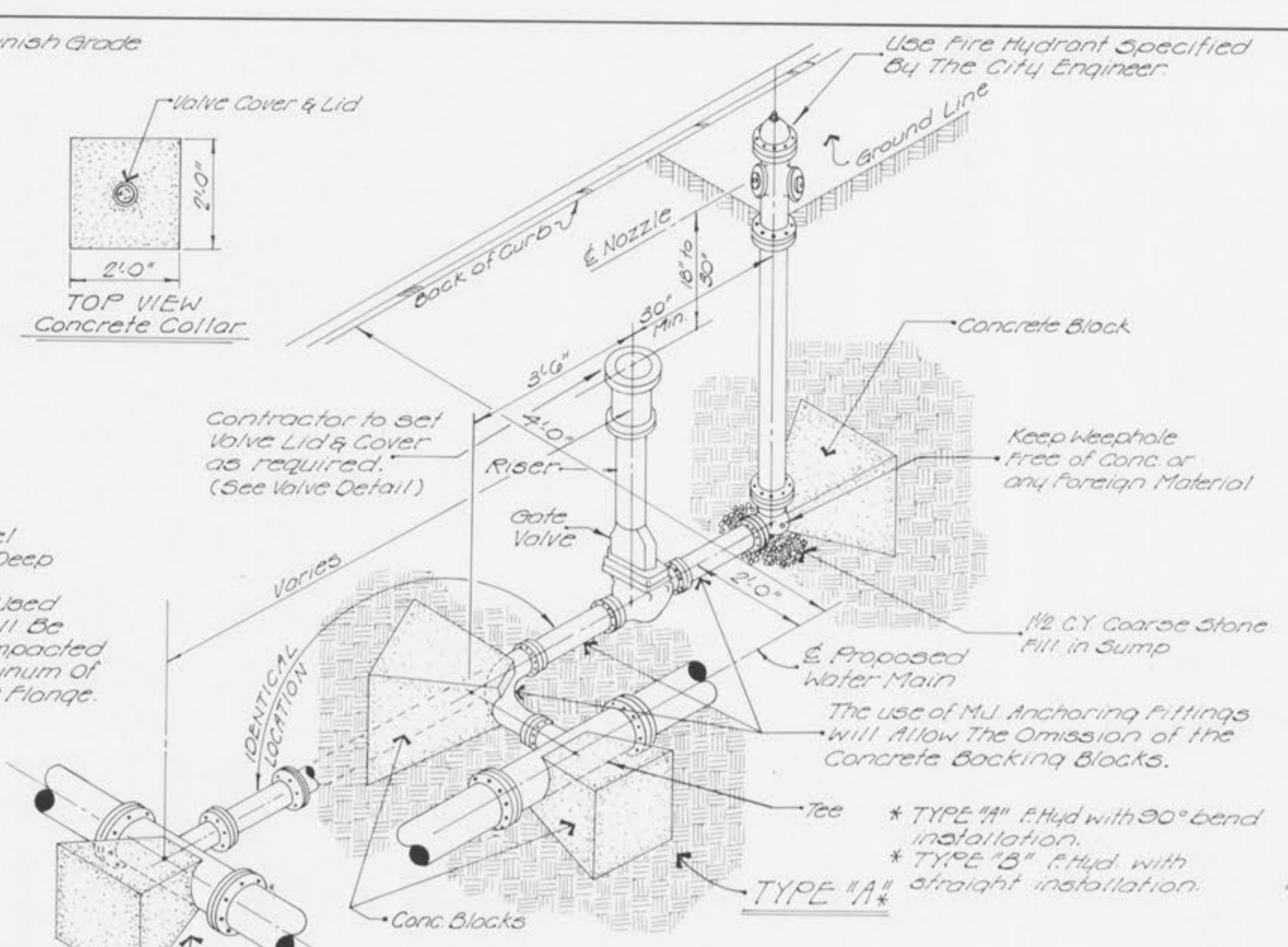
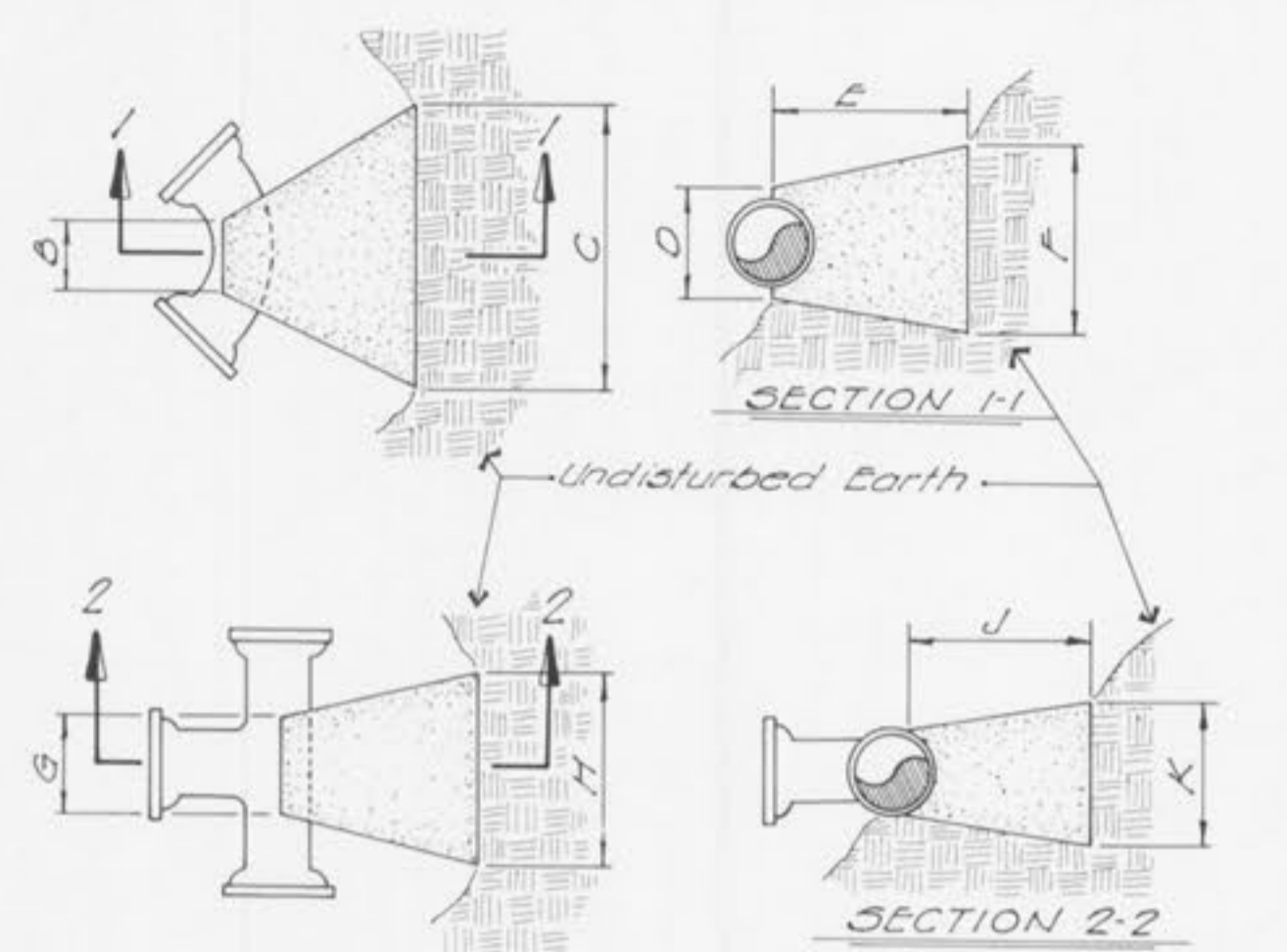


WATER VALVE DETAIL



FIRE HYDRANT DETAIL



BENDS						TEES				
	B	C	D	E	F	G	H	J	K	
6" 11/4"	8"	15"	12"	24"	10"	6" x 6" x 6"	12"	24"	24"	18"
6" 2 1/2"	8"	19"	12"	24"	13"	8" x 8" x 6"	12"	24"	24"	18"
6" 4 1/2"	8"	30"	12"	24"	14"	8" x 8" x 8"	12"	24"	24"	24"
6" 9"	8"	30"	12"	24"	27"	12" x 12" x 6"	12"	24"	24"	18"
8" 1 1/4"	8"	20"	12"	24"	10"	12" x 12" x 8"	12"	24"	24"	24"
8" 2 1/2"	8"	28"	12"	24"	17"	12" x 12" x 12"	12"	36"	24"	36"
8" 4 1/2"	8"	30"	12"	24"	24"					
8" 9"	8"	36"	12"	24"	36"					
12" 1 1/4"	8"	30"	12"	24"	15"					
12" 2 1/2"	8"	35"	12"	24"	25"					
12" 4 1/2"	8"	40"	12"	24"	40"					
12" 9"	8"	60"	12"	24"	60"					

CUBIC FEET OF CONCRETE REQUIRED					
BEND	11 1/4"	2 1/2"	4 1/2"	9"	90°
6"	1.7	2.4	3.0	5.0	
8"	2.1	3.1	5.0	6.0	
12"	3.7	5.3	9.7	17.5	

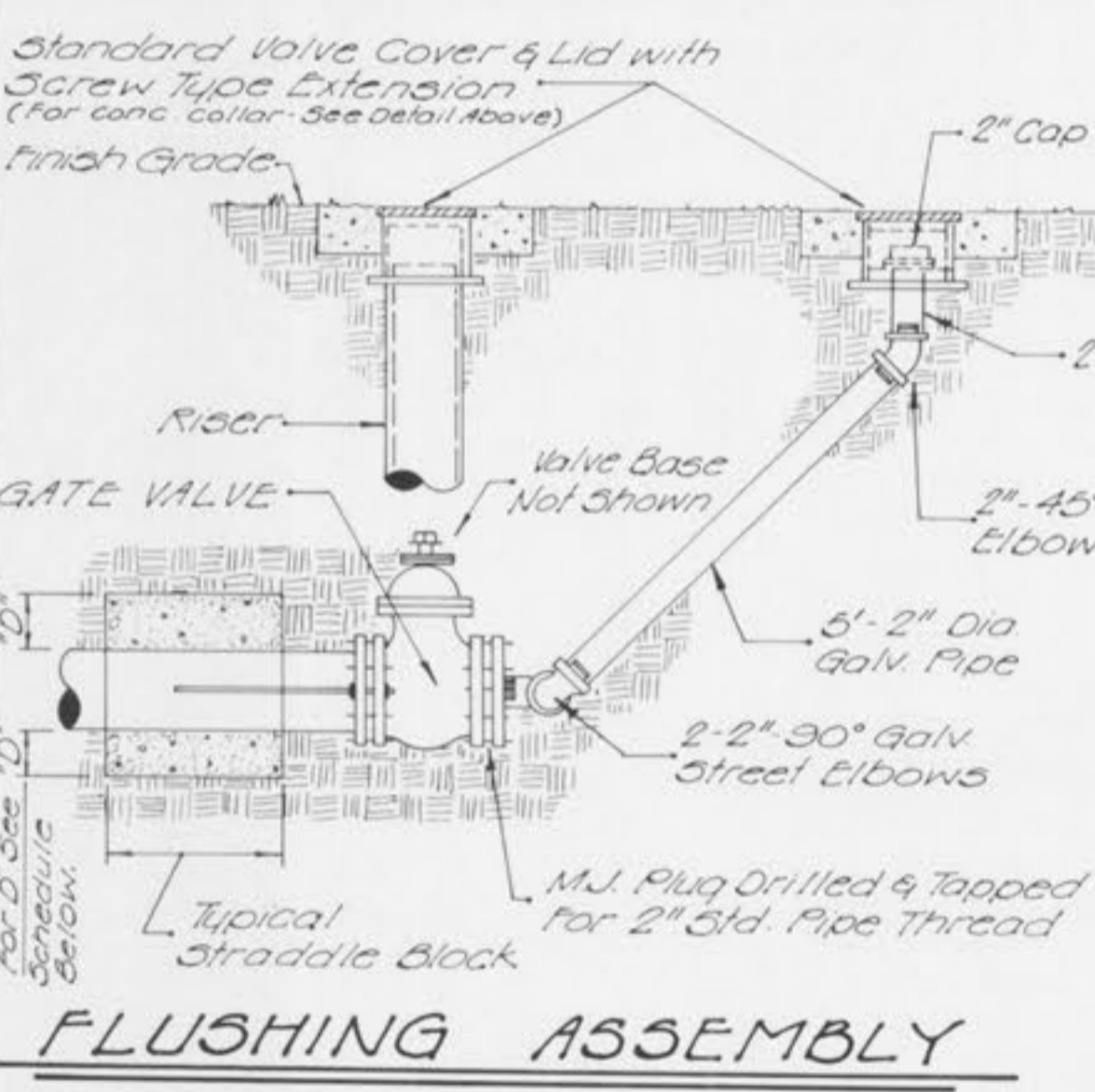
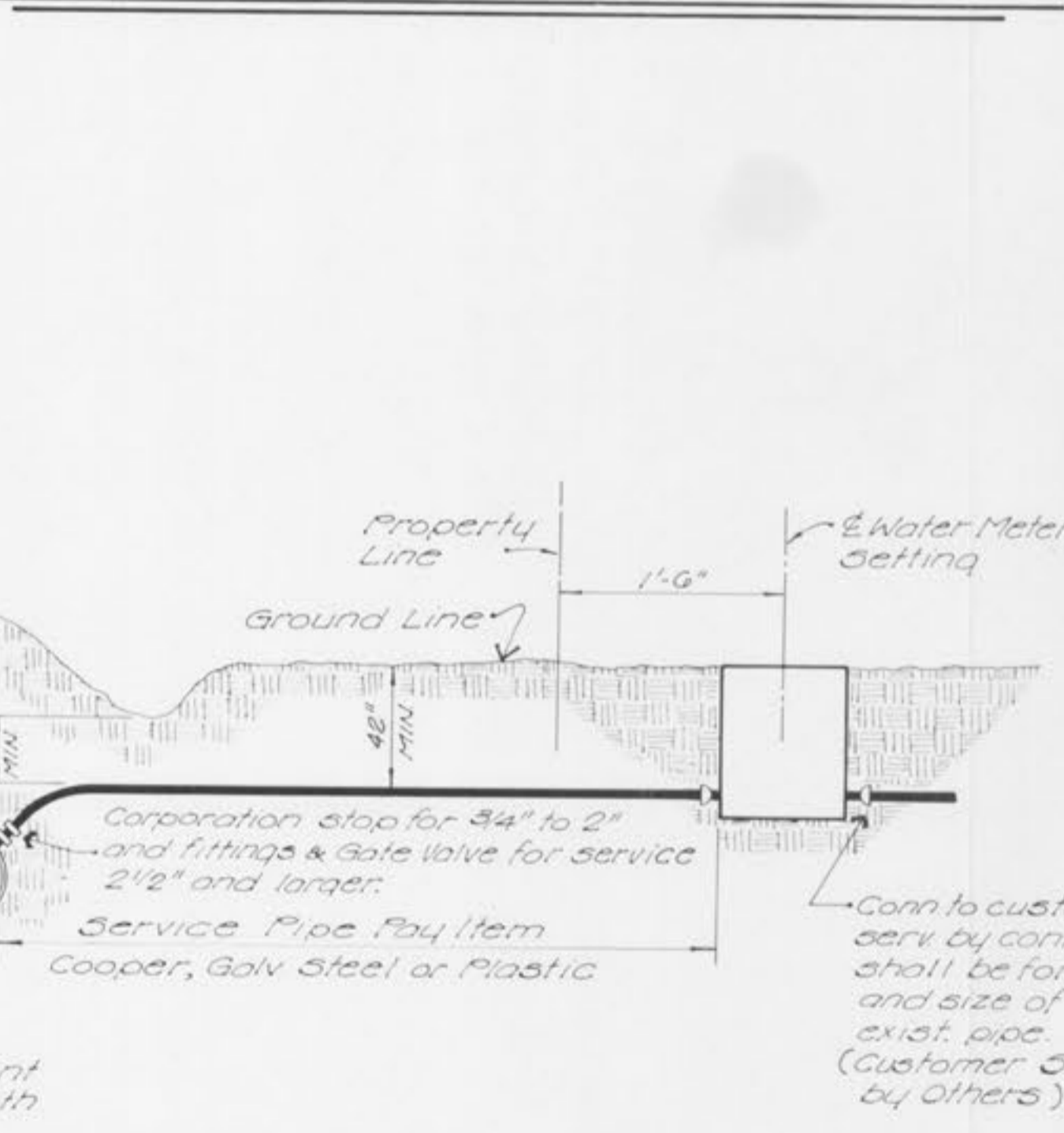
TEE X				PLUG	
6"	8"	12"			
4.0	5.0	~	4.0		
4.0	5.0	~	5.0		
4.5	5.5	10.5	10.5		

BACKING BLOCKS

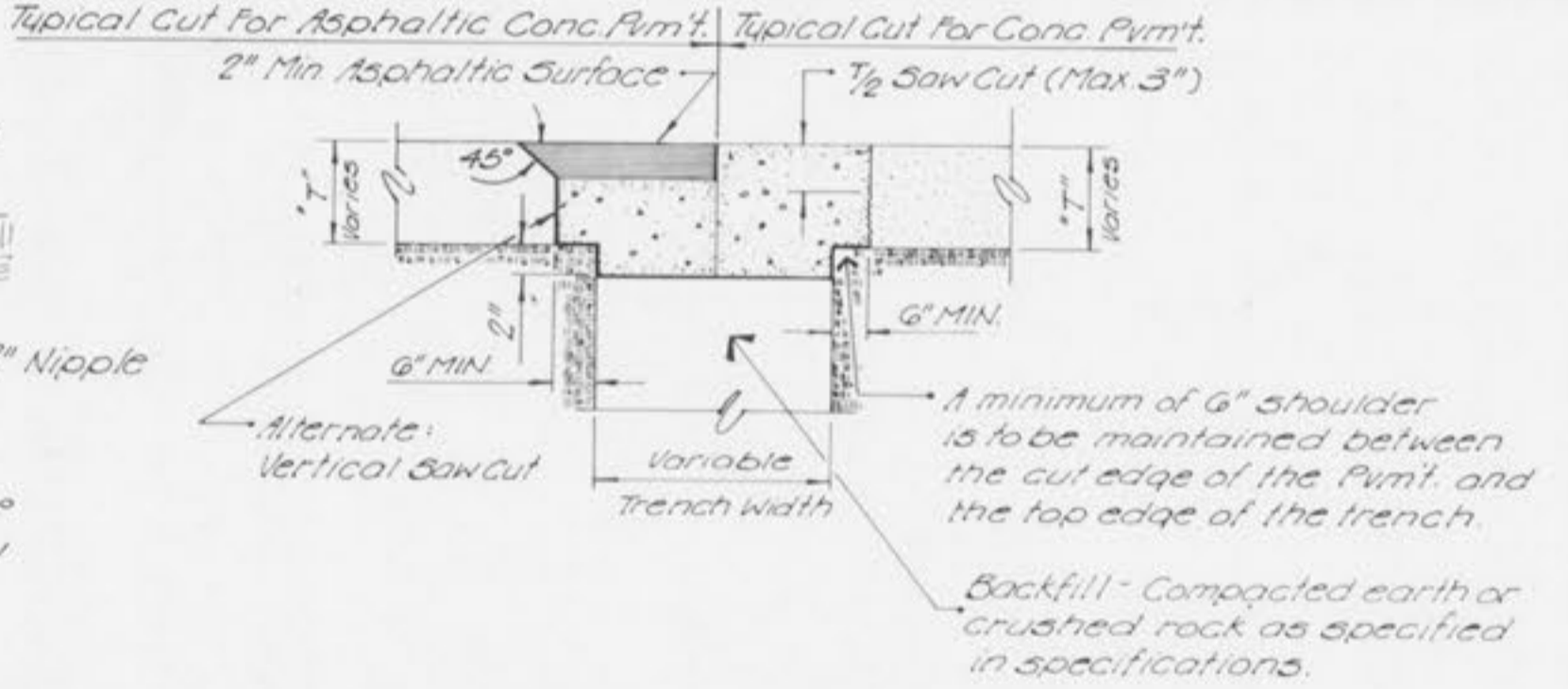
GENERAL NOTES:

- All construction shall be done in accordance with the standards set forth by the City and installation shall be done under the supervision of the City.
- Water Main Pipe to be Class 200 P.V.C. SDR-21.
- All fittings shall be mechanical joint, cast iron. (AWWA Spec. C-110)
- All fire hydrants shall have 5-1/4" valve opening, pump nozzle and 2 hose nozzles with 6" inlet connection, as specified by City Engineer.
- Bids for fire hydrants shall include 6" valve and box.
- Water and sewer main crossings shall conform to the Missouri Clean Water Commission Standards.
- Trench backfill shall be granular material through street crossings. All trench backfill to be compacted to 95% maximum density.
- Testing, sterilization and flushing shall be performed to the satisfaction of the City.
- All house service connections are to be done in a manner prescribed by the City.
- The price for the construction items shall include the cost for labor and materials for installation.
- All bends, tees and hydrants shall be blocked with concrete per the detail.

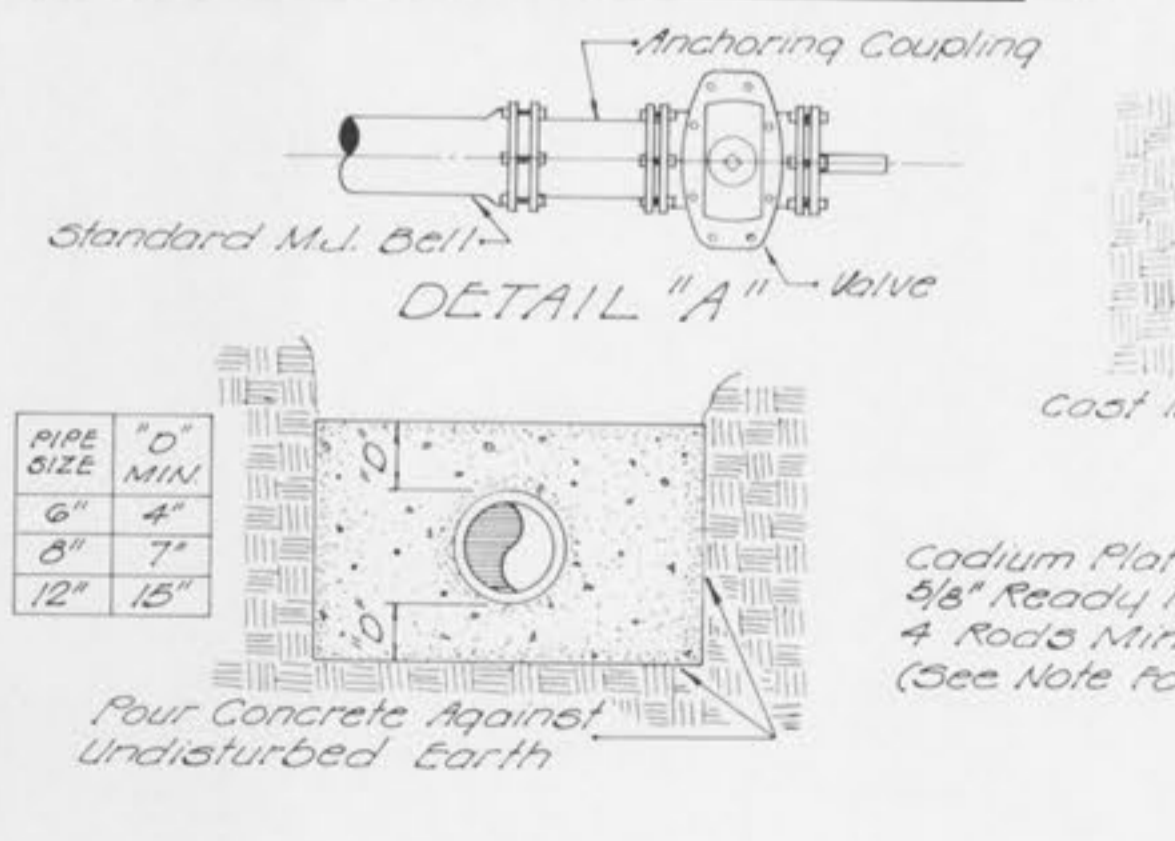
WATER MAIN EMBEDMENT



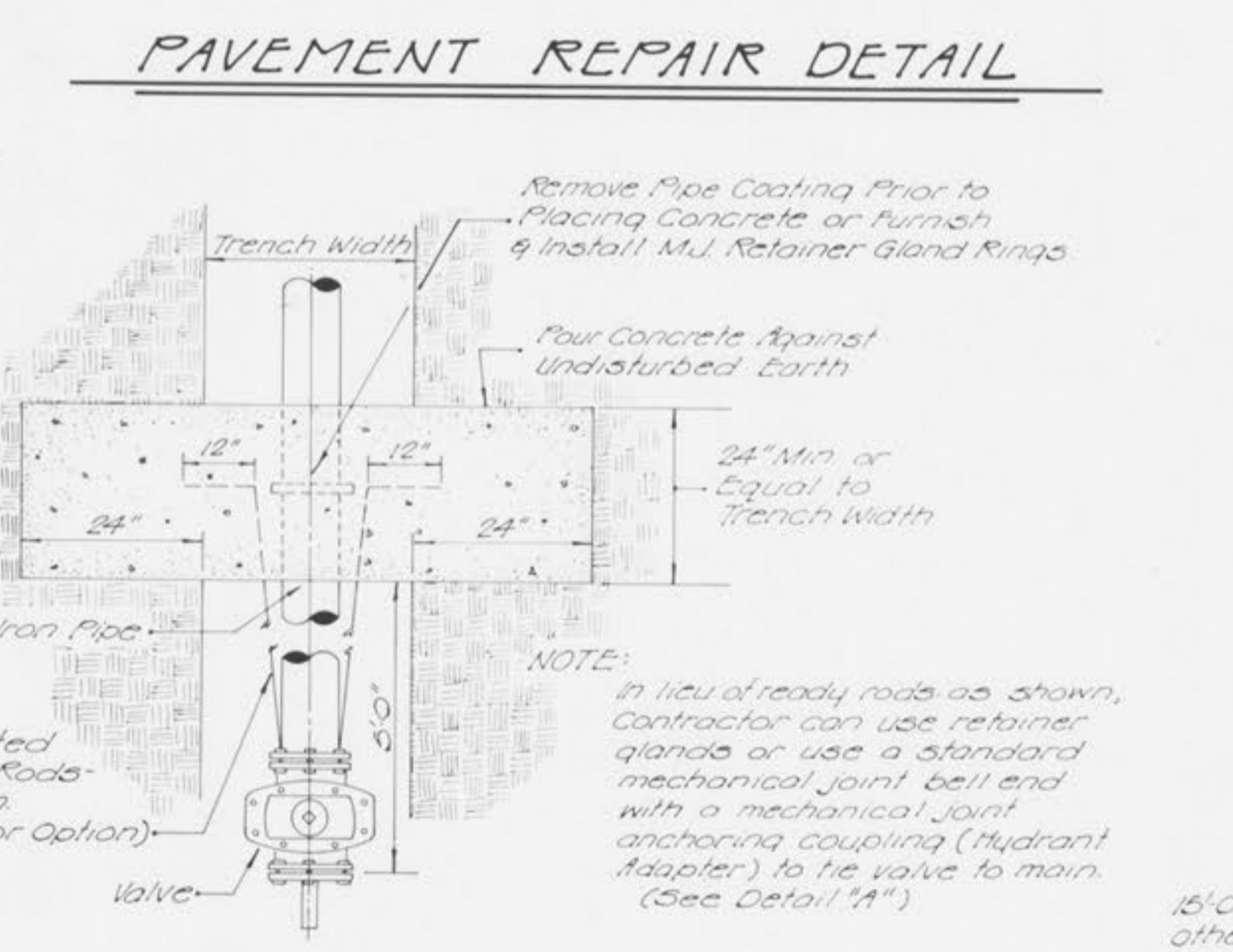
FLUSHING ASSEMBLY



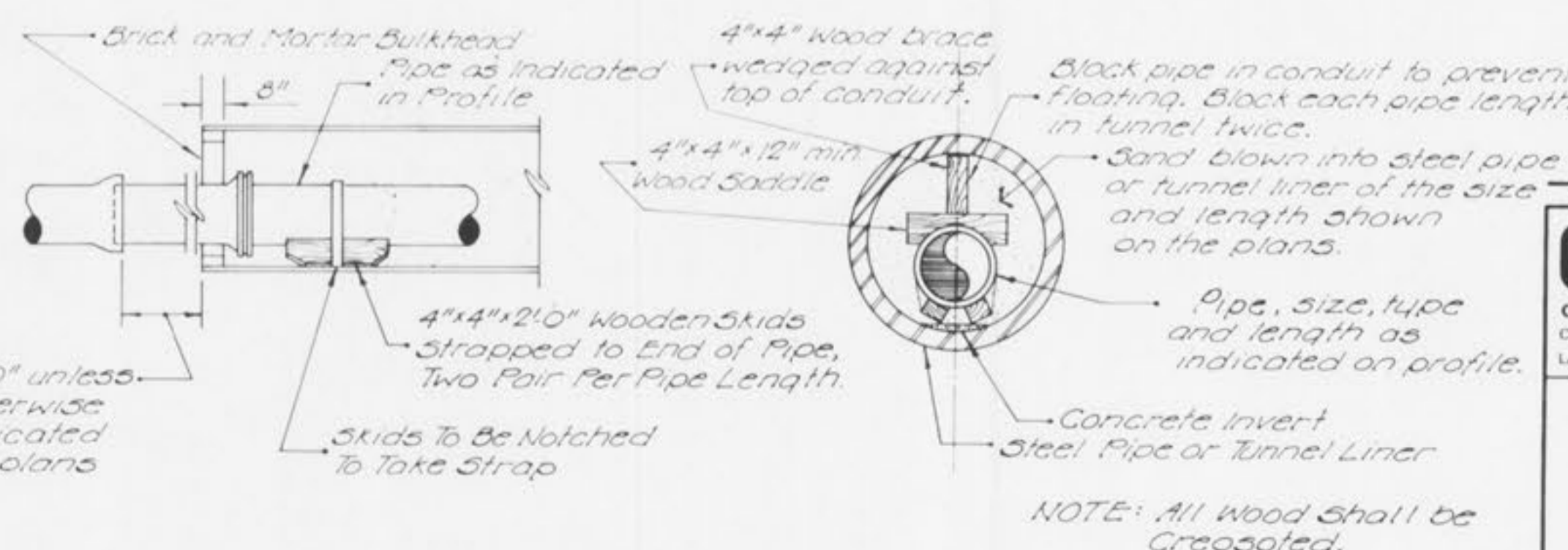
PAVEMENT REPAIR DETAIL



STRADDLE BLOCK DETAIL



TUNNEL LINER DETAIL



TYPICAL SERVICE ASSEMBLY

GBA
 GEORGE BUTLER ASSOCIATES
 CONSULTING ENGINEERS ARCHITECTS
 LANDSCAPE ARCHITECTS PLANNERS

OFFICES:
 ONE FIVE FIFTH PLAZA
 801 MELBOURNE DRIVE / LENEXA / KANSAS 66042
 TWO CITY CENTER SQUARE
 1700 MAIN / KANSAS CITY / MISSOURI 64108
 SUITE 4 / COLORADO PLAZA
 ONE ELM / OMAHA / NEBRASKA 68102

WESTRIDGE
 WATER MAIN DETAILS
 FOR
 R. D. HARRIS CONSTRUCTION CO.

DESIGNED BY: DRAWN BY: T.R. YORD CHECKED BY: R.E.H.

JOB NO. 3749
 DATE 4-16-80
 SCALE NOT TO SCALE
 SHEET NO. 22 OF 22