Pre-Meeting Packet & Supplementary Material

For the Specification Committee of the Asphalt Contractors Association of Florida, Inc

July 23rd, 2021, 10:00 am

303 West Landstreet Rd
Orlando, FL 32824

Virtual Teams Link: Click here to join the meeting

ACAF
Asphalt Contractors Association Of Florida, Inc.

ingevity

ANTI-TRUST POLICY OF THE ASPHALT CONTRACTORS ASSOCIATION OF FLORIDA, INC

The antitrust laws seek to preserve a free competitive economy in the United States and in commerce with foreign countries. As a general rule, competitors may not restrain competition among themselves through understandings or agreements as to the price, the production, or the distribution of their products or services, or other agreements which unreasonably restrict competition. With some exceptions, competitors may not act in concert to restrict the competitive capabilities or opportunities of their competitors, their suppliers, or their customers.

The antitrust laws, however, are often of unclear applicability, and in certain circumstances unlawful agreements can be inferred from circumstantial evidence. Furthermore, penalties for violating the antitrust laws are severe. The guidelines set forth below are designed to avoid even the appearance of questionable activity by the Association and its members.

ACAF through its meeting activities brings together representatives of competitors throughout the industry. The subject matters of ACAF's activities are technical or educational in nature. Nevertheless, ACAF's Board of Directors recognizes the remote possibility that the Association and its activities can be abused and be seen by those unaware of or determined to violate the law as providing an opportunity for anticompetitive conduct. Through this statement of policy, the ACAF Board reiterates its unequivocal support for the policy of competition served by the antitrust laws and uncompromising intent as individual companies and as an Association to comply strictly in all respects with those laws governing competitive activities.

At all meetings of the Asphalt Contractors Association of Florida's Board of Directors and committees, as well as all association-sponsored seminars, conferences, webinars and task force and working group sessions and among Association members, the following will not be discussed:

- Individual company prices, price changes, price differentials, markups, discounts, credit terms, etc.
- Individual company data on costs, production, capacity, inventories, sales, labor, supplies, etc.
- Agreements on terms of sale, warranties, or contract provisions.
- What constitutes a "fair profit level."
- Standardization or stabilization of prices.
- Pricing procedures or formulas.
- Confidential future marketing or pricing plans.
- Control of sales.
- Allocation of customers or geographic division of markets – agreements not to compete.
- Refusal to deal with a company because of its pricing or distribution practices.

- Whether or not the pricing practices of any industry member are unethical or constitute an unfair trade practice.
- Information concerning any individual company's costs, profits, inventory, market share, or other commercial information of a non-public nature.

Notwithstanding the prohibitions on certain cooperation between competitors described above, Association members may be immunized from antitrust liability when they cooperate to influence governmental action, such as joint legislative or regulatory initiatives. It should be viewed as very limited permission to influence jointly any branch of the government. It is important to remember that the doctrine immunizes cooperating competitors from liability only from any harm to competition that is caused by the resulting governmental action. It does not immunize competitors who behave or share information improperly at any time, even if they are doing so in the course of influencing law- or policymakers. For example, competitors may not share future pricing moves with each other in preparation for an effort to convince a lawmaking body to set a price floor for an industry.

Further, if the Association embarks on the development of specific product standards or a code of ethics for its members or the compilation of industry statistics, such activities shall be developed and conducted in a manner consistent with applicable antitrust laws with the prior approval of the Board of Directors of the Association and advice of counsel. To avoid even the appearance of questionable activity, as well as to guard against inadvertent conduct, Association meetings should observe the following guidelines and procedures:

- A written agenda will be prepared and adhered to.
- Accurate minutes of every meeting will be prepared and approved.
- Minutes of the meeting will be distributed to all committee members.
- In case of doubt about the propriety of a discussion, or a particular topic of discussion, Association counsel will be consulted.
- If a member has a reservation concerning remarks or discussion at an Association meeting, that member should state the reservation.

Revised March 2020

CONFLICT OF INTEREST POLICY

Article I. Purpose

The purpose of a conflict-of-interest policy is to protect the Association's interest when it is contemplating entering into a transaction or arrangement that might benefit the private interest of one of its officers or directors, or might result in a possible excess benefit transaction. This policy is intended to supplement, but not replace, any applicable state and federal laws governing conflicts of interest.

Article II. Definitions

1. Interested Person

An Interested Person is any director, principal officer, or member of a committee with governing board-delegated powers who has a direct or indirect Financial Interest, as defined below.

2. Financial Interest

A person has a Financial Interest if the individual has, directly or indirectly, any actual or potential ownership, investment, or compensation arrangement with the Asphalt Contractors Association of Florida, Inc or with any entity that conducts transactions with the Asphalt Contractors Association of Florida, Inc.

A Financial Interest is not necessarily a conflict of interest in all cases. Under Article III, Section 2 of IRS Form 1023, a person with a Financial Interest may have a conflict of interest only if the appropriate governing board or committee decides that a conflict of interest exists.

Article III. Procedures

1. Duty to disclose

In connection with any actual or possible conflict of interest, an Interested Person must disclose the existence of the Financial Interest and be given the opportunity to disclose all material facts to the directors and members of the committees with governing board-delegated powers considering the proposed transaction

or arrangement. In an effort to aid such disclosure, each member (board, committee, or staff) shall complete a conflict-of-interest questionnaire as circumstances warrant, but no less frequently than annually.

2. Determining whether a conflict of interest exists

The board shall review each member questionnaire and any other disclosures regarding the Financial Interests of its members and vote on whether a conflict of interest exists.

3. Procedures for addressing the conflict of interest

After exercising due diligence, the governing board or committee shall determine whether the organization can obtain with reasonable effort a more advantageous transaction or arrangement from a person or entity that would not produce a conflict of interest.

If an alternative transaction or arrangement is not possible, the governing board or committee shall determine by a majority vote of the disinterested directors whether the transaction or arrangement is in the best interests of the organization, for its own benefit, and fair and reasonable. Based on these determinations, the board or committee shall make its decision on whether to enter into the transaction or arrangement.

4. Disciplinary action

If the committee has reason to believe an individual has failed to disclose actual or potential conflicts of interest, it will inform the member and allow him/her to explain the alleged failure to disclose. If the committee still has reason to believe a conflict of interest exists after the alleged conflict is explained, it will take corrective action.

CONFLICT-OF-INTEREST QUESTIONNAIRE

The following questionnaire must be completed annually by all members and affiliates of Asphalt Contractors Association of Florida, Inc. Answers to this questionnaire should relate to relationships that occur from 1 September 2020 through 31 August 2021. Once you have completed this questionnaire, please sign and date in the space provided and return it to:

Mark Musselman
Asphalt Contractors
Association of Florida, Inc

1007 E. Desoto Park Drive
(850)222-7300
acaf@acaf.org

1. Are you an officer of an organization that conducts business or has a relationship with the Asphalt Contractors Association of Florida, Inc other than through the normal business of the Association?

   Yes No

   If yes, please define.

2. Have you ever served on the board of a business in which the Asphalt Contractors Association of Florida, Inc invests?

   Yes No

   If yes, please define.

3. Do you have a family relationship with anyone who has a noted relationship with the Asphalt Contractors Association of Florida, Inc? Family connections include an individual's spouse, parent, child, grandparent, grandchild, great-grandchild, and sibling. The spouses of any children, grandchildren, great-grandchildren, and siblings are considered family relationships as well.

   Yes No

   If yes, please define.

4. Have you participated, directly or indirectly, in any employment agreement, compensation relationship, or any other arrangement/investment opportunity with a third-party vendor doing

business with the Asphalt Contractors Association of Florida, Inc that has resulted or could result in personal benefit to you?

Yes No

If yes, please define.

5. Have you received, directly or indirectly, any salary payments, loans, or gifts of any kind or any free service, discounts, or other fees from any person/organization engaged in any transaction with the Asphalt Contractors Association of Florida, Inc?

Yes No

If yes, please define.

6. Do you share ownership of a business that does business with the Asphalt Contractors Association of Florida, Inc? Ownership means voting power in a corporation, profits interest in a partnership, or beneficial interest in a trust.

Yes No

If yes, please define.

Signature_____ Date_____

Print name_____

Name	Email	Contact Phone
David Allain	dallain@acaf.org	(205) 616-8758
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Mike Curle	mcurle@ajaxpaving.com	(813) 394-1760
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Renato Reis	Renato.Reis@rangerconstruction.com	(772) 215-8096
Chris Riley	criley@cwrcontracting.com	(850) 527-4126
William Whitehurst	william@vewhitehurst.com	(352) 538-7530
Mike Woodford	Mikew@vewhitehurst.com	N/A

SUPPLEMENTAL MATERIAL

23 JULY 2021 SPECIFICATION COMMITTEE AGENDA

Fri July 23rd, 2021

10:00am - 2:30pm EDT

1. Call to Order, Tim Carter - Chair

2. Recognition of Anti-Trust Policy

3. Recognition of Conflict-of-Interest Policy

4. Approval of Pre-Meeting Packet

5. New Business

    1. Industry Review Specifications pertaining to Asphalt

    2. Asphalt/Earthwork Contract Issues/Development

    3. QC Manager Submitted Recommendations

6. Lunch and learn provided by Ingenvity – Matthew Lachance, Technical Marketing Manager

7. Teams discussion with Howie Moseley – State Bituminous Materials Engineer; Richard Hewitt – State Construction Pavement Engineer

8. Adjournment

Industry Review Specifications (3rd June 2021)

SUPERPAVE ASPHALT BASE - 2340100
(REV 5-13-21)

ARTICLE 234-1 is deleted and the following substituted:

234-1 Description.
Construct a Superpave asphalt concrete base course as defined in these Specifications. Base course mixes are designated as Type B-12.5. The Contractor may use a Type SP-12.5 mixture (Traffic Level B, C, ~~D,~~ or E) or a Type SP-19.0 mixture (Traffic Level B, C, ~~D,~~ or E), in lieu of a Type B-12.5.

Obtain Superpave asphalt base from a plant that is currently on the Department's Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105.

PRIME AND TACK COATS. - 3000100
(REV 5-25-21)

ARTICLE 300-1 is deleted and the following substituted:

300-1 Description.
Apply bituminous prime coats on previously prepared bases, and apply bituminous tack coats on previously prepared bases and on existing pavement surfaces.

SUBARTICLE 300-8.4 is deleted and the following substituted:

~~Table 300-2~~
~~Tack Coat Application Rates~~

~~Asphalt Mixture Type~~	~~Underlying Pavement Surface~~	~~Target Tack Rate (gal/yd^2)~~
~~Base Course, Structural Course, Dense Graded Friction Course~~	~~Newly Constructed Asphalt Layers~~	~~0.05 minimum~~
	~~Milled Surface or Oxidized and Cracked Pavement~~	~~0.07~~
	~~Concrete Pavement~~	~~0.09~~
~~Open Graded Friction Course~~	~~Newly Constructed Asphalt Layers~~	~~0.06~~
	~~Milled Surface~~	~~0.08~~

Table 300-2
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.

When using a meter to control the tack or prime application rate, manually measure the volume in the tank at the beginning and end of the application area for a specific target application rate. Perform this operation at a minimum frequency of once per production shift. Resolve any differences between the manually measured method and the meter to ensure the target application rate is met in accordance with this Section. Adjust the application rate if the manually measured application rate is greater than plus 0.02 or minus 0.01 gallons per square yard when compared to the target application rate.

PRIME AND TACK COATS. - 3000201
(REV 5-3-21)

SUBARTICLE 300-2.1 is deleted and the following substituted:

300-2 Materials.

300-2.1 Prime Coat: For prime coat, use a product listed on the Department's Approved Product List (APL), meeting the requirements of 916-3, or other types and grades of bituminous material if specified in the Contract Documents. A copy of the Bill of Lading representing the material in the distributor tank must be in the truck and be always available.
Where prime coats are to be diluted, certify the dilution was done in accordance with the specific dilution requirements for each product and for each load of material used.
The Contractor may select any approved prime coat unless the Contract Documents indicate the use of a specific material. The Engineer may allow types and grades of bituminous material other than those specified above if the Contractor can show the alternate material will properly perform the function of prime coat material.

SUBARTICLE 300-2.3 is deleted and the following substituted:

300-2.3 Tack Coat: Unless the Contract Documents call for a specific type or grade of tack coat, use PG 52-28 meeting the requirements of 916-2, heated to a temperature from 250 to 300°F or use an undiluted emulsion listed on the APL, meeting the requirements of 916-3. Heat the emulsion to the temperature recommended by the tack coat manufacturer. A copy of the Bill of Lading representing the material in the distributor tank must be in the truck and be always available.
For night paving, use PG 52-28 tack coat. The Engineer may approve an emulsified tack coat for night paving if the Contractor demonstrates, at the time of use, the emulsion will break and not affect the progress of the paving operation.

SUBARTICLE 300-3.1 is delete and the following substituted:

300-3 Equipment.

300-3.1 Pressure Distributor: Provide a pressure distributor equipped with pneumatic tires having a sufficient width of rubber in contact with the road surface to avoid breaking the bond or forming a rut in the surface. Ensure the distance between the centers of openings of the outside nozzles of the spray bar is equal to the width of the application required, plus or minus two inches. Ensure the outside nozzle at each end of the spray bar has an area of opening not less than 25% or more than 75% in excess of the other nozzles. Ensure all other nozzles have uniform openings. When the application covers less than the full width, the Contractor may allow the normal opening of the end nozzle at the junction line to remain the same as the interior nozzles. A trailer-mounted pressure distributor can be used for non-mainline applications, if approved by the Engineer. It shall have a self-contained heat system, clean out system, calibration chart, manhole, and shall meet the requirements herein.

Clean the distributor tank at a minimum of every twelve months and whenever the product type in the tank is changed. Remove all emulsion and asphalt material during cleaning. Additionally, clean the distributor tank if the quality of the tack or prime shot diminishes or buildup causes the calibration of the tank to be affected.

300-3.2 Sampling Device: Equip all pressure distributors and transport tanks with an approved spigot-type sampling device.

300-3.3 Temperature Sensing Device: Equip all pressure distributors and transport tanks with an approved dial type thermometer.
Use a thermometer with a temperature range from 50 to 500ºF, no greater than 25ºF increments, and a minimum dial diameter of two inches.

Locate the thermometer near the midpoint of the tank's length and within the middle third of the tank's height, or as specified by the manufacturer (if in a safe and easily accessible location).
Enclose the thermometer in a well with a protective window or by other means as necessary to keep the instrument clean and in the proper working condition.

HOT MIX ASPHALT GENERAL CONSTRUCTION REQUIREMENTS. - 3300701
(REV 5-3-21)

SUBARTICLE 330-7.1 is deleted and the following substituted:

330-7 Compacting Mixture.

330-7.1 General Requirements: When density testing for acceptance is required, select equipment, sequence, and coverages ~~(number of times the roller passes over a given area of pavement)~~ of rolling to meet the specified density requirement. Regardless of the rolling procedure used, complete the final rolling before the surface temperature of the pavement drops to the extent effective compaction may not be achieved or the rollers begin to damage the pavement.

No vibratory compaction in the vertical direction will be allowed for layers one inch or less in thickness or, if the Engineer or Contract Documents limit compaction to the static mode only. Compact these layers in the static mode only. Other non-vertical vibratory modes of compaction will be allowed, if approved by the Engineer; however, no additional compensation, cost or time, will be made.

SUPERPAVE ASPHALT CONCRETE - 3340104
(REV 5-13-21)

SUBARTICLE 334-1.4.1 is deleted and the following substituted:

334-1.4.1 Layer Thicknesses: The allowable layer thicknesses for Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....1 to 1-1/2 inches
Type SP-12.5.....1-1/2 to 3 inches
Type SP-19.0..... 2 to 4 inches

In addition to the minimum and maximum thickness requirements, the following restrictions are placed on mixes when used as a structural course:

Type SP-9.5 - Limited to the top two structural layers, two layers maximum.
Type SP-9.5 - Do not use on Traffic Level ~~D and~~ E applications.
Type SP-19.0 - Do not use in the final (top) structural layer below FC-5 mixtures. Type SP-19.0 mixtures are permissible in the layer directly below FC-9.5 and FC-12.5 mixtures. Do not use in the final (top) layer of shoulders.

SUBARTICLE 334-3.2.1 is deleted and the following substituted:

334-3.2 Mix Design:
334-3.2.1 General: Design the asphalt mixture in accordance with AASHTO R 35-17, except as noted herein. Prior to the production of any asphalt mixture, submit the proposed mix design with supporting test data indicating compliance with all mix design criteria to the Engineer. For all mix designs, include representative samples of all component materials, including asphalt binder. Allow the Director of the Office of Materials a maximum of four weeks to either conditionally verify or reject the mix as designed.
~~For a Traffic Level A mixture, meet the mix design criteria for a Traffic Level B mixture and for a Traffic Level D mixture meet the mix design criteria for a Traffic Level E mixture.~~
At no additional cost to the Department, for a Type SP mix the following Traffic Level substitutions are allowed:
~~Traffic Level E can be substituted for Traffic Level D.~~
Traffic Level ~~D or~~ E can be substituted for Traffic Level C.
Traffic Level C can be substituted for Traffic Level B.
~~Traffic Level B or C can be substituted for Traffic Level A.~~

The same traffic level and binder type that is used for the mainline traffic lanes may be placed in the shoulder at no additional cost to the Department, even if the conditions stated above are not met for the shoulder.

Do not use more than four mix designs per nominal maximum aggregate size per traffic level per binder grade per year, where the year starts at the Notice to Proceed. Exceeding this limitation will result in a maximum Composite Pay Factor (CPF) of 1.00 as defined in 334-8.2 for all designs used beyond this limit.

Warm mix technologies (additives, foaming techniques, etc.) listed on the Department's website may be used in the production of the mix. The URL for obtaining this information, if available, is:
https://www.fdot.gov/materials/mac/production/warmmixasphalt/.
When warm mix technologies are used, for mixtures containing a PG 52-28, PG 58-22, or PG 67-22 binder, a mixture will be considered a warm mix asphalt design if the mixing temperature is 285°F or less. For

mixtures containing a PG 76-22 or High Polymer binder, a mixture will be considered a warm mix asphalt design if the mixing temperature is 305°F or less.
The Engineer will consider any marked variations from original test data for a mix design or any evidence of inadequate field performance of a mix design as sufficient evidence that the properties of the mix design have changed, and the Engineer will no longer allow the use of the mix design.

SUBARTICLE 334-3.2.3 is deleted and the following substituted:

334-3.2.3 Aggregate Consensus Properties: For Traffic Level C and~~through~~ E mixtures, meet the following consensus properties at design for the aggregate blend.
Aggregate consensus properties do not apply to Traffic Level ~~A and~~ B mixtures.

SUBARTICLE 334-3.2.3.2 is deleted and the following substituted:

334-3.2.3.2 Fine Aggregate Angularity: When tested in accordance with AASHTO T 304-17 (2020), Method A, meet the uncompacted void content of fine aggregate specified in AASHTO M 323-17, Table 6.

SUBARTICLE 334-3.2.4 is deleted and the following substituted:

334-3.2.4 Gyratory Compaction: Compact the design mixture in accordance with AASHTO T 312-19, with the following exception: use the number of gyrations at N_{design} as defined in Table 334-4. Measure the inside diameter of gyratory molds in accordance with AASHTO T 312-19.

Table 334-4
Gyratory Compaction Requirements

Traffic Level	N_{design} Number of Gyrations
~~A~~	~~50~~
B	65
C	75
~~D~~	~~100~~
E	100

SUBARTICLE 334-3.3 is deleted and the following substituted:

334-3.3 Mix Design Revisions: During production, the Contractor may request a target value revision to a mix design, subject to meeting the following requirements: the target change falls within the limits defined in Table 334-5, appropriate data exists demonstrating that the mix complies with production air voids specification criteria, and the mixture gradation meets the basic gradation requirements defined in 334-3.2.2.

Table 334-5 Limits for Potential Adjustments to Mix Design Target Values	
Characteristic	Limit from Original Mix Design
Asphalt Binder Content (1)	±0.3%
Gradation and Aggregate Component (2)	
No. 8 sieve and Coarser	± 5.0%
No. 16 sieve	± 4.0%
No. 30 sieve	± 4.0%
No. 50 sieve	± 3.0%
No. 100 sieve	± 3.0%
No. 200 sieve	± 1.0%
~~Asphalt Binder Content (1)~~	~~± 0.3%~~
Each Component of Aggregate Blend (2)	± 5.0 %

(1) Reductions to the asphalt binder content will not be permitted if the VMA during production is lower than 1.0% below the design criteria.
(2) The Engineer may waive the limits for the individual sieves and component of the aggregate blend contingent upon the quality of the production data for the mixture.
(2) Revisions to FC-5 mixtures to be determined by the Engineer.

Submit all requests for revisions to mix designs, along with supporting documentation, to the Engineer. In order to expedite the revision process, the request for revision or discussions on the possibility of a revision may be made verbally, but must be followed up by a written request. The verified mix design will remain in effect until the Engineer authorizes a change. In no case will the effective date of the revision be established earlier than the date of the first communication between the Contractor and the Engineer regarding the revision.

A new design mix will be required if aggregate sources change, or for any substitution of an aggregate product with a different aggregate code, unless approved by the Engineer.

SUBARTICLE 334-3.2.6 is deleted and the following substituted:

334-3.2.6 Moisture Susceptibility:
1. For all traffic levels, use a liquid anti-strip agent listed on the APL at the specified dosage rate. Hydrated lime may be used instead of the liquid anti-strip agent.
2. Provide a mixture having a retained tensile strength ratio of at least 0.80 and a minimum tensile strength (unconditioned) of 100 psi in accordance with FM1-T 283.
~~Provide a mixture having a retained tensile strength ratio of at least 0.80 and a minimum tensile strength (unconditioned) of 100 psi.~~

SUBARTICLE 334-5.1.1 is deleted and the following substituted:

334-5.1.1 Sampling and Testing Requirements: Obtain the samples in accordance with FM 1-T 168. Obtain samples at the plant of a sufficient quantity to be split into three smaller samples; one for QC, one for Verification testing and one for Resolution testing. Obtain each split sample of a sufficient quantity, approximately 40 pounds, for all required testing. The split samples for Verification testing and Resolution testing shall be reduced in size and stored in three boxes each. The approximate size of each box must be 12 inches x 8 inches x 4 inches. Provide, label, and safely store sample boxes in a manner agreed upon by the Engineer for future testing.

The asphalt content of the mixture will be determined in accordance with FM 5-563. The gradation of the recovered aggregate will be determined in accordance with FM 1-T 030. Volumetric testing will be in accordance with AASHTO T 312-19and FM 1-T 209. Prior to testing volumetric samples, condition the test-sized sample for one hour, plus or minus five minutes, at the target roadway compaction temperature in a shallow, flat pan, such that the mixture temperature at the end of the one hour conditioning period is within plus or minus 20°F of the roadway compaction temperature.

If one of the QC gyratory specimens is damaged, make an additional gyratory specimen.

For situations where two properly prepared gyratory specimens do not meet single-operator precision requirements for G_{mb} as provided in FM 1-T 166:

1. Retest both gyratory specimens in accordance FM 1-T 166.
2. Following the retest, if the newly measured G_{mb} values do not meet single-operator precision requirements, QC shall prepare a third gyratory specimen in accordance with AASHTO T 312-19 and test in accordance with FM 1-T 166. All three test results shall be input into MAC. The average G_{mb} will be determined by MAC after performing an outlier check in accordance with ASTM E178-16a.

Test for roadway density in accordance with FM 1-T 166.

SUBSRTICLE 334-8.2.3 is deleted and the following substituted:

334-8.2.3 Three or More Sublot Test Results: When three or more sublot test results are available for a LOT, the variability-unknown, standard deviation method will be used to determine the estimated percentage of the LOT that is within the specification limits. The number of significant figures used in the calculations will be in accordance with requirements of AASHTO R11-06/ASTM E29-13 (2019), Absolute Method.

SUPERPAVE ASPHALT CONCRETE. – SP3340203
(REV 5-4-21)

SUBARTICLE 334-2.3.4 is deleted and the following substituted:

334-2.3.4 Pavement Coring Report: ~~When the Contract includes milling of the existing asphalt pavement, the Pavement Coring Report may be available on the Department's website.~~ This Contract includes removal and/or milling of the existing asphalt pavement. The Pavement Coring Report is available on the Department's website at the following URL:

https://www.fdot.gov/materials/pavement/coringdata/default.shtm

ASPHALT CONCRETE CURB
(REV 5-13-21)

ARTICLE 525-2 is deleted and the following substituted:

525-2 Materials.
Use a Type SP-12.5 (Traffic Level ~~A,~~ B~~,~~ or C) asphalt concrete mixture.

Industry Review Specifications (10th June 2021)

BITUMINOUS MATERIALS.
(REV 5-3-21)

SUBARTICLE 916-2.1 is deleted and the following substituted:

916-2 Superpave PG Asphalt Binder:.

916-2.1 Requirements: Superpave Performance Graded (PG) asphalt binders, identified as PG 52-28, PG 58-22, PG 67-22, polymer modified asphalt (PMA) binders, PG 76-22 (PMA) and High Polymer, and asphalt rubber binders (ARB), PG 76-22 (ARB), shall meet the requirements of 916-2 and AASHTO M 332-~~19~~20. When the Contract Documents specify either a PG 76-22 (PMA), PG 76-22 (ARB), or PG 76-22 binder, either binder can be used interchangeably at no additional cost to the Department. All PG asphalt binders shall meet the following additional requirements:

1. The intermediate test temperature at 10 rad/sec. for the Dynamic Shear Rheometer (DSR) test (AASHTO T 315-~~19~~20 shall be 26.5°C for PG grades PG 67 and higher.
2. An additional high temperature grade of PG 67 is added for which the high test temperature at 10 rad/sec for the DSR test (AASHTO T 315-~~19~~20 shall be 67°C.
3. All PG asphalt binders having a high temperature designation of PG 67 or lower shall be prepared without modification.
4. All PMA binders having a high temperature designation higher than PG 67 shall only be produced with a styrene-butadiene-styrene (SBS) or styrene-butadiene (SB) elastomeric polymer modifier and the resultant binder shall meet all requirements of this Section.
5. Polyphosphoric acid may be used as a modifier not exceeding 0.75% by weight of asphalt binder for PG 76-22 (PMA) and PG 76-22 (ARB) binders. Polyphosphoric acid may not be used in High Polymer binder.
6. PG 76-22 (ARB) shall meet the additional requirements of 916-2.1.1.
7. All PG asphalt binders having a high temperature designation of PG 67 or lower shall not have a high temperature true grade more than 5.9°C higher than the specified PG grade, (for example, if a PG 58-22 is specified, do not supply a PG 64-22 or higher).
8. The use of waste oil is prohibited in the modification of any PG binder grade. Waste oil shall be defined as recycled oil products that have not been processed through a vacuum tower and have an initial boiling point of 385°C (725°F) or lower when tested in accordance with ASTM D6352-19.
9. Re-refined engine oil bottoms (REOB)/vacuum tower asphalt extenders (VTAE) may be used as a modifier not exceeding 8.0% by weight of asphalt binder. REOB/VTAE are materials as defined in Asphalt Institute document IS-235.

For all PG binder used in all hot mix asphalt, silicone may be added to the PG binder at the rate of 25 cubic centimeters of silicone mixed to each 5,000 gallons of PG binder. If a disbursing fluid is used in conjunction with the silicone, the resultant mixture containing the full 25 cubic centimeters of silicone shall be added in accordance with the manufacturer's recommendation. The blending of the silicone with the PG binder shall be done by the supplier prior to the shipment. When the asphalt binder will be used with a foaming warm mix technology, refer to the technology supplier's guidance on the addition of silicone.

Where an anti-strip additive is required, the anti-strip additive shall meet the requirements of 916-4. The anti-strip additive shall be introduced into the PG binder by the supplier during loading.

916-2.1.1 Additional Requirements for PG 76-22 (ARB): The following additional requirements apply only to PG 76-22 (ARB):

1. The asphalt binder shall contain a minimum of 7.0% ground tire rubber (GTR) by weight of asphalt binder.

2. The GTR shall meet the requirements of Section 919.
3. Polymer modification is optional for PG 76-22 (ARB).

916-2.1.2 High Polymer Binder Blending: Existing high polymer binder may be blended in an asphalt producer's storage tank to make a PG 76-22 binder provided the following requirements are met:

1. Notify the State Materials Office (SMO) and the local District Materials Office prior to blending.
2. Follow the blending instructions of the high polymer binder supplier.
3. Submit a sample of the blended binder to a SMO approved laboratory for testing. Provide test results to the SMO.
4. Use the newly blended binder only after approval from the SMO.

SUBARTICLE 916-2.3 is deleted and the following substituted:

916-2.3 Reporting: Specification compliance testing results shall be reported for the tests in Table 916-1 below, unless noted otherwise. Quality control (QC) testing results shall be reported for original binder DSR (G/sin δ and phase angle, as applicable).

Table 916-1
SUPERPAVE PG ASPHALT BINDER

~~SUPERPAVE PG ASPHALT BINDER~~

Test and Method	Conditions	Specification Minimum/Maximum Value
Superpave PG Asphalt Binder Grade		Report
APL Number		Report
Modifier (name and type)	Polymer, Ground Tire Rubber with Approved Product List (APL) number, Sulfur, PPA, REOB, and any Rejuvenating Agents	Report
Original Binder		
Solubility, AASHTO T 44-14 (2018)	in Trichloroethylene	Minimum 99.0% (Not applicable for PG 76-22 (ARB))
Flash Point, AASHTO T 48-18	Cleveland Open Cup	Minimum 450°F
Rotational Viscosity, AASHTO T 316-19	275°F	Maximum 3 Pa·s[a]

Table 916-1 SUPERPAVE PG ASPHALT BINDER		
Dynamic Shear Rheometer [b], AASHTO T-315-~~19~~20	$G^*/\sin\delta$	Minimum 1.00 kPa
	Phase Angle, δ[c] PG 76-22 (PMA) and PG 76-22 (ARB)[d]	Maximum 75 degrees
Separation Test, ASTM D7173-20 and Softening Point, AASHTO T-53-09 (2018)	163±5°C 48 hours	Maximum 15°F (PG 76-22 (ARB) only)
Rolling Thin Film Oven Test Residue (AASHTO T 240-13 (2017))		
Rolling Thin Film Oven, AASHTO T240-13 (2017)	Mass Change %	Maximum 1.00
Multiple Stress Creep Recovery, $J_{nr,3.2}$ AASHTO T-350-19	Grade Temperature (Unmodified binders only)	"S" = 4.50 kPa^{-1} max
Multiple Stress Creep Recovery, $J_{nr,3.2}$[d, e, f] AASHTO T-350-19	67°C (Modified binders only) 76°C (High Polymer binder only)	"V" = 1.00 kPa^{-1} max Maximum $J_{nr,diff}$ = 75% 0.10 kPa^{-1} max
Multiple Stress Creep Recovery, %Recovery[d, e] AASHTO T-350-19	67°C (Modified binders only) 76°C (High Polymer binder only)	$\%R_{3.2} \geq 29.371\ (J_{nr,3.2})^{-0.2633}$ $\%R_{3.2} \geq 90.0$
Pressure Aging Vessel Residue (AASHTO R-28-12 (2016))		
Dynamic Shear Rheometer, AASHTO T-315-~~19~~20	$G^*\sin\delta$, 10 rad/sec.	~~Maximum 5,000 kPa[g]~~ Maximum 6,000 kPa [g,h]
Creep Stiffness, AASHTO T-313-~~19~~20	S (Stiffness), @ 60 sec. m-value, @ 60 sec.	Maximum 300 MPa Minimum 0.300
ΔTc, ASTM D7643-16	20 hours PAV aging S (Stiffness), @ 60 sec. m-value, @ 60 sec.	$\Delta Tc \geq -5.0°C$

(a) Binders with values higher than 3 Pa·s should be used with caution and only after consulting with the supplier as to any special handling procedures, including pumping capabilities.
(b) Dynamic Shear Rheometer (AASHTO T 315-~~19~~20) shall be performed on original binders for the purposes of QC testing only. The original binder G*/sin δ shall be performed at grade temperature. Grade temperature for High Polymer binder is 76°C.
(c) The original binder phase angle (AASHTO T 315-~~19~~20 shall be performed at grade temperature.
(d) AASHTO T 315-19 and AASHTO T 350-~~19~~20 will be performed at a 2-mm gap for PG 76-22 (ARB).
(e) All binders with a high temperature designation >67 will be tested at 67°C. PG 76-22 (PMA) and PG 76-22 (ARB) shall pass a "V" grade per AASHTO M 332-~~19~~20
(f) A maximum Jnr diff = 75% does not apply for any Jnr value ≤ 0.50 kPa-1.
(g) For 5000 kPa ≤ G*sin δ ≤ ~~PG 67, perform the PAV residue testing at 26.5°C with a maximum of 5~~6,000 kPa, the phase angle, δ, shall be a minimum of 42°.
(h) For PG ~~76~~67 or higher grades, perform the PAV residue testing at 26.5°C ~~with a maximum of 6,000 kPa~~.

SUBARTICLE 916-3.2 is deleted and the following substituted:

916-3.2 Requirements: Use a prime coat meeting the requirements of AASHTO M 140--1820 for anionic emulsions, AASHTO M 208-18 or AASHTO M 316--189 for cationic emulsions, or as specified in the Producer's QC Plan. For anionic emulsions, the cement mixing test will be waived. For tack products, the minimum testing requirements shall include percent residue, naphtha content (as needed), one-day storage stability, sieve test, Saybolt Furol viscosity, original DSR, and solubility (on an annual basis). Residue testing shall be performed on residue obtained from distillation, ~~(~~AASHTO T 59-16~~)~~ or low- -temperature evaporation (AASHTO R 78-16) (2020).

At the direction of the Engineer, sample tack from the distributor used on the project at a minimum frequency of once per project per product. The sample shall be tested by the Department for the following specified material properties: percent residue, contaminants, and the residue property G*/sin δ. Should any of the test results fail the specification requirements, the tack material will be considered defective and shall not to be used on Department projects unless waived by the Engineer. The Engineer may require the Contractor to obtain roadway cores for bond strength testing (FM 5-599).

Asphalt/Earthwork Contract Issues/Development

To be discussed on Friday, July 23rd.

QC Manager Submitted Recommendations

Item 1

One of the things we've discussed here at P&S is the justification for a 100' section (50' each side) for repairs particularly if the repair is for segregation...perhaps we can open up some discussion in just repairing the areas that are affected rather than removing good asphalt...

330-9.5 Unacceptable Pavement:

330-9.5.1 Corrections: Address all areas of unacceptable pavement at no cost to the Department. Retest all corrected areas and assure the requirements of these Specifications are met.

330-9.5.1.1 Structural Layers: Correct all deficiencies, as defined in the Specifications, in the Type SP structural layers by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane.
As an option, for high straightedge deficiencies only, mill the pavement surface the full lane width to a depth and length adequate to remove the deficiency. This option only applies if the structural layer is not the final surface layer.

330-9.5.1.2 Friction Course: Correct deficiencies in the friction course or final surface layer by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane. As an exception, the Engineer may allow the Contractor to leave these areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. A reduction to the pay item quantity will be made in accordance with 330-9.5.2.

Item 2

Section 3.1
DISTRICT MATERIALS ACTIVITIES FOR ASPHALT PAVEMENT CONSTRUCTION

3.1.4.1.1.4 Failing Test Results
In the case of a valid IV failure, review all available information and then contact the QC Manager (or QC technician at the plant), Verification Technician, and the PA. We were not contacted for 5 days of the air void failure. Their results were 2.03 and ours was 2.66. This should be reported within 24 hours. Their procedure should be that Gmm, Gmb is performed first, and results are given within 24 hours of receiving the sample per 3.1.4.1.1.1 Sampling and Testing.

Production operations should then be stopped in accordance with the requirements of FDOT Specifications Sections 334 and 337. (Specifically, DMO personnel should notify the Producer that their asphalt production is out of the specified requirements and the Producer must take immediate action in accordance with their QC Plan to stop production.) However, operations at the plant should not be stopped if there is an obvious assignable cause to the problem that has already been corrected or can be corrected immediately (such as an equipment problem at the plant). In the event that corrective actions have already occurred, review any data that describes what the problem was and how it was resolved. If necessary, take additional samples as soon as possible to verify that the corrective actions taken by the Producer were successful.

Material failures should be handled as follows: Low Air Voids at the Asphalt Plant: If Va is below 2.30%, notify the Producer immediately (define immediately? 5 days later and averages around 3 days per IV sample) and have the production of the mixture stopped (Figure 2).

3.1.4.1 Independent Verification Activities

The purpose of an IV is to independently verify that the quality of the asphalt mixture product meets the Specifications. The project level verification testing is performed on split-samples for the asphalt mixture and the same roadway cores for density; and generally, uses the Asphalt Producer's (herein referred to as the Producer), testing laboratory. The IV test then represents a safeguard to assure that: the asphalt mixture meets the Specifications, the Producer's testing equipment is functioning properly, the QC tests are representative of the material being produced, and that there are no problems occurring within the QAPC system.

3.1.4.1.1.1 Sampling and Testing

The samples should be tested at the DMO laboratory or another accredited/qualified laboratory as approved by the District Materials and Research Engineer (DMRE). Each sample should be tested no later than the following working day and all concerned parties should be notified (including the Producer and/or Contractor) of the results within one working day following the completion of the testing. States it here to be notified and testing completed within one working day. Also, contradicts 3.1.4.1 Independent Verification Activities generally uses the Asphalt Producer's (herein referred to as the Producer), testing laboratory. We are receiving IV sample test results days after their sampling.

3.1.4.4.3 Technical Assistance

DMO personnel are expected to:
1) provide technical assistance to project and Contractor personnel;
2) observe and evaluate all quality related facets of the asphalt production, testing, and paving operations;
3) advise project personnel and the Contractor of any problems that are identified; and
4) recommend corrective action where such actions are deemed necessary for proper Specification compliance. This does not happen and when we provide a corrective action, we will wait over a week to get a response in District 5, so that we may delineate or evaluate.

Low Roadway Density Delineation Procedure

Here is the finalized draft wording that is going to go in the Materials Manual. It has not been approved by the District Materials Engineers or Tim Ruelke, the State Materials Engineer, so we need to consider it as draft language. But it should go through without issue.

"Low roadway density: Evaluate in-place density when the sublot density is below 89.50% Gmm. Lay out all existing core data, including station and offset, for the sublot in question, and if necessary, the adjoining sublots. The pavement should be evaluated from passing density test result to passing density test result, with the low density pavement located between the passing test results. Evaluation of low density material can encompass pavement outside of the sublot in question, but the evaluation limits should not cross outside of the Lot containing the low density material. When determining the limits for evaluation, one item to consider is production days. It is possible the low density could be related to a production issue that occurred on one day but not on other days. Cores should be obtained next to previous core locations which had failing density results (less than 89.50% Gmm). Typically, cores are obtained between the wheel path, especially when the roadway has been open to traffic, but some judgment is needed, as it is possible that the center of the lane had extra compaction due to roller overlap. Utilize the corresponding QC or IV sublot Gmm value in density calculations, depending on the source of the failure. If the Gmm for the failing sublot is itself in question, then the delineation scope should include testing the Gmm of the remaining boxed mix of the sublot or the roadway cores from the area in question. Areas represented by delineation cores with failing density results will be removed and replaced. If all of the delineation cores pass the minimum density requirements, no material would be removed and replaced." Gregory A. Sholar, P.E.

(Haven't seen this in there yet, but definitely needs to be in Materials Manual or the specifications, to clarify a delineation situation.)

Item 3

FDOT Proposed Specification Changes

Section 5 Control of the Work and Section 200 Rock Base

Section 5-3 Conformity of Work with Contract Documents. Perform all work and furnish all materials in reasonably close conformity with the lines, grades, cross-sections, dimensions, and material requirements, including tolerances, as specified in the Contract Documents. For base and surface courses, curb and gutter, the Department will allow the finished grade to vary as much as 0.1 foot .5 inches from the grade shown in the plans, provided that the Contractor's work meets all templates and straightedge requirements and contains suitable transitions. This holds the contractor to .5 inches instead of a 1.2 inch deviation and adds curb and gutter, since the control point is the issue on most widening and reconstruction projects.

200-7.3.1.2 Depth and Surface Testing Requirements:

Grade. The grade and crown shall be measured and shall be within +0 and -1/2 inch of the specified grade. Adding this to the specification for proposed finish grade tolerance.

Cross Slope Deviations and corrections: Measure the cross slope at a minimum frequency of one measurement every 100 feet during paving operations to ensure that the cross slope is uniform and in compliance with the design cross slope. When the difference between the measured cross slope and the design cross slope exceeds ±0.2% for travel lanes (including turn lanes) or ±0.5% for shoulders, make all corrections immediately to bring the cross slope into the acceptable range. When the cross slope is consistently within the acceptable range, upon the approval of the Engineer, the frequency of the cross- slope measurements can be reduced to one measurement every 250 feet during paving operations. Adding cross-slope to the specification requirements.

Other discussions:
1. What will be the verification measurement frequency?
2. Will the contractor and verification be required to keep documentation of cross slopes separately, or will this information be entered in the density logbook?
3. Will we use a 10' straightedge and a 4' electronic level on top, to assess a more accurate measurement?

ITEM 4

Master Production Range does not include the #8 sieve, but it is part of the Composite Pay Factor in 334-8.3. This needs to be updated and either eliminate it from the CPF or add it to MPR Table 334-6.

Table 334-6
Master Production Range

Characteristic	Tolerance (1)
Asphalt Binder Content (%)	Target ±0.55
Passing No. 200 Sieve (%)	Target ±1.50
Air Voids (%)	2.30 – 6.00
Density (minimum % G_{mm})(2)	89.50

(1) Tolerances for sample size of n = 1 from the verified mix design
(2) Based on an average of three to five randomly located cores

Here are the specification limits for example that show ± 0.40 as the limits on binder, which your CPF is based, but allowable is ± 0.55 shown in the MPR. Why not have the Master Production Range as the CPF requirements. Also, density is misleading as well. The allowable passing is 89.5%, but if you get 89.5% you will be penalized substantially with respect to the limits and PWL.

Table 334-9 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 + 4.00, - 1.20
Density, static mode (percent of G_{mm}):	92.00 + 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.	