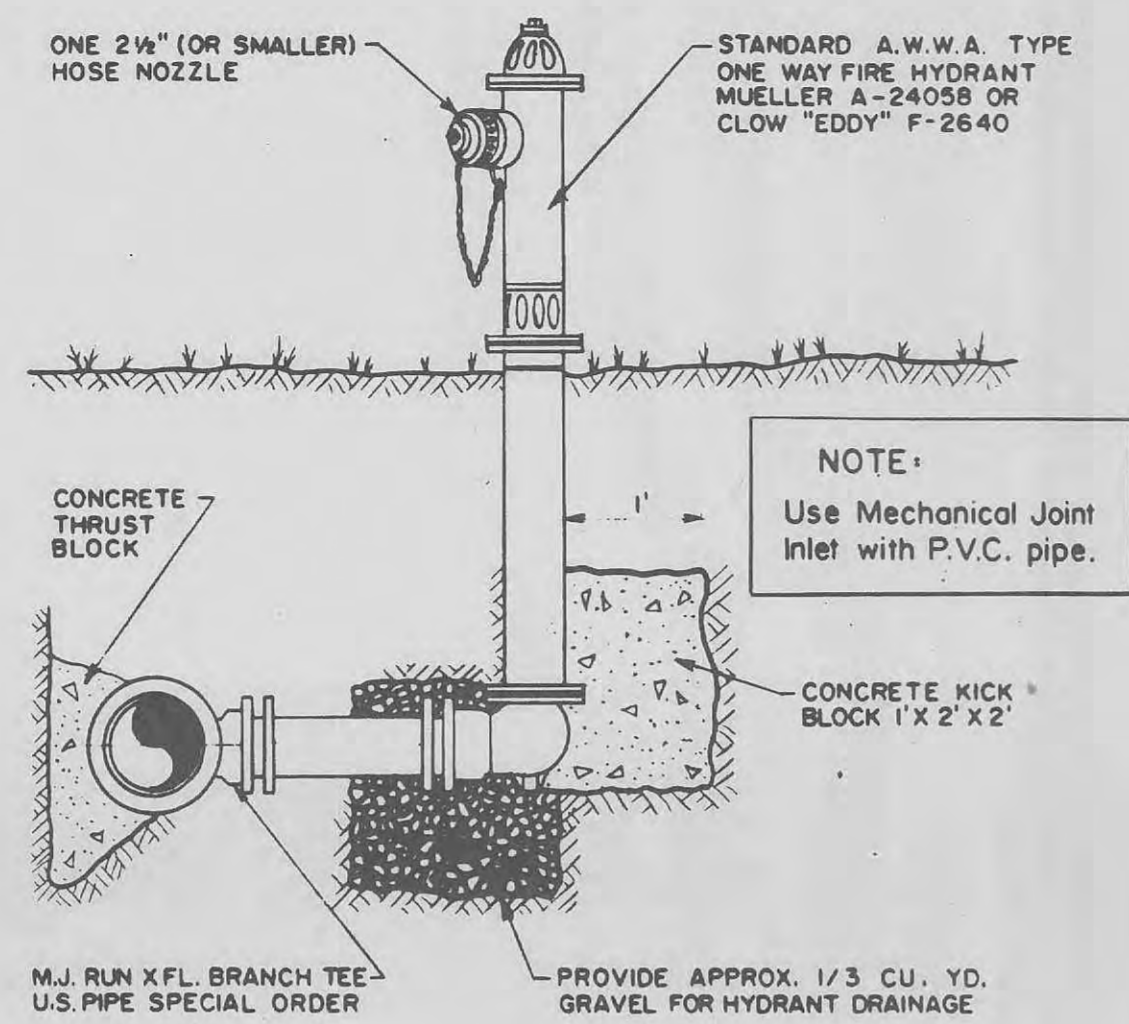


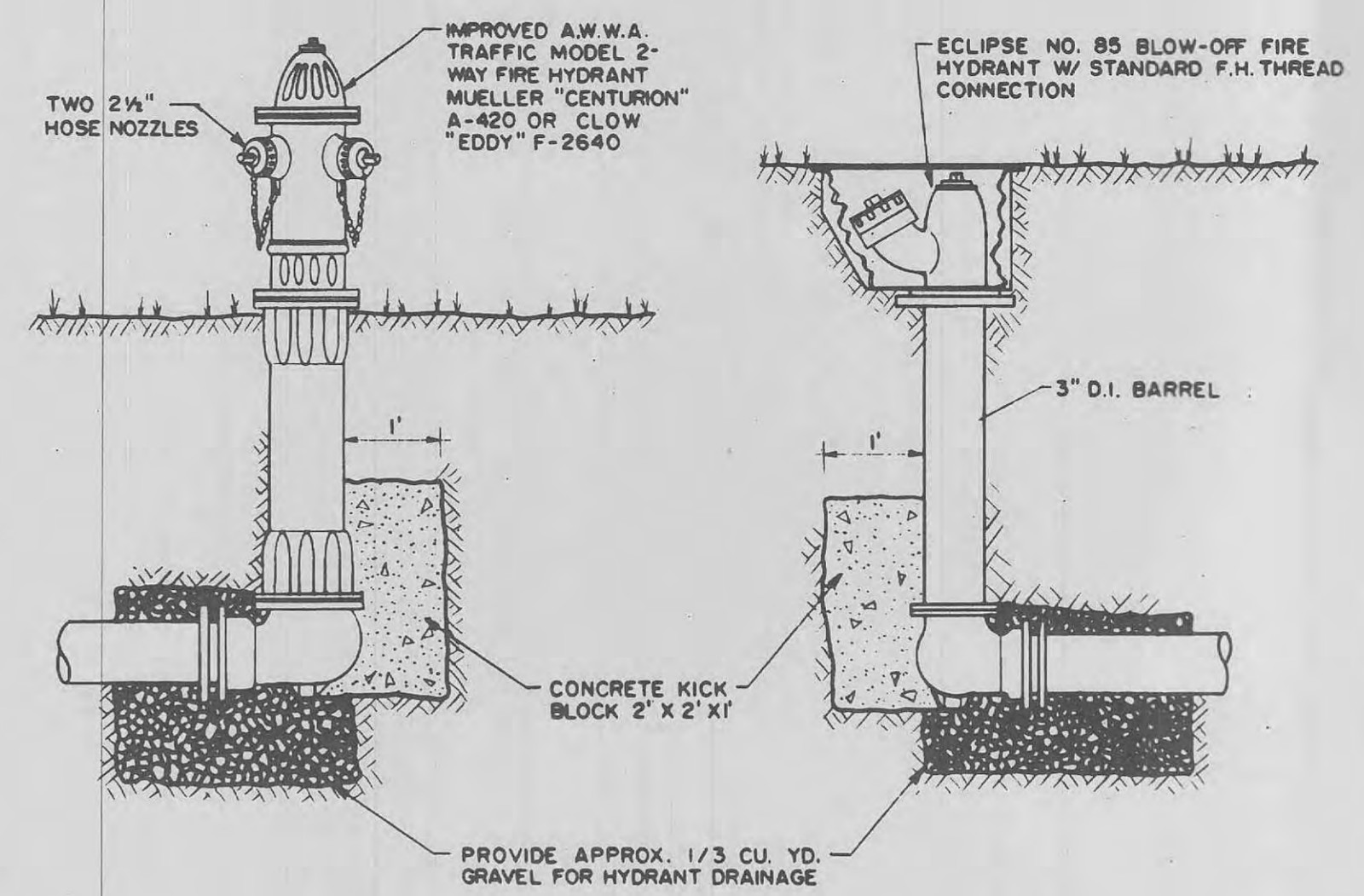
**FIRE HYDRANT INSTALLATION DETAIL WITH AUXILIARY VALVE**  
NO SCALE

**NOTE:**  
For 6" W.M. and larger, 6" THREE-WAY Hydrants are to be used.  
Contractor must take all necessary precautions to insure that hydrant drain (weep hole) remains open.

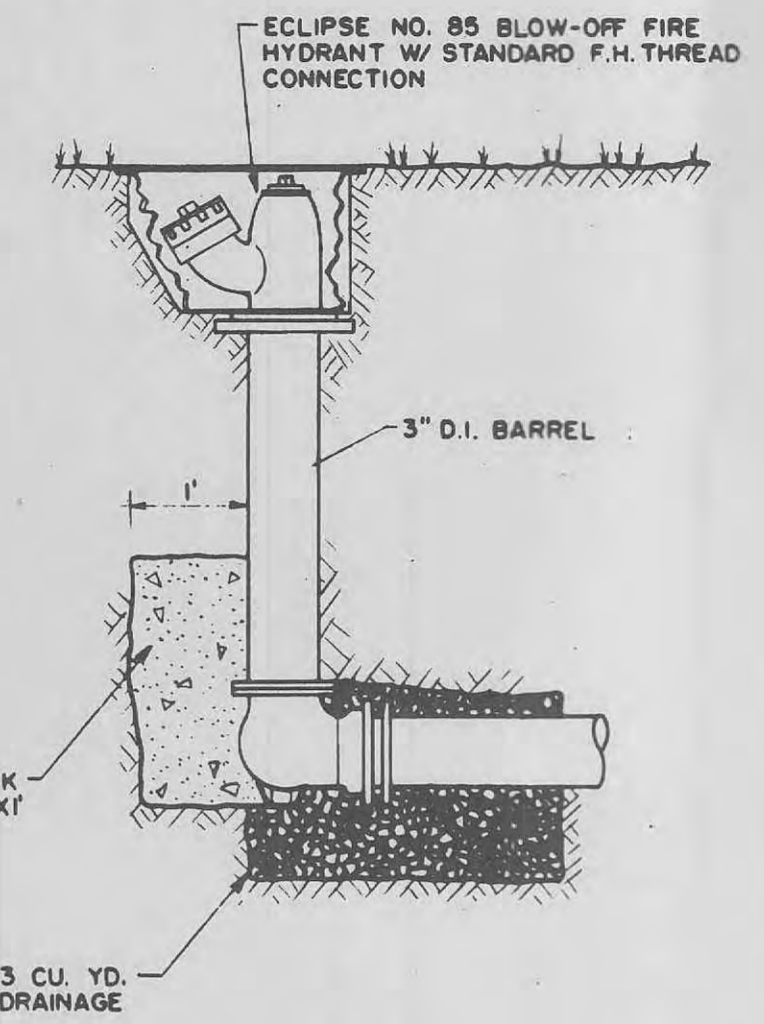


**FLUSHING HYDRANT**  
NO SCALE

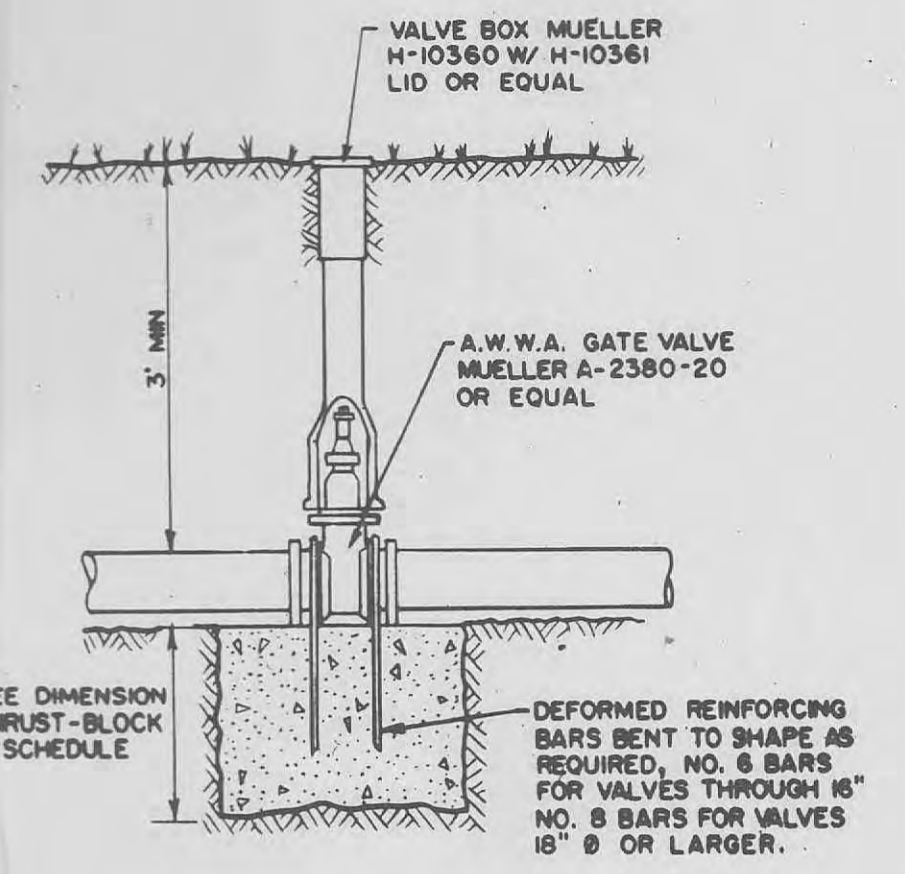
**NOTE:**  
Use Mechanical Joint Inlet with P.V.C. pipe.



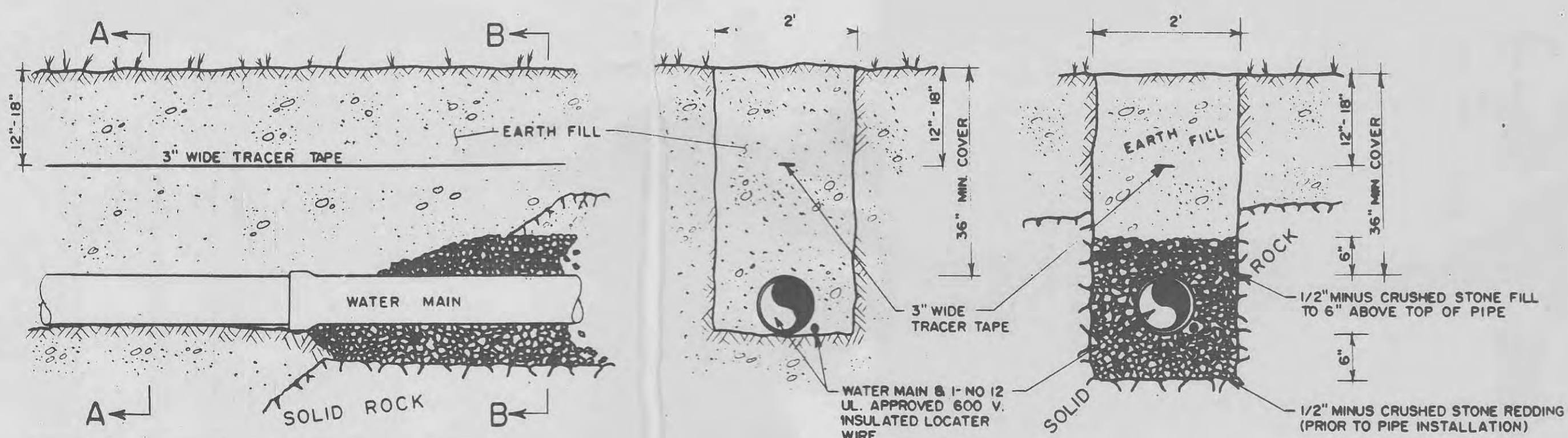
**2-WAY FIRE HYDRANT INSTALLATION DETAIL**  
NO SCALE



**BLOW-OFF FIRE HYDRANT**  
NO SCALE

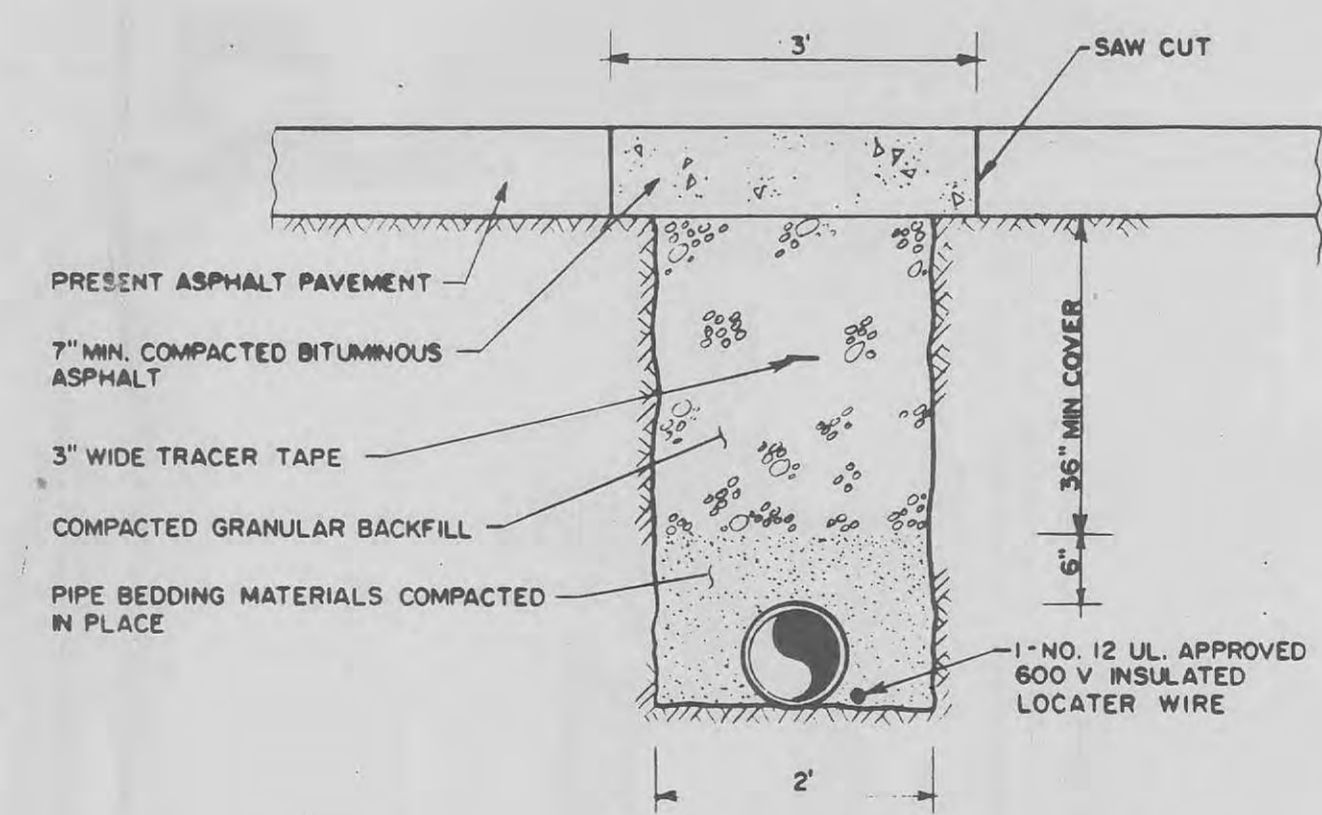


**GATE VALVE W/ THRUST-BLOCK**  
NO SCALE



**TYPICAL WATER MAIN TRENCHING DETAILS**  
NO SCALE

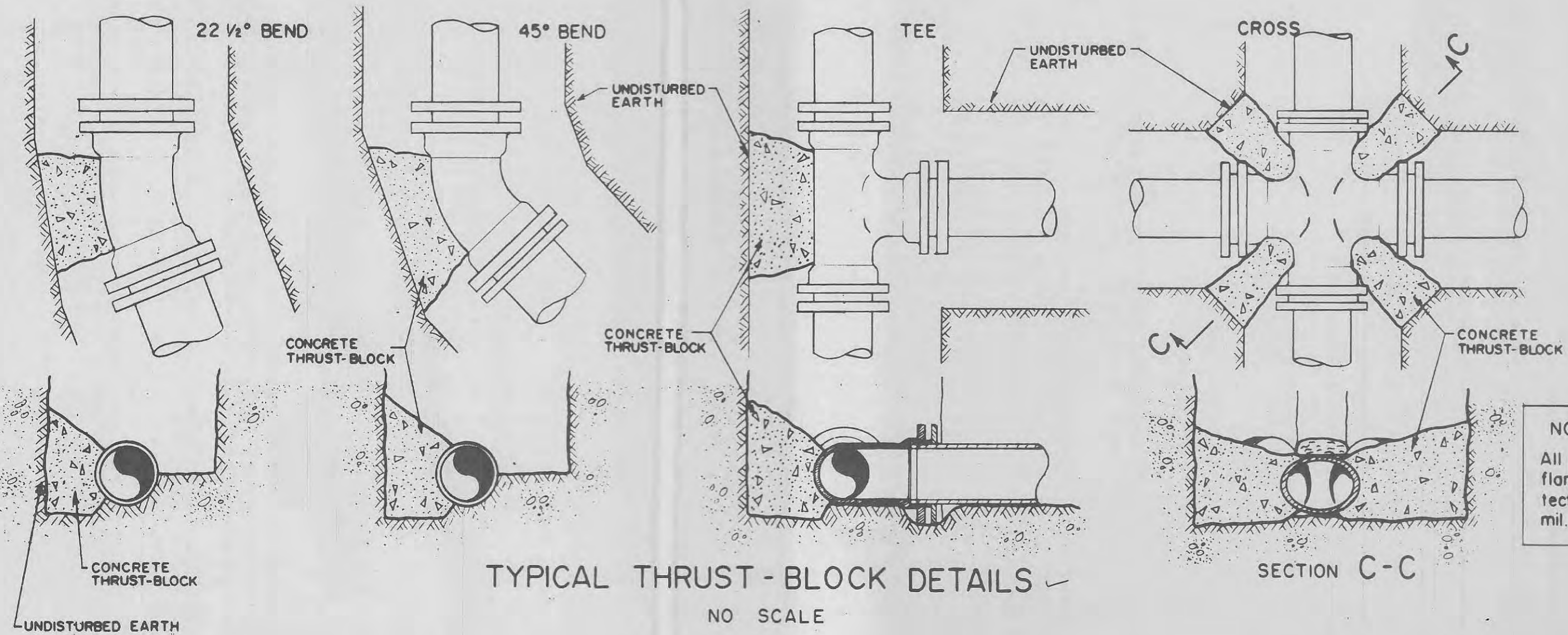
**NOTE:** Excavate for joint as required. Pipe is to be fully supported. No high or low spots under pipe will be permitted.



**TYPICAL PAVED STREET OR ROAD TRENCH, BACKFILL & SURFACE REPLACEMENT DETAIL**  
NO SCALE

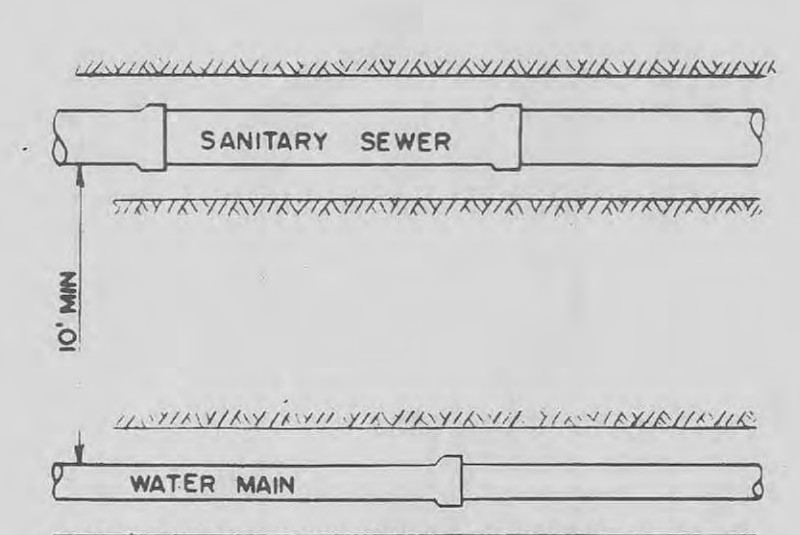
**THRUST-BLOCK SCHEDULE**  
Minimum thrust-block bearing dimensions to bear against undisturbed earth.

WATER MAIN SIZE	BEND 45°	BEND 22 1/2°	TEE	VALVE	CROSS
2"	0.5' x 1'	0.5' x 1'	0.5' x 1'	0.5' x 1'	0.5' x 1'
4"	1' x 1'	1' x 1'	2' x 1'	2' x 1'	1' x 1'
6"	1.5' x 1'	1' x 1'	2' x 1'	2' x 1'	1' x 1.5'
8"	2' x 1'	1' x 1'	2' x 2.5'	2' x 2'	1' x 1.5'
10"	2' x 2.5'	1.5' x 2'	2' x 3.5'	2' x 3'	2' x 2'
12"	2' x 3.5'	1.5' x 2.5'	3' x 3.5'	3' x 3'	2' x 3'
16"	3' x 4'	2' x 3'	4' x 4.5'	3' x 4.5'	3' x 3.5'
18"	3' x 4.5'	2' x 3.5'	5' x 6.5'	4' x 5'	4' x 4.5'



**TYPICAL THRUST-BLOCK DETAILS**  
NO SCALE

**NOTE:** All connections, bolts, glands, flanges, etc., must be protected from concrete w/ 10 mil. polyethylene film.



**TYPICAL WATER & SEWER SEPARATION**  
NO SCALE

HORIZONTAL DISTANCE - Minimum 10' between sanitary sewer & water main.

VERTICAL DISTANCE - Minimum 3' from top of sanitary sewer to bottom of water main.

**LEGEND**

SYMBOL	WATER MAIN
---	2" W.M.
---	4" W.M.
---	6" W.M.
---	8" W.M.
---	10" W.M.
---	12" W.M.
---	16" W.M.
---	18" W.M.
---	EXISTING W.M.
---	NEW W.M.

ST. CHARLES COUNTY  
PUBLIC WATER SUPPLY DISTRICT  
NO. 2

COCHRAN ENGINEERING COMPANY  
WASHINGTON, MISSOURI

APPROVED: *[Signature]*

TYPICAL INSTALLATION DETAILS

DATE	SCALE	SHEET NO.	REVISIONS
NOV., '93	AS SHOWN		