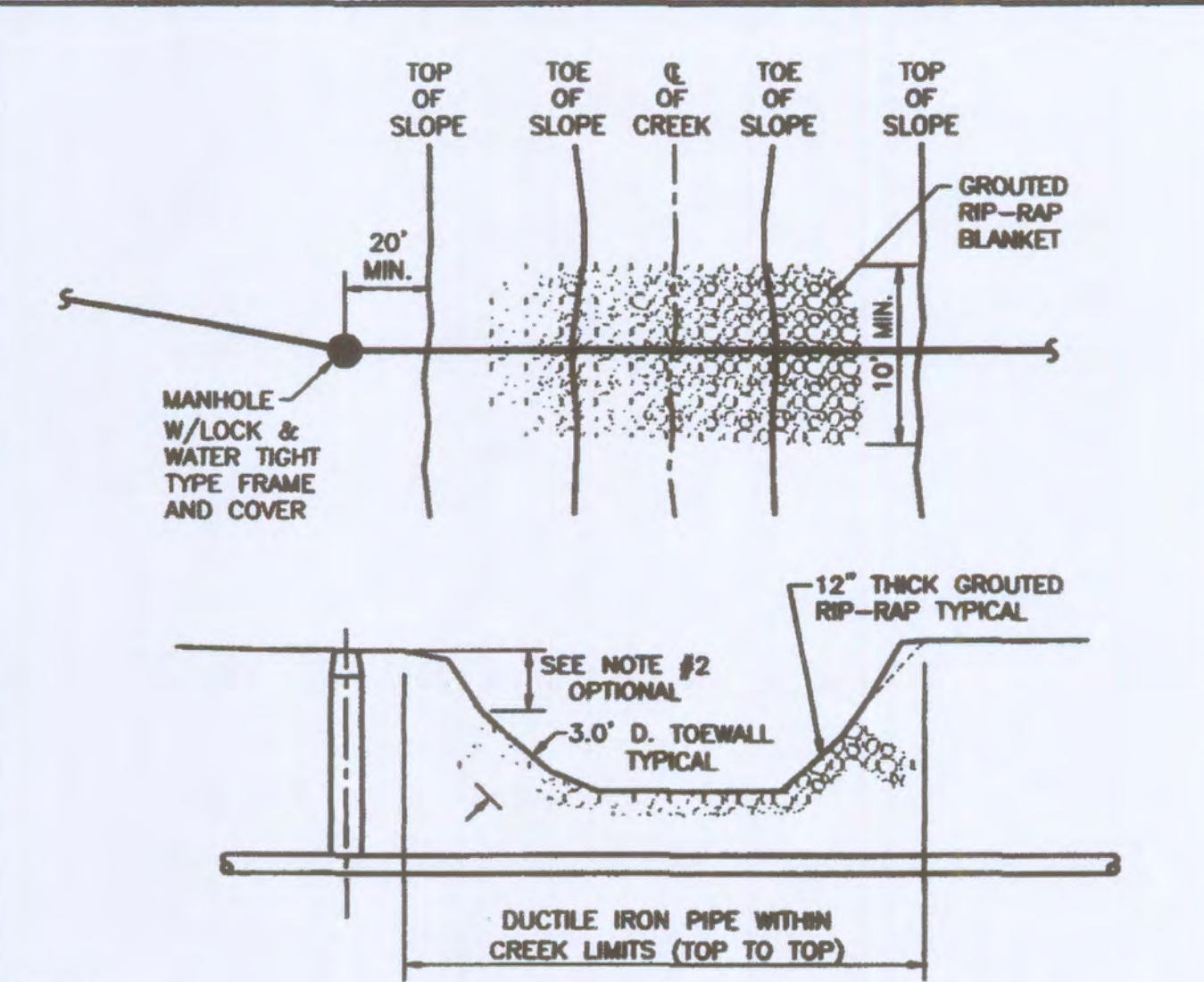


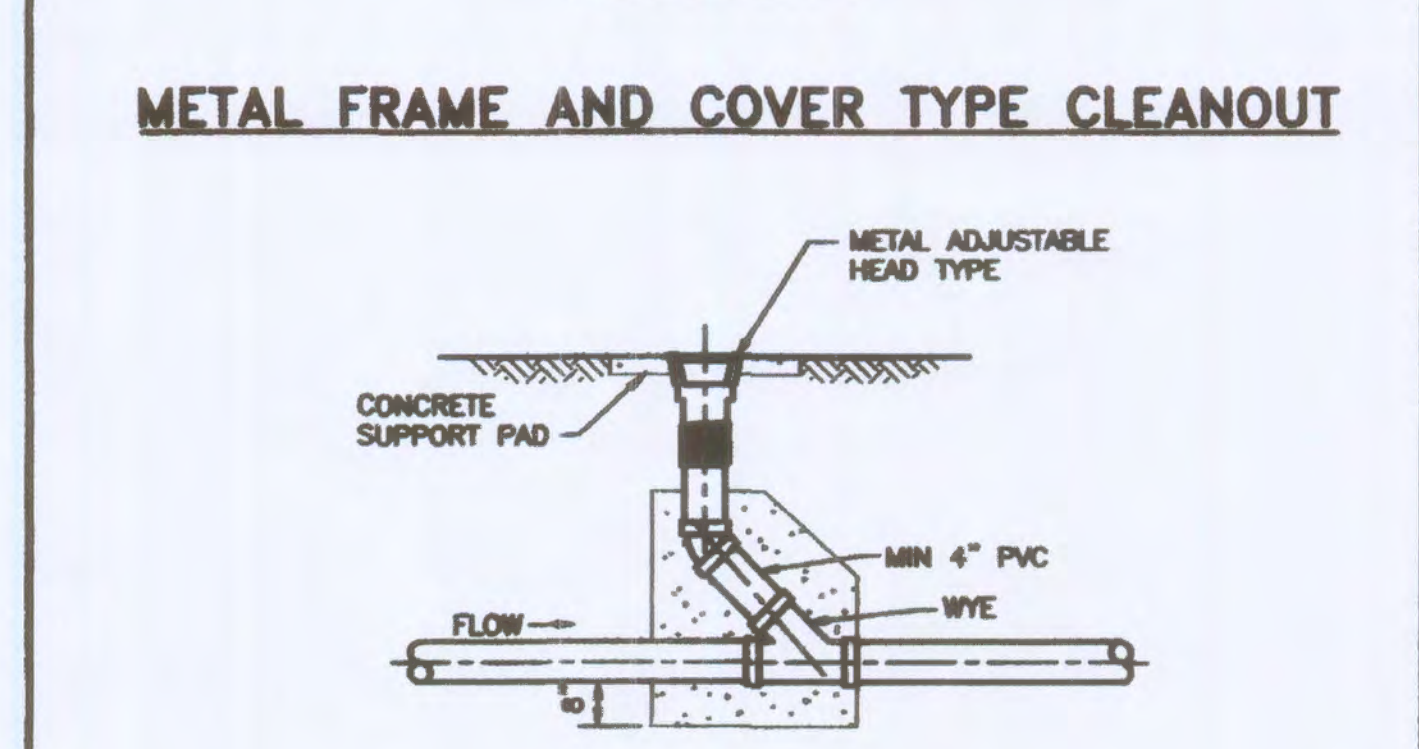
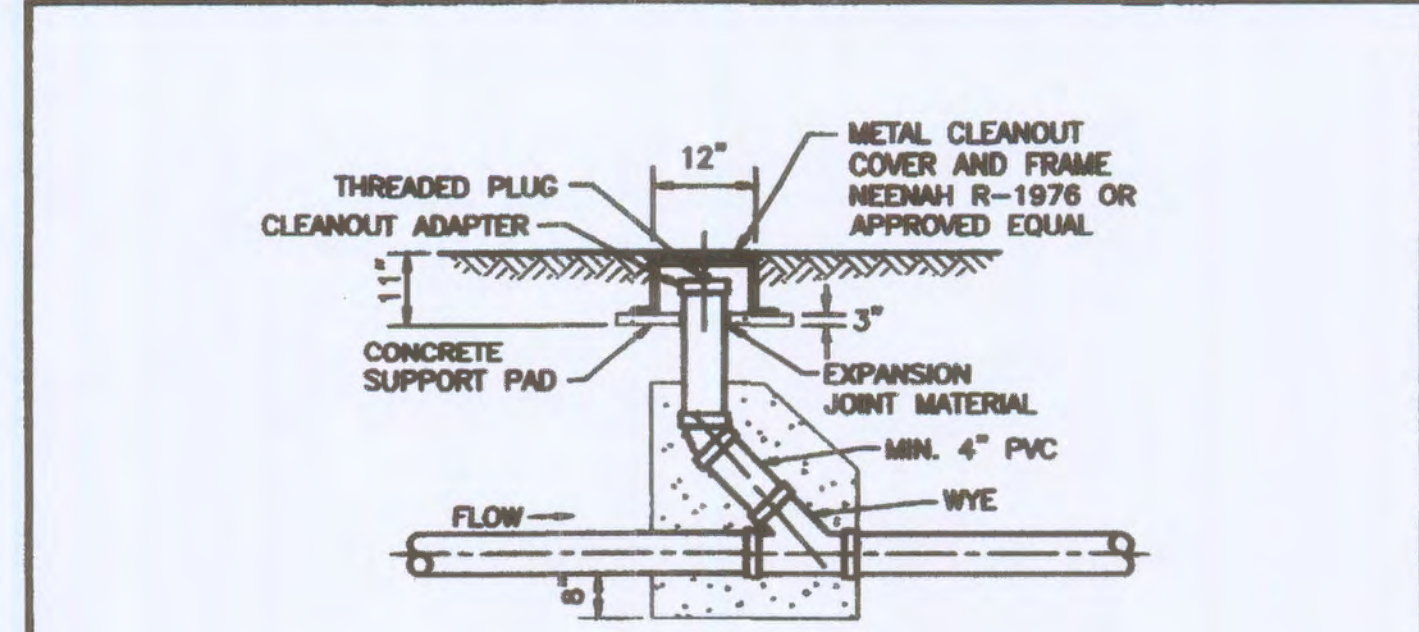
ISSUE	REMARKS/DATE
1	10-07-2013 Revised per City, DCSD, & PWSD#2 Comments
2	11-20-2013 Revised per City, DCSD, & PWSD#2 Comments
3	12-16-2013 PWSD#2 Approval
4	01-03-2014 Revised per City Comments
5	02-11-2014 Revised per City Comments
6	03-11-2014 Approval



- NOTES:**
1. GROUDED RIP-RAP IS REQUIRED AT ALL CREEK CROSSINGS WHERE THE EMBANKMENTS CROSSED ARE STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL RATIO SLOPE; AND ALSO WHERE THERE IS 3 FEET OR LESS COVER OVER THE TOP OF THE SEWER MAIN.
  2. PLACE RIP-RAP ON LOWER 3/4 OF SLOPE. GRADE UPPER 1/4 OF SLOPE AT 1 VERTICAL TO 2 HORIZONTAL SLOPE FOR SOD OR 1 VERTICAL TO 2.5 HORIZONTAL SLOPE FOR SEED AND STRAW.
  3. RIP-RAP TO BE "MSD 5" GRADATION, MINIMUM 12" THICK, GROUDED WITH 8 SACK MIX, SAND-CEMENT SLURRY, BROOM FINISH.
  4. INCORPORATE A 3 FEET DEEP TOE WALL ON EMBANKMENT'S UPPER EDGE OF RIP-RAP.
  5. TOP SURFACE OF RIP-RAP SHOULD NOT BE HIGHER THAN ADJACENT GROUND SURFACE.
  6. IF PIPE HAS LESS THAN 12" COVER, A PAVED CHANNEL MAY BE REQUIRED.
  7. DUCTILE IRON PIPE IS REQUIRED WITHIN THE CREEK LIMITS.

**Duckett Creek Sanitary District**

TYPICAL CREEK CROSSING	BSM	KLA	24
	MOOB	1-9-01	

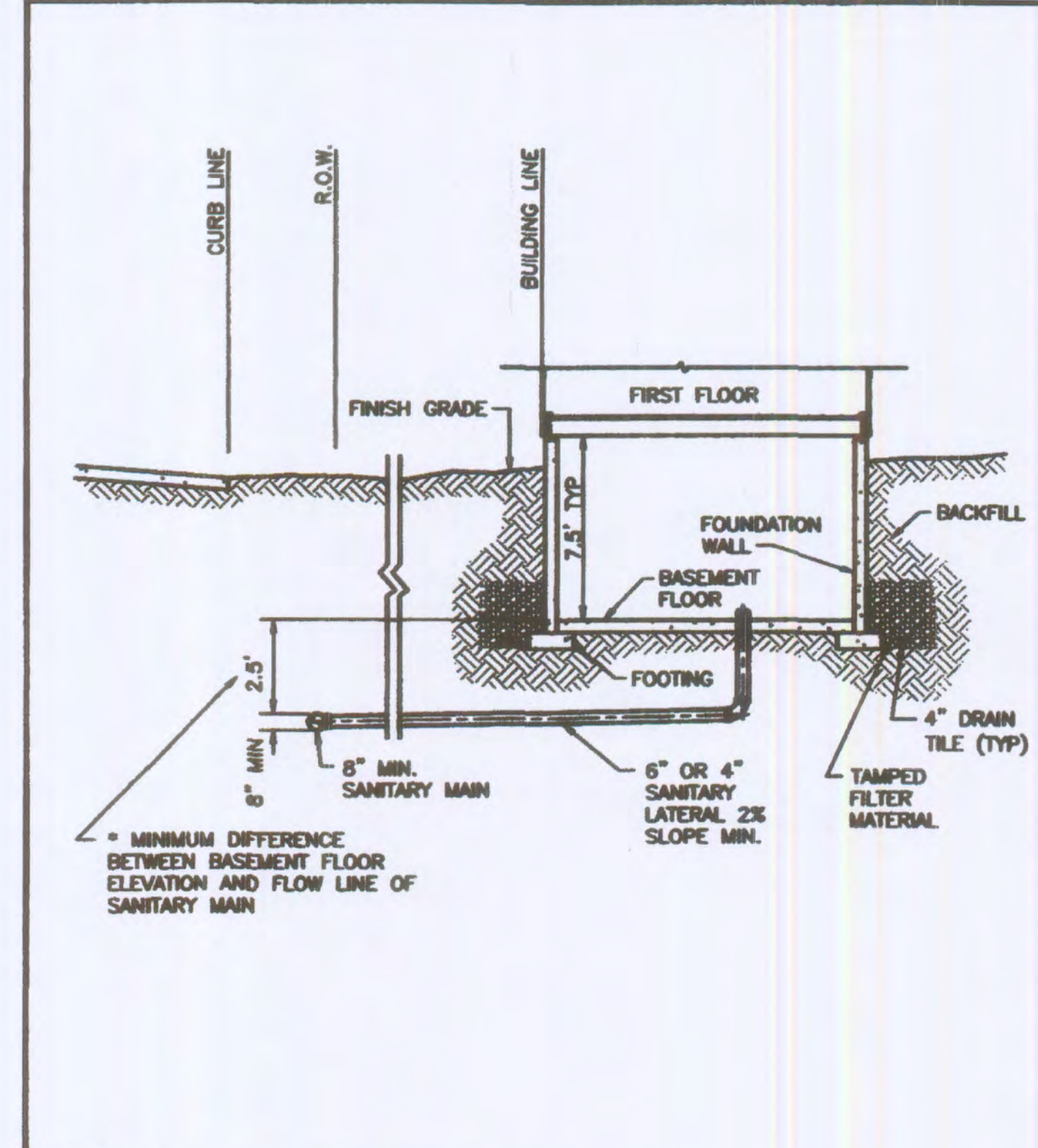


**Duckett Creek Sanitary District**

**METAL FRAME AND COVER TYPE CLEANOUT**

**ADJUSTABLE HEAD TYPE CLEANOUT**

TYPICAL SEWER LATERAL CLEANOUT DETAILS	BSM	KLA	25
	MOOB	1-9-01	

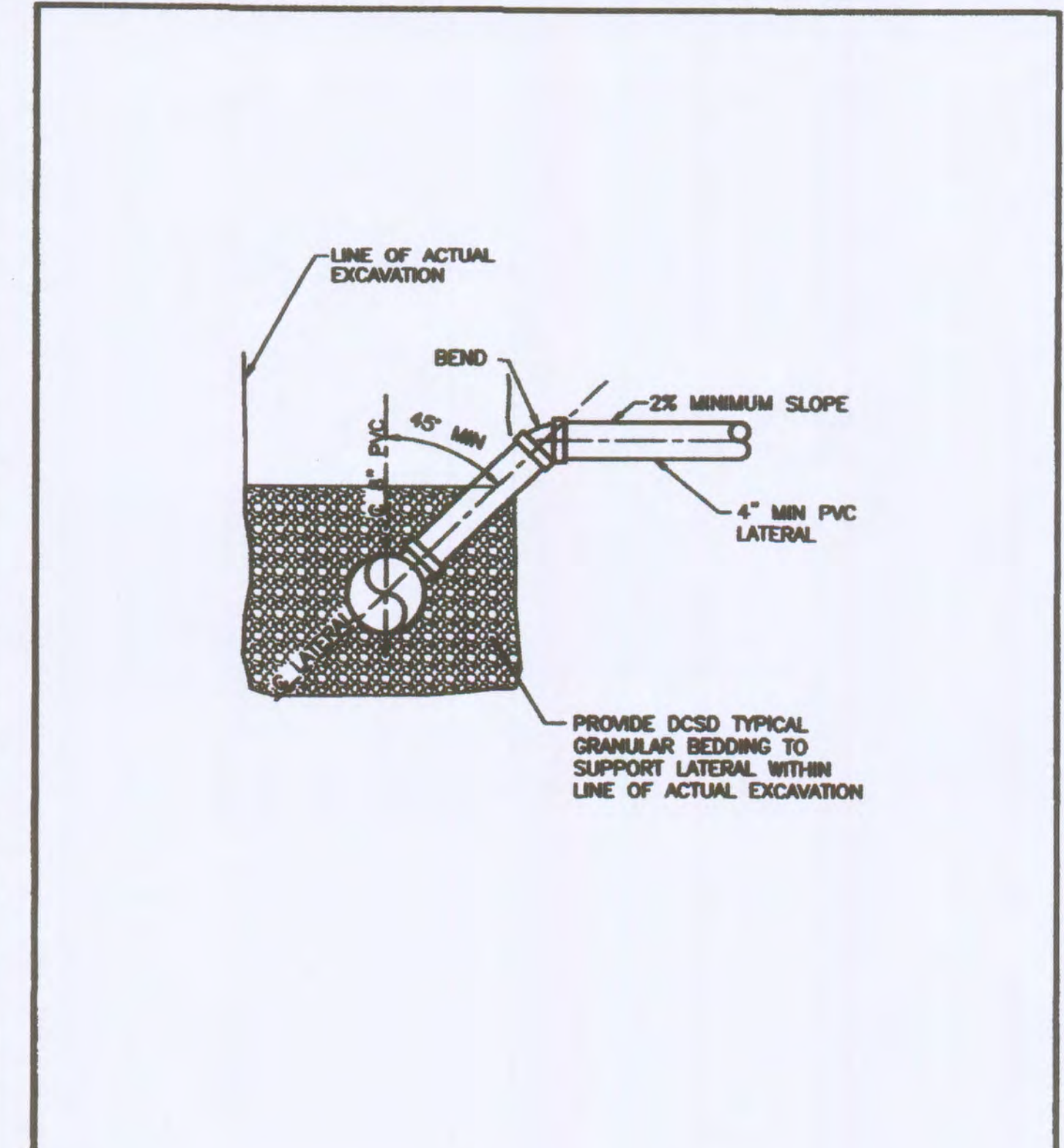


**Duckett Creek Sanitary District**

**TYPICAL SANITARY SEWER LATERAL PROFILE**

\*NOTE: DIFFERENCE IN DEPTH INCREASES WITH PIPE SIZE

TYPICAL SANITARY SEWER LATERAL PROFILE	BSM	KLA	26
	MOOB	1-9-01	

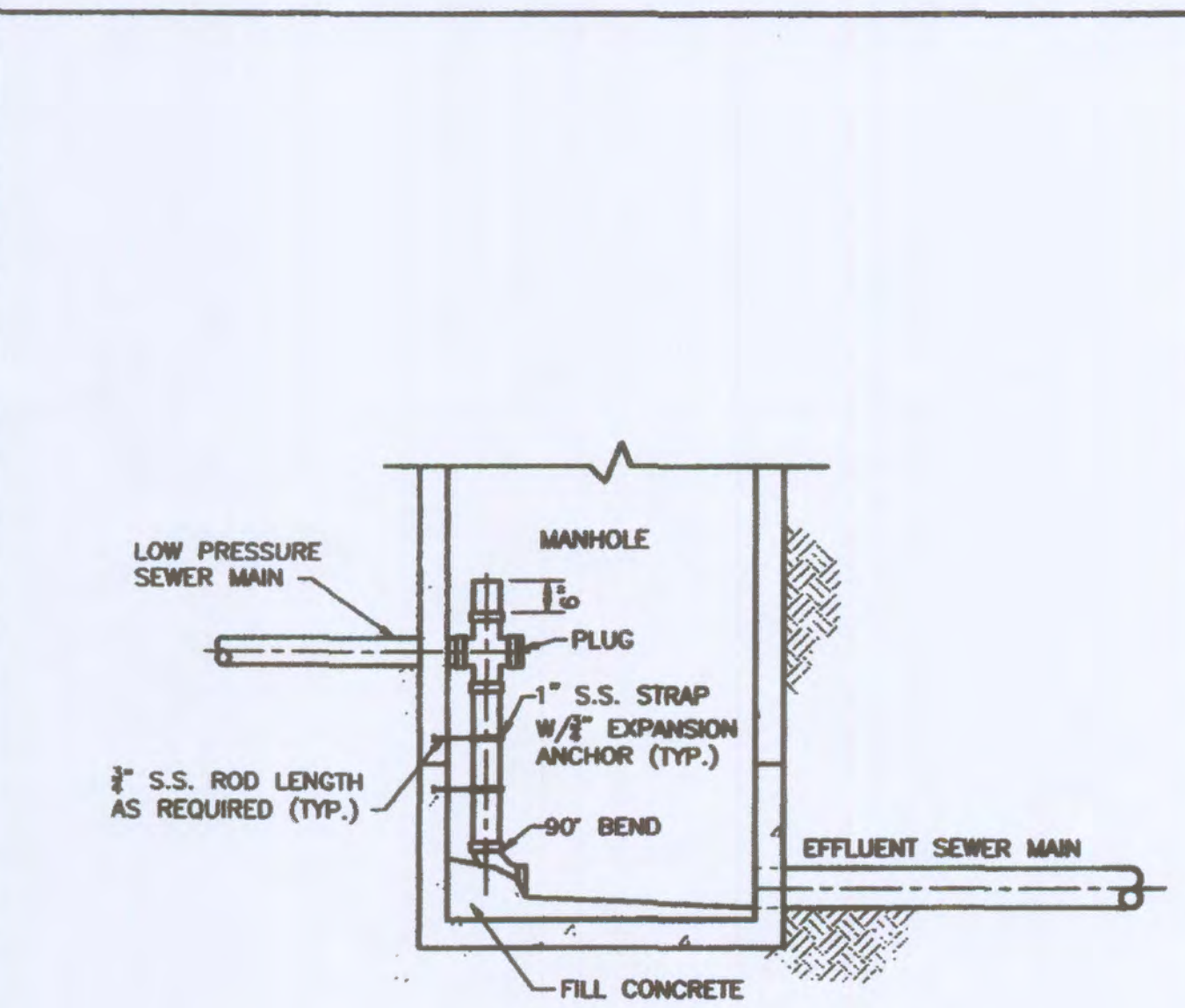


**Duckett Creek Sanitary District**

**SANITARY SEWER LATERAL RISER DETAIL**

PROVIDE DCSD TYPICAL GRANULAR BEDDING TO SUPPORT LATERAL WITHIN LINE OF ACTUAL EXCAVATION

SANITARY SEWER LATERAL RISER DETAIL	BSM	KLA	27
	MOOB	1-9-01	

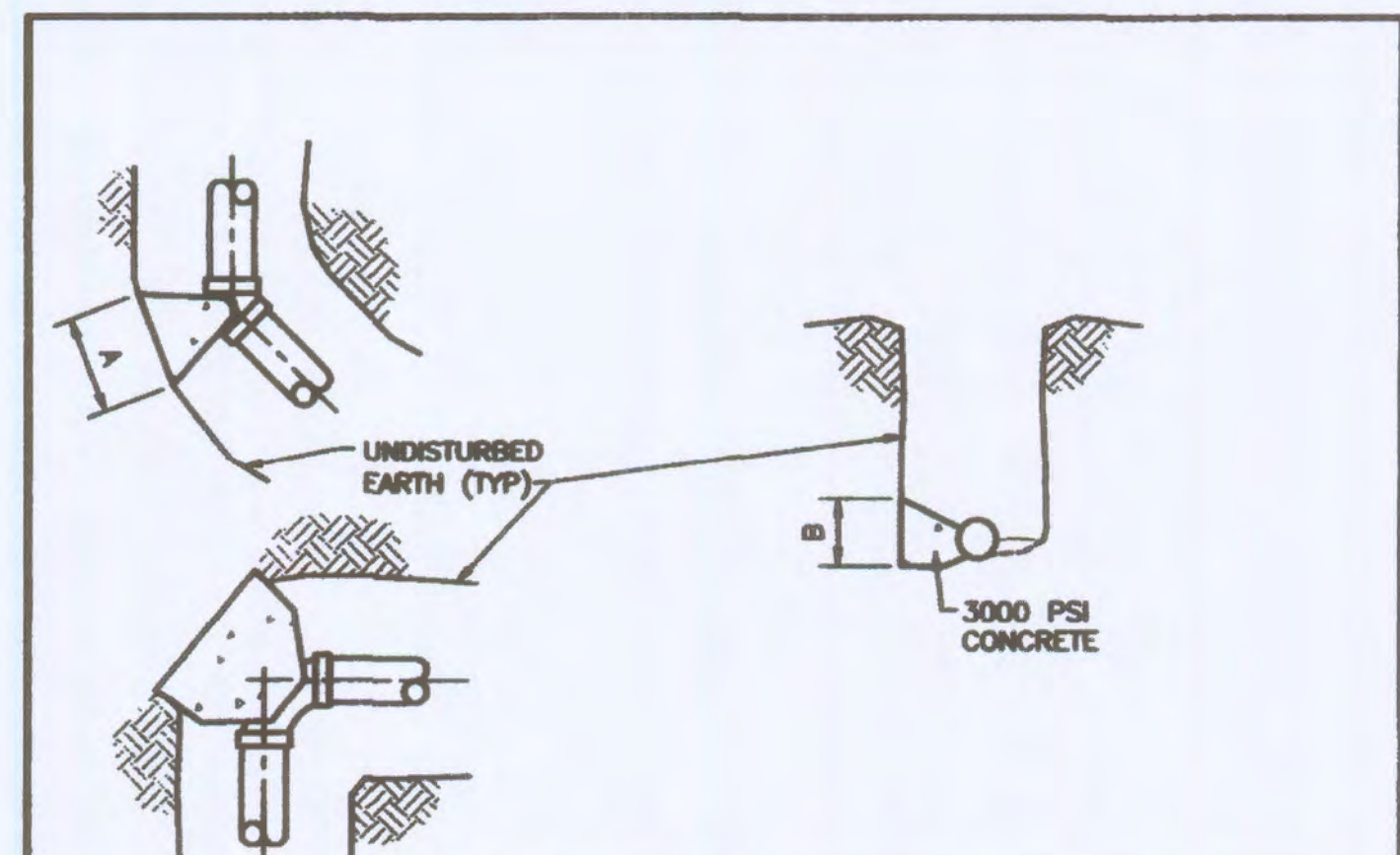


**Duckett Creek Sanitary District**

**LOW PRESSURE SEWER MAIN CONNECTION AT MANHOLE**

NOTE: INVERT-BOTTOM SHALL BE WORKED TO PROVIDE POSITIVE DRAINAGE THROUGH MANHOLE

LOW PRESSURE SEWER MAIN CONNECTION AT MANHOLE	BSM	KLA	28
	MOOB	1-9-01	



**Duckett Creek Sanitary District**

**THRUST BLOCK DETAIL AND SIZE SCHEDULE**

MAIN SIZE	22 1/2"	45"	90"	TEE
2"	.5' x 1'	.5' x 1'	1' x 1'	1' x 1'
4"	1' x 1'	1' x 1'	1.5' x 1'	1' x 1'
6"	1' x 1'	1.5' x 1'	2' x 1'	1.5' x 1'
8"	1' x 1'	2' x 1'	2' x 1'	2' x 1'

THRUST BLOCK DETAIL AND SIZE SCHEDULE	BSM	KLA	29
	MOOB	1-9-01	

**PROJECT TITLE**

**OAKHURST**  
OF FALLON, MISSOURI

**THE STERLING CO.**  
ENGINEERS & SURVEYORS  
5055 New Baumgartner Road  
St. Louis, Missouri 63129  
Ph. 314-487-0440 Fax 314-487-8944  
www.sterling-eng-sur.com  
Corporate Certificate of Authority #001046

The Professional Engineer's seal and signature affixed to this sheet, together only, in the manner and form shown on this sheet, shall constitute the professional seal and signature of the Engineer. All drawings, specifications, or other documents prepared for this project, and the Engineer's responsibility, shall be the responsibility of the Engineer. The Engineer's seal and signature shall not be considered as a representation of the Engineer's seal and signature.

*[Signature]*  
E-28643

Date: Michael G. Bording  
License No. MO E-28643  
Civil Engineer

**LOMBARDO HOMES**  
2299 Technology Drive  
OFallon, Missouri 63368  
Ph. 636-265-2710

**SANITARY SEWER DETAILS**

P+Z No. 207.02  
City No.  
Date: July 22, 2013  
Job No. 12-10-284  
Page No.

**DTL-7** IMP