

FIRE-WATER CALC WORKSHEET FOR

(Based upon the Hazen-Williams Formula)

NAME/ADDRESS OF PROJECT _____

INFORMATION REQUIRED TO CALCULATE WATER SERVICE SIZE

1.	Sprinkler Demand:	1 Sprinkler (gpm)	2 Sprinklers (gpm)	Total	GPM =
	Sprinkler Manufacturer:		Model#		K-Factor:
2.	Difference in elevation from main to external pressure tank or to building control valve.				(feet)
3.	Size of the water meter when applicable.	Example; 5/8, 3/4, 1, 2, 3, 4			
4.	Developed length from main or external pressure tank to building control valve.				(feet)
5.	Low pressure at main in street or external pressure tank.				(psig)

CALCULATE WATER SERVICE PRESSURE LOSS

6.	Low pressure at main in street or external pressure tank. (value of #5 above)				
7.	Water service diameter is	Material is	Pressure loss per 100 ft =		psi
	X (decimal equivalent of service length, i.e. 65 ft = 0.65)				
	(Subtract line 7. From line 6.)				subtotal
8.	Determine pressure gain or loss due to elevation. (multiply the value of #2 above by 0.434)				Value of "8"
9.	Available pressure after the bldg. Control valve.		(subtract or add line 8. Enter in "B".)		subtotal

CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")

B.	Available pressure after the building control valve. (from "9" above)			value of "B"
C.	Pressure loss of water meter. (when meter is required or installed)			value of "C"
	(subtract line C. From B.)			subtotal
D.	Pressure at controlling sprinkler(s).			value of "D"
	(controlling sprinkler(s) is)			
	(subtract the value of D.)			subtotal
E.	Difference in elevation between the building control valve and the controlling sprinkler(s) in feet;			
	X 0.434 psi/ft.			Value of "E"
	(subtract the value of E.)			subtotal
F.	Pressure loss due to water treatment devices, instantaneous water heaters and backflow preventers			
	which serve the controlling fixture			Value of "F"
	Pressure loss due to			(subtract the value of F) subtotal
G.	Developed length from building control valve to controlling sprinkler in feet		X 1.5	Value of "G"
	(divide by the value of G.)			subtotal
	(Note: Excessive number of fittings refer to material fitting pressure loss tables)			
	Water distribution piping material is:			
				(multiply by 100) 100
A.	Pressure available for uniform loss			"A" =

Comments