Pavement Management Program & 2006 Contracted Street Repair Project

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Pavement Management Program

- PCI Rating
- Curb & Gutter Condition
  - Pavement Condition Survey
  - Other Street Pavement Data
  - Maintenance Work History

- Community Input
- Recommendations
- Pavement Management System

- In-house Street Repairs
  - Crack Sealing
  - Curb & Gutter Repair
  - Pothole Repairs/Patching
  - Concrete Pavement Repair

- Contracted Street Repair
  - Crack Sealing
  - Full-depth Crack Repairs
  - Chip & Seal
  - Microsurfacing
  - Mill & Overlay
  - Curb & Gutter Repair
  - Concrete Pavement Repair
Examples of Typical Contracted Street Repair Activities

• Crack Sealing
• Full-Depth Crack Repair
• Chip and Seal
• Microsurfacing
• Milling and Overlay
• Curb and Gutter Repair
• Concrete Pavement Repair
Contracted Maintenance Criteria – Decision Factors

- Physical Roadway Condition – Utilizing the Pavement Condition Index (PCI)
- Street Classifications – Arterial, Collector, and Residential Streets
- On-going Maintenance Problems – Maintenance Work History
- Community Input
- Area Impact and Cost-Benefit
Condition - City of Lawrence Streets

Overall *PCI = 69.0

*Note that condition of Curb and Gutter does not impact the PCI value of the survey

Cycle One Survey includes 299 Miles of Streets (1922 Segments) Rated:

- 2.9 miles Brick, 116.2 miles Composite, 163.4 miles Flexible, & 16.7 miles Concrete
- OR 49.8 miles Arterial, 43.8 miles Collector, & 205.6 miles Residential
PCI Frequency Distribution – Cycle One

- 31.5% of City streets have been identified as “unacceptable” and represent the “backlog” that need rehabilitation or reconstruction efforts
- 68.5% of City streets need preventative maintenance
PCI Frequency Distribution – Cycle One Arterials

Cycle One PCI Frequency - Arterial Streets

- 43.3% Unacceptable (Minor/Major Rehab or Reconstruct)
- 56.7% Acceptable (Preventative Maintenance)
PCI Frequency Distribution – Cycle One Collectors

Cycle One PCI Frequency - Collector Streets

- 29.2% Unacceptable (Minor/Major Rehab or Reconstruct)
- 70.8% Acceptable (Preventative Maintenance)

- 0.0% - 10
- 0.04% - 20
- 0.3% - 30
- 4.2% - 40
- 10.4% - 50
- 14.2% - 60
- 16.7% - 70
- 14.0% - 80
- 17.0% - 90
- 23.1% - 100
PCI Frequency Distribution – Cycle One Residentials

Cycle One PCI Frequency - Residential Streets

27.5% Unacceptable (Minor/Major Rehab or Reconstruct)
72.5% Acceptable (Preventative Maintenance)

Frequency Percentage

PCI Range

0.1% 0.4% 2.2% 9.6% 15.2% 15.6% 18.4% 16.7% 13.3% 8.3%
Pavement Management Program (PMP) Goals

• Analyze gathered pavement condition data and report recommendations on maintenance of streets based on the specific maintenance need.
• Apply the correct pavement treatment at the right time to establish a cost-effective program.
• Incorporate more Pavement Preservation strategies and efforts by “keeping the good pavements in good condition”.
• Overall, provide and maintain a safe and efficient street network by implementing these tactics.
2006 Contracted Street Repair Program Recommendations

• Total Program Funding Available = $4,115,000
• Total Construction Cost Estimate = $3,900,000
  – Crack Sealing = $500,000
  – Milling and Overlay = $1,100,000
  – Milling, Overlay, Pavement Replacement, and Curb Repair = $2,300,000
• Reserve for Contingency = $215,000
2006 Proposed Maintenance Locations

2006 Contracted Street Repair Project
Lawrence, Kansas

- Mill & Overlay
- Mill, Overlay, Curb
- Fall Crack Sealing
- Spring Crack Sealing
- Crack Sealed in 2005

[Map showing proposed maintenance locations in Lawrence, Kansas]
Contracted Street Repair Budget

- 2005 - $3,100,000
- 2006 - $4,100,000
- Based on Cycle One analysis of street deterioration:
  - 2007 - $6,500,000 ($500,000 in crack sealing)
  - 2008 - $6,000,000
  - 2009 - $6,000,000