

REPORT OF THE DEPARTMENT OF FINANCE

THOMAS H. MACDONALD, *Chairman*
Commissioner, Public Roads Administration

THE PROBLEM OF PARKING FACILITIES¹

SYNOPSIS

The off-street parking problem is a significant factor in highway finance because of its relation to urban congestion and to the provision of express roads into cities designed to furnish more convenient access to central business districts. Yet today efforts to meet this problem by providing adequate low-cost parking facilities have been generally feeble and ineffective. In most cases the American city has done nothing to help itself, and in many cases it has adopted policies which constitute a definite hindrance to any sane solution.

The parking problem is discussed in terms of the general problem of providing a complete highway transportation service, and in relation to the general transportation problem of urban areas and the general problem of city planning. Three types of parking facilities are described—commercial, private and municipal. Cost conditions are described for each of these types of operation and consideration is given to methods of equitable payment. It is found that there are numerous inadequacies in current provision of terminal accommodations by private initiative and in view of these, the following means are suggested by which government may assume its proper responsibility:

1 Municipal governments might encourage private operators by eliminating license fees on parking lots, by lowering property assessments on land used for parking, or by the abatement of taxes on such property. These concessions would result in the reduction of parking costs, on the principle that the benefit of parking facilities would increase surrounding land values and help to rehabilitate the city.

2 Cities might also assist private enterprise by furnishing adequate street approaches, by enforcing street parking restrictions, by leasing public lands to private operators, and by planning the most desirable locations and designs for future parking facilities. Enactment of building codes requiring the provision of off-street facilities for new buildings should be extended.

3 The success and growth of municipal parking accommodations suggests further development of public ownership and operation and the passage of necessary legislation to permit the acquisition and financing of land for this purpose.

4 State governments might contribute to a solution by permitting the use of revenue bonds for parking facilities and the servicing of these with shares of State motor-vehicle revenues at present being made available for municipal streets.

5 The Federal Government might assist in furnishing land by RFC loans or the demolition of condemned buildings through WPA, and by sponsoring adequate surveys and planning of parking needs.

During the early road building era, efforts to provide highway transportation service were directed exclusively to the vehicle in motion on the assumption that the vehicle at rest could take care of itself. This assumption at one time was generally valid, for parking at the curb fur-

nished adequate terminal facilities for the motor vehicle, as it had for the horse. Today, however, the growth and concentration of motor vehicle ownership and use have reduced curb space to relative insignificance in relation to the demand for parking accommodations in downtown areas, leading to the necessity of furnishing this service off the street.

¹ Prepared for the Department by Wilfred Owen

Failure to recognize the need for off-street terminals in conjunction with the urban highway system, and inability or unwillingness on the part of cities to adopt bold measures for alleviating this problem, have long been a source of inconvenience and a barrier to efficient motor vehicle use

It would hardly be possible to convey the eloquence of previous testimony that parking is a serious problem. Elaborate surveys conducted in many cities already seem to have proved that further street parking is a mathematical impossibility. Yet the counting and recounting of potential parkers and available parking accommodations have generally led to only superficial recommendations affording little relief, with the result that the city and the motorist have accepted their predicament as a matter of course. A recent trip through the United States, for example, revealed that municipal governments have generally done little of real significance to alleviate parking difficulties, and instead have sponsored policies which are a definite hindrance to any sane solution. Municipal interest in some cases seemed to be limited to the apprehension of illegal parkers and the revenue possibilities of parking meters, while in others the inability to cope with parking difficulties has created the attitude that effective measures are no longer possible. Yet in view of the importance of the problem the wonder is not so much how it can be solved as how it has so long escaped solution. In one city, for example, a survey of the downtown area revealed that 93 per cent of all vehicles in the district were parked, and only 7 per cent moving on the streets.

Two years ago a report was transmitted to the Congress by the President of the United States containing a master plan for highway development.² This

² *Toll Roads and Free Roads*, House Document No. 272, 76th Congress, First Session, Government Printing Office (1939).

report outlined the need for express highways into the cities to permit easier access to the central districts, which are the ultimate destinations of most main line traffic entering the urban areas. The present report is an attempt to supplement these plans by discussion of the simultaneous need of accommodating the vehicle after its city terminus has been reached, and of removing to off-street facilities all vehicles parked at the curb where they interfere with the efficient movement of traffic. The magnitude of this task and a growing recognition of public responsibility for its performance have suggested a review of the nature of the problem and its solution as they concern the problems of highway finance.

NATURE OF THE PARKING PROBLEM

It is not a new idea, but an important one, that highway transportation constitutes not merely the movement of vehicles but the function of getting from one place to another. The provision of motor highways must, therefore, comprehend this over-all service from origin to destination, since exclusive concern with the ability of the automobile to go and not to stop makes impossible a full realization of the speed, economy and convenience of efficient highway service. For example, economy is greatly reduced when high terminal fees are added to vehicle operating costs, or when extra distance must be travelled to a parking space; likewise in terms of total highway transportation cost it is uneconomical to provide storage space on expensive street pavement when such use results in traffic congestion, or to widen pavements and then permit parked vehicles to reduce effective width. Parking on the street is expensive. In fact it has been estimated that the cost to the city of providing curb space for one vehicle on Fifth Avenue, New York, is approximately \$142 per month, or about ten

times the cost of parking in a modern garage.³

With regard to over-all speed of motor vehicle service, the time spent in locating a place to park and walking to and from it considerably reduces the swiftness of automobile travel; and the task of finding terminal accommodations within reasonable reach of the motorist's destination renders motor vehicle service in many urban communities irksome rather than convenient. As an illustration of the time-consuming process of urban motoring, tests made of the progress of a commuter from a suburb of Washington, D. C., to the downtown district revealed that average running speed for the automobile was 14 m p.h. from origin to destination; that after the driver had found a place to park, the speed had been reduced to 9.9 m p.h.; and that accounting for the time spent in walking back to the office, the over-all average speed was reduced to 7.3 m.p.h., or approximately half the actual running speed.⁴

The point to be emphasized, therefore, is that parking is not an isolated issue, but an intimate part of providing fast, cheap and convenient highway transportation service. Failure of the street itself to provide complete service in terms of adequate parking as well as traffic movement has not altered this fact, but has merely necessitated the dedication of additional facilities off the street. The problem of financing these facilities is therefore closely allied to the whole question of highway finance, just as rail service involves the railroad terminal, or as airports and docks must be furnished in providing transportation by air and water.

In addition to this consideration, the

highway problem is part of the general problem of providing transportation in urban areas, for the planning of urban highway service through provision of motorways and parking facilities cannot achieve the optimum result unless decisions are made in conjunction with possible alternative improvements in transit facilities. Important factors in this choice are the relative costs of individual and mass transportation and the convenience and efficiency of each in terms of serving the peculiar needs of a particular urban area. It is also significant, moreover, that transportation is not an end in itself but only a means of implementing some other objective, so that the parking problem, as part of the transportation problem, cannot be viewed completely without reference to the broader problems and policies of the whole city in terms of land use, urban finance and the pattern of municipal development.

THE URBAN PROBLEM

This intimate connection between transportation methods and municipal patterns is illustrated by the history of urban growth. In the days of horses and pedestrians the city remained small in size because its radius was determined primarily by the time it took to commute. The street car later increased this radius, and by permitting mass movements of commuters it encouraged vertical development of the downtown area. Finally came the automobile with its much greater travel possibilities, extending the area of urban influence many times and making it possible to escape the old city area made distasteful by unintelligent land use and planless growth.⁵

³ M. O. Eldridge, "The Cost of Parking," *Engineering News Record*, February 9 (1933).

⁴ C. A. Hogentogler, E. A. Willis and J. A. Kelley, "Intangible Economics of Highway Transportation," *Proceedings Highway Research Board*, Vol. 14 (1934)

⁵ Harland Bartholemew, "Present and Ultimate Effect of Decentralization Upon American Cities," 1940.

Also see *Business Week Magazine*, "Report to Executives on Rebuilding the Cities," July 6, 1940.

The problems raised by these trends in urban development are of grave concern to most large cities, and considerable effort will be required to determine proper steps to halt their disastrous consequences. For disintegration of the city appears to be not merely the temporary effect of a readjustment in the urban pattern, but a more permanent malady which spreads with attempts to escape it. Thus the trend began with the gradual abandonment of congested and run-down areas, as evidenced in the city by slums and vacant lots, and in the suburbs by an outcrop of new business establishments and satellite communities. With the costs of public services remaining high even in decadent areas, other more productive districts were called upon through higher tax burdens to subsidize those parts of the city no longer self-supporting. In St. Louis, for example, taxes levied in slum districts amount to only about 40 percent of the costs of municipal services furnished these districts, and a large percentage of these levies are delinquent. On the other hand, the central downtown district pays two and one-half times as much in taxes as it receives in the cost of municipal services rendered.⁶ This situation, typical of our large cities, has led to further withdrawal of business from expanding areas of high-tax property, with consequent extension of blight, a need for further subsidy, and the movement of taxable values beyond the jurisdiction of the city.⁷

Abandoning the city for the suburbs, however, does not long afford relief from urban troubles. For as the plight of the downtown district produces increasing outward movement, those who

previously sought the city limits find that the edge of the city has itself moved farther outward, and that most of the mistakes which led to the original exodus from the downtown area are committed again in the suburbs. Absence of zoning regulations or lack of zoning enforcement permit business to encroach upon residential areas, causing further population movement and depressing residential real estate values. Failure to protect new highways from harmful uses of abutting land and neglect of necessary parking accommodations render the outlying shopping district as inaccessible as the central area it sought to replace. Indiscriminate and scattered development of real estate over wide areas makes unit costs for public services unnecessarily high, and because there is often no way of furnishing satisfactory mass transportation for the dispersed populace, commuting to the central business district must be accomplished largely by automobiles, with consequent multiplication of street congestion and parking difficulties.

The question naturally suggested by consideration of the urban problem is how this diseased condition has been permitted to thrive in American municipalities. One answer seems to be that in spite of the preponderant role of our cities in the national economy, public concern in this country has always been directed chiefly toward farm and rural problems, as demonstrated in transportation by traditional emphasis upon rural highways and intercity traffic, and by the comparative neglect of terminal problems, municipal street facilities and mass transportation. The failure of cities to take appropriate measures in their own behalf has resulted in large part from the fact that our Federal and State governments were inaugurated at a time when no urban places of importance existed. Today, therefore, the city finds itself "almost completely disfranchised

⁶ St. Louis City Plan Commission, "Urban Land Policy," p. 13 (1936)

⁷ For an enumeration of the causes of urban decentralization, see the preliminary report on "Decentralization" by the Urban Land Institute, Chicago, April 1940.

by our constitutional system,"⁸ with many major programs in transportation as well as in other fields "throttled from sheer fear on the part of city officials who know from bitter experience that that city's governmental powers are not commensurate with its growing functions and responsibilities."⁹ It is these conditions which constitute the setting in which the parking problem has emerged. Any solution of that problem must therefore take into account over-all needs for solving the whole urban dilemma.

PRINCIPLES OF PARKING FINANCE

Types of Operation

Payment for off-street parking in the central city varies considerably with the methods used to provide facilities, of which there are three general categories: private facilities, privately operated public facilities, and public facilities. Today the second category, the privately operated public facility, which may be either a parking lot or a garage, is providing the major parking capacity in our downtown areas. Payment for these commercial facilities is assessed entirely against the motorist through direct cash charges, except where payments are made by stores to provide their customers a period of free parking. In the case of private accommodations operated in connection with retail stores, hotels, or other business establishments, there is no universal means of exacting payment. In some cases the motorist pays directly for the service, while in others the whole cost may be absorbed by the business establishment, or there may be some sharing of responsibility by the vehicle user and the business. Finally, parking may be a municipal operation, with facilities furnished free to the motorist or at low

rates made possible through sharing of the bill by property owners or general taxpayers.

This variety of responsibilities established in paying the parking bill is not unlike that encountered in providing the streets themselves. For just as the motorist, the property owner and the city share in the provision of adequate pavements for moving traffic, so also the necessity of furnishing terminal space suggests that access to the downtown area is of advantage not only to the motorist, but to the property owner, the merchant and the city itself. Decision as to how the bill should be paid depends not only upon the financial condition of the individual city, but upon the manner in which facilities are provided, since conditions of cost and possible methods of financing differ with each operating category.

Varying Cost Conditions

Under private operation of public lots the land used for parking is generally leased for an amount sufficient to pay taxes. In addition to this payment of rent, additional cost items include a return to compensate for private initiative in managing the enterprise, and generally a license fee payable to the city. Analysis of the cost per car of providing privately-owned parking lot facilities has revealed that 36.3 cents out of every dollar represent return on investment, and that property taxes and license fees constitute another 10 cents.

Under municipal operation, however, cost conditions may be entirely different. Parking may be provided on land which has long been in the possession of the city, involving no cash outlay. Appropriate sites are often available on land which has become public property through tax delinquency, or on remnants left from some previous public project. Removal of a public building may also provide usable property, or land may be acquired

⁸ Albert Lepawsky, "The Plight of Our Cities," *State Government*, November 1940, p. 218.

⁹ Albert Lepawsky, *op cit*.

as a gift. In the event that a municipality should acquire land directly for parking facilities, however, total costs incurred would still be lower than under private ownership. For on the theory that the whole city would benefit, taxes and return on investment might be foregone, and operating costs for municipal facilities have generally been kept low.

Private parking accommodations present still further variations in cost, for parking facilities may be provided as part of the building, or on adjacent property previously available or acquired specifically for that purpose. Cost figures for merchant-owned parking facilities are in general much lower than those for privately owned public facilities, not only because of the possibility of providing them in conjunction with existing property and business organization, but because a direct return on the investment may be foregone in view of the profits from increased sales.

Private vs. Public Operation

The problem of how parking should be financed, therefore, leads inevitably to the question of whether operation should be private or whether some degree of municipal action is necessary. Traditionally American enterprise has been conducted on a private basis, with government performing only those functions which private endeavor has been unable successfully to provide. In other words, our economy is the joint product of private and public action, based upon the belief that each function should be assigned to whichever type of enterprise can do the best job. Obviously this arrangement comprehends certain realms of activity which are difficult to classify in one sphere or the other, but a satisfactory decision is not impossible if a thoughtful evaluation is made of the alternative methods. The following critique of existing private parking facil-

ities is intended to point out some of the reasons why private initiative has failed to solve the problem, including not only those weaknesses which are believed to be inherent in the private operation of parking facilities, but other factors which may be susceptible to correction.

PRIVATE OPERATIONS

Trend in Commercial Facilities

In the absence of municipal action there has been little reluctance among private interests to establish parking stations. The rate at which this responsibility has been assumed is illustrated by Los Angeles, where the number of off-street parking facilities increased from 50 in 1922 to 920 in 1938, with capacity expanding from 4,000 automobiles to 65,000. Chicago had 60 off-street facilities in 1927 and 237 in 1938, and today one-fourth of the Chicago downtown area, excluding streets and railroad properties, is used for open parking lots. Similar trends are reported from every large city. Philadelphia had 100 lots in 1931 and 800 in 1938; Cincinnati nearly doubled its parking lot space in the period from 1932 to 1936, and Detroit lots could accommodate three times as many cars in 1937 as in 1927.

Unfortunately, however, solution of the parking problem involves not merely the provision of space, but of space properly located and attractively priced. These qualifications were recognized 17 years ago at the National Conference on City Planning, where it was stated that parking rates must not be "too high to be popular," nor parking locations "haphazard and illogical."¹⁰ The fact that current efforts by private enterprise often fail to comply with these specifica-

¹⁰ Hugh E. Young, "Day and Night Storage and Parking of Motor Vehicles," Proceedings, Fifteenth National Conference on City Planning (1923).

tions, however, is suggested by figures describing the use of off-street facilities. In New York City a survey of parkers conducted in a congested downtown district revealed that while 15,000 cars were parked at the curb, only one-third of available off-street space was being used, leaving 12,000 spaces empty.¹¹ In Detroit the situation was much the same. Within four-tenths of a mile of the central district there are 32,000 off-street parking spaces, yet a count conducted at the peak hour, 2:30 p.m., revealed that only 37 percent of this space was occupied. "It would seem futile," therefore, "to increase the number of berths unless at low rates and convenient locations."¹²

Parking Lots

As a result of the rapid increase in privately operated public parking lots during recent years, these facilities are now the most prevalent type of off-street parking accommodations. In the average city contacted by the American Automobile Association for its report on terminal facilities, the parking lot was found to constitute 58 percent of total off-street parking space and it did 78 percent of the business.¹³ These figures, however, are more an expression of the plight of the motorist than of the popularity of the average parking lot. Overcrowded, overpriced and ill-designed, these unattractive properties resemble more closely the scars of mass bombings than utilities performing a public service. Among the specific charges which have been brought against them are the following:

1. Location of the parking lot is generally dependent upon the loca-

tion of vacant property which cannot return sufficient earnings in any other use, rather than being governed in accordance with studies of traffic origin and destination, the effects of terminal location upon street use, and the relation of these factors to the general urban problem.

2. The size of lots is likewise determined by the fortuitous circumstances governing their location, in spite of the fact that demand conditions as well as the relation of terminal size to street congestion should regulate
3. Land for parking is furnished on a temporary speculative basis with the intention of later conversion to more profitable use. The dilemma thus arises that if greater accessibility created by parking facilities should restore values in the business district, land now used for parking would probably be withdrawn for building construction.
4. The temporary nature of parking lots, many of which are operated on one-year leases, makes improvement of the property uneconomical, with the result that the benefit of parking facilities in terms of transportation service may be offset by the depressing effect of unsightly property upon surrounding land values.
5. The whole cost of parking is charged to the motorist, in spite of the fact that the accrual of benefits to merchants, adjacent property and the city may suggest a more equitable cost allocation.
6. Rates must be charged to cover all costs in connection with the operation of the lot, whereas the broad interests involved in the availability of parking facilities suggest that these properties, like the streets themselves, should be operated on

¹¹ Willard Chevalier, *Engineering News Record*, January 20, 1938.

¹² Harry Koch, *Proceedings*, Institute of Traffic Engineers, 1939

¹³ Report of the AAA Committee on Parking and Terminal Facilities, October 1940

a non-commercial basis in terms of profit to the community as a whole

7. Because of the compulsion to produce an optimum return, parking lot charges, particularly for short-time parking, are often considered unreasonable, and the desire to operate at capacity often results in irresponsible handling of vehicles, illegal use of surrounding streets, crowding and inconvenience to the motorist.

Garages

In the survey of the American Automobile Association, approximately 42 percent of the total off-street parking space in the average city contacted was furnished by garages, but these performed only 22 percent of the total business. Many of the criticisms of private operation cited in connection with the parking lot are likewise applicable to the garage, but the latter, representing a relatively permanent type of facility which has generally been in operation for a number of years, introduces additional factors.

- 1 The early establishment of many garages has frequently resulted in their being poorly located with respect to current motor vehicle terminal needs
- 2 Garages were first built when there was no lack of street space available for parking, but when enclosed parking was a luxury service to protect the vehicle from the elements. These buildings were accordingly of ornate design, hence high cost, in keeping with the type of patronage. Today, however, technical improvements in the motor vehicle have eliminated the need for escaping the weather, and the lack of street space has made off-street facilities a necessity rather than a luxury
3. The extra cost of pretentious garage structures, their inefficient use of

space and the high labor costs required in operating them are reflected in rates which most motorists are unwilling or unable to pay.

Garage design has undergone very considerable revision in recent years, however, and the new open-wall garage is now a demonstrated possibility for the future. This parking structure embodies the old garage principle of multiple-level parking, but is designed specifically for storing cars at low cost by incorporating certain construction economies. The omission of walls makes ventilation and sprinkler equipment unnecessary, and ramps are provided for quick and easy movement of vehicles between floors. Low-studded construction and all possible utilization of space, including the roof, are also distinguishing characteristics of the open ramp structure. The combined effect of low first cost and a minimum of operating expense results in total costs from one-third to one-half those of the old enclosed garage.¹⁴ Thus far these structures have generally been established for private provision of parking service by department stores, although their use for privately-operated public parking is now established in several cities, including Boston, St. Louis and Washington. Under the latter type of operation there appear to have been no large price reductions passed on to the motorist, but several cities have recently been considering plans for municipal operation of open-wall garages at lower figures.

Merchant Facilities

In the past several years there has been a considerable extension of shopper

¹⁴ The so-called "Cage" parking structure established in Boston in 1934 can be constructed at 10 cents per cubic foot instead of the usual 25 to 35 cents for the ordinary garage, according to the patent holder, Mr. Samuel Ehot.

garages and lots provided in conjunction with retail stores. Much of this activity has been in suburban areas where land may be cheaper or where stores have been newly located, but in the downtown area there have also been outstanding successes in merchant operations, both individual and cooperative. Indeed, the downtown merchant has generally been far more alert to the consequences of inadequate access to the city than has the city itself.

A recent survey of customer parking facilities offers interesting information concerning the extent of merchant attempts to provide for the shopper.¹⁵ Data from 118 stores in 75 cities located in 31 States revealed that 53 stores, or 45 percent of the total, offered parking facilities of some kind. The same number had no parking arrangements whatsoever, while the remaining 12 stores, or 10 percent of the total, had formerly provided parking services but had discontinued them. As to the type of facility used, 10 of the 53 stores providing parking service had their own garages, 8 provided garage parking through arrangements with a public garage, 14 parked cars on a lot which they owned or leased, and 17 had arrangements with a commercial lot. Four stores had more than one type of service.

To cite some of the most successful ventures in merchant provision of parking facilities, in St. Louis a combined garage and bus service has been established for the use of shoppers patronizing any of 130 stores and offices in the downtown section. Each time a purchase is made in a member store ten cents is deducted from the total parking fee. These deductions are applied to reduce the regular rates of 10 cents for the first hour, 20 cents for two hours, 30 cents for three to five hours and 35 cents for all day. In addition, frequent bus service is provided

¹⁵ National Retail Drygoods Association, New York, May 1939

without charge along a route close to member stores. The success of this "Park-N-Shop" plan is measured by the fact that patronage in 1940 increased from 7,000 shoppers in January to 17,000 in April and 30,000 in August.

Another successful merchant venture is the Oakland, California experiment started in 1929, known as the Downtown Merchants Parking Association. This organization, now comprising 164 members, has acquired a number of strategically situated low-income properties for parking lots designed to anchor the business district. Land is acquired either by purchase or by lease, with a 10-year minimum term for leased property and an average rental of 1½ cents per month per square foot. The rate for parking in the Oakland lots is 10 cents per hour, but the motorist can park free for two hours by having his parking check validated in a member store, regardless of whether a purchase is made.

At the end of each month the Parking Association subtracts from its total costs the cash receipts received from non-validated or overtime parking, or from night parking which is provided for 15 cents without validations. This cash income amounts to about 40 percent of total costs. The number of validated checks is then divided into this net cost figure to obtain the unit parking cost per validated ticket, now about 4 cents per car and 50 percent lower than when the organization began operations. The number of checks validated by each store is then multiplied by 4 cents to obtain the total charge per store. One member, a large market, pays as much as \$1,000 per month to park its motoring customers.

An important observation from the Oakland experience is that stores which joined the Parking Association rather than operating through established commercial lots have lowered their parking

costs about 25 percent.¹⁶ In addition, there is a tendency among members to consider that such parking costs are actually chargeable to advertising, since the payment of 4 cents is guaranteed to bring a customer into their stores. Over a million and a quarter cars have been accommodated during 1940, and Oakland merchants have made the provision of parking facilities in the downtown area almost unprofitable for independent operators. This experiment has been an excellent demonstration of the possibilities of cheap non-profit parking in downtown areas. With cost concessions possible under municipal operation, parking rates could be made even lower.

In contrast to well publicized successes, however, there are numerous instances where stores are losing heavily on parking arrangements, or where free parking privileges have been abused or abandoned. Moreover, most stores are not large enough to provide their own accommodations, and where arrangements must be made with a commercial lot or garage the cost is often a considerable burden. On the other hand, an association of merchants formed to provide joint parking accommodations has this defect; that after costs have been lowered beyond a certain point there may be a desire on the part of member stores to maintain their competitive advantage by restricting entrance into the organization. Thus a serious obstacle is placed in the way of eventually extending the benefits of low-cost parking to the whole city. The fact remains, moreover, that the short-time shopper does not constitute the whole parking problem, nor can the premise be accepted that downtown merchants should shoulder the parking burden alone, while the city,

which is largely dependent upon the success of business, does nothing.

MUNICIPAL OPERATIONS

Existing Facilities

Failure of private enterprise to produce a satisfactory solution to the parking problem has led in a number of cities to the adoption of municipally owned and operated facilities as a public responsibility. Public action in this field has now been established fifteen years or more, with the past few years witnessing the largest increase in such accommodations despite expressions of concern over the encroachment of government upon private business. Among the cities displaying initiative in this field at an early date was Flint, Michigan, which established a municipal lot in 1924, followed soon after by Bay City, Michigan; Mitchell, South Dakota; and Racine, Wisconsin. At this time publicly owned land was also being used for parking in both Cleveland and Chicago,¹⁷ and in 1926 the city council of Lafayette, Indiana, authorized a bond issue of \$52,000 to acquire lands for this purpose. The attorneys for the successful bidders at the bond sale advised against the purchase because there was no court decision in the State establishing the fact that municipal parking ground constituted a public use. To overcome this objection, the city secured enactment of a State law which authorizes municipalities to establish municipal parking grounds for vehicles; to acquire necessary lands by gift, lease, purchase or condemnation; and to raise funds by donation, appropriation, taxation, or sale of bonds. The act also ratifies action previously taken by any city for the establishment of parking grounds.¹⁸

¹⁷ Miller McClintock, "Parking—When, Where and Why," *American City*, April 1924.

¹⁶ According to the American Automobile Association, merchants having their own facilities reported a cost of 69 cents per car parked, while those having arrangements with a private operator paid 14 2 cents.

¹⁸ A R Ross, *The American City*, May 1927, p 631. For State law see Ch 15, Acts of Indiana, 1927, or Baldwin's *Indiana Stat*, 1934, Secs 11815-11816.

Kansas City sought in 1936 to condemn lands for public off-street free parking facilities by passing an ordinance for that purpose. Several landowners contested the action, and the State court held that under the then existing laws the city could not condemn lands for parking lots¹⁹ Attempting to solve the problem, the Kansas Legislature enacted a law which authorized first-class cities having a population of 120,000 or more to establish public parking stations. The validity of this law was questioned, and the State court held that it was unconstitutional because it was a "special law," applying only to Kansas City.²⁰ The court did not consider the other questions presented in the case. The State legislature, in the meantime, enacted a law which authorizes cities having a population between 60,000 and 100,000 to acquire lands for public parking stations.

The city of Cleveland was enjoined several years ago from using its underground exhibition hall as a public garage. The court held that the city could use the premises for its own vehicles, for those of its officers and employees, or for any other purely public purpose, but that it could not operate a garage as a purely private business in competition with privately owned garages.²¹

Unquestionably, there is an urgent need for legislation in many of the States to provide means by which municipalities may solve their parking problems. Other States which already have made some provision in their general laws for municipally owned parking facilities are California, Massachusetts, Michigan, Pennsylvania, and West Virginia.

¹⁹ *Barker v Kansas City*, 70 Pac (2d) 5

²⁰ *Barker v Kansas City*, 88 Pac (2d) 1071 For law held unconstitutional, see 1939 Supp to Kansas Gen Stat, 1935, Sections 13-1366 and 13-1367 For other law, see Ch. 124, Laws of Kansas 1939, or 1939 Supp to Kansas Gen. Stat, Section 13-1368.

²¹ *Cleveland v Ruple*, 130 Ohio St 465, 200 N. E. 507, 103 A L R 853

Information concerning the extent of municipal parking activity is not available, but several indications are available in recent reports When the Public Administration Service made its parking survey in 1938, one-fourth of the cities studied had established municipal parking facilities, and one-third of these had been developed within the preceding three years.²² In a recent report of the New York State Bureau of Municipal Information 53 municipalities in the State were reported to be providing parking lots in their central business districts. The Regional Plan Association of New York has likewise investigated the progress of municipal parking provisions in the New York metropolitan area, where 18 communities of the 54 visited had by 1936 established municipal parking areas for general use.²³ Among the 34 municipal lots described in the Public Administration Service Report, the largest accommodations were reported in Chicago with 3,500 spaces, Memphis with 3,000, and Quincy, Massachusetts with 1,650.

In New England, reports received by the Regional Planning Commission from localities in that area indicate an expanding municipal interest in parking remedies.²⁴ Among the developments noted are the following:

Derry, New Hampshire—An article was passed at the town meeting in March appropriating money for a municipally owned parking lot

Exeter, New Hampshire—A generous citizen purchased a useless house close to the center of the village and presented the lot to the town on condition that it be made a municipal parking facility.

²² O F Nolting and Paul Oppermann, "The Parking Problem in Central Business Districts," Public Administration Service No 64, 1938

²³ Information Bulletin No 30, May 1936 The Regional Plan Association, New York.

²⁴ "Too Many Cars—Too Little Space," National Resources Planning Board, Region I. November 1939.

Falmouth, Massachusetts—All land owned by the town has been used for parking space where feasible

Lowell, Massachusetts—Whenever the city has acquired slum property in the downtown section for nonpayment of taxes, its suitability for public parking is considered. If it can be so used, it is graded and lined.

Middleborough, Massachusetts—The town has just appropriated funds to lease land for additional municipal parking space.

Quincy, Massachusetts—The parking problem has to a large extent been solved. A tract of land was taken by eminent domain, immediately in the rear of the business center. It is reported that since these facilities were established in Quincy, half the trade has come from outside communities. Property on the side of the main business street immediately adjacent to the parking area has jumped in value and is now worth 50 percent more than the property on the other side of the street. Quincy merchants estimate that if the free parking plan should be abandoned their sales would drop 25 percent overnight.²⁵

Salem, Massachusetts—Central Parking space of large size owned by city.

Waltham, Massachusetts—Considering large parking area to be financed mostly by merchants and property owners over a ten-year period, with the city abating taxes.

New Britain, Connecticut—A W P A project has been approved to build a large parking garage, with bus terminal on ground floor.

Although the efforts of municipalities to aid in solving the parking problem have generally been more successful in smaller communities, a number of large cities are giving consideration to similar possibilities. In Boston, the Mayor's Committee on off-street parking has reported that effective alleviation of traffic congestion in the downtown business district necessitates the immediate doubling of available off-street parking space, and that this must be accomplished by the city.²⁶ It was decided that the most economical approach to providing cheap parking would be for the city to acquire through a private operator strategically located properties upon which

would be constructed multiple-level parking structures of low-cost ramp design. Land and buildings would be financed by means of 20-year bonds. It was believed that a large saving in purchase price could be realized by avoiding eminent domain proceedings and by taking advantage of low municipal interest rates. The Boston report suggested that these properties be leased for private operation, which it is claimed would be cheaper than municipal operation due to civil service requirements. "Such private operations," this document is careful to state, "will also avoid competition between the municipality and other privately operated facilities."²⁷ The plan represents an investment of \$6,700,000 and would be spread over a six-year period.

Milwaukee is another city with plans for providing municipal parking areas as part of a program for rehabilitating the downtown section.²⁸ A report on this subject states that between 6 a.m. and 6 p.m., motorists pay an annual sum of one and a quarter million dollars in Milwaukee for parking on private property. In other words, while toll gates on the highways have been eliminated, now that increasing volumes of traffic have rendered street space inadequate, "many people have seized the opportunity of collecting toll privately for parking." The Board of Public Land Commissioners accordingly requested that \$125,000 be appropriated annually for the gradual renovation of Milwaukee, "and to provide efficient use of automobile transportation—with convenient parking facilities." Another large city in the East has prepared extensive plans for the construction of

²⁷ The city could not make this transfer to private operators without authority from the Legislature.

²⁸ Board of Public Land Commissioners, C N Whitnall, Memo to the Downtown Association of Milwaukee.

²⁵ Editorial Research Reports, Washington, D C, September 8, 1937.

²⁶ City Record, Boston, August 10, 1940.

multiple-deck open parking garages on available city-owned property, these garages to be municipally owned and operated as a demonstration project to attract private capital into further provision of similar facilities. For this reason all costs were to be computed as if the properties were privately owned, with the result that the cost advantages possible under municipal operation would thereby be cancelled. In view of the magnitude of the problem confronting this city, the plan appears to be somewhat overcautious.

Methods of Finance

As previous examples have indicated, land used for municipal parking facilities is often already available to the city and does not have to be acquired specifically for that purpose. This was true in most cases studied by the Public Administration Service, which found appropriate sites supplied through tax delinquencies, by gift-taking, by the removal of public buildings, or where remnants had been left from some previous public project. The demolition of public buildings by W.P.A. or of private dwellings in conjunction with slum clearance projects, offers the city an opportunity to obtain desirable sites for municipal parking facilities. When land is obtained by any of these devices, the problem of financing parking is generally negligible. In many instances, however, the city does not own satisfactory sites, making it necessary to purchase, condemn or lease. The problem of financing may then be solved in a number of ways, including general obligation or public revenue bonds,²⁹ special assessments, general fund appropriations or motor vehicle contributions. For example, Kalamazoo, Michigan, has financed a municipal

"shoppers parking lot" for free two-hour parking by charging the cost of the land and improvements to business property through special assessment districts. Instead of a bond issue, money was borrowed from the city cemetery perpetual care fund at 3 percent interest. The city expects to cover operating costs in part at least from cash fees collected for overtime parking.³⁰

Another interesting plan was developed in 1936 by Garden City, New York, which rejected the idea of a common parking lot serving a considerable area and adopted instead the principle of locating facilities in the rear of properties served. The objectives sought were convenient access, the minimizing of property depreciation, and cost reduction by acquiring rearage instead of high value frontage.³¹ To finance this \$197,000 parking project, 75 percent of the cost was assessed on a 10-year basis to commercial houses benefiting, while the improvements, amounting to \$46,000, were absorbed in general village expense. No fee is charged the motorist.³²

Although the cost of municipal parking is not generally charged to the motorist directly, wherever this practice has been followed remittance has been made in cash, as in the case of commercial facilities. Under municipal operation, however, there are two unexplored alternatives which appear to have merit. One is the issue of identification plates for a designated annual sum, which would admit the motorist to any municipal lot during the year. Proceeds from the sale of these plates would be used to finance such properties, which might be supplied in conjunction with special urban express roads. The second suggested method would be to amend State laws

²⁹ American Society of Planning Officials, *News Letter*, December 1939, p 99

³¹ Allan H Rogers, *Public Works*, July 1938, pp 20-22

³² *American City*, September 1938, p 105

²⁹ Michigan and Pennsylvania have State laws which permit municipalities to issue revenue bonds to finance parking facilities

for the distribution of motor vehicle revenues to permit cities to use their allotments for the purpose of providing off-street parking. In other words, the meaning of the term "highway purposes" would be extended to include terminal facilities.

Objections to Municipal Operation

Many city officials have expressed the belief that municipal operation is to be avoided because the city should not compete with private garages and parking lots. Obviously the city already competes with private business, however, when it permits free parking on the streets, or when parking meters take the cream of the traffic—the short time parker—away from private off-street facilities. This argument against public ownership, moreover, is hardly important, since the business of parking cars on lots does not involve a long term investment or a permanent enterprise so that the transition from private operation would create little hardship. Even in the case of garages, which involve a more permanent investment, the fact that such operations have been generally unprofitable for many years and that most garages are now being rendered obsolete by new designs appear to minimize the effect of a shift to municipal parking operation.

Decision concerning the advisability of private or public operation of parking facilities, therefore, should not be influenced by the desire to preserve existing values. The real issue is simply whether public operation makes possible a better and cheaper service, and judging from the results of private efforts, it appears that such would almost have to be the case. As one writer has commented, private attempts to solve the parking problem "have not anywhere near succeeded in bringing about even reasonable

conditions."³³ In spite of the familiar argument that private initiative must be preserved in the parking industry, therefore, it is concluded from the very nature of the problem that "only through public ownership can continued operation and relative permanency of necessary off-street parking terminals be assured."³⁴

OTHER PUBLIC ACTION

Development of Mass Transport

The apparent logic of considering parking facilities an integral part of highway service, hence a public responsibility, does not imply that municipal operation of off-street terminals is the only solution to parking troubles, for the problem might be attacked by reducing the demand for parking space as well as by providing an adequate supply. This approach introduces the possibilities of mass transportation. In spite of the phenomenal growth in motor vehicle traffic during the past two decades, transit facilities still provide the major transportation capacity in most large cities. An illustration of this fact is afforded by surveys of the methods used in entering and leaving downtown Boston on a typical weekday between 7 a.m. and midnight in the years 1927 and 1938.³⁵ This study shows that despite the rapid shift from mass transportation, particularly by railroad and surface street car, to individual transportation by automobile, over half of all the persons entering and leaving downtown Boston still utilize some form of mass transportation. It is reported that 90 percent of New York commuters travel on public carriers, and that in

³³ T. E. Transeau, Department of Public Safety, Philadelphia, "Solving the Parking Problem."

³⁴ H. E. Smutz, "Off-street Parking vs Curb Parking," League of California Cities, Report No. 24, April 1940, p. 11.

³⁵ Boston Traffic Survey, W. P. A. Project O P 465-14-3.

Chicago despite a loss of 20 to 25 percent in mass transportation patronage in the period from 1926 to 1938, and a 44 percent increase in passenger car traffic, less than one-fourth of all commuters travel by automobile. Finally, even in such cities as Los Angeles and Washington, where automobile use has been so highly developed, fully 38 percent of commuting is still accomplished by mass facilities. Lack of highway and parking facilities has obviously been a factor in this high degree of transit patronage.

In spite of the need for more satisfactory automobile accommodations in our cities, therefore, it must be remembered that motor vehicle traffic constitutes but a part of the urban transportation problem. Accordingly emphasis placed upon this single phase of the problem should not lead to neglect of the needs of a large percentage of the population for better facilities of mass transportation. It is possible that if the equipment and service supplied by these mass transportation facilities were improved they would be patronized by many who now use their own automobiles.³⁶ The result of thus attracting a larger percentage of commuters to mass transportation media might be highly salutary to the downtown district, not only because it would lessen the required amount of parking space, but because street capacity would thereby be enhanced. The American Transit Association has illustrated this latter point with the example of a 60-ft. street carrying three lanes of traffic in each direction with no parking. Such an artery would move 3,700 persons per hour if automobiles were used exclusively, assuming an average of 1.75 persons per car. The same street used by both automobiles and buses, however, would move 2,130 persons by automobile, 7,200 seated bus

passengers, and 1,800 standing bus passengers, or a total of 11,130 persons per hour. Finally, using this artery for automobiles and street cars, it will have a capacity of 2,130 automobile passengers, 9,000 persons seated in street cars and 4,500 standing, or a total of 15,630 people per hour.³⁷

These data admittedly demonstrate the superior capacity of mass transportation facilities. It is somewhat ironical, however, that the Transit Association, in computing how many persons could be herded into the aisles, has unwittingly answered the question of why, if transit facilities are more economical, those who are able prefer not to use them. In other words, while mass movement has tremendous possibilities in the solution of urban transport problems, including the parking problem, until more emphasis is placed upon the service factor and less on cost the consumer will exercise his right of free choice.

Municipal Subsidy and Regulation

Because of the realization that considerable time may elapse before the city acts to make possible attractive mass transportation and adequate municipal parking facilities, certain interim aids are suggested which might afford a measure of immediate relief. Municipal governments might subsidize private operation of parking lots by lowering the assessment of land so used on the theory that parking facilities constitute a public utility. Costs might also be lowered by tax abatement or the elimination of license fees, and the advantage passed on to the motorist by municipal regulation of parking rates. Reduction of parking costs effected by such subsidies would be justified on the grounds that adequate parking at low rates would improve accessibility to the downtown district and thereby bolster

³⁶ For a discussion of possible transit improvements, see *Proceedings*, American Society of Planning Officials, 1940, "Highways and Transportation," p. 54.

³⁷ American Transit Association, "Moving the Masses in Modern Cities," pp 12-13.

surrounding land values. Cities might also bring about an improvement in private efforts by furnishing adequate street approaches to parking lots, by enforcing curb parking ordinances, by leasing public land to private operators and by exacting strict requirements concerning the appearance of lots, the handling of cars, financial responsibility and the use of abutting streets.

Among the steps which a municipality might take to provide for better parking conditions in the future, are two which suggest immediate action. The first concerns establishment of an adequate parking plan through intelligent study of the peculiar needs of each individual city. The parking study now being conducted as a phase of the District of Columbia Highway Planning Survey, in which the Public Roads Administration and the District of Columbia Department of Highways are cooperating, is an example of the comprehensive approach required. The Washington survey is unique in that it proposes to determine the actual and potential demand for parking facilities generated by varying urban land uses. Data are obtained by means of carefully devised questionnaires directed to the parking habits of the motorist, supplemented by descriptive material concerning the travel habits of 200,000 government and business employees. It is this type of transportation study rather than the meaningless enumeration of motor vehicle traffic which must indicate proper plans for reducing urban congestion.

A second step having long range implications is the enactment of building codes and zoning ordinances. A dozen years ago a Detroit engineer issued this warning to constructors: "Take care of the parking demand created, or your building will be obsolete before it is up."³⁸ Not only are buildings unsatisfactory without parking facilities, but street congestion result-

ing from new apartments and theaters has been such as to impel many communities to adopt ordinances requiring off-street parking space in connection with certain types of building construction. The American Society of Planning Officials recently issued a selected list of zoning ordinances of this nature in 34 cities. Los Angeles requires that in certain zones "in connection with each and every duplex, double dwelling, multiple dwelling, apartment house, bungalow court or other multiple family use of a lot, there shall be provided on such lot garage space in a building for at least one automobile for each family unit or apartment contained on such lot."

Hotels are also included in the regulations of some cities, Southampton, New York, specifying that "for each sleeping room there shall be a paved or gravel parking space not less than 300 square feet, either on the same lot or within 200 feet of such lot and also on private property." In the case of theatres, Detroit has proposed that 200 square feet of off-street parking space be furnished for every 10 seats, and San Merino, California, requires parking facilities for one car for every two theatre seats. Stores are also included in some regulations, Du Page County, Illinois, specifying that "no building or structure shall be erected or structurally altered or land used for any purpose which will cause customers, employees, or residents to park their vehicles of transportation for one hour or longer unless space for such parking is provided and maintained in the lot or tract of land used." In Los Angeles there is no law to this effect, but merchants are encouraged by the Planning Department to provide such facilities for self-preservation, and most large stores now generally insist upon parking space at least equal to total floor space.

Other means of relieving urban street congestion are zoning ordinances which designate permissible land uses or which

³⁸ Arthur Pound in "No Parking," *Atlantic Monthly*, March 1938

limit the intensity of land use by fixing the maximum height and bulk of buildings.³⁹ Employment of these instruments of planning, it is true, may not yield any immediate relief in downtown areas, but the fact that cities are practically rebuilt every generation suggests the merit of planning now for a wise reconstruction

CONCLUSION

Consideration of the parking requirements of the automobile and of the issues they involve has led to the conclusion that off-street parking facilities constitute an essential part of urban highway transportation service. This fact, together with the inability of private enterprise to supply a satisfactory solution, has established parking as a public responsibility and introduced into the field of highway finance extensive new factors involving the whole city problem. In view of the utter inadequacy of urban transportation in the United States at the present time, it is inconceivable that public officials can long continue to deny this responsibility

³⁹ For a discussion of zoning problems see Hugh R. Pomeroy, *Proceedings*, American Society of Planning Officials, 1940, pp. 70-88.

Today the favorable cost conditions and financial methods possible under municipal development of parking facilities are being realized in an increasing number of cities, and the growing magnitude of urban congestion is creating widespread interest in further municipal experiments. It is suggested that Federal assistance might be offered in the planning of parking facilities in connection with the highway program, and that actual sites might be made available through building demolitions by the Work Projects Administration. Financial aid in the provision of the new facilities or loans for land acquisitions are also possibilities for the future. At the same time there appears to be no logical objection to the broadening of the legal interpretation of highway service to permit the cities to use their allotments of State motor vehicle tax revenues to finance off-street parking facilities. Intelligent surveys and enabling legislation, however, appear to be the most essential immediate steps, so that eventual return to a peace-time economy may find in readiness bold plans for a large-scale program of public works designed to rescue the city from its present plight.