

WATER DETAILS

W-01: STANDARD 5-1/4" FIRE HYDRANT ASSEMBLY INSTALLATION

W-02: BLOW-OFF HYDRANT INSTALLATION DETAIL

W-03: VENTED AUTOMATIC COMBINATION ARV INSTALLATION

W-04: DUAL PRV INSTALLATION

W-05: PRESSURE TAP INSTALLATION

W-06: WATER SAMPLING STATION DETAIL

W-07: 5/8", 3/4", OR 1" SINGLE METER INSTALLATION

W-08: (TWO) 1" METER INSTALLATION

W-09: (ONE) 1" OR 2" METER INSTALLATION SHOWING OPTIONAL BYPASS

W-10: STANDARD INSTALATION DETAIL FOR 3", 4" & 6" COMPOUND METERS

W-11: RPZ INSTALLATION


NOTES:

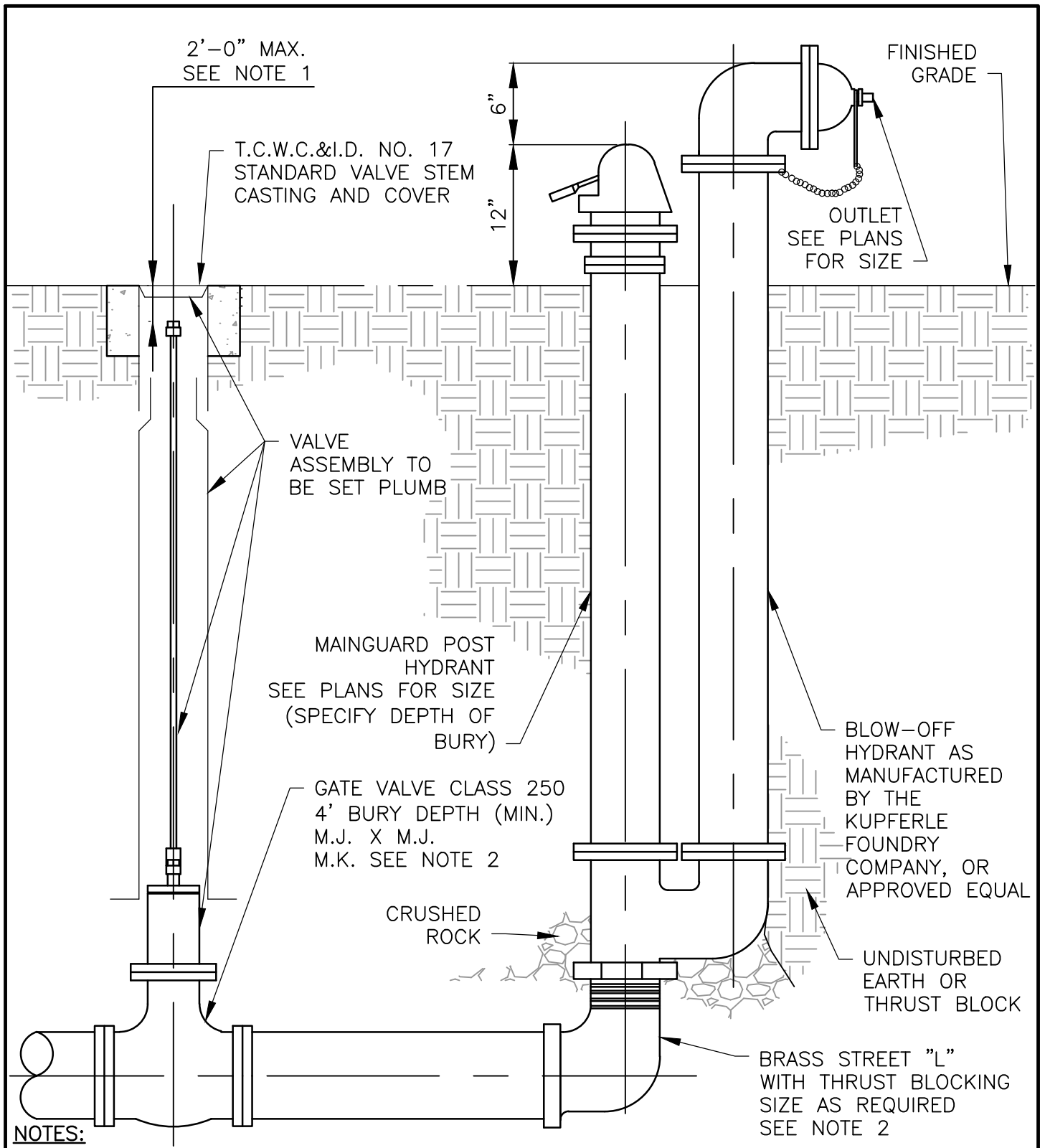
1. ONLY 4' BURY DEPTH FIRE HYDRANTS SHALL BE INSTALLED.
2. FIRE HYDRANTS SHALL BE A MINIMUM DISTANCE OF 3' BEHIND THE CURB OR 6' BEHIND THE EDGE OF PAVEMENT. IN STEINER RANCH, HYDRANTS MAY BE 1 FT. BEHIND CURB. UNDER NO CIRCUMSTANCES SHALL VALVES OR FIRE HYDRANTS BE PLACED IN A CURB OR SIDEWALK. IN AREAS WITHOUT CURBS OR SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED 3'-6' FROM THE MAIN. ANY OTHER INSTALLATIONS SHOULD BE PERFORMED AT THE DIRECTION AND TO THE SPECIFICATIONS OF THE T.C.W.C. & I.D. No. 17 DISTRICT PERSONNEL OR THE DISTRICT ENGINEER.
3. FOR BURY DEPTHS GREATER THAN 5', ONE BARREL EXTENSION NOT EXCEEDING 3' LENGTH SHALL BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT. BREAK AWAY BOLTS (SHOE TYPES) SHALL BE PROPERLY SPACED AND PLACED WITH EXTENSIONS AS NEEDED TO ACCOMMODATE THE FIRE HYDRANTS. CONCRETE BLOCKING WITH A MIN. 1-1/2 FT² BEARING AREA. CLASS A CONCRETE. DO NOT BLOCK DRAIN HOLES.
4. FIRE LINE SHALL HAVE RESTRAINT JOINT FROM MAIN TO HYDRANT.
5. CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND THE BOTTOM OF OF THE HYDRANT FOR A RADIUS OF AT LEAST 12" AND EXTEND AT LEAST 12" ABOVE THE OUTLET. DO NOT BLOCK DRAIN HOLES.
6. WELD SOCKET 2-1/2" X 2" DEEP TO 1" SCH. 40 ROUND STEM EXTENSION. FITTED ON OPERATING NUT. SCH. 80 FOR LENGTHS OVER 10'.
7. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18" AND 24" FROM FINISHED GRADE.
8. VALVE, DUCTILE IRON PIPE AND STANDARD FIRE HYDRANT SYSTEM SHALL BE RESTRAINT JOINT CONTINUOUSLY TOGETHER.

LAKeway FIRE HYDRANT: NATIONAL STANDARD THREAD WITH STEAMER CONNECTOR OF 4.5 (FOUR AND ONE-HALF) INCHES. COLORS-THE BASE SHALL BE PAINTED SILVER AND THE BOLT AND CAPS SHALL BE PAINTED THE DESIGNATED COLOR PER THE GALLONS PER MINUTE (GPM) AS FOLLOWS:

CLASS AA	LIGHT BLUE	1500 OR HIGHER GPM
CLASS A	GREEN	1000 - 1499 GPM
CLASS B	ORANGE	500 - 999 GPM
CLASS C	RED	LESS THAN 500 GPM
CLASS D	BLACK OR BAGGED	OUT OF SERVICE


AUSTIN FIRE HYDRANTS: ALL FIRE HYDRANTS SHALL BY DRY BARREL, TRAFFIC MODEL (BREAK-AWAY) POST TYPE HAVING COMPRESSION TYPE MAIN VALVES WITH 5-1/4" OPENING, CLOSING WITH LINE PRESSURE. NFPA1963- NATIONAL (AMERICAN) STANDARD FIRE HOSE COUPLING SCREW THREAD AND CITY OF AUSTIN 4 INCH FIRE HOSE PUMPER CONNECTION STANDARD AND THREAD-SIX (6) THREADS PER INCH "HIG BEE" CUT, 4.859 INCH O.D., 4.6425 INCH ROOT DIAMETER. EXTERIOR SURFACE ABOVE GROUND SHALL RECEIVE A COATING OF THE TYPE AND COLOR SPECIFIED IN THE APPLICABLE VERSION OF THE CITY OF AUSTIN SPECIFICATIONS. THE COATING SHALL BE APPLIED ACCORDING TO COATING MANUFACTURE'S SPECIFICATIONS.

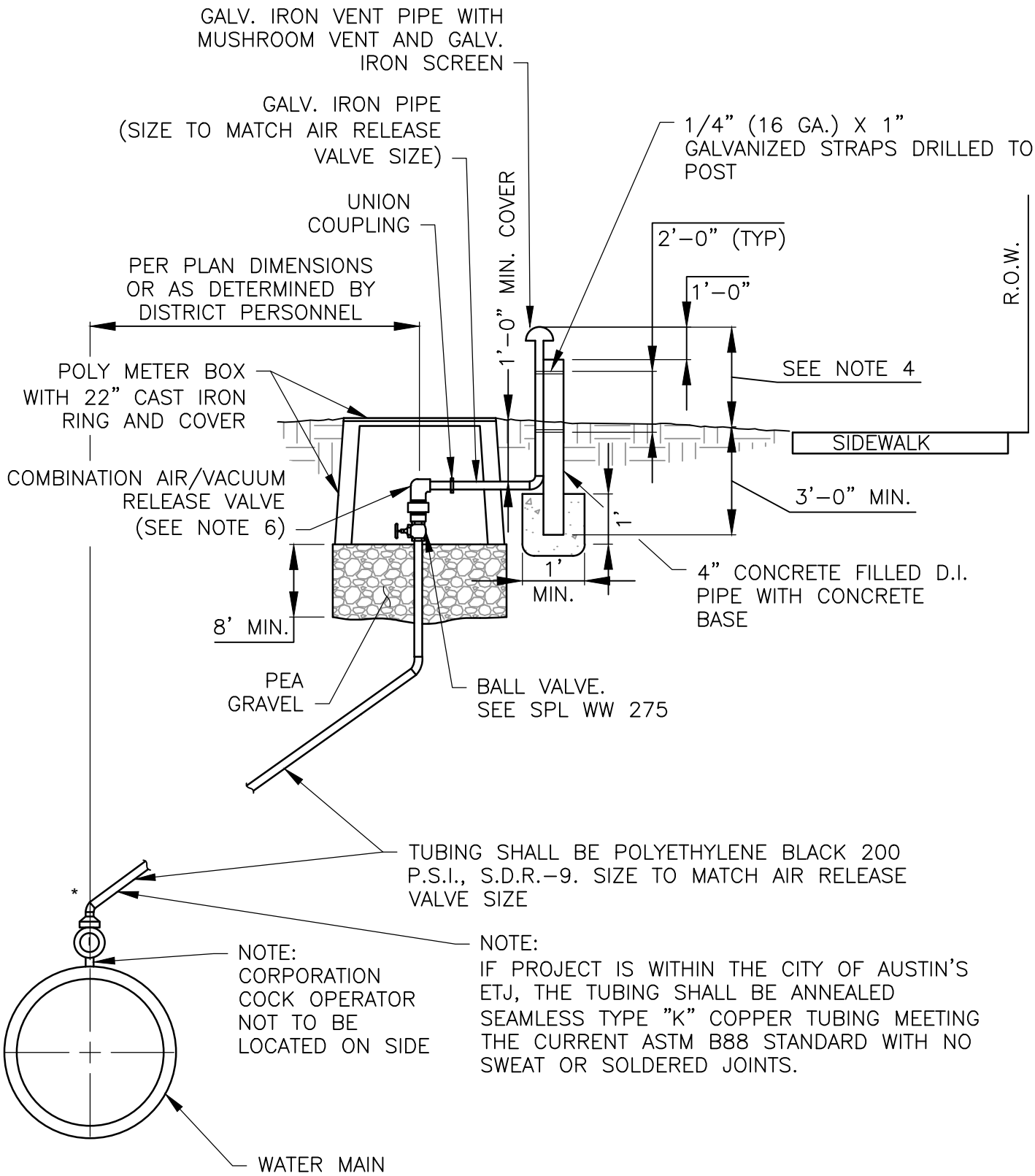
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	STANDARD 5 1/4" FIRE HYDRANT ASSEMBLY INSTALLATION (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W01




NOTES:

1. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18 AND 24" FROM FINISHED GRADE.
2. VALVE, DUCTILE IRON PIPE AND STANDARD HYDRANT SYSTEM SHALL BE RESTRAINT JOINT CONTINUOUSLY TOGETHER.

	<p>TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS</p>	<p>BLOW-OFF HYDRANT INSTALLATION DETAIL</p>	
	<p>ADOPTED: 03/01/2016</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>DETAIL NO. W02</p>




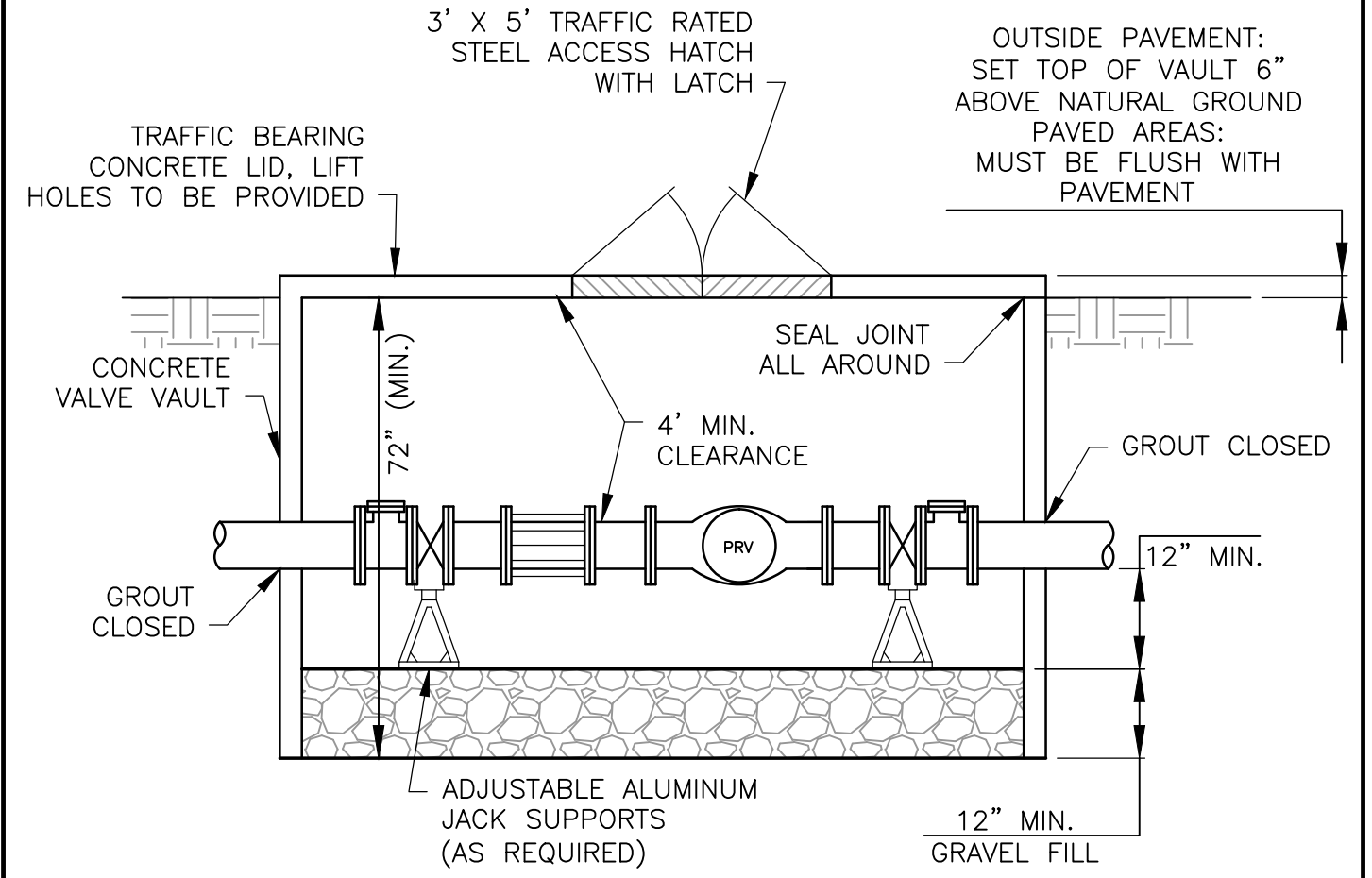
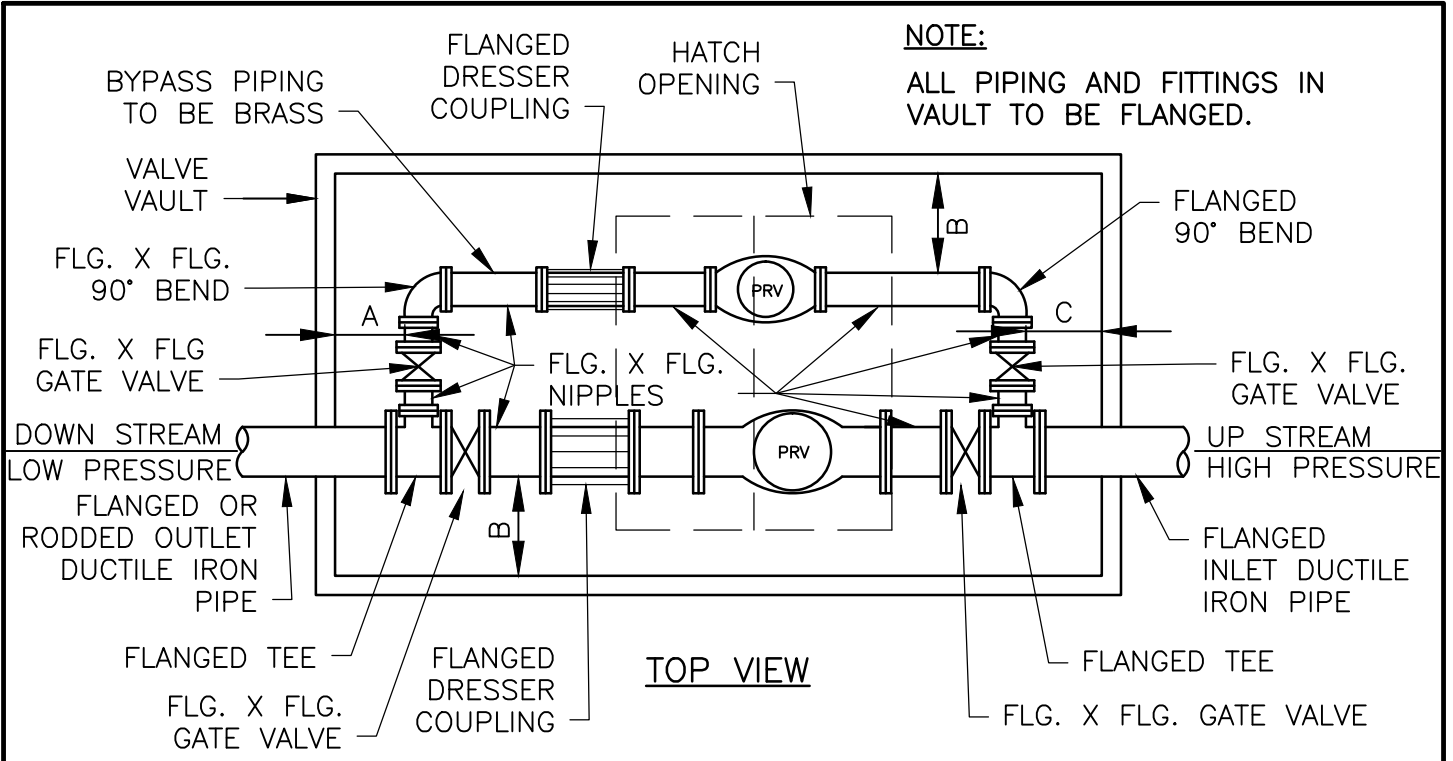
* THREAD TO COMPRESSION BRASS ELBOW ALLOWED IF NECESSARY DUE TO DEPTH LIMITATIONS.


	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VENTED AUTOMATIC COMBINATION AIR/VACUUM RELEASE VALVE INSTALLATION (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W03

NOTES:

1. EXTERIOR SURFACES OF EXPOSED AIR VENT PIPE AND D.I. SUPPORT PIPE SHALL BE PAINTED WITH RUST-OLEUM ACRYLIC 5225 (SAFETY BLUE), OR EQUAL, PER COATING MANUFACTURER INSTRUCTIONS PRIOR TO INSTALLATION.
2. AIR VENT PIPE INSTALLATION SHALL BE AS NEAR AS PRACTICAL TO RIGHT-OF-WAY LINE OR EASEMENT LINE AS INDICATED ON PLANS (VERIFY LOCATION WITH T.C. W.C. & I.D. NO. 17 DISTRICT PERSONNEL)
3. METER BOX PENETRATION SHALL BE CORE BIT DRILLED. VOID SHALL BE FILLED BY PRESS-SEAL GASKET CORP. PSX RESILIENT CONNECTOR MEETING ASTM C923 OR APPROVED EQUAL.
4. IN UNDEVELOPED AND DEVELOPED AREAS, THE AIR RELEASE SHALL BE 2 FEET IN HEIGHT SUPPORTED BY 4" D.I. PIPE WHICH HAS BEEN PAINTED BLUE AND FILLED WITH CONCRETE AND LOCATED NOT TO BE IN CONFLICT WITH SIDEWALK.
5. AUTOMATIC COMBINATION AIR/VACUUM VALVE SHALL BE INSTALLED IN A MANNER WHICH WILL ALLOW REMOVAL OF ASSEMBLY WITHOUT REMOVAL OF THE METER BOX.
6. AUTOMATIC COMBINATION AIR/VACUUM VALVE SHALL BE A MINIMUM SIZE OF 2" (SEE PLANS FOR SIZE) AND SHALL BE MANUFACTURED BY A.R.I. FLOW CONTROL ACCESSORIES, MODEL D-040 OR D-060.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VENTED AUTOMATIC COMBINATION AIR/VACUUM RELEASE VALVE INSTALLATION (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W03




	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	DUAL PRV INSTALLATION (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W04

PRV 1	PRV 2
4"	2"
6"	2"
8"	2"
8"	4"
12"	4"

NOTES:

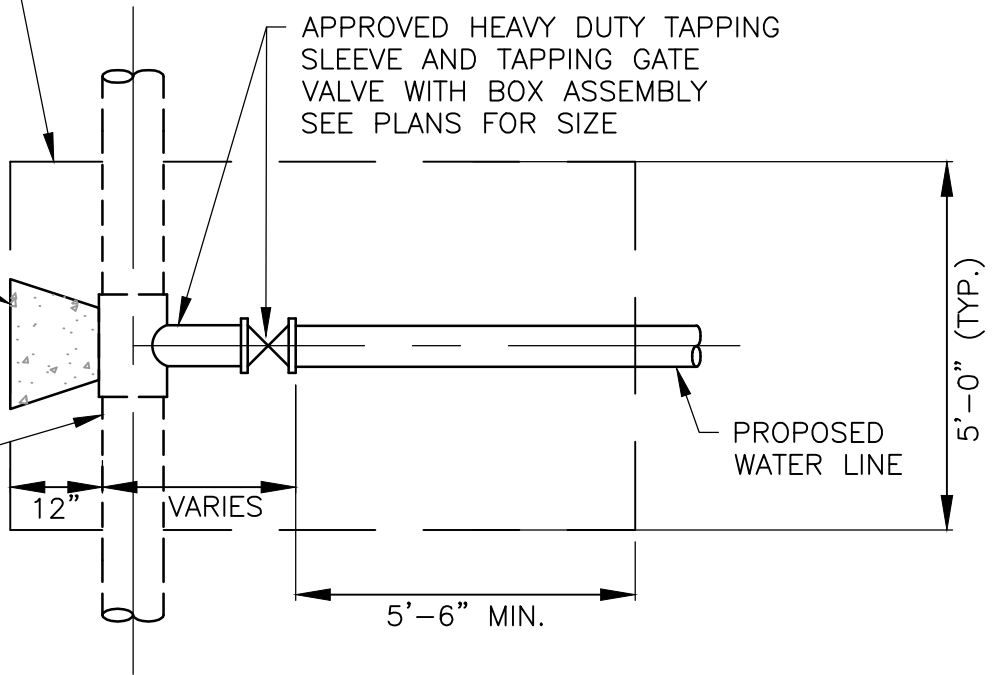
1. **ALL MATERIALS SHALL BE LEAD FREE IN ACCORDANCE WITH THE SAFE DRINKING WATER ACT.**
2. ALL PIPE IN PRESSURE REDUCING VALVE/BY-PASS INSTALLATION TO BE THREADED BRASS OR FLANGED DUCTILE IRON.
3. PRESSURE REDUCER VALVE SHALL BE IN ACCORDANCE WITH STANDARD PRODUCTS LIST NO. WW-319.
4. FOR DETAILS ON VAULT, LID AND MANHOLE ACCESS HATCH. (CONTACT T.C. W.C & I.D. NO. 17 STAFF DISTRICT PERSONNEL.)
5. PRESSURE ON THE LOW SIDE OF PRV SHALL BE AS NOTED ON THE PLANS BY THE DESIGN ENGINEER.
6. IF VAULT IS TO BE INSTALLED IN PAVEMENT, LID SHALL BE FLUSH WITH PAVEMENT AND TRAFFIC BEARING. IF VAULT IS TO BE INSTALLED OUTSIDE PAVEMENT LID SHALL BE INSTALLED 12" ABOVE FINISHED GRADE.
7. IF VALVE IS NOT ATTACHED TO FLANGED FITTING, ALL FITTINGS WILL BE MEGA-LUGGED RETAINER GLANDS OR APPROVED EQUIVALENT.
8. PRV'S SHALL NOT BE PLACED WITHIN THE CURB.
9. IF VAULT IS TO BE TRAFFIC BEARING, REFER TO CITY OF AUSTIN SPECIFICATIONS.
10. VERTICAL GATE VALVES TO BE WHEEL OPERATED.
11. ALL SLEEVES TO BE ON DOWN STREAM SIDE FOR SAFETY PURPOSES.
12. ALL UPSTREAM OR HIGH PRESSURE MATERIALS TO BE FLANGED.
13. ALL NON-FLANGED PIPE TO BE INSTALLED WITH MEGA-LUG RETAINER GLANDS OR APPROVED EQUIVALENT RESTRAINER.
14. ALL VALVES SHALL HAVE JACK STAND SUPPORTS.
15. ALL POINTS "A" THROUGH "D" TO HAVE A MINIMUM CLEARANCE OF EIGHTEEN (18) INCHES.
16. UPSTREAM PIPE SHOULD BE RODDED FOR ADDED SAFETY TO GUARD AGAINST BLOW OFF.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	DUAL PRV INSTALLATION (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W04

EXTENT OF EXCAVATION.
EXCAVATION DEPTH TO
BE 12" BELOW BOTTOM
OF MAIN

SEE STANDARD
THRUST
BLOCKING DETAIL

EXISTING
WATERLINE



NOTES:

1. ONLY HEAVY DUTY, MJ TAPPING SLEEVE AND TAPPING GATE VALVE SHALL BE USED.
2. TAPPING SLEEVE AND VALVE SHALL BE TESTED PRIOR TO THRUST BLOCK INSTALLATION.
3. TAPPING SLEEVE AND VALVE SHALL BE AIR TESTED AT 100 PSI FOR 10 MINUTES.



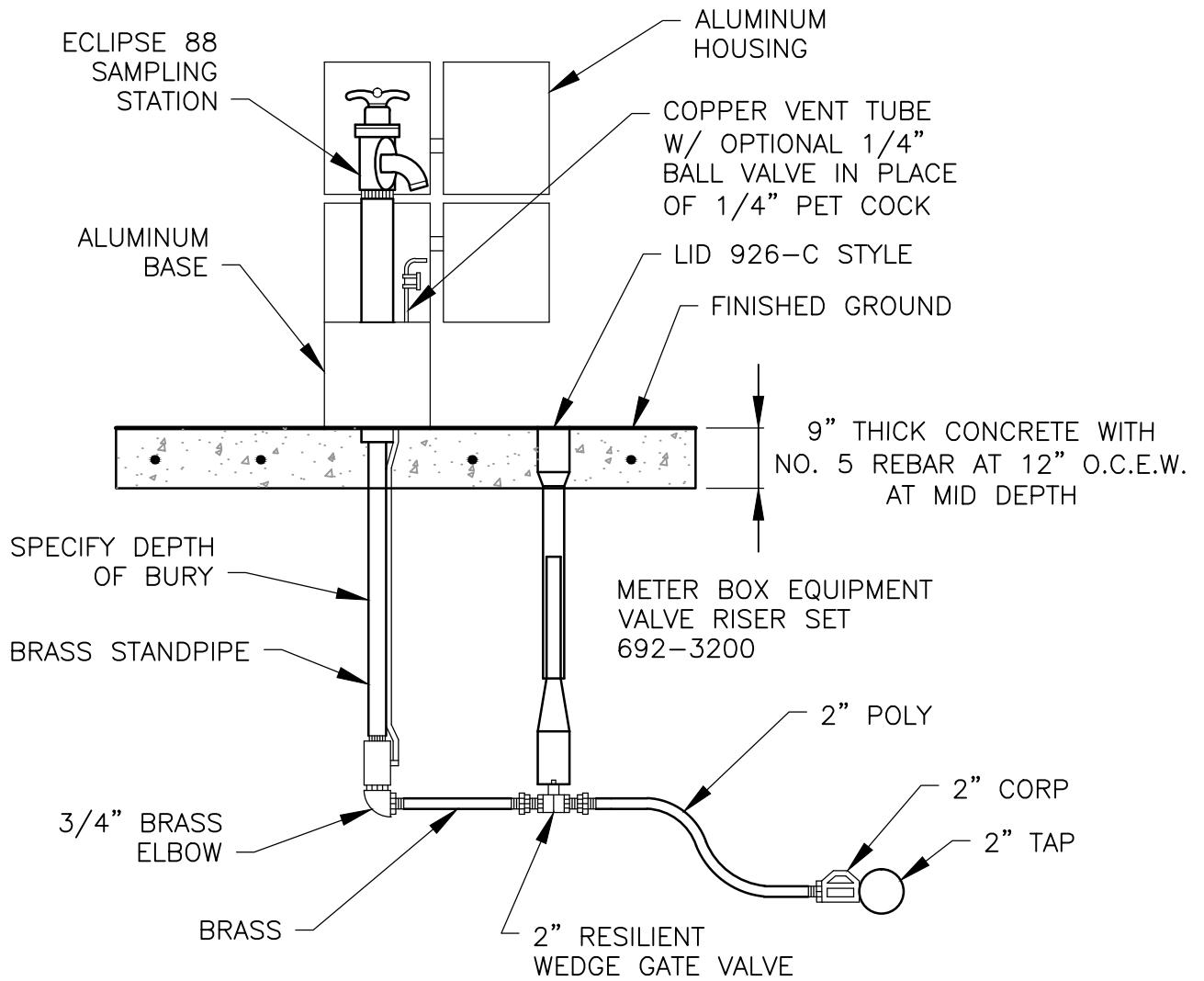
TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT No. 17
STANDARD DETAILS

PRESSURE TAP INSTALLATION

ADOPTED:
03/01/2016

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

DETAIL NO.
W05



TRAVIS COUNTY WATER CONTROL AND
 IMPROVEMENT DISTRICT No. 17
 STANDARD DETAILS

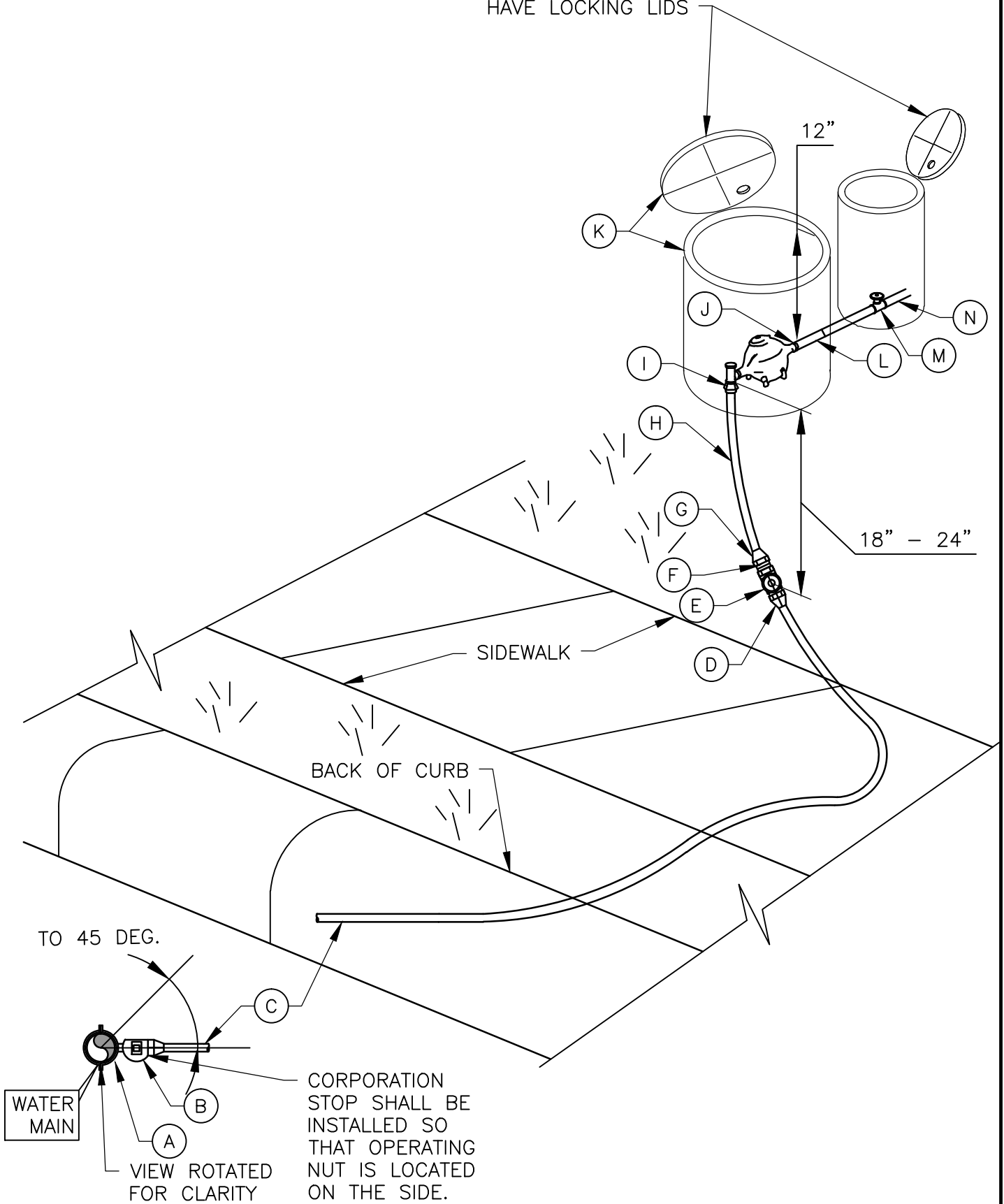
ADOPTED:
 03/01/2016

WATER SAMPLING STATION
 DETAIL

THE ARCHITECT/ENGINEER ASSUMES
 RESPONSIBILITY FOR APPROPRIATE
 USE OF THIS STANDARD.

DETAIL NO.
 W06

METER BOXES SHALL
HAVE LOCKING LIDS



TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT No. 17
STANDARD DETAILS

ADOPTED:
03/01/2016

5/8", 3/4" OR 1" SINGLE METER INSTALLATION
(1 OF 2)

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

DETAIL NO.
W07

MATERIAL LIST:


- A. TAP SADDLE REQUIRED ON ALL PIPES (317-D5)
- B. 1-1/2" CORPORATION STOP - (FB 1100-6G)
- C. 1-1/2" SERVICE PIPE (POLY E SDR 9) 200 P.S.I.
- D. 54 INSERT
- E. 1-1/2" BRASS BALL VALVE CURB STOP TYPE B41-666W.G.
- F. 1-1/2" X 1" REDUCER BUSHING
- G. 1" MIP X COMP (C84-44G)
- H. 1" POLY E SDR 9, 52 INSERT (200 P.S.I.)
- I. 1" METER ANGLE STOP (KV43-444WG)
- J. WATER NIPPLE WITH 3/4" MALE THREADS
- K. 1-SINGLE METER BOX - 34 P14 WESTERN IRON WORKS WITH CAST IRON LID AND RING SPECIFY SIZE OF HOLE FOR TOUCH READ PAD 2" - 2-1/8"
- L. BRASS PIPE, 4' MINIMUM LENGTH FROM METER TO CUSTOMER YARD LINE
- M. 1" BRONZE GATE VALVE: NON-RISING STEM (3/4" OR 1") FEMALE I.P. (PROPERTY OWNER'S CUTOFF VALVE, CUSTOMER'S RESPONSIBILITY)
- N. 3/4" OR 1" PIPE PVC SCH. 40 OR BETTER, MEETING CITY OF AUSTIN OR CITY OF LAKEWAY PLUMBING CODE REQUIREMENTS AS APPLICABLE (CUSTOMER'S RESPONSIBILITY)

NO COPPER PIPE ALLOWED. ONLY BRASS AND/OR POLYETHYLENE SHALL BE USED.

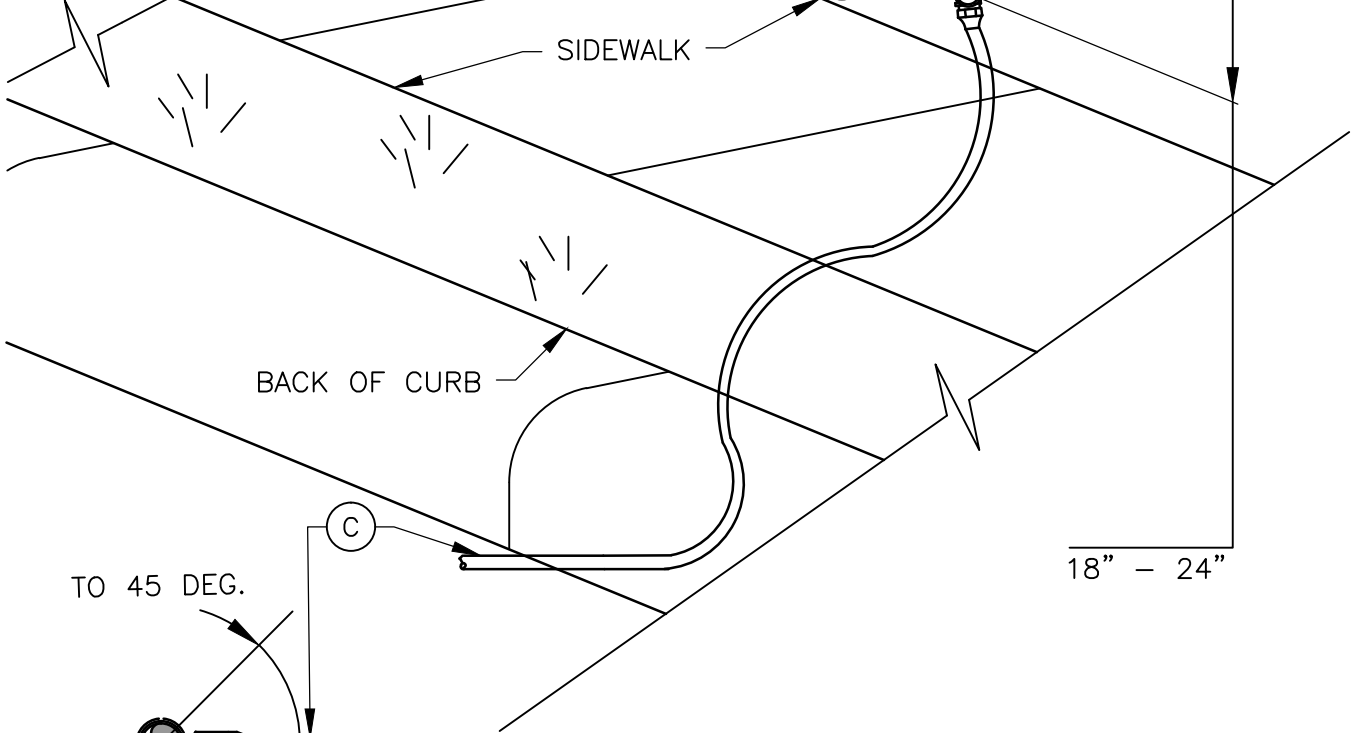
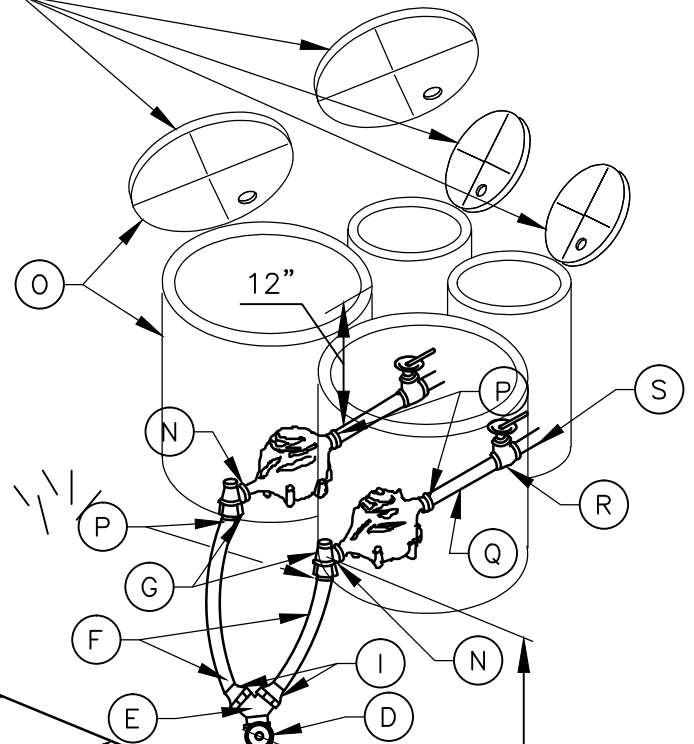
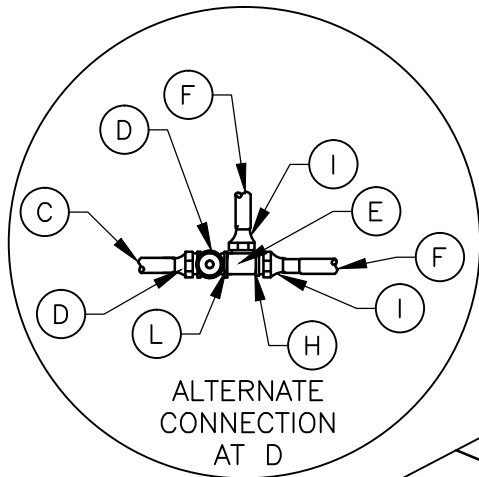
ALL MATERIAL SHALL BE LEAD FREE IN ACCORDANCE WITH THE SAFE DRINKING WATER ACT

NOTES:

- 1. TOP OF BOXES SHALL BE 2" ABOVE CURB AND/OR FINISHED GRADE OR FLUSH WITH PAVEMENT SURFACE.
- 2. WATER SERVICE LINES SHALL BE BEDDED IN WASHED SAND OR APPROVED GRAVEL BEDDING TO PROVIDE SIX INCHES (6") OF CUSHION BELOW THE LINE, AND 12" ABOVE. WATER METERS SHALL BE INSTALLED IN GROUND WHICH HAS AN ELEVATION NO HIGHER THAN 4 FEET FROM FINISHED GRADE STREET LEVEL. METERS LOCATED ON HIGH GROUND OR UPON STEEP SLOPES ARE NOT PERMITTED. TRENCH BOTTOM AND WALLS SHALL BE CLEARED OF ALL PROTRUDING ROCKS WHICH COULD DAMAGE THE PIPE BEFORE THE SAND BEDDING IS PLACED. WASHED SAND SHALL BE FILLED TO THE SAME ELEVATION AS THE TOP OF THE ADJACENT CURB AND/OR EDGE OF PAVEMENT AND SHALL BE COMPACTED TO A PROCTOR DENSITY OF 90%. NO ROCKS OR OTHER MATERIAL OVER THREE INCHES (3") IN DIAMETER SHALL BE USED FOR BACK FILL OVER THE SAND.
- 3. METER BOX MUST BE BEHIND CURB/ PAVEMENT AND/OR SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
- 4. THE BOTTOM OF THE WATER SERVICE AT ALL POINTS SHALL BE AT LEAST TWELVE (12") INCHES ABOVE THE TOP OF THE WASTEWATER SERVICE LINE.
- 5. WATER SERVICE LINE SHALL BE INSTALLED WITH WATER TIGHT JOINTS TESTED TO LINE PRESSURE.
- 6. ISOLATION VALVES WILL NOT BE SET UNDER OR NEAR SIDE WALKS OR CURBS, WHERE THEY CANNOT BE LOCATED.
- 7. PRESSURE REDUCING VALVE AND A BACK FLOW PREVENTER (WITH THERMAL EXPANSION TANK IN HOUSE IF REQUIRED) IN THAT ORDER ON THE YARD LINE.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	5/8", 3/4" OR 1" SINGLE METER INSTALLATION (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W07

METER BOXES SHALL HAVE LOCKING LIDS



WATER MAIN

TO 45 DEG.

VIEW ROTATED FOR CLARITY

CORPORATION STOP SHALL BE INSTALLED SO THAT OPERATING NUT IS LOCATED ON THE SIDE.

18" - 24"



TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17
STANDARD DETAILS

ADOPTED:
03/01/2016

(TWO) 1" METER INSTALLATION
(1 OF 2)

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

DETAIL NO.
W08

MATERIAL LIST:


- A. TAP SADDLE REQUIRED ON ALL PIPES (317-D5)
- B. 1-1/2" CORPORATION STOP (FB-1100-6G) (1-1/2" MIP X 1-1/2" COMP)
- C. 1-1/2" SERVICE PIPE (POLY E SDR 9) 200 P.S.I. (54 INSERT)
- D. 1-1/2" BRASS BALL VALVE CURB STOP TYPE (B41-666WG). 1-1/2 COMP X 1-1/2" F.I.P. CLOSE NIPPLE, BRONZE I.P. THREAD. (ALT.)
- E. 1-1/2" Y-BRANCH (Y48-246G) 2 - 1" COMP. X 1" X 1-1/2" MIP - (ALTERNATE BRONZE TEE)
- F. 1" SERVICE PIPE (POLY E SDR 9) 200 P.S.I. (ALTERNATE J)
- G. (2) 1" METER ANGLE STOP (KV43-444 WG); 54 INSERT 1" COMPRESSION X METER SWIVEL NUT 1"
- H. BRONZE BUSHING, 1-1/2" X 1", I.P. THREADS (ALT.)
- I. 1-1/2" MIP X 1-1/2" COMPRESSION (ALT.)
- L. 1-1/2" COMPRESSION X 1-1/2" FIP. (ALT.)
- N. (2) 1" COMPRESSION X METER SWIVEL NUT 1"
- O. (2) SINGLE METER BOXES - 34P14 WESTERN IRON WORKS WITH CAST IRON LID AND RING. SPECIFY SIZE OF HOLE FOR TOUCH READ PAD 2" - 2-1/8"
- P. WATER NIPPLE WITH 3/4" THREADS
- Q. 3/4" WATER SERVICE LINE (POLY E SDR 9). (54 INSERT)
- R. 1" BRONZE GATE VALVE: NON-RISING STEM OR 1" FEMALE I.P. (PROPERTY OWNER'S CUTOFF VALVE, CUSTOMER'S RESPONSIBILITY)
- S. 3/4" OR 1" PIPE PVC SCH. 40 OR BETTER, MEETING CITY OF AUSTIN OR CITY OF LAKEWAY PLUMBING CODE REQUIREMENTS AS APPLICABLE (CUSTOMER'S RESPONSIBILITY)

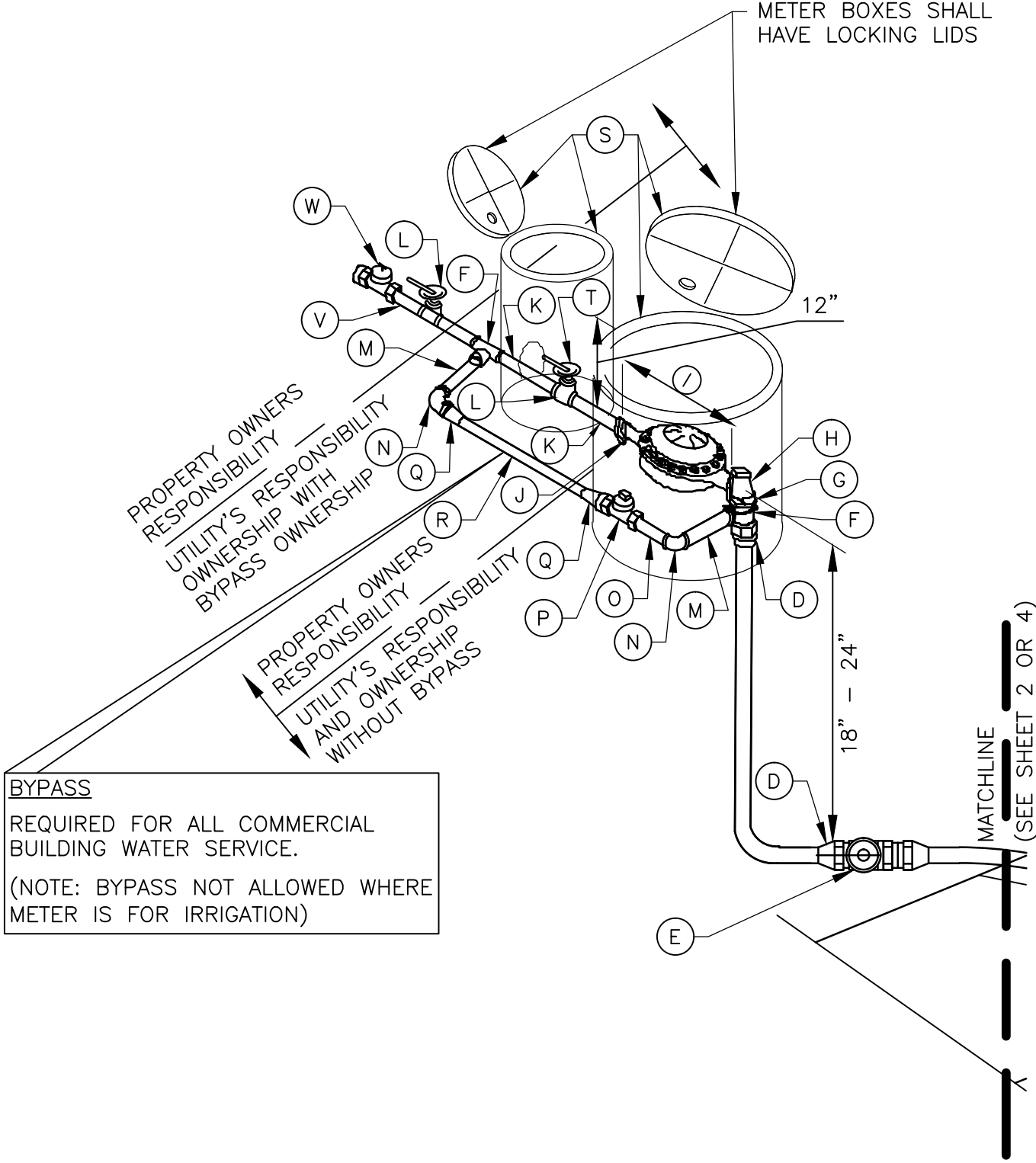
NO COPPER PIPE ALLOWED. ONLY BRASS AND/OR POLYETHYLENE SHALL BE USED.

ALL MATERIAL SHALL BE LEAD FREE IN ACCORDANCE WITH THE SAFE DRINKING WATER ACT.

NOTES:

- 1. BRANCH CONNECTION AND BOTH METER ANGLE STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
- 2. TOP OF BOXES SHALL BE 2" ABOVE CURB AND/OR FINISHED GRADE OR FLUSH WITH PAVEMENT SURFACE.
- 3. WATER SERVICE LINES SHALL BE BEDDED IN WASHED SAND OR APPROVED GRAVEL BEDDING TO PROVIDE SIX (6") INCHES OF CUSHION BELOW THE LINE, AND 12" ABOVE. WATER METERS SHALL BE INSTALLED IN GROUND WHICH HAS AN ELEVATION NO HIGHER THAN 4 FEET FROM FINISHED GRADE STREET LEVEL. METERS LOCATED ON HIGH GROUND OR UPON STEEP SLOPES ARE NOT PERMITTED. TRENCH BOTTOM AND WALLS SHALL BE CLEARED OF ALL PROTRUDING ROCKS WHICH COULD DAMAGE THE PIPE BEFORE THE SAND BEDDING IS PLACED. WASHED SAND SHALL BE FILLED TO THE SAME ELEVATION AS THE TOP OF THE ADJACENT CURB AND/OR EDGE OF PAVEMENT AND SHALL BE COMPACTED TO A PROCTOR DENSITY OF 90%. NO ROCKS OR OTHER MATERIAL OVER THREE INCHES (3") IN DIAMETER SHALL BE USED FOR BACK FILL OVER THE SAND.
- 4. METER BOX MUST BE BEHIND CURB, PAVEMENT AND/OR SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
- 5. THE BOTTOM OF THE WATER SERVICE AT ALL POINTS SHALL BE AT LEAST TWELVE (12") INCHES ABOVE THE TOP OF THE WASTEWATER SERVICE LINES.
- 6. WATER SERVICE LINES SHALL BE INSTALLED WITH WATER TIGHT JOINTS TESTED TO LINE PRESSURE.
- 7. ISOLATION VALVES WILL NOT BE SET UNDER OR NEAR SIDEWALKS OR CURB WHERE THEY CANNOT BE LOCATED.
- 8. PRESSURE REDUCING VALVE AND A BACK FLOW PREVENTER (WITH THERMAL EXPANSION TANK IN HOUSE IF REQUIRED) IN THAT ORDER ON THE YARD LINE.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	(TWO) 1" METER INSTALLATION (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W08



BYPASS
 REQUIRED FOR ALL COMMERCIAL BUILDING WATER SERVICE.
 (NOTE: BYPASS NOT ALLOWED WHERE METER IS FOR IRRIGATION)

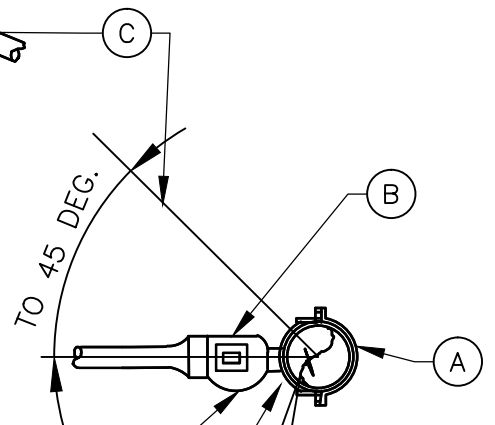
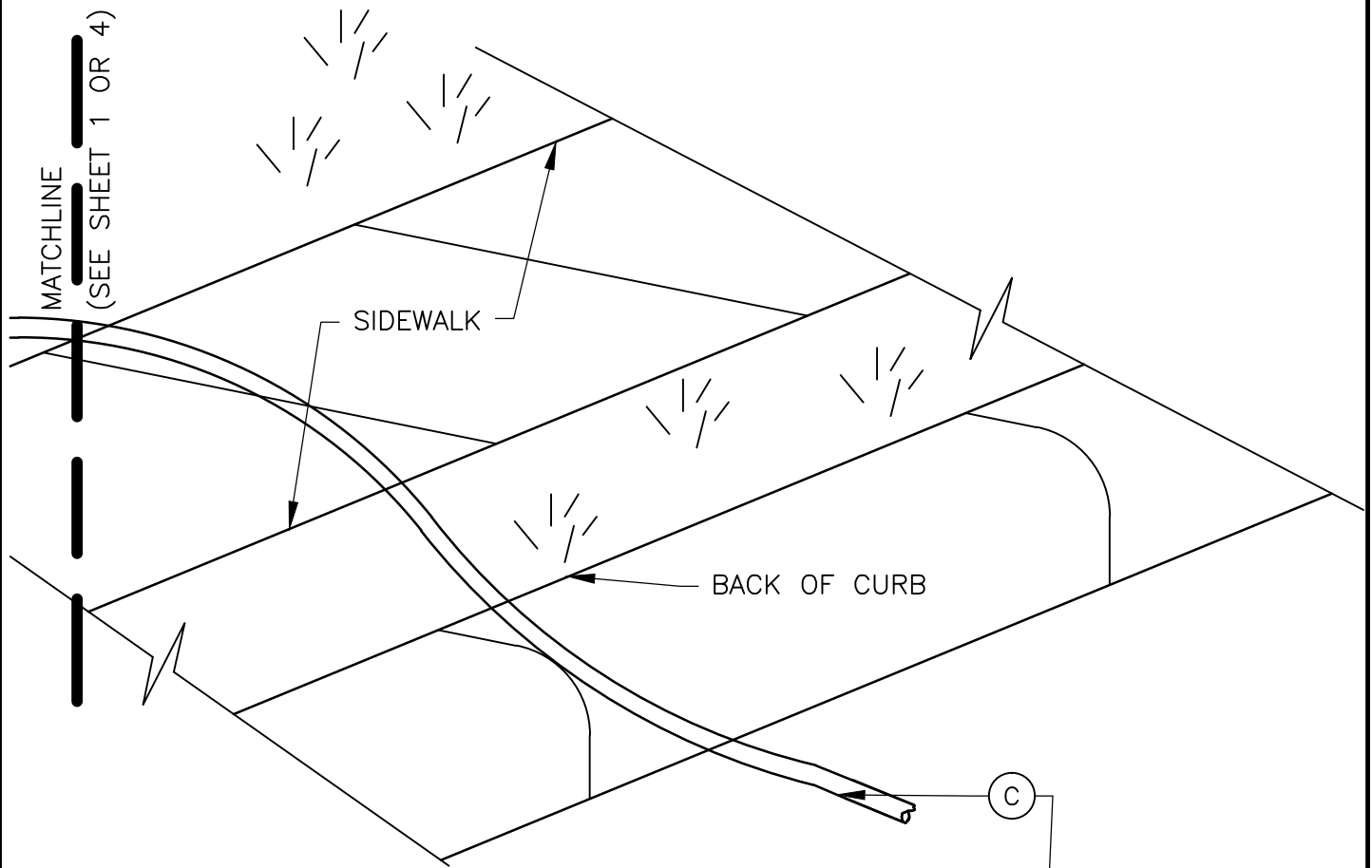


TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17
 STANDARD DETAILS
 ADOPTED:
 03/01/2016

(ONE) 1" OR 2" METER INSTALLATION SHOWING OPTIONAL BYPASS
 (1 OF 4)
 THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

DETAIL NO.
W09

MATCHLINE
(SEE SHEET 1 OR 4)



CORPORATION STOP SHALL BE
INSTALLED SO THAT OPERATION
NUT IS LOCATED ON THE SIDE.

WATER MAIN

VIEW ROTATED
FOR CLARITY



TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT No. 17
STANDARD DETAILS

ADOPTED:
03/01/2016


(ONE) 1" OR 2" METER INSTALLATION
SHOWING OPTIONAL BYPASS
(2 OF 4)

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

DETAIL NO.
W09


MATERIALS LIST		METER SIZE	
		1-1/2"	2"
A	TAP SADDLE FOR CONNECTION – ON ALL PIPES (317-D5)	1-1/2"	2"
B	CORPORATION STOP – SERVICE PIPE OUTLET	1-1/2"	2"
C	SERVICE PIPE, POLY E SDR 9, INSERTS REQUIRED (200 PSI)	1-1/2"	2"
D	COUPLING: SERVICE PIPE TO MAIL I.P.T. (COMPRESSION FITTING)	1-1/2"	2"
E	BALL VALVE, SEE SPL WW 275	1-1/2"	2"
F	TEES, BRASS.	1-1/2" X 1-1/2" X 1"	2" X 2" X 1"
G	CLOSE-NIPPLE, BRASS	1-1/2"	2"
H	ANGLE METER STOP, FEMALE I.P. THREAD INLET X FLANGE OUTLET	1-1/2"	2"
I	WATER METER LENGTH WITH GASKETS	13"	17"
J	FLANGE, BRASS, FEMALE I.P. THREAD	1-1/2"	2"
K	NIPPLES, BRASS	1-1/2" X 8"	1" X 5"
L	CUSTOMER'S BALL VALVE, SEE SPL WW 275	1-1/2"	2"
M	NIPPLES, BRASS	1" X 5"	1" X 5"
N	90 DEGREE ELBOWS, BRASS	1"	1"
O	NIPPLES, BRASS	1" X 3"	1" X 3"
P	CURB STOP, BRASS, FEMALE I.P. THREAD BOTH ENDS WITH LOCK NUTS	1"	1"
Q	COUPLINGS, BRASS, SERVICE PIPE TO MALE THREAD	1"	1"
R	SERVICE PIPE (BRASS OR SDR 9 200 P.S.I. POLY)	1"	1"
S	ROUND METER BOX 34P14 WESTERN IRON WORKS WITH CAST IRON LID AND RING. SPECIFY SIZE OF HOLE FOR TOUCH READ PAD 2" X 2-1/8"		
T	BRONZE GATE VALVE: NON RISING STEM 1.5" OR 2"		
V	BRASS PIPE, (4' MINIMUM LENGTH) FROM METER TO CUSTOMER YARD LINE		
W	PRESSURE REDUCING VALVE (PVR)	1-1/2"	0'-2"

**NO COPPER PIPE ALLOWED. ONLY BRASS AND/OR POLYETHYLENE SHALL BE USED.
ALL MATERIALS SHALL BE LEAD FREE IN ACCORDANCE THE SAFE DRINKING WATER ACT.**

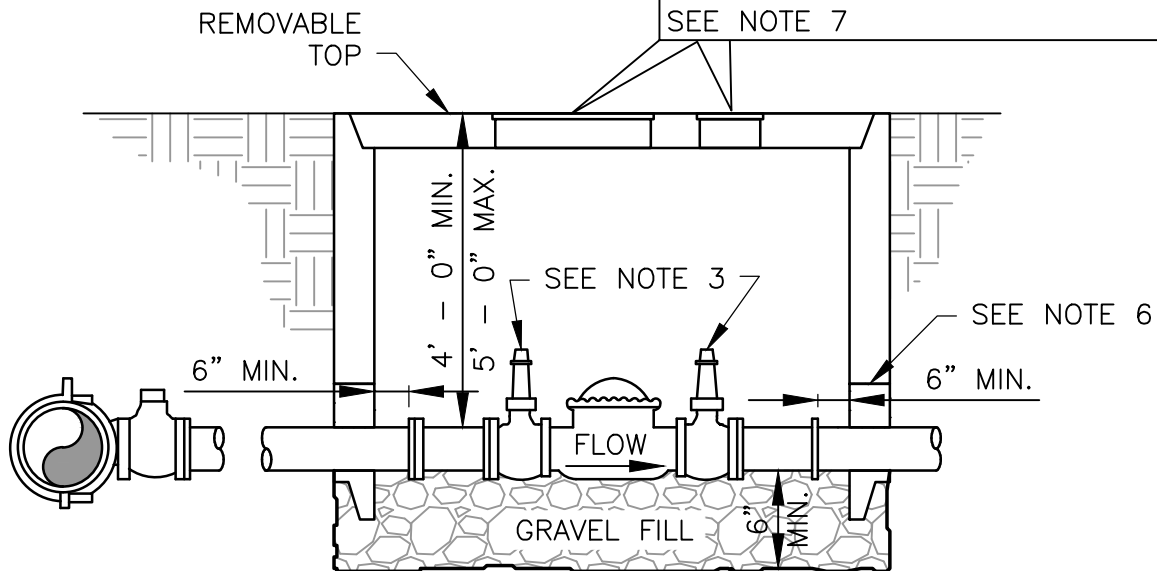
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	(ONE) 1" OR 2" METER INSTALLATION SHOWING OPTIONAL BYPASS (3 OF 4)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W09

NOTES:

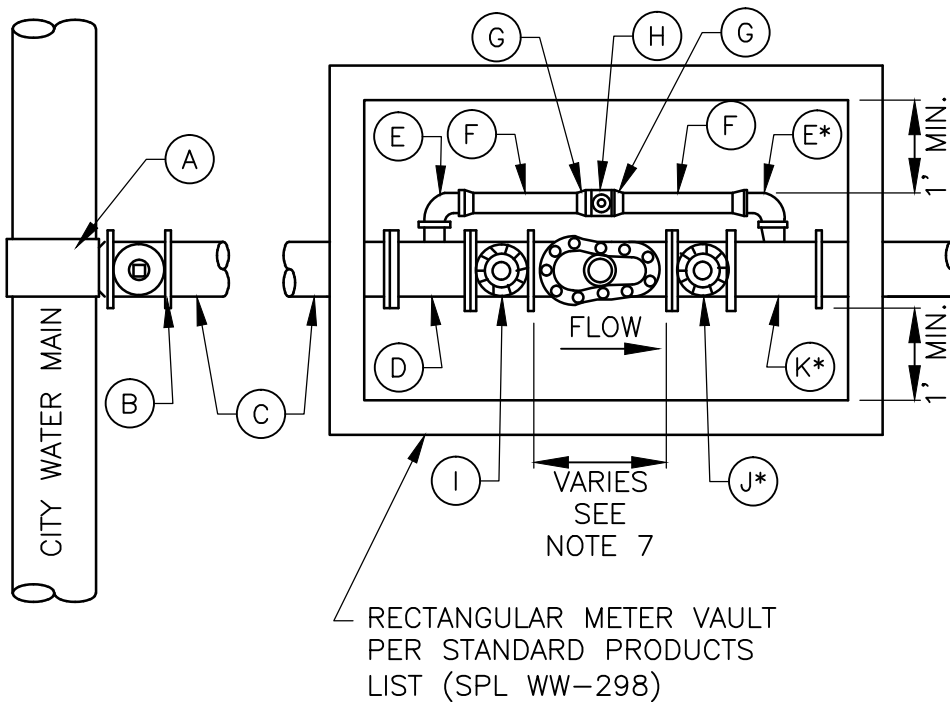
1. TOP OF BOXES SHALL BE 2" ABOVE THE CURB AND OR FINISHED GRADE OR FLUSH WITH PAVEMENT SURFACE.
2. IF TWO METERS ARE INSTALLED WITH A SINGLE SERVICE LINE, THEY SHALL BE INSTALLED IN SEPARATE BOXES WITH PIPING AS SHOWN FROM A TEE. THE COMMON SERVICE LINE TO THE TEE SHALL BE 2" FOR TWO 1-1/2" METERS, OR 4" DUCTILE IRON PIPE FOR TWO 2" METERS.
3. WATER SERVICE LINES SHALL BE BEDDED IN WASHED SAND OR APPROVED GRAVEL BEDDING TO PROVIDE SIX (6") INCHES OF CUSHION BELOW THE LINE, AND 12" ABOVE. WATER METERS SHALL BE INSTALLED IN GROUND WHICH HAS AN ELEVATION NO HIGHER THEN 4 FEET FROM FINISHED GRADE STREET LEVEL. METERS LOCATED ON HIGH GROUND OR UPON STEEP SLOPES ARE NOT PERMITTED. TRENCH BOTTOM AND WALLS SHALL BE CLEARED OF ALL PROTRUDING ROCKS WHICH COULD DAMAGE THE PIPE BEFORE THE SAND BEDDING IS PLACED. WASHED SAND SHALL BE FILLED TO THE SAME ELEVATION AS THE ADJACENT CURB AND/OR EDGE OF PAVEMENT AND SHALL BE COMPACTED TO A PROCTOR DENSITY OF 90%. NO ROCKS OR OTHER MATERIAL OVER THREE INCHES (3") IN DIAMETER SHALL BE USED FOR BACK FILL OVER THE SAND.
4. METER BOX MUST BE BEHIND CURB AND/OR SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
5. THE BOTTOM OF THE WATER SERVICE AT ALL POINTS SHALL BE AT LEAST TWELVE (12") INCHES ABOVE THE TOP OF THE WASTEWATER SERVICE LINES.
6. WATER SERVICE LINES SHALL BE INSTALLED WITH WATER TIGHT JOINTS TESTED TO 200 P.S.I. 10 MIN. 150 P.S.I. FOR 1 HOUR.
7. ISOLATION VALVES WILL NOT BE SET UNDER OR NEAR SIDEWALK OR CURB WHERE THEY CANNOT BE LOCATED.
8. PRESSURE REDUCING VALVE AND A BACK FLOW PREVENTER (WITH THERMAL EXPANSION TANK IN HOUSE) IF REQUIRED IN THAT ORDER ON THE YARD LINE.


	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	(ONE) 1" OR 2" METER INSTALLATION SHOWING OPTIONAL BYPASS (4 OF 4)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W09

CITY OF AUSTIN APPROVED LID AND STANDARD VALVE OPENING TO BE PLACED OVER METER AND PROPERTY OWNERS VALVE RESPECTIVELY. CALL FOR APPROVAL OF THESE LOCATIONS PRIOR TO FABRICATION. SEE NOTE 7



SEE NOTE 1



	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	STANDARD INSTALLATION DETAIL FOR 3", 4" & 6" COMPOUND METERS (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W10

MATERIALS:

- A. APPROVED TAPPING SLEEVE
 - B. TAPPING VALVE (GATE, IRON BODY WITH M.J. OUTLET)
 - C. D.I. OR CAST IRON PIPE NOT LESS THEN 4" DIAMETER
 - D. TAPPING CAST IRON TEE – M.J. X SPIGOT
 - * E. BRASS TO MALE IRON PIPE QUARTER BEND COUPLINGS
 - F. 2" BRASS PIPE
 - G. BRASS TO MALE IRON PIPE FITTINGS
 - H. 2" BRASS LOCKABLE GATE VALVE
 - I. SHUT OFF VALVE, GATE, C.I.: MIN. 4", FLANGE X M.J.
 - * J. CUSTOMER'S VALVE, GATE, C.I., FLANGED
 - * K. TAPPED CAST IRON TEE
- * VALVE AND FITTINGS TO BE FURNISHED AND INSTALLED BY CUSTOMER.
- (ITEMS D & K MAY BE LOCATED OUTSIDE OF BOX)

**NO COPPER PIPE ALLOWED
ALL MATERIAL SHALL BE LEAD FREE IN ACCORDANCE WITH THE SAFE
DRINKING WATER ACT.**

NOTES:

- 1. BOX MUST BE BEHIND CURB AND/OR WALK AND OUT OF VEHICULAR TRAFFIC.
- 2. PIPE AND FITTINGS TO BE DUCTILE IRON OR CAST IRON EXCEPT AS NOTED. NO PLASTIC PIPE. NO SOLDERED JOINTS.
- 3. NO RISING STEM OR WHEEL OPERATED VALVES EXCEPT ON 2" BY-PASS VALVE.
- 4. ROD RESTRAINT IS REQUIRED AT ALL MECHANICAL OR PUSH-ON TYPE JOINTS.
- 5. TOP OF BOX MUST BE 1" ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
- 6. METER BOX TO BE SET AFTER METER IS INSTALLED. SIDE NOTCHES IN BOX TO BE FILLED WITH MORTAR AFTER INSTALLATION OF PIPE.
- 7. FOR METER LENGTH, APPROVED TYPE OF LID AND LOCATION OF OPENINGS IN TOP OF BOX, CALL 480-2328
- 8. ANY WORK BY CUSTOMER ON CITY SIDE OF METER REQUIRES PLANS BY TEXAS REGISTERED PROFESSIONAL ENGINEER.
- 9. WHERE THERE IS A LOOP SYSTEM, WITH MORE THEN ONE METER, APPROVED CHECK VALVES SHALL BE INSTALLED DOWNSTREAM OF THE PROPERTY OWNER'S GATE VALVE (J) AT EACH METER. BACKFLOW PREVENTERS MAY BE REQUIRED WITHIN THE SYSTEM BY THE BUILDING INSPECTION DEPT.



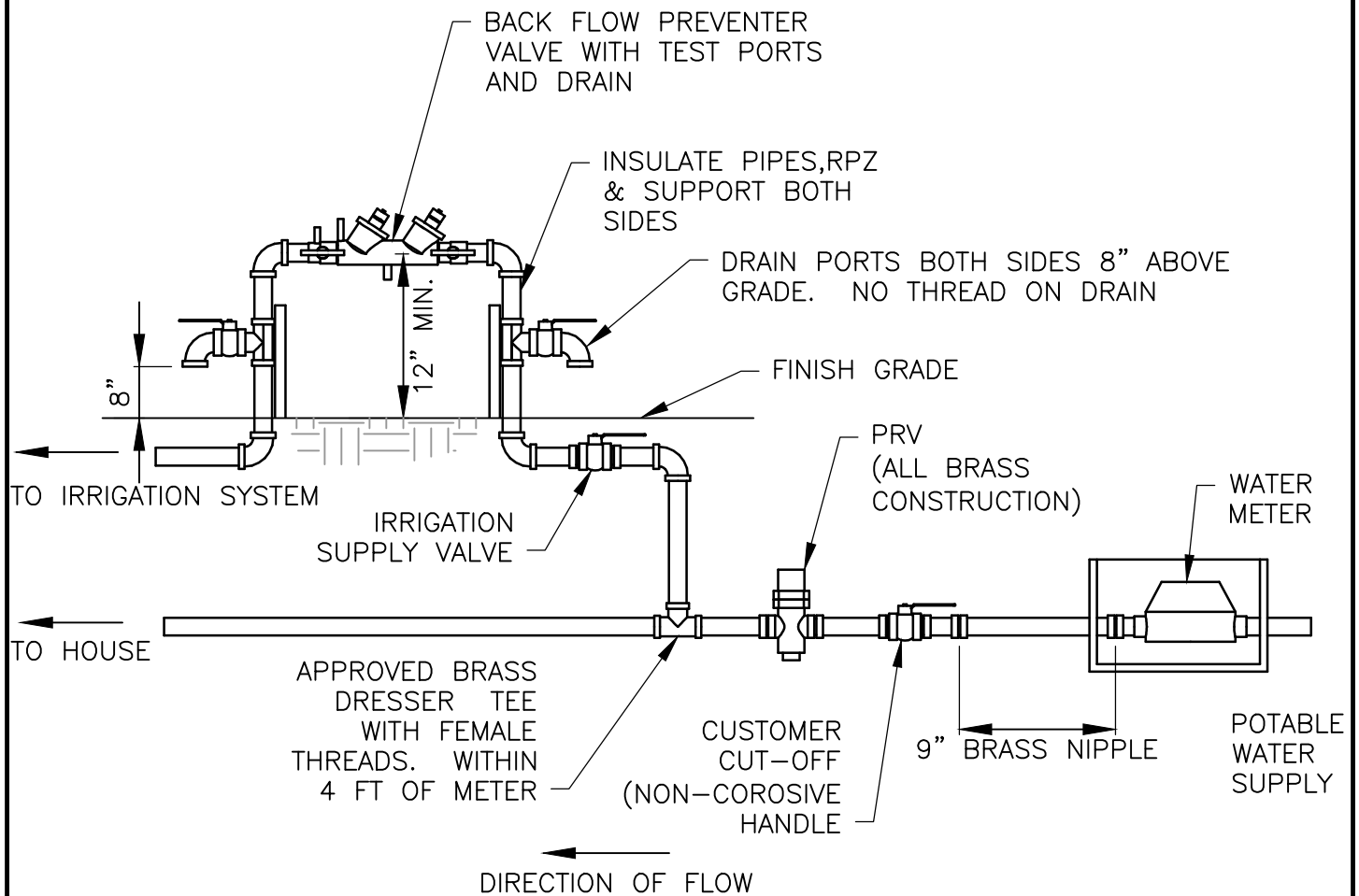
TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT No. 17
STANDARD DETAILS

STANDARD INSTALLATION DETAIL FOR 3", 4", & 6"
COMPOUND METERS
(2 OF 2)

ADOPTED:
03/01/2016


THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

DETAIL NO.
W10



NOTES:

1. ALL MATERIALS SHALL BE LEAD FREE IN ACCORDANCE WITH THE SAFE DRINKING WATER ACT.
2. DEPENDING ON PRESSURE, IRRIGATOR SHALL DETERMINE LOCATION OF INSTALLATION EITHER BEFORE OR AFTER PRV.
3. NO PVC HIGHER THEN 21" ABOVE FINISH GRADE.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	RPZ INSTALLATION	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W11