



SANTA CLARA  
Valley Transportation Authority

REC'D JUN 23 2005

## MEMORANDUM

Writer's Direct Telephone: (408) 321-5556

**TO:** Interested Parties

**FROM:** Kurt Evans  
Government Affairs Manager

**DATE:** June 16, 2005

**SUBJECT:** Valley Transportation Plan (VTP) 2030

For your information, I am attaching a copy of Valley Transportation Plan (VTP) 2030, which is an update of Santa Clara County's long-range, multi-modal, countrywide transportation plan.

VTP 2030 establishes a framework for the Board of Directors of the Santa Clara Valley Transportation Authority (VTA) to make key transportation investment decisions, and provides strategic direction for VTA's involvement in land-use and other livability issues. The plan includes the following elements:

- Vision, goals and objectives.
- Revenue projections for existing transportation funding sources consistent with the San Francisco Bay Area's Regional Transportation Plan (RTP).
- Description of the capital investments and services to be pursued.
- Programs to continue and expand VTA's involvement in land-use and livability initiatives.
- Programs to better link transportation and land-use decision-making.
- Near-term implementation tasks and future transportation studies to be undertaken.

VTP 2030 includes 10 program areas:

1. Highways and freeways.
2. County expressways.
3. Local streets and county roads.
4. Public transit.
5. Intelligent transportation systems (ITS).
6. Soundwalls.
7. Pavement management.
8. Bicycle projects.
9. Landscape restoration and graffiti removal.
10. Pedestrian and livable communities.

It is important to note that VTP 2030 is a long-range transportation plan; it is not a programming document. It does not set priorities or schedules for when projects will be implemented.

The adoption of VTP 2030 enables VTA to explore the full range of options for moving forward with its overall investment program. In a separate process, the VTA Board of Directors and its partners will determine expenditure programs for the VTP 2030 program areas, and affirm them in short-range programming documents. Along these lines, the VTA Board has already begun the process for developing a transit capital investment program that includes the projects specified in the 2000 Measure A Transit Improvement Program.

I hope VTP 2030 will be useful to you. If you have any questions, please feel free to contact me at (408) 321-5556.



- \* 66. Considered recommendations relating to weighing and measuring devices and price verification systems, and took the following actions:

- a. Waived reading and adopted Ordinance No. NS-300.719 (preliminary) repealing Division B30 and enacting a new Division B30 of the Santa Clara County Ordinance Code relating to fees for weights and measures devices and price verification system registration certificate.

**Vote:** Gage: Yes Alvarado: Yes McHugh: Yes Beall: Yes  
Kniss: Yes

- b. Adopted Resolution establishing annual registration fee for inspection of price verification systems.

#### **Roads & Airports**

- \* 67. Considered recommendations relating to Comprehensive County Expressway Planning Study Implementation Plan, and took the following actions:

- a. Accepted Comprehensive County Expressway Planning Study.
- b. Approved Study findings relating to need for capacity and operational improvements on expressway system.
- c. Approved Study findings relating to need for bicycle and pedestrian improvements, sound walls, and landscaping on expressway system.
- d. Approved recommended Funding Strategy relating to Capital Improvements and Maintenance/Operations.
- e. Directed Administration to pursue "Next Steps" outlined in Executive Summary.
- f. Directed Administration to forward Implementation Plan to Valley Transportation Authority (VTA) for inclusion in Valley Transportation Plan 2020 (VTP2020) 2003/2004 update.

# VTP 2030

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

## Valley Transportation Plan 2030



## **2005 Board of Directors**

Joe Pirzynski  
Chairperson  
Council Member  
Town of Los Gatos

Cindy Chavez  
Vice Chairperson,  
Vice Mayor  
City of San Jose

David Cortese  
Council Member  
City of San Jose

Ron Gonzales  
Mayor  
City of San Jose

Nora Campos  
Council Member  
City of San Jose

Forrest Williams  
Council Member  
City of San Jose

Liz Kniss  
Chair, Supervisor  
County of Santa Clara

Don Gage  
Supervisor  
County of Santa Clara

Jamie Mathews  
Council Member  
City of Santa Clara

Robert Livengood  
Council Member  
City of Milpitas

Dean J. Chu  
Mayor  
City of Sunnyvale

David Casas  
Mayor  
City of Los Altos

## **Board Member Alternates**

Dolly Sandavol  
Council Member  
City of Cupertino

Peter McHugh  
Supervisor  
County of Santa Clara

Ken Yeager  
Council Member  
City of San Jose

Breene Kerr  
Mayor Pro Tem  
Town of Los Altos Hills

Dennis Kennedy  
Mayor  
City of Morgan Hill

## **Ex-Officio Members**

James T. Beall, Jr.  
Supervisor  
County of Santa Clara  
Santa Clara County  
Representative to MTC

John McLemore  
Santa Clara County Cities  
Association Representative  
to MTC

## **Santa Clara Valley Transportation Authority**

Peter M. Cipolla  
General Manager

Chris Augenstein  
Transportation Planning Manager

Carolyn M. Gonot  
Chief Development Officer

# Valley Transportation Plan 2030

**February 2005**



# Table of Contents

	<i>Foreword</i>	<b>v</b>
Chapter 1	<b>FOUNDATIONS: PLAN WITH VISION</b>	<b>2</b>
	Looking to Tomorrow .....	4
	Influences of Growth .....	6
	VTP 2030 Goals and Objectives .....	14
	Financial Foundation .....	24
Chapter 2	<b>INVESTMENT PROGRAM</b>	<b>40</b>
	The Planning and Funding Process .....	42
	Capital Investment Program .....	46
	Subarea Analysis .....	48
	VTP 2030 Program Areas .....	86
	Highway Program .....	87
	Expressway Program .....	92
	Local Streets and County Roads Program .....	97
	Transit Services and Programs .....	103
	Transportation Systems Operations and Management Program .....	129
	Bicycle Program .....	138
	Livable Communities and Pedestrian Programs .....	142
	Systemwide Performance Results .....	143
Chapter 3	<b>LAND USE AND TRANSPORTATION</b>	<b>152</b>
	Transportation and Land Use Integration .....	154
	Transportation and Land Use Investment Strategy .....	168
	Partnerships for Livability .....	176
Chapter 4	<b>IMPLEMENTATION</b>	<b>184</b>
	Program Area Allocations and Funding Issues .....	186
	Near-Term Implementation Activities .....	188
	VTP Development Process .....	200
	<i>Appendix</i>	<b>206</b>
	<i>Glossary</i>	<b>226</b>
	<i>Acknowledgements</i>	<b>248</b>

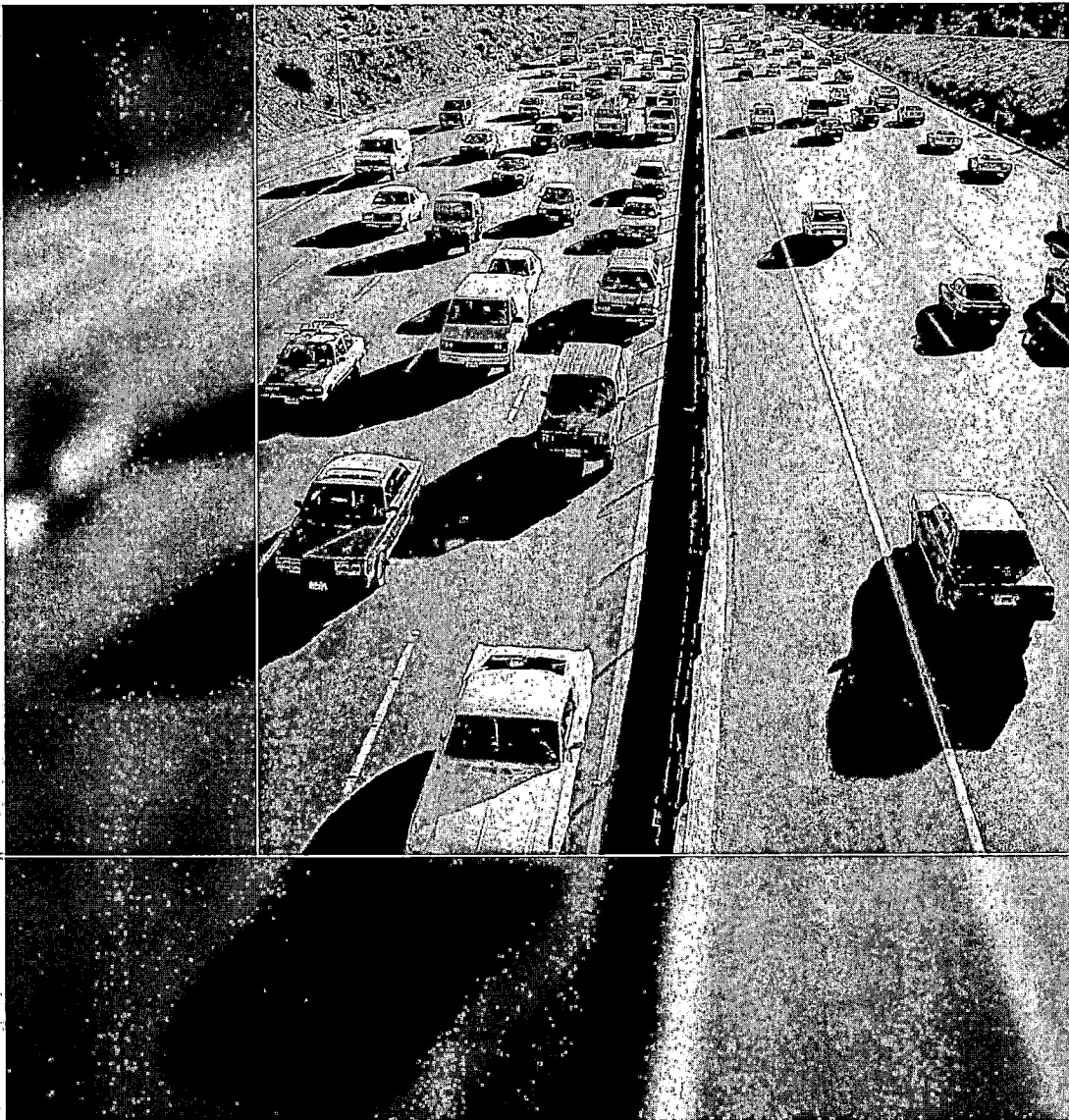
# Foreword

The Valley Transportation Plan (VTP) 2030 is the long-range countywide transportation plan for Santa Clara County. The Valley Transportation Authority (VTA), in its role as the appointed Congestion Management Agency (CMA) for Santa Clara County, is responsible for preparing and periodically updating the countywide transportation plan.

VTP 2030 is a plan. It is a statement of the programs and projects the Board of Directors would like to see built, and for which the Board may want to pursue State and/or Federal funds, within the timeframe of the plan. It is intended to provide a planning and policy framework for developing and delivering transportation projects and programs over the next 25 years (2005 to 2030). The Plan identifies existing and future transportation-related needs, considers all travel modes, links land use and transportation funding and decision-making, examines alternative courses of action, and identifies what can be accomplished with the projected available funding for projects and programs.

Revenue projections and project cost estimates presented in the Plan are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

VTP 2030 is not a programming document. It does not include precise schedules for implementation and does not make assumptions regarding financing costs that may be needed to implement specific projects in specific years. Beginning in late 2004, the VTA Board began development of an Expenditure Plan to implement the 2000 Measure A Transit Program. This process is expected to conclude in Spring/Summer 2005 with the adoption of a VTA Long-Term Transit Capital Investment Program. The Expenditure Plan will provide guidance for future Board actions that may include seeking an additional source of funding for transit or the re-evaluation of current project priorities.





## chapter 1: FOUNDATIONS: PLAN WITH VISION

Plans are visionary. They help us to understand where we are, envision where we want to go, and lay out the steps necessary to get there. Successful plans are founded on an understanding of not only the vision and goals that the plan is designed to achieve, but also on the issues that frame them and the resources available to achieve them. The Valley Transportation Plan (VTP) 2030 is both visionary and pragmatic—it affirms what we can do, and raises the bar for what we should do.

Looking to Tomorrow .....	4
Influences of Growth .....	6
VTP 2030 Goals and Objectives .....	14
Financial Foundation .....	24



---

# Looking to Tomorrow

"Make no little plans; they have no magic to stir the blood, and probably will themselves not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will not die."—DANIEL BURHAM

Valley Transportation Plan (VTP) 2030 was developed in an especially challenging environment. The unprecedented economic hardships associated with the high-technology bubble burst, and the growing State and Federal budget deficits, have raised questions about long-range financial forecasts. These funding realities have greatly affected VTA's operating and capital budget projections, and have introduced additional uncertainty regarding the future resources available to provide for and maintain a comprehensive multimodal transportation system in Santa Clara Valley. Added to this context are the continuing pressures of population and job growth in the county, and in the region, over the life of the plan.

There is, however, plenty of reason for optimism, and our expectations of what we can achieve should be high. Silicon Valley, centered in Santa Clara County, is nationally and internationally recognized as a center of entrepreneurship, innovation, high technology, and creative thinking. This creative and innovative spirit is not isolated to software engineers and venture capitalists—it is found in every facet of government and community too. Moreover, Santa Clara County has distinguished itself as a leading "self-help county." Its residents have a long and successful history of taxing themselves to pay for and implement the programs, projects, and serv-

ices necessary to make successful communities and businesses. Notable examples include the 1996 Measure B 1/2 cent sales tax funding a ten-year, \$1.63 billion capital program of highway and transit projects, and the 2000 Measure A 1/2 cent sales tax providing a 30-year multi-billion-dollar capital program of transit projects. With the leadership and people of Santa Clara County working together, there is every reason to believe we can achieve what we set out to do.

VTP 2030 provides policies and programs to guide investments in: Roadways, Transit, Intelligent Transportation Systems (ITS), Bicycle and Pedestrian Facilities, and Land Use. It is intended to demonstrate leadership and vision in the planning and delivery of innovative transportation projects, programs, and strategies. Moreover, VTP 2030 provides an opportunity for the community and the VTA Board of Directors to affirm an agenda for growth and change that:

- Balances transportation resources, plans their future use, and effectively improves the existing countywide roadway system
- Improves the operations of the county's roadways and transit services
- Implements new technologies and management strategies to better operate, manage, and maintain transportation systems

- Improves the relationship between transportation and land use planning and decision-making
- Responds to a heightened awareness of the importance of the links between transportation systems, open space preservation, air quality, urban form, and other quality-of-life issues
- Creates a multimodal framework for improving mobility options throughout the county

The past three decades have seen the completion of numerous roadway projects including new and expanded freeways, highways, and expressways, new and improved interchanges, and upgrades and improvements to arterial and local roadways. The transit system has been expanded and enhanced to include 54 stations and 37 miles of light rail, a modernized bus fleet, creative service plans, and new and expanded commuter rail services. A countywide network of bicycle trails and facilities that links with regional facilities is taking shape, and more recently, advances in technology are catching up with theory to allow the practical implementation of “intelligent transportation systems.”

As this plan indicates, these trends are projected to continue into the future with sustained investments in multimodal transportation services and infrastructure. However, while system expansion is still a key element of this plan, the VTP 2030 vision includes a shift toward enhanced utilization, better modal coordination and integration, and better operations of the existing transportation system.

Finally, while the transportation system has been maturing, there is intense latent demand for changes in land use patterns—in a sense, maturing them to better support existing and future investments in transportation infrastructure and services. Growth is coming—and the ultimate form of that growth will determine if we succeed in fully utilizing our investments in transportation and urban infrastructure, or if we continue to grow outwards, spreading our investment dollars ever thinner over ever-increasing areas.

Chapter 1 of the VTA’s Valley Transportation Plan 2030 (VTP 2030) examines the influences of growth in Santa Clara County, explores plan goals and their context, and presents an outlook for the resources anticipated to be available to implement the plan during its 25-year time-frame (2005 to 2030). Together, these sections lay a foundation for the broad array of investments, services and programs that VTA and its partnering agencies will work to put into place over the coming decades.

The following sections of Chapter 1 outline:

- Influences of Growth—engine of change
- VTP 2030 Goals—principles of change
- Financial Foundation—building blocks of change

The VTP 2030 vision provides an opportunity for the VTA Board and community to demonstrate leadership in moving Santa Clara County to better times, and making it a better place to live, work, and play.

---

# Influences of Growth

The population and land use data used in VTP 2030 is derived from the Association of Bay Area Governments (ABAG) *Projections 2003*. *Projections 2003* is based on a “Smart Growth” scenario derived from work conducted region-wide by ABAG during 2002 and 2003. ABAG projections have been questioned in the past because they were built primarily on historical growth trends, and therefore tended to perpetuate the status quo growth patterns of sprawl and decentralization in their forecasts.

Released during October 2003, this new approach to forecasting, termed a “Network of Neighborhoods,” assumes much of the new growth in the region will be focused in existing downtown and main street areas, around transit stations, and along major transportation corri-

dors. This scenario is very much in line with VTA’s own Community Design and Transportation (CDT) Program’s framework of growth focused in cores, corridors and station areas<sup>1</sup>—areas where major investments in transportation and urban infrastructure have already been made. An important note here is that these assumptions about new growth can only be realized through actions of local governments with land use authority—concerted and deliberate efforts are needed to change land use regulations to allow these new development patterns to emerge.

## Growth Trends

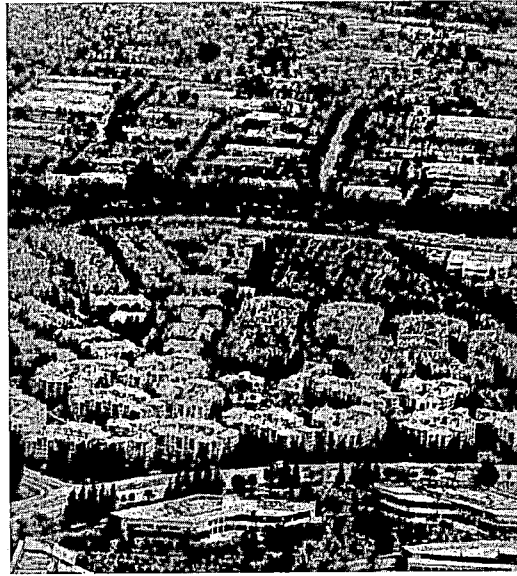
Although the high-technology bubble burst has greatly impacted the Silicon Valley economy over the last few years, growth projections for population and jobs remain strong for the foreseeable future. The advantages offered by Silicon Valley’s unique concentration of high-technology firms, world-renowned Bay Area universities, a superb climate, and a highly educated workforce are expected to continue to be strong attractive forces for the area. ABAG growth projections depict a robust economy continuing through 2030, with increases in the county’s population of 27 percent, and in job growth of 37 percent, from 2005 levels. These numbers are significant: they represent 31 percent of the total population growth and 29 percent of total job growth



1. The Community Design and Transportation (CDT) Program is discussed in Chapter 3.

projected for the entire nine-county Bay Area region during the same time period.

As a major employment center within the region, Santa Clara County will continue to retain significantly more jobs than employed residents. Over the next 25 years, this imbalance will become pronounced by a 37 percent increase in new jobs, which is expected to exceed the increase in employed residents by nearly 44,000. As a result, the need for labor from surrounding counties will increase. Growth in net in-commuting is projected to continue over the next decade and then to level off over the longer term.



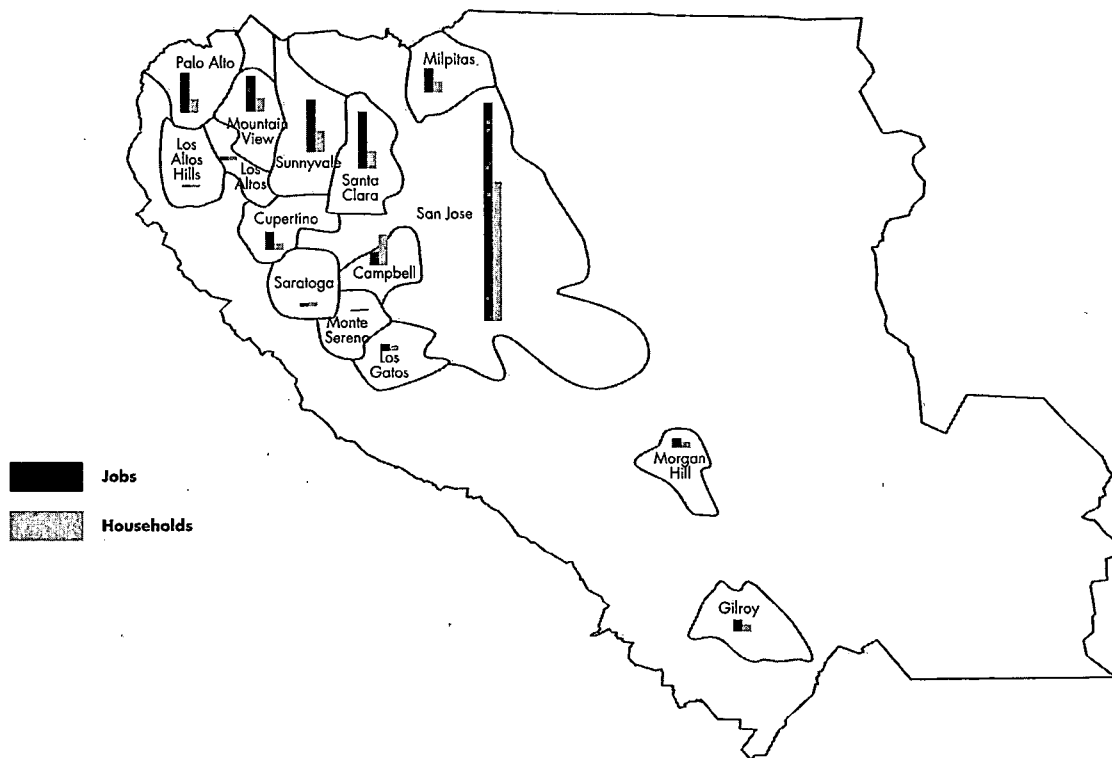
**Table 1-1 Growth Trends for Santa Clara County (2005 to 2030)**

Santa Clara County	2005	2030	% change
<b>Population</b>	1.79 million	2.27 million	27%
<b>Households</b>	.6 million	.77 million	28%
<b>Employed residents</b>	.96 million	1.31 million	36%
<b>Jobs</b>	1.09 million	1.48 million	37%

Source: ABAG Projections 2003

*Santa Clara County will continue to lead the Bay Area in number of jobs and amount of job growth over the next 25 years, adding nearly 396,000 jobs—or 29% of total job growth—and 68% of growth in high-technology jobs forecast for the entire Bay Area region.*

## Jobs and Housing 2030

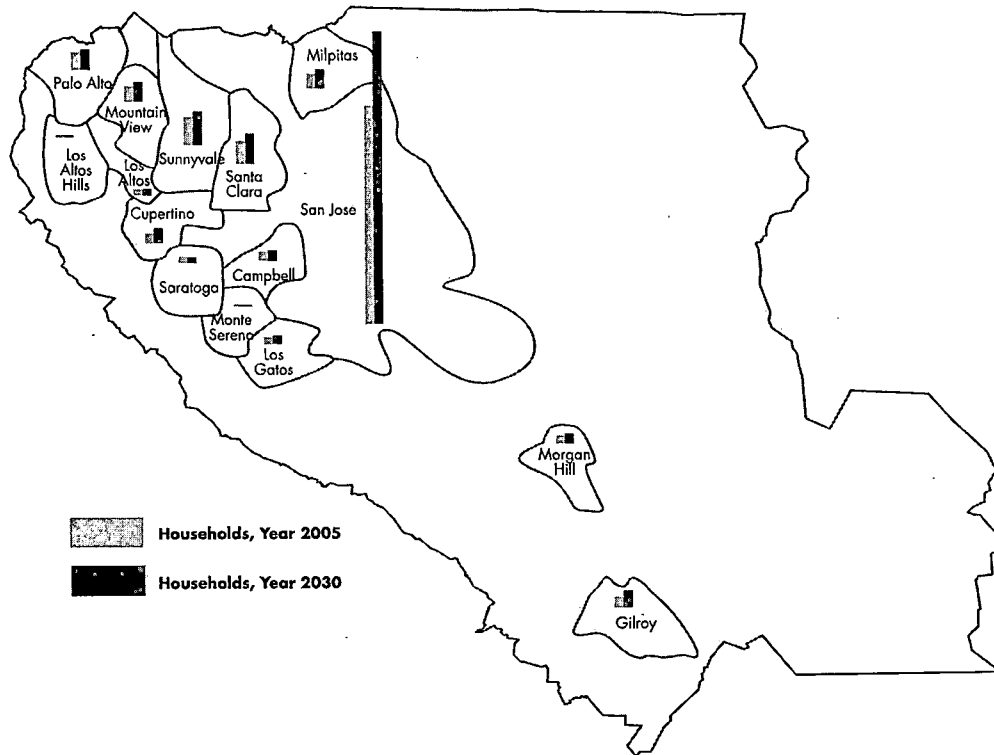


### Growth Patterns Within Santa Clara County

Over the next 25 years, substantial growth will occur in the northern parts of the county, in northern San Jose, Santa Clara, Sunnyvale, and Milpitas, in particular. This growth will continue the pattern of intensive development at the southern end of San Francisco Bay, filling in the

area from the Peninsula to the East Bay. A shift in the countywide pattern of growth is also anticipated, with a larger share of growth occurring in the southern parts of the county. In particular, high rates of growth are projected for southern San Jose, Morgan Hill, and Gilroy, as development accelerates in those areas.

## Population Growth, 2005–2030



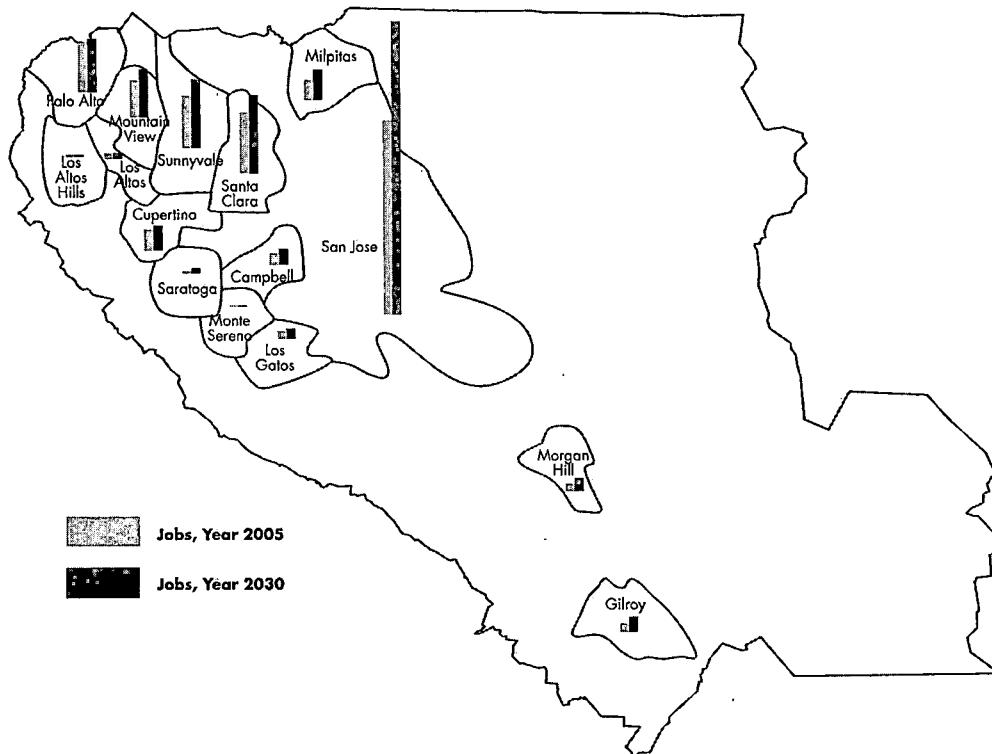
### Population Growth

Santa Clara County's population is estimated to be 2.27 million by 2030, an increase of nearly 486,000 residents over today's (2005) population. About two-thirds of Santa Clara County's population and household growth over the next 25 years will occur in San Jose, which will gain nearly 324,000 new residents and 107,000 new households. San Jose will remain the most populous jurisdiction within the county, the largest city in the Bay Area region, and the third largest city in California. The next largest amounts of population growth are expected in Santa Clara with 30,000 new residents, 26,600 in unincorporated areas of the

county, 22,800 in Milpitas, 21,500 in Sunnyvale, 13,600 in Gilroy, and 13,300 in Mountain View. Excluding north San Jose, the cities in the northern parts of the county represent about 21 percent of total county population growth. About 4 percent of countywide population growth is expected in the southernmost communities of Gilroy and Morgan Hill.

The highest rates of population growth are projected for San Jose at 34 percent, Milpitas at 33 percent, Gilroy at 29 percent, Santa Clara at 28 percent, unincorporated county areas at 25 percent, and Palo Alto at 20 percent.

## Job Growth, 2005-2030



### Job Growth

Despite the recent economic downturn, job growth in Santa Clara County is expected to be strong over the next 25 years, increasing by 37 percent (or nearly 400,000) to 1.48 million jobs.<sup>2</sup> Almost half of this growth in new jobs is projected for San Jose. Most of these will be higher-paying jobs (about 271,000) related to the high-technology industry. Job growth will also remain strong for other cities in the northern part of the county: 36,000 new jobs in Sunnyvale; 33,000 in Santa Clara; 20,000 in Milpitas; and 20,000 in Mountain View. The continued strength of employment in the northern parts of the county is highlighted

by the large combined job growth projected for the cities of Santa Clara, Sunnyvale, Milpitas, Mountain View, Cupertino, and Palo Alto, totaling nearly 128,000 jobs and representing 32 percent of the total job growth in the county. In the southern parts of the county the workforce will also expand significantly, by approximately 93 percent for Morgan Hill, and 62 percent for Gilroy. Together, these two cities account for over 26,000 new jobs, or nearly 6 percent of total countywide job growth, not including the substantial job growth expected in the southern San Jose/Coyote Valley area.

<sup>2</sup>Association of Bay Area Governments (ABAG), Projections 2003.

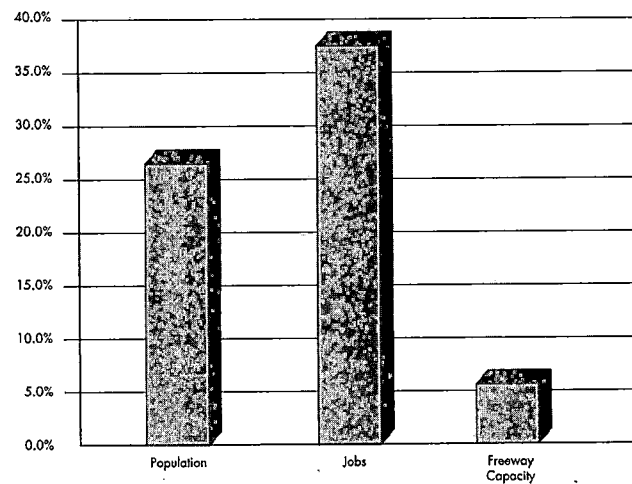
### Congestion and Mobility Management

The pursuit of economic growth means that travel demand will continue to increase significantly over the next 25 years. Plans are under way to expand roadway capacity to accommodate more trips in the coming years, but the ability to expand the roadway system to accommodate more vehicles is approaching practical limits. Moreover, adding roadway capacity essentially “induces” more automobile travel as people find the “cost” of driving (i.e., travel time) reduced, further aggravating the problem as new capacity is quickly gobbled up. This is one of the endemic problems of transportation planning associated with managing roadway congestion: build it and they will come.

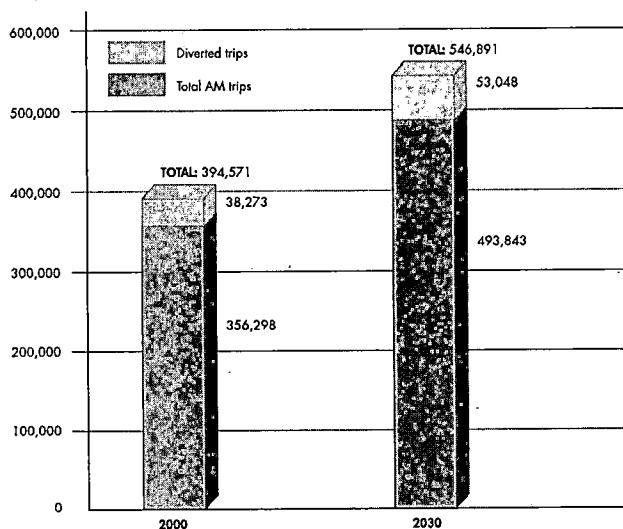
The estimated 5.6 percent increase in freeway capacity<sup>3</sup> from VTP 2030 roadway projects is far short of the percentage increases in residents and jobs. The widening gap between job and population growth and roadway capacity expansion means that a growing pool of commuters will be unable to find room on the roads during peak periods. By 2030, there is a demand for travel during the morning peak hour of nearly 550,000 vehicle trips. Over 50,000 of those trips will not be able to travel during the morning peak hour due to congestion. One result of this is an even greater duration of congested conditions, as more drivers adjust their time of travel to avoid the most heavily congested commute

<sup>3</sup>Increased capacity = additional lane miles.

**Table 1-2 Population, Employment and Freeway Capacity Increases (2005–2030)**

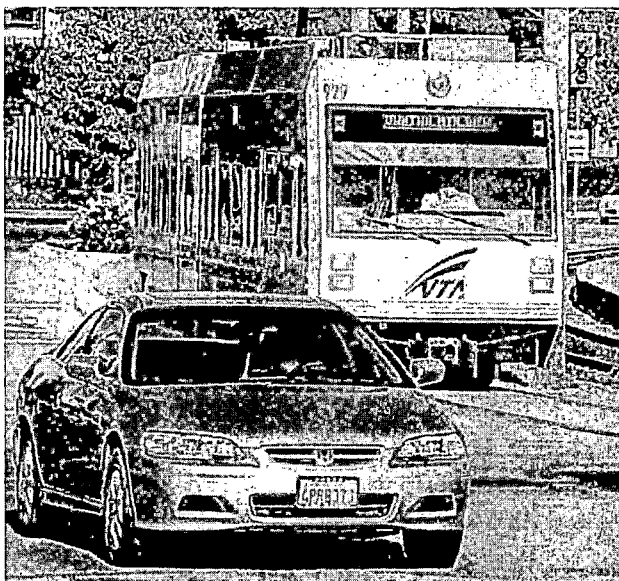
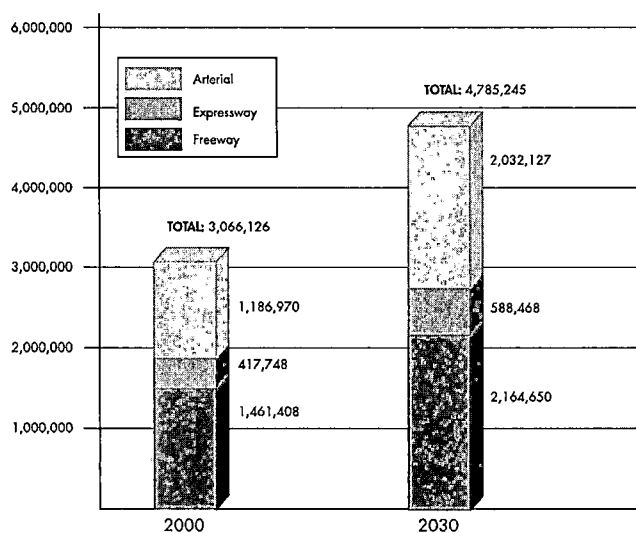


**Table 1-3 Vehicle Trips (AM Peak Hour)**





**Table 1-4 Traffic Growth**  
(AM Peak Hour Vehicle Miles of Travel)



hours. The enormous pent-up demand for roadway space will limit the ability to significantly reduce congestion over the 25-year planning horizon of VTP 2030.

The bottom line is that no matter how much we expand and refine our roadway systems, we will never completely eliminate congestion; nor would we want to in all areas, since some level of congestion—for example, in downtown business districts or along main streets—is an indicator of a healthy economy. This isn't to suggest that roadway improvements are not necessary. Quite the opposite: roadways are—and will continue to be—a critical piece of delivering a balanced and integrated transportation system in Santa Clara County.

With diminishing options for expansion, greater emphasis must be placed on throughput enhancement through systems management. Mobility management strategies and techniques can improve community livability and help shift person trips from driving alone to other modes such as shared ride, transit, biking and walking. VTP 2030 must thus accept and respond to these realities and opportunities. Responses include:

- Alternative transportation modes and changes in land uses and development patterns. These are necessary to provide travel alternatives to driving alone in the peak hours. A primary obstacle to managing peak-hour congestion is the high level of demand at the fringes of the morning and evening peak periods. Strategies that add peak-period roadway capacity will

increase peak-hour throughput but will not relieve congestion in key corridors.

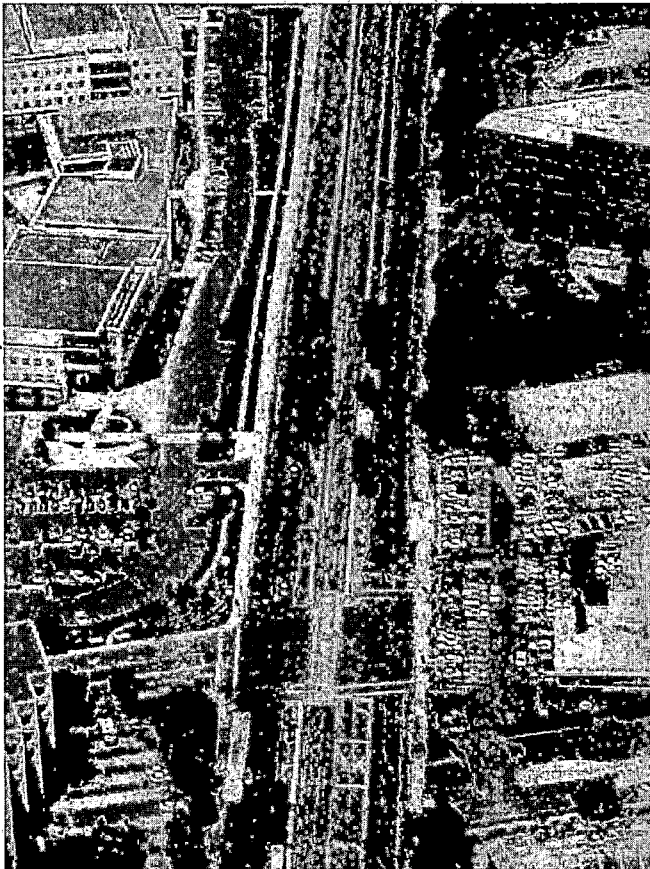
- Transit improvements in congested corridors to increase transit mode share by providing an attractive alternative to driving alone in heavy traffic. However, transit travel times need to be competitive with automobile travel times. As roads become more congested, transit service is also impacted, and ways to maintain and improve transit speeds become critical.
- Transportation system management strategies and the implementation of new technologies. These strategies will have increasingly important roles in future transportation plans due to their cost-effectiveness in improving roadway conditions, and to the high costs and limited benefits of improving the transportation system through expansion. Effective systems management requires the completion of an interconnected, multimodal system that provides travel options for all types of trips.
- Land uses and development patterns that support transit, walking and bike trips. High-quality, infill developments in downtowns, around transit stations, and along main streets and major transportation corridors should be priorities of local jurisdictions. These are areas where tremendous investments in urban and transportation infrastructure have already been made, and where changes in land uses will yield the greatest mobility and livability benefits.

Understanding these realities helps define a framework for VTA and local jurisdictions to take actions that can improve travel conditions and the quality of life for the county's residents and workers. The next section discusses the goals and objectives associated with VTP 2030, and how they can make a difference in sustaining and improving the quality of life and economic health of the region.

---

# VTP 2030 Goals and Objectives

Goals and objectives are fundamental components of the planning process. They help to define an overall vision and the steps necessary to move forward in attainment of that vision. VTP 2030 is intended to fulfill several complementary goals established by VTA, including VTA's overarching Vision and Mission Statements and its Strategic Plan Goals. This section presents these goals within the context of the VTP 2030 planning process.



## **VTA Vision and Mission Statements**

In 1995, VTA adopted the following Vision and Mission Statements:

### **Vision Statement**

*The vision of the Santa Clara Valley Transportation Authority (VTA) is to provide a transportation system that allows anyone to go anywhere in the region easily and efficiently.*

### **Mission Statement**

*The mission of the Santa Clara Valley Transportation Authority (VTA) is to provide the public with a safe and efficient county-wide transportation system. The system increases access and mobility, reduces congestion, improves the environment, and supports economic development, thereby enhancing the quality of life.*

In addition, the VTA Board of Directors specified four key policy directions and adopted a fifth related to the 1996 Measure B Program in 1999. Those policies are as follows:

- Integrate land use and transportation
- Use all transportation options
- Create safe, convenient, reliable and high-quality bus/rail operation
- Build a regional perspective
- In partnership with the County of Santa Clara, implement the 1996 Measure B Transportation Improvement Program

### VTA Strategic Plan Goals

VTA recently completed a review of its services and programs and formulated recommendations to improve its efficiency and effectiveness, and to enhance its ability to continue providing quality services and programs to its customers within the context of current Board policy, the region's current economic realities, and financial constraints. Subsequently, previous Strategic Plan goals and objectives were revised and expanded to include recommendations from a Business Review Team<sup>4</sup> and an Ad Hoc Financial Stability Committee.<sup>5</sup>

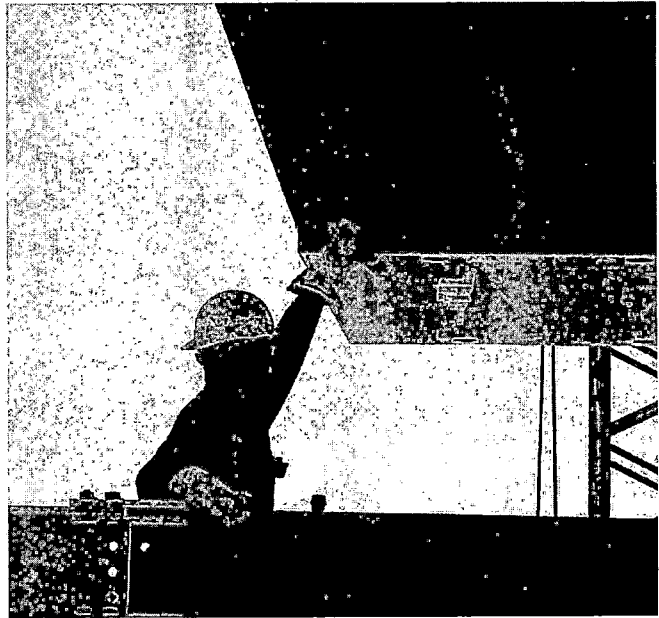
These goals and objectives, presented below, were reviewed and approved by the VTA Board on November 7, 2003.

#### Maintain Financial Stability

- Secure adequate levels of funding to sustain the existing transportation system and secure new fund sources for system expansion.
- Increase the transit system's operating recovery ratio, with a target of 20–25 percent, by adding new riders, increasing the average fare per passenger through a multi-year fare policy and annual or biennial fare reviews, and improving cost efficiencies.
- Ensure timely maintenance, replacement and/or rehabilitation of essential capital assets.
- Implement new capital programs only when

4. Composed of members of the business community and VTA management and staff.

5. Composed of VTA Board members and community members.



operations and maintenance costs have been identified and revenue sources determined.

- Ensure the Reserve Fund policy will sustain sufficient future cash flow through changing economic cycles.
- Maintain a proactive State and Federal legislative program to ensure policies and funding allocations serve the needs of VTA's mission and diverse communities.
- Pursue joint development opportunities that result in both ridership and development revenues for VTA.
- Ensure that expenditures of 2000 Measure A funds are consistent with priority projects and services as identified by the Board of Directors.



### **Improve Mobility and Access**

- Provide transportation facilities and services that support and enhance the quality of life for Santa Clara County residents and the continued health of Santa Clara County's economy.
- Manage congestion by focusing investments to address the transportation system's greatest roadway, transit, bicycle and pedestrian needs.
- Increase the use of commute alternatives, especially in defined key cores, transportation corridors and station areas.
- Continually evaluate services through the Service Management Plan, using revised

service standards, making necessary modifications to assure efficiency and effectiveness of transit service, and expand service as allowed by financial resources.

- Develop plans, secure environmental clearance and begin implementation of priority 2000 Measure A transit projects as funds become available.
- Complete the 1996 Measure A transit and highway projects as local, State and Federal funding allows.

### **Integrate Transportation and Land Use**

- Continue to work with the cities and County to improve the relationship between land use and transportation decisions, and advocate for the implementation of the principles and practices contained in the Community Design and Transportation Program.
- Develop and enhance partnerships with the cities and the County to ensure adoption of Transit-Oriented Development (TOD) plans and policies along existing and future transit corridors.
- Partner with the private sector and the cities to develop projects at VTA station areas to intensify residential, commercial, and retail uses.
- Through the VTP 2030 Plan, strive to provide certainty to cities and private developers that priority transit projects upon which cities base land use decisions will be implemented in a timely manner.

### Enhance Customer Focus

- Increase ridership at least 1 to 3 percent annually.
- Maintain a high level of transit system reliability.
- Better communicate transit service information to customers and improve customer information resources as near- and long-term opportunities arise, including real-time route and schedule information, on-line trip planning, and e-commerce for VTA passes and tickets.
- Maintain a proactive media relations presence to promote services and provide awareness of VTA benefits to the community.
- Continue to enhance transit service in order to make VTA the travel mode of first choice.
- Ensure that comprehensive public participation programs are a key element in developing transportation system plans and projects.

### Increase Employee Ownership

- Continue to involve employees in the refinement of VTA business practices, such as transit routes and schedule planning.
- Continue to respond to key areas of organizational improvement identified by employees.
- Continue to work with employee labor representatives to develop strategies and to implement additional operational efficiencies.
- Foster an environment that demonstrates VTA is an employer of choice.



### VTP 2030 Goal and Objectives

The overarching goal established for VTA's long-range planning is: *"To provide transportation facilities and services that support and enhance the county's continued success by fostering: A high quality of life for Santa Clara County's residents, and continued health of Santa Clara County's economy."*

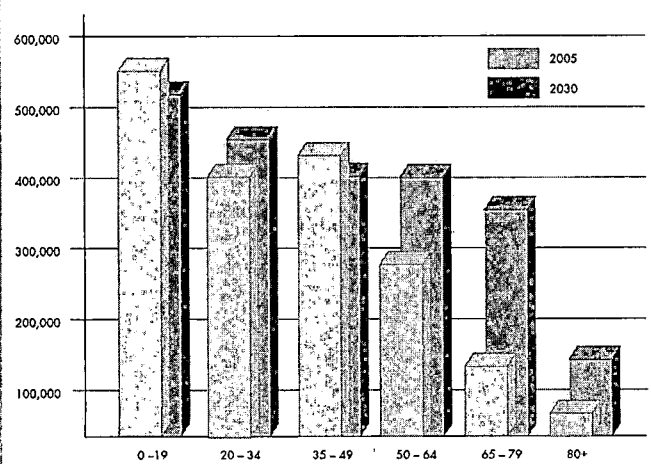
While this goal remains the backbone of countywide long-range transportation planning, VTP 2030 establishes the following supporting objectives:

- Provide a policy framework in which the investments made in transportation infrastructure and services are matched with land use policy commitments from local jurisdic-

### *Aging of Population and the Impact on Paratransit*

The 65 to 80+ population will nearly triple between 2005 and 2030. These individuals will need health care, social, shopping and other human services, including transportation. VTA anticipates that a large percentage of people 80+ will register for paratransit services, significantly increasing demand over current levels. To the extent that traditional transit can diversify and meet more of the needs of these individuals, the demand for paratransit service as we know it today can be focused on those needing it most.

**Table 1-5 Population by Age in Santa Clara County**



tions that fully support those investments and encourage optimal utilization and effectiveness of all transportation modes

- Provide a balanced transportation system that supports implementation of all modes of travel
- Provide projects, programs, and policies that develop and foster proactive partnerships between VTA and local jurisdictions
- Provide projects, programs, and policies that encourage and support community vitality, and economic and social prosperity
- Provide a long-range planning framework that supports and implements VTA's Strategic Goals and Objectives

### **Context of VTP 2030 Goals**

The above goals and objectives are intended to provide overarching principles for VTA in the planning process for VTP 2030. They relate to building and maintaining a multimodal transportation system that fosters a healthy economy and a high quality of life for residents and workers. VTP 2030 aims to achieve this by providing:

- Relief from congestion
- Better facilities and services for off-peak trips
- Attractive travel choices
- Services for a diverse population
- Transportation for vibrant communities
- Economic dividends of transportation investment

### Relief from Congestion

Time spent in traffic is time lost. Delays caused by incidents, construction and inadequate transportation system capacity aggravate drivers and passengers and make it harder to fulfill family, work and community commitments. The package of multimodal programs and projects in VTP 2030 is intended to provide a range of mobility and livability improvements.

### Facilitating Both Peak and Non-Peak Trips

Transportation planning generally focuses on managing peak-hour demand for the trip to work, and the improved transit service and roadway improvements described in VTP 2030 strives to do that. But people make many other types of trips throughout the day and evening to enjoy the region's activities and conduct their daily lives: high-tech workers may take evening college courses or pick up children after school sports or a karate class; teens may want to meet friends after school or get to parks, museums or malls during summer break; and families may want to attend sporting events or concerts during evening hours or on weekends.

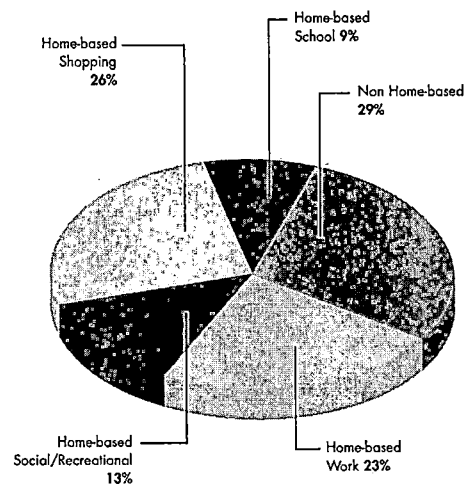
About half of all daily trips made in the county are made during the morning and afternoon peak periods. In 2000,<sup>1</sup> home-based work trips represented about a quarter of the daily trips made in the county, and roughly 65 percent of these trips are made during the morning and evening peak commute times. However, workers also make trips before, after and in between their

work trips. Moreover, about 43 percent<sup>2</sup> of the county's population is not part of the work force (children, seniors, students, etc.) and many of these non-work trips are made during off-peak hours. Non-work based trips accounted for about three-quarters of the county's daily trips.<sup>3</sup>

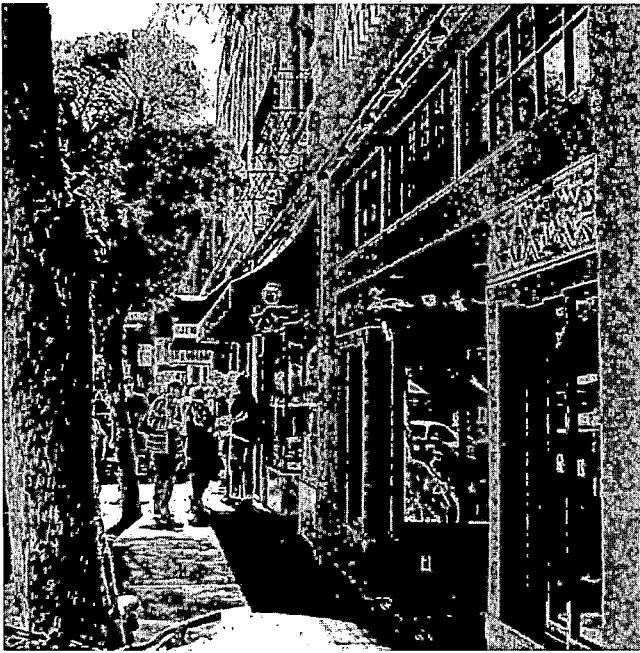
This underscores the importance of providing transportation facilities and services for both peak and off-peak trip-making. Future planning must consider a range of options including congestion pricing, TDM programs, and the development of a well-designed, compact, mixed-use urban form where housing, schools, worksites, restaurants and stores are located close together.

1. MTC 2000 Regional Household Survey Data
2. ABAG Projections 2003
3. VTA Countywide Models

**Table 1-6 Current Trip Types**







### **Attractive Travel Choices**

A transportation system that offers multiple modes of travel not only reduces automobile congestion, but also allows individuals to choose which mode is best for them. Public transportation, bicycling, walking and paratransit service offer a comfortable solution for residents who cannot drive due to age or ability or who prefer the economic dividends and convenience of not driving. As trips shift from single occupancy vehicles (SOV) to other transportation modes, the capacity of the overall system increases.

### **Services for a Diverse Population**

Over the next few decades a significant demographic shift will yield increased demand for

transit, bicycle and pedestrian services. An active and retired baby boom generation will increasingly turn to transit for longer trips and walkable destinations for shorter trips. These modes of transit are also viable economic options for residents who choose not to drive. By supporting transit- and pedestrian-friendly land uses we can ensure high mobility and a high quality of life for our communities.

### **Transportation and Vibrant Communities**

Key to vibrant communities is a pedestrian-oriented environment, well-integrated and easy-to-use transit, a mixture of land use, interesting buildings and public spaces, and efficient street design. However, the robust economic growth of the past 25 years has brought with it transit- and pedestrian-unfriendly features such as ultra-wide streets and expansive parking lots, and has segregated our employment cores from our residential areas. Through smart infill, advocacy, and transportation and land use investment, we can increase the number of vibrant community spaces in Santa Clara County. VTP 2030 helps do this with:

- Funding for local streets and roadways
- Funding for transit projects and services
- Funding for bicycle and pedestrian projects
- Funding grants for planning and building vibrant communities

### Economic Dividends of Transportation Investment

The nature of business in Silicon Valley puts significant demands on the transportation infrastructure. Manufacturing industries require interconnectedness with surrounding counties, states and ports to transport freight. High-tech companies, service providers and research parks require easy access to airports, regional rail lines, and interstate freeways to meet their need for rapid travel. And we require high-quality roads and transit to get to and from work. Ensuring that the transportation needs of business are met is a key factor in sustaining our employment centers and the high quality of life we are accustomed to. Included in the many business-friendly projects VTP 2030 calls for are the following:

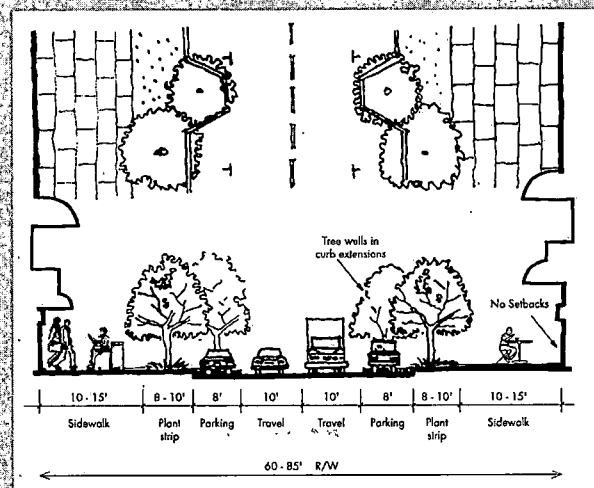
- Rapid transit improvement and additional multimodal capacity in key commute corridors
- Regional and local rail improvements
- Highway and expressway improvements
- Improved multimodal airport access to Mineta San Jose International Airport

### Access to Work Force

Silicon Valley's future depends on access to the largest and most diverse work force possible. The transportation system can support this success by getting people to their jobs quickly and easily. Nevertheless, continued growth of the Silicon Valley economy and a scarcity of

### Rethinking Street Design

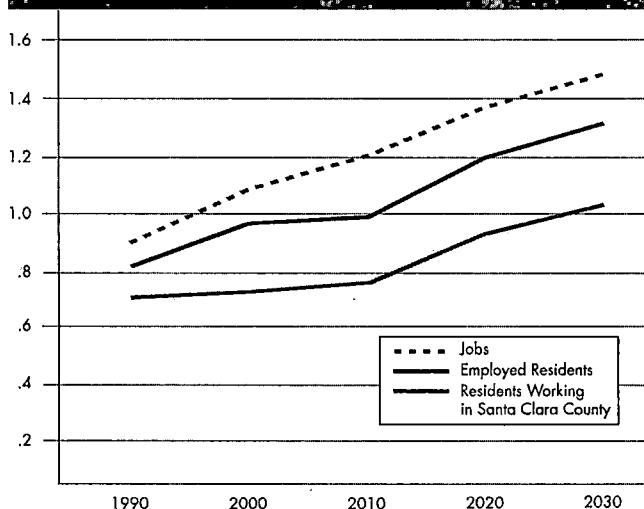
The growing desire to balance auto capacity more sensitively with capacity for alternate modes is leading to a re-examination of some accepted approaches to street design. Increasingly we understand the need for a range of street types. Conventional, auto-dominated streets will continue to be essential to serving the low-rise business parks and campuses that are among Silicon Valley's trademarks. However, streets emphasizing a balance among modes rather than maximizing auto capacity will support traditional city-style downtowns and suburban neighborhoods where people can get around by foot or bicycle.



**Table 1-7 Population and Jobs Ratio**

Year	Ratio of Jobs to Employed Residents	Ratio of Jobs to Residents Working in the County	Net In-commuters <sup>1</sup>	Percent of County Population Not Working
1990	1.10	1.25	78,585	46%
2000	1.14	1.50	133,259	43%
2010	1.22	1.57	214,260	48%
2020	1.14	1.46	168,830	43%
2030	1.13	1.44	168,270	42%

1. Gross in-commuters minus gross out-commuters equals net in-commuters.

**Table 1-8 Santa Clara Jobs and Labor Supply**

Source: ABAG Projections 2003, Commuter Forecasts for the San Francisco Bay Area: 1990–2030 (based on ABAG Projections 2003 and Census 2000) (May 2004)

affordable housing will enlarge the valley's commute shed. With the median price of a single-family home at \$590,000 in June 2004, providing affordable housing for Santa Clara County workers continues to be a challenge. As a result, many workers are forced to accept either longer commutes or less desirable housing, wages increase and the diversity of the labor pool decreases. Bringing people and jobs closer together means improving transportation, promoting telecommuting, and expanding access to housing, good schools, and other essential services.

In 2010, about 64 percent of the county's workforce is expected to live and work within Santa Clara County. This means that about 36 percent of jobs in the county are filled with workers commuting in from other counties. But some

residents live in Santa Clara County and commute to jobs in other counties. When this is factored in, about 214,000 net in-commuters are expected to be commuting to jobs in the county by 2010. However, if we are successful in implementing ABAG's Smart Growth vision—by concentrating higher-density housing and job centers around major transit facilities—the growth in housing supply in Santa Clara County is expected to better balance jobs and housing. So, while about 290,000 workers in 2030 will be living outside the county, the ratio of jobs to residents will improve.



---

# Financial Foundation

Developing VTP 2030 requires an awareness of the resources that will become available during the plan period to implement the programs and projects in the plan. This section of the plan examines the fiscal setting underlying the development of VTP 2030, the steps being taken to ensure VTA's long-term financial stability, the sources of funding, and the funds projected to become available during the 25-year timeframe of the plan. These elements provide the foundation for the Capital Investment Program discussed in Chapter 2.

## **VTP 2030 Fiscal Setting**

The ebbs and flows of an economy are natural occurrences. In the late 1990s, Santa Clara County found itself at the center of a high-technology boom and unprecedented job growth. But by the early 2000s, it found itself at the center of the high-technology bubble burst. This latest economic downturn has been the most severe on record, and with it an estimated 200,000 jobs left the county between 2000 and 2003. Most of these jobs were in the higher-paying high-technology sectors concentrated in Santa Clara County, and consequently, this area has been more severely affected than other Bay Area counties.

These lost jobs, and the related decline in business-to-business transactions, have significantly affected the amount of sales tax revenue generated in the county—VTA's primary source

of funding, historically accounting for 80 percent of its operating revenue. Between fiscal year 2001 and 2003, VTA revenues from VTA's 1/2 cent sales tax declined nearly 30 percent, or about \$50 million annually. VTA has also been affected by impacts to State and Federal budgets as belt tightening in those areas has steadily trickled down to regional and local agencies. In addition, transit ridership has declined in proportion to the loss of jobs, further affecting VTA's operating budget.

All of these factors establish a fiscal setting in which VTA is compelled to critically examine its near- and long-term capital and operating plans. In response to these conditions, VTA assembled two working groups to assist it in planning its financial future.

## **VTA Financial Stability and Efficiency**

During 2002 and 2003, VTA worked with a Business Review Team and an Ad Hoc Financial Stability Committee to analyze and address VTA's near- and long-term financial situation and provide the Board of Directors with recommendations. The Business Review Team was composed of members of the business community and VTA management and staff. The Ad Hoc Financial Stability Committee consisted of VTA Board members, financial consultants, and community stakeholders. Each of these groups prepared recommendations for improving VTA's financial foundation.

### Business Review Team Recommendations

The Business Review Team submitted five recommendations addressing 1) farebox recovery and average fare per boarding, 2) health benefits costs, 3) ADA/Paratransit program, 4) marketing efforts, and 5) the role of VTA in Joint Powers Authorities in approving operating and capital budgets.

### Ad Hoc Financial Stability Committee Recommendations

The Ad Hoc Financial Stability Committee developed a strategy based on the current economic climate and the viability of obtaining a new or broadened revenue source. The committee's recommendations were discussed at several Board workshops and meetings between May and November 2003. On February 19, 2004, following further review and input from VTA Board members, the VTA Board of Directors approved the Financial Stability Strategy. The Ad Hoc Committee recommendations were presented in near-term (six months to one year) and mid-term to long-term (one year and beyond) timeframes. A summary of the recommendations pertinent to VTP 2030 is presented below:

#### *Near-Term*

- Maximize revenues to support operations.
- Prioritize VTA's transportation projects and improvements.
- Utilize an advance of Measure A operations funds, only to the extent necessary to main-



tain current transit service as shown in the Adopted Fiscal Years 2004 and 2005 Budget.

#### *Mid-Term to Long-Term*

- Work in partnership with community leaders to identify the most viable new or expanded revenue source(s) for VTA.
- Over the next several years, lay the foundation to pursue limited expansion of the sales tax base to help make up for the continuing erosion of this financial resource.
- Use Budgetary Operating Reserves and authorized 2000 Measure A funds as necessary to maintain existing service.
- Continue to aggressively pursue joint development opportunities that will provide VTA a diverse revenue stream. As appropriate, in

partnership with applicable surrounding communities, identify assessment district sites that will benefit both the surrounding community and VTA. Seek other revenue opportunities as may be appropriate.

- Consider submitting an advisory ballot measure for setting project priorities if no new revenue sources are approved prior to December 1, 2006, and projected revenue shortfalls prevent implementation of all Measure A projects prior to 2036. The ballot measure should be preceded by a public involvement and community stakeholder input process.

These recommendations add to the economic setting and financial foundation that influence the overall development of VTP 2030, and specifically the Financial Plan discussed next.



## **VTP 2030 Financial Plan**

Developing the plan requires an understanding of the resources that are expected to become available during the life of the plan to implement the programs and projects presented in the plan. The VTP 2030 Financial Plan examines the various sources of funding for transportation programs in Santa Clara County, describes the planning and funding process, the funds projected to become available during the timeframe of the plan, and the Board-adopted fund allocations for each Program Area.

## **Fund Sources**

Funding for the projects, programs and services identified in VTP 2030 comes from a number of local, State and Federal fund sources. Generally, the plan focuses on the larger sources that provide flexibility in programming and that are expected to provide significant revenues for transportation projects in Santa Clara County. Other less flexible funding sources, or funds that are dedicated for specific purposes such as transit operations, are also presented. While these other funds are critically important to operate and maintain the transit system, their limitations mean that the plan is not needed to establish policy for their use, and so they are not discussed here in detail. Details regarding use of these funds can be found in VTA's Short Range Transit Plan, and in other city and county planning documents.

In addition to the more traditional fund sources, VTP 2030 discusses additional funding strategies that will be explored during the timeframe of the

plan, and that may become valuable sources of revenue. A description of all of these fund sources follows.

**Table 1-9 Fund Sources (2004–2030)**

<b>VTP 2030 Fund Sources</b>	<b>Revenue Projections<sup>1</sup> (’03\$/Millions)</b>
2000 Measure A Sales Tax (2006–2036)	\$5,432
Section 5309 New Rail Starts—Discretionary	973
State Traffic Congestion Relief Program (TCRP)	732
Federal Surface Transportation Program/Congestion Mitigation Air Quality (STP/CMAQ)	569
State Transportation Improvement Program (STIP)	559
Prop. 42 STIP	426
Interregional Transportation Improvement Program (ITIP)	320
1996 Measure B Sales Tax Fund (remaining through 2006)	290
TFCA 40%	45
Transportation Enhancement Act 21 (TEA-21) Enhancements	43
<b>Other Major Transportation Fund Sources</b>	
Gas Tax Subventions	4,773
Current VTA Dedicated Sales Tax (2005–2030)	4,481
Transportation Development Act (TDA) Articles 4, 4.5 and 8	2,425
Section 5307 Total San Jose & Gilroy/Morgan Hill Urbanized Area (UA )	925
Section 5309 Fixed Guideway San Jose/UA	468
State Transit Assistance (STA) Program	283
TDA Article 3—Bicycle/Pedestrian Funds	49

1. Estimates as of November 1, 2004. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

Source: VTA

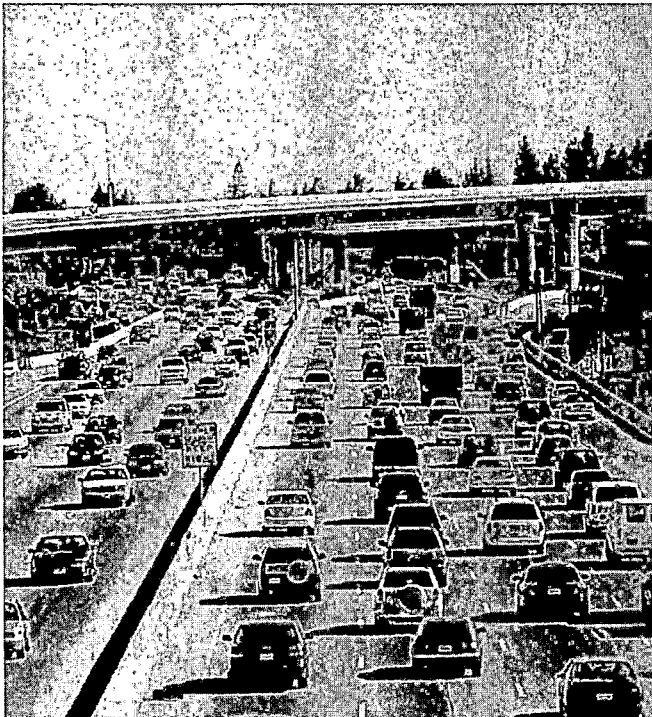


### **Transportation Funding Sources for VTP 2030 Projects and Programs**

The fund sources described below provide significant revenue for transportation projects in Santa Clara County, and are available for VTP 2030 projects and programs at the VTA Board of Directors' direction. A 25-year projection (in 2003 dollars) and a general description of the programming processes and fund-specific limitations are included with each source.

#### **2000 Measure A Sales Tax**

On November 2, 2000, the voters of Santa Clara County voted to extend the 1996 Measure B



Sales Tax for 30 years to fund a specified package of transit projects and programs. The new 2000 Measure A begins on April 1, 2006, and ends on March 30, 2036. The tax is currently projected to generate \$5.432 billion in 2003 dollars in that 30-year time span.

The VTA Board has already committed \$325 million for bonding to pay for current operating costs, low-floor light rail vehicles and Preliminary Engineering for the BART extension to San Jose/Santa Clara; \$5.107 billion remains to fund the rest of the projects. This is not enough to fund the entire project list at current cost estimates. The VTA Board determined which 2000 Measure A projects will be considered within the fiscally constrained portion of VTP 2030 on April 23, 2004. The VTA Board of Directors will develop an expenditure plan to determine priorities and scheduling of the constrained project list.

#### **Federal New Starts Program** (Section 5309)

The Federal New Starts program is one of the Federal transit funding programs created in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA). These programs were continued in the Transportation Efficiency Act for the Twenty-First Century (TEA-21) and are expected to be renewed in the next reauthorization. The New Starts program is part of Title 49 United States Code (USC), Section 5309. The funds are for signifi-

cant rail and rapid bus expansion projects. Congress distributes these funds to projects at its discretion, based on project evaluations by the Federal Transit Administration (FTA). VTP 2030 projects \$973 million from this source to extend BART from Fremont to San Jose and Santa Clara.

### **Traffic Congestion Relief Program (TCRP) and Proposition 42**

In 2000, the Traffic Congestion Relief Program (TCRP) was enacted, directing revenues generated by the State sales tax on gas and diesel fuel from the State general fund to transportation. The transfer was to occur for fiscal years 2003/04 through 2007/08, then end. However, in 2002, California voters passed State Proposition 42, making the transfer permanent. These transfers are now referred to as "Prop. 42 funding."

Proposition 42 funding goes to four specific programs:

- **Traffic Congestion Relief Projects (TCRP):** establishes a list of specific congestion relieving transit and highway projects designated to receive funds. Approximately \$965 million is designated for projects in Santa Clara County: \$233 million has already been allocated, and the remaining \$732 million is included in VTP 2030.

The future of the TCRP is uncertain. The administration submitted proposals to eliminate the program in its 2002/03, 2003/04 and 2004/05 State Budget proposals. While the

program itself has remained intact, the fund transfers were suspended in 2002/03 and 2003/04. As of the writing of this plan, the 2004/05 proposal to eliminate the program has been rescinded. As of the writing of this plan, the 2004/05 proposal to eliminate the program has been rescinded; however, the proposal to suspend the transfer for 2004/05 is still in place. Funds to pay expenses on existing TCRP allocations are linked to the defeat of two November 2004 ballot measure regarding Native American gaming receipts. The legislation directing transfers to these projects sunsets in 2008.

- **Local Streets and Road Rehabilitation:** augments the gas tax receipts that the State subvenes directly to cities and counties. The current estimate is \$621.5 million in 2003 dollars. Since the VTA Board of Directors does not control or direct these funds, the table incorporates them into the Gas Tax Subventions shown in the "Other Major Transportation Fund Sources" section.
- **State Transportation Improvement Program (STIP):** increases the amount of State funding flowing into the State Highway account for the STIP, subject to the distribution formulas that apply to the existing funds. The current estimate is \$426 million in 2003 dollars. More discussion is included under the State Transportation Improvement Program (STIP).
- **State Transit Assistance (STA):** increases the amount of State Transit Assistance to transit operations. The current estimate is \$106.6

---

million for VTA and \$34.0 million for Caltrain in 2003 dollars. The transfer has been suspended for the last two years. STA funds are directed to specific transit operators and funds are generally used for operations. More discussion of the STA program is included under "Other Major Transportation Fund Sources."

State Budget shortfalls in 2003 and 2004 have negatively impacted Prop. 42 funding. The State Legislature has the ability to suspend the transfers when the State is in a fiscal crisis and has exercised that option twice in the past two years, and is expected to do so in the 2004/05 State Budget. Each suspension to date has been accompanied by a commitment to repay the funds no later than 2008/09.

#### **Federal Surface Transportation Program/ Congestion Mitigation Air Quality Program (STP/CMAQ)**

The STP and CMAQ funding programs were created in ISTEA and continued in TEA-21. Since they are not restricted to particular modes, STP and CMAQ are also called "flexible funds." STP funds can be used for virtually all transportation capital projects. CMAQ funds are limited to implementing the transportation provisions of the 1990 Federal Clean Air Act in Air Quality Non-Attainment areas. The Bay Area is currently a non-attainment area.

Federal funds are authorized in six-year programs. TEA-21 expired on October 1, 2003; however, Congress has been adopting continu-

ing resolutions to allow transportation agencies to continue doing business until a successor bill is adopted. The Metropolitan Transportation Commission (MTC) has final programming authority for STP and CMAQ funds in the nine-county Bay Area, and directs the use of these funds through the Regional Transportation Plan. The current estimate for Santa Clara County is \$569 million.

#### **State Transportation Improvement Program (STIP)**

Senate Bill 45 (SB-45), enacted in 1997, consolidated several State transportation funding programs and directed State and Federal transportation funds from the State Highway Account (SHA) into the Regional Improvement Program (RIP) and the Interregional Improvement Program (IIP). Together, these programs are called the State Transportation Improvement Program (STIP). STIP funds may be used for road rehabilitation and capacity-expanding capital transportation projects.

RIP funding is 75 percent of the STIP, and it is distributed among the counties via a formula established by State legislation. In the Bay Area, Congestion Management Agencies (CMAs) program RIP funds with review by MTC and approval by the California Transportation Commission (CTC).

The IIP is the remaining 25 percent of the STIP. IIP funds are programmed by Caltrans through the Interregional Transportation Improvement

Plan (ITIP) process, with final approval by the CTC. The STIP programming process occurs every two years in “even” years. The current total STIP projection for Santa Clara County is \$1.305 billion, consisting of \$559 million in RIP funds, \$426 million in the Proposition 42 RIP increment, and \$320 million in IIP funds for projects nominated by Caltrans.

#### **Transportation Fund for Clean Air (TFCA)**

Health and Safety Code Section 44223 authorizes the Bay Area Air Quality Management District (BAAQMD) to levy a fee on motor vehicles. Funds generated by this fee are placed in the Transportation Fund for Clean Air (TFCA) account to be used for implementing projects and programs that reduce air pollution from motor vehicles. Health and Safety Code Section 44241 limits expenditure of these funds to specified eligible transportation control measures (TCMs) that are included in BAAQMD’s 1991 Clean Air Plan, developed and adopted pursuant to the requirements of the California Clean Air Act of 1988.

BAAQMD directly administers 60 percent of the TFCA, with annual revenues ranging from \$9 million to \$15 million. The remaining 40 percent goes directly to TFCA Program Managers in each Bay Area county. VTA, as Santa Clara’s TFCA Program Manager, works with member agencies to develop criteria that are then used to select projects consistent with the eligible project categories specified in statute. The



current TFCA 40 percent estimate for Santa Clara County is \$45 million in 2003 dollars.

#### **Transportation Enhancement Activities (TEA)**

The Intermodal Surface Transportation Enhancement Act (ISTEA) provided a 10 percent set-aside of each state’s STP allocation for “Transportation Enhancement Activities” (TEA) above and beyond normal capital improvements. TEA-21 continued this program. TEA funds must be used for elements of a project that are over and above what would be termed the “normal project.” They must have a direct relationship to the intermodal transportation system and fit one or more of 12 activity categories described in TEA-21. These activities



include bicycle and pedestrian improvements, scenic preservation, and wildlife mortality mitigation.

The mechanisms and responsibility for programming TEA funds have changed several times since the program's inception. As of 2004, TEA funds are programmed through the STIP process. Each of the counties receives a TEA share estimate with its RIP share estimate. The TEA estimate for Santa Clara County is \$43 million in 2003 dollars.

### **Other Major Transportation Fund Sources**

Although the fund sources discussed in this section provide significant funding for transportation projects in Santa Clara County they have not been included in VTP 2030 for the following reasons:

1. Funds are given directly to cities and counties for local road repairs.
2. The VTA Board does not control them, and/or they are committed to operations and rehabilitation purposes.

The priorities for using these funds are determined by the cities, the county, VTA and Caltrain, through local capital improvement programs (CIPs) and short-range transit plans (SRTPs).

### **Gas Tax Subventions**

A portion of the State sales tax on gasoline and diesel fuel goes directly back to the cities and the counties for streets and roads maintenance. These funds are allocated based on formulas established by the State Legislature. The State Controller's office transfers funds directly to local agencies. These funds were augmented by Prop. 42. The current estimate, including Prop. 42 transfers, is \$4.773 billion in 2003 dollars.

### **VTA Dedicated Sales Tax**

In 1976, the voters of Santa Clara County enacted a permanent 1/2 cent sales tax for local transit operations and capital projects. These funds flow to VTA and are allocated by VTA for operations and capital projects through VTA's annual budget and Short Range Transportation Plan (SRTP). The current 25-year estimate is \$4.481 billion in 2003 dollars.

### **Transportation Development Act Article 3 (TDA 3)**

TDA Article 3 funds are a portion of the sales tax on gasoline and diesel fuel, which is returned by the State of California to the county in which it was collected. TDA Article 3 funds are for use on bicycle and pedestrian projects. MTC programs these funds in the nine Bay Area counties. Each year, VTA coordinates and submits countywide project priorities for this fund source. The VTA Board has set aside 30 percent of the annual allocation for the Countywide Bicycle Expenditure Program between 2000/01 and 2010/11. The remainder is distributed among the cities/towns and county by a VTA Board-adopted formula. The current 25-year projection for TDA Article 3 funds is \$49 million in 2003 dollars.

### **Transportation Development Act (TDA, Articles 4, 4.5, and 8)**

TDA Article 4 and TDA Article 8, also generated from the statewide sales tax on diesel and gasoline fuels noted above, provide transit operating, maintenance, and capital funds. TDA Article 4.5 is available only for paratransit operating assistance and capital projects. TDA funds are administered by MTC and allocated annually based on sales tax receipts in each county. These funds flow to VTA and are allocated for operations and capital projects via VTA's annual budget and Short Range Transportation Plan (SRTP). The combined TDA estimate (for Articles 4, 4.5 and 8) for Santa Clara County is \$2.425 billion in 2003 dollars.

### **Federal Transit Act Section Funds (Section 5307, 5309)**

The Federal Transit Act (FTA) funding programs were parts of ISTEA, and were continued in TEA-21. These funds flow to transit operators via MTC's regional programming process, with earmarks for specific urbanized areas (UAs). Based on 2000 census data, Santa Clara County contains two UAs—the San Jose UA and the Gilroy/Morgan Hill UA. VTA and Caltrain are the only fund recipients within these two UAs. The three most significant federal funding programs are:

#### *1. Section 5307 - Transit Formula Funds:*

These funds are available to VTA and Caltrain for rolling stock purchases and paratransit operations. Programming is determined in VTA and Caltrain SRTPs, through the MTC region's Transit Capital Priority process, subject to the provisions of the Caltrain Joint Powers Agreement (JPA). The current 30-year estimate is \$925 million in 2003 dollars.

#### *2. Section 5309 - Fixed Guideway:*

These funds are available to VTA and Caltrain for rail or ferry capital projects. Planning for projects occurs in VTA's and Caltrain's SRTPs. Programming is through MTC's Transit Capital Priority process, and subject to the provisions of the Caltrain Joint Powers Agreement (JPA). The current 30-year estimate is \$468 million in 2003 dollars.

*3. Section 5309 - New Rail Starts:* This is a discretionary program for rail, ferry and rapid bus transit expansions, and is discussed in the previous section under VTP 2030 Fund Sources.

---

### **Measure B Sales Tax Funds**

In 1996, Santa Clara County voters approved Measure B, a 1/2 cent nine-year countywide general sales tax to be collected by the county. Tax collections began on April 1, 1998, and will end on March 31, 2006. Measure B is expected to provide \$290 million during the VTP 2030 plan period (July 1, 2004, through March 31, 2006).

When Measure B was approved, voters also approved 1996 Measure A, a nine-year program of transit, highway, expressway, and bicycle projects and a pavement management program to be funded with any new sales tax revenue and carried out by VTA and the county. The 1996 Measure A specified the transit and highway projects, established the pavement management funding allocations to each of the 15 cities/towns and the County of Santa Clara, and established a \$12 million bicycle program, without identifying specific bicycle projects. Bicycle projects funded by Measure B are identified in the 2000 Bicycle Expenditure Plan.

The majority of the 1996 Measure A projects and programs are either complete or under construction as of the writing of this plan. The remaining \$249 million that Measure B is expected to produce before it expires is already dedicated to projects and programs and is therefore not discussed in VTP 2030.

### **State Transit Assistance (STA)**

These funds may be used for transit capital projects and transit operations, including regional transit coordination. STA funds are subdivided

into STA–Revenue Based and STA–Population Based categories. Revenue-based funds are allocated to transit operators based on operator revenues. Population-based funds are allocated to transit operators based on service area population. The current 25-year STA projection is \$283 million in 2003 dollars. This includes base funding and \$140.6 million in Proposition 42 STA increments to VTA and Caltrain. It does not include population-based funds taken off the top by MTC for regional paratransit coordination.

### **Additional Funding Strategies**

#### **Local Sales Tax**

Since the voters in Santa Clara County approved a sales tax for specified transportation projects in 1984 and 1996, the county has successfully constructed significant improvements to the transportation system. The projects built under the 1984 measure and currently under design and construction with the 1996 measure dwarf the projects programmed with State and Federal flexible funds.

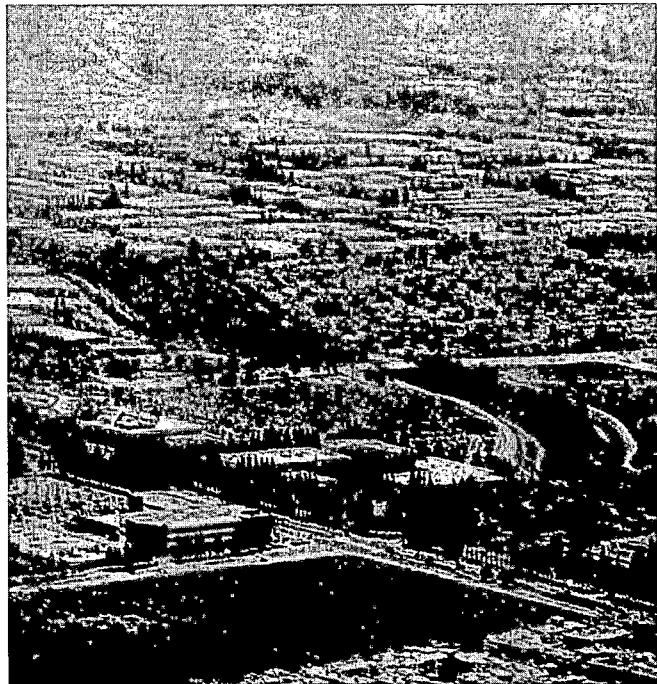
In November 2000, the Santa Clara County voters approved a 30-year 1/2 cent sales tax to fund transit projects and services in the county. Measure A revenues are administered by VTA, and VTA is responsible for providing the funds necessary to sustain operations and maintenance of the Measure A projects in perpetuity. The recent economic recession has resulted in downwardly revised sales tax forecasts for Santa Clara County. *As a consequence, VTA will need to*

*secure a new sales tax for transit operations to fully implement the 2000 Measure A Transit Program.*

### **Local Revenue Sources**

Local revenues can offer greater reliability and flexibility than State or Federal sources, and may be used strategically to leverage other funds. Forecasting the amount of revenue that many of these sources might generate is a difficult and inexact process over the long term. These local sources include, but are not limited to:

- Citywide or countywide development impact fees (discussed below)
- City or county general funds
- Business tax and/or license fees
- Transient Occupancy taxes
- Gas tax subventions
- Local assessment districts
- Developer exactions
- Right-of-way dedication
- California Environmental Quality Act (CEQA) mitigation
- Redevelopment tax increment financing
- Parking charges and taxes
- Payroll tax
- Parcel tax
- Joint development and other forms of value capture



- Vehicle registration fees
- Other user fees

### ***Twenty Percent or Higher Local Match Requirement***

The Capital Improvement Program of the CMP includes a policy requiring Member Agencies to provide a minimum 20 percent match for local transportation projects. This policy has been implemented with flexibility to allow key projects to move forward in a timely manner. Sources of matching funds are, for the most part, left to the discretion of the local agency, but include those listed above.



### Development Impact Fee

Development Impact Fees may be assessed to projects through local agency policies, or through the Congestion Management Program (CMP) Deficiency Planning Process. The CMP statute requires Member Agencies to prepare deficiency plans for CMP system facilities located within their jurisdictions that exceed the CMP Traffic Level-of-Service (LOS) standard. Santa Clara County's CMP traffic LOS standard is LOS E.



During the development of its draft Countywide Deficiency Plan (CDP), VTA investigated a countywide development impact fee dedicated to specific improvements on the CMP network. Such a fee program could have the following aspects:

- Fees charged directly to developers seeking permits to build within the county.
- Fees charged proportional to the impact (i.e., vehicle trip generation) of the specific land use type. Thus, the fee could be scaled according to the burden new development places on congested transportation infrastructure.

The traditional approach to instituting CDP fees is for all local jurisdictions to adopt the plan by a majority vote of their city council or board. Although no legal precedent has been established, an alternative strategy may be for VTA to institute a 50 percent matching requirement and give each jurisdiction the option of adopting the countywide fee as a means of generating its local match.

VTA Member Agencies may develop their own Citywide Deficiency Plans for the same purposes. Several cities in the county have or are developing deficiency plans or impact fees for new development projects. VTA staff is available to assist local jurisdictions with developing deficiency plans and impact fees.

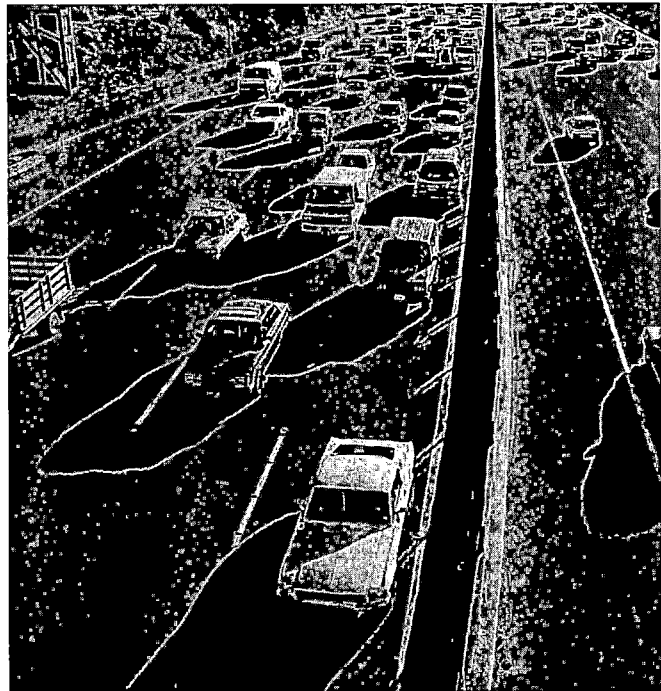
### Roadway Pricing

Although the concept of having drivers pay for using the roadways has existed for decades, it is now drawing more attention from local, State, and Federal agencies. This increased attention is attributable to worsening traffic congestion, the scarcity of transportation funding, and the improved ability to electronically collect tolls and vary toll amounts by time of day and location.

Tolling is the user fee best able to directly charge for the use of a facility at the place and time of use. Such user fees address the market side of the equation by considering the interaction between demand for transportation services and the available supply. This results in a direct cost for the good—or service—being consumed. Cost in this context may be considered as the time spent driving. Economic theory tells us that as the price of a good decreases (i.e., drive time) demand for it increases—so drive alone trips are induced as long as the cost of driving remains relatively low and new facilities that improve travel time are constructed.

VTP 2030 suggests two forms of roadway pricing for serious consideration:

**1. Toll Roads.** Toll Roads charge drivers in all travel lanes to use the roadway. Toll Roads have the admirable quality of being able to pay for themselves through the revenue generated from toll collection. Given the scarcity of—and the high demand for—State and Federal highway funds, Toll Roads are considered in some cases as the best—or only—hope for timely implemen-



tation of needed highway expansion or improvement projects. Toll roads are commonplace in other parts of the country and in other countries, and have often been constructed to accommodate long distance or commute trips.

Toll Roads can also be an effective congestion management tool. Flexible pricing plans can be used to encourage ridesharing while charging for use of the roadway. Pricing plans can also be used to discourage trips during the peak-hour periods and encourage drivers to shift their commute to times when fewer vehicles are using the facility. The revenue generated in excess of the amount needed to pay for construction and

operation of the facility can be used to provide transit services in the corridor; these efforts can further enhance the level of ridesharing and transit use, thereby effectively increasing the overall carrying capacity of the corridor.

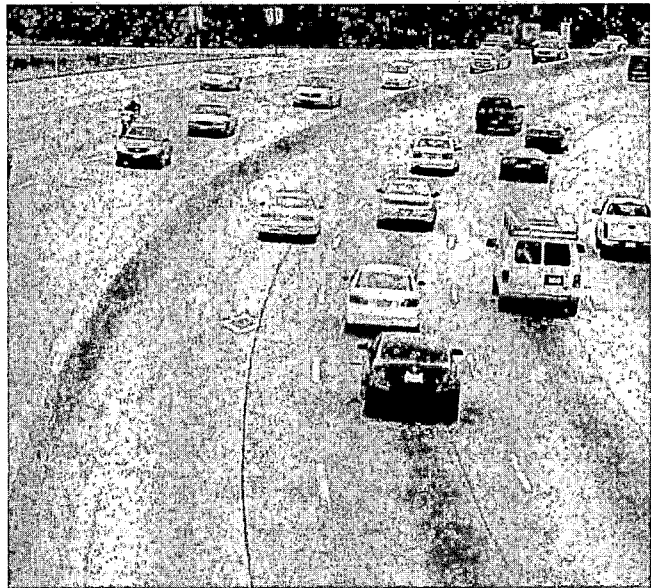
**2. High Occupancy Toll Lanes.** An innovative operational and financial approach to implementing roadway pricing is High Occupancy Toll (HOT) lanes. HOT lane facilities can be viewed as a subset of toll roads that allow Single Occupant Vehicles (SOVs) to use—for a fee—what would otherwise be a preferential lane for

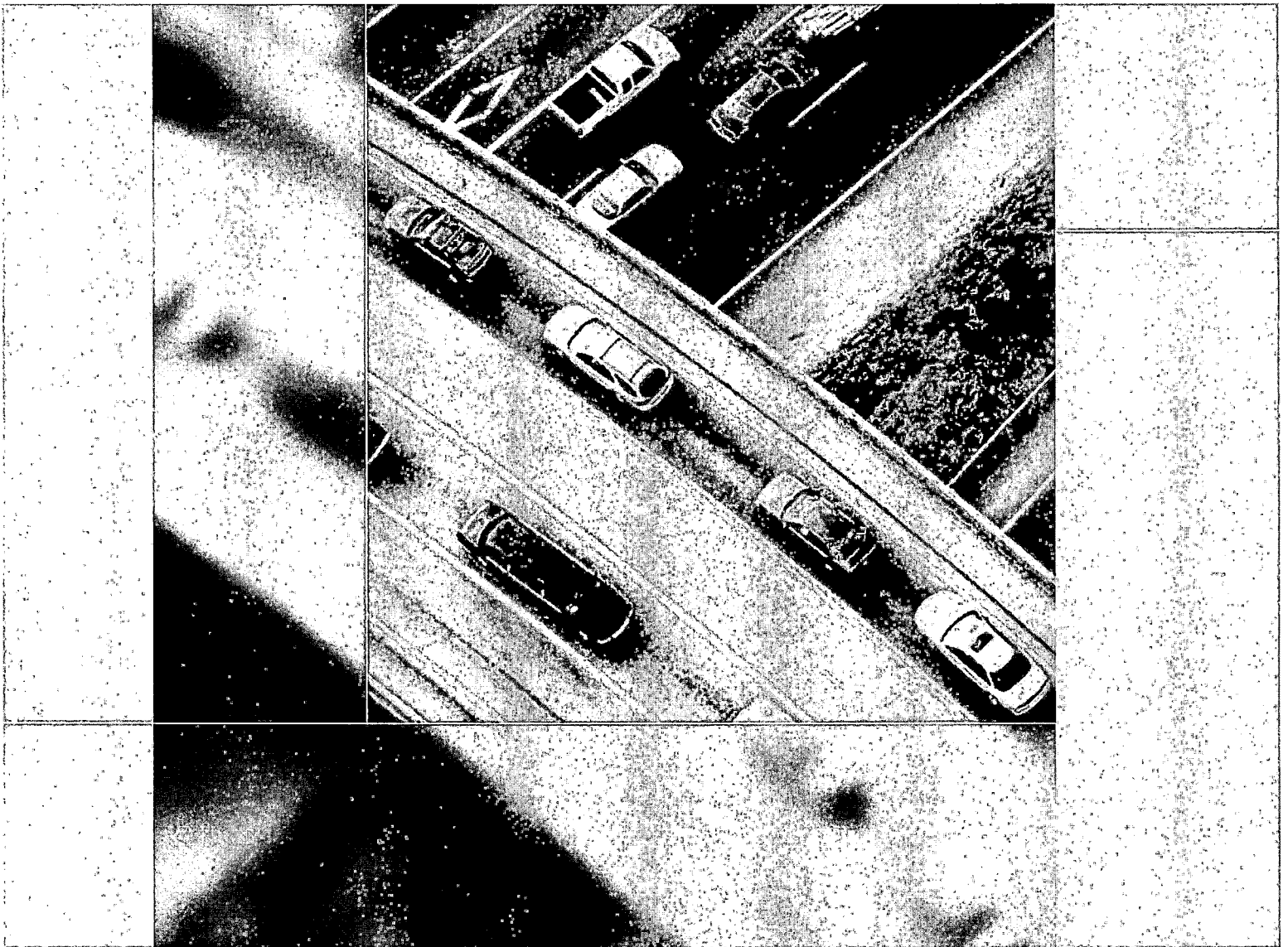
carpools and transit vehicles. HOT lanes are essentially toll roads where tolling is applied to new or existing carpool lanes. HOT lane operations have existed on State Route (SR) 91 in southern California since 1991. This four-lane HOT facility constructed in the median of SR 91 allows free passage to vehicles carrying three or more people, while charging a fee to SOVs and two-person carpools. Creating HOT lanes by converting already existing carpool lanes is currently under design for the southbound I-680 Sunol Grade carpool lane in Alameda and Santa Clara counties. This facility would charge SOVs for use, but would allow free passage to vehicles carrying two or more people.

The fee charged for using the lane is used to manage operations and prevent congestion in the HOT lane through “dynamic pricing.” To more actively balance demand with supply during operations, dynamic pricing is considered an essential component of many HOT lane operations. Dynamic pricing scales up the cost for using the HOT Lane as capacity (supply) decreases to provide a higher assurance of optimal operations. Just as for toll roads, revenues from HOT lanes could be used to pay for all or a portion of the cost of the additional lane(s) or the lane conversions, and to pay for transit services serving the corridor or other roadway improvements in the corridor.



In 2004, State legislation (AB 2032, Dutra) was passed giving VTA the authority to implement HOT lane operations in up to two corridors in Santa Clara County. VTA is currently conducting a HOT Lanes Study to identify candidate corridors for further evaluation. The HOT Lane Feasibility Study includes an assessment of Santa Clara County's freeway system to determine if the operation of HOT lanes is feasible and to identify viable corridors for HOT lane operations. In addition, future studies for new roadways, or for adding lanes to existing roadways, will consider roadway pricing as a method of financing and operating these new facilities and to provide services in the corridors.





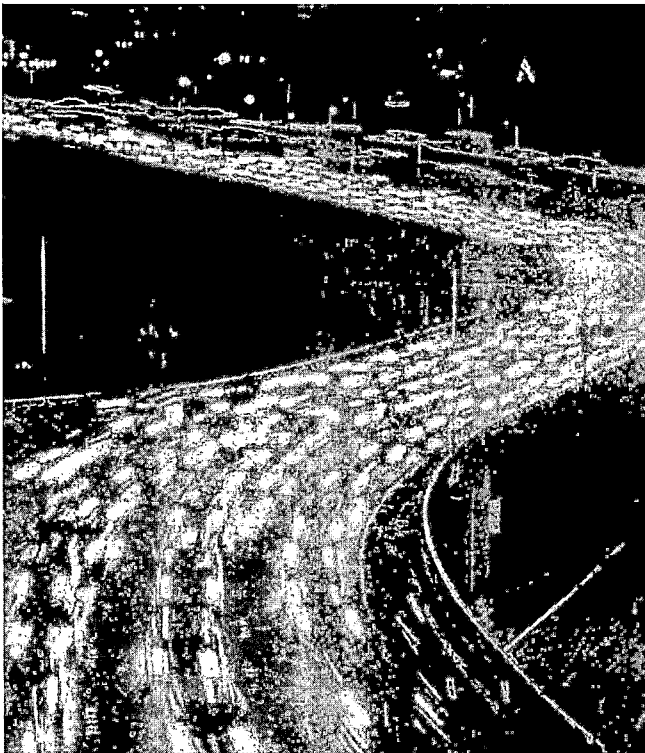
## chapter 2: INVESTMENT PROGRAM

This section of the plan is the core of VTP 2030. It presents a capital investment plan for a comprehensive set of transportation projects and programs that express a vision of Santa Clara County's transportation future. The Investment Program will guide VTA in enhancing both the county's livability and its economic health over the next 25 years. The success of these investments—both short- and long-term—requires the ongoing commitment of VTA and its partnering agencies, as well as the support of the Silicon Valley community.

The Planning and Funding Process . . .	42
Capital Investment Program . . . . .	46
Subarea Analysis . . . . .	48
VTP 2030 Program Areas . . . . .	86
Highway Program . . . . .	87
Expressway Program . . . . .	92
Local Streets and County Roads . . . . .	97
Transit Services and Programs . . . . .	103
Transportation Systems Operations and Management Program . . . . .	129
Bicycle Program . . . . .	138
Livable Communities and Pedestrian Programs . . . . .	142
Systemwide Performance Results . . . . .	143

# The Planning and Funding Process

As noted in Chapter 1, the projects, programs, and services identified in this section will be funded from a number of local, State and Federal fund sources. The process for dividing up and allocating Federal and State funds to the local level—and then to the various program areas—is complex and varies by fund source.<sup>1</sup> For the purposes of this plan, a brief summary of how this money flows to VTA is helpful in understanding the overall financial planning process for VTP 2030 and the policy environment that shapes VTA Board decisions.



## The Flow of Money

Locally generated funds are normally governed by local initiatives—such as a sales tax or parcel tax measure—that earmark revenues for specific purposes. Federal funds flow into the State and are divided up based on both Federal and State statutes and guidelines. State funds are essentially moved to the regional and local level through the State Transportation Improvement Planning (STIP) process, and allocated for specific purposes in accordance with the statutes and guidelines governing the STIP process.

Various organizations may be involved along the way—for example, the California Transportation Commission and Caltrans—but in the end the funds essentially arrive at the regional level where either a Regional Transportation Planning Agency (RPTA) or a Metropolitan Planning Organization (MPO) or both divide them up for various dedicated and discretionary purposes. These regional entities may, and most often do, have their own statutes and guidelines for directing funds to various uses.

In our case, the Metropolitan Transportation Commission (MTC) functions as the MPO for the nine-county San Francisco Bay Area region. The policies for MTC to assign transportation funds to counties occur through the development of the long-range Regional Transportation Plan (RTP), which is prepared every four years.

1. Refer to MTC's "Moving Costs: A Transportation Funding Guide for the San Francisco Bay Area," for additional information about the funding process.



### The Long-Range Transportation Planning Process

Not surprisingly, the preparation of VTP 2030 coincides with MTC's preparation of the RTP, this year called Transportation 2030, or T2030. The projects and programs included in VTP 2030 are submitted to MTC for inclusion in the RTP. Any project that could have regional significance, particularly as it pertains to air quality or transportation system capacity enhancement, must be in the RTP to receive Federal or State funding, or to move into construction or implementation phases. The projects contained in VTP 2030 are sent to MTC for inclusion in the RTP.

### Constrained and Unconstrained Projects

Under guidelines established by the Federal government in the 1998 Transportation Equity Act for the 21st Century (TEA-21), and its earlier sibling, the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), long-range transportation plans must be financially constrained. The financially constrained portion of the RTP includes projects funded with projected revenues from sources that exist today—such as approved sales tax measures, Federal flexible formula funds, or gas tax subventions.<sup>2</sup> The unconstrained portion of RTP includes projects that would be funded from sources that do not exist today, but could reasonably be assumed to happen or be pursued within the timeframe of the plan; for example, revenues



from developer fees, an increase in gasoline tax, or a new sales tax measure.

Like the RTP, not all of the programs and projects identified in VTP 2030 can be funded with the fund sources identified, which means that VTP 2030 also has an unconstrained portion. Both constrained and unconstrained projects lists are presented in the Capital Investment Program that follows.

### The Programming Process

VTP 2030 is a long-range transportation planning document. Neither it, nor RTP, set priorities or schedules for when projects are to be implemented. Programming documents, such as the Transportation Improvement Program (TIP), are where priorities and schedules for

2. Fund sources are discussed in Chapter 1.



delivery of specific projects are developed. These are shorter-range documents with a three- to six-year timeframe. The VTA Board of Directors and its partners determine an expenditure program that will guide project priorities and schedules that are affirmed in these shorter-range programming documents.

### MTC Fund Estimates

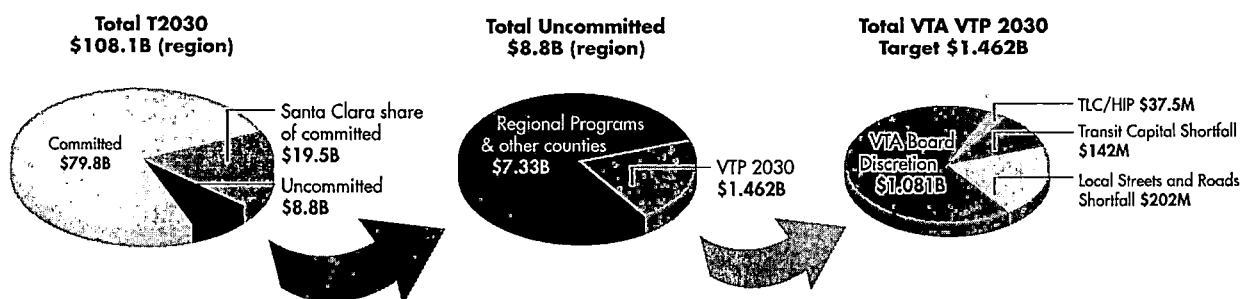
As part of the development of the RTP, MTC conducts an assessment of all State and Federal revenue sources and prepares revenue projections for the 25-year timeframe of the plan. Out of the total pot of money coming into the region, MTC policies for RTP identify revenues that are already committed to an established set of regional programs—including a share for Santa Clara County—and revenues that are not committed, and thus available for allocation to other programs and projects. Table 2-1 shows the breakdown of “committed” and “uncommitted” revenues in the region.

Approximately \$100 billion of \$108 billion in projected revenue for the region is “committed” over the 25-year life of the RTP. The “committed” revenues consist of a mixture of funds from the local, State and Federal sources discussed earlier in this plan. The remaining \$8.8 billion is considered “uncommitted” revenue that is available for discretionary allocation to regional programs and the counties. Of this \$8.8 billion, about \$1.46 billion is projected to come directly to Santa Clara County for allocation to the programs and projects in VTP 2030.

### VTP 2030 Fund Projections and Allocations

Part of the \$1.46 billion noted above is already committed by VTA to cover the county share of the Transit Capital Shortfall (\$142m), Local Streets and County Roads Shortfall (\$202m), and the Santa Clara County share of the Transportation for Livable Communities/ Housing Incentive Program (TLC/HIP). Setting

**Table 2-1 T2030 and VTP 2030 Revenues**



**Table 2-2 VTP 2030 Program Allocation by Fund Source ('03\$/Millions)**

VTP 2030 Program	Federal New Starts	2000 Measure A <sup>1</sup>	ITIP	TCRP <sup>2</sup>	STIP	Prop. 42 (STIP)	STP/CMAQ	TE/TFCA	Total
Highways			\$320.0		\$127.3	\$319.0			\$766.3
Expressways					150.0				150.0
Local Streets and County Roads					179.7			50.3	230.0
Pavement Management					92.1		209.4		301.5
Soundwalls					10.0				10.0
Landscape Restoration & Graffiti Removal					1.0				1.0
2000 Measure A									
Transit Program	973.0	5,017.0		732.0		107.0			6,829.0
TSM & Operations (ITS)								28.0	28.0
Bicycle Program <sup>3</sup>							80.5	10.0	90.5
Livable Communities & Pedestrian Program <sup>4</sup>							120.1		120.1
<b>Amount Available for programs/projects<sup>5</sup></b>	<b>\$973.0</b>	<b>\$5,017.0</b>	<b>\$320.0</b>	<b>\$732.0</b>	<b>\$560.1</b>	<b>\$426.0</b>	<b>\$410.0</b>	<b>\$88.3</b>	<b>\$8,526.4</b>

1. Based on moderate sales tax growth scenario, net of bonds approved by VTA Board to date

2. Net of TCRP allocations to date

3. Includes \$30.4 million from Santa Clara County's share of the Regional Bike Program

4. Includes \$7.025 million from Santa Clara County's share of the Pedestrian component of the Regional Bike Program

5. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

these commitments aside, the VTA Board can apply \$1.08 billion in discretionary revenue to the programs and projects in VTP 2030. In addition to the \$1.08 billion, VTP 2030 allocations include the 2000 Measure A revenues for transit, TCRP funds, and Federal New Starts funds, ITIP funds, and the additional regional target amounts for lifeline transit, the Bicycle Program and the Livable Communities and Pedestrian Program.

At its April 23, 2004 meeting, the VTA Board of Directors approved allocations for the ten VTP 2030 Program Area, as shown in Table 2-2. Table 2-2 also includes Santa Clara County's share of regional commitments.

The total amount available for VTP 2030 programs and projects is \$8.53 billion. Details

regarding each of these Program Areas and their respective lists of projects are presented in the following section—The Capital Investment Program.

The VTA Board of Directors adopted the allocations amounts for the projects shown in this table at its April 2004 meeting. These allocations were based on revenue projections developed for the Short Range Transit Plan (SRTTP) adopted by the VTA Board in February 2004. The Board is currently developing a Transit Expenditure Plan to deliver the 2000 Measure A Program that considers a more conservative projection for sales tax revenues. This more conservative sales tax figure is reflected in Table 1-9 on page 27.

---

# Capital Investment Program

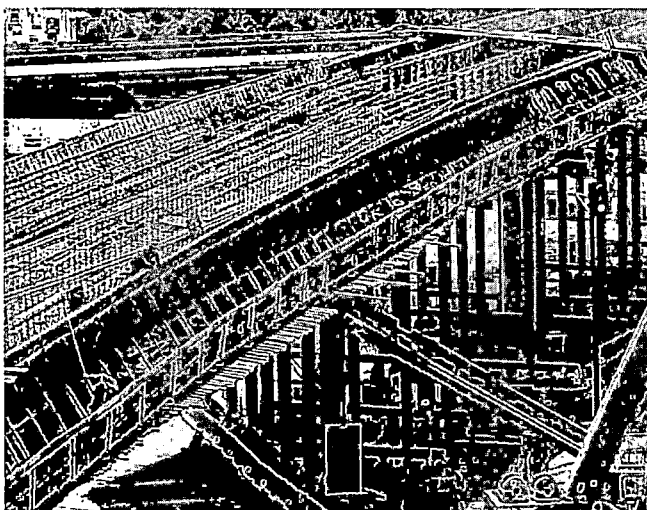
How will transportation systems respond in the coming decades to people's evolving needs for travel options and continuing pressures of local and regional growth? How can we get more out of existing investments in transportation and urban infrastructure and services? How can new projects make alternative modes more attractive? What is the best balance between transit and roadway investments, and how can transportation investments address or encourage beneficial changes in land use patterns and community livability? Responding effectively to these questions will require vision, dedication, creativity, and innovative changes in the way we design and manage Santa Clara County's transportation systems and built environment.

The high cost and lengthy delivery process for major capital investments means that they are the focus of the long-range transportation plan. This

focus does not change the fact that VTAs activities extend far beyond construction of roadway and transit projects, and include transit and paratransit operations, pedestrian and bicycle facilities, planning activities, and land use programs.

VTP 2030 Capital Investment Program is built on a vision in which the existing roadway network is better managed with ITS improvements: an expanded high-occupancy vehicle (HOV) system, improved interchanges, freeway-to-freeway connector ramps, and some freeway upgrades. Transit lines are expanded, and existing transit services are refined—increasing efficiency and productivity, and requiring fewer resources. Bicycle and pedestrian improvements augment other modes and firmly establish walking and biking as viable forms of travel. Overall, land use decisions are better integrated and coordinated so as to complement and support transportation projects.

The \$8.53 billion package of programs and projects to implement this vision are discussed in the following sections of VTP 2030. However, much of the work that keeps the overall transportation system going is accomplished through periodic planning efforts such as the preparation and implementation of the Congestion Management Program (CMP), the Short Range Transit Plan (SRTP), Annual Transit Service Plans, the Community Design and Transportation (CDT) Program, and through the programming of individual funding sources.



### Understanding the Investment Program

The Capital Investment Program addresses transportation-related projects and actions in Santa Clara County that involve participation by VTA and its partnering agencies, impact inter-jurisdictional travel, or are regional in nature. These investments are location-specific improvements for four modes of travel: roadway (including HOV and ITS), transit, bicycle, and pedestrian. The projects and programs for these modes are covered in ten Program Areas:

1. Highway Program
2. Expressway Program
3. Local Streets and County Roads Program
4. Pavement Management Program
5. Sound Mitigation Program
6. Landscape Restoration and Graffiti Removal Program
7. Transit Program
8. Systems Operations and Management Program
9. Bicycle Program
10. Livable Communities and Pedestrian Program

### Developing the Project Lists

Because the VTP 2030 Capital Investment Program represents a strong commitment to specified projects and programs, forming the project lists required extensive technical analysis and broad input. VTA's member and partnering agencies have been the primary source for identifying the projects. In addition, since the adoption of VTP 2020 in December 2000, VTA has developed new programs and conducted comprehen-

sive planning studies for future transit investments, roadway improvements, intelligent transportation systems (ITS), bicycle facilities, pedestrian facilities, and land use.

All of the projects presented in these lists were evaluated using mode-specific methodologies approved by VTA Committees and the Board of Directors. After a public review period and a series of public outreach meetings and VTA Board Workshops, the VTA Committees and Board approved the project lists in April 2004 for inclusion in VTP 2030 and the RTP. The process for evaluation, review, and approval of this investment program, and for future updates to the program, is presented in Chapter 4 of the plan.

### Programming Projects

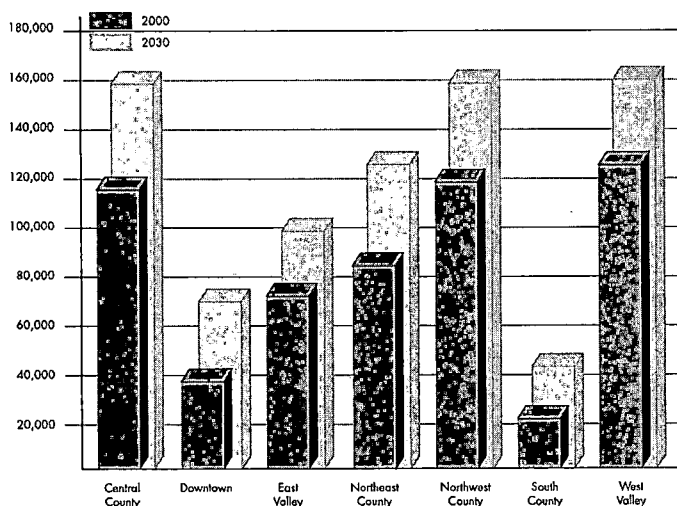
Together, the plan's projects and programs will be used as input into the countywide, regional, and statewide planning and programming process. These include the Expenditure Plan for sales tax reauthorizations, the State Transportation Improvement Program (STIP), and MTC's Regional Transportation Plan (RTP). These and other planning, programming, and funding documents and authorizing legislation will be consistent with the capital investments presented in this section.

### Projects and Programs

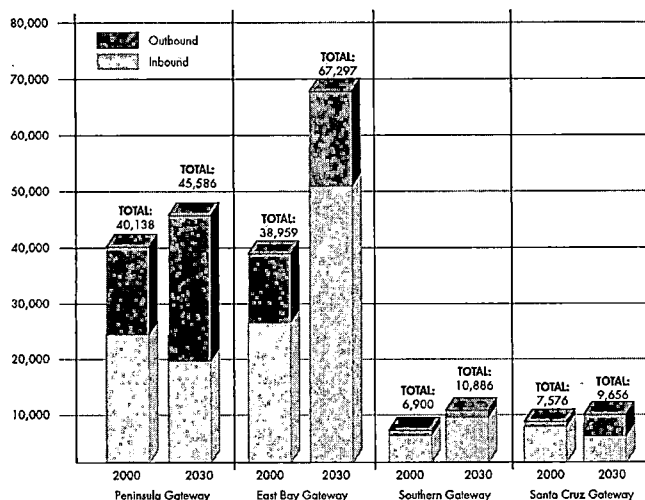
The remaining sections of the Capital Investment Program are presented in two parts:

- 1) Geographic Subareas and 2) Program Areas.

**Table 2-3 Travel Demand for the Seven Subareas**  
(within Santa Clara County; AM peak hour person trips)



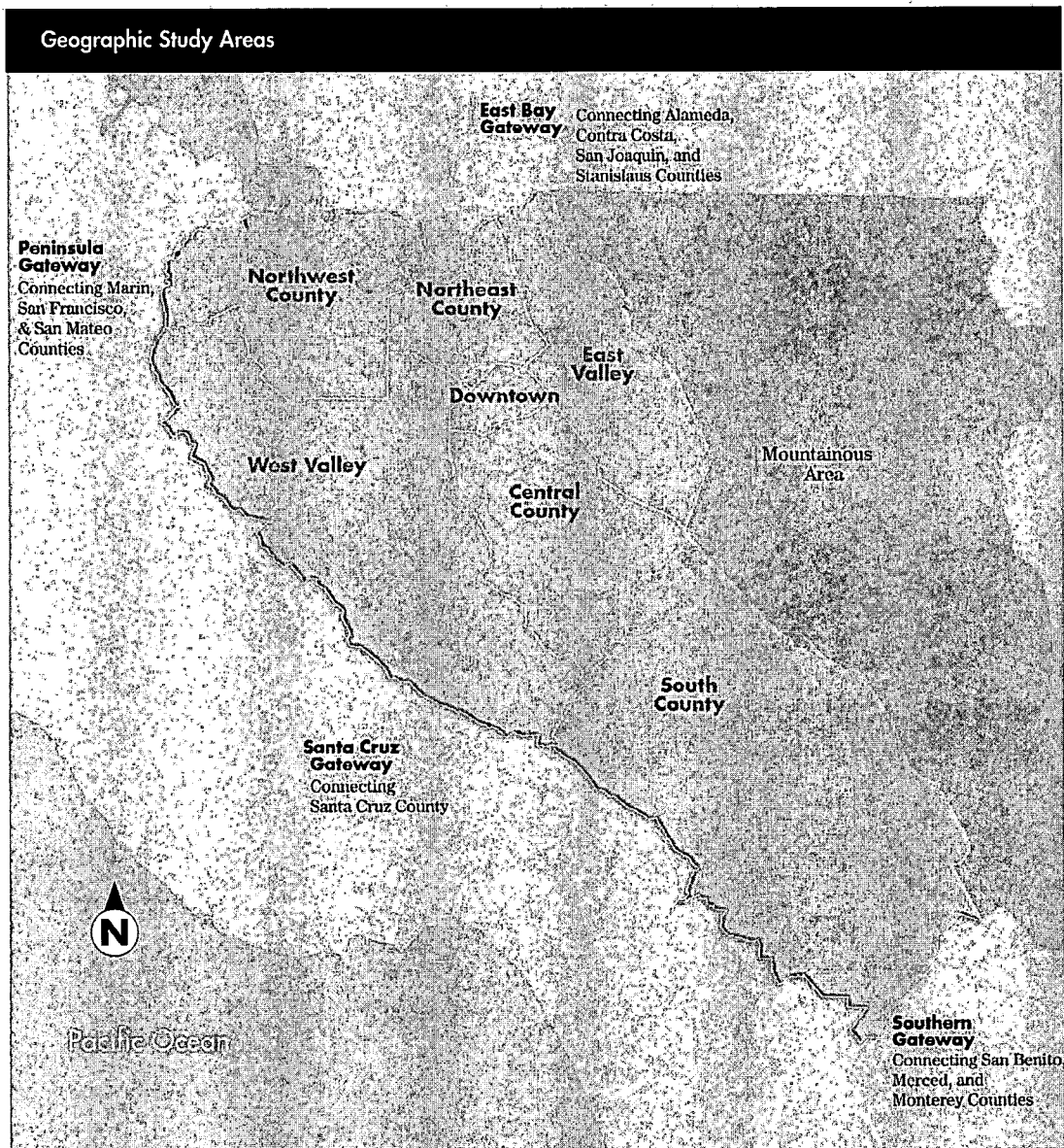
**Table 2-4 Person Trips Across the Gateways**  
(AM peak hour)



## SUBAREA ANALYSIS

As shown in the map on page 49, seven subareas focus on travel within the county's boundaries and four gateways focus on inter-county travel. Each of the subarea discussions consists of a description of travel demand and growth projections in that subarea over the next 25 years; a summary of the investment program for the subarea; and concludes with a map and list of the specific projects by mode.

In order to gain an understanding of travel patterns in the county, Table 2-3 presents the estimated 2000 and projected 2030 person trips destined (trips to or within) for each of the seven county subareas. As shown, all seven county subareas will experience growth in the number of trips destined for that subarea. The Downtown subarea will experience the highest percentage of growth (74.2 percent) followed by South County (72.7 percent). Central County will experience the greatest growth in the number of trips, with 46,500 new trips coming into the central part of the county.



---

## Northeast County Subarea

The Northeast County subarea consists of Western Milpitas, Northern San Jose and Northern Santa Clara. Principal roadways include US 101, I-880, I-680, SR 237, Montague Expressway, Central Expressway and Lawrence Expressway. Transit service includes the Altamont Commuter Express train, Caltrain, Mountain View, Guadalupe and Alum Rock Light Rail lines, and express and local VTA bus lines.

### Travel Patterns in 2030

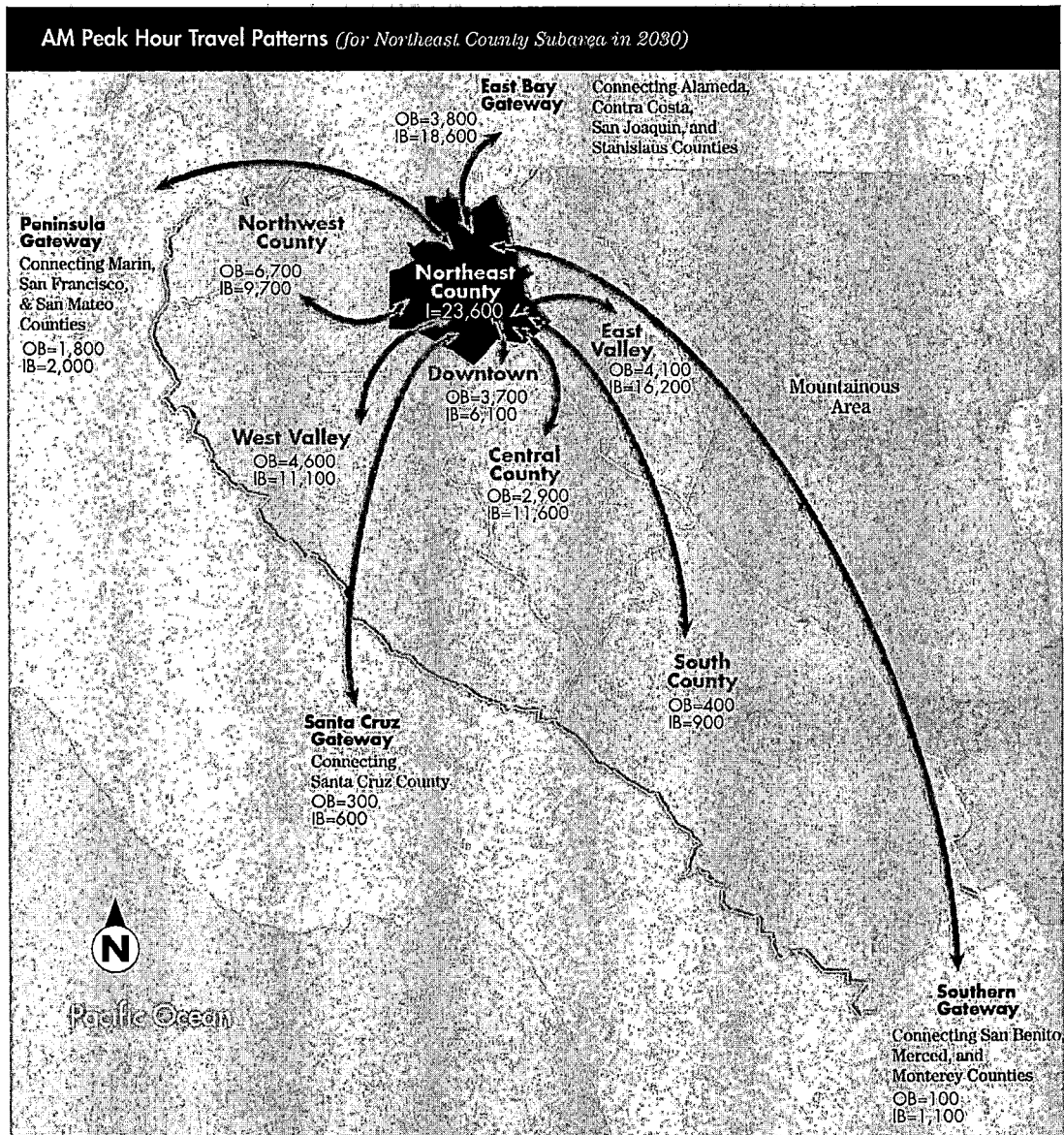
Northeast County is one of five subareas with more inbound AM peak commuters (77,900) than outbound (28,400). Inbound trips come largely from the East Bay Gateway (18,600) and the East Valley (16,200), West Valley (11,100), and Central County (11,600) subareas. Outbound trips go mostly to the Northwest County (6,700), the West Valley (4,600) and East Valley (4,100) subareas as well as north through the East Bay Gateway (3,800).

### Investment Program

The capital investments in the Northeast County subarea center around intelligent transportation systems (ITS) technologies, express-

way, highway, transit and bicycle upgrades and improvements. ITS improvements to US 101, I-880, I-680, SR 237, Lawrence Expressway, Central Expressway, Bowers Avenue, Old Oakland Road and other major thoroughfares will increase roadway efficiency and reduce delay from congestion and metering lights.

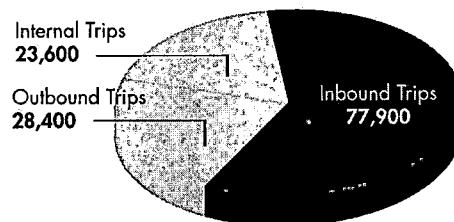
Nearly the entire lengths of Montague Expressway, Lawrence Expressway and Central Expressway will undergo major upgrades including new interchanges, additional lanes and HOV lane modifications. Highway improvements such as interchange improvements and additional HOV lanes will speed up commutes along US 101, I-680 and SR 237. Transit improvements include the extension of BART to San Jose and upgrades to the Altamont Commuter Express train. Cross-county bicycle trails will be constructed along San Tomas Aquino Creek in Santa Clara and San Jose as well as the extension of the Coyote Creek Trail to the East Bay through San Jose and Milpitas. Other improvements include the River Oaks bicycle and pedestrian bridge that will better connect neighborhoods and shopping areas to the Guadalupe light rail line.



**Internal (I) Trips:** trips that both start and end in the Northeast County subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the Northeast County subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the Northeast County subarea in the a.m. peak hour



Source: VTA 2004



VTP 2030 Proposed Projects, Northeast County

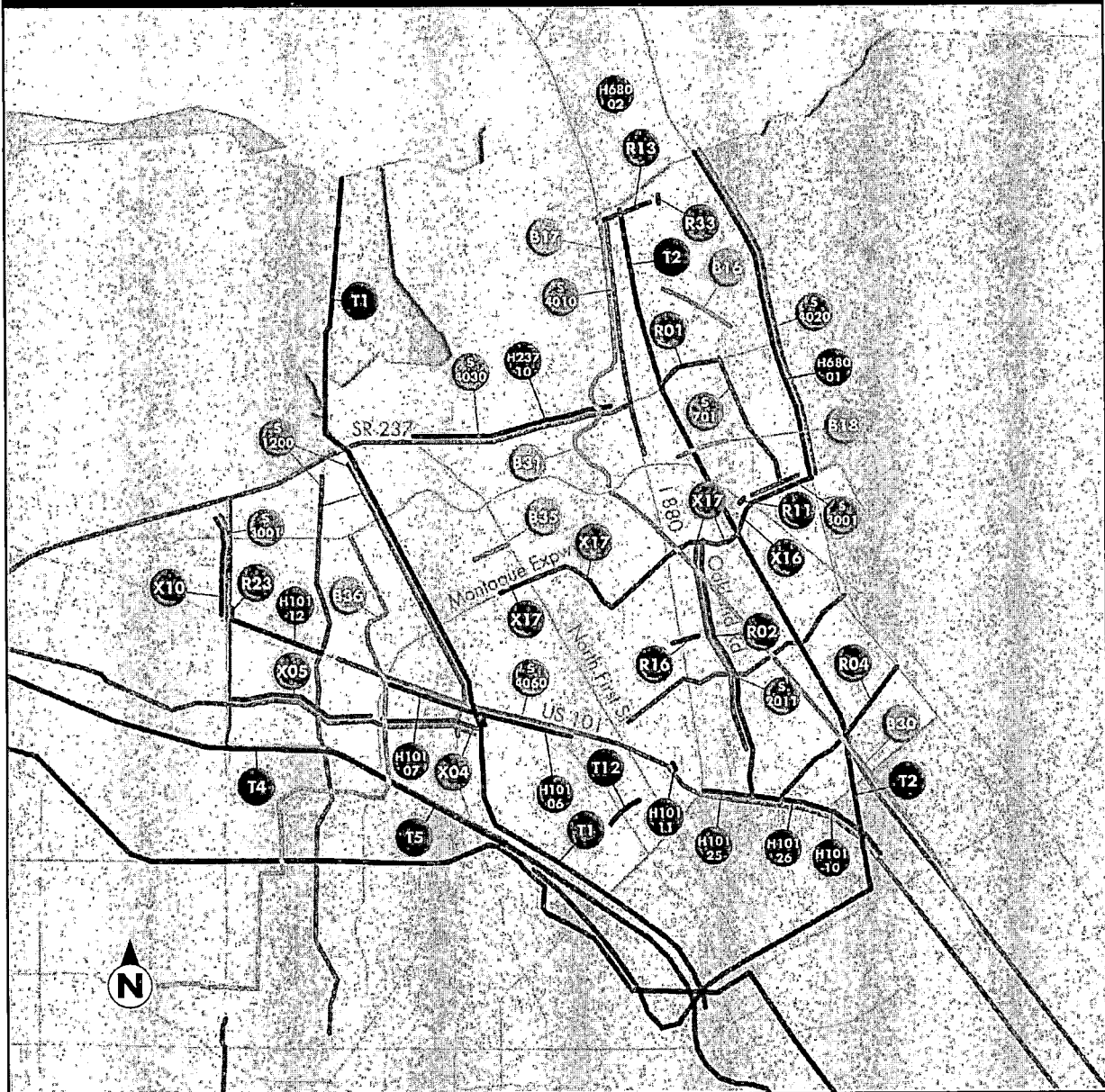


Table 2-5 VTP 2030 Proposed Projects, Northeast County

VTP ID	Project	Cost (‘03\$/Millions)	VTP ID	Project	Cost (‘03\$/Millions)
T1	Altamont Commuter Express Upgrade	\$22.0	R01	Calaveras Blvd. overpass widening with operational improvements	\$40.0
T2	BART <sup>1</sup>	4,193.0	R02	Oakland Rd. widening from US 101 to Montague Expwy.	10.0
T4	Caltrain Electrification	650.0	R04	Berryessa Rd. widening from US 101 to I-680	7.0
T5	Caltrain Service Upgrades <sup>2</sup>	171.0	R11	Montague Expwy./Great Mall Parkway—Capitol Ave. grade separation	24.5
T12	Mineta San Jose International Airport APM Connector	400.0	R13	Dixon Landing Rd. widening	0.6
H101-06	US 101 SB/Trimble Rd./De La Cruz Blvd./Central Expwy. Interchange improvements	27.0	R16	Charcot Ave. connection	36.0
H101-07	US 101 auxiliary lane widenings: Trimble Rd. to Montague Expwy.	10.0	R23	Lawrence Expwy. & Wildwood Ave. roadway realignment & traffic signal	4.4
H101-10	US 101/Mabury Rd./Taylor St. Interchange Environmental & Preliminary Engineering	3.0	R33	Dixon Landing Rd. at North Milpitas Blvd. Intersection improvements	1.0
H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. I/C Environmental & Preliminary Engineering	7.0	B16	Berryessa Creek Trail (Reach 3)	0.9
H101-12	US 101 SB auxiliary lane Great America Pkwy. to Lawrence Expwy.	2.0	B17	Coyote Creek Trail (Reach 1)	1.2
H101-25	US 101 SB auxiliary lane widening: I-880 to McKee Rd./Julian St.	8.0	B18	Bike/Pedestrian Overcrossing of UPRR tracks (near Great Mall)	5.6
H101-26	US 101 NB auxiliary lane widening: I-880 to McKee Rd./Julian St.	9.0	B30	Coyote Creek Trail (Hwy 237/Bay Trail to Story/Keyes)	6.1
H237-10	SR 237 WB auxiliary lane between Coyote Creek Bridge & North First St.	15.0	B31	Guadalupe River Trail (Alviso St. to Hwy 880)	5.1
H680-01	I-680 HOV lanes: Calaveras Blvd. to SR 84	25.0	B35	Guadalupe River Bridge at River Oaks	2.8
H680-02	I-680/I-880 cross-connector environmental & conceptual engineering	7.0	B36	San Tomas Expwy. Aquino Creek Trail (Hwy 237 to City Limits)	17.0
X04	Central Expwy.—convert the Measure B HOV lane widening between San Tomas Expwy. & De La Cruz Blvd. to mixed flow & remove the HOV queue jump lanes at Scott Blvd., if unsuccessful after a three- to five-year trial period	0.1	S701	South Milpitas Blvd. Smart Corridor	0.5
X05	Central Expwy.—widen to six lanes between Lawrence & San Tomas Expwys. without HOV lane operations	10.0	S1200	City of Santa Clara Communications Network Upgrade	3.5
X10	Lawrence Expwy.—convert HOV to mixed flow lanes between US 101 & Elko Dr.	0.1	S2011	Brokaw/Hostetter Roads Smart Corridor	2.0
X11	Lawrence Expwy.—Close median at Lochinvar Ave. & right-in-and-out access at DeSoto Ave., Golden State Dr., Granada Ave., Buckley St., and St. Lawrence/Lawrence Station on-ramp (not mapped)	0.5	S3001	County of Santa Clara Traffic Operations System Improvements	18.0
X16	Montague Expwy.—convert HOV lanes to mixed-flow use east of I-880	0.1	S4010	Caltrans I-880 Corridor TOS Elements & Ramp Metering <sup>3</sup>	3.6
X17	Montague Expwy.—baseline project consisting of eight-lane widening & I-880 partial clo interchange with at-grade improvements at Lick Mill Blvd., Plumeria Dr./River Oaks Pky., Main St./Old Oakland Rd. & McCandless Dr./Trade Zone Blvd.	38.5	S4020	Caltrans I-680 Corridor TOS Elements & Ramp Metering <sup>3</sup>	5.4
			S4030	Caltrans SR 237 Corridor TOS Elements & Ramp Metering <sup>3</sup>	5.7
			S4060	Caltrans US 101 Corridor TOS Elements & Ramp Metering <sup>3</sup>	3.0

1. Measure A need for the BART project is net of \$649 million in TCRP funds, \$834 Federal New Starts, \$107 Prop. 42, STIP and \$69 million in other funds. Does not assume additional bonding for construction.

2. Caltrain service upgrades include track and facility improvements and additional service.

3. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## Northwest County Subarea

The Northwest County subarea consists of Palo Alto, Mountain View, Sunnyvale and Northern Cupertino. Principal roadways include US 101, I-280, SR 85, SR 237, Central Expressway, Oregon Expressway, Foothill Expressway, Lawrence Expressway, El Camino Real and Stevens Creek Boulevard. Transit service includes Caltrain commuter rail, Amtrak, the Mountain View Light Rail line and various express and local VTA bus lines.

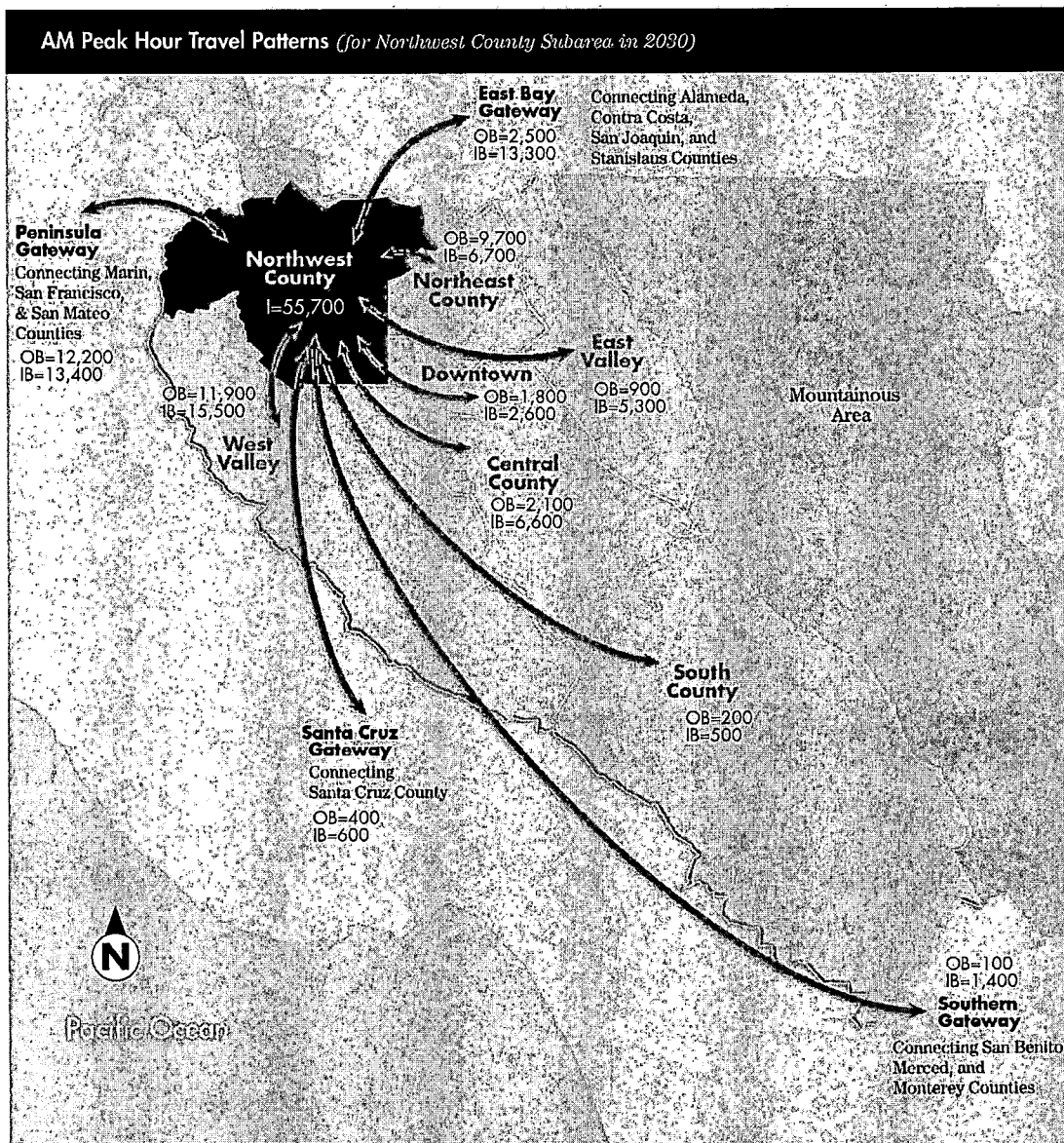
### Travel Patterns in 2030

Northwest County is one of five subareas with more inbound AM peak commuters (65,900) than outbound (41,700). Inbound trips come largely from the West Valley subarea (15,500 commuters) as well as the East Bay (13,300 commuters) and Peninsula (13,400 commuters) gateways. Outbound trips head largely to the Peninsula Gateway (12,200 commuters) and the West Valley (11,900 commuters) and Northeast County (9,700 commuters) subareas.

### Investment Program

The capital investments in the Northwest County subarea include major upgrades in intelligent transportation systems (ITS) technologies, expressways and transit services as well as

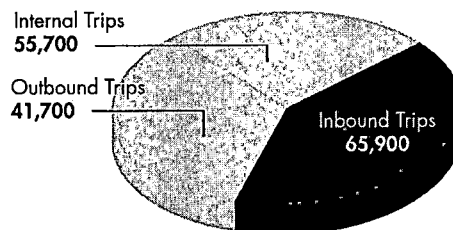
several bicycle and roadway projects. Major ITS improvements will cover the entire lengths of Lawrence, Foothill and Oregon Expressways. Investments to all three of these expressways will include roadway widening and interchange improvements. Other major thoroughfares such as Stevens Creek Boulevard, De Anza Boulevard, Fair Oaks Avenue and Fremont Avenue will be the recipients of ITS improvements. Palo Alto's Smart Residential Arterials roadway project will put in place intelligent traffic management and multimodal amenities on major residential corridors such as University Avenue, Embarcadero Road, Middlefield Road and San Antonio Road. Caltrain will undergo electrification and service upgrades and bus rapid transit (BRT) service will improve transit along El Camino Real. The Palo Alto Intermodal Transit Center will increase train, bus, bicycle and pedestrian interconnectivity. The extension of the Stevens Creek Trail, and several bicycle improvements along the Central Expressway/Caltrain corridor will facilitate safer and easier bicycle travel.



**Internal (I) Trips:** trips that both start and end in the Northwest County subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the Northwest County subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the Northwest County subarea in the a.m. peak hour



Source: VTA 2004



Table 2-6 VTP 2030 Proposed Projects, Northwest County

VTP ID	Project	Cost (‘03\$/Millions)	VTP ID	Project	Cost (‘03\$/Millions)
T1	Altamont Commuter Express Upgrade	\$22.0	R05	Mathilda at SR 237 corridor improvements	\$50.0
T3	Bus Rapid Transit—El Camino Real	50.0	R07	Mathilda Caltrain bridge reconstruction	17.4
T4	Caltrain Electrification	650.0	R23	Lawrence Expwy./Wildwood Ave. roadway realignment and traffic signal	4.4
T5	Caltrain Service Upgrades <sup>1</sup>	171.0	R34	Magdalena Ave. & Country Club intersection signalization	0.4
T8	Dumbarton Rail	278.0	R37	Java Drive bicycle shared use improvements	0.4
T13	Palo Alto Intermodal Center <sup>2</sup>	200.0	R39	Smart Residential Arterials Project	6.2
H85-02	SR 85 Noise Mitigation between I-280 & SR 87	7.0	R60	Miramonte Ave. bikeway improvements	1.0
H85-05	SR 85 NB to EB SR 237 connector ramp improvement	22.0	B09	Page Mill/I-280 Interchange bike improvements	5.0
H85-09	Fremont Ave. improvements at SR 85	2.0	B14	Adobe Creek Bike/Pedestrian Bridge replacement	0.5
H85-10	SR 85 auxiliary lanes between Homestead Rd. and Fremont Ave.	19.0	B15	Stevens Creek Trail feasibility study	0.1
H101-19	US 101 SB auxiliary lane improvement between Ellis St. & SR 237	3.0	B22	Stevens Creek Trail, Reach 4 Central	4.0
H237-01	SR 237/El Camino Real/Grant Rd. intersection improvements	3.0	B23	Stevens Creek Trail, Reach 4 South	5.0
H237-02	SR 237 WB to SB SR 85 connector ramp improvements	18.0	B24	Stevens Creek Trail, Reach 4, Segment 2 North (Yuba Dr. to North Meadow)	3.8
H237-03	SR 237 widening for HOV lanes between SR 85 and east of Mathilda Ave.	36.0	B25	Bicycle Boulevard/Lanes Network	5.0
H237-04	SR 237 WB on-ramp at Middlefield Rd.	8.0	B26	California Ave. Caltrain Undercrossing	9.0
H237-05	SR 237 WB to NB US 101 connector ramp improvements	8.0	B27	Homer Ave. Caltrain Undercrossing	5.6
H237-06	SR 237/US 101/Mathilda Ave. Interchange improvements	13.0	B40	Bernardo Ave. Caltrain Undercrossing	6.5
H237-08	SR 237 EB auxiliary lanes from Mathilda Ave. to Fair Oaks Ave.	5.0	B41	Borregas Ave. Bike Lanes (Weddell to Caribbean)	0.2
H237-09	Lawrence Expwy./SR 237 auxiliary lane improvement	3.0	B42	Borregas Ave. Bike/Pedestrian Overcrossings at US 101 & SR 237	6.5
X06	Central Expwy.—widen between Lawrence Expwy. & Mary Ave. to provide auxiliary and/or acceleration/deceleration lanes	13.0	B43	Evelyn Ave. Bike Lanes (Sunnyvale Ave. to Reed Ave.)	0.4
X07	Foothill Expwy.—replace Loyola Bridge in Los Altos. Also listed as R15 and B07 in the LSCR and Bicycle Program	10.0	B44	Sunnyvale East Drainage Trail (JWC Greenway to Tasman)	0.5
X08	Foothill Expwy.—traffic/signal operational corridor improvements between Edith Ave. & El Monte Ave. including adjacent side street intersections & Grant Rd./St. Joseph Ave.	1.5	B45	Sunnyvale Train Station North Side Access	1.8
X09	Foothill Expwy.—extend existing westbound deceleration lane at San Antonio Rd.	0.5	S1000	Rengstorff Ave. Corridor Traffic Signal	0.4
X10	Lawrence Expwy.—Convert HOV to mixed flow lanes between US 101 & Elko Dr.	0.1	S1101	City of Palo Alto Smart Residential Arterials Project <sup>3</sup>	6.2
X11	Lawrence Expwy.—Close median at Lochinvar Ave. & right-in-and-out access at DeSoto Ave., Golden State Dr., Granada Ave., Buckley St., and St. Lawrence/Lawrence Station on-ramp (not mapped)	0.5	S1401	City of Sunnyvale Traffic Adaptive Signal System on Major Arterials	2.8
X18	Oregon Page Mill Expwy. corridor improvements	5.0	S1402	City of Sunnyvale CCTV Camera Deployment	0.6
X19	Oregon Page Mill Expwy.— I-280/Page Mill Interchange modification	5.0	S3001	County of Santa Clara Traffic Operations System Improvements	18.0
X20	Oregon Page Mill Expwy.—Alma Bridge Replacement Feasibility Study	0.3	S4030	Caltrans SR 237 Corridor TOS Elements & Ramp Metering <sup>4</sup>	5.7
			S4040	Caltrans SR 85 Corridor TOS Elements and Ramp Metering <sup>4</sup>	4.8

1. Caltrain service upgrades include track and facility improvements and additional service.
2. Palo Alto Intermodal Transit Center requires additional funds not identified at this time.
3. Also listed as a Local Streets and County Roads project.
4. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## Downtown San Jose Subarea

The Downtown subarea consists of Downtown San Jose. Principal roadways include US 101, I-280, SR 87, SR 17/I-880, El Camino Real/The Alameda/Santa Clara Street and San Carlos Street. Transit service includes Guadalupe Light Rail, Caltrain commuter rail, Amtrak rail, Altamont Commuter Express, Highway 17 Express bus service and various express and local VTA bus lines.

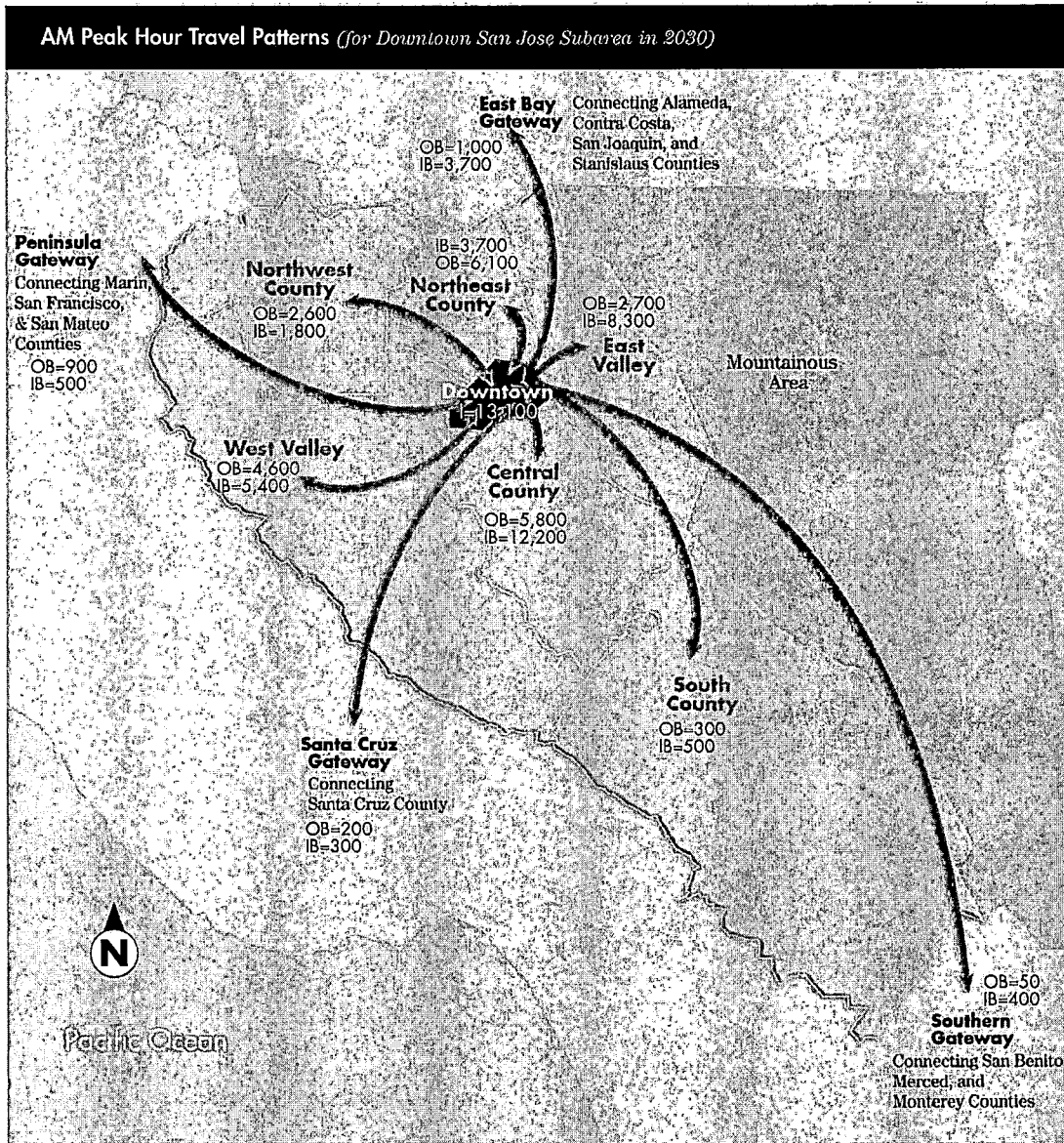
### Travel Patterns in 2030

Downtown is one of five subareas with more inbound AM peak commuters (36,800) than outbound (24,300). Inbound trips come largely from the Central County (12,200 commuters) and East Valley (8,300 commuters) subareas. Outbound trips go mostly to the adjacent Northeast County (6,100 commuters), Central County (5,800 commuters) and West Valley (4,600 commuters) subareas.

### Investment Program

Major capital investments in new transit services and sizeable roadway projects as well as significant pedestrian and bicycle projects define the downtown improvements. Bringing BART into downtown will connect Santa Clara County's urban center with the rest of the Bay Area, as well as other transit services like: Caltrain commuter rail, Amtrak, Altamont Commuter Express, Highway 17 Express Bus and VTA bus, BRT and light rail lines including the new Vasona light rail line (opening 2005). To improve automobile circulation, five one-way couplets will be changed to two-way traffic among other projects. The Los Gatos Creek Trail will be extended into downtown San Jose and will improve the area's connection to the existing bicycle network.

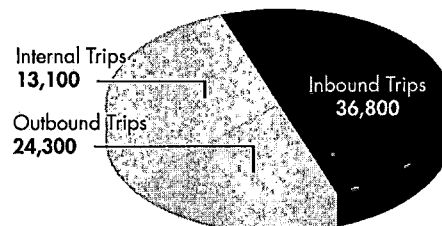




**Internal (I) Trips:** trips that both start and end in the Downtown subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the Downtown subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the Downtown subarea in the a.m. peak hour



Source: VTA 2004



VTP 2030 Proposed Projects, Downtown San Jose

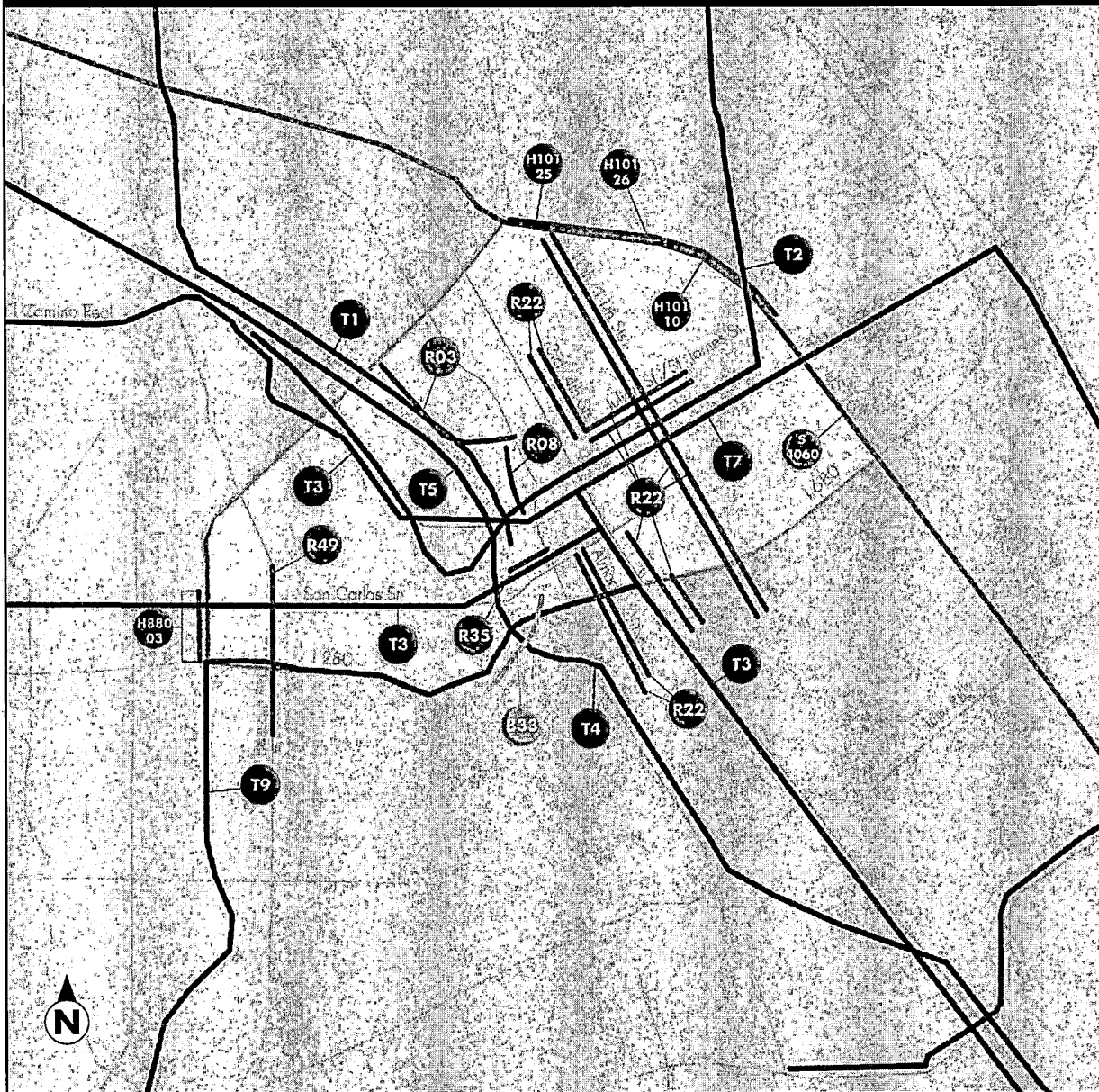


Table 2-7 VTP 2030 Proposed Projects, Downtown San Jose

VTP ID	Project	Cost (’03\$/Millions)
T1	Altamont Commuter Express Upgrade	\$22.0
T2	BART <sup>1</sup>	4,193.0
T3	Bus Rapid Transit—Line 22, Stevens Creek Blvd., Monterey Hwy.	50.0
T4	Caltrain Electrification	650.0
T5	Caltrain Service Upgrades <sup>2</sup>	171.0
T7	Downtown East Valley <sup>3</sup>	550.0
T9	Highway 17 Bus Service Improvements	2.0
H101-10	US 101/Mabury Rd./Taylor St. Interchange Environmental & Preliminary Engineering	3.0
H101-25	US 101 SB auxiliary lane widening: I-880 to McKee Rd./Julian St.	8.0
H101-26	US 101 NB auxiliary lane widening: I-880 to McKee Rd./Julian St.	9.0
H880-03	I-880/I-280/Stevens Creek Blvd. Interchange improvements—Phase I	14.0
R03	Coleman Ave. widening	14.0
R08	Autumn St. extension	10.0
R22	Downtown couplet conversions	20.0
R35	Park Ave. improvement	1.0
R49	ITS Enhancements on Bascom Ave. <sup>4</sup>	0.2
B33	Los Gatos Creek Trail (Reach 5)	6.4
S4060	Caltrans US 101 Corridor TOS Elements & Ramp Metering <sup>5</sup>	3.0

1. Measure A need for the BART project is net of \$649 million in TCRP funds, \$834 Federal New Starts, \$107 Prop. 42, STIP and \$69 million in other funds. Does not assume additional bonding for construction.

2. Caltrain service upgrades include track and facility improvements and additional service.

3. DTEV includes Enhanced Bus or LRT in the Santa Clara Alum Rock Corridor plus LRT on Capitol Expressway to Eastridge with an extension to Nieman Boulevard. A specific strategy will be developed as EIS and PE are completed on both portions.

4. Also listed as an ITS project.

5. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## East Valley Subarea

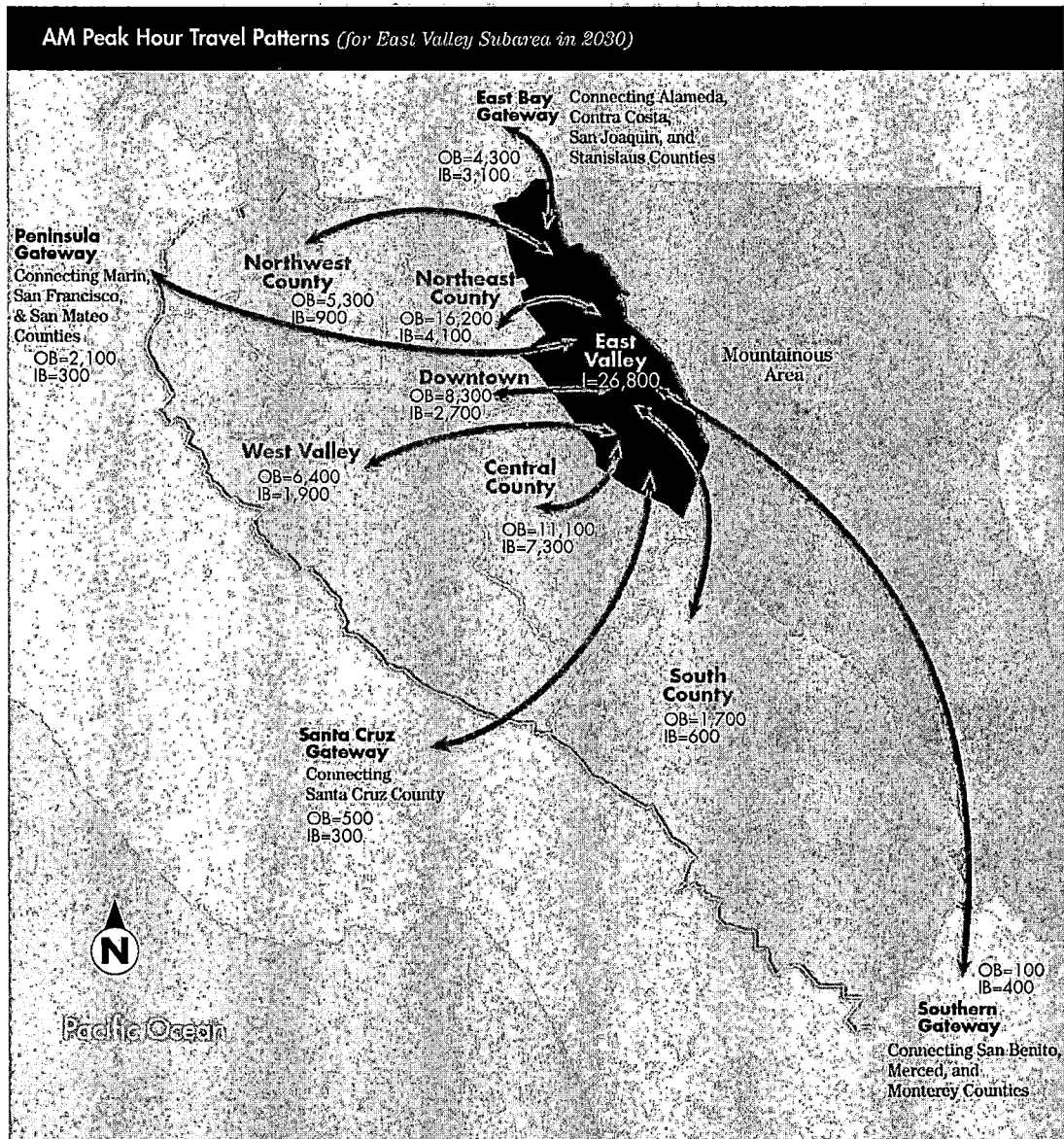
The East Valley subarea consists of Eastern San Jose and Eastern Milpitas. Principal roadways include US 101, I-680 and Capitol Expressway. Transit service includes the Alum Rock–Santa Teresa Light Rail line and VTA bus lines.

### Travel Patterns in 2030

More commuters will leave the East Valley subarea (56,100) than will enter (21,400) during the AM peak hour. Outbound trips will largely go to the Northeast County (16,200 commuters), Central County (11,100 commuters) and Downtown (8,300 commuters) subareas. Inbound trips will come largely from the Central County (7,300 commuters) and Northeast County (4,100 commuters).

### Investment Program

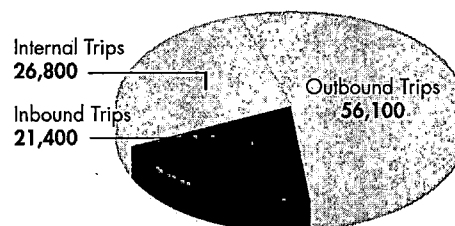
The capital investments in the East Valley subarea are aimed at improving roadway efficiency and expanding transit options. New transit services including BART and a Downtown–East Valley Light Rail/BRT line will better connect this subarea with the rest of the county. Intelligent transportation systems (ITS) technologies will better manage traffic flow and light metering, reducing delays on US 101 and major commuter thoroughfares like Capitol Expressway, Story Road and King Road. Interchange improvements along US 101 will reduce delay, as well.



**Internal (I) Trips:** trips that both start and end in the East Valley subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the East Valley subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the East Valley subarea in the a.m. peak hour



Source: VTA 2004

The map displays the Potomac River to the west of Washington, D.C. The Capital Beltway (I-495) is shown as a major highway running north-south. The Annapolis Expressway (I-495) is shown as a major highway running east-west. The Washington Monument is located near the center of the map. The Lincoln Memorial is located to the south of the Washington Monument. The National Mall is located to the east of the Lincoln Memorial. The White House is located to the east of the National Mall. The Capitol Building is located to the east of the White House. The Pentagon is located to the east of the Capitol Building. The map also shows the locations of several major highways, including I-495, I-495, and I-495. The map is oriented with North at the top.

**Table 2-8 VTP 2030 Proposed Projects, East Valley**

VTP ID	Project	Cost ('03\$/Millions)
T2	BART <sup>1</sup>	\$4,193.0
T3	Bus Rapid Transit	50.0
T7	Downtown East Valley <sup>2</sup>	550.0
H101-10	US 101/Mabury Rd./Taylor St. Interchange Environmental & Preliminary Engineering	3.0
H101-14	US 101/Tully Rd. Interchange modifications	22.0
H101-15	US 101 SB widening from Story Rd. to Yerba Buena Rd.	11.0
H101-16	US 101/Capitol Expwy. Interchange improvements	20.0
H680-01	I-680 HOV Lanes: Calaveras Blvd. to SR 84	25.0
X29	Capitol Expwy. street improvements—intersection modifications, left-turn lane, carpool lane adjustments & stripping modifications	2.0
R27	King Rd. pedestrian improvement at Barberry	1.0
R51	Alum Rock School District area traffic calming elements	2.0
B30	Coyote Creek Trail (Hwy 237/Bay Trail to Story Rd./Keyes St.)	6.1
S2010	King/Story Roads Smart Corridor	3.0
S3001	County of Santa Clara Traffic Operations System Improvements	18.0
S4020	Caltrans I-680 Corridor TOS Elements & Ramp Metering <sup>3</sup>	5.4
S4060	Caltrans US 101 Corridor TOS Elements & Ramp Metering <sup>3</sup>	3.0

1. Measure A need for the BART project is net of \$649 million in TCRP funds, \$834 Federal New Starts, \$107 Prop. 42, STIP and \$69 million in other funds. Does not assume additional bonding for construction.
2. DTEV includes Enhanced Bus or LRT in the Santa Clara Alum Rock Corridor plus LRT on Capitol Expressway to Eastridge with an extension to Nieman Boulevard. A specific strategy will be developed as EIS and PE are completed on both portions.
3. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## West Valley Subarea

The West Valley subarea consists of Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Southern Cupertino, Saratoga, Campbell, Southern Santa Clara and Western San Jose. Principal roadways include I-280, SR 85, SR 17, Lawrence Expressway, San Tomas Expressway, Stevens Creek Boulevard, De Anza Boulevard, Saratoga Avenue and Winchester Boulevard. Transit service includes Caltrain commuter rail, Highway 17 Express Bus service and various express and local VTA bus lines.

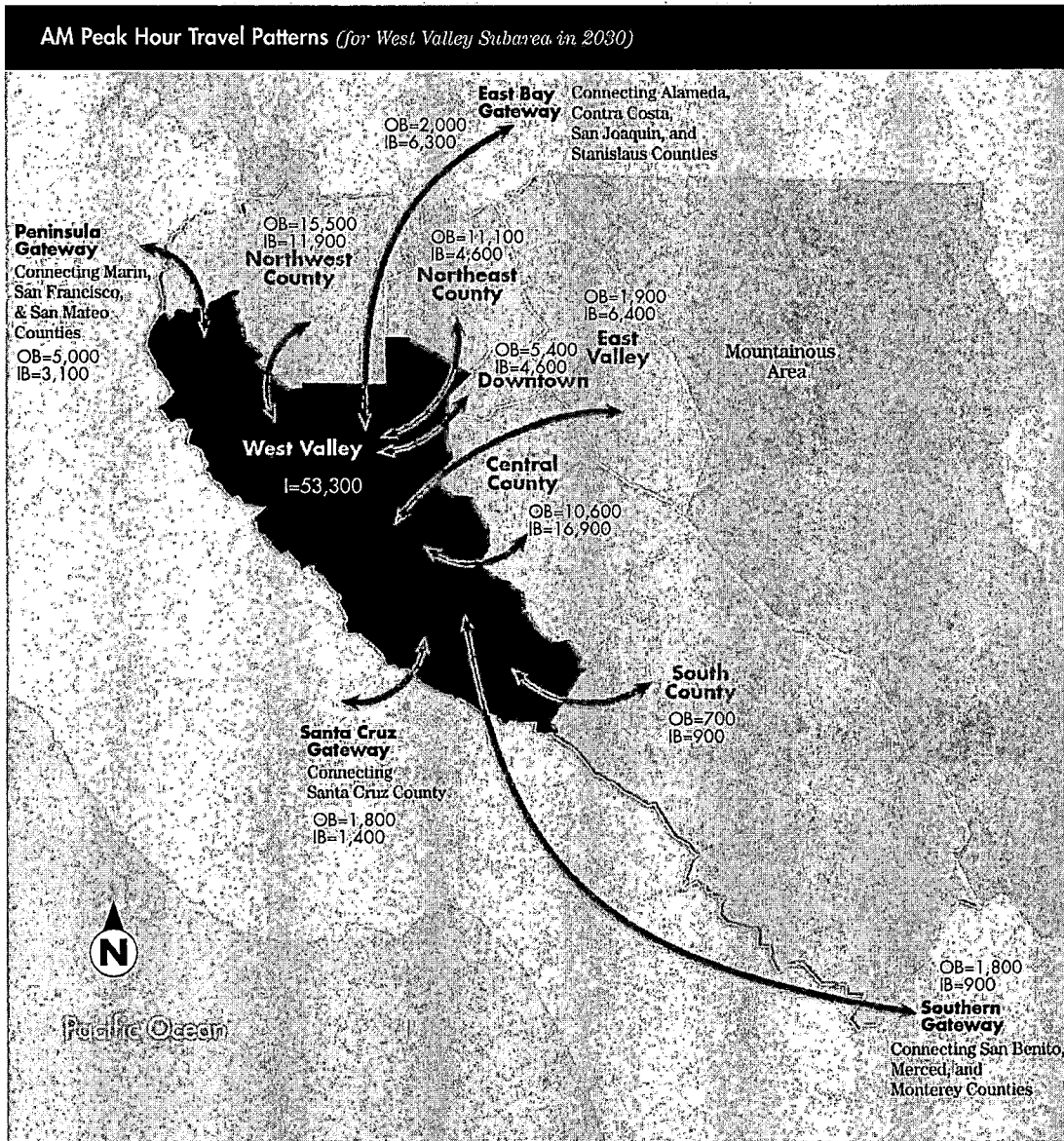
### Travel Patterns in 2030

West Valley is one of five subareas with more inbound AM peak commuters (57,100) than outbound (54,200). Inbound trips come largely from the Central County (16,900 commuters) and Northwest County (11,900 commuters) subareas. Outbound trips go mostly to the adjacent Northwest County (15,500 commuters), Northeast County (11,100 commuters) and Central County (10,600 commuters) subareas.

### Investment Program

The capital investments in the West Valley subarea consist of improved transit service, highway improvements, intelligent transportation systems (ITS) technologies, bicycle network connections and expressway and roadway upgrades. Upgrades to the Highway 17 Express bus and a new bus rapid transit (BRT) line along Stevens Creek Boulevard will improve transit service. Sound mitigation along the entire length of SR 85, and improvements to I-280 at SR 85/Foothill Expressway and SR 17 in Campbell should alleviate commute crunches. ITS improvements are coming to Lawrence Expressway, Foothill Expressway, Winchester Boulevard, Hamilton Avenue, Saratoga Avenue and Kiely Boulevard. Bicycle improvements to SR 9, the Stevens Creek Trail, the San Tomas Aquino Trail and the Los Gatos Creek Trail will be constructed. Widening and improvements to San Tomas Expressway and Lawrence Expressway will increase roadway capacity. Upgrades to De Anza Boulevard and Saratoga Avenue will improve commutes along these corridors.

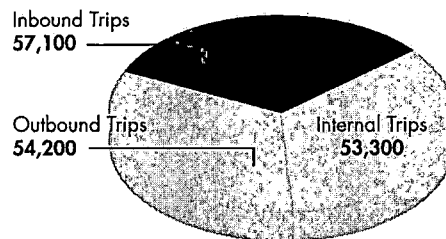




**Internal (I) Trips:** trips that both start and end in the West Valley subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the West Valley subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the West Valley subarea in the a.m. peak hour



Source: VTA 2004





Table 2-9 VTP 2030 Proposed Projects, West Valley

VTP ID	Project	Cost (‘03\$/Millions)	VTP ID	Project	Cost (‘03\$/Millions)
T3	Bus Rapid Transit—El Camino Real & Stevens Creek Blvd.	\$50.0	B01	Campbell Ave. improvements at Hwy 17 & Los Gatos Creek	\$1.5
T4	Caltrain Electrification	650.0	B02	Los Gatos Creek Trail Expansion on west side (Hamilton Ave.—Campbell Ave.)	2.0
T5	Caltrain Service Upgrades <sup>1</sup>	171.0	B03	Los Gatos Creek Trail bridge & path improvements (Mozart—Camden)	0.8
T9	Highway 17 Bus Service Improvements	2.0	B10	Bollinger Rd. bicycle facility improvement	0.4
H17-01	SR 17 improvements, NB SR 17 auxiliary lane from Camden Ave. to Hamilton Ave.	12.0	B11	Mary Ave. (I-280) bike/pedestrian overcrossing	7.1
H85-02	SR 85 noise mitigation between I-280 & SR 87	7.0	B19	Hwy 9 bike lanes (Saratoga Ave.—Los Gatos Blvd.)	1.7
H280-05	I-280 NB second exit lane to Foothill Expwy.	1.0	B36	San Tomas Aquino Creek Trail (Hwy 237 to City Limits)	17.0
H880-03	I-880/I-280/Stevens Creek Blvd. interchange improvements—Phase I	14.0	B37	Santa Clara Intermodal Transit Center bicycle/pedestrian overcrossing <sup>4</sup>	5.0
X11	Lawrence Expwy.—Close median at Lochinvar Ave. & right-in-and-out access at De Soto Ave., Golden State Dr., Granada Ave., Buckley St., St. Lawrence/Lawrence Station onramp	0.5	B38	Cox Ave. railroad grade crossings	0.5
X12	Lawrence Expwy.—widen to eight lanes between Moorpark Ave. & Bollinger Rd. & south of Calvert Dr.	4.0	B39	PGE De Anza Trail (Reach 3)	2.5
X13	Lawrence Expwy.—optimize signal coordination along Lawrence Expwy.—Saratoga Ave. corridor	0.1	S101	Hamilton Ave. Intelligent Transportation System	0.3
X14	Lawrence Expwy.—coordinate and optimize signal phasing and timing plans in I-280/Lawrence Expwy. Interchange area	0.1	S102	City of Campbell traffic signal system upgrade	0.3
X15	Lawrence Expwy.—prepare a Caltrans PSR for tier 1C project at the Lawrence Expwy/Calvert Dr./I-280 Interchange area <sup>2</sup>	0.0	S103	Winchester Blvd. Intelligent Transportation System	0.3
X21	San Tomas Expwy.—provide an additional WB right-turn lane at Monroe St.	1.0	S1200	City of Santa Clara Communications network upgrade	3.5
X22	San Tomas Expwy.—widen to eight lanes between Williams Rd. & El Camino Real	28.0	S1301	City of Saratoga citywide signal upgrade project <sup>3</sup>	0.5
X23	San Tomas Expwy.—provide 2nd EB, WB & NB left-turn lanes at Hamilton Ave.	2.0	S1401	City of Sunnyvale traffic adaptive signal system on major arterials	2.8
X24	San Tomas Expwy.—at-grade improvements at SR 17/San Tomas	2.0	S3001	County of Santa Clara traffic operations system improvements	18.0
R21	Union Ave. widening from Los Gatos-Almaden Rd. to Ross Creek	1.7	S4040	Caltrans SR 85 Corridor TOS elements & ramp metering <sup>6</sup>	4.8
R25	Campbell Ave. bicycle/pedestrian improvements	2.0	S4050	Caltrans I-280 Corridor TOS elements & ramp metering <sup>6</sup>	2.2
R29	Winchester Blvd. streetscape improvement	4.0	S5004	Silicon Valley ITS program upgrades	27.0
R31	Quito Rd. improvements	1.9			
R34	Magdalena Ave./Country Club Dr. intersection signalization	0.4			
R75	Moody Rd. improvements	0.2			
R81	Wedgewood Ave. improvements	0.6			
R89	Saratoga Citywide Signal Upgrade Project Phase II <sup>5</sup>	0.5			
R91	Rancho Rinconada Neighborhood Traffic Calming Project	0.1			

1. Caltrain service upgrades include track and facility improvements and additional service.

2. Project cannot be funded by fund source. PSR estimated cost \$500,000.

3. Also listed as an ITS project.

4. Also included in the VTP 2030 Livable Communities and Pedestrian Program.

5. Also listed as LSCR project.

6. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## South County Subarea

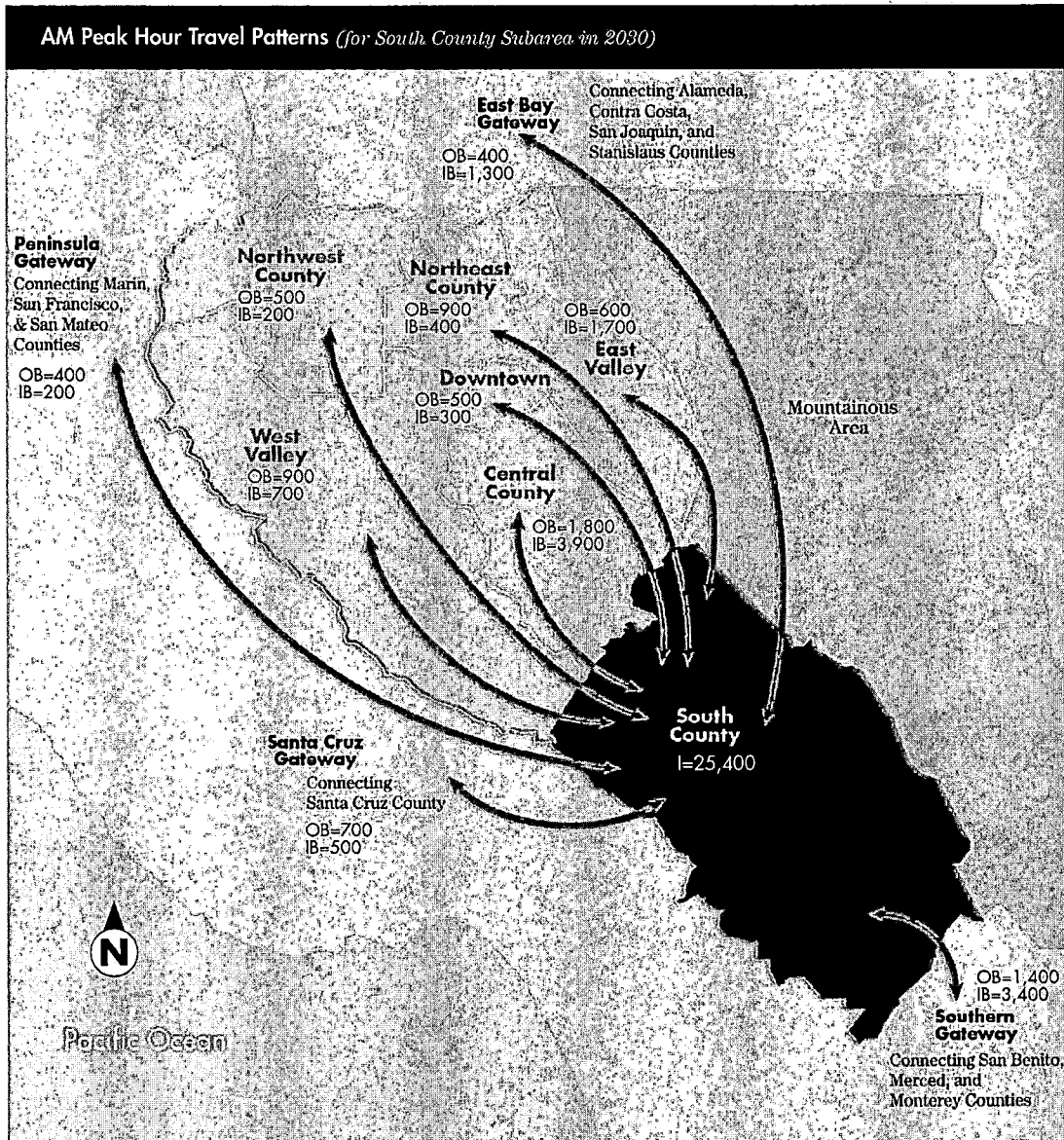
The South County subarea consists of Morgan Hill, San Martin, Gilroy, South San Jose and unincorporated areas of Santa Clara County. Principal roadways include US 101, SR 152, SR 25, SR 156 and Santa Teresa Boulevard. Transit service includes Caltrain commuter rail, Amtrak, and various express and local VTA bus lines.

### Travel Patterns in 2030

South County is one of five subareas with more inbound AM peak commuters (12,600) than outbound (8,000). Inbound trips come largely from Central County (3,900 commuters) and the Southern Gateway (3,400 commuters). Outbound trips will largely go to Central County (1,800 commuters) and the Southern Gateway (1,400 commuters).

### Investment Program

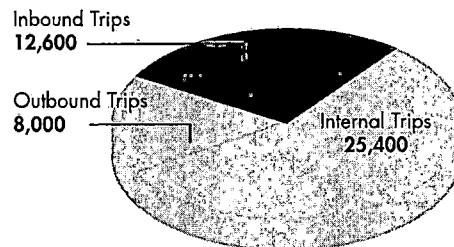
The capital investments in the South County revolve around highway expansion, new transit service, significant intelligent transportation systems (ITS) technologies improvements along commute corridors and roadway improvements. US 101 will be widened southward to the San Benito County line. Interchange, roadway improvements and widening will improve SR 25 and SR 152 and better manage traffic flows through the southern gateway. The electrification of Caltrain as well as service upgrades and new South County service will provide a convenient and quick alternative to northbound commuters. ITS improvements along US 101, SR 152, Santa Teresa Boulevard and Monterey Road will reduce delay and congestion. Roadway projects will fill gaps and improve interconnectedness between major corridors. Butterfield Boulevard, DeWitt and Sunnyside and Hill Road will all be extended.



**Internal (I) Trips:** trips that both start and end in the South County subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the South County subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the South County subarea in the a.m. peak hour



Source: VTA 2004



Table 2-10 VTP 2030 Proposed Projects, South County

VTP ID	Project	Cost (‘03\$/Millions)	VTP ID	Project	Cost (‘03\$/Millions)
T4	Caltrain Electrification	\$650.0	R43	De Witt Ave. & Sunnyside Ave. realignment at Edmunson Ave.	\$5.0
T5	Caltrain Service Upgrades <sup>1</sup>	171.0	R44	Santa Teresa Blvd. & Fitzgerald Ave. intersection signalization	0.3
T6	Caltrain South County <sup>2</sup>	100.0	R50	First St. roadway widening from Monterey Rd. to Church St.	1.2
H25-02	SR 25/Santa Teresa Blvd./US 101 Interchange construction	85.0	B04	Coyote Creek Trail (Hellyer to Anderson Lake County Park)	1.3
H25-03	SR 25 upgrade to six-lane facility design	10.0	B12	Uvas Creek Trail (part of Gilroy Sports Park Phase 1 & 2)	11.9
H101-20	US 101/Tennant Ave. Interchange improvements	10.0	B13	Uvas Creek Trail Study (Sports Park to Gavilan Collegé)	0.2
H101-22	US 101 conversion to four-lane freeway: SR 25 to Santa Clara/San Benito County line <sup>3</sup>	140.0	B20	Coyote Creek Trail Connection	0.5
H101-23	US 101 widening between Cochrane Rd. and Monterey Hwy. <sup>3</sup>	164.0	B21	West Little Llagas Creek Trail	1.5
H152-02	SR 152 improvements, traffic signal at Gilroy Foods/WTI intersection, SR 152 widening from Miller's Slough through Llagas Creek Bridges	10.0	S300	City of Gilroy Adaptive Traffic Signal Control System	0.9
H152-03	SR 152 improvements, intersection improvement at Ferguson Rd.	1.0	S301	City of Gilroy Event Management System	0.9
H152-04	SR 152/SR 156 Interchange improvements (not mapped)	27.3	S302	City of Gilroy Traffic Signal System Upgrade	3.9
R14	Gilman Rd./Arroyo Cir. & Camino Rd. improvements	7.0	S900	Cochrane Avenue Corridor Traffic Signal System Improvement	0.1
R24	Butterfield Blvd. extension	14.0	S3003	ITS Enhancements at Santa Teresa Blvd.	1.0
R28	Uvas Park Dr. roadway extension	2.2	S5004	Silicon Valley ITS Program Upgrades	27.0
R30	Railroad Crossing: San Martin Ave. at Monterey Rd.	1.2			
R32	Fitzgerald Ave./Masten Ave. realignment at Monterey Rd.	0.9			
R36	Railroad Crossing: Church Ave. at Monterey Rd.	0.5			
R40	Hill Rd. extension	5.0			

1. Caltrain service upgrades include track and facility improvements and additional service.
2. Caltrain upgrades in South County include double-tracking and station improvements.
3. Funded by ITIP.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## Central County Subarea

The Central County subarea consists of central San Jose. Principal roadways include US 101, I-280, SR 87, SR 85 and Almaden and Capitol Expressways. Transit service includes Guadalupe and Almaden Light Rail lines, Caltrain and various express and local VTA bus lines.

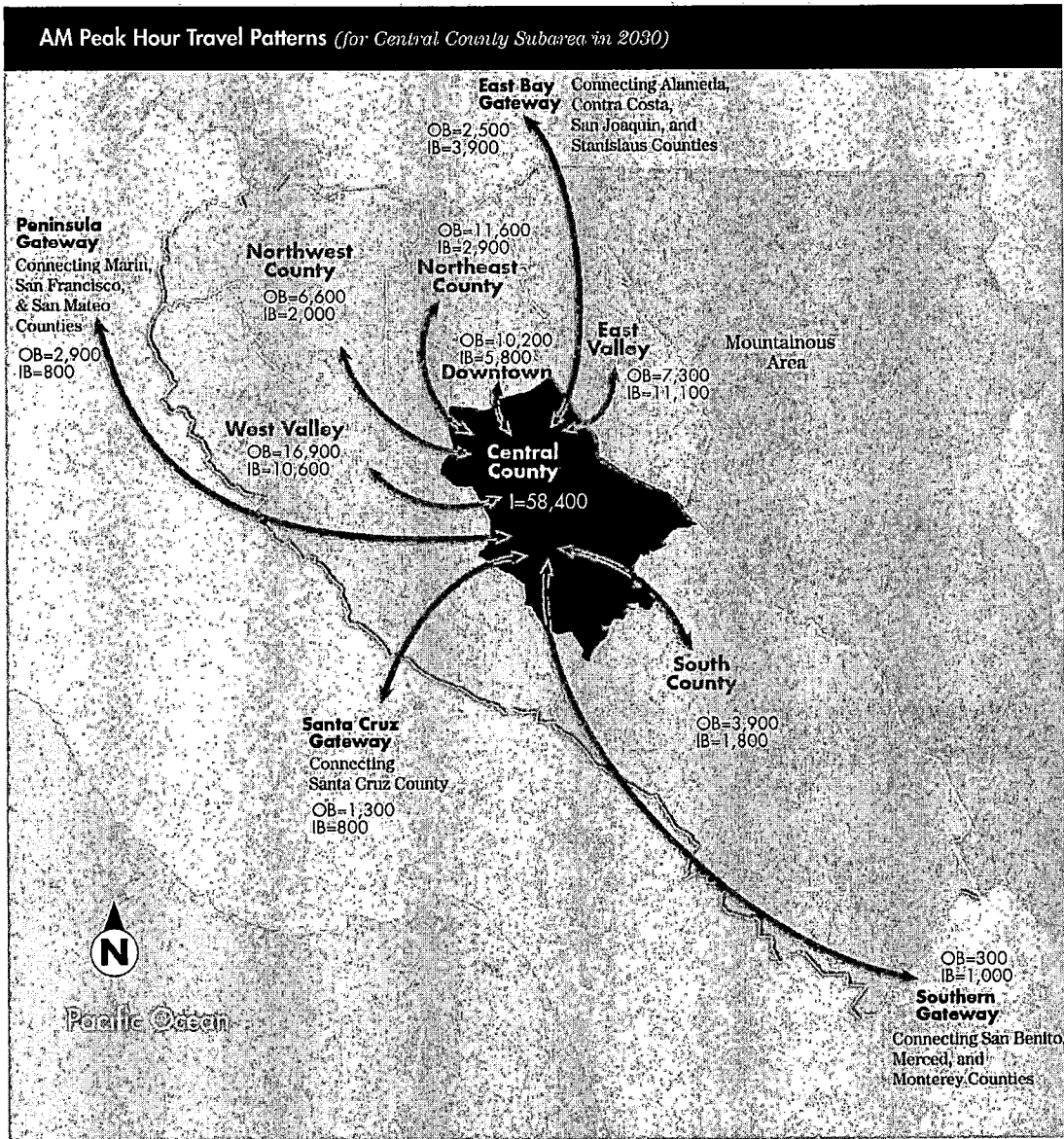
### Travel Patterns in 2030

More commuters will leave the Central County subarea (65,200) than will enter (40,800) during the AM peak hour. Outbound trips will largely go to the West Valley (16,900 commuters), Downtown San Jose (12,200 commuters) and Northeast County (11,600 commuters). Inbound trips will come largely from East Valley (11,100 commuters) and West Valley (10,600 commuters) subareas.

### Investment Program

The capital investments in the Central County subarea entail significant intelligent transportation systems (ITS), transit, roadway and bicycle improvements and some modest highway and

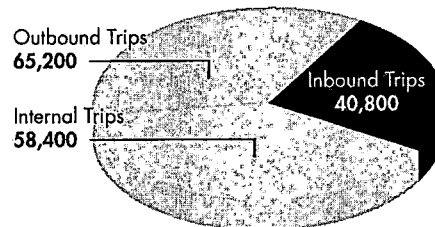
expressway improvements. ITS improvements along US 101, Almaden Expressway, Capitol Expressway, Santa Teresa Boulevard, Story Road and Monterey Road will improve traffic flow and reduce delay and congestion. Caltrain service upgrades and electrification, service improvements to the Highway 17 Express Bus, the BART extension into Downtown, Downtown–East Valley light rail/bus rapid transit (BRT), and the addition of BRT service on Monterey Road will improve our transit network and reduce congestion. Roadway improvements include widening of US 101 south of Story Avenue, improvements to SR 17, improvements to southern San Jose, and along major commute corridors like Story Road and Bascom Avenue. Bicycle improvements along McKean Road and Almaden Expressway will encourage multi-modality, and the extension of the Los Gatos Creek Trail will bring bicyclists and pedestrians into downtown San Jose.



**Internal (I) Trips:** trips that both start and end in the Central County subarea in the a.m. peak hour

**Outbound (OB) Trips:** leaving the Central County subarea in the a.m. peak hour

**Inbound (IB) Trips:** with destinations in the Central County subarea in the a.m. peak hour



Source: VTA 2004



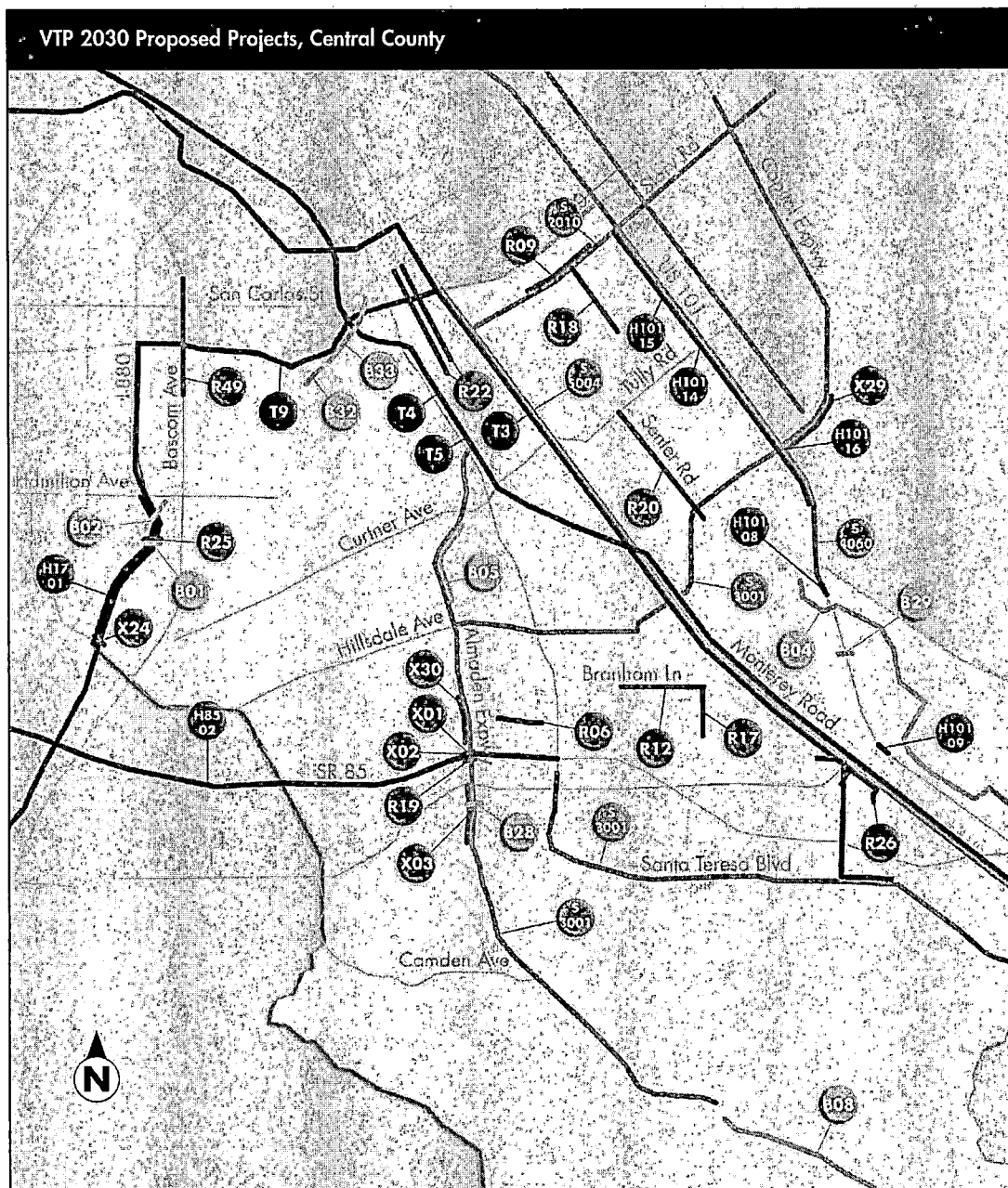


Table 2-11 VTP 2030 Proposed Projects, Central County

VTP ID	Project	Cost (‘03\$/Millions)	VTP ID	Project	Cost (‘03\$/Millions)
T3	Bus Rapid Transit—Monterey Hwy.	\$50.0	R19	Almaden Plaza Way widening	\$0.8
T4	Caltrain Electrification	650.0	R20	Senter Rd. widening project	6.8
T5	Caltrain Service Upgrades <sup>1</sup>	171.0	R25	Campbell Ave. Bicycle/Pedestrian Improvements	2.0
T9	Highway 17 Bus Service Improvements	2.0	R26	Blossom Hill Bicycle/Pedestrian Improvements	6.8
H17-01	SR 17 Improvements, NB SR 17 Auxiliary Lane from Camden Ave. to Hamilton Ave.	12.0	R49	ITS Enhancements on Bascom Ave. <sup>4</sup>	0.2
H85-02	SR 85 Noise Mitigation between I-280 & SR 87	7.0	B01	Campbell Ave. improvements at Hwy 17 & Los Gatos Creek.	1.5
H101-08	US 101/Hellyer Ave. Interchange improvements <sup>2</sup>	11.0	B02	Los Gatos Creek Trail expansion on west side (Hamilton Ave. to Campbell Ave.)	2.0
H101-09	US 101/Blossom Hill Rd. Interchange improvements <sup>2</sup>	7.0	B04	Coyote Creek Trail (Hellyer Ave. to Anderson Lake County Park)	1.3
H101-14	US 101/Tully Rd. Interchange Modifications	22.0	B05	Almaden Expwy. (Ironwood Dr. to Koch Ln.)	2.3
H101-15	US 101 SB Widening from Story Rd. to Yerba Buena Rd.	11.0	B08	McKean Rd. shoulder improvements (Harry Rd. to Bailey Ave.)	5.0
H101-16	US 101/Capitol Expwy. Interchange Improvements	20.0	B28	Almaden Expwy. Bike/Pedestrian Overcrossing	5.7
X01	Almaden Expwy.—Initiate a Caltrans Project Study Report/Project Development Study to reconfigure SR 85/Almaden Interchange <sup>3</sup>	0.0	B29	Branham Ln./ Hwy 101 Bike/ Pedestrian Overcrossing <sup>5</sup>	5.0
X02	Almaden Expwy.—Provide interim operational improvements at SR85/Almaden	2.0	B32	Los Gatos Creek Trail (Reach 4)	4.8
X03	Almaden Expwy.—Widen to eight lanes between Coleman Rd. & Blossom Hill Rd.	8.0	B33	Los Gatos Creek Trail (Reach 5)	6.4
X24	At-grade improvements at SR 17/San Tomas	2.0	S2010	King/Story Roads Smart Corridor	3.0
X29	Capitol Expwy. street improvements—intersection modifications, left-turn lane, carpool lane adjustments, & stripping modifications	2.0	S3001	County of Santa Clara Traffic Operations System Improvements	18.0
X30	Almaden Expwy.—Widen to eight lanes from Blossom Hill Rd. to Branham Rd.	3.2	S4060	Caltrans US 101 Corridor TOS Elements & Ramp Metering <sup>6</sup>	3.0
R06	Chynoweth Ave. extension—east of Almaden Expwy.	15.1	S5004	Silicon Valley - ITS (SV-ITS) Program Upgrades	27.0
R09	Story Rd. improvements between Senter Rd. & McLaughlin Ave.	2.0			
R12	Branham Ln. widening from Vista Park Dr. to Snell Ave.	8.2			
R17	Snell Ave. widening from Branham Ln. to Chynoweth Ave.	3.2			
R18	Lucretia Ave. widening from Story Rd. to Phelan Ave.	9.0			

1. Caltrain service upgrades include track and facility improvements and additional service.
2. Funded by San Jose.
3. Project cannot be funded by fund source. PSR estimated cost \$250,000.
4. Also listed as an ITS project.
5. Also included in the VTP 2030 Livable Communities and Pedestrian Program.
6. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

## Peninsula Gateway

The Peninsula Gateway is the northwestern boundary for travel between Santa Clara County and San Mateo, San Francisco, Marin and Sonoma Counties, as well as other origins and destinations beyond these counties. Current principal roadways include the I-280 and US 101 freeways and El Camino Real. Transit services include SamTrans, Caltrain commuter rail, Dumbarton Express and VTA buses.

### Travel Patterns in 2030

The Peninsula Gateway handles 26 percent of inbound traffic into Santa Clara County and 50 percent of outbound traffic during the AM peak hour. In 2030, more commuters will travel out of Santa Clara County through this gateway (25,300) than enter (20,300). The destination

for inbound trips will be largely in the neighboring Northwest County (13,400 commuters) sub-area. Conversely, trips into the peninsula counties will largely come from the Northwest County, supplying 12,200 northbound commuters.

### Investment Program

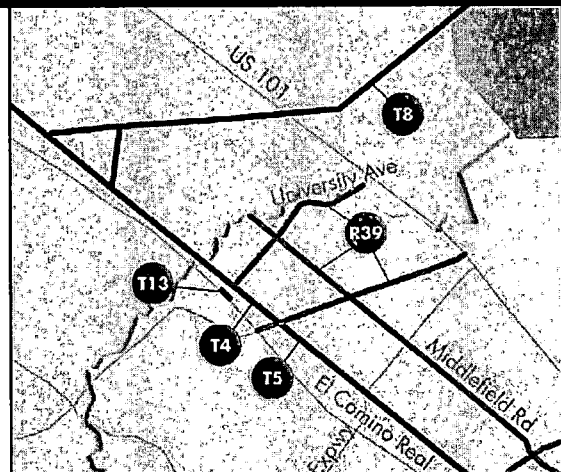
The capital investments in this gateway center around improving transit service and efficiency. Caltrain service upgrades will improve performance, and electrification will make the system quieter and reduce pollution. Dumbarton Rail will offer cross-bay rail transit service. Adjacent to the gateway will be the Palo Alto Intermodal Transit Center — a terminal that integrates bus, pedestrian, bicycle and rail services.

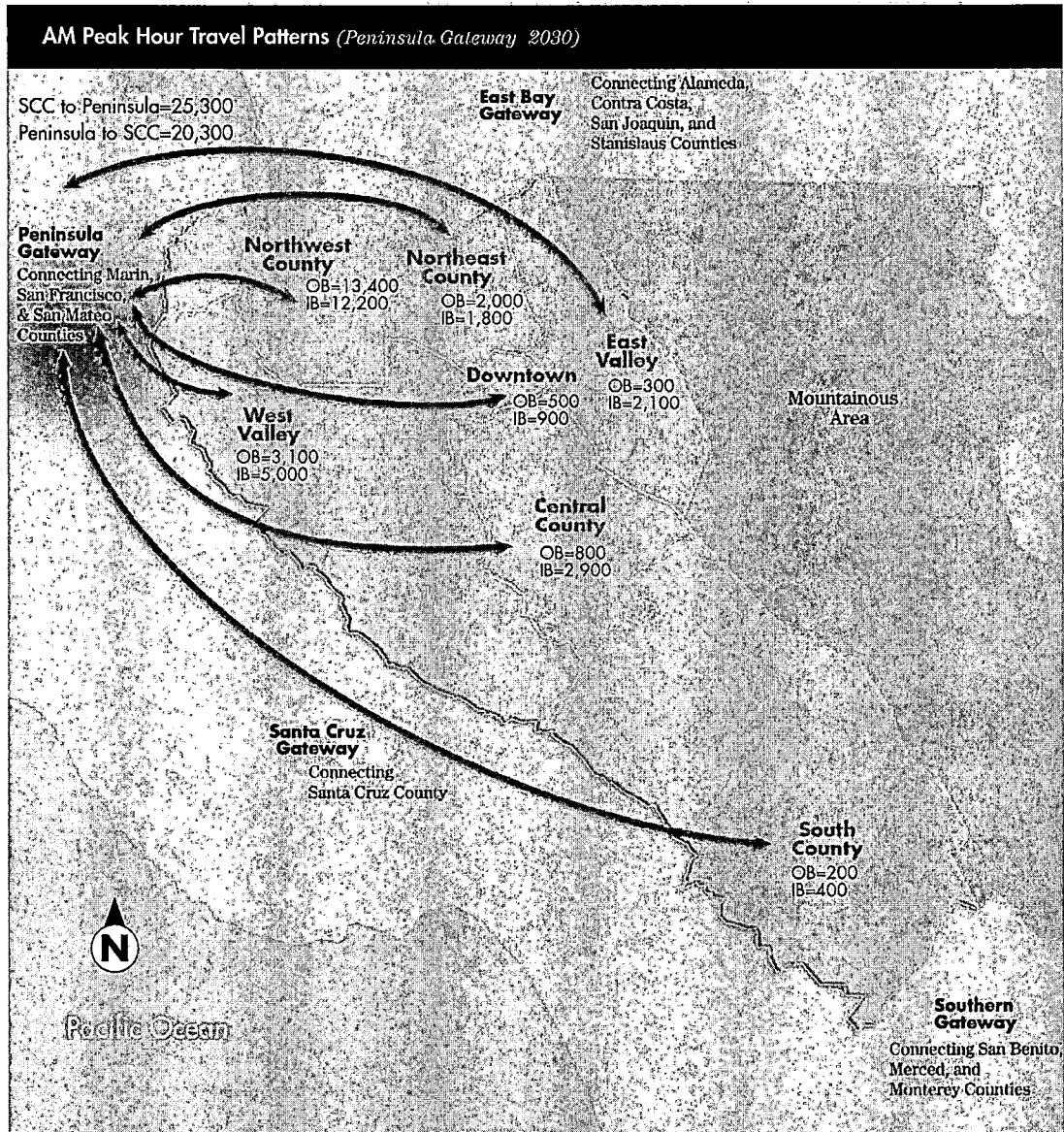
**Table 2-12 VTP 2030 Proposed Projects, Peninsula Gateway**

VTP ID	Project	Cost ('03\$/Millions)
T4	Caltrain Electrification	\$650.0
T5	Caltrain Service Upgrades <sup>1</sup>	171.0
T8	Dumbarton Rail	278.0
T13	Palo Alto Intermodal Center <sup>2</sup>	200.0
R39	Smart Residential Arterials Project <sup>3</sup>	6.2

1. Caltrain service upgrades include track and facility improvements and additional service.
2. Palo Alto Intermodal Transit Center requires additional funds not identified at this time.
3. Also listed as an ITS project.

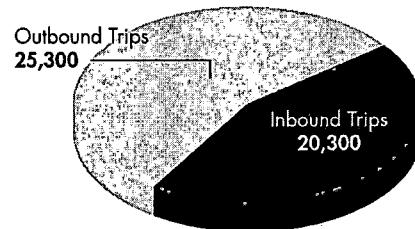
See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.





**Outbound (OB) Trips:** leaving Santa Clara County going through the Peninsula Gateway

**Inbound (IB) Trips:** entering Santa Clara County from the Peninsula Gateway



Source: VTA 2004

## East Bay Gateway

The East Bay Gateway is the northeastern boundary for travel between Santa Clara County and Alameda, Contra Costa, San Joaquin, Napa and Solano Counties as well as other origins and destinations beyond these counties. Principal roadways include I-880 and I-680, and transit services include the Altamont Commuter Express train from San Joaquin and Alameda counties, Capitol Corridor service from Sacramento and Oakland, and VTA bus service.

### Travel Patterns in 2030

The East Bay Gateway will handle 57 percent of inbound traffic into Santa Clara County and 32 percent of outbound traffic during the AM peak hour. In 2030, more morning commuters will enter Santa Clara County via the gateway (45,800) than will leave it (16,600). The destinations for trips into Santa Clara County will largely

be the job-heavy subareas of Northeast County (18,600 commuters) and Northwest County (13,300 commuters). Trips out of Santa Clara County via the East Bay Gateway will originate mostly from the neighboring East Valley (4,300 commuters) and Northeast County (4,100 commuters) subareas.

### Investment Program

The capital investments along this gateway are substantial. Intelligent technologies improvements in the I-880 and I-680 corridors, as well as HOV lane expansion on I-680, will ease the East Bay traffic crunch. A new cross-connector in Alameda County will share the traffic burden of I-680 to I-880 with Mission Boulevard. The extension of BART to San Jose will offer a reliable, high-speed alternative to driving in the corridor, and increase the interconnectedness of the South Bay with its northern neighbors.

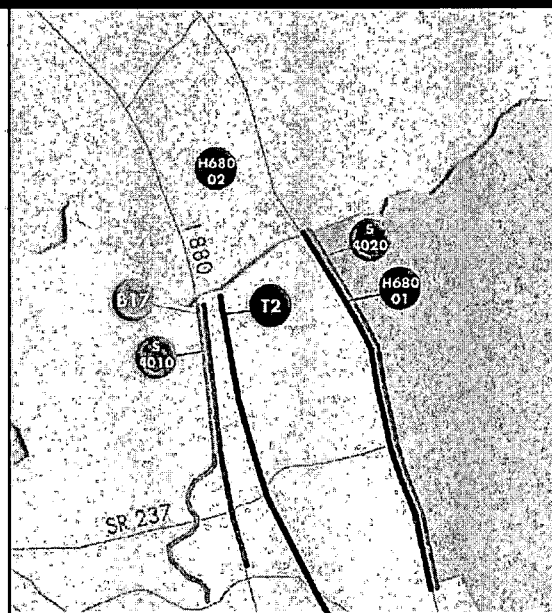
**Table 2-13 VTP 2030 Proposed Projects, East Bay Gateway**

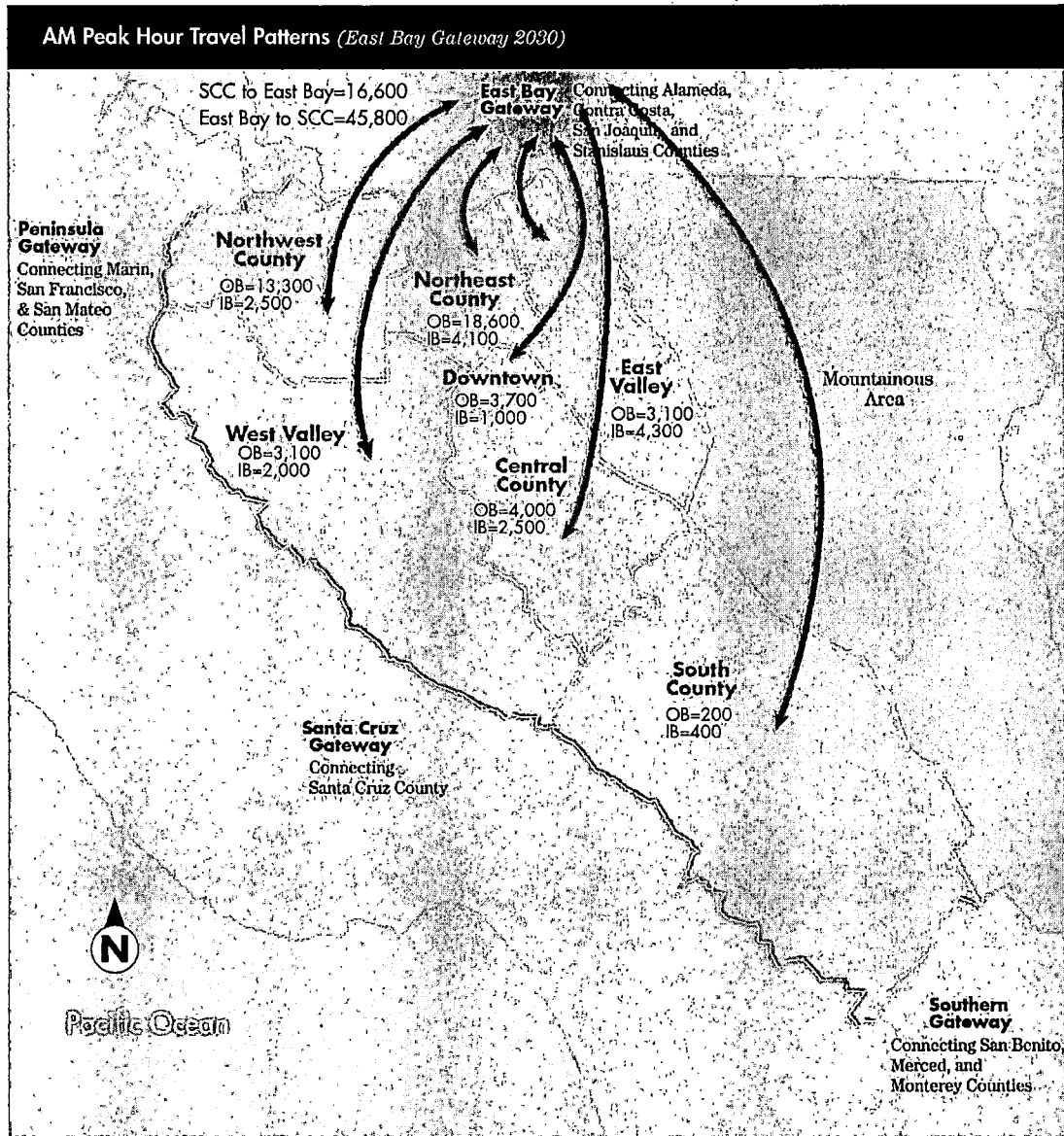
VTP ID	Project	Cost ('03\$/Millions)
T1	Altamont Commuter Express Upgrade	\$22.0
T2	BART	4,193.0 <sup>1</sup>
H680-01	I-680 HOV lanes: Calaveras Blvd. to SR 84	25.0
H680-02	I-680/I-880 cross-connector environmental and conceptual engineering	7.0
S4010	Caltrans I-880 Corridor TOS Elements and Ramp Metering	3.6 <sup>2</sup>
S4020	Smart Residential Arterials Project	5.4 <sup>2</sup>
B17	Coyote Creek Trail Reach 1	1.2

1. Measure A need for the BART project is net of \$649 million in TCRP funds, \$834 Federal New Starts, \$107 Prop. 42, STIP and \$69 million in other funds. Does not assume additional bonding for construction.

2. Covered by project identified in VTA Highway Program.

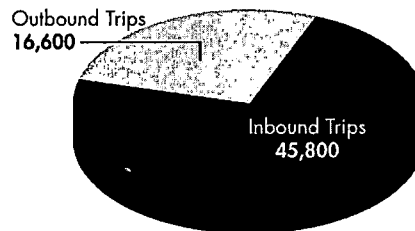
See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.





**Outbound (OB) Trips:** leaving Santa Clara County going through the East Bay Gateway

**Inbound (IB) Trips:** entering Santa Clara County from the East Bay Gateway



Source: VTA 2004

## Southern Gateway

The Southern Gateway is the southern boundary for travel between Santa Clara County and San Benito and Monterey Counties as well as other origins and destinations beyond these counties. Principal roadways include SR 25, SR 152, SR 156 and US 101. Transit service into the county consists of Amtrak and commuter bus services. Caltrain and VTA bus lines provide service north of the gateway.

### Travel Patterns in 2030

The Southern Gateway handles 11 percent of inbound traffic into Santa Clara County and eight percent of outbound traffic in the AM peak hour. In 2030, more morning commuters will enter Santa Clara County via the gateway (8,600) than will leave (3,900). Outbound trips

will be largely headed toward neighboring South County (3,400 commuters) and, notably, Northwest County (1,400 commuters) and Northeast County (1,100 commuters). Two-thirds (1,400 commuters) of all southbound trips out of Santa Clara County originate from neighboring South County cities.

### Investment Program

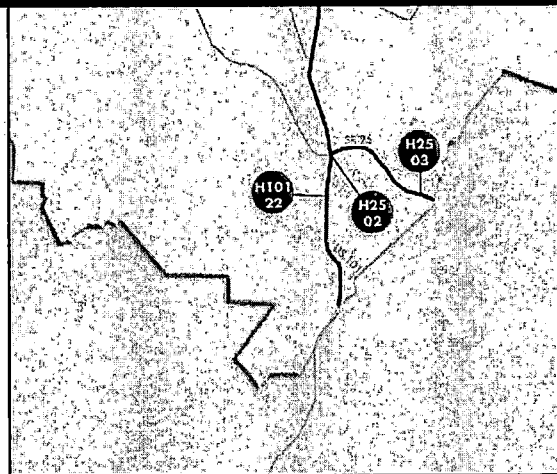
The capital investments along this gateway are centered upon increasing roadway capacity and efficiency between Santa Clara and San Benito County. The expansion of US 101 to an eight-lane freeway will be extended to the county line. SR 25 will be expanded to six lanes. SR 152 will be widened in select areas along with other roadway improvements. Caltrain service will be expanded.

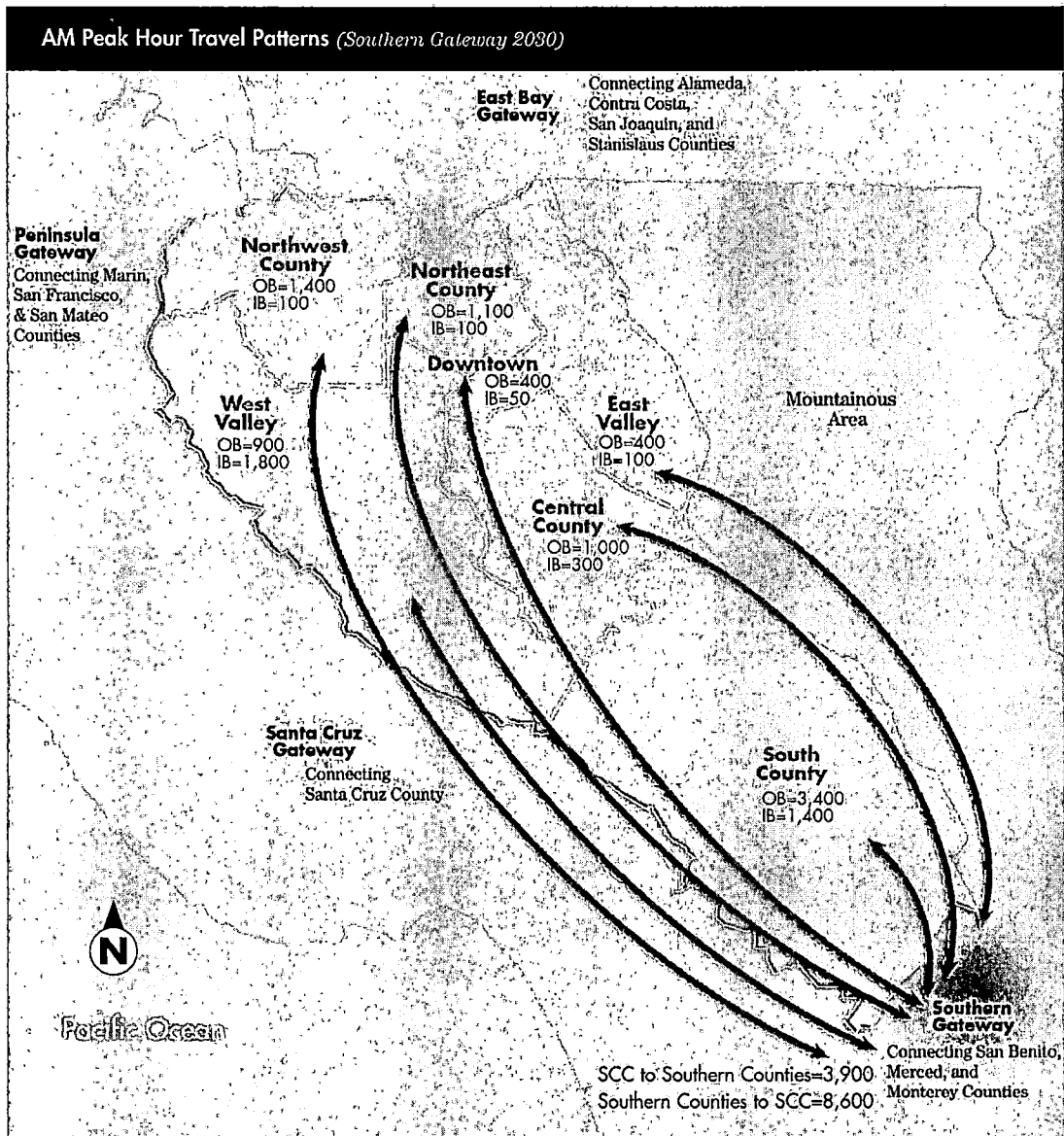
**Table 2-14 VTP 2030 Proposed Projects, Southern Gateway**

VTP ID	Project	Cost ('03\$/Millions)
H25-02	SR25/Santa Teresa Blvd./US 101 Interchange Construction (Includes US 101 widening between Monterey Hwy. & SR 25)	\$70.0
H25-03	SR 25 upgrade to a six-lane facility design	10.0
H101-22	US 101 conversion to four-lane freeway: SR25 to Santa Clara/San Benito County line <sup>1</sup>	140.0
H152-04	SR 152/SR 156 interchange improvements (not mapped)	27.3

1. Funded by ITIP.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

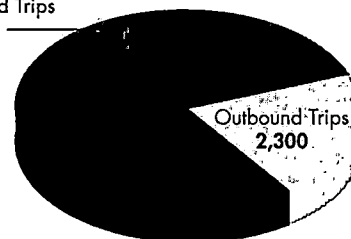




**Outbound (OB) Trips:** leaving Santa Clara County going through the Southern Gateway

**Inbound (IB) Trips:** entering Santa Clara County from the Southern Gateway

Inbound Trips  
8,600



Source: VTA 2004



## Santa Cruz Gateway

The Santa Cruz Gateway is the boundary for travel between Santa Clara County and Santa Cruz County. The principal roadways are Highway 17 and SR 9. Transit service consists of Highway 17 Express Bus service.

### Travel Patterns in 2030

The Santa Cruz Gateway handles six percent of inbound traffic and ten percent of outbound traffic in the AM peak hour. In 2030, more commuters will leave Santa Clara County through the Santa Cruz Gateway (5,100) than will enter (4,500). Outbound trips will be largely headed

toward the West Valley (1,400 commuters) subarea. Outbound trips will originate largely from the West Valley subarea (1,800 commuters) as well as the Central County (1,300 commuters) subarea.

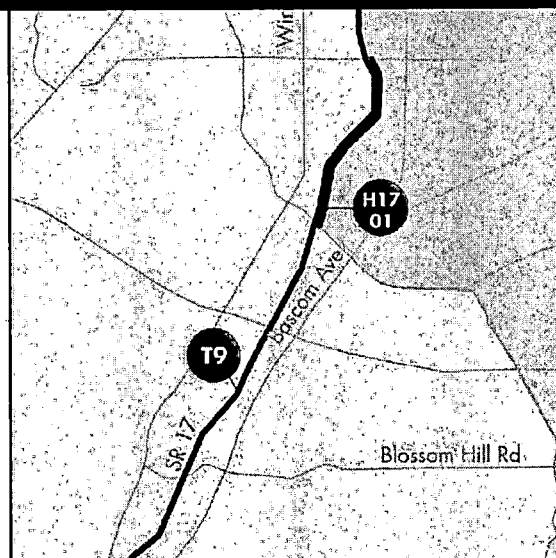
### Investment Program

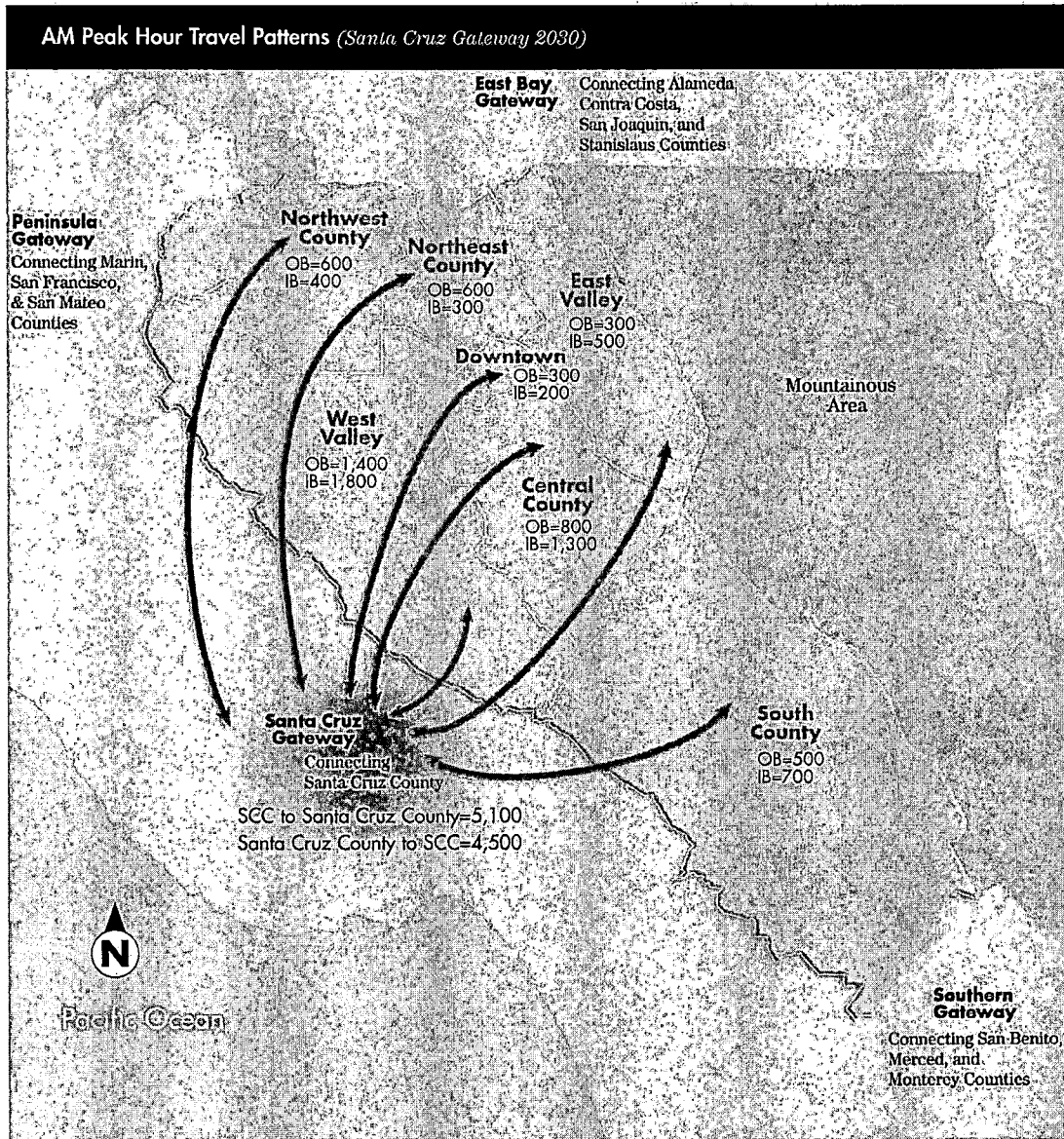
The capital and service investments for this gateway consist of modest service improvements to Highway 17 Express Bus service and minor safety improvements to Highway 17.

**Table 2-15 VTP 2030 Proposed Projects, Santa Cruz Gateway**

VTP ID	Project	Cost ('03\$/Millions)
T9	Highway 17 Bus Service Improvements	\$2.0
H17-01	SR 17 Improvements, NB SR 17 Auxiliary Lane from Camden Ave. to Hamilton Ave.	12.0

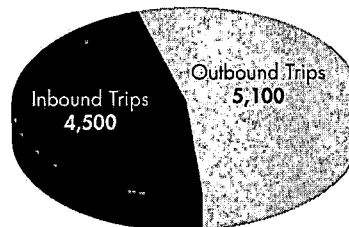
See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.





**Outbound (OB) Trips:** leaving Santa Clara County going through the Santa Cruz Gateway

**Inbound (IB) Trips:** entering Santa Clara County from the Santa Cruz Gateway



Source: VTA 2004

## VTP 2030 PROGRAM AREAS

The VTP 2030 program areas represent a broad range of programs and projects covering four modes of travel: roadways, transit, bicycle and pedestrian. Since the adoption of VTP 2020 in December 2000, VTA and its partners have conducted numerous planning studies to identify transportation needs and define projects throughout the county. Results from these studies have helped to define the program areas and to develop the project lists. Each of the program areas and the VTP 2030 allocations discussed in this section is shown in Table 2-16.

The appendix provides additional information about the project lists presented in this chapter. The additional information may include the project sponsor, the jurisdictions the project affects, and the VTP 2030 project allocation.

**Table 2-16 Program Areas and Fund Allocation**

Program Areas	Fund Allocation (03\$/Millions)
Highway Program	\$766.3
Expressway Program	150.0
Local Streets & County Roads Program	230.0
Pavement Management Program	301.5
Sound Mitigation Program	10.0
Landscape Restoration & Graffiti Removal Program	1.0
Transit Program	6,829.0
Transportation Systems Operations & Management Program	28.0
Bicycle Program	90.5
Livable Communities & Pedestrian Program	120.1

## Highway Program

Planning for the next generation of state highway improvements in Santa Clara County is an evolving process. VTP 2030 continues this process by building upon the highway planning work conducted for VTP 2020.

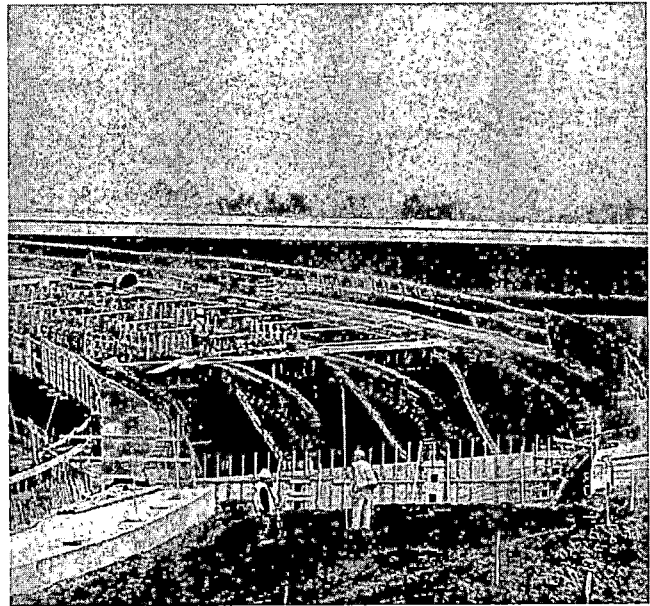
*The VTP 2030 Highway Program fund allocation is just over \$766 million for 40 improvements in all areas of the county.*

One of the key recommendations from VTP 2020 was the need to study county gateways and key highway corridors. As a result, part of the work in developing VTP 2030 Highway Projects involved an evaluation of the county gateways and key corridors within the county to identify, define, and prioritize improvements that relieve congestion, alleviate bottlenecks, and enhance safety.

### Highway Planning Studies

A presentation to the VTA Board of Directors in 2001 identified a series of major freeway corridor studies being conducted by VTA. These included:

- I-680/I-880 Cross-Connector Study
- Southern Gateway Land Use and Transportation Study
- Peninsula Gateway Corridor Study
- SR 152/SR 156 Interchange Study
- US 101 North Corridor Study
- US 101 Central Corridor Study



- SR 85/I-280 Area Study
- SR 237 Corridor Study

The first three in this list are multi-county studies with partnering agencies from outside Santa Clara County. The fourth listed is a focused study of the SR152 / SR156 interchange area that includes conceptual and preliminary engineering of the interchange and approaching highways. The last four studies are for corridors located entirely within Santa Clara County. Each study included traffic operations analysis of improvements for existing and long-term needs, screening of alternatives, preparation of conceptual geometric and operational plans, preparation of preliminary cost estimates and development of construction phasing strategies.

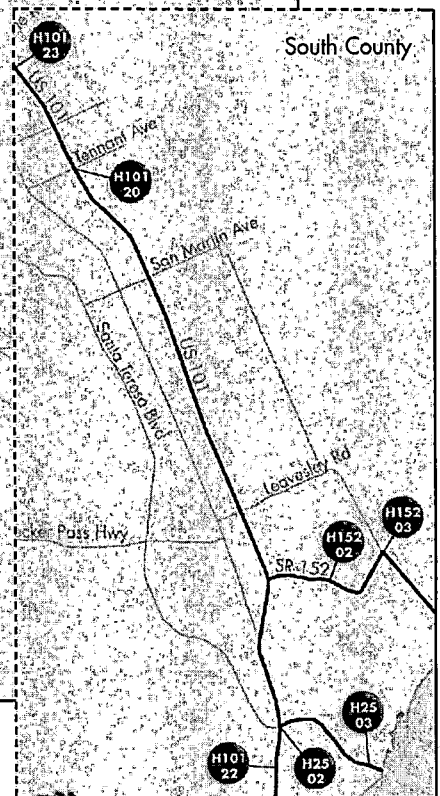


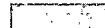
Table 2-17 Highway Projects (projects with funding)

VTP ID	Project	Cost ('03\$/Millions)	VTP ID	Project	Cost ('03\$/Millions)
H00-01	High Occupancy Toll Lane Demonstration Project Development (not mapped)	\$5.0	H237-04	SR 237 WB On-ramp at Middlefield Rd.	\$8.0
H17-01	SR 17 Improvements, NB SR 17 Auxiliary Lane from Camden Ave. to Hamilton Ave.	12.0	H237-05	SR 237 WB to NB US 101 Connector Ramp Improvements	8.0
H25-02	SR 25/Santa Teresa Blvd./US 101 Interchange Construction (Includes US 101 Widening between Monterey Hwy. & SR 25)	85.0	H237-06	SR 237/US 101/Mathilda Ave. Interchange Improvements	13.0
H25-03	SR 25 Upgrade to Six-Lane Facility Design	10.0	H237-08	SR 237 EB Auxiliary Lanes from Mathilda Ave. to Fair Oaks Ave.	5.0
H85-02	SR 85 Noise Mitigation between I-280 & SR 87	7.0	H237-09	Lawrence Expwy./SR 237 Auxiliary Lane Improvement	3.0
H85-05	SR 85 NB to EB SR 237 Connector Ramp Improvement	22.0	H237-10	SR 237 WB Auxiliary Lane between Coyote Creek Bridge & North First St.	15.0
H85-09	Fremont Ave. Improvements at SR 85	2.0	H280-05	I-280 NB: Second Exit Lane to Foothill Expwy.	1.0
H85-10	SR 85 Auxiliary Lanes between Homestead Ave. & Fremont Ave.	19.0	H680-01	I-680 HOV Lanes: Calaveras Blvd. to SR 84	25.0
H101-06	US 101 SB/Trimble Rd./De La Cruz Blvd./Central Expwy. Interchange Improvements	27.0	H680-02	I-680/I-880 Cross-Connector Environmental & Conceptual Engineering	7.0
H101-07	US 101 Auxiliary Lane Widening: Trimble Rd. to Montague Expwy.	10.0	H880-03	I-880/I-280/ Stevens Creek Blvd. Interchange Improvements—Phase I	14.0
H101-08	US 101/Hellyer Ave. Interchange Improvements <sup>1</sup>	11.0	H85-03	SR 85 Auxiliary Lanes between Fremont Ave. & El Camino Real	48.0
H101-09	US 101/Blossom Hill Rd., Interchange Improvements <sup>1</sup>	7.0	H85-04	SR 85 Auxiliary Lanes between El Camino Real & SR 237 & SR 85/El Camino Real Interchange Improvements	41.0
H101-10	US 101/Mabury Rd./Taylor St. Interchange Environmental & Preliminary Engineering	3.0	H85-06	SR 85 NB/SB Auxiliary Lanes from Stevens Creek Blvd. to Saratoga/Sunnyvale Rd.	25.0
H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Environmental & Preliminary Engineering	7.0	H85-07	SR 85 NB/SB Auxiliary Lanes from Saratoga/Sunnyvale Rd. to Saratoga Ave.	32.0
H101-12	US 101 SB Auxiliary Lane Great America Pkwy. to Lawrence Expwy.	2.0	H85-08	SR 85 NB/SB Auxiliary Lanes from North of Winchester Blvd. to Saratoga Ave.	31.0
H101-14	US 101/Tully Rd. Interchange Modifications	22.0	H101-10	US 101/Mabury Rd./Taylor St. Interchange Construction	40.0
H101-15	US 101 SB Widening from Story Rd. to Yerba Buena Rd.	11.0	H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Construction—Phase I	71.0
H101-16	US 101/Capitol Expwy. Interchange Improvements	20.0	H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Construction—Phase II	10.0
H101-19	US 101 SB Auxiliary Lane Improvement between Ellis St. & SR 237	3.0	H101-17	US 101 SB Braided Ramps between Capitol Expwy. & Yerba Buena Rd.	21.0
H101-20	US 101/Tennant Ave. Interchange Improvements in Morgan Hill	10.0	H101-18	US 101 NB Braided Ramps between Capitol Expwy. & Yerba Buena Rd.	21.0
H101-22	US 101 Conversion to Four-Lane Freeway: SR 25 to Santa Clara/San Benito County Line <sup>2</sup>	140.0	H101-21	US 101/Buena Vista Ave. Interchange Construction	20.0
H101-23	US 101 Widening between Cochrane Rd. & Monterey Hwy. <sup>2</sup>	164.0	H101-27	US 101 SB to EB SR 237 Connector Improvements	55.0
H101-25	US 101 SB Auxiliary Lane Widening: I-880 to McKee Rd./Julian St.	8.0	H237-07	SR 237 EB to Mathilda Ave. Flyover Off-ramp	17.0
H101-26	US 101 NB Auxiliary Lane Widening: I-880 to McKee Rd./Julian St.	9.0	H237-11	SR 237 EB Auxiliary Lane between Zanker Rd. & North First St.	6.0
H152-02	SR 152 Improvements, Traffic Signal at Gilroy Foods/WTI Intersection, SR 152 Widening from Miller's Slough through Llagas Creek Bridges	10.0	H280-02	I-280 NB Braided Ramps between Foothill Expwy. & SR 85	34.0
H152-03	SR 152 Improvements, Intersection Improvement at Ferguson Rd.	1.0	H280-04	I-280 Downtown Access Improvements between 3rd St. and 7th St.	22.0
H152-04	SR 152/SR 156 Interchange Improvements (not mapped)	27.3	H680-03	I-680 NB/SB Auxiliary Lanes from McKee Rd. to Berryessa Rd.	46.0
H237-01	SR 237/El Camino Real/Grant Rd. Intersection Improvements	3.0			
H237-02	SR 237 WB to SB SR 85 Connector Ramp Improvements	18.0			
H237-03	SR 237 Widening for HOV Lanes between SR 85 & East of Mathilda Ave.	36.0			

1. Funded by the City of San Jose.

2. Funded by ITIP.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

 Projects without funding allocations, not mapped

The findings from these studies were evaluated using Board-adopted highway project prioritization criteria. These criteria provided a means to evaluate projects based on congestion relief, safety enhancement, environmental equity, geographic equity, project implementability, and ability of the project to enhance the county's economic health. The results of these studies fed into the development of the VTP 2030 list of highway projects.

### Highway Projects List

The Highway Projects include projects remaining from VTP 2020, projects studied or under study in highway corridor and gateway studies, projects submitted by Caltrans, projects under

development by local agencies and/or VTA, and partner projects under development by neighboring counties.

The resulting VTP 2030 Highway Projects list includes a wide array of projects located along freeway and state highway corridors. The projects include freeway mainline improvements, safety improvements, interchange reconstruction, new interchanges, new high occupancy vehicle (HOV) lanes, freeway-to-freeway connector improvements, intersection improvements along state highways and operational improvements.

### Developing the Constrained and Unconstrained Project List

A total of 62 projects totaling about \$1.9 billion in requests were evaluated using the Board-adopted highway project prioritization criteria. Out of a score of 100, the scoring for projects ranged from 82 to 12, with the scoring criteria favoring larger projects. In order to give consideration to low-cost improvements with high utility, a benefit-cost criterion was also evaluated. This allowed lower-cost projects with higher benefit-cost ratios to rank higher on the final listing of projects.

The constrained list of projects includes 40 projects totaling \$766.3 million in requests (includes \$319.5 million in ITIP funds; see below). Another 17 projects totaling \$540 million are shown as unconstrained projects. The full list of projects with the appropriate dividing lines is provided in

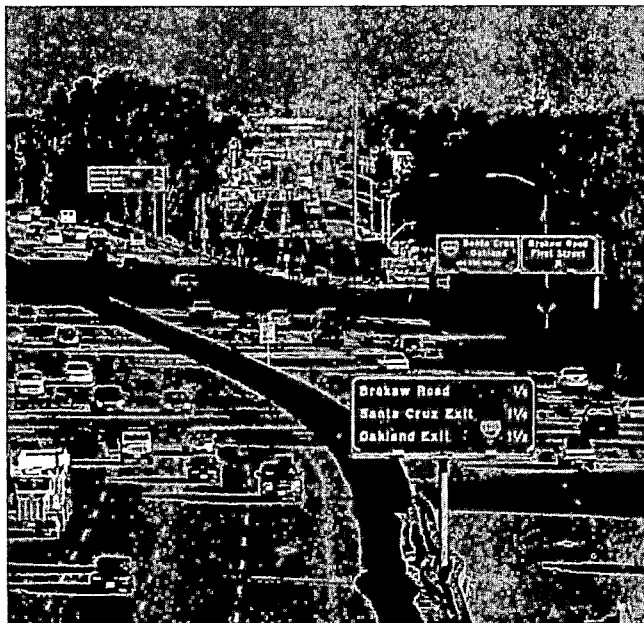




Table 2-17 on page 89. The map of projects on page 88 shows only the 40 constrained projects.

### Special Considerations

*ITIP Projects*—Three projects on the constrained list are proposed to receive \$319.5 million in Interregional Transportation Improvement Program (ITIP) funding. These are the following projects:

- SR 25/Santa Teresa Boulevard/US 101 Interchange construction (including US 101 between Monterey Highway and SR 25)—for the US 101 widening portion of the project
- US 101 conversion to four-lane freeway: SR 25 to Santa Clara/San Benito County Line
- US 101 widening between Cochrane Road and Monterey Highway

The \$446 million in requests approved by the VTA Board of Directors in April 2004 taken with this ITIP request amount comprise the \$766.3 million stated earlier.

*Projects with Known Funding from Other Sources*—Three projects on the constrained list are known to have secured funding from other regional or local sources since this list was presented to the VTA Board of Directors. As a result, they are shown here with a \$0 request amount. These projects are:

- SR 152/SR 156 Interchange improvements—funding from local sources, RTIP and ITIP

- US 101/Blossom Hill Road Interchange improvements—funding from City of San Jose
- US 101/Hellyer Road Interchange improvements—funding from City of San Jose

### *Projects Not on Constrained or*

*Unconstrained Lists*—Five projects are not on the constrained or unconstrained lists. These are projects with high costs that could not be fit into the plan or have unresolved issues. These projects can be evaluated and considered in the next plan update. The five projects are the following:

- SR 152 Corridor New Toll Roadway: US 101 to SR 156—carryover listing from VTP 2020 that has not progressed
- I-880/Kato Road Overcrossing (with connections to Dixon Landing Road and Scott Creek Road)—engineering and conceptual engineering could progress through another listing in the constrained list
- I-880/SR 237 Flyover: Northbound I-880 to Westbound SR 237—dropped from Measure B project due to conflicts with slip ramp from Calaveras Boulevard to SR 237
- I-880 Widening for HOV Lanes from SR 237 to Old Bayshore—high-cost project in a corridor with recent improvements
- SR 17 Improvements: Northbound SR 17 to Northbound SR 85 Direct Connector—former Measure B project lacking the necessary local support



# Expressway Program

## VTP 2030 Expressway Program

Santa Clara County is the only county in the state operating an expressway system through incorporated areas. The purpose of this system is to relieve local streets and supplement the freeway system. VTP 2020 established the need for conducting a comprehensive study of the county's expressways system to identify projects and establish implementation priorities.

In 2001, VTA provided the Santa Clara County Roads and Airports Department with \$2 million to conduct a Comprehensive Countywide

Expressway Planning Study (CCEPS.) This study took two years to complete and culminated in the development of an Implementation Plan that was adopted by the County Board of Supervisors in August 2003. The Implementation Plan outlines expressway system infrastructure needs for a 25-year timeframe, provides a framework for roadway project prioritization, and provides a basis for including projects in VTP 2030 and the Regional Transportation Plan.

The CCEPS Implementation Plan identifies three tiers of roadway projects. The Tier 1 projects address the existing and future needs of level-of-service (LOS) F intersections by providing signal, safety, and operational improvements. The 28 projects identified in Tier 1A address the top priorities for each expressway and improve most of the current LOS and operational problem areas. The CCEPS concluded that most of the projects in Tier 1A can be completed in a three- to six-year timeframe. A complete list of Tier 1A projects is provided on page 95.

## VTP 2030 Expressway Program Fund Allocation

VTP 2030 allocates \$150 million to fund the entire Tier 1A list of projects and the Capitol Expressway Street Improvements identified in the US 101 Central Corridor Study conducted by VTA.



## Expressway Projects/Improvements

### Almaden Expressway

Improvements to Almaden Expressway largely involve relieving congestion near Highway 85. A Project Study Report (PSR) will determine ways of reconfiguring the Almaden/Highway 85 interchange. Additional lanes will be added both north and south of the Highway 85 interchange to reduce congestion and increase throughput.

### Capitol Expressway

Improvements include intersection modifications, left-turn lane, carpool lane adjustments, and striping modifications.

### Central Expressway

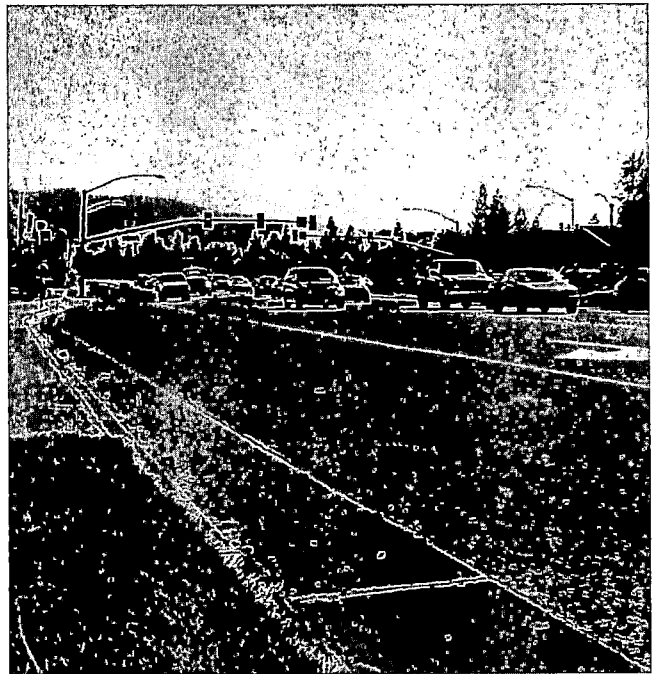
Widening from four to six lanes between Mary and San Tomas Expressways will increase capacity and safety on this heavily used stretch of Central Expressway. Carpool lanes may also revert to mixed flow lanes between San Tomas Expressway and De La Cruz.

### Foothill Expressway

Signal improvements between Edith and El Monte will reduce congestion while a host of bicycle, pedestrian and signal timing improvements are added with the replacement of Loyola Bridge.

### Lawrence Expressway

Optimizing signal timing in the Lawrence/Saratoga area and the Highway 280 intersection



will reduce delays. Limiting the number of neighborhood access points between Highways 101 and 280 will reduce delays from merging vehicles. Additional mixed flow lanes will be added between Calvert and Moorpark/Bollinger. Additionally, a project study report will look at the Lawrence Expressway/I-280/Calvert interchange area.

### Montague Expressway

Improvements include converting HOV lanes between Highways 680 and 880 to mixed flow lanes, and a series of intersection and interchange improvements between Highways 101 and 680.

## Expressway Projects

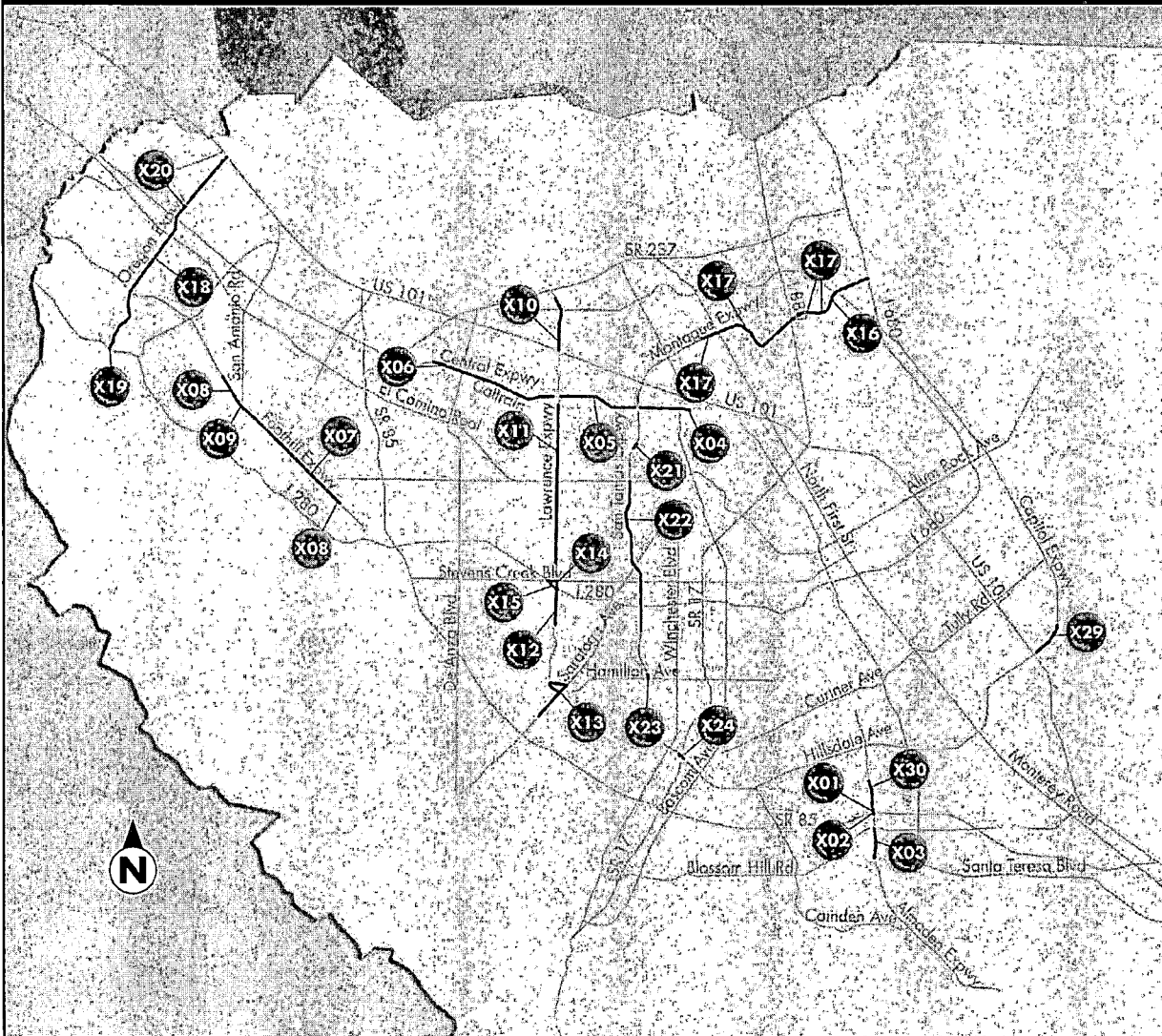


Table 2-18 Expressway Projects

VTP ID	Project	Cost ('03\$/Millions)	VTP ID	Project	Cost ('03\$/Millions)
X01	Almaden Expwy.—Initiate a Caltrans Project Study Report /Project Development Study to reconfigure SR 85/Almaden Interchange <sup>1</sup>	\$0.0	X19	Oregon Page Mill Expwy.—I-280/ Page Mill interchange modification	\$5.0
X02	Almaden Expwy.—Provide interim operational improvements at SR 85/Almaden Expwy.	2.0	X20	Oregon Page Mill Expwy.—Alma Bridge Replacement Feasibility Study	0.3
X03	Almaden Expwy.—Widen to eight lanes between Coleman and Blossom Hill Rd.	8.0	X21	San Tomas Expwy.—Provide additional westbound right-turn lane at Monroe	1.0
X04	Central Expwy.—Convert the Measure B HOV lane widening between San Tomas Expwy. & De La Cruz Blvd. to mixed flow & remove the HOV queue jump lanes at Scott Blvd., if unsuccessful after a three- to five-year trial period	0.1	X22	San Tomas Expwy.—Widen to eight lanes between Williams and El Camino Real	28.0
X05	Central Expwy.—Widen to six lanes between Lawrence and San Tomas Expwys. without HOV lane operations	10.0	X23	San Tomas Expwy.—Provide 2nd eastbound, westbound, and northbound left-turn lanes at Hamilton Ave.	2.0
X06	Central Expwy.—Widen between Lawrence Expwy. & Mary Ave. to provide auxiliary &/or acceleration/deceleration lanes	13.0	X24	San Tomas Expwy.—At-grade improvements at SR 17/San Tomas Expwy.	2.0
X07	Foothill Expwy.—Replace Loyola Bridge	10.0	X25	Expressway Traffic Information Outlets <sup>3</sup>	5.0
X08	Foothill Expwy.—Traffic/signal operational corridor improvements between Edith Ave. & El Monte Ave. including adjacent side street intersections & Grant Rd./St. Joseph Ave.	1.5	X26	Expwy Signal Coordination with City Signals <sup>3</sup>	10.0
X09	Foothill Expwy.—Extend existing westbound deceleration lane at San Antonio Rd.	0.5	X27	Equipment to connect with Sunnyvale, Palo Alto, Mountain View, and Los Altos traffic signal interconnect systems <sup>3</sup>	2.5
X10	Lawrence Expwy.—Convert HOV to mixed flow lanes between US 101 and Elko Rd.	0.1	X28	Upgrade traffic signal system to allow automatic traffic count collection <sup>3</sup>	0.5
X11	Lawrence Expwy.—Close median at Lochinvar Ave. & right-in-and-out access at DeSoto Ave., Golden State Dr., Granada Ave., Buckley St., & St. Lawrence/Lawrence Station on-ramp	0.5	X29	Capitol Expwy. street improvements— intersection modifications, left-turn lane, carpool lane adjustments, and stripping modifications	2.0
X12	Lawrence Expwy.—Widen to 8 lanes between Moorpark Ave./Bollinger Rd. & south of Calvert Dr.	4.0	X30	Almaden Expwy.—widen to eight lanes from Blossom Hill Rd. to Branham Rd.	3.2
X13	Lawrence Expwy: Optimize signal coordination along Lawrence–Saratoga Ave. corridor	0.1	X31	Capitol Expwy.—Interchange at Silver Creek Rd.	55.0
X14	Lawrence Expwy.—Coordinate & optimize signal phasing & timing plans in I-280/Lawrence interchange area	0.1	X32	Lawrence Expwy.—Interchange at Arques Ave. with square loops along Kern Ave. & Titan Way	35.0
X15	Lawrence Expwy.—Prepare Caltrans Project Study Report for Tier 1C project at the Lawrence/ Calvert Dr./I-280 interchange area <sup>2</sup>	0.0	X33	Lawrence Expwy.—Interchange at Kifer Rd.	45.0
X16	Montague Expwy.—Convert HOV lanes to mixed flow use east of I-880	0.1	X34	Lawrence Expwy.—Interchange at Monroe St.	45.0
X17	Montague Expwy.—Baseline project consisting of 8-lane widening and I-880 partial-clover interchange with at-grade improvements at Lick Mill Blvd., Plumeria Dr./River Oaks Pkwy., Main St./Old Oakland Rd., & McCandless Dr./Trade Zone Blvd.	38.5	X35	Montague Expwy.—Trimble Rd. Flyover	15.0
X18	Oregon Page Mill Expwy. corridor improvements	5.0	X36	Montague Expwy.—At-grade improvements at Mission College Blvd. & partial-clover interchange at US 101	11.0
			X37	Montague Expwy.—McCarthy Blvd./O Toole Ave. square loop interchange	60.0

1. PSR cannot be funded by fund source. PSR estimated cost \$250,000.

2. PSR cannot be funded by fund source. PSR estimated cost \$500,000.

3. Project not mapped.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

 Projects without funding allocations, not mapped

### **Oregon/Page Mill Expressway**

Replacing and optimizing signals, installing pedestrian ramps improving pedestrian and bicycle safety and reducing the effects of traffic on adjacent streets will occur. Additionally, improvements to the I-280/Page Mill interchange and an Alma Bridge replacement feasibility study are scheduled.

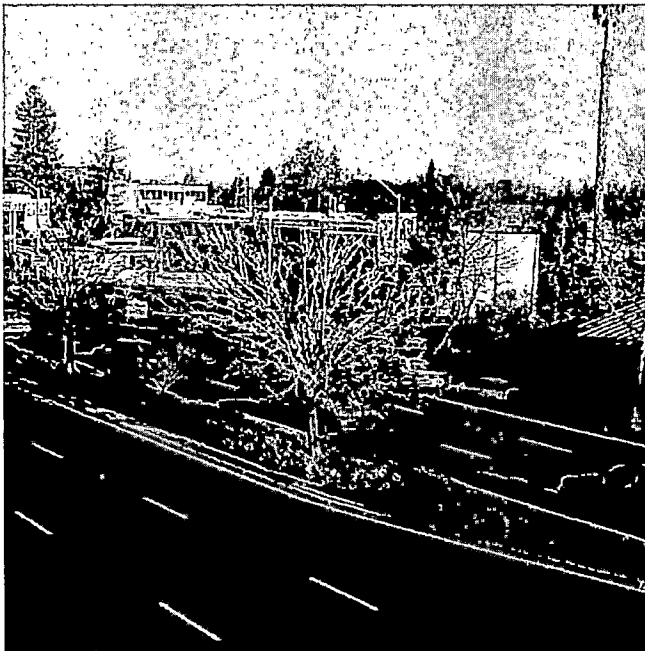
### **San Tomas Expressway**

Widening to eight lanes between El Camino Real and Williams Road as well as a series of additional turn lanes between Monroe Street and SR 17 will increase capacity on one of the most popular expressways.

### **Signal Operations for All Expressways**

Improvements include coordination of expressway signals with signals on perpendicular streets, electronic information signs, advisory radio, cable TV feeds, automatic traffic counts and a web page. These improvements are intended to work together to reduce delay on and around the expressways. Additionally, traffic signal monitoring on the expressways will be interconnected with other programs in Sunnyvale, Palo Alto, Mountain View and Los Altos.

Refer to the Comprehensive Countywide Expressway Planning Study, Implementation Plan, August 19, 2003, for more information on the Tier 1A projects.



## Local Streets and County Roads

The VTA Board of Directors created the Local Streets and County Roads (LSCR) Fund Program with the adoption of VTP 2020 in 2000. This program addresses the difficulties Member Agencies have with raising revenues for local streets and county roads projects not connected to new development projects.

*The VTP 2030 Program Area allocation identifies up to \$230 million for local streets and county roads on the committed project list.*

VTA Staff, working through the Capital Improvement Program (CIP) subcommittee of the Technical Advisory Committee (TAC), developed this list of projects using program eligibility and scoring criteria adopted by the VTA Board. The criteria are based on street connectivity, congestion relief, safety, and the interface between transportation and land use. Another \$58 million in grant fund requests appear on the uncommitted project list.

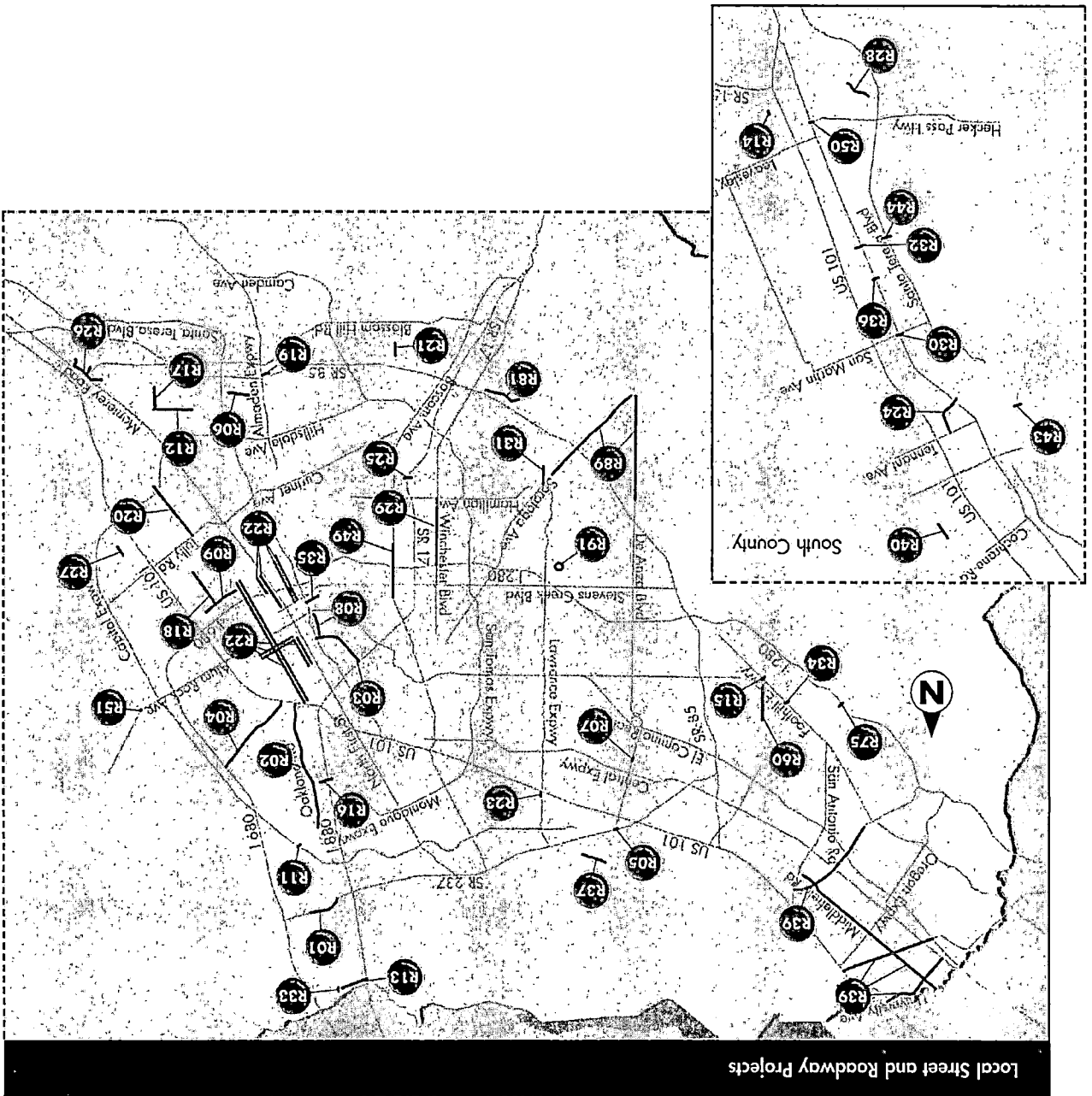
The following project types are eligible for LSCR funds:

- New street connections and extensions, local road crossings of freeways and expressways
- Multimodal reconstruction of streets
- Roadway operational improvements including new lanes, intersection turn lanes, and modern roundabouts



- New or major upgrades of sidewalk and Class II & III bicycle facilities
- Traffic calming measures
- New grade separations at railroads and roadways
- ITS projects and project elements

The complete list of LSCR projects is provided on page 99.



**Table 2-19 Local Streets and County Roads Projects (with allocated funding)**

VTP ID	Project	Cost (‘03\$/Millions)	VTP ID	Project	Cost (‘03\$/Millions)
R01	Calaveras Blvd. Overpass Widening with Operational Improvements	\$40.0	R27	King Rd. Pedestrian Improvement at Barberly Ln.	\$1.0
R02	Oakland Rd. Widening from US 101 to Montague Expwy.	10.0	R28	Uvas Park Dr. Roadway Extension	2.2
R03	Coleman Ave. Widening	14.0	R29	Winchester Blvd. Streetscape Improvement	4.0
R04	Berryessa Rd. Widening from US 101 to I-680	7.0	R30	Railroad Crossing: San Martin Ave. at Monterey Ave.	1.2
R05	Mathilda Ave./SR 237 Corridor Improvements	50.0	R31	Quito Rd. Improvements	1.9
R06	Chynoweth Ave. Extension—East of Almaden Expwy.	15.1	R32	Fitzgerald Ave./Masten Ave. Realignment at Monterey Rd.	0.9
R07	Mathilda Ave. Caltrain Bridge Reconstruction	17.4	R33	Dixon Landing Rd./North Milpitas Boulevard Intersection Improvements	1.0
R08	Autumn St. Extension	10.0	R34	Magdalena Ave. at Country Club Dr. Intersection Signalization	0.4
R09	Story Rd. Improvement from Senter Rd. to McLaughlin Ave.	2.0	R35	Park Ave. Improvement	1.0
R10	Rengstorff Ave. Grade Separation Environmental Documentation <sup>1</sup>	0.3	R36	Railroad Crossing: Church St. at Monterey Rd.	0.5
R11	Montague Expwy./Great Mall Pkwy.—Capitol Ave. Grade Separation	24.5	R37	Java Dr. Bicycle Shared Use Improvements (Class II & III Bike Lanes)	0.4
R12	Branham Ln. Widening from Vista Park to Snell Ave.	8.2	R39	Smart Residential Arterials Project <sup>2</sup>	6.2
R13	Dixon Landing Rd. Widening	0.6	R40	Hill Rd. Extension	5.0
R14	Gilman Rd./Arroyo Circle Camino Arroyo Improvements	7.0	R43	DeWitt Ave./Sunnyside Ave. Realignment at Edmunson Ave.	5.0
R15	Loyola Dr./Foothill Expwy. Intersection	10.0	R44	Santa Teresa Blvd./Fitzgerald Ave. Intersection Signalization	0.3
R16	Charcot Ave. Connection	36.0	R49	ITS Enhancements on Bascom Ave. <sup>2</sup>	0.2
R17	Snell Ave. Widening from Branham Ln. to Chynoweth Ave.	3.2	R50	First St. (SR 152) Roadway Widening: Monterey St. to Church St.	1.2
R18	Lucretia Ave. Widening from Story Rd. to Phelan Ave.	9.0	R51	Alum Rock School District Area Traffic Calming Elements	2.0
R19	Almaden Plaza Way Widening	8.0	R60	Miramonte Ave. Bikeway Improvements	1.0
R20	Senter Rd. Widening Project	6.8	R75	Moody Rd. Improvements	0.2
R21	Union Ave. Widening from Los Gatos-Almaden Rd. to Ross Creek	1.7	R81	Wedgewood Ave. Improvements	0.6
R22	Downtown Couplet Conversions	20.0	R89	Citywide Signal Upgrade Project Phase II <sup>2</sup>	0.5
R23	Lawrence Expwy./Wildwood Ave. Roadway Realignment & Traffic Signal	4.4	R91	Rancho Rinconada Neighborhood Traffic Calming Project	0.1
R24	Butterfield Blvd. Extension	14.0			
R25	Campbell Ave. Bicycle/Pedestrian Improvements	2.0			
R26	Blossom Hill Rd. Bike/Ped Improvements	6.8			

1. Project not mapped.

2. Also listed as ITS project.


See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.



**Table 2-20 Local Streets and County Roads Projects (projects without allocated funding)**

VTP ID	Project	Cost ('03\$/Millions)	VTP ID	Project	Cost ('03\$/Millions)
R38	Martha St. Bicycle/Pedestrian Corridor	\$3.3	R79	Pedestrian/Bicycle Improvements on Alum Rock Ave. South of Miguelita Creek Ped Bridge	\$0.3
R41	Delmas Ave. Streetscape Improvement	0.9	R80	Scott St. Pedestrian Corridor—I-880 to Meridian Ave.	6.0
R42	Bird Ave. Pedestrian Corridor	0.9	R82	Scott St. Pedestrian Corridor	3.9
R45	Reed St. Pedestrian Corridor Project	1.4	R83	Farrell Ave. Bridge Widening	1.5
R46	North 13th St. Streetscape Project	1.6	R84	Citywide Sidewalk Improvements	1.8
R47	Balbach St. Bike/Ped Improvements	1.4	R85	DeWitt Ave. S-Curve Realignment	1.0
R48	Taylor St. Improvement	1.0	R86	Aborn Rd. Pedestrian Improvements at Irwindale	1.0
R52	Sterlin Rd./Shoreline Blvd. Intersection Modification	0.2	R87	Fair Oaks Ave./Arques Ave. Intersection Improvement	0.6
R53	Sunnyvale-Saratoga Rd./Remington Dr. Intersection Improvement	1.2	R88	Wolfe Rd./Kifer Rd. Intersection Improvement	1.2
R54	Auzerais Ave. Bicycle/Pedestrian Improvements	1.9	R90	Washington Ave./Mathilda Ave. Intersection Improvement	1.1
R55	ITS Improvement on Santa Teresa Blvd.	1.0	R92	Mary Ave./Fremont Ave. Intersection Improvements	1.0
R56	Downtown Sunnyvale/Mathilda Blvd.	2.4	R93	McLaughlin Ave. Streetscape Project	1.5
R57	Keyes St. Streetscape Improvement Project	1.5	R94	Calaveras Rd. Improvements	3.0
R58	Mary Ave. Bicycle Improvement	0.3	R95	W. Virginia St. Streetscape & Pedestrian Crossings Project	1.0
R59	Almaden Rd. Improvement—Malone Rd. to Curtner Ave.	2.0	R96	Garden Area Pedestrian/Bicycle Improvements	0.5
R61	Junipero Serra Blvd. Shoulder Widening	0.4	R97	Metal Beam Guardrails on County Roads	0.3
R62	Easy St./Gladys Ave. Intersection Modification	0.3	R98	El Monte Rd./I-280 Improvements	0.2
R63	Mary Ave./Evelyn Ave. Intersection	0.6	R99	Comprehensive Sidewalk Network for Employment Areas	7.2
R64	Mary Ave./El Camino Real Intersections	0.6	R100	Citywide Traffic Calming Program	1.0
R65	White Rd. Streetscape	1.0	R101	Aldercroft Creek Bridge/Old Santa Cruz Hwy.	1.7
R66	Senter Rd. Improvement Project	6.8	R102	Mantelli Dr. Corridor Improvements: Intersections and Traffic Signals	2.0
R67	White Rd. Pedestrian Improvement—Alum Rock Ave. to Mabury Rd.	2.0	R103	Junipero Serra Blvd. Traffic Calming	0.5
R68	Bicycle Boulevard Network Project	0.8	R104	New Pavement Markers and Signs	0.3
R69	McKean Rd. and Watsonville Rd. Left-Turn Pockets & Shoulder Widening	5.0	R105	Citywide Class II & III Bicycle Route Improvements	0.7
R70	Gifford Ave. Streetscape	0.5	R106	Burbank Area Streetlighting Project	0.2
R71	Loyola Corners Traffic Circle	0.5	R107	Countywide Pedestrian Ramps	0.3
R72	Wolfe Rd./Red Ave./Old San Francisco Rd. Intersection Improvement	6.0	R108	Verde Vista Ln. Traffic Signal	0.3
R73	Hyland Area Pedestrian/Bicycle Improvements	0.7	R109	Pedestrian/Bicycle Improvements in the Tbyon Rd. Area	0.8
R74	West San Carlos St. Streetscape Improvement Project	1.4	R110	Oak Place & Highway 9 Pedestrian Signal	0.2
R76	East Hills/Florence Area Bicycle/Pedestrian Improvements	0.2	R111	Herriman Dr. Traffic Signal Project	0.3
R77	Pedestrian/Bicycle Improvements on McKee Rd. between White Rd. and Staples Ave.	0.2			
R78	Pedestrian/Bicycle Improvements in the Mitty Ave./Lawrence Expwy. Area	0.3			

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

 Not mapped

### Roadway Maintenance Programs

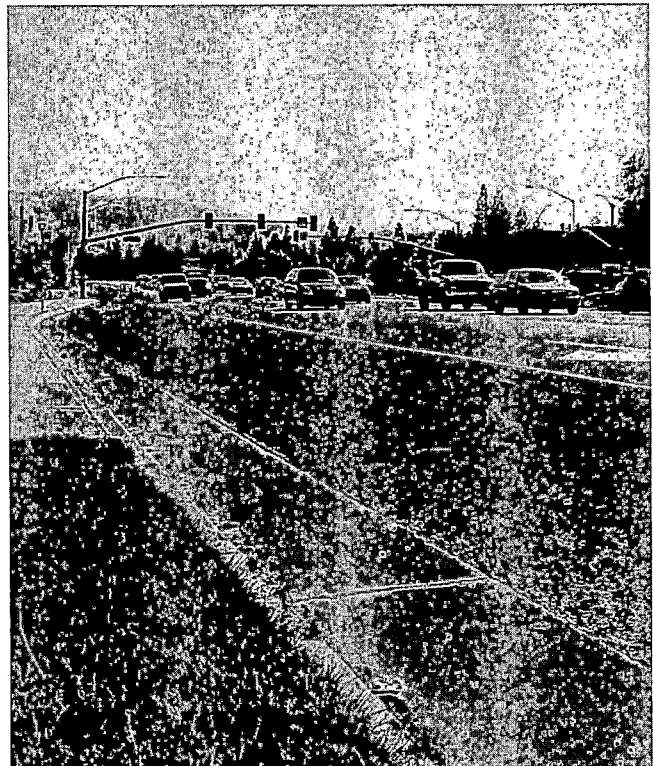
Three VTP 2030 roadway program areas are presented under this heading: 1) Pavement Management, 2) Sound Mitigation, and 3) Landscape Restoration & Graffiti Removal. Project lists have not been developed for these programs. However, VTA will work in partnership with its Member Agencies to identify projects that would be eligible to fund through these programs. Each of these program areas is described below.

#### Pavement Management Program

VTP 2030 identifies up to \$301.5 million for the Pavement Management Program (PMP). This is based on MTC's policies for funding the Local Streets and Roads Rehabilitation shortfall that identified a minimum amount of \$201.5 million based on Santa Clara County's share of Metropolitan Transportation System (MTS) roads and \$100 million from discretionary sources.

Pavement management projects are intended to repair or replace existing roadway pavement from outside edge of curb and gutter to opposite outside edge of curb and gutter. The following types of project expenditures are eligible for PMP funding:

- Roadway reconstruction projects
- Overlay projects
- Pavement maintenance treatments including seal coats and microsurfacing
- Spot repairs
- Curb and gutter repair
- Replacing pavement markings and striping
- Incidental non-pavement repairs (e.g., emergency storm drain repair)
- Bike facilities will be included in the final striping wherever feasible and consistent with local plans
- Fiber-optic cable installation and other ITS elements should be installed in conjunction with these projects
- Projects should include VTA standard concrete pads and provide ADA accessible curbside facilities at bus stop locations



Each city and the county must use a Pavement Management System certified by the Metropolitan Transportation Commission (MTC) to identify and prioritize projects and must have roadway on the Metropolitan Transportation System.

In cases where a jurisdiction has no roadway on the MTS, they may certify that there are not any roads on the MTS and the average pavement condition index (PCI) on the roadway must be below a 70 rating. If it meets those criteria, pavement management funds may be used on Federal aid-eligible arterials and collectors.

Due to the fact the actual funds will not be available for programming until the next VTP Plan Update, there is no pavement management list.

### **Sound Mitigation Program**

With the enactment of Senate Bill (SB) 45, the responsibilities for programming capital projects on State transportation facilities rests largely with local agencies. VTA is responsible for programming freeway sound mitigation projects such as soundwalls in Santa Clara County. The VTP 2030 Expenditure Plan identifies up to \$10 million for a Sound Mitigation Program. Funds for the sound mitigation program can only be used for retrofit sound mitigation projects on existing freeways and expressways. Retrofit projects are sound mitigation projects in locations where no new changes to the freeway or expressway are planned.

There is no compiled list of sound barrier and soundwall projects. However, VTA staff, working with the Capital Improvement Subcommittee of

the Technical Advisory Committee, have developed a process for identifying projects that would be eligible to fund through the Sound Barrier Program. The policies and procedures will:

- Provide basic sound mitigation for residential, educational, recreational, and community/cultural facilities
- Give priority to the most severely affected first, based on decibel level
- Give priority to the longest affected site first, based on the date that the need was first formally identified and verified
- Consider geographic equity in sound mitigation funding decisions

Eligible projects for the program are new soundwalls on existing freeways and expressways and new State and/or Federally eligible sound mitigation on existing freeways and expressways. These projects must meet VTA's Basic Noise Mitigation Standard, must be eligible for STIP funds, and a Noise Barrier Summary Scope Report (NBSSR) or equivalent must be complete.

### **Landscape Restoration and Graffiti Removal**

The VTP 2030 Expenditure Plan identifies up to \$1 million to augment Caltrans efforts to restore freeway landscaping and remove graffiti within the freeway rights of way. These funds will provide "seed" money to develop public/private partnerships to identify funds and develop programs for ongoing landscaping and maintenance efforts.

## Transit Services and Programs

The Capital Investment Program identifies specific transit projects to be implemented during the timeframe of the plan. As shown in Table 2-21 on page 105, these projects include new light rail extensions, bus rapid transit corridors, new regional rail services, community-oriented bus service operated with small vehicles, and enhanced commuter rail service.

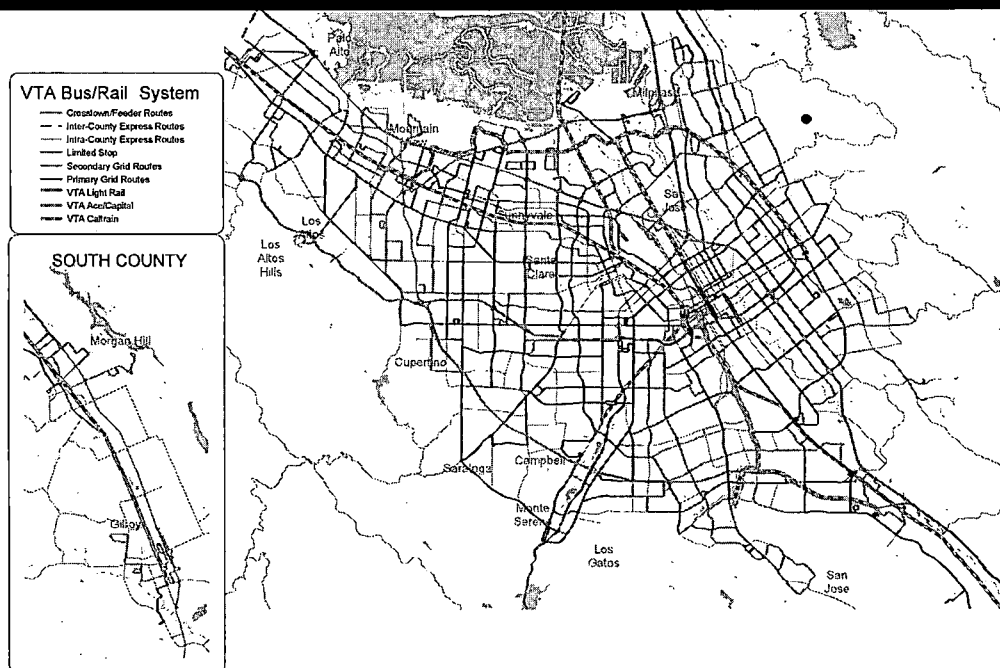
Other transit improvements and programs included in VTP 2030 will provide enhanced transit services throughout the County. This section discusses VTA's current services and plans to enhance and expand them, more defined descriptions of the specific capital projects in the VTP 2030 Capital Investment Program, and the need to secure a new source of

funds to fully implement the 2000 Measure A Transit Program of projects.

### Existing VTA Transit Services

VTA directly provides bus, light rail, light rail shuttles and paratransit services to Santa Clara residents, workers and visitors. VTA also partners with other transit operators to provide commuter rail service, inter-community and inter-county express bus service, and rail shuttles. These services provide important connections to and from Santa Clara County for residents and workers. VTA also funds privately operated shuttles and ADA paratransit services for persons with disabilities. A summary of the directly operated,

#### Existing VTA Transit Services



# VTP 2030 Proposed Transit Projects

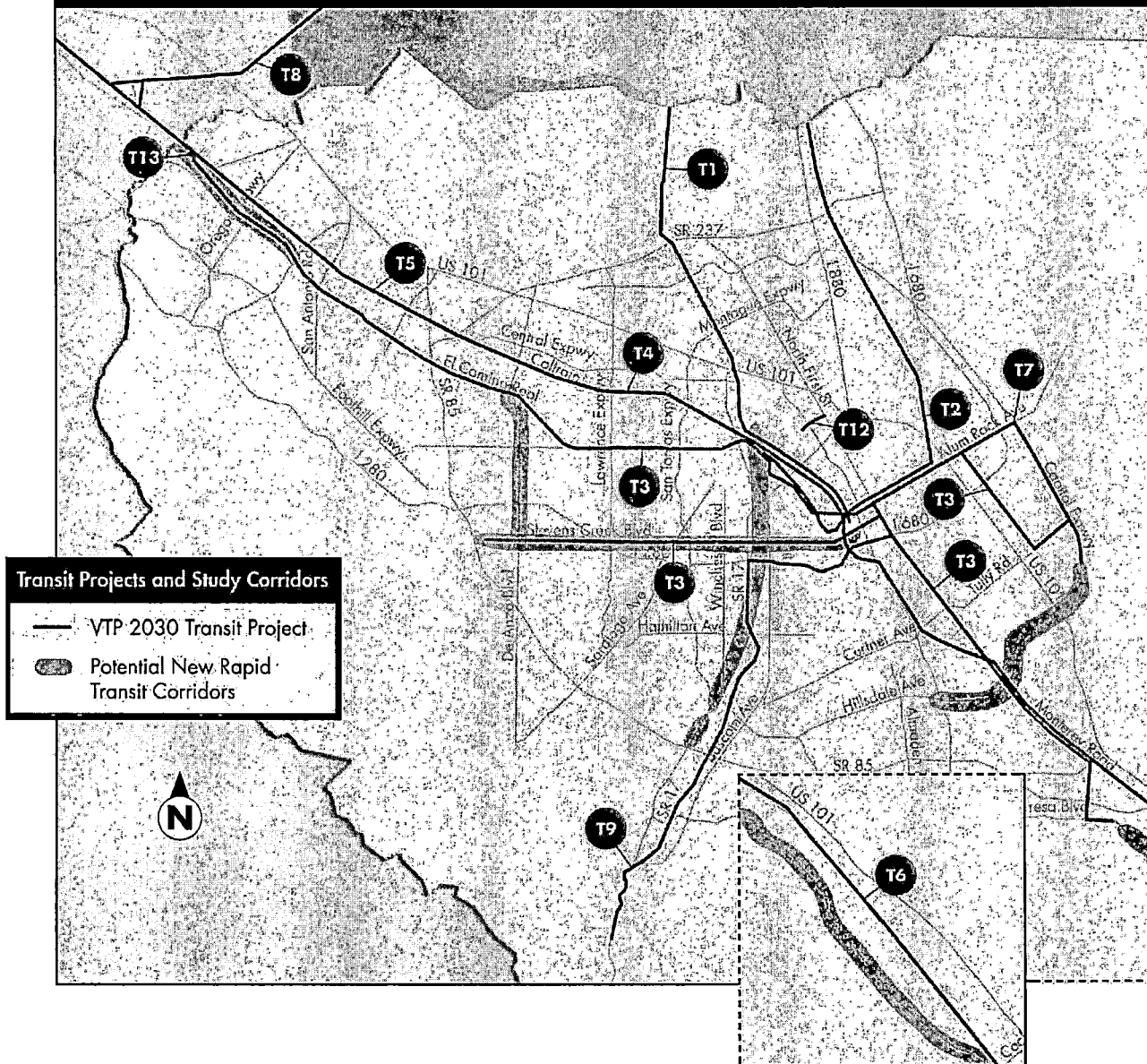


Table 2-21 Transit Projects

VTP ID <sup>1</sup>	Project Name	Total Estimated Cost (‘03\$/Millions) <sup>2</sup>	VTP 2030 Measure A Allocation (‘03\$/Millions) <sup>3</sup>	Funding from Other Source
T0	Operating Assistance 2006–2036	\$1,003	\$1,003	
T7	Downtown East Valley (DTEV)	550	550	
T2	BART to Milpitas, San Jose and Santa Clara	4,193	2,453	1,740
T3	Bus Rapid Transit (Line 22, Monterey, Stevens Creek)	50	33	17
T5	Caltrain Service Upgrades (VTA Share)	171	155	16
T11	New Rail Corridors Study—conceptual alignment evaluations	1	1	
T12	Mineta San Jose International Airport APM Connector	400	222	178
T6	Caltrain—South County	100	61	39
T9	Highway 17 Bus Service Improvements	2	2	
T8	Dumbarton Rail	278	44	234
T13	Palo Alto Intermodal Center	200	50	150
T1	Altamont Commuter Express Upgrade	22	22	
T10	New Rail Corridors—Phase 1	TBD	188	
T4	Caltrain Electrification	650	233	417
T16	Zero Emission Bus (ZEB) Demonstration Program	17		17
T15	New Rail Corridors—Phase 2	TBD		1,031
T16	Zero Emission Buses & Facilities	260		260

1. VTP ID numbers are assigned alphabetically and do not imply any priority order.

2. Revenue projections and project cost estimates presented in the plan are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

3. The VTA Board of Directors adopted the allocations amounts for the projects shown in this table at its April 2004 meeting. These allocations were based on revenue projections developed for the Short Range Transit Plan (SRTP) adopted by the VTA Board in February 2004.

See Appendix for more project detail.



Projects without funding allocations; not mapped.

Table 2-22 Capital for On-Going Operations

Non-Measure A Transit Investments <sup>1</sup>	2005–2030
Revenue Vehicles & Equipment	\$1,045
Operating Facilities & Equipment	159
Light Rail Way, Power & Signal	82
Passenger Facilities	51
Information Systems & Technology	109
Caltrain and ACE Capital Contributions	181
Miscellaneous Projects	4
<b>Total</b>	<b>\$1,631</b>

1. Capital Projects for On-Going Operations do not use Measure A funds and are not mapped.

inter-agency, and contracted transit services is presented in the following tables.

VTA directly operates 69 bus lines and 3 light rail lines, with a fleet of 523 buses and 100 light rail vehicles. About 21 million miles of bus and light rail service is operated annually. During FY 2002/2003, VTA carried about 45 million riders: 39 million on bus and 6 million on light rail.

### Plans for Future Bus Service Improvements

VTA is committed to providing the high-quality transit service its customers expect and

deserve. While VTA has placed bus service expansion plans on hold until the current financial shortage is resolved, several planning studies will be conducted to prepare for expansion as demand for transit services increases. These studies will include market studies to help VTA planners design service for particular market segments, and operational studies to help planners design more effective and productive service.

The VTP 2030 vision for improving bus transit service focuses on system refinements and improved operating efficiency, rather than over-

**Table 2-23 VTA Directly Operated Service**

Service Type	Description	Target Market	Target Improvements
<b>Primary Bus</b>	Primary Bus services include local bus, limited stop bus, neighborhood & feeder routes, and express service. These routes provide daily local service covering the entire service area, including commute services to major employment zones.	Commuters, students, and general purpose trips.	System refinements and improved operating efficiency, improve frequency in major corridors, implement new technologies. Develop BRT and Community Bus services.
<b>Light Rail</b>	Light rail system operating in exclusive right-of-way with trains of 1 to 3 cars, depending upon ridership demand. The current light rail system is 37 miles in length, serving 54 stations.	Commuters, students, and general purpose trips.	Several new rail lines/extensions: Vasona, Downtown/East Valley, and other potential corridors to be studied.
<b>Light Rail Shuttle Bus</b>	VTA and employers co-sponsor commute shuttle routes linking light rail with nearby employment sites. Includes DASH shuttle service in downtown San Jose.	Employees working at companies near light rail stations. DASH serves downtown San Jose, Caltrain and light rail.	Expand program in support of new rail lines/extensions.
<b>Paratransit</b>	Specialized door-to-door transportation for persons who meet the eligibility requirements established by the Americans with Disabilities Act. Paratransit service is provided with taxis, sedans and accessible vans.	Persons with disabilities who are unable to use fixed route bus or rail service.	Manage service to meet increasing demand and continue making station and stop access improvements.

all growth. To get more from existing investments and address specific community needs, VTA will use new technologies, innovative planning and marketing strategies, and smaller-sized vehicles. The vision for these improvements is to develop an expanding ridership base by providing higher-quality, market-oriented service.

VTA continually monitors use of the primary bus network to determine where and when service improvements and expansions may be needed. This information is considered as VTA

develops its biennial ten-year Short Range Transit Plan (SRTTP), and its Annual Transit Service Plans. These plans are used to implement detailed transit service improvements, route changes and refinements, and improve productivity. Until a new source of additional funding can be secured for operations, VTA will have to work within the existing resources it has for operations. This does not mean that VTA will not strive to continue to improve services to its current and potential new customers. To improve bus transit service, VTA will be embarking on the following studies and programs:

**Table 2-24 VTA Inter-Agency and Contracted Services**

Service Type	Description	Target Market	Future Improvements
<b>Caltrain</b>	Joint Powers Board (JPB) operating commuter-oriented rail service providing daily service along the Peninsula between San Francisco and Gilroy.	Commuters and general purpose trips within Santa Clara, San Mateo, and San Francisco Counties.	Expand service with emphasis on Santa Clara County service needs.
<b>Caltrain Shuttle Bus</b>	Joint Powers Board (JPB) and employers co-sponsor commute shuttle routes linking Caltrain stations with nearby employment sites.	Employees working at companies near Caltrain stations.	Expand as new sponsor companies are identified.
<b>ACE Commuter Rail</b>	Commuter-oriented rail service providing daily service between Stockton, Tracy, Livermore, Pleasanton, Fremont, and San Jose. Four trains are operated per weekday.	Commuters.	Expand number of trains in response to ridership demand.
<b>Highway 17 Express</b>	Express bus service operating between Santa Cruz/Scotts Valley and downtown San Jose.	Commuters and San Jose State students general purpose trips.	Expand program in response to ridership growth.
<b>Dumbarton Express</b>	Express bus service operating between Union City, Redwood City, and Palo Alto.	Commuters, general purpose trips.	Expand program in response to ridership growth.



**Table 2-25 Examples of Matching Markets with Services**

Travel Patterns	Typical Attitudes & Preferences	Services
<b>Regional Travel</b>	Sensitivity to travel time Concern for the environment Sensitivity to use of time	Caltrain Express Bus
<b>Sub-Regional Travel</b>	Need for flexibility Sensitivity to transportation costs Sensitivity to crowds and personal safety	Light Rail Bus Rapid Transit Local Arterial Bus
<b>Community-Based Travel</b>	Need for flexibility Sensitivity to transportation costs Sensitivity to crowds and personal safety	Local Arterial Bus Community Bus

- Market Segmentation Study
- Community Bus Service
- Bus Rapid Transit

If additional funding is secured in the future to expand operations and restore transit service, some of the areas of bus service improvements will potentially include the following:

*Headway Improvements*—When financial conditions allow, future service expansion will focus on restoring and improving service frequencies on the bus network, and future headway improvements will move toward filling in the 10/15/30-minute transit networks. It may not be economically feasible to fully achieve these headways, but headway improvements will be pursued, particularly for the grid routes, as funding allows.

*Expanded Service Hours*—When financial conditions allow, expanded hours of service will be

explored for lines with high evening ridership demand, and for lines serving major regional activity locations such as shopping centers, key regional transportation hubs and locations with evening entertainment and cultural or educational activities. These improvements also support welfare-to-work initiatives.

*Improved Commute and Regional Service*—VTA operates a network of commute and regional express routes designed to provide direct service to major employment areas, operate in major commute corridors, utilize commuter lanes whenever possible, and provide an attractive commute alternative that is time competitive to the auto. Regional Express lines also link major regional points and destinations, such as Fremont BART to downtown San Jose. As employment, development, and regional travel increase, the demand for expanded commute and regional service will also increase.

The need to improve and expand this element of transit service will become even more critical, and new strategies, such as BRT, need to be explored.

### Market Segmentation Study

Market segmentation is a sophisticated market research tool used to identify distinct segments in the marketplace to help better understand the values and expectations of these populations. Private sector entities have utilized this kind of analysis for years to identify ways to increase their market share. Using this tool in the public sector, and specifically in transit, is a relatively new development.

From this effort we'll learn:

- Where there are distinct groups (market segments) in the population that share the same set of values
- What attitudes and preferences these groups have regarding different transit options
- What service delivery strategies best match these market segments

An analysis will be conducted linking the results from the three elements of the market segmentation study: identifying attitudes and preferences, developing various transit service options, and identifying travel patterns. This will allow VTA to develop recommended changes to the bus network aimed at capturing a larger market share.



### Attitudes and Preferences

Below are a few examples of attitudes and preferences that could impact a person's decision to use transit:

- What is the need for flexibility in terms of frequency of service and hours of operation?
- How sensitive is the market segment to travel time?
- How sensitive is the market segment to transportation costs?
- Is the main reason for using transit concern for the environment?
- Is there a sensitivity to crowds, personal space and safety?
- Is it important to be able to use the time on transit productively?

### Transit Service Options

Service delivery alternatives will focus on the following travel:

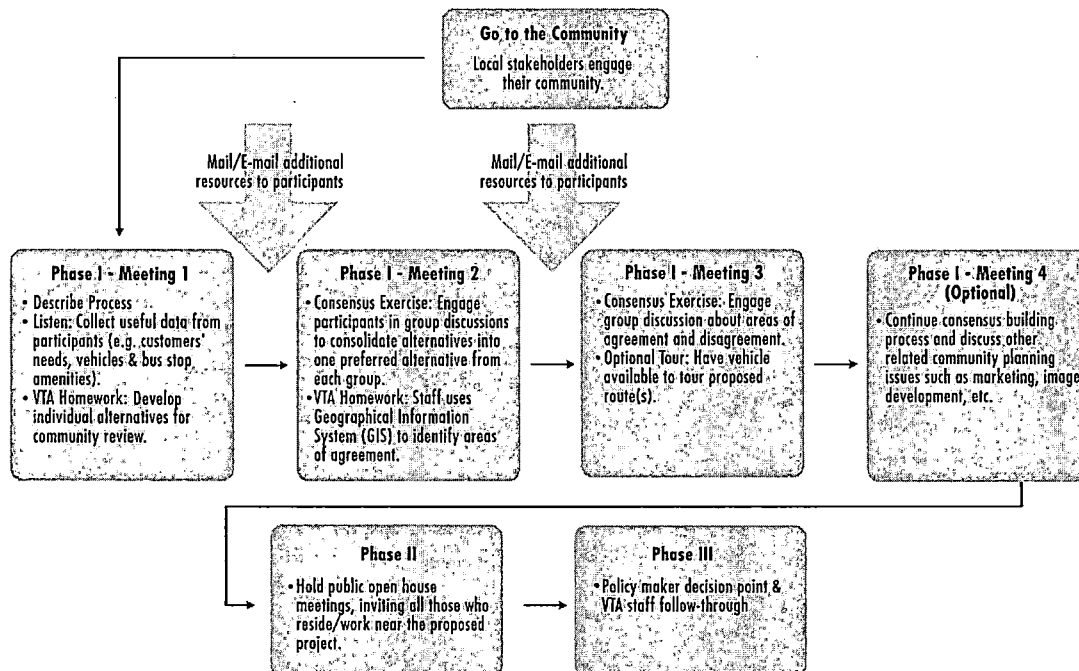
- Regional—travel between VTA's service area and adjoining counties
- Sub-Regional—medium to long distance travel within the VTA service area
- Community-Based—short trips within a localized area

### Market-Driven Services

Below are examples of market-driven services:

- Commuter rail
- Light rail
- Express bus
- Bus Rapid Transit (new)
- Local arterial bus
- Community bus (new)

**Table 2-26 Community-Based Service Consensus-Building Planning Process**



The challenge is to match these basic elements (travel, attitudes, services) in a way that VTA can prioritize the deployment of its resources and maximize its market share. Another dimension to this study will be identifying the origins and destinations of these markets. This can be used to implement new services and/or adjust current services to better meet the needs of the various market segments.

### Community Bus Service

Current development patterns and densities, multiple destinations, and an increasingly diverse population present some unique challenges to daily travels around our valley. VTA has long recognized that a new approach to fixed route services blending standard “big” buses with smaller, “community” vehicles could provide better service for everyone.

This community-based blend of vehicle types coupled with new routings can provide the service and convenience needed to attract new riders. Recognizing these opportunities and community benefits, VTA’s Fiscal Year 2004–2013 Short Range Transit Plan incorporates the use of smaller capacity vehicles beginning in January 2006.

### Community-Based Service

Unlike conventional routes serving longer distances and multiple communities, services designed in the Community-Based Service concept operate with small vehicles along short,

### *Community Bus Service*

#### Key Benefits

- Smaller vehicles more easily navigate in low to medium density areas
- Mobility for all riders is provided through one service, reducing the need for complementary paratransit
- Lower operating cost than traditional fixed route and complementary paratransit
- Can be customized to accommodate unique community needs—not a “one-size-fits-all” model
- Connects to major arterials and other transit hubs



### *Proven Programs in Service*

- Citylink in Abilene, Texas, a 108-square-mile community of 106,000, has ten fixed routes, nine of which will deviate to either specific places or to destinations requested by a rider. Riders must call to request the service 30 minutes before boarding. Most of the requests for deviation come from persons using wheelchairs.
- Madison Mobility in Madison, Wisconsin, has eight service routes, which operate weekdays only, from 7 AM to 6 PM in the community of just under 250,000. The routes will deviate, but only for passengers with disabilities who make the request in advance.
- Omnilink in suburban Washington, DC, operates along five flex-route corridors using 13 peak vehicles. Riders can access the service like a fixed route bus if their origin and destination are near Omnilink stops. If bus stops are not convenient, flexible routing (within one-mile-wide corridors) enables riders to call and arrange for the bus to pick them up or to drop them off closer to their destinations within their neighborhoods. Standing orders for repeat trips are also accepted.

### **Potential Applications in Santa Clara County**

- Areas in West Valley, South County, North County
- Lower density areas
- Areas that would benefit from circulator types of services (e.g., a downtown setting)
- Areas that have significant populations of seniors, disabled, or children

circuitous pathways that match the travel patterns of specific groups in neighborhood-oriented activity spaces. The Community Bus concept is a consensus-driven process that is flexible to meet varying needs in specific neighborhoods.

### **Route Flexibility Options**

- Deviate anywhere along route
- Deviate only to designated stops (e.g., senior centers, hospitals)
- Deviate along some parts of the route, but not others
- Have fixed stops, but deviate anywhere in between stops
- No deviation, providing either fixed route or circulator services

### **ITS Technologies**

- Automatic Vehicle Location (AVL) through the use of global positioning systems
- Mobile data terminals for in-vehicle mapping and on-time performance
- On-line reservations depending on service concept
- Real-time trip information for customers

### **Vehicles**

- Smaller than in typical transit use
- "Branded" to fit the specific character of the community
- Able to accommodate the mobility needs of all customers

### Community Consensus to Build the Service Plan

VTA will use a step-by-step consensus-driven process during which community members, transit planners and other stakeholders meet in working sessions. Each workshop culminates in consensus decisions, first at a strategic level and, ultimately, at the tactical level of routing, scheduling, and vehicle selection. The process is illustrated on page 110.

### Bus Rapid Transit (BRT)

BRT is a newly evolving concept in the provision of transit services. VTA has embraced the concept and has identified three BRT corridors in VTP 2030. The characteristics that distinguish a BRT corridor are described in the sidebar.

The Measure A Transit Program identifies \$33 million for these three BRT corridors: Line 22, Monterey Highway and Stevens Creek Boulevard.

*Line 22 BRT Project*—The current Line 22 provides bus service across the east-west length of the County. VTA supports the continued enhancement of the Line 22 BRT as a participating agency in the Federal Bus Rapid Transit Demonstration Program. VTA is currently developing BRT in the northwest segment of the Line 22 corridor in the cities of Santa Clara, Sunnyvale, Mountain View and Palo Alto. The southeast portion of Line 22 in the Santa Clara/Alum Rock corridor is being studied for

### Characteristics of a Rapid Transit Corridor

- Addresses multiple travel markets throughout the day
- Frequent service of 15 minutes or better
- Upgraded passenger facilities and amenities
- Average speed of 20 miles per hour or greater (including stop times)
- Stop spacing is generally wider, depending on land use patterns and accessibility
- Often supported by exclusive rights-of-way
- Bus preferential traffic treatments



---

BRT as part of the Downtown East Valley Transit Improvement Project.

*Monterey Highway BRT*—The Monterey Highway BRT project is currently in the conceptual design phase to further define specific improvements. The Monterey Highway BRT project includes improvements along a 9.6-mile route (primarily Monterey Highway) from the Diridon Station to the Santa Teresa Station on the Guadalupe Line in South San Jose. The next steps in this process for the projects included in the preferred investment strategy are preliminary engineering, final design, and construction.

*Stevens Creek Boulevard BRT*—Stevens Creek has been identified as a potential BRT corridor and will need to be studied in greater detail to determine its viability for BRT services.

The improvements for these projects are intended to increase carrying capacity, reduce travel times and establish a brand for BRT service. Specific improvements include deploying low-floor vehicles, queue jump lanes, signal prioritization, automated vehicle location technology, ticket vending machines, and improved passenger amenities and security.

### **Bus Fleet Replacement**

At the writing of VTP 2030 there are no bus replacement plans beyond plans stated in 2004 SRTP. Cost estimates for replacement buses programmed in FY 2004 and beyond are based primarily on American Public Transportation

Association (APTA) survey data for 30-foot, 35-foot, 40-foot and 60-foot (articulated) buses. All new VTA buses will be low-floor vehicles using ramps rather than lifts to provide access for the mobility impaired. Additionally, VTA is introducing Zero-Emission Buses (ZEBs). Starting in 2009, 15 percent of full-size (standard) replacement buses will be zero-emission (fuel cell) technology. ZEB costs are assumed to be substantially greater than standard buses.

### **Zero-Emission Vehicle Program**

In December 2000, VTA's Board of Directors selected the low-emissions diesel fuel path in compliance with CARB's Fleet Rule for Urban Transit Operations. The Board further acted to implement a bus procurement program that shifts from a low-emission diesel bus fleet to a zero-emission bus fleet (fuel cell technology) beginning with the purchase of zero-emission buses in 2008.

VTA is proceeding with a demonstration project of fuel cell technology to evaluate the impacts on operation, maintenance, and the public. This demonstration program will be done in conjunction with SamTrans to increase effectiveness. As part of this demonstration project, VTA has purchased three 40-foot low-floor fuel cell powered buses from the Gillig Corporation. In addition to the fuel cell buses, the program includes installation of a hydrogen fueling facility and modification of the Cerone maintenance facility to accommodate the fuel cell buses,

the training of staff, the public and emergency departments, and an evaluation of the overall program.

The Federal Transit Administration approved a Letter of No Prejudice (LONP) in the amount of \$10.5 million on June 29, 2001. The LONP allows VTA to expend local funds for the acquisition of up to seven 40-foot hydrogen fuel cell, zero-emission buses. This approval permits VTA to incur costs for the project and retain the eligibility for future FTA grant reimbursement.

CARB regulations are currently undergoing review and changes may affect VTA's ZEB Program. VTA will monitor this process and take actions accordingly.

### **Light Rail Service Enhancements and Expansion**

#### **Light Rail Extensions**

Several of the light rail extensions presented in VTP 2020 are either already open for revenue service or near completion. The following is a list of the LRT corridors that were programmed and their status:

- Tasman East Corridor Phase I (Baypointe Station to I-880/Milpitas Station, 1.9 miles) opened for service in May 2001
- Tasman East Corridor Phase II (I-880/Milpitas Station to Hostetter Station, 2.9 miles) opened for service in July 2004



- Capitol Corridor (Hostetter Station to Alum Rock Station, 3.5 miles) opened for service in July 2004
- Vasona Phase I (Downtown San Jose to Winchester Station in Campbell, 5.3 Miles) under construction with an anticipated opening date in Summer 2005

### **Potential Future Light Rail Extensions**

#### **Downtown/East Valley (DTEV)**

2000 Measure A identified partial funding for DTEV projects; VTP 2030 includes an allocation of \$550 million. In 2000, the VTA Board



approved a Preferred Investment Strategy for DTEV as follows (project costs are shown in 2003 dollars):

- Light Rail along Santa Clara Street and Alum Rock Avenue at \$298 million (an Enhanced Bus option is estimated to cost \$85 million)
- Light Rail along Capitol Expressway to Eastridge Mall at \$291 million
- Light Rail along the southern portion of Capitol Expressway from Eastridge Mall to Guadalupe LRT/Hwy87 at \$550 million (includes \$118m to extend from Eastridge to Nieman Blvd., \$21m for a storage facility, \$204m for an extension from Nieman Blvd. to Coyote Creek, and \$207m to extend from Coyote Creek to Guadalupe LRT/Hwy 87)
- \$33m for three BRT lines (Monterey Hwy., Stevens Creek Blvd. and Line 22)

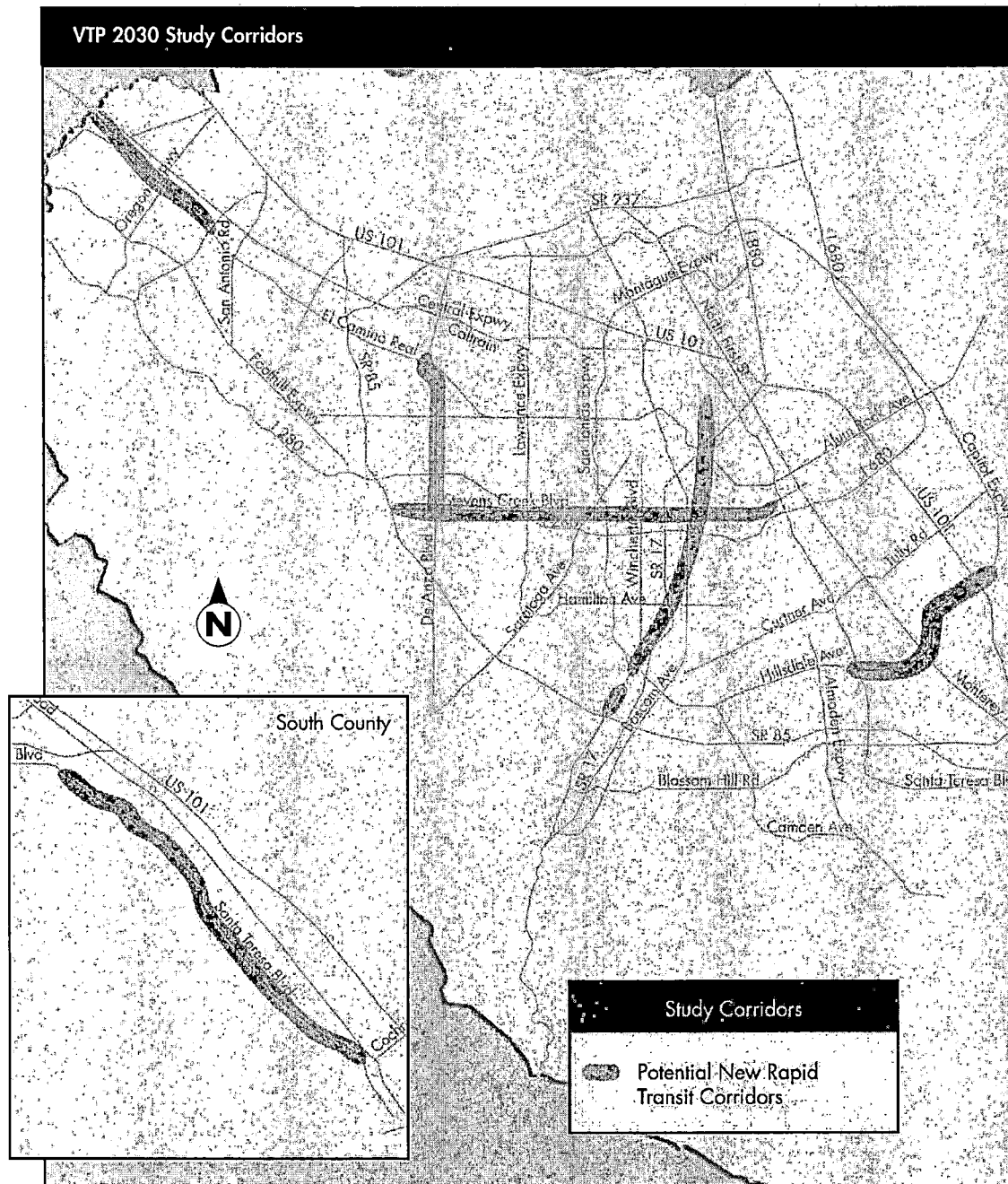
The DTEV corridors are shown on the adjacent map.

The environmental work for DTEV has been divided into two corridors described below:

*Downtown East Valley Capitol Expressway Corridor*—The Capitol Expressway Light Rail Line would extend light rail approximately eight miles from the Alum Rock Station on the Capitol (Avenue) Line along the entire length of Capitol Expressway to the Capitol Station on the Guadalupe LRT Line. This line would operate in a semi-exclusive guideway primarily in the median of Capitol Expressway, and would include grade

separations, park-and-ride facilities, and pedestrian access improvements. The Environmental Impact Report (EIR)/ Environmental Impact Statement (EIS) covers the segments from Alum Rock to Nieman Blvd., including the LRV storage facility. These segments are also undergoing Preliminary Engineering (PE), with anticipated completion in early 2006. The segments from Nieman Blvd. to Guadalupe LRT/SR 87, while not included in the EIR/EIS, will be studied as part of the New Light Rail Corridors Study. Approval of the final EIR/EIS for the Capitol Expressway Light Rail by the VTA Board of Directors is anticipated in 2005.

*Downtown East Valley Santa Clara/Alum Rock Corridor*—The Santa Clara/Alum Rock corridor extends from the San Jose Diridon Station to the Alum Rock Station along the Capitol LRT Line. Two alternatives were selected by the VTA Board of Directors in May 2003 for study in the EIR/EIS, as follows: an Enhanced Bus alternative, which would provide specialized service (limited stop and circulator) tailored to the corridor's transit needs, as well as construction of improved bus stop areas and other corridor enhancements (\$85m); and a Single-Car Light Rail alternative, which would provide light rail service with single-car trains in the corridor (\$290m). The VTA Board of Directors is expected to approve the Final EIR/EIS for the project along with a preferred transit mode alternative in 2005.



### Potential New Light Rail Corridors

VTP 2030 includes \$188 million in capital funds for New Rail Corridors, and \$1 million to conduct a study of the seven potential rail corridors shown below:

- Sunnyvale/Cupertino
- Downtown East Valley extension to Guadalupe LRT Line
- Vasona LRT: Winchester Boulevard to Vasona Junction

- Stevens Creek Boulevard
- West San Jose/Santa Clara
- Santa Teresa/Coyote Valley, and potential extension south to Morgan Hill
- North County/Palo Alto

#### **New Rail Corridors Study**

The New Rail Corridors study will examine the potential benefits and feasibility of building these lines. Elements that may be considered in the evaluation of these lines include:

- System connectivity
- Ridership potential
- Constructability and environmental impacts
- Cost
- Community enhancements

MTA will also be developing a Policy for System Expansion to guide future requests for new transit service. The Transit Expansion Policy would provide criteria for expanding both bus and rail services.

#### **LRT System Enhancement**

Three primary LRT system enhancements are discussed in this plan. They will provide for conversion to low-floor vehicles, overall maintenance of the existing LRT infrastructure and improvement of the LRT infrastructure in the downtown. These programs include:

- Light rail platform reconstruction along the existing Guadalupe corridor to address conversion to low-floor vehicles. As of May 2004, stations north of downtown San Jose have been completed. The remaining stations south of downtown will be upgraded when future funding has been identified.
- Light rail system rehabilitation including the rehabilitation or replacement of the track, overhead contact system, substations and passenger facilities and stations.
- Transit improvements in downtown San Jose to increase LRT speed and operational capacity of the system. Enhancements in the downtown would also serve low-floor LRT vehicles and improve the integration of LRT, bus transit, and future regional rail services.

#### **Commuter and Regional Rail Services Enhancement and Expansion**

MTA currently participates in three inter-county commuter rail services. Improvements to each of these services are included in VTP 2030.

#### **Caltrain**

Caltrain rehabilitation and electrification are the first priority of the Joint Powers Board (JPB) Caltrain Rapid Rail Program. This program provides for the rehabilitation and electrification of the rail line in Santa Clara County from Palo Alto to Gilroy. The VTP 2030 Program Allocation includes \$233 million for the electrification of Caltrain between Gilroy and San Francisco.

The 2000 Measure A program also includes an allocation of \$155 million for Caltrain service upgrades. These upgrades are meant to increase Caltrain service, including the purchase of new locomotive train sets for increased Caltrain service in Santa Clara County from Gilroy to Palo Alto, and to provide additional facilities to support the increased service. An additional \$61 million is allocated for South County Caltrain service expansion, particularly to extend the Caltrain double track from the San Jose Tamien Station through Morgan Hill to Gilroy.

### California High-Speed Rail

The California High-Speed Rail (CHSR) Project is an intra-state rail link currently being planned by the California High-Speed Rail Authority to help meet the anticipated increase in travel demand between the Bay Area and Southern California. The initial phase of the project calls for a 220-mile-per-hour train to connect the Bay Area and the Los Angeles area. Later phases would link Sacramento in the north and San Diego in the south.

Yet to be determined is the Bay Area alignment. Due to public comments received after the release of the draft Environmental Impact Report/Environmental Impact Statement in January 2004, the High-Speed Rail Authority decided in September 2004 to re-examine all potential alignments connecting the Central Valley and the Bay Area. This review is expected to take a year and a half to complete.



VTA strongly supports an alignment that enters the San Francisco Bay Area from the south. Such an alignment should pass through San Jose/Silicon Valley as part of the mainline service. This alignment should work to maximize the ridership of the high-speed rail service and, therefore, its long-term economic sustainability. It should also minimize environmental impacts to the extent practicable by following an existing transportation corridor rather than creating a new one, and by not passing through or under Henry Coe State Park. Furthermore, VTA believes the alignment should continue north following the Caltrain tracks along the Peninsula into San Francisco; such an alignment would help Caltrain achieve several of its long-term goals such as electrification, grade-separating the corridor, and improved travel time.



A bond measure to fund the construction and operation is scheduled to come before California voters in November 2006. VTA will be monitoring the development of this project and considering it in future planning studies. (For more information, see <http://www.cahighspeedrail.ca.gov/>.)

#### **Altamont Commuter Express (ACE)**

VTA provides funding toward the operating and capital costs of ACE commuter rail service through a cooperative agreement with the San Joaquin County Regional Rail Commission and the Alameda County Congestion Management Agency. VTP 2030 includes an allocation of \$22 million to upgrade ACE service—particularly to provide VTA's matching funds for additional train sets, passenger facilities and service upgrades.

#### **The Capitol Corridor**

VTA supports the expansion of the Capitol Corridor rail service from the current eight trips per weekday to the full 14 trips per day in FY 2005. Similar to the expansion in ACE service, VTA will work with partnering agencies and the cities to address the need for station improvements and passenger services that are required as Capital Corridor service is expanded.

#### **Fremont–South Bay Corridor**

The Fremont–South Bay corridor is one of the most congested corridors in the Bay Area. This is a heavily traveled commute corridor serving people living in the East Bay and beyond, who are accessing jobs in the Silicon Valley. Work trip growth in the corridor is expected to increase 30 percent over the next 20 years. In November 1996, the Santa Clara County voters approved Measure A, an advisory ballot measure, containing specific transportation projects including rail improvements in the Fremont–South Bay corridor. In November 2000, 70 percent of the voters in Santa Clara County supported Measure B, a local sales tax measure that commits significant local funding to the Silicon Valley Rapid Transit Corridor, among other transit projects.

#### ***Silicon Valley Rapid Transit Corridor (SVRTC)***

In 2000 and 2001, a Major Investment Study (MIS) of 11 transportation alternatives was completed for the corridor. Alternatives evaluat-

ed included extensions of the Bay Area Rapid Transit (BART) system, light rail, express bus and commuter rail. In November of 2001, the VTA Board of Directors approved an extension of BART to Milpitas, San Jose and Santa Clara as the locally preferred investment alternative in the corridor.

The SVRTC project would extend the BART system 16.3 miles from the future BART Warm Springs station in Fremont to the cities of Milpitas, San Jose and Santa Clara. The alignment follows the Union Pacific Rail Road (UPRR) right-of-way through Milpitas to Santa Clara Street in San Jose. At that point the alignment turns west and proceeds in a tunnel under Santa Clara Street to the Diridon Caltrain station. The alignment then turns north under Stockton Street, surfacing near the San Jose/Santa Clara city limits and proceeding to the Santa Clara Caltrain station.

The extension includes 7 stations: Montague/Capitol, Berryessa, Alum Rock, Civic Plaza/San Jose State University, Market Street, Diridon/Arena and Santa Clara—and one future station (South Calaveras). In addition, a new BART maintenance facility will be built near the Santa Clara station.

The Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIS/DEIR) was circulated to the public in March, April and May of 2004. The final EIR was certified in December 2004, and the final EIS is anticipated

to be certified in early 2007. Preliminary engineering for the project is under way, with a scheduled completion date in late 2006.

The SVRTC is included in the Regional Transportation Plan. The costs of the project are estimated to be \$4.193 billion (in year 2003 dollars). The project is scheduled to be completed in 2015, depending on funding availability. Funding is projected to come from a variety of sources including local sales tax, the governor's Traffic Congestion Relief Program (TCRP) and the Federal 5309 "New Starts" Program.

### **San Jose International Airport Transit Connection**

This project will provide a link to Mineta San Jose International Airport from VTA's Guadalupe Light Rail Transit (LRT) Line on North First Street in San Jose, and from Caltrain and future BART in Santa Clara, using Automated People Mover (APM) technology. It is anticipated that the connection to light rail will occur at the Metro station. The connection to Caltrain and future BART is anticipated along the airport's northern perimeter road as an extension on the airport APM between the centralized terminal and long-term parking garage or in a tunnel under the existing airport runways. It is anticipated that the airport will operate and maintain the APM system. The estimated cost of the project ranges from \$375 million to \$425 million, depending upon specific project alignment and features. Funding for this

---

system would include passenger facility charges at Mineta San Jose International Airport and future sales tax revenues.

### **Dumbarton Rail**

This effort would implement new commuter rail service over the Dumbarton Rail Bridge corridor connecting Union City to select Caltrain stations in San Mateo, San Francisco and Santa Clara counties. The objective of this service is to address the demand for cross-bay trips, easing the traffic congestion in the San Mateo and Dumbarton bridge corridors. Estimated project capital costs are \$300 million, with annual operating costs projected at \$7.5 million.

Next steps in this effort include determination of institutional and funding arrangements, environmental compliance and preliminary engineering and final design, and construction. Funding for the Dumbarton Rail Project would include future sales tax revenues, toll bridge revenue, and other sources from the partnering counties of Alameda and San Mateo. The 2000 Measure A transit program includes a \$44 million allocation for the Dumbarton Rail Project.

### **Facility Rehabilitation and Expansion**

The VTP 2030 facility rehabilitation and expansion program supports the on-going maintenance and delivery of existing services, and the accommodation of the Zero-Emission

Bus (ZEB) fleet. Specific projects within this program include:

- Reconstruction and expansion of the Cerone bus division operation and maintenance facilities to support on-going operations and the ZEB fleet.
- Reconstruction and expansion of Chaboya bus division operation and maintenance facility, and changes to support the ZEB fleet. The cost of this project is under development.
- Construction of a new LRT/bus maintenance facility with capacity to accommodate future LRT and the ZEB fleet. VTA will evaluate the cost of this project as part of a Facilities Master Plan.

### **Transit Centers Program**

Coordinated with the short-range transit services enhancement and expansion planning described previously, VTA will be pursuing a Transit Centers program. Transit centers are most often proposed as joint-venture efforts at key activity centers.

Transit centers fall into two basic types: Major Intermodal Facilities and Transit Centers. Major intermodal facilities provide significant transfer opportunities between commuter rail, light rail, shuttles, VTA buses, other transit operator services, and potentially BART. Transit Centers are at locations with lower, yet still significant, transfer demand.

### Major Intermodal Transit Facilities

Major intermodal facilities are to be developed or improved at:

- Palo Alto
- Diridon Station
- Potential future BART stations

VTP 2030 identifies only the Palo Alto Intermodal Transit Center for development and improvement with potential future intermodal transit facility improvements. The estimated cost of this project is \$50 million, which has been identified from Measure A funds.

Construction for the Palo Alto Intermodal Transit Center is expected to begin in late 2004. This transit center is designed to improve links between Caltrain and bus service, as well as accommodate buses operated by VTA, SamTrans, and the Dumbarton Express, which provides service to and from the Union City BART station in Alameda County. The transit center will also provide convenient connections to Stanford's Marguerite shuttle and Palo Alto's local shuttle system. Project elements include the following:

- Reconstruction of University Avenue bridge connecting with Palm Drive
- Reconstruction and expansion of the Caltrain bridge over University Avenue to include four tracks to allow express train service



- Roadway improvements and creation of park space
- Reconstruction and expansion of bus transit center facilities with provisions for VTA expanded services, Palo Alto shuttles, and the Stanford Marguerite and Caltrain shuttles

With regard to Diridon Station and potential future BART stations, these transit facilities will be further studied for potential multimodal transit facility use and design as funding becomes available.

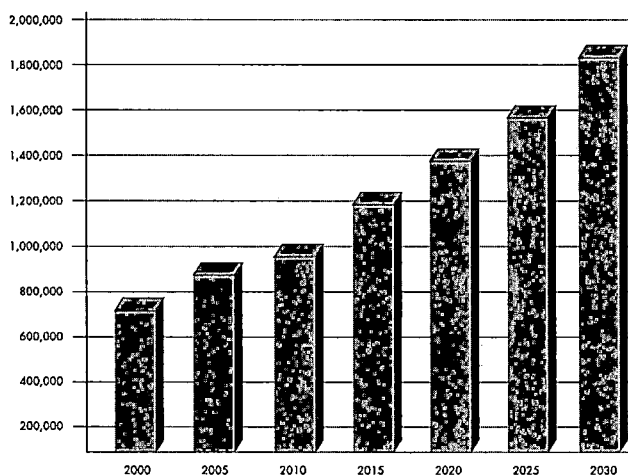
### Transit Centers

Potential locations for future, upgraded, or expanded transit centers include the following:

- DeAnza College
- Eastridge Mall (as part of the Downtown East Valley Capitol Expressway LRT Project).



**Table 2-27 Projected Annual Paratransit Trips**



Other locations will be considered over the life of the plan. The Transit Centers Program will function in parallel with the Community Design & Transportation Program to promote transportation and land use integration.

#### **Community-Based Transportation Studies**

In partnership with MTC, VTA will conduct community-based transportation planning studies in the Gilroy and the East San Jose areas. The goal of the MTC's Community-Based Transportation Planning Program is to advance the findings of the Lifeline Transportation Network Report as adopted by the Commission and incorporated into the 2001 Regional Transportation Plan (RTP). That report identified transit needs in economically disadvantaged

communities throughout the San Francisco Bay Area, and recommended community-based transportation planning to further efforts to address them. Likewise, the Environmental Justice Report for the 2001 RTP also identified the need for MTC to support local planning efforts in low-income communities throughout the region. Each community-based transportation plan will be a collaborative effort involving residents and community-based organizations (CBOs) providing services within minority and low-income neighborhoods.

#### **Services and Programs for People with Special Needs**

Demographic, social and economic changes in Santa Clara County and the region between now and 2030 will continue to urge VTA to look for creative and cost-effective ways to provide programs and services for persons with special needs. There will be more lower-income households, more elderly, and more disabled persons. This section of the plan outlines the programs and services that VTA provides and is exploring to meet the needs of these groups.

#### **Paratransit Services Program**

To allow for access to medical care, jobs, community activities, and other personal errands for persons with disabilities, VTA provides paratransit services that operate throughout the county. Until recently, VTA paratransit usage surged each year, often by double-digit increases.

A recent drop in systemwide ridership has slowed the growth in paratransit ridership; however, long-term growth is still expected to be significant. In 2000, paratransit carried 780,000 trips. During 2004, the Paratransit Program provided about 930,540 trips, and by 2030 it is expected to provide about 1.9 million annual trips. VTA's on-going planning for paratransit seeks to continually refine and improve the service—from both cost efficiency and quality of service perspectives.

To serve this demand for paratransit services and to meet the requirements of ADA, VTA will:

- Ensure that adequate operating funds are set aside to address the demand for ADA paratransit services
- Continue to implement various strategies to improve operational efficiencies and control costs
- Ensure that the existing fixed route bus and rail transit services are accessible, providing a range of choices for people with disabilities
- Assist persons with determining if they are eligible to use the service, and help them apply
- Look at alternative service and delivery concepts that both meet the letter and intent of ADA and ensure quality accessibility for persons with disabilities in Santa Clara County as a part of the short-range planning process
- Conduct a study that looks at all the agencies in the county that receive money for trans-



portation services, and explore opportunities to leverage and build upon those funds with VTA committed resources

### *Planning for Paratransit*

By 2030, the demand for paratransit services may more than double. To plan for this need as well as for near-term increases in demand, VTA will continue to develop short-range and long-range paratransit plans. Most recently, VTA developed a five-phase Paratransit Service Business Practices Improvement (PSBPI) Plan, which identified multiple cost-containment strategies designed to improve VTA's ability to manage costs while maintaining one of the premier paratransit services in the nation. The

first three phases of the PSBPI Plan have been implemented, and the last two are currently under development. All phases of this plan control costs through one of the four following strategies: improving productivity, reducing vendor and broker expenses, managing demand, and increasing revenue.

Future plans, beyond full implementation of the PSBPI Plan, may identify operating costs and capital elements such as Intelligent Transportation Systems, as well as a financial program to address the operating and capital needs.

Finally, the need to design environments for accessibility is key to providing safe transportation for the disability community. VTA's Community Design and Transportation (CDT) Program's Manual of Best Practices for Integrating Transportation and Land Use

addresses the design of transportation facilities. The CDT Manual includes design elements that directly relate to accessibility in the pedestrian environment and to transportation services.

### **Community Bus Program**

VTA is exploring implementation strategies for providing a Small Bus Program. As currently envisioned, the Community Bus would provide transit services that function as neighborhood circulator and shuttle routes. In some cases, buses may deviate from fixed routes to pick up or drop off near main lines of service. This flexible service would have significant benefits for persons with special needs by providing improved transit connections with neighborhoods, activities and services, and by offering lower-cost options to paratransit or taxis. VTA is currently developing draft policies and a procedural framework in preparation for implementation.

### *Program Funding*

As a precursor to full implementation, VTA is pursuing funds from MTC's Access to Mobility Program and Regional Measure 2 funds to implement a Pilot Program. In addition, VTA is investigating possible funds from a variety of sources.

### **Facilities improvements**

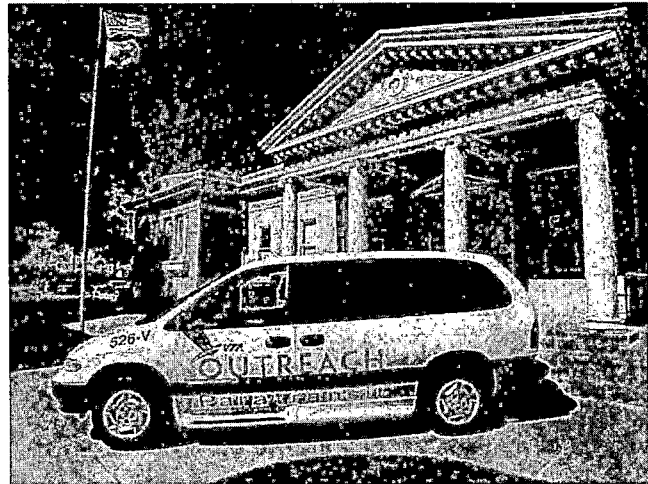
VTA has a number of programs that provide improvements that benefit persons with special needs.



- *Bus stop improvement program.* This program implements ADA requirements at bus stops throughout the county. This is an on-going effort that is continually improving bus stop environments.
- *Purchase of low-floor/kneeling buses.* All buses in VTA's fleet are being converted to low-floor/kneeling buses as part of the on-going fleet replacement program. This conversion is expected to be complete by 2015.
- *Low-floor LRVs.* All new light rail vehicles have low-floor entry that eliminates the need for wayside lifts. This improves access convenience for wheelchair users and persons with mobility impairments, and improves travel times for all riders.
- *LRT Platform Retrofit.* VTA is currently retrofitting its light rail passenger platforms to accommodate the new vehicles. Retrofit is complete on all stations north of the Japantown/Ayer station on the Guadalupe line, and all stations on the Tasman/Capitol line. The platform retrofits on stations south of Japantown/Ayer are scheduled for completion by the end of 2005.

### **Golden Getaway/Giveaway Program**

This program provides door-to-door transit service for a reduced fee to non-profit senior groups throughout Santa Clara County. Buses are scheduled on a first-come, first-served basis on Thursdays, Saturdays, or Sundays. The program objective is to make meaningful connections



with seniors through a wide variety of communication activities to encourage them to ride VTA's fixed route service to their favorite destinations, and to generate a favorable view of VTA's overall service. As part of the program, VTA is available to visit the various sites to give groups a free presentation, which will include travel options for seniors, fare information and trip planning assistance. As an incentive to experience public transportation, VTA is exploring the possibility of implementing a Golden Giveaway Program. This program would hold weekly drawings for a senior non-profit organization to win a free Golden Getaway trip.

### **Information Access Services**

VTA regularly evaluates what information people need about its services and programs, how



people access that information, and explores new ways to provide information. Below are a few of the information services VTA currently offers or has under development.

- VTA has implemented a new “accessibility hotline” to assist paratransit users with determining their eligibility to use paratransit and with signing up for the service.
- Real-time information systems are being implemented in conjunction with the Advanced Communication System (ACS) that VTA has been implementing over the past two years. This program will provide real-time information on next bus arrival times at stations, transit centers and key bus stops.
- VTA participates in the regional “TranStar” trip planning systems sponsored by the MTC

regional partnership. This system provides schedule, travel time and trip-planning information over the Internet.

- VTA provides multi-language call-in lines where people can speak with live Information Service Representatives (ISRs) that assist them with trip planning, fare and schedule information, transfers, and information about the transit system network.

#### **Community-Based Transportation Studies**

In partnership with MTC, VTA will conduct community-based transportation studies in the Gilroy and East San Jose areas. The goal of these studies is to advance the findings from MTC's Lifeline Transportation Network Report adopted by the Commission and incorporated into the 2001 Regional Transportation Plan (RTP). The Lifeline Transportation Network Report identified transit needs in economically disadvantaged communities throughout the San Francisco Bay Area region, and recommended local transportation studies to further efforts to address them. Each community-based transportation study will involve a collaborative approach that includes residents and community-based organizations (CBOs) that provide services within minority and low-income neighborhoods.

## Transportation Systems Operations and Management Program

The Transportation Systems Operations and Management (TSO&M) Program includes projects that use technology to improve the operation and management of the overall transportation system. These new technologies are collectively referred to as Intelligent Transportation Systems (ITS), and include electronics, computer, and communications infrastructure.

Development of the TSO&M Program for VTP 2030 built on work conducted for the development of an ITS Plan for Santa Clara County as part of VTP 2020. The VTP 2030 TSO&M Program development included a review and update of the list of ITS projects from VTP 2020, and the development of a fund allocation strategy for the TSO&M Program. This work was conducted by an ITS task force consisting of staff from both VTA's Member Agencies and regional agencies, including MTC and Caltrans.

The remainder of this section provides overviews of the following:

- Uses and benefits of ITS
- Federal role in funding ITS
- ITS fund allocation plan (expenditure plan)
- ITS projects list
- Status of ITS activities

### Uses and Benefits of Intelligent Transportation Systems

The Santa Clara County ITS Plan organizes ITS applications in eight program areas as follows.

#### *Transit Management Benefit Case Study*

As part of VTA's Line 22 Bus Rapid Transit (BRT) system, priority for buses at traffic signals is being implemented. Equipment costs are estimated at just over \$300,000 for the first two phases, covering about 19 miles of the Line 22 corridor. Other similar projects have yielded travel time reductions for buses of up to 30 percent, requiring fewer buses for improved service.

#### *Traveler Information Benefit Case Study*

The Bay Area's 511 Transportation Information System, sponsored by MTC and San Francisco Bay Area Partners, includes a feature that allows travelers to get current driving times for the freeway by calling 511 or online. This is a voice-activated system that can be accessed simply by dialing 511 from any of the nine counties in the Bay Area, asking for "driving times," and then giving starting and ending point information. 511 information is also available over the Internet at [www.511.org](http://www.511.org).

#### *Transportation Management Benefit Case Study*

The City of San Jose received \$500,000 in TEA-21 funds through MTC's Corridor Management Program to retime 223 traffic lights along travel corridors in San Jose that also extended into the cities of Campbell, Milpitas and Santa Clara. The project resulted in a travel delay reduction of over 30 percent. This improvement in travel time reduced annual fuel cost by over \$900,000 and annual pounds of vehicle emissions by over 100,000—over 180 percent return on investment in the first year alone.

### *Incident and Emergency Management Benefit Case Study*

The Bay Area's Freeway Service Patrol (FSP) Program consists of over 70 trucks patrolling over 450 miles of freeway during the busiest times of the day to assist motorists and to quickly clear traffic accidents. Such accidents are now responsible for over half of all delays on freeways. The FSP trucks feature state-of-the-art, computerized communications and automatic vehicle location systems that contribute to making this one of the more popular services available for freeway travelers.



*photo courtesy of MTC*

### **1. Transportation Management**

The purpose behind transportation management technologies is to use local and regional roadway systems more efficiently by improving systems operation and management. This program area includes traffic signal systems, ramp metering, camera systems, and variable message signs that accomplish the following:

- **Arterial management**—Includes traffic light technologies that allow signal systems to change in immediate response to traffic, and to give priority to emergency and transit vehicles (also a transit management application)
- **Freeway management**—Systems that collect information on current traffic conditions, respond to traffic incidents and manage traffic flow on freeways
- **Roadway-railway crossing safety**—Enhanced warning and barrier systems at rail and road crossings
- **Electronic toll collection**—Systems that allow vehicles to pay tolls electronically and avoid delays at toll plazas
- **Event management**—Systems that manage traffic circulation and parking associated with special events, such as concerts and baseball games

### **2. Transit Management**

Managing and operating transit systems more efficiently and effectively is the goal of this program area. Transit Management projects include automatic vehicle location systems that allow

transit agencies to know the location of all vehicles (resulting in improved fleet management), smart card systems that allow passengers to use multiple transit systems with a single fare card, electronic fare payment systems that allow electronic debit or credit processing of transit fares, and priority for transit vehicles at traffic lights to improve transit service reliability.

### 3. Traveler Information

Providing real-time travel information to the public allows users of the transportation system to anticipate trip times accurately, and to make route, departure time, and mode choices. Real-time information technologies include kiosks and displays at transit stops showing next bus arrival times, pre-trip traveler information with the current roadway conditions on the Internet, and travel time data collection systems.

### 4. Incident and Emergency Management

The use of technologies for incident management allows transportation managers to identify and quickly respond to roadway incidents and enable rapid dispatch of emergency vehicles and personnel. Many of the installations are the same as those for transportation management and also include Freeway Service Patrol and the Smart Call Box programs operated by MTC.

### 5. Commercial Vehicle Operations

Commercial vehicle operations (CVO) use ITS technologies to improve travel time and reliability



for freight traffic and reduce the cost of shipping goods. Development in this program area follows the lead of statewide initiatives. CVO applications include automatic vehicle identification systems, weigh-in motion scales, and satellite tracking of truck traffic.

### 6. Rural Transportation Management

Installation of ITS will follow a focused strategic planning effort to identify ITS for the county's rural roadway system. The most prevalent ITS technologies for rural transportation systems are those providing automated weather and roadway condition advisories and traveler/tourist information.



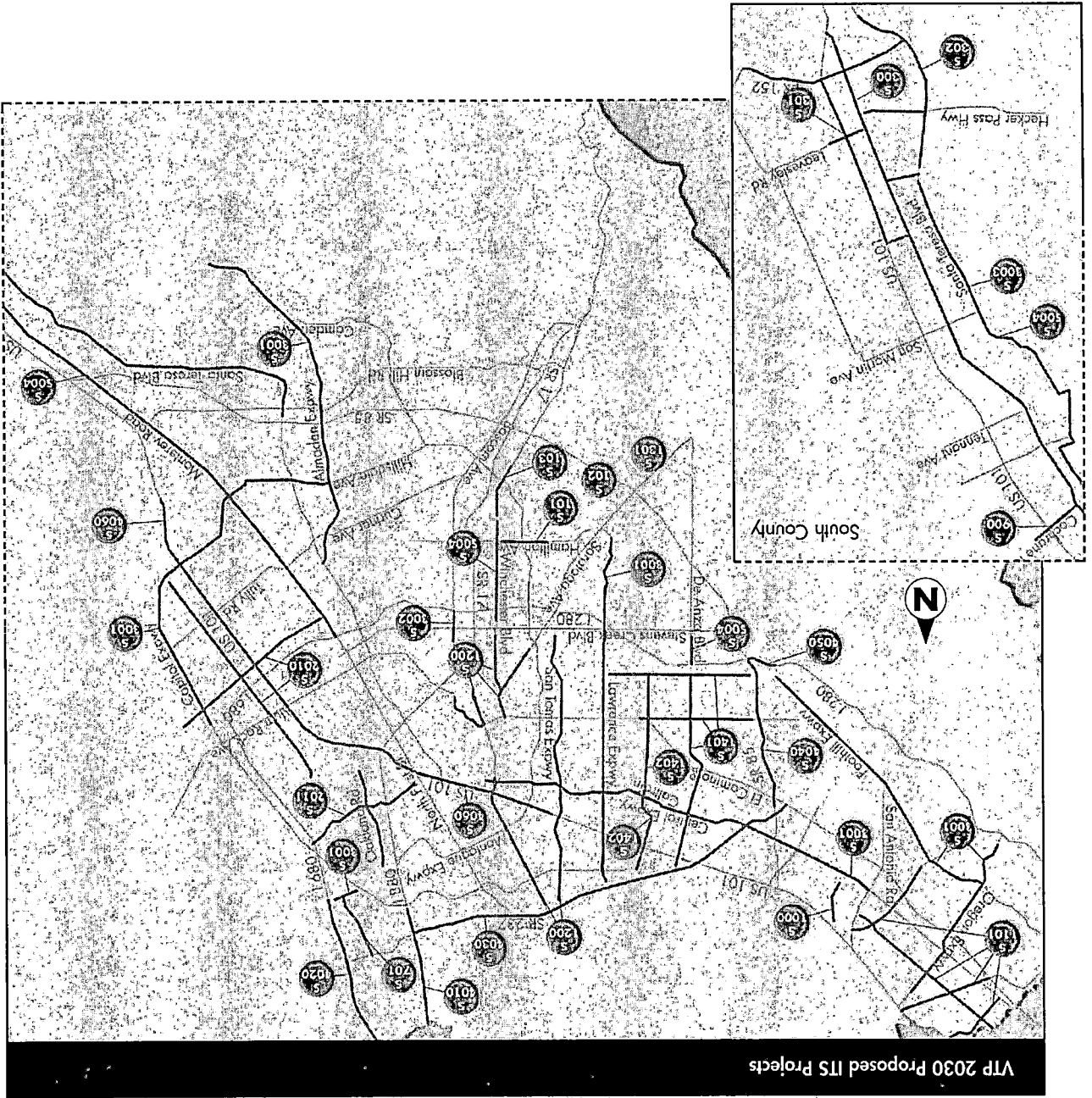


Table 2-28 Intelligent Transportation Systems Projects

VTP ID	Project	Cost (*03\$/Millions)	VTP ID	Project	Cost (*03\$/Millions)
S101	Hamilton Ave. Intelligent Transportation System	\$0.3	S600	Town of Los Gatos Traffic Signal System Upgrade	\$0.3
S102	City of Campbell Traffic Signal System Upgrade	0.3	S702	City of Milpitas Traffic Signal System Upgrade	0.8
S103	Winchester Blvd. Intelligent Transportation System	0.3	S703	City of Milpitas CCTV Camera Deployment on Major Travel Corridors	0.3
S300	City of Gilroy Adaptive Traffic Signal Control System	0.9	S901	City of Morgan Hill Traffic Signal System Improvement	0.4
S301	City of Gilroy Event Management System	0.9	S1201	City of Santa Clara Traffic Signal System Cabinet and Controller Replacement	3.2
S302	City of Gilroy Traffic Signal System Upgrade	3.9	S1202	City of Santa Clara Transportation Management Center Upgrade	0.4
S701	South Milpitas Blvd. Smart Corridor	0.5	S1403	City of Sunnyvale Traffic Signal Controller Update	0.5
S900	Cochrane Ave. Corridor Traffic Signal System Improvement	0.1	S1404	City of Sunnyvale Count & Speed Monitoring Stations	0.9
S1000	Rengstorff Ave. Corridor Traffic Signal System Improvement	0.4	S1405	City of Sunnyvale ITS Communications Infrastructure	1.5
S1101	City of Palo Alto Smart Residential Arterials Project <sup>1</sup>	6.2	S1406	City of Sunnyvale TMC Integration	0.2
S1200	City of Santa Clara Communications Network Upgrade	3.5	S2001	City of San Jose Proactive Signal Timing Program Phase II	1.0
S1301	City of Saratoga Citywide Signal Upgrade Project—Phase II <sup>1</sup>	0.5	S2002	Silicon Valley Sub-Regional Transportation Management Center	7.5
S1401	City of Sunnyvale Traffic Adaptive Signal System on Major Arterials	2.8	S2003	City of San Jose Transportation & Incident Management Center (TIMC)/PD CAD Integration	2.0
S1402	City of Sunnyvale CCTV Camera Deployment	0.6	S2004	City of San Jose Smart Intersections	4.0
S2010	King/Story Roads Smart Corridor	3.0	S2005	City of San Jose Field Equipment Upgrade	3.0
S2011	Brokaw/Hostetter Roads Smart Corridor	2.0	S2006	City of San Jose Transportation Communications Network	9.8
S3001	County of Santa Clara Traffic Operations System Improvements	18.0	S2007	City of San Jose Neighborhood Business District (NBD) ITS Deployment	3.0
S3002	ITS Enhancements on Bascom Ave. <sup>1</sup>	0.2	S2008	City of San Jose Downtown Freeway & Incident Management System	2.0
S3003	ITS Enhancements on Santa Teresa Blvd.	1.0	S2009	City of San Jose Motorists Information System	1.4
S4010	Caltrans I-880 Corridor TOS Elements & Ramp Metering <sup>2</sup>	3.6	S2012	City of San Jose Red Light Running Enforcement Program	0.5
S4020	Caltrans I-680 Corridor TOS Elements & Ramp Metering <sup>2</sup>	5.4	S2013	City of San Jose Advanced Parking Management System	1.5
S4030	Caltrans SR 237 Corridor TOS Elements & Ramp Metering <sup>2</sup>	5.7	S6000	Countywide Ramp Metering Study	0.5
S4040	Caltrans SR 85 Corridor TOS Elements & Ramp Metering <sup>2</sup>	4.8	S6010	Transit ITS	5.0
S4050	Caltrans I-280 Corridor TOS Elements & Ramp Metering <sup>2</sup>	2.2			
S4060	Caltrans US 101 Corridor TOS Elements & Ramp Metering <sup>2</sup>	3.0			
S5004	Silicon Valley—ITS (SV-ITS) Program Upgrades	27.0			
S303	City of Gilroy Flood Watch Cameras	0.5			

1. Also listed as a Local Streets and County Roads project.

2. Covered by project identified in VTA Highway Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

Not mapped

### ***Federal Role in ITS Funding***

On January 8, 2001, the U.S. Department of Transportation published two new documents related to ITS: FHWA's Final Rule and FTA's Policy on the National ITS Architecture. The intent of these documents (Rule/Policy) is to "foster integration of the deployment of regional ITS systems."

The Rule Policy essentially implements section 5206(e) of TEA-21, which requires that all ITS projects funded from the Highway Trust Fund (which includes transit projects funded from the Mass Transit Account) be in conformance with the National ITS Architecture and appropriate standards. So what does this mean for Santa Clara County?

The two main requirements concerning ITS in Santa Clara County are the following: the Bay Area needs to have a regional ITS architecture in place by April 8, 2005 (and major regional ITS projects must be consistent with this architecture); and all ITS projects must follow a systems engineering process.

MTC completed work on a Bay Area regional ITS architecture in June 2004. A copy of the plan is available online at <http://www.iteris.com/mtcits/>.

### **7. Advanced Vehicle Control and Safety Systems**

In-vehicle technologies can provide safety and operational improvements for the transportation system. Efforts include evaluation of on-board technologies for transit vehicles and supporting

private industry development of technology applications for vehicles.

### **8. ITS Planning**

Countywide planning efforts are required to continue defining and developing ITS. ITS planning efforts include the development of a Strategic ITS Master Plan to address institutional issues regarding the application of technologies to transportation, and focused studies of future "smart" corridors.

### **ITS Projects**

The VTP 2030 ITS Plan includes 50 listings of "projects" totaling over \$146 million. "Projects" is in quotes here because some projects may be included in whole or in part in projects found in other program areas, and as such do not represent individual projects in the usual sense.

A map and project listing are provided on pages 130–131. Please refer to the Local Streets and County Roads Program map for the four projects that are included under that program. The cost shown in the listing is the full cost. The listing includes the following:

- Project listings are shown for 11 of the 15 local cities and towns in the county (the cities/towns of Campbell, Gilroy, Milpitas, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga and Sunnyvale, and the Town of Los Gatos).

**Table 2-29** Examples of Matching Markets with Services

Activity	VTP 2020 Description	VTP 2030 Status
<b>Planning Integration</b>	ITS planning should continue to be integrated in the overall transportation planning process. This will lead to improved opportunities to mainstream ITS and to better coordinate ITS implementation.	[Progressing] ITS integration into highway planning started; transit planning includes ITS; integration in local roadway projects is less consistent.
<b>Mainstream ITS in Other Projects</b>	Opportunities to include ITS implementation as part of a capital improvement project should be identified. One example would be the installation of communications infrastructure (e.g., conduits, fiber optics cabling and wireless communications systems) as part of a roadway improvement project.	[Progressing] Mainstreaming of ITS in regional highway and transit projects is under way; ITS projects at the local level are still mainly standalone efforts.
<b>Near-term Emphasis of Basic Elements</b>	In the next five years, basic systems management and operations elements for roadways and transit and communications infrastructure should be implemented and/or upgraded. Examples of such efforts include VTA's installation of a vehicle location system based on a global positioning system (GPS), Santa Clara County's plan to install communications infrastructure on area expressways, and traffic signal system upgrade efforts by local agencies.	[Continuing] VTP 2030 funding allocation strategy emphasizes: projects that improve traffic flow through improved signal operations (e.g., signal systems, ramp meters, signal priority for transit and bicycle detection), countywide operations, maintenance and management program, and systems integration and connectivity.
<b>ITS Policy Discussion Forum</b>	A forum for discussing ITS policy issues should be established. The current proposal is to reconstitute the LOS/Modeling Subcommittee of VTA's Technical Advisory Committee (TAC) as the Systems Management Subcommittee. The Systems Management Subcommittee would be responsible for recommending actions on ITS policy to the TAC. This would be in addition to the current responsibilities of the LOS/Modeling Subcommittee. Other options should be explored.	[Completed] VTA's LOS/Modeling Subcommittee has been reconstituted as the Systems Operations and Management (SOM) Subcommittee. This subcommittee has taken on the task of recommending countywide actions related to ITS planning.

**Table 2-30 Examples of Matching Markets with Services** *(continued)*

Activity	VTP 2020 Description	VTP 2030 Status
<b>Funding for Operations and Management</b>	Providing funding for systems operations and management is key to successfully implementing ITS. New technologies and the implementation of integrated ITS elements bring with them new requirements in skills, in the training of personnel, in operations, and in maintenance. The specific needs in these areas as they pertain to ITS are still being identified, but it should be expected that new requirements would need to be considered.	[Early Planning] VTP 2030 recommendation includes an allocation of \$5.6m for a county-wide ITS operations, management and maintenance program managed by VTA.
<b>Expand Silicon Valley ITS Program Coalition</b>	A partnership formed to implement the Silicon Valley Smart Corridor project has expanded into the Silicon Valley-ITS (SV-ITS) Program. The SV-ITS Program is currently working to implement three additional ITS projects. The project delivery process supported by the SV-ITS Program could be used to implement future ITS projects. This could include projects that cross county lines and involve integration of transit operations with roadway systems.	[No Progress] Due to budget constraints, main emphasis has been to complete projects already under way. New work has mainly focused on developing a Communications System Master Plan for the program.
<b>Develop Partnerships</b>	Development of partnerships with private and other public sector entities is encouraged. Partnerships with the private sector can provide financial and technical resources that may not be otherwise available to a public agency.	[No Progress] OUTREACH, VTA's countywide paratransit service provider, has a demonstration project for providing traveler information. It is scheduled to be showcased at the 2005 ITS World Congress held in the Bay Area.
<b>Resolve Institutional Questions</b>	Create or designate an organization, recognized by the participating public agencies, to manage the overall planning and deployment of ITS in Santa Clara County.	[No Progress] Institutional issues are still resolved by individual agencies on a case-by-case and as-needed basis.

- Project listings are also shown for the County of Santa Clara, VTA, Caltrans, and the Silicon Valley ITS (SV-ITS) Program.
- The county, SV-ITS Program, and VTA entries each contain multiple projects.
- The Caltrans entry is composed of multiple projects that are incorporated into highway projects listed in the Highway Program.
- Four ITS projects appear under the Local Streets and County Roads Program, where they were selected for programming.

When ITS projects in other program areas are considered, the cost of all remaining projects in the plan is just over \$114 million. Assuming a local matching contribution of 20 percent, the request amount is just over \$91 million.

The VTP 2030 allocation amount for the TSO&M Program is \$28 million. The approved allocation strategy for this funding level is as follows:

- Projects that improve traffic flow through improved signal operations for local roadways/expressways, freeways (ramp meters), transit (priority treatment at traffic signals) and bicycle traffic (bicycle detection and signal timing) are the first priority. Half of the proposed allocation (\$14m) should be reserved for these projects.
- Reserve 20 percent (\$5.6m) of the proposed allocation to fund a countywide ITS operations, management and maintenance program managed by VTA.



- Use the remainder (\$8.4m) of the proposed allocation on other ITS projects that emphasize systems integration and connectivity.

VTA will work with staff from the cities, towns, and county to identify a project list that uses the above strategy and meets the allocation target.

### Status of ITS Activities

Key ITS activities were sketched out by the ITS task force during the development of VTP 2020. The table on pages 135–136 describes these activities and provides a summary of the status of each one.

---

## Bicycle Program

In 1998, VTA launched a Bicycle Program that is committed to improving the bicycle infrastructure in Santa Clara County, to enable and encourage people to bike to work, school, errands and for recreation. Three major components of the Bicycle Program have been established:

- Bicycle Expenditure Program
- Countywide Bicycle Plan
- Cross-County Bicycle Network

### **Bicycle Expenditure Program**

There is \$90.5 million in the Bicycle Expenditure Program (BEP) to fund bicycle projects over the 2001–2030 time period. The funding is a combination of:

- 1996 Measure B sales tax
- Transportation funds for clean air
- Transportation Development Act Article 3 funds
- Transportation Enhancements funds
- Regional Bicycle/Pedestrian Program funds

As projects sponsors, Member Agencies are required to provide a minimum 20 percent match to the BEP funding for implementation. The BEP projects list is reviewed and re-adopted every three years, for project changes and cost increases.

Several projects on the BEP list are also included in the Local Streets and County Roads Program and the Livable Communities and Pedestrian Program.



### **Countywide Bicycle Plan**

In 2000, VTA adopted the Santa Clara Countywide Bicycle Plan (CBP), a stand-alone document that served as the Bicycle Element of VTP 2020, and also serves as the Bicycle Element of VTP 2030. The Countywide Bicycle Plan will be updated in 2005.

The CBP guides the development of major bicycling facilities, prioritizing projects for funding through the BEP. The plan documents the Cross-County Bicycle Network and the Bicycle Expenditure Program (BEP). The CBP complements Member Agencies' bicycle plans, which are more focused on improvements at the local level.

### Cross-County Bicycle Network

The Cross-County Bicycle Network maps out 16 bicycle corridors. The network includes on-street bikeways and off-street trails, combining existing, planned, and undeveloped segments. The network also coordinates facilities that straddle jurisdictional boundaries. When completed, they will be the most direct and convenient routes for extended bike trips.

### *Bikeways Map*

VTA also produces and distributes the Santa Clara Valley Bikeways Map, which shows existing bikeways as well as transit facilities, to help cyclists navigate around the county. The map is free. It can also be viewed at: [www.vta.org](http://www.vta.org).





## VTP 2030 Bicycle Projects

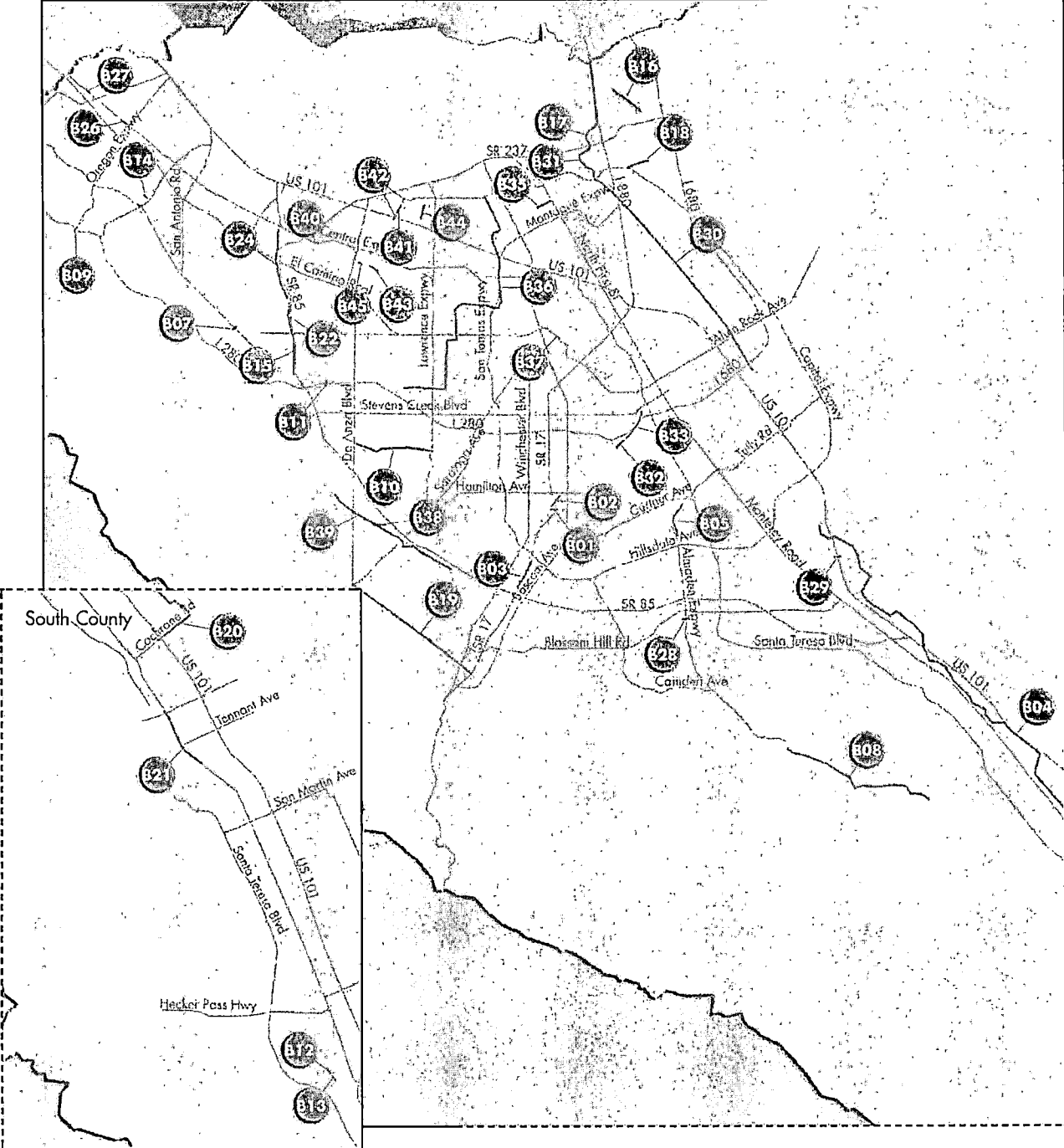


Table 2-31 Bicycle Projects

VTP ID	Project	Cost (03\$/Millions)	VTP ID	Project	Cost (03\$/Millions)
B01	Campbell Ave. Improvements at Hwy. 17 at Los Gatos Creek	\$1.5	B27	Homer Ave. Caltrain Undercrossing	\$5.6
B02	Los Gatos Creek Trail Expansion on West Side (Hamilton–Campbell)	2.0	B28	Almaden Expwy. Bike/Pedestrian Overcrossing	5.7
B03	Los Gatos Creek Trail Bridge and Path Improvements (Mozart–Camden)	0.8	B29	Branham Ln./US 101 Bike/Pedestrian Overcrossing <sup>3</sup>	5.0
B04	Coyote Creek Trail (Hellyer–Anderson Lake County Park)	1.3	B30	Coyote Creek Trail (SR 237/Bay Trail–Story Rd./Keyes St.)	6.1
B05	Almaden Expwy. (Ironwood–Koch)	2.3	B31	Guadalupe River Trail (Alviso St.–I-880)	5.1
B06	Bicycle Shoulder Delineation Along Expressways (not mapped)	0.6	B32	Los Gatos Creek Trail (Reach 4)	4.8
B07	Foothill/Loyola Structural Improvements in Los Altos <sup>1</sup>	10.0	B33	Los Gatos Creek Trail (Reach 5)	6.4
B08	McKean Rd. Shoulder Improvements (Harry Rd.–Bailey Ave.)	5.0	B35	Guadalupe River Bridge at River Oaks	2.8
B09	Page Mill Rd./I-280 Interchange Bike Improvements <sup>2</sup>	5.0	B36	San Tomas Aquino Creek Trail (SR 237 to City Limits)	17.0
B10	Bollinger Rd. Bicycle Facility Improvement	0.4	B37	Santa Clara Intermodal Transit Center Bike/Pedestrian Overcrossing <sup>3</sup>	5.0
B11	Mary Ave. (I-280) Bike/Pedestrian Overcrossing	7.1	B38	Cox Ave. Railroad Grade Crossings	0.5
B12	Uvas Creek Trail (part of Gilroy Sports Park Phase 1 and 2)	11.9	B39	PGE De Anza Trail (Reach 3)	2.5
B13	Uvas Creek Trail Study (Sports Park–Gavilan College)	0.2	B40	Bernardo Ave. Caltrain Undercrossing	6.5
B14	Adobe Creek Bike/Ped Bridge Replacement	0.5	B41	Borregas Ave. Bike Lanes (Weddell Dr. to Caribbean Dr.)	0.15
B15	Stevens Creek Trail Feasibility Study	0.1	B42	Borregas Ave. Bike/Pedestrian Overcrossings at US 101 & SR 237	6.5
B16	Berryessa Creek Trail (Reach 3)	0.9	B43	Evelyn Ave. Bike Lanes (Sunnyvale Ave. to Reed Ave.)	0.4
B17	Coyote Creek Trail (Reach 1)	1.2	B44	Sunnyvale East Drainage Trail (JWC Greenway–Tasman Dr.)	0.5
B18	Bicycle/Pedestrian Overcrossing over UPRR Tracks (near Great Mall)	5.6	B45	Sunnyvale Train Station North Side Access <sup>3</sup>	1.8
B19	Hwy. 9 Bike Lanes (Saratoga Ave.–Los Gatos Blvd.)	1.7	B46	Pilot Bicycle Parking Program (not mapped)	0.2
B20	Coyote Creek Trail Connection	0.5			
B21	West Little Llagas Creek Trail	1.5			
B22	Stevens Creek Trail, Reach 4 Central	4.0			
B23	Stevens Creek Trail, Reach 4 South	4.0			
B24	Stevens Creek Trail, Reach 4, Segment 2 North (Yuba Dr. to North Meadow)	3.8			
B25	Bicycle Boulevard/Lanes Network (not mapped)	5.0			
B26	California Ave. Caltrain Undercrossing <sup>3</sup>	9.0			

1. Also included in the VTP 2030 Local Streets and County Roads Program.

2. Also included in the VTP 2030 Expressway Program.

3. Also included in the VTP 2030 Livable Communities and Pedestrian Program.

See Appendix for more project detail. Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

---

## Livable Communities and Pedestrian Programs

The Livable Communities and Pedestrian (LCP) Program provides capital funds for transportation-related projects that improve community access to transit, provide multi-modal transportation facilities, and enhance the pedestrian environment along transportation corridors, in core areas, and around transit stations.

MTC's policies for funding regional programs identify the amount to be used for this program, allocated through its Transportation for Livable Communities (TLC) Program. This allocation is based on Santa Clara County's population share of the regional total and on the amount MTC requires for dedication to the county share (currently split on a 1/3 share for counties and a 2/3 share for MTC). In addition, VTA will pursue

other fund sources that could be administered through the LCP Program.

The project list will target \$113 million of the TLC funds. One-third (\$37.5 million) of this is guaranteed to VTA for programming, and two-thirds (\$75.6 million) is a target share of the regional discretionary TLC Program.

### Developing a Project List

VTA and its Member Agencies are currently developing the project evaluation criteria to select and rank LCP Program projects. In 2004/2005, VTA will issue to Member Agencies a call-for-projects for the LCP Program. To allow VTA and Member Agencies greater flexibility in utilizing these funds, some projects may appear on both the Bicycle Program and LCP Program lists of projects.

### Community Design and Transportation Program

The LCPP supports the goals of VTA's Community Design and Transportation (CDT) Program, VTA's Board-adopted program for integrating transportation and land use. The CDT program also offers planning and capital grants to Member Agencies.

The Community Design and Transportation Program and other VTA land use programs and activities are discussed in the following section.



## Systemwide Performance Results

Performance measures provide a common framework in which to evaluate investments and strategies. They also provide an indication of how well Santa Clara County's transportation system serves the traveling public. In 1999, the VTA Board adopted a set of multimodal performance measures as part of the Santa Clara County Congestion Management Program (CMP). These performance measures are used to evaluate the impacts of land use decisions and projections on the county's transportation system. This section estimates how well the transportation system will perform in 2030, given the additional growth in and out of the county and the implementation of the VTP 2030 projects.

The transportation system's performance may be evaluated using a 2000 base condition, a 2030 No Project scenario and a year 2030 Project scenario. The "base" refers to improvements included in the current Measure B program as well as projects anticipated to be funded from current funding programs (STIP, STP/CMAQ, etc.). The No Project scenario includes the VTP 2030 land use conditions but

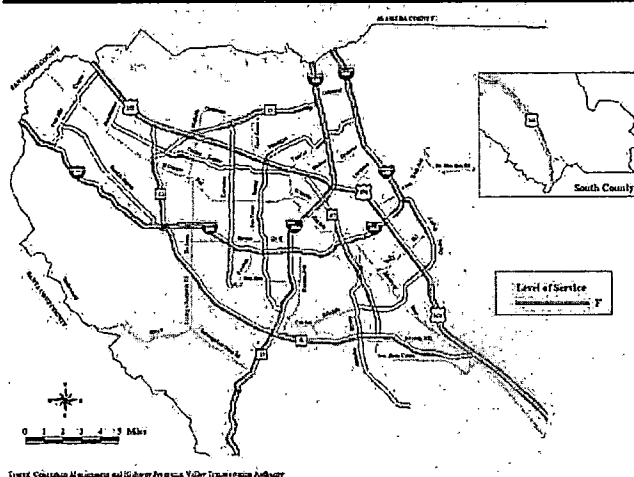


not the VTP 2030 projects. The 2030 Project scenario includes all of the base projects, plus the VTP 2030 Investment Program. This analysis scenario includes projects funded with 25 years of State and Federal programming, as well as the 2000 Measure A sales tax revenue. It also

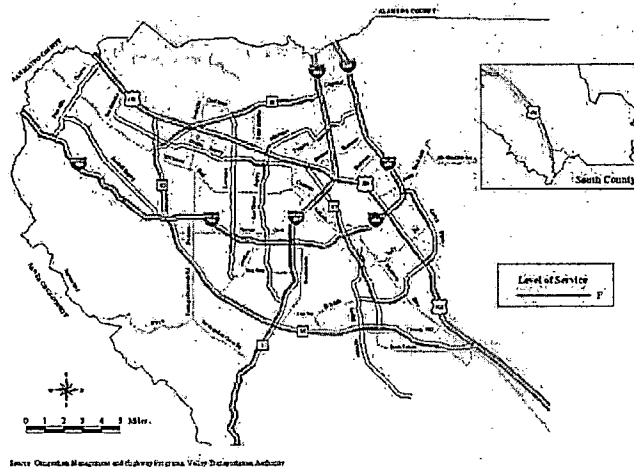
**Table 2-32 Deficient Freeway and Expressway Miles**

	Year 2030 No Project (miles)	Year 2030 Project (miles)	Net Change (miles)	Percent Change
AM Peak Hour	202.2	182.6	-19.6	-9.7%
PM Peak Hour	215.4	205.3	-10.1	-4.7%

### Freeway and Expressway LOS F (with Project, PM Peak Hour)



### Freeway and Expressway LOS F (with No Project, PM Peak Hour)



presumes that VTA is able to secure adequate funding to be able to fully implement and operate the 2000 Measure A program of projects.

### Traffic Level of Service

Traffic level of service (LOS) measures the interrelationship between travel demand (volume) and supply (capacity) of the transportation system. LOS is a quantitative measure categorized into six levels, A through F—with LOS A representing ideal conditions and LOS F representing poor conditions or congested flow. Roadways at LOS F are considered deficient. The Santa Clara County CMP considers freeway segments with a speed less than 35 miles per hour and expressway segments less than 13 miles per hour to be deficient (LOS F). Due to the growth within the county as well as the increase in travelers coming into the county, the number of roadways operating at LOS F will increase between 2000 and 2030. Nevertheless, the VTP 2030 Project scenario shows some improvement over a No Project scenario in the miles of deficient roadway segments.

By year 2030, miles of deficient freeways and expressways are projected to be 202.2 miles in the AM peak hour and 215.4 miles in the PM peak hour. With completion of the VTP 2030 scenario, these are projected to decrease by 19.6 miles in the AM peak and 10.1 miles in the PM peak, a decrease of 9.7 percent and 4.7 percent, respectively.

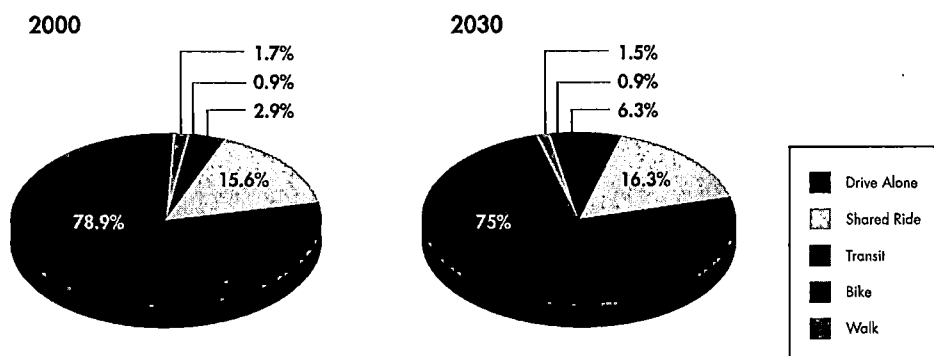
### Modal Split

Modal split measures the extent to which travelers use the various available transportation modes. It is measured as the proportion of people making a trip using a given mode. Modal split values shown here are for daily person trips in 2030.

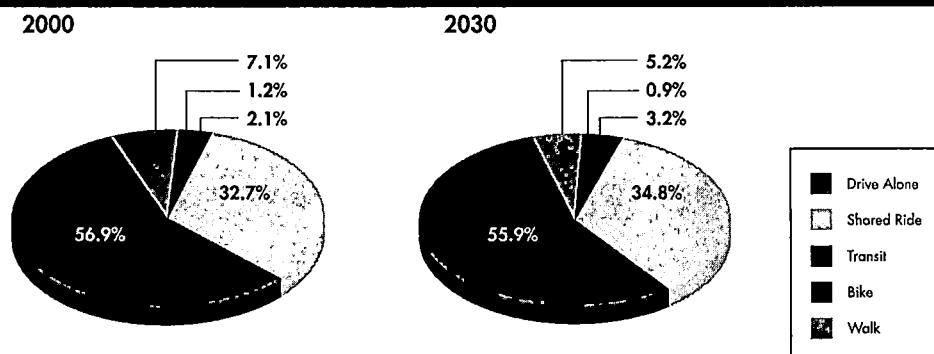
The 2030 scenario increases the viability of alternatives to driving alone with investments in transit and HOV improvements. These invest-

ments will allow more alternative mode use, as indicated by the pie charts below. The percentage of drive-alone work trips decreases nearly 5 percent from 2000 to 2030. The drive-alone mode share for all purposes is also expected to decrease. The proportion of commute trips for the shared-ride (HOV) mode is expected to increase by about 4.5 percent, representing approximately 140,000 more commuter carpools. Transit experiences the greatest improvement in commute mode share, increas-

**Table 2-33 Home-Based Work Trips**



**Table 2-34 Total Trip Purpose**



**Table 2-35 Vehicle Miles of Travel and Vehicle Hours of Travel**

	2030 No Project	2030 Project	Net Change	Percent Difference
<b>AM Peak</b>				
<b>VMT</b>	4,907,411	4,785,245	-122,166	-2.5%
<b>VHT</b>	395,948	399,525	3,577	0.9%
<b>Vehicle Trips</b>	545,523	546,891	1,368	0.3%
<b>VMT/Trips</b>	9.00	8.75	-0.25	-2.7%
<b>VHT/Trips</b>	0.74	0.73	0.00	0.7%
<b>PM Peak</b>				
<b>VMT</b>	5,308,370	5,167,929	-140,441	-2.6%
<b>VHT</b>	518,948	517,122	-1,826	-0.4%
<b>Vehicle Trips</b>	634,289	635,988	1,699	0.3%
<b>VMT/Trips</b>	8.37	8.13	-0.24	-2.9%
<b>VHT/Trips</b>	0.82	0.81	-0.01	-0.6%

ing from 2.9 percent in 2000 to 6.3 percent in the 2030 scenario. This 117 percent increase over 2000 represents approximately 105,000 more transit trips. Bicycle mode stays about the same and the walk mode share decreases slightly for both commuters and all travelers.

### **Vehicle Miles of Travel and Vehicle Hours of Travel**

Vehicle miles of travel per vehicle trip (VMT/V-T) identifies the number of roadway vehicle miles of travel required to satisfy the demand for travel by vehicles, measured in vehicle trips. When monitored over time, it is an indicator of the level of utilization for high-occupancy modes (carpooling, transit, etc.). Vehicle hours

of travel per vehicle trip (VHT/V-T) is an indicator of the average amount of time travelers spend getting to their destination. A decrease in these measures indicates people are traveling more efficiently and mobility is improving.

As shown in Table 2-35, more people will travel more efficiently in the Project Scenario than in the No Project Scenario, even though there are more vehicle trips in the Project Scenario. Systemwide VMT decreases about 2.5 percent during both AM and PM peak hours. VMT/V-T decreases from 9.0 to 8.8 miles for the AM peak hour (2.7 percent reduction) and from 8.4 to 8.1 miles during the PM peak hour (2.9 percent reduction), which shows improved travel efficiency. People will spend about the same time

on the road in both scenarios, as shown by VHT/V-T.

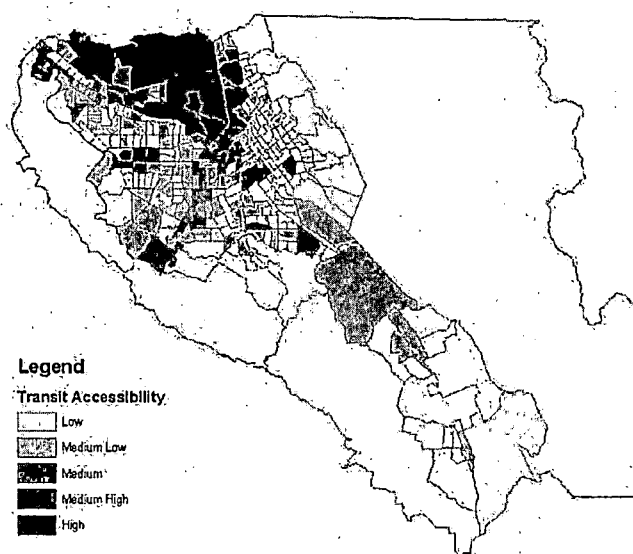
### Transit Accessibility

The transit accessibility measure uses a specific form of transit performance: peak-hour work trips with walk access. This specific trip type is then used as a proxy for overall system performance. Accessibility is an abstract measure that can inform planners on the effect of changes in two quantities: travel time to jobs (transit system performance) and the number of jobs available (land use). The higher an area's accessibility, the better job the transit system is doing in getting its residents to large concentrations of employment in minimal time.

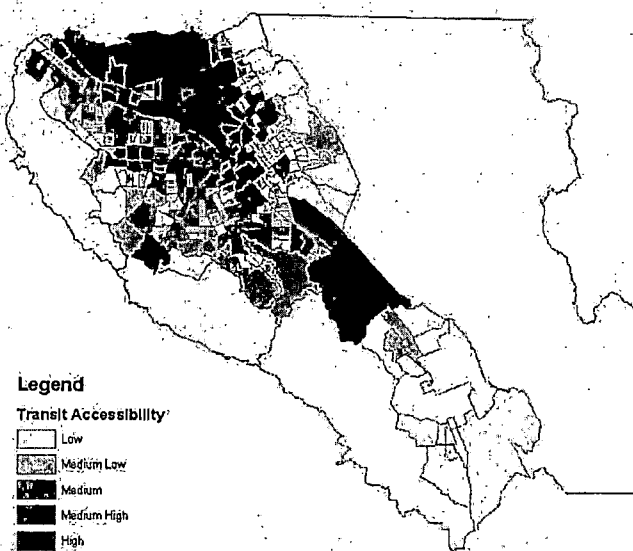
Transit accessibility is anticipated to significantly improve over the next 25 years for two reasons:

- Transit improvements, particularly along the BART corridor through Milpitas, San Jose and Santa Clara, as well as around the airport and in the East Valley area. Improvements are also visible along the Vasona LRT extension from downtown Campbell to Winchester Boulevard. In Coyote Valley, transit accessibility is expected to increase from medium low in the 2000 scenario to medium high in the 2030 scenario. Improvements are also visible in the Northwest County area, potentially a result of the Dumbarton Rail, Line 22 improvements, and Caltrain upgrades.
- Land use pattern changes concentrating greater numbers of households and jobs near transit services.

Transit Accessibility 2000



Transit Access 2030





**Table 2-36 Systemwide Air Quality** *(in Tons)*

Type	Time	2000	2030	% Change
Hydrocarbons (HC)	AM	5.143	0.599	-88%
	PM	6.209	0.711	-89%
Carbon Monoxide (CO)	AM	64.865	9.811	-85%
	PM	76.43	11.223	-85%
Nitrous Oxides (NOx)	AM	4.35	0.613	-86%
	PM	5.052	0.703	-86%
Particulates (PM)	AM	0.143	0.329	130%
	PM	0.17	0.387	128%

### Air Quality

Vehicle emissions of air pollutants are estimated for conformance with state CMP guidelines and are related to several factors, including cold and hot starts and stops, speed changes, and idling time. Improvements in air quality may indicate the benefits of an efficient multimodal transportation system. As shown in Table 2-36, air quality is expected to dramatically improve between year 2000 and year 2030 in hydrocarbons, carbon monoxide, and nitrous oxides as a result of the introduction of no/low emission vehicles and the retirement of early-year high emission vehicles as assumed by the California Air Resources Board. Particulates increase due to the 38 percent increase in AM peak period trips and 36 percent increase in PM peak period trips between 2000 and 2030.

### Duration of Congestion

Duration of congestion measures the length of time that particular links are subject to congested conditions. This is a measure of peak spreading, and it provides a way of showing the length of time over which congested traffic conditions persist. Duration of congestion can be affected by changes in travel demand or changes in transportation capacity such as adding highway lanes, improving intersections, transit improvements, and ITS strategies. The selected locations shown represent freeway segments where congestion occurred for more than 0.5 hours as reported in VTA's 2002 Annual Monitoring and Conformance Report. As shown in the table, most of the freeway segments (44 of 50) analyzed show improvement with the VTP 2030 Project scenario when compared with the No Project scenario. Duration of congestion for one segment remains the same and five get worse.

**Table 2-37** Duration of Congestion (in Hours)

Facility	Direction	Segment	2000	2030	Change
<b>AM Peak Hour</b>					
SR 17	NB	Hamilton Ave. to I-280	4.0	3.9	-0.1
	SB	SR 85 to Lark Ave.	0.8	0.5	-0.3
SR 85	NB	Cottle Rd. to Blossom Hill Rd.	0.5	0.3	-0.3
	NB	SR 87 to Almaden Expwy.	2.1	1.8	-0.3
	NB	Saratoga Ave. to Saratoga-Sunnyvale Rd.	4.0	2.9	-1.1
	NB	Homestead Rd. to Fremont Ave.	4.0	2.4	-1.6
SR 87	NB	Capitol Expwy. to Curtner Ave.	2.9	3.1	0.3
US 101	NB	San Martin Ave. to Tennant Ave.	3.4	2.1	-1.3
	NB	Tennant Ave. to Dunne Ave.	3.1	2.1	-1.0
	NB	Silver Creek Valley Rd. to Hellyer Ave.	1.6	0.8	-0.8
	NB	Hellyer Ave. to Yerba Buena Rd.	3.9	2.1	-1.8
	NB	Montague Expwy. to Great America Pkwy.	2.9	2.4	-0.5
	NB	Fair Oaks Ave. to Mathilda Ave.	1.6	1.3	-0.3
	NB	Mathilda Ave. to SR 237	1.1	0.0	-1.1
	SB	Cochrane Rd. to Dunne Ave.	2.4	0.3	-2.1
	SB	Tully Rd. to Capitol Expwy.	1.6	0.0	-1.6
	SB	Mathilda Ave. to Fair Oaks Ave.	0.8	0.0	-0.8
SR 237	EB	Lawrence Expwy. to Great America Pkwy.	1.8	2.4	0.5
	EB	Lawrence Expwy. to Wolfe Rd.	1.1	1.6	0.5
I-280	NB	Saratoga Ave. to Lawrence Expwy.	4.0	3.1	-0.9
I-680	NB	McKee Rd. to Berryessa Rd.	2.6	0.3	-2.3
	NB	Berryessa Rd. to Hostetter Rd.	2.4	2.6	0.3
	SB	Berryessa Rd. to McKee Rd.	1.3	0.0	-1.3
	SB	Coleman Ave. to SR 87	2.6	1.6	-1.0
I-880	NB	SR 87 to North First St.	2.6	1.6	-1.0
<b>PM Peak Hour</b>					
SR 17	SB	Camden Ave. to SR 85	1.1	0.8	-0.3
	SB	Hamilton Ave. to Camden Ave.	3.1	2.4	-0.8
SR 85	NB	Winchester Blvd. to Saratoga Ave.	1.6	0.0	-1.6
	SB	SR 237 to El Camino Real	4.0	3.1	-0.9
SR 87	NB	Alma Ave. to I-280	1.6	0.3	-1.3
	SB	Almaden Expwy. to Curtner Ave.	4.0	3.4	-0.6
	SB	Coleman Ave. to Julian St.	1.1	0.0	-1.1
	SB	Great America Pkwy. to Lawrence Expwy.	0.3	0.0	-0.3
US 101	NB	Ellis St. to Moffett Blvd.	3.9	3.4	-0.5
	SB	Dunne Ave. to Tennant Ave.	3.6	2.1	-1.5
	SB	Cochrane Rd. to Dunne Ave.	4.0	3.9	-0.1
	SB	Tully Rd. to Capitol Expwy.	4.0	3.4	-0.6
	SB	Lawrence Expwy. to Great America Pkwy.	4.0	1.3	-2.7
	SB	Fair Oaks Ave. to Lawrence Expwy.	1.8	2.6	0.8
	SB	Mathilda Ave. to Fair Oaks Ave.	4.0	3.6	-0.4
	SB	Mathilda Ave. to Fair Oaks Ave.	0.5	0.0	-0.5
SR 237	EB	North First St. to Zanker Rd.	4.0	1.8	-2.2
	WB	Maude Ave. to Central Expwy.	2.4	0.0	-2.4
	WB	US 101 to Maude Ave.	3.6	0.0	-3.6
	WB	US 101 to Maude Ave.	3.6	0.0	-3.6
I-280	NB	Magdalena Ave. to El Monte Ave.	3.1	2.9	-0.3
	SB	Lawrence Expwy. to Saratoga Ave.	3.9	3.1	-0.8
	SB	Wolfe Rd. to Lawrence Expwy.	3.1	1.8	-1.3
I-680	NB	McKee Rd. to Berryessa Rd.	0.8	0.0	-0.8
	SB	Capitol Expwy. to King Rd.	2.9	1.8	-1.0
I-880	NB	SR 237 to Dixon Landing Rd.	4.0	4.0	0.0

---

## Travel Time

This measure is an estimate of average travel time across modes for several origin/destination pairs. The difference over time or between scenarios indicates changes in congestion over time. It tends to be more intuitive than delay because the traveling public thinks more about how long a trip takes than how much delay they experience. The travel time measures shown include seven origin/destination pairs. Values for 2000 are based on actual travel time runs conducted for the VTA's 2000 Monitoring and Conformance Report.

The following tables show travel time improvements for some origin/destination pairs and declines for others from year 2000 to year 2030. As described in previous sections, between 2000 and 2030 population is expected to grow by 27 percent and jobs by 37 percent, but freeway capacity will grow by only 5.6 percent. In addition, over the same period total vehicle trips will increase from about 394,600 to 546,900 (or 39 percent) during the morning peak hour and from about 467,100 to 636,000 (or 36 percent) during the afternoon peak hour. Since a slight increase in traffic volume may cause a large

increase in travel time during the congested peak hour, substantial increases in travel time for some origin/destination pairs can be expected, given the significant increases in both morning and afternoon peak-hour vehicle trips. Lastly, although a significant portion of these trips will shift from drive-alone to shared-ride and transit modes, the additional congestion is expected to impact some transit and shared-ride travel times as well.

Overall, this measure indicates that we cannot build our way out of congested conditions. It underscores the need for VTA to pursue a balanced program of multimodal transportation improvements and changes to land use development policies.

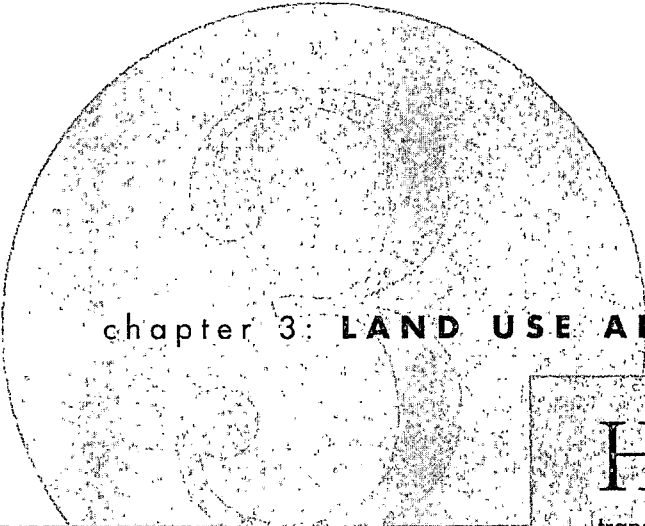
**Table 2-38 AM Peak-Hour Average Travel Times by Modes** *(in Minutes)*

Origin/Destination Pair	Drive Alone		Shared Ride		Transit	
	2000	2030	2000	2030	2000	2030
Los Gatos Residential Area to Lockheed in Sunnyvale	54	42	33	37	97	111
Morgan Hill Residential Area to Sun/RiverMark in Santa Clara	70	74	47	55	76	79
Los Gatos Residential Area to Sun/RiverMark in Santa Clara	41	34	31	34	92	88
Palo Alto Residential Area to Apple Computer in Cupertino	37	25	28	23	80	71
Evergreen Residential Area to Downtown San Jose	37	35	N/A	34	47	63
County Line to Cisco Site near Tasman/Zanker	28	70	N/A	50	38	36
County Line to Lockheed in Sunnyvale	22	86	17	55	48	54

**Table 2-39 PM Peak-Hour Average Travel Times by Modes** *(in Minutes)*

Origin/Destination Pair	Drive Alone		Shared Ride		Transit	
	2000	2030	2000	2030	2000	2030
Lockheed in Sunnyvale to Los Gatos Residential Area	37	54	N/A	43	107	89
Sun/RiverMark in Santa Clara to Morgan Hill Residential Area	58	104	55	53	83	77
Sun/RiverMark in Santa Clara to Los Gatos Residential Area	35	44	32	41	107	85
Apple Computer in Cupertino to Palo Alto Residential Area	31	26	25	21	86	68
Downtown San Jose to Evergreen Residential Area	22	38	N/A	31	55	73
Cisco Site near Tasman/Zanker to County Line	21	75	15	41	34	33
Lockheed in Sunnyvale to Sunol Road in County Line	40	91	28	49	56	60





## chapter 3: LAND USE AND TRANSPORTATION

**H**ere we highlight efforts by VTA and its Member Agencies to better integrate transportation systems and land use. These efforts include policy objectives and programs that recognize changes must occur in how our cities and transportation systems are planned and built. Efforts to strengthen these linkages between transportation and land use encompass:

Transportation and Land Use Integration .....	154
Transportation and Land Use Investment Strategy .....	168
Partnerships for Livability .....	176

### **Transportation and Land Use Integration:**

Sets forth the need for and benefits of integrated transportation and land use planning, the vision, goals, and objectives for VTA's land use programs, and the ways we will work to achieve them.

### **Transportation and Land Use Investment**

**Strategy:** Sets forth strategies and policy objectives to link transportation investments with land use decisions.

### **Partnerships for Livability:**

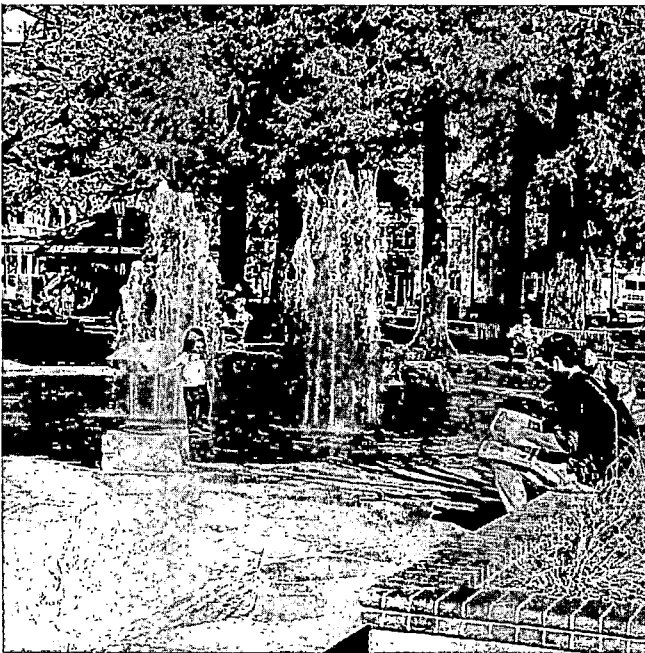
Highlights established and innovative ways that VTA is working with other agencies to achieve goals related to transportation, quality of life, sustainability, and economic health.

---

# Transportation and Land Use Integration

## **VTA's Role in Land Use Policy**

Because of the fundamental link between urban form and the travel needs of individuals, VTA has a vital and compelling interest in land use and the design of communities. The form of development not only shapes the places in which we live, work and play, it also defines the spaces we move around in and the travel modes we use. The transportation/land use connection is becoming increasingly more important to VTA's ability to deliver and maintain a high-quality, multimodal transportation system. With practical opportunities for system expansion diminishing, our maturing transportation system now demands greater attention be given to the land uses that support its use and maintenance.



While VTA's interest in land use is clear, the agency's ability to influence development patterns, urban design, conservation, and reuse is less clear. The local governments in Santa Clara County—VTA's member agencies—hold authority for land use approvals and related regulations. VTA's land use programs will not change this. However, VTP 2030 presents two related programs designed to create a more effective partnership between VTA and Member Agencies in coordinating land use and transportation decision-making: The Community Design & Transportation (CDT) Program, and the Transportation/Land Use Investment Strategy. These programs are described later in this section.

## **The VTP 2030 Land Use Vision**

The VTP 2030 land use and transportation vision sees a shift in development patterns from spreading out to growing up in key locations. Future development is clustered in core areas and downtowns, along Main Streets and major transportation corridors, and around rail transit stations. Development in these areas is more compact, diverse, and pedestrian-oriented and less reliant on the automobile.

The benefits of this vision are many. As an amenity-rich and synergy-rich urban form emerges, concentrated in areas where major investments in transportation and urban infrastructure have already been made, the value and productivity of those investments is greatly enhanced. More intensive and diversified

development supports a greater range of local services and facilities, making transit service more productive, increasing opportunities for safe walking and biking, and reducing trip lengths. Automobile use, energy consumption and pollution are reduced, and open spaces and natural areas are preserved. Human-scale architectural and urban design details define attractive public spaces, rekindling interest in public life and stimulating renewed social and economic growth. Some streets take on new life too, shedding the reign of the car and connecting with adjacent land uses, emerging as multipurpose corridors friendly to transit, pedestrians and bicyclists.

### VTP 2030 Land Use Goal and Objectives

The VTP 2030 land use goal and objectives reflect this vision and VTA's role as a transportation provider, not a land use agency. The goal and objectives define the high level of coordination that the VTP 2030 land use programs expect from member agencies when setting priorities for transportation investment.

### VTP 2030 Goal for Integrating Transportation and Land Use

*"To provide transportation investments and services that support the maintenance and creation of vibrant urban communities and protect the Santa Clara County's natural resources."*

### *Vision for Station Areas*

Transit station areas have become "places to be" and destinations in their own right. Residents and workers located near these stations enjoy many benefits, having access to a wide variety of activities without needing a car. This mixing of activities brings together the station and surrounding areas, and the station area emerges as a highly valued community asset.



### VTP 2030 Objectives for Integrating Transportation and Land Use

- Concentrate development in cores, community corridors, and station areas to support alternate transportation modes and maximize the productivity of transit investments.
- Design and manage the transportation system to support concentrated development in selected locations.
- Provide connectivity in road, bike, and pedestrian networks so travelers can choose among



### *Smarter Suburbs*

The VTP 2030 land use vision includes a new, smarter vision for suburban areas. Pockets of mixed-use, higher-density development are strategically placed throughout suburbia, providing neighborhood services and social and recreational activities close to homes. They also contain a variety of housing types that better serve changing demographics and support a range of incomes and age groups. Interconnected streets—some designed specifically to support transit service—support bike paths and attractive sidewalks, offering residents options other than the car for moving around their community. This new suburban form—together with more compact development in core areas—works to complement urban centers and halt the common pattern of sprawling, low-intensity development, separation and de-centralization.



Evergreen Villages: a smarter suburb in San Jose.

routes linking their origins and destinations.

- Provide for future transportation system needs by coordinating land development and capital project planning.
- Design and construct transportation facilities to enhance the aesthetic quality of the built environment.
- Use land efficiently and support concentrated development with strategies including land use intensification and reuse, transportation investments that minimize right-of-way requirements, and limiting land area dedicated to surface parking.
- Support development that expands housing accessibility relative to transportation alternatives, proximity to job centers, child care and other essential services, range of affordability, and opportunities for both rental housing and home ownership.
- Foster an urban design vision that creates a sense of place, human-scale buildings, vibrant public spaces, and as many activities as possible within easy walking distance of each other and transit stops.
- Plan and design whole communities that integrate housing, work places, shops, schools, parks, entertainment and public facilities so that residents can meet their essential needs close to home.
- Promote street design standards that consider function and land use context, and provide interconnected multimodal options where possible.

While many of the objectives refer to concentrated, mixed-use development, other objectives—particularly those relating to urban design, walkability, street connectivity, transit integration, right-of-way preservation, and multimodal street design that accommodates pedestrians and bicyclists—are not limited to areas of concentrated development, but may also be appropriate in suburban and even rural settings (see sidebar).

To implement this vision and achieve its land use goal and objectives, VTA has established a new comprehensive land use program—the Community Design and Transportation Program, which is discussed in the following sections.

### **Community Design and Transportation—A Program for Integrating Transportation and Land Use**

In 2002, the VTA Board of Directors adopted the Community Design and Transportation (CDT) Program as its primary program for integrating transportation and land use. It was created to help achieve VTA's land use vision and implement its goal and objectives. It is also intended to unite with common objectives VTA planning, design, programming and construction activities. Formulated as an outgrowth of the VTP 2020 planning process, it was developed in partnership with VTA's member agencies—the 16 cities, towns, and county governments within Santa Clara County.

### *Qualities of Concentrated Development*

Most of the cities in Santa Clara County desire city- or village-style development in strategic locations. Although these places will vary greatly in form and character, the vision for all includes people being able to get around comfortably without a car. This requires developments that are compact and diverse, and capable of supplying the whole spectrum of daily activities within easy walk distances.

The qualities that create these places differ in scale and emphasis, but consistently include:

- A mix of land uses that enables residents and workers to complete their errands and obtain services without driving. The mix includes retail, entertainment, a variety of housing types, offices, and civic activities such as libraries and post offices.
- Human-scale urban design that creates a vibrant environment and promotes walking and transit use through appropriate intensity of use, a dynamic mix of land uses, site design conducive for pedestrians, and located within walking distance of frequent transit service.
- Building design that creates safe and attractive pedestrian environments through appropriate setbacks, building heights, and ground floor uses.
- Street design that balances the use of all modes of transportation rather than maximizing auto capacity, and as a result facilitates amenity-rich compact development, which in turn supports transit, walking and bicycling.
- Concentrations of major community attractions that serve as destinations for people who live in and outside the area. These include education and health care facilities as well as places for cultural activities and entertainment.
- Attractive, safe, and efficient transportation facilities for all modes of travel that enhance public spaces, along with appropriate accommodations for autos where they are necessary.

Each of these elements is addressed in VTA's *Community Design and Transportation Program: A Manual of Best Practices for Integrating Transportation and Land Use*.

### *Transportation Implications of Concentrated Development*

A recent Portland study noted that a 10 percent reduction in vehicle-miles traveled (VMT) could be achieved with a region-wide increase in the quality of the pedestrian environment.

The local features shown to contribute to reducing VMT are:

- Ease of street crossings based on street width, signalization, and traffic volumes
- Presence of sidewalks on streets with transit service
- Local street grid patterns and short block distances
- Topography with minimal changes in slope



The CDT program is designed to inspire new thinking about the form and function of growth, broaden the range of viable transportation choices and make the most efficient use of transportation and other resources in the county. The CDT program has been formally endorsed by each member agency, and continues to function as an active partnership for pursuing transportation and land use goals.

Fundamentally, CDT calls for change: across multiple disciplines, from design to finance to engineering, each of which has overlapping importance to the other disciplines. CDT challenges us to critically re-examine our current pattern of outward growth, and begin working toward creating places that invite pedestrian activity, support transit, and build on the distinct qualities of each community. Through the CDT program, VTA is engaging its partners in a countywide dialogue to develop strategies for changing planning and development processes to more consistently support alternative travel modes and efficient automobile use.

### **CDT Program Approach**

The approach of the CDT program reflects VTA's role as a multimodal transportation provider. It considers all transportation modes and stresses the importance of a healthy pedestrian environment, concentrated mixed-use development, integrated transit service, innovative street design, and the interrelationships of buildings and sites with transportation facilities and services. It is concerned with how policies shape these pieces, and how the pieces can be fitted together to create an attractive, safe, and sustainable urban form.

The CDT program is designed around a framework for application, at least initially, in community *cores*, along the major transportation *corridors*, and surrounding transit *station areas*. The map on page 161 shows the cores,

Table 3-1 Transit Use in Cores and Corridors

	Caltrain All-Day	Caltrain Commute	Light Rail	Rapid Bus Transit <sup>1</sup>	BART	VTA Bus	Local Shuttle
<b>Regional Cores</b>							
San Jose	E	E	E	E	P	E	E
Palo Alto/Stanford	E	E		E		E	E
<b>County Cores</b>							
Campbell			C			E	P
Cupertino				P		E	E
Milpitas			E		P	E	E
Mountain View	E	E	E	E		E	E
Sunnyvale	E	E	E	E		E	E
Santana Row/ Valley Fair				P		E	E
Santa Clara	E	E	E	E	P	E	E
Morgan Hill		E				E	E
Gilroy		E				E	E
<b>Local Cores</b>							
Los Altos				E		E	P
Los Gatos						E	P
Saratoga						E	P
Willow Glen			E			E	
Communications Hill						E	
Eastridge			P	E		E	E
Japan Town			E			E	
Gilroy		E				E	E
Morgan Hill		E				E	E

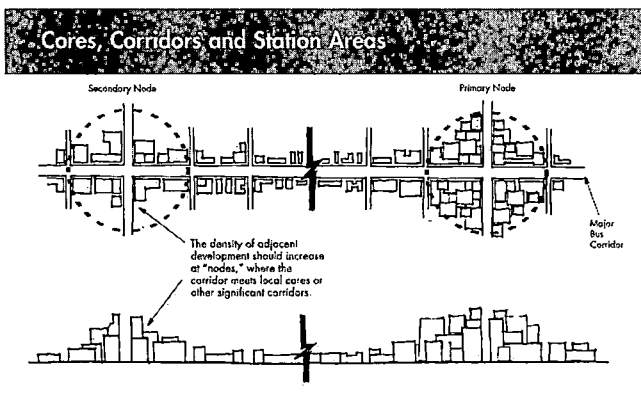
1. Enhanced/Rapid Bus

E = Existing; C = Under Construction; P = Planned or Proposed

*New Frontiers for Growth*

Untouched lands at the urban fringe have generally been thought of as leading candidates for growth and development. However, Santa Clara County's mature urban areas are also prime development opportunities. In fact, vacant or underutilized urban sites offer advantages over outlying areas

because they are already connected with urban services and infrastructure. Moreover, accommodating growth in urban cores plays a more critical role in protecting valuable open space at the edge. These sites—structured around a framework of cores, corridors and station areas—constitute the new frontiers for growth, and are the focus of the CDT program.



corridors and station areas designated by local agencies and VTA for the CDT program. These are areas most likely to benefit from land use intensification and implementation of the CDT best practices principles (discussed in following sections), and are key land use opportunity areas for providing multimodal transportation alternatives that can serve the needs of both existing and new residents and workers.

## Manual of Best Practices for Integrating Transportation and Land Use

The CDT Manual of Best Practices for Integrating Transportation and Land Use is a key product of the CDT program and was developed to support the implementation of VTA's land use objective and goals. It documents proven and innovative best practices in urban design and transportation planning that support and enhance both VTA's and its Member Agencies' investments in the community. It provides planning and design guidance for how to develop in the cores, corridors and station areas. It also provides policy guidance and outlines steps that communities and local governments can take to identify and overcome barriers to developing more livable and sustainable communities. Moreover, it articulates VTA's vision for how communities and a multimodal transportation system can grow together, their

### *Cores, Corridors and Station Areas*

- **Cores** are districts that contain concentrations of residential areas, employment sites, and other destinations such as retail, entertainment, academic and cultural activities. They are further distinguished as regional cores, such as downtown San Jose; county cores such as downtown Mountain View or Sunnyvale; or local cores such as San Jose's Willow Glen area and downtown Los Gatos.
- **Corridors** are linear in shape, centered on a street or transit line, and often function as a backbone for surrounding communities. Corridors offer opportunities similar to cores for intensified mixed-use development, but usually in a more defined area within a block or so of the corridor. Corridors also present tremendous opportunities for creating urban- or village-like nodes, especially at major intersections where several transit lines cross. With enhanced "boulevard-like" pedestrian environments and other multimodal improvements



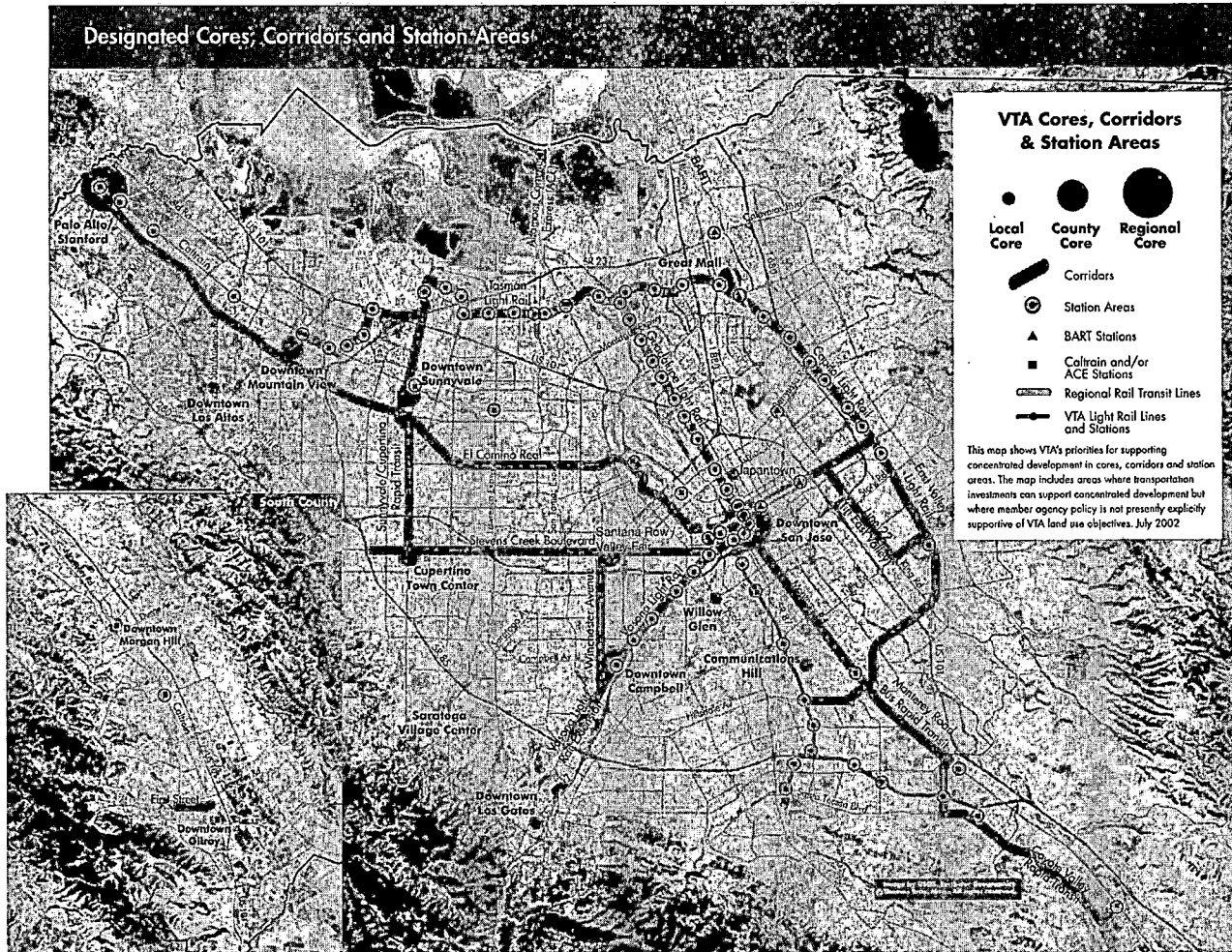


Image by USGS, Earthstar Geographics. © Thomas Brothers map. All rights reserved.

such as transit preferential treatments and bike lanes, corridors have real potential for becoming cohesive community elements, offering a multitude of activities, a range of pleasant environments and several choices of ways to move along its length.

- **Stations areas** are locations adjacent to rapid transit stations that already serve, or will serve, as focal points for new infill development and redevelopment. Station areas have opportunities similar to cores and corridors for intensified

mixed-use development, and offer unique opportunities for community "place-making." Attractive urban design, multimodal transportation improvements, and a variety of all-day activities at station areas can create vibrant centers of activity. Station areas become destinations in their own right and add value to surrounding communities. If located within a local core area, such as near a downtown or Main Street, the station area design can complement and enhance the overall urban experience of those areas.

## *CDT Manual Topics*

The CDT Manual addresses critical topics by illustrating best practices and identifying implementation strategies and methods for propagating best practices throughout the county. The manual is intended to be a living document that evolves in response to new information and opportunities.

Best practices topics covered in the CDT Manual include:

- Site and building design
- Street connectivity and multimodal street design
- Innovative and efficient uses of land
- Supporting concentrated development
- Development density recommendations for cores and corridors
- Alternative use of level-of-service standards
- Rethinking parking requirements
- Model places and visualizing best practices
- The role of local governments in best practices
- Building community support for best practices
- Flexible zoning strategies
- Community planning for bus transit, rail transit and station areas
- Attracting developers to best practices projects
- Transportation demand management

respective roles, and how the actions of each can be mutually supportive and beneficial.

This vision is outlined in four key concepts and ten principles that provide the basis for the CDT program.

### **Key Concepts and Principles for Integrating Transportation and Land Use**

The *Key Concepts*, summarized below, underlie all aspects of the *CDT Program* and form the foundation upon which the principles, practices, and actions are built:

- *Interconnection*—focuses on interconnecting street, bicycle, and pedestrian networks, transit modes, buildings, and activity centers to get more from transportation resources, and to form distinct districts and more livable places.
- *Place-making*—focuses on the human-scale elements of the built environment that create uniqueness and identity, and that make places attractive, comfortable, memorable, and lasting.
- *Access-by-Proximity*—focuses on clustering complementary land uses and compact, well-designed development to make the types of amenity-rich places that allow trips to be combined, reduced or eliminated, and made by transit, walking or biking; and accordingly, this helps achieve the kind of critical mass that makes vibrant public life possible.
- *Choice*—focuses on the notion that one-size-does-not-fit-all, and seeks to expand the range of choices about the design of developments that we live and work in, where activities are located, the character of the community, and the means of getting around.

### **CDT Principles for Integrating Transportation and Land Use**

These time-proven planning and design principles build upon and expand the big-picture key concepts described previously, and create a foundation for more detailed practices and actions covered in the CDT Manual. An overview of each principle is provided below.

**1. Target growth is cores, corridors and station areas.** Focusing growth on established cores, corridors, and station areas is about doing more with less. New growth in these areas capitalizes on existing infrastructure and allows cities to avoid the costs of expanding and maintaining new infrastructure. Infill growth thwarts urban fringe development, conserving open space, resources and natural areas. Transit service in these areas is more fully utilized and productive.

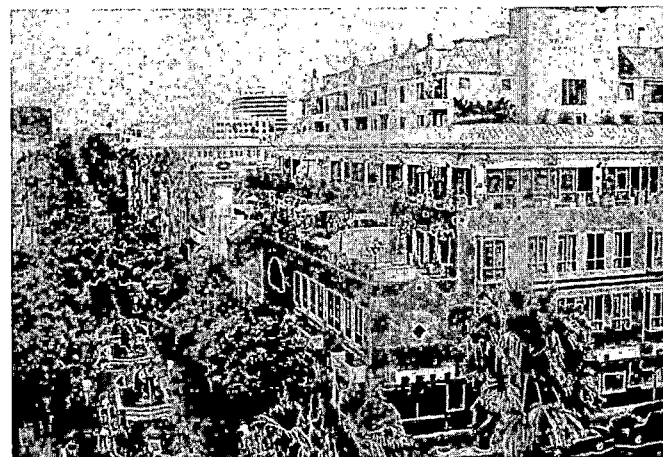
**2. Intensify land uses and activities.** Compact, amenity-rich development is essential to developing vibrant and functional places. Higher-intensity land use in cores, corridors and station areas facilitates walkability, creates viable transportation options, promotes thriving businesses, and develops a sense of place. High-quality urban design and architecture must accompany intensified development to make communities feel comfortable, attractive, and safe.

**3. Provide a diverse mix of uses.** Mixed-use developments offer users various combinations of commercial, office, and residential land uses within close proximity. A variety of uses attracts people during all times of the day and creates synergies that help these areas reduce the need for automobile trips, make transit, walking, and biking viable options, enhance community livability, and thrive both economically and socially.

**4. Design for pedestrians.** The hallmark of great places is the ability to walk between



*Targeting growth in cores, corridors and station areas.*

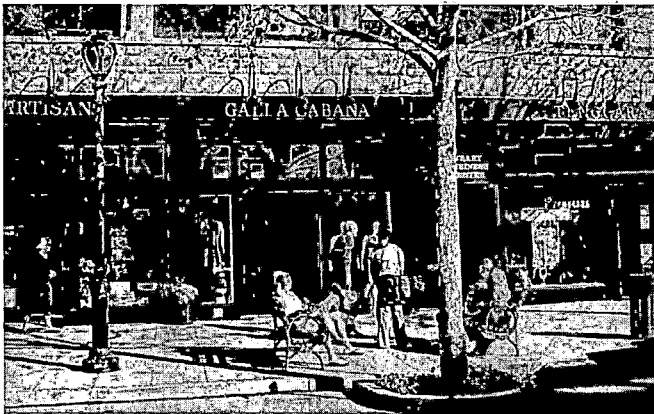


*Intensifying land uses and activities.*

destinations. This principle, coupled with a diverse mix of uses and high-quality project design, helps to create synergies that encourage walking, enliven public spaces, and bring vitality to urban areas. Being able to walk to destinations also takes automobile trips off the roadway network, and reduces energy consumption and pollution.

**5. Design in context.** Designing in context focuses on the materials, design details, and





*Providing a diverse mix of uses.*



*Design for pedestrians.*



*Designing in context.*

architectural styles that establish and reinforce a unique community character. Designing in context is also about sensitivity to the relationships between buildings, streets, and public spaces.

6. **Focus on existing areas.** Before consuming additional land and resources in outlying areas, greater attention should be given to using land already dedicated to the urban fabric more efficiently. This also means that sustaining the community is just as important as improving it—and that after-care and maintenance programs are as vital as good planning and design are in creating a sense of place and community.
7. **Create a multimodal transportation system.** Great places offer a multitude of ways to get around. Provision of viable transportation alternatives is not about destroying the automobile; rather, it is about balancing the needs of vehicle movement with the needs of transit, walking, and biking.
8. **Establish streets as places.** In addition to being part of the multimodal transportation system that moves people and goods, streets are the most abundant public space in cities. Rather than being viewed as just a thoroughfare for cars, street design should also reflect the context of adjacent land uses and the needs of people.
9. **Integrate transit.** Transit service benefits everyone; but transit can only function effectively when it is fully integrated with the community. Integration can be achieved either by

extending the community fabric out to connect with transit facilities, or by bringing transit service directly into the heart of the community. Transit stops and stations should be viewed as valuable civic spaces warranting public resources and high-quality design.

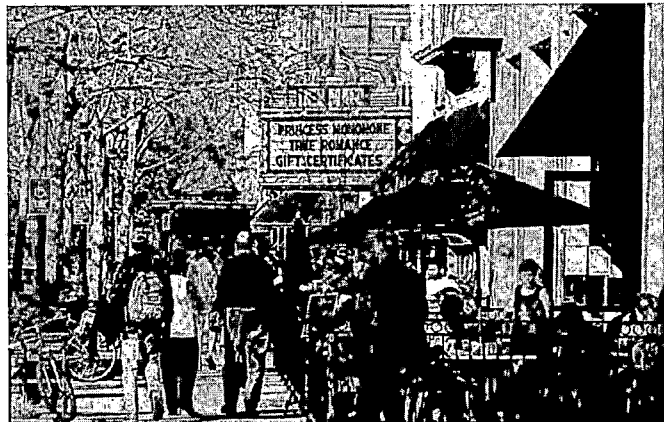
- 10. Manage parking.** Parking takes up enormous amounts of land and is today perhaps the single most important element influencing the design of urban areas. As such, the design and placement of parking helps dictate the character of a place, determining whether it will feel isolated from adjacent uses or integrated into a continuous urban fabric.

These concepts and principles are intended for implementation together in fulfillment of a *long-range vision* for growth and development. Consistent and incremental implementation will create the types of synergy-rich and amenity-rich environments that make urban spaces thrive, and bring wholesale positive results to the transportation system and our communities.

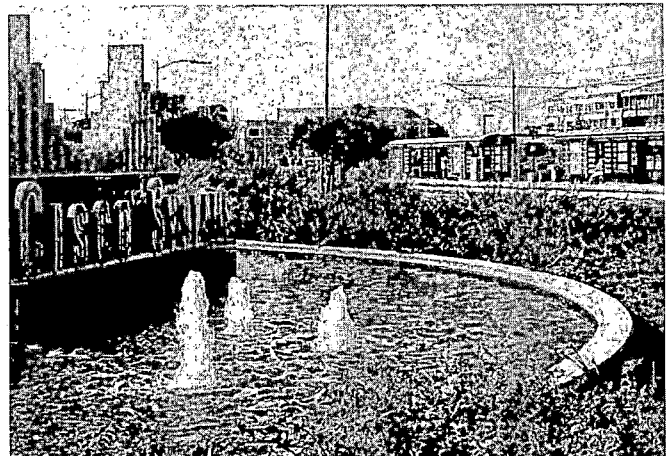
### Implementing the CDT Program

VTA will facilitate countywide implementation of the CDT program through the following activities:

- *Supporting Member Agency Efforts.* VTA will continue to work with the cities, towns and the County of Santa Clara, and support their endorsements of the CDT program by providing project review, planning, design, and technical assistance.



*Establishing streets as places.*



*Integrate transit with development.*



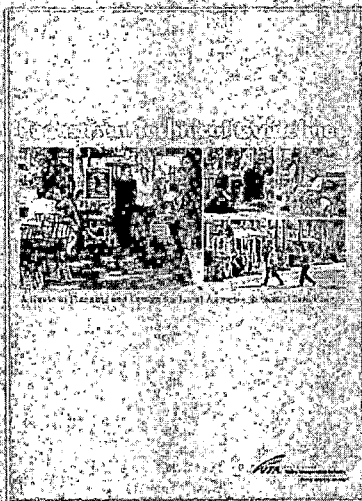
*Manage parking.*

## *Documents Supporting the CDT Manual*

The CDT Manual was conceived as a comprehensive "lookit," but some areas of planning and design covered in the manual warrant greater detail. So in addition to updates of the manual, the CDT program includes the development of other supporting documents. For example, a quality pedestrian environment is critical to the vitality and success of communities, and to the productivity of transit. To help plan and build better pedestrian environments, VTA recently released a Manual of Pedestrian Technical Design Guidelines.

Future CDT program publications providing additional detail may include:

- Parking policies, strategies and design guidelines
- Station area design guidelines
- Street and site design guidelines
- Strategies for community and economic sustainability



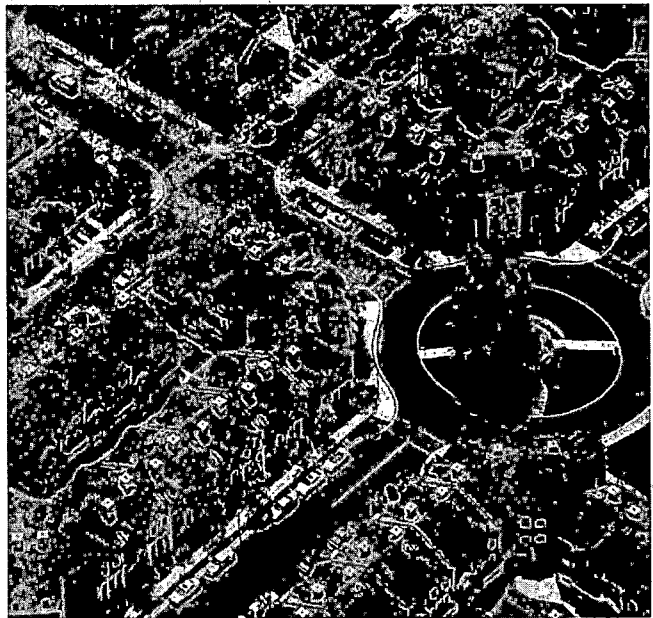
- *Continuing Development of the CDT Program.* VTA will update the CDT program and manual to keep abreast of the latest planning, design, and development practices. New manuals and documents will be created as needed to support the on-going efforts of the CDT program.
- *CDT Planning Grants.* Provides grants to Member Agencies to plan for specific projects or changes in local plans or regulations that implement CDT concepts and principles. The initial fund amount is \$1.4 million, distributed over three years.
- *CDT Capital Grants.* Administered through the Livable Communities and Pedestrian Program, capital grants will be awarded to Member Agencies to assist them with implementing transportation-related projects that improve community access to transit, provide multimodal transportation facilities, and enhance the pedestrian environment along transportation corridors, in core areas, and around transit stations. VTA 2030 allocates approximately \$10 million every two years for capital grants.
- *Technical Standards and Procedures.* VTA will revise the materials that set forth requirements for local compliance with the Congestion Management Program in accord with the CDT program.
- *Outreach and Training.* Building community and political support for innovative, high-quality development through continuing edu-

cation, outreach, and advocacy. VTA will sponsor outreach and training programs on topics including planning, design, and policy strategies oriented to county decision-makers, planning and public works staffs, and stakeholders from the development and business communities as well as civic leaders.

- *Advancing Established Land Use Programs.* On-going programs that support transit-oriented development, development review, and CMP programs will continue, with modifications as needed to complement the continued development of the CDT program.
- *Establishing New Programs.* VTA will continue investigating new programs that facilitate the implementation of its land use goal and objectives. New programs, such as the Joint Development Program (discussed in the following section), will incorporate CDT concepts and principles.

### The Role of Member Agencies

VTA can't do it alone. To get the highest and best use from transportation investments, and deliver a world-class multimodal transportation system, VTA must rely on the concerted efforts of its Member Agencies. Since opportunities to add capacity to roadways and expand fixed-rail transit are limited and costly, the land use policies and decisions of Member Agencies are



becoming increasingly important factors in VTA's decision-making process for transportation improvements. VTA will expect to see its commitments of billions of dollars in capital and on-going operating funds work in concert with coordinated land use and policy commitments from Member Agencies that support those investments.

---

# Transportation and Land Use Investment Strategy

The more than \$8.5 billion capital program included in VTP 2030 is VTA's most powerful instrument for achieving its goals. The Transportation/Land Use Investment Strategy commits VTA to making investments in facilities and services that will support VTA's land use objectives, and the on-going operations and maintenance of the transportation system. This section describes strategies and policy objectives for more closely linking transportation investments with the land use decisions made by Member Agencies.

## **Funding for Projects to Enhance Livability—CDT Program Grants**

Linking the CDT program and the Transportation/Land Use Investment Strategy, VTA has created two new grant fund programs to support Member Agencies, efforts to implement the concepts and principles of the CDT program. These funds are a key component of the overall investment strategy, demonstrating VTA's on-going commitment to supporting its land use objectives with significant local investments in improving the quality of life in our communities. Grants will be awarded on a competitive basis to provide strong incentives for Member Agencies to implement the precepts of the CDT program.

### **CDT Planning Grants**

CDT planning grants are intended to help VTA Member Agencies refine and build on promising

ideas and to prepare those plans, projects, and policies for implementation or adoption. The CDT Planning Grant Fund Program will make available approximately \$475,000 per annual cycle to VTA Member Agencies, and is currently funded for three annual programming cycles scheduled for FY 2004, 2005 and 2006. During this time VTA will work to identify and secure additional funds to continue programming in future years. Two categories of planning grants are offered:

*Policy Planning Grants*—up to \$150,000 for projects that revise existing, or create new, policies, codes, ordinances, or enforceable design standards that encourage changes in community form that result in multimodal, pedestrian-friendly streets and transit-oriented, compact, mixed-use developments along major transportation corridors and in core areas such as downtowns, main streets, commercial nodes, and station areas.

*Capital Planning Grants*—up to \$75,000 for capital planning projects that integrate high-quality, pedestrian and multimodal transportation design elements into a public street, corridor, commercial node or station area, and ready those projects for implementation.

### **Livable Communities and Pedestrian Program Capital Grants (CDT Capital Grants)**

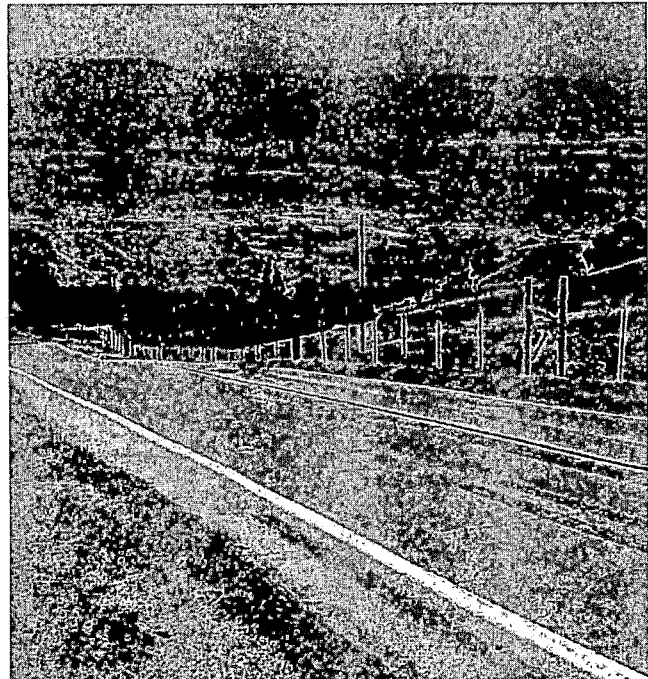
The Livable Communities and Pedestrian (LCP) Program provides capital funds for transportation-related projects that improve

community access to transit, provide multimodal transportation facilities, and enhance the pedestrian environment along transportation corridors, in community cores, and around transit stations. The LCP Program is designed to support the goals of CDT program, and the land use/transportation goals of Member Agencies. The LCP Program is expected to provide about \$10 million every two years for Member Agency capital projects. While a new evaluation methodology will be developed for these projects, the CDT Manual, Pedestrian Technical Design Guidelines, and other CDT documents will provide a framework for project evaluation, selection, and implementation.

### Capital Project Evaluation Criteria

The process for choosing among candidate projects attracts enormous attention, and with each investment costing hundreds of millions of dollars, decision-makers and community members correctly feel that the stakes are high. Due to the reciprocal relationship between the productivity of the transportation system and the land uses it serves, making informed and rational decisions about investments in future transit projects requires information about the land use characteristics they will serve.

The VTP 2030 Capital Investment Program presented in Chapter 2 reflects the first-round implementation of the investment strategy, in which land use characteristics have influenced the selection of both rapid transit and roadway



projects. Program areas in which project evaluation criteria currently consider land use characteristics include:

- Transit corridors
- Highways
- Local streets and county roads
- Bicycles

The inclusion of land use points in the scoring process results in a significant improvement in the overall ranking for projects judged as advancing the achievement of land use objectives. While these judgments are necessarily subjective, they provide an initial way for the

investment strategy to bring land use considerations into the decision-making process for transit and roadways. The result of including land use considerations with roadway projects was the ability of local roadway projects to compete with freeway projects in the evaluation. The result of including land use considerations with transit corridor projects helps to predict whether there will be all-day demand for transit and a sufficient ridership base to warrant the high capital investments in rapid transit technologies.

### **Joint Development Program**

VTA's Joint Development Program furthers the VTP 2030 land use goal and objectives and supports VTA's strategic and fiscal goals. The program was adopted by the VTA Board in January 2005. It is designed to secure the most appropriate private and public sector

development of VTA-owned property at and adjacent to transit stations and corridors. VTA envisions its station areas and transit corridors as vibrant, prosperous community assets that create a strong sense of place for transit, pedestrians, and the surrounding community, and which are destinations in their own right.

The Joint Development Policy provides a framework for creating and pursuing the highest and best opportunities for development around station areas and along corridors. The policy is intended to establish guidelines and procedures for identifying such opportunities to optimize return on investment to VTA. Joint Development also includes coordination with local jurisdictions in station area land use planning to establish development patterns that enhance transit use.

### **Goals**

The VTA's Joint Development Program seeks to:

1. Comprehensively plan and develop the highest and best housing, office and retail uses around station sites and along transit corridors.
2. Increase transportation system capacity by increasing transit use.
3. Generate both a long-term source of revenue for VTA, and allow VTA to participate in the increase in the value of its real property assets over time.

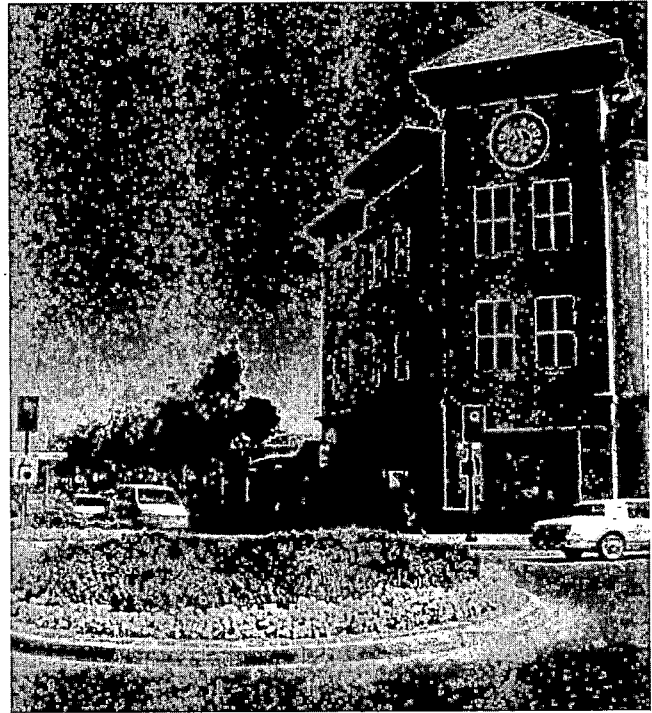


### Joint Development Policy

VTA shall, to the greatest extent possible, take advantage of opportunities for development on VTA property. VTA shall support and complete projects that have the greatest potential to contribute financially to VTA, to improve transit ridership, reduce dependence on the automobile, and enhance community livability and prosperity.

Joint development projects shall:

- Create both a long-term source of revenue for VTA, and shall allow VTA to participate in the increase in the value of its real estate assets over time.
- Encourage transit utilization and ridership.
- Exhibit high urban design standards and quality.
- Be consistent with local jurisdiction land use goals and shall be developed with a public participation process that respects neighborhood concerns.
- Provide for efficient and safe vehicular and pedestrian circulation and shall provide adequate parking to serve both private and public demand, while maximizing shared parking opportunities.
- Implement the concepts, principles, and practices outlined in VTA's Community Design and Transportation (CDT) Program and shall include the elements of transit-oriented design (TOD).
- Enhance and maintain existing or future transportation systems, operations, and infrastructure.



- Address community needs in joint development consistent with VTA policy, encouraging revenue generation and implementing TOD design principles.

### Statutory Support for VTA Joint Development

The following legislative summaries are presented to illustrate VTA's unique position with regard to potential joint development projects and the development of real property in both direct proximity to VTA transit services and other locations.





*Assembly Bill (AB) No. 670, Papan  
(enacted February 1999)*

AB 670 (Papan) allows VTA, the San Mateo County Transit District (SamTrans), and the Bay Area Rapid Transit District (BART), to acquire land entirely for the purpose of transit-oriented development (TOD). TOD, in this context, is defined as “a project that is a commercial, residential, or mixed-use development that is undertaken in connection with existing, planned, or proposed transit facilities and is located 1/4 mile or less from the external boundaries of that facility.” VTA, SamTrans and BART are the only transit operators in California with this authority. Accordingly, since VTA can acquire properties specifically for the purpose of development—including land assembly purposes—it is uniquely

positioned to develop and implement a Joint Development Program.

*Assembly Bill (AB) No. 935, Diaz, Santa Clara Valley Transportation Authority: Benefits Assessments (enacted October 2003)*

AB 935 (Diaz) authorizes VTA to establish Benefit Assessment Districts relative to its rail lines, and to issue revenue bonds in that regard. In addition to VTA, the Los Angeles County Metropolitan Transportation Authority (LACMTA) is the only other transit operator in California to be granted this authority. This law allows VTA to levy “benefit assessments” on certain property within a half mile of an existing or proposed rail transit station, with the proceeds to be used for the rail transit station or transit-related facilities within the boundaries of the benefit assessment district. In its decision, the State Legislature declared that “it is in the best interest of the citizens of the state to authorize the Santa Clara Valley Transportation Authority to levy special benefit assessments needed for public rail rapid transit facilities and services on the property that benefits from those facilities and services.” An Assessment District must be approved by a majority of the impacted property owners.

The ability to generate revenue, and participate in the economic benefits of its transit improvements through Benefit Assessment Districts, has many potential benefits for VTA. For example, it enables VTA to potentially share the

cost of providing rail transit services with the properties that benefit from those improvements. These savings could then fund additional amenities for transit patrons and the communities adjacent to transit facilities, or other capital improvements that serve the larger community.

*Assembly Bill (AB) No. 1937, Dutra  
(enacted February 2002)*

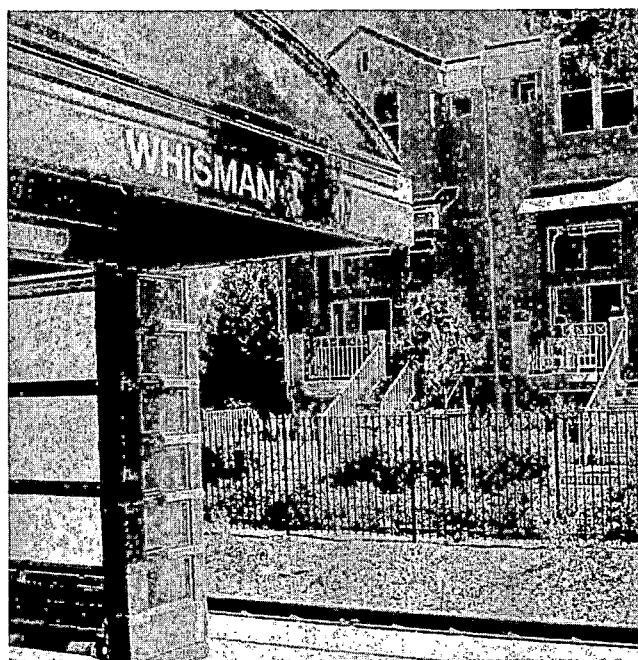
AB 1937 (Dutra) allows a transit operator to enter into agreements with a public agency, public utility, or person or entity for the purpose of joint development. This legislation essentially gives VTA the ability to develop and manage real property for transit-oriented development purposes. For example, VTA can, if it determines that it is in its best interests, enter into a development agreement with a private developer to construct a project on land that VTA owns or purchases, and retain ownership and management of that project as an on-going source of revenue for the agency.

*Assembly Bill (AB) No. 1320, Dutra, Transit  
Village Plan (enacted February 2003)*

AB 1320 amends the Transit Village Development Planning Act of 1994 to allow cities and counties greater flexibility for preparing Transit Village Plans for land within a quarter mile of major transit facilities. The primary significance of this amendment is in the definition of transit facilities, which changed from simply “a rail transit station” to include “a rail station, ferry terminal, bus hub, or bus transfer station.” In addition, the 1994 act

required transit districts to meet 13 specific benefits. Demonstrating that a district could meet all 13 specific benefits set the bar too high for most jurisdictions to get over—only one such district has been established in the State since the act was passed in 1994. As a result of AB 1320, more local jurisdictions are expected to form transit village development districts. The AB 1320 amendment streamlines the process for creating transit village development districts and makes it easier for local jurisdictions to implement them by allowing cities and counties to meet any five of the specified demonstrable public benefits.

This amendment expands VTA potential partnership opportunities for joint development



with member agencies by including bus hubs and bus transfer stations in the list of potential locations, and by allowing member agencies and VTA to focus greater attention on a smaller list of public benefits.

### **Transit Expansion Policy**

To help ensure that VTA's investments in current and future transit services are supported by local land use and policy decisions, VTA will develop a Transit Expansion Policy (TEP). Capital project funding and service expansion will be linked with the TEP, and apply to both bus and rail projects and services. The TEP will provide a policy framework for transit expansion, and establish thresholds for minimum commitments from local governments. The TEP will also support future planning studies for



transit expansion and improvements including annual service plans and corridors studies. With its responsibility as trustee of public transit funds in Santa Clara County, the TEP will assist VTA with continuing to:

- Protect taxpayer and Agency investments in transit infrastructure and services
- Protect the financial health and sustainability of the Agency
- Contribute to enhancing the livability and sustainability of Santa Clara County communities

Things that VTA may consider in developing its Transit Expansion Policy include:

- Ridership generation
  - > Farebox recovery goals/standards
  - > New transit riders
  - > Supportive land uses—planned, approved and existing residential, commercial, office areas and activity centers with close proximity to transit
  - > Enhanced connections with existing local, sub-regional, and regional transit services
- Financial constraints and opportunities
  - > Capital capacity—VTA's ability to provide capital funds for the expansion
  - > Operational capacity—VTA's ability to provide operating funds and efficiently

accommodate the service within the existing transit network/system

- > Opportunities for joint development and partnerships with other agencies and private business, and the level of local government commitments supporting joint development projects

### Implementation

As part of implementing the TEP, VTA will seek specific commitments from local governments to support the proposed transit service. In partnership with local governments, actions may include, but will not be limited to, one or a combination of the following:

- General Plan changes or approved Specific Plans
- Memorandums of Understanding (MOUs)
- Developer Conditions of Approval
- Tax Increment Financing
- Transit Benefit Assessment District
- Dedication of land
- Local funding



---

# Partnerships for Livability

Improving the livability of Santa Clara County requires meaningful cooperation and coordination between all groups and jurisdictions in the county—with everyone working toward mutual goals. While working to address transportation issues in the county is VTA's primary responsibility, our goals cannot be addressed by VTA alone. Many of the programs presented in this document require meaningful and collaborative partnerships to be truly successful.

Partnerships are essential to VTA's success in implementing the CDT program, linking land use and transportation investments, improving transit ridership, managing the transportation system, and in meeting the goals of enhanced livability and economic prosperity in Silicon Valley. VTA itself was developed as a partnership among the cities, towns, and County of

Santa Clara with the 1995 merger of the Santa Clara County Transit District and the Congestion Management Agency of Santa Clara County. VTA also absorbed the responsibilities of the Santa Clara County Traffic Authority, which dissolved at the end of 1997 after successful completion of its mandate.

VTA was created to address the transportation issues of Santa Clara County, and functions as a multimodal transportation planning agency involved with transit, highways, roadways, bike-ways, and pedestrian facilities. The VTA Board of Directors is composed of 12 elected officials appointed by Member Agencies, and all members of this partnership work together to address the transportation needs of Santa Clara County. As demonstrated by the significant strides made since VTA's inception, this partnership can truly be called one of the most successful in the valley.

The remainder of this section discusses VTA's work with other partners in our community and the future role of VTA leadership on issues related to transportation.

Partnerships for livability considers two basic types of partnerships:

- **Public/Public.** Enhanced cooperation between public entities is essential—better using public funds and having greater success with programs involving countywide issues such as housing, park space and traffic. Even better cooperation between different entities



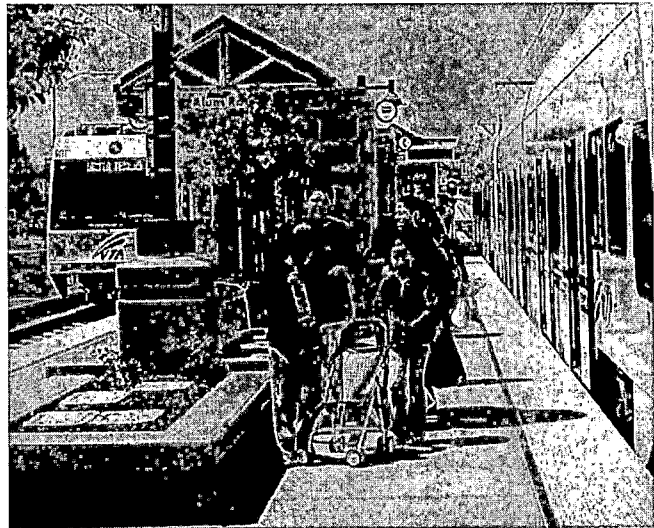
within an agenda can yield substantial public benefits.

- **Public/Private.** Examples include joint development, provision of shuttle services, and Transportation Demand Management (TDM) programs.

### Land Use Partnerships

Since VTA does not hold land use approval authority, successfully implementing its land use programs will require dynamic partnerships with Member Agencies. In addition to the CDT program and the transportation/land use investment strategies previously discussed, VTA engages in other land use activities to further its goals for concentrated mixed-use development. Current efforts include:

- **Development Review.** The cities and county already forward many of their proposals for land development to VTA, usually in the form of environmental documents, site plans, and transportation studies. VTA reviews the proposals to ensure that transportation is adequately integrated into the plans, and then submits suggestions to Member Agencies, who may work with the development community to incorporate VTA's concerns. In addition, VTA staff are also assisting Member Agencies through the CDT program with the early review of development proposals.
- **Proactive Congestion Management Program (CMP).** As the Congestion



Management Agency for Santa Clara County, VTA is charged with ensuring that regional roadways operate at acceptable levels of congestion. VTA reviews development proposals to ensure that transportation impacts are minimized, and that opportunities to facilitate use of transportation alternatives are taken. The CDT program is a fundamental component of this review process.

- **Transit-Oriented Development (TOD).** Through the CDT program, VTA also has an established TOD program in which VTA plays a role in conducting research and providing expertise and resources to help achieve transit-oriented development. Elements of the TOD program involve concept-level station area planning, joint development, and outreach and education efforts advocating development that complements VTA's transit system.

### Public/Private Partnerships

VTA works extensively with area employers and developers to establish partnerships and programs that encourage transit use and alternatives to single-occupant vehicle travel.

### Shuttle Services

VTA partners with Santa Clara County employers and the Bay Area Air Quality Management District (BAAQMD) to provide shuttles from light rail stations to surrounding employment sites. In addition, working through the Altamont Commuter Express (ACE) cooperative agreement, VTA provides shuttles from the Great America Station in Santa Clara to businesses throughout Silicon Valley. VTA also operates the DASH shuttle service in downtown San Jose, which links the Diridon Caltrain Station/Transit



Center with downtown employment and activities. In addition to shuttles provided by agencies or through public/private partnerships, a number of employers provide their own shuttles to meet the demand and flexible work hours of their employees.

### Eco Pass

Eco Pass is a partnership between Santa Clara Valley employers and VTA. Eco Pass is good for unlimited use of VTA bus and light rail services, seven days a week. Employers purchase annual Eco Pass stickers for all full-time employees at a given work site, paying one low cost. Pricing levels are based on proximity to VTA services and the number of employees.

The Silicon Valley Leadership Group (SVLG) and the San Jose Silicon Valley Chamber of Commerce endorse the Eco Pass program, and the Bay Area Clean Air Partnership (BayCAP) has recognized Eco Pass as an effective strategy for reducing air pollution. In addition, Eco Pass was awarded the 1999 Outstanding Public Environmental Program Award from the Santa Clara Valley Chapter of the American Society for Public Administration (ASPA) and the 1997 Governor's Environmental and Economic Leadership Award for Environmental Management.

VTA also offers a residential Eco Pass to housing developments like condominiums, apartments, townhouses, and to neighborhood and community associations. This program helps to

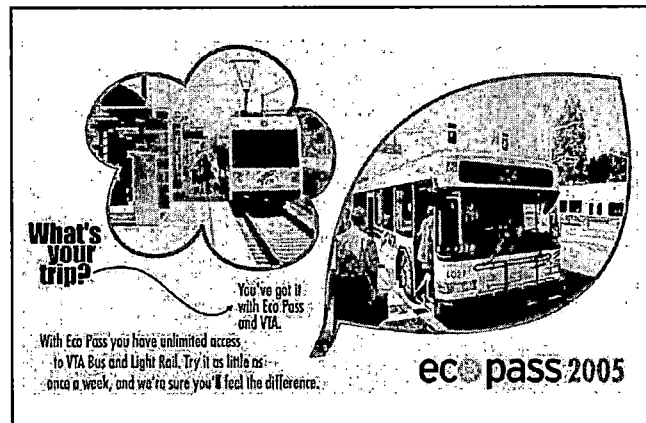
enhance community livability by encouraging use of alternative forms of transportation.

### Joint Development Partnerships

As discussed previously, VTA is establishing a program for developing VTA-owned land. In addition to partnerships with Member Agencies to secure favorable land use designations, this effort will require active partnerships with private developers. Such public/private partnerships can secure the highest and best use of land around station areas and transit long corridors. By delivering high-quality development projects specifically designed to make maximum use of transit-rich sites, joint development can deliver catalytic projects that stimulate further development that reinvigorates communities.

### Silicon Valley Community Partnerships

As Silicon Valley prospers and grows, VTA has joined with many business and community-based organizations to ensure a coordinated effort in improving the quality of life in Silicon Valley. These partnerships constitute a critical component to the future accomplishment of VTA's goals. For example, VTA actively participates in programs and functions held by the following organizations: SVLG, Greenbelt Alliance, Joint Venture Silicon Valley, and the Housing Action Coalition.



On a project planning or program level, VTA also involves numerous other community groups. These groups provide ideas, insights, perspective, and concerns at the local neighborhood level and may represent specific communi-



### *Environmental Justice Study*

VTA, in cooperation with the Metropolitan Transportation Commission (MTC), and with a grant from Caltrans, is developing transportation evaluation criteria for use in environmental justice planning applications within the framework of VTA's countywide transportation modeling process. This project will establish practical environmental justice planning procedures using a multidisciplinary approach. It will make extensive use of VTA existing public participation, transit planning, congestion management, and travel demand programs to identify potential impacted communities early in the planning process. Qualitative measures will be developed within the framework of countywide travel demand models to measure and predict environmental justice elements.

ties, housing associations, or businesses. Their input often leads to better-defined projects that meet the community's needs.

In addition, VTA coordinates with a wide range of other governmental agencies and non-profit organizations on an expansive array of topics from emergency preparedness, to transportation options for residents moving from welfare to work, to the implementation of Smart Corridor technology.

### **Multi-Jurisdictional Partnerships**

Since transportation problems rarely disappear at city or county boundaries, many solutions require working with agencies in adjoining counties and our regional partners. VTA works with the following agencies on a wide range of activities, from planning improvements to project delivery:

- VTA Member Agencies (the 16 city, town and county governments in Santa Clara County)
- Metropolitan Transportation Commission (MTC)
- Association of Bay Area Governments (ABAG)
- Bay Area Air Quality Management District (BAAQMD)
- Caltrans
- Alameda County Congestion Management Agency (ACOMA)



- San Mateo County Transportation Authority (SMCTA)
- Santa Cruz County Regional Transportation Commission (SCCRTC)
- Santa Cruz Metropolitan Transit District
- Transportation Agency for Monterey County (TAMC)
- San Benito Council of Governments

In addition, VTA participates in partnerships with other transit operators in the region to provide transit services under joint operating agreements. These organizations include:

- Caltrain Peninsula Joint Powers Board
- Altamont Commuter Express (ACE) Cooperative Service Agreement
- Dumbarton Express Transit Consortium
- Highway 17 Express Bus
- Capital Corridor Joint Powers Authority (Amtrak)

These partnerships enable VTA to provide regional rail and express bus connections with surrounding counties, and provide an extensive network of shuttles linking light rail, ACE and Caltrain with key employment sites throughout the county. VTA also works with the regional commute information service—RIDES for Bay Area Commuters—to maximize the capacity of the system by supporting carpool and vanpool options.

### *Regional Transit Coordination*

Coordinating regional projects is important for ensuring that projects are planned and implemented efficiently and effectively. VTA's efforts with regional coordination include:

- Coordinated Training Partners
- Transportation for Livable Communities
- Regional Discount Card Improvements Partners
- Transit Labor Management Workshops Partners
- Commuter Check Partners
- Interagency Paratransit Service Partners
- Regional Transit System of Routes and Transfer Points Update
- Paratransit Technical Assistance Program (PTAP) Partners
- Incident Response Planning Partners
- Fare/Transfer Agreements Partners
- ADA Paratransit Eligibility Program Partners
- Regional Transit Guide Update Partners
- Regional Transit Marketing Partners
- Clean Fuel Bus Initiative Partners
- Transit Trip Planning and Regional Transit Database (RTD)
- TravInfo™ Regional Transportation Information Systems Partners
- TransLink® Partners
- Regional Links Partners
- Trans Response Plan (TRP) Partners

### *Smart Corridors.*

The Smart Corridors program stems from the recognition that major transportation corridors often span many jurisdictional boundaries. A Smart Corridor is one where various public agencies' traffic management activities are coordinated to more effectively manage traffic in that corridor. While this is in large part achieved by using advanced technologies, partnerships between the jurisdictions are needed to develop procedures and measures for coordinating agency activities.



### **Intelligent Transportation Systems (ITS) and Systems Operations Management (SOM)**

Roadways and transit lines usually serve more than one jurisdiction, so the funding and implementation of ITS and SOM projects in these corridors often require the mutual cooperation of multiple agencies. VTA works with its Member Agencies and its regional partners to identify, evaluate, fund and implement these projects.

### **The Future Role of Partnerships**

Enhancing the livability of Santa Clara County requires meaningful coordination and cooperation between all groups in the county working toward this goal. More than ever, successful solutions will involve very creative cooperative efforts among all of the stakeholders in the cities, the counties surrounding Santa Clara County, and the region as a whole. The inclusion of a land use component in VTA's long-range planning program is an important step in acknowledging the need to address land use-related transportation problems as part of a comprehensive interrelated system of relationships. Traditional definitions of jurisdiction and responsibility should be redefined to identify opportunities for integrating transportation as a component of improving livability in Santa Clara County.

The promotion and development of these partnerships will require several key elements:

- **Vision** in understanding that business as usual will not achieve our transportation and livability goals, and that there are alternative courses of action.
- **Leadership** in the identification of issues and in the development of the conditions and coalitions to address them.
- **Boundary Crossing**—The CDT program advocates looking beyond the boundaries of jurisdiction and discipline, and challenges a critical examination of our current patterns of growth. Doing this will require active partnerships between local governments, public agencies, businesses, community groups, advocacy groups and individuals. Moreover, cross training between the various departments in public agencies—from policy to planning to engineering—is needed to increase understanding and unify public efforts toward common goals.
- **Inclusion** ensures that the creativity and brilliance of the entire community is brought to bear in the development of solutions to the issues that will arise.
- **Education and Communication** are important elements in ensuring that the solutions that are brought about through these partnerships are implemented.
- **Commitment** to bringing new ideas and solutions to fruition.

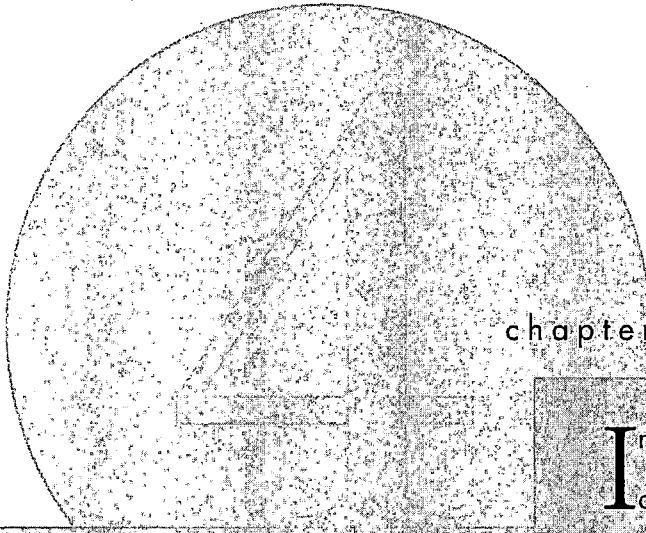
### *Transportation Demand Management*

Transportation Demand Management (TDM) is one response to the many challenges associated with increasing traffic congestion and the realization that road funding cannot keep pace with demand. The purpose of TDM is to increase the efficiency of existing roadway systems by reducing the demand for vehicular travel. TDM strategies and initiatives are multimodal and aimed at reducing peak-hour travel demands.

TDM strategies encompass a range of programs and initiatives including carpooling and vanpooling, flexible work hours, telecommuting, use of alternative transportation modes (e.g., transit, walking and biking), parking controls, cost incentives, and advanced technologies. As urban growth continues, TDM strategies will become increasingly important for meeting the needs of a growing and changing society.







## chapter 4: **IMPLEMENTATION**

Program Area Allocations and Funding Issues .....	<b>186</b>
Near-Term Implementation Activities ..	<b>188</b>
VTP Development Process .....	<b>200</b>

**I**mplementing the projects and programs described in Chapters 2 and 3 of the plan involves multi-stepped processes and decision-making stages. This chapter provides an overview of how the VTP implementation process works. It begins with a brief review of the program area allocations described in Chapter 2, and some of the key funding issues that need resolution before some projects can be implemented. This is followed by a summary of the near-term projects and programs and next steps for mid- and long-term implementation horizons. The chapter concludes with an overview of the VTP 2030 processes for project selection, planning, programming and delivery, and for amending and updating the plan.

---

# Program Area Allocations and Funding Issues

As presented in Chapter 2, VTP 2030 outlines a 25-year, \$8.5-billion plan of programs and projects. These program areas provide a framework for the overall VTP work program that the VTA Board will work to implement during the 25-year timeframe of the plan.

The Board-adopted program area allocations are presented in Table 4.1. In some cases, such as with the Countywide Expressway Program, the VTP 2030 allocations cover all project costs. In other cases, funding from other sources must be assembled to fully fund specific projects. Full implementation of the Measure A Transit Program of projects is contingent on VTA's ability to secure a new dedicated source of funding for transit.

## **Availability of Funds Identified in VTP 2030**

The timing and availability of State and Federal—and in some cases local—transportation dollars will be the primary factors determining when many of the VTP 2030 highway and roadway projects can move forward. At the writing of this document, new State funds are not expected to be available for programming before 2008. On the Federal side, the ultimate form of the Federal budget and the re-authorization of TEA-21 will determine how much funding will be available in the near- and mid-term horizons. Locally, VTA's success in securing an additional dedicated source of funding for transit is a key factor in developing practical

implementation schedules for 2000 Measure A projects. If VTA is unable to secure a new source of revenue for transit by the end of 2006, the VTA Board of Directors will re-evaluate projects and priorities for the Measure A Transit Program. In addition, some transit projects include funding from multiple partners. The ability of all partners to contribute their full share will determine when those projects can move forward.

## **Implementation Process**

Project programming does not occur in VTP 2030. The VTA Board and its partnering agencies determine project programming and implementation schedules for inclusion in programming documents such as the Capital Improvement Program section of the Congestion Management Program (CMP) and the Short Range Transit Plan (S RTP). Obviously, not all projects can be implemented quickly, and many will be phased in over time and started in outlying years. However, the projects receiving the highest scores based on the Board-adopted project evaluation criteria will generally be considered first for implementation.

Once the programs and project lists are developed, and funding sources and schedules are identified, VTP 2030 next looks toward the steps for implementation. Some projects are already under way in design; others are in planning stages; and still others are waiting to be further defined or identified through studies.

Table 4-1 VTP 2030 Program Areas and Allocations

Program Areas	Allocations (*03\$/Millions)
Highways	\$766.3
Expressways	150.0
Local Streets & County Roads	230.0
Pavement Management	301.5
Sound Mitigation	10.0
Landscape Restoration & Graffiti Removal	1.0
Transit	6,829.0
TSM & Operations	28.0
Bicycle	90.5
Livable Communities & Pedestrians	120.1
<b>Total</b>	<b>\$8,526.4</b>

Revenue projections and project cost estimates are shown in 2003 dollars to be consistent with State and Federal revenue projections provided by the Metropolitan Transportation Commission (MTC) and with project cost estimates developed in 2003.

The following section outlines the implementation processes of VTA and other project-related activities that need to occur for project delivery in the near term (i.e., before the next VTP update), and during the mid-term and long-term horizons.

### Implementation Process for Capital Projects

Most capital projects move through eight basic steps from plan to completion, shown below. Some of these tasks can be completed concurrently, such as the Preliminary Engineering and Environmental tasks, and Final Engineering and Right-of-Way tasks.

**1. Planning.** Defines the transportation need and project goal.

**2. Programming.** Through a formal process, funds are identified and specified for a project scope and schedule.

**3. Preliminary Engineering.** Identifies alternatives for attaining the specified goal(s); for each alternative, describes benefits and develops engineering drawings with sufficient detail to perform environmental analysis and estimate construction feasibility.

**4. Environmental.** Analyzes each alternative for environmental impacts, identifies possible mitigations to reduce impacts, and obtains legally mandated State and/or Federal environmental clearance for a chosen preferred alternative.

**5. Final Engineering.** Finalizes design drawings and produces construction documents for the preferred alternative.

**6. Right-of-Way.** Obtains necessary right-of-way for project construction.

**7. Construction.** Builds the project.

**8. Operations.** Finished project is placed in operation.



---

# Near-Term Implementation Activities

This section focuses on the implementation activities that are anticipated to occur over the next four years of the plan—until the next update of this plan. VTA will continue planning and design efforts to ready other projects for implementation in outlying years. VTA will work with Member Agencies and other partners to deliver the projects and programs by focusing first on the planning and programming efforts required for implementation.

The following provides a summary of the activities expected to occur within the near term. Each section is organized into Highway/Roadway, Transit, and other categories, and further divided into Planning/Study and Construction sections. The projects, programs, and studies listed below have identified funding and will move forward and be completed within the next four years. Some of these projects are contingent on the availability of State or Federal funds within the next three years, and consequently may be delayed if the State's fiscal condition does not improve.

## Highway/Roadway Projects

### Projects Under Construction (as of October 2004).

*Route 85/Highway 101 North Interchange Project.* This project improves traffic operations and safety by reducing weaving between vehicles entering and exiting the freeway, increasing the capacity of the interchange, providing new

freeway-to-freeway connections, and adding auxiliary lanes. The project replaces the Route 85/US 101 connector, modifies interchange ramps at Moffett Boulevard, North Shoreline Avenue and Old Middlefield Way, and constructs auxiliary lanes and HOV direct connector ramps from northbound Route 85 to northbound US 101 and from southbound US 101 to southbound Route 85. Opening date in spring 2006.

*Highway 237/I-880 Interchange Project.* This project improves traffic operations and safety by providing direct connector HOV lanes from southbound I-880 to westbound Route 237 and from eastbound Route 237 to northbound I-880, and a southbound braided exit ramp from I-880 to Tasman Drive. Opening date in May 2005.

*Coleman Avenue/I-880 Interchange.* This project reconfigures and widens the existing ramps of the I-880/Coleman Avenue interchange, and adds a new direct connector ramp from Airport Boulevard to southbound I-880. It replaces the Coleman Avenue over-crossing at I-880 and widens Coleman Avenue to six lanes from North Airport Boulevard to Hedding Street. Opening date in late summer 2006.

*Bailey Avenue/US 101 Interchange.* This project constructs a new full interchange on US 101 in south San Jose, extending Bailey Avenue east of Monterey Road connecting to Malech Road across Coyote Creek. Opening date late December 2004.

*Montague Expressway Widening from I-880 to US 101.* The County of Santa Clara has secured funding to complete eastbound widening to four lanes, including crossing the south portion of the Guadalupe River Bridge. The eastbound portion of the project is under construction and will be completed by early 2006. While funding is available for certain segments of the westbound widening, a complete funding package has not been secured for the westbound lanes, including widening of the Guadalupe River Bridge. The County may choose to pursue the westbound segments for which funds are available, or wait until a complete funding package can be assembled; therefore, a schedule for westbound widening is not currently available.

#### **Projects Scheduled for Construction Before 2008**

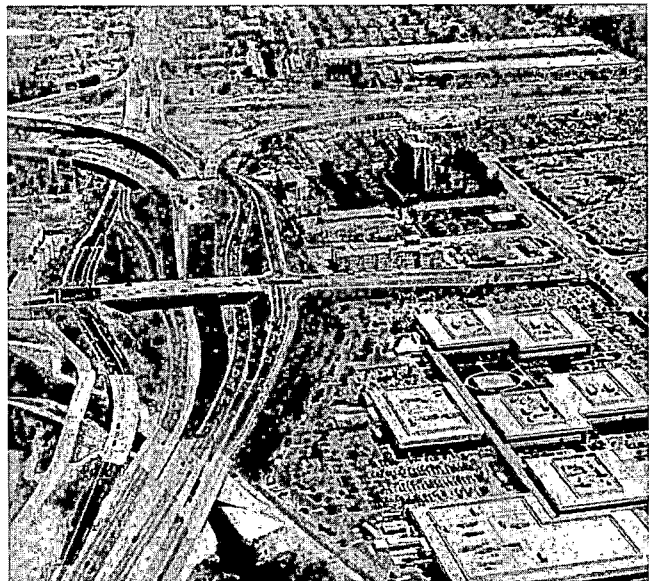
##### **1996 Measure B Projects**

*Route 152-B, Llagas Creek to Gilroy Foods.* This project provides safety and operational improvements on Route 152 between US 101 and Route 156 in Gilroy and Santa Clara County. The project widens Route 152 from two to four lanes from immediately west of Gilroy Foods through the Llagas Creek Bridge. Additional improvements include improvements to the intersection at the Gilroy Foods east entrance by installing a traffic signal and aligning it with the existing Westside Transport Inc., entrance. Construction is scheduled to begin in spring 2005, with a completion date of late summer 2006. The \$21.9-million cost of the project is

funded with \$16.2m in Measure B local sales tax, \$5.5m from the City of Gilroy, and \$0.25m from Federal funds.

*Route 17-E Auxiliary Lane, Camden to Hamilton Avenue.* This project will add northbound auxiliary lanes between Camden Avenue and Hamilton Avenue to provide more room for traffic merging onto and off Route 17, and modify the off-ramp from southbound Route 17 to Hamilton Avenue to improve traffic operations.

*Highway 87 HOV Lanes.* This project will provide high-occupancy vehicle (HOV) lanes on Highway 87 between Branham Lane near Highway 85 and Julian Street. The project is being constructed in two segments: 1) I-280 to just north of Julian Street, and 2) Branham Lane to I-280. Segment 1 is scheduled to begin





in summer 2004 and be completed summer 2006; segment 2 is scheduled to begin in fall 2006 and be completed by summer 2007. Project cost for both segments is \$121.0m, with \$76.9m coming from GARVEE bonds, \$25.6m from Measure B sales tax, and \$18.5m from the State Highway Operations and Safety Program (SHOPP funds on segment 2 only). Segment 1 is scheduled for completion in Fall 2006, followed by segment 2 in early 2007.

#### **VTP 2030 Projects**

*Route 152/156.* Through a joint VTA/Caltrans partnership, this project will enhance safety by constructing a direct connector separation ramp from westbound SR 152 to westbound SR 156,

and a reconfigured at-grade direct connector ramp from eastbound SR 156 to eastbound SR 152. All other at-grade movements will be upgraded and highway standards lighting will be added. The project is currently at the 65 percent design phase. Construction is scheduled to begin on the \$27.25 million project in early 2006 and be completed by mid- to late 2008. The project is contingent on STIP and ITIP being available in 2005/06.

#### **Planning Studies and Design Projects**

The following studies and design projects are gearing up or already under way:

*US 101 Central Corridor Study.* This study examined operational and safety improvements along US 101 in central Santa Clara County between the I-280/680 interchange on the north to the Yerba Buena Road interchange on the south. The study identified a list of improvements that includes construction of an additional lane in the southbound direction in the median from south of Story Road to south of the Capitol Expressway interchange; modification of the US 101/Tully Road interchange to a partial cloverleaf interchange; modification of the US 101/Capitol Expressway interchange to a partial cloverleaf interchange; construction an auxiliary lane in the southbound direction of US 101 between the Tully Road and Capitol Expressway interchanges; modification of the collector-distributor (C-D) system on northbound US 101 between Yerba Buena Road and Capitol

Expressway; and construction of a new on-ramp from the C-D road to northbound US 101 south of Capitol Expressway Overcrossing. The project is currently completing an Environmental Impact Report (EIR) and Preliminary Engineering (PE.) The EIR is scheduled for adoption in May 2005, and PE is scheduled for completion in June 2005.

*Hellyer and Blossom Hill Road Design.* Design work for his project is 95 percent complete. However, funding shortfalls experienced by the City of San Jose have stalled further design. The city is working to identify funding to complete design and ready the project for construction.

*South County Circulation Study.* This study will conduct a comprehensive review and analysis of existing and projected traffic conditions in south Santa Clara County, including the cities of Morgan Hill and Gilroy, and the community of San Martin. The results of this study will include a list of preferred roadway improvement projects to be considered with the next VTP update.

*High Occupancy Toll (HOT) Lanes Feasibility Study.* This study will assess the freeway system in Santa Clara County to determine if the operation of a HOT lane system is feasible, and, if so, identify feasible corridors for HOT lane operations. The study includes an initial assessment of freeway corridors in the county and identification of two or three corridors for detailed evaluation. A detailed analysis of each candidate corridor will include an evaluation

of demand for HOT lane operations, HOT lane operations pricing, and HOT lane traffic operations including revenue projections. Based on this analysis, recommendations will be made for each of the candidate corridors for further study beyond the scope of this study. Each candidate corridor will be considered not only in terms of its potential as an individual project, but also in terms of its potential as part of a regional HOT or managed lane network.

Project planning and development will continue to occur on various projects contained in the Highway, Expressway, and Local Streets / County Roads project lists. The planning and design work from these efforts will inform the next VTP update.

### Transit Projects

Following are projects under construction.

*Vasona Light Rail Line.* The project is currently under construction with an anticipated opening date of summer 2005. The project constructs a 5.3-mile addition to the 37-mile VTA light rail system between downtown San Jose and the Winchester station in Campbell, including eight stations and a tunnel segment at the Diridon station in San Jose.

*Palo Alto Caltrain Transit Center Reconstruction.* Construction is expected to begin in late 2004 and be completed by summer 2005. This project will completely reconstruct the Palo Alto Transit Center to improve links

between Caltrain and bus service, as well as accommodate additional buses operated by VTA, SamTrans, and the Dumbarton Express, and provide convenient connections with Stanford's Marguerite shuttle and Palo Alto's local shuttle system. The project adds two new bus bays for Line 22 articulated buses and provides improved passenger shelters. Project elements include the reconstruction of the University Avenue Bridge connecting with Palm Drive, reconstruction and expansion of the Caltrain Bridge over University Avenue to include four tracks to allow express train service, roadway improvements, and the creation of community park space.

*LRT Platform Retrofit.* This project completes reconstruction of the remaining station platforms on the Guadalupe Line south of downtown San Jose to accommodate low-floor Light Rail Vehicles (LRVs). Design work is completed. Completion date is dependent on identification of capital funding.

*Cerone Phase 1.* Improvements include construction of a new hydrogen refueling facility to support the Zero Emission Bus Demonstration Program, and new yard entrance and road call building.

*Chaboya Bus Division Improvements.* Include the installation of a new vacuum system and a new bus wash and waste water treatment system.

### **Transit Projects in Environmental or Design**

*Silicon Valley Rapid Transit Corridor (BART).* Project is currently conducting Preliminary Engineering (PE) and completing environmental clearance with an Environmental Impact Report (EIR) and an Environmental Impact Statement (EIS). The VTA Board of Directors certified the final Environmental Impact Report (EIR) in December 2004. The certification of the Environmental Impact Statement (EIS) is anticipated in early 2007, and may be tied to approval of the EIS for the Warm Spring BART extension. Preliminary Engineering is scheduled for completion by late 2006. This project cannot proceed into final design and construction until a new dedicated source of funding for transit is secured.

*Downtown East Valley.* Preliminary Engineering and Environmental Clearance for the Capitol Expressway segment between Wilbur Streets and Nieman Avenue will begin in September 2004. Preliminary Engineering and Environmental Clearance for the Alum Rock segment will begin with the VTA Board adoption of either the Enhanced Bus or Light Rail technology. A decision on technology is currently scheduled for summer 2005. This project cannot proceed into final design and construction until a new dedicated source of funding for transit is secured, or a reprioritization of projects occurs.

*Caltrain Electrification EIR/EA.* Caltrain has prepared and circulated a Draft Environmental Impact Report (DEIR)/ Environmental Assessment (EA) for electrifying Caltrain from Gilroy to San Francisco. Caltrain is currently in the process of responding to comments received and preparing a final EIR with an expected issue date of late 2004 or early 2005. Caltrain's adopted 2004–23 Strategic Plan outlines four scenarios for the future of Caltrain, with the schedule for completion of electrification varying under each scenario: Status Quo (no electrification), Moderate Growth (electrified service begins in 2018), Enhanced (electrified service begins 2008), and Build Out (electrified service begins in 2014, assuming construction of High Speed Rail between Gilroy, San Jose and San Francisco). Due to funding schedule uncertainties, Caltrain's recently adopted 2004–2013 Short Range Transit Plan (SRTP) does not include capital funds for implementation of electrification through 2013. Prior to initiation of the design and implementation of the electrification project, the local and regional funding partners must reach agreement on a schedule for the allocation of funding commitments from VTA, Muni, Samtrans and MTC. The Caltrain SRTP will be updated in two years to reflect policy decisions and additional actions over the next two years that will provide the information needed to develop a firmer schedule for the electrification project. VTA will continue to work with Caltrain and MTC to develop an implementation schedule.



### Transit Planning Studies

*Measure A Expenditure Plan.* VTA is currently developing scenarios for implementing the 2000 Measure A program of projects. Expenditure scenarios include consideration of variables such as project schedules, and with and without a new permanent source of funding for transit. The Expenditure Plan is scheduled for completion by early 2005.

*New Rail Corridors Feasibility Study.* This \$1.3 million study is scheduled to begin in late 2004 and take 12–18 months to complete. It will examine seven potential rail corridors to evaluate the feasibility, operational efficiency, and cost-effectiveness, and clear a Programmatic EIR. New rail corridors to be considered include Vasona extension to Vasona Junction, DTEV Eastridge Area to Hwy 87, Santa Teresa



extension to Coyote Valley, and extensions to Morgan Hill, Stevens Creek Blvd., West San Jose/Santa Clara, and North County/Palo Alto. Light Rail from Capitol Expressway/Nieman Avenue to Highway 87 will be included in this study.

*Market Segmentation Study.* This study will utilize sophisticated market research techniques developed for private industry to identify distinct market segments for transit services. Study objectives include: 1) a better understanding of distinct groups (market segments) in the population that share similar values, 2) which attitudes and preferences these groups have regarding different transit options, and

3) which service delivery strategies best match these market segments. An analysis will be conducted to link these results with identified travel patterns and develop various transit service options. The end result will allow VTA to develop recommended changes to the bus network that are aimed at capturing a larger market share while conserving resources.

*Community Bus Study.* Current development patterns and densities, multiple destinations, and an increasingly diverse population present some unique challenges to daily travels around our valley. This study will develop a new approach to fixed route services by blending standard buses with smaller, "community buses." This community-based blend of vehicle types coupled with new routings is envisioned to provide the service and convenience needed to attract new riders. The results of the Community Bus Study will be used in the development of Annual and Rail Integration Service Plans. Recognizing these opportunities and community benefits, VTA's Fiscal Year 2004–2013 Short Range Transit Plan incorporates the use of smaller-capacity vehicles beginning in January 2006.

*Bus Rapid Transit (BRT) Studies.* BRT is a newly evolving concept in the provision of transit services. The VTP 2030 Measure A Transit Program identifies \$33 million for three BRT corridors: Line 22, Monterey Highway and Stevens Creek Boulevard. A key attribute of BRT service is the reduced need for capital

infrastructure investments, and the ability to add BRT features incrementally as demand for service and availability of funding warrants. Results from the BRT studies will guide the implementation of new BRT services. The following BRT efforts are currently under way:

- *Line 22 BRT Project.* VTA is participating in the Federal Bus Rapid Transit Demonstration Program to provide BRT enhancements for Line 22. BRT is currently being developed in the northwest segment of the Line 22 corridor in the cities of Santa Clara, Sunnyvale, Mountain View and Palo Alto. The southeast portion of Line 22 in the Santa Clara/Alum Rock corridor is being studied for BRT as part of the Downtown East Valley Transit Improvement Project.
- *Monterey Highway BRT.* The Monterey Highway BRT project is currently in the conceptual design phase to further define specific improvements. The Monterey Highway BRT project includes improvements along a 9.6-mile route (primarily Monterey Highway) from the Diridon station to the Santa Teresa station on the Guadalupe line in south San Jose. Next steps include developing a strategy to move into preliminary engineering, final design, construction, and operations.
- *Stevens Creek Boulevard BRT.* Stevens Creek will be studied in greater detail to determine its potential as a BRT corridor. Study findings will be considered with the development of operating and capital improvement plans.

*Dumbarton Rail Corridor EIR/EIS.* This project commits VTA to providing up to \$1 million in funding as VTA's one-third local share of the cost of preparing a project Environmental Impact Report/Environmental Impact Statement (EIR/EIS). The lead project sponsor is the San Mateo County Transportation Authority (SMCTA), who will also act as the implementing agency for the overall project. Other project sponsors include the Alameda County Congestion Management Agency (ACCM), the Alameda County Transportation Improvement Authority (ACTIA), and the Capitol Corridor Joint Powers Authority (CCJPA).

*Caltrain to Monterey/Salinas.* The Transportation Agency for Monterey County (TAMC) is currently conducting planning work to determine the feasibility of, and funding strategies for, linking Caltrain with Monterey County. VTA staff is working with TAMC and Monterey County staff to coordinate planning efforts.

In partnership with MTC, VTA will conduct community-based transportation studies in the Gilroy and east San Jose areas. The goal of these studies is to advance the findings from MTC's Lifeline Transportation Network Report adopted by the Commission and incorporated into the 2001 Regional Transportation Plan (RTP). The Lifeline Transportation Network Report identified transit needs in economically disadvantaged communities throughout the San



Francisco Bay Area region, and recommended local transportation studies to further efforts to address them. Each community-based transportation study will involve a collaborative approach that includes residents and community-based organizations (CBOs) that provide services within minority and low-income neighborhoods. The first of these studies will be in the Gilroy area, scheduled to begin in summer 2005.



## **Other Programs and Projects**

### **Intelligent Transportation Systems (ITS)**

As described in the Transportation Systems Operations and Management Program section in Chapter 2, project planning and development in the near term will focus on projects that improve traffic flow through improved signal operations. This includes improvements in traffic signal operations for transit, pedestrians, bicyclists and vehicles on local roadways, expressways, freeways and transit. Examples of projects that will be completed in the near term include the following:

*Silicon Valley Intelligent Transportation Systems (SV-ITS) Program Enhancements.* Through a partnership of local, regional and State agencies, work continues on the integration of technology-based systems to provide improved operations of the transportation system. Building on the original Smart Corridor project along I-880, the program is completing four projects that expand camera surveillance, coordinate traffic signal operations, and share traffic information in areas covering Los Gatos north to Fremont in Alameda County, around the San Jose Mineta International Airport, and westward from downtown San Jose to Cupertino.

*Transit Signal Priority Implementations for BRT.* One element of VTA's BRT program includes the deployment of priority treatment at traffic signals for buses. Such bus signal priority

(BSP) is expected to be in operation in 2005 along VTA's Line 22 corridor and also along Bascom Avenue as a result of a signal system improvement project by the City of San Jose.

*County Expressway Traffic Operations System.* The County of Santa Clara Roads and Airports Department is completing deployment of fiber-optic communications, traffic signal system improvements and surveillance cameras along all eight expressways. Much of this improvement project has been funded by the 1996 Measure B sales tax.

*Dynamic Passenger Information Project.* The Dynamic Passenger Information Project incorporates various state-of-the-art Intelligent Transportation System (ITS) technologies into light rail/bus transit centers and park and ride lots. This project has been expanded to include Internet-based information, real-time electronic transit schedules linking to Automated Vehicle Location (AVL) on buses and light rail, transit information signs, electronic signs on the Silicon Valley Smart Corridors, and other on-site transit user amenities. A specific element funded with \$1.57 million in Federal Section 5308 ITS funds will help implement real-time transit information components at key locations. Future funding will expand the number of real-time information displays to all transit centers and other key bus stops.



#### **Pedestrian and Bicycle Projects**

*Guadalupe Bridge at River Oaks.* This bridge connects the River Oaks light rail station in San Jose to the residential/retail Rivermark neighborhood in Santa Clara. Scheduled for completion in September 2005.

*Mary Avenue Bike/Pedestrian Bridge at I-280 in Cupertino and Sunnyvale.* The bridge will provide a safe and convenient connection between De Anza College in Cupertino and Homestead High School in Sunnyvale along the Mary Avenue corridor. Scheduled for completion in spring 2006.

---

*Los Gatos Creek Trail Bridge/Path Improvements in Campbell.* Provides a bridge and other path improvements near Camden Avenue in Campbell. Scheduled for completion in summer 2005.

*Almaden Expressway Improvements Between Ironwood Drive and Foxworthy Avenue.* Includes the installation of sidewalks, bike shoulders, and crosswalks providing residents with safer connections to local services and shops. Scheduled for completion in spring/summer 2006.

*Uvas Creek Trail, Phase I, Gilroy.* Provides creek trail improvements as part of the new Gilroy Sports Park connecting with Luchessa Avenue. Scheduled for completion in summer 2006.

*San Tomas Aquino Creek Trail Reach 2 in Santa Clara.* This project extends the creek trail from Agnew Road to Scott Blvd., and includes an under-crossing of US 101. Scheduled for completion in summer 2005.

*Los Gatos Creek Trail Reach 4 (Lincoln Avenue–Auzerais Avenue) in San Jose.* This project provides an extension of the existing trail, and includes on-street sections. Scheduled for completion in fall 2007.

*Stevens Creek Trail (between Yuba Drive and North Meadow Lane) in Mountain View.* This project extends the trail southwards toward

Mountain View High School, and includes the under-crossing of El Camino Real. Scheduled for completion in December 2007.

## **Implementation of VTA Land Use Programs**

### **Livable Communities and Pedestrian Program**

The Livable Communities and Pedestrian (LCP) Program provides capital funds for transportation-related projects that improve community access to transit, provide multimodal transportation facilities, and enhance the pedestrian environment along transportation corridors, in community cores, and around transit stations. During winter 2006, VTA will develop specific evaluation and scoring criteria for LCP Program projects using the CDT Manual, Pedestrian Technical Design Guidelines, and other CDT documents as a framework. Beginning in 2006, the LCP Program is expected to provide about \$10 million every two years for Member Agency capital projects.

Table 4-2 shows the implementation activities associated with VTA's Land Use programs, including both on-going efforts and new programs.

**Table 4-2 Implementation of VTA Land Use Programs**

Program or Plan	Short-term Activities	Mid- to Long-term Activities
<b>CDT Program</b>	<ul style="list-style-type: none"> <li>Continued program development</li> <li>Work with Member Agencies</li> <li>CDT Planning and Capital Grants Program</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> <li>Integrate CDT principles and practices into VTA programs, and Member Agency programs and policies</li> </ul>
<b>Proactive CMP/ Transportation Impact Analysis Review (TIA)</b>	<ul style="list-style-type: none"> <li>Incorporate CDT principles and practices</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> </ul>
<b>Development Review</b>	<ul style="list-style-type: none"> <li>On-going; incorporate CDT principles and practices</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> </ul>
<b>Transit-oriented Development (TOD) Program</b>	<ul style="list-style-type: none"> <li>On-going; assist Member Agencies with TOD projects</li> <li>Implement CDT principles and best practices</li> </ul>	<ul style="list-style-type: none"> <li>On-going as part of the CDT Program</li> </ul>
<b>Deficiency Plans</b>	<ul style="list-style-type: none"> <li>Assist cities with the development of city-wide plans</li> <li>Revise guidelines to include CDT principles and best practices</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> <li>Consider countywide deficiency plan</li> </ul>
<b>Land Use Transportation Investment Strategies</b>		
<b>CDT Planning Grants</b>	<ul style="list-style-type: none"> <li>Administer program; annual call-for-projects</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> <li>Monitor projects</li> <li>Pursue additional strategies to keep the program funded</li> </ul>
<b>CDT/Livable Communities and Pedestrian Program Capital Grants</b>	<ul style="list-style-type: none"> <li>Develop project evaluation criteria and selection process</li> <li>Administer program</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> <li>Monitor projects</li> <li>Pursue additional strategies to keep the program funded</li> <li>Coordinate with MTC TLC and bike/pedestrian program</li> </ul>
<b>Joint Development Program</b>	<ul style="list-style-type: none"> <li>Establish formal program</li> <li>Pursue one to five projects</li> <li>Coordinate with other programs</li> </ul>	<ul style="list-style-type: none"> <li>Continue with project development and management</li> <li>Maintain on-going revenue stream</li> </ul>

---

# VTP Development Process

VTP 2030 uses a systematic approach for planning and programming capital projects developed as part of VTP 2020. This process was used to create the current list of projects described in the Capital Investments section, and will be maintained through the 25+ year VTP 2030 planning horizon. It is also intended for use in future updates to VTP 2030.

The VTP approach establishes processes in which, under the leadership of the VTA Board of Directors, VTA can make planning and programming decisions with input from VTA's advisory committees, Member Agencies, the

environmental and business communities, and the general public. These decisions are based on consistent, technically sound evaluation of project proposals and preceded by clear and consistent communications with outside organizations and the community. After programming decisions are made, the VTP 2030 approach includes sustained commitments to major planned projects in order to secure funding and proceed successfully to project delivery.

In order to establish this planning approach, VTP 2030 defines three processes to govern how projects move from planning documents to construction:

- VTP Project Selection
- Project Planning, Programming, and Delivery
- Updating and Amending the VTP

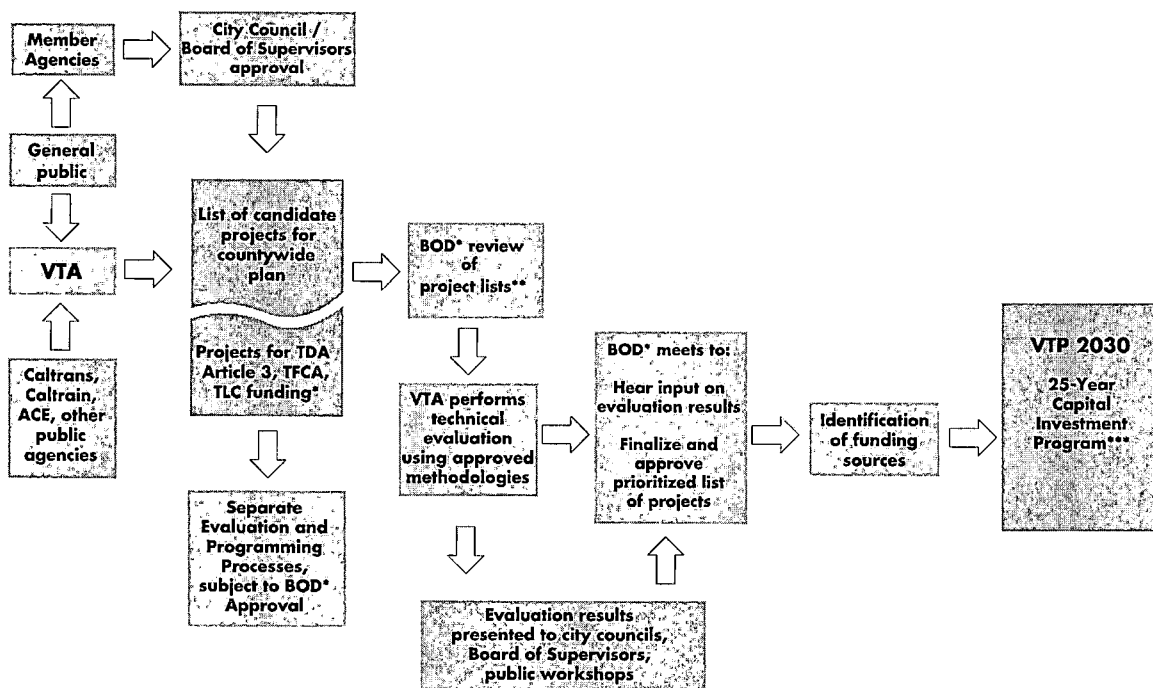
## VTP Project Selection Process

Figure 4-1 illustrates the process of selecting projects for inclusion in VTP 2030. This process puts oversight of the planning process with the VTA Board of Directors and allows for broad community input. The flowchart of the Project Selection Process is described in following text.

To begin the process, VTA solicits proposals from interested agencies and the general public, and may include a formal call-for-projects. VTA's Member Agencies solicit further input from their constituents, and then present project lists to their elected officials for approval before sub-



Figure 4-1 Project Selection Process



\* VTA Board of Director (BOD) action will follow review and action by VTA advisory committees

\*\* Proposed for Major Funding Sources such as STIP, TEA-21, Major Earmarks, Future Sales Tax or Bonds

\*\*\* Transit Program covers 30 years

mitting the lists to VTA. This step ensures local knowledge of, and commitment to, proposed projects. Projects are next submitted to VTA for consideration in one or more of the ten program areas identified in VTP 2030.

VTA then evaluates the proposed projects using technical methodologies that are approved by VTA's Technical Advisory Committee and Board.

Evaluation results are presented to Member Agencies and at public workshops. This step functions as a feedback loop to provide for public comment on VTA's evaluation. Based on evaluation scores, the VTA Board then finalizes and approves the list of projects. Once the VTA Board of Directors approves the list of projects, individual projects can proceed into programming phases.

## Project Planning, Programming, and Delivery

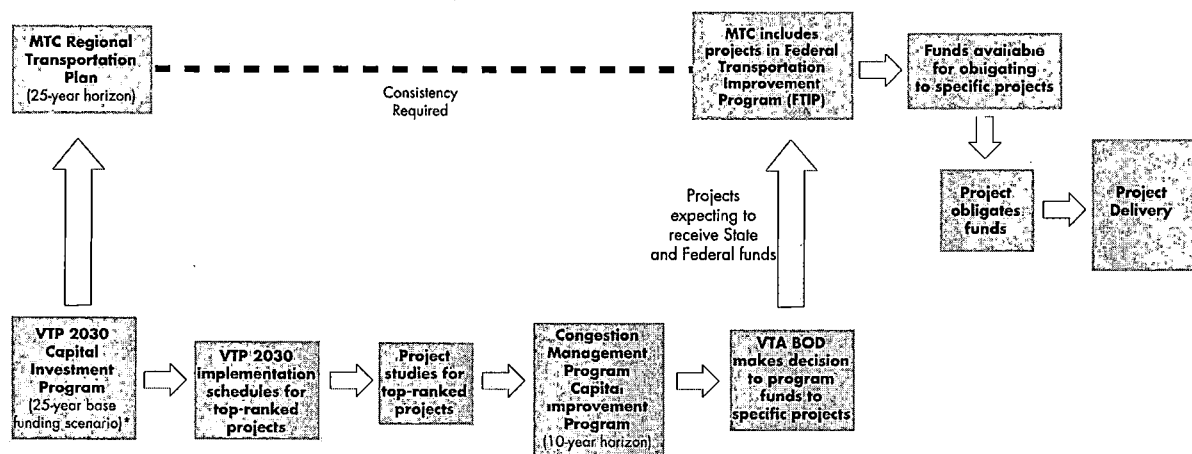
This section describes what happens to a project once it emerges from VTP 2030 as an agency priority. Figure 4-2 below presents a flowchart of the process by which a transportation project moves from VTP 2030 through project delivery. A description of the flowchart is described in following text.

At the local level, projects appearing in VTP 2030 will generally undergo project studies. In cases where project planning or engineering studies have already been completed, those studies will provide the starting point for more advanced studies or engineering. Based on

these project studies, the VTA Board places the top-ranked projects in the Congestion Management Program's Capital Improvement Program (CIP). Top-ranked projects are determined by using a set of evaluation criteria similar to those developed for initial project evaluation but more focused on project delivery. The VTA Board can then make decisions to program funding for specific projects.

Beyond the local level, the Metropolitan Transportation Commission (MTC) takes projects appearing in VTP 2030's Capital Investment Program and places them in MTC's Regional Transportation Plan (RTP) where they may appear in the constrained or unconstrained

**Figure 4-2 Project Planning, Programming and Delivery**



\* Transit Program covers a 30-year base

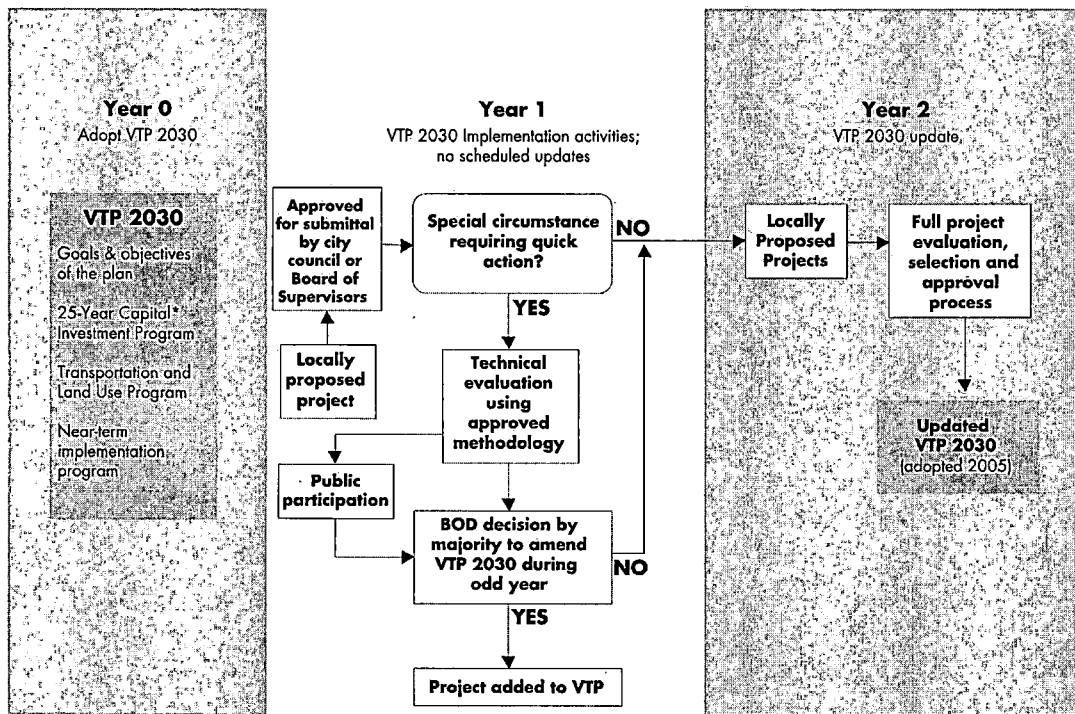
portion of the RTP. Once the VTA Board votes to program funds to specific projects from specific sources, MTC places those projects in its Federal Transportation Improvement Program (FTIP). Only projects in the RTP can be placed in the FTIP. Funds from State and Federal sources are then made available to be obligated to these projects. Finally, the agencies' sponsors of the projects obligate the funds in order to finance construction.

### Updating the VTP

Notwithstanding VTP 2030's process of analysis and evaluation, things change, and VTA expects to update the plan every four years. Plan updates will include the project selection process, and the process for project planning, programming, and delivery shown above.

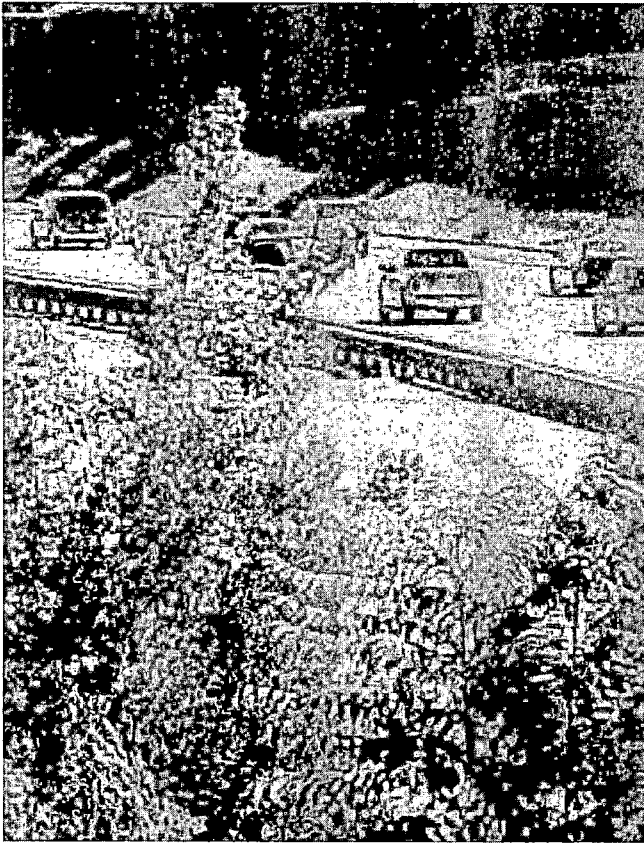
However, VTA recognizes that special circumstances may arise that require an update during an off-year. VTP 2030 therefore establishes a process for amending the plan that

**Figure 4-3 Updates and Additions**



\* Transit Program covers a 30-year base





allows for off-year changes. A flowchart of the process for amending VTP 2030 is shown in Figure 4-3 on the previous page. A description of the flowchart is provided in following text.

Special circumstances such as time-limited funding availability, or contributions from a local developer, may require quick action. In these cases, there will be opportunity for projects to be added to the VTP in off-years. Off-year

project proposals will be subjected to the same technical analysis required during full updates, and a majority vote of the VTA Board of Directors still will be required to approve plan amendments. Project proposals not accepted during off-years can be reconsidered during the subsequent update of the entire plan. VTA will conduct a public participation process for the proposed amendment, the level of which will be based on the scale of the proposed amendment.

### **Projects Without VTP 2030 Allocated Funding**

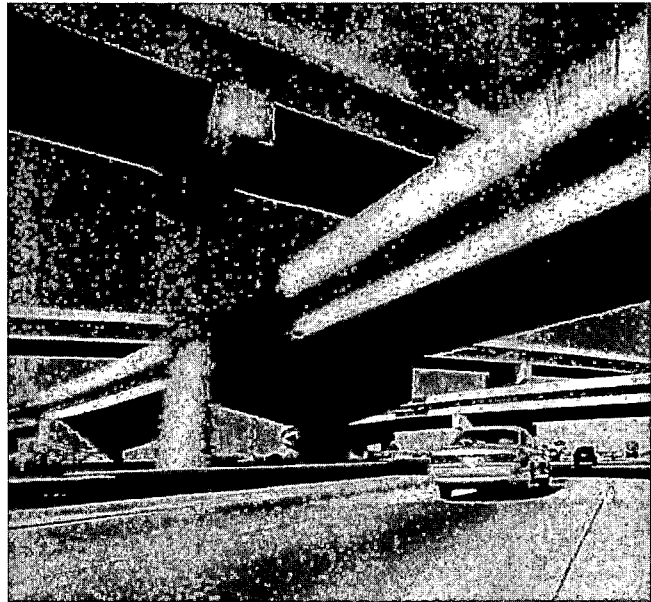
Projects appearing in the VTP 2030 Capital Investment Program that do not have allocated funding for construction are considered in the “unconstrained” portion of the VTP 2030 and the RTP. Funding options for these projects will be re-evaluated with the next update of VTP 2030.

If funding for a project is identified before VTP 2030 is updated, and the sponsoring agency determines the project has become a top priority, the project may move into planning and preliminary design phases without needing to be included in the financially constrained portion of VTP 2030 or the RTP. If the project needs to acquire right-of-way or move into engineering and construction phases before the next VTP update, VTP 2030 and the RTP need to be amended, requiring at minimum regional transportation systems and air quality conformance

analysis involving significant staff time and resources. In these cases, Member Agencies should notify VTA as soon as possible so staff may explore a range of possible actions.

### **Implementation Process for Non-Capital Programs**

Non-capital programs include the Community Design and Transportation (CDT) Program and the Joint Development Program. Activities in these programs may include administrative, planning, design and programming-related functions. VTP 2030 identifies a lump sum amount for several of these program areas, and lists of specific projects may not be identified before the next VTP update.



## APPENDIX

### PROGRAM AREA DETAILED PROJECT LISTS

This appendix provides additional information about the project lists presented in the Program Areas in Chapter 2, "The Capital Investment Program." Additional information may include the project sponsor, the jurisdictions the project affects, and the VTP 2030 project allocation amount. The reader should consult the Program Area maps in Chapter 2 to locate projects geographically. All dollar amounts are shown in 2003 dollars.

Projects lists for the following Program Areas are presented:

- Highways
- Expressways
- Local Streets and County Roads
- Transit
- Systems Operations Management/ITS
- Bicycles

Project lists for Pavement Management, Sound Mitigation, Landscape Restoration and Graffiti Removal, and the Livable Communities and Pedestrian Program were not developed during the VTP 2030 planning process.

## Highway Program

The VTP 2030 Highway Projects list includes a wide array of projects located along freeway and State highway corridors. The projects include freeway mainline improvements, safety improvements, interchange reconstruction, new interchanges, new high occupancy vehicle

(HOV) lanes, freeway-to-freeway connector improvements, intersection improvements along State highways and operational improvements. All projects submitted to MTC and incorporated in the RTP are included in this list, as well as some additional projects resulting from recent studies.

### Highway Projects—Allocation Amount \$766.3 million

VTP ID	Project Name	Project Location/Sponsor	Total Estimated Project Cost ('03\$/Millions)	VTP 2030 Allocation ('03\$/Millions)
H17-01	SR 17 Improvements, NB SR 17 Auxiliary Lane from Camden Ave. to Hamilton Ave.	San Jose, Los Gatos	\$12.0	\$12.0
H25-02	SR 25/Santa Teresa Blvd./US 101 Interchange Construction (includes US 101 Widening between Monterey Highway & SR 25)	Gilroy	85.0	70.0
H25-03	SR 25 Upgrade to Six-Lane Facility Design	County	10.0	10.0
H85-02	SR 85 Noise Mitigation between I-280 & SR 87	Cupertino, Los Altos, Los Gatos, San Jose, Saratoga, Sunnyvale, Campbell	7.0	7.0
H85-05	SR 85 Northbound to EB SR 237 Connector Ramp Improvement	Mountain View	22.0	22.0
H85-09	Fremont Ave. Improvements at SR 85	Sunnyvale	2.0	2.0
H85-10	SR 85 Auxiliary Lanes between Homestead Ave. & Fremont Ave.	Sunnyvale, Cupertino	19.0	19.0
H101-06	US 101 SB/Trimble Rd./De La Cruz Blvd./ Central Expwy. Interchange Improvements	San Jose	27.0	27.0
H101-07	US 101 Auxiliary Lane Widenings— Trimble Rd. to Montague Expwy.	San Jose, Santa Clara	10.0	10.0
H101-08	US 101/Hellyer Ave. Interchange Improvements <sup>1</sup>	San Jose	11.0	0.0
H101-09	US 101/Blossom Hill Rd. Interchange Improvements <sup>1</sup>	San Jose	7.0	0.0
H101-10	US 101/Mabury Road/Taylor St. Interchange Environmental & Preliminary Engineering	San Jose	3.0	3.0

1. Funded by the City of San Jose.

### Highway Projects (cont.)

VTP ID	Project Name	Project Location/Sponsor	Total Estimated Project Cost ('03\$/Millions)	VTP 2030 Allocation ('03\$/Millions)
H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Environmental & Preliminary Engineering	San Jose	\$7.0	\$7.0
H101-12	US 101 SB Auxiliary Lane Great America Pkwy. to Lawrence Expwy.	Sunnyvale, Santa Clara	2.0	2.0
H101-14	US 101/Tully Road Interchange Modifications	San Jose	22.0	22.0
H101-15	US 101 SB Widening from Story Rd. to Yerba Buena Rd.	San Jose	11.0	11.0
H101-16	US 101/Capitol Expwy. Interchange Improvements (includes New NB On-ramp from Yerba Buena Rd.)	San Jose	20.0	20.0
H101-19	US 101 SB Auxiliary Lane Improvement Between Ellis St. and SR 237	Sunnyvale	3.0	3.0
H101-20	US 101/Tennant Ave. Interchange Improvements in Morgan Hill	Morgan Hill	10.0	10.0
H101-22	US 101 Conversion to Four-Lane Freeway: SR 25 to Santa Clara/San Benito County Line <sup>2</sup>	County	140.0	0.0
H101-23	US 101 Widening between Cochrane Rd. and Monterey Highway <sup>2</sup>	Gilroy, County, Morgan Hill	164.0	0.0
H101-25	US 101 SB Auxiliary Lane Widening—I-880 to McKee Rd./Julian St.	San Jose	8.0	8.0
H101-26	US 101 NB Auxiliary Lane Widening—I-880 to McKee Rd./Julian St.	San Jose	9.0	9.0
H152-02	SR 152 Improvements, Traffic Signal at Gilroy Foods/WTI Intersection, SR 152 Widening from Miller's Slough through Llagas Creek Bridges	Gilroy	10.0	10.0
H152-03	SR 152 Improvements, Intersection Improvement at Ferguson Rd.	County	1.0	1.0
H152-04	SR 152/SR 156 Interchange Improvements <sup>2</sup>	County	27.3	0.0
H237-01	SR 237/El Camino Real/Grant Rd. Intersection Improvements	Mountain View	3.0	3.0
H237-02	SR 237 WB to SB SR 85 Connector Ramp Improvements	Mountain View	18.0	18.0
H237-03	SR 237 Widening for HOV Lanes between SR 85 & east of Mathilda Ave.	Mountain View, Sunnyvale	36.0	36.0
H237-04	SR 237 WB On-Ramp at Middlefield Rd.	Mountain View	8.0	8.0
H237-05	SR 237 WB to NB US 101 Connector Ramp Improvements	Sunnyvale	8.0	8.0
H237-06	SR 237/US 101/Mathilda Ave. Interchange Improvements	Sunnyvale	13.0	13.0

2. Funded by ITIP.

## Highway Projects (cont.)

VTP ID	Project Name	Project Location/Sponsor	Total Estimated Project Cost ('03\$/Millions)	VTP 2030 Allocation ('03\$/Millions)
H237-08	SR 237 EB Auxiliary Lanes from Mathilda Ave. to Fair Oaks Ave.	Sunnyvale	\$5.0	\$5.0
H237-09	Lawrence Expwy./SR 237 Auxiliary Lane Improvement	Sunnyvale	3.0	3.0
H237-10	SR 237 WB Auxiliary Lane between Coyote Creek Bridge & North First St.	Milpitas, San Jose	15.0	15.0
H280-05	I-280 NB—Second Exit Lane to Foothill Expwy.	Cupertino, Los Altos	1.0	1.0
H680-01	I-680 HOV Lanes—Calaveras Blvd. to SR 84	Milpitas, San Jose, Fremont	25.0	25.0
H680-02	I-680/I-880 Cross-Connector Environmental & Conceptual Engineering	Milpitas, San Jose, Fremont	7.0	7.0
H880-03	I-880/I-280/ Stevens Creek Blvd. Interchange Improvements—Phase I	San Jose	14.0	14.0
H00-01	High Occupancy Toll Lane Demonstration Project Development	Countywide	5.0	5.0

## Fiscally Unconstrained Projects

H85-03	SR 85 Auxiliary Lanes between Fremont Ave. & El Camino Real	Los Altos, Mountain View, Sunnyvale	\$48.0	\$48.0
H85-04	SR 85 Auxiliary Lanes between El Camino Real & SR 237 & SR 85/El Camino Real Interchange Improvements	Mountain View	41.0	41.0
H85-06	SR 85 NB/SB Auxiliary Lanes from Stevens Creek Blvd. to Saratoga/Sunnyvale Rd.	Cupertino, San Jose	25.0	25.0
H85-07	SR 85 NB/SB Auxiliary Lanes from Saratoga/Sunnyvale Rd. to Saratoga Ave.	San Jose, Saratoga	32.0	32.0
H85-08	SR 85 NB/SB Auxiliary Lanes from North of Winchester Blvd. to Saratoga Ave.	Saratoga, San Jose, Campbell, Los Gatos	31.0	31.0
H101-10	US 101/Mabury Rd./Taylor St. Interchange Construction	San Jose	40.0	40.0
H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Construction—Phase I	San Jose	71.0	71.0
H101-11	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Construction—Phase II	San Jose	10.0	10.0
H101-17	US 101 SB Braided Ramps between Capitol Expwy. & Yerba Buena Rd.	San Jose	21.0	21.0

### Highway Projects (cont.)

VTP ID	Project Name	Project Location/Sponsor	Total Estimated Project Cost ('03\$/Millions)	VTP 2030 Allocation ('03\$/Millions)
--------	--------------	--------------------------	--	---

#### Fiscally Unconstrained Projects (cont.)

H101-18	US 101 NB Braided Ramps between Capitol Expwy. & Yerba Buena Rd.	San Jose	\$21.0	\$21.0
H101-21	US 101/Buena Vista Ave. Interchange Construction	Gilroy	20.0	20.0
H101-27	US 101 SB to EB SR 237 Connector Improvements	Sunnyvale	55.0	55.0
H237-07	SR 237 EB to Mathilda Ave. Flyover Off-Ramp	Sunnyvale	17.0	17.0
H237-11	SR 237 EB Auxiliary Lane between Zanker Rd. & North First St.	San Jose, County	6.0	6.0
H280-02	I-280 NB Braided Ramps between Foothill Expwy. & SR 85	Cupertino, Los Altos	34.0	34.0
H280-04	I-280 Downtown Access Improvements between 3rd St. & 7th St.	San Jose	22.0	22.0
H680-03	I-680 NB/SB Auxiliary Lanes from McKee Rd. to Berryessa Rd..	San Jose	46.0	46.0

#### Projects That Were Not Submitted to MTC

H17-02	SR 17 Improvements, NB SR 17 to NB SR 85 Direct Connector	San Jose, Los Gatos	\$9.0	\$9.0
H152-05	Limited access four-lane facility and partial new alignment between I-5 & US 101; possible toll road	Gilroy, Santa Clara County, San Benito County, Merced County	300.0	300.0
H880-04	I-880/SR 237 Flyover—NB I-880 to WB SR 237	Milpitas	65.0	65.0
H880-05	I-880 Widening for HOV Lanes from SR 237 to Old Bayshore	Milpitas, San Jose	272.0	272.0
H880-06	I-880/Kato Rd. Overcrossing (with Connections to Dixon Landing Rd. & Scott Creek Rd.)	Fremont, Milpitas	10.0	10.0

## Expressway Projects

The projects in this list are taken directly from the Comprehensive Countywide Expressway Planning Study (CCEPS) conducted by the Santa Clara County Roads and Airports Department in 2001. The list includes Tier 1a

(fiscally constrained) and Tier 1b (fiscally unconstrained) projects. The \$150m allocation for the County Expressway Program covers the total project costs for all Tier 1a projects. Cost savings due to local contributions to Tier 1a projects may be applied to Tier 1b projects.

### Expressway Projects—Allocation Amount \$150.0 million

VTP ID	Project Name	Allocation and Total Estimated Project Cost (‘03\$/Millions)
<b>Tier 1A Projects (Fiscally Constrained)</b>		
X01	Almaden Expwy.—Initiate a Caltrans Project Study Report/ Project Development Study to reconfigure SR 85/Almaden Interchange <sup>1</sup>	\$0.0
X02	Almaden Expwy.—Provide interim operational improvements at SR 85/Almaden Expwy.	2.0
X03	Almaden Expwy.—Widen to eight lanes between Coleman Ave. & Blossom Hill Rd.	8.0
X04	Central Expwy.—Convert the Measure B HOV lane widening between San Tomas Expwy. & De La Cruz Blvd. to mixed flow & remove the HOV queue jump lanes at Scott Blvd., if unsuccessful after a three- to five-year trial period	0.1
X05	Central Expwy.—Widen to six lanes between Lawrence & San Tomas Expwys. without HOV lane operations	10.0
X06	Central Expwy.—Widen between Lawrence Expwy. & Mary Ave. to provide auxiliary and/or acceleration/deceleration lanes	13.0
X07	Foothill Expwy.—Replace Loyola Bridge	10.0
X08	Foothill Expwy.—Traffic/signal operational corridor improvements between Edith Ave. & El Monte Ave. including adjacent side street intersections & Grant Rd./St. Joseph Ave.	1.5
X09	Foothill Expwy.—Extend existing WB deceleration lane at San Antonio	0.5
X10	Lawrence Expwy.—Convert HOV to mixed flow lanes between US 101 & Elko Dr.	0.1
X11	Lawrence Expwy.—Close median at Lochinvar Ave. & right-in-and-out access at DeSoto Ave., Golden State Dr., Granada Ave., Buckley St., & St. Lawrence/Lawrence Station Rd. on-ramp	0.5
X12	Lawrence Expwy.—Widen to 8 lanes between Moorpark Ave./Bollinger Rd. & south of Calvert Dr.	4.0
X13	Lawrence Expwy.—Optimize signal coordination along Lawrence-Saratoga Ave. corridor	0.1
X14	Lawrence Expwy.—Coordinate & optimize signal phasing & timing plans in I-280/Lawrence Interchange area	0.1

1. PSR cannot be funded by fund source. PSR estimated cost \$250,000.



### Expressway Projects (cont.)

VTP ID	Project Name	Allocation and Total Estimated Project Cost (03\$/Millions)
X15	Lawrence Expwy.—Prepare Caltrans Project Study Report for Tier 1C project at the Lawrence/Calvert/I-280 Interchange area <sup>2</sup>	\$0.0
X16	Montague Expwy.—Convert HOV lanes to mixed-flow use east of I-880	0.1
X17	Montague Expwy.—Baseline project consisting of 8-lane widening & I-880 partial-clover Interchange with at-grade improvements at Lick Mill Blvd., Plumeria Dr./River Oaks Pkwy, Main St./Old Oakland Rd., & McCandless Dr./Trade Zone Blvd.	38.5
X18	Oregon Page Mill Expwy. corridor improvements	5.0
X19	Oregon Page Mill Expwy.—I-280/Page Mill Interchange modification	5.0
X20	Oregon Page Mill Expwy.—Alma Bridge Replacement Feasibility Study	0.3
X21	San Tomas Expwy.—Provide additional WB right-turn lane at Monroe St.	1.0
X22	San Tomas Expwy.—Widen to eight lanes between Williams Rd. & El Camino Real	28.0
X23	San Tomas Expwy.—Provide 2nd EB, WB, & NB left-turn lanes at Hamilton Ave.	2.0
X24	San Tomas Expwy.—At-grade improvements at SR 17/San Tomas Expwy.	2.0
X25	Expressway Traffic Information Outlets	5.0
X26	Expressway Signal Coordination with City Signals	10.0
X27	Equipment to connect with Sunnyvale, Palo Alto, Mountain View, & Los Altos traffic signal interconnect systems	2.5
X28	Upgrade traffic signal system to allow automatic traffic count collection	0.5
X29	Capitol Expwy. street improvements—intersection modifications, left-turn lane, carpool lane adjustments, and stripping modifications	2.0
X30	Widen Almaden Expwy. to eight lanes from Blossom Hill Rd. to Branham Rd. Measure B LOS Project, not included in the CCPES	3.2

### Tier 1B Projects (Fiscally Unconstrained)

X31	Capitol Expwy.—Interchange at Silver Creek Rd.	55.0
X32	Lawrence Expwy.—Interchange at Arques Ave. with Square loops along Kern Ave. & Titan Way	35.0
X33	Lawrence Expwy.—Interchange at Kifer Rd.	45.0
X34	Lawrence Expwy.—Interchange at Monroe St.	45.0
X35	Montague Expwy.—Trimble Rd. Flyover	15.0

2. PSR cannot be funded by fund source. PSR estimated cost \$500,000.

## Expressway Projects (cont.)

VTP ID	Project Name	Allocation and Total Estimated Project Cost ( <i>'03\$/Millions</i> )
X36	Montague Expwy.—At-grade improvements at Mission College Blvd. & partial clover Interchange at US 101	\$11.0
X37	Montague Expwy.—McCarthy Blvd./O'Toole Ave. square loop Interchange	60.0

## Local Streets and County Roads Projects

The Local Streets and County Roads Fund Program was created to address the difficulties Member Agencies have with raising revenues for local streets and county roads

projects not connected to new development projects. A minimum 20-percent local match is required for LSCR projects.

## Local Streets and County Roads Projects—Allocation Amount \$230.0 million

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost ( <i>'03\$/Millions</i> )	VTP 2030 Allocation ( <i>'03\$/Millions</i> )
R01	Calaveras Blvd. Overpass Widening with Operational Improvements	Milpitas	\$40.0	\$32.0
R02	Oakland Rd. Widening from US 101 to Montague	San Jose	10.0	3.7
R03	Coleman Ave. Widening	San Jose	14.0	11.2
R04	Berryessa Rd. Widening—US 101 to I-680	San Jose	7.0	5.6
R05	Mathilda Ave./SR 237 Corridor Improvements (Mary Ave. Extension)	Sunnyvale	50.0	25.0
R06	Chynoweth Ave. Extension from East of Almaden Expwy.	San Jose	15.1	6.3
R07	Mathilda Ave. Caltrain Bridge Reconstruction	Sunnyvale	17.4	3.5
R08	Autumn St. Extension	San Jose	10.0	8.0
R09	Story Rd. Improvement from Senter Rd. to McLaughlin Ave.	San Jose	2.0	0.4

# Local Streets and County Roads Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost ('03\$/Millions)	VTP 2030 Allocation ('03\$/Millions)
R10	Rengstorff Ave. Grade Separation Environmental Documentation	Mountain View	\$0.3	\$0.2
R11	Montague Expwy./Great Mall Parkway-Capitol Ave. Grade Separation	Milpitas	24.5	17.5
R12	Branham Ln. Widening from Vista Park Dr. to Snell Ave.	San Jose	8.2	3.9
R13	Dixon Landing Rd. Widening	Milpitas	0.6	0.5
R14	Gilman Rd/Arroyo Circle/ Camino Arroyo Improvements	Gilroy	7.0	5.6
R15	Loyola Dr./Foothill Expwy. Intersection	County	10.0	8.0
R16	Charcot Ave. Connection	San Jose	36.0	23.2
R17	Snell Ave. Widening from Branham Ln. to Chynoweth Ave.	San Jose	3.2	2.8
R18	Lucretia Ave. Widening from Story Rd. to Phelan Ave.	San Jose	9.0	3.5
R19	Almaden Plaza Way Widening	County	0.8	0.6
R20	Senter Rd. Widening Project	San Jose	6.8	5.4
R21	Union Ave. Widening from Los Gatos-Almaden Rd. to Ross Creek	San Jose	1.7	1.4
R22	Downtown Couplet Conversions	San Jose	20.0	16.0
R23	Lawrence Expwy./Wildwood Ave. Roadway Realignment & Traffic Signal	Sunnyvale	4.4	3.5
R24	Butterfield Blvd. Extension	Morgan Hill	14.0	7.2
R25	Campbell Ave. Bicycle/Pedestrian Improvements	Campbell	2.0	1.6
R26	Blossom Hill Rd. Bike/Ped Improvements	San Jose	6.8	5.4
R27	King Rd. Pedestrian Improvement at Barberry Ln.	San Jose	1.0	0.8
R28	Uvas Park Dr. Roadway Extension	Gilroy	2.2	1.8
R29	Winchester Blvd. Streetscape Improvement	San Jose	4.0	0.8
R30	Railroad Crossing: San Martin Ave. at Monterey Hwy.	County	1.2	0.5
R31	Quito Rd. Improvements	San Jose	1.9	1.5
R32	Fitzgerald Ave./Masten Ave. Realignment at Monterey Rd.	County	0.9	0.8
R33	Dixon Landing Rd./North Milpitas Blvd. Intersection Improvements	Milpitas	1.0	0.8
R34	Magdalena Ave. at Country Club Dr. Intersection Signalization	County	0.4	0.3
R35	Park Ave. Improvement	San Jose	1.0	0.8

## Local Streets and County Roads Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation (‘03\$/Millions)
R36	Railroad Crossing— Church St. at Monterey Rd. (San Martin)	County	\$0.5	\$0.4
R37	Java Dr. Bicycle Shared Use Improvements (Class II & III Bike Lanes)	Sunnyvale	0.4	0.3
R39	Smart Residential Arterials Project	Palo Alto	6.2	5.0
R40	Hill Road Extension	County	5.0	4.0
R43	DeWitt Ave./Sunnyside Ave. Realignment at Edmunson Ave.	County	5.0	4.0
R44	Santa Teresa Blvd./Fitzgerald Ave. Intersection Signalization	County	0.3	0.2
R49	ITS Enhancements on Bascom Ave.	County	0.2	0.2
R50	First St. (SR 152) Roadway Widening— Monterey St. to Church St.	Gilroy	1.2	0.9
R51	Alum Rock School District Area Traffic Calming Elements	County	2.0	1.6
R60	Miramonte Ave. Bikeway Improvements	Los Altos	1.0	0.8
R75	Moody Rd. Improvements	Los Altos Hills	0.2	0.2
R81	Wedgewood Ave. Improvements	Los Gatos	0.6	0.4
R89	Citywide Signal Upgrade Project Phase II	Saratoga	0.5	0.4
R91	Rancho Rinconada Traffic Calming Project	Cupertino	0.1	0.1

## Fiscally Unconstrained Projects

R38	Martha St. Bicycle Pedestrian Corridor	San Jose	\$3.3	\$2.7
R41	Delmas Ave. Streetscape Improvement	San Jose	0.9	0.7
R42	Bird Ave. Pedestrian Corridor	San Jose	0.9	0.7
R45	Reed St. Pedestrian Corridor Project	San Jose	1.4	0.7
R46	North 13th St. Streetscape Project	San Jose	1.6	0.5
R47	Balbach St. Bike/Ped Improvements	San Jose	1.4	1.1
R48	Taylor St. Improvement	San Jose	1.0	0.8
R52	Sterlin Rd./Shoreline Blvd. Intersection Modification	Mountain View	0.2	0.2
R53	Sunnyvale-Saratoga Rd./Remington Dr. Intersection Improvement	Sunnyvale	1.2	1.0
R54	Auzerais Ave. Bicycle/Pedestrian Improvements	San Jose	1.9	0.4
R55	ITS Improvement on Santa Teresa Blvd.	County	1.0	0.8

### Local Streets and County Roads Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost ('03\$/Millions)	VTP 2030 Allocation ('03\$/Millions)
<b>Fiscally Unconstrained Projects (cont.)</b>				
R56	Downtown Sunnyvale/Mathilda Blvd.	Sunnyvale	\$2.4	\$1.9
R57	Keyes St. Streetscape Improvement Project	San Jose	1.5	0.9
R58	Mary Ave. Bicycle Improvement	Sunnyvale	0.3	0.2
R59	Almaden Rd. Improvement— Malone Rd. to Curtner Ave.	San Jose	2.0	1.6
R61	Junipero Serra Blvd. Shoulder Widening	County	0.4	0.3
R62	Easy St./Gladys Ave. Intersection Modification	Mountain View	0.3	0.2
R63	Mary Ave./Evelyn Ave. Intersection	Sunnyvale	0.6	0.5
R64	Mary Ave./El Camino Real Intersections	Sunnyvale	0.6	0.5
R65	White Rd. Streetscape	County	1.0	0.8
R66	Senter Rd. Improvement Project	San Jose	6.8	2.5
R67	White Rd. Pedestrian Improvement— Alum Rock Ave. to Mabury Rd.	San Jose	2.0	1.5
R68	Bicycle Blvd. Network Project	Palo Alto	0.8	0.6
R69	McKean Rd. and Watsonville Rd. Left-Turn Pockets and Shoulder Widening	County	5.0	4.0
R70	Gifford Ave. Streetscape	San Jose	0.5	0.4
R71	Loyola Corners Traffic Circle	County	0.5	0.4
R72	Wolfe Rd./Red Ave. Old San Francisco Rd. Intersection Improvement	Sunnyvale	6.0	0.5
R73	Hyland Area Pedestrian/Bicycle Improvements	County	0.7	0.6
R74	West San Carlos St. Streetscape Improvement Project	San Jose	1.4	0.7
R76	East Hills/Florence Area Bicycle/ Pedestrian Improvements	County	0.2	0.1
R77	Pedestrian/Bicycle Improvements on McKee Rd. between White Rd. & Staples Ave.	County	0.2	0.1
R78	Pedestrian/Bicycle Improvements in the Mitty Ave./Lawrence Expwy. Area	County	0.3	0.2
R79	Pedestrian/Bicycle Improvements on Alum Rock Ave. South of Miguelita Creek Ped Bridge	County	0.3	0.2
R80	Scott St. Pedestrian Corridor— I-880 to Meridian Ave.	San Jose	6.0	4.8
R82	Scott St. Pedestrian Corridor	County	3.9	3.2
R83	Farrell Ave. Bridge Widening	Gilroy	1.5	1.2

## Local Streets and County Roads Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (*03\$/Millions)	VTP 2030 Allocation (*03\$/Millions)
<b>Fiscally Unconstrained Projects (cont.)</b>				
R84	Citywide Sidewalk Improvements	Gilroy	\$1.8	\$1.5
R85	DeWitt Ave. S-Curve Realignment	County	1.0	0.8
R86	Aborn Rd. Pedestrian Improvements at Irwindale Dr.	San Jose	1.0	0.8
R87	Fair Oaks Ave./Arques Ave. Intersection Improvement	Sunnyvale	0.6	0.5
R88	Wolfe Rd./Kifer Rd. Intersection Improvement	Sunnyvale	1.2	1.0
R90	Washington Ave./Mathilda Ave. Intersection Improvement	Sunnyvale	1.1	0.4
R92	Mary Ave./Fremont Ave. Intersection Improvements	Sunnyvale	1.0	0.8
R93	McLaughlin Ave. Streetscape Project	San Jose	1.5	1.0
R94	Calaveras Rd. Improvements (Rural Area)	County	3.0	2.4
R95	West Virginia St. Streetscape & Pedestrian Crossings Project	San Jose	1.0	0.4
R96	Garden Area Pedestrian/Bicycle Improvements	County	0.5	0.4
R97	Metal Beam Guardrails on County Roads	County	0.3	0.2
R98	El Monte Rd./I-280 Improvements	Los Altos Hills	0.2	0.2
R99	Comprehensive Sidewalk Network for Employment Areas	Sunnyvale	7.2	5.8
R100	Citywide Traffic Calming Program	Sunnyvale	1.0	0.8
R101	Aldercroft Creek Bridge/Old Santa Cruz Hwy.	County	1.7	1.3
R102	Mantelli Dr. Corridor Improvements: Intersections & Traffic Signals	Gilroy	2.0	1.6
R103	Junipero Serra Blvd. Traffic Calming	County	0.5	0.4
R104	New Pavement Markers and Signs	County	0.3	0.2
R105	Citywide Class II & III Bicycle Route Improvements	Gilroy	0.7	0.6
R106	Burbank Area Streetlighting Project	County	0.2	0.1
R107	Countywide Pedestrian Ramps	County	0.3	0.2
R108	Verde Vista Ln. Traffic Signal	Saratoga	0.3	0.2
R109	Pedestrian/Bicycle Improvements in the Toyon Rd. Area	County	0.8	0.6
R110	Oak Place & Highway 9 Pedestrian Signal	Saratoga	0.2	0.2
R111	Herriman Dr. Traffic Signal Project	Saratoga	0.3	0.2

## Transit Projects

The Transit Program identifies specific transit projects to be implemented during the time-frame of the plan. These projects include new light rail extensions, bus rapid transit corridors,

new regional rail services, community-oriented bus service operated with small vehicles, and enhanced commuter rail service. Funds for this program come from the 2000 Measure A and from other local, State and Federal sources.

### Transit Projects—Allocation Amount \$6,829.0 million<sup>1</sup>

VTP ID	Project Name	City	Total Estimated Project Cost (‘03\$/Millions)	VTP 2030 Measure A Allocation (‘03\$/Millions)	Funding from Other Sources (‘03\$/Millions)
T0	Operating Assistance 2006–2036 <sup>2</sup>	All Cities	\$1,003.0	\$1,003.0	
T1	ACE Upgrade	Santa Clara, San Jose	22.0	22.0	
T2	BART to Milpitas, San Jose & Santa Clara <sup>3</sup>	Milpitas, San Jose, Santa Clara	4,193.0	2,453.0	1,740.0
T3	Bus Rapid Transit (Line 22, Stevens Creek)	Monterey, Mountain View, Palo Alto, Sunnyvale, Santa Clara, San Jose, Cupertino	50.0	33.0	17.0
T4	Caltrain Electrification <sup>4</sup>	Palo Alto, Mountain View, Sunnyvale, Santa Clara, San Jose, Morgan Hill, Gilroy	650.0	233.0	417.0
T5	Caltrain Service Upgrades (VTA Share) <sup>5</sup>	Palo Alto, Mountain View, Sunnyvale, Santa Clara, San Jose, Morgan Hill, Gilroy	171.0	155.0	16.0
T6	Caltrain–South County <sup>6</sup>	San Jose, Morgan Hill, Gilroy	100.0	61.0	39.0
T7	Downtown East Valley (DTEV) <sup>7</sup>	San Jose	550.0	550.0	
T8	Dumbarton Rail	Palo Alto	278.0	44.0	234.0
T9	Highway 17 Bus Service Improvements	Los Gatos, Campbell, San Jose	2.0	2.0	
T10	New Rail Corridors—Phase 1 <sup>8</sup>		TBD	188.0	
T11	New Rail Corridors Study—conceptual alignment evaluations <sup>9</sup>		1.0	1.0	

## Transit Projects (cont.)

VTP ID	Project Name	City	Total Estimated Project Cost ( <sup>'03</sup> \$/Millions)	VTP 2030 Measure A Allocation ( <sup>'03</sup> \$/Millions)	Funding from Other Sources ( <sup>'03</sup> \$/Millions)
T12	Mineta San Jose International Airport APM Connector	San Jose	\$400.0	\$222.0	\$178.0
T13	Palo Alto Intermodal Center <sup>10</sup>	Palo Alto	200.0	50.0	150.0
T16	Zero Emission Bus (ZEB) Demonstration Program	All Cities	17.0		17.0

## Fiscally Unconstrained Projects

T15	New Rail Corridors— Phase 2 <sup>3</sup>		TBD		1,031.0
T16	Zero Emission Buses (ZEBs) & Facilities <sup>11</sup>	All Cities	260.0		260.0

- Includes \$973 million in Federal New Starts Funds, \$5.017 billion from 2000 Measure A, \$732 million from TCRP, and \$107 million from Proposition 42 (STIP).
- 2000 Measure A funds dedicated to future transit operations representing 18.45% of Measure A revenues.
- Measure A need for BART project is net of \$649m in TCRP funds, \$834m Federal New Starts, \$107m Prop. 42 STIP and \$69m in other funds. Does not assume additional bonding for construction.
- Full funding for Caltrain electrification is dependent on full funding from Caltrain JPB partners.
- Caltrain service upgrades include track and facility improvements and additional service.
- Caltrain upgrades in South County include double-tracking and station improvements.
- DTEV includes Enhanced Bus or LRT in the Santa Clara Alum Rock Corridor plus LRT on Capitol Expressway to Eastridge with an extension to Nieman Boulevard. A specific strategy to be developed as EIR/EIS and PE are completed on both portions.
- The costs and phasing of new rail corridor projects will be determined as part of the planning study (see note 6).
- Long-range planning study would evaluate the feasibility, operational efficiency, and cost-effectiveness of several light rail extensions and lines. New rail corridors to be considered include Vasona extension to Vasona Junction, DTEV Eastridge Area to Hwy 87, Santa Teresa extension to Coyote Valley, extensions to Morgan Hill, Stevens Creek Blvd., West San Jose/Santa Clara, Sunnyvale/Cupertino, and North County/Palo Alto.
- Palo Alto Intermodal Transit Center requires additional funds not identified at this time.
- Short Range Transit Plan (SRTP) assumes 15% Zero Emission Buses (ZEBs). Currently, VTA is testing ZEB technology with a demonstration project. Based on the results of this project, the viability of the technology will be reassessed. The ZEB program may move up in the Measure A program with future VTP updates.



## Transportation Systems Operations and Management Projects

The Transportation Systems Operations and Management (TSOM) Program includes projects that use technology to improve the

operation and management of the overall transportation system. These new technologies are collectively referred to as Intelligent Transportation Systems (ITS), and include electronics, computer, and communications infrastructure. These projects are subject to the CMP CIP 20-percent local match.

### ITS Projects —Allocation Amount \$28.0 million

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation (‘03\$/Millions)
S101	Hamilton Ave. Intelligent Transportation System	Campbell	\$0.3	\$0.2
S102	City of Campbell Traffic Signal System Upgrade	Campbell	0.3	0.2
S103	Winchester Blvd. Intelligent Transportation System	Campbell	0.3	0.3
S300	City of Gilroy Adaptive Traffic Signal Control System	Gilroy	0.9	0.7
S301	City of Gilroy Event Management System	Gilroy	0.9	0.7
S302	City of Gilroy Traffic Signal System Upgrade	Gilroy	3.9	3.1
S303	City of Gilroy Flood Watch Cameras	Gilroy	0.5	0.4
S600	Town of Los Gatos Traffic Signal System Upgrade	Los Gatos	0.3	0.2
S701	South Milpitas Boulevard Smart Corridor	Milpitas	0.5	0.4
S702	City of Milpitas Traffic Signal System Upgrade	Milpitas	0.8	0.6
S703	City of Milpitas CCTV Camera Deployment on Major Travel Corridors	Milpitas	0.3	0.2
S900	Cochrane Ave. Corridor Traffic Signal System Improvement	Morgan Hill	0.1	0.04
S901	City of Morgan Hill Traffic Signal System Improvement	Morgan Hill	0.4	0.3
S1000	Rengstorff Ave. Corridor Traffic Signal System Improvement	Mountain View	0.4	0.3
S1101	City of Palo Alto Smart Residential Arterials Project <sup>1</sup>	Palo Alto	6.2	5.0
S1200	City of Santa Clara Communications Network Upgrade	Santa Clara	3.5	2.8

1. Also listed as a Local Streets and County Roads Project.

## ITS Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation (‘03\$/Millions)
S1201	City of Santa Clara Traffic Signal System Cabinet & Controller Replacement	Santa Clara	\$3.2	\$2.6
S1202	City of Santa Clara Transportation Management Center Upgrade	Santa Clara	0.4	0.3
S1301	City of Saratoga Citywide Signal Upgrade Project—Phase II <sup>1</sup>	Saratoga	0.5	0.4
S1401	City of Sunnyvale Traffic Adaptive Signal System on Major Arterials	Sunnyvale	2.8	2.2
S1402	City of Sunnyvale CCTV Camera Deployment	Sunnyvale	0.6	0.5
S1403	City of Sunnyvale Traffic Signal Controller Update	Sunnyvale	0.5	0.4
S1404	City of Sunnyvale Count & Speed Monitoring Stations	Sunnyvale	0.9	0.7
S1405	City of Sunnyvale ITS Communications Infrastructure	Sunnyvale	1.5	1.2
S1406	City of Sunnyvale TMC Integration	Sunnyvale	0.2	0.2
S2001	City of San Jose Proactive Signal Timing Program Phase II	San Jose	1.0	0.8
S2002	Silicon Valley Sub-Regional Transportation Management Center	San Jose	7.5	6.0
S2003	City of San Jose Transportation & Incident Management Center (TIMC)/PD CAD Integration	San Jose	2.0	1.6
S2004	City of San Jose Smart Intersections	San Jose	4.0	3.2
S2005	City of San Jose Field Equipment Upgrade	San Jose	3.0	2.4
S2006	City of San Jose Transportation Communications Network	San Jose	9.8	7.8
S2007	City of San Jose Neighborhood Business District (NBD) ITS Deployment	San Jose	3.0	2.4
S2008	City of San Jose Downtown Freeway & Incident Management System	San Jose	2.0	1.6
S2009	City of San Jose Motorists Information System	San Jose	1.4	1.1
S2010	King/Story Roads Smart Corridor	San Jose	3.0	2.4
S2011	Brokaw/Hostetter Roads Smart Corridor	San Jose	2.0	1.6

**ITS Projects (cont.)**

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation (‘03\$/Millions)
<b>S2012</b>	City of San Jose Red Light Running Enforcement Program	San Jose	\$0.5	\$0.4
<b>S2013</b>	City of San Jose Advanced Parking Management System	San Jose	1.5	1.2
<b>S3001</b>	County of Santa Clara Traffic Operations System Improvements	County	18.0	14.4
<b>S3002</b>	ITS Enhancements on Bascom Ave. <sup>1</sup>	County	0.2	0.2
<b>S3003</b>	ITS Enhancements on Santa Teresa Blvd.	County	1.0	0.8
<b>S4010</b>	Caltrans I-880 Corridor TOS Elements & Ramp Metering <sup>2</sup>	Caltrans	3.6	2.9
<b>S4020</b>	Caltrans I-680 Corridor TOS Elements & Ramp Metering <sup>2</sup>	Caltrans	5.4	4.3
<b>S4030</b>	Caltrans SR 237 Corridor TOS Elements & Ramp Metering <sup>2</sup>	Caltrans	5.7	4.6
<b>S4040</b>	Caltrans SR 85 Corridor TOS Elements & Ramp Metering <sup>2</sup>	Caltrans	4.8	3.8
<b>S4050</b>	Caltrans I-280 Corridor TOS Elements & Ramp Metering <sup>2</sup>	Caltrans	2.2	1.8
<b>S4060</b>	Caltrans US 101 Corridor TOS Elements & Ramp Metering <sup>2</sup>	Caltrans	3.0	2.4
<b>S5004</b>	Silicon Valley—ITS (SV-ITS) Program Upgrades	San Jose	27.0	21.6
<b>S6000</b>	Countywide Ramp Metering Study	MTA/Countywide	0.5	0.4
<b>S6010</b>	Transit ITS	MTA/Countywide	5.0	4.0

2. Covered by project identified in VTA Highway Program.

## Bicycle Projects

In 2000, VTA adopted the Santa Clara Countywide Bicycle Plan (CBP), a stand-alone

document that served as the Bicycle Element of VTP 2020, and also serves as the Bicycle Element of VTP 2030. The Countywide Bicycle Plan will be updated in 2005.

### Bicycle Projects —Allocation Amount \$90.5 million

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation/BEP (‘03\$/Millions)
B01	Campbell Ave. improvements at Hwy 17 & Los Gatos Creek	Campbell	\$1.5	\$1.2
B02	Los Gatos Creek Trail expansion on west side (Hamilton to Campbell)	Campbell	2.0	1.6
B03	Los Gatos Creek Trail bridge & path improvements (Mozart Ave. to Camden Ave.)	Campbell	0.8	0.6
B04	Coyote Creek Trail (Hellyer Ave. to Anderson Lake County Park)	County Parks	1.3	1.0
B05	Almaden Expwy. (Ironwood Dr. to Koch Ln.)	County Roads and Airports	2.3	1.8
B06	Bicycle shoulder delineation along expressways	County Roads and Airports	0.6	0.5
B07	Foothill Expwy./Loyola Dr. structural improvements in Los Altos <sup>1</sup>	County Roads and Airports	10.0	2.0
B08	McKean Rd. shoulder improvements (Harry Rd. to Bailey Ave.)	County Roads and Airports	5.0	4.0
B09	Page Mill Expwy./I-280 interchange bike improvements <sup>2</sup>	County Roads and Airports	5.0	1.0
B10	Bollinger Rd. bicycle facility improvement	Cupertino	0.4	0.2
B11	Mary Ave. (I-280) Bike/Pedestrian Overcrossing	Cupertino	7.1	6.8
B12	Uvas Creek Trail (part of Gilroy Sports Park Phase 1 & 2)	Gilroy	11.9	0.5
B13	Uvas Creek Trail Study (Sports Park to Gavilan College)	Gilroy	0.2	0.1
B14	Adobe Creek Bike/Pedestrian Bridge replacement	Los Altos	0.5	0.4

1. Also included in the VTP 2030 Local Streets and County Roads and Expressway Programs.

2. Also included in the VTP 2030 Expressway Program.

### Bicycle Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation/BEP (‘03\$/Millions)
B15	Stevens Creek Trail feasibility study	Los Altos	\$0.1	\$0.1
B16	Berryessa Creek Trail (Reach 3)	Milpitas	0.9	0.4
B17	Coyote Creek Trail (Reach 1)	Milpitas	1.2	0.6
B18	Bike/Pedestrian Overcrossing of UPRR tracks (near Great Mall)	Milpitas	5.6	4.5
B19	Hwy. 9 Bike Lanes (Saratoga Ave. to Los Gatos Blvd.)	Monte Sereno	1.7	1.4
B20	Coyote Creek Trail Connection	Morgan Hill	0.5	0.4
B21	West Little Llagas Creek Trail	Morgan Hill	1.5	1.2
B22	Stevens Creek Trail, Reach 4 Central	Mountain View	4.0	3.2
B23	Stevens Creek Trail, Reach 4 South	Mountain View	5.0	4.0
B24	Stevens Creek Trail, Reach 4, Segment 2 North (Yuba Drive to North Meadow)	Mountain View	3.8	1.2
B25	Bicycle Blvd./Lanes Network	Palo Alto	5.0	4.0
B26	California Ave. Caltrain Undercrossing <sup>3</sup>	Palo Alto	9.0	4.0
B27	Homer Ave. Caltrain Undercrossing	Palo Alto	5.6	1.0
B28	Almaden Expwy. Bike/Pedestrian Overcrossing <sup>3</sup>	San Jose	5.7	4.6
B29	Branham Lane/US 101 Bike/ Pedestrian Overcrossing <sup>3</sup>	San Jose	5.0	4.0
B30	Coyote Creek Trail (SR 237/Bay Trail to Story/Keyes)	San Jose	6.1	4.9
B31	Guadalupe River Trail (Alviso to I-880)	San Jose	5.1	4.1
B32	Los Gatos Creek Trail (Reach 4)	San Jose	4.8	3.6
B33	Los Gatos Creek Trail (Reach 5)	San Jose	6.4	5.1
B35	Guadalupe River Bridge at River Oaks	San Jose, Santa Clara, VTA	2.8	1.8
B36	San Tomas Aquino Creek Trail (SR 237 to City Limits)	Santa Clara	17.0	5.0
B37	Santa Clara Intermodal Transit Center Bike/Pedestrian Overcrossing <sup>3</sup>	Santa Clara	5.0	4.0

3. Also included in the VTP 2030 Livable Communities and Pedestrian Program, currently under development.

## Bicycle Projects (cont.)

VTP ID	Project Name	Project Sponsor/Location	Total Project Cost (‘03\$/Millions)	VTP 2030 Allocation/BEP (‘03\$/Millions)
B38	Cox Ave. Railroad Grade Crossings	Saratoga	\$0.5	\$0.4
B39	PGE De Anza Trail (Reach 3)	Saratoga	2.5	2.0
B40	Bernardo Ave. Caltrain Undercrossing	Sunnyvale	6.5	5.2
B41	Borregas Ave. Bike Lanes (Weddell Dr. to Caribbean Dr.)	Sunnyvale	0.2	0.1
B42	Borregas Ave. Bike/Pedestrian Overcrossings at US 101 & SR 237	Sunnyvale	6.5	5.2
B43	Evelyn Ave. Bike Lanes (Sunnyvale Ave. to Reed Ave.)	Sunnyvale	0.4	0.3
B44	Sunnyvale East Drainage Trail (JWC Greenway to Tasman Dr.)	Sunnyvale	0.5	0.4
B45	Sunnyvale Train Station North Side Access <sup>3</sup>	Sunnyvale	1.8	1.4
B46	Pilot Bicycle Parking Program	VTA	0.2	0.1

---

# Glossary

**ABAG—Association of Bay Area**

**Governments** A regional agency responsible for regional planning (excluding transportation).

ABAG publishes forecasts of projected growth for the region.

**Access** The facilities and services that make it possible to get to any destination, measured by the availability of physical connections (roads, sidewalks, etc.), travel options, ease of movement, and nearness of destinations.

**Access-by-proximity** A key concept of the CDT Program. Focuses on clustering complementary land uses and well-designed compact development to combine, reduce or eliminate trips, reduce automobile trips, and to help achieve the kind of critical mass that makes vibrant public life possible.

**ACCMA—Alameda County Congestion**

**Management Agency** The agency responsible for transportation planning and programming of transportation funds in Alameda County.

**ACE—Altamont Commuter Express** A commuter rail service that runs between the City of Stockton in San Joaquin County and the City of San Jose in Santa Clara County. The service is a partnership involving VTA, the San Joaquin Regional Rail Commission, and the Alameda County Congestion Management Agency.

**ACTIA—Alameda County Transportation**

**Improvement Authority** A special government agency authorized by State law and created by the voters of Alameda County to collect a half-

cent sales tax and use the money for a specific list of transportation projects and programs in Alameda County.

**ADA—Americans With Disabilities Act** On July 26, 1990, ADA was signed into law, requiring public transit systems to make their services fully accessible to persons with disabilities as well as to underwrite a parallel network of paratransit service for those who are unable to use the regular transit system. In addition, VTA must meet the new ADA accessibility design guidelines for all newly constructed transit facilities such as light rail stations, bus stops, and transit centers. All procurement of bus and rail vehicles must also meet the ADA accessibility design guidelines.

**APIS—Advanced Parking Information System**

APIS provides real-time parking availability information to drivers. The system provides motorists with electronic message signs located at key locations on major streets and freeway ramps informing motorists where to park.

**ASPA—American Society for Public**

**Administration** A professional association in the field of public administration.

**ATMS—Advanced Traffic Management**

**System** ATMS is a category of intelligent transportation systems that focuses on the management of traffic. It typically includes ramp metering, traffic management centers (TMCs), HOV lanes, integrated corridor management, CCTVs, arterial management, and/or incident management.

**Auxiliary Lanes** A lane from one on-ramp to the next off-ramp to allow vehicles coming on the freeway or getting off the freeway to have more time to merge with the through lanes. These lanes are often installed for safety purposes (reduce merging accidents).

**AVL—Automated Vehicle Location** AVL is the use of electronic technologies to allow fleet managers to know where vehicles are located at a given time. Several different types of AVL technologies exist. The Department of Defense's Global Positioning System (GPS) is the basis for several recent transit industry AVL projects. In addition to its primary use by transit dispatchers and supervisors, AVL can be linked into other systems and used to provide real-time arrival information for transit customers, to support paratransit services, and for a variety of other applications.

**BAAQMD—Bay Area Air Quality**

**Management District** The regional agency created by the State legislature for the Bay Area air basin (Alameda, Contra Costa, half of Solano, half of Sonoma, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties) that develops, in conjunction with MTC and ABAG, the air quality plan for the region. BAAQMD has an active role in approving the TCM plan for the region, as well as in controlling stationary and indirect sources of air pollution.

**BAC—Bicycle Advisory Committee** An advisory committee to the VTA that is responsible for

overseeing the work of the VTA staff associated with bicycle plans, guidelines, and programs.

**BART—Bay Area Rapid Transit** The San Francisco Bay Area Rapid Transit District (BART) provides heavy passenger rail service in Alameda, Contra Costa, San Mateo, and San Francisco counties, between the cities of Fremont, Pleasanton, Richmond, Pittsburg, and San Francisco.

**BayCAP—Bay Area Clean Air Partnership**

BayCAP is a consensus initiative established by the Bay Area Air Quality Management District, the Bay Area Council, the Silicon Valley Manufacturing Group, and other interested organizations to promote greater awareness of air quality issues, particularly during the critical ozone season; provide extra encouragement on "Spare the Air" days to limiting air pollution through reduced use of cars, products, equipment or activities that can cause smog; permit businesses and organizations to get credit for emission reductions achieved through voluntary programs; and prevent future violations of the Federal ozone standard.

**BEP—Bicycle Expenditure Plan** The ten-year funding program dedicated for the implementation of bicycle projects in Tier 1 of the Santa Clara Countywide Plan (Bicycle Element of VTP 2030). It includes funding from various local, State and Federal sources. Projects in the Bicycle Expenditure Program are required to provide a minimum 20 percent local match.



---

**Bicycle Technical Guidelines** VTA document that provides a uniform set of optimum standards for the planning, design, and construction of bicycle projects in Santa Clara County.

**BOD—Board of Directors** VTA Board of Directors is composed of 12 elected officials appointed by the member cities and County of Santa Clara. The members of this partnership work together to address the transportation needs of Santa Clara County.

**Bottleneck** A location on a roadway where the traffic demand tends to be greater than its capacity. Typically, this occurs where the number of lanes decrease on congested or near-congested roadways.

**Braided Ramp** Type of freeway on/off-ramp that consists of grade separated ramp(s) that keep two major traffic movements from crossing one another.

**BRT—Bus Rapid Transit** BRT combines the quality of rail transit and the flexibility of buses. It can operate on exclusive transit-ways, HOV lanes, expressways, or ordinary streets. A BRT system combines intelligent transportation systems technology, priority for transit, cleaner and quieter vehicles, rapid and convenient fare collection, and integration with land use policy.

**Caltrain/Peninsula Corridor Joint Powers Board** Commuter rail service running between Gilroy and San Francisco through San Jose. The Peninsula Corridor Joint Powers Board (JPB),

made up of representatives from the counties of San Francisco, San Mateo, and Santa Clara, oversees this commuter rail service.

**Caltrans—California Department of Transportation** The responsible owner/operator of the State highway system. Caltrans is responsible for the safe operation and maintenance of roadways.

**CalWORKs** In response to Federal welfare reform legislation, the legislature created the California Work Opportunity and Responsibility to Kids (CalWORKs) program, enacted by Chapter 270, Statutes of 1997 (AB 1542, Ducheny, Ashburn, Thompson, and Maddy). Like its predecessor, Aid to Families with Dependent Children, the new program provides cash grants and welfare-to-work services to families whose incomes are not adequate to meet their basic needs. Under CalWORKs, able-bodied adult recipients (1) must meet participation mandates, (2) are limited to five years of cash assistance, and (3) must begin community service employment after no more than 24 months on aid.

**Capacity** The maximum rate of flow that can be accommodated on a facility segment under prevailing conditions. Rate of flow is the number of vehicles passing a point on a facility during some period of time, expressed in vehicles per hour or persons per hour.

**Capitol Corridor Intercity Rail Service** A 150-mile intercity rail service along the Union Pacific ROW Capitol Corridor, which runs between San Jose and Auburn, through Oakland and Sacramento.

**Carpooling** An arrangement in which commuters share driving and the cost of commuting. A carpool is formed with a minimum of two people who commute on a regular basis. The members generally share common residential and employment locations as well as common commuting patterns and schedules.

**CCTV—Closed-Circuit Television** This ITS component is used for traffic surveillance, where the signal is transmitted by wire. A CCTV system usually communicates with a centralized facility such as a TMC or OCC.

**CDP—Countywide Deficiency Plan** A document that will address deficiencies on Santa Clara County's freeways and expressways and include a set of improvements, programs and actions that are designated to both improve service on the overall transportation system and cause a significant improvement in air quality.

**CDT Program** See Community Design and Transportation Program

**CEQA—California Environmental Quality Act** The basic goal of CEQA is to develop and maintain a high-quality environment now and in the future, while the specific goals of CEQA are for

California's public agencies to 1) identify the significant environmental effects of their actions; and either 2) avoid those significant environmental effects where feasible or 3) mitigate those significant environmental effects where feasible.

**Choice—A Key Concept of the CDT Program**

Focuses on the notion that one-size-does-not-fit-all. A transportation system that is dominated by a single mode fosters development patterns and policies that encourage sprawl, decentralization and separation of uses. Choice seeks to expand the range of options about what kind of home to live in, where that home is located, the character of the community, and the means of getting around.

**CIP—Capital Improvement Program** A multi-year program of projects to maintain or improve the traffic level-of-service and transit performance standards developed by the CMP, and to mitigate regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to State and Federal air quality requirements. It is updated every other year as part of the Congestion Management Program update. The CIP is a ten-year program.

**Clean Air Act** The Federal law that requires urban areas with high pollution to modify transportation policies in order to reduce emissions. This law makes air quality a primary concern in transportation decisions.

---

**CMA—Congestion Management Agency** The CMA is a countywide organization responsible for preparing and implementing the county's CMP (see definition below). CMAs came into existence as a result of State legislation and voter approval of Proposition 111 in 1990 (later legislation removed the statutory requirements of Proposition 111, making CMAs optional). In Santa Clara County, VTA is the designated CMA.

**CMAQ—Congestion Mitigation and Air Quality Improvement Program** A Federal funding program established by ISTEA and continued in TEA-21 specifically for projects and programs that will contribute to the attainment of a national ambient air quality standard. The funds are available to non-attainment areas for ozone and carbon monoxide based on population and the degree of severity of pollution. Eligible projects will be defined by the approved State Implementation Program (SIP) and the State's air quality plan.

**CMP—Congestion Management Program** A comprehensive program designed to reduce traffic congestion, to enhance the effectiveness of land use decisions, and to improve air quality. The program must comply with CMP State statutes, and with State and Federal Clean Air Acts. Unless otherwise specified, CMP means Santa Clara County's Congestion Management Program.

**CMP Roadway Network** A network of roadways within a CMA that are of regional significance. The CMP roadway network in Santa Clara County consists of freeways, expressways, urban arterials (six-lane facilities or non-residential arterials with average daily traffic (ADT) of 30,000 vehicles per day), and rural highways.

**Community Design and Transportation (CDT) Program** A partnership between the VTA and the 15 cities/towns and the county to develop and promote strategies for improving transportation systems and community livability. This involves creating areas with high-quality planning and design that support walking, biking, and local auto trips. It also promotes concentrated development, good access to transit services, multi-modal street design, and efficient use of land. The CDT program is VTA's primary program for integrating transportation and land use, and has been adopted by each of the 16 city, town and county governments in Santa Clara County.

**Commute** A home-to-work or work-to-home trip.

**Concentrated Development** Usually synonymous with higher-density development than is the average for the area. Among land use planners, concentrated development implies a minimum of multistory, attached residential condominiums or apartments, mid- to high-rise office or retail, or some mix of these land uses.

Usually, concentrated development connotes an urban setting located around some type of transit station, downtown commercial center, or other attraction or amenity. Concentrated development generally contrasts with “clustered” development, which may describe a grouping of detached residential units in a rural or suburban setting and intended to preserve open space in a large parcel.

**Congestion** The condition of any transportation facility in which the use of the facility is so great that there are delays for the users of that facility. Usually this happens when traffic approaches or exceeds facility capacity.

**Connectivity** Generally defines how well a street network allows pedestrians, bicyclists, and non-auto modes to travel in a straight line (i.e., shortest path) between two points. Improvement to connectivity, such as extending dead-end streets or continuing arterials under freeways, encourages walking and bicycling. Planners would contend that a perfect grid or radial street pattern maximizes connectivity while cul-de-sacs, at-grade freeways, rail tracks, and other impediments or intimidating structures diminish connectivity. For auto travel, connectivity may apply to extending arterial roadways that will allow autos to avoid using congested freeway segments to make short trips.

**Cores** District areas that include many streets and blocks characterized by concentrated development features.

**Corridors** Linear areas, typically centered on a single street, that function as the spine of the surrounding community.

**CSS—Commute Services Study** A VTA study document updated every two to three years to ensure commute services are responsive to changing commute patterns in Santa Clara County. The study is an analysis of commute trips, to assess the viability of existing commute bus services and to identify new commute bus service concepts and routes.

**CTC—California Transportation Commission** A State agency that sets State spending priorities for highway and transit and allocates funding. Members are appointed by the governor.

**CVO—Commercial Vehicle Operations** Use of ITS technologies to improve travel time and reliability for freight traffic and reduce the cost of shipping goods. CVO applications include satellite tracking of truck traffic, automated weigh-in-motion scales, and automatic vehicle identification systems.

**Deficiency** Deficiencies occur where the transportation facilities provided do not conform to the standards that the area has adopted as minimally acceptable. A deficient roadway in Santa Clara County is one with a Level of Service (LOS) of F.

---

**Delay** A measure of the amount of time spent during a trip due to congestion. It is measured as the difference in travel time between congested and free-flow conditions.

**Developer Exaction** A contribution or payment required as an authorized precondition for receiving a development permit; usually refers to mandatory dedication (or fee in lieu of dedication) requirements found in many subdivision regulations.

**Development Impact Fees** A fee, also called a development fee, levied on the developer of a project by a city, county, or other public agency as compensation for otherwise unmitigated impacts the project will produce. California Government Code Section 66000 et seq. specifies that development fees shall not exceed the estimated reasonable cost of providing the service for which the fee is charged. To lawfully impose a development fee, the public agency must verify its method of calculation and document proper restrictions on use of the fund.

**Economic Health** A term used to describe the fundamental and long-term strength of the economy. The most common measures of a region's economic health include unemployment rate, business output, personal income, the sales growth of indigenous business, and the attraction of new business to the area. Short-term indicators of economic health may include congestion, historically high cost of housing,

parking shortages, low commercial and retail vacancy rates, and a high cost of living. Long term, however, these indicators could presage economic decline if not addressed. It may also include long-term indicators that measure a region relative to the State or nation in regard to wages, construction of high-end housing, demand for skilled labor, diversity of the industrial mix, the share of economic activity related to new or robust industry sectors (e.g., biotech, telecommunications, etc.).

**Eco Pass** Partnership between Santa Clara Valley employers and the VTA. Eco Pass is a transit card with unlimited use of VTA bus and light rail services. Employers purchase annual Eco Pass stickers for full-time employees at a given site, at one low cost. Pricing levels are based on proximity to VTA transit services and the number of employees.

#### **EIR/EIS—Environmental Impact Report/**

**Environmental Impact Statement** A study which analyzes various alternatives for environmental impacts, identifies possible mitigations to reduce impacts, and obtains legally mandated State and/or Federal environmental clearance for a chosen preferred alternative.

**Electrification** To equip rail or bus transit systems for use of electric power.

**Evaluation** Criteria factors that help to distinguish the relative value of alternative actions.

**Final Engineering** Finalizes design drawings and produces construction documents for the preferred alternative.

**Fixed-Route Transit** Transit service provided on a repetitive, fixed-schedule basis along a specific route, with vehicles stopping to pick up passengers at and deliver passengers to specific locations.

**Flexible Work Hours** This is a form of alternative work schedule. It is a policy that gives employees the option of varying their start and end times each workday. The intent is to allow employees more flexibility to adjust work hours to meet individual needs and provide incentive to use commute alternatives.

**Flyover Ramp** A ramp connecting two roadway facilities that provides a direct connection to avoid congestion, merging, and/or an intersection.

**Freeway Service Patrol (FSP)** The Bay Area FSP is a joint project of the Metropolitan Transportation Commission Service Authority for Freeways and Expressways (MTC SAFE), the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The service is provided by a fleet of 74 trucks provided by private tow truck companies under contract with MTC SAFE, and patrols some 450 miles of the Bay Area's freeways. Patrol routes are selected based on several factors, including a high rate of traffic

and congestion, frequent accidents or stalls, and lack of shoulder space for disabled vehicles.

**FTA—Federal Transit Administration** A component of the U.S. Department of Transportation, delegated by the Secretary of Transportation to administer the Federal transit program under the Urban Mass Transportation Act of 1964, as amended, and various other statutes.

**FTIP—Federal Transportation Improvement Program** All Federally funded projects are required to be included in the FTIP. The FTIP is a document that includes key information regarding all Federally funded and “regionally significant” projects. This document is used as a common reference point for review and approval of processes (such as funding, air quality conformity, etc.) by various State and Federal agencies. The FTIP is actually a composition of select projects from State, regional and local sources. Each “level” also has its own transportation improvement program (TIP). Therefore, in order for a project to be included in the FTIP, it must first be included in a local TIP, then in the RTIP, then in the STIP. Each TIP will require a review and approval process by the agency responsible for administering the TIP.

**Golden Triangle** The area bounded by US 101, SR 237, and I-880 that experienced large job growth in the 1980s and 1990s.

---

**Grade Separation** A grade separation is a structure necessary to provide for either the passage of a roadway or bicycle or pedestrian facility under or over a rail line.

**HOT Lanes—High-Occupancy Toll Lanes**

Combines the characteristics of HOV lanes and toll roads by allowing carpools, vanpools, and buses free access, while charging for single occupant vehicle (SOV) or drive alone use.

**HOV Lanes—High-Occupancy Vehicle Lanes**

Lanes on heavily congested roadways that are used exclusively by carpools, vanpools, buses or any vehicle that transports multiple passengers.

**IIP—Interregional Improvement Program**

A State funding program created by SB-45. IIP funds may be programmed to projects outside of the urbanized areas and/or interregional projects. All IIP funds are programmed by Caltrans, via the Interregional Transportation Improvement Plan (ITIP) process, with final approval by CTC.

**Incidents** Accidents and other problems that cause increased congestion on our roads.

**Intensification** For residential uses, the increase in the actual number or the range of dwelling units per net or gross acre. For non-residential uses, an increase in the actual or the maximum permitted floor area ratios (FARs).

**Interconnection – A Key Concept of the CDT Program**

Focuses on interconnecting streets, pedestrian and bicycle networks, transit modes, buildings and developments to get more from transportation resources and urban infrastructure, and to form coherent districts and more livable places.

**Intermodal** The term “mode” refers to and distinguishes the various forms of transportation, such as automobile, transit, ship, bicycling and walking. Intermodal refers specifically to the connections between modes.

**Inter-Agency** Indicates cooperation between or among two or more discrete agencies.

**Inter-County** Existing or occurring between two or more counties.

**Inter-Jurisdictional** Existing or occurring between two or more jurisdictions.

**Intra-County** Existing or occurring within the county boundaries.

**ISTEA—Intermodal Surface Transportation**

**Efficiency Act** Federal legislation passed in 1991 and expired in 1997 which restructured much of the basis for funding highway projects, and made some of these funds available to urban areas for transit projects. A key ISTEA component is increased flexibility in the programming of projects.

**ITIP—Interregional Transportation**

**Improvement Program** The ITIP is a four-year planning and expenditure program adopted by the CTC and updated in even numbered years. The ITIP covers rural highway and key interregional improvements, including intercity rail.

**ITS—Intelligent Transportation Systems**

Technologies that improve the management and efficiency of our transportation system, such as electronic fare payment systems, ramp metering, timed traffic signals and on-board navigation systems.

**Jobs/Housing Balance; Jobs/Housing Ratio**

The availability of housing for employees in a particular area. The jobs/housing ratio divides the number of jobs in an area by the number of employed residents. A ratio of 1.0 indicates a balance. A ratio greater than 1.0 indicates a net in-commute; less than 1.0 indicates a net out-commute.

**LAN—Local Area Network** A computer network that spans a relatively small area. Most LANs are confined to a single building or group of buildings. However, one LAN can be connected to other LANs over any distance via telephone lines and radio waves.

**Land Use** Activities and structures on the land, such as housing, shopping centers, farms, and office buildings.

**Livability** While this term may encompass as many different meanings as there are workers and residents in Santa Clara County, it is used in the VTP 2030 as a more broadly defined synonym for “quality of life” to describe the plan’s support for four types of transportation investments and services: relief from congestion, better facilities and services for non-work and off-peak trips, attractive travel choices, and services for a diverse and changing population. Livability describes a resident’s satisfaction with the transportation system in such terms as its ease of use, convenience, reliability, cost, range of travel choices, and interference in non-transportation-related activities.

**Long-Range Plan** A transportation plan covering a time span of 20 or more years. While the VTP 2030 is a living document that will be updated every two to five years, the plan’s methodologies are intended to create performance-based processes that will be used to select projects and design programs over the plan’s 20-year horizon.

**LOS—Level-of-Service** LOS measures the interrelationship between travel demand (volume) and supply (capacity) of the transportation system. LOS is a quantitative measure categorized into six levels, A through F, with A representing ideal conditions—or no congestion—and LOS F representing poor conditions or congested flow. The VTA Congestion Management Program has a standard of LOS E; roadways at LOS F are considered deficient.



---

**LRT—Light Rail Transit** LRT operates on an electrical system powered from an overhead wire on a dedicated track. The system is capable of operating at high speeds in dedicated rights of way and at lower speeds on arterial streets and downtown environments.

**Measure A (1996)** A Santa Clara County advisory ballot measure passed in 1996 that identified a specific program of priority transportation improvement projects in Santa Clara County to be undertaken as funding became available.

**Measure B (1996)** A 1996 ballot measure in Santa Clara County that raised the local sales tax by one-half cent for a nine-year period, with the proceeds being deposited into the county's General Fund.

**Measure A (2000)** A 2000 ballot measure in Santa Clara County that provides a one-half cent sales tax for 30 years, beginning in April 2006. The proceeds would be used to fund several transit projects throughout the county. The Measure passed in November 2000.

**Member Agencies** Local jurisdictions that are signatories to the CMA's Joint Powers Agreement. This includes all cities and towns within the county, Santa Clara County, and the Santa Clara Valley Transportation Authority.

**MIS—Major Investment Study** A study required for major Federally funded transportation projects (highway and transit) before a

project can be included in the RTP. The study must include all reasonable alternatives to address defined transportation problems, and the study process must include all affected agencies, local governments, MTC, and the public.

**Mitigation** An action to reduce or eliminate the impacts of another action.

**Mixed Use** Refers to a variety of land uses and activities with a mixture of different types of development, in contrast to separating uses, such as job sites, retail and housing; multiple land uses in the same structure or same general area of a community; used to describe buildings with different types of use on different floors, particularly commercial uses (such as shops or banks) on the ground floor with flats above.

**Mobility** The movement of people or goods throughout our communities and across the region. Mobility is measured in terms of travel time, comfort, convenience, safety and cost.

**Modal Split or Mode Share** Modal split measures the extent to which travelers use the various available transportation modes. It is measured as the proportion of people making a trip using a given mode.

**MPO—Metropolitan Planning Organization** A Federally required transportation planning body responsible for the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP) in its region; the governor

designates an MPO in every urbanized area with a population of over 50,000.

**MTC—Metropolitan Transportation**

**Commission** The metropolitan planning organization (MPO) for the nine-county San Francisco Bay Area.

**Multimodal** Of or relating to more than one mode of transportation.

**NEXTEA** The next evolution of TEA-21.

**OCC—Operations Control Center** Centralized location where transportation operations (traffic and/or transit) are monitored and conducted.

**Paratransit** Paratransit services are specialized systems of transportation operated for people who are unable to use conventional fixed-route transit. Paratransit services provide trips between a rider's origin and destination, usually door-to-door. ADA requires that the service be comparable to the fixed-route service available.

**Parking Cash-Out Program** State law requires certain employers who provide subsidized parking for their employees to offer a cash allowance in lieu of a parking space. This law is called the parking cash-out program (Assembly Bill 2109, Katz; Chapter 554, Statutes of 1992), and the main provision of the law is California Health & Safety Code Section 43845. It was enacted after studies showed cash allowances in lieu of parking encourage employees to find alternate

means of commuting to work, such as public transit, carpooling, vanpooling, bicycling, or walking. Parking cash-out offers the opportunity to improve air quality and reduce traffic congestion by reducing vehicle trips and emissions. For years, negative tax implications limited the implementation of the law. But in 1998, the Federal Transportation Equity Act for the 21st Century (TEA-21) included amendments to the Internal Revenue Code that fixed this problem. The parking cash-out law does not apply to all employers or all employees. Employers with over 50 employees in an air basin designated non-attainment for any State air quality standard must offer a parking cash-out program to those employees who have the availability of subsidized parking that meets certain criteria.

**Peak Hour** The peak hour of traffic volumes in an area.

**Peak Spreading** A lengthening of the peak period of traffic congestion, usually accompanied by a flattening of the peak.

**Performance Measure** A means to measure whether an objective has been achieved or whether investments or strategies improve over time or across alternatives.

**Person Trip** A trip made by one person irrespective of mode.

---

**Place-making—A Key Concept of the CDT**

**Program** Focuses on the human-scale elements of the built environment that create uniqueness and identity and make places attractive, comfortable, and memorable.

**PMP—Pavement Management Program**

Funding program intended to repair or replace the existing roadway pavement. Funds are distributed using a population-based and lane-mile formula. The cities and county must use a Pavement Management System certified by the MTC to identify and prioritize pavement needs.

**Preliminary Engineering** A study that identifies alternatives for attaining a specified goal. For each alternative, the document describes benefits and contains engineering drawings with enough detail to perform environmental analysis and gauge construction feasibility.

**PR—Project Report** Refers to the report used by Caltrans to recommend approval of a project. The term “Draft Project Report” (Draft PR) refers to a draft version of this report that must be prepared for projects with environmental documents.

**PSR—Project Study Report** A PSR is an engineering report, the purpose of which is to document agreement on the scope, schedule, and estimated cost of a project so that the project can be included in a future State Transportation Improvement Program (STIP). Chapter 878 of

the Statutes of 1987 requires that any capacity-increasing project on the State highway system, prior to programming in the STIP, have a completed PSR. The PSR must include a detailed description of the project scope and estimated costs. The intent of this legislation was to improve the accuracy of the schedule and costs shown in the STIP, and thus improve the overall accuracy of the estimates of STIP delivery and costs.

**PSR/PR Combined** The Combined Project Study Report/Project Report (Combined PSR/PR) was developed to streamline the project development process for non-complex, non-controversial projects on State highways that are 100 percent funded by others. It applies to projects that have an estimated construction cost over \$1,000,000 for work within the existing or to be dedicated State right of way. In addition, the project must comply with the stated criteria itemized in Chapter 9 of the Caltrans Project Development Procedures Manual (PDPM). It may also be used as a project report for some projects costing more than \$300,000 that are too complex to use a Permit Engineering Evaluation Report (PEER) format. The Combined PSR/PR may also be used for Caltrans projects that meet the same stated criteria in Chapter 9, Article 12, of the PDPM, provided they also meet the criteria necessary for programming of the project, i.e., justification for the project, a good cost estimate, identifica-

tion of support costs, and proposed funding. In both cases, the District Directors have approval authority of the document.

**PTA—Public Transportation Account** These revenues are derived from the sales tax on gasoline and diesel fuel. Under the provisions of SB-45, 50 percent of PTA revenues are distributed to the State Assistance Program (STA) with the other 50 percent used for funding planning activities of Caltrans, the CTC, intercity rail purposes and for the operations of the new California High-Speed Rail Authority. Part of the revenues are for uses formerly covered by the Transit Capital Improvement (TCI) Program (TCI has been eliminated as a separate program and folded into the PTA), which include transit vehicle purchases.

**PTAP—Paratransit Technical Assistance**

**Program** A regional effort to focus training in the areas of paratransit operations.

**Quality of Life** The first of the two goals of the VTP 2030, the plan seeks, "...to provide transportation facilities and services that support and enhance the county's continued success by fostering a high quality of life for Santa Clara County's residents." The VTP 2030 goes on to define quality of life as the plan's support for four types of transportation investments and services: relief from congestion, better facilities and services for non-work and off-peak trips, attractive travel alternatives, and services for a

diverse and changing population. Some specific measures include high-quality design and planning that support walking, biking, and local auto trips.

**R&D—Research and Development** Work engaged in study, testing, design, analysis, and experimental development of products, processes, or services.

**Redevelopment Tax Increment** This source of local revenues comes from property taxes within a defined redevelopment area. The county assessor freezes the assessed value of all real property within the redevelopment area as of a base year. As property values appreciate over the life of the redevelopment area (usually about 20 years), the same proportion of the increment of tax revenues above the base year value is paid into the redevelopment agency special fund and used for designated projects. In theory, these specific projects help the area's property to increase in value beyond the appreciation rate of what would have occurred without these projects. Proposition 13 restricts the appreciation of property values to 2 percent per year (or less if the market appreciates at a lower rate). Other agencies that normally receive property taxes may negotiate "pass-through" agreements with the redevelopment agency to avoid losing their share of the increment to the agency. Tax increments are bondable revenue streams that have leveraged large amounts of local bond for all types of public improvements.

---

**RIDES for Bay Area Commuters** The Bay Area's regional commute information service. RIDES supports carpool and vanpool options.

**Right-of-Way** A strip of land occupied or intended to be occupied by certain transportation and public use facilities, such as roadways, railroads, and utility lines.

**Roadway Pricing** "Road pricing" is an umbrella phrase that covers all charges imposed on those who use roadways. The term includes such traditional revenue sources as fuel taxes and license fees as well as charges that vary with time of day, the specific road used, and vehicle size and weight.

**RTD—Regional Transit Database** MTC is developing a public transportation database that encompasses seven major transit operators in the Bay Area: AC Transit, Bay Area Rapid Transit (BART), Central Contra Costa Transit, Golden Gate Transit, SamTrans, VTA, and San Francisco Muni. The database will include each operator's routes, schedules, and stop locations.

**RTIP—Regional Transportation Improvement Program** A list of proposed transportation projects submitted to the CTC by the regional transportation planning agency (for the Bay Area—MTC), as a request for State funding. The individual projects are first proposed by local jurisdictions, then submitted by the CMA to the regional agency, and then submitted by

the regional agency for submission to the CTC. The RTIP has a four-year planning horizon and is updated every two years.

**RTP—Regional Transportation Plan** A multi-modal blueprint to guide the region's transportation development for a 20-year period. Updated every two to three years, it is based on projections of growth and travel demand coupled with financial assumptions. Required by State and Federal law.

**Santa Clara Countywide Bicycle Plan** Plan developed by the VTA to guide the development of bicycle facilities in order to promote safe and convenient bicycling throughout the county. It also provides coordination of facilities that cross jurisdictional boundaries.

**SB-45—Senate Bill 45** Governor Wilson signed SB-45 into law at the end of the 1997 legislative session. This legislation consolidated several State transportation funding programs into three funding programs and devolved State transportation programming responsibility to the county and MPO level. Funds consolidated by SB-45 include the Flexible Congestion Relief (FCR), Transit Capital Improvement (TCI), Transportation Systems Management (TSM) and Regional Traffic Signalization and Operations Program (RTSOP) Programs.

**SCCRTC—Santa Cruz County Regional Transportation Commission** The SCCRTC consists of ten members representing the Santa Cruz County Board of Supervisors, the four cities, the Transit District Board, and a non-voting member of Caltrans. One of the Commission's primary roles is to distribute various types of State and Federal funds to transportation projects throughout the county. The Commission also conducts long-range planning activities, including the RTP.

**Section 5307** Funds provided through FTA through a complex formula. These funds are not available for operating assistance in Urbanized Areas (UZAs) with a population over 200,000; however, they can be used for preventive maintenance purposes. Additionally, in UZAs with populations greater than 200,000, 1 percent of the UZA formula funds are to be spent on transit enhancements, which include rehabilitation, connections to parks, signage, pedestrian and bicycle access and enhanced access for those persons with disabilities, and 1 percent must be spent on security.

**Section 5309** This includes both discretionary and formula transit capital funds provided through the FTA. New rail starts and extensions are funded through this program, which operates through earmarking at the congressional level. Other categories are fixed guideway modernization (formula based), and bus and bus facilities (discretionary).

**Section 5311** FTA funds available for rural/intercity bus projects including purchases of buses and related equipment, and bus operations in rural areas.

**SHOPP—State Highway Operations and Protection Plan** A program created by State legislation that includes State highway safety and rehabilitation projects, seismic retrofit projects, landscaping, some operational improvements, and bridge replacement. SHOPP is a four-year program of projects adopted separately from the STIP cycle. Both new (Prop. 111) and old State gas tax revenues and Federal funds are the basis for funding this program. The legislature and governor have made seismic retrofit the State's highest priority and in practice have used other STIP monies for these projects.

**SJC—Mineta San Jose International Airport (sometimes referred to as SJIA)** The airport serving the Santa Clara Valley area. It is a self-supporting enterprise, owned and operated by the City of San Jose.

**Smart Corridor** A Smart Corridor is one where various public agencies' traffic management activities are coordinated to more effectively manage traffic in that corridor. These are typically achieved using advanced technologies or ITS, while partnerships between jurisdictions are necessary to develop procedures and measures for coordination.

---

**SMCTA—San Mateo County Transportation**

**Authority** The SMCTA is an independent agency formed to administer the proceeds of a countywide half-cent sales tax measure approved by voters in June 1988. The tax will expire on December 31, 2008. The measure included a specific expenditure plan with a broad spectrum of projects and programs, including Caltrain upgrades and improvements, highway and street projects, 20 percent allocation for local streets and roads and paratransit service for people with disabilities. The Transportation Authority also has allocated funding for transportation systems management programs, aimed at reducing traffic through various means, including funding for a countywide bicycle map.

**SRTP—Short Range Transit Plan** This documents the VTA's on-going transit development and planning process for a ten-year planning horizon. It is used to support projects in the RTP and VTP.

**STA—State Transit Assistance** Provides funding for mass transit, transit coordination projection and transportation planning. Half of the revenues budgeted for the PTA are appropriated to STA. STA apportionments to regional transportation planning agencies (MTC in the Bay Area region) are determined by two formulas: 1) 50 percent of funds are distributed

according to population and 2) 50 percent are distributed on a basis proportional to operator revenues in the region for the prior year. The Bay Area region usually receives about 38 percent of State STA funds.

**Station Areas** Locations immediately proximate to rapid transit stations that already serve or will serve as central elements in a transit-oriented development (TOD).

**STIP—State Transportation Improvement**

**Program** The STIP is a multi-year planning and expenditure plan adopted by the CTC for the State Transportation System, and is updated in even-numbered years. The STIP is composed of the approved RTIPs and the Caltrans ITIP. The 2000 STIP is a four-year program. New State legislation passed in 2000 will extend the STIP timeframe to a five-year program.

**STP—Surface Transportation Program A**

flexible funding program established by ISTEA. Many mass transit and highway projects are eligible for funding under this program. Ten percent of the projects in this program must be transportation enhancement projects, and ten percent must be safety projects.

**SVITS—Silicon Valley ITS Program**

Expanded partnership formed to implement the Silicon Valley Smart Corridor project to work toward implementing three additional ITS projects in

Santa Clara and southern Alameda County. The original Smart Corridor was focused on the I-880 and SR 17 corridor.

**TAC—Technical Advisory Committee** An advisory committee to the VTA that is responsible for overseeing the technical work of the VTA staff and developing recommendations to the Board of Directors on projects and programs.

**TCM—Transportation Control Measure** A measure intended to reduce pollutant emissions from motor vehicles. Examples of TCMs include programs to encourage ridesharing or public transit usage, city or county trip reduction ordinances, and the use of cleaner-burning fuels in motor vehicles. MTC has adopted specific TCMs, in compliance with the Federal and State Clean Air Acts.

**TCRP—California Governor's 2000 Traffic Congestion Relief Program** A program established in 2000 to provide \$2 billion in funding for traffic relief and local street and road maintenance projects throughout California. Specific transit and highway projects were identified to receive some funding from this plan including I-680 HOV lanes, US 101 widening to accommodate SR 85 direct HOV connectors in San Jose, SR 85/US 101 direct HOV connectors in Mountain View and San Jose, I-880/Coleman Avenue interchange improvements, BART to San Jose, Caltrain

upgrades, Vasona LRT to Winchester, and Fremont-South Bay Commuter Rail.

**TDA—Transportation Development Account**

Created in 1972, this account receives 1/2 cent of the 6-cent Statewide sales tax. The 1/2 cent is apportioned to the county of origin according to the amount of sales tax generated by that county, and allocated by MTC to the county's eligible applicants. In Santa Clara County, the transit agency is the only eligible applicant for Article 4 allocations. In addition to Article 4, allocations from TDA are also made under Article 4.5 for community and paratransit services. This provision allows MTC to allocate up to 5 percent of the total TDA allocation for Santa Clara County for these types of services, which the Santa Clara Valley Transportation Authority claims for ADA paratransit services.

Additionally, Article 3 funds (4 percent of the total) are allocated annually for bicycle/pedestrian projects, which are nominated by the VTA.

**TDM—Transportation Demand Management**

The purpose of TDM is to increase the efficiency of existing roadway systems by reducing the demand for vehicular travel. TDM strategies and initiatives are multimodal and aimed at reducing peak-hour travel demands. Example TDM strategies include carpooling or vanpooling, flexible work hours, telecommuting, parking controls, and use of alternative transportation modes such as transit.



---

**TE—Transportation Enhancements Program**

MTA established the TE with the Santa Clara TEA funds. Approximately 37 percent of the TEA funds from TEA-21 will be dedicated to Countywide Bicycle Expenditure Program projects and the remainder will be available for projects in all TEA funding categories.

**TEA—Transportation Enhancement Activities**

ISTEA provided for a ten percent set-aside of each state's STP allocation to be used for TEA projects above and beyond normal capital improvements. Enhancement funds must be used for elements of a project that have a direct relationship to the intermodal transportation system and fit one or more of 12 activities categories described in TEA-21.

**TEA-21—Transportation Equity Act for the 21st Century** TEA-21 is the successor legislation to ISTEA. Congress enacted TEA-21 in mid-1997. The legislation covers the six-year period 1997/98 to 2002/03, and extends and expands many of the funding programs developed under ISTEA.

**Telecommuting** A system of working at home or at an off-site workstation with computer facilities that link to the worksite.

**TFCA—Transportation Fund for Clean Air**

TFCA funds are generated by a \$4.00 surcharge on vehicle registrations. The funds generated by

the fee are used to implement projects and programs to reduce air pollution from motor vehicles. Health and Safety Code Section 44241 limits expenditure of these funds to specified eligible transportation control measures (TCMs) that are included in BAAQMD's 1991 Clean Air Plan, developed and adopted pursuant to the requirements of the California Clean Air Act of 1988. BAAQMD manages 60 percent of the funds via a regional discretionary program. The remaining 40 percent are returned to each county based on annual vehicle registrations.

**TIP—Transportation Improvement Program**

A federally required document produced by a regional transportation planning agency (MTC in the Bay Area) that states investment priorities for transit and transit-related improvements, mass transit guideways, general aviation, and highways. The TIP is the MTC's principal means of implementing long-term planning objectives through specific projects.

**TLC—Transportation Livable Communities**

**Program** MTC created a new regional discretionary funding program called TLC with some of the TEA funds. Sponsors of projects must apply directly to MTC for these funds. Funds are to be used for cities to help them develop transportation-related projects aimed at improving quality of life.

**TMC—Traffic Management Center** TMCs help in the real-time management of traffic, including monitoring and controlling roadway access, responding to and managing incidents, rerouting traffic, and communicating and coordinating with the public and the media. They perform these functions with advanced ITS technology such as sophisticated sensors; data fusion, information processing, and communications equipment; and technology to automate routine decision-making and other activities.

**TOS—Traffic Operations System** A system made up of various ITS components that improve and monitor traffic operations for an area. Components typically include surveillance (loop detectors, CCTV, etc.), monitoring equipment, highway advisory radio, changeable message signs (CMS), and ramp metering.

**Transient Occupancy Taxes** These taxes are also known as hotel taxes and are charged for any overnight stay at a commercial lodging. They typically run between 8 and 15 percent but may be higher. Some proportion of the transient occupancy tax revenues is sometimes dedicated for convention and visitor promotions or special projects. The balance is usually paid into the county's General Fund. The revenue stream from these taxes is bondable and has

often been used to subsidize the construction of convention centers and downtown improvements.

**Transit** Passenger service provided to the public along established routes. Paratransit is a variety of smaller, often flexibly scheduled and routed transit services serving the needs of persons that standard transit would serve with difficulty or not at all.

**Transit-Oriented Development** Transit-oriented development (TOD) is characterized by a compact layout that encourages use of public transit service and walking or bicycling instead of automobile use for many trip purposes. Typically, it places higher-density development within an easy walking distance of 1/4 to 1/2 mile of a public transit station or stop and is accessible by all other modes. It is compact, typically mixed-use, pedestrian-friendly, and has a transit stop or station as an activity center.

**Transit Streets** VTA is considering developing a network of "transit streets" which would include thoroughfares where resources could be directed to enhance transit operations, the pedestrian environment, passenger waiting facilities, and pedestrian connections between stops and activity centers. This is supportive of the CDT program.

---

**TransLink** The Bay Area's regional electronic fare payment collection system.

**TravInfo** The Bay Area's advanced traveler information system.

**TRP—Trans Response Plan** The TRP concept creates a multimodal transportation response that is integrated into overall emergency response for the nine-county Bay Area.

**TSM—Transportation Systems Management** The use of low-cost capital improvements to increase the efficiency of road transportation and transit services. Sometimes the term is also applied to techniques used to reduce the demand for travel in an area. Other TSM measures are engineering-oriented, such as timing traffic signals to smooth the flow of traffic, and ramp metering, which regulates the entrance of vehicles onto a freeway, thus increasing the efficiency of the freeway.

**Universe of Projects** The compilation of projects in the VTP 2030 which were proposed by interested agencies and the general public. The projects proposed by individual cities and the county required City Council or Board approval prior to submittal to the VTA for inclusion in the plan.

**Urban Design** The attempt to give form, in terms of both beauty and function, to selected urban areas or to whole cities. Urban design is concerned with the location, mass, and design

of various urban components and combines elements of urban planning, architecture, and landscape architecture.

**UA—Urbanized Area** An area defined by the United States Census Bureau that includes one or more incorporated cities, villages and towns (or "central place") and the adjacent densely settled surrounding territories (or "urban fringe") that together have a minimum of 50,000 persons. The urban fringe generally consists of contiguous territory having a density of at least 1,000 persons per square mile. UZAs do not conform to congressional districts or any other political boundaries, but are set by the Census Bureau on demographics, numbers and definitions. Non-Urbanized Areas are demographically rural in population.

**Vanpooling** Commuting in a 7- to 15-passenger van, with driving undertaken by commuters. Some portion of the van's ownership and operating cost is usually paid by the riders on a monthly basis. The van may be privately owned, employer-sponsored with the company owning and maintaining the vehicle, or it may be provided through a private company that leases vehicles.

**VHT/P-T—Vehicle Hours of Travel per Person Trip** A measure of the average amount of time travelers spend getting to their destination.

**Vision** A brief description of what we want the region to be for the next generation. A vision statement should be expansive and inspirational.

**VMТ—Vehicle Miles of Travel** A standard areawide measure of travel activity, calculated by multiplying average trip length by the total number of trips.

**VTA—Santa Clara Valley Transportation**

**Authority** The Santa Clara Valley Transportation Authority (VTA) is an independent special district responsible for bus and light rail operations, congestion management, specific highway improvement projects, and countywide transportation planning. As such, VTA is both a transit provider, and a multimodal transportation planning organization involved with transit, highways and roadways, bikeways,

pedestrian facilities, and land use.

**VTP—Santa Clara Valley Transportation Plan**

A 25-year plan developed by VTA which provides policies and programs for transportation in the Santa Clara Valley including roadways, transit, ITS, bicycle, pedestrian facilities, and land use. The VTP is updated every three to four years to coincide with the update of the Regional Transportation Plan (RTP).

**ZEB—Zero Emission Bus** The VTA's plan to purchase and deploy a zero emission bus fleet. ZEB is defined as an urban bus certified to zero exhaust emissions of any pollutant under any and all conditions and operations. This includes hydrogen-powered fuel cell buses, electric trolley buses, and battery electric buses.

---

# Acknowledgments

## **Project Staff**

Chris Augenstein, *Transportation Planning Manager; Development and Congestion Management, Project Manager*

Adam Burger, *Transportation Planner*

Ya Wang, *Transportation Planner III*

## **Contributing Staff**

Celia Chung, *Senior Transportation Planner*

Casey Emoto, *Transportation Engineering Manager*

George Naylor, *Principal Transportation Planner*

Jeff Qin, *Senior Transportation Planner*

Marcella Rensi, *Transportation Planning Manager; Grants and Programming*

Julie Render, *Deputy Director, Transit Planning and Programming*

Steve Fisher, *Senior Transportation Planner*

Eugene Meada, *Transportation Planner III*

Mike Aro, *Deputy Director, Service Planning*

Bill Capps, *Manager, Service Planning*

## **Consultant Staff**

Moore Iacofano Goltsman, Inc. (MIG)  
Berkeley, California



3331 North First Street  
San Jose, California 95134-1906

408.321.3000  
TDD only 408.321.2330

[www.vta.org](http://www.vta.org)