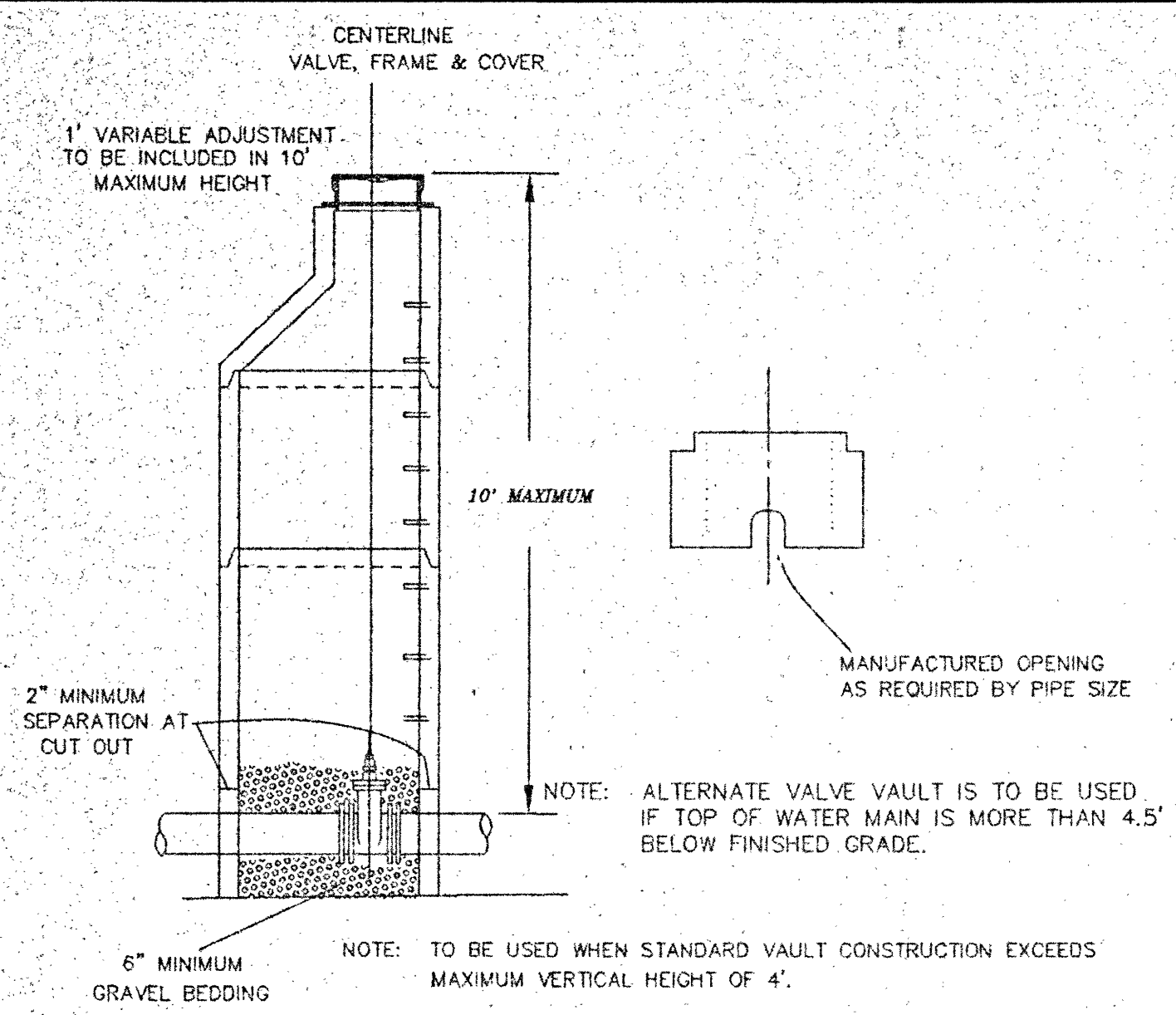
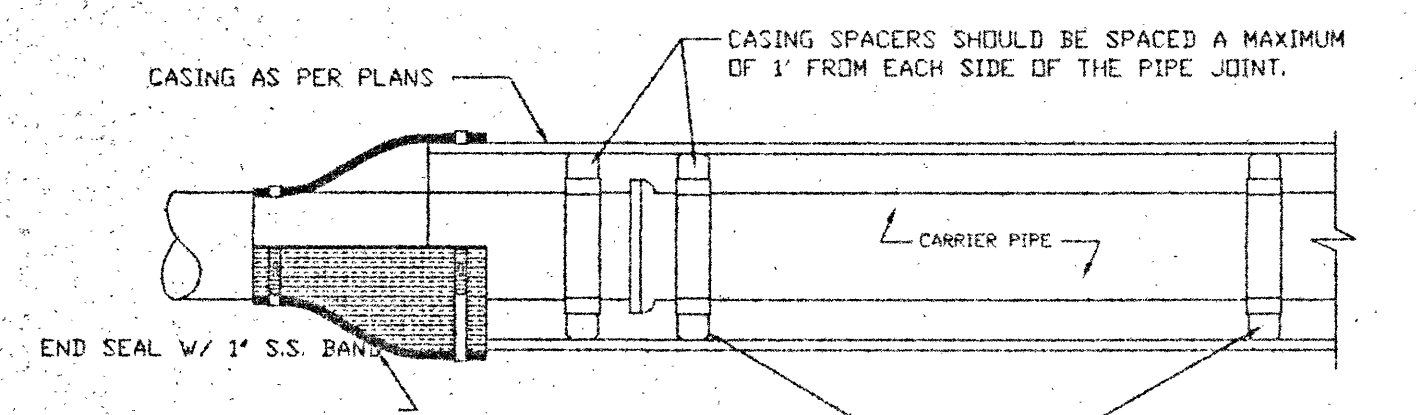
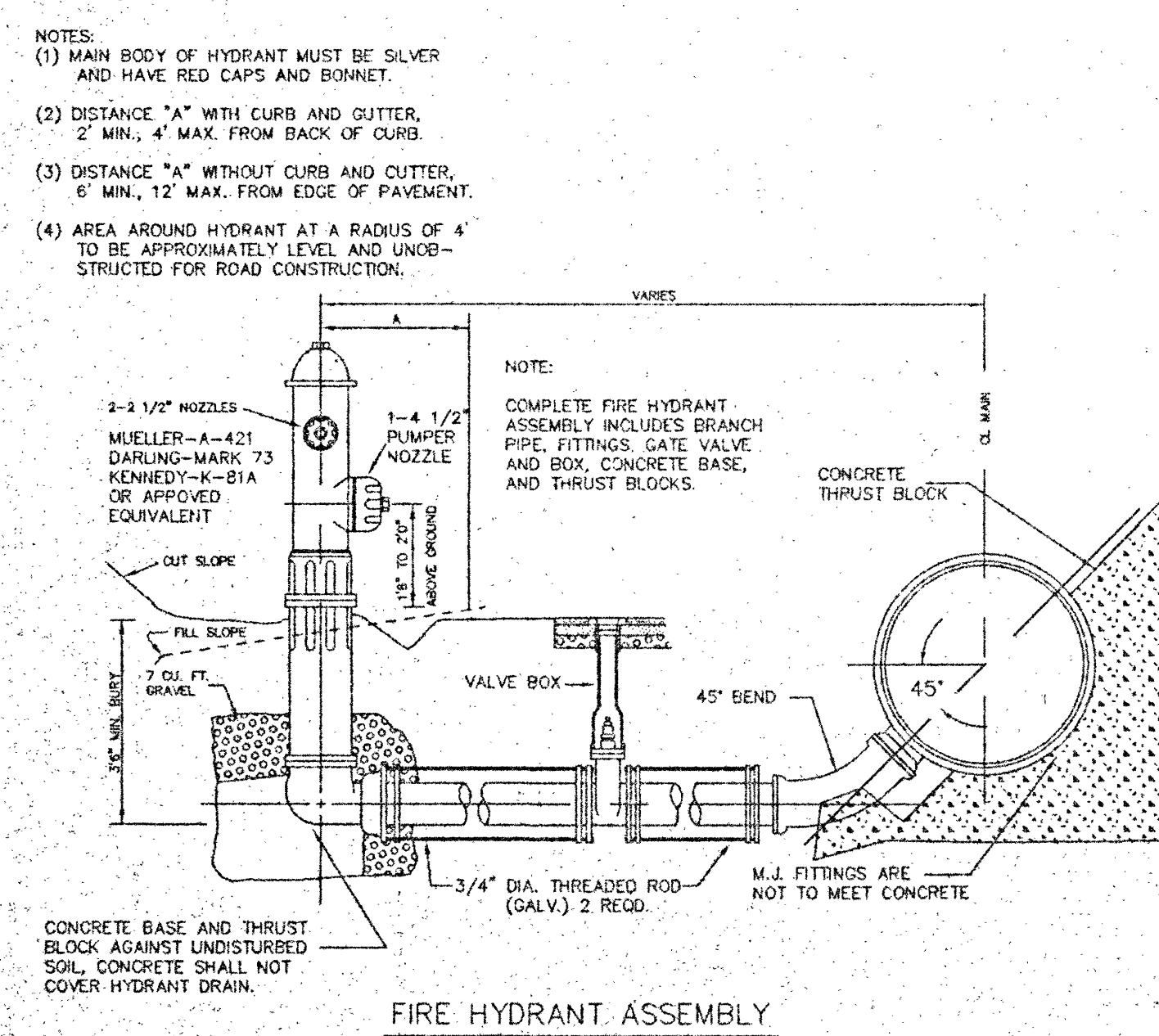




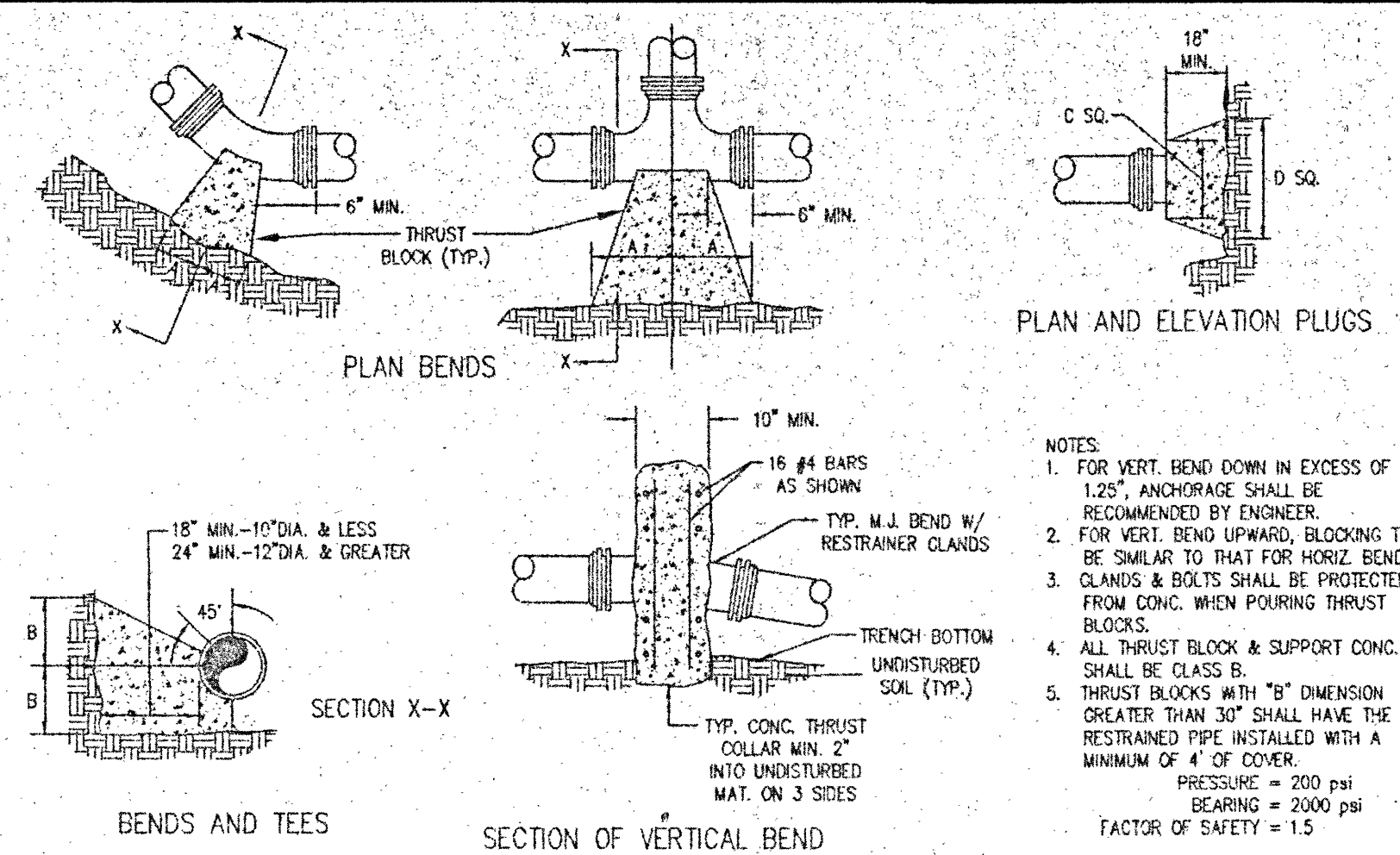
ALTERNATE VALVE VAULT (MANHOLE)



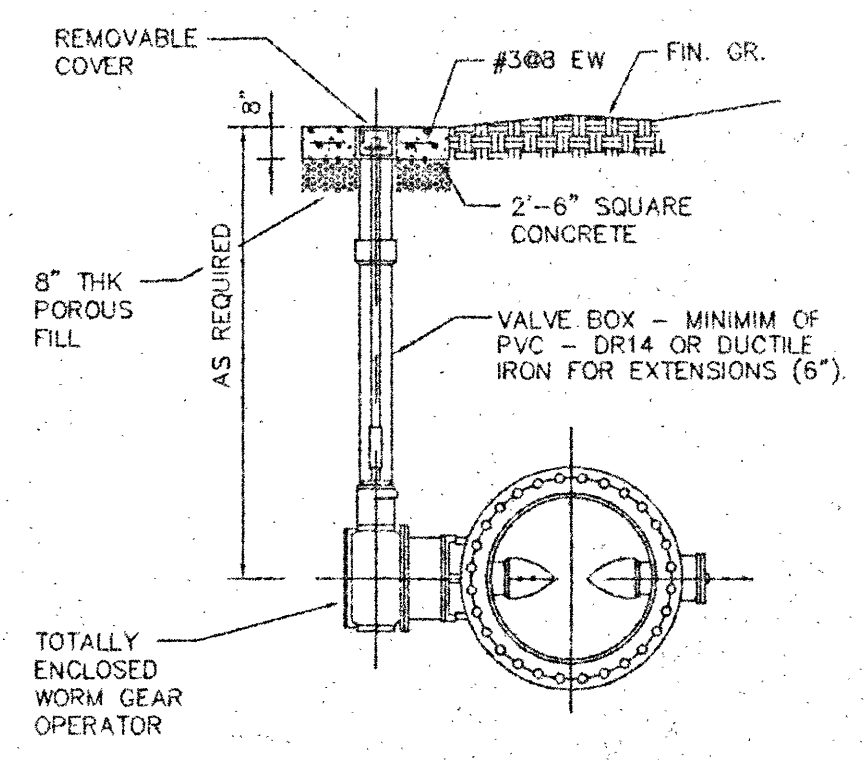
PIPE SUPPORTS IN CASING PIPE



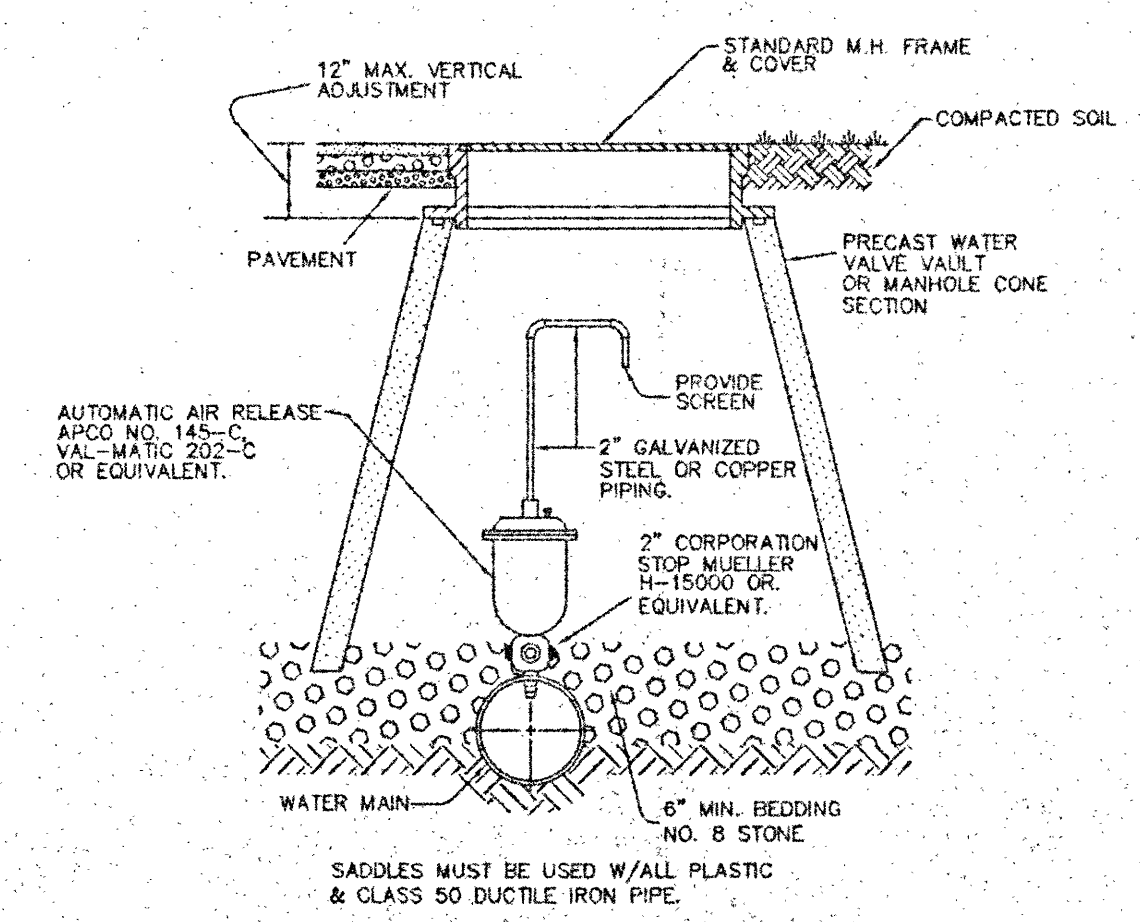
FIRE HYDRANT ASSEMBLY



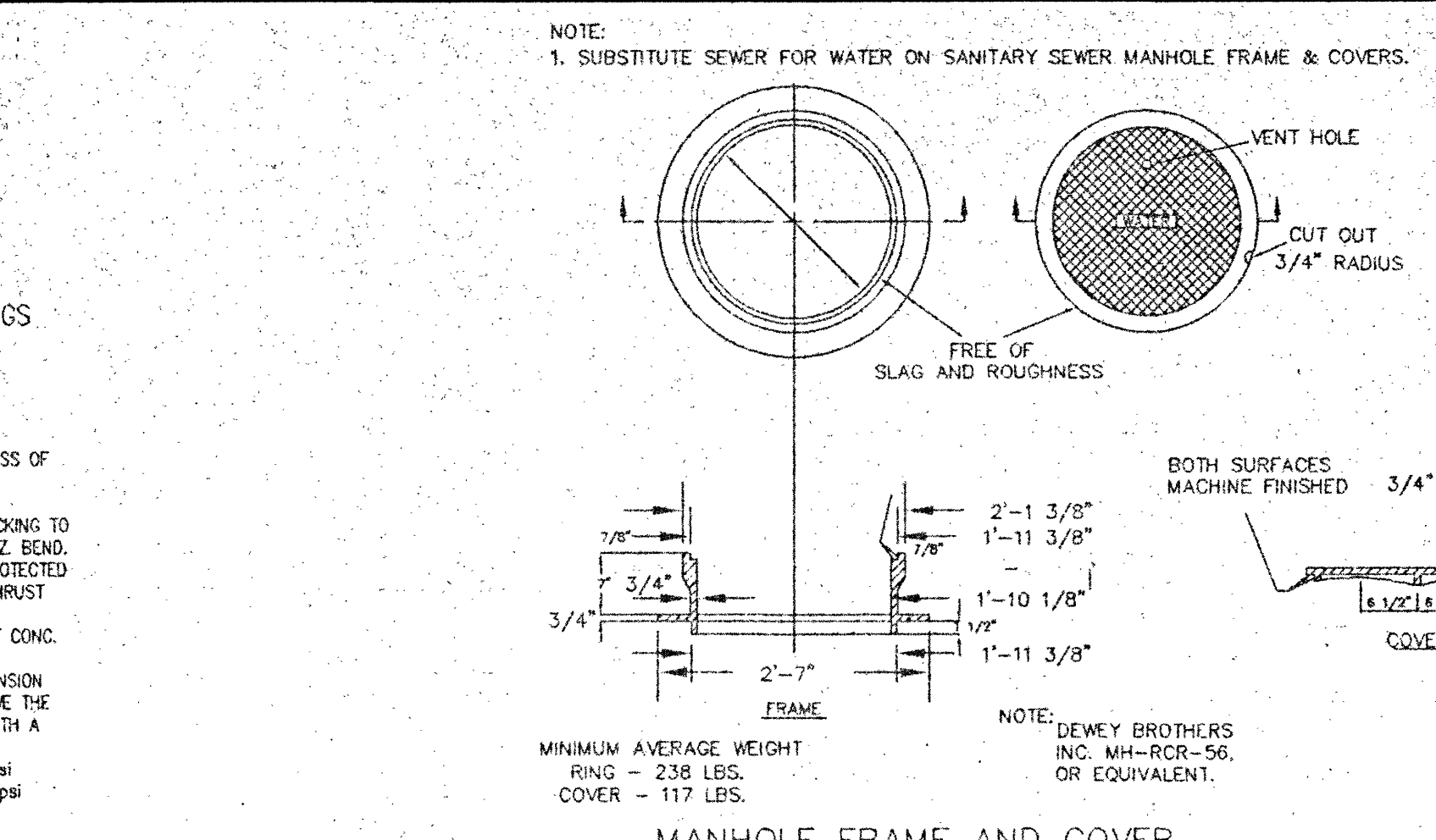
THRUST BLOCK CONSTRUCTION



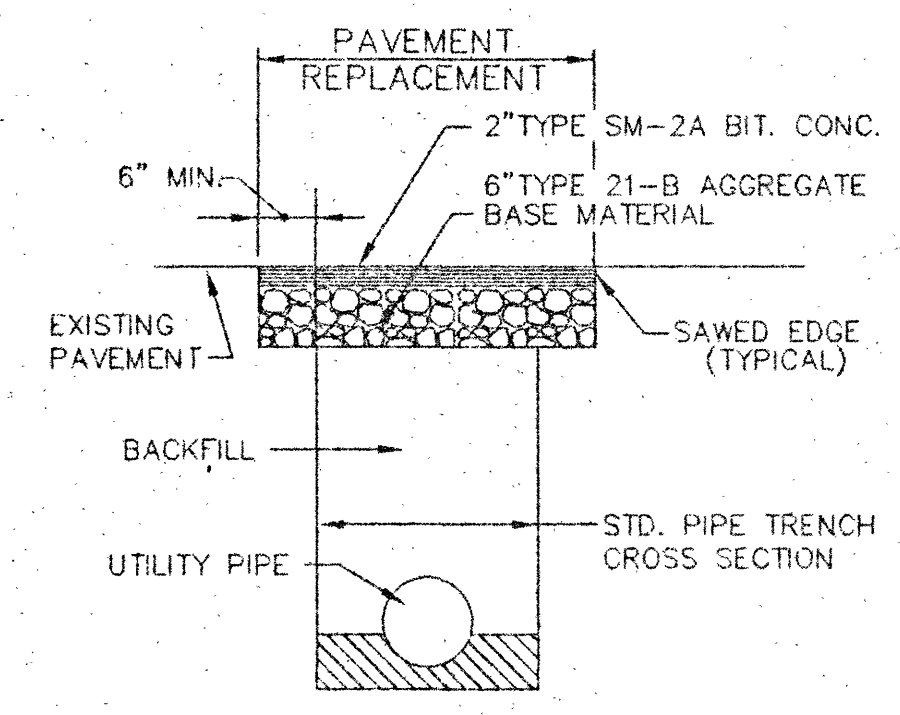
BURIED BUTTERFLY VALVE (BFV)



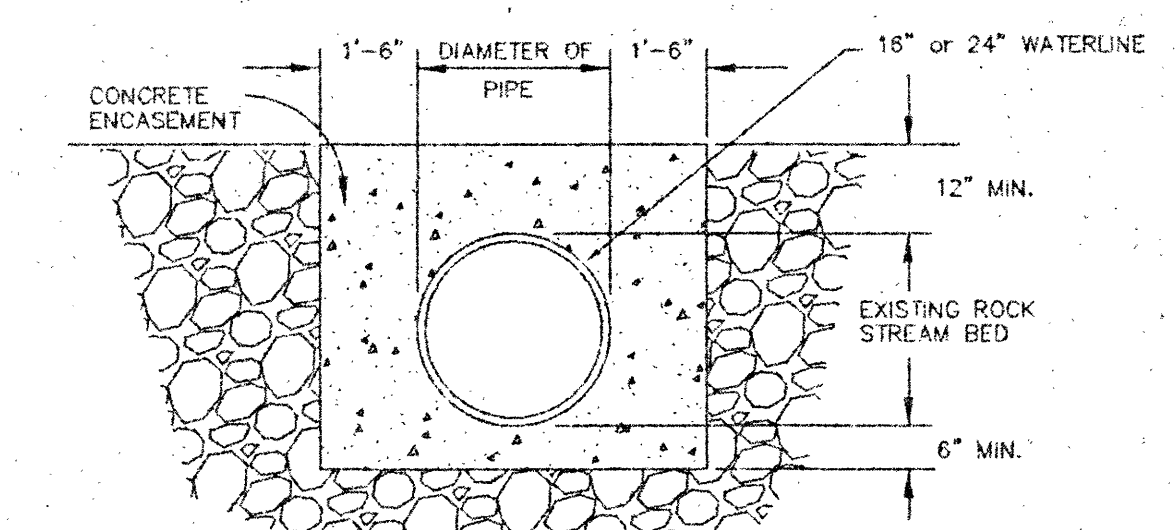
AUTOMATIC AIR RELEASE ASSEMBLY



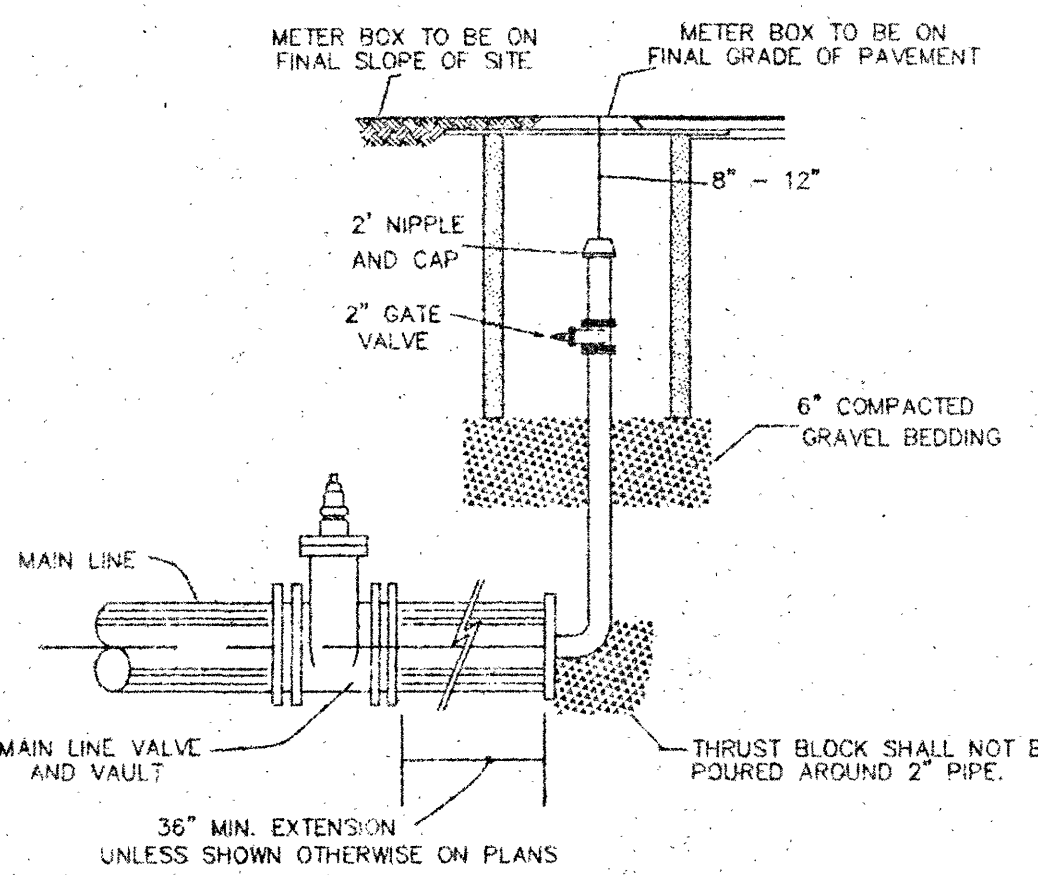
MANHOLE FRAME AND COVER



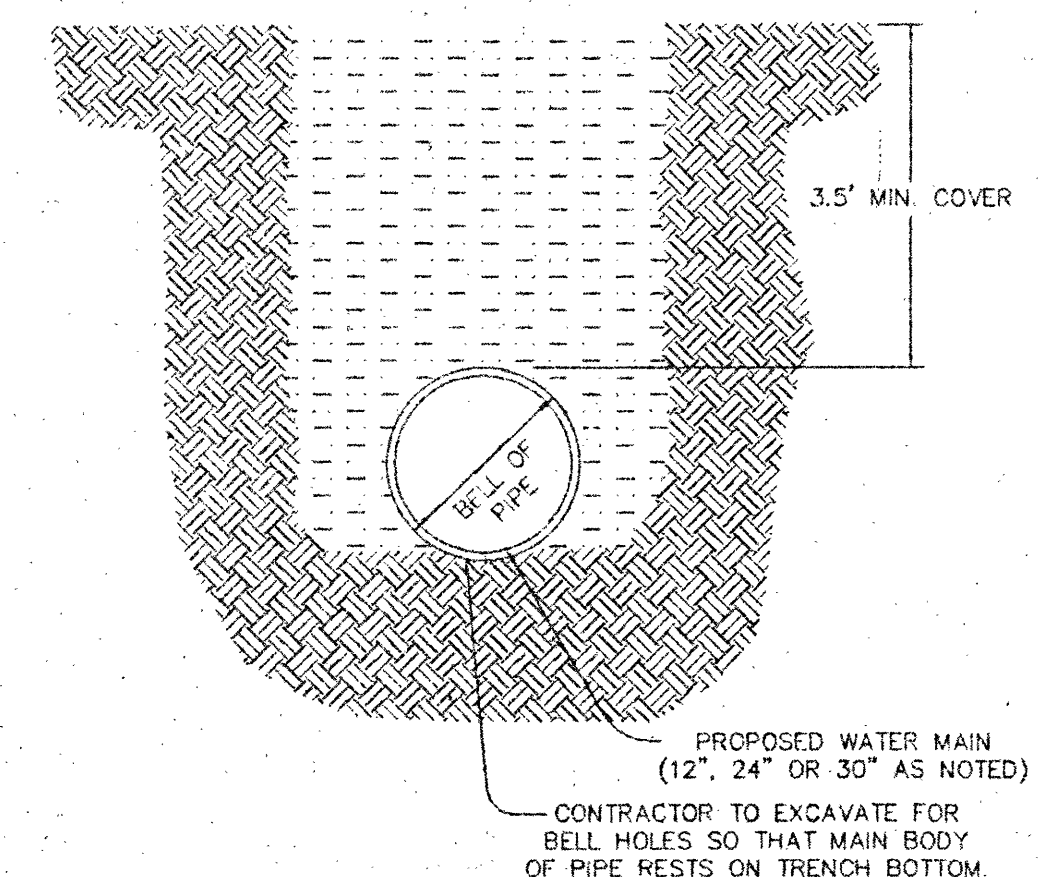
PAVEMENT REPLACEMENT



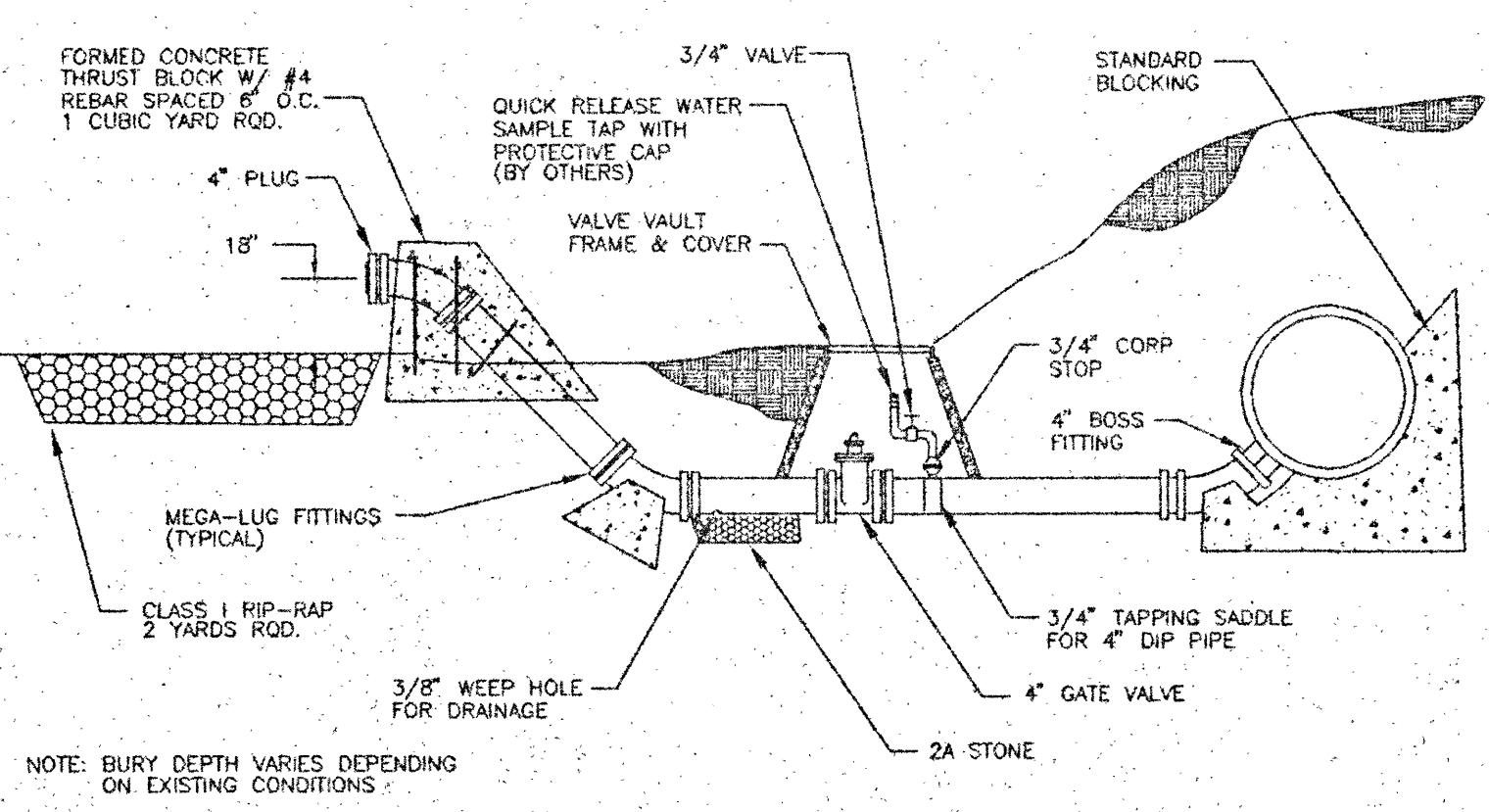
STREAM CROSSING DETAIL



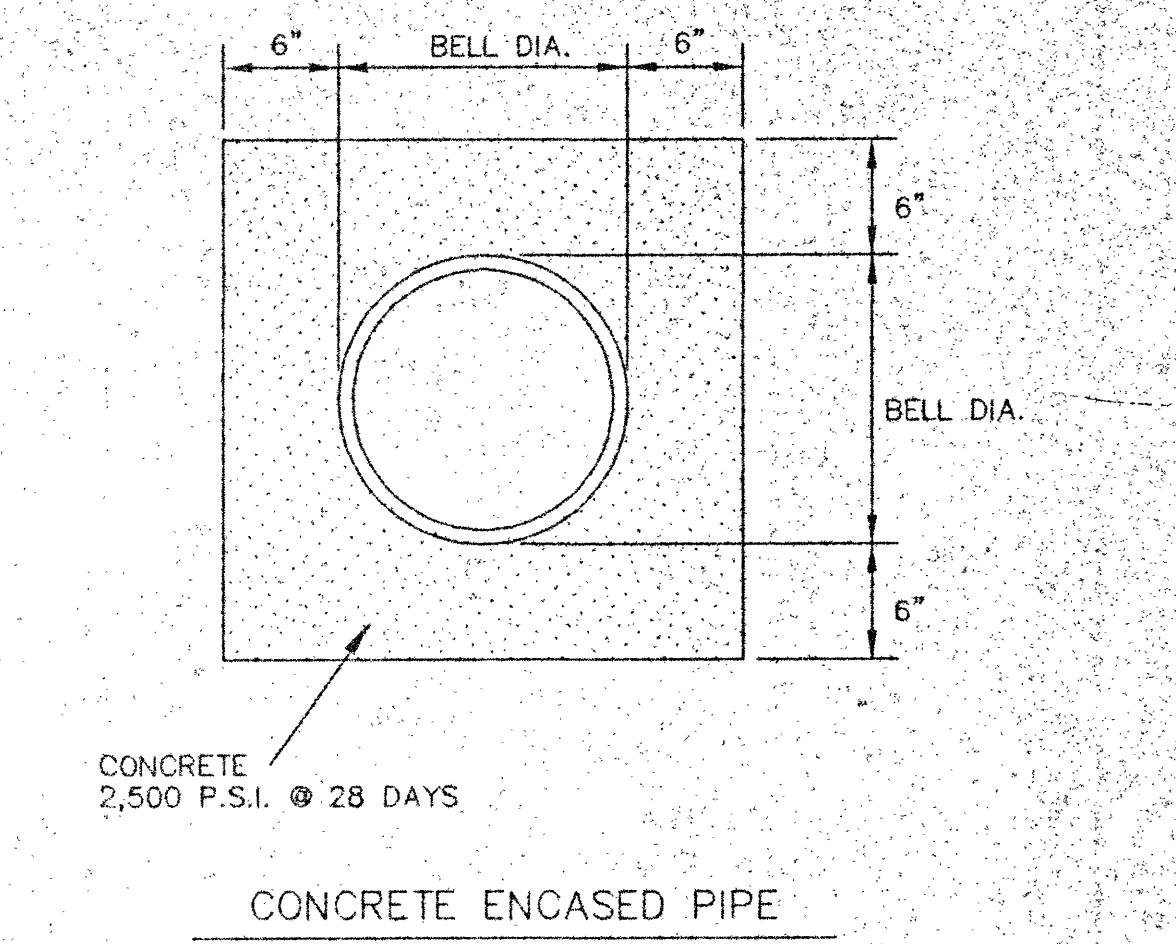
BLOW OFF ASSEMBLY
TEMPORARY TERMINATION



WATER MAIN INSTALLATION



FLUSH TYPE BLOW OFF



CONCRETE ENCASED PIPE

- 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 OTHER AREAS. MANHOLE FRAMES AND COVERS ARE NOT TO BE SET IN DRAINAGE SWALE, VALLEY GUTTER, ETC.
 5. JOINTS AND OPENINGS IN MANHOLE UNITS SHALL BE MADE WATER TIGHT BY USING BUTYL SEALANTS, 10" 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.

- APPROVED MATERIALS
1. METER BOXES
 - A) FORD IRONCONCRETE METER BOX WITH NO. 2 IRONCONCRETE TOP OR APPROVED EQUAL.
 - B) SOUTHEASTERN DISTRIBUTOR MODEL MB-5 PLASTIC BOX WITH FORD OR CHARLOTTE MODEL C-32 CAST IRON BASE AND COVER (NOT APPROVED FOR ROADWAY AREA).
 - C) APPROVED EQUAL.
 2. METER SETTER (INCLUDING INLET RISER VALVE AND DOUBLE CHECK VALVE ON OUTLET)
 - A) FORD VEH 72-15-WD.
 - B) APPROVED EQUAL.
 3. METER SETTER EXTENDER OR RISER
 - A) NOT ALLOWED UNLESS APPROVED BY THE UTILITY DIRECTOR.
 4. CORPORATION STOP
 - A) MUELLER MODEL H-1500
 - B) FORD MODEL F-600
 - C) APPROVED EQUAL.
 5. U-BRANCH
 - A) FORD MODEL U28-43
 - B) MUELLER MODEL H 15362
 - C) APPROVED EQUAL.
 6. SERVICE SADDLES (FOR PVC PIPE)
 - A) FORD MODEL FS 202 AND FC 202 WITH STAINLESS STEEL BAND AND BOLTS.
 - B) APPROVED EQUAL.

WATER DETAILS
FOR
NORTH LOOP WATER TRANSMISSION MAIN
PHASE 1
FOR
THE COUNTY OF ROANOKE
SITUATE CATAMBA MAGISTERIAL DISTRICT
COUNTY OF ROANOKE, VIRGINIA

SCALE: AS SHOWN DATE: JANUARY 5, 1996

DESIGNED BY _____
DRAWN BY _____
CHECKED BY _____
W.O. # 92-1077
N.B. _____
TAX NO. _____

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