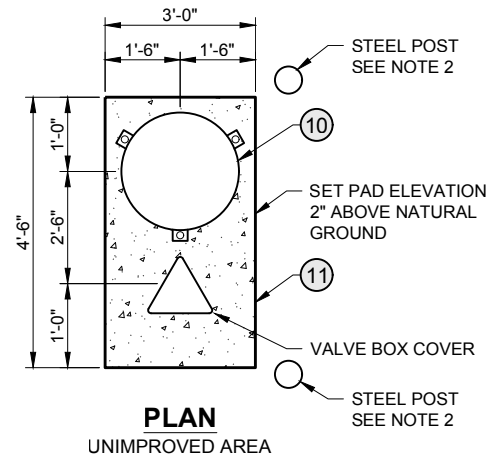


PLAN

SIDEWALK WIDER THAN 7 FEET OR
SIDEWALK NOT ADJACENT TO CURB



PLAN
WITH SIDEWALK



PLAN

UNIMPROVED AREA

NOTES

1. ALL BURIED BOLTS SHALL BE COATED WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
2. IN AREAS WHERE NO CURB OR BERM EXISTS OR WHERE THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL ONE 3" GALVANIZED STEEL POST (PAINTED IN ACCORDANCE WITH STANDARD DRAWING W7) AT EACH CORNER OF CONCRETE PAD ON TRAFFIC SIDE. IMBED POSTS IN 24" OF CONCRETE 2' BELOW GRADE AND EXTEND 3' ABOVE GRADE.
3. FOR AIR/VAC ASSEMBLIES IN SLOPES, SEE STANDARD DRAWING W28.
4. FOR 1" AIR/VAC USE PART NO. D040P01WS FOR PRESSURE 3-250 PSI. FOR 2" AIR/VAC USE PART NO. D040P02WS FOR PRESSURE 3-250 PSI. FOR 1" AND 2" USE PART NO. D065HF FOR PRESSURE 3-580 PSI.
5. FOR 1" AIR/VAC USE ARMORCAST PART NO. P6002003. FOR 2" AIR/VAC USE ARMORCAST PART NO. P6002002 POLYMER CONCRETE, COLOR: GRANITE.

CONSTRUCTION ITEMS / MATERIALS LIST

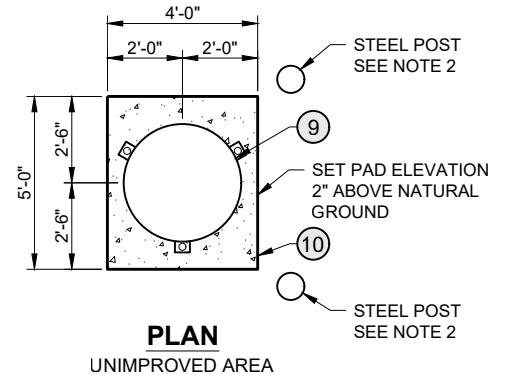
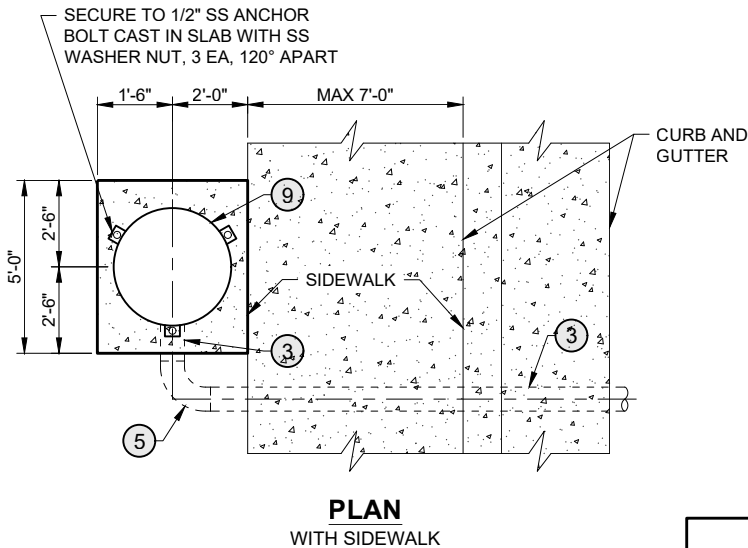
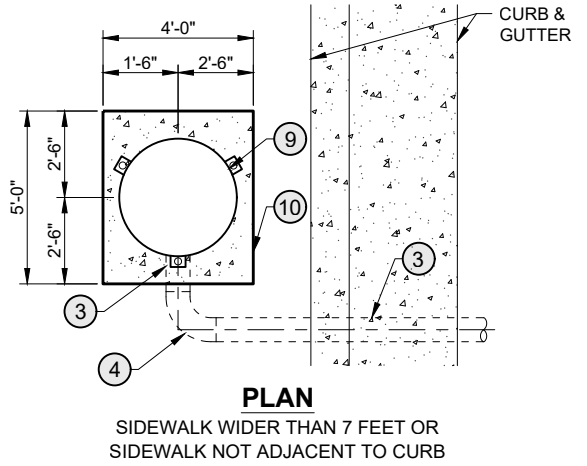
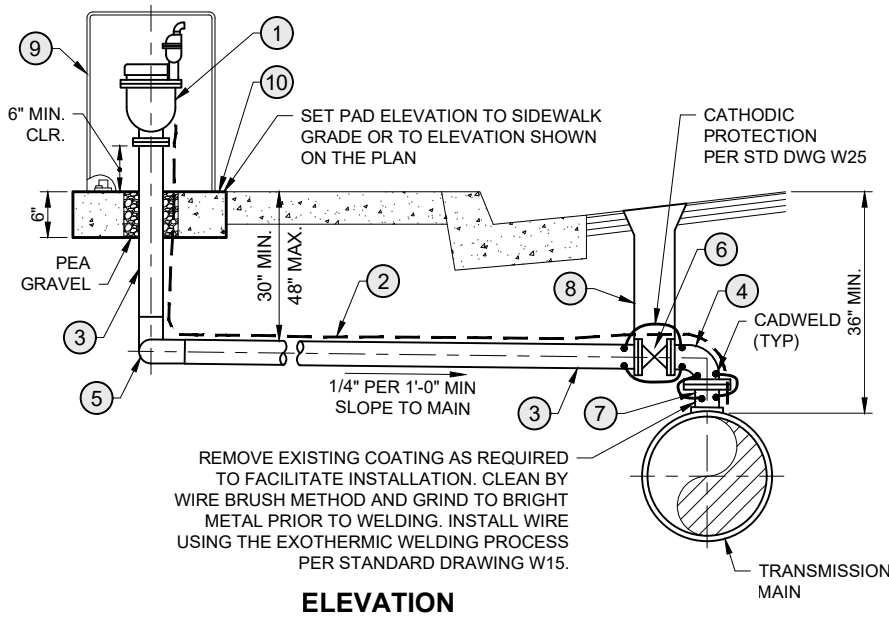
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
1	1" (2") AIR RELEASE AND VACUUM VALVE	A.R.I. USA Inc.	SEE NOTE 4
2	1" (2") BRASS NIPPLE	-----	-----
3	1" (2") SILVER SOLDER COPPER FITTING	-----	-----
4	1" (2") COPPER TUBING WITH POLYETHYLENE SLEEVE PER STD DWGS W1A & W3	-----	TYPE "K" SOFT
5	1" (2") 90° LONG RADIUS SILVER SOLDER SWEAT ELBOW	-----	-----
6	1" (2") BRONZE BALL VALVE	JONES, MUELLER	E-1900, B-20283N
7	SERVICE TAP PER STD DWG W6A	-----	-----
8	VALVE BOX AND COVER PER STD DWG W9	TYLER	6855 SERIES
9	TRACER WIRE PER STD DWG W20	-----	-----
10	AIR/VAC ENCLOSURE	ARMORCAST	SEE NOTE 5
11	CONCRETE PAD, CLASS 560-C-3250	-----	-----
12	15 LB ZINC ANODE PER STD DWGS W1A & W3	-----	-----

Santa Margarita Water District

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**1" & 2" COMBINATION
AIR RELEASE AND
VACUUM VALVE ASSEMBLY**

SMWD
STD DWG NO.
W18
1 of 1



NOTES

- ALL BURIED BOLTS SHALL BE COATED WITH SANCHEM INC. NO-OX-ID "A-Special" OR APPROVED EQUAL.
- IN AREAS WHERE NO CURB OR BERM EXISTS OR WHERE THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL ONE 3" GALVANIZED STEEL POST (PAINTED IN ACCORDANCE WITH STANDARD DRAWING W7) AT EACH CORNER OF CONCRETE PAD ON TRAFFIC SIDE. IMBED POSTS IN 24" OF CONCRETE 2" BELOW GRADE AND EXTEND 3' ABOVE GRADE.
- FOR AIR/VAC ASSEMBLIES IN SLOPES, SEE STANDARD DRAWING W28.
- FOR 4" AIR/VAC USE PART NO. D060CHF FOR PRESSURE 3-285 PSI AND USE PART NO. D065HF FOR PRESSURE 3-580 PSI.
- 36" x 36" POLYMER CONCRETE WITH 1/2" DIA. VENT HOLES. ARMORCAST PART NO. P6002001 COLOR: GRANITE.

CONSTRUCTION ITEMS / MATERIALS LIST

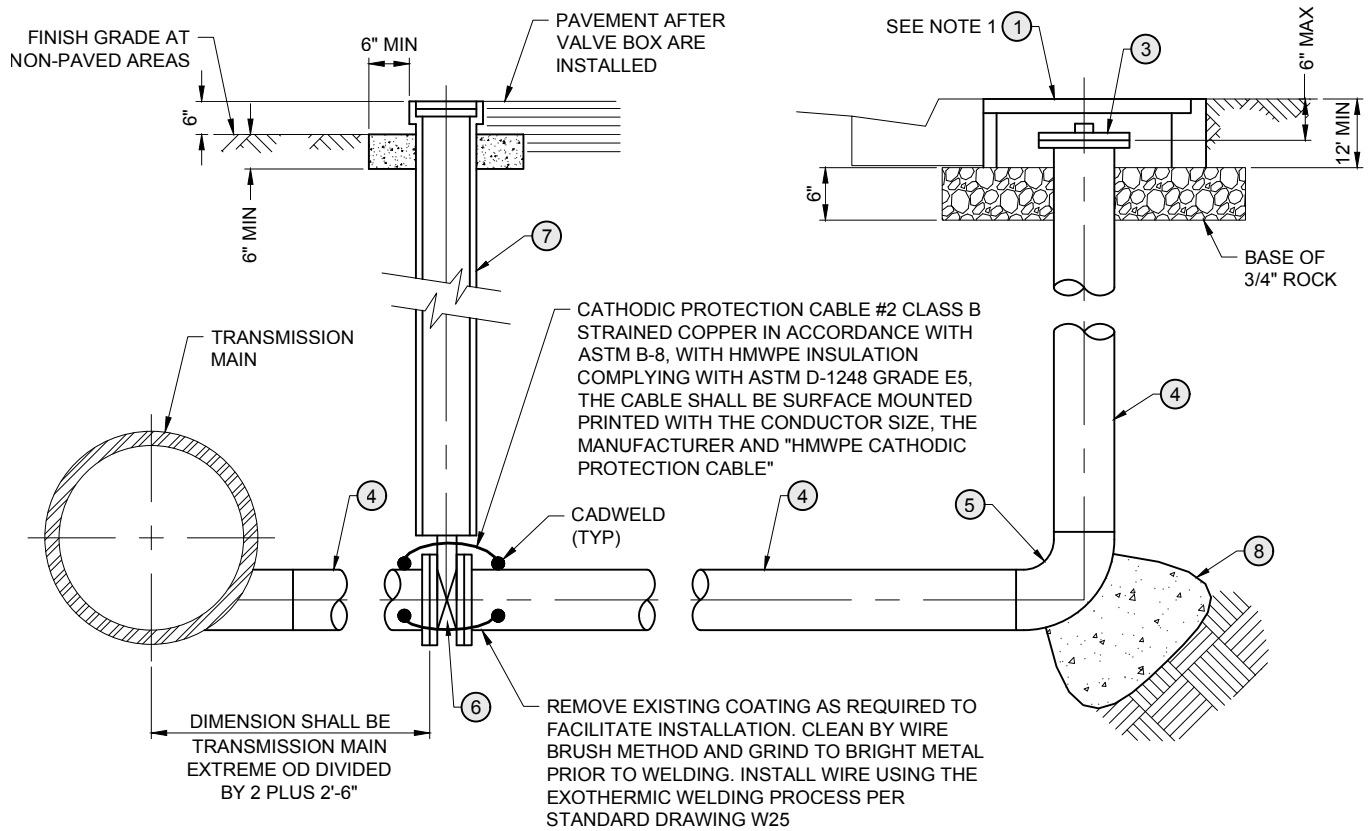
ITEM	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
1	4" COMBINATION AIR RELEASE AND VACUUM VALVE (FLANGED)	A.R.I. USA Inc.	SEE NOTE 4
2	TRACER WIRE PER STD DWG W20	-----	STD DWG W20
3	4" CML & C STEEL SPOOL (FLANGE x WELDED)	-----	-----
4	4" CML & C STEEL 90° ELBOW (FLANGED)	-----	-----
5	4" CML & C STEEL 90° ELBOW (WELDED)	-----	-----
6	4" RW GATE VALVE (FLANGED)	PER STD DWG W9	-----
7	4" x MAIN SIZE TEE OR 4" TAP, SEE STD DWG W17	-----	-----
8	VALVE BOX AND COVER PER STD DWG W9	TYLER	6855 SERIES
9	AIR/VAC ENCLOSURE	ARMORCAST	SEE NOTE 5
10	3'-0" x 3'-0" CONCRETE PAD, CLASS 560-C-3250, WITH 4x4 10/10 W.W. MESH	-----	-----

Santa Margarita Water District

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		CHIEF ENGINEER, Engineering Department	

4" COMBINATION AIR RELEASE AND VACUUM VALVE ASSEMBLY

SMWD
STD DWG NO.
W19
1 of 1



CONSTRUCTION ITEMS / MATERIALS LIST

ITEM	SIZE AND DESCRIPTION
①	POLYMER METER BOX AND LID PER STANDARD DRAWING W3 WITHOUT QUICK READ PORT
②	NOT USED
③	4" BLIND FLANGE WITH 2" I.P. TAP AND PVC THREADED PLUG
④	4" CML & C STEEL PIPE (WELDED)
⑤	4" LONG RADIUS 90° CML & C STEEL ELBOW (WELDED)
⑥	4" RW GATE VALVE, FLANGED
⑦	VALVE BOX ASSEMBLY PER STANDARD DRAWING W9, ITEMS 3 THRU 6
⑧	CONCRETE THRUST BLOCK PER STANDARD DRAWING W12, CONDITION II

NOTES

1. INSTALL METER BOX DIRECTLY BEHIND CURB OR AS DIRECTED ON THE PLANS.
2. MINIMUM NUMBER OF BONDING WIRES SHALL BE 2 PER PIPE JOINT PLACED ON PIPE 180° APART.

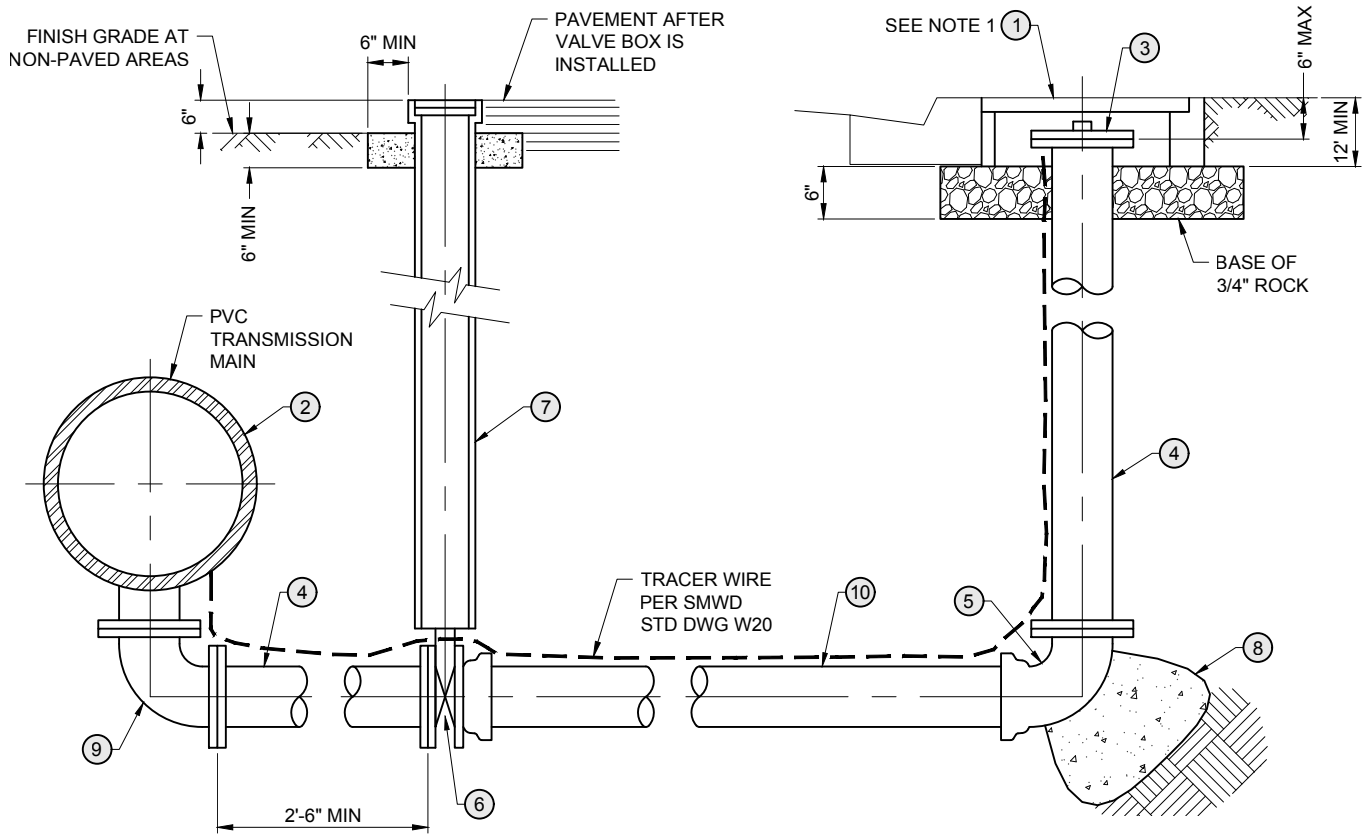
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		CHIEF ENGINEER, Engineering Department

4" BLOW OFF STEEL MAIN CONNECTION

SMWD
STD DWG NO.

W21



CONSTRUCTION ITEMS / MATERIALS LIST

ITEM	SIZE AND DESCRIPTION
①	POLYMER METER BOX AND LID PER STANDARD DRAWING W3 WITHOUT QUICK READ PORT
②	FLANGED D.I.P. TEE (MAINLINE DIAMETER x 4") WITH TWO FLG x P.O. ADAPTERS TO MATCH MAINLINE
③	4" BLIND FLANGE WITH 2" I.P. TAP AND PVC THREADED PLUG
④	4" FLG D.I.P. SPOOL (LENGTH AS REQUIRED)
⑤	4" 90° D.I.P. ELBOW (FLG x P.O.)
⑥	4" RW GATE VALVE (FLG x P.O.) VALVE CLASS TO MATCH MAINLINE PRESSURE
⑦	VALVE BOX AND COVER ASSEMBLY (PER STANDARD DRAWING RW3)
⑧	CONCRETE THRUST BLOCK (PER STANDARD DRAWING W12, CONDITION II)
⑨	4" 90° D.I.P. ELBOW (FLG x FLG)
⑩	4" AWWA C-900 PVC PIPE

NOTES

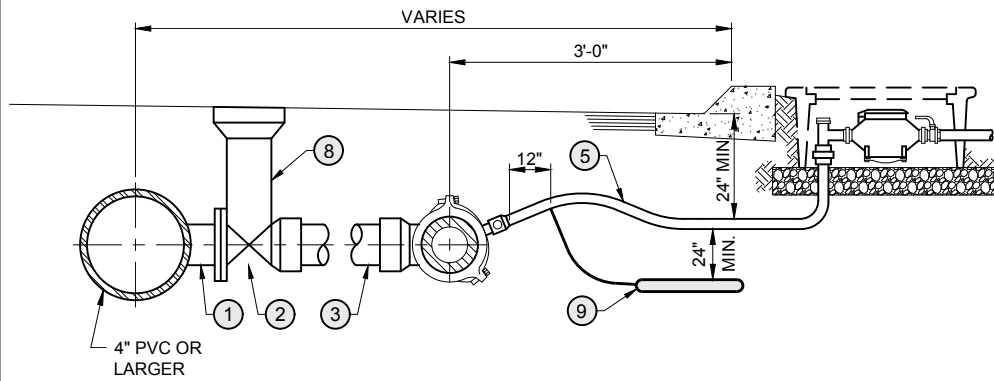
1. INSTALL METER BOX DIRECTLY BEHIND CURB OR AS DIRECTED ON THE PLANS.
2. ATTACH ANODE PER PROJECT SPECIFICATIONS AND BOND ACROSS D.I. JOINTS PER SMWD STANDARD DRAWING W25.

Santa Margarita Water District

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4" BLOW OFF PVC MAIN CONNECTION

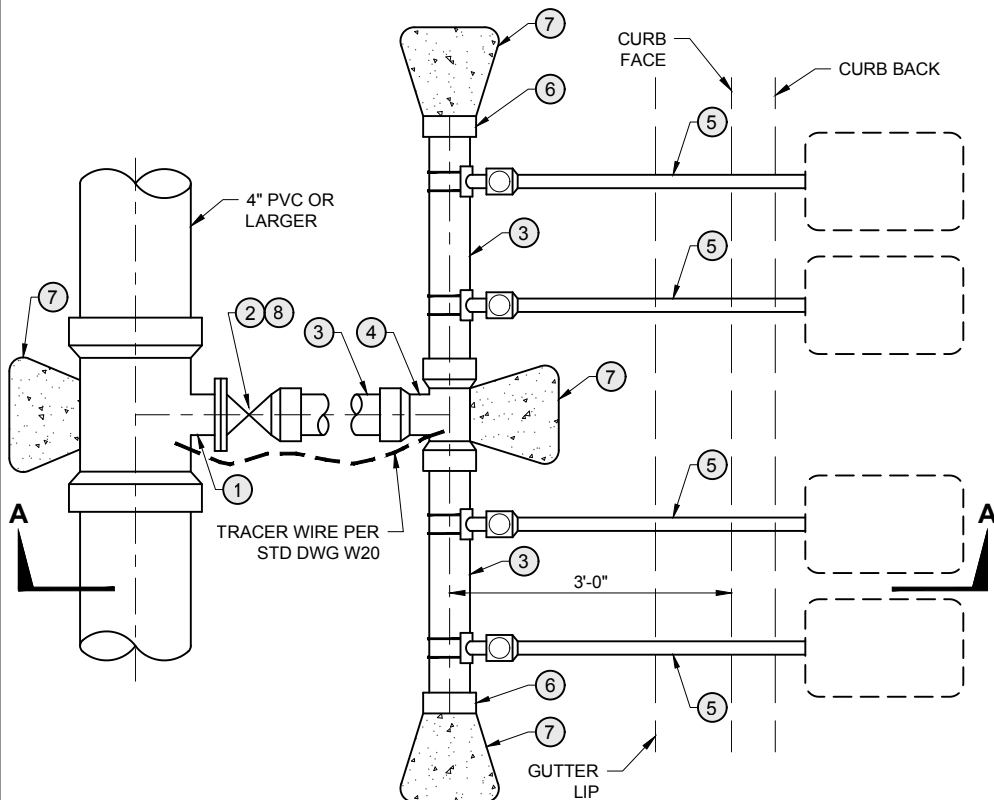
SMWD
STD DWG NO.
W21A
1 of 1



NOTES:

1. DOUBLE TRAP SERVICE SADDLE REQUIRED FOR ALL MAINS, EXCEPT PVC UNDER 12" DIAMETER.
2. INSTALL CORPORATION STOP WITH KEY SIDEWAYS, IN OPEN POSITION.
3. THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE WITH GUIDE OR PILOT TAP.
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
5. NO TAP TO MAIN SHALL BE WITHIN 18 INCHES OF A COUPLING. TAP FOR 1" SERVICES SHALL BE A MIN. OF 18" APART. TAPS FOR 1 1/2" AND 2" SHALL BE A MIN. OF 24" APART.
6. METER BOXES SHALL BE INSTALLED DIRECTLY BEHIND THE CURB WHETHER SIDEWALK IS DIRECTLY BEHIND THE CURB OR NOT. IF THERE IS NO SIDEWALK, THE METERS MUST BE SET WITHIN A 6" THICK CONCRETE PAD EXTENDING 1' IN ALL DIRECTIONS FROM OUTSIDE EDGE OF OUTERMOST METER BOXES.
7. NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 20 FEET, IN WHICH CASE A SILVER SOLDER COPPER COUPLING SHALL BE USED.
8. ALL LIDS AND COVERS SHALL BE RATED FOR H2O TRAFFIC LOADING.
9. IF REQUIRED BACKFLOW PREVENTER SHALL BE INSTALLED AND CERTIFIED PRIOR TO ACTIVATION OF THE WATER METER.
10. FOR SERVICE TAP OF STEEL MAINS, SEE STANDARD DRAWING W6.
11. A MAXIMUM OF SIX 1-INCH SERVICES MAY BE CONNECTED TO MANIFOLD, PROVIDED THERE ARE NO IRRIGATION OR FIRE SPRINKLER USES TO BE SUPPLIED THROUGH THESE SERVICES.
12. INSTALL TRACER WIRE PER SPECIFICATION.
13. FOR METERS IN SLOPES, SEE STANDARD DRAWING W28.
14. MANIFOLD MAY BE INSTALLED BEHIND THE SIDEWALK AT THE DISCRETION OF THE DISTRICT'S ENGINEER.

SECTION A-A



PLAN

CONSTRUCTION ITEMS / MATERIALS LIST		
ITEM	SIZE AND DESCRIPTION	MFR. CAT. NO. OR SPEC.
①	FLG x PUSH-ON TEE	----
②	4" RW GATE VALVE, FLG x PUSH-ON	----
③	4" PVC WITH TRACER WIRE	AWWA C-900
④	PUSH-ON TEE	----
⑤	SERVICE INSTALLATION, SEE STANDARD DRAWINGS W1, W1A, W2, W3	PER STD DWGS W1, W1A, W2, W3
⑥	DEAD END SERVICE CONNECTION	PER STD DWG W5
⑦	THRUST BLOCK	PER STD DWG W12
⑧	VALVE BOX ASSEMBLY	PER STD DWG W16 ITEMS 3 THRU 7
⑧	15 LB ZINC ANODE (ONE PER SERVICE)	----

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CHIEF ENGINEER, Engineering Department			

METER MANIFOLD INSTALLATION

SMWD
STD DWG NO.
W27
1 of 1