



## **Materials Specifications & Virginia Test Methods (VTM's)**

### **2016 VAA Fall Conference**

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# Specifications

# Overview

- **Predominantly unchanged Materials specifications for all FY17 paving**
- **There are, though, some minor corrections & changes to be aware of.**

# Changes for 2017 contracts

- Section 210 - Asphalt Materials (liquid)
  - Adding softening point temperature requirement for polymer modified emulsions (a min. of 100°F).
  - Adding a penetration test requirement for Non-Tracking tack
  - Clarifying that testing for asphalt residue for CRS-2L is tested using the “Evaporation method”, and adding a Ductility test (AASHTO M316)

# Changes for 2017 contracts

- Section 211.05 – Asphalt Concrete (mix requirements)
  - Eliminating permeability test requirements for production run materials
  - Now only required during mix design.

~~For surface mixes, permeability test data shall be submitted in accordance with VTM 120 using either single point verification or the regression method for each surface mix having a different gradation. A minimum of one permeability samples will be taken and test run in the first lot, and every other lot thereafter, and results submitted to the District Materials Engineer.~~

# Changes for 2017 contracts

- **Special Pr. for Section 315 (SP315) – 4.75 mm mixes**
  1. **Establishing tack as a pay item in this Special Provision as well**
    - In accordance with Section 310 and changes made in 2016.
  2. **Establishing min. temp. & MTV requirements**
    - Placement only when ambient and surface temperatures are 50°F or above.
    - MTV required for placement when ambient and/or surface temperatures are 50° – 60°F. *(MTV not required > 60°F)*

# Changes for 2017 contracts

- Section 317.06 - Asphalt Concrete Placement (SMA)
- Establishing min. temperature for SMA – both ambient and surface temperatures must be 50°F.

*SMA mixture shall be placed only when the ambient and surface temperatures are 50 degrees F or above, unless a warm mix additive or process approved by the Department is used to produce the SMA in which case the surface temperature must be 40 degrees F or above.*

# Chief Engineer Quality initiatives & 2017 specs





# From 2016 contracts

## Staying the same – requirements for all 2017 contracts:

- **Milling time requirements (and penalties)**
- **Permanent pavement marking requirements (and bonuses)**
- **50 gyratory surface mix design requirements**

## From 2016 contracts

**Expanding application of requirements for  
all 2017 contracts:**

- **Minimum asphalt contents and variability controls**
- **Field density acceptance using cores (selected routes)**

# Chief Engineer Quality initiatives & 2017 specs

**Minimum asphalt contents and variability controls**



# Section 211 – Asphalt Mix Design

## 1. Minimum AC requirements:

- SM-9.5 = 5.5%
- SM-12.5 = 5.3%
- *NOTE – adjustments for specific gravity may allow lower %AC*

## 2. Incentive of up to 5% - consistency of AC content

- % of unit bid price, per ton, for consistency - *no sieves w/ st. dev. adjustment points to receive bonus.*

## 3. Increase of negative adjustment points for being out-of-spec:

- from 1% to 3% on process tolerance(s)
- from 0.5% to 1.0% for standard deviation

# Chief Engineer

## Quality initiatives & 2017 specs

Field density acceptance using plugs/cores (selected routes)



## 2016 Pilot Projects for density (total of 13)

District	# of Project	Project
Bristol	1	PM1F-961-F17
Salem	2	PM2H-033-F16 PM2L-009-F16
Lynchburg	2	PM3E-041-F16 PM3F-071-F16
Richmond	2	PM4A-042-F16 PM4E-042-F16
Hampton Roads	3	PM5F-090-734 PM5H-114-F16 PM5P-091-F16
Fredericksburg	1	PM6B-966-F16
Culpeper	1	PM7E-967-F16
Staunton	2	<del>PM8Q-085-F16</del> <del>PM8T-968-F16</del>
NOVA	1	PM9J-029-F16

# Section 315 – Asphalt Placement

## 1. Field compaction requirements:

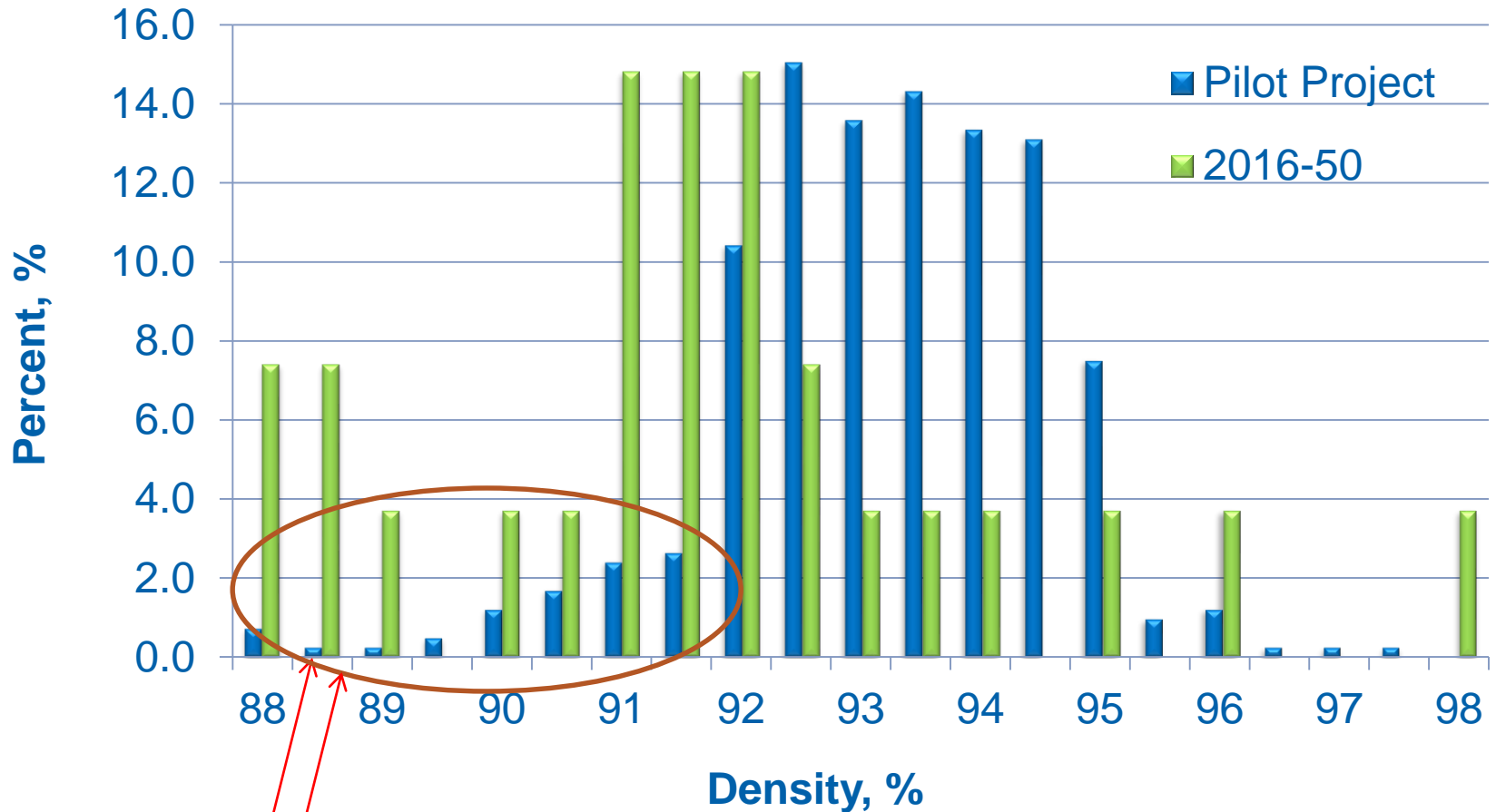
- Slight increase in field density control strip requirements (all Superpave surfaces now 92.5%)
- QC by contractor – still requires roller pattern, control strips
- QA / acceptance – now with plugs/cores (similar to SMA)

## 2. Incentive of up to 5% - meeting minimum density requirements with consistency

- *must be 100% pay, and have 80% of plugs from each sub-lot be 92.5 -96.5 % of TMD to receive bonus*

# Density Comparison: Regular vs Pilot

Comparison between Non-pilot and Pilot in 2016



*Reduction in low density readings in the field for pilot projects !*



**Expanding** application of requirements for  
**all 2017 contracts:**

- **Field density acceptance using cores (selected routes)**

Potential breakdown (specifications not yet officially adopted):

- Interstates acceptance **by cores\***
- Primary /Secondary >10,000 ADT acceptance **by cores\***
- Primary/Secondary < 10,000 ADT acceptance by nuclear

\*all roadways for core acceptance must be 20' or wider

# Questions?

