

**Los Angeles County  
Metropolitan Transportation  
Authority  
FY 2002 On-Board Bus  
Weekend Survey Report**

Report to the Los Angeles County  
Metropolitan Transportation Authority  
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by

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October, 2002

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## EXECUTIVE SUMMARY

This report summarizes the results of the FY 2002 Bus On-Board (Weekend) Survey. The survey was conducted on weekends from June through December 2001. Two companion reports, one on a concurrent weekday survey and one on a subsequent telephone follow-up to the weekday survey, are also available. There are also three reports on rail riders that are analogous to the three bus rider reports.

### Demographic Profile

- Weekend Metro Bus riders are 55% female and 45% male, with little difference by MTA service sector.
- Median annual household income for weekend bus riders is \$10,000 per year, again with little difference by service sector.
- Latinos are the largest ethnic group among weekend riders (59%). African-Americans are 24% of the ridership, and Whites and Asians are 8% and 7%, respectively. Latino bus riders are particularly prominent in the San Gabriel Valley (69%), Gateway (66%), and West Central (64%) sectors. African-Americans comprise 38% of South Bay sector ridership. White riders are most numerous in the San Fernando Valley (19%).
- The average age of weekend riders is 41.3. Whites are older than the other groups (49.8).

### Travel Characteristics

- A large majority of weekend Metro Bus riders (73%) use more than one bus or train in the course of their one-way trip.
- Riders access their first bus or train almost entirely by walking (95%). A similar percentage (94%) walk to their final destination.
- Most riders (83%) use MTA buses 5 or more days per week.
- The home-to-work trip (and its reverse—work-to-home) constitute 46% of all weekend trips.
- Fewer trips are work related (e.g. home-work, work-shopping, school-work, among others) on Sunday (47%) than on Saturday (53%).
- Most weekend Metro Bus riders use passes to pay their boarding fare (55%); approximately 1/3 (34%) use regular monthly passes. Pass use is highest in the South Bay sector (60%) and lowest in San Fernando Valley and Gateway (50% each).

### Travel Patterns

- West Central sector riders remain within the West Central sector on 65% of all bus trips that originate there. This is in contrast to the San Gabriel Valley (42%), which is the only sector where a majority of riders travels outside of their sector.
- The major destination for riders outside of their own sector (for all sectors except West Central) is West Central. Travel to West Central is equal to or exceeds travel to all of the remaining sectors combined for all other sectors, except Gateway.

- By Subregion (modified COG jurisdictions), this same pattern is even more pronounced:
  - Intra-Subregional travel either makes up a majority or a plurality of trips in five of the seven Subregions.
  - The Central Los Angeles Central area is either the most common destination or the second most common destination for all Subregions.
  - Travel to Central Los Angeles Central is more common than all travel to the remaining Subregions combined. (This is not the case for the San Fernando Valley, which also differs by having a high proportion of intra-Subregional bus travel.)
  - This central city orientation of inter-Subregional travel contradicts a popular notion of suburban disintegration from the urban core. Instead, the region is interwoven by transit to and through its central core.
- Riders indicate that their median one-way trip consumes 60 minutes, including 25 minutes on board buses and trains, 10 minutes getting to the transit vehicle, 10 minutes getting from the transit vehicle, and 15 minutes waiting for buses and trains. The largest total travel time on weekends is among San Gabriel Valley sector riders (70 minutes).

#### **Satisfaction With Bus Service Features**

- Metro Bus weekend riders are generally satisfied with the overall service of the Metro Bus system (2.4 on a 5-point scale, with 1.0 representing very satisfied). More than one-half (55%) of all riders on weekends rate overall service as either very good or good.
- Convenience of Route is rated most highly (2.1); safety is next in order of satisfaction (2.2). On the lower satisfaction end are “time spent waiting” and “buses being on time” (2.8 each).
- Those service features for which satisfaction levels are most strongly correlated with overall satisfaction are “buses being on time” ( $r=.64$ ) and “buses do not pass by” ( $r=.62$ ).

## INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (MTA) operates 185 bus routes in Los Angeles County spanning a 1,400 square mile area from the northern portions of the San Fernando Valley to the San Pedro harbor area and from the Pacific Ocean to the San Gabriel Valley. Its 8,000 employees plan, design, coordinate, build, and operate one of the largest transit systems in the nation, with a fleet of approximately 2,000 buses. On an average weekday almost 1.25 million passengers board MTA buses, with over 700,000 boardings on weekend days, placing MTA in the top 3 bus systems in the nation along with New York City Transit and Chicago Transit Authority. There are almost 20,000 bus stops in the system. MTA also provides direct subsidies to 12 fixed-route municipal bus operators and 1 transportation zone in Los Angeles County. It also administers the Local Return component of local transportation taxes that several recipient communities use to provide small-scale fixed-route bus service.

### **Framework for the Bus On-Board Survey Analysis**

MTA authorized a representative survey of bus riders on board MTA buses. The goal of this survey was to provide accurate and representative baseline data on MTA bus riders' demographics, travel patterns, and levels of satisfaction regarding their bus service.

Of fundamental interest were issues pertaining to the following, among others:

- Origin and destination trip characteristics
- Mode of access and egress to and from the bus
- Seating and space availability on-board the buses
- Driver courtesy
- Security issues on-board and at bus stops
- Travel time issues
- Overall satisfaction with the bus system
- Greatest needs for improvement
- Fare media usage
- Additional demographic data

This report concentrates on weekend MTA bus riders. It examines weekend data by MTA Service Sector (San Fernando Valley, San Gabriel Valley, West Central, South Bay, and Gateway). Separate reports have been prepared for weekday riders and geo-coded origin/destination data.

Further analysis of MTA weekend bus data was performed for 7 MTA Planning Subregions. Findings for these Planning Subregions are reported in Appendix B.

Appendix A is a complete explanation of the methodology employed in the course of this study.



## **DEMOGRAPHIC PROFILE**

Table 1 is a demographic profile of the weekend FY 2002 Metro Bus riders. Forty-five percent (45%) are male and 55% are female. There is not much variation in gender by service sector, with the ridership dominantly female in the West Central sector (58%), and least prevalent in the San Gabriel Valley (52%). The annual median household income for all riders is \$10,000, with minimal difference by sector—the San Fernando Valley having the highest median income (\$11,000) and Gateway riders having the lowest (\$9,000).

Among all weekend Metro Bus riders, 59% are Latino, 24% are African-American, 8% are White, and 7% are Asian/Pacific Islander. The table shows dramatic differences in the ethnic makeup of the service sectors. The San Fernando Valley has by far the most White riders (19%) on weekends. The San Gabriel Valley (69%) and, to a lesser extent, Gateway (66%) and West Central (64%) have the greatest Latino rider proportions. South Bay (38%) and Gateway (25%) are highest in African-American ridership. Asian riders are more numerous in the San Gabriel Valley (11%) and West Central (10%).

Table 1 further reports that the mean age of weekend Metro Bus riders is 41.3 years. Riders in the San Fernando Valley have the lowest mean age (39.4 years), while West Central riders have the highest (43.1 years).

Table 2 shows that the median income among weekend Metro Bus riders is \$15,000 for Whites. The median income for White riders in the San Fernando Valley is considerably higher (\$21,000) and it is lower in the South Bay (\$12,000) and Gateway sectors (\$13,000). The lowest median income is found among Latino riders (\$9,000), with consistency across the five sectors.

Table 2 also reports that the mean age of White weekend riders is 49.8 years, and for Latino riders it is 39.2 years. Whites in the Gateway sector and Asians in South Bay have the highest mean age (52.2 years), while African-Americans in the San Fernando Valley have the lowest mean age (34.0 years).

**Table 1:****Demographic Profile of MTA Bus Riders by Sector—Weekend**

	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Gender						
Male	45%	43%	48%	42%	44%	46%
Female	55	57	52	58	56	54
Median Household Income	\$10,000	\$11,000	\$10,000	\$10,000	\$10,000	\$ 9,000
Mean Age (Years)	41.3	39.4	41.4	43.1	41.0	40.5
Ethnicity						
Hispanic/Latino	59%	58%	69%	64%	50%	66%
White/Caucasian	8	19	7	9	5	6
African-American/Black	24	15	10	14	38	25
Asian/Pacific Islander	7	6	11	10	5	2
Other (American-Indian/ Multi-Racial)	2	2	3	3	2	1

**Table 2:  
Demographic Characteristics by Ethnic Group  
by Sector-Weekend**

	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
<b>Median Income</b>						
Hispanic/Latino	\$ 9,000	\$ 8,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 8,000
African-American/Black	11,000	13,000	9,000	11,000	11,000	11,000
White/Caucasian	15,000	21,000	15,000	18,000	12,000	13,000
Asian/Pacific Islander	12,000	14,000	14,000	12,000	13,000	7,000
<b>Percentage of Riders in Households Earning Less Than \$7,500 Annually</b>						
Hispanic/Latino	45%	50%	43%	44%	43%	47%
African-American/Black	38	25	42	35	38	40
White/Caucasian	22	9	22	13	28	39
Asian/Pacific Islander	34	36	25	35	37	55
<b>Percentage of Riders in Households Earning \$50,000 and Over Annually</b>						
Hispanic/Latino	1%	2%	2%	1%	0%	0%
African-American/Black	3	0	6	5	4	3
White/Caucasian	4	7	5	1	3	6
Asian/Pacific Islander	6	7	6	9	4	0

**Table 2 (continued)**

	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
<b>Mean Age</b>						
Hispanic/Latino	39.2	37.6	39.4	40.4	39.1	38.6
African-American/Black	41.0	34.0	42.1	44.3	40.2	41.1
White/Caucasian	49.8	48.4	50.5	48.4	49.6	52.2
Asian/Pacific Islander	47.6	41.6	46.4	49.8	52.2	46.9
<b>Percentage of Riders 25 Years of Age or Younger</b>						
Hispanic/Latino	19%	18%	20%	18%	19%	20%
African-American/Black	16	39	21	11	16	15
White/Caucasian	5	4	3	5	6	8
Asian/Pacific Islander	13	29	15	6	7	20
<b>Percentage of Riders Over 50 Years of Age</b>						
Hispanic/Latino	21%	20%	23%	23%	20%	20%
African-American/Black	24	12	27	34	23	21
White/Caucasian	45	42	36	38	51	57
Asian/Pacific Islander	45	29	42	47	64	35

As depicted in Table 3, other than more men riding on Sunday (47% versus 43% on Saturday), the demographic profile of Saturday and Sunday riders are effectively indistinguishable from one another.

<b>Table 3:</b>		
<b>Demographic Profile - Saturday/Sunday</b>		
	Saturday	Sunday
Gender		
Female	57%	53%
Male	43	47
Median Household Income	\$10,000	\$10,000
Mean Household Income	\$13,000	\$14,000
Mean Age (Years)	41.3	41.0
Ethnicity		
Hispanic/Latino	60%	59%
African-American/Black	23	25
White/Caucasian	8	8
Asian/Pacific Islander	7	6

## TRAVEL CHARACTERISTICS OF ONE-WAY TRIP

### Number of Buses/Trains Used

Table 4 indicates that weekend Metro Bus riders typically ride more than one train or bus in the course of their one-way trip, with a very substantial 73% of riders using more than one bus or train.

Among the buses and trains used by weekend Metro Bus patrons, the vast majority are MTA bus and rail trip segments (97%), leaving only 3% for other bus/rail systems. Among these other systems, Foothill Transit and Santa Monica Big Blue Bus each carry slightly more than one-half of 1% of weekend Metro Bus riders' trip segments.

<b>Table 4:</b>						
<b>Number of Buses/Trains Used on One-Way Trip</b>						
<b>(Weekend)</b>						
	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
One Bus	27%	24%	24%	24%	27%	33%
Two Buses/Trains	34	36	34	32	36	32
Three Buses/Trains	25	24	29	30	23	22
Four or More Buses/Trains	14	16	13	14	14	13

Table 4 also shows that riders in each MTA service sector ride more than one bus or train in very similar patterns, with the exception of Gateway, in which weekend sector riders use only one bus

to a greater extent (33%) than do riders in the other sectors. San Fernando Valley riders (16%) use 4 or more buses or trains to a greater extent than do riders in the other sectors. Similar to the bus system as a whole, riders in each of the sectors overwhelmingly use MTA buses and trains, ranging from a low of 96% in the San Gabriel Valley to 99% in the San Fernando Valley. In the San Gabriel Valley sector, slightly more than 1% of weekend MTA riders' trip segments are on the Foothill Transit bus system.

### **Mode of Access/Egress**

Table 5 shows that 95% of weekend Metro Bus riders walk to the first bus or rail car of their trip, with West Central service sector riders walking to the greatest extent (98%) and San Fernando Valley riders to the least (92%). Those patrons who ride the bus under one day per week walk less than riders who use the bus 5 or more days per week (87% versus 96%).

Table 6 shows that weekend bus riders walk (94%) to their final destination after they get off their last bus or train. This is consistent across service sectors. Bus riders who ride the bus at least once per week walk to their final destination (94%) more than those who ride the bus less than once per week (79%).

### **Origins and Destinations**

Table 7 indicates that weekend bus riders come primarily from home (75%) before they get on the first bus or train of their one-way trip. Riders in the West Central (81%) and San Gabriel Valley (79%) sectors indicated the highest percentage of origins from home, while riders in the San Fernando Valley have the lowest (64%). San Fernando Valley riders originate from work (16%) more than riders from the other sectors (10%-12%).

Table 8 shows that the most prevalent destinations of weekend bus riders after they get off the last bus or train of their one-way trip are work (36%) and home (30%). This lack of symmetry between home as origin (75%) and destination (30%) indicates that, although the surveys were distributed throughout the day, the respondents tended to provide information about their first trip rather than their return trip. A likely contributor to this differential is the mail back option provided

<b>Table 5:</b>						
<b>Mode of Travel to First Bus/Train</b>						
<b>by Sector—Weekend</b>						
	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Walked	95%	92%	95%	98%	94%	94%
Dropped Off	2	3	2	0	3	3
Drove	1	1	1	1	1	1
Bicycle	1	1	1	1	1	1
Other*	1	3	1	0	1	1

\*Other category consists of predominantly unspecified responses.

<b>Table 6:</b>						
<b>Mode of Travel to Destination After Getting Off Last Bus/Train</b>						
<b>by Sector—Weekend</b>						
	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Walked	94%	94%	93%	93%	94%	95%
Picked Up	2	3	2	2	3	2
Drove	1	1	0	1	0	1
Bicycle	1	1	2	1	1	1
Other*	2	1	3	3	2	1

\*Other category consists of predominantly unspecified responses.



<b>Table 7:</b>						
<b>Place Coming From Before Getting On First Bus/Train</b>						
<b>by Sector–Weekend</b>						
	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Home	75%	64%	79%	81%	73%	76%
Work	11	16	10	11	12	11
School	2	6	1	0	2	1
Shopping	5	6	4	3	5	5
Social/Recreation/ Church	3	4	3	2	3	3
Medical	1	1	1	1	2	1
Other (child care, airport)	3	3	2	2	3	3

to riders. Those riders who completed surveys may have reported their first trip even if they were handed the survey on their return trip.

Riders in the San Gabriel Valley and West Central indicated the highest percentage of work destinations (38% each), while riders in the South Bay (35%) and Gateway (34%) sectors indicated the lowest. San Fernando Valley riders have shopping as a destination (16%) more than other sectors (8%-11%).

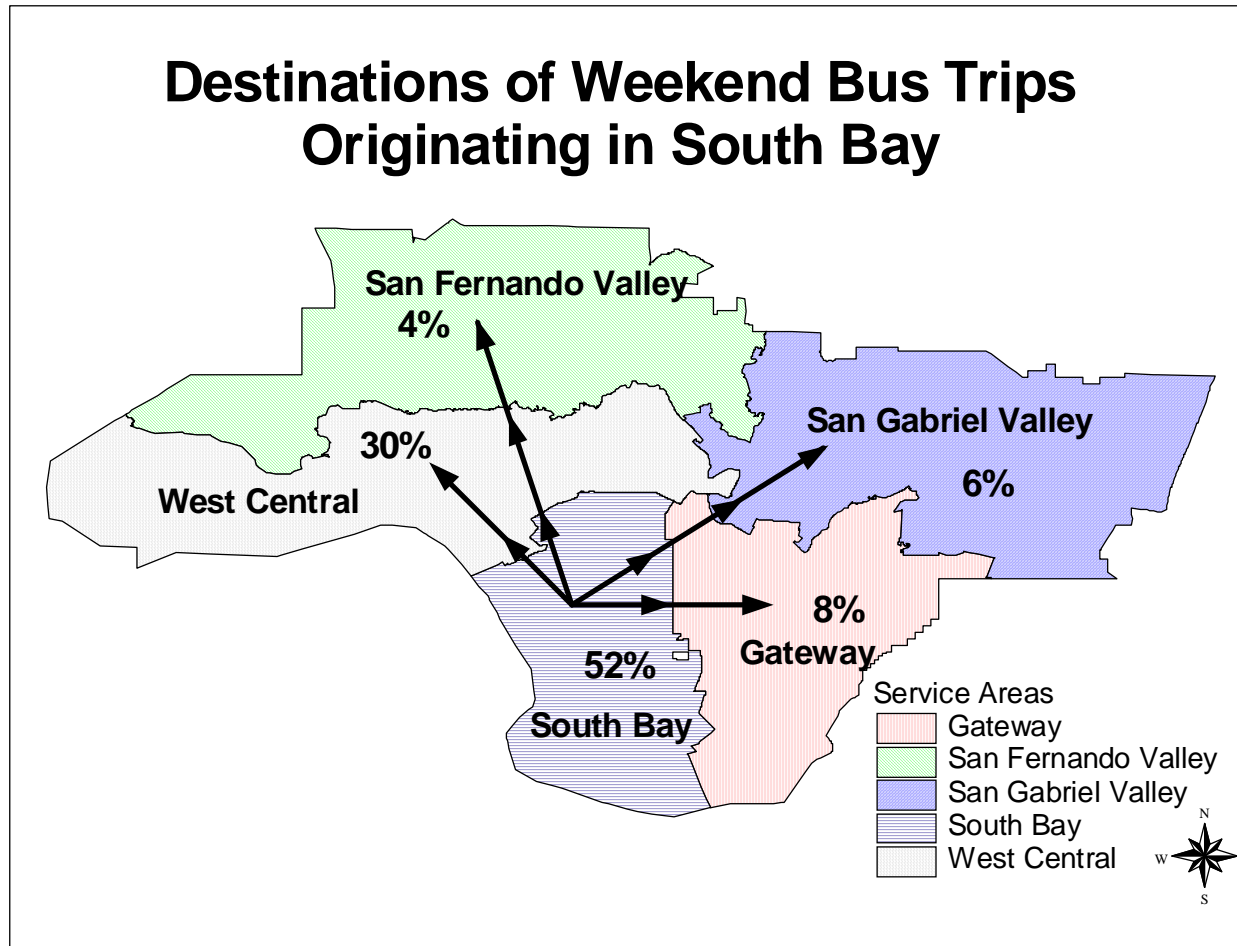
The distribution of trips within and among sectors is depicted on the maps that follow. West Central sector riders remain within the West Central area (65%) more than other riders remain within their sectors. San Gabriel Valley riders travel outside of their sector (58%) more than riders in other sectors. It is the only sector where a majority of riders do not travel entirely within their own sector. In the San Gabriel Valley, there is still an intra-sector plurality, indicating significant bus travel within the sector. The major destination for riders outside of their own sector is West Central. For all

sectors, other than Gateway, travel to West Central is equal to or more frequent than all travel to the remaining sectors combined. Regarding travel within the West Central sector, Appendix B shows that much of the intra-sector West Central travel is actually movement from the Westside to Central Los Angeles.

<b>Table 8: Destination After Getting Off Last Bus/Train by Sector-Weekend</b>						
	MTA System	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Home	30%	33%	28%	27%	29%	32%
Work	36	37	38	38	35	34
School	4	2	4	3	5	4
Shopping	10	16	8	10	11	11
Social/Recreation/ Church	9	5	9	8	7	7
Medical	3	3	3	4	3	5
Other (child care, airport)	8	4	7	10	10	7

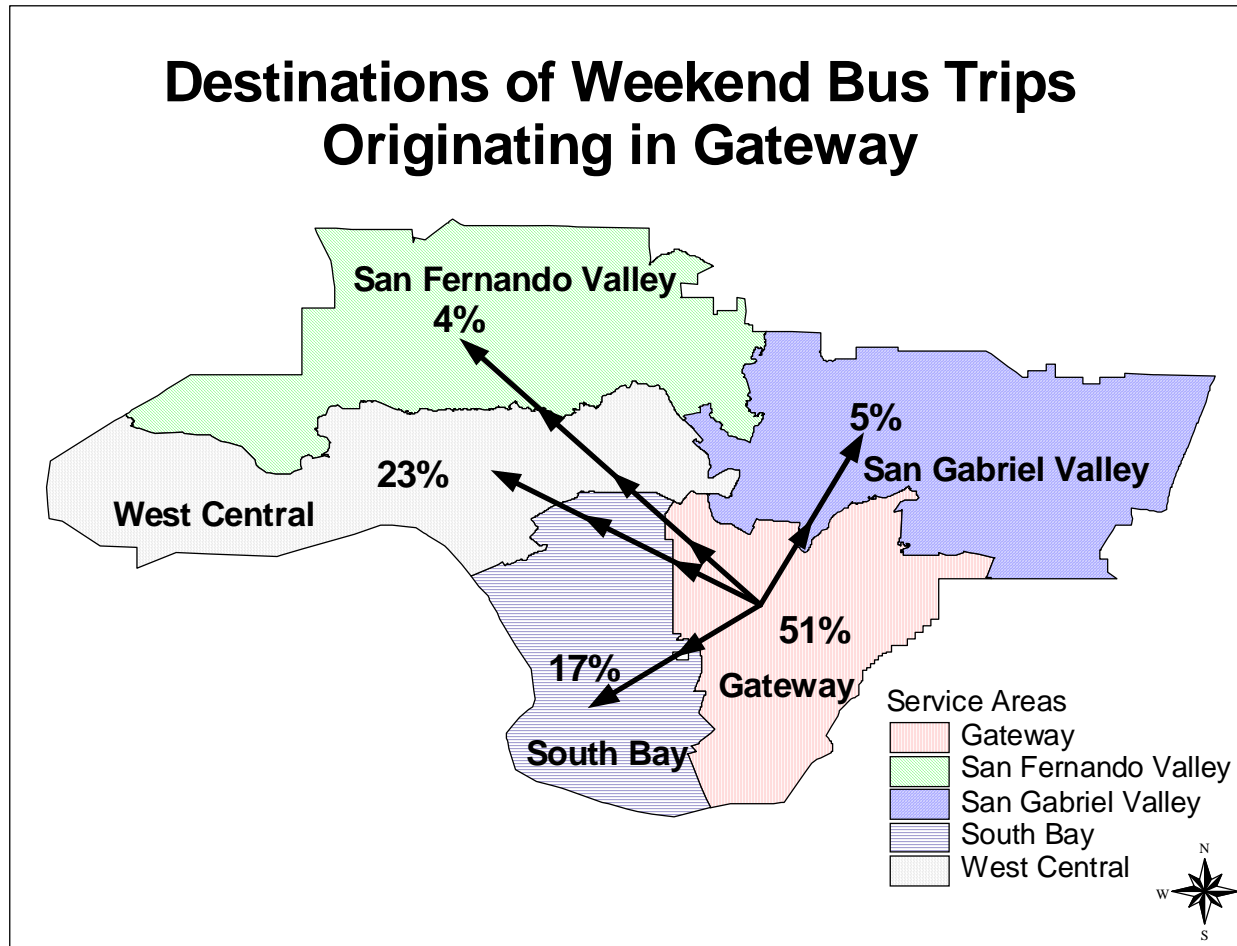
It is clear that the popular urban growth theories that detail the declining importance of the center city are not applicable to transit usage. Los Angeles is not necessarily the loosely connected association of unrelated suburbs that has so often been portrayed. To the contrary, it is significantly interwoven by transit to and through its central core.

## Destinations of Weekend Bus Trips Originating in South Bay



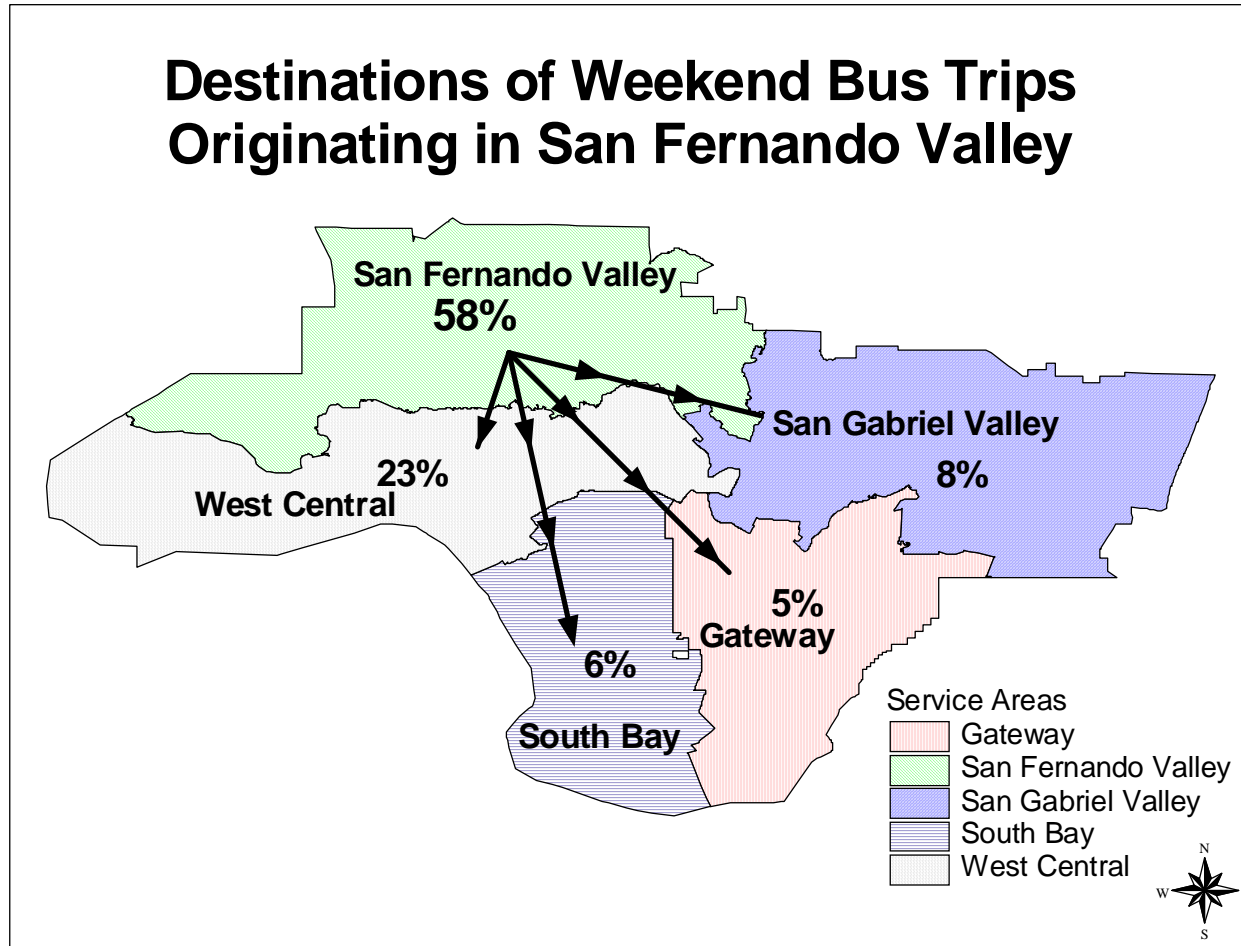
Map 1: Destinations of Weekend Bus Trips Originating in South Bay

## Destinations of Weekend Bus Trips Originating in Gateway



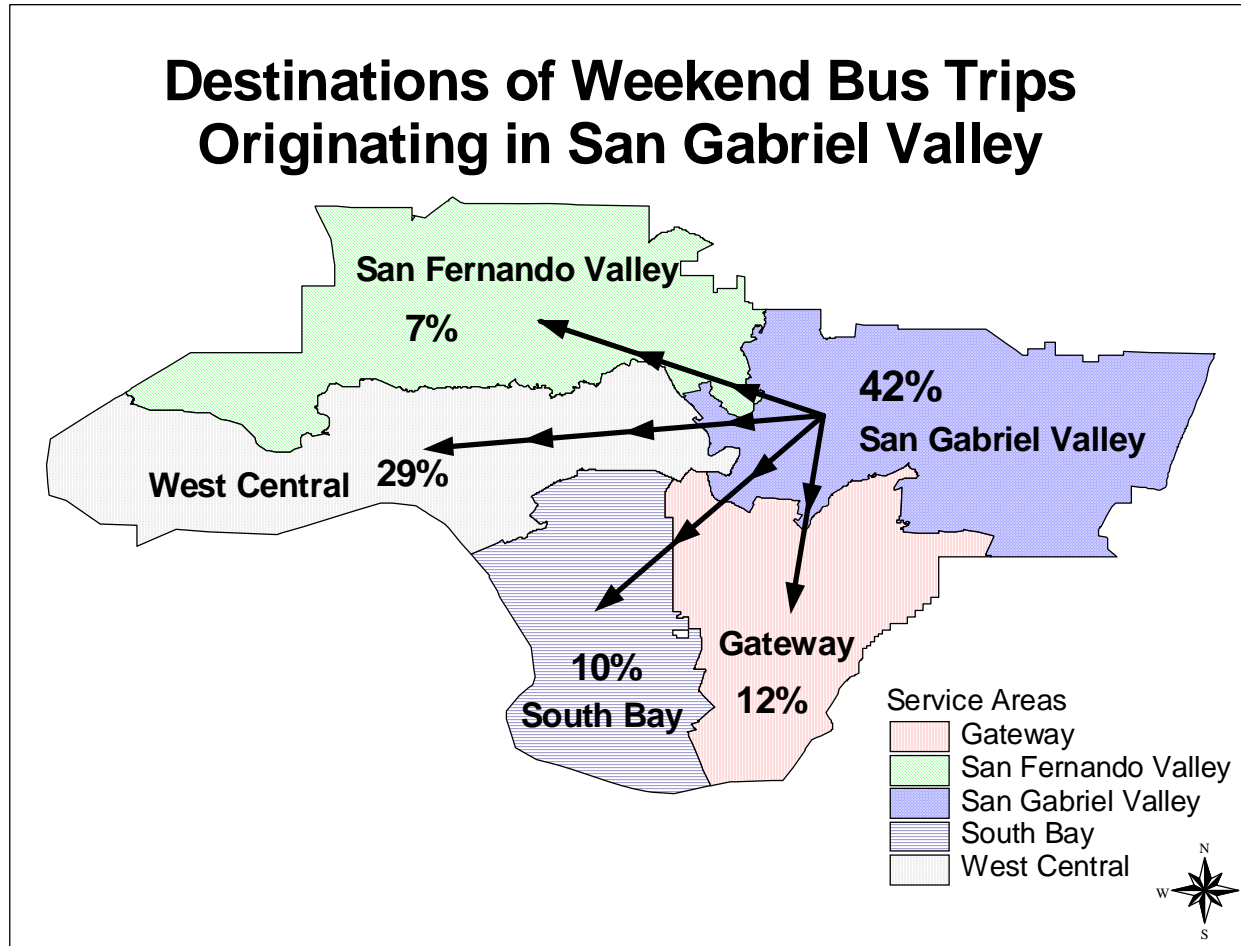
Map 2: Destinations of Weekend Bus Trips Originating in Gateway

## Destinations of Weekend Bus Trips Originating in San Fernando Valley



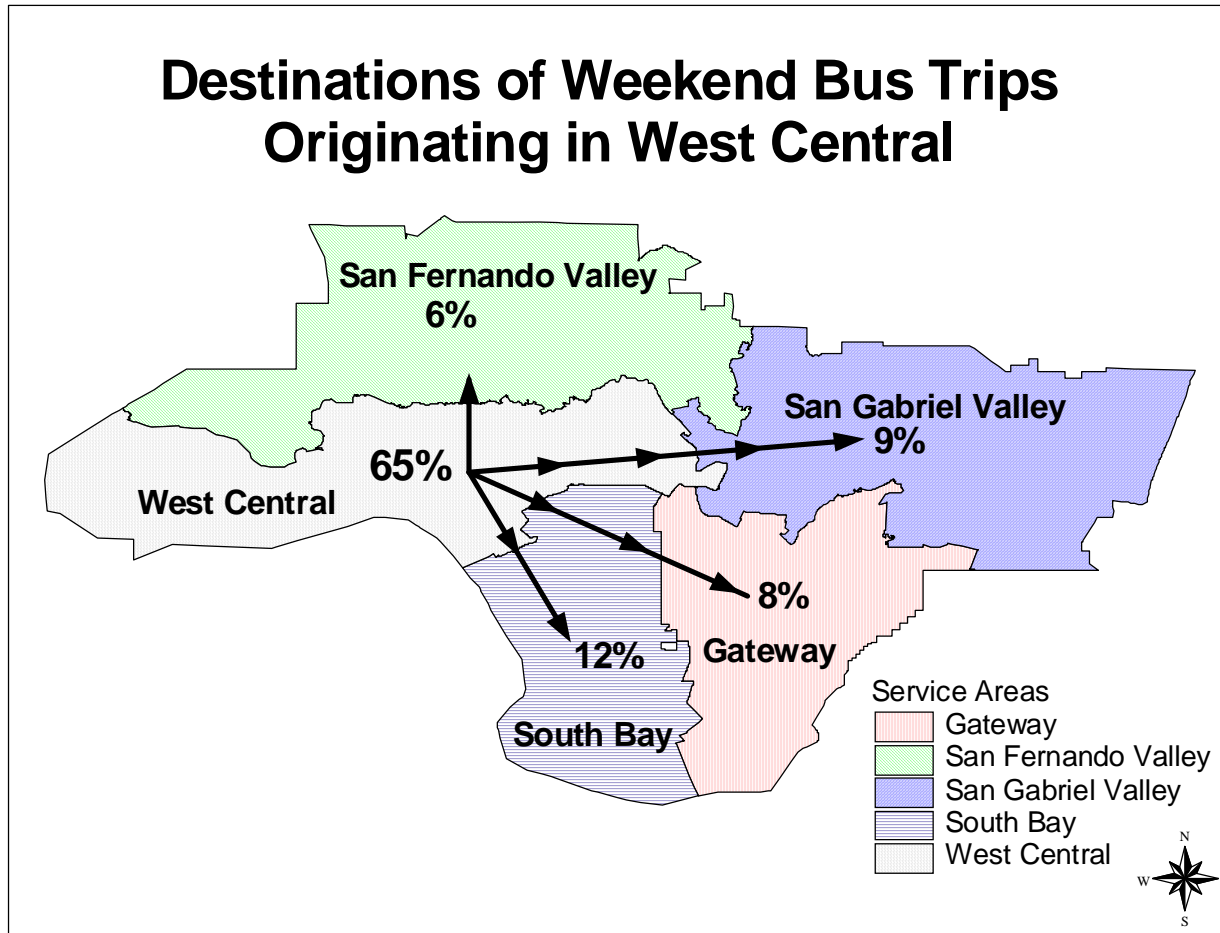
Map 3: Destinations of Weekend Bus Trips Originating in San Fernando Valley

## Destinations of Weekend Bus Trips Originating in San Gabriel Valley



Map 4: Destinations of Weekend Bus Trips Originating in San Gabriel Valley

## Destinations of Weekend Bus Trips Originating in West Central



Map 5: Destinations of Weekend Bus Trips Originating in West Central

## **Production/Attraction**

Employing the Production/Attraction transportation planning tool, it is possible to analyze the trip purposes of MTA bus riders. Production/Attraction classifies any home-based or home-destination trip as a trip produced at home and attracted by the other end of the trip (e.g., work, school, shopping). All other trips (not involving home) are recorded strictly as being produced at the point of origin and attracted by the destination.

Even on weekends, the work trip is the major purpose for using the bus system. Figure 1 depicts the trip purposes in the Production/Attraction mode for all weekend riders. It shows that the home-work trip represents 46% of all weekend bus trips, followed by home-shopping/social/recreational (22%) and home-other (16%—including medical, church, children, bank, auto repairs, among others).

Figure 2 examines this factor controlling for frequency of riding and indicates that the home-work trip declines in importance as riding frequency declines. That is, whereas home-work trips are 51% of all trips taken on weekends by people who ride the bus 5 or more days per week, these trips decline to 21% for 1-2 day per week travelers and down to 5% for riders who use the bus less than once per month (not shown on Figure 2).

In total, home-produced trips represent 90% of all weekend trips for riders who use MTA buses 5 or more days per week,<sup>1</sup> 86% for those who ride 3-4 days, and 90% for 1-2 day riders. Home-produced trips decline to 79% for riders of less than once per month.

Table 9 shows the major trip purposes by service sector. Home-work trips are of lesser significance in South Bay (41%), Gateway (45%), and San Fernando Valley (46%) than they are in the San Gabriel Valley (52%) and West Central (51%). Home-social/shopping/recreational trips are consistently the second most prevalent trip purpose for weekend bus trips.

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<sup>1</sup> This total and the others that follow, include the data reflected in Figure 2 plus home-school trips (5% for 5+ day riders—2% for 3-4 day riders—3% for 1-2 day riders).

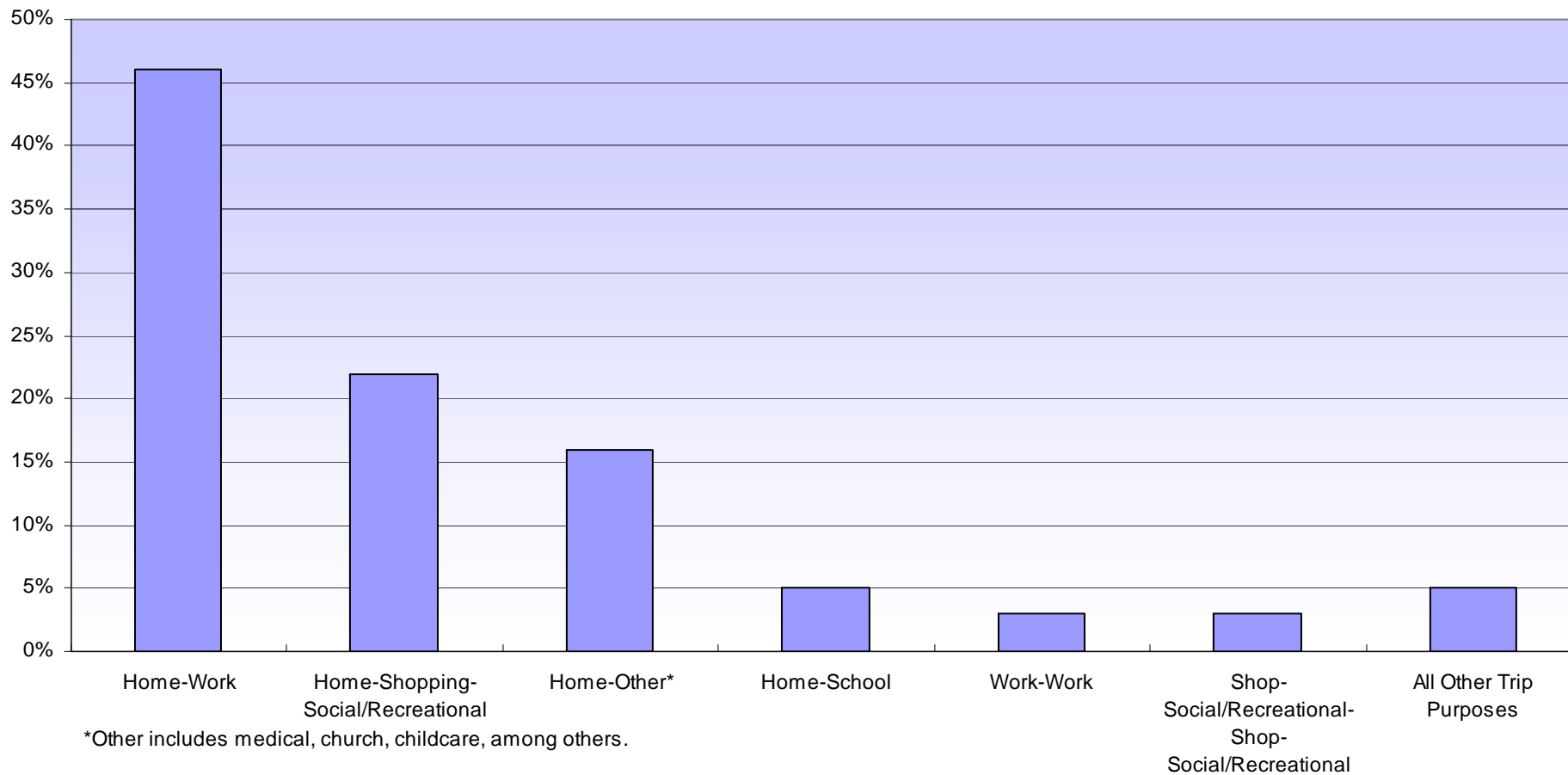


Fewer trips are work-related (e.g., home-work, work-shopping, school-work) on Sunday (47%) than on Saturday (53%), with Sunday's social/recreational/shopping trips more significant (31%) than are these trips on Saturday (24%).

<b>Table 9:</b>					
<b>Major Trip Purposes (Production/Attraction)</b>					
<b>by Service Sector - Weekend</b>					
	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Home-Work	46%	52%	51%	41%	45%
Home-Shopping/ Social/Recreation	21	22	21	21	24
Home-Other	10	14	17	16	14
Work Produced*	5	3	4	6	6
School Produced*	6	0	0	2	0
Shopping/Social/ Recreation Produced*	6	3	2	3	2
Home-School	2	5	3	7	5

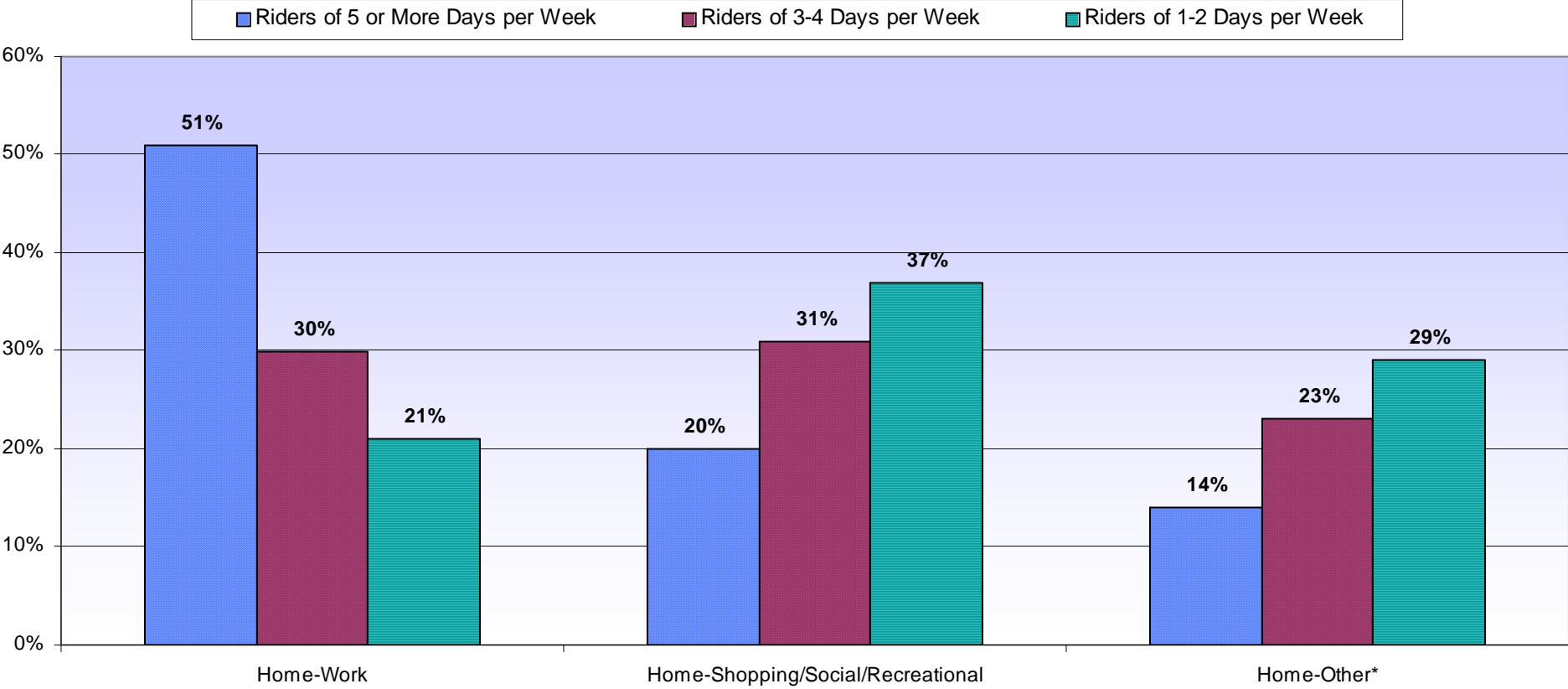
\*These include all non-home trips that originate at work, school, or a shopping/social/recreational site (e.g., work-work, work-shopping, school-social).

**Figure 1  
Trip Purpose (Production/Attraction)  
MTA Bus Weekend**



**Figure 1 Trip Purpose (Production/Attraction) MTA Bus Weekend**

**Figure 2**  
**Major Trip Purposes (Production/Attraction)**  
**by Riding Frequency MTA-Weekend**



\*Other includes medical, church, childcare, among others.

**Figure 2: Major Trip Purposes (Production/Attraction) by Riding Frequency MTA- Weekend**

### **Travel Time**

Figure 3 that shows that an average weekend one-way trip takes 60 minutes. The largest single component is time on all buses and trains (25 minutes). Getting to and from buses and trains consumes 10 minutes each. Riders wait an average of 15 minutes for all weekend buses and trains. Mean travel times (not shown) are greater than the medians (71.1 total minutes versus 60 minutes) because there are some very long trips indicated that skew the mean upward.

Table 10 indicates that riders in the San Gabriel Valley make the longest average one-way trip (70 minutes). Waiting time is lowest (12 minutes) in Gateway. West Central riders spend the least amount of time traveling (55 minutes), especially travel time on buses and trains (20 minutes). San Gabriel Valley and Gateway riders take the greatest amount of time getting from their last stop to their final destination (15 minutes each).

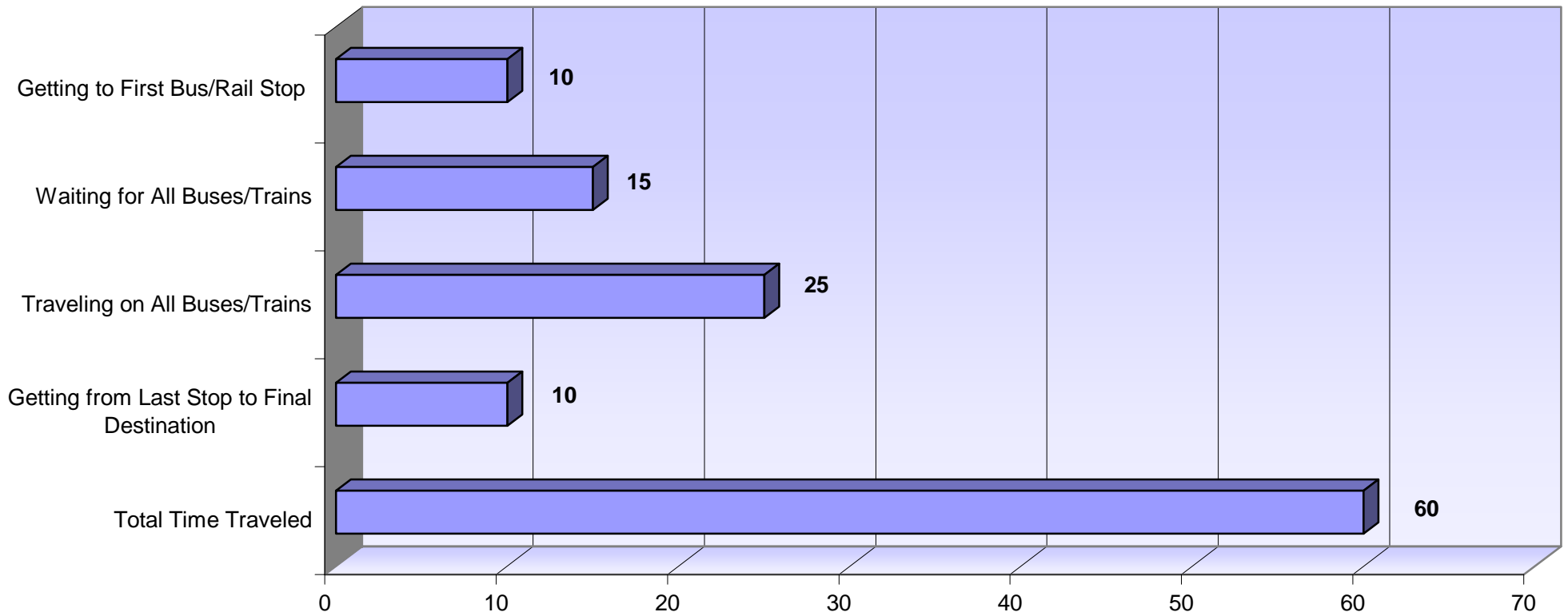
### **Frequency of Use**

Figure 4 shows that 83% of weekend bus riders are frequent riders who use Metro buses 5 or more days per week, with mean usage of the Metro bus system at 5.0 days per week. There is some minor variation in that riders in the San Fernando Valley and South Bay have the highest percentage of frequent riders, while the Gateway sector has the lowest level of frequent riders (84% versus 81%).

### **Method of Payment**

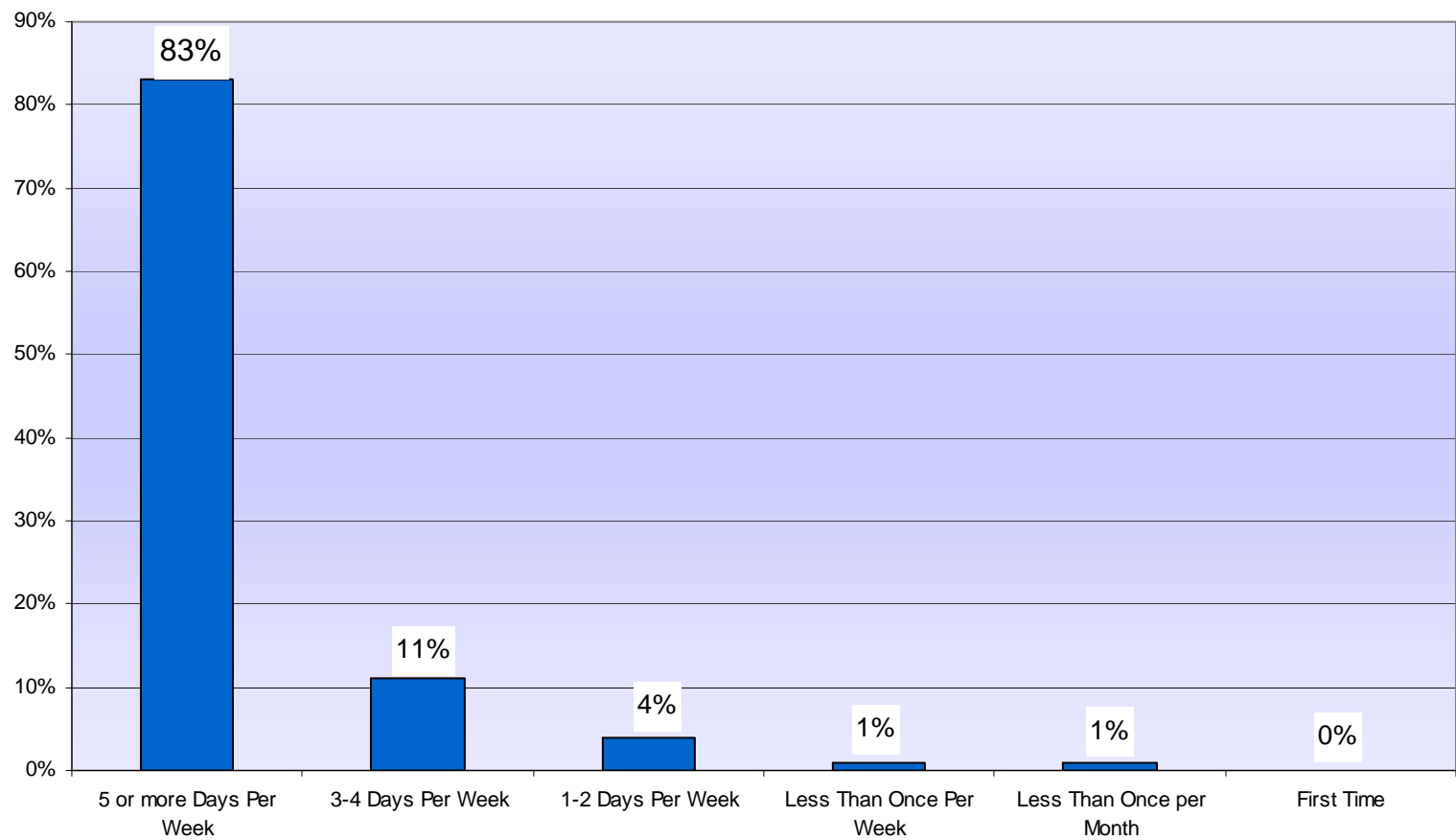
Figure 5 shows that well over one-half (55%) of Metro bus riders use passes to pay their boarding fare. Figure 5 also shows that 34% of passholders use the regular monthly pass, with the weekly pass (23%) next in usage, and the semi-monthly pass following at 14%. Table 11 shows that passholders are predominant in the South Bay sector (60%) but least prevalent in the San Fernando Valley and Gateway sectors (each 50%).

**Figure 3**  
**Median Time Spent on Various Components**  
**of One-Way Trip (in minutes)**  
**MTA Bus--Weekend**



**Figure 3: Median Time Spent on Various Components of One-Way Trip MTA Bus- Weekend**

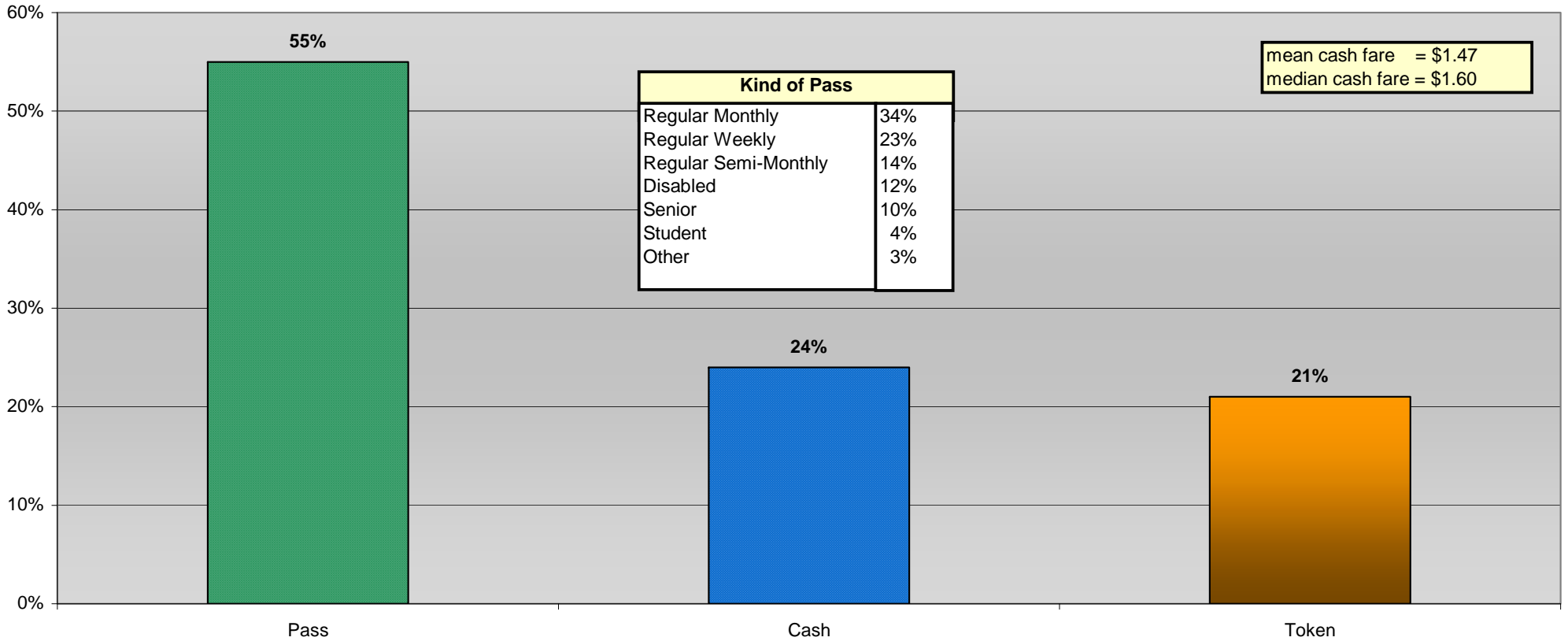
**Figure 4**  
**Frequency of Riding Metro Buses**  
**MTA System-Weekend**



% of 5+ Day Riders by Sector	
San Fernando Valley	84%
San Gabriel Valley	83%
West Central	83%
South Bay	84%
Gateway	81%

**Figure 4: Frequency of Riding Metro Buses MTA System- Weekend**

**Figure 5**  
**Method of Payment Used to Board**  
**First Bus/Train of One Way Trip**  
**MTA Bus Weekend**



**Figure 5: First Bus/Train of One Way Trip MTA Bus- Weekend**

<b>Table 10:</b>					
<b>Median Time Spent on Various Components of the</b>					
<b>One-Way Trip (in minutes)</b>					
<b>by Service Sector - Weekend</b>					
	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Getting to First Bus/Rail Stop	10	10	10	10	10
Waiting for All Buses/Trains	15	15	15	15	12
Traveling on All Buses/Trains	30	30	20	25	25
Getting from Last Stop to Final Destination	10	15	10	10	15
Total Time Traveled*	65	70	55	60	62

\*Total time traveled is the sum of the above individual trip components; it is not a median.

<b>Table 11:</b>					
<b>Method of Fare Payment</b>					
<b>by Service Sector - Weekend</b>					
	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Pass	50%	55%	55%	60%	50%
Cash	31	22	21	20	26
Token	19	23	24	20	24



Figure 5 also shows that 24% of MTA bus riders pay their boarding fare with cash. The mean cash fare is \$1.47 and the median fare is \$1.60.<sup>1</sup> Riders in the San Fernando Valley pay their fare with cash to a greater extent than riders in the other sectors (31%). Riders 51 years of age and older tend to use passes more than do riders 25 years of age and younger (69% versus 40%).

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<sup>1</sup> The boarding fare on each line is \$1.35 and the cost of a transfer is \$.25.

## SATISFACTION WITH METRO BUS SERVICE FEATURES

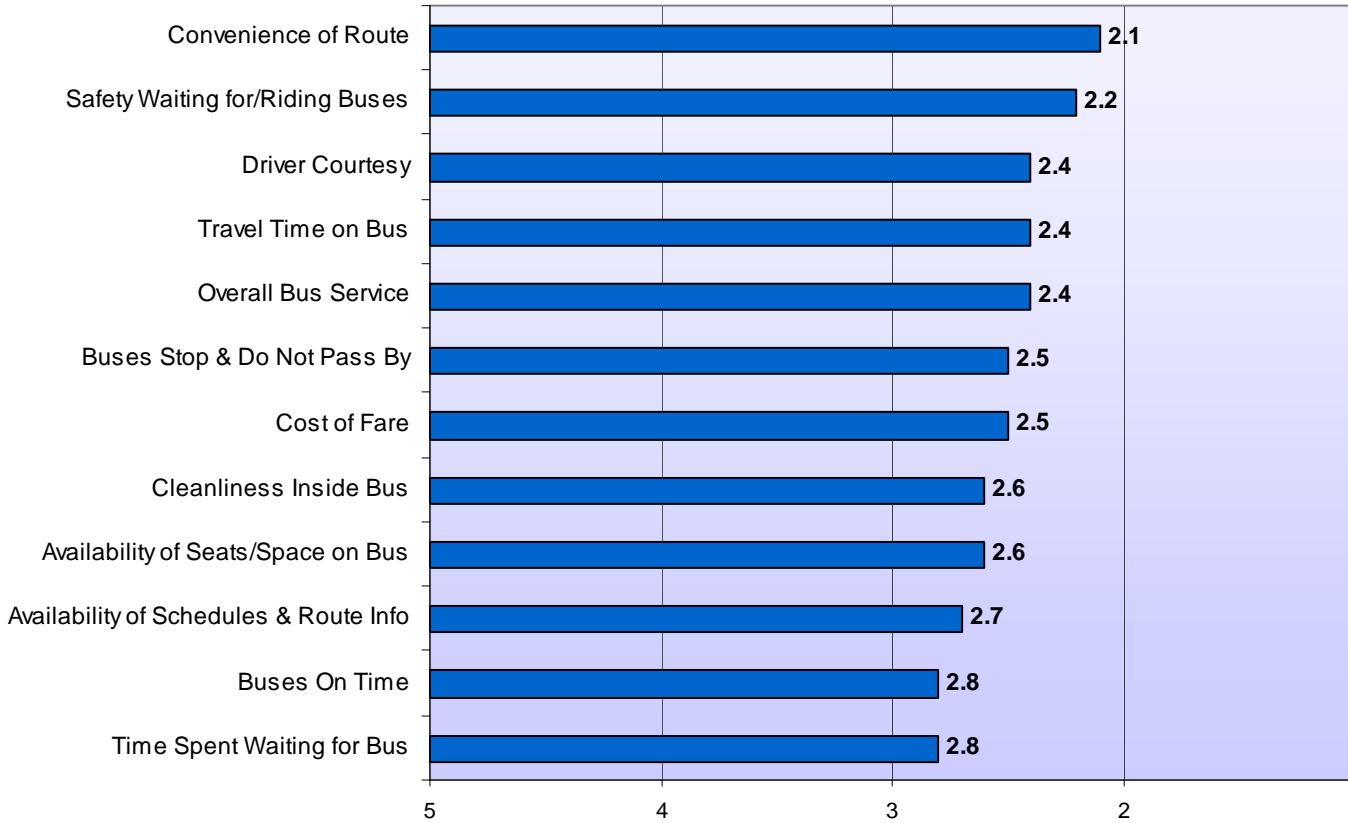
Generally speaking, Metro Bus weekend riders are satisfied with the service features provided by MTA. Figure 6 shows that overall satisfaction for the entire MTA system is 2.4 on a scale of 1-5, with 1 = very good and 5 = very poor. More than one-half (55%) of all riders on weekends rate overall services as either very good or good.

Figure 6 also shows that convenience of route is the most satisfactory of all features (2.1). Next in order of satisfaction is safety while waiting for or riding buses (2.2)... Buses being on time and time spent waiting for a bus are rated as least satisfactory (each 2.8).

Using Pearson's  $r$  measures of association (Table 12), it is possible to identify those individual features that are most correlated with overall satisfaction. Satisfaction with cost of fare ( $r = .47$ ), safety ( $r = .52$ ), and convenience of route ( $r = .55$ ) have the lowest correlation with the overall satisfaction, although these are moderately strong associations. Satisfaction with buses being on time ( $r = .64$ ) and buses do not pass by ( $r = .62$ ) have the strongest satisfaction with overall satisfaction and can be classified as strong relationships. The balance of features all demonstrate correlations with overall satisfaction of between .60 and .61. Taken together, all 11 features explain 68% of overall weekend satisfaction ( $R^2 = .68$ ), leaving 32% to be explained by other features or characteristics. Income, frequency of travel, amount of fare paid, and age are not important contributors to explaining overall satisfaction, all of which demonstrate weak associations with overall satisfaction.

Table 13 shows that riders in the Gateway sector are more satisfied with overall bus service (2.3) than are riders in other sectors, however, the differences are small. The specific service features within the Gateway sector that are most satisfactory in comparison to other sectors are convenience of route (2.0), travel time (2.2), cleanliness inside bus (2.5), and buses being on time (2.6).

**Figure 6**  
**Mean Satisfaction Ratings for Various Features of**  
**MTA Bus Service--Weekend**  
 (1=very good; 2=good; 3=fair; 4=poor; 5=very poor)



Bus Feature	% Indicating Choices 1 & 2
Convenience of Route	66%
Safety Waiting ...	66%
Driver Courtesy	58%
Travel Time on Bus	57%
Overall Bus Service	55%
Buses Stop...	54%
Cost of Fare	53%
Cleanliness Inside Bus	49%
Availability of Seats...	49%
Availability of Schedules ...	49%
Buses On Time	44%
Time Spent Waiting...	43%

**Figure 6: Mean Satisfaction Ratings for Various Features of MTA Bus Service- Weekend**

<b>Table 12:</b> <b>Strength of Relationships Between Overall Satisfaction</b> <b>and Satisfaction With Individual Service Features</b> <b>MTA Weekend Bus Riders</b>	
Service Feature	Measure of Association Between Satisfaction with Feature and Overall Satisfaction (Pearson's <i>r</i> )
Buses On Time	.64
Buses Do Not Pass By	.62
Travel Time	.61
Cleanliness Inside Bus	.61
Availability of Schedules/Timetables	.61
Time Waiting for Bus	.61
Driver Courtesy	.60
Availability of Seats/Space	.60
Convenience of Route	.55
Safety Waiting/Inside Buses	.52
Cost of Fare	.47

<p align="center"><b>Table 13:</b></p> <p align="center"><b>Satisfaction With Various Service Features*</b></p> <p align="center"><b>by Service Sector – Weekend</b></p> <p align="center"><b>(1 = very good; 5 = very poor)</b></p>					
	San Fernando Valley	San Gabriel Valley	West Central	South Bay	Gateway
Convenience of Route	2.2	2.2	2.1	2.1	2.0
Safety	2.1	2.3	2.2	2.2	2.2
Driver Courtesy	2.4	2.4	2.4	2.4	2.3
Travel Time	2.5	2.5	2.5	2.4	2.2
Overall Bus Service	2.4	2.5	2.4	2.4	2.3
Buses Do Not Pass By	2.4	2.5	2.6	2.6	2.4
Cost of Fare	2.5	2.4	2.5	2.5	2.4
Cleanliness Inside Bus	2.6	2.7	2.7	2.6	2.5
Availability of Seats/Space	2.5	2.7	2.7	2.7	2.5
Availability of Schedule/Route Information	2.9	2.7	2.7	2.7	2.6
Buses on-Time	2.9	2.8	2.8	2.7	2.6
Time Waiting	3.0	2.8	2.8	2.8	2.7

\*Listed in same order as Figure 6 for comparison purposes.

San Gabriel Valley riders are least satisfied with overall bus service (2.5) but otherwise do not demonstrate significant differences by specific service feature. San Fernando Valley riders show the greatest satisfaction with safety (2.1) but are least satisfied of all riders regarding time waiting (3.0), buses on time (2.9), and availability of schedules and route information (2.9).

The contrast between Saturday and Sunday riders is remarkably indistinct, with exactly the same satisfaction ratings for all service features other than .1 differences in buses being on time (in favor of Sunday) and seat/space availability (in favor of Saturday).

Statistical tests of significance (Analysis of Variance, Independent Samples t-test, and Chi-Square) were performed upon the data in order to evaluate the possible existence of relationships between demographic/travel characteristics and satisfaction. Statistically significant relationships that might offer further insight for MTA marketing and MTA operations are highlighted below. Only differences of .4 or greater in satisfaction ratings are reported, although certain other differences are also statistically significant, indicative of real, but relatively inconsequential distinctions.

**Ethnicity:**

Asians are significantly more dissatisfied than other ethnic groups with regard to most service features, including the following:

- Time waiting (3.2 versus 2.7 for African-Americans and Whites and 2.8 for Latinos).
- Convenience of route (2.4 versus 1.9 for Whites).

**Income:**

- Riders who earn under \$7,500 are more satisfied with the cleanliness inside the bus (2.5) than are those who earn \$25,000 and more (2.9).
- Riders earning under \$7,500 are more satisfied with route information and schedule availability (2.5) than are those who earn \$25,000 and more (2.9).

### **Frequency of Riding:**

- Riders who ride buses 3 or more days per week are less satisfied with the availability of schedules and route information (2.7) than are those who ride less than one day per week (2.2).
- Riders who use the bus 3 or more days per week are also more dissatisfied with buses that pass them by (2.5) than are those who ride 2 days or less per week (2.1).

As a corollary to satisfaction, riders were asked which service feature they would most want to be improved. Figure 7 shows that riders prefer that buses being on time (19%) and time waiting for the bus (18%) were selected most for improvement. This is consistent with the poorer satisfaction rating that these features demonstrated. Overall satisfaction is highest for weekend riders who want schedule availability (2.1) and cost of fare (2.1) improvements, while it is lowest on the weekends among riders who prefer improvements to safety (2.7), travel time (2.7), and buses on time (2.6).

Differences among various demographic and travel characteristic subgroups that exceed 6% are provided below. No notable differences, however, exist between Saturday and Sunday riders.

### **Age:**

- Riders over 50 years of age are more inclined to prioritize safety (10% versus 3% for those 25 and under) and on-time performance (24% versus 15% for those 40 and under).
- Riders over 40 are less inclined to give priority to waiting time (15%) than are younger riders age 25 and under (24%).

### **Ethnicity:**

- Latinos prioritize improvements to waiting time (20%) and driver courtesy (13%) more than do White riders (16% and 5%, respectively).
- Whites give priority to seat/space availability (19%) to a greater extent than do Latinos (9%) and Asians (12%).
- Asians demonstrate greater priority for safety improvements (10%) than do Whites (2%) and for on-time improvements (21%) more African-Americans (16%).

### **Frequency:**

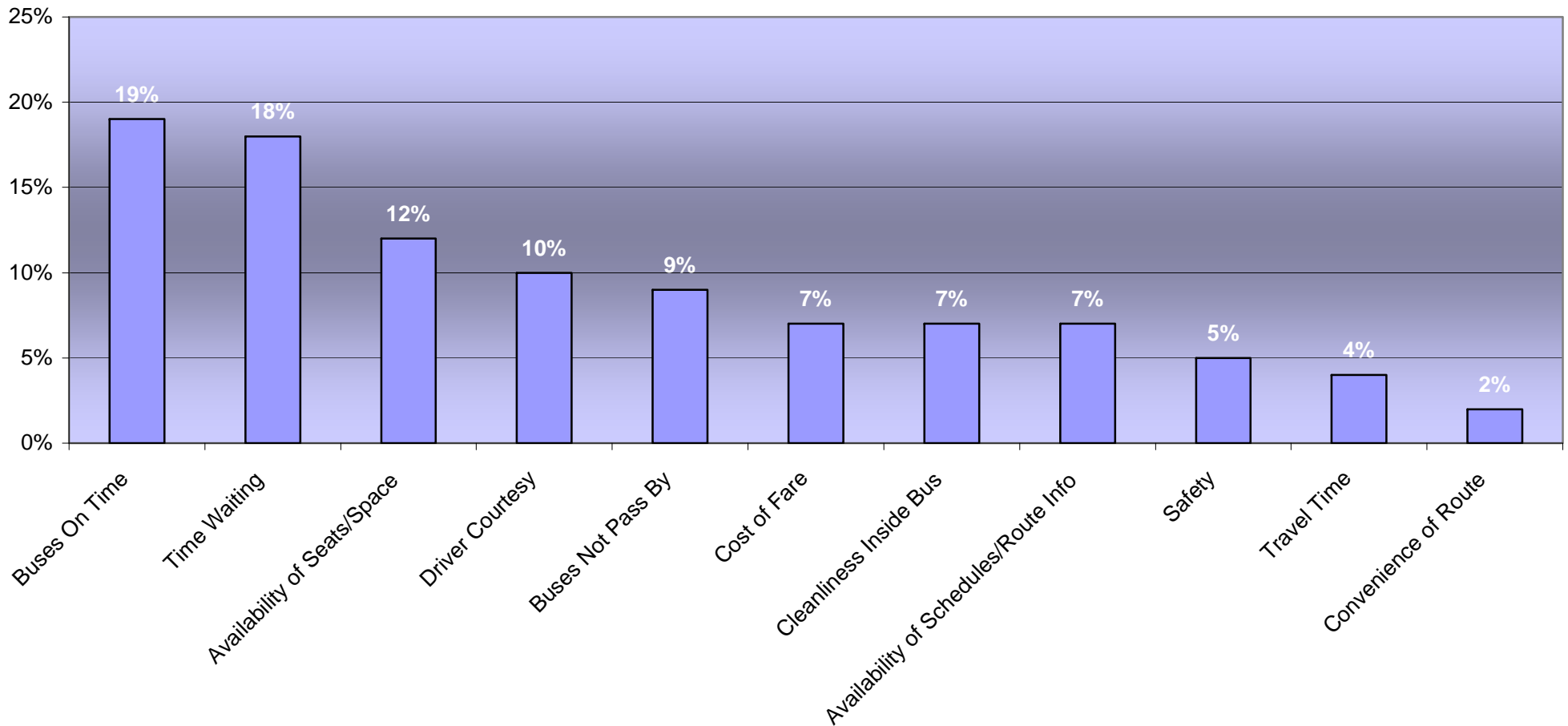
- Riders who use the bus 3 or more days per week prioritize on-time performance improvements (18%) more than do less frequent travelers (10%).
- Those who travel less than once per week give priority to safety enhancements (17%) substantially more than do riders who use the bus at least once per week (4%).

**Attraction:**

- Waiting time improvements are of a higher priority for those riders going to school (24%) than for those going to work (17%).
- On-time improvements, however, are more important to those going to work (19%) than those going to school (12%).
- Improvements to seating and space availability have greater priority among those going to school (17%) and to shopping/recreation/social attractions (16%) than among those going to work (10%).



Figure 7  
**Service Feature Desired to Be Improved--  
MTA Weekend Bus Riders**



**Figure 7: Service Feature Desired to Be Improved- MTA Weekend Bus Riders**

## APPENDIX A: METHODOLOGY

### Survey Design

The FY 2002 On-Board Bus Survey was designed by the combined efforts of the MTA staff and Rea & Parker Research. The process of survey design involved focus groups in March and April 2001. Each set of 2 focus groups covered a specific theme. On March 6, two groups in Central Los Angeles were conducted (one in Spanish) concerning advertising the survey with car cards and take-ones in addition to identifying the incentives that would contribute most to encouraging participation among riders.

Two focus groups were held in Norwalk on March 29—one among young riders to identify their willingness to participate and to pretest some aspects of the survey (e.g., question phrasing, comprehensiveness, understandability, relevance). Two further groups were conducted on April 5 in the Crenshaw area of Los Angeles (one among African-Americans—typically an under-participating group of riders). And, lastly, the survey was pretested in East Los Angeles in two focus groups of Latinos in East Los Angeles—one group in Spanish. One further focus group was held in August to pretest the telephone survey.

Formal pretests of the preliminary survey instrument were conducted on Line 30 and Line 66 from April 19-22, 2001, and again on May 1, 2001. These pretests involved 1,128 respondents, 56% of whom (635) provided surveys that were at least 75% complete and 41% of which (466) were completed in Spanish.

Problems were identified in respondents' accurately recording other buses and trains that were a part of their trip, in their providing generic responses to specific address requests (e.g., "my home" or "trabajo" instead of addresses), and in their reluctance to complete all 12 parts of the satisfaction questions. Efforts were undertaken to clarify and make bolder certain instructions, to clarify certain wording, and to shorten the "appearance" of the survey instrument. The final survey instrument for MTA buses is attached to this report in Appendix C. There are a total of 19 questions, including an unnumbered home address, totaling 40 individual items (variables).

## Sample

Initially, a random sample of bus runs was selected in order to achieve a distribution among bus lines that would include a minimum of 10,000 weekend respondents, 75% of whom (7,500) were to have completed their surveys with sufficient thoroughness to be considered "completed surveys," as defined by MTA below.

A "completed" survey shall have:

- Validated (logically ordered and reasonable) origin and destination x/y coordinates, validated (logically ordered and reasonable) boarding stop and alighting stop x/y coordinates, validated (reasonable) home address x/y coordinates, trip purpose, mode of access and mode of egress.
- For a survey to be considered complete, it must also have a unique ID number, the line/route, direction, the time period ("peak" or "off-peak") and at least 75% of all other items completed (namely, demographics, trip characteristics, and customer-satisfaction ratings).

The initial weekend sampling plan is attached to this Appendix. The number of runs selected was based upon MTA boarding statistics and an assumed 23% response rate, as suggested in the MTA Request for Proposals. On each sampled bus, every passenger of age 13 and over was offered a survey.

Survey implementation began on May 29, 2001, and continued into August 2001, when it became apparent to Rea & Parker Research that a 23% response rate was not to be achieved for a variety of reasons, in particular the increased difficulty and complexity of this survey instrument in comparison to the prior one, a completely different sampling plan in this survey compared to the prior one (no effort was made to census smaller volume lines in the previous survey in order to achieve  $\pm$  5% margins of error for each line).

The initial sampling plan called for surveying to be complete within approximately 20 weeks (mid-October, 2001), but the discovery of the lower response rate caused the sampling plan to be revised to 3,500 weekend MTA participants, with an extension of time to complete surveying to December 2001.

In early 2002, once the surveys were tallied, it was determined by Rea & Parker Research that there still existed a shortage in meeting the MTA objective. Supplemental surveys were

conducted in late February and early March 2002, once again on heavily traveled bus lines, but on bus runs not previously surveyed.

Ultimately, buses carrying an estimated 64,000 weekend MTA patrons were surveyed. A total of 35,000 (approximate) surveys were distributed on the MTA weekend buses (55% of estimated ridership).

From the surveys distributed, 3,794 weekend bus riders provided surveys that qualified as "complete," as defined above, or "acceptably incomplete"—containing "some missing address, trip purpose, or mode of access/egress data... and at least 50% of all other survey items completed." The response rate from MTA weekend surveys was 6% based upon MTA boarding statistics and 11% based upon actual surveys distributed.

Manual post-coding of returned surveys indicated that 73% of the 3,794 MTA weekend surveys were identified as "complete." At a later stage, survey address data were geo-coded. The geo-coding process successfully geo-coded 2,791 MTA weekend boarding stops (74%), 3,114 MTA weekend origin locations (82%), 2,693 MTA weekend alighting stops (71%), 2,835 weekend destination locations (75%), and 2,721 MTA weekend riders' home addresses (74%).

Overall, the 3,794 MTA weekend surveys represent a margin of error of  $\pm 1.6\%$ . By sampling plan quartile, the most lightly traveled quartile achieved a  $\pm 6.0\%$  margin of error, with the others achieving considerably better—up to  $\pm 2.3\%$ .

Among the weekend participants, 60% were Saturday riders and 40% were Sunday riders, reflecting MTA's boarding statistics of 58% on Saturday and 42% on Sunday.

In order to establish satisfactory representativeness, weights were calculated and applied for each bus line (where more lightly traveled lines were over-sampled vis-a-vis heavier lines, especially during the early stages of the survey process). These weights (over 100 in number) are contained and described in full in the data set that accompanies this report.

For further sample validation, direction of travel can be examined. Table A-1 depicts the distribution of the sample by direction traveled and demonstrates substantial directional symmetry for the sample.

<b>Table A-1:</b>		
<b>MTA Weekend Sample</b>		
Direction	<i>f</i>	%
North	933	24.6
South	1,016	26.8
East	843	22.2
West	1,002	26.4
Total	3,794	100.0

**Survey Implementation**

The implementation of a such a geographically widespread survey, covering almost all of Los Angeles County and so large in sample size, is a significant task and one that requires substantial personnel, supervision, and significant system controls. The bus runs that were randomly selected originate and end at one of MTA's 11 bus divisions throughout the County from Carson to El Monte to the San Fernando Valley.

Rea & Parker Research survey staff members were assigned to board the bus either when it pulled out of the division or with a relief operator when he or she was driven with the surveyor by MTA from the divisions to a boarding stop en route. One last boarding option was at a bus stop that was a walkable distance away from the division.

Surveyors reported to the division between 20 and 45 minutes preceding their assignment in order to allow time to prepare for their day and to travel to the bus at another site, if necessary. The Assignment Log for each surveyor contained their time of arrival at the division, the bus run assigned (recognizable on the vehicle itself by the bus route number and a small set of numbers viewable from the front of the bus under the operator area), where and when they would board and alight from the bus, the number of one-way trips their bus run was scheduled to make, and how they would reach or return from a bus stop other than at the division. Surveyors were further given Trip Logs for each

one-way trip that contained a list of all stops the bus would make in each direction so that the surveyor could record the survey numbers distributed at each stop. The Assignment Log and Trip Log forms are attached in sample form in this Appendix.

A supervisor from Rea & Parker Research was on site at the division the entire time surveyors were in the field, from 4 a.m. to 9 p.m. on many occasions.

One last control form was utilized—the Survey Number Assignment sheet, also attached in this Appendix. This form assigned a specific number of pre-numbered surveys to each assignment (cross-referenced to the Assignment Log number) for on-site supervisors to give to the on-board surveyors. The number of surveys assigned was based upon the pretest and varied from 67% to 80% of the estimated number of riders on-board the bus run, depending upon the total volume (a lower percentage for higher volume buses). At the end of each week, all undistributed surveys were tallied in order to identify the adequacy of the number of surveys being provided to the surveyors. With a few minor early adjustments (some early bus runs were allocated 60%), these percentages held for the entirety of the survey process.

On-board surveyors boarded the buses, made certain that a collection bag for passengers to return surveys as they alighted at the rear door was in place, and then assumed their position at the front door in order to distribute surveys to bus patrons as they boarded. Surveyors were instructed to stay at the front door so that they would always know the stop being made (for recording purposes) and always be available to distribute surveys to boarding passengers.

Surveyors were provided with a tote bag for their surveys, pencils to distribute to passengers who needed them, a clipboard to facilitate the completion of the Trip Logs, a safety vest, identification badge, and a sign to post in the front of the bus informing passengers that there would be a "Survey Today."

At the end of their assignment, surveyors returned the completed surveys collected from passengers or taken from the collection bag to the on-site supervisor for review of quality and quantity and in order to ascertain the adequacy of surveyor performance.

### **Weekend Sampling Plan**

Saturday and Sunday MTA bus routes have been allocated 10,000 surveys in the 2001 On-Board Survey. With average Saturday ridership volume at 615,935 and Sunday at 448,227, the allocation (57.9%-42.1%) between the two days on a proportionate basis is 5,800 Saturday surveys and 4,200 Sunday surveys. In order to achieve these samples, approximately 29,000 and 21,000 riders will have to be approached for participation on Saturday and Sunday, respectively (assuming a 20% response rate).

Initially, samples involving representation of all lines was contemplated; however, with a mean ridership per run of approximately 540 on Saturdays and 495 on Sundays, the total number of runs to be surveyed on Saturdays would be approximately 54, with 42 on Sundays. The total number of lines (including contracted lines) operating on these days is 107 (Saturday) and 103 (Sunday).

In order to achieve so few as just one sampled run per line, the runs would have to be divided into smaller fractional runs—approximately  $\frac{1}{2}$  runs on Saturday and  $\frac{2}{5}$  runs on Sunday. This is somewhat inefficient in terms of manpower deployment and, more importantly, very short of adequate representation on large volume lines. Therefore, Rea & Parker Research proposed an alternative approach that has been approved by MTA.

Saturday and Sunday samples were not to be structured to achieve representation on each line and instead were to be stratified into four groupings of bus lines on each of those days, allocated according to natural breaks in the ridership volumes, with roughly equal numbers of lines in each strata, as follows in Exhibit 1 (note that differences between this plan and the earlier memorandum recommending this approach are due to the addition of contract lines to the database):

**Exhibit 1**

**Distribution of Weekend Bus Lines into Ridership Volume Quartiles**

Saturday		Sunday	
Riders per line	# of Lines	Riders per line	# of Lines
I. under 700	25	I. under 700	27
II. 700 - under 2500	27	II. 700 – under 2000	23
III. 2500 – under 8500	29	III. 2000 – under 7500	27
IV. 8500 and above	26	IV. 7500 and above	25

In particular, Exhibit 2 depicts the weekend bus lines, including the number of bus runs included within those lines, and the strata to which they were assigned.

For diversification purposes, runs were divided into ½ runs and randomly sampled within each stratum. Each stratum was sampled to achieve a minimum +/-5% margin of error, which was accomplished with an oversampling of the four smallest strata (two on Saturday and two on Sunday) and a small undersampling of the large ones. The disproportionate samples will be weighted and expanded to achieve an overall representative sample in the final analysis. Proportionate and disproportionate sample sizes, margins of error, and the corresponding number of riders to be approached are depicted in Exhibit 3. Exhibit 4 lists the bus runs ultimately selected in the samples.

This methodology provides an adequate sample of large volume routes, in the aggregate, as opposed to the method initially considered (which would have significantly underrepresented them), and it also represents small volume routes, as an aggregated unit of analysis, to the same +/-5% margin of error as are the individual bus lines on weekdays—thereby retaining a certain logic and methodologically symmetrical rationale.



**Exhibit 2**

**Allocation of Specific Bus Lines to Weekend Strata**

<b>Stratum</b>	<b>Bus Lines</b>	<b># of Bus Runs</b>
Saturday I	22, 56, 58, 65, 102, 112, 124, 161, 167, 168, 205, 209, 214, 218, 220, 225, 232, 236, 250, 254, 256, 270, 487, 608, 631	73
Saturday II	96, 107, 125, 130, 154, 158, 188, 201, 202, 245, 255, 262, 266, 267, 268, 305, 362, 401, 434, 439, 444, 460, 471, 483, 490, 550, 605	127
Saturday III	10, 38, 53, 55, 76, 78, 90, 92, 105, 108, 110, 115, 117, 120, 150, 152, 163, 166, 200, 206, 212, 217, 230, 234, 260, 446, 484, 603, 750	314
Saturday IV	14, 16, 18, 20, 26, 28, 30, 33, 40, 45, 60, 66, 68, 70, 81, 94, 111, 156, 165, 180, 204, 207, 210, 251, 561, 720	612
Sunday I	22, 56, 58, 65, 96, 102, 112, 124, 130, 161, 167, 201, 202, 205, 214, 218, 220, 250, 254, 256, 267, 270, 401, 444, 471, 490, 631	76
Sunday II	10, 90, 107, 120, 125, 158, 166, 188, 232, 236, 245, 255, 262, 266, 268, 305, 362, 434, 439, 460, 487, 550, 605	106
Sunday III	38, 53, 76, 78, 92, 105, 108, 110, 115, 117, 150, 152, 163, 165, 200, 206, 212, 230, 234, 251, 260, 446, 483, 484, 561, 603, 750	250
Sunday IV	14, 16, 18, 20, 26, 28, 30, 33, 40, 45, 55, 60, 66, 68, 70, 81, 94, 111, 156, 180, 204, 207, 210, 217, 720	470

**Exhibit 3**

**Sample Sizes/Number of Riders Needed by Stratum (Weekend)**

<b>Stratum</b>	<b>Total Riders</b>	<b>Proportionate Sample Size*</b>	<b>Disproportionate Sample Size**</b>	<b>Margin of Error +/-</b>	<b>Number of Riders Needed***</b>
Saturday I	8,231	78	365	5.0%	1,825
Saturday II	40,173	379	380	5.0%	1,900
Saturday III	147,071	1,385	1,385	2.6%	6,925
Saturday IV	420,460	3,958	3,670	1.6%	18,350
<b>Total Saturday</b>	<b>615,935</b>	<b>5,800</b>	<b>5,800</b>	<b>1.3%</b>	<b>29,000</b>
Sunday I	10,473	98	370	5.0%	1,850
Sunday II	22,573	212	378	5.0%	1,890
Sunday III	162,083	1,519	1,344	2.7%	6,720
Sunday IV	253,098	2,371	2,108	2.1%	10,540
<b>Total Sunday</b>	<b>448,227</b>	<b>4,200</b>	<b>4,200</b>	<b>1.5%</b>	<b>21,000</b>

\* Based upon total sample sizes of 5,800 Saturday and 4,200 Sunday

\*\* In order to achieve maximum +/- 5% margins of error for each stratum, smaller strata are to be oversampled, with slight undersampling of larger strata. All undersampling was allocated to Saturday IV because of its dominant size. On Sunday, the undersampling was allocated 60-40 between Sunday IV and Sunday III.

\*\*\* Assuming 20% response rate

**Exhibit 4****Randomly Selected Sample Weekend Bus Runs**

<b>Stratum</b>	<b>Bus ½ Runs (Early ½ designated as “-1”; Late ½ as “-2”)</b>
Saturday I	65001-2, 65002-2, 102001-1, 124001-1, 124002-2, 205003-1, 209001-1, 209001-2, 209002-1, 209002-2, 218003-2, 225001-1, 225003-1, 232001-1, 232006-2, 236001-1, 236002-2, 250001-2, 254001-2, 254003-2, 270004-2
Saturday II	107001-2, 107003-2, 158002-1, 158051-2, 245001-1, 483002-1, 483006-1, 490005-1, 605001-1
Saturday III	10056-1, 38006-2, 53005-2, 55052-2, 76005-1, 76009-2, 76010-2, 78001-1, 78011-1, 105031-2, 115001-2, 117004-2, 120004-2, 150001-2, 150002-1, 150041-2, 217008-1, 217008-1, 217041-2, 230002-1, 230004-2, 234003-2, 234006-2, 260004-2, 260052-1, 484004-1, 484004-2, 603005-2, 750060-2
Saturday IV	14002-1, 14014-1, 16002-2, 18004-1, 18004-2, 18007-1, 18011-2, 18015-2, 18020-1, 26012-1, 26018-1, 26021-1, 26022-1, 28021-1, 28025-1, 33070-1, 40003-1, 40004-1, 40013-1, 40053-1, 40053-2, 45006-2, 45009-2, 60053-2, 60054-1, 60097-2, 66009-2, 66010-1, 68015-1, 68017-2, 70004-1, 70008-2, 70012-2, 70015-1, 81008-2, 94059-2, 94070-2, 111012-1, 156008-1, 156051-1, 204062-1, 207013-2, 207014-2, 207052-2, 251002-2, 251008-2, 251052-2, 251055-1, 561001-1, 561008-2, 720006-1, 720019-2, 720024-1
Sunday I	56002-1, 102001-2, 112001-1, 112002-1, 130003-2, 130004-2, 167001-2, 201002-1, 205002-1, 214001-2, 218003-2, 220003-2, 250001-1, 250001-2, 256001-1, 270002-1, 270003-1, 401001-2, 401002-2, 444005-2, 444007-1, 490002-2
Sunday II	10081-1, 90001-1, 90002-1, 90003-2, 158051-2, 188003-1, 236001-2, 262003-1, 262003-2, 362005-2, 550002-2
Sunday III	76008-1, 78007-1, 92008-2, 105055-1, 110003-1, 110004-1, 115007-1, 117005-1, 117005-2, 152001-2, 152004-2, 200001-2, 200002-1, 206052-1, 206054-2, 212001-2, 230002-2, 483004-2
Sunday IV	16051-1, 16055-2, 16058-1, 18004-2, 26003-2, 26018-2, 28004-1, 28010-2, 28019-2, 30004-1, 30006-2, 30013-2, 33058-1, 40008-1, 40051-2, 40052-2, 40056-2, 55007-1, 81004-2, 81053-2, 111006-1, 111008-1, 204003-2, 204010-2, 204041-2, 204060-2, 204091-1, 207002-1, 207002-2, 210004-2

**Trip Log**

*To be completed by surveyor for each trip*

<p><b>Assignment #</b> _____</p> <p><b>Trip</b> ____ <b>of</b> ____</p> <p><b>MTA 2001 On-Board Survey</b></p> <p><b>Surveyor:</b> _____</p> <p><b>Date:</b> _____ <b>Day of Week:</b> _____</p>
--

Bus Line(s)	Direction	Trip Start Location	Trip End Location
<b>10 (48-11)</b>	<b>West</b>	<b>Avalon Blvd/Avalon Stat</b>	<b>Santa Monica/Larrabee</b>

STREET	STOP CODE	AT STREET	STARTING SURVEY #
AVALON BLVD	580	AVALON STA LAYOVER	
AVALON	581	118TH	
AVALON	582	116TH	
IMPERIAL	583	AVALON	
IMPERIAL	584	SAN PEDRO	
SAN PEDRO	585	111TH	
SAN PEDRO	586	110TH	
SAN PEDRO	587	108TH	
SAN PEDRO	588	104TH	
SAN PEDRO	589	CENTURY	
SAN PEDRO	590	COLDEN	
SAN PEDRO	591	92ND	
SAN PEDRO	592	88TH	
SAN PEDRO	593	MANCHESTER	
SAN PEDRO	594	83RD	
SAN PEDRO	595	81ST	
SAN PEDRO	596	79TH	
SAN PEDRO	597	78TH	
SAN PEDRO	598	76TH	
SAN PEDRO	599	FLORENCE	
SAN PEDRO	600	69TH	
SAN PEDRO	601	67TH	

SAN PEDRO	602	65TH	
GAGE	603	SAN PEDRO	
GAGE	604	MAIN	
MAIN	605	61ST	
MAIN	606	59TH	
MAIN	607	SLAUSON	
MAIN	608	55TH	
MAIN	609	54TH	
MAIN	610	53RD	
MAIN	611	51ST	
MAIN	612	49TH	
MAIN	613	47TH	
MAIN	614	SAN PEDRO	
MAIN	615	VERNON	
MAIN	616	43RD	
MAIN	617	41ST	
MAIN ST	618	KING BL	
KING BL	619	MAIN ST	
WOODLAWN AV	620	KING BL	
WOODLAWN	621	MAPLE	
MAPLE	622	38TH	
MAPLE	623	36TH	
MAPLE	624	JEFFERSON	
MAPLE	625	30TH	
MAPLE	626	28TH	
MAPLE	627	ADAMS	
MAPLE	628	23RD	
MAPLE	629	22ND	
MAPLE	630	WASHINGTON	
MAPLE	631	16TH	
MAPLE	632	PICO	
MAPLE	633	12TH	
MAPLE	634	11TH	
MAPLE	635	OLYMPIC	
MAPLE	636	9TH	
MAPLE	637	8TH	
8TH	638	MAPLE	
8TH	639	SANTEE	
8TH	640	SPRING	
8TH	641	BROADWAY	
8TH	642	HILL	
S HILL ST	643	BROADWAY/7TH TMPT	
HILL	644	7TH	
HILL	645	6TH	
HILL	646	5TH	
HILL	647	4TH	

HILL	648	3RD	
HILL	649	2ND	
HILL	650	1ST	
HILL	651	TEMPLE	
TEMPLE	652	HILL	
TEMPLE	653	GRAND	
TEMPLE	654	FIGUEROA	
TEMPLE	655	BEAUDRY	
TEMPLE	656	BOYLSTON	
TEMPLE	657	EDGEWARE	
TEMPLE	658	DOUGLAS	
TEMPLE	659	GLENDALE	
TEMPLE	660	BELMONT	
TEMPLE	661	BONNIE BRAE	
TEMPLE	662	ALVARADO	
TEMPLE	663	ROSEMONT	
TEMPLE	664	PARKVIEW	
TEMPLE	665	RAMPART	
TEMPLE	666	OCCIDENTAL	
TEMPLE	667	VENDOME	
TEMPLE	668	ROBINSON	
TEMPLE	669	HOOVER	
TEMPLE	670	VIRGIL PL	
TEMPLE	671	VIRGIL	
BEVERLY	672	MADISON	
VERMONT	673	BEVERLY	
VERMONT	674	ROSEWOOD	
VERMONT	675	HOLLYWOOD	
VERMONT	676	CLINTON	
VERMONT	677	MELROSE	
MELROSE	678	EDGEMONT	
MELROSE	679	ALEXANDRIA	
MELROSE	680	NORMANDIE	
MELROSE	681	HARVARD	
MELROSE	682	WESTERN	
MELROSE	683	WILTON	
MELROSE	684	VAN NESS	
MELROSE	685	BRONSON	
MELROSE	686	WINDSOR	
MELROSE	687	LARCHMONT	
MELROSE	688	VINE	
MELROSE	689	ARDEN LAYOVER	
MELROSE	690	CAHUENGA	
MELROSE	691	WILCOX	
MELROSE	692	JUNE	
MELROSE	693	LAS PALMAS	

MELROSE	694	HIGHLAND	
MELROSE	695	ORANGE	
MELROSE	696	LA BREA	
MELROSE	697	FORMOSA	
MELROSE	698	POINSETTIA	
MELROSE	699	MARTEL	
MELROSE	700	GARDNER	
MELROSE	701	SPAULDING	
MELROSE	702	OGDEN	
MELROSE	703	FAIRFAX	
MELROSE	704	CRESCENT HEIGHTS	
MELROSE	705	HARPER	
MELROSE	706	ORLANDO	
MELROSE	707	LA CIENEGA	
MELROSE	708	HUNTLEY	
MELROSE	709	SAN VICENTE	
SAN VICENTE	710	MELROSE	
SANTA MONICA	711	SAN VICENTE	
SANTA MONICA	712	LARRABEE	

# MTA ON-Board Survey

## Assignment Log

To be completed by Rea & Parker Research Project Manager and On-Site Supervisor

Assignment# \_\_\_\_\_ Surveyor: \_\_\_\_\_

DATE: \_\_\_\_\_ Day of Week: \_\_\_\_\_

LINE #: \_\_\_\_\_ BUS RUN (BLOCK)#: \_\_\_\_\_ EARLY/LATE ½ RUN \_\_\_\_\_

NUMBER OF TRIPS SCHEDULED ON RUN: \_\_\_\_\_

STARTING DIRECTION: \_\_\_\_\_

COLLECTION BAG/POSTER INSTRUCTIONS: \_\_\_\_\_

*Collection Bag Instruction Key:*

*I/L=Install bag at rear door—poster behind driver: Leave on board when finished for the day*

*E/R=Existing bag/poster should be there: Remove when finished*

*I/R=Install: Remove when finished*

*[NOTE: Bring extra collection bag and poster in case they are not there]*

Scheduled Sign In Time: \_\_\_\_\_ Sign In Site (Division #): \_\_\_\_\_

Bus Departure Time: \_\_\_\_\_ Boarding Site (if different from Sign-In): \_\_\_\_\_

Directions to Boarding Site (if different) \_\_\_\_\_

Final Stop: \_\_\_\_\_ Final Stop Time (approx) \_\_\_\_\_

Scheduled Sign Out Time \_\_\_\_\_ Sign Out Site (Division #): \_\_\_\_\_

Directions back to Sign out Site (if different from Final Stop Site):  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*

Actual Sign In Time: \_\_\_\_\_

Actual Sign Out Time: \_\_\_\_\_

Initials (when log form complete) \_\_\_\_\_





**APPENDIX B: PLANNING SUBREGIONS**

**Weekend Summary Of Findings**

**Format of Appendix**

This appendix presents six Figures and one map for each of seven Subregions of Los Angeles County, as follows:

Figure 1: Demographic Profile

Figure 2: Travel Characteristics

Figure 3: Travel Time

Figure 4: Satisfaction Ratings ( means)

Figure 5: Satisfaction Ratings (percent choosing “good” and “very good”)

Figure 6: Service Features Most in Need of Improvement

O/D Map: Destinations for Trips Originating in the Subregion

Each Subregion's set of tables is grouped together and starts on the page indicated below:

San Fernando Valley Subregion.....	56
South Bay Cities Subregion.....	62
Arroyo Verdugo Subregion .....	68
Gateway Subregion .....	74
Los Angeles Central Subregion.....	80
San Gabriel Valley Subregion.....	86
Westside Cities Subregion.....	92

**Definitions of Subregions**

The Southern California Association of Governments (SCAG) distinguishes 8 planning Subregions in Los Angeles, the boundaries of which are based on the jurisdictional boundaries of local Councils of Government (COGs). For this study MTA made the following adaptations to these Subregions: (1) the San Fernando Valley was analyzed separately from the City of Los Angeles, (2) contiguous boundaries were drawn around the discontinuous Westside Cities Subregion, and (3) the thin corridor of the City of Los Angeles that stretches to Long Beach Harbor was reassigned to

neighboring Subregions. Each of these modifications effectively truncates the City of Los Angeles Subregion, the remainder of which is renamed the Los Angeles Central Subregion. The intent is to have each Subregion more accurately reflect transportation commonalities than does the use of meandering political boundaries.

Two of the reconfigured Subregions drop out of the analysis because too few respondents live there: the Malibu/Las Virgenes Subregion and the North Los Angeles County Subregion.

### **Demographics**

While females are the majority of MTA weekend bus in every Subregion, the proportion varies from 51% in the Gateway Subregion to 64% in the Westside Cities.

There are large variations in ridership ethnicity by Subregion. Latinos constitute a plurality of patrons in three Subregions (South Bay, San Fernando Valley, and Westside), with a low of 33% in the Westside Cities. They form a majority of riders in the remaining four, with a high of 79% in the Gateway Subregion. Whites are the second most common weekend rider in three Subregions (San Fernando Valley, Arroyo Verdugo and Westside), with a high of 31% in the Westside Cities. They are the least common ethnic group (among the four major groups considered) among riders in the San Gabriel Valley (8%) and also represent low proportions in South Bay (9%), Los Angeles Central (7%), and Gateway (4%). African Americans are the second most common ethnic group among riders in three Subregions (Gateway, Los Angeles Central, and South Bay), with a high of 38% in the South Bay Cities. They are the third most common in the 4 remaining Subregions, with a low of 9% in the Arroyo Verdugo Subregion. Asians are the second most common weekend rider in the San Gabriel Valley (18%), otherwise they come in fourth, with as low a proportion as 2% in both the Arroyo Verdugo and the Gateway Subregions.

Median incomes are lowest in Los Angeles Central (\$9,000) and highest in Arroyo Verdugo and Westside (\$15,000 each). Average age also varies considerably by Subregion, with a low of 39.6 years in the San Fernando Valley and a high of 45.6 years in the Westside Cities.

## **Travel Characteristics and Travel Time**

Most weekend patrons take the bus frequently – an average of 5 days a week. Westside Cities riders are an exception; they take the bus 3.9 days a week.

Weekend pass use varies dramatically by Subregion, with a high of 66% among Los Angeles Central riders and a low of 19% for Arroyo Verdugo riders. Cash use is highest in South Bay Cities at 47% and lowest in Los Angeles Central at 14%. Token use is very high in Arroyo Verdugo at 39% and lowest in the South Bay Cities at 16%.

Home-work trips do not achieve majority in any of the Planning Subregions—all of which demonstrate home-work trips between 40% and 48%, with the exception of Westside riders for whom home-work trips represent only 22% of weekend trips taken by bus. For Westside riders, home-shopping/social/recreation trips on weekends are 37%.

Travel time does not vary by Subregion as much as do other travel characteristics – the range is 60 to 65 minutes total time door to door.

## **Satisfaction**

Overall satisfaction ranges from a high of 2.2 in Arroyo Verdugo to a low of 2.5 in Los Angeles Central. Satisfaction for separate service attributes is relatively consistent across Subregions. In six of the seven Subregions, Route Convenience and Safety are among the top two most satisfactory service features rated and Time Waiting is the least satisfactory.

Buses Being On Time and Time Waiting are the features most often cited as most in need of improvement. Safety is seen as a major need in Arroyo Verdugo and the Westside Cities. Driver Courtesy is seen as most in need of improvement by a substantial minority of riders in San Gabriel Valley and Gateway – although approximately 2/3 of the weekend patrons in both Subregions give high marks to it. South Bay Cities riders (23%) think that pass-ups are the problem most in need of fixing and a large number of Westside Cities riders (16%) think availability of seats is the major problem.

## **Subregional Origins and Destinations**

The Subregional maps in this appendix show where trips originating in each Subregion are destined. There is a common pattern for all Subregions:

- Intra-Subregional travel either makes up a majority or a plurality of trips in five of the seven Subregions.
- Los Angeles Central is either the most common destination or the second most common destination for all Subregions.
- Travel to Los Angeles Central is more common than all travel to the remaining Subregions combined. This is not the case for the San Fernando Valley.

This central city orientation of inter-Subregional travel, and its frequency, contradicts a popular notion of suburban disintegration from the urban core. Los Angeles is not necessarily the loosely connected association of suburbs that has so often been portrayed. To the contrary, it is interwoven by transit to and through its central core

The one dramatic exception to this is the San Fernando Valley. With 67% of weekend bus trips being internal to the Subregion, and with connections to the Westside Cities being almost as common as those to Central Los Angeles, the San Fernando Valley has far less a Central Los Angeles orientation than any other Subregion.

**Table B-1:**  
**San Fernando Valley Subregion**  
**Demographic Profile – Weekend**  
**(n = 166)**

<u>Gender</u>		
	Female	59%
	Male	41%
<u>Ethnicity</u>		
	Latino	49%
	White	21
	African-American	19
	Asian	9
<u>Median Household Income</u>		\$11,000
<u>Mean Age (years)</u>		39.6

---

**Table B-2:**

**San Fernando Valley Subregion**

**Travel Characteristics - Weekend**

<u>Day Traveled</u>		
Saturday		67%
Sunday		33
<u>Frequency of Riding</u>		
Mean Number of Days Per Week		5.0
Percentage Who Ride 5 or More Days Per Week		80%
<u>Walk</u>		
To First Stop		91%
From Last Stop		93
<u>Method of Payment</u>		
Pass		58
Cash		25*
Token		17
<u>Kind of Pass</u>		
Regular Monthly		42%
Regular Weekly		20
Regular Semi-Monthly		16
<u>Trip Purpose (Production/Attraction)</u>		
Home-Work		44%
Home-Shopping/Recreation/Social		24

---

\*mean = \$1.60 median = \$1.60

**Table B-3:**  
**San Fernando Valley Subregion**  
**Median Time Spent on Various Components**  
**of One-Way Trip - Weekend**  
**(in minutes)**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	15
Traveling on All Buses/Trains	25
Getting From Last Stop to Final Destination	10
Total Time Traveled*	60

\*Total Time Traveled is the sum of the individual time components; it is not a median itself.



**Table B-4:**  
**San Fernando Valley Subregion**  
**Mean Satisfaction Ratings for Various Features**  
**of Bus Service – Weekend**  
**(1 = very good; 5 = very poor)**

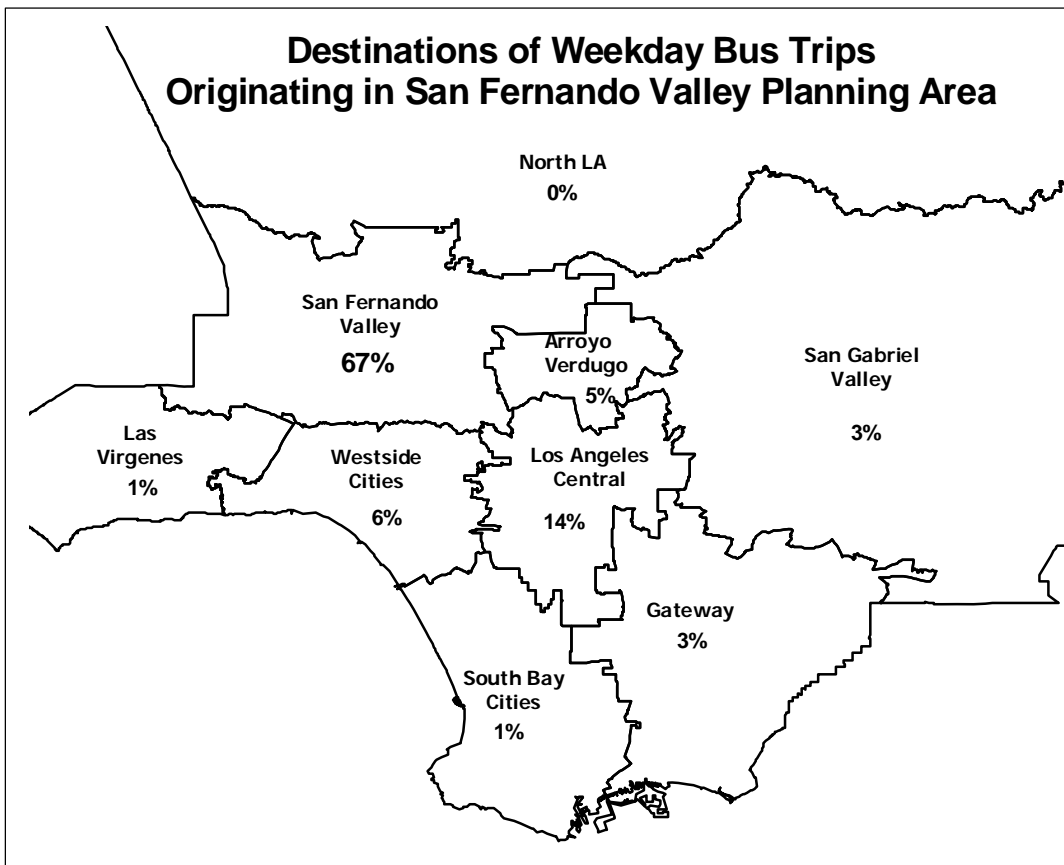
<u>Bus Feature</u>	<u>Mean</u>
Safety	2.1
Convenience of Route	2.2
Buses Do Not Pass By	2.3
Overall Bus Service	2.4
Travel Time	2.4
Driver Courtesy	2.5
Availability of Seats/Space	2.6
Cost of Fare	2.6
Cleanliness Inside Bus	2.6
Availability of Route Information	2.9
Buses on Time	3.0
Time Waiting	3.2

**Table B-5:**  
**San Fernando Valley Subregion**  
**Percentage of Respondents Indicating Choices 1 and 2 – Weekend**  
**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Safety	73%
Convenience of Route	62
Buses Do Not Pass By	59
Overall Bus Service	56
Travel Time	52
Driver Courtesy	48
Availability of Seats/Space	48
Cost of Fare	46
Cleanliness Inside Bus	44
Availability of Route Information	39
Buses on Time	31
Time Waiting	29

**Table B-6:**  
**San Fernando Valley Subregion**  
**Service Features That Were Indicated as Most**  
**in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Buses on Time	27
Time Waiting	19



**Destinations of Weekday Bus Trips Originating in San Fernando Valley Planning Area**

**Table B-7:**  
**South Bay Cities Subregion**  
**Demographic Profile - Weekend**  
**(n = 206)**

Demographic Profile

Gender

Female	62%
Male	38

Ethnicity

Latino	45%
African-American	38
White	9
Asian	4

Median Household Income \$11,000

Mean Age (years) 40.5

**Table B-8:**  
**South Bay Cities Subregion**  
**Travel Characteristics - Weekend**

<u>Day Traveled</u>		
Saturday		52%
Sunday		48
<u>Frequency of Riding</u>		
Mean Number of Days Per Week		5.0
Percentage Who Ride 5 or More Days Per Week		82%
<u>Walk</u>		
To First Stop		96%
From Last Stop		92
<u>Method of Payment</u>		
Pass		37%
Cash		47*
Token		16
<u>Kind of Pass</u>		
Regular Weekly		28%
Regular Monthly		27
Disabled		15
Senior		15
<u>Trip Purpose (Production/Attraction)</u>		
Home-Work		48%
Home-Shopping/Recreation/Social		28

---

\*mean = \$1.49 - median = \$1.60

**Table B-9:**  
**South Bay Cities Subregion**  
**Median Time Spent on Various Components**  
**of One-Way Trip (in minutes) - Weekend**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	10
Traveling on All Buses/Trains	30
Getting From Last Stop to Final Destination	10
Total Time Traveled*	60

\* Total Time Traveled is the sum of the above individual trip components. It is not a median, itself.

**Table B-10:**  
**South Bay Cities Subregion**  
**Mean Satisfaction Ratings for Various Features**  
**of Bus Service - Weekend**  
**(1 = very good; 5 = very poor)**

<u>Bus Feature</u>	<u>Mean</u>
Convenience of Route	2.0
Safety	2.2
Driver Courtesy	2.2
Availability of Seats/Space	2.4
Overall Bus Service	2.4
Travel Time	2.5
Cost of Fare	2.5
Buses Do Not Pass By	2.6
Time Waiting	2.8
Cleanliness Inside Bus	2.8
Availability of Route Information	2.8
Buses on Time	2.8

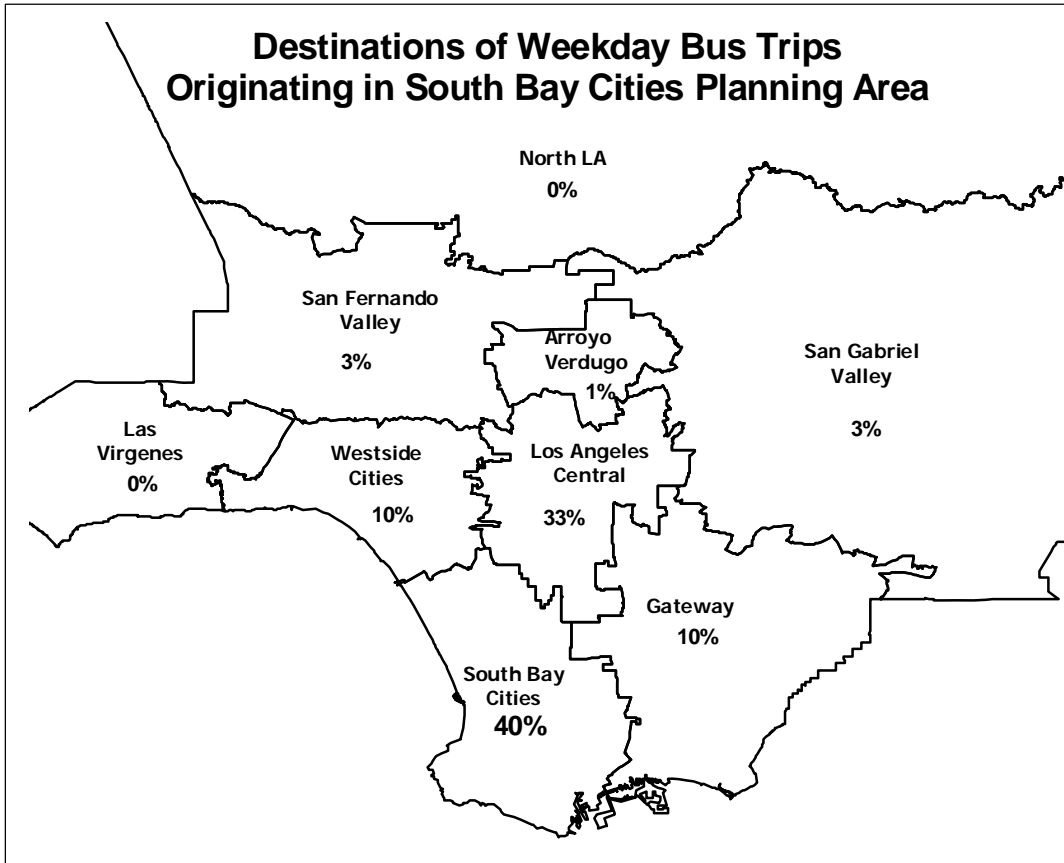
**Table B-11:**  
**South Bay Cities Subregion**  
**Percentage of Respondents Indicating Choices 1 and 2 - Weekend**  
**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Convenience of Route	74%
Safety	69
Driver Courtesy	66
Availability of Seats/Space	61
Overall Bus Service	51
Travel Time	52
Cost of Fare	50
Buses Do Not Pass By	53
Time Waiting	43
Cleanliness Inside Bar	41
Availability of Route Information	40
Buses on Time	39

**Table B-12:**  
**South Bay Cities Subregion**  
**Service Features That Were Indicated as**  
**Most in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Buses Do Not Pass By	23
Buses on Time	15





**Destinations of Weekday Bus Trips Originating in South Bay Cities Planning Area**

**Table B-13:**

**Arroyo Verdugo Subregion  
Demographic Profile - Weekend  
(n = 32)**

Demographic Profile

Gender

Female	53%
Male	47

Ethnicity

Latino	70%
White	20
African-American	9
Asian	2

Median Household Income \$15,000

Mean Age (years) 44.5

---

**Table B-14:**

**Arroyo Verdugo Subregion**

**Travel Characteristics - Weekend**

<u>Day Traveled</u>	
Saturday	70%
Sunday	30
<u>Frequency of Riding</u>	
Mean Number of Days Per Week	4.9
Percentage Who Ride 5 or More Days Per Week	79%
<u>Walk</u>	
To First Stop	96%
From Last Stop	93
<u>Method of Payment</u>	
Pass	19%
Cash	42*
Token	39
<u>Kind of Pass</u>	
Regular Monthly	31%
Regular Semi-Monthly	28
Senior	20
Regular Weekly	18
<u>Trip Purpose (Production/Attraction)</u>	
Home-Work	46%
Home-Shopping/Recreation/Social	46

---

\*mean = \$1.39 - median = \$1.35

**Table B-15:**  
**Arroyo Verdugo Subregion**  
**Median Time Spent on Various Components**  
**of One-Way Trip (in minutes) - Weekend**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	10
Traveling on All Buses/Trains	30
Getting From Last Stop to Final Destination	10
Total Time Traveled*	60

---

\* Total Time Traveled is the sum of the above individual trip components. It is not a median, itself.

**Table B-16:**

**Arroyo Verdugo Subregion**

**Mean Satisfaction Ratings for Various Features**

**of Bus Service - Weekend**

**(1 = very good; 5 = very poor)**

<u>Bus Feature</u>	<u>Mean</u>
Convenience of Route	1.7
Driver Courtesy	1.9
Travel Time	1.9
Buses Do Not Pass By	2.1
Safety	2.1
Cleanliness Inside Bus	2.2
Overall Bus Service	2.2
Cost of Fare	2.3
Time Waiting	2.4
Buses on Time	2.4
Availability of Seats/Space	2.6
Availability of Route Information	2.9

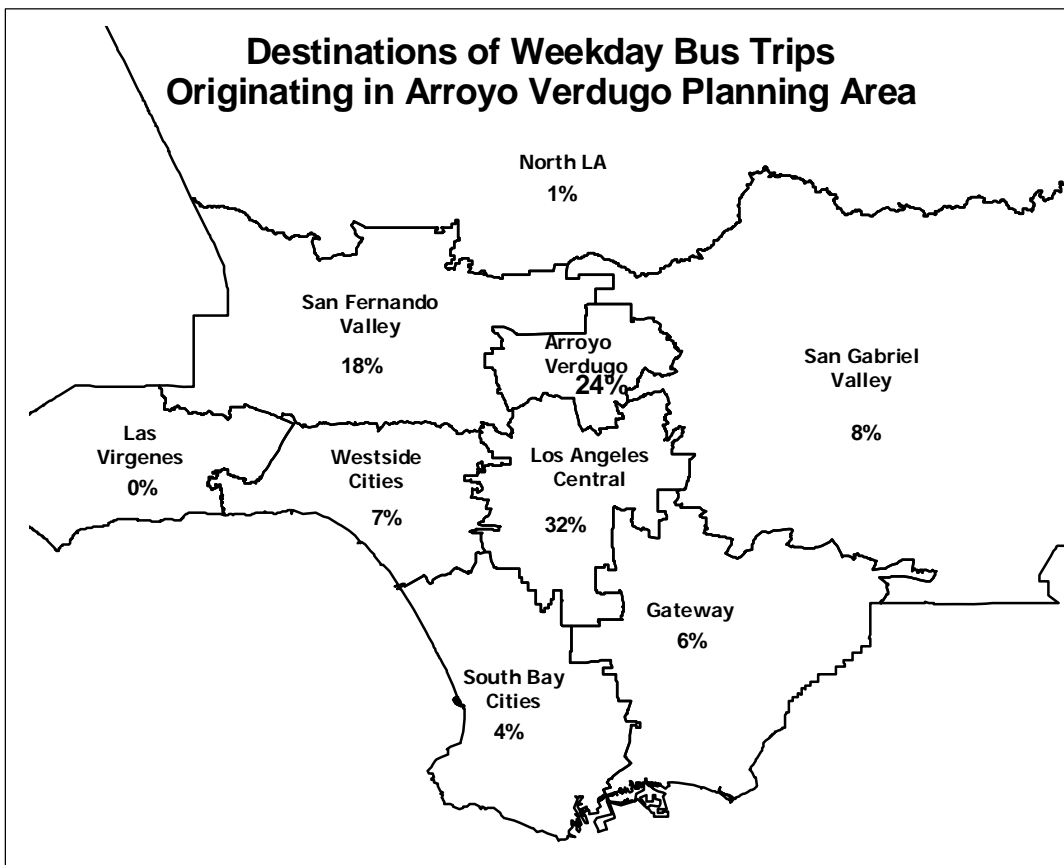
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**Table B-17:**  
**Arroyo Verdugo Subregion**  
**Percentage of Respondents Indicating Choices 1 and 2 - Weekend**  
**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Convenience of Route	80%
Driver Courtesy	82
Travel Time	82
Buses Do Not Pass By	70
Safety	67
Cleanliness Inside Bus	75
Overall Bus Service	68
Cost of Fare	63
Time Waiting	58
Buses on Time	50
Availability of Sets/Spaces	51
Availability of Route Information	44

**Table B-18:**  
**Arroyo Verdugo Subregion**  
**Service Features That Were Indicated as**  
**Most in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Buses on Time	48
Time Waiting	14
Safety	13



**Destinations of Weekday Bus Trips Originating in Arroyo Verdugo Planning Area**

**Table B-19:**  
**Gateway Subregion**  
**Demographic Profile - Weekend**  
**(n = 327)**

<u>Gender</u>	
Female	51%
Male	49
<u>Ethnicity</u>	
Latino	79%
African-American	14
White	4
Asian	2
<u>Median Household Income</u>	\$12,000
<u>Mean Age (years)</u>	40.6

---



**Table B-20:**  
**Gateway Subregion**  
**Travel Characteristics - Weekend**

<u>Day Traveled</u>	
Saturday	67%
Sunday	33
<u>Frequency of Riding</u>	
Mean Number of Days Per Week	4.9
Percentage Who Ride 5 or More Days Per Week	80%
<u>Walk</u>	
To First Stop	94%
From Last Stop	96
<u>Method of Payment</u>	
Pass	45
Cash	28*
Token	27
<u>Kind of Pass</u>	
Regular Monthly	27%
Regular Weekly	23
Regular Semi-Monthly	15
Senior	14
<u>Trip Purpose (Production/Attraction)</u>	
Home-Work	46%
Home-Shopping/Recreation/Social	23

---

\*mean = \$1.50 - median = \$1.60

**Table B-21:**  
**Gateway Subregion**  
**Median Time Spent on Various Components**  
**of One-Way Trip - Weekend**  
**(in minutes)**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	15
Traveling on All Buses/Trains	25
Getting From Last Stop to Final Destination	10
Total Time Traveled*	60

---

\* Total Time Traveled is the sum of the above individual trip components. It is not a median, itself.

**Table B-22:**

**Gateway Subregion**

**Mean Satisfaction Ratings for Various Features**

**of Bus Service - Weekend**

**(1 = very good; 5 = very poor)**

<u>Bus Feature</u>	<u>Mean</u>
Convenience of Route	1.9
Safety	2.1
Driver Courtesy	2.3
Travel Time	2.3
Buses Do Not Pass By	2.3
Overall Bus Service	2.3
Cost of Fare	2.4
Cleanliness Inside Bus	2.5
Availability of Seats/Space	2.5
Availability of Route Information	2.6
Buses on Time	2.7
Time Waiting	2.8

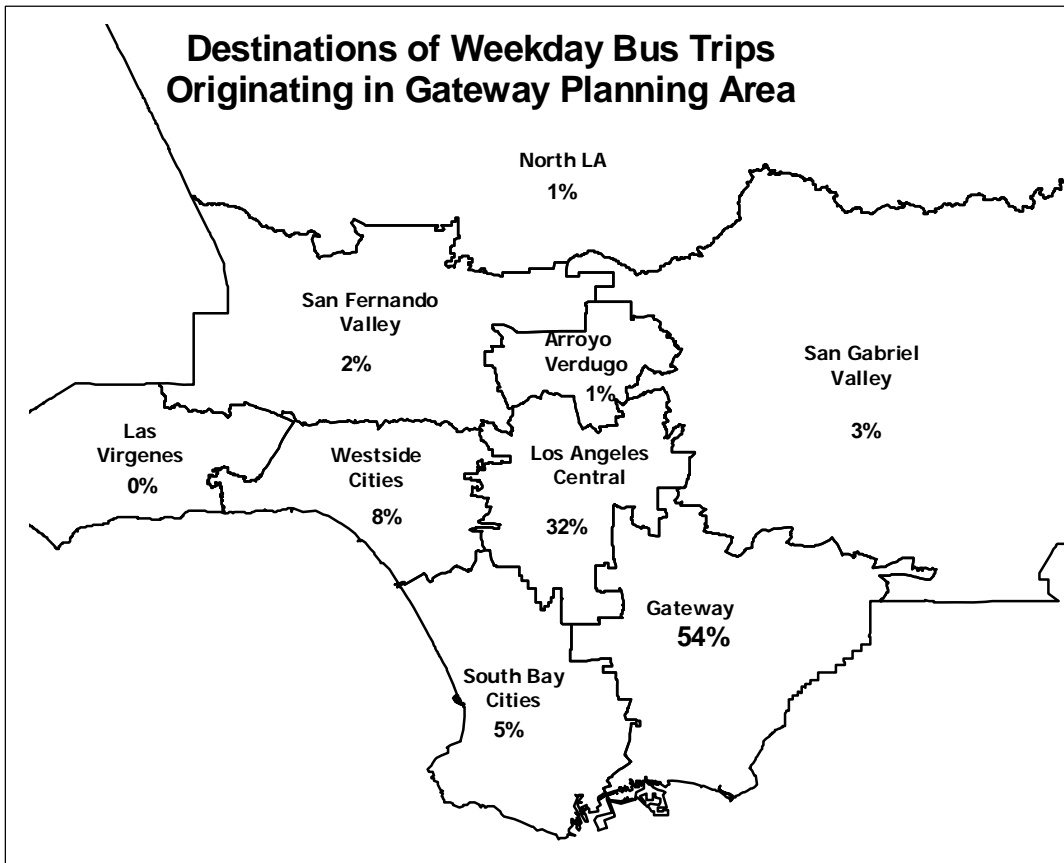
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**Table B-23:**  
**Gateway Subregion**  
**Percentage of Respondents Indicating Choices 1 and 2 – Weekend**  
**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Convenience of Route	76%
Safety	76
Driver Courtesy	65
Travel Time	62
Buses Do Not Pass By	62
Overall Bus Service	57
Cleanliness Inside Bus	56
Cost of Fare	55
Availability of Seats/Space	55
Availability of Route Information	50
Buses on Time	47
Time Waiting	44

**Table B-24:**  
**Gateway Subregion**  
**Service Features That Were Indicated as Most**  
**in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Time Waiting	29
Buses on Time	15
Driver Courtesy	12



**Destinations of Weekday Bus Trips Originating in Gateway Planning Area**

**Table B-25:**

**Los Angeles Central Subregion**

**Demographic Profile - Weekend**

**(n = 1,870)**

Demographic Profile

Gender

Female	55%
Male	45

Ethnicity

Latino	58%
African-American	26
White	7
Asian	8

Median Household Income \$9,000

Mean Age (years) 41.5

---

**Table B-26:**

**Los Angeles Central Subregion  
Travel Characteristics - Weekend**

<u>Day Traveled</u>		
Saturday		56%
Sunday		44
<u>Frequency of Riding</u>		
Mean Number of Days Per Week		5.1
Percentage Who Ride 5 or More Days Per Week		86%
<u>Walk</u>		
To First Stop		96%
From Last Stop		92
<u>Method of Payment</u>		
Pass		66%
Cash		14*
Token		20
<u>Kind of Pass</u>		
Regular Monthly		34%
Regular Weekly		24
Regular Semi-Monthly		14
Disabled		13
<u>Trip Purpose (Production/Attraction)</u>		
Home-Work		47%
Home-Shopping/Recreation/Social		20

---

\* mean=\$1.45—median=\$1.60

**Table B-27:**

**Los Angeles Central Subregion**

**Median Time Spent on Various Components**

**of One-Way Trip (in minutes) - Weekend**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	12
Traveling on All Buses/Trains	25
Getting From Last Stop to Final Destination	15
Total Time Traveled *	62

---

\* Total Time Traveled is the sum of the above individual trip components. It is not a median, itself.



**Table B-28:**

**Los Angeles Central Subregion**

**Mean Satisfaction Ratings for Various Features**

**of Bus Service - Weekend**

**(1 = very good; 5 = very poor)**

<u>Bus Feature</u>	<u>Mean</u>
Convenience of Route	2.2
Safety	2.3
Travel Time	2.4
Driver Courtesy	2.4
Overall Bus Service	2.5
Cost of Fare	2.5
Buses Do Not Pass By	2.6
Availability of Route Information	2.6
Cleanliness Inside Bus	2.6
Availability of Seats/Space	2.7
Buses on Time	2.8
Time Waiting	2.8

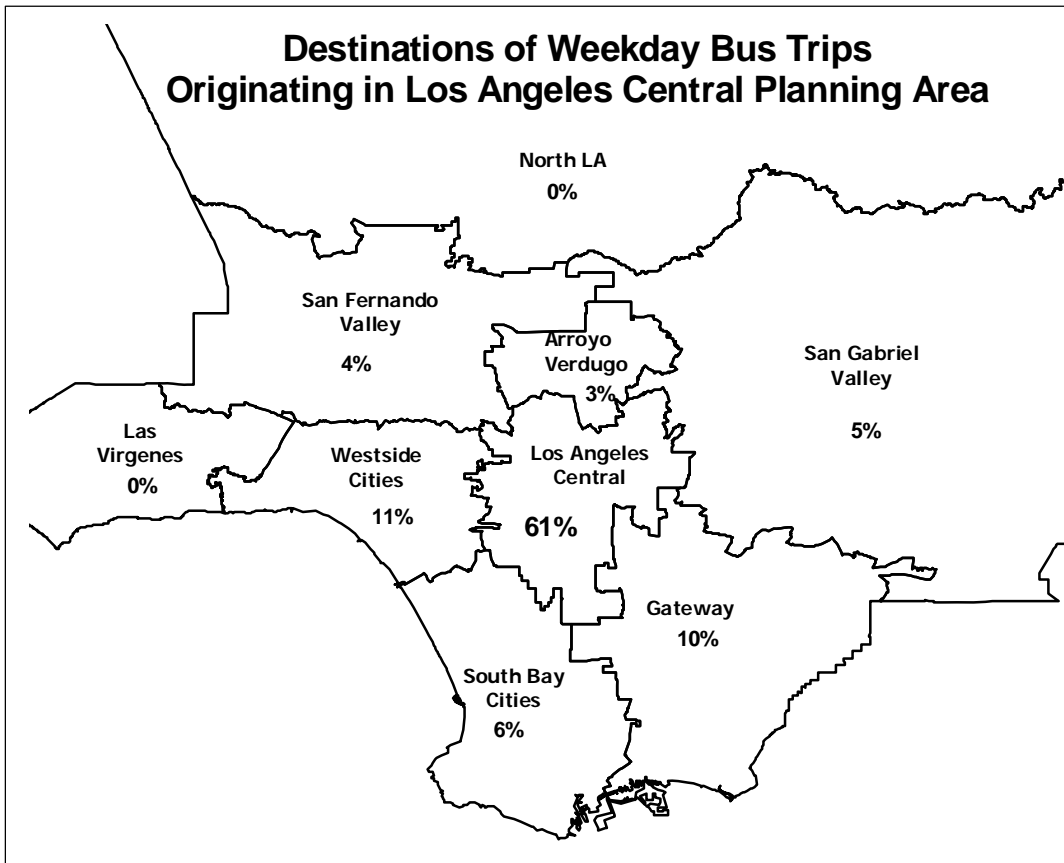
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**Table B-29:**  
**Los Angeles Central Subregion**  
**Percentage of Respondents Indicating Choices 1 and 2 - Weekend**  
**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Convenience of Route	64%
Safety	62
Travel Time	57
Driver Courtesy	56
Overall Bus Service	53
Cost of Fare	53
Buses Do Not Pass By	51
Availability of Route Information	49
Cleanliness Inside Bus	48
Availability of Seats/Space	45
Buses on Time	42
Time Waiting	40

**Table B-30:**  
**Los Angeles Central Subregion**  
**Service Features That Were Indicated as**  
**Most in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Time Waiting	18
Buses on Time	18



**Destinations of Weekday Bus Trips Originating in Los Angeles Central Planning Area**

**Table B-31:**

**San Gabriel Valley Subregion**

**Demographic Profile - Weekend**

**(n = 137)**

Gender

Female	57%
Male	43

Ethnicity

Latino	54%
Asian	18
African-American	14
White	8

Median Household Income \$11,000

Mean Age (years) 42.4

---

**Table B-32:**

**San Gabriel Valley Subregion**

**Travel Characteristics - Weekend**

<u>Day Traveled</u>	
Saturday	73%
Sunday	27
<u>Frequency of Riding</u>	
Mean Number of Days Per Week	5.1
Percentage Who Ride 5 or More Days Per Week	86%
<u>Walk</u>	
To First Stop	98%
From Last Stop	95
<u>Method of Payment</u>	
Pass	42
Cash	27*
Token	31
<u>Kind of Pass</u>	
Regular Monthly	30%
Regular Weekly	22
Senior	22
<u>Trip Purpose (Production/Attraction)</u>	
Home-Work	40%
Home-Shopping/Recreation/Social	26

---

\*mean = \$2.00 - median = \$1.60

**Table B-33:**

**San Gabriel Valley Subregion**

**Median Time Spent on Various Components**

**of One-Way Trip - Weekend**

**(in minutes)**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	15
Traveling on All Buses/Trains	30
Getting From Last Stop to Final Destination	10
Total Time Traveled*	65

---

\* Total Time Traveled is the sum of the above individual trip components. It is not a median, itself.

**Table B-34:**

**San Gabriel Valley Subregion**

**Mean Satisfaction Ratings for Various Features**

**of Bus Service - Weekend**

**(1 = very good; 5 = very poor)**

<u>Bus Feature</u>	<u>Mean</u>
Safety	2.1
Convenience of Route	2.1
Cost of Fare	2.3
Driver Courtesy	2.4
Overall Bus Service	2.4
Travel Time	2.4
Buses Do Not Pass By	2.4
Availability of Route Information	2.5
Cleanliness Inside Bus	2.6
Buses on Time	2.6
Availability of Seats/Space	2.6
Time Waiting	2.7

---

**Table B-35:**

**San Gabriel Valley Subregion**

**Percentage of Respondents Indicating Choices 1 and 2 - Weekend**

**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Safety	71%
Convenience of Route	69
Cost of Fare	60
Driver Courtesy	64
Overall Bus Service	55
Travel Time	53
Buses Do Not Pass By	52
Availability of Route Information	51
Cleanliness Inside Bus	50
Buses on Time	50
Availability of Seats/Space	47
Time Waiting	44

**Table B-36:**

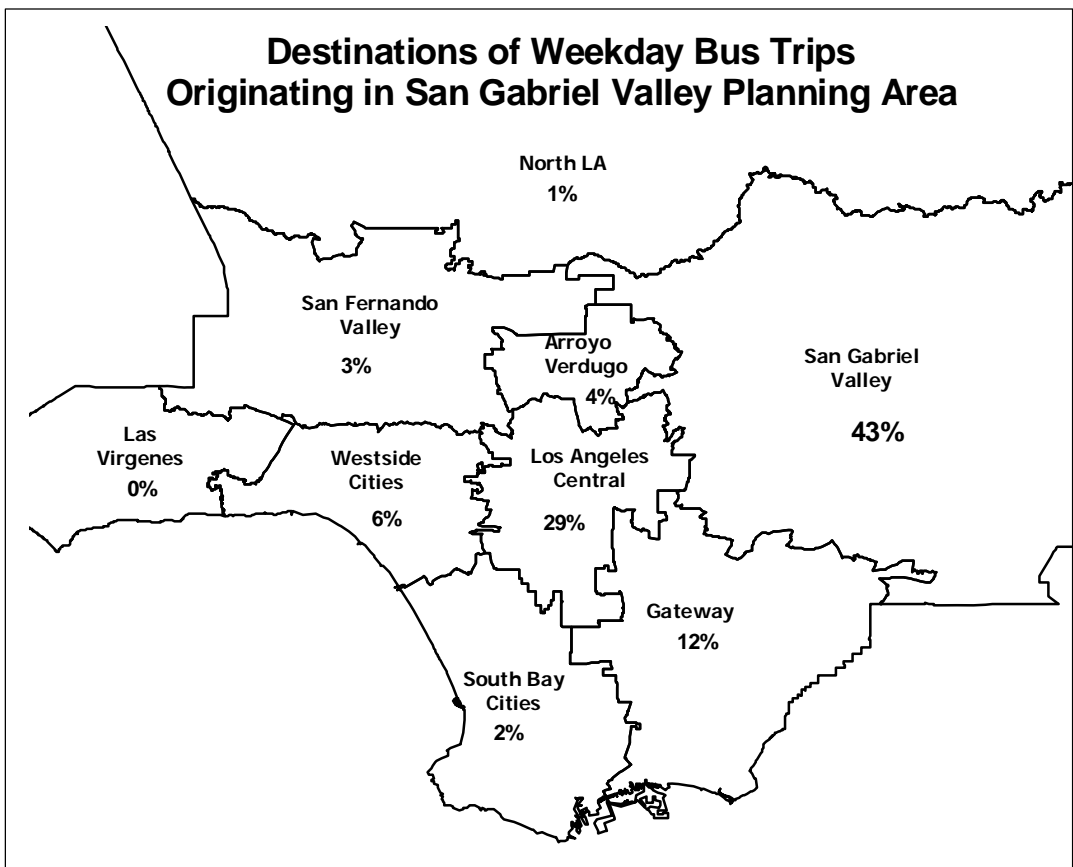
**San Gabriel Valley Subregion**

**Service Features That Were Indicated as Most**

**in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Buses on Time	26
Driver Courtesy	17
Time Waiting	14





**Destinations of Weekday Bus Trips Originating in San Gabriel Valley Planning Area**

**Table B-37:**  
**Westside Cities Subregion**  
**Demographic Profile - Weekend**  
**(n = 94)**

Demographic Profile

Gender

Female	64%
Male	36

Ethnicity

Latino	33%
White	31
African-American	25
Asian	10

Median Household Income \$15,000

Mean Age (years) 45.6

**Table B-38:**

**Westside Cities Subregion**

**Travel Characteristics - Weekend**

<u>Day Traveled</u>		
Saturday		75%
Sunday		25
<u>Frequency of Riding</u>		
Mean Number of Days Per Week		3.9
Percentage Who Ride 5 or More Days Per Week		58%
<u>Walk</u>		
To First Stop		93%
From Last Stop		98
<u>Method of Payment</u>		
Pass		31%
Cash		44*
Token		25
<u>Kind of Pass</u>		
Disabled		27%
Regular Monthly		25
Regular Semi-Monthly		17
Regular with Express Stamps		16
<u>Trip Purpose (Production/Attraction)</u>		
Home-Shopping/Recreation/Social		37%
Home-Work		22
Home-Other		20

---

\* mean=\$1.30—median=\$1.35

**Table B-39:**

**Westside Cities Subregion**

**Median Time Spent on Various Components**

**of One-Way Trip (in minutes) - Weekend**

<u>Components of Trip</u>	<u>Minutes</u>
Getting to First Bus/Train Stop	10
Waiting for All Buses/Trains	15
Traveling on All Buses/Trains	30
Getting From Last Stop to Final Destination	10
Total Time Traveled*	65

---

\* Total Time Traveled is the sum of the above individual trip components. It is not a median, itself.

**Table B-40:**

**Westside Cities Subregion**

**Mean Satisfaction Ratings for Various Features**

**of Bus Service - Weekend**

**(1 = very good; 5 = very poor)**

<u>Bus Feature</u>	<u>Mean</u>
Safety	2.0
Convenience of Route	2.1
Driver Courtesy	2.2
Overall Bus Service	2.3
Buses Do Not Pass By	2.4
Time Waiting	2.6
Cleanliness Inside Bus	2.6
Buses on Time	2.6
Availability of Seats/Spaces	2.6
Cost of Fare	2.7
Availability of Route Information	2.7
Travel Time	2.7

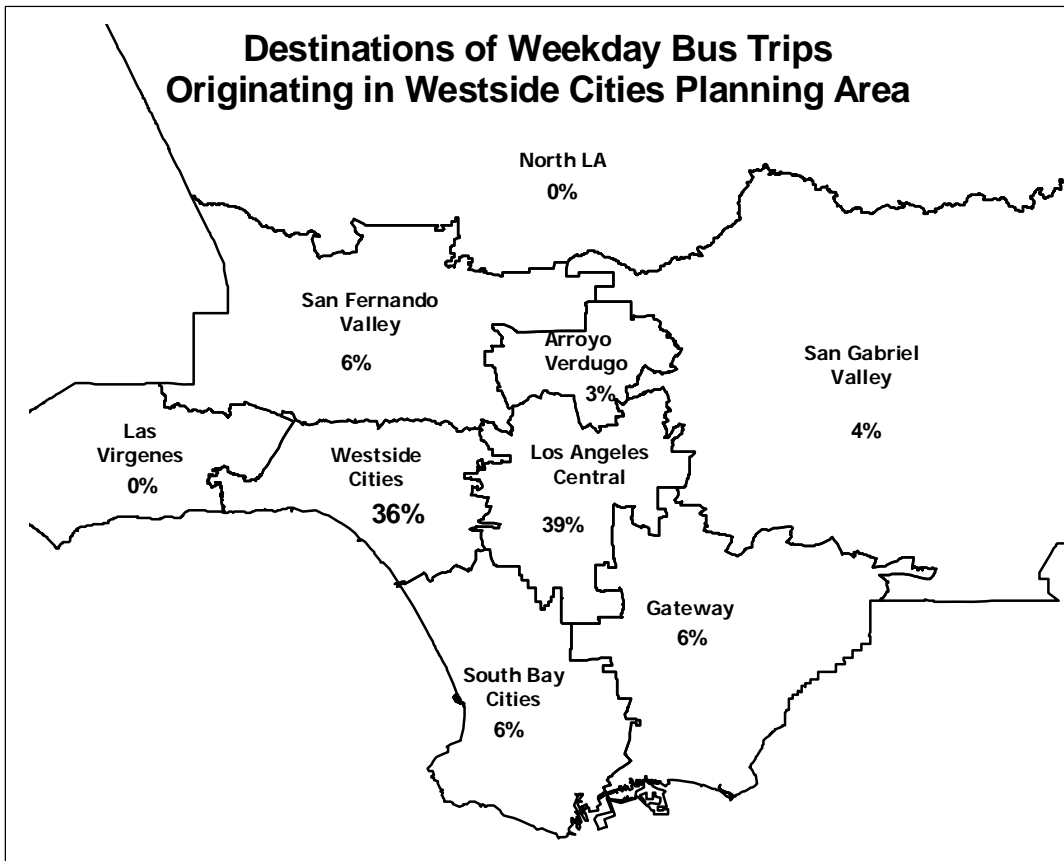
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**Table B-41:**  
**Westside Cities Subregion**  
**Percentage of Respondents Indicating Choices 1 and 2 - Weekend**  
**(1 = very good, 2 = good)**

<u>Bus Features</u>	<u>% Indicating Choices 1 and 2</u>
Safety	79%
Convenience of Route	72
Driver Courtesy	64
Overall Bus Service	57
Buses Do Not Pass By	67
Time Waiting	53
Cleanliness Inside Bus	48
Buses on Time	46
Availability of Seats/Spaces	44
Cost of Fare	44
Availability of Route Information	44
Travel Time	43

**Table B-42:**  
**Westside Cities Subregion**  
**Service Features That Were Indicated as**  
**Most in Need of Improvement - Weekend**

<u>Feature</u>	<u>%</u>
Availability of Seats/Space	16
Safety	14
Time Waiting	13



**Destinations of Weekday Bus Trips Originating in Westside Cities Planning Area**

# APPENDIX C: ON BOARD SURVEY INSTRUMENT

## Answer to win valuable prizes! Bus Rider Survey

### Help Us to Serve You Better

*Espanol en el lado opuesto →*

**This one-way trip**

**1** Please list **ALL** bus/train/rail lines you will use to complete **THIS ONE-WAY TRIP** from **WHERE YOU STARTED TO WHERE YOU ARE GOING:**

(For round trip, include the line # or line name *and* bus/train/rail company)

first bus/train: LINE#: \_\_\_\_\_  
 transfer to second bus/train: LINE#: \_\_\_\_\_  
 transfer to third bus/train: LINE#: \_\_\_\_\_  
 transfer to fourth bus/train: LINE#: \_\_\_\_\_

**2** **WHERE** are you coming from **BEFORE** you **GOT ON** the first bus/train/rail of **THIS ONE-WAY TRIP**?  (only one)

- My home     Shopping     Childcare  
 Work     Social/Recreation     Other: \_\_\_\_\_  
 School/Class     Medical/Dental

**3** At what stop (cross streets) did you get **ON** the **FIRST** bus/train/rail of **THIS ONE-WAY TRIP**?

**4** How did you **GET TO** the first bus/train/rail of **THIS ONE-WAY TRIP**?

- (only one) Walked     Drove     Other: \_\_\_\_\_  
 Dropped off     Bicycle

**5** What is the **EXACT ADDRESS** of where you are **COMING FROM**?

(complete address or nearest cross streets/intersection, plus city or neighborhood)

**6** At what stop (cross streets) will you **GET OFF** the **LAST** bus/train/rail of **THIS ONE-WAY TRIP**?

**7** How will you **GET TO** the place you are going **AFTER** you get off the last bus/train/rail of **THIS ONE-WAY TRIP**?  (only one)

- Walk     Drive     Other: \_\_\_\_\_  
 Be picked up     Bicycle

**8** Where are you **GOING AFTER** you **GET OFF** the **LAST** bus/train/rail of **THIS ONE-WAY TRIP**?  (only one)

- My home     Shopping     Childcare  
 Work     Social/Recreation     Other: \_\_\_\_\_  
 School/Class     Medical/Dental

**9** What is the **EXACT ADDRESS** of where you are **GOING AFTER** you **GET OFF** the **LAST** bus/train/rail of **THIS ONE-WAY TRIP**?

(complete address or nearest cross streets/intersection, plus city or neighborhood)

**10** How did you pay when boarding your **FIRST** bus/train/rail of **THIS ONE-WAY TRIP**?  (only one)

- Cash / How much? \$ \_\_\_\_\_  
 Token  
 Pass / What kind of pass was it?  (only one)  
 Regular Monthly     Disabled  
 Regular Semi-Monthly     Student  
 Regular Weekly     Interagency  
 Regular with Express Stamp(s)     Non-MTA  
 Senior     Other: \_\_\_\_\_

**11** How much time did you (or will you) spend on **THIS ONE-WAY TRIP**?

- a) Getting to your first bus/rail stop (walking/driving, etc.): \_\_\_\_\_ minutes  
 b) Waiting for bus(es) or train(s): \_\_\_\_\_ minutes  
 c) Traveling on bus(es) or train(s): \_\_\_\_\_ minutes  
 d) Getting from your last stop to your final destination: \_\_\_\_\_ minutes  
**TOTAL (add a thru d) =** \_\_\_\_\_ minutes

**Your opinion of Metro Bus service**

**12**

	very good	good	fair	poor	very poor
a) Safety while waiting for/riding buses.....1	2	3	4	5	5
b) Time spent waiting for bus .....1	2	3	4	5	5
c) Buses are on time.....1	2	3	4	5	5
d) Cost of fare .....1	2	3	4	5	5
e) Driver courtesy .....1	2	3	4	5	5
f) Convenience of route .....1	2	3	4	5	5
g) Travel time on bus .....1	2	3	4	5	5
h) Cleanliness inside bus .....1	2	3	4	5	5
i) Availability of seats/space on bus .....1	2	3	4	5	5
j) Availability of schedule and route info ..1	2	3	4	5	5
k) Buses stop for me and do not pass me by ..1	2	3	4	5	5
l) Overall bus service.....1	2	3	4	5	5

**13** Which one of the items from question 12 (a thru k) represents the one service feature you would most want MTA to improve?

\_\_\_\_\_ (write letter a thru k)

**About you**

**14** How **OFTEN** do you ride Metro buses (for all trips that you make)?

- (only one) 5 or more days/wk     1-2 days/wk     Less than once/month  
 3-4 days/wk     Less than once/wk     First time

**15** Are you:  Male  Female

**16** Year you were born: 19 \_\_\_\_\_

**17** Are you:

- Latino/Hispanic     Asian/Pacific Islander  
 Black/African American     American Indian/Alenutian  
 White /Caucasian     Other: \_\_\_\_\_

**18** What was the **TOTAL FAMILY INCOME** in 2000, before taxes, of **all** persons in your household?  (only one)

- Under \$7,500     \$15,000-\$24,999     \$35,000-\$49,999  
 \$7,500-\$14,999     \$25,000-\$34,999     \$50,000 or more



In order for you to win a prize, MTA must be able to contact you. Please provide the following information.

Name: \_\_\_\_\_

Home Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone No: \_\_\_\_\_



Transit Authority

**Return this form on the bus or fold, seal, and mail (postage paid)**

**Thank you / All information will be kept confidential**



# ¡Responda para ganar premios valiosos!

## Encuesta a Los Usuarios del Autobús

### Ayúdenos a servirle mejor

English on reverse side →

#### En este viaje de ida

- 1** Por favor mencione **TODOS** los autobuses/trenes que Ud. usará para **ESTE VIAJE DE IDA** *(agrade vamos)* **DESDE DONDE EMPEZO HASTA SU DESTINO:** *(incluya el # o nombre de línea y la compañía de autobuses)*
- primer autobús/tren: # DE LINEA: \_\_\_\_\_  
 transbordo a segundo autobús/tren: # DE LINEA: \_\_\_\_\_  
 transbordo a tercer autobús/tren: # DE LINEA: \_\_\_\_\_  
 transbordo a cuarto autobús/tren: # DE LINEA: \_\_\_\_\_

- 2** ¿DE DONDE viene **ANTES** de SUBIRSE al primer autobús/tren en **ESTE VIAJE DE IDA?** *(solo una respuesta)*
- Mi casa     Compras     Guardería  
 Trabajo     Social/Recreación     Otro lugar: \_\_\_\_\_  
 Escuela/clases     Cita médica/Dentista

- 3** ¿En cuál parada *(en qué calles)* estaba cuando se **SUBIO** al **PRIMER** autobús/tren en **ESTE VIAJE DE IDA?**
- \_\_\_\_\_

- 4** ¿Cómo **LLEGO** al primer autobús/tren en **ESTE VIAJE DE IDA?** *(solo una respuesta)*
- Caminé     Llegué en mi auto  
 Me llevaron     En bicicleta     Otra respuesta: \_\_\_\_\_

**5** ¿Cuál es el **DOMICILIO EXACTO** de donde Ud. **VIENE?**  
*(escriba el domicilio completo o las calles más cercanas, adentro de la ciudad o área)*

- 6** ¿En qué parada *(en qué calles)* se **BAJARA** del **ULTIMO** autobús/tren que usará para **ESTE VIAJE DE IDA?**
- \_\_\_\_\_

- 7** ¿Cómo **LLEGARA** a su destino **DESPUES** de que se baje del último autobús/tren de **ESTE VIAJE DE IDA?** *(solo una respuesta)*
- Caminaré     Llegaré en mi auto  
 Me llevará alguien     En bicicleta     Otra respuesta: \_\_\_\_\_

- 8** ¿A dónde **VA A IR** **DESPUES** de que **BAJE** del **ULTIMO** autobús/tren de **ESTE VIAJE DE IDA?** *(solo una respuesta)*
- Mi casa     Compras     Guardería  
 Trabajo     Social/Recreación     Otro lugar: \_\_\_\_\_  
 Escuela/clases     Cita médica/Dentista

**9** ¿Cuál es el **DOMICILIO EXACTO** a donde Ud. **VA** **DESPUES** de que se **BAJE** de la **ULTIMA** parada de autobús/tren en **ESTE VIAJE DE IDA?**  
*(escriba el domicilio completo o las calles más cercanas, adentro de la ciudad o área)*

- 10** ¿Cómo pago al subirla **PRIMER** autobús/tren en **ESTE VIAJE DE IDA?** *(solo una respuesta)*
- Dinero en efectivo / ¿Que cantidad fue? \$ \_\_\_\_\_  
 Fichas  
 Pase / ¿Que tipo de PASE? *(solo una respuesta)*
- Regular Mensual     Para discapacitados  
 Regular Semi-Mensual     Para estudiantes  
 Regular Semanal     De otras agencias  
 Regular con "Express Stamps"     No de MTA  
 Para personas mayores de 65 años     Otra respuesta: \_\_\_\_\_

- 11** ¿Cuánto tiempo duró *(solo una)* en **ESTE VIAJE DE IDA?**
- a) En llegar a la primera parada de autobús/tren: \_\_\_\_\_ minutos  
*(sumando, incluyendo, etc.)*  
 b) Esperando el autobús(es) o tren(es): \_\_\_\_\_ minutos  
 c) Viajando en autobús(es) o tren(es): \_\_\_\_\_ minutos  
 d) En llegar a su destino desde que bajó del último autobús/tren: \_\_\_\_\_ minutos
- TOTAL *(suma a - d)* = \_\_\_\_\_ minutos

#### Su opinión del servicio de Metro Bus

**12**

	muy bien	bien	ok	mal	muy mal
a) Su seguridad mientras espera/ viaja por autobús	1	2	3	4	5
b) Tiempo que espero al autobús	1	2	3	4	5
c) Los autobuses están a tiempo	1	2	3	4	5
d) Costo del pasaje	1	2	3	4	5
e) Cortesía del chofer	1	2	3	4	5
f) Conveniencia de la ruta	1	2	3	4	5
g) Tiempo que duró el viaje	1	2	3	4	5
h) La limpieza dentro del autobús	1	2	3	4	5
i) Disponibilidad de asientos	1	2	3	4	5
j) Disponibilidad del horario e información sobre la ruta	1	2	3	4	5
k) Los autobuses hacen la parada y no me dejan	1	2	3	4	5
l) Servicio en general	1	2	3	4	5

- 13** ¿De la pregunta 12, cual representa el servicio que necesita mejorar más en su opinión? *(seleccione una letra de a - l)*
- \_\_\_\_\_


#### Sobre Ud.

- 14** ¿Qué tan **SEGUIDO** usa los autobuses Metro *(en todos sus viajes)*? *(solo una respuesta)*
- 5 o más días por semana     Menos de una vez por semana  
 3-4 días por semana     Menos de una vez al mes  
 1-2 días por semana     Es la primera vez
- 15** Es Ud.:  Hombre     Mujer
- 16** Año en que nació: 19 \_\_\_\_\_
- 17** Es Ud.:
- Latino/Hispano     Asiático/De las Islas del Pacífico  
 Negro/Africano Americano     Indio Nativo/Nativo de Alaska  
 Blanco     Otra respuesta: \_\_\_\_\_

- 18** ¿En **TOTAL**, cual fue el **INGRESO FAMILIAR** antes de pagar impuestos en el año 2000 de todas las personas en su hogar? *(solo una respuesta)*
- Menos de \$7,500     \$15,000-\$24,999     \$35,000-\$49,999  
 \$7,500-\$14,999     \$25,000-\$34,999     \$50,000 o más

Para ganar un premio debe proporcionar su información y la MTA se comunicará con usted:

Nombre: \_\_\_\_\_  
 Domicilio: \_\_\_\_\_  
 Ciudad: \_\_\_\_\_ Código Postal: \_\_\_\_\_  
 Telefono: \_\_\_\_\_



**Gracias / Toda la información será estrictamente confidencial.**

Regrese esta forma en el autobús o mandela por correo (no necesita estampilla)