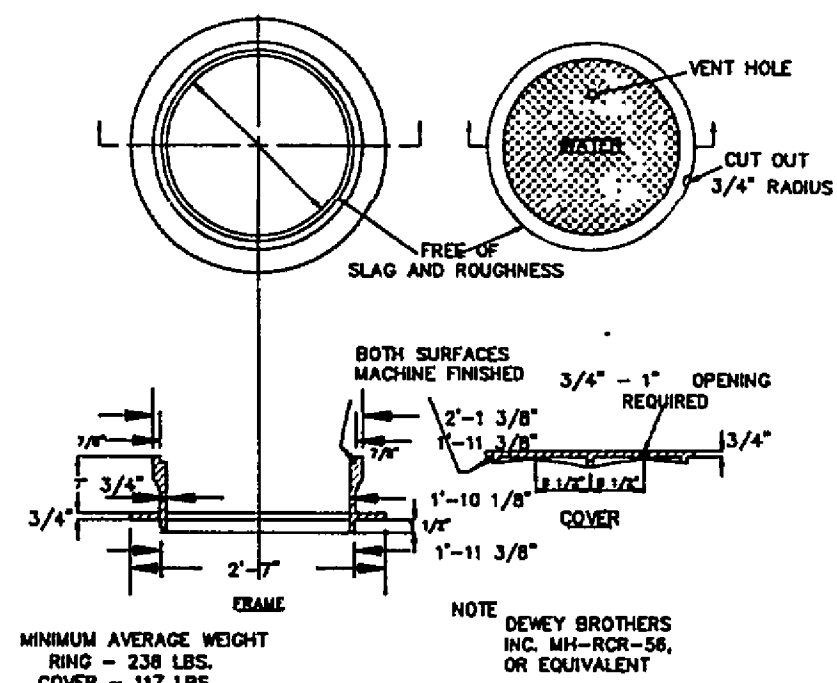
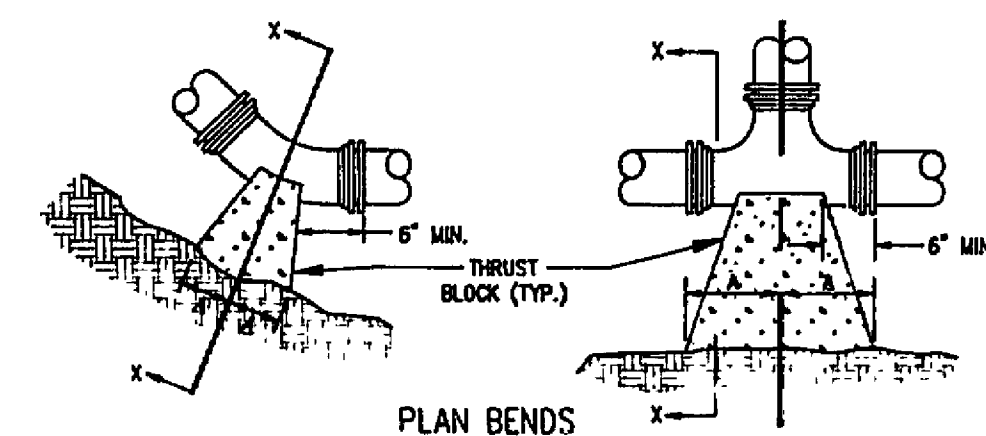


TYPICAL WATER PRESSURE TEST RIG

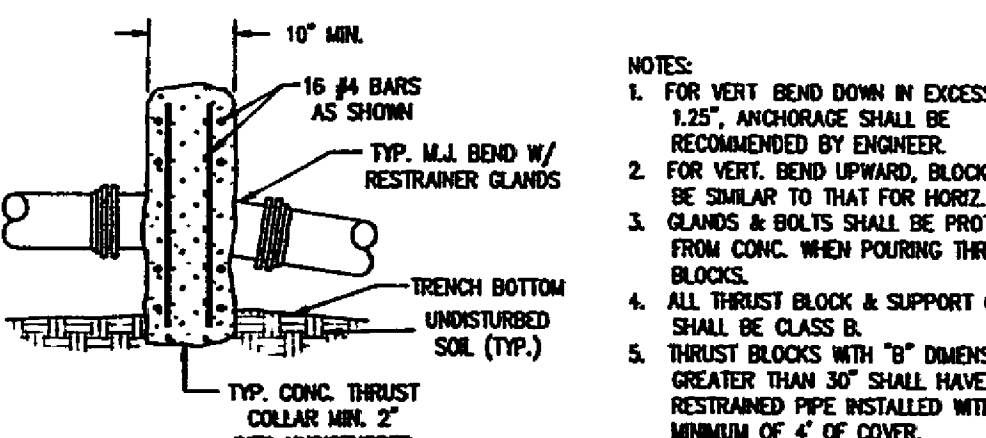
NOTE: 1. SUBSTITUTE SEWER FOR WATER ON SANITARY SEWER MANHOLE FRAME & COVERS.



MANHOLE FRAME AND COVER



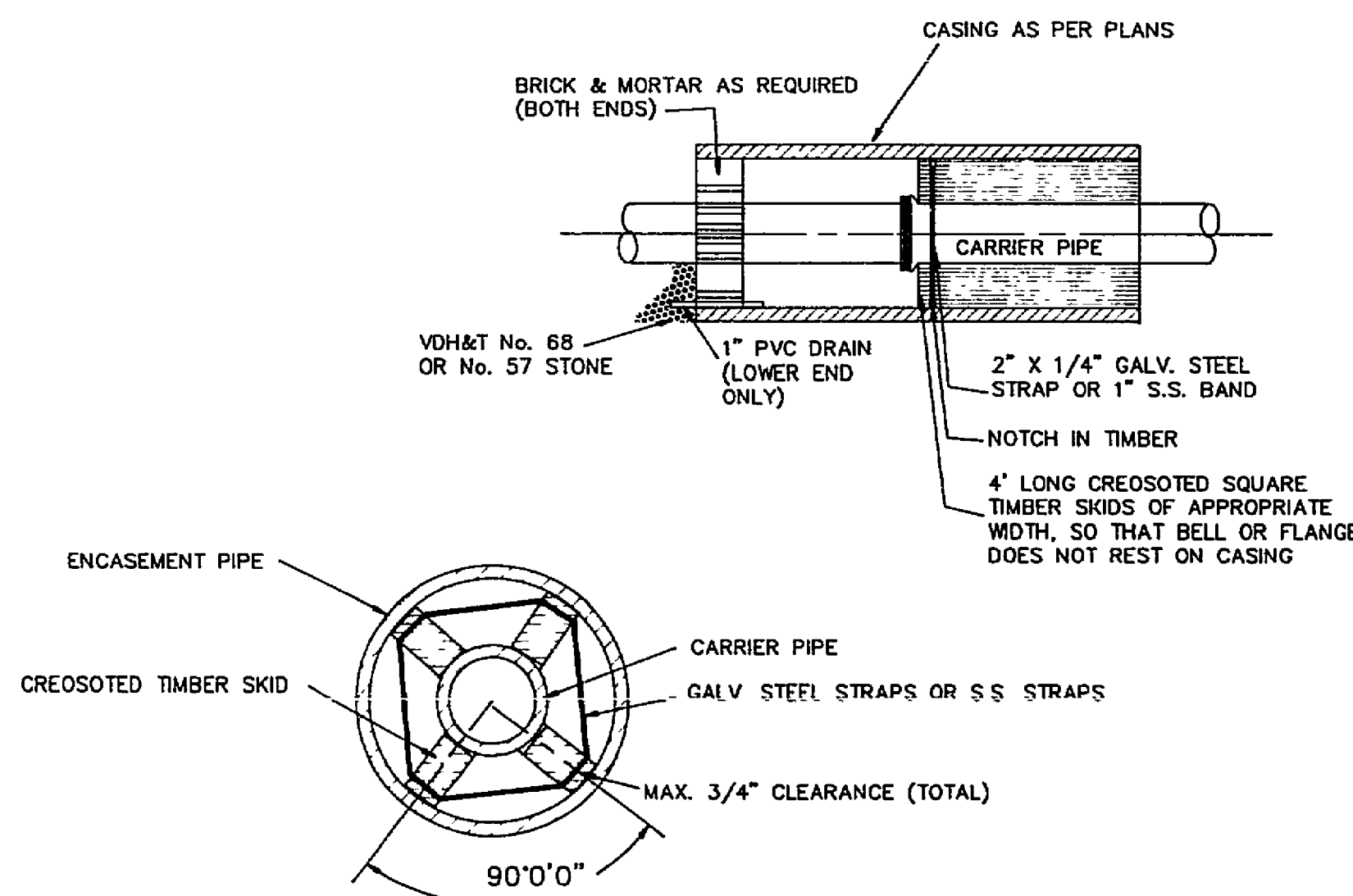
PLAN AND ELEVATION PLUGS



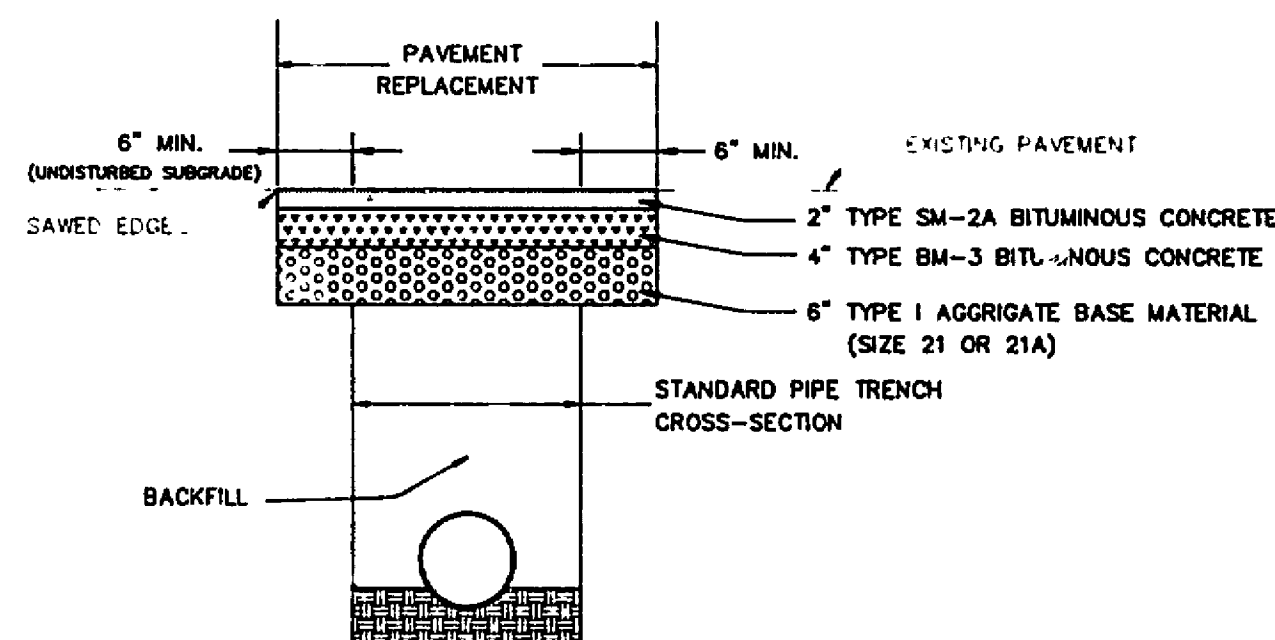
SECTION OF VERTICAL BEND

PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE	PLUG
4"	10"	10"	10"	10"	10"	10"
6"	12"	12"	12"	12"	12"	12"
8"	14"	14"	14"	14"	14"	14"
10"	16"	16"	16"	16"	16"	16"
12"	18"	18"	18"	18"	18"	18"
14"	20"	20"	20"	20"	20"	20"
16"	22"	22"	22"	22"	22"	22"
18"	24"	24"	24"	24"	24"	24"
20"	26"	26"	26"	26"	26"	26"
22"	28"	28"	28"	28"	28"	28"
24"	30"	30"	30"	30"	30"	30"
26"	32"	32"	32"	32"	32"	32"
28"	34"	34"	34"	34"	34"	34"
30"	36"	36"	36"	36"	36"	36"

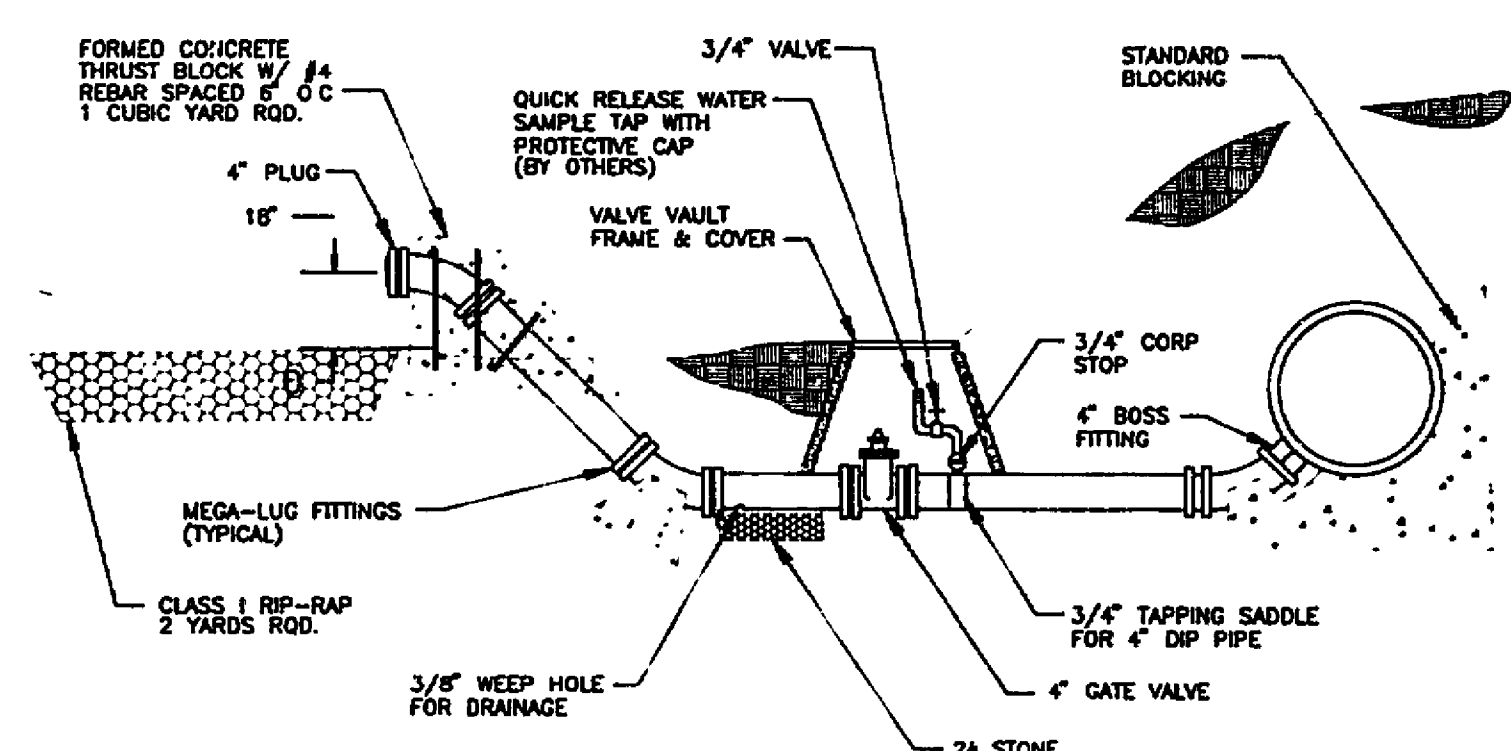
THRUST BLOCK CONSTRUCTION



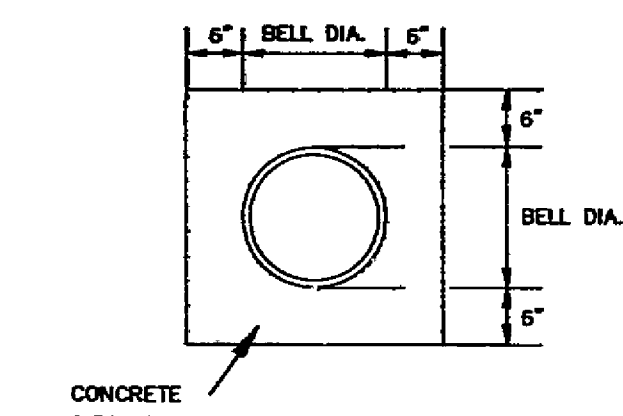
PIPE SUPPORT IN CASING PIPE



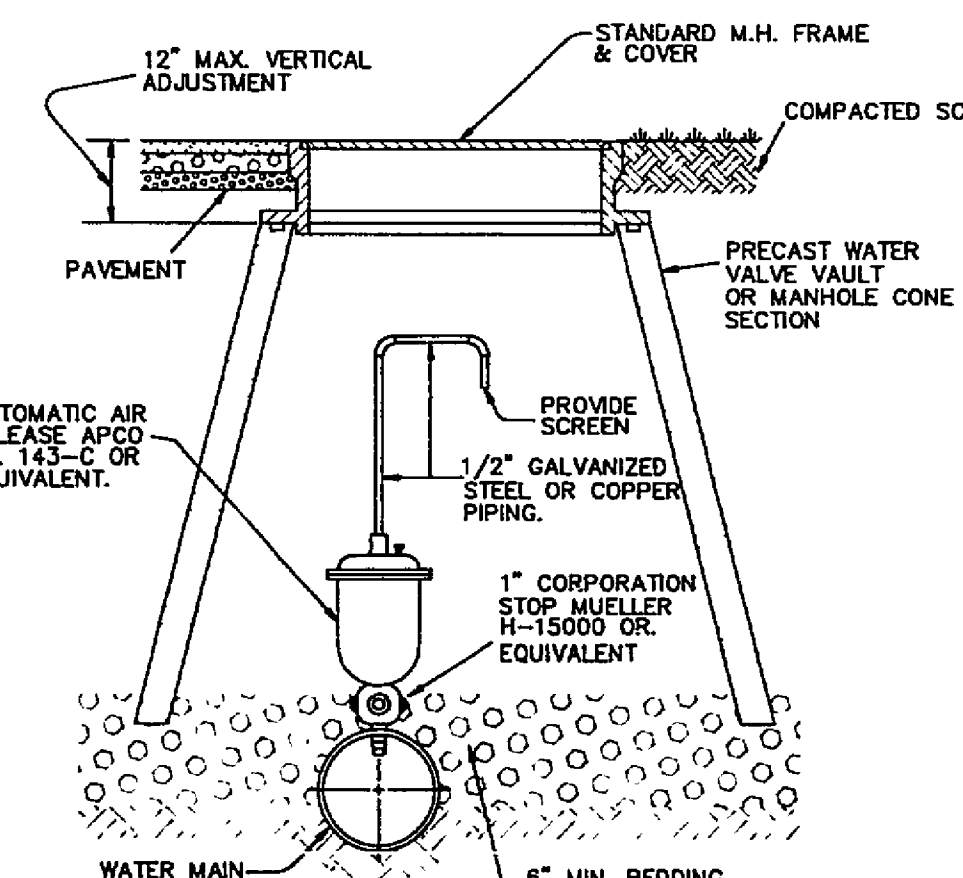
PAVEMENT REPLACEMENT



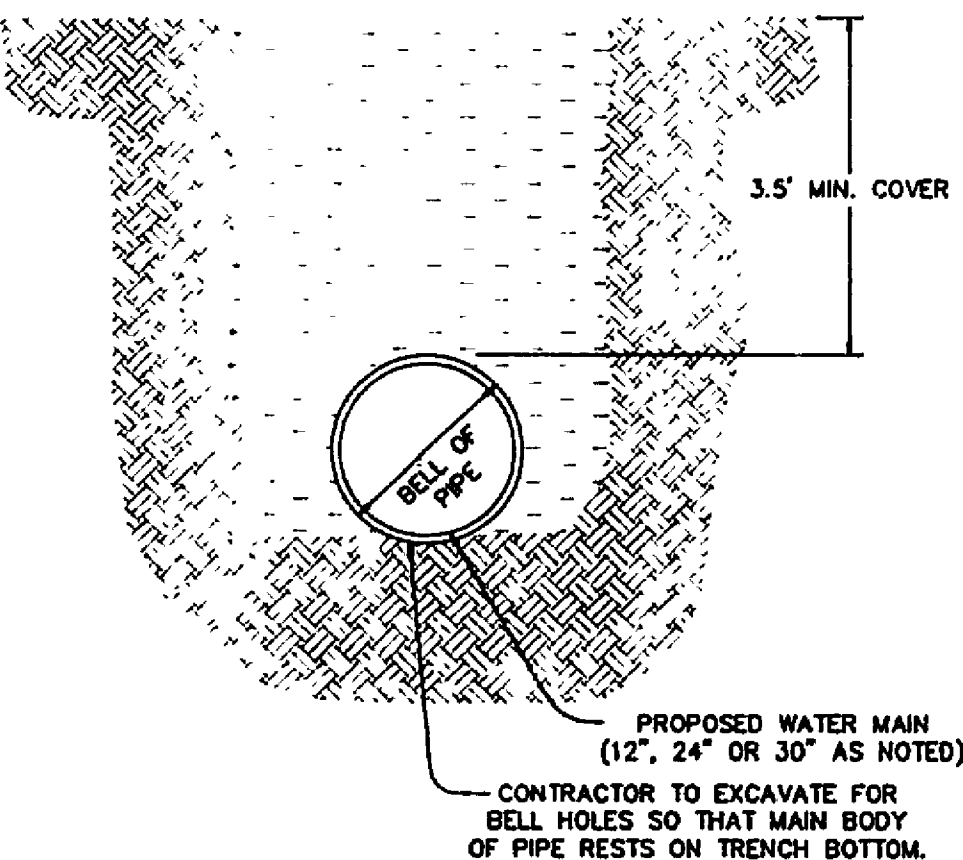
FLUSH TYPE BLOW OFF



CONCRETE ENCASED PIPE

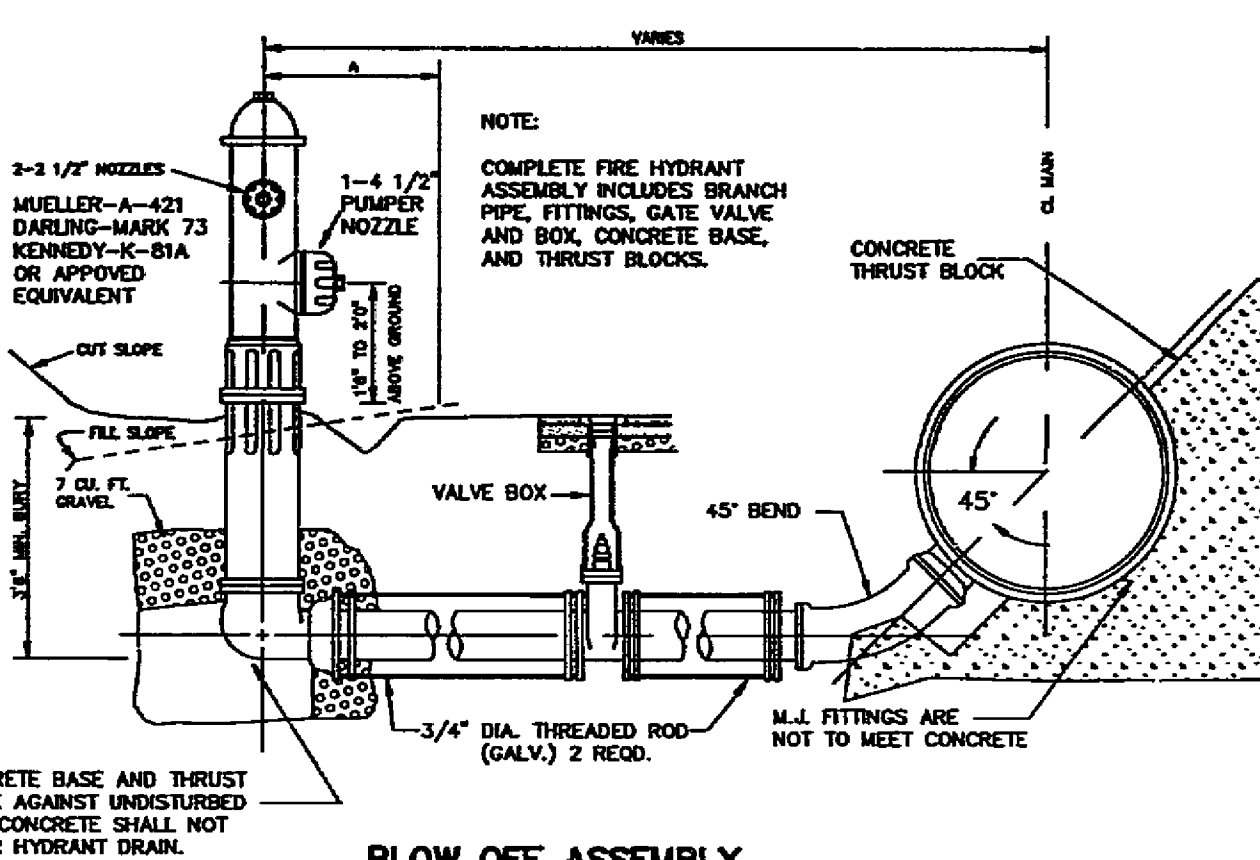


AUTOMATIC AIR RELEASE ASSEMBLY

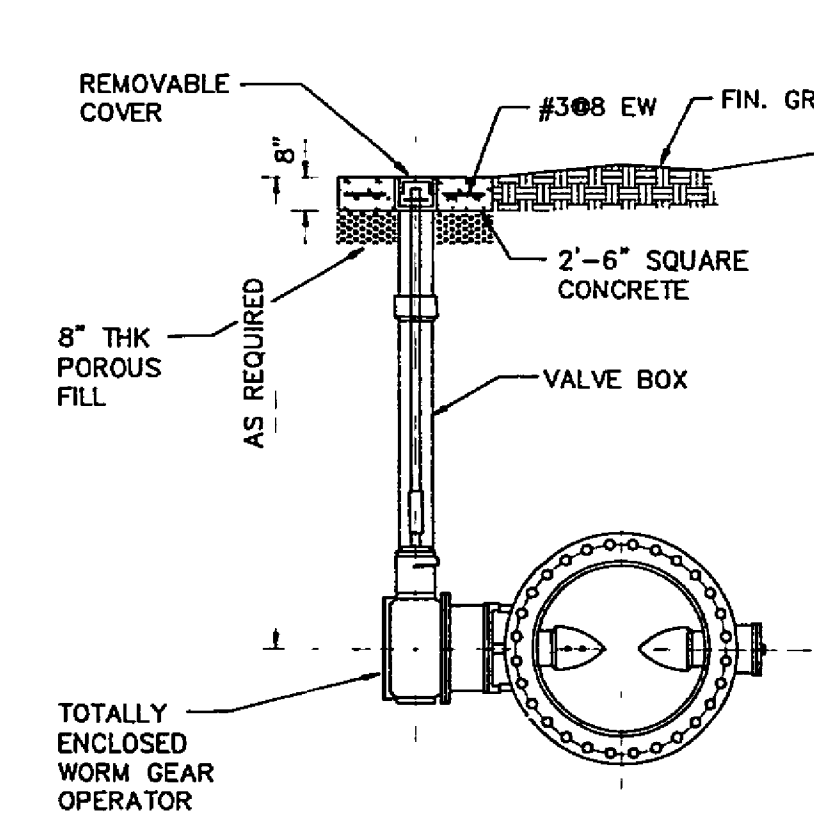


WATER MAIN INSTALLATION

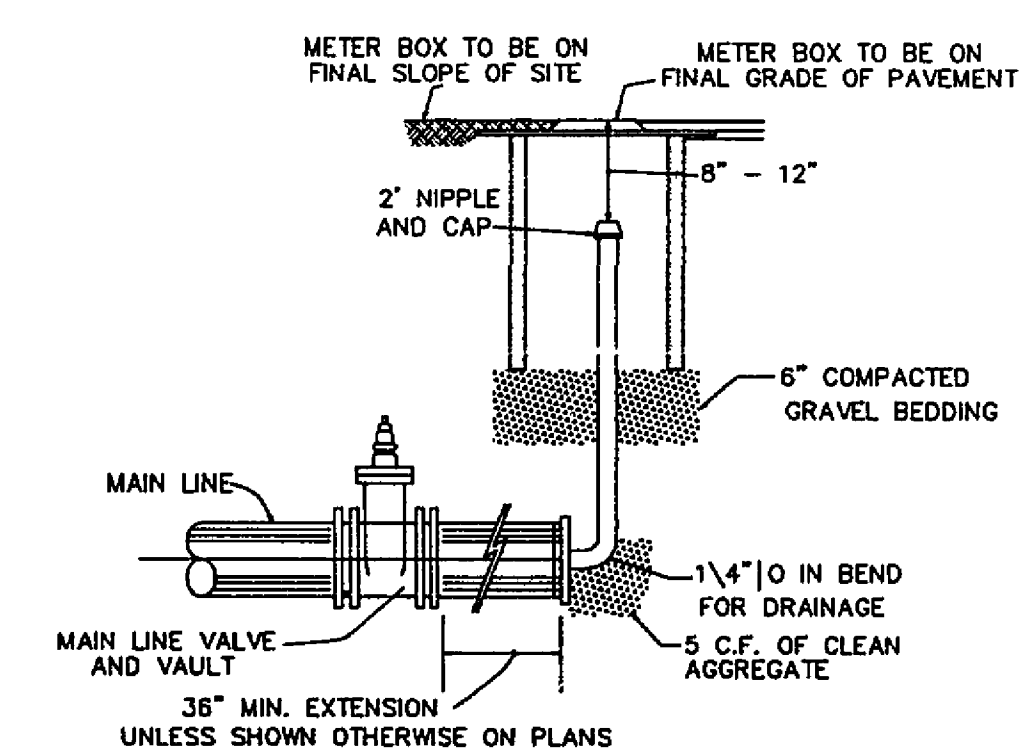
- MAIN BODY OF HYDRANT MUST BE SILVER AND HAVE RED CAPS AND BONNET.
- DISTANCE "A" WITH CURB AND OUTLET, 4" MIN., 4" MAX. FROM BACK OF CURB.
- DISTANCE "B" WITHOUT CURB AND OUTLET, 6" MIN., 12" MAX. FROM EDGE OF PAVEMENT.
- AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE APPROXIMATELY LEVEL AND UNOBSTRUCTED FOR ROAD CONSTRUCTION.



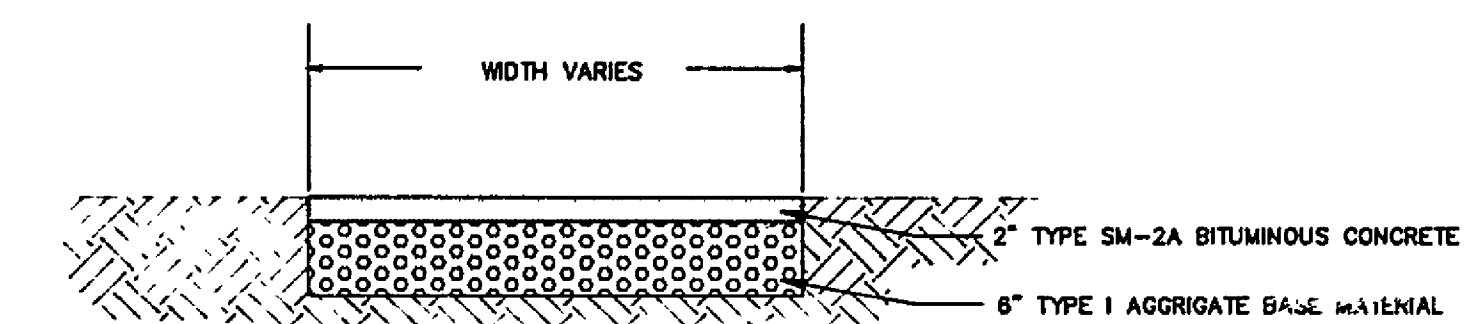
BLOW OFF ASSEMBLY



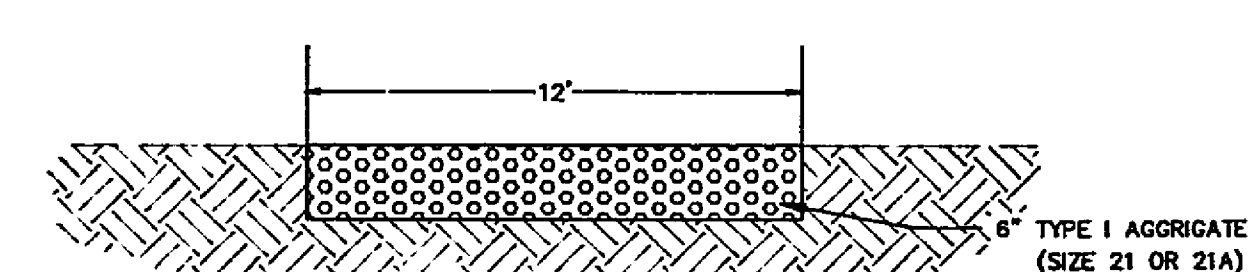
BURIED BUTTERFLY VALVE (BFV)



BLOW OFF ASSEMBLY TEMPORARY TERMINATION



DRIVEWAY PAVEMENT DETAIL



GRAVEL DRIVEWAY DETAIL

REVISION	DATE	DESCRIPTION
1	5/10/95	REVISED ALIGNMENTS & APPURTENANCES
DESIGNED -	PAM	WATER DETAILS FOR PHASE 3
DRAWN -	PAM-JNG	SOUTH LOOP TRANSMISSION MAIN
CHECKED -	MSW	PREPARED FOR ROANOKE COUNTY UTILITY DEPARTMENT
		CAVE SPRING, WINDSOR HILLS, & CATAMBA MAGISTERIAL DISTRICTS
		ROANOKE COUNTY, VIRGINIA

LUMSDEN ASSOCIATES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
ROANOKE, VIRGINIA

SCALE: NONE
DATE: 28 FEB 1995
SHEET 10 OF 11