

Frost, for example, disintegrates more or less all macadam roads. This is not surprising, since the effect of frost can be seen even on solid roads. We can, therefore, adopt the practice of rolling anew every road each spring as soon as the frost has disappeared. We must not forget that this rolling must be preceded by the ordinary sprinkling. Sometimes the sprinkling may be avoided if the weather is rainy at the beginning of the summer, but it is not advisable to delay this work too long awaiting rain. The cost of rolling and sprinkling might reach approximately \$100 a mile per year.

The heaving of the soil produces blisters which are a cause of rapid deterioration. These can be eliminated by drainage. If the system of drainage employed during the construction of the road has been insufficient to keep the road from infiltration, some means will have to be devised to eliminate water from the affected spots. Tile drains are usually advisable in these cases.

The cleaning out of the ditches and curbs is imperative each year and should be done in the first days of spring, before vegetation gets a chance to take root. In flat country, such as the land to the south of Montreal, at Laprairie, Chateauguay and Huntingdon, it often happens that

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MUNICIPAL ENGINEERS AND TOWN PLANNING

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THERE was a time in Britain when the engineer looked somewhat askance at town planning and regarded it as sort of a fanciful idea promoted by impracticable idealists. The period of this attitude ended about 1911 when the town planning act became really operative and engineers began to take up the subject as a part of their daily practice. Ever since then the annual meeting of the Institution of Municipal and County Engineers has included one or more papers on town planning in its program and on two or three occasions has dealt almost exclusively with town planning as the subject for discussion at their annual meeting. Such eminent municipal engineers as John Brodie, of Liverpool, and H. E. Stilgoe, of Birmingham, are prominent members of the council of the Town Planning Institute, and have promoted, in their own cities, town planning schemes for most of the undeveloped building land.

The last annual meeting of the institution was held June 26th to 28th, in Birmingham, under the presidency of Mr. Stilgoe. This is the last occasion when Mr. Stilgoe may preside as a city engineer, since he has been appointed as chief engineer of the Metropolitan Water Board of the County of London.

At the Birmingham meeting, a town planning paper was presented by James Thomson, the city engineer of Dundee. Its subject was "Housing in Relation to Town Development." Mr. Thomson indicated the connection between housing and town planning from the standpoint of the engineer, and how the fact that they were inseparable parts of well considered schemes of expansion made them pre-eminently engineering questions. He pointed out how the absence of any comprehensive plan has produced disastrous effects to amenity and housing conditions. Plans of development, he suggested, should sufficiently meet not only the present-day requirements but also the needs of every locality for a period of not less than 50 years.

Mr. Thomson indicated the following main proposals which local authorities should consider in relation to housing and land development:—

- (1) Absolute change from the present method of town growth as one mass without intervening spaces.
- (2) Acquisition at every opportunity of undeveloped land at as near its agricultural value as possible.
- (3) Design of the frame work or skeleton of all existing and proposed main roads, excluding subsidiary roads, within a well-considered probable extended boundary.

(4) Limitation in the size of all new combined industrial and housing areas to a maximum to be fixed by the local authority.

(5) Separation of all new combined industrial and housing areas from each other, and from existing areas by open spaces and wooded belts.

(6) Complete revisal of former methods of lay-out of land for working-class dwellings.

(7) Drastic change in the design, type, size, equipment and environment of houses for the working classes.

(8) Reduction of housing density.

(9) Sufficiency in all housing schemes for gardens and allotments and facilities for culture.

(10) Certainty that in all new works areas, housing shall be carried out on town planning lines.

(11) Allocation to each new housing and industrial area of sites for buildings necessary for culture and recreation facilities.

(12) Facilities in every new housing unit for out-door recreation for adults and children.

(13) Increase in the number of small parks corresponding with the increase in number of housing areas.

(14) Transit facilities to outlying districts and to all new industrial and housing areas.

(15) Abolition, step by step, of all slum areas.

(16) Improvement by degrees of central area and of all congested districts.

(17) Gradual widening of central main streets and the early widening of portions of arterial roads in the outskirts.

(18) Preparation of town planning schemes for all areas proposed or brought within boundaries in conjunction with town planning of areas within the existing town.

(19) Extension of railways and provision of railway sidings into land to be used for industrial purposes.

(20) Appropriation of sites for landing grounds in anticipation of the introduction of aerial transport in conjunction with the fixing of housing and industrial areas.

Mr. Thomson pointed out that as expansion of cities took place, the necessity of a combined scheme of housing and development became more and more necessary.

Cities would continue to grow as formerly and would consist of an aggregation of houses, industrial buildings and streets massed and expanding without method. He claimed that there was a large responsibility resting upon municipal engineers to prevent the laying out of roads "insufficiently wide and illogically placed, public buildings erected without regard to suitability of site, traffic and transport convenience neglected, and, generally, a haphazard accumulation of all that goes to make a town unattractive and depressing."

We have still some progress to make in Canada in getting the municipal engineers to take such an active part in promoting town planning as they seem to be doing in Great Britain. Now that we are gradually getting the needed legislation, it is certain that engineers will give more attention to the subject.

One of the directions in which we need to make progress in Canada is in providing more education in our universities to engineers and architects on town development, and it is hoped and expected that this defect will be made good in the near future.

In connection with housing there is a tendency in Canada to promote schemes of building houses on vacant lots in parts of the cities that are already in course of development. This does not give the engineer who has ideas, any opportunity of assisting in securing an efficient and economical system of building houses and laying out local improvements—matters which go together.

One of our tendencies is to have stereotyped rules fixing width of streets and other things in connection with land development, leaving no initiative to the engineer. The time has surely come when the members of the engineering profession who specialize in municipal work should get together and co-operate, with a view to giving more influential direction to some of the problems of town development. We have just as great problems as they have in Britain and, being a new country, we have better opportunity to solve them.