

much more economical, but owing to the noise would be objectionable. Two units of one million gallons capacity each should also be installed for the higher service, either of which might, in an emergency, be used for the lower service. This would make four units, each of one million gallons capacity.

For the higher service a steel force main would be required up the mountain face, and a storage tank of reinforced concrete or of steel, at a sufficient elevation to give any desired pressure on Mountain above. In case of fire in the lower district this extra supply might be drawn upon by using proper equalizing valves.

We propose that the station be supplied by a new 20 inch main.

We estimate that the works above mentioned will cost as follows :

(7) Pump House. . . . .	\$12,000 00
(8) Two Pumping Units, each one million gallons capacity . .	12,000 00
(9) Two heavy pressure pumping units, each of half million gallons capacity . . . . .	18,000 00
(10) Force main to tank, 2,500 feet of 12 inch pipe . . . . .	12,900 00
(11) Elevated tank, capacity 100,000 gallons. . . . .	8,000 00
(12) Contingencies 5 per cent . . . . .	2,500 00
(13) Engineering and superintendence . . . . .	2,500 00
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	\$67,000 00

**Air Lift System.** To place the Wentworth Street Mountain Pumping System in an efficient condition, constructing a tank of sufficient capacity alongside the station, and by duplicating the pumping plant, would cost approximately \$2,800.

While this would be quite suitable and safe for a certain length of time, we do not feel assured of its permanent operation under the best conditions, and would therefore not recommend its continuance, except as an auxiliary. In fact, the Mountain top can be more efficiently supplied from units in the Ferguson Avenue Pump House, and would thus obviate the engagement of two extra men, reducing the cost of operating and maintenance.

Taking into consideration the condition and capacity of the Wentworth street air pumps, together with the unsatisfactory nature of the service now given to the Mountain top from this station, we would recommend the enlargement of the Ferguson Avenue Pumping Station, with the pumping units above mentioned, together with the pipe up the Mountain side to supply the entire plateau above.

The Ferguson avenue steam plant, and the air lift station at Wentworth street, should, however, be thoroughly overhauled and maintained in an efficient condition for emergency service, until such time as the City secures electric power strictly in duplicate from the point or points were generated.

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