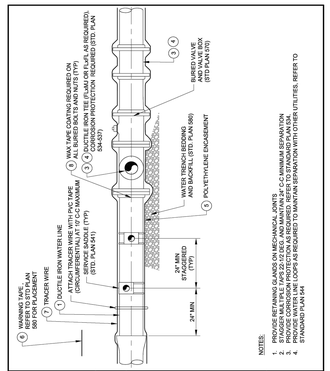
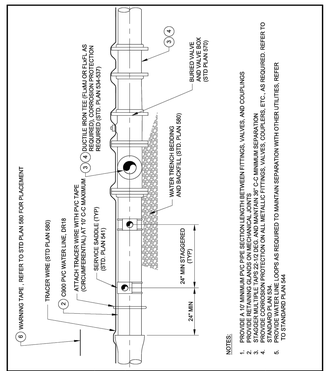
DETAIL NOTES

1. USE OF AN INSIDE WATER METER REQUIRES CITY ENGINEER APPROVAL. REFERENCE WATER STANDARD PLAN 520 FOR APPLICABLE CONDITIONS.
2. FIRE PROTECTION SPRINKLER SYSTEM REQUIRED. A SITE SPECIFIC DESIGN IS REQUIRED. THE FIRE PROTECTION SPRINKLER SYSTEM AND POTABLE WATER SYSTEM DESIGN SHALL BE APPROVED BY THE FIRE MARSHAL AND THE PARK CITY BUILDING DEPARTMENT. THE POTABLE WATER SERVICE CONNECTION AND METER ASSEMBLY DESIGN SHALL BE APPROVED BY THE PARK CITY BUILDING DEPARTMENT AND THE CITY ENGINEER. DESIGN AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE STANDARDS AND SPECIFICATIONS.
3. BACKFLOW PREVENTION. PROVIDE A DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA) OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPBA) ON THE FIRE SPRINKLER RISER ASSEMBLY STYLE TO BE DETERMINED BY THE BUILDING APPROVAL DEPARTMENT BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM. BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED, THE OWNER SHALL HAVE THE BACKFLOW ASSEMBLY TESTING FOR PROPER OPERATION (PER THE REQUIREMENTS BY A CERTIFIED TESTER RECOGNIZED BY THE CITY) IS REQUIRED AND A REPORT SUBMITTED.
4. CONNECTIONS TO THE WATER SYSTEM ARE NOT PERMITTED PRIOR TO THE POTABLE WATER METER ASSEMBLY OR THE FIRE SPRINKLER RISER BACKFLOW ASSEMBLY. THIS INCLUDES OUTSIDE IRRIGATION SUPPLY.
5. CLEARANCES. PROVIDE ADEQUATE CLEARANCES FROM FIRE RISER AND AROUND WATER METER ASSEMBLY. MAINTAIN:
   18" CLEAR ON FACH SIDE OF METER ASSEMBLY
   36" CLEAR IN FRONT OF METER ASSEMBLY
6. LOCATE METER ASSEMBLY TWO (2) TO FOUR (4) FEET ABOVE THE FLOOR. POSITION METER HORIZONTAL WITH SMALL POINTING UP.
7. VERIFY WITH THE WATER METER DEPARTMENT PRIOR TO INSTALLING PIPING
8. PROVIDE ISOLATION VALVES AT METER INLET AND OUTLET
9. FOR MULTIPLE METERS PROVIDE A MANIFOLD WITH A MAIN VALVE PRIOR TO THE MANIFOLD AND INDIVIDUAL VALVES LOCATED PRIOR TO AND AFTER METERS.
10. PROVIDE A FLOOR DRAIN IN THE FIRE RISER ROOM WITHIN 10 FEET OF THE WATER METER LOCATION.
11. PROVIDE 3/4" MIN. THICK PLYWOOD BACKBOARD FOR MOUNTING OF THE METER AND THE WATER METER DESIGNATING PIPE AS "POTABLE WATER".
12. PROVIDE PIPE ANCHORAGE TO SUPPORT METER ASSEMBLY INDEPENDENT OF THE POTABLE WATER SUPPLY PIPING AND BUILDING PLUMBING. PROVIDE PIPE STANDS OR UNISTRUT WALL STANDOFFS. DO NOT SUPPORT METER ASSEMBLY FROM OTHER PIPING.
13. PROVIDE 2" EMT CONDUIT AND SUPPORTS FOR AMR (AUTOMATIC RADIOREAD METER TRANSMITTER UNIT (MXU) DEVICE(S). COORDINATE ROUTING AND WALL PENETRATION LOCATION WITH THE WATER DEPARTMENT. REFERENCE WATER STANDARD PLANS 520 AND 520.
14. PROVIDE 1/2" EMT CONDUIT AND SUPPORTS FOR MXU SIGNAL WIRE IF DISTANCE TO WALL PENETRATION EXCEEDS 10 FEET.
15. PROVIDE ACCESS TO THE WATER ENGINEER FOR INSPECTION OF THE POTABLE WATER SYSTEM METER ASSEMBLY INSTALLATION.
16. REFER TO STD. PLAN 500 AND THE SPECIFICATIONS FOR FLUSHING, HYDROSTATIC TESTING, AND DISINFECTING REQUIREMENTS.
17. BUILDING OWNER IS RESPONSIBLE TO HAVE THE BACKFLOW PREVENTER FLOW TESTED AND INSPECTED INTERNALLY AT LEAST ONCE PER YEAR, OR MORE AS CONDITIONS WARRANT, IN ACCORDANCE WITH NFPA 13 AND NFPA 25 AND A REPORT SUBMITTED TO THE PARK CITY BUILDING DEPARTMENT.

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	3" AND LARGER METER INSIDE SETTING	STD. PLAN 528 S.2



PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	WATER MAIN AND FIRE LINE 3" TO 12" DIAMETER	STD. PLAN 540-A



PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	WATER MAIN - PVC PIPE 8" TO 12" DIAMETER	STD. PLAN 540-B

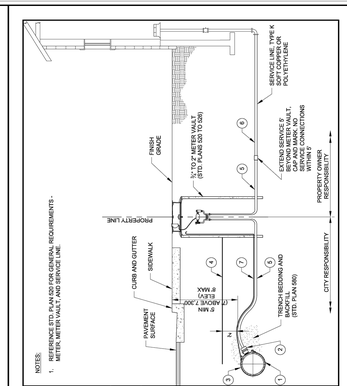
LEGEND AND APPROVED PARTS LIST

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	STANDARD JOINT PIPE: PUSH ON TYTON JOINT
		U.S. PIPE (1) PACIFIC STATES	RESTRAINED JOINT PIPE: THRUST LOCK TR FLEX
2	POLYVINYL CHLORIDE (PVC) PIPE, C.I.O.D. C900, DR 18, INTEGRAL BELL JOINT	JM EAGLE (1)	STANDARD JOINT PIPE: BLUE BRUTE
3	DUCTILE IRON FITTINGS, 3" TO 12" DIAMETER, FULL BODY, PRESSURE CLASS 350, CEMENT MORTAR LINED, ASPHALTIC EXTERIOR COATING, AWWA C153 / C104	U.S. PIPE (1) PACIFIC STATES	PLAIN END STYLE FITTING: TYTON JOINT FLANGED FITTING
	FLANGES: AWWA C110 / C115, CLASS 125 FLANGE WITH FULL FACE OR RING FLANGE/TYTE GASKETS	U.S. PIPE (1) PACIFIC STATES	RESTRAINED JOINT PIPE: 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)	FITTINGS: MECHANICAL JOINT RETAINER GLANDS: MEGALUG SERIES 1100, STD T-BOLTS/NUTS
5	POLYETHYLENE ENCASEMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C105E METHODS A & C	CHRISTY'S (1)	AWWA C105E METHOD A (4 MIL) AT BOLT-TYPE JOINTS, FITTINGS, AND VALVES
6	DETECTABLE UNDERGROUND WARNING TAPE, 5-MIL MINIMUM, ALUMINUM BACKING BLUE BACKGROUND, 6" WIDE	SETON (1)	89525
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 ALL BURIED BOLTS AND NUTS AND BUCKING MECHANICAL JOINT RESTRAINT SYSTEMS, AWWA C 217. REFER TO STD. PLAN 534.	TRENTON, OR APPROVED EQUAL	TRENTON, OR APPROVED EQUAL
9	(1) DENOTES "OR EQUAL" MANUFACTURER AND MODEL SUBMIT IN ACCORDANCE WITH CITY STANDARDS		

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 PSI AT 100 PSI
4. PROVIDE TOMBSTONE MARKERS
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

PARK CITY MUNICIPAL CORPORATION WATER	DATE 4/2014 REV. 0	WATER MAIN AND FIRE LINES	STD. PLAN 540 S



PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	WATER SERVICE LINE 3/4" TO 2" METERS	STD. PLAN 541

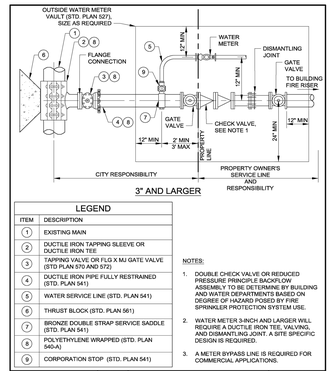
LEGEND AND APPROVED PARTS LIST

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 S202B 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-25000-N
		FORD	FB1100-0SERVICE SIZE(-G-NL)
3	POLYETHYLENE ENCASEMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C105E METHOD C	CHRISTY'S OR APPROVED EQUAL	AWWA C105E METHOD C (4 MIL)
4	DETECTABLE UNDERGROUND WARNING TAPE, 5-MIL MINIMUM, ALUMINUM BACKING BLUE BACKGROUND, 6" WIDE	SETON OR APPVD EQUAL	89525
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" 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
8	CORPORATION STOP (STD. PLAN 541)	FORD	FB1100-0SERVICE SIZE(-G-NL)

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 5/2014 REV. 0	WATER SERVICE LINE 3/4" TO 2" METERS	STD. PLAN 541 S

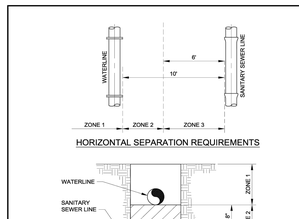


LEGEND

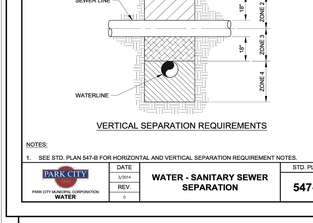
ITEM	DESCRIPTION
1	EXISTING MAIN
2	DUCTILE IRON TAPPING SLEEVE OR DUCTILE IRON TEE
3	TAPPING VALVE OR FLG X MJ GATE VALVE (STD PLAN 570 AND 572)
4	DUCTILE IRON PIPE FULLY RESTRAINED (STD. PLAN 541)
5	WATER SERVICE LINE (STD. PLAN 541)
6	THRUST BLOCK (STD. PLAN 561)
7	BRONZE DOUBLE STRAP SERVICE SADDLE (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 4/2014 REV. 0	FIRE SERVICE LINE	STD. PLAN 542



HORIZONTAL SEPARATION REQUIREMENTS



VERTICAL SEPARATION REQUIREMENTS

NOTES:
1. SEE STD. PLAN 547-B FOR HORIZONTAL AND VERTICAL SEPARATION REQUIREMENT NOTES.

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	WATER - SANITARY SEWER SEPARATION	STD. PLAN 547-A

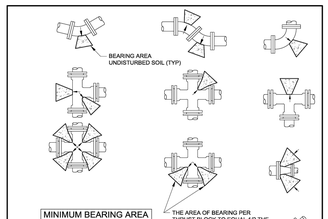
HORIZONTAL SEPARATION NOTES:

1. ZONE 1: WATER LINE AND SEWER LINE SEPARATED 10 FEET OR GREATER – NO SPECIAL REQUIREMENTS
   ZONE 2: WHERE LOCAL CONDITIONS AND SITE SPECIFIC CONDITIONS PRECLUDE ZONE 1 SEPARATION – SPECIAL REQUIREMENTS APPLY
   A) APPROVAL BY DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER AND
   B) SEWER PIPES IN GOOD CONDITION AND,
   C) NO HIGH GROUNDWATER AND,
   D) WATER LINE GRADED 18" OR AT LEAST 6 FEET AT OUTSIDE PIPE WALLS AND,
   E) BOTTOM OF WATER LINE IS AT LEAST 18 INCHES ABOVE TOP OF SEWER LINE AND,
   F) WATER LINE CONSTRUCTED WITH MECHANICAL, RESTRAINED JOINT PIPE
   ZONE 3: WATER LINE AND SEWER LINE SEPARATED LESS THAN 6 FEET – NOT ALLOWED WITHOUT APPLICATION TO AND APPROVAL BY UTAH DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER FOR EXCEPTION TO THE RULE. ADDITIONAL MITIGATION MEASURES TO PROTECT PUBLIC HEALTH REQUIRED
2. ADDITIONAL REQUIREMENTS FOR MOTION AND/OR SPECIAL PIPE MATERIALS MAY BE REQUIRED IN AREAS WITH HIGH GROUNDWATER MOTION CONDITIONS, OR SPECIAL SEWER LINE CONTENTS
3. SERVICE LINE TAPS NOT ALLOWED IN ZONE 3
4. SERVICE LINE TAPS WITHIN ZONE 3 ALLOWED ONLY BY SITE SPECIFIC APPROVAL BY DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER
5. SANITARY SEWER FORCE MAINS
   a. WATER LINE SEPARATION 18 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION REQUIRED – ZONE 2
   b. NEW SEWER FORCE MAIN CROSSING UNDER AN EXISTING WATER MAIN TO BE ENCLOSED IN A CONTINUOUS SLEEVE
   c. NEW WATER MAIN CROSSING OVER AN EXISTING SEWER FORCE MAIN, 200 PSI MINIMUM WORKING PRESSURE RATED PIPE MATERIALS REQUIRED
6. CONSULT SNYDERVILLE BASIN WATER RECLAMATION DISTRICT FOR ADDITIONAL SANITARY SEWER RELATED 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 THAT 18 INCHES – LOOP WATER LINE, REFER TO STD. PLANS 540 AND 544. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), "FLOWABLE FILL", 100 PSI MINIMUM TO 150 PSI MAXIMUM MIX DESIGN, FOR FULL TRENCH WIDTH 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. PLANS 540 AND 544. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), "FLOWABLE FILL", 100 PSI MINIMUM TO 150 PSI MAXIMUM MIX DESIGN, FOR FULL TRENCH WIDTH WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
   ZONE 4: WATER LINE BELOW SEWER LINE SEPARATED LESS THAN 18 INCHES – LOOP WATER LINE FULL LENGTH LENGTH OF WATER PIPE OVER THE SEWER 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", 100 PSI MINIMUM TO150 PSI MAXIMUM MIX DESIGN, FOR FULL TRENCH WIDTH WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
2. SERVICE LINE TAPS NOT ALLOWED IN ZONES 2 AND 3
3. SANITARY SEWER FORCE MAINS, SEE HORIZONTAL SEPARATION REQUIREMENTS, NOTE 5.
4. CONSULT SNYDERVILLE BASIN WATER RECLAMATION DISTRICT FOR ADDITIONAL SANITARY SEWER RELATED REQUIREMENTS AND SEWER LINE MODIFICATIONS

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	WATER – SANITARY SEWER SEPARATION	STD. PLAN 547-B



MINIMUM BEARING AREA IN SQ. FT.

SIZE OF PIPE	11¼° & VALVES, DEAD ENDS	90° BENDS	45° BENDS	22½° BENDS	11¼° BENDS
3"	3.5	5	3	1.5	1
6"	7	10	5.5	3	1.5
8"	12.5	17	9.5	5	2.5
10"	18.5	26	14	7.5	3.8
12"	27	36	20	10	5
14"	35	49	26.5	13.5	7
16"	45	63	34	17.5	9

NOTE:
1. RESTRAINT SIZING IS BASED UPON A MAXIMUM OPERATING PRESSURE OF 150 PSI AND A TEST PRESSURE OF 250 PSI, AND A MINIMUM SOIL BEARING STRENGTH OF 2,000 PSF. OPERATING PRESSURES IN EXCESS OF 150 PSI OR SOILS WITH LESS THAN 2,000 POUND BEARING STRENGTH WILL REQUIRE SPECIAL DESIGN.
2. PIPE SIZE EXCEEDING 16" REQUIRES SPECIAL DESIGN.
3. SIDE WALLS OF THRUST BLOCK SHALL BE FORMED WITH VERTICAL SIDES.
4. DO NOT ENCASE ADJACENT FITTINGS AND BOLTS.
5. DO NOT THRUST AGAINST ADJACENT PIPES.
6. PLACE PE WRAP PRIOR TO INSTALLING BLOCKING.

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	DIRECT BEARING THRUST BLOCK	STD. PLAN 561

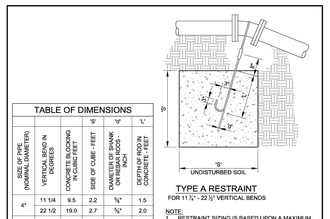


TABLE OF DIMENSIONS

SIZE OF PIPE (NOMINAL DIAMETER)	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	SIZE OF CURE - FEET 'A'	DIAMETER OF BANK OR REBAR NODS - INCHES 'B'	DEPTH OF ROD IN CONCRETE - FEET 'C'
4"	11 1/4	9.5	2.2	½"	1.5
	22 1/2	19.0	2.7	½"	2.0
6"	11 1/4	20	2.7	½"	2.0
	22 1/2	40	3.4	½"	2.0
8"	11 1/4	34	3.3	½"	2.0
	22 1/2	68	4.1	½"	2.0
10"	11 1/4	51	3.8	½"	2.0
	22 1/2	102	4.7	½"	2.0
12"	11 1/4	72	4.2	½"	2.0
	22 1/2	143	5.3	½"	2.0
14"	11 1/4	97	4.6	½"	3.0
	22 1/2	193	5.8	½"	3.0
16"	11 1/4	125	5.0	½"	3.0
	22 1/2	249	6.3	½"	4.0

TYPE A RESTRAINT

FOR 11 ¼° - 22 ½° VERTICAL BENDS

NOTE:
1. RESTRAINT SIZING IS BASED UPON A MAXIMUM OPERATING PRESSURE OF 150 PSI AND A TEST PRESSURE OF 250 PSI, AND A MINIMUM SOIL BEARING STRENGTH OF 2,000 PSF. OPERATING PRESSURES IN EXCESS OF 150 PSI OR SOILS WITH LESS THAN 2,000 POUND BEARING STRENGTH WILL REQUIRE SPECIAL DESIGN.
2. PIPE SIZE EXCEEDING 16" REQUIRES SPECIAL DESIGN.
3. SIDE WALLS OF THRUST BLOCK SHALL BE FORMED WITH VERTICAL SIDES.
4. DO NOT ENCASE ADJACENT FITTINGS AND BOLTS.
5. DO NOT THRUST AGAINST ADJACENT PIPES.
6. APPLY WAX TAPE COATING SYSTEM TO EXPOSED SHANK AND REBAR RODS. AWWA C217. SYSTEM TO INCLUDE FILLER MATERIAL, TAPE COATING, AND PROTECTIVE OUTER WRAP. DENSO N.A., TRENTON, OR APPROVED EQUAL
7. SHANK AND REBAR MATERIALS SHALL BE EPOXY COATED AT LEAST 15 MILS THICK.
8. REINFORCEMENT SHALL BE DEFORMED STEEL, ASTM A 615. MINIMUM STRESS YIELD STRENGTH OF STEEL TIE-DOWN BARS IS 70,000 KSI.

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	TIE-DOWN THRUST RESTRAINTS	STD. PLAN 562-A

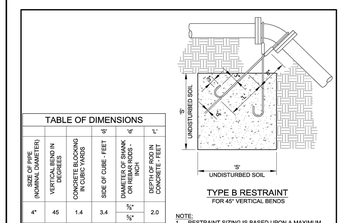


TABLE OF DIMENSIONS

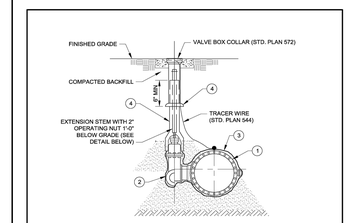
SIZE OF PIPE (NOMINAL DIAMETER)	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	SIZE OF CURE - FEET 'A'	DIAMETER OF BANK OR REBAR NODS - INCHES 'B'	DEPTH OF ROD IN CONCRETE - FEET 'C'
4"	45	1.4	3.4	¾"	2.0
				⅝"	
6"	45	2.8	4.3	¾"	2.5
				⅝"	
8"	45	4.9	5.1	¾"	3.0
				⅝"	
10"	45	7.3	5.9	¾"	4.0
				⅝"	
12"	45	10.4	6.8	¾"	4.0
				⅝"	
14"	45	14.0	7.3	¾"	4.0
				⅝"	
16"	45	18.1	7.9	¾"	4.0
				⅝"	

TYPE B RESTRAINT

FOR 45° VERTICAL BENDS

NOTE:
1. RESTRAINT SIZING IS BASED UPON A MAXIMUM OPERATING PRESSURE OF 150 PSI AND A TEST PRESSURE OF 250 PSI, AND A MINIMUM SOIL BEARING STRENGTH OF 2,000 PSF. OPERATING PRESSURES IN EXCESS OF 150 PSI OR SOILS WITH LESS THAN 2,000 POUND BEARING STRENGTH WILL REQUIRE SPECIAL DESIGN.
2. PIPE SIZE EXCEEDING 16" REQUIRES SPECIAL DESIGN.
3. SIDE WALLS OF THRUST BLOCK SHALL BE FORMED WITH VERTICAL SIDES.
4. DO NOT ENCASE ADJACENT FITTINGS AND BOLTS.
5. DO NOT THRUST AGAINST ADJACENT PIPES.
6. APPLY WAX TAPE COATING SYSTEM TO EXPOSED SHANK AND REBAR RODS. AWWA C217. SYSTEM TO INCLUDE FILLER MATERIAL, TAPE COATING, AND PROTECTIVE OUTER WRAP. DENSO N.A., TRENTON, OR APPROVED EQUAL
7. SHANK AND REBAR MATERIALS SHALL BE EPOXY COATED AT LEAST 15 MILS THICK.
8. REINFORCEMENT SHALL BE DEFORMED STEEL, ASTM A 615. MINIMUM STRESS YIELD STRENGTH OF STEEL TIE-DOWN BARS IS 70,000 KSI.

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	TIE-DOWN THRUST RESTRAINTS	STD. PLAN 562-B



EXTENSION STEM

NOTES:
1. REFER TO STD. PLAN 570 S FOR LEGEND ITEMS, APPROVED PARTS LIST, AND DETAIL NOTES.

PARK CITY MUNICIPAL CORPORATION WATER	DATE 5/2014 REV. 0	BURIED VALVE AND VALVE BOX	STD. PLAN 570

LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
1	BUTTERFLY VALVE, MRS, AWWA C504 CLASS 350B, 250 PSI, SST BONNET BOLTS, FLANGED END CONNECTIONS	MUELLER	LINESEAL APPL 5227 SERIES
2	GATE VALVE, NRS, AWWA C509, 250 PSI, SST BONNET BOLTS, END CONNECTIONS PER FOLLOWING: ON TEES: FLG x FLG IN-LINE VALVES: MJ x MJ OTHERS: MJ x MJ, OR PER DESIGN	MUELLER	SERIES 2360
		CLOW	MODEL 2639
3	POLYETHYLENE ENCASEMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C105E METHOD C	CHRISTY'S OR APPROVED EQUAL	AWWA C105E METHOD C (4 MIL)
4	VALVE BOX, CAST IRON, TWO PIECE, SLIP TYPE WITH CAST IRON DROP-IN COVER MARKED AS FOLLOWS: ISOLATION VALVE: "WATER" BLOW OFF VALVE: "BPV" ZONE VALVE: "ZONE" FIRE LINE VALVE: "FIRE" VALVE BOX RISER: LIMIT ONE PER VALVE BOX	DBL SUPPLY OR APPV'D EQUAL	BOX AND LID: M-8543 RISER: M-8049 THRU M-8055 EXTENSION: M-8070

DETAIL NOTES

1. VALVES TO BE RATED FOR WORKING AND TEST PRESSURE OF WATER MAIN.
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