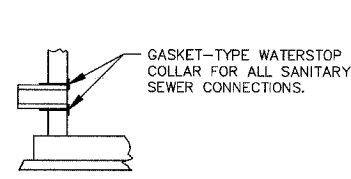


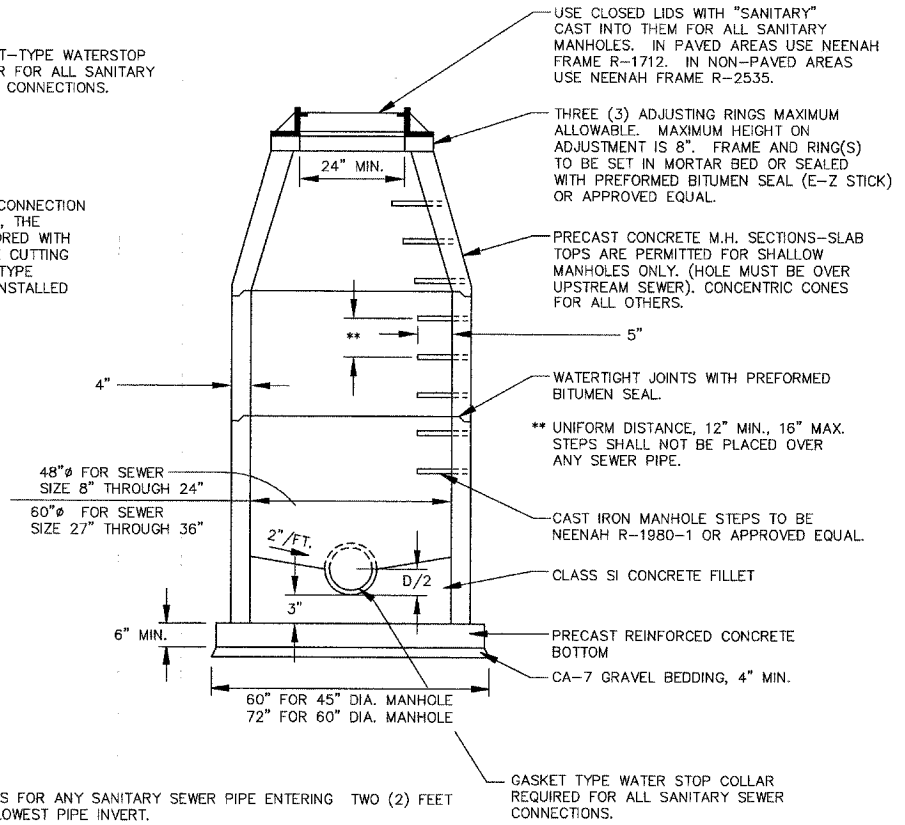
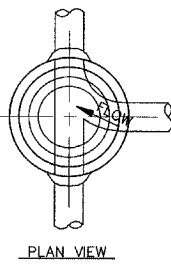
PIPE SIZE	BEARING AREA IN SQ. FT. [SQ. METERS]				
	TEE/PLUG	90°	45°	22 1/2°	11 1/4°
6"	4"	2"	1"	1"	1"
8"	6"	4"	3"	1"	1"
10"	7"	5"	3"	2"	1"
12"	8"	6"	4"	3"	2"
14"	12"	9"	6"	4"	3"
16"	15"	12"	7"	5"	3"
18"	18"	15"	9"	5"	4"
24"	40"	30"	15"	10"	5"

ALL BLOCKING SHALL BE POURED CONCRETE AGAINST UNDISTURBED EARTH.
ALL BENDS OR ELBOWS GREATER THAN 11-1/4° SHALL HAVE THRUST BLOCKING.
ALTERNATIVELY, "MEGA-LUG" JOINT RESTRAINTS CAN BE USED WITH APPROVAL OF THE ENGINEER.

THRUST BLOCK INSTALLATION
(N.T.S.)



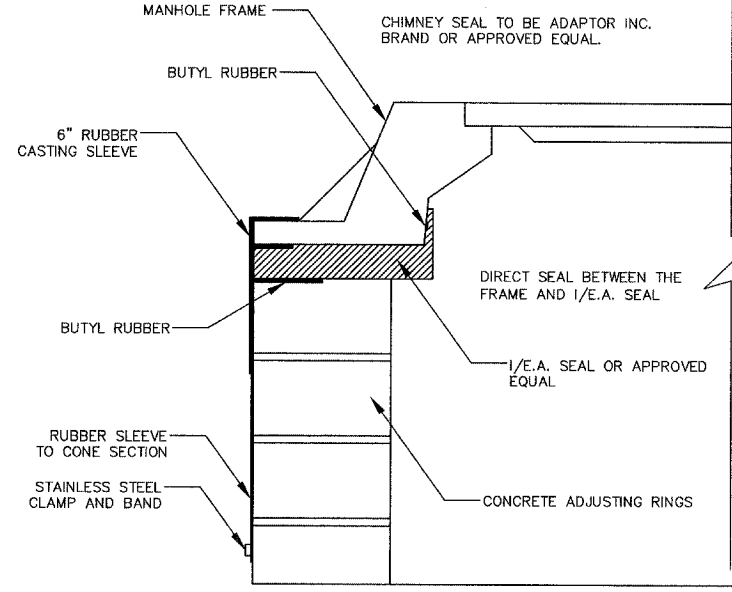
NOTE: FOR SANITARY SEWER CONNECTION TO EXISTING MANHOLES, THE MANHOLE SHALL BE CORED WITH A CIRCULAR HOLE CUTTING TOOL WITH A GASKET-TYPE WATER-STOP COLLAR INSTALLED INTO MANHOLE.



USE DROP CONNECTIONS FOR ANY SANITARY SEWER PIPE ENTERING TWO (2) FEET OR MORE ABOVE THE LOWEST PIPE INVERT.

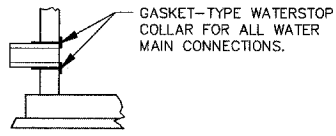
STANDARD SANITARY MANHOLE DETAIL
(N.T.S.)

ALL SANITARY MANHOLES SHALL BE INSTALLED WITH AN INTERNAL/EXTERNAL CHIMNEY SEAL WITH A RUBBER SLEEVE TO SEAL THE OUTSIDE OF THE CHIMNEY FROM THE TOP OF THE CORBEL TO THE MANHOLE FRAME. THE SEAL SHALL BE INSTALLED PER THE INSTALLATION INSTRUCTIONS.

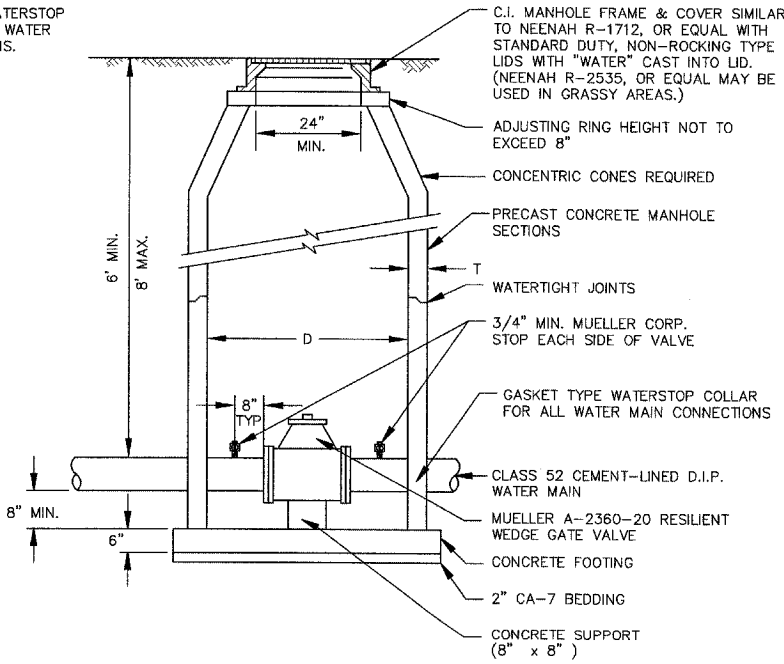


THE INTERNAL/EXTERNAL ADAPTER SEAL IS MANUFACTURED TO FIT ALL MANHOLE FRAMES TO ANY DEMOTIONS OF HEIGHT AND INSIDE OR OUTSIDE DIAMETERS.

INTERNAL / EXTERNAL CHIMNEY SEAL - I / E.A. SEAL
(N.T.S.)



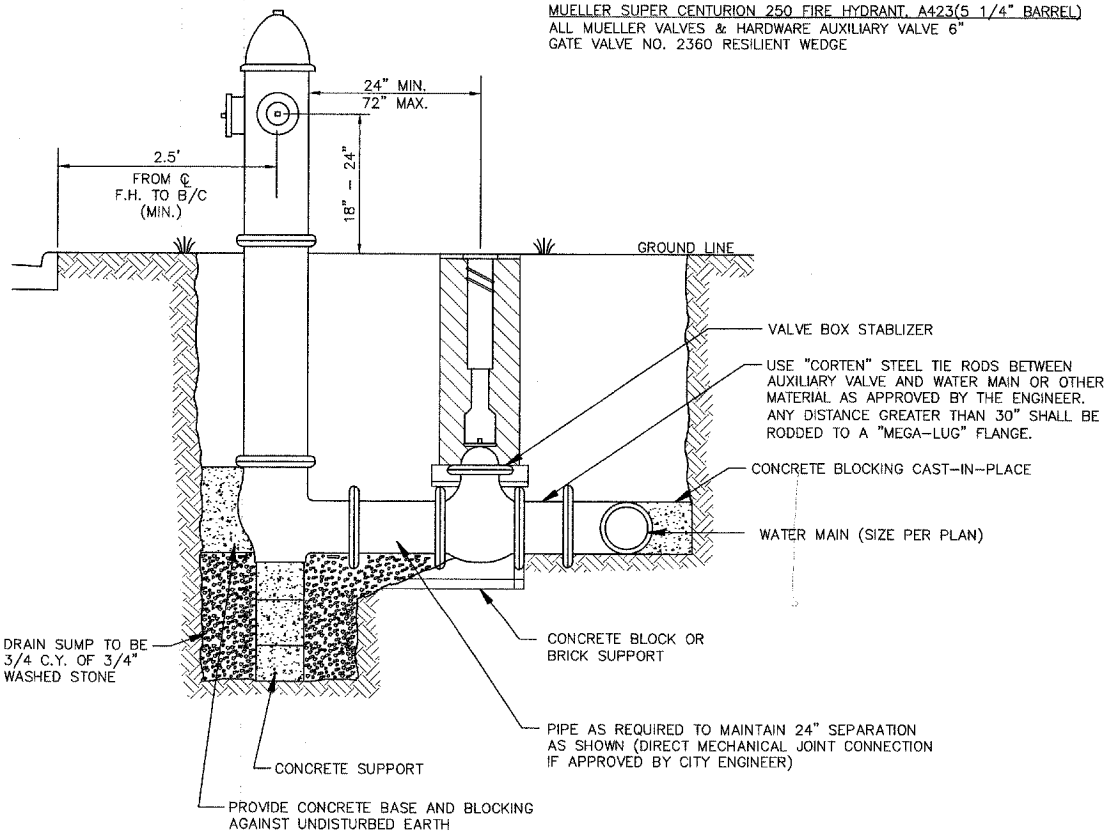
NOTE: FOR WATER MAIN CONNECTION TO EXISTING MANHOLES, THE MANHOLE SHALL BE CORED WITH A CIRCULAR HOLE CUTTING TOOL WITH A GASKET-TYPE WATER-STOP COLLAR INSTALLED INTO MANHOLE.



NOTES
DRAIN FOR VALVE VAULT SHALL BE CONSTRUCTED ONLY WHEN SHOWN ON THE PLANS.
FRAME AND RING(S) TO BE SET IN MORTAR BED OR SEALED WITH A PREFORMED BITUMEN SEAL (E-Z STICK OR APPROVED EQUAL).
FOR PRESSURE CONNECTION, SEE SEPARATE DETAIL.

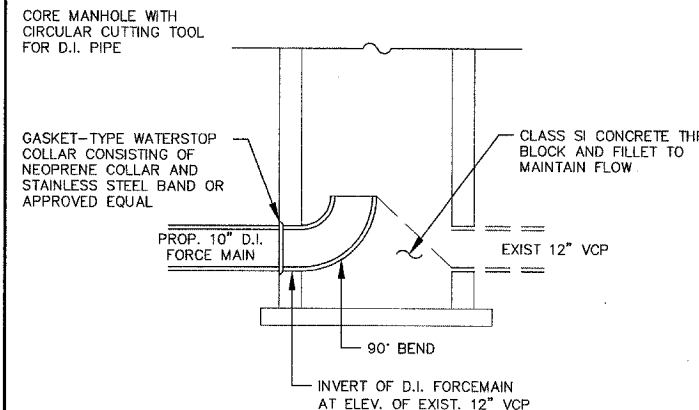
DIAMETER OF WATER MAIN	D	T
8" AND OVER	5'-0"	5"

STANDARD VALVE VAULT
(N.T.S.)



DRAIN SUMP TO BE 3/4 C.Y. OF 3/4" WASHED STONE
CONCRETE SUPPORT
PROVIDE CONCRETE BASE AND BLOCKING AGAINST UNDISTURBED EARTH

FIRE HYDRANT DETAIL
(N.T.S.)



SANITARY MANHOLE FORCE MAIN CONNECTION DETAIL
NOT TO SCALE