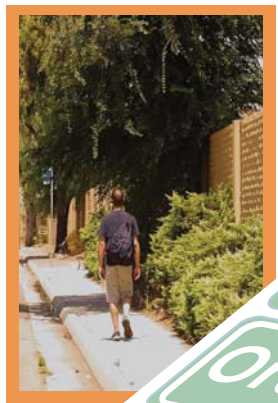
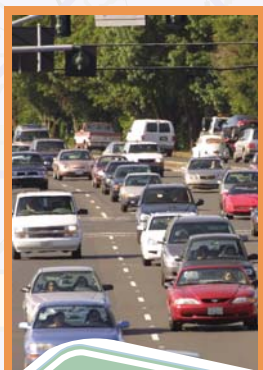
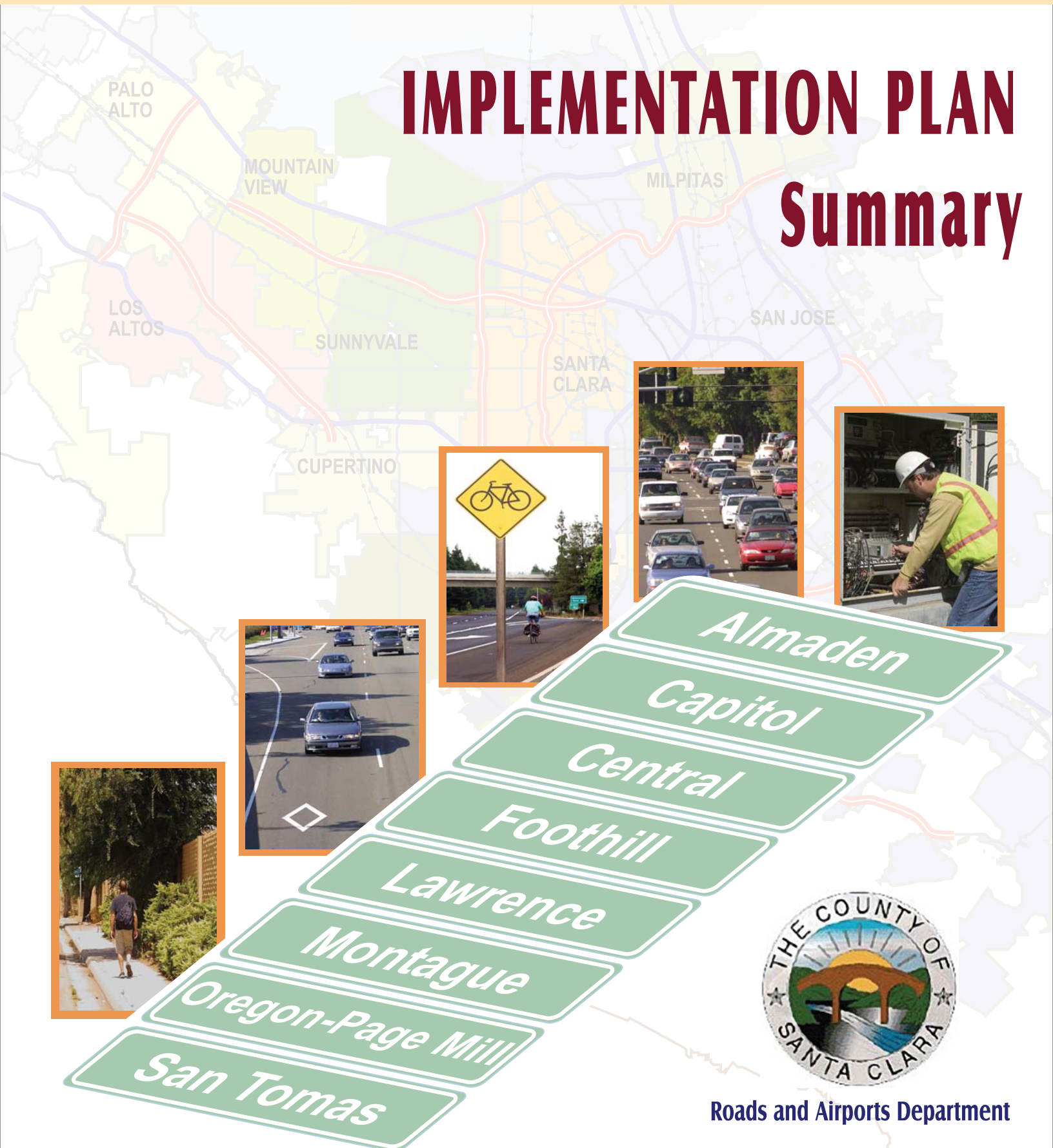


Comprehensive County Expressway Planning Study

IMPLEMENTATION PLAN Summary



- Almaden
- Capitol
- Central
- Foothill
- Lawrence
- Montague
- Oregon-Page Mill
- San Tomas



Roads and Airports Department

August 19, 2003

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INTRODUCTION

The Comprehensive County Expressway Planning Study was undertaken to provide a long-term plan for the improvement and maintenance of the County Expressway System. The study took two years to complete and culminated in the development of the *Implementation Plan*. The *Implementation Plan* provides a basis for and guides the investment of money and resources in the expressways. A collaborative planning process was used during the study to ensure the local cities and their residents would support the plan's recommendations.

The plan:

- ◆ Forecasts conditions and evaluates need over a 30-year timeframe to be compatible with other regional planning documents and to provide a long-term perspective on expressway system needs.
- ◆ Recognizes that each expressway has its own unique character, function, and community relationship.
- ◆ Identifies capital improvement project needs ranging from short sidewalk segments to extensive expressway segment improvements to freeway interchange reconstruction.
- ◆ Identifies maintenance and operational improvement needs varying from signal coordination expansion to enhanced street sweeping intervals to infrastructure replacement.
- ◆ Provides immediately useful information by including recommendations for improvements to signal timing plans and modifications to high-occupancy vehicle (HOV) lane operations, and by recommending design guidelines for bicycle accommodation on the expressways.
- ◆ Relates project benefits and potential for delivery to priorities expressed through a tier structure, with the highest priority Tier1A roadway projects expected to be funded through existing revenue sources.
- ◆ Proposes a funding strategy to achieve plan implementation.
- ◆ Considers roadway improvement needs in South County, where Gilroy is constructing Santa Teresa Boulevard to expressway standards.

The expressways were designed to relieve local streets and supplement the freeway system. There are:

- ◆ **8** expressways, **5** of which have HOV lanes
- ◆ **62** centerline miles of expressway, traveling through **11** cities
- ◆ **134** signalized intersections
- ◆ **55** bridges
- ◆ **150,000** feet of existing sound walls
- ◆ **1.5 million** vehicles trip on expressways daily
- ◆ **55%** of Santa Clara County residents using an expressway daily (based on 2001 telephone survey)



CAPACITY AND OPERATIONAL IMPROVEMENTS

Seventy-two (72) roadway improvement projects are identified for the expressway system. There are a wide range of projects included to reflect a variety of needs, including:

Capacity Improvements

- ◆ Expressway widening to add through capacity and reduce traffic congestion
- ◆ New turning lanes at intersections to better serve cross streets
- ◆ New or reconfigured interchanges/grade separations to relieve traffic congestion and reduce turning movement conflicts



Signal Operational Improvements .

- ◆ Traffic Operations System (TOS) equipment using advanced technologies to monitor and improve traffic flow
- ◆ Replacement of outdated equipment to benefit from modern technology and to reconfigure intersections
- ◆ Expanded coordination with city signal systems to gain more coordination benefits
- ◆ Retiming signals regularly to stay current with changing traffic conditions

Operational and Safety Improvements

- ◆ Auxiliary lanes to provide more room for merging on and off the expressway
- ◆ Access improvements to limit uncontrolled vehicle movements and reduce conflicts
- ◆ Bridge replacements to meet current needs



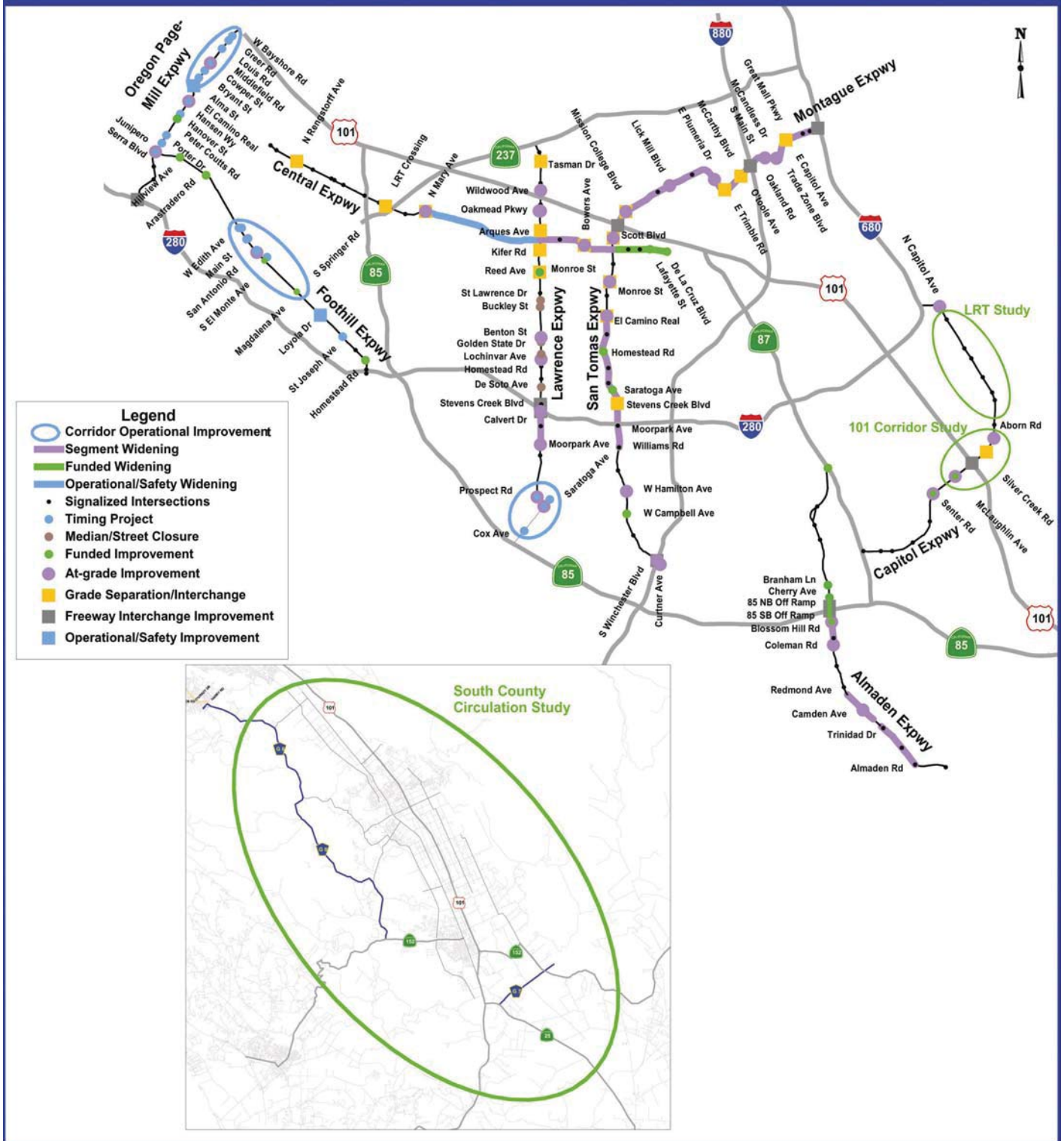
HOV System Improvements

- ◆ New HOV lane segments to provide an incentive to rideshare
- ◆ Removal of HOV lanes experiencing operational problems to respond to driver and local agency issues
- ◆ Expressway-freeway HOV direct connector ramps to improve HOV system operation

South County Improvements

- ◆ Initiating a South County Circulation Study to identify projects serving intercity travel needs

Figure 1: Capacity/Operational Improvements



ROADWAY IMPROVEMENTS EFFECTIVENESS

Figures 2 and 3 illustrate the LOS benefits of the recommended capacity and operational improvements for the planning year 2025. Key results of the Plan include:

- ◆ 6 of the 8 expressways would operate at corridor LOS D or better.
- ◆ Montague Expressway would have LOS E and F corridor segments but queuing and overall delay would be reduced significantly over existing levels.
- ◆ Capitol Expressway may have LOS E or F segments east of US 101; however, a light rail line is planned for this expressway providing a travel alternative.
- ◆ 28 existing LOS F intersections and 43 projected 2025 LOS F intersections would be improved to at least LOS E, with most improved to LOS D or better.

COSTS AND PRIORITIES

The total cost for the roadway improvement capital program is \$1.64 to 1.94 billion. To determine priorities for funding and implementation, the roadway projects were divided into tiers using specific criteria. Table 1 summarizes the tiers.

The 28 projects in Tier 1A address the top priorities for each expressway and improve most of the current LOS and operational problem areas for a total cost of \$150 million. These low-cost improvements can be delivered relatively quickly once funds are secured.

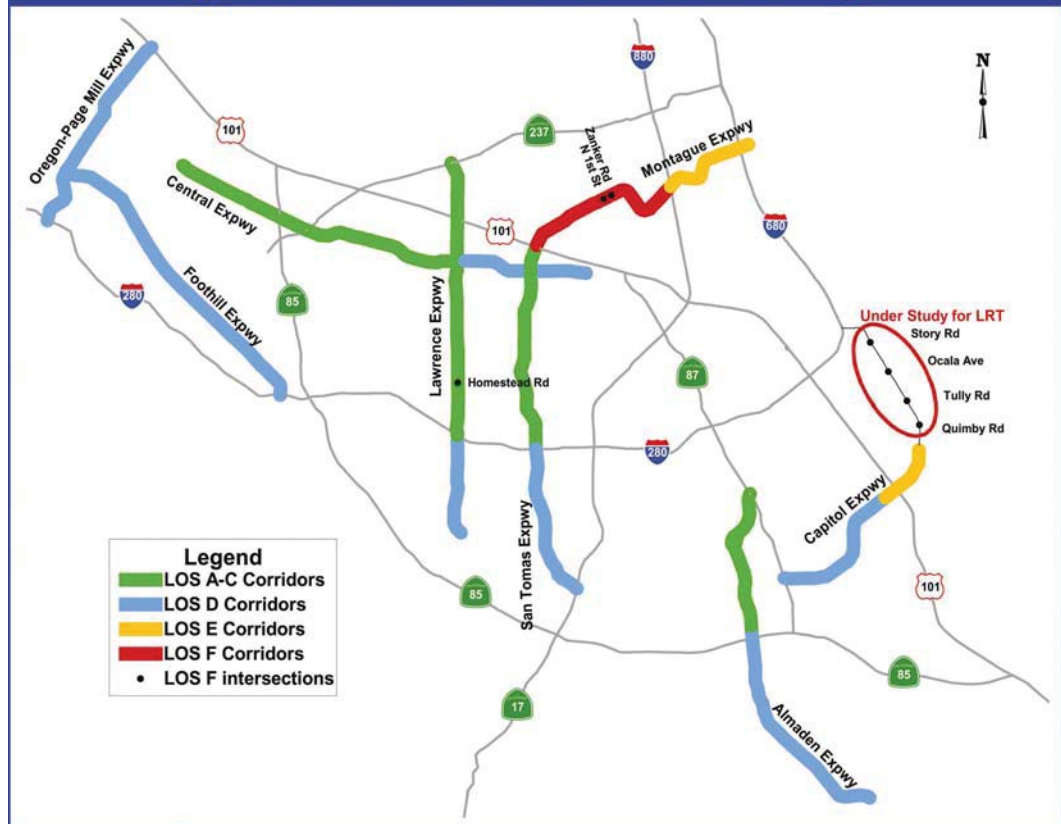
Table 1: Roadway Projects Tier Summary

Tier	Tier Criteria	# of Projects	Capital Cost (millions)
1A	Improves 2001 LOS F intersections, provides operational improvements, or conducts key feasibility studies	28	\$149-151
1B	Constructs interchanges at 2001 LOS F intersections	7	\$261-271
1C	Improves 2025 projected LOS F intersections	13	\$49-53
2	Provides other expressway capacity improvements or new technologies	15	\$585-671
3	Reconstructs major existing facilities or constructs new facilities	9	\$593-795
Totals		72	\$1,637-1,941

Figure 2: Corridor Level of Service for No Project



Figure 3: Corridor Level of Service for All Project



OTHER CAPITAL IMPROVEMENTS

Bicycle Projects

Bicycles are accommodated on all expressways.



Bicycle improvement recommendations were identified based on bringing all expressways into compliance with the Bicycle Accommodation Guidelines (BAG). The BAG includes guidelines on bicycle travel area widths, striping, signage, trail connections, maintenance, and several other design treatments.

Specific capital projects recommended, such as striping improvements and shoulder widening, total \$1.65 million.

Installation of landscaping is estimated to cost approximately \$21 million

Landscaping

The following level of landscaping is recommended for the expressways: trees and limited shrubs; median finishes, such as decomposed granite; sound walls covered with vines; and, automated irrigation system



Pedestrian Facilities

A pedestrian facilities plan was developed covering the entire length of each expressway. New sidewalks along the expressways are recommended to close gaps in otherwise continuous sidewalks, to access transit stops, and to provide access to land uses fronting on the expressways. Recommendations also include improved connections and directional signage to parallel pedestrian facilities, such as trails and frontage roads.

For expressway crossing needs, high-demand crossing locations were identified for potential crossing enhancements ranging from reconfiguring intersections to make them more pedestrian-friendly to installing pedestrian countdown timers and pedestrian ramps. Two new pedestrian overcrossings (POCs) are also recommended. Altogether, \$23.2 million in pedestrian improvements are recommended.

Sound Walls

The study included an assessment of sound wall needs

conducted according to the guidelines of Caltrans and the Federal Highway Administration (FHWA). Overall, the plan recommends 63,500 feet of new sound walls and replacing 36,000 feet of existing walls with higher walls for a total cost of \$47.7 million



MAINTENANCE & OPERATIONS

Maintenance and operations include all activities and materials necessary to keep the expressways functioning safely and effectively while looking presentable. Based on comments received from the public, cities, and policymakers, the overall goal for expressway maintenance and operations can be summed up as:

The expressways should be cleaner and greener with smooth pavement and synchronized signals.



The County's current practices are limited by available revenue. However, to meet the desired goal, the plan recommends levels of effort comparable to the cities' current practices. Table 2 lists the estimated costs for the recommended levels of effort. The operating costs for the recommended levels of effort exceed existing available revenues.



Table 2: Recommended Maintenance/Operations Levels of Effort	
Category	Annual Operating Cost (millions)
Signal Operations/Traffic Operation System	\$1.5
Sweeping	\$0.6
Landscape Maintenance	\$4.0
Pavement Maintenance	\$3.8
Infrastructure Replacement (all types)	\$6.6
All Other	\$1.5
Total	\$18.0

FUNDING STRATEGY

The *Implementation Plan* has laid out a comprehensive program for the improvement and maintenance of the expressways over the next 30 years. The plan identifies a total capital program approaching \$2 billion as well as needs of \$18 million annually for maintenance and operations.

The primary funding sources for the capital improvement program are federal and state grants. These grants are allocated through the Santa Clara Valley Transportation Authority (VTA) Valley Transportation Plan (VTP) 2020. Currently, out of a \$2 billion roadway funding program, VTP 2020 allocates \$80 million for expressways. VTP 2020 also includes competitive grant programs for bicycle, pedestrian, TOS, and sound wall improvements.

The only continuous sources of expressway maintenance and operating funds come from the County's share of the state gas tax and future Proposition 42 (sales tax on gas tax) funds. The *predictable sustainable* revenue available for expressway maintenance/operations ranges from \$5.2 million in 2003 to \$7.9 million in 2009.

Taking into consideration the existing, potential, and possible new funding sources, a funding strategy has been developed addressing each major area of need. Recommendations from that funding strategy include the following:



- ◆ As part of the VTP 2030 process, request that VTA increase the expressway allocation from \$80 million to at least \$150 million to allow full implementation of Tier 1A roadway projects.
- ◆ Jointly with VTA, pursue additional revenue for meeting both the transit operating needs and the expressway maintenance/operations needs, including capital program local match requirements.
- ◆ Resolve the expressway local match issue during VTA's VTP 2030 process, especially if a new funding source cannot be secured. Strategies include continuing to work with the cities to secure developer impact fees where appropriate, exchanging federal/state funds for local funds with no match requirements, and using other non-county sources as match.
- ◆ Work with the cities to collect expressway traffic mitigations, and expressway pedestrian, sound wall, and landscaping improvements through land development approval processes.
- ◆ Pursue grants and partnerships for non-roadway capacity projects, such as pedestrian, bicycle, sound wall, and TOS projects.

NEXT STEPS

The County will update the *Implementation Plan* every three years in conjunction with the triennial updates of VTA's VTP plans to reflect changing traffic and financial conditions. In addition, an interim update will be prepared in 2004 if VTA does not fully fund the Tier 1A list of roadway projects in VTP 2030. This interim update will focus on using the plan's collaborative process to establish Tier 1A priorities.

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