RULE NO.: R161-16.02

NOTICE OF RULE ADOPTION

ADOPTION DATE: MAY 25, 2016

By: Greg Meszaros, Director

Austin Water

The Director of the Austin Water has adopted the following rule. Notice of the proposed rule was posted on April 5, 2016. Public comment on the proposed rule was solicited in the April 5, 2016 notice. This notice is issued under Chapter 1-2 of the City Code. The adoption of a rule may be appealed to the City Manager in accordance with Section 1-2-10 of the City Code as explained below.

A copy of the complete text of the adopted rule is available for public inspection and copying at the following locations. Copies may be purchased at the following locations at a cost of ten cents per page:

Austin Water, located at 625 E. 10th Street, 3rd Floor Suite 300, Austin, Texas. See Mr. Britt Jones; and

Office of the City Clerk, City Hall, located at 301 West 2nd Street, Austin, Texas.

EFFECTIVE DATE OF ADOPTED RULE

A rule adopted by this notice is effective on May 25, 2016.

TEXT OF ADOPTED RULE

The adopted rule contains no changes from the proposed rule.

R161-16.02: Revisions to the Standards Manual Series 500 Pipe and Appurtenances

- **520S-1** Water and Wastewater Service Connection 1.5 m \times 1.5 m (5' \times 5') Esmt Delete
- **520S-1A** Modified Water Service & Wastewater Service Connection Detail-Delete
- **520S-1B** Wastewater Service Connection to PVC C900 Rated Gravity Wastewater Main- Delete
- 520S-3 Double Water/Wastewater Service Connection Detail- Delete
- 520S-3A Single Wastewater Service Connection Detail- Delete
- 520S-3B 6" Wastewater Connection to Existing PVC or Lined Main- Delete
- 520S-4 Wastewater Cleanout Adjustment to Grade in Driveways- Delete
- 520S-4A Wastewater Cleanout Casting (Unpaved Location) Delete
- 520S-6 Wastewater Deep Service Connection Detail- Delete

RULE NO.: R161-16.02

NOTICE OF RULE ADOPTION ADOPTION DATE: MAY 25, 2016

By: Greg Meszaros, Director

Austin Water

The Director of the Austin Water has adopted the following rule. Notice of the proposed rule was posted on April 5, 2016. Public comment on the proposed rule was solicited in the April 5, 2016 notice. This notice is issued under Chapter 1-2 of the City Code. The adoption of a rule may be appealed to the City Manager in accordance with Section 1-2-10 of the City Code as explained below.

A copy of the complete text of the adopted rule is available for public inspection and copying at the following locations. Copies may be purchased at the following locations at a cost of ten cents per page:

Austin Water, located at 625 E. 10th Street, 3rd Floor Suite 300, Austin, Texas. See Mr. Britt Jones; and

Office of the City Clerk, City Hall, located at 301 West 2nd Street, Austin, Texas.

EFFECTIVE DATE OF ADOPTED RULE

A rule adopted by this notice is effective on May 25, 2016.

TEXT OF ADOPTED RULE

The adopted rule contains no changes from the proposed rule.

R161-16.02: Revisions to the Standards Manual Series 500 Pipe and Appurtenances

- **520S-1** Water and Wastewater Service Connection 1.5 m × 1.5 m (5' × 5') Esmt Delete
- **520S-1A** Modified Water Service & Wastewater Service Connection Detail-Delete
- 520S-1B Wastewater Service Connection to PVC C900 Rated Gravity Wastewater Main- Delete
- 520S-3 Double Water/Wastewater Service Connection Detail- Delete
- **520S-3A** Single Wastewater Service Connection Detail- Delete
- 520S-3B 6" Wastewater Connection to Existing PVC or Lined Main- Delete
- 520S-4 Wastewater Cleanout Adjustment to Grade in Driveways- Delete
- 520S-4A Wastewater Cleanout Casting (Unpaved Location) Delete
- **520S-6** Wastewater Deep Service Connection Detail- Delete

- **520S-9** Installation Detail For Two 16 mm (5/8"), 19 mm (³/₄") & 25 mm (1') Meters- Delete
- **520S-9A** Double Water Service For Duplex- Delete
- **520S-9B** Potable HDPE Double Service Installation & Two 16 mm, 19 mm, OR 25 mm (5/8", ³/₄", or 1") Meters- Delete
- **520S-9R** Reclaimed Water Connection Installation For Two 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") Reclaimed Water Meters- Delete
- **520S-11** Installation for a 16 mm, 19 mm OR 25 MM (5/8", ³/₄", or 1") Potable Meter- Delete
- 520S-11A Double Water Service For Duplex With Irrigation Meter- Delete
- **520S-11B** Potable HDPE Service & 16 mm, 19 mm, and 25 mm (5/8", ³/₄", or 1") Meter Installation- Delete
- **520S-11R** Reclaimed Water Connection Installation For a 16 mm, 19 mm or 25 mm (5/8", ³/₄", or 1") Reclaimed Water Meter- Delete
- **520S-13** 35 mm & 50 mm (1½" & 2") Meter Installation Showing Optional Bypass- Delete
- **520S-13B** Potable HDPE Service Installation for 35 mm (1½") Meter- Delete
- **520S-13R** Reclaimed Water Connection Installation For a 38 mm, 50 mm (1½" OR 2") Reclaimed Water Meter Showing Optional Bypass- Delete
- **520-AW-01** Water Service and Wastewater Service Connection Detail New Detail and New Number
 - o Combines 520S-01, 520S-1B, 520S-3, 520S-3A, 520S-3B, 520S-6
- **520-AW-02** Water Service and Meter Installation 1" & Smaller Meters– New Detail and New Number
 - o Combines 520S-9, 520S-9A, 520S-9B, 520S9R, 520S-11, 520S-11A, 520-11B, 520-11R.
- **520-AW-03** Wastewater Clean-out Frame and Lid New Detail and New Number
 - o Combines 520S-4, 520S-4A
- **520-AW-04** 1-1/2" and 2" Meter Installation Showing Optional Bypass—New Detail and New Number
 - o Combines 520S-13, 520-13B, 520-13R

The adopted rule contains no changes from the proposed rule. A copy of the complete text of the adopted rule is available for public inspection and copying at the following locations. Copies may be purchased at the following locations at a cost of ten cents per page:

Austin Water, located at 625 E. 10th Street, 3rd Floor Suite 300, Austin, Texas. See Mr. Britt Jones; and

Office of the City Clerk, City Hall, located at 301 West 2nd Street, Austin, Texas

SUMMARY OF COMMENTS

The Austin Water did not receive comments regarding the rule adopted in this notice.

AUTHORITY FOR ADOPTION OF RULE

The authority and procedure for adoption of a rule to assist in the implementation, administration, or enforcement of a provision of the City Code is provided in Chapter 1-2 of the City Code. The authority to regulate the installation of water and wastewater facilities is established in the Texas Local Government Code Section 552.001 and Title 15 of the City Code.

APPEAL OF ADOPTED RULE TO CITY MANAGER

A person may appeal the adoption of a rule to the City Manager. AN APPEAL MUST BE FILED WITH THE CITY CLERK NOT LATER THAN THE 30TH DAY AFTER THE DATE THIS NOTICE OF RULE ADOPTION IS POSTED. THE POSTING DATE IS NOTED ON THE FIRST PAGE OF THIS NOTICE. If the 30th day is a Saturday, Sunday, or official city holiday, an appeal may be filed on the next day which is not a Saturday, Sunday, or official city holiday.

An adopted rule may be appealed by filing a written statement with the City Clerk. A person who appeals a rule must (1) provide the person's name, mailing address, and telephone number; (2) identify the rule being appealed; and (3) include a statement of specific reasons why the rule should be modified or withdrawn.

Notice that an appeal was filed and will be posted by the city clerk. A copy of the appeal will be provided to the City Council. An adopted rule will not be enforced pending the City Manager's decision. The City Manager may affirm, modify, or withdraw an adopted rule. If the City Manager does not act on an appeal on or before the 60th day after the date the notice of rule adoption is posted, the rule is withdrawn. Notice of the City Manager's decision on an appeal will be posted by the city clerk and provided to the City Council.

On or before the 16th day after the city clerk posts notice of the City Manager's decision, the City Manager may reconsider the decision on an appeal. Not later than the 31st day after giving written notice of an intent to reconsider, the City manager shall make a decision.

CERTIFICATION BY CITY ATTORNEY

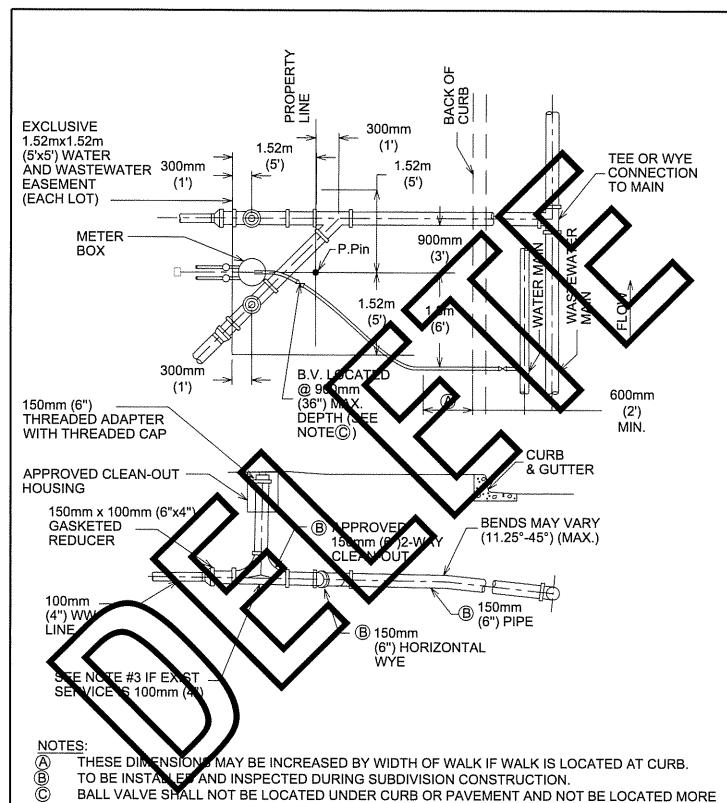
By signing this Notice of Rule Adoption R161-16.02, the City Attorney certifies that the City Attorney has reviewed the rule and finds that adoption of the rule is a valid exercise of the Director's administrative authority.

REVIEWED AND APPROVED

Greg Meszaros, Director Austin Water

Anne L. Morgan City Attorney rate.

Date: 5/23/14



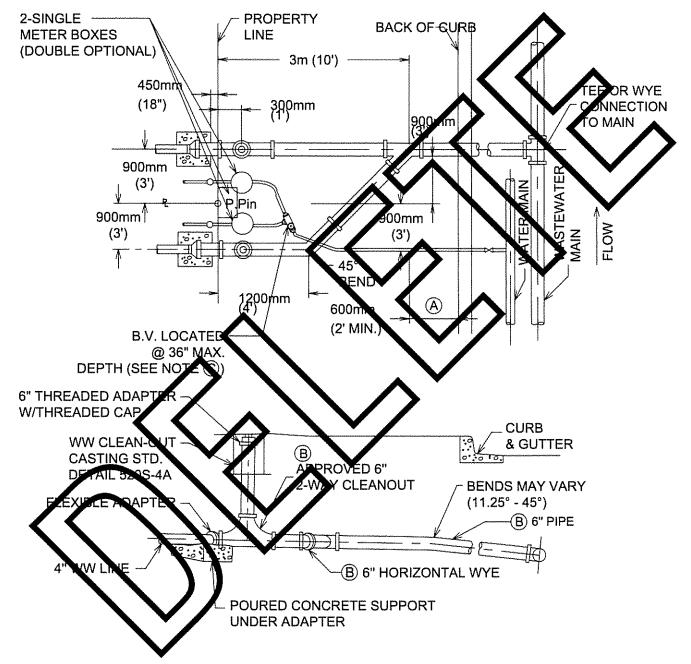
BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT AND NOT BE LOCATED MORE THAN 24" (600mm) HORIZONTAL FROM METER BOX.

OH TOL MOOTING		WATER AND WASTEWATE CONNECTION 1.5mx1.5m	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	standard no. 520S-1
	ADOPTED		1 OF 2

- 1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WIRE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4"), OTHERWISE THE INSTAL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-6. UTILITY CONTRACTO **ALSO INSTALLS** WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES IN SLUDING STO VE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLIA PARD DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INS ECZ ON PERSO INEL
- 2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT ROPER 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCED (SPLA ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL H OF 1 ກ (18") LENG END 100mm 150mm (6") (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXIB WW-354) AND CAST IN **EWATER WILL NOT** PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEXIBLE ADAPTER. I SATISFACTORILY FLOW BY GRAVITY TO SEVER KAIN ADJA NT TO PROPERTY, **RUMP EQUIPMENT** MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE CUS OMER'S WAS TEX ATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING ATTINGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVER S. A VENTED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FITT lgs.
- 3. IF EXISTING WASTEWATER SERVICE IS 100mm (4"), CUSTOMER SHALL INSTALL A 100mm (4") 2-WAY CLEAN-OUT. SEE SPL WM-227L
- 4. IF EXISTING SERVICE IS NOT PVOOTHE SUSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL NAVE MINIMUM PIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF 150mm (3") BLYOND EITHER END OF THE ADAPTER.
- 5. CUSTOMER IS RESPONSIBLE FOX IN ETER BOX AND PIPMG SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY MISSING OR DANAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PENCO OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, IN AT ALL VALVES AND STORE METER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SIDLWALKS AND OTHER OBSTRUCTIONS
- 6. CITY OF AUSTIN ACTIVITY IS EMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWAYER CONNECTION TO THE 2-WAY CLEAN-OUT.
- 7. PIPIN'S AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER FELOW FINAL STREET GRADE OF 1.07m (42") ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
- 8. NO METER BOX OR LEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.
- 9. ALL WW JOINTS THAT ARE NOT PVC OR A COMBINATION OF NON-PVC WITH PVC SHALL BE ENCASED IN CONCRETE OR CLSM.

CITY OF AUSTIN AUSTIN WATER UTILITY		WATER AND WASTEWATER SERVICE CONNECTION 1.5mx1.5m (5'x5') ESMT.	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-1 2 OF 2

USE ON LOT WIDTHS RANGING FROM 50 FEET TO 25 FEET

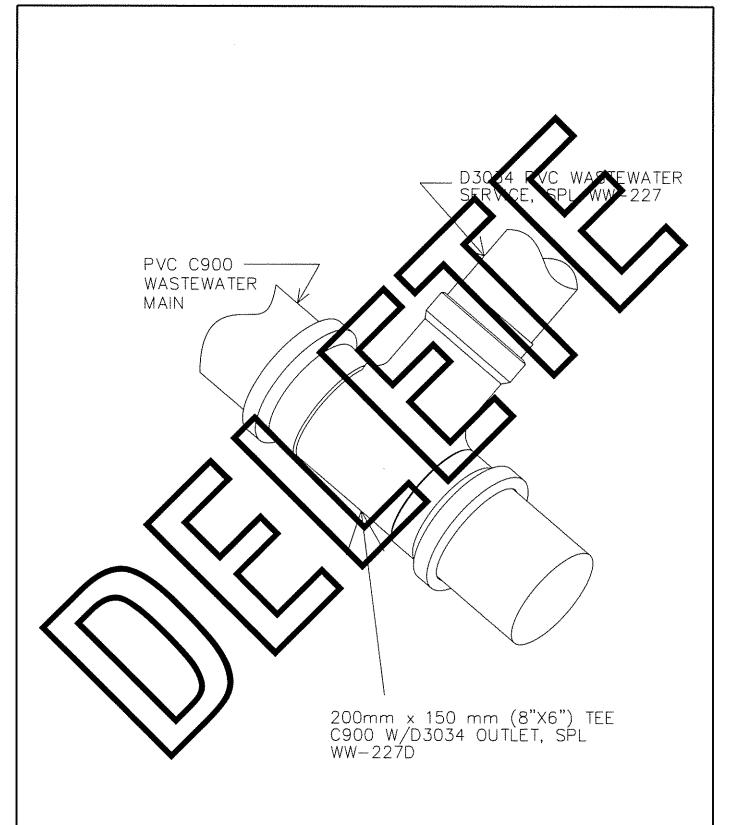


- (A) THESE DIMENSIONS MAY BE INCREASED BY WIDTH OF WALK IF WALK IS LOCATED AT CURB.
 (B) TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.
- © BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX.

1			
	CITY OF AUSTIN	MODIFIED WATER SERVICE & WASTEWATER	
	AUSTIN WATER UTILITY	SERVICE CONNECTION DETAIL	
	RECORD COPY SIGNED BY	THE ARCHITECT/ENGINEER ASSUMES STANDARD NO.	
	KATHI L FLOWERS 08/31/2011	RESPONSIBILITY FOR APPROPRIATE USE 520S-1A	

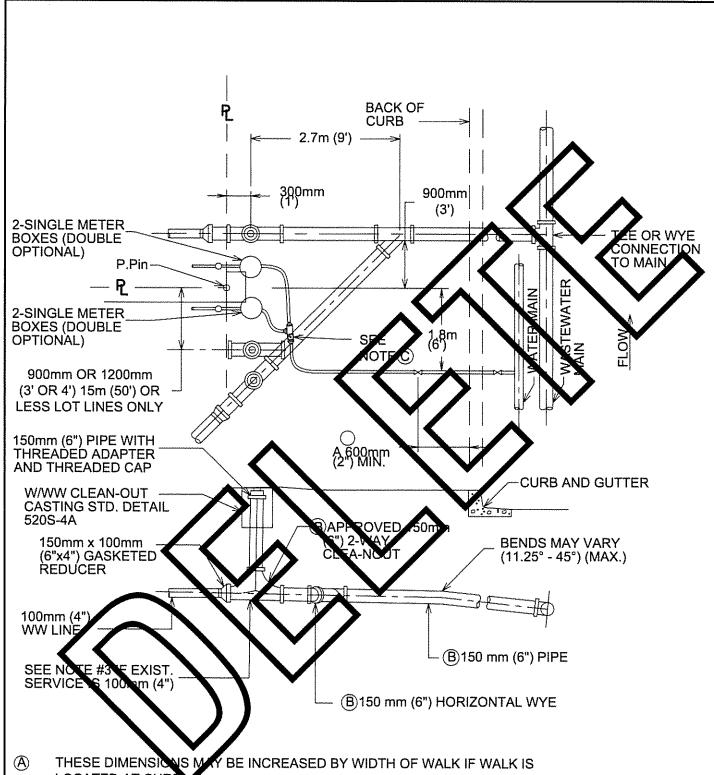
- 1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4'), OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-6. UTILITY CONTRACTO AN LSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. ALZ INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DETWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INSPECTION PERSONNES.
- 2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT PROB 150mm x ZPTY LINE, IN 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCER (SPL WW-227-B). BUŠHLAG WILL NOT BE ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIMUM 450mm (To (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, EXTEND 100mm (4") PIPE 13 mm ") MINIMU INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXIPLY ADALTER (SPL WW 354) AND LAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEX PZE ADX RTER IF WASTEWAKER WILL NOT AIN ADJACENT SATISFACTORILY FLOW BY GRAVITY TO SEWER O PRO PERTY, PUM MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE CUSTOMER'S WASTEWATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING FITTINGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. A VEW ED SPACER MAY BISUSED TO ASSURE PROPER SPACING AND ALIGNMENT OF ME ER F
- 3. IF EXISTING WASTEWATER SERVICE IS 100mm (4"), COSTC MER SHALL INSTALL A 100mm (4") 2-WAY-CLEAN-OUT, SEE SPL WW-227B.
- 4. IF EXISTING SERVICE IS NOT PVC, THE CUSTOMER SHALL INSTALL A DEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT B. OCK INDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL HAVE MINIMUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND AMINIMUM OF 150mm (6") BEYOND EITHER END OF THE ADAPTER.
- 5. CUSTOMER IS RESPONSIBLE FOR METER BOX AND PIPING SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY INSSINC OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A FERUD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, INAT ALL VALVES AND STORS, METER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
- 6. CITY OF AUSTIN ACTIVITY IS LUMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WAS NEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
- 7. PIDING AND TORING IN STREET RICKT-OF WAY AND IN EASEMENT AREA SHALL BE BEDDED IN FRANCILAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFICATION 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 1.07m (42"). ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
- 8. NO METER LOX OR CLEAN OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTLA WATER UTILITY.
- 9. ALL WW JOINTS THAT ARE NOT PVC OR A COMBINATION OF NON-PVC WITH PVC SHALL BE ENCASED IN CONCRETE OR CSM.

ı			
	CITY OF AUSTIN	MODIFIED WATER SERVICE & WASTEWATER	
	AUSTIN WATER UTILITY	SERVICE CONNECTION DETAIL	
	RECORD COPY SIGNED BY	THE ARCHITECT/ENGINEER ASSUMES STANDARD NO.	-
	KATHI L FLOWERS 08/31/2011	RESPONSIBILITY FOR APPROPRIATE USE 520S-1A	



1. THIS DETAIL APPLIES ONLY TO INSTALLATIONS THAT MUST COMPLY WITH TCEQ RULE 217.53 (d) (A) (i).

CITY OF AUSTIN AUSTIN WATER UTILITY				NNECTION TO ASTEWATER MAIN
RECORD COPY SIGNED BY 06/0			R ASSUMES PROPRIATE USE	standard no. 520S-1B
ADOP	TED OF THIS	STANDARD.		

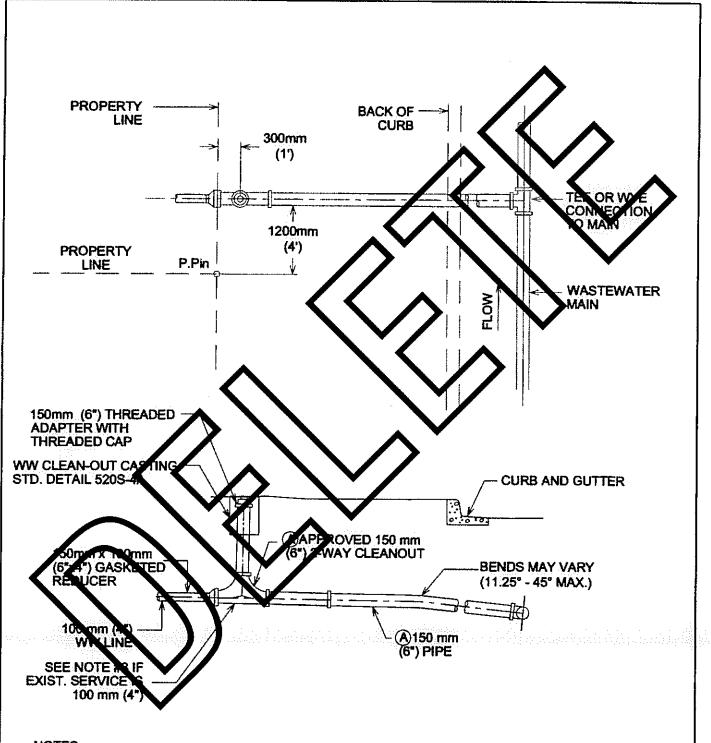


- LOCATED AT CURB
- TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.
- (B)(C) BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX.

CITY OF AUSTIN AUSTIN WATER UTILITY	DOUBLE WATER/WASTEWATER SERVICE CONNECTION DETAIL	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-3 1 OF 2

- DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES. 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4'), OTHERWISE THE INSTALL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-6. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP MALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. AN INS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INSE CT QNNEL
- CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT PROPERTY LINE, INS 2. 150mm 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCER (3PL WW-2 NG W ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIM M 450 mm (18") LEN **TH OF 15** (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, PE 150mm (8 INTO 150mm (6") PIPE AND JOINT BLOCK UNDER T ER (RL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER TA E FLEXIBLE ADAPTER. E WAS TEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROBERT, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE SUSTOMER'S WASTEW ATER SYSTEM. OMER'S WAS TEW RTER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDIN S AND VALVES IN BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. A VEN TED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FIT NNGS
- IF EXISTING WASTEWATER SERVICE IS 100mm (4"), COSTOMER SHALL DISTALL A 100mm (4") 2-WAY CLEAN-OUT, SEE SPL W W-221B.
- 4. IF EXISTING SERVICE IS NOT PVS. THE CUSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL HAVE MINIMUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF \$50mm (6") BEY OND EITHER END OF THE ADAPTER.
- 5. CUSTOMER IS RESPONSIBLE FOR METER TOX A ID PIPING SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED, ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GOA KANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. THAT ALL VALVES AND STORS, MEYER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
- 6. CITY OF ALCT'N ACTIVITY IS UNITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF COMMENTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
- 7. PIPING AND TUBING IN STRUET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANDLAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 1.07m (42"). ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
- 8. NO METER BOX OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.
- 9. ALL WW JOINTS THAT ARE NOT PVC OR A COMBINATION OF NON-PVC WITH PVC SHALL BE ENCASED IN CONCRETE OR CLSM.

CITY OF AUSTIN AUSTIN WATER UTILITY	CEDVICE CONNECTION DETAIL	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-3 2 OF 2

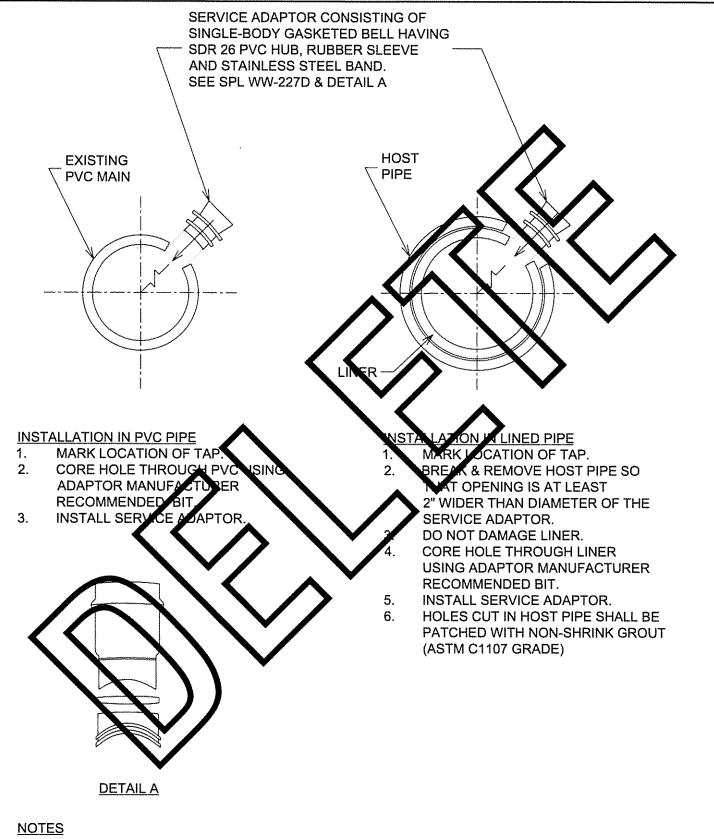


A. TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.

CITY OF AUSTIN AUSTIN WATER UTILITY		SINGLE WASTEWATER SERVICE CONNECTION DETAIL	
Kathid Flowers	9 23 10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	\$TANDARD NO. 520S-3A

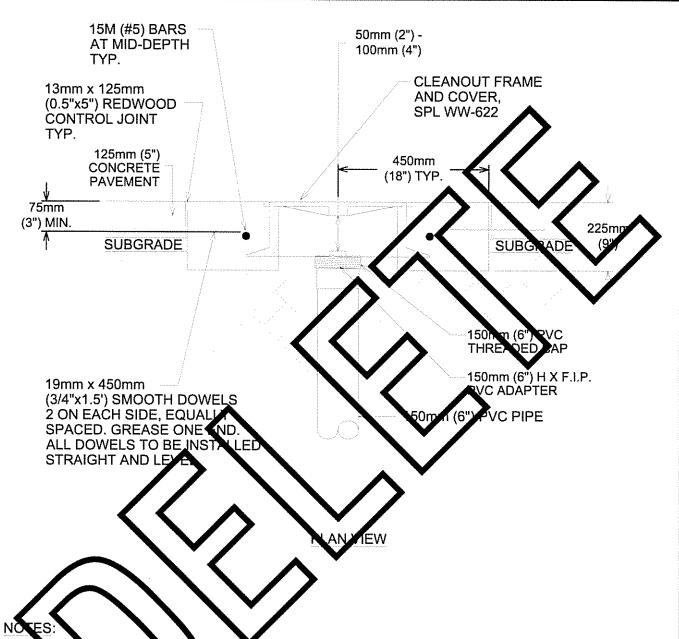
- 1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. AN WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% (.284mm (1/8") PER FOOT) MINIMUM TO 45" MAXIMUM. DEPTH OF SERVICE TUBAT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22pt (4"), OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 1.22m (4") TO 1.8m (6"). IF WASTEWATER SERVICE INE TO MAIN REQUIRES DEFLECTION EXCEEDING 45", REFER TO DETAIL 520-8 UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FIZTINGS AND VALVES INCLUDING STOP VALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN. ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTNI CONSTRUCTION INSPECTION PERSONNEL.
- 2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT ATPROPERTY DNE, INSTALLS 50mg/x 100mm (6"x4") ELASTOMERIC GASKETED BELL REBUCER (SPL WW-287-B). IN BUSHING WAY NOT BE ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIMUM 458 gm (7") LENGTH OF 150mm (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, EXTEND 100mm (4") MPE 150mm (6") MINIMUM INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXURE ADAPTER (SRL WW 354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEXURE ADAPTER. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PARK OF THE CUSTOMER'S WASTEWATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING FININGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. IN VENIED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALICHMENT OF METER FITTINGS.
- 3. IF EXISTING WASTEWATER SERVICE & 100mm (4"), CUSTOMER SMALL INSTALL A 100mm (4") 2-WAY-CLEAN-OUT, SEE SPL 1/W 2278.
- 4. IF EXISTING SERVICE IS NOT PVC, THE COSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SERPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SEPPORT BLOCK SHALL HAVE MINUSUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF 150mm (6") BEYOND EITHER END OF THE ADAPTER.
- 5. CUSTOMER IS RESPONSBLE FOR METER BOX AND PIPING SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY MISSING ONDAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WING SHALL GUARANTEE, FORTA PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT ALL VALVES AND STOPS, METER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SUFEWALLS AND OTHER OBSTRUCTIONS.
- CITY OF AUSTIN ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
- 7. PIPING AND TUBING INSTRUCT RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(a) AND (3)(b); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS DEQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMOM COVER BELOW FINAL STREET GRADE OF 1.07m (42"). ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
- 8. NO METER BOX OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.

CITY OF AUSTIN AUSTIN WATER UTILITY		SINGLE WASTEWATER SERVICE CONNECTION DETAIL	
Kathid & lowers	9/23/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE	STANDARD NO. 520S-3A
	ADOPTED	OF THIS STANDARD,	2 OF 2
e e i			



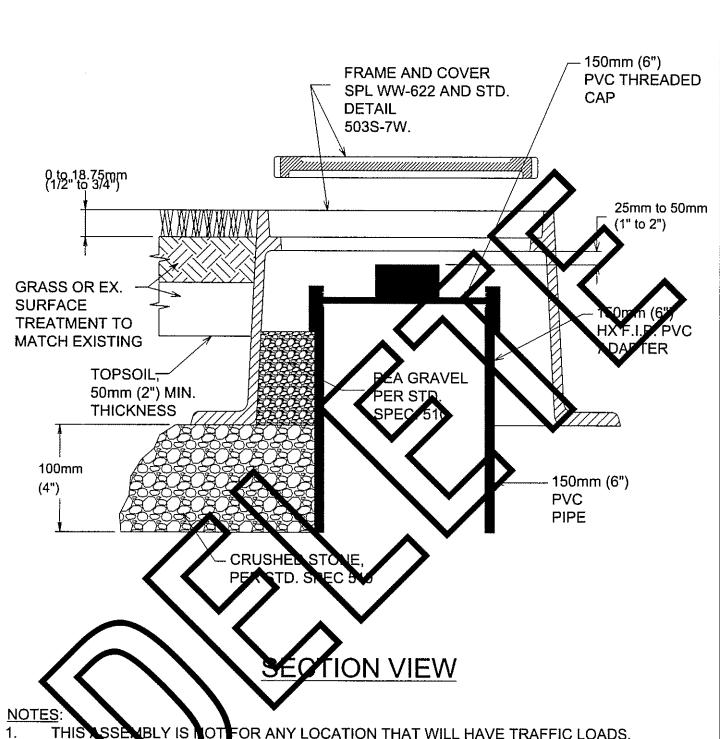
- 1. USE ONLY TO TAP EXISTING PVC OR LINED PIPE.
- 2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.

CITY OF AUSTIN	6" WASTEWATER CONNECTION	
AUSTIN WATER UTILITY	TO EXISTING PVC OR LINED MAIN	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	standard no. 520S-3B



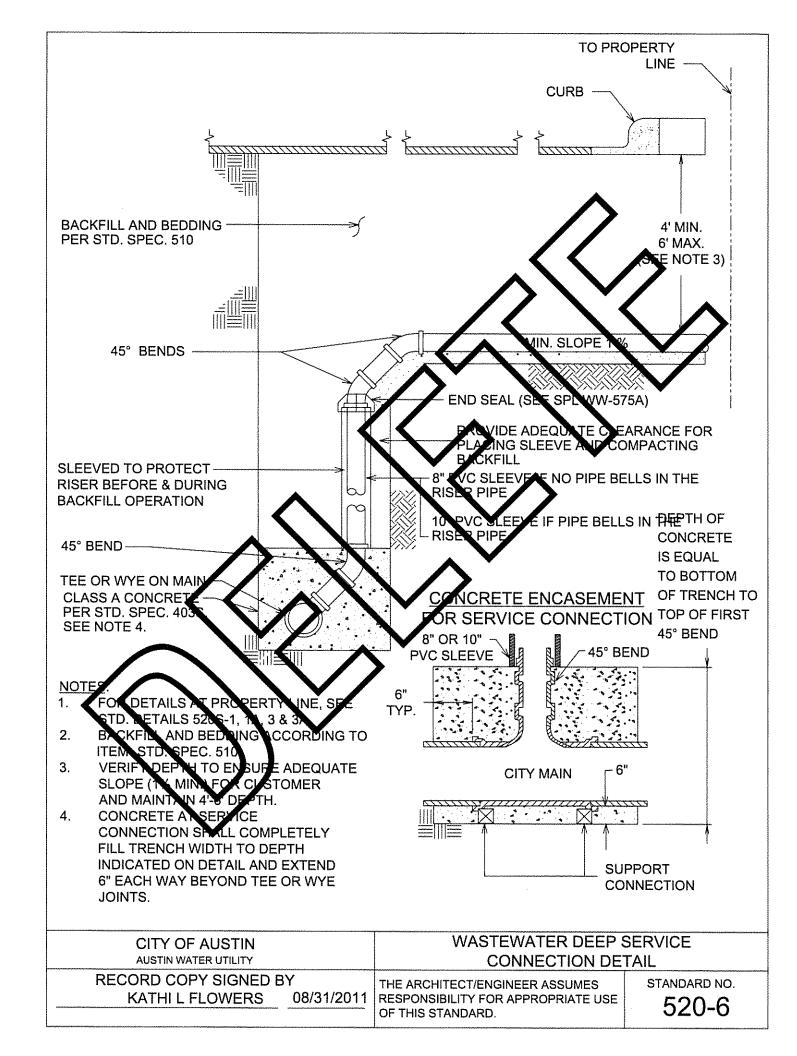
- 1. SERVICES SHALL BE LESIGNED TO AVOID CLEAN-OUT LOCATION WITHIN DRIVEWAYS.
- 2. This simpland detail is only for existing cleanouts that are located within existing priveways.
- 3. SUB-GRADE SHALL BY COMPACTED AS PER STD. SPEC. 201S, SUB-GRADE PREPARATION.
- 4. REINFORSING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
- 5. PC CONCRETE SMALL MEET ITEM 403S CLASS "A".
- 6. TRAFFIC BEARING FRAME AND COVER ONLY, HEAVY DUTY.
- 7. PLACE CASTING IN CONCRETE, FINISH CONCRETE SMOOTH.
- 8. LOCATE CASTING SO WATER WILL NOT ACCUMULATE AT CASTING.
- 9. PVC PIPE SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-35. CLEANOUTS INSTALLED ON SDR-26 SERVICES SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26.

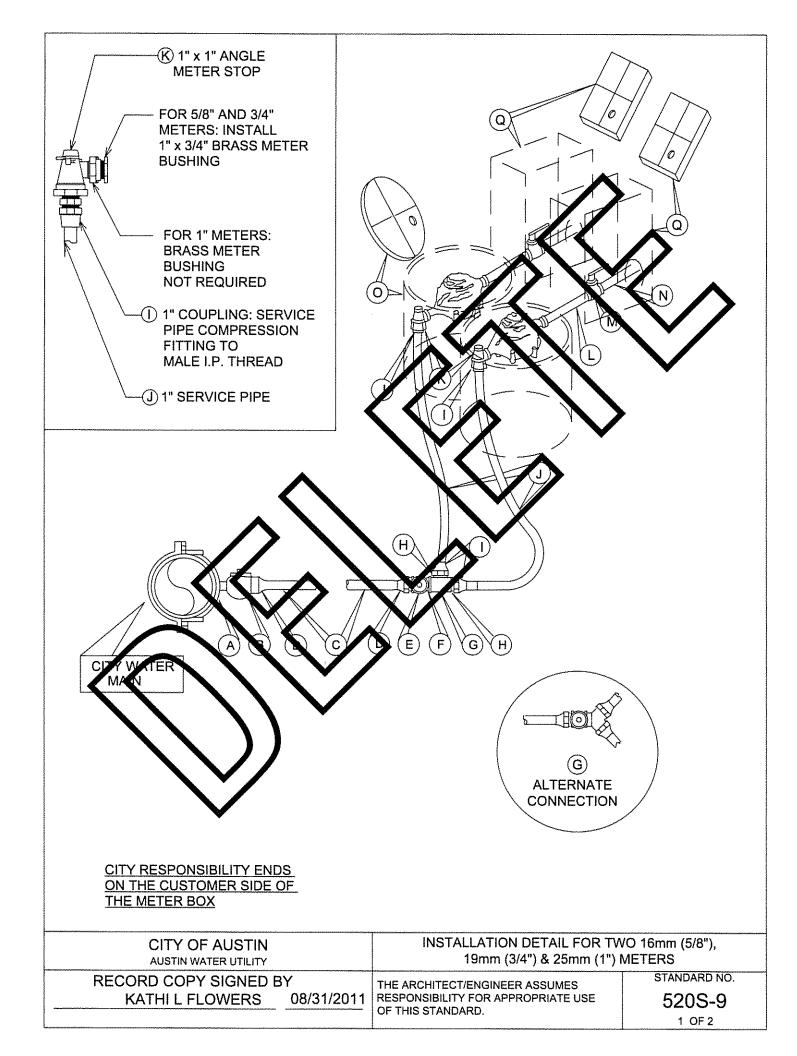
CITY OF AUSTIN AUSTIN WATER UTILITY		WASTEWATER CLEAN-OUT ADJUSTMENT TO GRADE IN DRIVEWAYS	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	standard no. 520S-4
	ADOPTED		3203-4



- BLY IS NOT FOR ANY LOCATION THAT WILL HAVE TRAFFIC LOADS.
- ITS LCCATED IN SIDEWALKS, DRIVEWAYS, ASPHALT, AND OTHER 2. FOR CLIMANO PAVED AR TAZL CLEAN-OUT CASTING PER 520S-4.
- LOCATE CASTING OR SET AT APPROPRIATE HEIGHT SO WATER WILL NOT ACCUMULATE 3. AT CASTING.
- 4. PVC PIPE SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-35. CLEANOUTS INSTALLED ON SDR-26 SERVICES SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26.

CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER CLEANOU (UNPAVED LOCAT	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	standard no. 520S-4A



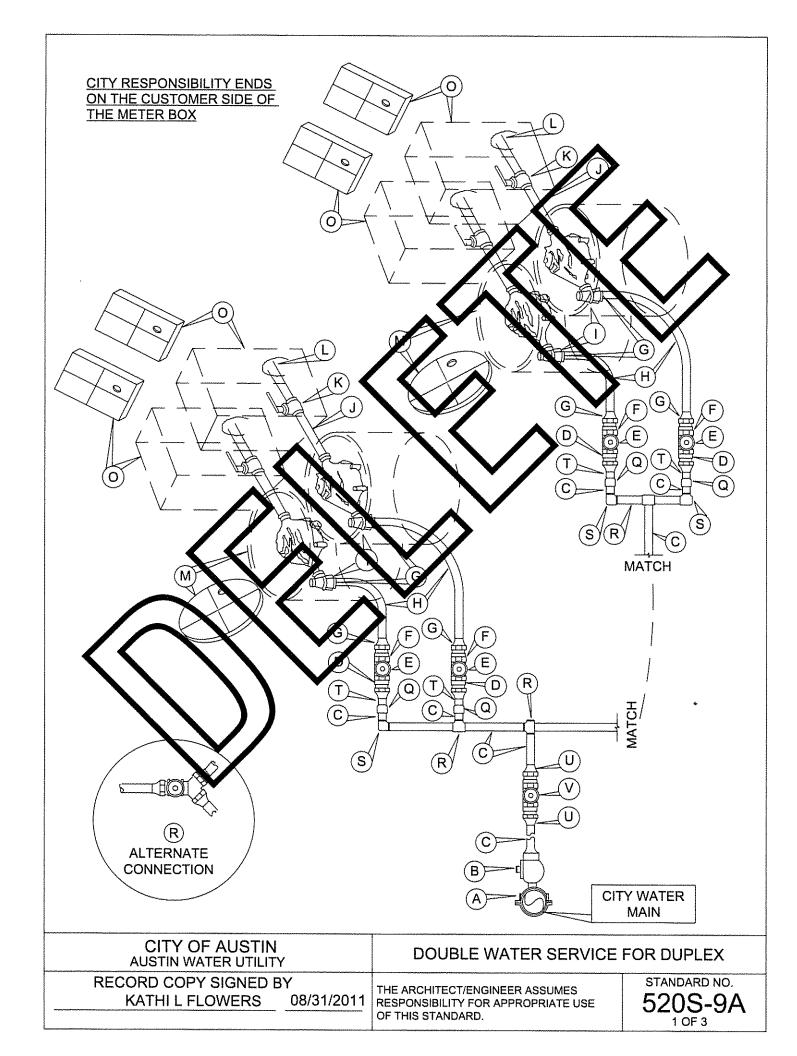


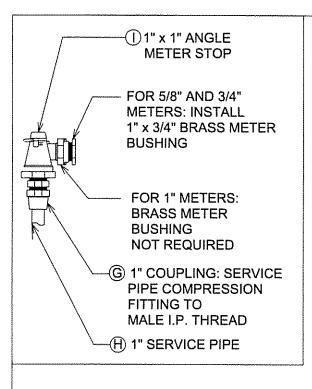
- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- 38mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- 8 38mm (1-1/2") BALL VALVE. SEE SPL WW -275; SEE NOTE 8
- 38mm (1-1/2") CLOSE NIPPLE. BRONZE I.P. THREAD
- © 38mm (1-1/2") BRONZE TEE. SPL WW-68 OR 38mm (1-1/2") BRONZE WYE SPL W 68
- oxplus BRONZE BUSHING, 38mm x 25mm (1-1/2"x1"), I.P. THREADS
- 25mm (1") COUPLING: SERVICE PIPE TO MALE I.P. THREAD, COMPRESSION FOR TING
- J 25mm (1") SERVICE PIPE
- (\$\) 25mm (1") ANGLE METER STOP; SERVICE PIPE INLET x SWIVEL COUPLING IN IT OUT LET AND BRASS BUSHING:
 - -FOR 16mm AND 19mm (5/8" AND 3/4") METERS 25mm x19mm (1"x3/4") BRASS METER JUSHING
 - -FOR 25mm (1") METERS BRASS METER BUSHING NOT REQUIRED
 - -FOR ALL, SEE SPL WW-68
- WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING: NT: -FOR 16mm (5/8") AND 19mm (3/4") METERS: 19mm x 213h x (3/4"x -1/2") ONG -FOR 25mm (1") METERS: 25mm x 213mm (1"x8-1/2") LONG
- M 25mm (1") BALL VALVE. SEE SPL WW-276
- Quantity (1") PIPE MEETING CITY OF AUSTIN PLYMBING CODE REQUIREMENTS
- O AMR/AMI READY METER BOX AND LID PER STANDARD PRODUCTS LIST: SIL WW.145 OR WW-145A
- (P) N/A
- PROPERTY OWNERS BALL VALVE BOX AND LID RECKING LAR PLASTIC BOX, DFW #D1200 OR EQUAL.

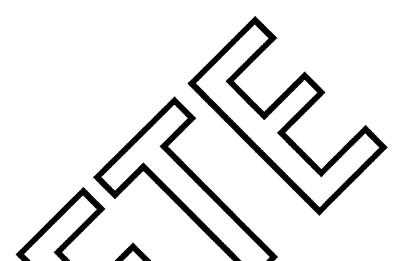
NOTES:

- 1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT AS TM B85 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
- 2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM
- 3. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO DIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOX SERVICE.
- 4. TOLOF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT NURE CE
- 5. PILVIG AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKVILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- 6. BOX MUST BE BENIND CURB, NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICLE AR TRAFFIC AREA.
- 7. BALL VALVE PLALL NOT BE LOCATED MORE THAN 36" (914mm) BELOW METER OR MORE THAN 24" (610mm) HORIZONTALLY FROM METER. BALL VALVE MAY NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
- 8. A METER BOX IS REQUIRED FOR EACH 25mm (1") METER.

CITY OF AUSTIN AUSTIN WATER UTILITY	INSTALLATION DETAIL FOR TWO 16mm (5/8"), 19mm (3/4") & 25mm (1") METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE	STANDARD NO.
NATHIL PLOWERS 00/31/2011	OF THIS STANDARD.	520S-9 2 OF 2



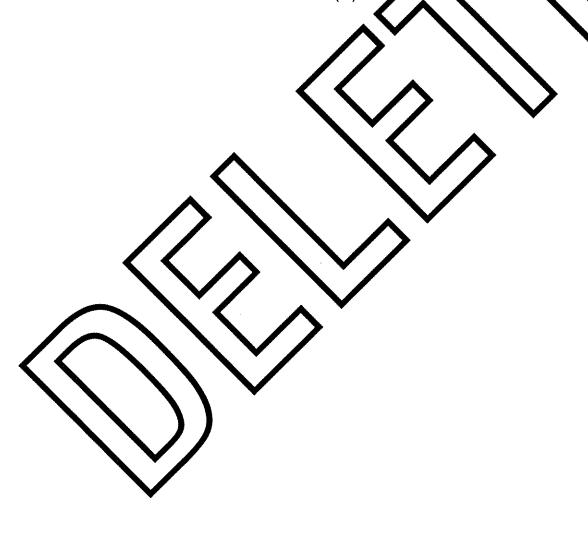




- **(A)** SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASSES OS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- 50mm (2") CORPORATION STOP SERVICE PIPE OU
- 50mm (2") SERVICE PIPE.
- 38mm (1-1/2") COUPLING: SER (ICE TIPE TO MALE I.P.T. COMPRES SION FITTING)
- 38mm (1-1/2") BALL VAL SEE *!*-275.
- **BRONZE BUSHING, 32** ") I.P. THREADS. mm :
- VICE PIPE ON PRESSION FITTING) 25mm (1") COUPLIN 5: SE O MALE I.P.T.
- 25mm (1") SERV
- ANGLE METER TOP SERVIC **UDVEL** COUPLING NUT OUTLET AND BRASS BUSHING: 4") METERS: 25pm x 19mm (1"x3/4") BRASS BUSHING mm (-FOR 16mm AND -FOR 25mm (1") MET S BUSHING NO VEQUIRED. RS: ERAS
- (J) R METER C x SY IVEL COUPLING NUT: : MAI
 - AND 3.41) MEZERS: 19mm x 213mm (3/4"x8-1/2") LONG **ID 25**7 m (5/8) 25mm (1") 6: 25mh x 213m n (1" x 8-1/2") LONG
- LVE. SEE <u>0(2(3)</u>C(3) PL W V-276. Nm 1 OR 25mm (3/4" OR 1") (PROPERTY OWNER'S BALL VALVE) n OR 25mm (3/4" OR 11 PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS.
- AMI/AMR READY METER BOX AND LID PER SPL WW-145 OR WW-145A.
- N/A
- BAL VALVE BOX AND LID-RECTANGULAR PLASTIC BOX. DFW # D1200 OR PROPERT OWN EQUAL.
- N/A
- 50mm x 38mm (2"X-1/2") REDUCER.
- 50mm x 50mm x 50mm (2"x2"x2") TEE, OR WYE, SPL WW-68.
- 50mm x 50mm (2"x2") ELBOW.
- SCH@200 38mm (1-1/2") SERVICE PIPE.
- 50mm (2") COUPLING. SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- 50mm (2") BALL VALVE. SEE SPL WW-275.

CITY OF AUSTIN AUSTIN WATER UTILITY	DOUBLE WATER SERVICE FOR DUPLEX	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-9A

- SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS. OTHER THAN FITTINGS INCLUDED ON PAGE 2 OF 3.
- 2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM.
- 3. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
- 4. TOP OF BOXES SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAREMENT SURFACE.
- 5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GEANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25)
- BOX SHALL BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
- 7. BALL VALVES AND SHALL NOT BE LOCATED UNDER CURB OF PAVEMENT, AND NOT LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX AND 900mm (35") BELOW FINAL GRADE
- 8. A METER BOX IS REQUIRED FOR EACH 25mm (1") METER.



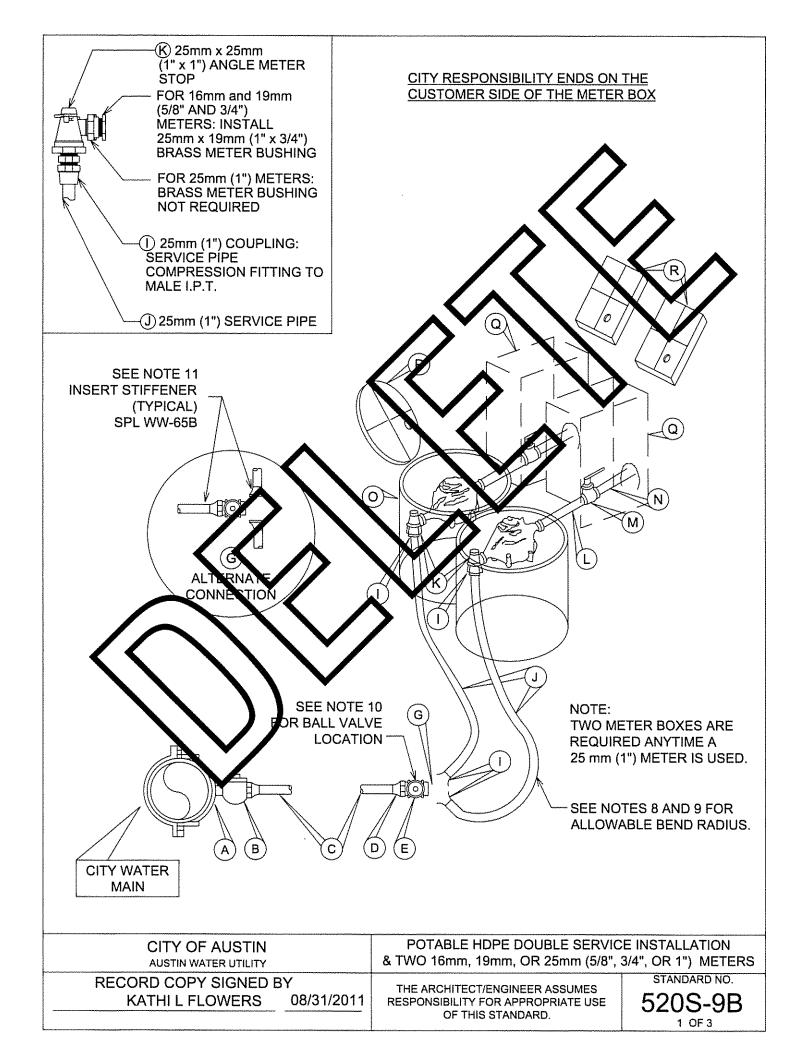
CITY	OF AUSTIN	
AUSTIN	WATER UTILITY	

DOUBLE WATER SERVICE FOR DUPLEX

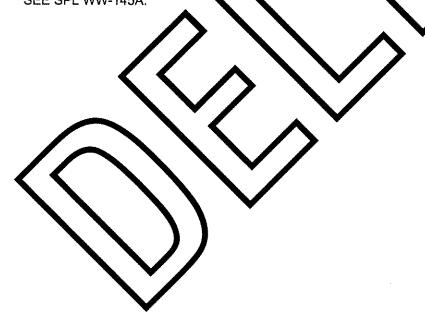
RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

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

STANDARD NO. **520S-9A** 3 OF 3



- SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300 mm (12") AND SMALLER.
- 50mm (2") CORPORATION STOP-MALE THREAD INLET BY COMPRESSION OUTLET, SPL WW-68 ⑱
- (C) 50mm (2") SERVICE TUBING PER SPL WW-65
- **(D)** COUPLING: 50mm (2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.
- Œ 38mm (1-1/2") BALL VALVE; SEE SPL WW-275 AND NOTE 10.
- Ē
- Ğ 38mm (1-1/2") x 25mm (1") BRONZE WYE. SPL WW-68 OR TEE (ALTERNATE CONNECTION)
- \oplus
- (1) 25mm (1") COUPLING: SERVICE TUBING TO MALE I.P.T. (COMPRESSION W/STIFFENER PER SPL WW-65B
- 25mm (1") SERVICE TUBING **(J)**
- (Ŕ) 25mm (1") ANGLE METER STOP; SERVICE TUBING INLET x SWIY OUTLET, AND 25mm x 19mm (1" x 3/4") BRASS BUSHING. A 25p (1" x 3/4") METER BUSHING IS REQUIRED AT THE ANGLE ST BE INSTA
- PLUMBER FOR ALL 16mm (5/8") AND 19mm (3/4") METERS (L) WATER METER COUPLING: MALE I.P.T. x SWIVEL COU -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm -FOR 25mm (1") METERS: 25mm x 213mm (1" x 8-1
- CUSTOMER BALL VALVE 25mm (1") SEE SPL W
- 25mm (1") TUBING MEETING CITY OF AUSTIN PLUMBING CODE REQUIR
- (N) METER BOX PER SPL WW-145 OR WW-148
- ē OVED BOX. AMR/AMI READY LID-FOR METER BOX FUR
- (Q) RECTANGULAR BOX FOR CUSTOMER'S CUT-C D PRV (WHEN REÖ'D.) 300mm x 425mm x 300mm (12"x17"x12") OR EQUA VARY WASH PRV AND SIZE
- SHOULD BE SIZED FOR OPERATION OF BALL VALV (R)RECTANGULAR PLASTIC BOX LID. 300mm x 425mm x 12") OR EQUAL. SEE SPL WW-145A.



CITY OF AUSTIN **AUSTIN WATER UTILITY**

POTABLE HDPE DOUBLE SERVICE INSTALLATION & TWO 16mm, 19mm, OR 25mm (5/8", 3/4", OR 1") METERS

RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011

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

STANDARD NO.

520S-9B 2 OF 3

- SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM.
- 2. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
- 3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANUAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTING TANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- 5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE AND/OR SIDE WALK AND OUT OF VEHICULAR TRAFFIC AREA.
- INSTALL METALLIC WARNING TAPE MIN. 1' ABOVE P.E. TUBING FROM TAP CONNECTION TO METER.
- TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.
- 8. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALL FX THAN THE VALUE SHOWN IN TABLE 1.
- 9. IF A FITTING WILL BE INSTALLED WITHIN A BEN, SECTION OF TUBING, THE TUBING SHALL SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.
- 10. B.V. © SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 900 mm (20") BELOW FINAL GRADE.
- 11. INSERT STIFFENERS FOR P.E. TUBING PER SN. WWW.CSB TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

TABLE 1 (SEE NOTE 8)			
Nominal Subing Dia.	Berd Radius of at Least		
25mm (1")	0.9m (3')		
38mm (1-1/2")	1.2m (4')		
50mm (2")	1.5m (5')		

TABLE 2 (SEE NOTE 9)		
Nominal Tubing Dia.	Bend Radius of at Least	
25mm (1")	3.66m (12')	
38mm (1-1/2")	4.86m (16')	
50mm (2")	6.06m (20')	

CH.	Y	UF.	ΑU	5	HN
AU:	STIN	I WA	TER	UT	ILITY

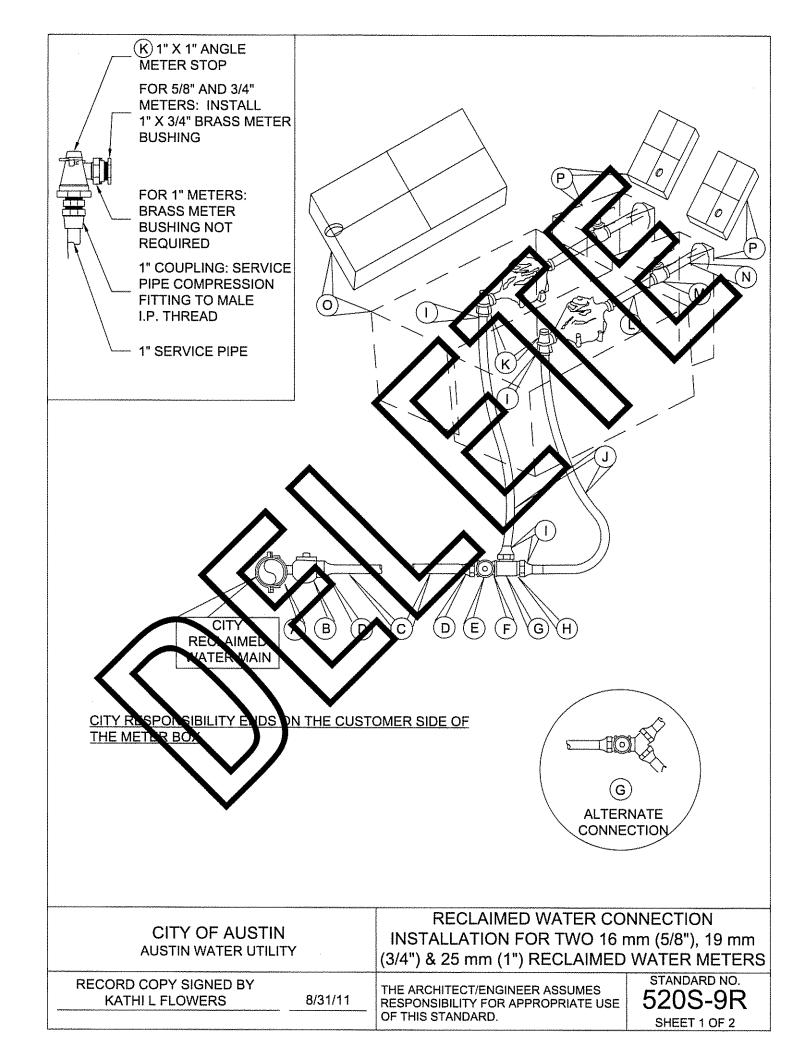
POTABLE HDPE DOUBLE SERVICE INSTALLATION & TWO 16mm, 19mm, OR 25mm (5/8", 3/4", OR 1") METERS

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

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

STANDARD NO.

520S-9B

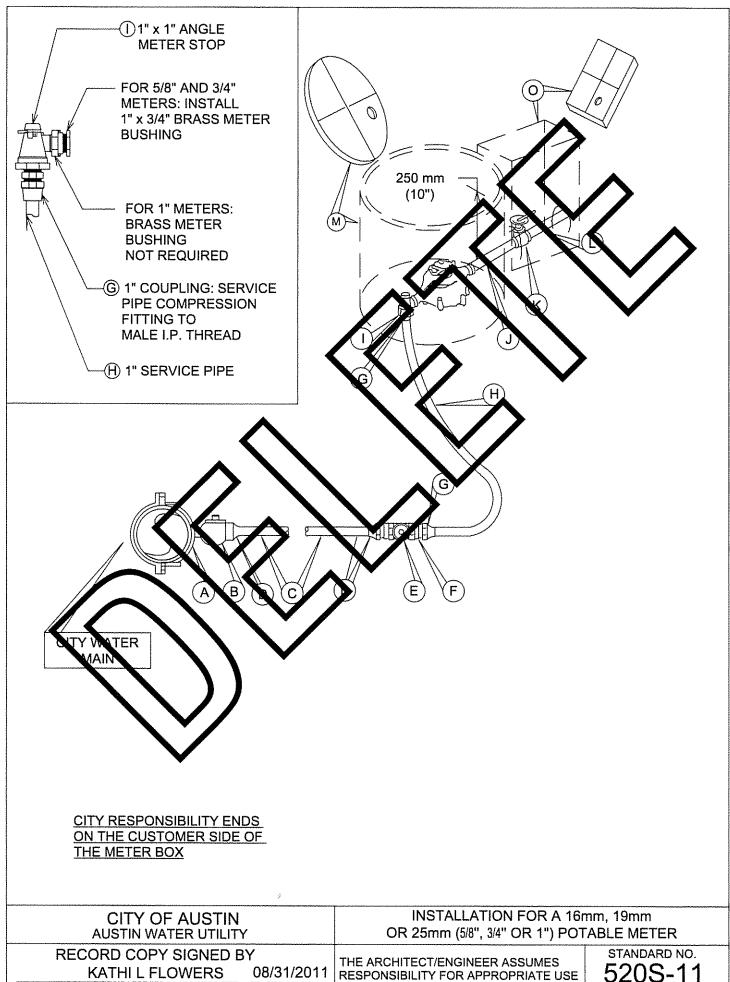


- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER
- ⑻ 38 mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- 38 mm (1-1/2") SERVICE PIPE
- 38 mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- 38 mm (1-1/2") BALL VALVE. SEE SPL WW-275; SEE NOTE 8
- 38 mm (1-1/2") CLOSE NIPPLE, BRONZE I.P. THREAD
- 38 mm (1-1/2") BRONZE TEE, SPL WW-68 OR 38 mm (1-1/2") BRONZE WYE SPL
- BRONZE BUSHING, 38 mm X 25 mm (1-1/2" X 1") I.P. THREADS
- 25 mm (1") COUPLING: SERVICE PIPE TO MALE I.P. THREAD, COMPRESS ON ATTING
- 25 mm (1") SERVICE PIPE
- 25 mm (1") ANGLE METER STOP: SERVICE PIPE INLET X SWIVEL CA NG Ì IT OUT AND BRASS **BUSHING:**
 - -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS; 25 mm X 19 mm (1" 3/4") BRASS
 - -FOR 25 mm (1") METERS: BRASS METER BUSHING NOT REQUIRED
 - -FOR ALL, SEE SPL WW-68
- (L) WATER METER COUPLING: MALE I.P.T. X SWIVEL COL LING NUT: -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS: 19 nm X 213 mm (3/4" X LONG -FOR 25 mm (1") METERS: 25 mm X 213 mm (1" X 2 1/2") ONG
- M) 25 mm (1") BALL VALVE. SEE SPL WW-276
- 25 mm (1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REC (\overline{N}) DIREMENTS
- 0 RECTANGULAR METER BOX AND COVER, SEE SIX WWW SA, FOR RECLAIMED WATER RESIDENTIAL CUSTOMERS. (MUST BE AMR/AMI COMPATIBLE)
- PROPERTY OWNERS BALL VALVE BOX AND COVER, RECTARGULAR PLASTIC BOX, DFW #D1200.5 (P) OR EQUAL. (MANUFACTURED OR COLORED PURPLE WIN'H "RESLAVIED WATER" CAST INTO COVER)

NOTES:

- SERVICE PIPE SHALL BE CONPER TO BE SIXE. IT SHALL BE AN IEXZED SEAMLESS 1. ZTING THE CURRENT ASTM 288 STANDARD WITH NO TYPE "K" COPPER TUBING ME SWEAT OR SOLDERED JOIN'S.
- SE WRAPPED CO PLET LYWITH 2. SERVICE SADDLE STALL 0.2 mm (8 MIL) POLYETHYLENE FILM PER SPL WW-27D FOR RECLAIMED WATER.
- TH ANGLE METER STOPS MUST BE INSTALLED PRIOR BRANCH CONNECTION AND 3. TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVI
- TOP OF BOXE (") AT OVE GROUND OR FLUSH WITH PAVEMENT SHOU D BE 2 mm 4. SUR
- N STREET RIGHT-OP WAY SHALL BE BEDDED IN GRANULAR PIR NG AND TUBING 5. MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKPLL ALOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- JUST RE BEH'ND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF 6. METER BOX SIDEWALK AND VEHICLIAR TRAFFIC AREA.
- BALL VALVE (E) SNALL NOT BE LOCATED MORE THAN 914 mm (36") BELOW BELOW 7. FINAL GRADE OR MORE HAN 610 mm (24") HORIZONTALLY FROM METER BOX. BALL VALVE (E) SHALL NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
- 8. A METER BOX IS REQUIRED FOR EACH 25 mm (1") METER.
- 9. METER BOX TO BE RECTANGULAR AND COVER SHALL BE MANUFACTURED PURPLE WITH "RECLAIMED WATER" CAST INTO IT.
- 10. ALL RECLAIMED WATER PIPING AND APPURTENANCES TO BE MANUFACTURED PURPLE, WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D, OR PAINTED PURPLE PER SPL WW-3C.

CITY OF AUSTIN AUSTIN WATER UTILITY	RECLAIMED WATER CONNECTION INSTALLATION FOR TWO 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") RECLAIMED WATER METERS		
RECORD COPY SIGNED BY KATHI L FLOWERS 8/31/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-9R SHEET 2 OF 2	



OF THIS STANDARD.

520S-11 1 OF 2

- SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- B 38mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET, SPL WW-68
- © 38mm (1-1/2") SERVICE PIPE
- D 38mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- E) 38mm (1-1/2") BALL VALVE. SEE SPL WW -275
 - BRONZE BUSHING, 38mm x 25mm (1-1/2"x1") I.P. THREADS
- G 25mm (1") COUPLING: SERVICE PIPE TO MALE I.P.T.(COMPRESSION FITTING
- (H) 25mm (1") SERVICE PIPE PER SPL-WW-65.
- ANGLE METER STOP: SERVICE PIPE INLET x SWIVEL COUPLING NUT O (TLET AND BRASS BUSHING: -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 25mm x 19mm (1"x3/4") BRASS METER BUSHING.
 - -FOR 25mm (1") METERS: BRASS METER BUSHING NOT REQUIRED.
 - -FOR ALL, SEE SPL WW-68.
- WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING MUT:
 - -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm x 213 nm (2/4"x8 1/2") LONG
 - -FOR 25mm (1") METERS: 25mm x 213mm (1"x8-1/2") LONG
- K) BALL VALVE. SEE SPL WW-276. 19mm OR 25mm (3/4" CA 1") PROPERTY OF VIEW COLUMN OF A STANDARD CORRESPONDENCE OF A STANDARD MARKET OF A
- 19mm or 25mm (3/4" or 1") PIPE MEETING CITY OF ALSTIN PLUMBING CODE REQUIREMENTS
- M AMR/AMI READY METER BOX AND LID PER SPL V/W-1/16 OR WW-145A
- (N) N/A
- O PROPERTY OWNER'S BALL VALVE BOX AND LO, RECTANGULAR PLASTIC BOX. DFW #D1200 OR EQUAL.

NOTES:

- 1. SERVICE PIPE SHALL BE COPPER TUBL SIZE. IT SHALL BE MINEAUED SEAMLESS TYPE "K" COPPER TUBING MEETING IN IE CUR REN'T ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
- 2. SERVICE SADDLE SMALL SE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
- 3. TOP OF BOXES SHOUL (BE 25mp (") ABOVE GROWND OR FLUSH WITH PAVEMENT SURFACE.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION \$10.3 (14) OF THE CRY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ADD IS GRAN LAR BEDDING AS DEQUIRED BY SECTION 510.3 (25).
- 5. BOX MUST BE BEHAND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA
- 6. BAZL V LVEESHALL NOT BE LICATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 60 mm (24") HORIZONTALLI FROM METER BOX OR 900mm (36") BELOW FINAL GRADE.

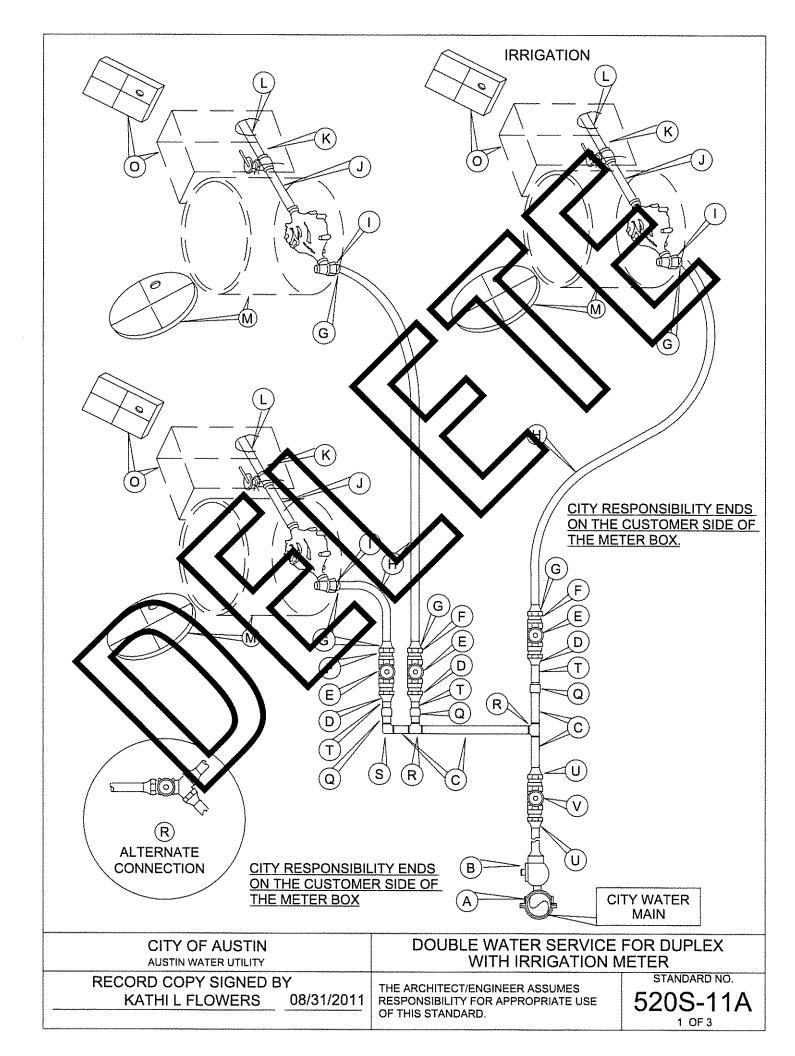
CITY OF AUSTIN AUSTIN WATER UTILITY

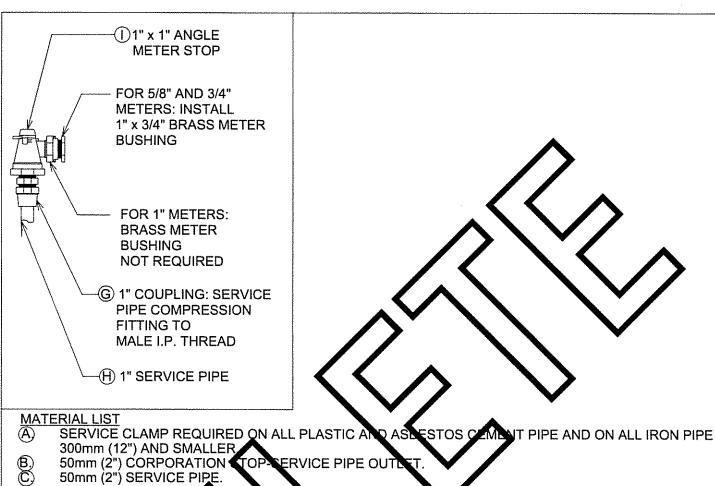
INSTALLATION FOR A 16mm, 19mm OR 25mm (5/8", 3/4" OR 1") POTABLE METER

RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011

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

STANDARD NO. 520S-11





38mm (1-1/2") COUPLING 38mm (1-1/2") BALL (AL) RE TO MALE I.P.T. 🐧 SER ICE P RESSION FITTING)

. SEE (275.

- mm x 25 mm **BRONZE BUSHIN** ADS
- 25mm (1") COU LING SERVICE PIPE T. (COMPRESSION FITTING)

25mm (1") SE VICE PIPE.

- ANGLE METER NLET x SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING: -FOR 16mm AND im (7/8" x 3/4") METERS: 35° im x 19mm (1"x3/4") BRASS METER BUSHING FRS: B' ASS BUSHING NOT REQUIRED.
- SWIVEL COUPLING NUT: (J)G: M AND 34") MT TERS: 19mm x 213mm (3/4" x 8-1/2") LONG ND 19 nm (5/8 m x 217mm (1" x 8-1/2") LONG 🗷 25mm (1ⁿ RS: 251
- BALL VALVE. SE. SPL 15 mm of 25mm (3/4") r 1" AMI VAMINEADY MEYE WW 276 12 mm OR 25mm (3/4" or 1") (PROPERTY OWNER'S BALL VALVE) **023**CR 1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS. ER OX AND LID PER SPL WW-145 OR WW-145A.

N/A

BALL VALVE BOX AND LID RECTANGULAR PLASTIC BOX, DFW #D1200 OR PROPER EQUAL.

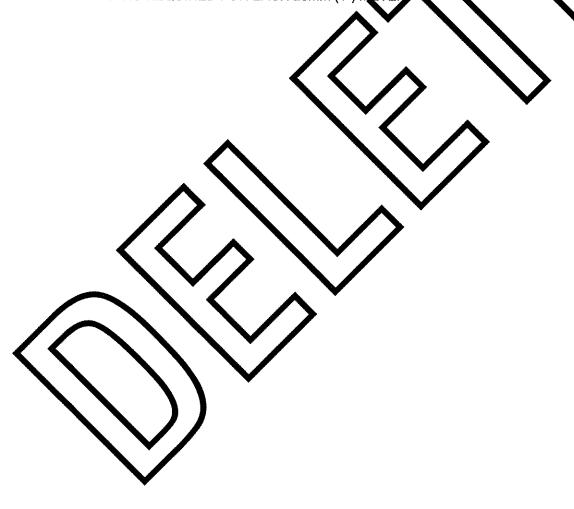
N/A

- 50mm x 38mm (***) 1/2") REDUCER.
- 50mm x 50mm x 50mm (2"x2"x2") TEE OR 50mm (2") BRONZE WYE, SEE SPL WW-68. SNOT REQUIRED IF WYE IS INSTALLED.
- 50mm x 50mm (2"x2") ELBOW.
- 38mm (1-1/2") SERVICE PIPE.
- 50mm (2") COUPLING. SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- 50mm (2") BALL VALVE. SEE SPL WW-275.

CITY OF AUSTIN	DOUBLE WATER SERVICE FOR DUPLEX	
AUSTIN WATER UTILITY	WITH IRRIGATION METER	
RECORD COPY SIGNED BY	THE ARCHITECT/ENGINEER ASSUMES	STANDARD NO.
KATHI L FLOWERS 08/31/2011	RESPONSIBILITY FOR APPROPRIATE USE	520S-11A
	OF THIS STANDARD.	2 OF 3

- SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K"
 COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR
 SOLDERED JOINTS.
- 2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) FOLYETHYLENE FILM
- 3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.5 (25).
- 5. BOX SHALL BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
- 6. BALL VALVES EAND VSHALL NOT BE LOCATED UNDER CLAB OX PAVENENT, AND NOT LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER FOX AND 900mm (55") BE YOW FINAL GRADE.





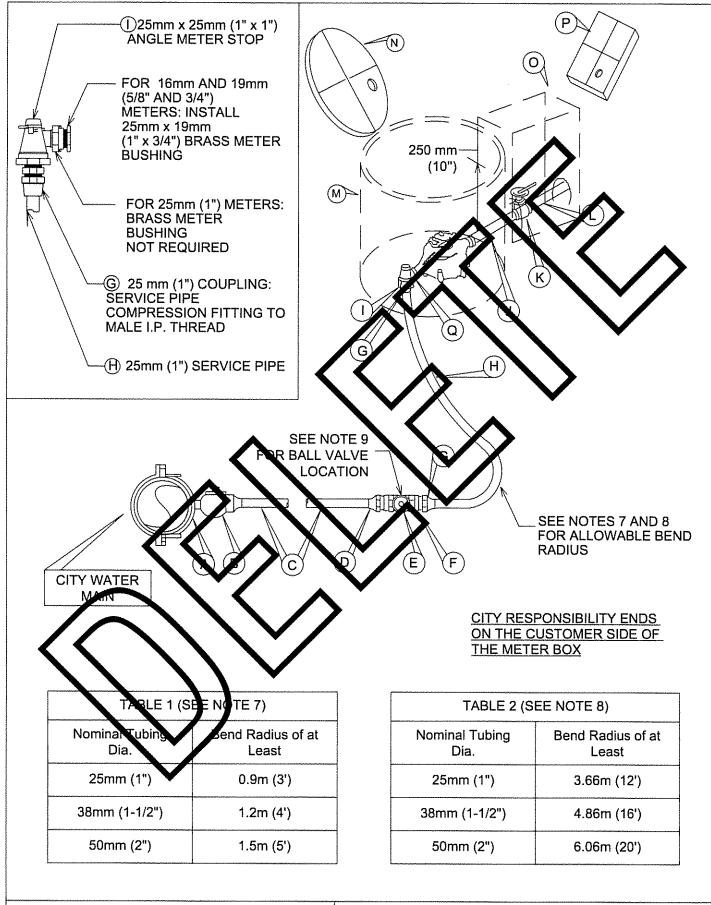
CITY OF AUSTIN	
AUSTIN WATER UTILITY	
	

DOUBLE WATER SERVICE FOR DUPLEX WITH IRRIGATION METER

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

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

520S-11A



CITY OF AUSTIN
AUSTIN WATER UTILITY

POTABLE HDPE SERVICE & 16mm, 19mm, AND 25mm (5/8", 3/4", AND 1") METER INSTALLATION

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

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

STANDARD NO. 520S-11B

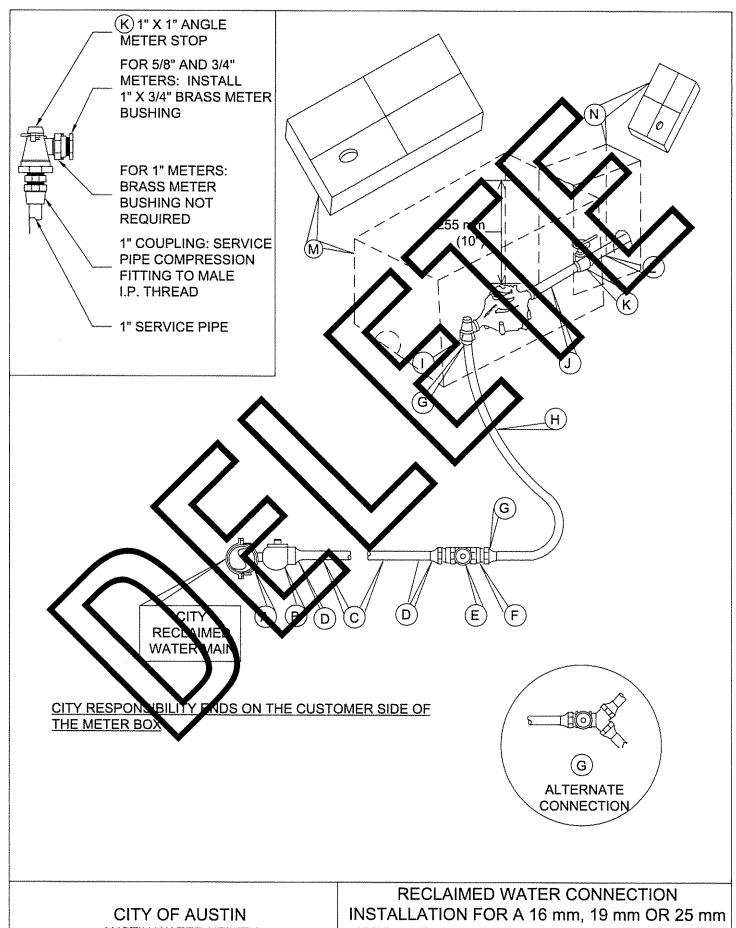
- SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (A) (12") AND SMALLER.
- 50mm (2") CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET, SPL WW-68.
- 50mm (2") SERVICE TUBING.
- COUPLING: 50mm (2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.
- 38mm (1-1/2") BALL VALVE; SEE SPL WW-275 AND NOTE 9.
- BRONZE BUSHING, 38mm x 25mm (1-1/2" x 1") I.P.T.
 - 25mm (1") COUPLING: COMPRESSION TO MALE I.P.T.
- 25mm (1") SERVICE TUBING PER SPL WW-65.
- ANGLE METER STOP: SERVICE TUBING INLET x SWIVEL COUPLING NUT OUT ET AN -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 25mm x 19mm (1" x 3/4") BENSS ISHIN -FOR 25mm (1") METERS BRASS METER BUSHING NOT REQUIRED. -FOR ALL SEE SPL WW-68.
- (J) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING NUT -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm x 213mm 4 4" x 8-1/2 ONG. -FOR 25 mm (1") METERS: 25mm x 213mm (1" x 8-1/2") LONG.
- BALL VALVE 19mm OR 25mm (3/4" OR 1") (PROPERTY OWNER'S **VALV** SEE SPL WW
- 19mm OR 25mm (3/4" OR 1") TUBING MEETING CITY OF AUSTAI PLUMBING LODE IN EQUIREMENT:
- METER BOX PER SPL WW-145 OR WW-145A.
- ED W H APPROVED BOX AMR/AMI READY LID-FOR METER BOX, LID FURNIS
- PROPERTY OWNER'S CUT-OFF VALVE BOX-RETANGUL
- 12") OR EQU RECTANGULAR PLASTIC BOX LID, 300mm x 425mm x 300
- ANGLE METER STOP: SERVICE TUBING INLET x SW VEL UT OUTLET: -FOR 16mm and 19mm (5/8" and 3/4") METERS: 25mm x
 - -FOR 25mm (1") METERS: 25mm x 25mm (1" x 1")

NOTES:

- Y WITH 0.2mm (8 MIL) POLYETHYLENE FILM. 1. LBE
- VE GROUND OR FLUSH WITH PAVEMENT SURFACE. OULD BE 25mil 2. (1")
- EET RICHT-OF-WM SHALL BE BEDDED IN GRANULAR MATERIALS IN ST IND TUBING 3. RED BY SECTION 5 0.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: FILL ALOVE GRAND, AR BEDDING . 3 REQUIRED BY SECTION 510.3 (25).
- 4. BOX MOST BE BEHIND CUTS NEXT TO PROPERTY LINE AND/OR SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
- 5. INSTALL ME **VARNI** S TA PE (MAGNETIC TRACER TAPE) MIN. 300mm (1') ABOVE P.E. TUBING FROM TAP CONNECTION TO MELER
- TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH. 6.
- TUBING, WHEN BENT SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1. 7.
- IF A FITTING WILL BE NOTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO 8. SMALLER THAN THE VALUE SHOWN IN TABLE 2.
- 9. B.V. (E) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 900mm (36") BELOW FINAL GRADE.
- 10. INSERT STIFFENERS FOR P.E. TUBING PER SPL WW-65B TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

ı			
CITY OF AUSTIN AUSTIN WATER UTILITY		POTABLE HDPE SERVICE & 16mm, 19mm, AND 25mm	
		(5/8", 3/4", AND 1") METER INSTALLATION	
The Part of the Pa	RECORD COPY SIGNED BY	THE ARCHITECT/ENGINEER ASSUMES	STANDARD NO.
	KATHI L FLOWERS 08/31/2011	RESPONSIBILITY FOR APPROPRIATE USE	520S-11R

OF THIS STANDARD.



AUSTIN WATER UTILITY

(5/8", 3/4", OR 1") RECLAIMED WATER METER

RECORD COPY SIGNED BY KATHI L FLOWERS

8/31/11

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

STANDARD NO. 520S-11R SHEET 1 OF 2

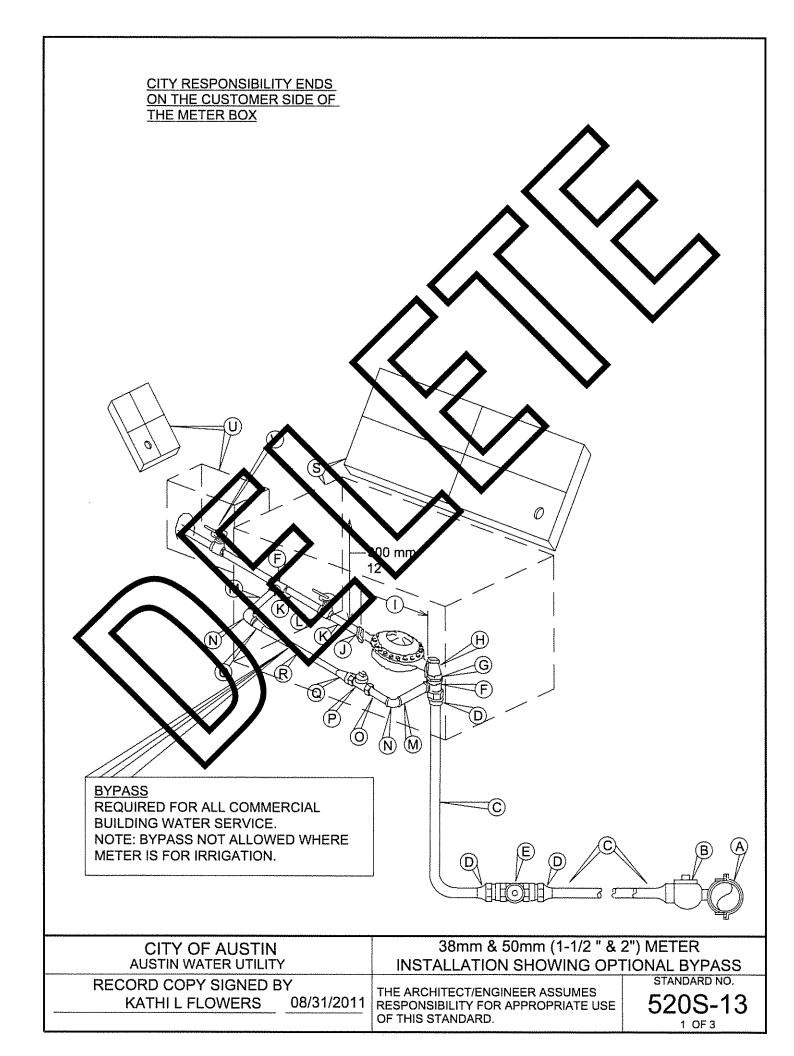
MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER
- 38 mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- 38 mm (1-1/2") SERVICE PIPE
- 38 mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION E
- 38 mm (1-1/2") BALL VALVE. SEE SPL WW-275
- BRONZE BUSHING, 38 mm X 25 mm (1-1/2" X 1") I.P. THREADS
- 25 mm (1") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FIT ING WITH STIFFENER)
- 25 mm (1") SERVICE PIPE PER SPL WW-65B
- ANGLE METER STOP: SERVICE PIPE INLET X SWIVEL COUPLING I **BUSHING:**
 - -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS: 25 mm X /9 mr (1" X 3/4") B ASS' ETER B -FOR 25 mm (1") METERS: BRASS METER BUSHING NO. REQUIR
 - -FOR ALL, SEE SPL WW-68
- (\mathbb{J}) WATER METER COUPLING: MALE I.P.T. X SWIVEL m X 213 mm (*\/4" X 1/2") LONG -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS 19 🖻 -FOR 25 mm (1") METERS: 25 mm X 213 mm (1" X 8-1/2") LONG
- BALL VALVE. SEE SPL WW-276. 19 mm OR 25 m x (3/4" OR 1 ") (PROPERTY OWNER'S **(K)** CUT-OFF VALVE)
- ٥ 19 mm OR 25 mm (3/4" OR 1") PIPE MEETING CITY UST'N PLUMBING COME REQUIREMENTS
- (M)RECTANGULAR METER BOX AND COVER, SEE SPL WW. 45A, FOR RECLAIMED WATER RESIDENTIAL CUSTOMERS. (MUST BE AMR/AMI COMPATIBLE)
- PROPERTY OWNERS BALL VALVE BOX AND COVER, RECTANGULAR LASTIC BOX, DFW #D1200.5 OR EQUAL. (MANUFACTURE) OR COLORED PURPLE WITH DECLAMED WATER" CAST INTO COVER) (N)

NOTES:

- 1. SERVICE PIPE SI E COPPER TURE SIZE. IT S BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOIN
- 2. SERVICE SADDLE SHAL SE W APPED COMPLETELY WITH 0.2 mm (8 MIL)
- FILM PER S. L. WW-27D FOR RECLAIMED WATER.
 SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT. TOP OF BOXES 3.
- IBING IN STREET RIGHT OF-WAY SHALL BE BEDDED IN GRANULAR 4. ATTRIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD RECIPCATIONS: LACKNILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 3 (25)
- METER BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF 5. SIDEWALK AND VEHICULUR TRAFFIC AREA.
- BALL VALVE (E) STALL NOT BE LOCATED MORE THAN 914 mm (36") BELOW METER OR 6. MORE THAN 10 mm 44") HORIZONTALLY FROM METER. BALL VALVE (E) SHALL NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
- METER BOX TO BE RECTANGULAR AND COVER SHALL BE MANUFACTURED PURPLE WITH 8. "RECLAIMED WATER" CAST INTO IT.
- ALL RECLAIMED WATER PIPING AND APPURTENANCES TO BE MANUFACTURED PURPLE. 9. WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D, OR PAINTED PURPLE PER SPL WW-3C.

CITY OF AUSTIN AUSTIN WATER UTILITY		RECLAIMED WATER CO INSTALLATION FOR A 16 mm, (5/8", 3/4", OR 1") RECLAIMED	19 mm OR 25 mm
RECORD COPY SIGNED BY	/31/11	THE ADOLUTEOT/ENGINEED ACQUINE	STANDARD NO.

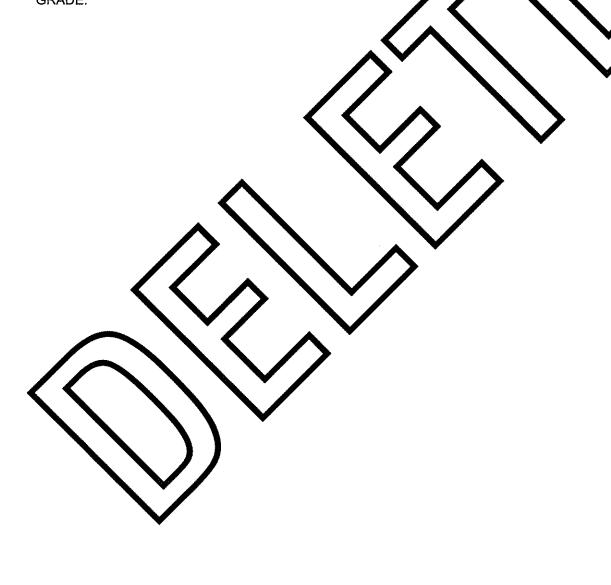


MATERIALS LIST	METER	SIZE
	38 mm (1-1/2")	50 mm (2")
SERVICE CLAMP FOR CONNECTION-REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ALL IBON RIPE 200 mm (12") AND SMALL FR	38 mm (1-1/2")	50 mm (2")
ALL IRON PIPE 300 mm (12") AND SMALLER (B) CORPORATION STOP - SERVICE PIPE OUTLET	38 mm (1-1/2")	30 mm (2")
© SERVICE PIPE	38 mm / 1-1/2"	50 mm (2")
© COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)	38 m ii (1-42")	50 mm (2")
E BALL VALVE. SEE SPL WW 275.	38 nm (1-1/2")	50 mm (2")
(F) TEES, BRASS 38 mp	x 38 lm x 25mm (1-1/2"x1-1/2"x1")	50N m x 50mm x 25mm (2"x2" 1")
(G) CLOSE-NIPPLE, BRASS.	32 mm (1-1/2")	50 mm (2")
ANGLE METER STOP, FEMALE I.P. THREAD INLET X FLANGE OUTLET	38 mm (1-1/2")	50 mm (2")
(I) WATER METER LENGTH WITH GASKETS	388 mm (13-1/24)	444 mm (17-3/4")
J. FLANGE, BRASS; FEMALE I.P. THREAD	38 mm (1-1/2	50 mm (2")
(K) NIPPLES, BRASS	38 mm x 200mm (11 N2"x8")	50mm x 200 mm (2"x8")
(L) AWU'S BALL VALVE. SEE SPL WW 275.	8 mp (1-1/2 ")	50 mm (2")
M NIPPLES, BRASS	25 mm x 125mm (1"x5")	25 mm x 125 mm (1"x5")
N 90 DEGREE ELBOWS, DRASS	25 mm (1")	25 mm (1")
NIPPLES, BRASS	25 mm x 75mm (1"x3")	25 mm x 75 mm (1"x3")
P CURB STOP, BRASS, FEMALE IF. TUREAD BOTH ENDS WITH LOCK NUTS	25 mm (1")	25 mm (1")
© COUPLINGS, BRASS, SERVICE PIPE TO MALE THREAD	25 mm (1")	25 mm (1")
® SERVICE PIPE	25 mm (1")	25 mm (1")
S ALR/AM READY RESTANCULAR METER BOX AND LID. SEE SPL-W V-145 OR W W-145A		
① N/A		
PROPERTY OWNER'S PALL VALVE BOX AND LID-RECTANGULAR PLASTIC BOX, DFW #D1200 OR EQUAL		
♥ CUSTOMER'S BALL VALVE.		

CITY OF AUSTIN	38mm & 50mm (1-1/2 " &	2") METER
AUSTIN WATER UTILITY	INSTALLATION SHOWING OP	FIONAL BYPASS
RECORD COPY SIGNED BY	THE ADOLUTEOT/ENGINEED ACCUMED	STANDARD NO.
KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	520S-13

- 1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
- 2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
- 3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRAND AR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- 5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.

6. BALL VALVES ESHALL NOT BE LOCATED UNDER CURB OR PAVEMENT AND 107 LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 90 mm (36") BELOW FINAL GRADE.



CITY OF AUSTIN AUSTIN WATER UTILITY		
RECORD COPY SIGNED BY		
KYTHII ELOWEDS 08/31/2011		

38mm & 50mm (1-1/2 " & 2") METER INSTALLATION SHOWING OPTIONAL BYPASS

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

520S-13

3 OF 3



CITY OF AUSTIN
WATER UTILITY

POTABLE HDPE SERVICE INSTALLATION FOR 38 mm (1-1/2") METER

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

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

520S-13B 1 OF 3

MATERIALS LIST

- (\widehat{A}) 50mm (2") SERVICE CLAMP FOR CONNECTION-REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND IRON PIPE 300mm (12") AND SMALLER.
- 50mm (2") CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
- 50mm (2") SERVICE TUBING PER SPL WW-65
- COUPLING: 500mm (2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.
- 38mm (1-1/2") BALL VALVE, SEE SPL WW-275 AND NOTE 9.
- **(E)** 38mm (1-1/2") x 38mm (1-1/2") x 25mm (1") TEES, BRASS
- 38mm (1-1/2") CLOSE-NIPPLE, BRASS
- 38mm (1-1/2") ANGLE METER STOP, FEMALE I.P.T. INLET x F.
- 36000 38mm (1-1/2") WATER METER LENGTH WITH GASKETS
- 38mm (1-1/2") METER FLANGE, BRASS FEMALE I.P.T
- 38mm (1-1/2") x 200mm (8") NIPPLE, BRASS, MIPT
- 38mm (1-1/2") BALL VALVE. SEE SPL WW-275
- M 25mm (1") x 125mm (5") NIPPLES, BRASS, MIP
- 25mm (1") 90° ELBOWS, BRASS, FIPT
- (N) (O) 25mm (1") x 75mm (3") NIPPLES, BRASS, MIPT
- 25mm (1") CURB STOP, BRASS, FEMALE I.P.T BOTH INDS
- 25mm (1") COUPLINGS, BRASS, SLRVICE PIPE TO MIP
- 25mm (1") SERVICE PIPE
- RECTANGULAR METER BOX. SE (W-145 OR WW-14
- AMI/AMR READY LID F **SPL WW-62**:
 - OR APPROVED EQU VITH APP ED METER BOX. SPL WW-145A
- (U) AND PRV WHEN REQ'D.) RECTANGULAR BE SPL-WW-145A 3 0mm 425mm
- 38mm (1-1/2") CUS
- 3886 RECTANGULAR PLA
- PER SPL V-65
- COUPLING: 38mm 8mm (1-1/2") MALE I.P.T.

CITY OF AUSTIN WATER UTILITY

POTABLE HDPE SERVICE INSTALLATION FOR 38 mm (1-1/2") METER

RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011

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

STANDARD NO. 520S-13B 2 OF 3

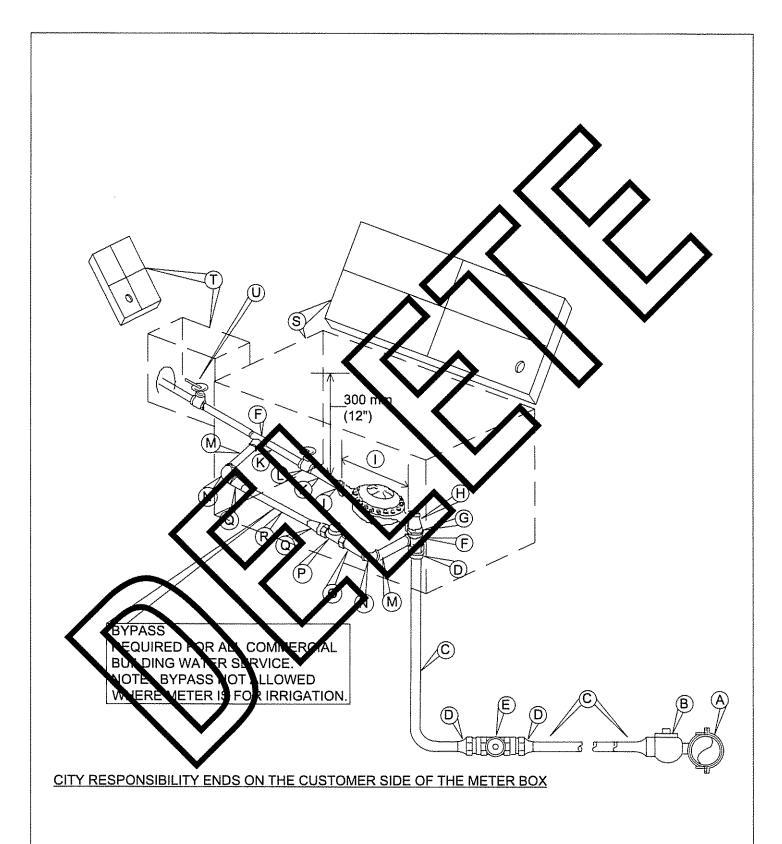
- 1. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
- 2. TOP OF BOXES SHALL BE 25mm (1") ABOVE GROUND.
- PIPING AND TUBING IN RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED 3. BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- 4. BOX SHALL BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND NOT LOCATED IN SIDEWALK OR VEHICULAR TRAFFIC AREA.
- INSTALL METALLIC WARNING TAPE (MAGNETIC TRACER TAPE) MIN. 35 Jmm ') ABOVE P.E. TUBING 5. FROM TAP CONNECTION TO METER.
- TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOO 6.
- 7. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER TH
- IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION Q 8. RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE
- B.V. (E) SHALL NOT BE LOCATED UNDER CURB OR PAYEMENT. 9. AND NOT BE 600mm (24") HORIZONTALLY FROM METER BOX OR 5 00mm (36") INSERT STIFFENER FOR P.E. TUBING TO BE INSTALLED INSIDE T
- 10. FITTINGS, SEE SPL WW-65B.

	· · · · · · · · · · · · · · · · · · ·
TABLE (S	E NOTE 7)
Nominal Nibing Dia.	Bend Radius of at Least
25mm ("'	0.9m (3')
38mm (1-1/2")	1.2m (4')
50mm (2")	1.5m (5')

TABLE 2 (S	EE NOTE 8)
Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	3.66m (12')
38mm (1-1/2")	4.86m (16')
50mm (2")	6.06m (20')

3 OF 3

CITY OF AUSTIN WATER UTILITY	POTABLE HDPE SERVICE INSTALLATION FOR 38 mm (1-1/2") METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	520S-13B



CITY OF AUSTIN AUSTIN WATER UTILITY RECLAIMED WATER CONNECTION INSTALLATION FOR A 38 mm & 50 mm (1-1/2" OR 2") RECLAIMED WATER METER SHOWING OPTIONAL BYPASS

RECORD COPY SIGNED BY KATHI L FLOWERS

8/31/11

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

STANDARD NO. 520S-13R SHEET 1 OF 3

© @ © © © © © © ⊕ ⊕ ⊕ ⊕ ⊕ © ©	SERVICE CLAMP CONNECTION REQUIRED ALL PLASTIC AND ASBESTOS CEMENT PII ON ALL IRON PIPE 300 mm (12") AND SMAI CORPORATION STOP - SERVICE PIPE OUT SERVICE PIPE COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING) BALL VALVE. SEE SPL WW-275 TEES, BRASS CLOSE-NIPPLE, BRASS ANGLE METER STOP, FEMALE I.P. THREA INLET X FLANGE OUTLET WATER METER LENGTH WITH GASKETS FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS 90 DEGREE ELBOWS, BRASS NIPPLES, BRASS	PE AND LLER TLET	38 mm (1-1/2")	50 mm (2")
(a) (b) (c) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	ALL PLASTIC AND ASBESTOS CEMENT PII ON ALL IRON PIPE 300 mm (12") AND SMAI CORPORATION STOP - SERVICE PIPE OUT SERVICE PIPE COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING) BALL VALVE. SEE SPL WW-275 TEES, BRASS CLOSE-NIPPLE, BRASS ANGLE METER STOP, FEMALE I.P. THREA INLET X FLANGE OUTLET WATER METER LENGTH WITH GASKETS FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS	PE AND LLER TLET	3" mm (1-1/2") 38 mm (1-1/2"X1) 38 mm (1-1/2"X1) 38 mm (1-1/2")	50 mm (2")
(a) (b) (c) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	CORPORATION STOP - SERVICE PIPE OU'SERVICE PIPE COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING) BALL VALVE. SEE SPL WW-275 TEES, BRASS CLOSE-NIPPLE, BRASS ANGLE METER STOP, FEMALE I.P. THREA INLET X FLANGE OUTLET WATER METER LENGTH WITH GASKETS FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS	TLET	38 mm (1-1/2") 38 mm (250mm (1-1/2"X8") 38 mm (1-1/2"X8") 38 mm (1-1/2"X8") 39 mm (1-1/2"X8") 31 mm (1-1/2") 25 mm X 125 mm (1"X 5")	50 mm (2") 444 mm (2") 50 mm (2")
	(COMPRESSION FITTING) BALL VALVE. SEE SPL WW-275 TEES, BRASS CLOSE-NIPPLE, BRASS ANGLE METER STOP, FEMALE I.P. THREA INLET X FLANGE OUTLET WATER METER LENGTH WITH GASKETS FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS		38 mm 1-1/2", 38 mmX38mmX25mm (1-1/2"X1-1/2"X1), 38 mm (1-1/2") 38 mm (1-1/2") 38 mm (1-1/2") 38 mmX1-1/2") 38 mmX250mm (1-1/2"X8") 38 mm (1-1/2") 25 mm X 125 mm (1"X 5")	50 mm (2") 444 mm (2") 50 mm (2")
(a) (b) (a) (a) (b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	TEES, BRASS CLOSE-NIPPLE, BRASS ANGLE METER STOP, FEMALE I.P. THREA INLET X FLANGE OUTLET WATER METER LENGTH WITH GASKETS FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS		38 mmX38mmX25mm (1 1/2"X1-1/2"X1) 38 mm (1-1/2") 38 mm (1-1/2") 38 mm (1-1/2") 38 mmX25dmm (1-1/2"X8") 38 mm (1-1/2") 25 mm X 125 mm (1"X 5")	50 mm×20mm×25m (2"×2"×1") 50 mm (2") 50 mm (2") 444 mm (2") 50 mm (2") 50 mm×200mm (2"×8") 50 mm (2") 25 mm X 125 mm
	ANGLE METER STOP, FEMALE I.P. THREA INLET X FLANGE OUTLET WATER METER LENGTH WITH GASKETS FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS		38 mix (1-1/2") 338 mix (13-1/2") 38 mix (1-1/2") 38 mmX25dmm (1-1/2"X8") 38 mm (1-1/2") 38 mm (1-1/2") 25 mm X 125 mm (1"X 5")	50 mm (2") 444 mm (2") 50 mm (2") 50 mmX200mm (2"X8") 50 mm (2") 25 mm X 125 mm
	FLANGE, BRASS; FEMALE I.P. THREAD NIPPLES, BRASS AWU'S BALL VALVE. SEE SPL WW-275 NIPPLES, BRASS 90 DEGREE ELBOWS, BRASS		38 mm (1-1/2") 38 mm (200mm (1-1/2"X8") 31 mm (1-1/2") 25 mm (1-1/2") (1"X 5")	50 mm (2") 50 mmX200mm (2"X8") 50 mm (2") 25 mm X 125 mm
	NIPPLES, BRASS 90 DEGREE ELBOWS, BRASS		33 mm (1-1/2") 25 mm X 125 mm (1"X 5")	50 mm (2") 25 mm X 125 mm
(P) (I) (I) (I) (I) (I) (I) (I) (I) (I) (I				
© (R)		A	25 mm X 75 mm	25 mm (1") 25 mm X 75 mm
@ ! ® !	CURB STOP, BRASS / ÉMALE I.P. TRREAD ENDS WITH LUCK LUTS	ВОТН	(1"X 3") 25 mm (1")	(1" X 3") 25 mm (1")
_	COUPLINGS, BRASS, SERVICE PIPE TO M THREAD	VLE	25 mm (1")	25 mm (1")
	SERVICE BIPE	>	25 mm (1")	25 mm (1")
SPI-145A, FOR RECLAIMED WATER COMMERCIAL CUSTOMERS (MUST BE AMRAMI COMPATIBLE)				
PROPERTY OWNER'S BILL VALVE BOX AND COVER- RECTAN SULAR PLASTIC BOX, DFW #D1200.5 OR EQUAL. (MANUFACTURED OR COLORED PURPLE WITH "RECLAIMED				
_	WATER CAST INTO COVER) U CUSTOMER'S BLUZ VALVE			
debilahida susan sanan diresurum	CITY OF AUSTIN AUSTIN WATER UTILITY		LAIMED WATER CO LLATION FOR A 38	

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

RECORD COPY SIGNED BY

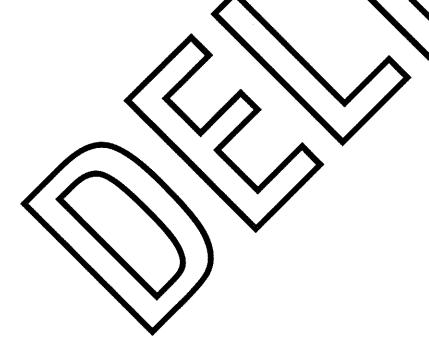
KATHI L FLOWERS

8/31/11

STANDARD NO. 520S-13R

SHEET 2 OF 3

- SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS
 TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD ATH NO
 SWEAT OR SOLDERED JOINTS.
- SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM PER SPL WW-27D FOR RECLAIMED WATER.
- TOP OF BOXES SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE PLODED IN GRANULAR. MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS A EQUIRED BY SECTION 510.3 (25).
- 5. METER BOX MUST BE BEHIND CURB NEXT TO PROPERLY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
- 6. BALL VALVE © SHALL NOT BE LOCATED MOKÉ THAN 914 mm (36') BELOW FINAL GRADE OR MORE THAN 610 mm (24") HORIZONTAY LY FROM METER BOX. BALL VALVE © SHALL NOT BE LOCATED UNDER PAVING, SIDEWAL'S, OR ORIVEWAY.
- 8. METER BOX TO BE RECTANGULAR AND COVER SHALL BE MANUFACTURED. URPLE WITH "RECLAIMED WATER" CAST INTO IT.
- 9. ALL RECLAIMED WATER PIPING AND APPURTLNANCES TO BE MANUFACTURED PURPLE, WRAPPED IN PURPLE POLYETHYLENE PER SPL VW-2XX, OR PAINTLD PURPLE PER SPL WW-3C.



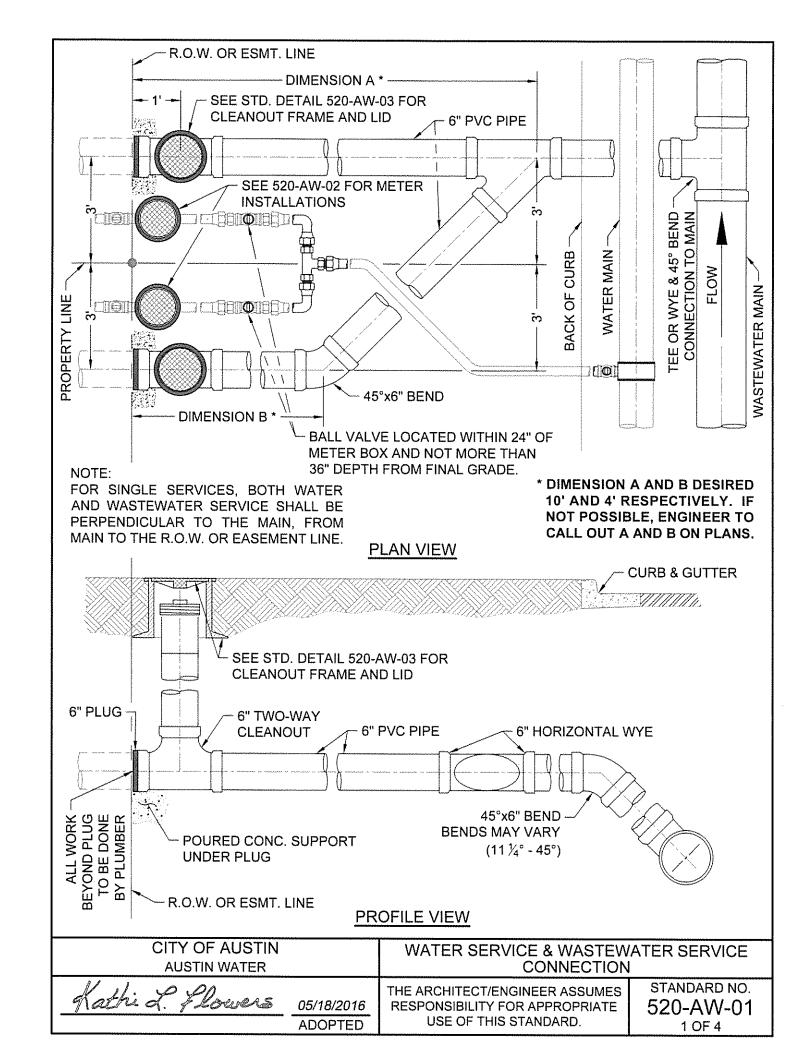
CITY OF AUSTIN AUSTIN WATER UTILITY RECLAIMED WATER CONNECTION INSTALLATION FOR A 38 mm & 50 mm (1-1/2" OR 2") RECLAIMED WATER METER SHOWING OPTIONAL BYPASS

RECORD COPY SIGNED BY KATHI L FLOWERS

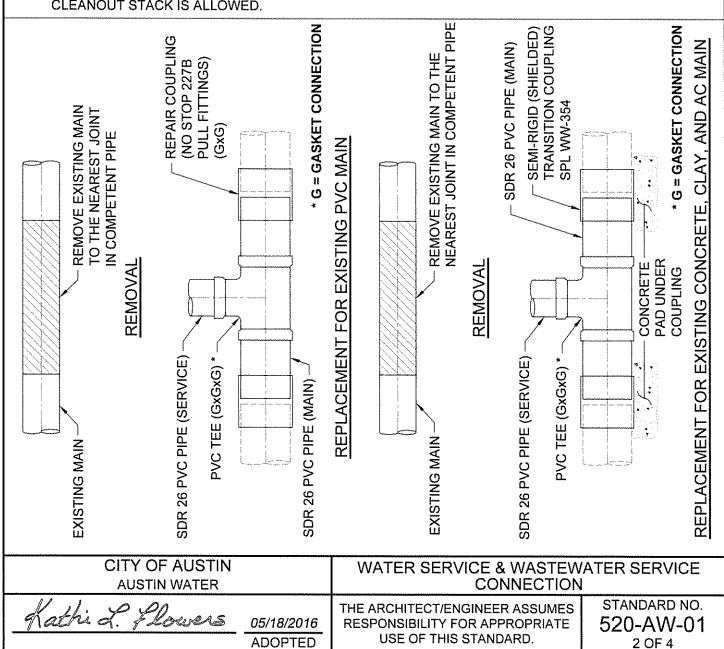
8/31/11

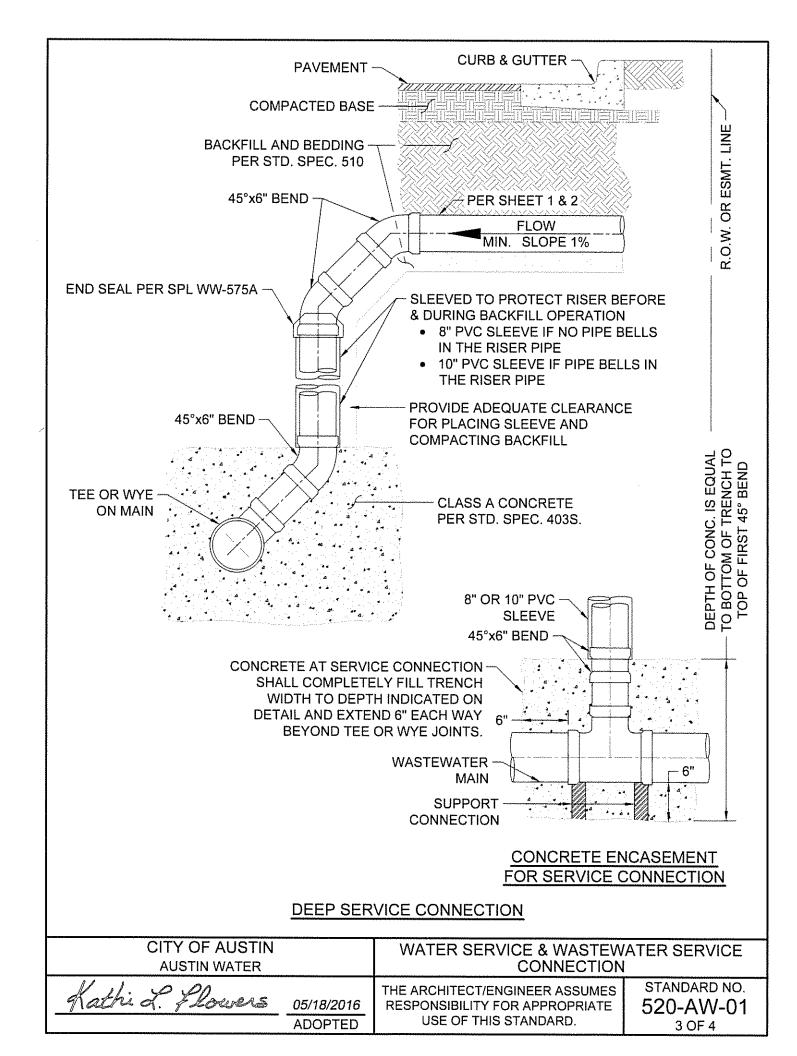
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

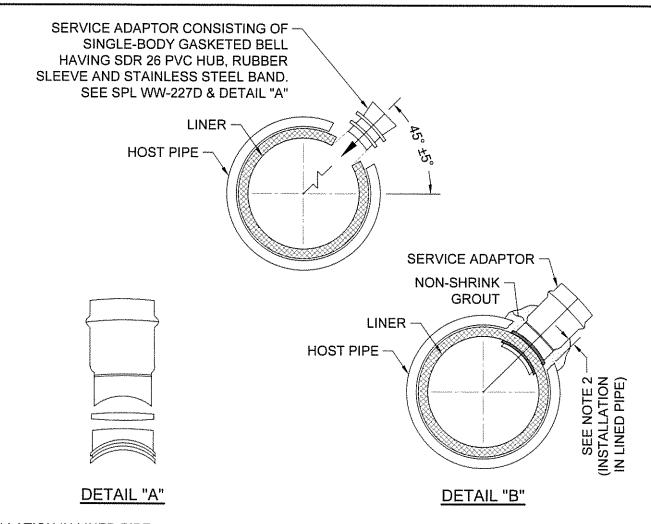
STANDARD NO.
520S-13R
SHEET 3 OF 3



- DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR **INSTALLS** WASTEWATER CONNECTION TO MAIN, 6" STUB, HORIZONTAL WYE FOR DOUBLE SERVICES, 6" SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER, FRAME, AND COVER CLEANOUT(S) PLUGGED AT PROPERTY LINE OR EASEMENT LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MIN. TO 45° MAX. DEPTH OF SERVICE AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4'. OTHERWISE INSTALLED DEPTH WILL BE 4' MIN. AND 6' MAX. AT PROPERTY LINE. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, SEE SHEET 3 OF 4. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE. REFER TO DETAIL 520-AW-02.
- 2. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MIN. COVER BELOW FINAL STREET GRADE OF 42".
- NO METER BOX, BALL VALVE OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA AND SHALL BE A MINIMUM OF 6" FROM ALL PAVED AREAS.
- 4. PLUMBER SHALL REMOVE PLUG AND CONNECT TO 2-WAY CLEANOUT. NO CONNECTION TO CLEANOUT STACK IS ALLOWED.







INSTALLATION IN LINED PIPE:

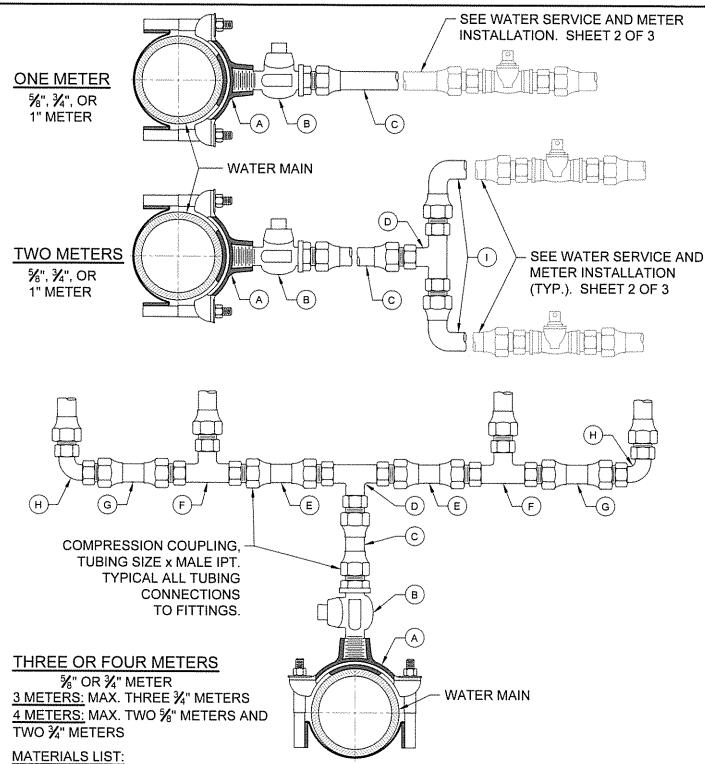
- 1. MARK LOCATION OF TAP.
- 2. BREAK & REMOVE HOST PIPE SO THAT OPENING IS AT LEAST 2" BUT NO MORE THAN 3" WIDER THAN DIAMETER OF THE SERVICE ADAPTOR.
- 3. DO NOT DAMAGE LINER.
- 4. CORE HOLE THROUGH LINER USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
- 5. INSTALL SERVICE ADAPTOR.
- 6. HOLES CUT IN HOST PIPE SHALL BE PACKED WITH NON-SHRINK GROUT (ASTM C1107 GRADE). SEE DETAIL "B"

NOTES:

- 1. USE ONLY TO TAP EXISTING LINED PIPE.
- 2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.
- 3. THE EDGE OF THE CORE HOLE MUST BE AT LEAST 3' FROM THE ENDS OF THE PIPE, ANY OTHER CORE SERVICE CONNECTIONS, AND ANY FITTINGS.
- 4. FOR DEEP SERVICE APPLICATIONS SEE SHEET 3 OF 4, EXCEPT SUBSTITUTE A CORED HOLE, AND SERVICE ADAPTOR FOR THE TEE OR WYE.
- 5. SERVICE CONNECTIONS TO MANHOLES MUST BE MADE USING A PIPE-TO-MANHOLE CONNECTOR WHICH LIMITS THE PIPE SLOPE INTO THE MANHOLE TO 12% MAX.

6" WASTEWATER CONNECTION TO EXISTING LINED MAIN

CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & WASTEWATER SERVICE CONNECTION	
Kathi L. Flor	05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 4 OF 4

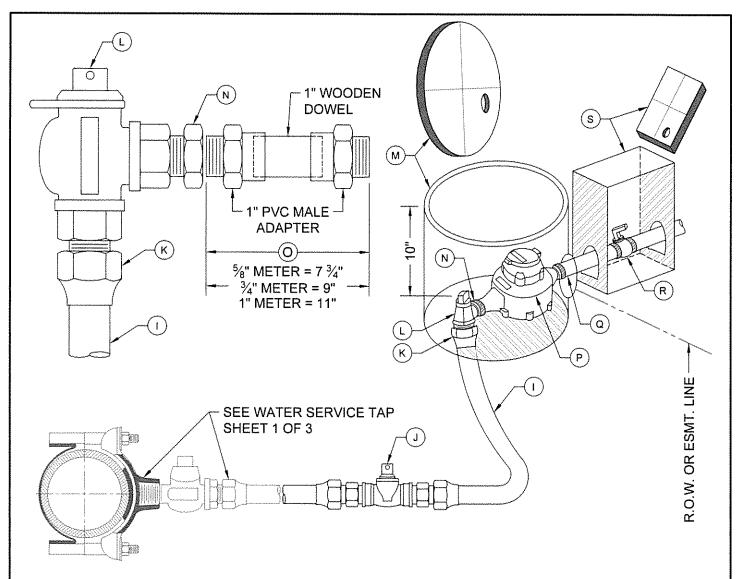


- A. 2" SERVICE CLAMP
- B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET.
- C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT.
- D. TEE FOR THREE OR FOUR METERS ON WATER TAP. TEE OR WYE FOR TWO METERS ON WATER TAP. (2" x SERVICE TUBING SIZE "E") FOR THREE OR FOUR METERS. 2" TUBING BY SIZE "I" FOR TWO METERS.

(MATERIALS LIST CONT ON SHEET 2 OF 3)

WATER SERVICE TAP

	VVAIC	R SERVICE TAP	
CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & METER II 1" & SMALLER MET	
Kathi L. Flowers	05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 1 OF 3



MATERIALS LIST CONT:

- E. SERVICE TUBING, (1 ½" COPPER OR 2" HDPE)
- F. BRONZE TEE, (SIZE EQUAL TO "E")
- G. SERVICE TUBING 1 ½" COPPER OR 1 ½" HDPE FOR ¾" METER, 1" COPPER OR 1 ½" HDPE FOR ½" METER. METER SIZES TO BE SHOWN ON PLANS.
- H. BRONZE ELBOW, (SIZE EQUAL TO "G"). ALL BRONZE FITTINGS PER SPL WW-68.
- I. SERVICE TUBING FOR SINGLE METER, 1 $\frac{1}{2}$ " COPPER OR 2" HDPE FOR 1" METER. MIN. 1 $\frac{1}{2}$ " COPPER OR 1 $\frac{1}{2}$ " HDPE FOR $\frac{3}{4}$ " METER. MIN. 1" COPPER OR 1 $\frac{1}{2}$ " HDPE FOR $\frac{5}{8}$ " METER. METER SIZES TO BE SHOWN ON PLANS.
- J. BALL VALVE, SPL WW-275 (SIZE EQUAL TO "I")
- K. COUPLING COMPRESSION TO MALE IPT (SIZE "I" x SIZE "I")

- L. ANGLE METER STOP; SERVICE TUBING INLET x SWIVEL COUPLING NUT OUTLET
- M. METER BOX AND COVER, SPL WW-145A

TO BE INSTALLED BY PLUMBER:

- N. BRASS METER BUSHING SIZE AS NEEDED TO CONNECT ANGLE STOP TO METER
- O. TEMPORARY METER SPACER (REQUIRED TO ASSURE METER WILL FIT APPROPRIATELY)
- P. WATER METER PURCHASED FROM AUSTIN WATER (MAY BE INSTALLED BY AUSTIN WATER FOR NEW RESIDENTIAL SERVICE)
- Q. BRASS WATER METER COUPLING MALE IPT x SWIVEL COUPLING NUT 8 ½" LONG. ¾" DIA. FOR ¾" AND ¾" METER OR 1" DIA. FOR 1" METER
- R. CUSTOMER CUT-OFF VALVE
- S. CUSTOMER VALVE BOX AND LID

WATER SERVICE AND METER INSTALLATION

I	CITY OF AUSTIN	WATER SERVICE & METER II	NSTALLATION -
L	AUSTIN WATER	1" & SMALLER MET	TERS
	Kathi L. Flowers 05/18/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE	standard no. 520-AW-02
1	ADOPTED	USE OF THIS STANDARD.	2 OF 3

- 1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
- 2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
- TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
- 6. BALL VALVE "J" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.

COPPER:

C1. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

HDPE:

- H1. INSTALL METALLIC WARNING TAPE MIN. 1' ABOVE HDPE TUBING FROM TAP CONNECTION TO METER.
- H2. TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.
- H3. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1.
- H4. IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.
- H5. INSERT STIFFENERS FOR HDPE TUBING PER SPL WW-65B TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

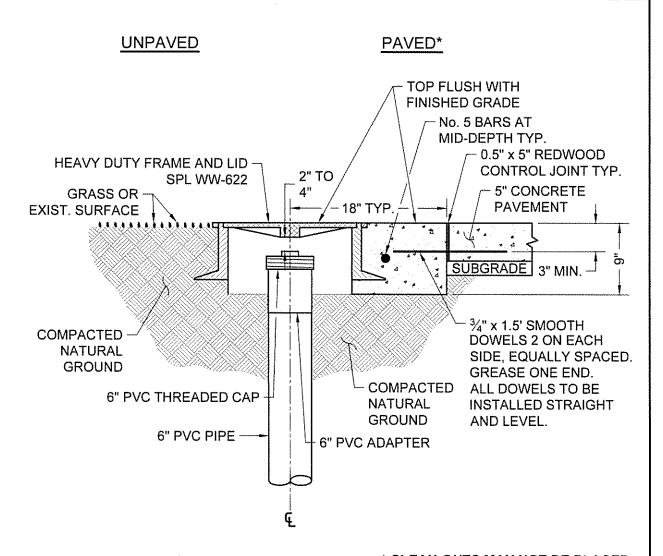
TABLE 1 (SE	EE NOTE H3)
NOMINAL TUBING DIA.	BEND RADIUS OF AT LEAST
1"	3'
1 ½"	4'
2"	5'

TABLE 2 (SEE NOTE H4)	
NOMINAL TUBING DIA.	BEND RADIUS OF AT LEAST
1"	12'
1 ½"	16'
2"	20'

RECLAIMED WATER:

R1. FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. HDPE TUBING SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

	CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	
9	Kathi L. Flowers	05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 3 OF 3



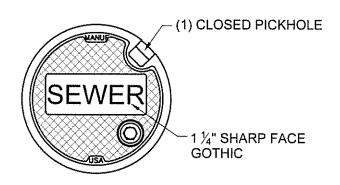
* CLEAN-OUTS MAY NOT BE PLACED IN PAVED AREAS - I.E. SIDEWALKS, DRIVEWAYS, OR PARKING LOTS, AND MUST BE LOCATED A MINIMUM OF 6" FROM ALL PAVED AREAS.

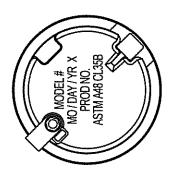
NOTES:

- 1. SUB-GRADE SHALL BE COMPACTED AS PER STD. SPEC. 201S, SUB-GRADE PREPARATION.
- 2. REINFORCING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
- 3. CONCRETE SHALL MEET ITEM 403S CLASS "A".
- 4. ALL PVC SHALL BE SDR 26.

CLEAN-OUT FRAME AND LID

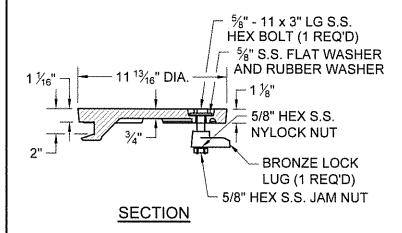
CITY OF AUSTIN AUSTIN WATER		WASTEWATER CLEAN-OUT F	FRAME AND LID
Kathi L. Flowers	05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-03 1 OF 2

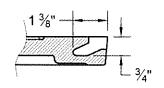




TOP VIEW

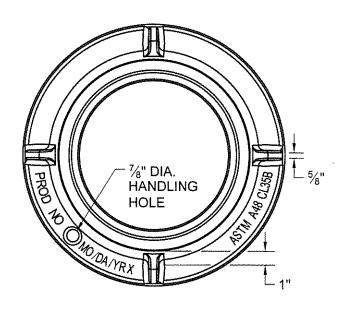
BOTTOM VIEW

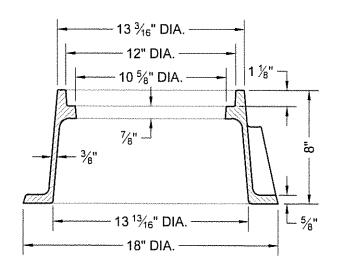




PICKHOLE DETAIL

CLEAN-OUT LID





TOP VIEW

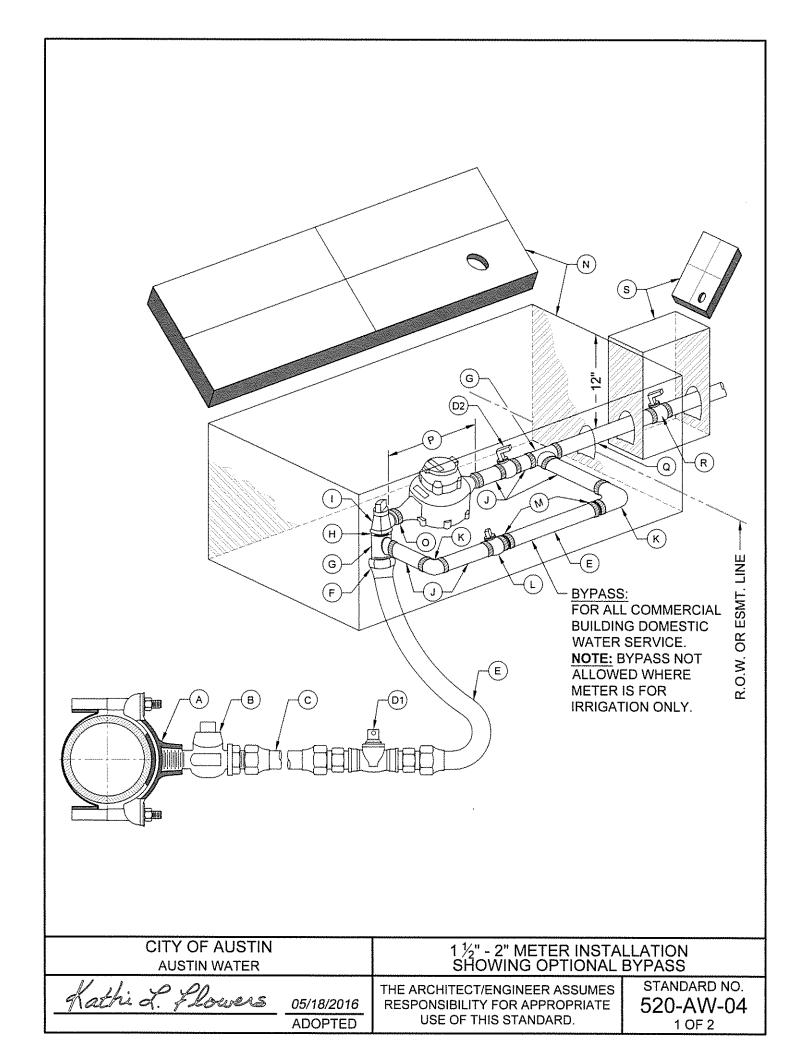
SECTION

2 OF 2

CLEAN-OUT FRAME

1			
	CITY OF AUSTIN AUSTIN WATER	WASTEWATER CLEAN-OUT F	FRAME AND LID
	Kathi L. Flowers 05/18/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-03

DATE



MATERIALS LIST:

- A. 2" SERVICE CLAMP
- B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
- C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT
- D1. 2" BALL VALVE, SPL WW-275
- D2. 2" BALL VALVE, SPL WW-275
- E. 2" COPPER SERVICE TUBING
- F. 2" BRASS COUPLING COMPRESSION TO MALE IPT
- G. 2" BRASS TEE
- H. 2" BRASS CLOSE-NIPPLE
- 1. 2" ANGLE METER STOP; SERVICE TUBING INLET x FLANGED OUTLET
- J. 2" BRASS NIPPLE
- K. 2" BRASS ELBOW
- L. 2" LOCKABLE CURB STOP FEMALE IPT INLET BY COMPRESSION OUTLET
- M. 2" BRASS COUPLING SERVICE TUBING TO MALE IPT
- N. RECTANGULAR METER BOX AND COVER, SPL WW-145A
- O. BRASS ADAPTER (2" x 1 ½") FOR 1 ½" METER ONLY
- P. WATER METER. LÈNGTH 13", (PURCHASED FROM AUSTIN WATER)
- Q. 2" COPPER SERVICE TUBING (PRIVATE PLUMBING PER CODE)
- R. CUSTOMER CUT-OFF VALVE
- S. CUSTOMER VALVE BOX AND LID

NOTES:

- SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
- 2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
- 3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- 5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
- 6. BALL VALVE "D1" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.
- 7. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

RECLAIMED WATER:

FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

CITY OF AUSTIN		1½" - 2" METER INSTALLATION	
AUSTIN WATER		SHOWING OPTIONAL BYPASS	
Kathi L. Flowers	<i>05/18/2016</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-04 2 OF 2