

# The Canadian Engineer

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## EFFICIENCY, PRODUCTION AND CONSERVATION CANADA'S NEEDS OF THE HOUR

CONSERVATION of material, in order to assist in national reconstruction, must find expression in the following eight measures, says a writer in the last issue of "Conservation," the official bulletin of the Commission of Conservation:—

- (1) Increase the fertility of the soil and reclaim areas not under cultivation at present.
- (2) Protect our forests from fire and reforest denuded areas.
- (3) Guard certain species of fish and wild life against extinction.
- (4) Exploit our mines conservatively, extracting the maximum output of ore.
- (5) Develop our potential resources of hydro-electric power.
- (6) Organize our manufactures to secure maximum efficiency and to recover by-products.
- (7) Eliminate extravagance in consumption.
- (8) Find an economic use for materials now treated as refuse.

This is a succinct statement of a very comprehensive program, and one that must be followed if Canada is to hold her own in the economic struggle. The second phase of conservation necessary for efficiency during the reconstruction period, is conservation of our human resources. As pointed out by the Commission of Conservation, work under this heading must include:—

- (a) Efficiency in public hygiene and sanitation.
- (b) Sound town-planning schemes and improved housing.

(c) Better roads and better organization of all systems of transportation, so that products may be conveyed from producers to consumers with minimum effort and expense.

Some of this work is beyond the jurisdiction of the Commission of Conservation, but that commission is performing useful service in repeatedly calling the attention of the public to basic requirements. With the active co-operation of the newly-organized departments of Public Health and Public Highways, the good work of the Commission of Conservation will be given a great impetus.

## ONTARIO HIGHWAY AWARDS RESCINDED

TWO weeks ago the Department of Public Highways of the Province of Ontario announced the award of four contracts for the construction of 50 miles of the provincial highway; yesterday the deputy minister in charge of the department rescinded the awards and stated that the contracts would not be signed. The reason given is that the lowest tenders received were 50% higher than expected.

The specifications called for bituminous construction, penetration method. The lowest bid received for any section was \$32,000 a mile; for another section the lowest bid was \$40,000 a mile; while for the other two sections the lowest bids ranged between those two figures. These prices were exclusive of the cost of culverts.

W. A. McLean, deputy minister of the department, declares that the work will be carried out by day labor, and that a great saving will thereby be effected. The department, says Mr. McLean, pays labor 30 to 35 cents an hour, while contractors offer 45 to 55 cents in order to persuade men to enter their employment at once. "Time is more important to the contractor than to the province," says Mr. McLean. "The contractor loses money if he cannot finish the work quickly. The province can wait and engage men from the farms whenever they are willing to work for the wages offered. The fact that the province's plant is tied up for a long period is not considered to be a serious factor, whereas a contractor must keep his plant in more or less constant use."

The fact that the awards have been rescinded does not mean that the roads will not be built, says Mr. McLean, but they will be built at a slower rate and by provincial forces, but, he prophesies, at less expense. The change in policy regarding these awards involves more than the question of day labor vs. contracts, as Mr. McLean intimates that the department may construct water-bound macadam and gravel roads at first and may not surface them in any more permanent manner for a few years. That is, cheaper roads may possibly be built with the intention of using them, after consolidation by traffic, as foundations for more expensive types of construction such as asphaltic or tar macadam or cement-concrete. Mr. McLean states that the better types of surfacing will be laid as soon as the macadam has fully settled and that meanwhile the roads will be well oiled.

## FAIR PLAY FOR THE G.T.R.

AS the pioneer railroad of Canada, the Grand Trunk Railway is entitled to the benefits of arbitration in establishing a fair price for its assets and prospects. Conferences are now being held in Ottawa by the prime minister of Canada, Sir Robert Borden, and the chairman of the G.T.R. directorate, Sir Alfred Smithers, and it is thought that the result may be mutually satisfactory without recourse to either litigation or arbitration. Should unforeseen difficulties be encountered, the G.T.R. should agree to a reasonable minimum payment and the government should agree to arbitrate, as there appears to have been a difference of more than \$4,000,000 per annum between the G.T.R.'s earlier claims and the rental which the government offered in the first negotiations. The old G.T.R. deserves fair play.