Can Employer-Subsidized Commute Assistance Programs be Effective in a Free Parking Environment?

The City of San José and the Eco-Pass Program

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Executive Summary

Implemented in 1996, the Eco-Pass program is a deeply discounted transit pass sponsored by the Santa Clara Valley Transportation Authority (VTA). Under the program, employers are required to purchase an Eco-Pass for all employees. For the City of San José, the Eco-Pass is a free benefit to 4250 full- and part-time benefited employees. As the key element of the City's Commute Assistance Program, the Eco-Pass is intended to encourage transit usage.

Administratively, VTA does not track, nor does it require employers to track Eco-Pass usage. This means that in the thirteen years the City of San José has participated in the Eco-Pass program, there has never been an evaluation of the effectiveness of the program in meeting its intended goals. As such, this research will provide the City's first evaluation of the program since its inception.

The goals of the Eco-Pass program align well with City policies and programs aimed at reducing the environmental impacts associated with the automobile. However, other practices of the City, specifically that of providing free parking at all worksites, have the potential to undermine the effectiveness of the program, particularly given the auto-oriented culture of the San José metropolitan area.

Considering that City employees are provided both free transit and free parking, the multi-phased approach of this research is intended to answer the question, "*Can Employer-Subsidized Commute Assistance Programs be Effective in a Free Parking Environment?"* The research begins with a review of the City's stated policies and goals related to encouraging transit use in general and, more specifically, its participation in the Eco-Pass program. This information provides direction for a more broad-based literary review of industry practices associated with the evaluation of employer-subsidized commute assistance programs with an emphasis on the work commute and the effects of a free parking environment.

The literature review provides the framework to build upon and leads to a focused data collection process. At the cornerstone of this process is a survey of approximately 4000 City employees to determine their assessment of the effectiveness of the Eco-Pass program based on relevant measures identified through the literature review process. Other elements of the data collection process include stakeholder interviews and a compilation of parking data. As parking is free to City employees, the parking data is used to gain a better understanding of trends associated with driving during the work commute. A focused study was developed that considered parking trends and transit usage during the summer of 2008 when the cost of gas peaked to historic levels and doubled the average cost of driving to work. Additional data was collected to compare the cost of "free" parking to free transit from the perspective of the City.

Looking beyond the results of this research, measurable outcomes have been developed to determine the effectiveness of the Eco-Pass program that can serve as a guide to program improvements and provide a baseline for comparison in future evaluations.

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW OF THE ISSUE

The Eco-Pass serves as the cornerstone of the City of San José's Commute Assistance Program. Sponsored by and administered by the Santa Clara Valley Transportation Authority (VTA), the City has participated in the Eco-Pass program since 1996. Beginning in January 2010, the City will pay VTA an annual fee of approximately $185,000 to participate in the Eco-Pass program. As a result, the City's 4250 non-sworn, full and part-time benefited employees will receive free, unlimited access to the county-wide bus and light rail transit system as a benefit of employment.

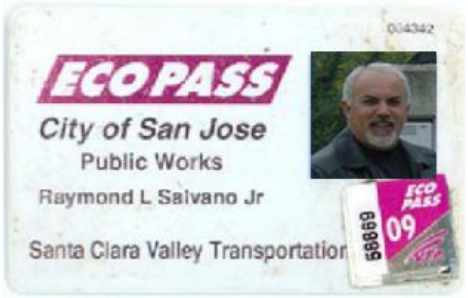
Due to its well-intended goals and perceived benefits, the Eco-Pass program is looked upon favorably by the City's administration. This is due to the fact that the Eco-Pass program aligns very well with City's policies and goals aimed at encouraging transit ridership and reducing the reliance of City employees on the automobile and its negative environmental effects. However, in the 13 years that the City has participated in the program, it has never evaluated the effectiveness of the Eco-Pass program in achieving these goals.

One of the most significant disincentives to employee participation in the program is the long-standing City practice of also providing free parking to all employees. Free parking has the potential to undermine the full potential and effectiveness of the Eco-Pass program. In this context, overcoming the auto-oriented culture that has dominated the San José metropolitan area for the past 60 years could present one of the greatest challenges the City faces in meeting the goals related to its participation in the Eco-Pass program.

It is in this contrasting context of policies and actions, of providing free transit in a free parking environment that serves as the motivation for this research to determine the effectiveness of the Eco-Pass Program.

1.2 WHAT IS AN ECO-PASS?

VTA's Eco-Pass is an employer-paid identification card that allows employees free, unlimited access to VTA's transit services. Annual fees paid to VTA by an employer are determined based on a sliding scale that considers the total number of eligible employees and their proximity to VTA's transit services.



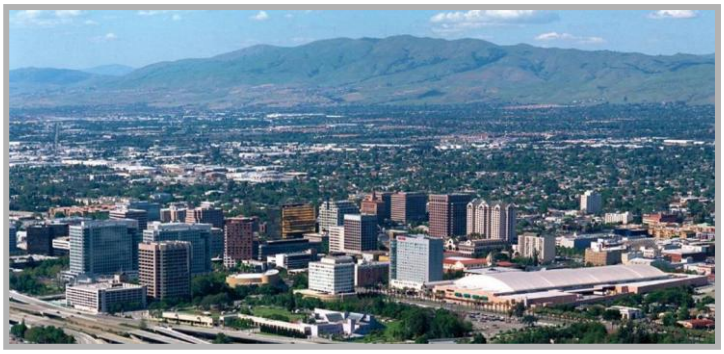
The Eco-Pass program falls under the broad category of Transportation Demand Management (TDM) strategies. As defined by the Victoria Transport Policy Institute in the *TDM Encyclopedia (2009),* TDM **"**is a general term for strategies that result in more efficient use of transportation resources." In terms of the numerous strategies commonly associated with TDM, the Eco-Pass program improves commute options and provides incentives that reduce driving by providing free transit service to, in this case, City employees.

1.3 THE CITY OF SAN JOSÉ AT A GLANCE [(1)]

Founded in 1777, the City of San José is the third largest city in California and the tenth largest city in the United States. With a population of 1,008,000, the City covers 178 square miles. As the "Capital of Silicon Valley", San José is home to many internationally renowned companies in the fields of information technology, biosciences and alternative energy development.

(1) –From *City of San José 2008-2009 Adopted Capital Budget, San José at a Glance*

San José's growth and expansion accelerated in the 1950's, and has continued into the early part of this decade. Much of this growth was in the development of single family homes and the infrastructure needed to support an auto-oriented culture.



Today, approximately one-third of the City's land use is dedicated to single family homes, and one-fifth of the land use is dedicated to 2310 miles of roadways. In an effort to curtail residential sprawl and demand for increasing roadway capacity, urban growth boundaries have been established and higher density residential land uses along transit corridors are currently being developed. Despite efforts to increase the inventory of available housing, housing prices in San José remain among of the highest in the nation.

As an employer, the City of San José has approximately 7000 employees, 4250 of which are non-sworn, benefited employees that receive an Eco-Pass. Given the size of the City and the diversity of the services it provides to its residents, there are over 100 City worksites. The recently constructed City Hall accommodates approximately 1800 employees, and is the largest of the City's employment sites. Centered in the downtown area, City Hall is well served by numerous transit services.

Other City worksites include the Mineta-San José International Airport, Water Pollution Control Plant, Happy Hollow Zoo, 35 fire stations, 22 libraries, 51 community, senior and youth centers and numerous corporation yards. With the exception of City Hall and other downtown employment sites, many worksites have limited transit service availability. Consequently, it has been a City practice to provide free parking to City employees at all City worksites.

Transit Service

Downtown San José serves as the major transit hub for the southern region of the San Francisco Bay Area. VTA is the primary provider for transit service in San José and Santa Clara County and administers the Eco-Pass program. County-wide, VTA provides 42 miles of light rail service with 62 stations. Light rail service accounts for approximately 10 million annual boardings. In addition, VTA operates 480 buses, operating over 70 routes with 3778 stops. Bus service accounts for 33 million annual riders.

Other regional transit agencies that provide service to San José include Caltrain, the Altamont Commuter Express (ACE) and the Highway 17 Express as shown in Figure 1-1. Caltrain and ACE are commuter rail systems, with Caltrain providing service from San Francisco, through San José and terminating in Gilroy at the south end of Santa Clara County. ACE provides service from the Central Valley to the East Bay, terminating at the Diridon Station in Downtown San José. The Highway 17 Express bus provides direct service from Santa Cruz County to Downtown San José.

Figure 1-1
Regional Transit Agencies

While the Eco-Pass is not valid on any of these transit systems, every effort is made to provide convenient transfers onto the VTA system.

Recognizing the importance of San José as a regional transit hub, future service improvements are currently being developed that include the extension of the Bay Area Rapid Transit system and the California High Speed Rail project into Downtown San José.

1.4 RESEARCH OBJECTIVE AND REPORT ORGANIZATION

Research Objective

In the 13 years the City of San José has participated in the Eco-Pass Program, neither VTA nor the City has ever evaluated the level of program participation at the employer level to determine if the goals of the program are being achieved. As such, the main objective of this research is to evaluate the effectiveness of the Eco-Pass program against its intended goals and other industry-standard objectives in a free parking environment. This research will focus on City of San José employees and the peak hour home-to-work/work-to-home commute periods. Aligning the City's goals of program participation with the measurable outcomes developed through this research will establish a benchmark of program effectiveness that can be referenced for future program evaluations.

In support of these objectives, this research is intended to answer five key questions in determining the effectiveness of the Eco-Pass program:

- What are the City's goals in participating in the program?
- What factors should be considered to determine program effectiveness?
- Does free parking influence participation in the Eco-Pass program?
- Is the program effective?
- What strategies can the City implement to improve the effectiveness of the program?

Report Organization

The remainder of this report is divided into 6 chapters. In Chapter 2, a literary review of published material on commute assistance programs and the relationship of free parking will be discussed. This review will include a focus on related City policies and objectives as well as a broader review of industry practices in determining the effectiveness of commute assistance programs.

Building upon the information discussed in Chapter 2, Chapter 3 discusses the data collection methodology that includes stakeholder interviews and an introduction to a City-wide employee survey conducted as part of the original research associated with this report. In Chapter 4, the effectiveness of the Eco-Pass program will be analyzed, followed by Chapter 5 which discusses the influence of free parking from both a behavioral and economic perspective. Chapter 6 answers the five key questions previously discussed, to include the fundamental question, "*Can Employer-Subsidized Commute Assistance Programs be Effective in a Free Parking Environment?*" with recommendations for further study and/or action.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The literature reviewed to determine the answer to the question "C*an Employer-Subsidized Commute Assistance Programs be Effective in a Free Parking Environment?"* is summarized in this chapter.

Through this review, the goals and objectives related to the City's participation in the Eco-Pass program are first presented. This is the starting point as information gathered from this review provides direction for a more broad-based literature research. The emphasis will be on industry practices related to evaluation methods and measures of effectiveness of employer-subsidized commute assistance programs. Common themes that may contribute or detract from successful programs, such as free parking, are identified and discussed at the end of this chapter.

2.2 FOCUSED LITERATURE REVIEW

What are the City's goals in participating in the program?

The City of San José began participating in the Eco-Pass Program in 1996. The program is a benefit of employment and is purchased by the City for all full- and part-time employees (*City of San Jose Employee Benefit Handbook, 2007*). The goals and benefits of program participation were outlined in the *San José's Sustainable City Programs Report (1998),* to the City Council and included:

- Increase ridership on the VTA and other transit systems
- Reduce reliance on automobiles by city employees
- Reduction in Vehicle Miles Traveled (VMT) throughout San José
- Reduced parking demand
- Reduction in air and water pollutants
- Reduced dependency on fossil fuels

These goals and benefits were reaffirmed nine years later with the adoption of San Jose's *Green Vision (October 2007).* Under the heading *Green Mobility,* the *Green Vision* points to a need to "*reduce reliance on single-occupant vehicles and ensure that alternative transportation is efficient, convenient, and environmentally sustainable.*" Although not directly mentioning the City's participation in the Eco-Pass Program, one of the messages of the *Green Vision* is to encourage the use of public transportation and to reduce the "carbon footprint" of the San Jose community. Over the eleven years since the *Sustainable City Programs Report* was developed, and again with the City's *Green Vision,* no evidence was found indicating that the City had ever evaluated its progress toward achieving the intended goals and benefits of the Eco-Pass Program.

2.3 BROAD-BASED LITERATURE REVIEW

With an understanding of what the City's goals are for participating in the Eco-Pass program, the purpose of this section is to gain an understanding of what industry experts consider to be measures of effectiveness for employer-subsidized commute strategies such as the Eco-Pass. This review includes answers to the questions of why programs should be evaluated, what gets evaluated, and how evaluations are typically performed. In addition, the research also identifies potential data gaps that will need to be addressed.

Why Evaluate the Program?

The most comprehensive and useful document on this subject comes from the *Transit Cooperative Research Program* (*TCRP) Report 107: Analyzing the Effectiveness of Commuter Benefits Programs (October 2005).* This document directly supports the intent of this paper by asking the question "Why evaluate the Eco-Pass program?" The answer to this question describes the need to:

- Justify the investment into the transit program,
- Meet requirements, such as air quality, and
- Determine how to improve the program.

An example of why programs need to be evaluated can be found in the changes the Denver Regional Transit District (RTD) is proposing to their Eco-Pass program. Tracking the trend of increased ridership associated with the Eco-Pass with the increasing costs of operating their transit system in a time of declining sales tax revenue, RTD was forced to pass these increased costs to their Eco-Pass customers. Passing these costs on to customers, particularly employers, was not well received. As a result, RTD is in the process of restructuring their program to add a new Flex-Pass, which provides tax incentives to both employers and employees to participate. Through a comprehensive program evaluation and outreach effort, RTD is in a better position to manage cash flow and track participation levels while at the same time maintaining levels of transit service and costs that are attractive to employers.

What gets evaluated?

Several reports, including the *TCRP Report*, point to five measurable outcomes that determine the effectiveness of employer-subsidized commute assistance programs. These outcomes, which will later serve as the basis of this report's research, include:

- Awareness,
- Participation,
- Travel behavior changes,
- Transit agency impacts (ridership, revenues, and costs), and
- Regional impacts (vehicle travel and emissions).

These measures of effectiveness can be considered both from the perspective of the transit service provider (VTA) and the participating organization (City of San José).

How are programs evaluated?

On-board surveys are the primary source of data collected by transit properties, including VTA. These types of surveys help transit properties better understand the opinions and demographics of their customers. However, for the purposes of this research, they are

too narrowly focused on current transit users and do not capture information related to the measurable outcomes as discussed above. More importantly and in the context of this research, these types of surveys do not consider the views of the non-transit commuter and what compels them to drive as opposed to using free transit service. Lastly, the information and results from on-board surveys are typically consolidated to represent ridership information on a system-wide scale whereas the subject of this research is focused on City of San José employees.

Several organizations do encourage and track transit usage and aggressively encourage alternative ways to get to work. Through targeted outreach to their employees, many local high tech firms provide free employer shuttles to major transit hubs based on an understanding of employee needs. While increasing transit usage, these types of programs also help attract and retain employees from a broader geographic area. Further, transportation coordinators are employed as part of the organization's overall TDM strategy to facilitate and develop transit-oriented solutions based on employee commute patterns. In this context, transit usage has become part of the culture of these organizations.

VTA does not track nor require employers to track the actual usage of the Eco-Pass. Similarly, it is evident that the City does not track the effectiveness of its participation in the Eco-Pass program. As such, the administrative need for on-site, employer-based transportation coordinators is minimal, as is the overall administrative cost of the program. Throughout the researched material it is noted that very little information is available in the public domain related to particular employer participation. This reflects a significant data gap that will be included as part of the research for this paper.

TDM Strategies

In the context of the goals and objectives of the City's participation in the Eco-Pass program and the definition of TDM, the Eco-Pass can be considered one of the City's TDM strategies. Other elements of the City's employee-focused TDM strategy include

the Commuter Check Program, Vanpool Program, Emergency Ride Home Program and several promotional efforts that encourage bicycling and walking. Cumulatively, these TDM strategies can have a positive impact on traffic congestion and air quality. However, without a comprehensive approach to TDM, to include parking, land use management and policy and institutional reforms, the overall benefit of TDM and the Eco-Pass program may only be minimal.

One of the areas where TDM can be most successful is in managing the morning work-bound commute. In order to influence commuter travel behavior, working through employers can be an effective means to reduce trips. With the work commute accounting for approximately 30-40% of all peak hour trips, employers have a number of opportunities and a great deal of influence over employee travel behavior due to their work site location, flexible work schedule, on-site parking availability, compensation and benefits policies and practices. This is in consideration that work trips are the easiest of all trip-types to accommodate by alternate modes and the regularity of travel. (2) Several literary sources highlighted the fact that daily air pollution from the automobile begins with the morning commute to work.

The Free Parking Paradigm

Whether in outlying suburban libraries and community centers with limited transit service, or in the transit-rich downtown core area, all City of San José employees are provided free parking. Shoup and Breinholt's study, *Employer-Paid Parking: A Nationwide Survey of Employer Parking Subsidy Policies*, conclude that free parking provides the greatest disincentive to public transit use policies and programs. Similarly, in the Section 1909 Commission Briefing Paper 4H-03, *Market-Based Parking Fees for Employees and Other Parking Pricing Strategies*, the author points out that the more free

(2) - *Employer-Based Transportation Management Programs,* http://www.epa.gov/otaq/stateresources/policy/transp/tcms/emplyer_transmgt_prog.pdf

parking that is provided, the more automobile trips are created. It is estimated that free parking increases driving by 20 to 30%.

Equally significant is the economics of employer-subsidized free parking. While this is a topic in and of itself whose full analysis is beyond the scope of this report, there are a few points worth noting. In Santa Clara County and across the nation there is an increasing awareness of how single occupant vehicle (SOV) commuting is not being discouraged, but accommodated by virtue of the number of subsidies provided to the automobile driver.

Numerous studies highlight the fact that current revenues for transportation system providers cannot and have not kept pace with the increasing operational and maintenance demands on the local streets, highways and transit systems. It is also recognized that drivers pay only a fraction of the actual cost to operate and maintain the infrastructure that supports the automobile. Locally, "congestion pricing" is a strategy being developed in an attempt to recoup the operating and maintenance costs of the local transportation infrastructure from the users. One such example is the introduction of high-occupancy toll lanes.

This same argument can be applied to employer-subsidized free parking. It has been estimated that free parking subsidizes automobile travel by an average of 11 cents per mile. In the case of the City of San José, the employer-subsidized cost for providing free parking escalates dramatically in consideration of the cost of the land, construction, the operating and maintenance costs, and debt service associated with any new employee parking facilities. As these costs are not passed on to the "users", there is no financial incentive to switch from the SOV commute to an alternate mode.

In terms of financial incentives, one event that did occur recently was the increase in gas prices to an all-time historic level of $4.57 per gallon. From February 2008 to its peak in July 2008, gas prices increased by almost $1.50 per gallon. Intuitively one would think that such increases in gas prices would create a financial incentive to switch from the

SOV to transit, particularly if using transit was free by virtue of having an Eco-Pass. However, one such study concludes that the decision to drive is not very responsive to increasing gas prices, particularly in the short term. This is mainly due to growth in real income and increased vehicle efficiency. (3)

2.4 SUMMARY

Both the *Sustainability* and *Green Vision* reports outline the goals of the City of San José to "go green" by providing employees with commute options to the SOV for their home-based work commutes. Numerous studies on the affects of a comprehensive program of TDM strategies support and align with these visions. However, without a meaningful measurement of the desired outcomes related to the objectives, it is not possible to determine if the Eco-Pass program is achieving its intended goals.

In evaluating meaningful measurements of the program, it is important to understand why programs need to be evaluated. The two fundamental reasons to evaluate the program are to justify the investment in the program and to identify areas needing improvement. This is true at both the transit agency level, or service provider, and at the employer, or user level. In the RTD example, a program evaluation indicated the need for program changes in light of increasing costs and declining revenues.

At the core of any evaluation is the identification of elements to be measured. This relates to the identification of meaningful and measurable outcomes and determining how they get measured. Recognizing the lack of employer-specific data as it relates to employee participation and the effectiveness of the Eco-Pass program, the most direct method of program evaluation is by a survey of the participants.

One of the central findings of this initial survey is that employer-provided free parking at the worksite undermines many of the goals and objectives of the City's *Green Vision* and

(3) - *Effects of Gasoline Prices on Driving Behaviors and Vehicle Markets.* Congressional Budget Office. January 2008.

TDM strategies in general and the Eco-Pass program specifically. Free parking is a subsidy that perpetuates auto use. It is a cost borne by the employer that is not passed on to the user. For the City of San José, more money is spent in operating, maintaining and debt service payments for employee parking facilities than on promoting and providing the more desired behavior of using alternative modes of transportation.

While free parking may create an incentive for City employees to drive to work, the sharp increase in gas prices that occurred in the summer of 2008 almost doubled the cost of driving to work. Contrary to the findings of this literature review, would a rapid and dramatic increase in fuel prices influence City employees to make the decision to take transit, particularly if transit was free? This very question will be answered in Chapter 5 of this report.

CHAPTER 3

DATA COLLECTION

3.1 INTRODUCTION

The previous chapter provided the direction for data collection in two specific areas. The first area will focus on quantifying the measurable outcomes used to determine the effectiveness of the Eco-Pass program. Table 3.1 summarizes the City's goals associated with its participation in the Eco-Pass Program to the measurable outcomes identified in Chapter 2. The analysis associated with quantifying the measurable outcomes will be discussed in Chapter 4. The second area of data collection focuses on the role free parking plays in the overall effectiveness of the Eco-Pass program. This study is developed in Chapter 5 of this report.

Table 3.1
Aligning City Goals to Measurable Outcomes

City Goals	Measurable Outcomes
• To reduce reliance on automobiles for city employees • Reduced parking demand	• Participation in Eco-Pass Program • Travel behavior changes associated with the Eco-Pass Program
• To increase ridership on the VTA and other transit systems	• Awareness of Eco-Pass Program • Transit agency impacts (ridership, revenues, and costs)
• Reduction in Vehicle Miles Traveled (VMT) throughout San José • Reduced demand on highways and surface streets • Reduction in air and water pollutants. • Reduced dependency on fossil fuels	• Regional impacts (vehicle travel and emissions).

3.2 METHODOLOGY

The methods employed in data collection are focused in two areas as discussed below:

Focus Area I: Stakeholder interviews - The purpose of the interviews is to coordinate this research with the Program Administrators, collect data that contributes to this research, understand the elements of the Program Administration and organization, such as marketing strategies, and align the efforts of this research with the objectives of the program. Interviews are conducted with personnel at both VTA and the City.

Focus Area II: City-wide employee survey – One of the key elements of this research is the survey of all City employees. The survey was distributed by e-mail to all City employees using SurveyMonkey, a web-base survey tool. This information will be used to quantify the measurable outcomes of program participation and serve as a benchmark for future evaluations.

3.3 FOCUS AREA I – STAKEHOLDER INTERVIEWS

As part of this research, interviews were conducted with VTA's Eco-Pass program administrators, City Eco-Pass coordinators and Parking Managers. After introducing the purpose of the research, the interviews were treated more as discussions that covered a broader range of topics and issues. The following highlights the most relevant points of these discussions.

VTA's Eco-Pass Program Administrator

What began in the early part of this research as a series of e-mail and telephone interviews culminated in a two-hour meeting with VTA's Eco-Pass Program Administrator. During the meeting, the preliminary results of the survey and other findings were presented, allowing for a more in-depth discussion in key areas. The results of these discussions are summarized below.

- General Administration

  As the VTA does not track nor require employers to track Eco-Pass usage, there are minimal administrative costs associated with the program. In terms of marketing and promotions, the main focus of the Eco-Pass marketing program is to attract new participants into the program.

- Fee Structure

  The Eco-Pass program generates approximately $2.9 million in annual revenue to VTA. San Jose State University and the County of Santa Clara, with 30,000 and 34,000 Eco-Pass participants, respectively, make up almost two-thirds of all Eco-Pass revenue. In determining employer fees, participation levels are estimated at 3-5% of the total number of employees. This estimate reflects a cost neutral impact to VTA.

  Beginning in January 2010, VTA will be increasing program fees by 20%. The last fee adjustment was in 2005. In calculating its fee, it is worth noting that the City benefits from having worksites in both low and high VTA service areas. The rates charged to the City are based on VTA's level of transit service at the worksite and many sites in low transit service areas. As a result, the rates are skewed lower. The derivation of the City's fees to participate in the Eco-Pass program is included in Appendix A.

- Future Developments

  Flat or declining fare revenue with increased ridership may point to increasing use of the Eco-Pass that exceeds the estimated levels of program participation. VTA, in cooperation with other transit providers in the region, is a participant in the development of the *Translink* card. The *Translink* card is an electronic form of fare payment that can be used on all transit systems throughout the San Francisco Bay Area. Various fare structures can be coded into the card. Use of the electronic fare media allows for better tracking of transit system usage and, accordingly, a more

equitable fare structure based on actual usage. The timeframe for VTA's implementation of the *Translink* card system-wide is uncertain.

City Eco-Pass Coordinators

The City's Eco-Pass Coordinators are typically administrative staff within the various Offices and Departments of the City. Their main responsibilities are to provide Eco-Passes for new employees, obtain surrendered Eco-Passes from departing employees and to dispense the annual validation stickers that go on each Eco-Pass. Due to the simplicity of the program, the City's administrative costs to manage the Eco-Pass program are negligible.

Parking Managers

Providing the funding for the City's annual fee to participate in the Eco-Pass program is the extent of the City's Parking Manager's involvement with the Eco-Pass program. As a study of City employee parking trends is included in this research, interviews/discussions were conducted with the Parking Managers and valuable data was collected as summarized below.

- The City's fees to VTA for participating in the Eco-Pass program come from the City's parking revenues. Beginning in January 2010, the annual fee increases 20% to approximately $185,000.

- The estimated cost of operating and maintaining the City Hall employee parking garage in fiscal year 2009-2010 is $366,870. The employee parking garage serves the majority of City Hall employees.

- Average daily and monthly parking volumes were provided. Approximately 1400 of the 1850 City employees at City Hall are allowed to park in the employee garage. The City Hall garage has 1117 parking spaces. On average, approximately 830 employees park in the employee parking garage each day.

3.4 FOCUS AREA II – EMPLOYEE SURVEY

At the cornerstone of this research, a survey was sent to all City employees on April 10, 2009, with a closing date of April 17, 2009. The survey was developed in cooperation with VTA's Eco-Pass Administrator and the Office of the City Manager using SurveyMonkey, a web-based survey tool. Consistent with researched literature, the survey was developed as a means to measure the effectiveness of the Eco-Pass program. Areas to be measured are restated as follows:

- Awareness,
- Participation,
- Travel behavior changes,
- Transit agency impacts (ridership, revenues, and costs), and
- Regional impacts (vehicle travel and emissions).

It is noted that many of the measurements will be directly answered, whereas others will be derived from employee responses to the questions. Each of the five elements related to program effectiveness will be separately analyzed and summarized in Chapter 4. A copy of the survey is attached as Appendix B.

Response Rate

During the week-long, City-wide survey time period, 1409 employees began the survey. On average, there were 1347 responses to each question, excluding the 455 responses to the question asking respondents to list incentives to encourage alternatives to driving alone. This represents a 34% response rate in consideration of the fact that there are approximately 4000 computer users within the City. As this was a web-based survey tool, all responses required the use of a computer.

Responses to the survey came from all of the 26 Offices and Departments of the City. Six of these locations had 5 or fewer responses and represented the Offices and Departments within the City with fewer staff members. Response rates for the larger

City departments, such as the Department of Aviation, Public Works, Environmental Services and Transportation, were on the order of 20-25% based on the number of responses from that department to the number of employees within that department. For example, 91 surveys were completed by the Department of Aviation which has approximately 400 employees. This translates to a 23% response rate by that department.

Assumptions

Due to the high response rate to the employee survey, it is assumed that responses to the survey are representative of the City as a whole. A review of the survey responses indicate an error of approximately 2-5% in the data entered by the respondents or that data in a particular area was not entered. Correspondingly, the results of the survey are generally assumed to be accurate to within +/- 5%.

Employee Commute Profile

Prior to the evaluation of the measures of effectiveness for the Eco-Pass program that are covered in Chapter 4, it is first important to know something about the commute patterns of the City workforce. The following discussion summarizes these patterns based on responses to the employee survey.

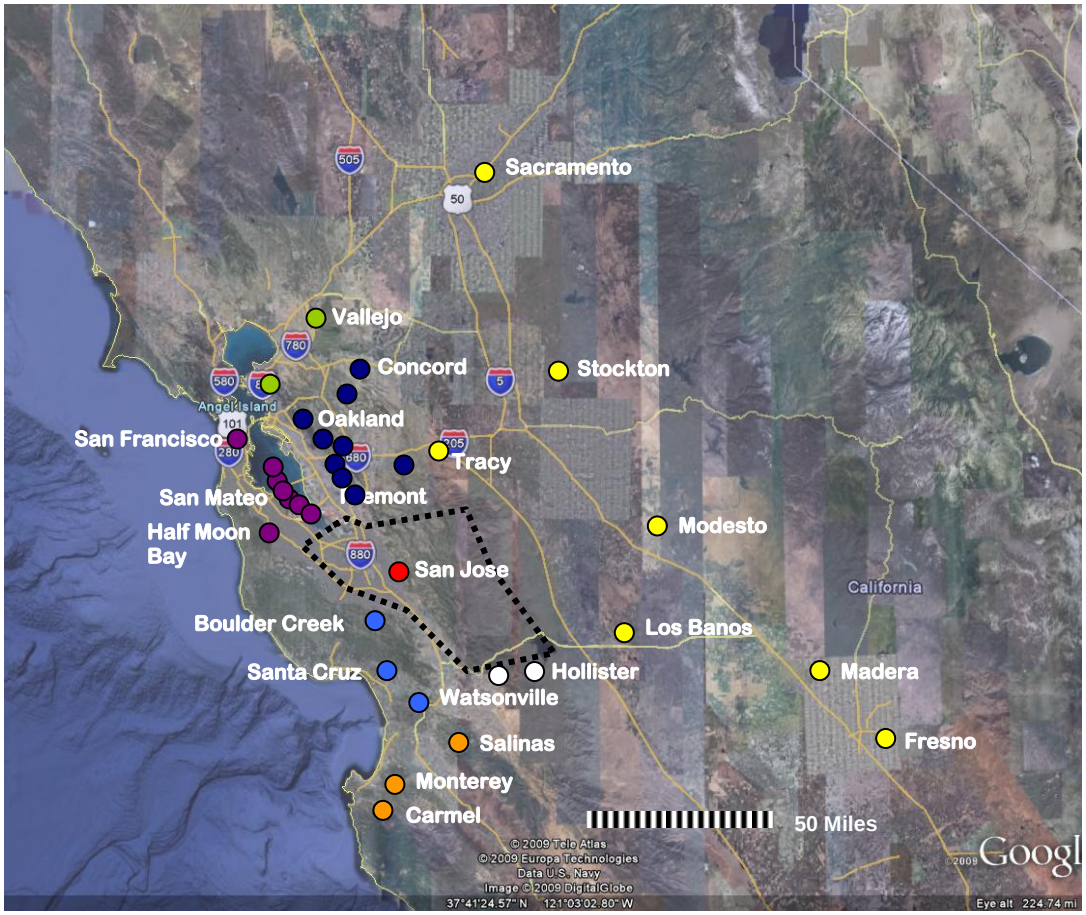
Almost two-thirds of all respondents live in San Jose, and approximately 84% live within Santa Clara County and VTA's service area. On average, respondents have a 17 mile, one-way commute that takes approximately 30 minutes. This is higher than the median values of 10 miles and 25 minutes. Noting the median value is significant in that it is the midpoint of all responses and indicates that at least half of all respondents live within 10 miles of their worksite and have at most a 25 minute commute. The average vehicle fuel economy is 23 miles per gallon.

With a relatively short commute for most employees, it is not surprising that 65% usually drive alone in their home-to-work commute, while 17% usually take transit. Travel time, convenience and flexibility were the main reasons cited for driving alone. In this context,

daycare and driving children to school play key roles in the decision-making process of how employees get to work. Also, several respondents indicate that working late or irregular hours are the main reasons they drive to work.

To provide readers unfamiliar with Santa Clara County and the San José metropolitan area, Figures 3-1 and 3-2 illustrate both the regional and local distribution of where City of San José employees live.

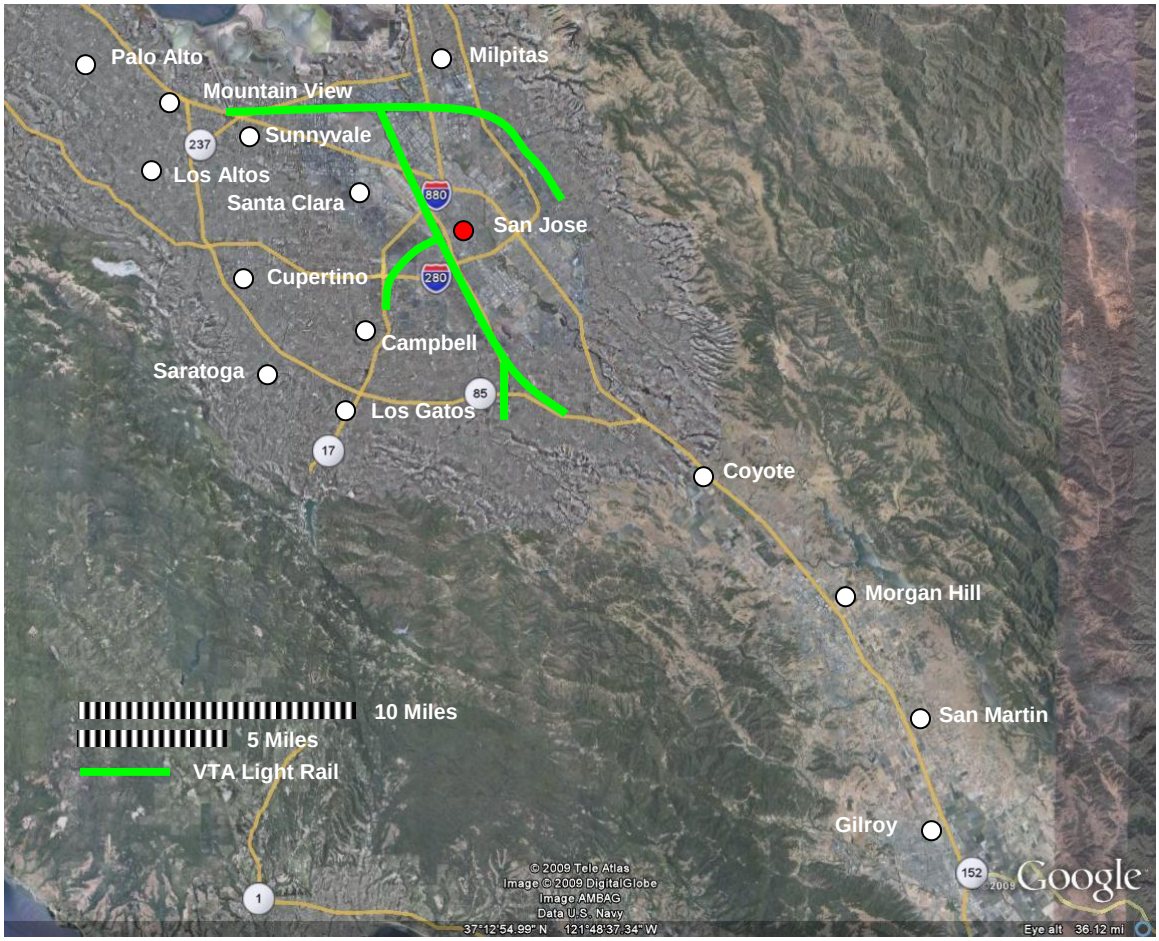
FIGURE 3-1
Where San Jose Employees Live



Regional Summary

Region	No. Responses	% of Total
Santa Clara County	259	20%
San Jose	828	63%
Santa Cruz County	36	3%
Central Valley	40	3%
Monterey County	6	<1%
San Benito County	19	1%
East Bay	80	6%
Peninsula	31	2%
North Bay	4	<1%
Other	4	<1%
Total of Responses	1307	100%

FIGURE 3-2
Where San Jose Employees Live in Santa Clara County



Santa Clara County

City	No. Responses	% of Total	City	No. Responses	% of Total
San Jose	828	76%	Cupertino	15	1%
Gilroy	47	4%	Los Gatos	13	1%
Morgan Hill	40	4%	Palo Alto	10	1%
Mtn View	34	3%	Saratoga	4	<1%
Santa Clara	30	3%	San Martin	4	<1%
Sunnyvale	30	3%	Los Altos	3	<1%
Campbell	28	3%	Coyote	1	<1%

Total of Responses = 1087

CHAPTER 4

MEASURES OF EFFECTIVENESS

This section of the report evaluates the Eco-Pass program against the previously discussed five measures of program effectiveness; Awareness, Participation, Travel Behavior Changes, Transit Agency Impacts and Regional Impacts. The quantification of these measures is based on responses to the employee survey and supplemented by both the stakeholder interviews and literary sources.

4.1 AWARENESS

Questions 1 and 2 of the employee survey were intended to determine the awareness and familiarity of the employee with the City's Commute Assistance Program (CAP), with a specific emphasis on the Eco-Pass. Statistically, there was less awareness and familiarity with the CAP in general, but practically all employees were aware of the Eco-Pass Program. City-wide, while 84% of respondents were somewhat to very familiar with the CAP, 99% were familiar with the Eco-Pass. The responses are summarized in Table 4-1.

Table 4-1

How familiar are you with your employee benefits under the City's Commute Assistance Program?		
Answer Options	**Response Frequency**	**Response Count**
Very Familiar	24.1%	326
Somewhat Familiar	***59.7%***	***807***
Not Familiar	16.1%	218
answered question		**1351**
skipped question		**19**
Please check any of the City's Commute Assistance Programs you are aware of:		
Answer Options	**Response Frequency**	**Response Count**
Eco-Pass Program	***99.3%***	***1331***
Commuter Check Program	31.7%	425
Vanpool/Rideshare Program	27.9%	374
Emergency Ride Home Program	18.5%	248
answered question		**1340**
skipped question		**30**

The high level of awareness of the Eco-Pass can largely be attributable to the fact that most employees live within VTA's service area and can also use the Eco-Pass for non-commute and non-work related purposes. Also, all benefited employees receive a photo identification card that serves as their Eco-Pass, and that there is a once per year notification to get the validating stamp on their Eco-Pass. Both the ID card and the once per year notification are reminders to the employee of this free benefit. Despite this low-level "outreach", no other CAP element is actively promoted within the City and, as such, fewer City employees are aware of and/or use any of the other commuter services provided by the CAP.

One element of the CAP that is linked to the Eco-Pass is the Emergency Ride Home Program. Under this program, employees that use transit to get to work are guaranteed a taxi ride home in the event of an emergency. Less than one-half of one-percent of employees claim to have used the Emergency Ride Home program over the past year. Written comments indicate that many employees were unaware of this program, and may be more inclined to use transit now that they know about it.

4.2 PARTICIPATION

Question 4 of the employee survey, summarized in Table 4-2, and was asked to determine the level of City employee participation in the Eco-Pass program. The question relies on the respondent's memory of transit usage over the past year. It was believed that asking the question based on more current levels of participation would be biased against transit usage due to a series of early spring storms preceding and during the survey timeframe.

City-wide, 44% of the 1363 respondents indicated they use their Eco-Pass more than once per month for their home-to-work commute. As would be expected, for employment sites outside of the downtown area this number fell to 33%, and increases to 51% for employees that work at City Hall and in the downtown area.

Table 4-2

Within the past year (April 2008 - March 2009), how many times would you estimate that you used any of the following for your home-to-work/work-to-home commute?		
Answer Options	**ECO-Pass**	**Response Frequency**
Not at All	386	28%
A few times	272	20%
About 1 time/month	101	7%
2-3 times/month	131	10%
About 1 time/week	88	6%
2-3 times/week	126	9%
More than 3 times/week	259	19%
answered question	***1363***	
skipped question	***10***	

City-wide, 28% of the respondents have not used their Eco-Pass over the past year. A further breakdown of the survey results indicate that 23% of downtown employees and 36% of employees that work outside of the downtown area have not used their Eco-pass in the past year.

While this information provides a broad snapshot of participation, a more rigorous evaluation was developed that compares Eco-Pass usage to opportunities. First, in terms of opportunities, it was assumed that there are 220 working days per year. As reported by VTA, the City is issued 4250 Eco-Passes. The product of working days and number of Eco-Passes results in 935,000 "opportunity days", i.e., if all Eco-Pass users used their Eco-Pass every working day, the result would be 935,000 round trips from home to work and work to home. Distributing the response frequency to the number of employees that have Eco-Passes, and assessing the range of the annual number of trips that would be made per response, it was determined that there is an average of 233,865 annual, round trips by City employees using the Eco-Pass. This represents a derived, city-wide participation rate of 25%. (233,865 / 935,000). This information is summarized in Table 4-3.

Table 4-3
Annual Eco-Pass Participation Rate

Estimated No. of Working Days / Year	220
No. of ECO-Passes Issued to City	4250
Number of "Opportunity Days"	935,000

Response Options	Responses	Response Frequency	Estimated No. of City-wide Users by Frequency	Estimated No. Annual City-wide Uses by Response Option		Total Annual Use by Repsonse Option	
A	B	C	D	E	F	G	H
		B / 1402 (%)	C*4250	Range		D*E	D*F
				low	high	low	high
Not at All	394	28%	1194	0	0	0	0
A few times	280	20%	849	6	9	5,093	7,639
About 1 time/month	102	7%	309	12	12	3,710	3,710
2-3 times/month	134	10%	406	24	36	9,749	14,623
About 1 time/week	90	6%	273	52	52	14,187	14,187
2-3 times/week	134	10%	406	104	156	42,245	63,368
More than 3 times/week	268	19%	812	156	200	126,736	162,482
Total Responses	1402	100%	4250		**Totals**	**201,720**	**266,010**
				Average (high/low)		**233,865**	
				% Annual Participation		**25%**	

4.3 TRAVEL BEHAVIOR CHANGES

Without a baseline to compare to, it is not possible to directly determine any behavioral changes in employee commute patterns as a result of the Eco-Pass Program. However, one of the purposes of this research is to set a baseline level, or benchmark, of City participation in the program. Benchmarking provides a basis to measure future changes in travel behavior.

Even though there is insufficient data to measure changes in travel behavior, there are recent changes in the environmental setting that likely have had an impact on City employee transit usage and other alternative commute behaviors. These include:

- The relocation of City Hall into the downtown core area in 2005 likely had a positive influence on the number of City employees that could better take advantage of their Eco-Pass. Employees whose work site may not have been well served by transit are now located in one of the densest transit areas in the region.

- The increasing cost of gas in mid-2008 provided an incentive for some City employees to use their Eco-Pass. Even though gas prices subsequently fell, it is likely that some employees continued using transit to some extent for their work commute.

- Completion of light rail corridors, specifically the Vasona Corridor in 2005, which provides Eco-Pass and other transit users direct service into the downtown area from the southwest Santa Clara County.

- The restructuring of bus service in early 2008 as a result of VTA's Comprehensive Operational Analysis resulted in more efficient routes for Eco-Pass and transit users.

- Increasing community awareness of conservation of natural resources and the negative environmental impacts of the automobile may provide another form of motivation for City employees to use their Eco-Pass more frequently.

- Other, non-transit related improvements include completion of the Route 87 HOV lanes and increased promotion of biking to work.

While the incremental contribution to Eco-Pass use associated with these elements may be small, cumulatively they increase the opportunities for City employees to use their Eco-Pass and/or provide alternatives to the SOV work-based commute.

4.4 TRANSIT AGENCY IMPACTS (Ridership, Revenues, and Costs)

One of the considerations for the City's participation in the Eco-Pass program is based on its attractiveness as a deeply discounted program. But how deep is too deep? The bottom line for transit agencies is balancing revenues versus costs. Transit revenues come from a variety of sources, and one of the key indicators of a successful transit

system is farebox recovery. Typically expressed as a percentage, farebox recovery is the ratio of revenue from ticket sales versus the operating and maintenance costs of the transit system. With current farebox recovery ratios at approximately 14%, VTA is well below their target range of 20-25%.

Deeply discounted transit programs, such as the Eco-Pass program, have proven to increase ridership and generate revenue for transit agencies, recovering the fare revenue from existing riders while at the same time attracting new riders. The challenge to a successful program is in developing, monitoring and balancing the pricing/ridership relationship so as to remain attractive to participants while at the same time generating revenue, or at least being cost-neutral. This was previously discussed in the RTD example.

VTA's *Proposed 2010-2011 Budget* includes a proposal to increase Eco-Pass rates by 20% effective January 2010. The goal is to increase the percentage of operating costs paid by patrons and the average fare revenue per boarding. As the current rate went into effect in January 2005, it will have been five years since the cost of participating in the Eco-Pass program has been adjusted.

Based on the derived results from the employee survey, the annual participation rate of all 4250 City employees is approximately 25%. This translates to 1062 daily workday commutes using the Eco-Pass. If these same 1062 persons were to purchase the annual pass at $1348, the total revenue to VTA would be $1,432,250. However, under the proposed fare increase, the City will pay VTA a lump sum amount of $185,000. This results in an 87% discount to the City and a 13% farebox recovery to VTA based on the participation rate identified through the employee survey. Further, this translates to an average estimated participation rate of approximately 3%.

The City's fee is derived on a sliding scale based on the number of employees and their proximity to transit service as shown in Appendix A. The fee factors in a 3-5% transit mode share as derived from 2000 census data. Working with a participation rate of 25%

as opposed to 3-5%, and a farebox recovery ratio of 25%, the City's fees should be $358,062 based on the following formula:

City Fee = 4250 employees x $1348 annual cost x 25% participation rate x 25% farebox recovery = $358,062

The difference between what the City pays ($185,000) and the derived rate ($358,062) is $173,062. Two questions come to mind as a result of this finding:

- In a poorly performing economy, can VTA continue to provide quality transit service and frequency under such a deeply discounted program?
- Would the City continue to participate in the Eco-Pass program if the cost of participating in the program doubled?

4.5 REGIONAL IMPACTS (Vehicle Travel and Emissions).

Question 9 of the employee survey, summarized in Table 4.4, below, serves as the basis for determining the two key measures of program effectiveness on the region; reduction in vehicle miles traveled (VMT) and greenhouse gas emissions. These measures are specifically referenced as City goals for participating in the program and again as part of the Green Vision strategy.

Table 4-4
Commute Mode Split

In your home-to-work/work-to-home commute, do you mostly-		
Answer Options	**Response Frequency**	**Response Count**
Drive alone	69.0%	943
Carpool/Vanpool	7.6%	104
Take transit	19.1%	261
Walk	2.3%	31
Bike	2.0%	28
answered question		1367
skipped question		4

From Question 18, it was identified that the average round trip work commute is 34 miles. As such, the round trip commute of all 4250 City employees with Eco-Passes translates to an annual of VMT of 31,790,000 miles. From Question 12, the average fuel economy of vehicles driven to work is 23 miles per gallon. Given this information, Table 4-5 compares the annual consumption and savings of VMT, fuel and CO_2 [(4)] emissions of drive-alone commuters versus those that use transit through the Eco-Pass program based on the commute mode split [(5)].

Table 4-5
Regional Performance Indicators
Drive-Alone vs Eco-Pass [(6)]

Annual VMT (miles)		**Fossil Fuels (gallons of gas)**		**Annual CO_2 (tons)**	
Drive Alone	Eco-Pass (savings)	Drive Alone	Eco-Pass (savings)	Drive Alone	Eco-Pass (savings)
21,935,100	7,947,500	953,700	345,543	9251	3352

As with the "Travel Behavior Changes" element discussed in Section 4.3, there is no previous value, or baseline, from which to compare changes in these measures.

4 – CO_2 emissions based on 19.4 pounds of CO_2 per gallon of gas.
Source: http://www.epa.gov/otaq/climate/420f05004.htm

5 – The 25% mode split for the Eco-Pass was used in this summary instead of the 19% from the employee survey.

6 - The 1,907,400 VMT not accounted for in this summary can be attributed to other modes used for the work commute to include biking, walking, carpooling and other non-Eco-Pass transit.

CHAPTER 5

THE ROLE OF FREE PARKING

One of the consistent themes that emerged through this research considers the role that employer-provided free parking plays in the effectiveness of the Eco-Pass program. It is obvious that the key word here is "free". Studies suggest an elasticity of cost and value is inherent to people's perception of driving. But what would be the effect on driving behavior if the cost of driving to work doubled in an environment where transit is free?

5.1 INTRODUCTION AND PURPOSE

In the summer of 2008, gas prices in San José and the surrounding metropolitan region soared to an historic high of $4.57 per gallon. For the weeks leading up to the peak price, all forms of media reported the financial impact this was having on business and individuals. Although gas prices subsequently dropped, the theory emerged that more City employees may have used their Eco-Pass during the period of escalating gas prices as a cost savings measure. With this theory serving as the background and the home-to-work commute pattern being the focus of this research, the intent of the parking study is to research potential changes in employee driving frequency as a result of increased gas prices. For this study, parking volumes will be used to measure driving frequency.

Figure 5-1
7-story parking structure (lower right) serves the 18 story City Hall Tower and complex (upper left)

This study will focus on the City employee parking garage usage. The employee parking garage was selected over other City parking garages because it serves the greatest number of City employees, is located in the

downtown area, which is well served by transit, and entry to the garage requires an electronic card that can be tracked by the City's Parking Management Division.

Building upon the information provided in the interview with the City's Parking Managers and the employee survey, this parking study will:

- Benchmark average parking usage.
- Analyze driving frequency (by parking volumes) and trends to gas price increases.
- Evaluate the "cost" of free employee parking.
- Correlate this analysis to employee survey responses.

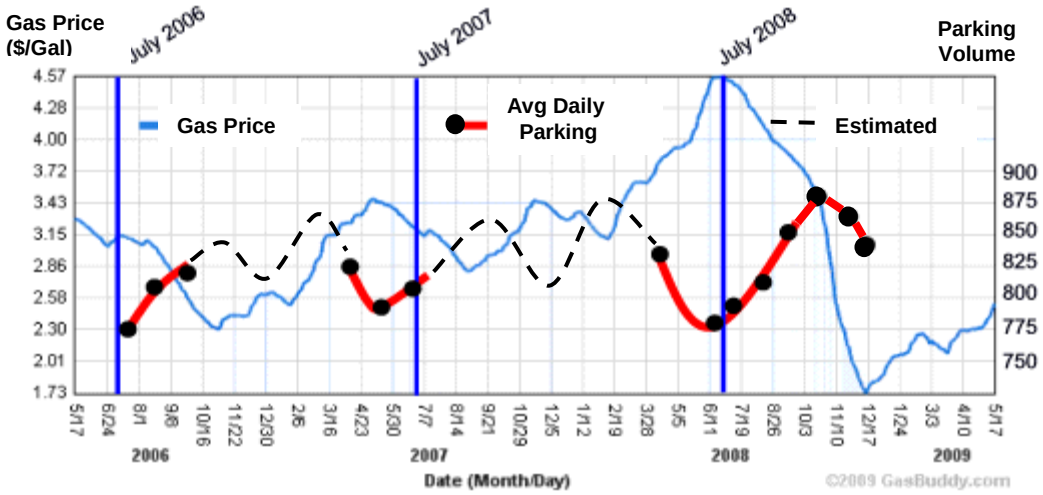
5.2 BENCHMARKING AVERAGE PARKING USAGE

Recapping from the interview with the City's Parking Manager, approximately 1400 of the 1850 City employees at City Hall can park in the employee garage. From the data collected, an average of 830, or 59% (830/1400), of City employees park in the employee garage on a daily basis. This is the percentage of all employees that do park in the employee parking garage each day as compared to all employees that can park in the employee garage. From Question No. 9 of the employee survey, 55% of City Hall employees said they usually drive alone to work. Another 8% indicate they carpool. Discounting the carpool percentage by half to 4%, as both the driver and the passenger would be in one vehicle, the survey result of 59% correlates with the measured result of daily employee parking volumes.

5.3 SENSITIVITY TO GAS PRICES

Data was collected on employee parking trends versus gas prices and is graphically illustrated in Figure 5-2. Due to limited resource availability, parking data was collected only for periods that correspond to peak gas prices.

Figure 5-2
Average Daily Parking Volume vs Gas Prices



Considering just the peak gas price period of the summer of 2008, one would assume a direct correlation between increased gas prices and decreased auto use. Expanding the data set to previous years indicates a seasonal fluctuation in employee parking trends that seemingly correspond to a seasonal fluctuation of gas prices. While there may be some small correlation between parking trends and gas prices, institutional knowledge says the lower parking volumes are directly attributable to more employees taking vacations in the summer months and the fact that the City Council recesses for the month of July. Similarly, estimated daily parking volumes for December and January consider that more employees take time off during the holiday season in conjunction with the weeklong furlough of City employees.

More evident is the little or no change in parking volumes for similar time periods despite significant differences in gas prices. This is consistent with the researched literature and is highlighted by the fact that an average of 775 employees continued to drive to work and park in the garage each day during the peak gas period of July 2008 as they did in prior years.

This leads to one of the key points of this analysis which considers the sensitivity of employees to increased costs of driving. As previously discussed, the average City employee has a 34 mile, roundtrip commute in a vehicle that gets 23 miles per gallon. The roundtrip commute would have consumed 1.35 gallons of gas. At $4.57 per gallon, that translates to a roundtrip cost of $6.18 in gas. With gas currently at about $2.60 per gallon, that same trip costs $3.40, a savings of $2.78 per day.

In response to Employee Survey Question No. 13, almost 60% of respondents indicated that increased gas prices had no influence on their decision as to how they got to work. Given the inclination of downtown employees to continue driving to work regardless of modest increases in cost, is there enough upward elasticity in the cost of driving that the City could charge for parking? Several employees had suggested as much in the employee survey.

At this point it is worth reminding the reader that this study focused on the employee parking condition in Downtown San José and considers approximately one-third of the employees that have an Eco-Pass. The study revealed some elasticity in the costs employees were either willing or able to absorb to continue driving, and then questioned whether the City could charge employees for parking.

While there may be arguments that support this idea, charging for parking would likely be met with strong opposition by the employee unions. The concept of charging downtown employees to park but not employees that perform similar work and are paid the same amount but work in more suburban areas or areas with less transit service brings up a question of equity. More realistically, other types of programs and practices such as transit and parking vouchers, parking cash-out programs and tax incentives in combination with the *Translink* card could better provide a more comprehensive, City-wide approach toward reducing the number of SOV commutes.

5.4 THE "COST" OF FREE PARKING

It is well understood that driving is heavily subsidized. Many of the actual costs of driving are borne by the public sector or employer in terms of constructing, operating and maintaining the infrastructure needed to support the automobile. The same holds true in the context of providing free parking. As an example, the City of San Jose recently constructed a $27 million employee parking garage to support the new City Hall. The 1117 space garage is provided free of charge to the 1400 employees designated to park at this location.

The estimated cost for operating and maintaining the employee parking garage in fiscal year 2009-2010 is $366,870. This represents an ongoing annual cost (or employer subsidy) of $328 per parking space per year. Not included in the cost is the debt service owed on the land and for the construction of the facility. Considering that the City also pays VTA $72 for every downtown employee to participate in the Eco-Pass program, the City directly subsidizes employee commutes, whether by transit or driving, in the amount of approximately $400 annually. In terms of value, it is noted that the current rate for off-street parking in the downtown area is $1200 per year.

CHAPTER 6

RESEARCH EVALUATION

This chapter of the report summarizes the multi-phase approach associated with this research by answering the five questions introduced in Chapter 1.

6.1 ANSWERING THE KEY QUESTIONS

What are the City's goals in participating in the program?

As discussed in the *Sustainable City's Programs* report of 1998 and considered in the *Green Vision* of 2007, the City's stated goals of participating in the Eco-Pass program are as follows:

- Increase ridership on the VTA and other transit systems
- Reduce reliance on automobiles by city employees
- Reduction in Vehicle Miles Traveled (VMT) throughout San José.
- Reduced demand on highways and surface streets.
- Reduced parking demand.
- Reduction in air and water pollutants.
- Reduced dependency on fossil fuels.

However, without quantifying these goals, e.g., increase transit ridership by 5% annually, the desired outcomes are subjective and not measurable. It is said, "What gets measured, gets done." Through this research, a baseline for performance indicators associated with the City's goals has been developed that provides both a scope and scale for future measurement of the desired outcomes.

What factors should be considered to determine program effectiveness?

In the course of this research, five measurable outcomes of program effectiveness were identified that align with the City's goals for participating in the Eco-Pass program. These outcomes include program *awareness, participation, travel behavior changes,*

transit agency impacts and *regional impacts*. These measures can be considered both at the transit agency level (VTA) and at the user level (City).

Does free parking influence participation in the Eco-Pass program?

As identified in the literature review, free parking provides the greatest disincentive to public transit use policies and programs and can increase driving by 20-30%. In this context, free parking undermines the full potential of the Eco-Pass program and provides no motivation or incentive to switch from the SOV commute to transit.

Recognizing that driving is more heavily subsidized than transit leads one to believe that driving is the better value. The low cost convenience and flexibility of driving also meets a variety of needs that people place a high value on. However, this behavior likely has a threshold both in terms of cost and duration. Short term increases, such as the spike in gas prices, had no measurable impact on driving behavior, whereas a daily cost for parking may increase the use of the Eco-Pass. For example, even though the additional cost of gas for the average daily round trip work commute increased by $2.78, many City employees continued to drive. If the City were to begin charging an equivalent $2 per day for parking (which is still deeply discounted), would employees view this added cost differently and use their Eco-Pass more frequently?

While not considered a benefit, free parking has become institutionalized within the City organization and any consideration of charging for parking would likely face opposition from employees and unions. However, other programs and strategies, such as transit and parking vouchers, parking cash out programs and the use of government tax incentives have been successful and may prove to be a more equitable solution in consideration of the various worksite locations of City employees.

Closely associated with free parking, improved vehicle efficiency, low gas prices and relatively short commutes favors the SOV commute by keeping the cost of driving down.

While there will always be employees that will continue to drive regardless of the cost, results from the employee survey suggest that more employees are becoming increasingly aware of both the environmental and economic impacts of driving and benefits associated with using their Eco-Pass for their work commutes. Some have sold their second car, or moved closer to transit lines or worksites, while others arrange their schedules so as to take transit more frequently.

Can the program be considered effective?

Of the 5 measures of effectiveness, *awareness* and *participation* point in the direction of an effective program. Employee awareness of the program was virtually 100%. In review of the number of opportunities of all City employees to use the Eco-Pass versus the actual usage, an average daily participation rate of 25% was derived. This is a higher level of participation than was expected, and greatly out-performs VTA's estimated participation rate of 3-5%.

In terms of *travel behavior changes*, the evaluation was largely indeterminate. This is due to the fact that there was no information on Eco-Pass usage from which to compare. This is unfortunate because there have been several changes to both the transit and highway systems over the past five years. Coupled with the relocation and consolidation of City offices into the downtown area, this measure conceivably could have provided a direct measure of increased transit and Eco-Pass usage associated with these changes. Nevertheless, through the documentation developed through this research, future evaluations of travel behavior changes of City employees would be possible.

A focused study was conducted that considered the *travel behavior changes* associated with the increase in gas prices and its relationship to parking. It was assumed that soaring gas prices would lead to a decrease in parking volumes, correlating to an increase of transit usage. Although one-third of City Hall respondents indicated they used transit more frequently, it was not reflected in the daily parking volumes. This measurement indicates that the increase in gas prices had no measurable affect on driving behaviors

and is consistent with similar research findings. While having more disposable income and more fuel efficient vehicles were identified as reasons people continue to drive during peak gas prices, it is also noted that most employees have relatively short commutes and enjoy the convenience and flexibility of driving over transit usage.

Through the evaluation of *transit agency impacts*, this research concluded that the Eco-Pass program, as currently structured, is unsustainable. At a farebox recovery rate of 13%, the program is too deeply discounted based on the number of City employees that actually use the Eco-Pass. Even with the proposed 20% increase in program fees scheduled to go into effect in January 2010, the Eco-Pass program will not return the desired farebox revenue of 20-25%. The introduction of the *Translink* card should help VTA better track transit usage and develop a more adaptive and sustainable program fee structure.

The *regional impacts*, measured in VMT, fossil fuel consumption and CO_2 emissions all point favorably to the use of the Eco-Pass. As with other measures developed through this research, there is no baseline to compare against. In this context, the results of this research can be used as a baseline for future evaluations.

What strategies can improve the effectiveness of the program?

With a participation rate of 25%, the program can be considered effective. The concern however, lies in the financial sustainability of the program. Increasing operational and maintenance costs to VTA amidst declining revenues point to a need to revise the program. The City should be a frontline participant in working with VTA to develop and align adaptive strategies to pricing structures that are more sustainable, particularly in the current economic environment.

In revising the program, a clear understanding of the goals and performance-based measurable outcomes should be developed and tracked regularly. This research provides the first stepping stone to that end. Advancements in electronic information gathering techniques, such as *Translink* and *SurveyMonkey* should be employed to manage the

costs of program administration, participation, marketing and outreach. Suggested outcomes may include:

- Develop a marketing plan that ensures 100% of City employees are aware of the Eco-Pass program and associated benefits of the Commute Assistance Program, e.g., emergency ride home.
- Increase employee Eco-Pass use by 5% per year.
- Using *Translink*, track Eco-Pass use particularly for new service areas.
- Track Eco-Pass participation rates to better assess employer fees.
- Quantify the environmental benefits of the Eco-Pass program through reduced VMT, fuel consumption and CO_2 emissions of City employees and set a target of 5% per year.

Internally, the City's policies and practices associated with providing free parking should be reviewed. The high cost to the City of providing free parking should be considered both a financially unsustainable and environmentally incompatible with the City's *Green Vision* policies and goals.

An area that could be explored, as identified in the employee survey, was the provision of convenient daycare and other such type conveniences. This is a barrier to Eco-Pass usage by many working adults, and having a daycare facility close to work would relieve the need for the extra trip to pick up and drop off children.

6.2 CONCLUSIONS

Based on survey results of City employees, the Eco-Pass program well exceeds VTA's estimated levels of participation and can be considered effective in three of the five measurable outcomes developed through this research. This should be encouraging news to both the City of San José and the VTA that the program is so widely supported. However, the program has likely run its course as currently structured. For VTA, the

deeply discounted program is not sustainable in these times of declining revenues and the higher costs associated with operating and maintaining the transit fleet.

With new opportunities associated with the *Translink* venture, VTA has an opportunity to restructure its discount fare program. A restructured program should emphasize increasing the program's farebox recovery to more desired and sustainable levels.

Even though the program can be considered effective, there will always be those employees that cannot or will not use their Eco-Pass. For those employees on the margins, i.e., they could but don't use their Eco-Pass, the balance may be tipped in favor of driving given the City's practice of providing free parking. In this context, free parking undermines the City's *Green Vision* policies and the full potential of the program. In addition, free parking perpetuates subsidies to auto use.

Similar to VTA's situation, the City also faces higher costs of providing services in a climate of declining revenues. In this context, the service is free parking. A portion of these costs could be passed on to the employee through a restructured program that includes voucher and/or cash out programs and other government tax incentive programs. This is consistent with the local development of congestion pricing strategies. In cooperation with VTA, a successful restructuring of the program would require significant outreach to the many employee unions and bargaining units within the City of San José.

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Appendix A

2009-2010 Proposed Eco Pass Fares
City of San Jose Fee Calculation Worksheet

2009-2010 Proposed Eco-Pass Fares*

Employer Location/ Service Level	1-99 Employees	100-2,999 Employees	3,000-14,999 Employees	15,000+ Employees
Downtown San Jose	**$144**	**$108**	**$72**	**$36**
Areas served by bus and light rail	**$108**	**$72**	**$36**	**$18**
Areas served by bus only	**$72**	**$36**	**$18**	**$9**

* **- from VTA Board of Directors Meeting, June 4, 2009, Item 35**

Fee Calculation Worksheet

The City of San José's cost for the Eco-Pass program is determined based upon two factors:

- *The total number of full-time employees*
- *The location of the work site/office in relation to the level of VTA service in the area*

Based on the number of employees and their location in relation to the level of service in the area that was submitted by City of San Jose representatives during the renewal period, the price per employee is noted below.

Since there are a total of 4,250 employees, the City of San Jose falls within the 3,000 – 14,999 tiered pricing.

1850 employees (located in Downtown San Jose) @ $72/person	$133,200
388 employees (located in area served by lightrail & bus) @ $36/person	$13,968
2012 employees (located in area served by bus only) @ $18/person	$36,216
Total	$183,384

APPENDIX B

City of San Jose Employee Survey
Distributed April 10-April 17, 2009

Default Section

Thank you for taking the time to complete this survey. It should take about 5-7 minutes to complete.

The purpose of this survey is to:

- Determine employee awareness of the City's Commute Assistance Program,
- Seek employee input on their home–to-work/work-to-home commute patterns,
- Obtain information related to employee participation in the Eco-Pass Program.

Your input will help us to:

- Develop an understanding of how employees get to work,
- Measure the effectiveness of the Eco-Pass Program based on current participation,
- Benchmark current commute patterns for future evaluation of employee commute trends.

This survey is being conducted through April 17, 2009 and is sponsored by the Department of Transportation and the Department of Planning, Building and Code Enforcement in cooperation with the Valley Transportation Authority (VTA). All responses are confidential.

Questions or comments should be directed via e-mail to ray.salvano@sanjoseca.gov. Please use the subject title "CAP Survey".

1. How familiar are you with your employee benefits under the City's Commute Assistance Program?

◯ Very Familiar

◯ Somewhat Familiar

◯ Not Familiar

2. Please check any of the City's Commute Assistance Programs you are aware of:

☐ ECO-Pass Program

☐ Commuter Check Program

☐ Vanpool/Rideshare Program

☐ Emergency Ride Home Program

3. How would you rate your Commute Assistance Program benefits?

◯ Very valuable ◯ Somewhat valuable ◯ No opinion ◯ Not valuable

4. Within the past year (April 2008 - March 2009), how many times would you estimate that you used any of the following for your home-to-work/work-to-home commute?

	ECO-Pass	Commuter Check	Vanpool/Carpool	Emergency Ride Home
Not at All	☐	☐	☐	☐
A few times	☐	☐	☐	☐
About 1 time/month	☐	☐	☐	☐
2-3 times/month	☐	☐	☐	☐
About 1 time/week	☐	☐	☐	☐
2-3 times/week	☐	☐	☐	☐
More than 3 times/week	☐	☐	☐	☐

5. The ECO-Pass Program provides eligible City employees free, unlimited access to VTA bus and light rail service throughout Santa Clara County.

Now that you know more about this benefit, how likely would you be to use this benefit for your home-to-work/work-to-home commute?

◯ Very likely ◯ Somewhat likely ◯ No opinion ◯ Somewhat unlikely ◯ Very unlikely

6. The Commuter Check Program offers reduced rates for City employees on fares for Caltrain, Altamont Commuter Express, BART, Highway 17 Express and SMART Bus.

Now that you know more about this benefit, how likely would you be to use this benefit for your home-to-work/work-to-home commute?

◯ Very likely ◯ Somewhat likely ◯ No opinion ◯ Somewhat unlikely ◯ Very unlikely

7. The Vanpool/Rideshare Program leases vans to groups of employees, who can then share costs and reduce commute costs of gasoline and wear and tear on your personal vehicle.

Now that you know more about this benefit, how likely would you be to use this benefit for your home-to-work/work-to-home commute?

◯ Very likely ◯ Somewhat likely ◯ No opinion ◯ Somewhat unlikely ◯ Very unlikely

8. The Emergency Ride Home Program provides an emergency-only ride home to any employee who requests the service on the same day he/she uses bus or light rail to get to work.

Now that you know more about this benefit, how likely would you be to use this benefit for your home-to-work/work-to-home commute?

◯ Very likely ◯ Somewhat likely ◯ No opinion ◯ Somewhat unlikely ◯ Very unlikely

9. In your home-to-work/work-to-home commute, do you mostly-

- ◯ Drive alone
- ◯ Carpool/Vanpool
- ◯ Take transit
- ◯ Walk
- ◯ Bike
- ◯ Other (please specify)

10. I usually drive to work alone because...

- ☐ Its faster and more convenient
- ☐ Transit service doesn't match my route/schedule
- ☐ Difficult to find others to carpool/vanpool
- ☐ Work late or irregular hours
- ☐ Cannot get home in an emergency
- ☐ Poor bike/walking access
- ☐ Use my car on the job
- ☐ Need to make stops on the way to work or home
- ☐ Need to pick up and/or drop off child from school/daycare
- ☐ Prefer to drive my own car
- ☐ Not applicable, I seldom drive alone
- ☐ Other (please specify)

11. If you drive to work, what kind of vehicle do you drive?

- ◯ Small to mid-sized car (not a hybrid)
- ◯ Van/Truck/SUV (not a hybrid)
- ◯ Hybrid (all models)
- ◯ Electric (all models)
- ◯ Motorcycle

12. If you drive to work, how many miles per gallon does your vehicle get?

Miles per gallon

13. Last summer, the price of gas spiked to over $4/gallon. Did this influence how you got to work?

- ◯ No change
- ◯ Carpooled more frequestly
- ◯ Rode transit more frequently
- ◯ Purchased an hybrid/electric vehicle

Other (please specify)

14. What is most important to you when you choose how you get to work? (Select up to 3)

- ☐ Travel Time
- ☐ Cost
- ☐ Convenience/Flexibility
- ☐ Reliability
- ☐ Comfort and Safety
- ☐ Reducing pollution, conserving energy
- ☐ Ability to make stops on the way to work or home
- ☐ Other (please specify)

15. If you currently drive alone to work, would you be willing to try an alternate way to get to work such as bus, light rail, carpooling or biking?

◯ Once per week ◯ Once every two weeks ◯ Once per month ◯ Not at all

16. Please list any incentives or ideas you have that may encourage more employees to use alternatives to driving alone for their commute.

17. Home/Work Zip Codes

Home Zip Code

Work Zip Code

18. Please tell us about your average home to work commute?

Approximately how many miles one-way?:

Average door-to-door commute time in minutes:

19. Where do you work?

◯ City Hall

◯ Other Downtown location

◯ Other location not in Downtown

20. Which Department do you work for?

21. What is your age?

◯ under 21 ◯ 21-31 ◯ 32-47 ◯ 48-63 ◯ Greater than 63

22. What is your gender?

◯ Male

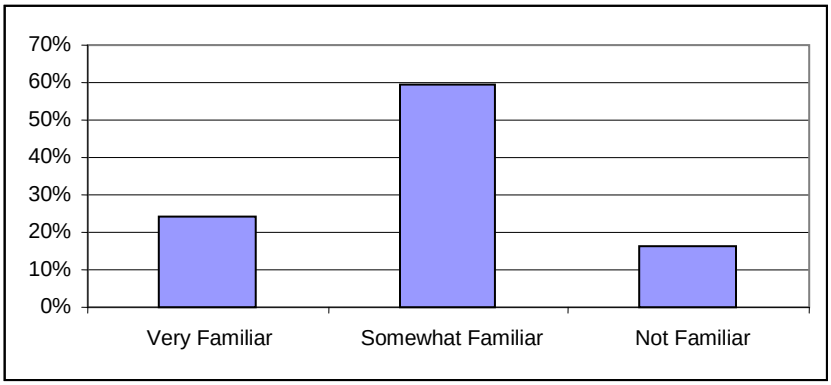
◯ Female

APPENDIX C

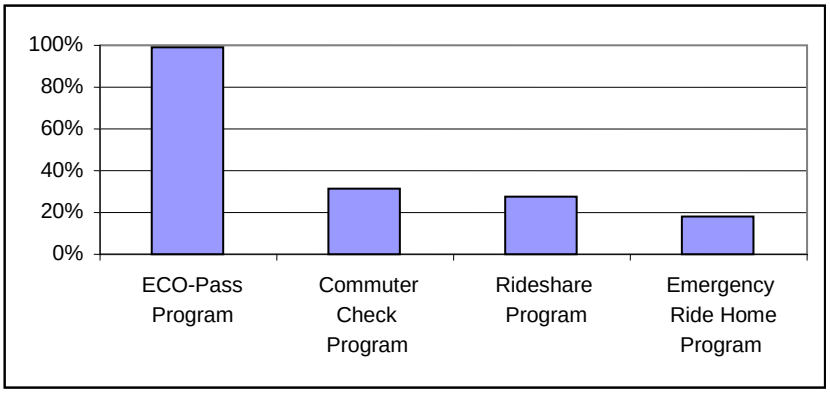
Responses to Select Questions

City of San Jose Employee Survey Distributed April 10-April 17, 2009

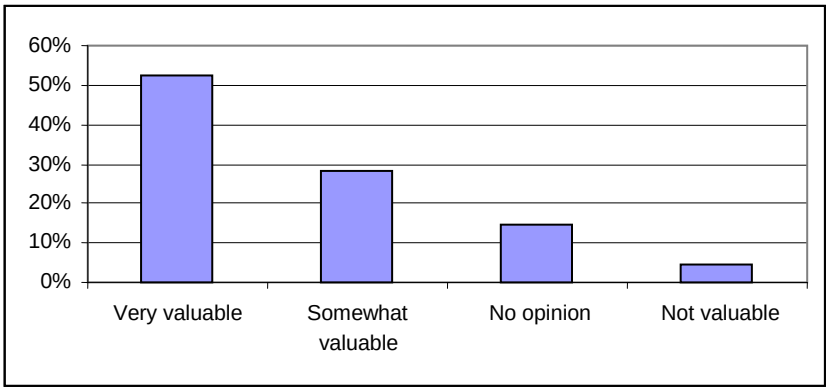
Question No. 1
How familiar are you with your employee benefits under the City's Commute Assistance Program?
(1351 responses)



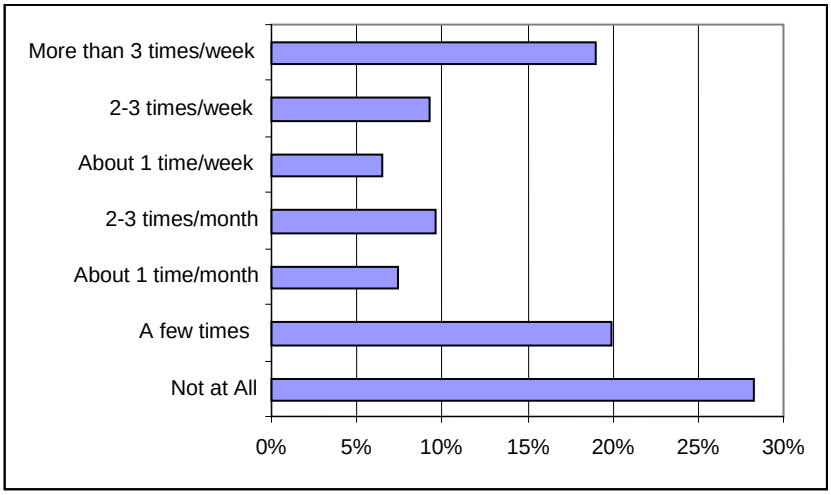
Question No. 2
Please check any of the City's Commute Assistance Programs you are aware of:
(1340 responses)



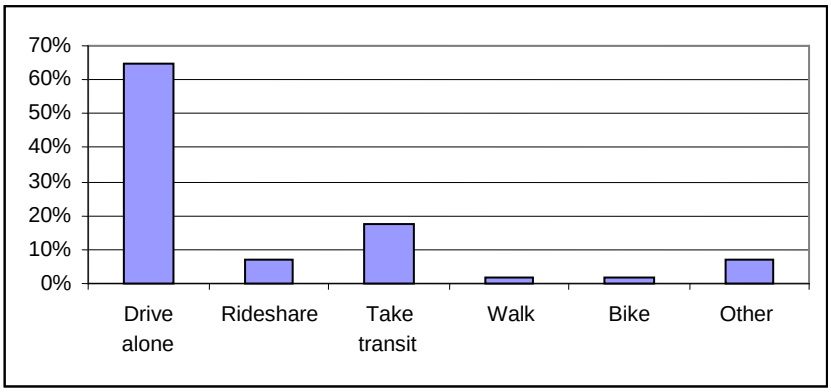
Question No. 3
How would you rate your Commute Assistance Program benefits?
(1327 responses)



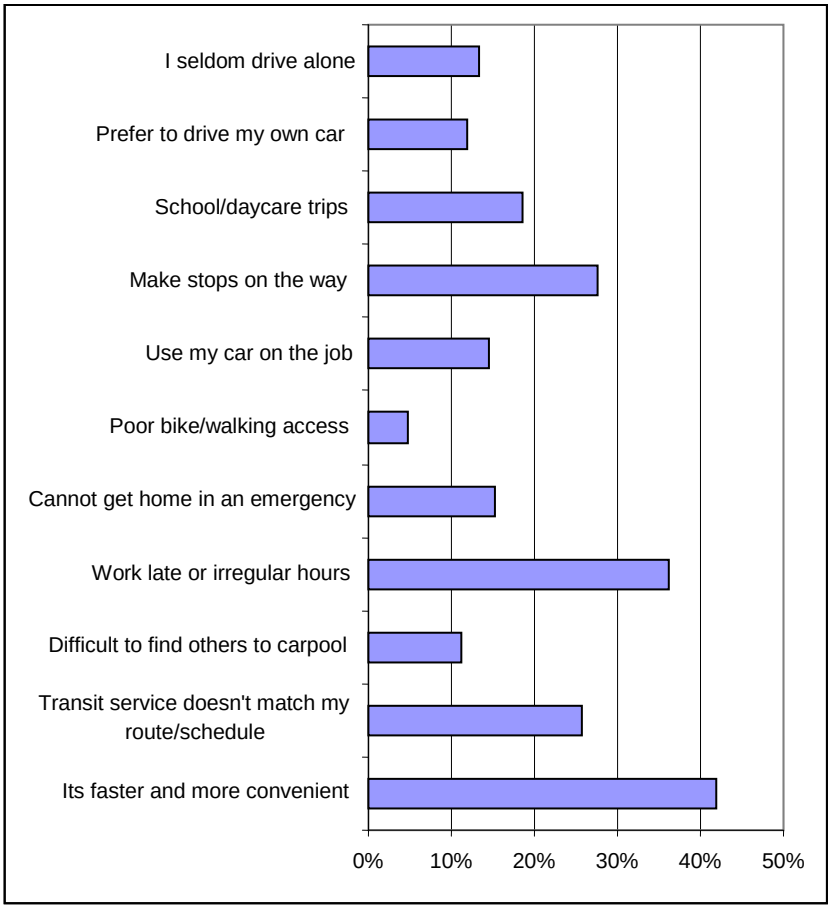
Question No. 4
Within the past year (April 2008 - March 2009), how many times would you estimate that you used your Eco-Pass for your home-to-work/work-to-home commute? (1360 responses)



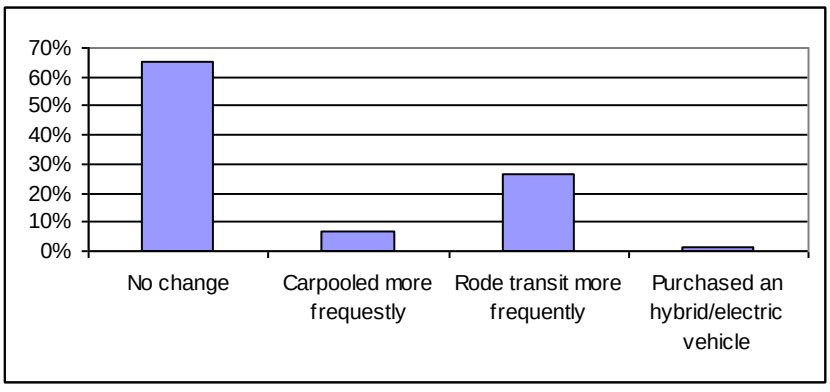
Question No. 9
In your home-to-work/work-to-home commute, do you mostly- (1366 responses)



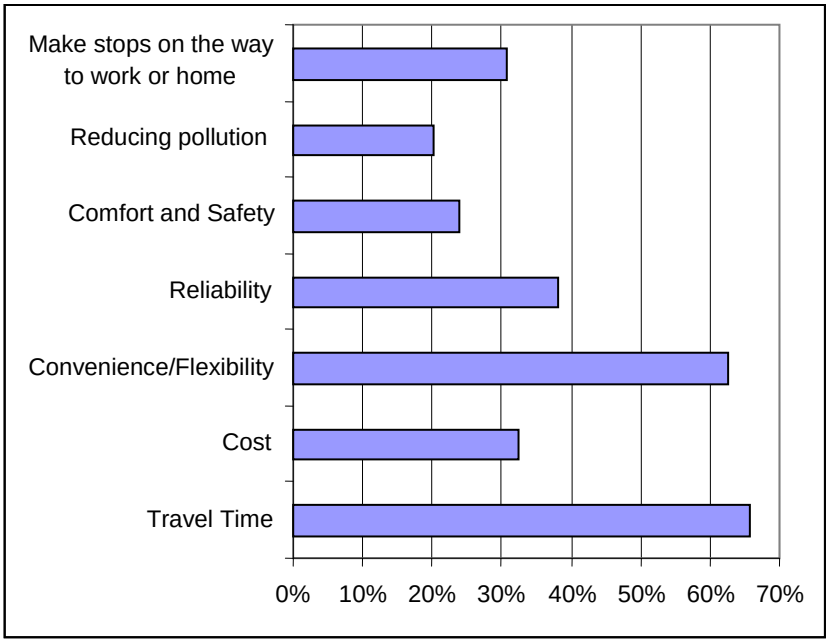
Question No. 10
I usually drive to work alone because...
(1298 responses)



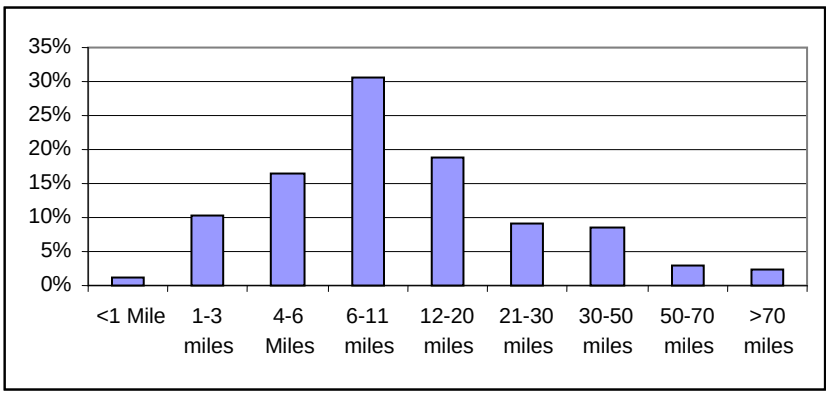
Question No. 13
Last summer, the price of gas spiked to over $4/gallon. Did this influence how you got to work?
(1241 responses)



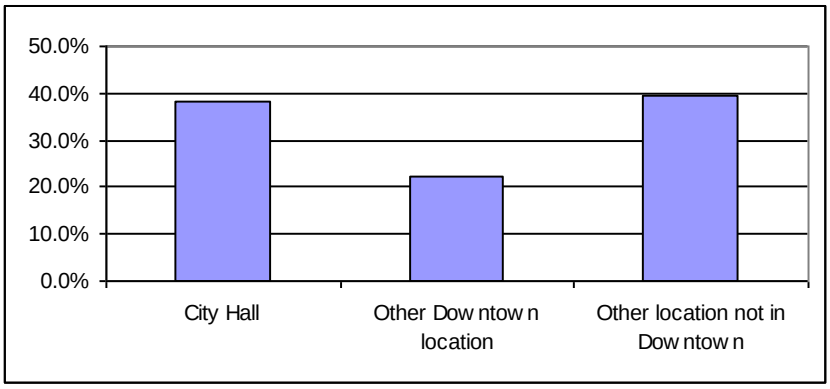
Question No. 14
What is most important to you when you choose how you get to work?
(1361 responses)



Question No. 18
Approximately how many miles is your one-way commute?
(1327 responses)



Question No. 19
Where do you work?
(1354 responses)



Question No. 20
Which Department do you work for? (1320 responses)