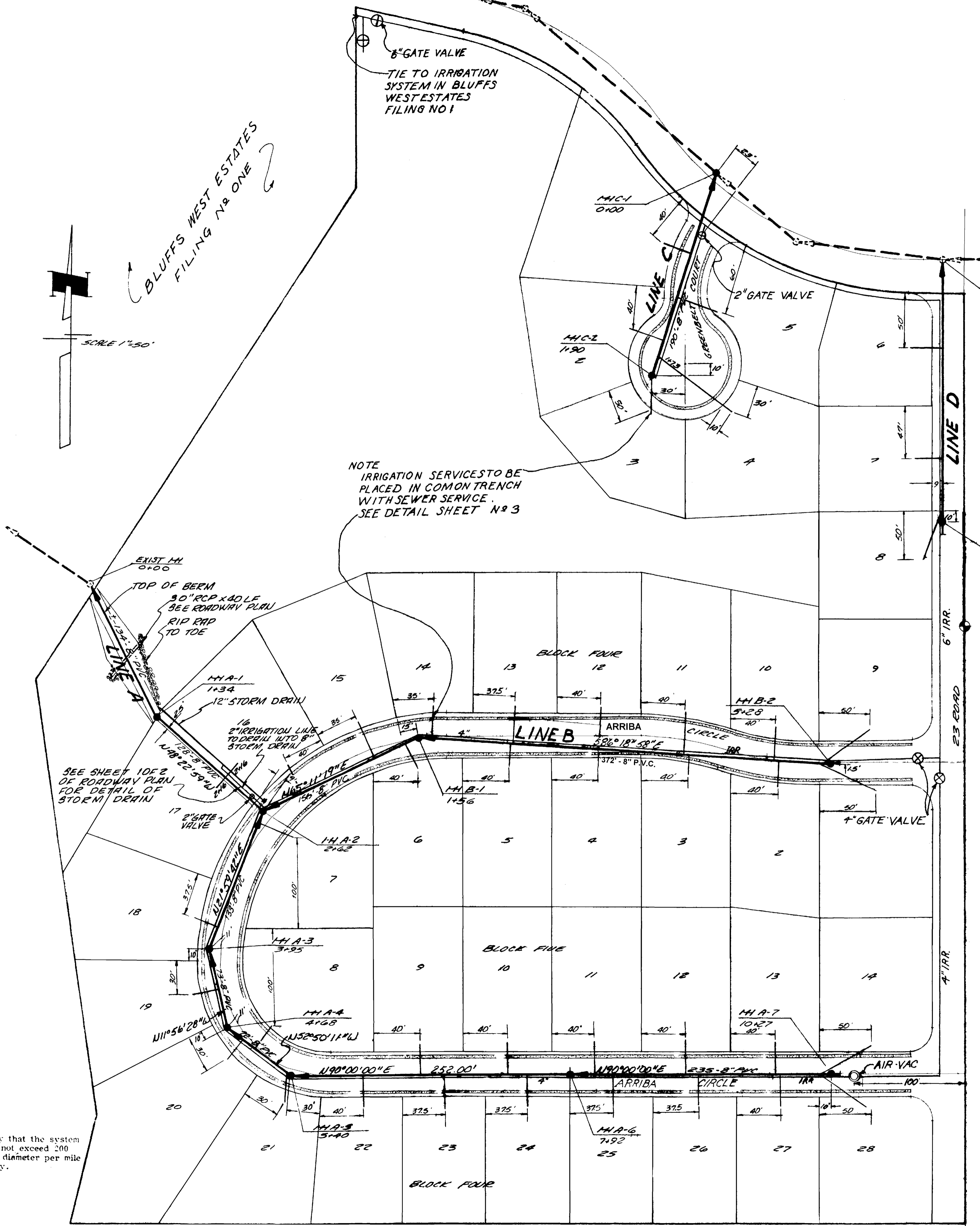


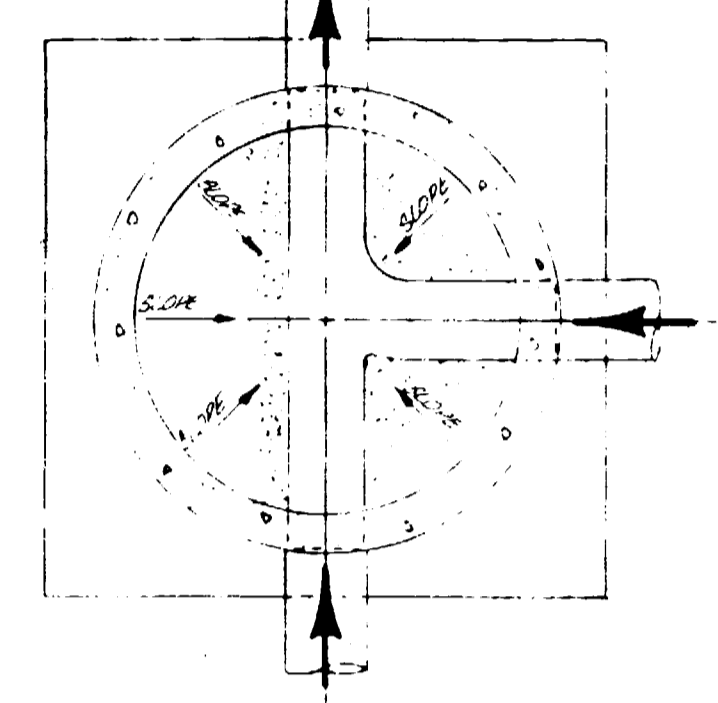
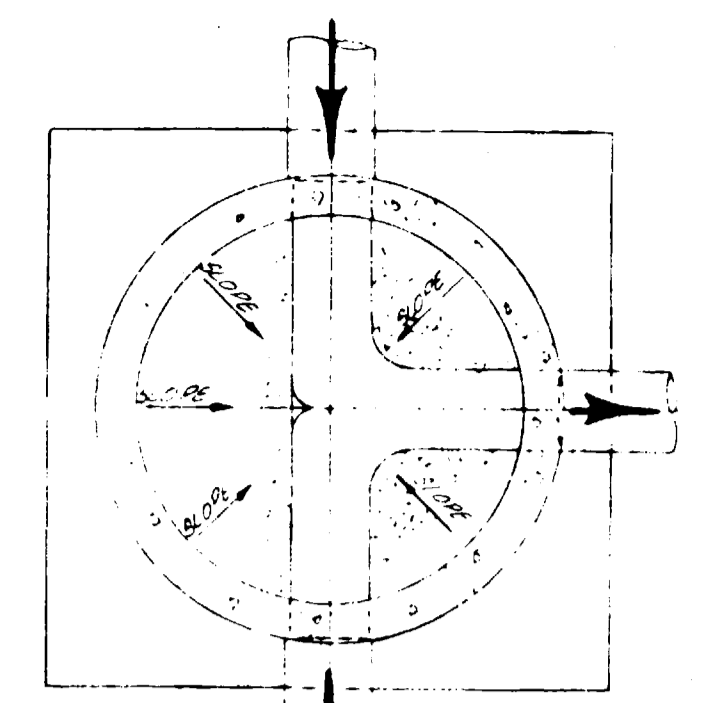
BLUFFS WEST ESTATES
FILING NO ONE

8" GATE VALVE
TIE TO IRRIGATION SYSTEM IN BLUFFS WEST ESTATES FILING NO 1

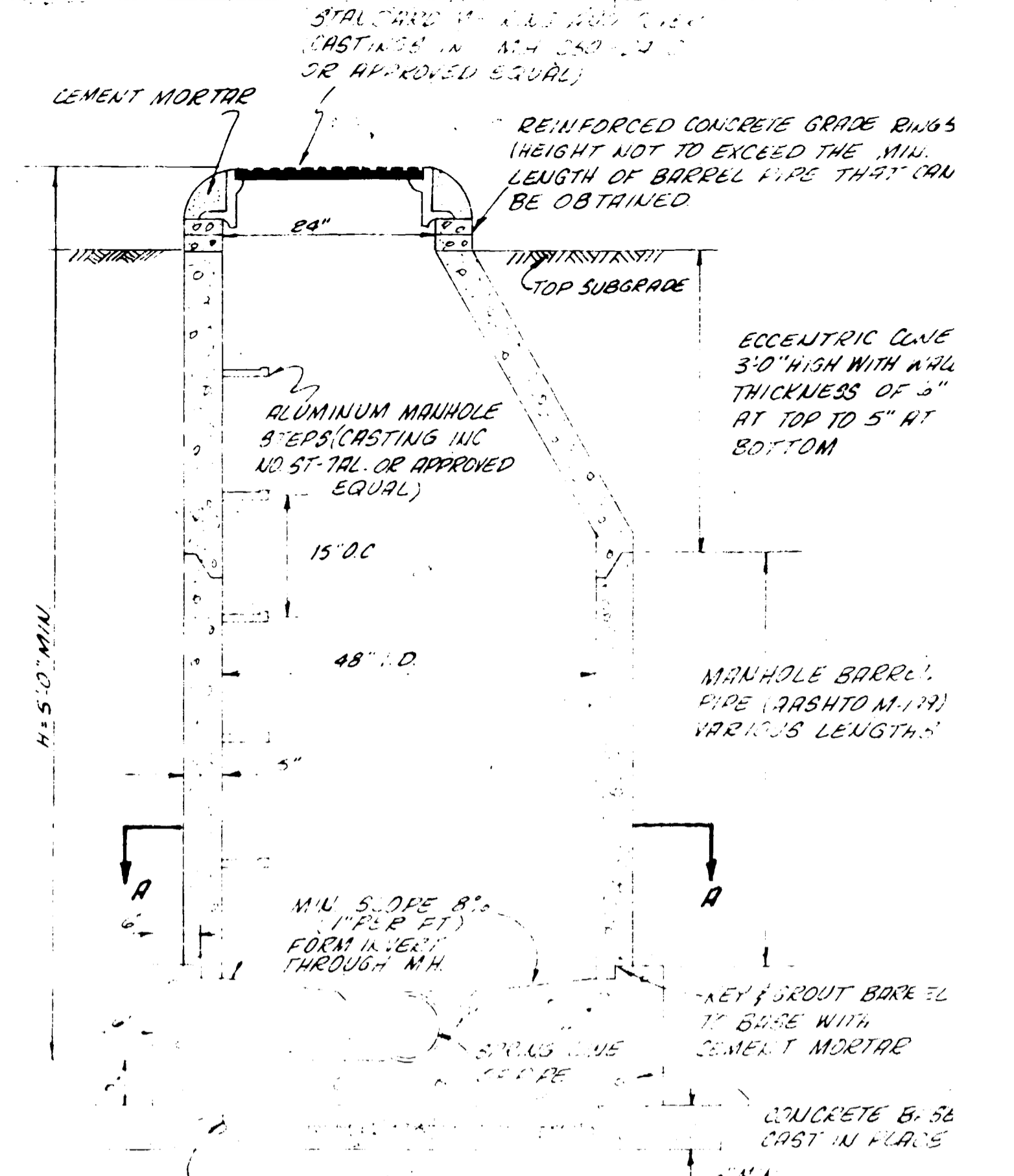
NOTE
IRRIGATION SERVICES TO BE PLACED IN COMMON TRENCH WITH SEWER SERVICE. SEE DETAIL SHEET NO 3



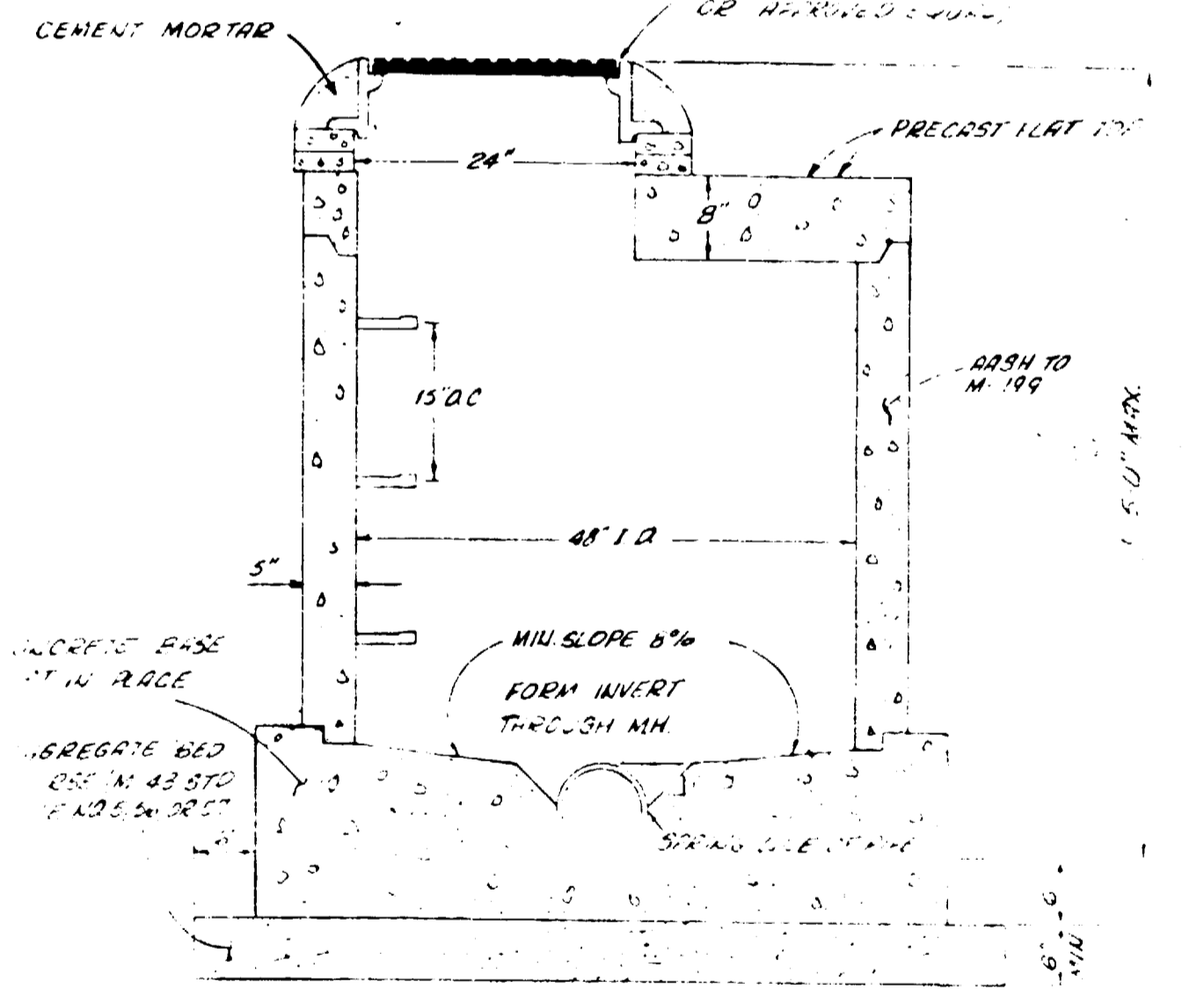
NOTE:
This is to certify that the system infiltration does not exceed 200 gallons per inch diameter per mile of length per day.



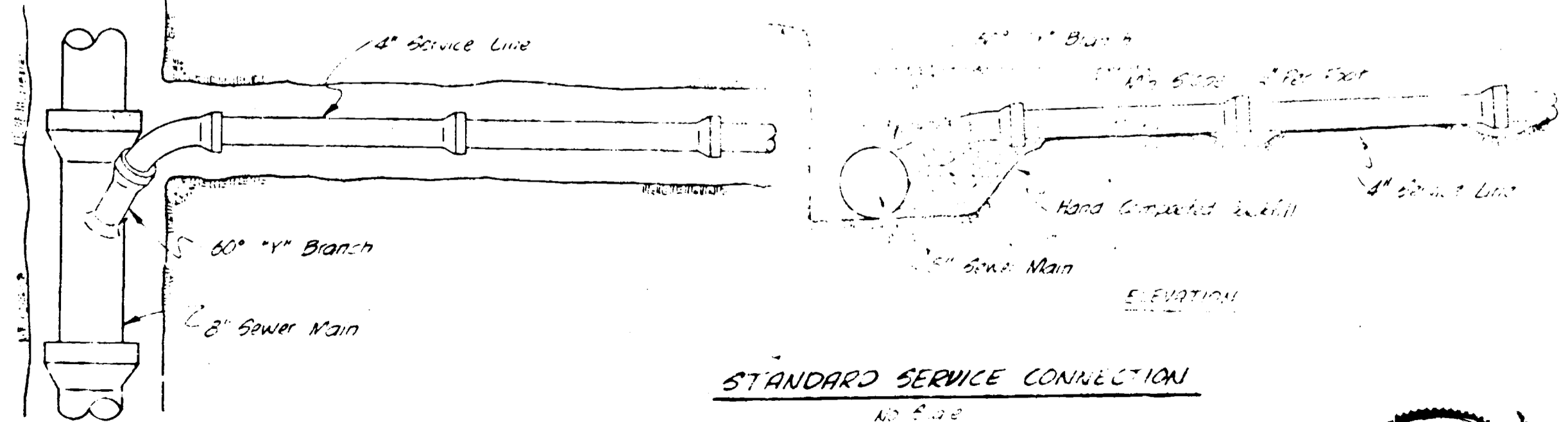
SECTION "A-A"



STANDARD MANHOLE



STANDARD SHALLOW MANHOLE



STANDARD SERVICE CONNECTION

- NOTES
1. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE CITY OF GRAND JUNCTION SPECIFICATIONS.
 2. TOP OF ECCENTRIC CONE TO BE SET @ TOP OF SUBGRADE (STREET CONTRACTOR TO SET EIMS TO FINISH GRADE OF STREETS).
 3. SERVICE LINES ARE INTENDED TO BE LOCATED CENTER OF LOTS OR AS SHOWN ON PLANS AND EXTEND 10' BEYOND PROPERTY LINE.
 4. ALL IRRIGATION LINE AND SERVICES TO BE LAID IN COMMON TRENCH WITH SANITARY SEWER UNLESS OTHERWISE SPECIFIED.
 5. ALL IRR PIPE IS CLASS 160 PVC UNLESS OTHERWISE SPECIFIED
 6. AIR/VACS ARE TYPE 1 UNLESS OTHERWISE SPECIFIED

QUANTITIES

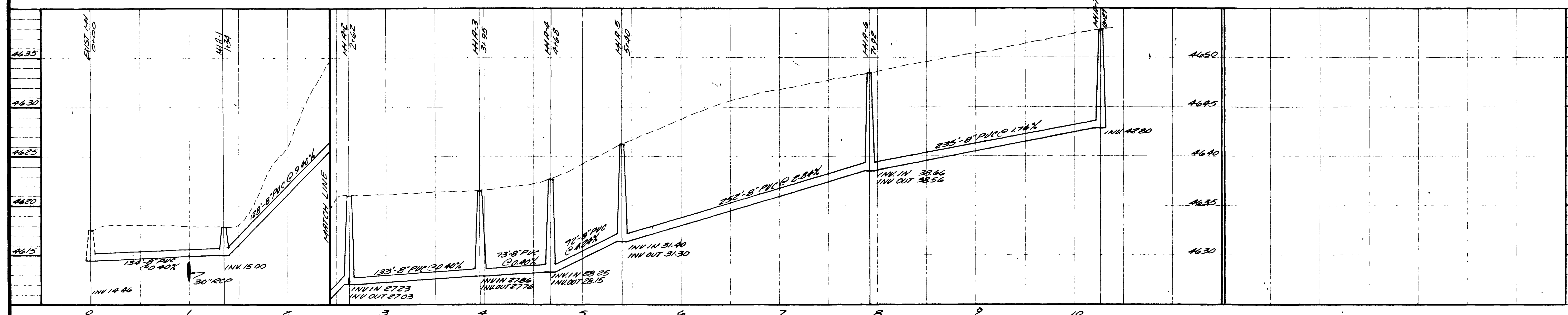
| | |
|------------------------|-----------|
| MANHOLES | 12 |
| 8" PVC | 1980 L.F. |
| 4" SERVICE CONNECTIONS | 42 |

LEGEND

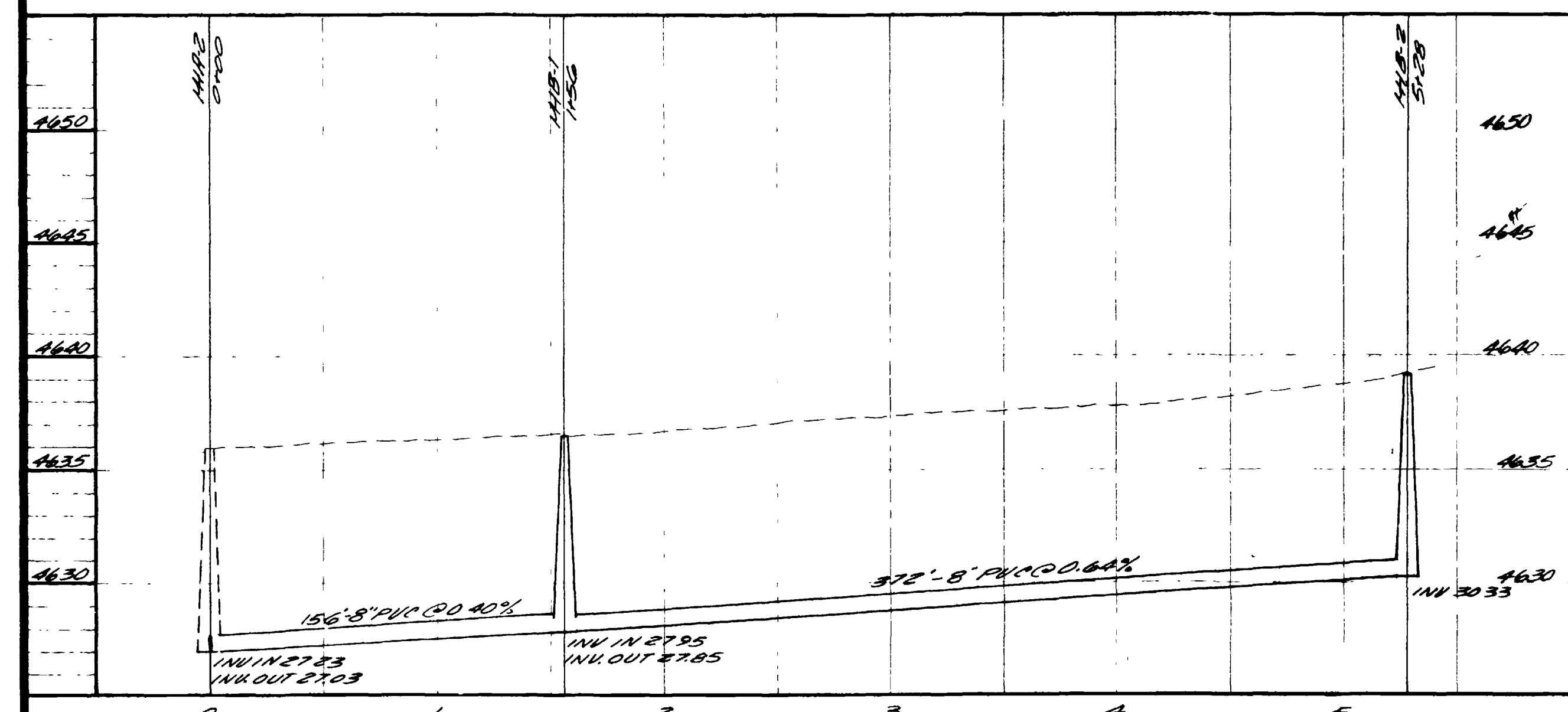
- MANHOLES & 8" SEWER LINE
- IRR. — IRRIGATION LINE

AS BUILT DRAWINGS

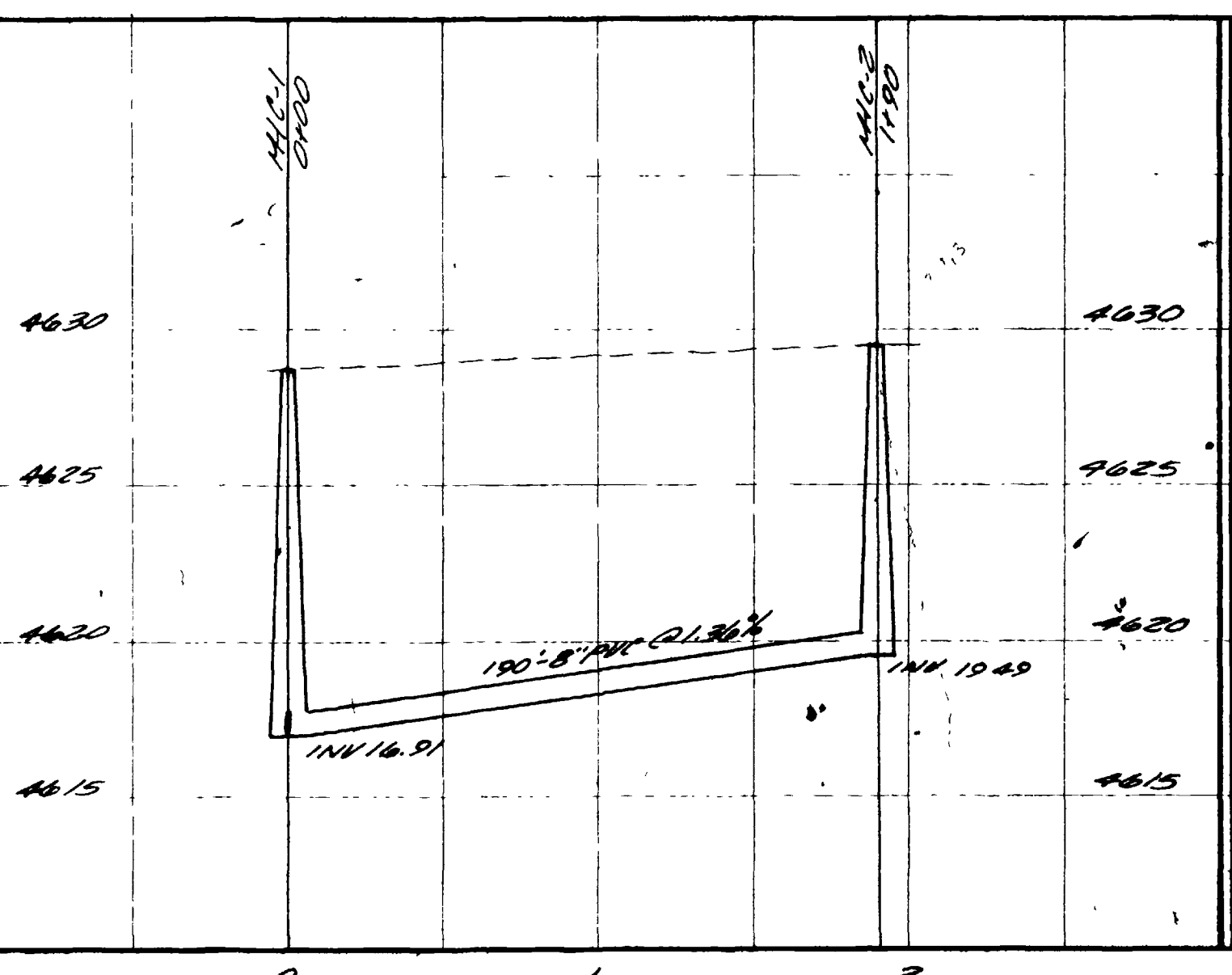




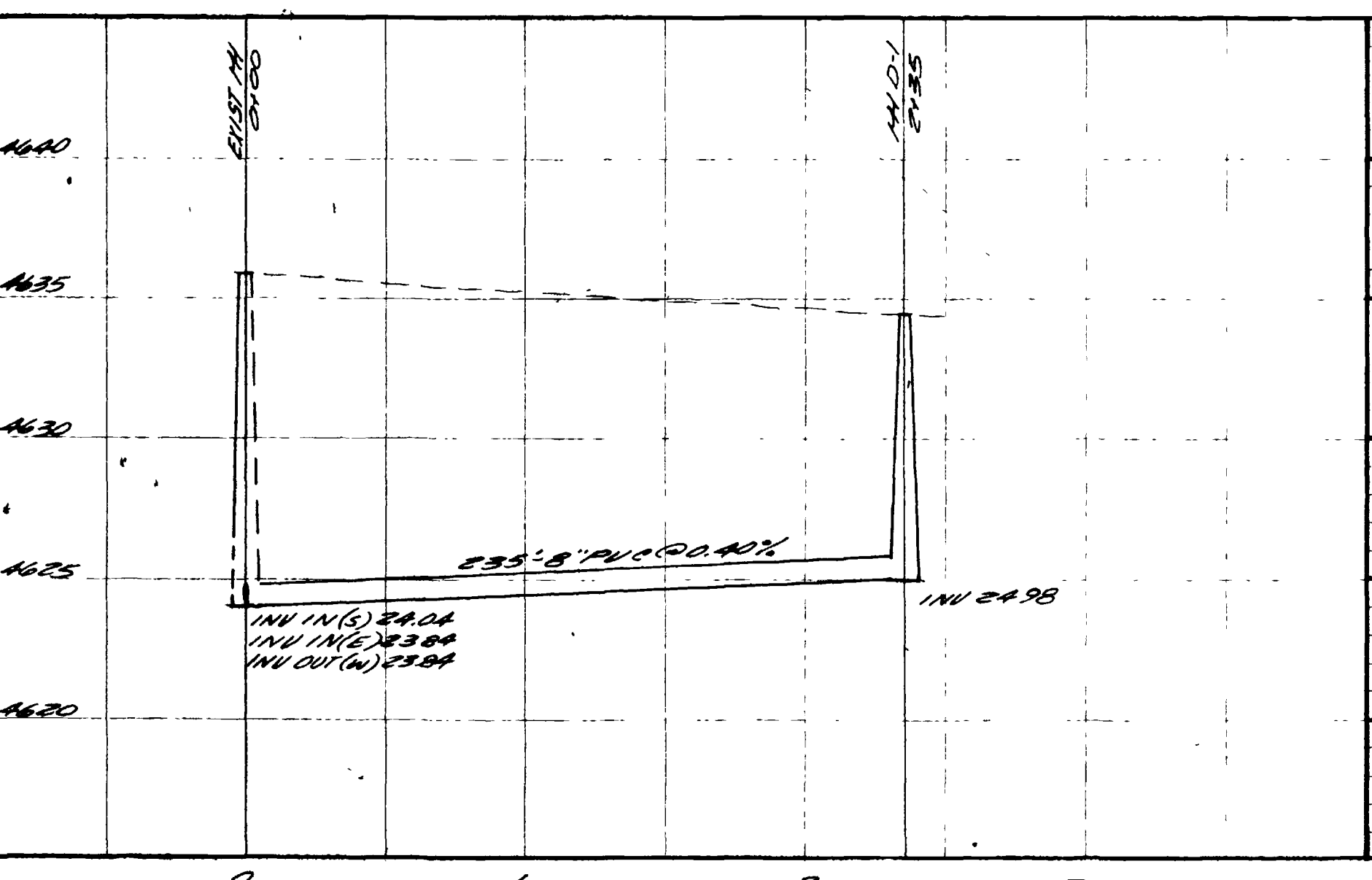
LINE A



LINE B

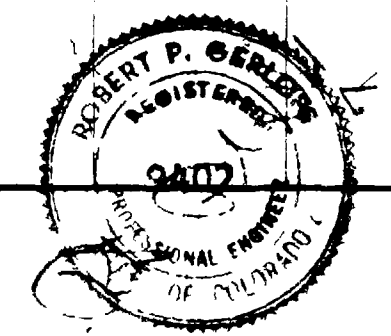


LINE C



LINE D

PARAGON ENGINEERING, INC.
 Engineering Consultants
 P.O. BOX 2872 • GRAND JUNCTION, COLORADO • 81501 • PHONE 243-8866
 DATE: JULY 1978
 SCALE: HORIZ. 1"=50'
 VERT. 1"=5'
 THE BLUFFS WEST ESTATES
 FILING NO. 2
 MESA COUNTY, COLORADO
 SANITARY SEWER
 PLAN & DETAILS
 SHEET
 2
 OF 3



AS BUILT DRAWINGS

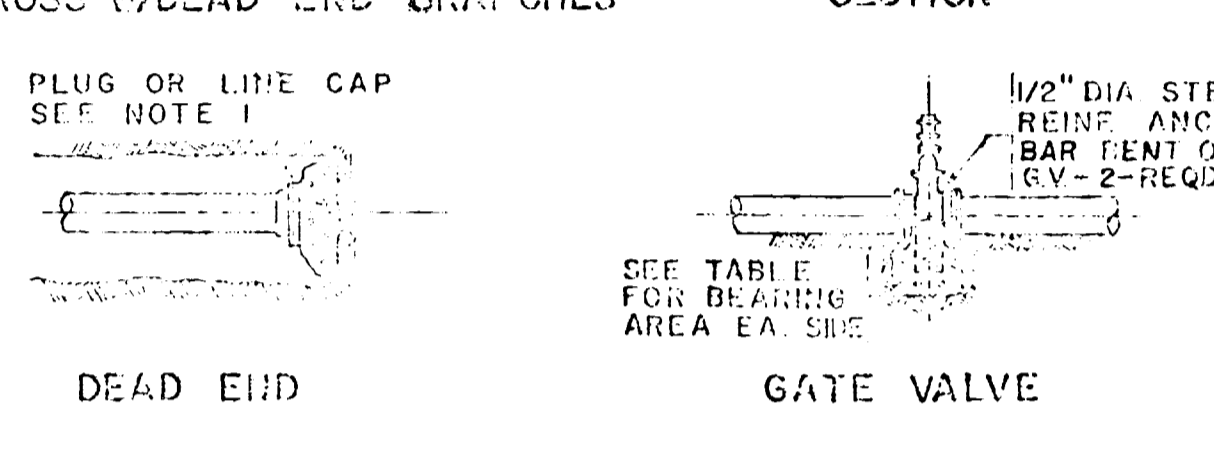
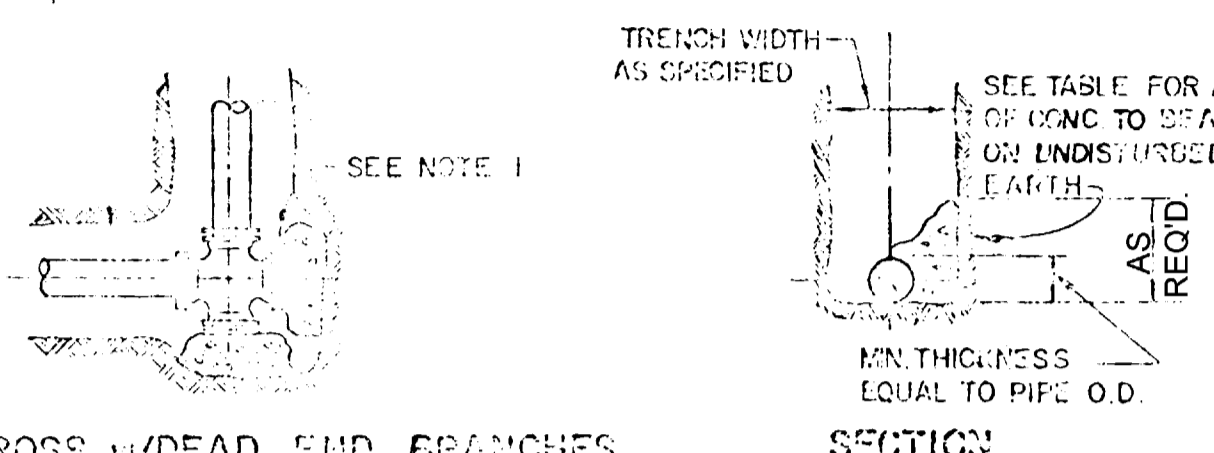
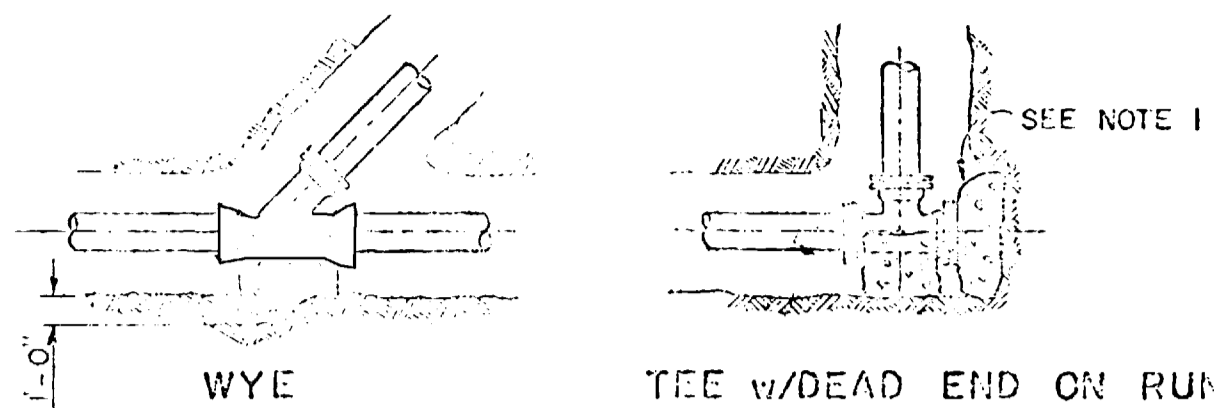
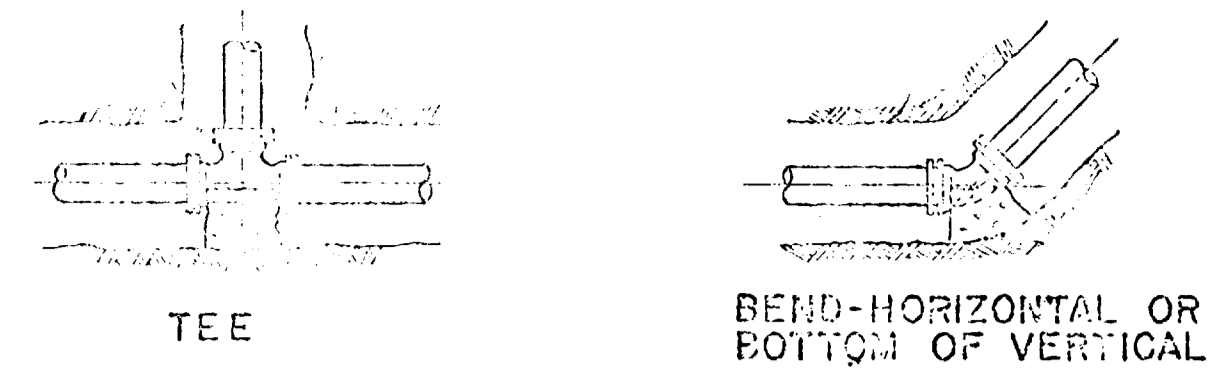


TABLE OF BEARING AREAS IN SQ. FT FOR CONCRETE THRUST BLOCKING

| SIZE | BENDS | | | | TEES | GATE VALVES | DEAD ENDS |
|------|-------|-----|---------|---------|------|-------------|-----------|
| | 90° | 45° | 22 1/2° | 11 1/4° | | | |
| 3 | 1.0 | 0.6 | 0.3 | 0 | 0.7 | 0.5 | 0.7 |
| 4 | 1.8 | 1.0 | 0.5 | 0 | 1.3 | 0.5 | 1.3 |
| 6 | 4.0 | 2.2 | 1.1 | 0 | 2.8 | 0.7 | 2.8 |
| 8 | 7.1 | 3.6 | 2.0 | 1.0 | 5.0 | 2.4 | 5.0 |
| 10 | 11.1 | 6.0 | 3.0 | 1.5 | 7.8 | 4.5 | 7.8 |
| 12 | 16.0 | 8.6 | 4.4 | 2.2 | 11.3 | 7.3 | 11.3 |

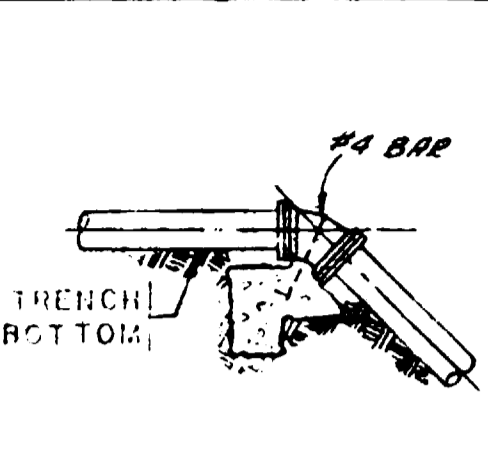
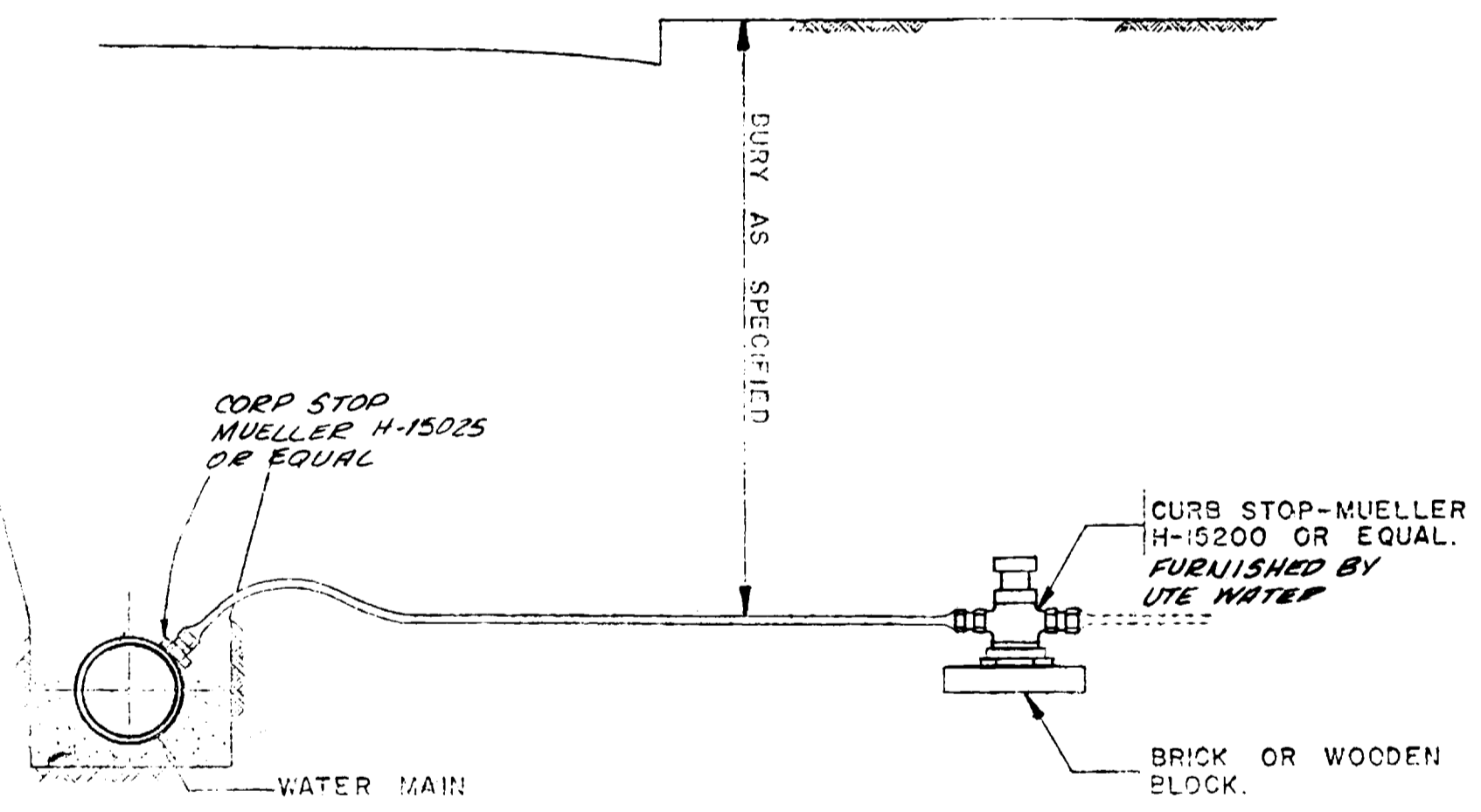


TABLE OF VOLUMES OF CONCRETE (IN CU. FT.)

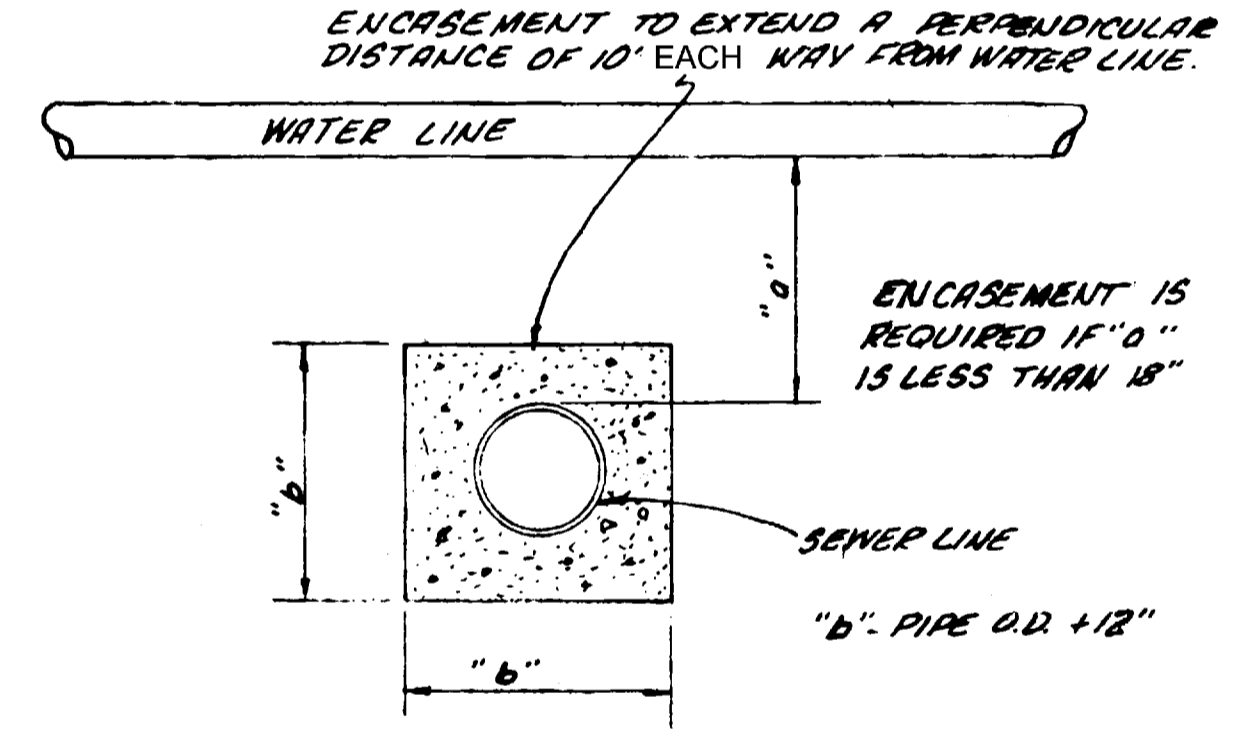
| SIZE | BEND | | |
|------|-------|---------|---------|
| | 45° | 22 1/2° | 11 1/4° |
| 3 | 7.4 | 3.8 | 1.8 |
| 4 | 13.0 | 6.6 | 2.4 |
| 6 | 29.2 | 15.0 | 7.4 |
| 8 | 52.0 | 26.4 | 13.2 |
| 10 | 81.0 | 41.4 | 20.6 |
| 12 | 117.0 | 60.0 | 29.6 |

- NOTES FOR DRAWINGS**
- AT DEAD ENDS, WRAP FITTINGS WITH TAR PAPER, FELT, OR HEAVY KRAFT PAPER TO PROVIDE BOND BREAK BETWEEN CONCRETE AND FITTING.
 - ALL THRUST BLOCKING SHALL BE CAST-IN-PLACE CONCRETE HAVING A MINIMUM YIELD STRENGTH OF 2000 PSI.
 - THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED TO OBTAIN TO OBTAIN ADEQUATE BEARING AREA AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE.

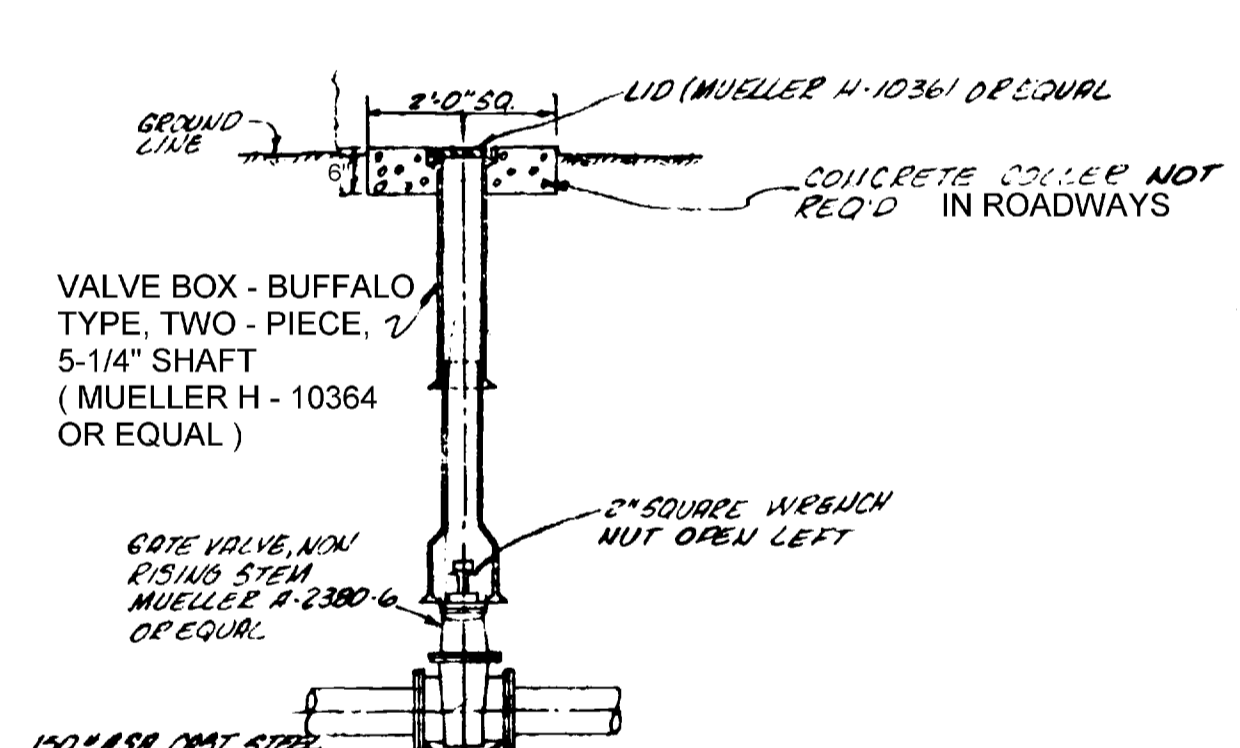
THRUST BLOCK DETAILS



TYPICAL SERVICE CONNECTION

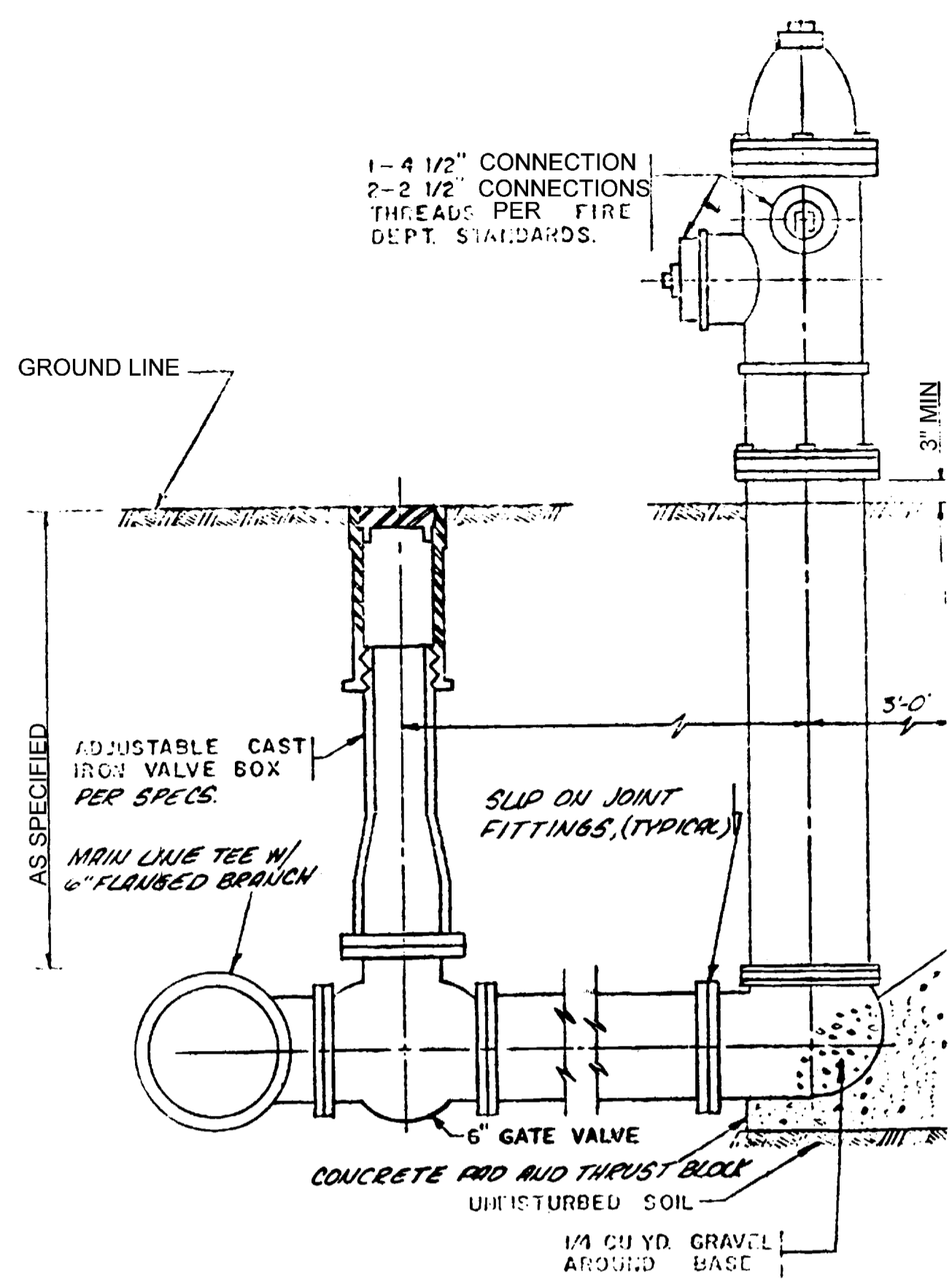


SEWER LINE ENCASUREMENT DETAIL

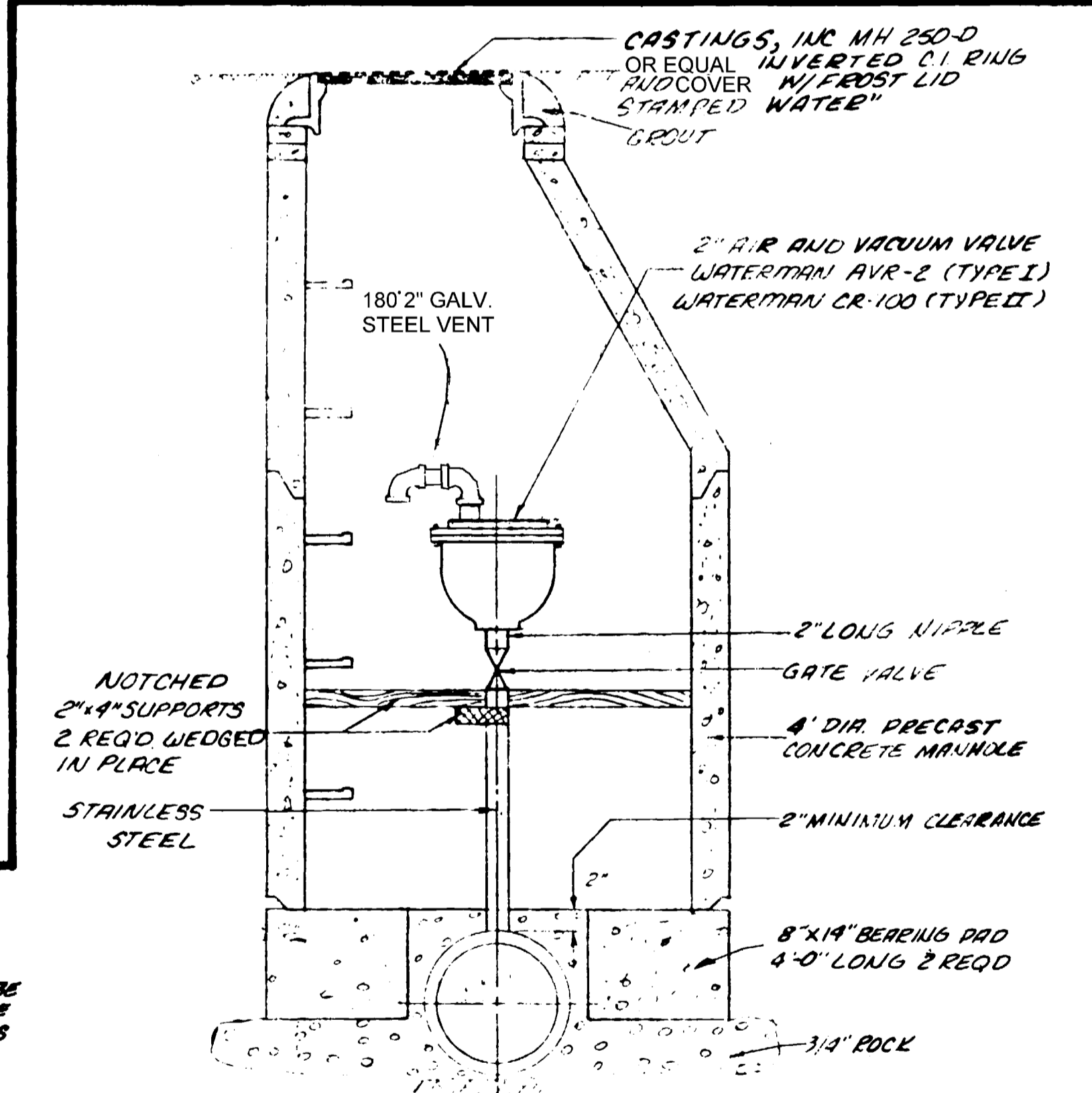


BURIED VALVE DETAIL

FIRE HYDRANT DETAIL

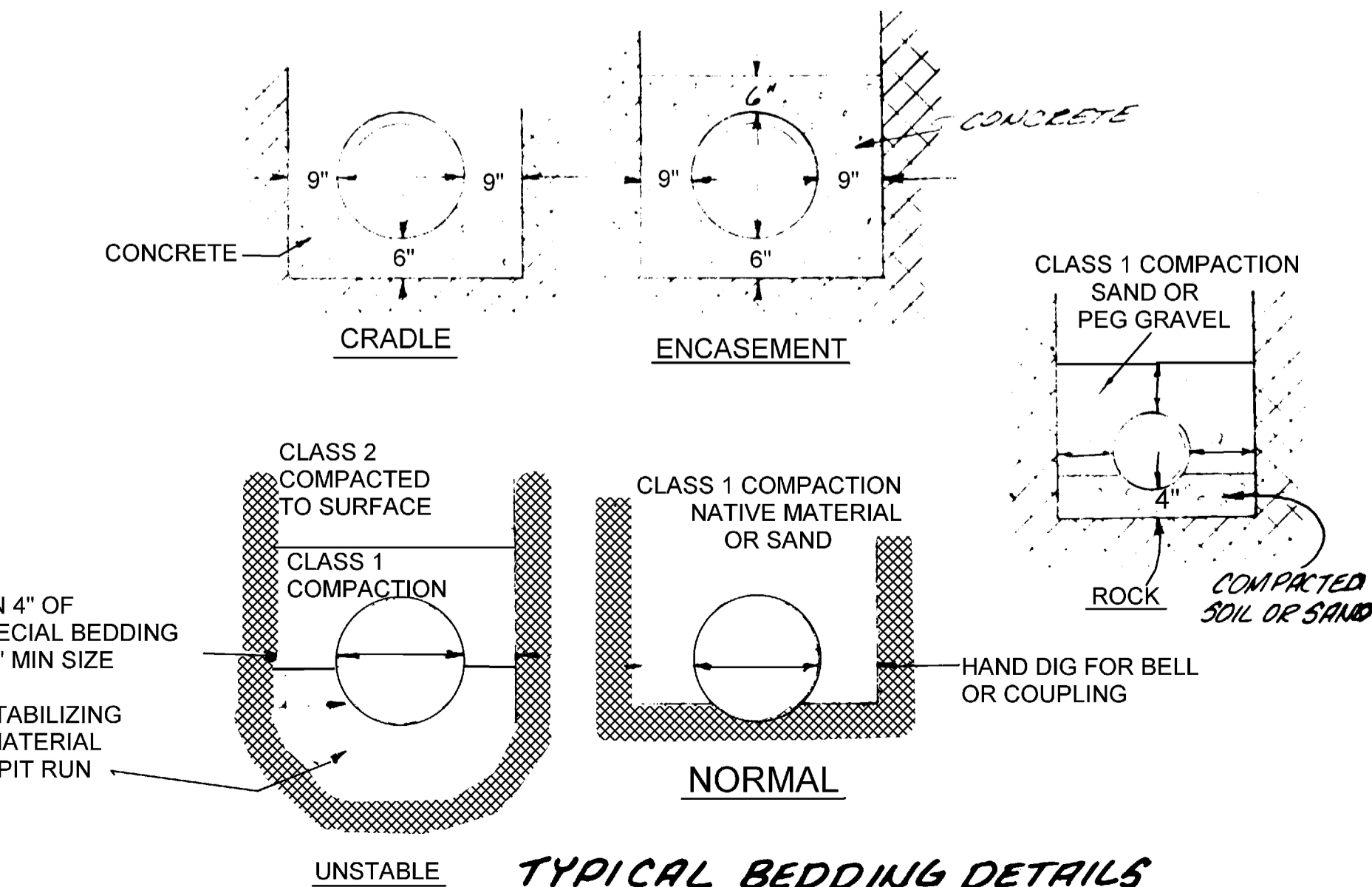
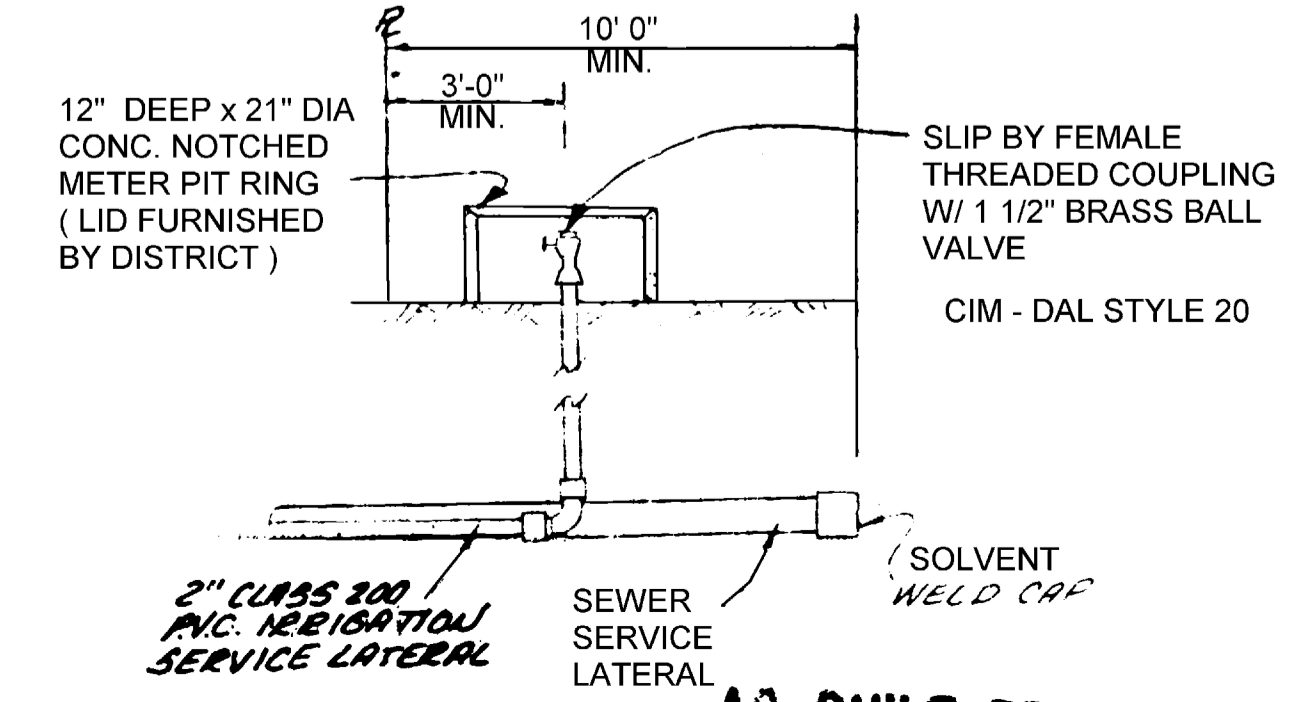


FIRE HYDRANT DETAIL

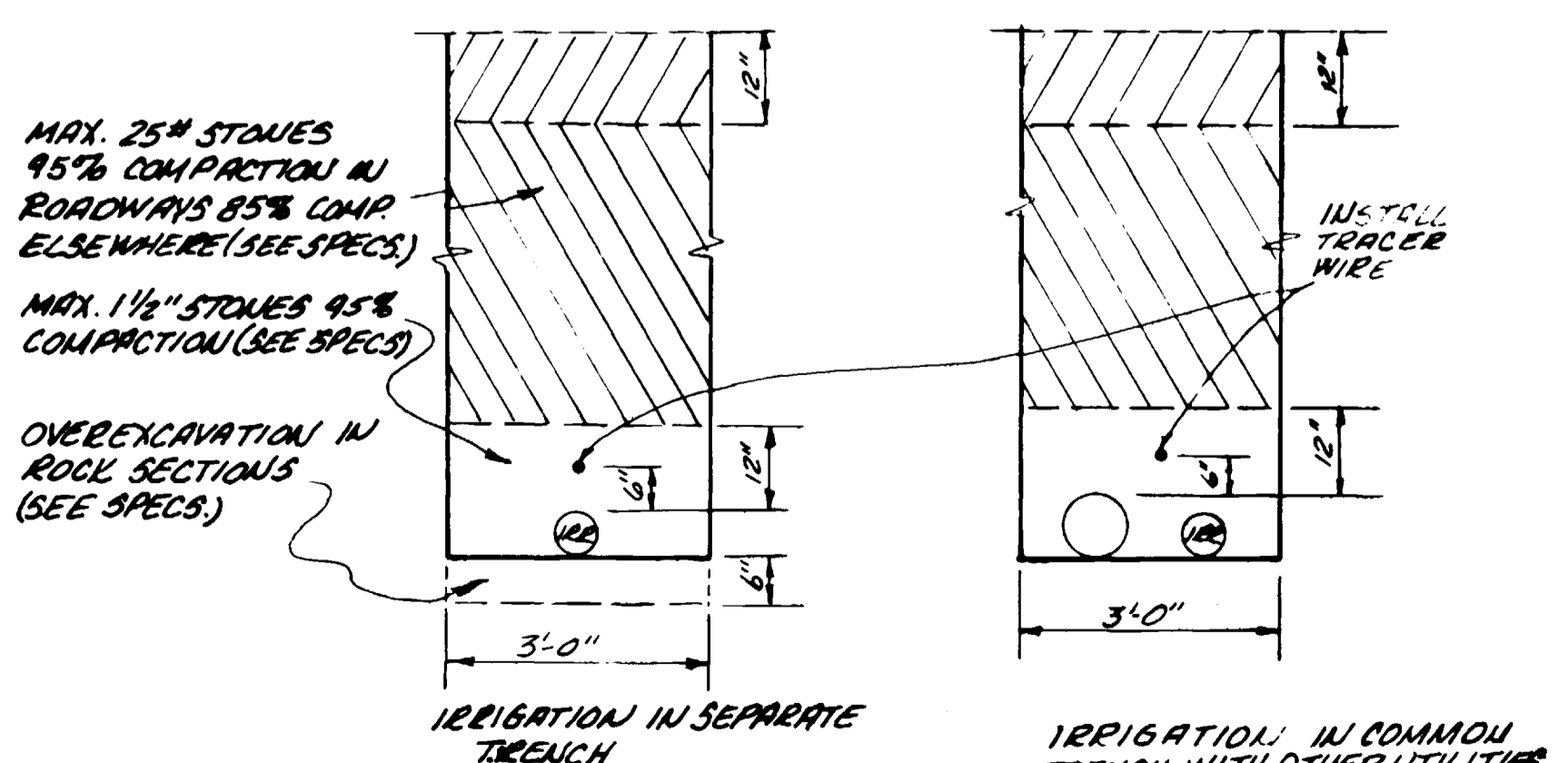


IRRIGATION COMBINATION AIR/VACUUM VALVE (WHEN NOT INSTALLED IN SEWER MANHOLE)

DETAIL OF COMMON SERVICE

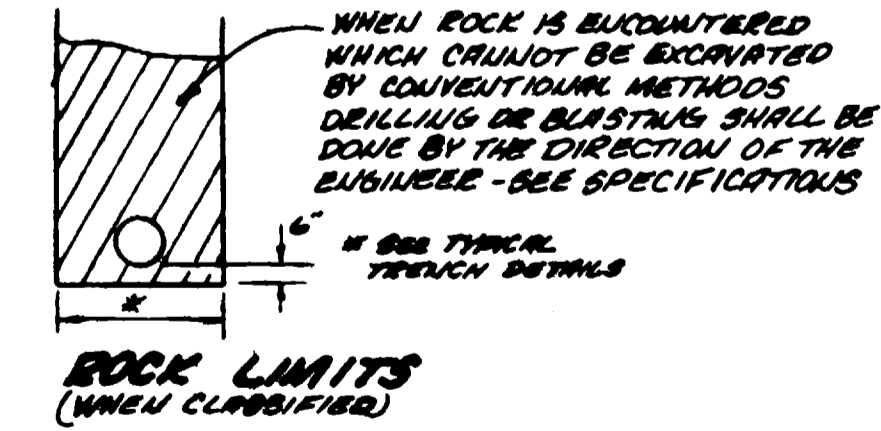


TYPICAL BEDDING DETAILS



TRENCH DETAILS

IRRIGATION AND SANITARY SEWER DETAILS



ROCK LIMITS (WHEN CLASSIFIED)

PARAGON ENGINEERING, INC. PO BOX 2872 GRAND JUNCTION COLORADO 81501 PHONE 243-8866
 DATE OCT. 1978 SCALE AS SHOWN
 WATER, IRRIGATION AND SANITARY SEWER DETAILS
 THE BLUFFS WEST ESTATES FILING NO. TWO MESA COUNTY, COLORADO
 SHEET 3 OF 3