

STANDARD DETAILS

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PUMP STATIONS

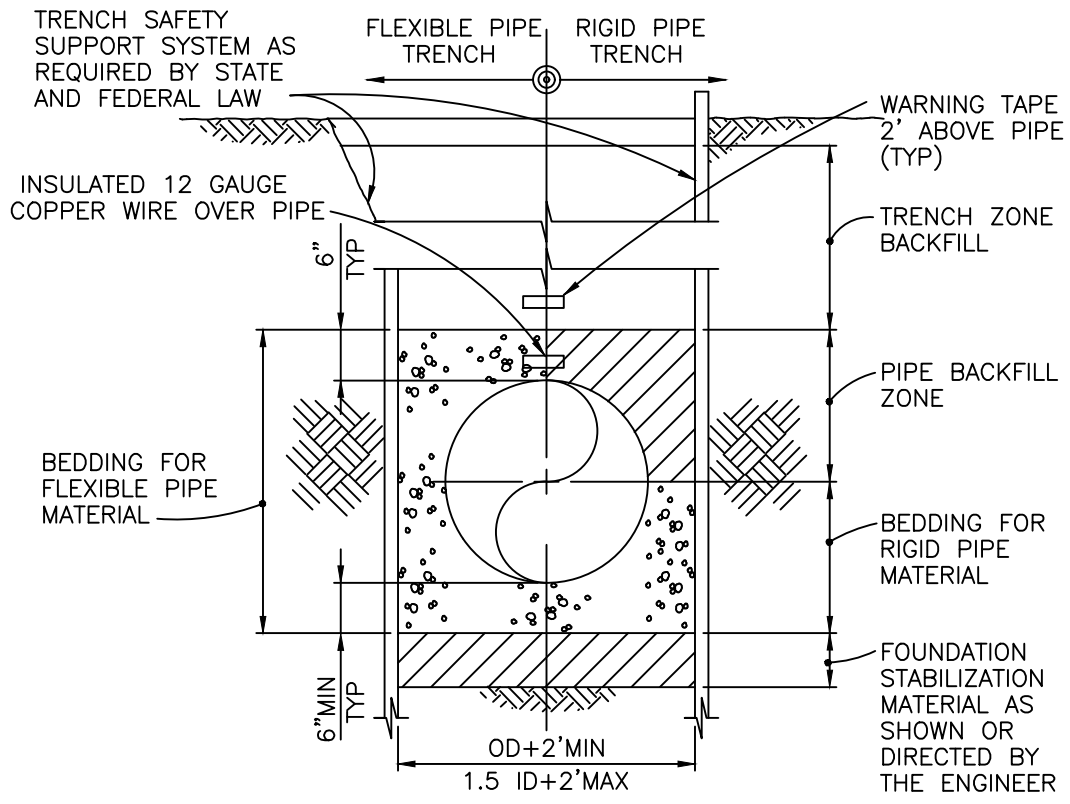
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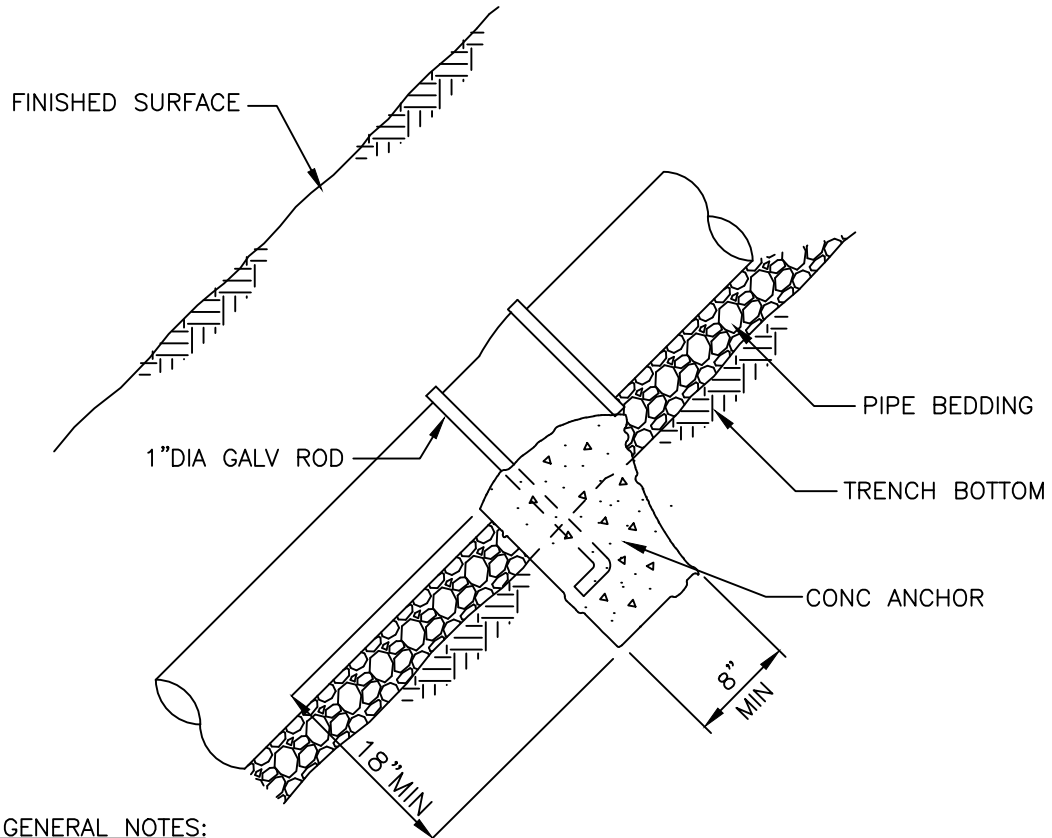


TYPICAL PIPE TRENCH
 NO SCALE



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KITSAP COUNTY Dept. of Public Works	PIPE TRENCH	DETAIL PD-1
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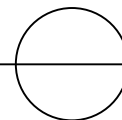


GENERAL NOTES:

1. MINIMUM ANCHOR BLOCK SIZE 8"x12"x18" UNLESS OTHERWISE NOTED.
2. BLOCKING SHALL BE POURED AGAINST UNDISTURBED SOIL.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

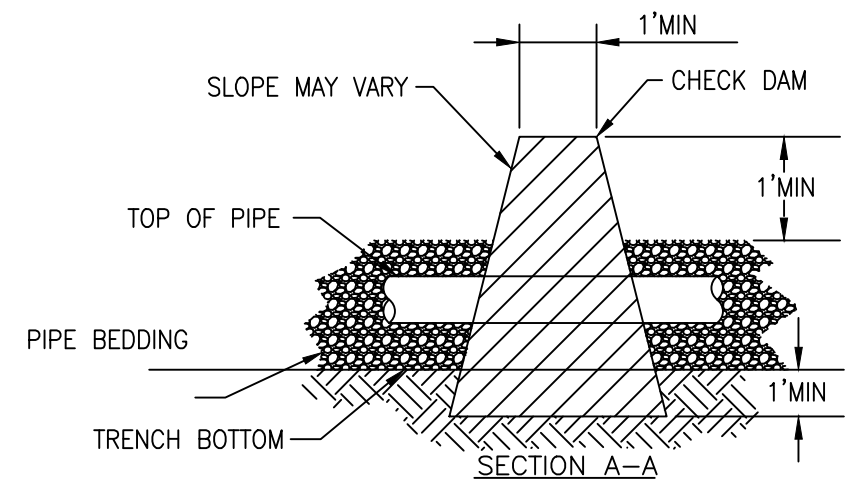
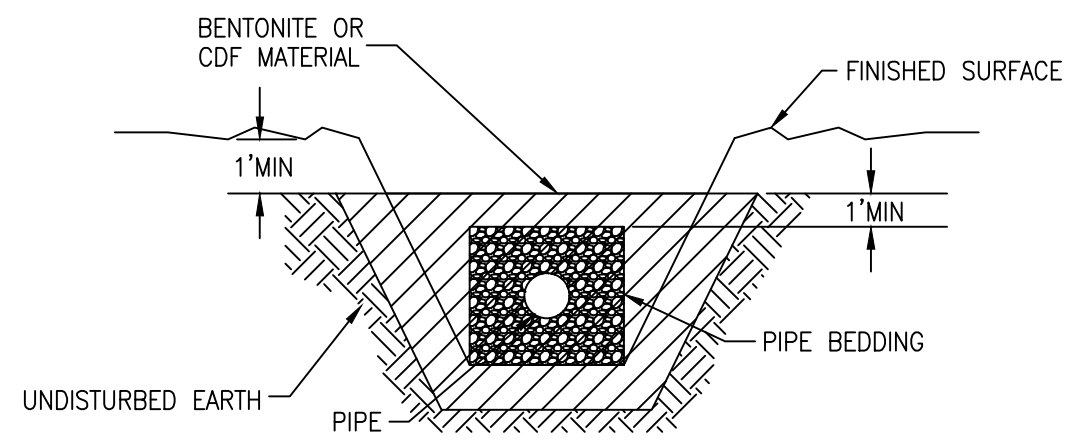
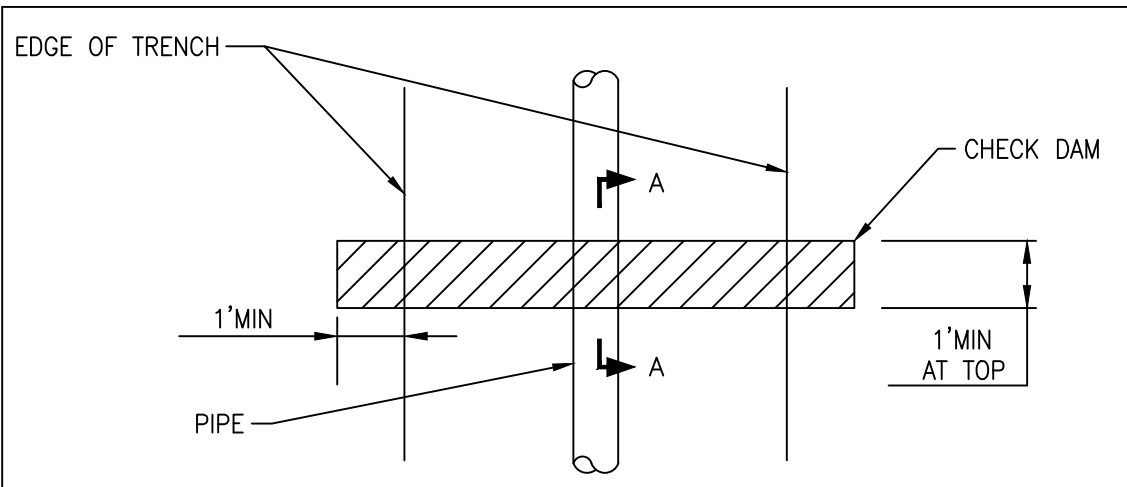
PIPE ANCHOR

NO SCALE

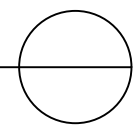


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KITSAP COUNTY Dept. of Public Works	PIPE ANCHOR	DETAIL PD-2
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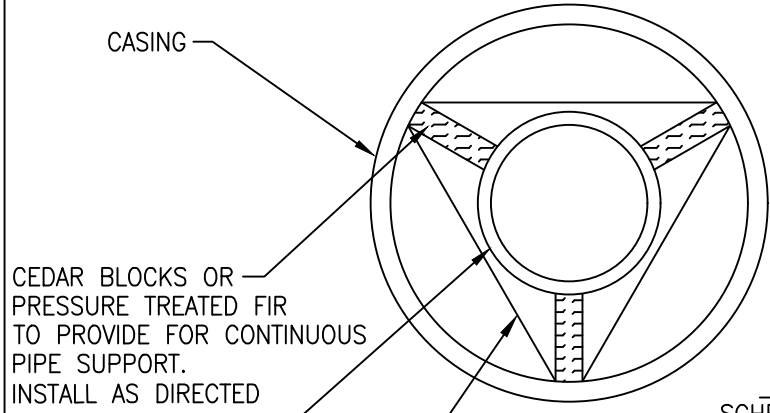
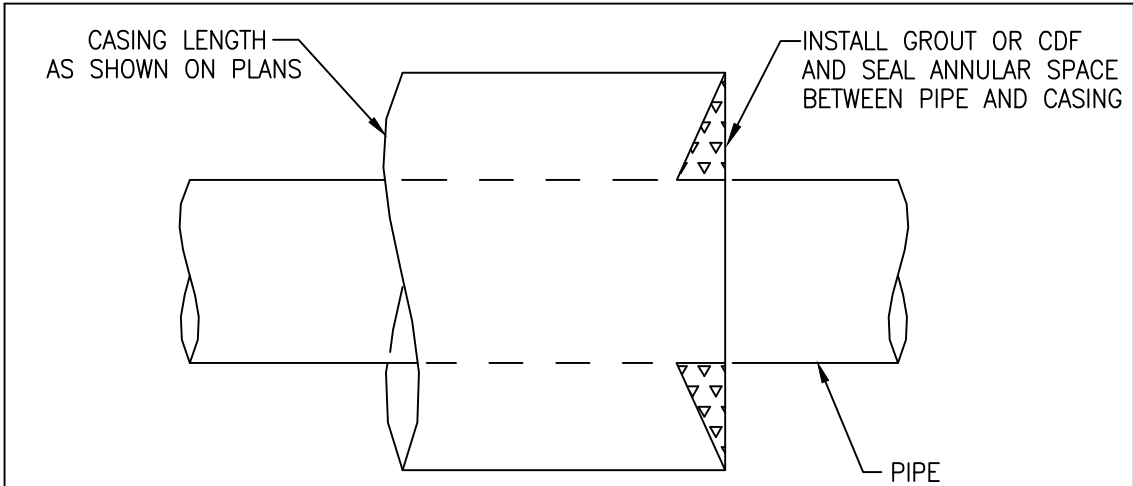


CHECK DAM
NO SCALE



Rev: _____

<p>KITSAP COUNTY Dept. of Public Works</p>	<p>CHECK DAM</p>	<p>DETAIL PD-3</p>
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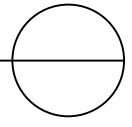
STAINLESS STEEL BANDS
10 FOOT SPACING
MINIMUM 3 REQUIRED

CASING TABLE
SCHEDULE 20 STEEL PIPE
UNLESS OTHERWISE INDICATED

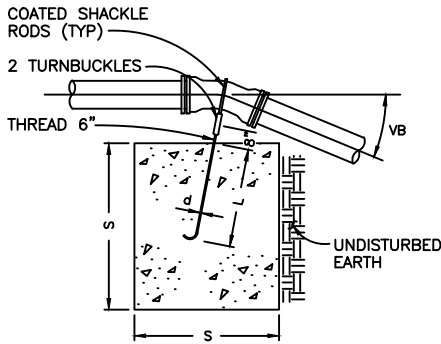
PIPE DIAMETER	MIN. CASING DIAMETER
6	12
8	14
10	16
12	18
14	20
16	22

- NOTES:
1. COMPLY WITH ALL REGULATORY REQUIREMENTS OF JURISDICTIONAL AUTHORITY.
 2. CASING SPACERS CAN BE SUBSTITUTED FOR BLOCKING.
 3. PRESENT PROPOSED METHOD FOR BLOCKING AND SUPPORTING PIPE WITHIN CASING TO ENGINEER FOR APPROVAL.

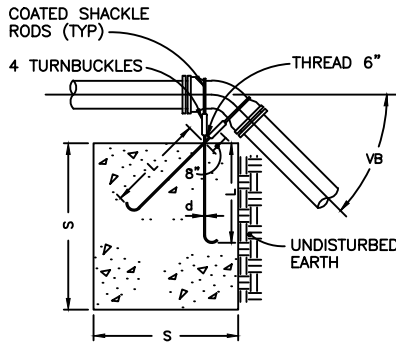
PIPE CASING
NO SCALE



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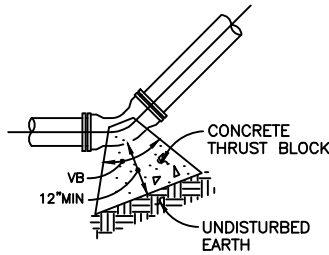


TYPE A

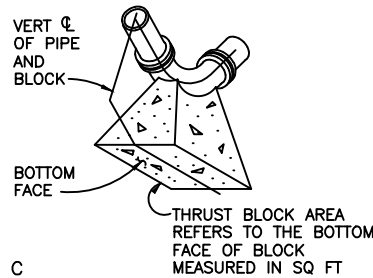


TYPE B

TYPE "A" BLOCKING FOR 11 1/2" AND 22 1/2" VERTICAL BLOCKS						TYPE "B" BLOCKING FOR 45" VERTICAL BENDS							
PIPE SIZE NOM DIAMETER INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	NO OF CU FT OF CONC BLOCKING	SIDE OF CUBE FEET	DIA OF SHACKLE RODS (2) INCHES	DEPTH OF RODS IN CONCRETE INCHES	PIPE SIZE NOM DIAMETER INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	NO OF CU FT OF CONC BLOCKING	SIDE OF CUBE FEET	DIA OF SHACKLE RODS (2) INCHES	DEPTH OF RODS IN CONCRETE INCHES
4"	300	11 1/4"	8	2	5/8"	18	4"	300	45	27	3	5/8"	20
		22 1/2"	12	2'-3"					64	4	5/8"		
6"	300	11 1/4"	12	2'-3"	5/8"	24	6"	300	45	64	4	5/8"	20
		22 1/2"	27	3					125	5	5/8"		
8"	300	11 1/4"	16	2'-6"	5/8"	24	8"	300	45	125	5	5/8"	20
		22 1/2"	43	3'-6"					216	6	7/8"		
12"	300	11 1/4"	64	4	3/4"	24	12"	300	45	216	6	7/8"	30
		22 1/2"	125	5	7/8"	36							



TYPE C



NOTES:

1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" 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 IN PLACE AND SUFFICIENT TIME SHALL BE ALLOWED FOR THE CONCRETE TO CURE AND TRENCH SHALL BE BACKFILLED AND COMPACTED PRIOR TO PRESSURE TESTING.
4. ALL BLOCKING TO BE 3000 PSI CONCRETE.
5. AFTER INSTALLATION, SHACKLE RODS AND TURNBUCKLES SHALL BE CLEANED AND COATED WITH 2 COATS OF ASPHALTIC VARNISH, ROYSTON ROYKOTE #612XM OR APPROVED EQUAL.
6. SHACKLE RODS SHALL BE 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.

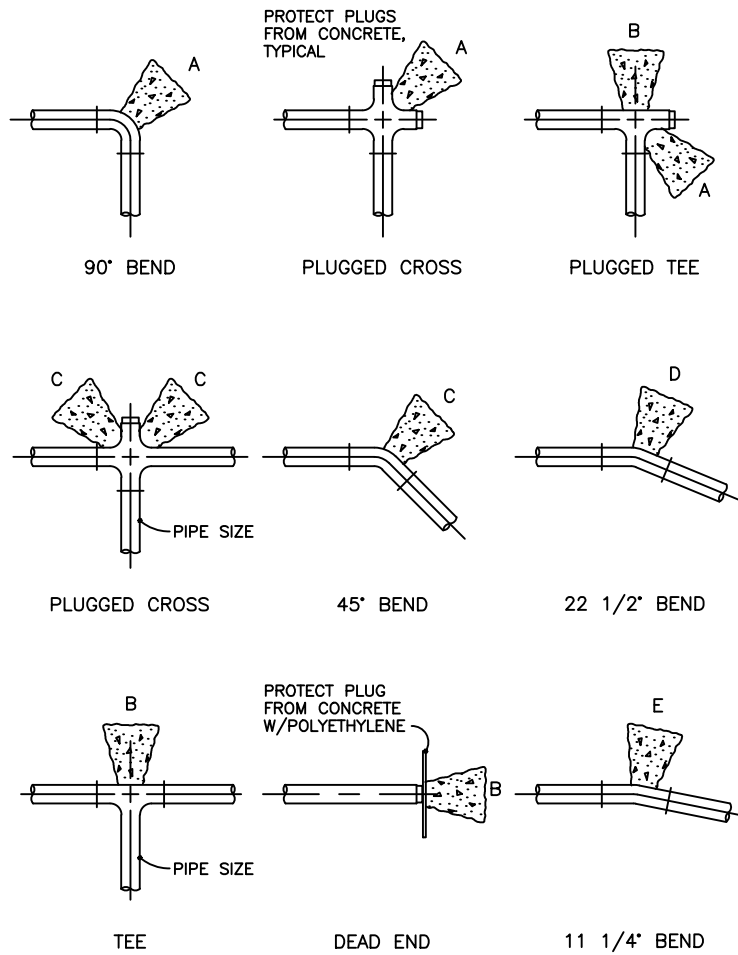
TYPE "C" BLOCKING FOR 11 1/4", 22 1/2", 45", AND 90" VERTICAL BENDS									
THRUST BLOCK AREA IN SQUARE FEET									
FITTING	Firm silt or firm silty sand			Compact sand			Compact sand and gravel		
	90° Bend	Tee 45° Bend and Dead End	11 1/4" and 22 1/2" Bend	90° Bend	Tee 45° Bend and Dead End	11 1/4" and 22 1/2" Bend	90° Bend	Tee 45° Bend and Dead End	11 1/4" and 22 1/2" 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 300psi TEST PRESSURE AND 36" MIN COVER.

VERTICAL THRUST BLOCKS
NO SCALE



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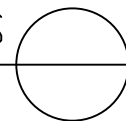


BLOCK LETTER	CONCRETE AREA IN SQ FT AGAINST SOIL FOR EACH PIPE SIZE				
	4"	6"	8"	10"	12"
A	2.0	3.5	6.5	10.5	15.0
B	1.5	2.5	4.5	7.5	10.5
C	1.0	2.0	3.5	5.0	8.0
D	1.0	2.0	3.5	5.0	4.0
E					

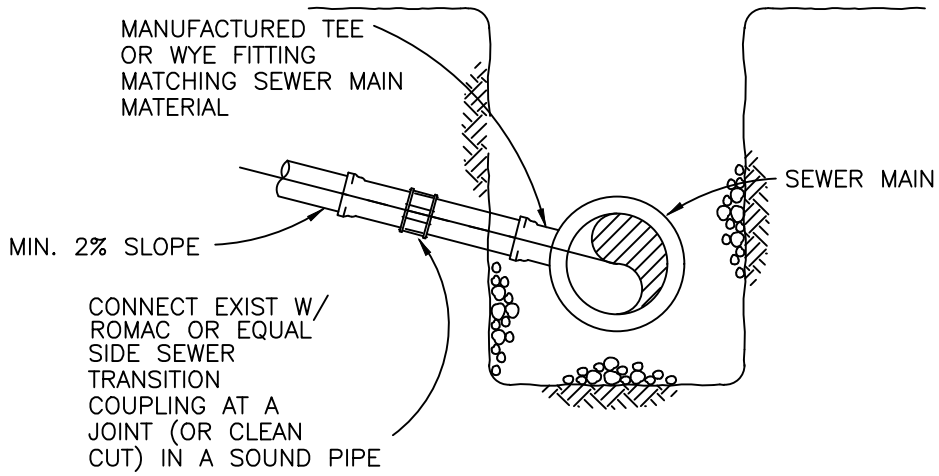
NOTE:
 CONCRETE THRUST BLOCK SHALL EXTEND FROM PIPE FITTING TO UNDISTURBED SOIL. THE AREA IN SQUARE FEET OF THE CONCRETE AT THE END LAYING AGAINST THE UNDISTURBED SOIL SHALL NOT BE LESS THAN THE TABULAR VALUES SHOWN.

HORIZONTAL THRUST BLOCKS

NO SCALE

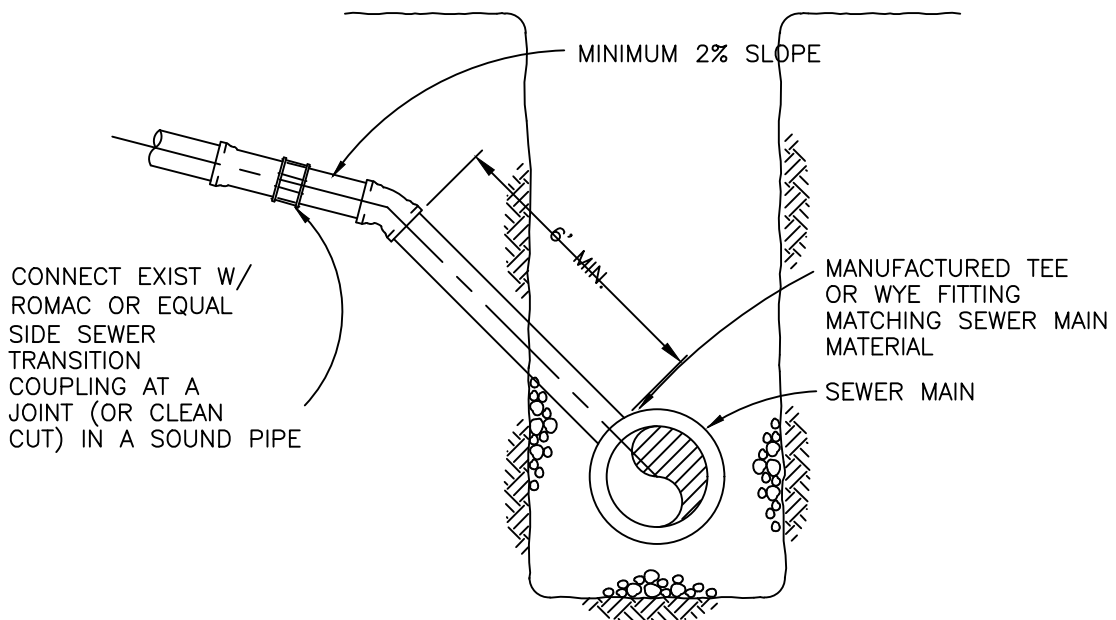
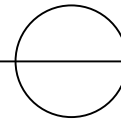


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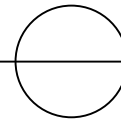
SIDE SEWER CONNECTION

NO SCALE



ALT. SIDE SEWER CONNECT.

NO SCALE

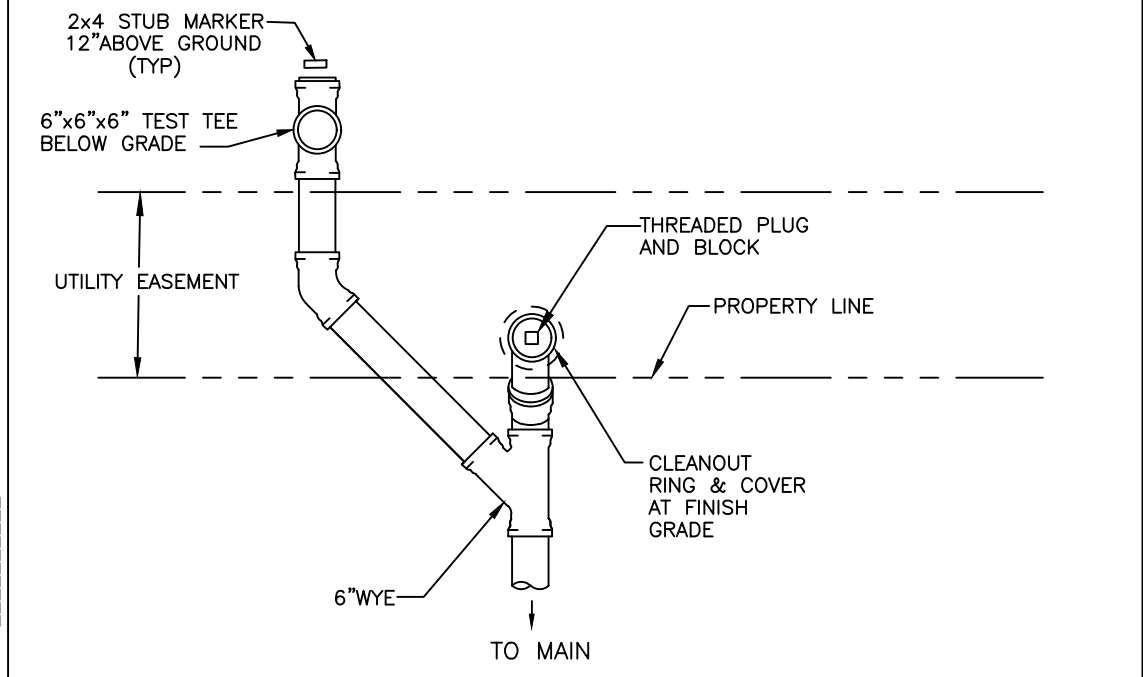
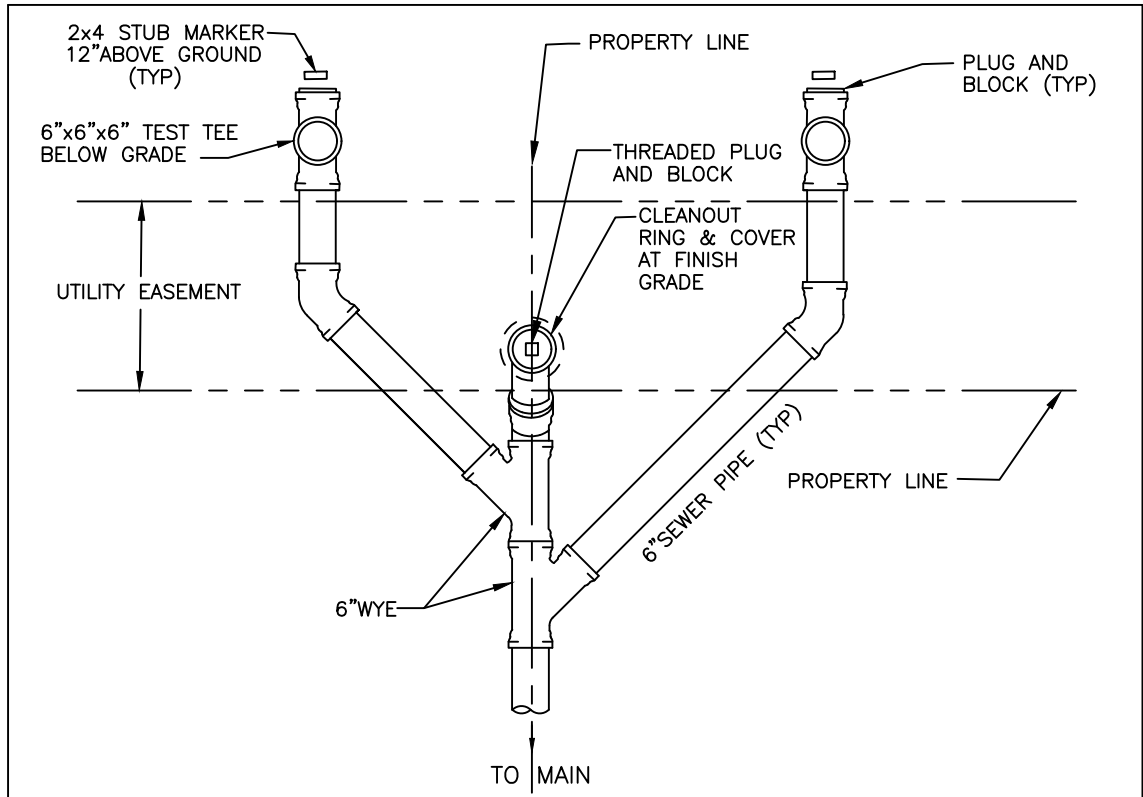


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KITSAP COUNTY
Dept. of Public Works

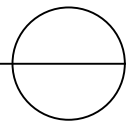
SIDE SEWER
CONNECTION

DETAIL
PD-7



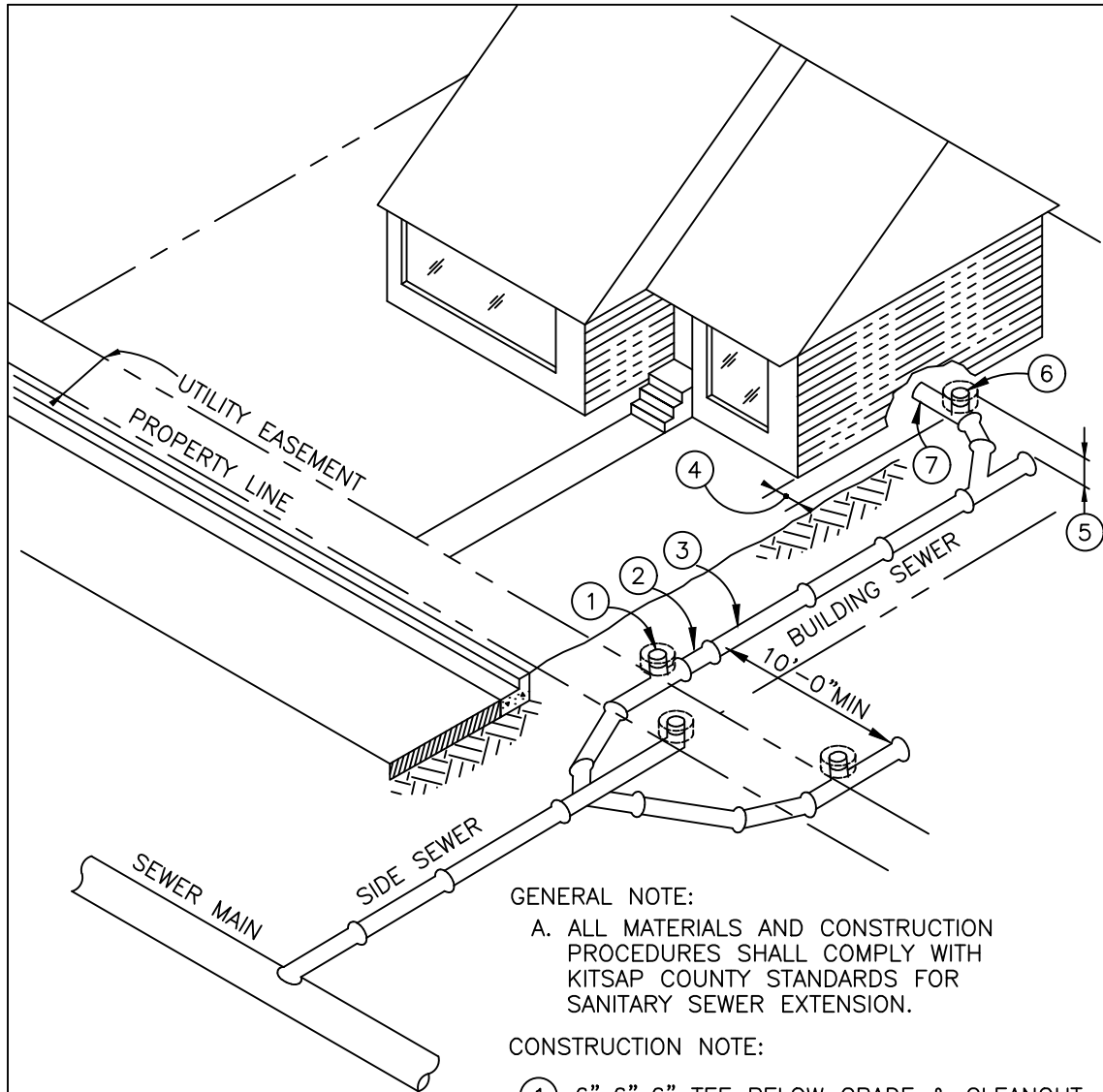
SIDE SEWER PLAN

NO SCALE



Rev: _____

<p>KITSAP COUNTY Dept. of Public Works</p>	<p>SIDE SEWER PLAN</p>	<p>DETAIL PD-8</p>
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GENERAL NOTE:

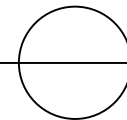
A. ALL MATERIALS AND CONSTRUCTION PROCEDURES SHALL COMPLY WITH KITSAP COUNTY STANDARDS FOR SANITARY SEWER EXTENSION.

CONSTRUCTION NOTE:

- ① 6"x6"x6" TEE BELOW GRADE & CLEANOUT WITH THREADED PLUG AT PROPERTY LINE
- ② 6"x4" REDUCER
- ③ 4" BUILDING SEWER (RESIDENTIAL) OR 6" BUILDING SEWER (COMMERCIAL)
- ④ 30" MINIMUM FROM BUILDING
- ⑤ 18" MINIMUM DEPTH
- ⑥ CLEANOUT TO GRADE WITH THREADED PLUG
- ⑦ RUBBER COUPLING AT BUILDING

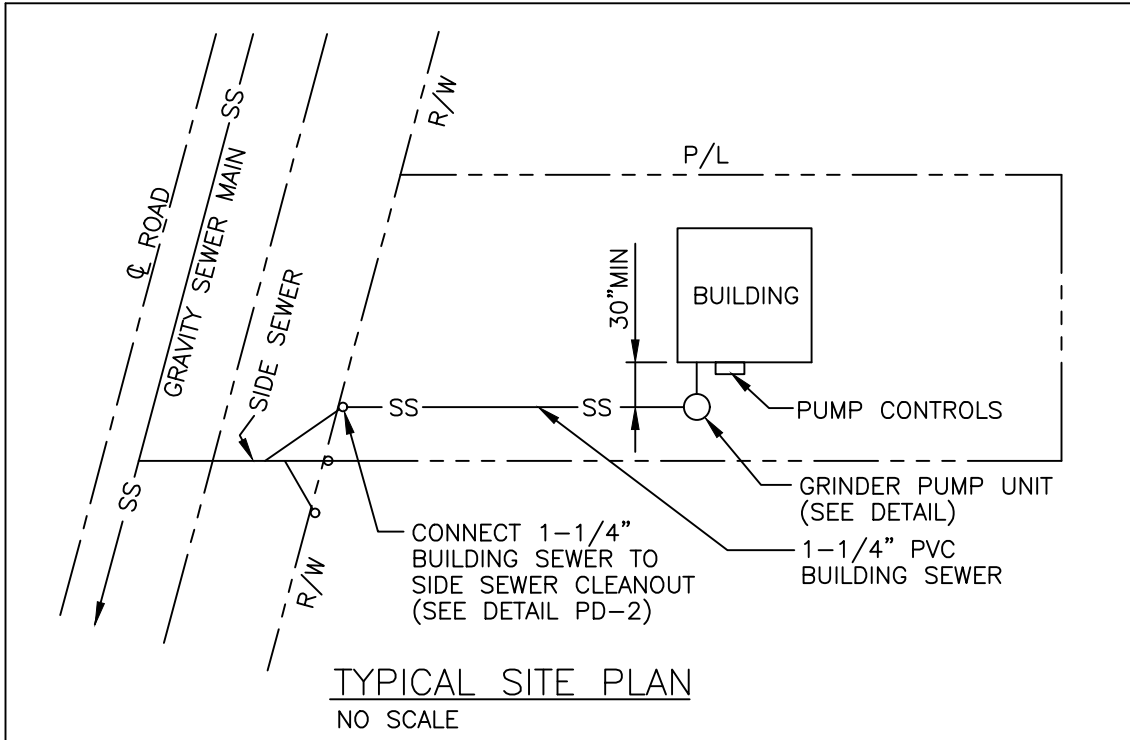
BUILDING SEWER CONNECTION

NO SCALE



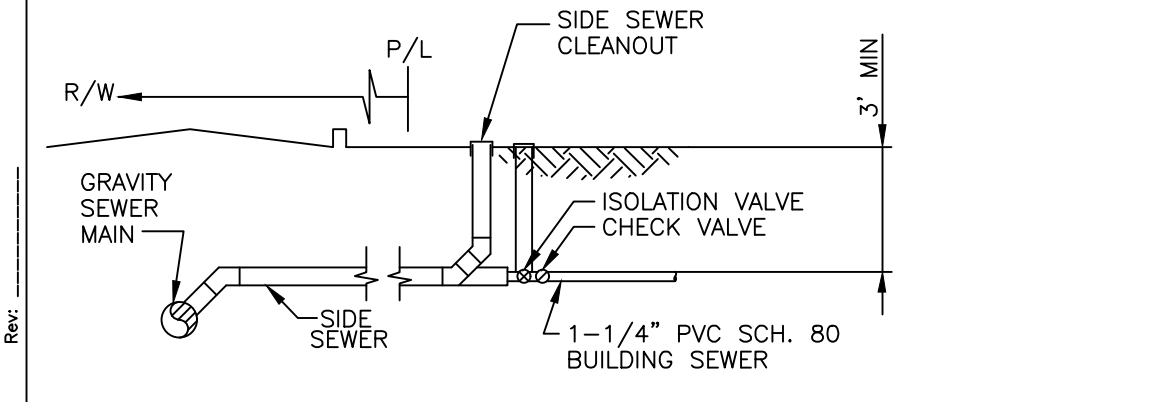
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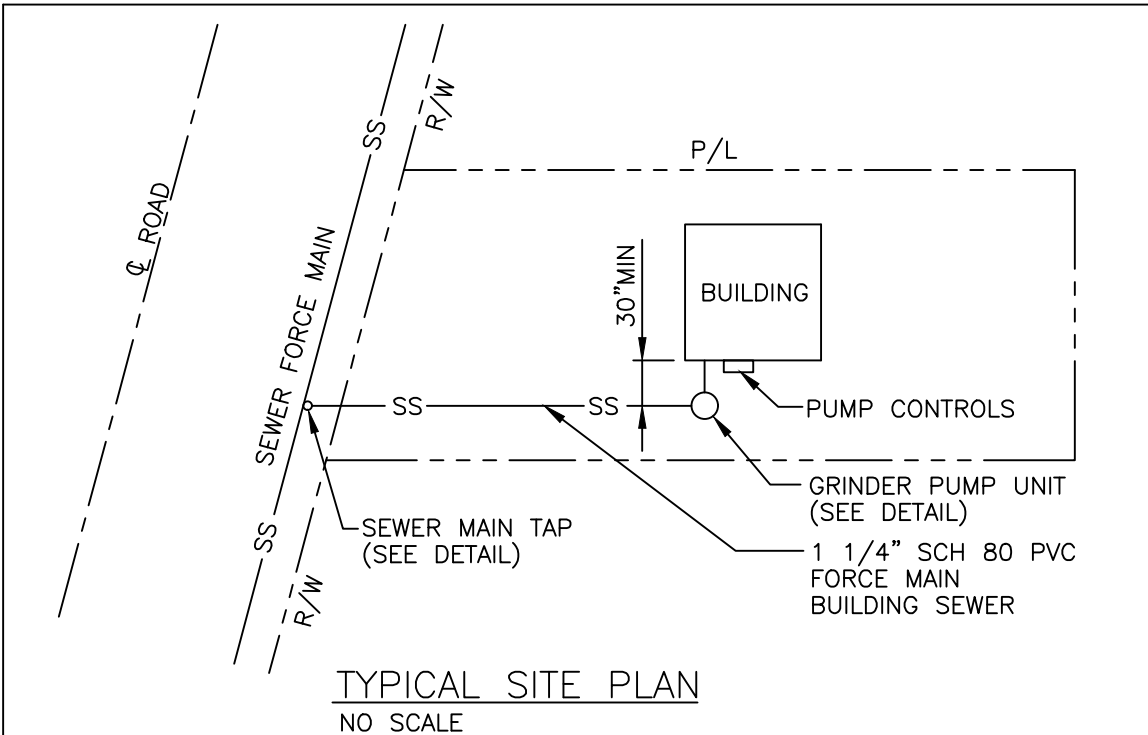
KITSAP COUNTY Dept. of Public Works	BUILDING SEWER CONNECTION	DETAIL PD-9
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PUMP REQUIREMENTS

STATIC HEAD _____ FT. DYNAMIC HEAD _____ FT. @ _____ GPM TOTAL HEAD _____ FT. DISCHARGE VELOCITY _____ FPS POWER REQUIREMENTS _____ V, _____ ϕ	RECOMMENDED PUMP: TYPE - <u>GRINDER PUMP</u> MODEL - _____ MFGR. - _____ SUPPLIER - _____ FLOW @ HEAD - _____ GPM @ _____ FT
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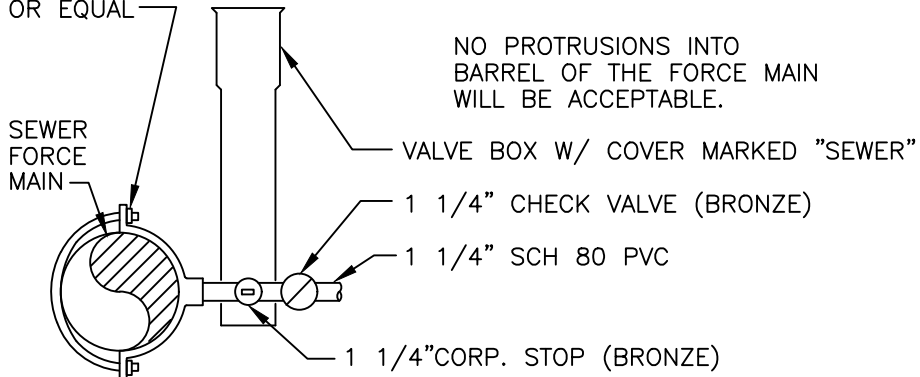




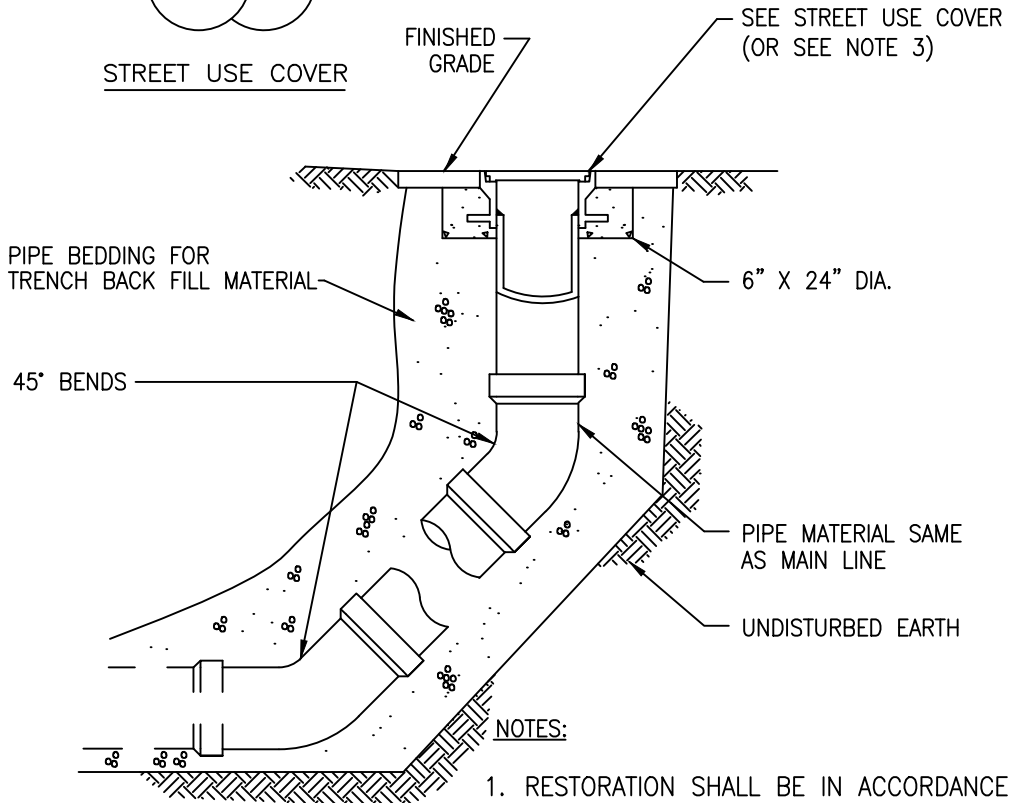
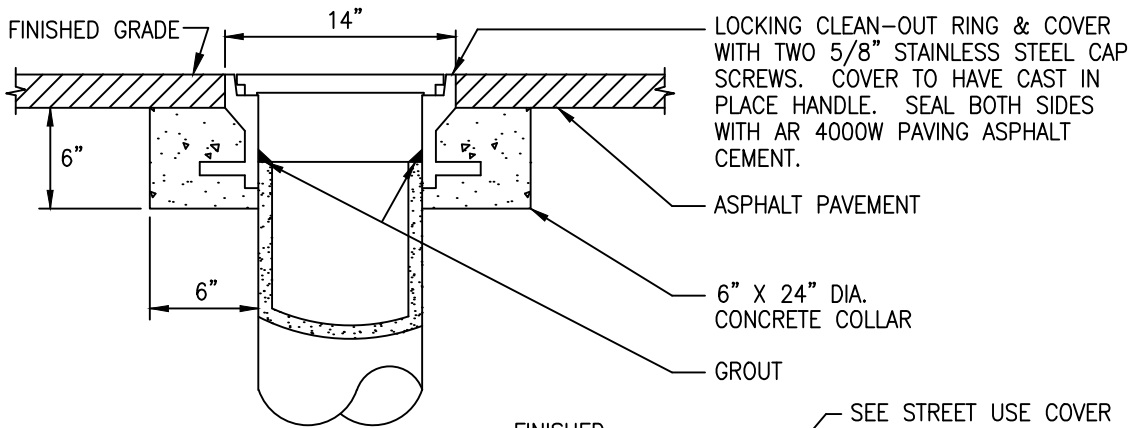
PUMP REQUIREMENTS

STATIC HEAD _____ FT.	RECOMMENDED PUMP: TYPE - <u>GRINDER PUMP</u>
DYNAMIC HEAD _____ FT. @ _____ GPM	HP - _____
TOTAL HEAD _____ FT	MODEL - _____
DISCHARGE VELOCITY _____ FPS	MFGR. - _____
POWER REQUIREMENTS _____ V, _____ ϕ	SUPPLIER - _____
	FLOW @ HEAD - _____ GPM @ _____ FT

SADDLE, ROMAC
STYLE 304
OR EQUAL

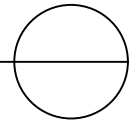


FORCE MAIN CONNECTION
NO SCALE



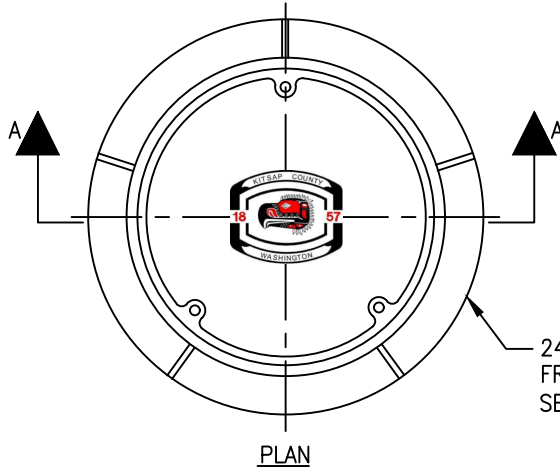
- NOTES:
1. RESTORATION SHALL BE IN ACCORDANCE WITH LOCAL REGULATORY REQUIREMENTS.
 2. TRENCH BACKFILL SHALL BE COMPACTED AND TESTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND LOCAL REGULATORY REQUIREMENTS.
 3. SEE EASEMENT CLEANOUT FRAME & COVER DETAIL FOR CLEANOUTS LOCATED IN EASEMENTS

CLEANOUT
NO SCALE



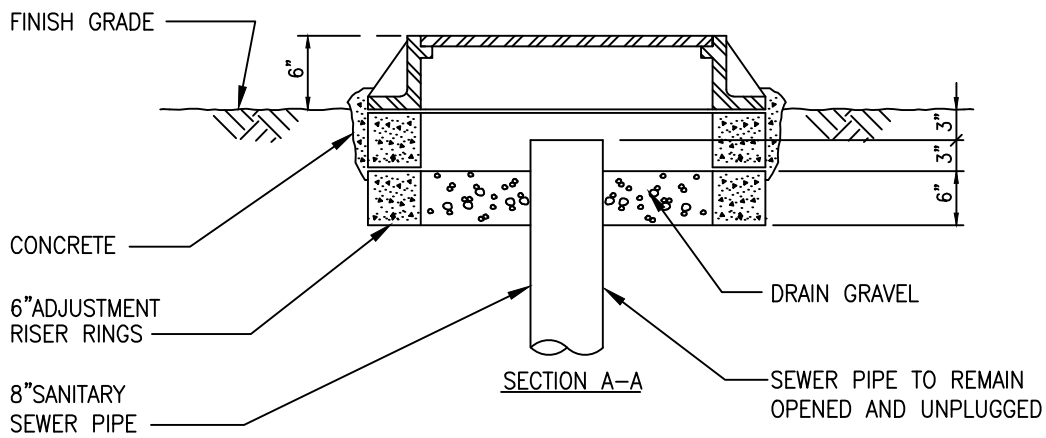
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KITSAP COUNTY Dept. of Public Works	CLEANOUT AND STREET USE COVER	DETAIL PD-12
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24" COUNTY MANHOLE
FRAME AND COVER
SEE DETAIL MV-3

PLAN



FINISH GRADE

CONCRETE

6" ADJUSTMENT
RISER RINGS

8" SANITARY
SEWER PIPE

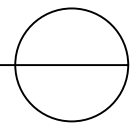
DRAIN GRAVEL

SECTION A-A

SEWER PIPE TO REMAIN
OPENED AND UNPLUGGED

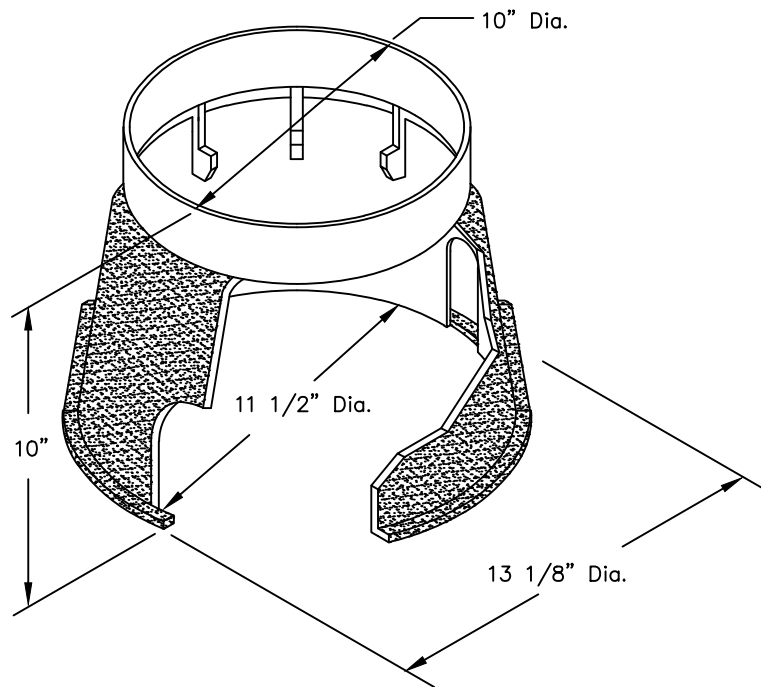
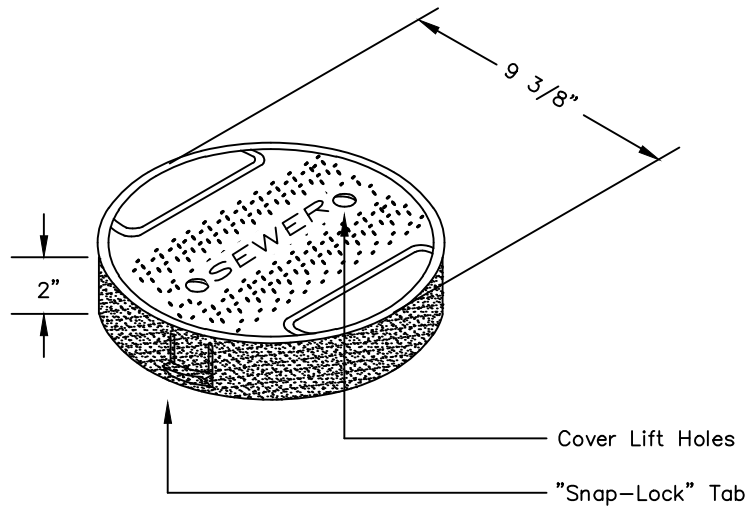
EASEMENT
CLEANOUT COVER

NO SCALE



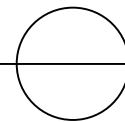
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<p>KITSAP COUNTY Dept. of Public Works</p>	<p>EASEMENT CLEANOUT COVER</p>	<p>DETAIL PD-13</p>
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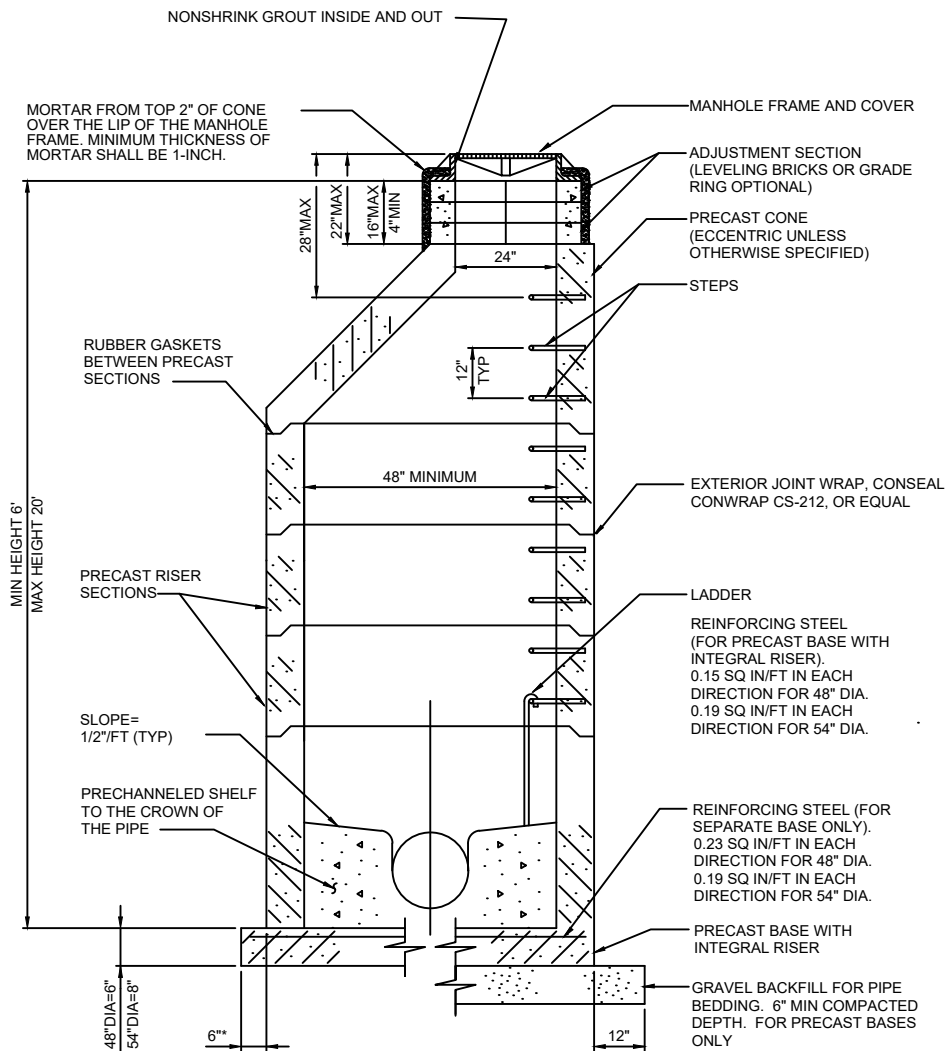


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SIDE SEWER CLEAN-OUT BOX
 NO SCALE



KITSAP COUNTY Dept. of Public Works	SIDE SEWER CLEAN-OUT BOX	DETAIL PD-14
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* FOR SEPARATE CAST-IN-PLACE ONLY

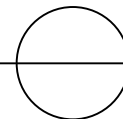
NOTES:

1. HEIGHT: 6' TO 12': SOIL BEARING VALUE EQUALS 3300#/FT² (MIN)
2. HEIGHT: OVER 12' TO 20': SOIL BEARING VALUE EQUALS 3800#/FT² (MIN)
3. HEIGHT: OVER 20': INTERMEDIATE SAFETY PLATFORMS REQUIRED; SEE DETAIL MV-2.

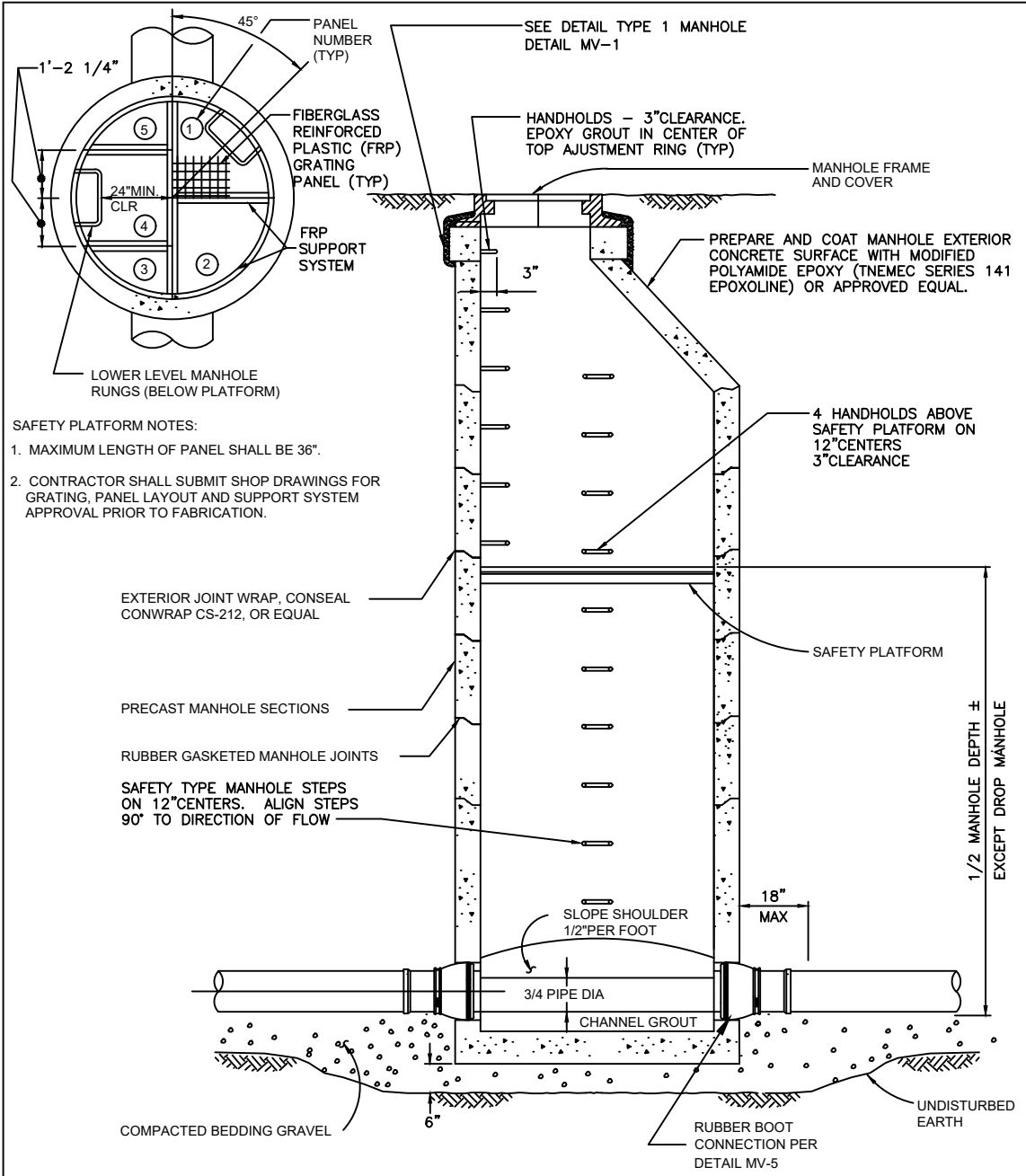
RUBBER BOOTED AND PRECHANNELED

TYPE 1

NO SCALE

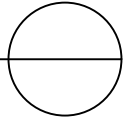


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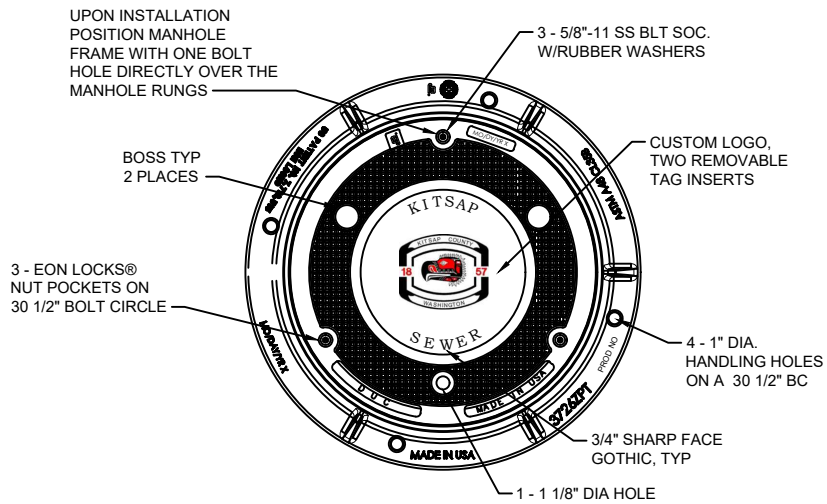
- SAFETY PLATFORM NOTES:
1. MAXIMUM LENGTH OF PANEL SHALL BE 36".
 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR GRATING, PANEL LAYOUT AND SUPPORT SYSTEM APPROVAL PRIOR TO FABRICATION.

DEEP MANHOLE
NO SCALE

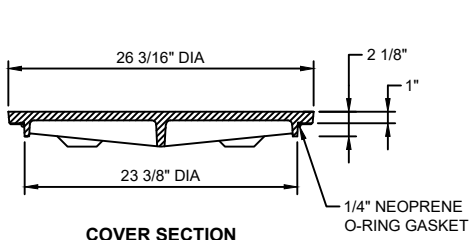


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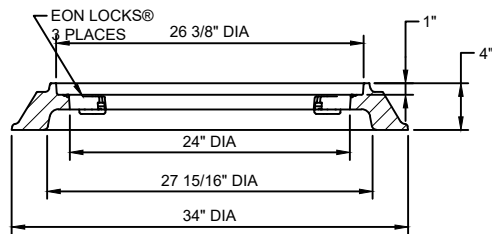
<p>KITSAP COUNTY Dept. of Public Works</p>	<p>DEEP MANHOLE</p>	<p>DETAIL MV-2</p>
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PLAN



COVER SECTION



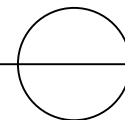
SECTION VIEW

NOTES:

1. MATERIALS: FRAME - GRAY IRON (CL35B), ASTM A48; COVER - DUCTILE IRON (80-55-06), ASTM A536
2. EJ GROUP INTERNATIONAL NO. 3725 APT (OR EQUAL).
3. MANHOLES LOCATED WITHIN NON-PAVED AREAS SHALL REQUIRE THE INSTALLATION OF MARKER POSTS AS MANUFACTURED BY CARSON TYPE CS-225 AND MARKED SEWER (DECAL 37-A).
4. PROVIDE NEOPRENE GASKET AND HOLE PLUGS FOR A WATER-TIGHT ASSEMBLY.

MANHOLE FRAME AND COVER

NO SCALE

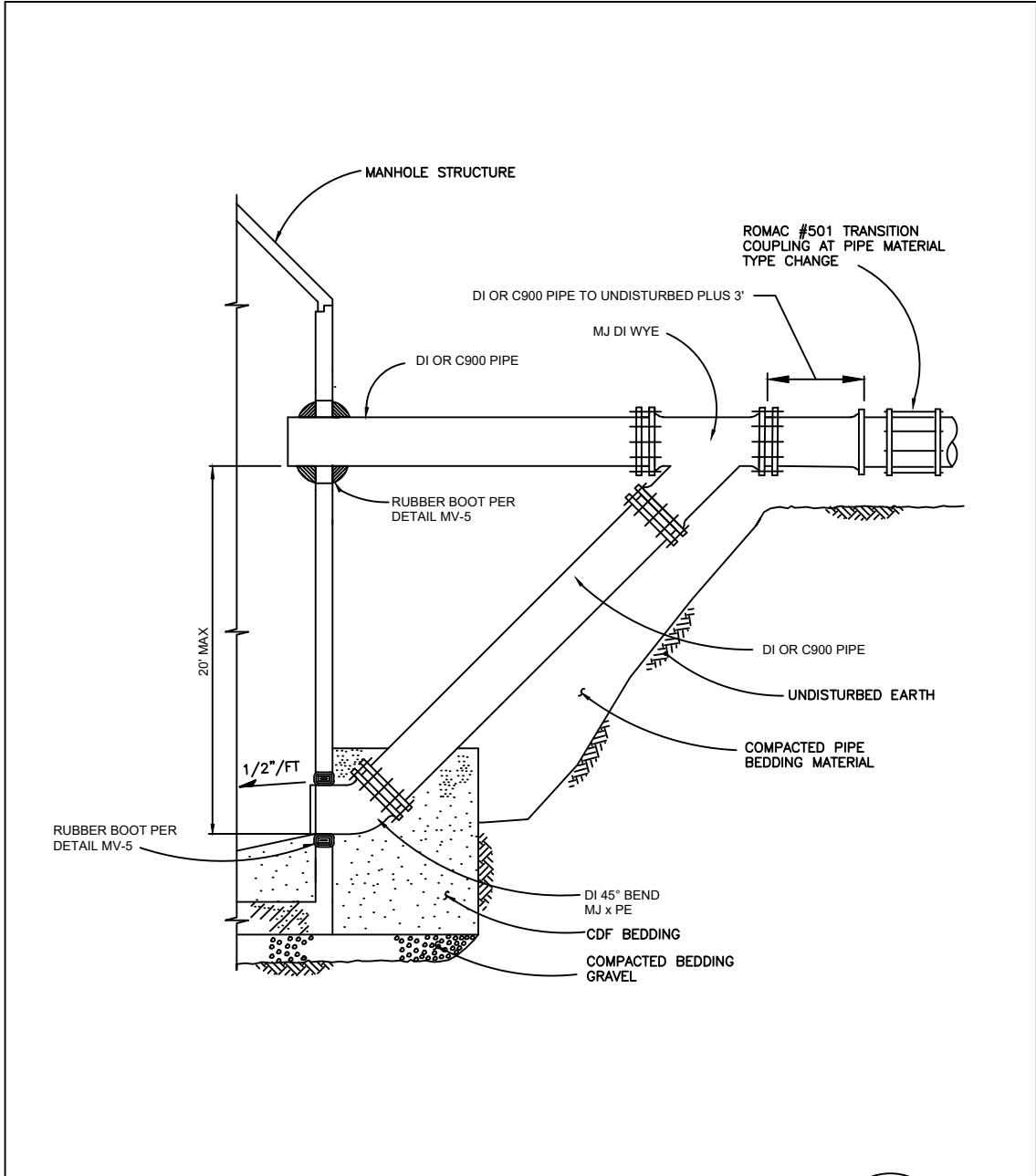


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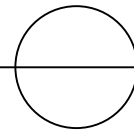
MANHOLE FRAME
AND COVER

DETAIL
MV-3



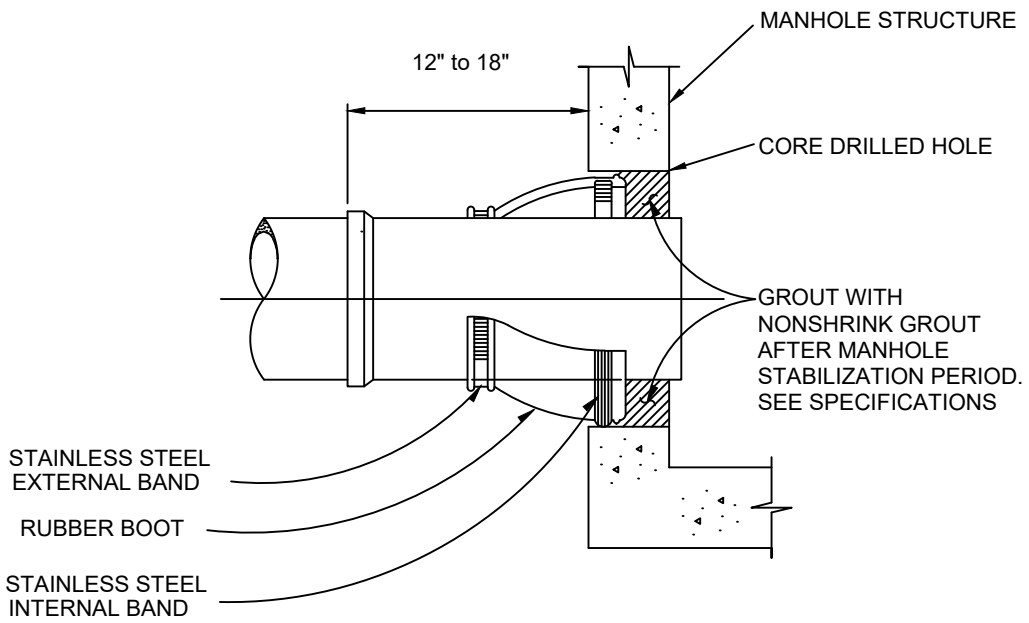
DROP MANHOLE CONNECTON

NO SCALE



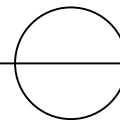
Rev.

<p>KITSAP COUNTY Dept. of Public Works</p>	<p>DROP MANHOLE CONNECTION</p>	<p>DETAIL MV-4</p>
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RUBBER BOOT MANHOLE INSERT

NO SCALE

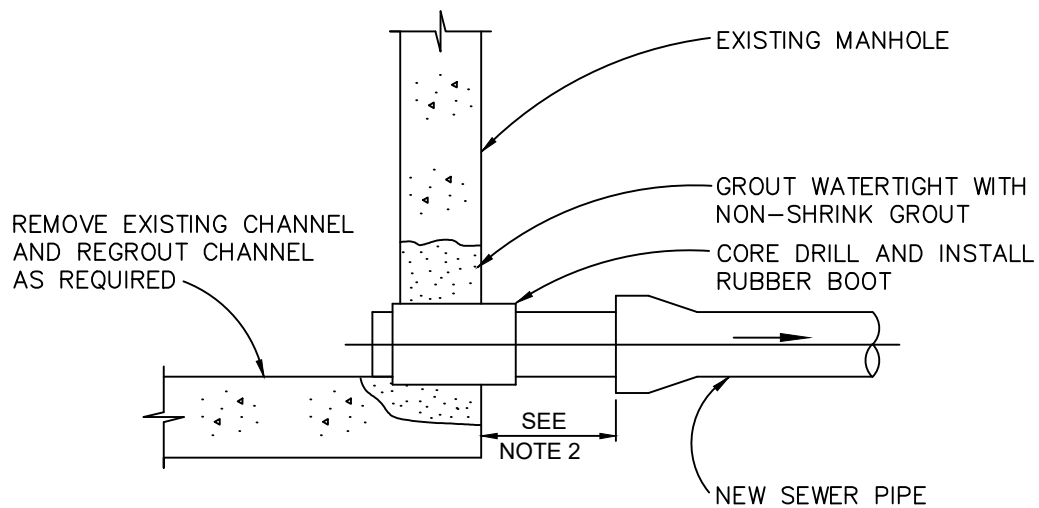


Rev. _____

KITSAP COUNTY
Dept. of Public Works

RUBBER BOOT
MANHOLE INSERT

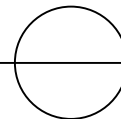
DETAIL
MV-5



1. THE OPENING SHALL PROVIDE A MINIMUM CLEARANCE OF 2" AROUND THE CIRCUMFERENCE OF THE PIPE.
2. ALL PIPES SHALL BE PROVIDED WITH A FLEXIBLE JOINT WITHIN 1/2 OF A PIPE DIAMETER OR 12", WHICHEVER IS GREATER.

CONNECTION TO EXISTING MANHOLE

NO SCALE

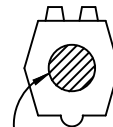
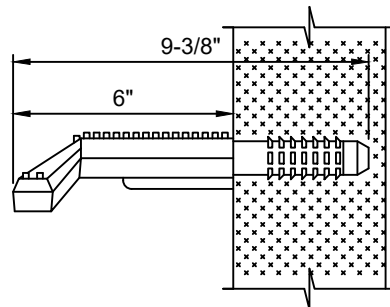
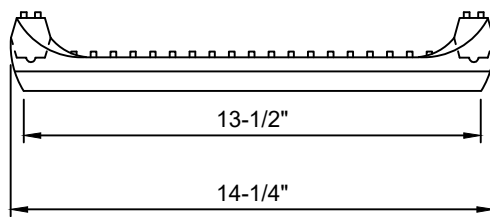
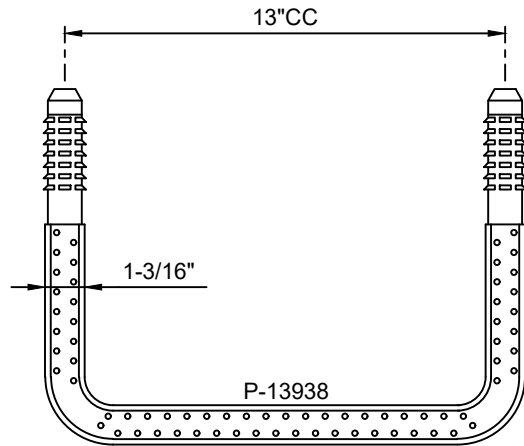


Rev:

KITSAP COUNTY
Dept. of Public Works

CONNECTION TO
EXISTING MANHOLE

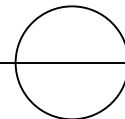
DETAIL
MV-6



1/2" GRADE 60 STEEL REINFORCING BAR

POLYPROPYLENE SAFETY STEP

NO SCALE

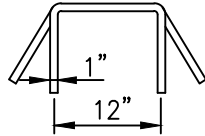


2585003/KCPW3 12.95

KITSAP COUNTY
Dept. of Public Works

POLYPROPYLENE
SAFETY STEP

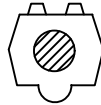
DETAIL
MV-7



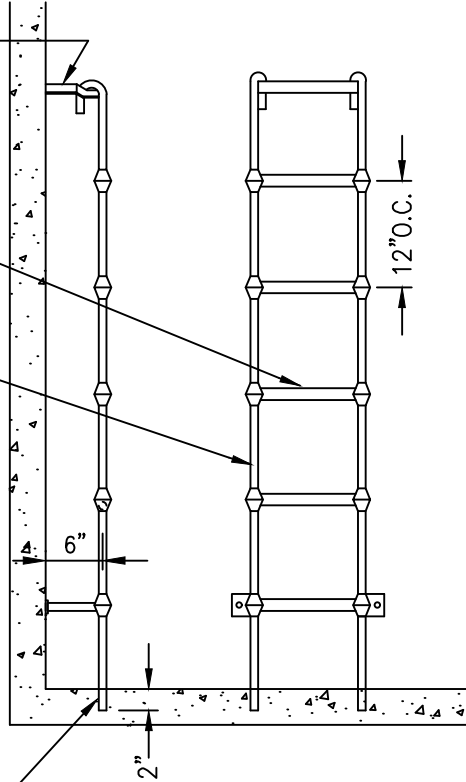
LEGS MAY BE PARALLEL OR APPROX RADIAL AT OPTION OF MANUFACTURER EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE SIMILAR

LADDER TO HANG FROM MH STEP

RUNG
1/2" GRADE 60



RAIL
9/16" ROUND
BAR

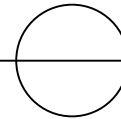


PROVIDE 2" MINIMUM PENETRATION INTO MANHOLE BASE. PROVIDE MEANS TO SECURELY ANCHOR INTO MANHOLE BASE

LADDER SHALL CONFORM TO
POLYPROPYLENE ASTM D-4101
1/2" GRADE 60 REINFORCING
BAR A-615 9/16" COLD DRAWN
BAR C-1018

POLYPROPYLENE LADDER

NO SCALE

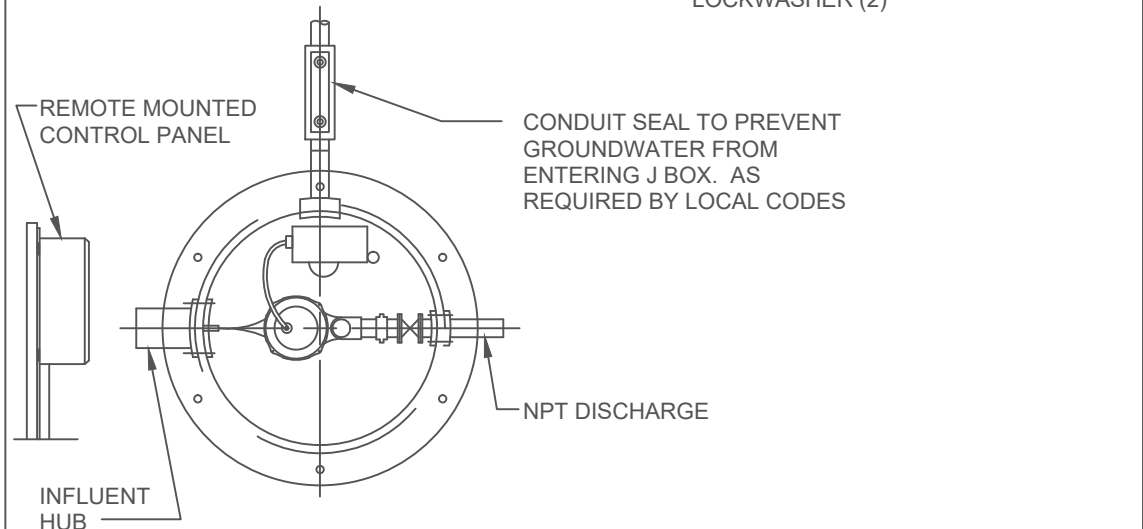
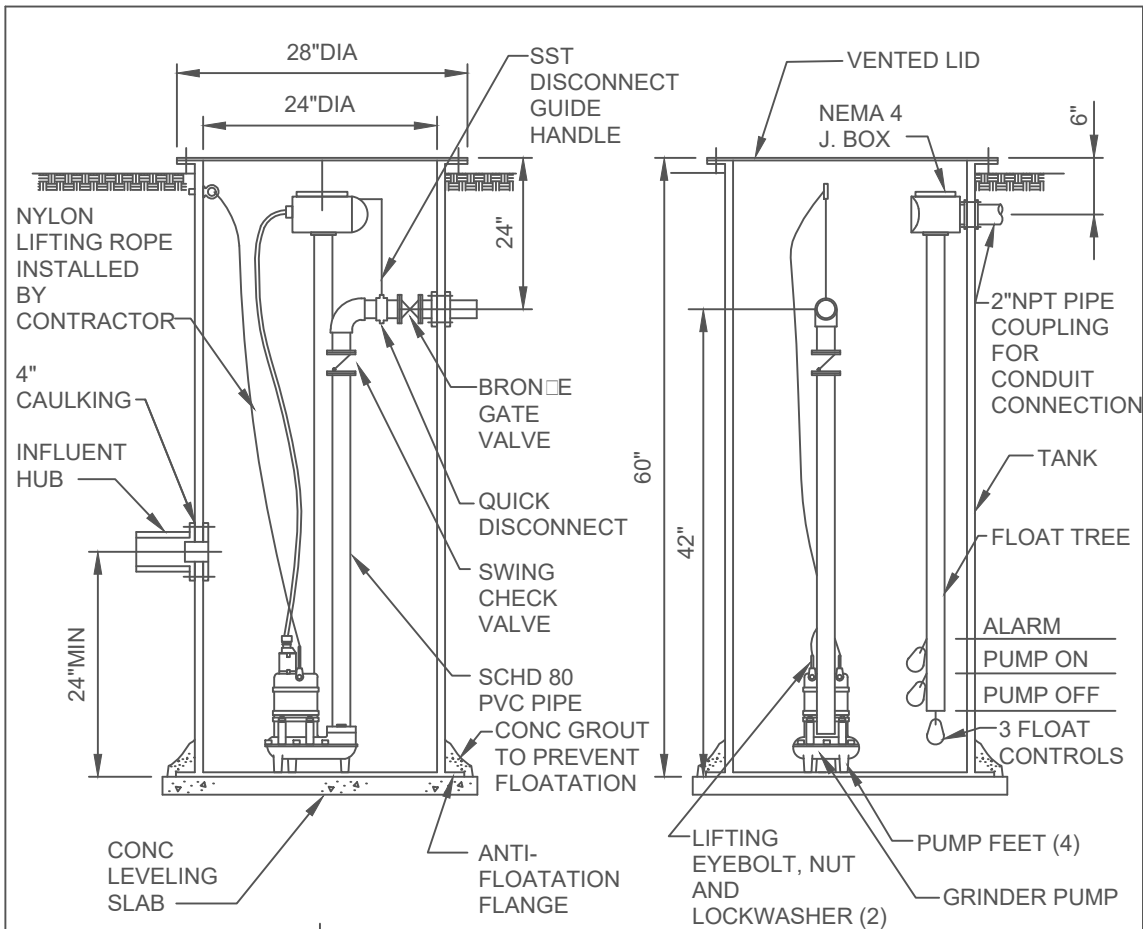


Rev: _____

KITSAP COUNTY
Dept. of Public Works

MANHOLE LADDER

DETAIL
MV-8

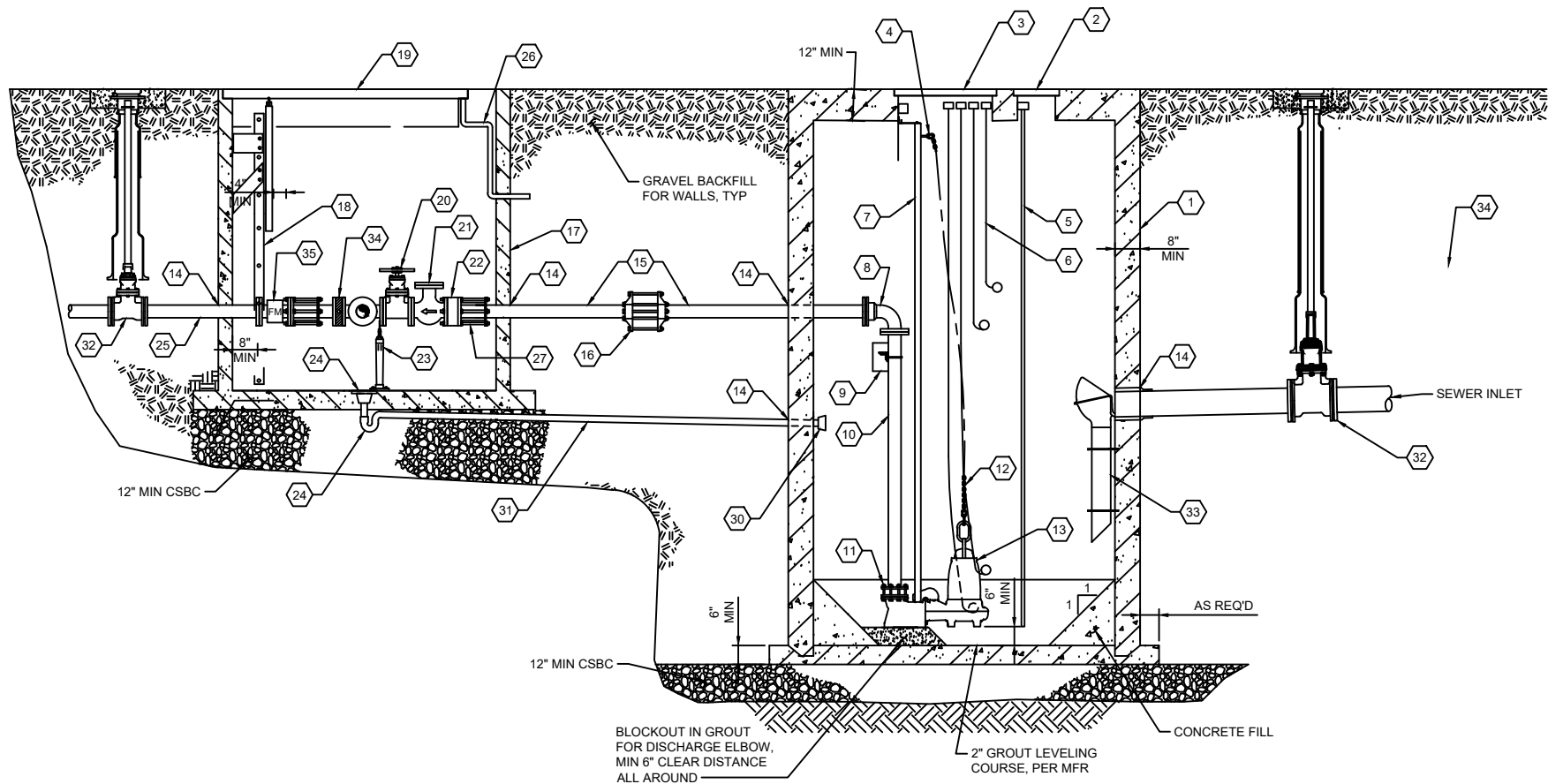


**INDIVIDUAL
SEWAGE PUMP**

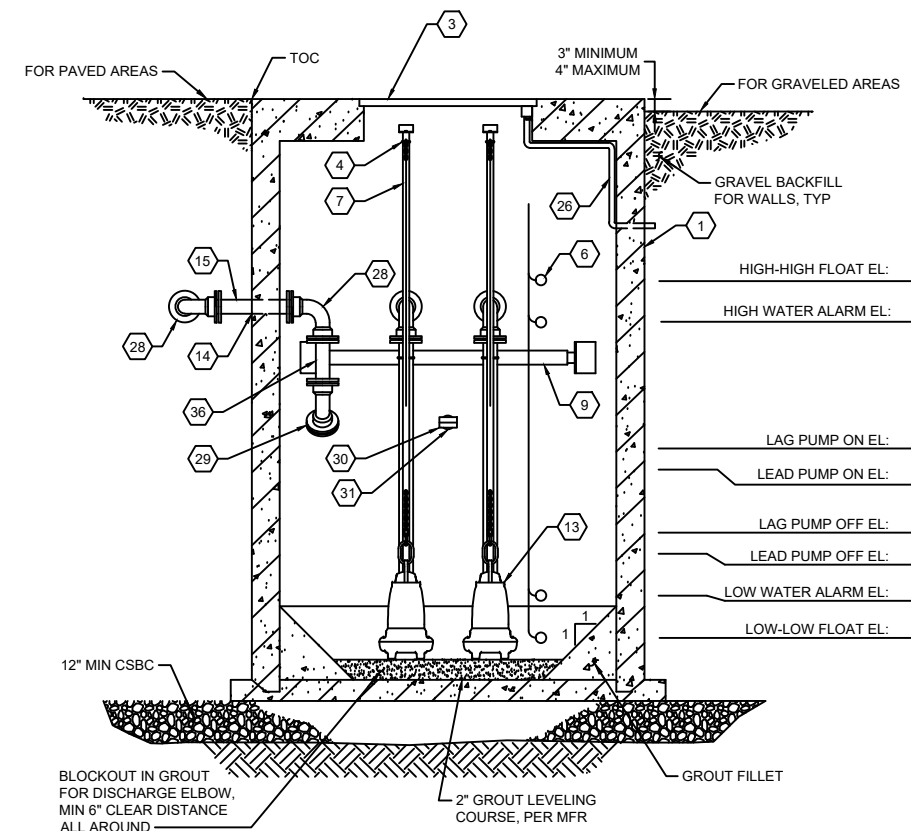
NO SCALE

2585003/KCPW3 Rev. 6/9

<p>KITSAP COUNTY Dept. of Public Works</p>	<p>INDIVIDUAL SEWAGE PUMP</p>	<p>DETAIL PS-1</p>
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PUMP STATION SECTION A
SCALE: NO SCALE PS-3



PUMP STATION SECTION B
SCALE: NO SCALE PS-3

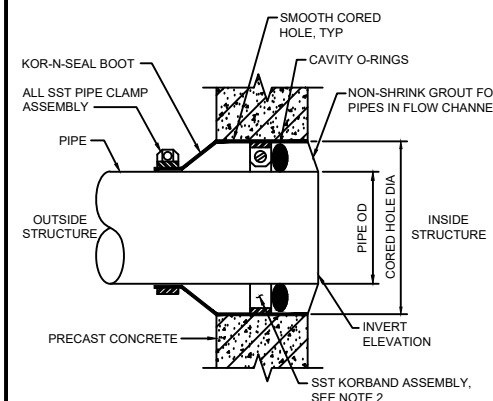
NOTES:

- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CLASS 52 LINED WITH PROTECTO 401.
- ALL BOLTED CONNECTIONS IN THE WET WELL AND VALVE VAULT SHALL BE CONSTRUCTED WITH DOUBLE 316L SST NUTS.
- PRESSURE GAUGES TO BE MOUNTED WITH FACE VERTICALLY UP SUCH THAT THEY CAN BE READ FROM GROUND SURFACE.
- ALL MECHANICAL AND PLAIN END JOINTS SHALL BE RESTRAINED.
- HATCH SIZED FOR FLYGT PUMPS. CONFIRM SIZE WITH SELECTED PUMP VENDER. COORDINATE HATCH AND FLAT AREA LOCATIONS AND DIMENSIONS WITH SELECTED PUMP MANUFACTURER. DISTANCES SHOWN ARE FOR FLYGT PUMPS.
- PROVIDE FABRICATED DI SSFM FLANGED SPOOL TO MATCH LAY LENGTH OF INSTALLED FLOW METER.
- CAST FLOOR DRAIN IN VAULT BASE. SLOPE FLOOR TO DRAIN.
- BED AND BACKFILL CISP DRAIN PIPING IN CDF.
- NOT USED.
- COAT INTERIOR AND EXTERIOR OF ALL STRUCTURES IN ACCORDANCE WITH KITSAP COUNTY STANDARDS FOR SANITARY SEWER.

SECTION VIEW

PUMP STATION COMPONENTS

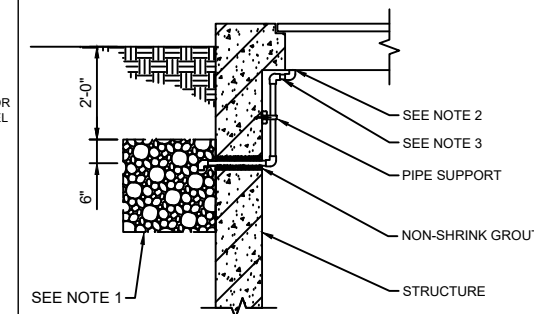
- | | | | |
|----|--|----|--|
| 1 | WET WELL, MINIMUM 8' DIA INSIDE DIMENSION | 17 | VALVE VAULT, MINIMUM 5'-6" x MINIMUM 7'-0" INSIDE DIMENSIONS |
| 2 | 12" x 18" SINGLE LEAF ALUM ACCESS HATCH, H-30 RATED | 18 | ACCESS LADDER, WITH RETRACTABLE SAFETY POST |
| 3 | 30" x 48" SINGLE LEAF ALUM ACCESS HATCH, H-30 RATED | 19 | ALUM ACCESS HATCH, 5'-0" x 6'-0" CLEARANCE MINIMUM, H-30 RATED |
| 4 | 316I SST HOOK SIZED TO SECURE PUMP LIFTING CHAIN, TYP OF EACH PUMP, LOCATE TO BE ACCESSIBLE WITHOUT ENTERING WETWELL | 20 | GATE VALVE, FL x FL WITH HAND WHEEL OPERATOR |
| 5 | PRESSURE-SENSING LEVEL PROBE | 21 | CHECK VALVE, FL x FL, TYP |
| 6 | FLOAT SWITCH ASSEMBLY, TYP | 22 | PRESSURE SENSOR WITH PRESSURE GAUGE, FL x FL, TYP |
| 7 | GUIDE RAIL SYSTEM, SIZE PER PUMP MANUFACTURER, MINIMUM SCH 40 316L SST | 23 | PIPE SUPPORT |
| 8 | DI LONG RADIUS 90° BEND, FL x MJ, TYP | 24 | CAST IRON FLOOR DRAIN WITH P-TRAP, SEE NOTE 7 |
| 9 | DISCHARGE PIPE SUPPORT ASSEMBLY | 25 | DI SPOOL, FL x PE, LENGTH AS REQUIRED |
| 10 | DI SPOOL, FL x FL, LENGTH AS REQ'D, TYP | 26 | HATCH DRAIN, SEE DETAIL 2 |
| 11 | DISCHARGE ELBOW, TYP | 27 | RESTRAINED FLANGE COUPLING ADAPTER (RFCA), TYP |
| 12 | PUMP LIFTING CHAIN, 316L SST, TYP | 28 | 4" DI 90° BEND, MJ x MJ |
| 13 | SUBMERSIBLE PUMP, TYP | 29 | 4" DI 45° VERTICAL BEND, GROOVED x PE, LOCATE 4' ABOVE WET WELL FLOOR, ROTATE AS DIRECTED BY FIELD INSPECTOR |
| 14 | WALL PENETRATION TYPE 1, TYP | 30 | 4" DUCKBILL TYPE CHECK VALVE |
| 15 | DI SPOOL, PE x PE, LENGTH AS REQ'D | 31 | 4" CISP VAULT DRAIN, SEE NOTE 8 |
| 16 | ROMAC™ ALPHA RESTRAINED JOINT COUPLING, CENTER BETWEEN STRUCTURES | 32 | GATE VALVE WITH VALE BOX, MJ x MJ (MATCH PIPE SIZE, TYP) |
| | | 33 | DROP BOWL ASSEMBLY |
| | | 34 | PRESSURE SENSOR WITH TRANSMITTER AND PRESSURE GAUGE, FL x FL |
| | | 35 | MAGNETIC FLOW METER FL x FL, SEE NOTE 6 |
| | | 36 | DI SPOOL, PE x GROOVED, LENGTH AS REQUIRED. |



NOTES:

- CONTRACTOR SHALL COORDINATE CORED HOLE DIAMETER REQUIREMENTS WITH PIPING AND MANHOLE/VAULT MANUFACTURER.
- FOR PENETRATION INTO EXISTING MANHOLES OR VAULTS, KOR-BAND ASSEMBLY SHALL CONSIST OF 316 STAINLESS STEEL WEDGES.

WALL PENETRATION TYPE 1 DETAIL 1
NTS TYP



NOTES:

- 2' x 2' x 2' SUMP FILLED WITH GEOTEXTILE WRAPPED DRAIN ROCK.
- CONNECT TO HATCH DRAIN PER MANUFACTURER'S RECOMMENDATIONS.
- 1 1/2" SCH 80 PVC PIPE, MAINTAIN 2% MINIMUM SLOPE.

HATCH DRAIN DETAIL 2
NTS TYP

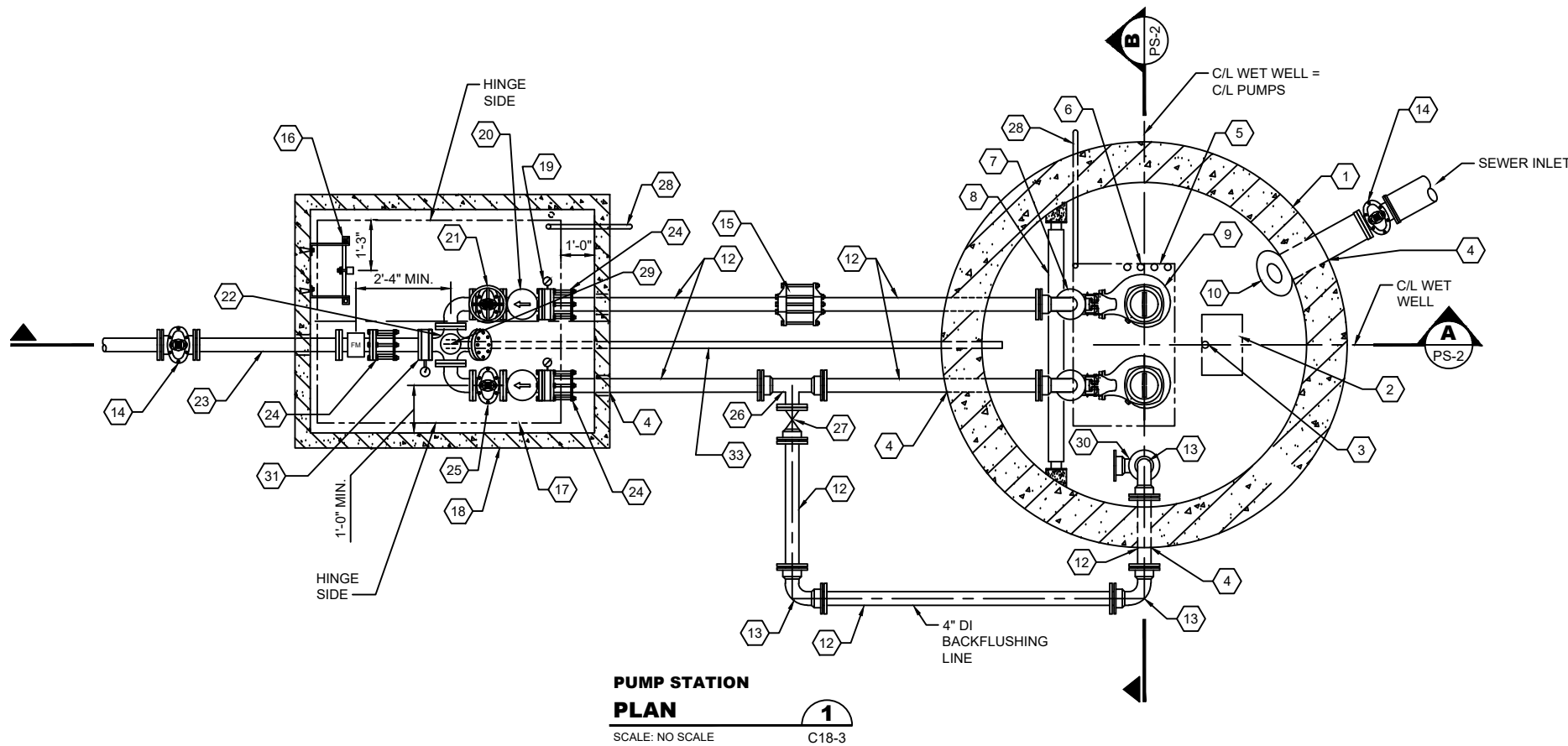


Kitsap County Public Works
614 Division Street, MS 27
Port Orchard, WA 98366

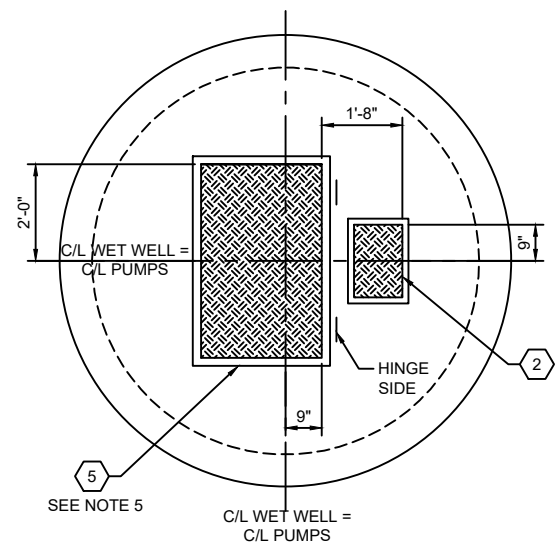
SCALE:
NO SCALE
DATE:

SUBMERSIBLE PUMP STATION

DETAIL PS-2



PUMP STATION PLAN
SCALE: NO SCALE
C18-3

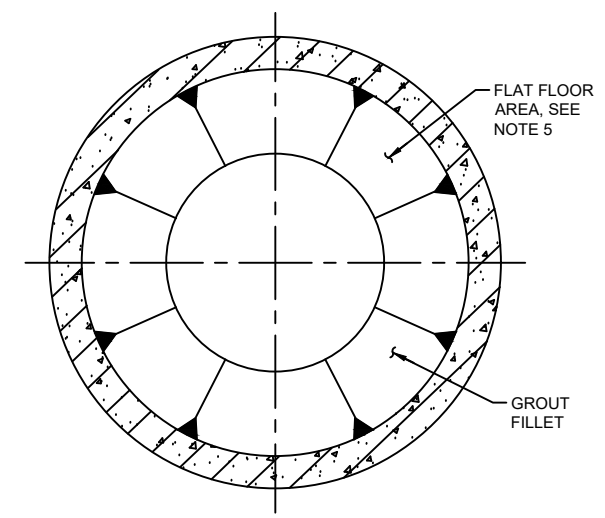


TOP SLAB ACCESS HATCH LAYOUT DETAIL
SCALE: NO SCALE

- NOTES:**
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CLASS 52 LINED WITH PROTECTO 401.
 - ALL BOLTED CONNECTIONS IN THE WET WELL AND VALVE VAULT SHALL BE CONSTRUCTED WITH DOUBLE 316L SST NUTS.
 - PRESSURE GAUGES TO BE MOUNTED WITH FACE VERTICALLY UP SUCH THAT THEY CAN BE READ FROM GROUND SURFACE.
 - ALL MECHANICAL AND PLAIN END JOINTS SHALL BE RESTRAINED.
 - HATCH SIZED FOR FLYGT PUMPS. CONFIRM SIZE WITH SELECTED PUMP VENDER. COORDINATE HATCH AND FLAT AREA LOCATIONS AND DIMENSIONS WITH SELECTED PUMP MANUFACTURER. DISTANCES SHOWN ARE FOR FLYGT PUMPS.
 - PROVIDE FABRICATED DI SSFM FLANGED SPOOL TO MATCH LAY LENGTH OF INSTALLED FLOW METER.
 - CAST FLOOR DRAIN IN VAULT BASE. SLOPE FLOOR TO DRAIN.
 - BED AND BACKFILL CISP DRAIN PIPING IN CDF.
 - VALVE STEM EXTENSION SHALL TERMINATE WITHIN 4" OF HATCH. PROVIDE COVERED VALVE STEM OPENING IN HATCH.
 - COAT INTERIOR AND EXTERIOR OF ALL STRUCTURES IN ACCORDANCE WITH KITSAP COUNTY STANDARDS FOR SANITARY SEWER.

PUMP STATION COMPONENTS

- | | |
|---|--|
| 1 WETWELL, MINIMUM 8' DIAMETER INSIDE DIMENSION | 20 CHECK VALVE, FL x FL, TYP |
| 2 12" x 18" SINGLE LEAF ALUM ACCESS HATCH, H-30 RATED | 21 GATE VALVE, FL x FL WITH HANDWHEEL OPERATOR |
| 3 PRESSURE-SENSING LEVEL PROBE | 22 DI CROSS TEE WITH 45° BEND AND BLIND FLANGE, FL x FL |
| 4 WALL PENETRATION TYPE 1, TYP. SEE KITSAP COUNTY STANDARD DETAIL PS-2 | 23 DI SPOOL, FL x PE, LENGTH AS REQUIRED |
| 5 30" X 48" MINIMUM CLEAR OPENING, SINGLE LEAF ALUM ACCESS HATCH, H-30 RATED | 24 RESTRAINED FLANGE COUPLING ADAPTER (RFCA), TYP |
| 6 FLOAT SWITCH ASSEMBLY | 25 GATE VALVE WITH NUT OPERATOR AND VALVE STEM EXTENSION, FL x FL SEE NOTE 9 |
| 7 DI LONG RADIUS 90° BEND, MJ x FL, TYP | 26 DI TEE, MJ x FL |
| 8 DISCHARGE PIPE SUPPORT ASSEMBLY | 27 4" GV WITH VALVE BOX, FL x MJ |
| 9 SUBMERSIBLE PUMP, TYP | 28 HATCH DRAIN, SEE KITSAP COUNTY STANDARD DETAIL PS-2 |
| 10 DROP BOWL ASSEMBLY | 29 CAST IRON FLOOR DRAIN WITH P-TRAP, SEE NOTE 7 |
| 11 NOT USED | 30 4" DI 45° BEND, GROOVED x PE |
| 12 DI SPOOL, PE x PE, LENGTH AS REQUIRED, TYP | 31 PRESSURE SENSOR WITH TRANSMITTER AND PRESSURE GAUGE, FL x FL |
| 13 4" DI 90° BEND, MJ x MJ, TYP | 32 MAGNETIC FLOW METER, SEE NOTE 6 |
| 14 GATE VALVE WITH VALVE BOX, MJ x MJ (MATCH PIPE SIZE) TYP | 33 4" CISP VAULT DRAIN, SEE NOTE 8 |
| 15 ROMAC™ ALPHA RESTRAINED JOINT COUPLING, CENTER BETWEEN STRUCTURES | |
| 16 ACCESS LADDER, WITH RETRACTABLE SAFETY POST | |
| 17 ALUM ACCESS HATCH, 5'-0" X 6'-0" MINIMUM CLEAR OPENING, CENTERED AND OFFSET AS SHOWN FOR REFERENCE, H-30 RATED | |
| 18 VALVE VAULT, MINIMUM 5'-6" x MINIMUM 7'-0" INSIDE DIMENSIONS | |
| 19 PRESSURE SENSOR WITH PRESSURE GAUGE, FL x FL, TYP | |



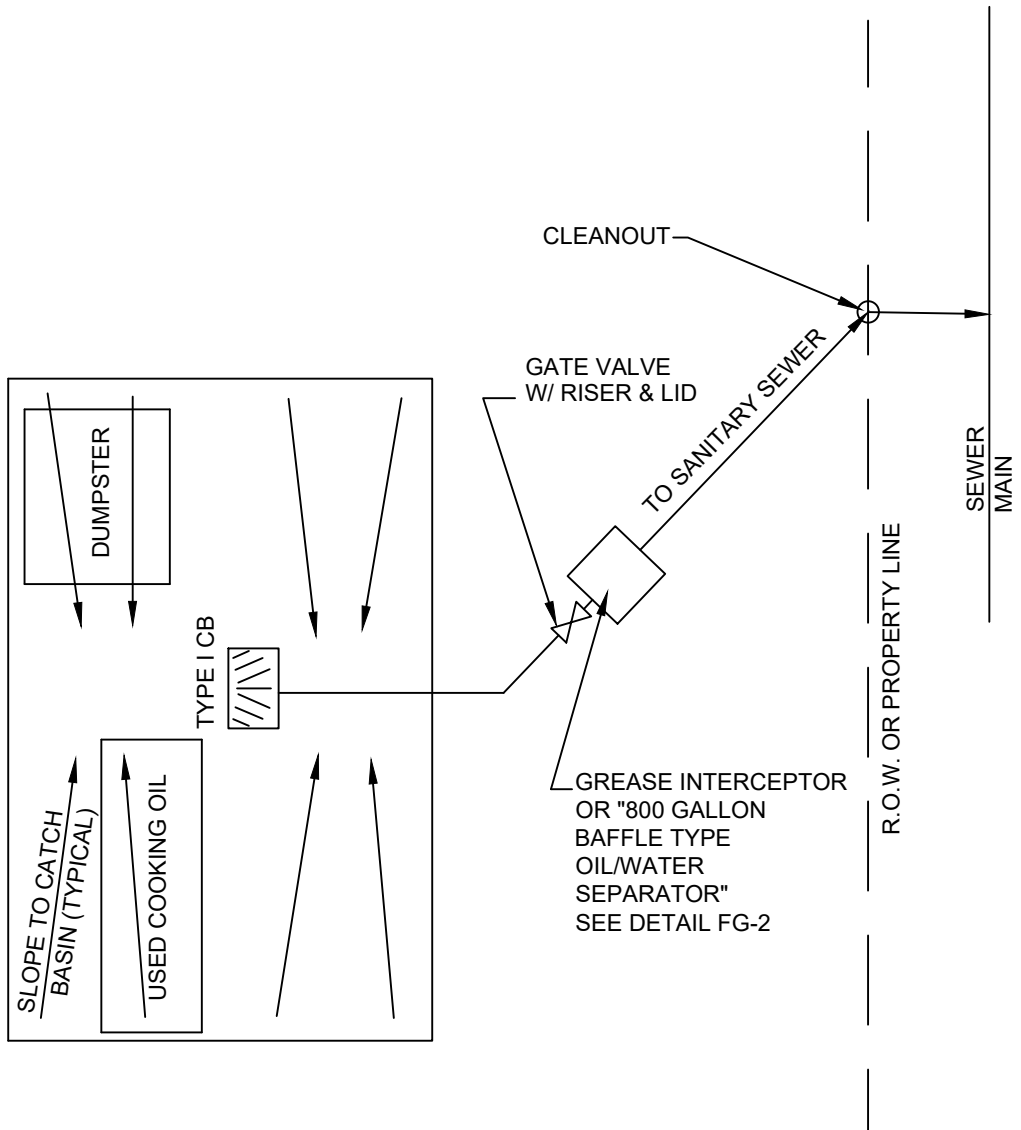
WET WELL GROUT FILLET DETAIL
SCALE: NO SCALE



Kitsap County Public Works
614 Division Street, MS 27
Port Orchard, WA 98366

SCALE:
NO SCALE
DATE:

SUBMERSIBLE PUMP VALVE VAULT DETAIL PS-3



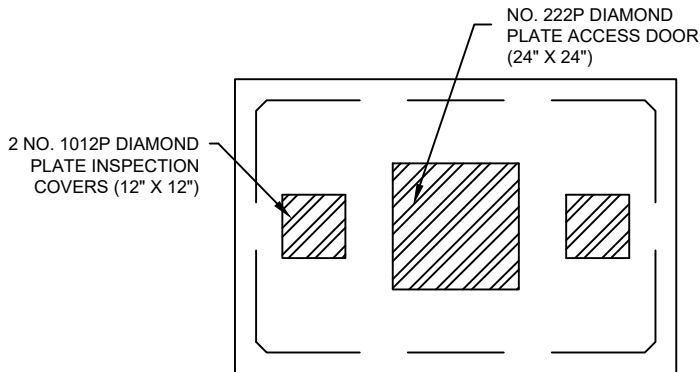
NOTES:
 UNCOVERED AREA GRADED TO DRAIN TO SANITARY
 SEWER SHALL NOT EXCEED 200 S.F. AREAS
 OVER 200 S.F. REQUIRE A ROOF, WITH ROOF
 RUNOFF DRAINING TO STORM SEWER.
 TO BE USED FOR FOOD SERVICES, APARTMENT
 COMPLEXES AND CONDOS.

DUMPSTER AREA DRAINAGE

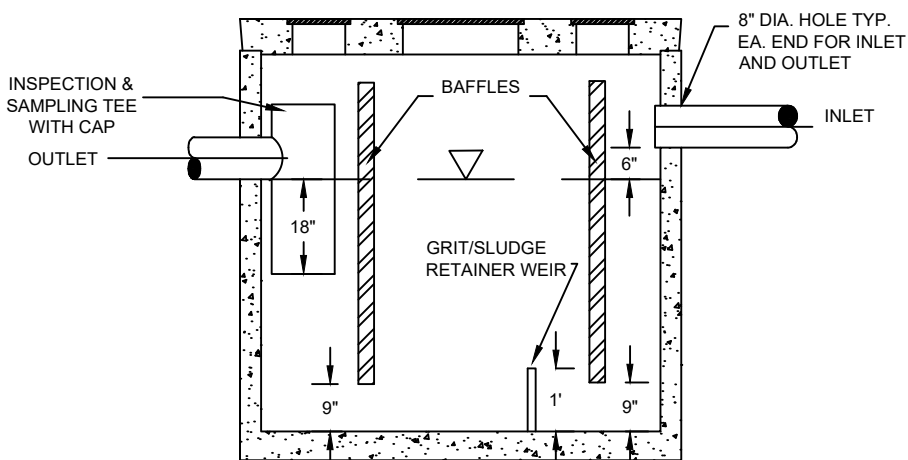
NO SCALE

Rev: -----

KITSAP COUNTY Dept. of Public Works	DUMPSTER AREA DRAINAGE	DETAIL FG-1
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PLAN
NTS



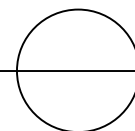
ELEVATION
NTS

NOTES:

1. UTILITY VAULT COMPANY, INC., #577-SA, OR EQUAL
2. LOCATE WITHIN 20 FEET OF DRIVE FOR ACCESS BY MAINTENANCE VEHICLE.
3. INSPECTION AND SAMPLING TEE TO BE INSTALLED BY CONTRACTOR. LINE-SIZED P.V.C. PIPE SHALL BE USED.
4. FILL WITH CLEAN WATER PRIOR TO START-UP OF SYSTEM.
5. GRAY AND BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER.
6. SIZE WILL BE DETERMINED BY THE VOLUME TREATED.

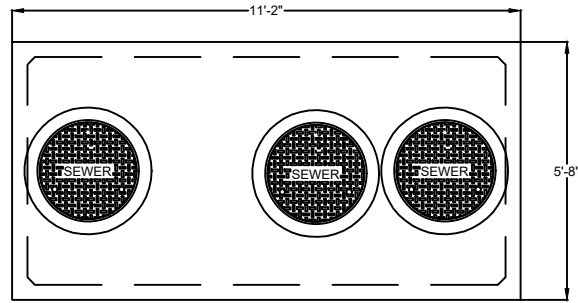
BAFFLE TYPE
OIL/WATER SEPARATOR

NO SCALE

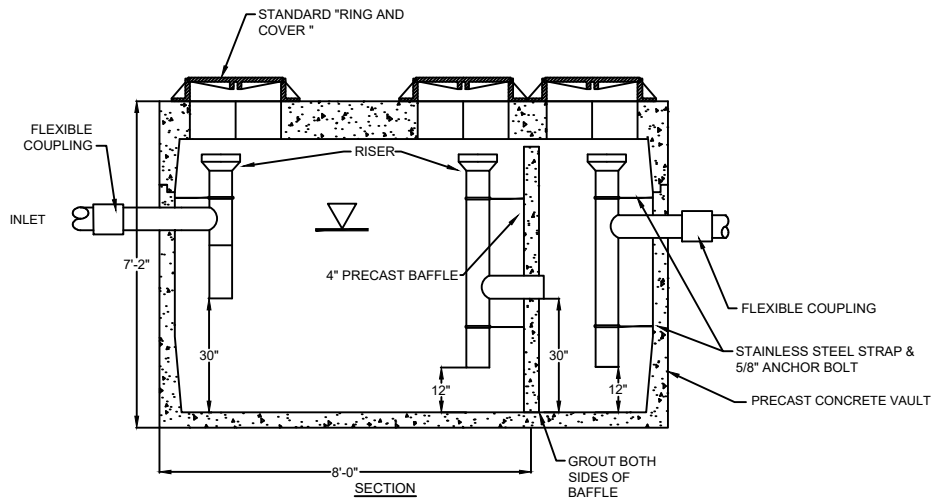


Rev: -----

KITSAP COUNTY Dept. of Public Works	BAFFLE TYPE OIL/WATER SEPARATOR	DETAIL FG-2
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PLAN-VAULT LID



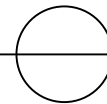
SECTION

GENERAL NOTES

1. PRECAST VAULT AND BAFFLE SHALL HAVE KNOCKOUTS AT ALL PIPE OPENINGS. IF KNOCK-OUTS ARE NOT PRESENT, THEN PIPE OPENINGS SHALL BE CORE DRILLED. PIPE OPENINGS SHALL BE 2" LARGER THAN THE PIPE DIAMETER.
2. POSITION RISERS BELOW ACCESS OPENINGS TO ALLOW CLEAR ACCESS TO RISER AND VAULT CHAMBER.
3. LOCATE INTERCEPTOR WITHIN 20' OF DRIVE FOR ACCESS BY MAINTENANCE VEHICLE.
4. CONNECTIONS TO CONCRETE WALL WITH PVC PIPE, REQUIRE KOR-N-SEAL CONNECTORS OR A.C. x PVC BRANT ADAPTER. SEAL ALL PIPE CONNECTIONS WITH NON-SHRINK GROUT.
5. GRAY WATER ONLY. BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER.
6. RISER CHIMNEY IS LIMITED TO 24" MAX HEIGHT.
7. FILL WITH CLEAN WATER PRIOR TO START UP OF SYSTEM.
8. VAULT DIMENSIONS WILL VARY DEPENDING ON VOLUME RREQUIRED.
- 9.2 - 1500 GALLON TANKS MAY BE USED IN LIEU OF 1 - 3000 GALLON OR 2 - 2000 GALLON IN LIEU OF 1 - 4000 GALLON, OR ANY COMBINATION OF TANKS TO EQUAL THE SIZE REQUIRED.

TYPICAL GREASE INTERCEPTOR

NO SCALE



Rev: _____

<p>KITSAP COUNTY Dept. of Public Works</p>	<p>TYPICAL GREASE INTERCEPTOR</p>	<p>DETAIL FG-3</p>
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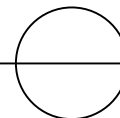
GENERAL CONSTRUCTION NOTES

1. Construction materials and workmanship shall conform to the requirements of the most recent edition of "Kitsap County Department of Public Works Standards for Sanitary Sewer Extensions" in conjunction with the most recent edition of "The Standard Specifications For Road, Bridge, and Municipal Construction" prepared by the Washington State Chapter of the American Public Works Association.
2. The contractor shall arrange for a preconstruction conference prior to commencing construction. The engineer and/or inspector for the Sewer Utility Division of the Kitsap County Public Works Department shall be in attendance.
3. All sewer installation inspections and test observations shall be made by Kitsap County Department of Public Works Sewer Utility Division. The County inspector shall be notified two work days in advance of commencing work on a sanitary sewer extension. Prior to final acceptance of all installations, the County shall conduct an inspection of all main lines by the use of television equipment. Final acceptance of sewer installations will not be made until tests and inspections are complete and prove satisfactory.
4. The physical connection to an existing manhole or sewer shall not be made until authorized by the County. Such authorization will not be given until all upstream lines have been completely cleaned and all debris removed.
5. Gravity mains shall be tested by the low pressure air method. Forcemains shall be tested by the hydrostatic test method. All tests shall be made in the presence of the County inspector.
6. Drop manholes shall, in all respects, be constructed as a standard manhole with the exception of the outside drop connection as shown on the standard plan "Drop Manhole Connection".
7. Manholes shall be precast reinforced concrete units with eccentric cones conforming to the standard plan "Type 1 Manhole". Joints between precast wall sections shall be confined O-ring type.
8. Manhole frame and covers shall be cast iron, three bolt locking type, EJ Group International No. 00372553B01, or equal. Bolts shall be 5/8" stainless steel socket head, countersunk. The cover shall have the Kitsap County logo.
9. Cleanout frame and covers shall be cast iron two bolt locking type, Olympic Foundry type M1025, or equal. Bolts shall be 5/8" stainless steel socket head, countersunk.
10. All side sewers shall be 6" diameter minimum and laid on a minimum slope of 2 percent. All side sewers shall be provided with a cleanout and test tees for each lot to be served.
11. Check dams shall be placed at 100 foot intervals on gravity mains laid on 6 percent or greater slopes.
12. Concrete pipe anchors shall be placed on sewer mains where slopes exceed 20 percent. Anchors shall be placed on 36 foot centers for slopes 20 to 35 percent, on 24 foot centers for slopes 35 to 50 percent, and on 16 foot centers for slopes 50 percent and greater.

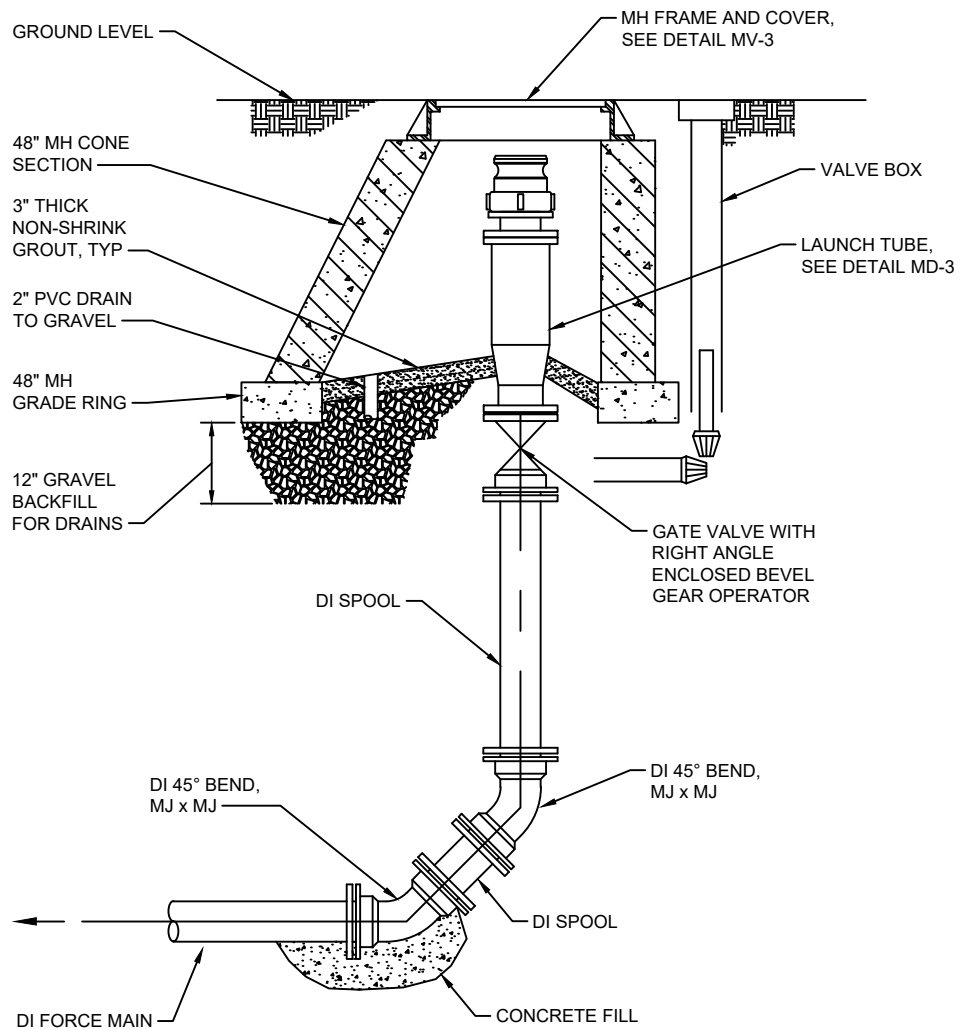
Rev.

**GENERAL
CONSTRUCTION NOTES**

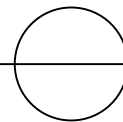
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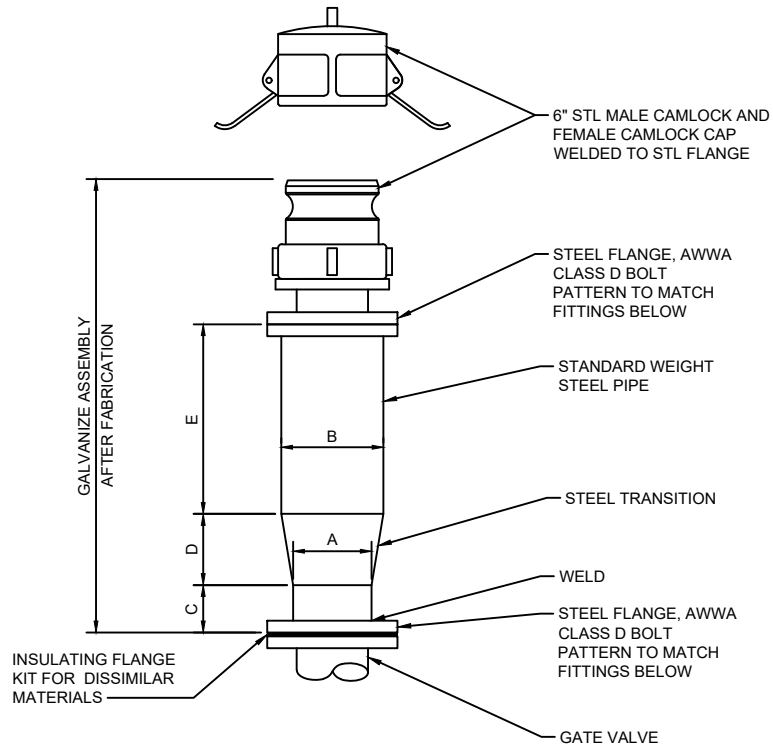
KITSAP COUNTY Dept. of Public Works	GENERAL CONSTRUCTION NOTES	DETAIL MD-1
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PIG LAUNCH STATION
NO SCALE



Rev: _____



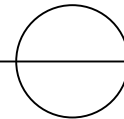
SECTION

FORCE MAIN SIZE	A	B	C	D	E
12"	12"	14"	4"	8"	16"
8"	8"	10"	4"	6"	12"
6"	6"	8"	4"	4"	8"
4"	4"	6"	4"	4"	8"

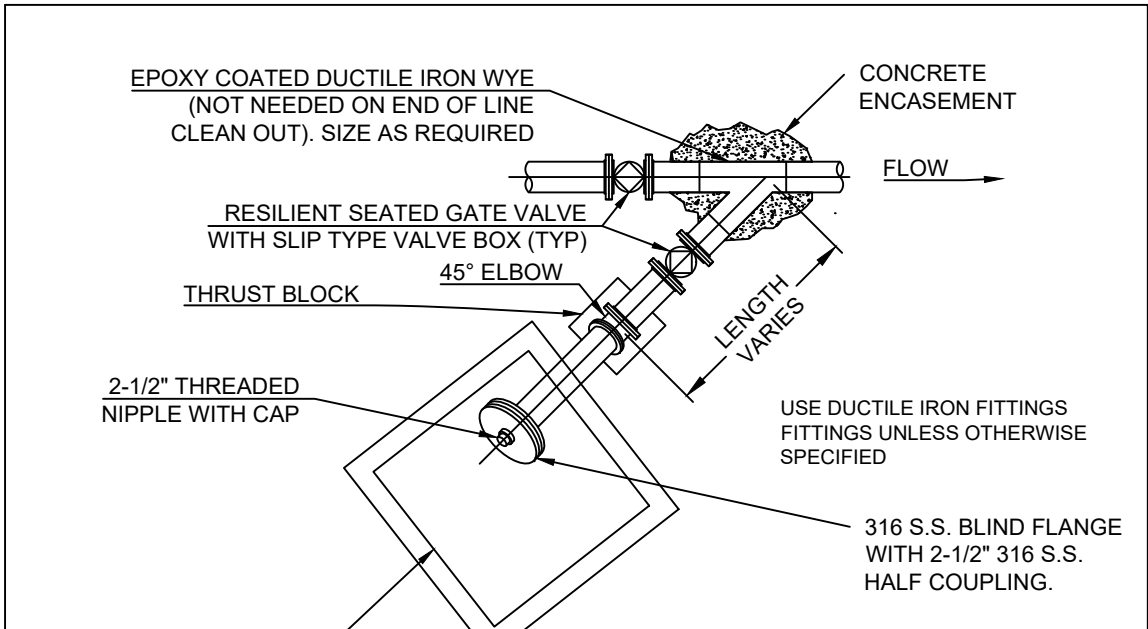
FOR FORCE MAINS LARGER THAN 12", CONTACT KITSAP COUNTY PUBLIC WORKS SEWER UTILITY DIVISION FOR REQUIREMENTS

PIG LAUNCH TUBE

NO SCALE

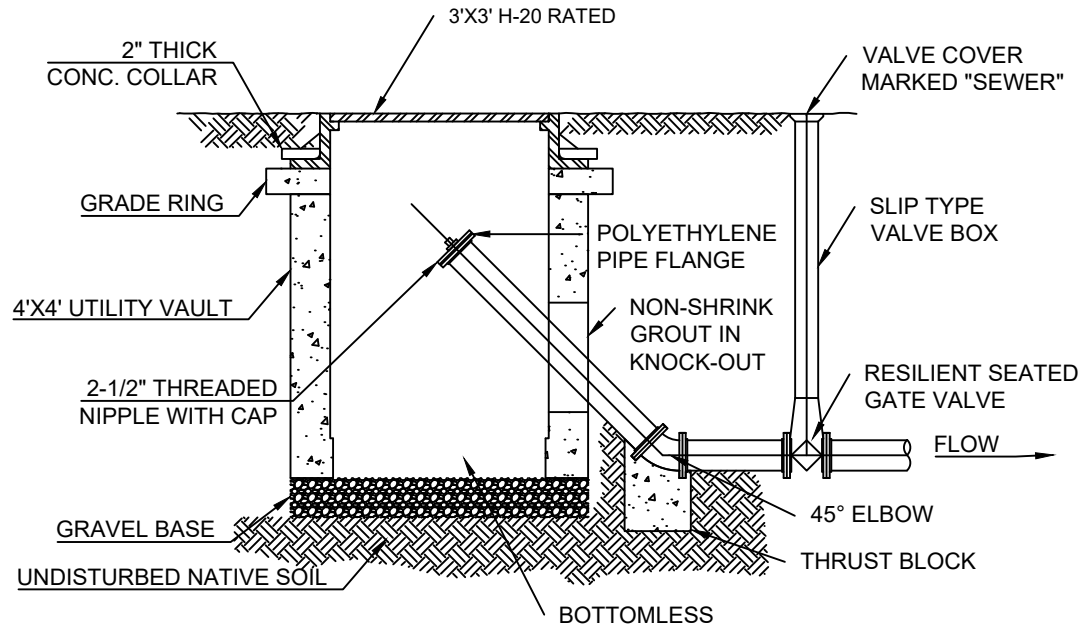


Rev: _____



36"x36" ACCESS HATCH

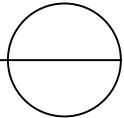
PLAN



PROFILE

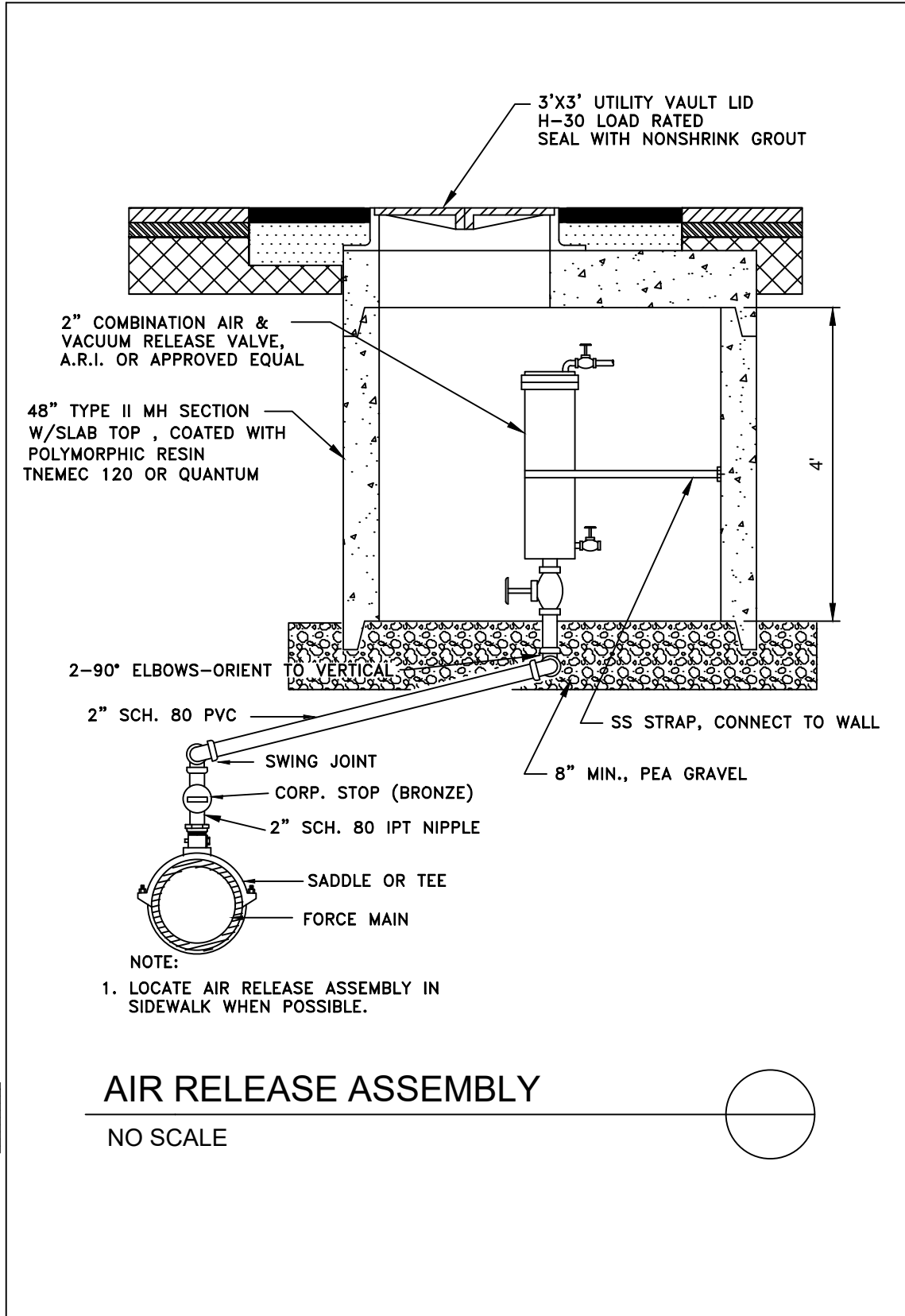
**LOW PRESSURE FORCE
MAIN CLEANOUT DETAIL**

NO SCALE



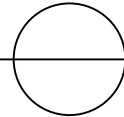
Rev.

KITSAP COUNTY Dept. of Public Works	LOW PRESSURE FORCEMAIN CLEANOUT	DETAIL MD-4
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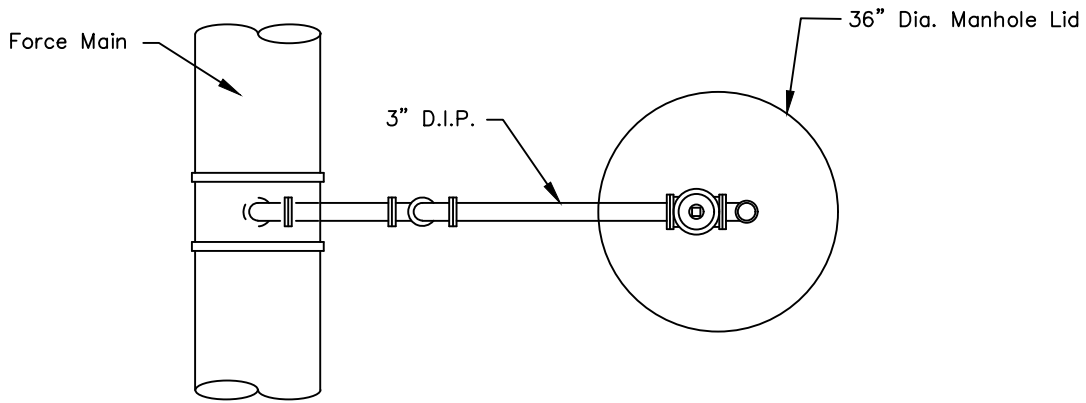
AIR RELEASE ASSEMBLY

NO SCALE

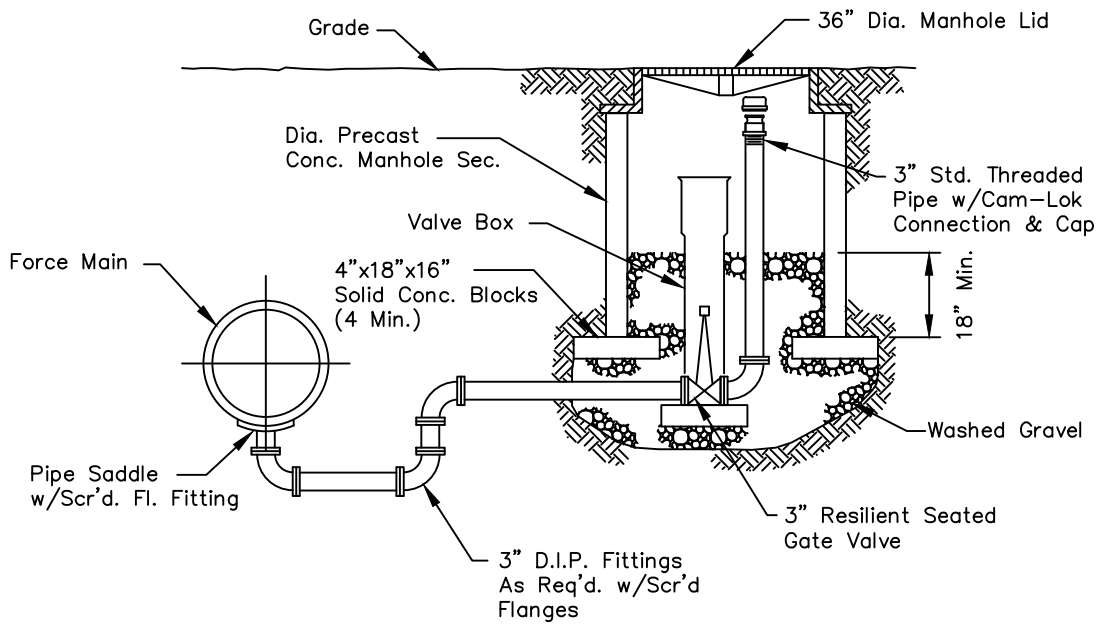


Rev:

KITSAP COUNTY Dept. of Public Works	AIR RELEASE ASSEMBLY	DETAIL MD-5
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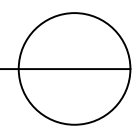
PLAN



ELEVATION

BLOW-OFF ASSEMBLY

NO SCALE



Rev:

<p>KITSAP COUNTY Dept. of Public Works</p>	<p>BLOW-OFF ASSEMBLY</p>	<p>DETAIL MD-6</p>
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