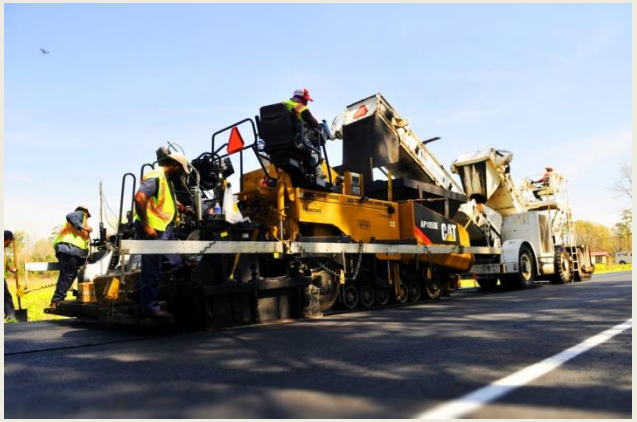
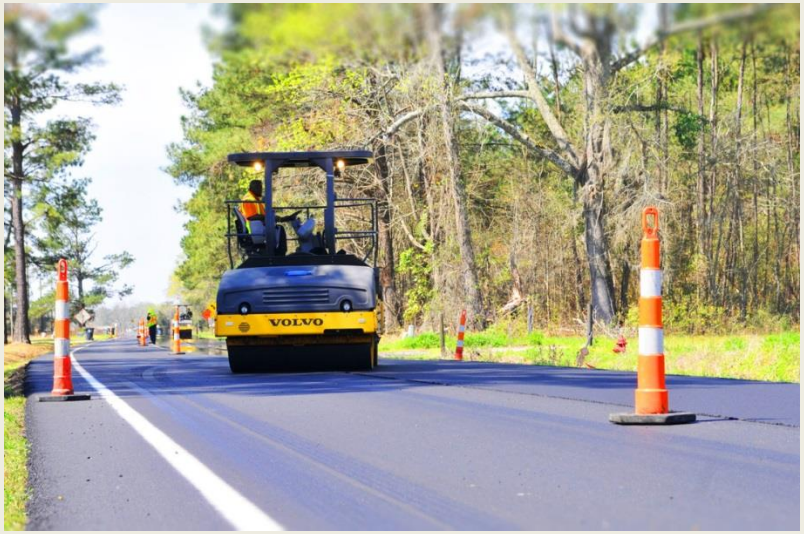
2018 Asphalt Specification Update





Flu Symptoms & Diagnosis

- Influenza (also known as “flu”) is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death.
- The best way to prevent seasonal flu is to get vaccinated every year – also, don’t ride in a car to a PIQ meeting with someone that is just getting over the flu (You are welcome Cliff!)

SC-M-400

Old Specification – April 2015

LPF – Based on PWL (must have 3 tests)

Acceptance Criteria:

a) % Binder

b) % Air Voids

c) % VMA

d) % In-Place Compaction

SC-M-400

New Specification – January 2018

LPF – Based on AAD (1 test minimum)

Acceptance Criteria:

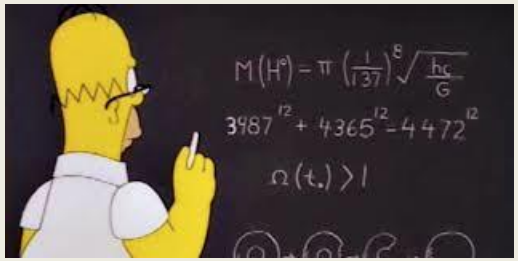
a) % Binder Content

b) Gradation: 2- critical sieves per mix – mix specific)

- 1/2” or 3/8”sieve based on mix type
- No. 4 or No. 8 sieve based on mix type

c) In-Place Compaction

SC-M-400



Why are we changing?

a) To be able to close LOTs out daily - Must drop PWL and go to AAD

b) Speed up testing times with fewer required QC/QA tests

- Improve overall mix quality – Plant techs should be able to run tests much quicker - make changes to plant -> mix faster

- Still required to validate JMF during first days production on a contract and after any mix failure . Volumetrics will not be used for LPF.

c) Move towards a performance specification:

Increase in place compaction specification values

Average = 93.0% - 93.9% to obtain 100% LPF

Average ≥ 94.0% to obtain bonus of 105% LPF

SC-M-400

How is this going to affect daily business?

@ Changes for the Asphalt Plant:

a) Should be able to pay contractor quicker – closing LOTs daily
b) Contractors must focus on providing an asphalt mix with gradation in mind, not volumetric properties!
c) Need more focus on obtaining and using gradations from the contractor's stockpiles to ensure the final extracted aggregate blends will meet JMF. The contractor will need to be familiar with their percentage of breakdown through plant operations.

Finally – The contractors must look at the new specification different than their older work, it may be difficult to run under the two specifications simultaneously.

a) Control your gradation (new SC M 400)
b) Control your volumetrics (old SC M 400)

SC-M-400

How is this going to affect daily business?

@ Asphalt Plant: Continued

a) Split sample testing will continue, projects with less than 7500 tons of any particular mix will be tested by SCDOT at one of the main labs. Any property that does not compare will be retested (referee) and if the results don't compare once again, the tests values will be used for acceptance.
b) Verification will continue as done on previous projects, with the exception of running volumetric properties .. AC, Gradation, and MSG* only.

*MSG- will be used to validate JMF, and verification of binder content

SC-M-400

How is this going to affect daily business?

@ the Roadway:

Contractors must focus compaction and improvements in the mix designs to provide a durable mixture.

i.e. - Finer mixtures should be easier to compact with more binder and this should improve texture, ride, and improvement in construction joints.

New Changes to Road:

a) 6” cores will be taken on Surface A & B and Intermediate A and B only. The cores will be taken on a frequency of random 1 core for every 1500 feet paved.

b) Intermediate C will be accepted using the gauge (no cores)

c) In Place acceptance using the gauges will be performed by obtaining 1 random gauge reading for every 500 feet paved. (no more minimum of 10 per LOT).

SC-M-400

How is this going to affect daily business?

@ the Roadway:

d) Roads under 1500 feet in length should use existing roller pattern or 3-3-3 as stipulated in SC T-65. No cores or gauges readings will be necessary for acceptance. LPF will be based on binder content and gradation (w/o density).

Reminder: Continue to focus on everyday good paving practices:

Proper Set Up – Use paint and string line to improve straight joints

Uniform tack rate on entire road

Consistent Trucking Operations = Continuous Flow of Mix to Paver

Following Established Roller Pattern to obtain consistent density measurements-acceptance.

Changing over - Transition

- Change Orders will be required through the RCE/DCE to adopt the new SC M 400.

- Suggestion – QC Manager's should contact Karen Nicholson (AMVM) to see if you have any outstanding – open data sets under the old SC M 400 spec. Submit a current list of projects with the File Numbers so they can scan through the files and find these projects.

- If there are no issues (pass) with the open data sets, then they can be closed and new data sets can be opened under the new specification once the change orders have been approved.

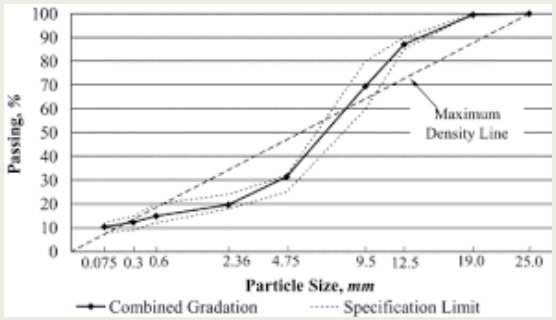
- Submit a New QC Plan for 2018 - QC Managers

  Needed due to changes in SC M 400 – Requirements for Plant and Road Tests / Frequency

Reminder - IA Sampling - 2018 Changes

- Changes going forward for 2018 – moving to a system based approach vs project based.
- Check each “active” plant and roadway tech a minimum of once per year.
- Important to notify IA Dept. when you have a new technician on staff. – A updated list required and submitted annually in January to Chris Lybarker (lybarkercl@scdot.org).
- Inspectors will be checking to see that proper procedures are being followed and the testing equipment is operational and calibrated.
- Split samples will be taken and run at the OMR labs, if the samples fail, the process will need to be repeated.

SC-M-402



- Surface A and B have same gradation, and same 75 gyrations. – difference is PG 76-22 vs 64-22
- Intermediate B Special added – used for rehab work in deep sections on high volume routes and as an option for FDP.
- All Mixtures that contain PG 64-22 may used hydrated lime or LASA product (terminal blended)as a anti-strip.
- Reminder at COAC is an option for all Surface and Intermediate mixtures that contain RAP/RAS. Improve workability and compaction => durability.

SC-M-406

All Mixtures that contain PG 64-22 may use hydrated lime or LASA product (terminal blended) as an anti-strip.

LASA must be introduced at the terminal and added over 85% of the load.

Prevent this from happening! =>

Full Depth Patching

Two Supplemental Specifications

a) One is to address the current Errata for the 2007 Standard Specifications that states that FDP must be done using a Intermediate C.

b) Two is a rewrite of the FDP Specification that involves removal of the old pavement and patching.

- Additions include some best practices that should be done to verify depth of existing pavement, and marking locations.
- A table was added that allows different mix types to be used based on the depth of the repair.
- This allows more options when running other mixes to other projects, as well as a new options to reduce number of lifts if using Intermediate B Special.

Full Depth Patching

Full Depth Patching Materials		
Depth of FDP	Select mixture type below based on Depth of FDP	
	Alternate Mixture Options	Typical Mixture
4” or Less	Surface Type B / C 2 Lifts	Intermediate C 2 Lifts
6”	Surface Type B / C 2 Lifts	Intermediate C 2 Lifts
8”	Intermediate B Special 2 lifts	Intermediate C 3 lifts
10”	Intermediate B Special 2 lifts	Intermediate C 3 lifts
12” or More	Consult with the State Pavement Design Engineer	

Questions?

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