

## 54<sup>th</sup> Annual Asphalt Paving Conference

**Pavement Management System** 



Presented by
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City of Lawrence, KS
December 2, 2010

## **Agenda**

- Proactive approach to pavement management and maintenance
- Developing a program
- Evaluating pavements and ratings
- Best candidates for maintenance selection
- Types of maintenance tools
- Establishing a program and budget



# What is Pavement Management?

It's not a reaction to lack of action







## Why is it Important to be Proactive?







## Proactive Approach to Pavement Management and Maintenance

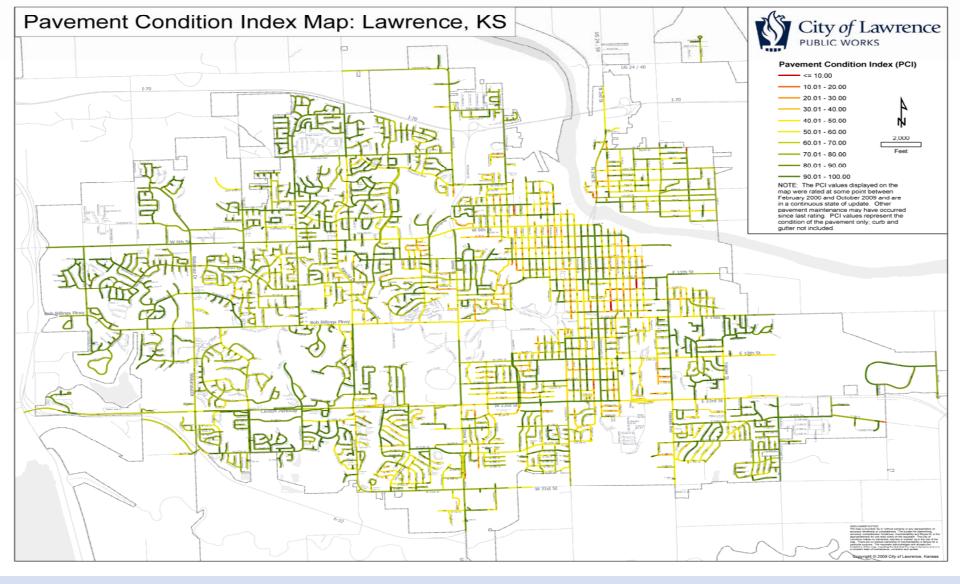
- Have a formal program
- Know the conditions of your streets (PCI)
- Know the expectations
- Lobby for appropriate funding levels
- Know your community
  - Who are the key players
  - Tell your story



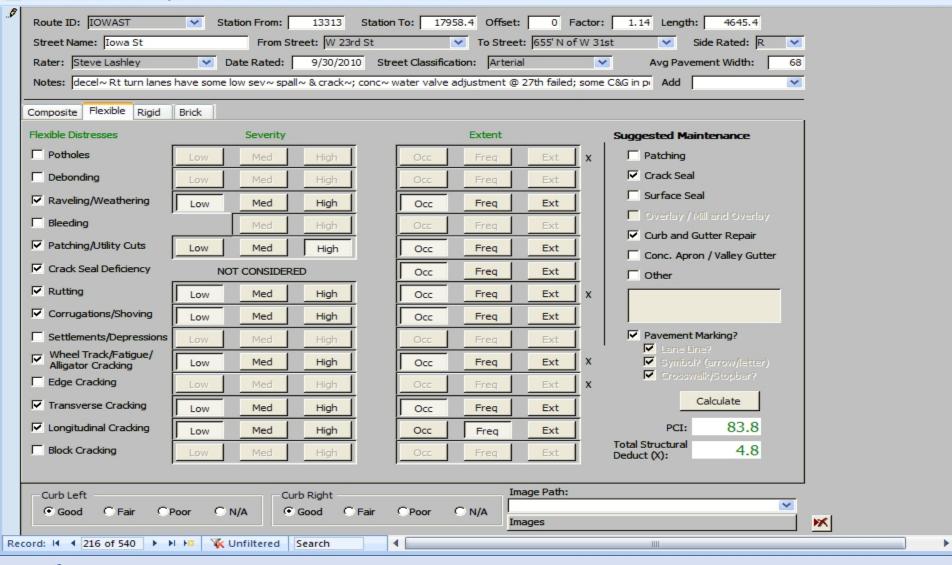
## **Evaluating Pavements and Ratings**

- Evaluate in cycles
  - One cycle is equal to four years data
  - Evaluate 25% of the streets per year
- Pavement ratings are entered into a database and linked to our GIS
- Keeps track of maintenance history
- Provides deterioration rates











= Pavement Condition Entry Form









Street Pavement	mormation							
Full Name: Towa S	St	Construct Year:	1952			Current Surface	Asphalt Overlay	~
From Street: Clin	ton Pkwy	Original Section:	6-10 in reinforce	d concrete	~	Current C and G:	30	
To Street: W 2	4th St	C and G Section:	None	<u>~</u>		Current Back to Back:	73.5	
Route ID: IOWA	ST	Back to Back Width:	24'/48'			Comments:	Asphalt Full Depth Sho	ulders
Street Key: IOWA	ST021	Subgrade:	No Treatment			<u>~</u>		
,				:s: 5 L	_	887.4028848609		
WORKHIST STRKE	Y		V	VORKHIST				YEA +1
IOWAST021 Street Widened from 24' to 73'6" BB, 30" conc curb, 17" Asph, Year 1972						1972		
IOWAST021 Milled, Fabric, & 2" Asphalt Overlay Year 1991							1991	
IOWAST021 Milled & 2" Asphalt Overlay Year 2000						2000		
IOWAST021 Milled & 2" Asphalt Overlay Year 2008						2008		
IOWAST021 Crack Seal 2009						2009		
* IOWAST021								
WH1 Street Widene to 73'6" BB, 30 17" Asph, Year	conc curb, Over	d & 2" Asphalt Wi lay Year 2008	17:		WH10:			
WH2: Milled, Fabric, Overlay Year	& 2" Asphalt WH5: Crack	k Seal 2009	H8:					
WH3: Milled & 2" Asp Year 2000	halt Overlay WH6:	WI	19:					
cord: Id. 4 1585 of 4098  P. P. P. W. Unfiltered Search								



#### **Deterioration Rates**

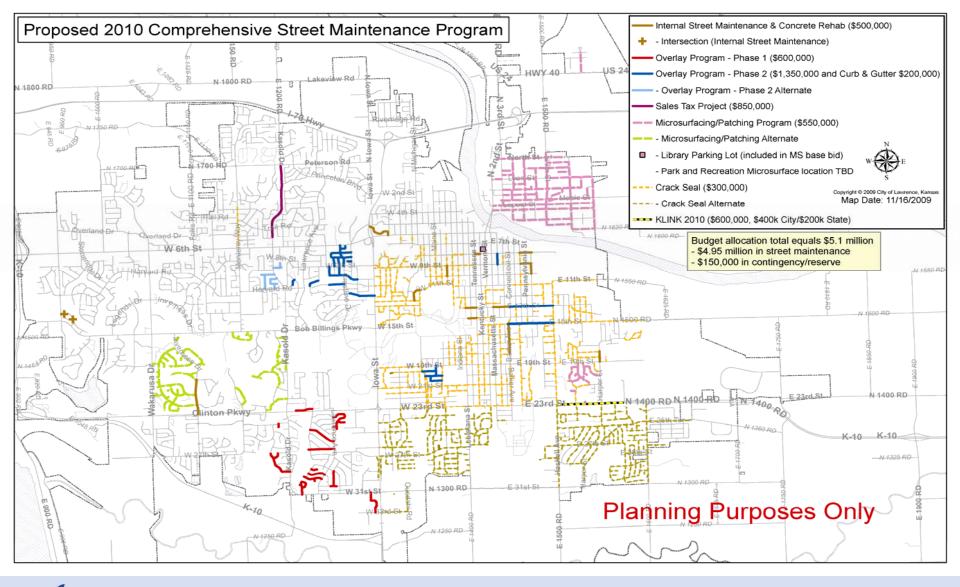
TABLE 1							
Pavement Type	Street	C1 – Deterioration	C2- Deterioration				
ravement Type	Classification	Rate	Rate				
Flexible (Asphalt)	Arterial	-2.40	-2.60				
w/ No Past Overlay	Collector	-2.38	-1.84				
W/ No rast Overlay	Residential	-2.40	-1.18				
Flexible (Asphalt)	Arterial	-6.42	-2.66				
w/ Past Overlay	Collector	-5.60	-1.00				
W/ Tast Overlay	Residential	-5.27	+2.28				
Composite (Asphalt over	Arterial	-8.70	+1.58				
Composite (Aspiralt over	Collector	-5.62	+0.86				
Corici ete/Brick)	Residential	-3.84	+0.72				
	Arterial	-1.97	-0.93				
Rigid (Concrete)	Collector	-1.50	-0.21				
	Residential	-1.41	-0.35				



#### **Best Candidates for Maintenance**

- PCI ratings
- Known problem areas
- Type of street (arterial vs. residential)
- Constituent concerns
- Coordination with other projects / agencies
  - Utilities, Private development, Bicycle advisory
- Selections throughout the community







## **Types of Maintenance Tools**



#### Contracted











## **Types of Maintenance Tools**



Polymer Patching

In-House

Injection Patching





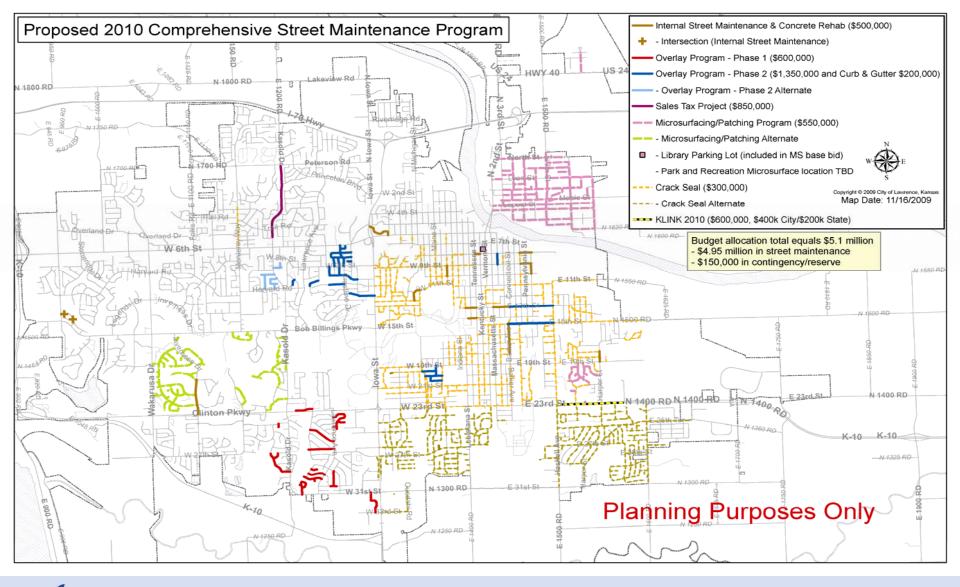




### **Establishing a Program and Budget**

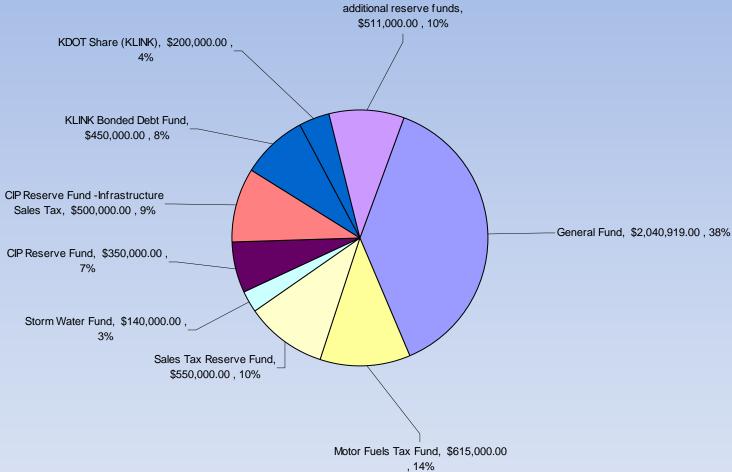
- Have a Plan to present
- Show progress
- Establish real dollars
- BAC review, utility review, public discussion others
- Flexibility, have contingency
  - Last years winter effect on pavement







## 2010 Street Maintenance Funding Source \$5,356,919.00





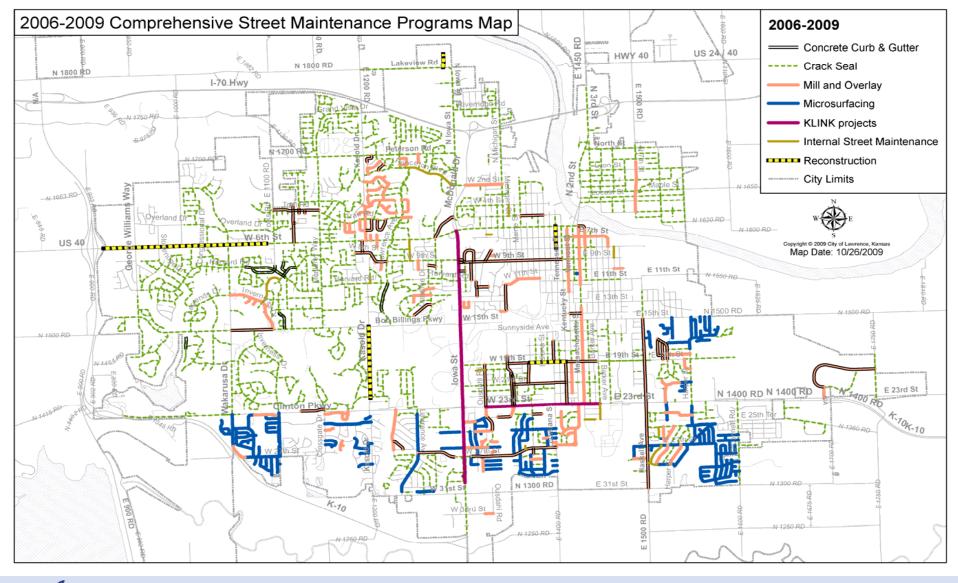
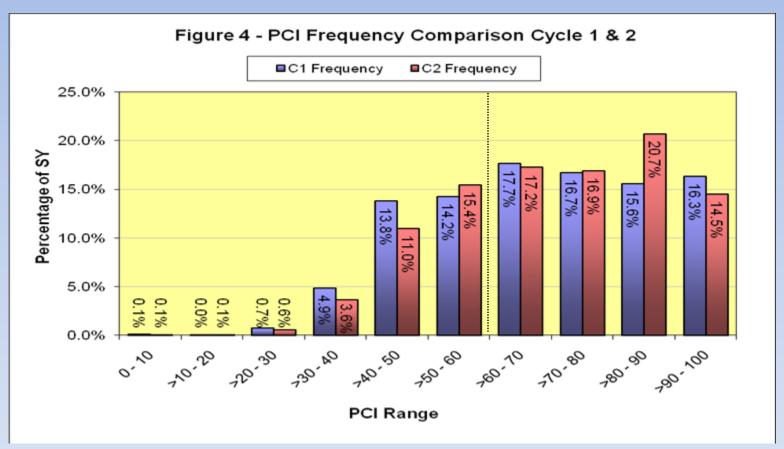




TABLE 2	Actual Dollars (Approx.)	Description		
Contracted Street Maintenance Program (2006 through 2009)	\$16.05 million	Crack Sealing – 443.0 lane-miles Microsurfacing – 69.0 lane-miles Milling & Overlay – 87.3 lane-miles Curb & Gutter – Approx. 31.4 miles		
Public Works Internal Street Maintenance	\$1.1 million	Asphaltic & Concrete Material Costs Only		
W 6 <sup>th</sup> St - Folks Rd to K-10	\$15 milllion	Reconstruction, Widening, Mill & Overlay – 2006 Completion		
Kasold Dr – Bob Billings Pkwy to W 22 <sup>nd</sup> St	\$5.39 million	Concrete Reconstruction – 2007 Completion		
Ohio St – W 6 <sup>th</sup> St to W 8 <sup>th</sup> St	\$680,000	Brick Reconstruction – 2008 Completion		
W 19 <sup>th</sup> St – Tennessee St to Alabama St	\$1.0 million	Reconstruction, Widening, Mill & Overlay – 2008 Completion		



## **PCI Comparison**





## Funding Sources 8

- General Fund
- Motor Fuels Tax
- Sales Tax Reserve
- Storm Water Fund

- KDOT (KLINK)
- Infrastructure Sales Tax
- CIP Reserve Fund
- Bonded Debt



## A Successful Program

- Flexibility
- Coordination
- Communication
  - Media
  - NeighborhoodAssociations,Presentations, Reports

- Longevity
- Proactive
- Positive Results
  - Tell your story, be honest, use all available resources to get the word out!



## **Questions?**



