tions were based on the assumption that the cables would be stressed to the elastic limit at 32 degrees Fahrenheit with a 3/8 inch coating of ice and a 65-mile gale. The minimum ground clearance allowed was 20 feet.

The rate of cable erection varied greatly, depending not only on weather conditions and topography, but upon the number of railways and transmission lines encountered. (Fig. 18). The erection of strain insulators and the forming and adjusting of loops on anchor and crossing towers seriously

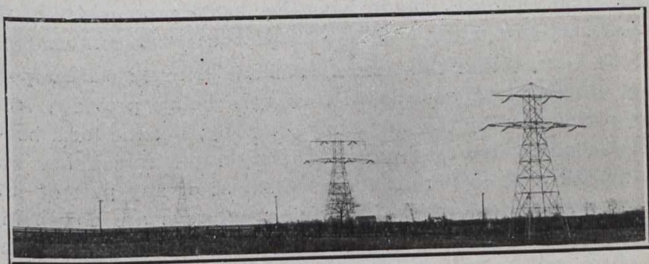

Fig. 18.—Typical Double-Circuit Transmission Line Railway Crossing.

affected the progress of the work on some sections of the line. On double-circuit sections, where six power cables and three ground cables were erected, the average rate of erection was from ½ mile to 6/10 mile of the completed line a day. The labor cost varied from $110 to $215 a mile, the average being $130 for a mile of completed line. The rate of erection for three power cables and the ground cables was from ½ mile to ¾ mile of line a day, and the labor cost averaged about $80 for a mile.

Special Construction.—The most important special construction is located within the corporate limits of Toronto, where the high-tension line (Fig. 19) is carried to the Strachan Avenue station. This section of line is supported on towers giving 70-foot minimum ground clearance, and for a distance of about a mile the towers are located in Lake Ontario, 200 feet from the shore. Reinforced-concrete piers, cross-braced with steel girders 15-feet above water-level and protected at their bases by heavy hand-laid rip-rap support the tower bases.

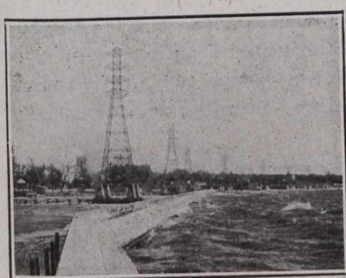

Fig. 19.—High Tension Transmission Line in Humber Bay, Toronto Entrance.

Table IV.—Cable Diminsions and Characteristics.

	No. 0000.	No. 000.
Over-all diameter	.530 in.	.470 in.
Number of strands	7	7
Diameter of strands, average	.1756 in.	.1559 in.
Elastic limit, lbs. per sq. in.	14,000-15,000	14,000-15,000
Ultimate strength, lbs. per sq. in.	24,000-27,000	24,000-27,000
Conductivity	61	61
Weight per mile	1050 lb.	816 lb.
Total miles single aluminum cable erected	312.2	673.8
Total weight of aluminum cable erected	164 tons	275 tons

HOW CITY PLANNING BILLS ARE TO BE PAID.*

By Nelson P. Lewis.†

In discussing city planning there is frequently a disposition to ignore such practical questions as that which is the subject of this paper. The writer recalls one occasion at a public dinner when a gentleman of distinguished reputation in the world of art expressed his sense of humiliation that one of the speakers, who was the chief financial officer of the city, should have introduced such sordid considerations as those of cost when the discussion up to that time had been confined to things of beauty. He assured his hearers that when, a few centuries ago, the men of Sienna or Florence wanted to do something to adorn their cities, they did not stop to consider the cost but went ahead and did it and thought about the expense afterward.

In contrast with this a prominent officer of a real estate holding company recently expressed his strong disapproval of any widening of streets or readjustment of street lines which was calculated to facilitate traffic, whether vehicular or pedestrian. He admitted that such changes might be advantageous to the city at large and would stimulate the development of outlying sections, but as his company owned a large amount of business property in the older part of the city, he believed that the rental value of that particular property for retail shops would be greater if the movement of the people were so obstructed that they would be compelled to loiter, to look into the shop windows and go in and buy.

We may have less patience with the latter than with the former point of view, yet both are inimical to real progress in city planning. He who scorns any consideration of cost may by his enthusiasm succeed in committing the city to projects which will seriously cripple its finances for years to come and render the public suspicious of any improvement, while he who openly avows his supreme selfishness may possibly arouse a feeling of indignation which will result in bringing about the very things he would like to prevent.

The question of how the bills are to be paid is not only a pertinent but a necessary one and cannot be avoided. To provide for a city of 100,000, with no apparent reason for exceptional growth, an ambitious scheme suited to a metropolis of several millions is to invite disaster; while to limit the plan of a large and rapidly growing city occupying a strategic position to one suited to its present size will seriously retard its future orderly development and may prevent it from realizing the growth and importance of which its natural advantages appear to give promise.

The feeling is common and not unnatural that if we are planning more for the future than the present, future generations which will reap the benefit should bear the greater part of the burden. It seems easy to pay with borrowed money, particularly when the money can be borrowed for fifty years or the span of two generations. The habit of paying in this way is easily acquired and is broken with difficulty. When anything is paid for with money borrowed for a period longer than the possible or even probable life of the article purchased, the city's credit is improperly used. A corporation which pays for its betterments from earnings is on a sound basis. When large earnings are used to pay excessive dividends and betterments and renewals are paid from borrowed money representing additional obligations, there is danger. When interest on existing debt is paid

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