

Flow = 7.5 GPM      Delta Z = 231 ft

Material: Galvanized CS, Sched 40  
DIA 1.5 inch  
Area 0.0141377 ft<sup>2</sup>  
Velocity = 1.18 fps

		Unit Le	Qty	Le	
Pipe			1	1800	
Elbow	90 deg LR	4.03	25	100.75	
	45 deg SR	2.15	5	10.75	
Weld	r/d = 1	0		0	
Weld	r/d = 2	0		0	
Miter	45 deg	0		0	
Miter	90 deg	0		0	
Tee	Thru	2.68	4	10.72	
	Branch	8.05	2	16.1	
Bend	Close Return	6.71		0	
Valve	Gate	1.07	3	3.21	
	Swing Check	13.4	1	13.4	
	Angle	20.1		0	
	Globe	45.6		0	
	Butterfly	0		0	
	<b>Total</b>				<b>1955</b>

from CHD: f = 0.051 ft/cft

hf = 1.0 ft

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

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

hA = 242.0 ft

SF = 1.15

TDH = 278 ft

Eff = 0.65

BHP = 0.81 HP = 605 Watts