

The speaker has stated that the number of motorists that would use the proposed system of express highways in the Chicago area can be anticipated from the information available through these studies. Such information is vital, not only in the design and location of the highways and feeder routes as he has suggested, but in the economic justification of the project as a whole.

We all know that the demand for improved free-wheel transportation facilities far exceeds the available funds for satisfying these demands. We know that the functional requirements of rapid and safe movement in our modern cars have made many of our streets and highways obsolete. Although they have kept us out of the mud for years, congestion and accidents demand that they be improved. Since the supply cannot meet the demand, everyone interested in roadways must make only those capital investments for traffic facilities that will produce the greatest return per dollar invested.

Since the war emergency, it has become necessary to justify street and highway construction not only on the dollar basis but also on the basis of available critical materials. It is interesting to note that within recent weeks the Public Roads Administration has demanded a detailed report on each road project submitted to it by a state highway commission for approval, such report to contain all available information regarding traffic and accidents. On the basis of these reports, together with the strategic importance of these projects to our national war effort, each project is, if approved, given a priority rating.

The use of traffic studies in determining the justification for improved facilities will assume more and more importance even after the termination of our war effort. Consequently, I believe that there will be an increasingly greater need for such studies.

ON- AND OFF-STREET PARKING

Chauncey R. McAnlis,
City Engineer, Fort Wayne

Motor-vehicle parking is one of the big problems facing practically every city, large or small, in the country today. For a number of years, city engineers and highway engineers have been busy providing, among other improvements, good street pavements and paved roads to make it easy for motorists to get to downtown or business districts in the shortest time possible. In general, pavements have been provided, but the automobile driver, after arriving downtown, faces the serious problem of parking his car. It is easier to get downtown than it is to dispose of one's car after arriving. Very few, if any, of our cities were designed so that the streets can handle the heavy parking burden now thrust upon them.

As a rule, the parking problem is limited to the downtown or business district. However, the problem is acute in many outlying areas where large apartments, factories, or other institutions have been built. The same methods are used to relieve poor parking conditions in these sections as in downtown areas. Many large factories face serious difficulties in securing ample parking spaces for their employees and visitors.

"The saturation point in parking is a definite limitation upon the development of central business districts." So says Orin F. Nolting in an article, "The Parking Problem in Central Business Districts," published by the Public Administration Service. Parking accommodations must be available to shoppers or they will seek other sections where accommodations are offered. Any alert municipal administration must be awake to the necessity of available parking space if its city is to grow and prosper.

The number of automobiles in the U. S. A. in 1895 was *four*. In 1930, this figure was 26,500,000. In 1941 the number of licensed vehicles was, in round figures, 32,000,000.

It is evident that few or none of our American cities today can take care of the parking load by means of "on-street" parking, mostly curb parking. Los Angeles found, by actual count, that only 20 per cent of the cars in the downtown business district were parked on the streets. The other 80 per cent were on parking lots or in garages. This is known as "off-street" parking.

The curb parker may be placed in one of three classes as follows:

1. Those unloading passengers or making deliveries where the stop is a very short one.
2. Those having errands in a store or bank and parking for 15 to 20 minutes.
3. Those who wish to park for a much longer period of time, extending to two or three hours, or all day.

Restricted parking practically eliminates the third class, forcing them to park outside the restricted district, or to use "off-street parking." The first class can be cared for in short-time vacant stalls or at loading zones.

A traffic survey and careful analysis, block by block, of downtown business sections by a competent traffic engineer will closely determine the traffic demand so that the proper time limit for parking can be established in a certain block. This will give that block the maximum possible turnover. Block by block, the entire congested area can be covered.

We should always bear in mind that turnover is what is wanted in order to give the largest number of drivers or shoppers an opportunity to patronize the downtown business section.

Such a survey consists of making a careful record of license numbers in the block or blocks every fifteen minutes, from

which it can be determined how long each car has been parked in the block. The number of parking hours that the block has been used can then be computed, and finally a demand curve can be plotted. This operation is well explained by Mr. Earl J. Reeder of the National Safety Council in Memo. No. 37 published by the Council. This survey is made, as a rule, before establishment of parking restrictions.

No parking scheme will be of much value without enforcement. Therefore, there must be close co-operation between the traffic engineer and the enforcing agency. The parking meter acts as an enforcing agent and therefore helps in that way.

No matter how well curb, or on-street parking is regulated, only a small percentage of the parking generally can be handled by that means in downtown business districts. Off-street parking, therefore, must be resorted to. There has been a lively trend in recent years to the establishment of garages and parking lots for this purpose. These are either private business enterprises or municipally-owned and operated. Some cities own the lots and contract with private individuals for their operation. Garages are used in many cities. However, the high cost of construction and operation force the rates so high that many motorists are unwilling or unable to pay.

The privately-owned lot is often on vacant property or property from which low-revenue producing buildings have been removed. These lots will be closed just as soon as good business justifies a modern building's being built thereon. When this happens, the off-street parking problems will be more acute than ever for that particular section. With this fact in mind, together with the irresponsibility of many private operators, a large number of cities have been prompted to establish municipally-owned parking lots. Vacant lots and low-revenue-producing property are being acquired and the buildings being torn down. Land already owned by governmental units is being used. Chicago has reclaimed a large parking area from Lake Michigan. Some cities lease land from other governmental units.

REGULATING ORDINANCES

Whether the parking lot is owned privately or by the city, strict regulations concerning its operation should be enforced by ordinances. Many cities license privately-owned lots.

Ordinances regulating parking lots should set up the following rules:

- a. Barriers in the form of fences or masonry walls should enclose the property.
- b. Size of curb cut and opening to the lot should be limited.
- c. All lots used for night parking should be well lighted with flood lights.
- d. Legible signs should be posted showing the name of the operator and the rates in effect.

- e. Rates posted at 8:00 A.M. should remain in effect for twenty-four hours.
- f. Operators who do not satisfy court judgments for damages within a specified period should be closed down until judgment is satisfied.
- g. Operators must keep a record of license numbers of patrons for police inspection.
- h. Operators should not be allowed to move cars to other lots without the written consent of the owner.
- i. Operator, before given a license, must submit plans showing a parking layout of the lot, curb cuts, and gates. Each parking space should be defined.
- j. When the lot is full, a sign "Filled" must be displayed at the entrances.
- k. All loading and unloading should be done entirely on the lot, and sidewalks should not be blocked.
- l. Premises must be kept clean and free from dust.

Local conditions may prompt your city to add to the above restrictions.

Improved mass transportation in the form of busses, trolley cars, and trolley coaches help relieve the parking problem. This service in many instances can be made much more utilitarian and attractive, so as to induce the automobile owner to leave his car at home and thus decrease the demand for parking space. The average passenger car carries 1.75 persons, while the Fort Wayne trolley busses at peak hours now are carrying 90 to 100 passengers out of the downtown district. One trolley bus can therefore replace 50 autos, or the equivalent of 1,000 feet of curb parking space.

No set of rules will solve the parking problem for any city. Each city must solve its own problem. All cities should have a traffic survey made and a competent traffic engineer to work out as sane and enforceable a solution as possible. No community will ever solve its problem to the entire satisfaction of everyone. It must solve each problem as it comes up.

OPERATIONS OF A COUNTY ROAD DEPARTMENT

George W. Koronski,

Superintendent and Engineer, Gogebic County Road
Commission, Bessemer, Michigan

Michigan has 83 counties, 68 of which are south of the Straits of Mackinac and 15 in that territory known as the Upper Peninsula. This peninsula stretches 350 miles from east to west and about 195 miles from north to south. It is about half the size of the State of Indiana, from which you can see that the counties in the Upper Peninsula are quite large. I live approximately 100 miles west and 435 miles north of Chicago. Gogebic County borders on Lake Superior and is