

as inflation increases the current dollar value of time and other attributes of transit service. The extent to which this is the case is the subject of an ongoing study of a 10-cent fare increase in Jacksonville.

ACKNOWLEDGMENT

The work described in this paper was performed under contract to the Transportation Systems Center (TSC), whose support is hereby acknowledged. In particular, we would like to thank Simon Prensky and Larry Doxsey of TSC for their review and comments and Jack Johnson of the Jacksonville Transportation Authority and Joseph Poquette of City Coach Lines for providing much of the raw data used in the study.

The opinions and conclusions expressed in the paper are ours and do not necessarily reflect the views or policy of the Transportation Systems Center or the Jacksonville Transportation Authority.

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Publication of this paper sponsored by Committee on Public Transportation Planning and Development.

Abridgment

Feasibility of Combining Public Transit and School Bus System Services in Dade County, Florida

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The concept of a public transit system's providing school transportation services is an issue of major interest to many communities. Where a community already has two large transit operations—a general public transit operation and a school transit operation—there is a possibility that cost or service efficiencies or both can be achieved by using these services jointly. Several cities, such as Buffalo, Atlanta, and Toledo, have joint-use arrangements by which public school students are transported on the public transit system rather than by school buses.

An issue here is whether joint use would be appropriate for Dade County, Florida, which includes the city of Miami as well as other urban, suburban, and rural areas. Four alternatives for joint use of transit services were examined:

1. Home-to-school and return transportation of public school students by the public transit system, known as the Metropolitan Transit Agency (MTA),
2. Field-trip transportation of public school students by the MTA,
3. After-school transportation of public school students by the MTA, and
4. Maintenance of school-board buses by the MTA.

BACKGROUND

School-Board Transportation Services

Florida school boards are required by state statute to provide transportation services to students. They must provide home-to-school and return transportation for all public school students who live 3 km (2

miles) or more from school; home-to-school and return transportation for many types of exceptional students such as the physically handicapped, regardless of how far from school they live; and school-to-school transportation for students participating in vocational and special education programs.

The Dade County school board meets these responsibilities by owning and operating a fleet of 448 vehicles. The board's transportation department provides these services to about 38 300 students per day, out of a total school enrollment of about 230 000 students. In addition, and beyond the minimum legal requirements, the transportation department provides these supplemental services:

1. Transportation for about 2600 students (mostly in kindergarten, first grade, and second grade) who live within the legal limit but near enough to school bus routes that have extra seats available;
2. Transportation for almost all school field trips, involving about 14 000 vehicle trips/year, and
3. Up to 30 after-school runs from selected junior and senior high schools.

Thus, the school board provides all of the services required by statute, plus significant supplemental services. Outside contractors are used only for occasional field trips.

Of the transportation department's pupil transportation budget for the 1977-1978 school year, \$5.6 million, the primary expenditure, was driver compensation. The state of Florida, through the Florida Education Financing Program (FEFP), currently reimburses the school board with about \$2.7 million for pupil transportation; the allocation is based on a formula that considers number of students transported and vehicle distance traveled.

The school board fleet operates over 393 designated routes and makes about 1150 runs each morning and afternoon. Most of the vehicles hold 66 passengers; 96 vehicles are lift-equipped to accommodate handicapped students. The average cost per student is \$146/year, which breaks down to about 81 cents/day and 40 cents/trip. These average costs vary significantly between the regular school runs and the special runs for exceptional students. The regular school runs, about 69 percent of all runs and 91 percent of all students transported, have an estimated cost per student trip of 31 cents; the special runs, about 31 percent of all runs and only 9 percent of all students transported, have an estimated cost per student trip of \$1.35.

For the 1977-1978 school year, vehicle distance traveled totaled approximately 9.2 million km (5.7 million miles). In terms of operating costs, basic home-to-school and school-to-home transportation service is provided at a cost of about \$0.63/km (\$0.98/mile).

Public Transit Services

MTA, the authorized public carrier for Dade County, owns and operates a fleet of 550 buses. Each month, the buses carry approximately 5.6 million passengers over about 2.9 million km (1.8 million miles). Routes are laid out in a grid system and tend to be concentrated in the central business district and other commercial areas. As many as 425 buses are committed for peak-hour transit service. The cost of providing service is approximately \$1.05/km (\$1.70/mile). Based on the number of passengers carried, the average cost per passenger trip is 55 cents. The MTA also runs a limited charter service within the constraints of the regulations of the U.S. Department of Transportation's Urban Mass

Transportation Administration (UMTA).

MTA's operating budget for fiscal year 1977/78 was \$39.2 million; driver compensation accounted for 55 percent of this total. The capital budget for fiscal 1977/78 was \$21.5 million. At present, MTA operates buses only, but it will become a rail-bus operator when the county rapid rail system, scheduled to open in 1983, is completed. By 1982, MTA plans to have over 900 buses.

HOME-TO-SCHOOL TRANSPORTATION OF PUBLIC SCHOOL STUDENTS

The study recommended that the school board continue to use its own vehicles and drivers for the home-to-school transportation of students. This recommendation was based on five factors.

First, Florida state laws require that the level of service provided be sufficient to ensure all students a seat on a vehicle. It is the responsibility of the school board to provide the seats; exceptions are allowed only in emergencies. This requirement is most important. While state law requires seats on vehicles for students, federal regulations prohibit reserving seats on MTA vehicles for students. Thus, guaranteeing each student a seat on an MTA vehicle would necessitate adding inordinate further capacity to the MTA system.

By contrast, Florida's seating requirement, which is intended to improve student safety, is not a law in a number of other states that provide joint use. In these other states, students stand on the vehicle as a matter of course. However, even if this law were to be relaxed in Florida, it is not clear that joint use would be enhanced. If standees were allowed, the school board could obtain significant economic benefits by placing more students on its own vehicles, which would reduce the number of school buses needed and the associated operating costs.

Second, school bus transportation is far less expensive than MTA transportation. For the six months ending March 1978, MTA had a total operating cost of \$1.05/km (\$1.70/mile), as compared with \$0.63/km (\$0.98/mile) for the school board. The difference is attributable to MTA's higher vehicle operating costs and higher driver compensation. MTA vehicles cost \$0.47/km (\$0.76/mile) to operate, as compared with \$0.29/km (\$0.46/mile) for school board vehicles. MTA drivers are paid an average of \$6.88/h, as compared with \$5.80/h for school board drivers. Thus with differences of 65 percent in vehicle operating costs and 19 percent in hourly driver compensation, a direct one-for-one substitution of MTA vehicles and drivers for school board vehicles and drivers would not be cost effective; school board costs would increase by about 40 percent, or \$2 million, each year without an improvement in service.

Similarly, major expansion of MTA service specifically to meet student needs also would be disadvantageous. Based on the figures cited above, the cost of transporting students would be reduced only if more than 1.4 school buses could be eliminated for each additional MTA bus that had to be placed in service.

School buses carry an average load of 47 students. To replace 1.4 school buses would require that 66 students be transported by the MTA. This, in turn, would require all the seats (53) on the one bus added during the morning peak period plus another 13 seats on an MTA vehicle already in service. (The demand for 13 seats is an average; the demand can be as high as 20 on certain days.) This availability of seats does not now exist and, barring an extreme drop in level of demand by the general public, is not expected to exist in the foreseeable future.

Third, the present labor contract of MTA, which would be difficult to change, guarantees drivers at least a 40-h week. School board transportation, however, requires only a 20- to 25-h week, and school board drivers work with a 20-h guarantee. Thus, using MTA drivers for the school peak could necessitate higher wage rates, plus compensation for drivers for time when they are not needed.

Fourth, while federal regulations require that MTA vehicles have an open-door policy, i.e., that they be available to all types of passengers, Florida law currently disallows state financial support for students transported on open-door vehicles. This support is important; it currently funds about 48 percent of the county's total costs for mandated pupil transportation services. If there were no other difficulties with the concept of joint use of services, this is one area in which statutory change should be sought.

Fifth, MTA's current routes are designed to meet the needs of the general public and would be of limited value to students. Bus routes on major roads are typically long and direct with a minimum of stops. By contrast, school service involves short runs of many stops, primarily in residential neighborhoods, followed by a closed-door run to the school. Given MTA's current routes, many or most students would have to transfer at least once during each trip, and students' walking distances from home to bus stop would also increase. The inherent differences between the two transit services limit the route and schedule integration that can occur.

OTHER JOINT-USE ALTERNATIVES

The alternative of having MTA rather than the school board provide field-trip transportation for class trips, athletic team trips, and band and chorus trips should not be pursued. Under federal restrictions, which are not likely to be changed in the foreseeable future, MTA is only allowed to provide this type of service to the school board at a charter rate. MTA charter rates are almost 100 percent above the corresponding rates and actual costs of the school board; thus, MTA service would not be economical. Moreover, the school board has demon-

strated responsiveness and good performance in providing field-trip services.

The alternative of having MTA provide some after-school service, such as transporting late-staying students along designated routes, represents a meaningful opportunity for joint use as long as the students can be accommodated through regularly scheduled service. Students are an attractive market for MTA. Federal regulations would allow MTA to provide service as a part of its regular schedule, and there are no state restrictions in this area.

The alternative of having MTA provide maintenance services for school board vehicles should not be pursued. Federal rules and regulations sharply restrict use of MTA's equipment and facilities for school bus purposes. In addition, MTA lacks the present and planned capacity for servicing school board vehicles. Finally, the school board has demonstrated responsiveness and good performance in its maintenance operations, and its operations are of sufficient size to achieve efficiencies.

SUMMARY

There are very limited opportunities for joint utilization of transit services in Dade County. The home-to-school transportation of students should continue to be provided by the school board's transportation unit, primarily because of (a) the inability of MTA to guarantee seats for students on its vehicles, (b) the significantly lower operating costs of the school board's vehicles, and (c) the more flexible labor contract of the school board in terms of guaranteed hours for drivers.

The school board should also continue to provide field-trip transportation for students, primarily because its cost is significantly lower than the charter rates of MTA.

MTA maintenance of school board vehicles is not feasible under federal regulations, nor is it desirable. MTA provision of after-school service for students, however, should be explored.

Publication of this paper sponsored by Committee on Public Transportation Planning and Development.

Abridgment

Assisting Small Transit Operators in California

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The California Department of Transportation (Caltrans) recently conducted a series of 10 workshops with transit operators throughout the state. The workshops were held to (a) identify the needs of small transit operators, (b) determine the existing expertise of transit operators and others associated with transit (universities, consultants, etc.), and (c) discuss the role Caltrans should play in a transit management assistance program.

This paper describes the workshop process and presents the workshop results.

BACKGROUND

Transit in California has followed the national historical pattern. In 1950 there were 30 transit operators providing scheduled fixed-route service in the state; 21 were private companies. By 1970 there were still about 30 transit companies, but only 3 were privately owned. In 1971 a statewide transit-assistance program was established through the Mills-Alquist-Deddeh Act of 1971, better known as the Transportation Development Act.