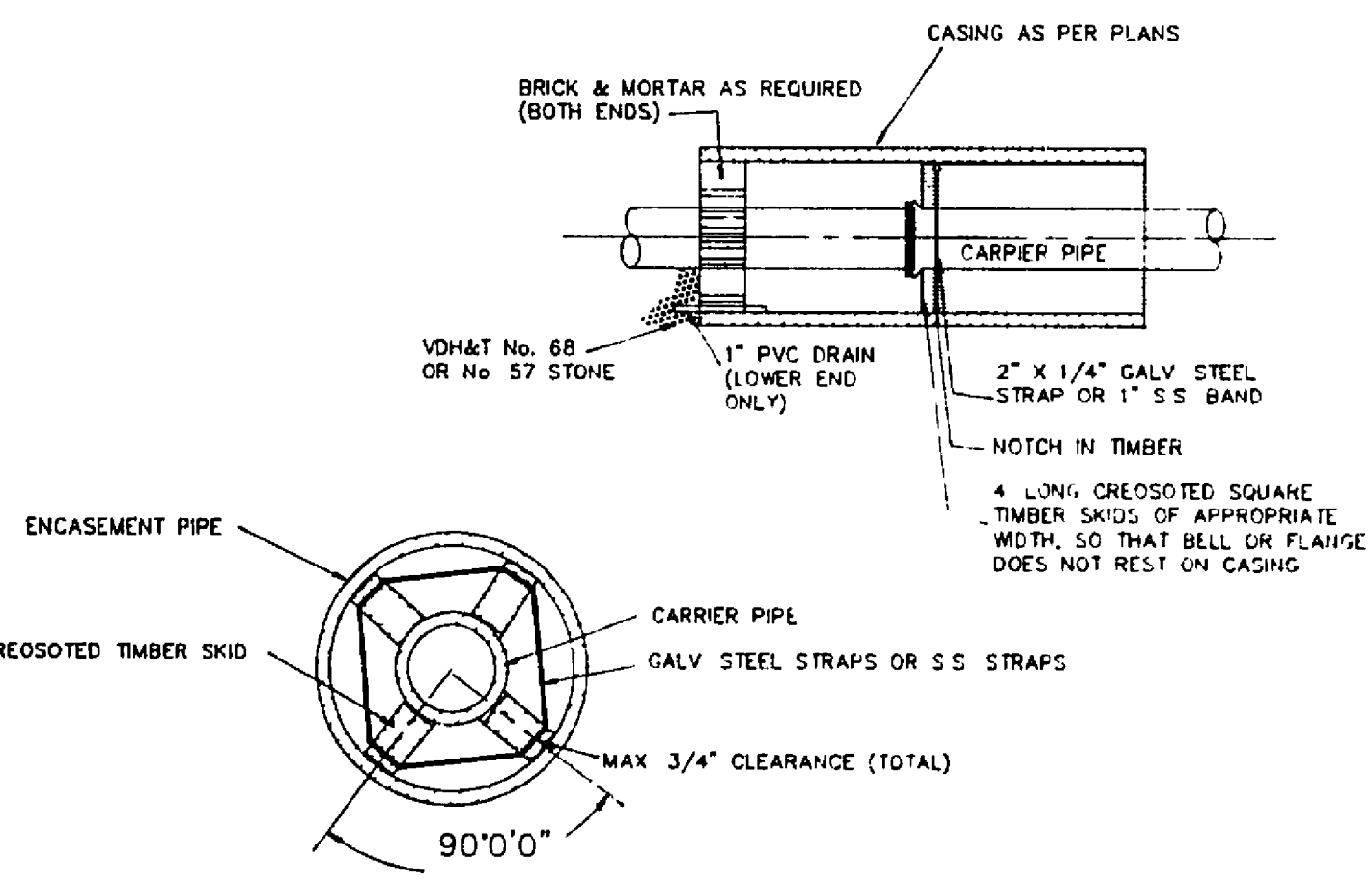
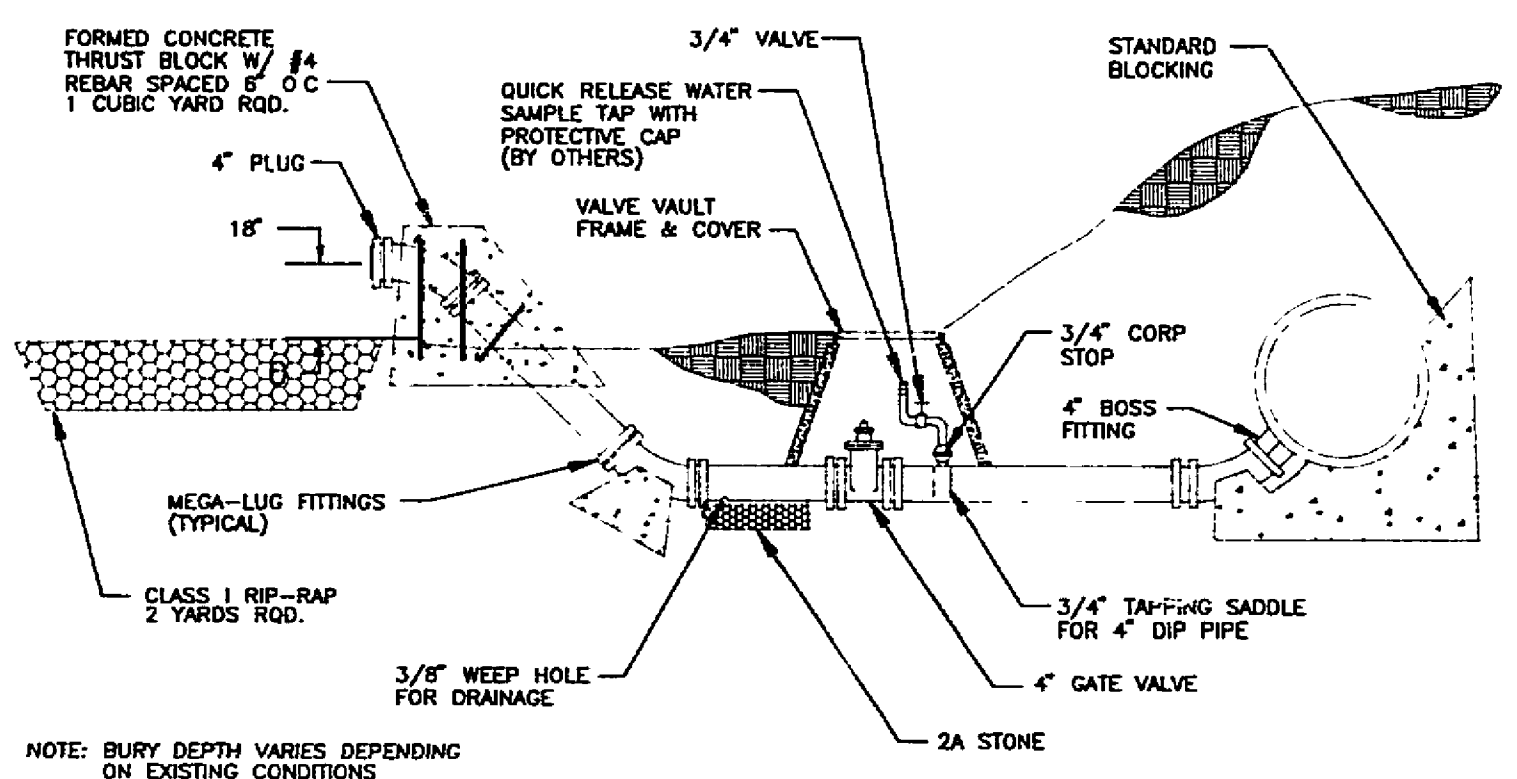
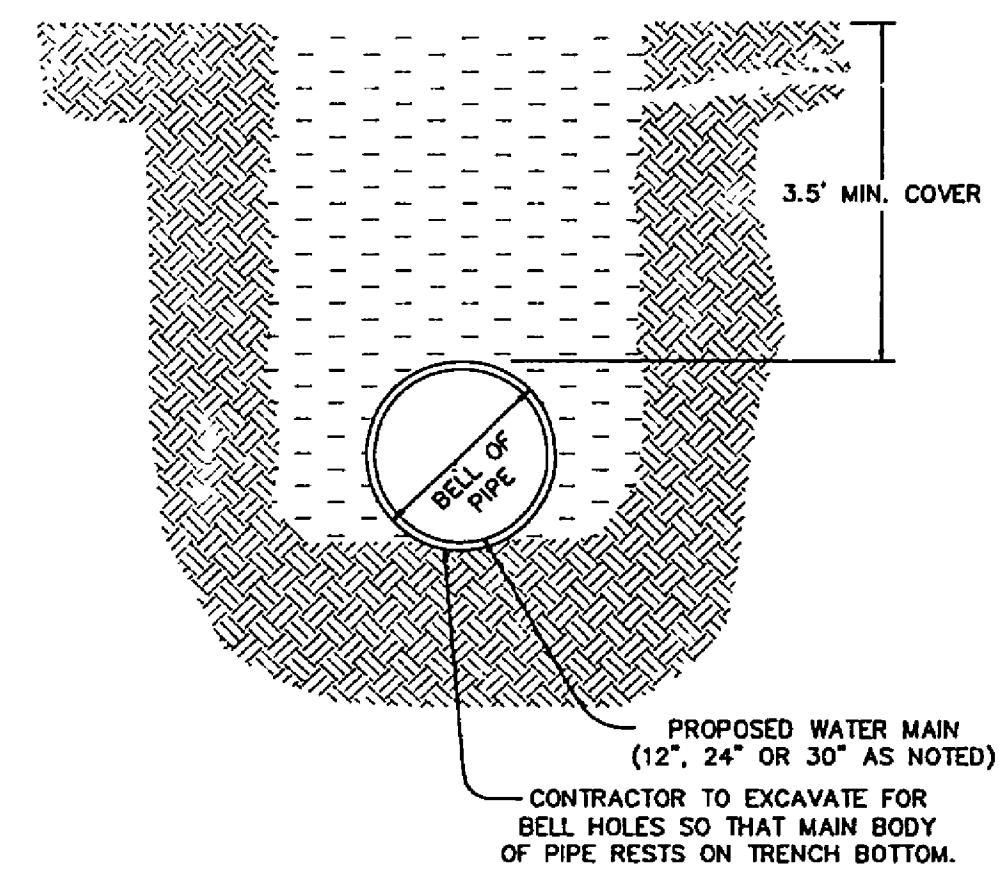
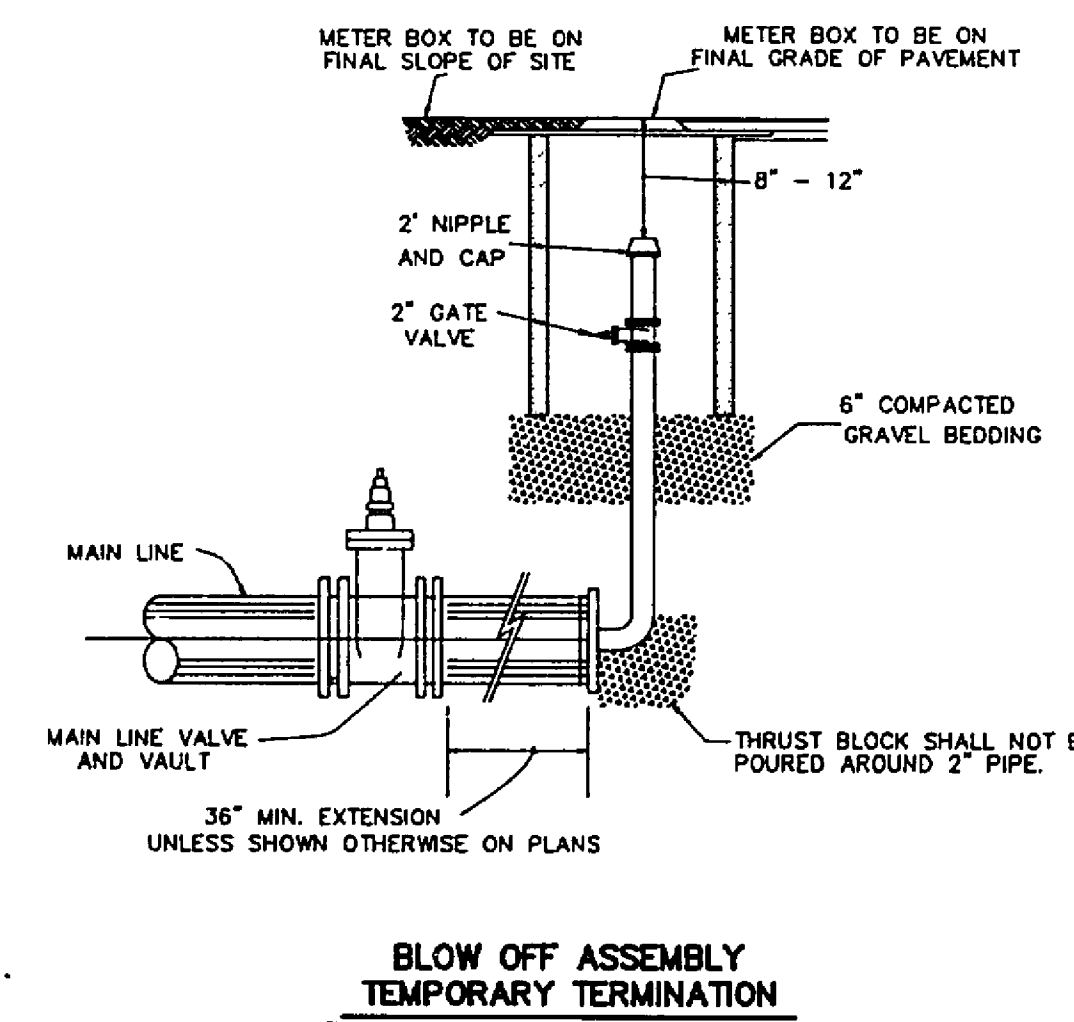
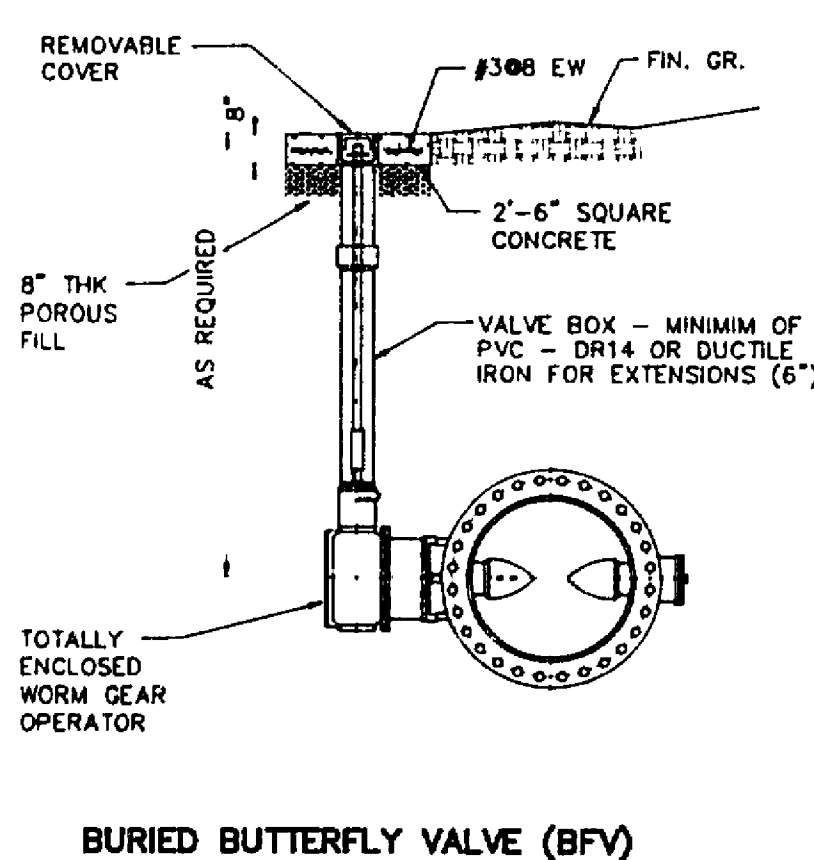
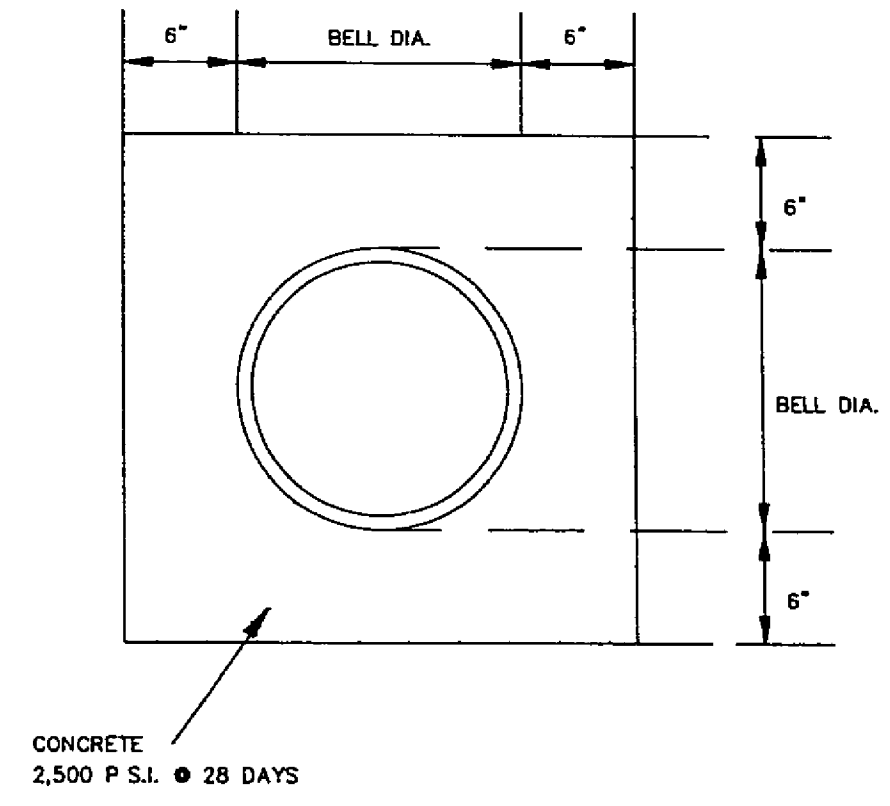
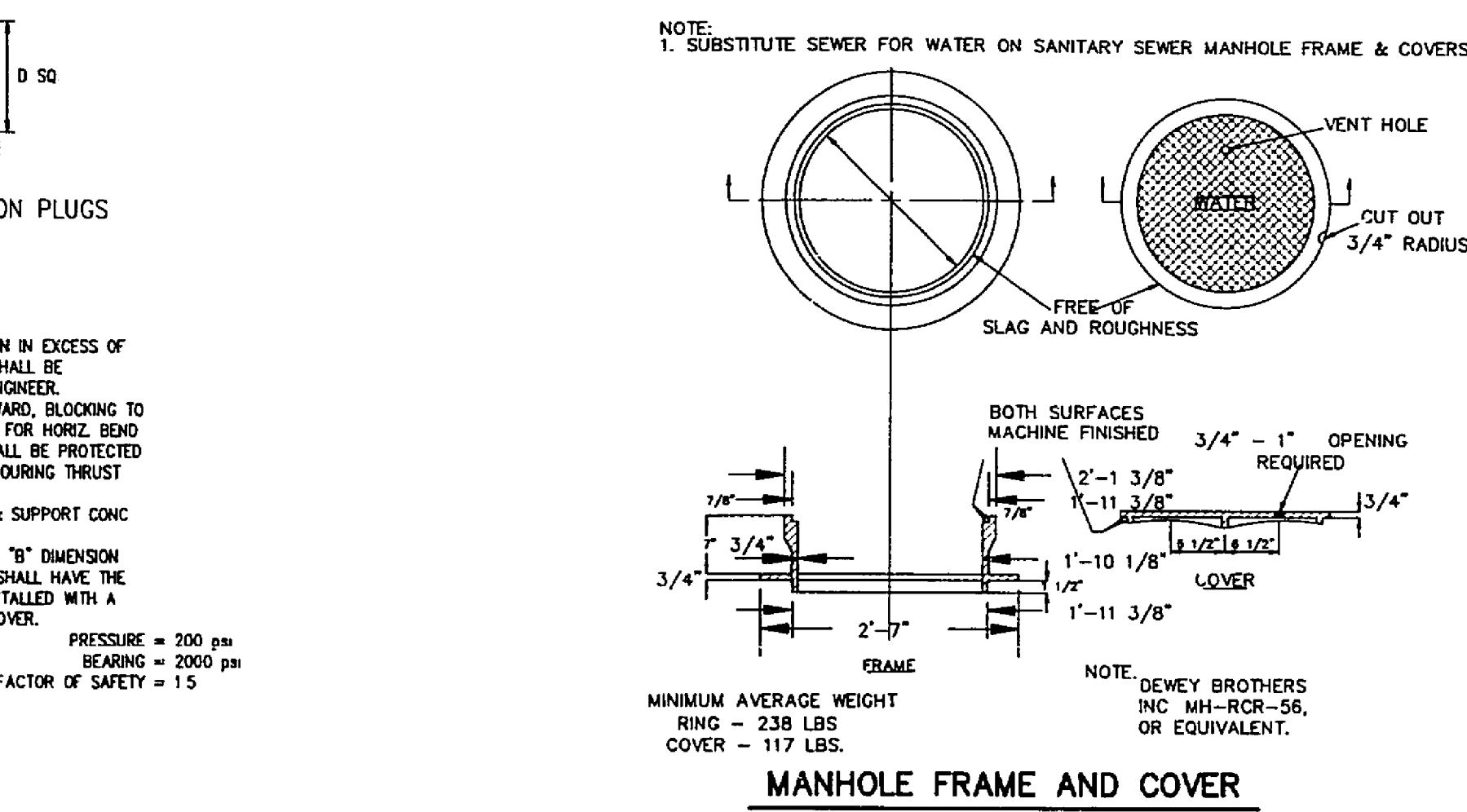
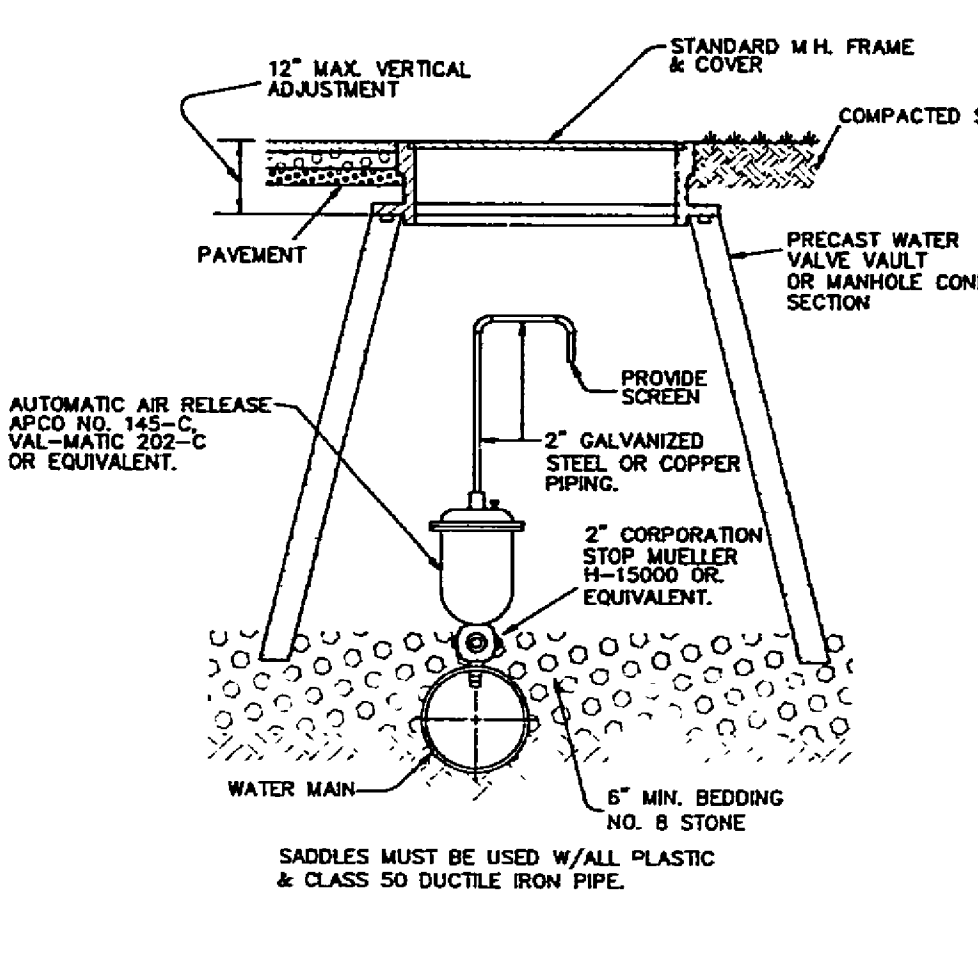
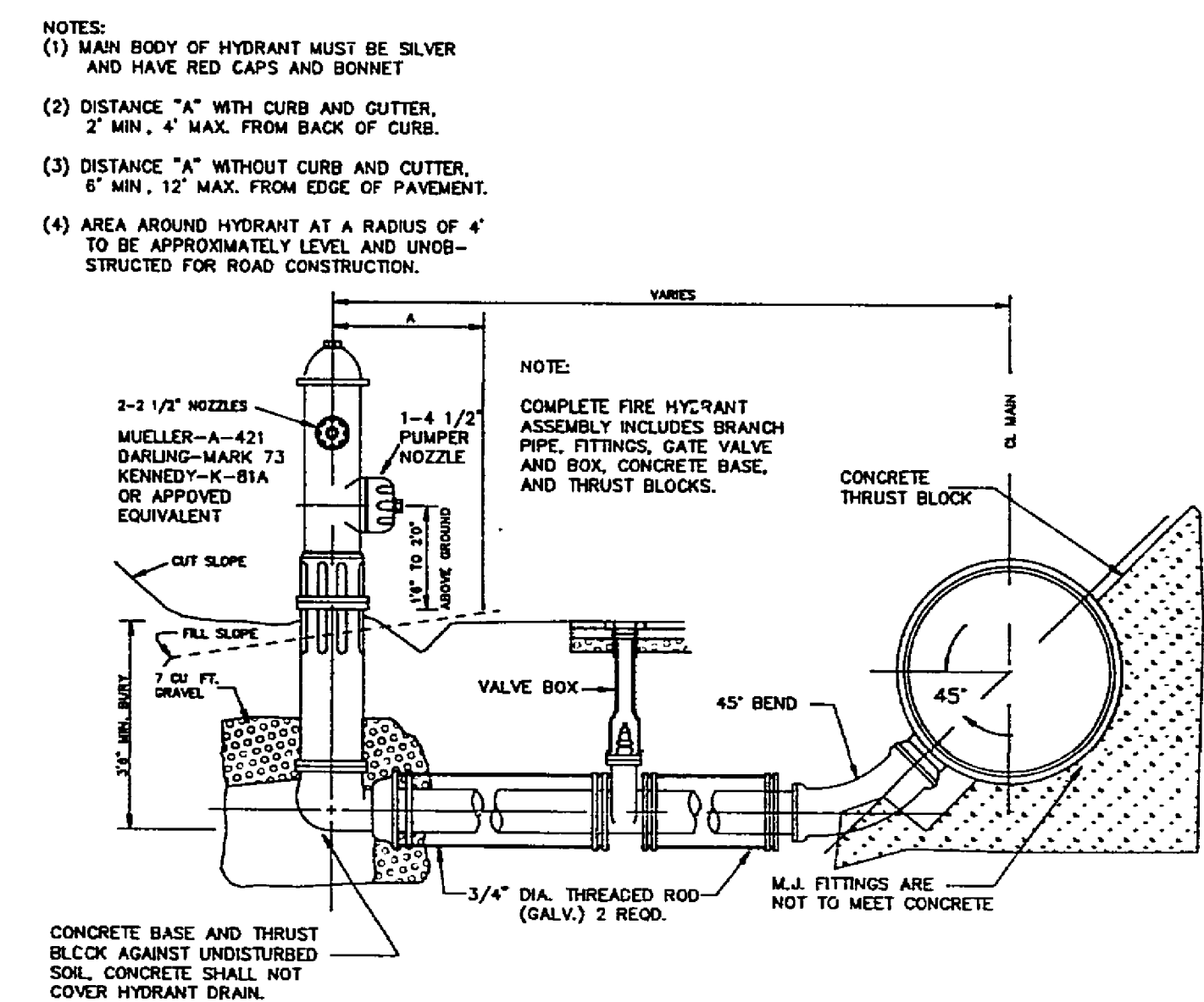


PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE	PLUG
4"	8"	8"	8"	8"	11"	10"
6"	12"	12"	12"	12"	11"	10"
8"	18"	18"	18"	18"	11"	12"
10"	24"	24"	24"	24"	11"	12"
12"	30"	30"	30"	30"	11"	12"
14"	36"	36"	36"	36"	11"	12"
16"	42"	42"	42"	42"	11"	12"
18"	48"	48"	48"	48"	11"	12"
20"	54"	54"	54"	54"	11"	12"
22"	60"	60"	60"	60"	11"	12"
24"	66"	66"	66"	66"	11"	12"
26"	72"	72"	72"	72"	11"	12"
28"	78"	78"	78"	78"	11"	12"
30"	84"	84"	84"	84"	11"	12"



- VAULT AND WATER STANDARDS FOR CONSTRUCTION**
1. VAULTS, MANHOLE BASES, RISERS, TAPERS AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE MANUFACTURED IN ACCORDANCE WITH VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, SECTION 503.
  2. MANHOLE BASE AND RISER SECTIONS CONSTRUCTION SHALL BE VERTICAL WITH MAXIMUM 1" IN 4' TILT.
  3. A MAXIMUM OF 2 CONSTRUCTION GRADE RINGS OR MAXIMUM OF 1' OF GRADE RINGS AND FRAME AND COVER ADJUSTMENT ARE ALLOWABLE.
  4. FINAL ADJUSTMENT OF FRAME AND COVER SHALL BE IN ACCORDANCE TO FRAME AND COVER ADJUSTMENT DETAIL USING NON SHRINK CONCRETE WITH MAXIMUM OF 4 BRICKS OR CONCRETE BLOCKS FOR GRADE CONTROL. FRAME AND COVER ARE TO BE SET AT FINISH GRADE OR 1/4" ABOVE FINISH GRADE IN PAVEMENT AND YARD AREAS AND MINIMUM 6" ABOVE FINISH GRADE IN DRAINAGE SWALES, VALLEY GUTTER, ETC.
  5. JOINTS AND OPENINGS IN MANHOLE UNITS SHALL BE MADE WATER TIGHT BY USING BUTYL SEALANTS, "O" RING GASKETS OR MASTIC. THE CONCRETE SURFACE SHALL BE CLEANED PRIOR TO USE OF SEALANT.
  6. FRAME AND COVERS
    - A) DEWEY BROTHERS INC. MH - RCR - 56.
    - B) APPROVED EQUAL.
  7. ALL LIFT HOLES, OPENINGS AROUND PIPE, ETC. SHALL BE FILLED FROM INSIDE AND OUTSIDE TO THICKNESS OF STRUCTURE.
  8. ALL UNITS USED IN MANHOLE AND VAULT CONSTRUCTION SHALL BE SECURELY CONNECTED BY INTERLOCKING BETWEEN UNITS, CONCRETE COLLARS OR OTHER APPROVED METHODS.
  9. AREA AROUND METER BOX AT A RADIUS OF 4' TO BE ON FINISH GRADE AND UNOBSTRUCTED EXCEPT FOR ROAD CONSTRUCTION.



REVISION	DATE	DESCRIPTION
DESIGNED - GLR		WATER DETAILS FOR PHASE 6
DRAWN - MDH		SOUTH LOOP TRANSMISSION MAIN
CHECKED - MSW		PREPARED FOR ROANOKE COUNTY UTILITY DEPARTMENT
		CAVE SPRING, WINDSOR HILLS, & CATAWBA MAGISTERIAL DISTRICTS
		ROANOKE COUNTY, VIRGINIA
		LUMSDEN ASSOCIATES, P.C. ENGINEERS-SURVEYORS-PLANNERS ROANOKE, VIRGINIA
		SCALE: NONE COMM: 91-376
		DATE: 4/20/95 SHEET 13 of 14

