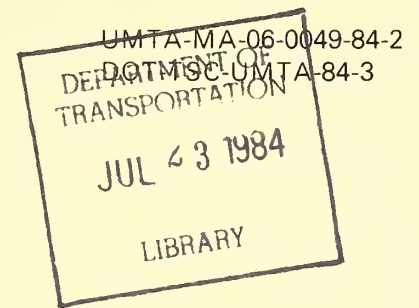




U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**



Easyride: Specialized Transportation Service in New York City (Phase II Report)

**Final Report
March 1984**

**UMTA Technical Assistance Program
Office of Service and Management Demonstration
UMTA/TSC Project Evaluation Series**

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16. Abstract The EASYRIDE demonstration involved a door-to-door specialized transportation system which served elderly and handicapped residents of the Lower East and West Sides of Manhattan. The demonstration, operated under the auspices of the non-profit Vera Institute of Justice, began in June 1977, and ran through March 1982. This final report covers the period from July 1979 through the end of the demonstration. During the course of the demonstration, EASYRIDE evolved into an 18-vehicle operation providing as many as 7300 trips per month. EASYRIDE successfully secured a broad array of grants, service contracts, and private contributions for a total revenue base in excess of \$800,000 per year. In developing this mix of funding, EASYRIDE was able to offer a multi-purpose service with minimal restrictions on "mixing" riders. During the period covered by this report, EASYRIDE instituted three major changes: 1) In May 1980 EASYRIDE installed two-way radios in all vehicles; this contributed to improved productivity through the reduction of deadheading and vehicle dead time. 2) In the summer of 1980 EASYRIDE automated much of its record-keeping and scheduling procedures, thereby improving the efficiency and accuracy of these processes. 3) Finally, in the Fall of that year EASYRIDE expanded its service area into the Lower West Side of Manhattan, thereby increasing its overall ridership substantially. Following these changes, EASYRIDE's cost per trip dropped significantly: the average figure for the fiscal year preceding the improvements (1979-80) was \$15.36 per trip, while the subsequent year's average figure was \$12.36 per trip. The average cost per trip for the final three years was \$12.84. The average monthly ridership for the three-year period was 5704; nearly 18% of these trips originated in the West Side, 73% in the East Side, and the remainder in other parts of New York City. The average productivity for the first year of the report period was under 3.8 trips per driver hour; this improved to over 5.0 in the last year. Over the course of the demonstration, EASYRIDE provided a high quality--though rather high cost--specialized service that was valued highly by users, community groups, funding agencies, and city officials. As the demonstration ended, EASYRIDE was making renewed efforts to secure new sources of funding so as to continue to provide this service.					
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PREFACE

The EASYRIDE demonstration project was funded, in part, by the U.S. Department of Transportation under the UMTA Service and Methods Demonstration Program. As part of that program, Multisystems, under contract to the U.S. DOT's Transportation Systems Center, has prepared this Final Evaluation Report.

This report is based on analysis of data collected by EASYRIDE and the Vera Institute. The author wishes to thank the following individuals for their assistance and cooperation in this effort:

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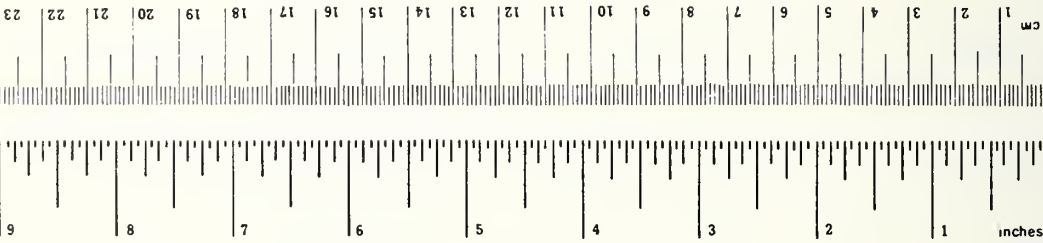
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

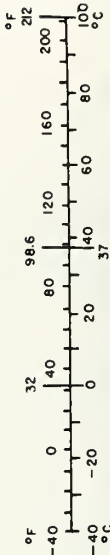
Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds short tons (2000 lb)	0.45 0.9	kilograms tonnes	kg t
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³

TEMPERATURE (exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
AREA				
cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.5	acres	ac
MASS (weight)				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	st
VOLUME				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³
TEMPERATURE (exact)				
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



* 1 in = 2.54 (exact). For other exact conversions and more detailed tables, see NBS Misc. Publ. 296, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10.286.

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EXECUTIVE SUMMARY

INTRODUCTION

The EASYRIDE demonstration involved a door-to-door (door-through-door where necessary) specialized transportation system which serves elderly and handicapped residents of the Lower East and West Sides of Manhattan. This service, operated under the auspices of the non-profit Vera Institute of Justice, began in June 1977 with funding from the Urban Mass Transportation Administration (UMTA) Service and Management Demonstration (SMD) program, the Department of Health, Education and Welfare (through a special Medicare waiver), and several local grants and contracts. The original UMTA demonstration grant ran through May 1979, but was subsequently extended through June 1982.*

Throughout the demonstration, EASYRIDE was funded through a variety of grants, service contracts, private contributions, and passenger fares. As of the end of the demonstration, the major sources of revenue were UMTA (Section 6 and Section 5), the New York City Department for the Aging (DFTA), and Medicaid reimbursements. At that time, EASYRIDE was operating with a fleet of 18 wheelchair lift-equipped vehicles, and was providing approximately 6500 trips per month (the total demand for service was nearly 8000, including passenger no-shows).

* Although funding was authorized through June, EASYRIDE had expended the total amount of the grant by the end of March. EASYRIDE continued to operate past that point, through greater reliance on its other funding sources.

This report presents an evaluation of "Phase II" of the demonstration (i.e., the period between June 1979 and April 1982). (The first two years of the demonstration are documented in a separate evaluation report.*) The total operating budget during the period covered in this report was approximately \$2.4 million, of which SMD funds provided 17%.

BACKGROUND

The EASYRIDE demonstration was originally developed by the Vera Institute of Justice, in part as a means of providing a supervised work environment for ex-addicts and ex-offenders; these individuals served as the drivers and attendants in this new specialized transportation system serving the elderly and handicapped. However, the project eventually evolved beyond that focus; by the start of Phase II of the demonstration, the focus had shifted to the operation of the service itself.**

During the first two years of the demonstration (i.e., Phase I), EASYRIDE provided service only to residents of the Lower East Side of Manhattan. One of the major objectives of Phase II was to demonstrate the impact on the overall operation of expanding service into another service area - the Lower West Side. In addition, EASYRIDE (and UMTA) sought to demonstrate the impacts of several major technological improvements (i.e., the installation of two-way radios in the vehicles and the computerization of scheduling, billing, and reporting procedures). The assessment of these impacts thus constituted

* Applied Resource Integration, Ltd. Evaluation of the EASYRIDE Specialized Transportation Service, UMTA/TSC Project Evaluation Series, Report # UMTA-MA-06-0049-80-4, November 1979.

** It should be noted that ARI found EASYRIDE's use of ex-addicts and ex-offenders to be "one of the most successful aspects" of Phase I of the demonstration. Their performance as drivers, in terms of "reliability, promptness, accident rate, and sensitivity to the needs of the passengers" was found to be "excellent." Furthermore, EASYRIDE's passengers perceived these drivers to be "courteous and safe" - the fact that the drivers were ex-offenders "added an additional element of security" to their passengers' trip.

the major focus of the evaluation, although significant attention was also placed on EASYRIDE's efforts to secure new funding sources (i.e., so as to broaden the project's base of support and enable it to continue following the end of the UMTA demonstration period). The key project accomplishments and results are summarized below.

KEY ACCOMPLISHMENTS AND RESULTS

Institutional Accomplishments

EASYRIDE began Phase II of the demonstration with funding from UMTA (Section 6), HEW (Medicare), and several local grants and contracts. Through extensive marketing efforts on the part of EASYRIDE and the Vera Institute, the funding base was considerably expanded over the latter three years of the demonstration. The key accomplishments in this area were as follows:

- In August 1979, EASYRIDE procured a service contract with the New York State Office of Vocational Rehabilitation (OVR) to transport local clients to employment training sites. In winning this contract, EASYRIDE had convinced OVR to modify its practice of soliciting multiple bids on each trip to be delivered in favor of awarding service contracts (on a regional basis) to the lowest bidder.
- In September 1979, EASYRIDE was approved as a Medicaid vendor, enabling it to receive reimbursement for Medicaid-eligible medical trips. This was noteworthy in that EASYRIDE was one of the first non-profit carriers to be so authorized; prior to a recent court ruling, only certified "invalid coaches" had been eligible for Medicaid reimbursement.
- In early 1980, EASYRIDE solicited funds from several city agencies, and was awarded grants from the New York City Department of Transportation (UMTA Section 5 funds), the City Planning Department (Community Development Block Grant funds), and the City Department of Employment (through the CETA program). EASYRIDE encountered problems in procuring the UMTA Section 5 funds, however; the transit union of the Metropolitan Transit Authority of New York held up allocation of the funds on the basis of Section 13(c) of the Urban Mass Transportation Act of 1964. However,

this issue was eventually resolved through EASYRIDE's assurances to the union that the transit employees' status would not be jeopardized.

- EASYRIDE was able to secure (in early 1980) a service contract with the City Department for the Aging (DFTA) by working through agencies (Interagency Councils of the Lower East and West Sides) which receive funds from the DFTA. These agencies committed their allotted funds to EASYRIDE to provide service in their respective areas.
- Also in early 1980, UMTA agreed to provide EASYRIDE with additional demonstration (Section 6) funding to cover the provision of service in the Lower West Side.
- In July 1980, EASYRIDE convinced the New York State Department of Transportation (NYDOT) to revise its procedures for ordering vehicles through UMTA's 16(b)(2) program. By modifying some of the interior vehicle specifications and locating a vehicle supplier on its own, EASYRIDE was able to acquire 7 vehicles with the funds NYDOT had allocated to buy 5.
- In August 1980, EASYRIDE secured a contract with the Democratic National Convention (held in New York City) to transport handicapped delegates to and from the Convention site.
- This diversity of support - from local, state, and federal agencies, as well as from private organizations - enabled EASYRIDE to offer a multiple-purpose service (i.e., with largely unrestricted trip purposes), which did not have to be limited to particular agencies or persons eligible for particular funding programs. In addition, these new funding sources enabled EASYRIDE to offset the eventual loss of three of its largest sources (CETA, Medicare, and UMTA Section 6) and continue its operations.

Impacts of West Side Expansion

EASYRIDE considerably expanded its service catchment area in the fall of 1980, when it began providing service in Manhattan's Lower West Side. This service was developed at the request of - and with the close cooperation of - the Lower West Side Interagency Council for the Aging (IAC). In addition to committing its share of DFTA funds to EASYRIDE, the IAC assisted EASYRIDE in defining the need and potential demand for

specialized service within the area, and in identifying and registering eligible area residents. The West Side service, which officially began in September, produced significant impacts on EASYRIDE's overall operation; the major impacts were as follows:

- The West Side expansion significantly boosted EASYRIDE's registration and ridership. As of the end of the demonstration, West Side registration represented 29% of the system total. Trips originating in the West Side reached a peak of nearly 2,300 (32% of the system total) in October 1981. Beginning in January 1981 (i.e., after service had been in operation long enough for demand to stabilize somewhat), West Side ridership averaged 1,652 per month (23% of the overall monthly average for the same period).
- The expansion had a strong positive impact on EASYRIDE's overall cost-effectiveness, as the operating cost per trip dropped substantially following the expansion: during the first year of the evaluation period (July 1979 - June 1980), the average cost per trip was \$15.36, while the average for the second year was \$12.93; the average cost per trip in the third year dropped to \$11.04.
- The expansion contributed to a significant improvement in system productivity. The average number of trips per driver hour rose substantially following the expansion, and showed steady improvement over the rest of the demonstration period. The average productivity for the final quarter of the demonstration was 5.33 trips per hour; the estimated average figure for the first year of the evaluation period (i.e., prior to the West Side expansion) was under 3.8.

Impacts of Technological Improvements

As mentioned earlier, EASYRIDE made two major technological improvements during the evaluation period: the installation of two-way radios in the vehicles, and the implementation of a computerized management information system. The major impacts of these improvements on EASYRIDE's operation were as follows:

- The implementation of the radios contributed to higher productivities by reducing the amount of deadheading and dead time (i.e., resulting from no-shows).

- The computerization of the operational and record-keeping procedures also contributed to higher productivities, primarily by improving the efficiency of the reservation and scheduling process. The computer reduced the time required to perform each task, improved the nature of informational storage and retrieval, and significantly reduced the potential for error.
- The computerization also contributed to an improvement in the system's overall cost-effectiveness, by allowing EASYRIDE to undertake a significant expansion of service while adding only one office staff person.

Travel Behavior, Service, and Cost Characteristics

Additional key findings concerning EASYRIDE's travel and service characteristics can be summarized as follows:

- Seventy-eight percent of all trips were standing orders, 22% were demand-responsive, and less than 1% group trips.
- Although service was allowed outside of the catchment area (Lower Manhattan), approximately 90% of all trips began within the catchment area, and 90% ended within the catchment area.
- Fifty-four percent of all trips were for nutrition purposes, and the monthly percentage of these trips increased over the course of the project; hospital and physician trips each represented 10% of the total.
- EASYRIDE provided an average of 5704 trips per month; the monthly ridership exhibited relatively steady growth until the final two months of the demonstration, during which time it dropped substantially.
- EASYRIDE was faced with a substantial number of no-shows and cancellations throughout the project; the monthly averages were 546 no-shows and 1036 cancellations; in several months, the number of cancellations nearly equalled the number of West Side trips.
- The fare change (February and March 1982) apparently exerted a rather significant impact on both ridership and no-shows: the number of trips delivered declined sharply in March and April, while no-shows increased greatly in these two months (the March total was the highest of the entire project).

- EASYRIDE's total operating costs were \$641,013, \$903,069, and \$870,016, respectively for the three years of the evaluation period. Approximately 24% of the three-year total was attributable to direct hourly (i.e., driver-related) costs, 9% to mileage-related costs, and 67% to fixed costs. The percentage of fixed costs is very high for a specialized transportation system.
- EASYRIDE's average cost per driver hour (over the last 14 months of the evaluation period) was \$54.27; the major factors contributing to this very high figure were the 24-28% overhead costs collected by the Vera Institute and the large EASYRIDE administrative/support staff.

TRANSFERABLE RESULTS

One of the most important objectives of any demonstration is to identify those findings which are transferable to other locations. Certain aspects of any system are rather site-specific and this applies to EASYRIDE perhaps more than most systems; very few locations feature site characteristics similar to those of Manhattan. On the other hand, other aspects and lessons can be applied to many types of systems and settings. The most important transferable findings from the EASYRIDE Phase II evaluation can be summarized as follows:

1. A diversified funding base, with minimal trip restrictions, allows for flexibility in scheduling trips and promoting shared-riding. EASYRIDE was able to secure financial support from a wide variety of funding sources. The bulk of these grants and contracts were free of restrictions on trip purpose and eligibility, which allowed mixing of riders (i.e., for different trip purposes) on vehicles. This enabled development of a multiple-purpose service, and significantly enhanced EASYRIDE's flexibility in arranging trips; this

* Accurate driver hour data were available only for the latter half of the evaluation period.

flexibility was important in that it allowed for greater shared-riding--and hence higher productivities--than in a system with restrictive service contracts.

2. A diversified funding base enhances the capability to continue operations from year to year despite changes in funding availability. In light of the fact that many grants and contracts are of limited duration--and often cannot be renewed--it is important for a system to secure a mix of funding sources with overlapping funding periods. Furthermore, to ensure replacement of expiring grants or contracts an aggressive marketing effort is necessary to develop new sources.

3. An automated management information system can improve the management and operation of a service funded by multiple sources. Depending on the number of sources from which a specialized service is receiving funding (and the complexity of billing and accounting procedures), computerization of these procedures may be very useful. Automating billing and accounting operations improves and simplifies the overall administration of the service by improving the speed, efficiency, and accuracy of each procedure. A computerized system also readily facilitates modifications in billing or accounting procedures for particular contracts, as well as the addition of new sources. Finally, a computerized system can also be expanded to permit automation of other procedures, including registration, reservations, and scheduling. (Of course, computerization can be very expensive, and each specialized service provider must carefully weigh the costs and benefits associated with it.)

4. Working closely with community groups can expedite the introduction or expansion of service into new service areas. EASYRIDE demonstrated, through the West Side expansion, that community groups can be extremely helpful in marketing and implementing service in a new service area. In this case, the West Side Inter-Agency Council identified the target market, estimated potential demand, and assisted in registering

prospective users, and informed member agencies about the nature of the service being implemented.

5. Many users of specialized transportation services are quite sensitive to fare increases when they pay their own fares. When EASYRIDE substantially raised its fares, ridership dropped significantly and no-shows increased tremendously. Apparently, many persons chose not to make trips they would otherwise have made.

In conclusion, EASYRIDE has provided a high quality - though also high cost - specialized service that has been valued highly by users, community groups, funding agencies, and city officials. During the demonstration, EASYRIDE was successful at developing a broad base of funding sources, which enabled the service to continue in full operation past the end of the demonstration period.

1. INTRODUCTION/BACKGROUND

1.1 INTRODUCTION

This report presents an evaluation of the final three years of an Urban Mass Transportation Administration (UMTA) Service and Management Demonstration (SMD) project known as EASYRIDE. The demonstration involved a door-to-door demand-responsive transportation system serving the elderly and handicapped living in the Lower East and West Sides of Manhattan. The UMTA demonstration began in June 1977 and the original grant ran through May 1979. However, the grant was subsequently extended--originally through 1980 and then through June 1982. The first 2 years of the demonstration were evaluated by Applied Resource Integration (ARI), Ltd. in 1979.* This report covers the demonstration from the conclusion of the ARI evaluation (mid-1979) through the end of the demonstration (April 1982).

1.2 DESCRIPTION OF THE DEMONSTRATION

EASYRIDE has been operated under the auspices of the Vera Institute of Justice, a New York City-based private non-profit organization. Vera has extensive experience in working with social problems, particularly in the areas of criminal justice, anti-social behavior, and the use of a supported work environment to allow ex-offenders and ex-addicts to work on public service projects. The transportation demonstration concept originated with Vera's suggestion that graduates of the Wildcat Service Corporation, the company set up by Vera to provide the

* ARI, Ltd. Evaluation of the EASYRIDE Specialized Transportation Service, UMTA/TSC Project Evaluation Series, Report #UMTA-MA-06-0049-80-4, November 1979.

supported work experience, be used as the drivers and attendants in a new transportation service. The resulting service emphasized a high quality door-through-door service, in which passengers were escorted, when necessary, from (or to) the vehicle to a point where they felt safe and secure, either into their own homes or to the care of a supervisory person at a medical or social service facility.

The demonstration has been quite broad in scope, due to the fact that EASYRIDE has been supported with funds from a variety of sources. The major funding sources over the latter 3 years of the demonstration were the following:

- UMTA (Service and Methods - Section 6, Transit Assistance - Section 5, and Specialized Agency Capital Assistance - Section 16(b)(2))
- U.S. Department of Health and Human Services (Title XVIII - Medicare, and Title XIX - Medicaid)
- Comprehensive Employment Training Act (CETA)
- New York State Office of Vocational Rehabilitation
- New York City Department for the Aging
- U.S. Department of Housing and Urban Development (Community Development Block Grant Program)*
- Greater New York Fund

In addition to these sources, EASYRIDE has been supported through a number of additional grants, service contracts, and private contributions, as well as through the collection of fares. The UMTA Section 6 grant, which totaled \$400,565 during the evaluation period,** was totally expended by April 1982. Total revenue for EASYRIDE was \$641,013 for the period July 1, 1979 through June 30, 1980, \$903,069 for the period July 1, 1980 through June 30, 1981, and \$870,016 for the period July 1, 1981 through June 30, 1982.

* allocated for specific purposes by the City

** In addition to the Section 6 grant, UMTA also provided \$332,857 in Section 5 and \$100,805 in Section 16(b)(2) funds during the evaluation period.

EASYRIDE provided service predominantly within the Lower East Side until September 1980, when service was expanded into the Lower West Side as well. At its peak (June 1981), EASYRIDE provided over 7300 passenger trips per month, although the total fluctuated considerably over the course of the evaluation period; the total ridership for April 1982 (the final month of the SMD demonstration) was approximately 5400, although the number of trip requests (including no-shows) for that month was nearly 6400.

In addition to the West Side expansion, the major project changes during the evaluation period were two technological improvements: the installation of two-way radios in the vehicles, and the implementation of a computerized management information system. The evaluation effort has assessed the impacts of the project changes and other aspects of the project's development since the time of the initial evaluation.

The remainder of this chapter describes the organizational roles and the evaluation issues.

1.3 ORGANIZATIONAL ROLES

The Vera Institute of Justice, a private non-profit organization, was the grantee for this demonstration. The UMTA demonstration funds, along with other grants and contracts, were used to support the EASYRIDE project.

UMTA has overall responsibility for the SMD Program itself, while the Transportation Systems Center (TSC) of the U.S. Department of Transportation (DOT) has overall responsibility for the evaluation of all SMD projects. Actual evaluation activities have been performed under contract to TSC. In this case, there were two evaluation contractors. ARI, Ltd. was the original evaluator and prepared the initial evaluation report (issued in November 1979). When the demonstration grant was extended beyond the original two-year period, Multisystems was assigned responsibility for monitoring the remainder of the project and preparing a report covering this period.* Multisystems interacted directly with EASYRIDE and Vera staff in undertaking the evaluation effort.

1.4 EVALUATION ISSUES

In light of the fact that a comprehensive evaluation of the EASYRIDE demonstration has already been undertaken, the follow-up evaluation effort has not duplicated detailed analyses of the user impact and level of service issues associated with the project. Instead, this effort has focused on documenting service delivery and economic impacts of the various changes and project developments which have occurred since the time of the initial evaluation. The major issues addressed in this report can be summarized as follows:

- Nature of Overall Service Changes - EASYRIDE operations reports and financial records were used to assess the nature of changes in such measures as ridership, trip types, trip purposes, productivity, unit operating costs, and amount of service provided during the evaluation period.

Included is an examination of the impact of a change in the fares charged for trips (instituted in March 1982). In addition, the changes in funding/revenue sources during this period are documented, especially within the context of EASYRIDE's efforts to secure ongoing (i.e., non-demonstration) funding which would enable it to continue following the end of the demonstration funding.

- Impact of Lower West Side Expansion - In addition to examining the overall system changes, the evaluation effort has involved documenting the expansion effort (i.e., the planning and implementation procedures) and assessing the impact of the expansion on the overall operation: how has the expansion affected EASYRIDE's productivity and operating cost ratios?
- Impacts of Technological Improvements - The evaluation effort has also examined the nature and impact of EASYRIDE's major technological improvements--the installation of two-way radios in the vehicles and the computerization of scheduling, billing, and reporting procedures. The timing of implementation and procedures/funds used in procuring/developing the improvements are documented, and their impact on EASYRIDE's

* ARI's evaluation contract expired following their initial evaluation of EASYRIDE; this precluded their assuming responsibility for the follow-up evaluation.

overall operation is assessed (i.e., how these improvements have affected productivity and operating costs).

In assessing the above issues, Multisystems has relied predominantly on EASYRIDE's operations and financial reports, as well as additional supporting documents, such as grant applications. These sources have been supplemented through discussions/correspondence with EASYRIDE and Vera staff, as well as interviews with several other persons who have dealt with EASYRIDE in some way (e.g., city officials and consumer group representatives). No other specific data collection activities were undertaken as part of this evaluation effort; extensive data collection was included in the initial evaluation, and it was decided (by UMTA and TSC) not to repeat these activities.

The remainder of this report is organized as follows: Chapter 2 describes the demonstration setting; Chapter 3 describes the nature of EASYRIDE's operations and discusses the project's development/evolution during the evaluation period; Chapter 4 examines travel behavior characteristics; Chapter 5 assesses economic and productivity issues; and Chapter 6 presents conclusions and transferability of the project's results.

2. DEMONSTRATION SETTING

This chapter briefly describes the site characteristics and the existing transportation services found within the demonstration area--the Lower East and West Sides of Manhattan.*

2.1 GEOGRAPHIC AND DEMOGRAPHIC CHARACTERISTICS

During the evaluation period, EASYRIDE service was available to any Lower Manhattan resident confined to a wheelchair, reliant on some other type of mobility aid, or visually impaired; requests from persons who did not fall into this category were judged on a case-by-case basis.** The service area (i.e., for trip origins--until March 1982, users could travel outside of Lower Manhattan) was bounded by the Hudson River on the west, the East River in the east and south, and 34th Street to the north (see Figure 2-1).

As of 1980, the total population of the EASYRIDE service area was approximately 304,000 (this represents a drop of 6.5% from 1970); roughly 60% of this population resides in the Lower

* The characteristics of the Lower East Side are described in considerable detail in the ARI evaluation report. The information contained in this chapter is derived from the ARI report, the application of the City of New York for UMTA Section 5 funds (for EASYRIDE), and Vera Institute's application for SMD funds for the Lower West Side.

** It should be noted that, prior to May 1978, any target area resident over the age of 60 or over 18 with a handicap was eligible for service. Eligibility was subsequently restricted to the handicapped in an effort to more efficiently meet EASYRIDE's goal of serving those persons least able to travel by other means.

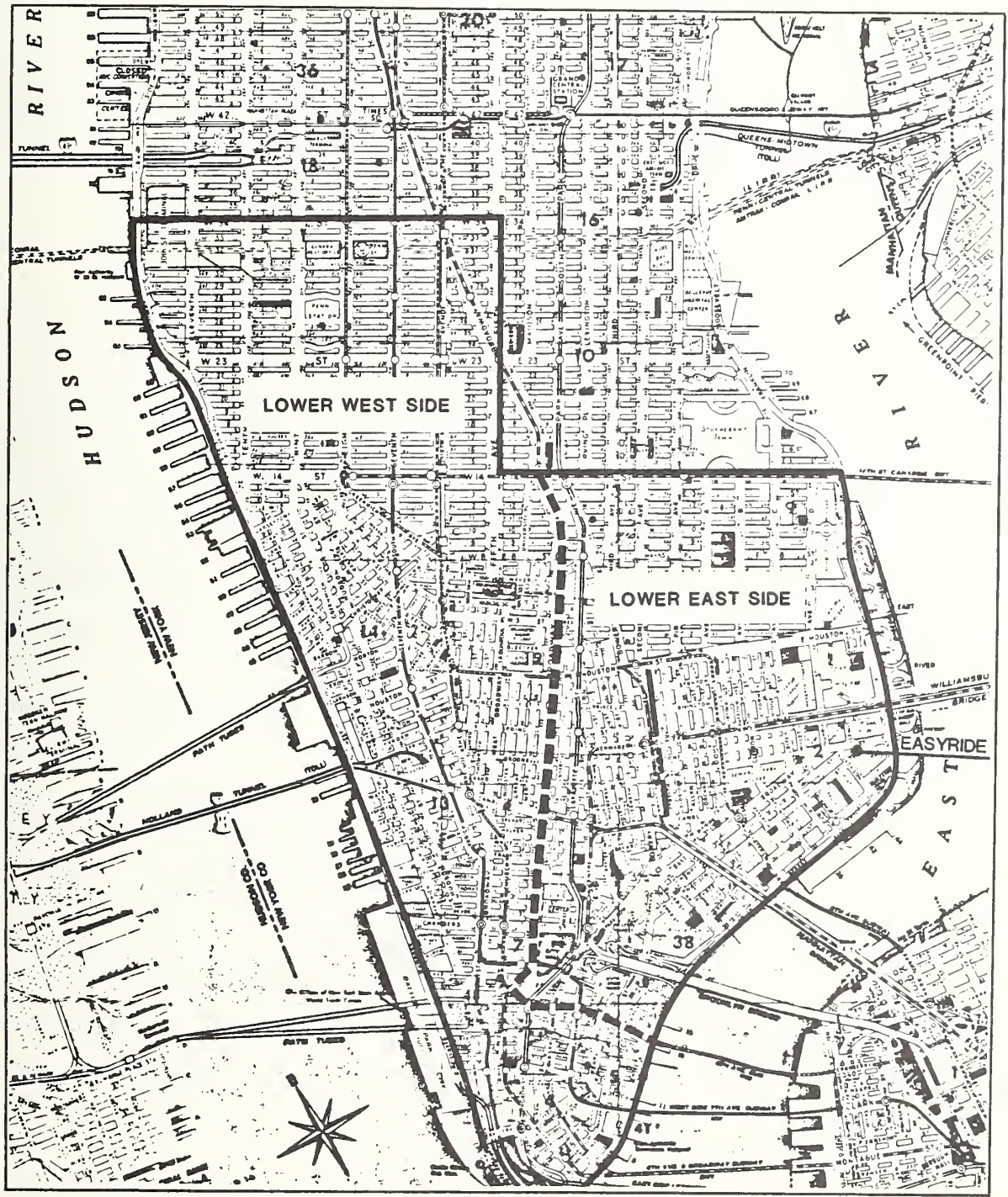


FIGURE 2-1. EASYRIDE SERVICE CATCHMENT AREA

East Side. The population density for the overall service area is on the order of 80,000 persons per square mile; the Lower East Side has a density of approximately 94,000 and the Lower West Side 65,000. There is a large number of ethnic groups within the area, and many of the area's residents do not use English as their primary language. Among the prominent ethnic backgrounds are Jewish, Italian, Slavic, Hispanic, African, and Oriental. The service area is also marked by a very low median income (\$6,611 in 1970, as compared to \$10,870 for the entire New York SMSA).

2.2 EXISTING TRANSPORTATION SERVICES

2.2.1 Public Transit

The Metropolitan Transit Authority (MTA) operates several subway lines and extensive bus service within Lower Manhattan. Some buses are equipped with wheelchair lifts.* However, a survey conducted in May 1982 (by the City Comptroller's office) revealed significant problems with the lifts and complaints over the level of service: the lifts were found to malfunction frequently, and most persons attempting to use the lift service reported very long waits for lift-equipped vehicles; in addition, there were a number of cases in which mechanisms designed to secure wheelchairs on the bus did not function properly.** If the lift-equipped service were to improve substantially, there could be some impact on the demand for EASYRIDE; however, considering that EASYRIDE offers door-to-door service, the impact should not be great. At the time of this report, the MTA fare was \$0.75, with half fare for the elderly and handicapped during all off-peak hours; the one-way fare for EASYRIDE (as of March 1982) was \$1 for all demand-responsive trips, \$0.25 for nutrition trips, and \$2.50 for all non-nutrition standing order trips.

* Approximately 24% of the MTA's fleet is lift-equipped; specific figures for those vehicles operating in Lower Manhattan were not available.

** The results of the survey were reported in the New York Times (7/26/82).

The subways also present significant barriers for use by the handicapped. As of this report, the entire system (459 stations) was equipped with only 23 passenger elevators (at 8 of the deepest stations) and 102 escalators (at 39 additional stations). Furthermore, while the elevators could accommodate wheelchairs, getting to the elevators required negotiating at least some steps at each of the 8 stations; more important for EASYRIDE users, though, is the fact that none of these "accessible" stations are located within the EASYRIDE catchment area.

2.2.2 Taxi Services

There are approximately 11,000 metered, medallioned taxi cabs in New York City, as well as approximately 15,000 private livery vehicles (licensed by the State rather than the City) and upwards of 30,000 illegally-operating "gypsy" cabs. All of the medallion cabs are available for street hailing, while about 2% of them belong to "radio" fleets and are thus available by telephone request. Livery vehicles are available only via telephone request or through requests made on the premises of the operator. Gypsy cabs are either taxis operating without official licenses or livery vehicles accepting street hails.

Taxi service is available in the EASYRIDE service area primarily through telephone requests. The Lower East Side in particular is not well-served by cruising cabs. The service area is marked by a rather high crime rate, and many taxi drivers are apparently reluctant to drive on certain streets for fear of being assaulted.

The fares for medallion taxi service are \$1 for the first 1/9 mile and \$0.10 for each additional 1/9 mile. Thus, a 2-mile trip, which is roughly the average taxi trip length in Manhattan, would cost \$2.70 (excluding tip). Livery service fares are flat rate in nature, although these rates vary widely.

2.2.3 Ambulette Service

Ambulettes, also known as invalid coaches, are operated by private companies and provide door-through-door service for

those persons unable to use taxis, buses, or the subway. At least 100 companies provide ambulette service within New York City, although the actual number cannot be determined since many of the operators are unlicensed. The bulk of the ambulette trips are reimbursed through the Medicaid program; as of this report, Medicaid was paying operators \$18.75 per trip. EASYRIDE, as a Medicaid vendor, is essentially in direct competition with the ambulette operators. However, at the time of this assessment, no figures were available on the number of trips EASYRIDE had diverted (if any) from ambulette operators.

2.3 EXOGENOUS FACTORS

A variety of exogenous factors can exert an influence on the results of a demonstration; these include both expected and unforeseen events. The anticipated factors affecting EASYRIDE during the evaluation period included seasonal weather patterns and the annual occurrence of the Jewish High Holidays (in September or October). The unexpected factors occurring during the evaluation period included the New York City transit strike in April 1980, various vehicle mechanical problems (with EASYRIDE's vehicles and lifts), and unforeseen changes in funding programs (e.g., the loss of CETA funding in June 1981). The impacts of the various exogenous factors are discussed in the following chapters.

3. PROJECT DEVELOPMENT AND OPERATIONS

This chapter describes EASYRIDE's operational characteristics and reviews the development of the project since the time of the initial project evaluation.

3.1 OVERVIEW

As of the end of the demonstration (April 1982), EASYRIDE was operating with a fleet of 18 lift-equipped vehicles* and was providing three types of trips: demand-responsive, standing order, and group. At that time, 1659 persons were registered for the service, with registration generally limited to those persons requiring the use of a mobility aid (i.e., wheelchair, walker, crutch, or cane); persons not falling into that category but in need of specialized service could register if given approval by EASYRIDE's project manager. Twenty-two percent of the registrants were confined to wheelchairs. This section describes EASYRIDE's operating characteristics during the evaluation period.

3.2 INSTITUTIONAL SETTING AND FUNDING SOURCES

EASYRIDE was essentially a self-contained project operating under the auspices of the Vera Institute of Justice.** EASYRIDE had its own staff, vehicles, and facilities (see Sec-

* There were 11 vehicles at the start of the evaluation period (July 1979).

** As of this writing (July 1983), EASYRIDE continued to provide service at essentially the same ridership level (approximately 6000 rides per month) as during the final months of the demonstration. The past tense as used here refers to the demonstration period.

tions 3.5 and 3.6), and generated its own operations reports, while Vera maintained overall responsibility for service monitoring, legal support and personnel (i.e., payroll), and generated project financial reports. In addition, EASYRIDE was monitored and assisted by a Consumer Advisory Board. This group, made up of representatives of neighborhood agencies, local officials, and service users, served in a policy advisory capacity. Its purpose was twofold: to act as a "watchdog" in insuring the quality and responsiveness of the service to community needs; and to act as an advocate for EASYRIDE through engaging in community outreach and fund-raising efforts.

During the evaluation period, EASYRIDE was operated through a variety of grants, service contracts, and contributions, as well as revenue from passenger fares. By combining these funding sources, EASYRIDE was able to offer a multiple purpose service (i.e., with only minimal trip purpose restrictions) which did not have to be limited to particular agencies or persons eligible for particular funding programs.

During the evaluation period the major funding sources were as follows:

- UMTA Section 6 (SMD) - This grant was originally awarded in June 1977 for a two-year period. It was subsequently extended for an additional two years beginning in June 1979, and then for an additional year in June 1981. The total amount of the extension (1979-1982) was approximately \$400,600. The second extension was designated for use in the West Side expansion.
- UMTA Section 5 (Transit Assistance) - The New York City Department of Transportation allotted a portion of its Section 5 funds for 1980-1982 to Vera for use in funding EASYRIDE. The total for July 1980 through June 1982 was approximately \$333,000.
- Medicare (Title XVIII of the Social Security Act) - Between July 1977 and January 1981, EASYRIDE was reimbursed (through the Medicare Program) for trips to Medicare beneficiaries.* The total amount received was approximately \$556,700.

* This required that EASYRIDE obtain a waiver to allow Medicare beneficiaries to receive transportation benefits as part of the services provided under the Medicare program. This waiver, the first of its kind, is discussed in detail in the ARI final report.

- Medicaid (Title XIX of the Social Security Act) - In November 1979 EASYRIDE was approved as a Medicaid vendor, enabling it to be reimbursed for medical trips eligible under Medicaid. Between then and July 1982, EASYRIDE received a total of approximately \$168,000.
- New York State Office of Vocational Rehabilitation (OVR) - During the evaluation period, EASYRIDE had a contract with the OVR to transport clients to employment training sites. During this period the total amount received under the contract was approximately \$44,400.
- New York City Department for the Aging (DFTA) - Beginning in November 1980, the DFTA provided funds (through the East and West Side Interagency Councils for the Aging) to EASYRIDE to cover a variety of trip purposes. The total amount received by EASYRIDE during this period was approximately \$316,800.
- Comprehensive Employment Training Act (CETA) - CETA funds were used to help cover EASYRIDE staff positions until June 1981, when CETA funding was frozen. During the evaluation period EASYRIDE received a total of \$120,200.
- Community Development Block Grant (CDBG) Program - EASYRIDE was allotted CDBG funds from the City in September 1980. The total amount received during the evaluation period was approximately \$185,100.

In addition to these sources, EASYRIDE received revenue through a number of smaller contracts, grants, and private contributions, as well as through the collection of fares. The breakdown of EASYRIDE's funding during the evaluation period is discussed further in Section 5.3.

3.3 SERVICE PROVIDED

During the evaluation period EASYRIDE provided three types of specialized transportation service to its users; these services were as follows:

- Standing Orders - Service provided to individual users who make trips on a specified recurring basis (daily or weekly).
- Demand-Responsive Service - Service provided to individual users who make trip reservations at least 48 hours in advance of the desired travel time.

- Group Service - Charter service provided to a group of users traveling to a single destination. Group service is sponsored by local human service agencies.

Of the trips provided during the evaluation period,* roughly 78.2% were standing orders, 21.5% were demand-responsive, and the remaining 0.3% were group trips. The distribution of trip types is summarized in Tables 3-1 and 3-2 and depicted graphically in Figure 3-1. As shown in Figure 3-1 and indicated in the tables, the relative distribution of trip types changed during the evaluation period (i.e., the number of demand-responsive trips declined, while standing orders rose; the number of group trips remained fairly steady). This change essentially reflects growth in nutrition trips (see Chapter 4 for a discussion of trip purposes), which are generally standing orders.

The standing orders represented regular trips taken to work, hospitals and, primarily, nutrition sites. The fare for standing order trips (other than nutrition trips) was \$1.50 per one-way trip before February 1982, and \$2.50 per one-way trip after that time; the fare for nutrition trips was \$0.25 per trip throughout the case study period, although, beginning in March 1982, everyone traveling to a nutrition site was charged the full round trip fare (\$0.50) at the time of the trip to the site.

Demand-responsive trips were made for a variety of purposes (medical, recreational, therapy, and others). The fare for demand-responsive trips was \$0.35 until February 1982, at which point it was raised to \$1.

Group trips were organized by various human service agencies, settlement houses, churches/synagogues, and other organizations. The sponsoring organizations were originally billed at a rate of \$15 per vehicle for trips within Manhattan, \$25 per vehicle for trips to the Bronx, Brooklyn, or Queens,

* This breakdown actually reflects only those trips made after August 1980; prior to the implementation of EASYRIDE's computer in September 1980, trip types were not accurately reported and thus are not included here.

TABLE 3-1. TRIP TYPES

Month/Year	Number of Trips by Type*		
	Demand-Responsive	Standing Order	Group
September 1980**	1,808	3,431	0
October	2,132	4,017	5
November	1,697	3,336	14
December	1,861	4,285	55
Subtotal	7,498	15,069	74
January 1981	2,034	4,750	24
February	1,677	4,788	20
March	1,394	5,494	55
April	1,399	5,154	20
May	1,256	5,179	39
June	1,784	5,410	21
July	1,384	5,388	18
August	1,449	5,282	18
September	1,310	4,998	33
October	1,143	5,536	4
November	1,040	5,455	8
December	989	6,373	22
Subtotal	16,859	63,807	282
January 1982	740	5,862	14
February	838	5,962	24
March	1,124	6,565	17
April	1,006	5,054	20
Subtotal	3,708	23,443	75
TOTAL	28,065 (21.5%)	102,319 (78.2%)	431 (0.3%)

* includes no-shows

** Trip types were not accurately reported prior to the implementation of EASYRIDE's computer facilities, and therefore are not included here.

TABLE 3-2. AVERAGE MONTHLY RIDERSHIP BY TRIP TYPE

Year	Number of Trips by Type (Relative %)*		
	Demand-Responsive	Standing Order	Group
1980**	1875 (33%)	3767 (65%)	123 (2%)
1981	1405 (21%)	5317 (79%)	24 (0%)
1982***	921 (14%)	5861 (86%)	19 (0%)

* includes no-shows (the breakdown of trips by type was available only with no-shows)

** Beginning in September; trips types were not accurately reported prior to the implementation of EASYRIDE's computer facilities.

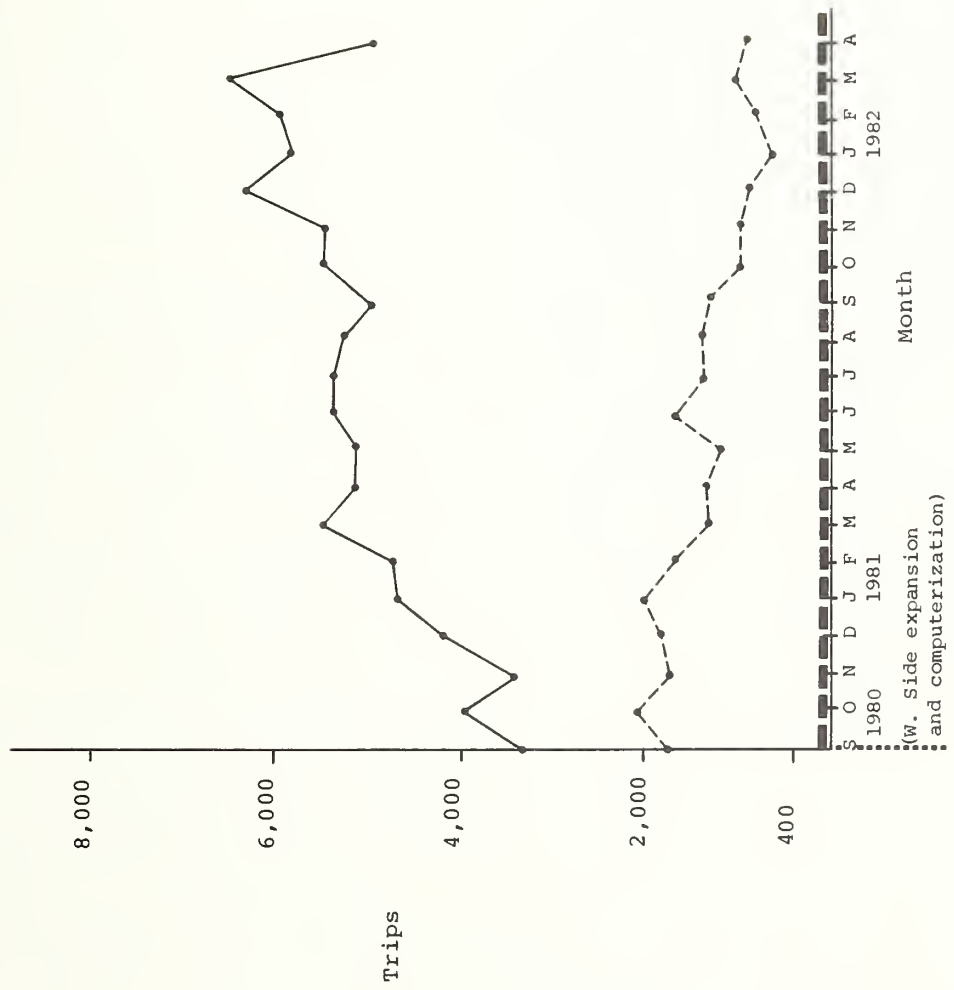
*** through April 1982

\$35 per vehicle for trips to Staten Island, and \$50 per vehicle for trips outside of New York City (limited to destinations that are within 40 miles of the City). However, as of March 1982, the per vehicle group trip rates were increased to \$25 for trips within lower Manhattan (i.e., below 96th Street), \$45 for trips to the Bronx, Brooklyn, or Queens, \$50 for trips to Staten Island, and \$100 for trips outside of New York City.

In addition to the regular services described above, EASYRIDE provided specialized service under a special contract with the Democratic National Convention held in New York City in August 1980. EASYRIDE carried 30 disabled delegates to and from the Convention site. EASYRIDE provided this service for a total of \$3850 (\$150 under the authorized budget).

FIGURE 3-1. TRIP TYPES

— Standing Order
 - - - Demand-Responsive
 ■ ■ ■ Group



Until mid-February 1982, EASYRIDE transported users virtually anywhere within Manhattan.* At that time, however, EASYRIDE decided to discontinue providing service above 40th Street (in Manhattan) to all non-wheelchair users.** All persons not confined to wheelchairs desiring to travel "uptown" would be dropped off at an MTA bus stop near 40th Street. The reasoning behind this change was simply to reduce the number of long distance trips, and thereby improve the efficiency of the overall service (service productivity and economic issues are addressed in Chapter 5). This change in itself did not greatly affect overall system travel patterns, however, since nearly 90% of both origins and destinations were in the Lower East and West Sides.

During the evaluation period, EASYRIDE provided service Monday through Friday between the hours of 7:30 a.m. and 6 p.m.; the exact time of the first pickup and the last dropoff depended on the timing of particular trips each day.

3.4 OPERATIONAL AND RECORD-KEEPING STRUCTURE AND PROCEDURES***

During the first 3 years of the EASYRIDE demonstration, all operational and record-keeping procedures (i.e., user registration, reservations, scheduling and billing) were handled on a manual basis. However, due to the complexity of these procedures, caused by the multitude of funding sources and the expansion of service into the West Side, EASYRIDE decided to computerize all internal operational processes. Hence, EASYRIDE and Vera staff, working with a consultant, developed a comprehensive software package to assist in registration, reservations, billing, scheduling, and reporting procedures. All hardware was in place by July 1980, and by

* As explained above, group charter trips could be arranged for destinations outside of Manhattan.

** This decision was subsequently modified (following the end of the demonstration), however, to shift this boundary to 125th Street.

*** The information in Section 3.4 is based primarily on a report prepared by EASYRIDE/Vera Institute entitled "EASYRIDE - Management Information System" (March 1981).

August each call-taker had his/her own terminal; the computerized system was fully operational by October 1980. The specific operational and record-keeping procedures are described below.*

3.4.1 Registration.

EASYRIDE's registration procedure is designed to determine eligibility for service as well as to establish a background file for each person deemed eligible. Registration is typically done by telephone: a reservation clerk determines whether or not each applicant is eligible, based on the nature of his/her disability and the area of residence. The clerk then prepares a file on each person judged eligible; this file includes an identification number, the nature of the person's disability, socioeconomic information, and Medicaid/Medicare status.

Until the registration procedure was automated, all registrations were recorded on index cards; when a registrant called in to request service, his/her card would be retrieved from the file box. New registrations were collected, coded and filed once a week. Computerization enabled immediate entry and retrieval of files and reduced the incidence of misplaced files; it also allowed for easy updating of registration data. Finally, the computer automatically updates aggregate registration information.

3.4.2 Reservations and Scheduling

Prior to automation, reservations and scheduling were done on a completely manual basis: a caller's registration card was retrieved from the file box; then the appropriate information (background information from the file and information particular to each trip from the caller) was recorded on a trip request form; finally, each trip request was recorded on a master calender (following consultation of the master calender

* Since EASYRIDE was still in operation at the time this report was prepared, the procedures are described in the present tense.

for availability of a vehicle at the requested trip time). One day before the scheduled trip date, the scheduler would take all trip request slips for that day from the files and put together a trip schedule for each driver. The trip schedules were then distributed to the drivers, with copies kept in the EASYRIDE office to facilitate confirmation of the trip reservations (i.e., in most cases, the scheduled user was called the night before the trip).

Computerization considerably increased the speed and accuracy of the reservation and scheduling processes. It eliminated the need for registration cards and with it the opportunity for recording and reporting inaccurate information due to illegible handwriting, misfiling, or duplication. Instead of using cards, information from callers is entered into the computer terminal; certain trip-specific information must be solicited each time a person calls, while other pieces of information will hold true for all--or most--of each user's trips. For instance, unless the reservation clerk indicates otherwise, the computer makes the following "assumptions" concerning each caller's trip request: that the passenger's origin will be the home address listed in the registration file; that the passenger's return trip will begin at the destination point and end at the home address; and that a particular type of vehicle is necessary. If not overridden, this information is automatically printed onto a trip slip.

When a caller's registration file is accessed, the computer indicates, first of all, whether or not the registrant is eligible for service at all, i.e., if a "block" has been placed on his/her file as a result of abuse of the service; EASYRIDE's program manager has the discretion of revoking a user's eligibility following repeated no-shows, jeopardizing the safety of other users, or other abuses. Once the caller is cleared for use of the service, the computer determines whether or not he/she is eligible for the trip purpose requested (e.g., a person eligible for Medicaid but living outside the EASYRIDE catchment area will not be allowed to make an employment trip). The computer then determines whether space is available on the

required type of vehicle at the requested time (i.e., by accessing a "master calendar" of trips already scheduled for that time period). If space is available, the trip request is automatically entered onto the master calendar file.

The above procedure applies to demand-responsive (i.e., non-repeated) trips. For standing order trips, the trip information need be entered only once. The computer then automatically produces reservations for the appropriate days and times, unless a particular standing order is changed for a particular day or time.

As with manual reservations, a trip request is produced for each passenger pick-up. Each individual request is printed out (on gummed paper) the day before the trip. The scheduler arranges the trips in the most logical order and geographical distribution, and makes up a schedule for each driver by affixing the trip request forms to a driver log. The computer assists in the scheduling process by sorting each day's trips by the following criteria: appointment time, pick-up zone, drop-off zone, and type of vehicle required; the product of this sorting is a sequential trip list, which the scheduler employs in making up the driver trip logs.

The scheduling of return trips is more complicated than the scheduling of original trips. The return trip is arranged at the same time that the original trip is scheduled wherever possible. When this is not possible (i.e., when the return pick-up time is unknown at the time of the trip request), the return is classified as a "will call"; the passenger notifies EASYRIDE when he/she is ready to be picked up, and the first available vehicle is sent to pick him/her up. However, the return times can often be estimated, allowing their incorporation in the reservation process.

3.4.3 Billing

One of EASYRIDE's objectives was integration of multiple funding sources. However, this integration produced a billing and accounting system that was, by nature, quite complex; this

complexity, in fact, inhibited EASYRIDE's capability to expand its number of grants and contracts. In this respect, automation was crucial to EASYRIDE's continued success, permitting the accommodation of a wide variety of billing requirements and procedures.

The computerized billing system is automatically activated when a trip reservation is entered into a terminal. The computer then identifies the proper payment source and determines the charge for the trip (from a pre-established rate schedule); as of the end of the case study period, EASYRIDE billed trips on an average cost per trip basis (the rates were adjusted on a quarterly basis).

The driver trip log serves as the basis for billing. At the end of each day the driver turns in his/her trip log, with the pick-up and drop-off times noted for each passenger; passenger no-shows are billed as one-way trips, although after two consecutive no-shows a standing order for that registrant is cancelled. The completed trip log information is entered into the computer, which can then produce invoice information* and various types of trip reports (i.e., to satisfy the accounting requirements of the different funding sources). Each day EASYRIDE issues a report summarizing registration changes. Two reports are produced on a weekly basis: (1) agencies which have funded trips, and (2) a summary of trips. Finally a number of reports are issued on a monthly basis: (1) operations and registration statistics; (2) registrants (alphabetically); (3) a roster of unsubsidized trips; (4) a roster of registrants by billing source; (5) a roster of subsidized trips; and (6) a list of registrants who have cancelled trips, with the frequency for each.

In summary, automation of the operational and record-keeping procedures produced significant changes in EASYRIDE's operational capabilities, primarily through improving the efficiency and accuracy of each individual procedure. The time

* The actual invoices are produced manually.

required to perform each task has been reduced, the nature of information storage and retrieval has been improved, and the potential for error has been reduced. The impacts of automation on operating costs and system productivity are addressed in Chapter 5.

3.5 STAFFING

As of the end of the demonstration, the operations staff of EASYRIDE included a project manager, operations manager, scheduling assistant, office manager, administrative assistant, two reservation clerks, ten drivers (including a driver/supervisor), and a mechanic. In addition, Vera's associate director participated in the administration of EASY-RIDE.

During the evaluation period, the staff size varied somewhat due to changes in contracts (e.g., CETA) and service areas (i.e., West Side expansion). The staff changes over time are summarized in Table 3-3. In addition to full-time staff, EASY-RIDE had in its employ various summer interns and other temporary help.

A major change in staff size occurred in November-December 1980, when six drivers and an additional reservations clerk were hired (with CETA funds) to handle the West Side expansion.* The expanded staff size was rather short-lived, however, as the CETA funding of seven employees was eliminated the following June. Two of these slots were covered through other sources; hence EASYRIDE experienced a net loss of five drivers at that time. The only other significant staff change during the evaluation period was the reduction in February 1982 to two reservation clerks.**

* The implementation of the full computerized system enabled EASYRIDE to significantly expand its service while adding only one non-driving staff member.

** Following the close of the demonstration period, EASYRIDE faced the prospect of having to further reduce its staff due to budget limitations.

TABLE 3-3. EASYRIDE STAFF AND FLEET CHANGES

Date	Vehicles	Staff		
		Drivers	Clerks	Others (full time)*
June 1979	11	10	2	6
January 1980	11	10	2	6
June 1980	18	10	2	6
January 1981	18	16	3	6
June 1981	18	11	3	6
January 1982	17	9-11	2	6
June 1982	18	10	2	6

* Includes project manager, operations manager, scheduler, administrative assistant, assistant office manager, and mechanic.

3.6 VEHICLES AND FACILITIES

During the evaluation period, EASYRIDE's fleet varied in size from 11 to 18 vehicles (see Table 3-3). As of the end of the demonstration, there were 18 vans in operation. All of these vehicles were purchased with 16(b)(2) grants, with the 20% local matching funds coming from various sources: the project's original 10 vehicles** were received in early 1977, while the other major vehicle order (7) was received in July 1980. The latter vehicles were made by the Thomas Company (based in South Carolina) according to EASYRIDE's modifications of New York State Department of Transportation (NYDOT) 16(b)(2) specifications. Six of these vehicles are lift-equipped and can each accommodate six ambulatory passengers and three wheelchair users.

** The original fleet, all made by Grumman, included five lift-equipped vehicles with capacity for three wheelchair users and six ambulatory passengers, and five 15-passenger modified step vans.

In ordering the latter seven vehicles, EASYRIDE convinced NYDOT to revise its procedures for ordering 16(b)(2) vehicles. Previously, NYDOT had dictated the type of vehicles to be ordered; using its standard specifications and purchase guidelines, NYDOT was planning to order five vehicles for EASYRIDE. However, by modifying some of the specifications and locating a supplier on its own, EASYRIDE was able to procure seven vehicles with the funds NYDOT had allocated to buy five.

Unfortunately, EASYRIDE subsequently encountered a number of problems with the vehicles. Several of the vehicles were plagued by significant mechanical difficulties--with both basic operation and the operation of wheelchair lifts.* These problems were exacerbated by difficulties with the vehicle warranties (i.e., finding authorized warranty repair shops). EASYRIDE's solution to this problem was to have itself authorized by the manufacturer to do its own warranty repairs. In this connection, EASYRIDE hired a full-time mechanic (it had previously used various part-time mechanics) in August 1980 to maintain its vehicles; in addition to repairing the new vehicles, this mechanic totally "rejuvenated" the older vehicles and initiated a comprehensive preventive maintenance program. As of the end of the demonstration, the vehicles were housed in two garages. One of these, located at 62 East 1st Street, is owned by EASYRIDE, while the other, located at 235 Cherry Street, is rented from the City. Both of these garages are located within 10 blocks of the EASYRIDE office.

As of May 1980, EASYRIDE's vehicles were equipped with two-way mobile radios connected to a base station in EASYRIDE's office. These radios, purchased through private contributions, significantly upgraded EASYRIDE's dispatching and scheduling flexibility by allowing for the transmission of up-to-date pick-up information and notification of last-minute cancellations. This would seem to have reduced deadheading time to

* However, the modifications which had been requested by EASYRIDE related to the placement of seats and other interior features, and not to mechanical features. EASYRIDE encountered no problems with those features for which the specifications had been changed.

some extent, although the actual impact of the radios on dead-heading time was not measured as part of this evaluation.

In terms of office facilities, EASYRIDE's central operations are conducted at an office at 551 Grand Street. This office, located in the Lower East Side, was first occupied by EASYRIDE in September 1978 and was still in use as of the end of the demonstration.

3.7 PROJECT MARKETING AND EXPANSION

During the evaluation period, EASYRIDE's marketing efforts were concentrated on attempts to expand its funding base so as to allow for: (1) expansion of its service area; and (2) establishment of a permanent service (i.e., to allow for the continuation of the service following the end of the UMTA demonstration period). These efforts involved working with community organizations (i.e., in the Lower West Side), working with various city organizations in an attempt to develop--and secure a role in--a citywide paratransit system, and attempting to secure additional purchase of service contracts and grants. These efforts are discussed below in terms of how they related to: (1) the West Side expansion; and (2) attempts to establish a permanent system.

3.7.1 West Side Expansion

EASYRIDE considerably expanded its service catchment area in the Fall of 1980, when it began providing service in the Lower West Side. This service, which had originally been proposed 2 years earlier, was jointly developed by EASYRIDE and the Lower West Side Interagency Council for the Aging (IAC). The IAC (a coalition of representatives of different service programs for the elderly) had first approached EASYRIDE in June 1978 about the possibility of providing specialized service for the elderly and disabled residing in the Lower West Side; the IAC's proposal had been ratified by three Lower West Side Community Planning Boards.

EASYRIDE was interested in the proposed expansion, and thus undertook an assessment of its feasibility. Working with the IAC, EASYRIDE defined the population service need and estimated demand within the target area,* established the service catchment area, and determined vehicle and personnel requirements.

Following this assessment, EASYRIDE and the IAC applied in mid-1979 for 16(b)(2) funds to purchase seven vehicles; these funds were awarded in October 1979, and the vehicles were eventually delivered in July 1980 (see Section 3.6). Along with the 16(b)(2) grant, EASYRIDE applied for funds from the New York City Department of Employment (from the CETA program), the City Department for the Aging (DFTA), and the City Planning Department. Finally, EASYRIDE applied for additional UMTA SMD funding (to be used exclusively for service in the West Side). All of these proposals were accepted, although the SMD grant was authorized only following confirmation of a commitment from the City Administration to provide funds. The DFTA funding consisted of the Lower West Side area's normal entitlement, while the City Planning Department provided funds through the Community Development Program.

Once funding was secured, EASYRIDE (through the IAC) began the process of identifying and registering eligible area residents. By the time the service was scheduled to start (August 1980), 270 West Side residents had been registered; by the time full service actually started (November 1980), the registration list had grown to 442. Registration was up by nearly 100 after the first year of service, but by the end of the demonstration it had dropped below 500. EASYRIDE and the

* It was estimated that, of the approximately 25,000 elderly and disabled residents of the Lower West Side, 3,000 were in need of specialized transportation service.

IAC had hoped to register 2000 persons during the first year, but obviously this estimate was rather too optimistic.*

As indicated above, the Lower West Side service was scheduled to be fully operational in August 1980. At that time, some group and emergency medical trips were provided (189 trips originated in the Lower West Side in August), but, due primarily to the vehicle problems described in Section 3.6, full service to individuals was not offered until the end of November. (The travel behavior issues associated with the West Side expansion are discussed further in Chapter 4; the economic and productivity impacts of the expansion are addressed in Chapter 5.)

3.7.2 Attempts to Establish a Permanent Service

A major concern of any demonstration project is to secure non-demonstration funds which will enable it to become a permanent system (i.e., continue operating following the demonstration period). Since its inception, EASYRIDE derived much of its support from several grants, including the SMD funds. Due to the limited time period of most of these grants, EASYRIDE made concerted efforts to develop third-party purchase of service contracts, as well as to secure additional grants. By securing a variety of contracts and grants, EASYRIDE was able to serve multiple trip purposes in a more cost-effective manner than would have been possible had they been operating under a single funding source (i.e., this enabled greater flexibility in the grouping of rides).

EASYRIDE faced certain barriers in attempting to secure purchase of service contracts. For one thing, EASYRIDE found that many agencies which purchase transportation prefer to contract for service on a much larger scale than the limited serv-

* On the other hand, although the estimate of service need was quite high, the trip rate per registrant proved to be nearly twice the projected rate: EASYRIDE and the IAC had estimated that the 2,000 registrants would take 40,000 trips (i.e., 20 trips per registrant per year); in actuality, the roughly 500 registrants took approximately 18,000 trips during the first year (i.e., 36 trips per registrant per year).

ice area served by EASYRIDE. EASYRIDE circumvented this problem in one instance (Department for the Aging) by working through the Interagency Councils of the Lower East and West Sides. As suggested above, these councils are allotted funds from the DFTA; both decided to commit their allotments to EASYRIDE to provide service in their respective areas.

Along similar lines (i.e., the decentralization of service contracts), EASYRIDE proposed to the Office of Vocational Rehabilitation that, rather than following its prior practice of soliciting multiple bids on each trip to be delivered, it should divide the City into regions; the transportation contract for each region would be awarded to the operator willing to provide trips at the lowest cost. This proposal was accepted, and EASYRIDE was awarded (in August 1979) a contract to serve lower Manhattan.

The other major barrier which EASYRIDE had to overcome in gaining third-party contracts was regulatory in nature. This problem was encountered in EASYRIDE's efforts to become an authorized Medicaid carrier. At issue was whether or not operators not registered as "invalid coaches" could be eligible for reimbursement for Medicaid trips; EASYRIDE's non-profit status essentially precluded designation of its vehicles as invalid coaches. However, the requirements regarding certification of invalid coaches were modified by the New York State Supreme Court in mid-1979; this ruling limited the authority of the State Health Department in carrier certification to emergency vehicles (e.g., ambulances) and gave the State Department of Transportation authority over all other types of paratransit operators. This meant that EASYRIDE could provide Medicaid trips without being certified as an invalid coach operator; EASYRIDE was approved as a Medicaid vendor in September 1979.

Since that time Medicaid has been an important funding source--as of the end of the demonstration, approximately 15% of all trips were covered by the Medicaid program--and represents an ongoing source. For that reason, EASYRIDE was

making efforts to expand its Medicaid business; as the SMD demonstration period was drawing to a close, EASYRIDE was in the process of discussing possible service agreements with four area hospitals. EASYRIDE's ability to generate more of this type of business appeared to be key to enabling the continuation of its service.*

In addition to the purchase of service contracts (and the small contract with the Democratic Party), EASYRIDE sought more general (i.e., non-trip-specific) funding from various city and federal programs. These sources included CETA, UMTA Section 5 (through the City DOT), and the Community Development Program (through the City Planning Department). These general funds were needed so as to maintain EASYRIDE's flexibility in terms of scheduling trips (i.e., avoiding restrictions on trip purposes).

Toward this end, EASYRIDE and Vera Institute staff met (in early 1980) with representatives of several City agencies (i.e., the City Planning Department, the City DOT, and the Department for the Aging) concerning the design of - and EASYRIDE's potential role in - a citywide paratransit system. Such a system was being considered largely as a means of meeting the "interim accessibility" requirements under the U.S. Department of Transportation's Section 504 regulations (i.e., prior to making the transit system fully accessible). A final design was never adopted--and indeed the plan for a citywide system was eventually shelved due to a decision to proceed with fixed route accessibility--but EASYRIDE's participation in the planning process and lobbying effort paid off; the city agreed to provide support for EASYRIDE and eventually committed both Section 5 and CDBG funds.

* Indeed, as of this writing, EASYRIDE had significantly expanded its Medicaid billings and had unofficial agreements with several hospitals.

There were subsequent problems with the allocation of UMTA Section 5 funds, however; the transit union of the Metropolitan Transity Authority of New York held up passage of the funds, citing Section 13(c) of the Urban Mass Transportation Act of 1964.* However, this issue was eventually resolved through discussions between EASYRIDE's project manager and union officials, as the former assured the latter that EASYRIDE would in no way jeopardize the status of transit employees.

EASYRIDE was thus quite successful in its marketing efforts in that it significantly extended its service catchment area and considerably expanded its funding base. Whereas the loss of CETA and SMD demonstration funding significantly reduced EASYRIDE's operating budget, the procurement of the various ongoing contracts and grants enabled the program to remain operational beyond the demonstration period. As this period ended, EASYRIDE was making a renewed effort to develop new sources of revenue; examples included proposals to the New York City Board of Education to provide specialized transportation, and to the Federal Government (through a White House Initiative) to do a planning study on the feasibility of using a network of volunteers in providing work trips to the handicapped.**

At the time of this report, funding for specialized transportation was becoming increasingly tight at all levels of government, a situation which certainly limited EASYRIDE's future prospects; nevertheless, EASYRIDE, through the aggressive marketing efforts of its (and Vera's) management

* Section 13(c) protects transit employees from any "worsening of their position" as a result of the granting of federal assistance to any "non-transit" operator.

** The latter proposal was accepted, with funding provided by grants from UMTA and the IBM Corporation. As of this writing, the project, entitled "Ride-to-Work," was midway through the planning stage. However, the study was not being undertaken by EASYRIDE per se, but rather as a separate entity under the auspices of the Vera Institute.

and the provision of a valuable and apparently needed service, was able to place itself in a very favorable position in terms of competing for any funds which may become available.*

* Interviews with officials in the Mayor's Office of the Handicapped, the City Administrator's Office, and the Lower East and West Side Interagency Councils revealed a unanimously high level of satisfaction with EASYRIDE's performance. All of these officials felt that EASYRIDE was providing a necessary service in an efficient manner, especially considering the problems inherent in providing such a service (i.e., vehicle and lift problems, funding problems, and complexities involved in dealing with the elderly and handicapped). Finally, all of these persons expressed wishes that EASYRIDE could expand to serve more of the city.

4. TRAVEL BEHAVIOR CHARACTERISTICS*

This chapter examines the travel behavior characteristics (i.e., demand levels and travel patterns) of EASYRIDE's users. These characteristics are reviewed for East and West Side users, as well as for the overall system.**

4.1 RIDERSHIP

EASYRIDE's monthly ridership levels are summarized in Tables 4-1 and 4-2 and depicted graphically in Figures 4-1 and 4-2. Table 4-1 presents the monthly system totals, with passenger no-shows and cancellations separated out, and the monthly totals (including no-shows***) broken out by origin and destination, the average number of vehicles in service per day (for each month) is also included. Table 4-2 presents the monthly averages for these same categories, and includes the average figures for Phase I of the demonstration. Figure 4-1 shows the total system demand, with no-shows separated out, while Figure 4-2 shows the total monthly demand (including no-shows) as well as that for each origin zone.

* User characteristics were not addressed as part of this evaluation. For a discussion of user characteristics and impacts and related issues, see the ARI Final Report, Chapters 5 and 6.

** The figures presented in this chapter are derived from data included in EASYRIDE's monthly operations reports.

*** No-shows are included in many of the ridership figures discussed in this chapter because EASYRIDE's monthly operations reports separate out no-shows for the total system demand figures only.

TABLE 4-1. MONTHLY RIDERSHIP

Month/Year	Rides	No-Shows	Canc.	Origin*			Destination*			Avg. No. Vehicles Per Day
				W.Side	E.Side	Other	W.Side	E.Side	Other	
July 1979	3234	364	N/A	--	2972	626	--	2895	704	N/A
Aug	3599	359	N/A	--	3331	627	--	3282	676	N/A
Sept	2789	351	N/A	--	2730	413	--	2652	491	N/A
Oct	3105	417	N/A	--	3085	437	--	2995	527	N/A
Nov	2984	351	N/A	--	2932	403	--	2861	469	N/A
Dec	2864	396	N/A	--	2845	415	--	2765	495	N/A
Mean	3096	373	N/A	--	2983	487	--	2908	560	N/A
Jan 1980	3281	490	N/A	--	3253	518	--	3113	658	N/A
Feb	3222	489	N/A	--	3207	504	--	3136	575	N/A
Mar	3329	498	N/A	--	3306	521	--	3190	637	8.5
Apr	3470	767	N/A	--	3617	620	--	3451	786	8.0
May	4038	857	N/A	--	4157	738	--	4061	834	10.4
June	4126	947	N/A	--	5073	--**	--	5073	--	8.7
July	4172	984	N/A	--	5156	--**	--	5156	--	9.8
Aug	3918	909	N/A	--	4827	--**	--	4827	--	9.8
Sept	4330	1059	N/A	189	4950	250	198	4916	274	10.8
Oct	4975	1249	360	623	4844	757	629	4747	844	12.6
Nov	4504	739	730	581	3965	697	558	3858	827	N/A
Dec	6781	190	1127	1061	4851	1058	1079	4843	1049	N/A
Mean	4179	765	N/A	614	4267	472	616	4198	540	N/A
Jan 1981	7027	117	1219	1385	4843	916	1423	4725	996	N/A
Feb	6334	431	801	1373	4570	822	1435	4437	893	11.1
Mar	7352	361	753	1507	5350	856	1555	5266	892	10.9
Apr	6711	142	1340	1340	4762	751	1368	4656	829	9.8
May	6775	245	929	1311	4996	713	1327	4925	768	9.3
June	7361	148	1314	1689	5121	819	1601	5006	902	10.1
July	6592	450	1060	1508	4869	664	1522	4772	747	9.6
Aug	6818	183	892	1520	4791	690	1517	4692	792	9.2
Sept	6776	27	1072	1647	4488	668	1612	4398	793	8.6
Oct	5950	789	1553	2281	4321	673	1723	4251	765	8.7
Nov	6192	423	951	1670	4377	568	1646	4338	631	10.5
Dec	7232	460	943	1874	5211	607	1850	5148	694	9.5
Mean	6760	315	1069	1592	4808	768	1600	5068	809	9.75
Jan 1982	6540	272	1150	1729	4591	492	1704	4563	545	8.1
Feb	6976	184	957	1824	4864	472	1803	4865	492	9.8
Mar	6480	1464	945	2110	5221	613	2087	5225	632	8.8
Apr	5353	1007	956	1668	4154	538	1663	4130	567	8.5
Mean	6337	732	1002	1833	4708	529	1814	4696	559	8.8
Overall Mean	5093	546	1036	1010	4192	564	1008	4218	617	N/A

*includes no-shows

**ridership breakdown not available for these months

TABLE 4-2. AVERAGE MONTHLY RIDERSHIP

Year	Rides	No-Shows	Canc.	Origin*			Destination*			Avg. No. Vehicles Per Day
				W.Side	E.Side	Other	W.Side	E.Side	Other	
1977**	2864	91	N/A	--	2955	N/A	--	2955	--	N/A***
1978	2942	300	N/A	--	3242	N/A	--	3242	--	N/A***
1979+	3209	381	N/A	--	3590	N/A	--	3590	--	N/A***
1979++	3096	373	N/A	--	2983	487	--	2908	560	N/A
1980	4179	765	N/A	614	4267	472	616	4198	540	N/A
1981	6760	315	1069	1592	4808	768	1600	5068	809	9.75
1982+++	6337	732	1002	1833	4708	529	1814	4696	559	8.80

*includes no-shows

**June-December

***not accurately reported during Phase I

+through May

++beginning in July

+++through April

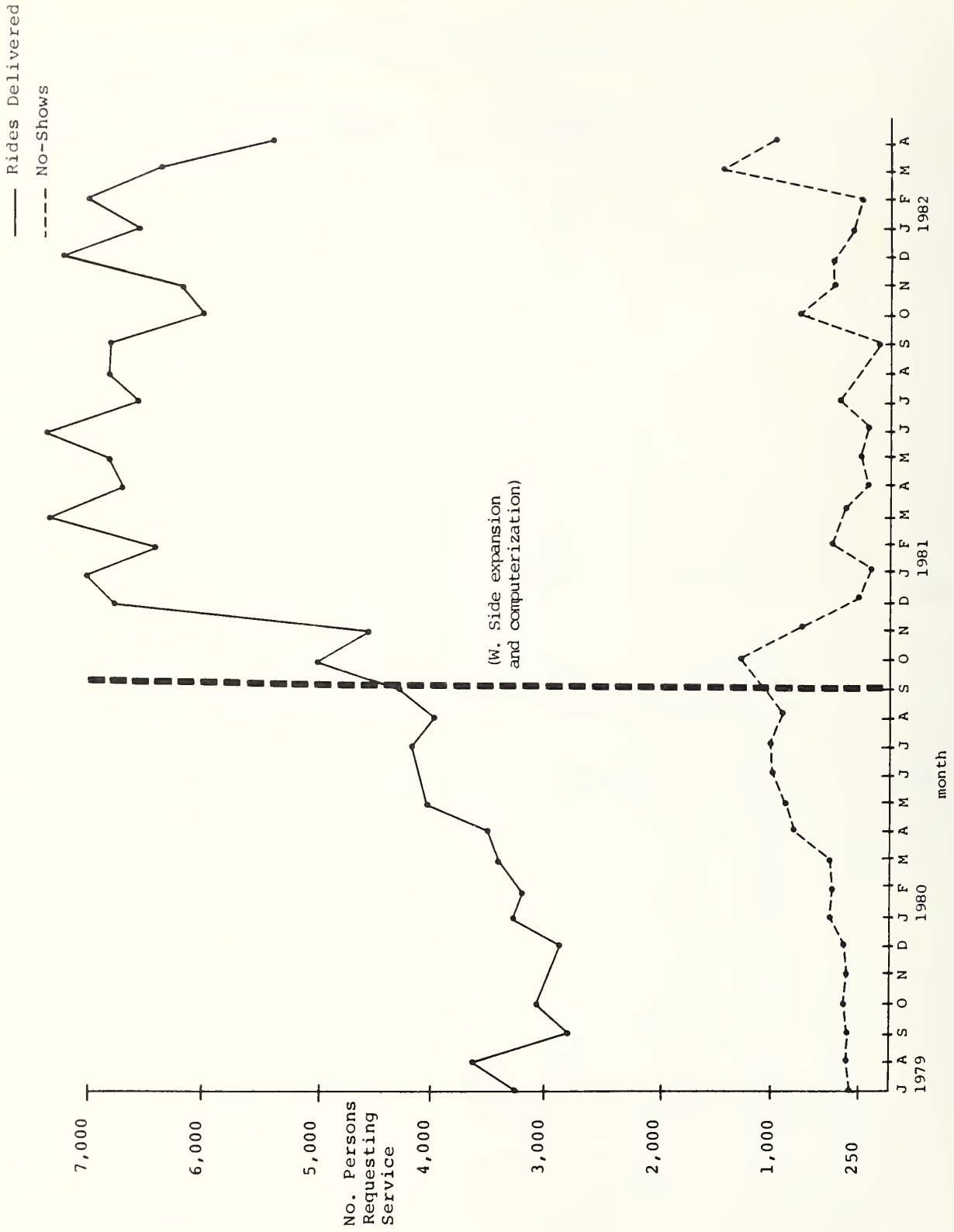


FIGURE 4-1. RIDERS DELIVERED VS. NO-SHOWS

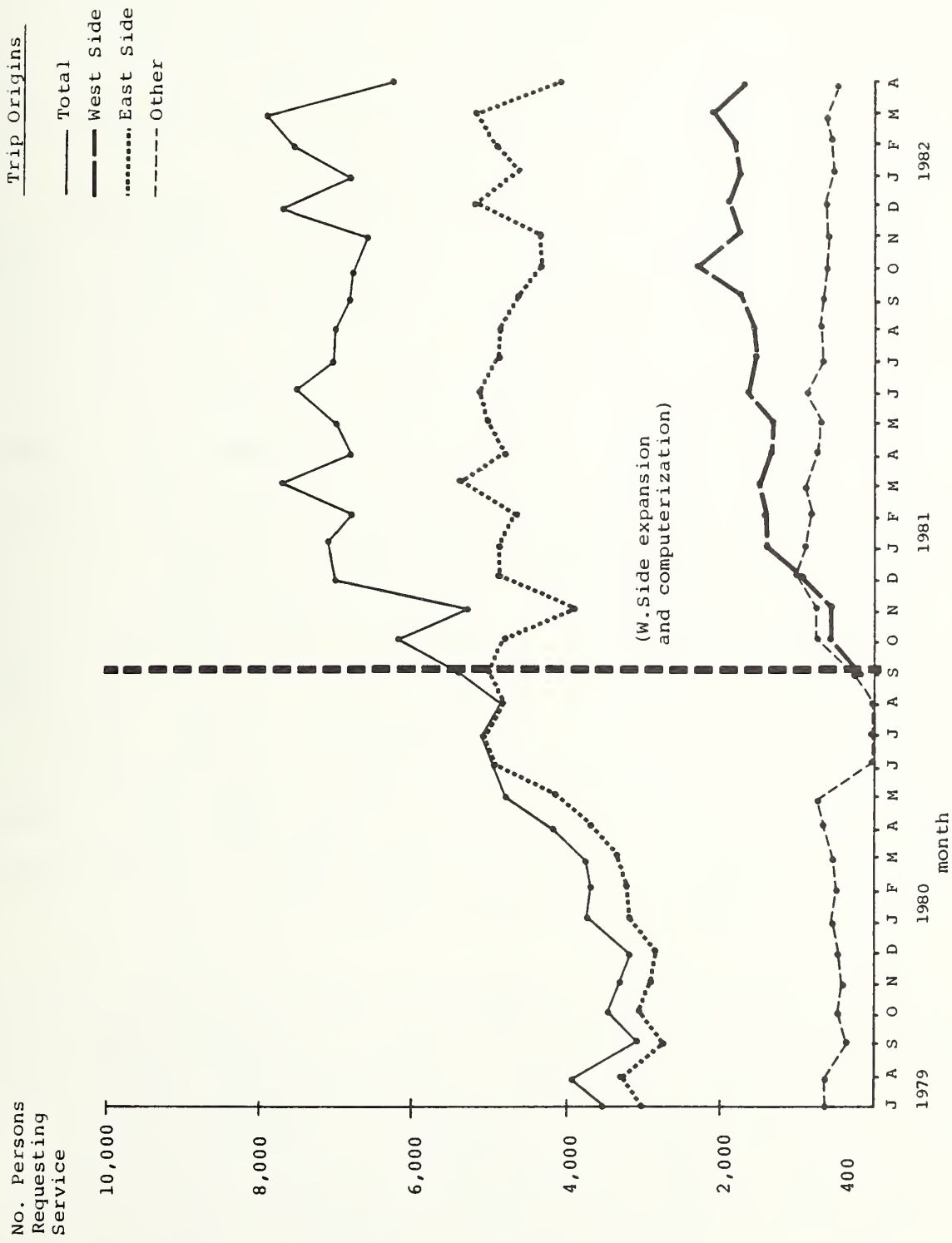


FIGURE 4-2. DEMAND (Including No-Shows)

In terms of changes over the entire demonstration, Table 4-2 shows that average monthly ridership levels remained quite consistent during all of Phase I (i.e., June 1977-June 1979) and through the beginning of Phase II. The monthly totals varied considerably during the two years of Phase I, but on average remained steady, exhibiting little overall growth. A total of 3,293 trips were provided in June 1977 - the first month of the demonstration; in July 1979 - the first month of Phase II - an almost identical number of rides was provided (3,234).

During Phase II, however, EASYRIDE experienced a substantial increase in ridership. As shown in Figure 4-1, the trip volume pattern displayed relatively steady growth (with some variability) until November 1980, at which time the West Side expansion produced a large increase. During 1981, the monthly totals fluctuated significantly, although they remained relatively high throughout the year. Then, ridership dropped precipitously over the final two months of the demonstration (March, April 1982). During the entire Phase II period, EASYRIDE provided an average of 5,704 trips per month.

As shown in Figure 4-2, overall demand for service (i.e., including no-shows) exhibited a similar pattern to that of trips delivered in terms of general growth through 1979 and 1980, a leveling off in 1981, and a decline in 1982. However, the inclusion of no-shows somewhat reduces the slope of the overall curve; as shown in Figure 4-1, the number of no-shows was higher, in general, over the first 16 months of the case study period, although it rose again in 1982.*

* In addition to no-shows, EASYRIDE has been faced with a substantial number of cancellations, in which passengers notify EASYRIDE that they will not be making scheduled trips. As shown in Table 4-1, the number of cancellations reported was quite high (cancellations were not recorded prior to the installation of EASYRIDE's computer in October 1980), in several months actually approaching or equalling the number of West Side trips. Cancellations are not as serious as no-shows since the cancelled reservations can often be filled with other requests; nevertheless, not all cancelled time slots can be filled, and thus they do constitute an operational problem.

In terms of explaining the variability of ridership, several factors came into play over the course of the project. Some of the variation can be attributed simply to differing numbers of days of service in different months: owing to holidays and differing numbers of weekdays from one month to the next, the number of operating days per month varied from 18 to 23. Holidays--especially the Jewish High Holidays*--also tended to produce drops in ridership; the Jewish High Holidays (Rosh Hashannah and Yom Kippur) occur in September and/or October (their dates vary from year to year). As can be seen in Figure 4-1, demand dropped in September 1978, and also dropped substantially in October 1981; ridership rose significantly in September and October 1980, but that period coincided with the West Side expansion.

The other major factors contributing to the variation in ridership included changes in the numbers of drivers and/or vehicles in service, as well as fluctuations in the need for various services (e.g., medical trips, training etc.). As can be seen in Table 4-3 (see Section 4.3), the numbers of trips made for certain purposes--notably nutrition, medical and recreation--fluctuated considerably from month to month. (This is not unexpected in a system serving so many different trip purposes.)

During the final few months of the evaluation period, two other factors were brought into play: the increase in fares (February and March 1982) and the cessation of uptown trips (February 1982). These changes, which are described in Chapter 3, apparently exerted a rather significant impact on ridership. As can be seen in Figure 4-1, the number of rides delivered declined sharply in March and April. Also noteworthy is the fact that the number of no-shows reached its peak for the entire evaluation period in March 1982; this suggests that the above policy changes (regarding fare and allowable destinations) may have influenced various persons' decisions not to

* The majority of EASYRIDE users are Jewish.

use the service, despite having requested a ride. The number of no-shows was lower in April than in March, but still higher than it had been for any month since October 1980.

4.2 GEOGRAPHICAL DISTRIBUTION OF DEMAND*

As shown in the previous tables and figures, the vast majority (75%) of all EASYRIDE trips during the evaluation period originated in the Lower East Side; similarly, 74% of all trips had destinations in the Lower East Side. This is partially due to the fact that West Side service was not introduced until September 1980. However, the East Side remained the major origin and destination even after the West Side service had had sufficient time to build up a steady patronage level (December 1981). By January 1981 - the fifth month of West Side service - trips originating in the West Side had grown to 19% of all trips; this percentage rose somewhat over the remainder of the demonstration, but, as of the end of the demonstration (April 1982), had risen to only 26% of all trips. Over the entire evaluation period, trips originating in the West Side accounted for 14% of all trips, while 15% of all trips had destinations there. A total of 11% of the trips during the evaluation period originated outside of the primary service area (predominantly other parts of Manhattan, but occasionally in the other boroughs); the same percentage of trips had destinations outside of the primary service area.

The difference in the level of demand for the two major service areas is attributable basically to the demographic difference between the areas. As indicated in Chapter 2, the Lower East Side has a considerably larger population - and higher density than the Lower West Side. The fact that service had been provided in the East Side since June 1976 (full operations began a year later) does not seem to be a significant factor in explaining the different levels of demand; demand in the East Side in June 1977 (the first month of the demonstration) was considerably higher (3,292) than the highest West Side figure (2,281).

4.3 TRIP PURPOSE

EASYRIDE reported trips broken into 17 different trip purposes. For this evaluation, these were consolidated into eight categories, as shown in Table 4-3. The number of trips (and relative percentages) within each of these categories is presented in Table 4-3.

As shown in the table, nutrition trips accounted for 54% of all trips during Phase II.* The percentage of nutrition trips increased over the course of the evaluation period, from the Phase I total of 44% to 61% in 1982. The next most common trip purposes were health related: hospital and physician trips each accounted for approximately 10% of all EASYRIDE trips, although relative percentages of both declined during the demonstration.

The high percentage of nutrition trips has important implications for EASYRIDE's productivity and cost-effectiveness, since these trips were generally provided in a shared-ride mode; these implications are discussed in Chapter 5.

4.4 PAYMENT CATEGORIES

Tables 4-4 and 4-5 summarize the distribution of categories of payment for EASYRIDE trips during the evaluation period.** Prior to January 1981, the vast majority of all trips were subject to Medicare reimbursement (83% in 1979 and 73% in 1980); Medicare funding ended at the end of 1980.*** Beginning in 1981, the major source of reimbursement was the

* During Phase I, the percentages were as follows: nutrition - 44%, health-related - 32%, employment/training - 6%, recreation - 11%, other - 9%.

** The distribution (i.e., relative percentages) of categories during Phase I was as follows: Medicare - 68%, Outward Bound - 1%, Medicaid - 1%, group - 6%, subscription - 3%, none - 14%, other - 8%.

*** The Medicare administrators decided to discontinue funding because of the limited extent of EASYRIDE'S service area; they were interested in funding service over a larger area than EASYRIDE was capable of handling.

TABLE 4-3. AVERAGE MONTHLY RIDERSHIP BY TRIP PURPOSE

Month/ Year	No. Trips by Trip Purpose*							
	Nutrition	Hospital	Physician	Employment	Recreation	Therapy	Training	Other
July 1979	1480	451	426	123	451	59	141	466
Aug	1766	436	432	175	444	66	105	534
Sept	1465	332	383	173	99	89	32	570
Oct	1733	335	513	189	36	112	50	554
Nov	1664	399	432	158	52	140	38	452
Dec	1682	342	389	177	70	108	33	459
Mean	1632 (47%)	383 (11%)	429 (12%)	166 (5%)	192 (6%)	96 (3%)	67 (2%)	506 (15%)
Jan 1980	1868	425	521	194	56	150	53	474
Feb	1569	402	404	150	494	140	97	455
March	1640	574	519	189	186	115	112	492
April	1739	524	562	274	332	174	92	632
May	2078	516	721	218	358	184	73	747
June	2254	607	696	215	287	191	44	779
July	2432	594	578	235	171	180	77	889
Aug	2367	448	485	217	122	149	74	965
Sept	2802	534	658	220	133	157	46	839
Oct	3162	583	851	253	95	268	91	921
Nov	2536	604	672	247	186	195	86	717
Dec	3202	692	764	396	796	227	144	750
Mean	2304 (47%)	542 (11%)	619 (13%)	234 (5%)	268 (5%)	178 (4%)	82 (2%)	722 (15%)
Jan 1981	3570	773	834	393	408	233	32	771
Feb	3612	622	755	385	274	206	131	780
March	4149	464	644	435	890	242	106	783
April	3894	438	697	437	353	209	89	736
May	3879	393	673	413	551	201	91	1020
June	4259	498	827	409	369	208	100	839
July	4221	519	620	396	288	197	183	618
Aug	4249	656	561	406	384	123	68	554
Sept	3852	704	601	413	512	119	74	528
Oct	4028	687	530	531	145	116	139	563
Nov	4088	665	516	539	144	142	131	390
Dec	4902	629	555	587	271	149	175	424
Mean	4059 (57%)	587 (8%)	651 (9%)	445 (6%)	382 (5%)	179 (3%)	110 (2%)	667 (9%)
Jan 1982	4452	534	479	450	239	157	188	313
Feb	4582	661	448	421	355	185	141	417
March	4865	841	615	497	285	157	224	460
April	3670	720	435	361	343	199	163	831
Mean	4392 (61%)	677 (9%)	494 (7%)	432 (6%)	306 (4%)	175 (2%)	179 (3%)	505 (7%)
Overall	3050 (54%)	546 (10%)	582 (10%)	319 (6%)	299 (5%)	163 (3%)	101 (2%)	639 (17%)

*includes no-shows

TABLE 4-4. PAYMENT CATEGORY

Month/ Year	No. Trips by Payment Category*									
	Medicare	Medicaid	OVR**	OB***	None	Group	Sub.+	DFTA++	Other	Sec.+++
July 1979	2762	2	0	156	191	405	83	-	0	-
Aug	3151	0	15	57	133	408	194	-	0	-
Sept	2584	0	26	38	95	241	159	-	0	-
Oct	3092	0	35	67	106	30	191	-	1	-
Nov	2886	0	22	70	112	81	164	-	0	-
Dec	2839	14	0	82	162	1	162	-	0	-
Mean	2886	8	16	78	133	194	159	-	0	-
Jan 1980	3244	8	58	66	214	0	181	-	0	-
Feb	2702	27	76	56	630	60	159	-	1	-
March	2981	65	85	58	233	210	194	-	1	-
April	3243	81	68	50	382	123	289	-	3	-
May	3701	92	103	73	466	137	320	-	3	-
June	3976	103	114	72	0	465	266	-	77	-
July	4323	138	94	38	39	270	252	-	4	-
Aug	3829	168	83	31	20	360	237	-	99	-
Sept	4230	291	78	39	289	150	222	-	90	-
Oct	4327	437	144	66	682	79	256	-	233	-
Nov	3526	364	105	70	-	210	240	600	-	128
Dec	3917	413	133	88	-	827	394	1032	-	167
Mean	3667	182	95	59	296	241	251	816	51	148
Jan 1981	0	527	106	58	-	360	396	5399	-	295
Feb	0	567	87	46	-	300	393	5121	-	251
March	2	647	57	26	-	837	445	5406	-	293
April	5	592	64	2	-	300	445	5132	-	313
May	0	649	42	0	-	593	416	5047	-	273
June	0	706	68	0	-	315	382	5768	-	270
July	0	618	122	0	-	272	371	5384	-	275
Aug	0	523	65	0	-	270	377	5499	-	267
Sept	0	556	63	0	-	495	408	5024	-	257
Oct	0	491	119	0	-	60	529	5249	-	291
Nov	0	485	106	0	-	120	569	5057	-	278
Dec	0	481	118	2	-	330	606	5866	-	369
Mean	1	570	85	11	-	354	445	5329	-	286
Jan 1982	0	543	125	0	-	210	428	5257	-	249
Feb	0	683	87	4	-	360	449	5305	-	272
March	0	914	121	2	-	255	548	5746	-	358
April	0	803	91	0	-	300	408	4410	-	348
Mean	0	736	106	2	-	281	458	5180	-	307

* includes no-shows

** Office of Vocational Rehabilitation

*** Outward bound

+ Subscription

++ Department for the Aging

+++ Secondary

TABLE 4-5. AVERAGE MONTHLY RIDERSHIP BY PAYMENT SOURCE

Year	Number of Trips by Payment Category (% Annual Total)*									
	Medicare	Medicaid	OVR	OB	None	Group	Sub.	DFTA	Other	Sec.
1979**	2686 (83%)	8 (0%)	16 (0%)	78 (2%)	133 (4%)	194 (6%)	159 (5%)	-	0 (0%)	-
1980	3667 (73%)	182 (4%)	95 (2%)	59 (1%)	296 (6%)	241 (5%)	251 (5%)	-	51 (1%)	148 (3%)
1981	1 (0%)	570 (8%)	85 (1%)	11 (0%)	-	354 (5%)	445 (6%)	5329 (75%)	-	286 (4%)
1982***	0 (0%)	736 (10%)	106 (1%)	2 (0%)	-	281 (4%)	458 (6%)	5180 (73%)	-	307 (4%)

* includes no-shows
 **beginning in July
 ***through April

City Department for the Aging; 75% of EASYRIDE trips were covered through this source during 1981, and 73% in 1982. Medicaid represented the third most common payment source and was becoming increasingly important as the demonstration ended; during 1982, 10% of the trips were covered by Medicaid, and the percentage rose to nearly 13% in April 1982.

The remaining payment categories listed in Tables 4-4 and 4-5 represent service contracts (Office of Vocational Rehabilitation and Outward Bound--see Chapter 3), self-payment ("none" and "subscription"), and combinations of other funding sources (i.e., "group" and "secondary"* trips). It is noteworthy that EASYRIDE was able to counter the loss of its single major funding source (Medicare) with new sources (e.g., DFTA and UMTA Section 5) and actually expand service.

* "Secondary" trips are those not covered by a particular funding source, but which are paid for out of the "general" funding sources such as the Community Development and UMTA grants.

5. ECONOMICS AND PRODUCTIVITY

This chapter documents and assesses EASYRIDE's economics and productivity during the Phase II evaluation period. In addition to examining overall system changes in cost, productivity, and revenue measures, this chapter addresses the impacts of the Lower West Side expansion and the major technological improvements (computerization and installation of two-way radios). The cost information is divided into two major categories: capital and operating.

5.1 COSTS

5.1.1 Capital Costs

Capital costs represent the funds expended for the purchase of major pieces of equipment and facilities; in EASYRIDE's case, this includes vehicles and radios.* During the evaluation period, EASYRIDE's major capital expenditures were as follows:

- seven vehicles:** one 12-passenger and six lift-equipped (15 passengers with no wheelchair passengers, or 9 passengers including 3 wheelchair passengers)
- 18 two-way radios and a base station

* The computer equipment is leased from the Vera Institute; this cost is included under operating costs. EASYRIDE's own garage was purchased prior to the evaluation period.

** The other vehicles were purchased during Phase I.

The vehicles were purchased through UMTA's 16(b)(2) program (with a 20% local match). The 16(b)(2) grant totaled approximately \$110,000, of which the local match amounted to \$22,050. EASYRIDE allocates depreciation of the vehicles as a monthly expense (see Section 5.1.2).* The radios (and accompanying base station) were purchased through private donations; the purchase price for the total radio system was \$14,515. Thus, the total capital cost during the evaluation period was approximately \$124,500.**

5.1.2 Operating Costs***

For the purposes of this case study, EASYRIDE's operating costs were separated into two major categories: variable and fixed. Variable costs were further separated into direct hourly and mileage-related categories, while fixed costs refer to all other categories, including vehicle, administrative, occupancy, and data processing costs. Thus, EASYRIDE's operating costs are presented here in terms of three basic categories:†

- direct hourly costs (variable)
- mileage-related costs (variable)
- fixed costs

Direct hourly costs consist of drivers' wages and benefits; the wages of the other staff persons are included under fixed costs. The reason for this distinction is that driver payroll hours directly affect the number of vehicle hours of service, while the cost of the administrative and supporting personnel are not affected by changes in the number of driver hours from day to day.

* Depreciation of the vehicles is based on a straight 5-year basis.

** The Phase I capital cost was approximately \$161,000.

*** All of the data for the assessment of EASYRIDE's operating costs are compiled from quarterly (and annual) financial reports prepared by the Vera Institute for EASYRIDE.

† This framework was introduced and described in ARI's evaluation report.

Mileage-related costs are those which are a direct result of vehicle use (i.e., primarily fuel and maintenance); the cost of insurance is not directly related to the number of miles traveled and is therefore categorized as a fixed cost. All other cost categories (i.e., occupancy, office, and other expenses) are included in the fixed cost category. (The indirect costs, i.e., the overhead costs charged by the Vera Institute were allocated among the three categories based on the relative percentage of each category of the total operating cost. Vera provided various professional services to EASYRIDE, including accounting, legal assistance, and research and administrative support.)

Table 5-1 summarizes the annual cost trends and presents a breakdown according to the overall categorization discussed above. Table 5-2 presents a detailed breakdown of the costs.* As can be seen from Table 5-1, the 1980-81 total was 48% greater than the 1979-80 total, while the 1981-82 figure was actually slightly smaller (4%) than that for 1980-81. However, as shown in the Table, the relative percentage of direct

TABLE 5-1. SUMMARY OF EASYRIDE EXPENSES FOR CASE STUDY PERIOD

Expense Category	Cost (% of Total)		
	1979-80	1980-81	1981-82
Direct Hourly Costs	\$132,809 (21.6%)	\$221,165 (24.4%)	\$216,793 (24.8%)
Mileage-Related Costs	60,475 (9.8%)	90,375 (10.0%)	74,797 (8.6%)
Fixed Costs	421,601 (68.6%)	596,339 (65.7%)	582,763 (66.6%)
Total Operating Cost	\$614,885	\$907,879	\$874,353

* Summaries of the operating costs for the individual years of the evaluation period are included in Appendix A.

TABLE 5-2. EASYRIDE EXPENSES (1979-1982)

Category	7/79-6/80	7/80-6/81	7/81-6/82
<u>Personnel</u>			
Drivers	\$ 89,077	\$146,979	\$140,045
Reservation Clerks	37,332	50,005	44,082
Scheduler (and Asst. Office Manager)	16,884	26,826	37,258
Project Manager	27,746	32,426	35,874
Operations Manager	18,180	25,035	29,044
Secretary and Admin. Asst.	15,989	19,010	20,123
Assoc. Dir. (Vera Inst.)	8,028	7,032	7,053
Others (incl. temp. help)	8,540	31,370	41,903
Fringe Costs	49,771	81,643	86,451
Subtotal - Personnel	271,547	420,326	444,581*
<u>Occupancy (Office)</u>			
Rental/Depreciation	7,165	6,867	13,319
Maintenance	3,724	0	1,952
Utilities, Heat	6,378	3,584	6,446
Telephone	9,893	10,495	12,545
<u>Occupancy (Garage)</u>			
Depreciation	7,220	7,220	7,220
Real Estate Taxes	0	0	0
Repairs and Maintenance	N/A**	3,971	1,034
Rent	N/A**	16,000	18,000
Utilities, Heat	N/A**	2,375	1,274
Subtotal - Occupancy	34,380	50,512	61,790
<u>Transportation Costs</u>			
Vehicle Depreciation	42,513	54,834	40,808
Fuel	20,156	46,626	46,385
Repairs and Maintenance	25,299	21,652	13,934
Insurance	42,813	24,470	19,794
Misc. Expenses	2,541	3,448	2,492
Provision for Major Repairs	0	8,000	6,382
Subtotal - Transportation	133,322	159,030	129,796

* includes \$2,748 for anticipated vacation wages

** EASYRIDE's Operating Cost report for the year ending 6/80 did not report any charges for these items.

TABLE 5-2. EASYRIDE EXPENSES (1979-1982) (CONTINUED)

Category	7/79-6/80	7/80-6/81	7/81-6/82
<u>Start-Up Costs</u> (Amortization)	\$ 1,927	\$ 1,928	\$ 1,932
<u>Other General Costs</u>			
Data Processing	32,930	60,938	\$ 43,978
Travel	1,195	1,241	695
Office Supplies and Postage	1,732	8,001	2,101
Reproduction and Printing	4,729	5,244	6,475
Equipment	1,031	2,845	794
Depreciation of Improve- ments and Equipment	3,060	5,034	4,866
Insurance	-	-	444
Program Development	0	1,727	0
All Other Expenses	2,151	3,713	7,670
Subtotal - Other	46,828	88,743	67,023
Total Direct Costs	488,004	720,539	705,123
Indirect Costs* (Overhead)	126,881	187,340	169,230
Total Costs	\$614,885	\$907,879	\$874,353

*Indirect Cost Rates: 28% for 1979; 26% for 1980 and 1981; and 24% for 1982

hourly, mileage-related, and fixed costs remained quite consistent over the years; in fact, the percentage of mileage-related costs was nearly identical for the first 2 years of the evaluation period.

The higher percentage of direct hourly costs in the second fiscal year is basically attributable to the West Side expansion (i.e., the addition of drivers). As shown in Table 5-2, the totals in virtually all expense subcategories (i.e., personnel, occupancy, transportation, and other general costs) were higher in the second year, but the overall drivers' salaries (and fringe benefits) increased by a greater percentage than did the other major categories.*

This trend reversed somewhat in the final year of the evaluation period, as all three categories decreased; the 1981-82 driver costs and fixed costs were, respectively, 2% and 4% lower than in the previous year, while the 1981-82 mileage-related (i.e., predominantly fuel and repairs) costs experienced a 17% drop. The number of drivers--and hence the total amount of driver hours and the consumption of fuel--decreased during the final year; whereas there had been 11 full-time drivers through September 1981, this number fluctuated (between 9 and 11) over the remainder of that fiscal year. In addition, the number of reservation clerks fell from three to two in February 1982. The decrease in the fixed costs in the final year was attributable to various factors, including substantial decreases in vehicle depreciation** and data processing charges.

It should be noted that the percentage of EASYRIDE's costs allocated to the fixed cost category is unusually high

* The drivers' hourly wages also increased substantially during the demonstration. The starting wage (including fringe benefits) for all EASYRIDE drivers as of the beginning of the demonstration (1977) was \$4.73 per hour; as of the end of the demonstration, the starting wage was \$6.31.

** The drop in vehicle depreciation charges is attributable to the fact that the original 10 vehicles had been fully depreciated by mid-1981. However, the other 8 vehicles had higher purchase prices than the original 10, and thus had higher depreciaton charges.

for a specialized transportation service. It is more typical in such systems for direct hourly costs to represent the highest percentage. The major factor contributing to EASYRIDE's high fixed cost rate is the non-driver personnel cost; as shown in Table 5-2, the salaries (and fringe benefits) of administrative and support staff represent the bulk of the personnel costs (approximately 60% in each of the three years). Through its first five years, EASYRIDE was able to secure sufficient revenue to support a large administrative staff, and each staff member played a valuable role in the program's development and operation. However, as available funding becomes tighter, EASYRIDE may find it necessary to significantly reduce its personnel costs in the future.

Also contributing greatly to EASYRIDE's high fixed cost - and the high cost in general - was the indirect (i.e., overhead) cost collected by the Vera Institute. As shown in Table 5-2, this represented between 24 and 28% of the total operating cost. The Vera Institute has served an important function in EASYRIDE's implementation and continued operation providing assistance in several areas (e.g., development, research, planning, accounting, legal assistance, and grant administration). However, as with the staff size, decreasing funding in the coming years may force reductions in the extent of this support - or at least in the level of overhead charges.

Figure 5-1 and Table 5-3 show the operating costs on a quarterly basis. As can be seen, there was considerable variations in these costs, especially within the first year of the evaluation period (July 1979-June 1980). The bulk of the variation in that year was attributable to changes in transportation and "other" costs.* EASYRIDE incurred much heavier vehicle repair/maintenance charges during the second quarter than in the other three quarters; in addition, the initial data processing costs were charged during that

* A substantial portion of the changes between quarters was also attributable to indirect costs, i.e., any change in direct operating costs carried with it a 24-28% change in indirect costs.

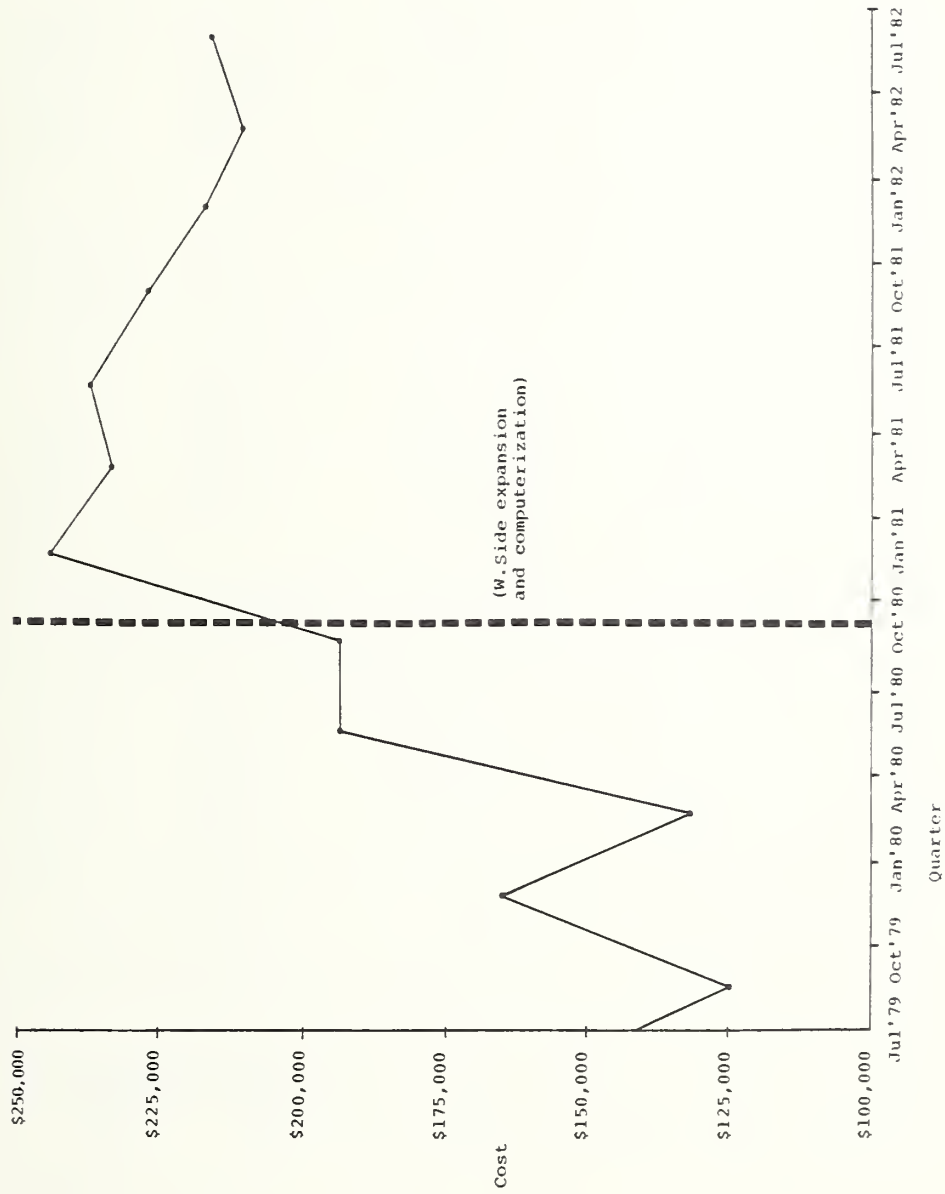


FIGURE 5-1. EASYRIDE OPERATING COSTS (QUARTERLY)

TABLE 5-3. EASYRIDE QUARTERLY OPERATING COSTS

Period	Personnel	Transportation	Other	Indirect	Total
7/79 - 10/79	\$ 65,274	\$ 24,941	\$ 8,918	\$ 25,775	\$124,908
10/79 - 1/80	69,799	40,949	20,029	34,002	164,779
1/80 - 4/80	68,924	23,080	12,448	27,158	131,610
4/80 - 7/80	67,550	44,352	41,740	39,946	193,588
Total (1979-80)	\$271,547	133,322	\$ 83,135	\$126,881	\$614,885
7/80 - 10 80	\$ 80,904	\$ 36,448	\$ 35,491	39,739	\$192,582
10/80 - 1/81	115,264	41,851	36,889	50,441	244,445
1/81 - 4/81	113,554	40,554	31,358	48,221	233,687
4/81 - 7/81	110,604	40,177	37,445	48,939	237,165
Total (1980-81)	\$420,326	159,030	\$141,183	\$187,340	\$907,879
7/81 - 10/81	\$132,457	\$ 28,882*	\$ 22,121	\$ 44,030	\$227,490
10/81 - 1/82	97,202	40,396*	38,411	42,242	218,251
1/82 - 4/82	109,095	30,038	31,542	40,962	211,637
4/82 - 7/82	105,827	30,479	38,674	41,995	216,975
Total (1981-82)	\$444,581	\$129,795	130,748	\$169,229	\$874,353

* There was apparently a bookkeeping error in allocating vehicle depreciation fo the quarters ending 10/81 and 1/82; the total transportation costs for these two quarters probably should have been \$33,683 and \$35,595, respectively.

quarter. The higher fourth quarter costs were attributable predominantly to the highest single data processing charge of the evaluation period (\$28,000); the computer system was implemented during this period. In addition, the vehicle depreciation allocation was increased substantially during the fourth quarter due to the acquisition of seven new vehicles during that time.

The large jump in costs in the second quarter of the second year (i.e., October 1980-January 1981) was caused by the addition of six drivers and one reservation clerk in connection with the West Side expansion; this produced a 42% increase in personnel costs. EASYRIDE's overall operating cost remained relatively stable during the remainder of that year. The major cost changes during the final year are also attributable predominantly to changes in personnel costs - as explained earlier, the number of full-time drivers was reduced in the second quarter (October 1981-January 1982). The number of reservation clerks was subsequently reduced (in the third quarter), as well.

On the whole, EASYRIDE's operating cost patterns are quite straightforward within the context of staff size changes, "normal" (i.e., due to inflation) increases in fixed costs such as office rent and utilities, and "learning curve" cost savings such as those related to data processing. For instance, the data processing charges were understandably highest during the development and implementation stages; the ongoing expenses are primarily attributable to leasing and operations, now that development and debugging have been completed.

5.1.3 Unit Cost Ratios

In order to assess EASYRIDE's cost-effectiveness during the evaluation period, it is necessary to determine unit cost ratios (i.e., operating cost per specified unit of service). The unit cost ratio measures typically considered are cost per trip, hour, and mile. However, in assessing EASYRIDE, we were unable to present cost per mile figures because mileage data were not reported in EASYRIDE's operations reports and could

not be collected within the scope of the case study effort. In terms of cost per hour, our assessment was rather limited by the lack of accurate vehicle service hour data for much of the evaluation period;* we were able to determine costs per hour for only the latter half of the case study period. Thus, the only unit cost measure we were able to determine for the entire case study period is cost per trip.**

The cost per trip figures for the entire demonstration are presented in Table 5-4. Figure 5-2 shows the cost per trip on a quarterly basis for the Phase II evaluation period. As can be seen from Figure 5-2, the unit costs fluctuated considerably during the first year of the Phase II evaluation period. Since ridership figures remained fairly steady over the first three quarters, the differences in unit costs are attributed to changes in costs, as described in Section 5.1.2. In the fourth quarter of 1979-80, the number of rides rose substantially, but the cost also exhibited a proportionally greater rise, accounting for the increase in the unit cost.

The cost per trip dropped somewhat during the first quarter of 1980-81 as the cost remained steady and the ridership rose. The next quarter, in which the West Side expansion and computer implementation took place, was marked by a further decrease in cost per trip delivered, as ridership (excluding no-shows) jumped by 24% as compared to a 21% cost increase. On the other hand, due to the lower number of no-shows in the second quarter, the cost per trip (including no-shows) was higher than in the previous quarter.

The third quarter of 1980-81 was marked by a significant decrease in unit cost, as the cost per trip figures (both with and without no-shows) dropped to their lowest levels to that

* Service hour data were not reported accurately by Vera's original data reporting contractor, the GNL Company. This problem was not remedied until well after EASYRIDE implemented its own computer; apparently, service hours were not accurately reported until February 1981.

** Because no-shows are costly to EASYRIDE, cost per trip figures are presented both with and without no-shows. Despite the fact that a trip is not actually delivered, a no-show ties up vehicle time and produces unnecessary dead-heading mileage.

TABLE 5-4. ANNUAL COST PER TRIP FIGURES

Year	Trips Delivered	Total Trips*	Total Operating Cost	Cost per Trip (Delivered)	Cost per Trip*
7/77 - 6/78	35,376	37,784	\$ 444,597	\$12.56	\$11.77
7/78 - 4/79**	26,523	29,846	\$ 352,185	\$13.28	\$11.80
Total (Phase I)	61,899	67,630	\$ 796,782	\$12.87	\$11.78
7/79 - 6/80	40,041	46,327	\$ 614,885	\$15.36	\$13.27
7/80 - 6/81	70,240	76,814	\$ 907,879	\$12.93	\$11.82
7/81 - 4/82***	59,556	63,808	\$ 657,378	\$11.04	\$10.30
Total (Phase II)	169,837	186,949	\$2,180,480	\$12.84	\$11.66

* includes no-shows

** information not available 5/79-7/79

*** includes only first three quarters of 1981-82 because SMD funding was totally expended by April.

— For trips delivered
 ---- For all trips (including no-shows)

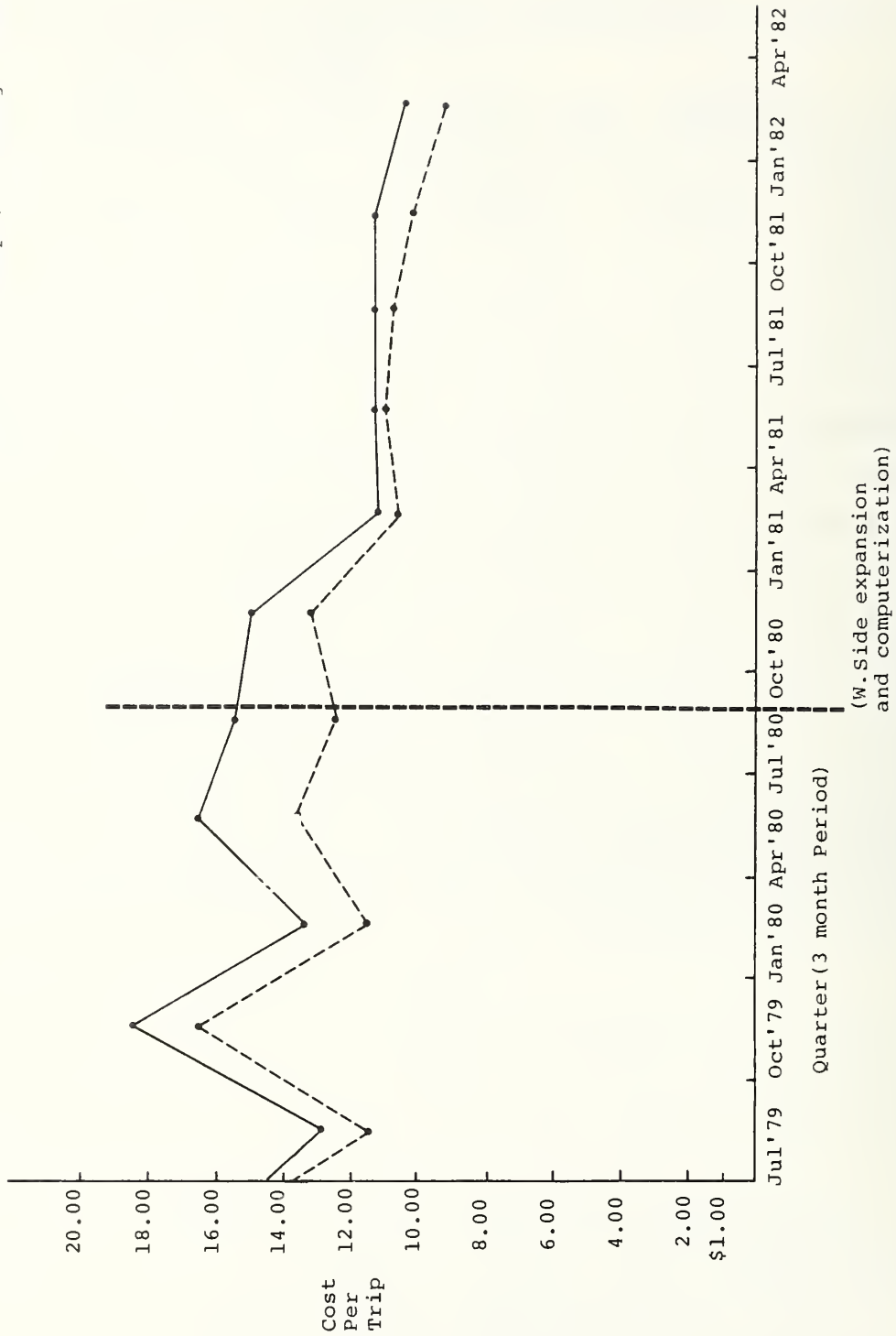


FIGURE 5-2. COST PER TRIP (QUARTERLY)

point in the evaluation period. The operating costs were reduced, while ridership continued to rise. The following three quarters' figures remained remarkably steady; although actual ridership decreased slightly in each of these quarters, the operating costs dropped concomitantly. (The total unit cost figures--including no-shows--exhibited greater variation during this period, as the number of no-shows rose considerably in each of the three months.) Finally, the cost per trip (\$10.58) for the last quarter of the evaluation period (the third quarter of 1981-82) was the lowest of any quarter of the entire demonstration; ridership was up significantly from the prior quarter, while the total operating cost for the quarter was substantially lower than that of the previous quarter--lower, in fact, than for any quarter since July-September 1980.

Thus, in examining the overall trend, it is clear that the West Side expansion and the computerization exerted a significant impact on the system's cost-effectiveness. Although the computerization entailed the accrual of substantial data processing charges, it enabled EASYRIDE to expand while adding only one office staff person. Once the expanded service was allowed sufficient time to stabilize, the cost per trip dropped to a point substantially lower than at any time before the changes were implemented. Table 5-4 shows that the average cost per trip delivered for 1980-81 was 16% lower than for 1979-80, while the 1981-82 figure was nearly 15% lower than for 1980-81.

As explained above, accurate data on driver service hours were available only for the latter half of the evaluation period (January 1981 - April 1982). The cost per hour figures for this period are summarized in Table 5-5. This table presents total hourly operating cost (i.e., including direct hourly, mileage-related, and fixed costs). As can be seen, there is no real pattern to these costs, as they increased over the first three quarters, then decreased, only to rise again in the final quarter. In light of the limited data, we cannot determine the actual impact of the West Side expansion and the computerization on cost per hour. However, the fact that the

TABLE 5-5. QUARTERLY COST PER HOUR FIGURES

Quarter	Cost per Trip Delivered*	Trips Delivered per Hour*	Total Cost per Hour
Jan-Mar 1981	\$11.28	4.45	\$50.20
Apr-June 1981	\$11.38	4.83	\$54.97
July-Sept 1981	\$11.27	5.07	\$57.14
Oct-Dec 1981	\$11.27	4.67	\$52.63
Jan-Apr 1982	\$10.58	5.33	\$56.39

*excluding no-shows

latter added considerable cost (i.e., data processing charges, as well as an additional staff person), while the amount of service hours did not expand accordingly suggests that the cost per hour probably increased somewhat as a result of the computerization.

It must be noted here that EASYRIDE's cost per hour is very high for a specialized transportation service. EASYRIDE has provided a high quality service, and the computerized management information system and Vera Institute support have contributed to developing a rather sophisticated operation. However, these attributes have obviously been quite expensive; the indirect costs collected by the Vera Institute alone represented 24-28% of the operating costs. Vera has served a valuable role in EASYRIDE's operation; however, whether EASYRIDE can continue to afford such support, as well as a large administrative staff, remains to be seen.

5.2 PRODUCTIVITY

In assessing a transportation system's efficiency (i.e., in scheduling trips), it is useful to examine the system's productivity--in this case defined as the number of trips being provided within a specified unit of time or distance (i.e., trips per vehicle-hour or per vehicle-mile). Unfortunately, the nature of productivity measures which could be determined for this evaluation were quite limited: as explained in the previous section, vehicle mileage figures were not included in EASYRIDE's operating reports and thus are not examined here, and accurate vehicle hour figures were reported only for the second half of the case study period (beginning in February 1981). Thus, we have only trip per service hour figures for the period between February 1981 and April 1982; these figures (for both trips delivered and total trips including no-shows) are summarized on a quarterly basis in Table 5-6.

As can be seen in the table, EASYRIDE's productivity experienced improvement--except for a modest decline at the end of 1981--over the last five quarters. Although the pre-1981 service hour figures were not accurately maintained,* it can be seen from rough estimates that productivity improved considerably over the course of the evaluation period. According to the GNL figures, the average monthly productivity for the period July 1979 through August 1980 (at which point data reporting was transferred directly to EASYRIDE) fell between 2.6 and 3.2. Although individual monthly figures were generally higher than those reported by GNL, we can assume (based on EASYRIDE's own driver records) that the GNL service hour figures are not more than 20% higher than the actual service hour figures.** Using this guideline, we can estimate that the average monthly productivity figures for the first

* The incorrectly reported service hour figures were based on the assumption (by the GNL Company) that all vehicles were in service for full days every service day, thereby overstating the number of hours and understating the productivity.

** GNL reported 10-11 vehicles in service each day. In reality, the daily average was apparently closer to 9 vehicles per day.

TABLE 5-6. QUARTERLY TRIP PER VEHICLE HOUR FIGURES*

Quarter	Trips Delivered per Vehicle Hour	Total Trips per Hour**
Jan-Mar 1981	4.45	4.63
Apr-June 1981	4.83	4.97
July-Sept 1981	5.07	5.22
Oct-Dec 1981	5.67	5.09
Jan-Apr 1982	5.33	5.86

*Vehicle hour figures were not available before February 1981.

**These figures include no-shows.

half of the evaluation period were probably no higher than 3.8. Thus, the productivities improved considerably over the course of the evaluation period.*

This improvement can be attributed to several factors: (1) the installation of two-way radios (in May 1980), which provided a means to communicate last minute cancellations, "will calls," and additional trips scheduled that day; (2) the implementation of the computer system, which allowed improved efficiency in scheduling trips; and (3) the increase in the relative percentage of nutrition trips, which generally involved shared rides and thus tend to be higher productivity trips than other trips (e.g., medical or recreation trips--see Section 4.3). This last point has definite implications in terms of EASYRIDE's future productivity. If EASYRIDE's service swings more toward Medicaid and other demand-responsive trips,

* Based on the GNL figures, the overall average productivity for Phase I was 2.15 trips per vehicle-hour.

the productivity will likely decrease. On the other hand, through improved efficiency in scheduling these trips, as well as through limiting trip distances (i.e., generally not transporting passengers north of 40th Street - see Section 3.3), EASYRIDE may be able to minimize such a decrease.

5.3 REVENUE

As described in Section 3.1, EASYRIDE was supported during the evaluation period through a combination of grants, service contracts, contributions, and passenger fares; the different revenue sources are summarized in Table 5-7.

As can be seen from the Table, the distribution of revenue sources varied considerably over the course of the demonstration. In 1978 (i.e., during Phase I) Medicare reimbursements accounted for 63% of EASYRIDE's total revenue, the UMTA Section 6 grant represented 18%, Vera Institute provided 8%, and various contributions and grants accounted for the remainder. In the first year of the Phase II evaluation period (July 1, 1979 - June 30, 1980), Medicare reimbursements accounted for nearly 60% of EASYRIDE's revenue, while UMTA grants (Section 6 and 16(b)(2)) represented nearly 30%; passenger fares and third party contracts accounted for a very small proportion of the total revenue for that year.

In the second year (July 1, 1980 - June 30, 1981), these proportions shifted dramatically. No 16(b)(2) funds were received, and Medicare billings dropped by over 50% from the previous year (although they still represented 20% of total revenue). However, these losses were more than made up by the addition of the Department for the Aging (25% of the total), Community Development (11%) and UMTA Section 5 (40%) grants, as well as increases in Medicaid billings (8% of the total), CETA funds (11%), and private contributions, grants, and fares (8% combined). The revenue from the UMTA Section 6 grant increased as well, but its relative percentage (12%) decreased slightly from the previous year.

TABLE 5-7. EASYRIDE REVENUES (1978, JULY 1979 - JUNE 1982)

Source	1/1/78-12/30/78	7/1/79-6/30/80	7/1/80-6/30/81	7/1/81-6/30/82	Total (7/1/79-6/30/82)
UMTA Section 6	\$ 91,082 (18%)	\$ 84,692 (13%)	\$103,966 (12%)	\$211,907 (24%)*	\$ 400,565 (17%)
UMTA Section 5	--	--	\$ 40,000 (4%)	\$292,857 (34%)	\$ 332,857 (14%)
Medicare	\$314,052 (63%)	\$376,733 (59%)	\$180,000 (20%)	--	\$ 556,733 (23%)
Medicaid	--	\$ 4,640 (1%)	\$ 72,571 (8%)	\$ 90,756 (10%)	\$ 167,967 (7%)
Office of Vocational Rehab.	--	\$ 16,930 (3%)	\$ 9,042 (1%)	\$ 18,462 (2%)	\$ 44,434 (2%)
CETA	--	\$ 25,369 (4%)	\$ 94,865 (11%)	--	\$ 120,234 (5%)
UMTA 16(b) (2)	--	\$100,805 (16%)	--	--	\$ 100,805 (4%)
Private Contributions & Grants	\$ 44,722 (9%)	\$ 30,909 (5%)	\$ 57,898 (6%)	\$ 34,650 (4%)	\$ 123,457 (5%)
N.Y. City Dept. for the Aging	\$ 4,399 (1%)	--	\$223,414 (25%)	\$ 93,323 (11%)	\$ 316,737 (13%)
Community Devel. Block Grant Prog.	--	--	\$100,002 (11%)	\$ 85,124 (10%)	\$ 185,126 (8%)
Fares and Service Contracts	\$ 3,832 (1%)	\$ 935 (0%)	\$ 21,311 (2%)	\$ 25,851 (3%)	\$ 48,097 (2%)
Misc. Income	\$ 39,196 (8%)	--	--	\$ 17,086 (2%)**	\$ 17,086 (1%)
Total	\$497,283	\$641,013	\$903,069	\$870,016	\$2,414,098

*totally expended by April 1, 1982

**Cove (Vera Institute) support

***insurance reimbursement and maintenance reserve

In the final year of the evaluation period,* funding burden shifted heavily to UMTA (a combined total of 58%), with the remainder distributed among several other grants and contracts, as well as contributions and fares. Medicaid and OVR billings increased slightly (to 10% and 2% of the total, respectively), as did fare and service contracts (to 3% of the total), while the DFTA and Community Development grants decreased (to 11% and 10%, respectively). Medicare billings and CETA funding had both terminated the previous year.

As shown in Table 5-7, the total revenue received by EASYRIDE during the period between July 1, 1979 and June 30, 1982 was approximately \$2,414,000. The UMTA Section 6 (SMD) grant accounted for 17% of this total; this represented the second highest percentage--Medicare funding accounted for 23%. EASYRIDE was successful in replacing the Medicare funding, which ended in mid-1981; the extent to which EASYRIDE can replace the SMD funds will be key to its continued operation. (The efforts to secure new funding sources are discussed in Section 4.7 of this report.)

* Table 5-7 presents revenues through June 1982, despite the fact that the UMTA demonstration funding was totally expended by April.

6. SUMMARY AND CONCLUSIONS

The EASYRIDE demonstration operated from June 1977 until April 1982 (EASYRIDE continued to operate past that point, but without UMTA SMD funding). A full evaluation of the first two years of service was prepared in 1979; the evaluation presented in the preceding chapters covers the period from July 1979 through March 1982. A summary of the most salient accomplishments and features of the project during this period is presented below, while the following section discusses the most important findings in terms of transferability to other sites considering implementing a similar service.

6.1 SUMMARY OF RESULTS /FINDINGS

6.1.1 Establishment of a Diversified Funding Base

EASYRIDE successfully combined support from a myriad of grants, service contracts, contributions, and passenger fares to provide a high quality specialized service to the elderly and handicapped of lower Manhattan. The diversity of this support--from private foundations, as well as local, state, and federal agencies--enabled EASYRIDE to offer a multiple purpose service (i.e., with largely unrestricted trip purposes) which did not have to be limited to particular agencies or persons eligible for particular funding programs.

The mix of revenue sources and their relative percentages varied considerably from year to year, as few sources provided funds during all three years. The UMTA SMD grant was the largest single source to provide funds in each of the three years (17% of the three year total), followed by Medicaid (7%) and the New York State Office of Vocational Rehabilitation

(2%). The single largest source, however, was Medicare, which constituted 23% of the three-year total, despite its termination in the second year of the evaluation period. The other major funding sources were UMTA Section 5 (14%) and the New York City Department for the Aging (13%).

EASYRIDE's administrative staff devoted a significant amount of time to attempting to secure those--and other--grants and contracts. EASYRIDE was faced with certain barriers in obtaining several of the purchase of service contracts (i.e., Medicare, Department for the Aging, Office of Vocational Rehabilitation, and Medicaid); in those particular cases, barriers were overcome through innovative proposals which resulted in the funding agencies (or state authorities) modifying their contracting procedures.

EASYRIDE also worked closely with both the City government and community organizations in expanding its funding base and its service area. The commitment of UMTA Section 5 (transit operating) and Community Development Block Grant funds came partially as a result of EASYRIDE's participation in the City's attempt to develop a citywide specialized transportation system. Such a system was never developed, but EASYRIDE impressed City officials and planners with its service and proposals. These funding commitments helped solidify EASYRIDE's base of support, which laid the groundwork for the West Side expansion. EASYRIDE worked closely with the West Side's Inter-agency Council for the Aging in carrying out the expansion, which, in fact, followed requests for service in that area from several elderly organizations.

Overall, EASYRIDE was reasonably successful in its marketing efforts in that it significantly extended its service catchment area and considerably expanded--and broadened--its funding base. EASYRIDE was able to offset the loss of two of its largest funding sources (CETA and Medicare) by procuring new grants and contracts. As the SMD grant period ended, EASYRIDE was very active in seeking new contracts and grants.

6.1.2 Impacts of West Side Expansion

EASYRIDE provided service predominantly within the Lower East Side until September 1980, when service was expanded into the Lower West Side as well; this expansion was undertaken in response to requests for service in the area from representatives of various agencies and programs representing the elderly. EASYRIDE had begun to register West Side residents considerably before that time, but the full expansion of service was delayed, primarily by vehicle mechanical problems. As of August 1980, the West Side registration list totaled 270, and this number grew to 442 by November. As of the end of the demonstration, West Side registration represented 29% of the total for the entire catchment area (1659).

Demand for service from West Side residents grew slowly over the first few months, but reached a level of nearly 1400 per month by January 1981. Trips originating in the West Side reached a peak of nearly 2300 (32% of the total system ridership) in October 1981; in the last full month of the demonstration (March 1982), West Side ridership amounted to 2110 (27% of the system total).

The West Side expansion exerted a significant impact on EASYRIDE's cost-effectiveness: the number (and percentage) of trips increased substantially, while the total operating cost did not grow commensurately. Therefore, the operating cost per trip dropped significantly following the expansion: the average cost per trip delivered* was \$15.36 for the first year of the evaluation period (July 1979 - June 1980) and \$12.93 for the second year. Once service was allowed to stabilize following the expansion--as well as other changes (see Section 6.1.3)--the cost per trip dropped still further; the third year average was \$11.04.

Productivity also improved following the service expansion, although other factors (e.g. the technological improvements and changes in trip purpose patterns) also contributed to the improvement. Accurate driver service hour data were avail-

*i.e., excluding no-shows.

able for only the second half of the evaluation period. However, based on approximations of the first half, the average number of trips per driver hour rose substantially following the West Side expansion, and showed steady improvement over the remainder of the demonstration. The average productivity for the last quarter of the demonstration was 5.33 trips delivered per hour. The estimated average productivity for the first year of the evaluation period (i.e., before the West Side expansion) was under 3.8 trips per hour.

6.1.3 Impacts of Technological Improvements

EASYRIDE also made two major technological improvements during the evaluation period: the installation of two-way radios in the vehicles, and the implementation of a computerized management information system. These improvements combined with the West Side expansion to exert considerable impact on EASYRIDE's productivity, as discussed above. (It was not possible to isolate the individual impacts of these improvements within this case study effort, in light of the fact that they all occurred in the same general time period--mid-to late 1980).

The radios facilitated reductions in the amount of dead-heading and dead time (i.e., resulting from no-shows), thereby contributing to higher productivities. The computerization of the operational and record-keeping procedures contributed to improved productivity primarily by increasing the efficiency of the reservation and scheduling processes; the time required to perform each task was reduced, the nature of informational storage and retrieval was improved, and the potential for error was greatly reduced.

In addition to generally improving EASYRIDE's operational capabilities, the computerization contributed to an improvement in the system's overall cost-effectiveness. Although it entailed the accrual of substantial data processing charges - for leasing the hardware and for programming/ development time - the automated system enabled EASYRIDE to undertake a significant service expansion (i.e., into the West Side) while adding only one office staff person.

6.1.4 Travel Behavior, Service and Cost Characteristics

During the five years of the UMTA demonstration, EASYRIDE evolved from a 10-vehicle system to an 18-vehicle system providing as many as 7300 trips per month. The average monthly ridership for the entire evaluation period was 5704; the average monthly no-show total was 546, and the average monthly cancellation total was 1036. Monthly ridership exhibited relatively steady growth until the final two months of the demonstration, during which time it dropped significantly. The average monthly ridership originating in the Lower West Side represented 17.5% of the total, while trips originating outside of lower Manhattan represented 9.8%; the remainder originated in the Lower East Side.

More than half of all trips (54%) were for nutrition purposes, and the monthly proportion of these trips increased over the course of the project. Trips to hospitals and physicians' offices each represented 10% of the total ridership. The bulk of trips (77%) were standing orders, while 22% were demand-responsive, and only 1% group trips. The high percentage of standing orders contributed heavily to improving EASYRIDE's productivity; as mentioned earlier, the estimated average productivity during the first year of the evaluation period was under 3.8 trips per hour, while the average figure for the last year was just over 5.0.

EASYRIDE's total operating costs for the three years covered by this evaluation were \$641,013, \$903,069, and \$870,016, respectively. Roughly 23.6% of the three-year total was attributable to direct hourly (i.e., driver-related) costs, 9.3% to mileage-related costs, and 67.1% to fixed costs. The relative percentages of these categories remained quite steady during the evaluation period. The average cost per trip for the entire evaluation period was \$12.84; including no-shows, this figure was \$11.66. As suggested earlier, these figures decreased significantly over the course of the project; the average figures (excluding no-shows) for the 3 years were \$15.36 (1979-80), \$12.93 (1980-81), and \$11.04 (1981-82). The average cost per driver hour (for the latter 14 months of the

case study period) was \$54.27. The major factors contributing to this rather high figure were the 24-28% overhead costs collected by the Vera Institute and the relatively large EASYRIDE staff size.

6.2 TRANSFERABILITY OF RESULTS

In examining the results of any demonstration it is important to assess the transferability of the results to other locations. Certain aspects of any system are rather site specific--and this applies to EASYRIDE perhaps more than most systems; very few locations feature site characteristics similar to those of Manhattan. On the other hand, other aspects--and lessons--can be applied to many types of systems and settings. The most important transferable findings from the EASYRIDE Phase II evaluation can be summarized as follows:

1) A diversified funding base, with minimal trip restrictions, allows for flexibility in scheduling trips and promoting shared-riding. EASYRIDE was able to secure financial support from a wide variety of funding sources. The bulk of these grants and contracts were free of restrictions on trip purpose and eligibility, which allowed mixing of riders (i.e., for different trip purposes) on vehicles. This enabled development of a multiple-purpose service, and significantly enhanced EASYRIDE's flexibility in arranging trips; this flexibility was important in that it allowed for greater shared-riding--and hence higher productivities--than in a system with restrictive service contracts.

2) A diversified funding base enhances the capability to continue operations from year to year despite changes in funding availability. In light of the fact that many grants and contracts are of limited duration--and often cannot be renewed--it is important for a system to secure a mix of funding sources with overlapping funding periods. Furthermore, to ensure replacement of expiring grants or contracts an aggressive marketing effort is necessary to develop new sources.

3) An automated management information system can improve the management and operation of a service funded by multiple

sources. Depending on the number of sources from which a specialized service is receiving funding--and the complexity of billing and accounting procedures--computerization of these procedures may be very useful. Automating billing and accounting operations improves and simplifies the overall administration of the service by improving the speed, efficiency, and accuracy of each procedure. A computerized system also readily facilitates modifications in billing or accounting procedures for particular contracts, as well as the addition of new sources. Finally, a computerized system can also be expanded to permit automation of other procedures, including registration, reservations, and scheduling. (Of course, computerization can be very expensive, and each specialized service provider must carefully weigh the costs and benefits associated with it.)

4) Working closely with community groups can expedite the introduction or expansion of service into new service areas. EASYRIDE demonstrated, through the West Side expansion, that community groups can be extremely helpful in marketing and implementing service in a new service area. In this case, the West Side Interagency Council identified the target market, estimated potential demand, assisted in registering prospective users, and informed member agencies about the nature of the service being implemented.

5) Many users of specialized transportation services are quite sensitive to fare increases when they pay their own fares. When EASYRIDE substantially raised its fares, ridership dropped significantly and no-shows increased tremendously. Apparently, many persons chose not to make trips they would otherwise have made.

6.3 CONCLUDING REMARKS

In the first five years of its operation, EASYRIDE evolved from a 10-vehicle system providing under 3000 trips per month to an 18-vehicle operation providing as many as 7300 trips per month. Originally conceived as a system based on multiple funding sources, EASYRIDE has successfully secured a

broad array of grants, service contracts, and private contributions for a total revenue base in excess of \$800,000 per year. Through aggressive marketing and innovative approaches to developing service contracts, EASYRIDE was able to replace expiring funding sources and even expand its base of support. In developing this mix of funding, EASYRIDE was able to offer a multiple-purpose service with only minimal restrictions on "mixing" riders.

During the last three years of the UMTA demonstration period, EASYRIDE instituted three major operational changes. First, working closely with community organizations, EASYRIDE expanded its service area into the lower West Side and thereby increased ridership significantly. At roughly the same time as the expansion, EASYRIDE automated most of the record-keeping and scheduling procedures, thereby improving the efficiency and accuracy of these processes. The third change involved the installation of two-way radios in all vehicles; this served to reduce deadheading and vehicle dead time, which contributed to improved productivity.

Over the course of the demonstration, EASYRIDE provided a high quality--though also high cost--specialized service that was valued highly by users, community groups, funding agencies, and city officials. As the demonstration ended, EASYRIDE was making renewed efforts to secure new sources of funding so as to continue to provide this service.*

* As of this writing (July 1983), EASYRIDE continued to provide service at a level comparable to the final months of the demonstration. Through increased revenues from several of its funding sources (notably, Medicaid, CDBG, DFTA, and UMTA Section 5), EASYRIDE has been able to provide on the order of 6000 rides per month; the fleet size has expanded to 21, although not all of these vehicles are in use at any one time - due to a limited number of drivers (the equivalent of approximately 11 full-time positions; EASYRIDE has increased its reliance on part-time drivers), as well as recurring mechanical problems.

APPENDIX
EASYRIDE'S ANNUAL EXPENSES

TABLE A-1. SUMMARY OF EASYRIDE EXPENSES (July 1979 - June 1980)

Expense Category	Direct Hourly Costs	Mileage- Related Costs	Fixed Costs
<u>Personnel</u>			
Drivers	\$ 89,077		
Reservation Clerks			\$ 37,332
Scheduler			16,884
Project Manager			27,746
Operations Manager			18,180
Secretary and Admin. Asst.			15,989
Assoc. Dir. (Vera Inst.)			8,028
Others			8,540
Fringe Benefits	16,327		33,444
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Subtotal - Personnel	105,404		166,143
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<u>Occupancy (Office)</u>			
Rental/Depreciation			7,165
Maintenance			3,724
Utilities, Heat			6,378
Telephone			9,893
<u>Occupancy (Garage)</u>			
Depreciation			7,220
Real Estate Taxes			0
Repairs and Maintenance			0
Rent			0
Utilities, Heat			0
<hr/>			
Subtotal - Occupancy			34,380
<hr/>			
<u>Transportation Costs</u>			
Vehicle Depreciation			42,513
Fuel		20,156	
Repairs and Maintenance		25,299	
Insurance			42,813
Misc. Vehicle Expenses		2,541	
Provision for Major Repairs			0
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Subtotal - Transportation		47,996	85,326

TABLE A-1. SUMMARY OF EASYRIDE EXPENSES (July 1979 - June 1980)
(CONTINUED)

Expense Category	Direct Hourly Costs	Mileage- Related Costs	Fixed Costs
<u>Other General Costs</u>			
Data Processing			\$ 32,930
Travel			1,195
Office Supplies and Postage			1,732
Reproduction and Printing			4,729
Equipment			1,031
Depreciation of Improve- ments and Equipment			3,060
Insurance			0
Program Development			0
Start-Up Costs (amortization)			1,927
Other Expenses			2,151
Subtotal - Other			48,755
Total Direct Costs	105,404	47,996	334,604
Indirect Costs	27,405	12,479	86,997
Total Costs	\$132,809	\$ 60,475	\$421,601
Grand Total		\$614,885	

TABLE A-2. SUMMARY OF EASYRIDE EXPENSES (July 1980 - June 1981)

Expense Category	Direct Hourly Costs	Mileage- Related Costs	Fixed Costs
<u>Personnel</u>			
Drivers	\$146,979		
Reservation Clerks			\$ 50,005
Scheduler			26,826
Project Manager			32,426
Operations Manager			25,035
Secretary and Admin. Asst.			19,010
Assoc. Dir. (Vera Inst.)			7,032
Others			31,370
Fringe Benefits	28,549		53,094
Subtotal - Personnel	175,528		244,798
<u>Occupancy (Office)</u>			
Rental/Depreciation			6,867
Maintenance			0
Utilities, Heat			3,584
Telephone			10,495
<u>Occupancy (Garage)</u>			
Depreciation			7,220
Real Estate Taxes			0
Repairs and Maintenance			3,971
Rent			16,000
Utilities, Heat			2,375
Subtotal - Occupancy			50,512
<u>Transportation Costs</u>			
Vehicle Depreciation			54,834
Fuel		46,626	
Repairs and Maintenance		21,652	
Insurance			24,470
Misc. Vehicle Expenses		3,448	
Provision for Major Repairs			8,000
Subtotal - Transportation		71,726	87,304

TABLE A-2. SUMMARY OF EASYRIDE EXPENSES (July 1980 - June 1981)
(CONTINUED)

Expense Category	Direct Hourly Costs	Mileage- Related Costs	Fixed Costs
<u>Other General Costs</u>			
Data Processing			\$ 60,938
Travel			1,241
Office Supplies and Postage			8,001
Reproduction and Printing			5,244
Equipment			2,845
Depreciation of Improve- ments and Equipment			5,034
Insurance			0
Program Development			1,727
Start-Up Costs (amortization)			1,928
Other Expenses			3,713
Subtotal - Other			90,671
Total Direct Costs	175,528	71,726	473,285
Indirect Costs	45,637	18,649	123,054
Total Costs	\$221,165	\$ 90,375	\$596,339
Grand Total		\$907,879	

TABLE A-3. SUMMARY OF EASYRIDE EXPENSES (July 1981 - June 1982)

Expense Category	Direct Hourly Costs	Mileage- Related Costs	Fixed Costs
<u>Personnel</u>			
Drivers	\$140,045		
Reservation Clerks			\$ 44,082
Scheduler			37,258
Project Manager			35,874
Operations Manager			29,044
Secretary and Admin. Asst.			20,123
Assoc. Dir. (Vera Inst.)			7,053
Others			41,903
Fringe Benefits	34,788		54,411
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Subtotal - Personnel	174,833		269,748
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<u>Occupancy (Office)</u>			
Rental/Depreciation			13,319
Maintenance			1,952
Utilities, Heat			6,446
Telephone			12,545
<u>Occupancy (Garage)</u>			
Depreciation			7,220
Real Estate Taxes			0
Repairs and Maintenance			1,034
Rent			18,000
Utilities, Heat			1,274
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Subtotal - Occupancy			61,790
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<u>Transportation Costs</u>			
Vehicle Depreciation			40,808
Fuel		46,386	
Repairs and Maintenance		13,934	
Insurance			19,794
Misc. Vehicle Expenses			2,492
Provision for Major Repairs			6,382
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Subtotal - Transportation		60,320	69,476

TABLE A-3. SUMMARY OF EASYRIDE EXPENSES (July 1981 - June 1982)
(CONTINUED)

Expense Category	Direct Hourly Costs	Mileage- Related Costs	Fixed Costs
<u>Other General Costs</u>			
Data Processing			\$ 43,978
Travel			695
Office Supplies and Postage			2,101
Reproduction and Printing			6,475
Equipment			794
Depreciation of Improve- ments and Equipment			4,866
Insurance			444
Program Development			0
Start-Up Costs (amortization)			1,932
Other Expenses			7,671
Subtotal - Other			68,956
Total Direct Costs	174,833	60,320	469,970
Indirect Costs	41,960	14,477	112,793
Total Costs	\$216,793	\$ 74,797	\$582,763
Grand Total		\$874,353	

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