

**REGIONAL SURVEY:
WHAT'S HAPPENING IN
THE CENTRAL (SEAUPG)
STATES?**

SEAUPG 2016

SEAUPG CENTRAL STATES

THE SURVEY

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- Does your State have specification changes / updates related to asphalt binder or mix, i.e., use of crumb rubber, modifiers, etc.?
- How many tons of asphalt material have you placed within the last year?
- How have funding shortages affected HMA tonnage?
- Describe your State's experience with WMA, i.e., tons placed-specifications – and concerns.
- Describe your State's experience with mixtures containing high percentages of recycled materials (RAP, Shingles, etc) i.e., tons placed-specifications – and concerns.

THE SURVEY

- What is your experience thus far (if any) using the AMPT or other performance tests?
- What Methods has your State implemented to lower cost for maintenance, preservation or reducing pavement costs?
- Please provide any other topics you would like mentioned in this update. Please provide any slides, photos; graphs etc., you would like to include.

**Q1: DOES YOUR STATE
HAVE SPECIFICATION
CHANGES / UPDATES
RELATED TO ASPHALT
BINDER OR MIX, I.E., USE
OF CRUMB RUBBER,
MODIFIERS, ETC.?**

SPEC CHANGES

- **ALDOT** - Looking to reduce shingle use back to 3% and to remove it completely from our 3/8" mix.
- **FLDOT** - PG 76-22 (PMA) and PG 76-22 (ARB) will become equivalent binders effective January 2017. It will be the contractor's choice to decide which one to use. Both binders must meet the same PG specifications, including Jnr and % Recovery from the MSCR test. In addition, PG 76-22 (ARB) has a separation requirement of 15F.
 - In July 2017, PG 76-22 (HP) will replace PG 82-22 (PMA). The HP binder is commonly referred to as the "Kraton binder" and has about 7.5% SBS. FDOT will not allow RAP in these mixtures.
- **GDOT** - We have developed specifications for Cold In-place Recycling and Cold Central Plant Recycled Mix. We have placed test sections for both processes this past year.

SPEC CHANGES

- **KYTC** - We are currently experimenting with some crumb rubber projects. Most of the projects are low ADT roads, but we are proposing the use of crumb rubber on a parkway or interstate. We have increased our use of binders by increasing the minimum asphalt contents 0.2% in our surface mixes. We are currently in the process of updating our specifications to be effective in the year 2018.
- **TDOT** - A Qualified Products List (QPL) is being developed for trackless tack products, in an effort to hopefully be able to specify them.

Q2: HOW MANY TONS OF ASPHALT MATERIAL HAVE YOU PLACED WITHIN THE LAST YEAR?

TONNAGE

- **FLDOT** - Approximately, 4.8 million tons.
- **GDOT** - 3.48 million tons
- **KYTC** - WMA = 1,967,135.24 tons
 - RAP and RAS = 2,406,755 tons
 - Virgin mix = 278,886 tons
- **TDOT** - ~2.5-million tons

Q3: HOW HAVE FUNDING SHORTAGES AFFECTED HMA TONNAGE?

TONNAGE SHORTAGES

- **ALDOT** - Not significantly yet.
- **FLDOT** - No.
- **GDOT** - Georgia's new transportation bill should provide nearly 1 billion dollars in new funding each year.
- **KYTC** - This year a new governor was elected, so funding has been cut on numerous statewide projects greatly reducing the number of projects and HMA.
- **TDOT** -

Q4: DESCRIBE YOUR STATE'S EXPERIENCE WITH WMA, I.E., TONS PLACED, SPECIFICATIONS AND CONCERNS.

WMA

- **ALDOT** - It's an everyday practice for some and others don't use it. Just depends on where you are in the state. Concerns are that if you are running a high recycled content the binder in the recycled materials doesn't even get softened up.
- **FLDOT** - WMA is barely used in FL. Contractors have a variety of reasons for not using it. However, some contractors are producing the mix at HMA temperatures in order to use the warm mix additive as a compaction aid. FDOT does not track these quantities.
- **GDOT** - GDOT has placed WMA and allows contractors to use this technology, but very little has been placed.

WMA

- **KYTC** - We have used warm mix effectively over the last 10 years or so. We will be looking to change our specifications for the use of warm mix since we now have years of experience using it. Concerns are high RAP contents and the proper use of warm mix additives. Warm mix is not being used in the true definition of warm mix. We have placed 1,201,786 tons of WMA this paving season. (April, 2016 - current)
- **TDOT** - Permits the use of WMA, but does not mandate it. Use of WMA is small, while use of WMA techniques at HPMA temps is common.

Q5: DESCRIBE YOUR STATE'S EXPERIENCE WITH MIXTURES CONTAINING HIGH PERCENTAGES OF RECYCLED MATERIALS (RAP, SHINGLES, ETC) I.E., TONS PLACED-SPECIFICATIONS - AND CONCERNS.

RECYCLE

- **ALDOT** - Shingles in the wearing surface does not appear to be working very well specifically when the lift thickness is 1.5" or less. The mix is too stiff. We are looking to make some changes in this area.
- **FLDOT** - FDOT routinely uses RAP in all mixtures except OGFC. We average about 25% RAP in mixtures that contain RAP. We limit RAP in dense graded friction course mixtures to 20% due to friction concerns. FDOT does not use shingles.
- **GDOT** - Typically, HMA producers incorporate 25 to 30 percent RAP in all mix types other than SMA and open-graded mixtures produced for GDOT. In 2013, GDOT implemented, a new specification where recycled binder in RAP mixtures were given only 75 % credit. The additional 25 % was made up in neat AC. We have seen vast

RECYCLE

- **KYTC** - Kentucky chose to use effective binder replacement for the use of high recycle mixes. This method allows for high RAP and RAS with use of PG58-28. We have had complaints from our district construction personnel that the mixes are too dry and only lasting 5-7 years, if that. That is why we increased our asphalt content 0.2% in our surface mixes to see what performance we get over the next two years or so. We will be looking to decrease our RAP and RAS usage, hopefully eliminating RAS altogether. We really need to take a look at capping our RAP percentages in our surface and base mixes. The binders we now use are not the same quality of binders we used over 10 years ago. We have placed 1,254,990 tons of recycle mixes and 139,443 tons of "virgin" mix this paving season. (April, 2016 - current)
- **TDOT** - TDOT's permits up to 20% RAP in surface and 35% in base and binder courses. Shingles are permitted up to 3%. Trial GTR projects are underway.

Q6: WHAT IS YOUR EXPERIENCE THUS FAR (IF ANY) USING THE AMPT OR OTHER PERFORMANCE TESTS?

AMPT

- **ALDOT** – None so far – it’s on the “to do” list.
- **FLDOT** – FDOT has a mix design APA requirement for the panhandle region of the state, which historically experienced more rutting due to the materials used. All other performance tests are performed for research purposes only.
- **GDOT** – We really have not used the AMPT other than the pooled fund FHWA study. GDOT is now using the HWTD, at the producer/mix designer discretion, for mix design approval.
- **KYTC** – Kentucky has an AMPT, and we have had the training, but still have not used it for any performance testing.
- **TDOT** – Acquired an IPC as part of the pooled fund, but it is under-utilized due to staff limitations in recent years. Hoping to put it to use in the future.

Q7: WHAT METHODS HAS YOUR STATE IMPLEMENTED TO LOWER COST FOR MAINTENANCE, PRESERVATION OR REDUCING PAVEMENT COSTS?

LOW COST/ PRESERVATION

- **ALDOT** – We are really starting to move towards doing some pavement preservation projects. We now have specifications for several different chip seals (double, triple, high performance, scrub) and for microsurfacing.
- **FLDOT** – FDOT does not do traditional pavement preservation techniques on a routine basis, though we have placed sections with micro-surfacing, full depth reclamation, and crack sealing.
- We do use a lot of RAP material, which reduces costs considerably.
- **GDOT** – We have begun using the micro-milling process more frequently. We currently have two micro-milling projects on I-75 in the metro Atlanta area. We have placed fog sealing over aged open-graded mix on a number of interstates this past year.
- **KYTC** – Kentucky has increased the use of preventative maintenance projects this year due to funding cuts. We have used microsurface, cape seals, scrub seals, chips seals and we just finished a chip seal with crumb rubber. We are going to see more preventative maintenance projects in the future.
- **TDOT** – We have a program in place that ensures pavement preservation techniques get used, when applicable. This program has been very successful.

Q8: PLEASE PROVIDE ANY OTHER TOPICS YOU WOULD LIKE MENTIONED IN THIS UPDATE. PLEASE PROVIDE ANY SLIDES, PHOTOS; GRAPHS ETC., YOU WOULD LIKE TO INCLUDE.

OTHER

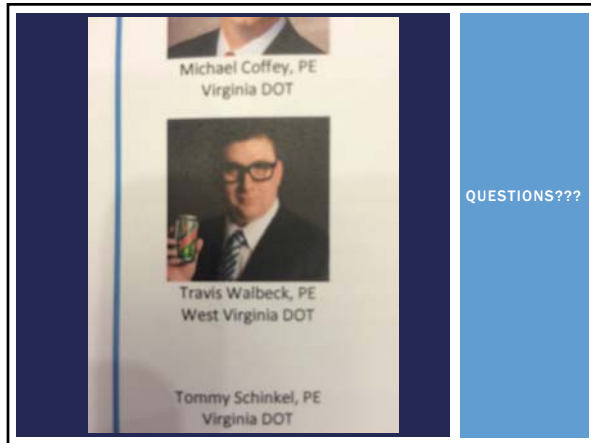
- **ALDOT** – PG grading for emulsions – this idea has very strong merit and am looking to move in that direction.
 - Another design we are looking at is 100% RAP for Local roads where they would like HMA without a large cost.
- **FLDOT** – FDOT would like to know if states are:
 - a) Mandating trackless tack
 - b) Having issues with trackless tack

OTHER

- **KYTC** - Would like to know what other states are doing to control RAP stockpiles at the contractor's plants. How is the state agency checking the asphalt content of the RAP that is being used in the mix designs?
- **TDOT** - Interested in 100% recycle mixtures, specifically CCPR as a potential alternative for base and binder mixtures on new construction and widening. Also hoping to look into collecting network-level structural data such as Traffic-Speed Deflectometer (TSD) to identify road segments that need additional structure.

SPECIAL THANKS TO:

- Lyndi Blackburn - ALDOT
- Greg Sholar - FLDOT
- Sheila Hines - GDOT
- Robert Semones - KYTC



QUESTIONS???