

NOTES:

1. ALL FITTINGS SHALL BE DUCTILE IRON
2. ALL EXCAVATION SHALL PROVIDE A MINIMUM OF 1'-0" CLEAR AROUND PIPE AND FITTINGS.
3. THESE PLANS ARE FOR DIP AND CIP WATERMAINS 12" OR SMALLER DIA OTHER SIZES AND TYPES SEE PROJECT DRAWINGS
4. REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) SHALL BE INSTALLED AS A UNIT (TWO SHUT-OFF VALVES, RELIEF PORT, TWO CHECK VALVES AND FOUR TEST COCKS). WHEN RPBA IS CONNECTED TO HYDRANT AND THE HOSE BIB FAUCET SAMPLE THEY SHALL BE CAPPED WHEN NOT IN USE. ASSEMBLY SHALL BE TESTED WHEN INSTALLED BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER (BAT) AND A CURRENT TEST REPORT SHALL BE ON SITE. FOR INSTALLATION PROCEDURES CALL 684-3536.
5. ALL FITTINGS AND MATERIALS FURNISHED BY CONTRACTOR AND TO BE INSTALLED BY SPU SHALL BE VERIFIED, INSPECTED AND ON THE JOB SITE PRIOR TO SHUTDOWN OF EXISTING MAIN. FAILURE TO MEET THIS REQUIREMENT COULD RESULT IN DELAYS.

LEGEND

- ① CLEAN & DISINFECTED POTABLE WATER HOSE ONLY. SIZE FLUSHING RISER PER TABLE IN STD SPEC SEC 7-11.3(12)
- ② HYDRANT PERMIT REQUIRED
- ③ CHECK WITH SEWER UTILITY BEFORE DISCHARGE TO SEWERS
- ④ CONTRACTOR TO DETERMINE ALIGNMENT, GRADE AND OUTSIDE DIAMETER OF EXISTING PIPE PRIOR TO INSTALLING NEW WATERMAIN. ENGINEER TO DETERMINE OUTSIDE DIAMETER OF EXISTING PIPE WHEN CONTRACTOR EXCAVATES TO DETERMINE ALIGNMENT & GRADE.
- ⑤ ALL EXCAVATION, PIPE, FITTINGS (EXCEPT AS NOTED BELOW), OTHER MATERIAL, BEDDING, BACKFILL, COMPACTION & STREET RESTORATION BY CONTRACTOR. ALL MATERIALS SHALL BE ON JOB SITE PRIOR TO SHUTDOWN OF EXISTING MAIN.
- ⑥ INSTALLED BY CONTRACTOR
- ⑦ CONNECTION PIPE: CONTRACTOR FURNISHED, INSTALLED BY SPU
- ⑧ WATERMAIN WITH PLAIN ENDS
- ⑨ MECHANICAL JOINT SLEEVE WITH SPACER CUT TO FIT GAP, FURNISHED AND INSERTED AT TIME OF CONNECTION BY SPU
- ⑩ TAPPING SLEEVE & TAPPING VALVE FURNISHED AND INSTALLED BY SPU
- ⑪ APPLIES TO PIPES 4" THROUGH 12". ALL LARGER SIZES TO BE ADDRESSED ON DRAWINGS
- ⑫ MECHANICAL JOINT SLEEVE, FURNISHED BY CONTRACTOR AND INSTALLED BY SPU, SPACERS BY SPU WHERE REQUIRED

REF STD SPEC SEC 7-11



City of Seattle

NOT TO SCALE

CONNECTIONS TO EXISTING WATERMAINS

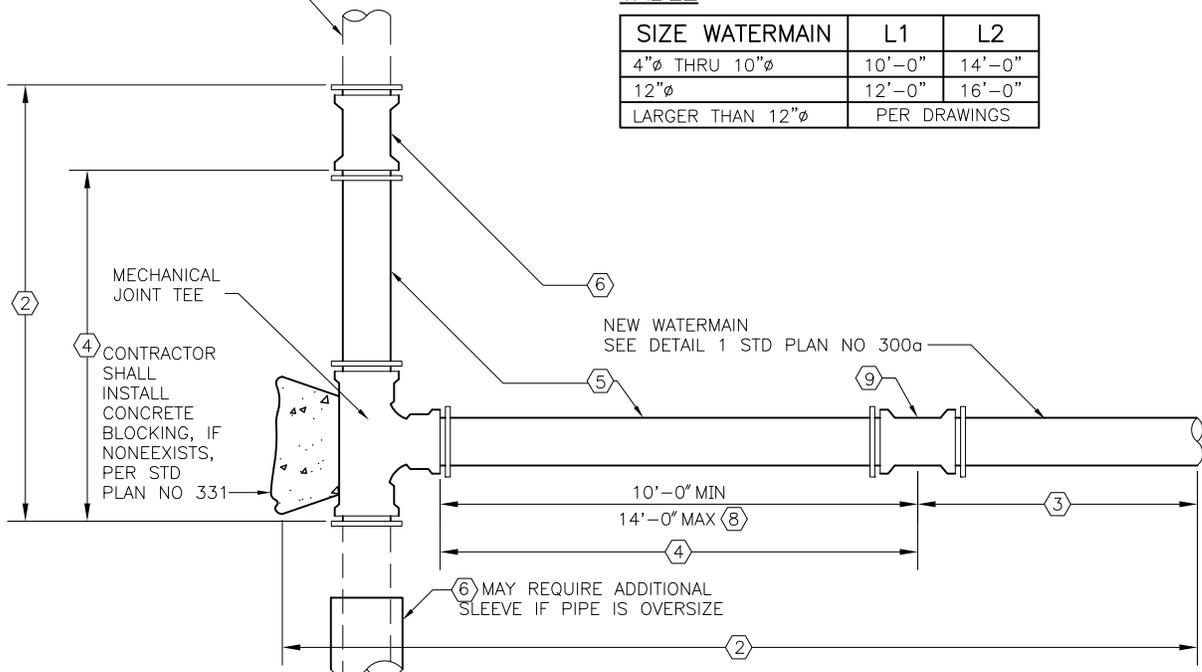
ELEVATION



TABLE

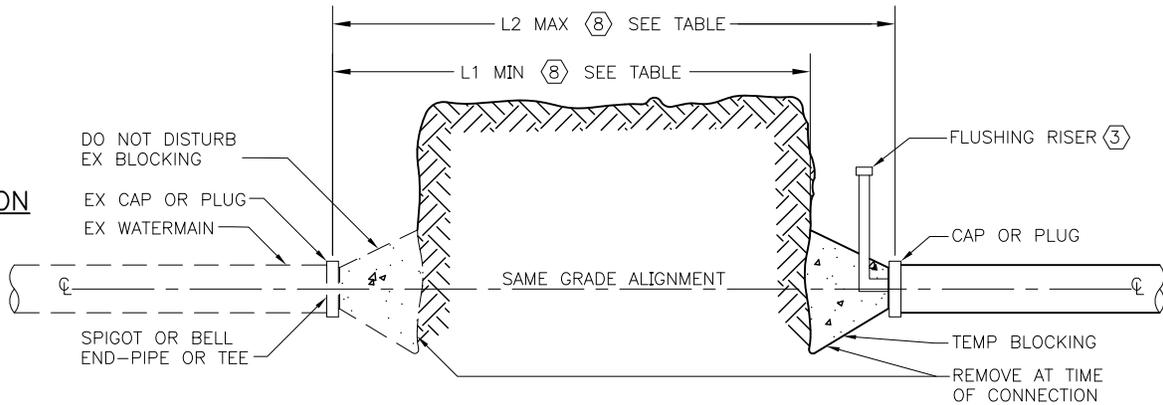
SIZE WATERMAIN	L1	L2
4"φ THRU 10"φ	10'-0"	14'-0"
12"φ	12'-0"	16'-0"
LARGER THAN 12"φ	PER DRAWINGS	

PLAN

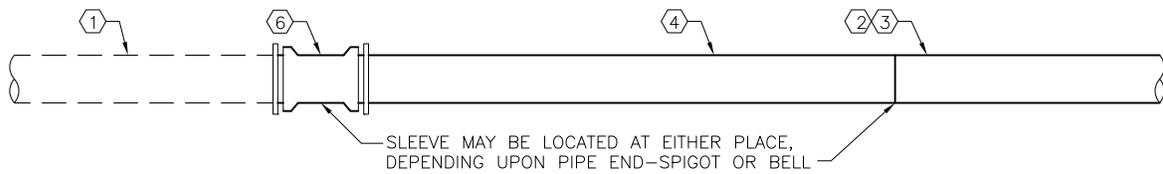


CONNECTIONS TO EXISTING MAIN, WITH A NEW TEE OR CROSS
(CUT IN NEW TEE)

ELEVATION



PLAN



CONNECTIONS TO EXISTING MAIN, STUB
OR END OUTLET OF TEE OR CROSS

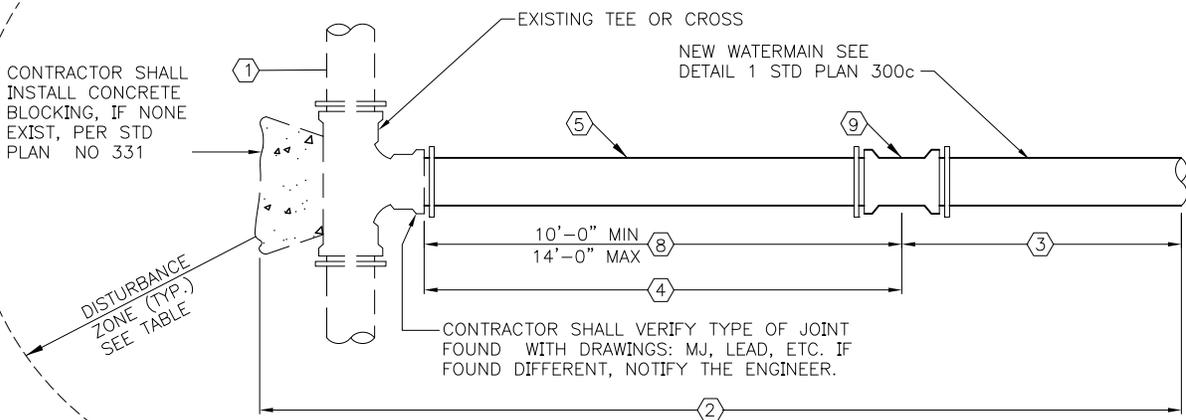
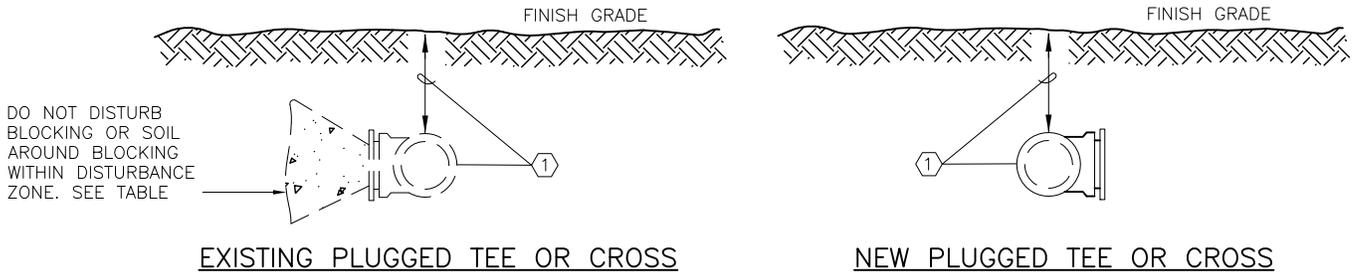
REF STD SPEC SEC 7-11



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NOT TO SCALE

CONNECTIONS TO EXISTING WATERMANS

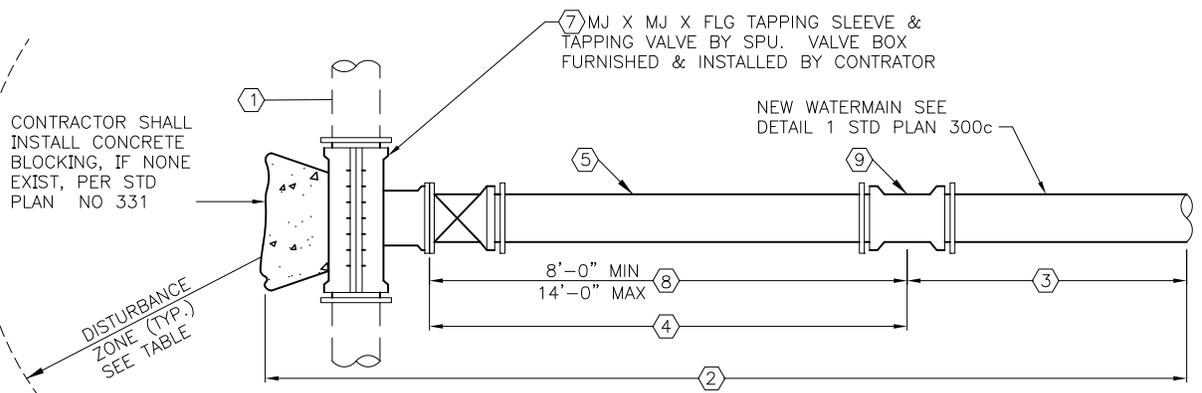


CONNECTIONS TO EXISTING TEE OR CROSS— PLAN VIEW

TABLE

SIZE OF WATERMAIN	DISTURBANCE ZONE
UP TO & INCLUDING 10"φ	10'-0"
OVER 10"φ	12'-0"

* SPU MAY INCREASE DISTURBANCE ZONE. SEE CONTRACT DOCUMENTS



CONNECTIONS TO EXISTING MAIN, NO TEE OR CROSS – PLAN VIEW
(TAPPING SLEEVE & TAPPING VALVE)

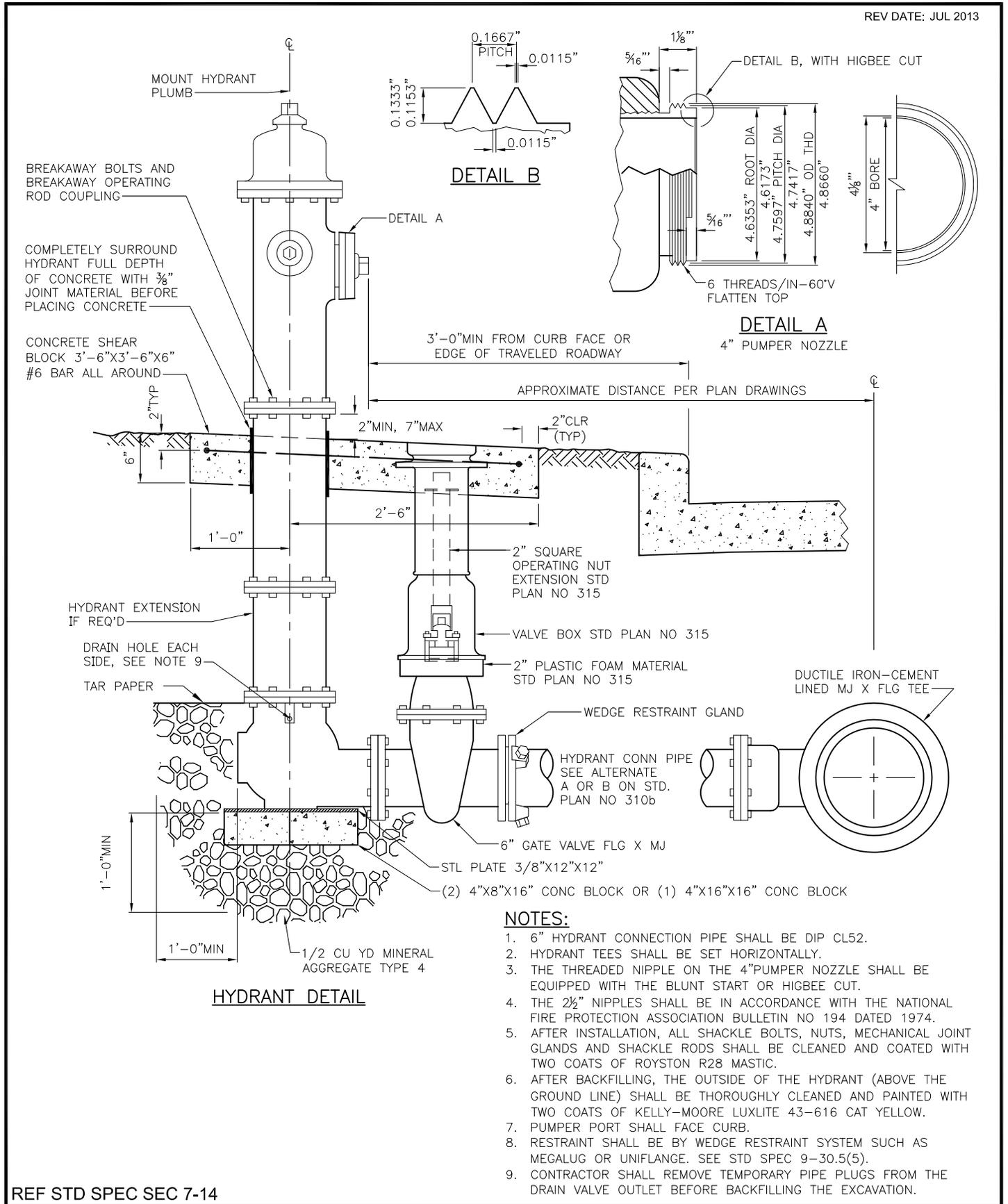
REF STD SPEC SEC 7-11



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NOT TO SCALE

CONNECTIONS TO EXISTING WATERMAINS



REF STD SPEC SEC 7-14

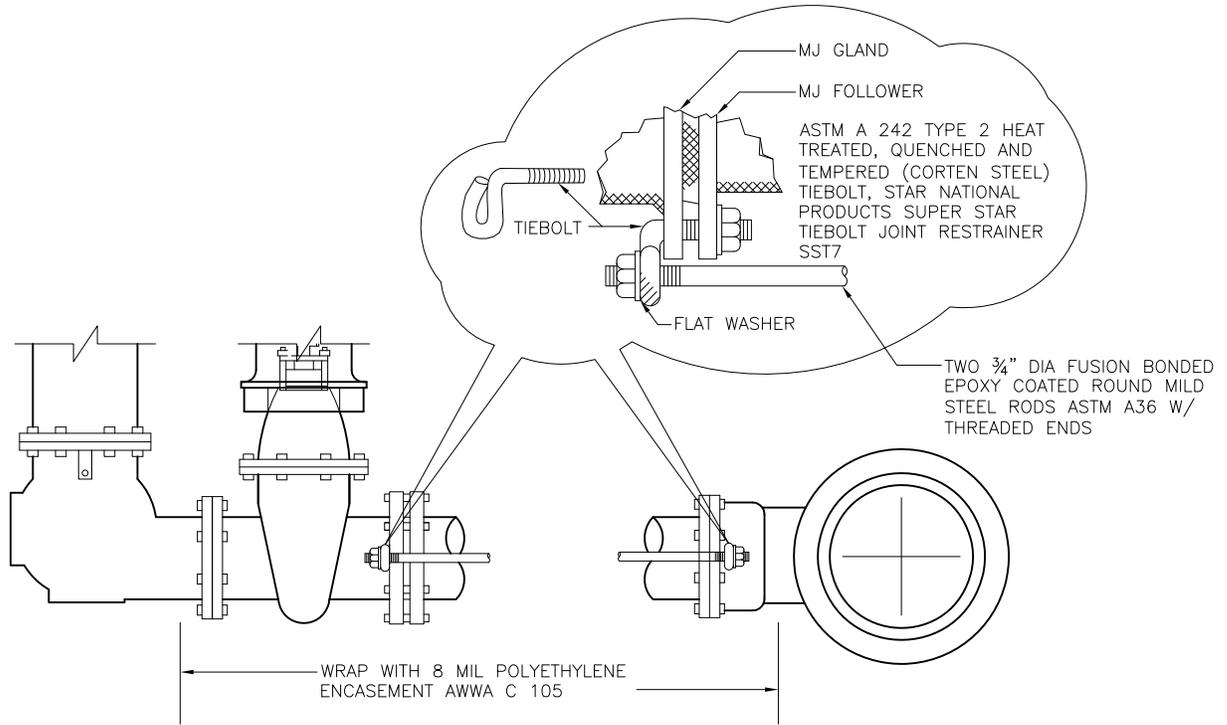


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NOT TO SCALE

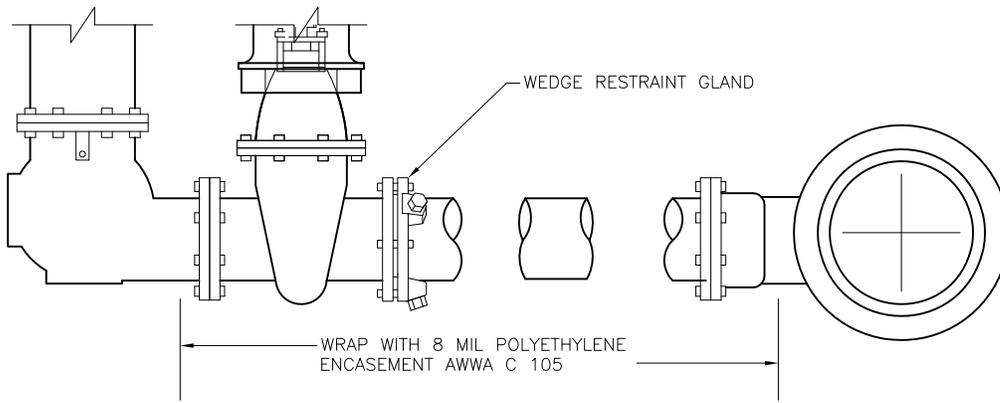
**TYPE 310 HYDRANT SETTING
DETAIL**

SEE GENERAL NOTES
BELOW



ALTERNATE A
TIEBOLT RESTRAINT

SEE GENERAL NOTES
BELOW



ALTERNATE B
MECHANICAL JOINT W/ WEDGE RESTRAINT GLANDS

NOTES:

1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCASEMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE SHALL BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED. WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HYDRANT BARREL SHALL BE TAPE COATED
2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING-PERMITTED AREA, A SECOND 6" GATE VALVE SHALL BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310a

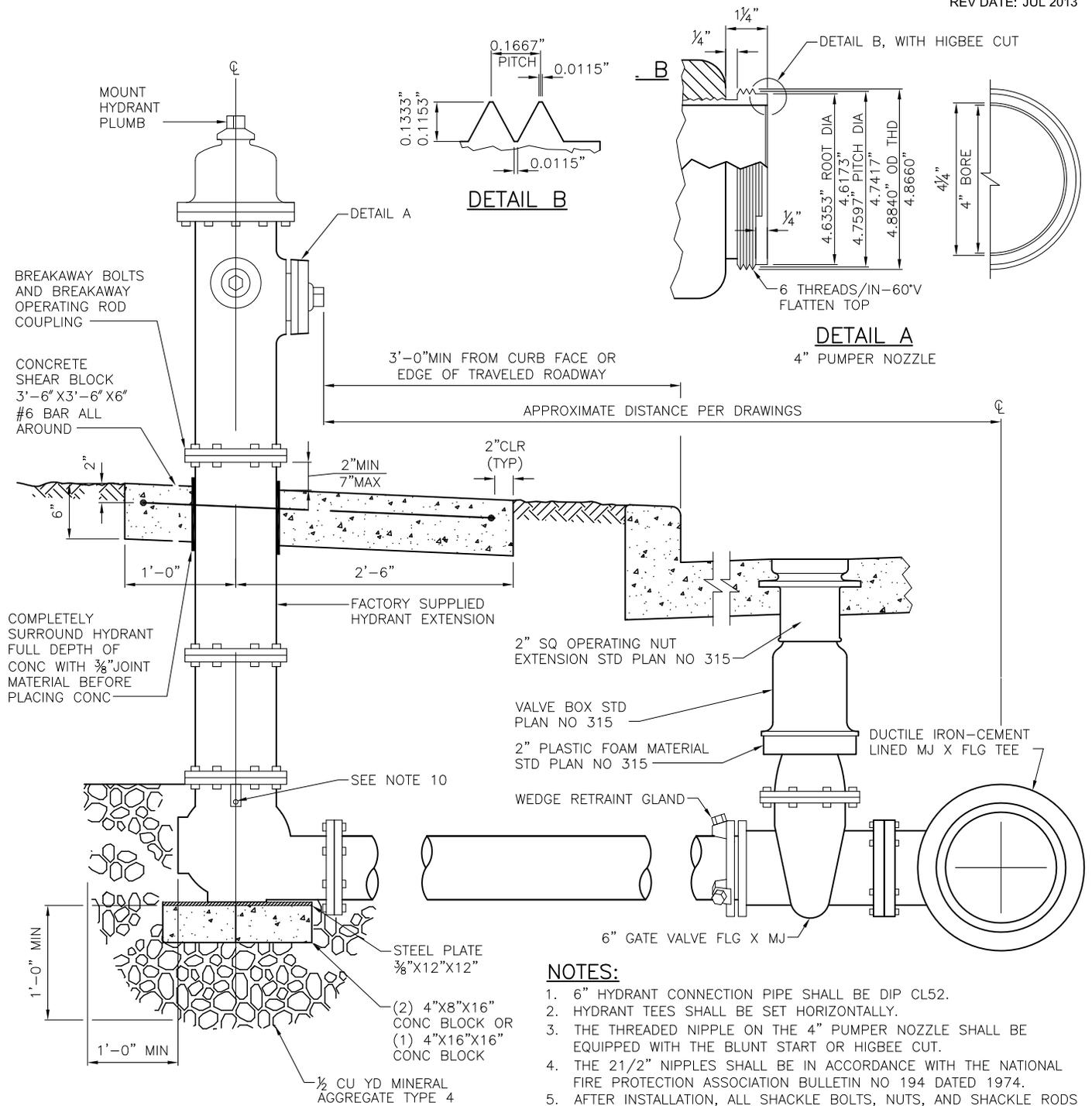
REF STD SPEC SEC 7-14



City of Seattle

NOT TO SCALE

**TYPE 310 HYDRANT SETTING
DETAIL**



HYDRANT DETAIL

NOTES:

1. 6" HYDRANT CONNECTION PIPE SHALL BE DIP CL52.
2. HYDRANT TEES SHALL BE SET HORIZONTALLY.
3. THE THREADED NIPPLE ON THE 4" PUMPER NOZZLE SHALL BE EQUIPPED WITH THE BLUNT START OR HIGBEE CUT.
4. THE 2 1/2" NIPPLES SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION BULLETIN NO 194 DATED 1974.
5. AFTER INSTALLATION, ALL SHACKLE BOLTS, NUTS, AND SHACKLE RODS SHALL BE CLEANED AND COATED WITH TWO COATS OF ASPHALT, ROYSTON ROSKOTE R28.
6. AFTER BACKFILLING, THE OUTSIDE OF THE HYDRANT (ABOVE THE GROUND LINE) SHALL BE THOROUGHLY CLEANED AND PAINTED WITH TWO COATS OF KELLY-MOORE 6130-516 CAT YELLOW.
7. PUMPER PORT SHALL FACE CURB.
8. PUMPER PORT TO BE FITTED WITH QUICK CONNECT ADAPTOR PER FIRE MARSHAL.
9. RESTRAINT SHALL BE BY WEDGE RESTRAINT SYSTEM USCH AS MEGALUG OR UNIFLANGE. SEE STD SPEC SEC 9-30.5(5).
10. CONTRACTOR SHALL REMOVE TEMPORARY PIPE PLUGS FROM THE DRAIN VALVE OUTLET BEFORE BACKFILLING THE EXCAVATION.

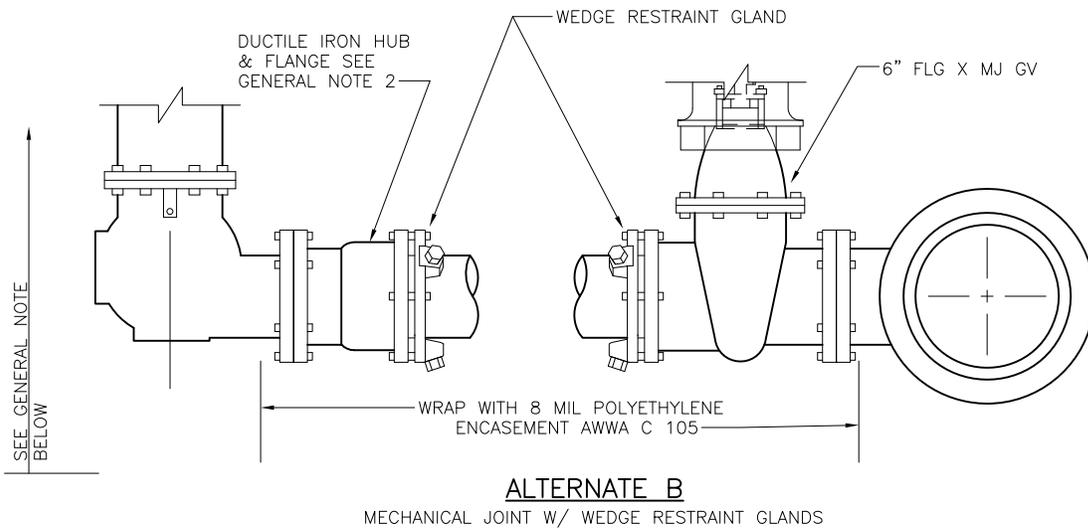
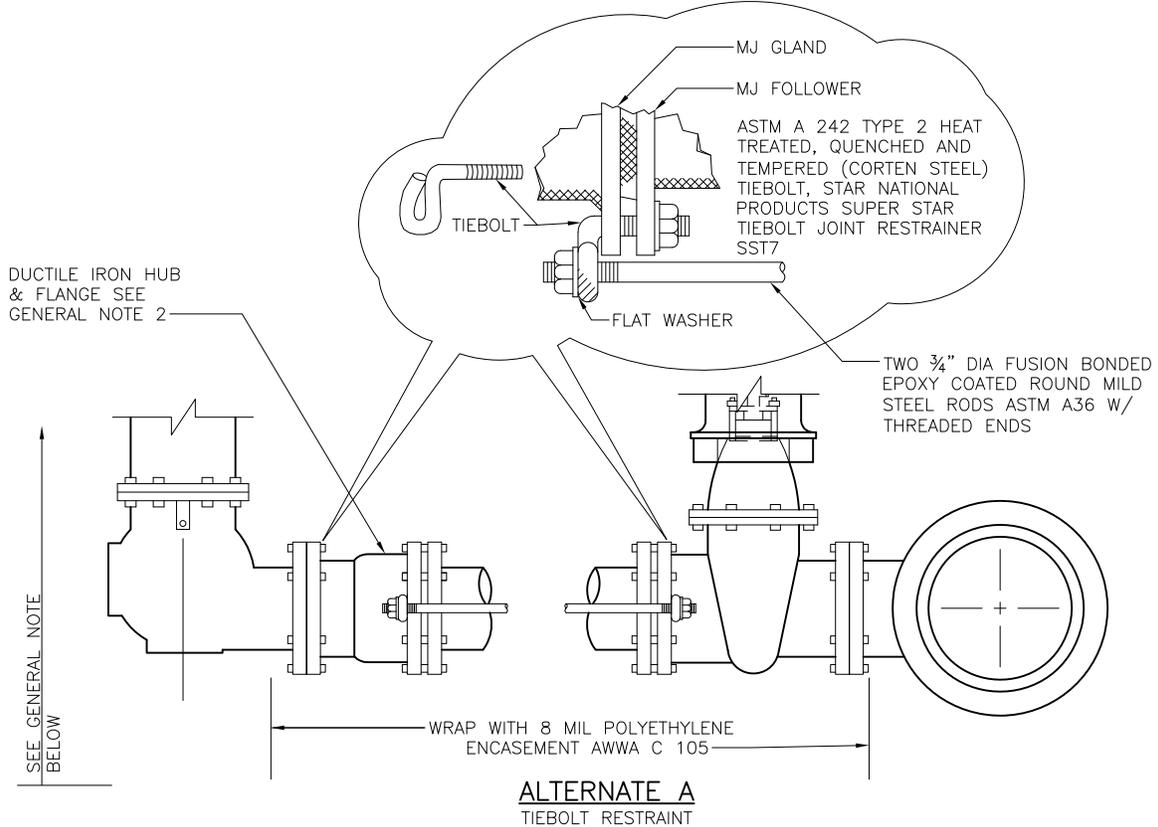
REF STD SPEC SEC 7-14



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NOT TO SCALE

**TYPE 311 HYDRANT SETTING
DETAIL**



GENERAL NOTES:

1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCASEMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE SHALL BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED. WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HYDRANT BARREL SHALL BE TAPE COATED
2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING-PERMITTED AREA, A SECOND 6" GATE VALVE SHALL BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310g

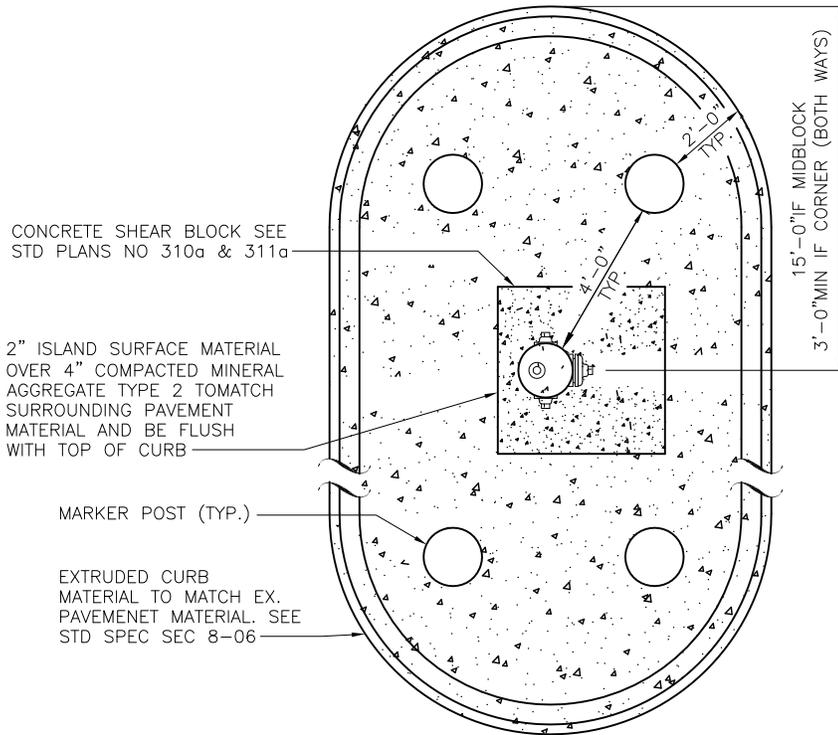
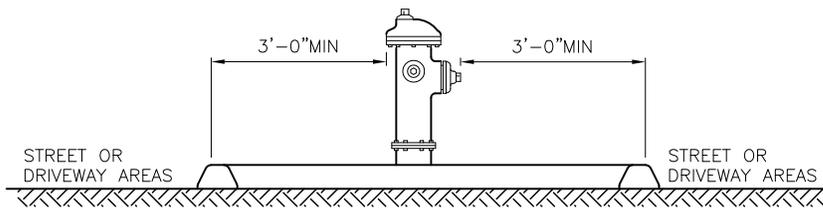
REF STD SPEC SEC 7-14



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NOT TO SCALE

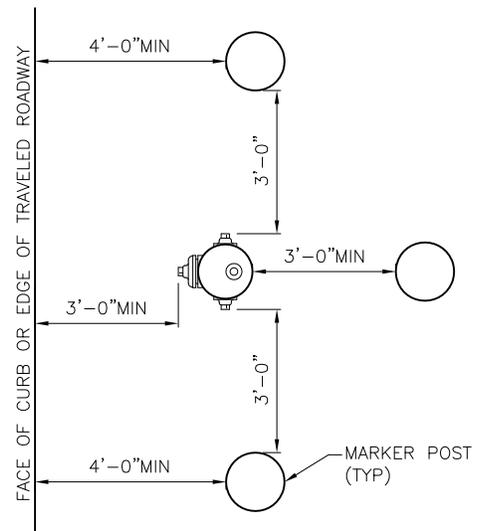
**TYPE 311 HYDRANT SETTING
DETAIL**



TRAFFIC ISLAND MARKER POST LAYOUT FOR FIRE HYDRANTS IN PARKING AREAS

NOTES:

1. LAYOUT OF MARKER POST SHALL BE VERIFIED FIRST WITH SPU AND SDOT
2. MARKER POST WITH HIGH INTENSITY REFLECTORIZED BANDS PROVIDED BY SPU



MARKER POST LAYOUT FOR FIRE HYDRANTS IN PARKING AREAS

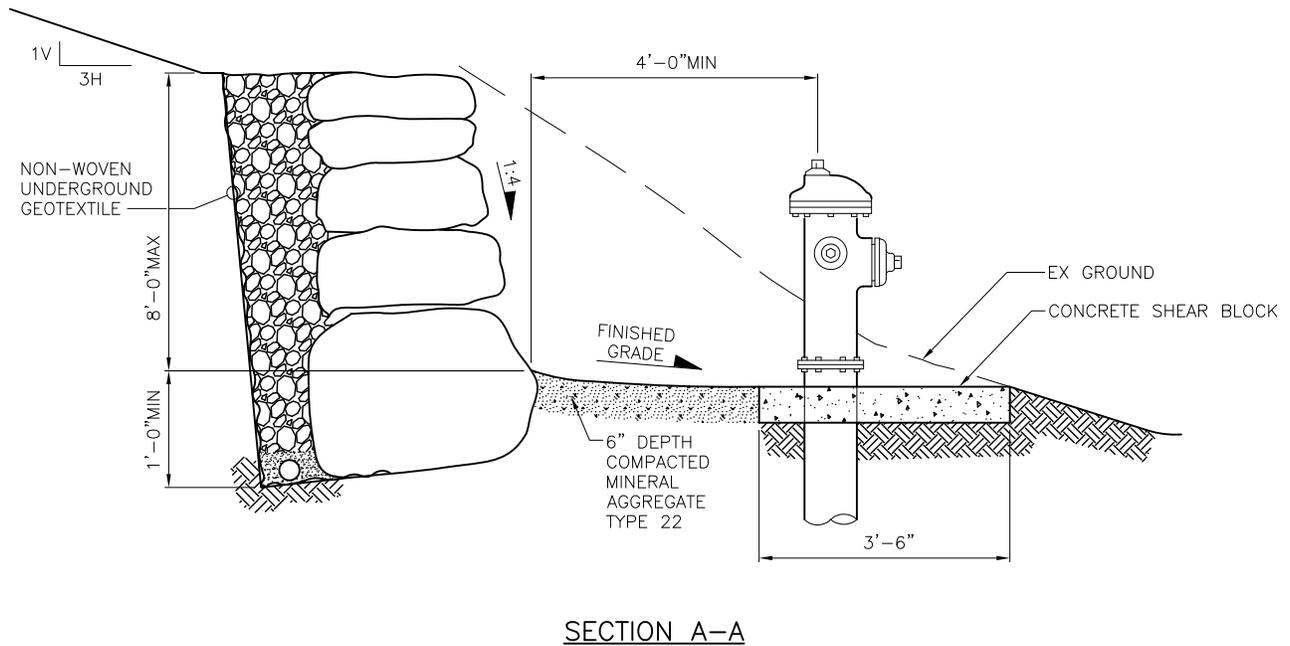
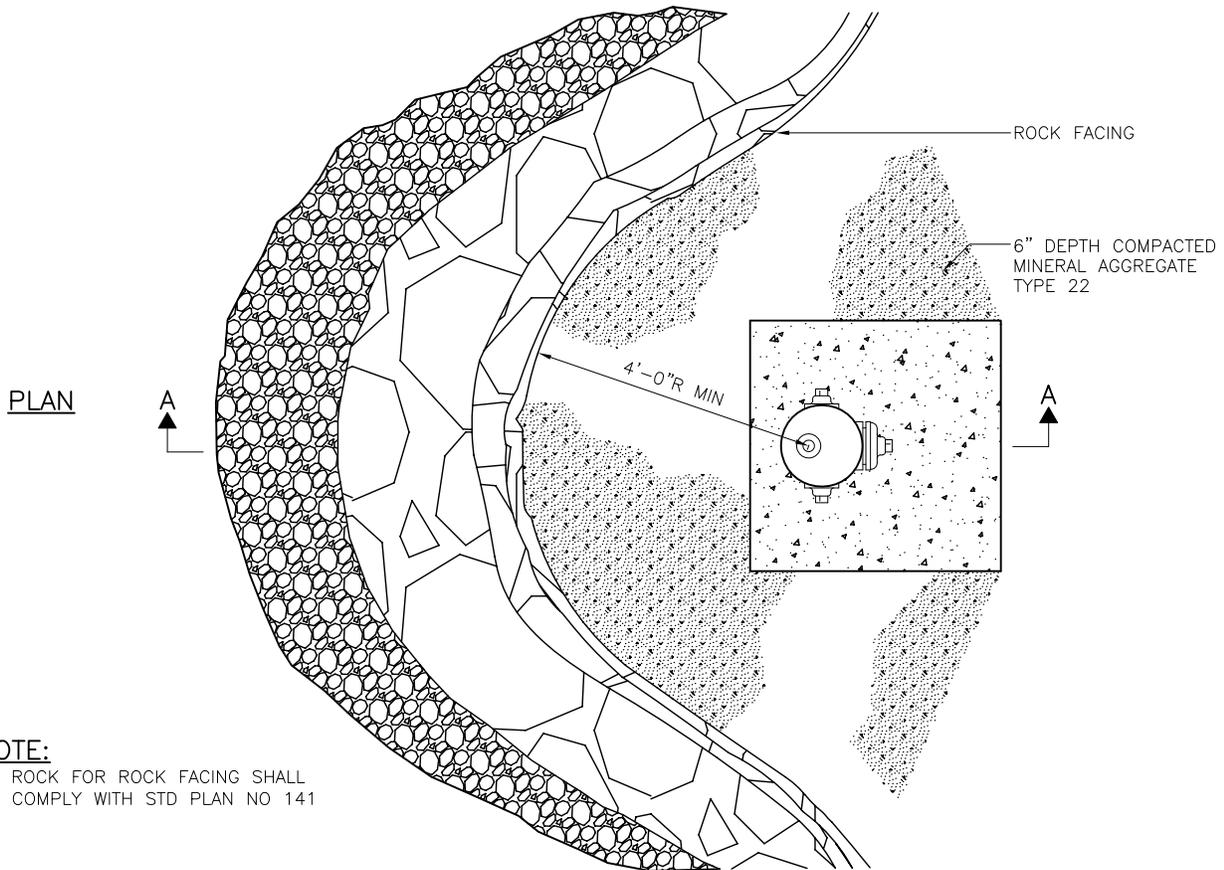
REF STD SPEC SEC 7-14



City of Seattle

NOT TO SCALE

FIRE HYDRANT MARKER LAYOUT



REF STD SPEC SEC 2-13



City of Seattle

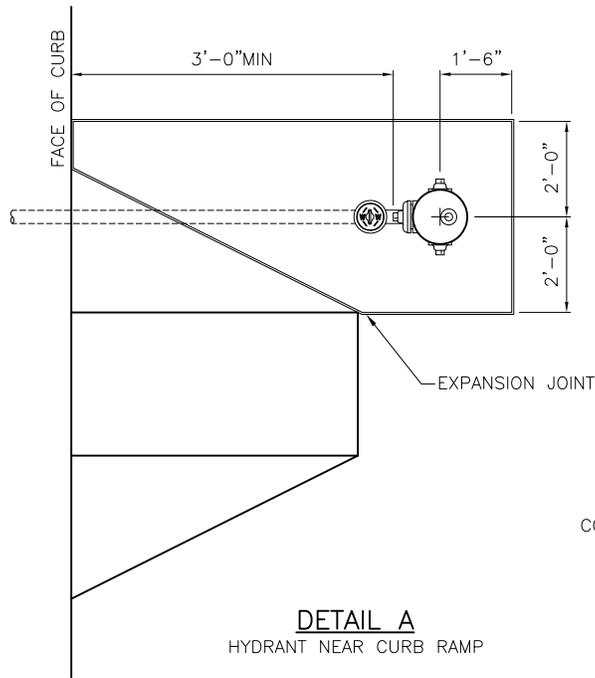
NOT TO SCALE

WALL REQUIREMENTS FOR HYDRANTS

REV DATE: JUN 2013

3'-0"MIN, 15'-0"MAX ON CORNERS
7'-0"MAX MIDBLOCK

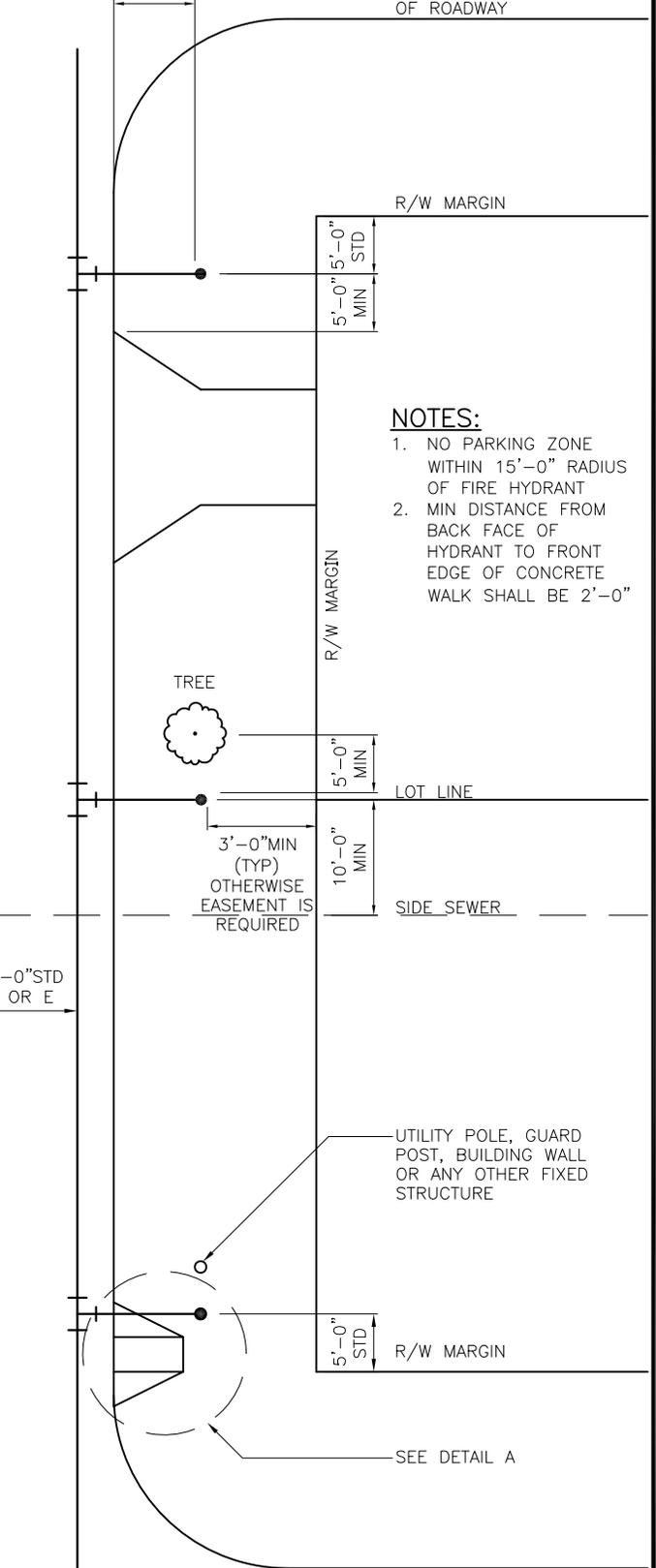
CURB OR EDGE OF
TRAVELED PORTION
OF ROADWAY



DETAIL A
HYDRANT NEAR CURB RAMP

10'-0"STD
N OR E

Q STREET



NOTES:

1. NO PARKING ZONE WITHIN 15'-0" RADIUS OF FIRE HYDRANT
2. MIN DISTANCE FROM BACK FACE OF HYDRANT TO FRONT EDGE OF CONCRETE WALK SHALL BE 2'-0"

REF STD SPEC SEC 7-14



City of Seattle

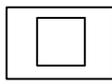
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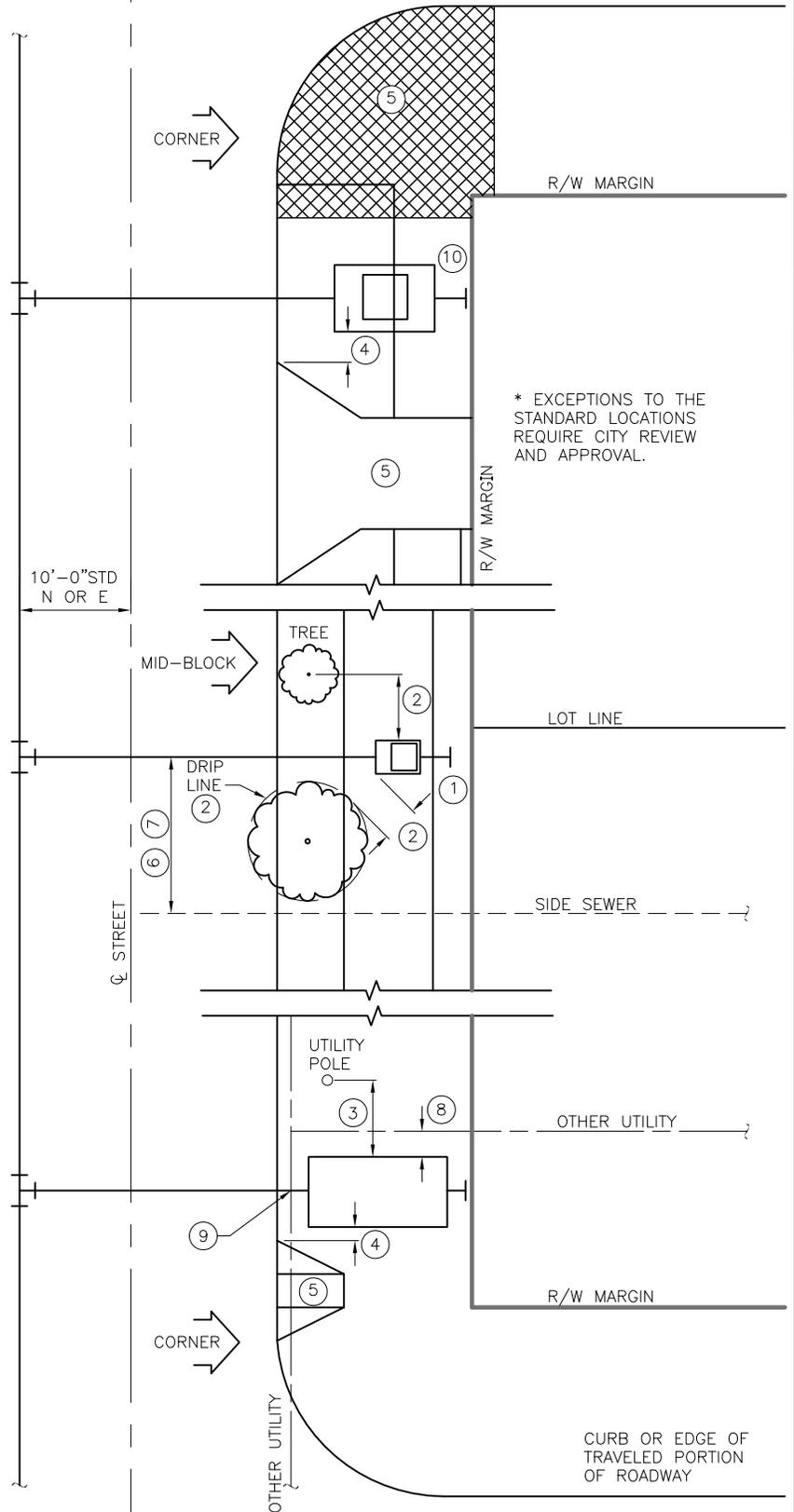
**FIRE HYDRANT
LOCATIONS & CLEARANCES**

NOTES:

- ① UNION POINT 2' OUTSIDE VAULT OR 2' FROM PROPERTY LINE.
- ② 5' CLEARANCE FROM NEW TREES OR CLEAR OF DRIP LINE FOR EXISTING TREES
- ③ 5' CLEAR FROM POLES.
- ④ 2' CLEAR FROM EDGE OF DRIVEWAY OR ADA RAMP.
- ⑤ WATER SERVICE NOT TO BE INSTALLED IN DRIVEWAY, BEHIND ADA RAMP, OR STREET CORNER.
- ⑥ SIDE SEWER HORIZONTAL CLEARANCE 10' FOR CAST IRON WATER PIPE OR 5' FOR DUCTILE IRON WATER PIPE.
- ⑦ SIDE SEWER VERTICAL CLEARANCE 1.5' MIN.
- ⑧ VAULT HORIZONTAL CLEARANCE 12" MIN FROM OTHER UTILITIES. UNLESS OTHERWISE NOTED IN STD SPECS.
- ⑨ VERTICAL CLEARANCE 12" MIN FOR ALL OTHER UTILITY CROSSINGS UNLESS OTHERWISE NOTED IN STD SPECS.
- ⑩ ALLOWABLE LOCATION OF WATER SERVICE VAULT. 2' CLEAR OF CURB AND 2' CLEAR OF PROPERTY LINE.

TYPES OF WATER SERVICES

-  6" & LARGER DOMESTIC SERVICE (DS) 6'X9' VAULT NCVP#
-  3" & 4" DOMESTIC SERVICE (DS) 5'X7' VAULT NCVP#
-  4" & LARGER FIRE SERVICES (DC DETECTOR CHECK) 4'X4' AREA (TYP DIRECT BURY) NCVP#
-  2" & SMALLER WATER SERVICE INSTALLED IN 1.5'X2' METER BOX MB#



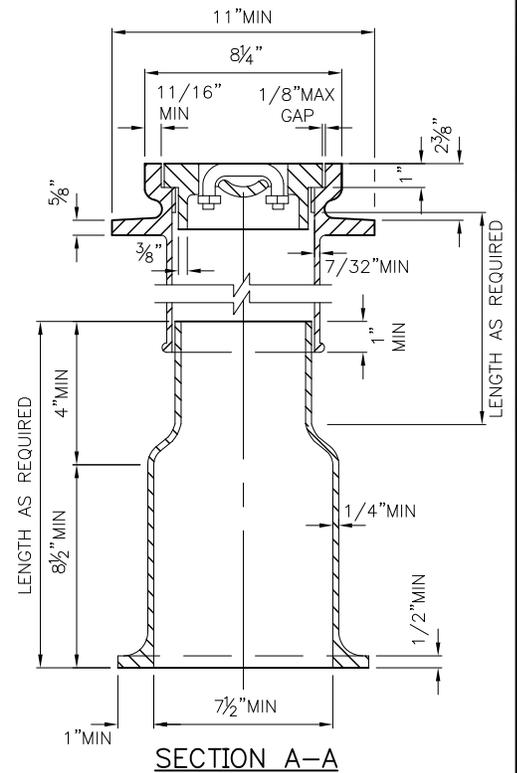
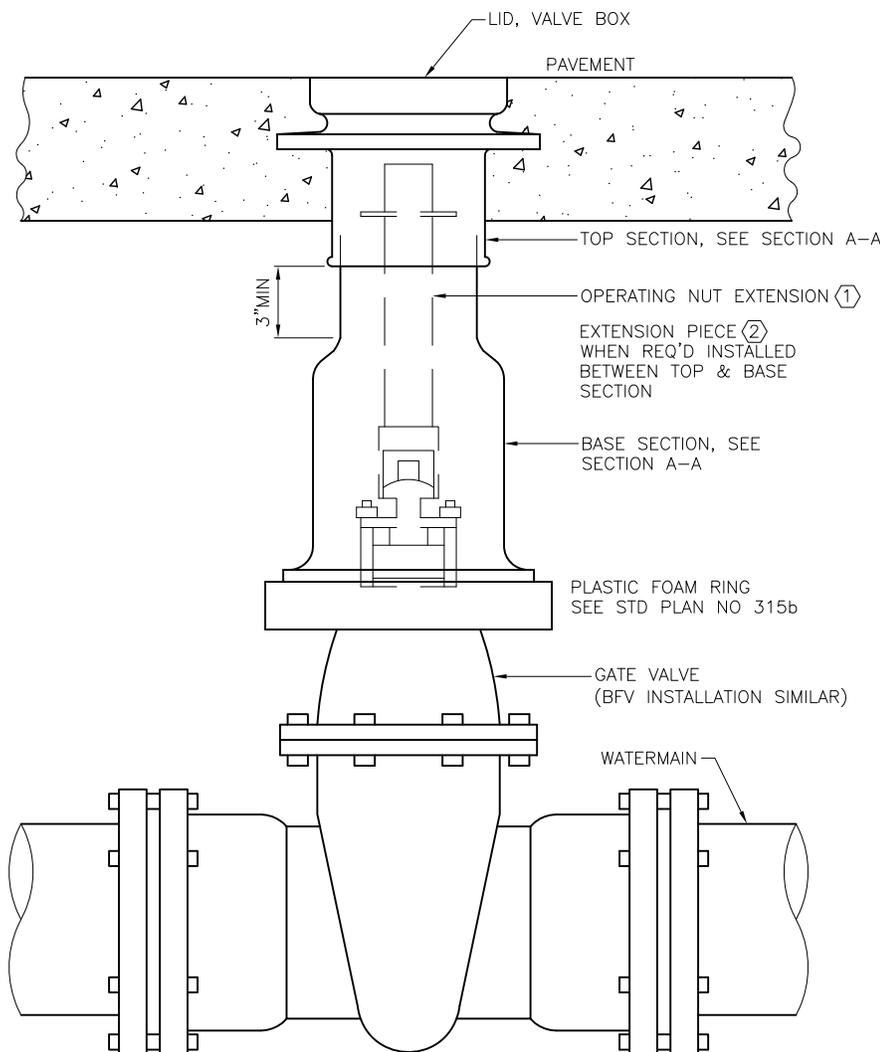
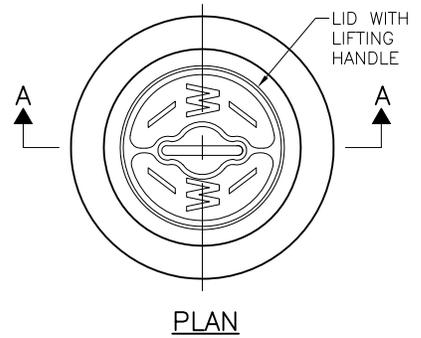
REF STD SPEC SEC 1-07.17(2)



City of Seattle

NOT TO SCALE

WATER SERVICE VAULT LOCATION CLEARANCES



NOTE:
VALVE BOX FOR USE ON 12" OR SMALLER VALVE INSTALLATIONS

VALVE BOX ASSEMBLY
TYPICAL SETTING DETAIL

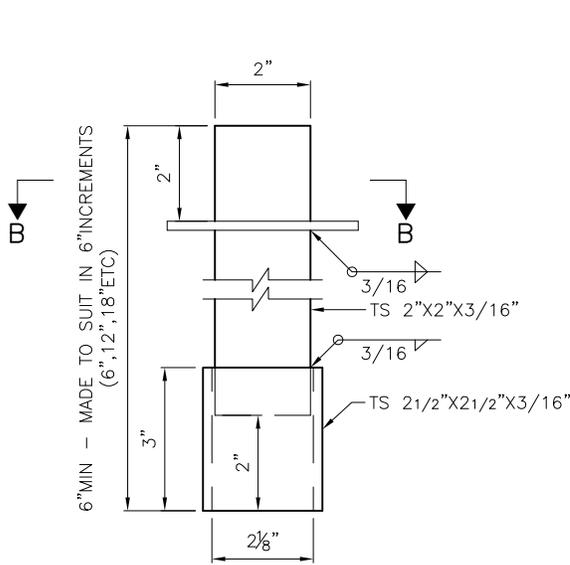
REF STD SPEC SEC 7-12



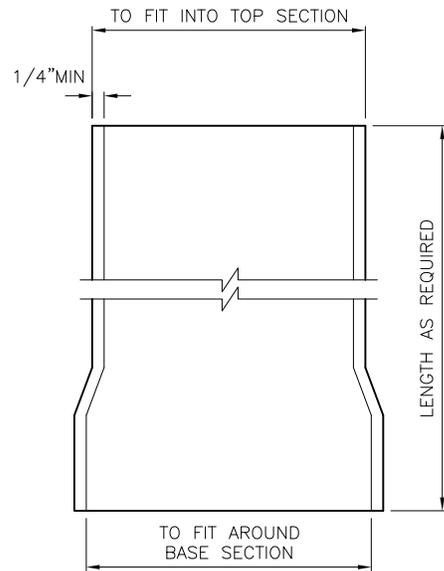
City of Seattle

NOT TO SCALE

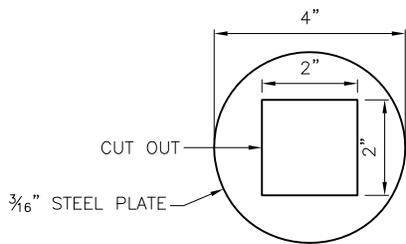
CAST IRON VALVE BOX & OPERATING NUT EXTENSION



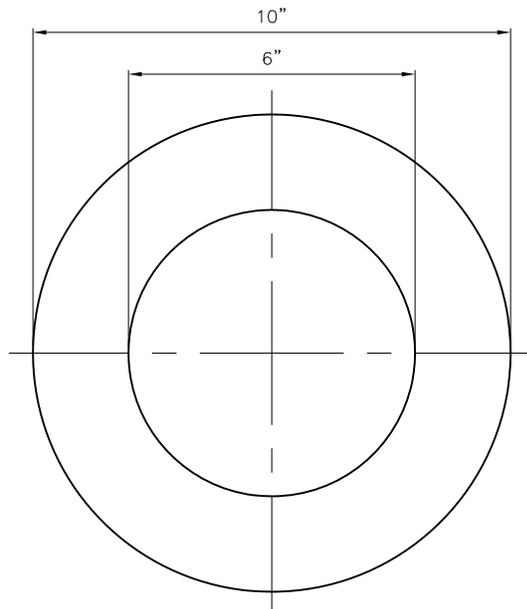
OPERATING NUT EXTENSION DETAIL 1



EXTENSION PIECE 2 WHEN REQUIRED



SECTION B-B



PLASTIC FOAM RING DETAIL

NOTES:

1. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY
2. CASTINGS AND EXTENSIONS SHALL BE HOT-DIPPED IN ASPHALTIC VARNISH ROYSTON ROSKOTE #612XM OR 2 COATS OF MASTIC ROYSTON INSIDE AND OUT.
3. VALVE BOXES SHALL BE RICH #045: TOP SECTION, LID AND BASE; OR OLYMPIC FOUNDRY: LID #1908-33, TOP SECTION #1106-33, BASE SECTION #1301-33
4. ALL CASTINGS SHALL BE DUCTILE OR GREY CAST IRON

LEGEND:

1. AN OPERATING NUT EXTENSION SHALL BE INSTALLED WHEN THE GROUND SURFACE IS MORE THAN 2'-6" ABOVE THE VALVE OPERATING NUT. THE OPERATING NUT EXTENSION SHALL EXTEND INTO THE TOP SECTION OF THE STANDARD VALVE BOX AND SHALL CLEAR THE BOTTOM OF THE LID BY 6" MIN
2. EXTENSION PIECES (WHEN USED) SHALL CONFORM TO MINIMUM THICKNESS REQUIREMENTS AND SHALL FIT INTO THE TOP SECTION AND OVER THE BOTTOM SECTION

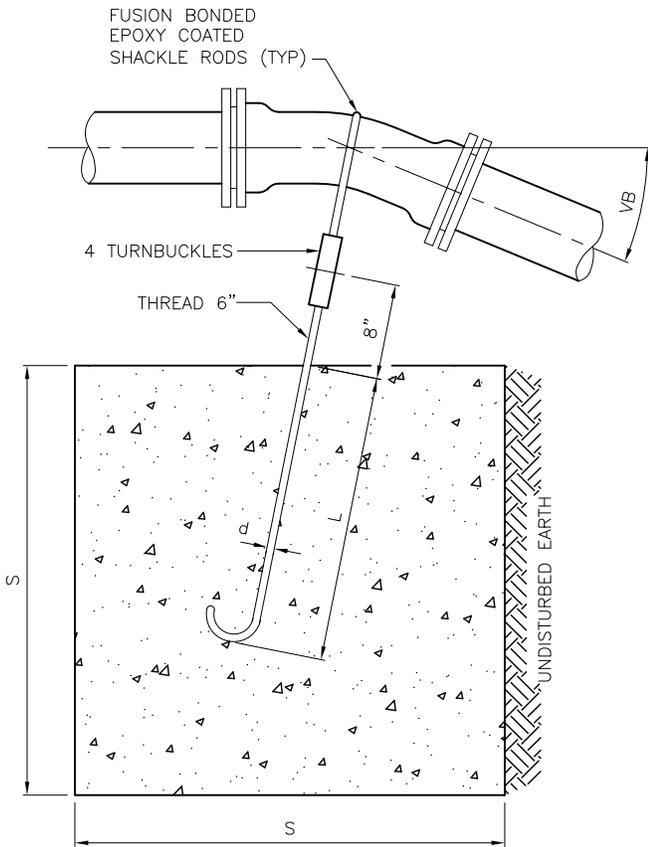
REF STD SPEC SEC 7-12 & 9-30



City of Seattle

NOT TO SCALE

CAST IRON VALVE BOX & OPERATING NUT EXTENSIONS



TYPE A

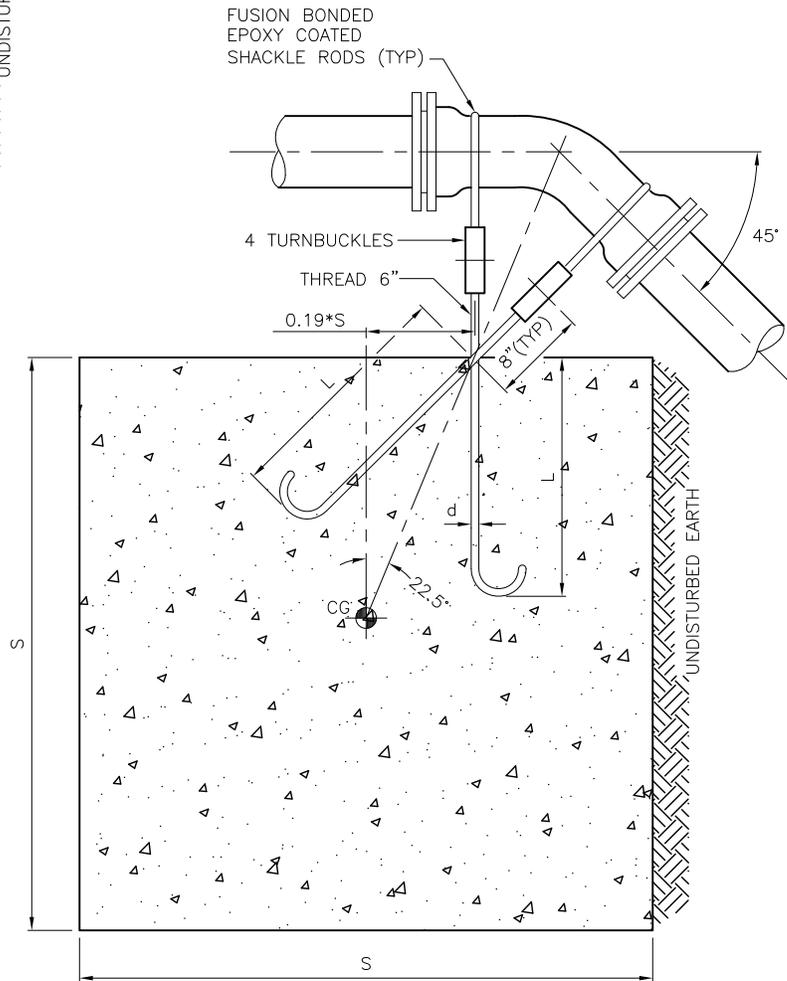
TYPE A BLOCKING FOR 11¼° & 22½° VERTICAL BENDS

PIPE SIZE NOM DIA INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	NO OF CU FT OF CONC BLOCKING	S SIDE OF CUBE FEET	d DIA OF SHACKLE RODS (2) INCHES	L DEPTH OF RODS IN CONCRETE INCHES
4"	300	11¼	8	2	¾	18
		22½	12	2¼		24
6"	300	11¼	12	2¼	¾	24
		22½	27	3		24
8"	300	11¼	16	2½	¾	24
		22½	43	3½		24
12"	300	11¼	64	4	1	24
		22½	125	5	1	36

TYPE B BLOCKING FOR 45° VERTICAL BENDS

PIPE SIZE NOM DIA INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	NO OF CU FT OF CONC BLOCKING	S SIDE OF CUBE FEET	d DIA OF SHACKLE RODS (2) INCHES	L DEPTH OF RODS IN CONCRETE INCHES
4"	300	45	27	3	¾	20
6"			64	4		
8"			125	5		
12"			216	6		

FOR NOTES SEE STD PLAN NO 330b



TYPE B

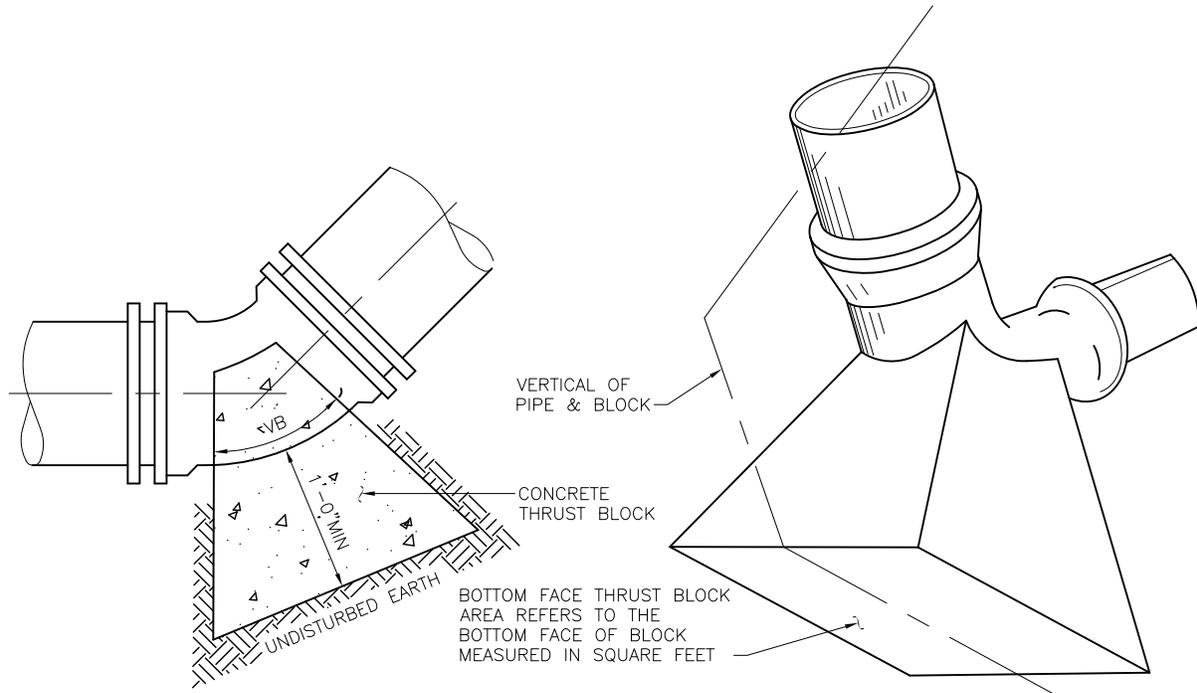
REF STD SPEC SEC 7-11



City of Seattle

NOT TO SCALE

WATERMAIN THRUST BLOCKING VERTICAL FITTINGS



TYPE C

TYPE "C" BLOCKING FOR 11¼", 22½", 45° AND 90° VERTICAL BENDS										
THRUST BLOCK AREA IN SQUARE FEET										
PIPE SIZE	SOIL	FIRM SILT OR FIRM SILTY SAND			COMPACT SAND			COMPACT SAND & GRAVEL		
	FITTING	90° BEND	TEE, 45° BEND & DEAD END	11¼" & 22½" BEND	90° BEND	TEE, 45° BEND & DEAD END	11¼" & 22½" BEND	90° BEND	TEE, 45° BEND & DEAD END	11¼" & 22½" BEND
4"		5.8	4.2	1.7	2.9	2.1	1.0	2.2	1.6	1.0
6"		13.3	9.4	3.8	6.7	4.7	1.9	5.0	3.5	1.4
8"		23.3	16.7	6.7	11.7	8.4	3.4	8.8	6.3	2.5
12"		53.0	37.5	15.0	26.5	18.8	7.5	20.0	14.0	5.6
AREAS CALCULATED ON 300 PSI TEST PRESSURE AND 3'-0" MIN COVER OVER WATERMAIN										

NOTES:

1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE ENGINEER.
2. ALL BLOCKING FOR VERTICAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND.
3. ALL POURED THRUST BLOCKS SHALL BE BACKFILLED AFTER MIN. 1 DAY. PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED f'c.
4. ALL BLOCKING SHALL BE CONCRETE CL 3000.
5. AFTER INSTALLATION, SHACKLE RODS & TURNBUCKLES SHALL BE CLEANED AND COATED WITH 2 COATS OF ASPHALTIC VARNISH, ROYSTON ROYKOTE #612M OR APPROVED EQUAL.
6. SHACKLE RODS SHALL BE FUSION BONDED EPOXY COATED ROUND MILD STEEL, ASTM A 36, WITH THREADS ON ENDS ONLY.
7. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS. REASONABLE ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED.

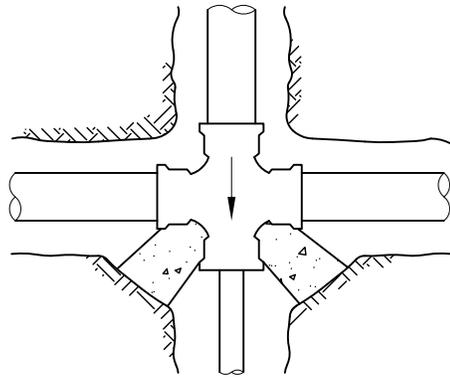
REF STD SPEC SEC 7-11



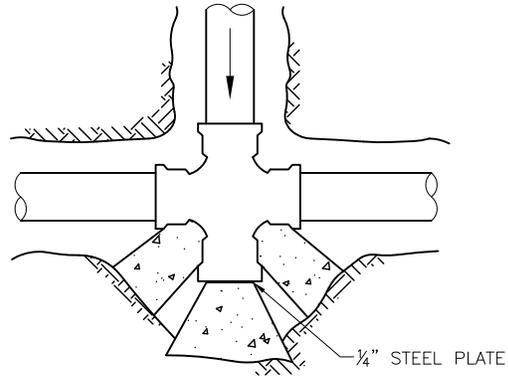
City of Seattle

NOT TO SCALE

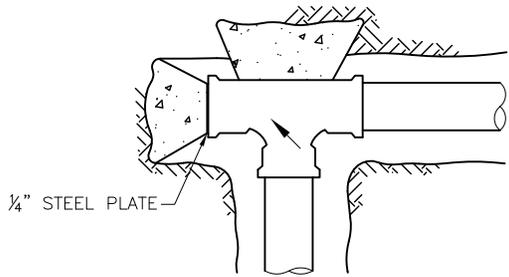
**WATERMAIN THRUST BLOCKING
VERTICAL FITTINGS**



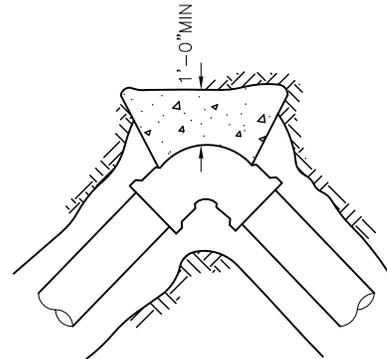
UNBALANCED CROSS



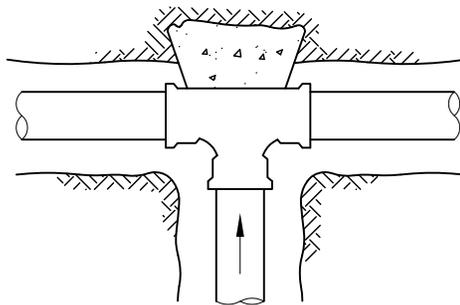
CROSS WITH PLUG



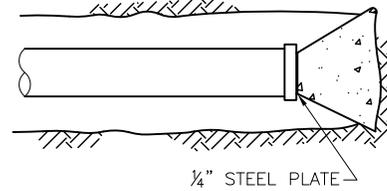
PLUGGED TEE



HORIZONTAL BEND



TEE



PIPE & CAP

THRUST BLOCK AREA IN SQUARE FEET (SEE STD PLAN NO 331B)																
PIPE SIZE	SOIL				FIRM SILT OR FIRM SILTY SAND				COMPACT SAND				COMPACT SAND & GRAVEL			
	90° BEND	TEE	45° BEND CAP OR PLUG	11¼° & 22½° BEND	90° BEND	TEE	45° BEND CAP OR PLUG	11¼° & 22½° BEND	90° BEND	TEE	45° BEND CAP OR PLUG	11¼° & 22½° BEND				
4"	7.0	4.2	4.2	1.7	2.9	2.1	2.1	1.0	2.2	1.6	1.6	1.0				
6"	13.3	9.4	9.4	3.8	6.7	4.7	4.7	1.9	5.0	3.5	3.5	1.4				
8"	23.3	16.7	16.7	6.7	11.7	8.4	8.4	3.4	8.8	6.3	6.3	2.5				
12"	53.0	37.5	37.5	15.0	26.5	18.8	18.8	7.5	20.0	14.0	14.0	5.6				

AREAS CALCULATED ON 300 PSI TEST PRESSURE AND 3'-0" MIN COVER OVER WATERMAIN

 ECOLOGY BLOCKS, PER STD PLAN NO 460, MAY BE USED, AT THE DISCRETION OF THE ENGINEER ONLY, IN LIEU OF POURED-IN-PLACE BLOCKING FOR FITTINGS IN HEAVY OUTLINED PORTION OF TABLE.

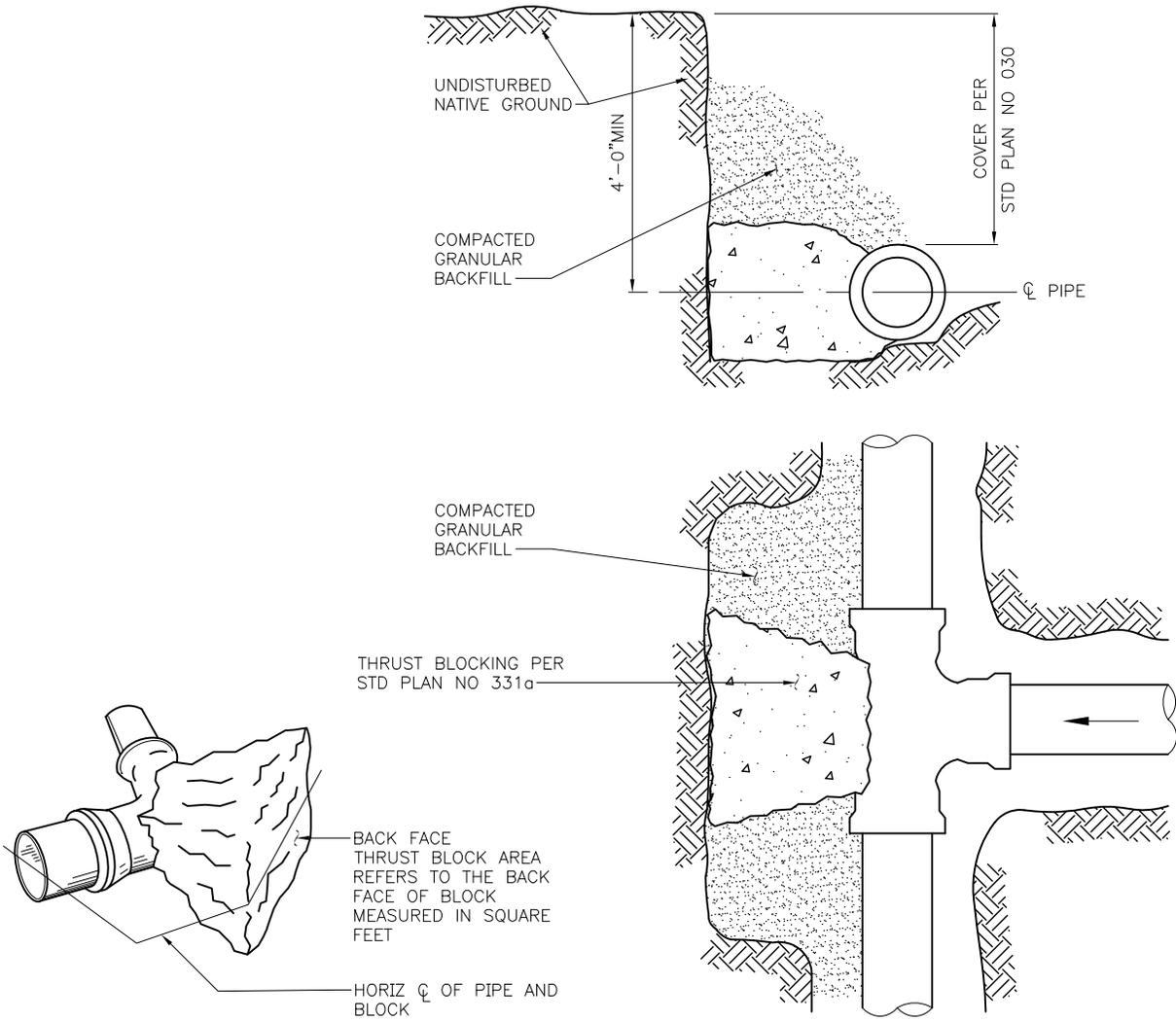
REF STD SPEC SEC 7-11



City of Seattle

NOT TO SCALE

WATERMAIN THRUST BLOCKING HORIZONTAL FITTINGS



THRUST BLOCK DETAIL

NOTES:

1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE ENGINEER.
2. ALL BLOCKING FOR HORIZONTAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND.
3. ALL POURED THRUST BLOCKS SHALL BE BACKFILLED AFTER MIN. 1 DAY. PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED f'c.
4. ALL BLOCKING TO BE CONCRETE CL 3000.
5. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS. ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED.
6. ALL HORIZONTAL BLOCKING THRUST AREAS SHALL BE CENTERED ON PIPE.
7. WHERE POURED-IN-PLACE BLOCKING IS REQUIRED AT A POINT OF CONNECTION TO AN EXISTING WATERMAIN, THE BLOCKING SHALL BE INSTALLED PRIOR TO CONNECTION.
8. TEMPORARY BLOCKING, IF USED, SHALL BE APPROVED BY ENGINEER.

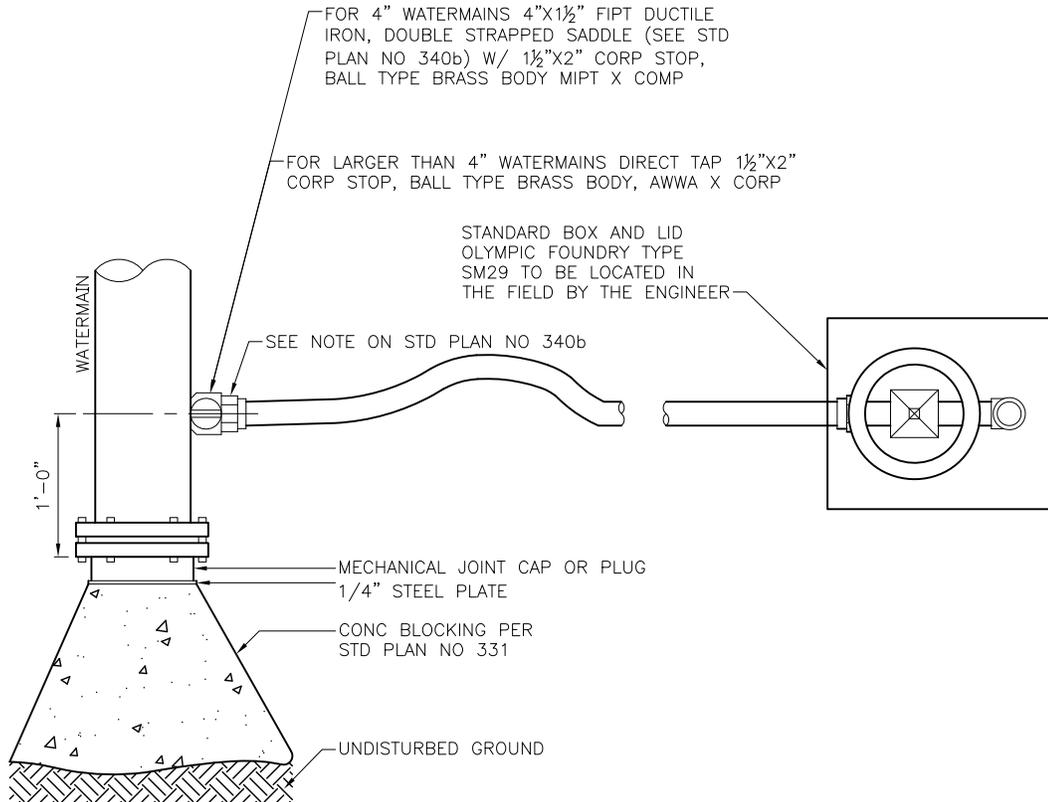
REF STD SPEC SEC 7-11



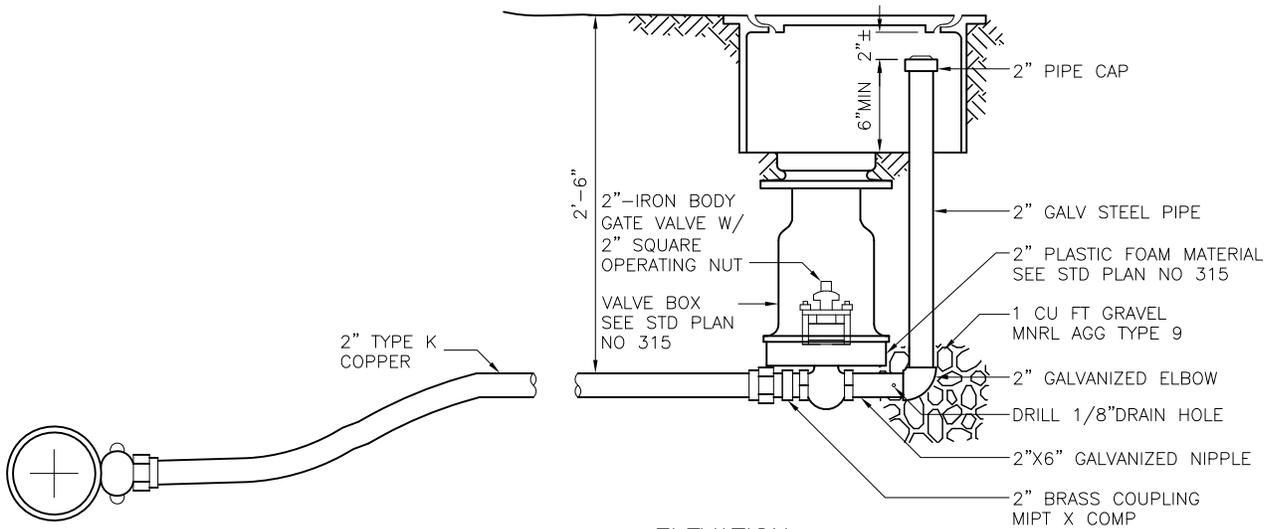
City of Seattle

NOT TO SCALE

**WATERMAIN THRUST BLOCKING
HORIZONTAL FITTINGS**



PLAN



ELEVATION

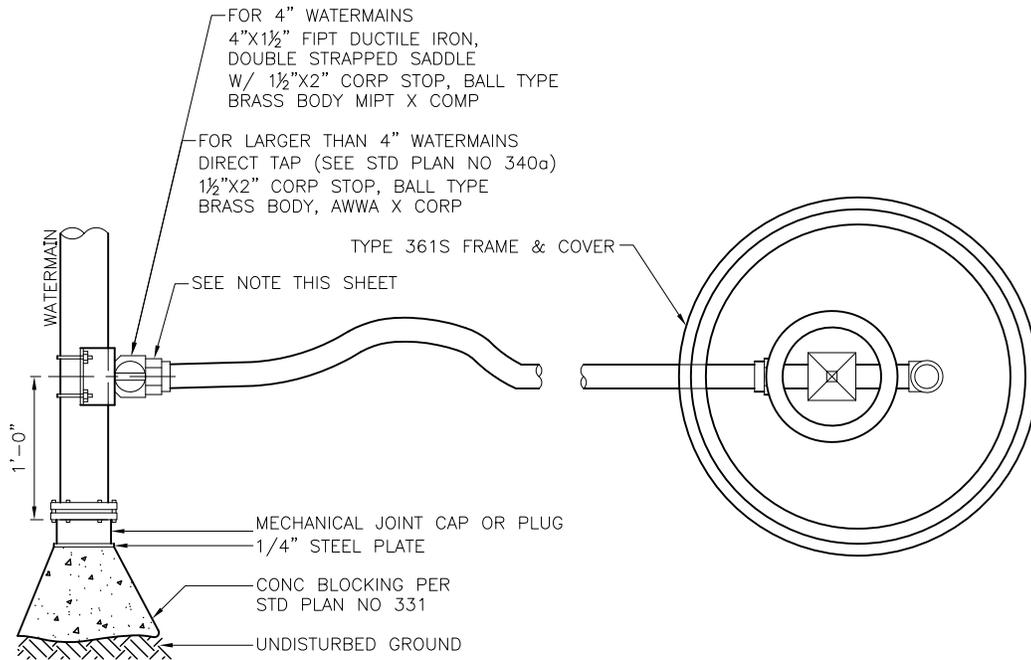
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City of Seattle

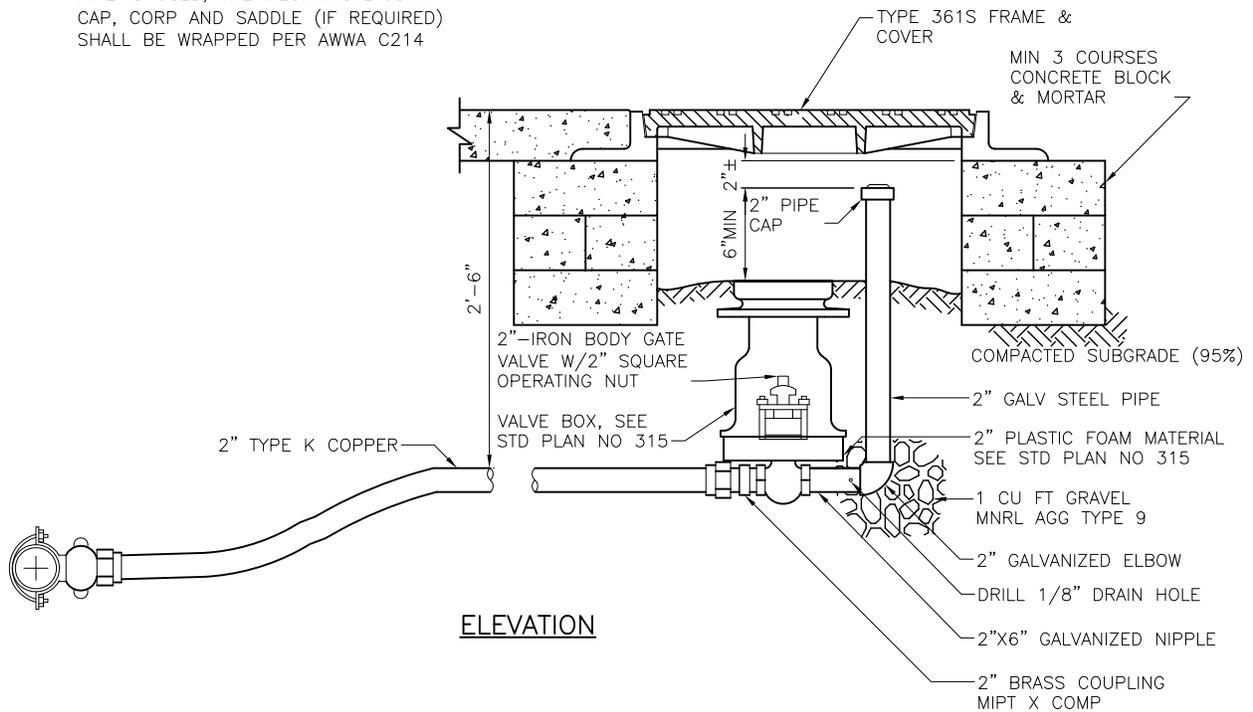
NOT TO SCALE

2" BLOW OFF TYPE A
NON TRAFFIC INSTALLATION



NOTE:
 WHERE TAPE-WRAPPED DUCTILE IRON PIPE IS USED, THE MECHANICAL JOINT CAP, CORP AND SADDLE (IF REQUIRED) SHALL BE WRAPPED PER AWWA C214

PLAN



ELEVATION

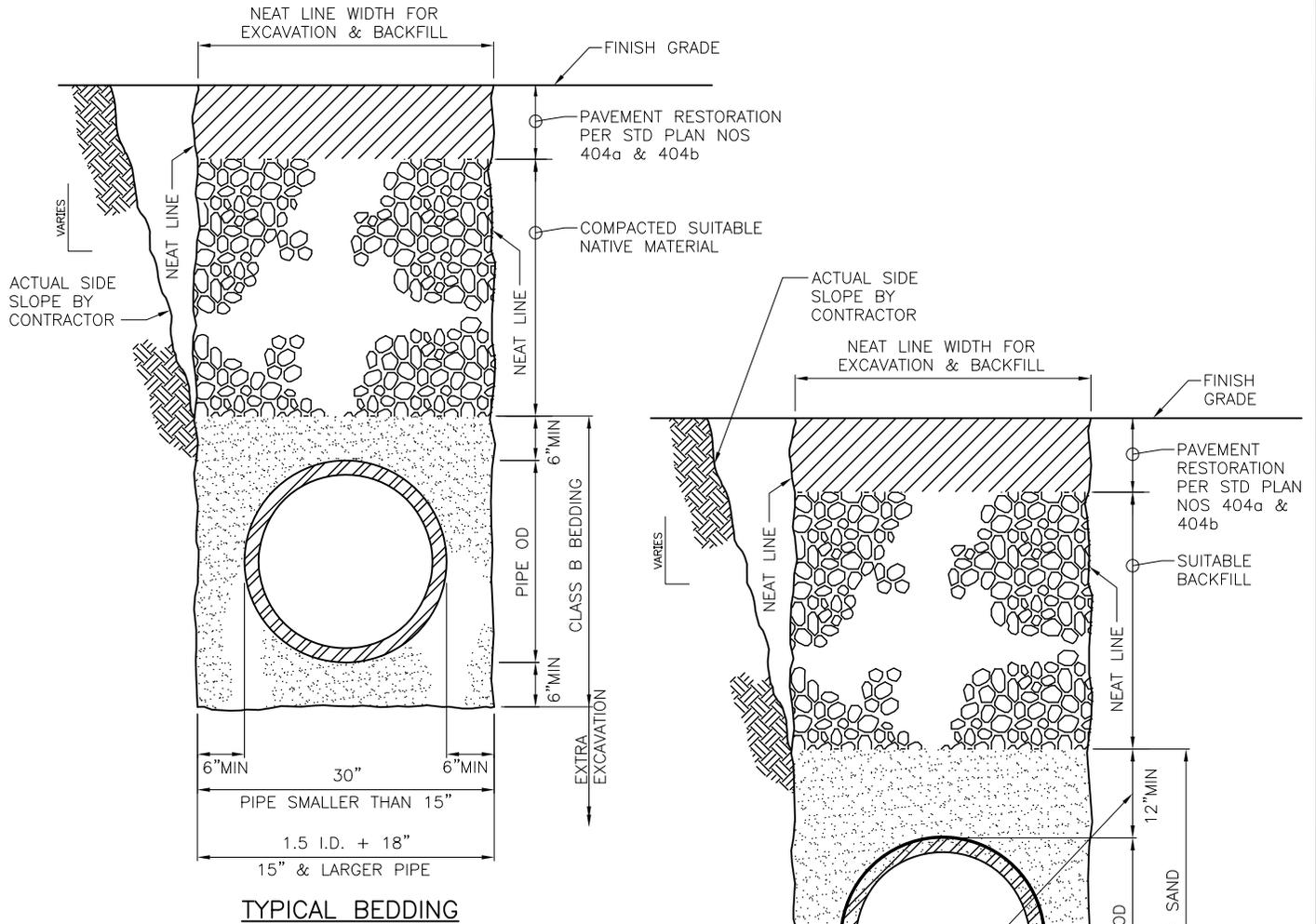
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City of Seattle

NOT TO SCALE

**2" BLOW OFF DETAIL TYPE B
 TRAFFIC INSTALLATION**



TYPICAL BEDDING

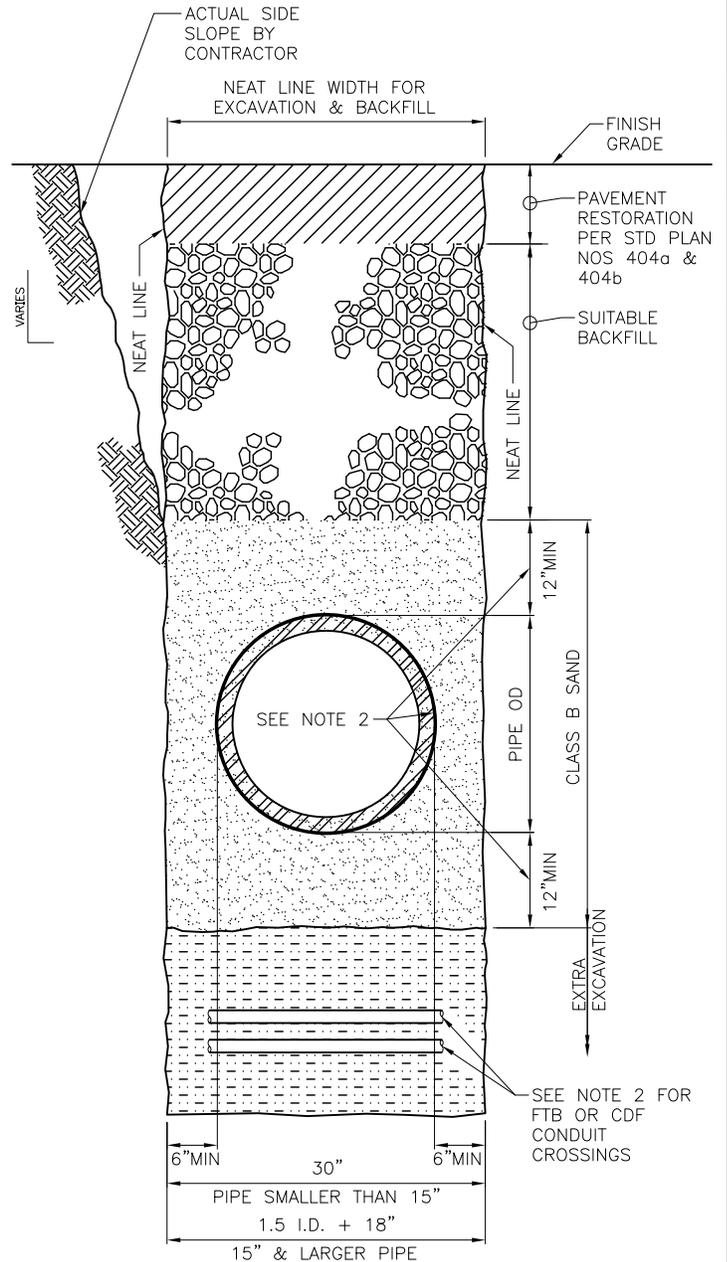
BEDDING MATERIAL

CLASS B:

- FOR DISTRIBUTION WATERMAIN, MINERAL AGGREGATE TYPE 6 OR TYPE 7
- FOR TRANSMISSION WATERMAIN, MINERAL AGGREGATE TYPE 9
- SPECIAL BEDDING TO BE INDICATED ON DRAWINGS

NOTES:

1. EXCAVATE FOR THE BELL TO ENSURE UNIFORM SUPPORT FOR THE PIPE BARREL
2. FOR FLUIDIZED THERMAL BACKFILL (FTB) OR CDF CROSSINGS OF METALLIC PIPE, INCREASE CLASS B SAND DEPTH & COVER TO 12" MIN & ENCASE METALLIC PIPE IN 8 MIL POLYETHYLENE ENCASEMENT FOR FULL TRENCH WIDTH



BEDDING AT TRENCH CROSSING

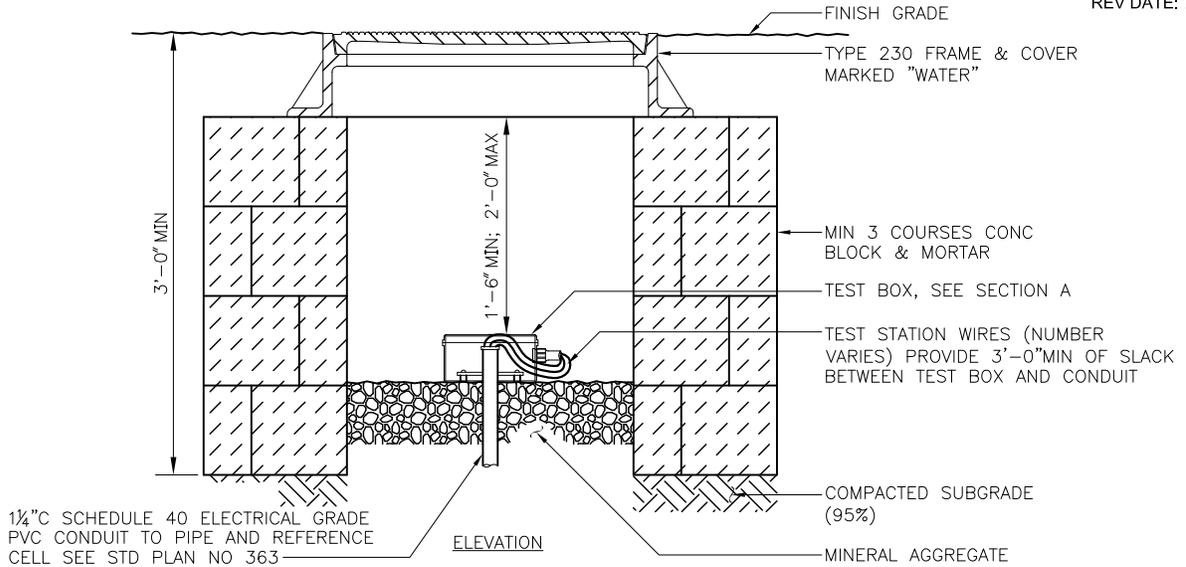
REF STD SPEC SEC 7-11,7-17



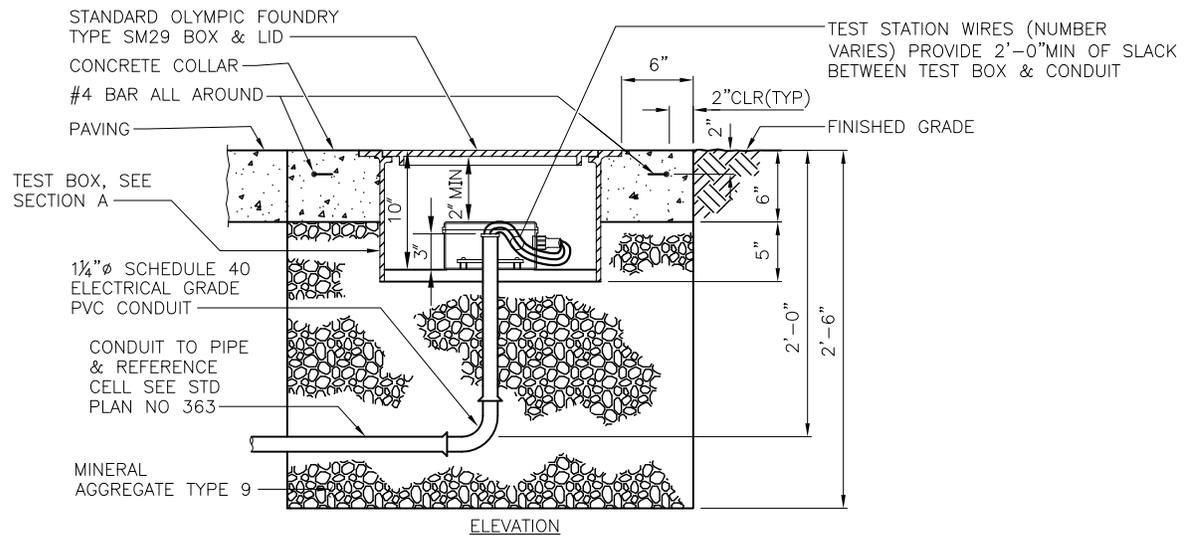
City of Seattle

NOT TO SCALE

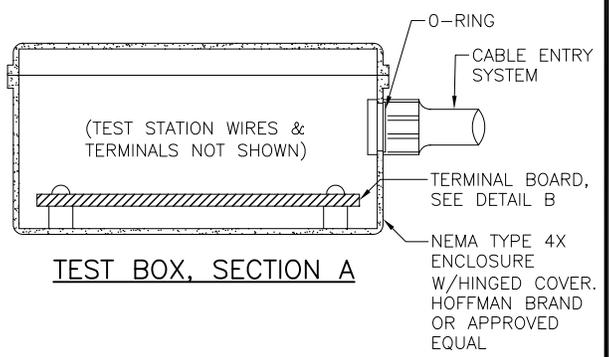
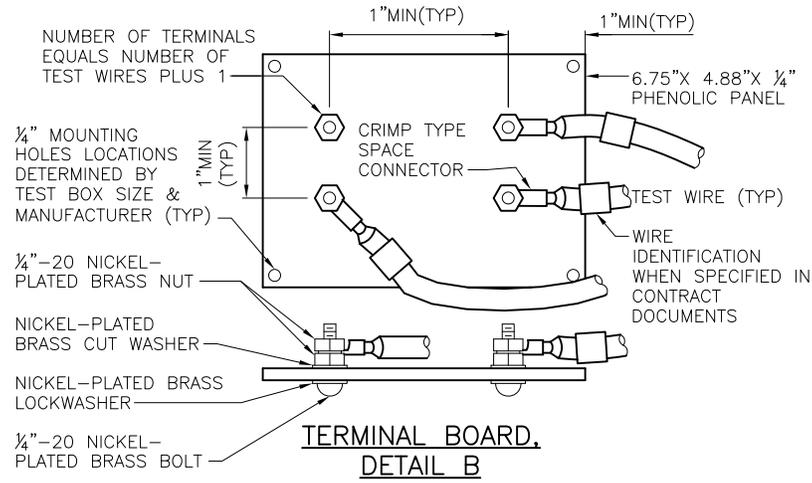
WATERMAIN TRENCH AND BEDDING



ELECTROLYSIS TEST STATION – TRAFFIC AREA



ELECTROLYSIS TEST STATION – NON-TRAFFIC AREA



TEST BOX, SECTION A

REF STD SPEC SEC 7-11

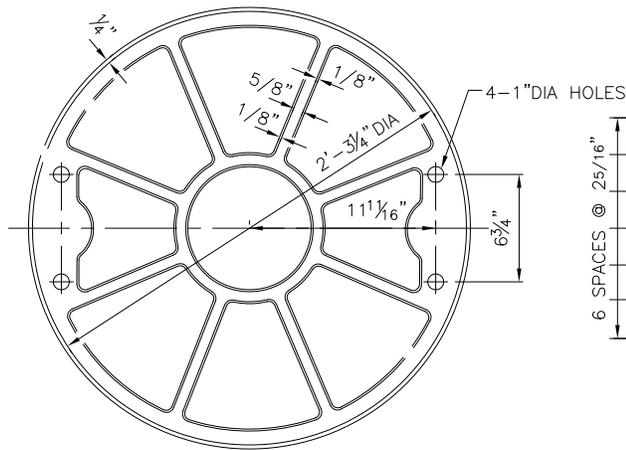


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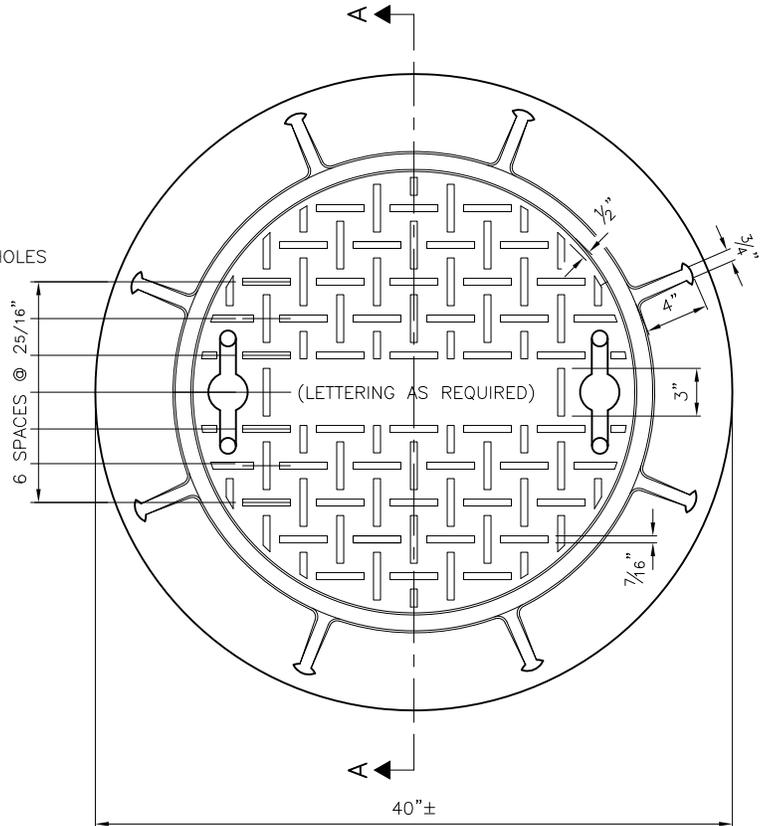
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WATERMAIN ELECTROLYSIS TEST STATION

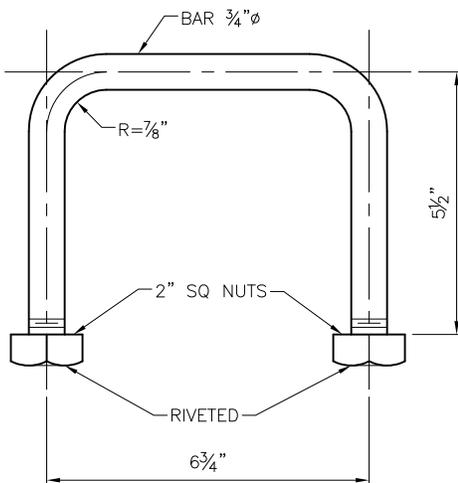
FRAME & COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY



BOTTOM VIEW

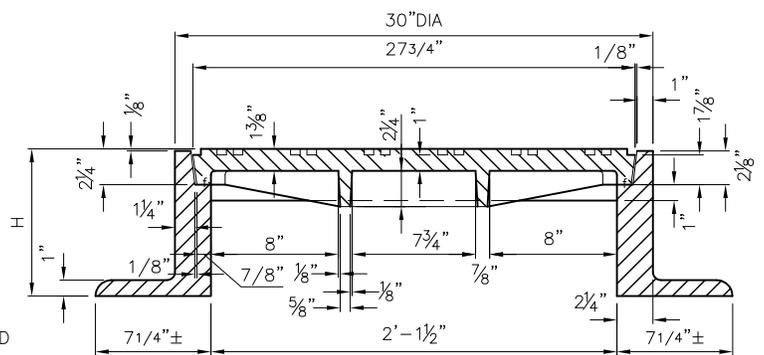


TOP VIEW



LIFTING HANDLE
(2 REQUIRED)

TYPE 361
H=9 1/4"
DESIGNATE SHALLOW FRAME AS TYPE 361S
H=4 1/4"
f=MACHINED FINISH



SECTION A-A

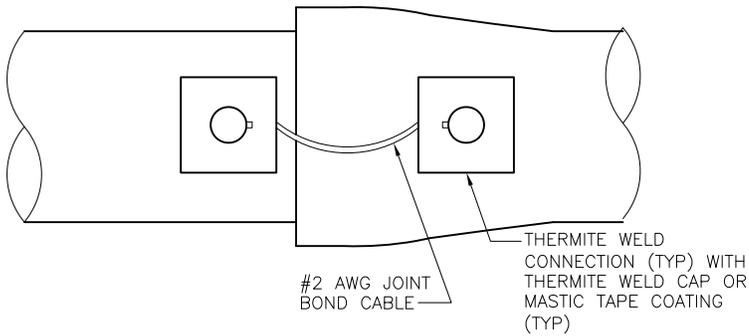
REF STD SPEC SEC 7-12



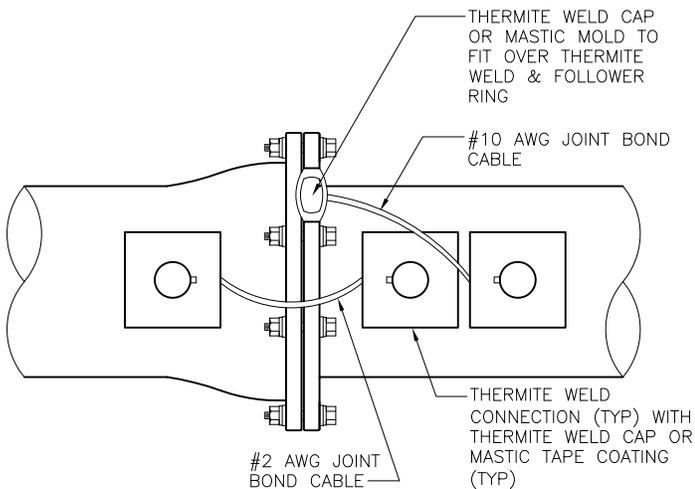
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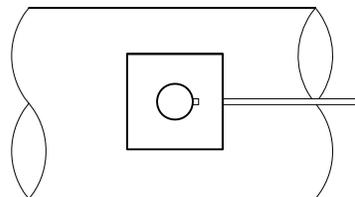
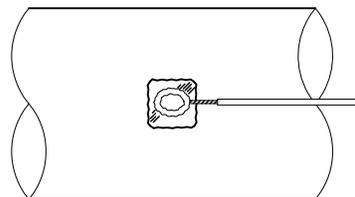
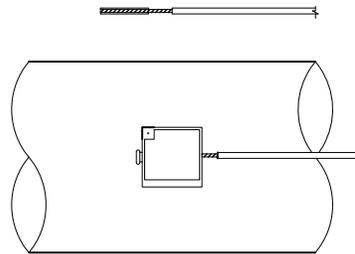
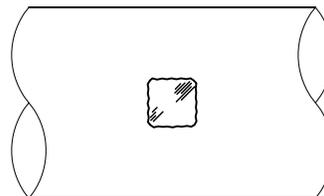
**TYPE 361 VALVE CHAMBER
FRAME & COVER**



SLIP JOINT BOND CONNECTION



MECHANICAL JOINT BOND CONNECTION



CONNECTION SEQUENCE:

1. REMOVE PIPE COATING TO BRIGHT & CLEAN METAL
2. STRIP INSULATION FROM TEST STION WIRE, INSTALL ADAPTER SLEEVE
3. HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR AND IGNITE
4. REMOVE SLAG AND ALLOW TO COOL
5. 16 OUNCE HAMMER TEST PER STD. SPEC SEC 7-11.3(15)D1
6. FINAL CONNECTION TO BE MADE WATERTIGHT WITH MASTIC COATING OR PREFORMED THERMITE WELD CAP

THERMITE WELD CONNECTION

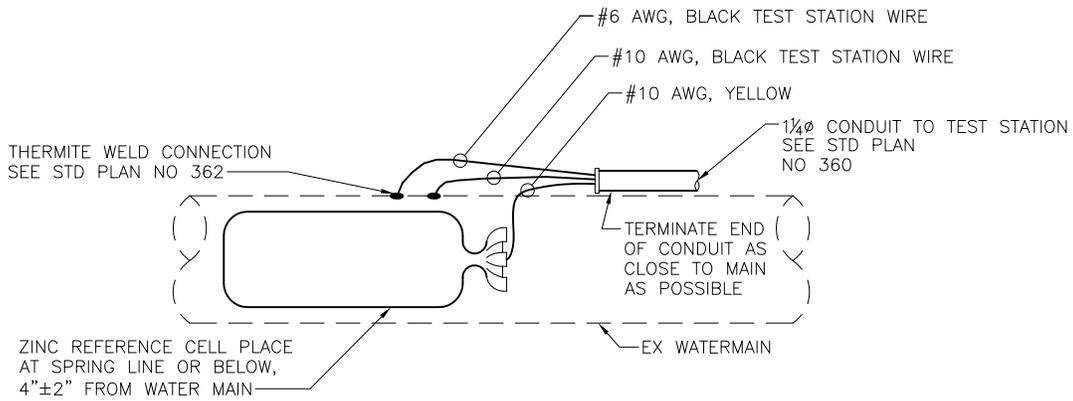
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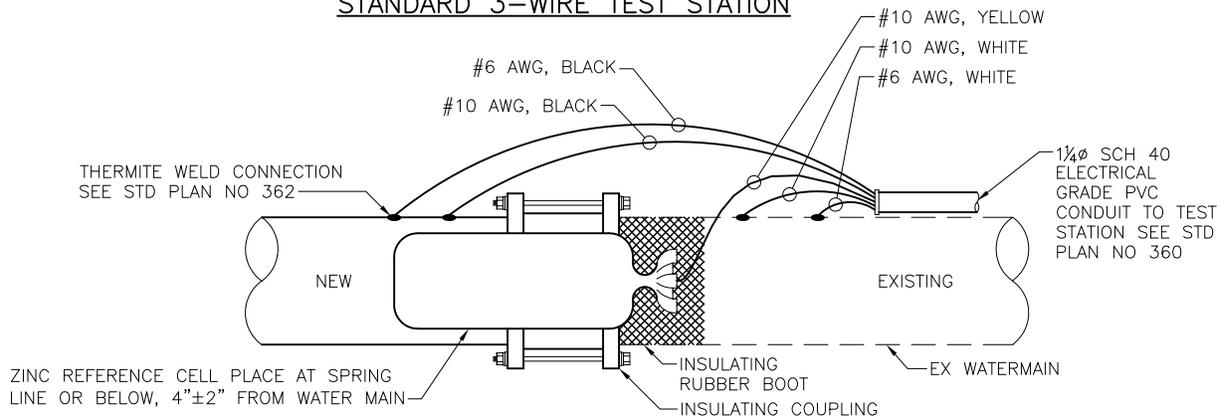
City of Seattle

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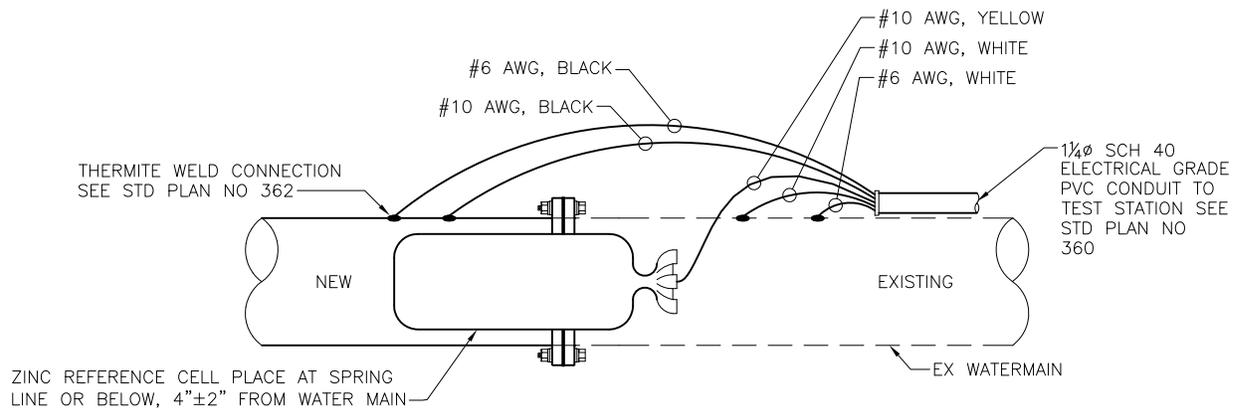
JOINT BONDING FOR DIP WATERMAINS & JOINTS BONDING DETAIL



STANDARD 3-WIRE TEST STATION



INSULATING COUPLING 5-WIRE TEST STATION



INSULATING FLANGE 5-WIRE TEST STATION

NOTE:

WIRE INSTALLATION PER STD SPEC SEC 9-30.12(3)

REF STD SPEC SEC 7-11.3(15) & 9-30.12



City of Seattle

NOT TO SCALE

**ELECTROLYSIS TEST STATION
 WIRE INSTALLATION DETAILS**