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ROAD IMPROVEMENT IN THE PROVINCE OF QUEBEC

SHOWING HOW THE EXPENDITURE ON ROAD CONSTRUCTION AND MAINTENANCE HAS INCREASED FROM THIRTY DOLLARS IN 1895-96 TO SIX MILLION DOLLARS IN 1914-15

IN the report of the Roads Department of the Province of Quebec the remarkable growth of the good roads movement since its inception is interestingly described. The development of each type of road is outlined in the following paragraphs abstracted from the Minister's Report, published a few weeks ago.

Earth Roads.—The maintenance of earth roads has been the object of the government's attention for over fifteen years. At the beginning of that period, although the advantages of hard surface roads were known, it was quite naturally thought that the most pressing matter should be attended to and the farmer be induced to keep the municipal road in order as it already was: that is, with its irregular shape, its more or less steep grades, its insufficient drainage and almost ever doubtful means of carrying off the water from its surface. The idea of improved roads was then so slightly developed, while traf-



Fig. 1.—Montreal-Quebec Road, Donnacona (Portneuf). Macadam Done in 1915.

fic was so far from having the requirements of the present day, that one can understand why maintenance should be only temporary work, to meet the needs of limited wheel traffic and of trade whose rapid growth was not yet in the least suspected. Neither had the automobile then revolutionized transportation, in this country at least.

Our industry, our agriculture, our means of communication all were nevertheless destined to soon undergo a transformation. On the eve of such transformation, bad roads, while an immense obstacle to progress and an unexplainable economic error, were tolerated by the mass of the population. On the morrow, a change became necessary; without insisting at once upon having macadamized roads, public opinion called for properly kept roads or, at least, if it did not manifest itself openly, they whose business it is to know public opinion, to listen to it, to interpret it and, at times, to forestall it and satisfy its just aspira-

tions, did not fail in their duty and, with praiseworthy foresight, they laid the basis of a regenerative movement which has not ceased to grow since then.

In a country of such inexhaustible resources and such prospects for the future as Quebec, earth roads are destined to become gravel or macadamized roads or roads treated with bitumen or paved with concrete. This means that when traffic with vehicles drawn by animals, later with automobiles

and motor trucks, becomes greater, then earth roads will become insufficient and will have to be gradually replaced by the surfaces just mentioned or by other equivalent or better ones.

With these facts in view, the following conditions were imposed on municipalities who received grants for road maintenance from the government, the object being to make the work done serve for future developments. These consist: (a) in lowering the hills to a grade of 6 per 100 feet, or in going

around them; (b) in re-making the ditches and giving them a regular slope of at least 5 inches per 100 feet; (c) properly draining damp and low spots; (d) straightening too sharp bends; (e) to removing all stones from the road and removing all rocks where its width is not sufficient; (f) properly rounding off the road for a length of one mile, taking care to not put more than a layer of four or five inches at a time and to pack it before running the machine over it again; (g) replacing the old wooden culverts by tile, concrete, corrugated iron, etc., ones.

The repairs mentioned do not represent all the permanent repairs that could be done, but it was thought advisable not to overload the programme. The municipal councils in charge of the work acted on the conditions and not only fulfilled them but did more. They widened roads not included in the programme; improved longer stretches of road than required, and made various other improve-