

**EVALUATION  
OF THE  
THREE YEAR REDUCED FARE  
PROGRAM**

FEBRUARY 1986

REFERENCE COPY

MTA LIBRARY



TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY	
1.0 <u>INTRODUCTION</u>	
1.1 Purpose of Report . . . . .	1
1.2 Scope of The Evaluation of The Three-Year Reduced Fare Program . . . . .	2
1.3 Proposition A Background . . . . .	2
1.3.1 Prop A Funding Allocations . . . . .	2
.1 Local Transit Improvements . . . . .	3
.2 Reduced Fare Program . . . . .	3
.3 Rail Rapid Transit Development . . . . .	3
.4 Year Four Allocation Formula . . . . .	4
1.3.2 Proposition A Reduced Fare Guidelines . . . . .	6
1.4 Memoranda of Understanding (MOU) . . . . .	9
1.4.1 Prop A Start-up Agreement . . . . .	9
1.4.2 Memorandum of Understanding Agreement (MOU) . . . . .	11
1.4.3 Vehicle Service Hour Adjustments . . . . .	11
1.4.4 Third Year Adjustments . . . . .	13
2.0 <u>PROPOSITION A IMPLEMENTATION</u>	
2.1 Implementation Plan . . . . .	15
2.1.1 Organizational Structure . . . . .	15
2.1.2 Departmental Responsibilities . . . . .	16
2.1.3 Ridership Projections . . . . .	19
2.1.4 Equipment/Service Facilities . . . . .	19
2.1.5 Manpower . . . . .	20
2.2 Data Collection . . . . .	20
2.3 Passenger Overload Monitoring Program . . . . .	21
2.4 Productivity Measures . . . . .	22
2.5 Prop A Service . . . . .	23
2.5.1 Schedule Adjustments . . . . .	23
2.5.2 Reallocation of Service . . . . .	24
2.5.3 Interlining . . . . .	24
2.5.4 Shortlining . . . . .	24
2.5.5 Day-to-Day Adjustments . . . . .	25
2.5.6 Line Regulators . . . . .	28

TABLE OF CONTENTS (Cont'd)

	<u>PAGE</u>
2.6 Year One Service . . . . .	28
2.7 Year Two Service . . . . .	28
2.8 Year Three Service . . . . .	32
3.0 <u>PROPOSITION A IMPACTS</u>	
3.1 Impact on Patronage Growth . . . . .	33
3.1.1 Impact on Total System . . . . .	33
3.1.2 Patronage Projections . . . . .	39
3.1.3 Impact of Ridership on a Sector Basis . . . . .	41
.1 Sector Ridership Trends . . . . .	43
.2 Regular Boardings . . . . .	44
.3 Student Boardings . . . . .	44
.4 Senior/Disabled Boardings . . . . .	44
.5 Express Usage By Sector . . . . .	48
3.1.4 Impacts by Type-of-Service . . . . .	48
3.1.5 Impact by Time-of-Day . . . . .	54
.1 Regular Boardings . . . . .	54
.2 Senior/Disabled Boardings . . . . .	55
.3 Student Boardings . . . . .	58
3.1.6 Impact on Accessible Service (Wheelchair Boardings) . . . . .	58
3.2 Impact on Cost/Revenue . . . . .	59
3.3 Impact on Bus Equipment . . . . .	62
3.3.1 Equipment Impact At The System Level . . . . .	62
3.3.2 Equipment Impact By Type of Service . . . . .	66
3.3.3 Equipment Impact on Selected Lines . . . . .	73
3.4 Impact on Manpower . . . . .	77
3.5 Impact on Vehicle Service Hours/Miles . . . . .	81
3.5.1 Impacts of Line Regulator . . . . .	85
3.5.2 Impact of Interlining . . . . .	85
3.5.3 Impact of Shortlining . . . . .	87
3.5.4 Impact of Reallocation of Service . . . . .	87
3.6 Impact on Pass Sales . . . . .	87
3.6.1 Regular Passes . . . . .	89
3.6.2 College/Vocational Passes . . . . .	89
3.6.3 Student Passes . . . . .	89
3.6.4 Disabled (Handicapped) Passes . . . . .	89

1981

## TABLE OF CONTENTS (Cont'd)

	<u>PAGE</u>
3.6.5 Senior Citizen Passes . . . . .	89
3.6.6 Proportional Distribution of Pass Sales by Fare Category . . . . .	96
3.6.7 Express Stamp Sales . . . . .	98
3.6.8 Method of Fare Payment . . . . .	101
3.6.9 Proportional Change in Ridership By Fare Category . . . . .	102
<b>4.0 <u>PRODUCTIVITY AND QUALITY OF PROP A SERVICE</u></b>	
4.1 Productivity and Cost Efficiency of Prop A Service . . .	104
4.1.1 Boardings Per Vehicle Service Hour . . . . .	106
4.1.2 Boardings Per Vehicle Service Mile . . . . .	106
4.1.3 Passengers Per Peak Bus . . . . .	110
4.1.4 Average Peak Hour Passenger Loading . . . . .	111
4.2 Cost of Prop A Service . . . . .	113
4.2.1 Operating Ratio . . . . .	113
4.2.2 Cost Per Boarding/Subsidy Per Boarding . . . . .	117
4.3 Quality of Prop A Service . . . . .	120
4.3.1 On-Time Performance . . . . .	120
4.3.2 Complaints . . . . .	121
.1 On-Time Performance (Schedule Problems) . . .	124
.2 Passenger Pass-ups . . . . .	125
.3 Discourteous Operators . . . . .	125
.4 Unsafe Driver Operation . . . . .	128
4.3.3 Commendations . . . . .	128
4.3.4 Passenger Information Requests . . . . .	128
<b>5.0 <u>PROP A LOCAL RETURN PROJECTS</u></b>	
5.1 Prop A Needs Assessment Studies . . . . .	134
5.2 Coordination Efforts and Locally-Funded RTD-Affected Projects . . . . .	136
5.2.1 Bus Stop Improvements . . . . .	136
5.2.2 Other Prop A Local Return Projects . . . . .	143
.1 Contract Services . . . . .	143
.2 Interagency Transfer Agreements . . . . .	145
.3 Subsidized Fare Programs . . . . .	146
.4 Transit Security Programs . . . . .	146
.5 Ventura Boulevard Bus Priority Traffic Signal Preemption Project . . . . .	146

TABLE OF CONTENTS (Cont'd)

	<u>PAGE</u>
6.0 <u>CONCLUSION</u>	147

## LIST OF FIGURES

	<u>PAGE</u>
1.1 Prop A Allocations . . . . .	5
1.2 Comparison of Pre and Post July 1, 1982 Cash Fares . . . . .	7
1.3 Comparison of Pre and Post July 1, 1982 Monthly Bus Pass Prices . . . . .	8
1.4 Vehicle Service Hours . . . . .	13
2.1 Pre-Prop A Departmental Responsibilities . . . . .	17
2.2 Estimated Prop A Ridership Projections (First Six Months) . . . . .	19
2.3 Prop A Bus Additions (July 1982 through November 1982) . . . . .	23
2.4 First Month: Buses Added . . . . .	26
2.5 Prop A Bus Requirements and Day-To-Day Adjustments (July 1, 1982 through July 31, 1982) . . . . .	27
2.6 Vehicle Service Hour Reduction Package (February 1984) . . . . .	30
3.1 Total Annual Ridership . . . . .	35
3.2 Comparison of Average Weekday Boardings . . . . .	36
3.3 Comparison of Average Saturday Boardings . . . . .	37
3.4 Comparison of Average Sunday Boardings . . . . .	38
3.5 Comparison of Actual vs. Projected Daily Ridership . . . . .	40
3.6 Sector Map . . . . .	42
3.7 Comparison of Average Daily Boardings By Sector . . . . .	43
3.8 Change in Daily Ridership, By Fare Type (East Central Cities Sector) . . . . .	45
3.9 Prop A Funded Paratransit Services Within The East Central Cities Sector . . . . .	46
3.10 Prop A Funded Paratransit Services Within The Pomona Valley Sector . . . . .	47
3.11 Types of Service By TPM Code . . . . .	49
3.12 Comparison of FY 1982 and FY 1985 Daily Boardings By Type of Service . . . . .	51
3.13 Comparison of FY 1982 and FY 1985 Saturday Boardings By Type of Service . . . . .	52
3.14 Comparison of FY 1982 and FY 1985 Sunday Boardings By Type of Service . . . . .	53
3.15 Ridership by Rider Group, By Time of Day . . . . .	56
3.16 Average Boardings By Time of Day . . . . .	57
3.17 Operating Cost . . . . .	60
3.18 Actual Farebox Revenue . . . . .	61
3.19 Summary of Systemwide Assignment of Equipment By Time of Day (Weekday) . . . . .	63
3.20 Comparison of Prop A and Pre-Prop A Bus Equipment Levels, By Time of Day (Weekday) . . . . .	63
3.21 Comparison of Relative Changes in Equipment Levels and Ridership, By Time of Day (Pre-Prop A vs. Prop A) . . . . .	64
3.22 Comparison of Relative Changes in Ridership vs. Peak Bus Equipment Levels, by Service Type . . . . .	65

LIST OF FIGURES (Cont'd)

	<u>PAGE</u>
3.23 Summary of Changes in Assigned Equipment Levels By Service Type, and By Time of Day . . . . .	68
3.24 Bus Equipment Usage by Transit Performance Measures . . . . .	69
3.25 Summary of Buses Added (LOST), By Type of Service and By Time of Day (FY 85 vs. FY 82) . . . . .	70
3.26 Line 30-31 - Pre-Prop A/Prop A Service Comparison . . . . .	74
3.27 Line 280 - Pre-Prop A/Prop A Service Comparison . . . . .	75
3.28 Line 232 - Pre-Prop A/Prop A Service Comparison . . . . .	76
3.29 Line 266 - Pre-Prop A/Prop A Service Comparison . . . . .	77
3.30 Number of Employees by Job Category, Through Time . . . . .	79
3.31 Comparison of Employees to Ridership . . . . .	80
3.32 Vehicle Service Hours . . . . .	83
3.33 Vehicle Service Miles . . . . .	84
3.34 Interline Comparison (Pre-Prop A vs. Prop A) . . . . .	86
3.35 RTD Annual Pass Sales Comparison . . . . .	88
3.36 RTD Pass Sales Comparison - Regular . . . . .	91
3.37 RTD Pass Sales Comparison - College/Vocational . . . . .	92
3.38 RTD Pass Sales Comparison - Student . . . . .	93
3.39 RTD Pass Sales Comparison - Disabled . . . . .	94
3.40 RTD Pass Sales Comparison - Senior Citizen . . . . .	95
3.41 Proportional Distribution of Pass Sales By Fare Category . . . . .	97
3.42 Annual Express Stamp Sales Comparison . . . . .	99
3.43 Comparison of FY 1982 and FY 1985 Express Stamp Sales . . . . .	100
3.44 Annual Boardings and Method of Fare Payment Comparison . . . . .	101
3.45 Average Boarding By Fare Category . . . . .	103
4.1 Summary of Productivity and Cost Indicators . . . . .	105
4.2 Unlinked Boardings Per Vehicle Service Hour . . . . .	107
4.3 Unlinked Boardings Per Vehicle Mile . . . . .	108
4.4 Passengers Per Hour and Passengers Per Mile Comparison . . . . .	109
4.5 Boarding Passengers Per Peak Bus . . . . .	110
4.6 Average Peak Hour Load Factor . . . . .	112
4.7 Actual Farebox Revenue . . . . .	114
4.8 Operating Cost . . . . .	115
4.9 Operating Ratio (Farebox Revenue/Operating Cost) . . . . .	116
4.10 Subsidy Per Boarding/Cost Per Boarding . . . . .	118
4.11 Operating Cost Per Unlinked Boarding . . . . .	119
4.12 Sample On-Time Pull-out Comparison . . . . .	121
4.13 Comparison of Service Complaints and Boardings . . . . .	123
4.14 Comparison of Complaints By Complaint Type . . . . .	124
4.15 Average Quarterly Reported Pass-ups and Schedule Problems . . . . .	126
4.16 Summary of Discourteous Operator Complaints . . . . .	127
4.17 Summary of Bus Operator Commendations . . . . .	129
4.18 Bus Operator Commendations vs. Discourteous Operator Complaints . . . . .	130

LIST OF FIGURES (Cont'd)

	<u>PAGE</u>
4.19 Telephone Information Requests . . . . .	132
4.20 Summary of Telephone Information Requests/Staffing Levels . . . . .	133
5.1 SCRTD Needs Assessment Studies . . . . .	135
5.2 Prop A Funded Bus Stop Improvement Projects . . . . .	138
5.3 SCRTD Operated Prop A Service . . . . .	144
5.4 Prop A Interagency Agreements . . . . .	145



EXHIBITS

<u>NO.</u>		<u>PAGE</u>
1	Prop A Service Additions	1-1
2	Peak Period Boarding Trends	2-1
3	Comparison of Actual vs. Projected Daily Ridership	3-1
4	Change in Daily Ridership, By Fare Type, By Sector, By Year	4-1
5	Equipment/Ridership Line Analysis	5-1
6	Peak Hour Load Factors, By Line	6-1

---

**EXECUTIVE SUMMARY**

## EXECUTIVE SUMMARY

On November 4, 1980, the residents of Los Angeles County, formally approved a ballot measure to impose a one-half cent sales tax for public transit. The tax, known as Proposition A (Prop A), was specifically directed to provide monies to construct rapid transit systems within the county. It also provided monies to local jurisdictions for their funding of local transit projects. Finally, for the first three years, it allocated monies to the transit operators within the county, to either lower, or maintain their fare structure to a maximum \$.50 base fare.

The sales tax was initiated on July 1, 1982. At that time the Southern California Rapid Transit District (District or RTD) base fare was reduced by 41 percent from \$.85 to \$.50. For the next three years the Reduced Fare Program statutorily remained in effect, ending June 30, 1985.

A thorough investigation and evaluation has been conducted by the District to determine what effects the Reduced Fare Program had upon several factors. These factors can generally be broken down into four major categories. They are:

- Impact On District Ridership and Operations -- The direct effects of Prop A on ridership, costs, revenues, equipment, manpower, the level of service provided, and the mix of pass and cash use.
- Impact On District Productivity -- An analysis of the productivity of the services that the District provided during the Reduced Fare Program.
- Impact On The District's "Quality" Of Service -- A determination as to whether the District was able to maintain a high quality of service, as measured by on-time schedule performance and passenger satisfaction.
- Impact On The District From Cities' Prop A Local Return Transit Projects -- The effect to the District from the Cities' Prop A Local Transit Projects.

Analysis of the data indicates that the District was extremely successful in carrying the increased numbers of riders with a minimum increase in service. This success can be measured by the fact that:

- A 40 percent increase in system annual boardings over the pre-Prop A period was accommodated by only a 6 percent increase in the District's annual service hours.

	<u>ANNUAL RIDERSHIP</u>	<u>ANNUAL SERVICE HOURS</u>
FY 1982	352.9 Million	6.7 Million
FY 1985	493.2 Million	7.1 Million
% Change	40%	6%

- Productivity, as measured by numerous factors, all showed significant improvement over the three year period.
  - boardings per vehicle service hour
  - boardings per vehicle service mile
  - operating cost per boarding
  - revenue per boarding
  - passengers per peak bus
  - average peak hour passenger loading
- A 46 percent increase in average daily boardings over the three year period was accommodated by only a 16 percent increase in PM Peak buses.

	<u>DAILY BOARDINGS</u>	<u>PM PEAK BUSES</u>
July 1982	1.1 Million	1,913
June 1985	1.6 Million	2,220
% Change	46%	16%

The analysis also revealed that the reduction in fares greatly increased ridership in most all ridership categories, with students registering the largest increase. One group of riders that did not increase, and, in fact, appeared to decrease, were the senior/disabled riders.

AVERAGE DAILY RIDERS (MILLIONS)

	<u>REGULAR</u>	<u>SENIOR/DISABLED</u>	<u>STUDENT</u>	<u>TOTAL</u>
FY 1982	0.824	0.160	0.127	1.111
FY 1985	1.048	0.157	0.319	1.524
% Change	27%	-2%	151%	37%

The tremendous growth in student riders occurred for several reasons. First, the dramatic 69 percent reduction in base fare (76 percent for college students) was an inducement to these riders to use transit. Secondly, several public school districts found it cheaper to buy RTD monthly passes for their students than it would be to contract for the service with a private carrier.

The stability in senior/disabled riders is significant in that their cash fare price dropped by 50 percent. This would appear to reinforce the theory that these riders were already very transit dependent; the reduction in fares was thus not an incentive. Another possible explanation is that many of the cities were starting up new local dial-a-ride senior/disabled paratransit services with their Prop A monies. Many of the District's potential added riders thus may have found it more convenient to use these new services.

Ridership increases occurred during all time periods of the day (AM peak Base, PM peak). Equipment was added to help meet this increase, with the bulk of added buses being assigned to peak period services. Base service received relatively few added buses; increased ridership during this period was handled by filling in the available seating capacity of buses during this time period.

These tremendous ridership increases being accommodated by the minimal service additions created more situations where buses were excessively overcrowded. During this time period, there was a significant increase in the number of passenger complaints received by the District; the number of

on-time performance complaints, and those for passengers being passed-up by overcrowded buses increased by 250 percent, and 120 percent, respectively. However, it should be noted that in actual numbers these remained at approximately one complaint per 100,000 passengers boarding District services during the periods of comparison. Based on this low rate of complaints to total boardings, it can be reasonably assumed that from the users' perspective the quality of service remained very high. Moreover, the District maintained an actual to scheduled pull-out ratio (buses pulling out of the division on time) of 98 - 99 percent. Also, RTD telephone information operators answered ever-increasing service and schedule data requests throughout the Fare Reduction Period.

The District continued to coordinate with local jurisdictions to develop facilities, or to institute new special services, which would best meet the transit needs of these communities. The cost of these programs were borne by the local jurisdictions using their allotted monies out of the total Prop A fund. Facilities included improvements at or around bus stops, a new park/ride lot, institution of new local feeder circulation services designed to transport local riders to convenient RTD transfer locations. New services included the contracting with RTD to provide new local circulation routes, and the contracting with RTD to provide enhanced District transit security support to an area.

The impacts generated were indeed significant. The applicability of the District's actions taken during this time period have not been lost. Subsequent to the end of the Fare Reduction Period, when the base fare again went to \$.85, the scheduling techniques used during these three years are continuing to be applied to make certain that the services are running as effectively and productively as possible.

# **CHAPTER 1.0**

---

## **INTRODUCTION**

## 1.0 INTRODUCTION

On July 1, 1982, the Southern California Rapid Transit District (SCRTD or District), operator of regional public transit in the Los Angeles area, was faced with the formidable task of implementing a transportation plan to accommodate a major increase in ridership. This anticipated increase was expected to occur as a result of a voter-approved one-half cent transit sales tax referendum (Proposition A), commonly referred to as Prop A. The referendum not only mandated the implementation of a fare reduction program to be instituted for the first three years of the program, but also supported the planning and construction of a 140-160 mile regional rail transit system. A third provision of the Proposition was the return of 25 percent of the sales tax revenue to cities in Los Angeles County for local transit improvements.

Although the passage of Prop A would affect District operations for years to come, the immediate impact in 1982 was in the area of increased ridership. The referendum provided for a 41 percent decrease in the base fare. The subsidized base fare was lowered from \$.85 to \$.50.

This voter approved referendum ushered in a new era for public transportation in Los Angeles County. Prop A enabled the District to increase service to accommodate the expected surge in ridership due to the lowered bus fares. In addition, cities were able to enhance transit availability for residents through subsidized bus fares, the provision of special contract services and the establishment of local circulation systems. Further improvements to transit services were made through the installation of curb cuts to increase accessibility, bus shelters and bus pads.

### 1.1 PURPOSE OF REPORT

The purpose of this report is to assess the overall impacts of the Prop A Reduced Fare Program on the Southern California Rapid Transit District bus system. It will also examine the opportunities that were made available to the District and local jurisdictions to improve public transportation



throughout Los Angeles County.

## 1.2 SCOPE OF THE EVALUATION OF THE THREE-YEAR REDUCED FARE PROGRAM

This evaluation is divided into four major sections.

- (1) INTRODUCTION: This section discusses the Prop A Reduced Fare Program.
- (2) PROP A IMPLEMENTATION: This section describes the start-up plan for the Prop A Program.
- (3) PROP A IMPACTS: This section details how the District responded to increased ridership levels within the framework of Prop A imposed guidelines.
- (4) QUALITY OF SERVICE: This section examines the public's perceptions of District service during the Three-Year Reduced Fare period.

## 1.3 PROPOSITION A BACKGROUND

On November 4, 1980, the electorate of Los Angeles County approved a Transit Development referendum. Known as Proposition A, it was one of the largest dedicated taxes for public transit ever voted by a county electorate in the United States.

Prop A was placed on the November 1980 general election ballot by the Los Angeles County Transportation Commission (LACTC). The measure was approved by 54.2 percent of the county voters. After a lengthy legal challenge, the measure was validated by the California Supreme Court on April 30, 1982. Revenue from the Prop A program would be generated by a one-half cent retail sales tax increase in Los Angeles County (from 6 percent to 6-1/2 percent). This new funding program was implemented on July 1, 1982. It was anticipated that the sales tax increase would generate approximately \$300 million in the first year.

### 1.3.1 Prop A Funding Allocations

The Transit Development referendum mandated that the increased sales tax revenue be used for the first three years on three specific programs:

- (1) Local transit improvement projects.
- (2) Reduction of base bus fares to \$.50.
- (3) Funding of a county-wide rail rapid transit system.

.1 Local Transit Improvements

Every incorporated city in Los Angeles County received a direct allocation of sales tax revenue for local transit improvements. Twenty-five percent of the sales tax revenue was set aside in a special fund, and then apportioned among the 81 cities, and the county unincorporated areas, according to the population of each jurisdiction. Before the end of the program funds would be apportioned among a total of 84 cities. Each city (or the County in the case of unincorporated areas), was authorized to determine how to utilize this "Local Return" allocation to provide better transportation services within their respective communities. All funds were to be spent within three years after the year in which they were first allocated.

.2 Reduced Fare Program

For the first three years, July 1, 1982, through June 30, 1985, the first funding allocation priority for the remaining pool of monies was to subsidize the fare reduction program. Funds were provided not only to defray the loss in revenues due to the lowered fares but also to put in additional service required to relieve overcrowding from the resultant increases in ridership. Prop A funds were also distributed to municipal operators to ensure that the 50-cent base fare would not be exceeded anywhere in Los Angeles County.

.3 Rail Rapid Transit Development

Any portion of the 75 percent of the Prop A revenue not used to support the Fare Reduction Program during the first three years was reserved for design

and construction of the rail transit system.

#### .4 Year Four Allocation Formula

Funding allocations of the Prop A program would change in the fourth year of the program (FY 1985-86). The apportionments would be as follows:

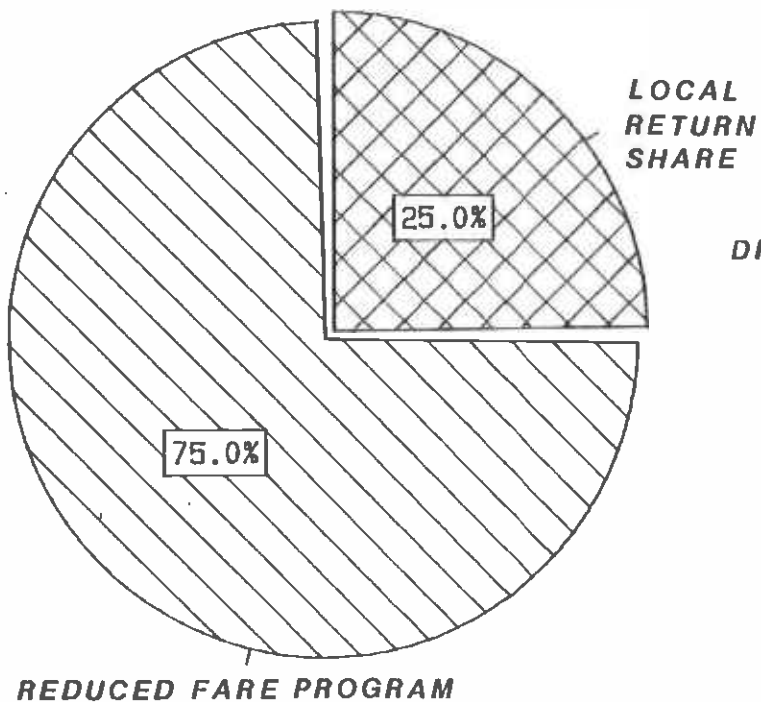
- Twenty-five percent for local transit projects;
- Thirty-five percent minimum for rail rapid transit development projects; and,
- Forty percent of Prop A revenues designated to accrue in a Discretionary Fund to be distributed by LACTC for general public transit and paratransit projects.

The significance of this change in the allocation formula was that the Reduced Fare Program was not specifically included for funding.

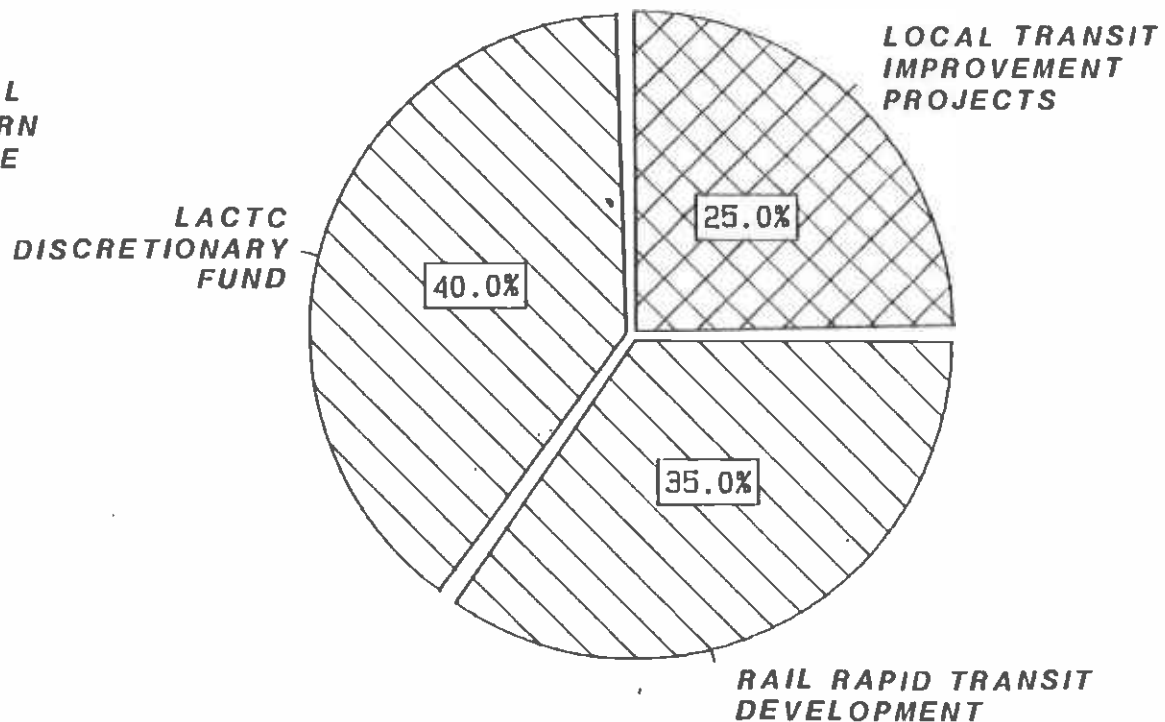
Prop A allocations are illustrated in Figure 1.1.

FIGURE 1.1

PROP A ALLOCATION  
FY 1982-85



PROP A  
YEAR 4 ALLOCATION  
FY 1985-86



- 5 -

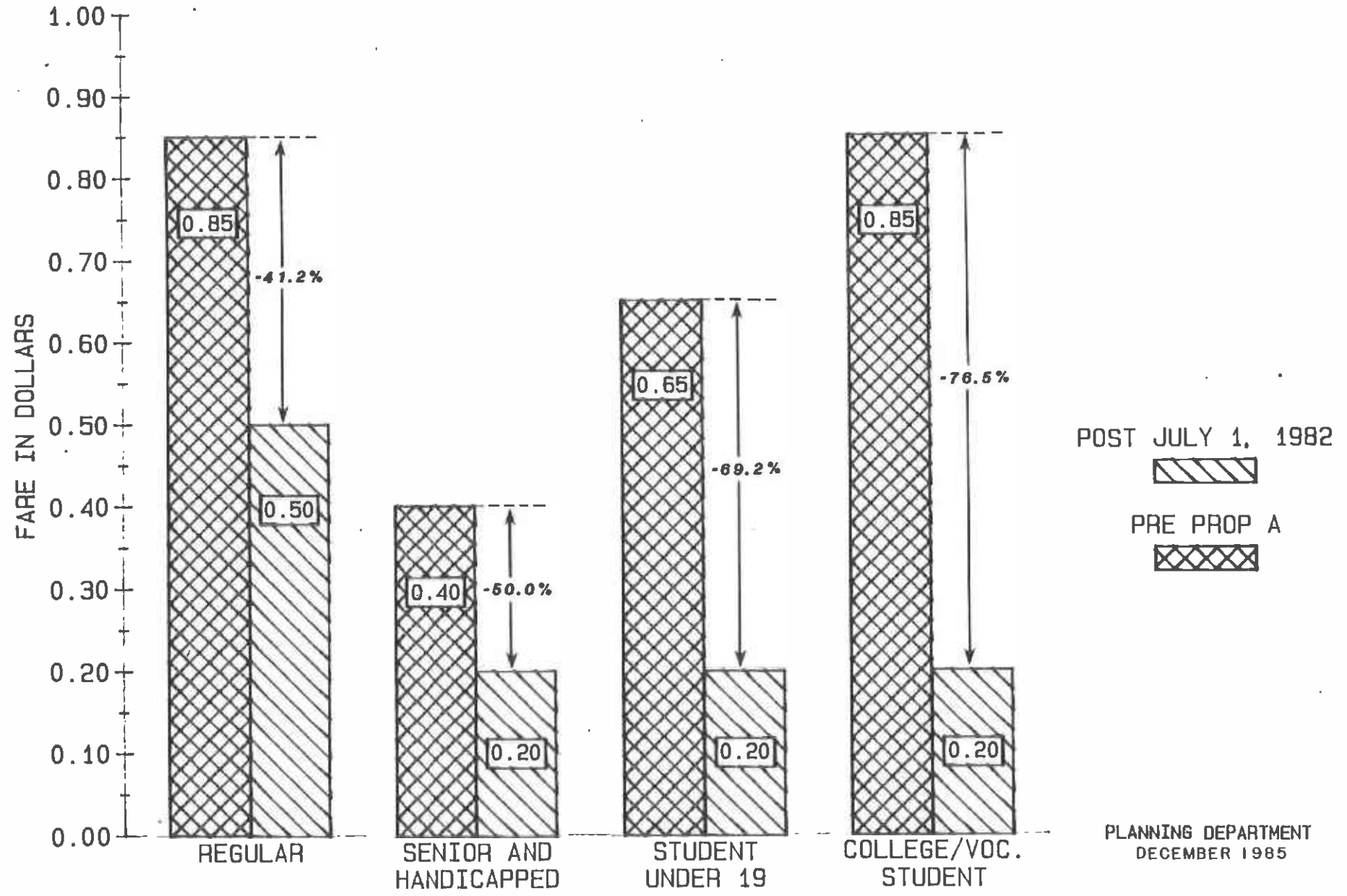
### 1.3.2 Proposition A Reduced Fare Guidelines

Included in the Prop A referendum were specific guidelines related to the implementation of the Reduced Fare Program. In order to participate in the program, transit operators were required to establish a fare structure consistent with the following guidelines.

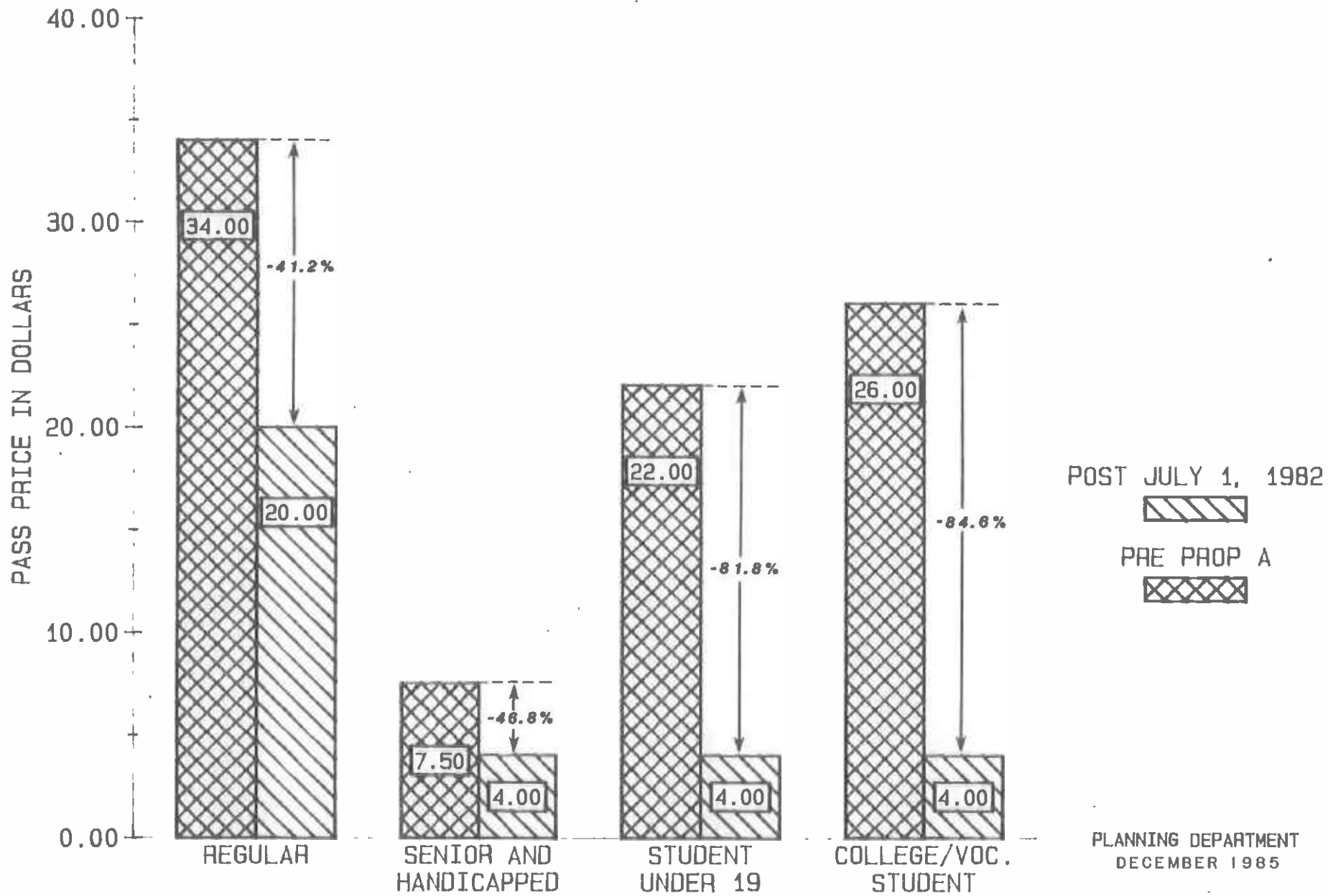
- A maximum base cash fare of 50 cents.
- A transfer charge of 10 cents.
- A maximum basic monthly transit pass price of \$20.00.
- A monthly transit pass maximum price of \$4.00 for the disabled, elderly and students.
- A maximum cash base fare for the disabled, elderly and students of 20 cents.
- Commensurate reductions in express fares.

The Pre and Post July 1 cash and monthly pass prices are illustrated in Figures 1.2 and 1.3

FIGURE 1.2  
 COMPARISON OF PRE AND POST JULY 1, 1982  
 CASH FARES



**FIGURE 1.3**  
**COMPARISON OF PRE AND POST JULY 1, 1982**  
**MONTHLY BUS PASS PRICES**



## 1.4 MEMORANDA OF UNDERSTANDING (MOU)

Prior to participation in the Reduced Fare Program and other related service improvement programs, it was necessary for the District and other municipal operators in Los Angeles County to execute an agreement with the Los Angeles County Transportation Commission. The agreement specifically addressed areas relative to lower fares, service standards and reporting requirements. The following is a description of the District's agreements relative to the Reduced Fare Program.

### 1.4.1 Prop A Start-up Agreement

Subsequent to the validation of Prop A by the California Supreme Court, the policy bodies of the SCRTD and LACTC in May 1982 approved an interim master agreement (Start-up Agreement). The agreement between the two agencies consisted of a brief conceptual and policy-oriented agreement which outlined specific service and financial indicators and constraints under which SCRTD was to implement the Prop A Fare Reduction Program.

Key features of the Start-up Agreement included the following:

- (1) The District would lower its fare structure to designated levels on July 1, 1982.
- (2) The District would provide enhanced service on existing lines to accommodate the increased ridership demand resulting from the lowered fare structure.
- (3) The District would redeploy its services wherever possible so that capacity could be shifted to meet additional demand.
- (4) The District would maintain its productivity as measured by designated standards and not allow conditions to worsen on lines experiencing excessive overcrowding.
- (5) The District would prepare brief statistical reports at regular intervals covering specified performance indicators.
- (6) The Los Angeles County Transportation Commission would reimburse the District for these actions up to a set dollar limit per month, for up to a set limit of vehicle service hours per year.



Based on preliminary discussion with the District regarding the agreement, LACTC assembled a set of major issues and proposed policies regarding implementation of the reduced fare portion of the Prop A program. In the opinion of LACTC, once a set of basic policies was adopted, the detailed agreements with the District and other transit operators would be developed.

It was recommended by LACTC that the Prop A Reduced Fare Program would be best administered through a "budget", compensating the transit operators for both revenue loss, as well as for cost of bus service added to meet demand. This mutually-agreed upon budget would specify levels of dollars, bus-miles and/or bus-hours to be added and monitored via certain basic control factors. It was suggested by LACTC that the formal agreement for implementation of the Prop A Reduced Fare Program take the form of a formal one-year Memorandum of Understanding which would be adopted by LACTC's Commissioners and the District's Board of Directors. The five goals proposed by the LACTC and the District for the Reduced Fare Program included the following:

- (1) Provide sufficient funds from Proposition A to reduce transit fares as indicated in the ordinance;
- (2) Provide sufficient funds to implement bus service needed to accommodate the ridership demands resulting from reduction of the fares;
- (3) Through an adopted set of performance measures, ensure that productivity is maintained as transit service is expanded to meet demand;
- (4) Ensure that service expansion is made so that, after Year 3 (June 30, 1985), service levels could be adjusted to retain high levels of service efficiency; and
- (5) Support funding for capital projects that are temporarily needed as a result of Prop A service expansion or modification and will be of full use to the transit operator after the Fare Reduction Program expires on June 30, 1985.

Since the District would be compensated for the cost of providing additional service, the LACTC established a limit or "vehicle service hour cap" on the number of service hours that the District could operate to meet

demand. Any hours exceeding the cap would have to be absorbed within the District's regular budget.

A decision was made to use the June 1982 service levels of 6.733 million annual service hours as the baseline for determining future Prop A services.

The service hour cap in the initial agreement (FY 1982-83) was set at 6,883,000 annual service hours. This represented an increase of just over 2% over the total hours operated during FY 1981-82. It should be noted that the June 1982 baseline level represented the lowest level of service in three years. The District further agreed to not add service which would result in exceeding the limits in service hours, or reimbursement amounts.

Faced with the potential loss of \$60 million in federal funding, the District had been required to reduce service levels as early as September 1981. Between FY 1980-81 and FY 1981-82, the District's annual service hours had been reduced from 6.813 million to 6.733 million, a 1.2 percent decrease.

#### 1.4.2 Memorandum of Understanding Agreement (MOU)

In February, 1983 the interim Agreement was superceded by the Master Agreement (Memorandum of Understanding or MOU) which was to remain in effect through the end of the mandated Fare Reduction Program, June 30, 1985. However, service amendments to the MOU would be made to increase the vehicle service hour cap to relieve overcrowding.

#### 1.4.3 Vehicle Service Hour Adjustments

Initial estimates of FY 1983-84 service hours required to meet passenger demand was determined by the District to be 2% above the FY 1982-83 ceiling of 6,883,000. Realizing the severity of the District's overcrowding situation, LACTC agreed to raise the 6,883,000 annual service hour limit to 7,020,000. Further studies of the District's overcrowding, however, suggested that an additional 98,000 service hours (above 7,020,000) was

also warranted. In October 1983, another amendment was adopted which raised the FY 1983-84 service cap to 7,118,000 annual service hours.

The FY 1983-84 service constraint of 7,118,000 annual service hours required the District to consider significant reductions in some of its services in the latter part of FY 1983-84 to conform to the service hours limit. The only alternative to service reductions was to renegotiate the MOU limit on vehicle service hours. Negotiations with LACTC resulted in the MOU limit being increased from 7,118,000 annual vehicle service hours to 7,326,500 during FY 1984-85. Figure 1.4 compares the actual vehicle hours for FY 1981-82, the year immediately preceding the interim Agreement, and agreed to annual vehicle service hour caps imposed by the MOU Agreements.

FIGURE 1.4

---

VEHICLE SERVICE HOURS

---

<u>FY</u>	<u>ANNUAL VEHICLE HOURS</u>
1981-82 (Pre-Prop A)	7.276 million hours
	<u>VEHICLE SERVICE HOUR CAP</u>
1982-83 (Start of Prop A)	6.883 million hours
1983-84	7.020 million hours
1983-84 (amended)	7.118 million hours
1984-85	7.326 million hours

---

1.4.4 Third Year Adjustments

In April 1985, the District requested approval from the Commission for an additional \$7.6 million in Fiscal Year 1984-85 Prop A Fare Reduction funds to finance unanticipated higher operating costs incurred during FY 1985.

The \$7.6 million increase was approved by the Commission with the following conditions:

"In preparing the SCRTD Fiscal Year 1986 final operating budget, the SCRTD agrees to develop the budget in such a manner that it does not exceed \$476 million. This condition results in a reduction of \$7.6 million from the SCRTD current budget target of \$484 million. SCRTD agrees that the budget reduction of \$7.6 million will not come from fare increases or reductions in service to the user; but rather, through economies and efficiencies which will not degrade service (e.g., contracting service to lower cost providers, reducing administrative cost, etc.)."

Subsequently, the SCRTD's Board of Directors adopted a FY 1986 budget of

\$484.4 million. In responding to the Commission's \$7.6 million budget reduction condition, the District expressed concern over the extent of cuts already made in the budget and the potential impacts to the bus service requirements from the higher than estimated ridership that would be generated from Prop A local city funded user-side subsidy programs for senior citizens and students. The Commission was also informed that the District's FY 1986 budget could be reduced by up to \$4 million through a number of actions which would not raise fares or reduce service to the user, if the system was not overloaded with Prop A subsidized students and senior citizens. These actions would be independent of whatever steps that would be taken to respond to potential federal operating subsidy reductions.

On July 24, 1985, after considerable discussion between the Agencies, the Commission approved the \$7.6 million allocation for FY 1985, contingent upon four conditions:

- The District would accept a \$4 million budget reduction objective to be accomplished without degradation of service to the user. The disbursement of \$4 million of the Fiscal Year 1986 Proposition A Discretionary Fund would be held by the Commission pending more specific data on the impacts of senior citizen and student fares and other factors influencing costs.
- The District would identify cost reduction options of up to \$3.6 million to be implemented in case of Federal operating subsidy reductions. These reductions would not go into effect unless Federal cuts in fact take place and would be included in, not additional to, the Federal cuts.
- The District and the Commission would conduct joint quarterly meetings to review budgetary performance and constraints. These meetings would consider factors including, but not limited to, the actual degree and location of ridership deflection and the impacts of local buy down programs.
- Five million dollars in excess TDA Capital funds would be reallocated to operating expenditures. This reallocation would be in accordance with the estimated revenues projected in the adopted budget.

## **CHAPTER 2.0**

---

### **PROPOSITION A IMPLEMENTATION**

## 2.0 PROPOSITION A IMPLEMENTATION

### 2.1 IMPLEMENTATION PLAN

Pursuant to the validation of Prop A, the District's Board of Directors authorized the General Manager to take whatever actions necessary to implement the Prop A program. Specifically, the General Manager was authorized to accomplish the following:

- (1) Enhance service on existing lines to accommodate ridership increases;
- (2) Develop the necessary implementation and monitoring processes and policies needed to institute Prop A services; and,
- (3) Take steps necessary to ensure that the District could accommodate the expected surge in ridership.

#### 2.1.1 Organizational Structure

During the pre-Prop A planning period, an organizational structure was created to deal with all Prop A related activities. An Ad Hoc Executive Staff Committee was created and charged with the responsibility of deciding where initial bus additions were to be placed. This committee was also given responsibility for assessing existing conditions and making recommendations to the General Manager on how best to handle the anticipated increase in ridership. This committee was in operation for about one month (during July and August 1982) and initially met on a daily basis to determine Prop A response requirements.

Responsibilities of the Ad Hoc Executive Committee were transferred to the District's Interdepartmental Task Force to include a review process for all Prop A service proposals. Under Prop A, this technical group received recommendations for service additions from the Schedule Department and determined their feasibility in terms of available manpower and equipment. Meetings were held weekly to evaluate service proposals. Recommendations on these proposals were forwarded to the General Manager for authorization prior to implementation.

### 2.1.2 Departmental Responsibilities

It was determined that certain tasks would require considerable lead-time for completion. These included the hiring and training of mechanics and bus drivers and the preparation of public information materials. As illustrated in Figure 2.1 each department was made responsible for the completion of specific tasks.



FIGURE 2.1

PRE-PROP A DEPARTMENTAL RESPONSIBILITIES

<u>DEPARTMENT</u>	<u>RESPONSIBILITIES</u>
Community Relations	<ul style="list-style-type: none"> <li>● Inform local jurisdictions of the Reduced Fare Program and the transit options available under Prop A.</li> </ul>
Customer Relations	<ul style="list-style-type: none"> <li>● Determine staffing requirements.</li> <li>● Train personnel.</li> <li>● Inform public of lower fare program.</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>● Inventory reserve fleet to determine condition of buses.</li> <li>● Prepare buses for service.</li> <li>● Determine staffing requirements.</li> <li>● Assign vehicles to divisions.</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>● Inform pass sales outlets of lower fares; supply outlets with new ticket/pass stock.</li> <li>● Inform public of lower fare program and other topics related to Prop A.</li> </ul>
Personnel	<ul style="list-style-type: none"> <li>● Develop and maintain eligibility list for operators, mechanics and other support personnel.</li> <li>● Hire authorized personnel.</li> </ul>
Planning	<ul style="list-style-type: none"> <li>● Prepare and coordinate action plan for Prop A services.</li> <li>● Develop policies and procedures for Prop A.</li> <li>● Develop action plan for the Local Return (25%) portion of Prop A.</li> </ul>

FIGURE 2.1 (Cont'd)

PRE-PROP A DEPARTMENTAL RESPONSIBILITIES

<u>DEPARTMENT</u>	<u>RESPONSIBILITIES</u>
Planning (Cont'd)	<ul style="list-style-type: none"> <li>● Estimate systemwide impact to ridership demand from Prop A.</li> </ul>
Schedules	<ul style="list-style-type: none"> <li>● Develop Pre-Prop A baseline data for services as of June 20, 1982.</li> <li>● Prepare systemwide estimates of ridership impact from Prop A.</li> <li>● Develop process to quickly evaluate overload request.</li> <li>● Develop process to monitor District services after the July 1 start-up.</li> <li>● Specify manpower and equipment requirements.</li> </ul>
Transit Police	<ul style="list-style-type: none"> <li>● Develop necessary security programs; staff up as necessary.</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>● Prepare changes to tariff.</li> <li>● Inform divisions/operators of the fare changes.</li> <li>● Train new operators, as needed.</li> </ul>

### 2.1.3 Ridership Projections

Initial projections of the anticipated demand for transit due to the passage of Prop A were conducted in late 1980. The study concluded that, in the first year, regular ridership would increase approximately 11 percent with an additional 4 percent from Prop A local return city-subsidized services. An additional study was conducted in 1982, prior to the July 1 implementation date to update the earlier findings. Figure 2.2 details the estimated ridership projections for the first six months of the program.

FIGURE 2.2

---

ESTIMATED PROP A RIDERSHIP PROJECTIONS  
First Six Months

---

	<u>Cumulative Boardings (Millions)</u>	<u>Average Weekday Boardings (Millions)</u>
Without Prop A	190.6	1.25
With Prop A	<u>214.5</u>	<u>1.40</u>
Change	+23.9	+0.15
Percent Change	+12.5%	+12.0%

SOURCE: Planning Department

---

The estimate of a 12.5 percent increase in ridership reinforced the earlier projection of approximately 11 percent. It was also estimated that an increase on the order of 13-14 percent could be realized during the first twelve months.

Ridership projections for the entire three year period will be discussed in Chapter 3.0.

### 2.1.4 Equipment/Service Facilities

Prior to Prop A, the District was required to deploy, on a daily basis, over 1900 peak hour buses. In order to accommodate additional Prop A ridership, it was necessary to activate buses from the District's reserve fleet. It was determined that approximately 240 reserve fleet buses could be made available on an as-needed basis.

It was anticipated that the deployment of these buses would be on a systemwide basis. Therefore, it would be necessary to provide additional maintenance and storage space at each operating division. In cases where divisions were already at capacity, buses were reassigned to alternate operating divisions.

#### 2.1.5 Manpower

In order to accommodate increased service demands, it would also be necessary to hire additional support personnel. The existing hiring program for mechanics, operators and service attendants was accelerated to ensure that personnel would be available to accommodate increased service requirements.

Additional personnel would also be required for transit security, road supervision and public information.

## 2.2 DATA COLLECTION

Several methods were used to identify and assess service overloads. They were:

**Riding Checks** - Checkers were assigned to record individual line patronage levels from open to close of service. These checks furnished the most detailed and complete information on individual lines and were considered to be the baseline data for District services.

**Point Checks** - Patronage and service data were obtained by checkers located at or near the peak-load point of a line. Passenger data and arrival and departure times were recorded. By repeating the checks over several days, between-day variances were determined. This procedure was determined to be the most efficient and effective way to quickly spot overloaded services.

In addition to these checks, reports were received from District Road Supervisors regarding passenger overloads or pass-up conditions. These reports were generally isolated incidents which occurred during various midday, nights or weekend periods. Follow-up checks were made to determine if these conditions warranted additional service. The District also relied on input from the public and bus operators. All reports were usually followed by point checks, and service was augmented as necessary.

District staff was directed to analyze data on patronage and service levels to identify potential overload conditions. This analysis resulted in a decision to track peak-point service and patronage levels on 72 lines. These lines were identified as operating at or near capacity during certain time periods. The selected lines represented 80% of the District's service and provided a spectrum of service types. This procedure also allowed the District to establish a baseline for responding to the anticipated increase in ridership.

Since indications were that on a typical day patronage levels varied on individual lines as much as 10 percent, it was also necessary for the District to monitor service periodically on a systemwide basis. Where overcrowding was indicated, lines were rechecked to assess the regularity of the occurrence.

Although line conditions were monitored in several ways, the primary factor in identifying overload conditions was information gathered from point checks. Between July 1 and November 1, nearly 1,000 point checks were conducted. These checks afforded the District the opportunity to quickly identify and implement measures to mitigate overcrowding.

### 2.3 PASSENGER OVERLOAD MONITORING PROGRAM

The District's major concern regarding the impacts of the Reduced Fare Program was that patronage demand would exceed capacity. It was virtually impossible to predict the size and location of expected passenger overloads. Therefore, it was necessary for the District to develop plans

that would allow overload problems to be quickly identified and corrected.

Internal guidelines were developed for responding to overload conditions. These guidelines were further designed to ensure that the District stayed within the constraints of the MOU Agreement. Data showing that any of the following five standards were being exceeded was deemed sufficient justification to recommend additional service.

- A 140% loading standard was exceeded on four consecutive trips each day.
- Pass-ups caused by crowding were reported at the same location or along the same route segment for at least three consecutive days (or on weekends); pass-ups could not be eliminated through schedule adjustments.
- The average maximum load for three-hour peak period exceeded 55 passengers. The maximum load is the highest passenger load occurring on a single trip.
- A 100% loading standard was exceeded on local service during non-peak periods and on weekends. Three consecutive trips had to exceed standard each day.
- A 100% loading standard was exceeded on express lines for three consecutive trips each day.

In addition to these standards, the District instituted the following internal policies:

- Authorized service enhancements to existing lines on a temporary basis beginning the Sunday after the authorization date and continuing until made permanent or cancelled.
- Service enhancements were authorized for implementation by either the General Manager or his designee and based upon recommendations by the District's Interdepartmental Task Force.

#### 2.4 PRODUCTIVITY MEASURES

During the term of the Master Agreement, the District would be required to maintain certain service standards relating to productivity and the allocation of service. Productivity would be measured by:

1. Passengers per hour,

2. Passengers per bus mile, and passengers per peak bus,
3. Unlinked trips/vehicle service hour (systemwide and line-by-line), and
4. Driver pay hours/vehicle service hours (systemwide and by division).

New service could not be operated for more than 120 days which would cause any of these measures to worsen from existing levels. Chapter 4.0 discusses the various productivity measures in more detail.

## 2.5 PROP A SERVICE

Buses were placed in service initially where the Schedule Department projected increased demand and from field reports during the first weeks of the Reduced Fare Program. By October, based upon demand, overloading had required the addition of 41 buses. By November there were 38 additional buses in service, bringing the total since the inception of the program to 79. Figure 2.3 summarizes the total number of buses added between July 1982 and November 1982. Bus additions on a line-by-line basis are shown in Exhibit 1.

FIGURE 2.3

---

PROP A BUS ADDITIONS  
(July 1982 through November 1982)

---

NUMBER OF BUSES ADDED, BY TIME PERIOD

<u>DAILY</u>			<u>SATURDAY</u>			<u>SUNDAY</u>		
<u>AM</u>	<u>BASE</u>	<u>PM</u>	<u>AM</u>	<u>BASE</u>	<u>PM</u>	<u>AM</u>	<u>BASE</u>	<u>PM</u>
79	5	70	9	12	14	0	1	1

SOURCE: Schedule Department

---

### 2.5.1 Schedule Adjustments

Buses were deployed to meet demand by inserting extra buses into the

schedule of critical lines rather than revising the entire operating schedule. If demand warranted the continuance of specific trips, entire operating schedules were revised to include the service additions. Throughout the Reduced Fare Program extra buses would be placed in service on an as-needed basis.

Most buses were added on the basis of the short period criteria (i.e. overloading on three successive trips). To strengthen the justification of service additions, passenger volumes for three-hour peak periods were also determined. This enabled staff to assess ridership levels on other trips within the three-hour time period. Peak period trends are shown in Exhibit 2.

#### 2.5.2 Reallocation Of Service

Data were gathered on the Prop A services and ridership from the first day of implementation. During August and September 1981, staff began making initial decisions on reallocating services to maximize the District's efficiency and productivity.

Two types of reallocation were considered during this period

- Reallocation of service from an underutilized line in one area or sector to an overutilized line in another area or sector.
- Reallocation of service on lines operating in the same area or sector.

#### 2.5.3 Interlining

Another method used to accommodate increased demand was through the interlining of equipment. This technique schedules buses to operate extended hours on more than one line. Use of this strategy enabled the District to reduce equipment requirements.

#### 2.5.4 Shortlining

Shortlining of buses also reduced equipment requirements. Since some lines



were experiencing overcrowding on certain route segments, selected trips were assigned to operate only the portion of the route experiencing the overcrowded conditions.

For example, Line 14 provided local service between Downtown Los Angeles, West Hollywood and Beverly Hills. Buses were scheduled to provide service between downtown and three separate shortline terminals along the route to relieve overcrowding during peak periods. Shortline trips were also scheduled during the midday and evenings consistent with service demands.

#### 2.5.5 Day-To-Day Adjustments

Consistent with the goals of the Fare Reduction Program, the General Manager set a target of 40 additional buses to be deployed within the first several weeks. Initially, 12-16 extra buses were authorized by the General Manager for service during the AM/PM peak periods. Spare buses were also authorized for insertion on a day-to-day basis where unanticipated demand warranted quick, temporary service augmentation. These latter additions were usually in response to reports from field personnel regarding overloads on consecutive trips.

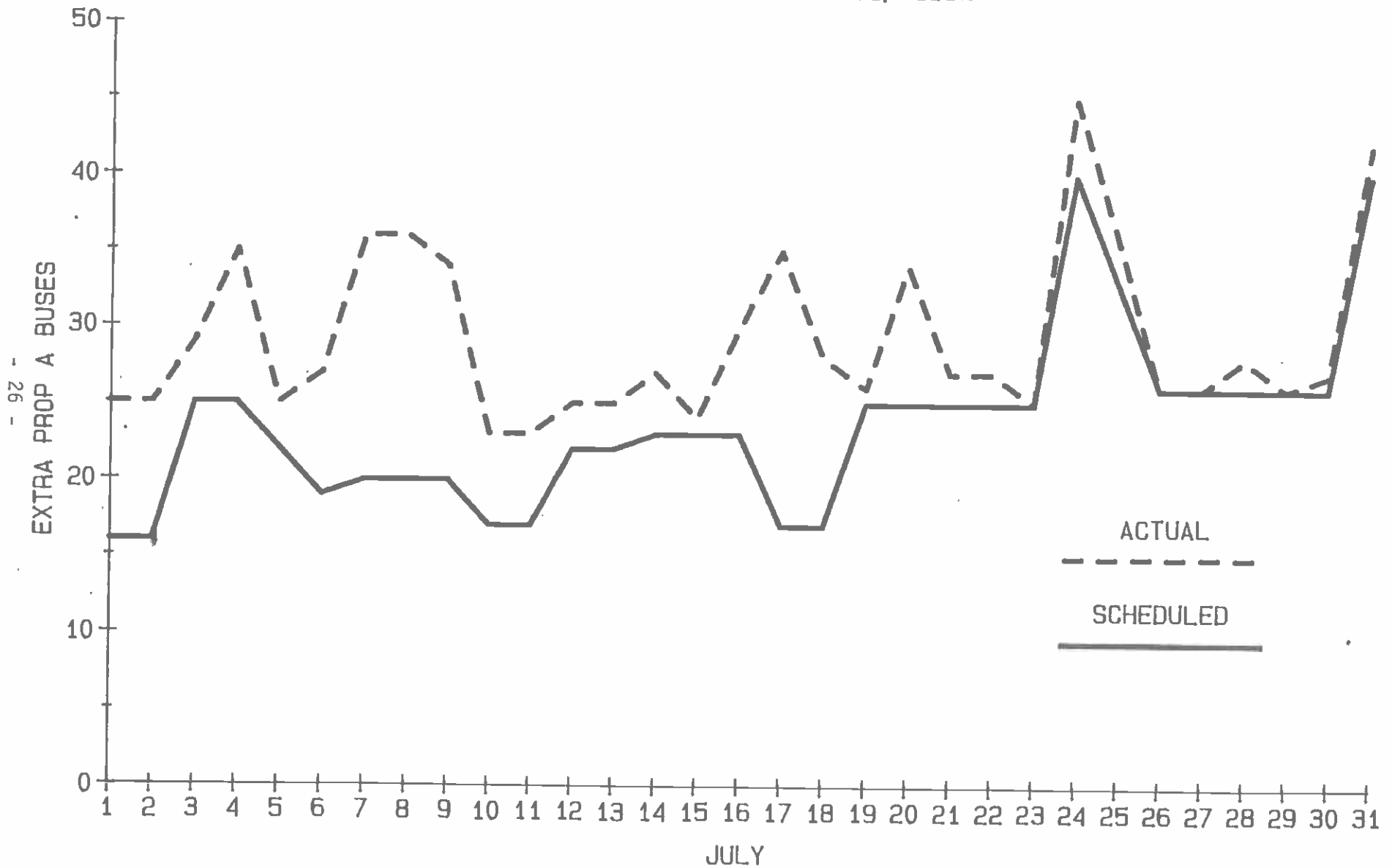
It was expected that the initial deployment of buses would be sufficient to bring the system to a reasonably stable loading condition, which would then be further adjusted to reduce any remaining overloads.

Figures 2.4 and 2.5 compare extra buses scheduled to actual buses used and the day-to-day adjustments which were necessary during the first month of the Reduced Fare Program. As indicated, additional buses were deployed each day except for three days near the end of the month. Service adjustments for the three-year period are discussed in more detail in Chapter 3.0.

FIGURE 2.4

# FIRST MONTH: BUSES ADDED

JULY 1, 1982 THROUGH JULY 31, 1982



SOURCE: SCRTO SCHEDULE DEPARTMENT

SCRTO PLANNING DEPARTMENT  
DECEMBER 1985

FIGURE 2.5

PROP A BUS REQUIREMENTS AND  
 DAY-TO-DAY ADJUSTMENTS  
 (July 1, 1982 through July 31, 1982)  
 (First Month)

DAY	DATE	SCHEDULED EXTRA PEAK HOUR BUSES		EXTRA BUSES DISPATCHED		TOTAL EXTRA BUSES USED	
		AM	PM	AM	PM	AM	PM
Thurs	7/1	12	16	13	2	25	18
Fri	7/2	12	16	13	9	25	25
Sat	7/3	17	25	1	4	18	29
Sun	7/4	17	25	0	10	17	35
Mon	7/5	14	22	4	3	18	25
Tue	7/6	17	19	10	2	27	21
Wed	7/7	19	20	17	8	36	28
Thurs	7/8	18	20	18	4	36	24
Fri	7/9	18	20	16	4	34	24
Sat	7/10	16	17	6	6	22	23
Sun	7/11	16	17	2	6	18	23
Mon	7/12	20	22	5	2	25	24
Tue	7/13	20	22	3	3	23	25
Wed	7/14	22	23	5	3	27	26
Thurs	7/15	23	23	a)0	a)1	23	24
Fri	7/16	22	23	5	7	27	30
Sat	7/17	16	17	13	18	29	35
Sun	7/18	16	17	2	11	18	28
Mon	7/19	25	23	1	1	26	24
Tues	7/20	25	23	1	11	26	34
Wed	7/21	25	23	1	4	26	27
Thurs	7/22	25	23	2	4	27	27
Fri	7/23	25	23	0	1	25	24
Sat	7/24	40	40	2	5	42	45
Sun	7/25	33	33	2	3	35	36
Mon	7/26	26	26	0	0	26	26
Tue	7/27	26	26	0	0	26	26
Wed	7/28	26	26	2	2	28	28
Thurs	7/29	26	26	0	0	26	26
Fri	7/30	26	26	0	1	26	27
Sat	7/31	40	40	2	2	42	42

a) No Operators - Div. 1-5-8

SOURCE: Schedule Department

### 2.5.6 Line Regulators

Passenger loads were controlled on selected heavily travelled lines by District field personnel. Line regulators were assigned to specific street-side locations, and given the responsibility of evenly distributing passenger loads and regulating schedules to meet demand on District buses. In some cases, buses with capacity were held briefly to allow additional passengers to board.

### 2.6 YEAR ONE SERVICE

At the beginning of the Fare Reduction Program, the District responded to anticipated overcrowding by deploying service on 12 lines that had already been identified as experiencing overcrowding. On a daily basis extra buses were dispatched in response to unanticipated demand.

As ridership growth continued through FY 1982-83, additional buses were scheduled to relieve overcrowding. By the end of the first year, over 140 buses had been added to the scheduled fleet. Frequent monitoring of passenger loadings, combined with the use of line regulators, enabled the District to minimize the need to dispatch buses based on isolated reports of overcrowding.

The first year was primarily dedicated to augmenting service to relieve overcrowding. Measures were also being established to fine-tune schedules and reallocate service to conform to the cap of service hours specified in the MOU.

### 2.7 YEAR TWO SERVICE

In order to conform to the vehicle service hour cap imposed in the (FY 1983-84) MOU, it was necessary for the District to initiate programs to reduce vehicle service hours. The goal of the program was to provide the maximum amount of service without exceeding the vehicle service hour cap. The District accomplished this goal through schedule adjustments and the redeployment of buses from low productivity lines.

One of several service reduction packages was implemented in February 1984. The package included the cancellation of one line, night service and headway adjustments. As illustrated in Figure 2.6, the service reduction package included adjustments on eleven lines. For example: Service on Route 11 was eliminated after 7:00 P.M. This change resulted in an 11.0 service hour reduction. Headways were adjusted and a shortline operation was established on Line 105 which also resulted in the removal of two buses in the peak and base schedules and a 22.7 hour service reduction. These same techniques would be used in varying degrees throughout the Prop A period to maximize resources, but most importantly, comply with the conditions set forth in the MOU.

FIGURE 2.6

VEHICLE SERVICE HOUR REDUCTION PACKAGE  
(FEBRUARY, 1984)

LINE	DAYS* DX SA SU	DESCRIPTION OF PROPOSED CHANGES AND METHOD OF IMPLEMENTATION	ESTIMATED CHANGES				
			BUSES			VEHICLE	REVENUE
			AM	BASE	PM	HOURS	HOURS
10/11	DX	Route 11 service eliminated after 7:00 P.M.			-1	-12.0	-11.0
	SA	Same as Daily				-2.3	-2.0
16	DX	Headway changed from 7.5 to 8 minutes, Owl Service between Sixth and Central and Fourth and Main eliminated.	-1	-1		-14.4	-13.4
	SA	Same as daily, except no peak hour service changes.	-1	-1	-1	-14.4	-13.8
	SU	Headway changed from 10 to 11 minutes and night service between Sixth and Central, and Fourth and Main eliminated.	-1	-1	-1	-17.6	-16.9
38	DX	Peak hour service rescheduled midday headway changed from 12 to 13 minutes and more buses shortlined at Maple Lot.	-1			-11.0	-10.2
45	DX	Peak hour service reschedule, midday hadways changed from 7.5 to 9 minutes.	-2			-6.9	-6.4
68	DX	Peak hour trips rescheduled and schedule rtied.	-1		-1	-4.5	-4.2
	SA	Low productivity trips eliminated and schedule retied.				-1.7	-1.5
	SU	Same as Saturday				-2.1	-1.9
105	SU	Headway changed from 20 minutes end-to-end to 20/40 minutes. Shortline at King Boulevard and Crenshaw.	-2	-2	-2	-23.9	-22.7

FIGURE 2.6 (Cont'd)

VEHICLE SERVICE HOUR REDUCTION PACKAGE  
(FEBRUARY, 1984)

LINE	DAYS* DX SA SU	DESCRIPTION OF PROPOSED CHANGES AND METHOD OF IMPLEMENTATION	ESTIMATED CHANGES				
			BUSES			VEHICLE HOURS	REVENUE HOURS
			AM	BASE	PM		
107	DX	Headway changed from 15/20/15 to 20/22/20 minutes.	-2		-2	-21.0	-19.5
	SA	Headway changed from 30 to 40 minutes.	-1	-1	-1	-17.0	-15.9
	SU	Headway changed from 30 to 40 minutes.					
217	SA	Rescheduled and shortlined at Fairfax and Sunset. Headways changed from 8 to 16 minutes between Sunset and Fairfax, and Hollywood and Franklin.	-1	-1	-1	-12.3	-11.8
	SU	Same as Saturday.	-1	-1	-1	-10.4	-9.9
220	SA	Shuttle service between Marina del Rey and West Hollywood cancelled. 60-minute headway end-to-end.	-2	-2	-2	-33.7	-33.2
608	DX	Service cancelled due to low productivity	-2	-2	-2	-38.8	-37.2
	SA	Same as Daily	-2	-2	-2	-38.8	-37.2
	SU	Same as Daily	-2	-2	-2	-38.8	-37.2
609	DX	Cancel one trip.			-1	-7.8	-7.4
	SA	Same as Daily.			-1	-7.8	-7.4
	SU	Same as Daily.			-1	-7.8	-7.4

\*-DAYS - DX (Daily)  
SA (Saturday)  
SU (Sunday)

SOURCE: Schedule Department

## 2.8 YEAR THREE SERVICE

The District's efforts during year three of the Reduced Fare Program centered around service reductions. In spite of the fact that the District was authorized to operate 7.3 million service hours, a reduction in service was necessary to bring service in line with the level of service that could be provided without Prop A operating Subsidies. Service hours for year three would remain at the FY 1983-84 level of 7.1 million service hours. Even though demand warranted additional service, the District would be forced to remove over 150 buses from service during the final year of the program.



## **CHAPTER 3.0**

---

### **PROPOSITION A IMPACTS**

### 3.0 PROPOSITION A IMPACTS

This chapter discusses the impacts of the Proposition A Reduced Fare Program on ridership and the District's bus system.

#### 3.1 IMPACT ON PATRONAGE GROWTH

Implementation of the Reduced Fare Program resulted in unprecedented growth in the use of the District's bus system. By the end of the three year period, annual boardings had exceeded 493 million, a 40 percent increase over the level of patronage achieved during FY 1981-82, the year immediately preceding the Reduced Fare Program (Figure 3.1).

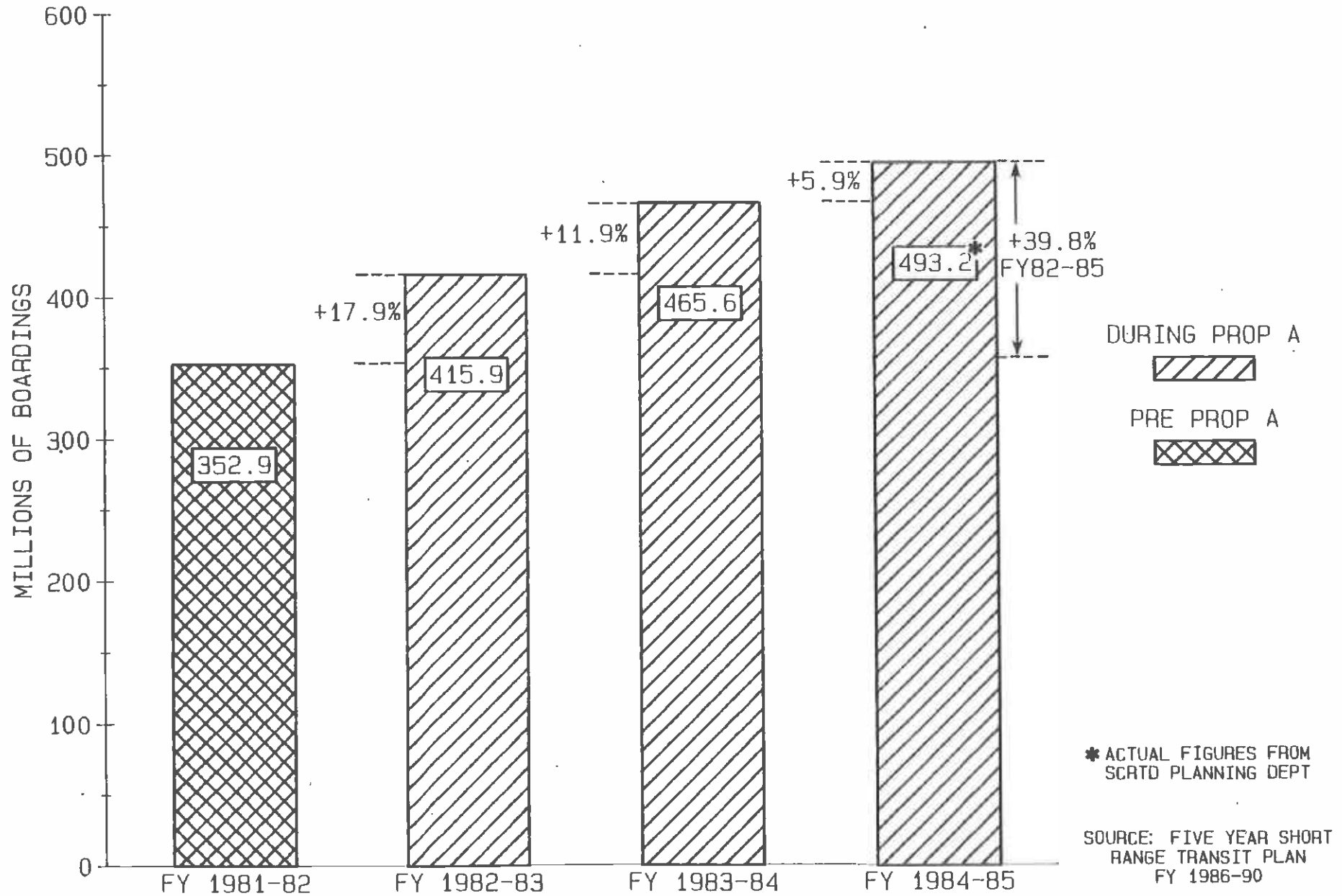
During the three year period, average weekday boardings increased by 46 percent, from 1.1 million to over 1.6 million. Saturday boardings increased from 660,000 to over 1.0 million, a 52 percent increase. Sunday boardings increased by 60 percent, from 435,000 to approximately 700,000. Daily, Saturday and Sunday boarding trends are illustrated in Figures 3.2 through 3.4. The highest boarding day total for each month is also shown for the final year of the program.

##### 3.1.1 Impact on Total System

Rapid ridership growth did, however, create some problems for the District. While subsidies were available as a result of the Proposition A Fare Reduction Program, the District could not always respond to higher patronage demand with commensurate increases in service levels. Constraints imposed by the vehicle service hour cap and equipment availability were major factors in the District's ability to readily respond to demand. The fact that pass-ups and overcrowding persisted throughout the three year period is a clear indication that more service was needed. This fact can be further verified by the fact that the District would be required to renegotiate with the LACTC annually to increase the vehicle service hour cap because of overcrowding and uncertainties surrounding how much of an impact the demand would have on the system.

Equipment reliability also played a major role in the District's ability to provide expanded service. At one point, a portion of the District's fleet was out-of-service because of structural damage. In order to mitigate impacts on the bus system, the District arranged for an early delivery of buses that were on order prior to Prop A implementation. Additional steps were taken to fine-tune all schedules and temporarily reallocate service to meet demand.

FIGURE 3.1  
 TOTAL ANNUAL RIDERSHIP  
 FY 1981-82 THROUGH FY 1984-85



**FIGURE 3.2**  
**COMPARISON OF AVERAGE WEEKDAY BOARDINGS**  
**BY MONTH**

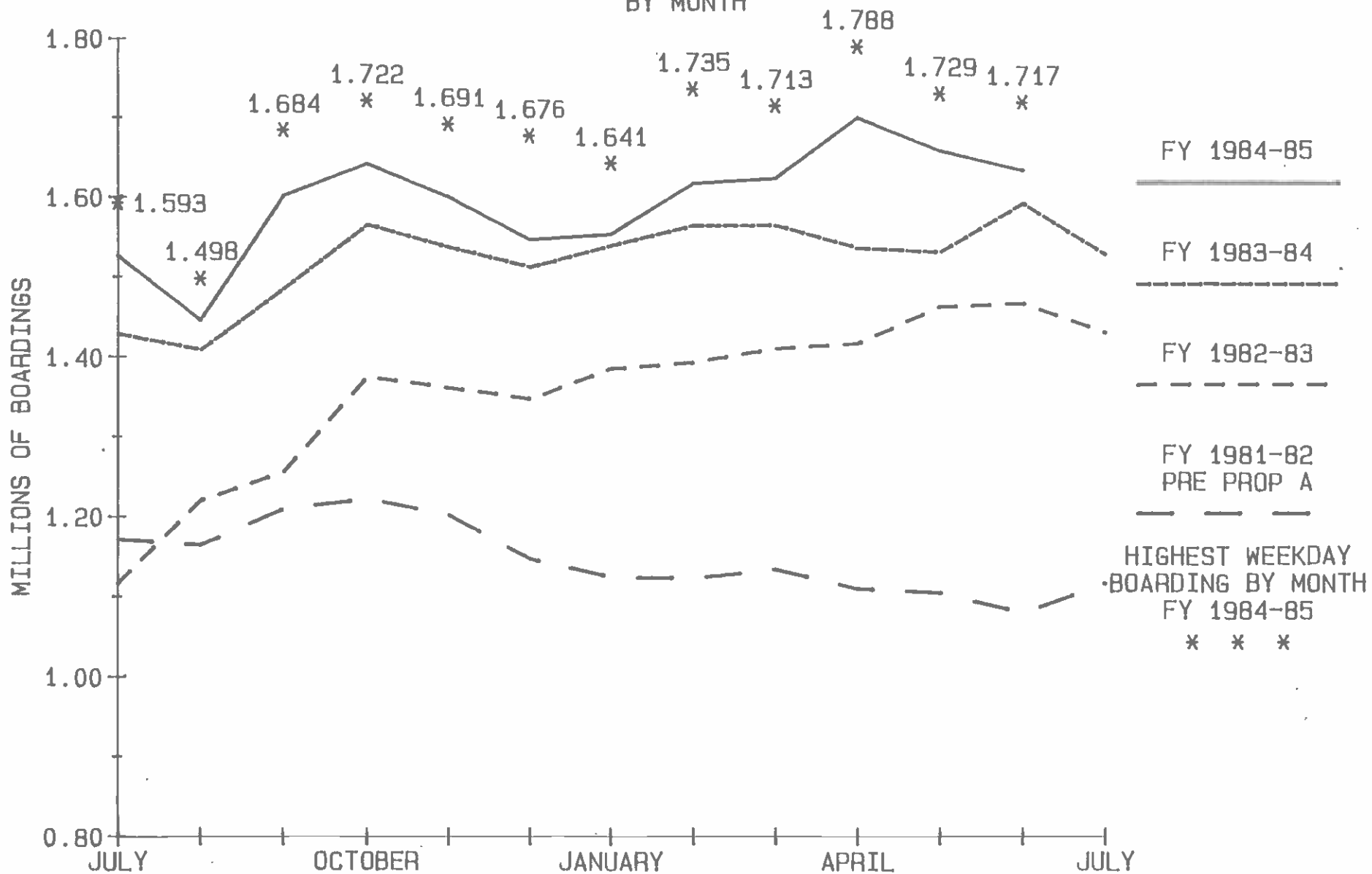
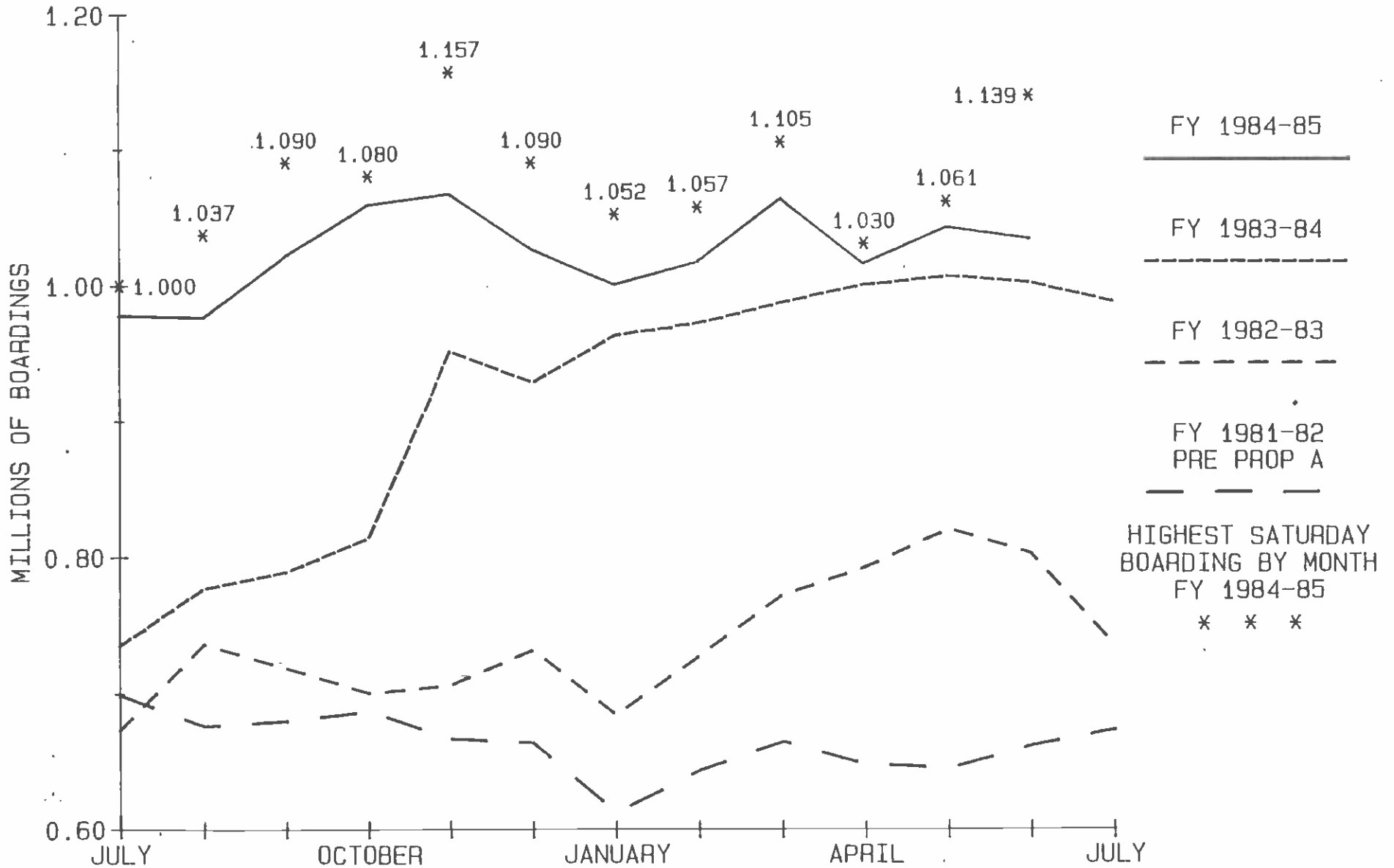
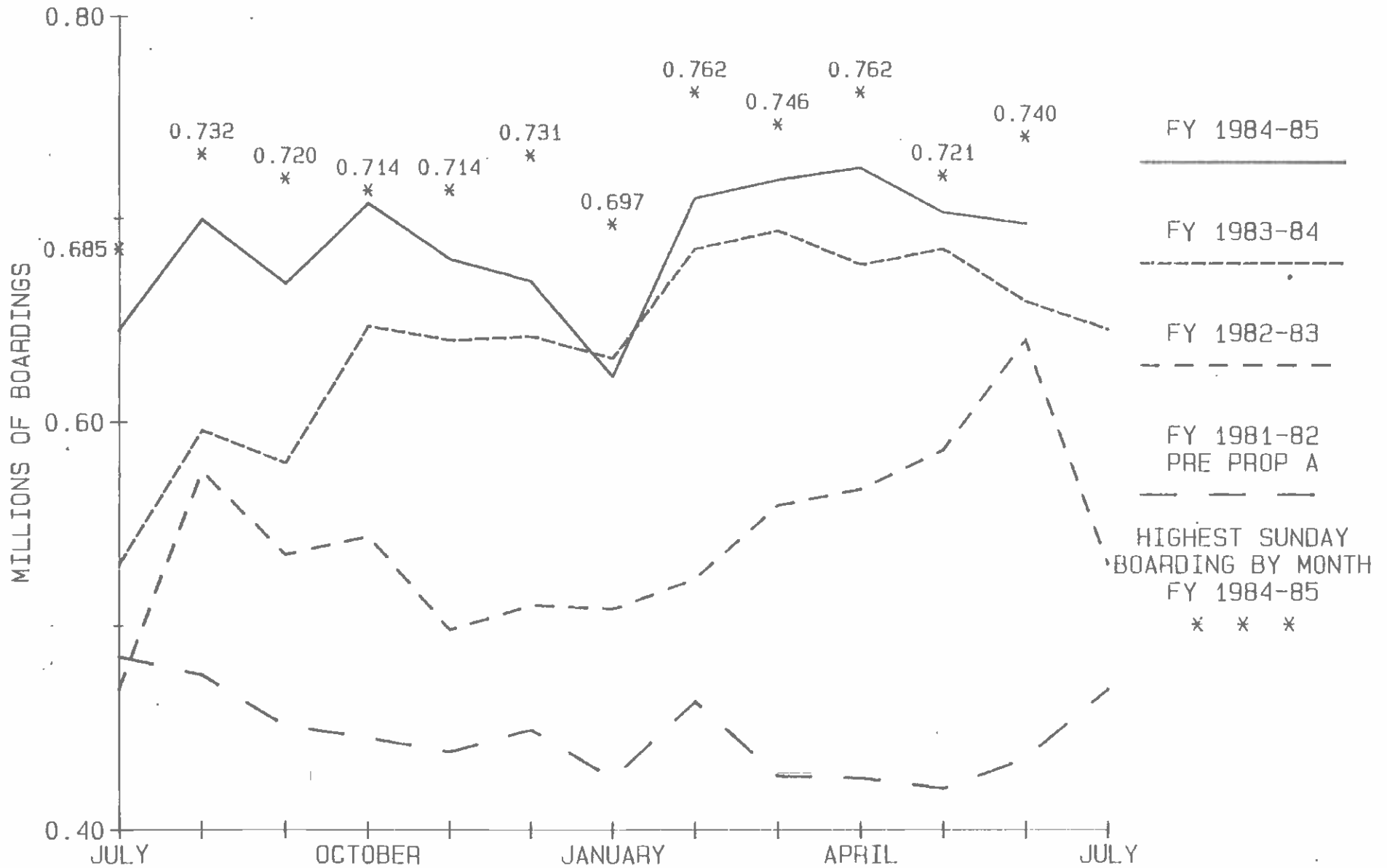


FIGURE 3.3

# COMPARISON OF AVERAGE SATURDAY BOARDINGS BY MONTH



**FIGURE 3.4**  
**COMPARISON OF AVERAGE SUNDAY BOARDINGS**  
**BY MONTH**



### 3.1.2 Patronage Projections

Patronage projections were developed to determine the impacts of the reduced fares on the bus system. These projections were designed to provide estimates of total daily boardings. Adjustments were made to reflect seasonal variations in ridership. Without these projections, the District could not accurately predict potential impacts to the system.

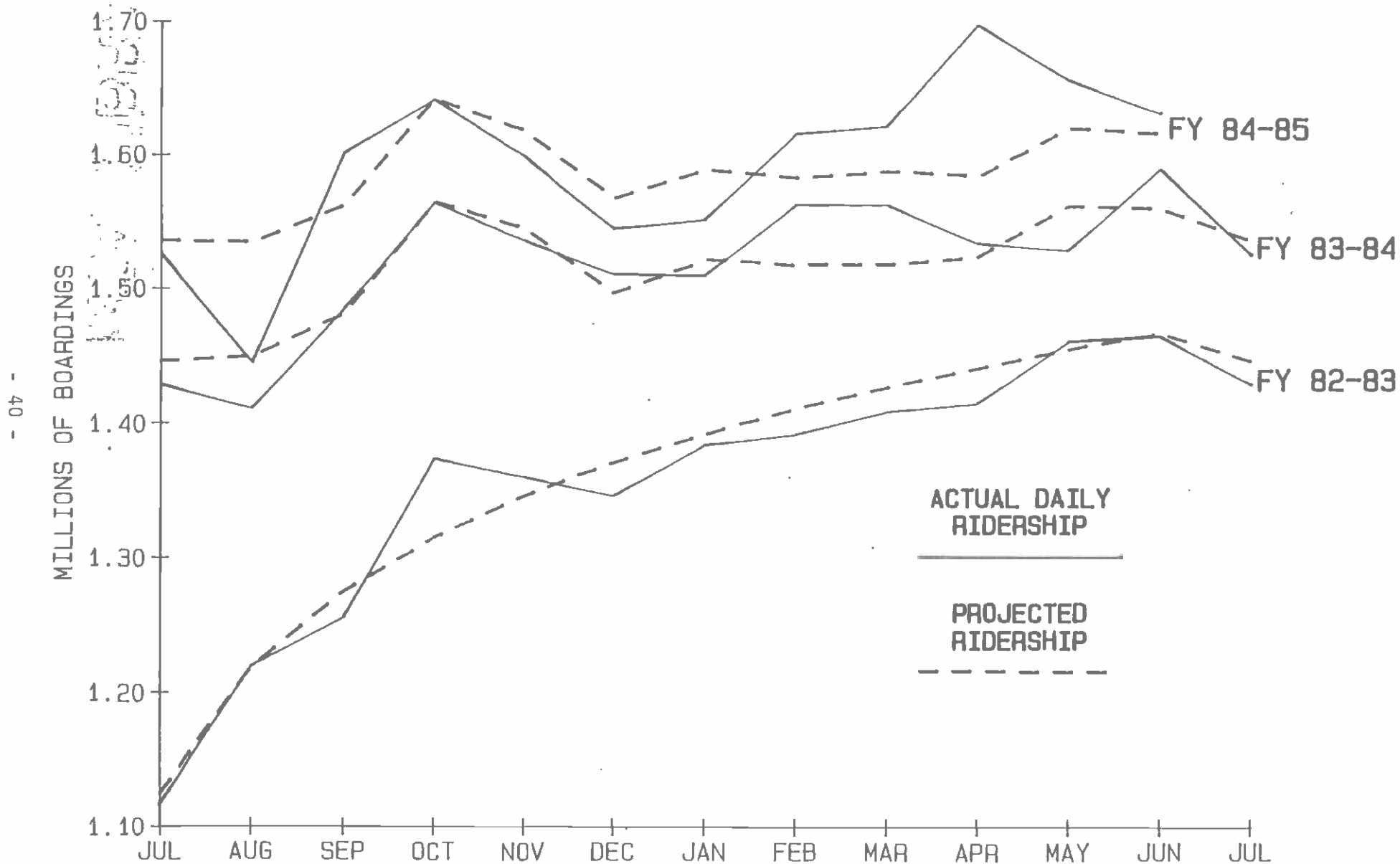
A comparison of actual ridership versus projected ridership is shown in Figure 3.5. Although there was a slight variation over time between actual and projected ridership, total ridership varied less than one percent. Actual monthly variations are shown in Exhibit 3.



FIGURE 3.5

# COMPARISON OF ACTUAL VS PROJECTED DAILY RIDERSHIP

FY 1982-83 THROUGH FY 1984-85



SOURCE: SCRTD PLANNING DEPARTMENT

### 3.1.3 Impact Of Ridership On A Sector Basis

In Los Angeles County, the District's service area is divided into sixteen planning sectors (Figure 3.6). The sectors have been designed to reflect an even distribution of the population within the County. Service allocation within each sector is based on ridership and population density.

In order to evaluate sector ridership, ride checks were used to determine average daily boardings within each sector. The data were further refined to include boardings by type of rider. Analysis indicated that transit usage increased in all sectors after the implementation of the Reduced Fare Program.

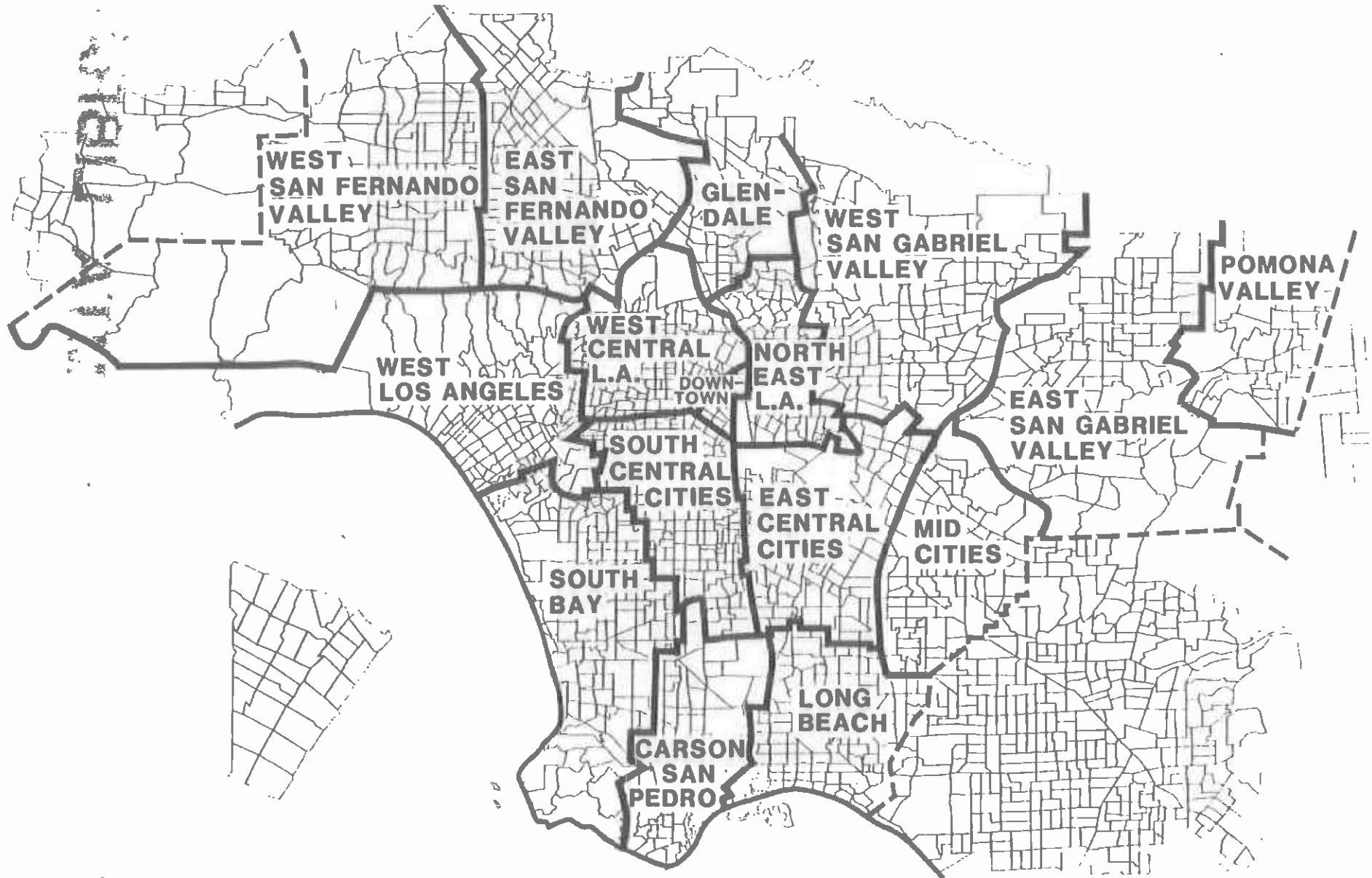
Average daily boardings increased over 120 percent in the East Central Cities Sector. Prior to Prop A, approximately 32,000 boardings occurred on a daily basis. By the end of the third year, boardings had increased to over 70,000.

Boardings in the Long Beach and Pomona Valley Sectors increased about 94 percent, from 5,000 boardings to about 10,000. Increases for the other sectors ranged between 18 and 58 percent.

Over 62 percent of the total boardings in the year immediately preceding the Reduced Fare Program, occurred in the South Central, West Central and Downtown Los Angeles Sectors. Although boardings increased in all sixteen sectors, these three sectors would continue to account for the majority of the system boardings over the three year period.

A comparison of the FY 1981-82 and FY 1984-85 average daily boardings within each of the sixteen sectors is shown in Figure 3.7.

FIGURE 3.6  
RTD PLANNING SECTORS



-42-

PLANNING DEPARTMENT

KILOMETERS  
 0 5.0 10.0

MILES  
 0 5.0 10.0

NORTH

FIGURE 3.7

COMPARISON OF  
AVERAGE DAILY BOARDINGS BY SECTOR FOR  
FY 1982 AND FY 1985

<u>SECTOR</u>	<u>PRE-PROP A FY 1981-82</u>	<u>FINAL YEAR OF PROP A FY 1984-85</u>	<u>PERCENT CHANGE</u>
East Central Cities	32,117	70,880	+120.7%
Pomona Valley	5,183	10,086	+94.6%
Long Beach	5,033	9,778	+94.3%
East San Gabriel Valley	12,251	19,317	+57.7%
West San Gabriel Valley	52,273	89,597	+56.4%
Carson - San Pedro	9,420	14,253	+51.3%
South Central Los Angeles	169,745	249,304	+46.9%
South Bay	45,170	65,368	+44.7%
East San Fernando Valley	62,835	90,578	+44.2%
Mid-Cities	6,193	8,684	+40.2%
Northeast Los Angeles	82,975	115,282	+38.9%
West San Fernando Valley	32,129	44,578	+38.7%
Glendale	17,213	23,487	+36.4%
West Central Los Angeles	315,267	400,000	+26.9%
West Los Angeles	54,002	67,952	+25.8%
Downtown Los Angeles	206,272	244,548	+18.6%

SOURCE: Sector Boarding Statistics (Area Accounts)

.1 Sector Ridership Trends

In theory, regular fare paying passengers are predominately making work trips, whereas senior/disabled and student passengers are more inclined to make a greater number of discretionary transit trips. It could, therefore, be assumed that the greatest increase in boardings would occur in the senior/disabled and student categories because of the available time to use public transit and the significantly lower fares. However, analysis of the sector boardings by fare type identified a slightly different trend in

regard to senior/disabled boardings within the various sectors.

## .2 Regular Boardings

The East Central Cities Sector experienced the highest increase in regular boardings. Average daily boarding increased from 32,000 to 70,000, a 122 percent increase. Regular boarding increases in the remaining fifteen sectors ranged between 15 and 94 percent.

## .3 Student Boardings

Student boardings increased over 375 percent in the Pomona Valley. All other sectors had increases in excess of 100 percent except for boardings in the Downtown Los Angeles Sector where the increase was about 73 percent.

## .4 Senior/Disabled Boardings

Combined senior and disabled boardings declined as much as 10 percent in nine of the sixteen sectors. Boarding increases of up to 9 percent occurred in the remaining seven sectors. These facts indicate that the fare reduction had very little influence on encouraging senior and disabled transit usage within most of the sectors.

Boarding variations for all sixteen sectors are shown in Exhibit 4. An illustration of the boarding variations by fare type within the East Central Cities Sector is shown in Figure 3.8. As indicated, there was a 122 percent increase in regular boarding during the reduced fare period. Student boardings increased over 300 percent. However, senior/disabled boardings declined more than 5 percent.

Within the East Central Cities Sector, seven of the thirteen cities provided various types of paratransit services for the elderly and disabled (Figure 3.9). These services were funded on an on-going basis through the Prop A Local Return Program. Prop A funds could be used to establish new services or expand existing services. Most of the services operating within the sector were established prior to Prop A.

FIGURE 3.8

# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

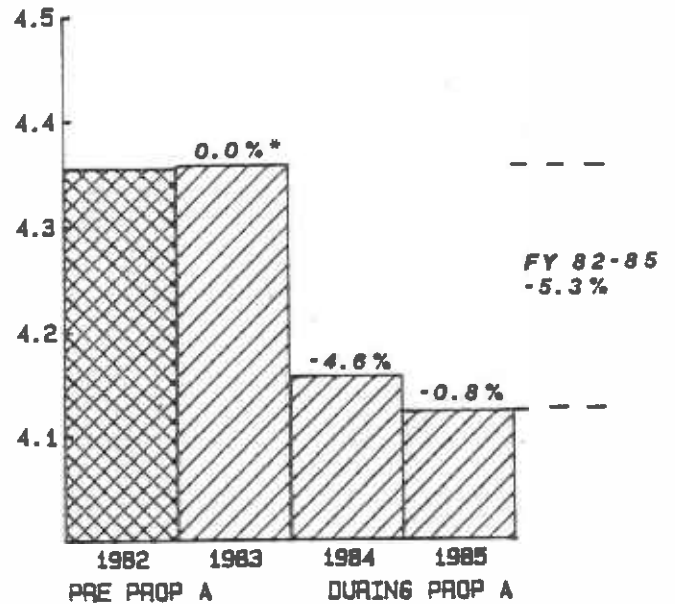
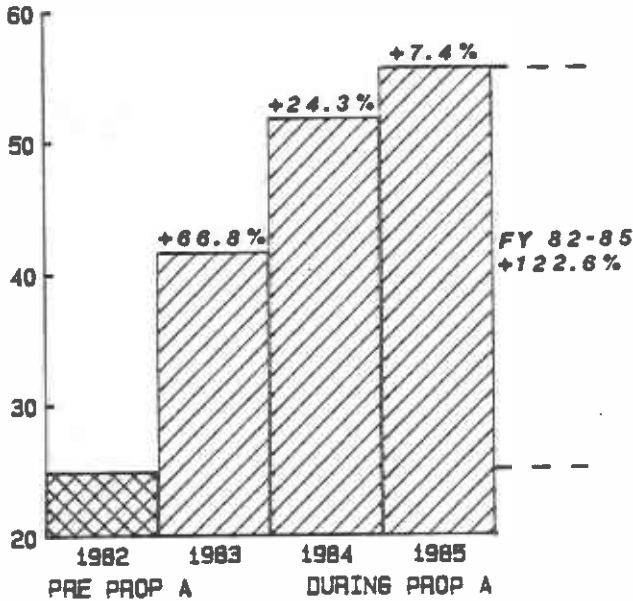
## East Central Cities Sector

### REGULAR

### SENIOR/DISABLED

THOUSANDS OF BOARDINGS

THOUSANDS OF BOARDINGS



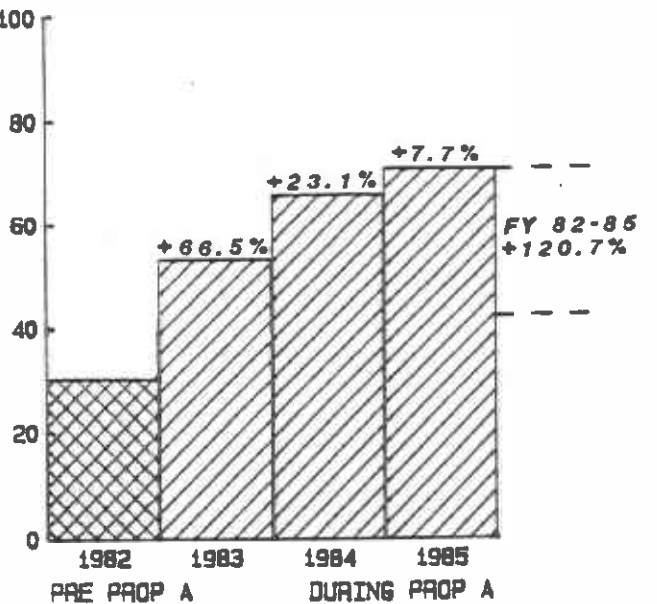
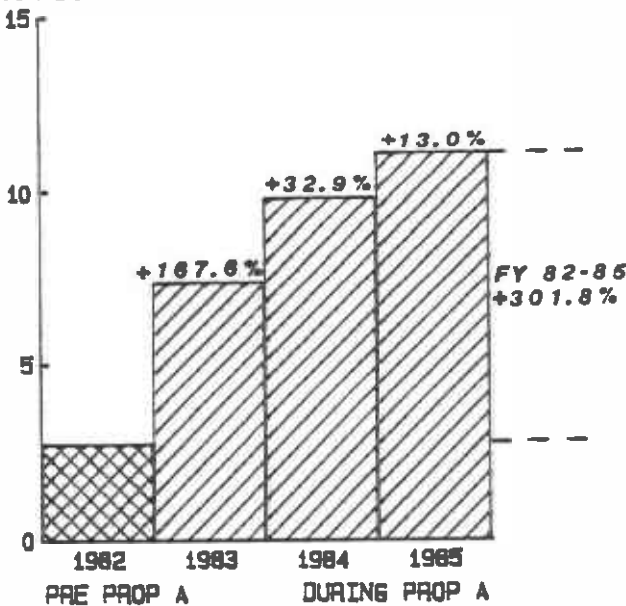
\*LESS THAN 0.1% CHANGE

### STUDENT

### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

FIGURE 3.9

PROP A FUNDED  
PARATRANSIT SERVICES WITHIN THE  
EAST CENTRAL CITIES SECTOR

<u>CITY</u>	<u>PROJECT</u>	<u>DATE ESTABLISHED</u>
Bell	Dial-A-Ride	December 1982
Bellflower	Dial-A-Ride	June 1982*
	Dial-A-Ride Handicapped	June 1982*
Cudahy	Local Fixed Route Paratransit	July 1973*
	Dial-A-Ride	January 1980*
Huntington Park	General Public Paratransit	January 1983
Lynwood	Dial-A-Ride	February 1978*
Paramount	Senior Transportation	November 1985
South Gate	Phone-A-Ride Service	June 1974*

\*-Pre-Prop A

SOURCE: LACTC Proposition A Local Return Program  
Project Listing FY 1984-85  
SCRTD Community Relations

By comparison, a different trend developed in senior/disabled boardings within the Pomona Valley Sector. Lower fares resulted in a 25 percent increase in senior and disabled boardings. This occurred in spite of the fact that paratransit services were available in the sector (Figure 3.10).

FIGURE 3.10

---

PROP A FUNDED  
PARATRANSIT SERVICES WITHIN THE  
POMONA VALLEY SECTOR

---

<u>CITY</u>	<u>PROJECT</u>	<u>YEAR ESTABLISHED</u>
Claremont	Elderly/Disabled Services	1975
	Dial-A-Ride	1975
La Verne	Elderly/Disabled Services	1975
Pomona	Elderly/Disabled Services	1975
San Dimas	Elderly/Disabled Services	1975

SOURCE: LACTC Proposition A Local Return  
Program Project Listing FY 1984-85  
SCRTD Community Relations

---

Ridership data for the remaining sectors are shown in Exhibit 4.

The LACTC reports that the most common use of Prop A Local Return Funds was for paratransit services for the elderly and disabled. It was also reported that prior to the passage of Prop A, approximately 40 cities provided paratransit services for the elderly and disabled. By 1985, fifty-five cities were providing these services; many existing systems were also greatly expanded. Since patronage figures are not available for these services, it can not be determined how much of an impact these services



have had on the usage of District's services by the elderly and disabled.

#### .5 Express Usage By Sector

Regular fare passengers were required to pay a zone incremental charge on all express services. These charges were based on the distance travelled on the freeway and/or busway. The fare reduction resulted in an increase in express service usage in fifteen of the sixteen sectors. At the end of the Prop A period express stamp usage in the Carson-San Pedro Sector remained at the Pre-Prop A level of 577 average daily boardings. Express usage in the Glendale Sector increased from 70 to 147 boardings, a 110 percent increase. The remaining sector increases ranged between 9 and 39 percent.

Express boardings for all sectors are also shown as part of Exhibit 4.

#### 3.1.4 Impacts by Type-of-Service

The level of service as well as the type of service provided by the District varied greatly between weekdays, Saturdays, and Sundays, as well as by time of day, particularly during weekdays. Some of the lines operate 24 hours a day, 7 days a week, while some operate only during weekdays; others operate only during weekday peak periods. In some cases, lines operate on the basis of policy headways (generally a minimum of 60 minutes). In most cases, headways are based on demand (passenger loadings), with more frequent headways. Figure 3.11 summarizes the types of District Services by TPM Code. TPM Codes are the codes designated by the LACTC and the transit operator in Los Angeles County to categorize the various types of service.

FIGURE 3.11

TYPES OF SERVICE  
BY TPM CODE

<u>TPM CODE</u>	<u>SERVICE DESCRIPTION</u>
1	Local Service Based on Demand Headways
2	Local Service on Policy Based Headways
3	Intra-Community Local Circulation Service
4	Express Service With Multiple Local Stops
5	Express Service with Few Local Stops (Park/Ride)
6	Most Service On The Line Operated Under Contract and Other Miscellaneous Services

Over the three year reduced fare period, daily boardings increased on all types of service except on lines operating local service on a policy based headway (generally a minimum of every 60 minutes). The most significant increase in boardings occurred on express services with multiple stops (TPM 4) and local lines operating service on a demand based headway (TPM 1). Boardings increased on express service by 59 percent with a 44 percent increase occurring on demand based local service. Boardings on peak hour express (park/ride) services (TPM 5) showed an increase of over 21 percent. Boardings increased on Contract/Other (TPM 6) services by 8 percent. Boardings declined over 3 percent on local lines operating on a policy based headway (TPM 2).

Indications are that travel time and service frequency were the major influences in the use of transit. This is verified by the fact that demand-based (TPM 1) and express (TPM 4) services experienced the most significant increases. Since passengers were required to pay distance based fares on express (TPM 4) and park/ride (TPM 5), the fare reduction made the usage of these types of services more affordable.

During this period, the District continued the phased implementation of the Sector Improvement Plan (SIP) which was a master plan to improve service within the region. The SIP was designed to enhance the ability of passengers to use one bus without the travel delays of route deviations or transfers. Routes were restructured throughout the region to establish more of a grid pattern.

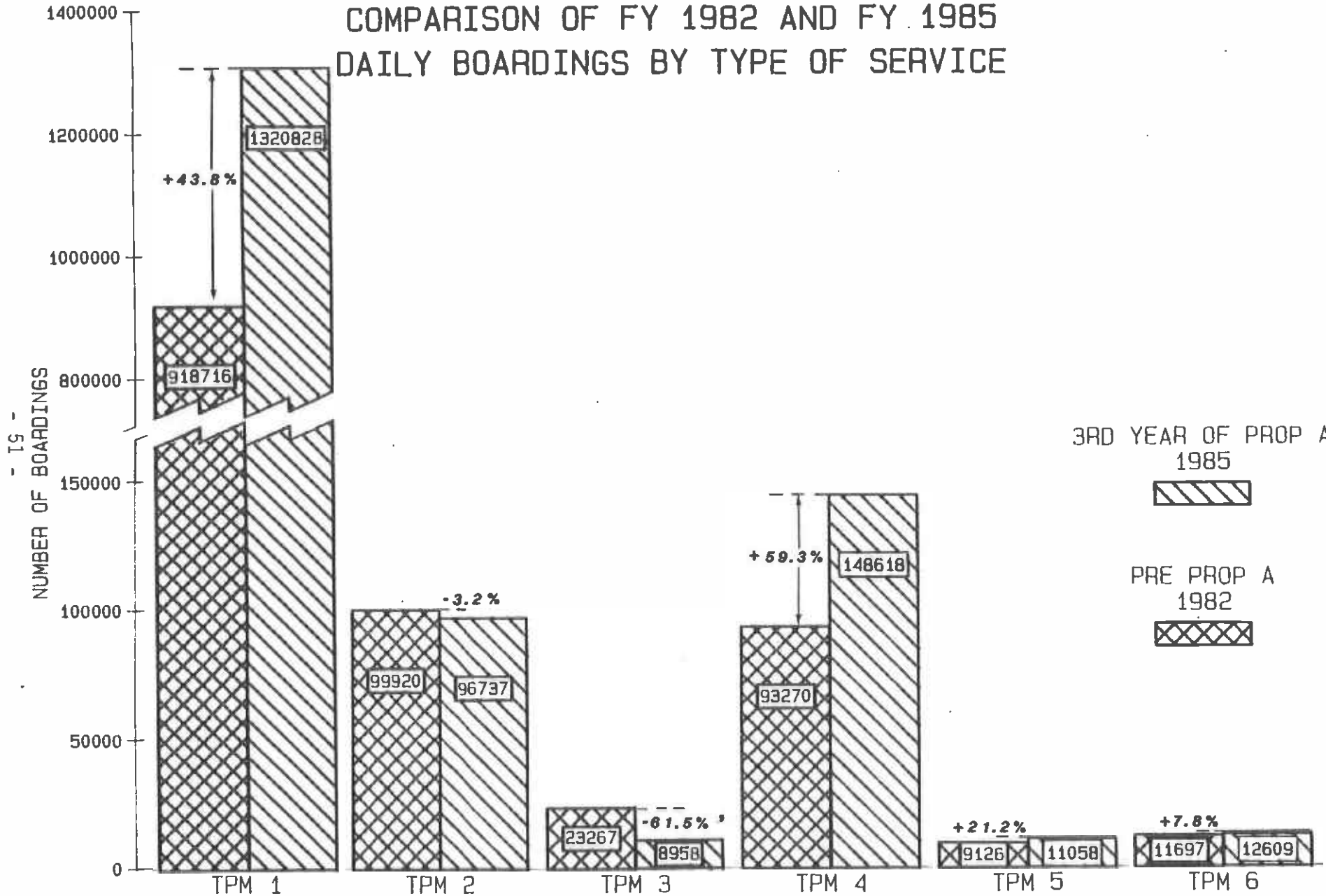
The implementation of this plan resulted in a number of lines that were previously classified as intra-community lines (TPM 3) being reclassified as part of a demand-based headway (TPM 1) or a policy based headway (TPM 2) line. Therefore, the 62 percent decline in ridership shown in Figure 3.12 resulted more from the reclassification of lines than a decline in ridership. Actual boarding on those route segments for FY 1984-85 are thus included in the TPM 1 and TPM 2 boarding totals.

As previously indicated the levels of service varied greatly between weekdays, Saturdays and Sundays. Based on lower demand, some weekday demand based services were scheduled to operate on a less frequent policy headway on weekends. Moreover, fewer demand-based headways were operated on Sunday compared to Saturday.

Figures 3.13 and 3.14 illustrates the shift in boardings between TPM 1 (demand based headway) and TPM 2 (policy based headway) for both Saturday and Sunday services. Saturday boardings increased over 34 percent on policy based headway services while Sunday boarding showed an increase of over 51 percent. Express service (TPM 4) showed boarding increases of 51 percent on Saturday and 42 percent on Sunday. Contract service boardings increased by 19 percent on weekends compared to a 4 percent increase on weekdays.

FIGURE 3.12

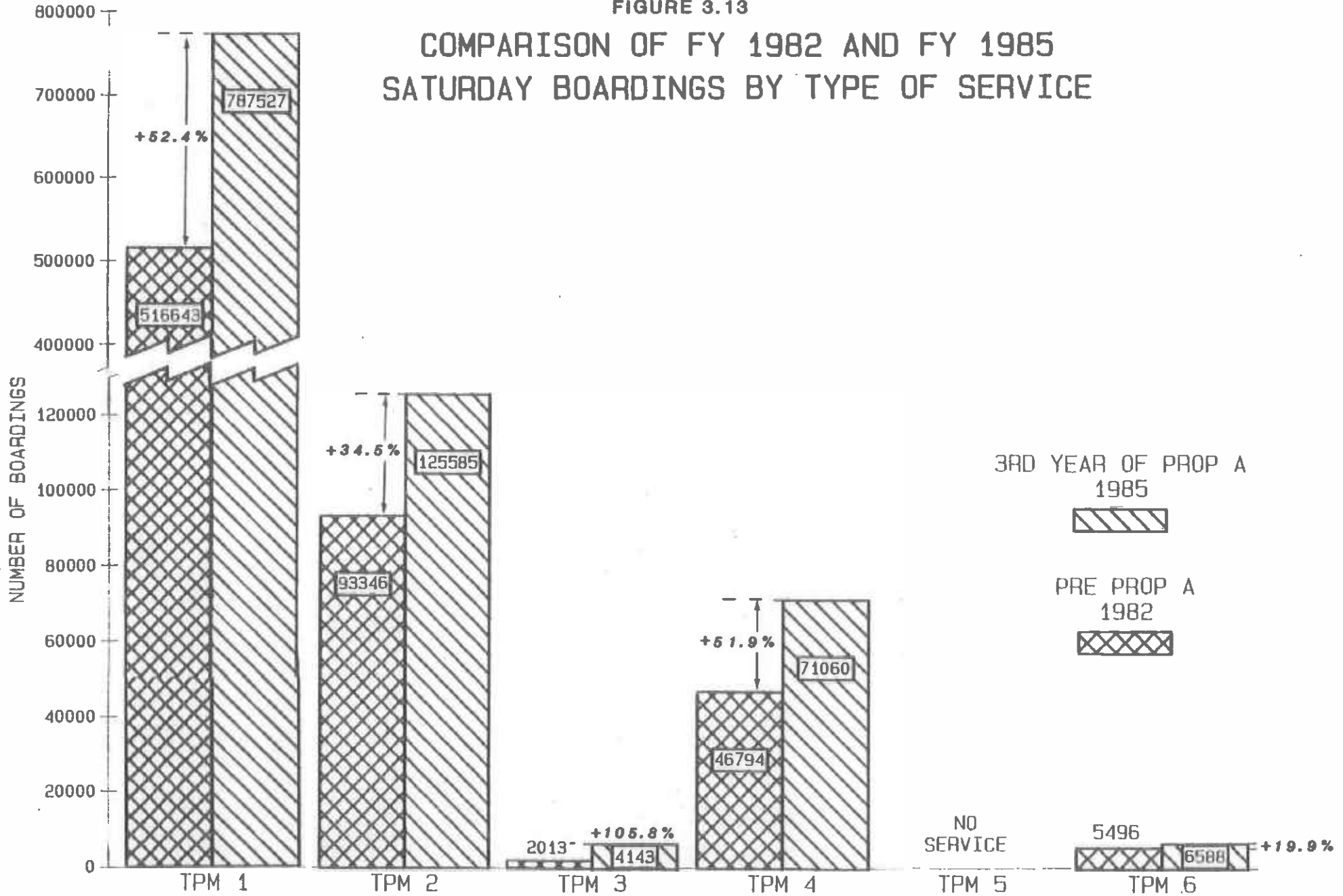
COMPARISON OF FY 1982 AND FY 1985  
DAILY BOARDINGS BY TYPE OF SERVICE



PLANNING DEPARTMENT  
NOVEMBER 1985

FIGURE 3.13

COMPARISON OF FY 1982 AND FY 1985 SATURDAY BOARDINGS BY TYPE OF SERVICE



3RD YEAR OF PROP A  
1985



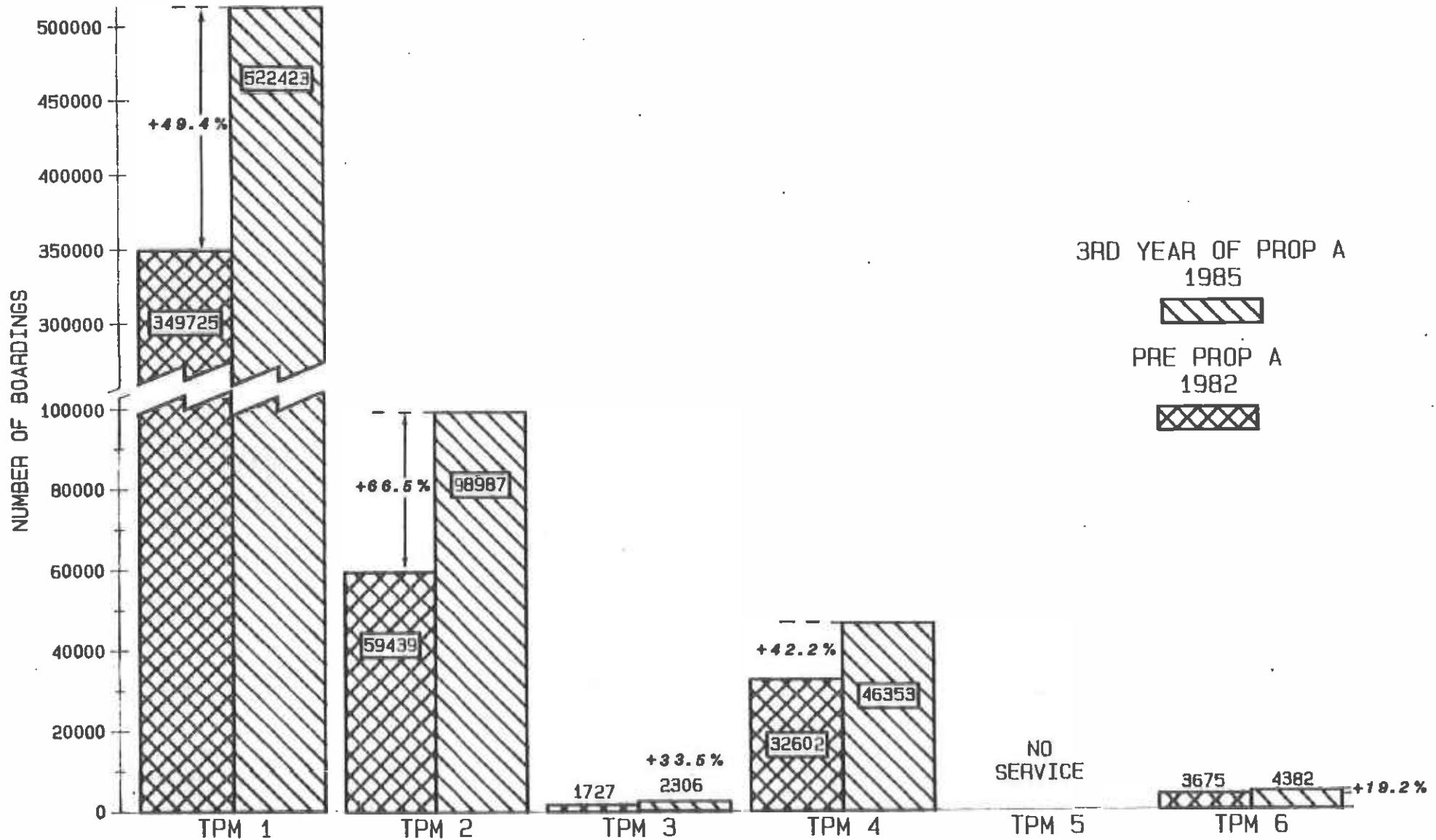
PRE PROP A  
1982



NO  
SERVICE

FIGURE 3.14

COMPARISON OF FY 1982 AND FY 1985  
SUNDAY BOARDINGS BY TYPE OF SERVICE



PLANNING DEPARTMENT  
NOVEMBER 1985

Saturday and Sunday boardings on intra-community services (TPM 3) increased over 105 percent and 33 percent respectively. Weekend service was not available in the TPM 5 (express service with few local stops (park/ride)) category. Boarding on contract and other services (TPM 6-9) showed a 19 percent increase.

### 3.1.5 Impact By Time Of Day

The distribution of daily, Saturday and Sunday boardings by regular, senior and student fare categories was compared with previous year's data to determine trends in the distribution of boardings by time-of-day (i.e., peak, base and night periods). This analysis focuses on the Prop A period which began July 1982 and continued through June 1985.

During this period, daily boardings increased from 1,170,000 in July 1982 to 1,657,000 in May of 1985. This equates to a 42 percent increase. Proportional increases were recorded for Saturday and Sunday boardings.

Because the District was limited in the amount of bus service it could add by the Memorandum of Understanding (MOU), boardings were constrained by available capacity. Traditionally, the greatest number of daily boardings occurs during the A.M. and P.M. peak periods. As a result, peak period buses are usually at or near capacity. During midday-base and night periods, fewer boardings occur. Therefore, available capacity is usually present in larger amounts.

Staff logically assumed that during this period of tremendous ridership growth, a larger percentage of Proposition A boardings would occur during the midday-base and night periods where available capacity is usually present.

#### .1 Regular Boardings

During the Proposition A period the District recorded a significant

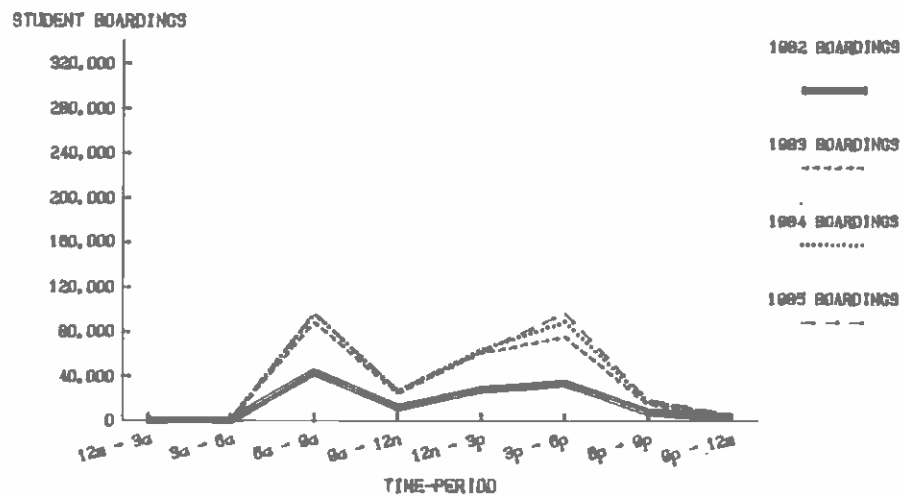
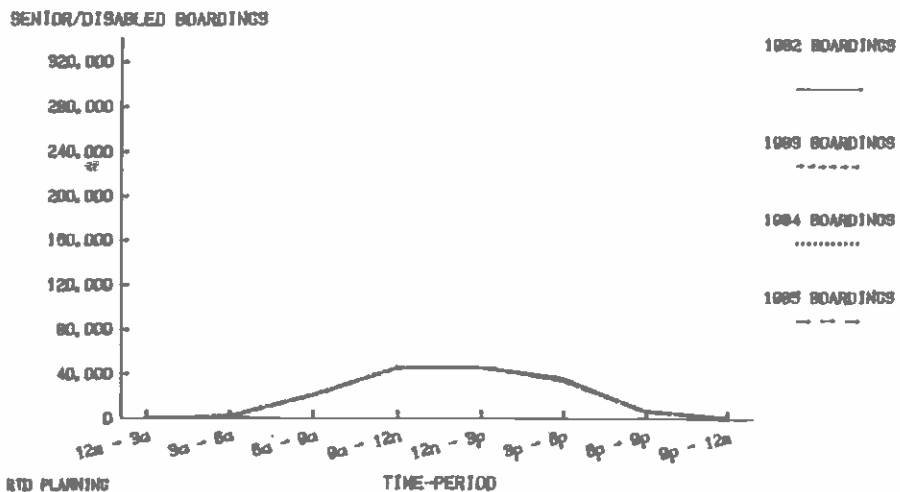
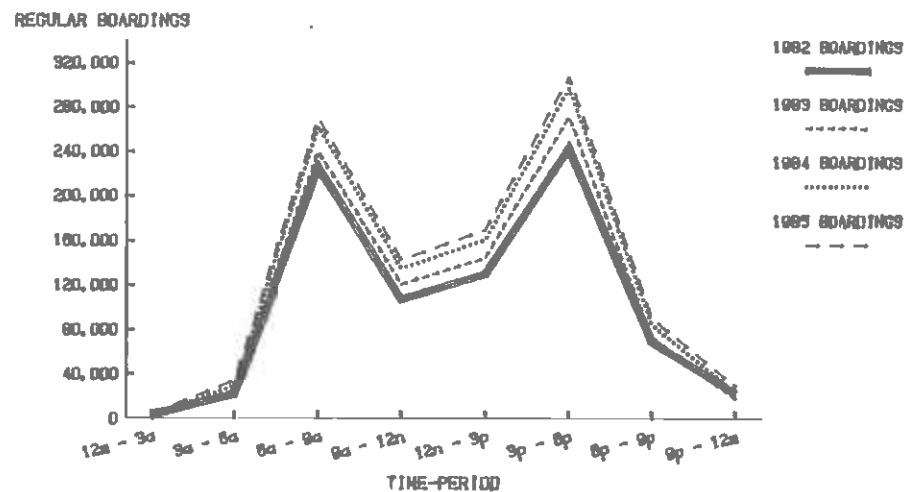
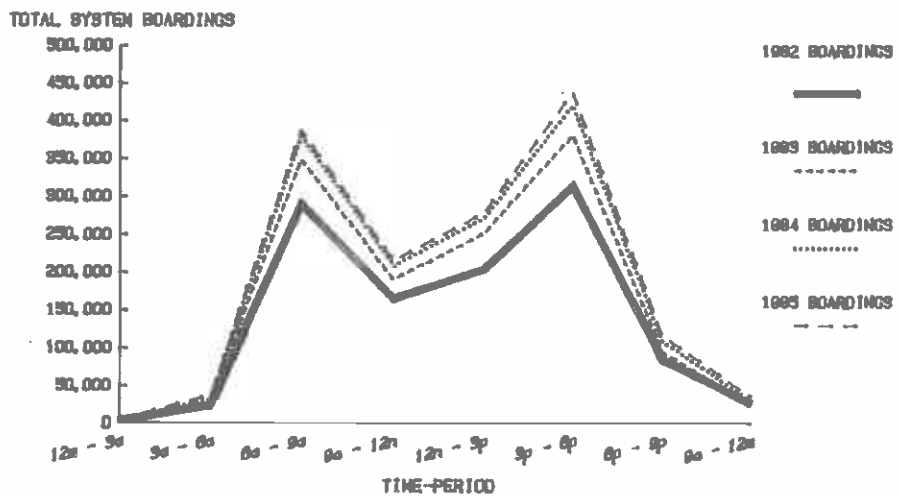
increase in regular boardings. Regular boardings increased about 9 percent the first year, 12 percent the second year, and a smaller increase of 5 percent was recorded during the third year. The relative distribution of these boardings by time of day remained constant through time. The early morning period attracted only 4 percent of regular boardings, closely followed by the midday period at 30 percent and the night period at 12 percent. The largest categories were the A.M. and P.M. peaks averaging 26 percent and 29 percent respectively. Proportional increases were recorded in each of the five time periods (early morning, A.M. peak, midday-base, P.M. peak, and night). For example, the percentage increases in base and peak boardings averaged about 10 percent per year (Figure 3.15).

## .2 Senior/Disabled Boardings

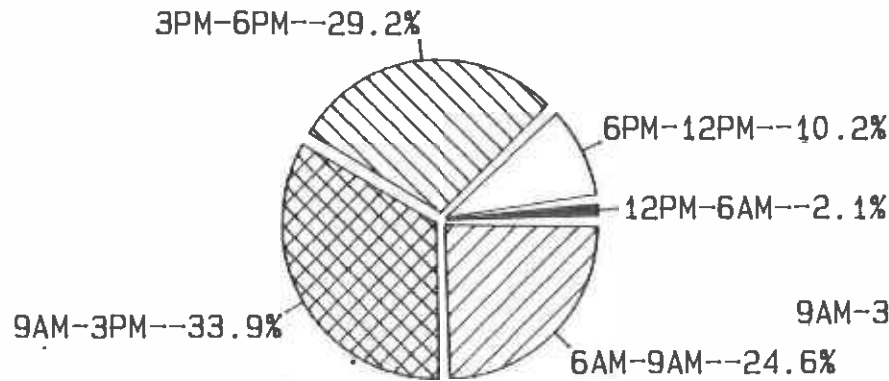
No significant increase in senior boardings was recorded during the Proposition A period despite the reduction in senior/disabled cash fares and 47 percent decrease in bus pass prices. The early morning and late night periods combined attracted less than 5 percent of senior/disabled boardings. During the A.M. peak boardings increased to 14 percent then levelled during the midday base at its highest point, 59 percent. Boardings tapered off to 22 percent and 1 percent during the P.M. peak and night periods (Figure 3.16). It is believed that the lack of growth in senior boardings may have been due to the emergence and proliferation of local dial-a-ride programs. The distribution of senior boardings by time of day remained constant through time. No relative changes occurred in any of the five time periods.



**FIGURE 3.15  
RIDERSHIP BY RIDER GROUP  
BY TIME OF DAY**

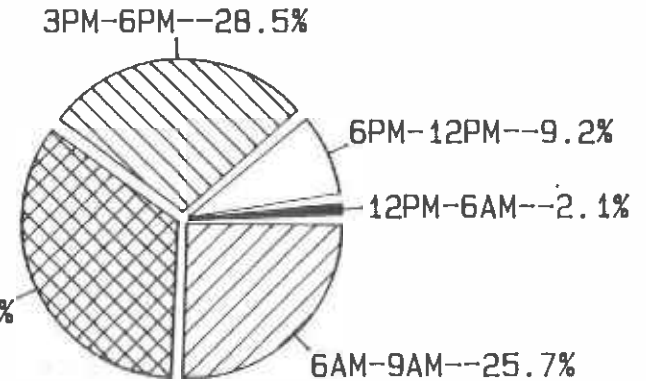


**FIGURE 3.16**  
**AVERAGE BOARDINGS BY TIME OF DAY**



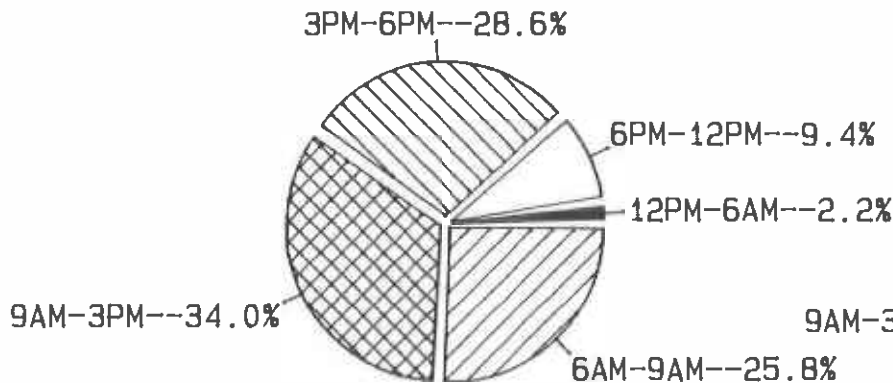
**TOTAL 1,156,000**

**1982**



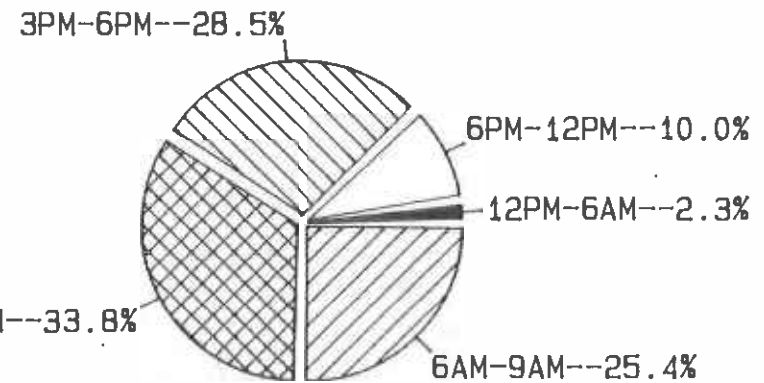
**TOTAL 1,348,000**

**1983**



**TOTAL 1,493,000**

**1984**



**TOTAL 1,600,000**

**1985**

### .3 Student Boardings

A significant increase in student boardings was recorded during the Proposition A period. During this period the Pasadena Unified School District discontinued most of its school bus service for economic reasons. This, along with reductions of school bus service by other school districts, were contributors to the increase in student boardings. Also a marked increase in college and vocational boardings was experienced as a result of the low Prop A fares. Student boardings more than doubled (113 percent) the first year, increased by 11 percent the second year, and recorded a smaller 3 percent rise during the third year. Proportional increases were recorded in three of the five time periods (early morning, A.M. peak and midday-base). In addition to proportional increases, growths of about 10 to 15 percent were experienced during the P.M. peak and night periods.

The large growth in P.M. peak and night student boardings can probably be attributed to college and vocational students. College and vocational students are more likely to maintain jobs and/or school hours which require travel during these time periods.

The analysis of boardings by fare category and by time period indicates that while boardings increased significantly during the Proposition A period, capacity was constrained below the actual demand for bus service; new boardings were not pushed by this limited capacity from the heavily travelled A.M. and P.M. periods into the midday-base and night periods.

The distribution of boardings has remained fairly constant prior to and during the Proposition A period, with only slight shifts occurring in a few time periods and fare categories.

#### 3.1.6 Impact On Accessible Service (Wheelchair Boardings)

Prior to Prop A, the District provided accessible service on 90 lines. By

November 1982, four months after the implementation of Prop A, the number of accessible lines had been expanded to 142. Over 183 lines were accessible by the end of the Reduced Fare Program.

Approximately 400 wheelchair passengers used District services during the month of April 1982. By November 1982, wheelchair boardings had increased to over 790 monthly boardings. By the end of the program, wheelchair boardings had increased to over 2,000 monthly boardings. Although the fare reduction made transit more affordable, it appears that service availability rather than the fare reduction contributed to the increase in accessible service boardings.

### 3.2 IMPACT ON COST/REVENUE

The District operating cost increased over 26 percent between FY 1982, the year before Prop A, and FY 1985 (Figure 3.17). The increase can be attributed to such factors as the increase in service provided, inflation, insurance, and collective bargaining agreements. Another factor that had a major influence was the cost associated with fleet maintenance. Since most buses were required to operate more service, there was a relative increase in cost associated with routine maintenance and accelerated wear on bus components.

In the year preceding the Reduced Fare Program, approximately 45 percent of the District operating cost was recovered through the farebox. Under the Prop A Fare Program, the District would be reimbursed for revenue lost as a result of the fare reduction, as well as for any additional service provided under the terms of the MOU. Revenue declined the first year from \$163.5 million to \$106.1 million, a 35 percent decrease. Farebox revenues increased the second and third year by 10 percent and 5 percent, respectively (Figure 3.18). This increase in revenue can be attributed to the tremendous surge in passenger boardings.

FIGURE 3.17  
**OPERATING COST**  
 FY 1981-82 THROUGH FY 1984-85

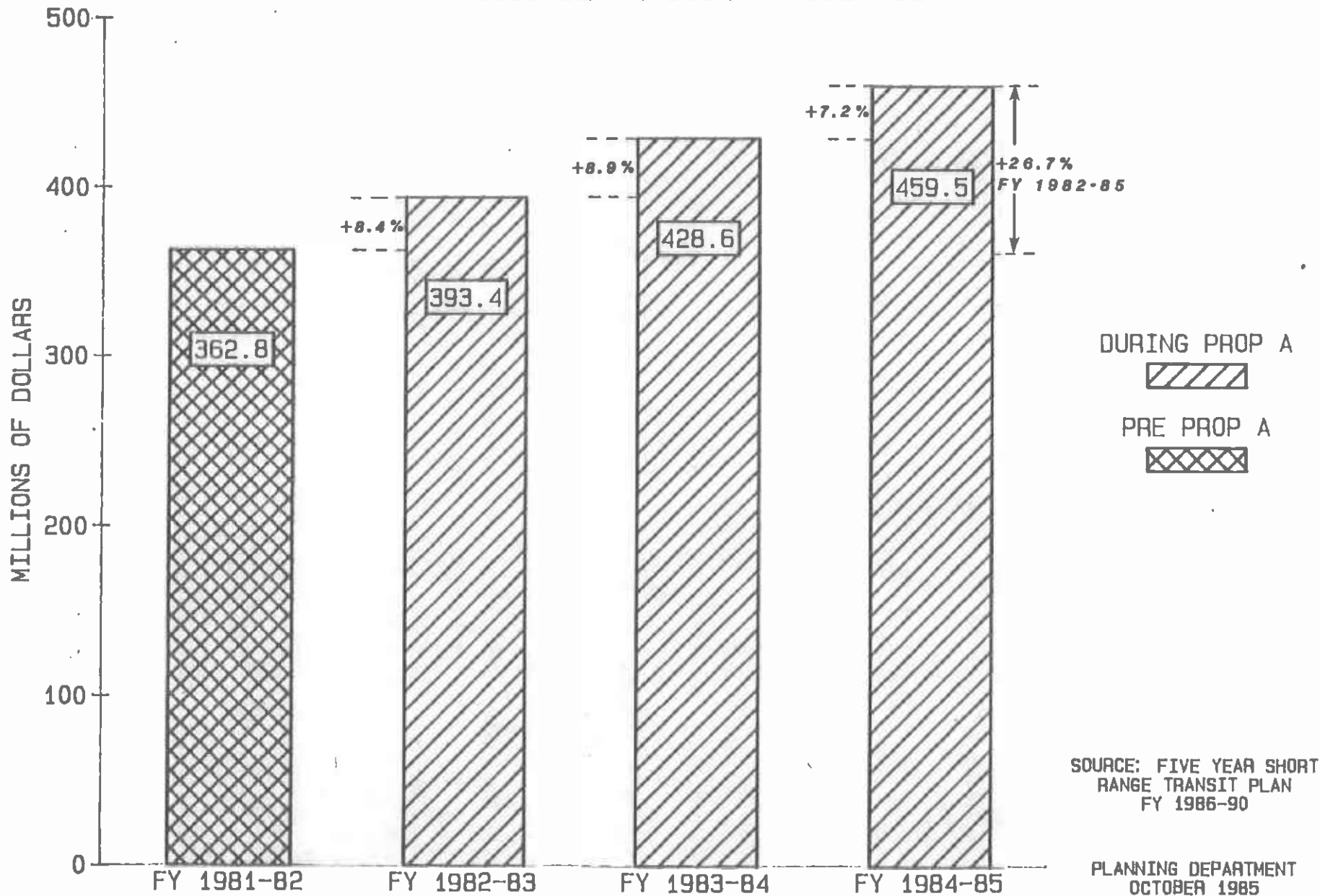
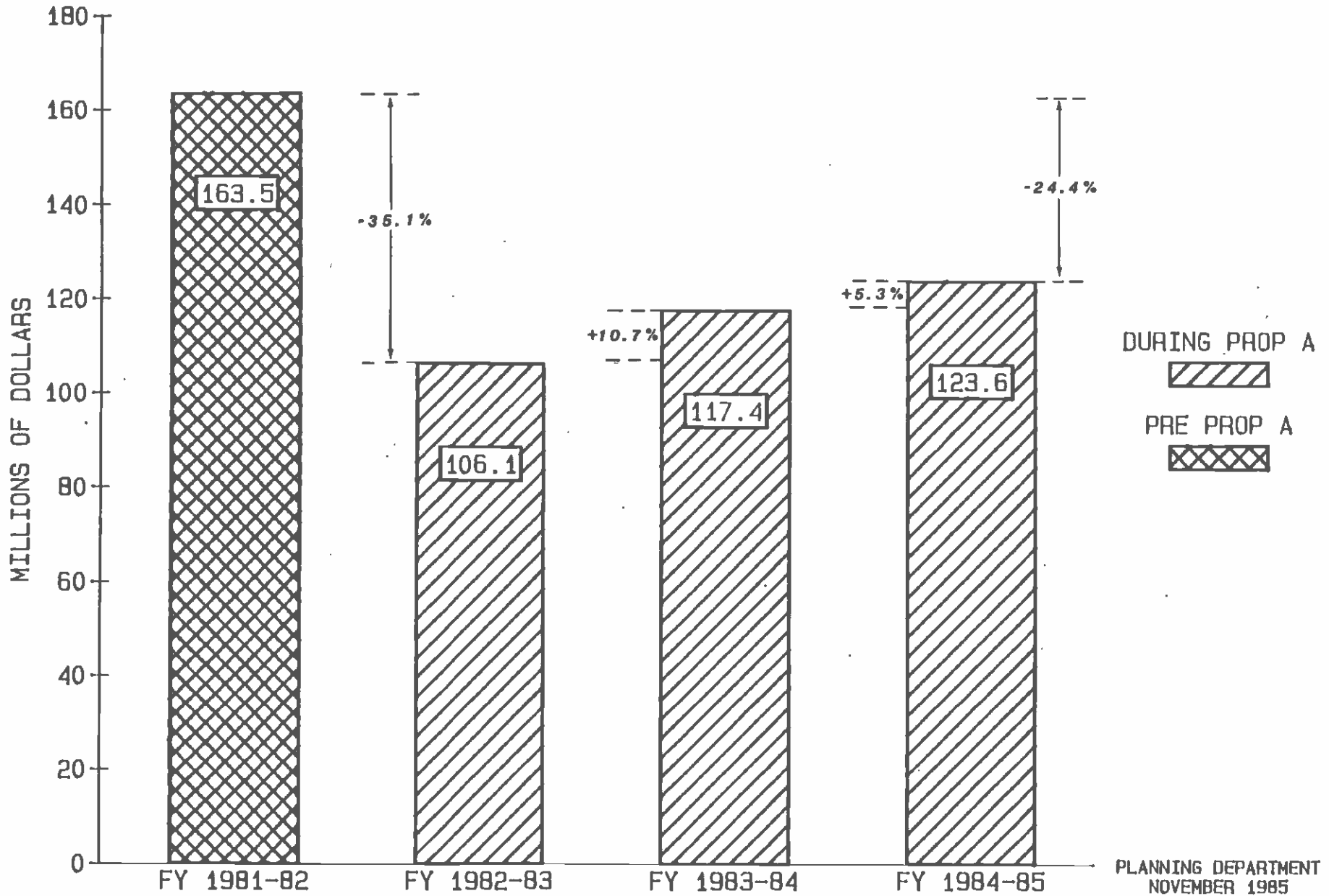


FIGURE 3.18

# ACTUAL FAREBOX REVENUE

FY 1981-82 THROUGH FY 1984-85



### 3.3 IMPACT ON BUS EQUIPMENT

Evaluation of the impact on bus equipment was conducted at both the macro (system) and micro (service type) levels of detail.

#### 3.3.1 Equipment Impact At the System Level

An analysis of the systemwide assignment of bus equipment levels revealed that buses were added throughout the fare reduction period to help accommodate demand. Figure 3.19 summarizes the levels of assigned equipment through time.

FIGURE 3.19

SUMMARY OF SYSTEMWIDE ASSIGNMENT OF  
EQUIPMENT BY TIME OF DAY  
(Weekday)

DATE	TIME OF DAY		
	A.M. PEAK	BASE	P.M. PEAK
April 1982	1,977 Buses	1,153 Buses	2,007 Buses
July 1982	1,878	1,147	1,913
September 1982	1,918	1,150	1,928
September 1983	2,088	1,205	2,095
September 1984	2,125	1,175	2,126
April 1985	2,206	1,193	2,220

SOURCE: SCRTD 4-24 Report

Overall, assigned equipment grew more during the peak periods than during the base. Figure 3.20 compares these changes by time of day of the April 1985 scheduled equipment assignments over their respective Pre-Prop A levels.

FIGURE 3.20

COMPARISON OF PROP A AND PRE-PROP A  
BUS EQUIPMENT LEVELS, BY TIME OF DAY  
(Weekday)

TIME OF DAY	EQUIPMENT ASSIGNED			PERCENT CHANGE
	PRE-PROP A (April 1982)	PROP A (April 1985)	DIFFERENCE	
A.M. Peak	1,977	2,206	+229	+11.6%
Base	1,153	1,193	+40	+3.5%
P.M. Peak	2,007	2,220	+213	+10.6%

SOURCE: SCRTD 4-24 Report



The peak periods required greater numbers of added equipment to satisfy the increased demand. Intuitively, this would be expected, given the fact that most public transit operators schedule their peak services to meet the demand while using the least number of additional buses. As a result, more passenger crowding is expected; little available capacity thus exists to accommodate any increases in ridership. However, the surge in demand by peak period riders left the District in a position where buses had to be added, even at this higher passenger loading level.

During the base, the significant growth in riders was accommodated by a very small growth in assigned base buses. Again, this was not surprising, given the facts that the growth was handled over a longer (six-hour) span of time than the peak periods, and that the base period services were generally scheduled both to meet demand and, in many cases, to provide a minimum level of service over a specific routing. Base services were thus more likely to have available capacity to carry more passengers.

The relative increases in equipment assignments were much lower than the growth in ridership. Figures 3.21 and 3.22 summarize and illustrate this point.

FIGURE 3.21

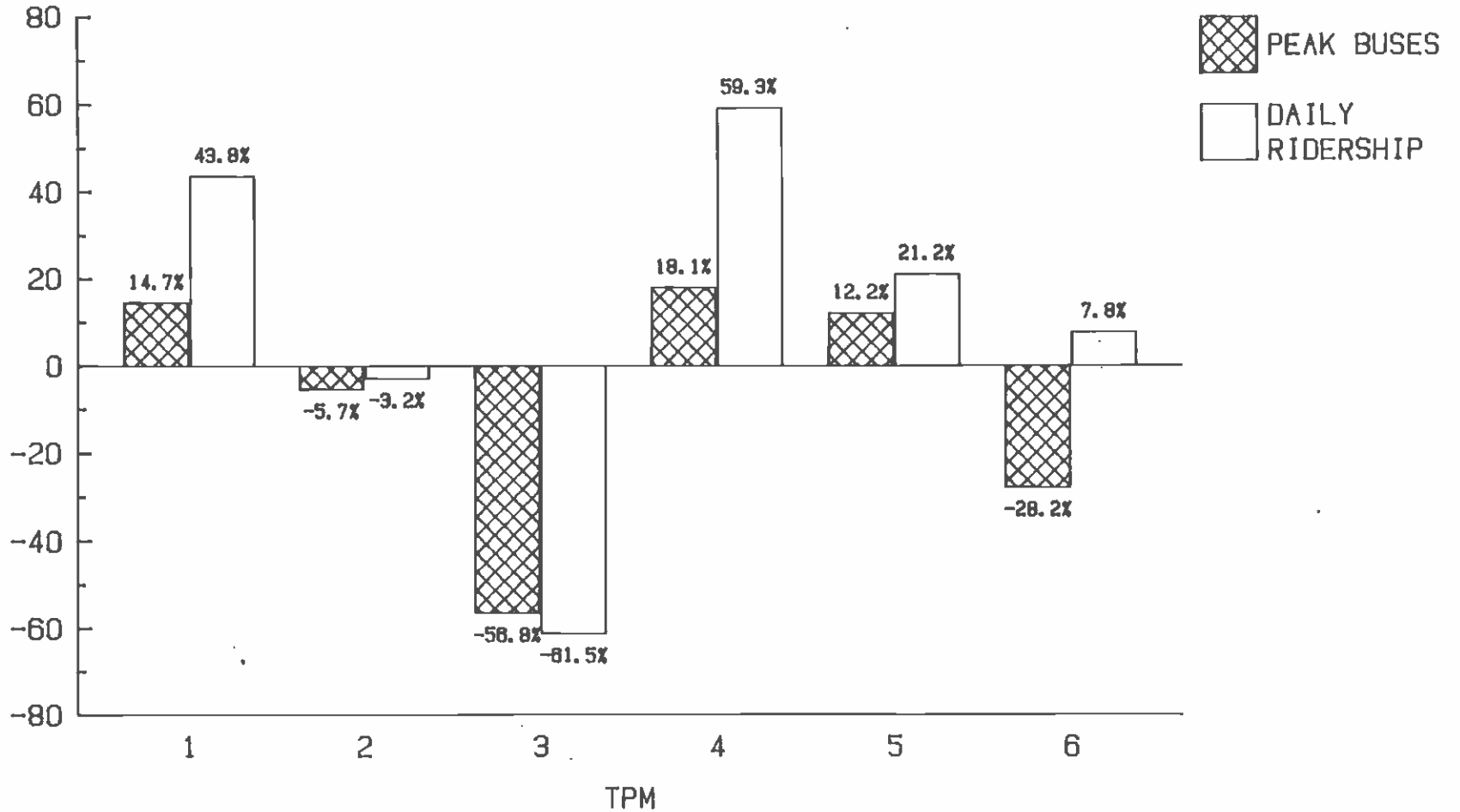
COMPARISON OF RELATIVE CHANGE IN EQUIPMENT  
LEVELS AND RIDERSHIP, BY TIME OF DAY  
(Pre-Prop A vs. Prop A)

TIME OF DAY	PERCENT CHANGE BETWEEN FY 1982 AND 1985	
	<u>EQUIPMENT LEVELS</u>	<u>AVERAGE DAILY RIDERSHIP</u>
AM Peak	+11.6%	+42.9%
Base	+3.5%	+38.4%
PM Peak	+10.6%	+35.5%

FIGURE 3.22

COMPARISON OF RELATIVE CHANGES IN RIDERSHIP VS  
PEAK BUS EQUIPMENT LEVELS, BY SERVICE TYPE  
FY 1985 VS FY 1982

PERCENT CHANGE (FY 85 VS FY 82)



- 65 -

The number of buses added was minimized primarily because of the agreed upon annual vehicle service hour cap contained in the LACTC Memorandum of Understanding. The District, in order to stay within this service hour constraint, more extensively utilized the following techniques:

- Average loading standards (passenger/bus) during the peak periods were allowed to rise to the District's accepted 140% passengers to bus seat ratio (See Section 4.1.4). Riders were thus required to ride in more crowded conditions. Also, many trips experienced severe overcrowding.
- Schedules were prepared which more efficiently utilized required equipment, through the expanded use of shortlining, interlining of buses.
- More field supervision was used to help balance out passenger loadings among buses of any one line.

### 3.3.2 Equipment Impact By Type Of Service

As previously mentioned in Section 3.1.3, the District divides all of its services into six distinct types of services.

Each line is assigned to one of these groupings, known as TPM categories. The six categories are again listed below:

<u>TPM CATEGORY</u>	<u>SERVICE TYPE DESCRIPTION</u>
1	Local, Demand Headways
2	Local, Policy Headways
3	Local, Intra-Community
4	Express with Multiple Local Stops
5	Park & Ride
6	Contract Service/Other Service

Category 6 represented a very small portion, only 3-4 percent, of the total number of buses assigned to each of the three time periods. Figures 3.23 and 3.24 summarize the bus assignment levels through time and also the distribution of buses, by service type, for selected points in time. These figures show that: most of the added buses were placed on the local demand

services, lines that had headways of 30 minutes or less; and, demand-based service continued to take up a larger share of total equipment assignments throughout the Prop A period. Both findings are certainly reasonable, given the fact that the District experienced continued reports of overcrowding on this type of service, and also because these demand lines had little available capacity to accommodate significant increases in ridership.

FIGURE 3.23

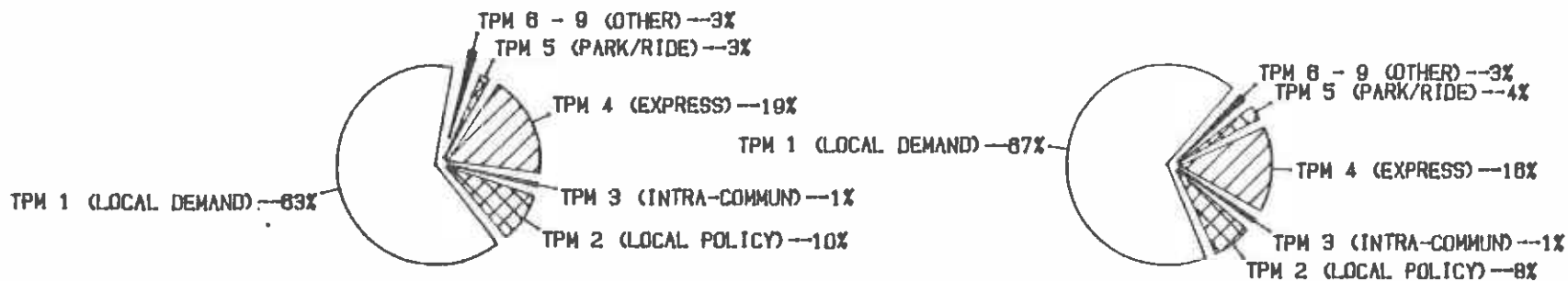
SUMMARY OF CHANGES IN ASSIGNED EQUIPMENT  
LEVELS BY SERVICE TYPE, AND BY TIME OF DAY

SERVICE TYPE (TPM CODE)	TIME OF DAY	BUSES ASSIGNED ON				
		4/82	9/82	9/83	9/84	4/85
1 Demand Local	AM Peak	1,246	1,216	1,327	1,365	1,459
	Base	762	777	828	828	841
	PM Peak	1,272	1,2308	1,350	1,396	1,440
2 Policy Local	AM Peak	189	196	209	213	2204
	Base	178	181	182	162	181
	PM Peak	193	192	204	195	201
3 Intra-Com- munity Local	AM Peak	37	19	26	20	21
	Base	30	19	20	14	15
	PM Peak	37	19	24	18	16
4 Express	AM Peak	370	365	394	397	443
	Base	146	151	142	140	145
	PM Peak	364	361	381	383	430
5 Park/Ride	AM Peak	75	70	84	84	85
	Base	2	0	0	0	0
	PM Peak	74	69	81	82	83
6 Other	AM Peak	63	52	50	46	46
	Base	31	22	33	31	35
	PM Peak	71	56	57	52	51
TOTALS	AM Peak	1,977	1,918	2,088	2,125	2,206
ALL	Base	1,153	1,150	1,205	1,175	1,193
<u>SERVICES</u>	PM Peak	2,007	1,928	2,095	2,126	2,220

SOURCE: Planning Department

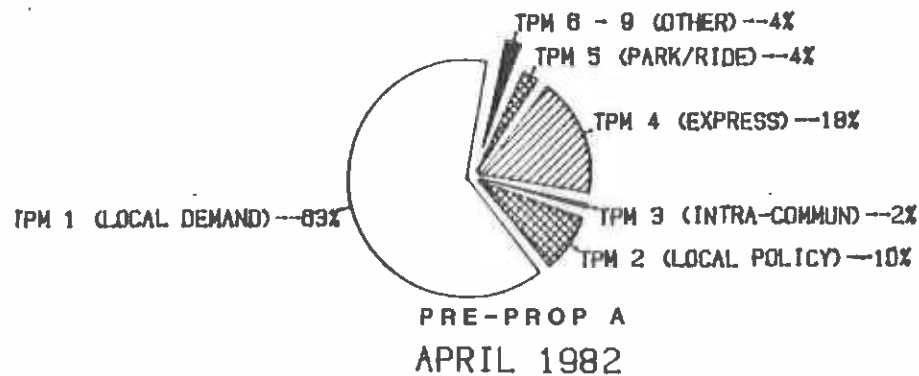
FIGURE 3.24

# BUS EQUIPMENT USAGE BY TRANSIT PERFORMANCE MEASURES

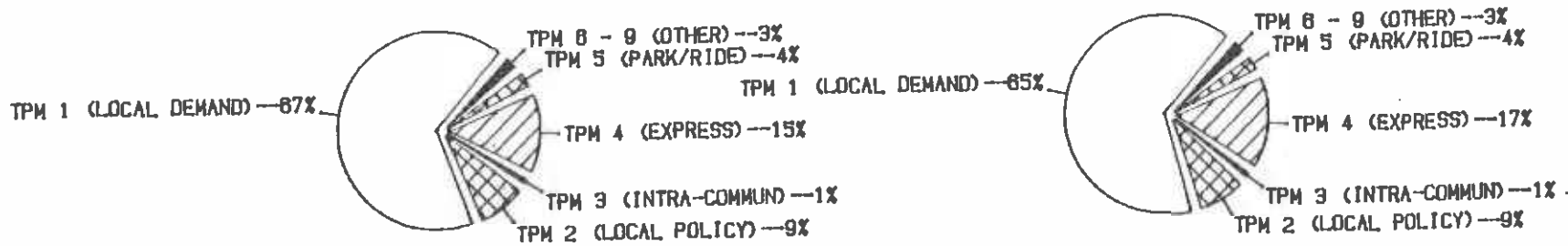


SEPTEMBER 1982

SEPTEMBER 1983



PRE-PROP A  
APRIL 1982



SEPTEMBER 1984

APRIL 1985

However, as shown in Figure 3.25, not all service types were fortunate to have had added buses assigned to them. Some, in fact, appear to have had buses removed. This is most evident for Category 3, Intra-Community Local service.

FIGURE 3.25

SUMMARY OF BUSES ADDED (LOST),  
BY TYPE OF SERVICE AND BY TIME OF DAY  
(FY 85 vs. FY 82)

<u>SERVICE TYPE</u> <u>TPM CODE)</u>	<u>TIME OF DAY</u>	<u>BASELINE</u> <u>(4/82)</u>	<u>NET</u> <u>CHANGE</u> <u>IN BUSES</u> <u>(4/85)</u>	<u>% CHANGE</u> <u>BY TIME</u> <u>PERIOD</u>
1 Demand Local	AM Peak	1,246	222	17.8%
	Base	766	75	9.8%
	PM Peak	1,272	187	14.7%
2 Policy Local	AM Peak	189	15	7.9%
	Base	178	(21)	(11.8%)
	PM Peak	192	11	5.7%
3 Intra-Com- munity Local	AM Peak	37	(16)	(43.2%)
	Base	30	(15)	(50.0%)
	PM Peak	37	(21)	(56.8%)
4 Express	AM Peak	370	73	19.7%
	Base	146	(1)	(*)
	PM Peak	364	66	18.1%
5 Park/Ride	AM Peak	75	10	13.3%
	Base	2	(2)	(100.0%)
	PM Peak	74	9	12.2%
6 Other	AM Peak	63	(17)	27.0%
	Base	4	15	12.9%
	PM Peak	71	-(20)	28.2%

FIGURE 3.25 (Cont'd)

SUMMARY OF BUSES ADDED (LOST),  
 BY TYPE OF SERVICE AND BY TIME OF DAY  
 (FY 85 vs. FY 82)

<u>SERVICE TYPE TPM CODE)</u>	<u>TIME OF DAY</u>	<u>BASELINE (4/82)</u>	<u>NET CHANGE IN BUSES (4/85)</u>	<u>% CHANGE BY TIME PERIOD</u>
All Services	AM Peak	1,977	287	11.6%
	Base	1,153	40	3.5%
	PM Peak	2,007	213	10.6%

(\*)-Less Than One-percent

SOURCE: Planning Department

Several explanations can be given which justify this apparent illogical finding. They are:

- MOU Vehicle Hour Cap -- Because of the service limitations imposed by the LACTC MOU, the District resorted to redeploying services away from less utilized services to those experiencing the most overcrowding. Local demand lines were the primary beneficiaries of this redeployment of equipment.
- Recategorizing Of Lines -- As equipment was added to certain lines they warranted reclassification into the demand category.
- Institution Of Major Service Changes -- In January 1983 and again in June 1983, RTD instituted service change programs which restructured many lines within the District. The impact of these changes was that several newly-created lines, and their respective equipment assignments, were assigned to differing TPM categories than the line(s) they replaced.
- Add Service Only To Meet Demand -- A decision was made to place only enough service at the start of the Prop A program to accommodate those riders already using the service. Because of the old 85¢ fare structure, ridership was at a level that enabled the District to reduce by 99 A.M. Peak, 6 Base, and 94 P.M. Peak buses the July 1982 bus assignment levels over their respective April levels. The philosophy was then to add service only as necessary to relieve overcrowding, and as demand warranted. Thus, the bus assignment levels entering the Prop A program were really more in line with the September, 1982 figures.



As indicated in Figures 3.23 and 3.24 comparison of the bus assignment changes by service type with corresponding ridership growth trends reveals that bus service additions were not necessarily needed to meet increased ridership levels.

Although there appears to be a reasonable relationship between ridership growth and bus increases for the local demand lines (TPM 1), the park and ride services (TPM 5) and the contract services (TPM 6), the relationships for the other three types of services were very unusual.

The local policy service, TPM 2, had more equipment added to serve fewer riders. The intracommunity service, TPM 3, experienced the reverse, a slight rider gain using fewer buses. The express services were subjected to tremendous ridership increases, without any increases in bus levels.

The explanations to these findings can be subjectively assessed as being influenced by the following:

- Available Capacity -- TPM 1 and 5 both are scheduled to provide service sufficient to meet demand. Available seating on these type services is thus very limited. TPM 2 and 3 are more policy-based; they thus had a relative abundance of unfilled seats that could easily accommodate the small increases in ridership. TPM 4 also had available seating capacity, primarily in the base period. Most of the rider increase in this type service probably occurred in the non-peak period. Enough capacity existed to accommodate these base riders while still being able to reduce express base bus levels by 23 percent.
- Service Changes -- The two service changes in January and June 1983 created new policy lines. The 4 percent increase in buses equates to only a net increase of 8 buses to this category. The creation of these policy lines was needed to ensure continued regional coverage by transit.
- Scheduled Passenger Loading -- All services experienced varying levels of overcrowding due primarily to the constraint place upon the level of service the District could provide. The result of this was an observance of higher passenger loadings on buses before allowing additional service to be scheduled in. Some types of services, such as the express and park/ride, were scheduled during the peaks such that passenger standees were allowed.

### 3.3.3 Equipment Impact On Selected Lines

The tremendous growth in ridership affected every line in the system. Overcrowding persisted for the duration of the Reduced Fare Program. The conditions set forth in the MOU determined how the District could respond to overcrowding. Service could not be added unless overcrowding exceeded the established load standard on consecutive trips. The requirement to reallocate buses from underutilized lines to relieve overcrowding reduced service levels on some lines. Because of the vehicle service hour cap, service on other lines would remain at Pre-Prop A levels.

In order to examine the impact on various lines in the system, Pre-Prop A line performance data was compared with data compiled during the Prop A period. A boarding and service level comparison was conducted on 32 lines. These lines represent various service levels and service types. Results of the comparison indicate that boarding variations ranged between a 7 percent decline in ridership to an increase of 225 percent (Exhibit 5).

As shown in Figure 3.26, Line 30-31 (West Pico Boulevard-East First-Floral Drive) experienced a 7 percent decline in boardings over the three year period. The decline in boardings resulted from the realignment of several routes to operate on Broadway in the Downtown area. The realignment of these lines significantly reduced overcrowding on Line 30-31 along the Broadway route segment. As a result of the shift in boardings to other lines, the District was able to reduce the number of trips operating on Line 30-31 and redeploy available buses to relieve overcrowding on other lines.

FIGURE 3.26

LINE 30-31 - WEST PICO BLVD.-EAST FIRST-FLORAL DRIVE  
PRE-PROP A/PROP A SERVICE COMPARISON

DATE OF CHECK	DAILY BOARDINGS	PERCENT CHANGE	NO. OF TRIPS	BUSES ASSIGNED			REVENUE	OPERATION
				AM	BASE	PM	BUS MILES	BUS HOURS
4/80*	54,689		417	48	29	45	4,890	468
11/82	44,999	-17.7%	386	44	25	41	4,663	452
4/83	46,775	+4.0%	388	45	25	42	4,627	456
12/83	46,677	**	394	45	25	42	4,627	456
5/84	50,865	+9.0%	394	45	25	43	4,660	460
Percent Change from Pre-Prop A		-7.0%	-5.5%	-3	-4	-2	-4.7%	-1.7%

\*-Pre-Prop A

\*\* - Less Than One Percent Change

SOURCE: SCRTD Line Performance Trends Report

As illustrated in Figure 3.27, service on Line 280 (Azusa Avenue) remained constant during the Fare Reduction Program. Three buses provided service on a 40-minute headway during the base and peak periods. Average daily boardings increased from 980 to over 2,000, a 105 percent increase. Although increased boardings resulted in some overcrowding, these sporadic occurrences did not warrant additional service under the conditions set forth in the MOU.

FIGURE 3.27

LINE 280 - AZUSA AVENUE  
PRE-PROP A/PROP A SERVICE COMPARISON

DATE OF CHECK	DAILY BOARDINGS	PERCENT CHANGE	NO. OF TRIPS	BUSES ASSIGNED			REVENUE	OPERATION
				AM	BASE	PM	BUS MILES	BUS HOURS
11/81*	983		61	3	3	3	677	33
9/82	1,407	+43.1%	61	3	3	3	677	33
3/83	1,605	+14.1%	61	3	3	3	677	33
8/83	1,539	-4.3%	61	3	3	3	677	33
12/83	1,645	+6.9%	61	3	3	3	677	33
7/84	2,041	+24.1%	61	3	3	3	677	33
12/84	2,015	-1.3%	61	3	3	3	677	33
Percent Change from Pre-Prop A		+105.0%						

\*-Pre-Prop A

SOURCE: SCRTD Line Performance Trends Report

A different trend developed on Line 232 (Long Beach-Redondo Beach-Los Angeles Airport). Additional buses were required to meet demand. Before Prop A, six to seven buses were required to provide service for approximately 3,300 passengers. Before the end of Prop A, 10 buses were required to operate expanded service for over 6,600 passengers. As a result, vehicle service hours increased over 43 percent (Figure 3.28).

FIGURE 3.28

LINE 232 - LONG BEACH-REDONDO BEACH-LOS ANGELES AIRPORT  
PRE-PROP A/PROP A SERVICE COMPARISON

DATE OF CHECK	DAILY BOARDINGS	PERCENT CHANGE	NO. OF TRIPS	BUSES ASSIGNED			REVENUE BUS MILES	OPERATION BUS HOURS
				AM	BASE	PM		
4/82*	3,318		66	6	6	7	1,505	104
2/83	4,530	+36.5%	67	6	6	7	1,505	104
7/83	5,250	+15.9%	94	10	10	10	1,505	147
7/84	6,398	+39.9%	93	10	10	10	2,156	147
2/85	6,658	+4.1%	93	10	10	10	2,166	148
Percent Change From Pre-Prop A		+100.1					+43.9	+42.3

\*-Pre-Prop A

SOURCE: SCRTD Line Performance Trends Report

After the implementation of Prop A, ten trips were added on Line 266 (Lakewood Boulevard-Rosemead Boulevard) to relieve overcrowding (Figure 3.29). Before the end of the first year boardings declined by 10 percent. Buses were then reallocated to relieve overcrowding on other lines. Schedules were adjusted on Line 266 to reflect the change in service levels. Even with reduced service levels, the District accommodated a 38 percent increase in boarding on fewer buses with minimal overcrowding.

FIGURE 3.29

LINE 266 - LAKEWOOD BOULEVARD-ROSEMEAD BOULEVARD  
PRE-PROP A/PROP A SERVICE COMPARISON

DATE OF CHECK	DAILY BOARDINGS	PERCENT CHANGE	NO. OF TRIP	BUSES ASSIGNED			REVENUE BUS MILES	OPERATION BUS HOURS
				AM	BASE	PM		
11/81*	3,125		55	6	6	6	1,703	84
8/82	3,966	+26.9%	65	10	8	11	2,199	131
3/83	3,580	-9.7%	58	6	6	6	1,726	104
4/83#	2,953	-17.5%	58	6	6	6	1,726	104
12/83	3,440	+16.5	64	6	6	6	1,756	106
6/84	4,126	+20.2	64	6	6	6	1,594	96
11/84	4,333	+4.8	58	6	6	6	1,594	96
Percent Change from Pre-Prop A		+38.7%					+6.4%	+14.3%

#-Rain

\*-Pre-Prop A

SOURCE: SCRTD Line Performance Trend Reports

Service comparisons for the 32 selected lines are summarized in Exhibit 5.

### 3.4 IMPACT ON MANPOWER

The success of the Prop A service would depend heavily upon the District having enough employees available to provide additional service. Based on ridership projections and equipment availability, the District was able to determine the minimum number of employees needed to provide additional services.

The first priority was to hire and train sufficient numbers of bus operators. Additional mechanics, electricians and service attendants were needed for necessary support services. The number of instructors, dispatchers, schedule makers and supervisory positions was also increased

to meet additional service levels.

By the end of the third year, staffing levels had increased in every category except for Transit Police and Security Guards. The increases were as follows:

(1) Bus Operators	+15.5%
(2) Maintenance Personnel	+12.6%
(3) Clerks	+14.9%
(4) Other Support Personnel	+15.1%

The number of transit police and security guards increased slightly during the second and third year of the Prop A service. However, by April 1985, transit security manpower levels were reduced to one above the pre-Prop A level. It should be noted that during this time District transit security was augmented by various local jurisdictions through the use of Prop A Local Return monies. The LACTC reports that approximately \$1.7 million was spent on transit security between FY 1983-84 and FY 1984-85.

Figures 3.30 and 3.31 illustrates the number of District employees by job category, through time and their relationship to ridership.

FIGURE 3.30

NUMBER OF EMPLOYEES BY JOB CATEGORY, THROUGH TIME

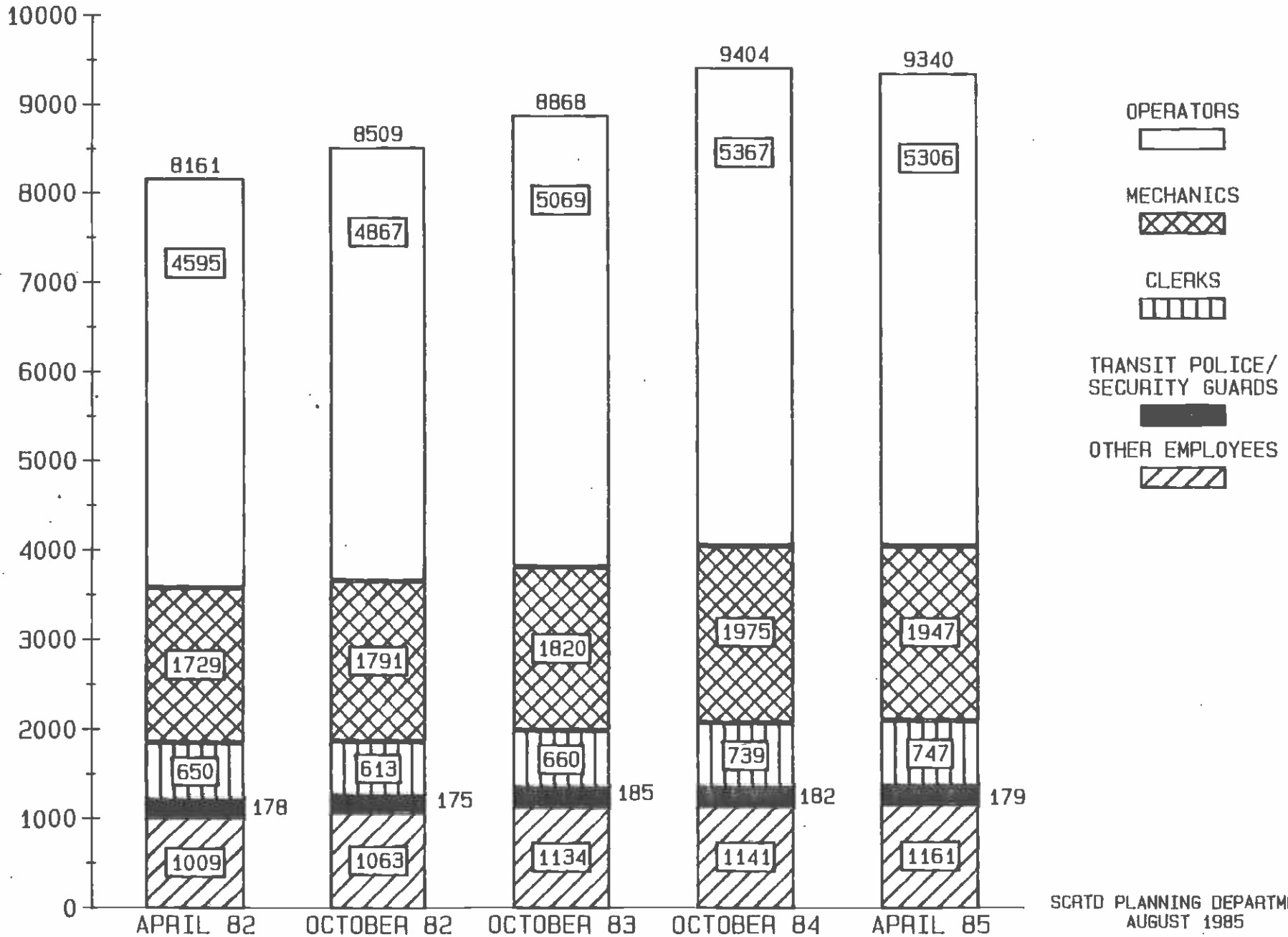
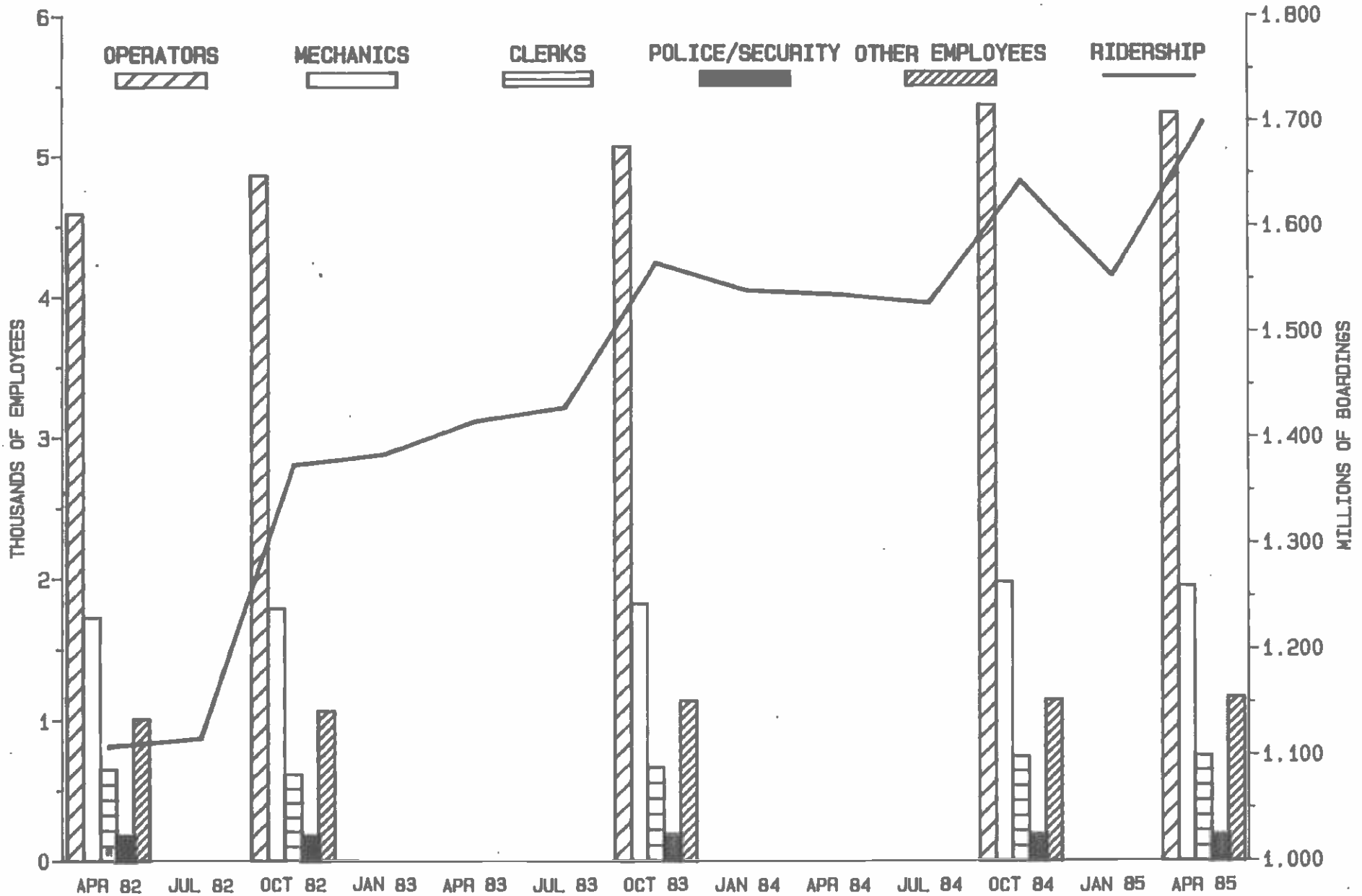




FIGURE 3.31  
COMPARISON OF EMPLOYEES TO RIDERSHIP



SCRTD PLANNING DEPARTMENT  
AUGUST 1985

### 3.5 IMPACT ON VEHICLE SERVICE HOURS/MILES

During the three-year Reduced Fare Program, the primary concern for the District was to provide enough service to meet demand without exceeding the MOU imposed vehicle service hour cap. Of equal importance was the realization that if too much service was added, then more significant service reductions would be required at such time as the Prop A subsidy dollars began being reallocated for purposes other than the Reduced Fare Program.

Under the Agreements, the District was required to provide additional service where increased ridership exceeded MOU established loading standards. In addition, service was to be redeployed wherever possible to meet demand. Conformance to these standards would greatly influence the District ability to remain within the vehicle service hour cap imposed by the MOU.

As discussed in Chapter 1.0, the initial Agreement for FY 1982-83 stipulated that the District would not operate more than 6.8 million vehicle service hours. This figure represented an increase of about 2 percent over the total for the previous year. During the second year, overcrowding persisted to a point that the District and the LACTC were required to renegotiate the vehicle service hour cap. As a result, the service hour cap was increased from 7.0 to 7.1 million service hours. Although 7.3 million service hours were authorized for the third year, the District's service hours remained consistent with the 7.1 million hours authorized for the previous year.

Proportional increases were recorded for vehicle service miles. The first and second year showed an increase of 2 percent and 4 percent. During the third year, vehicle service miles were decreased by 1 percent.

Both the vehicle service hours and miles were purposely stabilized by the District during FY 1984-85. As previously discussed, the District was required to make adjustments in service level in anticipation of possible

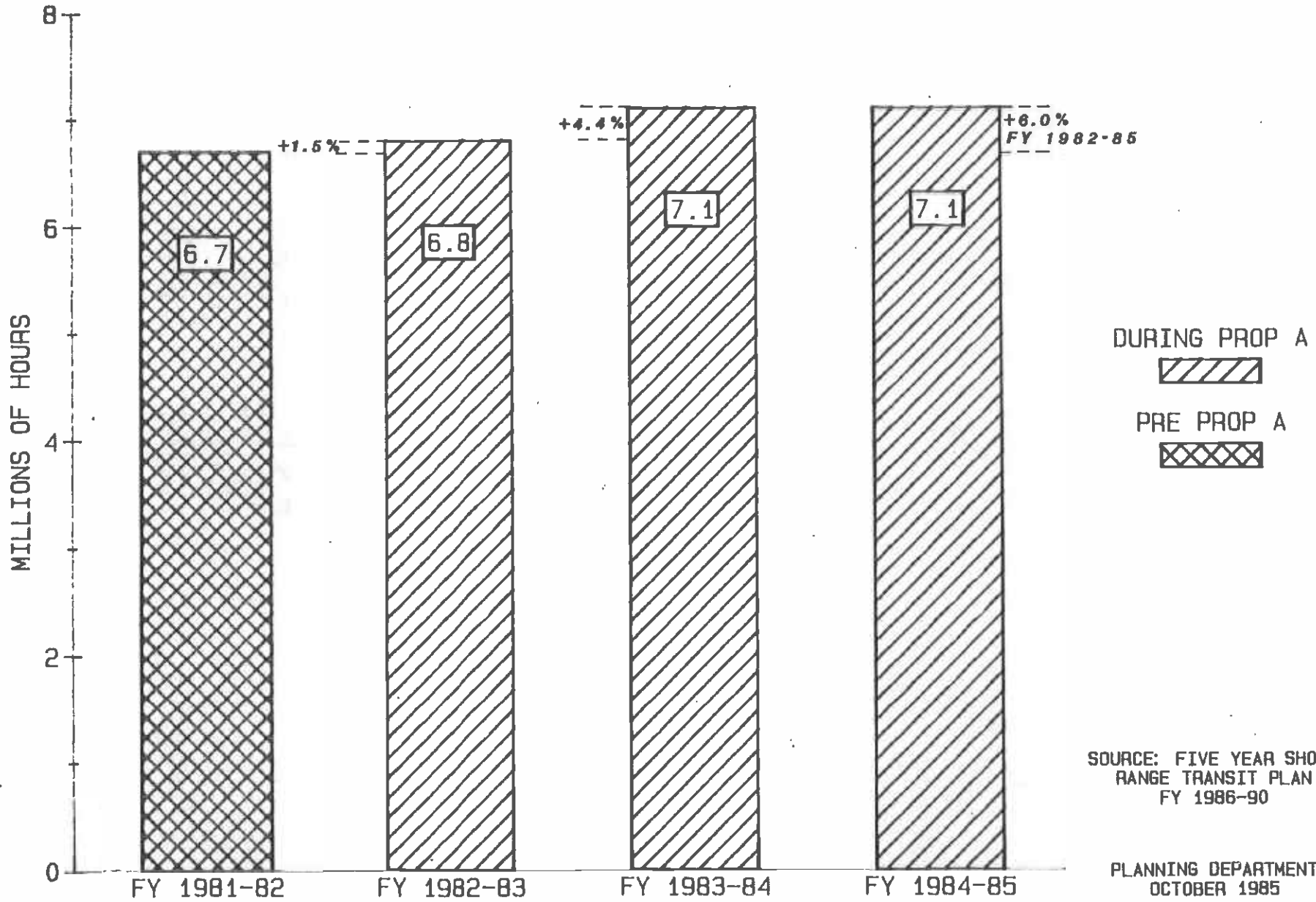
service reductions resulting from the end of the Prop A Subsidy Program. These adjustments were necessary to minimize passenger impacts and most importantly, for budgetary reasons.

Illustrations of the vehicle service hours and service miles for FY 1982 through FY 1985 are shown in Figures 3.32 and 3.33.

FIGURE 3.32

# VEHICLE SERVICE HOURS

FY 1981-82 THROUGH FY 1984-85



- 83 -

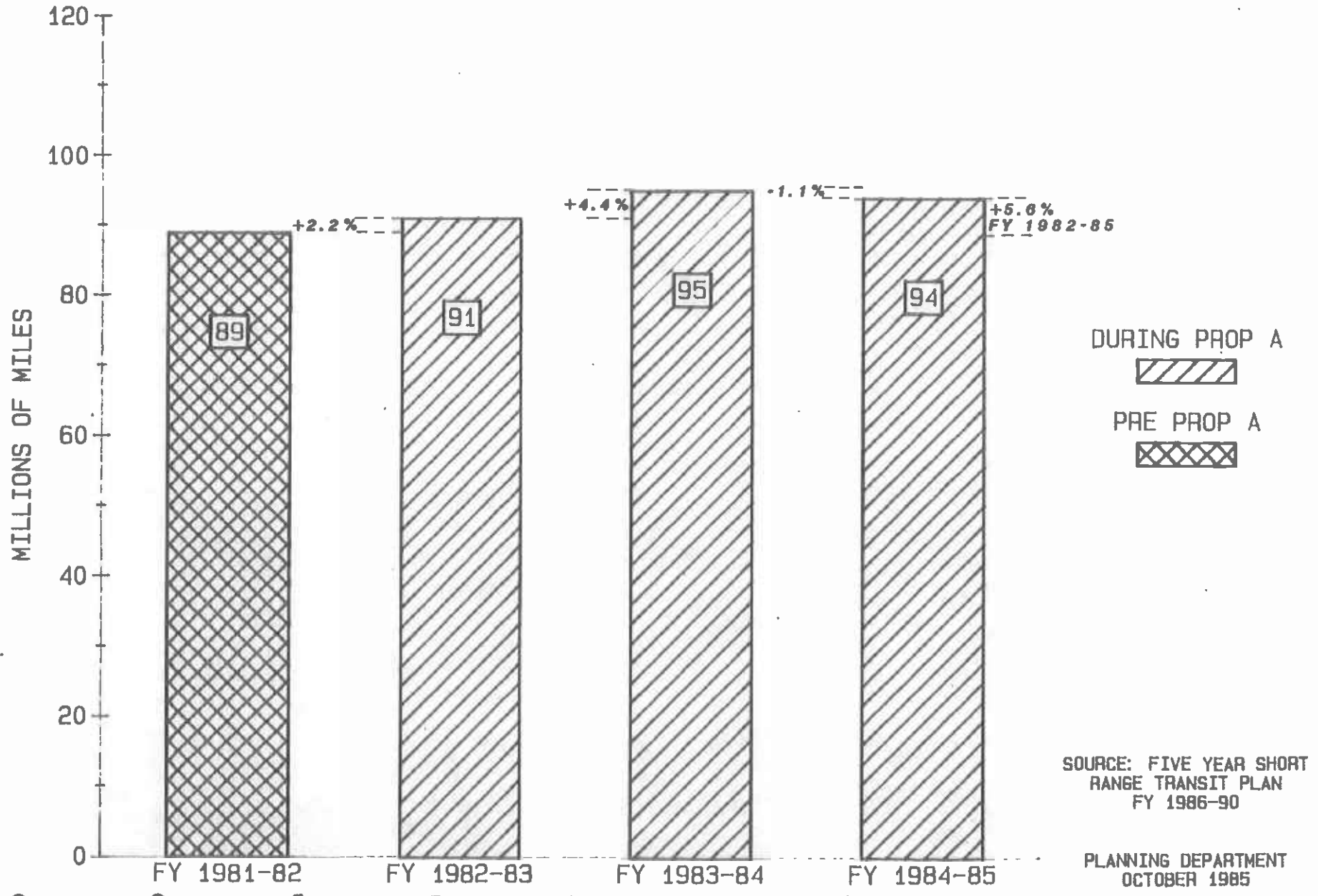
SOURCE: FIVE YEAR SHORT RANGE TRANSIT PLAN  
FY 1986-90

PLANNING DEPARTMENT  
OCTOBER 1985

FIGURE 3.33

# VEHICLE SERVICE MILES

FY 1981-82 THROUGH FY 1984-85



### 3.5.1 Impacts of Line Regulators

The primary function of the line regulators was to provide an even distribution of passengers on lines experiencing overcrowding. Load variations wasted capacity by having buses with standees alternating with buses which had empty seats. By reducing the variability in the loads, capacity was efficiently added with a minimum increase in buses. Line regulation proved to be one of the most efficient methods used for relieving overcrowding.

### 3.5.2 Impact of Interlining

Prior to Prop A, the District's bus system had been refined to a point that over 100 peak-hour buses were operating on an interlined basis. However, the uncertainties surrounding where additional buses would be needed to relieve overcrowding made it necessary to refine operating schedules and reassess the number of buses that could be successfully interlined.

Equipment availability would be the key factor in the District's ability to respond to overcrowding. Seasonal adjustments were made for school holiday services. Historically, fewer trips were required during this period.

It was determined that approximately 75 more buses could be interlined during the A.M. peak period. However, with the additional service required for the beginning of the school term, it was possible to interline 5 more buses during the same period. During the P.M. peak period, approximately 57 buses were scheduled to operate on an interline basis. An additional 15 buses were added in September to bring the total to 72 buses.

By the second year, enough buses had been deployed to reasonably stabilize loading conditions. More service was being provided systemwide which also made it possible to interline more buses without severely impacting equipment availability. More buses were scheduled to operate interline service. During FY 1983-84, over 100 buses were interlined during the AM/PM peak periods. This procedure would be expanded to reduce vehicle service hours and equipment requirements for the remainder of the Reduced

Fare Program.

A sample of the level of interlining is shown in Figure 3.34.

FIGURE 3.34

---

INTERLINE COMPARISON  
(Pre-Prop A vs. Prop A)

---

	NUMBER OF BUSES	
	<u>A.M.</u>	<u>P.M.</u>
April 1982 (Pre-Prop A)	109	101
July 1982	75	57
September 1982	80	66
January 1983	87	84
April 1983	88	84
July 1983	76	62
September 1983	86	86
October 1983	86	86
January 1984	101	112
April 1984	102	111
July 1984	75	66
September 1984	99	103
April 1985	140	141

SOURCE: SCRTD 4-24 Reports

---

### 3.5.3 Impact of Shortlining

Schedules were refined to include shortline operations. Buses were scheduled to operate only on peak route segments to relieve overcrowding. The interlining process enabled the District to reduce service hours, miles and minimize equipment requirements.

### 3.5.4 Impact of Reallocation of Service

Conformance with the conditions set forth in the MOU would require the District to redeploy service where possible to accommodate increased demand. The first priority was to determine where and how much service could be reallocated. Furthermore, any reallocation of service would have to be accomplished on a systemwide equitable basis.

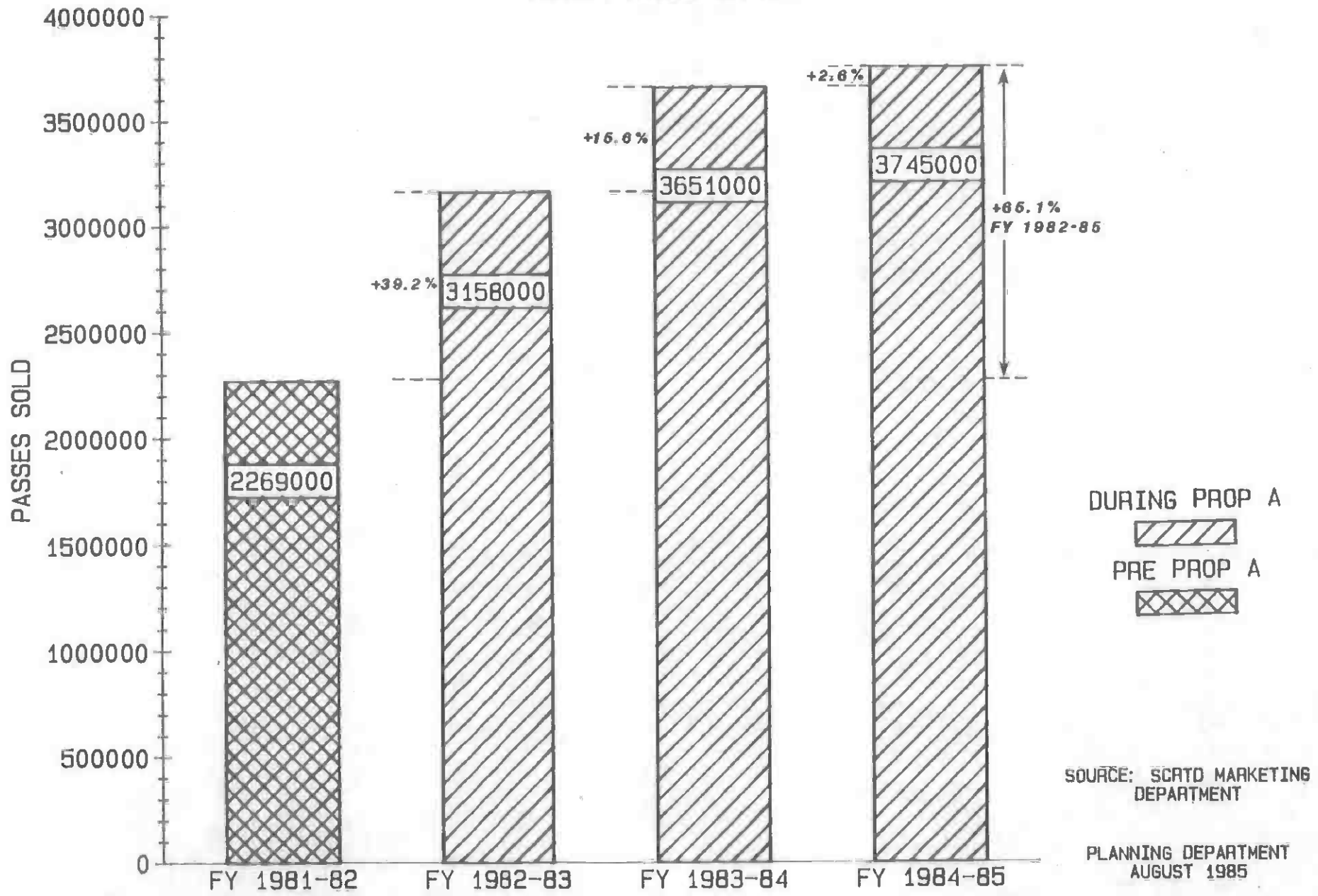
It was determined that headways could be widened on underutilized lines and buses reallocated for use on high demand lines. These adjustments were made with minimal impact to passengers. In all cases, passengers were informed well in advance of any reduction in service levels.

## 3.6 IMPACT ON PASS SALES

Consistent with the guidelines set forth in the MOU, monthly pass prices were reduced in all fare categories. As a result, approximately 3.1 million passes were sold in the first year compared to the 2.2 million sold in the previous year. Sales totaled 3.6 million the second year. Third year sales exceeded 3.7 million, a 65 percent increase over pre-Prop A sales. Figure 3.35 illustrates the increase in sales during the pre and Prop A fare reduction period.



**FIGURE 3.35**  
**RTD PASS SALES COMPARISON**  
**TOTAL PASS SALES**



### 3.6.1 Regular Passes

Regular monthly base passes were reduced from \$34 to \$20. As a result, pass sales increased from 1.0 million to 1.2 million by the end of the Reduced Fare Program. Sales increased by 2.7 percent the first year. Over the three-year period sales increased approximately 16 percent.

### 3.6.2 College/Vocational Passes

College/Vocational passes were reduced from \$26 to \$4 which resulted in a 96 percent increase in sales over the three-year period. During the first year of the program, sales increased 156 percent over the previous year. However, after the first year, sales declined by 17 percent and 8 percent, respectively.

### 3.6.3 Student Passes

Elementary through high school student pass prices were reduced approximately 82 percent, from \$22 to \$4. This fare reduction resulted in a 194 percent increase in sales the first year of the program. Sales continued to increase the second and third year by 46 percent and 6 percent, respectively.

### 3.6.4 Disabled Passes

Disabled passes were reduced from \$7.50 to \$4. As a result, pass sales increased from 128,000 to 138,000 the first year of the program, an 8 percent increase. Sales continued to increase the second and third year by 4 percent and 2 percent, respectively. Over the three-year period sales increased about 15 percent.

### 3.6.5 Senior Citizen Passes

Senior Citizen passes were also reduced from \$7.50 to \$4. Pass sales

increased the first year from 629,000 to 671,000, a 7 percent increase. Sales during the second and third year showed a slight increase of 2 percent and 1 percent. Senior pass sales increased less than 10 percent between FY 1981-82 and FY 1984-85.

Figures 3.36 through 3.40 compare annual sales for all fare categories before and after the implementation of the Reduced Fare Program.

FIGURE 3.36

# RTD PASS SALES COMPARISON REGULAR

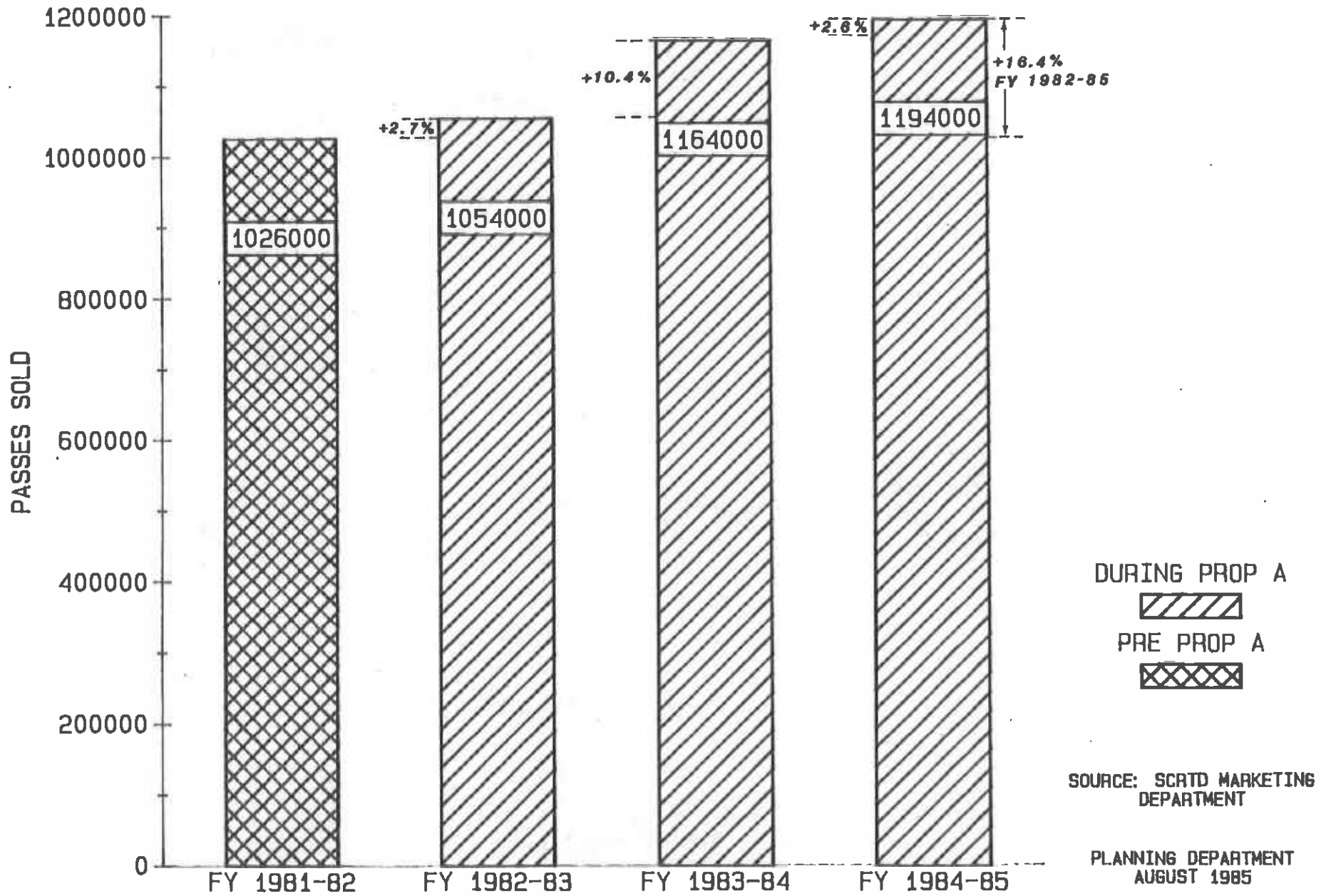


FIGURE 3.37

RTD PASS SALES COMPARISON  
COLLEGE/VOCATIONAL

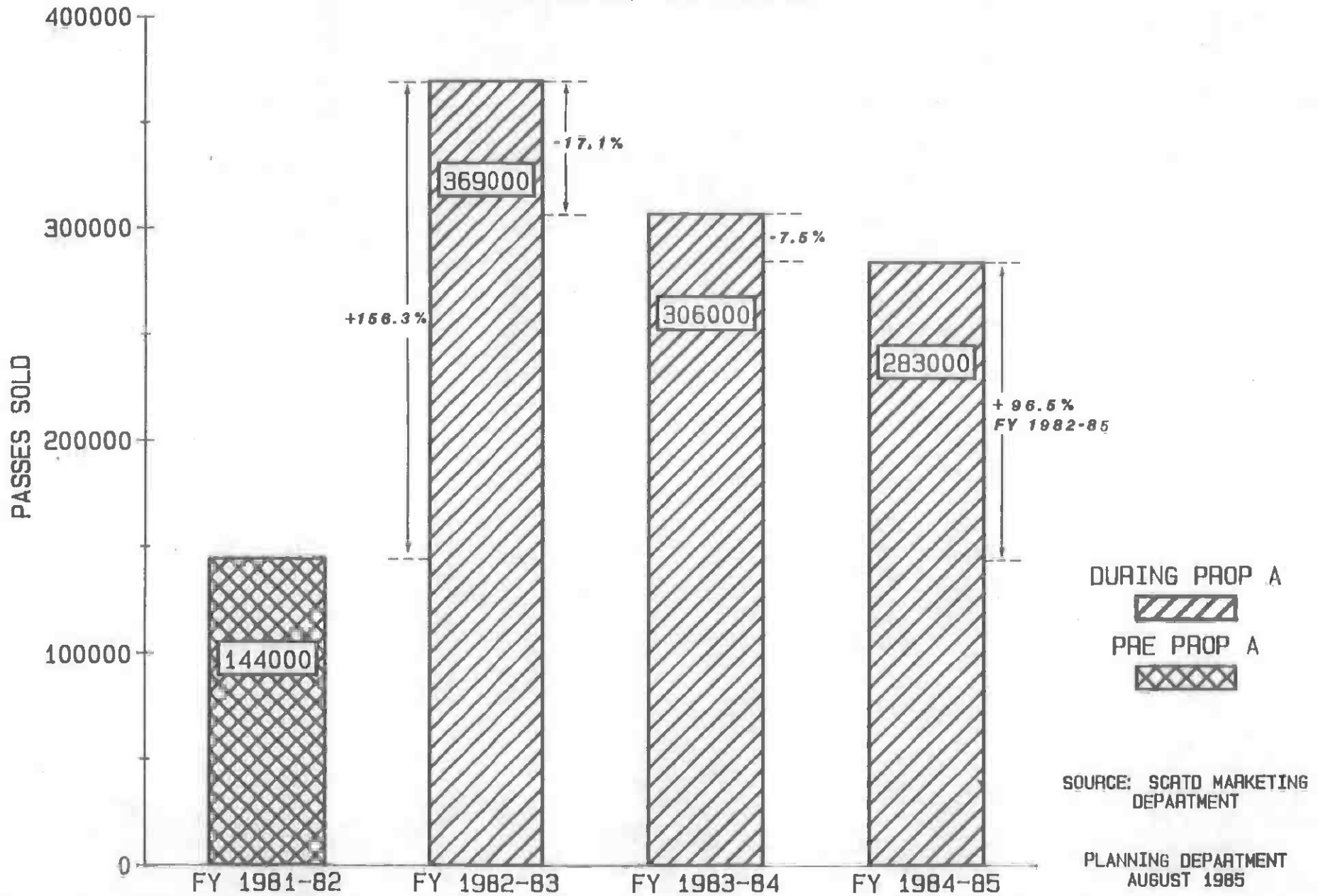


FIGURE 3.38

# RTD PASS SALES COMPARISON STUDENT

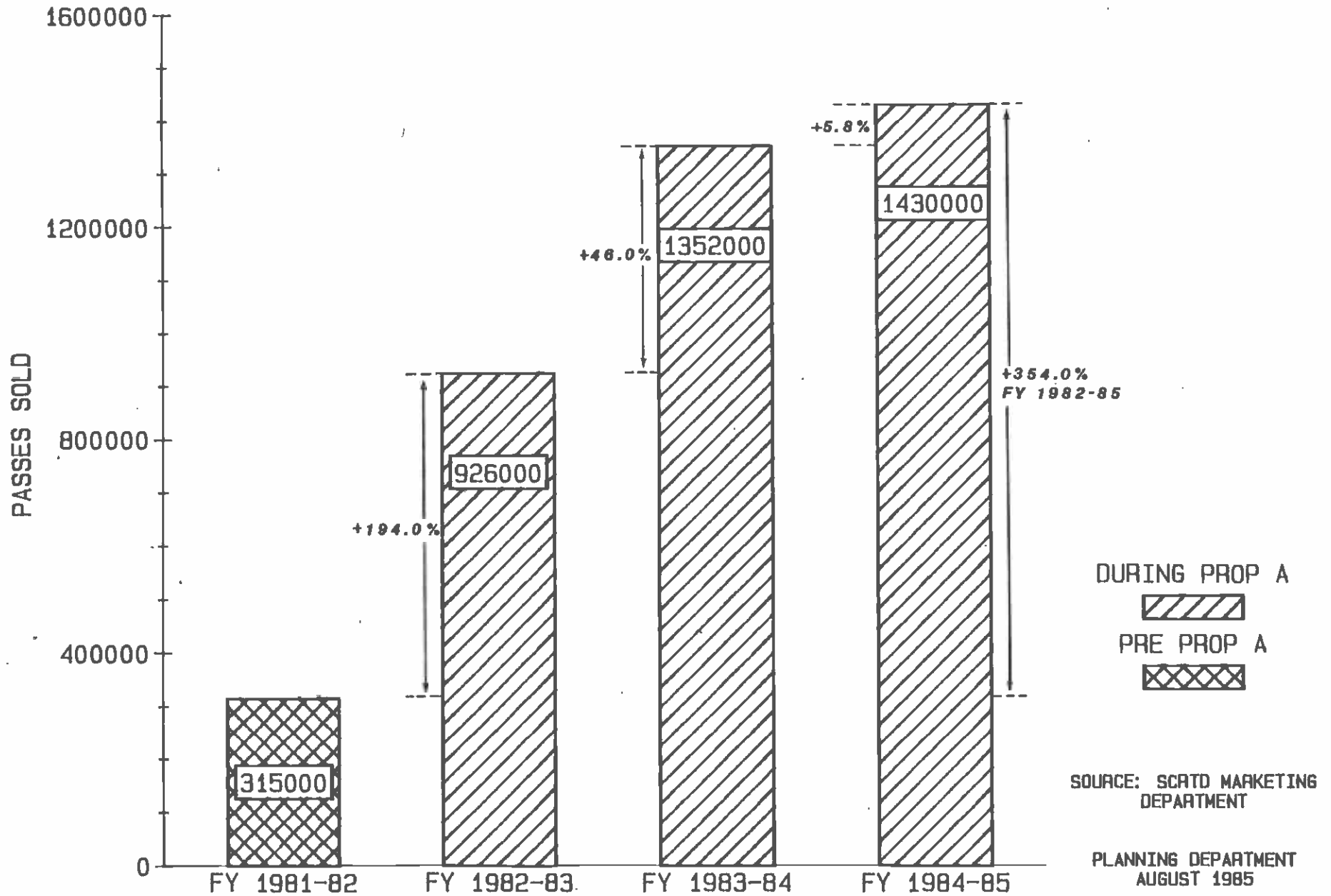


FIGURE 3.39  
 RTD PASS SALES COMPARISON  
 DISABLED

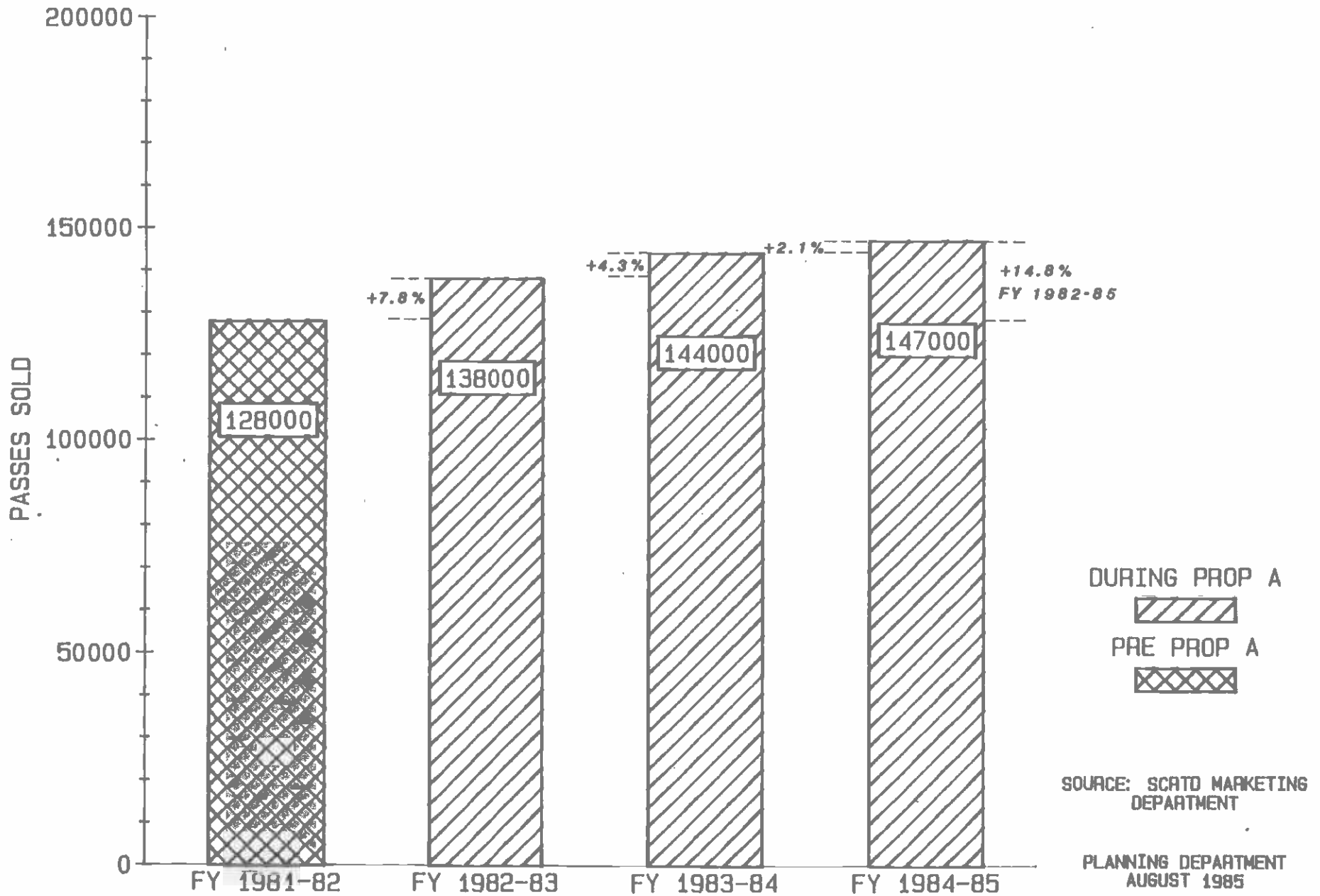
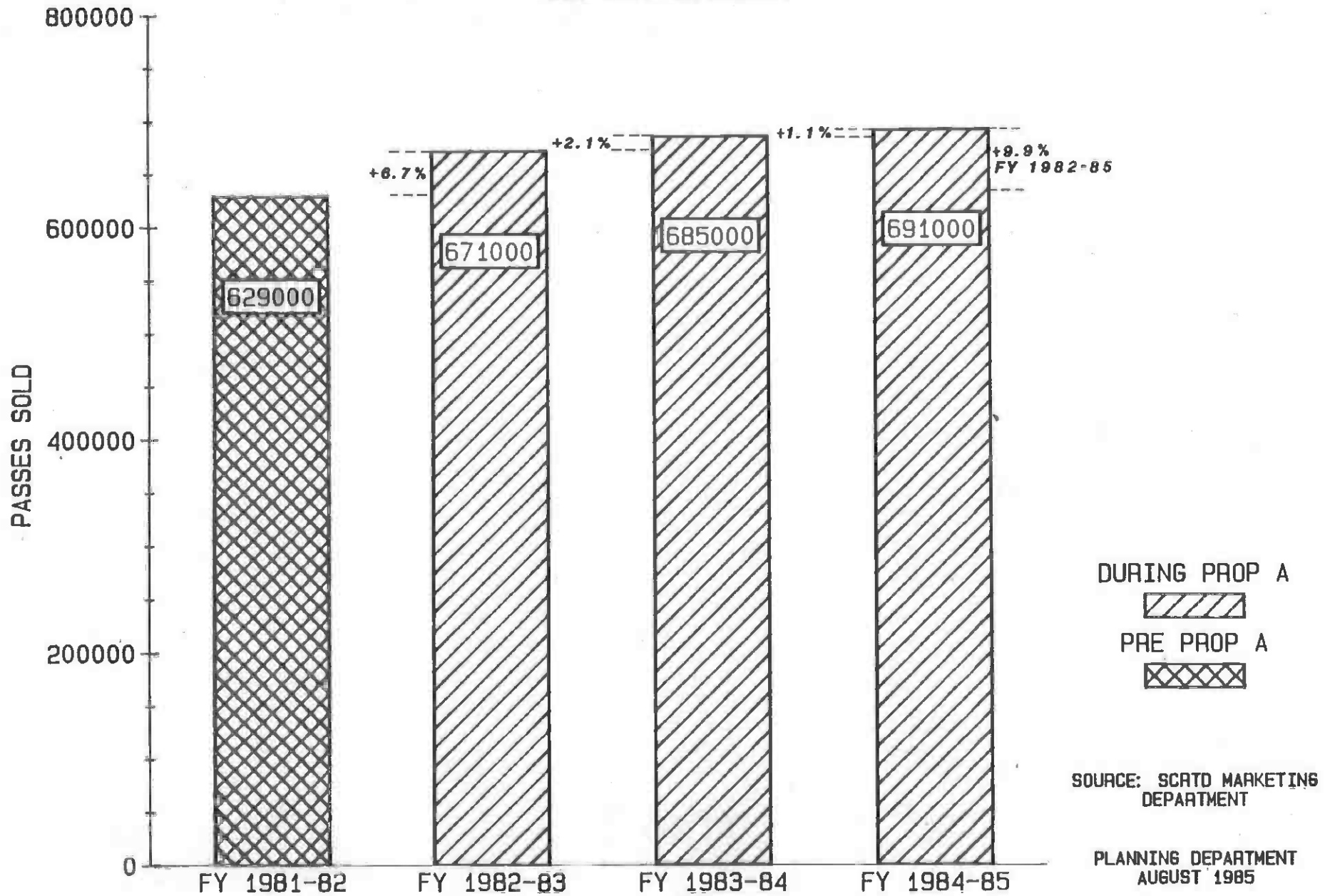


FIGURE 3.40

# RTD PASS SALES COMPARISON SENIOR CITIZEN



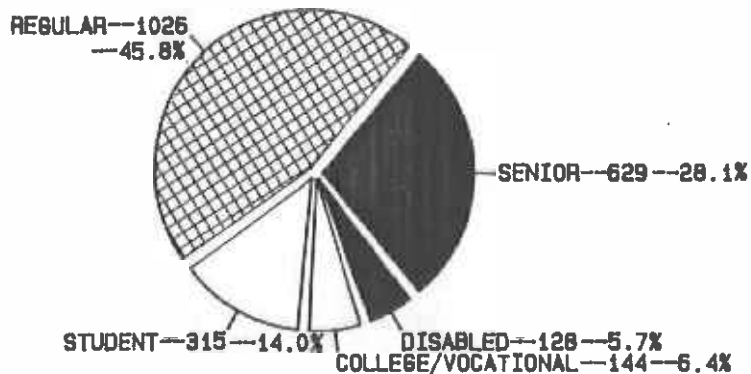


### 3.6.6 Proportional Distribution of Pass Sales by Fare Category

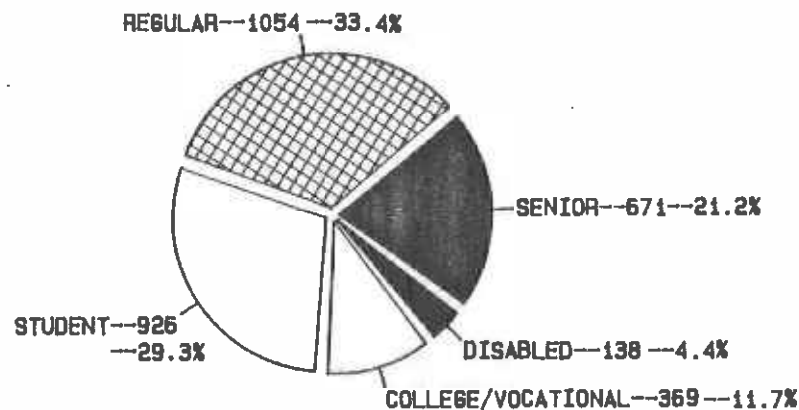
Prior to Prop A, almost 50 percent of the passes sold were regular monthly passes. By the end of the third year, however, regular pass sales had decreased to about 32 percent of the total. Student pass sales increased from 14 percent to over 38 percent of total sales. Figure 3.41 illustrates the proportional change in pass sales by fare category for FY 1982-85.

FIGURE 3.41

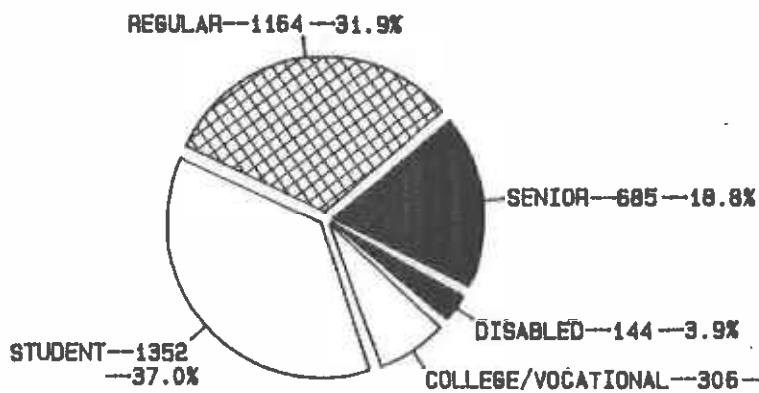
PASS SALES COMPARISON BY FARE CATEGORY



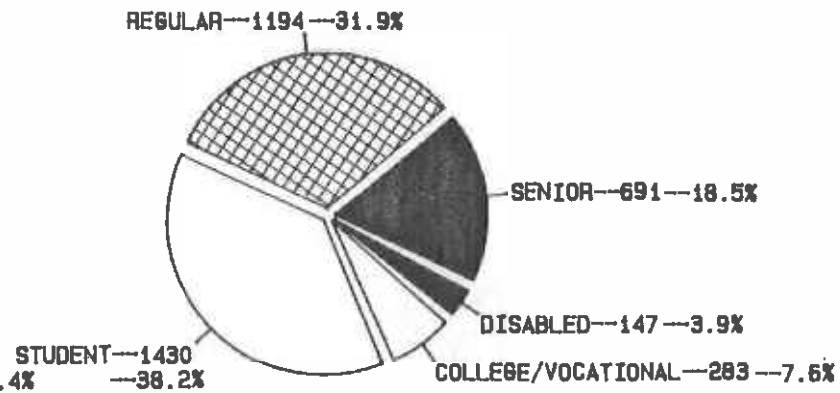
TOTAL PASSES SOLD 2,242,000  
**PASS SALES FY 1981-82**  
 (THOUSANDS)



TOTAL PASSES SOLD 3,158,000  
**PASS SALES FY 1982-83**  
 (THOUSANDS)



TOTAL PASSES SOLD 3,651,000  
**PASS SALES FY 1983-84**  
 (THOUSANDS)



TOTAL PASSES SOLD 3,745,000  
**PASS SALES FY 1984-85**  
 (THOUSANDS)

### 3.6.7 Express Stamp Sales

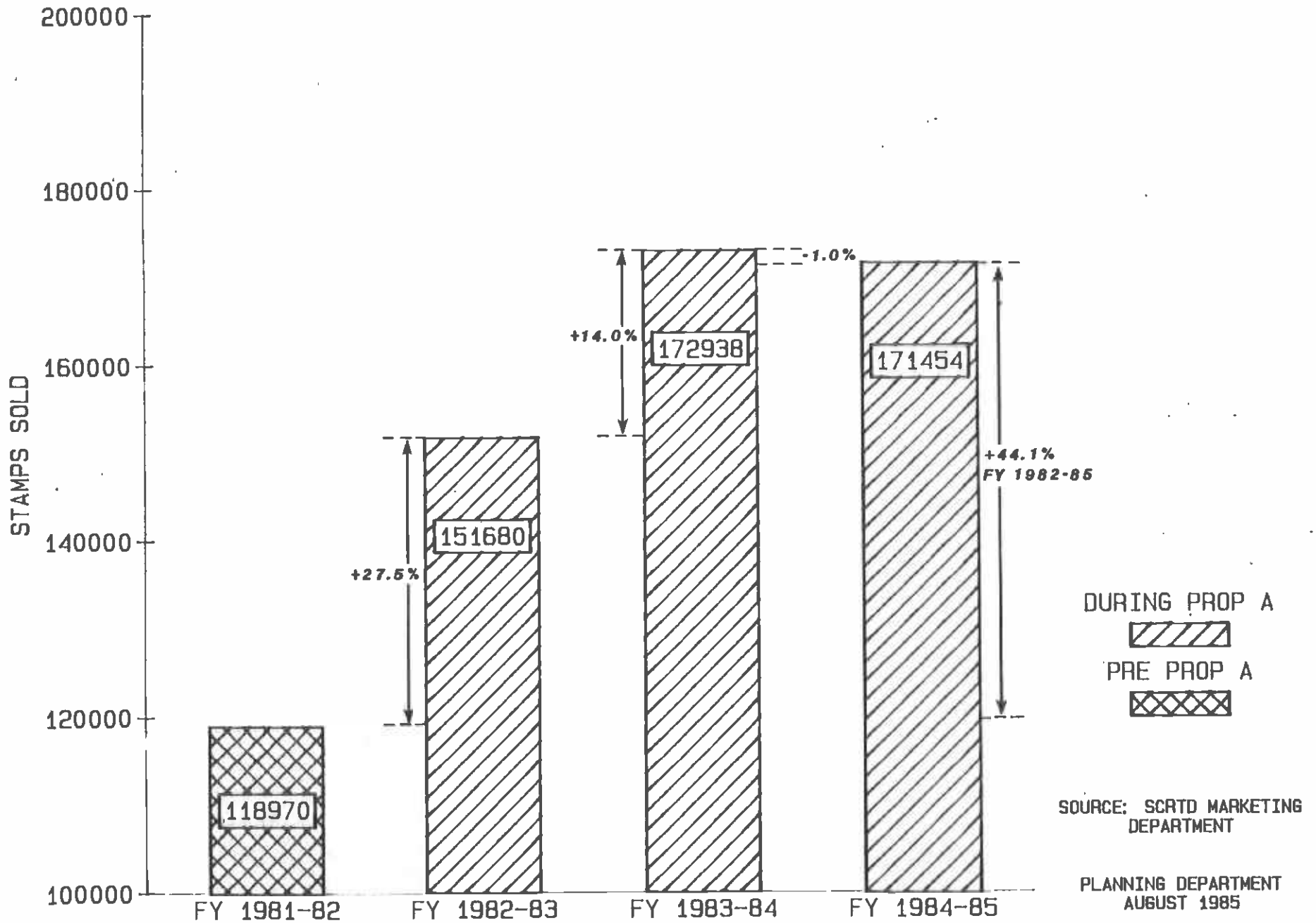
Distance based zone incremental charges were reduced from \$12.00 to \$7.00. Passengers using express or park/ride services were required to pay up to five zone increments, depending on the number of miles travelled on the freeway and/or busway. In terms of distance each zone stamp represented approximately four miles of freeway or busway travel.

Zone stamp sales increased approximately 44 percent over the three year period. The average increase in the one, two and three zone stamp categories was about 25 percent during the same period. However, the most significant increase occurred in the four and five zone categories with increases of 119.1 and 131.6 percent, respectively. (Figure 3.42).

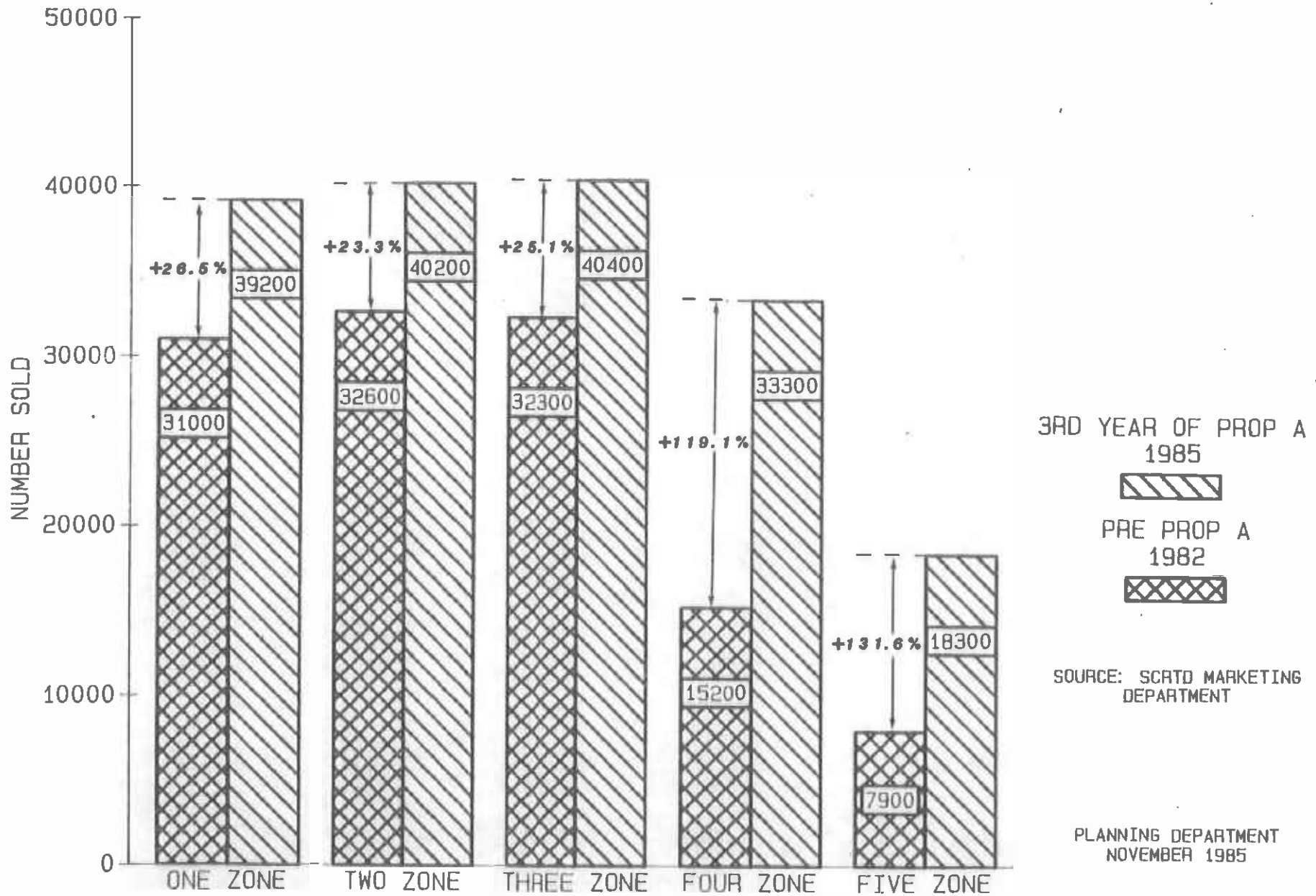
By lowering fares from \$82 to \$48 for the four zone stamp and from \$94 to \$55 for the five zone stamp, public transit became more attractive and affordable for users of distance-based express and park/ride services. This is verified by the fact that the four and five zone stamps represented use for commuter type trips, distances of 16 or more miles. (Figure 3.43).

FIGURE 3.42

# ANNUAL EXPRESS STAMP SALES COMPARISON



**FIGURE 3.43**  
**COMPARISON OF FY 1982 AND FY 1985**  
**EXPRESS STAMP SALES**



### 3.6.8 Average Boarding By Fare Category And Method Of Payment

The increase in boardings was a clear indication that lower fares made public transit more affordable for area residents. However, it was not clear whether the increase resulted from passengers paying cash fares or that most found it more cost-effective to purchase and use monthly passes.

Even though there was a 65 percent increase in pass sales over the three year period, pass usage could not be determined based solely on sales. In order to determine the method of payment, data were compiled from ride checks to determine actual boardings by fare type. Further refinement was necessary to determine the method of payment.

It was determined that the majority found it more cost-effective to purchase and use monthly passes. Figure 3.44 illustrates the shift to pass usage through time.

FIGURE 3.44

ANNUAL BOARDING AND METHOD OF FARE PAYMENT COMPARISON				
YEAR	TOTAL BOARDINGS (Millions)	PERCENT OF TOTAL BOARDINGS		
		CASH	PASSES	
FY 1982	352.7	47.0%	53.0%	
FY 1983	415.9	44.7%	55.3%	
FY 1984	465.6	45.1%	54.9%	
FY 1985	497.2	45.8%	54.2%	

SOURCE: Planning Department

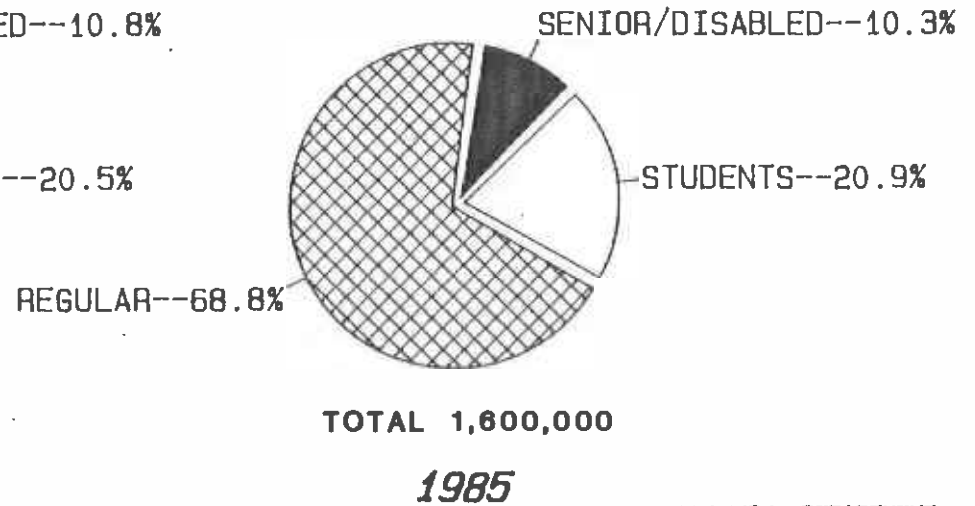
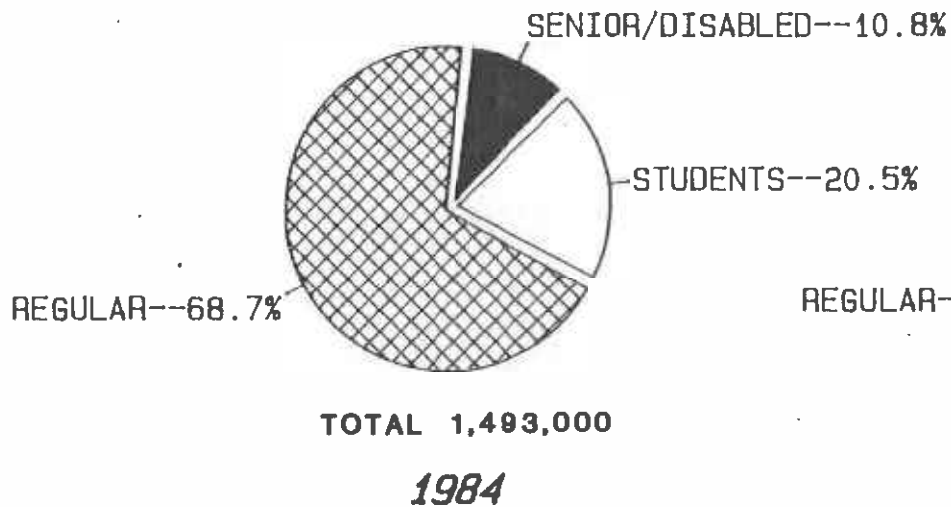
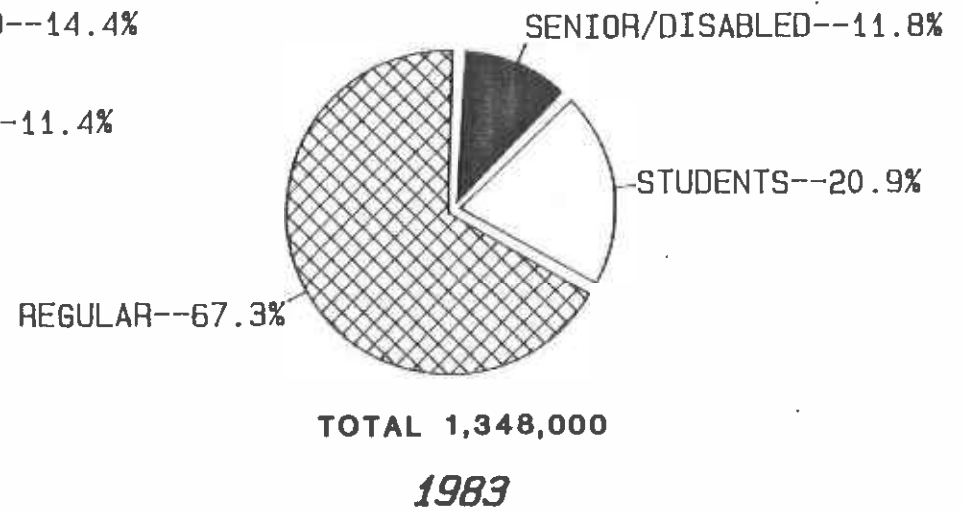
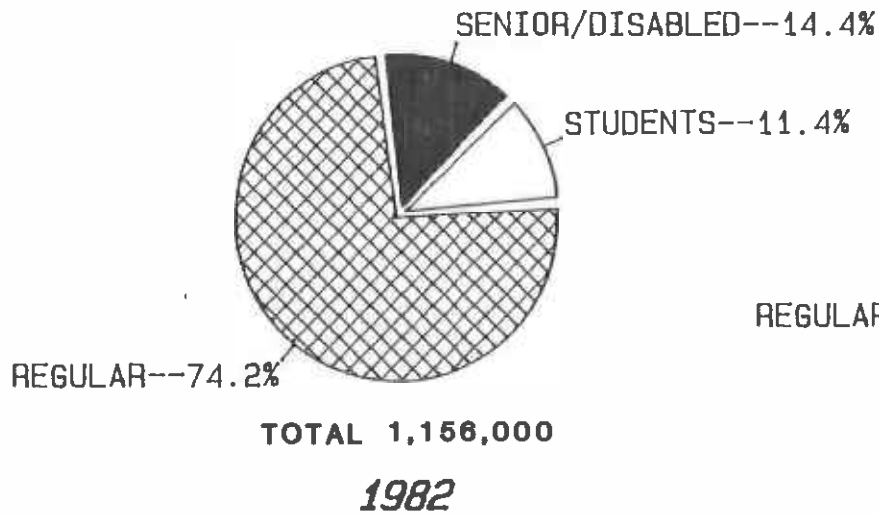
### 3.6.9 Proportional Change In Ridership By Fare Category

The Prop A fare reduction was significant enough to create a tremendous surge in pass sales and transit usage in the student and regular fare categories. However, a different trend developed in the senior and disabled usage of transit by the groups. Transit usage and pass sales remained fairly constant for the two groups throughout the Prop A period.

As illustrated in Figure 3.45, proportionally average boardings by fare category shifted during the Reduced Fare Program. Prior to the program, the regular boarding category accounted for 74.2 percent of the total boardings. Senior/Disabled and students represented 14.4 percent and 11.4 percent, respectively. During the first year of the program, the regular fare category represented 67.3 percent, with the senior/disabled category increasing to 11.8 percent, an increase of less than one percent. However, student boardings increased almost 10 percent, which represented 10.9 percent of the total boardings. Before the end of the Reduced Fare Program, proportionally regular fare boardings would represent 68.8 percent of total; senior/disabled declined to 10.3 percent with the student category remaining at 20.9 percent.

FIGURE 3.45

### AVERAGE BOARDINGS BY FARE CATEGORY





## **CHAPTER 4.0**

---

### **PRODUCTIVITY AND QUALITY OF PROP A SERVICE**

## 4.0 PRODUCTIVITY AND QUALITY OF PROP A SERVICES

This chapter will discuss the various productivity measures that were to be monitored and maintained under the terms of the LACTC Master Agreement. It also investigates the quality of service as perceived by both the transit user and the District.

### 4.1 PRODUCTIVITY AND COST EFFICIENCY OF PROP A SERVICE

The performance indicators which are discussed in this section have been categorized according to the area of performance they measure. To facilitate comparison and review, two major categories have been established: Productivity and Cost. The indicators in each category will provide a variety of ways to view both the District's performance within an area, and relationships among the areas. Results of each of the key performance indicators are summarized in Figure 4.1.

**MTA LIBRARY**

**MTA LIBRARY**

FIGURE 4.1

SUMMARY OF PRODUCTIVITY AND COST INDICATORS

<u>INDICATORS</u>	<u>FY 1981-82</u>	<u>FY 1982-83</u>	<u>FY 1983-84</u>	<u>FY 1984-85</u>
<u>Productivity</u>				
Boardings (000)	352,700	416,000	465,900	493,200
Vehicle Service Hours (000)	6,648	6,820	7,126	7,109
Boardings Per Vehicle Service Hour	53.1	61.2	65.4	69.4
Vehicle Service Miles (000)	89,400	91,100	94,540	93,979
Boarding Per Vehicle Service Mile	3.95	4.57	4.93	5.25
<u>Cost</u>				
Operating Cost (000)**	\$362,792	\$393,357	\$428,628	\$459,510
Passenger Revenue (000)	\$163,489	\$106,094	\$117,377	\$123,558
Operating Cost Per Boarding	\$1.029	\$.946	\$.920	\$.932
Revenue Per Boarding	\$.464	\$.255	\$.252	\$.251
Subsidy Per Boarding	\$.565	\$.691	\$.668	\$.682

\*\* Less Depreciation

SOURCES: SCRTD Five Year Short Range Transit Plan (Data For FY 1982-84)  
 Planning Department (Data For FY 1984-85)  
 Office of Management & Budget (Data For FY 1984-85)

#### 4.1.1 Boardings Per Vehicle Service Hour

In terms of boardings per vehicle service hour, productivity increased over 30 percent, from 53.1 to 69.4, during the three-year period. As illustrated in Figure 4.2, boardings per hour increased the first year by 15.3 percent. Increases during the second and third year were about 7 percent.

#### 4.1.2 Boardings Per Vehicle Service Mile

Boardings per vehicle service mile increased over 32 percent, from 4.0 to 5.3 by the end of the three year reduced fare period. As shown in Figure 4.3, boardings per vehicle service miles increased 15.0 percent the first year. Second and third year increases were 6.5 and 8.2 percent, respectively.

It should be noted that variances in the above mentioned indicators were limited by the amount of service and the service standards which required the District to add service when patronage rose above certain levels. The primary factors contributing to the increase in productivity were ridership growth and the efficient use of District resources. Although the vehicle service hour cap limited the amount of additional service, the District was able to efficiently deploy more buses while at the same time minimizing the number of additional service hours and miles. The fact that productivity increased in both passengers per mile and passengers per hour indicates that service deployment was consistent with systemwide passenger demand.

As illustrated in Figure 4.4 both indicators increase about 15 percent the first year. The second year showed increases of over 6 percent. During the third year, passengers per hour remained about 6 percent with passengers per mile increasing over 8 percent.

FIGURE 4.2

# UNLINKED BOARDINGS PER VEHICLE SERVICE HOUR

FY 1981-82 THROUGH FY 1984-85

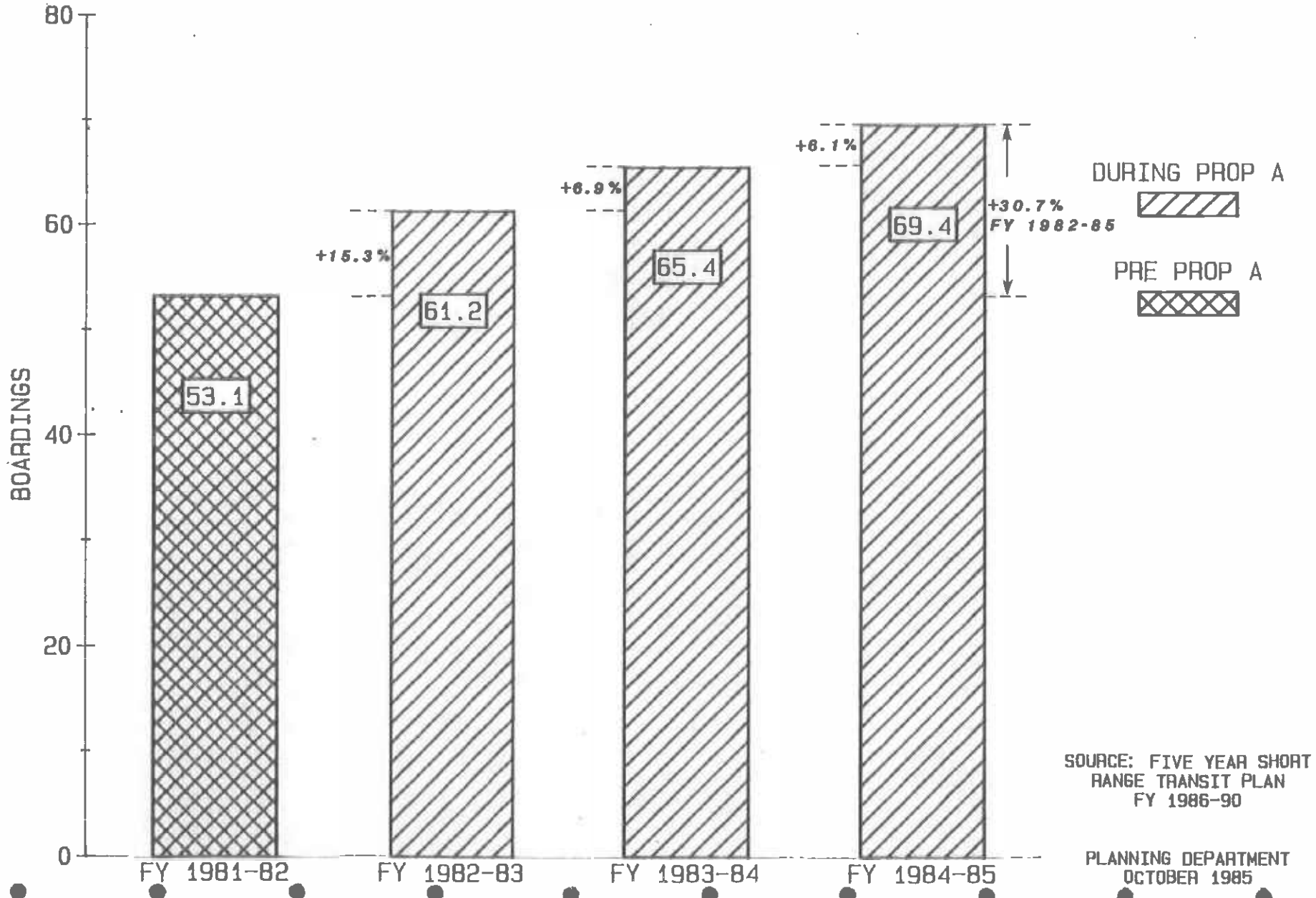


FIGURE 4.3

# UNLINKED BOARDINGS PER VEHICLE MILE

FY 1981-82 THROUGH FY 1984-85

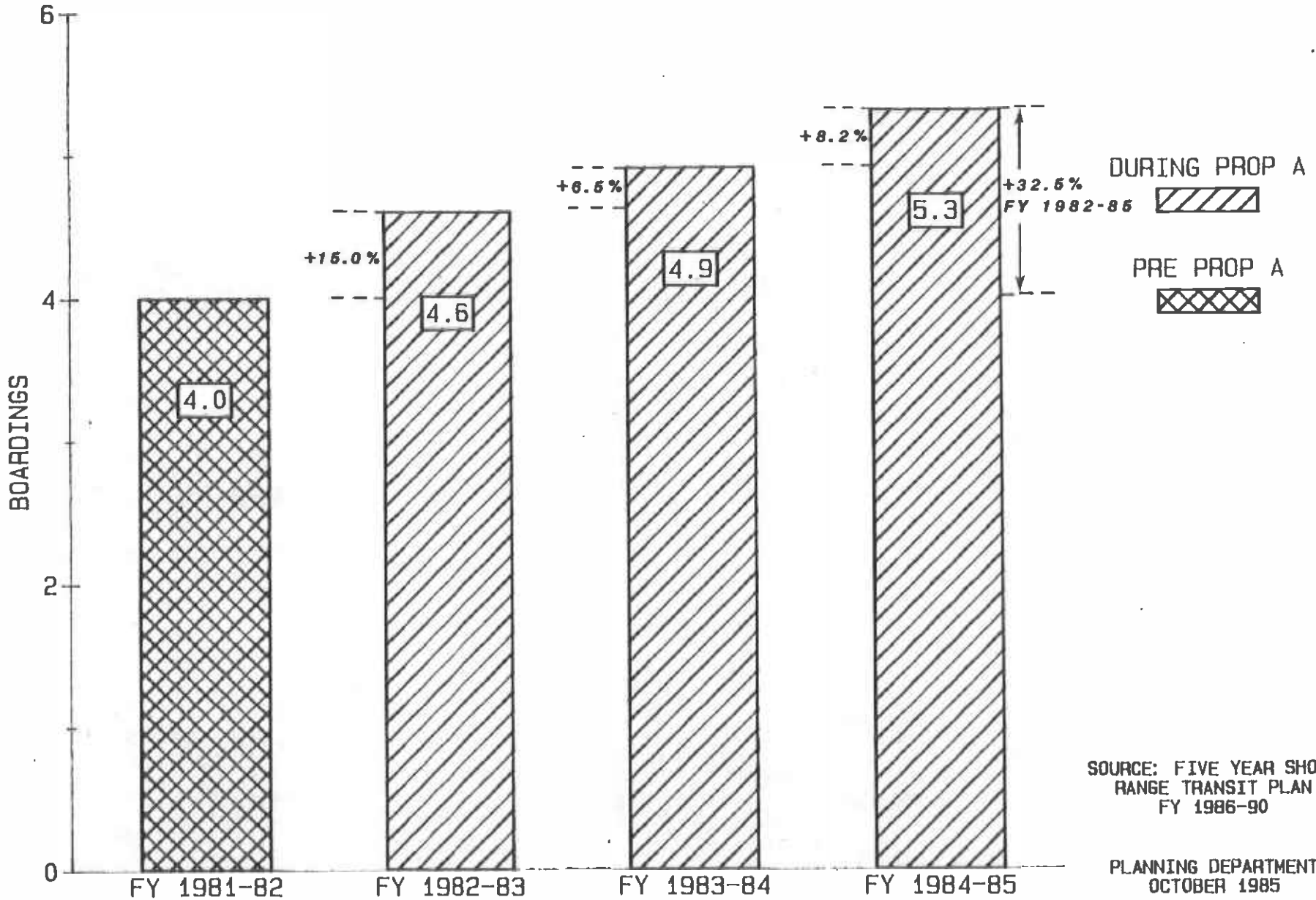


FIGURE 4.4

PASSENGERS PER HOUR AND PASSENGERS PER MILE COMPARISON

<u>INDICATOR</u>	<u>PRE-PROP A</u> <u>FY 1981-82</u>	<u>DURING PROP A PERIOD</u>		
		<u>FY 1982-83</u>	<u>FY 1983-84</u>	<u>FY 1984-85</u>
Passengers Per Hour	53.1	61.2	65.4	69.4
% Change from Previous Year		+15.3%	+6.9%	+6.1%
Passengers Per Mile	4.0	4.6	4.9	5.3
% Change from Previous Year		+15.0%	+6.5%	+8.2%

SOURCE: FY 1982-84, SCRTD Five Year Short Range Transit Plan  
 FY 1984-85 Planning Department

#### 4.1.3 Passengers Per Peak Bus

Figure 4.5 summarizes and compares the change in this indicator through time. It shows a continuing increase in this factor, with the largest percentage change occurring at the beginning of the Prop A program. Between July and September, 1982, the indicator increased by 12.2 percent. This would have equated to a phenomenal 73.2 percent annual rate. The figures from the September of 1982, 1983 and 1984 reflect annual changes, and indicate a leveling off in both the rate of growth of ridership and in the boardings per peak bus ratios.

FIGURE 4.5

BOARDING PASSENGERS PER PEAK BUS						
	PRE- PROP A 4/82	DURING PROP A PERIOD				
		7/82	9/82	9/83	9/84	4/85
Average Daily Boardings (Millions)	1.108	1.116	1.256	1.416	1.602	1.698
% Change from Previous Date		0.7%	12.5%	18.3%	7.8%	6.0%
PM Peak Period Buses	2,007	1,913	1,916	2,097	2,126	2,220
% Change from Previous Date		(4.7%)	0.2%	9.4%	1.4%	4.4%
Boardings/Peak Bus	552	583	654	709	754	765
% Change from Previous Date		5.6%	12.2%	8.4%	6.3%	1.5%

SOURCE: Planning Department Ridership by Month Reports  
SCRTD 4-24 Bus Equipment Assignment Reports



#### 4.1.4 Average Peak Hour Passenger Loading

The MOU between the District and the Commission stipulated that existing loading standards should not be allowed to worsen because of increased ridership. Additional service was to be instituted where necessary to maintain these standards.

Pre-Prop A checks were evaluated to determine average passenger loads for every line in the system. The baseline data were further analyzed to identify lines that could potentially exceed standards, thus becoming candidates for service augmentation.

Since the greatest demand for District services occurred during peak periods, it was, therefore, necessary to concentrate the majority of the monitoring efforts on lines operating during peak periods.

Figure 4.6 shows the average peak hour load factor for FY 1982 through FY 1985. As indicated, the average load factors increased from .92 to 1.35.

FIGURE 4.6

---

AVERAGE  
PEAK HOUR LOAD FACTOR

---

<u>FY 1981-82</u>	<u>FY 1982-83</u>	<u>FY 1983-84</u>	<u>FY 1984-85</u>
.92	1.07	1.23	1.35

SOURCE: TITLE VI Assessment for Capital and Operating  
Assistance Update 1984

---

Exhibit 6 illustrates the peak hour load variations on a line-by-line basis. Indications are that the peak hour varied on individual lines, but generally occurred during the AM or PM peak period (6:00 A.M. - 9:00 A.M. or 3:00 P.M. - 6:00 P.M.). The variations in regular service load factors ranged between .81 on Line 245 to 2.37 on Line 211.

In cases where load factors exceeded standards, follow-up checks were conducted to verify load conditions. Schedules were then adjusted or service added to relieve overcrowding.

## 4.2 COST OF PROP A SERVICE

This section compares the cost of providing Prop A service and its relationship to passenger boardings.

### 4.2.1 Operating Ratio

Revenue and cost were the two indicators dealing with the District's financial performance. Revenue was dependent upon the fare structure and the method of payment selected by the public. Operating cost was measured in terms of the costs of providing service in relationship to the number of passengers boarding. The relationship between the two indicators is used to determine the operating ratio.

As a direct result of lower fares, farebox revenue declined 24.4 percent over the three year reduced fare period. Farebox revenue declined in excess of 35 percent the first year. However, growth in ridership during the second and third years resulted in relative increases 10.7 percent and 5.3 percent, respectively. Figure 4.7 illustrates changes in actual farebox revenue between FY 1981-82 through FY 1984-85.

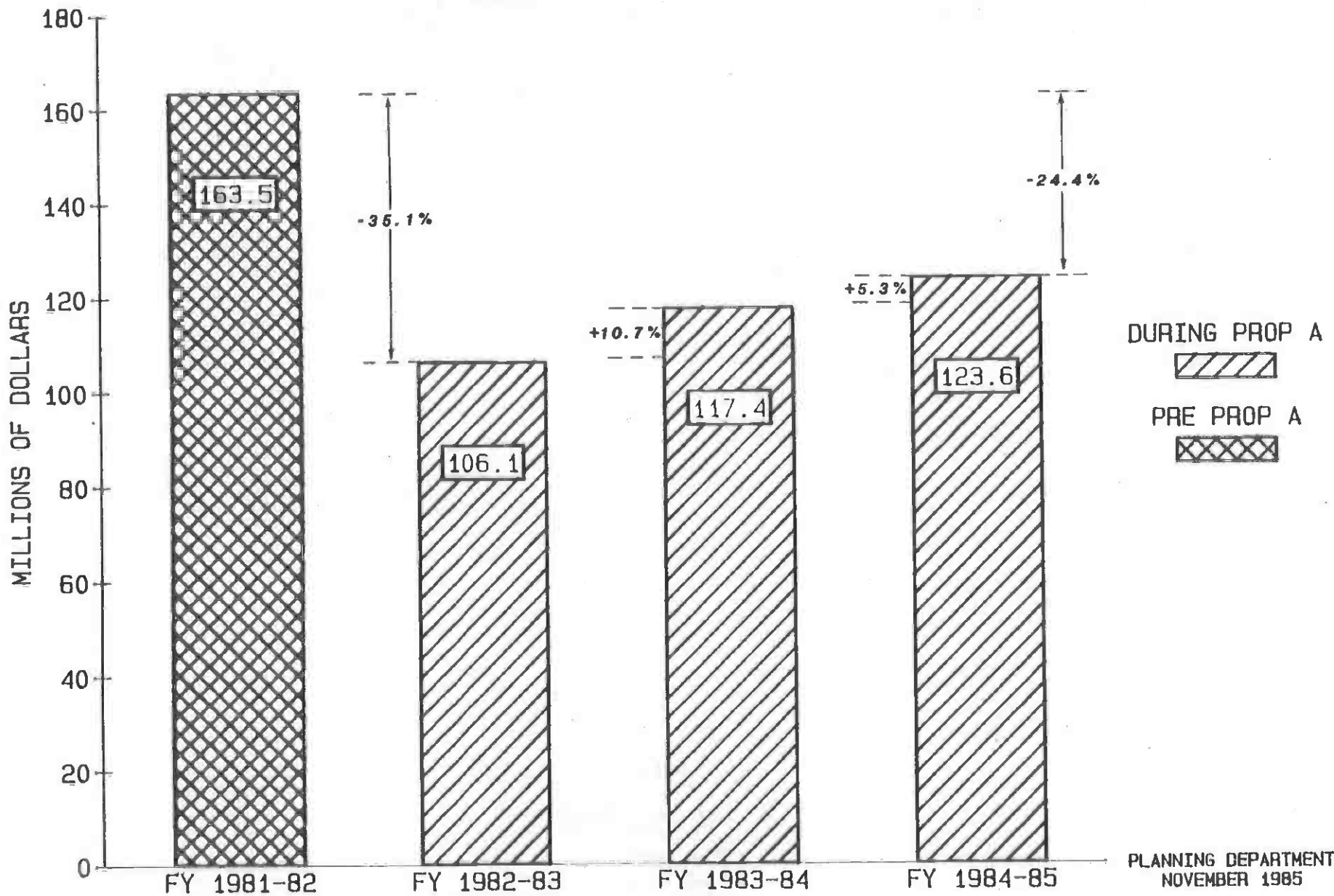
In the year preceding Prop A, the District's operating cost was \$362.8 million. By the end of the third year, operating cost had increased to \$459.5 million, a 27 percent increase. As illustrated in Figure 4.8, operating cost increased by about 8 percent the first year and remained fairly uniform during the last two years. The increase in operating cost was a direct result of inflation and the District providing more service to meet demand.

The ratio between farebox revenue and operating cost declined from 45.1 percent to 26.9 percent over the three year period. This decline was a direct result of increases in the number of pass users, riders paying reduced fares, and linked transfer trips which resulted in lower farebox revenue per boarding.

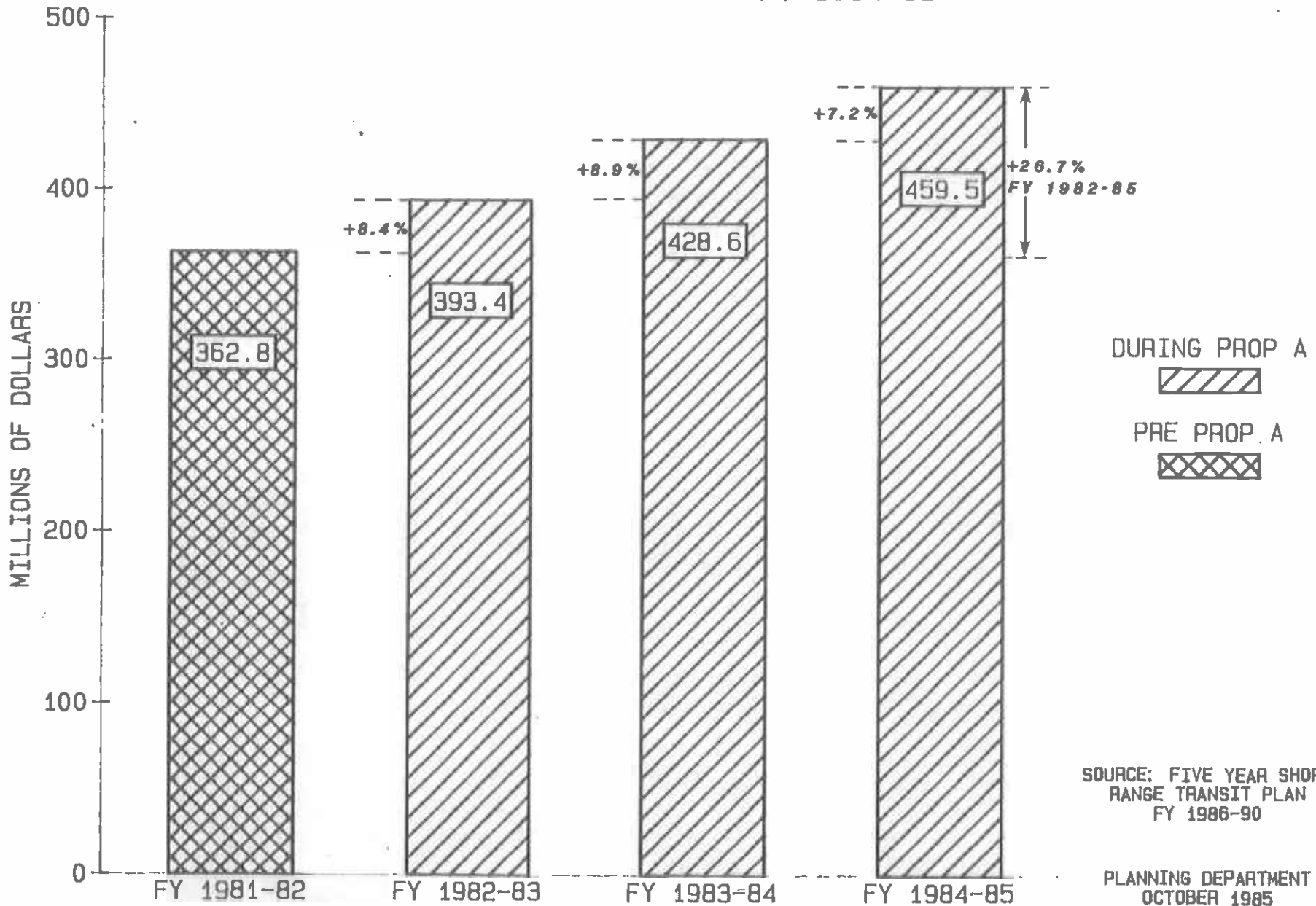
FIGURE 4.7

# ACTUAL FAREBOX REVENUE

FY 1981-82 THROUGH FY 1984-85



**FIGURE 4.8**  
**OPERATING COST**  
 FY 1981-82 THROUGH FY 1984-85



SOURCE: FIVE YEAR SHORT  
 RANGE TRANSIT PLAN  
 FY 1986-90

PLANNING DEPARTMENT  
 OCTOBER 1985

Figure 4.9 illustrates the relationship between the District operating costs and farebox revenues for FY 1982-85.

FIGURE 4.9

INDICATOR	PRE-PROP A FY 1981-82	THREE YEAR PROP A PERIOD		
		FY 1982-83	FY 1983-84	FY 1984-85
Actual Farebox Revenue (000' s)	\$163,489	\$106,094	\$117,377	\$123,558
Percent Change		-35.1%	+10.6%	+5.3%
Operating Cost** (000)	\$362,792	\$393,357	\$428,628	\$459,510
Percent Change		+8.4%	+9.0%	+7.2%
Operating Ratio	45.1%	27.0%	27.4%	26.9%

\*\* -Less Depreciation

SOURCE: FY 1981-82 Through 1983-84, SCRTD Five Year Short Range Transit Plan  
FY 1984-85, SCRTD Planning Department

#### 4.2.2 Cost Per Boarding/Subsidy Per Boarding

Operating cost per boarding varied with changes in ridership. Either increases in operating cost or decreases in ridership would affect both cost and subsidy per boarding.

Prior to Prop A, the District cost per passenger boarding was \$1.03. Approximately \$.56 of the \$1.03 cost per boarding was subsidized by the District. During the first year of the Reduced Fare Program, due to the increase in ridership, operating cost per boarding decreased by 8 percent. However, the subsidy per boarding increased over 22 percent to reflect the lower fare structure. Actual levels of increases and decreases for the three year period are shown in Figures 4.10 and 4.11.

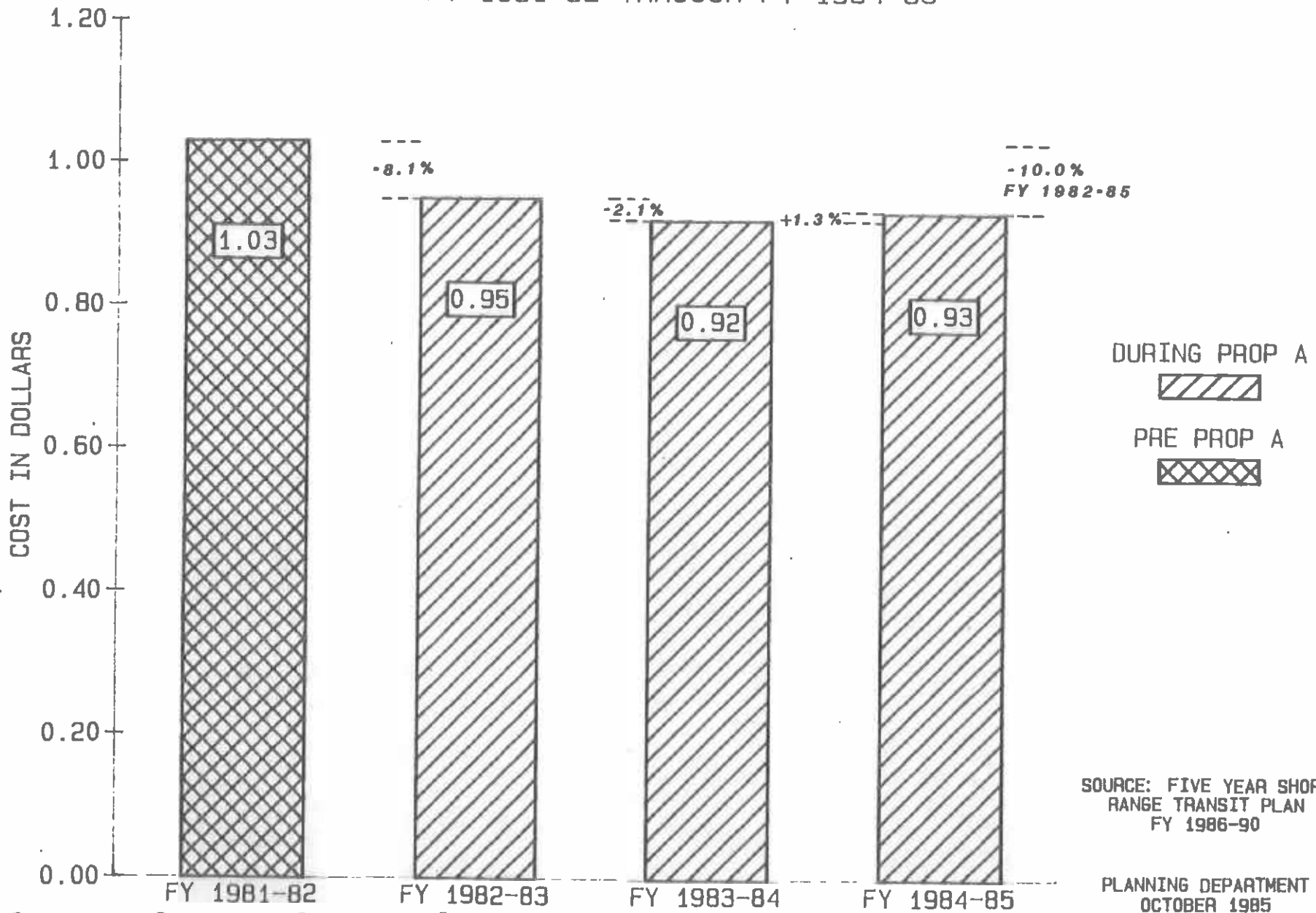
FIGURE 4.10

COST PER BOARDING/SUBSIDY PER BOARDING				
INDICATORS	PRE-PROP A FY 1981-82	THREE YEAR PROP A PERIOD		
		FY 1982-83	FY 1983-84	FY 1984-85
Boardings (000)	352,700	416,000	465,900	493,200
Operating Cost Per Boarding	\$1.029	\$.946	\$.920	\$.932
% Change From Previous Year		-8.1%	-2.8%	+1.3%
Operating Cost (000)	\$362,792	\$393,357	\$428,628	\$459,510
Prop A Subsidy Per Boarding	\$.565	\$.691	\$.668	\$.681
% Change From Previous Year		+22.3%	-3.3%	+2.1%

SOURCE: FY 1981-82 Through 1983-84, SCRTD Five Year Short Range Transit Plan  
FY 1984-85, SCRTD Planning Department



**FIGURE 4.11**  
**OPERATING COST PER UNLINKED BOARDING**  
 FY 1981-82 THROUGH FY 1984-85



SOURCE: FIVE YEAR SHORT  
 RANGE TRANSIT PLAN  
 FY 1986-90

PLANNING DEPARTMENT  
 OCTOBER 1985

#### 4.3 QUALITY OF PROP A SERVICE

In order to evaluate the quality of service provided during the three year period, it was important to also examine the service from the transit users' perspective. However, on the data available it was difficult to objectively assess the quality of service from the users' perspective. Therefore, several complaint areas were targeted for review. The areas of complaints most directly related to the quality of the Prop A service were identified as:

- On-Time Performance
- Passenger Pass Ups
- Discourteous Operators
- Unsafe Drivers

##### 4.3.1 On-Time Performance

Several factors influence the on-time performance of District buses. On lines with long headways, the major impact of variation from schedule was passenger loading delays and bus breakdowns. On lines with short headways, overcrowding caused by load variability created the majority of the delays. Some of the delays can also be attributed to traffic congestion.

In November, 1984, the Schedule Department completed a study to determine the level of schedule adherence. The reason for the study was to identify and implement measures to improve on-time performance. Data from ride checks and field checks compiled during the Reduced Fare Program were used in the study.

Initial analysis indicated that 75 percent of all buses were between one minute early and five minutes late. The same data indicated that approximately 41 percent of District buses ran on time, given an on-time performance of no more than 30 seconds early and no more than 2.5 minutes

late.

Figure 4.12 represents a sampling of on-time performance related activities at the division level. The data reflect reports of late or cancelled runs reported by the divisions (either maintenance or transportation) or by an operator. Regardless of the source, no more than one incident was tallied per bus run. "Late" is classified as any bus run which pulled out of the yard three or more minutes late. The data does not include bus runs which became late while in service. "Pullouts" refer to buses leaving RTD divisions to begin scheduled operations.

FIGURE 4.12

---

SAMPLE ON-TIME PULLOUT COMPARISON  
(One-Week Period)

---

	<u>LATE</u>	<u>CANCELLED</u>	<u>SCHEDULED PULLOUTS</u>	<u>PERCENT ON-TIME PULLOUTS</u>
April, 82	73	13	14,723	99.43%
October, 82	101	3	14,290	99.28%
October, 83	153	81	15,801	98.52%
October, 84	190	0	16,065	98.82%
June, 85	197	42	16,392	98.55%

SOURCE: Operations Department

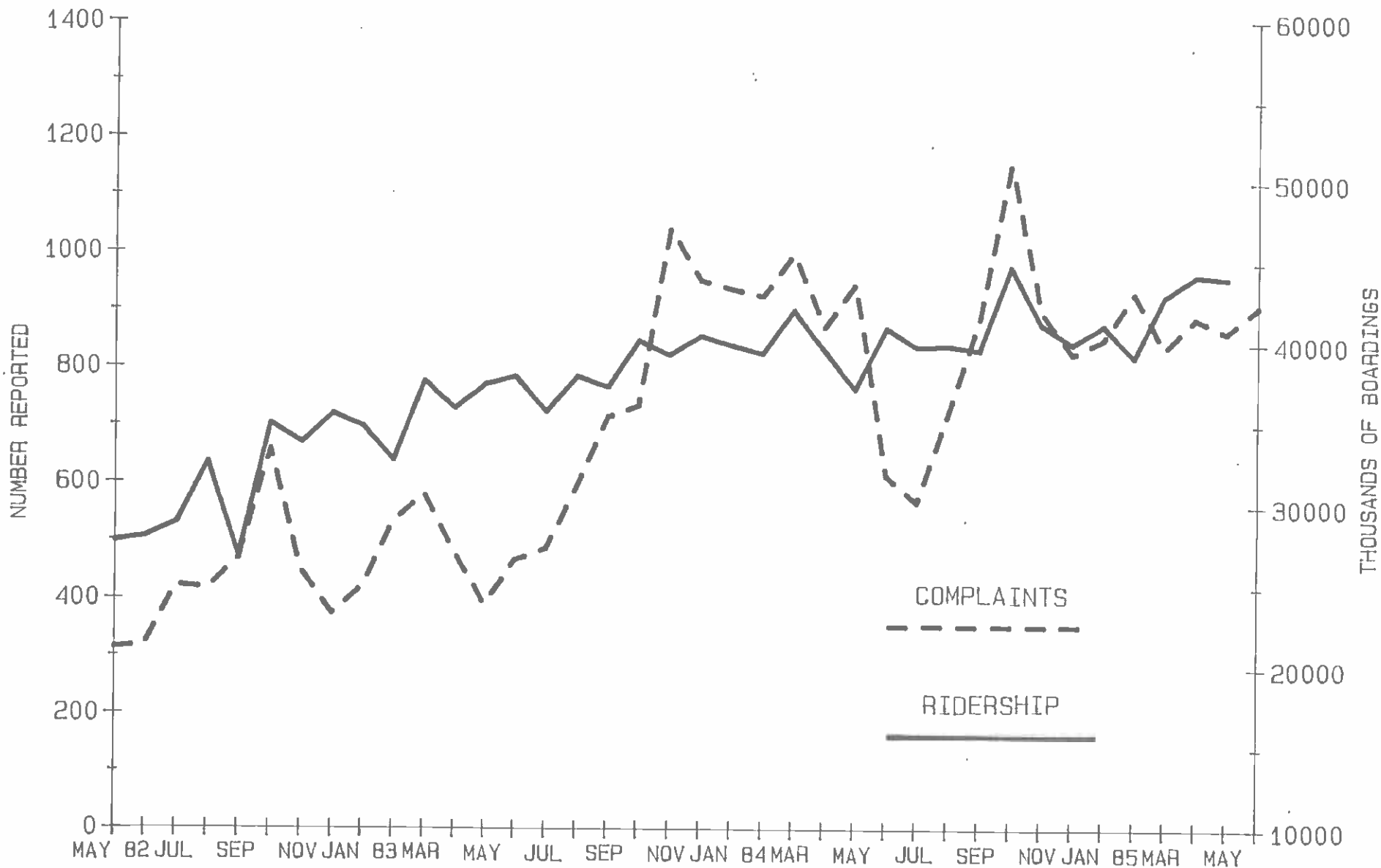
---

Although the sample data indicate an increase in late pullouts, this does not mean that buses were late for scheduled revenue service. As mentioned earlier, these runs were classified only as pulling out of the division three or more minutes late. These delays usually resulted from mechanical difficulties. Equipment availability was identified as the major reason for cancelled pullouts.

#### 4.3.2 Complaints

As service and patronage levels increased, it was reasonable to expect an increase in complaints regarding District services. Figure 4.13 compares boardings with the total number of complaints received before and after the implementation of the Reduced Fare Program. Included in the number of complaints are areas other than these previously identified as "quality of service" complaints (i.e.: street vibrations, constraints on the establishment of new service, exhaust fumes, passenger conduct).

FIGURE 4.13  
 COMPARISON OF  
 SERVICE COMPLAINTS AND BOARDINGS



SOURCE: SCRTD CUSTOMER RELATIONS DEPARTMENT

PLANNING DEPARTMENT  
 OCTOBER 1985

A comparison of the number of complaints regarding the quality of District services received during April, 1982 (Pre-Prop A) with the complaints received during the last month (June, 1985) of the Reduced Fare Program, showed a tremendous increase in quality of services complaints. Figure 4.14 shows the number of complaints for the period of comparison and the levels of increases in complaints during the same period.

FIGURE 4.14

---

SUMMARY OF COMPLAINTS BY COMPLAINT TYPE (BY MONTH)

---

	NUMBER OF REPORTED COMPLAINTS		PERCENT INCREASE
	PRE-PROP A APRIL 1982	END OF PROP A JUNE 1985	
On-Time Performance			
(Schedule Problems)	50	300	+250.0%
Passenger Pass Ups	99	218	+120.2%
Discourteous Operators	97	208	+114.4%
Unsafe Driver Operation	69	180	+160.9%

SOURCE: Customer Relations Department

---

.1 On-Time Performance

The majority of complaints centered around the fact that buses were not operating on schedule. Others complained that late buses prevented a scheduled transfer to other District service which resulted in additional delays.

As a direct result of the tremendous increase in transit usage more dwell time was required to load and unload passengers. Running time increases were experienced throughout the system. Since most of the overloading was

sporadic, the condition could not be alleviated by simply adding buses. In cases where late buses were reported on a regular basis, line regulators and field supervisory personnel were assigned to monitor peak stops and expedite bus movement by evenly distributing passenger loads. This procedure was primarily used in the peak periods when buses were operating very frequent headways.

## .2 Passenger Pass-Ups

During the Prop A period, pass-up complaints increased by 120 percent. The complaints were either that passengers were being passed up because of overcrowding or operators were not waiting for passengers at bus stops. Reports also indicated that wheelchair passengers were frequently passed up because of overloaded conditions. Figure 4.15 illustrates the increase in pass-up and schedule problem complaints.

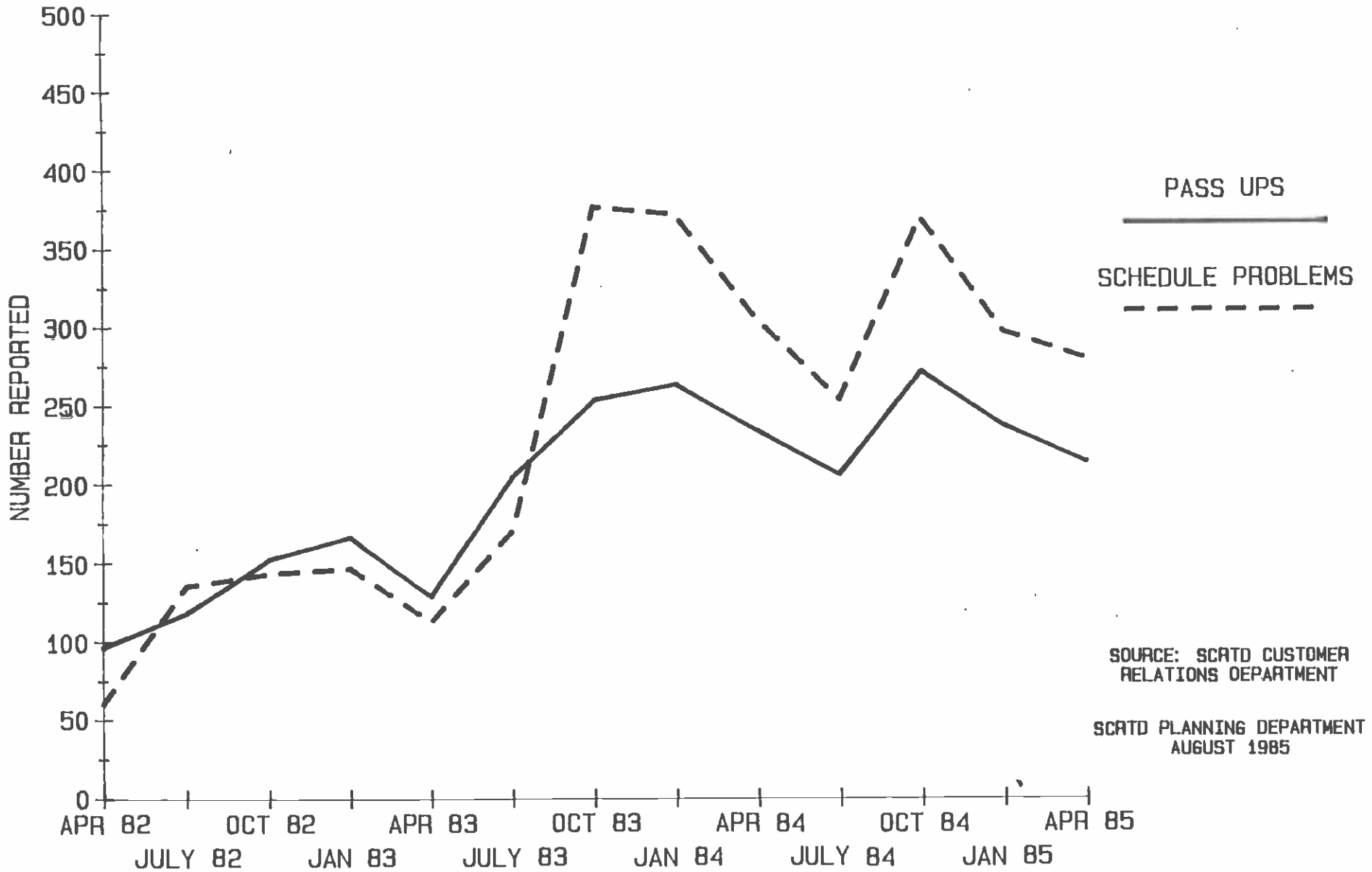
## .3 Discourteous Operators

Discourteous operator complaints increased by 114 percent. The vast majority of the complaints was regarding the failure of operators to explain, to the satisfaction of passengers, reasons for crowded or late buses; complaints that required an explanation by the bus operator. While these type complaints are not positive, they are understandable when viewed in light of an operator's prime responsibilities. The primary concern of an operator is to transport passengers safely while at the same time, maintaining a schedule. This mandate was made even more difficult with heavier passenger volumes. Not only did the operator have more people to be concerned with, but his ability to maintain schedule was severely tested because of the additional time incurred to load extra passengers. The time needed to answer in-depth questions by passengers would have negatively affected both the safety and the schedule for all passengers. Moreover, operators are precluded by regulation from engaging in excess conversation while the bus is in motion. Discourteous operator complaints are summarized in Figure 4.16.

FIGURE 4.15

# AVERAGE QUARTERLY REPORTED PASS UPS AND SCHEDULE PROBLEMS

APRIL 1982 THROUGH JUNE 1985

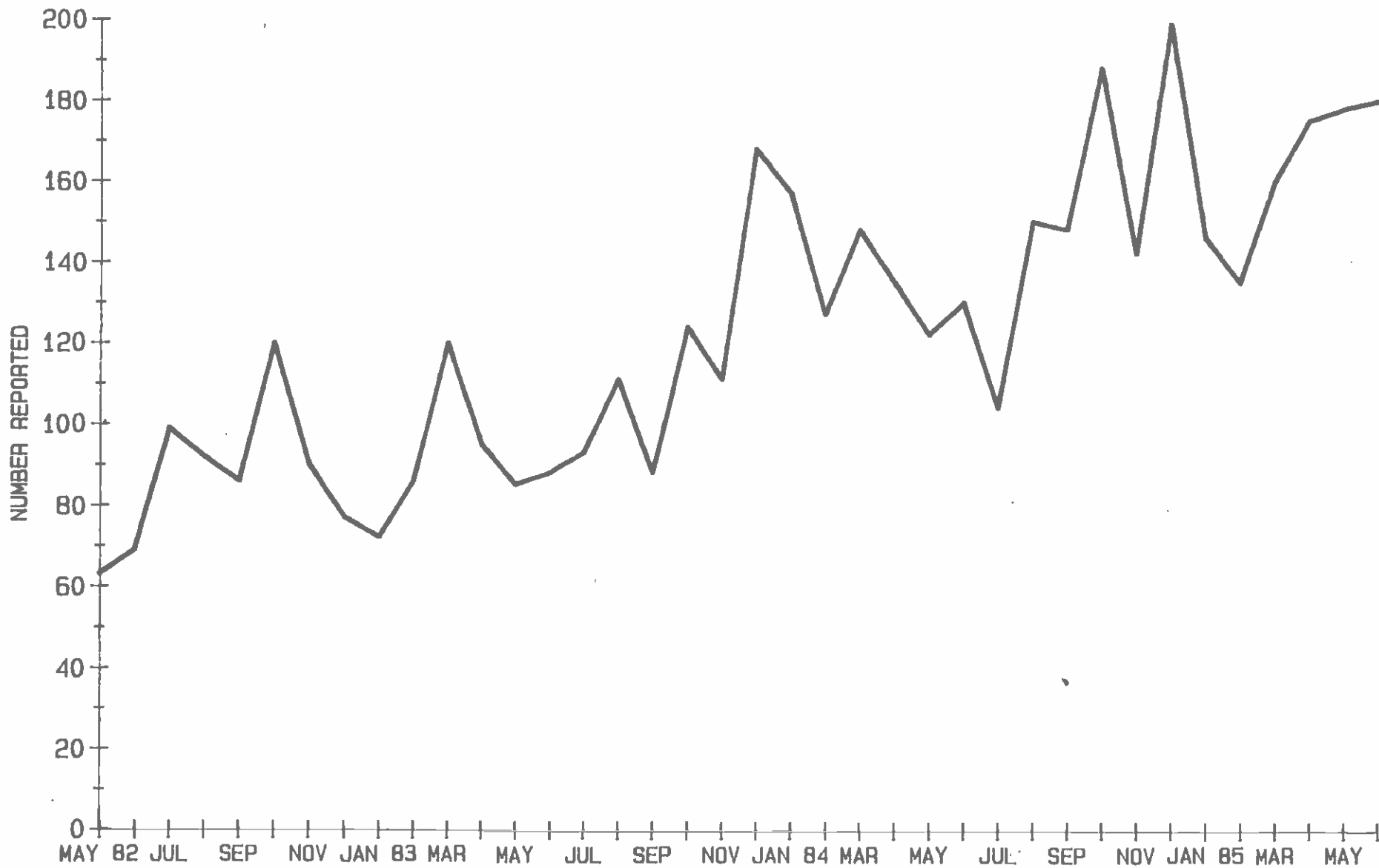


SOURCE: SCR TD CUSTOMER  
RELATIONS DEPARTMENT

SCR TD PLANNING DEPARTMENT  
AUGUST 1985



FIGURE 4.16  
 SUMMARY OF  
 DISCOURTEOUS OPERATOR COMPLAINTS



SOURCE: SCRTD CUSTOMER RELATIONS DEPARTMENT

PLANNING DEPARTMENT  
 OCTOBER 1985

#### .4 Unsafe Driver Operation

Complaints of unsafe operation were up by 160 percent. The most frequent complaint was that operators were applying quick pressure to the brakes with little regard for the safety of standing passengers. Others complained of operators pulling away from stops before passengers could be seated.

##### 4.3.3 Commendations

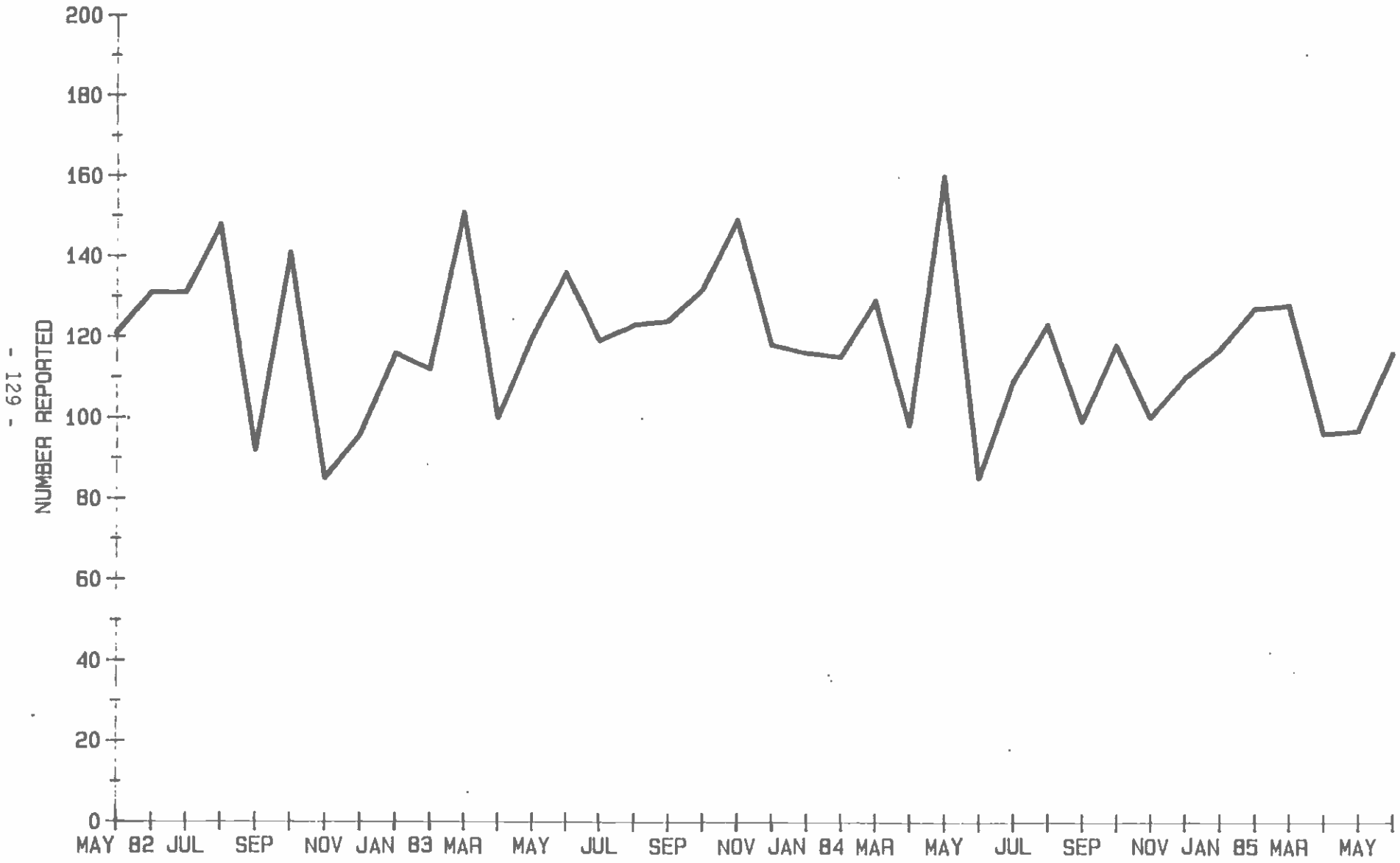
Operator commendations varied over the three year period (Figure 4.17). Before Prop A, the District received an average of 121 operator commendations per month. The number of commendations decline about 15 percent to an average of 103 during the last three months of the Reduced Fare Program. The 15 percent decline in operator commendations compared with the 114 percent increase in discourteous operator complaints clearly indicates that transit users are more inclined to take the time to write or phone in complaints than to write or phone in commendations. Figure 4.18 also compares the average number of commendations received before and during the Prop A period with the average number of complaints during the same period. By comparison, complaints increased significantly compared to the number of commendations received during the same period.

##### 4.3.4 Passenger Information Requests

Through the District's Telephone Information Department, customers were able to obtain personalized transit information. This service was available, seven days a week between the hours of 6 AM and midnight. This was an expansion over pre-Prop A hours of operation, (Monday through Friday, between the hours of 6 AM and midnight, and on weekends, between 6 AM and 6 PM).

Approximately 100 toll-free information lines were available throughout the District's service area for service inquiries. Reports indicate that prior to Prop A the peak period for information calls was between 8 AM and 9 PM.

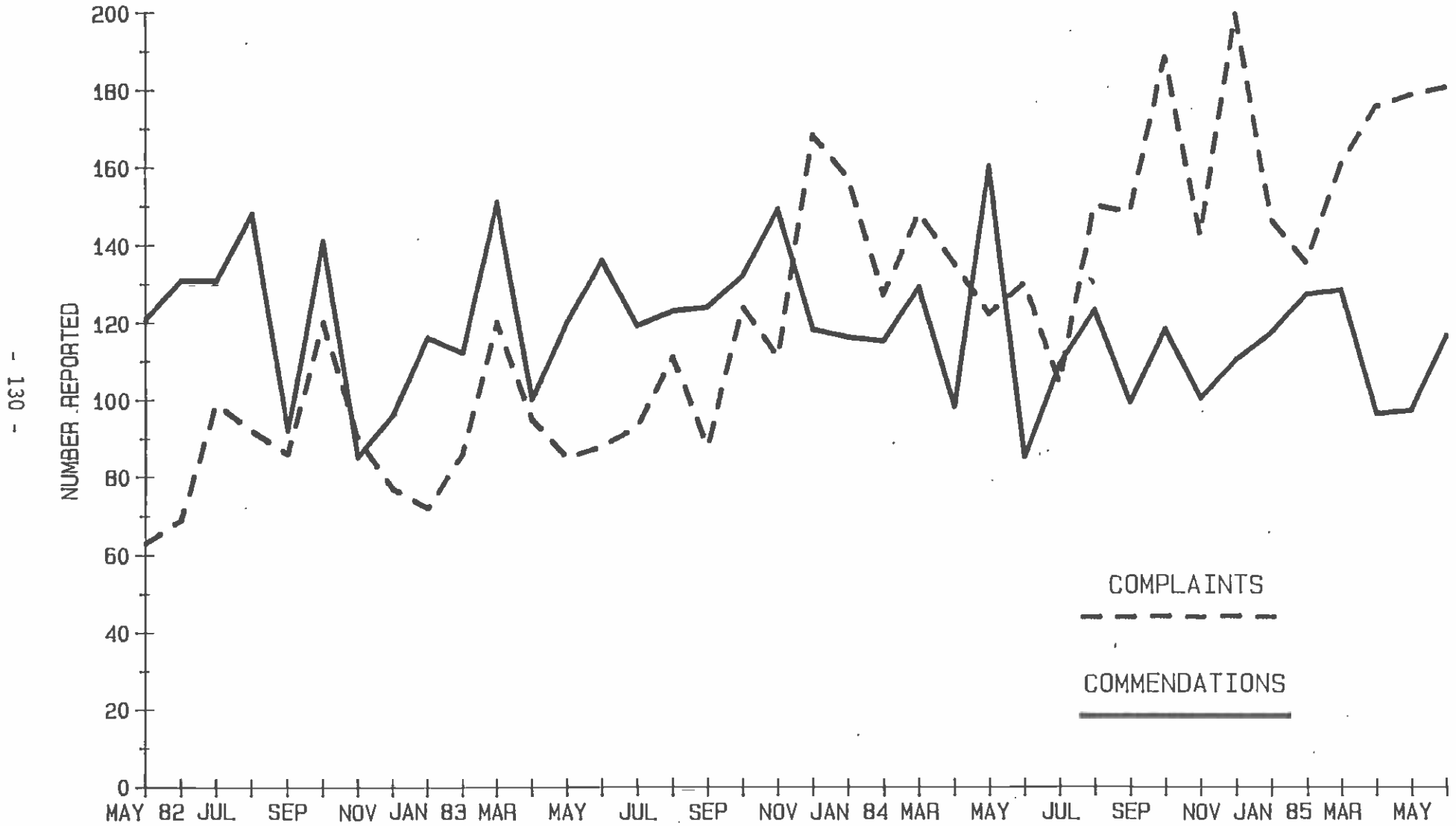
FIGURE 4.17  
 SUMMARY OF  
 BUS OPERATOR COMMENDATIONS



SOURCE: SCRTD CUSTOMER RELATIONS  
 DEPARTMENT

PLANNING DEPARTMENT  
 OCTOBER 1985

# BUS OPERATOR COMMENDATIONS VS DISCOURTEOUS OPERATOR COMPLAINTS



- 130 -

SOURCE: SCRTD CUSTOMER RELATIONS DEPARTMENT

PLANNING DEPARTMENT  
OCTOBER 1985

After the implementation of the Reduced Fare Program, the peak call period regularly began as early as 7 AM and extended to 10 PM. The average talk time for an operator to complete an information call increased from 150 to 180 seconds per call. This is due in part to new transit users needing detailed information in addition to regular transit users requesting detailed information on more than one transit trip.

Although there was a 30 percent increase in telephone information calls, it can not be determined how many additional calls resulted from the Reduced Fare Program. A new computerized information system was installed a few months after the program which resulted in improving response time and call completion. Therefore, an assessment cannot be made on the impact of the reduced fares on information requests.

As illustrated in Figure 4.19, there was a staff reduction in the year immediately preceding Prop A. For budgetary reasons, it was necessary to reduce information staff from 110 to 90. This staffing level would remain in effect during the entire three-year reduced fare period except for the hiring of the ten temporary Information Operators to assist during the 1984 Summer Olympic Games..

Telephone information requests and staffing levels for the three year period are summarized in Figure 4.19 and 4.20.

FIGURE 4.19

# TELEPHONE INFORMATION REQUESTS

FY 1981-82 THROUGH FY 1984-85

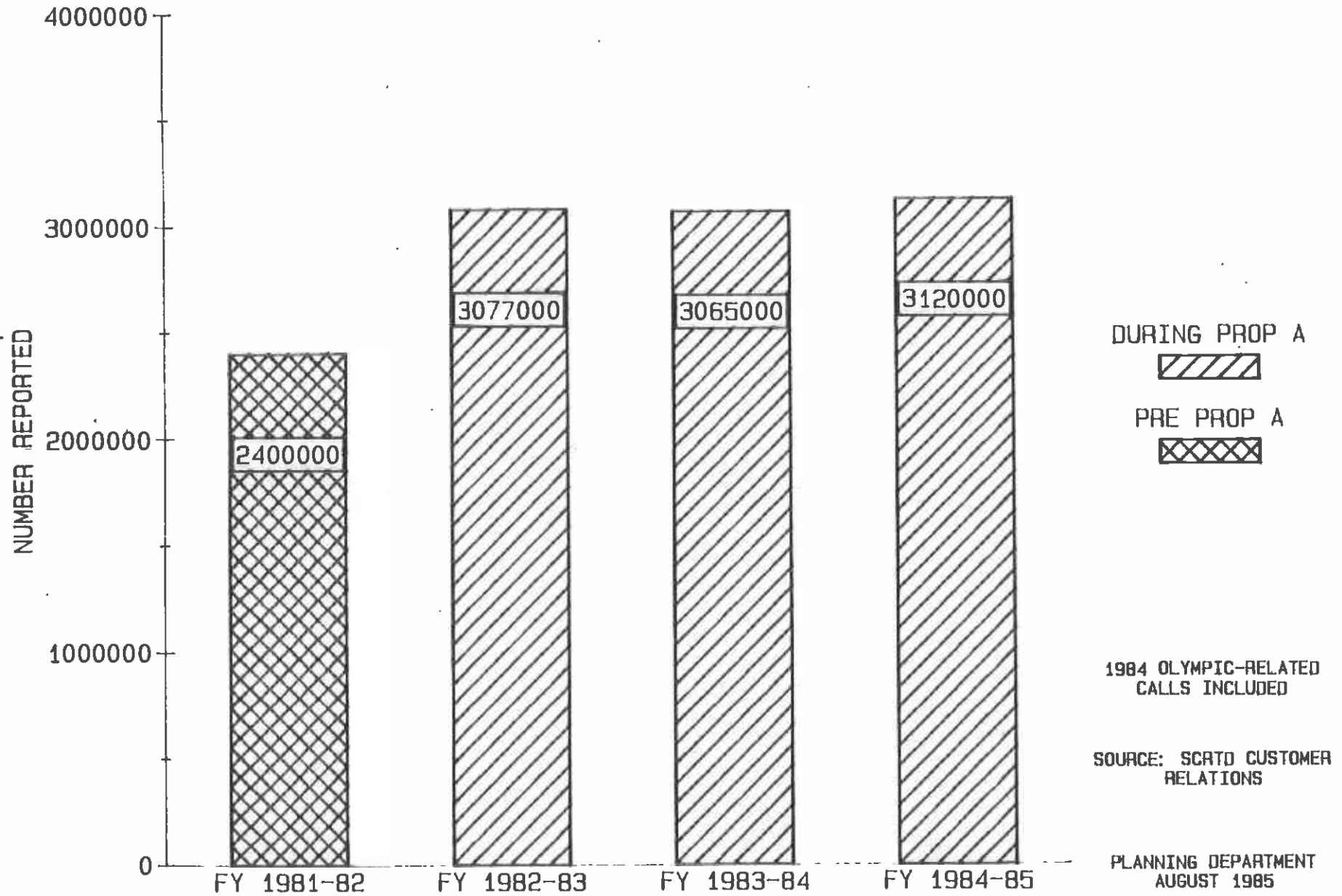


FIGURE 4.20

SUMMARY OF  
TELEPHONE INFORMATION REQUESTS/STAFFING LEVELS

	PRE-PROP A	DURING PROP A		
	<u>FY 1982</u>	<u>FY 1983</u>	<u>FY 1984</u>	<u>FY 1985</u>
<u>Number of Calls</u>				
Annual	2,400,000	3,077,000 +28.2%	3,065,900* @	3,120,000 +1.8%
Staffing Levels	110	90	90**	90

\*-Includes Olympic-related calls

\*\*-Additional 10 Temporary Operators were added during Olympic period over the 90 figure.

@-Less than one-percent change.

SOURCE: SCRTD Customer Relations Department

## **CHAPTER 5.0**

---

### **PROP A LOCAL RETURN PROJECTS**



## 5.0 PROP A LOCAL RETURN PROJECTS

This chapter describes the steps taken by the District and various cities (or Los Angeles County in the case of unincorporated areas) to improve transit under the Prop A Local Return Program.

### 5.1 PROP A NEEDS ASSESSMENT STUDIES

Since the validation of Prop A, the District has conducted preliminary inventory of transportation services and needs for 20 individual cities in Los Angeles County. Three other studies were prepared for multi-jurisdictional areas. These studies were for the Palos Verdes Peninsula, the South Bay beach area, and a study of selected unincorporated county communities.

The studies were designed to achieve two objectives:

- To enable the cities to better understand the amount and types of SCRTD service operating within their boundaries.
- To identify deficiencies that have been recognized by District staff in either the transit service provided by the District, street conditions, traffic signalization or bus stop problems within each city.

Following a review of these studies by the cities, follow-up meetings were held between the District and the cities to determine possible improvements to transit operations in their jurisdiction.

Planning for the end of the reduced fare program was also an important concern for the District. It appeared that fares would have to be increased and service reductions would be implemented on a system-wide basis. Cities were encouraged to allocate (on the average) one-half of their Prop A Local Return share to the District and to other municipal bus systems operating within their jurisdiction. This procedure could minimize or eliminate projected long-term service reductions.

As shown in Figure 5.1, Needs Assessment Studies were conducted by the

District for the following cities and local jurisdictions.

FIGURE 5.1

---

SCRTD NEEDS ASSESSMENT STUDIES

---

I. STUDIES DONE FOR INDIVIDUAL CITIES

1	Bellflower	11	La Mirada
2	Bell Gardens	12	La Puente
3	Burbank	13	Lynwood
4	Carson	14	Paramount
5	Cerritos	15	Pasadena
6	Downey	16	Pico Rivera
7	El Monte	17	South El Monte
8	Huntington Beach	18	Temple City
9	Inglewood	19	West Covina
10	Lakewood	20	Whittier

II. COMBINED AREA STUDIES

1. BEACH CITIES:

El Segundo, Hawthorne, Hermosa Beach, Lawndale, Manhattan Beach, Redondo Beach

2. PALOS VERDES AREA:

Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, Rolling Hills Estates

3. LOS ANGELES COUNTY:

Unincorporated county communities of: Agoura, Altadena, Diamond Bar, East Los Angeles, East Pasadena, Hacienda Heights, South Whittier, Topanga, Walnut Park.

---

## 5.2 COORDINATION EFFORTS AND LOCALLY-FUNDED RTD-AFFECTED PROJECTS

In July of 1982, Los Angeles area cities began receiving a 25 percent share of the sales tax proceeds from Prop A. Many possibilities existed as to the type of service or projects local cities could support. In late 1982, LACTC and District staff conducted joint meetings to inform cities of the options available for spending Prop A monies. Municipal operators were included in meetings with cities in their service area.

The meetings were designed to inform cities of new and innovative options for continuing and improving transit services within their communities. Several cost effective options were presented to the cities for their consideration. The options included ways for cities to:

- Maintain the present integrated bus network of local and express routes.
- Subsidize SCRTD and municipal bus operation for service operating in multiple cities.
- Utilize user-side subsidy to support the established public transportation system.

With respect to District participation, local funding could support studies to assess local transit needs, improvements to existing District services and/or the development and implementation of new services. Cities were also informed that local funding could be used to reduce the need for service reductions and/or fare increases which could occur at the end of the Reduced Fare Program.

### 5.2.1 Bus Stop Improvements

Indications are from LACTC's FY 1982-85 Project Listing for Prop A funds that approximately 40 cities received funding for improvements to bus stop locations.

Local jurisdictions determined the location and type of improvement required at each stop location. The first priority for most cities

appeared to be the installation of bus benches and shelters. Funding was also made available for stop maintenance, bus bench renovation and bus turnout lanes.

FY 1982-85 Prop A funded bus stop improvements in the District's service area are summarized in Figure 5.2.

FIGURE 5.2

PROP A FUNDED BUS STOP IMPROVEMENT PROJECTS

CITY	PROJECT DESCRIPTIONS			LACTC APPROVED* BUS STOP- RELATED EXPENDITURES (1982-85)
	FY 1982-83	FY 1983-84	FY 1984-85	
Alhambra	Bus Pad Installations	Bus Pad Installations	Bus Pad Installations	\$168,050
Arcadia	Curb Modifications for Wheelchair Access	----	----	77,250
Baldwin Park	----	Bus Turnout Lanes Bus Stop Improvements	Bus Shelter Maintenance	52,550
Bell	----	----	Bus Shelters	160,000
Bellflower	Bus Stop Improvements	Bus Stop Improvement Program	----	1,500
Bell Gardens	Bus Stop Improvement Planning	----	Bus Stop Improvements	183,000
Burbank	Bus Stop Improvements	Bus Stop Improvements Bus Pad Reconstruction	----	376,700
Carson	----	Bus Stop Improvements	----	82,000
Claremont	----	Bus Stop Improvements	----	1,000
Compton	----	----	Bus Shelter Construction	176,000
Downey	----	Bus Turnout Lanes	----	66,200

PROP A FUNDED BUS STOP IMPROVEMENT PROJECTS

CITY	PROJECT DESCRIPTIONS			LACTC APPROVED* BUS STOP- RELATED EXPENDITURES (1982-85)
	<u>FY 1982-83</u>	<u>FY 1983-84</u>	<u>FY 1984-85</u>	
Duarte	Bus Shelter Construction	Bus Shelter Construction	----	\$44,000
El Monte	Bus Stop Improvements	----	Bus Stop Improvements Bus Stop Shelter Program	336,886
El Segundo	----	----	Bus Stop Improvements	88,023
Hawthorne	- Bus Stop Improvements - Curb Modifications for Wheelchair Access	----	----	25,000
Industry	----	Bus Stop Improvements	----	11,500
Inglewood	----	Bus Pad Modifications	Bus Pad Modifications	31,172
La Mirada	----	----	Bus Shelters	50,000
La Verne	- Bus Stop Improvements - Bus Benches	- Bus Stop Improvements - Bus Benches	Bus Bench Maintenance	31,000
Lakewood	----	- Bus Pads - Bus Turnout Lane	Bus Pad Construction	83,000
Lawndale	----	----	Bus Shelters	129,440
Lomita	----	----	Curb Modifications for Wheelchair Access	12,000

PROP A FUNDED BUS STOP IMPROVEMENT PROJECTS

CITY	PROJECT DESCRIPTIONS			LACTC APPROVED* BUS STOP- RELATED EXPENDITURES (1982-85)
	<u>FY 1982-83</u>	<u>FY 1983-84</u>	<u>FY 1984-85</u>	
Long Beach	Bus Stop Improvements Trash Containers	Bus Stop Improvements Trash Containers	Bus Stop Improvements Trash Containers	\$226,200
Los Angeles, City	- Bus Bay Installations - Bus Pad Installations - Curb Modifications for Wheelchair Access	Reconstruction of Spring Street Contra-Flow Lane	- Bus Stop Improvements- Broadway - Bus Pad Restoration	1,290,836
Los Angeles, County	- Bus Stop Improvements - Curb Modifications for Wheelchair Access - Bus Pad Construction	----	Bus Stop Improvements	2,201,200
Lynwood	Bus Pad Modification Improvement Planning	- Bus Stop Improvements - Bus Pad Modifications - Bus Stop Maintenance	- Bus Stop Improvements - Bus Stop Maintenance	231,362
Monrovia	Bus Shelter Construction	Bus Stop Improvements	Bus Stop Maintenance	43,490
Montebello	Bus Shelters	----	----	40,000
Monterey Park	Bus Pad Modifications	Bus Stop Improvements	----	387,250
Pico Rivera	Planning for Installation of Bus Shelters and Bus Benches	- Bus Shelters - Bus Benches - Bus Stop Maintenance	----	187,900

- 140 -

PROP A FUNDED BUS STOP IMPROVEMENT PROJECTS

CITY	PROJECT DESCRIPTIONS			LACTC APPROVED* BUS STOP- RELATED EXPENDITURES (1982-85)
	FY 1982-83	FY 1983-84	FY 1984-85	
Pomona	----	Bus Stop Improvements	Bus Stop Improvements	\$40,600
Rancho Palos Verdes	----	----	Bus Stop Improvements	155,000
Rolling Hills	- Bus Shelters - Bus Benches	- Bus Shelters, - Bus Benches	----	14,000
Rolling Hills Estates	Bus Stop Improvements	Bus Stop Improvements	Bus Stop Improvements	56,640
Rosemead	Bus Bench Renovation	----	Bus Stop Improvement Engineering Service	52,910
San Dimas	- Bus Benches	----	Bus Stop Improvements	26,000
San Fernando	----	Bus Shelter Planning	----	1,000
San Marino	----	----	Bus Pad Improvement Project	106,000
Sierra Madre	----	Bus Stop Improvements	----	10,000
South Gate	- Bus Stop Improvements - Bus Shelters	Bus Stop Improvements	----	283,645
South Pasadena	----	----	Bus Pad Modifications	125,000

141



PROP A FUNDED BUS STOP IMPROVEMENT PROJECTS

LACTC APPROVED\*  
 BUS STOP-  
 RELATED  
 EXPENDITURES  
 (1982-85)

CITY	PROJECT DESCRIPTIONS			
	<u>FY 1982-83</u>	<u>FY 1983-84</u>	<u>FY 1984-85</u>	
Temple City	Bus Benches	- Curb Modifications for Wheelchair Access - Bus Pads - Bus Benches	----	\$82,960
West Covina	----	Bus Pad Modifications	Bus Shelter Purchase	136,000

SOURCE: \*-LACTC Proposition A Local Return Program Project Listings 1982-85

## 5.2.2 Other Prop A Local Return Projects

Prop A established a permanent special fund for local transit improvements. These improvements included, but were not limited to: bus stops, service levels, subsidized fares, expanding existing services or the establishment of new services.

### .1 Contract Services

Under the Prop A guidelines, cities could use their allocation to implement intra-community transit services or contract for additional transit services from the District or other transit operators.

Several special or supplemental services were provided by the District under funding provided by local governments or with private organizations. Figure 5.3 shows the various District services operated with cities' Local Return Prop A funds.

FIGURE 5.3

SCRTD OPERATED PROP A SERVICE

<u>SPONSOR/AGENCY</u>	<u>SERVICE</u>
City of Los Angeles	Line 605 operates as a special circulation route on Fridays and Saturdays in Westwood. The agreement provides for a \$.25 subsidized fare, with no transfer privilege to or from other District services.
City of Los Angeles Community Redevelopment Agency of the City of Los Angeles	Line 602 operates as a special circulation route in downtown Los Angeles. The net cost or subsidy is provided, 60 percent by the City, 20 percent by the Community Redevelopment Agency and 20 percent by the District. The City's share of the funding was obtained from its share of Prop A local return monies. The agreement provides for a \$.25 fare with no transfer privileges to or from other District services.
City of El Segundo	The City of El Segundo authorized an agreement to help fund the operating costs of the two remaining routes in the Bus Express Employee Program (BEEP). Prop A funds were used to subsidize a percentage of the net operating cost.
City of Pasadena	Line 601 operates as a shuttle service in the City of Pasadena. Service is provided Monday through Saturday. Prop A funds are used to subsidize the net costs of this operation.
Los Angeles County	Funded additional service on lines experiencing overcrowding in the Second Supervisorial District. Funded additional summer beach bus service on Line 434 that extended the route north to Leo Carillo Beach.
Los Angeles County/ Los Angeles Philharmonic Association	Special service is provided to the Hollywood Bowl Los Angeles under a service contract with Los Angeles County and the Los Angeles Philharmonic Association. Service was provided from 13 Park-Ride lots located throughout Los Angeles County on a cost-less-revenue basis.

.2 Interagency Transfer Agreements

Interagency transfer agreements are designed to promote regional travel throughout Los Angeles and neighboring counties. The agreement requires transit operators to issue and honor interagency transfer tickets as base fare on connecting service. To the extent possible, transit operators try to coordinate schedules and bus stops for the convenience of transferring passengers.

Prior to the implementation of the Reduced Fare Program, the District had transfer agreements with twenty-two service providers. They included municipal operators, dial-a-ride services and transit operators in neighboring counties.

Since July 1, 1982, the District has established transfer agreements with four new Prop A services. Figure 5.4 shows the agreements executed within the past three years.

FIGURE 5.4

---

PROP A  
INTERAGENCY TRANSFER AGREEMENTS

---

<u>FUNDING AGENCY</u>	<u>SERVICE</u>
City of Los Angeles	- Fairfax Trolley - San Pedro Transport - North West San Fernando Valley Foothill Transit
County of Los Angeles	- West Hollywood Shuttle
Transfer Agreements Pending Execution*	- Palos Verdes Transit System - City of Carson

\*-As of June 30, 1985

### .3 Subsidized Fare Programs

Fares have been subsidized in several ways. The City of La Verne instituted a senior citizen pass subsidy program in FY 1982 and has continued the subsidy for the past three years. Local Return funds were used to purchase senior passes. Passes were then resold or distributed at a reduced rate to persons meeting the specified eligibility requirements.

Several other cities (Alhambra, Downey and Huntington Park), in conjunction with local merchants, established a Shop-By-Bus Token Subsidy Program. Tokens were purchased from the District and resold to local merchants. Free bus tokens were distributed to shoppers with specified minimum purchases. These programs were subsidized through the use of Prop A Local Return funds.

### .4 Transit Security Programs

For some cities and local jurisdictions the issue of passenger safety at RTD bus stops and on-board District buses is a major concern. Prop A monies have been used to enhance transit security within Los Angeles County's Supervisorial District 2, an area which encompasses West Los Angeles, South Central Los Angeles and the South Bay. The LACTC reports that approximately \$1.7 million was spent on transit security between FY 1983-84 and FY 1984-85.

### .5 Ventura Boulevard Bus Priority Traffic Signal Preemption Project

The City of Los Angeles funded the Ventura Boulevard Bus Priority Traffic Signal Preemption Project with Prop A Local Return monies. The project was developed by the Los Angeles City Department of Transportation to expedite bus movement along a 10-mile segment of Ventura Boulevard. Special controllers were installed at forty-nine signalized intersections. Approximately sixty-four District buses operating on Ventura Boulevard were equipped with emitters which will activate the signal preemption. Implementation of the \$880,000 project is expected in late March, 1986.

# **CHAPTER 6.0**

---

## **CONCLUSION**

## 6.0 CONCLUSION

A thorough investigation and evaluation has been conducted by the District to determine what effects the Reduced Fare Program had upon several factors. These factors can generally be broken down into four major categories. They are:

- Impact To District Ridership and Operations -- The direct effects of Prop A on ridership, costs, revenues, equipment, manpower, level of service provided, pass vs. cash use.
- Impact To District Productivity -- An analysis of the productivity of the services that the District provided during the Reduced Fare Program.
- Impact To The District's "Quality" Of Service -- A determination as to whether the District was able to maintain a high quality of service, as measured by on-time schedule performance, and by passenger satisfaction.
- Impact To The District From Cities' Prop A Local Return Transit Projects -- The effect to the District from the Cities' Prop A Local Transit Projects.

Analysis of the data indicates that the District was extremely successful in carrying the increased numbers of riders with a minimum increase in service. This success can be measured by the fact that:

- A 40 percent increase in system annual boardings over the pre-Prop A period was accommodated by only a 6 percent increase in the District's annual service hours.

	<u>ANNUAL RIDERSHIP</u>	<u>ANNUAL SERVICE HOURS</u>
FY 1982	352.9 Million	6.7 Million
FY 1985	493.2 Million	7.1 Million
% Change	40%	6%

- Productivity, as measured by numerous factors, all showed significant improvement over the three year period.
  - boardings per vehicle service hour
  - boardings per vehicle service mile
  - operating cost per boarding
  - revenue per boarding
  - passengers per peak bus
  - average peak hour passenger loading

- A 46 percent increase in average daily boardings over the three year period was accommodated by only a 16 percent increase in PM Peak buses.

	<u>DAILY BOARDINGS</u>	<u>PM PEAK BUSES</u>
July 1982	1.1 Million	1,913
June 1985	1.6 Million	2,220
% Change	46%	16%

The analysis also revealed that the reduction in fares greatly increased ridership in virtually all ridership categories, and especially the students. One group of riders that did not increase, and, in fact, appeared to decrease, were the senior/disabled riders.

#### AVERAGE DAILY RIDERS (MILLIONS)

	<u>REGULAR</u>	<u>SENIOR/DISABLED</u>	<u>STUDENT</u>	<u>TOTAL</u>
FY 1982	0.824	0.160	0.127	1.111
FY 1985	1.048	0.157	0.319	1.524
% Change	27%	-2%	151%	37%

The tremendous growth in student riders occurred for several reasons. First, the dramatic 69 percent reduction in the base fare (76 percent for college students) was a tremendous inducement to these riders to use transit. Secondly, at least one public school district found it cheaper to buy RTD monthly passes for its students than it would be to contract for the service with a private transit company.

The stability in senior/disabled riders is significant in that their cash fare price dropped by 50 percent. This would appear to reinforce the theory that these riders were already very transit dependent; the reduction in fares was thus not an incentive. Another possible explanation is that many of the cities were starting up new local dial-a-ride senior/disabled paratransit services with their Prop A monies. Many of the District's potential added riders thus may have found it more convenient to use these new services.

Ridership increases occurred during all time periods of the day (AM peak Base, PM peak). Equipment was added to help meet this increase, with the bulk of added buses being assigned to peak period services. Base service



received relatively little added buses; its increased ridership was handled by the filling in of available seating capacity of buses during this time period.

These tremendous ridership increases being accommodated by the minimal service additions created more situations where buses were excessively overcrowded. During this time period, the District received a significant increase in the number of passenger complaints; the number of on-time performance complaints, and those for passengers being passed-up by overcrowded buses increased by 250 percent, and 120 percent, respectively. However, in terms of actual numbers these complaints remained at approximately one complaint per 100,000 passengers boarding District services during the periods of comparison. Moreover, the District maintained an actual to schedule pull-out ratio (buses pulling out of the division on time) of 98 - 99 percent. Also, RTD telephone information operators answered ever-increasing service and schedule data requests throughout the Fare Reduction Period.

The District continued to coordinate with local jurisdictions to develop facilities, or to institute new special services, which would best meet the transit needs of these communities. The cost of these programs were borne by the local jurisdictions using their allotted monies out of the total Prop A fund. Facilities included improvements at or around bus stops, a new park/ride lot, institution of new local feeder circulation services designed to transport local riders to convenient RTD transfer locations. New services included the contracting with RTD to provide new local circulation routes, the contracting with RTD to provide enhanced District transit security support to an area.

The impacts generated were indeed significant. The applicability of the District's actions taken during this time period have not been lost. Subsequent to the end of the Fare Reduction Period, when the base fare again went to \$.85, the scheduling techniques used during these three years are continuing to be applied to make certain that the services are running as effectively and productively as possible.

---

**EXHIBITS**

---

**EXHIBIT 1**

EXHIBIT 1

PROP A SERVICE ADDITIONS

Exhibit 1 illustrates Prop A bus additions, for the first four months of the Reduced Fare Program and summarizes permanent and temporary additions for the first year.

EXHIBIT 1 (Cont'd)

PERMANENT PROP A SERVICE ADDITIONS, BY LINE  
As of May 29, 1983

LINE NUMBER	DAILY			SATURDAY			SUNDAY		
	AM	BASE	PM	AM	BASE	PM	AM	BASE	PM
1	2	-	1	-	4	4	-	1	1
2	4	-	1	3	3	3	-	-	-
4	9	5	4	3	4	4	-	-	-
5	4	5	2	2	5	5	-	-	-
6	1	-	1	-	-	-	-	-	-
9	2	2	3	-	-	-	-	-	-
10	-	-	1	-	-	-	-	1	2
16	3	4	5	-	5	5	-	4	4
18	2	-	1	1	4	4	-	3	3
20	4	-	2	-	-	-	-	-	-
24	-	-	1	-	-	-	-	-	-
25	-	-	-	2	1	1	3	2	2
28	3	-	1	-	-	-	1	2	2
30	1	-	1	-	-	-	-	-	-
35	7	-	4	4	4	4	-	-	-
44	-	-	2	-	-	-	3	3	3
45	1	-	1	-	-	-	-	-	-
47	3	-	3	1	1	1	1	1	1
49	-	-	1	-	3	3	-	-	-
53	-	-	2	-	-	-	-	-	-
68	2	-	3	1	2	2	-	-	-
70	4	-	3	2	3	3	-	1	1
75	3	-	3	5	5	6	-	-	-
76	2	-	2	1	1	1	1	1	1
78	-	-	1	-	-	-	-	-	-
86	2	-	2	-	-	-	1	1	1
88	2	-	4	-	-	-	-	-	-
90	-	-	-	1	1	1	-	-	-
93	6	-	2	-	-	-	-	-	-
150	3	-	1	-	-	-	-	-	-
152	2	-	1	-	-	-	-	-	-
156	1	-	-	-	-	-	-	-	-
159	1	-	1	-	-	-	-	-	-
165	1	-	-	-	-	-	-	-	-
168	1	-	-	-	-	-	-	-	-
176	1	-	-	-	-	-	-	-	-
180	1	-	1	-	-	-	-	-	-
204	2	-	1	2	3	3	-	-	-
205	3	2	4	-	-	-	-	-	-
207	1	-	3	-	-	-	-	-	-

EXHIBIT 1 (Cont'd)

PERMANENT PROP A SERVICE ADDITIONS, BY LINE  
As of May 29, 1983

LINE NUMBER	DAILY			SATURDAY			SUNDAY		
	AM	BASE	PM	AM	BASE	PM	AM	BASE	PM
212	1	-	1	-	-	-	-	-	-
251	1	-	1	-	-	-	-	-	-
260	1	-	3	-	-	-	-	-	-
401	1	-	1	-	-	-	-	-	-
427	1	-	1	-	-	-	-	-	-
433	1	-	-	-	-	-	-	-	-
434	1	-	-	-	-	-	-	-	-
438	-	-	1	-	-	-	-	-	-
446	1	-	-	-	-	-	-	-	-
456	-	-	2	-	-	-	-	-	-
460	1	-	1	-	-	-	-	-	-
470	1	-	3	-	-	-	-	-	-
480	1	-	1	-	-	-	-	-	-
482	-	-	1	-	-	-	-	-	-
483	2	-	2	-	-	-	-	-	-
484	-	-	1	-	-	-	-	-	-
486	1	-	-	-	-	-	-	-	-
487	3	-	-	-	-	-	-	-	-
490	-	-	1	-	-	-	-	-	-
604	1	-	1	-	-	-	-	-	-
606	1	-	1	-	-	-	-	-	-
607	-	-	1	-	-	-	-	-	-
758	1	-	1	-	-	-	-	-	-
760	1	-	1	-	-	-	-	-	-
762	2	-	1	-	-	-	-	-	-
764	1	-	2	-	-	-	-	-	-
810	1	-	-	-	-	-	-	-	-
813	1	-	1	-	-	-	-	-	-
841	1	-	1	-	-	-	-	-	-
TOTAL BUSES ADDED	111	18	99	28	49	50	10	20	21
TOTAL PEAK BUSES DISTRICTWIDE	1,878	1,147	1,914	882	910	918	692	722	734
% BUSES ADDED	%6	%2	%5	%3	%5	%5	%1	%3	%3

SOURCE: Board Report (7/29/83 Passenger Boardings)

EXHIBIT 1 (Cont'd)

TEMPORARY PROP A SERVICE ADDITIONS, BY LINE  
 JULY 1, 1982 - JUNE 30, 1983

LINE NUMBER	DAILY			SATURDAY			SUNDAY		
	AM	BASE	PM	AM	BASE	PM	AM	BASE	PM
2-3	3	-	-	-	-	-	-	-	-
4	-	-	-	3	1	4	1	5	5
6	1	-	-	-	-	-	-	-	-
24	-	-	-	-	3	3	-	-	-
25	-	-	1	-	-	-	-	-	-
35-425	5	-	1	2	-	-	-	-	-
55	2	-	2	-	-	-	-	-	-
78-79	-	-	1	-	-	-	-	-	-
84-85	1	-	-	-	-	-	-	-	-
124	1	1	1	-	-	-	-	-	-
150-155	2	-	-	-	-	-	-	-	-
180-181	-	-	2	-	-	-	-	-	-
266	3	3	4	3	3	4	2	2	3
359	1	-	-	-	-	-	-	-	-
401-402	1	-	1	-	-	-	-	-	-
434	1	-	-	-	-	-	-	-	-
452-454	1	-	-	-	-	-	-	-	-
810	-	-	1	-	-	-	-	-	-
813	1	-	-	-	-	-	-	-	-
TOTAL BUSES ADDED	23	4	14	8	7	11	3	7	8
TOTAL PEAK BUSES DISTRICTWIDE	1,878	1,147	1,914	882	910	918	692	722	734
% BUSES ADDED	1%	.3%	.7%	.9%	.8%	1%	.4%	1%	1%

SOURCE: Board Report (7/19/83) Passenger Boardings

EXHIBIT 1

PROP A SERVICE ADDITIONS, BY LINE  
July 1982 through November 1982

LINE NUMBER	LINE NAME	DAILY NO. OF BUSES			SATURDAY NO. OF BUSES			SUNDAY NO. OF BUSES		
		AM	BASE	PM	AM	BASE	PM	AM	BASE	PM
1	Hollywood Boulevard	1		1						
2-3	Sunset Boulevard	5		3	3	3	3			
4	Santa Monica Boulevard	3								
5-442	Hawthorne Boulevard-Union Station	2		2		5	5			
6	Pasadena Avenue-York Boulevard	1		1						
7	South Broadway-Eagle Rock	1		2						
9	West Jefferson-Huntington Park	2	2	3						
12	West Washington Boulevard			1						
16	West Third Street			2						
18	West Sixth Street-Whittier Boulevard	2		1						
20	Wilshire Boulevard	2								
308	Wilshire Boulevard Limited			2						
24	Los Angeles-San Fernando			1						
25	North Broadway-Highland Park					1	2		1	1
27-28	Olympic Boulevard	3								
30-31	West Pico Boulevard-East First Street	1		1						
35-425	Los Angeles-Ventura Boulevard	7	3	3	3		3			
44	West Adams Boulevard-Beverly Boulevard			3						
47	East Olympic Boulevard-West Eighth Street	3		3						
53	Central Avenue			2						
75-313	Venice Boulevard-Echo Park	3		3						
76	Valley Boulevard			1						
86-412	Los Angeles-Burbank-Van Nuys	1		1						
88	LAX-Van Nuys Boulevard	1								

5-11



EXHIBIT 1

PROP A SERVICE ADDITIONS, BY LINE  
July 1982 through November 1982

LINE NUMBER	LINE NAME	DAILY NO. OF BUSES			SATURDAY NO. OF BUSES			SUNDAY NO. OF BUSES		
		AM	BASE	PM	AM	BASE	PM	AM	BASE	PM
93	Los Angeles-Van Nuys-Northridge	3		2						
115-116	Manchester Avenue	1		1						
150	Ventura Boulevard	1								
159	Coldwater Canyon-Sheldon Street- Lankershim Boulevard-Tujunga Avenue	1								
168	Lassen Street-Paxton Street	1								
169	Saticoy Street-Sunland Boulevard	1								
180-181	Hollywood-Glendale-Pasadena	2		1						
204	Vermont Avenue	2		1						
207	Western Avenue	2		2						
212	La Brea Avenue-Burbank Airport			1						
260	Long Beach-Pasadena			1						
401-402	Los Angeles-Pasadena	1		1						
420	Garfield Avenue	1		1						
422	Garvey Avenue-City Terrace	4		3						
428	Los Angeles-South Arcadia via Las Tunas			1	2	2	3			
433	Temple City Boulevard-Lincoln Avenue	1								
434	Los Angeles-Malibu-Trancas	1								
446	El Monte-West Covina-Walnut	1								
456	Los Angeles-Long Beach			1						
460	Los Angeles-Disneyland	1		1						
470-471	Los Angeles-Whittier-La Habra	1		2						

9-1

EXHIBIT 1

PROP A SERVICE ADDITIONS, BY LINE  
July 1982 through November 1982

LINE NUMBER	LINE NAME	DAILY NO. OF BUSES			SATURDAY NO. OF BUSES			SUNDAY NO. OF BUSES		
		AM	BASE	PM	AM	BASE	PM	AM	BASE	PM
480-481	Los Angeles-West Covina-Pomona	1		1						
482	Los Angeles-Hacienda Heights-Pomona			1						
483-485	Los Angeles-Altadena via Fair Oaks	2		2						
484	Los Angeles-La Puente-Ontario Airport			1						
486	Los Angeles-El Monte-Puente Hills Mall	1								
487-489	Los Angeles-Sierra Madre	2		1						
490	Los Angeles-West Covina-Brea Mall			1						
604	Los Angeles-Venice Boulevard	1								
606	Los Angeles-Culver Boulevard-Manhattan Beach	1		1						
716	Los Angeles-Tarzana-Canoga Park	1		1						
721	Los Angeles-Northridge-Reseda	1		1						
758	Los Angeles-La Mirada	1		1						
760	Los Angeles-West Covina-Glendora	1		1						
762	Los Angeles-Rowland Heights-Diamond Bar	1		1						
764	Los Angeles-Pomona-Montclair	1		1						
810	Los Angeles-Carson-Wilmington-San Pedro	1								
813	Los Angeles-West Torrance-Redondo Beach-Palos Verdes	1		1						
841	Long Beach-San Pedro	1		1						
TOTAL BUSES ADDED		79	5	70	9	12	14	0	1	1

1-7

---

**EXHIBIT 2**

## EXHIBIT 2

### PEAK PERIOD BOARDING TRENDS

This exhibit shows the three-hour peak period trends on 61 lines, lines which accounted for about 65% of the patronage. The indications of growth or decline for any specific line were not exact, since average daily fluctuation in line ridership ranged from 4 percent to 10 percent. However, a sense of the trend of peak period volumes was obtained by summing the patronage figures for the 57 lines which had data for June, July and October/November:

	<u>JUNE 1982</u>	<u>JULY 1982</u>	<u>OCTOBER/NOVEMBER 1982</u>
Sum of Peak Period Volumes	50,321	54,472	58,086
Percent Increase From June		8.2%	15.4%

EXHIBIT 2 (Cont'd)

PEAK POINT PATRONAGE LEVELS  
(Three-Hour Peak Period)

<u>LINE NUMBER</u>	<u>JUNE 1982</u>	<u>JULY 1982</u>	<u>SEPT. 1982</u>	<u>OCT./NOV. 1982</u>
1	1,228	1,226	1,540	1,646
2	973	1,106	1,042	1,211
4	1,009	1,115	1,120	1,296
5	1,682	2,077	1,907	1,679
6	1,023	1,160	1,169	1,151
7	1,292	1,247	----	1,277
8	561	577	----	605
9	2,224	2,660	2,364	2,998
10	1,543	1,400	1,427	1,520
12	1,089	1,071	----	1,123
16	1,968	1,896	2,149	2,442
18	1,637	1,953	1,930	2,006
20	2,820	2,933	----	2,901
24	611	649	----	443
25	861	1,105	1,016	1,141
28	1,978	2,237	2,054	2,349
29	1,133	1,289	1,184	1,230
35	1,139	1,488	1,645	1,745
39	911	846	853	862
44	1,488	1,489	----	1,639

EXHIBIT 2 (Cont'd)

PEAK POINT PATRONAGE LEVELS  
(Three-Hour Peak Period)

<u>LINE NUMBER</u>	<u>JUNE 1982</u>	<u>JULY 1982</u>	<u>SEPT. 1982</u>	<u>OCT./NOV. 1982</u>
47	1,064	1,049	911	1,170
49	899	862	----	952
50	804	898	1,024	----
75	1,472	1,470	1,551	1,598
76	689	779	----	746
86	657	633	645	647
88	268	352	394	659
90	548	576	588	555
92	567	562	540	622
93	701	740	718	765
115	484	485	----	619
120	459	420	----	602
150	692	603	528	509
165	277	355	----	238
180	672	752	722	662
200	824	1,017	----	----
204	1,687	2,269	2,327	2,418
206	544	596	----	624
207	1,190	1,236	1,302	1,561
212	698	649	661	841

EXHIBIT 2 (Cont'd)

PEAK POINT PATRONAGE LEVELS  
(Three-Hour Peak Period)

<u>LINE NUMBER</u>	<u>JUNE 1982</u>	<u>JULY 1982</u>	<u>SEPT. 1982</u>	<u>OCT./NOV. 1982</u>
422	1,179	1,145	----	1,260
432	427	512	----	450
456	413	446	539	529
460	343	392	354	415
462	250	311	230	239
470	824	917	862	881
480	868	971	1,094	1,053
483	596	639	607	651
487	544	606	663	685
604	126	254	237	237
606	167	137	156	144
607	120	157	117	----
721	373	389	404	394
757	553	670	612	692
758	182	194	225	191
760	468	522	650	506
762	446	484	535	569
810	311	406	430	405
826	380	438	----	----
841	346	424	456	448

---

**EXHIBIT 3**



EXHIBIT 3

COMPARISON OF ACTUAL VS. PROJECTED DAILY RIDERSHIP

This exhibit compares actual ridership with the District's projections for the three-year period.

EXHIBIT 3

COMPARISON OF ACTUAL VS. PROJECTED DAILY RIDERSHIP  
(Millions)

<u>MONTHS</u>	<u>ACTUAL FY 82-83</u>	<u>PROJECTED</u>	<u>CHANGE FROM PROJECTED</u>	<u>ACTUAL FY 83-84</u>	<u>PROJECTED</u>	<u>CHANGE FROM PROJECTED</u>	<u>ACTUAL FY 84-85</u>	<u>PROJECTED</u>	<u>CHANGE FROM PROJECTED</u>
JULY	1.116	1.124	-0.7%	1.429	1.446	-1.2%	1.526	1.536	=-0.7%
AUGUST	1.220	1.219	0.1%	1.411	1.450	-2.8%	1.445	1.535	-6.2%
SEPTEMBER	1.256	1.275	-1.5%	1.486	1.482	0.3%	1.602	1.563	2.4%
OCTOBER	1.374	1.315	4.5%	1.565	1.565	0.0%	1.642	1.642	0.0%
NOVEMBER	1.360	1.346	1.0%	1.536	1.545	-0.6%	1.599	1.618	-1.2%
DECEMBER	1.346	1.371	-1.8%	1.511	1.497	0.9%	1.545	1.568	-1.5%
JANUARY	1.384	1.392	-0.6%	1.510	1.522	-0.8%	1.552	1.589	-2.4%
FEBRUARY	1.392	1.411	-1.3%	1.563	1.518	2.9%	1.616	1.583	2.0%
MARCH	1.409	1.427	-1.3%	1.563	1.526	2.4%	1.622	1.538	2.1%
APRIL	1.415	1.441	-1.8%	1.534	1.524	0.7%	1.698	1.584	6.7%
MAY	1.461	1.455	0.4%	1.529	1.562	-2.2%	1.656	1.620	2.2%
JUNE	1.465	1.467	-0.1%	1.590	1.560	1.9%	1.631	1.616	0.1%

SOURCE: SCRTD Planning Department

3-2

---

**EXHIBIT 4**

## EXHIBIT 4

### CHANGE IN DAILY RIDERSHIP, BY FARE TYPE, BY SECTOR, BY YEAR

The following exhibits describe the changes that occurred in each of the sixteen planning sectors as a result of the Reduced Fare Program. The listing has been ranked by the level of increase in ridership.

- 4-A, East Central Cities
- 4-B Pomona Valley
- 4-C Long Beach
- 4-D East San Gabriel Valley
- 4-E West San Gabriel Valley
- 4-F Carson - San Pedro
- 4-G South Central Cities
- 4-H South Bay
- 4-I East San Fernando Valley
- 4-J Mid-Cities
- 4-K Northeast Los Angeles
- 4-L West San Fernando Valley
- 4-M Glendale
- 4-N West Central Los Angeles
- 4-O West Los Angeles
- 4-P Downtown Los Angeles

# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

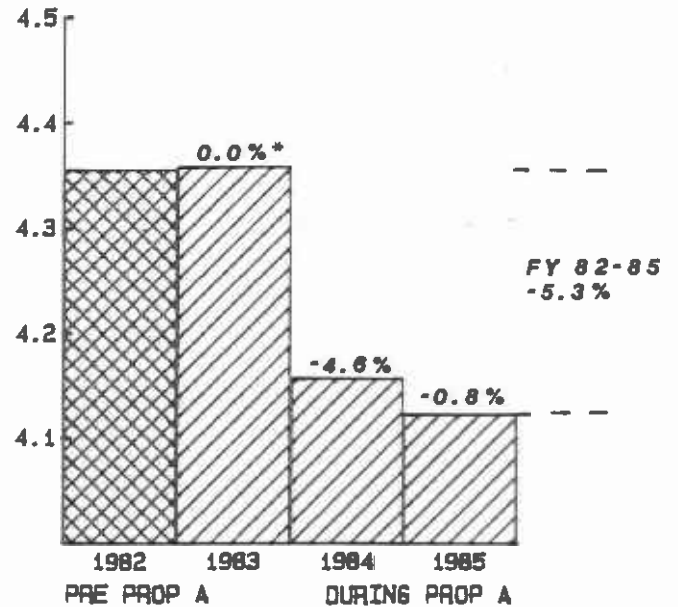
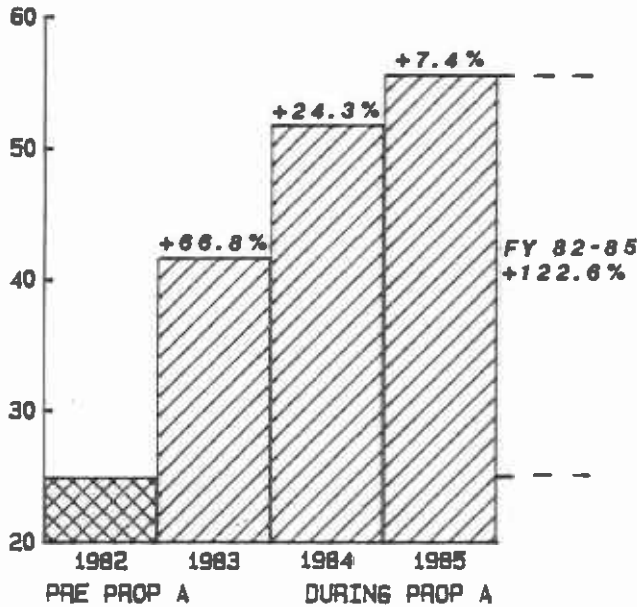
## East Central Cities Sector

### REGULAR

### SENIOR/DISABLED

THOUSANDS OF BOARDINGS

THOUSANDS OF BOARDINGS



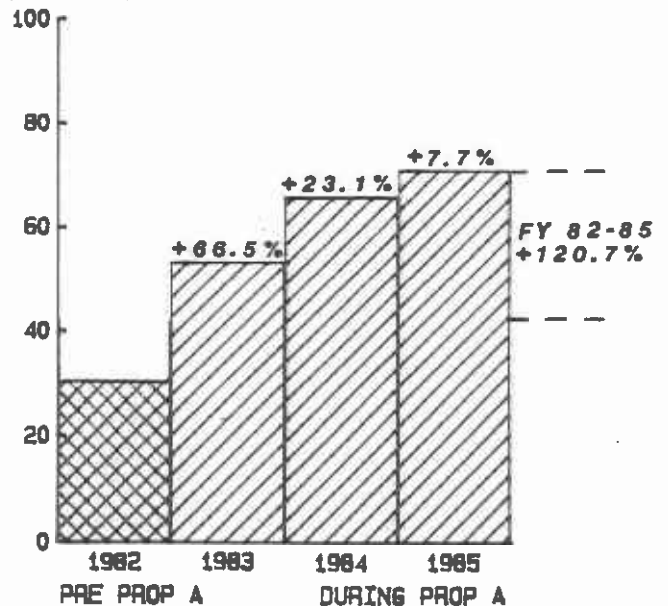
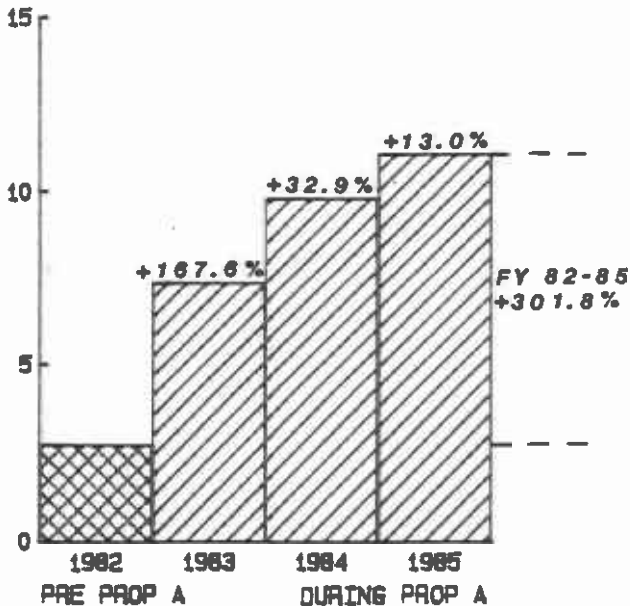
\*LESS THAN 0.1% CHANGE

### STUDENT

### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-A (Cont'd)

EAST CENTRAL CITIES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	24,999	41,708 +66.8%	51,837 +24.3%	55,659 +7.4%	+122.6%
Senior/Disabled	4,356	4,359 +0.0%*	4,158 +4.6%	4,124 -0.8%	-5.3%
Students	2,762	7,392 +167.6%	9,821 +32.9%	11,097 +13.0%	+301.8%
Express	691	654 -5.4%	786 +20.2%	868 +10.4%	+25.6%

\* Less than 0.1% change

SOURCE: Area Accounts

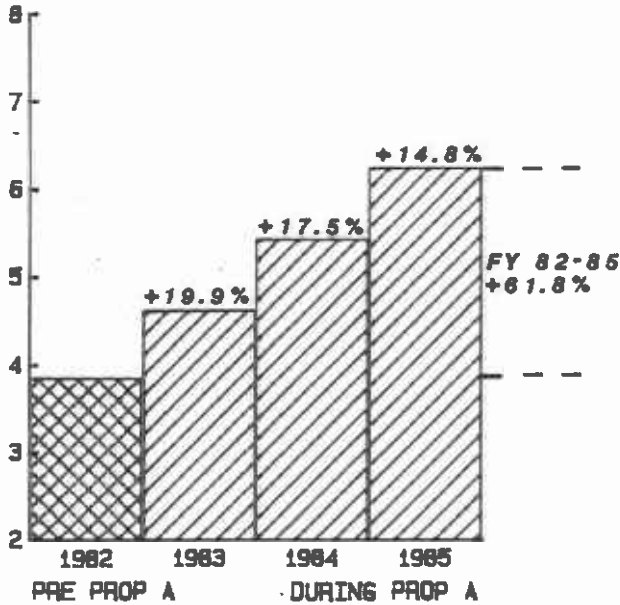
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Pomona Valley Sector

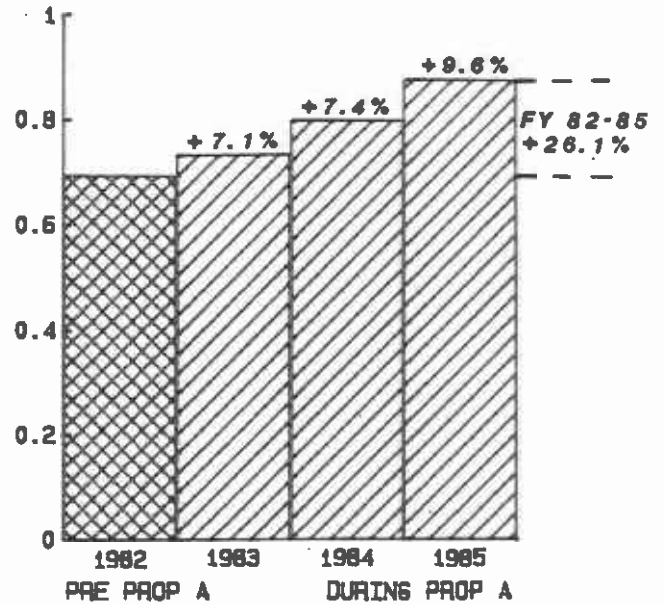
### REGULAR

### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



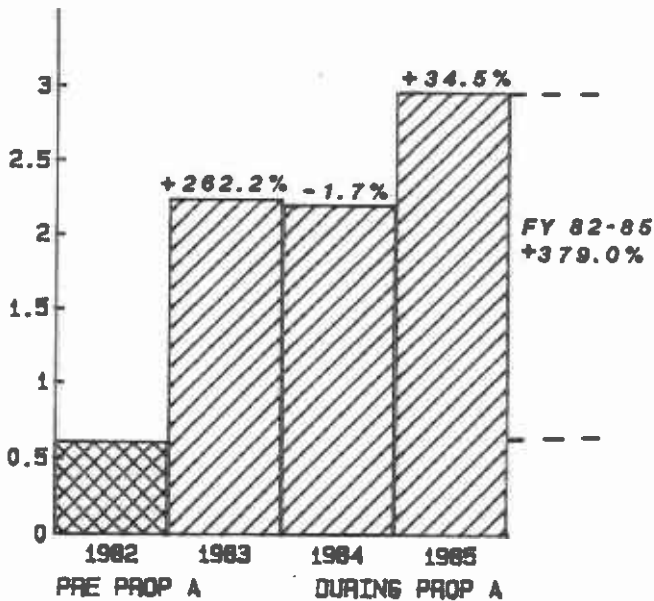
THOUSANDS OF BOARDINGS



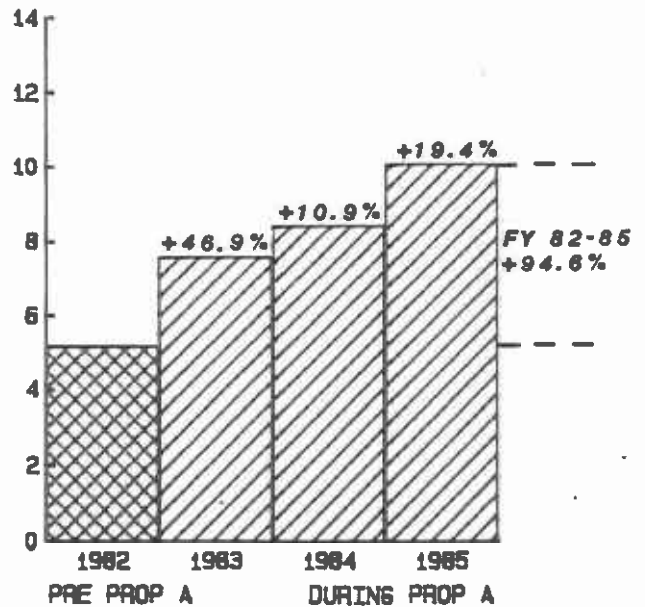
### STUDENT

### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-B (Cont'd)

POMONA VALLEY SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	3,860	4,630 +19.9%	5,441 +17.5%	6,246 +14.8%	+61.8%
Senior/Disabled	694	743 +7.1%	798 +7.4%	875 +9.6%	+26.1%
Students	619	2,242 +262.2%	2,205 -1.7%	2,965 +34.5%	+379.0%
Express	390	358 -8.2%	378 +5.6%	520 +37.6%	+33.3%

SOURCE: Area Accounts

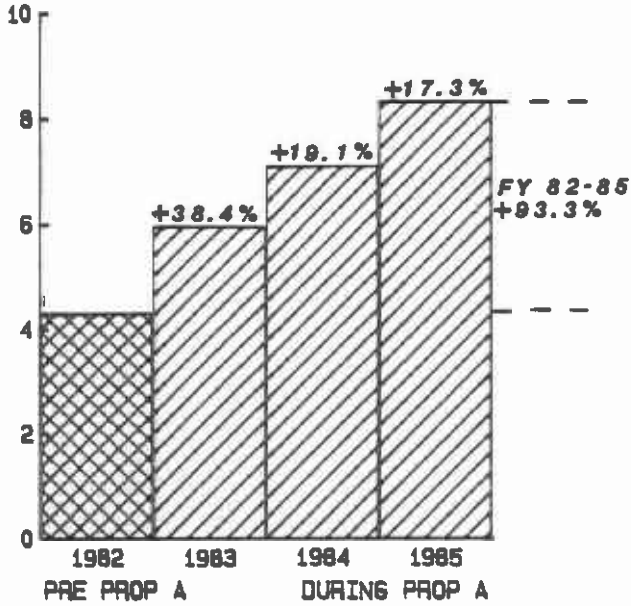


# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Long Beach Sector

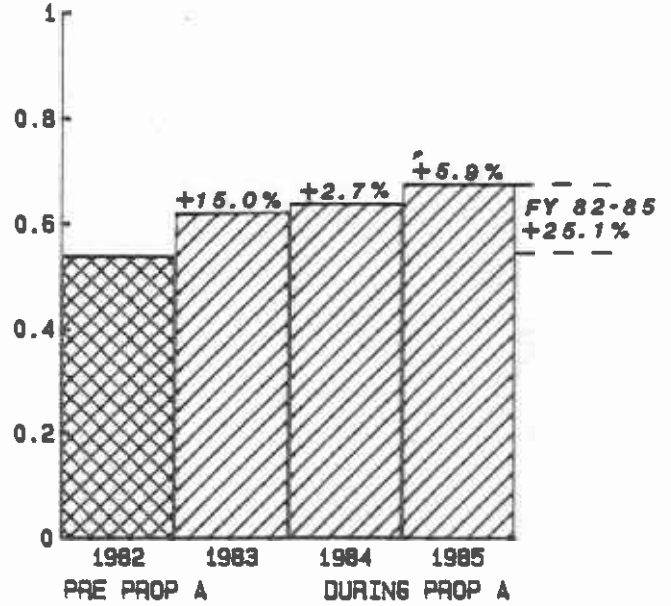
### REGULAR

THOUSANDS OF BOARDINGS



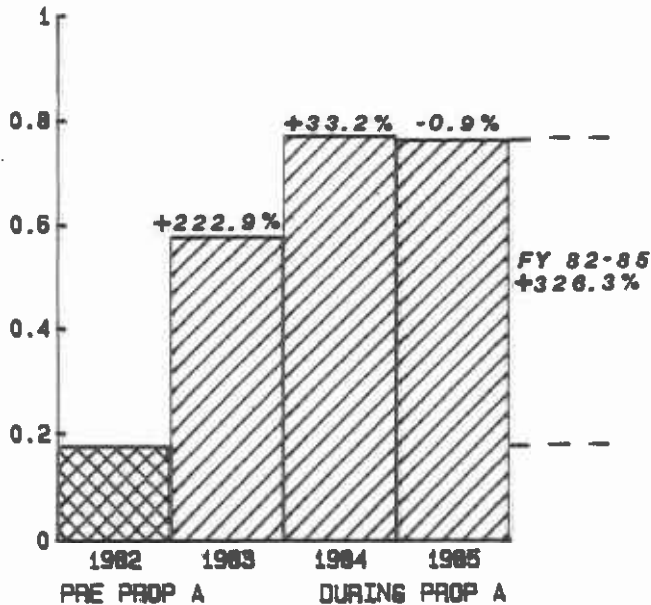
### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



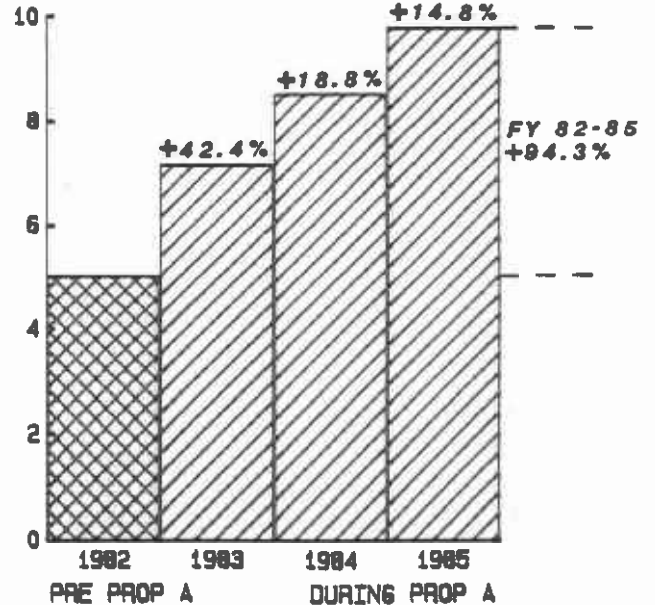
### STUDENT

THOUSANDS OF BOARDINGS



### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-C (Cont'd)

LONG BEACH SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

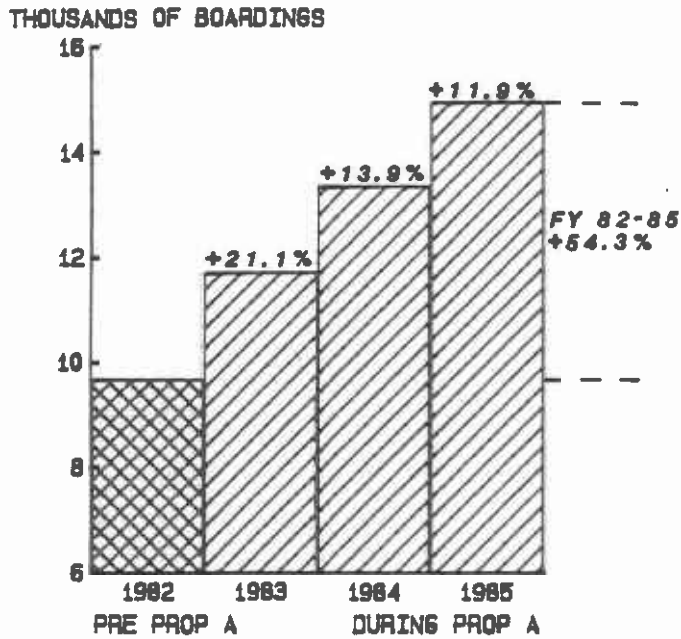
<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	4,313	5,968 +38.4%	7,109 +19.1%	8,338 +17.3%	+93.3%
Senior/Disabled	541	622 +15.0%	639 +2.7%	677 +5.9%	+25.1%
Students	179	578 +222.9%	770 +33.2%	763 -0.9%	+326.3%
Express	721	683 -5.3%	776 +13.6%	789 +1.7%	+9.4%

SOURCE: Area Accounts

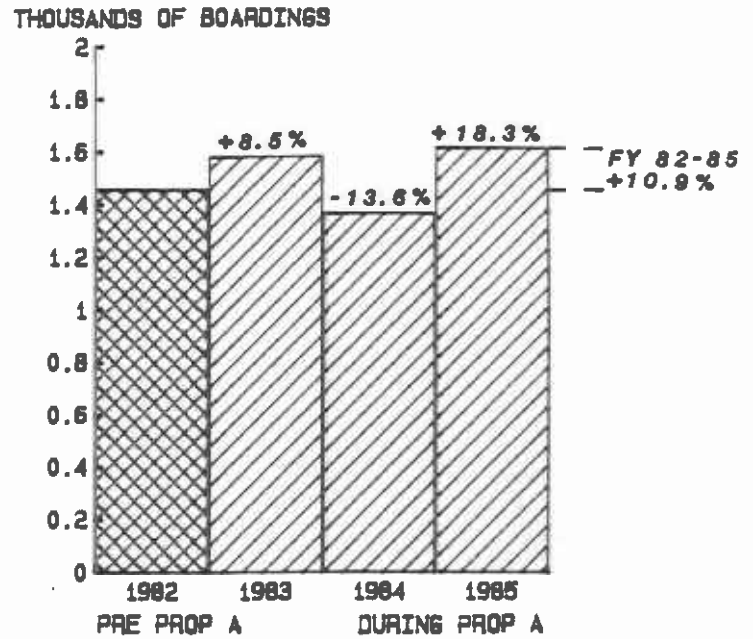
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## East San Gabriel Valley Sector

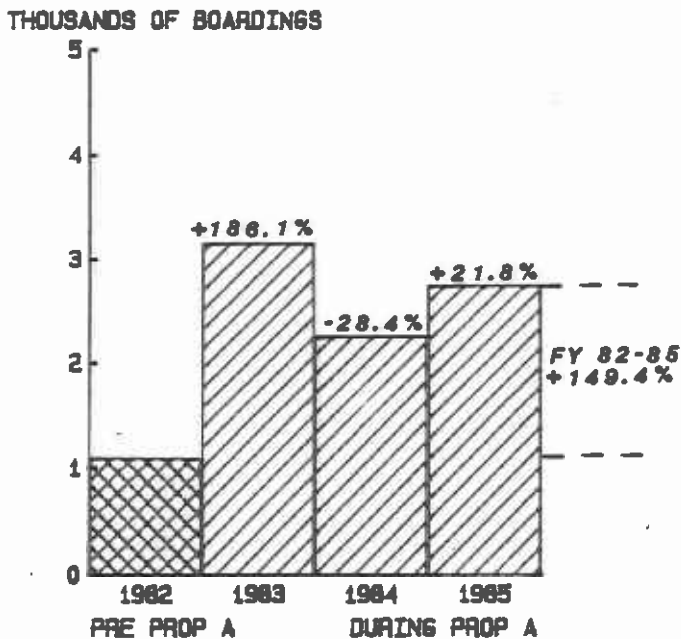
### REGULAR



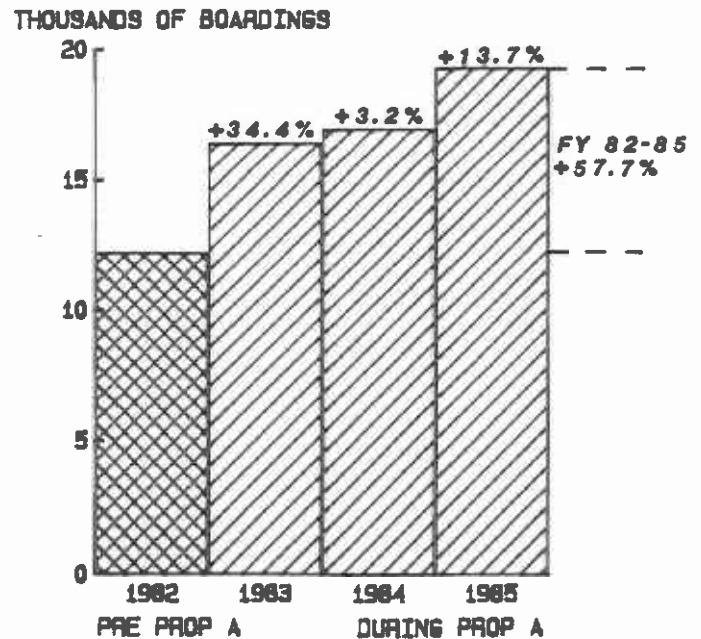
### SENIOR/DISABLED



### STUDENT



### TOTAL BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-D (Cont'd)

EAST SAN GABRIEL VALLEY SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	9,687	11,727 +21.1%	13,359 +13.9%	14,945 +11.9%	+54.3%
Senior/Disabled	1,460	1,584 +8.5%	1,369 -13.6%	1,619 +18.3%	+10.9%
Students	1,104	3,158 +186.1%	2,260 -28.4%	2,753 +21.8%	+149.4%
Express	1,137	1,416 +24.5	1,419 +.002%	1,573 +10.9%	+38.3%

SOURCE: Area Accounts

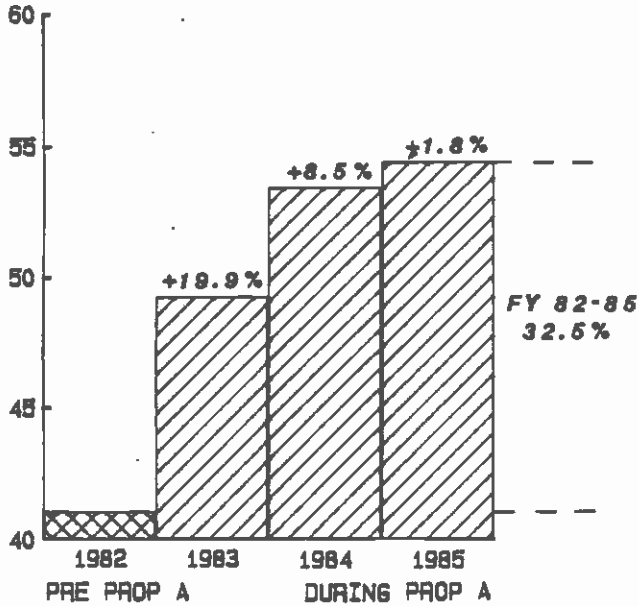
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## West San Gabriel Valley Sector

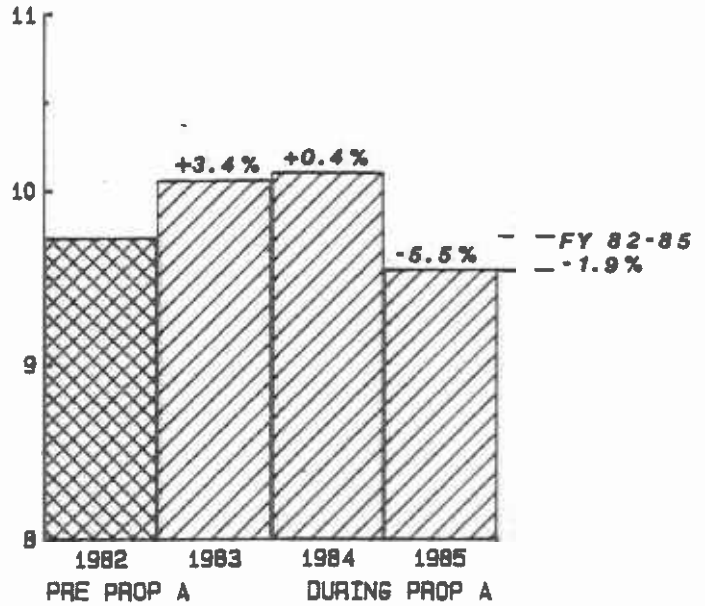
### REGULAR

### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



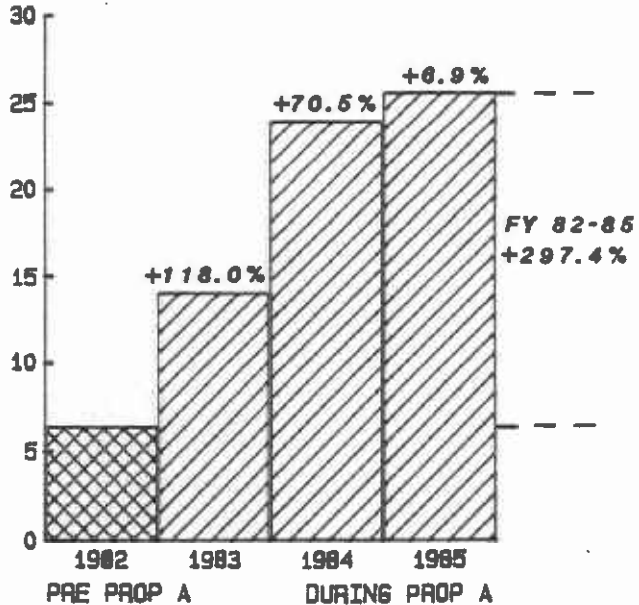
THOUSANDS OF BOARDINGS



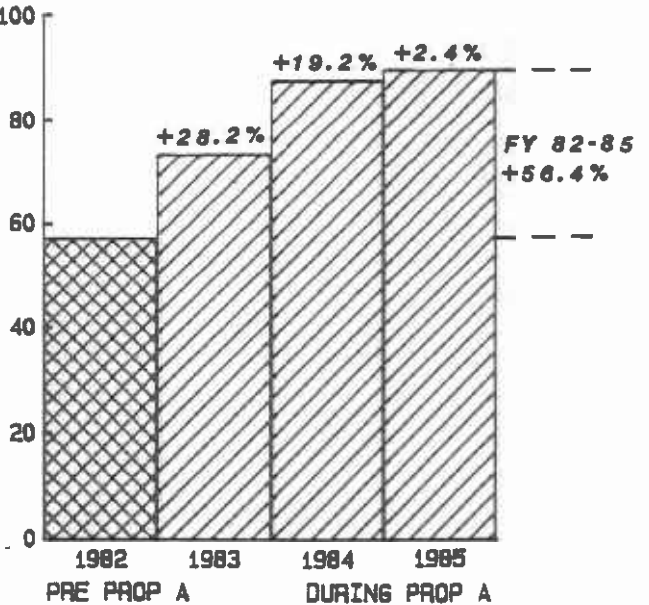
### STUDENT

### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-E (Cont'd)

WEST SAN GABRIEL VALLEY SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	41,095	49,292 +19.9%	53,474 +8.5%	54,431 +1.8%	+32.5%
Senior/Disabled	9,732	10,062 +3.4%	10,105 +0.4%	9,548 -5.5%	-1.9%
Students	6,446	14,053 +118.0%	23,955 +70.5%	25,618 +6.9%	+297.4%
Express Stamp Usage	2,157	2,526 +17.1%	2,731 +8.1%	2,869 +5.1%	+33.0%

SOURCE: Area Accounts

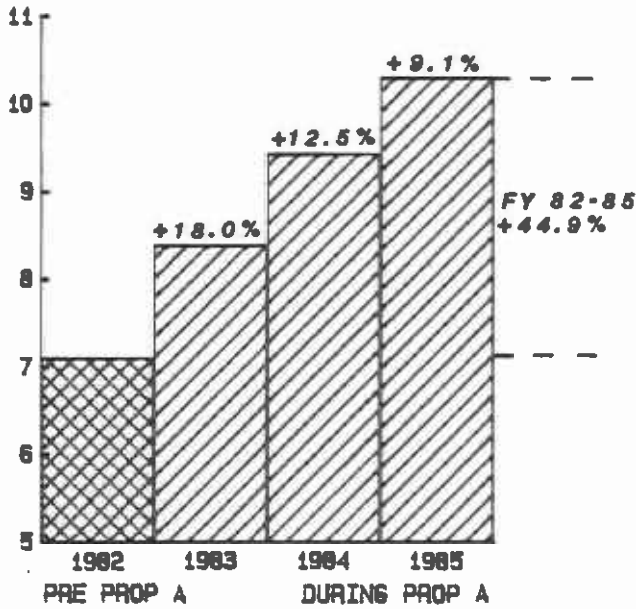
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Carson - San Pedro Sector

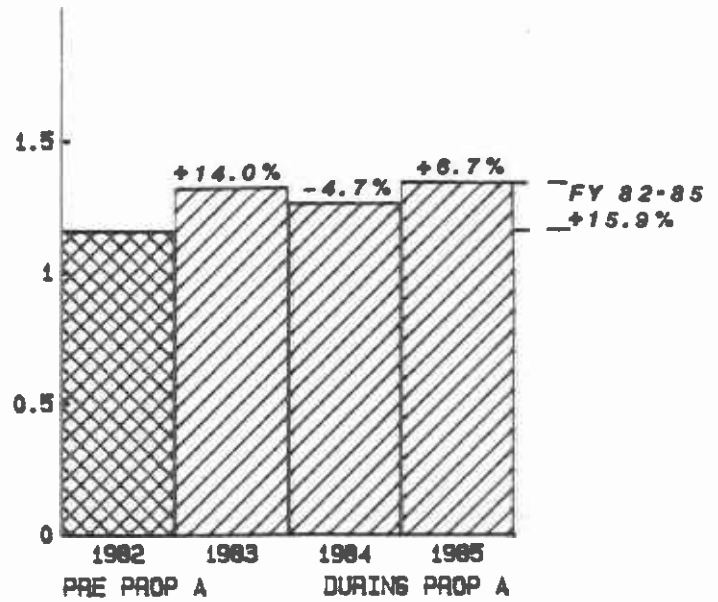
### REGULAR

### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



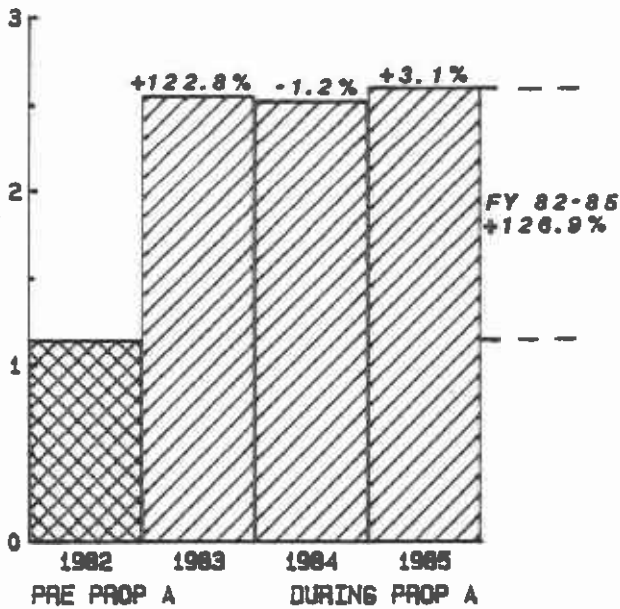
THOUSANDS OF BOARDINGS



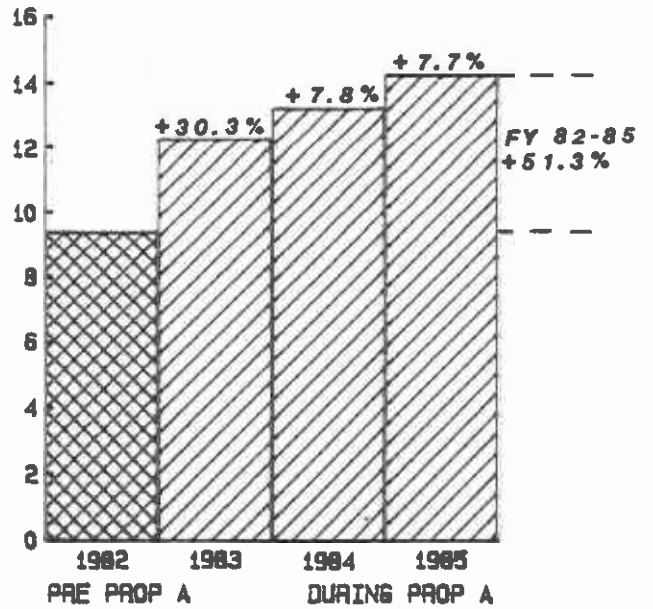
### STUDENT

### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-F (Cont'd)

CARSON - SAN PEDRO SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	7,110	8,393 +18.0%	9,438 +12.5%	10,301 +9.1%	+44.9%
Senior/Disabled	1,162	1,325 +14.0%	1,263 +4.7%	1,347 +6.7%	+15.9%
Students	1,148	2,558 +122.8%	2,527 -1.2%	2,605 +3.1%	+126.9%
Express	577	505 -12.5%	523 +3.6%	577 +10.3%	0%

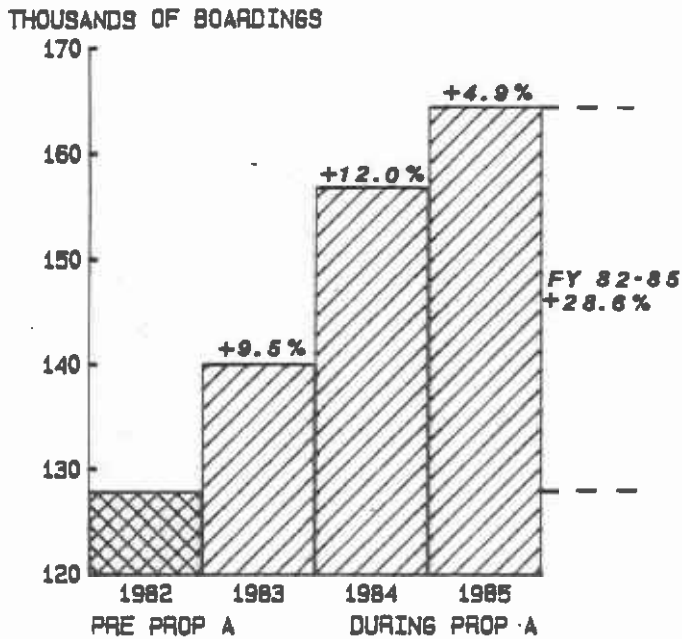
SOURCE: Area Accounts



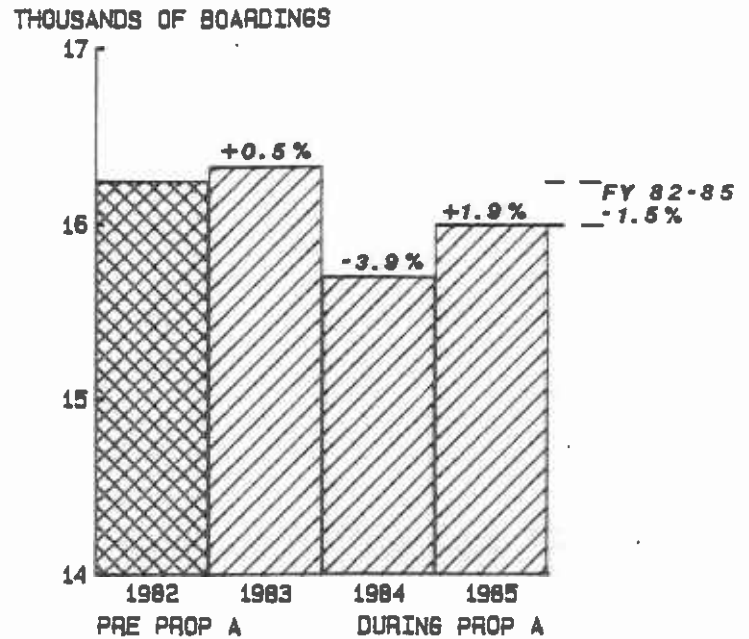
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## South Central Cities Sector

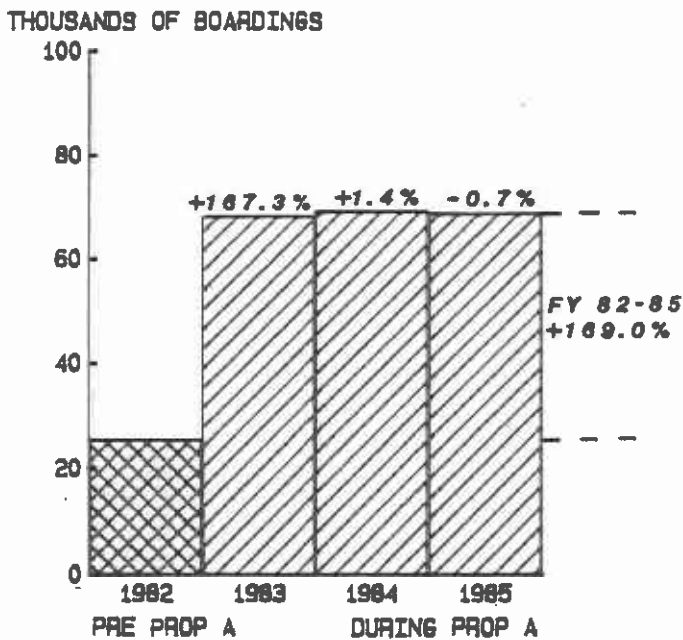
### REGULAR



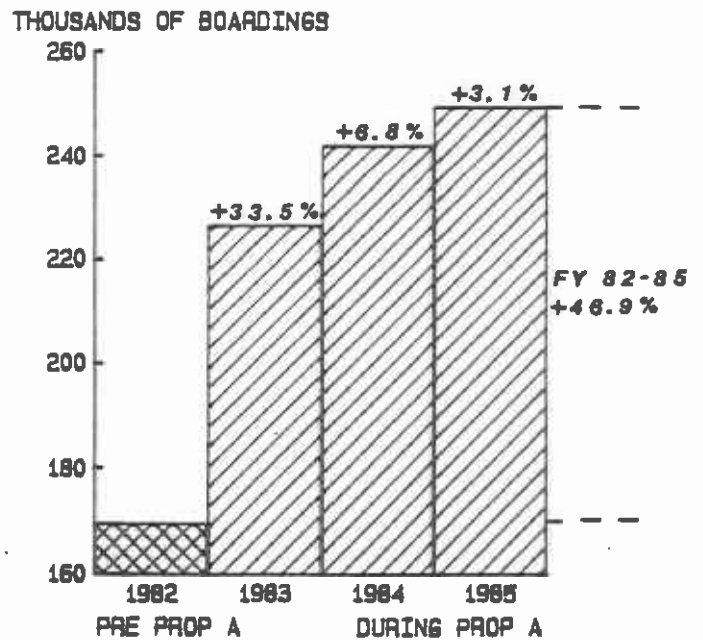
### SENIOR/DISABLED



### STUDENT



### TOTAL BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-G (Cont'd)

SOUTH CENTRAL CITIES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	127,929	140,055 +9.5%	156,898 +12.0%	164,541 +4.9%	+28.6%
Senior/Disabled	16,252	16,333 +0.5%	15,702 -3.9%	16,001 +1.9%	-1.5%
Students	25,564	68,331 +167.3%	69,256 +1.4%	68,762 -0.7%	+169.0%
Express	550	447 -18.7%	544 +21.7%	694 +27.6%	+26.2%

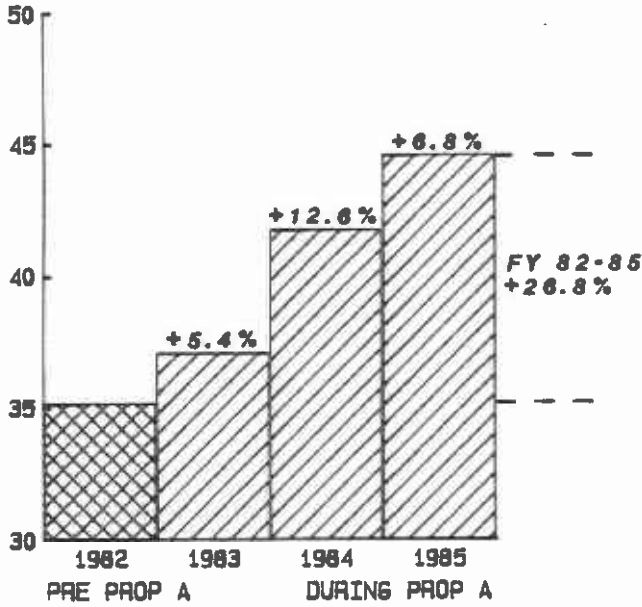
SOURCE: Planning Area Accounts

# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## South Bay Sector

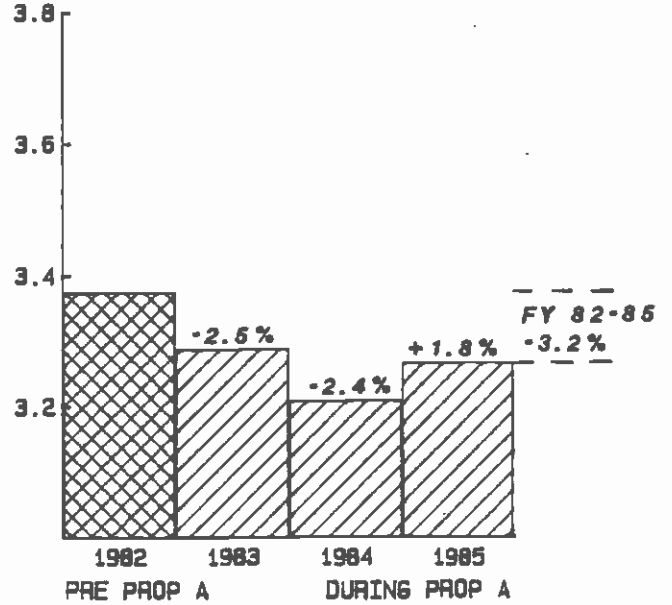
### REGULAR

THOUSANDS OF BOARDINGS



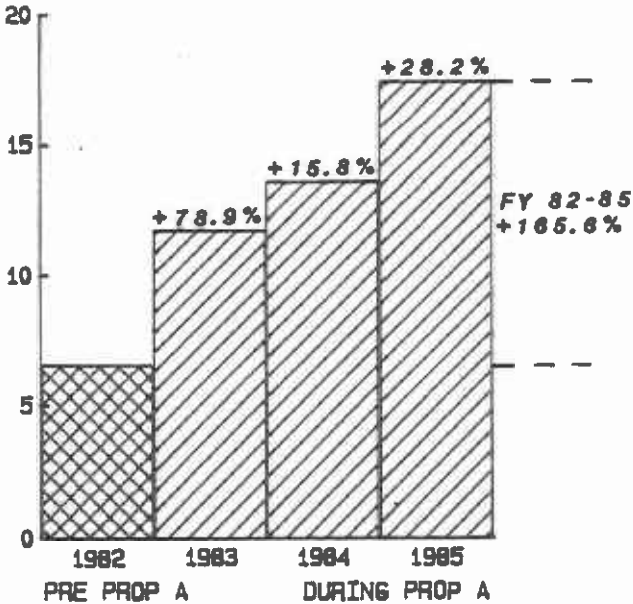
### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



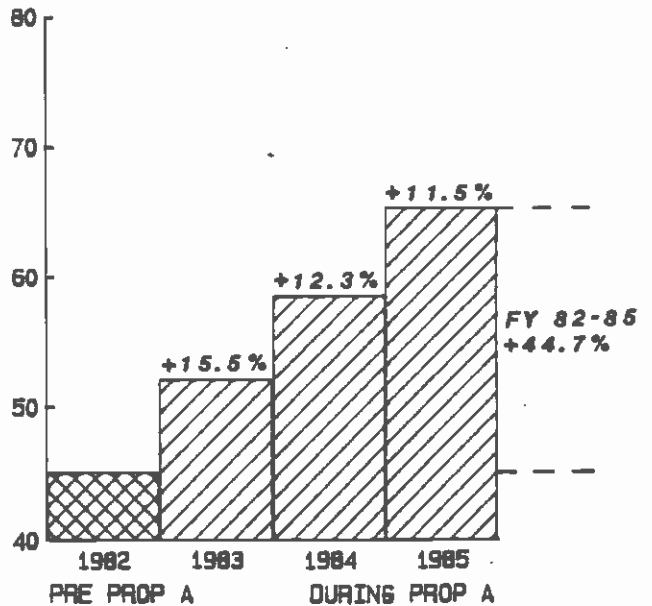
### STUDENT

THOUSANDS OF BOARDINGS



### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-H (Cont'd)

SOUTH BAY SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PRDP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	35,224	37,132 +5.4%	41,793 +12.6%	44,648 +6.8%	+26.8%
Senior/Disabled	3,375	3,289 -2.5%	3,210 -2.4%	3,268 +1.8%	-3.2%
Students	6,571	11,755 +78.9%	13,614 +15.8%	17,452 +28.2%	+165.6%
Express	787	876 +11.3%	1,030 +17.6%	979 -5.0%	+24.4%

SOURCE: Area Accounts

# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

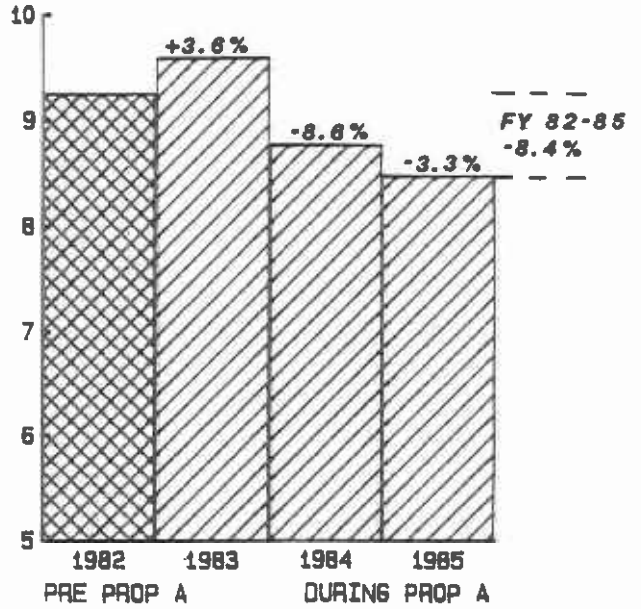
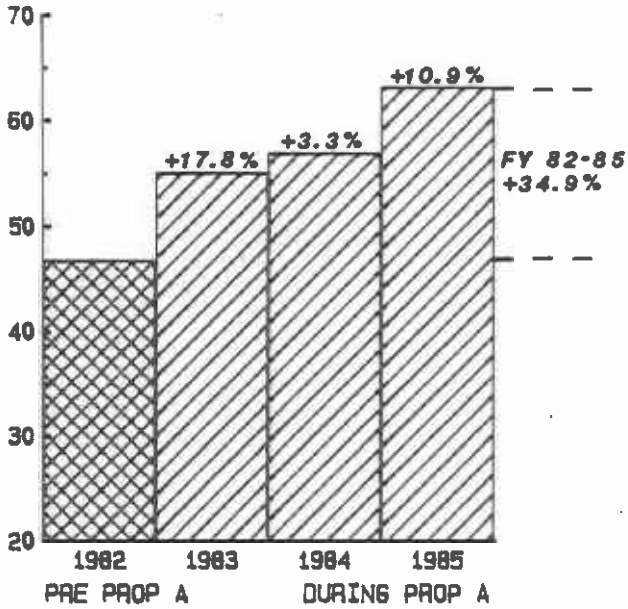
## East San Fernando Valley Sector

### REGULAR

### SENIOR/DISABLED

THOUSANDS OF BOARDINGS

THOUSANDS OF BOARDINGS

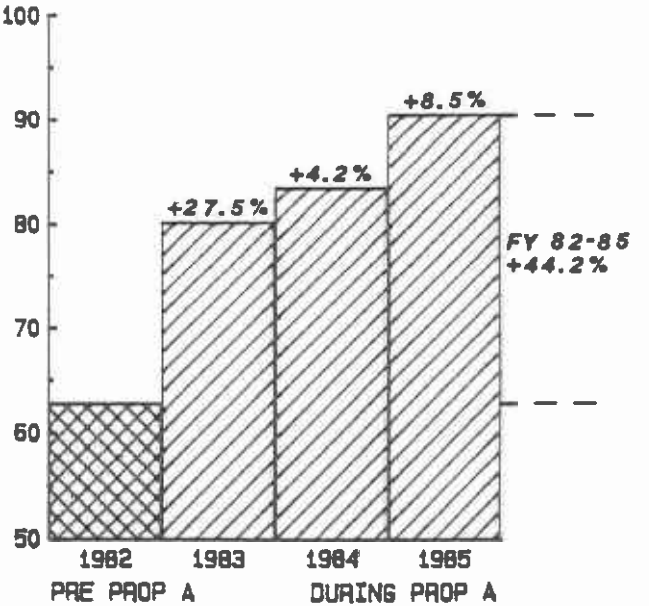
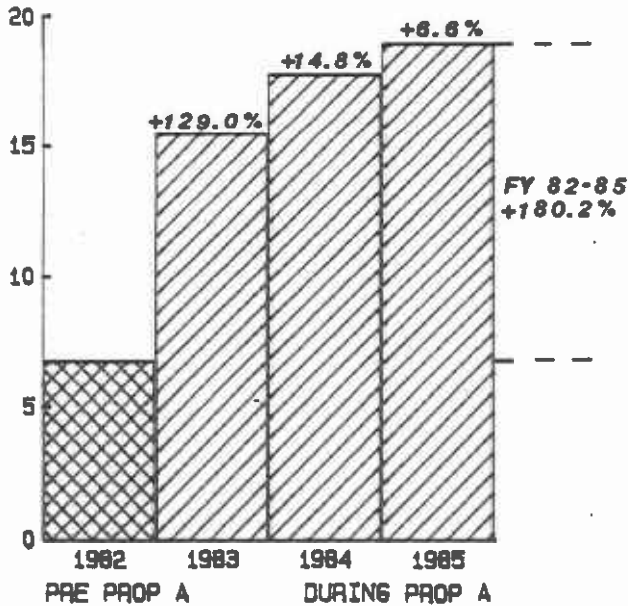


### STUDENT

### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-I (Cont'd)

EAST SAN FERNANDO VALLEY SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	46,812	55,126 +17.8%	56,951 +3.3%	63,144 +10.9%	+34.9%
Senior/Disabled	9,258	9,593 +3.6%	8,772 -8.6%	8,481 -3.3%	-8.4%
Students	6,765	15,490 +129.0%	17,784 +14.8%	18,953 +6.6%	+180.2%
Express Stamp Usage	2,091	2,365 +13.1%	2,459 +4.0%	2,557 +4.0%	+22.3%

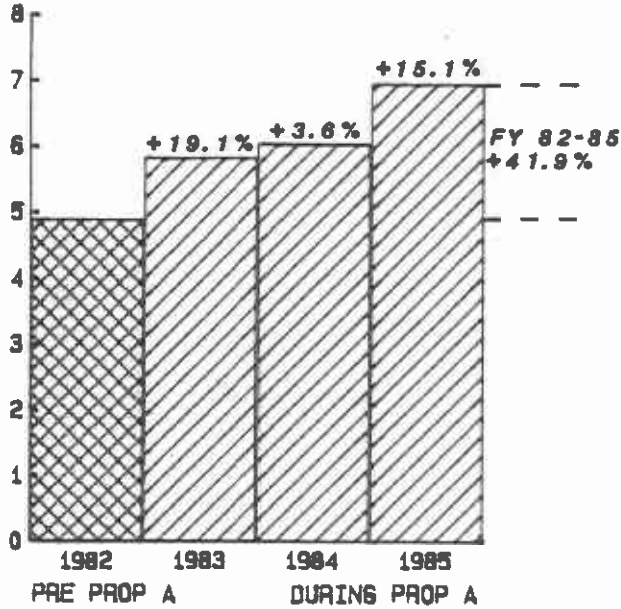
SOURCE: Area Accounts

# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Mid-Cities Sector

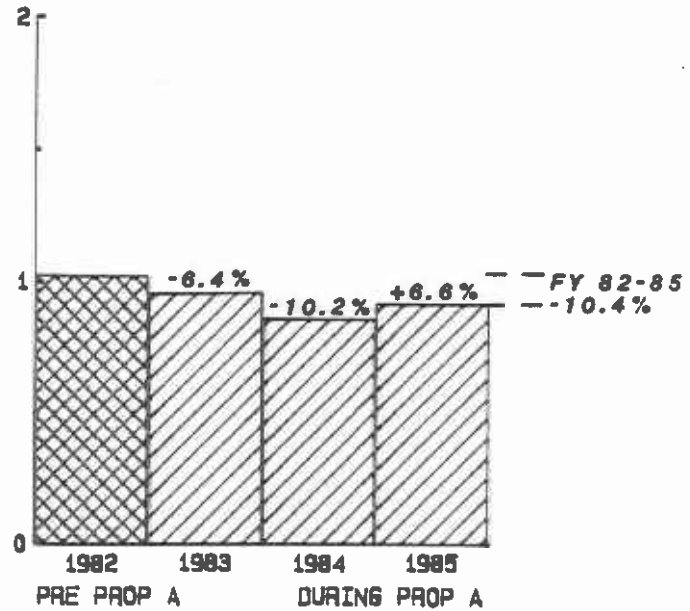
### REGULAR

THOUSANDS OF BOARDINGS



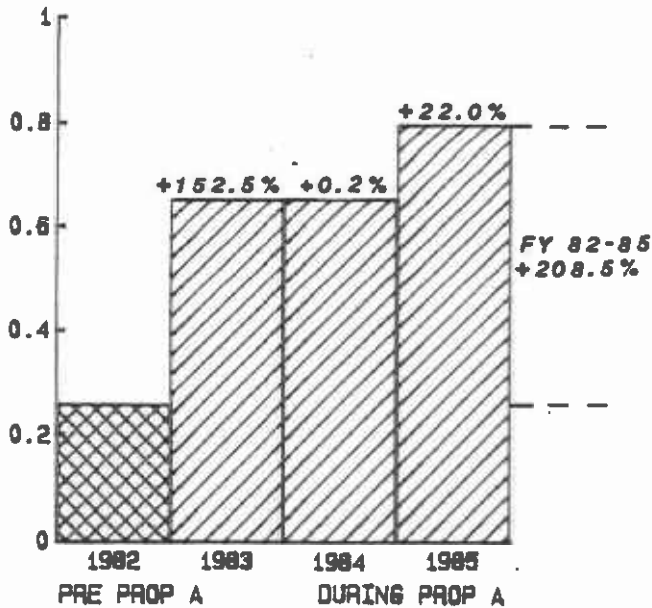
### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



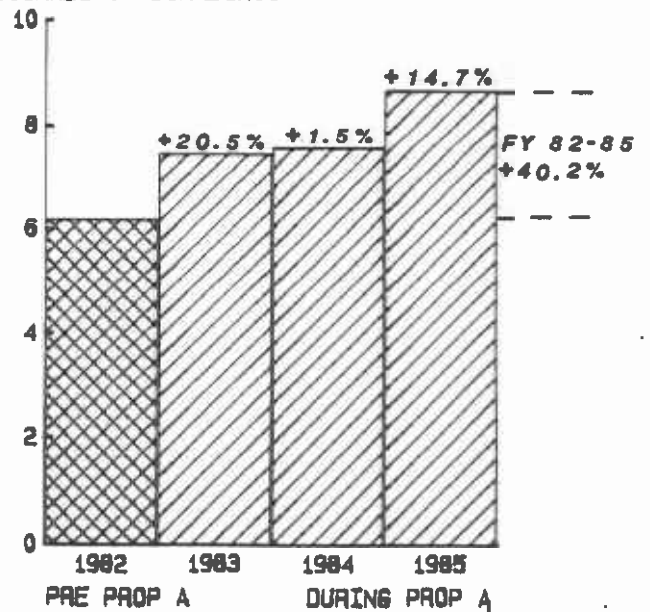
### STUDENT

THOUSANDS OF BOARDINGS



### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-J (Cont'd)

MID-CITIES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	4,908	5,846 +19.1%	6,054 +3.6%	6,966 +15.1%	+41.9%
Senior/Disabled	1,026	960 -6.4%	862 -10.2%	919 +6.6%	-10.4%
Students	259	654 +152.5%	655 +0.2%	799 +22.0%	+108.5%
Express	595	573 -3.7%	638 +11.3%	692 8.5%	+16.3%

SOURCE: Area Accounts

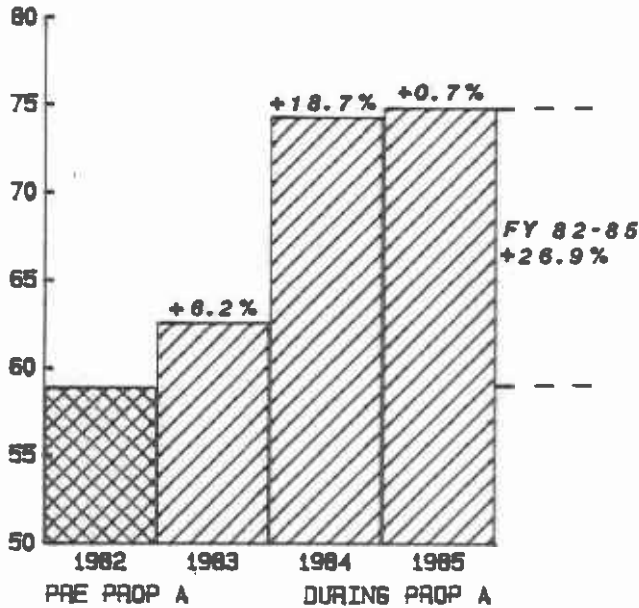


# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Northeast Los Angeles Sector

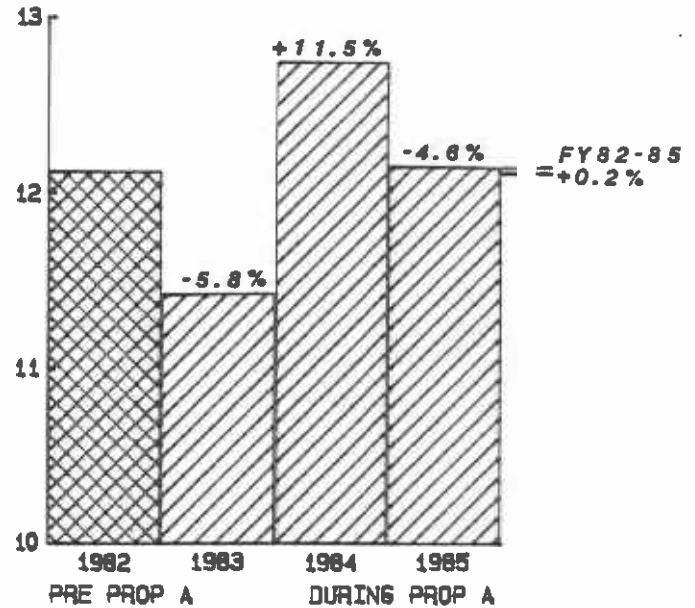
### REGULAR

THOUSANDS OF BOARDINGS



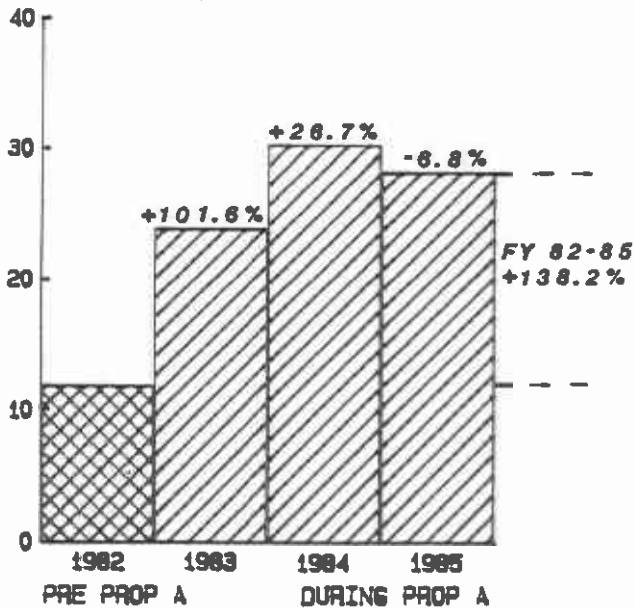
### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



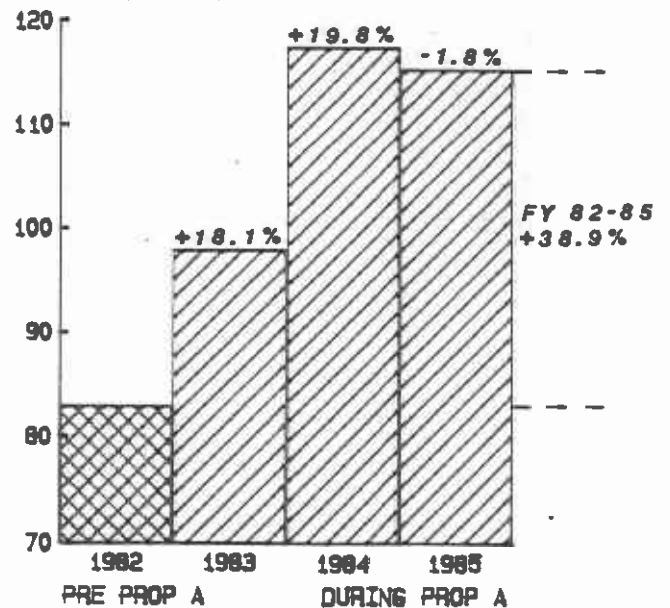
### STUDENT

THOUSANDS OF BOARDINGS



### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-K (Cont'd)

NORTHEAST LOS ANGELES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

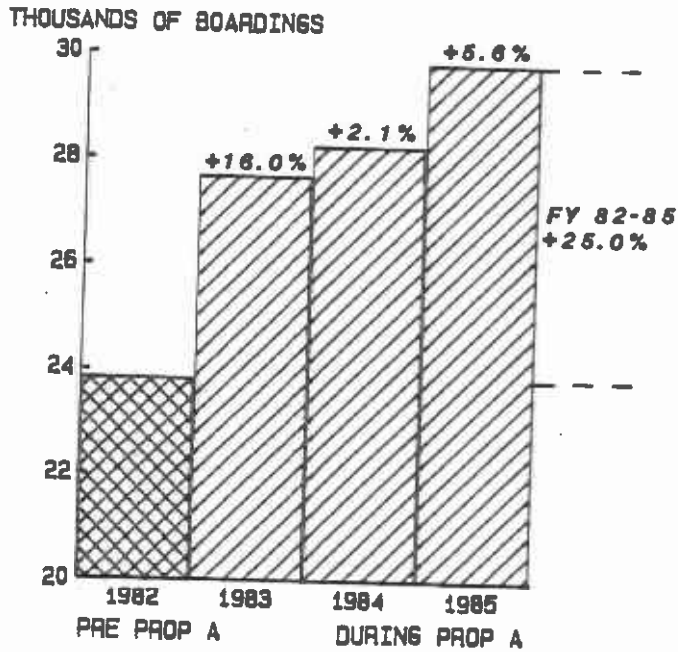
<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	58,971	62,610 +6.2%	77,317 +18.7%	74,850 +0.7%	+26.9%
Senior/Disabled	12,132	11,428 -5.8%	12,744 +11.5%	12,152 -4.6%	+0.002%
Students	11,872	23,935 +101.6%	30,329 +26.7%	28,280 -6.8%	+138.2%
Express	437	447 +2.3%	504 +12.8%	495 -1.8%	+13.3%

SOURCE: Area Accounts

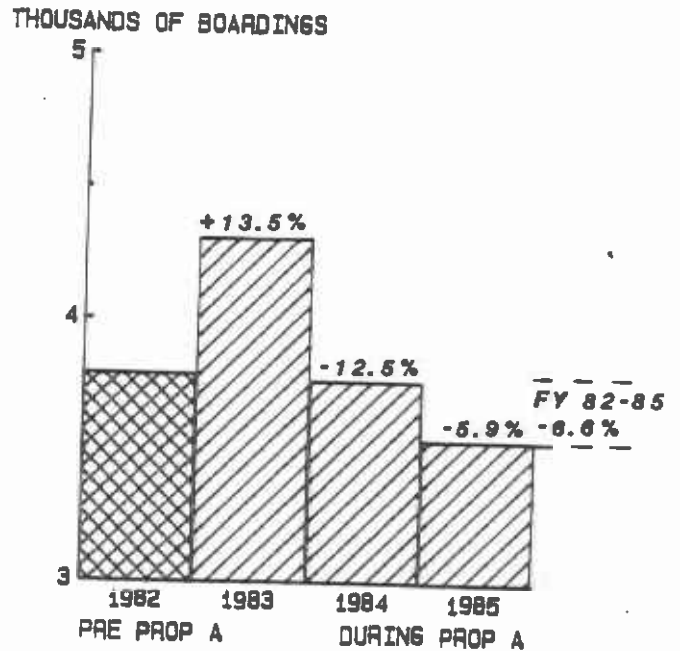
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## West San Fernando Valley Sector

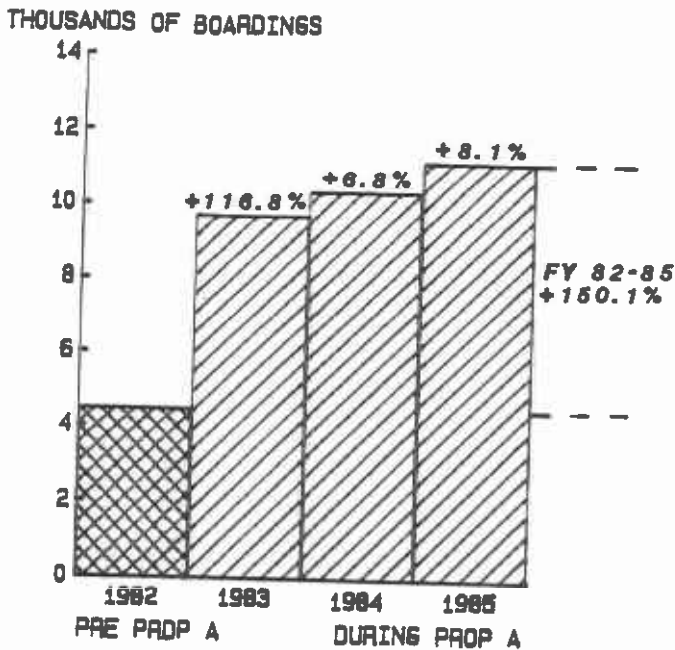
### REGULAR



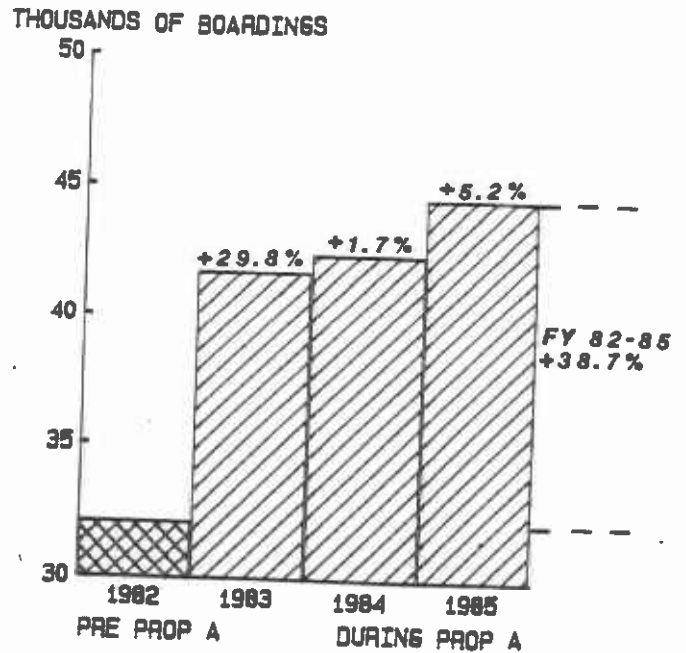
### SENIOR/DISABLED



### STUDENT



### TOTAL BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-L (Cont'd)

WEST SAN FERNANDO VALLEY SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	23,851	27,667 +16.0%	28,245 +2.1%	29,817 +5.6%	+25.0%
Senior/Disabled	3,794	4,307 +13.5%	3,767 -12.5%	3,545 -5.9%	-6.6%
Students	4,484	9,723 +116.8%	10,380 +6.8%	11,216 +8.1%	+150.1%
Express	1,019	1,150 +12.9%	1,375 +19.6%	1,330 -3.3%	+30.5%

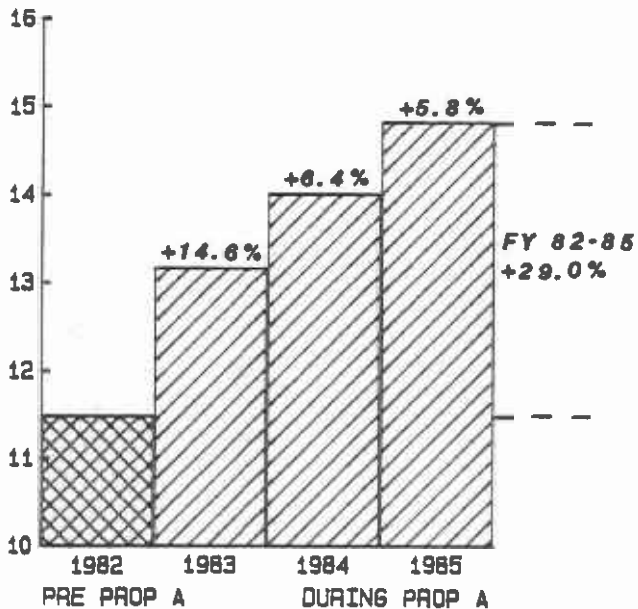
SOURCE: Area Accounts

# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Glendale Sector

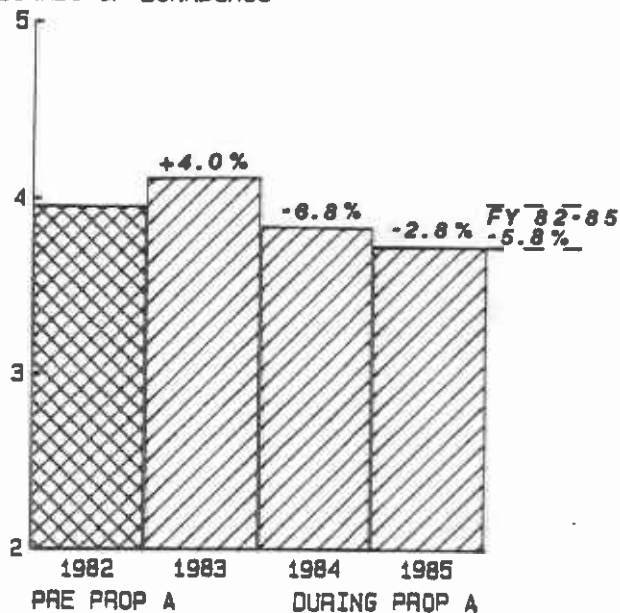
### REGULAR

THOUSANDS OF BOARDINGS



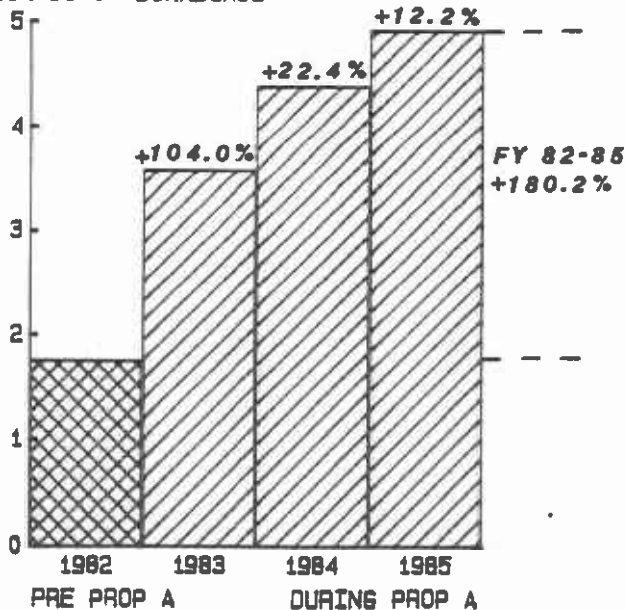
### SENIOR/DISABLED

THOUSANDS OF BOARDINGS



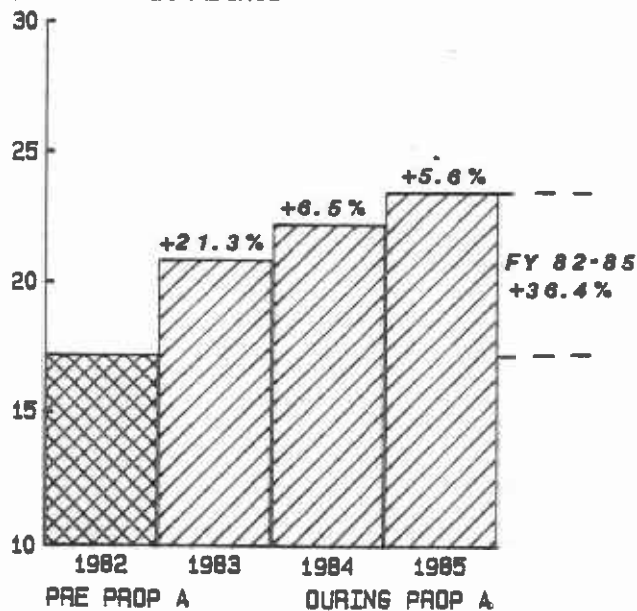
### STUDENT

THOUSANDS OF BOARDINGS



### TOTAL BOARDINGS

THOUSANDS OF BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-M (Cont'd)

GLENDALE SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

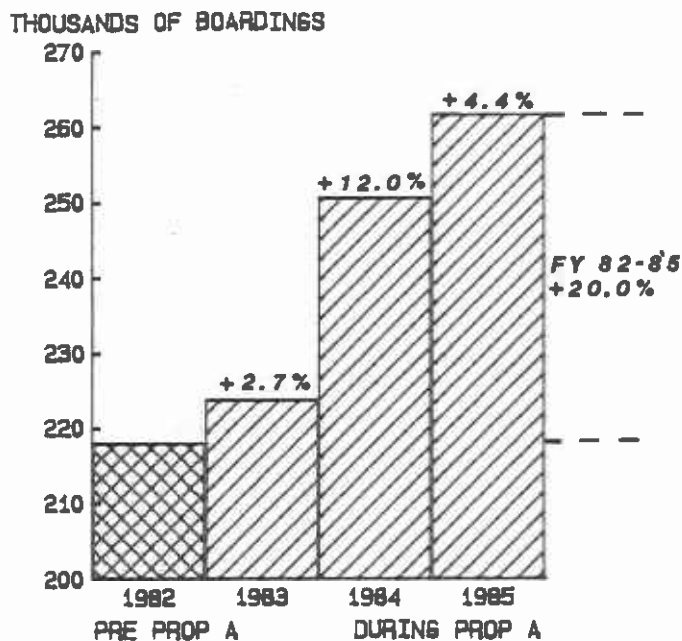
FARE TYPE	PRE-PROP A	DURING PROP A			PERCENT CHANGE
	1982	1983	1984	1985	
Regular	11,496	13,180 +14.6%	14,017 +6.4%	14,833 +5.8%	+29.0%
Senior/Disabled	3,961	4,120 +4.0	3,840 -6.8%	3,733 -2.8%	-5.8%
Students	1,756	3,582 +104.0%	4,385 +22.4%	4,921 +12.2	+180.2%
Express Stamp Usage	70	106 +51.4%	80 -24.5%	147 +83.8%	+110.0%

SOURCE: Area Accounts

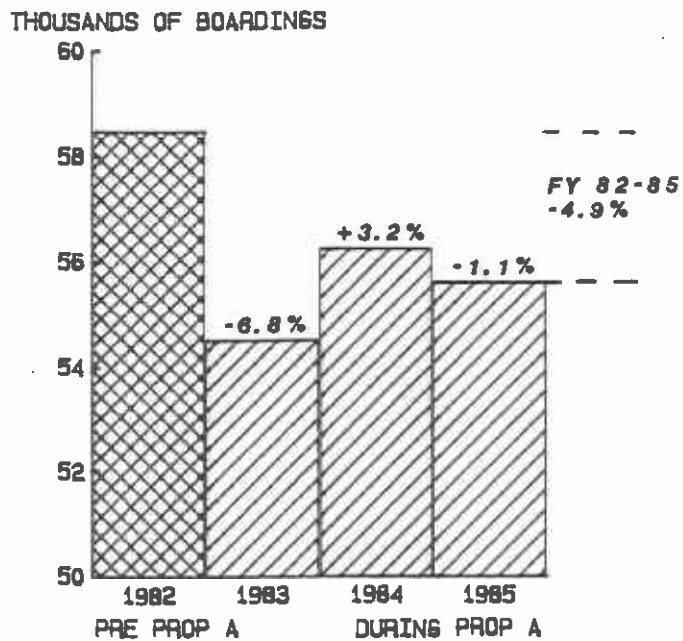
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## West Central Los Angeles Sector

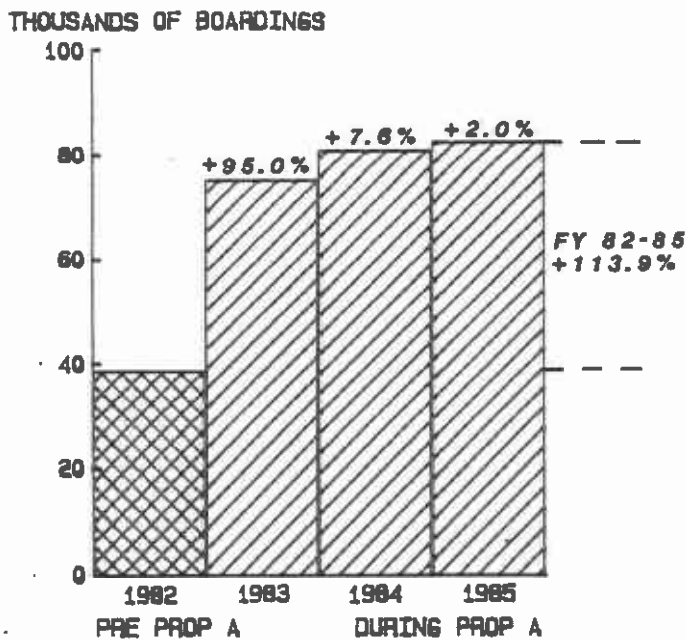
### REGULAR



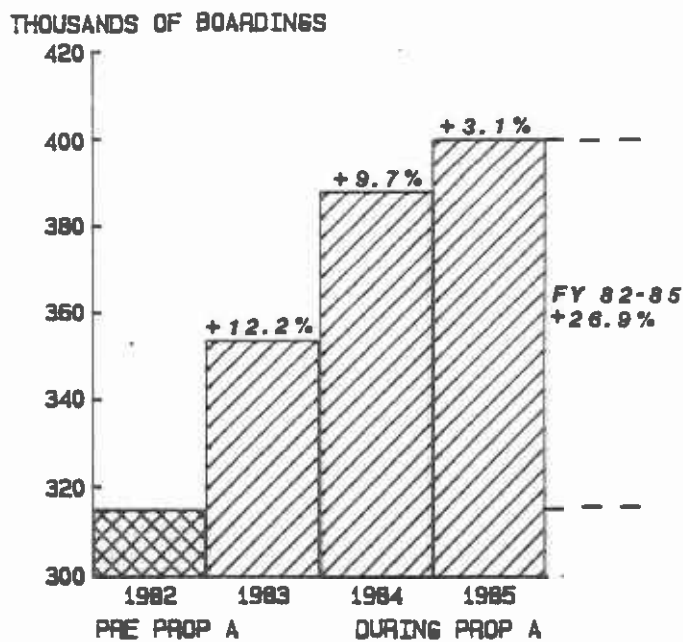
### SENIOR/DISABLED



### STUDENT



### TOTAL BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-N (Cont'd)

WEST CENTRAL LOS ANGELES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	218,182	223,985 +2.7%	250,810 +12.0%	261,794 +4.4%	+20.0%
Senior/Disabled	58,481	54,514 -6.8%	56,259 +3.2%	55,621 -1.1%	-4.9%
Students	38,604	75,262 +95.0%	80,982 +7.6%	82,579 +2.0%	+113.9%
Express	2,157	2,338 +8.4%	2,508 +7.3%	2,999 +19.6%	+39.0%

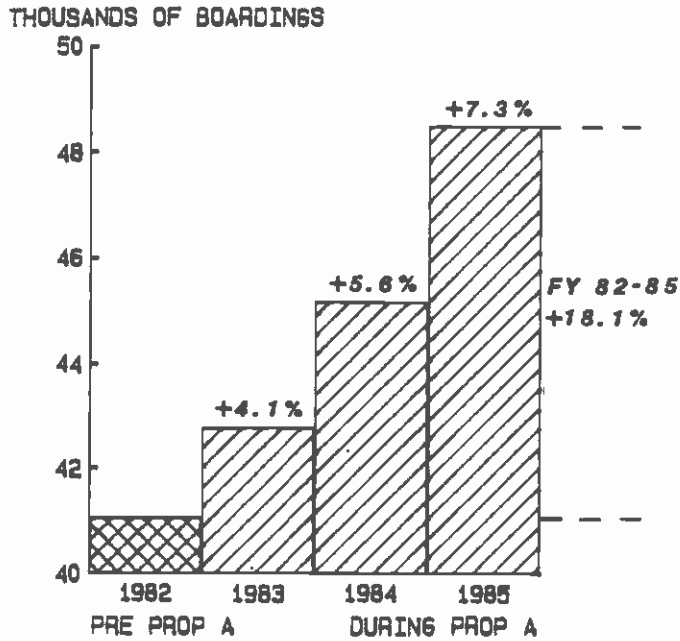
SOURCE: Area Accounts



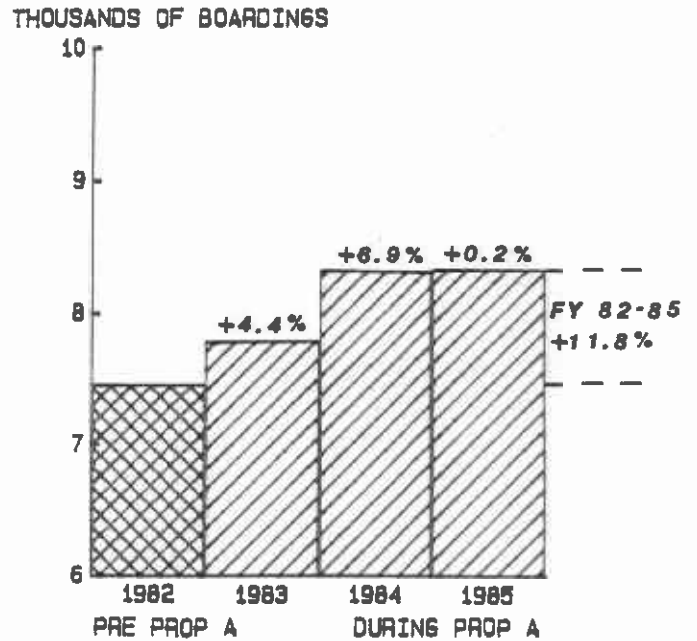
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## West Los Angeles Sector

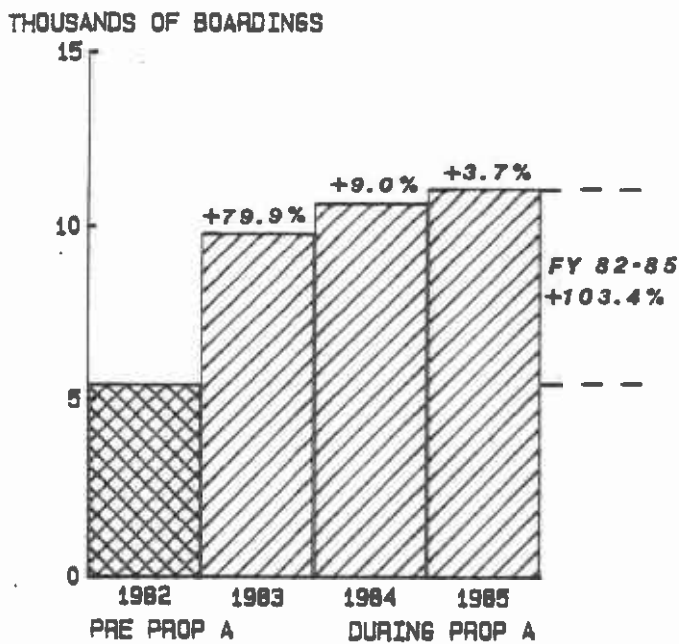
### REGULAR



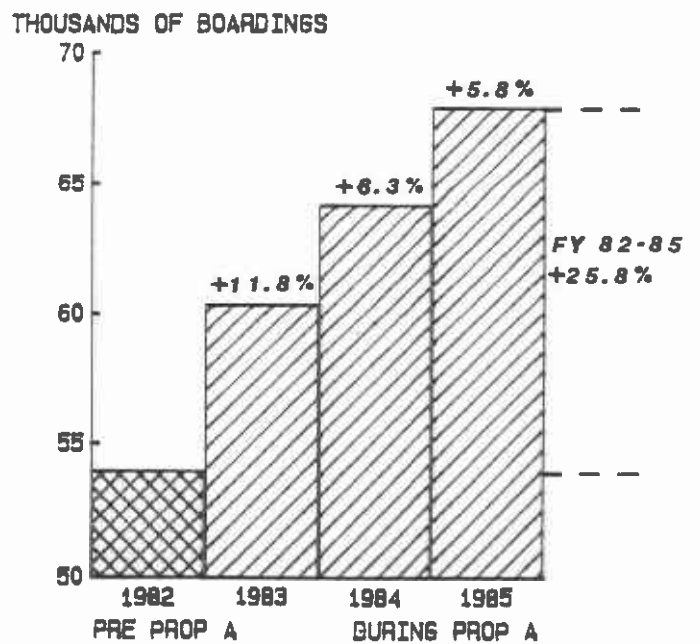
### SENIOR/DISABLED



### STUDENT



### TOTAL BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-0 (Cont'd)

WEST LOS ANGELES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

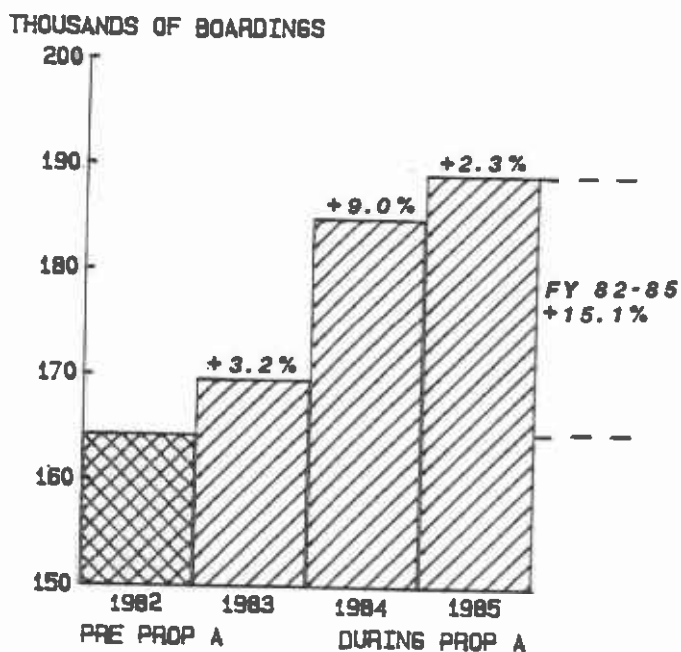
<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	41,082	41,785 +4.1%	45,191 +5.6%	48,510 +7.3%	+18.1%
Senior/Disabled	7,461	7,790 +4.4%	8,325 +6.9%	8,341 +0.2%	+11.8%
Students	5,459	9,819 +79.9%	10,704 +9.0%	11,101 +3.7%	+103.4%
Express Stamp Usage	1,053	969 -8.0%	1,074 +10.8%	1,273 +18.5%	+20.9%

SOURCE: Area Accounts

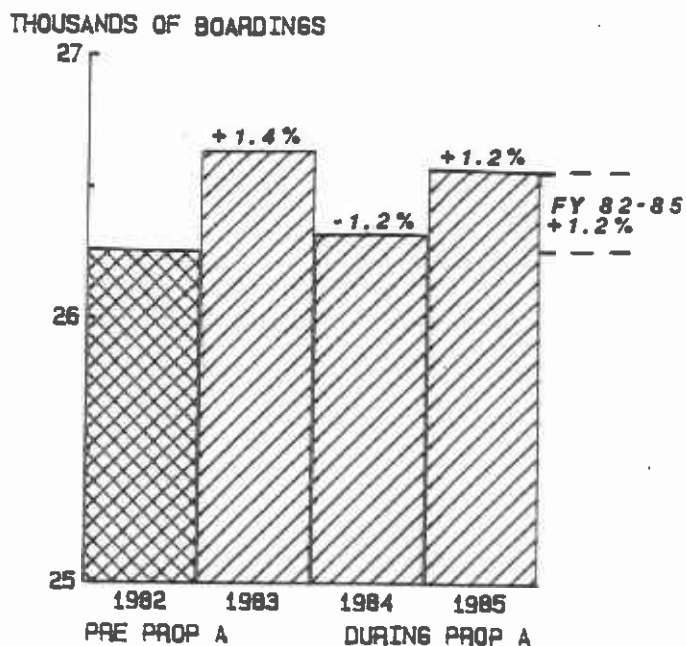
# CHANGE IN DAILY RIDERSHIP BY FARE TYPE, BY SECTOR, BY YEAR

## Downtown Los Angeles Sector

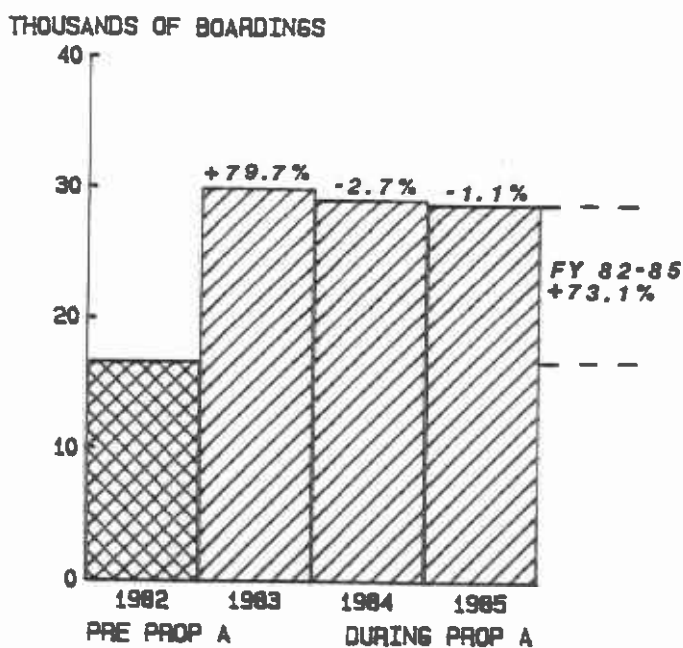
### REGULAR



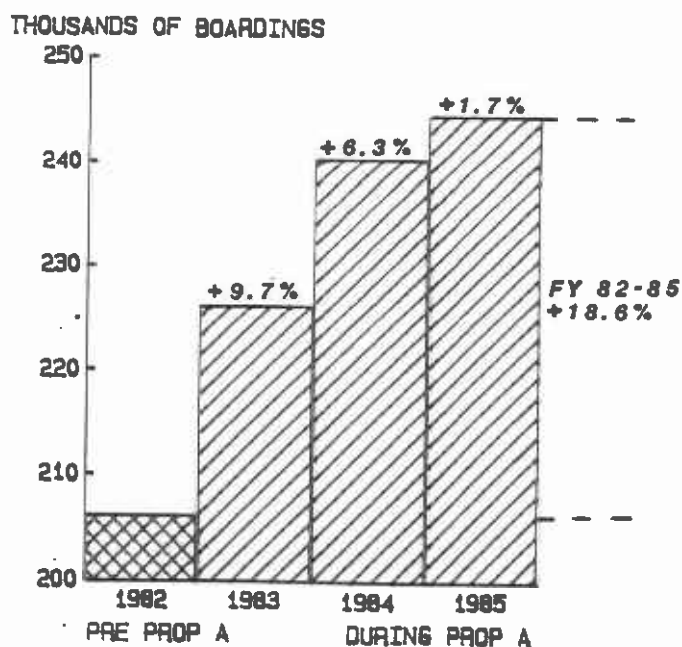
### SENIOR/DISABLED



### STUDENT



### TOTAL BOARDINGS



PLANNING DEPARTMENT  
NOVEMBER 1985

EXHIBIT 4-P (Cont'd)

DOWNTOWN LOS ANGELES SECTOR  
 AVERAGE DAILY RIDERSHIP COMPARISON BY FARE TYPE

<u>FARE TYPE</u>	<u>PRE-PROP A</u>	<u>DURING PROP A</u>			<u>PERCENT CHANGE</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Regular	164,357	169,632 +3.2%	184,904 +9.0%	189,144 +2.3%	+15.1%
Senior/Disabled	26,263	26,642 +1.4%	26,327 -1.2%	26,575 +1.2%	+1.2%
Students	16,656	29,933 +79.7%	29,136 -2.7%	28,829 -1.1%	+73.1%
Express	9,269	9,947 +6.8%	10,968 +10.3%	11,042 +.007%	+19.1%

SOURCE: Area Accounts

---

**EXHIBIT 5**

EXHIBIT 5  
EQUIPMENT/RIDERSHIP LINE ANALYSIS

Exhibit 5 summarizes the impacts of Prop A on 32 of the District's bus lines.

EXHIBIT 5

EQUIPMENT/RIDERSHIP LINE ANALYSIS

DATE OF CHECK	LINE NO.	TOTAL BOARDINGS	NO. OF TRIPS	BUSES ASSIGNED			REVENUE OPERATION	
				AM	BASE	PM	BUS MILES	BUS HOURS
2/82	16	19,014	259	22	11	22	2,110	235
10/22	(W. Third St.)	21,369	274	20	11	20	1,959	235
4/83		23,196	284	23	15	25	2,337	216
10/83		24,996	283	23	15	25	2,337	263
3/84		25,773	277	22	14	25	2,218	263
10/84		27,046	277	22	14	25	2,218	254
		+42.2%	+6.9%				+5.1%	+8.1%
2/82	18	26,512	279	29	17	29	3,499	286
10/82	(W. Sixth St.-	29,096	321	28	17	27	3,719	327
3/83	Whittier Bl.)	28,945	333	30	17	28	3,831	336
8/83		31,931	333	30	17	28	3,831	336
2/84		34,507	337	30	17	28	3,831	336
8/84		32,968	337	29	17	31	3,525	315
3/85		32,544	295	29	17	31	3,525	315
		+22.8%	+5.7%				*	+10.1%
1/82	26	10,841	211	14	9	16	1,516	173
1/83	(Seventh St.-Virgil	11,332	211	14	9	16	1,516	173
6/83	Ave.-Franklin Ave.)	12,024	211	14	9	16	1,542	175
1/84		12,130	211	14	9	17	1,538	175
6/84		12,578	211	14	9	17	1,538	175
1/85		13,126	211	14	9	17	1,538	175
		+21.1%	0%				+1.5%	+1.2%
1/82	27-28	24,484	327	44	20	37	3,778	375
1/83	(W. Olympic Bl.)	28,559	339	45	20	37	4,087	380
5/83		32,373	358	48	20	38	4,240	396
12/83		32,138	357	49	20	38	4,299	392
10/84		35,023	366	49	20	39	4,299	392
		+43.0%	+11.9%				+13.8%	+4.5%
4/80	30-31	54,689	417	48	29	45	4,890	468
11/82	(W. Pico Bl.-	44,999	386	44	25	41	4,663	452
4/83	E. First St.-	46,775	388	45	25	42	4,627	456
12/83	Floral Dr.)	46,677	394	45	25	42	4,627	456
5/84		50,865	394	45	25	43	4,660	460
		-7.0%	-5.5%				-4.7%	-1.7%
1/82	33	20,655	215	42	14	39	4,197	328
10/82	(Venice Bl.-	23,713	210	37	14	37	4,242	327
4/83	Echo Park Bl.)	26,576	225	40	14	40	4,520	347
2/84		29,654	262	42	19	43	5,013	396
10/84		31,152	262	42	19	43	5,013	396
6/85		32,386	262	42	19	43	5,013	396
		+56.8%	+21.9%				+19.4%	+20.7%

\*-Less Than One-percent Change

EXHIBIT 5 (Cont'd)

EQUIPMENT/RIDERSHIP LINE ANALYSIS

DATE OF CHECK	LINE NO.	TOTAL BOARDINGS	NO. OF TRIPS	BUSES ASSIGNED			REVENUE OPERATING MILES	OPERATING HOURS
				AM	BASE	PM		
8/81	40	22,415	243	34	19	40	4,264	370
10/82	(Hawthorne Bl.-	30,704	290	37	19	43	4,758	398
3/83#	Union Sta.)	31,360	338	37	19	43	4,758	398
10/83		34,758	345	41	24	45	5,082	448
1/85		36,016	326	44	26	46	5,193	458
		+60.7%	+34.2%				+21.8%	+23.5%
1/82	90-91	5,857	110	16	6	20	2,012	137
1/83	(Los Angeles-	7,124	110	16	6	20	2,012	137
6/83	Sunland)	7,287	108	16	6	20	2,012	137
11/83		7,190	107	17	6	20	2,165	136
6/84		7,816	107	17	6	20	2,165	136
2/85		8,152	112	17	6	20	2,165	136
		+39.2%	+1.8%				+7.6%	*
12/81	94	10,307	121	22	11	21	3,398	219
11/82	(Los Angeles-	11,200	124	22	11	21	3,414	223
9/83	San Fernando)	13,278	127	22	11	21	3,493	225
6/84		14,054	131	23	12	24	3,637	242
1/85		14,678	131	23	12	24	3,637	242
		+42.4%	+8.3%				-7.0%	+10.5%
4/82	117	7,930	110	9	7	9	1,396	120
3/83	(Century Bl.)	11,691	108	9	7	9	1,372	118
8/83		10,808	107	9	7	9	1,372	118
2/84		11,594	108	9	7	9	1,372	118
7/84		12,730	108	9	7	9	1,372	118
3/85		13,722	141	9	7	9	1,372	118
		+73.0%	+28.2%				-1.7%	-1.7%
1/82	120	7,373	119	13	9	15	2,520	170
3/83	(Imperial Hwy.)	10,126	119	13	9	15	2,653	175
8/83		11,202	120	13	9	15	2,647	175
7/84		11,959	120	13	9	15	2,647	175
3/85		14,027	119	13	9	15	2,647	175
		+90.2%	0%				+5.0%	+2.0%
2/82	163	5,645	82	7	7	7	1,669	112
1/83	(Sherman Way)	6,477	80	7	7	7	1,664	112
5/83		6,746	81	7	7	7	1,664	112
12/83		7,660	78	7	7	7	1,603	111
5/84		7,503	82	7	7	7	1,603	111
12/84		7,632	78	7	7	7	1,603	111
		+35.2%	-4.9%				-4.0%	*

\* -Less Than One-percent Change  
# -Rain



EXHIBIT 5 (Cont'd)

EQUIPMENT/RIDERSHIP LINE ANALYSIS

DATE OF CHECK	LINE NO.	TOTAL BOARDINGS	NO. OF TRIPS	BUSES ASSIGNED			REVENUE OPERATION	
				AM	BASE	PM	BUS MILES	BUS HOURS
4/81	180	14,252	139	14	14	15	2,330	224
10/82	(Hollywood-Glendale-	14,653	141	15	14	16	2,429	224
3/83	Pasadena)	16,481	146	15	14	16	2,429	224
8/83		16,357	150	16	14	20	2,539	239
1/84		17,706	150	16	14	20	2,539	239
6/84		18,002	150	16	14	20	2,468	234
2/85		18,921	149	16	14	20	2,491	235
		+32.8%	+7.2%				+6.9%	+4.9%
7/81	187	3,515	59	7	8	8	1,776	106
8/82	(Pasadena-Glendor-	3,926	58	7	8	8	1,776	106
3/83	Pomona via Foothill	5,312	58	7	8	8	1,752	108
5/83	Bl.)	4,895	58	7	8	8	1,752	108
1/84		5,448	58	7	8	8	1,752	108
7/84		4,334	54	7	7	7	1,427	96
4/85		4,515	55	7	7	7	1,427	96
4/85		5,047	55	7	7	7	1,427	96
		+43.6%	-6.8%				-19.7%	-9.4%
1/82	192-194	529	56	5	5	5	1,053	66
3/83#	(Arroyo Ave.-North	741	45	4	4	4	799	53
4/83	White-San Bernardino	1,287	45	4	4	4	843	53
10/83	Ave.)	1,151	43	4	4	4	843	53
7/84		920	45	4	4	4	843	53
10/84		1,690	45	5	4	4	867	53
5/85		1,726	45	5	4	4	867	53
		+226.3%	-19.6%				-17.7%	-16.7%
11/81	200	12,675	165	9	7	10	916	115
2/83#	(Alvarado St.)	13,522	167	9	7	10	916	115
6/83		15,438	167	9	7	10	911	113
4/84		16,889	183	10	7	11	944	117
4/85		18,596	199	13	10	13	1,092	154
		+46.7%	+20.6%				+19.2%	+33.9%
3/82#	207	24,021	244	25	15	22	2,811	270
1/83	(Western Ave.)	34,299	244	29	14	28	2,857	278
6/83		36,348	256	26	14	24	3,399	330
4/84		35,167	309	29	14	28	2,972	288
1/85		39,806	309	29	14	28	3,399	330
		+65.7%	+26.6%				+20.9%	+22.2%

#-Rain

EXHIBIT 5 (Cont'd)

EQUIPMENT/RIDERSHIP LINE ANALYSIS

DATE OF CHECK	LINE NO.	TOTAL BOARDINGS	NO. OF TRIPS	BUSES ASSIGNED			REVENUE OPERATIO	
				AM	BASE	PM	BUS MILES	BUS HOUR
5/82	210	20,378	207	24	17	23	3,549	288
10/82	(Vine St.-	24,299	209	24	17	22	3,542	286
3/83#	Crenshaw Bl.)	23,427	210	24	17	22	3,550	286
7/83		25,015	215	24	17	22	3,543	285
3/84		14,195	216	25	19	27	3,685	315
10/84		30,702	216	25	19	27	3,685	315
4/85		29,274	216	25	19	27	3,685	315
		+43.7%	+4.3%				+3.8%	+9.4
1/82	212	12,452	148	15	11	14	2,353	201
11/82#	(La Brea-Hollywood	10,612	151	15	11	14	2,320	201
8/83	Way)	14,689	155	17	11	15	2,408	201
4/84		16,014	157	18	10	17	2,322	217
10/84		16,232	157	18	10	17	2,327	217
4/85		16,683	156	18	10	17	2,327	217
		+34.0%	+5.4%				-1.1%	+8.0
4/82	232	3,318	66	6	6	7	1,505	101
2/83	(Long Beach-LAX)	4,530	67	6	6	7	1,505	104
7/83		5,250	94	10	10	10	2,156	147
7/84		6,398	93	10	10	10	2,156	147
2/85		6,658	93	10	10	10	2,166	148
		+100.1%	+40.9%				+43.9%	+42.3
4/82	234	3,249	65	5	4	5	994	70
1/83	(Sepulveda Bl.-	4,780	66	5	4	5	994	70
5/83	Brand Bl.-Sayre St.)	5,215	66	6	4	6	1,000	74
11/83		5,270	66	6	4	6	1,000	74
4/84		6,212	66	6	4	6	1,000	74
10/84		6,359	66	6	4	6	1,000	74
4/85		6,332	66	6	4	6	1,000	74
		+94.6%	+1.5%				*	+5.7
3/82	255	1,168	78	2	2	2	347	28
1/83	(Griffin Ave.-	1,776	72	4	3	4	602	55
8/83	Rowan Ave.)	3,388	96	4	3	4	602	55
3/84		4,832	96	4	3	4	602	55
9/84		4,941	68	3	3	3	496	48
12/84		3,072	68	3	3	3	496	48
		+163.0%	-12.8%				+42.9%	+71.4
4/82	260	7,239	97	10	10	10	2,034	151
12/82	(Long Beach-Pasadena-	9,688	99	10	10	11	2,096	158
	Altadena via Atlantic Bl.)							

\* -Less Than One-percent Change

# -Rain

EXHIBIT 5 (Cont'd)

EQUIPMENT/RIDERSHIP LINE ANALYSIS

DATE OF CHECK	LINE NO.	TOTAL BOARDINGS	NO. OF TRIPS	BUSES ASSIGNED			REVENUE OPERATION	
				AM	BASE	PM	BUS MILES	BUS HOURS
5/83	260 (Cont'd)	10,078	105	11	10	12	2,113	164
1/84	(Long Beach-Pasadena-	13,791	110	14	13	16	2,700	210
6/84	Altadena via Atlantic Bl.)	13,370	110	15	12	16	2,621	202
3/85		16,354	118	15	12	16	2,634	203
		+125.9%	+21.6%				+29.5%	+31.8%
5/82	264	759	37	3	3	3	677	32
3/83	(San Gabriel Bl.-	1,265	37	3	3	4	664	40
7/83	Altadena Dr.)	1,059	36	3	3	3	659	40
6/84		1,839	36	5	3	5	768	46
5/85		2,076	36	5	3	5	768	46
		+173.5%	-2.7%				+13.4%	+43.8%
11/81	266	3,125	55	6	6	6	1,703	84
8/82	(Lakewood Bl.-	3,966	65	10	8	11	2,199	131
3/83	Rosemead Bl.)	3,580	58	6	6	6	1,726	104
4/83#		2,953	58	6	6	6	1,726	104
12/83		3,440	64	6	6	6	1,756	106
6/84		4,136	64	6	6	6	1,594	96
11/84		4,333	58	6	6	6	1,594	96
		+38.7%	+5.5%				+6.4%	+14.3%
8/81	267	2,046	55	5	5	5	751	68
3/83#	(Temple City Bl.-	3,145	59	6	5	5	910	71
6/84	Del Mar Bl.-	4,966	85	15	5	13	1,173	89
12/84	Lincoln Ave.)	5,452	85	15	5	13	1,173	89
		+166.5%	+55.4%				+56.2%	+30.9%
11/81	280	932	61	3	3	3	677	44
9/82	(Azusa Ave.)	1,407	61	3	3	3	677	44
3/83		1,605	61	3	3	3	677	44
8/83		1,539	61	3	3	3	677	44
12/83		1,645	61	3	3	3	677	44
7/84		2,041	61	3	3	3	677	44
12/84		2,015	61	3	3	3	677	44
		+48.8%	0%					
3/82#	401-402	3,031	92	13	4	13	1,489	104
12/82	(Los Angeles-Pasadena-	4,021	93	13	4	13	1,489	104
3/83	N. Allen Ave. Express)	4,253	94	14	4	14	1,564	99
7/83		4,238	96	15	4	15	1,596	101
5/84		5,381	100	15	4	15	1,633	105
		+77.5%	+8.7%				+9.7%	+1.0%

#-Rain

EXHIBIT 5 (Cont'd)

EQUIPMENT/RIDERSHIP LINE ANALYSIS

DATE OF CHECK	LINE NO.	TOTAL BOARDINGS	NO. OF TRIPS	BUSES ASSIGNED			REVENUE OPERATIC	
				AM	BASE	PM	BUS MILES	BUS HOUR
2/82	420	16,155	189	33	17	34	4,552	34
1/83	(Los Angeles-Van Nuys-	18,641	190	32	16	32	4,948	339
5/83	Veterans Hosp.-	19,594	193	37	16	36	5,502	363
12/83	Northridge Express)	21,436	220	39	20	39	6,314	428
10/84		23,360	217	39	20	39	6,298	424
		+44.6%	+14.8%				+38.4%	+21.5
1/81#	424	13,325	184	39	11	33	4,477	292
10/82#	(Los Angeles-Ventura	14,915	183	38	12	31	4,927	296
4/83#	B1. Express)	15,353	203	45	12	38	5,603	334
5/83		16,693	202	45	12	38	5,603	334
12/83		16,536	210	52	12	39	5,900	350
6/84		18,408	210	52	12	39	5,900	350
2/85		19,104	244	52	12	39	5,900	350
		+43.4%	+32.6%				+31.8%	+19.5
3/82#	446	4,558	91	14	7	13	2,592	148
12/82	(Los Angeles-Carson-	6,560	92	15	9	12	2,564	146
4/83	Wilmington-San	6,942	93	15	9	12	2,564	146
11/83	Pedro Express)	7,764	98	14	9	12	2,570	147
5/84		8,119	98	16	8	14	2,680	170
12/84		7,906	95	16	8	14	2,680	170
		+73.5%	+4.4%				+3.4%	+7.4
3/82	480	4,907	138	25	11	25	3,654	220
3/83	(Los Angeles-W. Covina-	6,445	167	23	11	25	5,563	244
4/84	Pomona Express)	7,566	161	23	11	25	5,690	246
9/84		7,496	161	23	11	25	5,690	246
2/85		7,564	161	23	11	25	5,690	246
		+54.1%	+16.7%				+55.7%	+7.4

#-Rain

SOURCE: SCRTD's Line Performance Trends Report, October 1985

---

**EXHIBIT 6**

EXHIBIT 6

SCRTD PASSENGER LOAD ANALYSIS  
PEAK HOUR LOAD FACTORS, BY LINE  
(During Prop A)

This exhibit summarizes the peak hour load factors on a line-by-line basis during the Prop A period.

## EXHIBIT 6

SCRTD PASSENGER LOAD ANALYSIS  
 PEAK HOUR LOAD FACTORS, BY LINE  
 (During Prop A)

<u>LINE NO.</u>	<u>DATE OF CHECK</u>	<u>DAY</u>	<u>HOUR ENDG</u>	<u># OF TRIPS</u>	<u># OF SEATS</u>	<u># ON BOARD</u>	<u>LOAD FACTOR</u>
1	840508	TU	1512	3	151	239	1.58
2	840328	WE	1500	1	43	79	1.85
4	840404	TU	1600	8	360	546	1.52
10	830928	WE	736	6	258	389	1.51
14	830628	TU	1836	4	204	291	1.43
16	840322	TH	636	7	312	539	1.73
18	840208	WE	1712	11	489	732	1.50
20	830510	TU	736	35	1803	2510	1.39
26	840113	FR	1824	8	344	464	1.35
28	841031	WE	1636	1	43	73	1.70
30	840529	TU	1548	1	46	78	1.70
33	841010	WE	800	12	548	924	1.69
38	840314	WE	736	10	468	505	1.08
40	831025	TU	712	6	282	445	1.58
42	831220	TU	748	1	43	73	1.70
45	831005	WE	800	7	341	489	1.43
48	840307	WE	712	6	285	495	1.74
51	840223	TH	1636	6	277	438	1.58
53	840308	TH	712	7	325	520	1.60
55	840105	TH	1800	6	281	453	1.61
56	840509	WE	812	5	215	321	1.49
60	840306	TU	1612	3	137	248	1.81
65	840521	TU	1524	3	138	200	1.45
66	840209	TH	1612	1	43	92	2.14
68	840320	TU	724	7	337	518	1.54
70	840412	WE	700	4	172	244	1.42
76	831007	FR	724	8	380	488	1.28
78	841218	TU	1524	3	137	173	1.26
81	840503	TH	812	7	333	484	1.45

SCRTD PASSENGER LOAD ANALYSIS  
PEAK HOUR LOAD FACTORS, BY LINE  
(During Prop A)

<u>LINE NO.</u>	<u>DATE OF CHECK</u>	<u>DAY</u>	<u>HOUR ENDG</u>	<u># OF TRIPS</u>	<u># OF SEATS</u>	<u># ON BOARD</u>	<u>LOAD FACTOR</u>
83	840319	MO	1836	7	320	497	1.55
84	830923	FR	1500	2	96	160	1.67
90	831116	WE	900	1	43	77	1.79
92	831213	TU	812	1	43	74	1.72
94	840613	WE	1600	1	43	61	1.42
96	840611	TU	1500	1	43	63	1.47
97	830622	WE	924	1	43	45	1.05
102	840222	WE	1536	2	90	104	1.16
103	840501	TU	1612	1	46	81	1.76
104	840615	FR	724	1	43	47	1.09
105	830713	WE	924	2	86	120	1.40
107	840312	MO	800	3	137	192	1.40
108	840220	MO	1424	3	137	253	1.85
110	840302	FR	700	4	196	275	1.40
111	840224	FR	748	6	282	346	1.23
115	840207	TU	712	1	45	75	1.67
117	840229	WE	748	3	129	271	2.10
119	840723	MO	1648	1	51	49	0.96
120	840719	TH	1748	1	43	71	1.65
124	840507	MO	1536	1	43	66	1.53
125	831229	TH	1712	2	86	98	1.14
126	840430	MO	812	1	43	25	0.58
128	840130	MO	748	1	45	49	1.09
130	830506	FR	800	1	47	50	1.06
146	840109	MO	1600	1	51	67	1.31
147	841105	MO	748	1	45	71	1.58
149	840914	FR	1700	1	51	30	0.59
150	840511	FR	1748	3	129	201	1.56
152	840309	FR	748	3	136	204	1.50
154	840423	MO	900	1	43	58	1.35



SCRTD PASSENGER LOAD ANALYSIS  
 PEAK HOUR LOAD FACTORS, BY LINE  
 (During Prop A)

<u>LINE NO.</u>	<u>DATE OF CHECK</u>	<u>DAY</u>	<u>HOUR ENDG</u>	<u># OF TRIPS</u>	<u># OF SEATS</u>	<u># ON BOARD</u>	<u>LOAD FACTOR</u>
158	840703	TU	748	2	86	82	0.95
161	840112	TH	748	1	43	44	1.02
163	840521	MO	1612	3	133	239	1.80
165	831103	TH	836	2	86	174	2.02
168	830421	TH	748	1	43	70	1.63
169	840112	WE	848	1	43	64	1.49
170	840503	TH	748	1	45	74	1.64
175	830216	WE	824	3	105	189	1.80
177	830207	MO	1512	1	36	64	1.78
178	840322	TH	812	1	36	49	1.36
180	840124	TU	736	2	86	127	1.48
183	831107	MO	748	1	51	94	1.84
185	840904	TU	1500	1	36	56	1.56
187	840125	WE	1812	2	90	123	1.37
188	840416	MO	1612	3	137	222	1.62
192	831031	MO	1536	1	35	44	1.26
200	840430	MO	1624	6	302	415	1.37
201	840424	TU	1800	1	36	58	1.61
204	831011	TU	800	18	869	1214	1.40
205	841105	MO	1524	1	43	86	2.00
206	840420	FR	636	1	51	58	1.14
207	840418	WE	1748	10	462	609	1.32
209	831101	TU	748	3	145	165	1.14
210	830719	TU	1800	7	309	431	1.39
211	840113	FR	1524	1	43	102	2.37
212	840402	MO	1736	5	223	340	1.52
215	830314	MO	736	1	43	79	1.84
217	840111	WE	836	5	255	312	1.22
220	840206	MO	748	2	102	83	0.81
225	840316	FR	900	1	43	90	2.09

SCRTD PASSENGER LOAD ANALYSIS  
PEAK HOUR LOAD FACTORS, BY LINE  
(During Prop A)

<u>LINE NO.</u>	<u>DATE OF CHECK</u>	<u>DAY</u>	<u>HOUR ENDG</u>	<u># OF TRIPS</u>	<u># OF SEATS</u>	<u># ON BOARD</u>	<u>LOAD FACTOR</u>
~228	840323	FR	1636	1	43	91	2.12
230	841121	WE	1448	1	43	56	1.30
232	840706	FR	748	3	129	210	1.63
234	840423	MO	1612	1	43	78	1.81
236	840403	TU	812	2	93	118	1.27
243	841121	WE	648	2	89	125	1.40
245	840813	MO	1612	3	129	105	0.81
250	840130	MO	812	2	72	86	1.19
251	840313	TU	1624	1	51	90	1.76
254	831221	WE	1548	1	43	72	1.67
255	840302	FR	1524	1	35	66	1.89
256	840127	FR	1600	1	36	54	1.50
259	830210	TH	800	3	129	138	1.07
260	840123	MO	1712	3	129	212	1.64
262	840409	MO	748	3	129	149	1.16
265	840130	MO	624	1	45	36	0.80
266	831230	FR	1712	1	43	43	1.00
267	830328	MO	1648	2	86	95	1.10
268	830513	FR	1536	1	36	53	1.47
270	831216	FR	1500	1	43	47	1.09
271	840323	FR	648	1	35	26	0.74
274	840316	FR	1524	1	36	37	1.03
280	831228	TH	1712	2	72	67	0.93
291	831031	MO	748	1	45	56	1.24
358	840316	FR	712	2	101	109	1.08
401	840524	TH	1612	2	90	110	1.22
413	840725	WE	1712	1	47	41	0.87
418	840530	WE	824	1	43	43	1.00
419	840403	TU	1724	1	47	40	0.85
420	831206	TU	1600	3	149	229	1.54

SCRTD PASSENGER LOAD ANALYSIS  
 PEAK HOUR LOAD FACTORS, BY LINE  
 (During Prop A)

<u>LINE NO.</u>	<u>DATE OF CHECK</u>	<u>DAY</u>	<u>HOUR ENDG</u>	<u># OF TRIPS</u>	<u># OF SEATS</u>	<u># ON BOARD</u>	<u>LOAD FACTOR</u>
423	840403	TU	712	1	47	53	1.13
424	831209	FR	1500	1	43	80	1.86
426	840625	WE	1736	3	140	169	1.21
427	840403	TU	1700	2	98	85	0.87
429	840227	MO	1748	1	43	51	1.19
430	831129	TU	1736	1	43	17	0.40
431	831129	TU	1700	1	47	44	0.94
434	840202	TH	824	2	86	117	1.36
436	831129	TU	1624	2	90	107	1.19
437	831129	TU	1700	1	48	33	0.69
438	840522	TU	1812	1	43	45	1.05
439	840702	MO	1736	1	43	60	1.40
443	840828	TU	1736	1	43	42	0.98
444	840712	TH	1836	1	51	77	1.51
445	841206	TH	700	3	141	126	0.89
446	831104	FR	736	6	298	458	1.54
448	840828	FR	624	1	47	48	1.02
456	831202	FR	748	5	239	224	0.94
457	840607	TH	624	3	141	131	0.93
459	840510	TH	1836	1	47	43	0.91
460	830705	TU	1800	1	46	58	1.26
462	840719	TH	624	2	92	112	1.22
464	840605	TU	1512	1	47	48	1.02
466	840510	TH	1612	2	98	87	0.89
470	830720	WE	1712	5	227	250	1.10
480	840913	TH	812	11	510	642	1.26
482	830729	FR	1748	3	137	152	1.11
483	840531	TH	1624	2	92	153	1.66
484	840504	FR	1612	5	235	308	1.31
486	831228	WE	1436	1	43	55	1.28

SCRTD PASSENGER LOAD ANALYSIS  
 PEAK HOUR LOAD FACTORS, BY LINE  
 (During Prop A)

<u>LINE NO.</u>	<u>DATE OF CHECK</u>	<u>DAY</u>	<u>HOUR ENDG</u>	<u># OF TRIPS</u>	<u># OF SEATS</u>	<u># ON BOARD</u>	<u>LOAD FACTOR</u>
487	840131	TU	1524	3	137	209	1.53
488	840305	MO	1648	2	94	121	1.29
490	831121	MO	812	4	184	218	1.18
492	840727	FR	1824	1	41	42	1.02
493	840305	MO	1648	1	47	56	1.19
494	840727	FR	1748	1	46	39	0.85
495	831006	TH	712	5	375	354	0.94
496	840914	FR	1500	1	49	57	1.16
497	840614	TH	712	6	282	286	1.01
498	831018	TU	712	5	414	375	0.91
560	841107	WE	924	1	43	69	1.60
576	840201	WE	800	1	43	80	1.86
602	831020	TH	1648	7	245	182	0.74
603	840607	TH	848	1	47	35	0.74
605	840106	FR	1712	1	35	2	0.06

SOURCE: Title VI Assessment for Capital and Operating Assistance Update 1984

---

**ACKNOWLEDGEMENTS**

## ACKNOWLEDGEMENTS

Under the General Direction of:

Stephen T. Parry  
Planning Manager - Bus

Under the Supervision of:

Byron Lee  
Supervising Planner

Project Manager:

Callier Beard  
Planner

With Assistance From:

Larry Adrian  
Planner

Deborah Diamond  
Cartographer

Milton Brame  
Planning Assistant

Donald Dravis  
Secretary

Michael Brewer  
Planner

Atsuko Dvorak  
Secretary

Carol Dedeaux  
Planning Assistant

Joseph Rock  
Planning Assistant