

There is little reason to anticipate nuisance conditions from the screens, cell or settling basins when handling fresh sewage for there would normally be dissolved oxygen present throughout the process. Freedom from nuisance, however, cannot be predicted with any degree of certainty in a large municipal plant which must necessarily contain sludge beds or sludge presses for dewatering the sludge. In fact, it is altogether probable that disposal of the sludge would at times be attended by offensive odors.

Difficult to Predict Costs

It is difficult to predict, with a satisfactory degree of accuracy, the cost of operating a large unit by comparison with data collected through operation of a single small unit. However, in the absence of complete information reliance must be placed upon such data as are available and reasonable factors applied to meet expected conditions in the larger plant. The following figures regarding cost of operating the plant at Easton are therefore given as a rough indication of what might be expected, but apply more particularly to a plant of a similar size operating under the same conditions—namely, pumping of sewage and the addition of lime at a rate stated by the owner of the patent as being greatly in excess of that necessary to secure satisfactory results:—

Cost of Operation

Without Pumpage—	
Hydrated lime, 1,712 lbs. at \$6.75 per ton	\$ 5.78
Water for mixing lime, 20 cu. ft. at \$0.003 per cu. ft.06
Electric power, 130.6 k.w.h. at \$0.0226	2.95
Electric lights, 6¼ k.w.h. at \$0.080550
Heating	1.25
Labor and superintendence	15.00
Electrode renewals, company's estimate	1.00
Maintenance and repair	1.50
Total	\$28.04
Add for Pumpage—	
Electric power, 88.3 k.w.h. at \$0.0226	2.00
Water, 120 cu. ft. at \$0.003 per cu. ft.36
Total	\$30.40
Equivalent cost per 1,000,000 gals.	66.00

These figures are on the basis of pumping and treating 460,600 gals. excluding allowance for interest and sinking fund charges and cost of sludge pumping, treatment and disposal. The costs of hydrated lime, water and electric current are those which the department understands obtain at Easton. The figure for labor and superintendence is based upon employment of a superintendent at \$1,650 a year who should be able to make necessary bacteriological and chemical tests and who is familiar with the theory of operation of the

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GOVERNMENT CONTROL OF G.T.R.

THE Grand Trunk Railway System of Canada, with all its lines in and out of the Dominion, including the Grand Trunk Pacific, is to pass into the possession and control of the Dominion Government. The bargain has been made with the government by Sir Alfred Smithers, representing the stockholders of the Grand Trunk. It will have to be ratified by Parliament and by the stockholders of the Grand Trunk.

The stock of the company is to be acquired by the government. The payment will not be in cash, but by an exchange of securities. The holders of the preferred and common stock will transfer their shares to the government, and will receive in exchange therefor shares which will have no voting power, but will earn four per cent. guaranteed by the government. As the preferred and common shares of the company are now considerably below par, their value is to be determined by a board of arbitration and the agreement provides for the appointment of such a board.

The debentures will be assumed by the government. They amount to £31,926,125. The guaranteed stock, amount-

ing to £12,500,000, will be treated as debenture stock, and the payment of the 4 per cent. dividend will be guaranteed by the government.

The holders of debentures and guaranteed stock are to surrender all voting powers.

The other stock of the company falls into four classes, namely, first preference, second preference, third preference and common; the total par value of these four stocks is £37,073,492.

As soon as the bargain has been ratified, the road will be turned over to a committee of management. Two members of the committee will be named by the government and two by the company, and the four will select a fifth member. This committee will operate the road during the arbitration, and will operate it in close connection with the Canadian National Railway System. After the arbitration has been completed and the stock has been transferred to the government, the committee of management will be discharged and the Grand Trunk lines will become a part of the Canadian National Railway System.

In estimating the value of the stock the arbitrators are to refer to the fixed charges and other liabilities of the Grand Trunk and will take into consideration all the liabilities of the Grand Trunk on account of the Grand Trunk Pacific.

Hon. Arthur Meighen, Minister of the Interior, has introduced into Parliament a resolution ratifying the agreement with the G.T.R. It will be debated at length during the present session.

PROPOSED SCHEDULE OF CIVIC SALARIES AT BALTIMORE

THE Baltimore chapter of the American Association of Engineers presented to the Board of Estimates of the city of Baltimore, under date of September 27th, a report of the compensation committee of that chapter on salaries of engineer employees of the city, with the request that the board analyze the situation and take such action as seems advisable.

The schedule recommended covers more than 60 grades of engineer employees of the city. It recommends an increase for the chief engineer of at least \$2,500 to bring his salary up to a minimum of \$10,000 per annum, with a maximum of \$15,000. Some of the other recommendations are tabulated below:—

Present Title	Present Annual Salary	Annual Salary Recommended by Committee, Minimum Maximum	
Highways Engineer, Water Engineer, Harbor Engineer, Chief Engineer Paving Commission and Inspector of Buildings	\$4,000	\$5,000	\$7,500
Division Engineer of Sewers ..	3,300	3,600	5,000
Principal Assistant Engineer Water Department	3,000	3,600	5,000
Mechanical Engineer Water Department	2,700	3,600	5,000
Assistant Engineer Water Department	2,200	2,700	3,300
Assistant Engineer of Bridges and Improvements Highway Dept.	2,000	2,700	3,300
Designing Engineer Water Department	1,800	2,700	3,300
Assistant Engineer, Grade AA, Water Department	2,400	3,000
Office Engineer Paving Commission	2,000	2,400	3,000
Field Engineer Highways Department	1,500	2,400	3,000
Draftsmen all Departments	1,500 max.	1,500	2,100
Instrumentmen all Departments.	1,200	1,500	2,100
Rodmen all Departments	1,020	1,200	1,500
Tracers all Departments	840 max.	1,080	1,200
Chainmen all Departments	900 max.	1,080	1,200