



Seth Estep  
State Lab Manager  
Division of Materials and Tests

# HMA Samples

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- Core Markings
  - We want to make sure that we are cutting and testing the correct layer
- Place 1 core in a cylinder mold for transport
  - Cores have been sent in the same mold and caused damage to them
- Plate sample boxes
  - Have the correct information on the boxes
    - Correct mix size
    - Correct DMF
    - Correct contract number



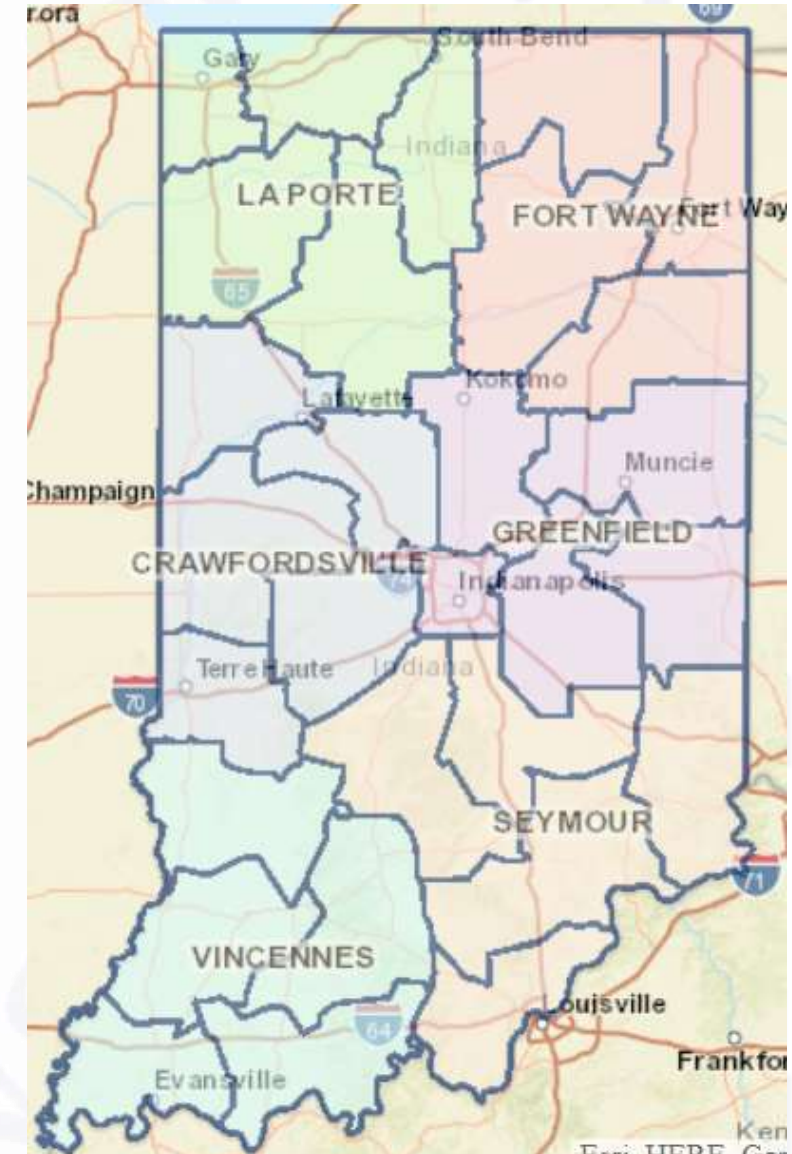
# INDOT/Industry Regional Meeting

Nathan Awwad, PE  
Asphalt Engineer

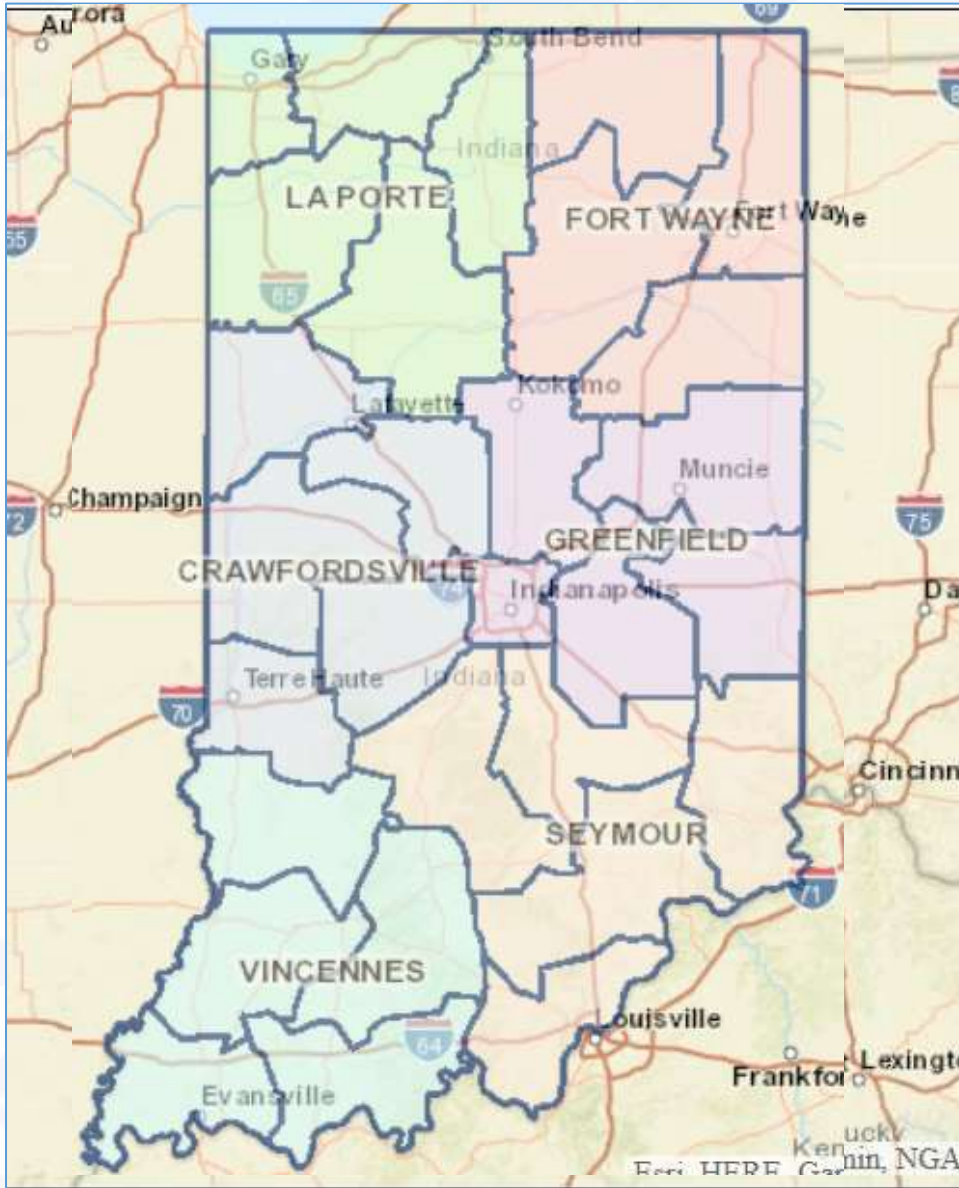
Division of Materials and Tests  
2024

# District Testing Engineers

- Crawfordsville
  - Greg Hole – [ghole@indot.in.gov](mailto:ghole@indot.in.gov) 765-361-5625
- Ft. Wayne
  - Josh Anderson – [JosAnderson@indot.IN.gov](mailto:JosAnderson@indot.IN.gov) 260-205-3072
- Greenfield
  - Doug Corey – [dcorey@indot.in.gov](mailto:dcorey@indot.in.gov) 317-522-9766
- LaPorte
  - Scott Haraburda – [sharaburda@indot.in.gov](mailto:sharaburda@indot.in.gov) 219-809-8017
- Seymour
  - Bill Tompkins – [btompkins@indot.in.gov](mailto:btompkins@indot.in.gov) 812-524-3763
- Vincennes
  - Tim Buckner – [tbuckner@indot.in.gov](mailto:tbuckner@indot.in.gov) 812-582-1137



# INDOT HMA testing 2025



## INDOT Central

- Fort Wayne
- Greenfield
- Seymour
- LaPorte
- Crawfordsville
- Vincennes

# HMA sample exchange

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- Samples have been split
- Look for communication in the near future





The screenshot displays the IN.gov website interface. At the top, there is a navigation bar with a 'MENU' button and the IN.gov logo. Below this, a header section reads 'Division of Materials Tests'. The main content area is organized into several sections, each with a title and a list of links:

- Testing Memorandums**
  - [Current Testing Memos](#)
- Certified Technicians/Supervisor Lists**
  - [CAPP Technicians](#)
  - [ICAT Technicians](#)
  - [HMA Field Supervisor](#)
- Aggregate Bulk Specific Gravity**
  - [2025 Gsb List \(2/18/25\)](#)
  - [Gsb List Changelog \(2/18/25\)](#)
  - [HMA Gsb List Instructions](#)
- Data Views**
  - [HMA Pay Factors and Comparison](#)
- PG Binder Index Adjustment**
  - [Spreadsheet for PG Binder Index Adjustment](#)
  - [Instructions for PG Binder Index Adjustment](#)
  - [Example Spreadsheet](#)
  - [Monthly PG Binder Index](#)
  - [PG Binder Index FAQ](#)
- Qualified Products and**
  - [Qualified Products Lists & Qualif](#)  
A listing of qualified products an
  - [Qualified Hot Mix Asphalt Design](#)  
A listing of HMA design laborato
  - [Ready Mixed Concrete Plants](#)
- Publications & Manual**
  - [Indiana Test Methods Index](#)  
Test Methods and Procedures d
  - [ITM 226: Review and Validatio](#)

# Overview

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- Spec, ITM, Directive Updates
- Audits – common gigs
- DMF Entry and Paywizard
- Statewide Data
- Current Research Projects





# Specification, ITM, Directive Updates

# Recurring Special Provisions

## Division 400 - Asphalt Pavement

RSP or RPD	Description	Rev. Date*	Letting Date**
<a href="#">400-R-680</a>	QC/QA Sampling and Testing on 401 and 410 Pay Items ( <i>edit.</i> )	06/21/18	12/01/18
<a href="#">400-R-780</a>	MSCR Binder Specifications	05/17/24	12/01/24
<a href="#">400-R-780</a>	MSCR Binder Specifications	11/22/24	06/01/25
<a href="#">401-R-417</a>	HMA Spray Paver and Emulsion	05/20/23	09/01/23
<a href="#">401-R-750</a>	Void Reducing Asphalt Membrane for HMA	05/20/23	09/01/23
<a href="#">401-R-750</a>	Void Reducing Asphalt Membrane for HMA	10/17/24	06/01/25
<a href="#">410-R-418</a>	SMA Spray Paver and Emulsion	05/20/23	09/01/23
<a href="#">410-R-751</a>	Void Reducing Asphalt Membrane for SMA	05/20/23	09/01/23
<a href="#">410-R-751</a>	Void Reducing Asphalt Membrane for SMA	10/17/24	06/01/25
<a href="#">410-R-759</a>	QC/QA HMA - SMA Pavement	05/17/24	12/01/24
<a href="#">410-R-759</a>	QC/QA HMA - SMA Pavement	12/18/24	06/01/25
<a href="#">411-R-608</a>	Cost of Closure Periods for Micro-Surfacing Remedial Work ( <i>edit.</i> )	05/20/23	09/01/23
<a href="#">411-R-767</a>	Warranted Micro-Surfacing	10/19/23	03/01/24
<a href="#">414-R-609</a>	Cost of Closure Periods for UBWC Remedial Work ( <i>edit.</i> )	05/20/23	09/01/23
<a href="#">414-R-768</a>	Ultrathin Bonded Wearing Course, Warranted	10/19/23	09/01/24

# 400-R-780

- PG 64-22 → PG 58S-28 “Standard”
- PG 70-22 → PG 58H-28 “Heavy”
- PG 76-22 → PG 58E-28 “Extremely Heavy”
  - All new pay items have been created

DESCRIPTION
QC/QA-HMA, 2, 58S, SURFACE, 9.5 mm
QC/QA-HMA, 3, 58H, SURFACE, 9.5 mm
QC/QA-HMA, 4, 58E, SURFACE, 9.5 mm

# 400-R-780

Mixture Type	Type B*	Type C	Type D
Design ESAL	< 3,000,000	3,000,000 to < 10,000,000	≥ 10,000,000
Surface	4.75 mm	4.75 mm	4.75 mm
	9.5 mm	9.5 mm	9.5 mm
	12.5 mm	12.5 mm	12.5 mm
Surface – PG Binder	<del>64-2258S-28</del>	<del>70-2258H-28</del>	<del>70-2258E-28</del>
Intermediate	9.5 mm	9.5 mm	9.5 mm
	12.5 mm	12.5 mm	12.5 mm
	19.0 mm	19.0 mm	19.0 mm
	25.0 mm	25.0 mm	25.0 mm
Intermediate – PG Binder	<del>64-2258S-28</del>	<del>64-2258H-28</del>	<del>70-2258E-28</del>
Base	19.0 mm	19.0 mm	19.0 mm
	25.0 mm	25.0 mm	25.0 mm
Base – PG Binder	<del>64-2258S-28</del>	<del>64-2258S-28</del>	<del>64-2258S-28</del>
<b>*A Type B mixture shall replace a Type A mixture.</b>			

FROM: Gregory G. Pankow, P.E., Chief Engineer of Construction   
Division of Construction Management and District Support

SUBJECT: Performance Graded Binder Specification changes.

The purpose of this memorandum is to highlight recent PG binder specification changes in 902.01(a) and subsequent changes to the Division 400 of the Standard Specifications (SS). These changes effectively substitute the asphalt binder from the Department's original PG specifications to the new MSCR grade requirements. It was determined that the change is a net benefit for the additional cost that could be incurred.

These changes have resulted in a recurring special provision, RSP, which can be found on the Department's website at: <https://www.in.gov/dot/div/contracts/standards/rsp/sep23/sep23.htm>. RSP 400-R-780 titled "MSCR Binder Specifications" and RSP 410-R-759 "QC/QA HMA – SMA Pavement" are effective for contracts let on or after 9/1/2024. Contracts that are paving under the 2024 Standard Specifications, but do not contain these changes, may elect to incorporate them.

If a Contractor elects to utilize RSP 400-R-780 and/or RSP 410-R-759 on a contract let prior to September 1, 2024 where it is not in the original contract documents, a change order will need to be generated in accordance with SS 109.05. The change order shall also include RSP 100-C-281.

For unit price increases due to this change, unit prices shall be submitted to and approved by Nathan Awwad, Asphalt Engineer, Division of Materials and Tests ([nawwad@indot.IN.gov](mailto:nawwad@indot.IN.gov)) prior to generating the change order.

An example of the pay items used in the change order is attached. Also, a chart comparing old PG grade pay items to the equivalent new MSCR grade pay items is attached for reference.

Questions should be directed to the Field Engineer assigned to your District.

GGP/ddh/nea



# Binder Index

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- Begin using 58-28
- No effect for the end-user
  - No need for dual published list



The ESAL category identified in the pay item correlates to the following ESAL ranges.

ESAL Category	ESAL
2*	< 3,000,000
3	3,000,000 to < 10,000,000

SECTION 401, BEGIN LINE 232, DELETE AND INSERT AS FOLLOWS:

*A ca*  
*used in lieu* mixture *original contract* pay item *in a calendar year* will not be sampled. An acceptance sample will consist of plate samples obtained in accordance with ITM 802 and ITM 580. The Engineer will take immediate possession of the samples.

# Recurring Special Provisions

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<a href="#">414-R-768</a>	Ultrathin Bonded Wearing Course, Warranted	10/19/23	09/01/24

# 410-R-759

The Standard Specifications are revised as follows:

SECTION 410, BEGIN LINE 24, DELETE AND INSERT AS FOLLOWS:

## Asphalt Materials

PG Binder, PG <del>76-22, PG 70-22</del> <b>58E-28</b> , .....	902.01(a)
Coarse Aggregates, Class AS .....	904.03
Fine Aggregates (sand, mineral filler) .....	904.02
Stabilizing Additives* .....	AASHTO M 325

*\*The stabilizer shall be virgin cellulose or virgin mineral fiber.*

### 410.04 Design Mix Formula

A DMF shall be prepared in accordance with 410.05 and submitted in a format acceptable to the Engineer one week prior to use. The DMF shall state the maximum

SECTION 410, BEGIN LINE 110, INSERT AS FOLLOWS:

### 410.06 Recycled Materials

Recycled materials shall be in accordance with 401.06 for dense graded mixtures except **RAS shall not be used and** non-SMA RAP material for use in the SMA mixture shall be 100% passing the 3/8 in. (9.5 mm) sieve and 95 to 100% passing the No. 4 (4.75 mm) sieve.

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# VRAM

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- INDOT has decided to implement VRAM for Cat 2, 3 and 4 roadways
  - Submitted for February standards committee
  - Increase usage in 2025, with full implementation for 2026
  - CM 24-13
    - Pavement marking folks requested that liquid asphalt sealant (LAS) be discontinued ASAP.
    - There will be a time period of joints and corrugations having only joint adhesive (JA), until the VRAM specs are fully implemented.

# VRAM

FROM: Gregory G. Pankow, P.E., Chief Engineer of Construction  
Division of Construction Management and District Support

SUBJECT: Liquid Asphalt Sealant

The purpose of this memorandum is to notify field personnel effective immediately to delete the pay item **Liquid Asphalt Sealant**, for HMA joints (SS 401) and pavement corrugations in HMA (SS 606). This item **should be deleted from** all active and future contracts through the June 2025 letting. This work should not be performed. Joint Adhesive should remain part of the contract.

**LPA projects may continue to use** the Liquid Asphalt Sealant if already included in the contract subject to the determination of the LPA ERC.

The Department has made the decision to discontinue the use of Liquid Asphalt Sealant and move toward full implementation of Void Reducing Asphalt Membrane (VRAM). VRAM is already included in some contracts and will increasingly be part of future contracts. If VRAM is not already part of your contract then please don't add it.

A complimentary memo for Designers will be forthcoming through their usual process.

Any questions should be directed to your assigned Construction Management Field Engineer.

# ITM Updates

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- <https://www.in.gov/indot/div/mt/itm/itm.htm>
- **ITM 906 Verifying Mechanical Shakers (4/5/2024)** – Section 5.2 requires a NIST traceable timer or Android/iPhone with a stopwatch function/app. This led to adding this into section 6.1.1. Table 1 for sieve overload on a 12 in sieve for the No. 8 to No. 200 shall not exceed 450 g/sieve. The verification paperwork in Appendix A has a section added to document the timer used.
- **ITM 917 Inertial Profilers (5/2/2024)** – Requires certification from ICART in Section 6.1. In 6.3, the host vehicle, make, model, license plate, and vehicle VIN number are to be included on the certificate. The Operator's completion of the course and passing exam are required prior to the certification on either the Department test track or I CART. Section 7.2 was added to clarify the Department will certify all operators of the inertial profiler or will require an operator successful certification of equipment from I CART.

# INDOT Directives

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- **Directive 105 District Sample Proficiency Program (1/7/2025)** – The testing required for each material in Appendix I added to where the following tests are to be run when applicable: AASHTO T 96 Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine, ASTM D 5821 Determining the Percentage of Fractured Particles in Coarse Aggregate, AASHTO T 21 Organic Impurities in Fine Aggregates for Concrete, and AASHTO T 304 Uncompacted Void Content of Fine Aggregate.
- **Directive 305 Hot Mix Asphalt Mix Design Laboratory Requirements (10/1/2024)** – The mix design for SMA mixtures added where a virgin stabilizing additive is required for all SMA mixtures. It also provides minimum amounts of the total mixture mass to be used for both cellulose and mineral fibers.

# Audits

	Plants	Completed Audits
Crawfordsville	7	7
Fort Wayne	18	18
Greenfield	17	17
LaPorte	14	0
Seymour	19	19
Vincennes	10	10
Total Auditted	85	71
Total Plants	101	
Inactive	16	



# Audits

- Gigs

2024 STATEWIDE COMPILATION OF CORRECTIVE ACTIONS		# of Gigs	
2.2	QCP needs to be updated	9	
3.3	ASTM/AASHTO's missing or not updated	6	
7.17	Stockpiles aren't adequately spaced	6	
2.8	Level 1 techs needs to be updated	5	<b>2024</b>
7.19	Binder tanks aren't labeled	5	24
8.21	Proving ring with gage blocks needs to be verified	4	8
8.23	class 3 weights weren't used or need to be verified	4	7
5.10	Nonconforming test aren't noted in the diary	3	0
2.1	QCP's dont match	2	22
2.4	Plant number needs to be updated	2	12
7.3	Asphalt meters or scales needs to be verified	2	
7.14	Stockpile map isn't current	2	
7.18	Stockpiles aren't adequately spaced	2	
8.17	Corelok needs to be verified	2	
2.3	plant location needs to be updated	1	
3.1	Missing INDOT Spec book	1	
5.11	Corrective Action wasn't documented	1	

# DMF Entry and Paywizard updates

# DMF Entry

- DMF Entry
- Currently

Add New Binder ×

Type: Binder

PG Grade: Select PG Grade...

Select PG Grade...

58E-28

58H-28

58S-28

64-22

70-22

76-22

Search...

Source	Source Name
7182	Co (IMTT Terminal)
7205	Co (Peoria Plant)
7206	Materials (Monroe Terminal)
7208	Phillips 66 (Jeffersonville Plant)
7212	Phillips 66 (Petroleum Fuel & Term, Apex Oil)
7214	Phillips 66 (Petroleum Fuel & Terminal)
7217	Interstate Asphalt Corp. (Bell Oil Terminal)

1 2 3 4 5 6 7 ... 1 - 7 of 55 items

# HMA Paywizard

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- HMA Paywizard: No immediate updates
  - Plan is to incorporate SMA and OG in the future
- Stress the importance of R# for contractor use

# DMF Entry/HMA Paywizard Support

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- M&T has decided to take over some of the cmsupport HMA issues
  - Testing issues, DMF Entry, Paywizard, etc can now be sent to [ommtesting@indot.in.gov](mailto:ommtesting@indot.in.gov)
  - Sitemanager, Field Assistant, etc still [cmsupport@indot.in.gov](mailto:cmsupport@indot.in.gov)
- Let District/M&T know:
  - If a Lot needs to be rolled back or converted to single subplot acceptance (end of paving)
  - Something is wrong, “stuck”, or hasn’t processed
  - Final subplot tonnage



# Statewide HMA Data

# Statewide data

The real benefits? DATA!



The screenshot shows a web application interface for the Division of Materials and Tests. The top navigation bar includes the ERIN logo, 'Employee Resources', 'Our INDOT', and 'Agency'. The main content area is titled 'HMA Data Views' and lists several data categories:

- [Failed Materials](#)
- [HMA Final Tonnages](#)
- [Pay Factors and Comparison](#)

Below this list, there are two columns of links:

- [Certified Aggregate Products](#)
- [HMA Certified Plant Programs](#)
- [HMA Field Supervisors](#)
- [HMA Excel Workbooks](#)
- [HMA Data Views](#) (highlighted with a red arrow)
- [Summary of CMDPs for PCCP Pay Items](#)
- [Failed Material Notification Procedure](#)
- [In-House Procedures Index](#)
- [Retroreflectometer Operator Training & Certification](#)
- [Material Lists](#)
- Geotechnical Materials:**
  - [Qualified Geotechnical Consultants](#)
  - [Using a Light Weight Deflectometer](#)

# Average Density Summary

	<b>Superpave 4 (%)</b>	<b>Superpave 5 (%)</b>
2019	93.16	94.41
2020		94.46
2021		94.41
2022		94.47
2023		94.47
2024		94.32

# PWL Pay Factors

	<b>PWL</b>			
	<b>AV</b>	<b>Vbe</b>	<b>Density</b>	<b>LCPF</b>
<b>2021</b>	<b>1.02</b>	<b>1.04</b>	<b>1.00</b>	<b>1.00</b>
<b>2022</b>	<b>1.01</b>	<b>1.04</b>	<b>1.00</b>	<b>1.01</b>
<b>2023</b>	<b>1.01</b>	<b>1.04</b>	<b>1.00</b>	<b>1.00</b>
<b>2024*</b>	<b>1.01</b>	<b>1.04</b>	<b>1.00</b>	<b>1.01</b>

\*as of 12/4/24

# Single Sublot (Volumetric) Pay Factors

<b>Single Sublot</b>				
	<b>AV</b>	<b>Vbe</b>	<b>Density</b>	<b>SCPF</b>
<b>2021</b>	<b>1.01</b>	<b>1.03</b>	<b>1.00</b>	<b>1.02</b>
<b>2022</b>	<b>1.02</b>	<b>1.03</b>	<b>1.00</b>	<b>1.01</b>
<b>2023</b>	<b>1.02</b>	<b>1.03</b>	<b>1.01</b>	<b>1.02</b>
<b>2024*</b>	<b>1.02</b>	<b>1.03</b>	<b>1.01</b>	<b>1.02</b>

\*as of 12/4/24



# Research Projects

# Research Projects

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- SPR 4716 “Lessening Density Requirement and Adjusting Density Pay Factors for Asphalt Pavements in Poor Sublayer Conditions”
  - Recently completed
  - Is there an “intermediate” density spec? Can it be identified with FWD in advance?

# Research Projects

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- SPR 4728 “Stone Matrix Asphalt (SMA) Overlay Performance Evaluation”
  - Internal perception at INDOT that SMA is being outperformed by dense graded HMA
  - Completion date of 12/31/24
  - Final report pending

# Research Projects

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- SPR 4751 "Investigation of Low Friction on Asphalt Pavements."
  - A handful of Crawfordsville projects have tested low on friction and the pavements are generally only 4 to 5 years old.
- Original completion date of 12/31/24
- Extended to 4/30/25

# Research Projects

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- SPR 4822 - Implementation Study for In-Place Testing of Asphalt-Treated Cold Recycled Pavements. Start date 1/1/24
- SPR 4830 - Moisture Control and Performance Evaluation for Asphalt-Treated Cold Recycled Pavements (CIR and FDR). Start date 3/1/24
- SPR 4909 - Evaluation of Superpave 5 Asphalt Mixtures with Volume of Effective Binder Specification Changes. Start date 1/1/25
- SPR 4913 - Investigation of Longitudinal Joint Sealant Properties for Enhanced Durability of HMA Pavement. Start date 1/1/25



# Marketing Cloud updates

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- Transitioned from GovDelivery to Salesforce Marketing Cloud in late 2024
- Should have gotten notification



THANK YOU

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Questions?

[nawwad@indot.in.gov](mailto:nawwad@indot.in.gov)