

Pavement Preservation-An Industry Perspective

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Presentation Outline

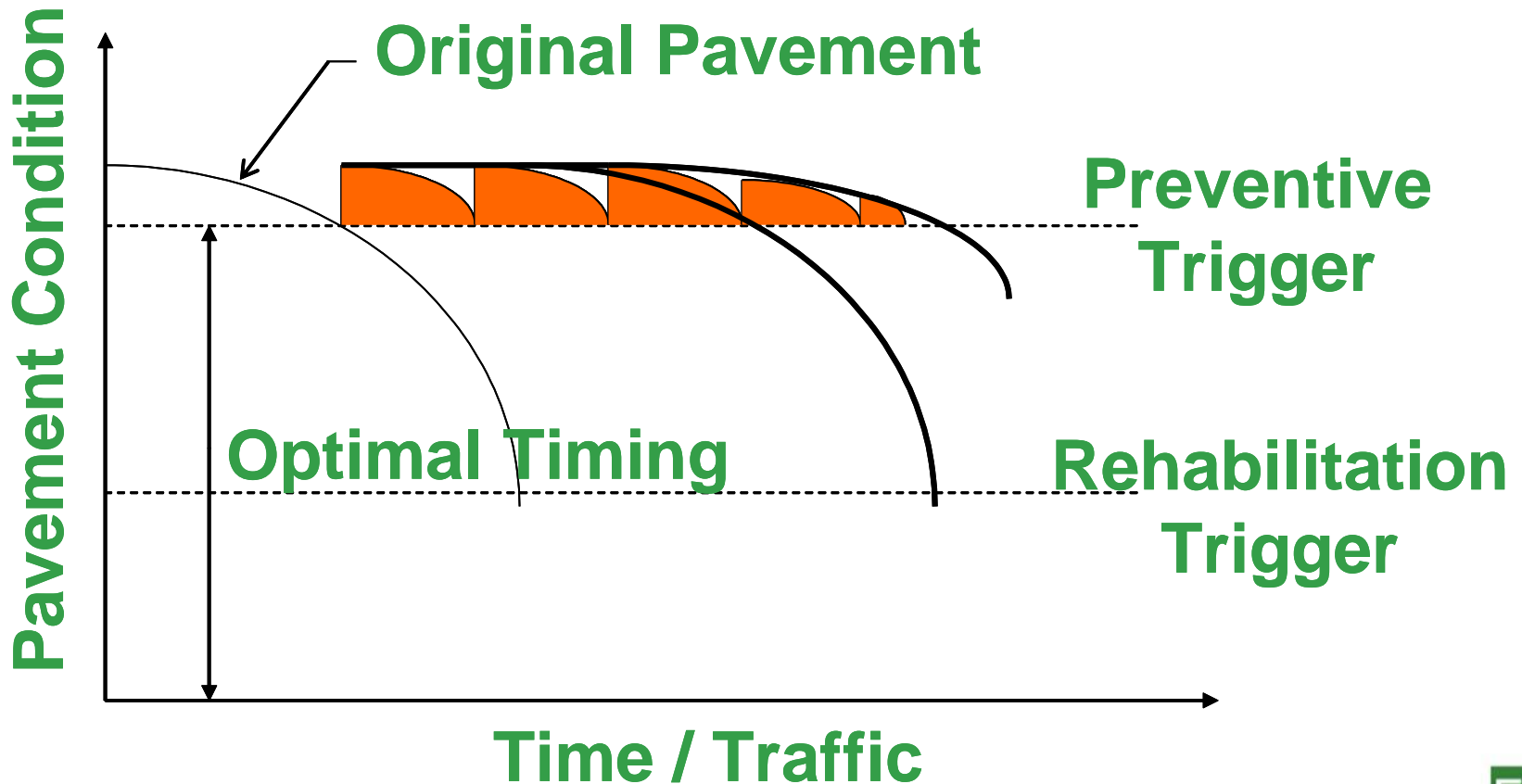
- **Keeping Good Roads good under a minimal funding scenario**
- **The need for Long term Planning and Strategies**
- **Benefits, Limitations, Opportunities, Needs**
- **Summary**

Strategies versus Treatments

- It appears that owners are looking at a broad range of treatments to stretch their \$\$\$ but not on proper strategies to preserve pavements
- Project selection is an important aspect of preservation-putting the *right* treatment-on the *right* road-at the *right* time.



Strategies versus Treatments



Strategies versus Treatments

- **Reduced \$\$ and deteriorating conditions should lead to a focus on preservation**
- **Is that happening?**
- **Agencies moving to treatments with lower unit cost to s t r e t c h \$\$\$**
- **Using treatments as Band-Aids is not pavement preservation**

NHDOT Pavement Management Section

2011/2012 Equivalent Annual Costs

Treatment Alternative	2011/2012 Approx. Costs		Estimated Service Life (years)	Equivalent Annual Cost (\$/SY/year)
	(\$/lane-mile)	(\$/SY)		
Micro or 4.75mm HMA	\$ 22,810	\$ 3.24	6	\$ 0.54
Double Chip Seal	\$ 28,301	\$ 4.02	7	\$ 0.57
Bonded Wearing Course (Nova Chip)	\$ 41,818	\$ 5.94	10	\$ 0.59
3/4" Paver Shim	\$ 25,281	\$ 3.59	6	\$ 0.60
1" HBP Overlay	\$ 33,708	\$ 4.79	8	\$ 0.60
Chip Seal	\$ 21,120	\$ 3.00	5	\$ 0.60
15% AR Chip Seal	\$ 35,482	\$ 5.04	8	\$ 0.63
1-1/2" HBP Overlay	\$ 50,561	\$ 7.18	10	\$ 0.72
1-1/2" ARGG Overlay	\$ 70,786	\$ 10.05	13	\$ 0.77
1-1/2" HBP Inlay	\$ 67,457	\$ 9.58	10	\$ 0.96
FDR with 4" HBP	\$ 147,502	\$ 20.95	15	\$ 1.40
2" TW Inlay with 1-1/2" FW Overlay	\$ 134,872	\$ 19.16	13	\$ 1.47
4" CIP with 3" HBP Overlay	\$ 156,035	\$ 22.16	15	\$ 1.48



Treatment Life Table (NH DOT)

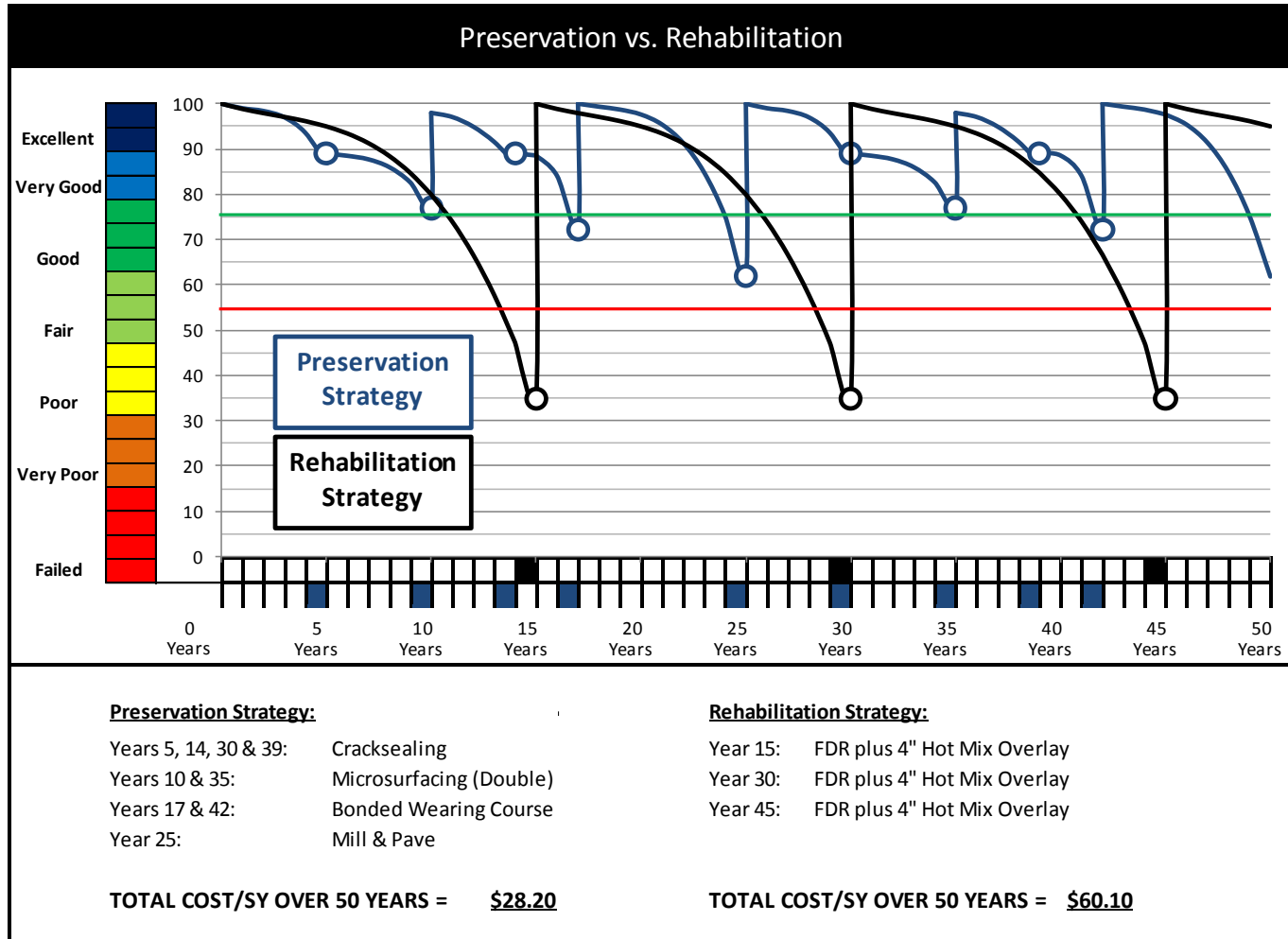
Treatment	Good Condition (PCI=80)	Fair Condition (PCI=60)	Poor Condition (PCI=40)
Crack Fill or Seal	1 - 3	0 - 2	0
Chip Seal	4 - 10	3 - 6	0 - 3
AR Chip Seal	6 - 12	3 - 7	2 - 4
Thin HMA	4 - 10	3 - 7	2 - 4
Bonded Wearing	6 - 12	3 - 7	2 - 4
AR Mixes	10 - 15	5 - 12	3 - 6

Apply treatments at the right time & get the best return on your investment or Equivalent Annual Cost "EAC".



Strategies

Progressive Pavement Management



Strategies

- **Approximate costs associated with various Strategies**

Reconstruction-\$100/yd²

Rehabilitation-\$15-30/yd²

Preservation-\$10/yd²



Benefits of Preservation Treatments

- **Stretching the limited \$\$\$**
- **Sustainability**
 - Use of RAP, RAS, Tire Rubber
- **Environmentally friendly**
 - WMA, Emulsions
- **Cost effective**

Paving Greener



Limitations of Preservation Treatments

- **Lack of QA requirements for non-HMA/WMA treatments**
- **Loss of knowledge in agencies**
- **Poor project selection** →
- **Quality oriented contractors**
- **Lack of Performance Related Specs**



Opportunities-Needs

- **Integration of companies**
 - **Developing capabilities with other treatment types**
- **Participation in the Regional Pavement Preservation Partnerships**
- **Re-establishment of the FHWA/Industry Pavement Preservation Expert Task Group**
- **Training for agency and industry**
- **Funding for Pavement Preservation research**



Summary

- Pavement Preservation is a Program area in a number of agencies and continues to grow
- Agencies trying to s t r e t c h their limited \$\$\$ are focusing on preservation treatments (not always in the correct way)
- Maintaining our nation's highway network is essential for job creation and economic growth

Summary

- There are numerous flexible and rigid pavement treatments in the preservation arena
- Choosing the *right* treatment and placing it at the *right* time on the *right* road is the mantra of pavement preservation
- Keeping good roads good is the *right* thing to do and good public policy

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Summary

- Need more information
 - www.fp2.org
 - www.pavementpreservation.org

Thanks