



## StreetSaver Overview

Southern California StreetSaver User Conference  
November 4, 2009

METROPOLITAN TRANSPORTATION COMMISSION

## Overview

- ✓ Network level decision making tool
- ✓ Developed more than 20 years
- ✓ Recognized by FHWA as “...one of the first regions in the country to implement a pavement management system that is used by nearly all of its localities.”
- ✓ Founding principle:  
It costs agencies far less to have good roads than it does to have bad roads  
=> **Pavement Preservation**

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## Overview



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## Overview

- Inventory
- Condition Assessment
- Determination of Needed Work & Funds
- Identification of Candidate Projects
- Determination of Impacts of Funding Alternatives
- Feedback

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## Inventory

- Absolute Minimum Data
  - Collect Only the Data Needed When It Is Needed
  - To Address Broad Funding Questions
- Required
  - Identification
  - Location (beginning & ending)
  - Area (length & width)
  - Surface type
  - Dates constructed & maintained
  - Functional classification
- Optional

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## Pavement Sections

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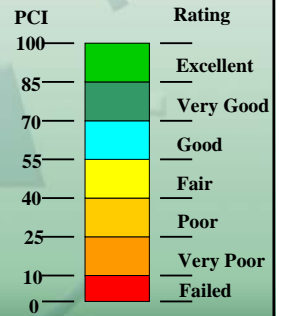
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## Condition Assessment

- Health of Individual Segments
  - Engineering
  - Functional
  - Safety
- Collectively Define Health of Network
  - e.g. Overall Network PCI = 65



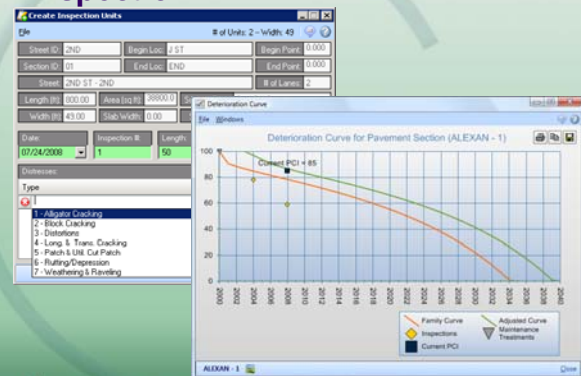
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## StreetSaver Uses PCI

- Pavement Condition Index – Developed by US Army Corp of Engineers
- Collects 7 pavement distresses for
  - Asphalt concrete (AC)
  - Portland cement concrete (PCC)
- Manual or Automated Survey

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## Inspection



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## PCI

- PCI Drives Many Recommendations
- Accurate PCI Depends on Accurate Distress Identification
- Quality Control During Inspection Needed
- MTC Provides Training (twice a year in Oakland)

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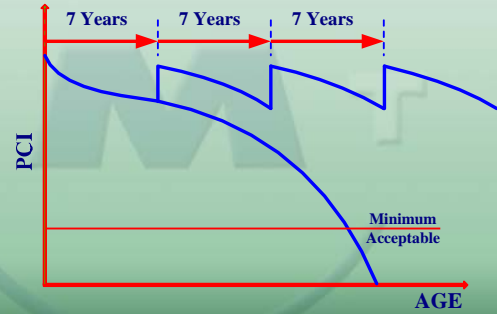
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## Needs Analysis

- Unconstrained Budget Analysis
- Identify Sections Needing Work
- Estimate Funds Needed
- Set Up Decision Trees
  - Preventive Maintenance
    - Minimum condition
    - Time interval
  - Rehabilitation - minor and major
- Repair Strategies are Condition Driven

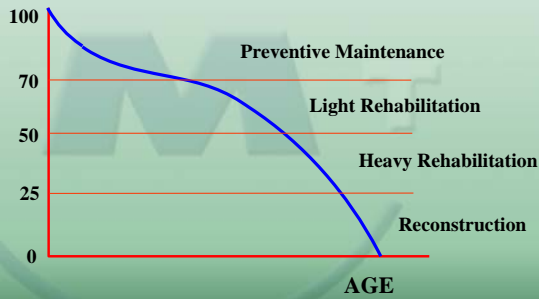
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## PM – Time Sequenced



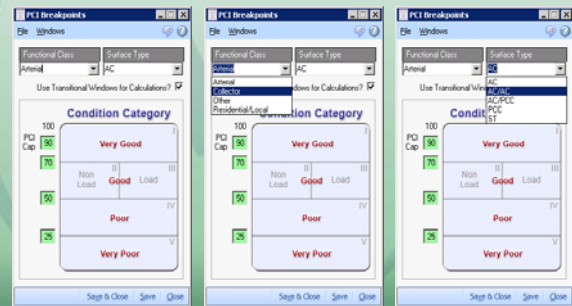
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## Repair Strategies – Condition Driven



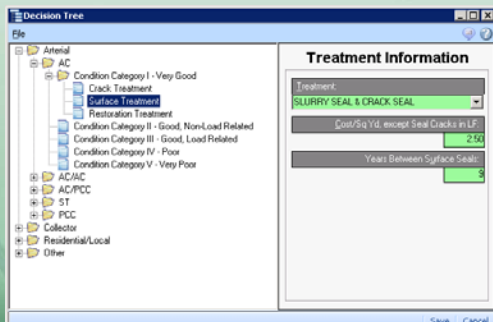
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## Decision Trees



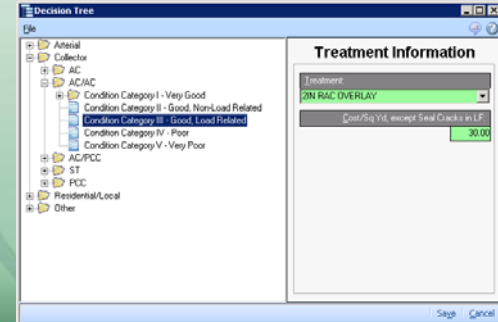
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## Decision Trees



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## Decision Trees



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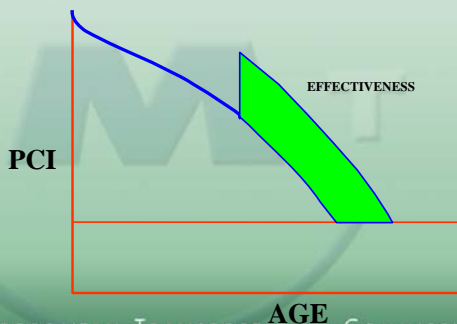
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## Prioritizing Candidate Projects

- Consider Effect of Available Funds
- Prioritized Listings of Projects Needing Work
- Goal - Best Pavement Network Over Time for Available Funds

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## Prioritization Based on Cost-Effectiveness



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## Impact of Funding Alternatives

- Connect PMS to Funding Decisions
- Justify Fund Requests
- Support of Allocation Decisions
  - Fix Worst First or Cost effective ?
  - When and Where to Apply PM ?

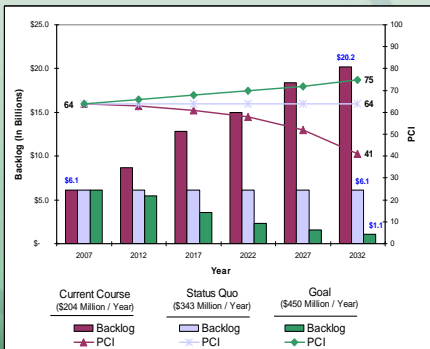
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## Results of Impact Analysis

- Ability to Compare Impacts of Different Funding Scenarios
  - Different Funding Levels
  - Different Allocation Approaches
  - Different Approaches to Treatment
- Answer "What If ?"
- Select Desired Scenario for Network-Level Recommendations

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## Results of Impact Analysis



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## Results of Impact Analysis

- Possible changes to Network level recommendations
  - Political
  - Delay due to Sewer & utility work
  - Group streets for construction & contract packages
  - Plan multi-year, multi-phase projects
  - Corridor analysis
- Solution: Project Selection

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## Project Selection

S-ID	S-Set ID	Street Name	Begin Location	End Location	Needs P
ABEL - 01	ABEL PL SOUTH END	SPRINGHUR DR	END	71	
ABEL - 02	ABEL PL NORTH END	SPRINGHUR DR	CAGE DR	71	
ADRIANA - 01	ADRIANA ST - ADRIANA	BISHOP AVE	BENJAMIN AVE	60	
ABUELO - 01	ABUELO WAY - ABUELO	ESPARTO AVE	END	70	
ADAMS - 02	ADAMS AVE - ADAMS	FREMONT BLVD	ROBERTS AVE	71	
ALTON - 01	ALTON CT - ALTON	SUTTON LOOP	END		
JANARL - 01	JANARLLO CT - JANARL	TUDORHUR DR	END		
JAMBERW - 01	JAMBERWOOD DR - JAM	KENWOOD DR	DEEP CREEK RD		
JAMECA - 01	JAMECA CT - JAMECA	VINCENTE ST	END		
JAMENS - 01	JAMENS AVE - JAMENS	FREDERICK LN	E-0 DUKE LN		
JANN - 01	JANN ST - JANN	MARTHA AVE	EDWARD AVE		

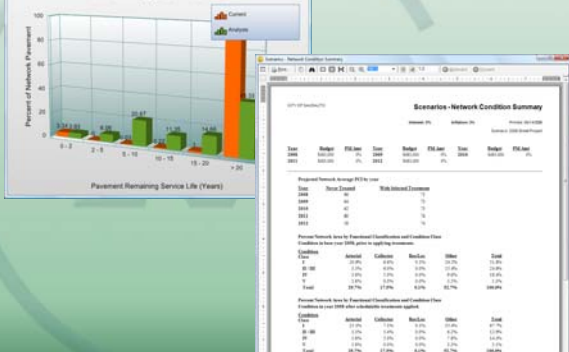
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## Reports & Analysis

- Over 50 standard reports
- Over 20 Graphs & Charts
- StreetSaver Generated GIS Maps (Shapefiles)
- Custom Reporting Tool
- Export to Access, Excel, XML, PDF, HTM, etc

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## Remaining Service Life

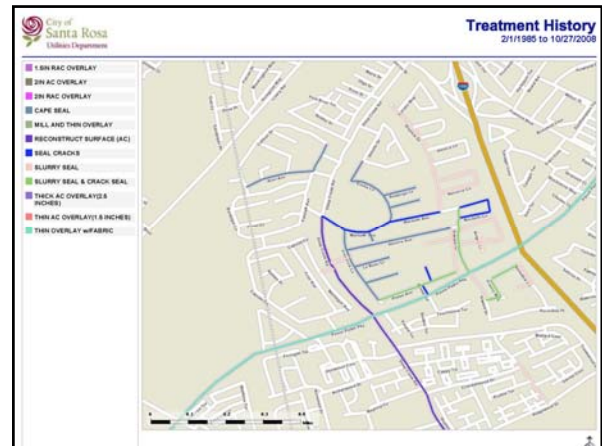
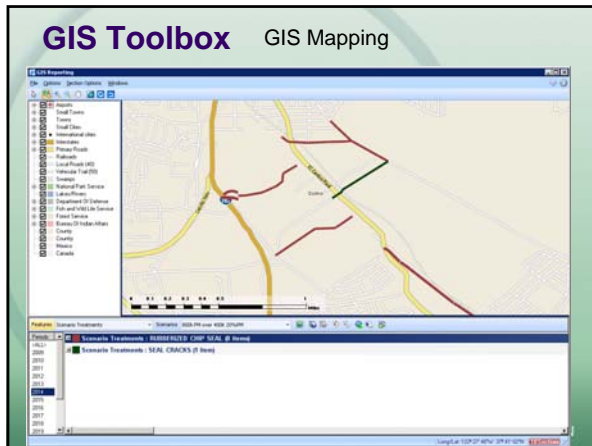


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## GIS Toolbox Link Sections

Link ID	Link Name	Link Type	Link Length	Link Status
1	ABEL PL SOUTH END	Street	0.10	Active
2	ABEL PL NORTH END	Street	0.10	Active
3	ADRIANA ST - ADRIANA	Street	0.10	Active
4	ABUELO WAY - ABUELO	Street	0.10	Active
5	ADAMS AVE - ADAMS	Street	0.10	Active
6	ALTON CT - ALTON	Street	0.10	Active
7	JANARLLO CT - JANARL	Street	0.10	Active
8	JAMBERWOOD DR - JAM	Street	0.10	Active
9	JAMECA CT - JAMECA	Street	0.10	Active
10	JAMENS AVE - JAMENS	Street	0.10	Active
11	JANN ST - JANN	Street	0.10	Active

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## Feedback

- Agency Must Review & Update:
  - M&R Strategies
  - Treatment Costs

The graph shows the price of NYMEX Crude Oil Futures (Front Month) in dollars per barrel from June 1, 2007, to June 27, 2008. The price starts at approximately \$60 and rises steadily to about \$140 by June 27, 2008. The y-axis is labeled '\$ / Barrel' and ranges from \$60 to \$160. The x-axis shows dates from 06/01/2007 to 06/27/2008.

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## Upkeep

- Enter Work Completed
- Periodically Re-inspect Sections
  - Arterials & Collectors – 2 years
  - Residential & others – 4-5 years
  - Quality control during inspections

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## Pricing for StreetSaver

Users	Subscription Fees
Bay Area	\$1,250/ year
Outside Bay Area	\$1,500/ year
Consultants	\$2,000/ year

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### Subscription fee includes:

- On demand, available 7x24x365 thru an Internet browser
- Unlimited users login
- Database storage and recovery
- Daily database backup and download via FTP
- Virtual on-site and hotline technical support
- Free upgrades and enhancements
- Access to premium training programs

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### For more information:

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**Free 30-day StreetSaver Demo:**  
[www.streetsaveronline.com](http://www.streetsaveronline.com)

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