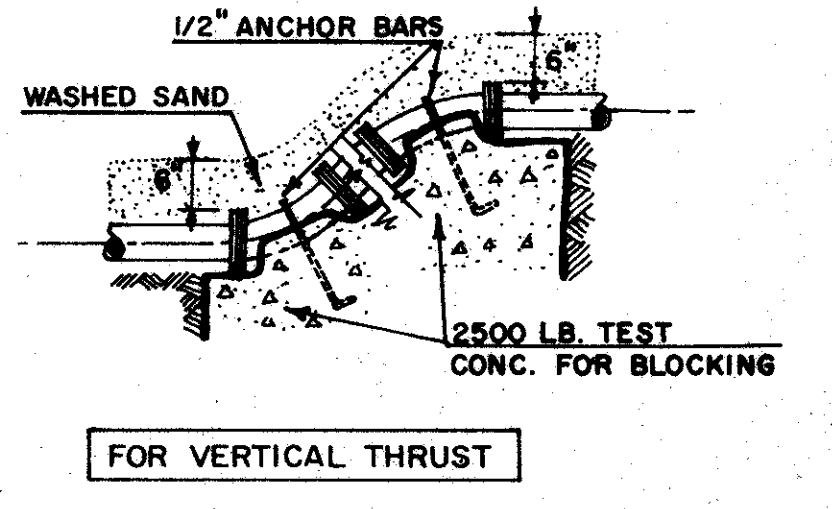
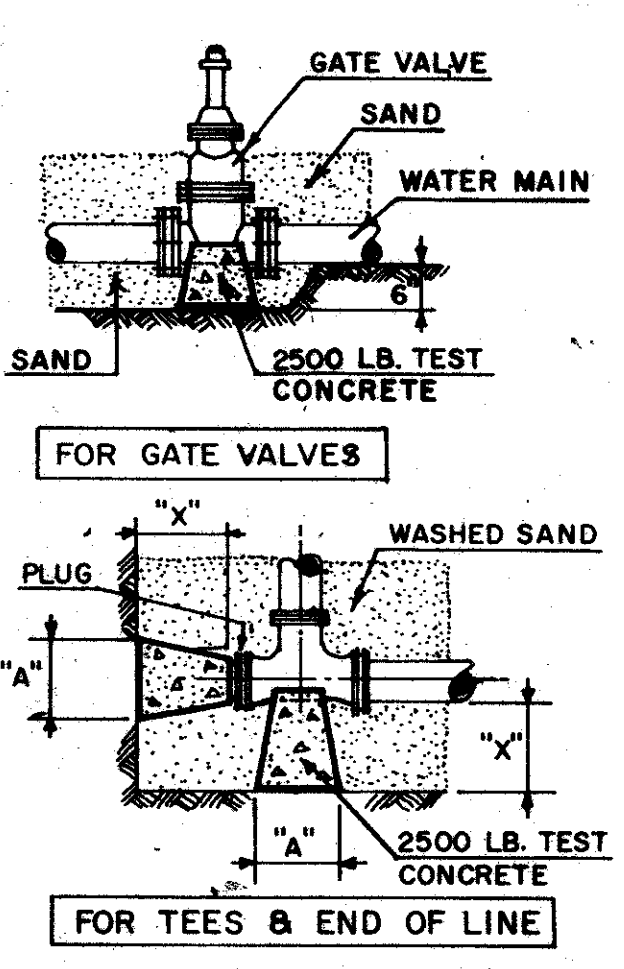
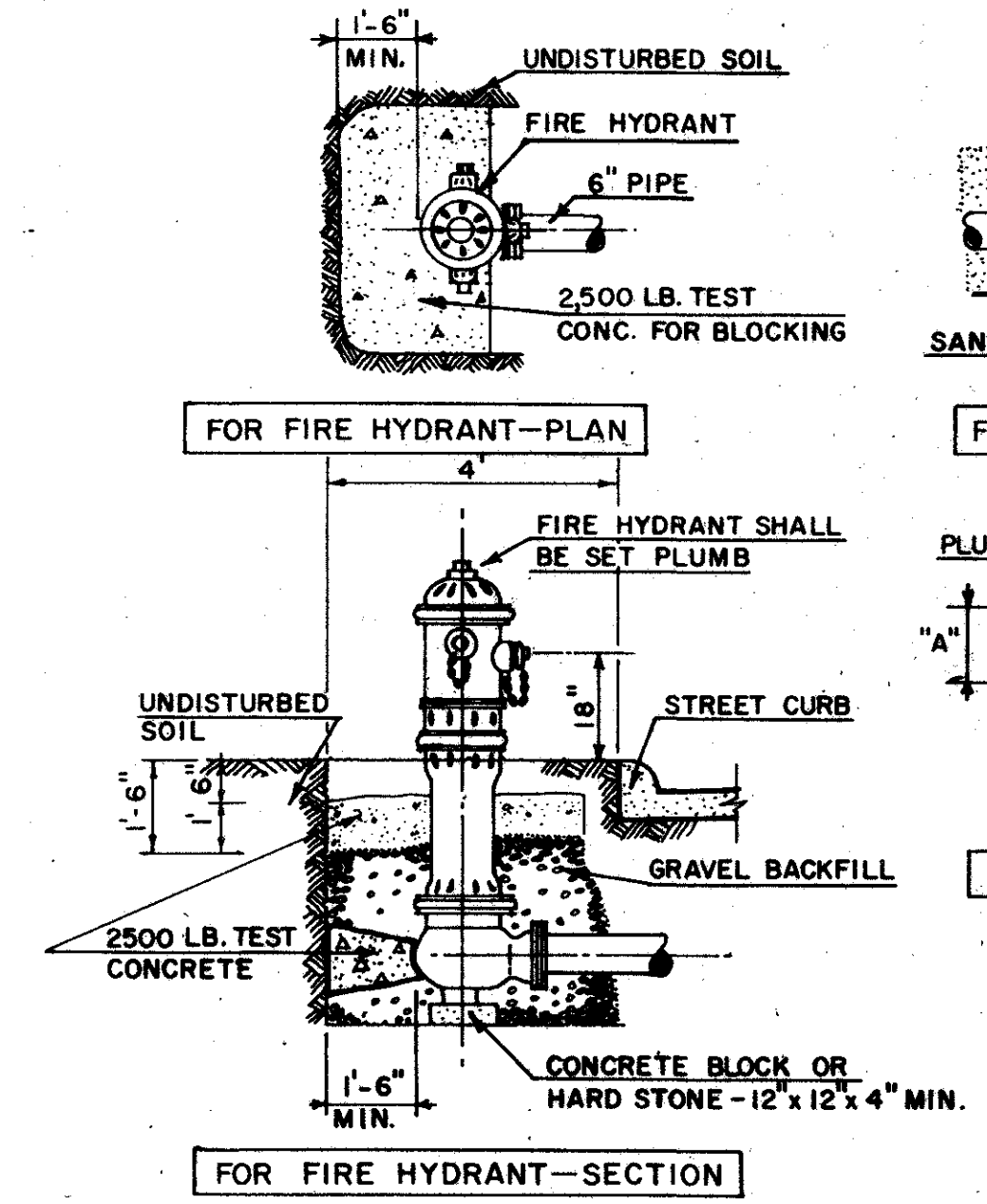
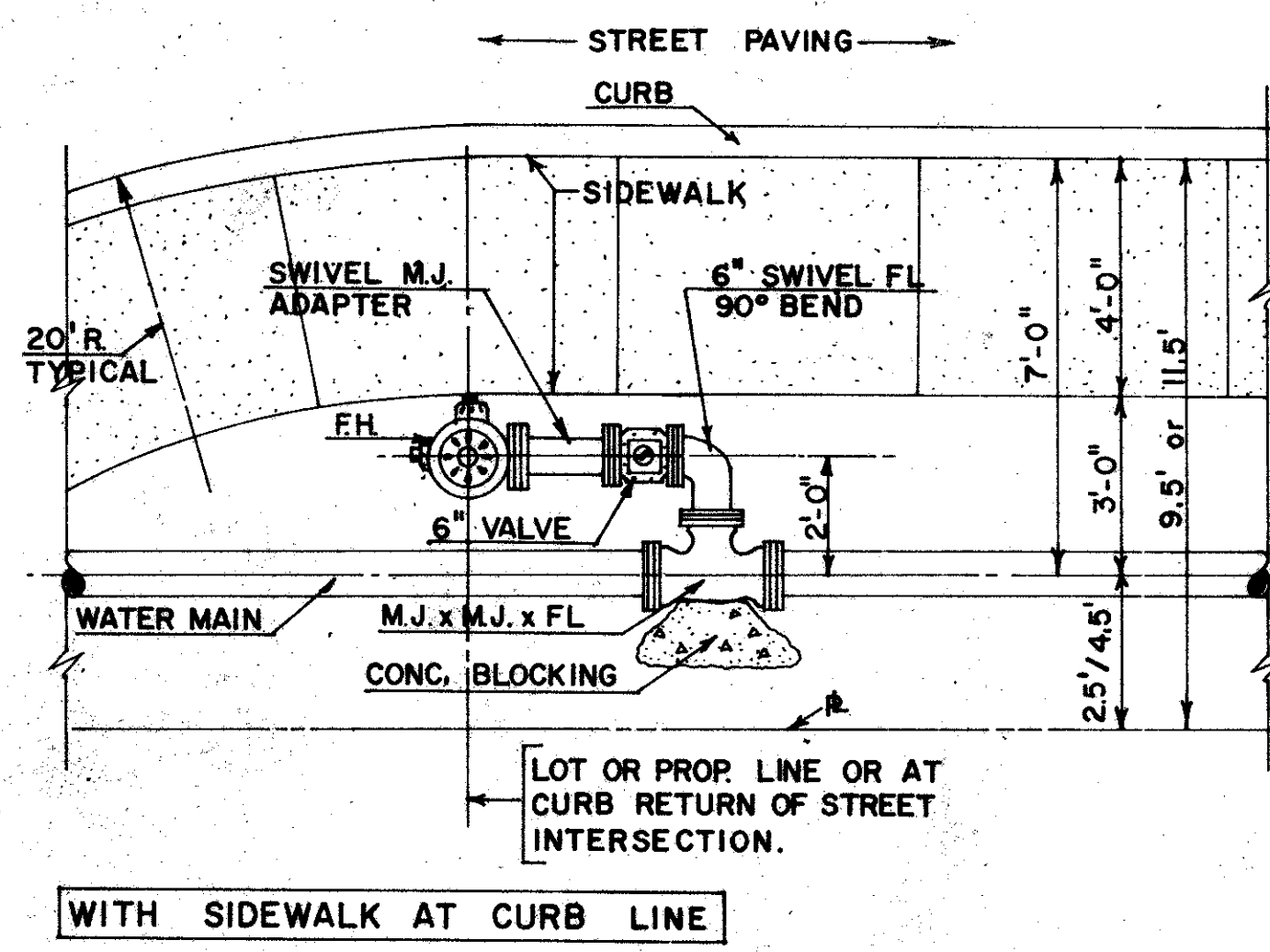
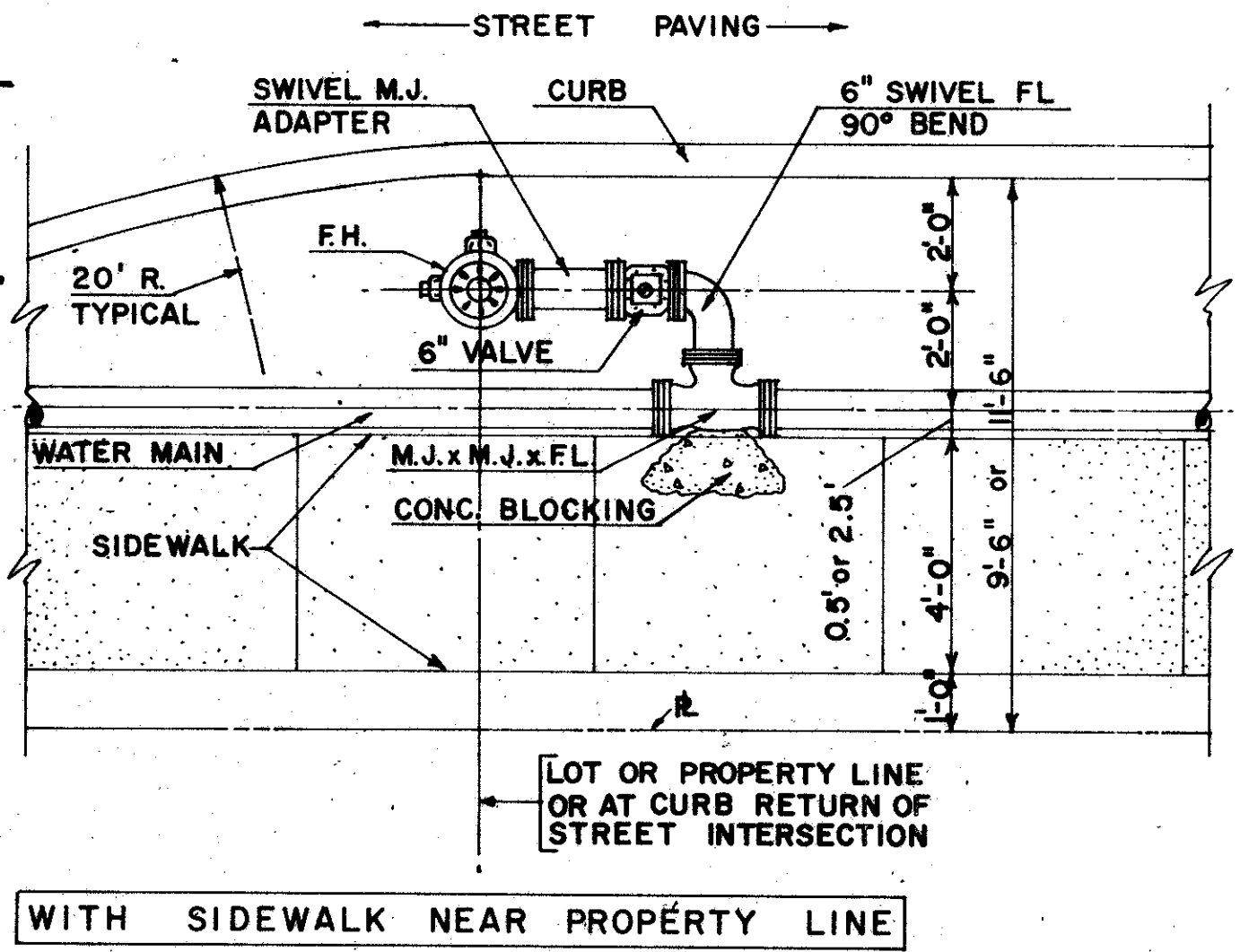


**NOTES:**  
 Fire hydrant shall have "O" ring seals and mechanical joint inlet ends.  
 Fire hydrant steamer nozzle centerline shall be 18" above curb grade and shall face C.L. of street.  
 Pipe fittings shall have mechanical joint, ring tite or swivel ends.  
 Mech. joint fittings shall be supplied with non-corrosive bolts.  
 Gate valves shall be non-rising stem with "O" ring seal & mech. joint or ring tite.



**NOTES:**  
 1. CONCRETE FOR BLOCKING SHALL CONTAIN A MINIMUM OF 4 1/2 SACKS OF CEMENT AND HAVE A 2500 LB. TEST STRENGTH.  
 2. WATER MAIN FITTINGS SHALL BE CAST IRON AND HAVE MECHANICAL JOINT ENDS OR AS APPROVED BY CITY ENGINEER.  
 3. JOINTS SHALL BE COVERED WITH A MINIMUM OF 6" OF WASHED SAND IN ALL DIRECTIONS OR WRAPPED IN POLYETHYLENE PIPE COVERING, MINIMUM THICKNESS OF 8 MILL.  
 4. BLOCKING FOR FIRE HYDRANT SHALL BE EXTENDED TO REST AGAINST UNDISTURBED SOIL AND SHALL NOT CLOG OR BLOCK DRAIN OPENING. AFTER BLOCKING HAS BEEN SET - PLACE 7 CUBIC FEET OF GRAVEL TO INSURE DRAINAGE OF DRAIN OPENING.

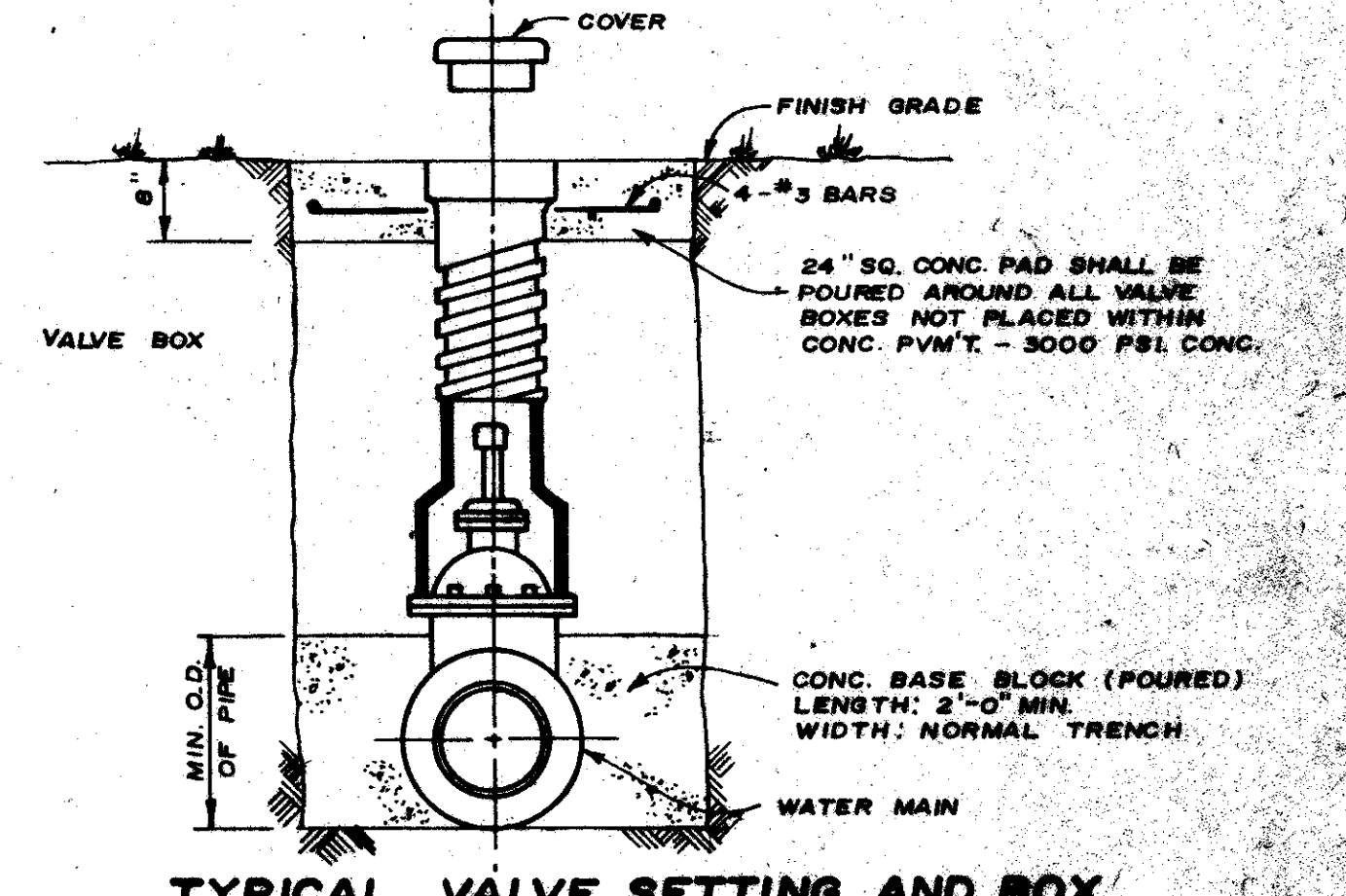
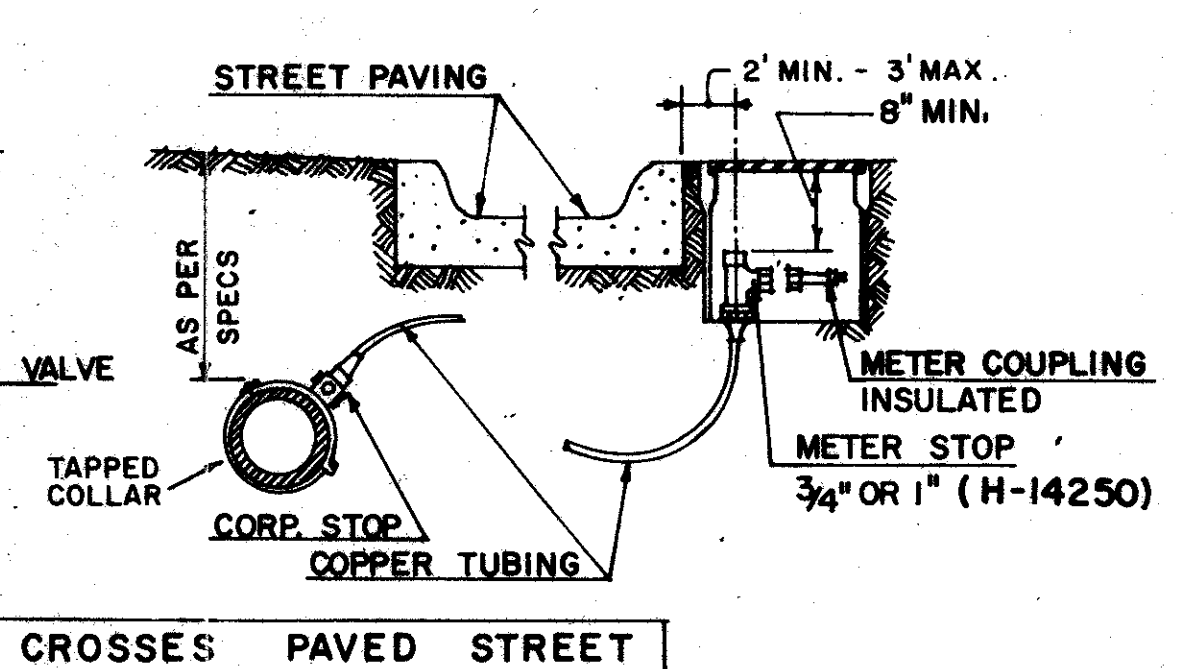
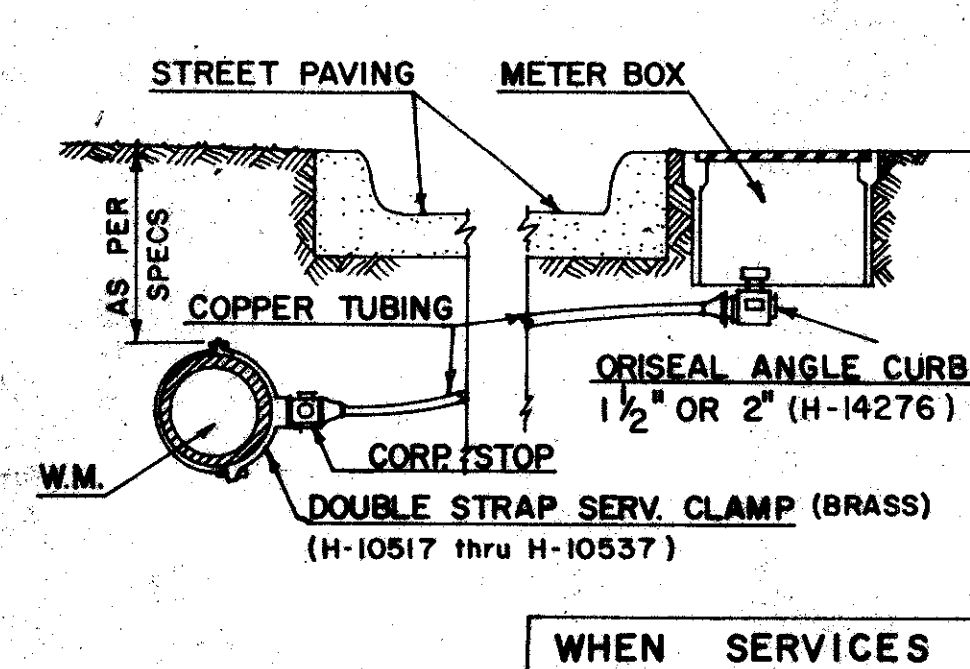
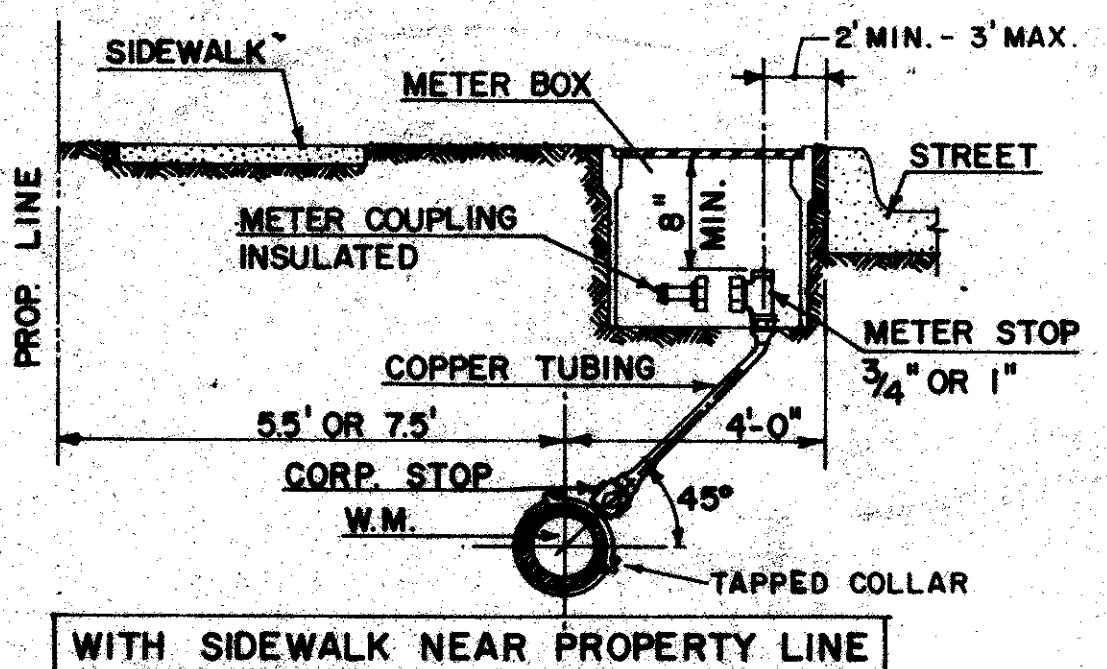
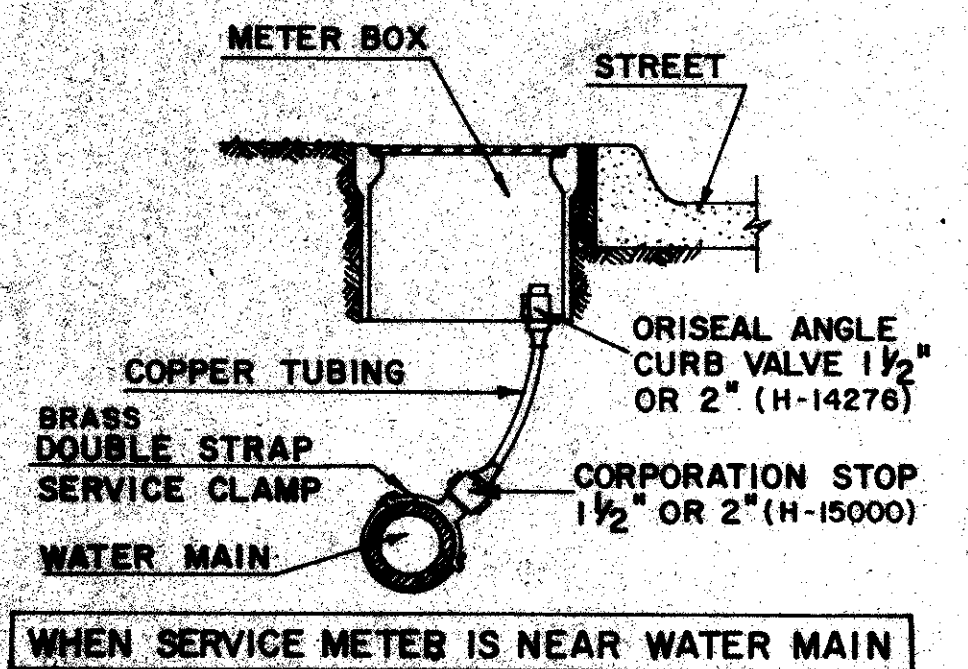
**HORIZONTAL BLOCKING TABLE**

PIPE SIZE	"X" DIM.	PLUGS & TEES		90° BENDS		45° BENDS		22°-30° BENDS		11°-15° BENDS	
		"A" MIN.	MAX. AREA VOL.	"A" MIN.	MAX. AREA VOL.	"A" MIN.	MAX. AREA VOL.	"A" MIN.	MAX. AREA VOL.	"A" MIN.	MAX. AREA VOL.
4"	1'-0"	1'-0"	.83 .05	1'-0"	.83 .05	1'-0"	.83 .05	1'-0"	.83 .05	1'-0"	.83 .05
6"	1'-6"	1'-0"	1.06 .06	1'-2"	1.50 .09	1'-0"	.83 .05	1'-0"	.83 .05	1'-0"	.83 .05
8"	1'-6"	1'-3"	1.89 .11	1'-6"	2.66 .15	1'-3"	1.44 .08	1'-0"	.83 .05	1'-0"	.83 .05
10"	1'-6"	1'-9"	2.95 .17	2'-0"	4.17 .24	1'-6"	2.26 .13	1'-3"	1.15 .07	1'-0"	.83 .05
12"	1'-6"	2'-0"	4.25 .24	3'-3"	6.00 .34	1'-9"	3.25 .18	1'-3"	1.65 .10	1'-0"	.83 .05
16"	2'-0"	2'-7"	7.54 .36	3'-0"	10.65 .78	2'-3"	5.76 .43	1'-8"	2.94 .22	1'-8"	1.48 .11
18"	2'-0"	2'-11"	7.70 .57	3'-5"	10.89 .82	2'-6"	5.89 .44	1'-10"	3.01 .22	1'-5"	1.51 .11
20"	2'-0"	3'-3"	7.86 .59	3'-9"	11.12 .84	2'-9"	6.01 .45	2'-0"	3.07 .23	1'-7"	1.54 .12
24"	2'-0"	3'-8"	11.33 .84	4'-3"	16.00 1.20	3'-2"	8.65 .65	2'-6"	4.42 .33	1'-10"	2.22 .17

"X" DIMENSION COLUMN ARE LIN. FT. DIMENSIONS AND ARE TO BE INCREASED WHERE IT IS NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED SOIL OR SOLID TRENCH WALL.  
 "A" COLUMN ARE LF. DIMENSIONS AND ARE TO BE INCREASED WHERE IT IS NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED SOIL OR SOLID TRENCH WALL.  
 MIN. AREA VOL. DIMENSIONS ARE IN SQ. FT. OF BEARING AGAINST UNDIST. SOIL OR SOLID TRENCH WALL AT LOCATION OF "A" DIMENSIONS.  
 MAX. VOL. COL. DIMENSIONS ARE IN CUBIC YARDS AND DENOTES THE MAXIMUM CU. YD. CONCRETE BLOCKING PAY FOR EACH FITTING.

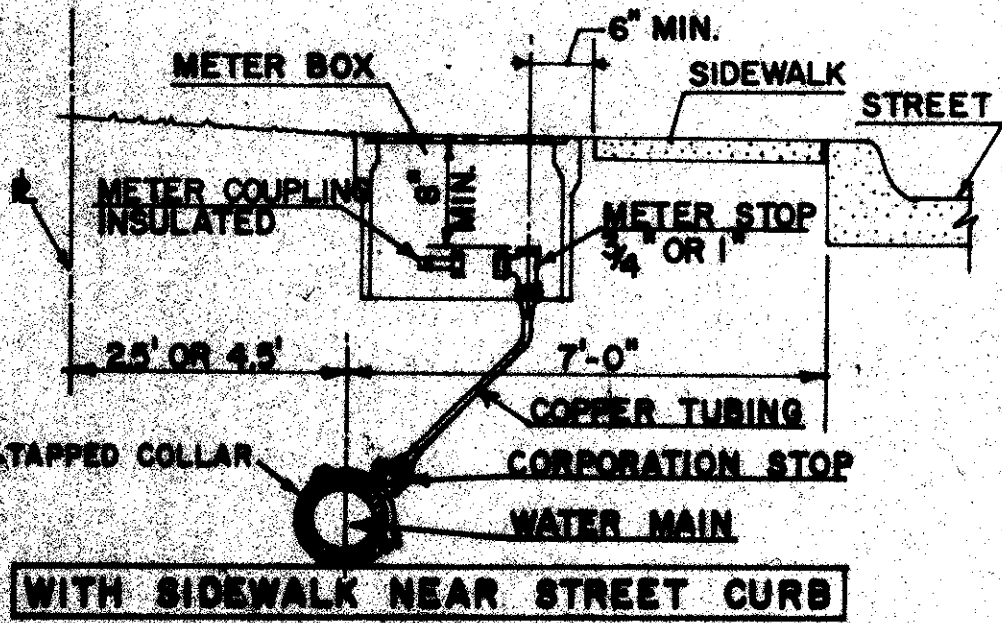
**FIRE HYDRANT LOCATION DETAILS**

**CONCRETE BLOCKING DETAILS**



**NOTES:**  
 1. The water main shall have a minimum cover as per specs. below top of curb grade.  
 2. The water services that are installed before the completion of street construction, shall be laid in the service ditch at the same elevation as the water main or a minimum cover of 30" below top of curb grade. At the proper location for the meter box, the meter (curb) stop shall be raised to 18" below top of curb grade with excess copper tubing to raise the stop at a future date to 6" below top of curb grade.  
 3. Use double brass strap service clamp when tapping all asbestos cement pipe.  
 4. On "A" & 1" corp. tapped collars shall be used.

**SERVICE CONNECTION DETAILS**



ADDED VALVE SETTING AND BOX		DATE	BY
REVISION		DATE	BY
<b>CITY OF FARMERS BRANCH, TEXAS</b>			
PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION			
<b>WATER</b>			
<b>SERVICE AND MAIN DETAILS</b>			
DRAWN BY GHA		APPROVED BY	
DESIGNED BY		DATE	
PROJECT NO.	SCALE	SHEET	64 OF 66