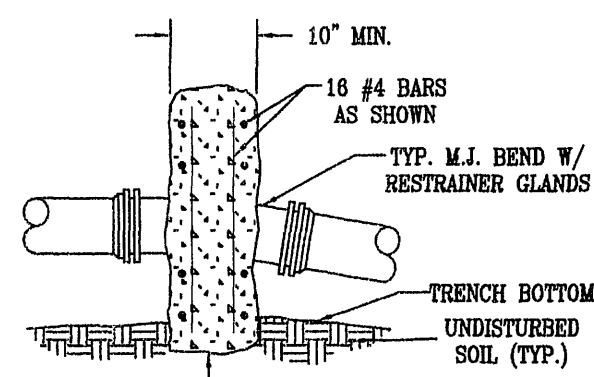
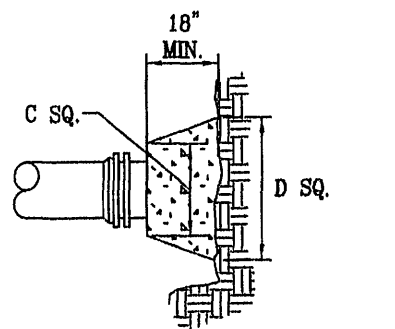


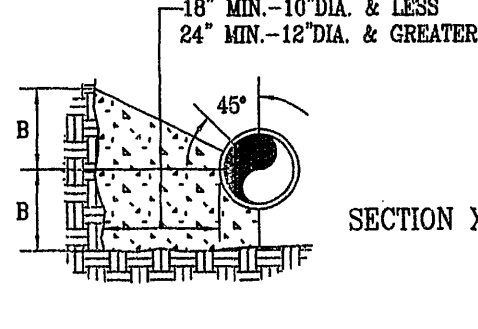
PLAN BENDS



SECTION OF VERTICAL BEND



PLAN AND ELEVATION PLUGS



BENDS AND TEES

NOTES:

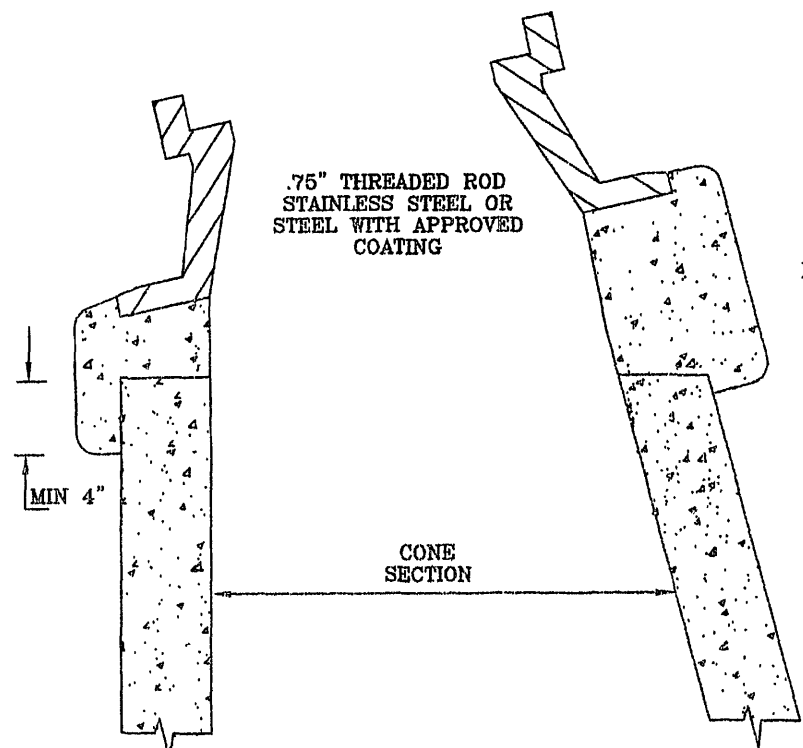
- FOR VERT. BEND DOWN IN EXCESS OF 11 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
- FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
- GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
- ALL THRUST BLOCK & SUPPORT CONC. SHALL BE 3000 PSI READY MIX CONC.
- THRUST BLOCKS WITH "b" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.

PRESSURE = 200 psi  
BRAND = 2000 psi  
FACTOR OF SAFETY = 1.5

| PIPE SIZE | 90° BEND | 45° BEND | 22 1/2° BEND | 11 1/4° BEND | TEE | PLUG |
|-----------|----------|----------|--------------|--------------|-----|------|
| 4"        | 8"       | 8"       | 8"           | 8"           | 8"  | 8"   |
| 6"        | 12"      | 12"      | 12"          | 12"          | 12" | 12"  |
| 8"        | 16"      | 16"      | 16"          | 16"          | 16" | 16"  |
| 10"       | 20"      | 20"      | 20"          | 20"          | 20" | 20"  |
| 12"       | 24"      | 24"      | 24"          | 24"          | 24" | 24"  |
| 14"       | 28"      | 28"      | 28"          | 28"          | 28" | 28"  |
| 16"       | 32"      | 32"      | 32"          | 32"          | 32" | 32"  |
| 18"       | 36"      | 36"      | 36"          | 36"          | 36" | 36"  |
| 20"       | 40"      | 40"      | 40"          | 40"          | 40" | 40"  |
| 22"       | 44"      | 44"      | 44"          | 44"          | 44" | 44"  |
| 24"       | 48"      | 48"      | 48"          | 48"          | 48" | 48"  |
| 26"       | 52"      | 52"      | 52"          | 52"          | 52" | 52"  |
| 28"       | 56"      | 56"      | 56"          | 56"          | 56" | 56"  |
| 30"       | 60"      | 60"      | 60"          | 60"          | 60" | 60"  |

THRUST BLOCK CONSTRUCTION

NO SCALE

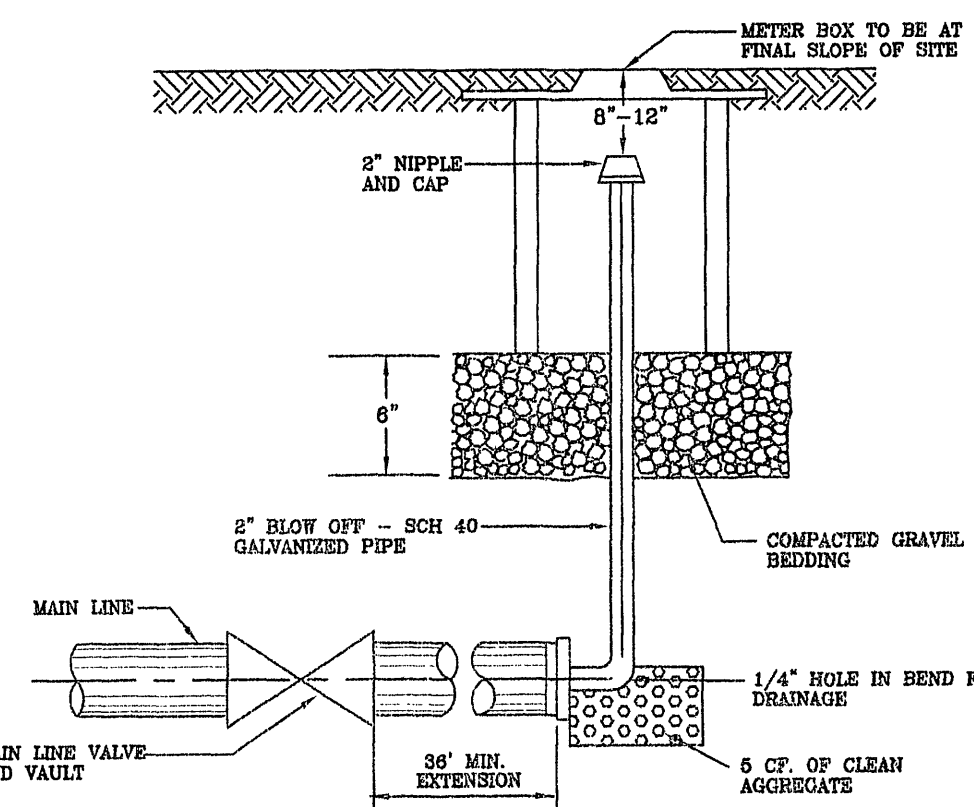


SECTION

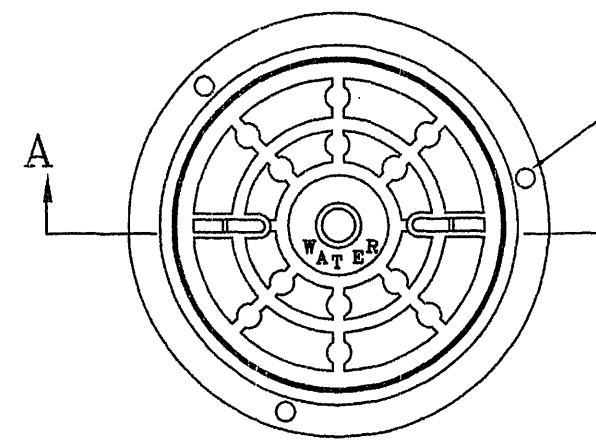
INSTALLATION DETAIL FOR ALL FRAMES AND COVERS

NOTE:

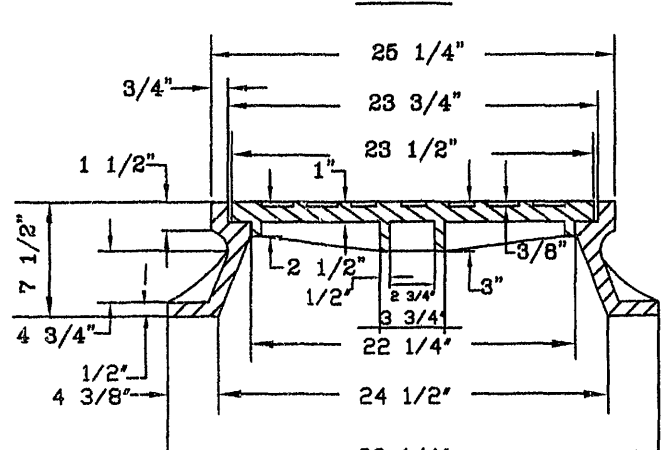
- USE MODERATELY STIP MIX OF NON SHRINK CEMENT, SAND AND 1/2" LESS DIAMETER GRAVEL WITH 28 DAYS, STRENGTH AT 3,000 P.S.I.
- MIX IS TO BE FORCED INTO ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF FLANGE.
- MAX. OF 4 BRICK OR CONCRETE BLOCKS TO BE USED FOR GRADE CONTROL.
- DO NOT BACKFILL AROUND FRAME AND COVER, FOR 48 HOURS AFTER CON. IS PLACED, THE USE OF HIGHLY STRENGTH CONCRETE WOULD REDUCE TIME TO (24HRS).
- RESTRICT TRAFFIC LOAD FOR MIN. 24 HOURS.



BLOW OFF ASSEMBLY FOR MAIN LINE TEMPORARY TERMINATION



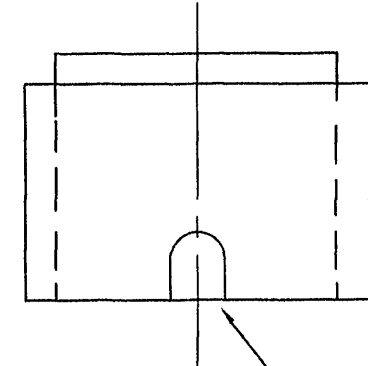
PLAN



SECTION A-A

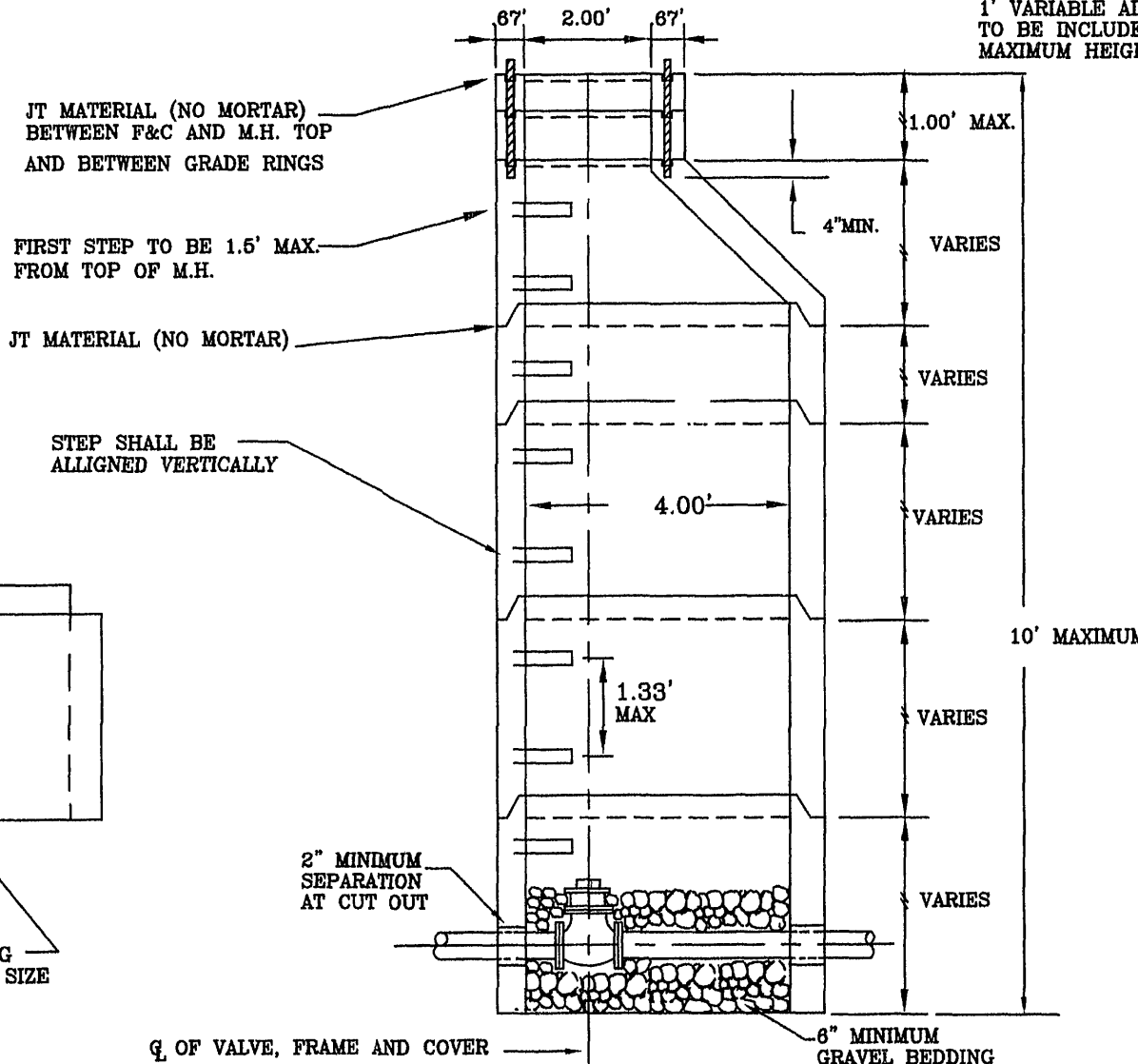
MANHOLE FRAME AND COVER  
PAVED 2001EC  
UNPAVED 2001(A)BVE

NOTE:  
USE DEWEY BROTHERS INC. MH-RCR-2000 OR 2001 WATERTIGHT FRAME & COVER IN PAVED AREAS.

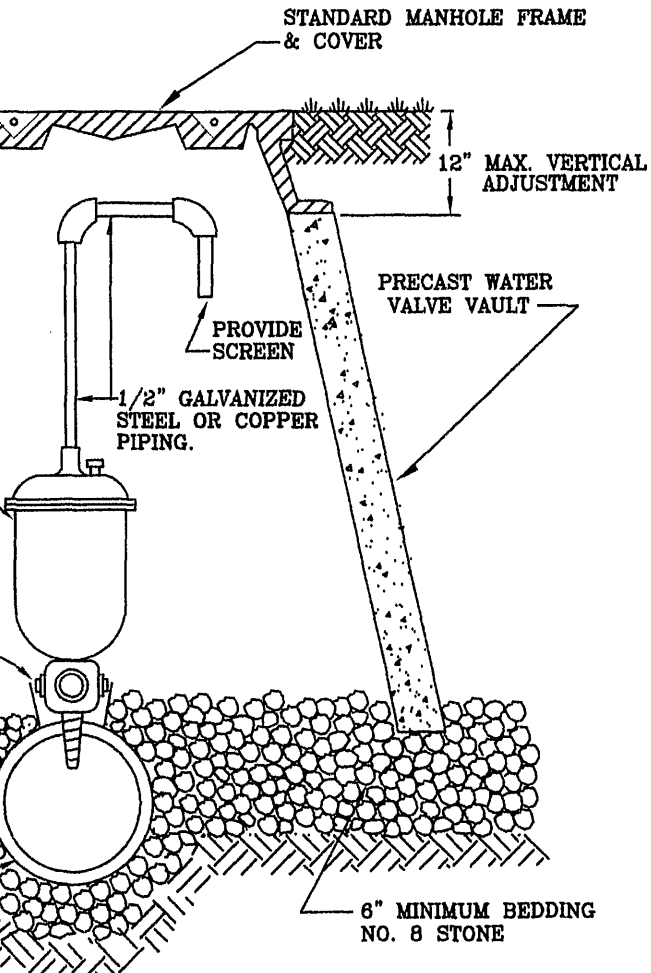


MANUFACTURED OPENING AS REQUIRED BY PIPE SIZE

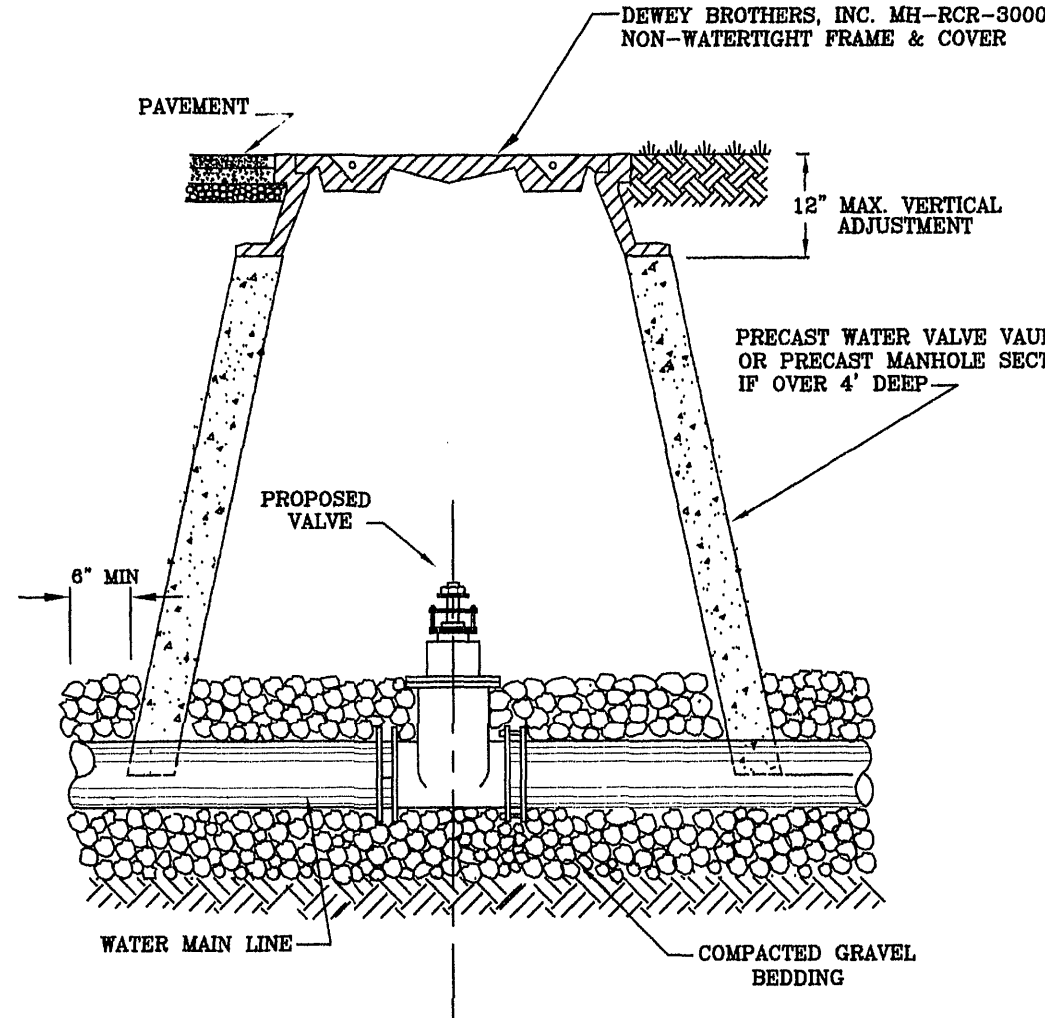
NOTE: TO BE USED WHEN STANDARD VAULT CONSTRUCTION EXCEEDS MAXIMUM VERTICAL HEIGHT OF 4'.



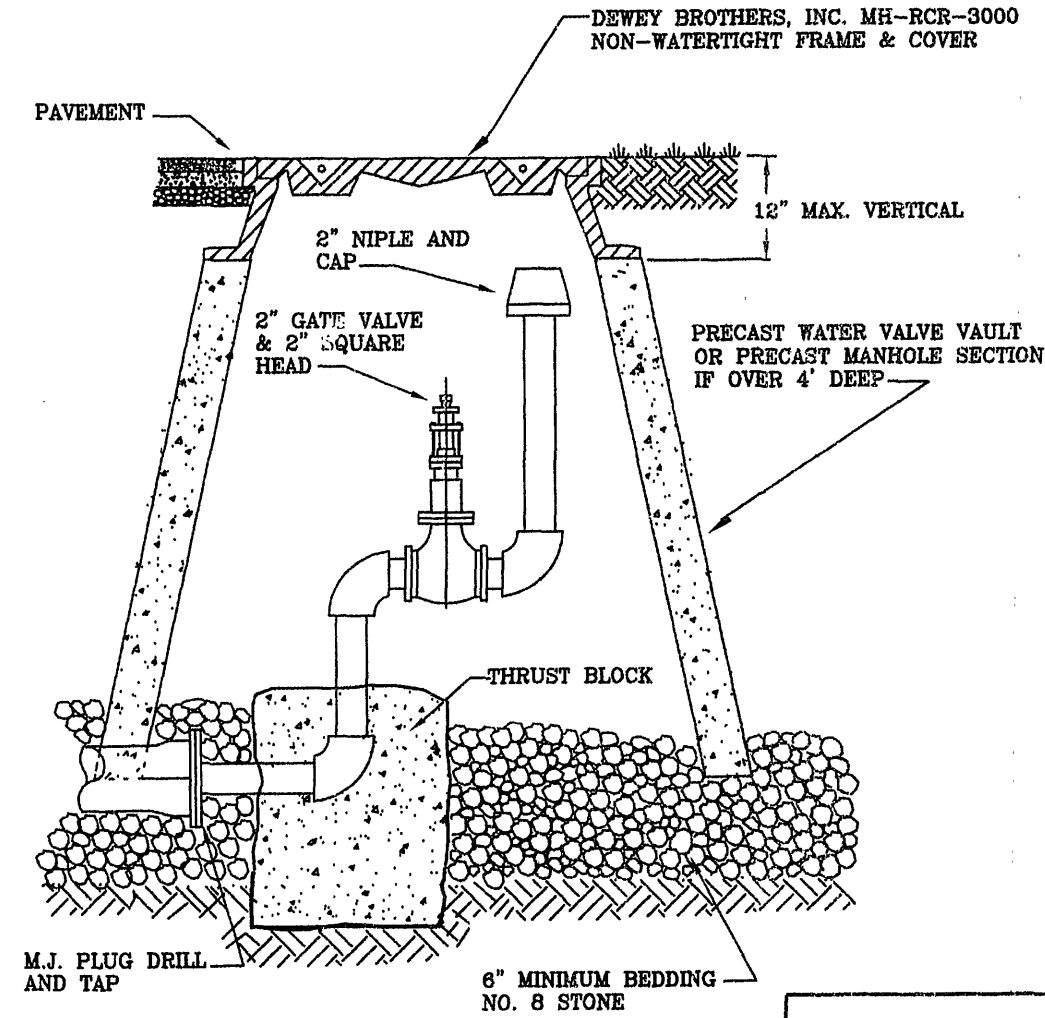
ALTERNATE VALVE VAULT (MANHOLE)



AUTOMATIC AIR RELEASE ASSEMBLY

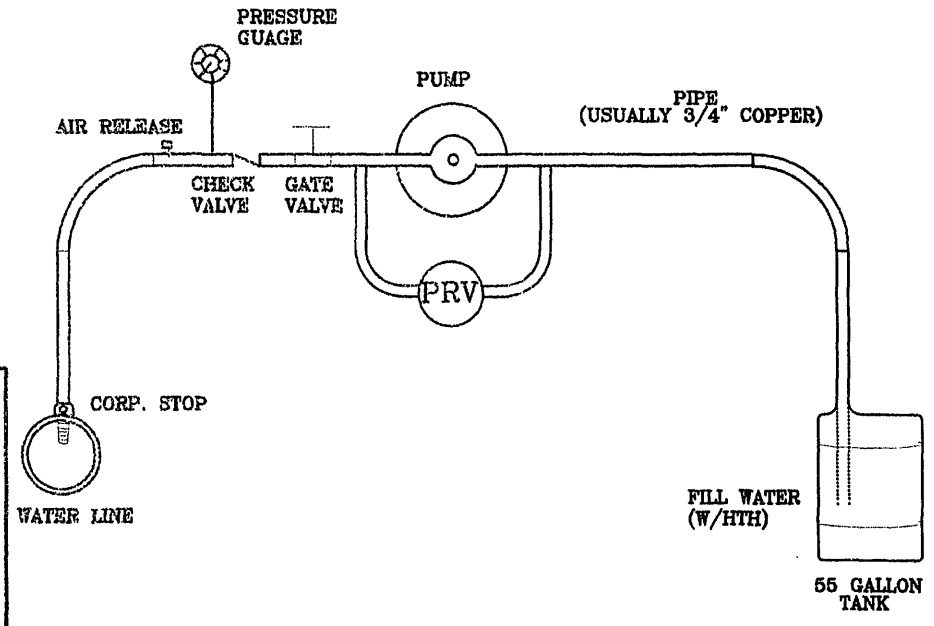


WATER LINE VALVE INSTALLATION

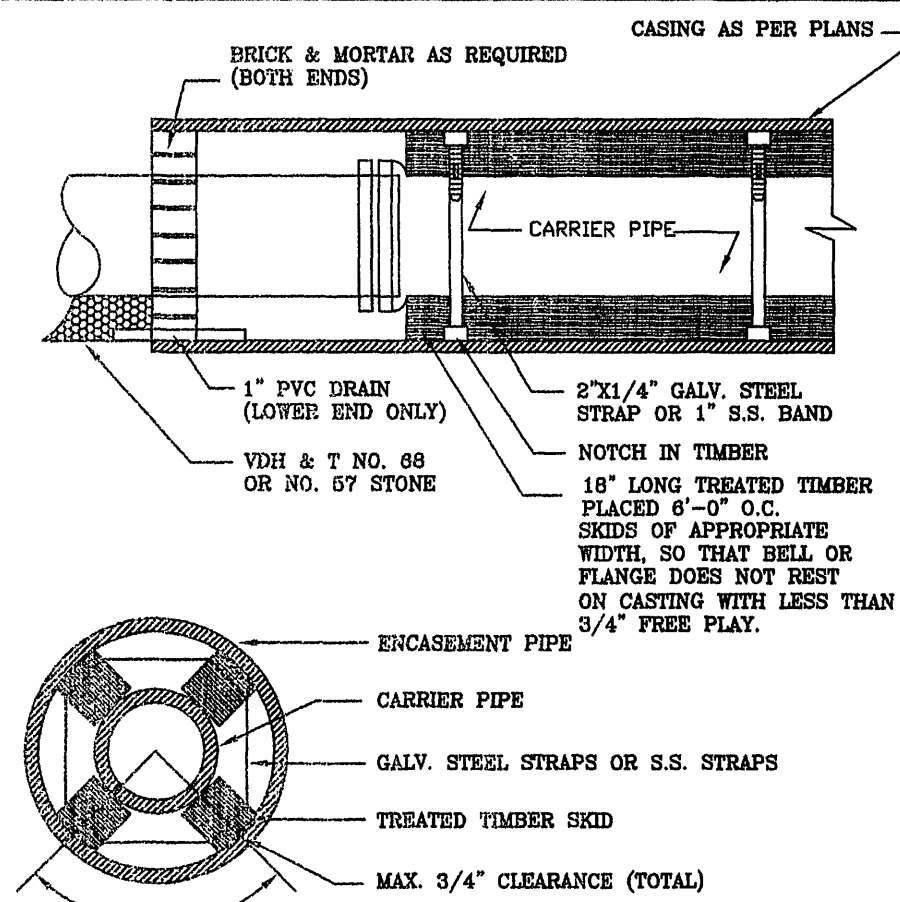


PERMANENT END OF LINE

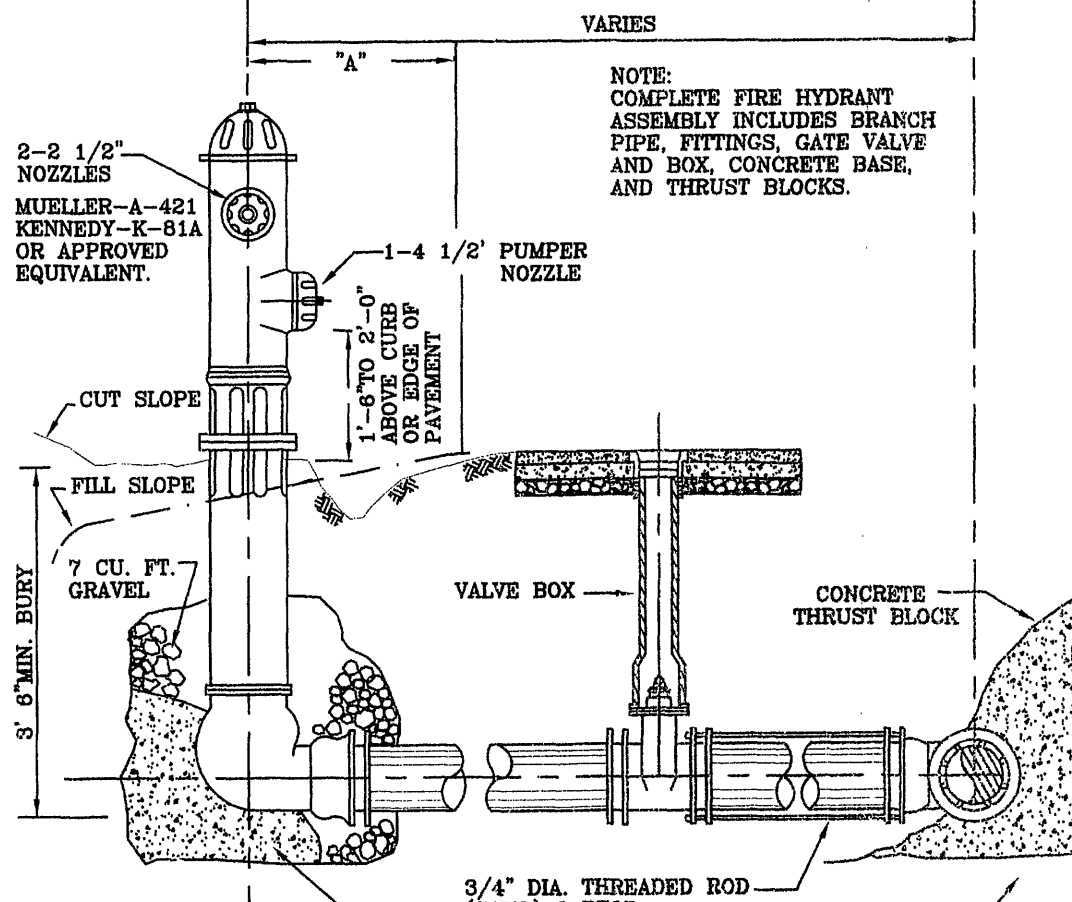
- NOTES:
- MAIN BODY OF HYDRANT MUST BE SILVER AND HAVE RED CAPS AND BONNET.
  - DISTANCE "A" WITH CURB AND GUTTER, 2" MIN., 4" MAX. FROM BACK OF CURB.
  - DISTANCE "A" WITHOUT CURB AND GUTTER, 6" MIN., 12" MAX. FROM EDGE OF PAVEMENT.
  - AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE APPROXIMATELY LEVEL AND UNOBSTRUCTED.



TYPICAL WATER PRESSURE TEST RIG



PIPE SUPPORT IN CASING PIPE



FIRE HYDRANT ASSEMBLY

NOT APPROVED