

Flow = 7.5 GPM Delta Z = 231 ft

Material: Galvanized CS, Sched 40
DIA 1 inch
Area 0.006001751 ft²
Velocity = 2.78 fps

		Unit Le	Qty	Le
Pipe			1	1800
Elbow	90 deg LR	2.62	25	65.5
	45 deg SR	1.4	5	7
Weld	r/d = 1	0		0
Weld	r/d = 2	0		0
Miter	45 deg	0		0
Miter	90 deg	0		0
Tee	Thru	1.75	4	7
	Branch	5.25	2	10.5
Bend	Close Return	4.37		0
Valve	Gate	0.7	3	2.1
	Swing Check	8.74	1	8.74
	Angle	13.1		0
	Globe	29.7		0
	Butterfly	0		0
Total				1901

from CHD: f = 4.04 ft/cft

hf = 76.8 ft ← TOO HIGH! USE 1 1/2" φ

P1/rho = -10 ft
P2/rho = 0 ft
v1/2gc = 0 ft
v2/2gc = 0 ft
hE = 0 ft

$h_A = (P1 - P2/rho) + (v2^2 - v1^2)/2gc + (z2 - z1) + hE + hf$

hA = 317.8 ft

SF = 1.15

TDH = 365 ft ← ASSUMED 65% EFF

Eff = 0.65

BHP = 1.06 HP = 794 Watts