

NOTES:

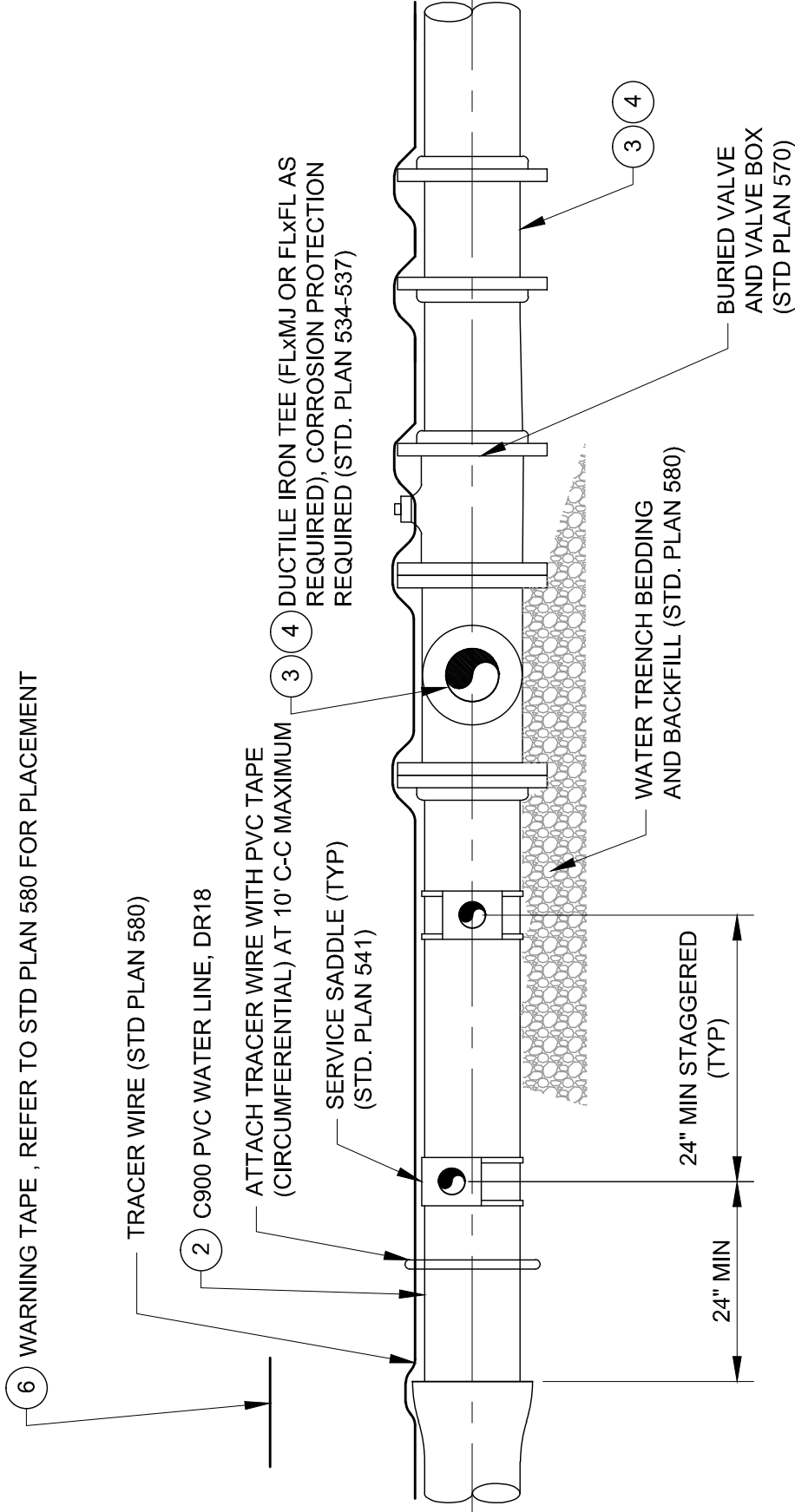
1. PROVIDE RETAINING GLANDS ON MECHANICAL JOINTS
2. STAGGER MULTIPLE TAPS 22-1/2 DEG. AND MAINTAIN 24" C-C MINIMUM SEPARATION
3. PROVIDE CORROSION PROTECTION AS REQUIRED. REFER TO STANDARD PLAN 534.
4. PROVIDE WATER LINE LOOPS AS REQUIRED TO MAINTAIN SEPARATION WITH OTHER UTILITIES, REFER TO STANDARD PLAN 544



DATE	3/2014
REV.	0

**WATER MAIN AND FIRE LINE
3" TO 12" DIAMETER**

STD. PLAN	540-A
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NOTES:

1. PROVIDE A 10' MINIMUM PVC PIPE SECTION LENGTH BETWEEN FITTINGS, VALVES, AND COUPLINGS
2. PROVIDE RETAINING GLANDS ON MECHANICAL JOINTS
3. STAGGER MULTIPLE TAPS 22-1/2 DEG. AND MAINTAIN 36" C-C MINIMUM SEPARATION
4. PROVIDE CORROSION PROTECTION ON ALL METALLIC FITTINGS, VALVES, COUPLERS, ETC., AS REQUIRED. REFER TO STANDARD PLAN 534.
5. PROVIDE WATER LINE LOOPS AS REQUIRED TO MAINTAIN SEPARATION WITH OTHER UTILITIES, REFER TO STANDARD PLAN 544



PARK CITY MUNICIPAL CORPORATION
WATER

DATE	3/2014
REV.	0

**WATER MAIN - PVC PIPE
8" TO 12" DIAMETER**

STD. PLAN
540-B

LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
①	DUCTILE IRON PIPE, 3" TO 12" DIAMETER, PRESSURE CLASS 350, CEMENT-MORTAR LINING, ASPHALTIC INTERIOR/EXTERIOR COATING, AWWA C150 / C151 / C104	U.S. PIPE (1) PACIFIC STATES	<u>STANDARD JOINT PIPE:</u> PUSH ON TYTON JOINT
		U.S. PIPE (1) PACIFIC STATES	<u>RESTRAINED JOINT PIPE:</u> THRUST-LOCK TR FLEX
②	POLYVINYL CHLORIDE (PVC) PIPE, C.I.O.D., C900, DR 18, INTEGRAL BELL JOINT	JM EAGLE (1)	<u>STANDARD JOINT PIPE:</u> BLUE BRUTE
③	DUCTILE IRON FITTINGS, 3" TO 12" DIAMETER, FULL BODY, PRESSURE CLASS 350, CEMENT MORTAR LINED, ASPHALTIC EXTERIOR COATING, AWWA C153 / C104 FLANGES: AWWA C110 / C115, CLASS 125 FLANGE WITH FULL FACE OR RING FLANGE-TYTE GASKETS	U.S. PIPE (1) PACIFIC STATES	<u>PUSH ON STYLE FITTING:</u> TYTON JOINT <u>FLANGED FITTING:</u>
		U.S. PIPE (1) PACIFIC STATES	<u>RESTRAINED JOINT PIPE:</u> THRUST-LOCK TR FLEX
④	FITTINGS – DUCTILE IRON MECHANICAL JOINT PIPE WITH RETAINER GLANDS OR SST TIE ROD / NUT RESTRAINTS, AWWA C110 / C111 / C104	EBBA IRON (1)	<u>FITTINGS:</u> MECHANICAL JOINT <u>RETAINER GLANDS:</u> MEGALUG SERIES 1100, STD T-BOLTS AND NUTS
⑤	POLYETHYLENE ENCASUREMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C703E METHODS A & C	CHRISTY'S (1)	AWWA C703E METHOD A (4 MIL) AT PIPE AND AWWA C703E METHOD C (10 MIL) AT BOLT-TYPE JOINTS, FITTINGS, AND VALVES
⑥	DETECTABLE UNDERGROUND WARNING TAPE, 5-MIL MINIMUM, ALUMINUM BACKING, BLUE BACKGROUND, 6" WIDE	SETON (1)	85525
⑦	TRACER WIRE: 12 GA. SOLID, BLUE PVC INSULATION; WIRE-WIRE CONNECTORS SILICONE-FILLED WIRE NUTS	CONNECTORS: IDEAL INDUSTRIES (1)	TWISTER DB PLUS OR APP'D EQUAL
⑧	WAX TAPE COATING SYSTEM, APPLY TO <u>ALL</u> BURIED BOLTS AND NUTS INCLUDING MECHANICAL JOINT RESTRAINT SYSTEMS, AWWA C 217. REFER TO STD. PLAN 534.		

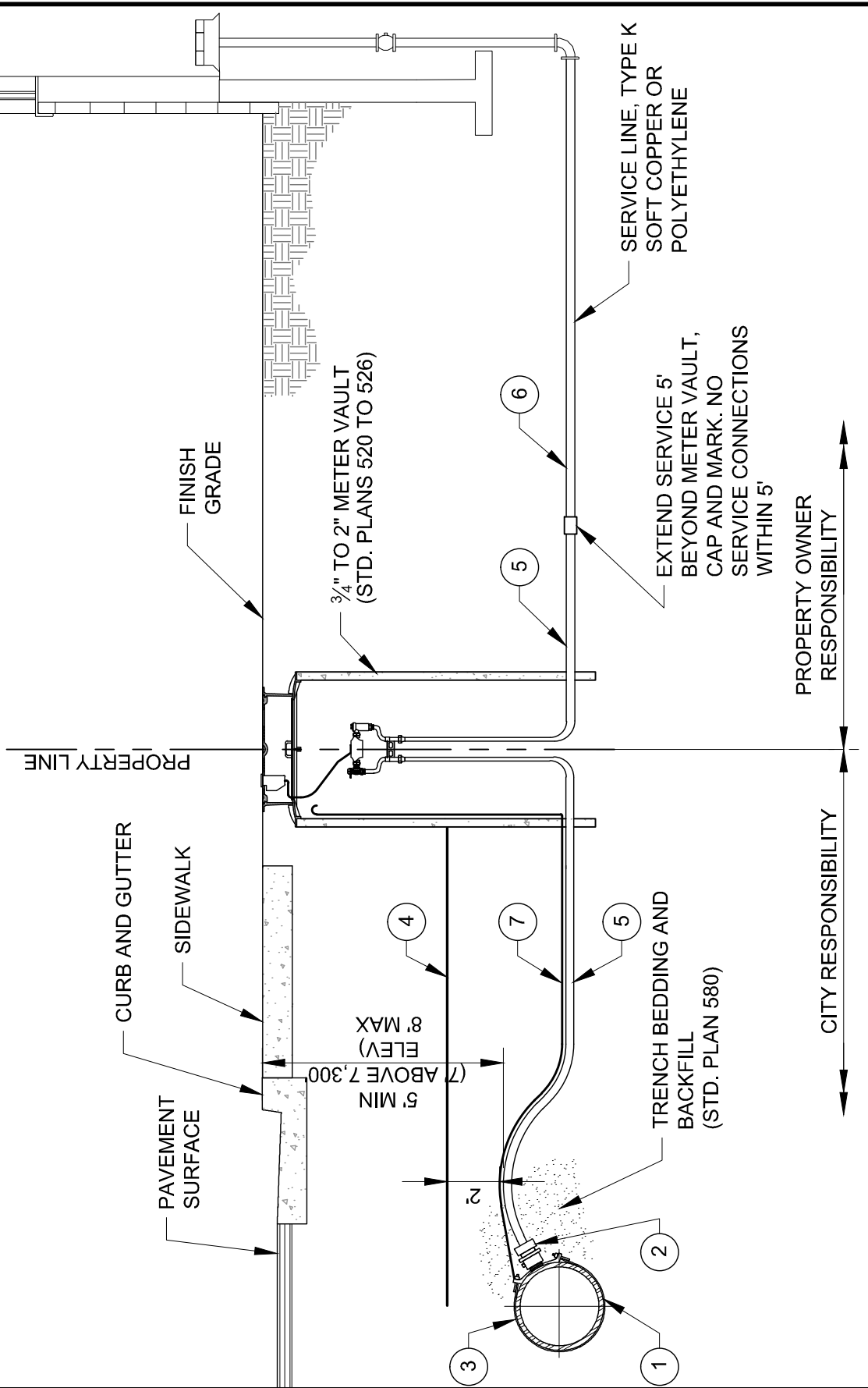
DETAIL NOTES

1. COORDINATE PIPE SIZE WITH APPROVED PLANS PRIOR TO ORDERING MATERIALS
2. LOCATE MAIN, FITTINGS, VALVES, AND FIRE LINES PER APPROVED PLANS
3. DUCTILE IRON PIPE IS REQUIRED WHEN WATER SYSTEM DESIGN PRESSURE EXCEEDS 150 PRESSURE RATING
4. PROVIDE "DOMESTIC" DUCTILE IRON FITTINGS
5. PROVIDE DUCTILE IRON RESTRAINED JOINT PIPE ON FIRE LINES, HYDRANT LINES, AND WHERE REQUIRED ON THE APPROVED PLANS
6. PROVIDE 316 STAINLESS STEEL BOLTS AND NUTS WITH ANTI-SEIZE LUBRICATION ON ALL FLANGED CONNECTIONS
7. REFER TO STANDARD PLAN 534 FOR SUPPLEMENTAL EXTERNAL CORROSION PROTECTION REQUIREMENTS. WHEN CATHODIC PROTECTION IS REQUIRED REFER TO STD. PLANS 534-538.
8. REFER TO SPECIFICATIONS FOR FLUSHING, HYDROSTATIC TESTING, AND DISINFECTING REQUIREMENTS
9. (1) DENOTES "OR EQUAL" MANUFACTURER AND MODEL. SUBMIT IN ACCORDANCE WITH CITY STANDARDS

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER MAIN AND FIRE LINES	STD. PLAN
	4/2014		540 S
	REV.		
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NOTES:

1. REFERENCE STD. PLAN 520 FOR GENERAL REQUIREMENTS - METER, METER VAULT, AND SERVICE LINE.



PARK CITY MUNICIPAL CORPORATION
WATER

DATE

2/2014

REV.

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**WATER SERVICE LINE
3/4" TO 2" METERS**

STD. PLAN


541

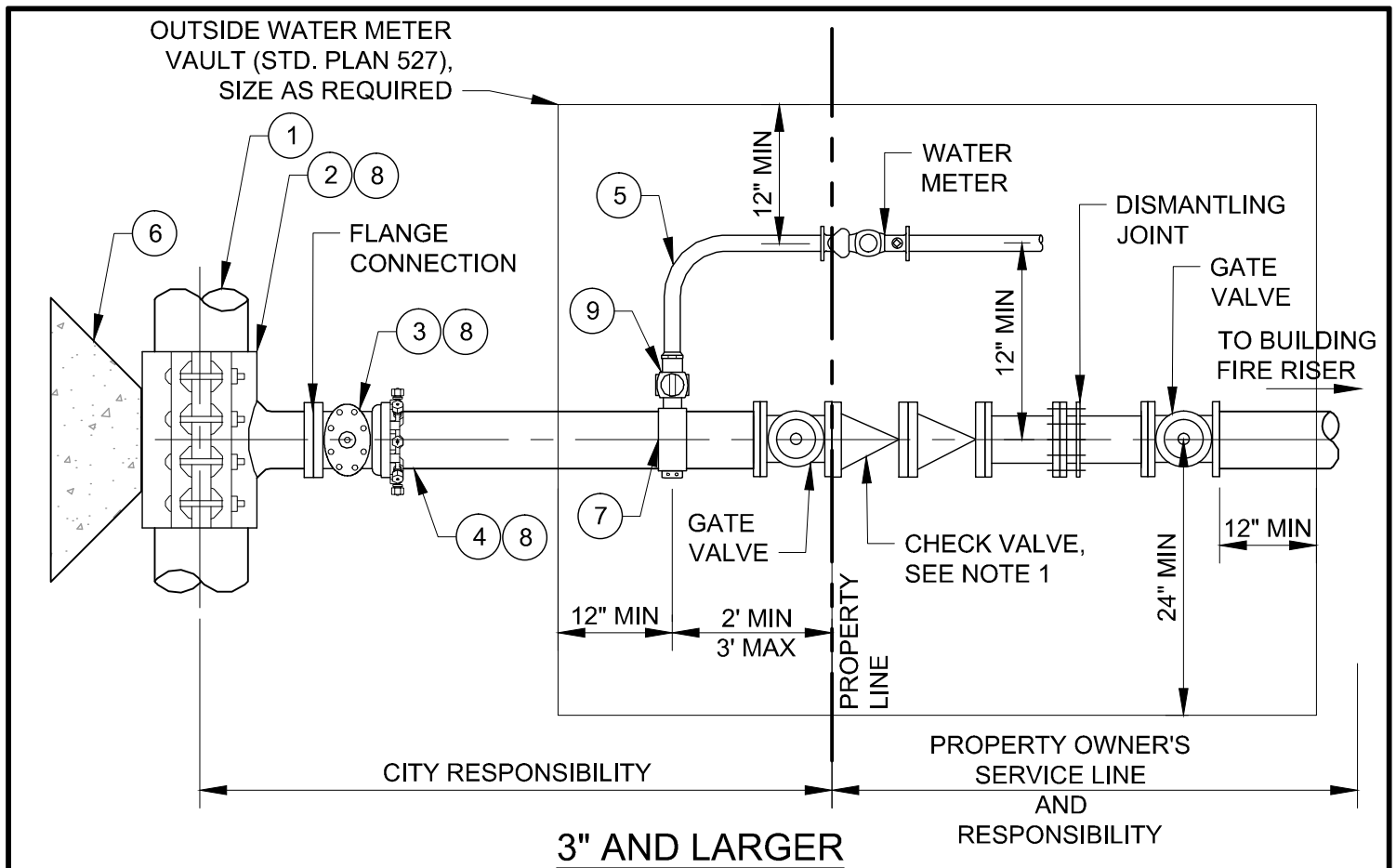
LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
①	BRONZE SERVICE SADDLE: DI & AC PIPE; DOUBLE STRAP PVC PIPE; TWO-PIECE BOLTED	MUELLER	DI & AC PIPE: BR2B SERIES, 1-1/2" SERVICE, CC THDS; 2" SERVICE FIP THDS PVC PIPE: H-13000 SERIES, 1-1/2" SERVICE, CC THDS; 2" SERVICE FIP THDS
		FORD	DI & AC PIPE: STYLE 202B 1-1/2" SERVICE, CC THDS; 2" SERVICE, FIP THDS PVC PIPE: 1-1/2" SERVICE, STYLE S902, CC THDS; 2" SERVICE, STYLE S912, FIP THDS
②	BRASS CORPORATION STOP, INLET CC THREAD, OUTLET CTS COMPRESSION	MUELLER	B-25008N
		FORD	FB1100-(SERVICE SIZE)-G-NL
③	POLYETHYLENE ENCASUREMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C703E METHOD C	CHRISTY'S OR APPROVED EQUAL	AWWA C703E METHOD C (4 MIL)
④	DETECTABLE UNDERGROUND WARNING TAPE, 5-MIL MINIMUM, ALUMINUM BACKING BLUE BACKGROUND, 6" WIDE	SETON OR APPV'D EQUAL	85525
⑤	WATER SERVICE LINE: HIGH-DENSITY POLYETHYLENE TUBING (CTS), BLUE, SDR 9, AWWA C901 1-1/2" DIA. SERVICE: 3/4" AND 1" SINGLE METER 1-1/2" DIA. SERVICE: 3/4" AND 1" DUAL METERS 2" DIA. SERVICE: 1-1/2" AND 2" SINGLE METER 2" DIA. SERVICE: 1-1/2" DUAL METERS	ADS OR APPV'D EQUAL	
⑥	WATER SERVICE LINE: HIGH-DENSITY POLYETHYLENE TUBING (CTS), BLUE, SDR 9, AWWA C901; OR, TYPE K COPPER, SOFT, AWWA C800	ADS OR APPV'D EQUAL	
⑦	TRACER WIRE: 12 GA. SOLID, BLUE PVC INSULATION; WIRE-WIRE CONNECTORS SILICONE-FILLED WIRE NUTS	IDEAL INDUSTRIES	TWISTER DB PLUS OR APP'D EQUAL

DETAIL NOTES

1. COORDINATE SERVICE SIZE WITH CITY PRIOR TO ORDERING MATERIALS
2. LOCATE SERVICE PER APPROVED PLANS
3. NO SERVICE LINE FITTINGS ALLOWED BETWEEN CORPORATION STOP AND METER VAULT CURB STOP VALVE
4. APPLY WAX TAPE COATING SYSTEM TO SERVICE SADDLE BOLTS AND NUTS, AWWA C217. SYSTEM TO INCLUDE FILLER MATERIAL, TAPE COATING, AND PROTECTIVE OUTERWRAP. DENSO NORTH AMERICA, TRENTON, OR APPROVED EQUAL (STD. PLAN 534)

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER SERVICE LINE 3/4" TO 2" METERS	STD. PLAN
	5/2014		541 S
	REV.		

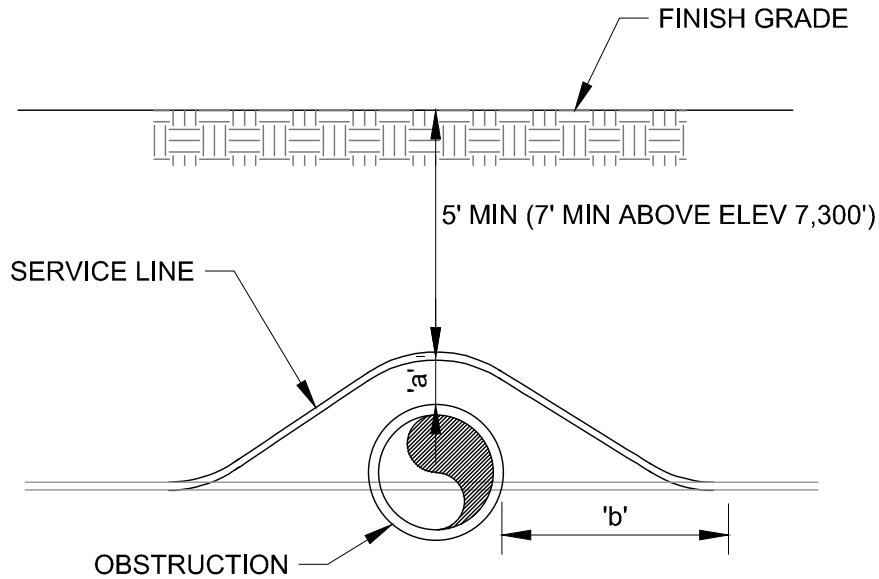


LEGEND	
ITEM	DESCRIPTION
①	EXISTING MAIN
②	DUCTILE IRON TAPPING SLEEVE OR DUCTILE IRON TEE
③	TAPPING VALVE OR FLG X MJ GATE VALVE (STD PLAN 570 AND 572)
④	DUCTILE IRON PIPE FULLY RESTRAINED (STD. PLAN 541)
⑤	WATER SERVICE LINE (STD. PLAN 541)
⑥	THRUST BLOCK (STD. PLAN 561)
⑦	BRONZE DOUBLE STRAP SERVICE SADDLE (STD. PLAN 541)
⑧	POLYETHYLENE WRAPPED (STD. PLAN 540-A)
⑨	CORPORATION STOP (STD. PLAN 541)

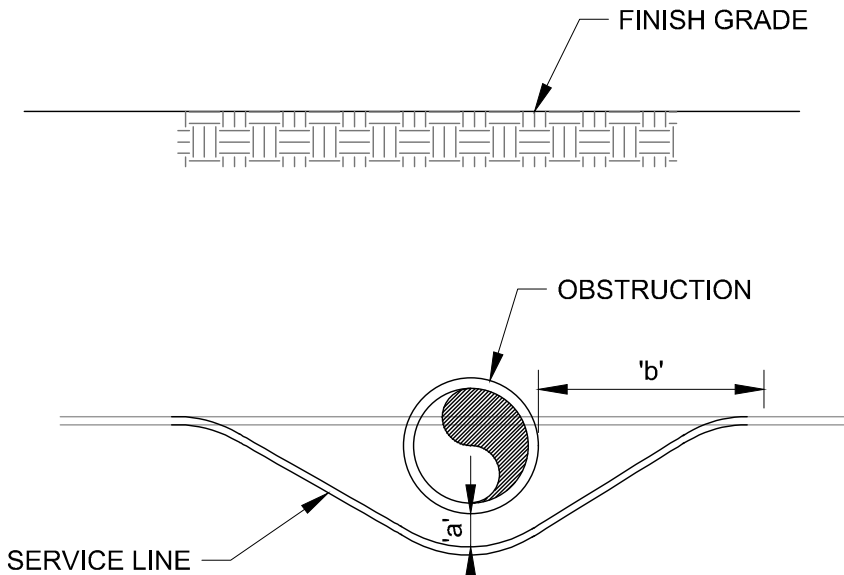
NOTES:

1. DOUBLE CHECK VALVE OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY TO BE DETERMINE BY BUILDING AND WATER DEPARTMENTS BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM USE.
2. WATER METER 3-INCH AND LARGER WILL REQUIRE A DUCTILE IRON TEE, VALVING, AND DISMANTLING JOINT. A SITE SPECIFIC DESIGN IS REQUIRED.
3. A METER BYPASS LINE IS REQUIRED FOR COMMERCIAL APPLICATIONS.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	FIRE SERVICE LINE	STD. PLAN
	4/2014		542
	REV.		
	0		



METHOD A



METHOD B

TABLE OF DIMENSIONS

	OBSTRUCTION		
	SEWER MAIN	STORM DRAIN OR CULVERT	OTHER
'a'	18"	SEE STD. PLAN 546	12" MIN
'b'	5'-0"		3'-0" MIN

NOTES:

1. ALL CULINARY WATER MAINS AND LATERALS SHALL BE INSTALLED ABOVE SEWER LINES UNLESS APPROVED BY PARK CITY AND UTAH DIVISION OF DRINKING WATER.



PARK CITY MUNICIPAL CORPORATION
WATER

DATE

6/2019

REV.

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WATER SERVICE LINE LOOP

STD. PLAN

543

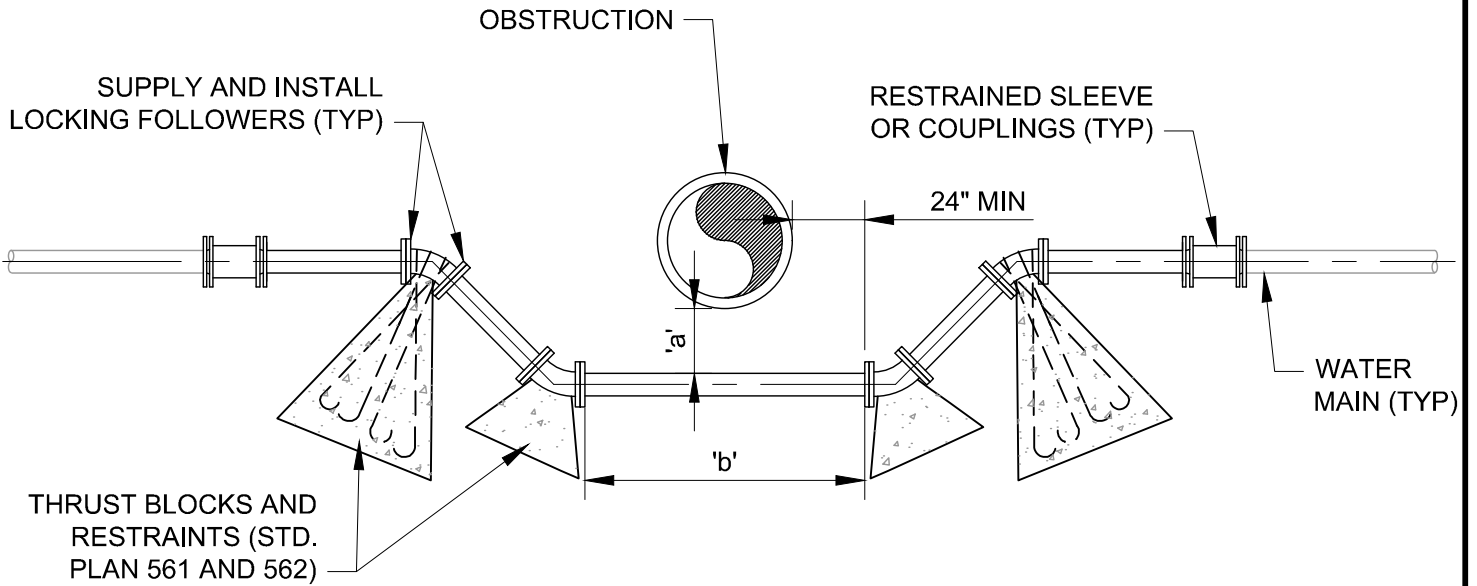


TABLE OF DIMENSIONS		
OBSTRUCTION	'a'	'b'
SEWER	18" MIN	20' MIN
STORM DRAIN OR CULVERT	SEE STD. PLAN 546	O.D. + 6'
OTHER	12" MIN	O.D. + 4'

NOTES:

METHOD A

1. RESTRAINED JOINT PIPE REQUIRED
2. ALL CULINARY WATER MAINS AND LATERALS SHALL BE INSTALLED ABOVE SEWER LINES UNLESS APPROVED BY PARK CITY AND UTAH DIVISION OF DRINKING WATER.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER MAIN LOOP	STD. PLAN
	6/2019		544-A
	REV.		
	1		

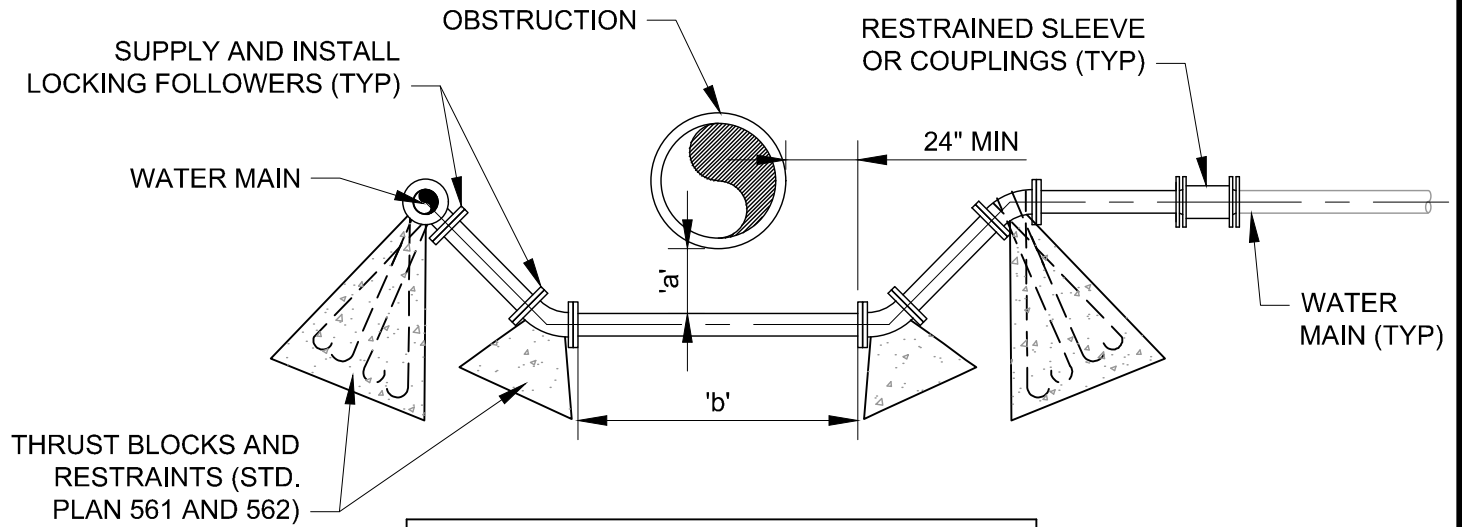


TABLE OF DIMENSIONS		
OBSTRUCTION	'a'	'b'
SEWER	18" MIN	20' MIN
STORM DRAIN OR CULVERT	SEE STD. PLAN 546	O.D. + 6'
OTHER	12" MIN	O.D. + 4'

METHOD B

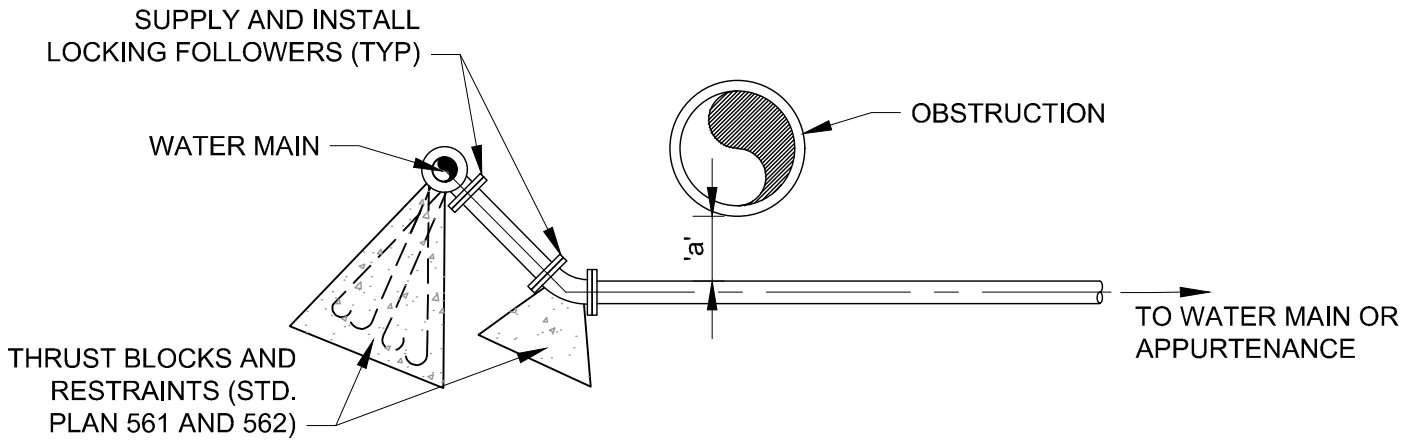


TABLE OF DIMENSIONS	
OBSTRUCTION	'a'
SEWER	18" MIN
STORM DRAIN OR CULVERT	SEE STD. PLAN 546
OTHER	12" MIN

METHOD C

NOTES:

1. RESTRAINED JOINT PIPE REQUIRED
2. ALL CULINARY WATER MAINS AND LATERALS SHALL BE INSTALLED ABOVE SEWER LINES UNLESS APPROVED BY PARK CITY AND UTAH DIVISION OF DRINKING WATER.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER MAIN LOOP	STD. PLAN
	6/2019		544-B
	REV.		
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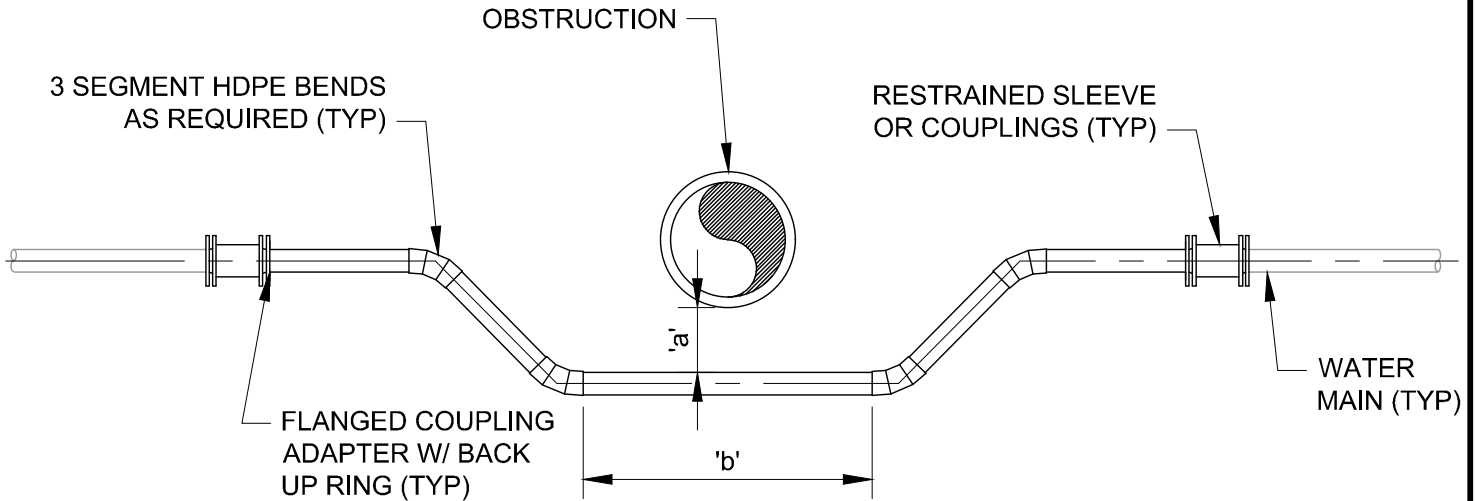


TABLE OF DIMENSIONS		
OBSTRUCTION	'a'	'b'
SEWER	18" MIN	20' MIN
STORM DRAIN OR CULVERT	SEE STD. PLAN 546	O.D. + 6'
OTHER	12" MIN	O.D. + 4'

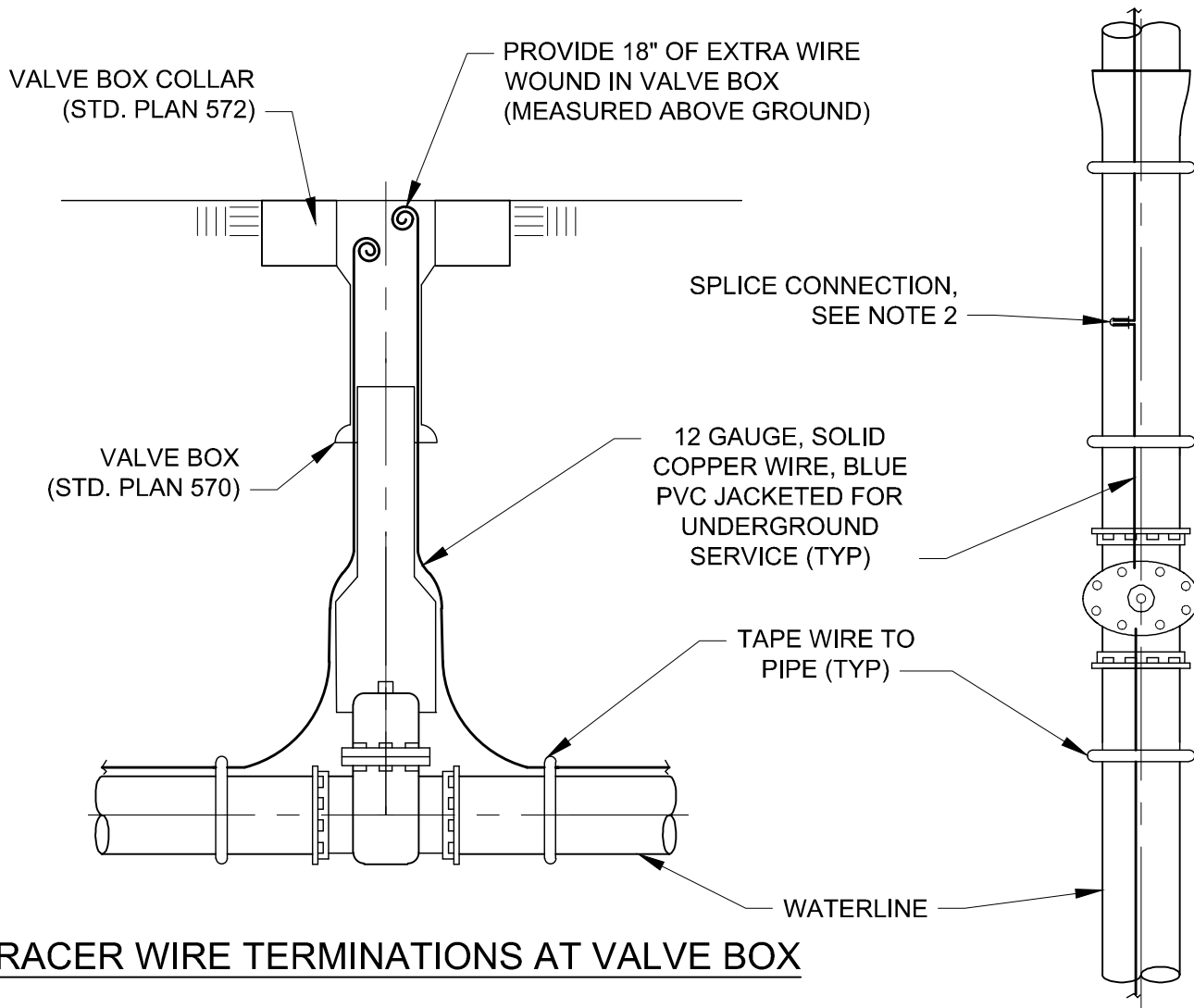
HDPE METHOD

NOTES:

HDPE PIPE WATERLINE LOOP MINIMUM REQUIREMENTS:

1. GENERAL: PIPE SHALL BE HDPE 4710 DR11 WITH AN INSIDE DIAMETER EQUAL TO OR GREATER THAN THE CONNECTING PIPE ON BOTH ENDS.
2. PIPE SHALL BE FUSION WELDED ALONG LENGTH AND FULLY RESTRAINED AT TRANSITIONS TO DIFFERING PIPE MATERIALS WITH FLANGES OR OTHER CITY APPROVED METHOD.
3. FITTINGS ALONG THE LOOP LENGTH SHALL BE HDPE UNLESS OTHERWISE APPROVED BY OWNER.
4. BENDING RADIUS NOT TO EXCEED PIPE MANUFACTURES RECOMMENDATIONS.
5. REDUCERS AND TRANSITION COUPLINGS SHALL BE PROVIDED ON BOTH ENDS AS REQUIRED AND SHALL BE HDPE OR DUCTILE IRON. CATHODIC PROTECTION REQUIRED ON FERROUS COMPONENTS PER STD. PLAN 534
6. ALL CULINARY WATER MAINS AND LATERALS SHALL BE INSTALLED ABOVE SEWER LINES UNLESS APPROVED BY PARK CITY AND UTAH DIVISION OF DRINKING WATER.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER MAIN LOOP	STD. PLAN
	6/2019		544-C
	REV.		
	1		

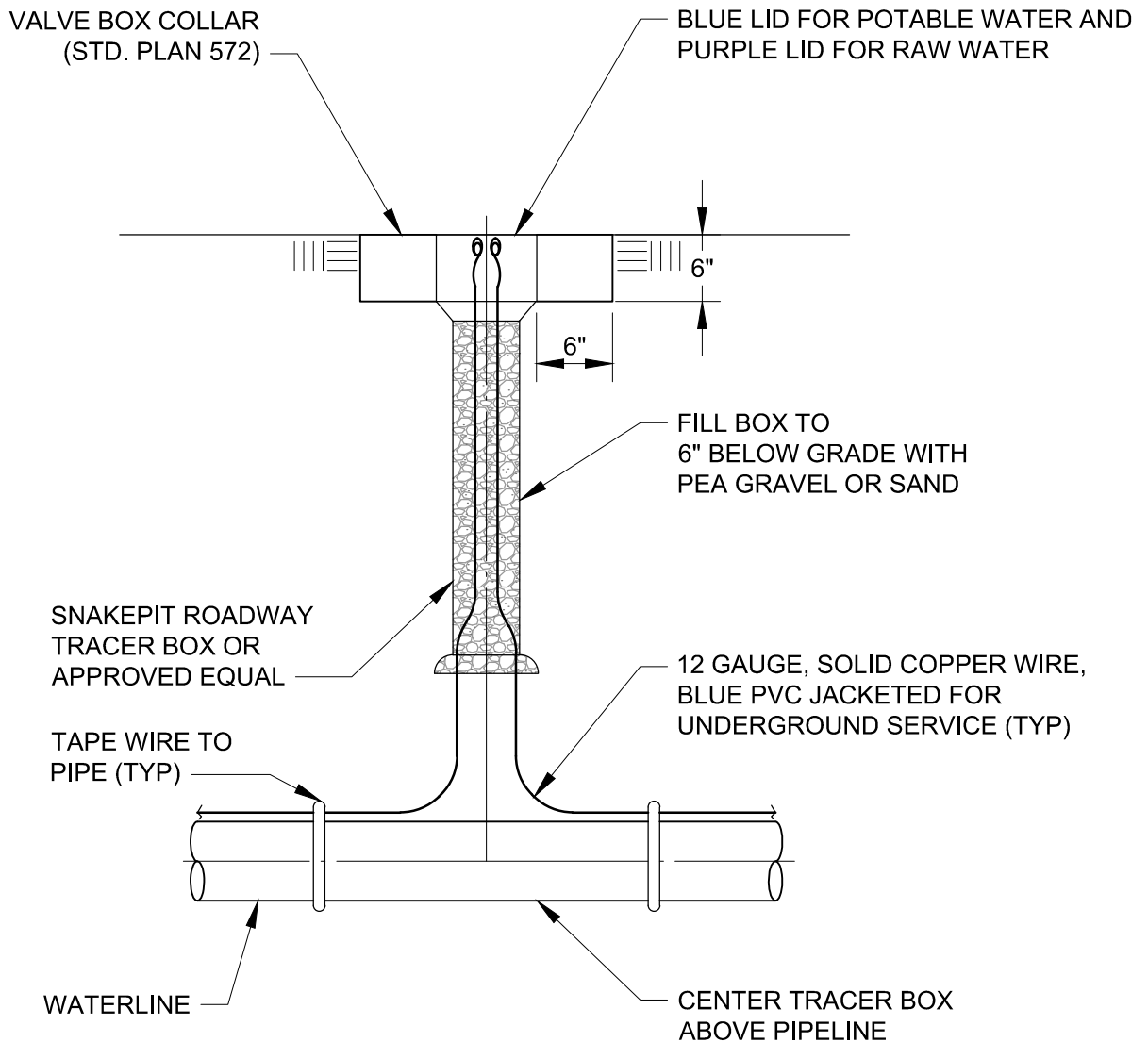


TRACER WIRE TERMINATIONS AT VALVE BOX

NOTES:

1. INSTALL TRACER WIRE ON ALL CONSTRUCTED (METALLIC AND NON-METALLIC) PIPE.
2. ALL SPLICES SHALL BE SILICONE FILLED WIRE CONNECTORS.
3. PROVIDE TRACER WIRE CONNECTIONS AT ALL VALVE BOXES AND PER STD. PLAN 545-B TO MAINTAIN A MAXIMUM DISTANCE BETWEEN CONNECTIONS OF NO GREATER THAN 500 FEET.
4. AT VAULT AND MANHOLE LOCATIONS COIL WIRE INSIDE.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	TRACER WIRE VALVE BOX TERMINATIONS	STD. PLAN
	3/2014		545-A
	REV.		
	0		



NOTES:

1. INSTALL LOCATOR WIRE ON ALL CONSTRUCTED (METALLIC AND NON-METALLIC) PIPE.
2. ALL SPLICES SHALL BE WITH SILICONE FILLED WIRE CONNECTORS.
3. PROVIDE LOCATOR WIRE CONNECTIONS PER THIS DETAIL AS REQUIRED TO MAINTAIN A MAXIMUM DISTANCE BETWEEN CONNECTIONS OF NO GREATER THAN 500 FEET. CONTRACTOR SHALL COORDINATE EACH LOCATION WITH OWNER.
4. LOCATOR WIRE AND WARNING TAPE NOT REQUIRED WHERE DIRECTIONAL DRILLING WILL TAKE PLACE.
5. AT VAULT LOCATIONS COIL WIRE INSIDE OF VAULT.



PARK CITY MUNICIPAL CORPORATION
WATER

DATE

3/2014

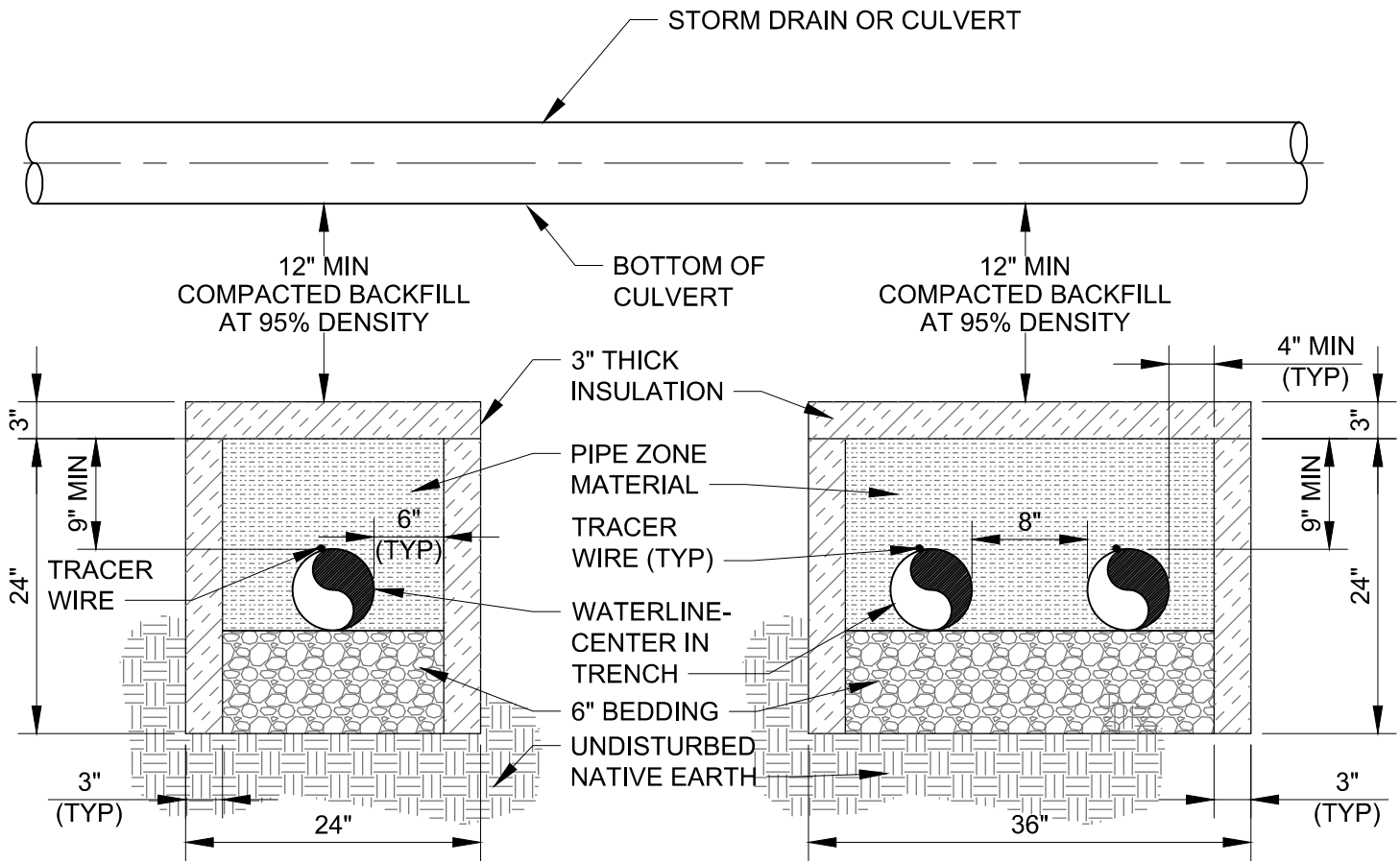
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**TRACER WIRE
ACCESS BOX TERMINATIONS**

STD. PLAN

545-B



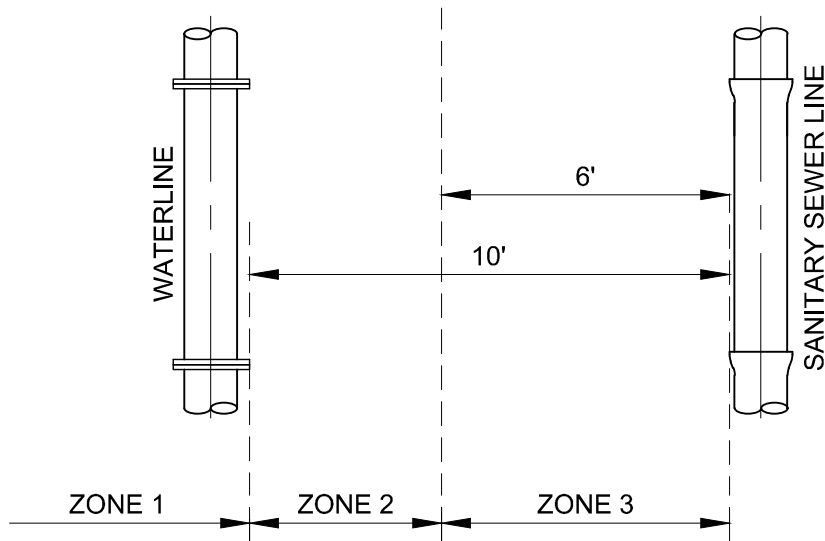
ONE LINE IN TRENCH

TWO LINES IN TRENCH

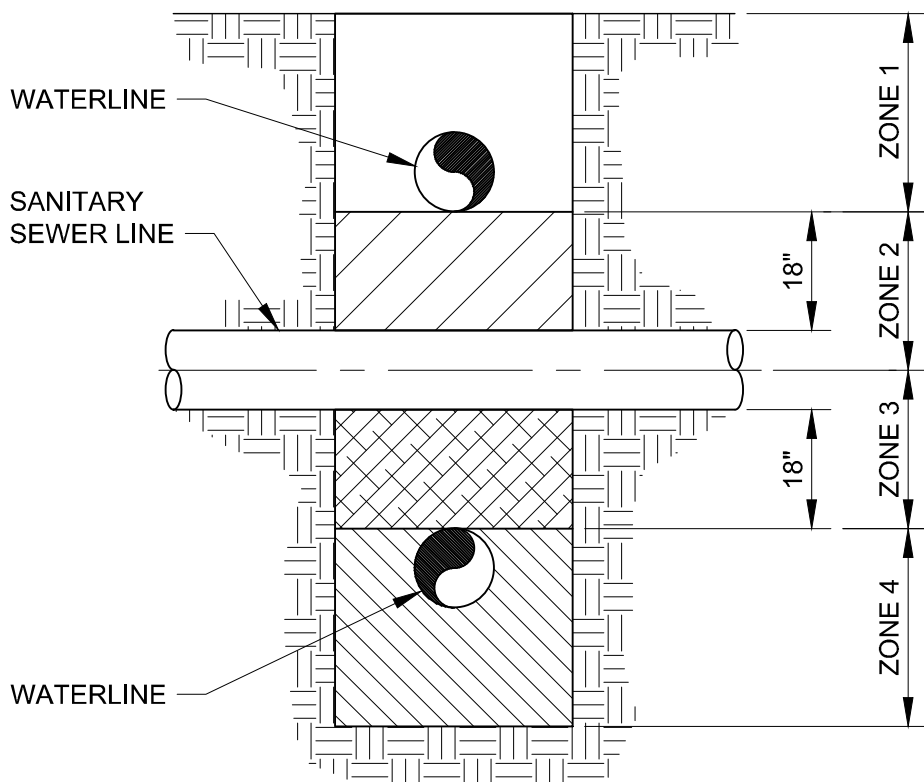
NOTES:

1. WHERE WATERLINES INTERSECT STORM DRAINS OR CULVERTS, INSTALL WATERLINE WITH FROST SHIELD. EXTEND FROST SHIELD A MINIMUM OF 3- FEET ON BOTH SIDES STORM DRAIN OR CULVERT.
2. INSULATION SHALL BE 3-INCH THICK INSULATION BOARD (DOW STYROFOAM HIGHLOAD - 60 INSULATION OR APPROVED EQUAL).
3. ALL BACKFILL MATERIAL, INCLUDING SPECIAL BEDDING AND PIPE ZONE MATERIAL, SHALL BE COMPACTED TO AT LEAST 95% DENSITY TO PROVIDE AN ADEQUATE FOUNDATION FOR THE CULVERT AND ROADWAY.
4. INSTALL TRACER WIRES AS REQUIRED (STD. PLAN 540, 541 AND 545)

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	PIPE INSULATION AT STORM DRAIN CROSSINGS	STD. PLAN
	3/2014		546
	REV.		
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HORIZONTAL SEPARATION REQUIREMENTS



VERTICAL SEPARATION REQUIREMENTS

NOTES:

1. SEE STD. PLAN 547-B FOR HORIZONTAL AND VERTICAL SEPARATION REQUIREMENT NOTES.
2. ALL CULINARY WATER MAINS AND LATERALS SHALL BE INSTALLED ABOVE SEWER LINES UNLESS APPROVED BY PARK CITY AND UTAH DIVISION OF DRINKING WATER.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER - SANITARY SEWER SEPARATION	STD. PLAN
	6/2019		547-A
	REV.		
	1		

HORIZONTAL SEPARATION

NOTES:

1. ZONE 1: WATER LINE AND SEWER LINE SEPARATED 10 FEET OR GREATER - NO SPECIAL REQUIREMENTS
ZONE 2: A) WATER LINE SEPARATED BY AT LEAST 6 FEET AT OUTSIDE PIPE WALLS AND
B) BOTTOM OF WATER LINE IS AT LEAST 18 INCHES ABOVE TOP OF SEWER LINE AND
C) WATER LINE CONSTRUCTED WITH MECHANICAL, RESTRAINED JOINT PIPE AND
SITE SPECIFIC REQUIREMENTS APPROVED BY DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER
ZONE 3: WATER LINE AND SEWER LINE SEPARATION LESS THAN 6 FEET - NOT ALLOWED
2. SERVICE LINE TAPS NOT ALLOWED IN ZONE 2.
3. SERVICE LINE TAPS WITHIN ZONE 3 ALLOWED ONLY BY SITE SPECIFIC APPROVAL BY DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER
4. MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION ABOVE SANITARY SEWER FORCE MAINS
5. CONSULT SNYDERVILLE BASIN WATER RECLAMATION DISTRICT FOR SANITARY SEWER REQUIREMENTS AND SEWER LINE MODIFICATIONS

VERTICAL SEPARATION

NOTES:

1. ZONE 1: WATER LINE ABOVE SEWER LINE AND SEPARATED 18 INCHES OR GREATER - NO SPECIAL REQUIREMENTS
ZONE 2: WATER LINE ABOVE SEWER LINE SEPARATED LESS THAN 18 INCHES - LOOP WATER LINE, REFER TO STD. PLAN 543. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), "FLOWABLE FILL", 150 PSI MAXIMUM MIX DESIGN WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
ZONE 3: WATER LINE BELOW SEWER LINE SEPARATED LESS THAN 18 INCHES - LOOP WATER LINE, REFER TO STD. PLAN 543. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), "FLOWABLE FILL", 150 PSI MAXIMUM MIX DESIGN WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
ZONE 4: WATER LINE BELOW SEWER LINE SEPARATED GREATER THAN 18 INCHES - CENTER ONE FULL UN-CUT LENGTH OF WATER PIPE OVER THE CROSSING AND PROVIDE MECHANICAL RESTRAINED PIPE JOINTS UNTIL THE WATER PIPE EXTENDS TO A DISTANCE OF 10 FEET PERPENDICULAR TO EACH SIDE OF THE SEWER LINE. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), "FLOWABLE FILL", 150 PSI MAXIMUM MIX DESIGN WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
2. SERVICE LINE TAPS NOT ALLOWED IN ZONES 2 AND 3.
3. MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION ABOVE SANITARY SEWER FORCE MAINS
4. CONSULT SNYDERVILLE BASIN WATER RECLAMATION DISTRICT FOR SANITARY SEWER REQUIREMENTS AND SEWER LINE MODIFICATIONS
5. ALL CULINARY WATER MAINS AND LATERALS SHALL BE INSTALLED ABOVE SEWER LINES UNLESS APPROVED BY PARK CITY AND UTAH DIVISION OF DRINKING WATER.

 PARK CITY MUNICIPAL CORPORATION WATER	DATE	WATER - SANITARY SEWER SEPARATION	STD. PLAN
	6/2019		547-B
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