Evaluation of Transit Services

for the

1984 OLYMPIC GAMES

October 1984

RTD

1984
OLYMPIC
GAMES

Southern California Rapid Transit District

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CHAPTER 1.0

INTRODUCTION

1.0 - INTRODUCTION

1.1 PURPOSE OF EVALUATION

The purpose of this evaluation is to assess the extent of the District's success in meeting the various objectives associated with the District's special bus service for the spectators of the XXIIIrd Summer Olympic Games. The scale of the program was truly enormous. It involved deploying approximately 500 buses to serve 24 special routes and required in excess of 1,000 District employees to execute. The magnitude of this added service can be clarified by noting that the District created a temporary operation that would have ranked as the fourth largest transit property in the State. Only the District's normal operation, and those of AC Transit, Santa Clara County Transportation Agency, and San Francisco Municipal Railway, have larger scheduled bus requirements.

While public satisfaction with the special Olympic services was the primary goal of the District's efforts, a number of objectives were identified as part of the Olympic transit planning process. Some of these objectives were not discernible by or of interest to the general public. Additionally, they were not limited to just the Olympic services, but addressed the regular system as well.

1.2 SERVICE GOALS AND OBJECTIVES

Several goals and objectives were identified during the planning process relative to District operations before, during, and after the Games.

1.2.1 GOALS

The District basically oriented its Olympic sights toward achieving six basic goals. The goals were to:

(1) Develop an Olympic Service Plan and Olympic Operations Plan to describe and guide the provision of Olympic bus transportation.

(2) Effectively manage the coordinated implementation of these plans up to and through the July 28 - August 12, 1984 Olympic Game period.

(3) Successfully provide Olympic services; quickly adjust operations as necessary.

(4) Operate the regular District service without interruption and at normal service levels during the Olympic period.

(5) Generate sufficient revenues to cover both the start-up and actual operating costs of the Olympic service.

(6) Return to regular operations as quickly as possible after the conclusion of the Games.

1.2.3 OBJECTIVES

In order to meet these goals, the District established the following objectives.

(1) To implement Olympic services and maintain regular operations as scheduled.

(2) To assign necessary equipment and manpower to Olympic services.

(3) To ensure that necessary contingency operations were instituted to address changing requirements for regular and Olympic services.

(4) To institute security procedures designed to protect bus passengers, employees and equipment.

(5) To institute necessary fare collection procedures to ensure that revenues were quickly, accurately and safely collected and processed.

(6) To institute special Olympic administrative procedures to effectively implement the Olympic services.

(7) To institute procedures designed to ensure coordination and communication both internally within the District, and also between SCRTD and outside agencies.

(8) To inform the public of the availability of, or changes to, Olympic services.

1.3 TARGET MODE SPLITS

Throughout the planning process, District staff met with representatives of the many agencies involved in the overall traffic management plans for the Olympics. An Olympic Advisory Group (OAG) was created with representatives from:

- California Department of Transportation (CALTRANS)

- California Highway Patrol (CHP)
- Commuter Computer
- Los Angeles County Road Department
- Los Angeles County Transportation Commission (LACTC)
- Los Angeles Department of Transportation (LADOT)
- Los Angeles Olympic Organizing Committee (LAOOC)
- Los Angeles Police Department (LAPD)
- Southern California Association of Governments (SCAG)
- Southern California Rapid Transit District (SCRTD)

With the expertise assembled within the OAG, a concensus process was used to develop the overall traffic management plan. Public transit was expected to assume a prominent role in the plan from the very beginning.

As information regarding venue capacities and event timing was released by the LAOOC, the OAG developed overall patronage goals or target mode splits for public transit's share of the patronage market. The venues at Exposition Park, UCLA, and Long Beach were assigned the highest targets (40% to 55%) since it was anticipated that parking would be in short supply and little additional vehicle capacity would be available on the roadways in their respective areas. Target mode splits for other venues ranged from 5% to 25%. Spectator capacities at each of the Olympic venues, and their associated mode split targets were developed and are summarized in Figure 1.1.

FIGURE 1.1

SPECTATOR CAPACITY AND MODE SPLIT TARGETS BY VENUE

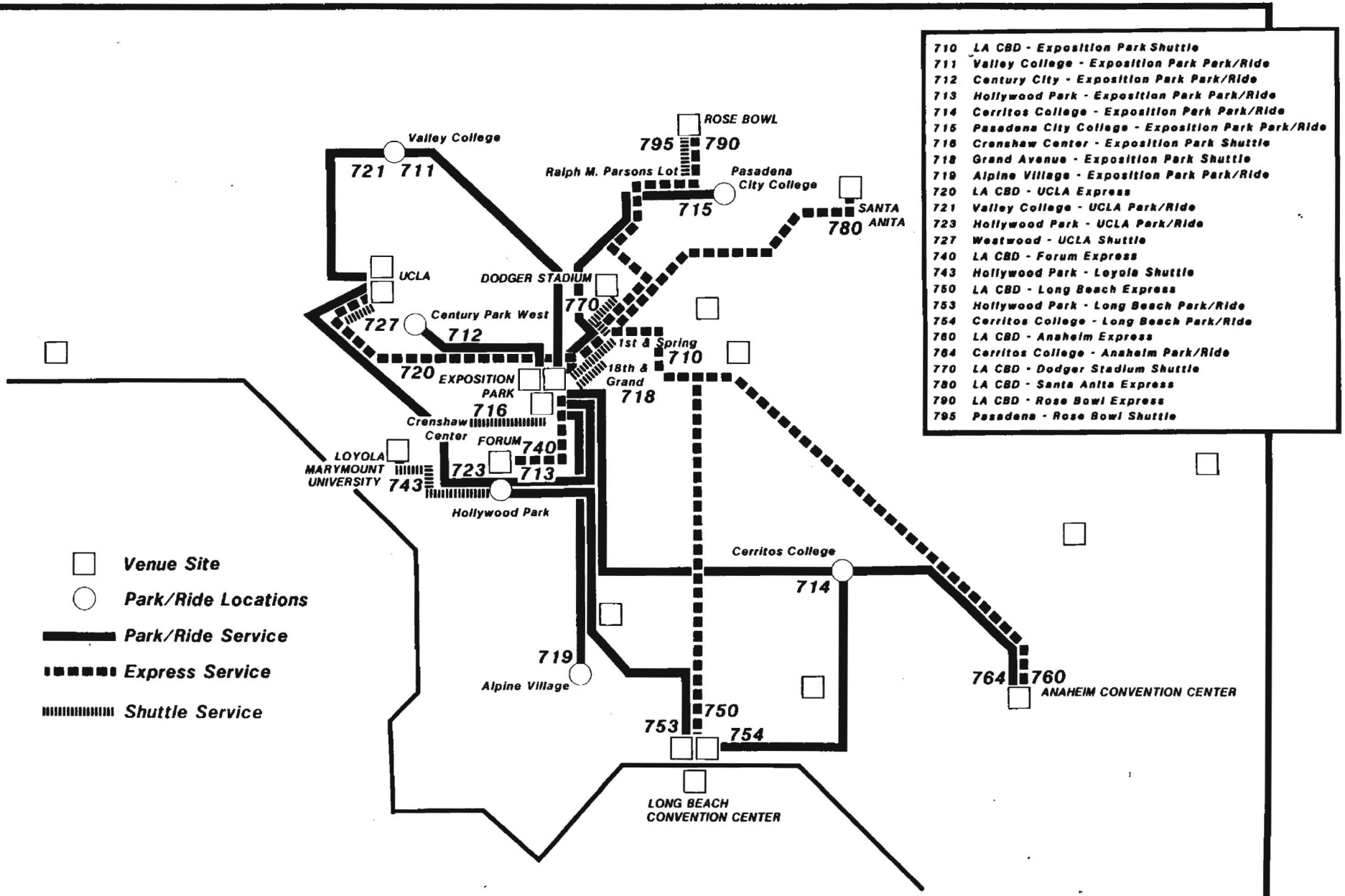
VENUE	CAPACITY	TARGETED MODE SPLIT (%)
Exposition Park (includes Coliseum, Sports Arena, USC Swim Stadium)	120,750	40
Santa Anita	34,650	10
East Los Angeles College	19,200	10*
Rose Bowl	105,000	15
Pepperdine	5,250	5*
Forum	17,325	5
Loyola	4,200	25
Long Beach (includes Convention Center and Sports Arena)	13,125	55
Anaheim	7,770	20
UCLA (includes Pauley Pavilion and Tennis Courts)	19,950	40
CS Dominguez Hills	5,250	5*
CS Fullerton	4,200	10*
CS Los Angeles	8,400	10*
Dodger Stadium	52,500	5

* Mode splits estimated for existing regular service.

Following the determination of the overall mode split targets, further refinements within the overall targets were used to develop patronage estimates and vehicle requirements for each type of service: shuttle, express, and park/ride. Overall, it was estimated that 50% of the Olympic ridership would be carried by shuttle, 40% by park-ride and express, and 10% on the regular system. The estimated patronage generated by this assumed distribution of service types was then used to forecast vehicle and manpower needs.

1.4 SUMMARY OF SERVICE PROVIDED

During the Games, the District provided service to all major Olympic venues in the greater Los Angeles area via a special network of 24 bus routes. As shown in Figures 1.2, 1.3, and 1.4, the Olympic bus system was comprised of eleven park-ride, six express, and seven shuttle routes, operated as a separate system apart from the 253 regular line services. The District operated 23 of the Olympic routes while the Westwood-UCLA shuttle service (Line 727) was operated by Santa Monica Municipal Bus Lines (SMMBL) under contract to RTD.

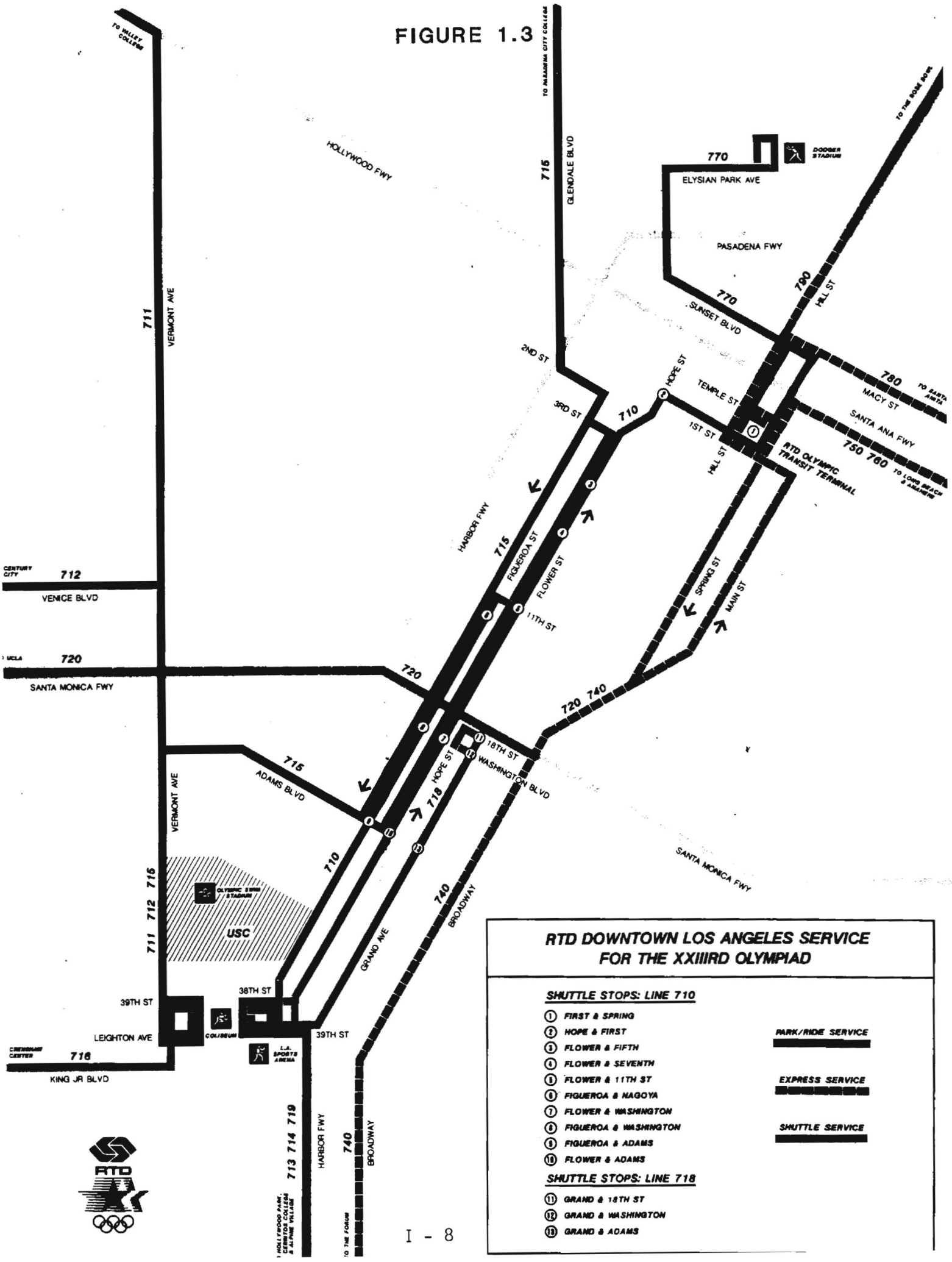


RTD

RTD SERVICE FOR THE XXIIIRD OLYMPIAD

FIGURE 1.2

FIGURE 1.3



RTD DOWNTOWN LOS ANGELES SERVICE FOR THE XXIIIRD OLYMPIAD

SHUTTLE STOPS: LINE 710

1. FIRST & SPRING
2. HOPE & FIRST
3. FLOWER & FIFTH
4. FLOWER & SEVENTH
5. FLOWER & 11TH ST
6. FIGUEROA & NAGOYA
7. FLOWER & WASHINGTON
8. FIGUEROA & WASHINGTON
9. FIGUEROA & ADAMS
10. FLOWER & ADAMS

SHUTTLE STOPS: LINE 718

11. GRAND & 18TH ST
12. GRAND & WASHINGTON
13. GRAND & ADAMS

PARK/RIDE SERVICE

EXPRESS SERVICE

SHUTTLE SERVICE

FIGURE 1.4

OLYMPIC ROUTES

LINE NUMBER	LINE NAME
710	Los Angeles CBD - Exposition Park Shuttle
711	Valley College - Exposition Park Park/Ride
712	Century City - Exposition Park Park/Ride
713	Hollywood Park - Exposition Park Park/Ride
714	Cerritos College - Exposition Park Park/Ride
715	Pasadena City College - Exposition Park Park/Ride
716	Crenshaw Center - Exposition Park Shuttle
718	Grand Avenue - Exposition Park Shuttle
719	Alpine Village - Exposition Park Park/Ride
720	Los Angeles CBD - U.C.L.A. Express
721	Valley College - U.C.L.A. Park/Ride
723	Hollywood Park - U.C.L.A. Park/Ride
727	Westwood - U.C.L.A. Shuttle
740	Los Angeles CBD - Forum Express
743	Hollywood Park - Loyola Shuttle
750	Los Angeles CBD - Long Beach Express
753	Hollywood Park - Long Beach Park/Ride
754	Cerritos College - Long Beach Park/Ride
760	Los Angeles CBD - Anaheim Express
764	Cerritos College - Anaheim Park/Ride
770	Los Angeles CBD - Dodger Stadium Shuttle
780	Los Angeles CBD - Santa Anita Express
790	Los Angeles CBD - Rose Bowl Express
795	Pasadena - Rose Bowl Shuttle

1.4.1 SUMMARY OF PARK/RIDE SERVICES

Park-ride service was offered from six parking facilities located in each geographic sector in Los Angeles County. Of the eleven routes operated, six served the major venues at Exposition Park, two lines operated to UCLA, two lines served Long Beach, and one park-ride route served Anaheim. Park-ride facilities were located at Alpine Village, Century City, Cerritos College, Hollywood Park, Pasadena City College, and Valley College.

1.4.2 SUMMARY OF EXPRESS SERVICES

Six express lines were operated from one bus terminal in downtown Los Angeles located at First and Spring Streets and were designed to transport passengers to particular Olympic venue sites. Service was provided to UCLA, the Forum in Inglewood, Long Beach Sports Arena, Anaheim Convention Center, Santa Anita Racetrack in Arcadia, and the Rose Bowl in Pasadena.

1.4.3 SUMMARY OF SHUTTLE SERVICES

Seven shuttle routes served venues at Exposition Park, Westwood, Loyola Marymount, Dodger Stadium, and the Rose Bowl. Shuttles to Exposition Park originated from three locations, downtown Los Angeles, Grand Avenue and 18th Street, and Crenshaw Center. Service in Westwood between the Federal Building and UCLA was provided by SMMBL under contract to RTD. Shuttles were also operated between Hollywood Park and Loyola Marymount, from downtown Los Angeles to Dodger Stadium, and between the Ralph M. Parsons Company in Pasadena and the Rose Bowl.

1.4.4 FARES

Fares adopted by the Board of Directors subsequent to a public hearing were expected to provide a major portion of the cost of the service. As such, it was determined that special Olympic Lines could be defined as Special Service and did not fall under the fare policies established with the passage of Proposition A and the Reduced Fare Program. Further, special service lines did not fall under the regulations establishing elderly and handicapped reduced fares. Therefore, all passengers were required to pay full fare. Fares are shown below.

- Shuttle Service - $2.00 one-way
- Express Service - $4.00 one-way fare on lines under 20 miles
  - $6.00 one-way fare on lines over 20 miles
- Park/Ride Service - $6.00 one-way

A special Olympic Gold Day Pass, valued at $10.00, was honored on all Olympic services. Other fares were paid either by $2.00 and $4.00 tickets or by $6.00 tokens.

1.4.5 ACCESSIBLE SERVICE

Lift-equipped buses were deployed on all Olympic lines. The only location requiring a special designated boarding area was at the Coliseum in the peristyle terminal. Reports from field personnel indicated that all passengers were accommodated without equipment malfunctions and with minimal service delays. Accessible ridership was not recorded separately, but indications are that it was quite low.

CHAPTER 2.0

RESULTS

2.0 - RESULTS

2.1 RIDERSHIP

Ridership on the 24 special Olympic lines during the 16-day Olympic period totaled 1.13 million boardings. Daily ridership ranged from a low of 15,747 on August 1, 1984 to a high of 132,454 on August 11, 1984. It is interesting to note that the ridership carried on Saturday, August 11 exceeded the average weekday boardings for bus transit systems in Cincinnati, Ohio, Orange County and Santa Clara, California, all of which operate bus fleets of similar size. A more detailed analysis of Olympic ridership is shown in Chapter 3.

The District's original projection was to carry 3,040,000 riders during this period. Although ridership was lower than projected, actual ridership was very close to the estimated proportions by service type. Ridership was split between the three types of service offered as shown below:

TYPE OF SERVICE	ACTUAL SHARE %	PROJECTED SHARE %
Park/Ride	39	40
Express	11	10
Shuttle	50	50

There were several reasons for the lower than expected ridership levels, including:

(1) Patronage projections were based on consensus target mode splits for each venue, determined by the management of the traffic and transportation agencies including the Los Angeles City Department of Transportation (LADOT), Caltrans, Los Angeles County Transportation Commission (LACTC), and Southern California Association of Governments (SCAG) as well as the Los Angeles Olympic Organizing Committee (LAOOC). Actual ridership fell far short of the target projections.

(2) It was assumed that all venue facilities would be filled to capacity for all events, plus 5% for support staff and non-ticketed spectators. With few exceptions, capacity crowds materialized only at Opening Ceremonies and during the final events despite the fact that LAOOC recorded record sales of tickets. The reason for the "no shows" are not known.

(3) The Olympic spectators were primarily a local audience, resulting in far fewer visitors as evidenced by the much lower than anticipated hotel occupancies, car rentals, airline reservations, use of charter buses, absence of anticipated development of recreational vehicle parks and the lighter than average attendance at local amusement parks. Consequently, the shuttle and express services of the District's which were targeted toward visitors showed far less ridership than projected.

(4) The extremely "late" decision of the Soviet bloc countries to boycott, as well as the strong postion of the U.S. dollar on the international market, seemed to dissuade visitors from European countries, as well as Canada from traveling in expected volumes.

(5) It appears that estimates in April of 40% day passes for Coliseum events were exceeded because of the last minute availability of tickets on the local market. The District estimates made in September 1983 and February 1984 assumed a complete turnover of spectators between morning and afternoon sessions.

(6) Finally, the Caltrans projections of an overall increase in base traffic of between 5-7% did not materialize. Rather, actual traffic was down 2-3% until the last days of the Games. Due to the lighter than anticipated traffic congestion around many venues, parking was not only readily available, but at far lesser

rates than expected. This factor permitted a family of four to travel by car and park at a cost less than traveling by special Olympic service.

2.2 OLYMPIC OPERATIONS

The magnitude of the Olympic operation required the District to obtain support facilities and equipment. This section briefly explains how the District used the facilities, equipment and manpower to successfully operate the service. Chapter 4 discusses the Olympic operation in more detail.

2.2.1 EQUIPMENT

The original estimate of equipment was developed to enable the District to meet requested modal splits. However, revisions were made before and during the Olympics to better reflect equipment requirements based on changing ridership figures.

Original estimates called for the District to deploy a maximum of 481 scheduled buses. However, the maximum number of buses actually scheduled for any given day was 472. As discussed in Chapter 4, actual deployment varied on a daily basis. The extent of these variances ranged between 4 and 46 percent. In most cases, the actual number of buses used was still greater than the revised scheduled figure but actual deployment still remained lower than originally estimated.

2.2.2 MANPOWER

The Olympic operation required a significant number of operators, mechanics and field supervisory staff to be operated sucessfully. Due to the special nature of the service provided, a sizeable number of student interns and RTD employees were recruited to work as members of the District's Passenger Assistance Force.

Training programs were created by the District and instruction was given to over 2,500 employees. On a daily basis, staffing levels for the Olympic operation ranged from 1,000 to 1,500. All of these people combined their efforts to put on a trouble-free operation.

2.2.3 FACILITIES

The demands of the Olympic operation required that support facilities be activated, developed or obtained.

Existing facilities were redesigned and activated to accommodate additional buses scheduled for the Olympic operation. Special procedures were developed to dispatch equipment in a timely manner by staging Olympic buses in areas designated specifically for the Olympic fleet.

New Division 10 was completed and activated prior to the Olympics. New Division 20, adjacent to Division 18, was not completed. It was therefore necessary to retain old Division 18. Both locations were used for storing and dispatching Olympic buses. The operation of these locations increased the District's flexibility in dispatching buses to meet daily surges in ridership. Terminal 24, old Division 8 was also established as a satellite parking location for the Valley College Park/Ride facility.

Special off-street bus terminals were also developed at the Coliseum in the Exposition Park area and at 1st and Spring Street in downtown Los Angeles to expedite bus movement and ensure convenient access for passengers. In addition, the District negotiated contracts for eleven (11) locations for use as either park/ride sites or as terminals for buses.

It was also necessary for the District to acquire four parking locations for RTD employees working unusual hours in areas where parking availability was expected to be at a premium.

In all instances, the District used the space effectively and efficiently.

2.2.4 SCHEDULES

Use of the reservation system on park/ride lines enabled the District to prepare schedules in advance, disperse and allocate demand into twenty minute periods throughout the day. However, express and shuttle demand was a little more difficult to anticipate. Therefore, a decision was made to operate the service primarily on a "subject-to-order basis".

The uncertainties surrounding the actual patronage levels to-and-from events and the complexities of the Olympic schedule, where no two of the sixteen days of events were alike, dictated that the District operate in such a manner that would allow maximum flexibility in responding to demand.

The schedule design parameters for the Olympic service called for a minimum spread of service of two hours prior to the beginning or end of each event, plus the required travel time from the terminal to the venue. Scheduling the buses around these design parameters permitted the development of actual operator work assignment. However, rather than print actual

schedules for buses with identified departure times from each terminal, buses were scheduled out of each division, usually in groups of five, to report to the Venue Captain and operate on a subject-to-order basis.

This operational technique allowed the District to modify service levels between Olympic routes and rapidly respond to sudden surges in patronage levels. This technique was also applied to those lines with intermediate stops; buses were added mid-line to quickly clear up crowds at stops without impacting the coaches departing the far terminal. Express lines were designed to operate from a common terminal and to travel non-stop to Olympic sites. The fact that the buses operated from a common terminal allowed field supervisors the flexibility of redeploying buses from underutilized lines to lines that were experiencing heavy demand. Deployment of service based on demand eliminated the need to continue operating on a predetermined schedule, when ridership was lower than anticipated.

2.2.5 SECURITY

In terms of security during the 16-days of the Games, only three (3) incidents were reported relative to the Olympic service. Of these, two were very minor incidents and did not involve any passengers or staff. The third incident did cause minor injury to one passenger when an object was thrown at one of the park/ride buses.

2.3 COSTS/REVENUES

Between July 1, 1983 and August 30, 1984, the District planned, developed, operated and closed down the Olympic Transit Service which operated for a period of 16 days from July 28, 1984. For the 14-month period the District's adopted budget amounted to total expenses of $13,360,000 with

projected revenues of the same amount. Actual expenses incurred during the above period totaled $10,677,000. This means that the District expended on the entire Olympics program some $2,683,000 less than budgeted.

In terms of revenues, the estimates were that from shuttle service, express and park/ride lines and token sales, a total of $13,360,000 would be received. The actual revenue received amounted to a total of $5,993,000 or a shortfall of $4,684,000. In short, expenses were approximately $2,700,000 below budget, but revenues were almost $7,400,000 below estimates, resulting in a deficit of $4,684,000.

In perspective, the ridership on the Olympic services was substantially below estimates which accounted for the shortfall in revenue and resulted in the operating deficit. The projected ridership, the actual ridership, and the percentage achieved is shown in Figure 2.1 below.

FIGURE 2.1

PROJECTED VERSUS ACTUAL RIDERSHIP ON
THE OLYMPICS TRANSIT SERVICE

SERVICE	PROJECTED	ACTUAL	PERCENTAGE
Shuttle	1,515,000	564,528	37%
Express	875,000	127,311	15%
Park/Ride	650,000	438,578	67%
TOTAL	3,040,000	1,130,417	37%

Figure 2.2 summarizes the actual cost versus the budgeted cost, as well as the actual revenue versus the budgeted revenue. The significance of Figure 2.2 is that in terms of expenses, the District was on target for the

pre-Olympic planning and development costs, was substantially under the budget for operating costs during the period of the Olympic Games, exceeded the budget estimate for token expenses by approximately $400,000, and spent no contingency dollars. The effect was that the District operated the entire program approximately $2.7 million under the estimated cost.

FIGURE 2.2

COMPARISON OF OLYMPIC
TRANSIT BUDGETED REVENUES AND
EXPENSES TO ACTUAL REVENUES AND EXPENSES

	BUDGETED	ACTUAL
REVENUE:		
Shuttle Service	$ 3,030,000	$1,054,000
Express Lines	3,325,000	633,000
Park/Ride Lines	3,705,000	2,270,000
Tokens, OTHER	3,300,000	2,036,000a
Sub-Total	13,360,000	5,993,000
EXPENSE:		
Pre-Olympic	5,251,000	5,314,000
Olympic Period	5,586,000	3,233,000
Tokens	1,740,000	2,130,000
Contingency	783,000	---------
Sub-Total	13,360,000	10,677,000
NET COST	$ -0-	$ 4,684,000

a-The District has an inventory of 141,000 token sets remaining unsold. Any income from the disposition of these token sets will reduce the net loss.

As previously discussed, there are a substantial number of reasons why the shortfall in ridership estimates occurred resulting in a shortfall of revenues and an operating deficit. It should also be noted that preliminary analysis of the fare media used to board Olympic buses indicates a significant use of the gold day pass, valued at $10.00, on all three types of service. Thus, the spectators used the pass to travel on several buses, attending more than one event each day, adding to their travel convenience while reducing the actual revenue received.

With regard to the Olympic Token Program, the entire 300,000 token set inventory was sold by April of 1984. The largest single buyer, Products International, which purchased 200,000 sets, defaulted on taking delivery and making payments as scheduled, after acquiring 60,000 sets. The District, therefore, presently has a remaining inventory of 141,000 token sets, and the program resulted in no net revenues for funding the Olympic service.

The break-even point for the District was based upon full sale of the tokens with a net revenue over expense of approximately $1.2 to $1.3 million. As well, it was necessary to achieve 75% of the estimated ridership on Olympic lines. Obviously, the token sales had a deficit and revenues were received from achievement of only 37% of the estimated ridership.

2.4 QUALITY OF SERVICE PROVIDED

In order to assess the quality of service provided, it was necessary to view the service not only from the perspective of the District, but from that of the user. Several quantifiable variables were identified. Some of the variables are as follows: the number of actual pull-outs to scheduled pull-outs, the number of mechanical breakdowns, the number of accidents, and the period of time necessary to clear a crowd of patrons from an event.

From the District's perspective, the Olympic operation can be considered a success. During the Olympic period, all scheduled pull-outs were met, with no shortage of either manpower or equipment. Furthermore, the majority of mechanical breakdowns only required minor adjustments and were fixed in a matter of minutes, enabling buses to continue in service. A total of 73 accidents were reported involving Olympic service buses. However, as indicted in Figure 4.2, the safety rate is very high when comparing the amount of service provided with the regular system's average figures. Although the service was designed to clear all events within a two hour period, the vast majority of all events were cleared in 75 minutes or less. Chapters 4 and 6 provide a more detailed discussion on the quantifiable variables used to determine the quality of service.

Viewing the service from the user's perspective however could only be assessed through the coverage given by the media, and on the number of commendations or complaints received about the service. It was felt that the media was persistent throughout the Games in determining the mood of the public. Overall it appears that the service was generally well perceived. The District received many commendations from both the riding public and the media. Commendations regarding Olympic service were extremely positive relative to both the quality and convenience of transportion provided. By comparison, of the seven (7) complaints received, the majority dealt with the high fares being charged and mistakes made by Ticketron.

2.4.1 AVERAGE WAIT TIME

With few exceptions, all passengers desiring to arrive in time for the beginning of an event were successful. Service was offered two hours prior to an event and was operated primarily on a "demand" schedule. Minimum frequencies were established and operated every 20 minutes. Other than

Opening Cermemonies when crowds started to form more than two hours prior to the scheduled departure of the first bus, the average wait time was assessed to be no more than 10 minutes, with no one having to wait longer than 20 minutes. One of the parameters of the service was to clear all events within a two hour period. However, the majority of events were cleared in 75 minutes or less.

2.4.2 RESERVATION SYSTEM

Implementation of the reservation system not only enabled the District to deploy equipment based on demand but also established an even flow of passengers on the buses and into the park/ride lots. Approximately 190,000 reservations were sold for use during the 16-day Olympic period. However, actual park/ride patronage levels were about 20% higher than reservations. This influx of passengers, without reservations, was accommodated without changes to the operating plan. The reservation system is discussed in more detail in Chapter 6. Figure 5.2 shows the revenue generated by the reservation system.

2.4.3 PEOPLE MISSING THE START OF EVENTS

The District was able to transport all passengers desiring to arrive at an event prior to start time. Although passengers had a tendency to show up early, equipment was available to accommodate all early arriving passengers within 20 minutes after the start of service, except for Opening Ceremonies.

CHAPTER 3.0

RIDERSHIP

3.0 - RIDERSHIP

3.1 SUMMARY BY TYPE OF SERVICE

Ridership on the 24 special Olympic lines during the 16-day Olympic period totaled 1.13 million boardings. Ridership was split between the three types of service offered as shown below:

TYPE OF SERVICE	BOARDINGS	%	PROJECTED SHARE %
Park/Ride	438,578	39	40
Express	127,311	11	10
Shuttles	564,528	50	50
TOTALS	1,130,417	100	100

Shuttles carried half of the total ridership while park/ride services carried most of the other riders. Express services to the major suburban venues accounted for 11% of the total patronage carried on the Olympic lines. These figures were very close to the proportions by service type estimated in the final service plan. Total boardings over the 16-day period of the Games for the 24 lines operated are shown in Figure 3.1.

3.1.1 DAILY RIDERSHIP

Daily ridership ranged from a low of 15,747 on August 1, 1984 to a high of 132,454 on August 11, 1984. It is interesting to note that the ridership carried on Saturday, August 11 exceeded the average weekday boardings for bus transit systems in Cincinnati, Ohio, Orange County, and Santa Clara, California, all of which operate bus fleets of similar size. Ridership varied with the schedule of Olympic events, particularly those held at the Exposition Park venues (Track and Field, Boxing, Swimming, Diving, Opening and Closing Ceremonies). On August 1, for example, both the Coliseum and the Swim Stadium were inactive; the Sports Arena was the only active venue in the area and was holding preliminary bouts. On August 11, by contrast,

FIGURE 3.1

OLYMPIC RIDERSHIP BY LINE

LINE NUMBER	LINE NAME	BOARDINGS
710	Los Angeles CBD - Exposition Park Shuttle	370,093
711	Valley College - Exposition Park Park/Ride	97,255
712	Century City - Exposition Park Park/Ride	63,869
713	Hollywood Park - Exposition Park Park/Ride	77,341
714	Cerritos College - Exposition Park Park/Ride	85,510
715	Pasadena City College - Exposition Park Park/Ride	75,501
716	Crenshaw Center - Exposition Park Shuttle	78,454
718	Grand Avenue - Exposition Park Shuttle	30,543
719	Alpine Village - Exposition Park Park/Ride	19,229
720	Los Angeles CBD - U.C.L.A. Express	16,298
721	Valley College - U.C.L.A. Park/Ride	7,271
723	Hollywood Park - U.C.L.A. Park/Ride	5,538
727	Westwood - U.C.L.A. Shuttle	30,861
740	Los Angeles CBD - Forum Express	16,290
743	Hollywood Park - Loyola Shuttle	2,142
750	Los Angeles CBD - Long Beach Express	21,058
753	Hollywood Park - Long Beach Park/Ride	2,959
754	Cerritos College - Long Beach Park/Ride	3,419
760	Los Angeles CBD - Anaheim Express	50,687
764	Cerritos College - Anaheim Park/Ride	686
770	Los Angeles CBD - Dodger Stadium Shuttle	9,394
780	Los Angeles CBD - Santa Anita Express	6,198
790	Los Angeles CBD - Rose Bowl Express	16,780
795	Pasadena - Rose Bowl Shuttle	43,041
	TOTAL	1,130,417

all three Exposition Park venues had two sessions of finals in their respective events. Other active venues were also holding final competitions that day. Daily ridership by service type is listed in Figure 3.2.

3.1.2 RIDERSHIP BY DESTINATION

As illustrated in Figure 3.3, the most popular destination for Olympic patronage was the Exposition Park complex which attracted nearly 80% of the total riders carried. The Rose Bowl in Pasadena and the venues at UCLA in Westwood were next in popularity with each accounting for approximately 5% of the overall ridership.

3.2 RESERVATIONS

A major element of the Olympic transit program was the reservation system used for the 11 park/ride services. The reservation system was implemented as a means of determining more precisely the equipment requirements for each park/ride service on each Olympic day. For the 16-day period of the Games, the District received 190,000 reservation requests. Figure 3.4 shows that ridership generated by the reservation system accounted for approximately 86% of the total patronage carried on the park/ride services. The remaining 14% were riders who did not have reservations and were accommodated on a stand-by basis. It should be noted that the stand-by riders were expected and thus were accommodated without affecting the operating plan.

FIGURE 3.2

DAILY BOARDINGS BY SERVICE TYPE

DATE	PARK/RIDE	EXPRESS	SHUTTLES	TOTALS
7-28	29,964	2,286	27,691	59,941
7-29	11,063	7,792	17,964	37,369
7-30	10,555	6,135	13,282	29,972
7-31	9,262	6,381	15,843	31,486
8-1	3,617	5,264	6,866	15,747
8-2	9,530	5,102	11,576	26,208
8-3	37,364	10,884	46,595	94,843
8-4	38,394	9,373	61,088	108,855
8-5	39,107	10,513	53,376	102,996
8-6	42,242	9,839	49,129	101,210
8-7	11,939	5,477	13,218	30,634
8-8	40,843	10,989	49,506	101,338
8-9	36,760	9,375	39,086	85,221
8-10	40,827	11,835	58,235	110,897
8-11	47,520	13,355	71,579	132,454
8-12	29,051	2,711	29,484	61,246
TOTALS	438,578	127,311	564,528	1,130,417

FIGURE 3.3

SCRTD OLYMPIC RIDERSHIP BY DESTINATION

DESTINATION	BOARDINGS	PERCENT
• Exposition Park	897,795	79.4
• U.C.L.A.	59,968	5.3
• Rose Bowl	59,821	5.3
• Anaheim	51,373	4.5
• Long Beach	27,436	2.4
• Forum	16,290	1.5
• Dodger Stadium	9,394	.8
• Santa Anita	6,198	.6
• Loyola-Marymount	2,142	.2
TOTALS	1,130,417	100.0

FIGURE 3.4

RESERVATIONS AND RIDERSHIP ON PARK/RIDE LINES

LINE	NAME	RESERVATIONS	RIDERSHIP*	%
711	Valley College-Exposition Park	36,499	48,628	75.1
712	Century City-Exposition Park	28,156	31,934	88.2
713	Hollywood Park-Exposition Park	36,930	38,670	95.5
714	Cerritos College-Exposition Park	37,838	42,755	88.5
715	Pasadena City College-Exposition Park	34,358	37,750	91.0
719	Alpine Village-Exposition Park	5,254	9,615	54.6
721	Valley College-U.C.L.A.	4,052	3,636@	111.4
723	Hollywood Park-U.C.L.A.	2,912	2,769@	105.2
753	Hollywood Park-Long Beach	1,315	1,480	88.9
754	Cerritos College-Long Beach	1,687	1,710	98.7
764	Cerritos College-Anaheim	259	343	75.5
	TOTALS	189,260	219,290	86.3

*Figures represent 50 % of the boardings since each rider boards a service twice - going and return.

@Data incomplete.

3.3 TEMPORAL DISTRIBUTION OF OLYMPIC RIDERSHIP

Several representative Olympic lines were analyzed to determine how and when riders used the special services. The services examined were:

- o Line 710 Los Angeles-Exposition Park Shuttle
- o Line 711 Valley College-Exposition Park Park/Ride
- o Line 760 Los Angeles CBD-Anaheim Express

In order to readily distinguish the travel patterns of the District's Olympic riders, three days were selected in which relatively few events were scheduled at the major venues at Exosition Park. The days selected were:

- o Saturday, July 28 - Opening Ceremonies
- o Friday, August 10 - Track and Field; Diving
- o Sunday, August 12 - Closing Ceremonies

3.3.1 TIME BEFORE EVENT

The schedule design parameters for the Olympic services originally called for a minimum spread of service of two-hours plus an allowance for the running time. For example, if an event was scheduled at 9:00 A.M. and the Olympic lines running time was one-hour, service would be offered from 6:00 A.M. to 8:00 A.M. In many instances, however, it was necessary to start service much sooner than originally scheduled because substantial numbers of riders arrived at terminals much earlier than anticipated.

It seems that many Olympic riders were induced to arrive especially early due to well-publicized forecasts of traffic delays, limited parking, and sell-outs on some of the District's services. The fear of being left

behind appears to have been a very strong motivator. This trend occurred on Opening Day and persisted throughout the 16-day period of the Games.

To illustrate the result of this effect, riding data for July 28 shows that over 55% of the total riders carried on Line 710 shuttle service to Exposition Park were transported by 3:00 P.M., 90-minutes before Opening Ceremonies were scheduled to begin. Similarly, over 55% of the riders carried on Line 711 Park/Ride service from Van Nuys and Line 760 service from Ahaheim left the terminal by 1:20 P.M., three hours before the event. This phenomenon is illustrated in Figures 3.5, 3.6, and 3.7.

The "early bird" effect could not be determined precisely, for the other two days examined due to multiple event scheduling which spread rider demand throughout the two days. However, Figures 3.8 and 3.9 indicate that the majority of riders using Line 710 shuttle service did their traveling 30 to 90 minutes before event time. Figures 3.10 and 3.11 indicate that the great majority of Line 711 passengers left the park/ride terminal approximately 2-1/2 hours before the start of events; similarly, most Line 760 patrons also chose to travel approximately 2-1/2 hours before the event.

3.3.2 TIME AFTER EVENT

As in travel to events, the schedule design parameters set a two-hour window to clear out passengers following the conclusion of major events. On Opening Day, the two-hour limit was stretched some due to traffic congestion on Vermont Avenue and Figueroa Street which delayed District buses attempting to reach the venue terminals from staging areas. Figures 3.5, 3.6 and 3.7 indicate the delay. In the case of Line 760 (Figure 3.7), approximately 30-minutes of the overall delay was attributed to travel-time on connecting service from Exposition Park to the downtown terminal at 1st and Spring Streets. In order to remedy this problem,

FIGURE 3.5

PASSENGER DISTRIBUTION BY TIME
OPENING DAY 7-28-84
LINE 710 SHUTTLE SERVICE

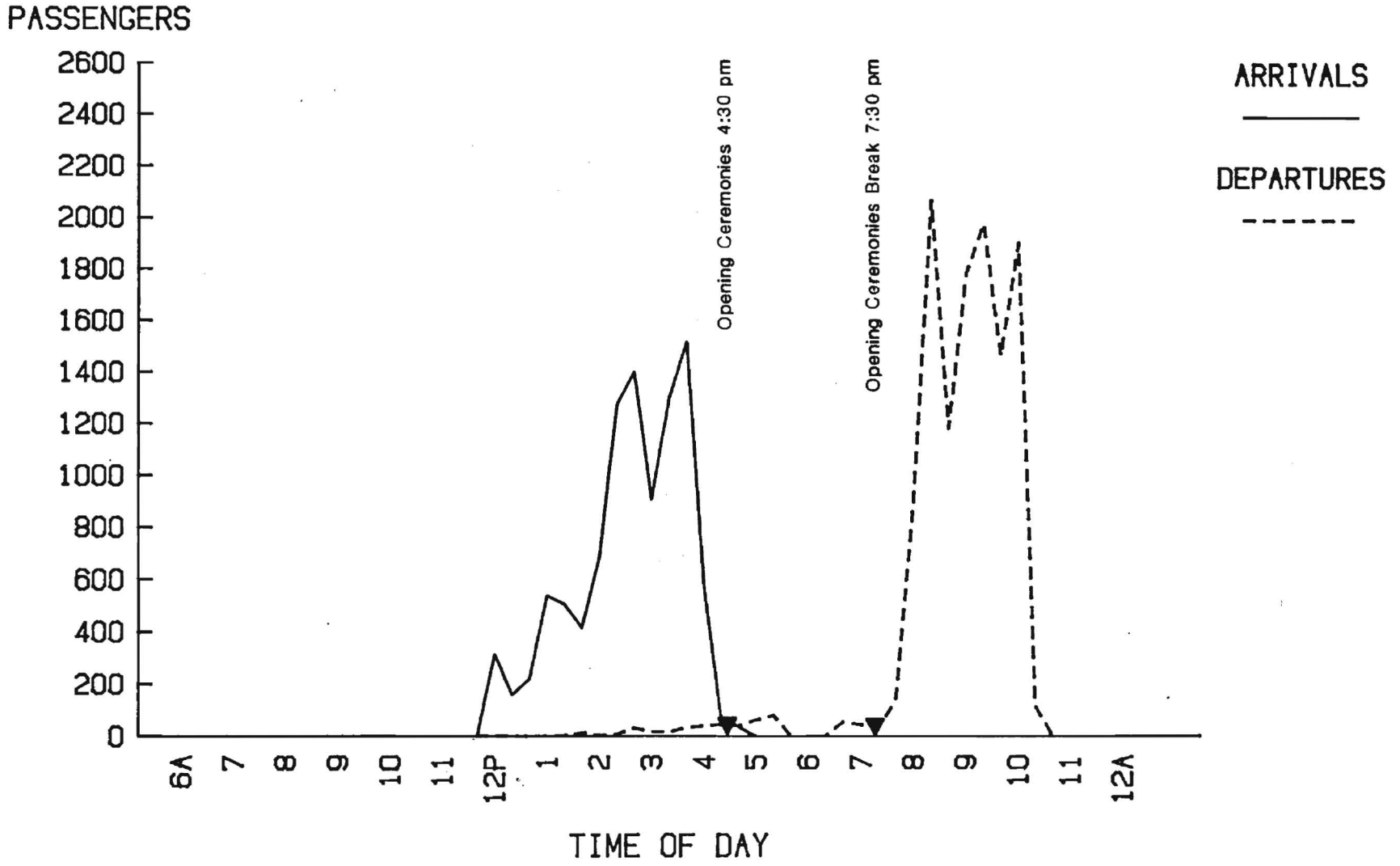


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FIGURE 3.6

PASSENGER DISTRIBUTION BY TIME
OPENING DAY 7-28-84
LINE 711 PARK/RIDE SERVICE

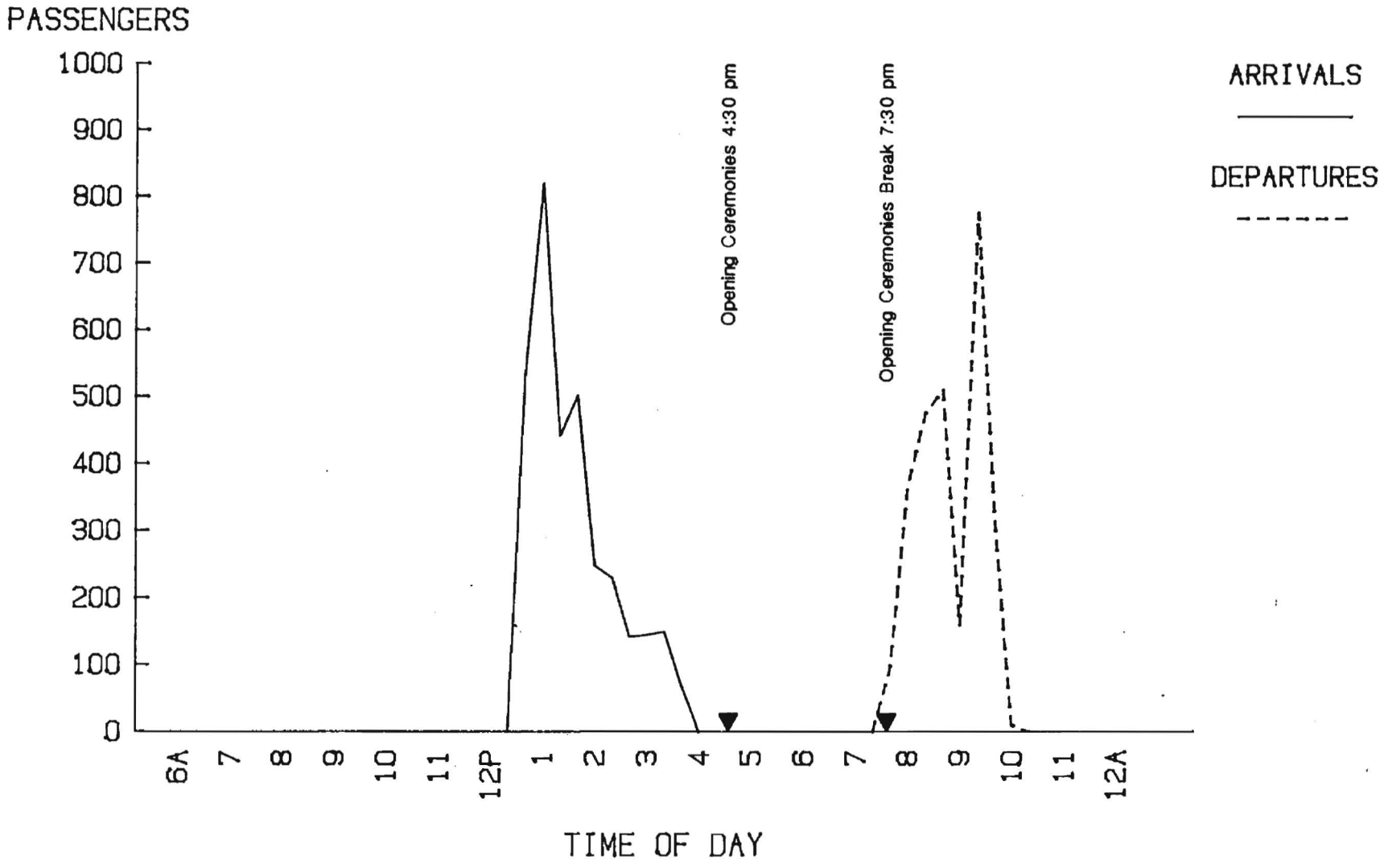

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FIGURE 3.7

PASSENGER DISTRIBUTION BY TIME
OPENING DAY 7-28-84
LINE 760 EXPRESS SERVICE

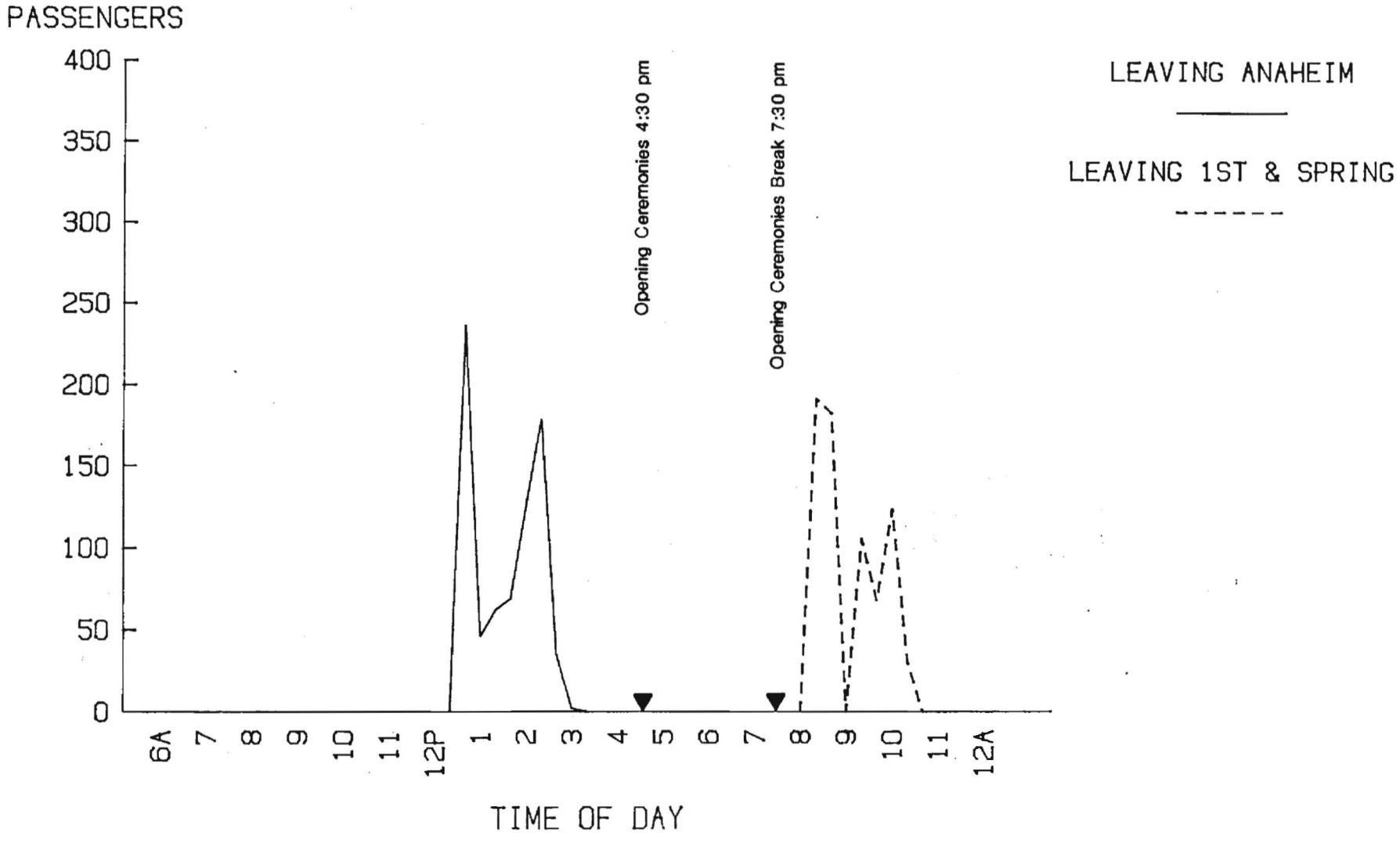

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FIGURE 3.8

PASSENGER DISTRIBUTION BY TIME
FRIDAY 8-10-84
LINE 710 SHUTTLE SERVICE

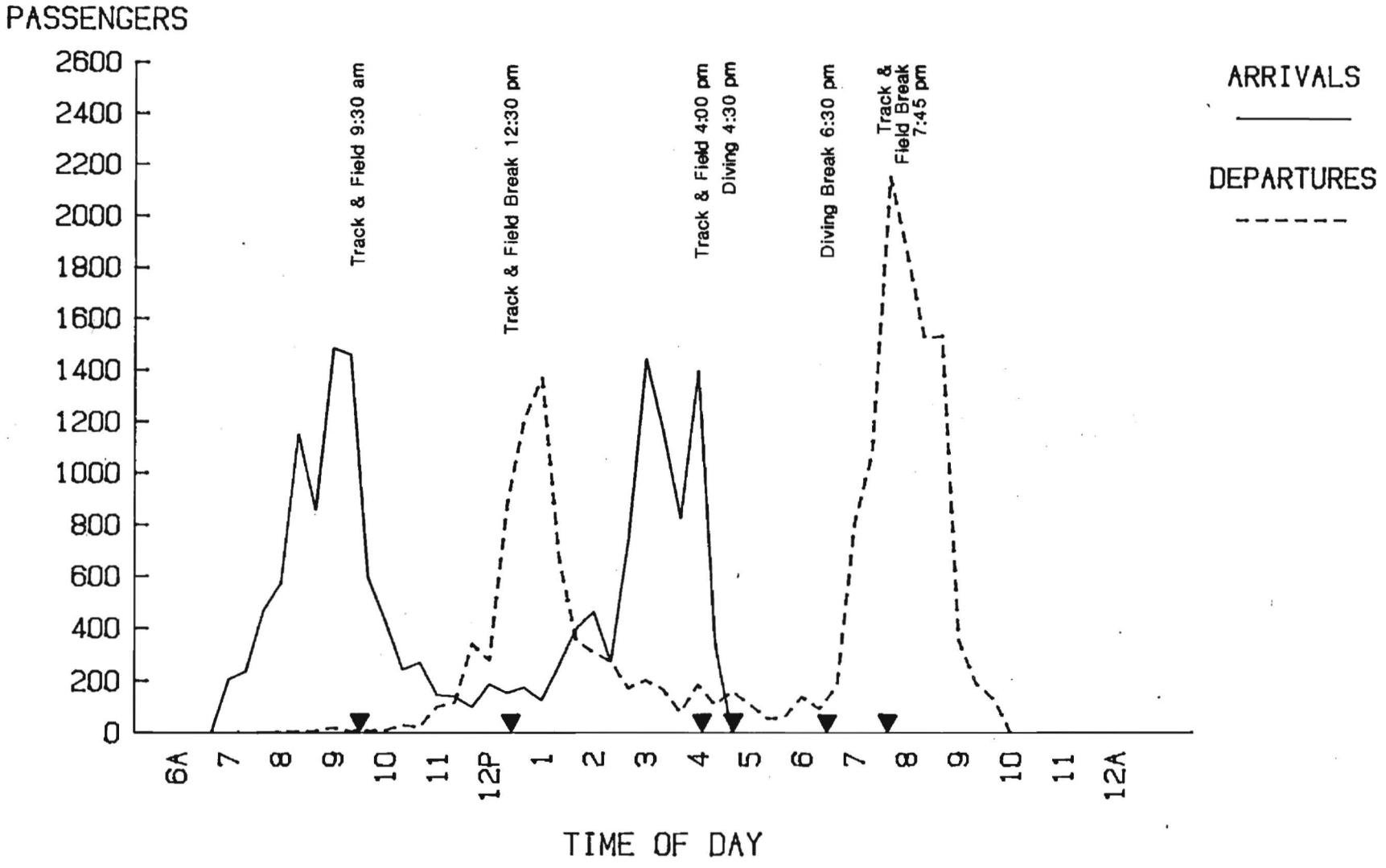

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FIGURE 3.9

PASSENGER DISTRIBUTION BY TIME
CLOSING DAY 8-12-84
LINE 710 SHUTTLE SERVICE

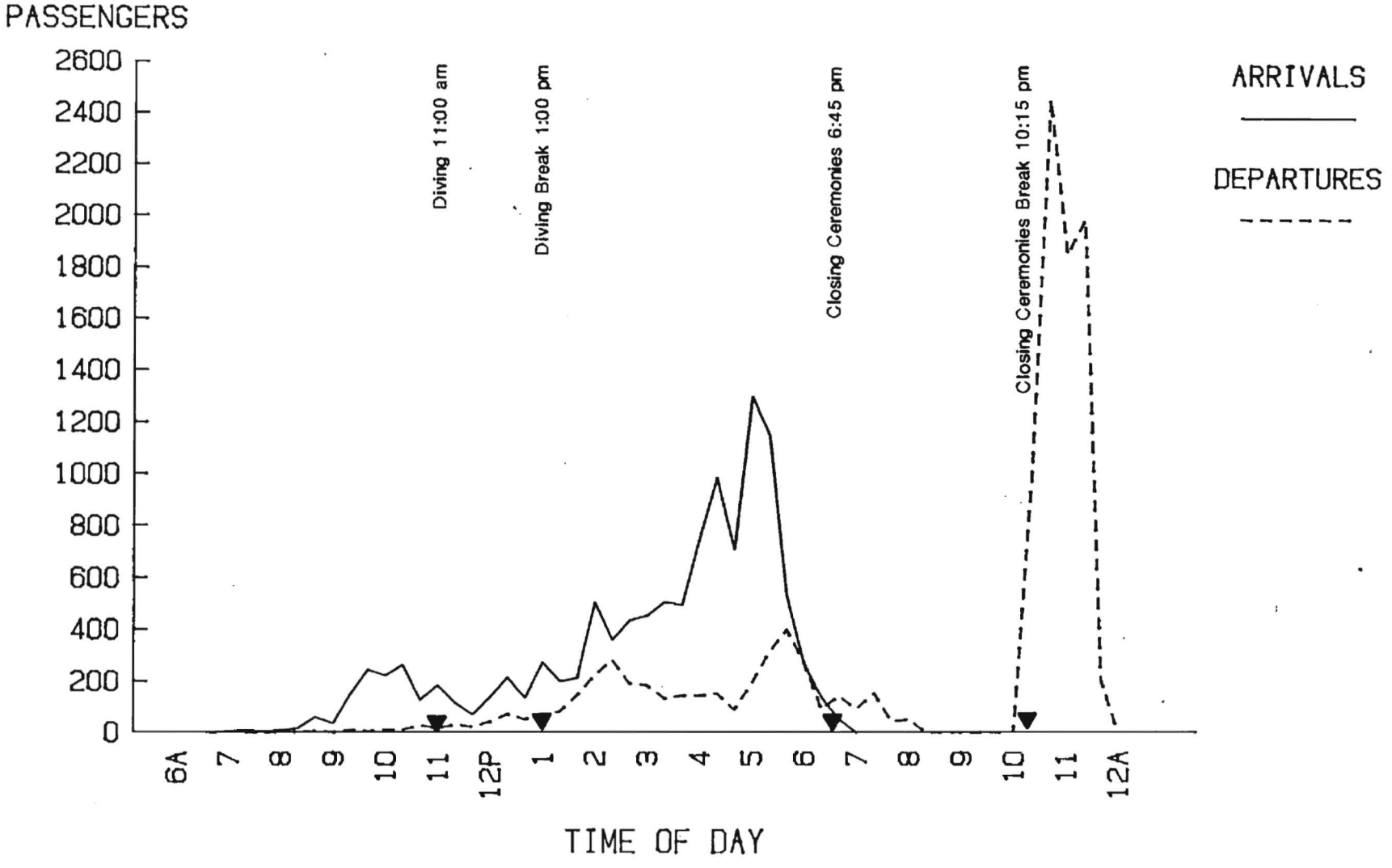

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FIGURE 3.10

PASSENGER DISTRIBUTION BY TIME
FRIDAY 8-10-84
LINE 711 PARK/RIDE SERVICE

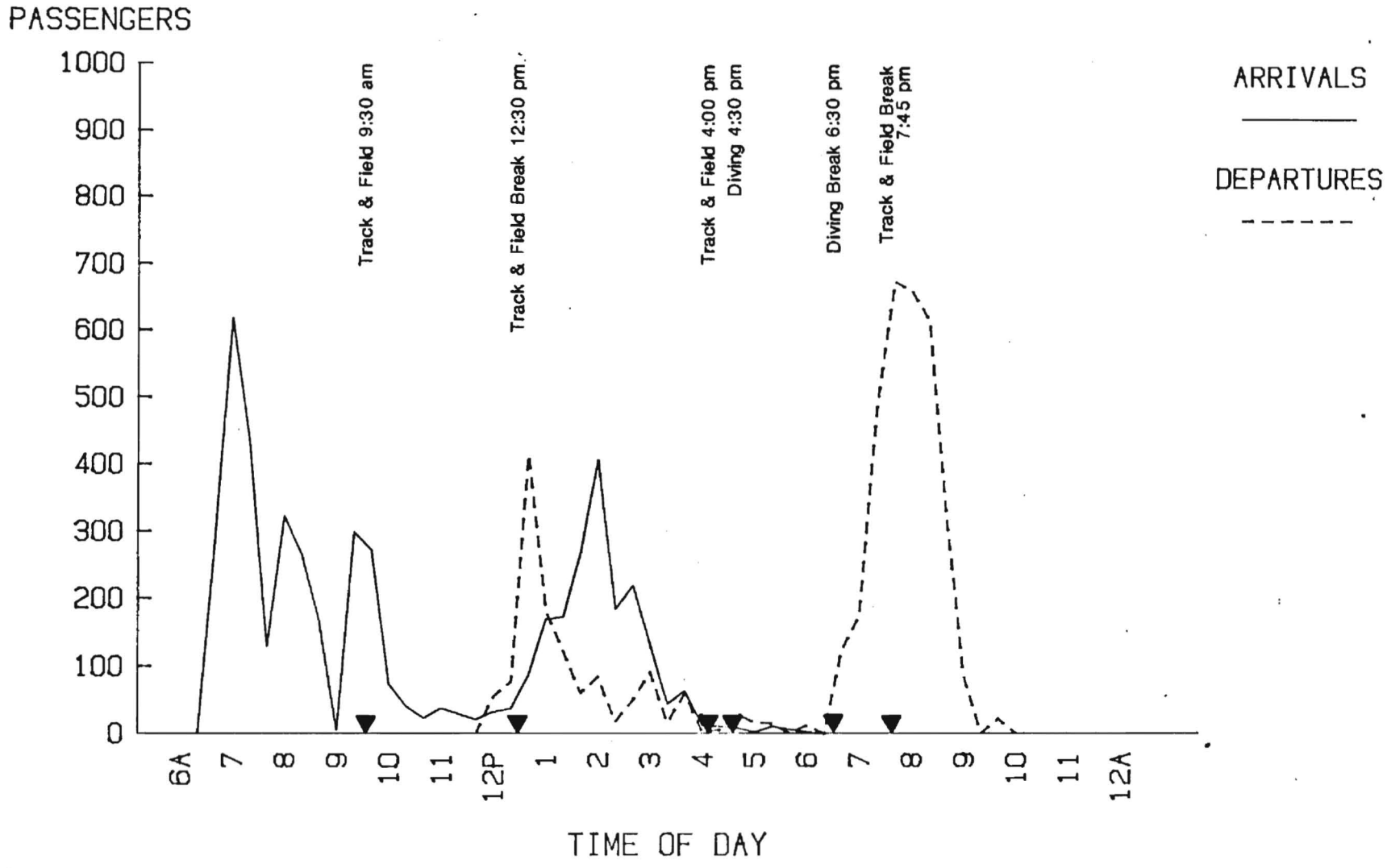

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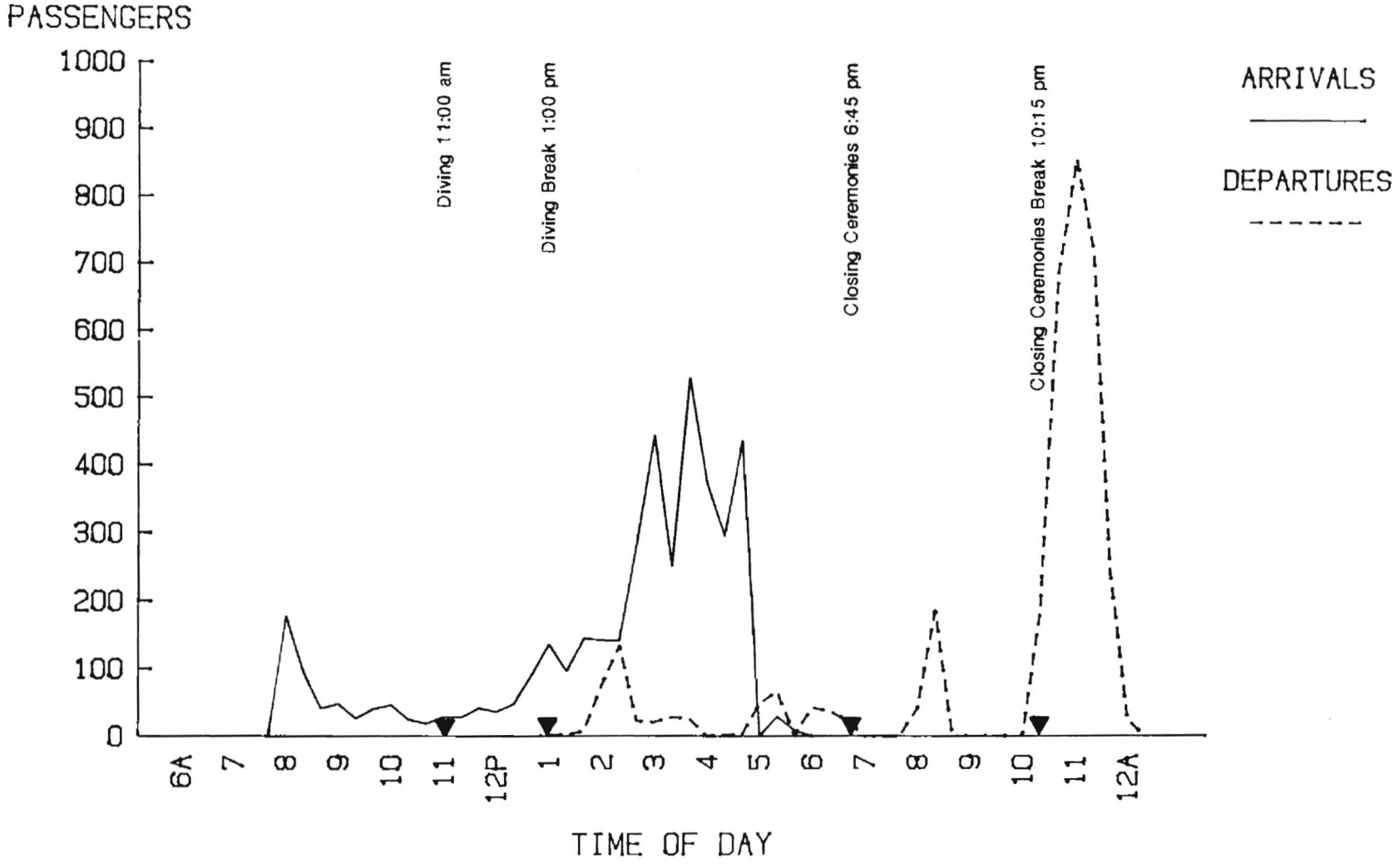
FIGURE 3.11

PASSENGER DISTRIBUTION BY TIME
CLOSING DAY 8-12-84
LINE 711 PARK/RIDE SERVICE



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traffic plans were modified by the City of Los Angeles to lengthen bus-preferential lanes and provide enhanced traffic control at key intersections.

These modifications proved very successful. With improved access to the venue terminals for District buses, passengers were cleared out after the conclusion of major events in less than two-hours. Figures 3.8, 3.9, 3.10, 3.11, 3.12 and 3.13 show that the vast majority of riders were accommodated within 75-minutes of event breaks. Of course, additional service was operated beyond the two-hour parameter to accommodate stragglers and other late travelers.

3.3.3 AVERAGE LOADING

Guaranteed seating was offered to only one class of passenger: the rider using Olympic park/ride service to an event with an advance reservation. Those without reservations were offered transportation on a stand-by basis. All other patrons using shuttle and express services were accommodated on a first-come, first-served basis. Park/ride patrons were also accommodated in this manner on return trips from a venue.

3.3.4 LOADING BEFORE EVENTS

With the exception of Opening Day, most trips on Olympic express and park/ride lines were operated at close to seated capacity on the going moves to events. In the case of park/ride services, standees were comprised of those without reservations who elected to stand rather than wait for a later trip. The shuttle service generally operated with standees on days when the Coliseum was active. The majority of the standees on the shuttle service originated at stops intermediate to the two terminals.

FIGURE 3.12

PASSENGER DISTRIBUTION BY TIME
FRIDAY 8-10-84
LINE 760 EXPRESS SERVICE

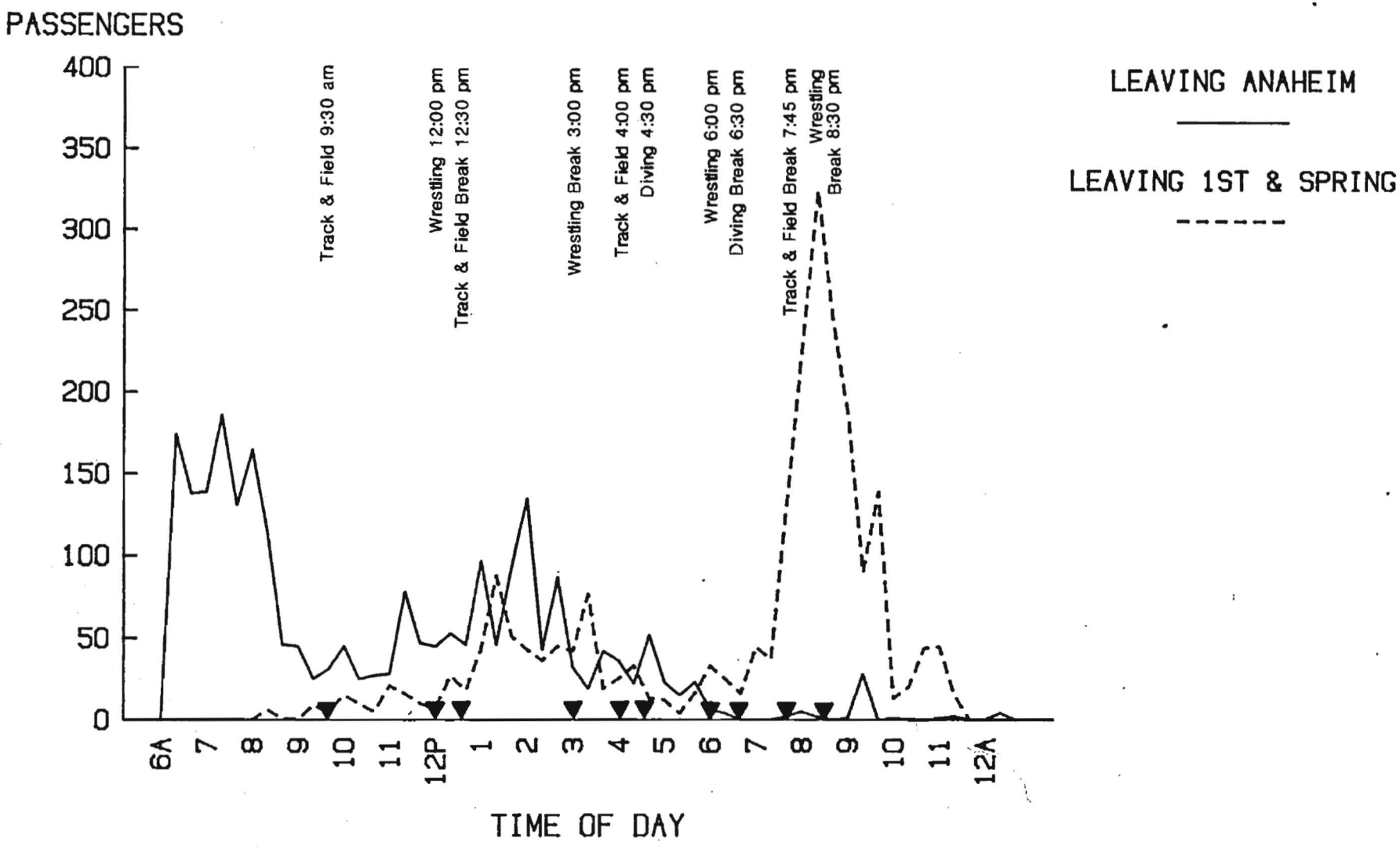

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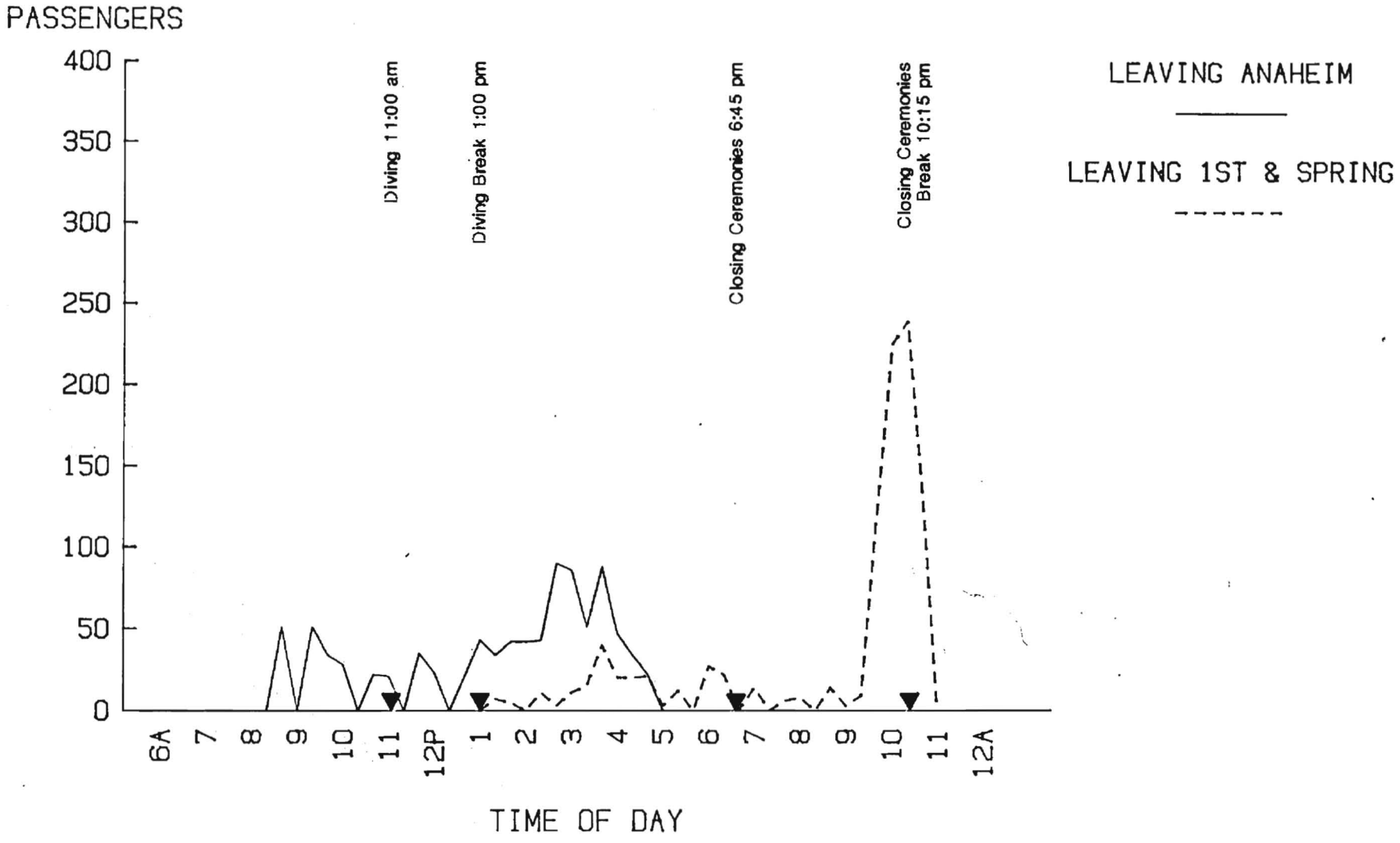
FIGURE 3.13

PASSENGER DISTRIBUTION BY TIME
CLOSING DAY 8-12-84
LINE 760 EXPRESS SERVICE



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Opening Day was characterized by higher than average loads for several reasons. First, riders assembled at terminals in heavy volumes well in advance of the published starting times for the Olympic services. Second, unknowns existed relative to traffic congestion, and third, many passengers feared that not enough vehicles would be available to transport them. Consequently, many passengers were quite willing to sacrifice the relative comfort of a seat for an improved chance to arrive at the Coliseum on-time. Figures 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, and 3.22 show that passenger loading flattened out after Opening Day due, at least in part, to rider confidence that the system worked. Other factors which contributed to this evening of loads included the operation of additional early trips and the generally greater distribution time for riders showing up to go to an event.

3.3.5 LOADING AFTER EVENTS

Following the conclusion of a major event, passenger loads on the Olympic lines were generally well above seated capacity and higher than loads before an event. These heavier loads were caused by a compressed distribution of passengers since most left an event within a short period of time. Additionally, many riders chose not to wait for a later trip. Again, Opening Day was characterized by even higher than average loads after the event due to traffic congestion which caused delays in getting buses into the terminals. Figures 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, and 3.22 also illustrate the loading patterns following major event breaks.

FIGURE 3.14

AVERAGE PASSENGERS PER TRIP
OPENING DAY 7-28-84
LINE 710 SHUTTLE SERVICE

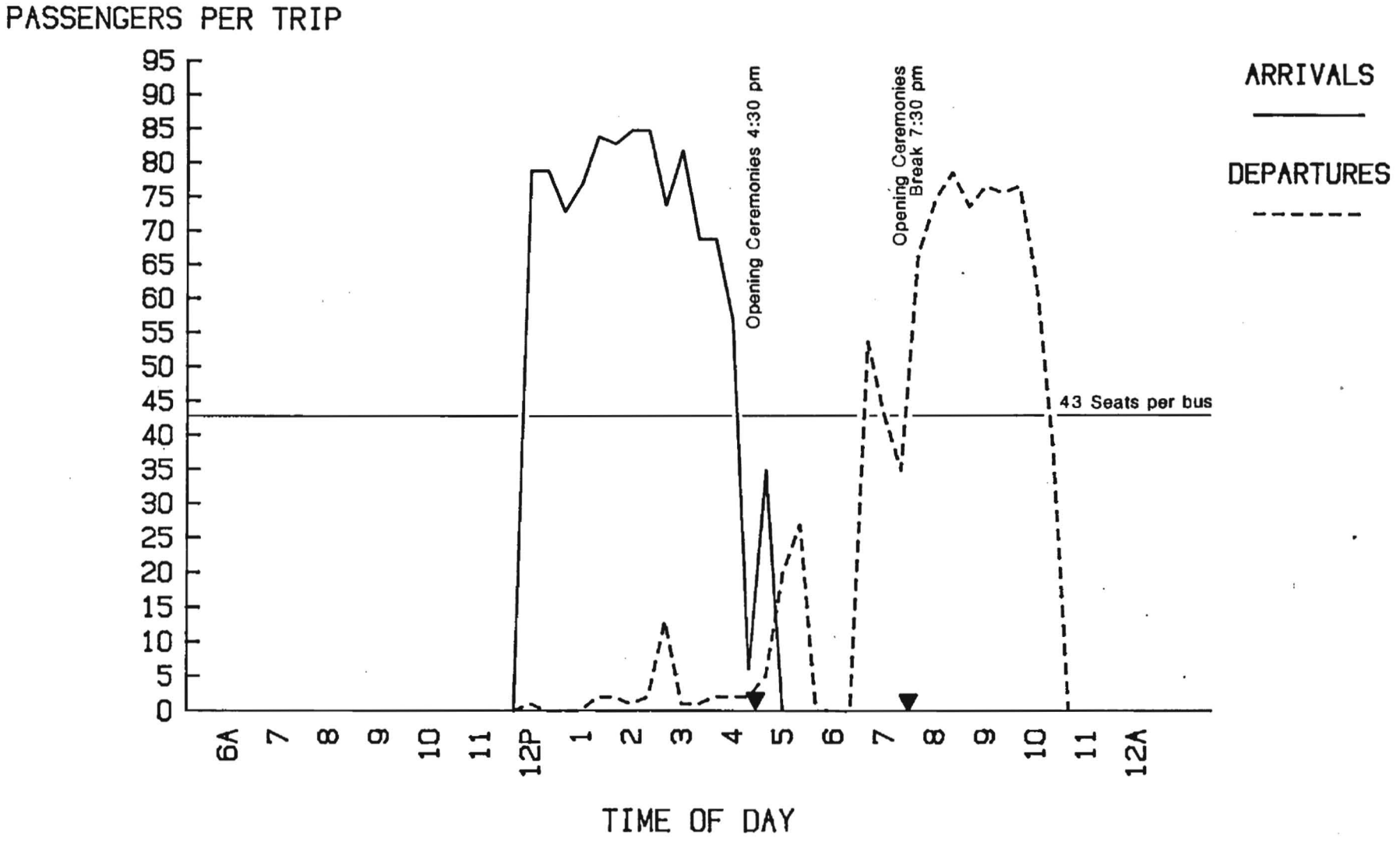

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FIGURE 3.15

AVERAGE PASSENGERS PER TRIP
FRIDAY 8-10-84
LINE 710 SHUTTLE SERVICE

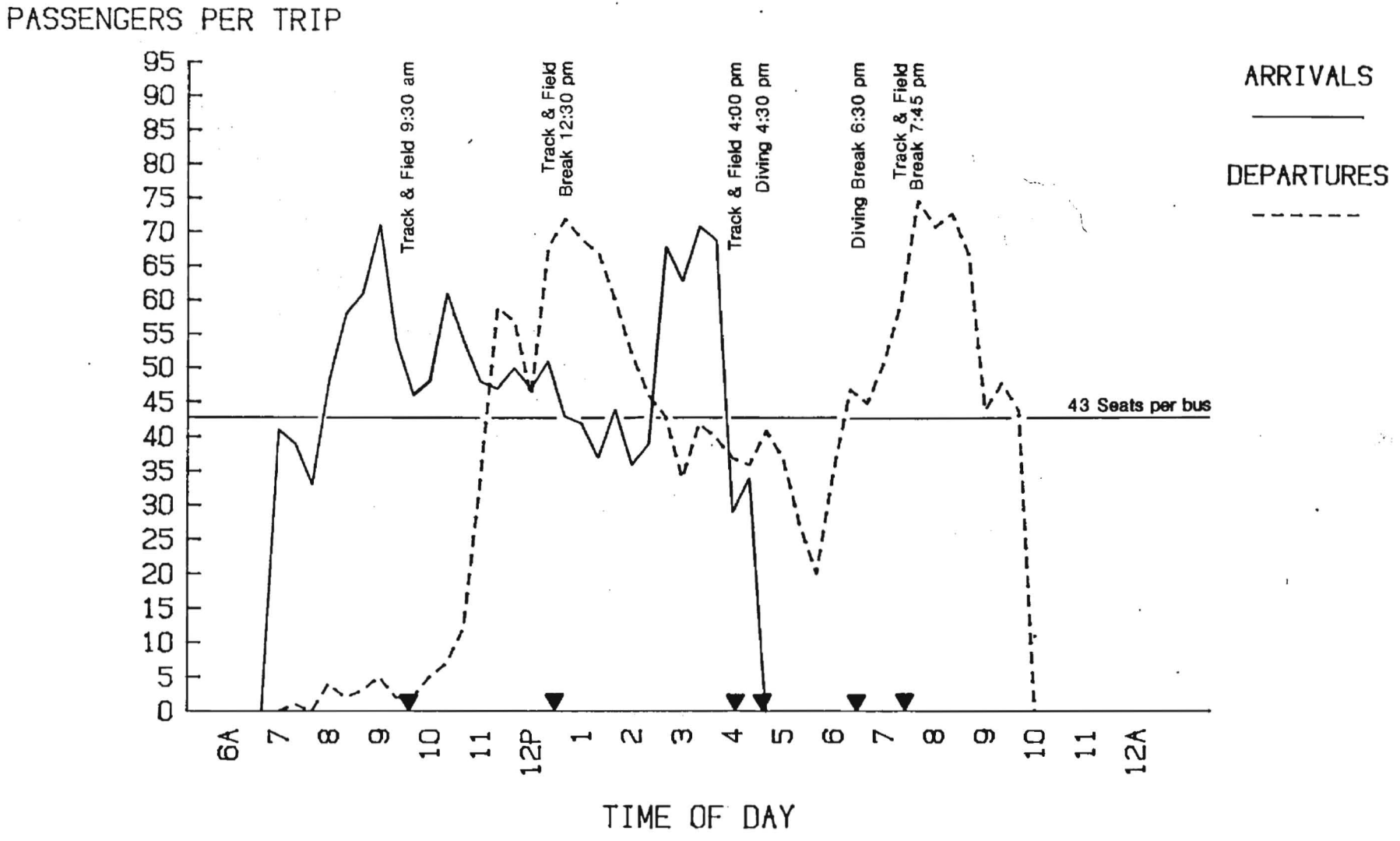

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FIGURE 3.16

AVERAGE PASSENGERS PER TRIP
CLOSING DAY 8-12-84
LINE 710 SHUTTLE SERVICE

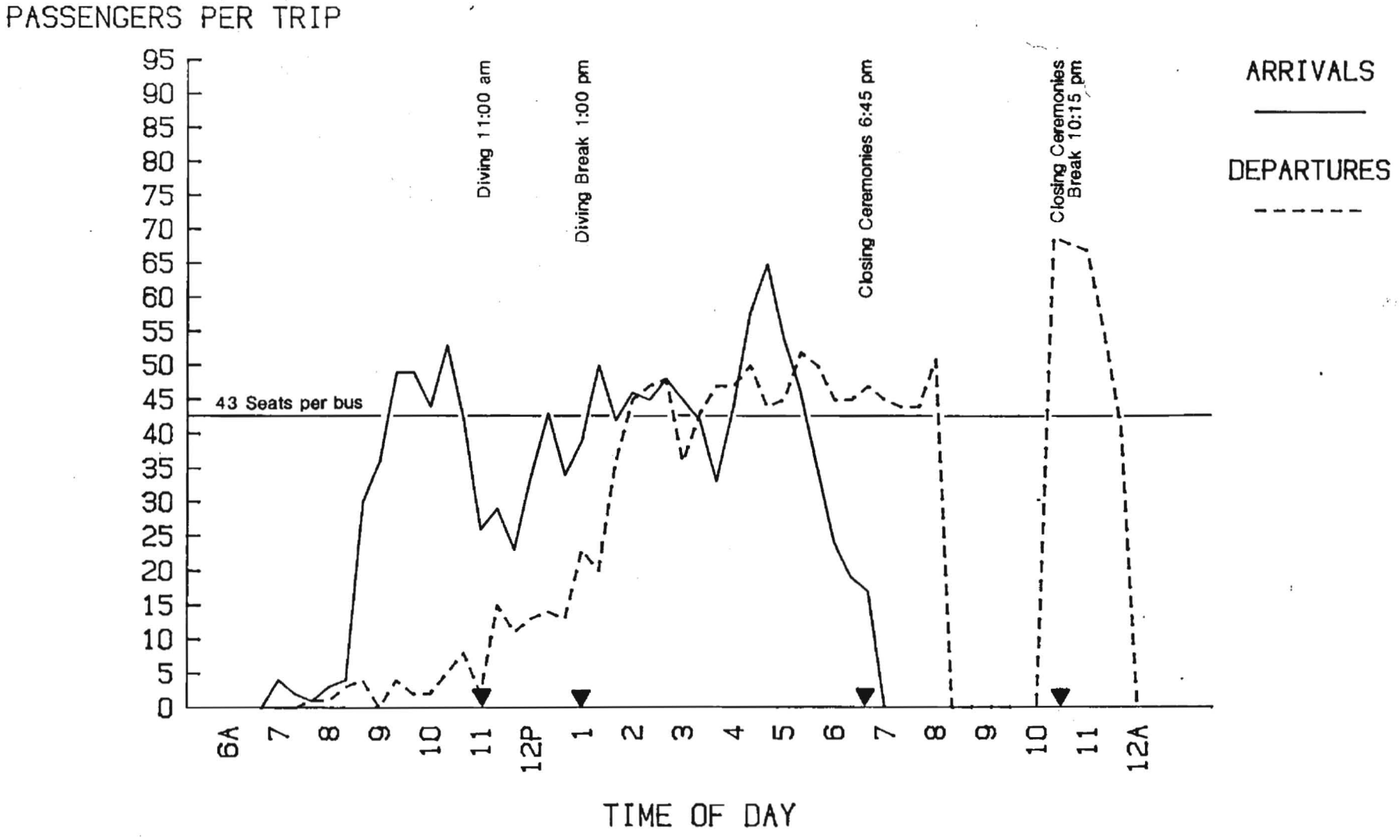

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FIGURE 3.17

AVERAGE PASSENGERS PER TRIP
OPENING DAY 7-28-84
LINE 711 PARK/RIDE SERVICE

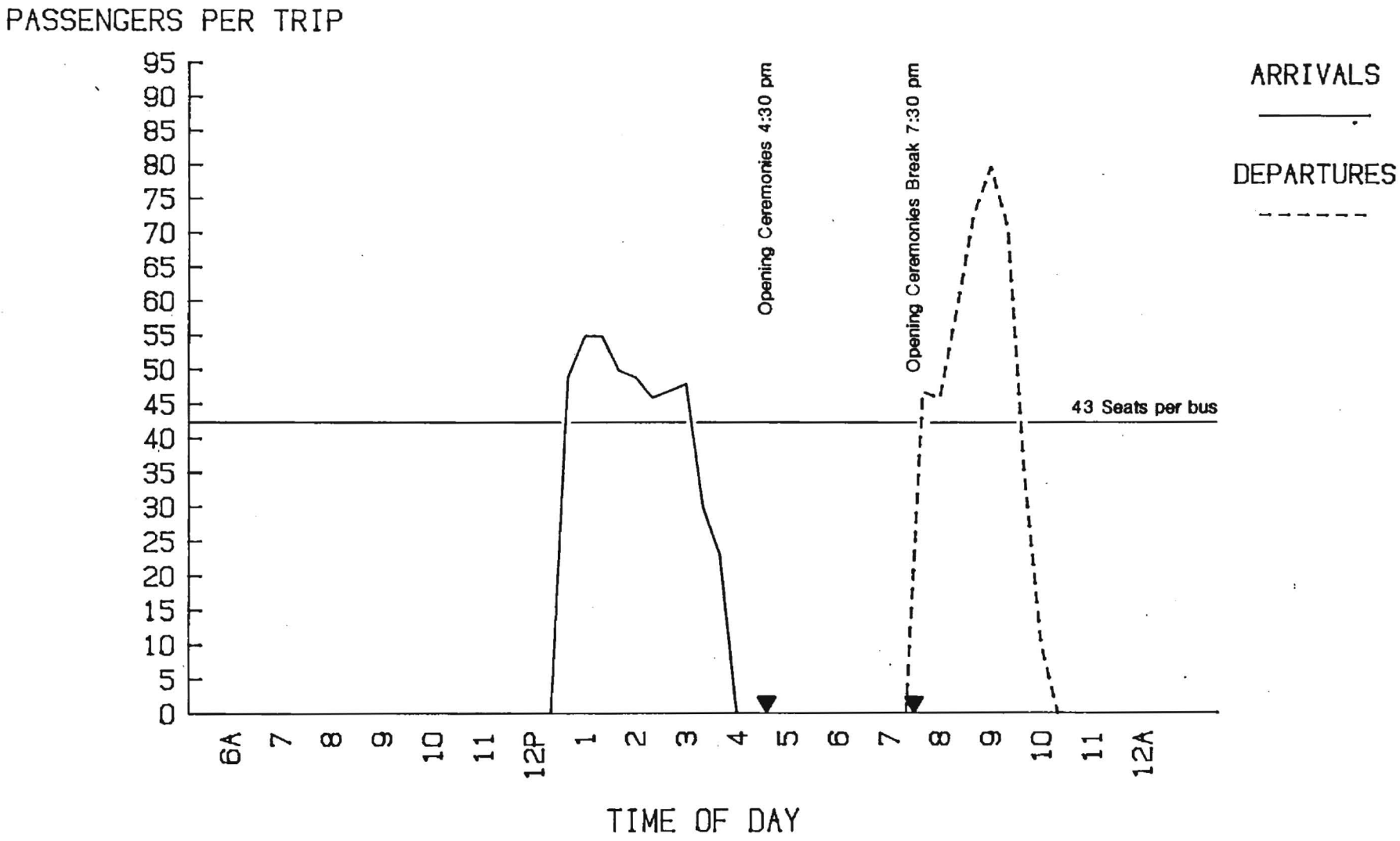

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FIGURE 3.18

AVERAGE PASSENGERS PER TRIP
FRIDAY 8-10-84
LINE 711 PARK/RIDE SERVICE

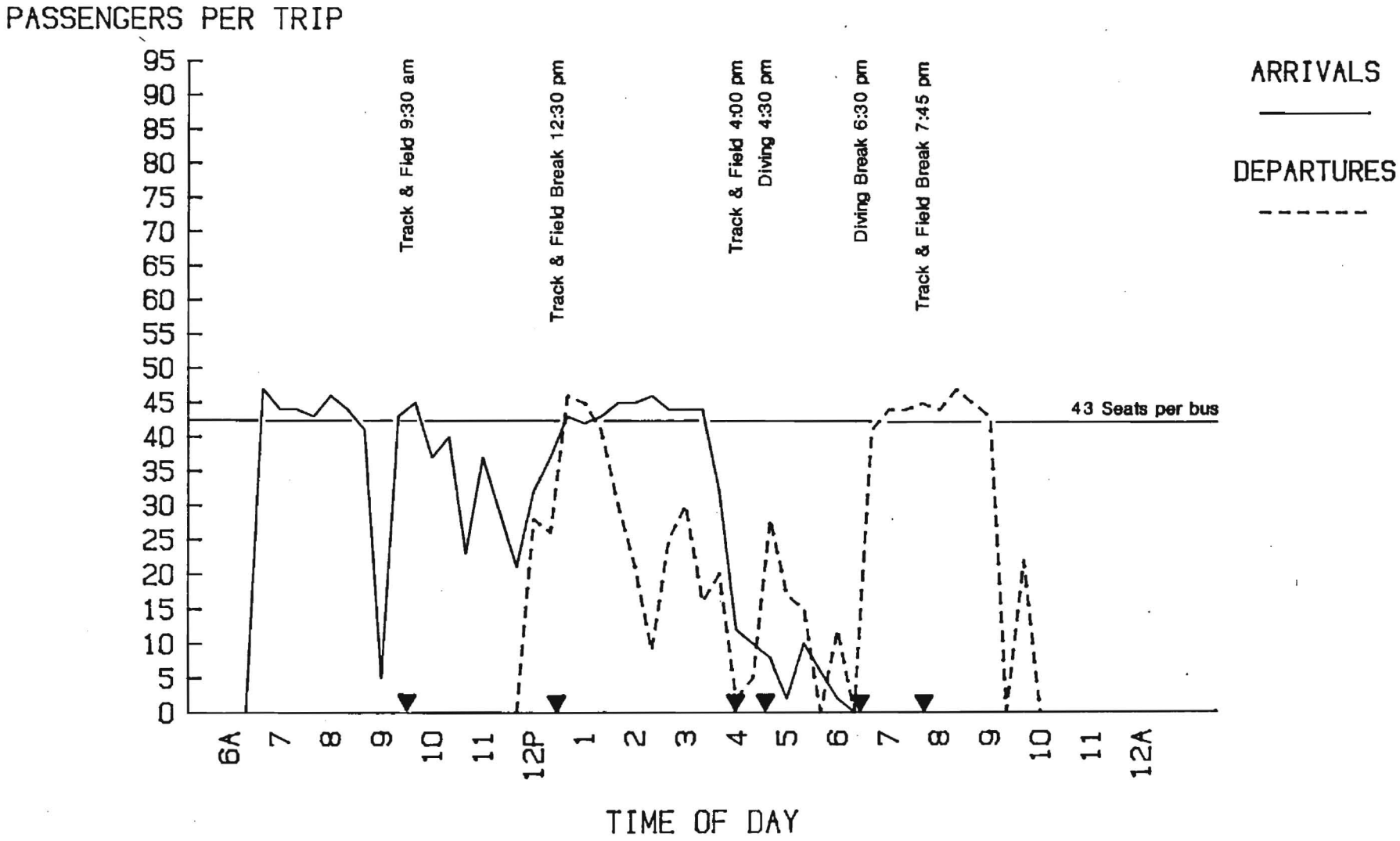

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FIGURE 3.19

AVERAGE PASSENGERS PER TRIP
CLOSING DAY 8-12-84
LINE 711 PARK/RIDE SERVICE

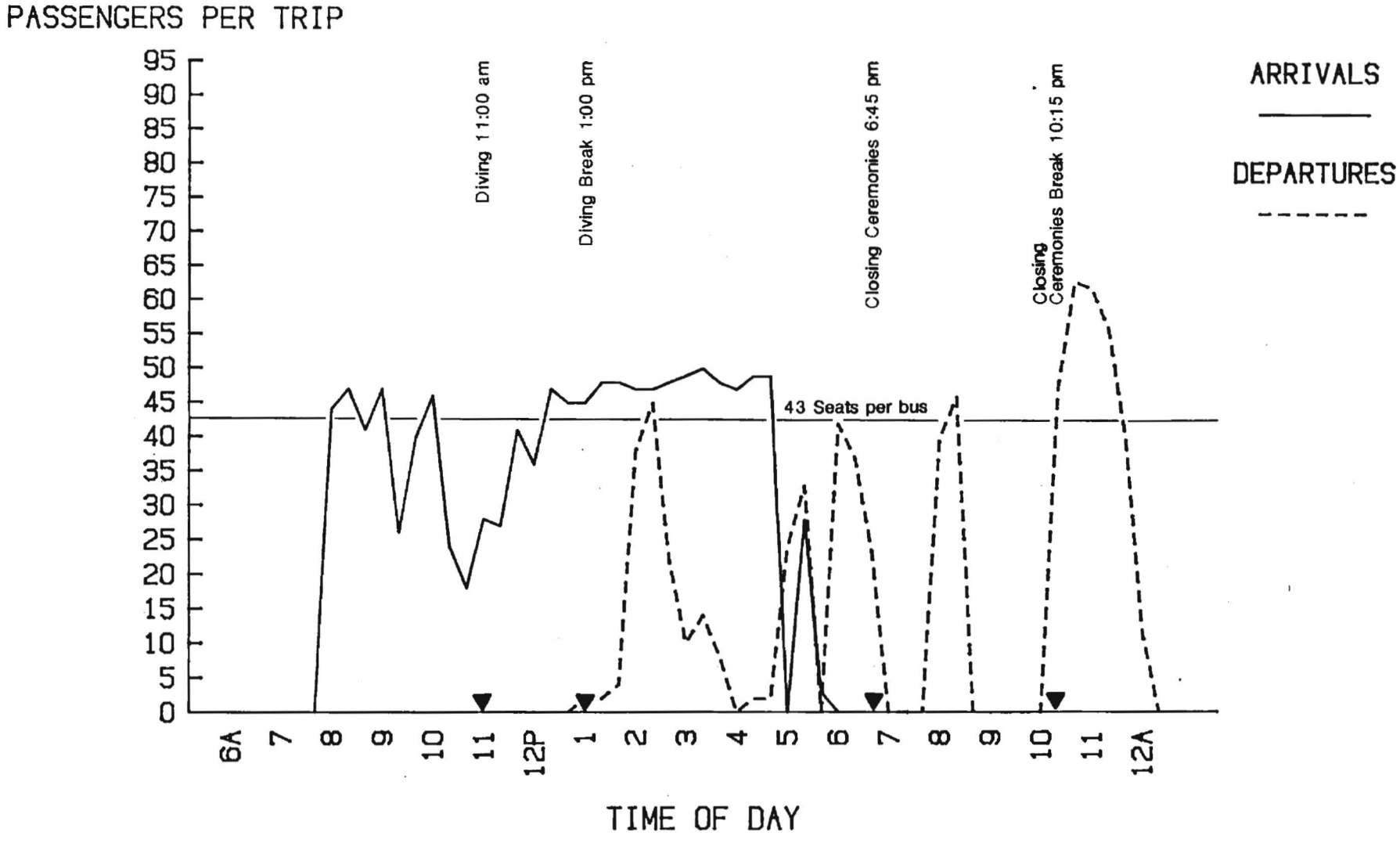

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FIGURE 3.20

AVERAGE PASSENGERS PER TRIP
OPENING DAY 7-28-84
LINE 760 EXPRESS SERVICE

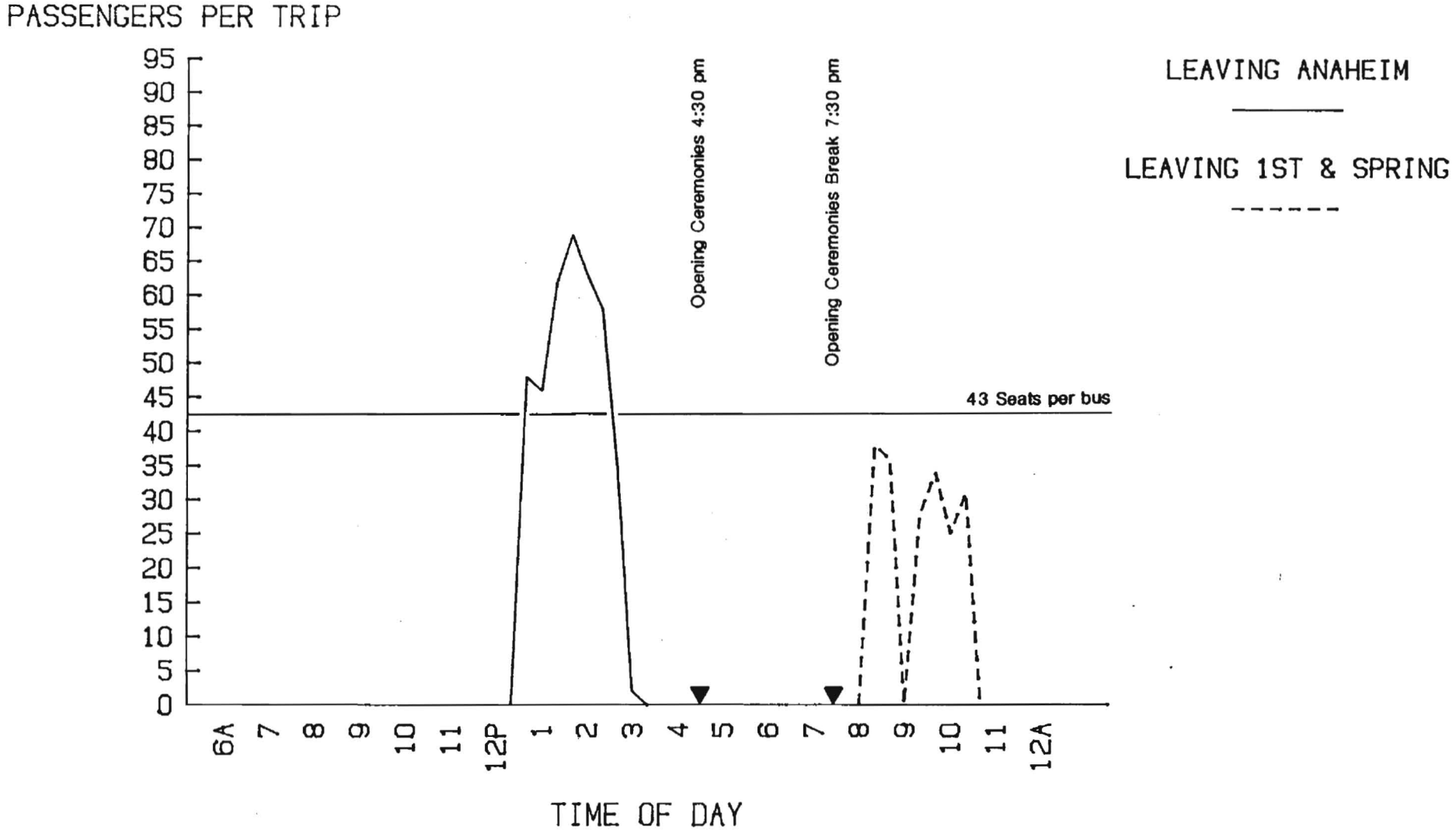

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FIGURE 3.21

AVERAGE PASSENGERS PER TRIP
FRIDAY 8-10-84
LINE 760 EXPRESS SERVICE

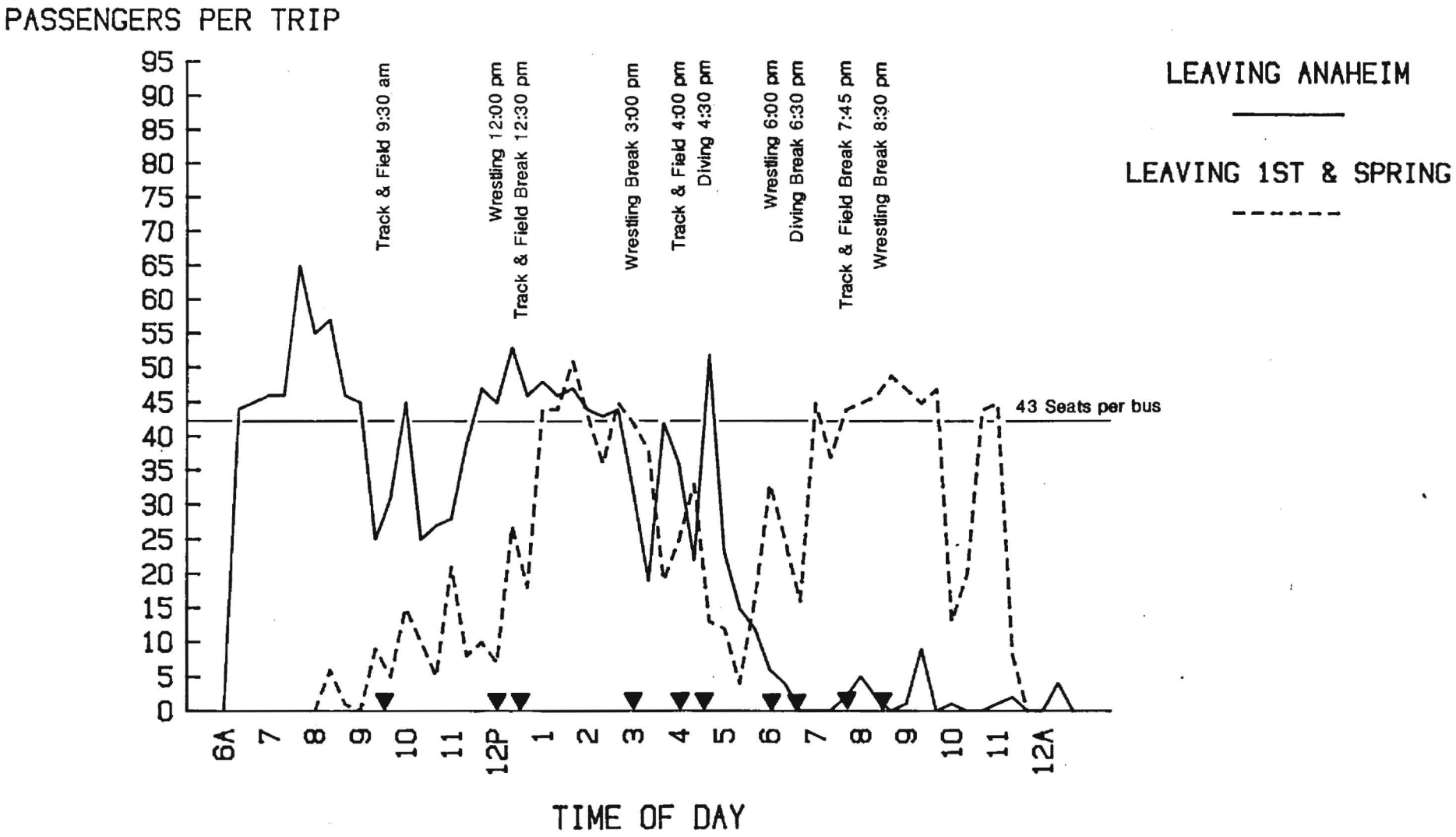

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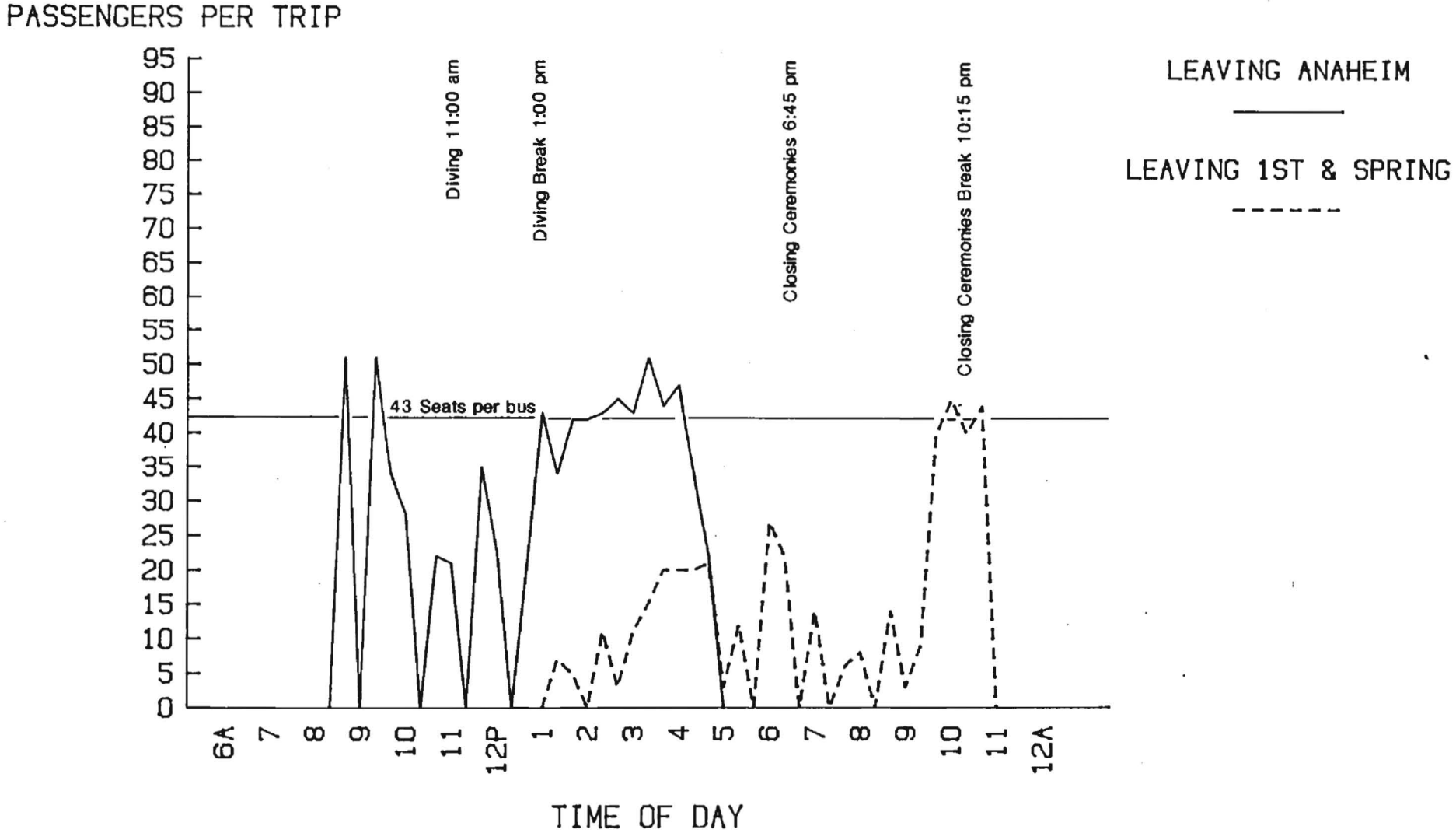
FIGURE 3.22

AVERAGE PASSENGERS PER TRIP
CLOSING DAY 8-12-84
LINE 760 EXPRESS SERVICE



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3.4 ANALYSIS OF MODE SPLITS

Key members of each of the regional transportation planning and management organizations, including the Los Angeles Olympic Organizing Committee, met regularly to discuss the transportation and traffic planning for each of the Olympic venues. This group established the various modal splits for each venue, with the primary determining factors being the actual available parking on-site or in adjacent facilities, the timing of the events and their impact on normal traffic, and the relationship to other non-Olympic traffic generators. Those venues with the highest identifiable deficiency in parking received the highest modal splits for public transportation. Accordingly U.C.L.A., Long Beach, and the Exposition Park complex had traffic plans developed that depended heavily on public transport playing a significant role for the transportation of spectators.

Figure 3.23 shows the targeted mode splits for each venue assuming capacity crowds. The SCRTD Special Olympic Service was the primary carrier, although certain portions were assigned to the District's regular bus service and in some instances, to service operated by local municipal carriers. The latter was especially important at the two venues on the U.C.L.A. Campus, the three venues in Long Beach, and to a lesser degree at East Los Angeles College and the Anaheim Convention Center.

The mode splits were determined from attendance figures furnished by the LAOOC for each event. It is not known whether the attendance reflects actual attendance recorded upon entrance, or from "paid" attendance based upon ticket sales.

Figure 3.24 through 3.30 show the actual mode splits at each of the venues. It should be noted that certain of these venues were difficult to assess as generated ridership may have been from adjacent facilities, or service was offered to a different segment of patronage. For example, service offered on Line 760 to and from the Anaheim Convention Center was not only designed

FIGURE 3.23

SPECTATOR CAPACITY AND ESTIMATED PATRONAGE BY VENUE

VENUE	CAPACITY	TARGETED MODE SPLIT (%)	ESTIMATED PATRONAGE
• Exposition Park (includes Coliseum, Sports Arena, USC Swim Stadium)	120,750	40	48,300
• Santa Anita	34,650	10	3,500
• East Los Angeles College	19,200	10	1,900
• Rose Bowl	105,000	15	15,800
• Pepperdine	5,250	5	300
• Forum	17,325	5	900
• Loyola	4,200	25	1,100
• Long Beach (includes Convention Center and Sports Arena)	13,125	55	7,200
• Anaheim	7,770	20	1,600
• UCLA (includes Pauley Pavilion and Tennis Courts)	19,950	40	8,000
• CS Dominguez Hills	5,250	5*	300*
• CS Fullerton	4,200	1*	400*
• CS Los Angeles	8,400	10*	800*
• Dodger Stadium	52,500	5	2,600

* Mode splits and patronage estimated for existing regular service.

FIGURE 3.24

SCRTD DAILY MODE SPLIT
ANAHEIM
JULY 30 - AUGUST 11

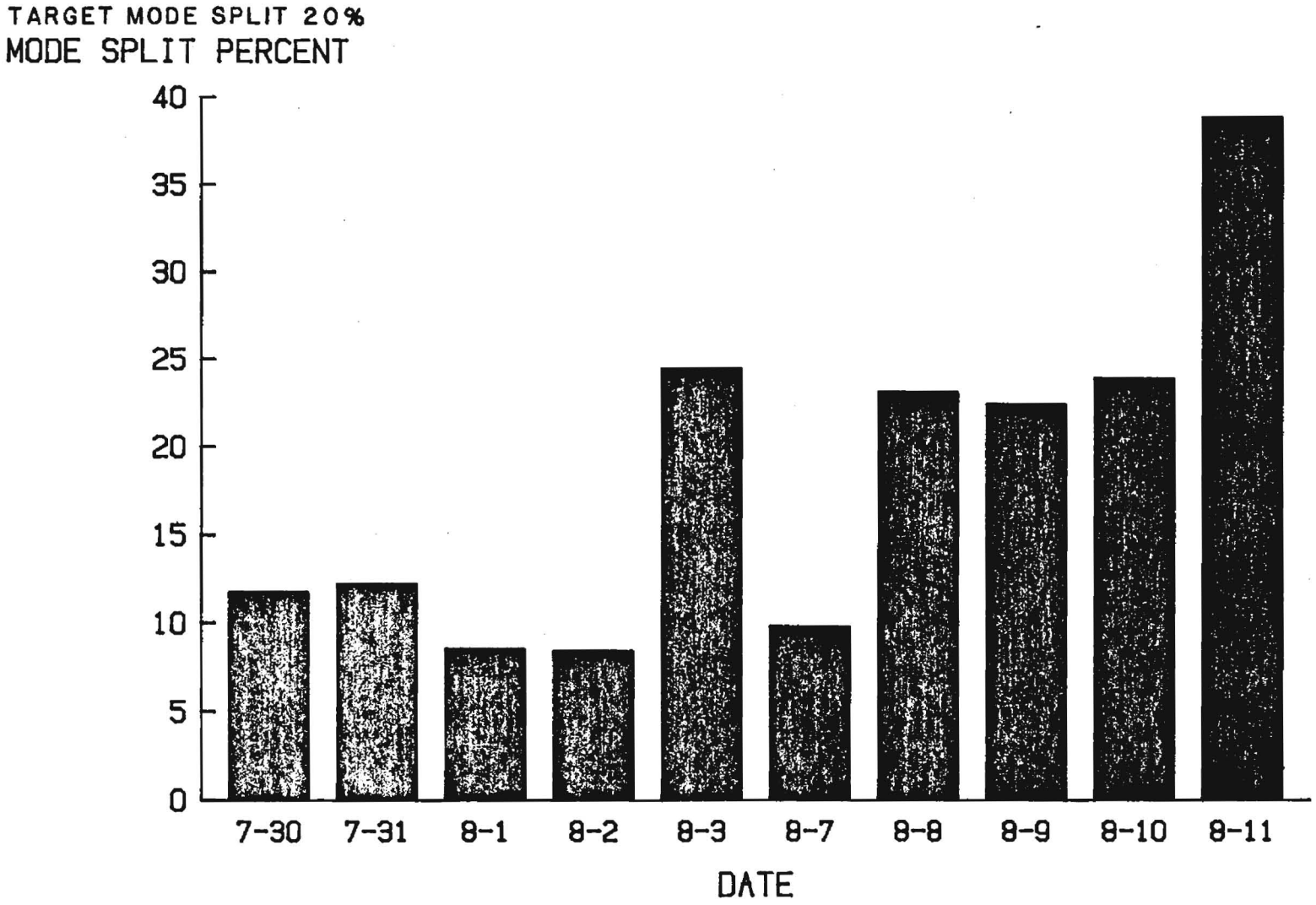

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FIGURE 3.25

SCRTD DAILY MODE SPLIT
EXPOSITION PARK
JULY 28 - AUGUST 12

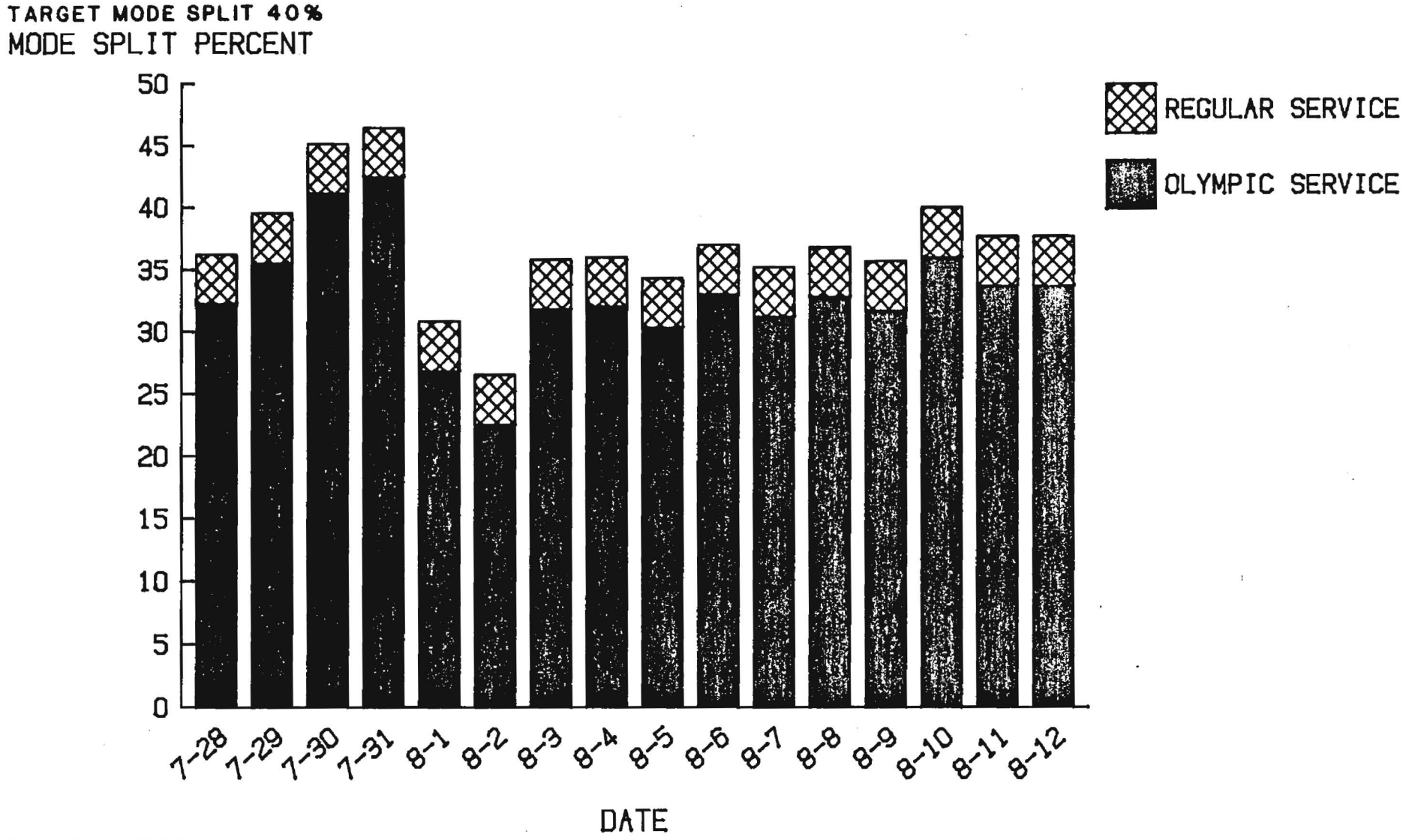

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FIGURE 3.26

SCRTD DAILY MODE SPLIT
WESTWOOD-UCLA
JULY 29 - AUGUST 11

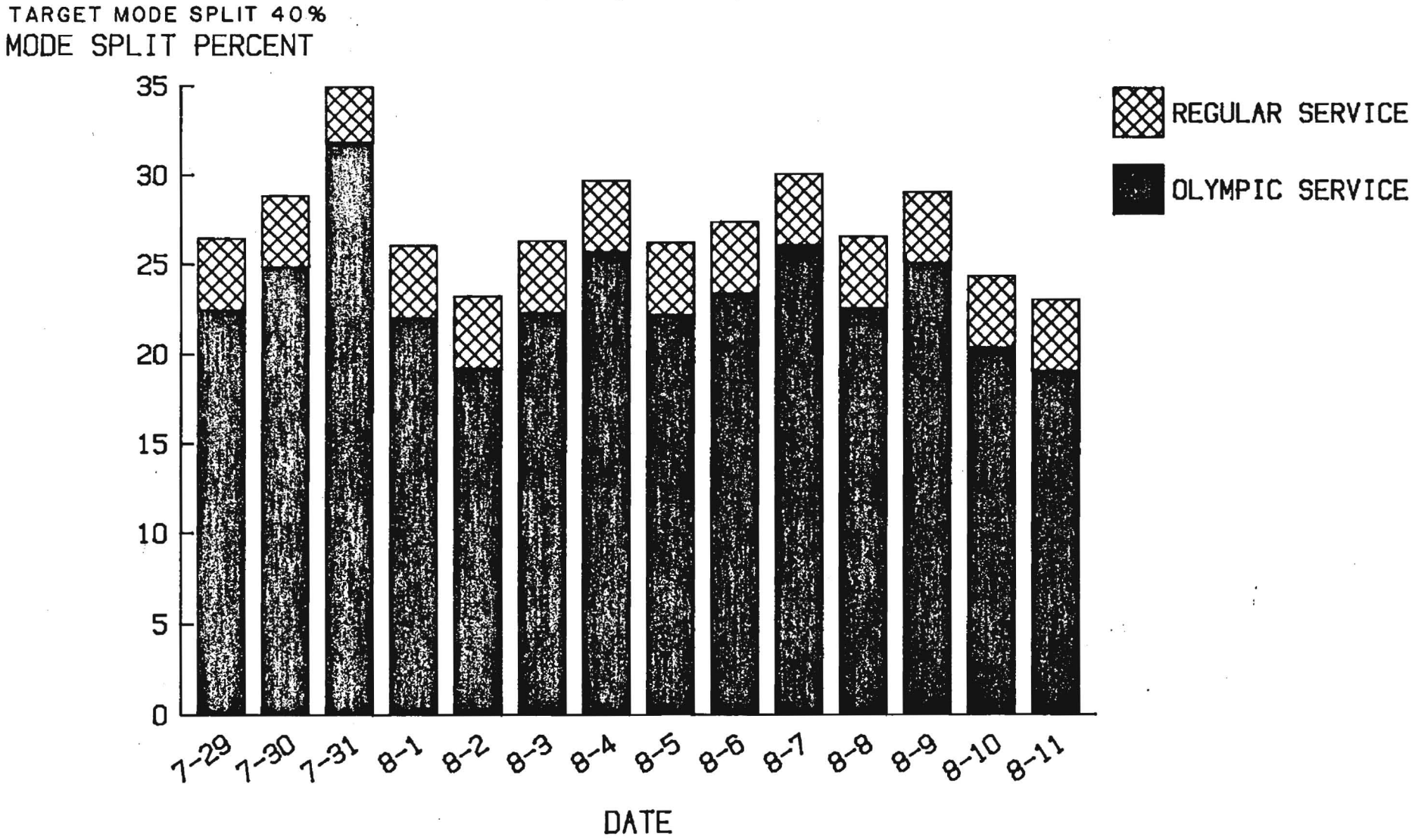

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FIGURE 3.27

SCRTD DAILY MODE SPLIT
ROSE BOWL
JULY 29 - AUGUST 11

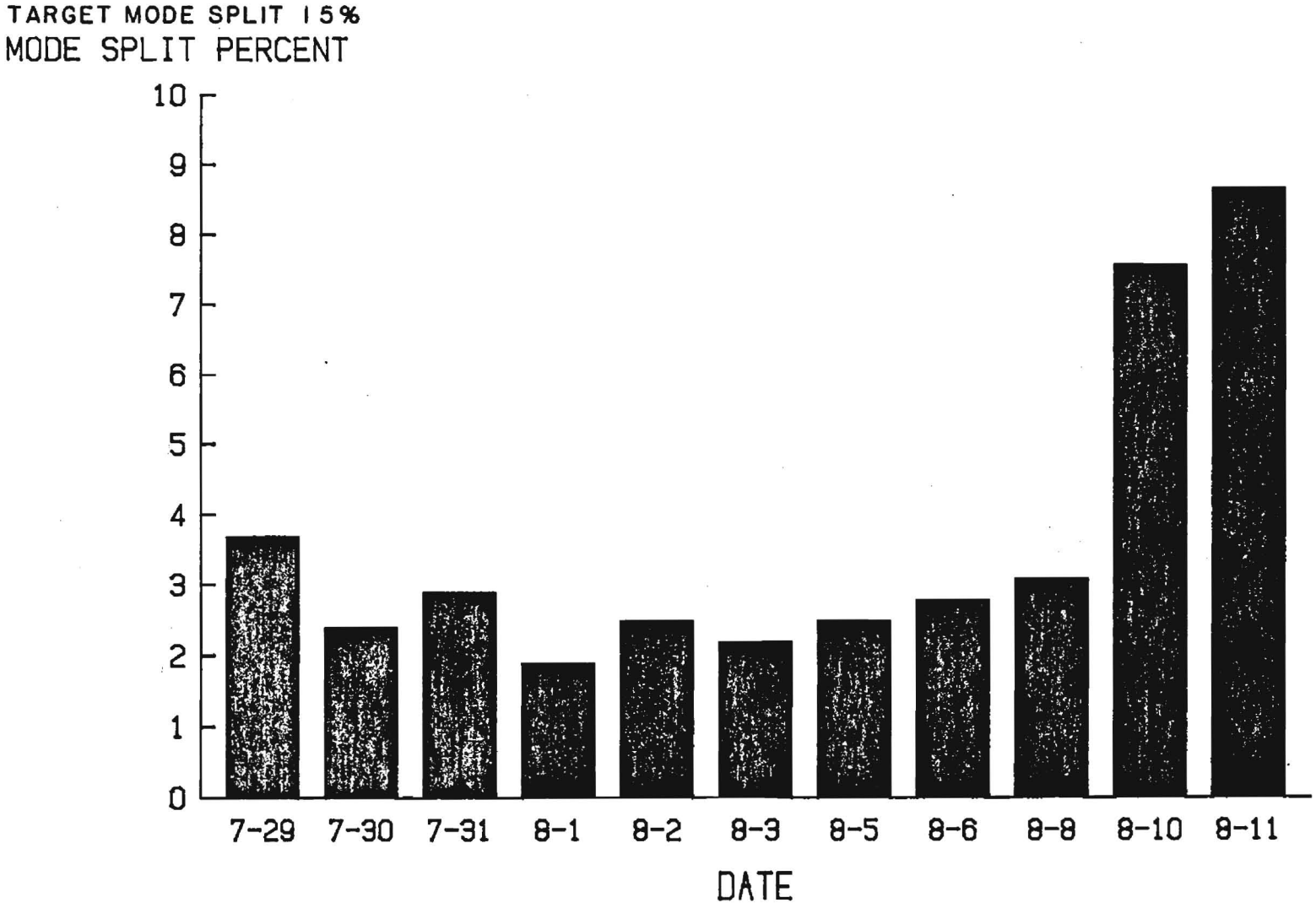

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FIGURE 3.28

SCRTD DAILY MODE SPLIT
DODGER STADIUM
JULY 31 - AUGUST 7

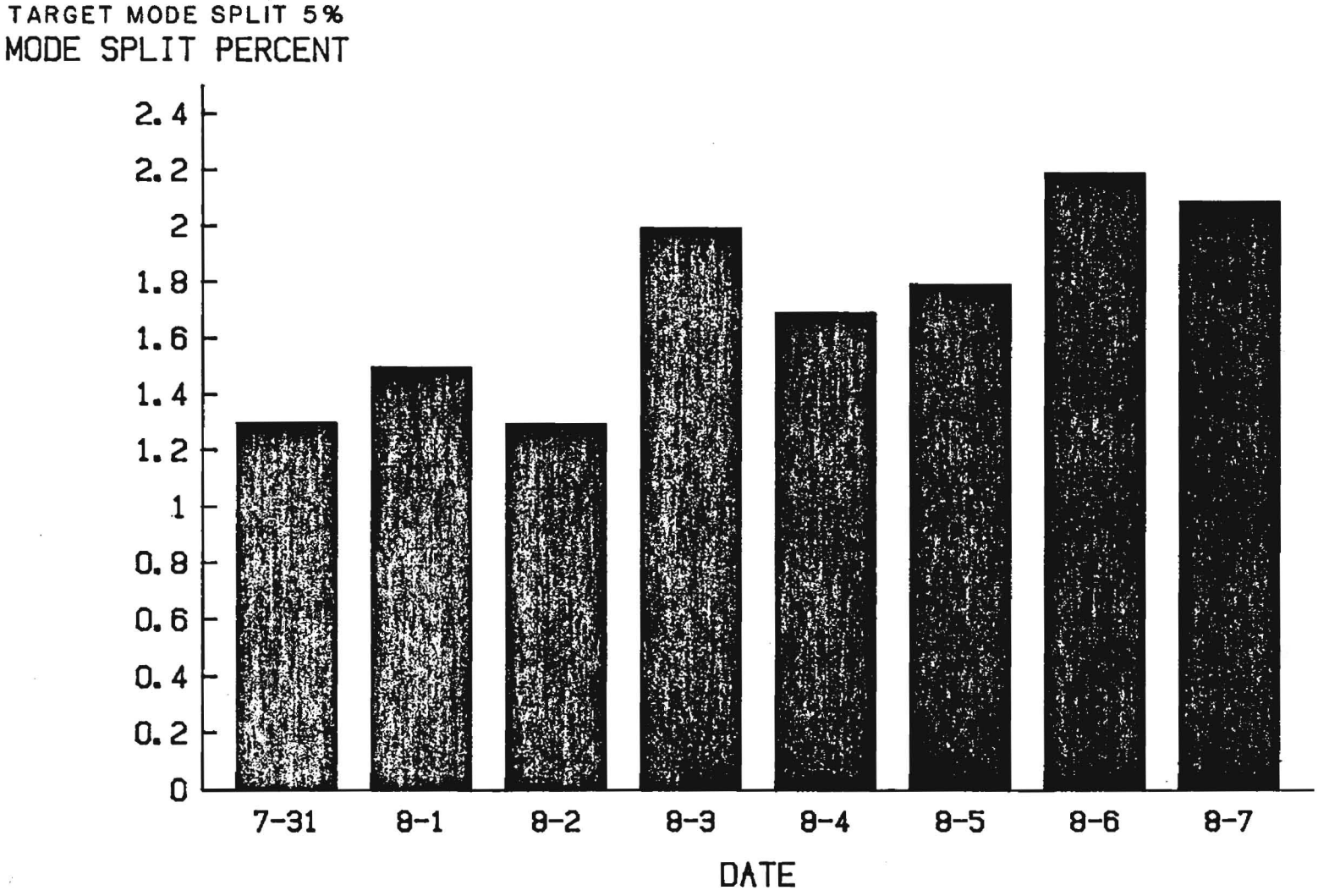

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FIGURE 3.29

SCRTD DAILY MODE SPLIT
SANTA ANITA
JULY 29 - AUGUST 12

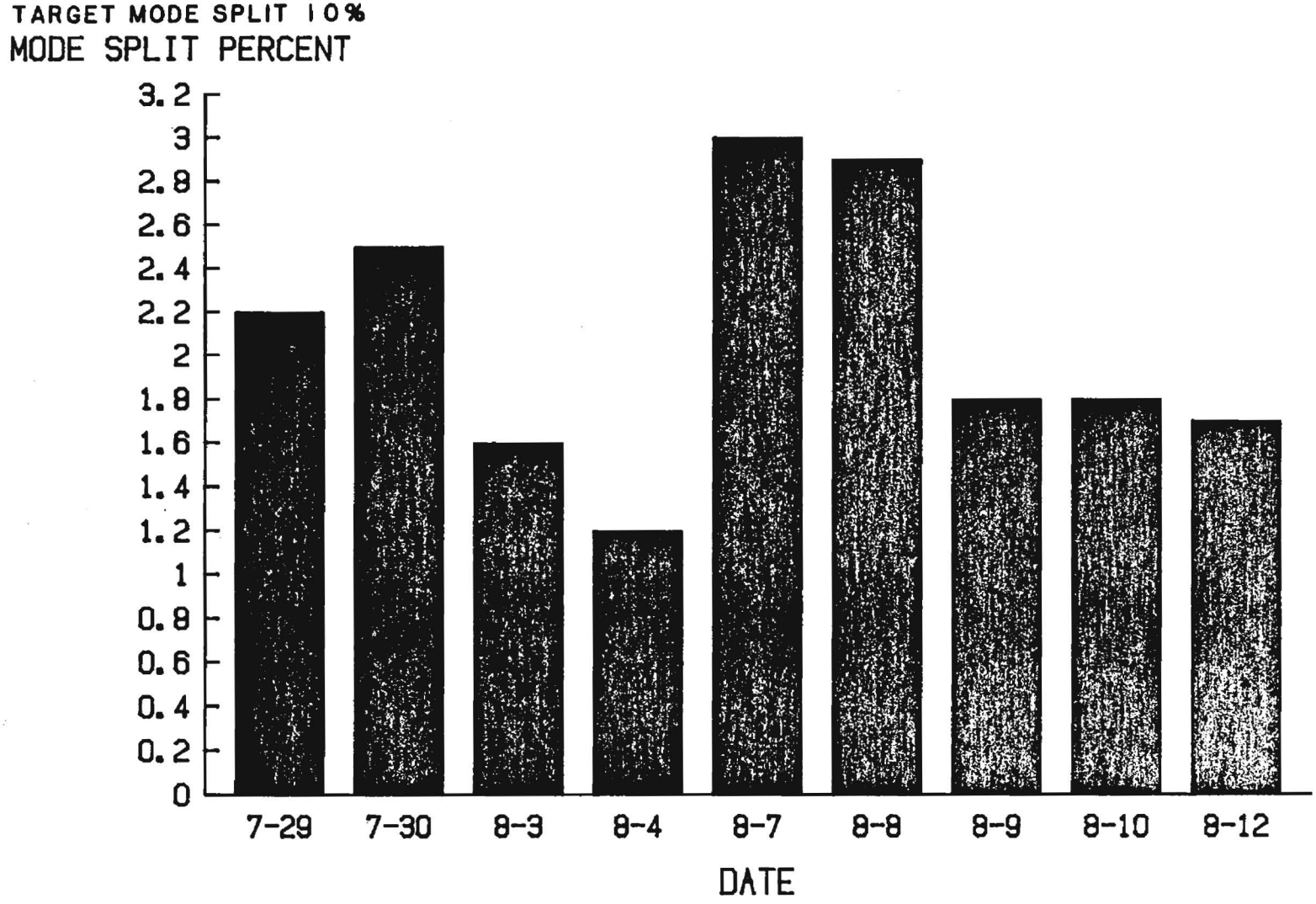

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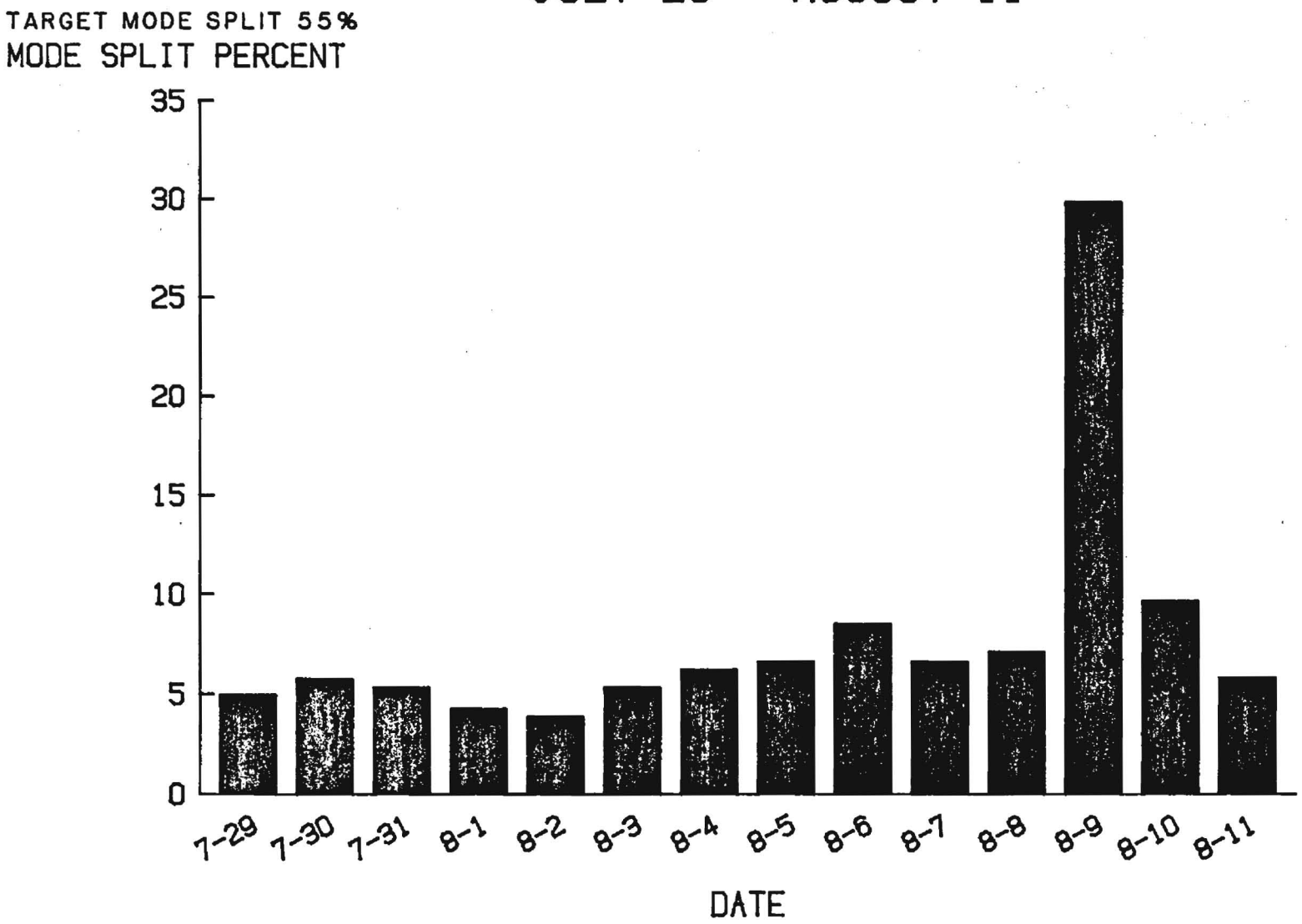
FIGURE 3.30

SCRTD DAILY MODE SPLIT
LONG BEACH
JULY 29 - AUGUST 11



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SEPTEMBER 1984

as an express service from Downtown Los Angeles for wrestling spectators, but as an express line from Orange County to Downtown Los Angeles. The actual patronage generally exceeded the targeted mode split partly because of the traffic from Orange County to Downtown Los Angeles.

In other instances, regular ridership played an important role in the provision of spectator transportation. Point checks were done during and after the Olympics on key lines operating in the vicinity of major venues. Unfortunately, without an on-board survey, it is not possible to determine whether ridership activity on these local lines was generated by Olympic events other than just normal route patronage. For example, the local lines operating in the vicinity of Exposition Park are all scheduled demand frequencies and experience heavy boarding and alighting on a normal basis. Checks indicate a minimum of a 10% increase on weekdays, although this figure could be significantly higher if regular ridership was reduced as people chose to stay home, or took alternate routes to avoid anticipated congestion the the Exposition Park area. As a result, the estimates shown in Figure 3.24 and 3.25 are for existing ridership and are, at best, conservative.

3.4.1 EXPOSITION PARK

The heart of the Olympic System was centered at Exposition Park where the majority of the SCRTD Olympic Service operated. Because of the multiplicity of events on a daily basis, it is difficult to assess the total share assigned to public transit. In order to assess the magnitude and impact of our service, special attention was given to the evening break of events and the ridership generated on departures. This was necessary because of the mix of spectators with day passes, or those going to more than one event during the day using the Exposition Park service more than

once. The evening break represented the most significant move of the day, carrying the largest volume of passengers and requiring the greatest number of buses.

Figure 3.25 indicates the actual ridership and how it compares to the targeted mode split of 40%. As can be seen, the District reached or exceeded this target on several occasions. Even on the minimum day, a 26.6% share was recorded. On the maximum day, a 46.5% share was realized. The average share for all sixteen days of events was 37%.

3.4.2 WESTWOOD/UCLA

The other major congestion of venues within the City of Los Angeles was located in Westwood Village, an area known for congestion on a regular basis. Because of the location of the two venues, as well as the home of one of the Olympic Villages, concern over traffic congestion yielded an assignment of 40% share for transit.

Figure 3.26 shows the estimated ridership in Westwood. The maximum day recorded a 31.9% transit share while the lightest day of travel on August 11 received a 19.2% share. The average was approximately 26%.

These figures are estimates because of the significant amount of spectators handled on the nine regularly scheduled RTD lines, the four local lines operated by Santa Monica Municipal Bus Lines and the Culver City Line 6. As a result the patronage figures, are, at best, conservative and do not account for any non-ticketed spectators going to the Village for entertainment or to share in the Olympic experience.

3.4.3 SUBURBAN VENUES

Of the suburban venues, three received special Olympic Service that can be quantified with a reasonable amount of accuracy, not skewed by other passenger activities. The Rose Bowl, Santa Anita Park and Dodger Stadium fall into this category. All of these venues had more than adequate parking available.

The Rose Bowl, host to Football/Soccer, received between a 1.9 - 8.7% mode split during the 11 days of events, averaging approximately 4.8%. This represents a higher figure than usually experienced for New Year's or Super Bowl events. Considering parking at the Rose Bowl is free, the higher days of passenger travel occurred on days of largest attendance when the shuttle service was most crucial for the traffic plans to run smoothly. Figure 3.27 depicts the mode splits and patronage.

Dodger Stadium hosted exhibition Baseball on eight separate days. Figure 3.28 shows the estimated ridership share for Dodger Stadium. The share to transit ranged between 1.3 - 2.2%, with a target of 5%. Patronage on key days was far greater than that experienced during the regular Dodger season.

Many of the Equestrian events were held at Santa Anita Park in Arcadia where the target was 10%. The estimated share to transit ranged from 1.2 - 3.0%. Patronage was less than expected for two reasons, spectators were different than the normal racetrack clientele and the Park operated at the maximum attendance of 31,046, less than one-half normal on race days, as spectators were not allowed in the infield. Figure 3.29 indicates the ridership on the nine days of events.

3.4.4 ANAHEIM AND LONG BEACH

These two locations not only had Olympic events with special Olympic Service but served as boarding locations on special Olympic lines to Downtown Los Angeles. As a result, actual passenger activities related to event traffic at these locations is difficult to assess with any degree of accuracy. Many of the riders boarding the express lines were going to events at other locations.

The Long Beach service recorded between 3.9 - 30% as described in Figure 3.30, while the Anaheim service received between 8.5 - 31.9% share. As shown in Figure 3.1, neither of these tables represent an actual depiction of spectator traffic for these events, rather, they represent the actual patronage handled. To some degree, however, the District contributed a significant part of passenger activity serving to reduce traffic congestion in these areas.

3.5 REGULAR SERVICE RIDERSHIP

An analysis of revenue collected during the Games shows that systemwide ridership on the regular service network declined compared to pre-Olympic data. However, this is consistent with historical data which shows that ridership normally declines during summer months (See Figure 3.29).

FIGURE 3.31

REGULAR SYSTEM BOARDINGS COMPARISON
MAY THROUGH AUGUST - 1983 AND 1984

MONTHS	BOARDINGS 1983	1984	DIFFERENCE
May	37,474,000	41,751,000	+11%
June	38,005,000	41,037,000	+8%
July	35,607,000	39,821,000	+12%
August	36,792,000	39,877,000	+8%

During the Olympics, point checks were taken at selected intersections near the Exposition Park complex to monitor passenger activity on regular service lines. These point checks produced records of boarding and alighting activity at the observation point, but did not indicate to what purpose the activity was related. As a consequence, it was not possible to distinguish whether or not the boarding and alightings were directly related to either the Olympics or other trip purposes.

The data collected was not sufficiently detailed to accurately indicate how many riders used regular services for Olympic related trips, although certain trends are suggested. For example, in comparison to checks taken the week following the conclusion of the Games, data suggests that on Olympic weekdays, approximately 10% more riders boarded the regular lines at the intersections observed. Olympic weekends are more impressive as the data comparison suggests that Olympic related trips may have doubled boardings around venues.

3.5.1 EXTRA SERVICE ON REGULAR LINES

A review of the extra service provided on regular lines during the Olympic period also provides some insight relative to patronage. Figure 4.3 shows that 178 extra morning and afternoon assignments were added on nine lines from Friday, August 3 to Sunday, August 12, 1984. Of these, 126 or 71% of the extra assignments were deployed on weekends. This tends to confirm that Olympic ridership demand on regular lines was greatest on weekends. Of special note, four of the nine lines, Lines 84, 480, 484, and 496, did not provide direct access to any Olympic venue yet they accounted for 103 extra assignments or 58% of the total assignments added. Field observations indicated that the three lines served as feeders to the various Olympic services which were operating from the special terminal established at 1st and Spring Streets in downtown Los Angeles.

3.5.2 OLYMPIC PATRONAGE ON REGULAR SERVICE TO MAJOR VENUES

As stated before, an accurate estimate of Olympics related ridership carried on the regular line services was not possible due to limitations in the data collected. There were two things going on. Since ridership systemwide was down, it was reasonable to assume that local regular lines were down. The increase in local ridership due to the Olympics could only have been obtained through an on-board survey. We obviously did not have time to conduct one. Because of the need to compile information on the Olympic service lines, manpower was simply not available to perform a more thorough check on the regular services. By applying several modest assumptions, however, a reasonably "educated guess" in terms of Olympic patronage carried on the regular system was developed.

If it is assumed that the four local lines (Lines 40, 42, 81, and 204) serving the Exposition Park complex only carried between five and ten passengers per trip from 8 a.m. to 5 p.m., to or from the complex, it is

indicated that regular service to the area transported between 38,500 and 77,000 Olympics riders over the 16 day period of the Games. If it is further assumed that the extra service added to the four lines commencing August 3 (see Figure 4.3) carried only 100 Olympic riders per added bus per day, 8,300 additional Olympic riders would have been carried. Regular service would have thus carried between 46,800 and 85,400 Olympic riders to Exposition Park. The major UCLA venues in Westwood were also well served by SCRTD local Lines 2, 20, 21, 22, 320, 322, and 560. Applying the same assumptions yields a range between 27,600 and 55,300 Olympic riders carried over the 16 days of the Games. When added to the total for Exposition Park riders, the Olympic patronage using regular line service would range between 74,500 and 141,000 riders.

Regular SCRTD local services also operated near Olympic venues at Cal-State Fullerton, East Los Angeles College, Cal-State Los Angeles, Cal-State Dominguez Hills, Pepperdine University in Malibu, the Convention Centers in Long Beach and Anaheim, the Forum in Inglewood, and Santa Anita Racetrack in Arcadia. It is believed, however, that additional ridership generated by the Olympics on these regular services was minimal for several reasons. First, most of the venues offered adequate parking; second, the campus venues were small relative to spectator capacity; third, some of the regular lines operating near the venues did not operate as frequently or as long a spread of service as those lines operating near the Exposition Park-Westwood venues; and fourth, these venues did not have the extensive festive development attractive to visitors as did the Exposition Park and Westwood areas.

Point checks were not conducted on the regular lines serving the other venues so trends could not be observed. However, the impression that Olympic ridership on these lines was minimal was reinforced by the fact that additional equipment was not deployed during the Games.

3.5.3 RIDERSHIP ON MUNICIPAL SERVICES

During the Games, the municipal bus systems operated by the Cities of Culver City, Long Beach, and Santa Monica may have experienced modest ridership increases. Culver City evaluated their Line 6 during the two-week Olympic period and reported a 5.3% gain over the same period in 1983. This increase in patronage did not require additional service. Long Beach estimated that both system ridership and ridership carried on services operating past venues increased approximately 3%. Similarly, Santa Monica estimated that system ridership increased approximately 3.6% compared to 1983.

CHAPTER 4.0

OLYMPIC OPERATIONS

4.0 - OLYMPIC OPERATIONS

4.1 BUS AND VEHICLE UTILIZATION

The District continuously developed or modified its estimates of bus needs. The original estimate of equipment was developed to enable the District to meet the targeted modal splits. Revisions to these estimates were made to reflect the latest ridership and demand figures.

Original estimates called for RTD to deploy a maximum of 481 scheduled buses to Olympic services. These estimates were generally downscoped in later revisions either just before, or during the Olympics.

Figure 4.1 summarizes the bus equipment figures scheduled and used, by day, for the Olympic service. The data indicate that the number of buses actually used was always greater than their respective revised scheduled figures. The extent of these variances ranged between 4 and 46 percent. This wide variation in day to day bus additions was necessary to transport passengers safely, quickly and efficiently. Added buses were needed to meet changing traffic conditions due to accidents, temporary street closures; to move passengers quickly away from their venues; to handle unexpected surges in rider demand at differing times of the day.

It should be noted that many of the extra buses added were placed into service to act as trippers, only used for a relatively short period of time to make one or two trips on their assigned lines. The maximum number of buses was attained for the "break" of the events, usually in the evening when the largest volume of people were transported in the shortest period of time.

4.1.1 REPORTED ACCIDENTS

During the period July 28 thru August 12, 1984 a total of 73 accidents were reported involving Olympic service buses. Forty-two of these accidents

FIGURE 4.1

OLYMPIC SPECIAL SERVICE
SCHEDULED VS. ACTUAL
BUS UTILIZATION

DAY	DATE	NO. OF LINES	ORIGINAL ASSIGNED BUSES	REVISED ASSIGNED BUSES	ACTUAL BUSES USED	DIFFERENCE REVISED VERSUS ACTUAL	PERCENT DEVIATION OVER REVISED
Sunday	7-29-84	13	266	344	396	+52	15
Saturday	7-28-84	22	256	246	257	+11	4
Monday	7-30-84	24	267	259	273	+14	5
Tuesday	7-31-84	24	238	214	222	+8	4
Wednesday	8-1-84	24	229	177	211	+34	19
Thursday	8-2-84	24	261	152	190	+38	25
Friday	8-3-84	25	481	347	399	+52	15
Saturday	8-4-84	21	443	312	456	+144	46
Sunday	8-5-84	22	462	325	354	+29	9
Monday	8-6-84	23	460	350	406	+56	16
Tuesday	8-7-84	23	246	164	173	+9	6
Wednesday	8-8-84	24	481	384	428	+44	11
Thursday	8-9-84	24	444	366	404	+38	10
Friday	8-10-84	26	478	373	468	+95	25
Saturday	8-11-84	22	455	344	472	+128	37
Sunday	8-12-84	13	312	282	384	+102	36

involved other vehicles making contact with District buses, all of which occurred in the vicinity of the preferential lanes either on Figueroa Street or Vermont Avenue in the area of Exposition Park. None of the accidents were major, nor were any major injuries reported.

In relation to the amount of service provided and compared with RTD regular system figures, the safety rates were high. Figure 4.2 summarizes and compares accident rates for the Olympic bus system and for the RTD regular bus operation. It should be noted that the majority of Olympic service was in heavy traffic areas around venues. The congestion, coupled with heavy loading of buses, is indicative of the care for a safe operation exhibited by operators and field personnel.

FIGURE 4.2

SUMMARY AND COMPARISON OF RTD ACCIDENT RATES

	OLYMPIC SYSTEM	REGULAR SYSTEM*
Traffic Accident Rate	14.6/100,000 miles operated	5.1/100,000 miles operated
Passenger Accident Rate	.4/100,000 miles operated	.7/100,000 miles operated

* FY 1983-84 averages

4.1.2 SERVICE CANCELLATIONS

All assigned work was dispatched in a timely manner, with no service being held in for lack of manpower or equipment. Therefore all assigned and extra Olympic (and regular) services were dispatched into service.

4.1.3 SERVICE DELAYS DUE TO BREAKDOWNS

During the 16-day Olympic period, mechanics assigned as either roving mechanics or assigned at a specific terminal or venue location responded to 146 mechanical failures. The majority of mechanical failures required minor adjustments or repairs and were fixed in a matter of minutes. This enabled the buses to continue in service. For those buses that could not be repaired immediately, a replacement bus was dispatched from either an on-site staging area or from staging areas within close proximity of the loading terminal, reducing the need for replacement buses to be dispatched directly from an operating division. This procedure essentially eliminated excessive downtime.

Placement of mechanics in the field at key locations played an important part in making the overall operation a success. Excessive delay to the Olympic spectators was reduced almost entirely by having the capability to respond to mechanical failures immediately.

4.1.4 REGULAR SERVICE ADDITIONS

In an effort to ensure sufficient service interface between regular service and the Olympic service at night and on weekends, various lines throughout the system were identified and scheduled to operate additional service during these time periods. In almost all instances, the regular lines were those which served the downtown (CBD) because of the projected demand by spectators travelling to and from events at Exposition Park on the downtown shuttle, Line 710.

For the first four days of the Games, July 28 - July 31st, augmented service was provided on a number of lines between the hours of 8:00 a.m. and 3:00 p.m. and during the late evening hours. During this period of time, actual usage was closely monitored. It appeared service was not warranted during the base period of the day. On August 1, regular service enhancements were scheduled for the late evening period only. Further examination of the service indicated that the greatest demand for regular

service was on weekend express lines connecting downtown Los Angeles to either San Gabriel or San Fernando Valley. Therefore, effective August 2nd, augmented service was scheduled to service these two corridors.

Although scheduled service was downscoped on RTD's regular local lines, service was added on a daily basis to accommodate surges in ridership. The small increased demand on local line service required the RTD to add extra service to alleviate extreme overloading. Figure 4.3 indicates where extra service was utilized during the Olympic Games. As mentioned in the ridership chapter, the increased demand was insignificant on weekdays. As can be seen, the largest additions occurred on weekends to selected regular express services (400 series line numbers).

4.1.5 LEASE BUSES

In an effort to ensure significant equipment availability for the Olympic service, the District leased 158 buses from various transit properties throughout the state. The majority of these coaches were used in regular line service during peak hours thus freeing RTD buses to operate the Olympic services. The leased buses were identified with temporary RTD markings and appropriate signage for easy patron identification.

4.1.6 OTHER LEASE VEHICLES

Not only was there a need for additional buses, but extra autos and trucks also had to be obtained. A total of 40 automobiles were leased for the Olympics. The majority of these automobiles were placed in operating divisions, supplementing the regular auto fleet needed for operator relief purposes. Additionally, 10 pickup trucks were leased for use at various divisions. These vehicles were also assigned either to Olympic service terminal and venue locations, or were used as replacement vehicles by mechanics required to perform road calls on regular service.

FIGURE 4.3

EXTRA SERVICE ASSIGNMENTS - REGULAR LINES - DURING OLYMPICS

Day	Date	LINE NUMBERS																		TOTAL BY DAY
		40		42		81		84		204		460		480		484		496		
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Saturday	07-28-84																			
Sunday	07-29-84																			
Monday	07-30-84																			
Tuesday	07-31-84																			
Wednesday	08-01-84																			
Thursday	08-02-84																			
Friday	08-03-84													1	3					4
Saturday	08-04-84									2				13	12		2			29
Sunday	08-05-84		2		2		5				7		1	11	9					37
Monday	08-06-84		3				3				4		1		6				1	18
Tuesday	08-07-84		1		2		1		1		3		1							9
Wednesday	08-08-84		1		2		1		1		2		1							8
Thursday	08-09-84		4				3				4									11
Friday	08-10-84						2													2
Saturday	08-11-84		3	1	2	2	2			1	4			11						26
Sunday	08-12-84		2		4	2	2				2			12	10					34
TOTALS:		—	16	1	12	4	19	—	2	3	26	—	4	48	40	—	2	1	—	
A.M.	TOTAL	57																		
P.M.	TOTAL	121																		
GRAND	TOTAL	178																		

4.1.7 REASSIGNMENT OF DISTRICT AUTOMOBILES

Additional automobile requirements due to the Olympics were met through the reassignment of 31 RTD staff and pool cars. In some instances, radio units were temporarily installed in these reassigned units to increase the ability for key staff personnel to have direct communication with the Operations Control Center and with field units.

4.2 FACILITIES

In addition to the increased need for buses and vehicles, the demands of the Olympic services required that support facilities be developed or obtained. The following describes these added facilities.

4.2.1 DIVISION 20

RTD's Division 20 located in the City of Carson, was scheduled for completion in June 1984. It was not fully completed by the start of the Olympics. However, the location was able to be used for storing and dispatching of equipment. Pre-Olympic projections indicated that both the locations of new Division 20 and existing Division 18 would be needed to provide the buses to service the demand by spectators utilizing the Cerritos, Hollywood Park and Alpine Village Park/Ride locations (Lines 714, 713, 719). The operation of both these facilities helped meet this demand and also allowed the RTD increased flexibility to send out buses to meet daily surges in ridership.

4.2.2 TERMINAL 24 (OLD DIVISION 8)

This particular location was utilized as a satellite location for the Valley College Park/Ride facility between August 3 and August 12, the days that track and field events at the Coliseum were scheduled. Establishment of this location provided a more accessible location for patrons residing

in the northwestern area of the San Fernando Valley. It also freed up additional spaces at the Valley College site for use by patrons from other portions of the San Fernando Valley.

4.2.3 1st & SPRING STREET TERMINAL

The routing of Olympic express routes from one location across from City Hall, and the starting of a major Exposition Park shuttle service from the same point, required that a major new ticket facility and bus loading areas needed to be established. A temporary RTD Customer Service Center was built on State-owned property located on 1st Street between Spring Street and Broadway. Bus loading areas were established to use both a portion of the County of Los Angeles parking lot and also the exclusive use of the curb space in the area. The 1st & Spring Street location was a focal point of the RTD Olympic service.

4.2.4 EXPOSITION PARK - COLISEUM

Special off-street bus terminals were established along the Vermont side (west) and the Figueroa side (east) of the Coliseum. The bus operation within both the east and west terminals was very successful. Although each terminal differed in its physical layout and type of operation, each design provided a manageable bus operation and permitted maximum convenience for the spectators. The success of the overall operation was enhanced by effective control and preferential treatment for RTD buses entering and exiting these terminals.

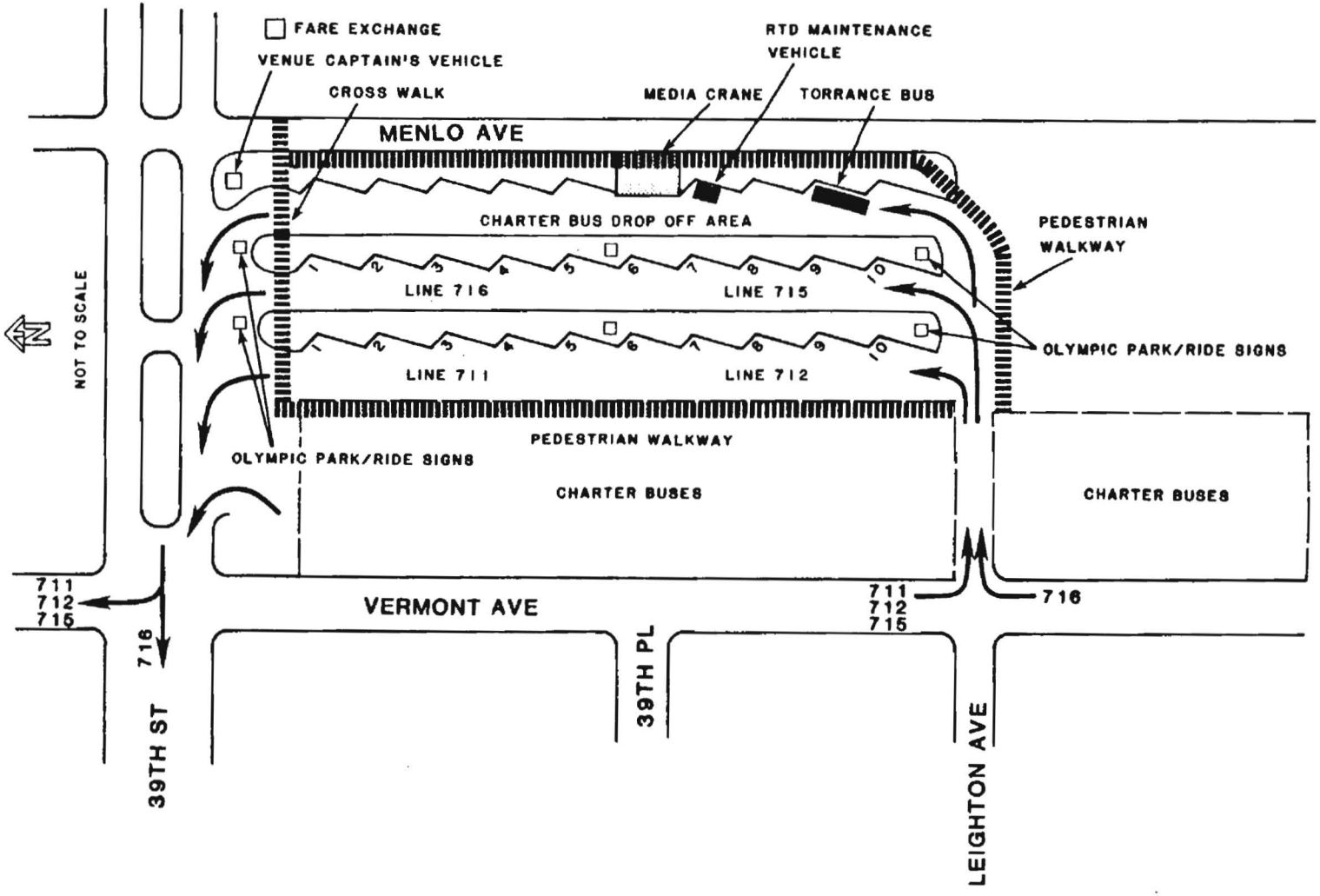
Realizing the important role for transit in effectively handling large volumes of spectators, the Los Angeles Olympic Organizing Committee incorporated these special off-street bus terminals in the master plan for Exposition Park, and constructed them to District specifications at their expense.

Figure 4.4 shows the Vermont Terminal (west) which utilized a portion of a parking lot located between Leighton Avenue and 39th Street, saw-toothed designed loading berths were painted on the parking lot provided capacity for 20 buses at a time. In addition, passenger areas were distinguished by painting cross hatch lines, to separate passengers from roadways utilized by buses. Fencing was installed to insure safety for passengers arriving and leaving.

During the first week of the Games, staging areas for buses utilizing the West Terminal were established on adjacent streets, a short distance from the terminal and on a portion of a parking lot south of Leighton Avenue. Commencing Friday, August 3, LAOOC staff made available to the District the entire portion of the parking lot south of Leighton Avenue for staging of buses. With the exception of one day, all buses were staged in this lot, enhancing the operation by reducing any delays previously created when buses were staged on streets away from the terminal.

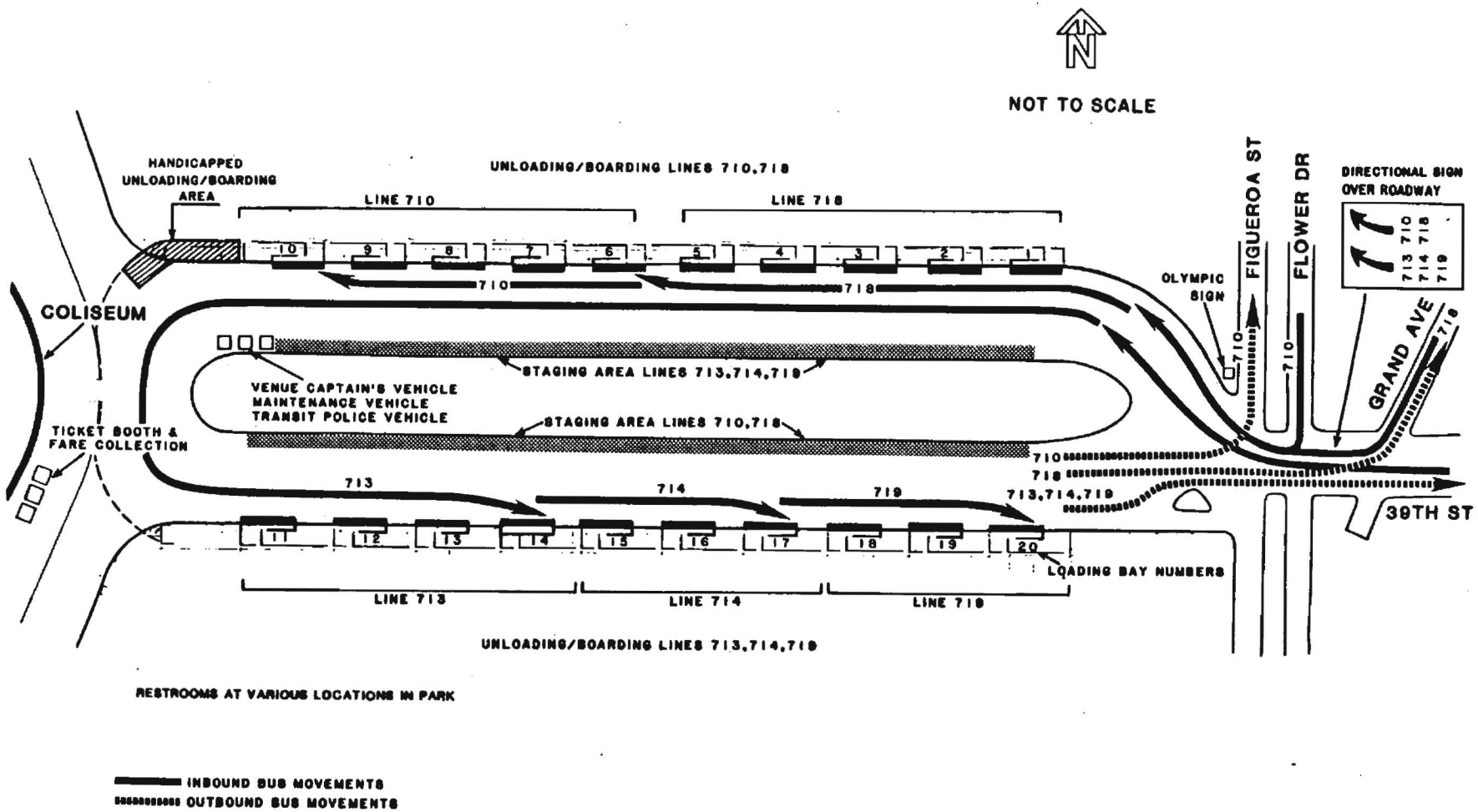
The Figueroa Terminal (East) was established and operated along previous and newly constructed roadways located between the Coliseum peristyle and Figueroa Street. As shown in Figure 4.5, twenty loading/unloading passenger bays were constructed, ten (10) on the north roadway and ten (10) on the south roadway, enabling the District to load and unload 20 buses simultaneously. Additional space was available to stage approximately 20-24 buses on the inner portion of the north and south roadways, providing readily available equipment to replenish buses departing with passengers. Installation of fencing at both ends of the terminal adjacent to the roadways and entrance/exit driveways enhanced the operation by eliminating the conflict of buses versus pedestrian traffic.

Staging areas for buses utilizing the East Terminal were established primarily along the west curbs of Hill Street and Broadway. In addition to these streets, a portion of Flower Street was utilized between Exposition Boulevard and 30th Street. Access to the terminal was established along 39th Street which was designated as a bus preferential street, including "No Parking At Any Time" between Broadway and Figueroa Streets. Midday and Night staging areas for the Exposition Park area are shown in Figure 4.6. With the assignment of key personnel, communication equipment and



EXPOSITION PARK WEST
LINES 711, 712, 715, 716

FIGURE 4.4



RTD

EXPOSITION PARK EAST
LINES 710, 713, 714, 718, 719

FIGURE 4.5

assistance in traffic control, the adoption of staging areas within a short distance from the terminals resulted in an effective and efficient operation.

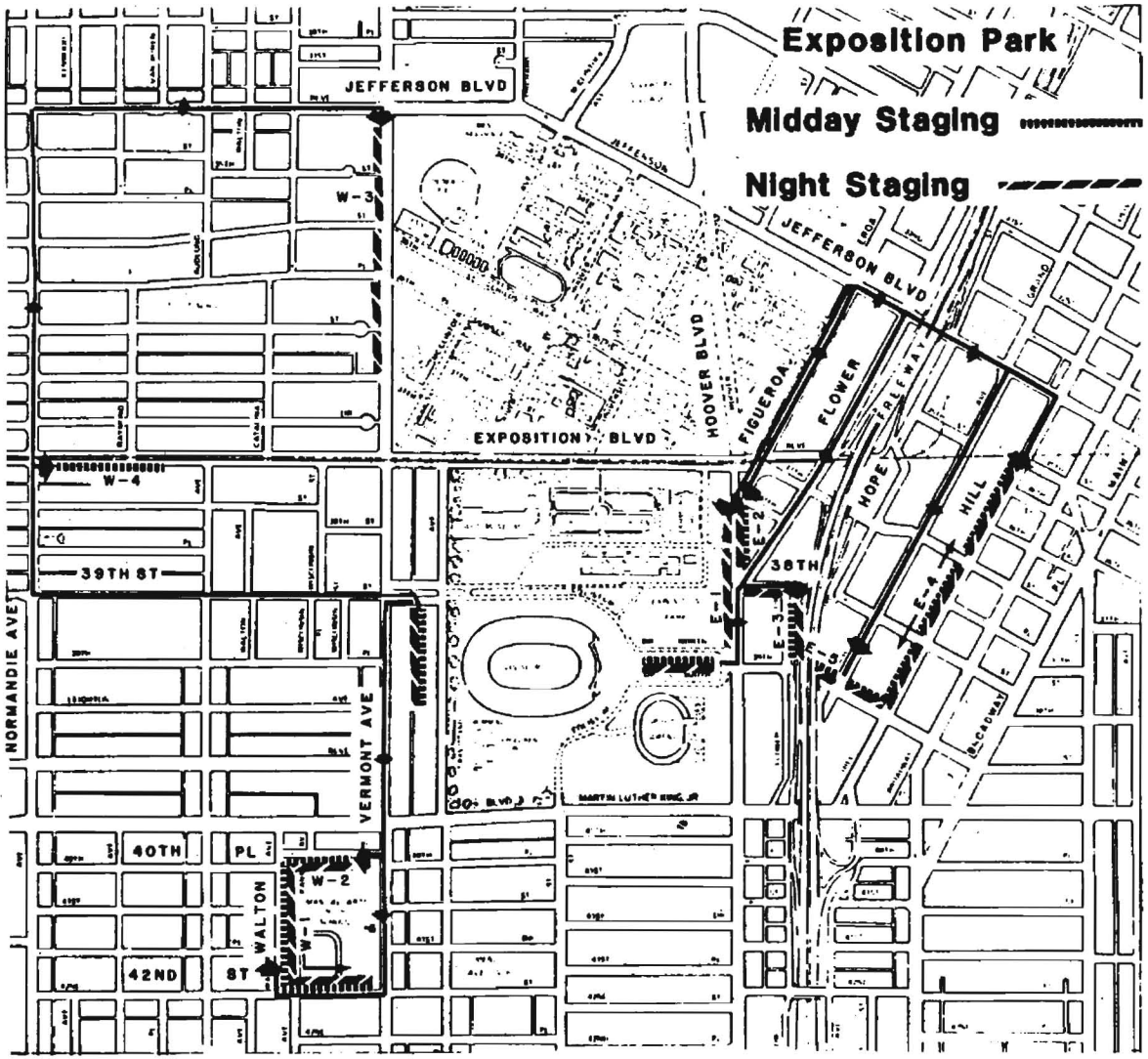
The success of the overall operation of both passenger terminals at Exposition Park was enhanced by effective controls and preferential treatment for RTD buses entering and exiting the terminals.

4.2.5 PARK/RIDE LOCATIONS

The Park/Ride facilities that were created in each geographic sector of the county contributed greatly to the success of the Olympic Service Plan. As shown in Figure 4.7, the District negotiated contracts for the use of eleven (11) locations as either a park/ride site or as a terminal for buses. In all instances, available space was utilized effectively and efficiently. Equally important, all locations contributed to the reduction of Olympic traffic along main corridors which directly served the two major venue sites, Exposition Park and Westwood-UCLA.

4.2.6 EMPLOYEE PARKING

RTD employees were redeployed to work in the field on Olympic-related assignments. Because of the unusual work hours worked by these shifts (either starting work very early in the morning or finishing work late at night) it was felt that these employees would need to drive to work. Many of them were assigned to work in downtown Los Angeles or at Exposition Park, areas where parking availability was expected to be at a premium. Therefore, special parking locations were needed to handle these many Olympic workers. Two parking facilities were leased in the vicinity of Division 2 located at 16th and San Pedro Streets. One lot belonged to the Los Angeles Unified School District, and the other to St. Turibius Catholic School. From these locations, employees were transported by shuttle bus to Exposition Park and to their downtown assignments. Additionally, a portion of a parking lot facilities belonging to the Pacific Design Center in West



RTD

EXPOSITION PARK

EAST & WEST STAGING AREAS

FIGURE 4.6

Los Angeles was utilized for parking by employees assigned to work the UCLA venues.

FIGURE 4.7

TERMINALS/PARK-RIDE LOCATIONS
UTILIZED DURING 1984 OLYMPIC GAMES

LOCATION	OWNER/AGENCY INVOLVED	SERVICE
Civic Center (1st & Spring)	State, City, County	Lines 710, 720, 740, 750 760, 770, 780 & 790
South C.B.D. Area (18th & Grand)	Public and Private Parking Lot Owners	Line 718
Crenshaw Center	Crenshaw Center Ave.	Line 716
Westwood Park	L.A. Parks & Recreation	Line 727
Pasadena	Ralph M. Parsons Co.	Line 795
Hollywood Park	Hollywood Park Turf Club	Lines 713, 723, 743 & 753
L.A. Valley College	L.A. Community College District	Lines 711 & 721
Century City	Century City Inc.	Line 712
Alpine Village	Alpine Village Inc.	Line 719
Cerritos College	Cerritos College	Lines 714, 754 & 764
Pasadena	Pasadena City College	Line 715

4.3 MANPOWER

The Olympic service was equivalent to operating the fourth largest transit system in the State of California. It required significant numbers of operators, mechanics, and in-field supervisory staff to be operated successfully. Due to the special nature of the service provided, a sizable number of students and RTD employees were recruited to work as members of the District's Passenger Assistance Force (PAF). This body of people was responsible to act as passenger loaders, token/ticket sellers, and information dispensers. In all, 257 non-contract staff from all departments volunteered to work in the field during the Olympics. With the approval of departmental management, these employees worked strange shifts and longer hours, requiring remaining personnel to perform additional duties which they were reassigned.

To supplement this group, 157 college students were recruited from local colleges and universities, trained at one of six sessions, and assigned to the field.

All of these people combined their efforts to put on the trouble-free Olympics' operations.

4.3.1 NUMBER OF OLYMPIC PERSONNEL ASSIGNED

Each day of the Olympic bus service was different, not only in terms of the number of lines that were scheduled, but in the hours of operation of these lines, the different combination of venues in operation on a daily basis, and the varying schedules for events. This daily variation also required varying manpower levels. Figure 4.8 summarizes the Olympic staffing by day, and by job classification.

FIGURE 4.8 DAILY SUMMARY OF OLYMPICS MANPOWER
BY WORK CLASSIFICATION

DATE	DAY	ASSIGNMENTS BY WORK CLASSIFICATION						
		BUS	IN-FIELD				INFOR.	TOTAL
		OPERATORS[1]	MECHANICS	SUPERVISORS[4]	PAF	SECURITY[5]	CLERKS	
7-28	SAT	626	248[2]	24	120	49	84	1,151
7-29	SUN	597	248[2]	59	225[3]	90	84	1,303
7-30	MON	665	248[2]	62	233[3]	86	80	1,374
7-31	TUE	634	248[2]	60	227[3]	85	88	1,342
8-1	WED	448	248[2]	60	230[3]	84	87	1,157
8-2	THU	338	248[2]	59	220[3]	87	81	1,033
8-3	FRI	703	248[2]	59	278	90	84	1,462
8-4	SAT	748	248[2]	56	270	87	83	1,492
8-5	SUN	750	248[2]	57	266	93	77	1,491
8-6	MON	775	248[2]	60	270	80	80	1,513
8-7	TUE	379	248[2]	57	208[3]	82	86	1,060
8-8	WED	798	248[2]	62	282	86	87	1,563
8-9	THU	806	248[2]	59	268	84	88	1,553
8-10	FRI	866	248[2]	61	282	91	85	1,633
8-11	SAT	866	248[2]	56	270	83	87	1,610
8-12	SUN	540	248[2]	39	137	55	72	1,091
TOTAL PERSON-DAYS		10,539	3,968	890	3,786	1,312	1,333	21,828

1 Includes scheduled and extra-board operators
2 160 mechanics and 88 service attendants. Mechanics worked either on servicing and repairing Olympic buses, or worked as field mechanics at Olympic sites.
3 No event scheduled in Coliseum on this day
4 Venue Captains and Assistant Venue Captains
5 Includes staff for both division security and for revenue protection

As can be noted, the numbers of people assigned varied by day to reflect the amount of service provided. The largest number of assigned manpower occurred when the track and field events were scheduled at the Coliseum.

During the first week of the Olympics, reductions in the amount of assigned staffing were made to reflect light ridership levels. The reductions took effect on Wednesday, August 1 and primarily impacted the assignments of bus operators, PAF, and security staffing levels.

4.3.2 TRAINING OF OLYMPIC STAFF

The District underwent a significant program to familiarize its employees of their role in the Olympic service. Special training programs were created by many RTD departments and instruction was given to over 2,500 employees. The length of training varied, depending upon the job classification. Figure 4.9 summarizes major Olympics-related training activities.

Actual on-the-job training was given to almost every affected work classification during two pre-Olympic practice runs. The first occurred on a practice simulation held June 2, 1984. This exercise involved over 170 buses; bus operators, maintenance staff, and in-field supervisory personnel were assigned to test the District's Olympics' plan for the Exposition Park area. No passengers were carried.

The second field training opportunity occurred on July 26, 1984, two days before the Opening Ceremonies. The occasion was a dress rehearsal of the Games' Opening Ceremonies at the Coliseum. Over 12,000 guests of the LAOOC were transported on 55 District buses, with no fare being charged, to this practice performance. Volunteers from the District's PAF were given the opportunity to practice their assigned tasks, as were the drivers, mechanics and supervisory staff.

As a result of the two exercises, the District was able to better refine working procedures and staffing levels. Although staffing levels were adjusted as necessary and procedures were slightly modified, these tests validated the overall operational strategy for the Exposition Park location.

FIGURE 4.9

SUMMARY OF MAJOR OLYMPICS RELATED TRAINING PROGRAMS

WORK CLASSIFICATION	NUMBER TRAINED	PERIOD OF INSTRUCTION BEGIN	PERIOD OF INSTRUCTION END	HOURS OF TRAINING PER EMPLOYEE	MAJOR TOPICS COVERED
Bus Operator (existing)	2224	May 21	July 27	2 1/2 - 24*	Olympic route, fare information, specific operating instructions for Olympic routes
Part Time Bus Operator (new hires)	558	Feb. 16	July 27	192-416*	Bus operator basic training; all Olympic routes (as above); all regular routes at assigned division
Mechanic (Service Attendants only)	88	June	July	20	Operation of bus; techniques and procedures for servicing bus
In-Field Supervisors	136	July 16	July 26	2 (Road Supervisor) 3 (Instructor)	Olympic route and fare information; site specific operational plans; PAF roles and responsibilities; contingency procedures
Passenger Assistance Force (District Volunteers) site specific information	257	July 11	July 20	6	Olympic route and fare information; passenger loading procedures; passenger counting techniques; fare selling procedures; contingency procedures;
Passenger Assistance Force (Students)	154	July 21	July 31	8	As above; District orientation

* Dependent upon number of routes to be learned

FIGURE 4.9 (Continued)

SUMMARY OF MAJOR OLYMPICS REALTED
TRAINING PROGRAMS

WORK CLASSIFICATION	NUMBER TRAINED	PERIOD OF INSTRUCTION BEGIN	END	HOURS OF TRAINING PER EMPLOYEE	MAJOR TOPICS COVERED
Security (Non-Sworn Personnel-- RTD Security Guards and Contract Agency Guards)	44	June 12	June 15	4	Olympic Bus Service Plan, Revenue protection, Role at venue site, Cash room operations, Identification of PAF, Communications, Bomb threat procedure, Diplomatic immunity procedure, Citizen assistance, and Vault truck procedure. (A representative from each of the three (3) guard companies was present and was responsible for forwarding this information to their personnel).
Security (Sworn Personnel-- RTD Transit Police Officers, Investigators and Sergeants)	55	July 10	July 11	8	Olympic Bus Service Plan, Revenue Protection, Venue organizational chain of command, Traffic Plan, Olympic related crime reporting.
Security (Sworn Personnel-- Sergeants Only)	9	July 27		4	Radio communication, Lost & Found procedure, Vehicle towing procedures, Bomb threats, Command posts, Diplomatic immunity, Defection procedure, Division Administration building security, and "Olympic Spirit" video tape.
Information Clerks	104	May 21	June 13	2	Olympic route, schedule and fare information

4.3.3 PERFORMANCE OF THE OLYMPIC MANPOWER FORCE

The result of having these hundreds of assigned staff working on special Olympics duties, being responsible for performing not only new, but sometimes untested procedures, could have been disastrous. Contingency measures were thus developed to alleviate these potential problems. Direct radio communication was established between the operations in the field and the District's Operations Command Center (OCC). This direct communications network was designed to quickly receive input from the field relative to problems, ineffective procedures, and to immediately relay OCC-developed solutions to affected personnel. In addition, the District developed reserve lists of non-contract staff that were trained and could be called upon to replace sick-outs. Replacements for contract employees were to be handled through normal operating procedures.

Changes and modifications were rare, and when needed, of only minor significance. The modifications were usually site specific; involving pulling buses out earlier than scheduled from selected divisions, moving of ticket seller locations to improve passenger flow, or modifying the passenger loading operation at a particular site). The potentially high sick-out rate never occurred. As can be seen in Figure 4.10, the level of missed work due to illness was very low; in fact was lower than non-Olympic period levels.

FIGURE 4.10 LEVEL OF MISSED WORK

ASSIGNMENTS DURING THE OLYMPICS

WORK CLASSIFICATION	SICK-OUT RATE OLYMPIC PERIOD	NON-OLYMPIC PERIOD
Bus Operators	6.0%	6.2%
Mechanics	4.0%	5.8%
Field Supervisors	3%	7%
PAF	1%	5%
Security	-*	1%
Information Clerks	-*	6%

* less than 1 percent

As will be discussed in a later section, the District received many compliments from both the riding public and the media on the service we provided. By comparison very few complaints were received, and almost all the negative complaints referred to mistakes made by Ticketron, not the District.

This data can only infer that the level of training received by the RTD Olympic group was more than sufficient to adequately train staff. It also infers that the new, untested procedures and instructions were appropriate for this service. Finally, it can be concluded that the Olympic staff did not find their tasks frustrating or ineffective. This conclusion is based upon the low to non-existent level of both staff absenteeism, and complaints against District personnel.

This conclusion is also reinforced from statements received in a post-Olympic survey of the Passenger Assistance Force (PAF). This group, composed of primarily office workers, worked on tasks and in locations which were the most foreign to their normal day-to-day routines. Yet, based upon their comments, these employees had very little trouble with

their work assignments. Their comments indicated that they were enthusiastic about working in the field and, excited about being a part of the Olympics' effort. They generally felt the training was very beneficial and that their manuals were quite useful. While the survey indicated that several areas of training could have been strengthened and that some of the procedures were slightly modified to suit their particular site, no one indicated that the deficiencies hindered their job performance. Finally, the survey revealed that these people, placed in an unfamiliar environment, responded well to the new demands and, based upon their comments, felt a tremendous pride in being an RTD employee.

4.4 SCHEDULES

The Olympic service offered a challenge never before equalled in the District. Although special event service has been offered to many of the major special events including the Rose Bowl and the Hollywood Bowl for many years, nothing of this magnitude had heretofore been experienced. As mentioned in Chapter 3 target modal splits were agreed upon in the early stages of planning through a concensus reached with the various transportation agencies. The District developed basic requirements for transporting those agreed upon volumes of people.

Because of the uncertainties surrounding the actual total patronage demand to-and-from each event, and the complexities of the Olympic schedule, where no two of the sixteen days of events were alike, the decision was made to operate the service in such a manner to allow maximum flexiblility. Service was planned to be offered for a period of two hours prior to the beginning of each event, plus the required travel time from the terminal to the venue. Because of the wide range of services, running time was estimated under maximum adverse conditions because of forecasted heavy traffic congestion. A reservation system was put into place to more effectively accommodate large volumes of patrons on the park/ride services.

The schedules were originally designed around the parameters described above. Each line was tailored to the event schedule of each day. It was

assumed that all venues would be at maximum attendance; an added factor of 5% was included to account for concessionaire staff, press, members of the Olympic family and staff, and non-ticketed spectators (Those people who visited an Olympic site to be a part of the festivities, and not to see the event at that site).

Scheduling the buses around event times permitted the development of actual operator work assignments. Rather than print actual schedules with identified departure times from all terminals, the buses were scheduled out of each division, usually in groups of five, to report to the venue captain and operate subject to his (her) orders. This operational technique allowed the District to modify service levels between Olympic routes and thus to rapidly respond to sudden surges in patronage. This technique was also applied to those lines with more than one intermediate stop; buses were added mid-line to quickly clear up crowds at those stops without impacting the coaches departing the far terminal.

The six Olympic express lines were all routed to begin at the 1st and Spring terminal, and to travel non-stop to a particular Olympic site. These two features of the express services were developed to increase the flexibility of the operation. The fact that these lines began at a convenient point enabled field supervisors the luxury of reassigning buses from an underutilized express line to another line that was experiencing heavy demand. This happened on a regular basis. The service to Dodger Stadium, to the Forum, and to the Rose Bowl all experienced significant variance in patronage.

The ability to limit boarding locations to the terminal and venue locations eliminated the need to continue running on a predetermined schedule, even if ridership was low.

Use of the reservation system for the park/ride services allowed the preparation of schedules in advance, dispersing and allocating demand and resources into twenty minute periods throughout the day. These schedules

were updated to reflect changes in reservation sales. The utilization of these techniques resulted in the District having to use less equipment and manpower, and thus helped it minimize costs. It was originally estimated that 3,404 pull-outs would be required to adequately respond to demand. However, with the reservation system, actual deployment was reduced by 20% or to 685 pull-outs.

The resulting schedules for all Olympic services were issued on "gold letters", a new format established for the Olympics. The "gold letters" were used so they would stand out in the myriad of paper distributed daily to operate the regular lines of the District, and especially to differentiate them from the "pink letters" already being used for temporary changes to regular lines. Because each day of the Olympics was different, not only for the venues actually in operation, but for the scheduling of events and the changes in anticipated volumes, the gold letters were headed with the date in two inch lettering to minimize confusion. Therefore, a separate set of letters was required for each day of operation. This enabled the schedulers, division dispatchers, telephone information staff, and others dealing with the minutae of the schedules to avoid using wrong information. As a result, the proper number of buses appeared at the correct locations on the appropriate day. Three hundred and fifty gold letters were issued for the sixteen days of Olympic operation, with a minimum of thirteen each for the Opening and Closing Ceremonies to a maximum of twenty-five for Friday, August 3.

4.4.1 IMPACT ON REGULAR SERVICE

Every attempt was made to limit the number of extra buses added to the regular system. Careful attention to the special Olympic service was the byword in all of our marketing efforts including the brochure, through media presentations, and by the information given through the telephone information center. Nevertheless, several venues were not served by the special Olympic lines and passenger volumes were projected to cause some overloading on regular services, especially at night and on weekends. Other venues, notably those at Expostion Park and U.C.L.A., had such large

concentrations of existing service that demand was known to be high. To permit passengers to ride these services without causing an undue burden on the regular patrons and services of these lines, a series of "blue letters" were issued. These letters, approximately 25 on an average day, supplemented service on lines serving the venues within Los Angeles County, with services specially tailored to the scheduled break of the events. After examining the impact of these "blue letters", they were cancelled effective August 2, because of lighter than anticipated usage. Several lines did experience surges in patronage later during the Games, most notably on weekends. Figure 4.3 summarized the number of buses required to augment regular service because of passenger demand.

4.4.2 CHANGES TO SCHEDULES

The schedules were designed from a basic set of target modal splits reached through concensus of a number of transportation agencies. Changes to the original schedules set forth by these modal split targets were anticipated. The gold letter format enabled the District to respond quickly updating volumes of buses to meet changing demand.

After the significant volume of passengers carried to Opening Ceremonies, passenger travel was somewhat less than originally expected. A task force of key personnel was formed to meet every day to review the patronage and service statistics of the previous day, and learn of the volumes at the completion of the current day's "going" move. This group, headed by the General Manager, included the Manager of Operations, the Directors of Transportation and Planning, the Chairs of the Olympic Task Force and Operations Command Center, key schedule staff and the Olympic reservations' monitor. The results of these meetings were implemented the following day. Figure 4.1 summarized the changes in buses from the original assignments, through the revised assignments, to those actually on the street for a given move.

4.4.3 ANALYSIS OF RUNNING TIME

In consideration of the traffic and projected congestion on both the freeway system as well as surface streets adjacent to the venues, schedules were designed to anticipate maximum running time. Because of the lack of traffic, most notably on the freeway system, the buses were able to make trips faster than orginally scheduled. This enabled buses to make more trips per hour, or per event, than originally scheduled. The service to Exposition Park was impacted in a positive manner, as many days saw substantial increases in patronage. With traffic congestion, the District would have had to assign a significant number of additional buses to maintain the scheduled service levels.

4.5 SECURITY

The RTD Olympic operation required up to 93 security staff to adequately protect District property and equipment, to safeguard revenue from sales of RTD tokens and tickets, and to protect RTD Olympic staff and passengers. The scope of these major security tasks required more personnel than were working at RTD. Therefore, the District contracted for the temporary services of over 100 as-needed employees. These people were either off-duty personnel from other local law enforcement agencies, or were assigned by the three security guard agencies that were under special contract to RTD.

The results of the combined security efforts were extremely positive. During the sixteen days of the Games, only three (3) incidents were reported relative to the Olympic service. Of these, two were incidents that were very minor and did not involve any passengers or staff. The third incident did cause minor injury to one passenger from an object thrown at the bus.

Aside from the low number of actual incidents, it is significant to note that no security incidents occurred which involved the sale of RTD tokens

and tickets in the field. Nothing occurred which posed either a physical danger to any RTD Fare Exchange staff, or to the money they were handling.

This positive result can be attributed to several reasons. First, an adequate number of security personnel were assigned for protection. For example, each Fare Exchange person was assigned one security guard whose responsibility was solely to guard the revenue and the sales person.

Secondly, the sales people were taught procedures that minimized the amount of cash that they were actually handling or holding. Although these procedures did not necessarily discourage a robbery attempt, it made the person selling the tickets and tokens more confident in handling money in the field.

Thirdly, the institution of a park/ride advance reservation system minimized the amount of token sales that were to be made at the park/ride lots. As stated, only about 20% of the people arriving at a park/ride lot did not already have a confirmed reservation as well as an RTD Gold Pass, and therefore needed to purchase a token.

Finally, sales of tokens and tickets at the heavy ridership locations of 1st and Spring Streets, and at Exposition Park, were largely conducted from an enclosed, protected ticket booth, with a guard stationed very close by. The opportunity for a robbery occurring at these locations was thus significantly minimized.

It is, in a way, very surprising that the Olympic security operation worked as well as it did. The manpower originally contracted from two of the three security guard agencies did not materialize during the Games. In fact, because of these agencies' inability to delivery necessary levels of staffing, their contracts were terminated just before, and just after, July 28. The third agency was retained and was able to successfully provide necessary staffing.

However, the loss of these two agencies' guards placed a tremendous burden on the remaining security staff to fill Olympic work assignments. RTD

Transit Police personnel were required to work additional shifts, even though they were all assigned ten-hour days for each of the sixteen Olympic days. It was not uncommon to have these employees consistently working eighteen hours per day. As a result, 100% of the assignments were covered during the Olympics.

4.6 INTERAGENCY COORDINATION

Interagency coordination was a major contributing factor in the success of transportation services during the 1984 Summer Games. Meetings were conducted on a regular basis to identify potential areas of congestion that could result in service delays for buses and autos on freeways, surface streets and around venue sites. The following agencies were involved in coordination efforts for the Games:

- California Highway Patrol
- Caltrans
- Commuter Computer
- Los Angeles City Department of Transportation
- Los Angeles County Road Department
- Los Angeles County Transportation Committee
- Los Angeles Police Department
- Los Angeles Olympic Organizing Committee
- Los Angeles County Sheriff's Department
- Southern California Rapid Transit District

Each agency was responsible for developing a transportation plan to alleviate traffic congestion during the sixteen day period. Traffic controls and preferential treatment for RTD buses were the major concerns outlined in the overall transportation plan. Coordination efforts between agencies allowed the District to incorporate viable options into the final transportation plan.

4.6.1 TRAFFIC COORDINATION CENTER (TCC)

In order to respond to traffic conditions in a timely manner, the Traffic Coordination Center (TCC) was established at Caltrans. Representatives from agencies directly involved in providing transit services and security during the Olympic Games were assigned to the TCC to monitor and evaluate all traffic conditions. The Center provided a direct link for monitoring and communicating the status of traffic conditions throughout the Los Angeles area. The Center became operational on July 14, 1984 and was operational for the duration of the Games. Participating agencies included:

- California Highway Patrol
- Caltrans
- Los Angeles City Department of Transportation
- Los Angeles Olympic Organizing Committee
- Los Angeles Police Department
- Southern California Rapid Transit District
- Independent Cities (Those municipalities with venues)

District staff was assigned to the Center to ensure direct access to any information that could result in transit delays as a result of freeway or surface street congestion. As a result, the District's Operations Command Center was notified of any occurrence that could impact Olympic transit services within five to ten minutes. The TCC was also responsible for coordinating and disseminating information to the media regarding traffic congestion, parking availability around RTD park/ride locations and venue sites. Establishment of the TCC also enabled the various agencies to monitor the overall operation and immediately discuss the impacts of implementing route diversions or adjusting assignments of in-field personnel. Coordination efforts by all agencies through the TCC combined with lower than anticipated traffic levels resulted in minimizing traffic congestion on area freeways and surface streets.

4.6.2 OPERATIONS COMMAND CENTER (OCC)

The District's Operations Command Center (OCC) was established to monitor, report, and communicate relevant information both internally among RTD departments and to outside agencies. All departments directly involved in providing Olympic service were represented in the OCC. The OCC was the forum for receiving information and reports from the field, made decisions based on received data, and made certain that changes were instituted by appropriate headquarter, division and/or field personnel. Direct communication was maintained between the OCC and the Transportation Coordination Center (TCC) at Caltrans. This direct link allowed the District to respond immediately to all situations that could result in delays on Olympic service.

4.6.3 MUNICIPAL SERVICES

Utilization of municipal carriers in the overall Olympic Service Plan was minimal but effective in supporting the operation. Line 727, Westwood -UCLA Shuttle, was operated by Santa Monica Municipal Bus Lines (SMMBL) under contract to the District and provided shuttle service between parking lots located just southwest of Westwood Village and the UCLA campus. In addition to providing the buses, SMMBL supervisory personnel assisted District personnel during the peak periods of demand on the service, resulting in a very good working relationship between the two agencies.

Torrance Transit also became involved in the operation by establishing a park and ride operation utilizing 4 to 5 buses from a location within the City of Torrance to the Coliseum West Terminal at Exposition Park. In an effort to enhance Torrance's operation, District staff successfully negotiated with appropriate agencies for sufficient staging areas and use of loading and unloading areas within the West Terminal adjacent to the space utilized by the District. Although the municipal carriers did not provide a large amount of Olympic service, their involvement was important in making the Olympic transit operation a success.

CHAPTER 5.0

COST/REVENUES

5.0 - COST/REVENUE

The RTD Olympic service was planned and priced such that all related operating expenses would be defrayed from Olympic revenue. The necessity to have no net costs for this service resulted from a combination of reasons: the posture of the LAOOC that movement of spectators was not their responsibility; the position by the Los Angeles County Transportation Commission (LACTC), the agency responsible for administering public subsidies among transportation providers in the County, that no public monies could be used to fund special Olympic service; the lack of interest by the private sector to financially support or sponsor these services.

The following describes the incurred costs and accrued revenues for the RTD Olympic service.

5.1 COST

Cost for the Olympic services was budgeted and approved by the RTD Board of Directors in September 1983. A limit of $13,360,000 was budgeted for the period July 1, 1983 through September 30, 1984. The fifteen month budgeting period was needed to enable all costs to be captured for three Olympic periods: pre-Olympic -- planning and gearing up (start-up); the actual Olympic service during the Games; and post-Olympics -- returning to normal operations (close down).

The actual cost for the Olympic service totaled around $10,677,000, some 20% less than budgeted. The lower cost was due primarily to labor savings, a result of operating reduced service levels because of low patronage demand. Operator assignments and mileage-related expenses were adjusted by management and operations personnel daily during the Games and resulted in substantially lower than budgeted operating costs for this period. In addition, closedown of the Olympic operation occurred within one week of the Games, instead of the two months scheduled in the plan, resulting in significantly reduced expenses.

Start-up cost for this special service was only 1% over budget. Reductions in this start-up cost could not have been made because the RTD had to gear up to handle the maximum estimated passenger demand.

FIGURE 5.1

SUMMARY OF COSTS FOR RTD OLYMPIC SERVICE

	COST (000)	
	BUDGETED	ACTUAL
PRE-OLYMPIC	$ 5,251,000	$ 5,314.000
OLYMPIC OPERATION	5,586,000	3,233,000
TOKEN COST	1,740,000	2,130,000
CONTINGENCY	785,000	
TOTAL	$13,360,000	$10,677,000

5.2 REVENUE

Revenue from the Olympic service was expected to be derived from four distinct sources. They were: 1) individual tickets or tokens sold to passengers at Olympic sites during the Games; 2) sale of advance reservations by Ticketron for bus rides from Olympic park/ride sites; 3) sale of non-reservation RTD Olympic Gold Passes; and 4) sale over an approximate one year period beginning January 1984 of special RTD Olympic token sets. Approximately 75% of the $13.36 million in budgeted revenue was to be generated from sales to Olympic bus service users (items 1-3 above), with the remaining 25%, or $3.3 million, expected to come from the sale of RTD token sets. It was further expected that revenue by service type, (shuttle, express, park/ride), would generate approximately 23%, 25%, and 28% of the total $13.36 million, respectively.

Figure 5.2 summarizes the budgeted versus actual Olympic revenue figures.

FIGURE 5.2

SUMMARY OF REVENUES BY SERVICE CATEGORY

SERVICE CATEGORY	REVENUE ($000) BUDGETED	% OF TOTAL	ACTUAL	% OF TOTAL	DIFFERENCE	% OF TOTAL
Shuttle	$ 3,030	30%	$1,054	27%	($1,976)	32%
Express	$ 3,325	33%	$ 633	16%	($2,692)	44%
Park/Ride	$ 3,705	37%	$2,270	57%	($1,435)	24%
TOTAL	$10,060	100%	$3,957	100%	($6,103)	100%

The generated farebox revenues totaled only $3,957,000, or 39%, of the $10,060,000 estimated would be collected. There were several reasons for this shortfall in revenue, including:

(1) Patronage projections were based on consensus target modal splits for each venue, determined by the management of the traffic and transportation agencies including LADOT, CALTRANS, LACTC, and SCAG, as well as the LAOOC. Actual ridership fell far short of the target projections.

(2) It was assumed that all venue facilities would be filled to capacity for all events, plus 5% for support staff and non-ticketed spectators. With few exceptions, capacity crowds materialized only at Opening Ceremonies and during the final events despite the fact that the LAOOC recorded record sales of tickets. The reasons for the large number of "no shows" are not known.

(3) The Olympic spectators were primarily a local audience, resulting in far fewer visitors as evidenced by the much lower than anticipated hotel occupancies, car rentals, airline reservations, use of charter buses, absence of anticipated development of RV parks and the lighter than average attendance at local amusement parks. Consequently, the shuttle and express services of RTD which were targeted towards visitors showed far less ridership than projected.

(4) The extremely "late" decision of the Soviet bloc countries to boycott, as well as the strong position of the U.S. dollar on the international market, seemed to dissuade visitors from European countries, as well as Canada from traveling in expected volumes.

(5) Preliminary examination of the fare media used to board Olympic buses indicates a significant use of the Gold Day Pass, valued at $10.00, on all three types of service. Thus, the spectators used the pass to travel on several buses, attending more than one event each day, adding to their travel convenience while reducing the actual revenue received.

(6) It appears that estimates in April of 40% day passes for Coliseum events were exceeded because of the last minute availability of tickets on the local market. The RTD estimates made in September 1983 and February 1984 assumed a complete turnover of spectators between morning and afternoon sessions.

(7) With regard to the Olympic Token Program, the entire 300,000 token set inventory was sold by April of 1984. The largest single buyer, Products International, which purchased 200,000 sets, defaulted on taking delivery and making payments as scheduled, after acquiring 60,000 sets. The District, therefore, presently has a remaining inventory of 146,000 token sets, and

the program resulted in no net revenues for funding the Olympic service but rather a shortfall of over $500,000. The default by Products International typifies the market for Olympic merchandise and souvenirs experienced during the 1984 Games. With the exception of two products, pins and flags, official licensees of Olympic products reportedly have 30% to 70% of their inventory unsold. Several firms, as a result, already have undergone bankruptcy.

(8) Finally, the CALTRANS projections of an overall increase in base traffic of between 5 - 7 % did not materialize. Rather, actual traffic was down 2 - 3% up until the last few days of the Games. Due to the lighter than anticipated traffic congestion around many venues, parking was not only readily available, but at far lesser rates than expected. This factor permitted a family of four to travel by car and park at a cost that was less than traveling by special Olympic service.

5.3 NET COSTS

Figure 5.3 indicates the net cost of providing this Olympic service.

FIGURE 5.3

SUMMARY OF BUDGETED AND ACTUAL NET COST FOR OLYMPIC SERVICE

BUDGETED ($000)			ACTUAL ($000)		
COSTS	REVENUES	NET COST	COSTS	REVENUES	NET COST
$13,360	$13,360	-0-	$10,677	$5,993	$4,684

The shortfall is a result of the significant difference between the revenue projections and the actual revenue received, rather than the over-expenditure of budgeted funds.

5.4 PRODUCTIVITY AND COST-EFFECTIVENESS

An indication of the relative success or failure of the RTD Olympic service can be measured by its productivity and cost-effectiveness. The productivity of the operation measures how much it was used by passengers. Cost-effectiveness generally indicates how much of the cost of operation was borne by each passenger.

5.4.1 PRODUCTIVITY

A common indicator used to measure the relative productivity of a service is the ratio of boardings per one-way trip. The average for the entire 16 days equalled 27.6 boardings/trip. Since passengers used the Olympic service to get to and from designated terminal or Olympic venue locations, the average boarding ratio also reflects average passenger loads on each bus.

The average, however, is quite misleading in that it does not address the extreme pre and post-event peaking characteristics of the service. As exemplified by Figures 3.14 through 3.22, the passengers per trip for the time periods before and after an event were usually equal or greater than 43. Since the average bus used on the Olympic service contained 43 seats, this indicates that, on the average, every seat was occupied and in fact had standees, for the pre and post-event time periods.

Average productivity could have been increased by running service only at these very high demand times; downward adjustments to service were made during the Games, as necessary, However, because we were operating several distinct types of services (shuttle, park/ride, express) in an attempt to serve perceived different market segments, instead of running relatively inefficient charter-type operation in which a group of passengers were

assigned to a particular vehicle, it would have been difficult if not impossible to limit service to very abbreviated periods. Also, it was recognized that the ancillary activities occurring adjacent to the Games would induce spectators to linger after their particular viewing event had concluded.

5.4.2 COST-EFFECTIVENESS

Figure 5.4 summarizes the cost and revenue per boarding for the Olympic service. Two sets of statistics have been calculated: the total cost and revenue of the operation, including start-up costs and token set-related figures, and the cost and revenue of just the provided Olympic service.

FIGURE 5.4

COST-EFFECTIVENESS OF THE OLYMPIC SERVICE

	COST/ BOARDING	REVENUE/ BOARDING	NET COST/ BOARDING
Total Olympic Operation*	$9.45	$5.30	$4.15
Olympic Period Only	$2.85	$3.50	-0-

* Includes start-up costs and token set sales-related figures.

The figure shows that the actual service provided not only paid for itself, but actually turned a profit of approximately $.65/passenger. Taken by itself, this statistic would indicate that the service was very cost-effective.

However, because of the scope and special nature of this provided operation, a tremendous start-up cost was incurred prior to the first Olympic day. In addition, the RTD token set sales program was a disappointment in terms of revenue generated, actually incurring a net loss.

CHAPTER 6.0

QUALITY OF SERVICE PROVIDED

6.0 - QUALITY OF SERVICES PROVIDED

The majority of this report has focused on the objective evaluation of the Olympic service -- how much manpower, how many buses, how many riders. An equally important examination has been included in this report which describes the objective aspects of the service. There are several variables that effect the actual quality of service provided. Quality of service may be seen through two perspectives; that as seen by the actual provider, in this case, the District, and, the quality of service as perceived by the user.

6.1 THE DISTRICT'S PERSPECTIVE

In order to assess the quality of service from the perspective of the District, several quantifiable variables were assessed and have already been discussed. They include the number of actual pull-outs to scheduled pull-outs, the number of mechanical breakdowns, the number of accidents, the average passenger boarding per trip, and the period of time necessary to clear a crowd of patrons from an event. It also includes other data not yet mentioned such as the personal assessments of the Passenger Assistance Force obtained from a post-Olympic survey.

As a transportation provider, the District was sometimes the center of rider frustration through no direct fault of the system. Lengthy delays between buses and the resultant long queues of patrons appeared to be the District's fault. This was usually not RTD's fault, but was caused by the presence of traffic congestion. With few exceptions, all passengers desiring to arrive in time for the beginning of the event were successful. On July 28, severe congestion appeared to delay the buses approaching the Coliseum, especially in the vicinity of the bus only lanes on Figueroa Street and Vermont Avenue. At one point, congestion appeared so great that

patrons got off the buses prematurely at Adams Boulevard and walked the remaining one mile to the Coliseum. In coordination with city staff, the traffic plans were adjusted and placed into action at subsequent events. The plans worked well due in part to increased enforcement of the newly created special bus lanes, and closer monitoring of key intersections crucial to the bus operation. Passengers were briskly transported without delay and the behavior observed on Opening Day did not repeat itself.

The system was designed to address the finish of major events when the greatest number of patrons would quickly desire service. One of the parameters of the service was thus to clear all events as soon as possible, but at least within a two hour period. The largest events were held at Exposition Park, where it was not uncommon to have 60,000 spectators wishing to return to their points of origin at the same time. In order to expedite passenger movement, passenger counts were tallied after the going move and the appropriate number of buses ordered. Passenger traffic was at times, heavy, resulting in large numbers of standees. The great majority of riders attending events were, however, cleared in 75 minutes or less, a much improved reality over the two hour period designed in the plan.

6.1.1 ACTUAL/SCHEDULED PULL-OUTS

The Maintenance Department monitored all pull-outs of Olympic equipment; the Transportation Department logged all bus operators who filled scheduled runs. During the Olympic period, all scheduled pull-outs were met, with no shortages of either manpower or equipment. Spot shortages of either were alleviated by filling the assignments with other adjacent operating divisions equipment or personnel. This problem was foreseen and operators from other divisions were qualified on Olympic routes in advance of the Games to enable this quick reallocation of assignments as needed. On days of heavy passenger traffic, augmentation of service was often necessary, especially on the Line 710 Shuttle between downtown Los Angeles and

Exposition Park. This particular line was assigned to two operating divisions, but two other divisions were also trained, enabling rapid deployment at both ends of the line.

6.1.2 RESERVATION SYSTEM

The reservation system for the park/ride service went on sale to the general public on June 1, 1984. A few early problems occurred in the training of Ticketron staff. These were corrected over time as the clerks became accustomed to the procedure and some programming "bugs" were worked out. The onslaught of people making reservations during the final month before the Games resulted in long lines of people at selected Ticketron locations, requiring waits of several hours. This was not unusual, and was like the long waits that occurred during major rock concert's ticket sales. A few of the earliest reservations were made for times and days when a particular service was not offered. These were adjusted well before the Games, and the affected patrons were offered revised reservations on scheduled trips.

The reservation system was designed to accommodate a rather large bank of information. Unfortunately, the system was only capable of immediately tracking on one control factor. This control factor was the number of tickets sold, by time period. For this data, schedules for the proper number of buses were developed preventing standees and thus guaranteeing all passengers with reservations a seat. A second control factor which was also needed was the number of cars the bus passengers would be using. This statistic was needed to determine the extent to which the park/ride lots were being filled. Ticketron was not able to present this information. However, parking lots were informally monitored and average riders per car were established. It turned out that the parking lots even on maximum rider days, were never completely full.

6.1.3 THE PASSENGER ASSISTANCE FORCE (PAF)

The strategy of using District office staff to work in the field was open to speculation. However, a post-Olympic survey of the PAF revealed that the concept was successful. It was successful in both the area of effective service to the passengers and an efficient Olympic operation -- the RTD received only compliments and no complaints regarding PAF -- and also in the area of employee District awareness.

The survey of PAF revealed that the employees themselves learned and appeared to appreciate several things about the District that they might not normally have found out in their present job classifications. These were of tremendous benefit to the RTD. First, the PAF met and worked with other employees from different departments. Communication between PAF at this individual level invariably included discussions about their regular duties. This communication helped employees gain an understanding of what these other people did in their normal work assignments and also help them understand what it was that the other departments actually did.

Secondly, many survey comments stated that, "I didn't know that a bus operation was this complex", or "Now I have a better understanding of what is involved in running a bus service". The District is so large and so specialized that individuals working in the office on support functions actually are rarely if ever in a position to see the actual operation of the bus service. Working in the field during the Olympics enabled these people to actually get some bus operations experience, and the "hands-on" work and training served to heighten their appreciation of what the bus operation required.

Both of these indirect results of using office workers as PAF are very beneficial to the RTD. Knowledge of other department's roles and responsibilities, and also of the names and faces in the departments, can only help improve and speed communications among staff, thus improving the

District's effectiveness. Also, gaining an awareness of the requirements of providing a bus operation will aid these employees in developing a better, more comprehensive understanding of the District.

6.2 THE USER'S PERSPECTIVE

The quality of service from the passengers' point of view was a bit more difficult to assess. This evalution based rider's feelings on the number of commendations or complaints received about the Olympic service. These comments were sometimes specific, sometimes general. Telephone calls received by Customer Relations personnel as well as other departments were also monitored. Perhaps the best gauge of the public's perception of the quality of service was assessed through coverage given by the media, both electronic and print. It was felt that the media was very sensitive to the mood of the public by reporting that the service was generally well perceived.

6.2.1 WRITTEN COMMENTS

The District received 24 letters about the reservations system. Most of them referred to specific instances of error on the part of Ticketron; all of these were handled by Ticketron and rectified. These critical letters generally had comments related to the long lines at the Ticketron ticket offices, or complained about the prolonged wait or recurrent busy signals of the Ticketron reservation phone lines. Calls regarding advance reservations were forwarded directly to Ticketron.

The Customer Relations Department received many written comments pertaining to the Olympic Games service. These can be categorized into four basic types: commendations, complaints, requests for RTD Olympic pins, and other miscellaneous comments. The following volumes were recorded through September 14:

1.	Requests for RTD Pins	43
2.	Commendations	56
3.	Complaints	7
4.	Other	1

Of the complaints received, the vast majority dealt with the high fares being charged.

The Telephone Information Department receives on an average 8,000 - 10,000 calls per day. During Olympic peak event days, up to 14,000 calls were received. On some days, it was reported that up to 80% of the calls were Olympic-related.

The News Bureau monitored material published in the newspapers and periodicals during and after the Games as well as kept records of the comments of the electronic media. Traffic and transporation were a vital part of the coverage of the Olympics, especially in the build-up prior to the commencement of the Games. This interest continued during the Games, but tapered off as the congestion and parking difficulties anticipated turned out, as Mayor Bradley stated, to be a "non-event".

The News Bureau staff was assigned special schedules to keep up with the requests for interviews and information from the 8,000 press in town for the Games. A special schedule was created that had staff available to meet the press between 6:00 A.M. and 11:00 P.M., seven days a week.

6.2.2 ON-TIME PERFORMANCE

Service to each of the scheduled events was offered during a two hour window plus the estimated travel time. For example, a four o'clock event

at Exposition Park from Century City required that District service begin at 1:30 in the afternoon. This two and a half hour period included the thirty minutes travel time needed to get to Exposition Park.

Despite the posting of this information in the brochure, people had a tendency to show up early. The media blitz which raised concerns about traffic and congestion woes had their impact on the perceptions of passengers, especially on Opening Day when crowds started to form more than two-hours prior to the departure of the first bus. For example, patrons arrived at 1st and Spring at least four hours before the start of the Opening Ceremonies. Although these people had to wait, all of them arrived at Exposition Park well before the beginning of Opening Ceremonies.

Those persons wishing to use park/ride services and who did not have advanced reservations tended to arrive early to ride on a stand-by basis. At many locations, significant numbers of would be patrons were waiting before the start of service to ensure that they would reach their event before it began. The reservations system was designed to enable an even flow of passengers not only on the buses, but also into the park/ride lots. In some instances, venue captains reported passengers with reservations were arriving several hours early and were demanding to be accommodated. They were generally able to be quickly placed on a bus. It did, however, result in having some standees on these buses and also in the need to provide more buses on several days.

6.2.3 AVERAGE WAIT TIME

Service was offered on all lines primarily on "demand" schedules. Minimum frequencies were established and operated every 20 minutes. Other than at Opening Ceremonies, as previously described, the average wait was assessed to be more than 10 minutes, with no one having to wait longer than twenty minutes. Constant radio contact with all venues and terminals permitted

the reassignment of buses, the rerouting of some lines to serve intermediate stops, and the assignment of extra equipment to satisfy surges in passenger demand.

CHAPTER 7.0

CLOSE DOWN PLAN

7.0 - CLOSE DOWN PLAN

In order to execute the Olympic transportation program, the District needed to procure and train additional manpower, and obtain extra equipment and facilities. In order to minimize Olympics-related expenditures, a close-down plan was developed to guide departments involved in the return of operations to normal levels following the Olympics.

7.1 MANPOWER

Additional personnel was needed to operate the District's Olympic transit program. Staffing requirements were met through a combination of hiring and training of new contract and non-contract employees and the redeployment of existing District staff, whenever possible. Prior to the start of the Games, post-Olympic manpower needs were also assessed and all affected departments prepared a listing of personnel to be terminated or furloughed in the period immediately following the Games.

Following the Olympics, all necessary furloughs, terminations, and personnel reassignments were accomplished in an expeditious manner. As illustrated in Figure 7.1, all departments were able to return to normal staffing levels, either on-schedule, or well in advance of the original close-down deadline.

7.2 EQUIPMENT

The extra equipment procured by the District for use during the Olympics included additional buses, autos, trucks, communications equipment, and other material. As in the process described for manpower, prior to the Games each affected department identified items to be either returned or removed. Figure 7.2 shows that the disposition process for equipment was also carried out ahead of schedules.

FIGURE 7.1

LISTING OF MANPOWER REASSIGNMENT
POST-OLYMPICS SCHEDULE

Personnel Category	Department	Disposition	Schedule for Completion	Actual Completion
• Part-time Operators	• Transportation operators	• Terminate excess personnel	• September 30	• August 17
• Retired Non-Contract personnel	• Operations Control & Services	• Terminate	• August 13	• August 13
• Temporary Intern/ Passenger Assistant	• Transportation	• Terminate	• September 30	• August 12
• Temporary BRAC Ticket Clerks	• Marketing	• Terminate	• September 30	• August 17
• Temporary BRAC Information Clerks	• Customer Relations	• Terminate	• September 30	• August 18
• Contract Security Guards	• Transit Police	• Terminate	• August 13	• August 13
• Transit Police Officers	• Transit Police	• Some retained to replenish part-time TPO pool; terminate remainder	• August 13	• August 13
• Temporary Technicians	• Telecommunications	• Terminate	• September 30	• August 15
• As-Needed BRAC Cash Clerks	• Accounting	• Terminate	• September 30	• August 14
• As-Needed BRAC Shop Clerks, Truck Drivers	• Purchasing	• Terminate	• September 30	• August 18
• Temporary Service Attendants	• Maintenance	• Terminate	• September 30	• August 19

FIGURE 7.1 (Cont'd)

LISTING OF MANPOWER REASSIGNMENT
POST-OLYMPICS SCHEDULE

Personnel Category	Department	Disposition	Schedule for Completion	Actual Completion
• Redeployed Vernon Yards Facility Maintainers	• Maintenance assignments	• Return to regular operation	• August 20	• August 20
• Redeployed South Park Service Attendants	• Maintenance assignments	• Return to regular operation	• August 20	• August 20
• Redeployed South Park Mechanics	• Maintenance assignments	• Return to regular operation	• August 20	• August 20
• Redeployed Non-Contract Staff	• Various Departments assignments	• Return to regular operation	• August 13	• August 13

FIGURE 7.2

LISTING OF EQUIPMENT DISPOSAL
POST-OLYMPICS SCHEDULE

EQUIPMENT	DEPARTMENT	DISPOSITION	SCHEDULE FOR COMPLETION	ACTUAL COMPLETION
• Automobiles	• General Services	• Return to Vendor	• August 30	• August 19
• Buses	• Maintenance	• Return to Vendors	• August 30	• August 19
• Service Vehicles (Vans, pick-ups, tow trucks)	• Maintenance	• Return to Vendors	• August 30	• August 19
• Beepers/Pagers	• Telecommunications	• Return to Vendor	• August 30	• August 20
• Telephone Lines	• Telecommunications	• Remove	• August 30	• August 30

7.3 FACILITIES

In order to meet the needs of Olympic passengers, special facilities such as kiosks, bus stop signs, on-site information signs, ticket booths, and parking lots were developed or obtained by the District. Figure 7.3 shows that all special facilities were disposed of quickly within one week following the Olympics.

FIGURE 7.3

LISTING OF FACILITIES DISPOSAL
POST-OLYMPICS SCHEDULE

FACILITY	DEPARTMENT	DISPOSITION	SCHEDULE FOR COMPLETION	ACTUAL COMPLETION
• Information Signs	• Stops & Zones	• Signage removed	• September 15	• August 17
• Portable Restrooms	• Purchasing	• Return to Vendors	• September 15	• August 16
• Parking Lots	• Real Estate	• Return to Vendor Control	• September 15	• August 13
• Ticket Office (1st & Spring)	• Marketing	• Relocate for use as office space at Vernon Yards	• September 15	• August 15

CHAPTER 8.0

CONCLUSION

8.0 - CONCLUSION

The RTD Olympic bus operation was an overwhelming success in all areas except one. The service and productively accommodated over one million passengers, transporting them safely, quickly and without undue delay to and from their desired Olympic spectator event. It demonstrated that we could have handled the projected ridership levels even if they had occurred for the full 16 days. It utilized the services of existing RTD employees and successfully reassigned and trained them to conduct new and completely different tasks in the field. It developed new procedures to not only accommodate, but also more effectively service and maintain, the 550 added vehicles that were used for the Olympics.

The plan which guided the Olympic operation was such that very few changes were made that had not already been developed as contingency measures. It was, in fact, operated such that total costs were 20% below budget, with much of the $2.7 million savings being made during Olympic period service. It was priced to generate enough revenue to return a significant profit which would cover not only the cost of operating, but the extremely heavy start-up costs. In actuality, it produced a $.65 per passenger profit during the Olympics to cover the cost of operation, but not the start-up costs. It received many compliments from the passengers that used the service, the media that reported on it, and the other agencies responsible for Olympic transportation.

The one negative aspect of the Olympic bus service was the large shortfall of funds to cover the actual operating costs. This deficit was unanticipated, and the reasons for its source have been previously discussed. However, it should be pointed out that the plan for the Olympic service had to be geared up to meet the maximum modal split ridership demand, which we in fact were faced with during the second week. Our start-up costs to bring on board enough equipment and supplies, or to train sufficient manpower to meet this maximum demand, could thus not have been reduced. This portion of cost represented 49% of total costs.

On the revenue side, the services were priced at levels that were deemed reasonable by the riding public, and were considered competitive with the alternative of spectators using their own autos and parking at the venue site. Pricing above this level was considered unreasonable and a detriment to attracting the riding public. The RTD Olympic service was thus an overwhelming success, despite the deficit.

Finally, from a transportation point of view, the service successfully contributed to the low to moderate levels of traffic congestion that occurred in the area during this time period. It is a certainty that traffic congestion in and around downtown Los Angeles and Exposition Park areas would have been chaotic and unbearably heavy during the morning and afternoon peak periods had the RTD not provided the Olympic transit services.

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