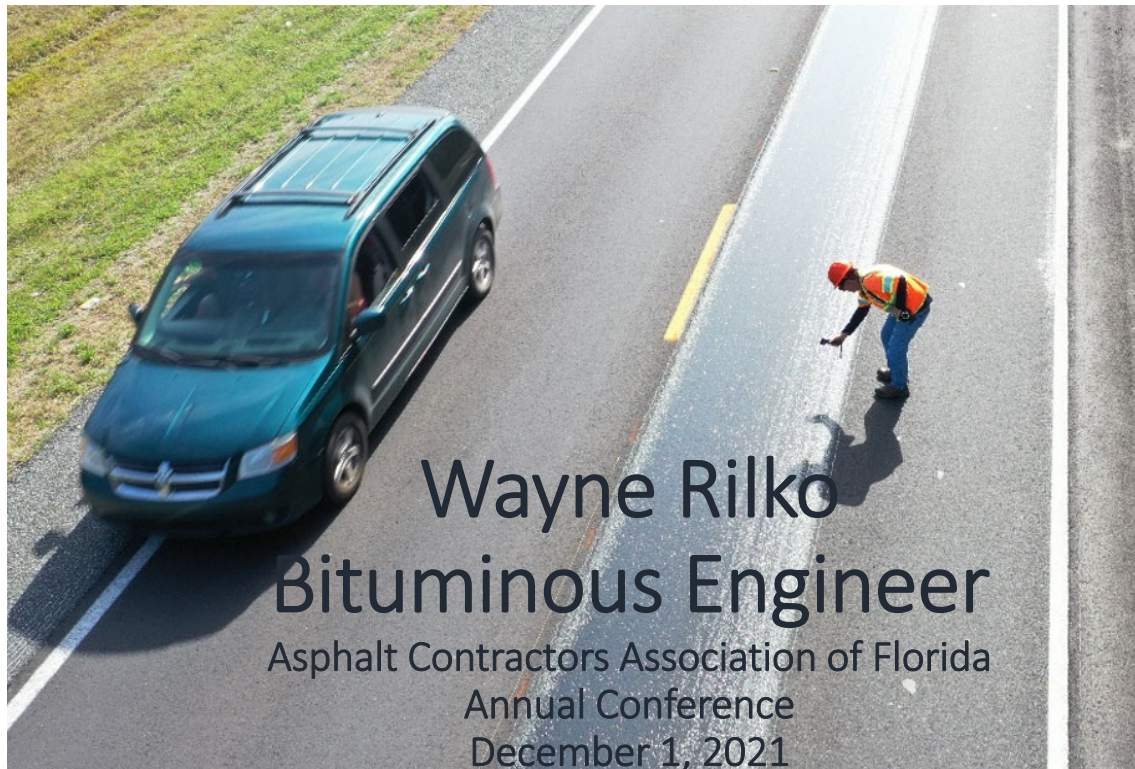


Specification Update 2021



Major Specification Changes

January 2021 Section 234

Allow Type SP-19.0 mixtures as Asphalt Base.

Layer thickness 2" to 4" for SP-19.0

January 2021 Section 334

Density testing for acceptance will not be performed on ...

any asphalt layer placed on subgrade except if the layer thickness is greater than 3 inches or is a Type SP-19.0 mixture (regardless of thickness).

Major Specification Changes

January 2021 Section 334

Continuous RAP stockpiles. Create a new stockpile if the added material exceeds the allowable limits.

Allowable Ranges for Continuous RAP Stockpile Properties	
Characteristic	Limit from Original Approved Stockpile Gradation
No. 8 sieve and coarser	$\pm 6.0\%$
No. 16 sieve	$\pm 5.0\%$
No. 30 sieve	$\pm 5.0\%$
No. 50 sieve	$\pm 4.0\%$
No. 100 sieve	$\pm 3.0\%$
No. 200 sieve	$\pm 2.0\%$
Gmm	± 0.040

Major Specification Changes

January 2021 Section 334

If the first IV test and the Contractor's test do not compare and the first and second IV tests do not compare, yet all three test results do not meet the Master Production Range, address any material in accordance with Defective Materials.

Major Specification Changes

January 2021 Section 334

Obtain an asphalt binder sample and a corresponding asphalt mixture sample utilizing binder from the same storage tank.

The asphalt binder and the asphalt binder recovered from the asphalt mixture will be tested by the Department.

Major Specification Changes

January 2021 Section 334

More than 20% RAP in **structural** courses with PG 76-22 asphalt binder.

Allowable RAP Percentages ¹ in Structural Mixtures with PG 76-22 Asphalt Binder				
		Coarse RAP	Intermediate RAP	Fine RAP
Gradation % Passing #16 Sieve ²		≤ 40%	> 40% to ≤ 50%	> 50%
PG _{HT} ³ > 100.0° C	Allowable RAP Percentage	≤ 25%	≤ 20%	≤ 20%
PG _{HT} ³ ≤ 100.0° C		≤ 30%	≤ 25%	
Notes:				
1. RAP aggregate by weight of total aggregate or RAP binder by weight of total binder.				
2. RAP gradations based on ignition oven extraction of RAP material in accordance with FM 5-563.				
3. PG _{HT} : asphalt binder high temperature continuous performance grade of RAP in accordance with Section 916.				

RAP percentage in dense-graded friction courses remains at a maximum of 20%.

Major Specification Changes

July 2021 Section 334

Add acceptance testing exceptions.

Density testing for acceptance will not be performed on ...

- raised crosswalks
 - speed tables
 - unsignalized side streets with less than four travel lanes and speed limits less than 35 mph
-

Major Specification Changes

July 2021 Section 334 Density Specification Limits

Specification Limits	
Quality Characteristic	Specification Limits
Passing No. 8 sieve (percent)	Target ± 3.1
Passing No. 200 sieve (percent)	Target ± 1.0
Asphalt Content (percent)	Target ± 0.40
Air Voids (percent)	4.00 ± 1.20
Density, vibratory mode (percent of G_{mm}):	$93.00 + \del{3.00} 4.00, - 1.20$
Density, static mode (percent of G_{mm}):	$92.00 + \del{4.00} 5.00, - 1.50^{(1)}$
(1): No vibratory mode in the vertical direction will be allowed. Other vibratory modes will be allowed, if approved by the Engineer.	

Major Specification Changes

July 2021 Section 334 Density Small Quantity Pay Table

Small Quantity Pay Table		
Pay Factor	1 Sublot Test Deviation	2 Sublot Test Average Deviation
Density ⁽¹⁾ Target = 93.00 percent of G _{mm}		
1.05	+ (0.00-2.00) (0.00-3.50), - (0.00-0.50)	+ (0.00-1.40) (0.00-3.25), - (0.00-0.35)
1.00	+ (2.01-3.00) (3.51-4.50), - (0.51-1.00)	+ (1.41-2.10) (3.26-4.25), - (0.36-0.71)
0.95	+ (3.01-3.50) (4.51-5.00), - (1.01-2.00)	+ (2.11-2.80) (4.26-4.75), - (0.72-1.41)
0.90	+ (3.51-4.00) (5.01-5.50), - (2.01-3.00)	+ (2.81-3.50) (4.76-5.25), - (1.42-2.12)
0.80	+ (>4.00) (>5.50), - (>3.00)	+ (>3.50) (>5.25), - (>2.12)
Density ⁽¹⁾ Target = 92.00 percent of G _{mm}		
1.05	+ (0.00-4.50), - (0.00-0.50)	+ (0.00-4.25), - (0.00-0.35)
1.00	+ (4.51-5.50), - (0.51-1.00)	+ (4.26-5.25), - (0.36-0.71)
0.95	+ (5.51-6.00), - (1.01-1.50)	+ (5.26-5.75), - (0.72-1.41)
0.90	+ (6.01-6.50), - (1.51-2.00)	+ (5.76-6.25), - (1.42-2.12)
0.80	+ (>6.50), - (>2.00)	+ (>6.25), - (>2.12)

Major Specification Changes

July 2021 Section 337 FC-5

Hydrated Lime: Add 1.0% by weight to mixes containing granite or granitic gneiss from Georgia or Alabama. Add 1.5% by weight to mixes containing any amount of granite from Nova Scotia.

Liquid Anti-Strip Additive: Use a liquid anti-strip additive at the approved dosage rate as indicated on the APL for all mixtures. ~~containing limestone aggregate.~~

Major Specification Changes

January 2022 Section 300

Tack Coat Application Rates

Tack Coat Application Rates		
Asphalt Mixture Type	Underlying Pavement Surface	Target Tack Rate (gal/yd ²) ¹
Base Course, Structural Course, Dense-Graded Friction Course, Open-Graded Friction Course	Newly Constructed Asphalt Layers	0.06
	Milled Asphalt Pavement Surface, Oxidized and Cracked Asphalt Pavement, Concrete Pavement	0.09
Note 1: Target tack application rates greater than those specified may be used upon approval of the Engineer.		

Major Specification Changes

January 2022 Section 300

Prime Coat, Tack Coat, and Equipment

A trailer-mounted pressure distributor can be used for non-mainline applications, if approved by the Engineer.

A copy of the Bill of Lading representing the prime coat or tack coat material in the distributor tank must be in the truck or available at all times.

What is actually in the tank?

Shipment and production data.

Major Specification Changes

January 2022 Section 334

Mix Designs for only three traffic levels.

No TL-A or TL-D.

Gyratory Compaction Requirements	
Traffic Level	N _{design} Number of Gyrations
A	50
B	65
C	75
D	100
E	100

Major Specification Changes

January 2022 Section 916 Tack Sampling

- Sample tack from the distributor, once per project per product. Tested by the Department.
 - Failing test results:
 - Not to be used on Department projects.
 - May require three 6" diameter roadway cores from the day of production.
 - Tested for bond strength.
 - Individual bond strength results less than 80 psi will require removal and replacement.
 - May result in bond strength testing in additional areas with failing tack material.
-
-

Major Specification Changes

July 2022 (proposed) Section 300

Curing and Time of Application: When using a distributor, apply tack coat sufficiently in advance of placing the mix to permit drying but not so far in advance that it might lose its adhesiveness as a result of being covered with dust or other foreign material. When using a spray paver, the requirements above do not apply.

Major Specification Changes

July 2022 (proposed) Section 330

Maximum temperature of 355°F for any load of mixture containing PG 76-22 PMA or High Polymer binder, regardless of the target mixing or compaction temperatures.

Major Specification Changes

July 2022 (proposed) Section 334

Defective Material

PC test results which did not compare with verified IV test results shall not be used for engineering analysis or delineation.

Additional PC samples obtained in the same work shift shall include enough material for three complete sets of tests in the event the Contractor requests using the PC test results for engineering analysis or delineation.

Major Specification Changes

July 2022 (proposed) Section 337

Fiber and Hydrated Lime Supply Systems: Provide flow indicators or sensing devices, interlocked with plant controls so that ~~the mixture production will be interrupted~~ an alarm will be activated if fiber or lime introduction fails. Stop production of the asphalt mixture. Resume production once the supply system is operating correctly.

Major Specification Changes

July 2022 (proposed) Section 337

Up to a 1.05 Pay Factor for small quantities of open-graded friction course (FC-5).

See next slide.

Major Specification Changes

Small Quantity Pay Table for FC-5		
Pay Factor	1-Test Deviation	2-Test Average Deviation
Asphalt Binder Content (%)		
1.05	0.00-0.25	0.00-0.18
1.00	0.26-0.50	0.19-0.35
0.90	0.51-0.60	0.36-0.42
0.80	>0.60	>0.42
3/8 inch Sieve (%)		
1.05	0.00-3.25	0.00-2.30
1.00	3.26-6.50	2.31-4.60
0.90	6.51-7.50	4.61-5.30
0.80	>7.50	>5.30
No. 4 Sieve (%)		
1.05	0.00-2.50	0.00-1.77
1.00	2.51-5.00	1.78-3.54
0.90	5.01-6.00	3.55-4.24
0.80	>6.00	>4.24
No. 8 Sieve (%)		
1.05	0.00-1.50	0.00-1.06
1.00	1.51-3.00	1.07-2.12
0.90	3.01-3.50	2.13-2.47
0.80	>3.50	>2.47

Major (Non-Specification) Change

Mid-2022

Thanks for the memories!
