

INTRODUCTION

The 1983 On-Board Survey was conducted by consultants under Planning Department direction for the purpose of developing updated data needed for Planning models. The survey began on April 29 and ended around mid-July. During that period data were obtained from just over 10,000 of RTD's weekday riders, 1,000 Saturday riders and about 800 Sunday riders.

This summary report represents an overview of survey results obtained from Planning Department computer printouts.

SUMMARY OF FINDINGS

About 40% of the trips made on RTD buses are made by riders who pay a cash fare.

Half of all weekday trips and 55% or more of weekend trips begin at home.

Up to 96% of the riders making trips on the RTD walk to the bus stop. Up to 94% walk from the bus to their destination.

The proportion of bus trips made by riders with no car available increases on weekends - from 70% on weekdays to 74% on Saturdays and 83% on Sundays.

An average linked trip on the RTD requires 1.54 buses on weekdays and Saturdays and 1.64 buses on Sundays.

At the time of the survey, 13% of the weekday trips, 10% of the Saturday trips and of the Sunday trips were made by new riders who had been using the RTD for less than six months.

Up to 60% of the weekday trips are made by female passengers, as are 56% of the Saturday trips and 51% of the Sunday trips.

The average age of riders making trips on the RTD is between 29 and 31.

At least 62% of the weekday trips, 65% of the Saturday trips and 67% of the Sunday trips are made by minority riders.

The annual household income of riders making RTD trips is higher on weekdays - \$13,000 - than on Saturdays or Sundays - \$10,000 and \$8,300 respectively.

About half the trips on RTD are made by riders who work full-time.

About one-quarter of the RTD trips are made by riders who do not have a timetable. Fifty-five percent or more are made by riders who obtained their timetable on the bus.

A majority of respondents were unable to identify Metro Rail correctly. Over 62% of respondents on weekdays, 60% on Saturdays and 55% on Sundays did not know what Metro Rail is.

TYPE OF FARE

The 1983 On-Board Survey found that cash was still the predominant form of fare payment at the time of the survey. As shown in Table 1, around 40% of the trips on weekdays, Saturdays or Sundays were paid for with cash. The second most common type of fare, accounting for about one-quarter of all trips, was the Regular Monthly Pass. In third rank was the Student Pass, accounting for 16% of weekday trips and 13% to 14% of weekend trips.

TABLE 1
TYPE OF FARE

| FARE | WEEKDAY | SATURDAY | SUNDAY |
|------------------|---------|----------|--------|
| CASH | 38.4% | 41.0% | 39.8% |
| TICKET | 1.4 | .4 | 1.1 |
| BASE PASS | 23.2 | 27.7 | 23.4 |
| EXPRESS PASS | 4.8 | 1.7 | 2.0 |
| HANDICAP PASS | 2.2 | 2.5 | 1.8 |
| SR. CITIZEN PASS | 7.0 | 6.8 | 9.9 |
| STUDENT PASS | 16.0 | 13.8 | 13.1 |
| COLLEGE/VOC.PASS | 6.1 | 4.5 | 7.4 |
| TOURIST PASS | .1 | - | .5 |
| OTHER | .9 | 1.5 | .8 |
| TOTAL | 100.0% | 100.0% | 100.0% |

TRIP PURPOSE

Table 2 shows that most transit trips started and ended at the bus rider's home. Half the weekday trips and 55% to 56% of the weekend trips originated at home. Only 41% of the weekday trips and about 39% of the weekend transit trips were destined for home, however.

Work trips were the second most common type of trip found by the 1983 On-Board Survey. On weekdays, 26% of the transit trips began at work, and 28% were bound for work. On Saturdays 19% of the trips started at work, and 16% were going to work. On Sundays, 10% of the trips began at work, and 12% were to end at work.

Trips beginning at school accounted for 11% of the weekday total, and trips to school accounted for 10%. The proportion of school trips was much lower on weekends, as would be expected. On Saturdays less than 1% of the transit trips began at school, and nearly 3% ended at school. On Sundays, only .2% of the trips began at school, and about 1% were to end at school.

Trips for shopping and errands increased on weekends. On weekdays about 5% of the transit trips began at shopping or errand locations, and 7% were bound for such locations. On Saturdays 10% of the trips began and 19% ended at shopping or errand locations. On Sundays the proportions were 12% and 11%, respectively.

Visiting and recreation were also common trip purposes, increasing in importance on weekends. On weekdays about 3% of the trips began at visiting or recreational locations, and 5% of the trips ended at such locations. On Sundays 7% of the trips began and 11% ended at these types of locations. On Sundays 13% of the trips began and 23% ended at these locations.

Religious institutions accounted for one-half per cent or less of weekday transit trips. On Saturdays 2% of the trips began at, and 4% ended at, religious institutions. On Sundays 5% of the trips began at religious institutions and 7% ended there.

TABLE 2
TRIP PURPOSE

| | AT ORIGIN | | | AT DESTINATION | | |
|--------------------------|-----------|----------|--------|----------------|----------|--------|
| | WEEKDAY | SATURDAY | SUNDAY | WEEKDAY | SATURDAY | SUNDAY |
| HOME | 49.7% | 56.1% | 55.0% | 41.3% | 38.9% | 39.3% |
| WORK | 25.8 | 19.3 | 10.3 | 28.3 | 16.4 | 12.0 |
| SCHOOL | 11.3 | .7 | .2 | 9.8 | 2.6 | .9 |
| SHOPPING/ ERRANDS | 4.6 | 10.2 | 12.4 | 6.8 | 18.8 | 11.1 |
| VISITING/ RECREATION | 3.3 | 7.4 | 13.0 | 4.7 | 11.2 | 22.5 |
| RELIGIOUS INSTITUTION | .3 | 1.7 | 5.2 | .5 | 4.2 | 6.6 |
| DOCTOR/ DENTIST | 1.2 | 1.3 | .5 | 2.1 | 1.1 | 1.3 |
| OTHER | 3.7 | 3.4 | 3.3 | 6.5 | 6.9 | 6.3 |
| TOTAL | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

MODE OF ACCESS AND EGRESS

Table 3 shows that the overwhelming mode of access to and egress from the RTD system was on foot. On weekdays, 93% of the trips made by transit began with walking to the bus stop. On weekends, the proportion increased to 96%. Ninety percent or more of the transit trips on weekdays or weekends ended with the rider walking from the bus to the final destination.

The second most common mode of access to and egress from the bus system was as a passenger in a car. On weekdays, 5% of the bus trips began and 2% ended this way. On weekends 3% of the trips began with the bus rider getting to the bus stop as a passenger in a car, and nearly 2% of the trips ended with the bus rider getting a ride from the bus stop.

On weekdays, just over 1% of the transit trips began with the bus rider driving to the bus stop, and 2% of the trips ended as the bus rider drove from the bus stop. On weekends, the proportion of bus trips beginning or ending in this way dropped to less than 1%.

TABLE 3
MODE OF ACCESS TO AND EGRESS FROM RTD SYSTEM

| MODE | ACCESS | | | EGRESS | | |
|---------------|---------|----------|--------|---------|----------|--------|
| | WEEKDAY | SATURDAY | SUNDAY | WEEKDAY | SATURDAY | SUNDAY |
| WALK | 93.2% | 95.9% | 95.7% | 91.1% | 93.6% | 89.9% |
| CAR DRIVER | 1.3 | .6 | .8 | 2.2 | .3 | .2 |
| CAR PASSENGER | 4.5 | 3.2 | 3.2 | 1.9 | 1.8 | 1.6 |
| OTHER | 1.0 | .4 | .4 | 4.8 | 4.3 | 8.3 |
| TOTAL | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

VEHICLE AVAILABILITY

Table 4 shows that 70% of the weekday transit trips, 74% of the Saturday trips and 83% of the Sunday trips were made by riders who had no car available to them.

The proportion of trips made by bus riders who had a car available decreased on weekends. On weekdays 19% of the trips were made by riders who could have driven. On Saturdays 13% of the trips were in this category, and on Sundays only 10%.

Trips made by riders who could have gotten a ride in a car accounted for 11% of the weekday trips, 13% of the Saturday trips and 8% of the Sunday trips.

TABLE 4
VEHICLE AVAILABILITY

| | WEEKDAY | SATURDAY | SUNDAY |
|-------------------|---------|----------|--------|
| YES, AS DRIVER | 19.0% | 13.3% | 9.6% |
| YES, AS PASSENGER | 11.4 | 13.1 | 7.8 |
| NOT AVAILABLE | 69.6 | 73.7 | 82.7 |
| TOTAL | 100.0% | 100.0% | 100.0% |

NUMBER OF LINKED TRIPS BUSES

A majority of the linked trips made on weekdays and Saturdays required just one bus as shown in Table 5. On weekdays and Saturday the average number of linked trips buses was 1.5. On Sundays the number of buses increased slightly to 1.6.

TABLE 5
NUMBER OF BUSES RIDDEN TO COMPLETE TRIP
FROM ORIGIN TO DESTINATION

| | WEEKDAY | SATURDAY | SUNDAY |
|--------------|---------|----------|--------|
| ONE | 54.1% | 52.5% | 47.4% |
| TWO | 39.2 | 41.5 | 43.0 |
| THREE | 5.3 | 5.1 | 8.1 |
| FOUR OR MORE | 1.3 | .9 | 1.4 |
| TOTAL | 100.0% | 100.0% | 100.0% |
| MEAN | 1.54 | 1.54 | 1.64 |

FREQUENCY OF BUS USE

Table 6 shows that 85% of the weekday transit trips were made by passengers who ride the bus "almost daily". On Saturdays this percentage declined to 82% and on Sundays to 77%.

TABLE 6
FREQUENCY OF BUS USE

| | WEEKDAY | SATURDAY | SUNDAY |
|--------------------------|---------|----------|--------|
| ALMOST DAILY | 84.9% | 82.4% | 76.8% |
| AT LEAST ONCE A WEEK | 10.2 | 13.6 | 13.3 |
| LESS THAN ONCE A WEEK | 4.9 | 4.0 | 9.9 |
| TOTAL | 100.0% | 100.0% | 100.0% |

WHEN RTD USE BEGAN

When the 1983 On-Board Survey was conducted in mid-year, 13% of the trips were made by new riders who had begun to use the RTD within the previous six months. On Saturdays 10% of the trips were made by riders in this category, and on Sundays, only 6%.

As shown in Table 7 the proportion of riders with more than 4-1/2 years experience with the RTD tended to increase on weekends. On weekdays 51% of the trips were made by riders who had begun to use the RTD before 1979. On Saturdays and Sundays, this proportion rose to 55% and 64%, respectively.

TABLE 7
WHEN RTD USE BEGAN

| DATE | WEEKDAY | SATURDAY | SUNDAY |
|-------------|---------|----------|--------|
| After 1/83 | 13.0% | 10.3% | 6.1% |
| 7/82 - 1/83 | 13.9 | 14.2 | 12.2 |
| 1/79 - 7/82 | 22.4 | 21.0 | 18.0 |
| BEFORE 1/79 | 50.7 | 54.5 | 63.7 |
| TOTAL | 100.0% | 100.0% | 100.0% |

RIDER GENDER

The 1983 On-Board Survey found that, of all weekday trips, 59% were made by female passengers. On Saturdays 56% of the trips were in this category and on Sundays, 51%.

TABLE 8
RIDER GENDER

| GENDER | WEEKDAY | SATURDAY | SUNDAY |
|--------|---------|----------|--------|
| MALE | 41.2% | 43.8% | 48.8% |
| FEMALE | 58.8 | 56.2 | 51.2 |
| TOTAL | 100.0% | 100.0% | 100.0% |

RIDER AGE

Table 9 shows that the 1983 On-Board Survey found little variance in average age by day of the week. The median age of riders making weekday trips was 29.4. Among riders making trips on Saturdays, the median age was 30.6, about one year older than among weekday riders. On Sundays the median age was 29.7, just slightly higher than on weekdays.

TABLE 9
RIDER AGE

| | WEEKDAY | SATURDAY | SUNDAY |
|--------------|---------|----------|--------|
| LESS THAN 10 | .2% | .1% | - |
| 10-19 | 19.5 | 15.2 | 16.5% |
| 20-29 | 32.2 | 33.4 | 34.5 |
| 30-39 | 20.5 | 21.8 | 18.5 |
| 40-49 | 9.8 | 10.7 | 9.5 |
| 50-59 | 7.6 | 8.6 | 7.1 |
| 60-69 | 6.3 | 6.1 | 6.7 |
| 70-79 | 3.1 | 3.1 | 6.1 |
| 80 OR OLDER | .9 | 1.0 | 1.1 |
| TOTAL | 100.0% | 100.0% | 100.0% |
| MEDIAN | 29.4 | 30.6 | 29.7 |

RIDER ETHNICITY

Table 10 shows that the 1983 On-Board Survey found some slight differences in the ethnic mix of RTD ridership by day.

The proportion of trips made by white riders declined somewhat on weekends, from 36% on weekdays to 33% on Saturdays and 32% on Sundays. The proportion of trips made by Black riders fluctuated, from 28% on weekdays to 30% on Saturdays and back down to 27% on Sundays. Trips by Hispanic riders accounted for 26% of the weekday and Saturday totals, but increased to 33% on Sundays. Trips by riders in the Asian/Pacific Islander category were at 7% on weekdays and Saturdays, declining to 5% on Sundays.

TABLE 10
ETHNICITY

| ETHNIC GROUP | WEEKDAY | SATURDAY | SUNDAY |
|------------------------|---------|----------|--------|
| WHITE | 35.5% | 32.9% | 31.9% |
| ASIAN/PACIFIC ISLANDER | 6.7 | 6.8 | 5.1 |
| HISPANIC | 26.2 | 26.3 | 32.5 |
| AMERICAN INDIAN | 1.3 | 1.1 | 1.7 |
| BLACK | 27.9 | 30.3 | 27.2 |
| OTHER | 2.2 | 2.7 | 1.5 |
| TOTAL | 100.0% | 100.0% | 100.0% |

ANNUAL HOUSHOLD INCOME

Bus riders' annual household incomes were found by the 1983 On-Board Survey to vary by day. On weekdays, the median income was over \$13,000. On Saturdays, it declined to just over \$10,000 and on Sundays to less than \$8,300.

TABLE 11
ANNUAL HOUSEHOLD INCOME

| | WEEKDAY | SATURDAY | SUNDAY |
|-------------------|----------|----------|---------|
| LESS THAN \$2000 | 14.2% | 18.0% | 23.3% |
| \$2000-\$4999 | 10.2 | 11.9 | 10.8 |
| \$5000-\$9999 | 15.8 | 19.6 | 24.4 |
| \$10,000-\$14,999 | 16.0 | 18.9 | 12.4 |
| \$15,000-\$19,999 | 10.7 | 10.2 | 7.4 |
| \$20,000-\$24,999 | 9.7 | 7.9 | 11.6 |
| \$25,000-\$34,999 | 8.7 | 5.8 | 5.4 |
| \$35,000-\$49,999 | 7.8 | 5.1 | 2.6 |
| \$50,000 OR MORE | 7.0 | 2.5 | 2.0 |
| TOTAL | 100.0% | 100.0% | 100.0% |
| MEDIAN | \$13,063 | \$10,132 | \$8,258 |

RIDER EMPLOYMENT STATUS

About half the trips made on RTD buses were made by riders who were employed full time. About 20% of the trips were made by riders who said they worked part-time. About 30% of the weekday and Saturday trips and 35% of the Sunday trips were made by riders who said they did not work outside the home.

TABLE 12
EMPLOYMENT STATUS

| STATUS | WEEKDAY | SATURDAY | SUNDAY |
|-------------|---------|----------|--------|
| FULL-TIME | 51.3% | 49.5% | 48.5% |
| PART-TIME | 19.4 | 20.1 | 17.1 |
| NOT WORKING | 29.3 | 30.4 | 34.5 |
| TOTAL | 100.0% | 100.0% | 100.0% |

TIMETABLE SOURCES

The predominant source of RTD timetables was on-board the bus. Between 54% and 58% of the trips were made by riders who had obtained their timetables on the bus. About 8% of the trips were made by riders who got their timetables at RTD Customer Service Centers, and another 5% by riders who got theirs at one of RTD's Pass Sales outlets. Between 21% and 28% of the trips were made by riders who did not have a timetable.

TABLE 13
TIMETABLE SOURCE

| SOURCE | WEEKDAY | SATURDAY | SUNDAY |
|--------------------------------|---------|----------|--------|
| DON'T HAVE TIMETABLE | 24.7% | 28.1% | 21.1% |
| ON BUS | 55.3 | 54.4 | 57.5 |
| BY MAIL | 2.2 | 1.5 | 1.8 |
| RTD CUSTOMER SERVICE CENTER | 8.1 | 7.4 | 7.9 |
| RTD PASS OUTLET | 4.5 | 5.1 | 4.4 |
| LIBRARY | 1.1 | .8 | 4.1 |
| THRIFTY DRUGS | 1.3 | 1.1 | 1.2 |
| OTHER | 2.9 | 1.6 | 2.0 |
| TOTAL | 100.0% | 100.0% | 100.0% |

RIDER KNOWLEDGE OF METRO RAIL

Fewer than half the respondents to the 1983 On-Board Survey were able to identify Metro Rail correctly. Among riders making weekday transit trips, only 38% knew what Metro Rail is. On Saturdays 40% correctly defined Metro Rail, and on Sundays 45% were able to do so.

TABLE 14
RIDER DEFINITION OF METRO RAIL

| | WEEKDAY | SATURDAY | SUNDAY |
|-----------------------------|---------|----------|--------|
| DON'T KNOW | 49.3% | 46.4% | 40.8% |
| LA-LAS VEGAS TRAIN | 2.7 | 1.4 | 3.1 |
| LA-SAN DIEGO TRAIN | 4.3 | 4.8 | 3.8 |
| LA-LONG BEACH LIGHT RAIL | 6.1 | 7.3 | 7.1 |
| LA-SFV SUBWAY | 37.7 | 40.1 | 45.3 |
| TOTAL | 100.0% | 100.0% | 100.0% |