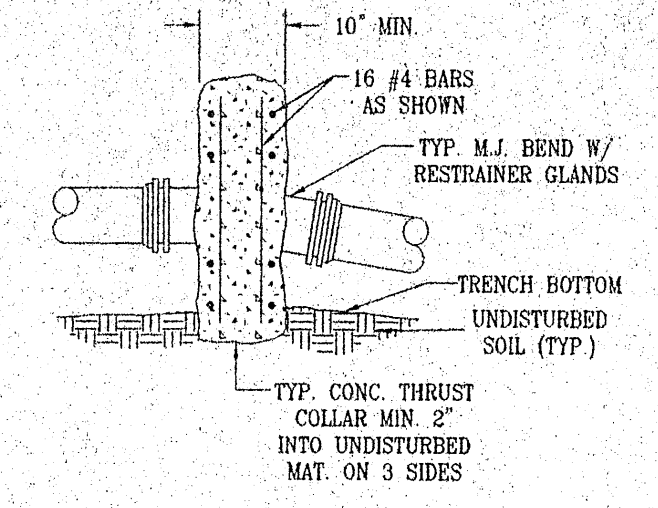
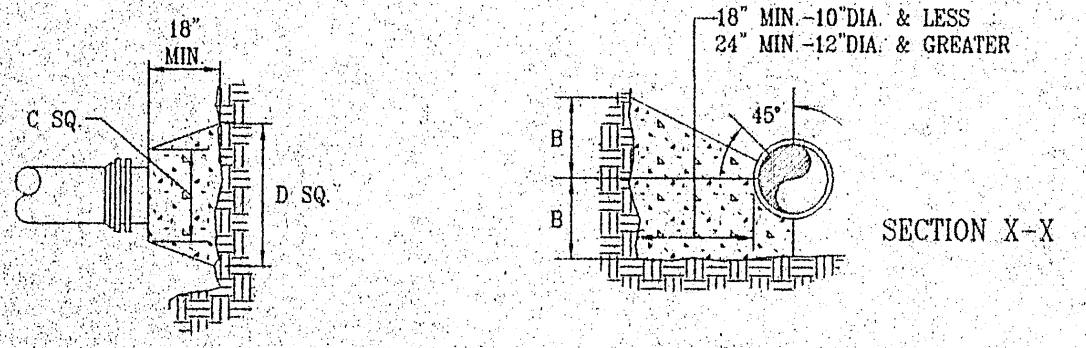


PLAN BENDS



SECTION OF VERTICAL BEND



PLAN AND ELEVATION PLUGS

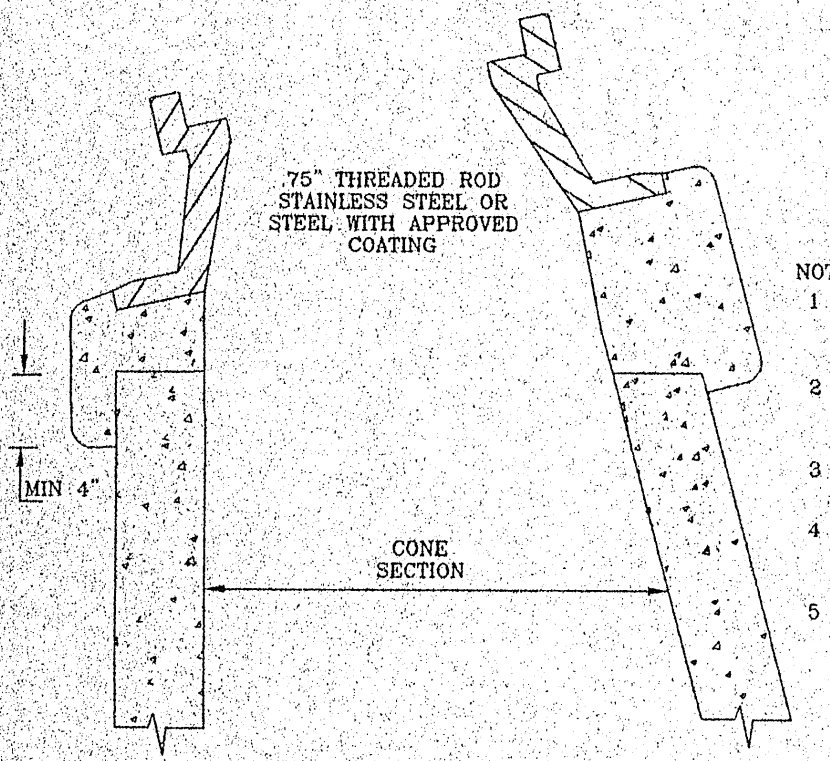
BENDS AND TEES

- 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  
BEARING = 2000 pcf  
FACTOR OF SAFETY = 1.5

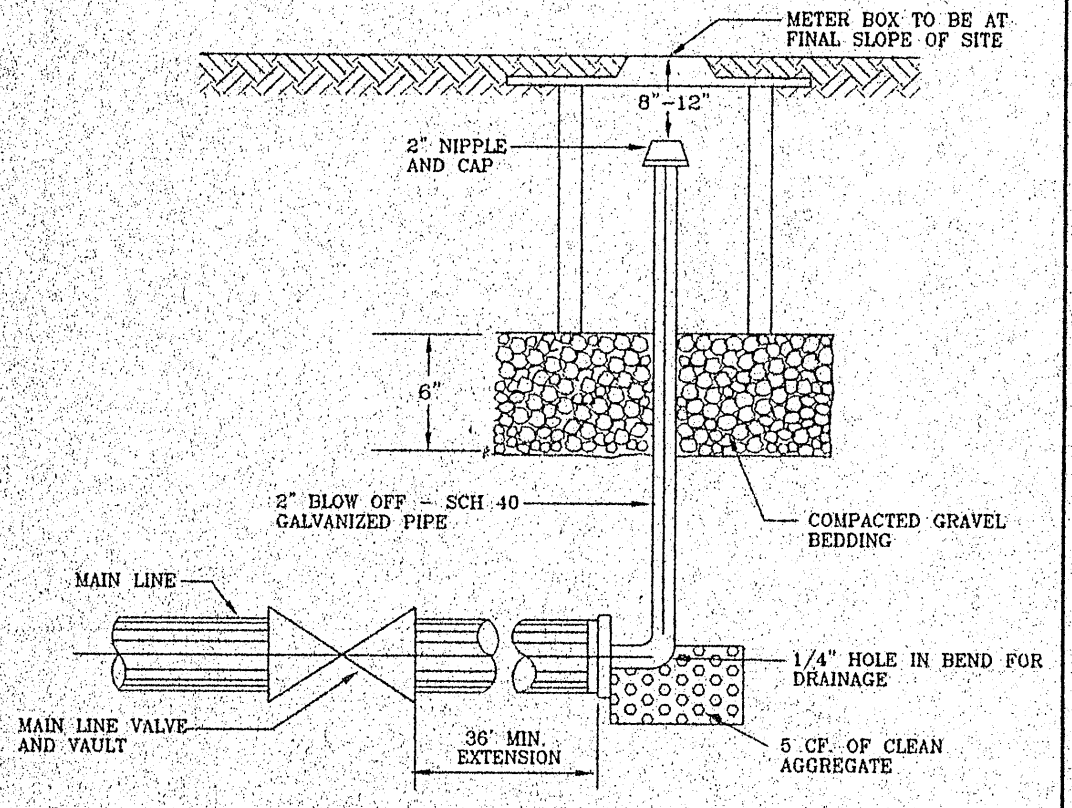
PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	8"	11"	10"	10"
6"	18"	12"	8"	8"	8"	8"	6"	6"	8"	11"	10"	12"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	52"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

THRUST BLOCK CONSTRUCTION  
NO SCALE

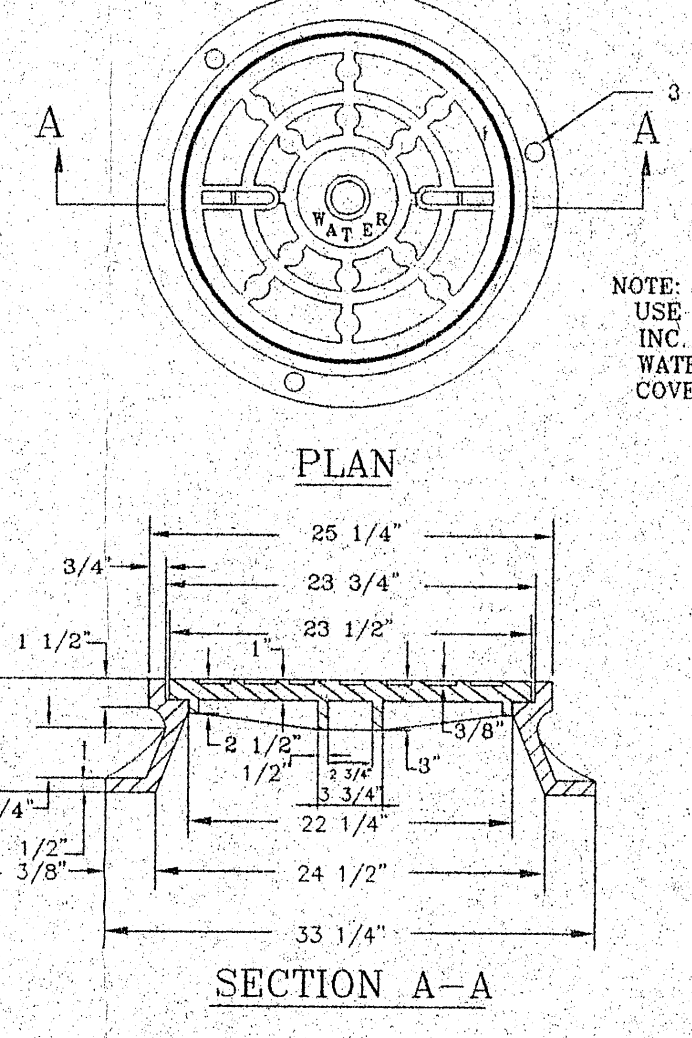


- NOTE:
- USE MODERATELY STIP MIX OF NON SHRINK CEMENT, SAND AND 1/2" AND LESS DIAMETER GRAVEL WITH 28 DAYS STRENGTH AT 3,000 P.S.I.
  - MIX IS TO BE FORCED INTO ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF FLANGE.
  - MAX. OF 4 BRICK OR CONCRETE BLOCKS TO BE USED FOR GRADE CONTROL.
  - 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.

INSTALLATION DETAIL FOR ALL FRAMES AND COVERS

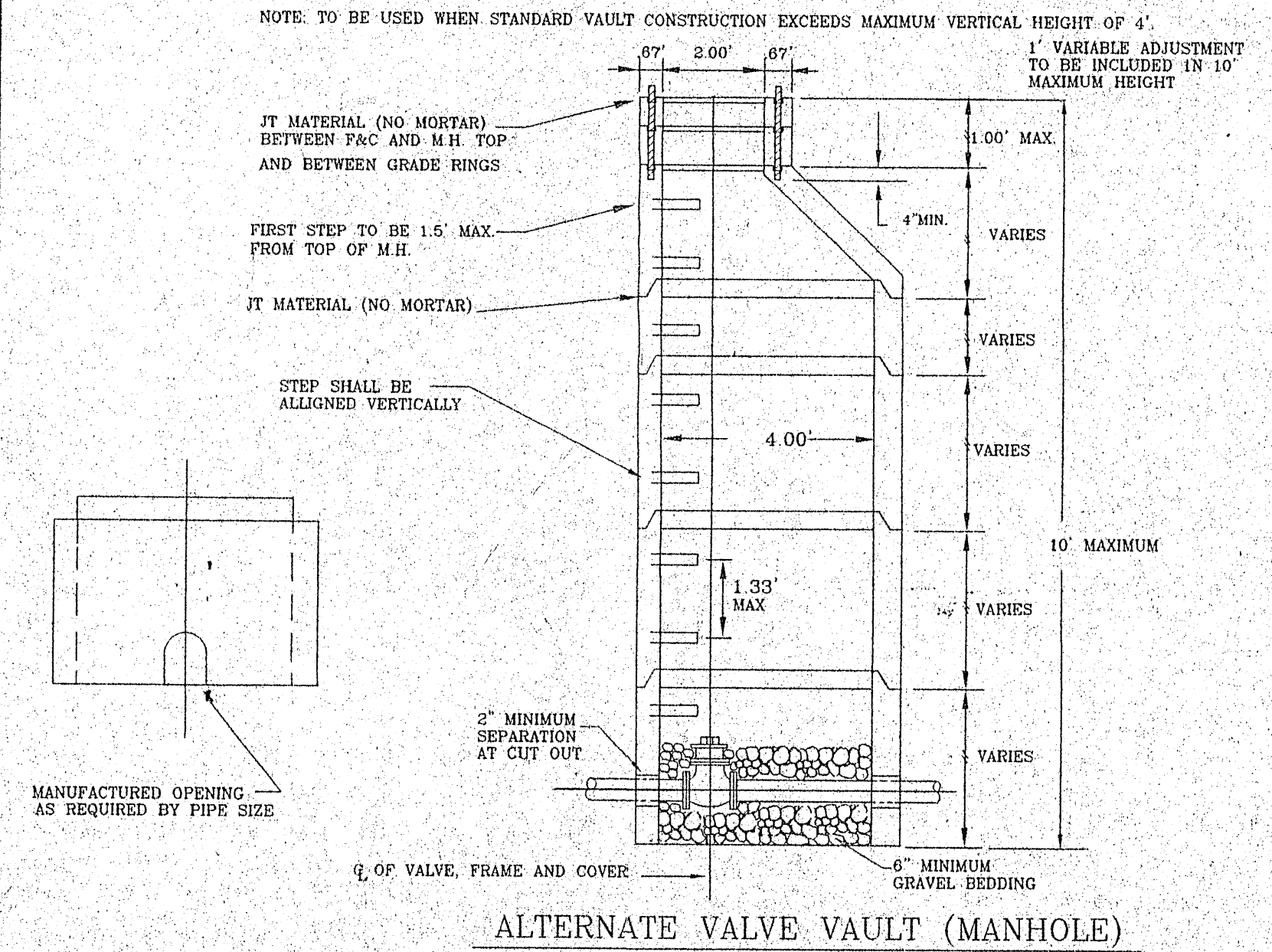


BLOW OFF ASSEMBLY FOR MAIN LINE TEMPORARY TERMINATION



MANHOLE FRAME AND COVER  
PAVED 2001EC  
UNPAVED 2001(ABOVE)

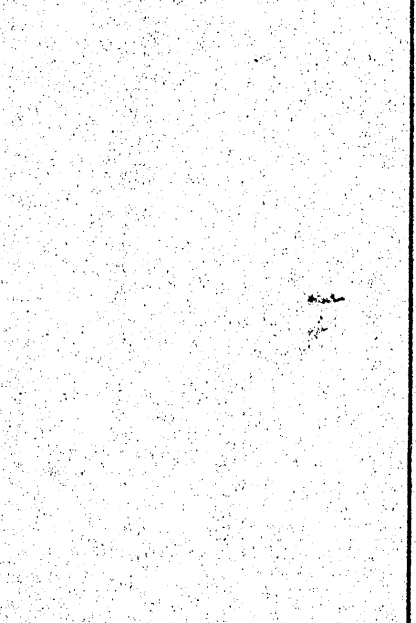
- NOTE:
- USE DEWEY BROTHERS INC. MH-RCR-2000 OR 2001 WATERTIGHT FRAME & COVER IN PAVED AREAS



ALTERNATE VALVE VAULT (MANHOLE)

- NOTE TO BE USED WHEN STANDARD VAULT CONSTRUCTION EXCEEDS MAXIMUM VERTICAL HEIGHT OF 4'
- IT MATERIAL (NO MORTAR) BETWEEN FAC AND M.H. TOP AND BETWEEN GRADE RINGS
  - FIRST STEP TO BE 1.5' MAX. FROM TOP OF M.H.
  - IT MATERIAL (NO MORTAR)
  - STEP SHALL BE ALIGNED VERTICALLY
  - MANUFACTURED OPENING AS REQUIRED BY PIPE SIZE

- NOTE:
- USE THE 3 - 1" DIA. HOLES @ 120°



MANUFACTURED OPENING AS REQUIRED BY PIPE SIZE

Q. OF VALVE, FRAME AND COVER

6" MINIMUM GRAVEL BEDDING

1" VARIABLE ADJUSTMENT TO BE INCLUDED IN 10' MAXIMUM HEIGHT

3.00' MAX

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