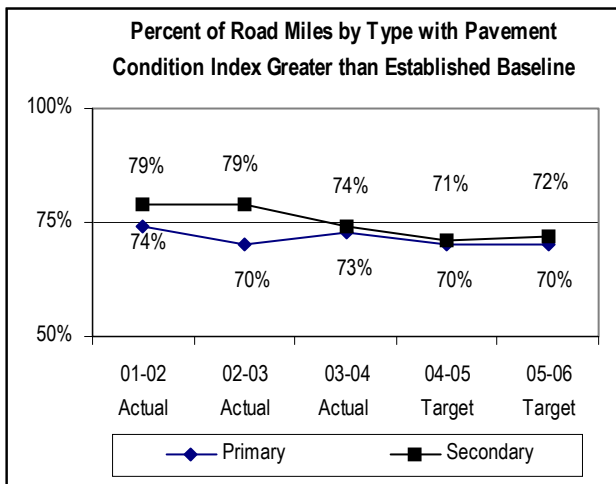
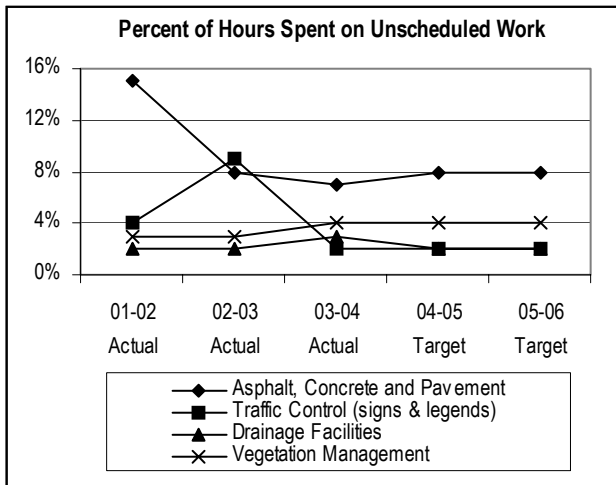


## Road Construction and Operations (4520P)

### Program Locator

- County
  - Public Works
    - Administrative Services
    - Engineering Services
    - Facilities Maintenance and Operations
    - ▷ **Road Construction and Operations**
      - Construction Services
      - Vehicle and Equipment Services
      - Waste Management and Environmental Services
      - Transportation Services
      - Utilities, Flood Control and Natural Resources
      - Airports

### Headline Measures



### Program Outcome Statement

The Road Construction and Operations Program ensures that the County Maintained Road System is preserved for the benefit of the public by constructing, repairing and maintaining roadways in a professional and cost effective manner.

### Services and Accomplishments

Functions and services previously provided by Road Construction Services and Road Maintenance and Operations were merged into Road Construction and Operations. The new program will maintain responsibility for the repair and maintenance of County maintained roads and will work closely with Engineering Services to plan and prioritize road and road-related construction projects. Traffic and construction inspection services will now be under the Road Operations Section (ROS) of this Program. Several staffing changes and transfers were made to support these responsibilities.

The following are major accomplishments in the current year:

- Acquired a new piece of equipment (the Zipper) which is used to stabilize failed pavement areas
- Evaluated the application of an asphaltic emulsion and sand (scrub seal) to rejuvenate and extend the life of oxidized pavement
- Demonstrated success with non-toxic clove oil in suppressing weed growth under certain conditions
- Completed needed landscaping replacement and enhancement work at four County Center facilities using native plants and efficient irrigation systems
- Completed an Equipment Operators Training program
- Initiated a new back injury prevention-training program (Backwise) to address the impact that injuries have on staffing levels

### Story Behind Baseline Performance

Revenue reductions and anticipated increases in maintenance and construction costs have presented significant staffing issues over the past year and will continue to be a challenge in the next two years. Positions vacated as a result of departmental promotions, retirements, and normal turnover have not been filled. Maintenance responsibilities have been reconfigured to provide coverage. Staffing requirements for all functional areas continue to be evaluated especially with changes in maintenance functions. The Program will continue to initiate succession-planning efforts including the development of staff leadership skills. New training programs will continue to be assessed and implemented targeting key technical skills in areas where vacancies will occur.

Service hours for asphalt/pavement, traffic control, drainage facilities and vegetation management have declined over the past two and half years due to staffing shortages. Preventive maintenance, or the percent of work completed according to schedule, has increased or

remained steady in spite of reductions. Road maintenance crews continue to perform work as needed to keep energy repairs and customer complaints to a minimum. Increased efficiency is due to long range planning, sharing resources between crews and locations and using other Program staff to note potential problems requiring attention while completing field data collection.

The new Computerized Maintenance Management System (CMMS) will be implemented in 2004 and will be a key asset in planning and scheduling operational and maintenance activities. The Program will be able to more accurately assess needs and effectively allocate resources as the use of CMMS expands and historical data is developed. This system will also help achieve scheduled maintenance levels.

Dedicated funding for road maintenance and construction has been reduced as the State General Fund now receives revenues from sales tax on fuel. General fuel tax revenues are down approximately 4%. Concurrently, negotiated labor increases have risen. It is anticipated that road maintenance material costs, primarily asphalt concrete for road paving and repair, will rise with the increased cost of crude oil. The combination of these factors will result in deferring projects that have been or will be proposed to maintain the Pavement Condition Index (PCI) of the maintained road system. The PCI is used to report on the condition of the road system as required by the Controller pursuant to General Accounting Standards Board 34 (GASB 34). The Program acquired a new piece of equipment in 2003. The Zipper is used to stabilize failed pavement areas by pulverizing the existing pavement in place, adding base material, incorporating cement into the pulverized material then placing a chip seal or other asphalt wearing surface to the strengthened section of road.

Road Construction and Operations (RCO) continues to research and utilize new methods and technologies to increase maintenance efficiency. This includes acquiring new equipment and working with Engineering Services to develop new road material applications. RCO will continue to research and evaluate vegetation methods, including the eradication of pampas grass and alternatives to herbicide use.

Customer surveys are distributed to different areas each year based on a multi-year survey plan. The number of resident survey recipients within an area can vary widely from one section to another. The number of completed survey responses returned will vary accordingly. The low satisfaction rating for FY 2002-03 was due to problems with overcrowding, litter and parking experienced by the area surveyed (North Fair Oaks). Satisfaction levels are targeted at 92% for service requests and 80% for street sweeping.

### **Major challenges over the next two years will be:**

- To increase efficiency and reduce costs for the traffic signal maintenance program
- To address reduced funding and rising costs for road maintenance and construction
- To maintain the Pavement Condition Index (PCI) of the maintained road system with the continued decline in funding
- To continue the assessment, development and implementation of training programs that target key technical skills in areas where vacancies will occur

### **Program Priorities**

The Road Construction and Operations Program will meet performance targets by doing the following:

#### Maintain 92% to 97% of Hours Spent on Scheduled Maintenance (Funding Adjustment 3)

- Complete the implementation of the Computerized Maintenance Management System (CMMS)
- Commence system use with high priority facilities and activities, including roads, drainage, traffic controls and inspections
- Continue the Culvert Inventory Program for inclusion in CMMS
- Coordinate the use of CMMS with the Pavement Management System
- Expand the use of clove oil along County-maintained roads
- Develop a Coastside Vegetation Management agreement with County Planning
- Continue ditch paving efforts to reduce erosion, sedimentation and the need for weed abatement measures where appropriate
- Provide public information on County practices and recommendations for vegetation management and the use of environmentally safe methods and materials
- Explore the development of a pampas grass eradication program

#### Maintain the Number and Percent of Primary Road Miles with Pavement Condition Index Greater Than the Established Baseline

- Increase the use of the Zipper to strengthen road sections
- Continue to explore new methods and materials to extend pavement life

#### Increase the Productive Hours in the Road Construction and Operations Program by 5% (Funding Adjustment 3)

- Assess current and future training needs and review and update existing policies, procedures and training plans as related to job performance, skill level, current techniques, work out of class, career development and succession planning
- Refine the processes currently in use to develop policies, procedures and standards to include all levels in the Program and other stakeholders
- Consolidate and implement operating, maintenance and construction standards

**Performance Measures Summary Table**

Performance Measures	FY 2001-02 Actual	FY 2002-03 Actual	FY 2003-04 Actual	FY 2004-05 Target	FY 2005-06 Target
<b>What/How Much We Do</b>					
Number of service hours for:					
- Asphalt, concrete, pavement	38,688	27,281	22,714	22,000	20,000
- Traffic control (signs and legends)	4,921	3,073	3,728	3,500	3,500
- Drainage facilities	18,099	18,724	12,525	11,500	11,000
- Vegetation management	22,015	19,403	15,568	17,000	17,000
- Project preparation work <sup>(1)</sup> (data development)	---	---	---	4,500	4,500
Number of maintained miles <sup>(2)</sup>	316	316	316	316	316
- Primary	102	102	102	102	102
- Secondary	214	214	214	214	214
Total productive hours for the Road Services Division (includes overtime and on-call hours)	122,649	111,904	98,831	98,000	97,000
Number of lane miles					
- Sealed	26.1	32.3	17	60	60
- Resurfaced	34.2	41.7	23	19	10
- Reconstructed	2.7	4.7	2.9	0.3	1.0
Number of service requests for traffic <sup>(3)</sup> (data development)	47	44	235	200	200
<b>How Well We Do It (Quality)</b>					
Percent of work completed according to schedule for:					
- Asphalt, concrete, pavement	85%	92%	93%	92%	92%
- Traffic control (signs and legends)	88%	91%	98%	95%	95%
- Drainage facilities	98%	98%	97%	98%	98%
- Vegetation management	97%	97%	96%	97%	97%
Cost per mile	\$18,830	\$19,307	\$18,146	\$19,500	\$19,500
Percent of productive hours lost as result of injury <sup>(4)</sup>	5.3%	2.8%	5.5%	4.0%	3.0%
Cost per lane mile:					
- Sealed	\$20,810	\$27,652	\$16,904	\$40,000	\$40,000
- Resurfaced	\$256,878	\$222,659	\$91,844	\$200,000	\$200,000
- Reconstructed	\$838,868	\$778,251	\$861,072	\$800,000	\$800,000
<b>Is Anyone Better Off? (Outcome)</b>					
Number and percent of hours spent on unscheduled work for:					

Performance Measures	FY 2001-02 Actual	FY 2002-03 Actual	FY 2003-04 Actual	FY 2004-05 Target	FY 2005-06 Target
- Asphalt, concrete, pavement	5,600 / 15%	2,163 / 8%	1,625 / 7%	1,800 / 8%	1,800 / 8%
- Traffic control (signs and legends)	177 / 4%	259 / 9%	50 / 2%	175 / 2%	175 / 2%
- Drainage facilities	365 / 2%	446 / 2%	474 / 3%	500 / 2%	500 / 2%
- Vegetation management	501 / 3%	514 / 3%	647 / 4%	500 / 4%	500 / 4%
Number and percent of customer survey respondents rating services good or better:					
- Service requests	138 / 92%	29 / 89%	61 / 96%	60 / 92%	70 / 92%
- Street sweeping <sup>(5)</sup>	480 / 86%	33 / 24%	--- / ---	50 / 80%	50 / 80%
Number and percent of road miles, by type, with Pavement Condition Index greater than established baseline:					
- Primary (55 and above)	111 / 74%	70 / 70%	71 / 73%	70 / 70%	68 / 70%
- Secondary (40 and above)	126 / 79%	168 / 79%	155 / 74%	154 / 71%	157 / 72%
Number of accidents (includes pedestrian and bicyclists)	492	425	340	400	400
Number and value of road related claims	0 / \$0	1 / \$6,000	0 / \$0	0 / \$0	0 / \$0

(1) Road maintenance project preparation work includes all activities associated with contracted reconstruction work on a road, including pipe replacements, crack sealing, digouts, patching low spots, and shoulder backing when resurfacing has been completed.

(2) Primary Roads are defined as County maintained roads that are major thoroughfares and streets or the only road servicing a particular area. Secondary Roads are defined as all other roads.

(3) The method of tracking service requests for traffic changed in FY 2003-04. The unit will further define "Traffic Service Request" in FY 2004-05 to provide consistent measurement and reporting.

(4) The FY 2003-04 year end actual is high due to the loss of approximately 4,600 productive hours as a result of five long-term injuries.

(5) The survey process was delayed in FY 2003-04. Results will be reported in FY 2004-05.

## Road Construction and Operations (4520P) Resource Allocation Summary

	Actual 2002-03	Actual 2003-04	Revised 2003-04	Adopted 2004-05	Change 2004-05	Adopted 2005-06
Salary Resolution	68.0	73.0	73.0	68.0	(5.0)	68.0
Funded FTE	68.0	73.0	73.0	68.0	(5.0)	68.0
<b>Total Requirements</b>	34,816,260	28,527,674	20,762,546	19,676,161	(1,086,385)	18,768,777
<b>Total Sources</b>	35,968,155	29,919,262	20,762,546	19,676,161	(1,086,385)	18,768,777
<b>Net County Cost</b>	(1,151,895)	(1,391,587)				

### Program Net County Cost

This program is not funded by the General Fund and therefore has no Net County Cost. Its operations are fully funded by state and federal revenue.

## FY 2004-05 Program Funding Adjustments

The following are significant changes from the FY 2003-04 Revised Budget to the FY 2004-05 Adopted Budget:

### 1. Adjustments to Provide Current Level of Services

Budget adjustments have been made as follows: inclusion of merit increases and negotiated labor increases; reductions in Gas tax interest; state and federal revenues; and Fund Balance; and reductions in road design and construction project appropriations.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
(1,406,667)	(2,136,667)	0	(490,000)	(1,220,000)	0

### 2. Road Construction (GASB34) Projects

Road reconstruction projects have been added as described in the Road Fund summary following this section. Road reconstruction project costs have been reclassified as Fixed Assets in compliance with General Accounting Standards Bulletin 34 (GASB 34).

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
0	1,220,000	0	0	1,220,000	0

### 3. Landscape Services

Landscape crews will provide a higher level of service for weed removal, brush clearing, tree trimming and mowing to Road Construction and Operations which will be offset with a decrease in services to Facilities Maintenance and Operations.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
(60,000)	0	(60,000)	0	0	0

### 4. Road Maintenance and Construction Project Reductions

The reduction in State funding and the decline in gasoline tax proceeds coupled with continued increases in Salary and Benefit costs have resulted in less funding available for road maintenance and construction projects. The Road Maintenance unit will be reduced by one crew which contains five vacant positions. As a result, maintenance areas will be redefined. The Computerized Maintenance Management System (CMMS) was not fully implemented by the end of FY 2003-04 and appropriation has been added to complete the project. CMMS will assist in scheduling preventive maintenance and customer responses which is critical due to reduced staffing levels. Funding for Retiree Health, work out of class and Overtime will be appropriated as previous salary savings from vacant positions were used to cover these costs. Increases to Engineering Services accounts as well as construction project reductions have been made to reflect current experience. An appropriation has been added for structures and improvements for the emergency roof repair at Grant Yard.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
0	(434,351)	0	0	(434,351)	(5)
0	434,351	0	0	434,351	0

### 5. Final Fund Balance Adjustment

Fund Balance has been increased and fully offsets the cost of projects not completed in the prior year. The remainder has been set aside in Reserves.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
380,282	354,538	0	25,744	0	0

**TOTAL FY 2004-05 PROGRAM FUNDING ADJUSTMENTS**

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
(1,086,385)	(562,129)	(60,000)	(464,256)	0	(5)

**FY 2005-06 Program Funding Adjustments**

The following are significant changes from the FY 2004-05 to the FY 2005-06 Adopted Budget:

**6. Adjustments to Provide Current Level of Services**

Budget adjustments have been made as follows: inclusion of merit increases and negotiated labor increases; an increase in the reimbursement rate for the Landscaping Unit; a reduction in Reserves and project appropriations; and a decrease in Fund Balance.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
(527,101)	(997,101)	0	(550,000)	(1,020,000)	0

**7. Road Reconstruction Projects**

Various road reconstruction projects are planned as outlined in the Road Fund Summary following this section.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
0	1,020,000	0	0	1,020,000	0

**8. Eliminate Project Costs**

One-time project costs have been eliminated.

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
(380,282)	(354,538)	0	(25,744)	0	0

**TOTAL FY 2005-06 PROGRAM FUNDING ADJUSTMENTS**

Revenue/Sources	Appropriations	Intrafund Transfers	Reserves	Net County Cost	Positions
(907,384)	(331,640)	0	(575,744)	0	0

**Public Works Agency Road Fund**

**Adopted Services FY 2004-05**

The following projects, equipment and plant improvements are budgeted for FY 2004-05

**MAJOR MAINTENANCE IMPROVEMENTS**

ADA Improvements		75,000		
Maintenance - Accidents		10,000		
Maintenance - Bridges		10,000		
General Maintenance		6,620,546		

**Public Works Agency Road Fund**
**Adopted Services FY 2004-05**

Maintenance System		40,000	<b>Subtotal:</b>	<b>6,755,546</b>
<b>OTHER MAINTENANCE PROJECTS</b>				
Countywide	Slurry/chip seal various roads	1,400,000		
Countywide	Culvert replacements	125,000		
Countywide	Pave unpaved ditches (Fishnet 4C)	100,000		
Countywide	NPDES - Maintenance Projects	140,000	<b>Subtotal:</b>	<b>1,765,000</b>
<b>MAJOR MAINTENANCE PROJECTS</b>			<b>TOTAL:</b>	<b>8,520,546</b>
<b>General Engineering/Administration</b>				
Contingencies		400,000		
GIS Road Related		75,000		
Overhead		750,000		
Grant Applications		20,000		
Pavement Management		100,000		
Judgements		200,000		
Maintenance Road Records		400,000		
Traffic Counts		200,000		
Undistributed Services and Supplies		1,200,000	<b>TOTAL:</b>	<b>3,345,000</b>
<b>MAJOR CONSTRUCTION PROJECTS</b>				
<b>Resurfacing Projects</b>				
Daly City	Broadmoor - Various Roads	160,000		
San Mateo	San Mateo Highlands - Various Roads	70,000		
Redwood City	North Fair Oaks - Various Roads	50,000		
Menlo Park	West Menlo Park - Various Roads	90,000		
Rural	Various Roads	380,000		
Mid Coast	El Granada, Moss Beach, Miramar, Montara - Various Roads	200,000	<b>Subtotal:</b>	<b>950,000</b>
<b>Reconstruction Projects</b>				
South Bayside	Various Roads	690,000		
South County	Various Roads	200,000		
Mid Coast - Urban	Various Roads	80,000	<b>Subtotal:</b>	<b>970,000</b>
<b>Safety Projects</b>				

---

**Public Works Agency Road Fund**


---

**Adopted Services FY 2004-05**

Countywide	Intersection Investigations	50,000	<b>Subtotal:</b>	<b>50,000</b>
<b>All Other Projects</b>				
Countywide	All Other Projects	311,468	<b>Subtotal:</b>	<b>311,468</b>
<b>MAJOR CONSTRUCTION PROJECTS</b>			<b>TOTAL:</b>	<b>2,281,468</b>
<b>CONTRIBUTIONS / AID TO CITIES</b>				
Woodside (City/County Agreement)	Bear Gulch Road Maintenance	4,000		
Belmont	Los Costanos Development Plan	225,000		
CARES Program (City/County Agreement)	Accident Record System	25,000	<b>TOTAL:</b>	<b>254,000</b>
<b>REIMBURSABLE OTHER SERVICES</b>				
Services to Other Agencies		454,035	<b>TOTAL:</b>	<b>454,035</b>
<b>EQUIPMENT AND PLANT</b>				
<b>Replacement</b>				
Half-ton pickup		22,500		
Hybrid sedan		22,000		
Sweeper		186,000		
Backhoe		90,000	<b>Subtotal:</b>	<b>320,500</b>
<b>EQUIPMENT AND PLANT</b>			<b>TOTAL:</b>	<b>320,500</b>
<b>TOTAL FOR FY 2004-05</b>				<b>\$15,175,549</b>

---

**Public Works Agency Road Fund**


---

**Adopted Services FY 2005-06**

The following projects, equipment and plant improvements are budgeted for FY 2005-06

<b>MAJOR MAINTENANCE IMPROVEMENTS</b>				
ADA Improvements		75,000		
Maintenance - Accidents		10,000		
Maintenance - Bridges		10,000		
General Maintenance		6,924,714		
Maintenance System		40,000	<b>Subtotal:</b>	<b>7,059,714</b>
<b>OTHER MAINTENANCE PROJECTS</b>				
Countywide	Slurry/chip seal various roads	1,430,000		



**Public Works Agency Road Fund**
**Adopted Services FY 2005-06**

Countywide	Culvert replacements	125,000		
Countywide	Pave unpaved ditches (Fishnet 4C)	100,000		
Countywide	NPDES - Maintenance Projects	110,000	<b>Subtotal:</b>	<b>1,765,000</b>
<b>MAJOR MAINTENANCE PROJECTS</b>			<b>TOTAL:</b>	<b>8,824,714</b>
<b>General Engineering/Administration</b>				
Contingencies		400,000		
GIS Road Related		75,000		
Overhead		750,000		
Grant Applications		20,000		
Pavement Management		100,000		
Judgements		200,000		
Maintenance Road Records		400,000		
Traffic Counts		200,000		
Undistributed Services and Supplies		1,000,000	<b>TOTAL:</b>	<b>3,145,000</b>
<b>MAJOR CONSTRUCTION PROJECTS</b>				
<b>Resurfacing Projects</b>				
Daly City	Broadmoor - Various Roads	20,000		
San Mateo	San Mateo Highlands - Various Roads	130,000		
Portola Valley	Ladera - Various Roads	70,000		
Portola Valley	Los Trancos - Various Roads	360,000		
Rural	Various Roads	620,000		
Mid Coast	El Granada, Moss Beach, Miramar, Montara - Various Roads	160,000	<b>Subtotal:</b>	<b>1,360,000</b>
<b>Reconstruction Projects</b>				
North County	Various Roads	320,000		
South County	Various Roads	210,000		
Mid Coast - Urban	Various Roads	440,000	<b>Subtotal:</b>	<b>970,000</b>
<b>Safety Projects</b>				
Countywide	Intersection Investigations	50,000	<b>Subtotal:</b>	<b>50,000</b>
<b>All Other Projects</b>				
Countywide	All Other Projects	68,761	<b>Subtotal:</b>	<b>68,761</b>

---

**Public Works Agency Road Fund**


---

**Adopted Services FY 2005-06**

<b>MAJOR CONSTRUCTION PROJECTS</b>			<b>TOTAL:</b>	<b>2,448,761</b>
<b>CONTRIBUTIONS / AID TO CITIES</b>				
Woodside (City/County Agreement)	Bear Gulch Road Maintenance	4,000		
Belmont	Los Costanos Development Plan	225,000		
CARES Program (City/County Agreement)	Accident Record System	25,000	<b>TOTAL:</b>	<b>254,000</b>
<b>REIMBURSABLE OTHER SERVICES</b>				
Services to Other Agencies		476,934	<b>TOTAL:</b>	<b>476,934</b>
<b>EQUIPMENT AND PLANT</b>				
<b>Replacement</b>				
Half-ton pickup		22,500		
Hybrid sedan		22,000		
Patch Truck		92,000		
End Dump Trailer		58,000	<b>Subtotal:</b>	<b>194,500</b>
<b>EQUIPMENT AND PLANT</b>			<b>TOTAL:</b>	<b>194,500</b>
<b>TOTAL FOR FY 2005-06</b>				<b>\$15,343,909</b>

## Public Works Agency Roadway Improvement Fund

The following projects are budgeted for FY 2004-05		
MAJOR RECONSTRUCTION AND RESURFACING PROJECTS		
Mid-Peninsula	Resurfacing of various roads in San Mateo Highlands	100,000
South Bayside	Resurfacing of various roads in North Fair Oaks	200,000
Emerald Lake	Resurfacing of various roads in Emerald Lake Hills	160,000
South County	Resurfacing of various roads in West Menlo Park	100,000
Mid Coast Urban	Resurfacing of various roads in El Granada, Moss Beach, Miramar and Montara	350,000
Rural	Resurfacing of various roads in the rural area	150,000
North County	Resurfacing of various roads in Broadmoor Village	15,000
All Other Projects		595,000
<b>TOTAL:</b>		<b>1,670,000</b>

The following projects are budgeted for FY 2005-06		
MAJOR RECONSTRUCTION AND RESURFACING PROJECTS		
Mid-Peninsula	Resurfacing of various roads in San Mateo Highlands	30,000
South Bayside	Resurfacing of various roads in North Fair Oaks	450,000
Emerald Lake	Resurfacing of various roads in Emerald Lake Hills	120,000
South County	Resurfacing of various roads in West Menlo Park	100,000
Mid Coast Urban	Resurfacing of various roads in El Granada, Moss Beach, Miramar and Montara	180,000
Rural	Resurfacing of various roads in the rural area	150,000
North County	Resurfacing of various roads in Broadmoor Village	45,000
All Other Projects		95,000
<b>TOTAL:</b>		<b>1,170,000</b>