Alternative Roadway Financing Methods: National Examples and Recent Experiences in Texas

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ABSTRACT

Methods of financing roadway improvements have undergone significant changes since the early 1970s. For a variety of reasons, traditional sources of highway revenues have not kept pace with transportation needs. Alternative financing methods that have been implemented in various areas of the country are reviewed. The Texas legislature recently passed two new approaches for state and local highway finance: transportation corporations and road utility districts (RUDs). Transportation corporations provide private land owners and developers an opportunity to expedite highway projects by conducting preliminary engineering studies and accepting right-of-way donations. RUDs, which are similar to municipal utility districts, are given the authority to issue bonds supported by property tax levies for local roads. These two methods provide an alternative infrastructure for the development of transportation projects and give state and local agencies additional sources for revenues.

The 1970s may be characterized as a period of transition for the transportation industry, particularly with regard to highway finance and development. The muscle flexing of the Organization of Petroleum Exporting Countries (OPEC) and a refined U.S. energy posture had serious implications for federal, state, and local transportation agencies. The cost of highway development, mainly maintenance and construction, is inextricably linked to fuel costs. The rising fuel costs during this period significantly reduced the purchasing power of highway dollars. This problem was magnified by a decline in highway revenues. The principal source of revenue for most state agencies is the fuel tax, which is dependent on the level of fuel consumption. As fuel prices rose, the rate of fuel consumption declined. Coupled with this was the trend toward more fuel-efficient vehicles and an altering of travel behavior. The result of the rising highway development costs and reduced revenues was a funding dilemma. Transportation agencies were forced to reevaluate and downscope many projects, and legislators were forced to consider new sources of funding.

Some of the alternatives that are being used to fund transportation projects are examined. First activities in different parts of the United States are reviewed. Then two alternatives recently enacted by the Texas legislature are discussed.

ALTERNATIVE FINANCING ARRANGEMENTS

Most state transportation agencies responded to the funding dilemma with increases in fees and taxes from traditional highway user charges. Since 1975, approximately 90 percent of the states have increased their fuel taxes, and most states have also increased their vehicle registration fees. Although highway development has traditionally followed a user-pay strategy, during the 1980s many states enacted legislation allowing for the transfer of general funds to state highway funds. During 1980-1981 alone, six states passed legislation for general revenue fund transfers to supplement state highway user charges (1,p.170). Several states also enacted indexing procedures to ensure adequate revenue levels during periods of rising inflation. The results of the indexing procedures, however, have been mixed, and one state--Texas--eliminated the procedure in 1984.

To supplement the more traditional sources of funding, many agencies, state and local, have attempted to involve private interests. This participation generally takes one of three forms: voluntary, incentive, or mandatory. Under the voluntary arrangement private-sector groups may agree to participate in transportation projects, but without a legally enforceable commitment to perform. Incentive programs, although voluntary, provide development bonuses, reduction in parking requirements, and so on, in return for specified transportation assistance. Mandatory participation requires private-sector participation in transportation programs or payment for provision of transportation services, or both.

The voluntary arrangement allows transportation projects or programs to be tailored to specific needs and opportunities and can be easily adjusted to new situations. However, because of its voluntary nature, governments are hesitant to depend on this approach to alleviate transportation problems. The incentive arrangement is the most difficult of the three approaches. Identification of real incentives is not an easy task and may result in some administrative difficulties. A common incentive used by localities is a reduction in parking space requirements in exchange for support or participation in commuting and ridesharing programs. In one instance, after receiving the desired permit, an employer discontinued participation in the program on the basis that it was not cost-effective. Experiences like this have caused city officials to shy away from incentive

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programs (2). Mandatory programs developed primarily because incentive and voluntary programs were deemed too risky and, in the case of incentive arrangements, unwieldy.

Although voluntary arrangements are not legally binding, many areas have been successful in using this approach to supplement traditional financial sources. A good example is the solicitation of private donations. In Grand Rapids, Michigan, the local transit authority approached an individual interested in the improvement of the local zoo. This person agreed to donate $100,000, to be matched by the city, for the purchase of five buses. The transit authority then agreed to extend bus stops to the zoo. A developer in Newport Beach, California, donated land and $300,000 toward operation of a shuttle service. An $800,000 transit center is to be built on the grounds of the developer's shopping center (3). Few jurisdictions, if any, would reject private donations for transportation programs. The key to success, however, is in identifying and soliciting potential sources.

In addition to donations, participation of local merchants has also been solicited in some localities. Participating merchants in Cedar Rapids, Iowa, gave bus coupons to customers who made purchases at their places of business. The coupons, ranging from half to full fare, accounted for $21,350, or 3.1 percent of the locality's revenues. In Champaign, Illinois, a local grocery chain subsidizes the operations and maintenance of a vintage 1960 bus. The bus is painted to resemble a generic grocery product and runs different routes around the city each day, charging half-price fares. During holidays, merchants in Springfield, Massachusetts, provided $1,500 to the city bus service in exchange for which the city operated the buses at no charge to riders during the four Sundays before Christmas. The $1,500 covered the revenues lost to the city through not charging these fares to the riders (3).

Governments are not always the major force behind transportation projects. In areas where local development is on the rise, private developers often provide the initiative for fulfilling transportation needs. The Friendswood Development Company of Houston, Texas, for example, was willing to contribute nearly $1 million for the completion of a section of highway if the Texas State Department of Highways and Public Transportation (SDHPT) agreed to speed completion. The Texas SDHPT eagerly accepted. The Woodlands Development Corporation of Woodlands, Texas, continually expedites transportation improvements in its community by providing contributions ranging from 15 to 20 percent of the project's cost. A private, nonprofit development organization provided the impetus for improving streets in downtown Pittsburgh, Pennsylvania. Total renovations costing $13 million to $14 million are to be funded 75 percent federally and 25 percent locally, with additional improvements beyond city standards provided by the development organization. The development organization is soliciting funds totaling $750,000 from major corporations in the area (3).

Municipalities have enacted a variety of methods for requiring private-sector participation in transportation programs. Most of these methods are tied to the development approval process. Fees or performance of certain activities, for example, may be required before a building permit is issued. One such method is the traffic signal fee, which is an assessment made on a developer or business to offset the costs of new traffic signals or intersection modifications to control increased traffic. Anaheim, California, enacted such an ordinance in 1978. Fees are assessed on all new developments--residential, retail, industrial, and so on--and deposited in a special traffic signal fund. The assessment rates are based on trip-generation rates, land use, economic data, and projected traffic signalization costs as determined by the city traffic engineer. Riverside County, California, emphasized operational improvements in the traffic signal network through the creation of traffic signal mitigation districts. Currently, nine signal districts are in operation with a combined $1.5 million to $2 million surplus. Thornton, Colorado, enacted a traffic signal fee assessed to new development on the basis of trip generation and the cost of traffic signals. The city ordinance specifies the construction cost of a new signal annually adjusted by the Colorado highway construction cost index and requires the assessed fee to include 18 percent of the interconnection construction costs, 7 percent of the specification and plan costs, and 5 percent of the construction engineering costs. All fees are paid before issuance of a building permit and are reserved exclusively for building and modifying traffic signal systems.

A second variety of the mandatory arrangement is the impact fee. Impact fees require businesses or developers to contribute resources to offset all or a portion of the increased transportation costs that result from their developments. Kansas City, Missouri, recently required a developer at one of its major intersections to submit plans indicating additional traffic flow as a result of the development. The developer was then required to undertake specific street improvements and provide funds for interchange modification (4). The Palm Beach County, Florida, Commission enacted an ordinance requiring new developments generating road traffic to pay their fair share of any necessary road improvements. The ordinance contains a formula requiring fees of $300 per single-family home, $200 per unit for multifamily homes, and $175 per unit for mobile homes. The fees can only be spent for road improvements in the area of collection. San Francisco, California, is in the process of approving a series of ordinances requiring developers to pay $5/ft^2 to support the additional load on transportation facilities (5).

A third type of mandatory participation involves benefit assessment districts. Under this scheme municipalities establish benefit districts to recover the cost of capital improvements benefiting a certain area. Property within the district is assessed a charge sufficient to retire bonds used for the capital improvements. In San Diego, California, developers may request the city manager to create an assessment district. In creating the district, the city manager considers the areas benefiting from the proposed project, prepares a schedule for the costs and timing of the capital improvement project, determines assessments, and schedules a public hearing. If more than 50 percent of the residents and property owners do not refuse, the facilities benefit assessment district is created and all property is assessed a fee with a lien on the property until the assessment is paid. Since its inception in 1980, assessment districts in San Diego have raised $3.5 million. A similar program, but only for rural dirt roads, has been established in Missoula County, Montana. Rural special improvement districts are created with 60 percent approval of the area residents and are responsible for paving a stretch of the roadway. Fees are charged to each landowner on the basis of their frontage or acreage or both. The county contributes 33 percent toward the total cost of the pavement project.

NEW TEXAS LEGISLATION

For the most part, Texas highway development has followed a pattern similar to that in the rest of

the country. In the early 1970s, the Texas SDHPT and other state officials became keenly aware of the highway planning and funding dilemma. After a major study and several planning documents, the 65th legislature passed House Bill 3, which created a new mechanism for funding the activities of the SDHPT. This mechanism provided increased funding without increasing highway user charges by utilizing some of the state budget surplus, which was rather significant at that time. The mechanism was designed to maintain a 1979 level of highway services by measuring and compensating for the impact of inflation on the costs of construction, maintenance, and operations--the three functional areas of highway activity.

This new mechanism, however, did not accomplish its intended results. As indicated in Figure 1 (6,p.66), total SDHPT revenues have been declining steadily, both in current and constant dollars. In 1980 total state highway funds approximated $2.4 billion, whereas in 1983 total available funds declined to slightly less than $1.9 billion, or $1.5

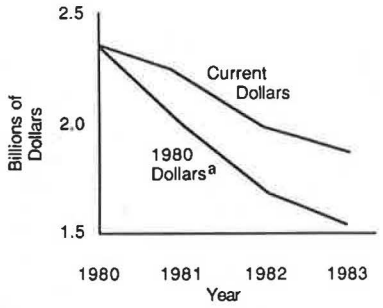
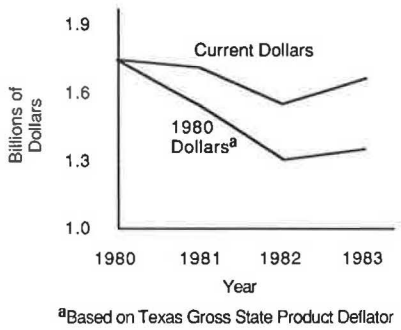


FIGURE 1 Texas state highway funds *(6).*

billion in 1980 constant dollars. Similarly, this decline forced a reduction in highway development outlays, as indicated in Figure 2. State highway disbursements equalled $1.75 billion in 1980 and declined to $1.65 billion in 1983, or $1.36 billion in 1980 constant dollars. In 1980 disbursements accounted for 73 percent of state funds; however, in 1983 disbursements used up 88 percent of available funds. As a result of the higher expenditures for existing highway projects, there have been significantly fewer authorizations for new highway projects. In 1980 the SDHPT authorized $1.4 billion in new projects, but in 1983 this figure declined 28.6 per-



[a]Based on Texas Gross State Product Deflator

FIGURE 2 Texas state highway disbursements *(6).*

cent to $987 million (7). These trends create a serious quandary in light of the SDHPT's 20-year Operational Planning Document Study, completed in 1982 (8). The planning study set the cost of transportation needs for the state during the next 20 years at $61 billion.

These trends are even more pronounced in the major urban areas. Population changes in the seven major standard metropolitan statistical areas (SMSAs) have been significant. The information in Table 1 documents the growth in these urban areas and reveals that of the 3 million increase in population, 75 percent occurred in the major metropolitan areas. However, despite these increases, construction expenditures for highway development have not kept pace (Table 2).

These trends, along with other procedural problems of the highway funding mechanism passed in House Bill 3, forced the legislature to once again reevaluate Texas highway finance. During a special session in the summer of 1984, the legislature voted to rescind the earlier-mentioned funding mechanism in favor of increasing traditional highway user charges. However, the legislature still recognized a need for new approaches and sources for highway funding. Thus, to supplement the increase in fuel taxes and registration fees, the legislature enacted House Bill 125 and Senate Bill 33 authorizing the creation of transportation corporations and road utility districts, respectively. These pieces of legislation were attempts to bring innovative financing approaches to Texas transportation development.

The authorization of transportation corporations is aimed at encouraging strong private-sector support of highway development and innovative financing of roadway improvements. The transportation corporations are nonprofit entities acting as instrumentalities

TABLE 1 Population Changes in the Seven Major Texas SMSAs

SMSA[a]	Population in 1970		Population in 1980		Change, 1970-1980	Percent Change
	No.	Percent	No.	Percent		
Austin	295,516	2.64	536,688	3.77	+241,172	81.61
Beaumont	315,943	2.82	375,497	2.64	+59,554	18.85
Corpus Christi	284,832	2.54	326,228	2.29	+41,396	14.53
Dallas-Ft. Worth	2,318,036	20.70	2,974,878	20.91	+656,842	28.34
El Paso	359,291	3.21	479,899	3.37	+120,608	33.57
Houston	1,985,031	17.73	2,905,350	20.42	+920,319	46.36
San Antonio	864,014	7.72	1,071,954	7.53	+207,940	24.07
Total	6,422,663[b]	57.35	8,670,494[c]	60.93	+2,247,831[d]	35.00

Source: U.S. Census Bureau, various reports.

[a]Some of the growth in the SMSAs is due to the addition of new counties. Any differences in percentage are due to rounding.
[b]Total state population in 1970 was 11,198,655.
[c]Total state population in 1980 was 14,229,191.
[d]Total change from 1970 to 1980 was 3,030,536.

TABLE 2 Construction Expenditures for Seven Major Texas SMSAs *(7)*

SMSA	1980 ($000,000s)	1983 ($000,000s)
Austin	33.609	23.114
Beaumont	25.796	24.435
Corpus Christi	14.692	19.454
Dallas-Ft. Worth	209.718	152.893
El Paso	20.894	13.286
Houston	225.194	247.751
San Antonio	88.503	69.676
Total	618.406[a]	550.609[b]

[a]Total for state was $1,293,557,000.
[b]Total for state was $1,030,350,000.

of the state for the purpose of assembling right-of-way and financial support toward completion of state highways. The corporations provide private property owners the opportunity to form a tax-exempt entity that can accept property and funding to support the assembly of right-of-way and engineering plans to support major highway developments. This gives private property owners a greater opportunity to obtain tax deductions for their land and dollar contributions as well as to expedite the completion of transportation construction projects near the property.

The transportation corporations, the creation of which must be approved by the SDHPT Commission, are governed by a Board of Directors serving without compensation (although expenses are reimbursable). Advisory directors can be appointed to assist the corporations but may receive no compensation, not even for expenses. The corporations are subject to the same open records provisions as other state agencies. They may work directly with property owners, governmental agencies, and elected officials to develop and promote their projects as follows:

- Prepare preliminary and final alignment studies;
- Receive land and cash contributions;
- Retain staff, consultants, engineering services, and so on;
- Establish appropriate formulas for proportionate sharing of costs among property owners; and
- Borrow funds to meet expenses.

The SDHPT Commission approved the first transportation corporation soon after the legislation was enacted. The Grand Parkway Association was created to assist in the planning and development of additional hurricane and emergency evacuation routes from low-lying areas in Galveston and Brazoria counties. The association was authorized to perform the following activities (SDHPT Minute Order 82325, October 25, 1984):

- Prepare preliminary and final alignment studies;
- Receive contributions of land for right-of-way and cash donations to be applied to the purchase of right-of-way not donated or to be applied to the design or construction of the Grand Parkway or both;
- Review and select candidates for advisory directorships;
- Retain necessary administrative staff and legal, public affairs and information, and engineering services;
- Prepare, via staff and retained consultants, right-of-way documents, environmental reports, and preliminary and final engineering plans;
- Solicit cash contributions to cover the costs of the services performed by the corporation and consultants;
- Borrow money to meet any expenses or needs associated with regular operations of the corporation or any capital improvements undertaken by the corporation, provided the borrowing does not encumber any right-of-way facilities;
- Issue press releases and other material to promote the activities of the corporation; and
- Make official presentations to the state and other affected agencies or groups concerning development of the Grand Parkway.

Northeast Austin property owners and developers are in the process of developing a second transportation corporation--the MOKAN Corridor Association. This association is planning the development of a 30-mi travel corridor (the MOKAN Corridor) to provide highway and express transit access from downtown Austin to north of Georgetown. When fully developed, MOKAN will cost an estimated $80 million to $100 million. The association expects to raise $19 million for right-of-way and engineering costs. The entire project is expected to be completed by 1998.

These two examples illustrate how private interests can assist in the planning and development of transportation systems. This new legislation changes the infrastructure of the highway development process in order, through private efforts, to expedite the completion of many urban transportation projects.

The second bill adopted by the state legislature, Senate Bill 33, encourages private participation in road development at the local level. The legislation authorizes the creation of road utility districts (RUDs) for the purpose of financing, constructing, acquiring, and improving arterial or main feeder roads and related projects. Similar to municipal utility districts (MUDs), RUDs may issue bonds supported by levying property taxes or assessing fees. The use of property taxes requires approval by a two-thirds majority of voters residing in the district; however, bonds may be issued without voter approval if secured by assessing fees.

In order to create a RUD, 100 percent of the property owners within a proposed district must petition the SDHPT Commission for approval to create a RUD, subject to voter approval. The local governing agency or agencies must also acquiesce in the creation of the district and assume responsibility to maintain the completed roadway, if necessary. In addition, the petition for creation of a RUD must also contain a full description of facilities to be acquired, built, or improved and an estimate of financial need and valuation of property contained within the district.

Once the RUD has been approved by the SDHPT Commission and accepted by a majority of voters in the district, it may issue bonds not to exceed 25 percent of the assessed value of real property within the district. The district may also assess a maintenance tax not to exceed $0.25 per $100 of assessed value, subject to a majority vote of the electors within the district. This maintenance tax can be used to support the operations of the district.

The requirements for creation of a RUD are a bit more difficult than those for transportation corporations. However, given the bond and taxing authority of the district, it certainly can have a significant effect on local road development. During the first 10 months after adoption of Senate Bill 33, no RUDs were created. However, the SDHPT right-of-way division has reported a number of inquiries about creation of such districts. The RUD concept has been used in Arapahoe County, Colorado. A coalition of metropolitan districts financed the building of the Yosemite Street Overpass through bonds supported by property tax levies.

CONCLUSION

The past decade has demonstrated that transportation agencies must look at a variety of ways to finance growing transportation needs. A number of areas have involved private business owners in the planning and development of transportation systems. The transportation corporation in Texas created an unlimited number of ways in which organizations could raise funds to assist in highway development. The potential for these various financing arrangements is significant and should help alleviate the funding dilemma faced by many transportation agencies. Transportation and highway financing for the future will require mutual consideration and cooperation between the private and public sectors. National examples demonstrate that when the two have merged, their interests benefited.

REFERENCES

1. C.M. Walton, B. Boske, W. Grubb, K.J. Cervenka, and M.A. Euritt. The Texas Highway Cost Index: An Assessment. Policy Research Institute, University of Texas at Austin, Aug. 1984.
2. E.A. Deakin. Private Sector Roles in Urban Transportation. ITS Review, Nov. 1984, pp. 4-8.
3. Alternative Financing for Urban Transportation: State of the Art Case Analyses. U.S. Department of Transportation, Oct. 1983.
4. K.W. Graham and J.B. Saag. Interchange Reconstruction with Developer Assistance. ITE Journal, May 1985, pp. 50-55.
5. San Francisco Imposes Downtown Growth Cap. Engineering News Record, July 11, 1985, p. 10.
6. Texas Transportation Finance Facts 1984. Texas State Department of Highways and Public Transportation, Austin, 1984.
7. Supplement to Annual Financial Reports. Texas State Department of Highways and Public Transportation, various years.
8. Operational Planning Document Study. Texas State Department of Highways and Public Transportation, Austin, July 1982.

Publication of this paper sponsored by Committee on Taxation, Finance and Pricing.