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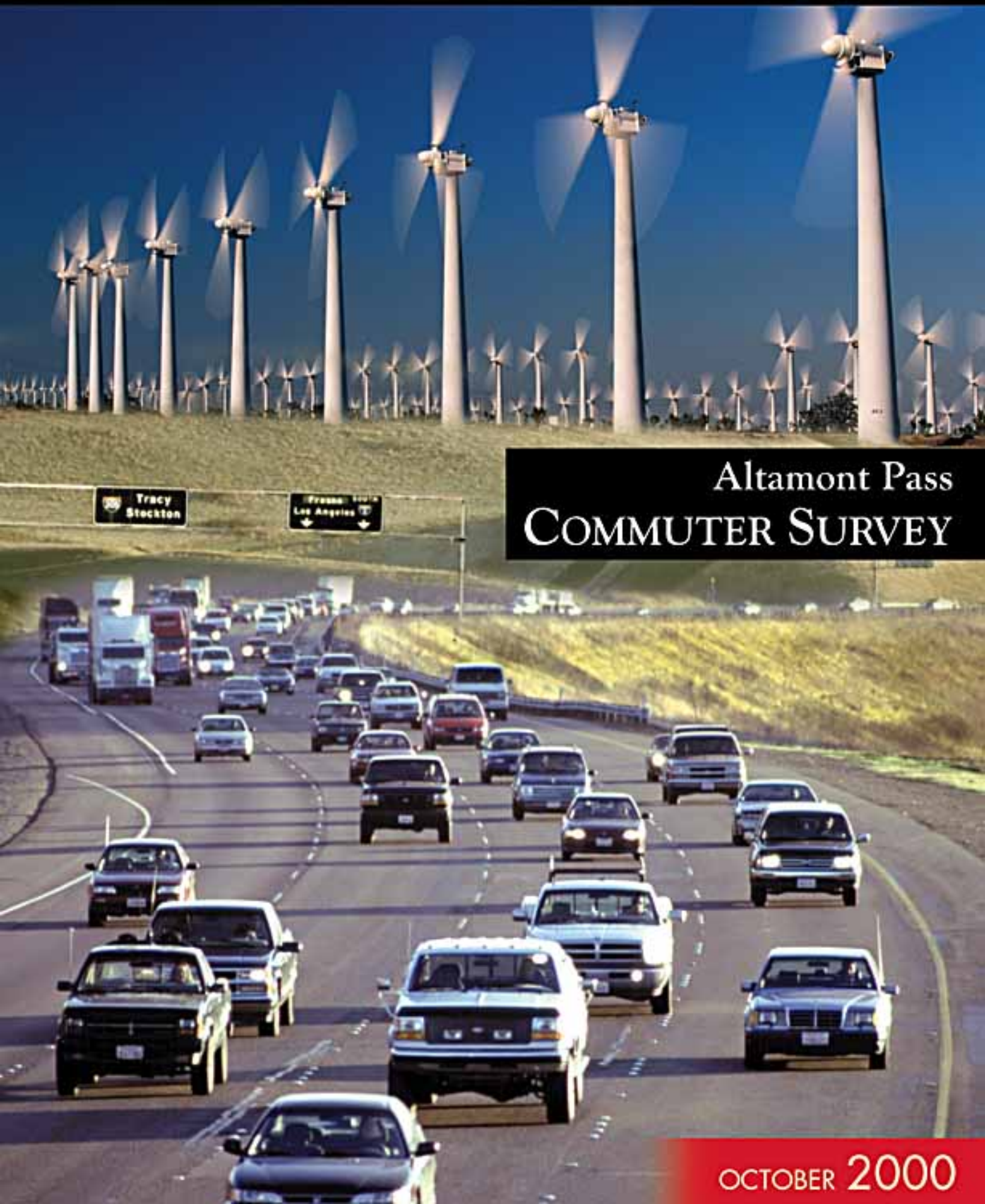


# Altamont Pass
# COMMUTER SURVEY

OCTOBER 2000

# ALTAMONT PASS

# COMMUTER SURVEY

**By**

**John W. Billheimer**

**Juliet McNally**

**Submitted To**

**THE SAN JOAQUIN COUNCIL OF GOVERNMENTS**

**and**

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**SYSTAN, INC.**
**343 Second Street**
**P.O. Box U**
**Los Altos, CA 94022**

## TABLE OF CONTENTS

# 1. EXECUTIVE SUMMARY

# 1.0 EXECUTIVE SUMMARY

This survey of Altamont Pass commuters has been sponsored by the San Joaquin Council of Governments (SJCOG) and the San Joaquin Partnership in an effort to:

- Identify the job skills of commuters traveling over the Altamont Pass to the San Francisco Bay Area as a first step in attracting more jobs to the San Joaquin County area and enabling residents to work closer to home; and

- Determine the destinations, distances, and travel times reported by Altamont Pass commuters to allow SJCOG to refine its marketing of carpools, vanpools, and transit services.

## 1.1 SURVEY MECHANICS

The survey of Altamont Pass commuters consisted of the following key elements:

- **Mailback Survey** sent to commuters videotaped using the Altamont Pass for their morning commute;

- **On-Board Surveys** of riders using the Altamont Commuter Express (ACE) trains and SMART buses to commute to the Bay Area.

- **A Focus Group Discussion** used to fine-tune the survey questionnaires, probe the perceptions and attitudes of Altamont Pass commuters, and explore the willingness of commuters to transfer to jobs closer to home.

### 1.1.1 Survey Distribution

**Videotaping and Mailing**. A total of 29,708 vehicles were videotaped traveling westbound over the Altamont Pass between 3:00 a.m. and 10:30 a.m. on Wednesday, March 29, 2000. After eliminating trucks, commercial vehicles, unreadable plates, and out-of-state plates, 22,525 (75.8% of the total videotaped) were submitted to the DMV for identification. Further elimination of invalid plates, duplicate addresses, incomplete addresses, and out-of-the-area residents produced the names and addresses of 20,567 vehicle owners (69.2% of the total videotaped). Surveys were mailed to these vehicle owners during the first week of June.

**On-Board Surveys**. Surveys were distributed to all ACE train and SMART bus passengers on May 23, 2000. All passengers boarding the westbound ACE trains leaving Stockton at 4:18 a.m. and 5:30 a.m. were given surveys at the Stockton, Lathrop-Manteca, and Tracy stops. At the same time, the survey was administered on the westbound morning trip of seventeen different SMART bus routes, including nine originating at Stockton, four in Manteca, two in Tracy, one in Escalon, and one in Ripon.

### 1.1.2 Survey Response

Response rates for the mailback and on-board surveys are summarized below.

| Survey Population | Surveys Distributed | Surveys Returned | Response Rate |
|---|---|---|---|
| Drivers | 20,567 | 3,950 | 19.2% |
| SMART Bus Riders | 412 | 207 | 50.2% |
| ACE Train Riders | 610 | 497 | 81.5% |
| Total | 21,589 | 4,654 | 21.6% |

## 1.2 TRIP CHARACTERISTICS

### 1.2.1 Origins and Destinations

Trip origins and destinations have been tabulated and mapped for bus riders, train riders, and drivers. A summary of origins and destinations by county and mode appears in Exhibit 1.1. A sample map showing the city-by-city destinations of drivers crossing the Altamont Pass in the morning appears in Exhibit 1.2.

**EXHIBIT 1.1**
**ORIGINS AND DESTINATIONS BY COUNTY**

| | BUS RIDERS | | TRAIN RIDERS | | AUTO DRIVERS | |
|---|---|---|---|---|---|---|
| TRIP ORIGINS | No. | % | No. | % | No. | % |
| San Joaquin County | 176 | 85.4% | 379 | 76.9% | 2763 | 71.2% |
| Stanislaus County | 23 | 11.2% | 74 | 15.0% | 900 | 23.2% |
| Contra Costa County | 0 | 0.0% | 7 | 1.4% | 53 | 1.4% |
| Sacramento County | 0 | 0.0% | 7 | 1.4% | 42 | 1.1% |
| Other Counties | 7 | 3.4% | 26 | 5.3% | 120 | 3.1% |
| Total | 206 | 100.0% | 493 | 100.0% | 3878 | 100.0% |
| TRIP DESTINATIONS | | | | | | |
| Alameda County | 85 | 41.7% | 105 | 21.3% | 2307 | 59.8% |
| Santa Clara County | 104 | 51.0% | 373 | 75.8% | 811 | 21.0% |
| Contra Costa County | 8 | 3.9% | 10 | 2.0% | 291 | 7.5% |
| San Mateo County | 0 | 0.0% | 4 | 0.8% | 129 | 3.3% |
| San Francisco County | 6 | 2.9% | 0 | 0.0% | 131 | 3.4% |
| Other Counties | 1 | 0.5% | 0 | 0.0% | 192 | 5.0% |
| Total | 204 | 100.0% | 492 | 100.0% | 3861 | 100.0% |

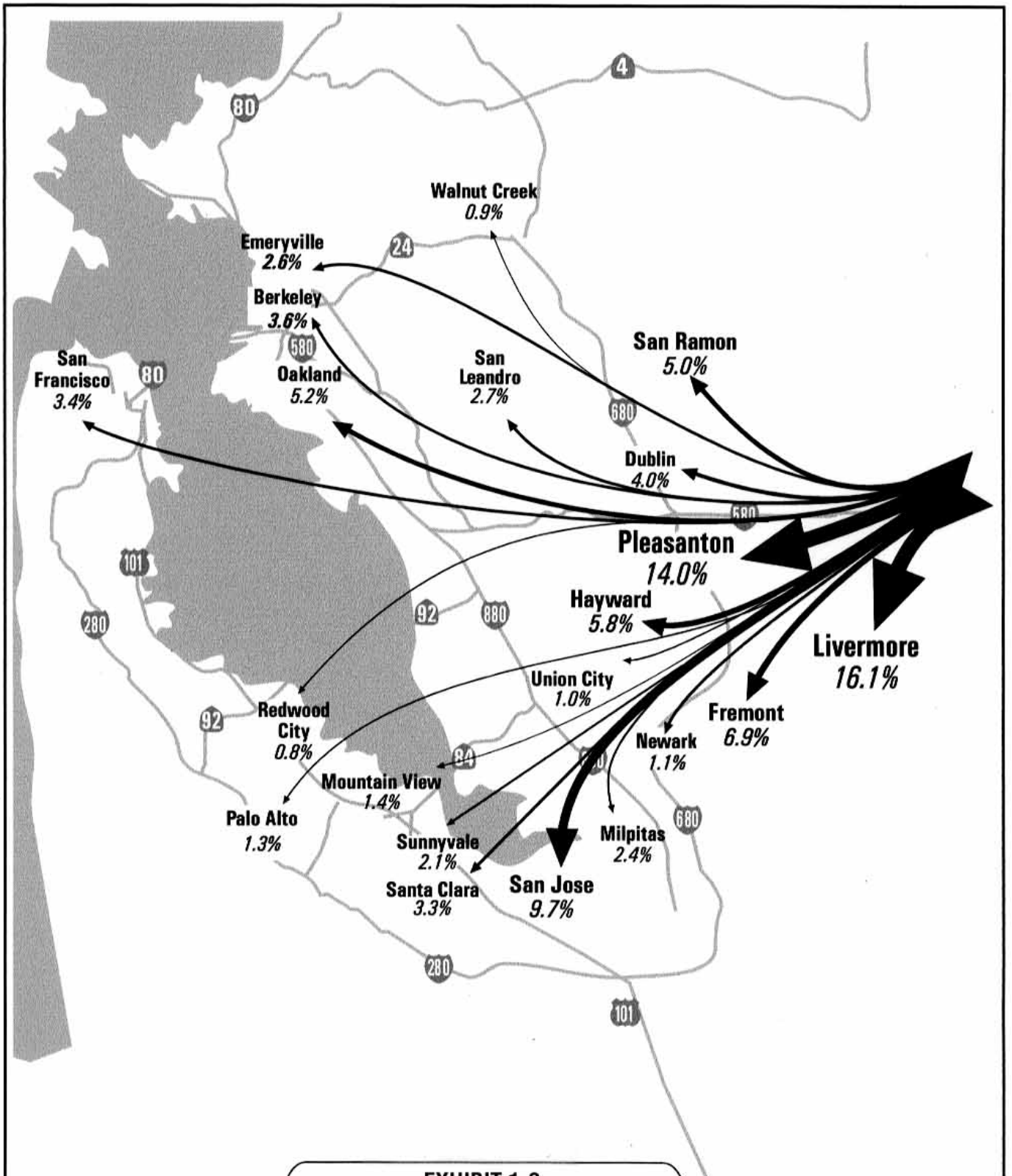



**EXHIBIT 1.2**
**San Joaquin I-580 Destinations, AM Peak Period, Westbound Drivers**

*Source: Systan, ATD Inc., Nelson|Nygaard*

### 1.2.2 Trip Statistics

**Purpose**. The home-to-work commute was by far the most common trip purpose reported by respondents, accounting for 96.9% of all corridor trips during the morning peak. Another 1.4% of all trips were related to work in some way (i.e., salespersons on their way to meet clients, contractors on their way to job sites), so that over 98% of the morning trips reported by drivers involved the workplace.

**Trip Length**. The average one-way trip length reported by auto drivers was 58.3 miles. Carpoolers made slightly longer trips than solo drivers, averaging 60.8 miles to 57.7 miles for non-carpoolers.

**Departure Times**. On the average, bus riders get the earliest start, leaving home at 4:46 a.m. The average train rider leaves at 5:04 a.m., while the average driver leaves at 5:43 a.m. Car- and vanpoolers leave at 5:26 a.m., twenty minutes earlier than the average solo driver, who leaves at 5:46 a.m. Focus group responses suggest that the average departure time for drivers has gotten earlier in recent years, as traffic has become more clogged and commuters have found it necessary to get earlier starts in order to beat the peak hours of congestion.

**Travel Time**. Bus riders reported average travel times of 1.41 hours, largely on trips to Livermore and Sunnyvale. Train riders, destined primarily for Silicon Valley, reported average travel times of 2.01 hours. Both bus and rail trips lasted longer than the average trip by car, which took 1.35 hours from start to finish.

### 1.2.3 Out-of-Pocket Costs

**Transit Fares**. On the average, bus riders paid $6.15 per day in fares, while train riders spent $11.04. Drivers who crossed the Altamont Pass by car and transferred to BART reported average fares of $9.11 per day.

**Vanpool Expense**. Vanpoolers reported average expenses of $9.52 per day.

**Parking Charges**. The vast majority (95%) of all drivers reported no parking costs at all. The remainder experienced average charges of $7.14 per day.

**Total Driver Costs**. When the costs of fuel, maintenance, and repairs are added to the parking and tolls costs reported by drivers, the average out-of-pocket cost of commuting across the Altamont Pass by car can be estimated as $13.95 per day

**Composite Commuter**. When the out-of-pocket costs of bus riders, train riders, and drivers are weighted by the frequency with which each of these modes is used, it is possible to reflect the characteristics of a composite, or average commuter. Weighting out-of-pocket costs in this manner produces an average cost of $13.73 per day for transit fares, vanpool expenses, parking charges, tolls, gasoline, and maintenance.

### 1.2.4 Alternative Travel Modes

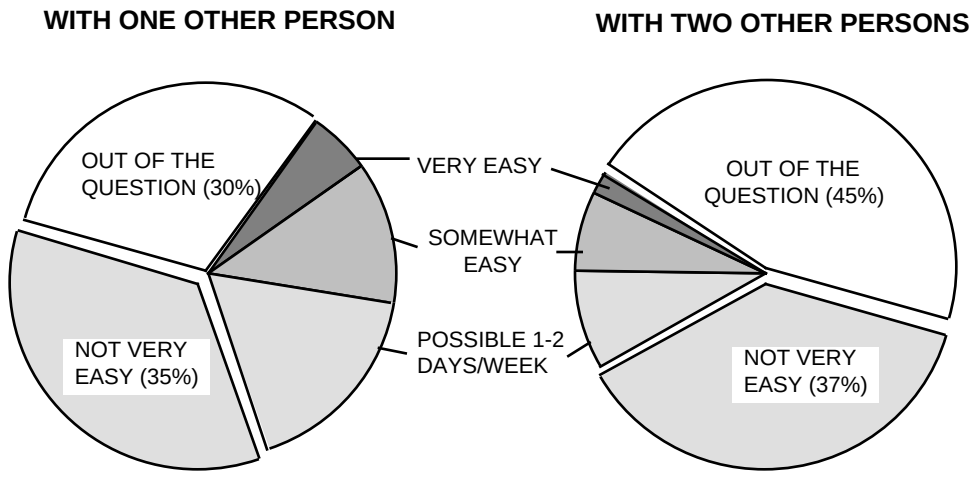
**Mode Share**. Survey respondents were not exclusively tied to mode they were observed using. It was not uncommon, for example, for a train rider to drive alone one day a week while taking the ACE train the other four days, or for a single driver to carpool one or two days a week. Only 54.5% of the train riders surveyed use the train exclusively five days a week. The corresponding figure for bus riders was 80.1%, while 80.0% of auto drivers did not vary their travel mode from day to day. Survey respondents were asked to identify their mode of travel over the five days of the work week. Based on these day-by-day responses, 78.4% of all commuters crossing the Altamont Pass drive alone, 14.3% carpool, 1.2% are vanpool members, 3.9% take the ACE train, and 2.1% take the SMART bus.

**Telecommuting**. On the average, 10.8% of all Altamont Pass commuters work at home (telecommute) at least one day per week.

**Ridesharing Potential**. In an effort to determine the size of the potential ridesharing market, non-carpoolers were asked how easy it would be for them to carpool with one or two persons, and all drivers were asked how easy it would be to take transit. Exhibit 1.3 graphs the answers of non-carpoolers who were asked how easy it would be to rideshare.

**EXHIBIT 1.3**

**POSSIBILITY OF CARPOOLING WITH ONE OR TWO PERSONS**



Roughly 35% of the non-carpoolers surveyed thought that it might be relatively easy to carpool with one other person or said that it would be possible one or two days per week. Of the remainder, 35% said that carpooling with another person would not be very easy and 30% characterized it as "out of the question." The drivers surveyed generally viewed transit use as more difficult than carpooling. An average of 74.4% of the drivers surveyed said that it would either be "not very easy" (28.0%) or "out of the question" (46.4%) for them to take public transit across the Altamont Pass.

## 1.3 EMPLOYMENT CHARACTERISTICS

### 1.3.1 Current Occupations

**Occupational Rankings**. Survey respondents were provided with a list of twenty-six occupations and asked to select the entry which best described their current job. Responses covered a wide range of occupations. The top five categories identified by Altamont Pass commuters are listed below.

| Occupation | Percent Claiming |
|---|---|
| Administration/Support | 11.8% |
| Construction | 11.0% |
| Computers | 10.3% |
| Manufacturing | 10.0% |
| Engineering | 7.8% |

**High Tech Jobs**. In all, 27.2% of the drivers surveyed were employed by the electronics/communications industry.

**Management Levels**. Forty-three percent of the Altamont Pass commuters held management positions. Of these, 9.4% classified themselves as upper management, 20.1% said they were middle management, and 11.3% said that they held lower management levels. The remainder did not specify a level of management.

**Length of Employment**. On the average, Altamont Pass commuters had been with their current employer 6.8 years. Nearly 37% of all commuters (and two-thirds of all bus riders) had worked at the same place for ten or more years.

### 1.3.2 Willingness to Change Jobs

**Flexibility**. Commuters were asked "Would you take a comparable job if it were available in or near your home?" On the average, 87.8% of all Altamont Pass commuters said they would be willing to shift to a comparable job close to home.

**Characteristics of Job Changers**. The greatest willingness to change jobs was found among high-tech employees (92% were willing to change employers), those who had been with their current companies less than three years (92%) and women (90.4%). At the other end of the scale, those least willing to change jobs were people with ten or more years in their current job (81.5% willing), or in their current home (81.1%); respondents making $100,000 or more (78.1%); commuters 55 or older (76.8%); and Ph.D.'s (73.3%). Even among the groups least willing to change jobs, however, more than seventy percent were still willing to move to a comparable job closer to home.

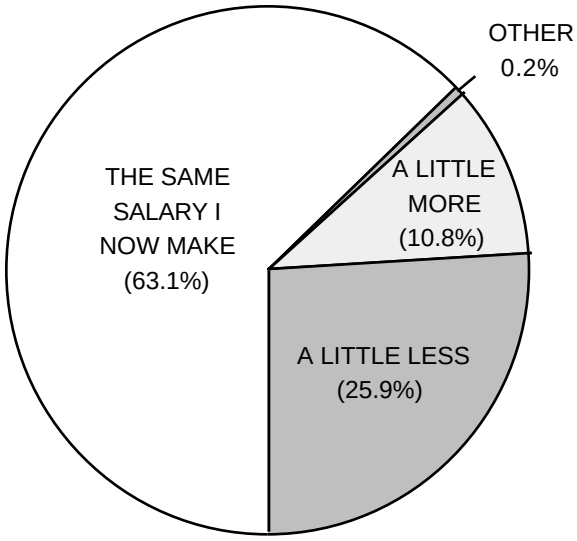
**Salary Requirements**. Respondents who said they would be willing to shift to a job closer to home were asked what salary level they would require to make the switch. Answers to this question are graphed in Exhibit 1.4.

**EXHIBIT 1.4**

**SALARY REQUIREMENTS OF POTENTIAL JOB CHANGERS**

**QUESTION: WHAT SALARY LEVEL WOULD YOU REQUIRE IN ORDER TO WORK CLOSER TO HOME?**

(Asked of respondents willing to shift to comparable jobs closer to home - 87.8% of total commuters)



In all, 25.9% of the respondents said they would be willing to shift to a job closer to home for a slightly lower salary, while 63.1% said they would settle for the same salary they currently make. Thus 89.0% of those willing to change jobs would not require an increase in pay to go to work for an employer closer to home.

## 1.4 DEMOGRAPHICS

### 1.4.1 Personal Characteristics

**Gender and Age**. Among Altamont Pass commuters, males outnumbered females by a factor of nearly two to one. In all, 64.9% of the corridor users were male, while 35.3% were female. The average commuter was 42 years old.

**Education Level**. Exhibit 1.5 shows the highest education level attained by bus riders, train riders, and drivers. On the average 23.8% of all commuters had achieved a bachelor's degree or better.

**EXHIBIT 1.5**
**EDUCATION BY MODE**

| RESPONDENT'S EDUCATION LEVEL | BUS RIDER | | TRAIN RIDER | | DRIVER | | COMPOSITE COMMUTER |
|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | % |
| Some High School | 2 | 1.1% | 10 | 2.0% | 142 | 3.6% | 3.6% |
| High School Grad | 27 | 14.8% | 50 | 10.3% | 746 | 19.1% | 18.8% |
| Some College | 58 | 31.9% | 126 | 25.9% | 1407 | 36.1% | 35.7% |
| Tech. School Grad | 16 | 8.8% | 32 | 6.6% | 306 | 7.8% | 7.8% |
| Associate Degree | 33 | 18.1% | 58 | 11.9% | 398 | 10.2% | 10.4% |
| Bachelor's Degree | 36 | 19.8% | 157 | 32.2% | 686 | 17.6% | 18.0% |
| Master's Degree | 8 | 4.4% | 45 | 9.2% | 182 | 4.7% | 4.8% |
| Doctorate | 2 | 1.1% | 9 | 1.9% | 36 | 0.9% | 1.0% |
| TOTAL | 182 | 100.0% | 487 | 100.0% | 3903 | 100.0% | 100.0% |

Train ridership increased among commuters with a bachelor's degree or higher, presumably because the destinations served by the ACE trains are the high-tech employers of Silicon Valley.

### 1.4.2 Household Characteristics

**Size**. The average household size reported by Altamont Pass commuters was 3.1 persons.

**Home Ownership**. Eighty-three percent of all respondents owned their own homes. On the average, respondents had lived in their current residence for 5.6 years, with 22% having lived in the same place ten or more years. Bus riders tended to have lived at the same location longer than train riders (6.4 years versus 4.1 years).

### 1.4.3 Annual Salary

The average salary reported by all commuters was $59,600. Train riders reported somewhat higher incomes ($67,800) than both bus riders ($59,100) and drivers ($59,400). Again, this presumably reflects the train destinations, which deliver commuters to the higher paying, high-tech jobs of Silicon Valley.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SAN JOAQUIN PARTNERSHIP
Economic Development for the Benefit of San Joaquin County
2800 W. March Lane, Suite 470
Stockton, California 95219
(209) 956-3380 • (800) 570-JOBS • Fax (209) 956-1520
Web: sjpnet.org • Email: mlocke@sjpnet.org

SAN JOAQUIN COUNCIL OF GOVERNMENTS
6 South El Dorado St., Suite 400
Stockton, California 95202
(209) 468-3913 • Fax (209) 468-1084
Web: sjcog.org • Email: info@sjcog.org