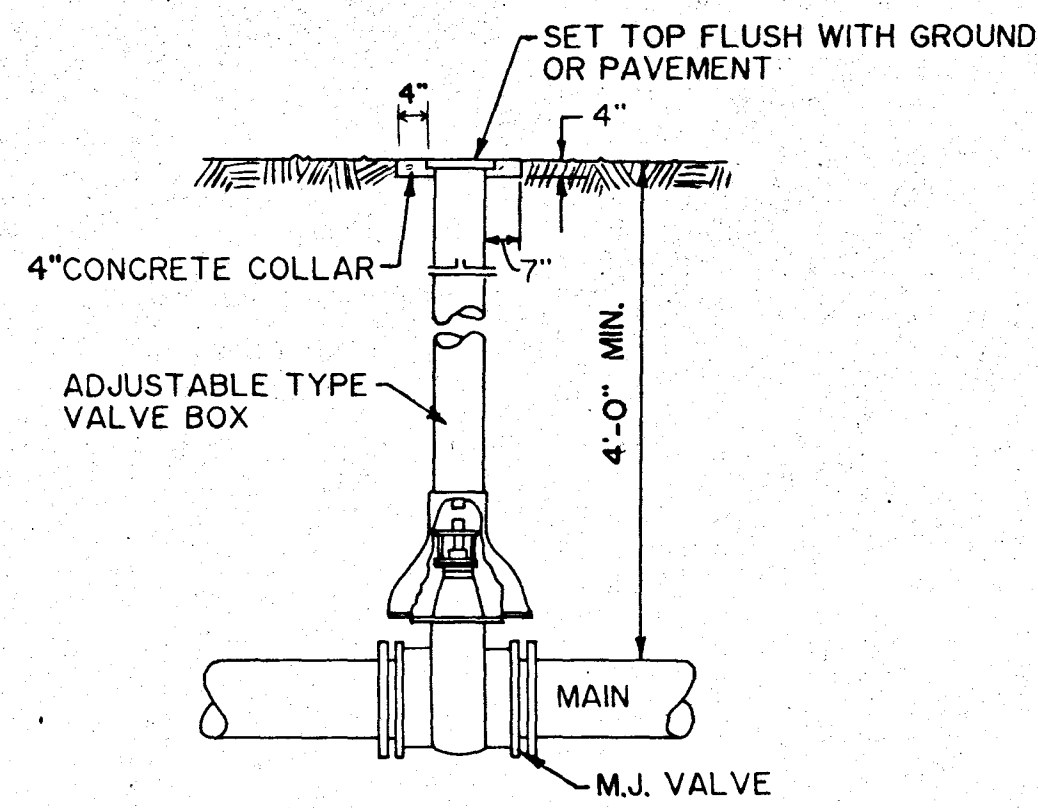
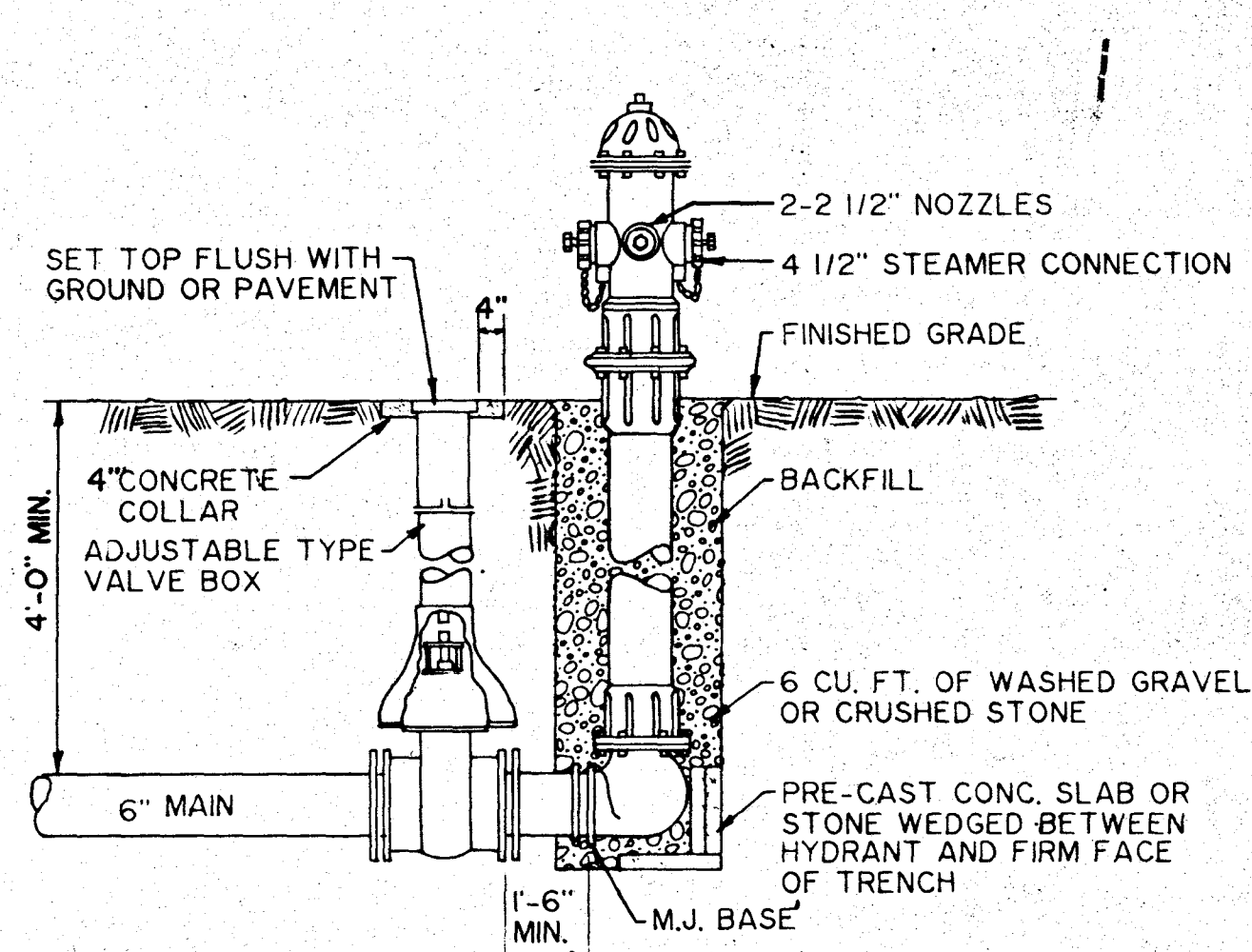
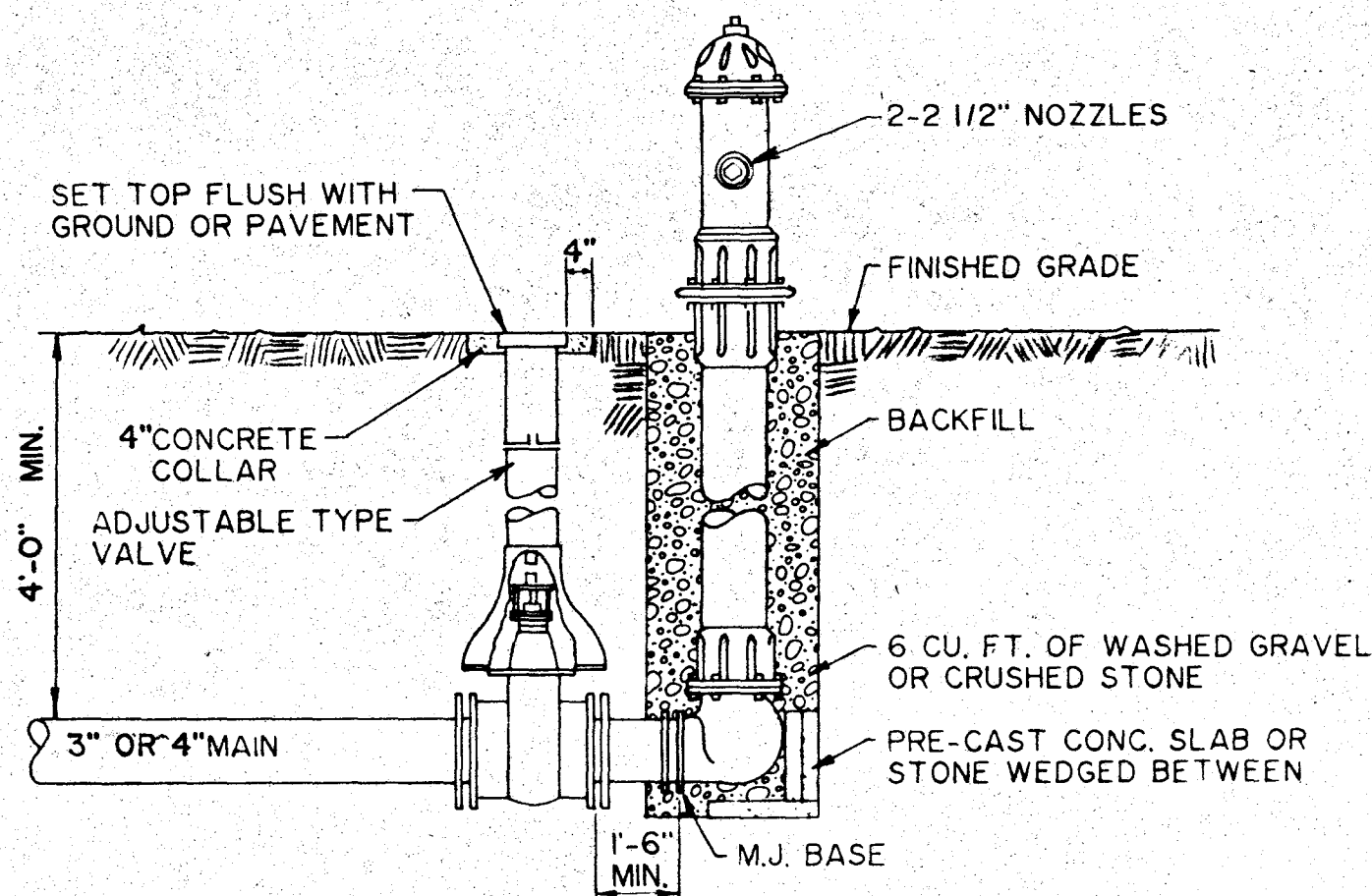




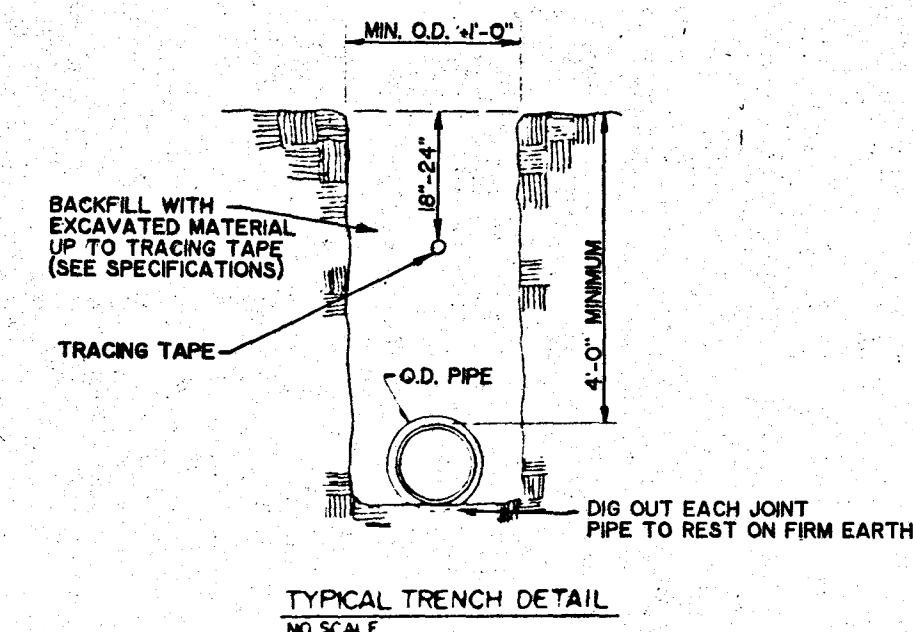
TYPICAL GATE VALVE & VALVE BOX  
NO SCALE



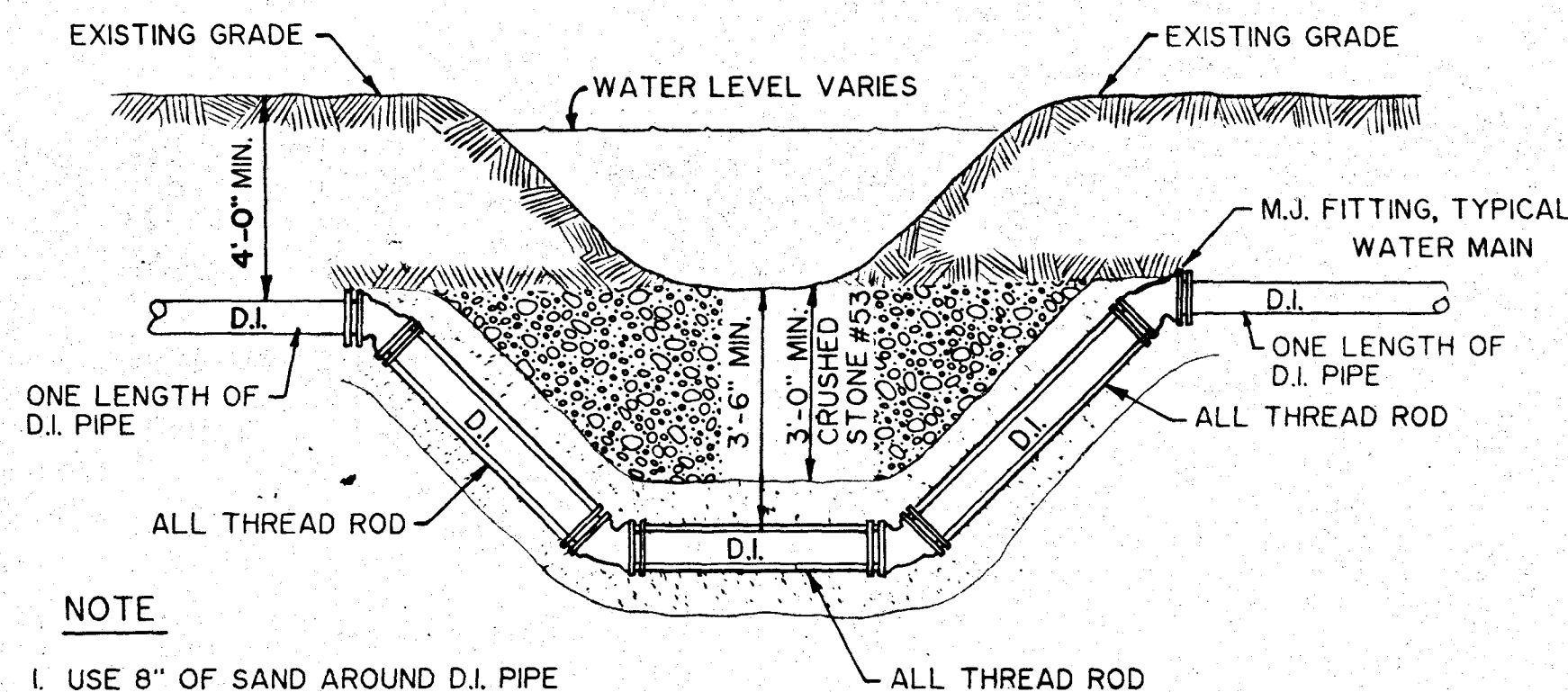
STANDARD FIRE HYDRANT  
NO SCALE



STANDARD FLUSH HYDRANT  
NO SCALE



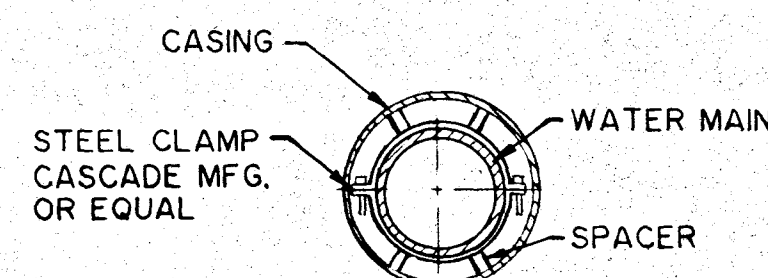
TYPICAL TRENCH DETAIL  
NO SCALE



NOTE

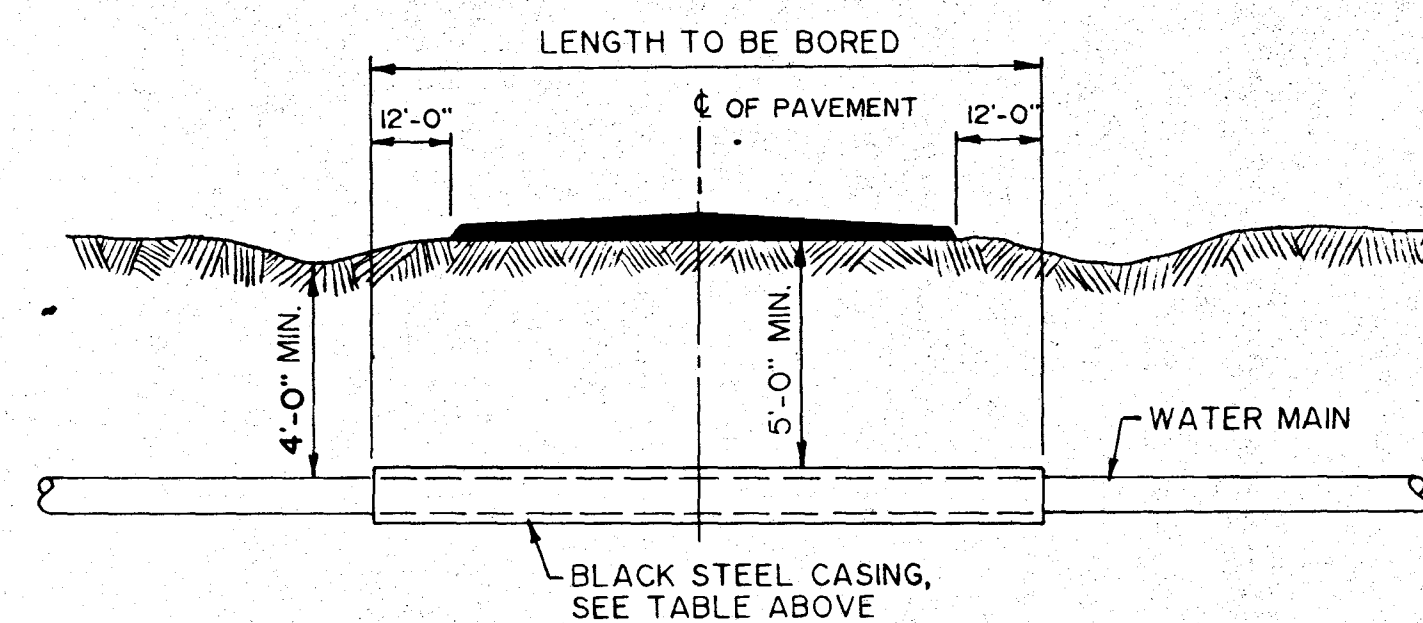
- USE 8" OF SAND AROUND D.I. PIPE
- USE ALL THREAD AS SHOWN OR RETAINER GLAND OR RESTRAINED JOINT PIPE

CREEK CROSSING DETAIL  
NO SCALE

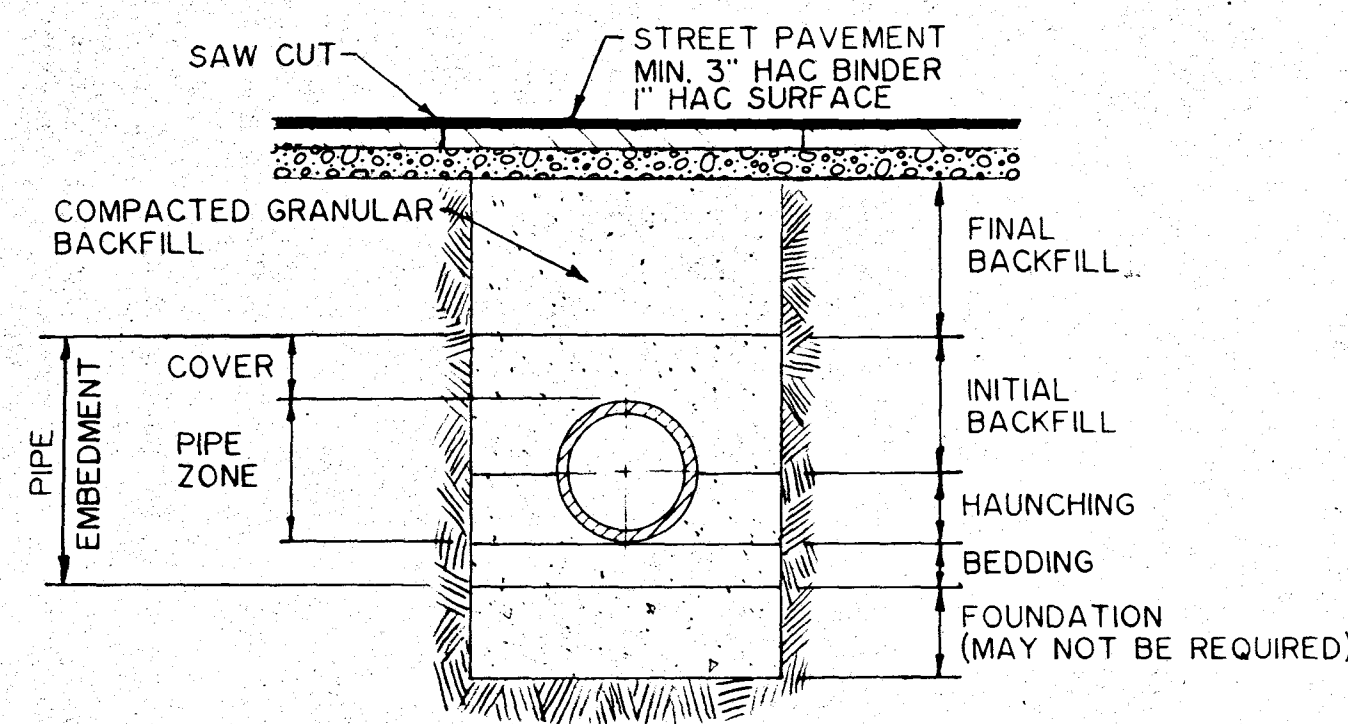


CENTERING CASING SPACER

| TABLE OF CASING SIZES                  |                                          |                      |                      |
|----------------------------------------|------------------------------------------|----------------------|----------------------|
| NOMINAL PIPE SIZE (DIAMETER IN INCHES) | CASING SIZE (OUTSIDE DIAMETER IN INCHES) | MAXIMUM SPACING FEET | MINIMUM SPACING FEET |
| 6                                      | 14"                                      | 6' (3/pipe)          | 6' (3/pipe)          |
| 8                                      | 16"                                      | 6' (3/pipe)          | 6' (3/pipe)          |
| 10                                     | 18"                                      | 6' (3/pipe)          | 6' (3/pipe)          |
| 12                                     | 20"                                      | 6' (3/pipe)          | 6' (3/pipe)          |
| 16                                     | 25"                                      | 6' (3/pipe)          | 6' (3/pipe)          |
| 20                                     | 30"                                      | 6' (3/pipe)          | 6' (3/pipe)          |
| 24                                     | 34"                                      | 6' (3/pipe)          | 6' (3/pipe)          |



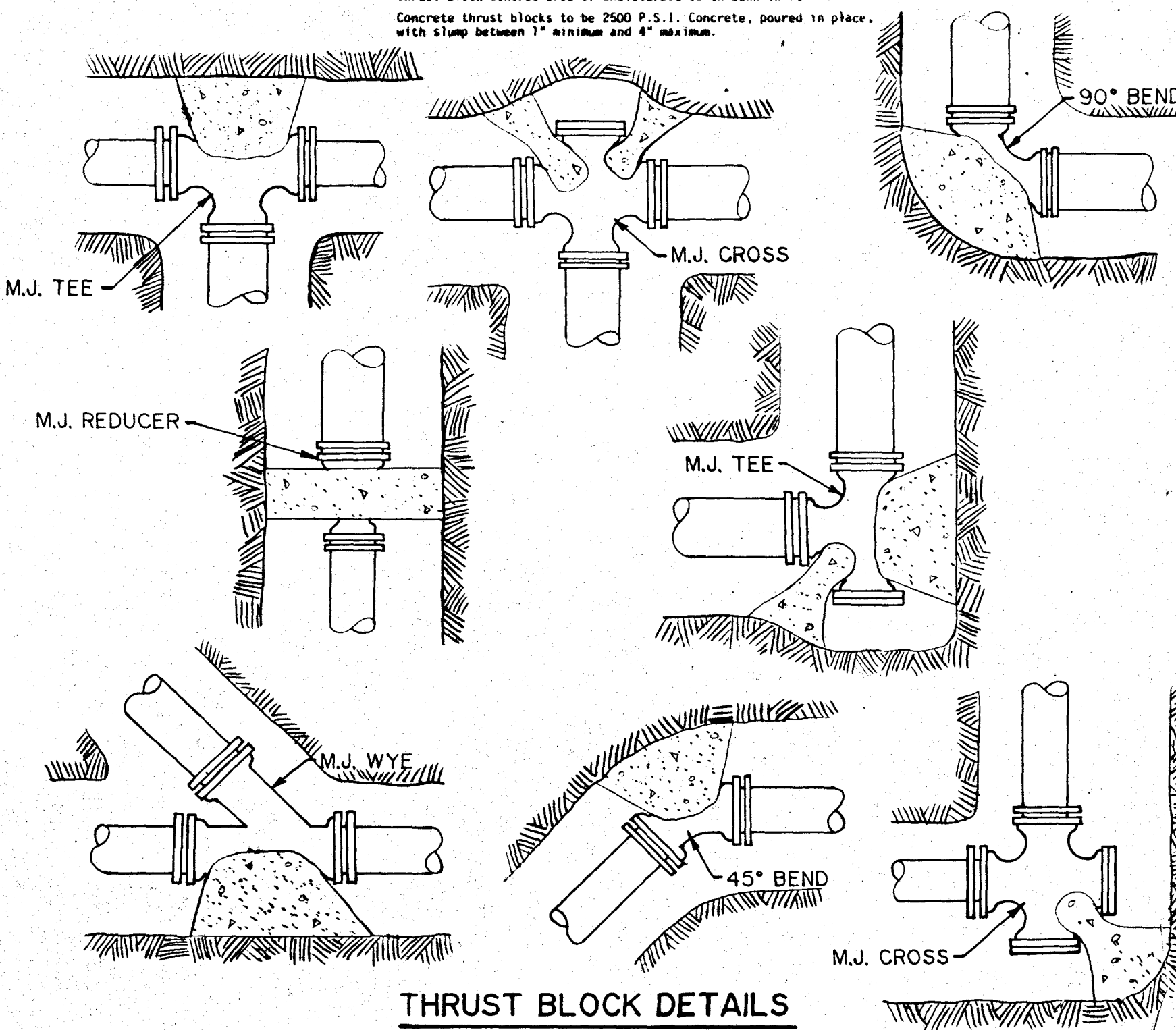
ROAD BORING DETAIL  
NO SCALE



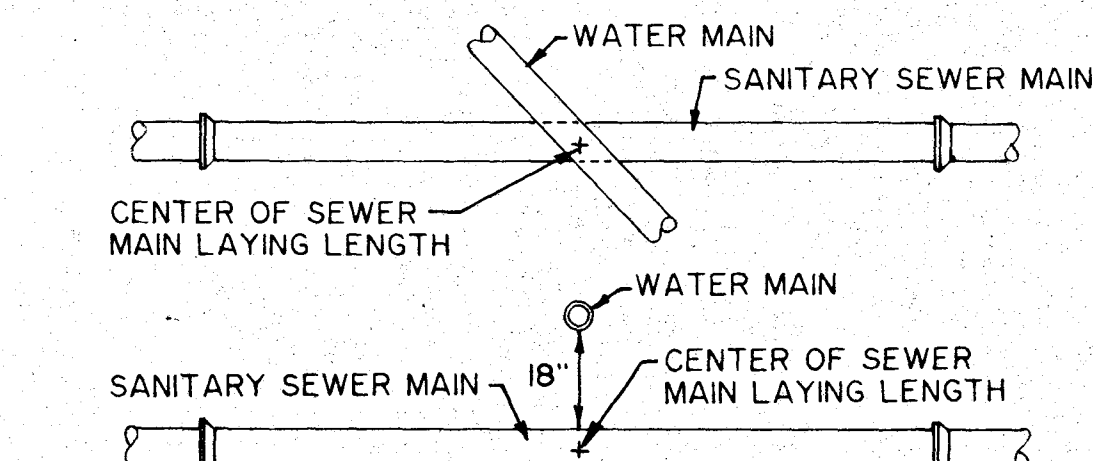
STREET CROSSING DETAIL  
NO SCALE

| THRUST BLOCK SCHEDULE |      |      |         |         |      |                  |         |     |  |
|-----------------------|------|------|---------|---------|------|------------------|---------|-----|--|
| PIPE SIZE             | 90°  | 45°  | 22 1/2° | 11 1/4° | TEL. | VALVES & HYDRANT | REDUCER |     |  |
| 16"                   | 37.8 | 19.1 | 11.2    | 3.0     | 28.6 | 21.4             | 16 x 14 | 3.6 |  |
| 14"                   | 29.8 | 14.9 | 8.9     | 2.3     | 23.2 | 16.4             | 14 x 12 | 3.1 |  |
| 12"                   | 21.1 | 8.6  | 6.6     | 1.7     | 16.6 | 10.5             | 12 x 10 | 2.6 |  |
| 10"                   | 11.5 | 5.9  | 3.6     | 1.2     | 9.6  | 7.8              | 10 x 8  | 2.1 |  |
| 8"                    | 7.2  | 3.7  | 2.1     | 1.2     | 5.4  | 4.6              | 8 x 6   | 1.6 |  |
| 6"                    | 3.2  | 3.0  | 1.3     | 1.2     | 3.5  | 2.6              | 6 x 4   | 1.6 |  |
| 4" & Under            | 1.3  | 3.0  | 1.3     | 1.2     | 3.5  | 1.3              | 4 x 3   | 1.6 |  |

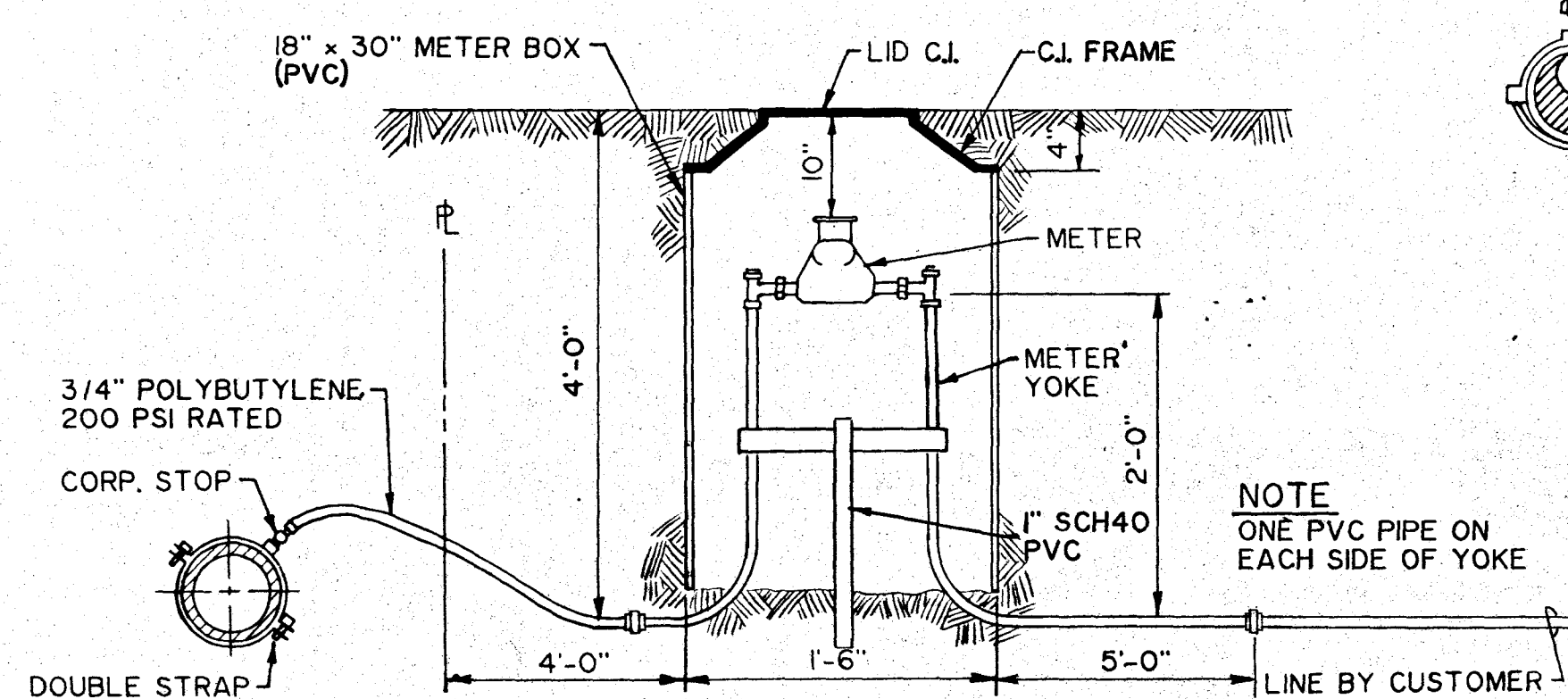
NOTE: Class 150 Pipe, Test Pressure 87 in. <sup>2</sup>, Soil Bearing: 2000 #/ft. <sup>2</sup>  
Thrust Block contact area of undisturbed earth bank in ft. <sup>2</sup>  
Concrete thrust blocks to be 2500 P.S.I. Concrete, poured in place, with slump between 1" minimum and 4" maximum.



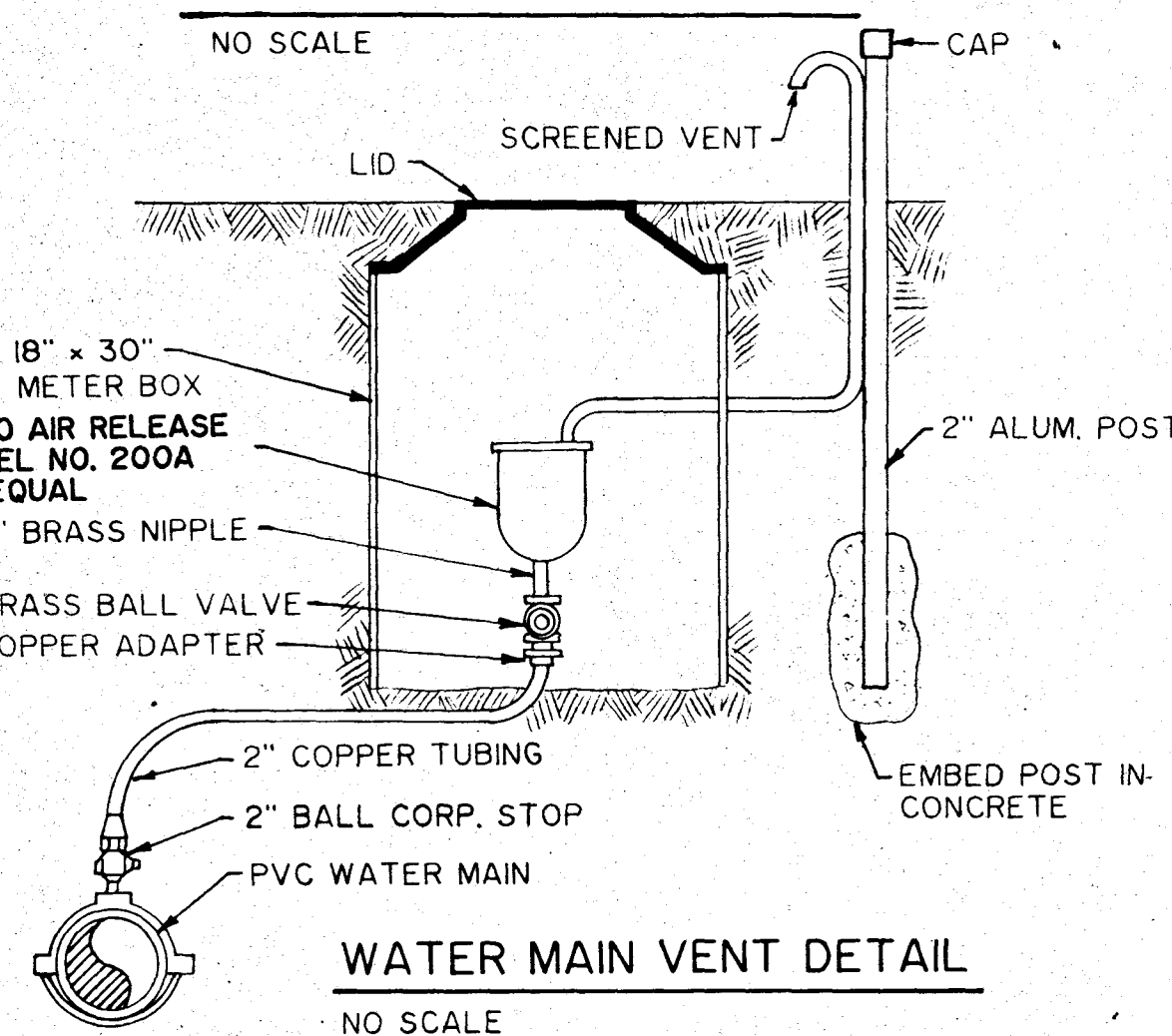
THRUST BLOCK DETAILS  
NO SCALE



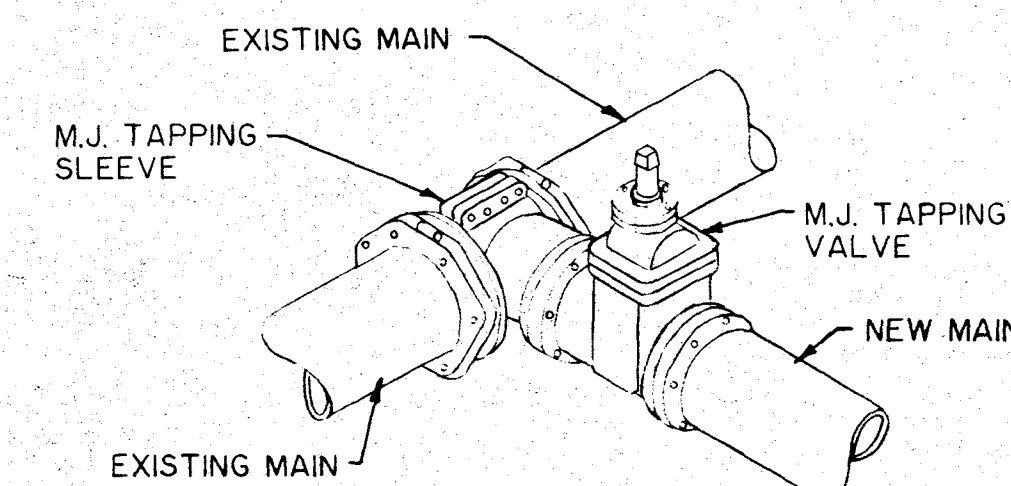
MINIMUM CROSSING & SEPARATION REQUIREMENTS FOR WATER & SANITARY SEWER MAINS  
NO SCALE



METER & BOX SETTING  
NO SCALE



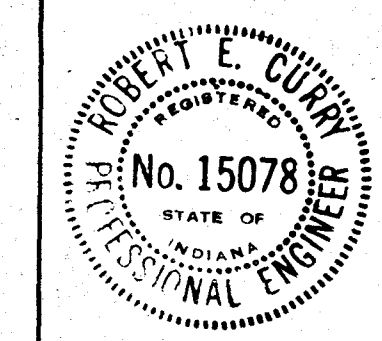
WATER MAIN VENT DETAIL  
NO SCALE



WET TAP TO EXISTING MAIN  
NO SCALE

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(317) 272-3050

ELROD WATER COMPANY, INC.  
WATER MAIN EXTENSIONS  
DIVISION "C"  
STANDARD DETAILS



DATE: 6/15/89  
APPROVED BY: Robert E. Curry  
DRAWING NUMBER: 31 OF 31