

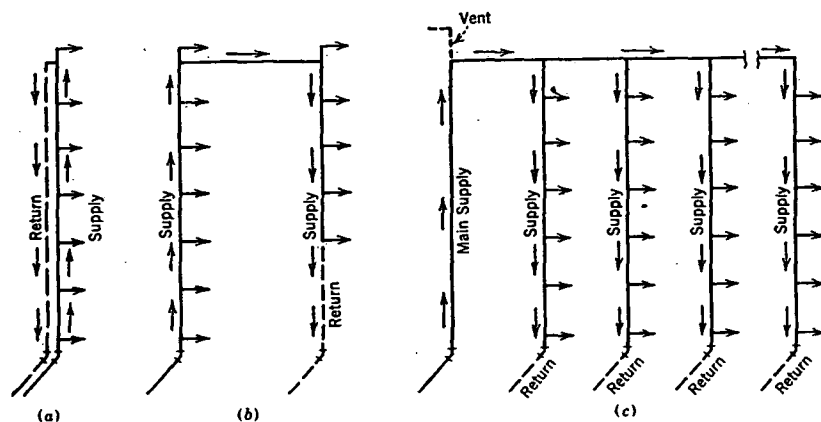


FIG. 6. METHODS OF ARRANGING HOT WATER CIRCULATION LINES

water risers which do not have the combined up- and down-travel which the hot water must make.

In the third and most common arrangement all of the water is carried from the tank or heater directly to the top of the building and is there distributed to the risers which are down-feed and may be sized in the regular down-feed manner if the total equivalent run either from the street main or house tank is taken into consideration. The return circulation lines from the bottom of each riser should be arranged in the manner already outlined and any riser not going to the basement to

TABLE 9. SUMMARY OF RISER SIZES TO GIVE MAIN SIZES

RISER No.	FIXTURES	GPM PER FIXTURE	RISER GPM	PROBABLE USE (PER CENT)	PROBABLE GPM	ALLOWABLE DROP (LB PER 100 FT)	SIZE OF MAIN (INCHES)
1	12 W. C.	50	600				
	6 U.	40	240				
	18 31 Fixt.		840 186	18 37	151 69	3.3	4
2	29 W. C.	50	1450				
	5 U.	40	200				
	52 29 Fixt.		2490 177	8 33	199 120	3.3	4
3	6 W. C.	50	300				
	58 10 Fixt.		2790 36	7 33	195 131	3.3	4
	70		399		326		

TABLE 10. TYPICAL CALCULATION OF PIPE SIZES ON UP-FEED RISER WITH FLUSH VALVE WATER-CLOSETS AND URINALS

FLOOR OF BLDG.	FIXTURES ON FLOOR	GPM PER FIXT.	MAX. FIXT. GPM	PROBABLE USE (PER CENT)	PROBABLE FIXT. GPM	PROBABLE RISER GPM	ALLOWABLE DROP (LB PER 100 FT)	PIPE SIZE IN.
<i>Riser No. 1</i>								
8th	4 W. C.	50	200					
	2 U.	40	80					
	6 3 Lav.	3	280 9	40 80	112 7	119	8.5	2½
7th	4 W. C.	50	200					
	2 U.	40	80					
	12 3 Lav.	3	560 9	25 55	140 10	150	8.5	2½
6th	4 W. C.	50	200					
	2 U.	40	80					
	18 3 Lav.	3	840 9	18 50	151 14	165	8.5	2½
5th	4 W. C.	50	200					
	2 U.	40	80					
	24 3 Lav.	3	1120 9	15 47	168 17	185	8.5	3
4th	24 W. C.* and U.	3	1120 30	15 40	168 27	195	8.5	3
	10 Lav.		66					
3rd	24 W. C.* and U.	4	1120 4	15 40	168 28	196	8.5	3
	1 S. S.		70					
2nd	24 W. C.* and U.	4	1120 4	15 40	168 30	198	8.5	3
	1 S. S.		74					
1st	24 W. C.* and U.	4	1120 4	15 40	168 31	199	8.5	3
	1 S. S.		78					
	25							

*From floors above.