

Electronic Ticketing Implementation, eCAMMS, and eCertification Updates

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PennDOT eTicketing: Background

Specification Work

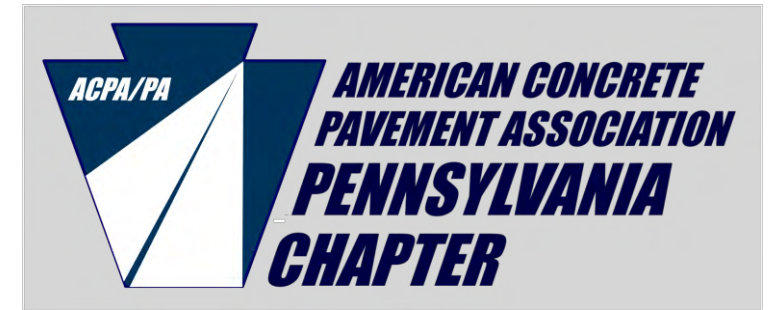
- **District 11 Pilots - 2017**
- **Team Formation - 2020**
 - Included All Parties from Producers to Inspectors



PennDOT's eTicketing Workgroup



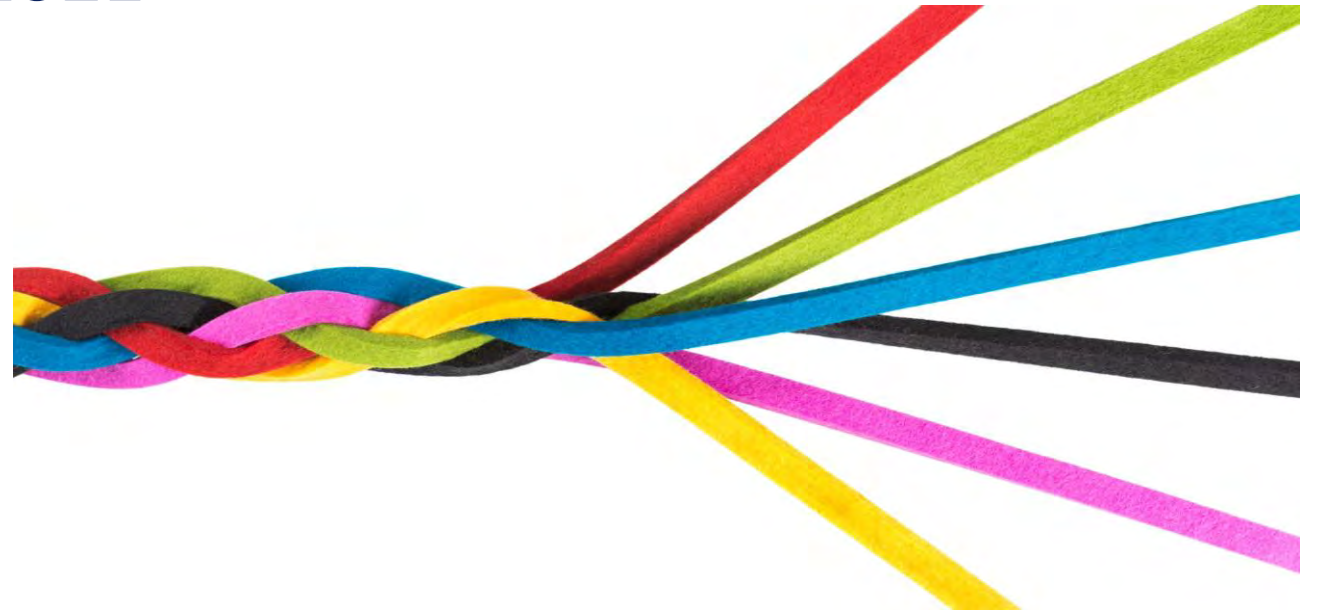
Pennsylvania Aggregates and Concrete Association



PennDOT eTicketing: Background Continued

Specification Work Continued

- Initial Special Provision – 2021
- Special Provision – 2022
- Special Provision – 2023



PennDOT eTicketing: 2024 Roadmap - Asphalt

- **Special Provision**
- **Pub 408 – *Highway Construction Specifications***
- **Bulletin 41 – *Producers of Asphalt Mixtures***

PennDOT eTicketing: 2024 Asphalt Special Provision

For acceptance on a project, the electronic ticket must contain the following information:

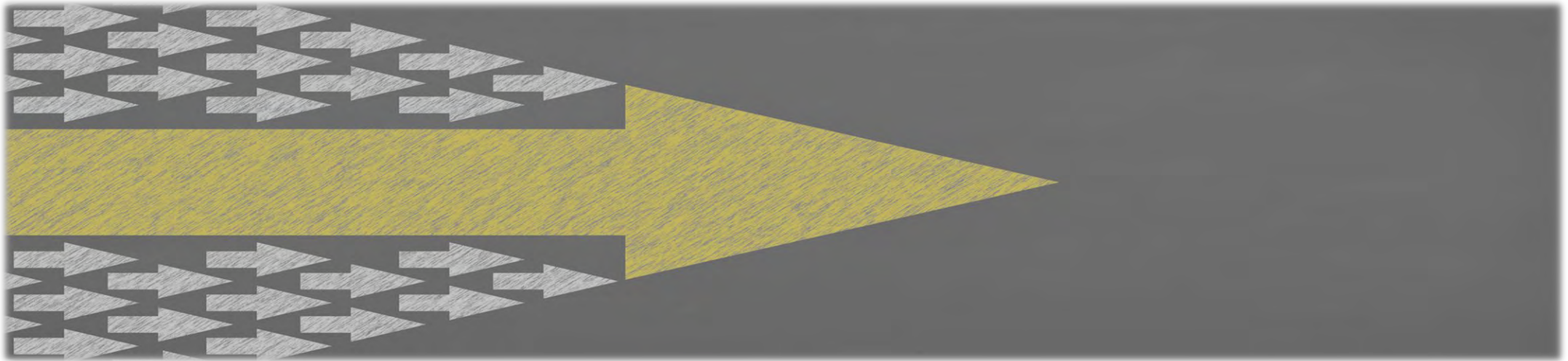
- Engineering and Construction Management System (ECMS) Number
- Plant Supplier Code
- PennDOT Material Type (ex. Asphalt)
- Job Mix Formula (JMF) Number
- JMF Year
- Plant Ticket Identification (ID)
- Date and Time Ticketed
- Unique Truck ID
- Gross Weight
- Gross Weight Unit of Measure (UoM)
- Tare Weight
- Tare Weight UoM
- Net Weight
- Net Weight UoM
- Name of Licensed Public Weighmaster
- License Number of Licensed Public Weighmaster
- Running Daily Total in Tons of material being transported
- Running Daily Total UoM
- Load Count

PennDOT eTicketing: 2024 Asphalt Special Provision

- If internet connection is unavailable at the project or temporarily unavailable at the material suppliers' site, provide paper tickets for inspection staff to work offline. Ensure the inspector can retrieve the eTicketing data when internet connection is restored.
- The Unique Truck ID must be a minimum of 3 inches in height, on three (3) sides of the truck (each side and the tailgate) and must match the Unique Truck ID entered on the eTicket.

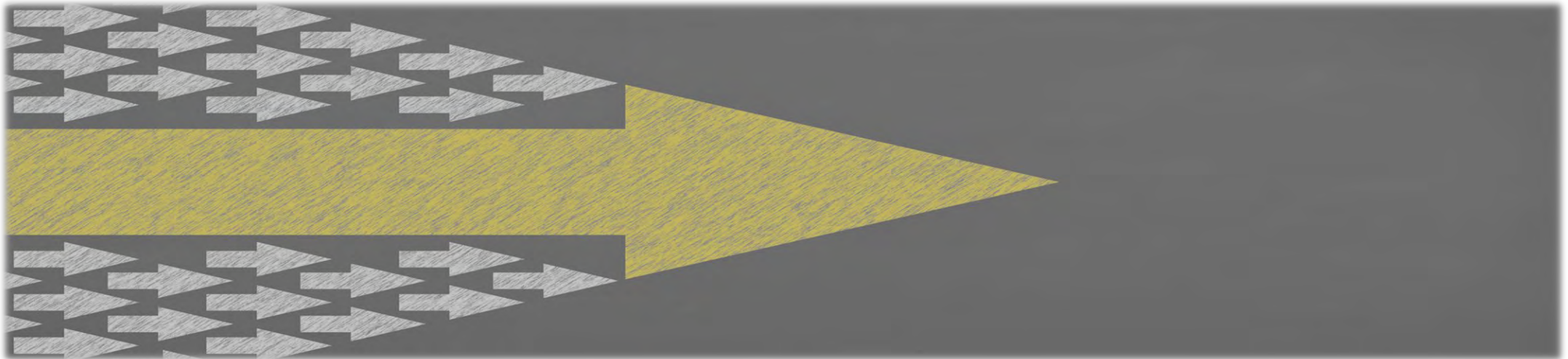
PennDOT eTicketing: Pub 408 Asphalt Update, Pending

- Section 413 (Asphalt) Superpave Mixture Design, Standard and RPS Construction of Plant-Mixed Asphalt Courses
 - 413.3 Electronic Ticketing (eTicketing) System



PennDOT eTicketing: Bulletin 41 Update, Pending

- **Bulletin 41 Producers of Asphalt Mixtures**
 - All producers providing material to an ECMS construction project must meet the requirements specified in Pub 408 Section 413.3(p) Electronic Ticketing (eTicketing) System.



PennDOT eTicketing: Asphalt by the Numbers

	# Approved Suppliers	# Active¹ Construction Suppliers	# Active¹ Suppliers within Pilot	Suppliers with eTickets²	% of Pilot Suppliers with eTickets
Bulletin 41	191	146	116	94	81.0%

¹ Provided material to an ECMS project within the last 3 construction seasons
² Ticket successfully submitted into PennDOT's eTicketing app

PennDOT eTicketing: Upcoming Enhancements



- Batch data for Concrete
- Contractor, Plant Technician and Plant Inspector Access
 - Read only access
- Plant Technician and Plant Inspector Access
 - Access to enter data

PennDOT eTicketing: Upcoming Conversations

- Pennsylvania State Police
- Federal Motor Carrier Safety Administration



PennDOT eTicketing: Ways to Connect

Option 1

For Producers and Contractors with Internal IT Resources

PennDOT will provide an API key for you to send ticket data to the Pennsylvania DOT Portal



Option 2

For Producers and Contractors with existing e-Ticketing Solutions

The e-ticketing provider can forward the tickets via API to the PennDOT Portal. If they are unable to do so currently, HaulHub can assist in establishing the connection.



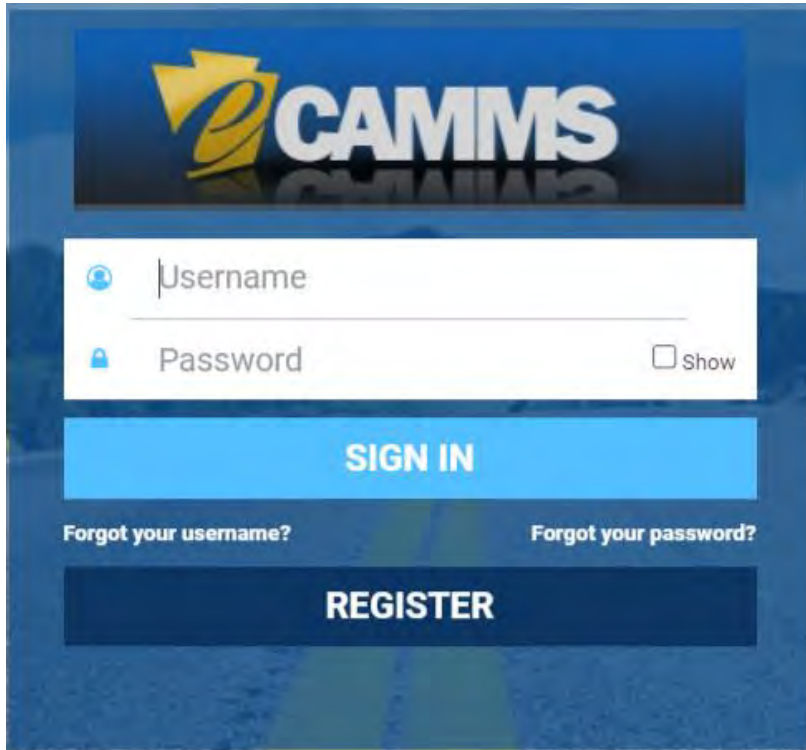
Option 3

For Producers with Limited to No IT Resources and no e-Ticketing Solution

Provide a simple solution to get your tickets flowing into the portal at no cost to you.



eCAMMS – Releases Over the Past Year



The screenshot shows the eCAMMS user interface. At the top left is the eCAMMS logo, which consists of a yellow stylized 'e' followed by the word 'CAMMS' in white. Below the logo is a white login form with two input fields: 'Username' and 'Password'. The 'Password' field has a small 'Show' checkbox to its right. Below the login form is a blue button labeled 'SIGN IN'. Underneath the 'SIGN IN' button are two links: 'Forgot your username?' on the left and 'Forgot your password?' on the right. At the bottom of the form is a dark blue button labeled 'REGISTER'.

- Release 36 – June 2023
- Release 37 – September 2023
- Release 38 – November 2023
- Release 39 – November 2023

eCAMMS – Release 36 (June 2023)

- JMF Changes**
- Concrete JMFs Calculation - Volume Remains the Same When Specific Gravity is Updated.....
- Concrete JMF Fine Aggregate Validation.....
- JMF Maintenance - JMF Validation Requirements Maintenance - Fines/Asphalt (F/A) Ratio Column.
- JMF Reference Data Added to the JMF Export Field Selections Popup.....
- Mixture Draindown Field Added to JMFs
- Total Percent RAP Values are Included in the JMF export from eCAMMS into QARS.....

eCAMMS – Release 37 (Sept 2023) & Release 39 (Nov 2023)

- ESB Changes**.....
- ESB Bituminous Quality Control - Graphs page
- ESB Bituminous Quality Control: Overall Summary page

eCAMMS – Engineer of Tests Configuration Changes

April 2023

Material Code (Material Code Description)	New Material Class (Material Class Description)	Effective Date
7 (Asphalt Matl. Non-Paving)	VRAM (Void Reducing Asphalt Membrane)	01/30/2023
217 (Concrete Cylinder)	S (N/A)	04/14/2023
218 (Concrete Core)	S (N/A)	04/14/2023
276 (Cement)	1T(L)(P) (Type IT Limestone & Pozzolan Blend)	03/02/2023
	1T(L)(S) (Type IT Limestone & Slag Blend)	03/02/2023
	1T(P)(L) (Type IT Pozzolan & Limestone Blend)	03/02/2023
	1T(P)(P) (Type IT Two Pozzolan Blend)	03/02/2023
	1T(P)(S) (Type IT Pozzolan & Slag Blend)	03/02/2023
	1T(S)(L) (Type IT Slag & Limestone Blend)	03/02/2023
	1T(S)(P) (Type IT Slag & Pozzolan Blend)	03/02/2023
308 (Paint-Traffic)	EPOXYWHT (Epoxy Resin White)	03/30/2023
	EPOXYVEL (Epoxy Resin Yellow)	03/30/2023

eCAMMS – Engineer of Tests Configuration Changes

Nov 2023

eCAMMS Material Code (Material Code Description)	eCAMMS Material Class	eCAMMS Material Class Description	MCC Combination Added or Removed
187 (WMA Technology)	EVO-J88	Evotherm J88	Added
187 (WMA Technology)	EVO-M80	Evotherm M80	Added
187 (WMA Technology)	REDWMX	Rediset WMX	Removed
187 (WMA Technology)	SONNGRasII	Sonnegreen as II	Removed
187 (WMA Technology)	SONNWM	SonneWarmix	Removed
187 (WMA Technology)	ZYCOTH	ZycoTherm	Removed
187 (WMA Technology)	ZYCOTH-SP2	ZycoTherm SP2	Added

eCAMMS – Engineer of Tests Configuration Changes

Jan 2024

Material Code (Material Code Description)	New Material Class (Material Class Description)
11 (Asphalt Density Samples)	WR25BCM (WMA w/ RAP, 25 mm NMAS, Base Crse, High RAP for LVR)
97 (Asphalt Ignition Furnace)	WR25BCM (WMA w/ RAP, 25 mm NMAS, Base Crse, High RAP for LVR)
98 (Asphalt Solvent Extraction)	WR25BCM (WMA w/ RAP, 25 mm NMAS, Base Crse, High RAP for LVR)

- WR25BCM as a JMF Material Class
 - Allowable Design ESAL Ranges:
 - Ndes = 50 RAP > 15-25%
 - Ndes = 50 RAP > 25-50%

eCAMMS – Words of Wisdom from eCAMMS Support

The screenshot displays the eCAMMS web application interface. At the top left is the eCAMMS logo. Below it is a navigation menu with links: Home, Sample, JMF, ESB, Product Evaluation, Maintenance, and Tools. To the right of the menu are search fields for 'TR-447 Ref #' and 'Sample #' with navigation arrows and a 'Search' button. The main content area is titled 'JOB MIX FORMULA MAINTENANCE: GENERAL'. Below the title is a toolbar with buttons: 'Job Mix Formula Menu', 'Add New', 'Copy', 'Attachments', 'Save', 'Revise JMF', 'Revise Material', and 'Disapprove'. The 'Revise JMF' and 'Revise Material' buttons are highlighted with green boxes, and the 'Disapprove' button is highlighted with a red box. Below the toolbar, there are two columns of text: 'DESIGN TYPE: ASPHALT', 'SUPPLIER CODE: HAP63A41', 'JMF YEAR: 2024' on the left; and 'JMF/Mix DESIGN NUMBER: W1972V01', 'JMF MATERIAL CLASS: WM19B', 'JMF STATUS: APPROVED' on the right.

eCAMMS – Upcoming Release 40

Currently in User Acceptance Testing Phase

Projected Implementation Date: April 3, 2024

- ESB Asphalt Quality Control
 - Refinement of Action Points for Single Sample/Specimen and Multiple Sample/Specimen flags
- Certificates of Compliant for Aggregate and Concrete
- Product Evaluation Enhancements

eCertifications

- New eCAMMS Auto-generated CS-4171 for aggregate and concrete
- Update to form CS-4171 and CS-4171LA
 - PennDOT Forms & Pubs Website (www.penndot.pa.gov)
 - DocuSign forms CS-4171 and CS-4171LA
 - Template

PennDOT eTicketing, eCAMMS and eCertification

THANK YOU!

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