



# Pavement Preservation Practices in Virginia

**SEPPP Conference**

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# Introduction to VDOT

## Virginia Department of Transportation (VDOT):

- **Maintains and operates the 3<sup>rd</sup> largest network of state maintained highways in the US**
  - Over 125,000 lane-miles of pavement
  - Interstate: 5,500 lane-miles
  - Primary: 21,500 lane-miles
  - Secondary: 98,500 lane-miles (~82,000 hard surfaced)
- **Consists of 9 Construction/Maintenance Districts and a Central Office in Richmond**
- **Employs approximately 7,500 full time personnel**

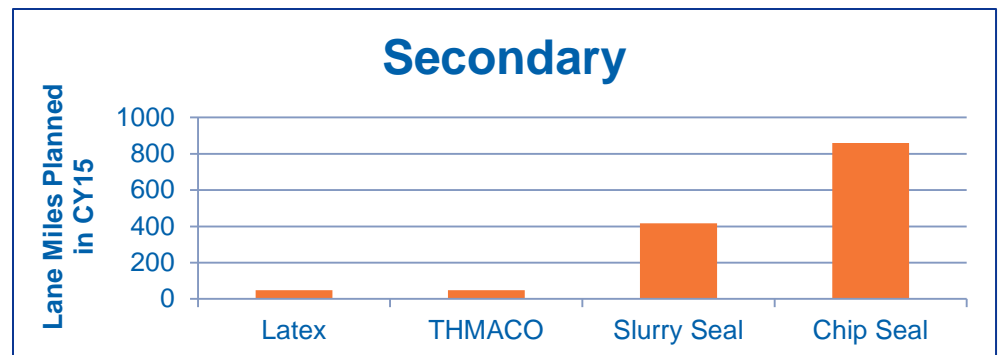
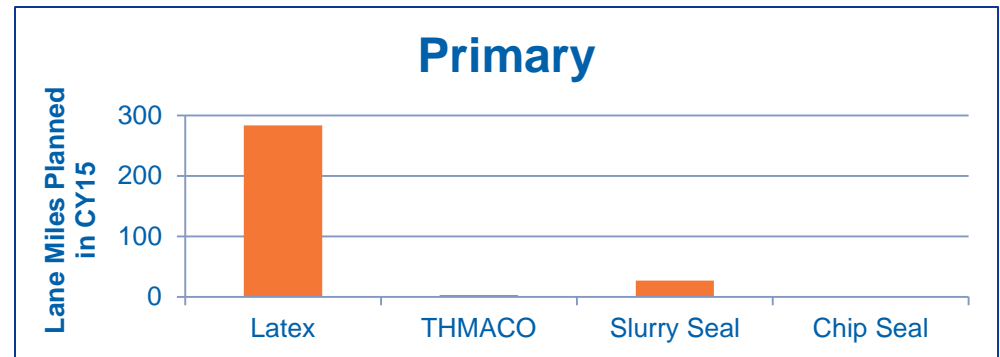
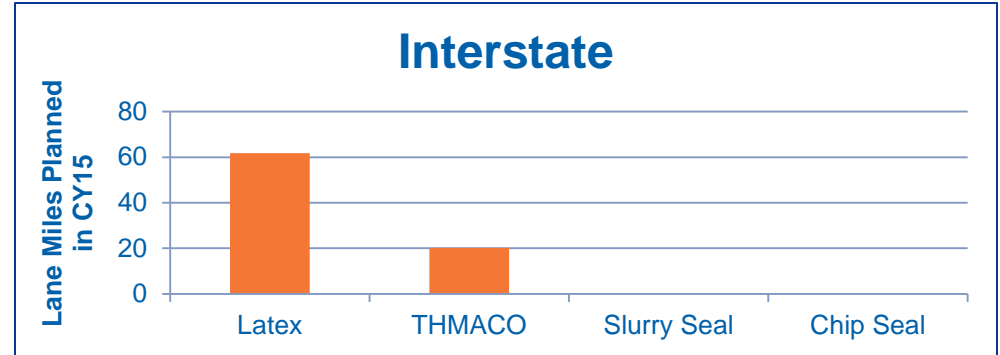


# Pavement Management Objectives

- Assess current and future pavement condition
- Estimate funding required to achieve targeted condition
  - 82 % of pavement in Fair or better condition on Interstate and Primary Systems
- Identify preservation and rehabilitation strategies to optimize funding
- Show the short and long term consequences of investment levels and treatment strategies
- Justify and obtain increased funding for maintenance and rehabilitation

# Pavement Preservation at VDOT

- VDOT has a robust Pavement Management program that promotes the effective use of pavement preservation
- Preservation treatments typically used in Virginia include:
  - Latex modified microsufacing
  - Thin Hot Mix Asphalt Overlay (THMACO)
  - Slurry seal
  - Chip seal



# Promoting Pavement Preservation at VDOT

- **Annual Pavement Forum**
  - Pavement managers, materials engineers, and pavement maintenance staff come together to discuss treatments used, construction techniques, what worked/didn't work, and why.
  - Open discussion allows the statewide community to share ideas and also reinforce the importance of pavement preservation: doing more with less.
- **Annual Pavement Management System (PMS) training**
  - Highlights the use of the State's PMS and the need to incorporate a proper "mix of fixes" to keep Virginia's roads in a state of good repair.

# Recent Examples of Preservation Techniques

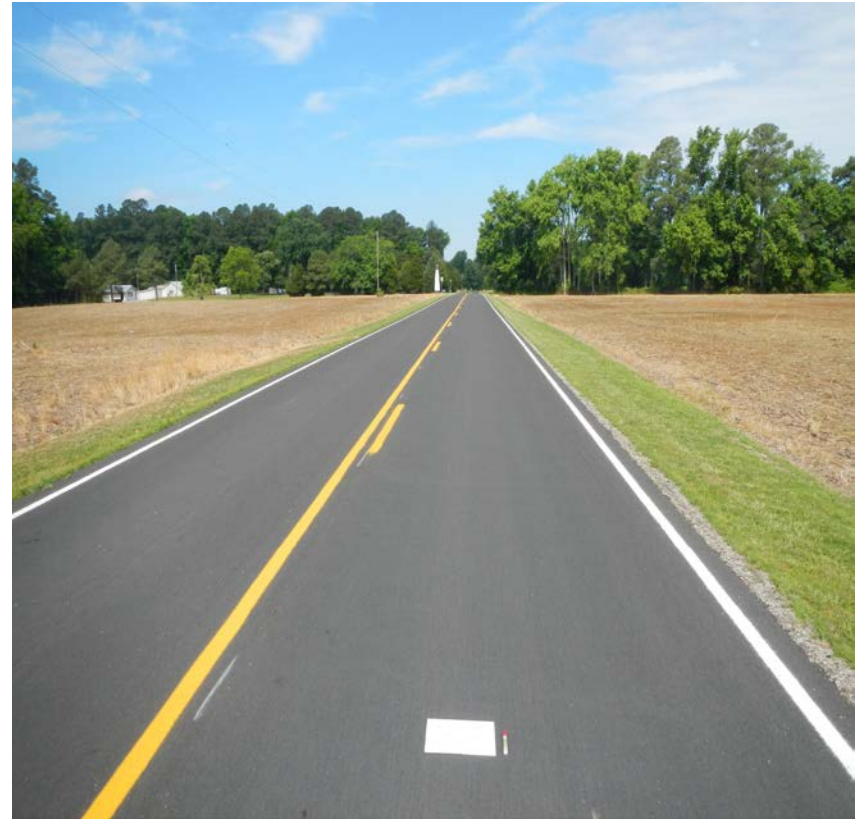
- **Cape Seal**
  - **Cape Seal is an application of Surface Treatment followed by an application of Slurry Seal**
    - First layer: Surface Treatment can be a single or double modified seal
    - Second Layer: Slurry Seal can be a type B or C gradation
    - Patching should be used to correct base failures
    - Replacement pavement markings were TY A paint
- **SM- 4.75**
  - **Application rate of 110 LBS/Sq. YD. final compacted pavement surface is 1.0"**
    - NOTE: For locations with irregular site conditions such as existing patching the application rate should be increased so that there are sufficient quantities to prevent over runs
  - **Typical paving equipment used (no special equipment needed)**
  - **Hand work is a little more challenging**

# Cape Seal on Lancaster Rte. 354

**Existing Condition  
2013**

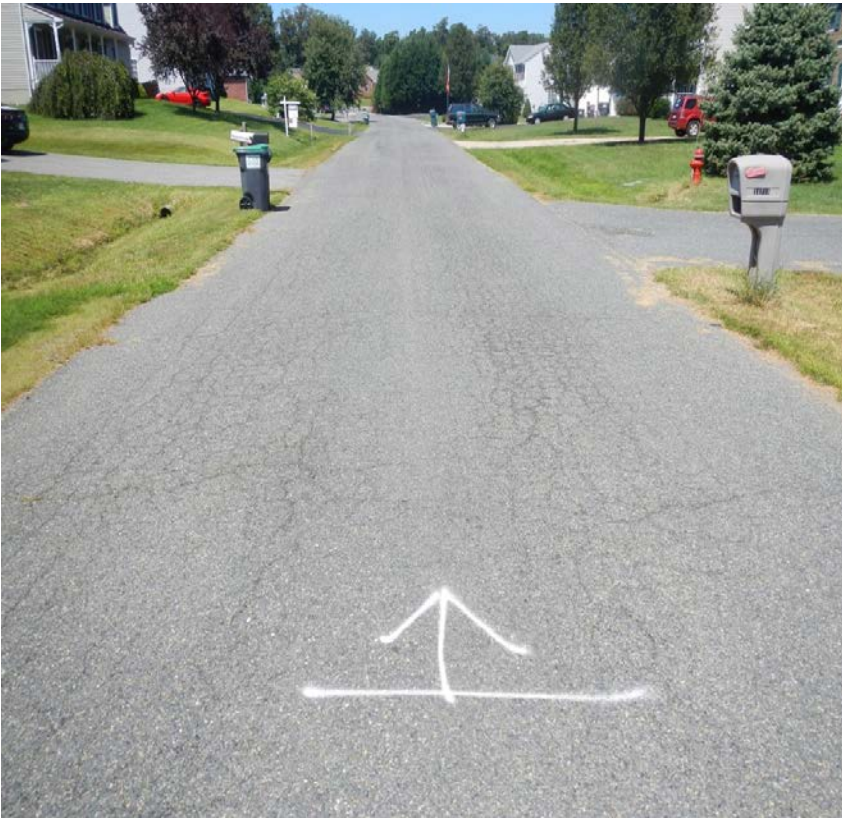


**After Overlay  
2014**



## SM 4.75 on Rte. 1568 (Inverarry Dr.)

**Existing Condition  
September 2014**



**After Overlay  
February 2015**





## SM 4.75 on Rte. 1566 (Hogan Ct.)

**Existing Condition  
September 2014**



**After Overlay  
February 2015**



## New Development – *Best Practices and Performance Assessment for Preventive Maintenance*

- A critical review of current VDOT practice from both the Central Office and District perspectives.
- Used PMS data to model the performance of the most common preservation treatments used in Virginia.
- Deliverable - a user friendly selection tool for use at the District level
  - Performance models for: Microsurfacing, Slurry Seal, Chip Seal, and Thin Hot Mix Concrete Overlay (THMACO)
  - Contrasts Central Office recommendations with what's achievable at the District level
  - Anticipated publication – spring 2015
  - Training with selection tool – fall 2015?
  - More info – Kevin McGhee (VCTIR)



## Questions ?

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