

TURNPIKE AUTHORITIES IN THE UNITED STATES*

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INTRODUCTION

Public authorities historically have occupied an anomalous position in the general pattern of conventional government whether here or abroad. This is especially true of toll-financed highways. Their place in government and public service has been somewhat more erratic than that of other public or special authorities such as bridges and tunnels. The difficulties of assimilating these special authorities into conventional governmental forms have arisen primarily because the special authorities have been created to compensate for the failure of the conventional and established forms of administrative organization, procedure, and finance, to satisfy "effective" demand for the provision of public services such as roads, bridges, tunnels, and airports.

This problem of political and economic assimilation is not new. Consequently, in considering turnpike authorities in the United States, it might be helpful to indicate how and where comparable problems have arisen historically, and how they were resolved.

I

THE RISE AND FALL OF TURNPIKES IN ENGLAND

The use of turnpikes (with toll charges) reached its peak in England during the nineteenth century. The rise and fall of this system is well documented; both were gradual, and, therefore, not spectacular, but the factors which contributed to both have considerable relevance to the contemporary thesis of "Turnpike Authorities in the United States." For more than two centuries—the sixteenth and seventeenth—the provision of road facilities had been governed by a static concept: the individual and parochial obligation was discharged by maintaining the public ways according to "customary standards." The main purpose of this system was to keep the roads free from obstructions, and to hold the user directly liable for any damage to the roadway resulting from his negligence. During this period the bulk of road travel and transportation was by horseback and by "droving," that is, the transportation of cattle and other animals over the roads under their own power.

* Grateful acknowledgment is made of the assistance of Mr. Richard Gatehouse, Executive Assistant, The Illinois State Toll Highway Commission, and to the American Bridge, Tunnel and Turnpike Association for permission to use current data on the organization and administration of tollways collected by the Administration Subcommittee.

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By the beginning of the eighteenth century, the rise of metropolitan areas in England and the rapid growth of foreign trade, coupled with the political consolidation of England and Scotland, required a new type of road facility and a new concept of provision in order to carry on the commercial and governmental functions of the country. A dynamic and "bold" approach to the solution of this problem was required; and it is at this point that the experience in England in the effort to accommodate this transition is of significance for the purposes of the present discussion.

The first and normal effort was to shore up and adapt the established methods and governmental organizations to the rapidly developing new requirements of commerce and industry. This failed, as in so many other cases, because of resistance to change. It was at this point that the concept of the turnpike or the tollway came into being in England. It is interesting to note that the basic conflicts at this juncture of the British experience, as in the case of modern highway regulation, were ". . . whether public authority should build the highway to accommodate the existing or anticipated use to be made of it or should limit the use of the existing highway by arbitrary regulation with a view to preserving it from destruction."¹

With the growing use of wheeled vehicles to accommodate increased commercial interchange, the forces working toward modernization of the concept of highway provision and methods of administration and finance became too powerful to be ignored. The first response was to delegate to local authorities (primarily to parishes) the power to levy tolls for the maintenance of the most heavily traveled roads. This, of course, was an effort to shift the main burden of road maintenance from the local residents of the parish to the traffic originating outside the local jurisdiction. As the present author has already had occasion to observe,²

It is in the theory underlying this particular type of road taxation that we find the foundation for the subsequent development of turnpike companies. These companies had their origin in the creation by Parliament of special statutory bodies to administer designated sections of main roadways. They were not designed to supplant, and in fact never wholly supplanted, the local road authorities in the administration of the road function.

Gradually, however, the turnpike trustees accumulated greater powers over the administration and use of highways. Eventually they acquired all the powers possessed by local government agencies, and added new ones of a sweeping nature.

The net result was that a device created by Parliament to perform a specialized function of road provision came to over-shadow, and in effect, to preempt the functions of local government. But the turnpike device was not capable of meeting the widely varied requirements of providing main arteries of travel, and at the same time preserving in a healthy condition the appropriate functions of local government for other roadway provision. In fact the turnpike system eventually proved inadequate even for the provision of the main arteries for which it was created. The basic concept was wrong, and the engineering and administrative genius of Thomas Telford and John Loudon Macadam, that was devoted to turnpike development in

¹ CHARLES L. DEARING, *AMERICAN HIGHWAY POLICY* 17 (1941).

² *Id.* at 18.

England, was not sufficient to save the turnpikes from complete extinction by the end of the nineteenth century.

In the history of tollroads and turnpikes the most quoted explanation is that after 1830, the "calamity of the railways" fell upon the turnpike system. The fact is that the system fell of its own weight. As early as 1726, long before the coming of the railroads, popular dissatisfaction with turnpike administration and toll charges had assumed the proportions of revolt and violence. The outcome might have been inherent in the turnpike system set up by Parliament. In 1864, a Parliamentary committee report concluded that the turnpike tolls were "unequal in pressure, costly in collection, inconvenient to the public, and injurious as causing a serious impediment to intercourse and traffic"; and that the abolition of Turnpike Trusts would be "both beneficial and expedient."³

By 1895 all Turnpike Trusts in England had been dissolved, and their functions had been restored to the conventional agencies of government. With this well-known and well-documented background of experience with turnpike administration based on the collection of tolls, there was only limited use of tollways in this country during the nineteenth century; and when the "good roads movement" attracted wide popular support in the early part of the twentieth century, the natural tendency was to meet the demands for road improvement through the established agencies of government rather than by specialized public authorities.

II

BACKGROUND OF RESURGENCE OF TURNPIKES IN THE UNITED STATES

For all practical purposes increasing demand for improved farm-to-market roads and inter-city roads was met up to 1940 by the development of a system of user charges based on gasoline taxes and license fees, and in some cases, general bond issues, and by shoring up the administrative efficiency of state and local highway organizations supported by the Federal Aid Highways Program beginning in 1916.

Under the cooperative efforts, which provided increasing volume of funds for road provision and constantly improving quality of highway administrative organization and professional competence, considerable progress was made in accommodating highway provision and maintenance to the phenomenal growth and demands of the motor vehicle age. However, as in the case of the specialized turnpike experience in England, the conventional system in this country proved inadequate to meet the effective demand for highway modernization. The growth of motor vehicle ownership and use (both passenger car and commercial) was running well ahead of the capacity of the combined efforts of the highway agencies and of the funds available to provide the facilities which would permit motor vehicle users to get from one place to another safely, expeditiously and at a reasonable cost.

³ As quoted by SIDNEY & BEATRICE WEBB, 5 *ENGLISH LOCAL GOVERNMENT: THE STORY OF THE KING'S HIGHWAY* 221 (1913).

Some thirteen years ago, in reviewing the history and the contemporary problems related to this subject, the present author observed that:⁴

In the evolution of political, economic, and social institutions there arrives a time when further growth hinges on adaptability. Stagnation is the penalty for failure to adjust to changing environment. The businessman who ignores this rule ends in bankruptcy. But, in government, we have developed no equally incisive methods of dealing with maladjustment. On the contrary, there is a tendency to resist adaptation even though the task at hand requires new tools and revised policies. That kind of situation is now shaping up in the public business of highway provision; for there is evidence of increasing antagonism between the technological and financial phases of highway management. We are entering a distinctive stage in the physical development of the highway system, characterized by technical standards and capital requirements that make previous concepts seem penurious. But it is apparent that the technological revolution is occurring without corollary adjustment in administrative and financial methods. Failure to remove these maladjustments will, in my judgment, gradually and subtly undermine the political and economic structure which has heretofore supported the growth of automotive transportation.

Historians will probably mark down the environs of 1940 as the end of a distinctive cycle in the development of American highways. At about that point, it became generally apparent that something was radically amiss in the field of automotive transportation. The motor vehicle had revolutionized the pattern of everyday living and working habits by enabling the individual to supply his own means of transportation. And it had profoundly affected methods of production and distribution through the flexibility and economy afforded by truck transportation. But, paradoxically, the motor vehicle was rapidly becoming a symbol of economic waste and personal frustration. Measured by reasonable standards of efficiency, convenience, and safety, the highway plant was deficient.

This is the general setting in which the resurgence of turnpikes in the United States occurred. There is an element of historical irony here, since the turnpike or tollway method of dealing with highway provision which had been rejected in this country in the early part of the twentieth century was brought back to life with the opening of the Pennsylvania Turnpike in 1940 at the end of an era which was marked by the successful efforts to free the last remaining turnpikes on which tolls were still being collected.

The subsequent and rapid postwar development of toll roads did not solve the problem of highway modernization, nor was this its intent. There was, of course, no major highway construction during the course of World War II, but there was adequate time for advance planning and programming. After the war some states took the tollway method of meeting their major problems on the high traffic and high cost facilities. This was true in such states as Ohio, New York, New Jersey, Pennsylvania, Oklahoma, Kansas, Florida, and Virginia, just to name a few. In some cases this was done because of the refusal of the legislature to increase user charges or to authorize bond issues in sufficient amounts to meet these requirements.

⁴ Charles L. Dearing, *User Charges and Highway Modernization*, paper presented to a Forum on Planning and Paying for Highways during the 28th Annual Meeting of the American Petroleum Institute in Chicago, November 1948.

The New Jersey Turnpike was authorized and built under this type of circumstance.⁵ Other states, such as California, took another course by aggressive use of the conventional methods of highway finance based on intensive studies of highway needs, long range programming, and increase in fuel taxes, license fees, and bond issues adequate to take care of their problems.

III

THE PRESENT STATUS, ORGANIZATION, AND OPERATION OF TOLL ROADS⁶

As a result of this need for highways and the resultant failure of governmental organizations to supply this need, certain states passed enabling legislation for toll road authorities or commissions. These authorities were created as supra-highway organizations to build particular high volume highways and to provide certain special services. Consequently, it is not surprising that most of them are geared into the basic organization of state government, even though the obvious intent in enabling legislation has been to retain a high degree of autonomy for the toll authorities. In most cases, however, four state officials, the Governor, the head of the State Highway Department, the State Treasurer, and the Attorney General, are given specific assignments in the operation of toll highway authorities.

The various relationships that exist are by no means uniform since the enabling legislation which determines the requirements under which an authority operates has been influenced by the highway needs of the particular state, the time at which the legislation was enacted, and the individual political pressures being exerted within each state.

In the following analysis the Connecticut Turnpike has not been included since this road is not a toll road authority, but rather a toll road which is operated by the State Highway Department. This is one example where the existing highway organization utilized the toll road financing concept to provide for modernization of highway facilities.

A study of turnpike authorities discloses that the single responsibility which has been reserved by the state in any turnpike authority legislation is the power of the appointment of authority members by the Governor. In two cases, the Illinois State Toll Highway Commission and the Oklahoma Turnpike Authority, this power was extended further by making the Governor an *ex-officio* member of the authority, thereby giving him voting participation in the proceedings of the authority. In contrast, in eight of the fifteen major toll road authorities the head of the State Highway Department is an *ex-officio* member.⁷ This arrangement seems appropriate

⁵ For a description of the background and reasons for the construction of the New Jersey Turnpike, see WILFRED OWEN & CHARLES L. DEARING, *TOLL ROADS AND THE PROBLEM OF HIGHWAY MODERNIZATION* 52-55 (1951).

⁶ This section is based upon a study made by the American Bridge, Tunnel and Turnpike Association, Administrative Sub-Committee, Charles L. Dearing, Chairman. This study was revised in April of 1960.

⁷ The heads of the State Highway Departments in Indiana, Kansas, Maine, Ohio, Pennsylvania, Texas and West Virginia are *ex-officio* members of toll road authorities within their respective states. In Illinois, the Director of the Department of Public Works and Buildings is an *ex-officio* member.

since a channel is provided through which basic coordination of overall highway planning can be accomplished, if the spirit of cooperation exists.

In addition to the general characteristics already described there are specific requirements which are peculiar to only a few roads. With regard to the Illinois State Toll Highway Commission, the State Attorney General is ex-officio attorney for the Authority. He certifies that the authority is authorized by law to take land and obtain easements and rights-of-way, appoints assistant attorneys general and other special counsel for the Authority, and also approves leases, bonds, contracts, etc., as to form and constitutionality.⁸ The New York State Attorney General has a similar function with regard to approval of form and constitutionality in connection with the New York State Thruway Authority. In Texas, the State Attorney General provides approval of the bond issue of the Texas Turnpike Authority.

Usually the State Treasurer or Comptroller has no responsibilities with regard to the toll road authorities except in a few cases such as the Illinois State Toll Highway Commission where the Treasurer is ex-officio custodian of the Authority's funds, delivers executed bonds, and purchases and sells United States Government securities.⁹ In New York, the State Comptroller has power to examine accounts and books of the Authority and, as with the Illinois Tollway, United States Government notes and bonds are sold by him as the Authority's agent. There are also special instances where a treasurer or comptroller may have a responsibility in connection with the authority resulting from the nature of the revenue bonds which the authority issues. In the case of the New Jersey Highway Authority, where the first \$285,000,000 of bonds are guaranteed in the event of default by the state, the Treasurer pays principal and interest from state motor fuel taxes or, if this is insufficient, from property taxes. These broadly are the relationships that exist between the state and the authority. All points at which state officials may participate in authority activities are not encompassed by the above paragraphs, but they do provide an indication as to the nature and amount of coordination involved.

So far, the analysis has centered on the relationship between authorities and state officials as distinguished from the organization of an authority itself. It is difficult to generalize as to what constitutes an authority. Even though there are some common characteristics, each facility has unique features, having been created by special state enabling legislation. The number of members constituting a toll road authority varies from three to nine, including in several cases ex-officio members, with the majority of toll roads having either three, five, or seven members. Their terms run from four to ten years, and the authority member may or may not receive a salary or per diem compensation, as shown by the following table.

Most toll road authorities are by their nature quasi-autonomous, with the power to appoint engineering, architectural, construction, and financial experts, and legal counsel. One exception to this is the Illinois Tollway, where, as indicated earlier, the

⁸ ILL. ANN. STAT. ch. 121, § 314237 (Smith-Hurd 1959).

⁹ *Id.* § 314245.

ORGANIZATION OF FIFTEEN MAJOR TOLL ROAD AUTHORITIES

Authorities	Number of Members ^a	Length of Term	Receive Salary or Per Diem Compensation
Florida State Turnpike Authority.....	5	4 years	No ^b
Illinois State Toll Highway Commission.....	5	6 "	Yes
Indiana Toll Road Commission.....	5	4 "	Yes
Kansas Turnpike Authority.....	5	4 "	Yes ^c
Maine Turnpike Authority.....	5	7 "	Yes
Massachusetts Turnpike Authority.....	3	8 "	Yes
New Jersey Highway Authority.....	3	9 "	No
New Jersey Turnpike Authority.....	3	5 "	No
New York State Thruway Authority.....	3	9 "	Yes
Ohio Turnpike Commission.....	5	8 "	Yes
Oklahoma Turnpike Authority.....	7	8 "	No
Pennsylvania Turnpike Commission.....	5	10 "	Yes
Richmond-Petersburg Turnpike Authority.....	7	4 "	No
Texas Turnpike Authority.....	9	6 "	No
West Virginia Turnpike Commission.....	5	8 "	No

^a Includes ex-officio members in some cases.

^b Except the Chairman who receives a salary.

^c On per diem basis except for the Director of Highways.

Attorney General of the State of Illinois appoints the assistant attorneys general and other special legal counsel. The Commission pays the full salary of the assistant attorneys general and also any other fees resulting from the employment of special legal counsel. One of the major differences between a toll road authority and a state highway department is that authority employees do not work under civil service except in the case of the New York State Thruway Authority. Notwithstanding this, in most cases authority employees are required to participate in the state employees' retirement system.¹⁰

Usually, authorities finance the highway projects solely out of their own revenue bonds. However, the New Jersey Highway Authority and the New York Thruway Authority have issued \$285,000,000 and \$50,000,000 respectively in state-guaranteed revenue bonds. Thus, out of the fifteen authorities being considered which have issued \$4.4 billion in revenue bonds, state-guaranteed revenue bonds have amounted to only a total of \$785 million. Occasionally, specific state revenues may be pledged for debt service, as in Kansas where the State Highway Commission agrees to make up any deficiency in interest and principal payments on certain types of expressways constructed by the Kansas Turnpike Authority on which tolls are collected. Such deficiencies are to be a lien upon the State Highway Fund. In Oklahoma specified portions of the state gasoline tax may be used in the financing of extensions to the Oklahoma Turnpike.¹¹ In many cases statutory maximum limits have been placed on the interest rates of any revenue bonds issued by the toll road authority.¹²

¹⁰ In the West Virginia Turnpike Commission, the Kansas Turnpike Authority, and the Oklahoma Turnpike Authority, employees do not participate in the state retirement systems.

¹¹ OKLAHOMA TURNPIKE AUTHORITY ANN. REP. TO THE GOVERNOR 21-26 (1960).

¹² Those toll road authorities having a 5% statutory limit on interest are: The Illinois State Toll Highway Commission, Florida State Turnpike Authority, Indiana Toll Road Commission, Kansas

There are some common features with regard to the operating characteristics of toll road authorities:

1. Either as a result of a provision in the trust indenture or a statutory requirement, toll road authorities, with the exception of the New York State Thruway Authority, the Ohio Turnpike Commission, the New Jersey Highway Authority, and the Turner Turnpike portion of the Oklahoma Turnpike Authority, are required to employ independent traffic engineers. All facilities employ independent consulting engineers.
2. In all cases initial toll rates were recommended by a firm of independent engineers, and any subsequent toll rate change has to be approved by a firm of independent engineers.
3. Each toll road authority establishes and enforces rules and regulations for use and occupancy of the road and also agrees, as a bond resolution provision, to keep the road in good repair through proper maintenance and reconstruction.
4. One of the unique features of the nation's toll roads is in the services provided by the police patrolling each road. In addition to the usual traffic law enforcement activities, these police are required as a matter of authority management policy to spend a large part of their time in customer services: *i.e.*, aiding disabled motorists. In most instances the police are members of the respective state police force and are trained, as are all troopers, by the respective state police departments. Some toll highway commissions train their police personnel further in the special responsibilities of patrolling the modern controlled access highways, and indoctrinate them in concepts of customer service. In most instances these police services are paid for by the toll highway commissions under arrangements arrived at with the respective state police departments. The Illinois State Toll Highway Commission has a contract for these services with the State Department of Public Safety, and retains the right to approve the assignment of individual officers for tollway duty. The Commission pays the full cost of this patrol service, including the purchase and maintenance of police cars.
5. In addition to the services provided by the toll road police, all authorities, with few exceptions, provide service stations, restaurants, gift shops, and usually roadside telephone services.
6. In order to insure the provision of essential information to the bondholders and the public, different types of reporting are either required by bond resolution or statutory provision or are carried out in practice by toll road authorities. All turnpike authorities except the Maine Turnpike submit annual reports, and all authorities agree to audits, balance sheets, income and expense statements, traffic and revenue statements and a schedule of insurance. This information

Turnpike Authority, Massachusetts Turnpike Authority, Oklahoma Turnpike Authority, and Texas Turnpike Authority. The Pennsylvania Turnpike Commission has a 6% limit and the New Jersey Highway Authority has a 3% limit on state-guaranteed bonds and a 6% limit on other bonds.

is produced either annually, semi-annually, quarterly, or monthly, depending upon the individually prescribed requirements for each authority. In addition, all authorities except the New Jersey Turnpike Authority have consulting engineers who submit annual reports. Finally, maintenance and operation budgets are adopted by all major toll road authorities in the United States. In fact, in most cases the bond resolutions or trust indentures specifically indicate that there will be an annual maintenance and operation budget, and establish procedures whereby the holders of a certain percentage of the aggregate principal amount of the revenue bonds then outstanding, or the managing underwriters, can request a public hearing which must be held by the Authority within a certain time period.

IV

ACCOMPLISHMENTS THROUGH USE OF TURNPIKE AUTHORITIES

As indicated earlier, the failure of conventional methods of financing highway modernization focused attention on the concept of "authority" type organization and revenue-bond financing. The far-reaching expansion of federal participation reflected in the 1956 and 1958 Federal-Aid Highway Acts¹³ was heralded as the ultimate solution, providing the states with increased funds and the substitution of ninety per cent for the traditional fifty-fifty matching of federal-state contributions for the construction cost of the Interstate System. This System when finally completed will include approximately 41,000 miles of urban and rural limited access expressways which will be built at a presently estimated total cost of forty-one billion dollars, and be completed by 1972. As a result the federal highway program has designated those high volume roads which were once potential toll roads as interstate highways. In 1953, in his capacity as Deputy Under Secretary for Transportation, United States Department of Commerce, the present author directed a study which indicated that there was a potential role for tollways under the then existing circumstances of between 10,000 and 11,000 miles (excluding metropolitan or urban expressways).

In 1950, the United States had only 424 miles of toll roads in operation. By October 1959, nineteen states had toll roads with a total of 3,262 miles, representing an investment of over five billion dollars.¹⁴ Of this mileage, eighty-six per cent was in operation by October 1957. Such rapid growth came only because many motorists demanded this type of facility. In general, toll roads have provided the public with the type and quality of services that will be expected and probably demanded in the roads being developed under the Federal Interstate Program. It is generally recognized that these facilities incorporate into the design standards such features as complete elimination of crossing at grades and traffic signals, wide rights-of-way,

¹³ 70 Stat. 374 (1956), 72 Stat. 89, 1725 (1958), 23 U.S.C. § 101 (1958).

¹⁴ U.S. DEP'T OF COMMERCE, BUREAU OF PUBLIC ROADS, HIGHWAY STATISTICS 59-60 (1958).

long acceleration and deceleration ramps, and wide pavements with wide stabilized shoulders.

However, there are a group of special services pioneered by toll roads which involve highly specialized aids and conveniences to individual users. Toll highways have developed these far beyond anything done on most free facilities. Toll roads incorporate service areas in the design of the road itself, so that the motorist does not have to leave the highway in order to use restaurant facilities or to obtain fuel or services for his vehicle. In addition, there is intensive police coverage on toll roads. For example, the Illinois State Toll Highway Commission now provides eighty-five police officers and troopers for exclusive use on the toll road of only 187 miles, using a fleet of vehicles provided by the Commission for patrolling around the clock. This force is designed to produce a standard of patrolling which results in a police vehicle passing any given point on the roadway on the average of once every thirty-five minutes. All patrol vehicles are fully equipped for emergency services with two-way maintenance and police communications channels, and are in constant touch with central communications, with each other, and with all maintenance vehicles, stations, and toll plazas. Besides intensive police coverage, the communications system, emergency services provided by concessionaires, and off-road services, such as wrecker, ambulance, and fire protection services all add up to a type of facility that truly serves the public the way it wants to be served.

V

OBJECTION TO AND BASIC PROBLEMS OF TOLL OPERATION

As indicated up to this point, the history of turnpike authorities has been turbulent, and at times unsatisfactory, as measured by performance. In this country, the tollways have reached their present status only in the face of consistent official opposition by the established highway agencies. It has been asserted by the groups favoring so-called freeways, *i.e.*, roads paid for by gasoline taxes and license fees and federal aid, that toll roads financed exclusively of revenue bonds based on tolls could not succeed, and that the responsibility would finally come back onto the state as an obligation to pay off the bonds. There also has been prolonged litigation in some cases as to the constitutionality of the enabling state legislation establishing the toll road authorities.¹⁵ Despite the demonstrated success of major toll facilities, many of these objections remain current, and the attitude, if not the official position, of the many highway agencies remains antagonistic to the entire concept of private financing through revenue bonds of toll road facilities.

A major objection to toll roads has been that revenue-bond financing increases the cost of capital. In a given state, revenue bonds secured by tolls carry somewhat higher interest rates than those backed by the full faith and credit of the state. While

¹⁵ *E.g.*, *People v. Illinois State Highway Comm'n*, 3 Ill. 2d 218, 120 N.E.2d 35 (1954); *City of Newark v. New Jersey Turnpike Authority*, 7 N.J. 377, 81 A.2d 705 (1951), *appeal dismissed*, 342 U.S. 874 (1951); *New Jersey Turnpike Authority v. Parsons*, 3 N.J. 235, 69 A.2d 875 (1949).

there are means of circumventing the high cost of borrowing, these often require relaxation of the rigid tests of self-support which are an essential part of the concept and technique of toll financing. "If the general credit of the state is pledged, certain safety margins that would otherwise be applied in determining economic feasibility are eliminated, and the necessity for strict economic accounting is lessened. In other fields such arrangements have bred unsound projects and involved governments in financial crises."¹⁶

The contention that the cost of revenue-bond financing is high points to an apparent disadvantage inherent in this method of providing highway facilities. Nevertheless, it should be emphasized that this additional cost of providing roads through revenue-bond financing is not borne by the taxpayers, nor even indirectly by the state, but only by those individuals who voluntarily choose to use the toll roads.

In a broader economic sense, and over the life span of a particular facility, the true capital costs of the tollway, even though financed at a higher interest rate, may prove to be lower than those of a similar facility financed under the so-called pay-as-you-go basis. It has been demonstrated repeatedly that the revenue-bond financing method used for tollways can get the roads built quickly where needed on the basis of traffic demand, and that the users are willing to pay in tolls for having these facilities available today rather than ten years hence. Thus, by having these highways in being, savings are realized in that the movement of commerce is facilitated and the number of accidents—with extensive property damage and losses of skilled individuals and/or loss of man hours resulting from temporary or permanent disabling injury or death—is reduced. In addition, the tollways are built as integrated facilities, not patchwork, as so often happens with the conventional methods of building expressways even under the ninety-ten Federal Aid financing. In short, if the expenditure, for example, of a billion dollars for a highway development can be justified economically by user demand, the few additional percentage points in the cost of capital required to get the road built in three years instead of ten at a lower true capital cost through state financing, will obviously be spent to the advantage both of the user and the general economy. With respect to those states where, instead of reverting to borrowing, taxes are increased to insure completion of the highway projects on a pay-as-you-go basis, it should be indicated that from the viewpoint of economic theory, the cost of capital is never free, though in some cases it may be more readily defined.

It should be noted that the authority concept is an ever changing instrument, adjusting itself to the desires of the legislatures which use this tool to accomplish certain objectives. For instance, in such early modern authorities as the Port of New York Authority there is in effect a self-perpetuating feature. After one facility has been paid off, the earnings from this facility can be used to build and operate other facilities even though not contemplated at the time the original project was conceived. In addition, the Authority would not be required to obtain any further

¹⁶ OWEN & DEARING, *op. cit. supra* note 5, at 72.

authorization from the legislatures to embark upon a new project but would be permitted to act under the original enabling legislation.

This is not so in the latest cases of toll road financing. The Illinois State Toll Highway Commission, one of the most recent major authorities created, incorporates into its bond resolution and includes under the statute the requirement that after the bonds are paid off, the 187 miles of turnpike be turned over to the state toll-free.¹⁷ With the exception of the power to issue bonds to construct a limited access highway from Aurora to the Tri-Cities area, the Commission is not permitted to issue bonds under the original bond resolution for any new construction of roadway even though the enabling legislation permits the construction of a toll highway anywhere in the State of Illinois.

In the past, discussion has centered upon the higher cost of maintaining a toll road over an alternate free road, the additional cost being made necessary because of the requirement to maintain toll collection facilities. To shed some light on this question, an analysis was made of the Illinois Tollway 1961 Maintenance and Operation Budget for maintenance of roadway and structures, signs, and striping, but not including labor for maintenance of equipment, such as mowers, trucks, etc. The analysis shows that maintenance costs for the Tollway for 1961 are budgeted at \$1,973,750, or \$10,555 per mile, while the cost of maintaining the Tollway not as a toll road but as a free road would be \$1,533,842, or \$8,202 per mile.

This comparison is cited only because it is tending to become folklore in the discussions of toll roads versus "free roads"; it is otherwise without any significance. Toll roads almost without exception provide higher standards of service to the traveling public in many ways than the conventional interstate highway. Consequently, the capital cost regardless of interest rates and the inevitable maintenance costs are higher per mile. With equal efficiency in the performance of the maintenance function, obviously, the maintenance of elaborate toll collection facilities at plazas and restaurant and service facilities on the road cost money. What is often overlooked is that the maintenance of these facilities is paid by the users through tolls, and that the prudent manager of the tollway authority would not provide them if there was not an effective demand by the user, and a substantial net return to the authority from toll collection and from fees paid by the concessionaires.

Even though operated in the main as self supporting enterprises, most tollway authorities are encumbered with a variety of present and potential handicaps. For example, in an attempt to create authorities that are financially independent, certain state revenues have not been allocated to the toll road authorities. The Authority has not been permitted to share in the gasoline tax revenues that are collected on the turnpikes. Thus the patrons who use toll road facilities have to pay twice: they pay the toll and also the tax on gasoline used while traveling on the turnpikes. For instance, it is estimated that the 32,019,702 motorists who used the Illinois Tollway in 1960 traveled 858.6 million vehicle miles. Assuming that each

¹⁷ ILL. STAT. ANN. ch. 121, § 314241 (Smith-Hurd 1959):

vehicle obtained approximately fifteen miles per gallon of gasoline, and since in Illinois the tax per gallon of gas is five cents, these motorists paid approximately \$2,860,000. This revenue went to the State and therefore was not available to operate and maintain the tollways.

There is a theoretical justification for a credit to self-supporting tollway authorities for the gasoline taxes paid on gasoline consumed in toll road use. However, there are numerous administrative and policy problems involved, such as whether or not the refund should be made to the user of the tollway or credited to the accounts of the toll road authority. The latter alternative would presumably permit a more rapid repayment of the bonds or a reduction in tolls. A few states have experimented with this device of gasoline tax refund.¹⁸ However, most successful toll authorities are not pressing the issue and in fact some would prefer to maintain their financial independence from any involvement in state budgeting or financial assistance.

There is another and more serious problem that will be facing most toll roads in the near future, especially those that have long term bonds outstanding: namely, the presently slow but inevitable development of strong competition from the 41,000 mile Interstate System financed by ninety cents on the dollar from the federal government. The clear intent of Congress in the passage of the 1956 Federal-Aid Highway Act¹⁹ which inaugurated the ninety-ten federal program was that this money should not be used to build Federal Aid roads that would parallel or be directly competitive with toll roads in existence, under construction, or authorized at that time. However, this congressional intent was not specifically incorporated in either the 1956 or 1958 Federal-Aid Highway Act.²⁰ Consequently, the tollway authorities will as a business matter, especially in view of their primary responsibility to the bondholders, have to depend largely for their continuing financial solvency on providing a higher type of service than that provided by the Federal Aid System, and on the prospect that the rate of growth in motor vehicle ownership and use will provide sufficient traffic to utilize effectively the capacity of both systems.

SUMMARY

- I. Toll roads have served a useful function in contemporary highway modernization.
 - A. They have provided substantial mileages of high cost, high traffic density facilities at no cost to the taxpayer; nor have they placed any burden on the full faith and credit of the states in which they operate.
 - B. In their conception, construction, and administration, it has been demonstrated that these complex and costly facilities can be built in record time, and that from an economic standpoint the additional cost incurred in revenue bond financing without the full faith and credit of the govern-

¹⁸ Oklahoma and Massachusetts have pioneered.

¹⁹ See note 13 *supra*.

²⁰ *Ibid*.

mental agency is more than compensated by providing these facilities when and where the motoring public wishes to have the service.

- C. They have pioneered in the provision of special services to motorists as an integral part of toll road operation and administration, such as restaurants, service areas and special aids to disabled motorists. These services are not being designed into the present Interstate System but will inevitably be demanded eventually by the traveling public. All of these services are paid for by the users through toll charges (even policing in most cases).
- II. The expansion of turnpikes in the United States has now been circumscribed by the Federal Aid Program under which the federal government presently pays ninety per cent of the total cost. If the historic fifty-fifty matching under the Federal Aid Highway Program had been continued, there would undoubtedly have been many thousands of miles more of toll roads built. Yet it may be that new toll roads or extensions to existing toll roads could be financed by revenue bonds, thus replacing planned Federal Aid Interstate (F.A.I.) routes. By doing so, funds would be released either to the federal government or to state governments. These funds would be available for stepping up the pace of construction on F.A.I. routes, or adding to the national system of Interstate and Defense Highways or offsetting the increased costs not provided for in the 1961 Federal Aid Highway Act.
 - III. The problems that have been faced and met by toll road administration have pointed up many issues in the general theory and practice of public authorities, and the lessons learned in this area can be applied profitably in other areas of public administration.