Welcome to STRETCHING YOUR ROAD BUDGET
Agenda

1. Road Conditions Across Michigan
2. Properly Manage Your Resources
3. Make a Plan: Have a Policy for Determining Prioritization
4. Available Funding Sources
5. Success Stories
6. Conclusion: What’s Your Plan
7. Questions & Answers
Pothole in New York
Pothole in Michigan
In Michigan

▪ We have over 120,311 miles of paved roads.
  ▪ Nearly 9,669 miles of state trunk line.
  ▪ Nearly 89,444 miles of county road.
  ▪ Over 21,198 miles of city/village roads.

▪ We have almost 11,000 bridges.

▪ There are nearly 9 million vehicles on Michigan roads.
  ▪ Driving over 95 billion miles per year.
How is My Community Affected?

- Public safety
- Property values are influenced by road conditions
- Investments in your community
- Community image
- Future budgets / increased costs: 10%-20%
- Insurance increases / maintenance costs
It’s obvious there’s a problem...
PROPERLY MANAGE YOUR ROADS
# Use Your Tools / Assessments

## Asphalt Streets

<table>
<thead>
<tr>
<th>PASER Rating</th>
<th>Condition</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 &amp; 10</td>
<td>Excellent</td>
<td>No Maintenance Required</td>
</tr>
<tr>
<td>8</td>
<td>Very Good</td>
<td>Little or No Maintenance</td>
</tr>
<tr>
<td>7</td>
<td>Good</td>
<td>Crack Sealing &amp; Minor Patching</td>
</tr>
<tr>
<td>5 &amp; 6</td>
<td>Fair - Good</td>
<td>Preservative Treatments (non-structural)</td>
</tr>
<tr>
<td>3 &amp; 4</td>
<td>Poor - Fair</td>
<td>Structural Improvement (overlay)</td>
</tr>
<tr>
<td>1 &amp; 2</td>
<td>Failed</td>
<td>Reconstruction</td>
</tr>
</tbody>
</table>

## Concrete Streets

<table>
<thead>
<tr>
<th>PASER Rating</th>
<th>Condition</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 &amp; 10</td>
<td>Excellent</td>
<td>No Maintenance Required</td>
</tr>
<tr>
<td>7 &amp; 8</td>
<td>Very Good</td>
<td>Routine Maintenance</td>
</tr>
<tr>
<td>5 &amp; 6</td>
<td>Fair - Good</td>
<td>Surface Repairs, Sealing, Partial-depth Patching</td>
</tr>
<tr>
<td>3 &amp; 4</td>
<td>Poor - Fair</td>
<td>Extensive Slab or Joint Rehabilitation</td>
</tr>
<tr>
<td>1 &amp; 2</td>
<td>Failed</td>
<td>Reconstruction</td>
</tr>
</tbody>
</table>
PASER Rating 1
PASER Rating 3
PASER Rating 5
PASER Rating 7
PASER Rating 9
Perfect 10
# Use Your Tools / Assessments

<table>
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</tr>
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<tbody>
<tr>
<td><strong>New – Very Good Preventative Maintenance</strong></td>
<td><strong>Good – Fair Rehabilitation</strong></td>
<td><strong>Poor – Failed Reconstruction</strong></td>
</tr>
<tr>
<td>Estimated Costs $0-$3,000 per mile</td>
<td>Estimated Costs $5,000-$100,000 per mile</td>
<td>Estimated Costs $130,000-$500,000 per mile</td>
</tr>
</tbody>
</table>

- **Estimated Costs**
  - $0-$3,000 per mile
  - $5,000-$100,000 per mile
  - $130,000-$500,000 per mile
Leverage Your Dollars Through Proper Planning

- PASER
- Consider utility needs:
  - Water & wastewater Master Plans
- Traffic studies
- Comprehensive Corridor Planning
MAKE A PLAN: HAVE A POLICY FOR DETERMINING PRIORITIZATION
Analyze your Data

- PASER
- Evaluate additional criteria / entire ROW
- Solve the REAL problem
Prioritize your Data

- Using all resources and studies
Strategize – Develop a Plan

- Develop CIP & Cost Estimates
- “look at more than the frosting on the cake”
Fund: Continuously Maintain Your Roads

A. Preventative maintenance
   ▪ Crack Seal (over band)
   ▪ Seal Coat (emulsion)
   ▪ Micro Seal (emulsion/concrete)
   ▪ Slurry Seal (emulsion / sand)
   ▪ Chip Seal (emulsion / stone)

B. Rehabilitation
   ▪ Overlay
   ▪ Mill & Fill
   ▪ Crush & Shape
   ▪ In Place Recycle

C. Full reconstruction
Defining Preventive Maintenance—AASHTO

- Planned strategy
- Cost-effective treatments
- Preserves the system
- Retards future deterioration
- Maintains or improves functional condition
- Does not increase structural capacity
40% Drop in Quality

75% of Life

40% Drop in Quality

12% of Life

Avoid the Waterfall
Cost-effective
## Table 7. Asphalt Maintenance Techniques (10).

<table>
<thead>
<tr>
<th>Technique</th>
<th>Reasons for use</th>
<th>Average Treatment Life (years)</th>
<th>Average Unit Cost</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Friction</td>
<td>Raveling</td>
<td>Rutting</td>
<td>Potholes</td>
</tr>
<tr>
<td>Crack Treatments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crack repair with sealing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean and seal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saw and seal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rout and seal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crack filling</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Full-depth crack repair</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface treatments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fog seal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seal coat</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Double chip seal</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Slurry seal</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Microsurfacing</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Thin hot-mix overlay</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pothole and Patching Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold-mix asphalt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spray injection patching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot-mix asphalt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patching w/slurry or microsurfacing material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Cost for materials only.

*Price varies with conditions.

lf=linear foot

sy=square yard
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## Example Selection Tool: HMA Decision Matrix

<table>
<thead>
<tr>
<th></th>
<th>Seal Coat</th>
<th>Slurry Seal</th>
<th>Microsurfacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADT &lt; 2,000</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>2,000 &gt; ADT &lt; 5,000</td>
<td>M</td>
<td>M</td>
<td>R</td>
</tr>
<tr>
<td>ADT &gt; 5,000</td>
<td>NR</td>
<td>NR</td>
<td>R</td>
</tr>
<tr>
<td>Bleeding</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Rutting</td>
<td>NR</td>
<td>M</td>
<td>R</td>
</tr>
<tr>
<td>Raveling</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Cracking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Few tight cracks</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Extensive cracking</td>
<td>R</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Improving Friction</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Snow Plow Damage</td>
<td>Most susceptible</td>
<td>Moderately susceptible</td>
<td>Least susceptible</td>
</tr>
</tbody>
</table>

R = Recommended; NR = Not recommended; M = Marginal
Why You Should Treat Cracks

• “Asset Management”
• Protect your largest investment
• Pavement failure imminent
• Crack treatments are cost-effective, up to 9 years of (75% effectiveness) performance
• Extends pavement life
Why You Should Treat Cracks

Chip Seal
(one year performance - hot-pour sealant)

• Unsealed cracks 98% reflective cracking
• Sealed cracks only 2% reflective cracking
EXECUTING YOUR PLAN
Public Education

- Make studies available
- Graphics that depicts anticipated annual construction
- Use your professional as a buffer – get out of the politics
Plan for Future Construction Costs

- Costs are rising
- Bidding & Construction window
  - Contract Language
  - Construction Schedule
AVAILABLE FUNDING SOURCES
Any word from the State?
Michigan Transportation Fund (MTF) Distribution (in millions)

$351.2
Cities & Villages
20,667 Road Miles
17% of Michigan Roads

$383.9
State of Michigan
Various Department Appropriation Deducts

$614.7
83 Road Commissions
89,499 Road Miles
73% of Michigan Roads

$638.7
MDOT
9,711 Road Miles
8% of Michigan Roads

For the 12 month period ended April 30, 2015, total MTF generated through the gasoline and diesel tax, and vehicle registration totaled $1,988,510,489. Of that total, $383,911,461 was deducted before the allocation was made between MDOT, Cities/Villages, and the 83 Road Commissions.

Of the remaining $1,604,599,028, MDOT received 39.1%, the 83 Road Commissions received 39.1%, and the remaining 21.8% went to Cities & Villages.

In general, the state gets 39.1 percent of all road funding, counties get 39.1 percent and cities and villages get 21.8 percent.
Federal

- TIGER
- EDA
- RD Community Facilities
State / MDOT

- Act 51
- Category A C D E & F (MPO’s / Rural Task Forces)
- TAP – Transportation Alternatives
- Local Bridge Program
- Safety
- CMAQ
- Enhancement
- Safe Routes to Schools (SRTS)
- MEDC – might be extinct
Local

- Taxes / Dedicated Millage / Bonding (as long as interest rates stay low)
- Leverage Enterprise funds (percentage based; on project conditions)
SUCCESS STORIES
• Street Millage estimated at $7 million over 10 years, used in combination with
  • Michigan Department of Transportation (MDOT),
  • Michigan Economic Development Corporation (MEDC)
Portland

- Income Tax
- Bonding
- MDOT
  - Transportation Alternatives (TAP)
  - Rural Task Force
  - Small Urban Task Force
  - Local Bridge Program
- Leverage Enterprise Funds
Saugatuck

- Dedicated road millage / bonding
- Took Advantage of Low Interest Rates in 2008
- Took Advantage of Low Construction Costs in 2009-2012
- Leveraged Enterprise Funds
Call Us to Help You Get Started!

- Paul Galdes: 616.942.3614
- Dave Johnson: 616.915.0272
- John DeVol: 231.642.3131
Grand Blanc

- Major Street Funding (Federal/State Programs)
  - STP
  - CMAQ
  - SRTS
  - TA
  - Safety
  - Act 51

- Local Street Funding
  - Dedicated road millage
  - Act 51
  - Interfund loan
CONCLUSION: WHAT'S YOUR PLAN?
According to ASCE Report Card 2013 Roads: D

- Transit: D+

- Condition of our roads and Bridges (http://justfixtheroads.com/just-the-facts/michigan-road-facts/):
  - $3 million in asset value lost per day.
  - $1 billion annually.
  - $357 is spent annually per driver unnecessary repairs.
  - It’s estimated that 1/3 of all accidents are caused by road conditions.

- Latest from the State Legislature:
  - Currently requesting $1.2 Billion
  - $400 million from cuts
  - $800 million from new taxes

- Chambers of both Senate and House and Governor’s office are “negotiating”