

# CAN PRIVATE ENTERPRISE HANDLE THE PARKING PROBLEM SUCCESSFULLY?

K. VAUGHAN-BIRCH,

*Traffic Engineer, Vancouver, B. C.*

The significance of the fact that there are two groups possibly more vitally concerned with the parking problem than the motorist seems sometimes to be overlooked.

These two groups are the downtown property owners, merchants, etc., and the municipal authorities, both of whom are vitally and selfishly concerned with the maintenance of business and property values in the central business district.

While the motorist's interest in the problem is a natural one it should not be forgotten that in the final analysis he has a choice the others have not, he may without compunction or loss transfer his patronage to another location where the parking demand has not yet reached the difficult stage.

Fundamentally the problem is one of getting people into and out of our business districts, not necessarily vehicles. Improvement in mass transportation facilities therefore offers probably the greatest relief. Furthermore, it might well be argued that if any subsidy is to be considered the best results might be achieved by its application to the transit system.

Municipal authorities are mainly alarmed at the loss of revenue brought about by the decrease in property values in the central business area. One approach to the problem therefore may lie in re-assessment of suburban business properties and a revision of the tax structure which would provide for higher taxation of such properties.

Consideration should be given to any and all other steps which might be taken to combat the problem. It is quite evident, however, that a certain percentage of the population will persist in the

individual convenience of the private auto, and, if parking accommodation is not provided in the central business district, will shop in suburban areas. Progressive merchants will then establish branch stores which will in turn attract mass transit patrons (who would otherwise journey downtown) in addition to local residents and so the vicious circle in the pattern of decentralization becomes evident.

## TWO MAIN FACTORS - CONVENIENCE AND COST

Primarily, therefore, the motorist must be satisfied. From his standpoint there are two main factors. Experience in many cities indicates that the degree of success of any parking plan depends to a large extent on these factors. The first is CONVENIENCE. The motorist evaluates in terms of time both the distance to destination and the ease with which he may park and subsequently pick up his vehicle. The second is COST. The parking fee must be one which the motorist is willing to pay.

With respect to the first, surveys have been carried out in a great many cities, some of them very extensive surveys, with the object of determining what amount, where, and what type of parking accommodation is needed to meet the requirements of the motorists in the cities concerned. Much attention has been given to this aspect; to the need for planning convenient parking accommodations.

After all the factual information is gathered and the answers to the foregoing questions known, however, action becomes bogged down in many cases because of the seeming impossibility to hurdle the next

obstacle, the matter of finance in which is wrapped the other factor - cost.

#### ECONOMIC ASPECT

While a number of parking studies, particularly, in recent times, deal with the cost of parking accommodation the economic aspect has not been given the importance it deserves. A full knowledge in this regard is necessary before an intelligent decision can be reached with respect to the method of financing the parking project and through what agency it is to be financed. Both of these lead to the important point - the cost to the motorist.

Much has been said pro and con on the question of municipal participation in the parking business. Advocates of private enterprise, however, appears to overlook an unusual feature uncommon to any other merchandising or service field, the competition to off-street storage formed by free or low cost accommodation (street parking) which in many instances is as conveniently located.

It is true, of course, that the streets can take care of only a small percentage of those seeking storage. While the amount of this space is steadily decreasing it must be acknowledged that curb parking accommodation will generally be available at least between the rush hours on all but the most important thoroughfares and, consequently, will continue to affect the economic aspect.

In any event it must again be remembered that the suburban area, with in most cases its free parking accommodations, is still beckoning the motorist. It is therefore quite evident that parking accommodation must not only be provided in the central business district but must also be made available at a cost which the motorist is prepared to pay if decay in this area is to be prevented or the amount lessened.

#### MUNICIPAL OWNERSHIP

The economic analysis which forms a part of the study of the downtown parking problem in Vancouver clearly indicates

that municipal ownership holds the answer to the problem of providing low-cost short-time storage. It is stated in the Report<sup>1</sup>:

"In an increasing number of cases, the failure of private enterprise to provide a satisfactory answer to the parking problem has resulted in municipalities having to accept this responsibility. Information to be published in the 1947 Municipal Year Book shows that 40 percent of 875 reporting U.S. cities of 10,000 population and over now operate one or more parking lots in their downtown business districts. The number of cities in this category has increased by 25 percent since 1946.

This trend has occurred despite expressions of concern about governmental interference with private business. It has, however, become increasingly evident that provision of parking facilities must be considered a public utility similar to City water works, sewers, roads and pavements. The principal reasons for the trend toward municipal operation are: (1) Only the municipality can acquire, by the right of expropriation, property suitable for parking: (2) Only by public ownership can continued operation and relative permanency of parking facilities be assured: (3) Economically, the service can usually be provided at less cost by the municipality.

The provision of parking accommodation on expensive downtown property is a good example of the type of project which can be undertaken most effectively by the municipality. This is true providing the municipality does not become involved in the sale of gasoline or oil, or the rendering of other services which can obviously be handled more efficiently by private enterprise.

In general, municipalities can provide more economical service on projects which involve relatively large initial investments coupled with small annual labor costs. Financing by municipalities involves interest charges on bonds, the

<sup>1</sup>Report on the Downtown Parking Problem, City of Vancouver, B. C.

annual cost of which is currently about one-half the usual minimum expected return on an equivalent investment by private enterprise. A substantial portion of each revenue dollar is required to pay financing charges on the investment in property used for parking. It follows that the more expensive the property, the greater is the advantage to the consumer in having the facilities provided by the municipality rather than by private enterprise."

#### LAND COST: INFLUENCE ON PARKING FEES

It is stated further in this report with respect to the economic analysis of parking lots that "the crux of the economic problem of providing off-street parking accommodation in Vancouver, at prices acceptable to the average motorist and within tolerable walking distance of his destination, is land cost. There is an abundance of land in the downtown area on which the cost of providing short-time parking by the municipality under favorable conditions would be less than 5 cents per hour. This land area is far more than enough to provide for immediate requirements. Not all of it is suitably located for parking near the congested areas along Granville and Hastings Streets. It would, of course, be uneconomical to acquire land for parking lots where it would not be reasonably well patronized.

Calculations show that the City can provide off-street parking accommodations for 5 cents per hour on land which costs about \$3.50 per sq. ft. If land can be acquired for less, the operations could be conducted at a profit. If land costs were higher, a subsidy would be required, or the motorist would have to pay more for the service. These figures apply to open parking lots, suitably developed, designed for self-parking and with liberal allowances for car clearance and aisle spaces."

The land cost in many United States cities of comparable size may be considerably higher than the \$3.50 per sq. ft. quoted above. Indeed much of the land situated in the Vancouver central business district is very much higher in price.

In this connection it was found that

in Vancouver the estimated cost of storage on a self-parking lot or a two-level open-deck structure (again self-parking) would be approximately the same on land costing about \$5.22 per sq. ft., the unit cost being about 6.3 cents per hour for self-parking. Where the land exceeds this cost the two-level structure would be more economical.

The basis of the calculation with respect to the foregoing figures included among other things a 3% interest on investment, a building cost of \$3.00 per sq. ft. of floor area at upper level and a 3% straight line depreciation on overhead structure.

#### "SELF-PARKED" VERSUS "ATTENDANT PARKED"

It will be noted that all the foregoing refers to self-parking. There are many factors both for and against self-parking. However, in view of the average motorist's dislike to spend time waiting while an attendant brings his car, it would appear that self-parking, providing not too many levels are involved, would generally be more attractive to him.

It is true, of course, that less space per car is required when the vehicles are attendant-parked. This unit saving in investment cost of parking space is offset, however, by the additional labor cost on attendant-parking.

From the study conducted by Mr. Ricker, as set out in his report on the "Traffic Design of Parking Garages", an average time of approximately 6 minutes is taken in storing and delivering a vehicle. Calculations indicate that in Vancouver the average labor cost of storing and delivering a car is approximately 10 cents.

The handling cost is the same irrespective of the length of time the vehicle is parked. Consequently, the cost of short time "attendant-parked" storage is higher and the long-time parking cost less than for the corresponding period on the "self-parked" plan as illustrated in the following table quoted from the Vancouver report relative to three level open-deck garages:

## PARKING

<u>Time Parked</u>	<u>"Attendant-Parked"</u> <u>3 Level Garage</u>			<u>"Self-Parked"</u> <u>Parking Lot</u>
	<u>Fixed</u> <u>Cost</u>	<u>Labor</u> <u>Cost</u>	<u>Total</u> <u>Cost</u>	<u>Fixed Cost =</u> <u>Total Parking Cost</u>
1 hour	5¢	15¢	20¢	8¢
2 hours	10	15	25	16
3 hours	15	15	30	24
4 hours	20	15	35	32
5 hours	25	15	40	40
6 hours	30	15	45	48
7 hours	35	15	50	56
8 hours	40	15	55	64

The above costs are based upon a land cost of \$6.80 per sq. ft. (For all-day "attendant-parking" in Vancouver, it is estimated that on land costing more than \$6.80 per sq. ft. it is cheaper to build a three level open-deck garage than to acquire additional land for parking at ground-level.)

There are many other factors concerning attendant-parking not the least of which is the difficulty of providing on a sound economic basis sufficient help to give quick service during the peak periods which the average motorist expects. On this account "attendant-parked" projects are not recommended for Vancouver to meet the short-time parking demand.

#### SHORT-TIME PARKING ACCOMMODATION MUNICIPALITY'S RESPONSIBILITY

Whether it is practically possible to segregate short from long-term parking seems a little uncertain. It would appear, however, that the short-time parking demand such as is now largely taken care of on the street should probably be looked upon as a municipal responsibility and the long-term (employee-type) parking as something which might be handled by private enterprise.

In most cities on this continent, up until comparatively recent times, operators of parking lots and garages appeared to be solely interested in the long-term parking. Certainly their rates discouraged short-time parking and encouraged the long-term parker.

#### INTENSE BUILDING DEVELOPMENT INCOMPATIBLE WITH TRAFFIC NEEDS

A great deal has been said concerning the large percentage of the total land area in any business district which would be required to provide sufficient accommodation to meet the demand and whether this in itself is detrimental to that area. There seems to be little object in academically discussing this point because in practically every large city today parking lots of low standard are to be found at fairly frequent intervals in the central business district, many of them next to tall skyscraper type buildings. It is obvious that these orphan sites are the out-come of the intense development of adjacent property. They are not born out of the parking demand.

It would appear that tall buildings are incompatible with our traffic needs. Traffic generators of this type create an impossible situation with respect to parking. The regulation of building height has been practiced, of course, for many years. The need for limitation of height, however, was usually based upon other than traffic considerations.

#### ZONING AS APPLIED TO PARKING

Such regulations might well form part of zoning as applied to parking. The question of zoning is a controversial one. Many qualified persons are of the opinion that it is virtually impossible to apply such zoning to existent central business

districts. Undoubtedly, there are many difficulties in the way of zoning generally and also in regard to limitation of building height in relation to the parking problem. One important point in this connection is that zoning may in fact accelerate decentralization instead of correcting the situation.

One qualification of the foregoing remarks concerning zoning is quite important. It is that the provision of off-street loading and unloading facilities in the case of commercial buildings, and the provision of off-street vehicle storage space in the case of dwellings, should be made mandatory, this need being of a different nature to the general parking requirements.

#### MUNICIPAL PARTICIPATION NECESSARY

All of the points enumerated indicate that the short-term parking space demand can best be treated on a community or area basis. An evaluation of the parking demand generated by any given type of business, which may be subject to change, presents many difficulties. The provision of parking accommodation by the municipal authority on a local improvement basis therefore offers the best possibility of success in dealing with this matter.

Municipal participation, as previously indicated, is desirable for three main reasons: (1) Generally only the municipi-

pality has power of expropriation. (2) It can assure that sites selected will be permanently maintained for parking. (3) It can usually provide such parking accommodation at a lower cost.

As final argument in further support of the desirability of municipal participation in the parking business it might be emphasized that the parking problem becomes more acute as development becomes more intense, consequently where the demand is greatest the difficulty in providing storage at acceptable rates is the greatest. Moreover, the high land costs and taxation in intensely developed areas encourages the owners to use their particular sites in a manner which will provide the greatest return on investment. Parking is usually not such a use or, usually, it is not such a use until the parking situation has become so intolerable that motorists in desperation accede to high parking rates. This seems to be the crux of the situation.

There is little evidence that private enterprise has so far met the parking need. Furthermore, it is obvious that private enterprise cannot be expected normally to do this, to provide (and retain) the low cost parking accommodation in the early stages of the development of the central business district which is the key to the problem.