



Sunnyvale

Information Sharing Regarding Pavement Management

Sean Smith, Superintendent of Operations
February 4, 2025



Agenda

- 1 Pavement Management Overview
- 2 City Street Network
- 3 Budget, Funding & Projects
- 4 Challenges & Opportunities
- 5 Q&A

Pavement Program Overview

Goals

- A Pavement Management Program focuses on maximizing available funding to extend the life of the street network.
- Prioritizing maintenance to keep 'good' roads in 'good' condition and prevent costly reconstruction.

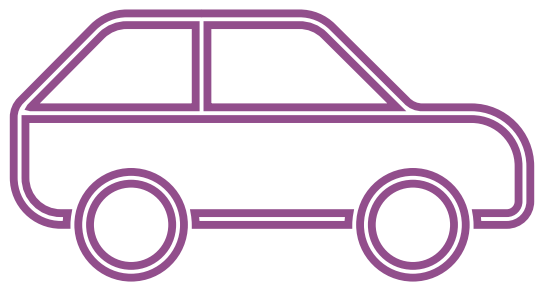
Purpose

- Maximize Pavement Lifespans
- Optimize Budget Utilization
- Maintain Safe and Accessible Roads

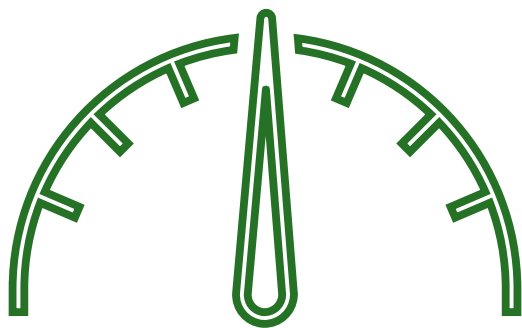
Tools

- Pavement Condition Rating (PCI) System
- Street Saver Asset Management Software
- Inspection and Monitoring
- MTC Technical Assistance

Current State of City Streets



Lane Miles: 641

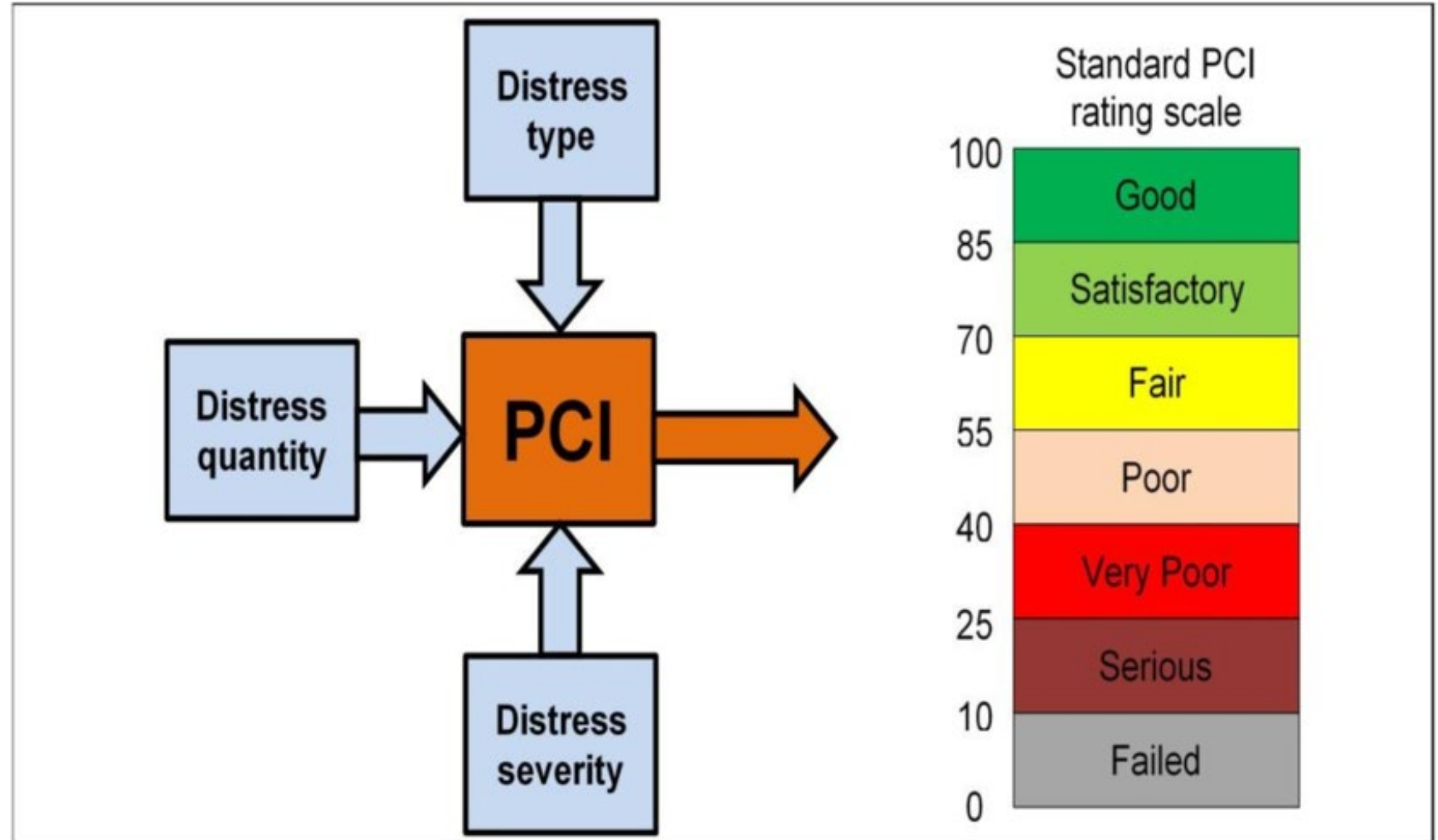


Centerline Miles: 260



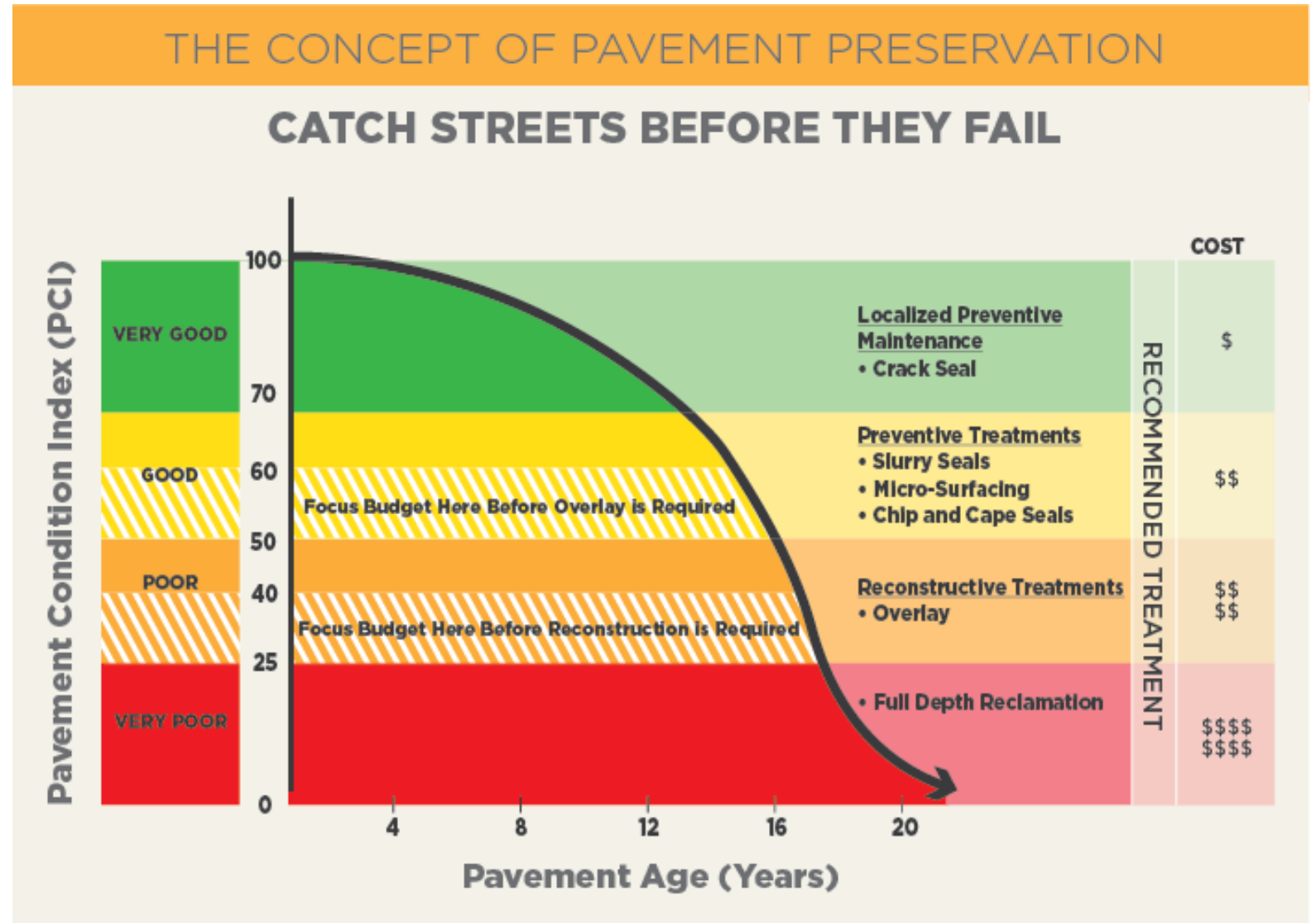
Pavement Condition Index

- The Pavement Condition Index (PCI) rates road health on a 0-100 scale, with 100 being newly paved. Factors like age, climate, traffic, and funding impact PCI scores.



Pavement Preservation

- Roads deteriorate every year, losing PCI points without maintenance. Regular treatment slows this decline, extends pavement life, and lowers long-term costs.



Increasing PCI

Treatment	Typical Score Increase
Crack Seal	+1-3
Localized Repairs	+5-10
Slurry Seal	+7-10
Chip Seal	+8-12
Reconstruction	Increase to 100

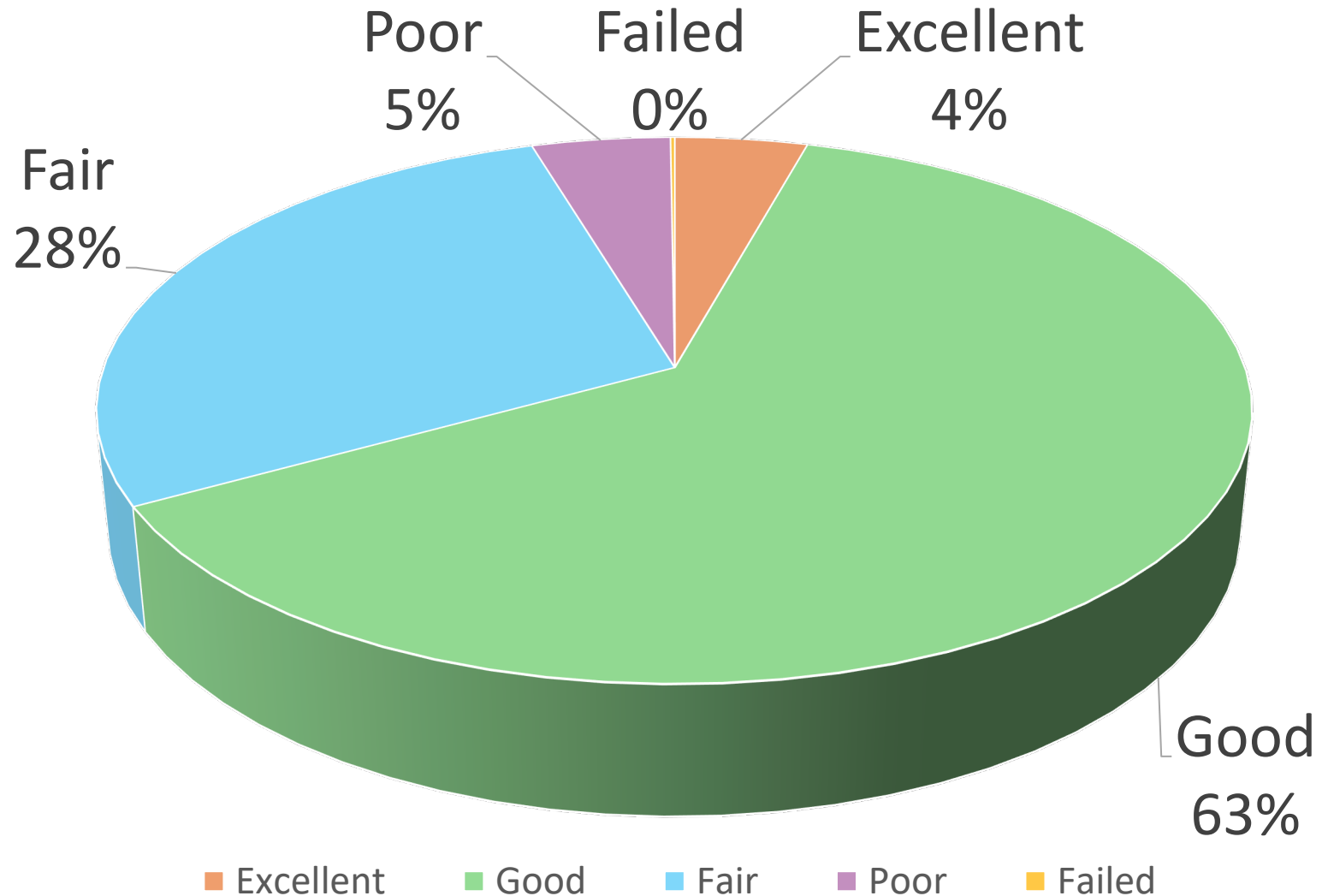


PCI Summary

Functional Classification	Centerline Miles	Lane Miles	Pavement Area (SF)	% of System	Average PCI
Arterial	48.76	270.31	16,050,642	27.9%	75
Collector	42.28	93.37	8,861,608	15.4%	74
Residential	169.07	339.89	32,599,791	56.7%	75
Totals	260.11	640.57	57,512,041	100%	75*

*PCI Score as of 4/30/2024

Total Road System Summary



*91% of the City's pavements are in Good to Fair condition.

Opportunities and Challenges

Opportunities

Preventative Maintenance Savings

Leveraging Technology

Grants

Sustainability Initiatives

Challenges

Aging Infrastructure

Increasing Development

Rising Material and Labor Costs

Traffic and Environmental Impacts

Typical Pavement Defects

Transverse Cracking



Block Cracking



Typical Pavement Defects

Potholes



Allegations & Depressions



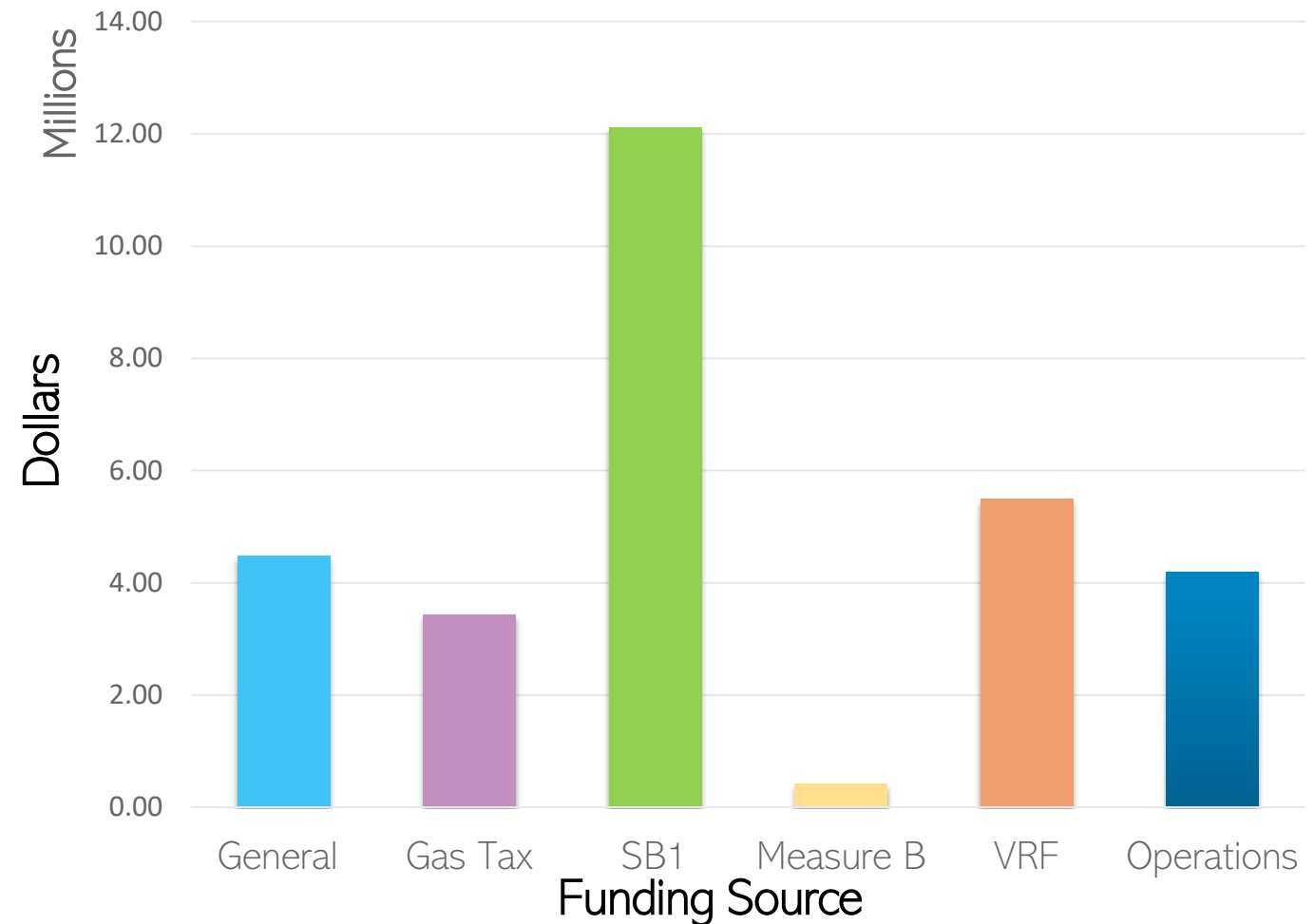
Budget Overview

Sources

- General Fund
- State Highway Users Tax (Gas Tax)*
- Road Maintenance and Rehabilitation Account (SB1)
- Measure B Santa Clara VTA Fund
- VRF Local Road Improvement Fund
- Operating Budget Fund

*Includes \$1.2M funding in Operations Budget

FY24/25 Budget Overview



Pavement Management Strategies

Treatment Category	Typical Treatment
Light Maintenance	• Slurry Seal • Crack Seal • Patching
Heavy Maintenance	• Slurry Seal with Digouts • Double Chip Seal then Slurry Seal
Light Rehabilitation	• Overlay (2" and under) • Mill and Fill (2" and under)
Heavy Rehabilitation	• Overlay (greater than 2") • Mill and Fill (greater than 2") • Full Depth Reclamation
Reconstruction	• Full Section Reconstruction

Typical Treatment Costs

Treatment	Arterial	Collector	Residential
Cost/Sq Yd			
Crack Seal (\$\$/LF)	\$1.90	\$1.70	\$1.60
Light Maintenance	\$10.50	\$2.80	\$2.80
Heavy Maintenance	\$22.30	\$22.30	\$22.30
Light Rehab.	\$45.50	\$45.50	\$45.50
Heavy Rehab.	\$60.70	\$60.70	\$60.70
Reconstruction	\$241.60	\$229.30	\$215.30

Maintenance Strategies

Sunnyvale's Street Operations Division

Slurry Seal



Chip Seal



Maintenance Strategies

Sunnyvale's Street Operations Division

Patching



Crack Seal



Capital Improvement Projects

Contractor Slurry Seal



Pavement Rehabilitation



Questions

Discussion and Feedback

