

MDOT

Current Status of MDOT's Maintained Pavement Program

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MDOT

Does John & Jane Q. Public want a warranty on a multi-million dollar pavement?



MDOT Warranty Development Using Pavement Management Data

- Track approximately 13,500 center-line miles of State Maintained Pavement
- Store original construction, rehabilitation, condition, and geometrics data history
- Condition data collected every two years
- Condition data reflects cracking, potholes, rutting, faulting, punchouts, etc.

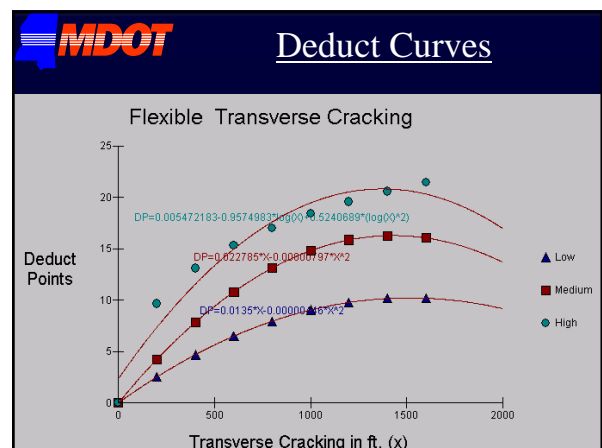
MDOT HMA Monitored Distresses

- Alligator Cracking
- Block Cracking
- Reflection Cracking
- Edge Cracking
- Longitudinal Cracking
- Transverse Cracking
- Potholes
- Rutting
- Raveling/Segregation
- Surface Bleeding
- Friction



MDOT JPCP Monitored Distresses

- Corner Breaks
- Joint Faulting
- Joint Seal Damage
- Longitudinal Cracking
- Transverse Cracking
- Spalling of Long. Joints
- Spalling of Trans. Joints
- Map Cracking & Scaling
- Surface Friction


MDOT Warranty Points

- Less agency personnel required
- Contractor selection & bonding
- Traffic provision
- Lower maintenance costs
- Improved accountability to public
- Innovation



MDOT Warranty Enforcement

- Annual distress survey
- At a minimum, 2 - 500' analysis sections per mile
- Contractor will be notified of the results and given a chance to respond




MDOT Warranty Enforcement

- Contractor has 45 days to perform any required remedial action
- Should the Contractor contest the results, the conflict resolution team will pass judgement - simple majority rules



MDOT Additional Points

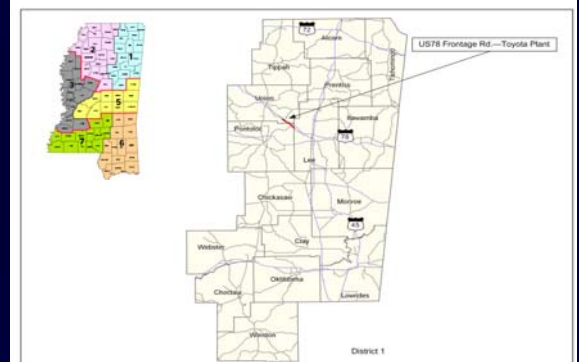
- If 30% of the project samples require a remedial action, then the entire project will receive that action
- MDOT can add additional 500' samples at any time

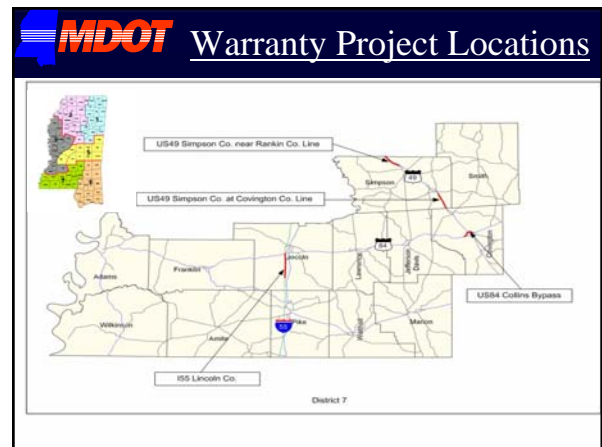
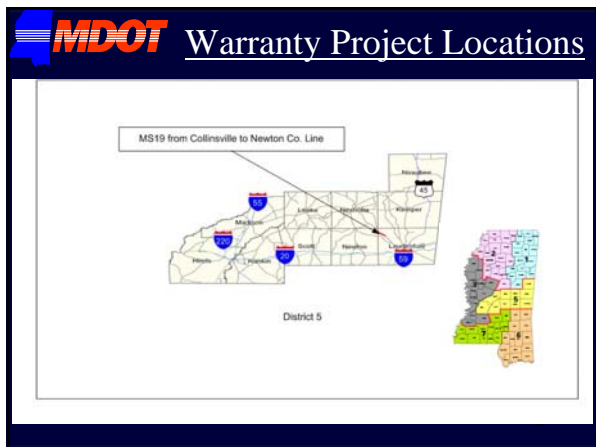
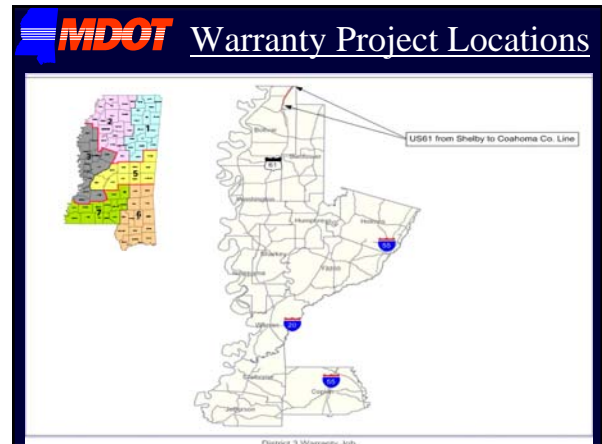
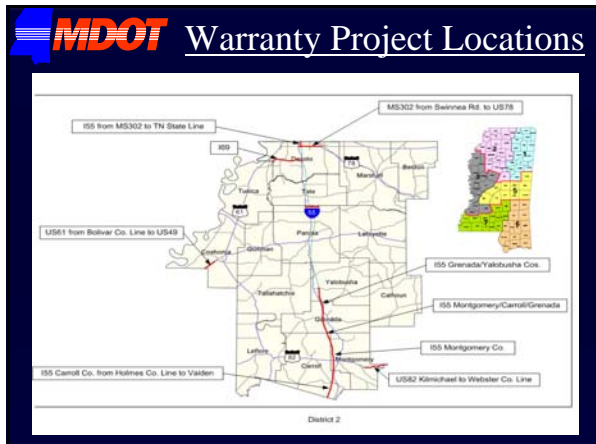


MDOT Program Status As Of Today

- 18 Projects total with the "clock ticking" on 13
- 15 HMA (2 - 5 year & 13 - 7 year)
- 3 JPCP (2 - 5 year & 1 - 10 year)
- 9 Different Contractors
- MDOT Research has published over 30 Annual Distress Reports
- MDOT has required remedial action on three projects

MDOT Warranty Project Locations





MDOT What have we seen?

- Changed pavers (Simpson US 49)
- Added rollers (Montgomery I-55)
- Sealed longitudinal joint (Lincoln I-55)
- Utilized industry for mix design (Koch/Sem for DeSoto MS 302 & BCD for Simpson US 49S)
- Sealed cracks after construction (Simpson US 49)

ALL WITHOUT BEING TOLD TO DO SO

MDOT What Is The Difference In Age?

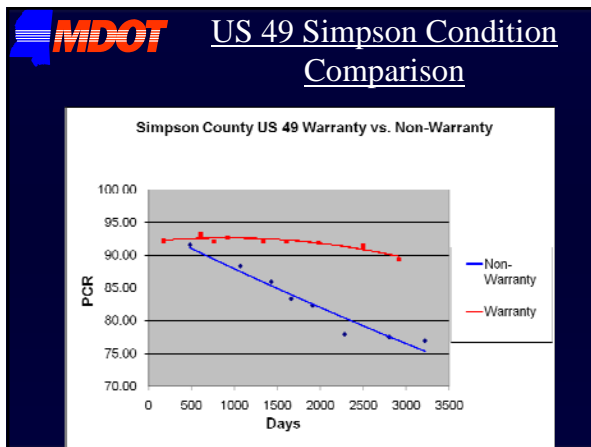
(Picture taken Aug 2004)

MDOT First Warranty Project - US 49 Simpson County

- Originally this was an 11.0 mile warranty
- No bidders and re-advertised as 5.7 mile conventional & 5.3 mile warranty
- Same underlying structure of pavement
- Same thickness overlay was placed
- Same amount of traffic

MDOT Did you say about 1 year?

(Picture taken Aug 2004)

MDOT Simpson County US 49 (Warranty) vs. Simpson County US 49 (Non-Warranty)

	Simpson US 49 (Non Warranty)	Simpson US 49 I-55 (Warranty)		
Letting Date	Feb-00	Apr-00		
Contractor	W.E. Blain & Sons Inc.	Superior Asphalt		
Total Bid	\$4,415,057	\$5,474,248		
Cost per Mile	\$774,571	\$1,032,877	\$258,306	33.35%
tons of HMA	89,755	72,429		
Total Bid Cost per ton	\$49.19	\$75.58	\$26.39	53.65%

MDOT Grenada/Yalobusha I-55 (Warranty) vs. Panola I-55 (Non-Warranty)

	Panola I-55 (Non Warranty)	Grenada-Yalobusha I-55 (Warranty)		
Letting Date	Jul-04	Mar-04		
Contractor	Lehman Roberts	Lehman Roberts		
Total Bid	\$5,742,000	\$7,800,000		
Cost per Mile	\$456,802	\$526,990	\$70,188	15.40%
tons of HMA	84,000	102,000		
Total Bid Cost per ton	\$68.36	\$76.47	\$8.11	11.86%

MDOT Future Directions

- Automated distress collection
- 100% of roadway data collected
- Consultant data collection for warranties
- Alternate pavement type bidding w/warranty





Future Directions

- Usage in design build contracting
- Utilization on projects with proposed deviation from the standards & specifications
- Long term warranties (i.e. 50 year tolling)



Questions?