2024 ACAF Expo Construction Update

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FY 2025-26 Specification Changes

- 330 & 338
  - Added IRI Incentive/Disincentive Smoothness Specifications for Limited Access & Non-Limited Access Roads
  - Removing Ride Number Specifications - Separates Straightedge from Laser-Tested Areas
- 330 & 334
  - Added Industry Suggestion to Clarify Roundabout Limits Regarding Straightedge & Density Testing Exceptions in Intersections

FY 2025-26 Specification Changes

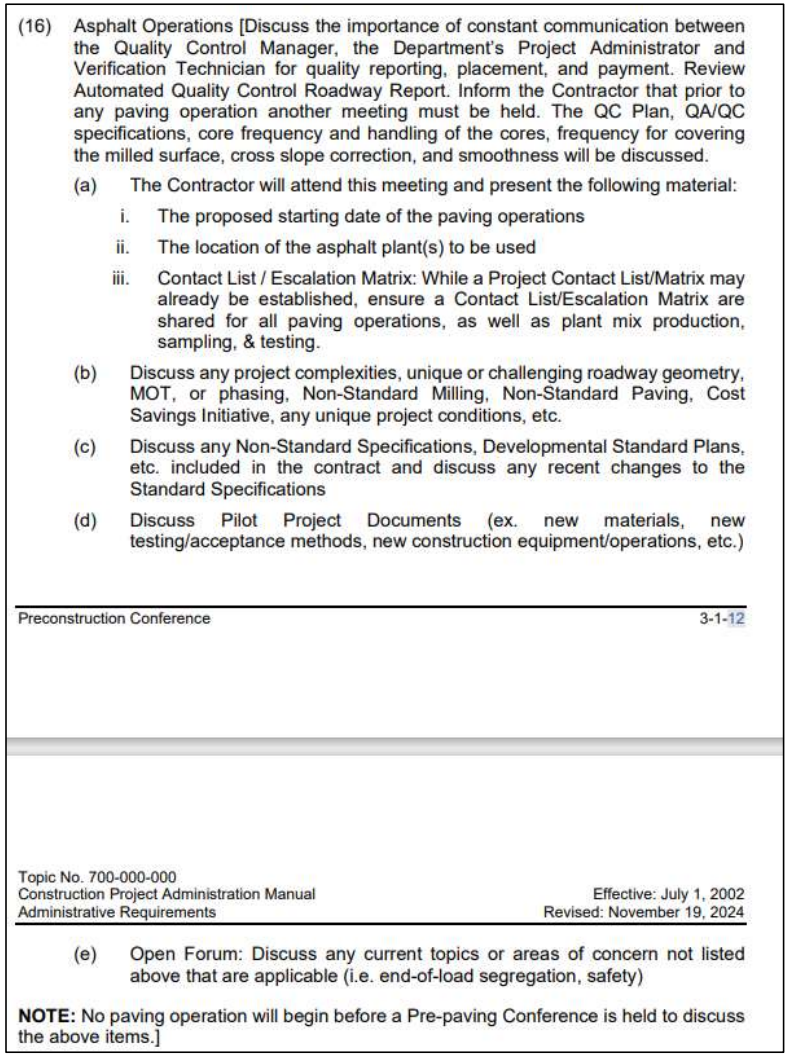
- 283 RAP Base
  - Existing 95% Modified Proctor Density (MPD) Results in %Gmm Densities in 70's
  - Proposed Using 85% of RAP's Gmm as Density Target, (not 95% MPD)
    - Provides Better Compaction, Improved Performance, Potential Increased Use of RAP base
    - Additional Changes Made After Discussion with SMO Geotechnical & Asphalt Sections, & Industry
    - SMO Recommended Calling 85% of RAP Gmm the "Calculated Proctor" & Using 95% of "Calculated Proctor" for RAP Acceptance for Non-LA, Shared Use Path, and Non-Traffic Locations

FY 2025-26 Specification Changes

- 285 Optional Base Course
  - Minor Changes Needed Due to 283 Changes in RAP Base Use
- 234 Superpave Asphalt Base
  - Raised Spreadrate Tolerance to +/-10% to Match 10% Pay Quantity Tolerance
- 286 Driveway Base
  - Clarified Plan Quantity Tonnage Determination

PrePave Meeting Agenda

- Concerns About
  - Time Spent at PrePave Meetings
  - Value of Some Agenda Items
- Worked with Districts & Contractors to Ensure
  - PrePave Meeting Covers Project-Relevant Topics
  - Entire Meeting Has Value
  - Time Well Spent
- Removed Agenda Items
  - Covered in Standard Specifications
  - Means & Methods
  - Don't Impact Project or Project Decisions



(16) Asphalt Operations [Discuss the importance of constant communication between the Quality Control Manager, the Department's Project Administrator and Verification Technician for quality reporting, placement, and payment. Review Automated Quality Control Roadway Report. Inform the Contractor that prior to any paving operation another meeting must be held. The QC Plan, QA/QC specifications, core frequency and handling of the cores, frequency for covering the milled surface, cross slope correction, and smoothness will be discussed.

(a) The Contractor will attend this meeting and present the following material:

i. The proposed starting date of the paving operations

ii. The location of the asphalt plant(s) to be used

iii. Contact List / Escalation Matrix: While a Project Contact List/Matrix may already be established, ensure a Contact List/Escalation Matrix are shared for all paving operations, as well as plant mix production, sampling, & testing.

(b) Discuss any project complexities, unique or challenging roadway geometry, MOT, or phasing, Non-Standard Milling, Non-Standard Paving, Cost Savings Initiative, any unique project conditions, etc.

(c) Discuss any Non-Standard Specifications, Developmental Standard Plans, etc. included in the contract and discuss any recent changes to the Standard Specifications

(d) Discuss Pilot Project Documents (ex. new materials, new testing/acceptance methods, new construction equipment/operations, etc.)

Preconstruction Conference 3-1-12

Topic No. 700-000-000
Construction Project Administration Manual
Administrative Requirements

Effective: July 1, 2002
Revised: November 19, 2024

(e) Open Forum: Discuss any current topics or areas of concern not listed above that are applicable (i.e. end-of-load segregation, safety)

NOTE: No paving operation will begin before a Pre-paving Conference is held to discuss the above items.]

Process Review & Project Findings

- The Good
  - Tack Coverage
  - Overall Inspection Efforts
- The Not So Good
  - Seeing More End-of-Load Segregation
  - Some Missed Quality & Inspection Issues

Tack Coverage

- Seeing Better Tack Coverage
- Increased Tack Rates Resulting in Full Tack Coverage
- Leads to Longer Lasting Pavements

End-of-Load Segregation

- Seeing Increase Around State
- Continuous Trucking Is A Challenge
- Better to Stop Paver than Pave & Run Hopper Dry
- Bump from Stopping Paver Can Typically Be Rolled Out
- However, Segregated Areas Are Removed & Replaced Full Depth or if Left In Place, Typically Won't Last As Long

Straightedge & MAC

- For Leave in Place at Full Pay
  - Provide Brief Reasoning Why Deficiency Is Being Left In Place at Full Pay
    - “Project’s Asphalt Pavement Ties Into Rutted, Off-Project Pavement”
    - “Deficiency Due to Manhole, Manhole Adjustment Was Not Part of Contract”
    - “Project’s Asphalt Pavement Ties Into Faulted Approach Slab”
- Why?
  - We Want Reasoning There So It Doesn’t Appear Like Straightedge Deficiencies Are Being Left In Place With No Discretion

2022 - Limited Access IRI Project Overview

- 18 Projects
  - Lowest Average Project IRI = 31
  - Highest Average Project IRI = 66
  - (Average) Average Project IRI = 43
- 14 Projects Received Incentive
  - Average Incentive/Disincentive = $575 per lane mile
  - Highest Average Incentive = $2,187 per lane mile
  - Greatest Average Disincentive = -$2,344 per lane mile
- No Project Received 3% Consistency Bonus
  - All LOTs ≤ 55

2023 - Limited Access IRI Project Overview

- 30 Projects
  - Lowest Average Project IRI = 32
  - Highest Average Project IRI = 64
  - (Average) Average Project IRI = 47
- 15 Projects Received Incentive
  - Average Incentive/Disincentive = $298 per lane mile
  - Highest Average Incentive = $1,901 per lane mile
  - Greatest Average Disincentive = -$2,183 per lane mile

2024 - Limited Access IRI Project Overview

- 37 Projects
  - Lowest Average Project IRI = 35
  - Highest Average Project IRI = 69
  - (Average) Average Project IRI = 49
- 22 Projects Received Incentive
  - Average Incentive/Disincentive = $233 per lane mile
  - Highest Average Incentive = $1,874 per lane mile
  - Greatest Average Disincentive = -$2,797 per lane mile
- 1 Project Received 3% Consistency Bonus
  - All LOTs ≤ 55

Non-Limited Access IRI Smoothness Projects

Smoothness Class	FIN	District	SR	Avg IRI	Min IRI	Max IRI	Total Incentive	Total Lane Miles Tested	Avg Incentive per Lane Mile	Pilot Project, IRI Added Later, etc.
2	43775815201	3	369	35	30	58	$4,407	3.24	$1,360	Pilot Project
3	44290615201	5	400	38	26	54	$11,614	6.23	$1,864	Pilot Project
3	44381515201	5	40	38	24	66	$45,970	24.50	$1,876	Pilot Project
4	44609715201	4	710	59	44	85	$4,823	5.08	$949	Pilot Project
3	43914215201	5	44	46	29	68	$10,584	8.95	$1,183	Pilot Project
3	44620915201	1	710	52	36	77	$1,996	4.71	$424	Pilot Project
3	44125915201	2	26	57	102	33	*-$2,615*	12.87	*-$203*	Pilot Project
4	44540215201	2	47	56	101	32	$27,864	25.57	$1,090	Pilot Project
4	44611215201	4	76	57	35	85	$4,454	7.39	$603	Pilot Project
3	44543615201	2	121	43	32	70	$28,013	15.79	$1,775	Pilot Project
2	44520815201	5	600	45	30	88	$876	4.48	$195	Pilot Project
4	44717615201	2	21	44	29	68	$10,986	5.91	$1,858	Pilot Project
4	44622815201	1	25	45	31	61	$12,246	6.53	$1,874	Pilot Project
3	42450125201	7	55	48	29	76	$1,919	2.21	$870	IRI Added Project
3	44163115201	4	25	66	33	140	*-$57,416*	50.40	*-$1,139*	IRI Added Project
3	44529415201	5	40	52	30	82	$5,644	11.92	$473	IRI Added Project
5	43914215201	3	44	46	29	68	$10,584	8.95	$1,182	IRI Added Project
4	44519015201	5	35	53	34	80	$5,450	6.31	$863	IRI Added Project
5	44381515201	5	40	38	24	66	$31,121	24.50	$1,271	IRI Added Project

Contractor Designates Responsible Party

- Prior to Any Value Added Asphalt Pavement Being Placed on the Project, the Contractor Shall Designate a Responsible Party…

338-3 Responsible Party.

Prior to any value added asphalt pavement being placed on the project, the Contractor shall designate a Responsible Party to accept responsibility for maintaining the value added asphalt pavement, when remedial work is required. When the scope of the asphalt work is only milling and resurfacing, and there is no construction of the embankment, subgrade or base below the pavement included in the Contract, the Responsible Party may be either the Contractor or the Department approved subcontractor performing the value added asphalt pavement work. When the construction of the embankment, subgrade or base below the pavement is included in the Contract, in addition to the construction of the asphalt concrete structural course and asphalt concrete friction course, the Contractor shall be considered as the Responsible Party.

Responsible Party

- Responsible Party Can Be
  - Contractor

    or
  - Department-Approved Subcontractor Performing the VAAP Work
    - Only on Milling & Resurfacing With No Construction of Embankment, Subgrade, or Base Below the Asphalt Pavement in the Contract

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Responsible Party

- Contractor is the Responsible Party When Contract Includes Construction of Embankment, Subgrade, or Base Below the Asphalt Pavement
- Department-Approved Subcontractor Performing the VAAP Work **Cannot** be the Responsible Party if Construction of Embankment, Subgrade, or Base Below the Asphalt Pavement is Included in the Contract

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Designation & Correspondence

- When Contract Includes Embankment, Subgrade, or Base Work Below Asphalt Pavement
  - Per Specification 338-1, Contractor is the Responsible Party
  - No Additional Correspondence Required
- When Contract is for Milling & Resurfacing with No Embankment, Subgrade, of Base Work Below Asphalt Pavement
  - Contractor Must Designate Responsible Party Before Paving Begins
    - If Contractor Wishes to Designate Subcontractor As Responsible Party,
      - Requires Written Agreement Between Contractor & FDOT
      - Contractor Submits Form# 700-010-53
        - Form Must Be Signed by Subcontractor, Prime Contractor, & FDOT
    - If Contractor Doesn't Designate Responsible Party Timely…Prior to VAAP Being Placed On Project
      - Contractor Is The Responsible Party
      - No Additional Correspondence Is Required

Contractor Is Responsible Party, Unless Agreed to in Writing By The Department

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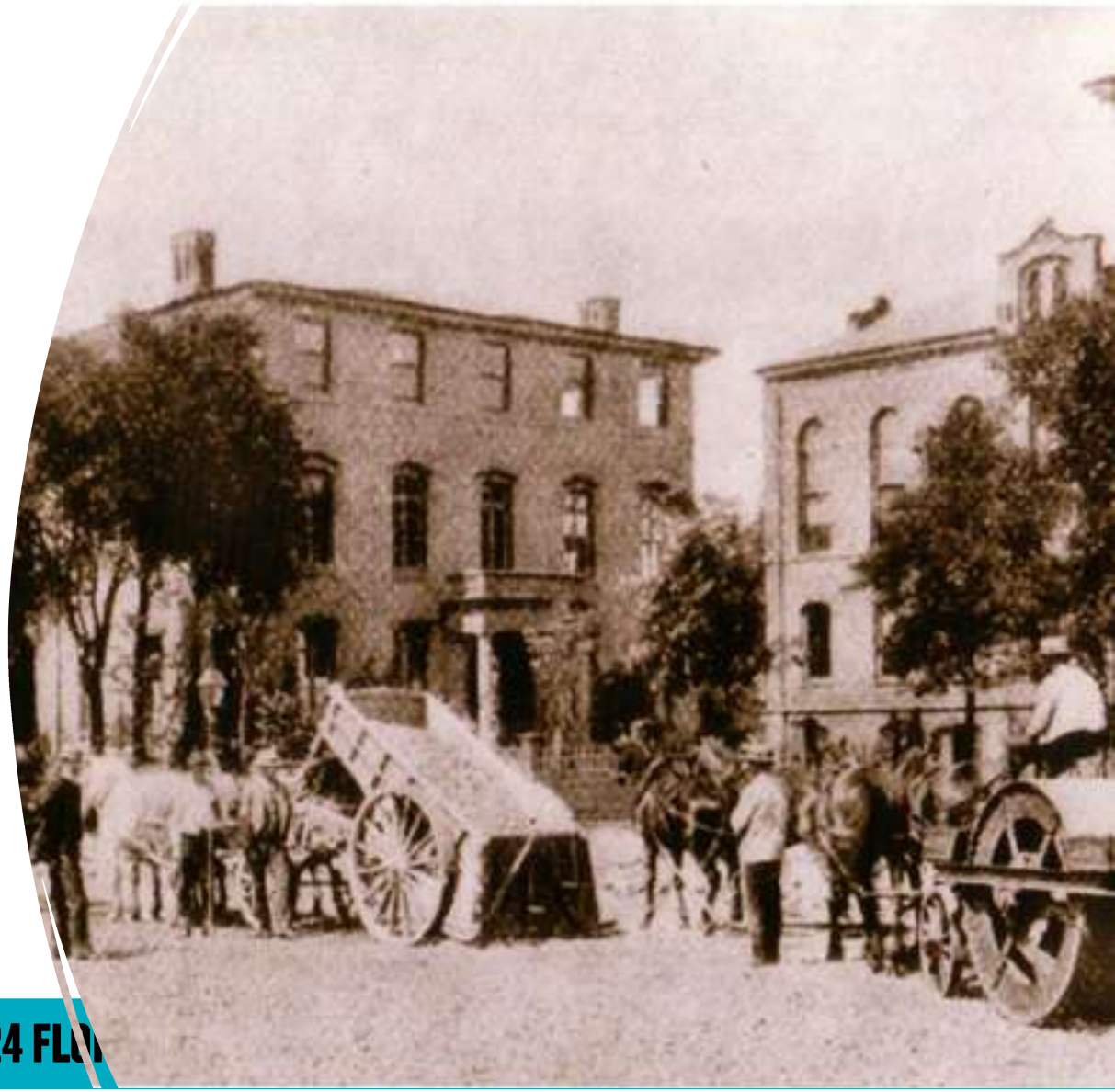
When the Responsible Party is a subcontractor, the subcontractor must be pre-qualified with the Department in the category of asphalt, and such designation must be made to the Department by the Contractor. The proposed subcontractor must execute and submit to the Department a form, provided by the Department, prior to or concurrent with the Contractor's request to sublet any value added asphalt pavement work, stipulating that the subcontractor assumes all responsibility as the Responsible Party for the value added asphalt pavement within the three-year warranty period. Failure to timely designate the Responsible Party will result in the Contractor being the Responsible Party unless otherwise agreed to in writing by the Department.

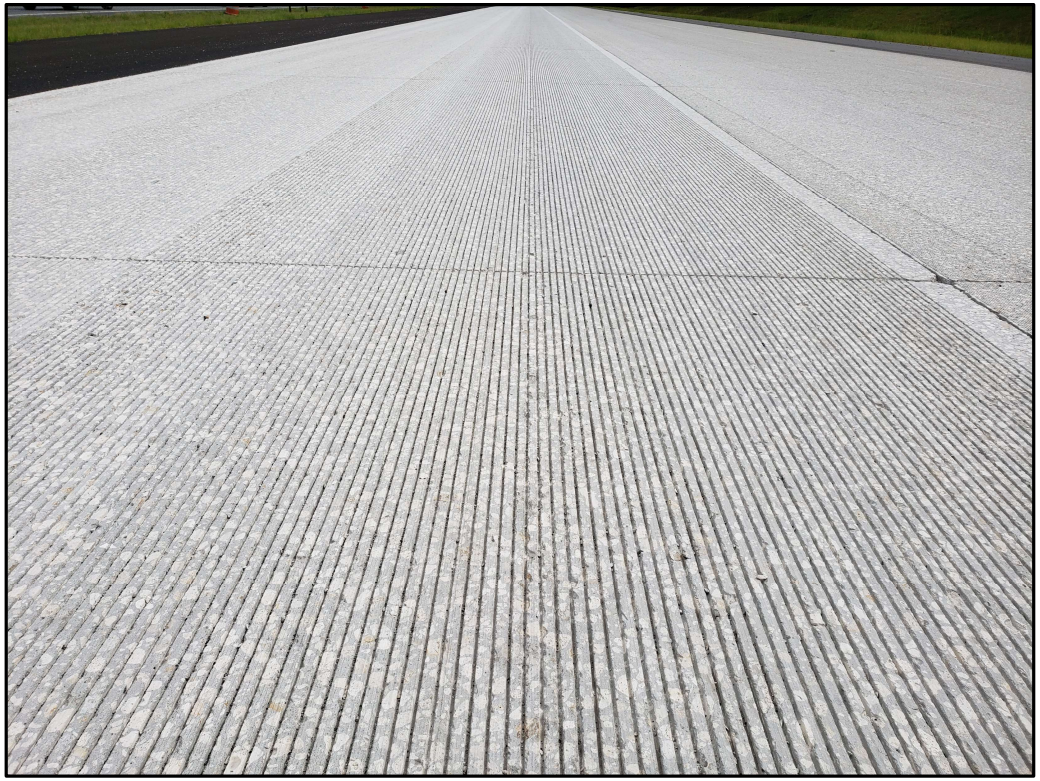
Upon final acceptance of the Contract in accordance with 5-11, the Contractor's

New Ideas, Equipment, Methods, & Technologies



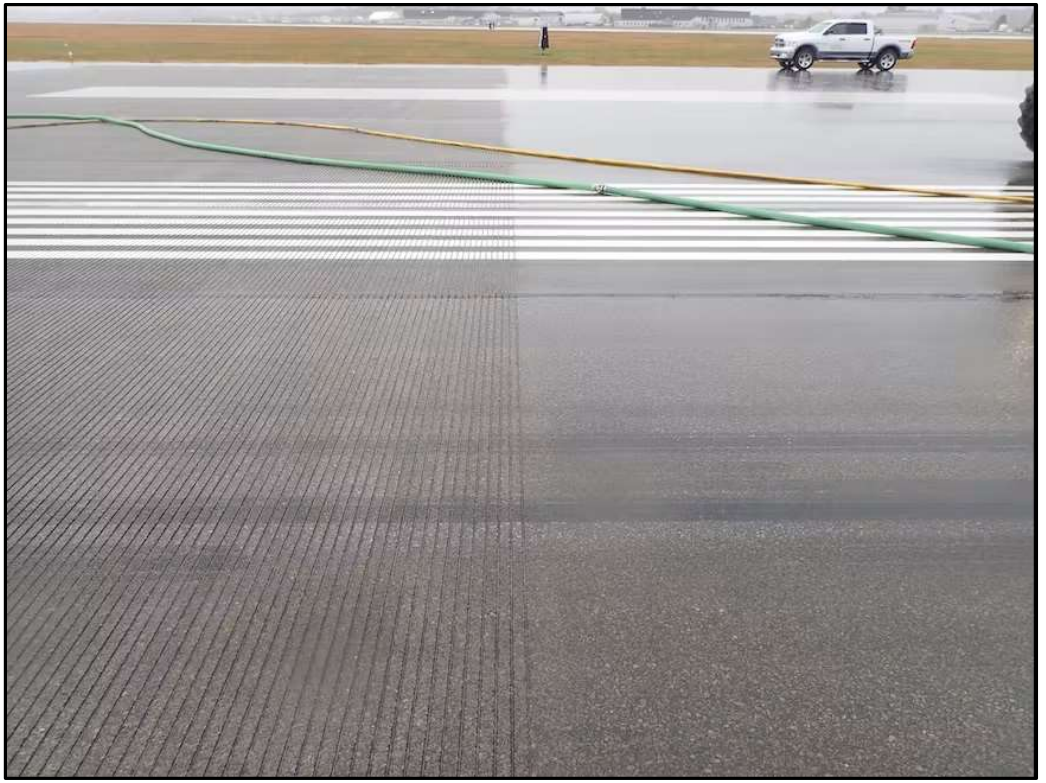
Longitudinal Grooving Dense-Graded Friction Course

- Longitudinally Grooved Concrete Pavement Project Resulted in Increased Friction, Macrotexture, & Hydroplaning Resistance
- Same Possible For Dense-Graded Friction Course
- Alternative to FC-5
- Eliminate Raveling & Increase Pavement Life
- Pilot Projects Scheduled



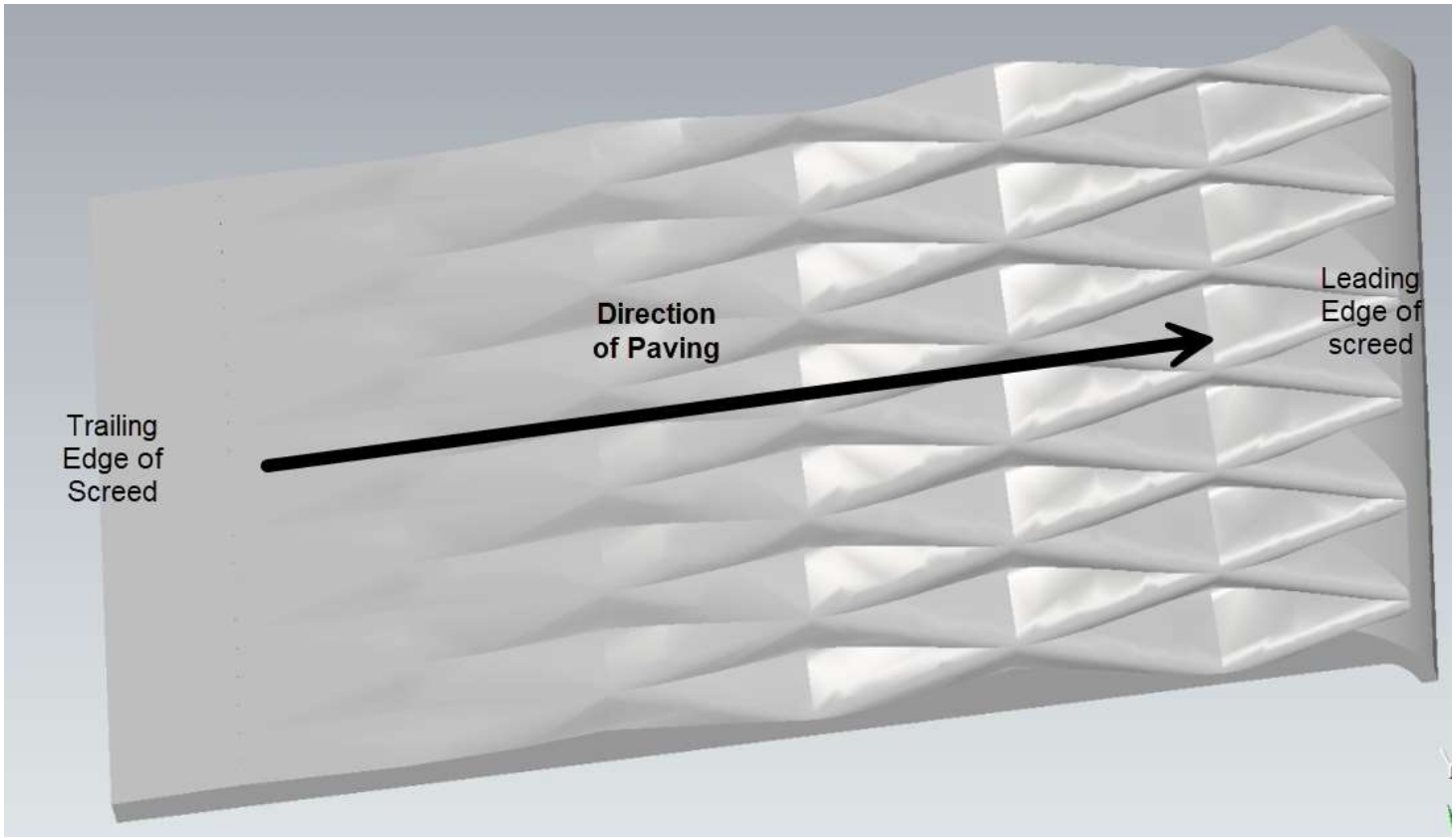
Longitudinal Grooving

- Other States Have Longitudinally Grooved Dense-Graded Asphalt
  - Missouri, NY, Ohio, California
  - Saw Reduced Crash Rates
    - Especially Wet Weather Crashes
- Florida
  - Transverse Grooving on Airport Runways & Taxiways
  - Sections of Grooved Dense-Graded Asphalt Planned in D7 & D1
  - Being Considered in Other Districts



SDX Paver Screed

- SDX Screed's Texture Compacts Asphalt More Than Standard Screed

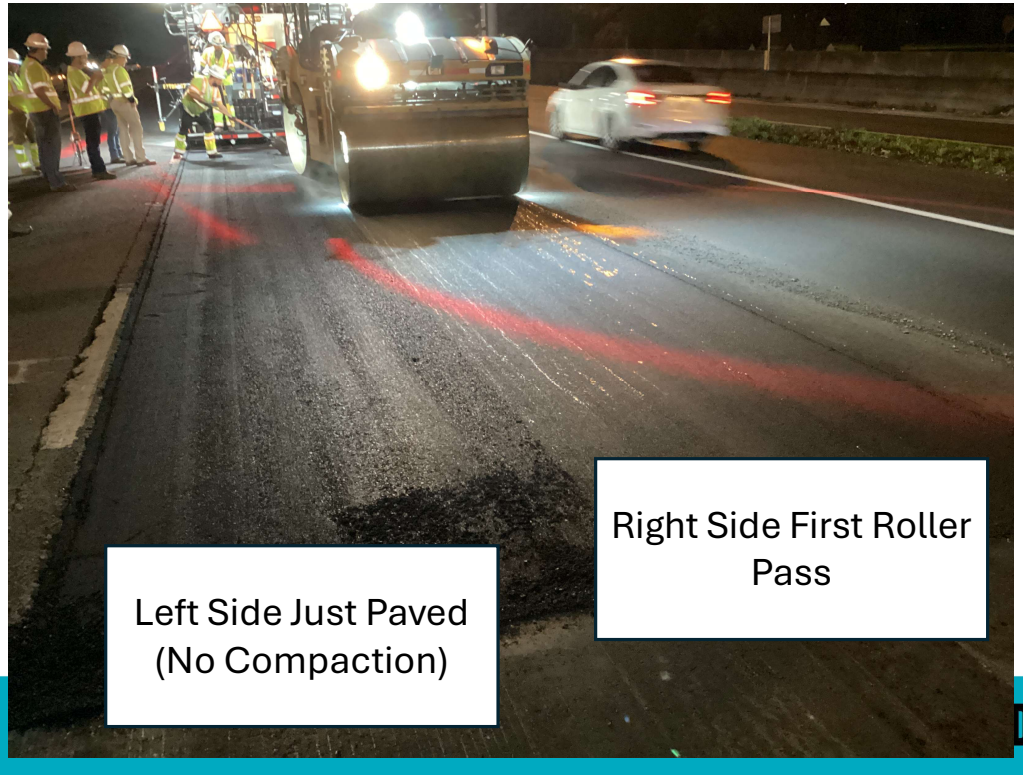


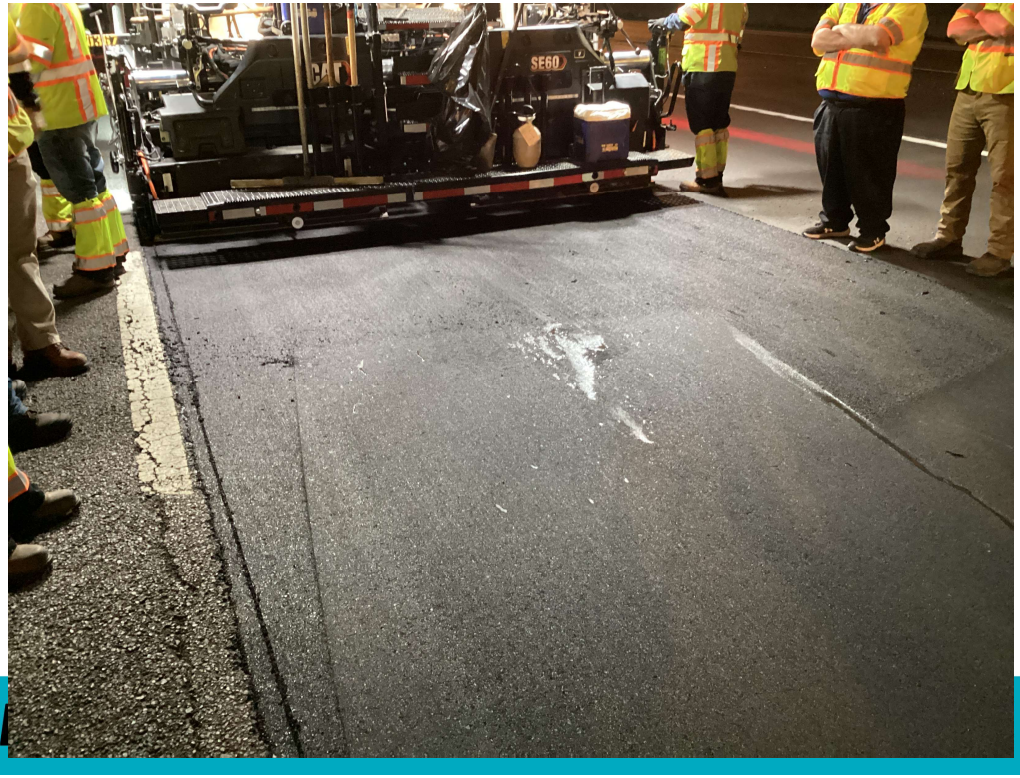
SDX Paver Screed on I-4

- 91% Density Behind Screed (Prior to Roller Compaction)
  - End of Low Density Failures?
- 92%-93% with Couple Static Compaction Coverages

SDX Paver Screed on I-4

- Half the Rolldown (~1/8” per inch)





SDX Paver Screed

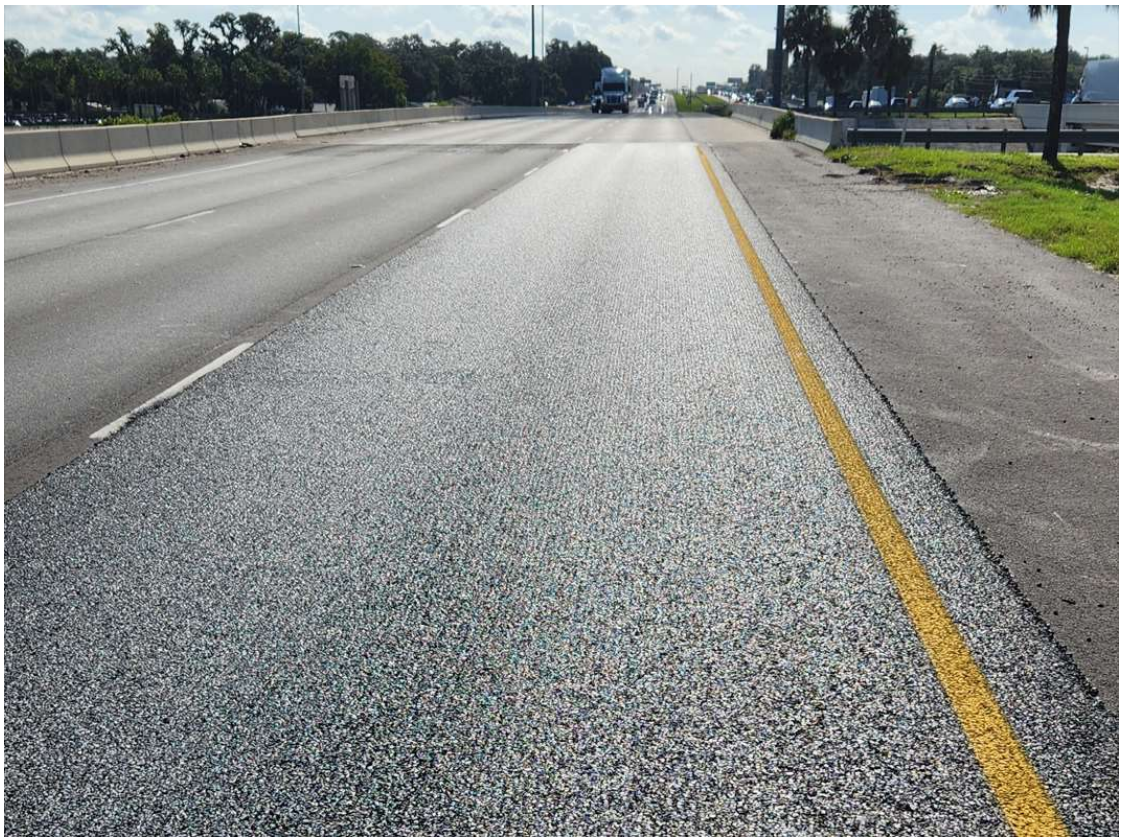
- Slight Line Texture Initially, Typically Gone After 2-3 Roller Coverages
- Smooth Compacted Mat After Rolling

Slight Line Texture

- Spoke to SDX Screed Inventors About Creating Screed To Place Grooves in Pavement (3/4” on Center, 1/4” to 3/8” deep)
- Use to Groove Dense-Graded Asphalt Friction Course & Provide Hydroplaning Resistance without Raveling Concerns of Open-Graded Friction Course
- If They Create It, We’ll Look to Use It on Some Projects

SDX Paver Screed Use on OGFC (FC-5)

- Slightly Visible Lines
- Smooth Pavement
- No Segregation or Texture Concerns
- Looks More Compacted & More Uniform
- **Is It More Durable?**
- **Last Longer?**
- **Less Susceptible to Raveling?**
- **How Do We Promote Use w/o Writing Means & Methods Specifications?**
  - **FC-5 Density Spec?**



SDX Paver Screed

- More Details & Discussion During SDX Paver Screed Presentation by Caterpillar & Hubbard Construction

Automating Construction Inspection

- Obtain Construction Inspection Data from Construction Equipment
  - Started with Panel Discussion @ 2024 FTBA Construction Conference
  - Continuing with Automated Construction Inspection Team
- Phases
  - Collect Data & Location From Construction Equipment
    - Ex. Milled Cross Slope from Milling Machine
  - Provide Data in Report Format
    - Submit Instead of Current FDOT Form
  - View Data/Report on an App (Smart Phone, Tablet, Computer)
  - View Data in App in Real Time - As Milling & Paving occurs

Automating Construction Inspection

- Ajax, OnGrade, Caterpillar, Haul Hub, OnStation, & FDOT Working to Collect Milled Cross Slopes on a Project

- End Goal is to Reduce/Eliminate Manual Measurements
  - Increase Safety by Reducing Time Inspectors In Path of Equipment
- Real Time Inspection Data
  - Inspectors Can Evaluate Cross Slopes & More Quickly Communicate With Crew, Rather Than Spending All Their Time Measuring & Collecting Data
  - Allows Milling & Paving Crews to Check App & Make Corrections Sooner
  - Allows Off-Site Oversight

Questions?

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