

**STANDARD DETAILS  
MANHOLE**

**BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
RULES, REGULATIONS AND POLICY**

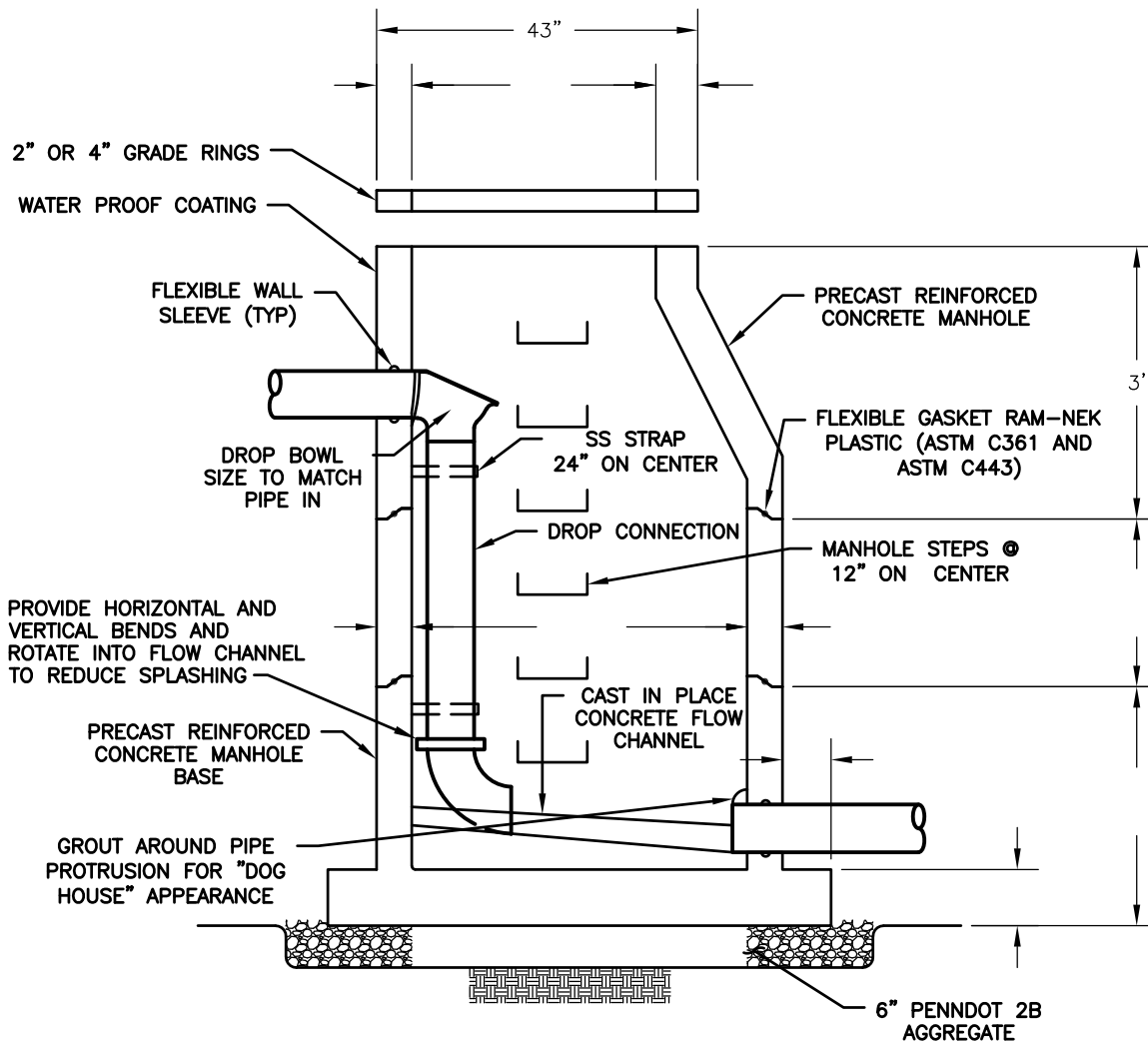
377 CEDARCREST DRIVE DUNCANSVILLE, PA 16635  
OFFICE: (814) 695-6300 FAX: (814) 696-5757  
TTY/TDD ONLY: 1-800-654-5984

BLAIR TOWNSHIP, BLAIR COUNTY  
PENNSYLVANIA

KELLER ENGINEERS, INC.  
420 ALLEGHENY STREET  
HOLLIDAYSBURG, PA 16648  
PHONE: 814-696-7430  
FAX: 814-696-0150

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## STANDARD DETAILS DROP MANHOLE

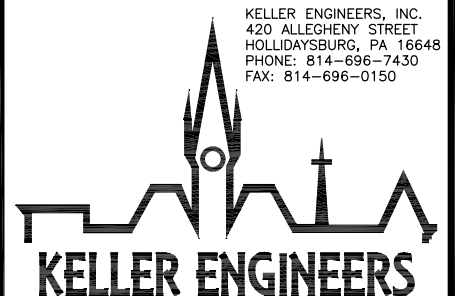
### BLAIR TOWNSHIP WATER AND SEWER AUTHORITY RULES, REGULATIONS AND POLICY

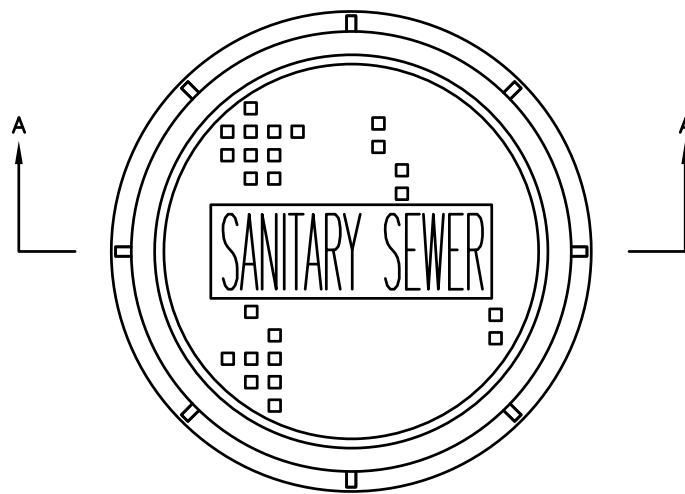
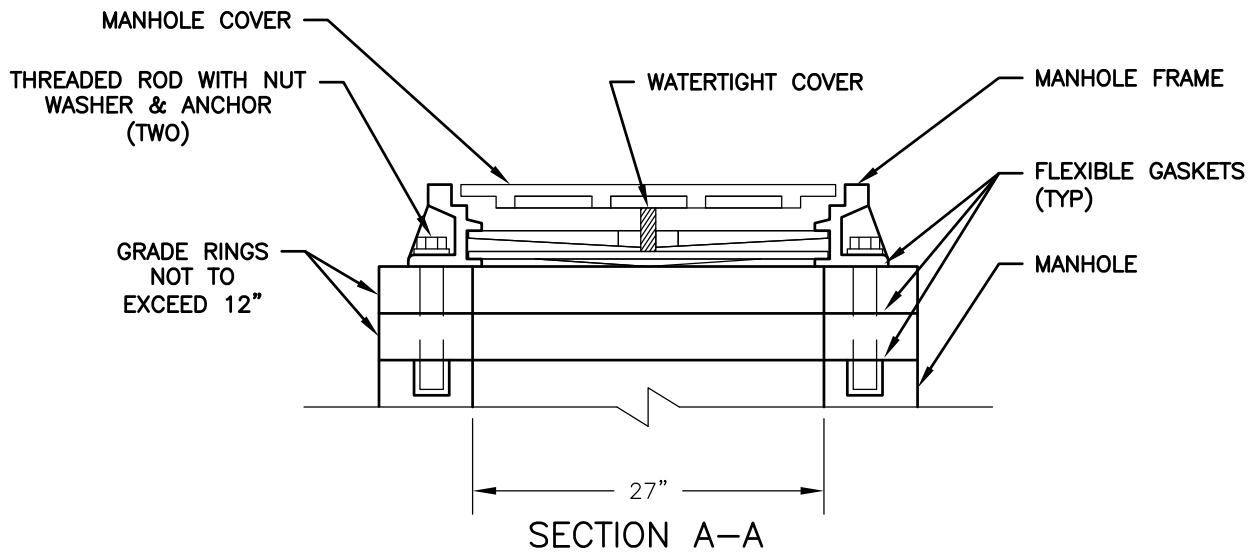
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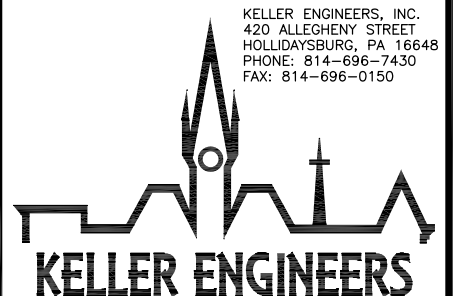


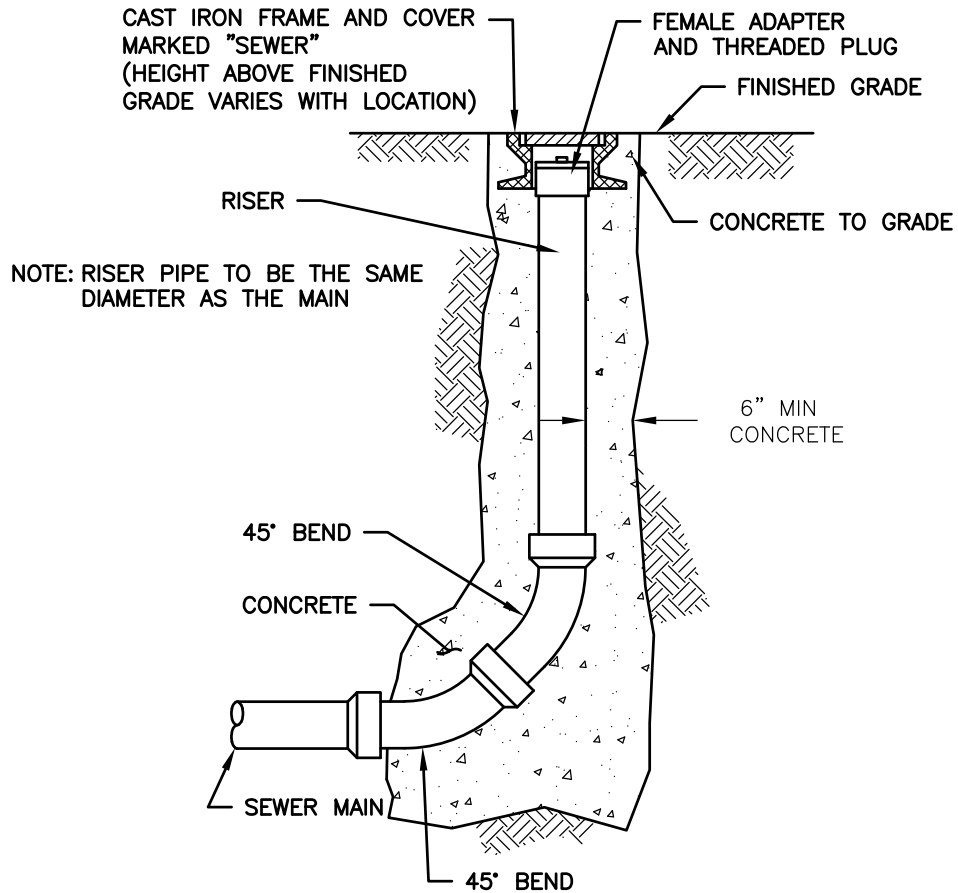
## STANDARD DETAILS MANHOLE FRAME AND COVER

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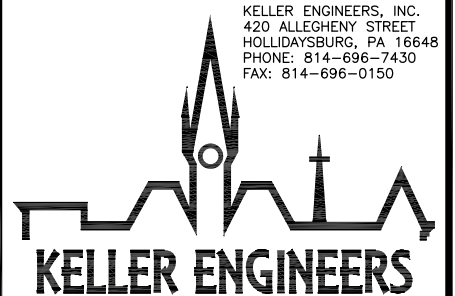


**STANDARD DETAILS  
CLEANOUT**

**BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
RULES, REGULATIONS AND POLICY**

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CAST IRON FRAME AND COVER  
 MARKED "SEWER" (HEIGHT ABOVE  
 FINISHED GRADE VARIES WITH  
 LOCATION; PROVIDE SILICON SEAL)

FINISHED GRADE

FLEXIBLE INSULATION  
 PAD

2" THREADED BRASS  
 NIPPLE AND CAP

2" BALL VALVE

6" MIN  
 CONCRETE

12"

1/2" DRAINAGE HOLES  
 IN STONE BACKFILL  
 SECTION OF PIPE

MIN 18" PVC  
 (SDR 35)

2B STONE FILL

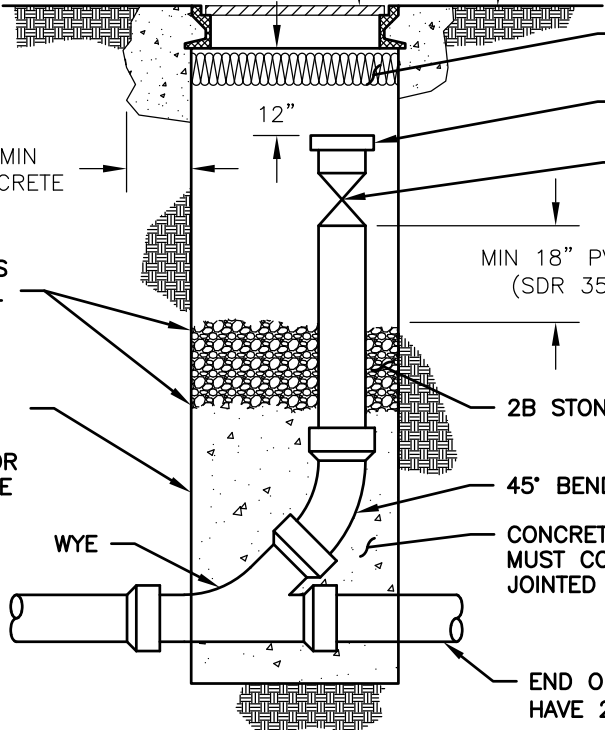
45° BEND

CONCRETE FILL  
 MUST COVER ALL  
 JOINTED PIPES

WYE

END OF MAIN CLEANOUT TO  
 HAVE 2' STUB WITH CAP

18" PVC (SDR 35) OR METER BOX  
 OPTION 1: PLACE ON TOP OF CONCRETE  
 OPTION 2: USE PIPE/BOX AS HOUSING FOR  
 CONCRETE AND DRILL HOLES AROUND THE  
 PIPE/BOX WHERE IT MEETS CONCRETE



**STANDARD DETAILS  
 PRESSURE CLEANOUT**

**BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
 RULES, REGULATIONS AND POLICY**

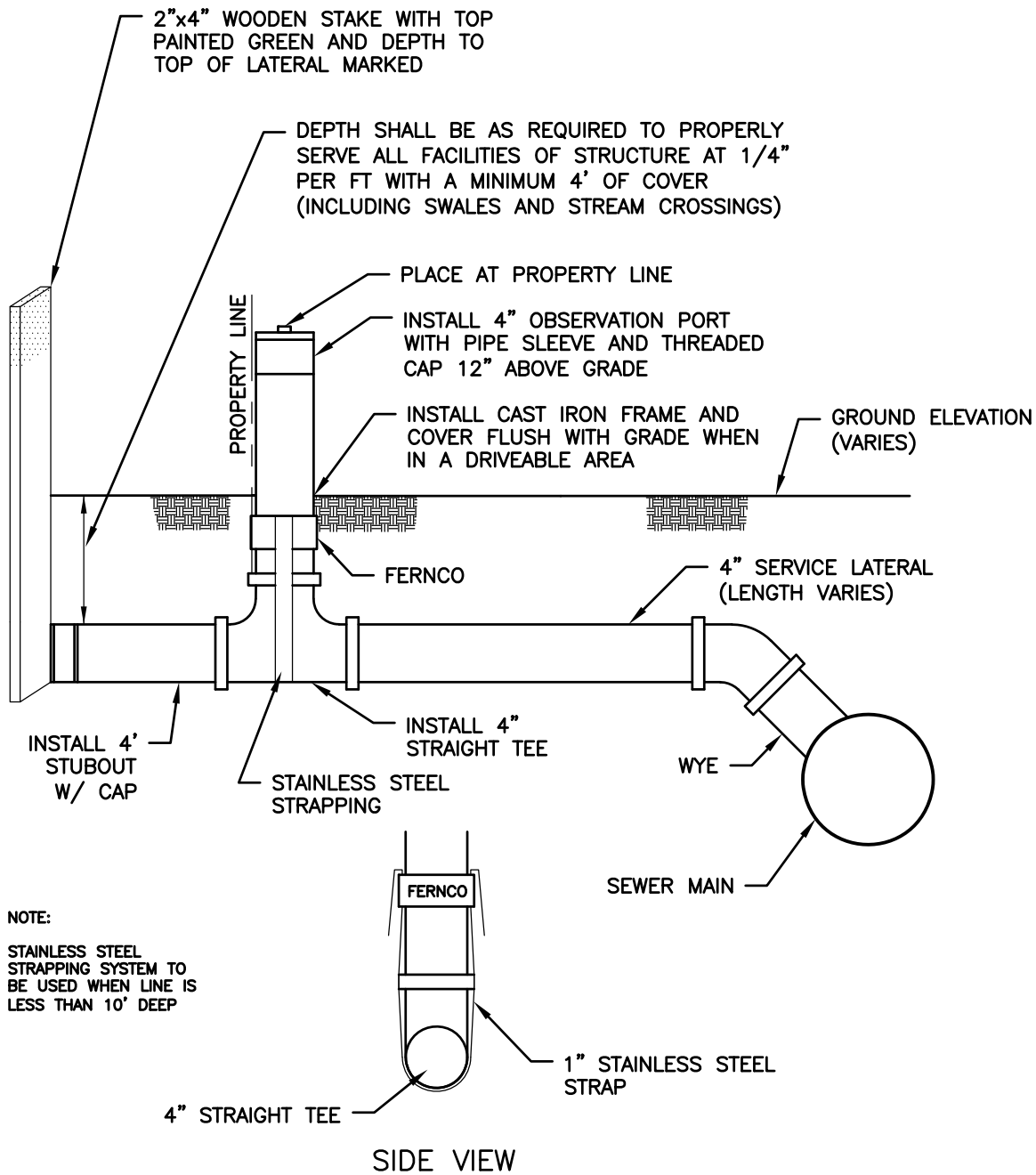
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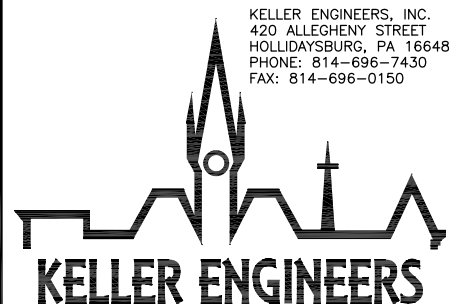
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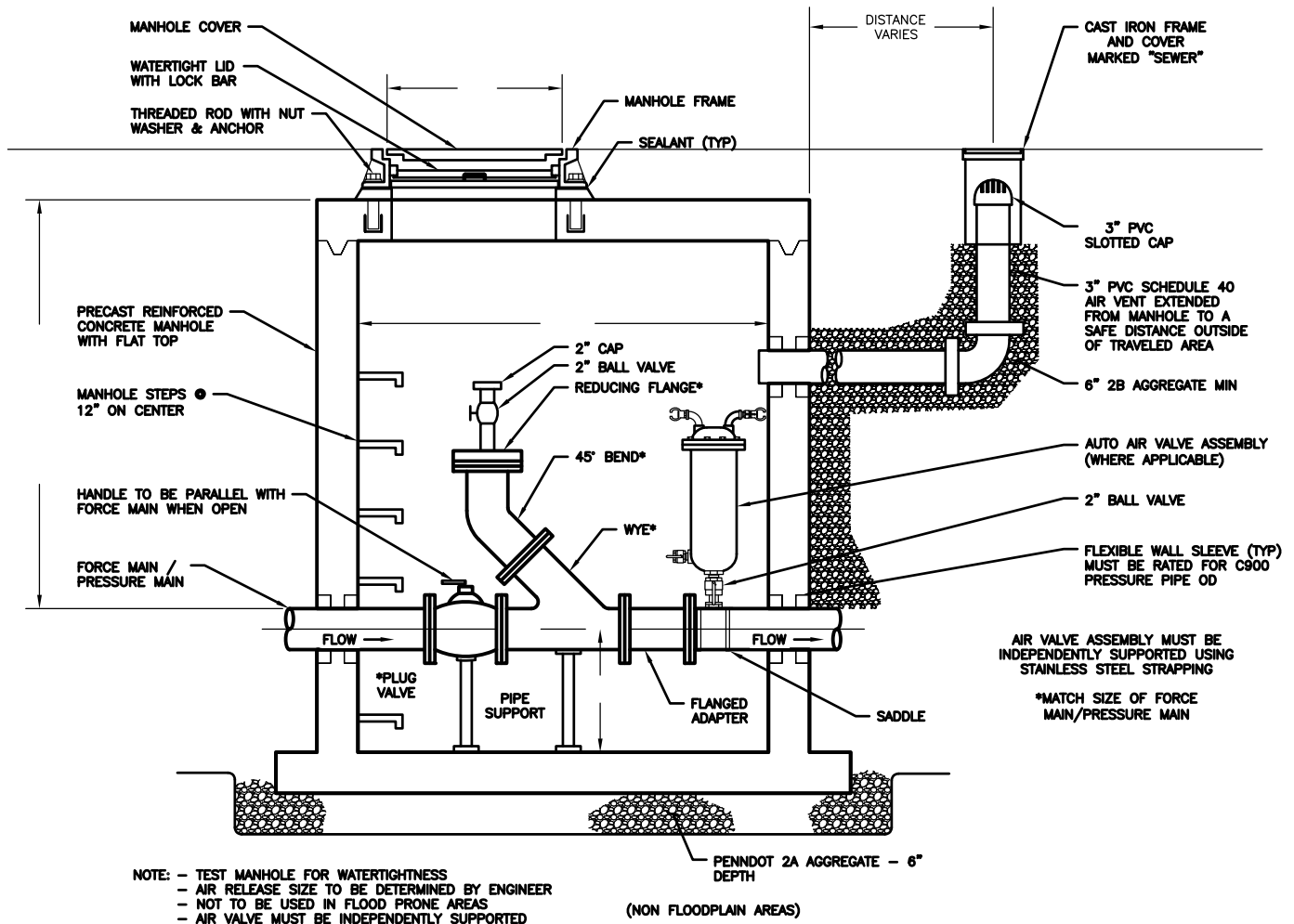


## STANDARD DETAILS SEWER SERVICE LATERAL

BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
RULES, REGULATIONS AND POLICY

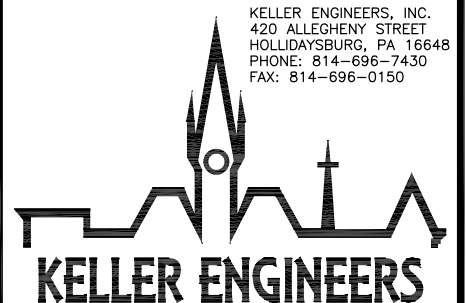
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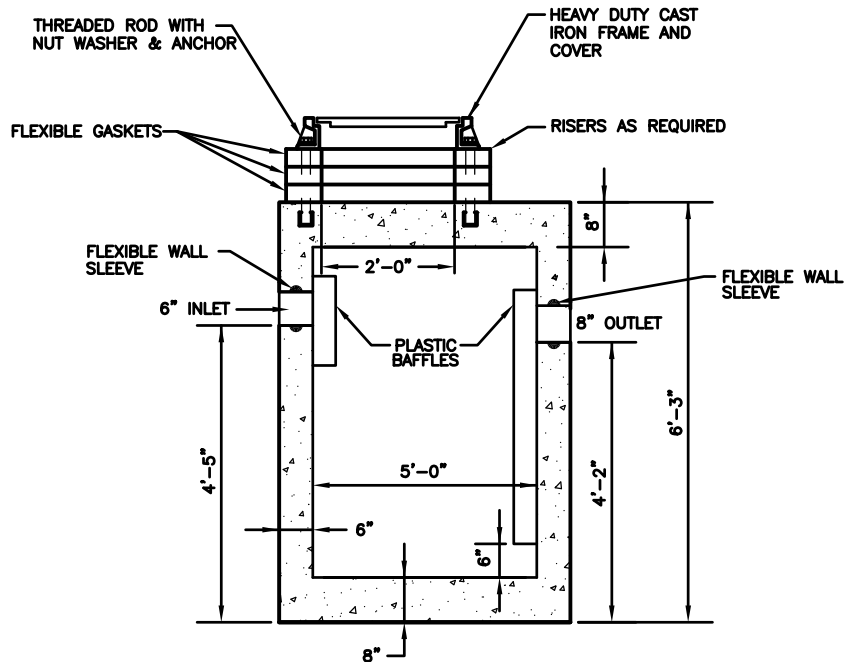




**STANDARD DETAILS**  
**FORCE MAIN CLEANOUT/  
 AIR VALVE ASSEMBLY**

BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
 RULES, REGULATIONS AND POLICY  
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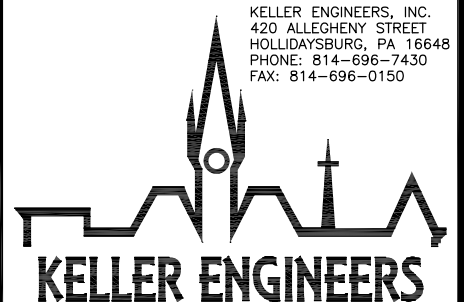
**NOTE:**  
CAPACITY - 500 GALLON, MONARCH  
PRODUCTS COMPANY, INC OR EQUAL

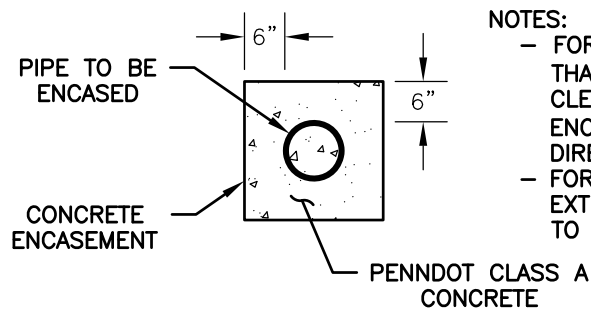
## STANDARD DETAILS GREASE AND OIL INTERCEPTOR

BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
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**NOTES:**

- FOR UTILITY CROSSING WITH LESS THAN 18" OF VERTICAL CLEARING: EXTEND CONCRETE ENCASEMENT 4.5' IN BOTH DIRECTIONS FROM CROSSING
- FOR MINOR STREAM CROSSINGS: EXTEND CONCRETE ENCASEMENT TO BOTH STREAM BANKS

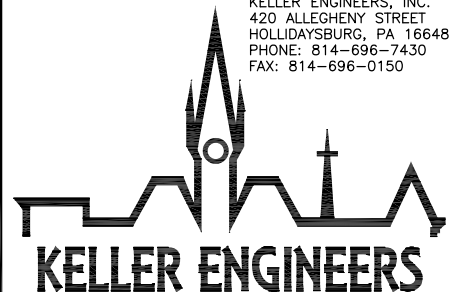
**STANDARD DETAILS  
CONCRETE ENCASEMENT**

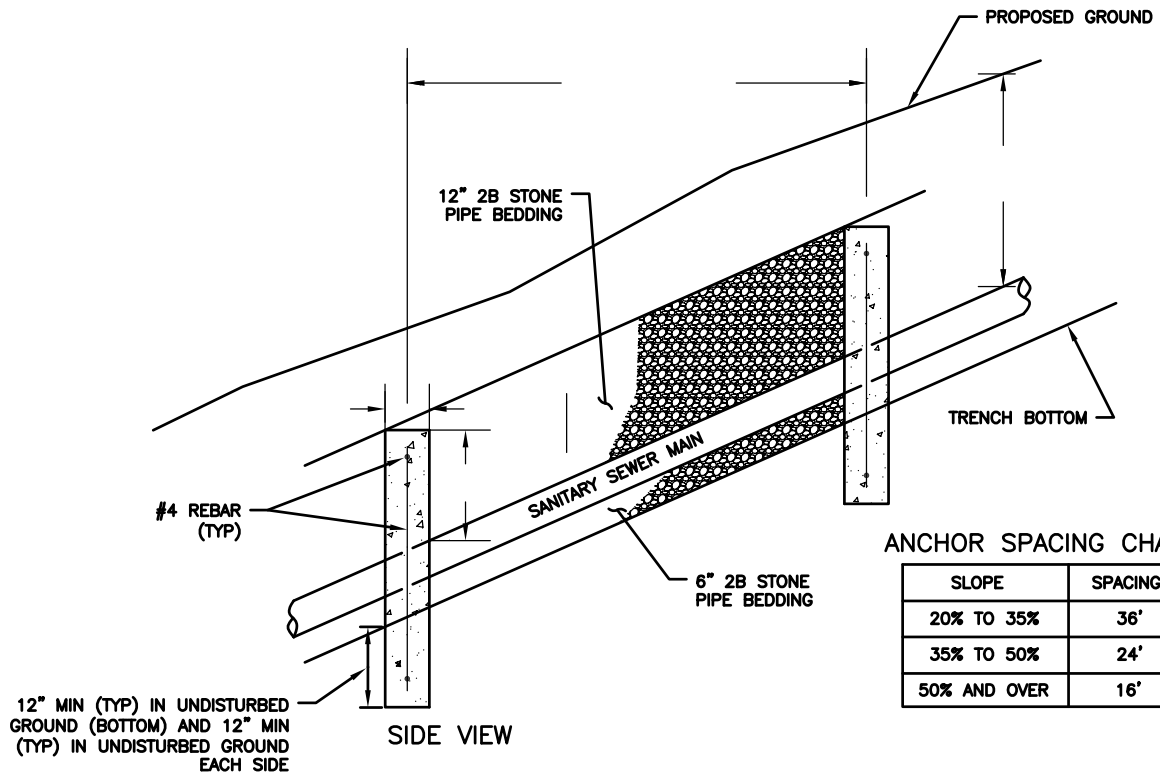
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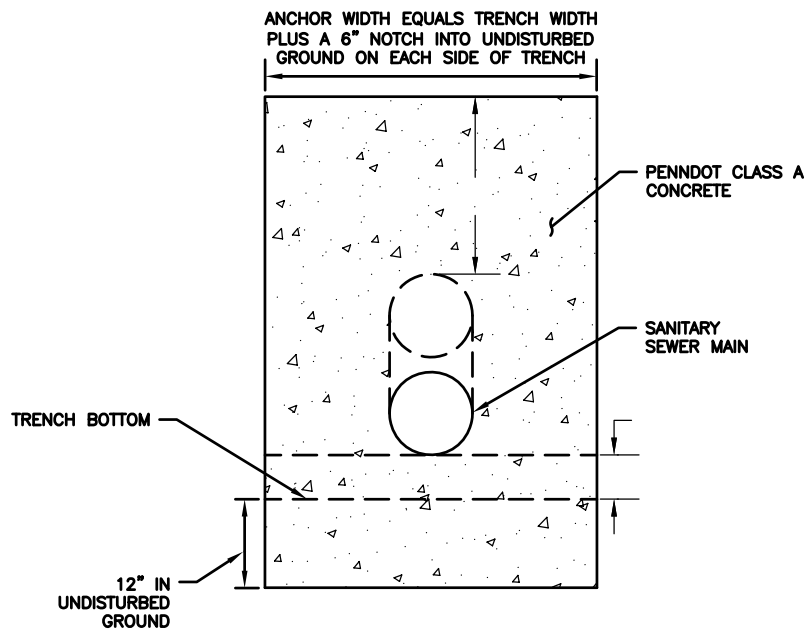


ANCHOR SPACING CHART

SLOPE	SPACING
20% TO 35%	36'
35% TO 50%	24'
50% AND OVER	16'

12" MIN (TYP) IN UNDISTURBED GROUND (BOTTOM) AND 12" MIN (TYP) IN UNDISTURBED GROUND EACH SIDE

SIDE VIEW



END VIEW

## STANDARD DETAILS CONCRETE PIPE ANCHOR

### BLAIR TOWNSHIP WATER AND SEWER AUTHORITY RULES, REGULATIONS AND POLICY

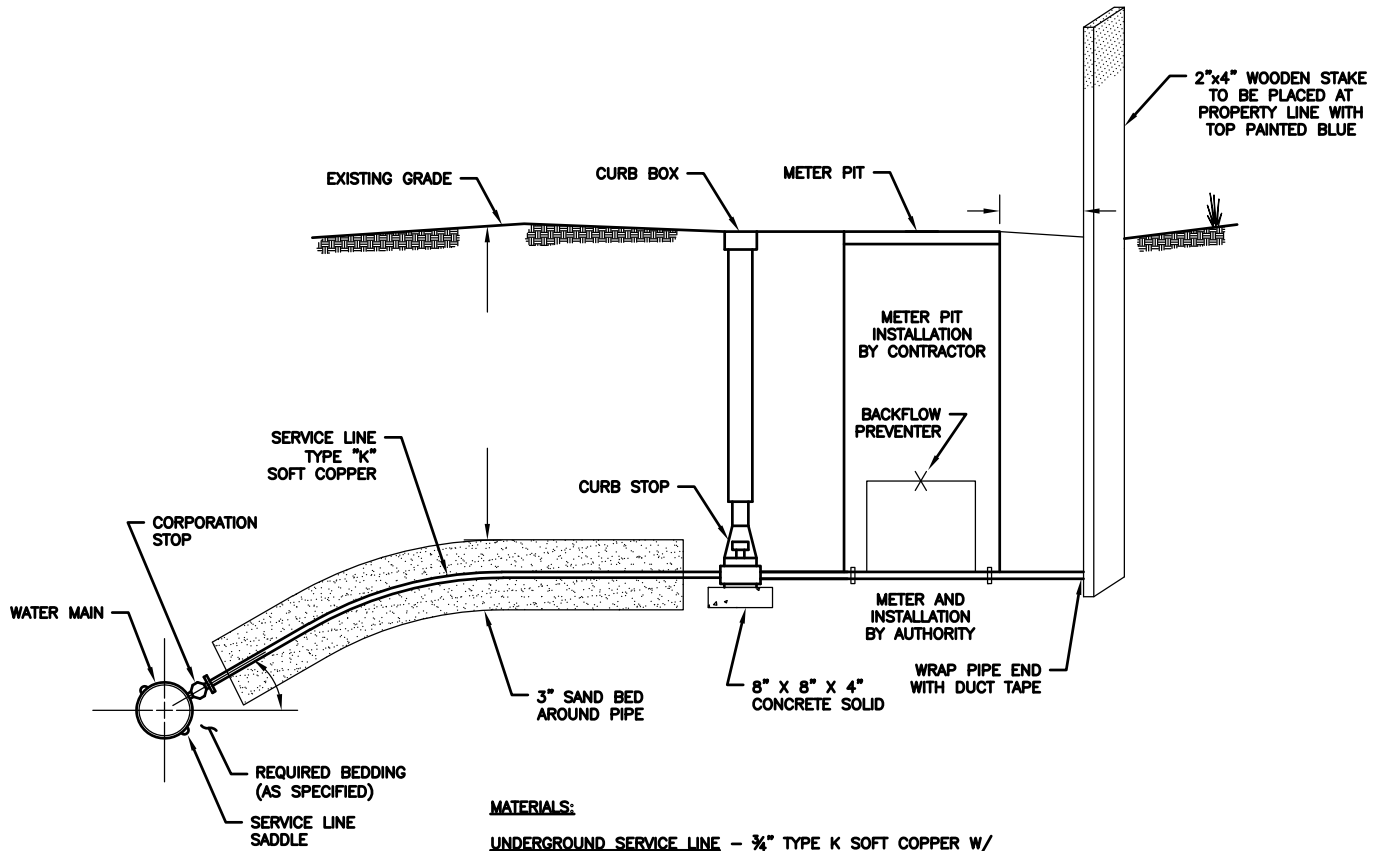
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**MATERIALS:**

UNDERGROUND SERVICE LINE - 3/4" TYPE K SOFT COPPER W/  
COMPRESSION CONNECTION

BALL VALVE - 3/4" BRONZE BALL VALVE

BALL VALVE W/ DRAIN - 3/4" BALL AND WASTE FULL PORT BRONZE  
BALL VALVE, WATTS #B-6300 OR EQUAL

BACKFLOW PREVENTER - 3/4" BRONZE DUAL CHECK VALVE, WATTS #7  
(OR)

PRESSURE REGULATOR - BRONZE BODY PRESSURE REGULATOR W/  
STRAINER, WATTS #U5 OR EQUAL IF REQUIRED

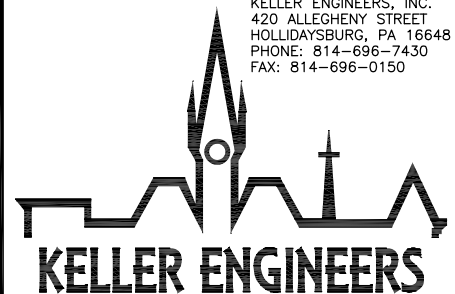
## STANDARD DETAILS WATER CONNECTION

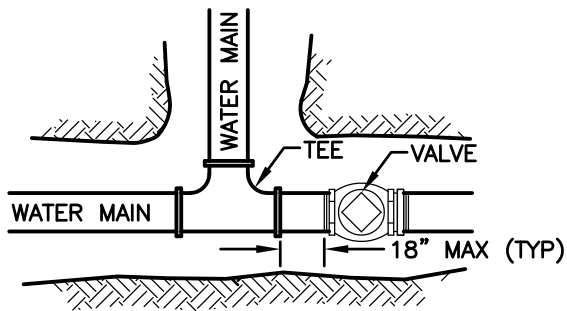
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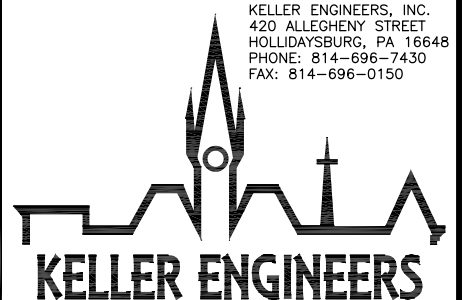
NOTE:  
TEES AND VALVES PLACED IN  
SUCCESSION SHALL BE SEPARATED  
BY NO MORE THAN 18"

## STANDARD DETAILS VALVE PLACEMENT

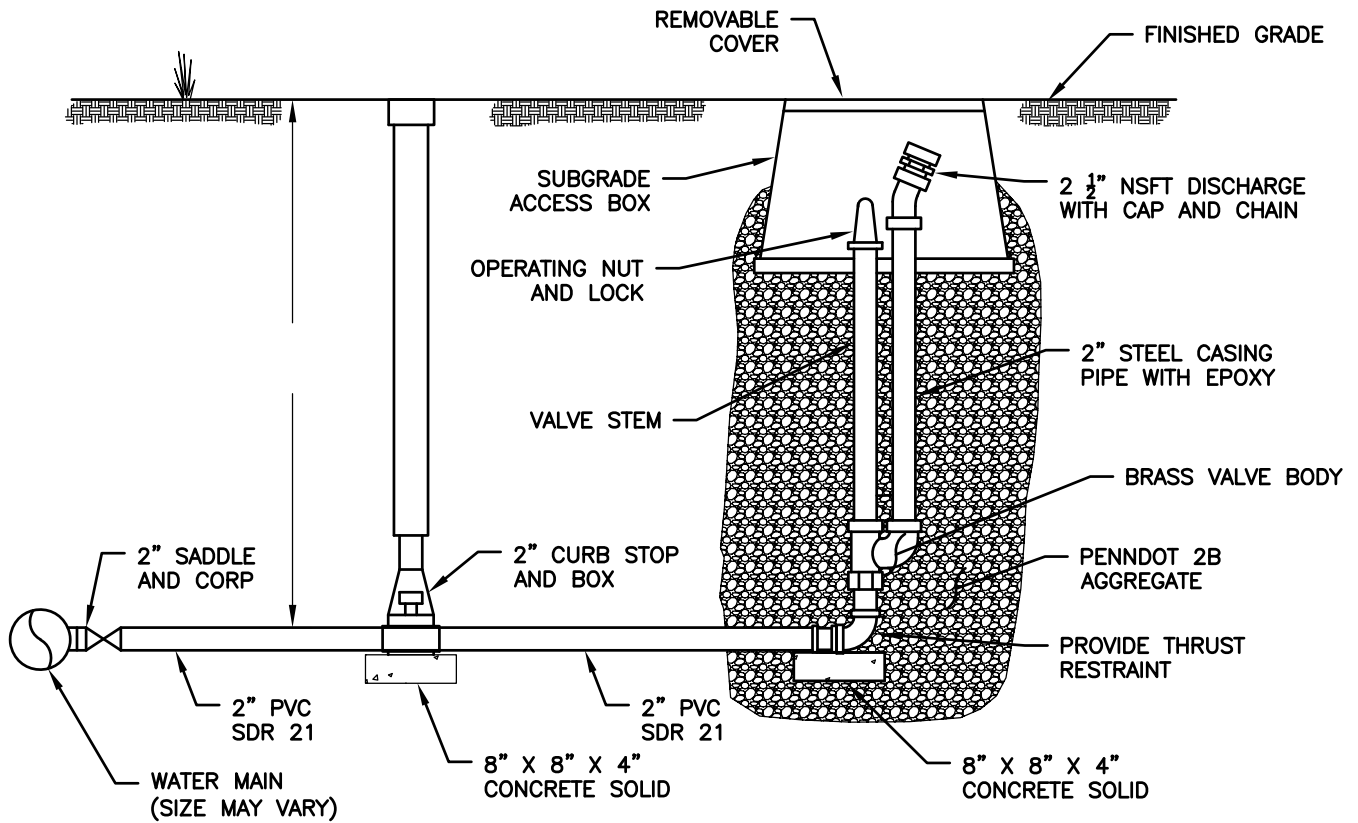
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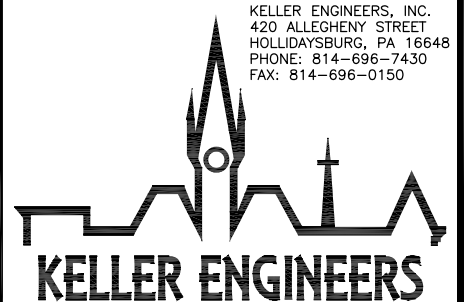


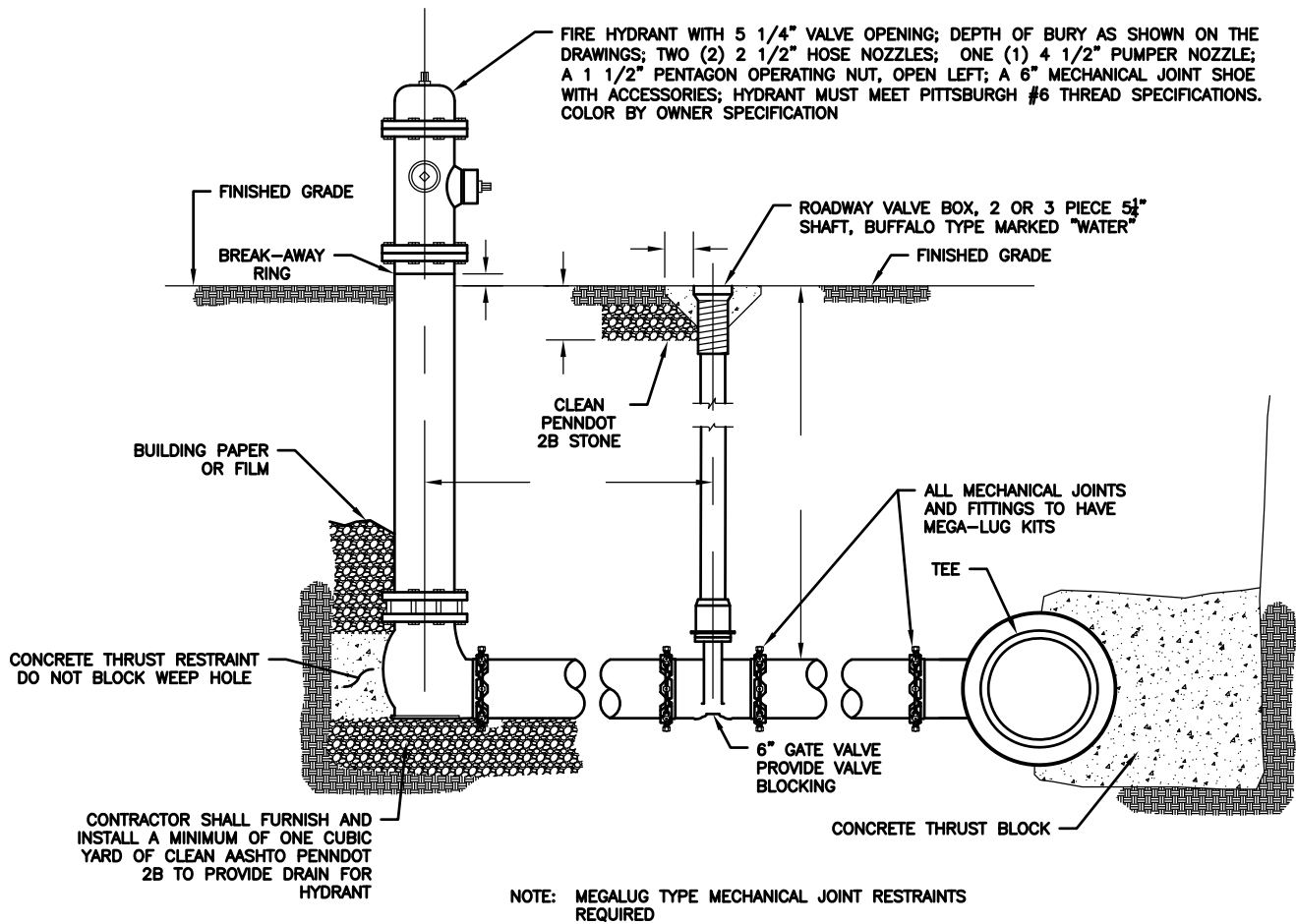
## STANDARD DETAILS BLOWOFF HYDRANT

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## STANDARD DETAILS FIRE HYDRANT ASSEMBLY

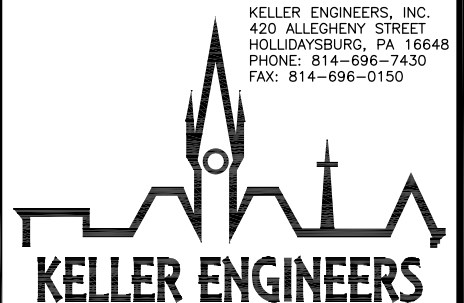
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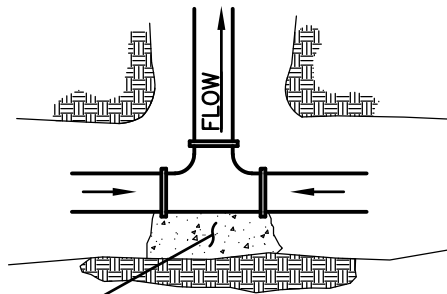
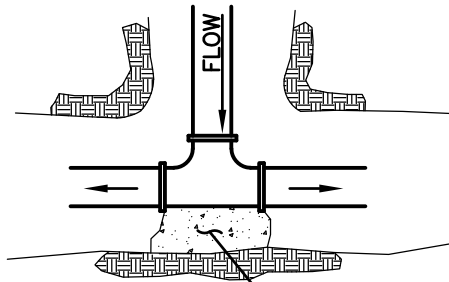
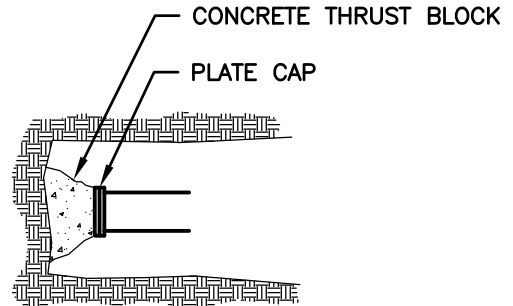
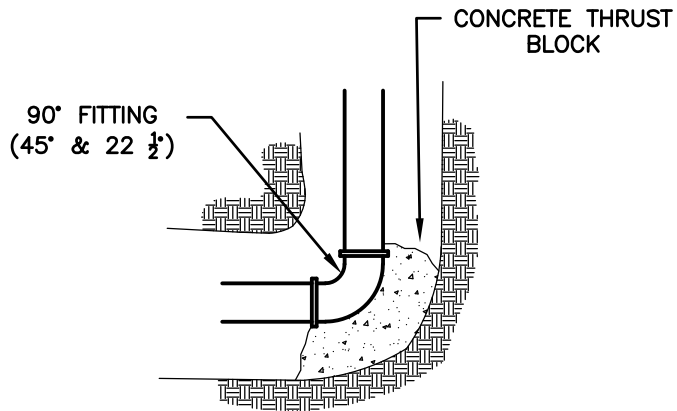
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CONCRETE THRUST BLOCK

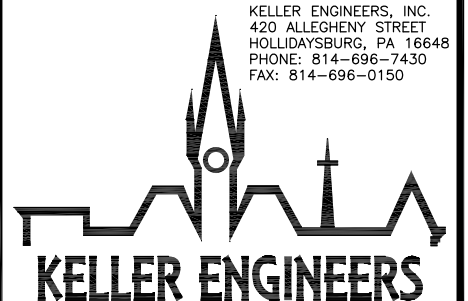
NOTE: CONCRETE TO BE PENNDOT CLASS A. PLACE PLASTIC BARRIER BETWEEN NUTS AND BOLTS AND CONCRETE

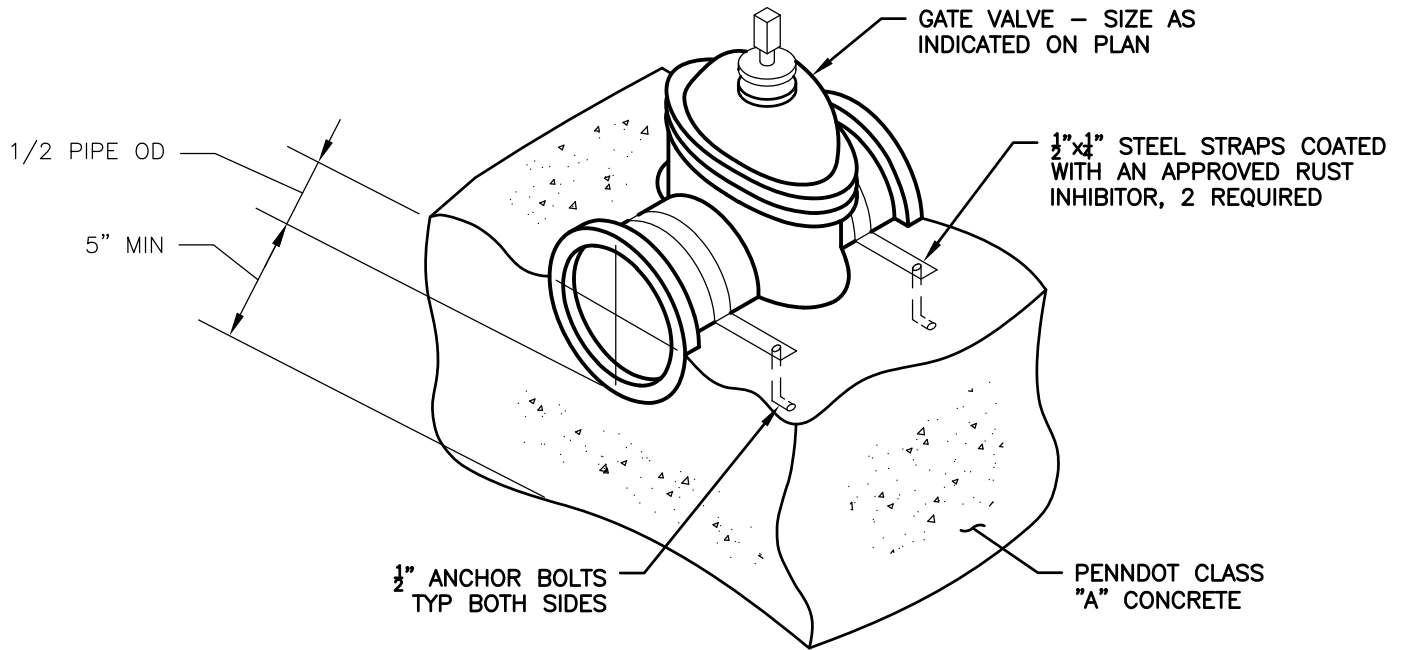
## STANDARD DETAILS THRUST BLOCK

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**NOTE:**  
CONCRETE NOT TO COVER BOLTS ON TOP OF STRAPS

## STANDARD DETAILS VALVE BLOCKING

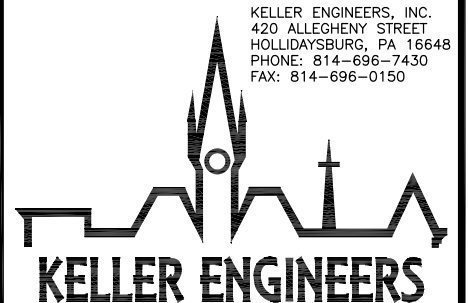
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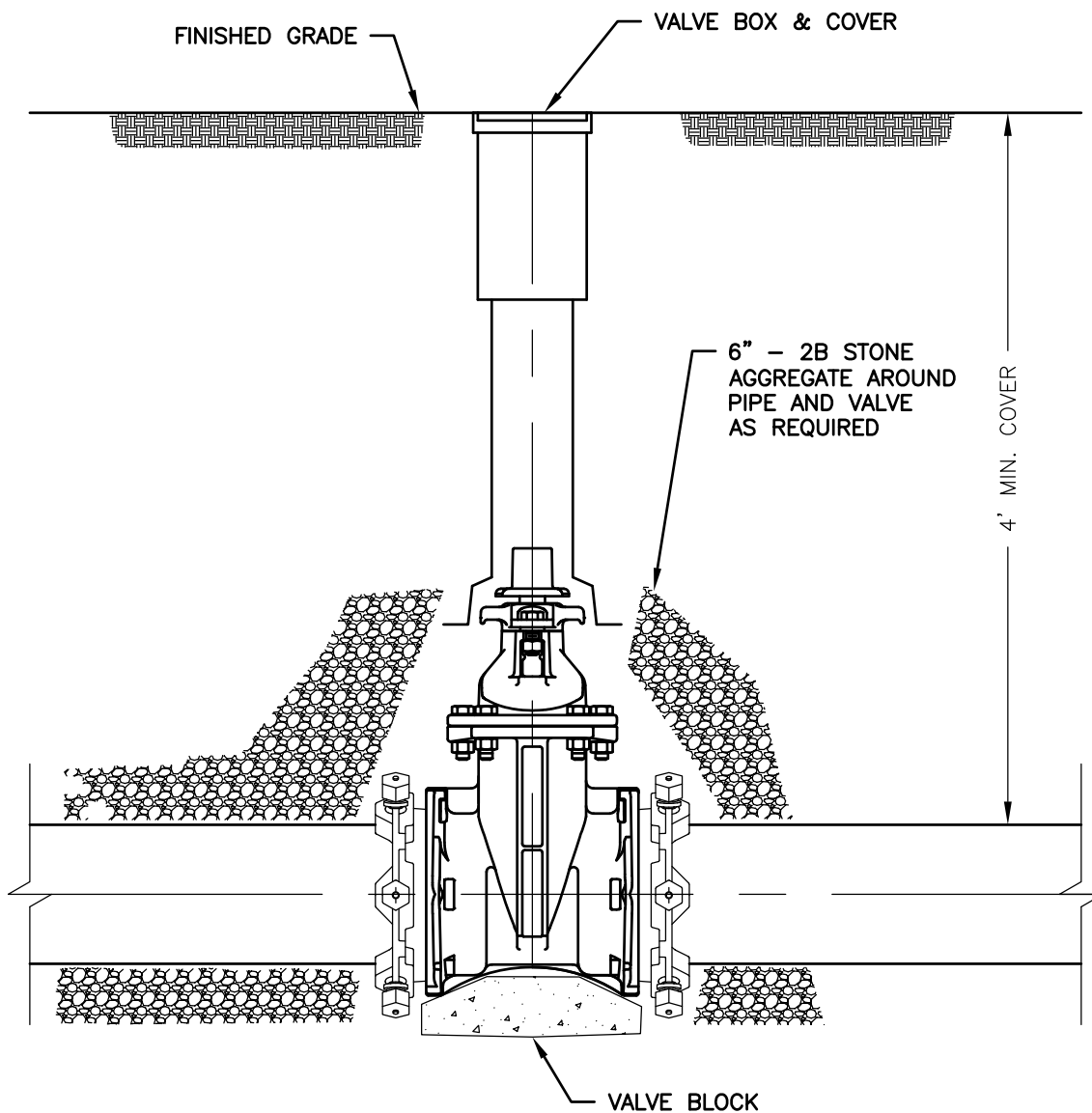
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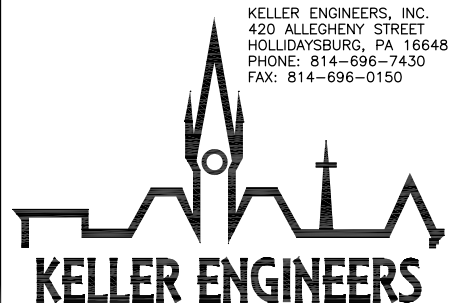


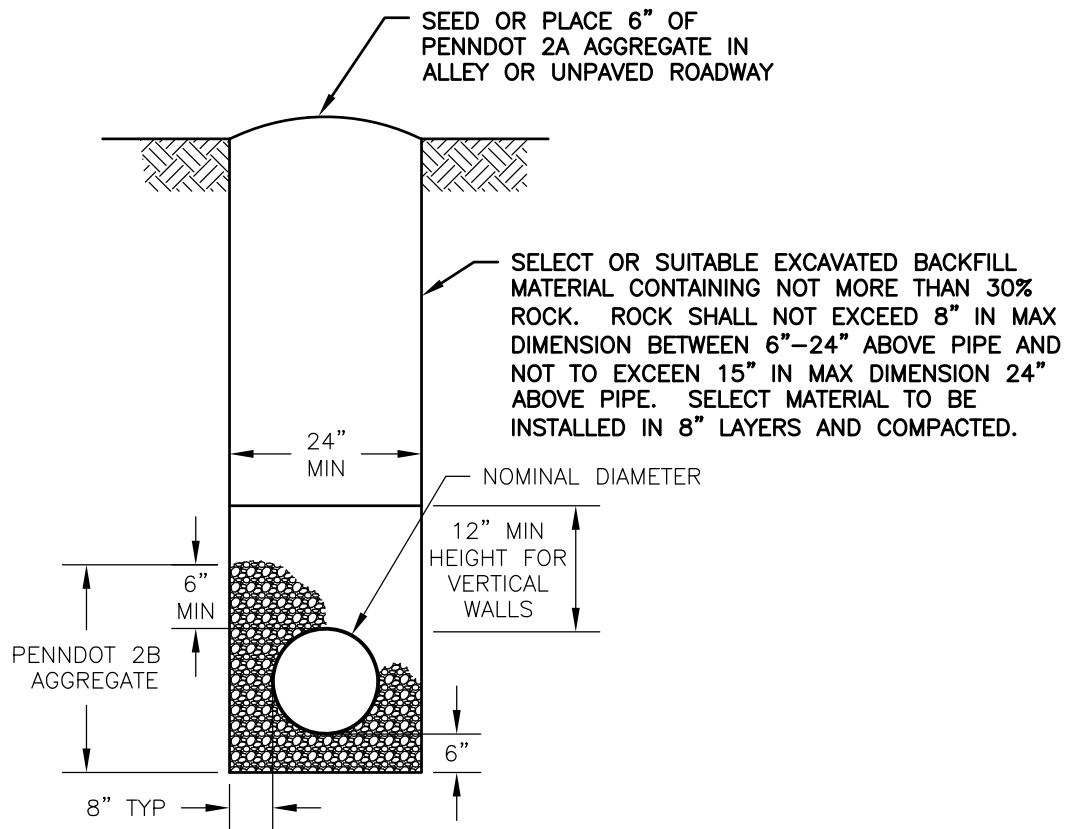
**STANDARD DETAILS**  
**CONCRETE PAD FOR VALVE BOX**

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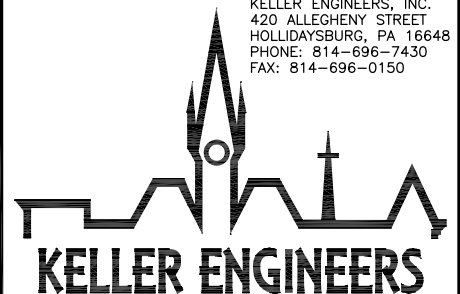


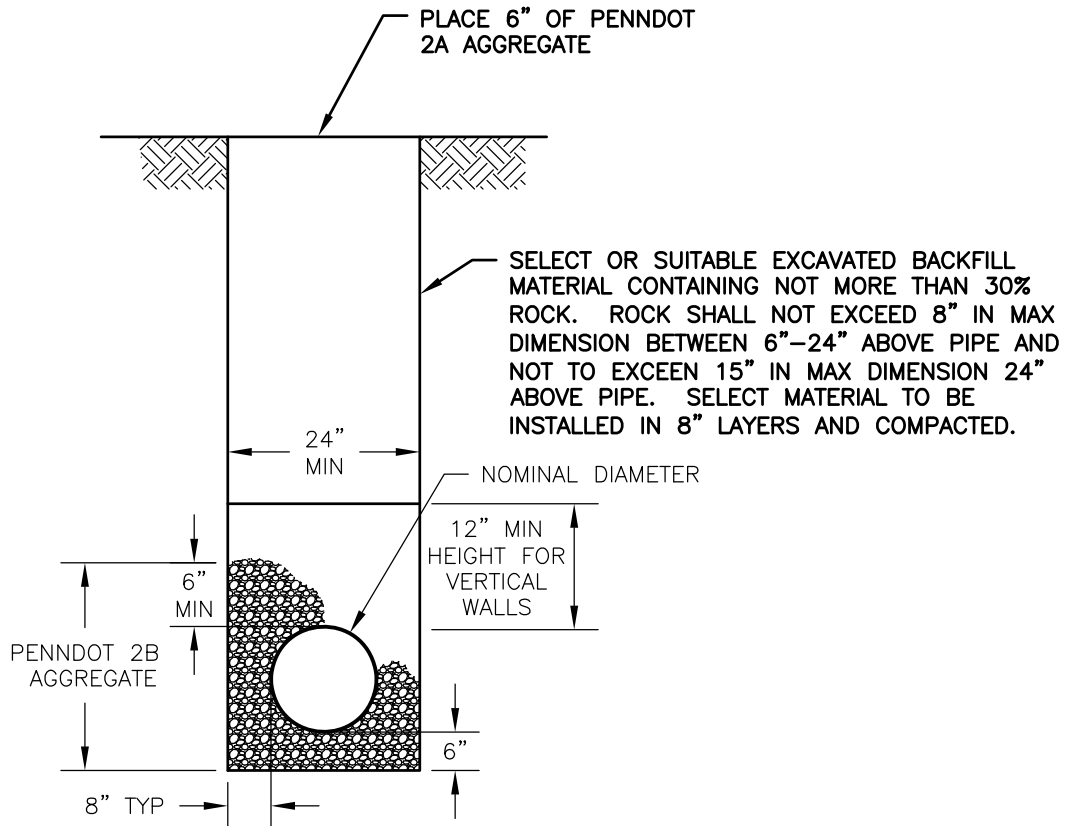


**STANDARD DETAILS  
PIPE INSTALLATION IN  
UNPAVED SURFACE**

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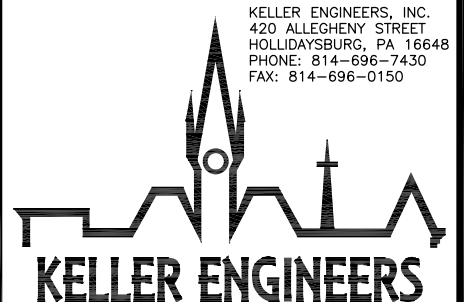


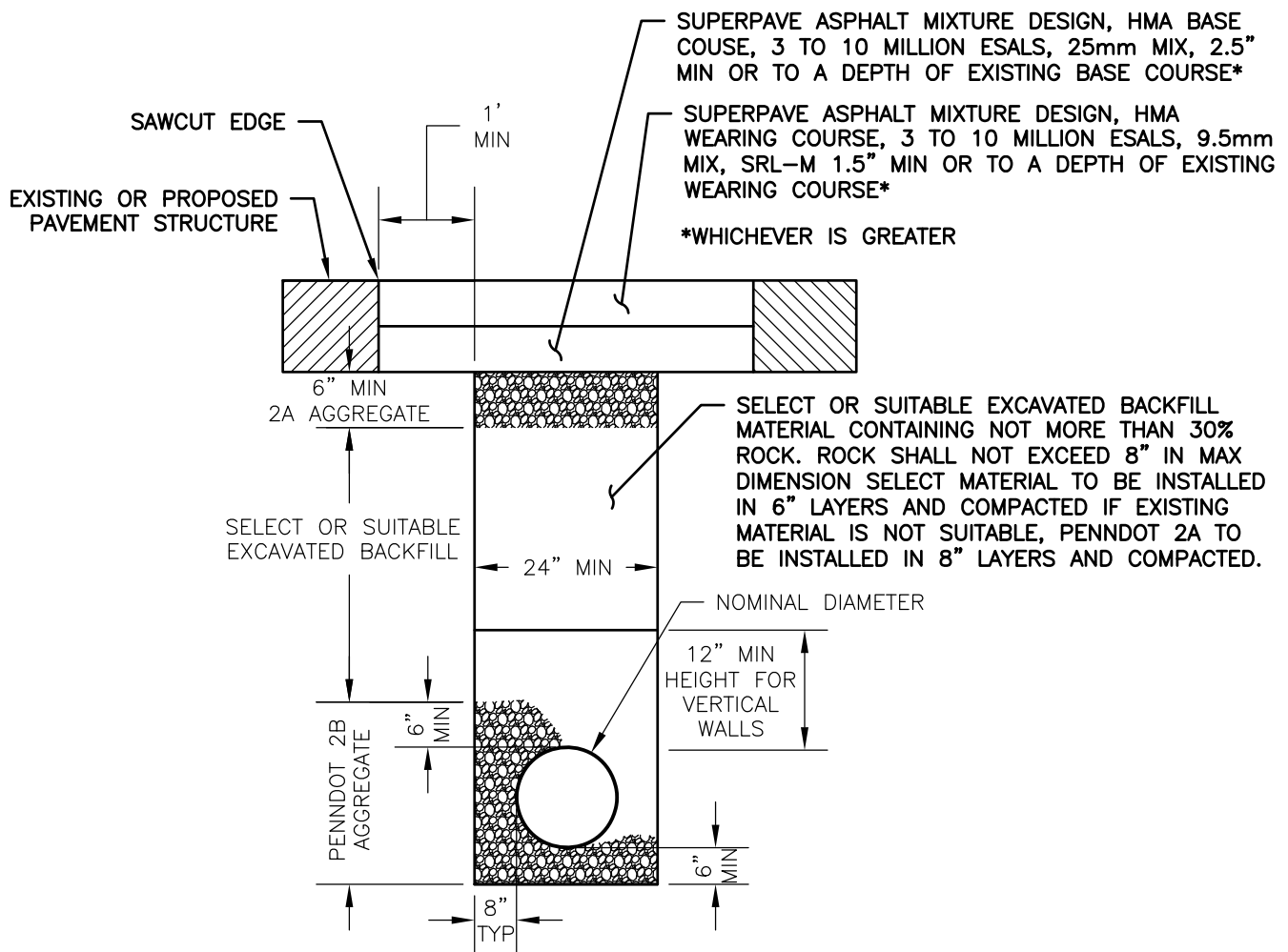


NOTE: TRENCH WALLS TO BE VERTICAL TO A DEPTH OF AT LEAST 12" ABOVE TOP OF PIPE

## STANDARD DETAILS PIPE INSTALLATION IN MUNICIPAL ROAD SHOULDER

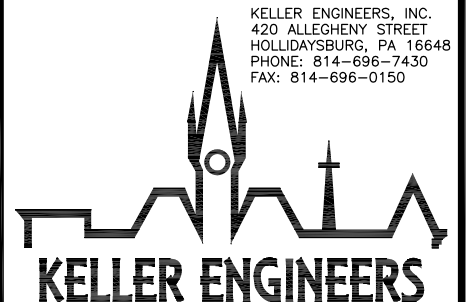
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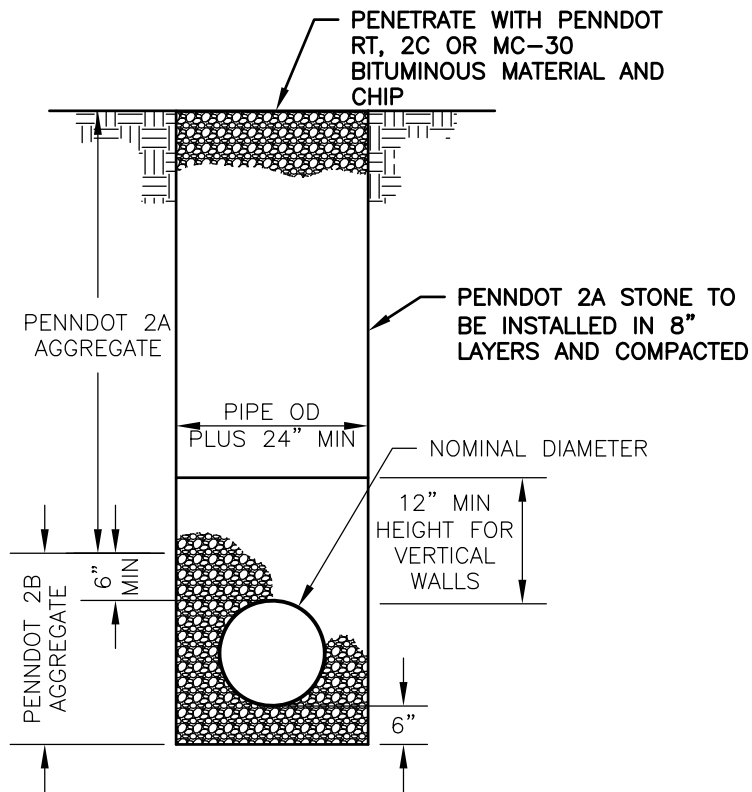




**STANDARD DETAILS  
PIPE INSTALLATION IN  
MUNICIPAL ROADWAY**

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PENNSYLVANIA**



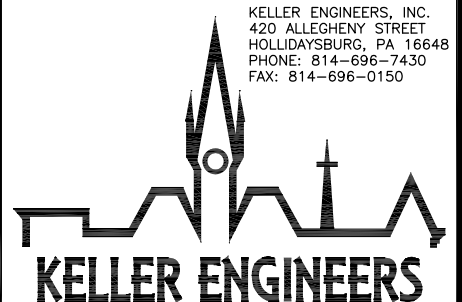


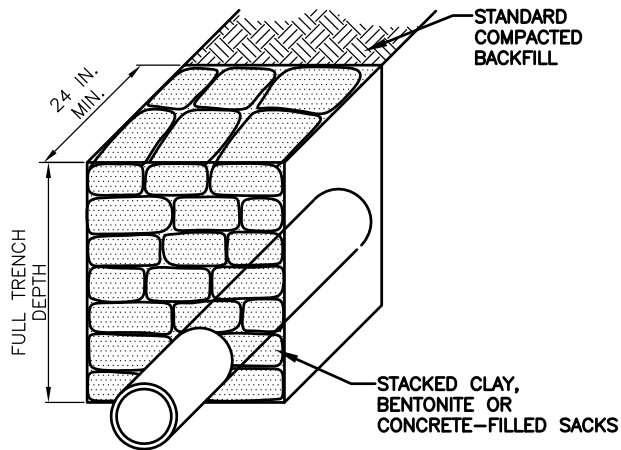
**NOTE:**

1. PIPE OD PLUS 30" MIN ON PIPE LARGER THAN 48"

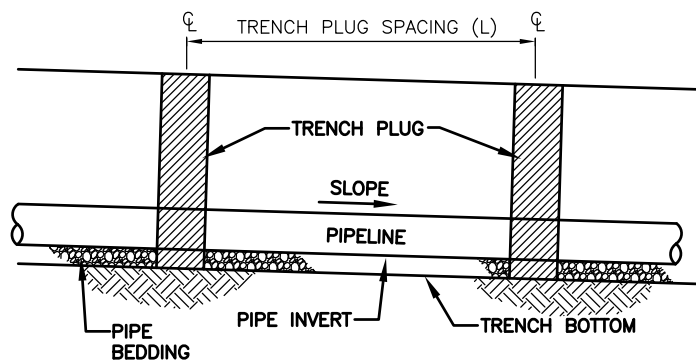
**STANDARD DETAILS  
PIPE INSTALLATION IN  
STATE ROADWAY SHOULDER**

**BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
RULES, REGULATIONS AND POLICY  
377 CEDARCREST DRIVE DUNCANSVILLE, PA 16635  
OFFICE: (814) 695-6300 FAX: (814) 696-5757  
TTY/TDD ONLY: 1-800-654-5984  
BLAIR TOWNSHIP, BLAIR COUNTY  
PENNSYLVANIA**





**SECTION VIEW**



**PROFILE VIEW**

PA DEP EROSION CONTROL MANUAL TABLE 13.1  
MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS

TRENCH SLOPE (%)	SPACING L (FT)	PLUG MATERIAL
< 5	1000	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
5 - 15	500	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
15 - 25	300	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
25 - 35	200	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
35 - 100	100	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
> 100	50	CEMENT BAGS (WETTED) OR MORTARED STONE

\* TOPSOIL MAY NOT BE USED TO FILL SACKS

**NOTES:**

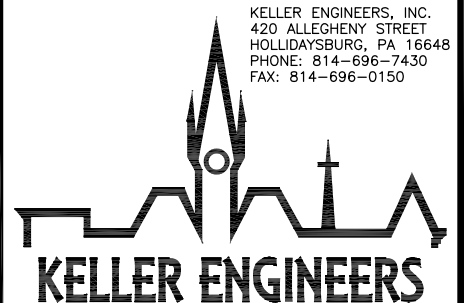
IMPERVIOUS TRENCH PLUGS ARE REQUIRED FOR ALL STREAM, RIVER, WETLAND, OR OTHER WATER BODY CROSSINGS.

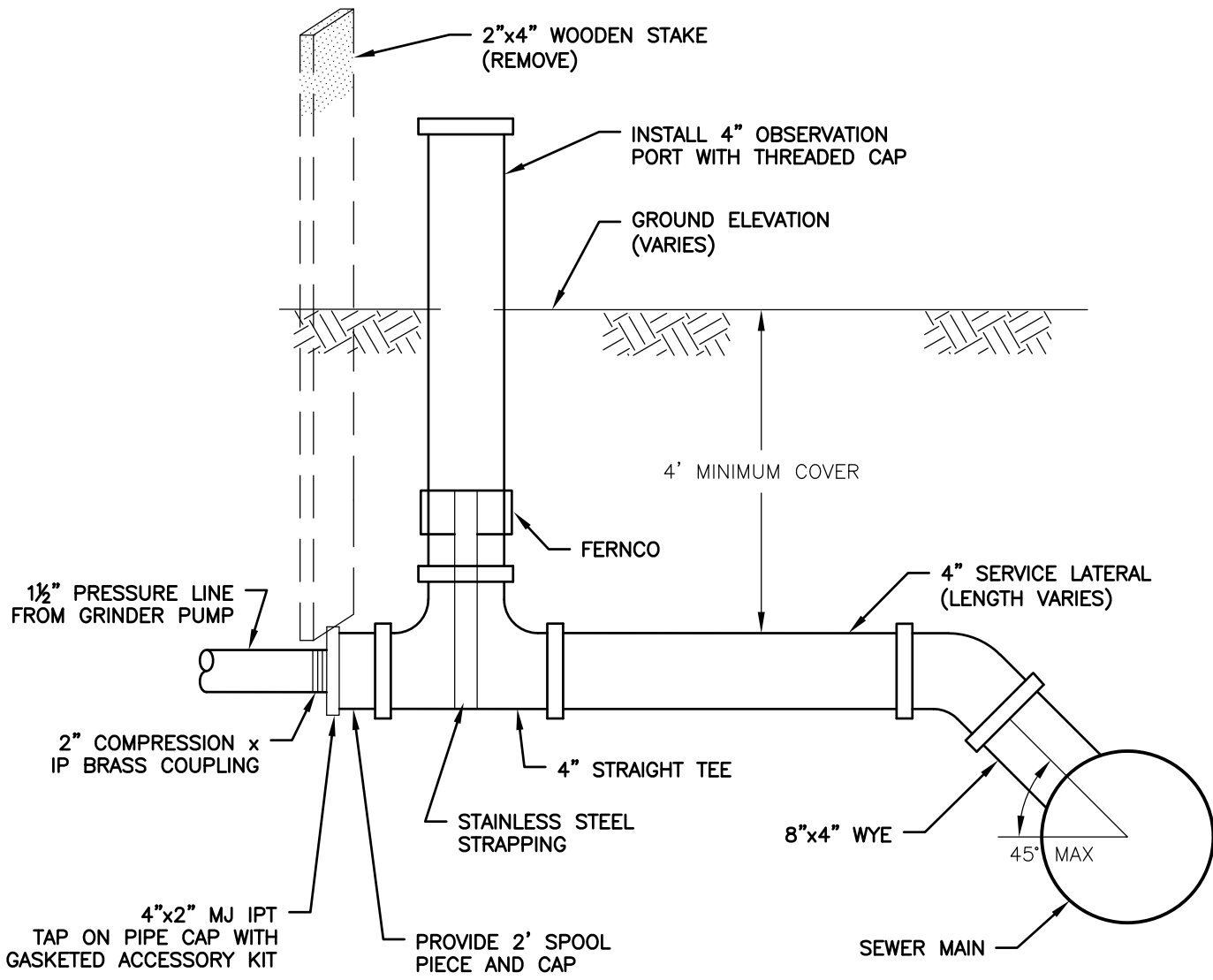
## STANDARD DETAILS TRENCH PLUG INSTALLATION

### BLAIR TOWNSHIP WATER AND SEWER AUTHORITY RULES, REGULATIONS AND POLICY

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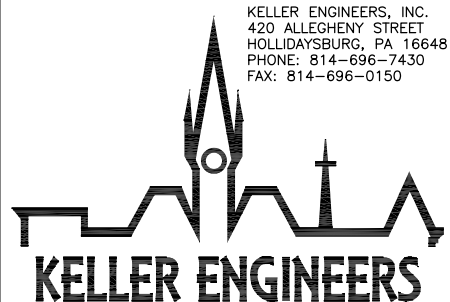
BLAIR TOWNSHIP, BLAIR COUNTY  
PENNSYLVANIA

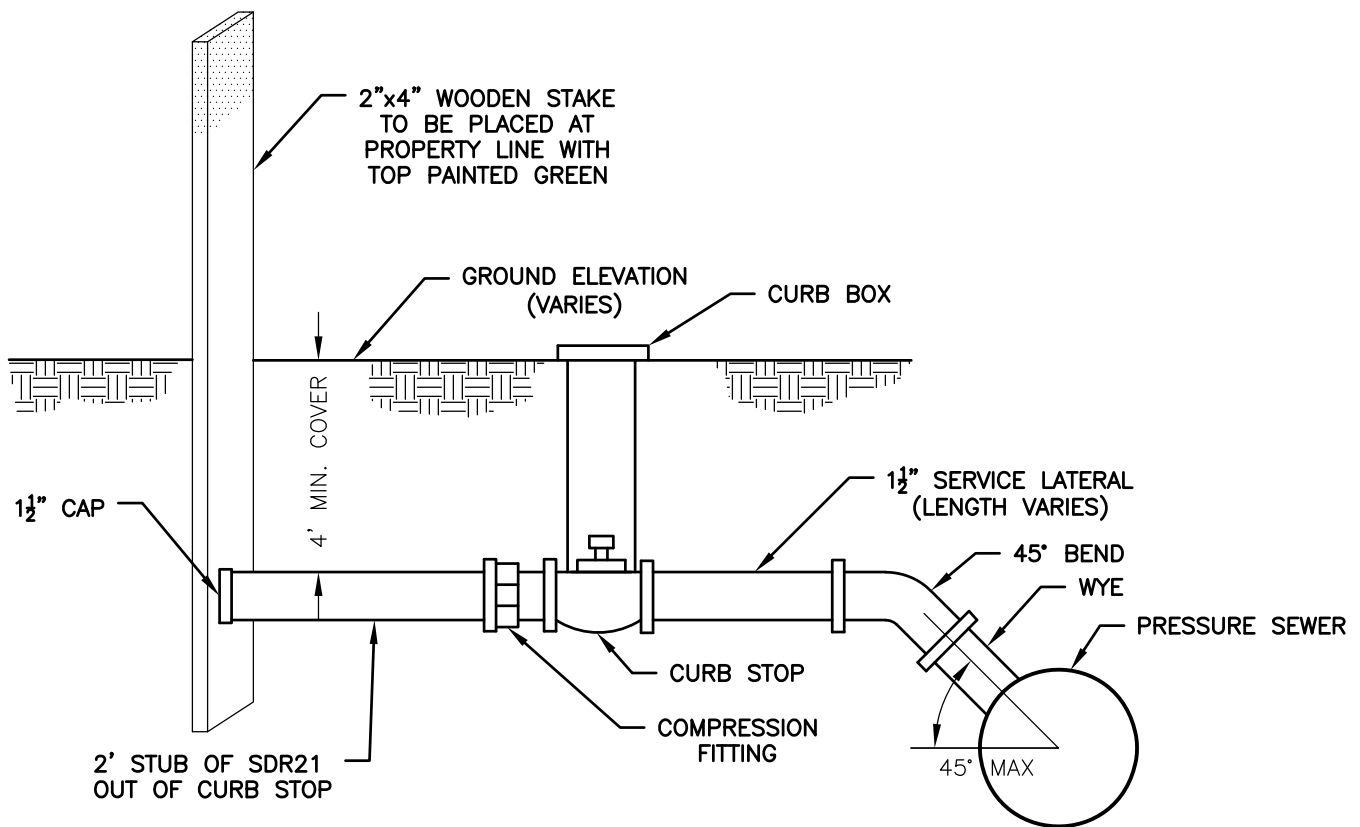




**STANDARD DETAILS  
PRESSURE CONNECTION TO  
GRAVITY LINE**

**BLAIR TOWNSHIP WATER AND SEWER AUTHORITY  
RULES, REGULATIONS AND POLICY**  
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PENNSYLVANIA





**NOTE:**  
CONTRACTOR RESPONSIBLE FOR COORDINATING  
LATERAL LOCATION WITH PROPERTY OWNER

## STANDARD DETAILS PRESSURE CONNECTION TO PRESSURE LINE

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