



SEAUPG State Update



**East Subgroup
SC, NC, WV, VA**



2022 Annual Meeting – Raleigh, NC

Asphalt Tonnage - 2022

Tons HMA placed by DOT: (last 12 months)

<p>SC DOT: 2021 ~ 2.87 million tons 2022 ~ 2.31 million tons as of Oct</p>	<p>NC DOT: 2021 ~ 6.61 million tons 2022 ~ 5.71 million tons as of Sept</p>
<p>VA DOT: 2021 ~ 5.63 million tons 2022 ~ 2.80 million tons as of Aug</p>	<p>WV DOT: 2021 ~ 2.85 million tons 2022 ~ 2.54 million tons as of Nov</p>

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Funding

What is the state of the DOT Funding for 2022?

SC - Very Good – still getting extra gas sales tax revenue until 2027
 VA - Steady
 NC - Very Good – Increase from Legislators in FY 2023.
 WV - Steady

- Is the level of asphalt work set to increase / decrease / hold steady in 2023?
 - SC – Increase
 - VA – Steady
 - NC – Steady/Increase
 - WV – Increase

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2022 Initiatives

- Did you have any new initiative in 2022, if so, what was learned?
 - SC - New Standard Specification coming in Mid 2023
E Ticketing – Started in Jan 2022 lettings
 - VA – Increase 4.75 mm mix placement temp to 290°F
Daily Gmm for all cores/plugs for density instead of 5 moving average value.
 - NC – New NCDOT Standard Specifications for Roads and Structures coming 2024
 - WV - No new initiatives for 2022, but several to come for 2023.

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Asphalt Program Updates

Do you have any upcoming major specification changes?

SC - New Standard Specification coming in Mid 2023 (updated from 2007)

VA - Possibly increasing max lift thickness from 4 x NMAs to 5.
 Most districts are waving depth required specifically for base mix.
 Our base mix density has increased over the past few years.
 We are still looking at different testing protocols for lifts greater than 4 in.

NC – No major Asphalt Program Updates anticipated.

WV - For 2023, our 401 Asphalt Specification was completely rewritten. Some of the changes include the elimination of thin-lift corrections, responsibility for acceptance testing was returned to the Division, and the bonus structure was eliminated. The bonus structure was also eliminated in our 410 PWL and Smoothness Specifications.

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Balanced Mix Design

- Have you or do you plan to implement BMD in your state?
 - SC – Yes
 - Actively pursuing since 2018.
 - A lot of research on-going with pilot projects.
 - Repeating vs Non-repeating. Round-robins for tests, Long-term aging, Recycling agents, Production variability on BMD, IDT, etc.
 - PI (to replace APA), etc.
 - Working on Certification class & MTS (Asphalt database)
 - Keep updating the BMD SP. evolving every year
 - NC – Hosted BMD workshops with NCAT staff, attended conferences where BMD was discussed in depth, upcoming research led by Universities where certain asphalt pavement tests that are commonly associated with BMD are being incorporated.
 - WV - We do plan to implement some form of BMD.

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Balanced Mix Design

- What approach has been chosen for your state, and what tests have you adopted for BMD?

SC – COAC (Surface and Intermediate Mixes) APA, Ideal CT, some limited Cantabro testing

VA - Currently, BMD testing is required in addition to traditional Superpave volumetrics testing for piloted projects. IDT-CT, APA, IDT-HT, Cantabro

NC – APA on all asphalt paving surface mixes, TSR on all mix designs not on all production samples. Cantabro testing on NC Friction courses only. Considering Ideal CT.

WV - Research is currently underway to determine the proper path.



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Balanced Mix Design

- Any pilot projects underway or planned? If so, has there been any real world validation of this BMD criteria?

SC – None

VA - Keep doing pilot since 2020.

- 2022: 13 contracts with 282,022 tons
- 2023 Plan: 15 contracts with 335,269 tons

NC – No immediate plans

WV - No projects currently planned or underway.

- Does your state's contractor's association been on board with BMD?

SC – Mixed

VA - Yes, in general. Shared concerns about amount of testing for production. They wish to shift from Volumetric criteria to BMD instead of currently running both on the pilot projects.

NC – Partner with our Asphalt Paving Association and industry stakeholders to the greatest extent possible.

WV - Indeed, and they have a seat at the table via our Joint Asphalt Subcommittee and our BMD Task Force.



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Smoothness

- Has your state had issues with smoothness specifications?

SC - Very few, most issues related to paving single lifts over rehab sections with CMRB, some issues with thick lift sections > 6".

VA - No

NC – No. [Inertial Profiler and Operators Certification](#) – 2024.

WV - Removal of the bonus structure.



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Smoothness

- Any issues with reliability of testing equipment?

SC – No

VA - No

NC – No. 2 Dynatest Units, 1 ICC SurPRO Unit

WV - No reliability issues, but current ICC hardware/software is reaching end of life.

- Does your state have a time limit to test final smoothness once job has been completed?

SC - Not at this time, RCE call the Office of Materials when all roads are done on entire contract, not usually done individually.

VA - VDOT will test within 30 days from Contractor's written request following the completion of the final surface with striping or temporary markings placed.

NC – Perform smoothness test within 7 days of receiving authorization. Raw files immediately handed to NCDOT staff who are onsite, Contractor's final report and documentation required 10 days after testing

WV - Our goal is to complete testing for acceptance within 14 days of the District's request.



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EPD's

- Has there been any recent buzz around EPD's in your state? – Environmental Product Declarations

SC - Some this year for the first time, initial inquiries centered around EPDs have been asked but waiting further guidance...continue to gather info on individual materials, although difficult to capture actual recycling percentages.

VA – Not much

NC - Some discussions involving decarbonization. Also waiting on further guidance.

WV - Yes

- What about LCA? – Life Cycle Assessments

SC - Always need to address LCA in our decision making.

VA - Not much. We did a LCA study on Cold Recycling Mixes.

NC - Yes. Always are looking, discussing, evaluating alternatives

WV – Yes. We were recently awarded a grant through the FHWA Climate Challenge. Along with the research funded by the grant, WVU is establishing the Center for Smart Road Infrastructure of the Future. WV Division of Highways will collaborate with WVU in all phases of this process.



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(STIP)

- Since IJJA was passed and signed into law, a significant increase in federal funding for highway construction is anticipated.

- Does your state anticipate stepping up and matching federal funds with the increase? - Yes

- Please indicate the anticipated construction funding reported in your current STIP for the years below:

State Fiscal Year	SC - \$ Millions	NC - \$ Millions	VA - \$ Millions	WV - \$ Million (asphalt only)
2022	1,481.0	1,498.9	5,242	123.4
2023	1,548.7	1,601.8	4,255	315.0
2024	1,664.2	1,830.5	3,930	191.6
2025	1,666.6	1,687.0	3,762	191.6



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E- Ticketing


- Does your state have a E -Ticketing specification?

SC - Yes; SC-M-409

VA - We have a Special Provision. SP109-000130-00

NC - We have not developed our E-ticketing spec yet as we are still building out our vision.

WV - Yes, it will be new for 2023.



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E- Ticketing

- What type of issues have been identified since using E Ticketing?

SC - Lack of cell phone – internet coverage in rural areas, need to have offline capabilities in the software-apps. Extra hands needed to accept trucks in ensure we receive all deliveries.

VA - How to accept it by DOT. Currently, email approval.

NC - Issue: Getting all of our suppliers updated with the IT capabilities to send real time ticket information directly to us may be our biggest challenge.


- NCDOT response: We are planning to contract with an E-Ticketing vendor to assist suppliers with e-ticketing capabilities (if they want this assistance)

- Issue: Some supplier plant sites don't even have data connectivity.
- NCDOT response: We have developed a QR Code option for e-ticketing that does not require data connectivity. It will require that a QR Code (containing the necessary data fields) be printed on the physical ticket that gets delivered to our inspectors.

- Issue: Some project sites don't have data connectivity
- NCDOT response: QR Code option as described above.

- Issue: Ticket Error fixes may be more difficult with E-Tickets
- NCDOT response: We are currently developing our plan for how we handle any ticket errors/re-prints of tickets.

WV - Will report back next year with an update.



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E- Ticketing

- What benefits have the state DOTs seen with using this software?

Producers- Suppliers?


SC - Producers: Best use of trucks (time), tracking during production and of their assets – equipment.
SCDOT: More efficient data collection – summary sheets at the end of the day in lieu of ~100 tickets.

VA - Direct input for Design Build

NC - More efficient and accurate ticket approval and summary process

- -Increased safety as Inspectors don't have to approach truck for physical ticket
- -Reduced paper handling
- -Better tracking of trucks contributing to more efficient paving operations
- -More efficient and accurate ticketing quantities and tracking

WV - Will report back next year with an update.



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2023 Initiatives

- Do you have any new initiatives or specifications coming out in 2023?


SC - Continue to use more SMA (9.5mm) on the Interstates
Need to train and maintain workforce

VA - Not much for Regular Spec

- BMD Spec
 - BMD Certification requirement
 - IDT-CT COV tolerance for Mix Design test
 - IDT-HT for Design: Report only
 - Eliminate small tonnage BMD testing requirement (>300 tons)
- Research on BMD, Rubber mixes, Recycled Plastic mixes, High Rap with Recycling agents, etc

NC – Similar response to previous initiative questions, really focusing on updating our 2024 Roads and Structures Specification Manual. Train and maintain workforce.

WV - As noted in the Asphalt Program Updates slide



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Additional Info


- Is there anything else that you would like to share?

Personnel Changes, etc.

SC – SCDOT workforce cut by 10-15% in 2021-22
Supplementing with CEI staff...
Still lots of vacancies

VA - Angela Beyke (new Assistant State Materials Engineer) replaced Rob Crandol who moved to Maintenance Division.

NC - Constant personnel changes, retirements, new recruitment efforts in our industry, our own CEIs are experiencing the same. Talks with other DOTs have echoed this sentiment.



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