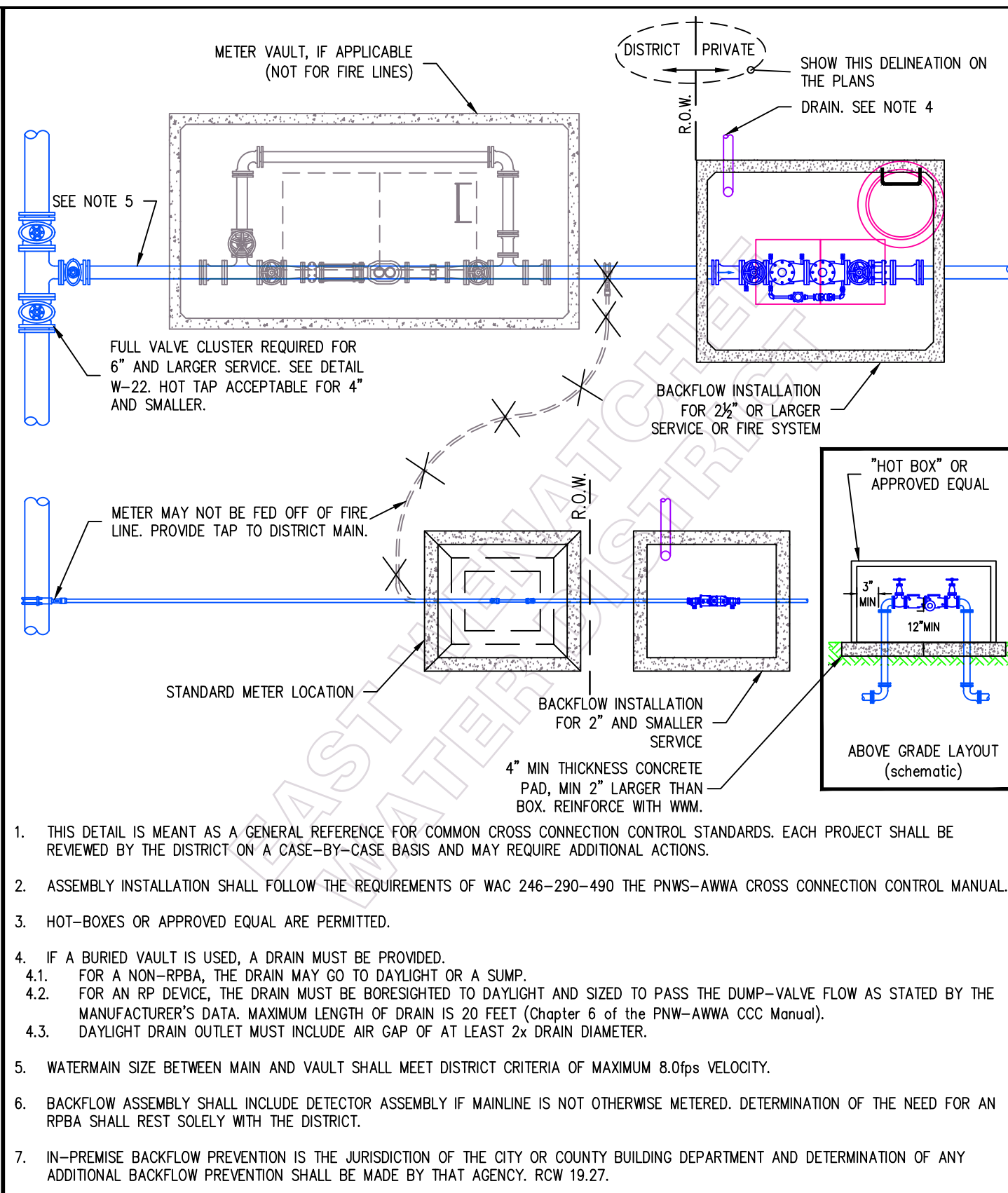
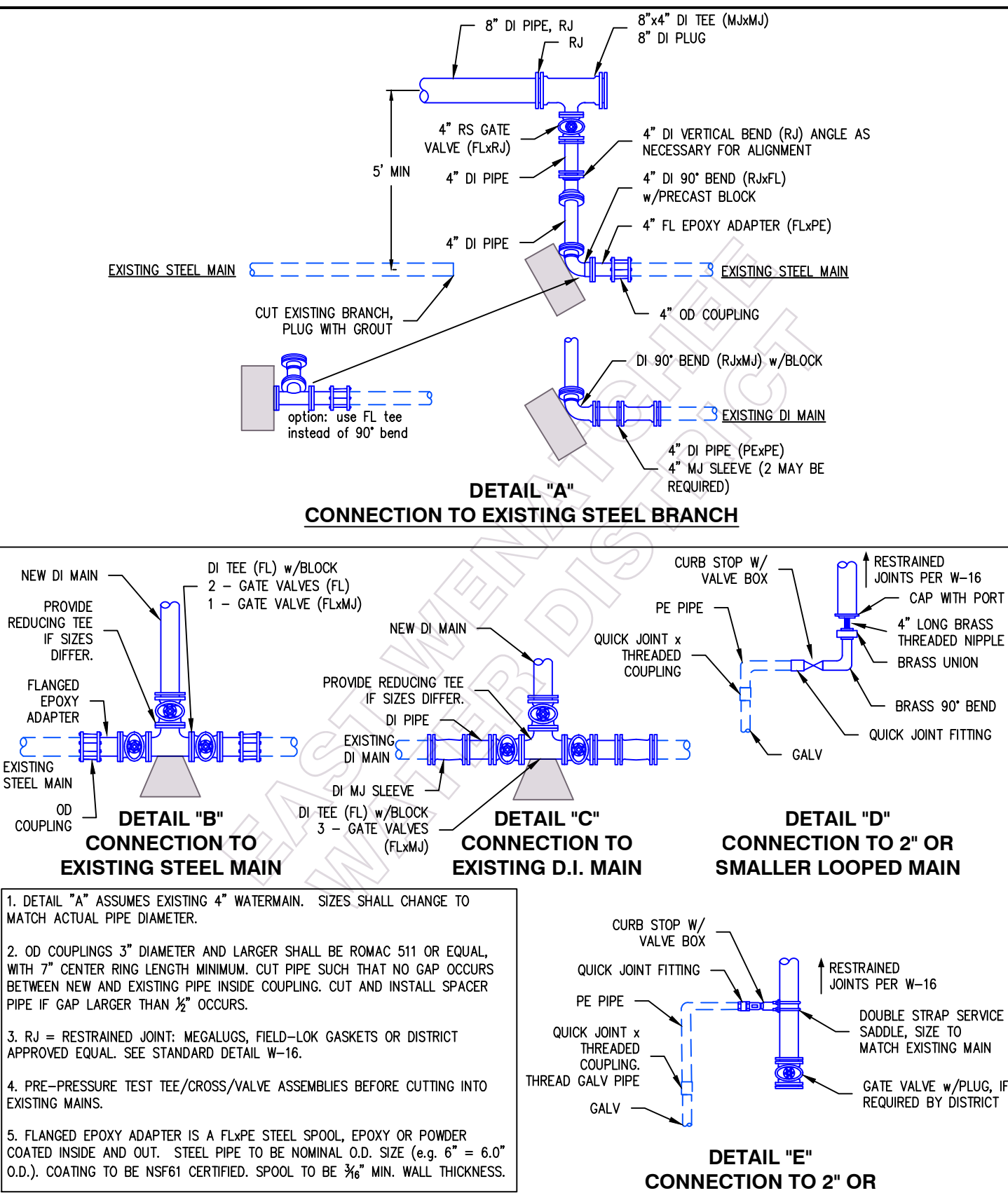


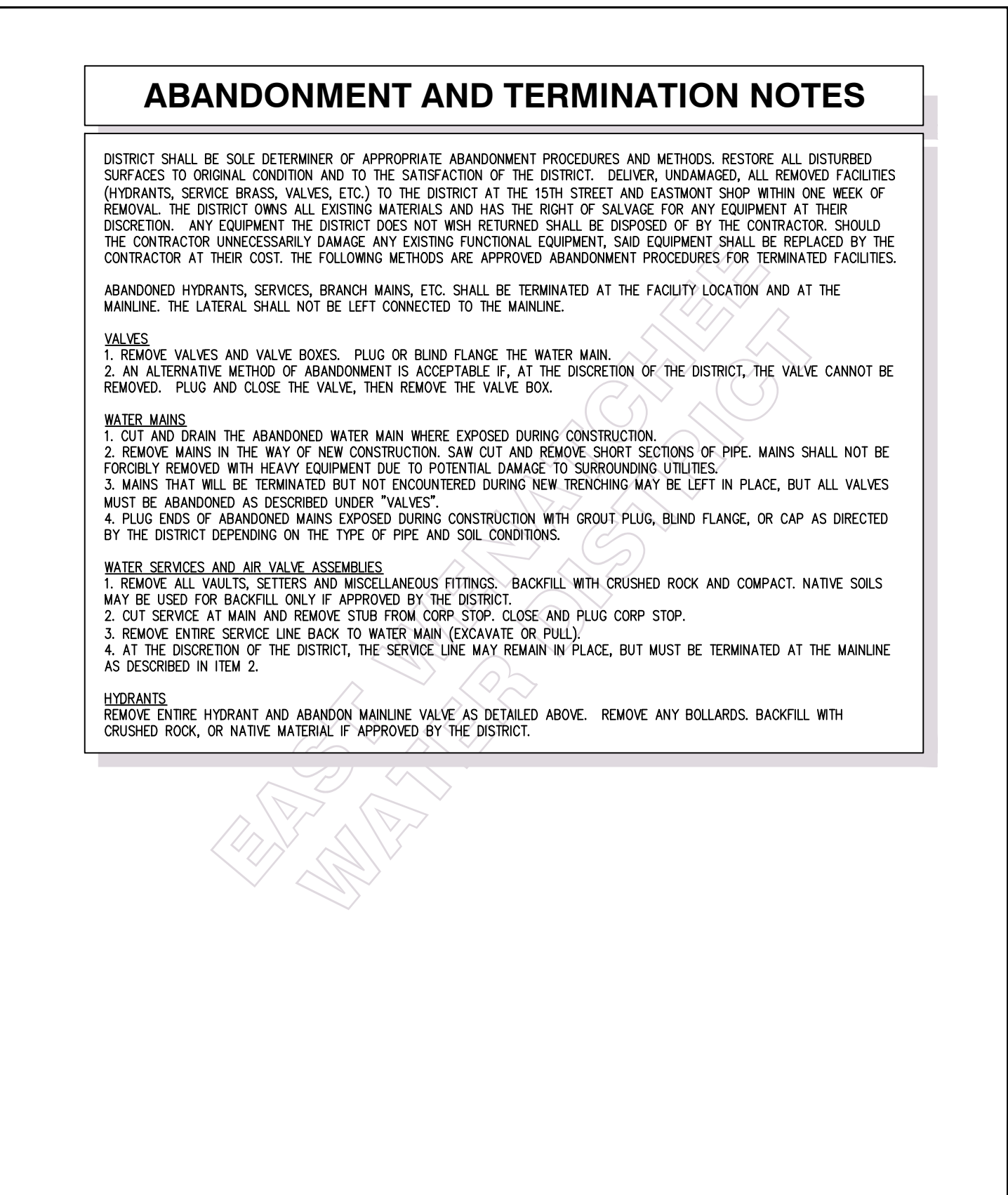
East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
BACKFLOW PREVENTION ASSEMBLY	DRAWING NO. W-13	SHEET NO. 25
File:EWDTW4	Revised: MAR 1, 2019	Printed: MAR 1, 2019



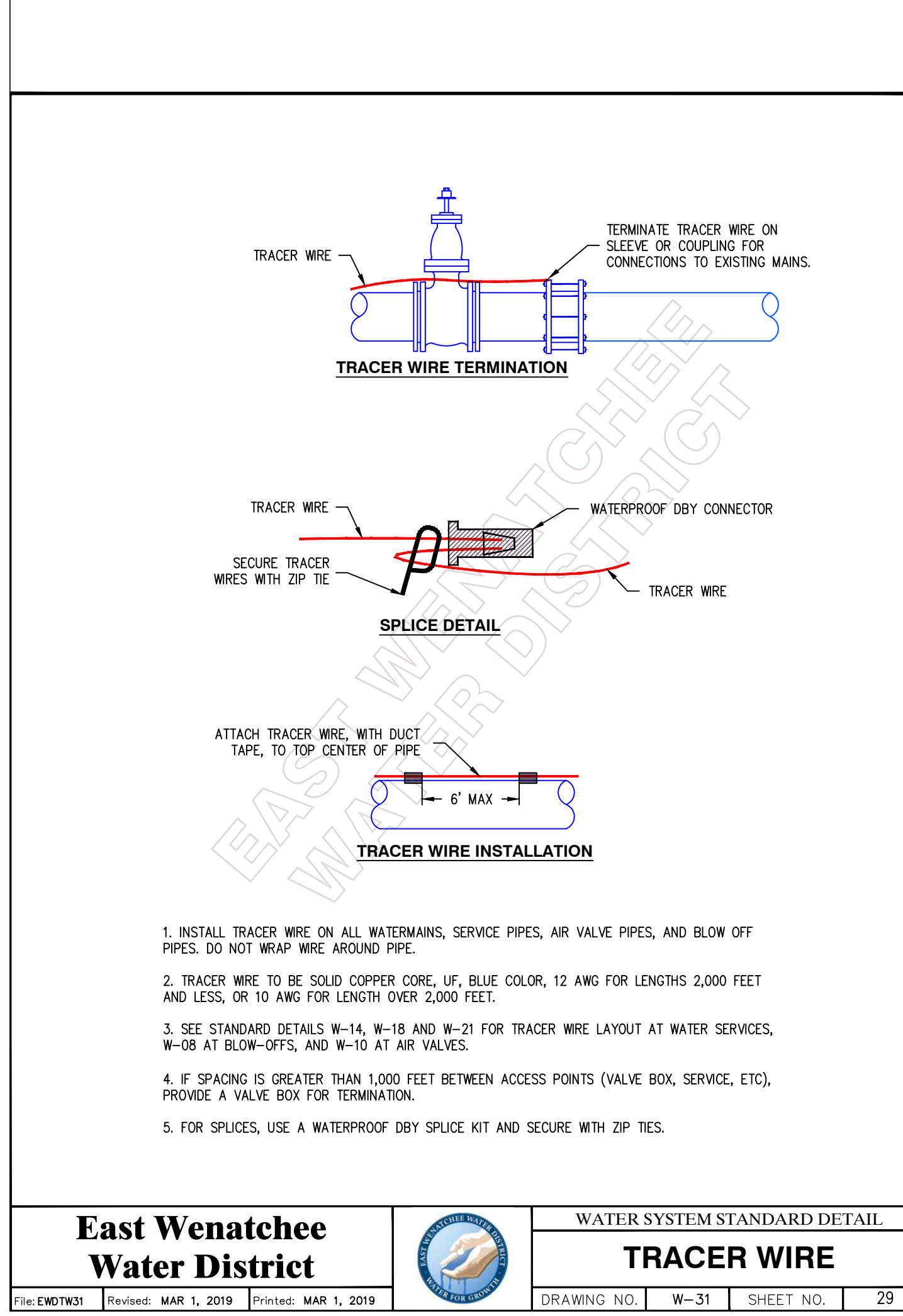
East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
BACKFLOW ASSEMBLY INSTALLATION	DRAWING NO. W-25	SHEET NO. 26
File:EWDTW6	Revised: MAR 1, 2019	Printed: MAR 1, 2019



East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
CONNECTIONS TO EXISTING MAINS	DRAWING NO. W-22	SHEET NO. 27
File:EWDTW8	Revised: MAY 2, 2018	Printed: MAY 2, 2018



East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
ABANDONMENT OF TERMINATED FACILITIES	DRAWING NO. W-15	SHEET NO. 28
File:EWDTW9	Revised: JAN 25, 2017	Printed: JAN 25, 2017



East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
TRACER WIRE	DRAWING NO. W-31	SHEET NO. 29
File:EWDTW3	Revised: MAR 1, 2019	Printed: MAR 1, 2019

- REVISION HISTORY**
- JULY 2014**
- W-07 DEFINED MATERIAL FOR ALL TIE/SHACKLE RODS. UPDATED DETAILS (W02, W05, W17, W20, W24) TO REFERENCE BACK TO W-07 FOR ROD MATERIAL.
 - W-10 ADDED TRACER WIRE TO SUPPLY LINE. ADDED #24 MESH SCREEN TO VENT.
 - W-12 ADDED DETAIL FOR CURB STOP RISER PIPE.
 - W-13 UPDATED BYPASS METER REGISTER MODEL.
 - W-14 ADDED CONCRETE BLOCKING AND PT WOOD SHIM CALLOUT.
 - CHANGED SERVICE LINE SIZE FOR 3/4" METER BASED ON WHICH SIDE OF THE STREET.
 - ADDED FOR CONNECTION TO EXISTING SERVICE BE AT OR BEHIND ROW.
 - W-17 CHANGED 3/4" AIR RELEASE VALVE TO 1" COMBINATION AIR VALVE, UPDATED PIPING. ADDED AIR VALVE TO BOTH SIDES OF PRV.
 - ADDED NOTE TO ADDRESS THE LOCATION OF GAUGE & AIR VALVE.
 - W-18 UPDATED FORD METER SETTER MODEL NUMBERS. ADDED A 3" LONG BRASS NIPPLE BETWEEN CURB STOP AND SETTER.
 - W-19 UPDATED LINE WORK FOR AIR VALVE PER CHANGE TO W-17.
 - W-20 REMOVED BASKET STRAINER.
 - W-21 UPDATED FORD METER SETTER MODEL NUMBERS. ADDED 6" BRASS NIPPLE BETWEEN CURB STOP AND SETTER.
 - W-22 CHANGED VALVE ON 2" AND SMALLER DETAIL TO CURB STOP, ADDED MINIMUM WALL THICKNESS TO FLANGED EPOXY ADAPTER. ADDED DETAIL FOR CONNECTION TO EXISTING 2" AND SMALLER DEAD END MAIN.
 - W-24 REMOVED BASKET STRAINER.
 - W-26 CREATED NEW DETAIL FOR COMMON LARGE VAULT INFORMATION.
 - ADDED NOTE THAT ALL EXTERIOR THRUST BLOCKS ON LARGE VAULTS SHALL BE INSTALLED PRIOR TO THE PIPE INSTALLED THROUGH THE VAULT BEING CUT OUT.
 - ADDED A NOTE THAT REINFORCED THRUST BLOCKS SHALL BE FORMED USING WOOD FORMS NOT POURED DIRECTLY AGAINST SOIL.
 - ADDED NOTE THAT REINFORCED THRUST BLOCKS SHALL BE CONSOLIDATED USING VIBRATION.
 - W-29 ADDED NOTE THAT CUSTOMER SIDE CASINGS ARE ALWAYS REQUIRED.
 - W-30 ADDED NOTE TO DELIVER SALVAGED VALVES WITHIN ONE WEEK AND UNDAMAGED.
 - W-30 ADDED NOTE THAT RESTRAINTS AND AFFECTED PIPE MAY NOT BE REUSED ONCE ASSEMBLED.
- NOVEMBER 2014**
- W-20 REVISED METER LAY LENGTH AND MODEL FROM NEPTUNE TO SENSUS.
 - W-24 REVISED METER LAY LENGTH AND MODEL FROM NEPTUNE TO SENSUS.
 - W-30 ADDED NOTE FOR FLANGE GASKET AND BOLT MATERIALS.
- JUNE 2015**
- W-07 REMOVED ASTM A36 STEEL FROM TABLE HEADING.
 - W-08 REVISED NOTE TO SEE DETAIL W29 FOR VAULT INSTALLATION REQUIREMENTS.
 - W-10 REVISED NOTE TO SEE DETAIL W29 FOR VAULT INSTALLATION REQUIREMENTS.
 - W-10 CHANGED VAULT LOCATION TO BE IN SIDEWALK.
 - W-13 REVISED VAULT DRAINS TO CONFORM TO DETAIL W-26.
 - W-15 REVISED FIRST PARAGRAPH.
 - W-26 REVISED NOTE REGARDING PIPE LENGTHS TO ACCOMMODATE LONG VAULTS.
 - W-26 ADDED REQUIREMENT OF 2 SUPPORTS FOR LADDER-UP EXTENSIONS.
 - W-21 ADDED REQUIREMENT OF 2 SUPPORTS FOR PE PIPE SERVICE CONNECTION.
 - W-21 ADDED LENGTHS FOR BRASS NIPPLE BASED ON SINGLE OR DOUBLE SERVICE.
 - W-23 ADDED REQUIREMENT OF 2 SUPPORTS FOR PE PIPE SERVICE CONNECTION.
 - W-29 CHANGED DETAIL TITLE TO "WATER SERVICE, AIR VALVE, BLOW OFF VAULT INSTALLATION PLACEMENT".
 - W-29 ADDED REQUIREMENT OF 2 SUPPORTS FOR PE PIPE SERVICE CONNECTION.
 - W-29 CHANGED NOTE ON THE LIDS INSTALLATION WITHIN SIDEWALK DETAIL TO REQUIRING A FULL PANEL OF SIDEWALK AROUND VAULT WHEN SIDEWALK IMPROVEMENTS ARE DEFERRED.
 - W-29 DETAIL NOTE CHANGES:
 - ADDED TO NOTE TO SET LID 2" ABOVE FINISHED GRADE IN LANDSCAPE AREAS.
 - ADDED NEW NOTE TO INSTALL MASTIC BETWEEN VAULT SECTIONS
 - ADDED NEW NOTE REQUIRING A HMA APRON AROUND THE LID IN UNPAVED TRAVEL AREAS.
 - W-30 RE-ADDED VAULT LID NOTE ACCIDENTALLY DELETED DURING 2014 REVISIONS.
 - W-30 MOVED NOTE REGARDING SALVAGED EQUIPMENT TO DETAIL W-15.
- JUNE 2016**
- W-13 REVISED MINIMUM VAULT SIZE REQUIREMENTS
 - W-14 REVISED SADDLE FIT RANGE
 - W-18 ADDED MUELLER PRODUCT INFORMATION TO TABLE
 - W-21 ADDED MUELLER PRODUCT INFORMATION TO TABLE
 - W-30 ADDITIONAL SPACING REQUIREMENTS FOR CASING RUNNERS
- JANUARY 2017**
- W-01 REVISED WATER MAIN COVERAGE DEPTH NOTE
 - W-01 REVISED THE THRUST RESTRAINT NOTE
 - W-01 INCLUDED SETTERS AND TAILPIPE IN PRESSURE TEST NOTE
 - W-01 INCLUDED OPEN END OF VALVES IN PIPE PLUG NOTE
 - W-06 REMOVED DEADMAN THRUST BLOCK DETAIL
 - W-07 REVISED ATTACHMENT DETAIL TO INCLUDE A WASHER AND DOUBLE NUT OR NYLOCK NUT
 - W-10 CLARIFIED CMU BLOCK SIZE REQUIRED AND ELIMINATED CMU BLOCK UNDER CURB STOP
 - W-10 CLARIFIED MATERIAL ALLOWED FOR CORP STOP BLOCKING.
 - W-12 ADDED NOTE 8 AND ADDED PLAN VIEW OF BOX LID
 - W-13 UPDATED NOTE 3 TO CLARIFY RESTRAINED PIPE REQUIREMENTS
 - W-13 REMOVED THRUST BLOCKS AND SHACKLES
 - W-13 CHANGED THE FCA TO A FLX RJ ADAPTER
 - W-13 ADDED DISMANTLING JOINT
 - W-13 UPDATED VAULT MIN INTERIOR DIMENSION REQUIREMENTS TO MATCH NEW PIPE LAYOUT
 - W-13 INCLUDED IPERL IN TYPE OF METER ALLOWED
 - W-15 INCLUDED AIR VALVE ASSEMBLIES IN WATER SERVICE SECTION TITLE
 - W-19 REMOVED WALL COLLARS FROM DETAIL
 - W-20 REMOVED EXTERIOR BLOCKS AND SHACKLES, ADDED NOTE 8, UPDATED FITTING NO. 2 FROM MJ TO RJ
 - W-21 REMOVED NOTE 4 REGARDING MASTIC BETWEEN CHAMBER TOP AND BASE
 - W-21 ADDED NOTE REGARDING PRESSURE TESTING SERVICE
 - W-21 ADDED NOTE IN ELEVATION REGARDING REQUIRED ADAPTER IN 1" SETTERS
 - W-24 REMOVED EXTERIOR BLOCKS AND SHACKLES, ADDED NOTE 8, UPDATED FITTING NO. 2 FROM MJ TO RJ WITH NO FCA OPTION
 - W-26 REMOVED ALL WALL COLLARS
 - W-26 UPDATED NOTE 2 TO HAVE THE DISTRICT DECIDE IF EXTERNAL BLOCKS ARE REQUIRED.
 - W-26 CLARIFIED IN NOTE 3 TO NEATLY ROUTE DRAIN PIPING IN VAULT
 - W-26 CREATED A NEW NOTE 7 ALLOWING THE DISTRICT TO REQUIRE INTERIOR PAINT
 - W-26 UPDATED NOTE 8 (WAS PREVIOUSLY 7) TO REQUIRE EXTERIOR COAT ON GROUT PATCHES
 - W-30 RELOCATED CASING NOTE TO CASING DETAIL, W-32
 - W-30 UPDATED CONTRACTOR SHUTDOWN REQUIREMENT NOTE
 - W-30 INCLUDED ASTM A307 GRADE B FOR FLANGE BOLTS
 - W-31 NEW DETAIL CREATED FOR TRACER WIRE INSTALLATION
 - W-32 NEW DETAIL CREATED FOR CASING PIPES
- SEPTEMBER 2017**
- W-01 RELOCATED DOMESTIC-MADE REQUIREMENT NOTE FROM NOTE 15 TO NOTE 1.
 - W-01, W-30 SPLIT NOTE 15 INTO SEPARATE NOTES 1, 2, AND 17. RENUMBERED OTHER NOTES ACCORDINGLY.
- JUNE 2018**
- W-01 CLARIFIED CUSTOMER SIDE TAILPIPE IN PRESSURE TESTING NOTE.
 - W-01 REVISED DOMESTIC MADE REQUIREMENT NOTE TO EXCLUDE CASING PIPES
 - W-02 UPDATED THE APPROVED M&H MODEL NUMBERS
 - W-02 ADDED TRACER WIRE TO ELEVATION VIEW
 - W-03 ADDED NOTE TO TRENCH DETAIL ABOUT TRACER WIRE INSTALLATION.
 - W-04 ADDED A ROW FOR SILT IN TABLE 2.
 - W-07 ADDED ATTACHMENT DETAIL FOR SHACKLE PLATES
 - W-07 ADDED A BULLET LIST OF APPROVED MATERIALS FOR THE TIE RODS IN THE GENERAL NOTES.
- JUNE 2018 (CONTINUED)**
- W-08 REVISED THE TRACER WIRE TO NOT WRAP AROUND THE PIPE.
 - W-10 REVISED TRACER WIRE ROUTING.
 - W-10 CREATED AN ISOMETRIC OF THE BLOW-OFF TEE.
 - W-10 UPDATED THE MODEL NUMBERS FOR THE APCO AIR RELEASE/VACUUM VALVE.
 - W-10 CALLED OUT THE LENGTH OF THE NIPPLE UNDERNEATH THE AIR RELEASE/VACUUM VALVE.
 - W-12 ADDED TRACER WIRE TO ISOLATION VALVE DETAIL
 - W-12 UPDATED VALVE NOTE TO INCLUDE VALVES ON TEES.
 - W-12 REVISED ISOLATION VALVE NOTE TO 4" AND LARGER.
 - W-12 CLARIFIED PRE-PRESSURE TEST NOTE TO SAY CLOSED SEAT.
 - W-12 ADDED TO MARKER POST NOTE TO INCLUDE WHEN VALVE IS IN GRAVEL AREA.
 - W-13 ADDED 12" VALVE SIZE DATA TO THE VAULT MIN. INSIDE TABLE
 - W-14 ADDED 1" MIN SIZE TO PE SERVICE PIPE
 - W-14 REVISED TRACER WIRE TO NOT WRAP AROUND PIPE
 - W-14 INCLUDED "WHEN TAPPING EXISTING MAIN" TO NOTE ABOUT TRACER WIRE CONNECTION.
 - W-16 ADDED A FUSION BONDED POLYESTER COATING REQUIREMENT TO THE MECHANICAL JOINT RESTRAINTS
 - W-16 UPDATED THE REQUIRED RESTRAINED LENGTHS FOR ALL FITTINGS
 - W-17 ADDED A BELL REDUCER ON THE GAUGE & AIR VALVE DETAIL
 - W-17 ADDED A MAX TAP SIZE TABLE
 - W-18 REVISED TRACER WIRE TO NOT WRAP AROUND PIPE
 - W-18 ADDED DETAIL TO SHOW SERVICE LINE GOING UNDER CROSSING UTILITY
 - W-18 ADDED 3" CASING TO ELEVATION DETAIL FOR SERVICE PIPE
 - W-19 ADDED FLX RJ ADAPTERS TO EACH END OF THE MAIN PIPE IN THE VAULT
 - W-19 ADDED A SPOOL OF PIPE TO SEPARATE THE PRV'S AND MOVE THE LADDER
 - W-19 REVISED ITEM NO. 4, REDUCING TEE, TO COME WITH A TAPPED BOSS
 - W-20 ADDED A VALVE AND DRAIN ON THE BYPASS
 - W-21 REVISED TRACER WIRE TO NOT WRAP AROUND PIPE
 - W-21 UPDATED THE MUELLER MODEL NUMBER
 - W-22 REMOVED NOTES AND PIPING THAT WAS REDUNDANT TO DETAIL W-15
 - W-22 UPDATED GENERAL NOTE 1 TO READ WATERMAIN INSTEAD OF BRANCH
 - W-22 UPDATED COUPLING NOTE TO INCLUDE ROMAC 511 COUPLING OR EQUAL WITH A 7" CENTER RING LENGTH MINIMUM.
 - W-24 ADDED A VALVE AND DRAIN ON THE BYPASS
 - W-26 CLARIFIED NOTE ABOUT DRILLING 2" HOLE IN DOOR. ONLY IF VAULT HAS METER
 - W-26 ADDED NOTE ABOUT A SPRAY UNDERCOAT TO THE GROUT PACK
 - W-26 REVISED LADDER-UP TO BE SPRING LOADED AND INCLUDED APPROVED MATERIALS FOR THE LADDER
 - W-29 ADDED REFERENCE TO RETAINING WALL DETAIL TO GENERAL NOTE 4
 - W-30 UPDATED THE DIMENSIONS FOR THE RECESSED HOLE FOR THE RADIO.
 - W-30 ADDED NOTE STATING THE TYPE OF VALVES TO BE USED WHEN SMALLER THAN
 - W-31 UPDATED TRACER WIRE TO COME IN BETWEEN TWO PARTS OF VALVE BOX
 - W-31 UPDATED DETAIL TO SHOW TRACER WIRE TERMINATING ON SLEEVE OR COUPLING
 - W-31 REVISED THE WATERPROOF NUT TO A WATERPROOF DBY CONNECTOR
 - W-31 REMOVED TRACER WIRE WRAPPING DETAIL
 - W-31 ADDED GENERAL NOTE 6
 - W-32 ADDED DETAIL FOR CASINGS LONGER THAN 20'
 - W-32 INCLUDED A CROSS SECTION OF THE CROSS UTILITY FOR EACH CASING DETAIL.
 - W-32 ADDED NOTE ABOUT CASING RUNNER SELECTION SIZE.
 - W-32 ADDED NOTE STATING CASING SIZE NEEDED FOR VARIOUS PUSH-ON JOINT DI CARRIER PIPE SIZES.
 - W-14, W-18, W-21, W-29 CHANGED SERVICE LINE DEPTH CALLOUT TO 48" COVER.

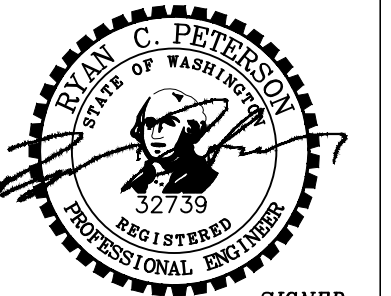
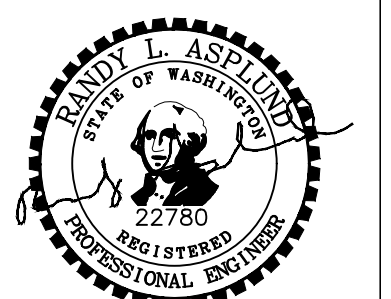
East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
TRACER WIRE	DRAWING NO. W-31	SHEET NO. 29
File:EWDTW3	Revised: MAR 1, 2019	Printed: MAR 1, 2019

- MARCH 2019**
- W-01 (NOTE 1) ADDED TO USE MOST CURRENT VERSION OF STANDARDS.
 - W-01 (NOTE 13) ADDED TO PRETEST VALVES PRIOR TO INSTALLATION.
 - W-13 ADDED MAXIMUM DRAIN PIPE LENGTH OF 20 FEET.
 - W-16 ADDED MULTIPLIER FOR PVC PIPE, ADDED THAT SET-SCREW RESTRAINTS AND TYLER TUFGrip RESTRAINTS ARE NOT ALLOWED.
 - W-25 ADDED MAXIMUM DRAIN PIPE LENGTH OF 20 FEET
 - W-30 (NOTE 23) ADDED COEFFICIENT OF FRICTION REQUIREMENT.
 - W-31 REMOVED TRACER WIRE IN VALVE BOXES.

East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
CONNECTIONS TO EXISTING MAINS	DRAWING NO. W-22	SHEET NO. 27
File:EWDTW8	Revised: MAY 2, 2018	Printed: MAY 2, 2018

- ABANDONMENT AND TERMINATION NOTES**
- DISTRICT SHALL BE SOLE DETERMINER OF APPROPRIATE ABANDONMENT PROCEDURES AND METHODS. RESTORE ALL DISTURBED SURFACES TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE DISTRICT. DELIVER, UNDAMAGED, ALL REMOVED FACILITIES (HYDRANTS, SERVICE BRASS, VALVES, ETC.) TO THE DISTRICT AT THE 15TH STREET AND EASTMONT SHOP WITHIN ONE WEEK OF REMOVAL. THE DISTRICT OWNS ALL EXISTING MATERIALS AND HAS THE RIGHT OF SALVAGE FOR ANY EQUIPMENT AT THEIR DISCRETION. ANY EQUIPMENT THE DISTRICT DOES NOT WISH RETURNED SHALL BE DISPOSED OF BY THE CONTRACTOR. SHOULD THE CONTRACTOR UNNECESSARILY DAMAGE ANY EXISTING FUNCTIONAL EQUIPMENT, SAID EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR AT THEIR COST. THE FOLLOWING METHODS ARE APPROVED ABANDONMENT PROCEDURES FOR TERMINATED FACILITIES.
- ABANDONED HYDRANTS, SERVICES, BRANCH MAINS, ETC. SHALL BE TERMINATED AT THE FACILITY LOCATION AND AT THE MAINLINE. THE LATERAL SHALL NOT BE LEFT CONNECTED TO THE MAINLINE.
- VALVES**
- REMOVE VALVES AND VALVE BOXES. PLUG OR BOND FLANGE THE WATER MAIN.
 - AN ALTERNATIVE METHOD OF ABANDONMENT IS ACCEPTABLE IF, AT THE DISCRETION OF THE DISTRICT, THE VALVE CANNOT BE REMOVED. PLUG AND CLOSE THE VALVE, THEN REMOVE THE VALVE BOX.
- WATER MAINS**
- CUT AND DRAIN THE ABANDONED WATER MAIN WHERE EXPOSED DURING CONSTRUCTION.
 - REMOVE MAINS IN THE WAY OF NEW CONSTRUCTION. SAW OUT AND REMOVE SHORT SECTIONS OF PIPE. MAINS SHALL NOT BE FORCEFULLY REMOVED WITH HEAVY EQUIPMENT DUE TO POTENTIAL DAMAGE TO SURROUNDING UTILITIES.
 - MAINS THAT WILL BE TERMINATED BUT NOT ENCOUNTERED DURING NEW TRENCHING MAY BE LEFT IN PLACE, BUT ALL VALVES MUST BE ABANDONED AS DESCRIBED UNDER "VALVES".
 - PLUG ENDS OF ABANDONED MAINS EXPOSED DURING CONSTRUCTION WITH GROUT, PLUG FLANGE, OR CAP AS DIRECTED BY THE DISTRICT DEPENDING ON THE TYPE OF PIPE AND SOIL CONDITIONS.
- WATER SERVICES AND AIR VALVE ASSEMBLIES**
- REMOVE ALL VAULTS, SETTERS AND MISCELLANEOUS FITTINGS. BACKFILL WITH CRUSHED ROCK AND COMPACT. NATIVE SOILS MAY BE USED FOR BACKFILL ONLY IF APPROVED BY THE DISTRICT.
 - CUT SERVICE AT MAIN AND REMOVE STUB FROM CORP STOP. CLOSE AND FULLY CORP STOP.
 - REMOVE ENTIRE SERVICE LINE BACK TO WATER MAIN (EXCAVATE OR PLUG).
 - AT THE DISCRETION OF THE DISTRICT, THE SERVICE LINE MAY REMAIN IN PLACE, BUT MUST BE TERMINATED AT THE MAINLINE AS DESCRIBED IN ITEM 2.
- HYDRANTS**
- REMOVE ENTIRE HYDRANT AND ABANDON MAINLINE VALVE AS DETAILED ABOVE. REMOVE ANY BOLLARDS. BACKFILL WITH CRUSHED ROCK OR NATIVE MATERIAL IF APPROVED BY THE DISTRICT.

East Wenatchee Water District	WATER SYSTEM STANDARD DETAIL	
ABANDONMENT OF TERMINATED FACILITIES	DRAWING NO. W-15	SHEET NO. 28
File:EWDTW9	Revised: JAN 25, 2017	Printed: JAN 25, 2017



SIGNED: 06/14/18

SIGNED: 06/14/18