TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
UMTA/TX-87/1088-1F		

4. Title and Subtitle	5. Report Date
Commuter Transit Service: A Financial Performance Analysis	January 1987
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
Kenneth C. Kaemmerle	Technical Report 1088-1F

9. Performing Organization Name and Address	10. Work Unit No.
Texas Transportation Institute The Texas A&M University System College Station, Texas 77843	11. Contract or Grant No. Study No. 2-10-86-1088
	13. Type of Report and Period Covered
12. Sponsoring Agency Name and Address The State Department of Highways and Public Transportation; Transportation Planning Division P.O. Box 5051 Austin, Texas 78763	Final - September 1985 January 1987
	14. Sponsoring Agency Code

15. Supplementary Notes

Research performed in cooperation with DOT, UMTA.
Technical Study Title: Strategies for "Break Even" Express Transit Operations

16. Abstract

This report details an analysis of first quarter FY86 operating cost and revenue for the Metropolitan Transit Authority (METRO) of Harris County (Houston, Texas). The METRO nine factor cost allocation model is used to allocate cost to individual routes, by schedules, and by weekday peak and off-peak time periods. Revenues are allocated to individual routes based on ridership and route specific average fares. Cost recovery ratios (farebox revenue divided by cost) are calculated for each route for both operating cost and total cost (depreciation cost included). Net cost per revenue passenger (deficit divided by revenue passengers) is determined for each service mode (local, express, park-and-ride). The financial performance of park-and-ride routes operating in transitways (HOV lanes) is compared to similar routes not using transitways. The financial performance of park-and-ride routes operated by private sector contractors is compared to the performance of similar routes operated by METRO.

The analysis indicates that commuter services have higher cost recovery ratios than weekday local service but local service has a lower net cost per revenue passenger. Cost recovery ratios during the peak period were found to be higher than during the off-peak for local service. Cost recovery ratios for routes using transitways were comparable to routes not using transitways only when transitway capital costs were not included. When transitway depreciation was included, cost per hour was 17 percent higher. Service by contract operators was found to cost less per revenue hour than similar service provided by METRO.

17. Key Words	18. Distribution Statement
transit finance, transit fares cost/ revenue analysis, farebox recovery ratio, cost allocation model, park and ride service, HOV, privatization	No restrictions. This document is available to the public through the National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	66	

Form DOT F 1700.7 (8-69)

COMMUTER TRANSIT SERVICE: A FINANCIAL PERFORMANCE ANALYSIS

by

Kenneth C. Kaemmerle

Technical Report 1088-1F
Technical Study Number 2-10-86-1088
Strategies for Break Even Transit Operations

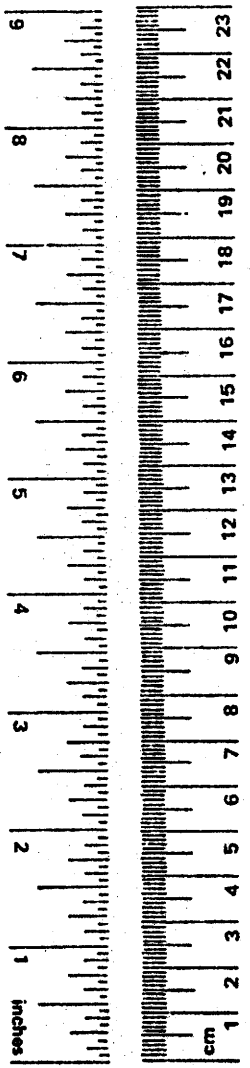
Sponsored by the
State Department of Highways and Public Transportation
in cooperation with the
U. S. Department of Transportation
Urban MassTransportation Administration

TEXAS TRANSPORTATION INSTITUTE
Texas A&M University System
College Station, TX 77843

METRIC CONVERSION FACTORS

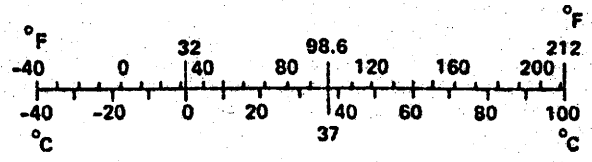
Approximate Conversions to Metric Measures

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	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	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



Approximate Conversions from Metric Measures

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	
	MASS (weight)			
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
	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 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.

ACKNOWLEDGEMENTS

The author would like to thank Mr. Ed Collins, Transportation Planning Division, State Department of Highways and Public Transportation for having served as project contact for this study. The author is especially indebted to Mr. Doug Wentworth, Director of Planning Analysis for the Metropolitan Transit Authority, for his invaluable assistance in identifying data sources and reviewing the cost/revenue analysis. The author would also like to thank Dr. Dennis Christiansen, Manager, Transport Operations Program–Texas Transportation Institute for reviewing the progress of the study and his helpful suggestions. Finally, the author would like to acknowledge the assistance of Mr. Michael Taylor and Mrs. Donna Lowery, Texas Transportation Institute–Transportation Planning Program with data processing for the study.

EXECUTIVE SUMMARY

Mass transit services oriented to workers traveling between the suburbs and central city of major urban areas have become common in recent years as communities have sought to reduce congestion in principal transportation corridors during peak travel periods. These services may take the form of express bus, park-and-ride, rail rapid transit or light rail. In Texas, commuter services are presently limited to the bus mode. Transit planners have recognized that to attract trip makers the transit service offered must be of high quality. Many studies have been made of demand for commuter transit services and the design of the service that should be provided. Only a limited amount of attention has been paid to questions related to the cost of providing transit service and amount of transit system resources that are being devoted to commuter-oriented transit.

This study examines some of the financial issues related to commuter service by analyzing the financial performance of the commuter services of the Metropolitan Transit Authority of Harris County (METRO) serving the Houston metropolitan area. METRO financial and operating data from the first quarter of METRO's 1986 fiscal year (October-December 1985) were employed in the analysis. METRO uses a nine factor cost allocation model allowing a sensitive apportionment of cost by service type and by route. The model was used to apportion system cost in the first quarter of METRO's 1986 fiscal year (October-December 1985) among the local, express, and park-and-ride routes in service at the time. Costs were alternatively apportioned with and without depreciation charges. Service costs were further segregated by weekday peak and off-peak sevice periods. System revenue during the quarter was apportioned among the routes based on ridership and route-specific average fares.

The cost recovery ratio of METRO park-and-ride and express services has been used as the primary analytical measure of financial performance. The cost recovery ratio is the proportion of revenue received from users of a service to the costs incurred by operating the service. The net cost of service per revenue passenger was also determined. The net cost is the difference between cost and revenue. It is often called the operating subsidy. The net cost per revenue passenger is the average cost to the system of each passenger trip.

The analysis was designed to answer the following questions about METRO service:

- Do commuter services pay for themselves?
- Do revenues from commuter services pay more of the service cost than do local service revenues?
- Are the net costs per revenue passenger comparable for commuter and local sevices?
- Are cost recovery ratios and the net cost per revenue passenger the same during the peak and off-peak periods?

METRO park-and-ride service is also notable for its use of transitways in freeway medians and the fact that METRO has contracted with private operators for service on some of the routes. This study, therefore, has looked at two additional questions:

- Is there a difference between the cost recovery ratios and net cost per revenue passenger for park-and-ride routes that operate in transitways and those that do not?
- Is there a difference between cost recovery ratios and net cost per revenue passenger for routes operated by METRO and those operated by contractors?

The results of the analysis have shown that farebox receipts for METRO commuter services pay a larger percentage of the cost of the service than do local service revenues. However, the net cost per revenue passenger for commuter services is as much as twice that for local service. Local service has a slightly higher cost recovery ratio when only the peak period cost and revenue are considered. The cost recovery ratios for park-and-ride routes operating in transitways and those that do not are almost the same. The routes using the transitways have higher costs, but the costs are offset by the higher revenue associated with METRO's distance based park-and-ride fares. The net cost per revenue passenger for the transitway routes is lower than for those not using the transitways only when the capital cost of the transitway is not considered. Cost recovery ratios for contracted service are higher than for METRO-operated service and net cost per revenue passenger are lower. METRO park-and-ride services have been successful at attracting commuter ridership. However, the park-and-ride service carries only 12.3 percent of the weekday ridership and requires 20.4 percent of the operating subsidy.

IMPLEMENTATION STATEMENT

The findings of this report indicate that the continued expansion of commuter services, at least in the METRO service area, will consume an increasing proportion of the local operating subsidy. The study examined the potential of increasing revenue from commuter services and concluded that, with the current cost of substitute service (ie., automobile), the potential was limited. The choice would be between increasing revenue and decreasing ridership. The use of transitways to make commuter service more attractive appears to have been successful in that the cost recovery ratios for the routes using the transitways is comparable to those that do not. Attention should be paid to the source of financing for the transitways since the inclusion of their cost in the cost of service makes the cost of operating transitway routes 17 percent greater. Contract services have been found to have lower operating costs and, therefore, hold some potential for improving the financial performance of the park-and-ride service.

DISCLAIMER

The contents of this report reflect the view of the author who is responsible for the facts and accuracy of the date presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration or the State Department of Highways and Public Transportation. This report does not constitute a standard, specification, or regulation.

There was no invention or discovery conceived or first actually reduced to practice in the course of or under this contract, including any art, method, process, machine, manufacture, design, or composition of matter, or any new or useful improvement thereof, or any variety of plant which is or may be patentable under the patent laws of the United States of America or any foreign country.

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Part I - INTRODUCTION TO THE RESEARCH PROBLEM

Commuter public transportation services have been implemented in many American urban areas as one method of reducing the roadway congestion in major transportation corridors that takes place as suburban residents journey to and from the central city for employment. These transportation services may take the form of heavy or light rail, bus, vanpool or carpooling. Each has the objective of increasing corridor capacity by shifting person work trips from single-occupant vehicles to shared vehicles. Where implemented, commuter transit service can reduce the need for added roadway capacity or, at least, postpone the need.

The attention of both public mass transportation agencies and highway transportation agencies has been drawn in the past ten years to the benefits that might accrue to the transportation system as a whole if resources were committed to commuter transit. The concept of Transportation System Management has encouraged study and implementation of mass transit technologies that might serve as cost effective and environmentally compatible alternatives to roadway construction. As a result, the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA), along with state and local transportation agencies have financially supported the expansion of commuter service.

The Texas Experience

An involvement in commuter transit service in Texas has been generally been limited to the larger urban areas: Houston, Dallas-Fort Worth, San Antonio, El Paso and, most recently, Austin. Commuter transit services in Texas have taken the form of bus, vanpool and carpool. At present, there are no rail transit services in the state, though some are in the planning stages. The most common of the commuter bus transit services found in the state is the express bus, often associated with a park-and-ride lot. Park-and-ride service is most prevelant in Houston, Dallas-Fort Worth and San Antonio.

A significant amount of research has taken place, and continues to take place, to determine the most effective means of implementing commuter services in Texas communities (Christiansen 1978, 1980, 1981), (Bullard, 1983), (Nordstrom, 1981), (Porterfield, 1982), (Kuo, 1984). Studies have been made of the factors influencing commuter demand, the design of park-and-ride lots and, most recently, the design and operation of High Occupancy Vehicle (HOV) lanes to improve the flow of commuter traffic. Among the related issues that have received less attention are the economics of commuter service.

This study will take a limited look at some of the issues associated with the cost of commuter service. The commuter services of the Metropolitan Transit Authority of Harris County (METRO) which serve the Houston urban area, have been selected for analysis. After reviewing the availability of data from the three largest Texas systems, it was determined that METRO's data base would be the most complete for the intended investigation. METRO has the most extensive complement of commuter oriented transit services among Texas' transit properties. Houston is also among the leading communities nationwide in the development of HOV lanes to facilitate commuter transit travel. In addition METRO has had several years of experience with private sector contracting for park-and-ride service. The first quarter of METRO's 1986 fiscal year (October-December 1985) will be the period studied.

Questions to be Addressed by the Research

1. Do METRO commuter services pay for themselves? Park-and-ride routes in the METRO system have fares two to three times the fare for local service. The commuter routes operate almost exclusively during the peak travel period when ridership is the highest. With higher fares, presumably higher load factors, and higher revenue passenger to total passenger ratios, park-and-ride routes could be expected to recover more of their cost than do local routes. Express routes, with more of the characteristics of park-and-ride service than local service, could also be expected to do well in this respect.

To answer this question the *cost recovery ratios* for METRO commuter services will be calculated. The cost recovery ratio is simply the proportion of direct service costs that are paid for by (farebox) revenues collected from the direct users of the service. Cost recovery ratios are not the only, nor ultimate, measure of the efficiency of transit operations.* They say little about the service's effectiveness in meeting many of the objectives that may have been set for it. However, for this study the cost recovery ratio is a useful indicator of the relative financial performance of different routes and service modes.

2. How does commuter service compare to local service in terms of cost recovery. Local routes in the METRO system have an all day flat fare and most of the routes operate 18 or more hours a day. Some local routes do, however, carry large passenger volumes. Local routes also are not subject to the excessive deadhead travel encountered by commuter services operating in the peak. Many studies have shown that off-peak operating costs are less than peak costs. Since the majority of local service is during the off-peak it might be expected that local service would have an overall lower cost and potentially higher cost recovery than commuter routes.

The question of whether peak service has a higher cost recovery rtatio than off-peak has been frequently debated by transit analysts. Cervero (1980, p. 93) reported that, "Research findings...have suggested that higher peak-period revenues are overshadowed by comparatively higher peak costs. Others, however, have asserted that the industry's prevailing opinion has been that the (peak's) revenue effect exceeds the cost effect. That is, peak service has better financial performance in terms of the ratio of revenue to cost than the base service (Reilly, 1977, p. 3)."

A comparison of the cost recovery ratios for commuter and local services during the weekday will provide an answer to this question. Local service cost will be segregated by schedule (weekday, Saturday, Sunday/holiday) for this comparison. A calculation of the cost recovery ratio for each route will address the question of whether some local routes have significantly higher cost recovery ratios than others.

*See Young (1985) for a discussion of the benefits and pitfalls of the cost recovery ratio as a performance measure.

3. Is the net cost per passenger to METRO the same for commuter and local services. The cost of service to the transit authority is the amount of costs that are not covered by passenger revenue. The cost recovery ratio expresses this proportion. It does not indicate the amount of the difference between cost and revenue in dollars. The net cost of two routes with identical cost recovery ratios can be very different. The issue being probed by this question is whether net dollar cost between local and commuter services is different. Since the function of the transit service is to transport passengers the net cost will be expressed in terms of *net cost per revenue passenger.** The net cost to METRO of transporting riders using the different types of service can then be compared.

4. Are cost recovery ratios and the net cost per revenue passenger comparable for commuter and local service when only peak cost and revenue are compared? It was noted previously that commuter services take place during the peak while local services operate during both the peak and off-peak periods. Dissimilarities in cost recovery ratios and net costs may be due to the differences in costs and ridership in the peak and off-peak. To determine if peaking characteristics explain any difference between commuter and local service cost revenue and net cost measures, cost, revenue and ridership for each route will be separated into peak and off-peak components. The same analysis performed in 1-3 will then be repeated for the two time periods.

5. Do park-and-ride routes using transitways have cost recovery ratios and net costs per revenue passenger different from those of routes that don't operate in transitways? An extensive system of HOV transitways are in the process of being constructed on freeways in the METRO service area. These facilities are designed to decrease the trip time for transit users, thereby making the service more attractive. A reduction in travel time should also increase the efficiency of the service which in turn should be reflected in lower operating costs. However, when captial costs are included the additional cost of the transitway could offset the reduction in cost achieved by the more efficient operation.

To answer this question the park-and-ride routes will be separated into two groups based on whether or not they use a transitway. As in the prior analysis, costs and revenues for the routes in each groups will be compared by calculating cost revenue ratios and net cost per passenger.

6. Are the cost recovery ratios and net cost per revenue passenger different for contract service park-and-ride routes compared to those park-and-ride routes operated by METRO? The argument is often made that some transit services can be provided by the private sector at less cost to the public than if the service were to be operated by the public transit agency. METRO's use of contract service allows a comparison to be made between the two operators. As in the transitway analysis, cost recovery and net cost comparisons will be made for the two types of operations.

*Cervero (1980) made this comparison using revenue and cost per passenger mile, passenger miles being the common denominator.

Report Organization

The discussion of the analysis undertaken to answer the preceding questions has been organized as follows:

- Part II is a description of the METRO system paying particular attention to the park-and-ride services that were offered in the first quarter of FY 1986. Additional detail about transitways and contract service is included.
- Part III describes the data collection process and the methodology used to analyze the data.
- Part IV presents the results of the analysis and answers the questions posed for the reserach.
- Part V summarizes the research findings and comments on their policy implications with respect to their possible implementation.
- Part VI contains the appendicies. The appendicies include the route level analyses that have been summarized in Parts III-V.

Part II - BACKGROUND

The transit system operated by the Metropolitan Transit Authority of Harris County provides an excellent environment in which to study the questions posed for this research. METRO serves the Houston metropolitan area. Harris county, in which Houston is located, had a 1982 population of 2.6 million. With a population of 1.6 million, Houston is the largest city in Texas and the fourth largest city in the United States. The following paragraphs describe the METRO system.*

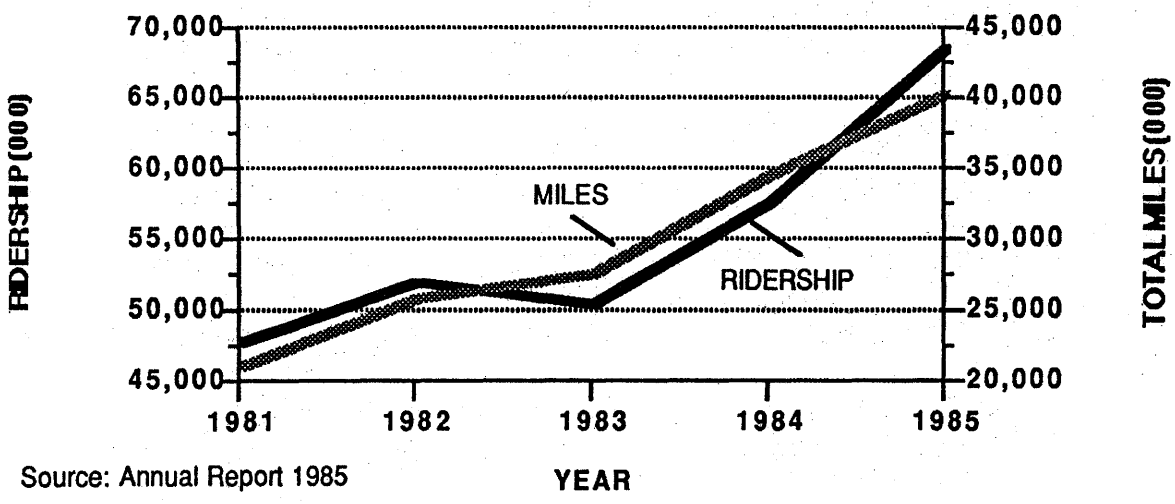
The Metropolitan Transit Authority

METRO was created in August 1978 by the voters of Harris County who approved the collection of a one percent sales tax to partially fund the authority. The authority is governed by a nine member board of directors. Five of the directors are appointed by the mayor of Houston, two by the Harris County Commissioners Court, and two are appointed by the 14 area mayors in the METRO service area. The transit system is managed by a general manager appointed by the board. The authority had a total of 2,936 employees in March of 1986, 936 of whom were in management and administration.

METRO's operating expenses in fiscal year 1985 were $156 million with farebox revenues of $31 million.** Sales tax revenues during the fiscal year provided another $173.6 million. METRO operates a fleet of 1,079 buses including more than 150 commuter-type vehicles and 50 articulated buses. The fleet is housed and maintained at five maintenance and operating facilities. Administrative headquarters are located in the Houston CBD.

Figure II.1

METRO TOTAL MILES AND RIDERSHIP 1981-85



Source: Annual Report 1985

METRO has steadily increased the level and quality of its service over the past five years with a corresponding growth in ridership as shown in Figure II.1 Transportation is provided to area residents through a coordinated group of services. Bus services operate six days a week on 55 local routes and four express routes. Sunday and holiday service is provided on 38 of the local routes. Weekday service is supplemented by 22 park-and-ride routes. METRO also operates a

* The source of the information unless otherwise noted is the "Metro Fact Sheet," June 1986.
** 1985 Annual Report, Metropolitan Transit Authority of Harris County.

regional vanpool program to complement existing transit services. All vehicles, insurance and administrative services for the VanShare program are provided by private contractors working with METRO. METROLift service provides curb-to-curb transportation for disabled persons with a fleet of 59 vehicles, supplemented with taxicabs. In addition, METRO provides computerized matching service for persons wishing to carpool.

METRO planners have been working on a regional transit plan to guide the future of transit development in Houston. The plan was adopted by the board in the spring of 1986. The METRO staff is proceeding with the detailed analysis of alternative modes and alignments for a "system connector" concept. A capital reserve fund consisting of unexpended revenues is being maintained to help finance this future system development.

METRO Park-and-Ride Service

The primary focus of this study is on METRO's park-and-ride service. Park-and-ride service in Houston began with the opening of a park-and-ride lot at a Sage Department Store in March of 1977. From that beginning service has increased to 22 routes serving 20 park-and-ride lots with a total capacity of 20,500 parked cars. Most of the routes provide direct service to the Houston CBD. Several of the routes serve other major activity centers in addition to the CBD. Table II. 1 lists the routes that were active during the first quarter of fiscal year 1986. The location of the park-and-ride lots are shown on the map in Figure II.2

Two features of METRO's park-and-ride service have gained nationwide attention. Nine of the park-and-ride routes make use of transitways that have been constructed in freeway corridors. Six park-and-ride routes have been contracted out to private operators. Special attention will be paid in this study to the routes that feature these charateristics.

Transitways

The Houston area continues to lead the nation in building transitways in freeway medians. Sixty-nine miles are currently authorized for design and construction. Transitways, also referred to as Authorized Vehicle Lanes (AVL), are designed to decrease travel times for high occupancy vehicles such as buses and vanpools. Transitways (Figure II.2) are being constructed on the North Freeway (I-45), the Katy Freeway (I-10) and the Gulf Freeway (I-45) while the Texas State Department of Highways and Public Transportation (SDHPT) is resurfacing and widening the roadways.

The contraflow lane on the North Freeway was replaced with an interim median lane in 1984. The interim lane is being improved to become a barrier-protected lane in the freeway median. The 14.1 mile transitway from the CBD to Beltway 8 will be completed in 1988. A three mile segment from Beltway 8 to Airtex is planned for completion in 1988. A 2.5 mile extension of the transitway to FM 1960 is also under consideration. The first 6.2 miles of the Katy transitway are completed. An additional 5.3 miles are scheduled for completion in 1987. When complete, the Gulf transitway will extend for 15.5 miles. It is scheduled to be completed in the fall of 1987.

Planning is underway for transitways on the Northwest (US 290) and Southwest (US 59S) freeways. These projects are also being coordinated with the SDHPT. The Southwest transitway will extend 8.5 miles from West Bellfort to I-610. The Northwest transitway will run for 13.5 miles between FM 1960 and the Katy Freeway. The transitways are expected to play a major role in METRO's development plans. Their relationship to the questions posed for this study is therefore important.

Table II.1

METRO Park-and-Ride Services
1st Quarter FY1986

No.	Route Name	Service Began	Operated By	Distance from CBD	Peak Buses	Peak Trips AM	Midday	PM	Lot Capacity	Cash Fare
59	Southwest Fry	6/1977	METRO	12.15	3	6	No	7	125	$1.25
107	FM 1960	8/1979	Contract	26.08	8	12	No	12	None	$2.00
201	North Shepherd	4/1980	METRO	9.35	13	26	No	26	1605	$1.25
202	Kuykendahl	1/1980	METRO	15.60	34	56	Yes	54	2246	$1.70(1)
204	Spring	10/1982	Contract	19.50	18	33	Yes	33	1280	$2.00
205	Kingwood	11/1979	Contract	27.40	15	22	Yes	21	940	$2.25
206	Eastex	7/1983	METRO	13.60	8	15	Yes	16	930	$1.45
210	West Belt	1/1985	METRO	13.73	6	12	Yes	11	1111	$1.45
212	Seton Lake	4/1983	Contract	16.70	15	28	No	24	1286	$1.70
214	Northwest Sta.	4/1984	METRO	19.45	8	15	No	16	1222	$1.70
221	Kingsland	9/1980	METRO	28.75	8	11	No	10	1300	$2.25
227	Katy/Fry	10/1982	METRO	32.00	4	6	No	6	35	$2.25
228	Addicks	1/1982	METRO	18.66	13	21	Yes	21	1119	$1.70
236	Maxey Road	8/1985	METRO	11.45	3	9	No	10	1129	$1.45
245	Edgebrook	3/1977	METRO	11.80	13	22	Yes	25	1000	$1.45
246	Bay Area	3/1980	Contract	22.55	14	22	Yes	22	1165	$2.00
261	West Loop	6/1977	METRO	10.10	7	20	No	20	639	$1.10
262	Westwood	5/1979	METRO	13.85	9	21	Yes	18	1213	$1.45
263	Alief	4/1981	METRO	15.61	9	13	No	13	1377	$1.45
270	Missouri City	10/1981	Contract	13.45	8	12	No	12	779	$1.45(2)
284	Spring-Westlake	1/1985	METRO	27.08(3)	4	4	No	5	50	$2.00
291	N. Shepherd-TMC	9/1985	METRO	13.25(4)	3	5	No	5	(5)	$1.45

(1) Fare to Greenway or Post Oak is $2.00

(2) Fare to TMC is $1.25

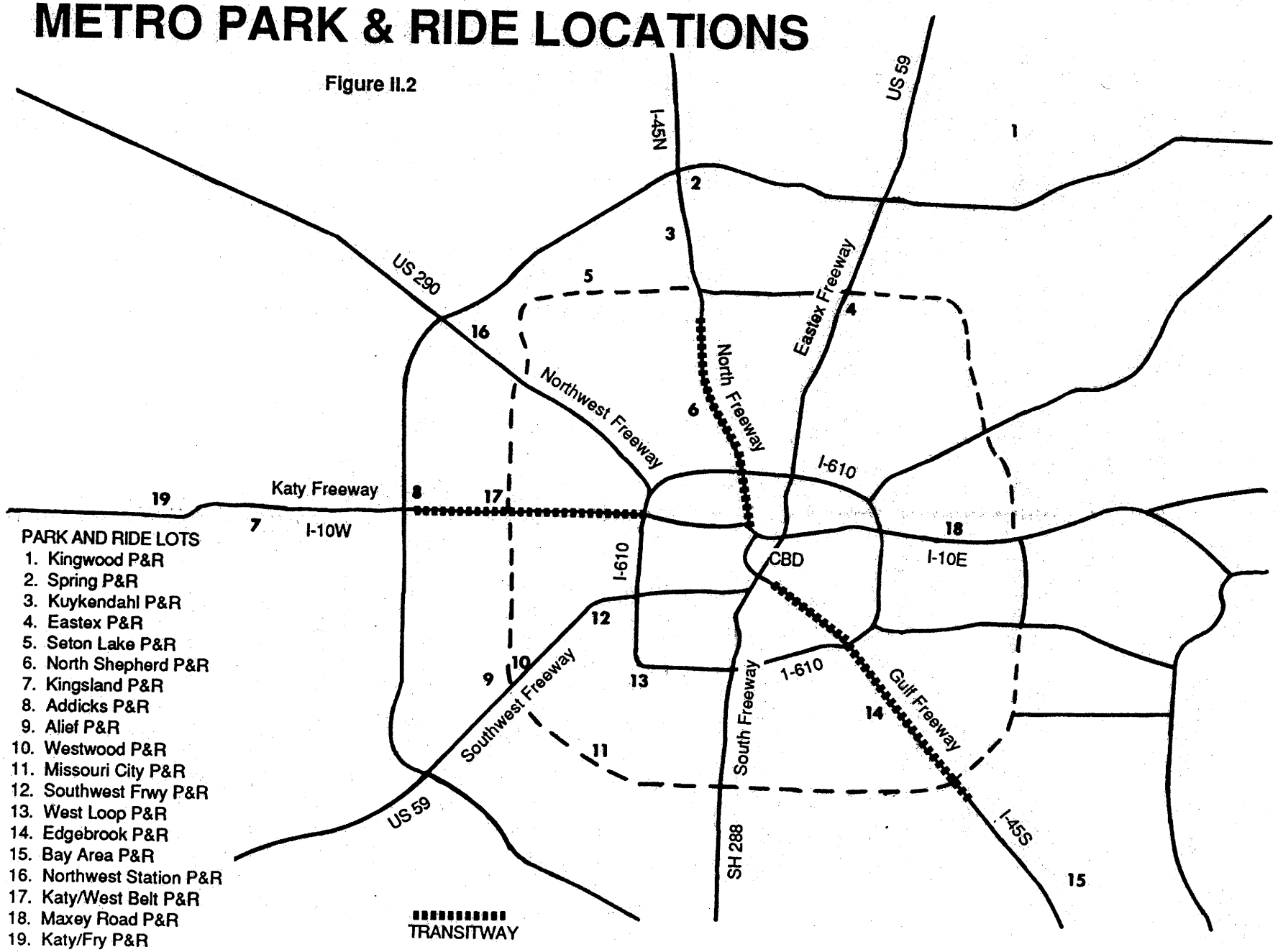
(3) Route length. Does not go to central Houston.

(4) Distance to TMC

(5) Shares lot with Rt. 201.

METRO PARK & RIDE LOCATIONS

Figure II.2



PARK AND RIDE LOTS

1. Kingwood P&R
2. Spring P&R
3. Kuykendahl P&R
4. Eastex P&R
5. Seton Lake P&R
6. North Shepherd P&R
7. Kingsland P&R
8. Addicks P&R
9. Alief P&R
10. Westwood P&R
11. Missouri City P&R
12. Southwest Frwy P&R
13. West Loop P&R
14. Edgebrook P&R
15. Bay Area P&R
16. Northwest Station P&R
17. Katy/West Belt P&R
18. Maxey Road P&R
19. Katy/Fry P&R

Contract Park-and-Ride Services

METRO has gained national attention for contracting with private operators for service on several of the park-and-ride routes. METRO began the practice of contracting for service in 1981 when it was unable to expand service fast enough to meet the demand for commuter service. The contract service initially involved 120 buses on 12 routes with five private operators involved (Rooney and Teal, 1985). Much of that service has now been assumed by METRO. During the first quarter of FY 1986 six of the park-and-ride routes were placed out for bid. They are all presently operated by the same contractor under a three year agreement. METRO provides the administrative services (planning, scheduling, marketing, etc.) for the contract routes. The contractors provide vehicles, drivers, maintenance and insurance. The performance of the contract routes with the METRO operated will be compared as part of the study.

The next part of the report will explain the sources of the data and the methodology used to analyze the questions that are the subject of this research.

PART III - FRAMEWORK AND METHODOLOGY

Cost and revenues for the first quarter of METRO's fiscal year 1986 were used to analyze the questions posed by this study. The analysis was limited to one quarter's data to constrain the variablity in service characteristics that take place over a year and to reduce the amount of data required for the analysis. It was desirable to analyze a period during which the fare did not change. A fare change would have required estimating two sets of average fares. Similarly, changes of service levels during the period would require prorating costs based on the number of days each level of service was operated. The quarter which best met these analysis criteria was the fourth quarter of fiscal year 1985 covering the months of July, August and September 1985. There were no fare changes during the quarter and limited modifications in service levels. Unfortunately, complete data for that quarter were not available.

The next best quarter for analysis was the first quarter of fiscal year 1986. There were no fare changes during the quarter but there were numerous service changes including:

the addition during the second month of a new route (Line 37-El Sol);

the addition of two shuttle routes (Lines 420 and 421, Post Oak Specials);

the splitting the Katy-Mason park-and-ride into two routes (Kingsland and Katy-Fry);

the operation of two contract park-and-ride routes by METRO during October;

changes in service levels on park-and-ride lines 202, 210, 228 and 284.

None of these service changes required a new driver's signup which would have substantially affected the schedules for all lines.The first quarter of METRO's fiscal year also includes the Thanksgiving and Christmas holidays during which service levels are maintained but ridership is traditionally below average.

Cost Analysis

METRO does not report cost by line. Costs are reported monthly, quarterly and annually for each of METRO's service modes: local, METRO park-and-ride, contract park-and-ride, charter, Clear Lake shuttle, METROLift and Vanshare.To perform the analysis outlined in the first chapter it was necessary to disaggregate the mode totals into individual route costs.

Cost Model

METRO has a very complete cost allocation model which is used to allocate total system expenditures to expense line items and, in turn, to service modes. The model uses the following allocation variables:

vehicle miles (platform miles)

vehicle hours (platform hours)

pay hours

revenue hours

employees

protected park-and-ride lots

peak buses

park-and-ride lots served

buses operating on transitways

One of the strong points of the model is its inclusion of the variable "operator pay hours." This variable is used to allocate driver and transportation supervisory costs. Pay hours include the actual time for which drivers are paid. Pay hours exceed the time the vehicle is on the road (vehicle/platform hours) or the time it is actually carrying passengers (revenue hours). The importance of the pay hour variable has been identified by Cherwony, et. al. (1981). The ratio of revenue hours to pay hours decreases when extra service is added during peak periods. The use of the pay hour variable, therefore, is preferable to revenue or vehicle miles for allocating driver wages. Total driver wages can be more accurately allocated to those routes with higher levels of peak service. This is especially important to this study's analysis of peak and off-peak costs.

The number of vehicle miles, vehicle hours, pay hours and peak vehicles on each route during the quarter can be found in the METRO report, "Summary of Schedules." The Summary of Schedules dated September 30, 1985, and a revision of this Summary of Schedules dated November 4, were used. The data for the other variables was taken from a METRO report, "First Quarter FY86 Update," which accompanies the quarterly cost allocation report.

Line item expenditures are allocated to each of the service modes based on each service mode's proportion of the variable total. For example, assume line item A had $100,000 in expenditures during the quarter and line item A expenses are allocated by vehicle miles. If local service had 81 percent of the vehicle miles during the period, then $81,000 of line item A expenses would be allocated to local service. For some line items, expenditures are allocated by more than one variable. By examining each line item it is possible to derive total expenditures allocated by each variable for each service mode. Total expenditures can then be allocated to individual routes in proportion to the route's share of the variable total. Continuing the example above, if Line No. 38 is a local route which operates 0.5 percent of the vehicle miles operated on local routes during the period, then $405 of line item A expenses would be allocated to Line 38.

Capital costs. Capital costs include depreciation on vehicles, land and building improvements, transitways, and durable equipment used in maintenance and administration. The METRO cost allocation model includes depreciation line items. The last three variables listed above are used principally to allocate these captial costs. Most cost allocation models do not include depreciation expenses since only "operating" or variable costs are of interest. These models may be used for estimating the cost of service expansion where the additional costs are largely increments of hours and miles. In this analysis the total cost of providing the service is of interest. It is, therefore, appropriate to include depreciation as a measure of the consumption of capital items.

Direct operating costs (depreciation excluded) *is* of interest when comparing the operating cost between routes or service modes. For this reason route costs have been estimated both with and without depreciation. Administrative overhead is also usually excluded from direct operating costs. Administrative costs have not been excluded from direct operating costs in this study.

The exclusion of capital depreciation complicates the comparison of METRO park-and-ride and contract park-and-ride costs. Depreciation of the revenue vehicles used by the private service provider is not included in the METRO cost allocation model and, therefore, cannot be excluded to compare direct operating costs. It has been assumed that the private provider has included a charge for vehicle depreciation in the cost of the service to METRO. Therefore, to compare METRO with contract park-and-ride, a third cost analysis category has been created which includes only revenue

vehicle depreciation. When total costs of service are compared the captial depreciation costs associated with contract park-and-ride (transitways, park-and-ride lots, etc.) are included. The three cost analysis categories have been identified as "all depreciation included," "vehicle depreciation only included," and "no depreciation included" (abbreviated in the tables as "all, vehicle, none.")

All captial depreciation costs have been allocated to weekday service. The allocation is based almost entirely on the number of vehicles in service during the afternoon peak period. "Peak vehicles" is a good measure of a route's capital requirements, not only in terms of the number of buses, but also in relation to the maintenance and administrative facilities required to support service. The practice of allocating capital costs based on peak vehicle use is a common practice (Cervero, 1980, p.69). Though wear on buses in particular also takes place when they are used for weekend service, this is considered a maintenance related expense and is accounted for under maintenance line items.

Table III.1 shows first quarter fiscal year 1986 costs allocated by the model variables, for each service mode of interest, and for the three cost analysis categories. The METRO cost allocation variable for employees (staff assignments) was not used in the study cost allocation. The data is not available to allocate costs to individual lines based on the number of employees serving the line. The number of peak buses was used in this analysis to allocate costs which the model allocated by the number of employees.

Table III.1
1st Quarter FY86 Cost Allocation Summary

	All Depreciation			Vehicle Depreciation Only			No Depreciation		
	Local	Metro P&R	Contr P&R	Local	Metro P&R	Contr P&R	Local	Metro P&R	Contr P&R
Veh Mi	$9,983,740	$1,614,639	$7,182	$9,896,701	$1,614,639	$7,182	$9,896,701	$1,614,639	na
Veh Hr	4,618,155	447,300	1,248,267	4,618,155	447,300	1,248,267	4,618,155	447,300	na
Rev Hr	1,912,366	182,145	63,035	1,513,113	124,672	50,113	1,513,113	124,672	na
Pay Hr	10,795,431	1,183,71	na	10,795,431	1,183,712	na	10,795,431	1,183,712	na
Pk Veh	4,861,159	1,255,193	na	3,437,624	870,349	na	1,319,822	289,927	na
Buses on Transitwy	129,368	601,182	230,314	17,927	82,574	34,456	17,927	82,574	na
Protected P&R Lots	0	82,381	17,227	0	82,381	17,227	0	82,381	na
P&R Lots Served	0	626,944	265,030	0	105,367	88,153	0	105,367	na
Total Alloctn	$32,300,219	5,993,548	1,831,055	30,278,951	4,510,994	1,445,398	28,161,149	3,930,572	na

na - data not avaliable

Peak and Off-Peak Costs

METRO does not report time and mileage by time period. Therefore, a model was developed to factor the time and mileage cost allocation variables into peak and off-peak components. The same allocation variables used to allocate costs to service modes and individual routes were used to allocate costs to the two weekday service periods. The peak period was defined as 6:00 a.m. to 8:59 a.m. and from 3:00 p.m. to 5:59 p.m. Revenue service during this period was considered to be peak service. All other service was considered off-peak.

The model made use of the distinction between the types of service blocks scheduled during the day. A block is the period of time from when a bus leaves the garage to when it returns. In some cases a bus departs the garage in the morning and remains in service all day. These are defined as "all-day blocks." In other cases a bus will go out for the morning peak period, will return to the garage, and then be dispatched again for the afternoon peak period. We will refer to these as "peak blocks." METRO also has blocks that begin in the p.m peak and continue into the evening hours, which will be called "evening blocks." METRO assigns each of the three types of blocks distinct numerical codes which, along with the route number, identify the block.

METRO's "Run Summary and Time Report" and "Block Summary" report provide the detailed information required to apportion time and mileage to the peak and off-peak components. The Run Summary document details the non-platform hours that contribute to pay hours. Though these non-platform hours are based on the driver's run time (the amount of work the driver does during the day), they can be reallocated to the run pieces which correspond to individual blocks. Overtime and undertime have been split between run pieces. All other non-platform time has been allocated to the block in which it occurred. The non-platform time provisions of the METRO labor agreement dated August 1, 1984 were followed.

All-day blocks. For the buses that remained in service all day, i.e., operating in both time periods, pay time in excess of platform time was allocated to the off-peak. Platform time was allocated to each time period based on the amount of revenue time spent during each period. An all-day block could have a maximum of six peak hours. Revenue time was divided into peak and off-peak components by multiplying the platform time for each period by the block's revenue/platform hour factor identified in the Block Summary report. Revenue miles in each time period were estimated by multiplying the revenue hours for each period by the average vehicle speed (m.p.h.) during the period. An estimate of the average speed in each time period was derived from the peak and off-peak round trip times reported in the Summary of Schedules. Platform/vehicle miles for all day blocks were determined by adding deadhead miles to off-peak revenue miles.

Peak blocks. The costs incurred for blocks that are dispatched and operate only during the peak were considered to be peak period costs. All pay hours in excess of platform hours were credited to the peak period for these blocks. Up to four hours of platform time for each peak block were credited to the peak period. Three of these hours were for revenue time and one hour was to account for deadhead time to and from the garage. In only a few cases did these blocks operate for more than than four hours. Deadhead miles for those blocks was similarly credited to the peak. The remaining mileage (revenue miles) was divided between the two time periods as was done for all-day blocks.

Evening blocks. Time and mileage for evening blocks was allocated to the peak and off-peak in the same manner as for all-day blocks with two exceptions. Pay time in excess of platform time was divided evenly between the peak and off-peak. Deadhead miles were split evenly between the two time periods.

Adding the platform miles, platform hours, pay hours, revenue miles and revenue hours for each block resulted in an estimate of the peak and off-peak measure of these variables for each route. The total costs allocated by these variables could then be further allocated by route, by time period. Note that revenue miles is not a allocation variable but was needed to estimate platform miles by time period.

Capital costs. As explained previously, all system capital costs have been allocated to the weekday schedule. The rationale for this was that the weekday schedule determines the level of capital investment. The question then becomes how to apportion capital costs allocated by peak vehicle between the peak and off-peak periods of the weekday schedule. Following the reasoning used to allocate capital based on the peak demand, it might seem reasonable to allocate all capital costs to the peak period. However, many of the vehicles operating in the peak also operate in the off-peak or base period. A preferable allocation might allocate a part of the capital cost to the peak increment (number of peak vehicles-base vehicles) and the remainder of the cost to each period based on the number of vehicle hours in each period. This is similar to the apportionment procedure used by Cervero (1980). The allocation of captial costs used in this study were made as follows:

$$PVF = (PVI/PV)+[(PVH/TVH) \times (BV/PV)]$$
$$BVF + (BVH/TVH) / (BV/PV)$$

where: PVF = peak vehicle factor
PVI = peak vehicle increment (additional vehicles over base)
PV = number of peak vehicles
BV = number of base vehicles
PVH = peak vehicle hours
TVH = total vehicle hours
BVH = base vehicle factor

Contract park-and-ride routes are not included in the Run and Block Summary reports. Without the detailed information provided by the Run and Block Summary reports it was not possible to apportion contract park-and-ride costs to the peak and off-peak period. However, only a very small portion of the contract park-and-ride schedule is operated during the off-peak. It can be assumed that all contract park-and-ride service takes place during the peak and, therefore, all contract park-and-ride costs are peak costs. Table III.2 summarizes weekday local, express and METRO park-and-ride costs by time period.

Table III.2

1st Quarter FY86 Weekday Cost Allocation by Service Mode and Time of Day

Depreciation	All Depreciation		Vehicle Depreciation Only		No	
Mode	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Local*	$12,862,839	$12,877,116	$11,785,987	$12,261,779	$10,445,613	$11,652,136
Express	1,482,522	317,767	1,259,209	297,107	1,098,490	290,040
Metro P&R	5,600,385	393,110	4,197,118	313,877	3,627,683	302,893
Total	$19,945,746	$13,587,993	$17,242,314	$12,872,763	$15,171,786	$12,245,069

Revenue Analysis

METRO also does not record revenue by route. The METRO buses are not equipped with recording fareboxes. Farebox and prepaid revenues are credited to the service modes based on estimates of ridership and an average fare. This method of apportioning revenue was also used to estimate fare by route for this analysis. An average fare was calculated for each route. The average fare was then multiplied by the quarterly ridership to provide the route revenue estimate. After all route revenue was estimated, appropriate adjustments were made to bring the estimated revenue in line with the revenue collections reported by METRO.

Ridership Estimates

METRO drivers count all boarding passengers and the passenger's method of fare payment on each route for one week of each month. These weekly counts are then factored upward to monthly ridership by line. The ridership estimated in this manner is multiplied by an average fare to estimate revenue. The estimated revenue is then compared to the collected revenue and a further adjustment is made to the ridership so that the product of ridership and average fare equals collected revenue. The driver counts of ridership are recorded in a series of computer printouts labelled "PCT." (PCT83 was used in this analysis.) The adjusted ridership is reported by line in the "Quarterly Ridership Report." All reported ridership is for unlinked passenger trips (revenue passengers plus transfer passengers.)

Estimated Average Fare

An average fare was calculated for each route using the PCT83 monthly passenger counts and data provided on fare payment by METRO's Office of Management and Budget.* Drivers record fare payment by the following categories: cash, reduced (elderly and disabled passengers and high school students pay one-half of the adult fare), monthly pass, tickets (prepaid full adult fares), other (promotional fares, employee passes, etc.) and transfer. METRO does not charge for transfers. An estimate of pass usage made by METRO permits a cash value to be assigned to pass fare payments. For example, during the first quarter of fiscal year 1986 the local adult fare was $0.55, reduced fares were $0.25 and pass fares were equal to $0.426. Local and express routes have flat fares. Park-and-ride routes have distance-based fares.

The number of passengers using each fare payment type (as recorded in the PCT83) was multiplied by the fare payment to derive total line revenue. Line revenue was then divided by total ridership for an average fare estimate. The average fare was multiplied by the number of passengers reported for each line in the Quarterly Ridership Report for the first quarter fiscal year 1986. For this study, ridership and average fare were estimated separately for each of the three schedules (weekday, Saturday, Sunday/holiday) operated during the quarter. During the first quarter there were 64 weekdays, 13 Saturdays and 15 days on which the Sunday/holiday schedule was in effect. Quarterly revenue for a schedule is defined as:

Quarterly Revenue = Average Daily Riders x Average Fare x Number of Days Schedule Operated

Total quarterly revenue is the sum of the revenue for the three schedules.

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* Notes on average fare calculations for the March 1986 fare increases provided to the author by Doug Wentworth, METRO OMB.

Adjustments to Estimated Revenue

The revenue for each of the service modes was determined by adding the estimated revenue for each route in the mode category. The result was compared to the revenue by sevice mode reported by METRO for the period. Table III.3 shows that the estimated system revenue was 6.7 percent greater than the reported revenue. METRO park-and-ride was overestimated by 17 percent. Discussions with METRO staff as to the source of the overestimate led to the following adjustments.

Pass discount. METRO has a promotional program in which monthly passes are sold to employers at a discount. The revenue lost during the study period due to the discount was $282,868. The procedure used to estimate revenue did not account for this discount. Therefore, pass revenue is overestimated. The discount was deducted from the estimated revenue in two steps. First the discount amount was apportioned between local and park-and-ride service based on the number of pass uses on each, weighted by the average value of the monthly pass for each. Local passes cost $23.00. The average park-and-ride monthly pass cost $70.00. The park-and-ride share of the discount was then apportioned between METRO and contract park-and-ride. Data on pass use on contract routes was not available. It was assumed that pass use on contract routes was in proportion to total ridership. Once the pass discount had been apportioned among the service modes it was allocated to each route within the service mode based on the number of pass uses per route to total pass use.

METRO park-and-ride ridership. The ridership estimate was considered a second possible source of error in estimating revenue. As noted above, the PCT ridership counts are inflated to reconcile ridership with revenue. In adjusting ridership for that purpose it is assumed that the PCT count is inaccurate due largely to driver error. Recent studies by METRO staff have found that the PCT estimates of park-and-ride ridership are very accurate.* The erroneous counts are presumably in the local service category. Based on this information, METRO park-and-ride revenue was re-estimated using the PCT data in place of the Quarterly Ridership Report.

Contract park-and-ride revenue. The revenue for contract park-and-ride service reported by METRO assumed each passenger paid the full cash fare. An average fare was not used and none of the discount for pass sales was deducted from the contract park-and-ride category. Although the lack of PCT data for contract park-and-ride routes made it impossible to estimate an average fare for these routes, it was assumed that they would have an average fare equal to the average fare on METRO park-and-ride routes in the same fare category. The revenue estimate for contract park-and-ride is consequently less than the revenue reported.

After making the adjustments outlined in the previous paragraphs the re-estimated system revenue was compared to the reported revenue. The revenue estimate for local service is 2.0 percent greater than that reported. METRO park-and-ride revenue is 0.8 percent less than reported and contract park-and-ride revenue is 7.6 percent less than the revenue reported by METRO. Systemwide the revenue estimated as described in the preceding paragraphs is 0.5 percent greater than the reported revenue.

* Conversation with Michael Leonard, METRO Manager of Service Evaluation

Table III.3

1st Quarter FY 1986
Comparison of Estimated and Reported Revenue by Service Mode

	Estimated	Reported	Difference	% Difference
Local*	$5,611,285	$5,500,162	$111,123	+2.0
Metro P&R	1,591,089	1,604,216	(13,127)	-0.8
Contract P&R	698,298	755,957	(57,659)	-7.6
System	$7,900,672	$7,860,335	$40,337	+0.5

*Includes express routes.

Weekday Peak Ridership and Revenue

Revenue attributable to the peak and off-peak was estimated following the procedure used to estimate weekday revenue. Ridership in the PCT83 is reported by hour. Ridership on each route during the six peak hours was totaled and then divided by the ridership for the day to get an estimate of the percent of ridership during the peak. The percent peak ridership was multiplied by the average daily ridership for the quarter for an estimate of average daily peak ridership. Quarterly Ridership Report estimates of daily ridership were used for local and express routes. The PCT ridership count was used for METRO park-and-ride. An average weekday peak fare was also estimated with the procedure used to estimate a daily average fare, except only revenue collected during the peak hours was considered. Peak revenue for the first quarter is defined as:

Peak revenue = % Peak ridership x average daily ridership x 64 weekdays x average peak fare

An estimate of contract park-and-ride peak revenue could not be made due to the lack of PCT83 data for these routes. Though some of the contract park-and-ride routes have midday service, the service is operated by METRO and is included in METRO park-and-ride ridership and revenue data. It can be assumed that all contract park-and-ride revenue is collected during the peak. First quarter fiscal year 1986 peak and off-peak revenue by service mode are listed in Table III.4.

Table III.4

Weekday Peak and Off-Peak Revenue by Service Mode
1st Quarter FY 1986

	Peak	Off-Peak
Local	$2,360,411	$2,187,543
Express	204,549	70,775
Metro P&R	1,427,662	163,427
Contract P&R	698,298	0
System	$4,690,920	$2,421,745

Weekday Revenue Ridership

In comparisons of ridership and cost, e.g., cost per passenger, it is often preferable to use revenue ridership or linked passenger trips as the measure of service consumed. The nature of transit service is such that transferring between routes is frequently necessary and, in the case of METRO, is permitted at no additional cost to the passenger. Revenue ridership by route can be estimated from the PCT data which identifies fare payment type. Revenue passengers were considered to be those who paid by cash, reduced fare, pass or ticket. It is recognized that some transfer rides are made with the monthly pass. Unfortunately, information on this phenomenon was not available and all pass trips were considered revenue trips. Contract park-and-ride was estimated to have the same percentage of revenue ridership as recorded for METRO park-and-ride. Using the PCT data the number and percentage of revenue riders by service mode were:

Table III.5

Weekday Revenue Passengers by Service Mode
1st Quarter FY 1986

	No. Revenue Riders	% Revenue Riders
Local	9,810,753	70.92
Express	394,560	79.15
Metro P&R	1,049,916	96.58
Contract P&R	379,815	96.63
System	11,635,044	73.58

Part IV - ANALYSIS

An analysis of the cost and revenue data developed as explained in Part III of this report, provides answers to the research questions. That analysis is presented in the following paragraphs along with observations about the results.

First Quarter Fiscal Year 1986 Cost Recovery Ratios

The primary question this study was designed to answer was whether METRO park-and-ride services paid for themselves. Even a cursory examination of the data developed as described in Part III of this study and summarized in Table IV.1 indicates that collectively METRO park-and-ride services are not self-supporting. Table IV.1 depicts weekday cost and revenue data for the four service modes with the three cost analysis categories representing the inclusion of different levels of depreciation costs. Cost and revenue data for individual routes can be found in Appendix B. As was noted in Part III, it has been assumed that contract park-and-ride vehicle depreciation costs are included in the cost of the service to METRO.

Park-and-ride service does substantially better than either local service or express service as far as cost recovery is concerned. METRO park-and-ride had a first quarter cost recovery ratio of 35.3 percent when only vehicle depreciation was included. Contract park-and-ride did even better with a 48.3 percent ratio. Express service did not recover quite the percentage of its cost as was recovered by local service. The express fare was $0.15 above the local fare.

An explanation for the higher cost recovery ratio for park-and-ride service can be found in Table IV.2. Though the operating cost of park-and-ride is greater than that of local service, the mileage graduated fares charged on park-and-ride service compensate for the difference in cost. Park-and-ride operating costs are greater due to the fact that the service is predominately peak service. Labor is used less efficiently during the peak and few if any passengers are carried by commuter service in the nondominant direction. An examination of the data from the study period provides support for this explanation. The vehicle hour to pay hour ratio for local service was .922, but for METRO park-and-ride it was .875. The ratio of revenue hours to vehicle hours was .835 for local service but only .582 for METRO park-and-ride.

Figure IV.2

Comparative Measures of Cost* and Revenue
1st Quarter FY1986

	Local	Express	Metro P&R	Contract P&R
Cost/Vehicle Hour	$56.95	$72.78	$84.15	-
Cost/Pay Hour	52.55	64.93	73.45	-
Cost/Revenue Hour	68.25	94.79	127.70	93.61
Revenue/Vehicle Hour	10.77	12.87	29.68	-
Revenue/Pay Hour	9.94	11.48	25.91	-
Revenue/Revenue Hour	12.91	16.76	45.04	45.22
Rev Passngers/Rev Hour	27.84	24.02	29.75	24.60

*Cost includes vehicle depreciation. Pay hour and vehicle hour cost for contract P&R are not available.

Table IV.1

Metro Weekday Cost Recovery Analysis by Service Type
1st Quarter FY 1986
(Revenue Adjusted for Pass Discount)

LOCAL SERVICE

Depreciation Included	All	Vehicle	None
Cost	$25,739,955	$24,047,766	$22,097,749
Revenue	$4,547,954	$4,547,954	$4,547,954
Deficit	$21,192,001	$19,499,812	$17,549,795
Revenue Passengers	9,810,753	9,810,753	9,810,753
Net Cost per Revenue Passenger	$2.16	$1.99	$1.79
Cost Recovery Ratio	17.67%	18.91%	20.58%

EXPRESS SERVICE

Depreciation Included	All	Vehicle	None
Cost	$1,800,289	$1,556,316	$1,388,530
Revenue	$275,324	$275,324	$275,324
Deficit	$1,524,965	$1,280,992	$1,113,206
Revenue Passengers	394,560	394,560	394,560
Net Cost per Revenue Passenger	$3.86	$3.25	$2.82
Cost Recovery Ratio	15.28%	17.69%	19.82%

METRO P&R SERVICE

Depreciation Included	All	Vehicle	None
Cost	$5,993,495	$4,510,995	$3,930,576
Revenue	$1,591,089	$1,591,089	$1,591,089
Deficit	$4,402,406	$2,919,906	$2,339,487
Revenue Passengers	1,049,916	1,049,916	1,049,916
Net Cost per Revenue Passenger	$4.19	$2.78	$2.23
Cost Recovery Ratio	26.55%	35.27%	40.48%

CONTRACT P&R SERVICE

Depreciation Included	All	Vehicle	None
Cost	$1,831,056	$1,445,398	na
Revenue	$698,298	$698,298	na
Deficit	$1,132,758	$747,100	na
Revenue Passengers	379,815	379,815	na
Net Cost per Revenue Passenger	$2.98	$1.97	na
Cost Recovery Ratio	38.14%	48.31%	na

SYSTEM-WIDE

Depreciation Included	All	Vehicle
Cost	$35,364,795	$31,560,475
Revenue	$7,112,665	$7,112,665
Deficit	$27,119,372	$23,700,710
Revenue Passengers	11,635,044	11,635,044
Net Cost per Revenue Passenger	$2.33	$2.04
Cost Recovery Ratio	20.11%	22.54%

n.a = data not available

The inclusion of depreciation expense has a significant effect on park-and-ride costs. This can be demonstrated by subtracting the cost of service with only vehicle depreciation included from the total cost of service with all depreciation included. This has been done in Table IV.3. The percentage of total cost represented by vehicle depreciation does not vary greatly among the service modes. However, the percentage of additional depreciation charged to park-and-ride is almost four times greater than charged to local service. The principal factor responsible for this difference is the inclusion of depreciation cost for park-and-ride facilities and transitways in the total cost of park-and ride service. Five METRO park-and-ride routes operate in transitways along with three contract park-and-ride routes. Two of the five express service routes also operate in transitways. All routes incur a depreciation charge proportionate to the number of express buses using the facilities.

Table IV.3

Depreciation Charges by Service Mode
1st Quarter FY1986

	Local		Express		Metro P&R		Contract P&R	
	Amount	% Total	Amount	% Total	Amount	% Total	Amount	% Total
Vehicle Deprec.	$1,949,993	7.6	$167,810	9.3	$580,423	9.7	-	-
Other Deprec.	1,690,711	6.6	245,450	13.6	1,482,503	24.7	385,658	21.1

As noted previously, depreciation cost is not usually included in an analysis of operating costs. The information has been presented here to illustrate the investment that has been made to make park-and-ride more attractive to potential users. To the extent that this investment represents the use of METRO funds that cannot then be used elsewhere in the system, the investment is a real cost to the system's operation. With the inclusion of all depreciation costs, the cost recovery rate for METRO park-and-ride falls from twice that for local service to one and one half times the local cost recovery ratio. The contract park-and-ride cost recovery ratio remains more than twice the rate for local service.

Net Operating Cost

Net operating cost is defined here as the difference between the cost of providing service and the revenue collected from providing the service, ie., the operating deficit. The METRO deficit is offset by tax revenues collected by the transit authority as explained in Part II of this report. The net operating cost, then, is a measure of what the service costs to the general public. A measure of the unit cost of service is the net cost to transport one revenue passenger. The net cost per revenue passenger is the product of dividing the deficit by the number of revenue passengers. It is instructive to compare the net cost per passenger by service mode with the cost recovery ratio by service mode. This comparison can be made by examining the data in Table IV.1.

Both weekday contract and METRO park-and-ride services have cost recovery ratios greater than the cost recovery ratio for local weekday service. However, the net cost per revenue passenger is substantially greater for METRO park-and-ride when only vehicle depreciation is included. Contract park-and-ride has a net cost per passenger lower than for local service. When all depreciation costs are included, the net cost per revenue passenger for both contract and METRO park-and-ride is greater than for local service. The net operating cost for express service is greater than that for local service *and* both park-and-ride services.

Comparison of METRO and Contract Park-and-Ride Service

The cost per revenue hour (Table IV.2-vehicle depreciation included) of providing contract park-and-ride operations during the first quarter fiscal year 1986 was 27 percent less than the cost of the service provided by METRO. The fact that contract park-and-ride service costs less to operate is well established by METRO and the system is nationally recognized for its use of the private sector. Revenue per revenue hour on contract service was only slightly higher than for METRO park-and-ride ($45.22 to $45.04). The difference in operating cost between the two park-and-ride services resulted in substantially higher cost recovery ratios and lower net cost per passenger for the contract park-and-ride as shown in Table IV.1.

Though performing better financially than METRO park-and-ride service, the contract service was not as productive. While the differences in operating costs between contract and METRO park-and-ride are a function of the lower cost of the private service, the differences in ridership and revenue are a function of the respective route demand characteristics. Revenue passengers per revenue hour for contract park-and-ride were 24.6 compared to 29.8 for METRO park-and-ride. Contract park-and-ride revenue per revenue hour was comparable to METRO park-and-ride revenue because on average, contract service operated on routes with higher fares. Revenue per revenue passenger was $1.84 for contract service, $1.51 for METRO park-and-ride.

Effect of Transitway Use on Cost Recovery and Net Cost per Passenger

Transitways have been provided in the north I-45 and the west I-10 right-of-ways to improve travel times for park-and-ride services using these these corridors. As noted in the discussion of depreciation costs, these transitways represent a significant component of total cost for the park-and-ride service using them. Transitway depreciation was 25 percent of all park-and-ride service depreciation charged in the first quarter of FY 1986. The transitway depreciation was

Table IV.4

Comparison of Park and Ride Routes Operating In Transitways with Park and Ride Routes not Operating In Transitways All Depreciation and Vehicle Depreciation Only Included

	n=8 In Transitway		n=13 Not in Transitway	
Measure	All	Vehicle	All	Vehicle
Cost per Revenue Hour	$179.18	$125.69	$130.07	$109.03
Revenue per Revenue Hour	$52.51	$52.51	$37.97	$37.97
Cost per Revenue Passenger	$5.89	$4.13	$5.01	$4.21
Revenue per Rev. Passenger	$1.73	$1.73	$1.46	$1.46
Revenue Passengers	756,765		672,380	
Cost Recovery Ratio	29.3%	41.8%	29.2%	34.7%
Net Cost per Rev. Passenger	$4.16	$2.41	$3.55	$2.75

Routes using transitways include 107, 201, 202, 204, 210, 212, 221, and 228.

only charged against those routes operating in the transitways, apportioned by the number of peak hour buses on each route. For those routes using the transitways, transitway depreciation charges were 11.5 percent of total costs. Of interest to this study is whether these additional costs result in lower cost recovery ratios and higher net cost per passenger for the routes utilizing transitways. This question is answered by analyzing the data presented in Table IV.4 which summarizes the route analysis in Appendix D.

There is virtually no difference between the cost recovery ratio for routes that use transitways and those that do not. Each group contains three of the contract park-and-ride routes. The reason for the difference can be seen by examining the cost and revenue data shown in Table IV.4. The cost per revenue hour of service for the routes using transitways is 15 percent higher than those not using transitways when only vehicle depreciation is included in the cost. When all depreciation, including the cost of transitways is included the hourly cost of the routes using the transitways is 38 percent greater. The greater cost of the routes operating on transitways is offset by the higher fares and ridership on the transitway routes. Revenue per hour is 38 percent higher on the transitway routes. The result is the nearly identical cost recovery ratios.

Net cost per revenue passenger is 17 percent greater for those routes that use the transitways when all depreciation costs are included. When only vehicle depreciation is included the routes in transitways actually do better than those not using the transitways. Though the cost of transitways does not adversely affect the cost recovery ratio it can be said that there is an added cost per passenger for the use of the transitway.

Comparative Peak and Off-Peak Cost Recovery Ratios

The final part of this analysis addressed the question of differences in peak and off-peak cost and revenue. This permits a comparison between park-and-ride, and local service during the peak period when more than 96 percent of the park-and-ride service is operated. It has previously been suggested that peak period service has higher costs. The comparison of park-and-ride with local service during the peak will answer the question of whether one or the other performs better financially during the period when service costs should be relatively equal. Contract park-and-ride service cannot be included in the comparison because data allowing the separation of cost into peak and off-peak are not available. A definition of the peak period and the methodology for separating costs into the two periods was presented in Part III. Table IV.5 repeats the format of Table IV.1 except cost, revenue and ridership has been disaggregated into the peak and off-peak components of the weekday schedule. The data for each line are shown in Appendix C.

There is little difference between the cost recovery ratios and net cost per revenue passenger measures for the three service modes in Table IV.1 and IV.5. Park-and-ride service has a higher cost recovery ratio and a higher net cost per passenger when compared to local service in the peak or the average of local peak and off-peak service. Express service generally has a lower cost recovery ratio and higher net cost per passenger than both park-and-ride and local service during the peak period. These results are not surprising considering that most of the park-and-ride and express service takes place in the peak. Fares are not a factor. METRO does not have time differentiated fares.

Unexpected, perhaps, is the finding that the cost recovery ratios for peak and off-peak local service are not substantially different. The cost of operating local service in the two periods is almost equal and actually less for the peak when none of the depreciation costs are included. Local service does slightly better in the peak period when higher costs are offset by increased riderhship. Depreciation is a smaller amount of total local service costs as shown in Table IV.3. The greatest part of depreciation costs are charged against peak hour services. This was discussed in Part III.

Table IV.5

Peak and Off-Peak
METRO Weekday Cost Recovery Analysis by Service Type
1st Quarter FY 1986
(Revenue Adjusted for Pass Discount)

LOCAL SERVICE

Depreciation Included	All	Peak Vehicle	None	All	Off-Peak Vehicle	None
Cost	$12,862,839	$11,785,987	$10,445,613	$12,8877,116	$12,261,779	$11,652,136
Revenue	2,360,411	2,360,411	2,360,411	2,187,543	2,187,543	2,187,543
Deficit	$10,502,428	$9,425,576	$8,085,202	$10,689,573	$10,074,236	$9,464,593
Revenue Pax	5,224,822	5,224,822	5,224,822	4,585,931	4,585,931	4,585,931
Net Cost / Rev Pax	$2.01	$1.80	$1.55	$2.33	$2.20	$2.06
Cost Recovery Ratio	18.35%	20.03%	22.60%	16.99%	17.84%	18.77%

EXPRESS SERVICE

Depreciation Included	All	Peak Vehicle	None	All	Off-Peak Vehicle	None
Cost	$1,482,522	$1,259,209	$1,098,490	$317,767	$297,107	$290,040
Revenue	204,549	204,549	204,549	70,775	70,775	70,775
Deficit	$1,277,973	$1,054,660	$893,941	$246,992	$226,332	$219,265
Revenue Pax	297,452	297,452	297,452	97,108	97,108	97,108
Net Cost / Rev Pax	$4.30	$3.55	$3.01	$2.54	$2.33	$2.26
Cost Recovery Ratio	13.80%	16.24%	18.62%	22.27%	23.82%	24.40%

METRO P&R SERVICE

Depreciation Included	All	Peak Vehicle	None	All	Off-Peak Vehicle	None
Cost	$5,600,385	$4,197,118	$3,627,683	$393,110	$313,877	$302,893
Revenue	1,427,662	1,427,662	1,427,662	163,427	163,427	163,427
Deficit	$4,172,723	$2,769,456	$2,200,021	$229,683	$150,450	$139,466
Revenue Pax	989,497	989,497	989,497	60,419	60,419	60,419
Net Cost / Rev Pax	$4.22	$2.80	$2.22	$3.80	$2.49	$2.31
Cost Recovery Ratio	25.49%	34.02%	39.35%	41.57%	52.07%	53.96%

ALL SERVICE MODES (Except Contract P&R)

Depreciation Included	All	Peak Vehicle	None	All	Off-Peak Vehicle	None
Cost	$19,945,746	$17,242,314	$15,171,786	$13,587,993	$12,872,763	$12,245,069
Revenue	3,992,622	3,992,622	3,992,622	2,421,745	2,421,745	2,421,745
Deficit	$15,953,124	$13,249,692	$11,179,164	$11,166,248	$10,451,018	$9,823,324
Revenue Pax	6,511,771	6,511,771	6,511,771	4,743,458	4,743,458	4,743,458
Net Cost / Rev Pax	$2.45	$2.03	$1.72	$2.36	$2.20	$2.07
Cost Recovery Ratio	20.02%	23.16%	26.32%	17.82%	18.81%	19.78%

Note: The total of peak and off-peak cost and revenue may not exactly equal the totals in Table IV.1 due to rounding of values in the process of disaggregation.

Therefore, the exclusion of depreciation does not change total costs in the off-peak as much as it does in the peak. Local service's better financial performance in the peak is due to the higher ridership during that period. Service levels and revenue ridership during the peak and off-peak periods are shown in Table IV.6

Table IV.6

1st Quarter FY 1986
WeekdayTotal Revenue Hours and Revenue Ridership by Period

Service Mode	Revenue Hours		Revenue Passengers	
	Peak	Off-Peak	Peak	Off-Peak
Local	162,901	189,482	5,224,822	4,585,931
Express	12,437	3,986	297,452	97,108
Metro P&R	31,376	3,911	989,497	60,419

In terms of the two financial performance measures, express and park-and-ride services do better in the off-peak than in the peak. This is related to both the lower cost of operation during the peak and, once again, the fact that more depreciation costs are charged against peak services. Other studies (Cervero, 1980, p.93) have found that cost recovery ratios during the midday off-peak period (when off-peak express and park-and-ride service is operated) are higher than for any other period. Vehicles operating are part of straight runs which represent the most cost effective scheduling. Table IV.7 illustrates the differences in cost and productivity during the peak and off-peak periods which explains much of the difference in the cost recovery ratios.

Table IV.7

Cost* and Ridership per Revenue Hour by Period

Service Mode	Cost/Revenue Hour		Revenue Passengers/Revenue Hour	
	Peak	Off-Peak	Peak	Off-Peak
Local	$ 72.35	$64.71	32.07	24.20
Express	$101.25	$74.54	23.92	24.36
Metro P&R	$133.77	$80.25	31.54	15.45

*Only vehicle depreciation included.

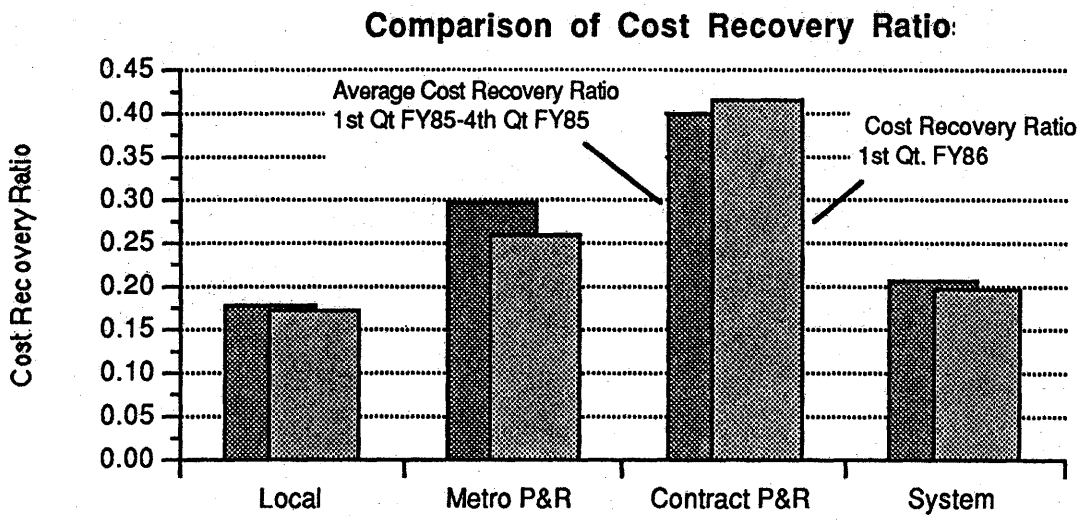
It can be said, then, that local service does not have a higher cost recovery ratio than park-and-ride service during the peak period, but does have a higher ratio than express service. However, in terms of net cost per revenue passenger, local service is still lower in the peak than either of the other service modes. In terms of productivity, Table IV.7 indicates that peak local and park-and-ride service board about the same number of revenue passengers per hour.

Validity of the Data for Generalizing Findings

In reviewing the cost revenue analysis consideration must be given to the fact that the data are limited to the first quarter of fiscal year 1986. Any conclusions based on data are somewhat restricted to that quarter. To get a feel for whether the first quarter data are representative of METRO route performance a comparison was made between the cost recovery ratios from the first quarter fiscal year 1986 and the preceding four quarters. The result of the comparison as illustrated in Figure IV.1 indicates very little difference between the first quarter of fiscal year 1986 and the average cost recovery ratios for the average of the previous four quarters.

The largest difference is between the first quarter cost recovery ratio for METRO park and ride service and the four quarter average. The first quarter is approximately 11 percent lower. The only explanation that can be offered based on this study is the change in park and ride service levels that took place during the first quarter and in the final weeks of the fourth quarter fiscal year 1985. Some of these were identified in the beginning of Part III. In addition to those changes, two new park and ride routes, No. 238-Maxey Road and No. 291-North Shepherd-TMC, were begun in September 1985. New service normally takes time to build ridership. This service increment may have depressed the cost revenue ratio.

Figure IV.1



Source: METRO Cost Allocation Model

A statistical comparison of route cost recovery ratios in different periods is not possible due to the lack of route cost revenue information other than that developed as part of this study. However, some confidence that the first quarter fiscal year 1986 cost recovery ratios are representative of recent trends can be gained from the preceding comparison with the previous quarters. Data for the five quarters is summarized in Appendix A.

Part V - SUMMARY AND CONCLUSIONS

This study began with the question, "Can park-and-ride service break even?" The preceding analysis has shown clearly that METRO park-and-ride service does not pay for itself, or come at all close to paying for itself. It might then be asked whether the revenue performance of METRO's commuter oriented services be can improved. The answer to the question is complex. It requires a basic understanding of urban transportation economics and the public policies under which transit systems such as METRO operate. The following paragraphs summarize the principles that affect the level of transit sevice provided and the pricing of that service. A better understanding of the principles can be had by referring to authors such as Dygert (1976) and Billingsley, et. al. (1980) who provide more detailed, but easily comprehended, explanations of the subject.

Fare Elasticities

Price elasticity of demand is an economic measure of the change in the quantity of a product or service demanded in relation to a change in the price of the product or service. Numerous studies have found that the demand for transit service is price inelastic. When demand is inelastic, the percentage change in demand will be less than the percentage change in price. If price increases ten percent and ridership subsequently decreases by six percent, the demand is price inelastic. In this example the price elasticity is measured as -0.6 (the coefficient of elasticity) indicating that the decrease in demand is only 60 percent of the percentage change in price.

When demand is inelastic the total revenue from a price increase will increase even though ridership declines. Therefore, fare increases are seen as postive improvements in revenue, but at the expense of ridership. Some transit systems will attempt to offset the loss of ridership by increasing service at the same time fares are increased. The demand elasticity for service improvements has been measured as being elastic (or if inelastic, with a positive coefficient signifying that an increase in service is followed by an increase in ridership). In which case, the service improvement might result in enough new ridership to make up for the loss in revenue. The increase in service, however, is made at an additional cost and the net change in revenue may not be positive.

Where the price elasticity of transit service has been measured elasticity has been found to range from roughly -0.2 to -0.6. The elasticity for market segments within a system may vary. Mayworm, Lago and McEnroe (1980) have reported that:

- off-peak fare elasticities are double the size of peak fare elasticities;
- short-distance trips are more elastic than long-distance trips;
- intrasuburban trips are four times more elastic than radial trips on arterials;
- fare elasticities rise with income and fall with age; and
- of all trip purposes, the work trip is the most inelastic.

Fare elasticity data for the METRO system is limited. It has been reported that the fare elasticity for METRO commuter service is -0.4 and -0.3 for local service. The documentation for this finding is not conclusive, however. The higher value for commuter service would tend to contradict the findings of Mayworm, et. al., with the exception of the relationship to income. There is no reason to suspect that the elasticity of METRO park-and-ride or express service would not fall in the -0.2 to -0.6 range.

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* Report on proposed fare increase prepared for METRO board and dated November 21, 1985.

The cost of substitute services is a primary factor in what determines fare elasticity. Where a substitute for transit service is readily available, transit use has a higher elasticity. As noted, higher income riders, presumably with an automobile available, are more likely to change modes in greater proportion than those individuals without that alternative. Many studies have found that the demand for transit service by elderly and lower income individuals is very inelastic, reflecting their lack of viable alternatives to transit use. To maintain the socially desirable benefits of transit service, fares are kept as low as possible following a policy of "second best" pricing.

"Second Best" Pricing

Large increases in transit fares are limited by the pricing policy adopted by publicly operated transit agencies. It is the economic ideal that all services be priced at their "optimal" marginal cost. In this way, an additional quantity of a service or product is consumed only if the purchaser is willing to pay the additional cost of providing that service. However, optimal pricing assumes that all competitive products or services are so priced. There is a great deal of documentation in the transportation economics literature that indicates that urban highway pricing is not optimally priced (Dygert 1976, pp. IV-31-34), (Wachs 1981). Motorists traveling during the peak periods pay only the average cost of the facilities they use rather than the marginal cost. Furthermore, the external cost of highway travel--congestion, pollution, less than optimal land use--are borne by the public at large. Charging the transit rider for the full cost of his or her ride would create an economic disincentive to use the service. Since the use of transit is considered beneficial to the public at large, the policy of subsidizing the cost of transit service has been adopted by public bodies to make the service competitive with the automobile alternative. Transit fares are less than they would be if optimally priced. This is referred to as "second best" pricing.

There are limits, however, to second best pricing. A classic study of travel demand in Chicago cited by Dygert (1976, p.IV-35) found that negative fares would have to be charged to achieve a 50 percent shift in mode choice. In other words, even paying people to ride would be required to make substantial changes in the way they travel. Many factors determine the price one is willing to pay for transit service. Time is an important cost to the traveller. Transit service improvements that reduce travel time have been found to be more conducive to increased ridership than fare reduction or stabilization (Dygert 1976, p.III-44). Transit pricing is only one mechanism for attracting ridership.

METRO Fare Policy

METRO has pursued an aggressive policy of promoting ridership with increased service levels, reliability, comfort and convenience. All of these promote increased transit use. METRO has also restructured and moderately increased its fares in recent years. The local fare was changed in 1985 from a three zone structure ($0.40, 0.50, 0.60) to a flat fare of $0.55. The base fare was increased to $0.60 in March 1986. Express fares increased at that time from $0.80 to $0.85. METRO's policy is to charge 1.5 times the base fare for express service. Park-and-ride fares were increased at the same time from $0.05 to 0.10, the larger increases being for the higher fares.

Increases of this amount should not have a significant effect on ridership. There is some question as to whether the elasticity effect of fare increases in the five to ten percent range are even measureable. Table V.1 shows the percent change in fare between March 1984 and the fare change that took place in March 1986 for the park-and-ride routes opearting in both years. The fares reflect the 1986 monthly pass fare in March 1984 dollars. The monthly pass fare on some routes actually declined in some cases due to a restructuring of park-and-ride fares in 1985. Fare changes of the magnitude shown in Table V.1 are not likely to have a detrimental effect on ridership.

Changes in ridership are more likely to be due to fluctuation in the price of gas, employment, highway construction and other related factors.

Table V.1

Value of METRO P&R Fare Increases Since March 1984

(1986 Fares In March 1984 Dollars*)

Line No./Name		Monthly Pass March 1984	Monthly Pass March 1986	Deflated Monthly Pass March 1986	'84-'86 % Increase	Average Annual % Increase
59	Southwest Frwy.	$50.00	$52.00	$50.67	1.35	0.6717
107	FM 1960	$70.00	$84.00	$81.86	16.94	8.1388
201	North Shepherd	$50.00	$52.00	$50.67	1.35	0.6717
202	Kuykendahl	$74.00	$72.00	$70.16	-5.18	-2.6264
204	Spring	$86.00	$84.00	$81.86	-4.82	-2.4379
205	Kingswood	$86.00	$94.00	$91.60	6.52	3.2062
206	Eastex	$58.00	$62.00	$60.42	4.17	2.0640
212	Seton Lake	$58.00	$72.00	$70.16	20.97	9.9875
221	Kingsland	$86.00	$94.00	$91.60	6.52	3.2062
221	Katy/Fry	$94.00	$94.00	$91.60	-2.55	-1.2832
228	Addicks	$74.00	$72.00	$70.16	-5.18	-2.6264
245	Edgebrook	$50.00	$62.00	$60.42	20.84	9.9263
246	Bay Area	$70.00	$84.00	$81.86	16.94	8.1388
261	West Loop	$38.00	$46.00	$44.83	17.97	8.6121
262	Westwood	$62.00	$62.00	$60.42	-2.55	-1.2832
270	Missouri City	$58.00	$62.00	$60.42	4.17	2.0640
	Average All Lines				5.14	2.5395

*Fares deflated using the CPI-All Urban Consumers: Houston (1967=100)

METRO's fare policy recognizes that park-and-ride services cost more to provide, offer a premium service in terms of transit travel time, and that longer routes are more expensive to operate. The lowest park-and-ride fare is more than twice the local fare although the shorter park-and-ride routes are no longer than many local routes. However, as was seen in Table IV.2, the cost of transporting a passenger on park-and-ride or express service cost more than transporting the same passenger on the local system. Furthermore, the net cost to METRO of transporting the park-and-ride passenger ranges from 25 to 95 percent more than for the local passenger (Table IV.1), depending on which levels of depreciation cost are being considered.

The express net cost per passenger is generally higher still, while contract park-and-ride has a lower net cost per passenger than local service when only vehicle depreciation costs are considered. On the positive side, park-and-ride routes do have a higher cost recovery ratio than either local or express routes, generally about twice as high. This contributes to METRO's systemwide cost recovery goal of 40 percent by 1990. Express routes, on the other hand, have lower cost recovery ratios than either local or park-and-ride service and, therefore, detract from the cost recovery objective.

Alternative Fare Policies

It is difficult to say what the impact on ridership would be if commuter fares were increased, except it can be said with some confidence that ridership would decline if large increases were made at once. Even this statement must include the proviso that "all other factors remain constant." Fare increases in the face of restraints on fuel availability might have completely different fare elasticities than are normally encountered. Estimates of fare elasticity found in the literature must also be considered illustrative. In most cases they represent the response to a fare change under specific conditions which may have had an impact on the measured ridership response. There is also some question of whether the reported fare elasticity would extend over a broad range of fare changes. It has been previously noted that the measurement of small fare changes may not be accurate.

Evidence has not been found that would suggest that the METRO fare structure is based on a market analysis of the demand for the service. The lowest park-and-ride fare is roughly double the base fare. Fares are incremented $0.25 to 0.30 for each zone. Whether a significant increase in park-and-ride fares would result in a substantial loss in ridership is unknown. It is possible that the ridership loss would be less than expected if in fact, the present fare structure is unrelated to the elasticity of demand for the service. The only way to determine the true elasticity for the park-and-ride service would be to make a major fare change and measure the resulting change in ridership (while monitoring related demand factors).* This is not likely to be done for the sake of determining the fare elasticity of METRO's park-and-ride service. To illustrate the effect of fare elasticity we can hypothesize fare changes and fare elasticities, and then observe the effect on ridership and revenue.

Hypothetical fare changes related to the issues addressed by this study have been chosen for this illustration. The changes include the fare that would have to be charged for park-and-ride service to pay for itself; and secondly, the fare that would have to be charged in order for the net cost service of local and park-and-ride service to be the same. For this analysis we will use the service mode cost, revenue and ridership from Table IV.1. It is assumed that service levels (and, therefore, costs) remain the same after the fare change. Assuming for the sake of the analysis that ridership would not change with a fare increase, the required break-even average fare can be found by dividing cost by revenue ridership. The fare which would result in the same net cost as for local service can be estimated by subtracting the local service net cost per passenger from the break-even fare. The results are shown in Table V.2.

Table V.2

Alternative Fares for Break-even and Equalized Net Cost per Passenger

		All Depreciation		Vehicle Depreciation		No Depreciation	
	Exist Avg Fare*	Break-even	Equal Net Cost	Break-even	Equal Net Cost	Break-even	Equal Net Cost
P&R	$1.60	$5.47	$3.31	$4.16	$2.18	$3.75	$1.95
Express	.70	4.56	2.40	3.94	1.95	3.52	1.73

* Park-and-ride cash fares range from $1.15 to $2.35; the express cash fare is $0.80. Average fares are less due to monthly pass use and fare discounts. METRO and contract P&R have been combined in the categories including depreciation.

*See Kemp (1981) for a detailed explanation of an empirical derivation of fare elasticity.

For example, with only vehicle depreciation included, the existing average park-and-ride fare would have to have been $4.16 for revenue to equal cost. The park-and-ride net cost per revenue passenger (in the first quarter fiscal year 1986, $2.57) would have equaled the net cost for a local passenger ($1.99) if the average park-and-ride fare had been $2.18. This would be a 36.25 percent increase over the actual average fare of $1.60. Also assume the elasticity for commuter service is -0.4. As shown below, an increase to the higher fares would result then in a 14.5 percent drop in ridership. The new net cost per passenger, using data from Table IV.1, would be:

ridership before fare change	1,429,145
ridership after fare change	1,221,919
revenue after fare change	1,221,919 x $2.18 = $2,663,783
deficit after fare change	$5,956,392-2,663,783 = $3,292,609
net cost per passenger	$3,292,609÷1,221,919 = $2.69

A desired increase in revenue has been achieved but the objective of equalizing the net cost per revenue passenger has not been met. The net cost per passenger has actually increased. It can be shown that any increase in the fare will subsequently increase the net cost per passenger when the price elasticity is -0.4. This is because revenue increases at a decreasing rate while ridership decreases at an increasing rate. Total revenue will increase to a point, after which it will begin to decrease due to the more rapidly declining ridership. Depending on the elasticity, park-and-ride *revenue* will be maximized as follows:

Elasticity	Revenue Maximizing Fare	Total Revenue	Ridership
-.2	$4.80	$4,115,938	857,487
-.3	3.50	3,313,832	946,809
-.4	2.80	2,801,125	1,000,402
-.5	2.40	2,679,648	1,116,520

Base fare was $1.60, revenue $2,286,632, ridership 1,429,145

Conclusion Regarding Fare Policy

Increasing fares to increase revenue is generally done at the expense of decreased ridership, no matter what the actual fare elasticity might be. The decision of whether the revenue or the ridership is more important is a policy decision that must be made by the transit board. If fares are increased and ridership declines, service levels might be reduced in return. The reduction in cost and increase in revenue would improve the cost recovery ratio. If service reductions diminish the attractiveness of the service, however, additional ridership decreases might result in decreased revenue. The decision in not easy, especially without an accurate knowledge of market segment fare elasticities.

Transitways

Transitways decrease travel time. In this respect they are service improvements that can be expected to attract transit rideship. Transitways help offset the travel time advantage of automobile users who are making the same trip. Since travel time is a trip "cost", the transitway, in effect, is a form of fare reduction. As noted previously, service improvements are preferable to actual fare reductions for encouraging ridership.

The comparison of the costs for the park-and-ride routes that operate in transitways with those that do not has shown that when the depreciated cost of the transitway is included, the transitway routes cost 38 percent more per revenue hour to operate. The transitway depreciation accounts for 58 percent of the difference or $28.44 per revenue hour of service. However, the transitway park-and-ride routes carry 30 revenue passsenger per revenue hour compared to 26 for the non-transitway routes. Revenue per passenger is also higher on the transitway routes though this is primarily due to the higher distance based fares on these routes. The result is almost identical cost recovery ratios for the two groups, although the net cost per passenger to METRO for the transitway service is 17 percent greater.

It could be argued that a premium should be added to the fares for the routes using the transitways. The premium, however, would offset the reduction in travel time provided by the transitway. The result would be a loss of ridership which would negate the benefit of the transitway. The cost of the transitway should be seen as a cost of attracting the riders who might otherwise not use the park-and-ride service. This is consistent with METRO's policy of increasing ridership.

Contract Park-and-Ride

Contract park-and-ride costs are significantly less than those for METRO park-and-ride. Contract service presumably costs less because of lower wages paid by the private operators to drivers and maintenance personnel. This is beneficial to METRO as long as service standards can be maintained with private operators. METRO has been at the forefront of transit systems nationwide in promoting what is presently called "privatization." METRO and other transit systems should be encouraged to take advantage of the benefits of contract service where they are available. It remains to be seen the extent to which the private sector will be willing to further invest in public transit operations.

Differential Fare Structures

The premium charged by METRO for park-and-ride service is an example of a quality and distance based fare. The park-and-ride service is seen as being preferable to local transit service where available and, therefore, subject to a higher fare. The fact that people use the service when they might use the local service supports the theory that the park-and-ride service is preferable, even at a higher price. Park-and-ride fares also vary by route distance. Much of the criticism of fare policy in the literature is aimed at fare structures which neither reflect the value of the service to the rider or the cost of the service to the provider. In this respect, METRO's park-and-ride fare structure seems appropriate.

METRO local service prior to 1984 had a distance based component. The three zone structure was abandoned in favor of a flat fare. The simplicity of flat fare structures is often seen as an incentive to transit use. Depending on average trip lengths, the loss of revenue from zone charges may or may not have been offset by the increase in ridership due to the attractiveness of the flat fare structure. It can been seen that a flat fare structure for park-and-ride services would have a

negative financial impact. Higher fares on short routes would result in the loss of some ridership while lower fares on longer routes would decrease their cost recovery ratios.

A strong argument can be made for time based fares although this is not as much of an issue for commuter services which generally are restricted to the peak period. Cervero (1980) among others has noted that cost recovery ratios for midday ridership are the highest when revenue and cost are apportioned by a.m. peak, midday, p.m peak and evening schedules. This is due to the better utilization of labor during the midday which reduces cost. It has also been noted that non-peak service is more elastic than peak service. Therefore, significant fare reductions in the midday period could markedly increase ridership. The loss of revenue from decreased off-peak fares would be made up by slightly increasing peak fares. The net effect would be a gain in total daily ridership.

This study's analysis of peak and off-peak cost recovery has not divided the off-peak into midday and evening segments. Therefore, it is not known if the midday cost recovery ratio is greater than that for other periods. Such a differential might justify a fare reduction as proposed in the preceding paragraph. The present analysis has found that the off-peak cost recovery ratio is lower in the off-peak period than in the peak. A further breakdown of the time-of-day cost recovery data would be useful if there were an interest in pursuing this fare policy.

In some instances, fares can be increased for limited segments of the market. Cervero (1980, p.19) has also noted that "the only transit services in the nation that are breaking even today are club buses, subscription services and taxi operations; each set prices according to the type of service characteristics people are willing to pay for – reduced travel time, air conditioning, or guaranteed seats." For each of these alternatives the users agree in advance to pay for all or a guaranteed percentage of the cost of the service. Without the advanced commitment the service does not operate. This arrangement attracts only the riders for whom the service has sufficient value to justify paying the higher fare. In the METRO service area much of this market is likely to be served by vanpools.

Further Study

The importance in understanding the fare elasticities of the different market segments that make up the demand for urban transit service has been illustrated in this report. Unfortunately, there is little empirical data on disaagregate elasticities. The focus of transit financial policy over the last fifteen years has been aimed toward rebuilding the ridership base that had been lost during the 1950's and 1960's. This policy entailed simplified fare structures and heavily subsidized fares to encourage ridership.

The focus of the 1980's has changed to one of cost reduction and revenue enhancement. At least some of the change can be attributed to stablized levels of federal operating assistance. Though increased operating deficits are not yet threatening service levels among Texas' transit authorities, all recognize the need to increase revenue where the opportunity exists. As the focus shifts to revenue enhancement measures, better information will be needed on the demand characteristics of market segments, especially in realtionship to fare elasticities.

The best method for establishing fare elasticity information is from longitudinal (time) studies of travel behavior by market segment, supported by selected market surveys and selected tests of pricing strategies. The marketing departments of the major transit authorities would do well to address some of their resources to these activities in preparation for a changing financial climate for public transportation.

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Appendix A

Cost Recovery Ratios by Service Mode
1st Quarter FY 1985 - 1st Quarter FY 1986

Quarter	Service Mode	Revenue	Cost*	Cost Recovery Ratio
1st Quarter FY85	Local	$5,094,498	$26,804,661	0.1901
	Metro P&R	1,246,482	4,092,339	0.3046
	Contract P&R	796,109	1,949,126	0.4084
	System	$7,137,089	$32,846,126	0.2173
2nd Quarter FY85	Local	$5,024,838	$29,396,230	0.1709
	Metro P&R	1,260,446	4,331,332	0.2910
	Contract P&R	858,541	1,969,567	0.4359
	System	$7,143,825	$35,697,129	0.2001
3rd Quarter FY85	Local	$5,576,796	$30,206,838	0.1846
	Metro P&R	1,330,815	4,456,465	0.2986
	Contract P&R	886,812	2,155,659	0.4114
	System	$7,794,423	$36,818,962	0.2117
4th Quarter FY85	Local	$5,712,155	$33,788,823	0.1691
	Metro P&R	1,565,757	5,375,817	0.2913
	Contract P&R	799,741	2,252,187	0.3551
	System	$8,077,653	$41,416,827	0.1950
1st Quarter FY86	Local	$5,500,162	$31,980,037	0.1720
	Metro P&R	1,604,216	6,220,318	0.2579
	Contract P&R	755,957	1,825,184	0.4142
	System	$7,860,335	$40,025,539	0.1964
FY85 Quarter Average	Local	$21,408,287	$120,196,552	0.1781
	Metro P&R	5,403,500	18,255,953	0.2960
	Contract P&R	3,341,203	8,326,539	0.4013
	System	$30,152,990	$146,779,044	0.2054

Source: METRO Cost Allocation Model Reports for each quarter.

*Cost includes all depreciation.

APPENDIX B
METRO 1ST QUARTER FY 1986 PERFORMANCE MEASURES

NO.	ROUTE NAME	AVG WKDAY PAX	AVG WKDAY REV PAX	ADJ TOTAL REVENUE	ALLOCATED COST WITH ALL DEPRC	ALLOCATED COST WITH VEH DEPRC	ALLOCATED COST WITH NO DEPRC	DAILY SCHEDULED VEHICLE MI	DAILY SCHEDULED VEHICLE HR	DAILY SCHEDULED PAY HOURS	DAILY REVENUE MILES	DAILY REVENUE HOURS
	WEEKDAY LOCAL											
1	HOSPITAL	3,036	1,846	$56,411	$316,205	$295,422	$272,007	912.97	90.517	96.550	758.21	77.996
2	BELLAIRE	10,044	7,231	$221,211	$1,069,195	$990,709	$897,048	3524.23	267.783	292.283	2989.86	213.370
3	LANGLEY LTD	3,828	2,660	$78,466	$433,161	$405,346	$374,125	1495.83	118.600	119.900	1338.43	98.334
4	BEECHNUT	4,750	3,488	$104,278	$636,424	$595,452	$548,622	2262.54	162.033	177.717	1936.70	136.720
5	KASHMERE GARDENS	5,386	3,834	$108,440	$596,480	$550,651	$496,015	1643.70	163.467	172.267	1469.98	129.500
6	JENSEN	4,112	2,761	$86,374	$533,683	$494,002	$447,171	1682.35	144.183	144.300	1535.67	112.460
8	NORTH/SOUTH MAIN	8,026	5,728	$174,459	$917,839	$864,531	$805,993	3431.12	236.683	259.717	2941.70	204.770
9	HIRSCH/MED CENTER	7,561	5,360	$154,431	$927,302	$866,051	$795,806	3223.45	241.383	256.800	2796.12	201.650
11	NANCE	1,634	1,140	$32,719	$178,057	$167,274	$155,566	510.03	52.550	56.483	477.83	47.303
12	ALLEN HOUSE		0	$1,035	$48,440	$42,713	$34,908	137.40	7.833	10.767	76.96	5.701
14	HIRAM CLARKE LTD	5,489	3,847	$115,406	$650,393	$609,076	$562,245	2333.43	168.100	180.433	1959.30	140.250
15	FULTON-WEST GRAY	4,039	2,877	$85,182	$383,602	$359,338	$332,020	1264.50	102.917	112.533	1076.50	92.884
16	MEMORIAL	1,462	1,000	$29,137	$271,365	$251,912	$228,497	1142.94	59.433	62.683	950.68	49.147
17	TANGLEWOOD	1,392	981	$28,336	$214,543	$198,530	$179,018	867.16	46.733	50.400	732.28	39.437
20	CANAL	3,199	2,309	$70,661	$214,730	$198,464	$178,952	625.02	55.683	62.017	602.50	50.860
22	ALEMEDA	1,493	1,021	$30,643	$223,032	$209,213	$193,602	859.45	55.767	59.733	760.23	46.087
24	KEMPWOOD	1,601	1,112	$35,544	$219,583	$203,418	$183,905	824.49	50.550	55.200	686.17	42.929
25	RICHMOND-NORTHLINE	11,792	8,640	$265,356	$1,115,682	$1,038,557	$948,798	3562.84	293.333	319.500	3172.80	255.730
26	OUTERLOOP XTOWN	4,988	3,370	$93,566	$609,456	$568,789	$521,958	2146.29	157.517	166.250	2072.89	139.080
28	SOUTHMORE	5,355	3,753	$102,320	$576,870	$541,448	$502,422	1922.51	160.983	167.617	1662.91	129.310
30	CULLEN-CLINTON	6,628	4,620	$137,149	$921,218	$860,443	$790,197	3384.45	229.050	248.250	2771.45	195.528
33	POST OAK XTOWN	1,885	1,183	$35,667	$407,400	$382,795	$355,477	1487.96	106.550	114.217	1351.20	93.401
34	MONTROSE XTOWN	1,349	989	$28,633	$253,262	$236,163	$216,650	788.34	70.450	73.117	687.32	63.073
35	KIRBY-LEELAND	1,484	1,074	$31,264	$312,324	$289,442	$262,124	1069.08	77.267	83.250	930.42	65.130
36	LAWNDALE	2,740	2,035	$61,649	$278,134	$258,233	$234,818	872.71	72.867	78.917	791.01	60.924
39	LONG POINT	3,220	2,296	$74,527	$382,184	$358,386	$331,068	1556.68	88.767	99.717	1351.30	74.724
40	TELEPHONE-PECORE	6,802	4,794	$141,560	$745,272	$697,523	$642,887	2746.56	186.333	203.800	2340.28	162.830
42	HOLMAN XTOWN	3,628	2,218	$62,211	$293,041	$272,848	$249,433	895.88	78.550	86.100	836.38	69.408
44	ACRES HOMES LTD	2,956	1,979	$59,681	$512,023	$483,415	$452,194	2147.73	125.033	135.533	1951.50	109.180
46	GESSNER XTOWN	2,102	1,358	$42,876	$276,351	$259,009	$239,496	1016.75	71.983	75.233	896.65	60.354
48	NAVIGATION-WASHGTN	4,061	2,729	$83,571	$490,073	$461,526	$430,306	1801.58	129.067	139.150	1619.78	111.710
50	HEIGHTS-HARRISBURG	9,372	6,877	$207,759	$862,328	$804,997	$738,654	3102.76	216.367	234.633	2713.89	183.890
52	SCOTT	6,951	4,957	$137,736	$796,087	$742,227	$679,786	2622.98	206.150	227.383	2080.60	169.930
53	WESTHEIMER LTD	4,490	3,348	$102,950	$551,724	$512,771	$465,941	2133.07	122.183	141.733	1703.49	103.870
56	AIRLINE LTD	2,614	1,870	$58,290	$474,215	$446,244	$415,023	1959.19	114.717	123.917	1678.40	98.019
58	HAMMERLY	1,096	757	$23,569	$209,095	$195,585	$179,975	810.14	50.100	55.233	687.08	42.388

APPENDIX B (con't) NO.	ROUTE NAME	AVG WKDAY PAX	AVG WKDAY REV PAX	ADJ TOTAL REVENUE	ALLOCATED COST WITH ALL DEPRC	ALLOCATED COST WITH VEH DEPRC	ALLOCATED COST WITH NO DEPRC	DAILY SCHEDULED VEHICLE MI	DAILY SCHEDULED VEHICLE HR	DAILY SCHEDULED PAY HOURS	DAILY REVENUE MILES	DAILY REVENUE HOURS
WEEKDAY LOCAL CONT												
60	HARDY-S.MacGREGOR	3,541	2,445	$68,588	$365,493	$338,975	$307,755	1162.10	96.817	101.033	1032.64	81.072
63	SAN FELIPE LTD	1,602	1,059	$30,935	$268,197	$248,603	$225,187	920.76	65.783	71.750	740.00	49.350
64	GULFTON LTD	1,635	1,292	$37,178	$275,989	$256,380	$232,965	1068.21	63.800	69.067	905.21	54.907
65	BISSONET	3,676	2,625	$80,161	$427,757	$400,317	$369,097	1508.62	110.617	119.683	1217.00	91.022
68	BRAYS BAYOU XTOWN	3,289	2,499	$71,873	$371,925	$347,897	$320,579	1234.42	98.483	107.750	1063.12	85.317
70	UNIVERSITY	930	582	$17,101	$168,848	$155,893	$140,283	544.12	42.683	45.200	443.00	34.178
73	BELLFORT XTOWN	4,648	2,822	$82,045	$394,609	$370,347	$343,029	1466.38	99.767	109.433	1339.24	83.120
75	TAFT	833	598	$17,215	$96,871	$90,135	$82,330	289.59	26.433	28.500	251.25	22.128
77	LIBERTY-MLK LTD	11,738	8,443	$237,279	$1,092,493	$1,021,221	$939,267	4027.18	273.650	294.733	3254.47	226.907
78	ALABAMA-IRVINGTON	4,813	3,645	$105,211	$458,534	$428,112	$392,989	1550.42	117.417	130.633	1354.79	107.110
79	WEST LITTLE YORK LTD	1,157	776	$23,374	$199,360	$185,752	$170,142	746.87	53.100	49.567	668.52	36.701
80	DOWLING-LYONS	7,652	5,150	$153,832	$707,149	$661,729	$610,996	2071.97	202.783	216.683	1887.85	180.730
82	WESTHEIMER	9,088	6,567	$203,643	$799,842	$747,741	$689,203	2521.39	225.617	232.567	2279.29	192.190
84	FOUNTAIN VIEW	492	405	$11,220	$101,083	$94,415	$86,610	434.93	22.800	24.033	389.43	19.981
85	ANTOINE LTD	1,980	1,571	$47,766	$342,836	$319,509	$292,191	1458.62	80.517	78.950	1268.85	61.465
88	BROADWAY LTD	581	498	$14,834	$124,895	$110,388	$90,875	347.09	23.500	27.283	246.29	15.771
89	YALE	3,047	2,232	$65,582	$495,216	$466,038	$433,842	1738.77	129.539	145.796	1473.28	112.409
93	GREENS ROAD	319	243	$7,862	$105,335	$98,454	$90,649	360.75	28.350	29.283	300.75	20.896
98	TEXAS SPECIAL BLUE	1,676	1,442	$44,376	$149,595	$147,467	$147,467	535.92	35.900	64.267	459.95	47.787
99	TEXAS SPECIAL RED	1,998	1,675	$51,808	$153,387	$151,057	$151,057	563.92	39.633	63.000	470.12	45.674
402	P & HC SHUTTLE	0		$0	$182,281	$173,823	$162,116	794.52	48.917	51.600	0.00	0.000
403	S & K SHUTTLE	0		$0	$180,895	$172,386	$160,678	864.24	44.567	47.450	0.00	0.000
404	NW SHUTTLE	0		$0	$73,919	$70,985	$67,083	420.28	15.633	17.483	0.00	0.000
DAY	TOTAL WKD LOC & SHTL	215,260	152,612	$4,534,951	$25,437,285	$23,770,127	$21,849,099	89399.18	6527.788	7069.077	75433.52	5446.592
37	EL SOL*	869	663	$12,535	$148,367	$139,517	$129,761	871.74	62.633	66.450	849.95	57.620
420	POST OAK SP-GOLD*	43	36	$374	$87,104	$78,704	$67,728	365.40	24.533	32.000	256.05	17.570
421	POST OAK SP-GREEN*	14	9	$93	$65,378	$59,074	$50,842	273.96	18.500	24.000	191.77	14.467
QT	TOTAL WKD LOC & SHTL	216,186	153,320	$4,547,953	$25,738,134	$24,047,423	$22,097,430	90910.28	6633.454	7191.527	76731.285	5536.249
WEEKDAY EXPRESS												
19	WILDCREST EXP	634	553	$24,442	$219,883	$173,536	$154,023	774.04	35.283	38.783	526.34	24.913
21	NORTHSHORE EXP	1,784	1,392	$61,565	$302,755	$277,966	$246,746	1244.54	59.733	66.583	1020.12	43.781
31	MEMORIAL EXP	2,815	2,072	$94,273	$648,310	$526,609	$475,876	2425.87	110.233	123.717	1789.70	82.694
32	HARWIN EXP	2,288	1,925	$85,764	$564,032	$517,492	$458,954	2178.38	115.633	130.500	1825.88	94.494
41	GARDEN VILLAS EXP	268	224	$9,280	$67,130	$61,057	$53,252	247.74	13.333	15.017	194.34	10.721
QT	TOTAL WKD EXPRESS	7,789	6,165	$275,324	$1,802,111	$1,556,661	$1,388,851	6870.57	334.215	374.600	5356.38	256.603

*ROUTES OPERATING FOR LESS THAN 64 DAYS DURING THE 1ST QUARTER

APPENDIX B (con't) NO.	ROUTE NAME	AVG WKDAY PAX	AVG WKDAY REV PAX	ADJ TOTAL REVENUE	ALLOCATED COST WITH ALL DEPRC	ALLOCATED COST WITH VEH DEPRC	ALLOCATED COST WITH NO DEPRC	DAILY SCHEDULED VEHICLE MI	DAILY SCHEDULED VEHICLE HR	DAILY SCHEDULED PAY HOURS	DAILY REVENUE MILES	DAILY REVENUE HOURS
	WEEKDAY P&R											
59	SOUTHWEST FRY P&R	398	379	$26,376	$96,350	$75,901	$63,788	314.56	14.150	16.350	232.66	10.499
201	NORTH SHEPHERD P&R	1,513	1,472	$105,929	$515,156	$342,201	$289,710	1382.09	58.500	71.117	791.90	31.534
202	KUYKENDAHL P&R	4,145	4,028	$491,357	$1,418,254	$978,908	$846,168	4430.01	176.506	198.925	2962.73	106.046
206	EASTEX P&R	954	884	$74,439	$372,982	$316,562	$284,260	1638.46	65.167	72.083	1262.00	47.836
210	KATY-W. BELT P&R	570	556	$46,743	$265,022	$197,284	$177,095	988.23	40.155	42.902	829.57	31.057
214	NORTHWEST P&R	861	834	$84,146	$258,976	$223,576	$203,387	1278.47	42.733	51.783	945.50	31.305
228	ADDICKS P&R	1,173	1,149	$116,221	$521,178	$359,823	$310,865	1832.45	55.167	65.748	1318.85	38.763
236	MAXEY P&R	276	237	$19,281	$121,141	$100,273	$88,160	460.28	20.233	23.833	372.77	15.019
245	EDGEBROOK P&R	1,773	1,710	$141,217	$435,941	$346,793	$294,303	1373.84	69.100	80.383	1006.02	51.033
261	WEST LOOP P&R	1,023	994	$59,615	$265,892	$217,634	$189,370	1058.22	40.917	46.817	795.30	28.634
262	WESTWOOD P&R	1,331	1,289	$106,530	$391,129	$328,126	$291,786	1648.48	66.500	74.067	1092.30	42.169
263	ALIEF P&R	864	838	$70,351	$313,048	$251,251	$214,912	1072.48	48.983	56.650	528.52	26.807
284	SPRING-W. LAKE P&R	130	128	$15,843	$119,402	$107,391	$91,240	563.35	18.898	22.531	248.55	9.297
291	NORTH SHEPHERD P&R	277	263	$23,321	$106,897	$86,217	$74,104	364.05	17.500	19.833	199.50	9.421
	SUBTOTAL METRO P&R	15,289	14,762	$1,381,370	$5,201,368	$3,931,939	$3,419,148	18404.96	734.509	843.022	12586.166	479.419
221	KATY-MASON P&R*	697	669	$69,064	$264,266	$193,679	$172,481	1354.04	45.817	53.067	1132.36	32.651
221	KINGSLAND P&R*	551	534	$18,133	$83,328	$59,905	$52,839	1262.50	39.650	46.983	799.16	27.850
227	KATY/FRY P&R*	166	159	$5,418	$39,355	$29,281	$26,253	695.94	19.017	21.250	511.17	14.523
107	FM 1960**	648	624	$29,090	$123,621	$94,896	$82,783	1233.28	48.433	57.283	808.40	34.150
204	SPRING P&R**	1,982	1,934	$88,015	$281,559	$201,293	$177,067	2793.94	95.650	102.167	1779.86	65.716
	TOTAL METRO P&R	19,333	18,681	$1,591,089	$5,993,497	$4,510,994	$3,930,571	25744.66	983.076	1123.772	17617.116	654.309
	CONTRACT P&R											
107	FM 1960**	539	521	$40,005	$141,866	$109,133					808.40	30.033
204	SPRING P&R**	1,819	1,758	$134,996	$337,364	$233,939					1779.90	58.317
205	KINGWOOD P&R	1,248	1,206	$167,432	$362,900	$318,909					1461.40	54.283
212	SETON LAKE P&R	1,616	1,561	$161,117	$465,524	$325,835					1257.40	53.467
246	BAY AREA P&R	1,257	1,215	$149,285	$345,283	$304,352					1321.30	51.950
270	MISSOURI CITY P&R	547	529	$45,463	$178,119	$153,230					454.40	26.350
	TOTAL CONTRACT P&R	7,026	6,789	$698,298	$1,831,056	$1,445,398					7082.80	274.400

*ROUTES OPERATING FOR LESS THAN 64 DAYS DURING THE 1ST QUARTER

**OPERATED UNDER CONTRACT DURING NOVEMBER AND DECEMBER

**OPERATED BY METRO DURING OCTOBER

SOURCE: PASSENGER DATA FROM QUARTERLY RIDERSHIP REPORT AND PCT83; VEHICLE MILE, VEHICLE HOUR, PAY HOUR FROM SUMMARY OF SCHEDULES; REVENUE MILES AND REVENUE HOURS FROM BLOCK SUMMARIES.

APPENDIX B (con't)
METRO 1ST QUARTER FY 1986 PERFORMANCE MEASURES

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH ALL DEPRC PER					ALLOCATED COST WITH VEH DEPRC PER				
			VEHICLE MI	VEHICLE HR	PAY HR	REVENUE MI	REVENUE HR	VEHICLE MI	VEHICLE HR	PAY HR	REVENUE MI	REVENUE HR
		WEEKDAY LOCAL										
1		HOSPITAL	$5.41	$54.58	$51.17	$6.52	$63.35	$5.06	$51.00	$47.81	$6.09	$59.18
2		BELLAIRE	$4.74	$62.39	$57.16	$5.59	$78.30	$4.39	$57.81	$52.96	$5.18	$72.55
3		LANGLEY LTD	$4.52	$57.07	$56.45	$5.06	$68.83	$4.23	$53.40	$52.82	$4.73	$64.41
4		BEECHNUT	$4.40	$61.37	$55.95	$5.13	$72.73	$4.11	$57.42	$52.35	$4.80	$68.05
5		KASHMERE GARDENS	$5.67	$57.01	$54.10	$6.34	$71.97	$5.23	$52.63	$49.95	$5.85	$66.44
6		JENSEN	$4.96	$57.83	$57.79	$5.43	$74.15	$4.59	$53.53	$53.49	$5.03	$68.64
8		NORTH/SOUTH MAIN	$4.18	$60.59	$55.22	$4.88	$70.04	$3.94	$57.07	$52.01	$4.59	$65.97
9		HIRSCH/MED CENTER	$4.49	$60.03	$56.42	$5.18	$71.85	$4.20	$56.06	$52.69	$4.84	$67.11
11		NANCE	$5.45	$52.94	$49.26	$5.82	$58.82	$5.12	$49.74	$46.27	$5.47	$55.25
12		ALLEN HOUSE	$5.51	$96.63	$70.30	$9.83	$132.76	$4.86	$85.20	$61.99	$8.67	$117.07
14		HIRAM CLARKE LTD	$4.36	$60.45	$56.32	$5.19	$72.46	$4.08	$56.61	$52.74	$4.86	$67.86
15		FULTON-WEST GRAY	$4.74	$58.24	$53.26	$5.57	$64.53	$4.44	$54.56	$49.89	$5.22	$60.45
16		MEMORIAL	$3.71	$71.34	$67.64	$4.46	$86.27	$3.44	$66.23	$62.79	$4.14	$80.09
17		TANGLEWOOD	$3.87	$71.73	$66.51	$4.58	$85.00	$3.58	$66.38	$61.55	$4.24	$78.66
20		CANAL	$5.37	$60.25	$54.10	$5.57	$65.97	$4.96	$55.69	$50.00	$5.15	$60.97
22		ALEMEDA	$4.05	$62.49	$58.34	$4.58	$75.62	$3.80	$58.62	$54.73	$4.30	$70.93
24		KEMPWOOD	$4.16	$67.87	$62.16	$5.00	$79.92	$3.85	$62.88	$57.58	$4.63	$74.04
25		RICHMOND-NORTHLINE	$4.89	$59.43	$54.56	$5.49	$68.17	$4.55	$55.32	$50.79	$5.11	$63.46
26		OUTERLOOP XTOWN	$4.44	$60.46	$57.28	$4.59	$68.47	$4.14	$56.42	$53.46	$4.29	$63.90
28		SOUTHMORE	$4.69	$55.99	$53.77	$5.42	$69.71	$4.40	$52.55	$50.47	$5.09	$65.43
30		CULLEN-CLINTON	$4.25	$62.84	$57.98	$5.19	$73.62	$3.97	$58.70	$54.16	$4.85	$68.76
33		POST OAK XTOWN	$4.28	$59.74	$55.73	$4.71	$68.15	$4.02	$56.13	$52.37	$4.43	$64.04
34		MONTROSE XTOWN	$5.02	$56.17	$54.12	$5.76	$62.74	$4.68	$52.38	$50.47	$5.37	$58.50
35		KIRBY-LEELAND	$4.56	$63.16	$58.62	$5.25	$74.93	$4.23	$58.53	$54.32	$4.86	$69.44
36		LAWNDALE	$4.98	$59.64	$55.07	$5.49	$71.33	$4.62	$55.37	$51.13	$5.10	$66.23
39		LONG POINT	$3.84	$67.27	$59.89	$4.42	$79.92	$3.60	$63.08	$56.16	$4.14	$74.94
40		TELEPHONE-PECORE	$4.24	$62.49	$57.14	$4.98	$71.52	$3.97	$58.49	$53.48	$4.66	$66.93
42		HOLMAN XTOWN	$5.11	$58.29	$53.18	$5.47	$65.97	$4.76	$54.27	$49.52	$5.10	$61.42
44		ACRES HOMES LTD	$3.73	$63.99	$59.03	$4.10	$73.28	$3.52	$60.41	$55.73	$3.87	$69.18
46		GESSNER XTOWN	$4.25	$59.99	$57.39	$4.82	$71.54	$3.98	$56.22	$53.79	$4.51	$67.05
48		NAVIGATION-WASHGTN	$4.25	$59.33	$55.03	$4.73	$68.55	$4.00	$55.87	$51.82	$4.45	$64.55
50		HEIGHTS-HARRISBURG	$4.34	$62.27	$57.43	$4.96	$73.27	$4.05	$58.13	$53.61	$4.63	$68.40
52		SCOTT	$4.74	$60.34	$54.70	$5.98	$73.20	$4.42	$56.26	$51.00	$5.57	$68.25
53		WESTHEIMER LTD	$4.04	$70.56	$60.82	$5.06	$82.99	$3.76	$65.57	$56.53	$4.70	$77.14
56		AIRLINE LTD	$3.78	$64.59	$59.79	$4.41	$75.59	$3.56	$60.78	$56.27	$4.15	$71.13
58		HAMMERLY	$4.03	$65.21	$59.15	$4.76	$77.08	$3.77	$61.00	$55.33	$4.45	$72.10

APPENDIX B (con't)

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH ALL DEPRC PER VEH MI	VEH HR	PAY HR	REV MI	REV HR	ALLOCATED COST WITH VEH DEPRC PER VEH MI	VEH HR	PAY HR	REV MI	REV HR
		WEEKDAY LOCAL										
60		HARDY-SO.MACGREGOR	$4.91	$58.99	$56.52	$5.53	$70.44	$4.56	$54.71	$52.42	$5.13	$65.33
63		SAN FELIPE LTD	$4.55	$63.70	$58.41	$5.66	$84.92	$4.22	$59.05	$54.14	$5.25	$78.71
64		GULFTON LTD	$4.04	$67.59	$62.44	$4.76	$78.54	$3.75	$62.79	$58.00	$4.43	$72.96
65		BISSONET	$4.43	$60.42	$55.85	$5.49	$73.43	$4.15	$56.55	$52.26	$5.14	$68.72
68		BRAYS BAYOU XTOWN	$4.71	$59.01	$53.93	$5.47	$68.11	$4.40	$55.20	$50.45	$5.11	$63.71
70		UNIVERSITY	$4.85	$61.81	$58.37	$5.96	$77.19	$4.48	$57.07	$53.89	$5.50	$71.27
73		BELLFORT XTOWN	$4.20	$61.80	$56.34	$4.60	$74.18	$3.95	$58.00	$52.88	$4.32	$69.62
75		TAFT	$5.23	$57.26	$53.11	$6.02	$68.40	$4.86	$53.28	$49.42	$5.61	$63.65
77		LIBERTY-MLK LTD	$4.24	$62.38	$57.92	$5.25	$75.23	$3.96	$58.31	$54.14	$4.90	$70.32
78		ALABAMA-IRVINGTON	$4.62	$61.02	$54.85	$5.29	$66.89	$4.31	$56.97	$51.21	$4.94	$62.45
79		WEST LITTLE YORK LTD	$4.17	$58.66	$62.84	$4.66	$84.88	$3.89	$54.66	$58.55	$4.34	$79.08
80		DOWLING-LYONS	$5.33	$54.49	$50.99	$5.85	$61.14	$4.99	$50.99	$47.72	$5.48	$57.21
82		WESTHEIMER	$4.96	$55.39	$53.74	$5.48	$65.03	$4.63	$51.78	$50.24	$5.13	$60.79
84		FOUNTAIN VIEW	$3.63	$69.27	$65.72	$4.06	$79.05	$3.39	$64.70	$61.38	$3.79	$73.83
85		ANTOINE LTD	$3.67	$66.53	$67.85	$4.22	$87.15	$3.42	$62.00	$63.23	$3.93	$81.22
88		BROADWAY LTD	$5.62	$83.04	$71.53	$7.92	$123.74	$4.97	$73.40	$63.22	$7.00	$109.37
89		YALE	$4.45	$59.73	$53.07	$5.25	$68.84	$4.19	$56.21	$49.95	$4.94	$64.78
93		GREENS ROAD	$4.56	$58.06	$56.21	$5.47	$78.76	$4.26	$54.26	$52.53	$5.12	$73.62
98		TEXAS SPECIAL BLUE	$4.36	$65.11	$36.37	$5.08	$48.91	$4.30	$64.18	$35.85	$5.01	$48.22
99		TEXAS SPECIAL RED	$4.25	$60.47	$38.04	$5.10	$52.47	$4.19	$59.55	$37.46	$5.02	$51.68
402		P & HC SHUTTLE	$3.58	$58.22	$55.20			$3.42	$55.52	$52.64		
403		S & K SHUTTLE	$3.27	$63.42	$59.57			$3.12	$60.44	$56.77		
404		NW SHUTTLE	$2.75	$73.88	$66.06			$2.64	$70.95	$63.44		
		AVG WKD LOC & SHTL	$4.45	$60.89	$56.22	$5.27	$72.97	$4.15	$56.90	$52.54	$4.92	$68.19
37		EL SOL	$4.25	$59.22	$55.82	$4.36	$64.37	$4.00	$55.69	$52.49	$4.10	$60.53
420		POST OAK SP-GOLD	$5.30	$78.90	$60.49	$7.56	$110.17	$4.79	$71.29	$54.66	$6.83	$99.54
421		POST OAK SP-GREEN	$5.30	$78.53	$60.54	$7.58	$100.42	$4.79	$70.96	$54.70	$6.85	$90.74
		AVG WKD LOC & SHTL*	$4.45	$60.96	$56.25	$5.27	$73.05	$4.16	$56.95	$52.55	$4.93	$68.25
		WEEKDAY EXPRESS										
19		WILDCREST EXP	$4.44	$97.37	$88.59	$6.53	$137.91	$3.50	$76.85	$69.91	$5.15	$108.84
21		NORTHSHORE EXP	$3.80	$79.19	$71.05	$4.64	$108.05	$3.49	$72.71	$65.23	$4.26	$99.20
31		MEMORIAL EXP	$4.18	$91.89	$81.88	$5.66	$122.50	$3.39	$74.64	$66.51	$4.60	$99.50
32		HARWIN EXP	$4.05	$76.22	$67.53	$4.83	$93.27	$3.71	$69.93	$61.96	$4.43	$85.57
41		GARDEN VILLAS EXP	$4.23	$78.67	$69.85	$5.40	$97.84	$3.85	$71.55	$63.53	$4.91	$88.99
		AVG WKD EXPRESS	$4.10	$84.25	$75.17	$5.26	$109.73	$3.54	$72.78	$64.93	$4.54	$94.79

APPENDIX B (con't)

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH ALL DEPRC PER VEHICLE MI	VEHICLE HR	PAY HR	REV MI	REV HR	ALLOCATED COST WITH VEH DEPRC PER VEHICLE MI	VEHICLE HR	PAY HR	REV MI	REV HR
		WEEKDAY P&R										
59		SOUTHWEST FRY P&R	$4.79	$106.39	$92.08	$6.47	$143.39	$3.77	$83.81	$72.54	$5.10	$112.96
201		NORTH SHEPHERD P&R	$5.82	$137.60	$113.18	$10.16	$255.26	$3.87	$91.40	$75.18	$6.75	$169.56
202		KUYKENDAHL P&R	$5.00	$125.55	$111.40	$7.48	$208.97	$3.45	$86.66	$76.89	$5.16	$144.23
206		EASTEX P&R	$3.56	$89.43	$80.85	$4.62	$121.83	$3.02	$75.90	$68.62	$3.92	$103.40
210		KATY-W. BELT P&R	$4.19	$103.13	$96.52	$4.99	$133.33	$3.12	$76.77	$71.85	$3.72	$99.25
214		NORTHWEST P&R	$3.17	$94.69	$78.14	$4.28	$129.26	$2.73	$81.75	$67.46	$3.69	$111.59
228		ADDICKS P&R	$4.44	$147.61	$123.86	$6.17	$210.08	$3.07	$101.91	$85.51	$4.26	$145.04
236		MAXEY P&R	$4.11	$93.55	$79.42	$5.08	$126.03	$3.40	$77.44	$65.74	$4.20	$104.32
245		EDGEBROOK P&R	$4.96	$98.58	$84.74	$6.77	$133.47	$3.94	$78.42	$67.41	$5.39	$106.18
261		WEST LOOP P&R	$3.93	$101.54	$88.74	$5.22	$145.09	$3.21	$83.11	$72.63	$4.28	$118.76
262		WESTWOOD P&R	$3.71	$91.90	$82.51	$5.59	$144.93	$3.11	$77.10	$69.22	$4.69	$121.58
263		ALIEF P&R	$4.56	$99.86	$86.34	$9.25	$182.47	$3.66	$80.15	$69.30	$7.43	$146.45
284		SPRING-W. LAKE P&R	$3.31	$98.72	$82.80	$7.51	$200.68	$2.98	$88.79	$74.47	$6.75	$180.49
291		NORTH SHEPHERD P&R	$4.59	$95.44	$84.22	$8.37	$177.30	$3.70	$76.98	$67.92	$6.75	$143.00
		AVERAGE METRO P&R	$4.42	$110.65	$96.40	$6.46	$169.52	$3.34	$83.64	$72.88	$4.88	$128.15
221		KATY-MASON P&R	$4.07	$120.16	$103.75	$4.86	$168.62	$2.98	$66.05	$76.04	$3.56	$123.58
221		KINGSLAND P&R	$4.13	$131.35	$110.85	$6.52	$187.00	$2.97	$94.43	$79.69	$4.68	$134.44
227		KATY/FRY P&R	$3.53	$129.34	$115.75	$4.81	$169.36	$2.63	$96.23	$86.12	$3.58	$126.01
107		FM 1960	$4.18	$106.35	$89.92	$6.37	$150.83	$3.21	$81.64	$69.03	$4.89	$115.78
204		SPRING P&R	$4.20	$122.65	$114.83	$6.59	$178.52	$3.00	$87.69	$82.09	$4.71	$127.63
		AVERAGE METRO P&R*	$4.37	$111.81	$97.58	$6.36	$169.67	$3.29	$84.15	$73.45	$4.78	$127.70

*Weighted to reflect those routes operating fewer than 64 days.

		CONTRACT P&R										
107		FM 1960				$4.39	$118.09				$3.37	$90.84
204		SPRING P&R				$4.74	$144.63				$3.29	$100.29
205		KINGWOOD P&R				$3.88	$104.46				$3.41	$91.80
212		SETON LAKE P&R				$5.78	$136.04				$4.05	$95.22
246		BAY AREA P&R				$4.08	$103.85				$3.60	$91.54
270		MISSOURI CITY P&R				$6.12	$105.62				$5.27	$90.86
		TOTAL CONTRACT P&R				$4.68	$118.58				$3.69	$93.61

4.6808528

APPENDIX B (con't)
METRO 1ST QUARTER FY 1986 PERFORMANCE MEASURES

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH NO DEPRC PER VEHICLE MI	VEHICLE HR	PAY HR	REVENUE MI	REVENUE HR	PAX PER VEH MI	PAX PER VEH HR	PAX PER PAY HR	PAX PER REV MI	PAX PER REV HR
		WEEKDAY LOCAL										
1		HOSPITAL	$4.66	$46.95	$44.02	$5.61	$54.49	3.325	33.541	31.445	4.004	38.925
2		BELLAIRE	$3.98	$52.34	$47.95	$4.69	$65.69	2.850	37.508	34.364	3.359	47.073
3		LANGLEY LTD	$3.91	$49.29	$48.75	$4.37	$59.45	2.559	32.277	31.927	2.860	38.929
4		BEECHNUT	$3.79	$52.90	$48.24	$4.43	$62.70	2.099	29.315	26.728	2.453	34.743
5		KASHMERE GARDENS	$4.72	$47.41	$44.99	$5.27	$59.85	3.277	32.949	31.265	3.664	41.591
6		JENSEN	$4.15	$48.46	$48.42	$4.55	$62.13	2.444	28.519	28.496	2.678	36.564
8		NORTH/SOUTH MAIN	$3.67	$53.21	$48.49	$4.28	$61.50	2.339	33.910	30.903	2.728	39.195
9		HIRSCH/MED CENTER	$3.86	$51.51	$48.42	$4.45	$61.66	2.346	31.324	29.443	2.704	37.496
11		NANCE	$4.77	$46.26	$43.03	$5.09	$51.39	3.204	31.094	28.929	3.420	34.543
12		ALLEN HOUSE	$3.97	$69.63	$50.66	$7.09	$95.68	0.000	0.000	0.000	0.000	0.000
14		HIRAM CLARKE LTD	$3.76	$52.26	$48.69	$4.48	$62.64	2.352	32.653	30.421	2.802	39.137
15		FULTON-WEST GRAY	$4.10	$50.41	$46.10	$4.82	$55.85	3.194	39.245	35.892	3.752	43.484
16		MEMORIAL	$3.12	$60.07	$56.96	$3.76	$72.64	1.279	24.599	23.324	1.538	29.747
17		TANGLEWOOD	$3.23	$59.85	$55.50	$3.82	$70.93	1.605	29.786	27.619	1.901	35.297
20		CANAL	$4.47	$50.21	$45.09	$4.64	$54.98	5.118	57.450	51.583	5.310	62.898
22		ALEMEDA	$3.52	$54.24	$50.64	$3.98	$65.64	1.737	26.772	24.995	1.964	32.395
24		KEMPWOOD	$3.49	$56.85	$52.06	$4.19	$66.94	1.942	31.672	29.004	2.333	37.294
25		RICHMOND-NORTHLINE	$4.16	$50.54	$46.40	$4.67	$57.97	3.310	40.200	36.908	3.717	46.111
26		OUTERLOOP XTOWN	$3.80	$51.78	$49.06	$3.93	$58.64	2.324	31.666	30.003	2.406	35.864
28		SOUTHMORE	$4.08	$48.77	$46.84	$4.72	$60.71	2.785	33.264	31.948	3.220	41.412
30		CULLEN-CLINTON	$3.65	$53.90	$49.74	$4.46	$63.15	1.958	28.937	26.699	2.392	33.898
33		POST OAK XTOWN	$3.73	$52.13	$48.63	$4.11	$59.47	1.267	17.691	16.504	1.395	20.182
34		MONTROSE XTOWN	$4.29	$48.05	$46.30	$4.93	$53.67	1.711	19.148	18.450	1.963	21.388
35		KIRBY-LEELAND	$3.83	$53.01	$49.20	$4.40	$62.88	1.388	19.206	17.826	1.595	22.785
36		LAWNDALE	$4.20	$50.35	$46.49	$4.64	$60.22	3.140	37.603	34.720	3.464	44.974
39		LONG POINT	$3.32	$58.28	$51.88	$3.83	$69.23	2.069	36.275	32.291	2.383	43.092
40		TELEPHONE-PECORE	$3.66	$53.91	$49.29	$4.29	$61.69	2.477	36.505	33.376	2.906	41.774
42		HOLMAN XTOWN	$4.35	$49.62	$45.27	$4.66	$56.15	4.050	46.187	42.137	4.338	52.271
44		ACRES HOMES LTD	$3.29	$56.51	$52.13	$3.62	$64.71	1.376	23.642	21.810	1.515	27.075
46		GESSNER XTOWN	$3.68	$51.99	$49.74	$4.17	$62.00	2.067	29.201	27.940	2.344	34.828
48		NAVIGATION-WASHGTN	$3.73	$52.09	$48.32	$4.15	$60.19	2.254	31.464	29.184	2.507	36.353
50		HEIGHTS-HARRISBURG	$3.72	$53.34	$49.19	$4.25	$62.76	3.021	43.315	39.943	3.453	50.965
52		SCOTT	$4.05	$51.52	$46.71	$5.11	$62.51	2.650	33.718	30.570	3.341	40.905
53		WESTHEIMER LTD	$3.41	$59.59	$51.37	$4.27	$70.09	2.105	36.748	31.679	2.636	43.227
56		AIRLINE LTD	$3.31	$56.53	$52.33	$3.86	$66.16	1.334	22.787	21.095	1.557	26.668
58		HAMMERLY	$3.47	$56.13	$50.91	$4.09	$66.34	1.353	21.876	19.843	1.595	25.856

APPENDIX B (con't)

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH NO DEPRC PER VEH MI	VEH HR	PAY HR	REV MI	REV HR	PAX PER VEH MI	VEH HR	PAY HR	REV MI	REV HR
		WEEKDAY LOCAL										
60		HARDY-SO.MACGREGOF	$4.14	$49.67	$47.60	$4.66	$59.31	3.047	36.574	35.048	3.429	43.677
63		SAN FELIPE LTD	$3.82	$53.49	$49.04	$4.75	$71.30	1.740	24.353	22.328	2.165	32.462
64		GULFTON LTD	$3.41	$57.05	$52.70	$4.02	$66.30	1.531	25.627	23.673	1.806	29.778
65		BISSONET	$3.82	$52.14	$48.19	$4.74	$63.36	2.437	33.232	30.714	3.021	40.386
68		BRAYS BAYOU XTOWN	$4.06	$50.86	$46.49	$4.71	$58.71	2.664	33.397	30.524	3.094	38.550
70		UNIVERSITY	$4.03	$51.35	$48.49	$4.95	$64.13	1.709	21.789	20.575	2.099	27.210
73		BELLFORT XTOWN	$3.66	$53.72	$48.98	$4.00	$64.48	3.170	46.589	42.473	3.471	55.919
75		TAFT	$4.44	$48.67	$45.14	$5.12	$58.13	2.876	31.514	29.228	3.315	37.645
77		LIBERTY-MLK LTD	$3.64	$53.63	$49.79	$4.51	$64.68	2.915	42.894	39.826	3.607	51.730
78		ALABAMA-IRVINGTON	$3.96	$52.30	$47.01	$4.53	$57.33	3.104	40.991	36.844	3.553	44.935
79		WEST LITTLE YORK LTD	$3.56	$50.07	$53.63	$3.98	$72.44	1.549	21.789	23.342	1.731	31.525
80		DOWLING-LYONS	$4.61	$47.08	$44.06	$5.06	$52.82	3.693	37.735	35.314	4.053	42.339
82		WESTHEIMER	$4.27	$47.73	$46.30	$4.72	$56.03	3.604	40.281	39.077	3.987	47.287
84		FOUNTAIN VIEW	$3.11	$59.35	$56.31	$3.48	$67.73	1.131	21.579	20.472	1.263	24.623
85		ANTOINE LTD	$3.13	$56.70	$57.83	$3.60	$74.28	1.357	24.591	25.079	1.560	32.213
88		BROADWAY LTD	$4.09	$60.42	$52.04	$5.77	$90.03	1.674	24.723	21.295	2.359	36.840
89		YALE	$3.90	$52.33	$46.49	$4.60	$60.30	1.752	23.522	20.899	2.068	27.106
93		GREENS ROAD	$3.93	$49.96	$48.37	$4.71	$67.78	0.884	11.252	10.894	1.061	15.266
98		TEXAS SPECIAL BLUE	$4.30	$64.18	$35.85	$5.01	$48.22	3.127	46.685	26.079	3.644	35.072
99		TEXAS SPECIAL RED	$4.19	$59.55	$37.46	$5.02	$51.68	3.543	50.413	31.714	4.250	43.745
402		P & HC SHUTTLE	$3.19	$51.78	$49.09							
403		S & K SHUTTLE	$2.90	$56.33	$52.91							
404		NW SHUTTLE	$2.49	$67.05	$59.95							
		AVG WKD LOC & SHTL	$3.82	$52.30	$48.29	$4.53	$62.68	2.408	32.976	30.451	2.854	39.522
37		EL SOL	$3.72	$51.79	$48.82	$3.82	$56.30	0.997	13.874	13.078	1.022	15.082
420		POST OAK SP-GOLD	$4.12	$61.35	$47.03	$5.88	$85.66	0.118	1.753	1.344	0.168	2.447
421		POST OAK SP-GREEN	$4.12	$61.07	$47.08	$5.89	$78.10	0.051	0.757	0.583	0.073	0.968
		AVG WKD LOC & SHTL*	$3.82	$52.34	$48.29	$4.53	$62.72	2.340	32.049	29.594	2.772	38.400
		WEEKDAY EXPRESS										
19		WILDCREST EXP	$3.11	$68.21	$62.05	$4.57	$96.60	0.819	17.969	16.347	1.205	25.449
21		NORTHSHORE EXP	$3.10	$64.54	$57.90	$3.78	$88.06	1.433	29.866	26.794	1.749	40.748
31		MEMORIAL EXP	$3.07	$67.45	$60.10	$4.15	$89.92	1.160	25.537	22.754	1.573	34.041
32		HARWIN EXP	$3.29	$62.02	$54.95	$3.93	$75.89	1.050	19.787	17.533	1.253	24.213
41		GARDEN VILLAS EXP	$3.36	$62.41	$55.41	$4.28	$77.61	1.082	20.101	17.846	1.379	24.998
		AVG WKD EXPRESS	$3.16	$64.93	$57.93	$4.05	$84.57	1.134	23.305	20.793	1.454	30.354

APPENDIX B (con't)

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH NO DEPRC PER VEHICLE MI	VEHICLE HR	PAY HOURS	REV MI	REV HR	PAX PER VEH MI	PAX PER VEH HR	PAX PER PAY HOUR	PAX PER REV MI	PAX PER REV HR
		WEEKDAY P&R										
59		SOUTHWEST FRY P&R	$3.17	$70.44	$60.96	$4.28	$94.93	1.265	28.127	24.343	1.711	37.908
201		NORTH SHEPHERD P&R	$3.28	$77.38	$63.65	$5.72	$143.55	1.095	25.861	21.273	1.910	47.976
202		KUYKENDAHL P&R	$2.98	$74.91	$66.46	$4.46	$124.68	0.936	23.484	20.837	1.399	39.087
206		EASTEX P&R	$2.71	$68.16	$61.62	$3.52	$92.85	0.582	14.642	13.238	0.756	19.947
210		KATY-W. BELT P&R	$2.80	$68.91	$64.50	$3.34	$89.10	0.577	14.198	13.289	0.687	18.358
214		NORTHWEST P&R	$2.49	$74.37	$61.37	$3.36	$101.51	0.673	20.144	16.623	0.910	27.497
228		ADDICKS P&R	$2.65	$88.05	$73.88	$3.68	$125.31	0.640	21.262	17.840	0.889	30.259
236		MAXEY P&R	$2.99	$68.08	$57.80	$3.70	$91.72	0.599	13.621	11.564	0.739	18.350
245		EDGEBROOK P&R	$3.35	$66.55	$57.21	$4.57	$90.11	1.291	25.663	22.061	1.763	34.749
261		WEST LOOP P&R	$2.80	$72.31	$63.20	$3.72	$103.34	0.967	25.003	21.852	1.286	35.729
262		WESTWOOD P&R	$2.77	$68.56	$61.55	$4.17	$108.12	0.808	20.022	17.977	1.219	31.575
263		ALIEF P&R	$3.13	$68.55	$59.28	$6.35	$125.27	0.805	17.633	15.247	1.634	32.220
284		SPRING-W. LAKE P&R	$2.53	$75.44	$63.27	$5.74	$153.35	0.231	6.900	5.787	0.525	14.026
291		NORTH SHEPHERD P&R	$3.18	$66.16	$58.38	$5.80	$122.91	0.761	15.836	13.973	1.389	29.418
		AVERAGE METRO P&R	$2.90	$72.73	$63.37	$4.24	$111.44	0.831	20.815	18.136	1.215	31.890
221		KATY-MASON P&R	$2.65	$78.43	$67.71	$3.17	$110.05	0.515	15.215	13.136	0.616	21.350
221		KINGSLAND P&R	$2.62	$83.29	$70.29	$4.13	$118.58	0.437	13.907	11.736	0.690	19.799
227		KATY/FRY P&R	$2.36	$86.28	$77.22	$3.21	$112.98	0.239	8.740	7.821	0.325	11.444
107		FM 1960	$2.80	$71.22	$60.22	$4.27	$101.00	0.525	13.379	11.312	0.802	18.975
204		SPRING P&R	$2.64	$77.13	$72.21	$4.15	$112.27	0.709	20.721	19.400	1.114	30.160
		AVERAGE METRO P&R*	$2.87	$73.33	$64.00	$4.17	$111.27	0.790	20.079	17.510	1.152	30.544

*Weighted to reflect those routes operating fewer than 64 days.

		CONTRACT P&R										
107		FM 1960				$0.00	$0.00				0.667	17.947
204		SPRING P&R				$0.00	$0.00				1.022	31.192
205		KINGWOOD P&R				$0.00	$0.00				0.854	22.991
212		SETON LAKE P&R				$0.00	$0.00				1.285	30.224
246		BAY AREA P&R				$0.00	$0.00				0.951	24.196
270		MISSOURI CITY P&R				$0.00	$0.00				1.204	20.759
		TOTAL CONTRACT P&R									1.019	24.549

APPENDIX B (con't)
METRO 1ST QUARTER FY 1986 PERFORMANCE MEASURES

NO.	ROUTE NAME	COST PER PASSENGER			COST PER REVENUE PASSENGER			REVENUE PER						
		ALL DEPRC	VEH DEPRC	NO DEPRC	ALL DEPRC	VEH DEPRC	NO DEPRC	VEH MI	VEH HR	PAY HR	REV MI	REV HR	PAX	REV PAX
	WEEKDAY LOCAL													
1	HOSPITAL	$1.63	$1.52	$1.40	$2.68	$2.50	$2.30	$0.97	$9.74	$9.13	$1.16	$11.30	$0.290	$0.478
2	BELLAIRE	$1.66	$1.54	$1.40	$2.31	$2.14	$1.94	$0.98	$12.91	$11.83	$1.16	$16.20	$0.344	$0.478
3	LANGLEY LTD	$1.77	$1.65	$1.53	$2.54	$2.38	$2.20	$0.82	$10.34	$10.23	$0.92	$12.47	$0.320	$0.461
4	BEECHNUT	$2.09	$1.96	$1.80	$2.85	$2.67	$2.46	$0.72	$10.06	$9.17	$0.84	$11.92	$0.343	$0.467
5	KASHMERE GARDENS	$1.73	$1.60	$1.44	$2.43	$2.24	$2.02	$1.03	$10.37	$9.84	$1.15	$13.08	$0.315	$0.442
6	JENSEN	$2.03	$1.88	$1.70	$3.02	$2.80	$2.53	$0.80	$9.36	$9.35	$0.88	$12.00	$0.328	$0.489
8	NORTH/SOUTH MAIN	$1.79	$1.68	$1.57	$2.50	$2.36	$2.20	$0.79	$11.52	$10.50	$0.93	$13.31	$0.340	$0.476
9	HIRSCH/MED CENTER	$1.92	$1.79	$1.64	$2.70	$2.52	$2.32	$0.75	$10.00	$9.40	$0.86	$11.97	$0.319	$0.450
11	NANCE	$1.70	$1.60	$1.49	$2.44	$2.29	$2.13	$1.00	$9.73	$9.05	$1.07	$10.81	$0.313	$0.448
12	ALLEN HOUSE							$0.12	$2.06	$1.50	$0.21	$2.84		
14	HIRAM CLARKE LTD	$1.85	$1.73	$1.60	$2.64	$2.47	$2.28	$0.77	$10.73	$9.99	$0.92	$12.86	$0.329	$0.469
15	FULTON-WEST GRAY	$1.48	$1.39	$1.28	$2.08	$1.95	$1.80	$1.05	$12.93	$11.83	$1.24	$14.33	$0.330	$0.463
16	MEMORIAL	$2.90	$2.69	$2.44	$4.24	$3.94	$3.57	$0.40	$7.66	$7.26	$0.48	$9.26	$0.311	$0.455
17	TANGLEWOOD	$2.41	$2.23	$2.01	$3.42	$3.16	$2.85	$0.51	$9.47	$8.78	$0.60	$11.23	$0.318	$0.451
20	CANAL	$1.05	$0.97	$0.87	$1.45	$1.34	$1.21	$1.77	$19.83	$17.80	$1.83	$21.71	$0.345	$0.478
22	ALEMEDA	$2.33	$2.19	$2.03	$3.41	$3.20	$2.96	$0.56	$8.59	$8.02	$0.63	$10.39	$0.321	$0.469
24	KEMPWOOD	$2.14	$1.99	$1.79	$3.08	$2.86	$2.58	$0.67	$10.99	$10.06	$0.81	$12.94	$0.347	$0.499
25	RICHMOND-NORTHLINE	$1.48	$1.38	$1.26	$2.02	$1.88	$1.72	$1.16	$14.13	$12.98	$1.31	$16.21	$0.352	$0.480
26	OUTERLOOP XTOWN	$1.91	$1.78	$1.64	$2.83	$2.64	$2.42	$0.68	$9.28	$8.79	$0.71	$10.51	$0.293	$0.434
28	SOUTHMORE	$1.68	$1.58	$1.47	$2.40	$2.25	$2.09	$0.83	$9.93	$9.54	$0.96	$12.36	$0.299	$0.426
30	CULLEN-CLINTON	$2.17	$2.03	$1.86	$3.12	$2.91	$2.67	$0.63	$9.36	$8.63	$0.77	$10.96	$0.323	$0.464
33	POST OAK XTOWN	$3.38	$3.17	$2.95	$5.38	$5.06	$4.70	$0.37	$5.23	$4.88	$0.41	$5.97	$0.296	$0.471
34	MONTROSE XTOWN	$2.93	$2.74	$2.51	$4.00	$3.73	$3.42	$0.57	$6.35	$6.12	$0.65	$7.09	$0.332	$0.452
35	KIRBY-LEELAND	$3.29	$3.05	$2.76	$4.54	$4.21	$3.81	$0.46	$6.32	$5.87	$0.53	$7.50	$0.329	$0.455
36	LAWNDALE	$1.59	$1.47	$1.34	$2.14	$1.98	$1.80	$1.10	$13.22	$12.21	$1.22	$15.81	$0.352	$0.473
39	LONG POINT	$1.85	$1.74	$1.61	$2.60	$2.44	$2.25	$0.75	$13.12	$11.68	$0.86	$15.58	$0.362	$0.507
40	TELEPHONE-PECORE	$1.71	$1.60	$1.48	$2.43	$2.27	$2.10	$0.81	$11.87	$10.85	$0.95	$13.58	$0.325	$0.461
42	HOLMAN XTOWN	$1.26	$1.18	$1.07	$2.06	$1.92	$1.76	$1.09	$12.37	$11.29	$1.16	$14.00	$0.268	$0.438
44	ACRES HOMES LTD	$2.71	$2.56	$2.39	$4.04	$3.82	$3.57	$0.43	$7.46	$6.88	$0.48	$8.54	$0.315	$0.471
46	GESSNER XTOWN	$2.05	$1.93	$1.78	$3.18	$2.98	$2.75	$0.66	$9.31	$8.90	$0.75	$11.10	$0.319	$0.493
48	NAVIGATION-WASHGTN	$1.89	$1.78	$1.66	$2.81	$2.64	$2.46	$0.72	$10.12	$9.38	$0.81	$11.69	$0.322	$0.478
50	HEIGHTS-HARRISBURG	$1.44	$1.34	$1.23	$1.96	$1.83	$1.68	$1.05	$15.00	$13.84	$1.20	$17.65	$0.346	$0.472
52	SCOTT	$1.79	$1.67	$1.53	$2.51	$2.34	$2.14	$0.82	$10.44	$9.46	$1.03	$12.66	$0.310	$0.434
53	WESTHEIMER LTD	$1.92	$1.78	$1.62	$2.58	$2.39	$2.17	$0.75	$13.17	$11.35	$0.94	$15.49	$0.358	$0.480
56	AIRLINE LTD	$2.83	$2.67	$2.48	$3.96	$3.73	$3.47	$0.46	$7.94	$7.35	$0.54	$9.29	$0.348	$0.487
58	HAMMERLY	$2.98	$2.79	$2.57	$4.32	$4.04	$3.72	$0.45	$7.35	$6.67	$0.54	$8.69	$0.336	$0.487

NO.	ROUTE NAME	COST PER PASSENGER ALL DEPRC	COST PER PASSENGER VEH DEPRC	COST PER PASSENGER NO DEPRC	COST PER REVENUE PASSENGER ALL DEPRC	COST PER REVENUE PASSENGER VEH DEPRC	COST PER REVENUE PASSENGER NO DEPRC	REVENUE PER VEH MI	REVENUE PER VEH HR	REVENUE PER PAY HR	REVENUE PER REV MI	REVENUE PER REV HR	REVENUE PER PAX	REVENUE PER REV PAX
	WEEKDAY LOCAL													
60	HARDY-SO.MACGREGOI	$1.61	$1.50	$1.36	$2.34	$2.17	$1.97	$0.92	$11.07	$10.61	$1.04	$13.22	$0.303	$0.438
63	SAN FELIPE LTD	$2.62	$2.42	$2.20	$3.96	$3.67	$3.32	$0.52	$7.35	$6.74	$0.65	$9.79	$0.302	$0.457
64	GULFTON LTD	$2.64	$2.45	$2.23	$3.34	$3.10	$2.82	$0.54	$9.11	$8.41	$0.64	$10.58	$0.355	$0.450
65	BISSONET	$1.82	$1.70	$1.57	$2.55	$2.38	$2.20	$0.83	$11.32	$10.47	$1.03	$13.76	$0.341	$0.477
68	BRAYS BAYOU XTOWN	$1.77	$1.65	$1.52	$2.33	$2.17	$2.00	$0.91	$11.40	$10.42	$1.06	$13.16	$0.341	$0.449
70	UNIVERSITY	$2.84	$2.62	$2.36	$4.53	$4.19	$3.77	$0.49	$6.26	$5.91	$0.60	$7.82	$0.287	$0.459
73	BELLFORT XTOWN	$1.33	$1.24	$1.15	$2.18	$2.05	$1.90	$0.87	$12.85	$11.71	$0.96	$15.42	$0.276	$0.454
75	TAFT	$1.82	$1.69	$1.54	$2.53	$2.36	$2.15	$0.93	$10.18	$9.44	$1.07	$12.16	$0.323	$0.450
77	LIBERTY-MLK LTD	$1.45	$1.36	$1.25	$2.02	$1.89	$1.74	$0.92	$13.55	$12.58	$1.14	$16.34	$0.316	$0.439
78	ALABAMA-IRVINGTON	$1.49	$1.39	$1.28	$1.97	$1.84	$1.68	$1.06	$14.00	$12.58	$1.21	$15.35	$0.342	$0.451
79	WEST LITTLE YORK LTD	$2.69	$2.51	$2.30	$4.01	$3.74	$3.43	$0.49	$6.88	$7.37	$0.55	$9.95	$0.316	$0.471
80	DOWLING-LYONS	$1.44	$1.35	$1.25	$2.15	$2.01	$1.85	$1.16	$11.85	$11.09	$1.27	$13.30	$0.314	$0.467
82	WESTHEIMER	$1.38	$1.29	$1.18	$1.90	$1.78	$1.64	$1.26	$14.10	$13.68	$1.40	$16.56	$0.350	$0.485
84	FOUNTAIN VIEW	$3.21	$3.00	$2.75	$3.90	$3.64	$3.34	$0.40	$7.69	$7.29	$0.45	$8.77	$0.356	$0.433
85	ANTOINE LTD	$2.71	$2.52	$2.31	$3.41	$3.18	$2.91	$0.51	$9.27	$9.45	$0.59	$12.14	$0.377	$0.475
88	BROADWAY LTD	$3.36	$2.97	$2.44	$3.92	$3.46	$2.85	$0.67	$9.86	$8.50	$0.94	$14.70	$0.399	$0.465
89	YALE	$2.54	$2.39	$2.22	$3.47	$3.26	$3.04	$0.59	$7.91	$7.03	$0.70	$9.12	$0.336	$0.459
93	GREENS ROAD	$5.16	$4.82	$4.44	$6.77	$6.32	$5.82	$0.34	$4.33	$4.20	$0.41	$5.88	$0.385	$0.505
98	TEXAS SPECIAL BLUE	$1.39	$1.37	$1.37	$1.62	$1.60	$1.60	$1.29	$19.31	$10.79	$1.51	$14.51	$0.414	$0.481
99	TEXAS SPECIAL RED	$1.20	$1.18	$1.18	$1.43	$1.41	$1.41	$1.44	$20.42	$12.85	$1.72	$17.72	$0.405	$0.483
402	P & HC SHUTTLE													
403	S & K SHUTTLE													
404	NW SHUTTLE													
	AVG WKD LOC & SHTL	$1.85	$1.73	$1.59	$2.60	$2.43	$2.24	$0.79	$10.85	$10.02	$0.94	$13.01	$0.329	$0.464
37	EL SOL	$4.27	$4.01	$3.73	$5.59	$5.26	$4.89	$0.36	$5.00	$4.72	$0.37	$5.44	$0.361	$0.473
420	POST OAK SP-GOLD	$45.02	$40.67	$35.00	$53.77	$48.58	$41.81	$0.02	$0.34	$0.26	$0.03	$0.47	$0.193	$0.231
421	POST OAK SP-GREEN	$103.77	$93.77	$80.70	$161.43	$145.86	$125.54	$0.01	$0.11	$0.09	$0.01	$0.14	$0.148	$0.230
	AVG WKD LOC & SHTL*	$1.86	$1.74	$1.60	$2.63	$2.45	$2.26	$0.79	$10.77	$9.94	$0.93	$12.91	$0.329	$0.464
	WEEKDAY EXPRESS													
19	WILDCREST EXP	$5.42	$4.28	$3.80	$6.22	$4.91	$4.36	$0.49	$10.82	$9.85	$0.73	$15.33	$0.602	$0.691
21	NORTHSHORE EXP	$2.65	$2.43	$2.16	$3.40	$3.12	$2.77	$0.77	$16.10	$14.45	$0.94	$21.97	$0.539	$0.691
31	MEMORIAL EXP	$3.60	$2.92	$2.64	$4.89	$3.97	$3.59	$0.61	$13.36	$11.91	$0.82	$17.81	$0.523	$0.711
32	HARWIN EXP	$3.85	$3.53	$3.13	$4.58	$4.20	$3.73	$0.62	$11.59	$10.27	$0.73	$14.18	$0.586	$0.696
41	GARDEN VILLAS EXP	$3.91	$3.56	$3.10	$4.68	$4.26	$3.72	$0.59	$10.88	$9.66	$0.75	$13.52	$0.541	$0.647
	AVG WKD EXPRESS	$3.62	$3.12	$2.79	$4.57	$3.95	$3.52	$0.63	$12.87	$11.48	$0.80	$16.76	$0.552	$0.698

APPENDIX B (con't)

NO.	ROUTE NAME	COST PER PASSENGER ALL DEPRC	COST PER PASSENGER VEH DEPRC	COST PER PASSENGER NO DEPRC	COST PER REVENUE PASSENGER ALL DEPRC	COST PER REVENUE PASSENGER VEH DEPRC	COST PER REVENUE PASSENGER NO DEPRC	REVENUE PER VEH MI	REVENUE PER VEH HR	REVENUE PER PAY HR	REVENUE PER REV MI	REVENUE PER REV HR	REVENUE PER PAX	REVENUE PER REV PAX
	WEEKDAY P&R													
59	SOUTHWEST FRY P&R	$3.78	$2.98	$2.50	$3.97	$3.13	$2.63	$1.31	$29.13	$25.21	$1.77	$39.25	$1.036	$1.087
201	NORTH SHEPHERD P&R	$5.32	$3.53	$2.99	$5.47	$3.63	$3.08	$1.20	$28.29	$23.27	$2.09	$52.49	$1.094	$1.124
202	KUYKENDAHL P&R	$5.35	$3.69	$3.19	$5.50	$3.80	$3.28	$1.73	$43.50	$38.59	$2.59	$72.40	$1.852	$1.906
206	EASTEX P&R	$6.11	$5.18	$4.65	$6.59	$5.59	$5.02	$0.71	$17.85	$16.14	$0.92	$24.31	$1.219	$1.315
210	KATY-W. BELT P&R	$7.26	$5.41	$4.85	$7.45	$5.55	$4.98	$0.74	$18.19	$17.02	$0.88	$23.52	$1.281	$1.314
214	NORTHWEST P&R	$4.70	$4.06	$3.69	$4.85	$4.19	$3.81	$1.03	$30.77	$25.39	$1.39	$42.00	$1.527	$1.577
228	ADDICKS P&R	$6.94	$4.79	$4.14	$7.08	$4.89	$4.23	$0.99	$32.92	$27.62	$1.38	$46.85	$1.548	$1.580
236	MAXEY P&R	$6.87	$5.68	$5.00	$8.00	$6.62	$5.82	$0.65	$14.89	$12.64	$0.81	$20.06	$1.093	$1.273
245	EDGEBROOK P&R	$3.84	$3.06	$2.59	$3.98	$3.17	$2.69	$1.61	$31.93	$27.45	$2.19	$43.24	$1.244	$1.290
261	WEST LOOP P&R	$4.06	$3.32	$2.89	$4.18	$3.42	$2.98	$0.88	$22.77	$19.90	$1.17	$32.53	$0.910	$0.937
262	WESTWOOD P&R	$4.59	$3.85	$3.42	$4.74	$3.98	$3.54	$1.01	$25.03	$22.47	$1.52	$39.47	$1.250	$1.291
263	ALIEF P&R	$5.66	$4.55	$3.89	$5.84	$4.69	$4.01	$1.02	$22.44	$19.40	$2.08	$41.01	$1.273	$1.312
284	SPRING-W. LAKE P&R	$14.31	$12.87	$10.93	$14.55	$13.09	$11.12	$0.44	$13.10	$10.99	$1.00	$26.63	$1.898	$1.931
291	NORTH SHEPHERD P&R	$6.03	$4.86	$4.18	$6.35	$5.12	$4.40	$1.00	$20.82	$18.37	$1.83	$38.68	$1.315	$1.385
	AVERAGE METRO P&R	$5.32	$4.02	$3.49	$5.51	$4.16	$3.62	$1.17	$29.39	$25.60	$1.71	$45.02	$1.412	$1.462
221	KATY-MASON P&R	$7.90	$5.79	$5.15	$8.23	$6.03	$5.37	$1.06	$31.40	$27.11	$1.27	$44.07	$2.064	$2.152
221	KINGSLAND P&R	$9.45	$6.79	$5.99	$9.76	$7.01	$6.19	$0.90	$28.58	$24.12	$1.42	$40.69	$2.055	$2.123
227	KATY/FRY P&R	$14.80	$11.01	$9.87	$15.47	$11.51	$10.32	$0.49	$17.80	$15.93	$0.66	$23.31	$2.037	$2.130
107	FM 1960	$7.95	$6.10	$5.32	$8.25	$6.34	$5.53	$0.98	$25.03	$21.16	$1.50	$35.49	$1.870	$1.942
204	SPRING P&R	$5.92	$4.23	$3.72	$6.07	$4.34	$3.81	$1.31	$38.34	$35.90	$2.06	$55.81	$1.850	$1.896
	AVERAGE METRO P&R*	$5.52	$4.15	$3.62	$5.71	$5.71	$3.75	$1.16	$29.68	$25.91	$1.69	$45.04	$1.464	$1.516
	CONTRACT P&R													
107	FM 1960				$6.81	$5.24	$0.00				$1.24	$33.30	$1.856	$1.920
204	SPRING P&R				$4.80	$3.33	$0.00				$1.90	$57.87	$1.855	$1.920
205	KINGWOOD P&R				$4.70	$4.13	$0.00				$1.79	$48.19	$2.096	$2.169
212	SETON LAKE P&R				$4.66	$3.26	$0.00				$2.00	$47.08	$1.558	$1.612
246	BAY AREA P&R				$4.44	$3.92	$0.00				$1.77	$44.90	$1.856	$1.920
270	MISSOURI CITY P&R				$5.27	$4.53	$0.00				$1.56	$26.96	$1.299	$1.344
	TOTAL CONTRACT P&R				$4.82	$3.81	$0.00				$1.79	$45.22	$1.777	$1.839

*Weighted to reflect those routes operating fewer than 64 days.

APPENDIX C
FIRST QUARTER FY 86 METRO PEAK AND OFF-PEAK LINE COST RECOVERY RATIOS
(REVENUE ADJUSTED FOR PASS DISCOUNTS)

NO.	ROUTE NAME	AVG DAILY PEAK PAX	AVG DAILY OFF-PEAK PAX	ADJUSTED TOTAL REVENUE	ADJUSTED PEAK REVENUE	ADJUSTED OFF-PEAK REVENUE	ONLY VEHICLE DEPRECIATION INCLUDED ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO
	WEEKDAY LOCAL									
1	HOSPITAL	1,337	1,699	$56,411	$23,101	$33,310	$121,646	$174,908	0.1899	0.1904
2	BELLAIRE	5,150	4,894	$221,211	$114,130	$107,082	$538,428	$448,792	0.2120	0.2386
3	LANGLEY LTD	1,884	1,944	$78,466	$37,719	$40,747	$194,606	$207,470	0.1938	0.1964
4	BEECHNUT	2,392	2,358	$104,278	$51,408	$52,870	$300,057	$296,470	0.1713	0.1783
5	KASHMERE GARDENS	2,904	2,482	$108,440	$57,252	$51,188	$282,343	$261,362	0.2028	0.1958
6	JENSEN	2,037	2,075	$86,374	$41,044	$45,331	$238,434	$247,625	0.1721	0.1831
8	NORTH/SOUTH MAIN	3,842	4,184	$174,459	$82,126	$92,334	$358,891	$505,072	0.2288	0.1828
9	HIRSCH/MED CENTER	3,932	3,629	$154,431	$77,094	$77,337	$416,780	$445,769	0.1850	0.1735
11	NANCE	794	840	$32,719	$15,656	$17,063	$54,188	$113,786	0.2889	0.1500
12	ALLEN HOUSE	307	0	$1,035	$619	$416	$43,328	$0	0.0143	0.0000
14	HIRAM CLARKE LTD	2,884	2,605	$115,406	$58,310	$57,096	$319,063	$290,480	0.1828	0.1966
15	FULTON-WEST GRAY	1,978	2,061	$85,182	$40,706	$44,476	$158,830	$201,394	0.2563	0.2208
16	MEMORIAL	1,009	453	$29,137	$18,977	$10,160	$175,277	$77,509	0.1083	0.1311
17	TANGLEWOOD	975	417	$28,336	$19,337	$8,999	$150,307	$49,317	0.1287	0.1825
20	CANAL	1,621	1,578	$70,661	$34,796	$35,865	$94,613	$105,355	0.3678	0.3404
22	ALEMEDA	818	675	$30,643	$16,523	$14,120	$102,114	$107,037	0.1618	0.1319
24	KEMPWOOD	1,010	591	$35,544	$23,144	$12,400	$127,148	$50,575	0.1820	0.2452
25	RICHMOND-NORTHLINE	5,844	5,948	$265,356	$130,786	$134,570	$539,239	$500,790	0.2425	0.2687
26	OUTERLOOP XTOWN	2,654	2,334	$93,566	$49,703	$43,863	$287,941	$283,674	0.1726	0.1546
28	SOUTHMORE	2,962	2,393	$102,320	$53,274	$49,046	$265,569	$271,881	0.2006	0.1804
30	CULLEN-CLINTON	3,495	3,133	$137,149	$72,721	$64,429	$438,718	$424,553	0.1658	0.1518
33	POST OAK XTOWN	1,067	818	$35,667	$19,794	$15,873	$156,151	$227,685	0.1268	0.0697
34	MONTROSE XTOWN	843	506	$28,633	$17,478	$11,155	$92,569	$145,239	0.1888	0.0768
35	KIRBY-LEELAND	1,001	483	$31,264	$21,280	$9,984	$166,095	$124,157	0.1281	0.0804
36	LAWNDALE	1,609	1,131	$61,649	$36,975	$24,675	$134,922	$124,058	0.2740	0.1989
37	EL SOL*	403	466	$12,535	$5,566	$6,969	$51,492	$88,761	0.1081	0.0785
39	LONG POINT	1,787	1,433	$74,527	$41,209	$33,318	$177,486	$180,222	0.2322	0.1849
40	TELEPHONE-PECORE	3,506	3,296	$141,560	$72,464	$69,096	$350,842	$349,005	0.2065	0.1980
42	HOLMAN XTOWN	1,998	1,630	$62,211	$32,397	$29,814	$135,370	$138,021	0.2393	0.2160
44	ACRES HOMES LTD	1,495	1,461	$59,681	$30,301	$29,380	$177,688	$308,476	0.1705	0.0952
46	GESSNER XTOWN	1,238	863	$42,876	$25,157	$17,719	$114,826	$145,457	0.2191	0.1218
48	NAVIGATION-WASHGTN	2,287	1,774	$83,571	$46,398	$37,173	$183,778	$278,452	0.2525	0.1335
50	HEIGHTS-HARRISBURG	4,675	4,697	$207,759	$100,666	$107,094	$371,005	$435,266	0.2713	0.2460
52	SCOTT	3,981	2,970	$137,736	$74,830	$62,906	$381,021	$359,392	0.1964	0.1750
53	WESTHEIMER LTD	2,591	1,899	$102,950	$57,927	$45,023	$323,570	$195,323	0.1790	0.2305
56	AIRLINE LTD	1,463	1,151	$58,290	$32,785	$25,505	$197,413	$250,181	0.1661	0.1019
58	HAMMERLY	651	445	$23,569	$14,297	$9,272	$109,172	$86,307	0.1310	0.1074
60	HARDY-SO.MACGREGOR	2,053	1,488	$68,588	$38,294	$30,294	$172,038	$165,630	0.2226	0.1829
63	SAN FELIPE LTD	1,127	475	$30,935	$21,289	$9,646	$158,896	$88,323	0.1340	0.1092
64	GULFTON LTD	1,107	528	$37,178	$25,168	$12,010	$181,335	$75,963	0.1388	0.1581
65	BISSONET	2,103	1,573	$80,161	$44,715	$35,446	$203,603	$196,849	0.2196	0.1801
68	BRAYS BAYOU XTOWN	1,873	1,416	$71,873	$39,322	$32,551	$167,350	$181,846	0.2350	0.1790
70	UNIVERSITY	605	325	$17,101	$10,353	$6,748	$99,967	$56,379	0.1036	0.1197
73	BELLFORT XTOWN	2,511	2,137	$82,045	$43,646	$38,398	$155,640	$214,684	0.2804	0.1789
75	TAFT	524	309	$17,215	$10,614	$6,600	$46,436	$43,895	0.2286	0.1504
77	LIBERTY-MLK LTD	6,481	5,257	$237,279	$127,123	$110,157	$511,296	$508,884	0.2486	0.2165
78	ALABAMA-IRVINGTON	2,743	2,070	$105,211	$58,737	$46,474	$212,044	$218,647	0.2770	0.2126
79	WEST LITTLE YORK LTD	595	562	$23,374	$12,261	$11,113	$97,526	$83,791	0.1257	0.1326
80	DOWLING-LYONS	3,699	3,953	$153,832	$70,633	$83,199	$281,904	$382,709	0.2506	0.2174
82	WESTHEIMER	4,516	4,572	$203,643	$97,082	$106,561	$329,261	$413,279	0.2948	0.2578
84	FOUNTAIN VIEW	331	161	$11,220	$7,250	$3,970	$59,135	$35,604	0.1226	0.1115

APPENDIX C (con't)
FIRST QUARTER FY 86 METRO PEAK AND OFF-PEAK LINE COST RECOVERY RATIOS
(REVENUE ADJUSTED FOR PASS DISCOUNTS)

NO.	ROUTE NAME	ALL DEPRECIATION INCLUDED				NO DEPRECIATION INCLUDED			
		ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO	ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO
	WEEKDAY LOCAL								
1	HOSPITAL	$131,866	$185,559	0.1752	0.1795	$109,554	$163,588	0.2109	0.2036
2	BELLAIRE	$594,812	$470,161	0.1919	0.2278	$465,600	$427,972	0.2451	0.2502
3	LANGLEY LTD	$212,892	$216,895	0.1772	0.1879	$171,894	$198,966	0.2194	0.2048
4	BEECHNUT	$327,737	$309,754	0.1569	0.1707	$265,459	$284,244	0.1937	0.1860
5	KASHMERE GARDENS	$312,573	$276,470	0.1832	0.1851	$243,574	$245,503	0.2350	0.2085
6	JENSEN	$263,742	$261,466	0.1556	0.1734	$206,045	$233,191	0.1992	0.1944
8	NORTH/SOUTH MAIN	$385,846	$531,706	0.2128	0.1737	$327,431	$478,003	0.2508	0.1932
9	HIRSCH/MED CENTER	$456,120	$467,553	0.1690	0.1654	$367,541	$424,773	0.2098	0.1821
11	NANCE	$57,924	$120,999	0.2703	0.1410	$50,178	$106,089	0.3120	0.1608
12	ALLEN HOUSE	$49,001	$0	0.0126	0.0000	$35,524	$0	0.0174	0.0000
14	HIRAM CLARKE LTD	$347,433	$303,328	0.1678	0.1882	$283,886	$278,833	0.2054	0.2048
15	FULTON-WEST GRAY	$172,398	$212,431	0.2361	0.2094	$142,568	$190,342	0.2855	0.2337
16	MEMORIAL	$191,664	$80,516	0.0990	0.1262	$154,441	$74,933	0.1229	0.1356
17	TANGLEWOOD	$164,747	$50,887	0.1174	0.1768	$131,876	$48,237	0.1466	0.1866
20	CANAL	$104,887	$111,565	0.3317	0.3215	$81,567	$98,891	0.4266	0.3627
22	ALEMEDA	$111,303	$111,610	0.1484	0.1265	$90,674	$102,869	0.1822	0.1373
24	KEMPWOOD	$139,921	$53,755	0.1654	0.2307	$110,790	$47,423	0.2089	0.2615
25	RICHMOND-NORTHLINE	$591,178	$526,431	0.2212	0.2556	$474,567	$475,716	0.2756	0.2829
26	OUTERLOOP XTOWN	$313,251	$299,377	0.1587	0.1465	$257,140	$267,652	0.1933	0.1639
28	SOUTHMORE	$287,833	$284,660	0.1851	0.1723	$238,568	$259,862	0.2233	0.1887
30	CULLEN-CLINTON	$480,169	$443,996	0.1514	0.1451	$386,577	$406,458	0.1881	0.1585
33	POST OAK XTOWN	$167,863	$240,773	0.1179	0.0659	$142,581	$213,941	0.1388	0.0742
34	MONTROSE XTOWN	$99,695	$155,415	0.1753	0.0718	$84,491	$133,807	0.2069	0.0834
35	KIRBY-LEELAND	$182,221	$130,905	0.1168	0.0763	$145,730	$117,209	0.1460	0.0852
36	LAWNDALE	$148,703	$130,142	0.2486	0.1896	$117,403	$118,165	0.3149	0.2088
37	EL SOL	$54,937	$94,334	0.1013	0.0739	$47,754	$82,744	0.1166	0.0842
39	LONG POINT	$192,950	$188,543	0.2136	0.1767	$158,272	$172,122	0.2604	0.1936
40	TELEPHONE-PECORE	$382,066	$365,842	0.1897	0.1889	$312,290	$332,929	0.2320	0.2075
42	HOLMAN XTOWN	$148,032	$145,726	0.2188	0.2046	$119,846	$130,133	0.2703	0.2291
44	ACRES HOMES LTD	$191,516	$323,463	0.1582	0.0908	$161,277	$293,672	0.1879	0.1000
46	GESSNER XTOWN	$123,902	$153,698	0.2030	0.1153	$104,029	$136,744	0.2418	0.1296
48	NAVIGATION-WASHGTN	$199,768	$291,165	0.2323	0.1277	$164,378	$266,637	0.2823	0.1394
50	HEIGHTS-HARRISBURG	$406,500	$457,168	0.2476	0.2343	$326,358	$413,578	0.3085	0.2589
52	SCOTT	$418,846	$375,187	0.1787	0.1677	$332,775	$345,206	0.2249	0.1822
53	WESTHEIMER LTD	$354,913	$202,971	0.1632	0.2218	$283,193	$188,876	0.2045	0.2384
56	AIRLINE LTD	$212,611	$263,014	0.1542	0.0970	$179,266	$237,113	0.1829	0.1076
58	HAMMERLY	$118,678	$90,316	0.1205	0.1027	$97,331	$82,541	0.1469	0.1123
60	HARDY-SO.MACGREGOR	$190,152	$173,992	0.2014	0.1741	$148,944	$157,508	0.2571	0.1923
63	SAN FELIPE LTD	$173,778	$92,681	0.1225	0.1041	$139,915	$83,892	0.1522	0.1150
64	GULFTON LTD	$197,980	$78,985	0.1271	0.1520	$160,449	$73,437	0.1569	0.1635
65	BISSONET	$222,121	$205,633	0.2013	0.1724	$180,516	$188,719	0.2477	0.1878
68	BRAYS BAYOU XTOWN	$181,587	$191,760	0.2165	0.1698	$150,182	$171,700	0.2618	0.1896
70	UNIVERSITY	$109,863	$59,331	0.0942	0.1137	$87,337	$53,402	0.1185	0.1264
73	BELLFORT XTOWN	$167,614	$226,908	0.2604	0.1692	$141,519	$201,492	0.3084	0.1906
75	TAFT	$51,033	$46,023	0.2080	0.1434	$40,654	$41,873	0.2611	0.1576
77	LIBERTY-MLK LTD	$559,950	$531,262	0.2270	0.2073	$449,834	$488,404	0.2826	0.2255
78	ALABAMA-IRVINGTON	$232,102	$229,465	0.2531	0.2025	$187,175	$208,398	0.3138	0.2230
79	WEST LITTLE YORK LTD	$106,772	$87,687	0.1148	0.1267	$85,759	$79,949	0.1430	0.1390
80	DOWLING-LYONS	$306,903	$403,669	0.2301	0.2061	$251,896	$361,991	0.2804	0.2298
82	WESTHEIMER	$359,106	$435,628	0.2703	0.2446	$292,920	$391,091	0.3314	0.2725
84	FOUNTAIN VIEW	$64,244	$37,205	0.1129	0.1067	$52,837	$34,098	0.1372	0.1164

APPENDIX C (con't)

NO.	ROUTE NAME	AVG DAILY PEAK PAX	AVG DAILY OFF-PEAK PAX	ADJUSTED TOTAL REVENUE	ADJUSTED PEAK REVENUE	ADJUSTED OFF-PEAK REVENUE	ONLY VEHICLE DEPRECIATION INCLUDED: ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO
	WEEKDAY LOCAL									
85	ANTOINE LTD	1,270	710	$47,766	$30,955	$16,811	$165,716	$149,358	0.1868	0.1126
88	BROADWAY LTD	581	0	$14,834	$13,686	$1,148	$109,347	$0	0.1252	0.0000
89	YALE	1,504	1,543	$65,582	$31,578	$34,004	$176,240	$290,596	0.1792	0.1170
93	GREENS ROAD	190	129	$7,862	$4,793	$3,069	$38,808	$59,126	0.1235	0.0519
98	TEXAS SPECIAL BLUE	532	1,144	$44,376	$13,179	$31,197	$64,831	$107,620	0.2033	0.2899
99	TEXAS SPECIAL RED	494	1,504	$51,808	$11,778	$40,030	$70,560	$119,121	0.1669	0.3360
402	P & HC SHUTTLE					$0	$61,121	$112,796	0.0000	0.0000
403	S & K SHUTTLE					$0	$66,902	$105,090	0.0000	0.0000
404	NW SHUTTLE					$0	$25,115	$45,728	0.0000	0.0000
420	POST OAK SP-GOLD*	1	42	$374	$8	$366	$0	$60,473	0.0000	0.0061
421	POST OAK SP-GREEN*	0	14	$93	$0	$93	$0	$45,570	0.0000	0.0020
	SUBTOT WKD LOC & SHTL	115,263	101,172	$4,547,487	$2,360,403	$2,187,084	$11,785,987	$12,155,736	0.2003	0.1799
	WEEKDAY EXPRESS									
19	WILDCREST EXP	634	0	$24,442	$22,092	$2,350	$172,283	$0	0.1282	0.0000
21	NORTHSHORE EXP	1,218	566	$61,565	$42,214	$19,350	$194,058	$82,667	0.2175	0.2341
31	MEMORIAL EXP	1,963	852	$94,273	$65,111	$29,162	$418,666	$106,935	0.1555	0.2727
32	HARWIN EXP	1,789	499	$85,764	$67,893	$17,872	$411,244	$107,505	0.1651	0.1662
41	GARDEN VILLAS EXP	268	0	$9,280	$7,239	$2,041	$62,958	$0	0.1150	0.0000
		5,872	1,917	$275,324	$204,549	$70,775	$1,259,209	$297,107	0.1624	0.2382

NO.	ROUTE NAME	AVG DAILY PEAK PAX	AVG DAILY OFF-PEAK PAX	ADJUSTED TOTAL REVENUE	ADJUSTED PEAK REVENUE	ADJUSTED OFF-PEAK REVENUE	ONLY VEHICLE DEPRECIATION INCLUDED: ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO
	WEEKDAY P&R									
59	SOUTHWEST FRY P&R	398	0	$26,376	$24,569	$1,807	$75,746	$0	0.3244	0.0000
201	NORTH SHEPHERD P&R	1,513	0	$105,929	$102,520	$3,409	$337,051	$0	0.3042	0.0000
202	KUYKENDAHL P&R	3,675	470	$491,357	$434,929	$56,427	$900,353	$73,203	0.4831	0.7708
206	EASTEX P&R	845	109	$74,439	$65,909	$8,529	$238,016	$81,876	0.2769	0.1042
210	KATY-W. BELT P&R	499	71	$46,743	$41,003	$5,740	$137,515	$64,078	0.2982	0.0896
214	NORTHWEST P&R	861	0	$84,146	$76,898	$7,248	$221,658	$0	0.3469	0.0000
228	ADDICKS P&R	1,173	0	$116,221	$103,417	$12,804	$357,758	$0	0.2891	0.0000
236	MAXEY P&R	276	0	$19,281	$18,786	$495	$105,117	$0	0.1787	0.0000
245	EDGEBROOK P&R	1,589	185	$141,217	$127,085	$14,132	$296,828	$52,222	0.4281	0.2706
261	WEST LOOP P&R	1,023	0	$59,615	$57,111	$2,504	$217,006	$0	0.2632	0.0000
262	WESTWOOD P&R	1,190	142	$106,530	$93,376	$13,155	$285,707	$42,498	0.3268	0.3095
263	ALIEF P&R	863	0	$70,351	$65,704	$4,647	$249,347	$0	0.2635	0.0000
284	SPRING-W. LAKE P&R	130	0	$15,843	$13,739	$2,104	$106,115	$0	0.1295	0.0000
291	NORTH SHEPHERD P&R	277	0	$23,321	$21,007	$2,314	$86,879	$0	0.2418	0.0000
	SUBTOTAL METRO P&R	14,312	977	$1,381,370	$1,246,055	$135,315	$3,615,096	$313,877	0.3447	0.4311
221	KATY-MASON P&R*	697	0	$69,064	$56,116	$12,948	$197,769	$0	0.2837	0.0000
221	KINGSLAND P&R*	552	0	$18,133	$15,777	$2,357	$59,571	$0	0.2648	0.0000
227	KATY/FRY P&R*	166	0	$5,418	$5,091	$327	$29,205	$0	0.1743	0.0000
107	FM 1960*	648	0	$29,090	$26,051	$3,039	$95,006	$0	0.2742	0.0000
204	SPRING P&R*	1,982	0	$88,015	$78,573	$9,442	$200,471	$0	0.3919	0.0000
	SUBTOTAL	4,045	0	$209,719	$181,607	$28,112	$582,022	$0	0.3120	0.0000
	TOTAL METRO P&R	18,357	977	$1,591,089	$1,427,662	$163,427	$4,197,118	$313,877	0.3402	0.5207

*ROUTES IN SERVICE LESS THAN 64 WEEKDAYS

APPENDIX C (con't)

NO.	ROUTE NAME	ALL DEPRECIATION INCLUDED: ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO	NO DEPRECIATION INCLUDED: ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO
85	ANTOINE LTD	$182,452	$155,576	0.1697	0.1081	$144,131	$143,629	0.2148	0.1170
88	BROADWAY LTD	$123,620	$0	0.1107	0.0000	$89,837	$0	0.1523	0.0000
89	YALE	$191,344	$304,842	0.1650	0.1115	$157,890	$276,754	0.2000	0.1229
93	GREENS ROAD	$41,628	$63,013	0.1151	0.0487	$35,504	$54,625	0.1350	0.0562
98	TEXAS SPECIAL BLUE	$67,191	$111,009	0.1961	0.2810	$63,128	$105,421	0.2088	0.2959
99	TEXAS SPECIAL RED	$72,132	$131,125	0.1633	0.3053	$70,153	$103,921	0.1679	0.3852
402	P & HC SHUTTLE	$64,218	$118,157	0.0000	0.0000	$56,813	$105,397	0.0000	0.0000
403	S & K SHUTTLE	$70,326	$110,175	0.0000	0.0000	$62,174	$98,111	0.0000	0.0000
404	NW SHUTTLE	$26,230	$47,548	0.0000	0.0000	$23,617	$43,324	0.0000	0.0000
420	POST OAK SP-GOLD	$0	$61,369	0.0000	0.0060	$0	$60,473	0.0000	0.0061
421	POST OAK SP-GREEN	$0	$46,294	0.0000	0.0020	$0	$45,570	0.0000	0.0020
	SUBTOT WKD LOC & SHTL	$12,862,839	$12,769,453	0.1835	0.1713	$10,445,613	$11,546,093	0.2260	0.1894
19	WILDCREST EXP	$215,245	$0	0.1026	0.0000	$152,773	$0	0.1446	0.0000
21	NORTHSHORE EXP	$215,489	$85,644	0.1959	0.2259	$165,387	$80,122	0.2552	0.2415
31	MEMORIAL EXP	$528,811	$120,993	0.1231	0.2410	$369,753	$105,122	0.1761	0.2774
32	HARWIN EXP	$453,977	$111,130	0.1496	0.1608	$355,423	$104,796	0.1910	0.1705
41	GARDEN VILLAS EXP	$69,000	$0	0.1049	0.0000	$55,154	$0	0.1312	0.0000
		$1,482,522	$317,767	0.1380	0.2227	$1,098,490	$290,040	0.1862	0.2440

NO.	ROUTE NAME	ALL DEPRECIATION INCLUDED: ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO	NO DEPRECIATION INCLUDED: ALLOCATED PEAK COST	ALLOCATED OFF-PEAK COST	PEAK REV/COST RATIO	OFF-PEAK REV/COST RATIO
	WEEKDAY P&R								
59	SOUTHWEST FRY P&R	$95,116	$0	0.2583	0.0000	$63,633	$0	0.3861	0.0000
201	NORTH SHEPHERD P&R	$500,030	$0	0.2050	0.0000	$284,560	$0	0.3603	0.0000
202	KUYKENDAHL P&R	$1,313,401	$94,262	0.3311	0.5986	$768,340	$72,477	0.5661	0.7786
206	EASTEX P&R	$287,619	$96,238	0.2292	0.0886	$209,395	$78,196	0.3148	0.1091
210	KATY-W. BELT P&R	$199,009	$86,455	0.2060	0.0664	$120,223	$61,181	0.3411	0.0938
214	NORTHWEST P&R	$255,380	$0	0.3011	0.0000	$201,470	$0	0.3817	0.0000
228	ADDICKS P&R	$510,744	$0	0.2025	0.0000	$308,801	$0	0.3349	0.0000
236	MAXEY P&R	$138,616	$0	0.1355	0.0000	$93,004	$0	0.2020	0.0000
245	EDGEBROOK P&R	$378,155	$69,065	0.3361	0.2046	$247,447	$49,113	0.5136	0.2877
261	WEST LOOP P&R	$262,633	$0	0.2175	0.0000	$188,742	$0	0.3026	0.0000
262	WESTWOOD P&R	$343,752	$47,090	0.2716	0.2793	$249,940	$41,926	0.3736	0.3138
263	ALIEF P&R	$306,967	$0	0.2140	0.0000	$213,007	$0	0.3085	0.0000
284	SPRING-W. LAKE P&R	$117,792	$0	0.1166	0.0000	$89,965	$0	0.1527	0.0000
291	NORTH SHEPHERD P&R	$106,136	$0	0.1979	0.0000	$74,766	$0	0.2810	0.0000
	SUBTOTAL METRO P&R	$4,815,350	$393,110	0.2588	0.3442	$3,113,293	$302,893	0.4002	0.4467
221	KATY-MASON P&R	$264,752	$0	0.2120	0.0000	$176,571	$0	0.3178	0.0000
221	KINGSLAND P&R	$81,793	$0	0.1929	0.0000	$52,505	$0	0.3005	0.0000
227	KATY/FRY P&R	$38,796	$0	0.1312	0.0000	$26,176	$0	0.1945	0.0000
107	FM 1960	$122,949	$0	0.2119	0.0000	$82,893	$0	0.3143	0.0000
204	SPRING P&R	$276,745	$0	0.2839	0.0000	$176,245	$0	0.4458	0.0000
	SUBTOTAL	$785,035	$0	0.2313	0.0000	$514,390	$0	0.3531	0.0000
	TOTAL METRO P&R	$5,600,385	$393,110	0.2549	0.4157	$3,627,683	$302,893	0.3935	0.5396

APPENDIX D
1ST QUARTER FY86 METRO AND CONTRACT P&R PERFORMANCE MEASURES
ROUTES USING TRANSITWAYS COMPARED TO ROUTES NOT USING TRANSITWAYS

NO.	ROUTE NAME	AVG WKDAY PAX	AVG WKDAY REV PAX	ADJ TOTAL REVENUE	ALLOCATED COST WITH ALL DEPRC	ALLOCATED COST WITH VEH DEPRC	ALLOCATED COST WITH NO DEPRC	DAILY SCHEDULED VEHICLE MI	DAILY SCHEDULED VEHICLE HR	DAILY SCHEDULED PAY HOURS	DAILY REVENUE MILES	DAILY REVENUE HOURS
ROUTES USING TWAY												
107	FM 1960	648	624	$29,090	$123,621	$94,896	$82,783	1233.28	48.433	57.283	808.40	34.150
107	FM 1960-C	539	521	$40,005	$141,866	$109,133					808.40	30.033
201	NORTH SHEPHERD P&R	1,513	1,472	$105,929	$515,156	$342,201	$289,710	1382.09	58.500	71.117	791.90	31.534
202	KUYKENDAHL P&R	4,145	4,028	$491,357	$1,418,254	$978,908	$846,168	4430.01	176.506	198.925	2962.73	106.046
204	SPRING P&R	1,982	1,934	$88,015	$281,559	$201,293	$177,067	2793.94	95.650	102.167	1779.86	65.716
204	SPRING P&R-C	1,819	1,758	$134,996	$337,364	$233,939					1779.90	58.317
210	KATY-W. BELT P&R	570	556	$46,743	$265,022	$197,284	$177,095	988.23	40.155	42.902	829.57	31.057
212	SETON LAKE P&R	1,616	1,561	$161,117	$465,524	$325,835					1257.40	53.467
221	KATY-MASON P&R	697	669	$69,064	$264,266	$193,679	$172,481	1354.04	45.817	53.067	1132.36	32.651
221	KINGSLAND P&R	551	534	$18,133	$83,328	$59,905	$52,839	1262.50	39.650	46.983	799.16	27.850
227	KATY/FRY P&R	166	159	$5,418	$39,355	$29,281	$26,253	695.94	19.017	21.250	511.17	14.523
228	ADDICKS P&R	1,173	1,149	$116,221	$521,178	$359,823	$310,865	1832.45	55.167	65.748	1318.85	38.763
	QUARTERLY TOTAL	779,466	756,765	$1,306,087	$4,456,493	$3,126,177	$2,135,261	745,480	27,737	31,702	699,237	24,871
ROUTES NOT USING TWY												
59	SOUTHWEST FRY P&R	398	379	$26,376	$96,350	$75,901	$63,788	314.56	14.150	16.350	232.66	10.499
205	KINGWOOD P&R	1,248	1,206	$167,432	$362,900	$318,909					1461.40	54.283
206	EASTEX P&R	954	884	$74,439	$372,982	$316,562	$284,260	1638.46	65.167	72.083	1262.00	47.836
214	NORTHWEST P&R	861	834	$84,146	$258,976	$223,576	$203,387	1278.47	42.733	51.783	945.50	31.305
236	MAXEY P&R	276	237	$19,281	$121,141	$100,273	$88,160	460.28	20.233	23.833	372.77	15.019
245	EDGEBROOK P&R	1,773	1,710	$141,217	$435,941	$346,793	$294,303	1373.84	69.100	80.383	1006.02	51.033
246	BAY AREA P&R	1,257	1,215	$149,285	$345,283	$304,352					1321.30	51.950
261	WEST LOOP P&R	1,023	994	$59,615	$265,892	$217,634	$189,370	1058.22	40.917	46.817	795.30	28.634
262	WESTWOOD P&R	1,331	1,289	$106,530	$391,129	$328,126	$291,786	1648.48	66.500	74.067	1092.30	42.169
263	ALIEF P&R	864	838	$70,351	$313,048	$251,251	$214,912	1072.48	48.983	56.650	528.52	26.807
270	MISSOURI CITY P&R	547	529	$45,463	$178,119	$153,230					454.40	26.350
284	SPRING-W. LAKE P&R	130	128	$15,843	$119,402	$107,391	$91,240	563.35	18.898	22.531	248.55	9.297
291	NORTH SHEPHERD P&R	277	263	$23,321	$106,897	$86,217	$74,104	364.05	17.500	19.833	199.50	9.421
	QUARTERLY TOTAL	700,143	672,380	983,300	$3,368,060	$2,830,214	$1,795,310				634,894	25,895

APPENDIX D (con't)
1ST QUARTER FY86 METRO AND CONTRACT P&R PERFORMANCE MEASURES
ROUTES USING TRANSITWAYS COMPARED TO ROUTES NOT USING TRANSITWAYS

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH ALL DEPRC PER					ALLOCATED COST WITH VEH DEPRC PER				
			VEH MI	VEH HR	PAY HR	REV MI	REV HR	VEH MI	VEH HR	PAY HR	REV MI	REV HR
		ROUTES USING TWAY										
107		FM 1960	$4.18	$106.35	$89.92	$6.37	$150.83	$3.21	$81.64	$69.03	$4.89	$115.78
107		FM 1960				$4.39	$118.09				$3.37	$90.84
201		NORTH SHEPHERD P&R	$5.82	$137.60	$113.18	$10.16	$255.26	$3.87	$91.40	$75.18	$6.75	$169.56
202		KUYKENDAHL P&R	$5.00	$125.55	$111.40	$7.48	$208.97	$3.45	$86.66	$76.89	$5.16	$144.23
204		SPRING P&R	$4.20	$122.65	$114.83	$6.59	$178.52	$3.00	$87.69	$82.09	$4.71	$127.63
204		SPRING P&R				$4.74	$144.63				$3.29	$100.29
210		KATY-W. BELT P&R	$4.19	$103.13	$96.52	$4.99	$133.33	$3.12	$76.77	$71.85	$3.72	$99.25
212		SETON LAKE P&R				$5.78	$136.04				$4.05	$95.22
221		KATY-MASON P&R	$4.07	$120.16	$103.75	$4.86	$168.62	$2.98	$66.05	$76.04	$3.56	$123.58
221		KINGSLAND P&R	$4.13	$131.35	$110.85	$6.52	$187.00	$2.97	$94.43	$79.69	$4.68	$134.44
227		KATY/FRY P&R	$3.53	$129.34	$115.75	$4.81	$169.36	$2.63	$96.23	$86.12	$3.58	$126.01
228		ADDICKS P&R	$4.44	$147.61	$123.86	$6.17	$210.08	$3.07	$101.91	$85.51	$4.26	$145.04
		WEIGHTED AVERAGE				$6.37	$179.18				$4.47	$125.69
		ROUTES NOT USING TWY										
59		SOUTHWEST FRY P&R	$4.79	$106.39	$92.08	$6.47	$143.39	$3.77	$83.81	$72.54	$5.10	$112.96
205		KINGWOOD P&R				$3.88	$104.46				$3.41	$91.80
206		EASTEX P&R	$3.56	$89.43	$80.85	$4.62	$121.83	$3.02	$75.90	$68.62	$3.92	$103.40
214		NORTHWEST P&R	$3.17	$94.69	$78.14	$4.28	$129.26	$2.73	$81.75	$67.46	$3.69	$111.59
236		MAXEY P&R	$4.11	$93.55	$79.42	$5.08	$126.03	$3.40	$77.44	$65.74	$4.20	$104.32
245		EDGEBROOK P&R	$4.96	$98.58	$84.74	$6.77	$133.47	$3.94	$78.42	$67.41	$5.39	$106.18
246		BAY AREA P&R				$4.08	$103.85				$3.60	$91.54
261		WEST LOOP P&R	$3.93	$101.54	$88.74	$5.22	$145.09	$3.21	$83.11	$72.63	$4.28	$118.76
262		WESTWOOD P&R	$3.71	$91.90	$82.51	$5.59	$144.93	$3.11	$77.10	$69.22	$4.69	$121.58
263		ALIEF P&R	$4.56	$99.86	$86.34	$9.25	$182.47	$3.66	$80.15	$69.30	$7.43	$146.45
270		MISSOURI CITY P&R				$6.12	$105.62				$5.27	$90.86
284		SPRING-W. LAKE P&R	$3.31	$98.72	$82.80	$7.51	$200.68	$2.98	$88.79	$74.47	$6.75	$180.49
291		NORTH SHEPHERD P&R	$4.59	$95.44	$84.22	$8.37	$177.30	$3.70	$76.98	$67.92	$6.75	$143.00
		WEIGHTED AVERAGE				$5.30	$130.07				$4.46	$109.30

APPENDIX D (con't)
1ST QUARTER FY86 METRO AND CONTRACT P&R PERFORMANCE MEASURES
ROUTES USING TRANSITWAYS COMPARED TO ROUTES NOT USING TRANSITWAYS

NO.	TYPE	ROUTE NAME	ALLOCATED COST WITH NO DEPRC PER VEH MI	ALLOCATED COST WITH NO DEPRC PER VEH HR	ALLOCATED COST WITH NO DEPRC PER PAY HR	ALLOCATED COST WITH NO DEPRC PER REV MI	ALLOCATED COST WITH NO DEPRC PER REV HR	PAX PER VEH MI	PAX PER VEH HR	PAX PER PAY HR	PAX PER REV MI	PAX PER REV HR
		ROUTES USING TWAY										
107		FM 1960	$2.80	$71.22	$60.22	$4.27	$101.00	0.525	13.379	11.312	0.802	18.975
107		FM 1960				$0.00	$0.00				0.667	17.947
201		NORTH SHEPHERD P&R	$3.28	$77.38	$63.65	$5.72	$143.55	1.095	25.861	21.273	1.910	47.976
202		KUYKENDAHL P&R	$2.98	$74.91	$66.46	$4.46	$124.68	0.936	23.484	20.837	1.399	39.087
204		SPRING P&R	$2.64	$77.13	$72.21	$4.15	$112.27	0.709	20.721	19.400	1.114	30.160
204		SPRING P&R				$0.00	$0.00				1.022	31.192
210		KATY-W. BELT P&R	$2.80	$68.91	$64.50	$3.34	$89.10	0.577	14.198	13.289	0.687	18.358
212		SETON LAKE P&R				$0.00	$0.00				1.285	30.224
221		KATY-MASON P&R	$2.65	$78.43	$67.71	$3.17	$110.05	0.515	15.215	13.136	0.616	21.350
221		KINGSLAND P&R	$2.62	$83.29	$70.29	$4.13	$118.58	0.437	13.907	11.736	0.690	19.799
227		KATY/FRY P&R	$2.36	$86.28	$77.22	$3.21	$112.98	0.239	8.740	7.821	0.325	11.444
228		ADDICKS P&R	$2.65	$88.05	$73.88	$3.68	$125.31	0.640	21.262	17.840	0.889	30.259
		WEIGHTED AVERAGE				$3.05	$85.85				1.115	31.340
		ROUTES NOT USING TWY										
59		SOUTHWEST FRY P&R	$3.17	$70.44	$60.96	$4.28	$94.93	1.265	28.127	24.343	1.711	37.908
205		KINGWOOD P&R				$0.00	$0.00				0.854	22.991
206		EASTEX P&R	$2.71	$68.16	$61.62	$3.52	$92.85	0.582	14.642	13.238	0.756	19.947
214		NORTHWEST P&R	$2.49	$74.37	$61.37	$3.36	$101.51	0.673	20.144	16.623	0.910	27.497
236		MAXEY P&R	$2.99	$68.08	$57.80	$3.70	$91.72	0.599	13.621	11.564	0.739	18.350
245		EDGEBROOK P&R	$3.35	$66.55	$57.21	$4.57	$90.11	1.291	25.663	22.061	1.763	34.749
246		BAY AREA P&R				$0.00	$0.00				0.951	24.196
261		WEST LOOP P&R	$2.80	$72.31	$63.20	$3.72	$103.34	0.967	25.003	21.852	1.286	35.729
262		WESTWOOD P&R	$2.77	$68.56	$61.55	$4.17	$108.12	0.808	20.022	17.977	1.219	31.575
263		ALIEF P&R	$3.13	$68.55	$59.28	$6.35	$125.27	0.805	17.633	15.247	1.634	32.220
270		MISSOURI CITY P&R				$0.00	$0.00				1.204	20.759
284		SPRING-W. LAKE P&R	$2.53	$75.44	$63.27	$5.74	$153.35	0.231	6.900	5.787	0.525	14.026
291		NORTH SHEPHERD P&R	$3.18	$66.16	$58.38	$5.80	$122.91	0.761	15.836	13.973	1.389	29.418
		WEIGHTED AVERAGE				$2.83	$69.33				1.103	27.038

APPENDIX D (con't)
1ST QUARTER FY86 METRO AND CONTRACT P&R PERFORMANCE MEASURES
ROUTES USING TRANSITWAYS COMPARED TO ROUTES NOT USING TRANSITWAYS

		COST PER PASSENGER			COST PER REVENUE PASSENGER			REVENUE PER						
NO.	ROUTE NAME	ALL DEPRC	VEH DEPRC	NO DEPRC	ALL DEPRC	VEH DEPRC	NO DEPRC	VEH MI	VEH HR	PAY HR	REV MI	REV HR	PAX	REV PAX
	ROUTES USING TWAY													
107	FM 1960	$7.95	$6.10	$5.32	$8.25	$6.34	$5.53	$0.98	$25.03	$21.16	$1.50	$35.49	$1.870	$1.942
107	FM 1960				$6.81	$5.24	$0.00				$1.24	$33.30	$1.856	$1.920
201	NORTH SHEPHERD P&R	$5.32	$3.53	$2.99	$5.47	$3.63	$3.08	$1.20	$28.29	$23.27	$2.09	$52.49	$1.094	$1.124
202	KUYKENDAHL P&R	$5.35	$3.69	$3.19	$5.50	$3.80	$3.28	$1.73	$43.50	$38.59	$2.59	$72.40	$1.852	$1.906
204	SPRING P&R	$5.92	$4.23	$3.72	$6.07	$4.34	$3.81	$1.31	$38.34	$35.90	$2.06	$55.81	$1.850	$1.896
204	SPRING P&R				$4.80	$3.33	$0.00				$1.90	$57.87	$1.855	$1.920
210	KATY-W. BELT P&R	$7.26	$5.41	$4.85	$7.45	$5.55	$4.98	$0.74	$18.19	$17.02	$0.88	$23.52	$1.281	$1.314
212	SETON LAKE P&R				$4.66	$3.26	$0.00				$2.00	$47.08	$1.558	$1.612
221	KATY-MASON P&R	$7.90	$5.79	$5.15	$8.23	$6.03	$5.37	$1.06	$31.40	$27.11	$1.27	$44.07	$2.064	$2.152
221	KINGSLAND P&R	$9.45	$6.79	$5.99	$9.76	$7.01	$6.19	$0.90	$28.58	$24.12	$1.42	$40.69	$2.055	$2.123
227	KATY/FRY P&R	$14.80	$11.01	$9.87	$15.47	$11.51	$10.32	$0.49	$17.80	$15.93	$0.66	$23.31	$2.037	$2.130
228	ADDICKS P&R	$6.94	$4.79	$4.14	$7.08	$4.89	$4.23	$0.99	$32.92	$27.62	$1.38	$46.85	$1.548	$1.580
	WEIGHTED AVERAGE	$5.72	$4.01	$2.74	$5.89	$4.13	$2.82				$1.87	$52.51	$1.676	$1.726
	ROUTES NOT USING TWY													
59	SOUTHWEST FRY P&R	$3.78	$2.98	$2.50	$3.97	$3.13	$2.63	$1.31	$29.13	$25.21	$1.77	$39.25	$1.036	$1.087
205	KINGWOOD P&R				$4.70	$4.13	$0.00				$1.79	$48.19	$2.096	$2.169
206	EASTEX P&R	$6.11	$5.18	$4.65	$6.59	$5.59	$5.02	$0.71	$17.85	$16.14	$0.92	$24.31	$1.219	$1.315
214	NORTHWEST P&R	$4.70	$4.06	$3.69	$4.85	$4.19	$3.81	$1.03	$30.77	$25.39	$1.39	$42.00	$1.527	$1.577
236	MAXEY P&R	$6.87	$5.68	$5.00	$8.00	$6.62	$5.82	$0.65	$14.89	$12.64	$0.81	$20.06	$1.093	$1.273
245	EDGEBROOK P&R	$3.84	$3.06	$2.59	$3.98	$3.17	$2.69	$1.61	$31.93	$27.45	$2.19	$43.24	$1.244	$1.290
246	BAY AREA P&R				$4.44	$3.92	$0.00				$1.77	$44.90	$1.856	$1.920
261	WEST LOOP P&R	$4.06	$3.32	$2.89	$4.18	$3.42	$2.98	$0.88	$22.77	$19.90	$1.17	$32.53	$0.910	$0.937
262	WESTWOOD P&R	$4.59	$3.85	$3.42	$4.74	$3.98	$3.54	$1.01	$25.03	$22.47	$1.52	$39.47	$1.250	$1.291
263	ALIEF P&R	$5.66	$4.55	$3.89	$5.84	$4.69	$4.01	$1.02	$22.44	$19.40	$2.08	$41.01	$1.273	$1.312
270	MISSOURI CITY P&R				$5.27	$4.53	$0.00				$1.56	$26.96	$1.299	$1.344
284	SPRING-W. LAKE P&R	$14.31	$12.87	$10.93	$14.55	$13.09	$11.12	$0.44	$13.10	$10.99	$1.00	$26.63	$1.898	$1.931
291	NORTH SHEPHERD P&R	$6.03	$4.86	$4.18	$6.35	$5.12	$4.40	$1.00	$20.82	$18.37	$1.83	$38.68	$1.315	$1.385
	WEIGHTED AVERAGE	$4.81	$4.04	$2.56	$5.01	$4.21	$2.67				$1.55	$37.97	$1.404	$1.462

APPENDIX D (con't)
1ST QUARTER FY86 METRO AND CONTRACT P&R PERFORMANCE MEASURES
ROUTES USING TRANSITWAYS COMPARED TO ROUTES NOT USING TRANSITWAYS

NO.	TYPE	ROUTE NAME	COST RECOVERY RATIO			SUBSIDY PER REV PAX		
			ALL DEPRC	VEH DEPRC	NO DEPRC	ALL DEPRC	VEH DEPRC	NO DEPRC
		ROUTES USING TWAY						
107	T	FM 1960	0.2353	0.3065	0.3514	$6.31	$4.39	$3.59
107	T	FM 1960	0.2820	0.3666		$4.89	$3.32	
201	T	NORTH SHEPHERD P&R	0.2056	0.3096	0.3656	$4.34	$2.51	$1.95
202	T	KUYKENDAHL P&R	0.3465	0.5019	0.5807	$3.60	$1.89	$1.38
204	T	SPRING P&R	0.3126	0.4372	0.4971	$4.17	$2.44	$1.92
204	T	SPRING P&R	0.4001	0.5771		$2.88	$1.41	
210	T	KATY-W. BELT P&R	0.1764	0.2369	0.2639	$6.14	$4.23	$3.66
212	T	SETON LAKE P&R	0.3461	0.4945		$3.05	$1.65	
221	T	KATY-MASON P&R	0.2613	0.3566	0.4004	$6.08	$3.88	$3.22
221	T	KINGSLAND P&R	0.2176	0.3027	0.3432	$7.63	$4.89	$4.06
227	T	KATY/FRY P&R	0.1377	0.1850	0.2064	$13.34	$9.38	$8.19
228	T	ADDICKS P&R	0.2230	0.3230	0.3739	$5.50	$3.31	$2.65
		WEIGHTED AVERAGE	0.2931	0.4178		$4.16	$2.41	
		ROUTES NOT USING TWY						
59		SOUTHWEST FRY P&R	0.2738	0.3475	0.4135	$2.88	$2.04	$1.54
205		KINGWOOD P&R	0.4614	0.5250		$2.53	$1.96	
206		EASTEX P&R	0.1996	0.2351	0.2619	$5.27	$4.28	$3.71
214		NORTHWEST P&R	0.3249	0.3764	0.4137	$3.28	$2.61	$2.24
236		MAXEY P&R	0.1592	0.1923	0.2187	$6.72	$5.35	$4.55
245		EDGEBROOK P&R	0.3239	0.4072	0.4798	$2.69	$1.88	$1.40
246		BAY AREA P&R	0.4324	0.4905		$2.52	$1.99	
261		WEST LOOP P&R	0.2242	0.2739	0.3148	$3.24	$2.48	$2.04
262		WESTWOOD P&R	0.2724	0.3247	0.3651	$3.45	$2.69	$2.25
263		ALIEF P&R	0.2247	0.2800	0.3274	$4.53	$3.37	$2.70
270		MISSOURI CITY P&R	0.2552	0.2967		$3.92	$3.19	
284		SPRING-W. LAKE P&R	0.1327	0.1475	0.1736	$12.62	$11.16	$9.19
291		NORTH SHEPHERD P&R	0.2182	0.2705	0.3147	$4.96	$3.73	$3.02
		WEIGHTED AVERAGE	0.2919	0.3474	0.5477	$3.55	$2.75	$1.21