

Ventura Freeway Vanpool Support Program

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The Ventura Freeway Improvement Project Vanpool Support Program (VSP) discount strategy is examined. This program was used to introduce Ventura Freeway Corridor commuters to vanpooling. Results from the project indicate that changes in travel behavior were price sensitive in that 673 commuters were willing to make the trade-off between lower fares and the value placed on privacy and convenience in order to sample vanpooling.

In February 1988, the California Department of Transportation (Caltrans) began extensive reconstruction work on a 7.4-mi segment of the Ventura Freeway (U.S. Route 101) in the San Fernando Valley (see Figure 1). To accomplish the needed work on one of the nation's busiest freeways, Caltrans developed a comprehensive traffic management plan that included a high-profile public information campaign, a local access route to ease traffic in a portion of the construction area, a roving service patrol to assist motorists with disabled vehicles, a 24-hr project information telephone hot line, changeable freeway message signs, freeway advisory radio broadcasts, and a reduced-fare vanpool program.

COMMUTER TRANSPORTATION NEEDS

Caltrans analyzed the ridesharing potential for the Ventura Freeway corridor by looking at the following community characteristics:

1. The west San Fernando Valley has a significant population of affluent, middle-class professionals commuting to distant employment centers.
2. Significant employment sites within the study area included suburb-to-suburb long-distance commuters with limited alternatives to solo driving.
3. Available local bus service existed throughout the San Fernando Valley. Express bus service was available to downtown Los Angeles or Westwood-Los Angeles International Airport.
4. Over 100 vanpools used the corridor before construction. Demographic and commute patterns suggested that solo commuters were likely vanpool candidates.

Ridesharing, with an emphasis on vanpooling, was included as a component of the traffic management plan because of

its capacity for reducing the number of drive-alone vehicles and low-occupancy carpools driving through the reconstruction corridor. The FHWA provided funding. Caltrans was responsible for program administration. Commuter Transportation Services, Inc. (CTS), the local rideshare agency, provided marketing support, and a public information contractor assisted with publicity and marketing collaterals.

Until the Vanpool Support Program (VSP), the rideshare industry's most popular promotional strategy to generate vanpool start-ups was the empty seat subsidy that stabilized fares while additional passengers were being recruited. The VSP fine-tuned this strategy and refocused it on the individual commuter, so that the incentive was to risk a temporary (at least 1 month) change in travel behavior. A 92 percent retention of ridership later confirmed the effectiveness of the VSP discount strategy. The VSP offered discounts that directly reduced each passenger's share of the monthly cost. Each qualified vanpooler received 6-month fare reductions on the basis of the following monthly schedule:

<i>Month</i>	<i>Percent Discount</i>
1	50
2	40
3	25
4	15
5	10
6	10

A qualified VSP candidate was a construction corridor commuter who had neither been a recipient of VSP funds nor vanpooled during the previous 6 months before making application for the program. A qualified (new or existing) vanpool had to have a minimum of eight paying passengers as of January 1, 1988, and thereafter. To further encourage vanpool formations, vanpools with seven paying passengers were permitted one empty seat for 1 month, counting it as a paying passenger for the purpose of fare calculations and program qualification. The program, tied to the construction schedule, concluded on October 31, 1989.

PROCEDURES

To form vanpools, employers, van-leasing companies, or individuals worked with Caltrans or CTS. Once Caltrans approved an applicant for a new or existing vanpool, that individual was eligible for 6 months of fare reductions. Depending on the van provider, two methods of fare collection were used. Under the first method, individual fares were reduced at the beginning of each month, with the van provider billing Cal-

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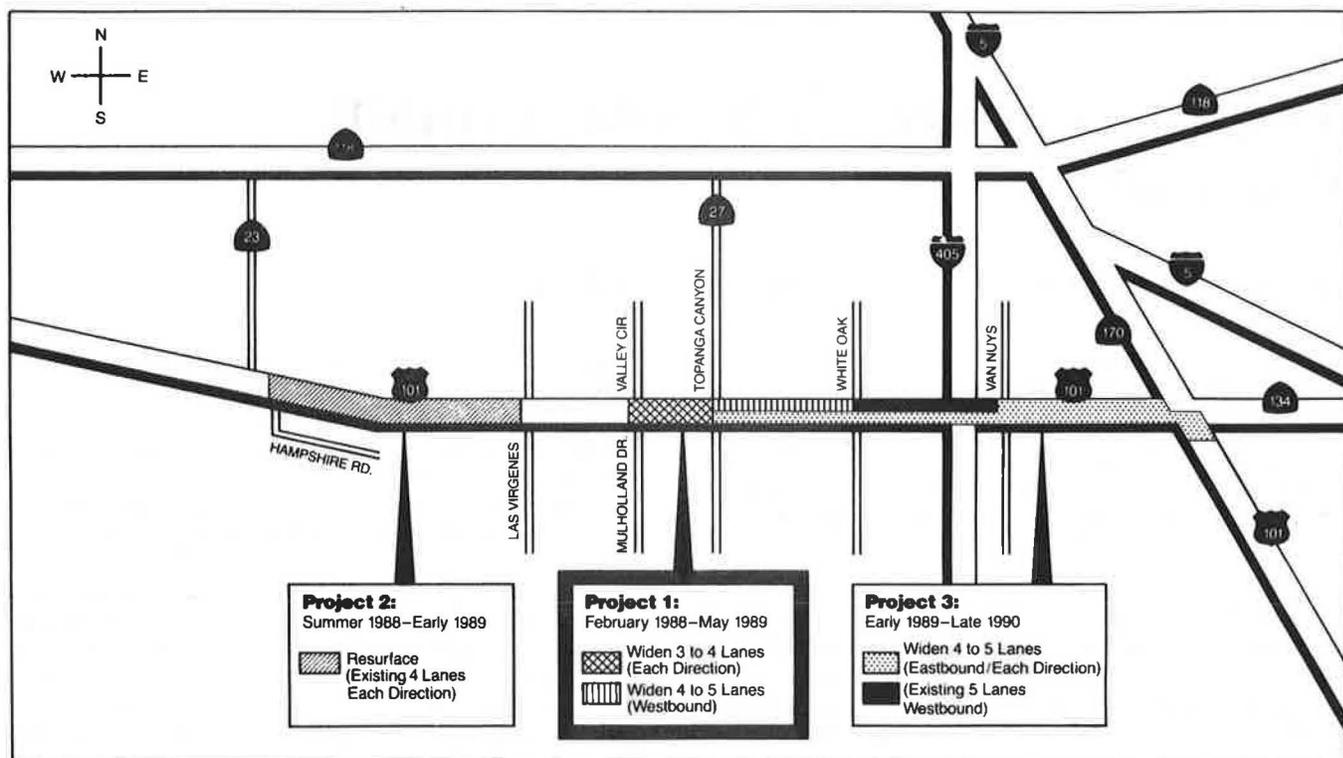


FIGURE 1 Overview of Ventura Freeway improvement projects from 1988 to 1990.

trans for the shortage. Under the second method, the van provider billed Caltrans for reimbursement of previously collected fares. Individuals then received their reimbursement.

The objective was to make the program flexible and consumer oriented. Vanpoolers could join at any time, permitting each qualified subscriber to have the benefit of the full 6-month fare reduction.

PARTICIPATION

During the 16-month campaign, 673 persons were converted to vanpooling, with 618 (92 percent) continuing to vanpool after the program concluded. The major reasons given for persons dropping out of vanpools were work schedule changes or changes in employment. Of 69 participating vans, more

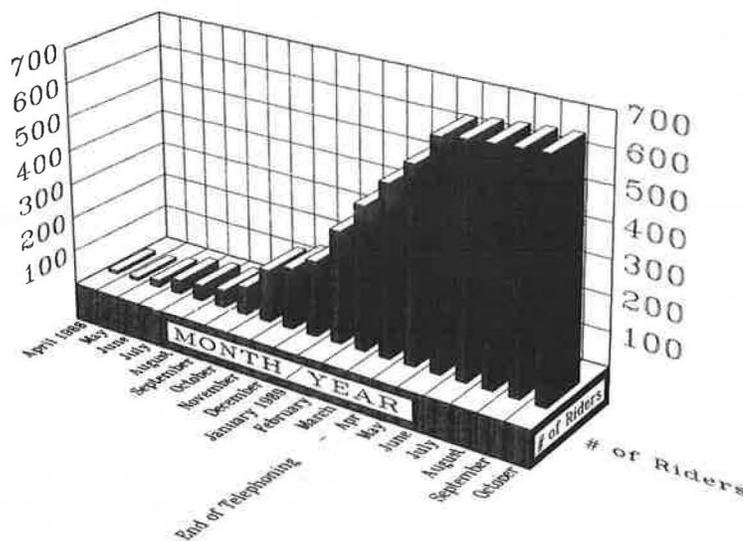


FIGURE 2 Ventura Freeway Vanpool Support Program (673 participating riders).

than 66 (95 percent) remained active after construction was completed. Among these vans, 23 (33 percent) were new vanpools that were organized as a result of the campaign. A total of 3,372 months of individual ridership was generated because of this promotional effort (see Figures 2 and 3).

ROUTE 101 PROJECT COST SUMMARY

The total program cost was \$223,901.84. Of this amount, \$65,261.94 was reduced fare payments. The Route 101 budget breakdown was as follows:

	Budgeted	Expended
Subsidy allotment	\$250,000.00	\$ 65,261.84
Baseline study	3,000.00	3,000.00
Printing	70,000.00	70,000.00
Marketing planning and collateral design	60,000.00	60,000.00
Program design	0.00	15,000.00
Administration	0.00	10,000.00
Total	\$383,000.00	\$223,261.84

The printing allocation was made to the regional rideshare agency. The marketing planning and collateral design allocation was made to the public relations contractor.

VANPOOL ORIGINS AND DESTINATIONS

The mean one-way commute trip for project vanpools was approximately 43 mi, with a mean commute time of about 64 min. The program experience suggests that the Ventura Freeway Corridor vanpool market tended to be middle class, low density, and 20 to 80 mi from employment centers.

The major vanpool work trip origins for the program were (a) Antelope Valley (Palmdale, Lancaster), in north Los Angeles County; (b) Conejo Valley (Thousand Oaks, Camarillo), in east Ventura County; and (c) West Los Angeles County (Santa Monica, Sawtelle, and Palms).

The major vanpool work trip destinations were (a) Conejo Valley (Thousand Oaks-Westlake Village), (b) Warner Cen-

ter (Canoga Park-Warner Center-Woodland Hills), and (c) University of California at Los Angeles (UCLA) in Westwood (West Los Angeles).

ENVIRONMENTAL IMPACTS

Each new vanpool passenger trip represented a vehicle-miles traveled (VMT) reduction and a trip deleted from traffic. Air quality impacts were based on the standard vehicle average established for all vehicles in 1988 by the South Coast Air Quality Management District.

In order to determine the daily VMT reductions, the following formulas were used:

For existing vans,

$$\text{Daily VMT per month} = (2 \times \text{trip distance} \times \text{number of new vanpoolers in the month})$$

For new vans,

$$\text{Daily VMT per month} = [2 \times \text{trip distance} \times (\text{number of new vanpoolers in the month} - 1)]$$

VMT/day determines the mean air quality impact for each work day of the month.

Assuming that only solo drivers converted to vanpooling, the campaign produced a potential daily VMT savings of 45,156 (see Figure 3). Even if these vanpools did not eliminate cold starts, these VMT savings would result in desirable emission reductions.

In order to calculate the trip-reduction impact on the project corridor, the trip times were converted to average aggregate trip hours for the average morning peak load traffic period for each month of the project. All project vanpools traveled on the Ventura Freeway between Topanga Canyon Boulevard (Route 27) and Balboa Boulevard during the a.m.

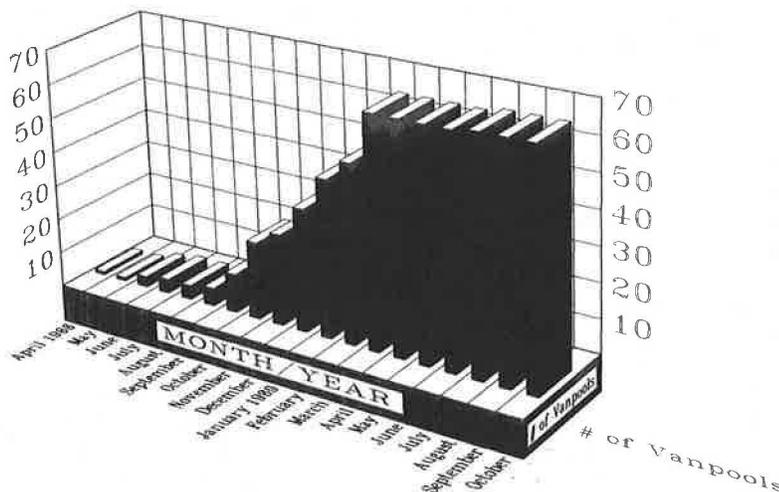


FIGURE 3 Cumulative numbers of vanpools participating in Ventura Freeway Vanpool Support Program.

and p.m. peak time periods. To calculate trips per hour saved, vanpool travel times were multiplied by the number of new passengers (as distinguished from drivers of new vanpools) for each month during the life of the project.

Caltrans identified the home-to-work trip direction for each vanpool. Twenty-eight vanpools traveled eastbound and 38 traveled westbound. Assuming solo drivers joined the vanpools, the program could have resulted in an eastbound trip reduction of 226 trip-hr and a westbound reduction of 288 trip-hr. The trip reduction had a westerly directional split of 56:44. This split excludes a westbound reduction of 33 trip-hr saved by two afternoon swing shift vanpools. The directional split of vanpool vehicles was 58:42 in a westerly direction.

The directional split reflects the fact that two of the employment centers were major trip destinations located at the west end of the construction project corridor. It also suggests that employers in major centers of the eastern end of the corridor and beyond (Encino, Sherman Oaks, Van Nuys, Studio City, Universal City, Burbank, Glendale, Pasadena, Westwood, Century City, Hollywood, Wilshire Center, and downtown Los Angeles) merited a heavier promotional effort. Time constraints and limited staff resources prevented this additional work.

PROGRAM MANAGEMENT AND PROMOTIONAL EFFORT

In 1988, the Caltrans Public Transportation and Ridesharing Branch and CTS signed a memorandum of understanding that outlined their respective roles for this project. Caltrans agreed to administer the program and CTS took the responsibility of promoting the program with its network of client employers. Communication with the mass market of commuters was the result of media exposure facilitated by the public information contractor. CTS concentrated its efforts on employer outreach using posters, brochures, and a program information manual.

From January 1988 until August 1988, CTS conducted workshops, telephoned employers, and generally promoted the vanpool discount program. Despite this effort, few program applications were generated. At first, it was concluded that other elements of the transportation management plan were so effective in eliminating construction area congestion that commuters had no incentive to try vanpooling. Although the conclusion seemed plausible, a shift in promotional tactics was made to test its validity.

From October 1988 until April 1989, two Caltrans staff members began telephoning employee transportation coordinators for 2 to 3 hr each day. This brought about an immediate and dramatic increase in the number of program applicants and vanpool placements (see Figures 2 and 3). The majority of program participants was directly attributable to the shift in promotional tactics. These findings were shared with CTS, but staffing demands did not permit them to participate in the telephone solicitation activity. After April 1989, Caltrans discontinued telephoning employers because of the impending completion of the construction project.

Despite efforts to create a user friendly program, some employee vanpool coordinators became confused and complained about the time-consuming paperwork and documen-

tation requirements. Feedback indicated that invoicing and subsidy disbursements needed to be distributed in a more timely manner. Since completion of the project, the process has been simplified and extended to other corridors for further testing and refinement. Ease of use has become a priority in order to facilitate program usage by area employers.

Program accomplishment (673 vanpool placements with a 92 percent retention rate) and employer feedback suggest that the discount strategy was effective in attracting new vanpool riders. Unlike the subsidy of empty seats that targets commuters already committed to vanpooling, the discount strategy reaches out to a larger audience that includes the uncommitted as well. The uncommitted are the subject of much discussion among transportation demand management planners. They represent a large group of commuters whose travel behavior could be changed.

An unanticipated finding, after the conclusion of the campaign, was the potential of a vanpool-focused promotion to generate carpool placements. Not every vanpool candidate was placed. Perhaps vanpooling did not make economic sense because the work trip was less than 15 mi or sufficient ridership was not available. In those instances, carpooling may have been elected as an alternative. In addition, the heightened awareness created by the vanpool campaign may have stimulated carpool prospects to finally cross the decision threshold to start carpooling. This linkage was not recognized during the campaign, and hence carpool placements were not tracked. This phenomenon was subsequently discovered during a similar campaign for the 23-118 interchange construction project where numerous call-in inquiries were generated by a series of vanpool signs on both the freeway and on surface street locations.

Because of the potential for a larger number of vanpool and derivative carpool placements, the discount strategy, when compared with the empty-seat subsidy approach, is clearly the more cost-effective investment. Other programs such as the campaign on the 23-118 Freeway and the I-110 VSP have been patterned after the Ventura Freeway vanpool strategy.

In order to capitalize on this strategy, all promotional materials and advance work need to be prepared before executing the campaign. The cash disbursement accounting mechanism must be in place before going public, so that new participants receive payment in a timely and efficient manner. Caltrans observed that word-of-mouth informal communication of the discount offer was one of the important ways employers discovered and developed an interest in the program. In addition, if the participants did not receive their funds in a timely manner, they became disgruntled and voiced their complaints to others. In general, when paperwork was perceived to be too difficult, both individuals and employers began to lose their enthusiasm.

Staff efficiency and time management can be enhanced with the use of a project-specific computer program that tracks each van and produces a status and summary report on demand. Such a program can offer valuable support to program administrators and employee transportation coordinators in monitoring each van. In addition, the need to simplify forms and procedures (while meeting legal and contractual requirements) was recognized. The benefits to the project manager include reduced administration time, better quality control, and an improved ability to evaluate program effectiveness.

CONCLUSIONS

1. Changes in travel behavior were price sensitive in that 673 commuters were willing to make the trade-off between lower fares and the value placed on privacy and convenience in order to sample vanpooling. In addition, once the ride-sharing habit was established, 618 (92 percent) of the new riders found that other vanpooling benefits improved their commute trip and continued vanpooling even though fares eventually doubled over a period of 6 months.

2. Reduced-fare vanpooling targets individuals, thus increasing placement opportunities. This occurs because this process not only stimulates new vanpool formations, but unlike empty-seat subsidy programs, it recruits passengers to fill empty seats on existing vans.

3. Direct telephone solicitation proved to be the most effective promotional activity whether or not an employee transportation coordinator or individual had previous knowledge of the discount offer. Most new vanpools and individual placements on existing vans were generated as a direct result of telephone interaction. As a consequence of this experience, it was concluded that even if all other promotional activities were abandoned, this single tactic could be relied on to deliver results.

4. The simpler and easier the application process, the more likely it is that people will apply for the program.

RECOMMENDATIONS

1. Reduce program duration from 6 to 4 months. This appears to be sufficient time to establish the vanpooling habit.

Further, this would accomplish program objectives at a lower cost.

2. Simplify the application and administration process to maximize participation and minimize administrative time and expense.

3. Design a quick-response cash disbursement mechanism to reimburse qualified vanpoolers at the conclusion of the trial ridership period. Without streamlining the process, future VSP campaigns and participation would suffer.

4. Extend a comparable discount to buspoolers, because a buspool (charter bus) is essentially a large vanpool.

5. Monitor derivative carpool placements.

6. Continue the pretest-posttest method of determining continued program effectiveness in attracting riders.

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