

Mixing Chamber and Coagulation Basins

The low lift pumps will take the water from the present screen well and raise it into the mixing chamber at the upper end of which the coagulant solution will be introduced. The water is then carried through the mixing chamber at a high velocity by means of vertical baffles, so as to secure a thorough mixture between coagulant and water, for a period of five or ten minutes. After leaving the mixing chamber the water enters the coagulation basin, which is approximately 80 x 60 x 16, where it will remain for an average period of two hours, or a minimum period of one hour and thirty minutes.

Filters

From the coagulation basin the coagulated and settled water will pass to the filters, of which there are to be eight units, each 20 x 16 feet, placed on either side of the pipe gallery. The filters will be covered by that part of the building west of the head house as shown on the

northerly end of the mixing chamber for the purpose of storing the coagulant as well as liquid chlorine, and for preparing the coagulant solution for application to the water. A covered passage is provided from the head house through the mixing chamber to the coagulant house.

Clear Well

As will be seen in Figure 2, the clear well extends under the head house and filter building. After passing through the filters the water is collected in this basin from where it is carried by gravity to the present pumping station through a 24-inch cast iron pipe.

Construction

Construction will in all probability be on the "cost plus" plan, but owing to the difficulty in procuring materials, actual building operations will not be undertaken before spring; however, it is proposed to contract for all material and equipment at once. The estimate of the

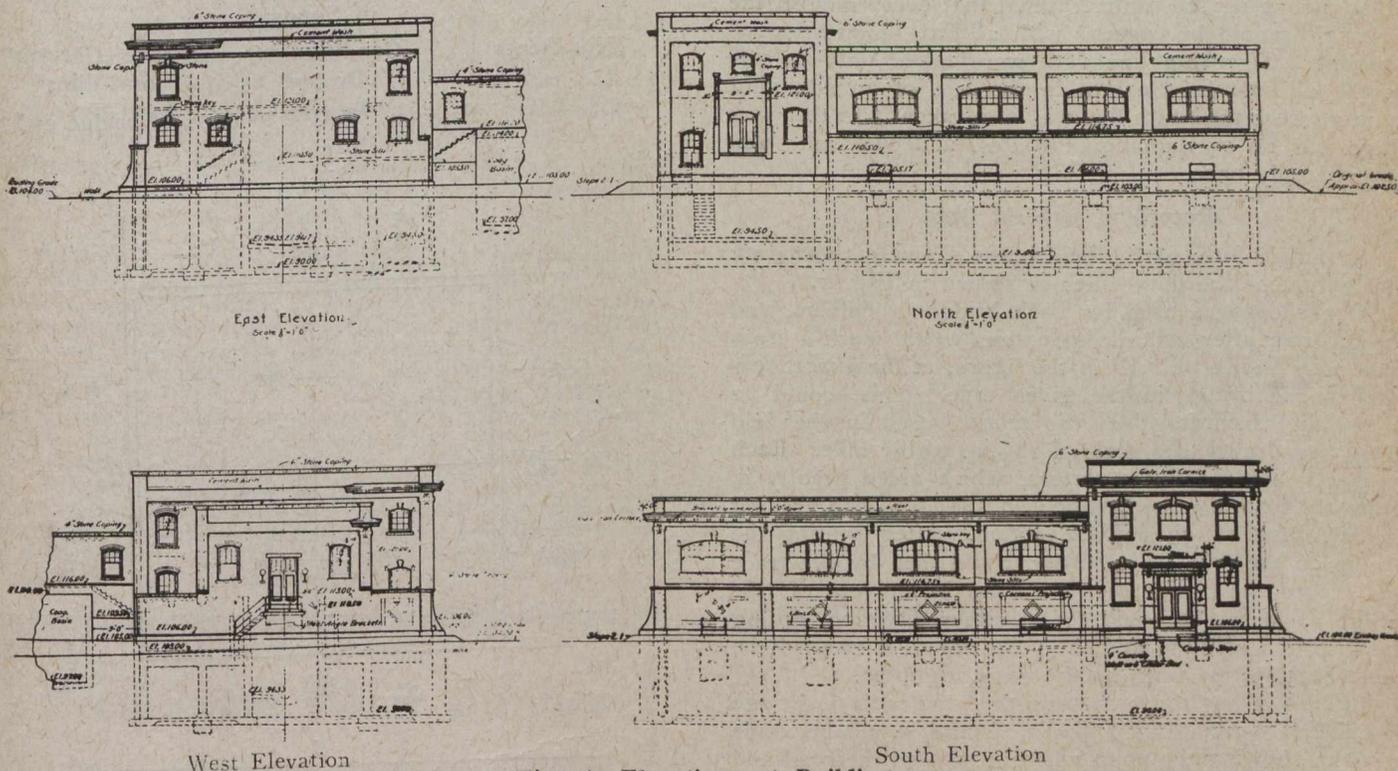


Fig. 4—Elevations of Buildings

south elevation. The strainer system is simple, consisting of 3-inch wrought iron pipe perforated with two rows of 1/4-inch holes, 4 inches on centres. Over these pipes is placed 18 inches of graded gravel and 2 feet 6 inches of sand.

Coagulant House

It is proposed to construct a building adjacent to the

cost of the building and fixtures is in the neighborhood of \$200,000.

The Walkerville Water Co., Limited, of which Mr. C. D. Brown is Secretary-Treasurer, has been in operation since 1880, and is supplied by gravity from the Detroit River. This system also supplies Ford and Sandwich East.

An ordinance before the city councils of Philadelphia provides that by December 31, 1924, all water supplied to consumers from the city waterworks shall be delivered through meters and charged for at meter rates. As nearly as may be, a fifth of the present unmetered services would be equipped with meters each year for the next four years, and all remaining in the fifth year. Consumers would pay the cost of supplying, setting, maintaining and repairing meters, but the work would be done and the meters controlled by the Bureau of Water. The ordinance authorizes the Director of Public Works to let one or more contracts for installing the proposed meters, under the terms stated in the ordinance.

A report to the Executive Committee of the American Water Works Association, made by George W. Fuller, Leonard Metcalf and George A. Johnson, shows that returns from fifty plants indicate that labor costs in 1917 were twenty-seven per cent. greater than before the war, while labor has decreased twenty-five to thirty per cent. in efficiency. Construction costs have more than doubled; coal and fuel oil have doubled in price, and chemicals have gone up between fifty and one hundred per cent. The annual increase in revenues has declined below normal, while net revenues, available for capital charges and profits have remained about stationary, as a rule.