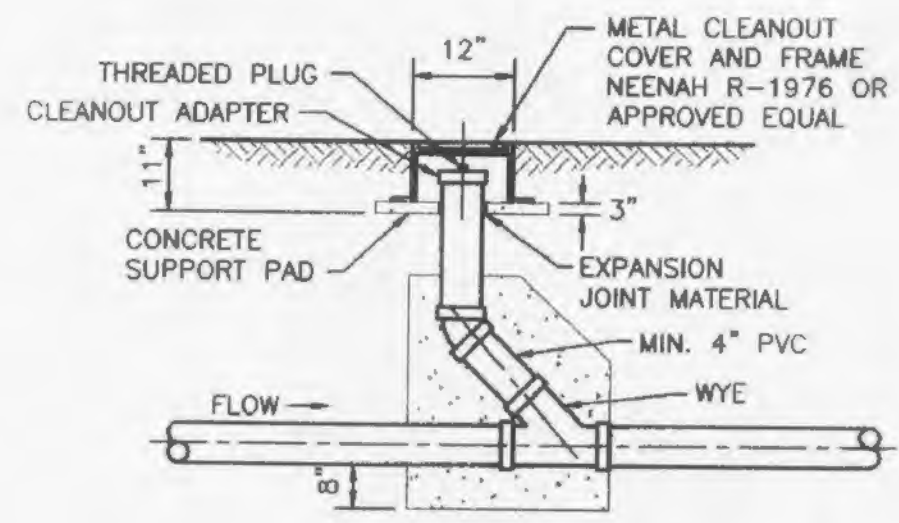


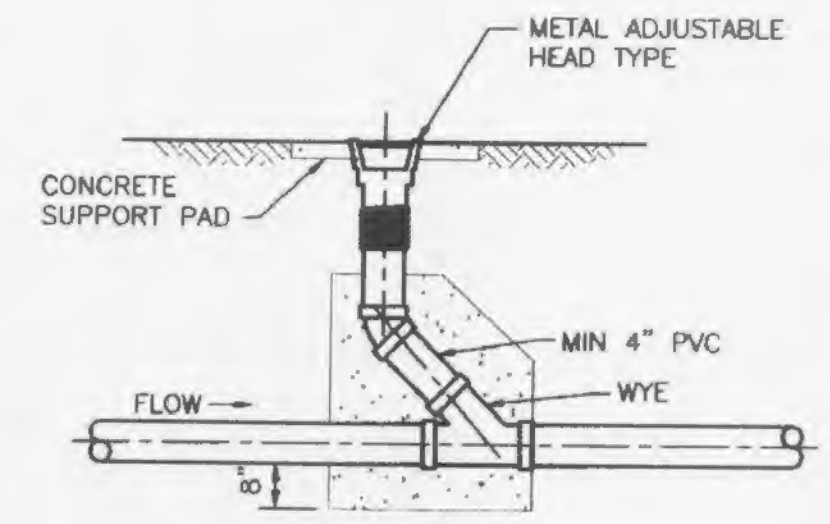
- NOTES:
1. GROUTED RIP-RAP IS REQUIRED AT ALL CREEK CROSSINGS WHERE THE EMBANKMENTS CROSSED ARE STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL RATIO SLOPE; AND ALSO WHERE THERE IS 3 FEET OR LESS COVER OVER THE TOP OF THE SEWER MAIN.
 2. PLACE RIP-RAP ON LOWER 3/4 OF SLOPE, GRADE UPPER 1/4 OF SLOPE AT 1 VERTICAL 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, GROUTED 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	Des By: BSM	App By: KLA	Detail No. 24
	Chd By: MDOB	Date: 1-8-01	



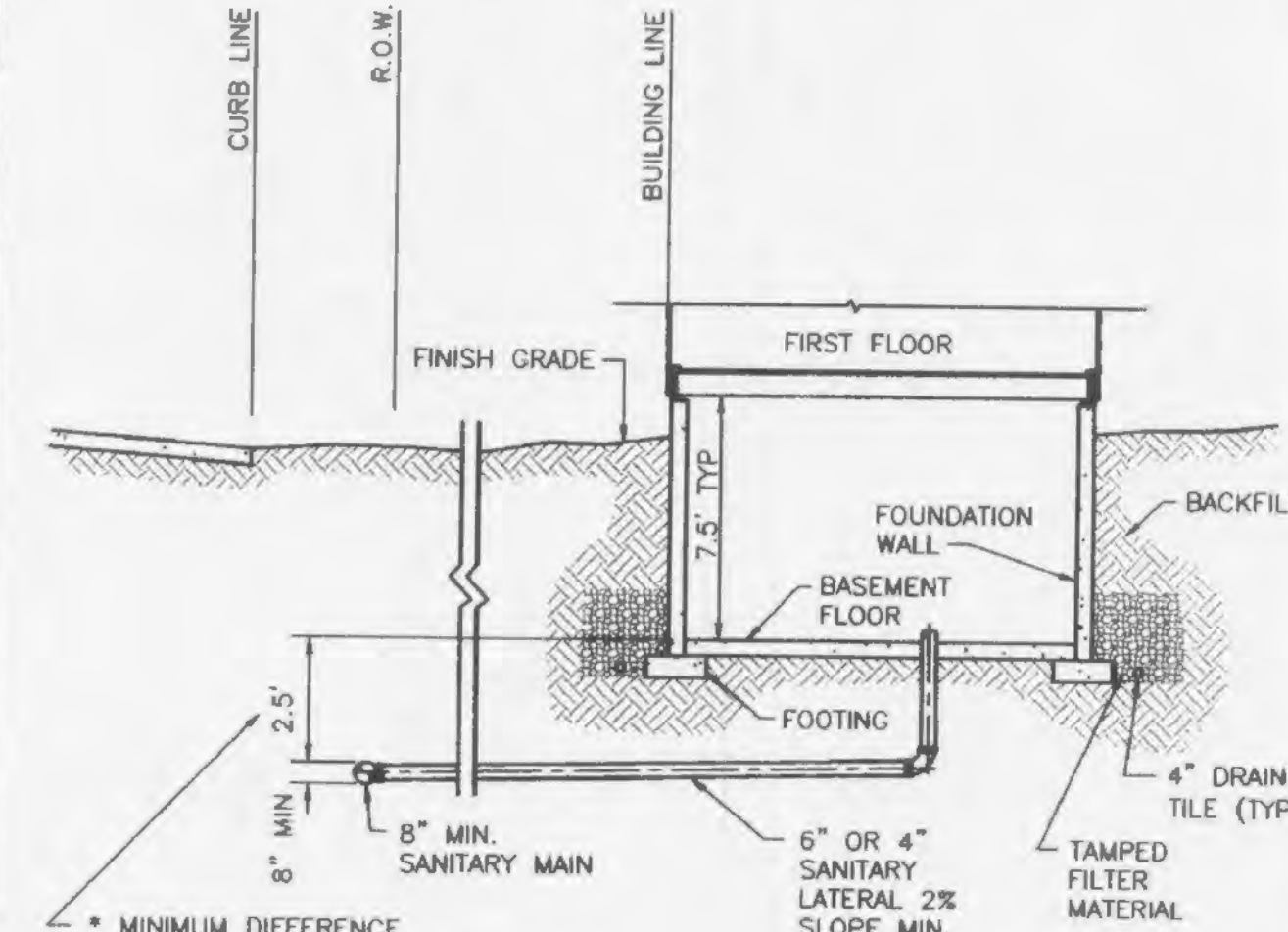
METAL FRAME AND COVER TYPE CLEANOUT



ADJUSTABLE HEAD TYPE CLEANOUT

Duckett Creek Sanitary District

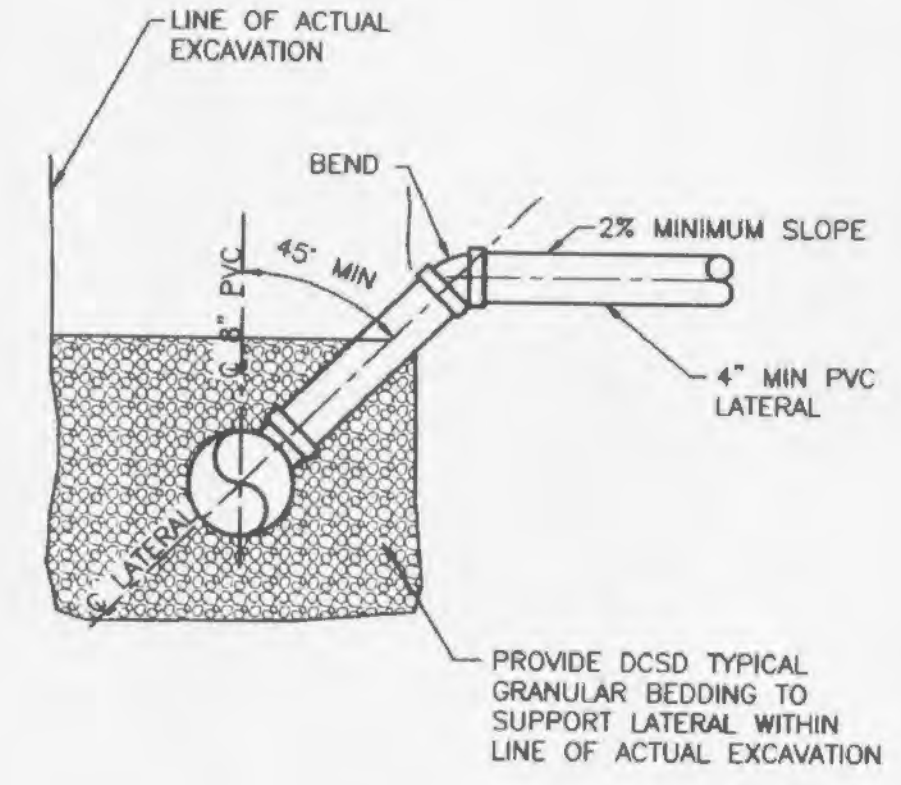
TYPICAL SEWER LATERAL CLEANOUT DETAILS	Des By: BSM	App By: KLA	Detail No. 25
	Chd By: MDOB	Date: 1-8-01	



* MINIMUM DIFFERENCE BETWEEN BASEMENT FLOOR ELEVATION AND FLOW LINE OF SANITARY MAIN

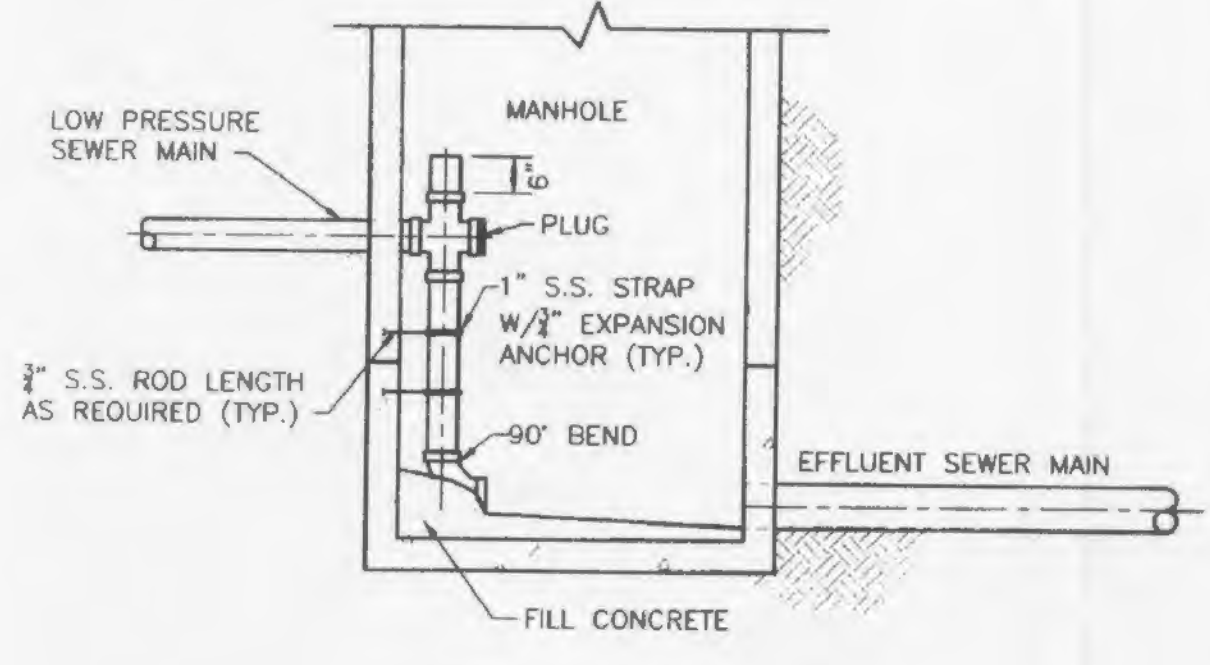
Duckett Creek Sanitary District

TYPICAL SANITARY SEWER LATERAL PROFILE	Des By: BSM	App By: KLA	Detail No. 26
	Chd By: MDOB	Date: 1-9-01	



Duckett Creek Sanitary District

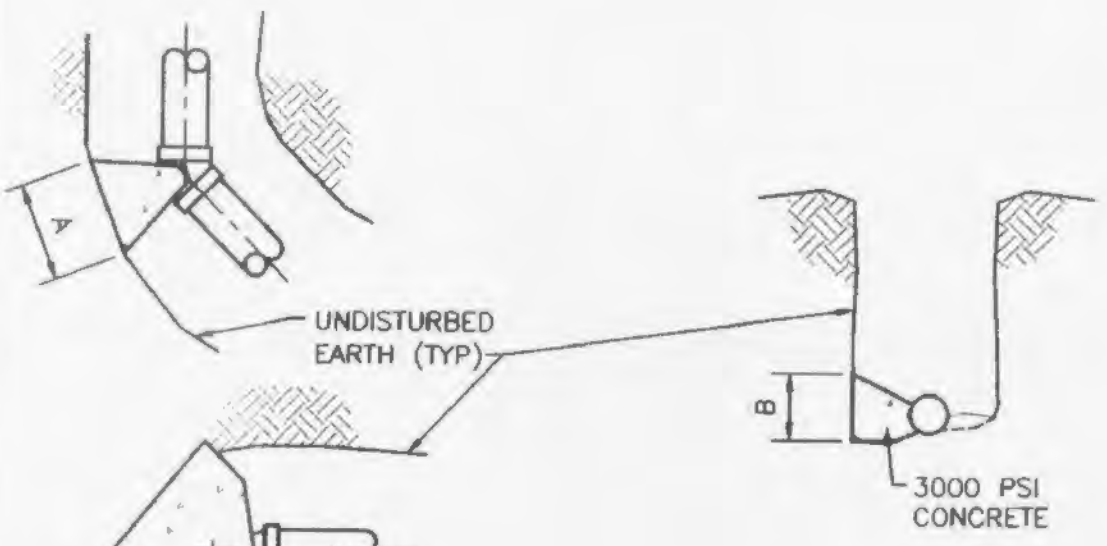
SANITARY SEWER LATERAL RISER DETAIL	Des By: BSM	App By: KLA	Detail No. 27
	Chd By: MDOB	Date: 1-9-01	



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

Duckett Creek Sanitary District

LOW PRESSURE SEWER MAIN CONNECTION AT MANHOLE	Des By: BSM	App By: KLA	Detail No. 28
	Chd By: MDOB	Date: 1-9-01	



MAIN SIZE	A x B 22 1/2"	A x B 45"	A x B 90"	A x B 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'

Duckett Creek Sanitary District

THRUST BLOCK DETAIL AND SIZE SCHEDULE	Des By: BSM	App By: KLA	Detail No. 29
	Chd By: MDOB	Date: 1-9-01	

DEVELOPER/OWNER:
PULTE GROUP
 17107 CHESTERFIELD AIRPORT RD. STE 120
 CHESTERFIELD, MO 63005
 PHONE: (636) 537-7129

CIVIL ENGINEERS
 JOHN F. HARSBARGER
 REG. PROFESSIONAL ENGINEER
 E-28716

DATE: 5/22/14

PRESTON WOODS
 PHASE 7
 IMPROVEMENT PLANS
 PRESTON WOODS LANE
 O'FALLON, MO 63366

SANITARY SEWER DETAILS

ST. CHARLES
 1520 S. Fifth Street
 Suite 307
 St. Charles, MO 63303
 636.978.7598 / f

COLE
 CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
 Cole & Associates, Inc.

DESIGN/CALC BY: MTS
 DRAWN BY: MTS
 CHECKED BY: JFH
 DRAWING SCALE:
 DATE: 01/07/2013
 Job Number: 13-0109
 Sheet Number: C9.9

USER: Taylor, Short, TAB; DETAILS 9
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