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HOMES and BUILDING

City Traffic And Building Development

Professor Orchard here discusses the relationship between building development and the traffic problem which is fast becoming worse in Australian cities.

He feels that the capital cities of Australia, particularly Sydney, already have become of such size that the ideal solution—the co-ordination of building development with the provision of traffic facilities—is no longer possible.

RECENT decisions by the Height of Buildings Advisory Committee and Ministerial and Governmental pronouncements both here and in the United Kingdom have focused attention on city planning and in particular the intensity of development which can properly be allowed both from the amenity aspect and traffic considerations in the city of Sydney.

City planning is concerned with the improvement of existing towns and the development of entirely new towns and the planner is concerned in each case with the intensity of development which normally is measured by the floor-space index, the disposition of land use and the location of roads.

The floor-space index is the combined roofed area at all floor levels, with certain exceptions, divided by the area of ground on which the building stands together with the area of half the width of any roadway adjacent to the building.

It is thus possible to keep within a specified floor-space index either by covering a large proportion of the available area with a low building or by constructing a tall building occupying only a small proportion of the site area.

Crucial Point

Whichever method is adopted, the effect on the traffic problem will be the same.

The crucial point is that it is not possible to concentrate more than a certain amount of activity within a certain area without resulting traffic congestion.

The very high values of floor-space index allowed in some areas in Sydney is therefore cause for considerable concern.

The decision on whether a tall building is adopted within the limit of the allowable floor-space index depends on economic considerations and no doubt the advertising and prestige value is also taken into account by a prospective developer.

The present tendency to concentrate all business within a city centre has been responsible for inflating land values and this has led to the desire of developers for tall buildings with high floor space indices, as the greater the site value the greater is the height to which it is economically necessary to build.

It is for this reason that high buildings are not normally constructed in suburban areas where the land values are comparatively low.

Parking Issue

For the convenience of people visiting a building it is desirable that they should be able to park their cars within the building they are visiting, but the possibility of allowing this will depend on the intensity of development allowed in the particular district.

If the intensity of development has been restricted so that the amount of traffic wishing to enter the area can be handled by a reasonable road system, then adequate parking facilities can be provided within the buildings in the area.

If, on the other hand, an excessive floor space index has been permitted throughout the area the provision of adequate parking accommodation will only intensify the traffic problem, and under these circumstances people must leave their cars outside the area in question and use public transport for the last stage of their journey to their destination. This stage has already been reached in Sydney.

The next important question is the allocation of land use within a town.

If a correct allocation of land use is achieved, the forces impelling an excessively high intensity of development are largely removed.

Residences should be located near to people's place of work so that not only are the journeys to work dispersed more evenly over the entire area of the town, but also the average length of journey is reduced, both factors being important in reducing traffic congestion.

— By —



D. F. ORCHARD
Professor of Highway Engineering, University of N.S.W., member of the Board of the Institute of Highway and Traffic Research.

As far as the traffic congestion aspect is concerned it is desirable, therefore, that as many people as wish to should live within the city centre near to their place of work.

In many cases the use of a vehicle to travel to work could thus be avoided, but a limit is set to this possibility by the natural desire of a large proportion of people to live in the suburbs.

Not Too Big

It is possible to plan and route roads of new towns so that traffic congestion does not result, provided that the town is not too big, and the aim should be to have a pattern of main roads within the town and a disposition of land use so that the various activities are dispersed and the main roads do not all lead to and concentrate on the town centre.

When planning roads, it must be borne in mind that there is a limit to the amount of traffic which conveniently can be taken on a single road. The Sydney Harbour Bridge is a typical illustration of this.

It also is impossible to design any form of road intersection, no matter how elaborate and expensive, to

carry more than a certain amount of traffic. In the case of an existing town the problem is considerably more difficult.

The present tendency is to plan and route new roads in existing towns from the results of origin and destination surveys.

These surveys determine the routes and journeys which people desire to, or have to, take under the existing town plan, and if therefore the new roads are located along the desired lines the established and possibly very bad existing town plan will be perpetuated.

This means that the demands of expediency and the immediate economic considerations may need to be subservient to future requirements when planning and routing new roads in existing towns.

New Districts

If the new roads are located to suit a future desirable disposition of land use, the improved traffic facilities will slowly induce developers to go to new districts and build in locations best suited to the ultimate plan.

Suggestions for the alleviation of traffic congestion include the construction of footpaths at first-floor level and colonnading or the construction of the footpath within the building at ground floor level.

The result of measures such as one-way streets, restriction of turning movements and the installation of traffic lights is unfortunately not to solve the traffic problem but merely to enable more traffic to be handled at a given degree of congestion.

Unless the measures taken are therefore adequate to enable all traffic which wishes to use the roads, to do so conveniently, a small increase in the traffic handling capacity of the system will only result in a little more traffic using the roads and not any reduction of the congestion.

The ultimate solution of the traffic problem can therefore arise only by the employment of all measures. An improvement in public transport, a limitation of the intensity of development, a proper allocation of land use and a proper network of main roads.

These measures can all be achieved in new towns without difficulty and people can therefore be allowed to travel to their place of work in their private cars, but existing towns are in many cases too big to enable even these measures to be completely effective, and a limitation of the size to which existing towns are allowed to grow is becoming imperative.

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