

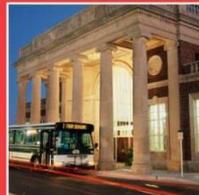
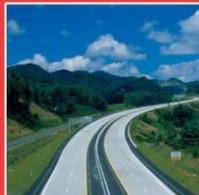


2013 CAPA Annual Meeting Construction Topics

Chris Peoples, PE

NCDOT - State Materials Engineer





NCDOT / CAPA Committees

- 1) **Joint Asphalt Committee**
- 2) **Joint Technical Committee**
- 3) **Specs / Training Subcommittee**

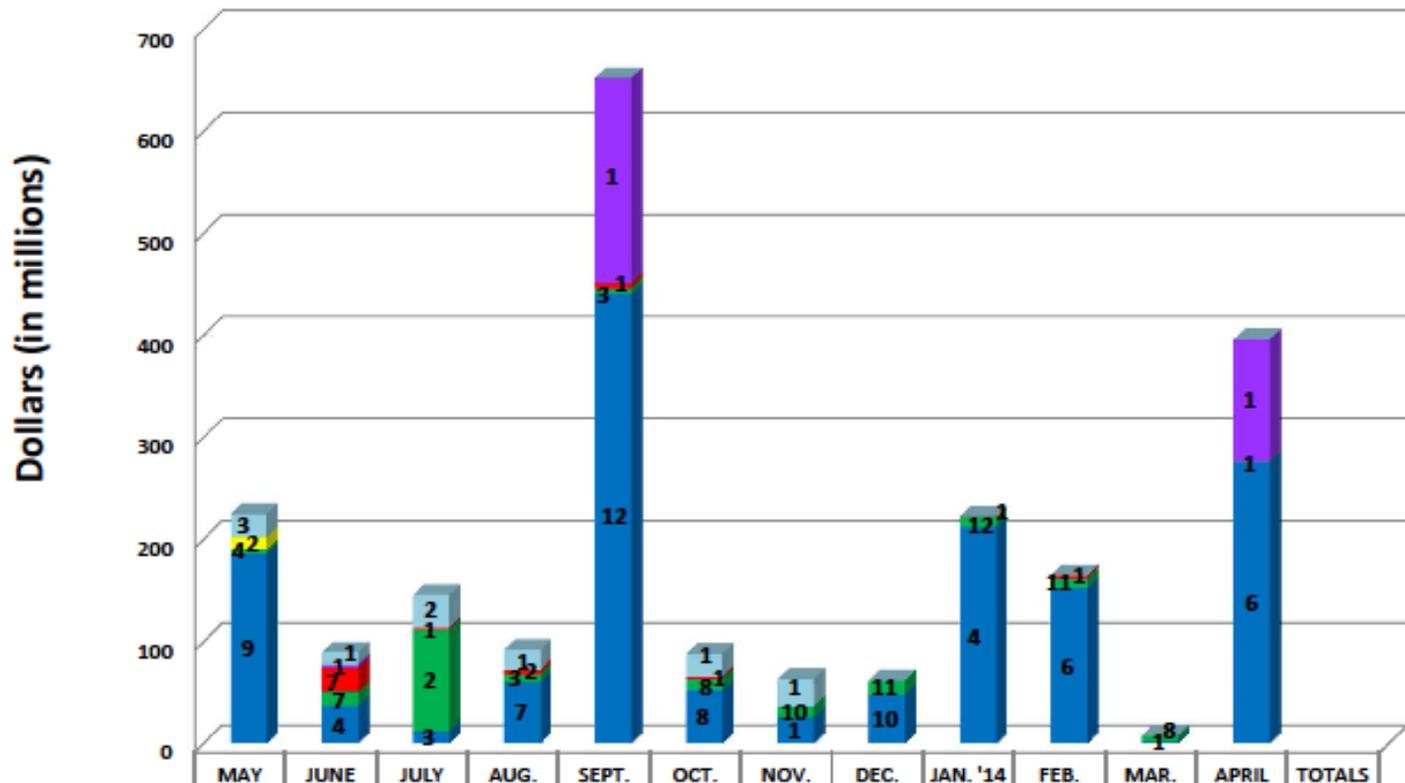
CAPA Members

David Glover - Barnhill
Chris Croom – S. T. Wooten
Barry Hall - Blythe
Marvin Hylton – Apac
Robbie Robinson - Lane
Ellis Powell - CAPA

NCDOT Members

Todd Whittington
Nilesh Surti
Wesley Welborn
David Jackson
Dan Hunter
Ron Hancock
Chris Peoples
Ted Naylor

NCDOT 12 Month Let List Totals in Millions



	MAY '13	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN. '14	FEB.	MAR.	APRIL	TOTALS
TOTAL	\$225.6	\$89.7	\$145.7	\$92.2	\$652.8	\$88.1	\$63.6	\$62.6	\$222.9	\$165.0	\$8.5	\$396.3	\$2,212.8
ARRA Rail	22.9	11.6	31.7	19.4	0.0	22.0	26.8	0.0	0.0	0.0	0.0	0.0	\$134.3
DB Express (22 Bridges)	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$12.4
Design Build (7 Bridges)	0.0	3.6	0.0	0.0	201.0	0.0	0.0	0.0	0.0	0.0	0.0	119.0	\$323.6
17BP, etc. (98 Bridges)	0.0	23.9	1.4	3.9	4.7	2.1	0.0	0.0	1.5	2.4	0.0	0.0	\$39.9
TIP Bridge Replacement (89 Bridges)	3.6	13.4	99.7	7.9	6.3	11.4	10.4	13.9	9.2	9.5	6.0	1.0	\$192.1
TIP	186.7	37.2	12.9	61.1	440.9	52.6	26.5	48.7	212.2	153.1	2.5	276.4	\$1,510.6

NOTE: The number on the bar chart represents the number of projects included in each category. The number of bridges affected appears in the legend. 4/11/2013



Historical Funding for C/R Program

<u>SFY</u>	<u>\$(M)</u>
2007	270
2008	277
2009	277
2010	300
2011	267
2012	406
2013	427





Update on FY 2013 C/R Program

Number of Contracts Awarded	157
Number of Contract Firms	46
Total \$'s Awarded	\$275M
Tons of Asphalt Distributed	2.4M
Number of Miles Let to Contract	~ 1835

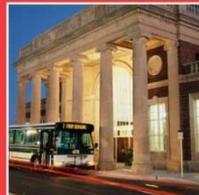
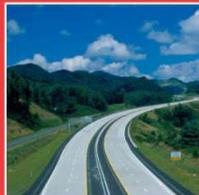




PROGRAM-TONNAGE COMPARISON

<u>Year</u>	<u>Total Tonnage</u>	<u>ARRA</u>	<u>GARVEE</u>	<u>CONTRACT RESURFACING</u>	<u>REGULAR TIP</u>	<u>POCs</u>
2010	7,569,653	25.9%	3.3%	30.0%	24.4%	16.3%
2011	6,747,708	10.6%	2.2%	46.5%	38.2%	2.5%
2012	7,305,488	5.4%	5.6%	55.0%	33.7%	0.3%

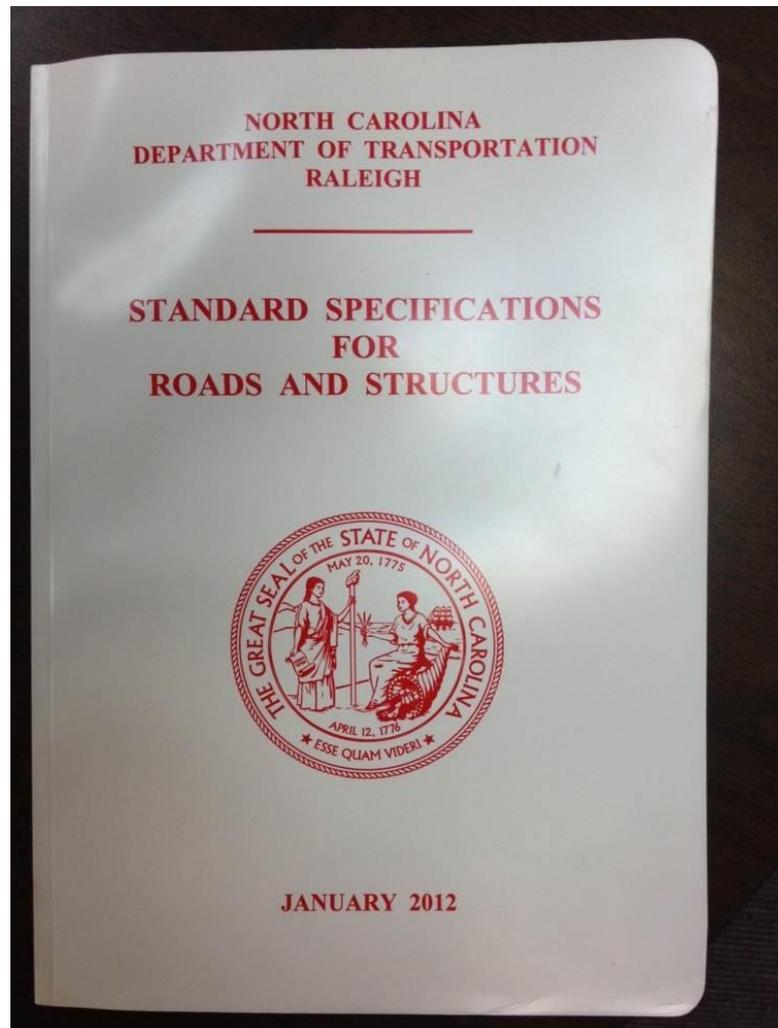




2013 Asphalt Summits

- **Memo requesting Divisions to hold a Summit on Dec. 13, 2012**
- **Every Division held a Summit in 2013**
 - Div. 3 and 6 combined
 - Div. 5 and 8 combined
- **Numerous topics discussed at the Summits**
- **Recommend more attendance by lead inspection staff and paving superintendents**
- **Welcome feedback for improvement at future Summits.**

Specification Issues



Temporary Traffic Control and Law Enforcement SPs for Resurfacing Contracts

Effective with July 2013 Letting on all Resurfacing Contracts

Temporary Traffic Control

- New Standard Drawing for sign resurfacing sign placement
- No -Y- Line stationary signs unless 1000 feet of resurfacing on -Y- line
- Pay for stationary signs by the SF but hold back 10% pay until signs are removed
- No more “Incidental Traffic Control” but continue to have LUMP SUM pay item

Temporary Traffic Control and Law Enforcement SPs for Resurfacing Contracts

LUMP SUM pay item includes the following:

- Portable Signs
- Cones and Drums
- Changeable Message Boards and Flashing Arrow Panels (per standard, additional considered extra work)
- Includes 4 flaggers per operation per map
- Additional flaggers paid at \$20 per hour for each flagger as approved by Engineer as Supplemental Flagging pay item

Law Enforcement SP

- Guidelines on when Law Enforcement pay item needed – high speed routes, urban intersections, etc.
- Each Law Enforcement officer will be paid Per Hour and not considered incidental or lump sum



Air & Surface Temperatures

**TABLE 610-5
PLACEMENT TEMPERATURES FOR ASPHALT**

<u>Asphalt Concrete Mix Type</u>	<u>Minimum Surface and Air Temperatures</u>	<u>Minimum Surface Temperature</u>
B25.0B, C	35°F	35°F
I19.0B, C, D	35°F	35°F
SF9.5A, S9.5B, S4.75A	40°F	50°F ^A
S9.5C, S12.5C	45°F	50°F
S9.5D, S12.5D	50°F	50°F

- Simplified Table with one requirement for both Air and Surface. Still check both and lower temperature controls.
- Check temps. away from artificial heat and at location of paving operation.
- Wording of “in the shade” has been removed



Final Surfacing Testing

“Final surface testing is NOT required on this project.” based on criteria:

- Resurfacing for any SR Route no matter how many lifts of pavement
(This is new starting January 2013)
- On any route where the speed limit is less than 45 mph
- When the project is less than one mile in length.
- Anytime the existing site conditions make it impractical to obtain rideability as determined by the Division.

(Considerations may include pavement width, traffic phasing constraints, type of facility, and large number of utility adjustments, driveways, or -Y- lines.)



Warm Mix Asphalt update

- WMA: Over 2.5 million tons placed to date since 2008-09
- WMA is approved for Interstate if min 250,000 tons placed
 - Effective with projects let after April 1, 2013
 - See Materials and Tests website for Approved List and Criteria
 - 9 WMA Technologies on the Approved List and 3 with “Unlimited” status

**North Carolina Department of Transportation
Approved Products Listing**

APPROVED WARM MIX ASPHALT (WMA) TECHNOLOGIES

Prior to any approval, the WMA technology manufacturer must submit documentation from a minimum of three (3) successfully constructed projects using the WMA technology that includes the following:

- Product Name & Supplier;
- Contact Name & Telephone Number;
- WMA Technology Material Safety Data Sheet (MSDS);
- Documentation from each successfully constructed project, including: project type, project owner, location, tonnage placed, mix design used, field density and performance data.

After the initial review process, the WMA technology can be given the following approval statuses based on the construction and performance of NCDOT-approved job mix formulas (JMFs) using the technology:

WMA Manufacturer	WMA Technology	Current Approval Status
Astec Industries	Double Barrel Green	Unlimited
Gencor Industries	Ultrafoam GX	Unlimited
MeadWestvaco	Evothem 3G	Unlimited
Aqua Foam, LLC	Aqua Foam WMA	Trial
ArrMaz Custom Chemicals	ADhere LOF65-00 + CecaBase RT945	Trial
Maxam Equipment	AQUABlack WMA	Trial
PQ Corporation	Advera	Trial
Sasol Wax	Sasobit	Trial
Terex Roadbuilding	Terex WMA	Trial

1) **Trial Approval** – one or more NCDOT-let projects have been successfully constructed using the WMA technology and monitored through a minimum of one winter season.

- WMA technologies with **Trial** status may be used on NC and Secondary routes.

2) **Limited Approval** – a minimum of 75,000 tons of mix using the WMA technology have been successfully constructed on NCDOT-let projects.

- WMA technologies with **Limited** status may be used on US, NC, and Secondary routes.

3) **Unlimited Approval** – a minimum of 250,000 tons of mix using the WMA technology have been successfully constructed on NCDOT-let projects.

- WMA technologies with **Unlimited** status may be used on any route, including Interstate routes.

Contact the Materials & Tests Unit at (919) 329-4060 for any information and current approval status.

M&T website link:

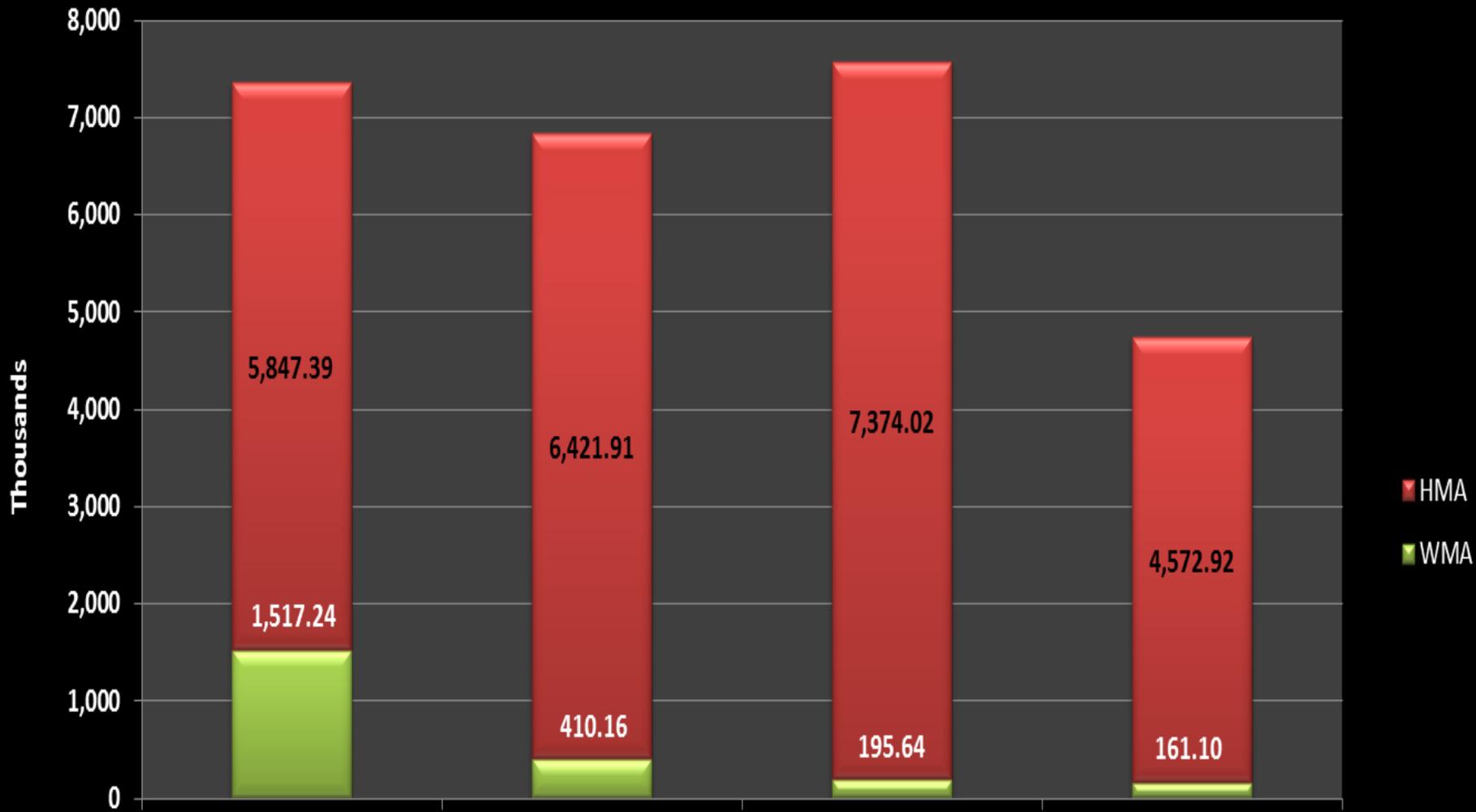
<https://connect.ncdot.gov/resources/Materials/MaterialsResources/Warm%20Mix%20Asphalt%20Approved%20List.pdf>

Limited Status (US, NC, Sec):

Min. 75,000 tons placed

Unlimited Status (Any routes):

Min. 250,000 tons placed



WMA %

22.3%

6.0%

2.6%

3.4%



Shoulder Material Testing

Revised section 1019 of Spec as follows:

- Allow additional lime to correct low pH
- Table added to provide specific direction
- No further testing if required lime is added
- Will also consider acidic amendments for high pH upon request.



SHOULDER AND SLOPE BORROW:

(3-19-13)

1019

SP10 R10

Use soil in accordance with Section 1019 of the *2012 Standard Specifications*. Use soil consisting of loose, friable, sandy material with a PI greater than 6 and less than 25 and a pH ranging from 5.5 to 7.0.

Soil with a pH ranging from 4.0 to 5.5 will be accepted without further testing if additional limestone is provided in accordance with the application rates shown in Table 1019-1A. Soil type is identified during the soil analysis. Soils with a pH above 7.0 require acidic amendments to be added. Submit proposed acidic amendments to the Engineer for review and approval. Soils with a pH below 4.0 or that do not meet the PI requirements shall not be used.

TABLE 1019-1A			
ADDITIONAL LIMESTONE APPLICATION RATE TO RAISE pH			
pH TEST RESULT	Sandy Soils Additional Rate (lbs. / Acre)	Silt Loam Soils Additional Rate (lbs. / Acre)	Clay Loam Soils Additional Rate (lbs. / Acre)
4.0 - 4.4	1,000	4,000	6,000
4.5 - 4.9	500	3,000	5,000
5.0 - 5.4	NA	2,000	4,000

Note: Limestone application rates shown in this table are in addition to the standard rate of 4000 lbs. / acre required for seeding and mulching.

No direct payment will be made for providing additional lime or acidic amendments for Ph adjustment.



New 4.75mm Superpave Mix

- New SP for 4.75mm Mix
- Criteria for use
- To date, 10 different contractors have submitted mixes
- Approval for non-DOT projects can be done



Tack Coat SP in July 2012 Letting

Apply tack coat **uniformly** across the existing surface at target application rates shown in Table 605-1.

TABLE 605-1

APPLICATION RATES FOR TACK COAT

Existing Surface	Target Rate (gal/sy)
	Emulsified Asphalt
New Asphalt	0.04 (+/- 0.01)
Oxidized Asphalt or Milled	0.06 (+/- 0.01)
Concrete	0.08 (+/- 0.01)

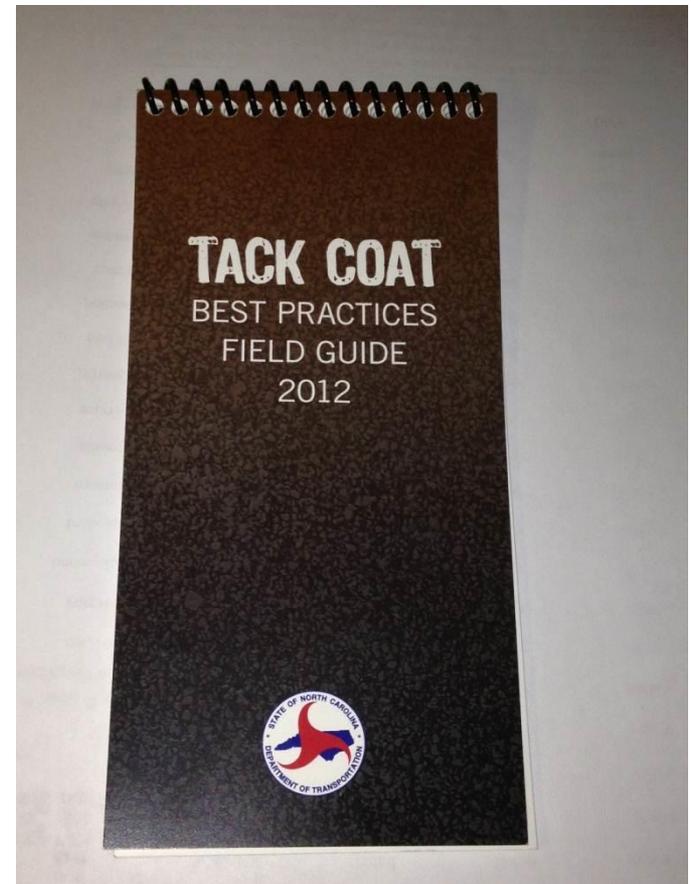
New specification is clear what is expected and should keep from inconsistent requirements. We appreciate assistance received last year with this focus area.



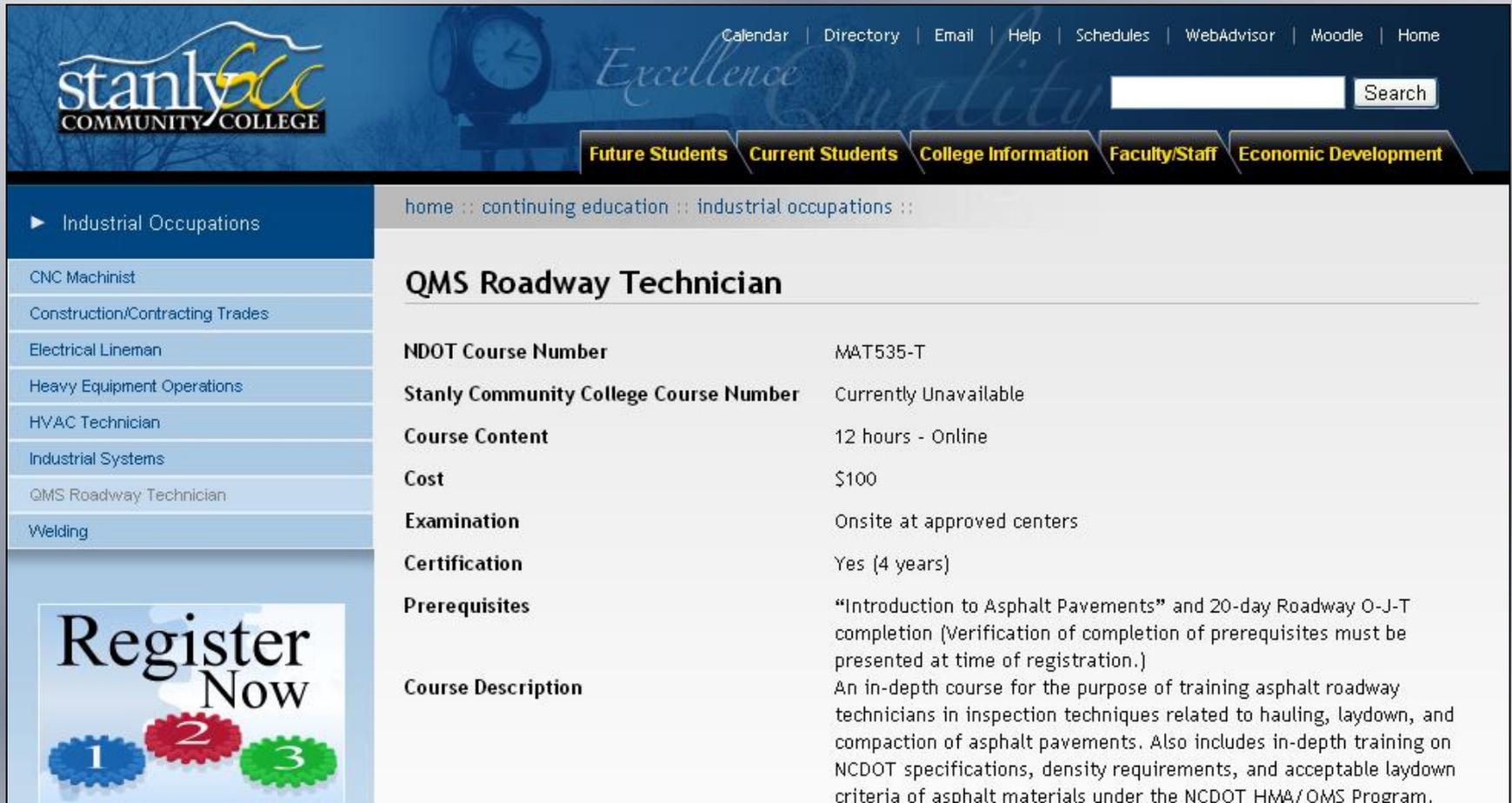
Tack Coat – Best Practices Guide

[NCDOT Pavement Construction:](https://connect.ncdot.gov/projects/construction/Documents/Tack%20Coat%20Best%20Practices%20Field%20Guide%202012.pdf)

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Online Roadway Technician Course



The screenshot shows the Stanley Community College website. At the top left is the college logo with the text "stanly COMMUNITY COLLEGE". To the right of the logo is a navigation menu with links for "Calendar", "Directory", "Email", "Help", "Schedules", "WebAdvisor", "Moodle", and "Home". Below the navigation menu is a search bar with the text "Search". A secondary navigation bar contains buttons for "Future Students", "Current Students", "College Information", "Faculty/Staff", and "Economic Development". The main content area is titled "Industrial Occupations" and lists various programs: CNC Machinist, Construction/Contracting Trades, Electrical Lineman, Heavy Equipment Operations, HVAC Technician, Industrial Systems, QMS Roadway Technician, and Welding. The "QMS Roadway Technician" program is selected, and its details are displayed in a table format. The details include the NDOT Course Number (MAT535-T), Stanley Community College Course Number (Currently Unavailable), Course Content (12 hours - Online), Cost (\$100), Examination (Onsite at approved centers), Certification (Yes (4 years)), Prerequisites ("Introduction to Asphalt Pavements" and 20-day Roadway O-J-T completion), and Course Description (An in-depth course for the purpose of training asphalt roadway technicians in inspection techniques related to hauling, laydown, and compaction of asphalt pavements. Also includes in-depth training on NCDOT specifications, density requirements, and acceptable laydown criteria of asphalt materials under the NCDOT HMA/QMS Program.).

home :: continuing education :: industrial occupations ::

QMS Roadway Technician

NDOT Course Number	MAT535-T
Stanly Community College Course Number	Currently Unavailable
Course Content	12 hours - Online
Cost	\$100
Examination	Onsite at approved centers
Certification	Yes (4 years)
Prerequisites	"Introduction to Asphalt Pavements" and 20-day Roadway O-J-T completion (Verification of completion of prerequisites must be presented at time of registration.)
Course Description	An in-depth course for the purpose of training asphalt roadway technicians in inspection techniques related to hauling, laydown, and compaction of asphalt pavements. Also includes in-depth training on NCDOT specifications, density requirements, and acceptable laydown criteria of asphalt materials under the NCDOT HMA/QMS Program.



NCDOT - Materials & Tests Unit

HMA/QMS

Online Roadway Technician Course

- **Pilot class period: April 15th – 26th**
- **24 Registered (Contractors, CEI, and DOT Personnel)**
- **Participants register, study, and take proctored exam (May 2013)**
- **8 Community colleges:**
 - **Brunswick CC – Wilmington**
 - **Piedmont CC - Roxboro**
 - **Wake Tech CC – Raleigh**
 - **Guilford Tech CC – Greensboro**
 - **Halifax CC – Weldon**
 - **Edgecombe CC - Tarboro**
 - **A-B Tech – Asheville**
- **After Pilot, revise website, process, etc.**
- **First Class: Anticipated for July 2013**





Erosion Control – Online Training

- **Level 1 and 2 online training handled through NCSU via the following link:**
<http://go.ncsu.edu/ESCLevel1-2>
- **Provides flexible scheduling of training to fit convenient times for contractors and staff.**
- **Reduces travel related costs**
- **NPDES reporting required on resurfacing projects that exceeded one acre of exposed shoulders**
- **To address this reporting, contractors are required to have a Level II certified individual on the project.**





QUESTIONS ?

