AASHTO PRODUCT EVALUATION & AUDIT SOLUTIONS

NTPEP Results on Preservation Products

Katheryn Malusky, AASHTO

NATIONAL PAVEMENT PRESERVATION CONFERENCE
npc23
IMPACTS AND BENEFITS FROM PAVEMENT PRESERVATION

ncpp National Center for Pavement Preservation
MICHIGAN STATE UNIVERSITY

AASHTO TSP2 PAVEMENT PRESERVATION

ROCKY MOUNTAIN WEST PAVEMENT PRESERVATION PARTNERSHIP
SOUTHEAST PAVEMENT PRESERVATION PARTNERSHIP
MIDWESTERN PAVEMENT PRESERVATION PARTNERSHIP
NORTHEAST PAVEMENT PRESERVATION PARTNERSHIP


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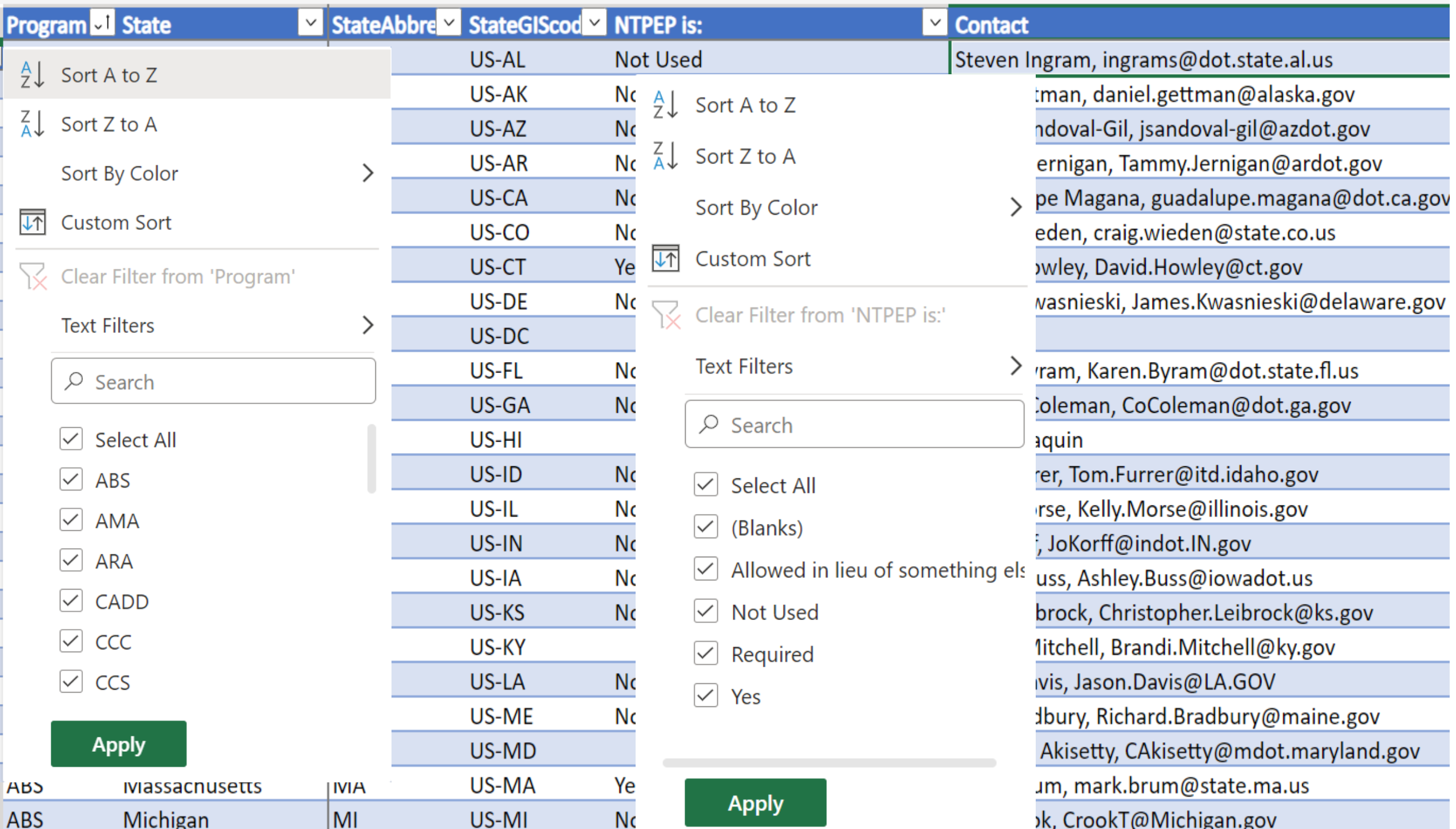
PRODUCT EVALUATION & AUDIT
SOLUTIONS
STATE USAGE SURVEY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US-AZ ndoval-Gil, jsandoval-gil@azdot.gov
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Tennessee DOT Use of HFST

Contact Danny Lane: Danny.Lane@TN.gov

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Tennessee's Strategic Highway Safety Plan (SHSP)

- As part of their Road Safety Audits (RSA), The Project Safety Office conducts systemic safety improvements that impact multiple locations with similar crash patterns or geometric layouts, including HFST
- The goal of the Project Safety Office is to reduce the total number and severity of crashes through reactive and proactive safety strategies, while expediting the project development process. The Project Safety Office received a National Roadway Safety Award for some RSAs that developed the "J-turn" alternate intersection design found in Maury County.

TN DOT's Special Provision for HFST

Table 1— Physical and Chemical Requirements of the Aggregate		
Property	**Test Method**	**Requirement**
Micro Deval Resistance to Degradation	ASTM D7428	5% Max
Aggregate Grading No. 4 Sieve No. 6 Sieve No. 16 Sieve	AASHTO T27	Percent Passing 100% min 95% min 5% max
Moisture Content	AASHTO T255	0.2% max
Aluminum Oxide	ASTM C25	87% min

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Tennessee DOT Use of Thin Overlays

- QPL 23: CONCRETE WATERPROOFING- SECTION D: EPOXY-URETHANE THIN OVERLAY SYSTEMS FOR BRIDGE DECKS (1/2 INCH THICKNESS OR LESS)
  - Outlines the Department's approval process for polymer-modified cementitious, epoxy urethane and low modulus epoxy materials applied as thin overlays on bridge decks used to sea improve skid resistance.

- Specification: AASHTO MP35- Standard Specification for Thin Overlay Treatments Using a Binder Resin System and Aggregate for Concrete Surfaces
  - Includes participation in NTPEP

- Procedures:
  - A completed Product Evaluation Form, safety data sheets (if applicable), product data information and a sample of the product being tested must be submitted to the Division of Materials and Tests. For Epoxy-Urethane Thin Overlay Systems:
  - Use deck pretreatment/primer per manufacturer's recommendation. • Apply two lifts of an epoxy-urethane copolymer and aggregate.
  - Apply overlay mechanically using metered equipment; hand mixing is not permitted.

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Louisiana DOTD Use of AASHTO Product Evaluation & Audit Solutions HFTO Data

Contact Justin Morris: Justin.Morris@LA.gov

AASHTO PRODUCT EVALUATION & AUDIT SOLUTIONS

- The HFTO evaluation is required for “High Friction Surface Treatment (HFTO). The HFTO evaluation is used to list products on their Approved Materials List.
  - Specify HFST products meet AASHTO MP-41, table 1 and use the HFTO evaluation to verify that products meet the specified values.
  - Use the HFTO field trial results for friction. Minimum required value is 65.
  - In favor of using photographic documentation for adhesion evaluation
  - Do not use the HFTO evaluation for bridge deck thin overlays

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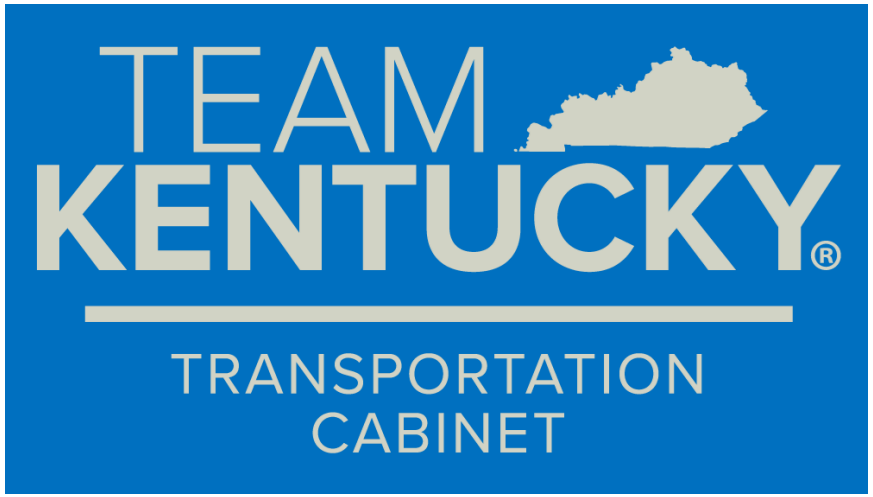
Kentucky Transportation Cabinet's Use of AASHTO Product Evaluation & Audit Solutions HFTO Data



Contact Brandi Mitchell: Brandi. Mitchell@KY.gov

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- Use the HFTO evaluation for both High Friction Surface Treatment (HFST) and bridge deck thin overlays. If used on a bridge, it is to improve friction, not to protect the deck.
- Require the ASTM C1583 testing that had been part of the HFTO evaluation. Kentucky has not had to evaluate any products since the adhesion testing was removed from the work plan.
  - Note: They do not use photo documentation to determine adhesion.
- Use both the HFTO lab and field evaluations for HFST products. Previously used the C1583 testing as well as the friction testing. They require the full 3-year NTPEP field evaluation for listing on their “List of Approved Materials.

North Carolina DOT's Use of AASHTO Product Evaluation & Audit Solutions HFTO Data

Contact Matt Hilderbran: mrhilderbran@ncdot.gov

- Don’t use very much HFST. Rather than HFST, they mostly use open graded friction course; an asphalt pavement.
- Require the lab portion of the HFTO evaluation.
  - Specify ASTM C-881 Type III epoxy binder for HFST and other applications.
- Don’t use the field trial and have no qualification requirements for friction testing.
- Don’t typically use thin overlays of the type that is evaluated by the HFTO program.
- Require that epoxy binders are evaluated by the program but it appears that either the ERB or HFTO evaluations would provide what they need.

AASHTO PRODUCT EVALUATION & AUDIT SOLUTIONS

- In Summary:
  - Many states require a Quality Control plan from the contractor performing the work. Often this also includes documentation of experience in applying the product
  - Many states require a test strip at the project site prior to starting the contracted work. This is often subjected to adhesion testing as per ASTM C1583.
  - Many states require adhesion testing as per ASTM C1583 and friction testing for final project acceptance.

AASHTO PRODUCT EVALUATION & AUDIT SOLUTIONS

AASHTO Product Evaluation & Audit Solutions Homepage

- TC homepages
- State Usage Survey
- News and Announcements
- NTPEP YouTube channel
- and more!

https://transportation.org/product-evaluation-and-audit-solutions/

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AASHTO Product Evaluation & Audit Solutions - (formerly National Transportation Product Evaluation Program (NTPEP))

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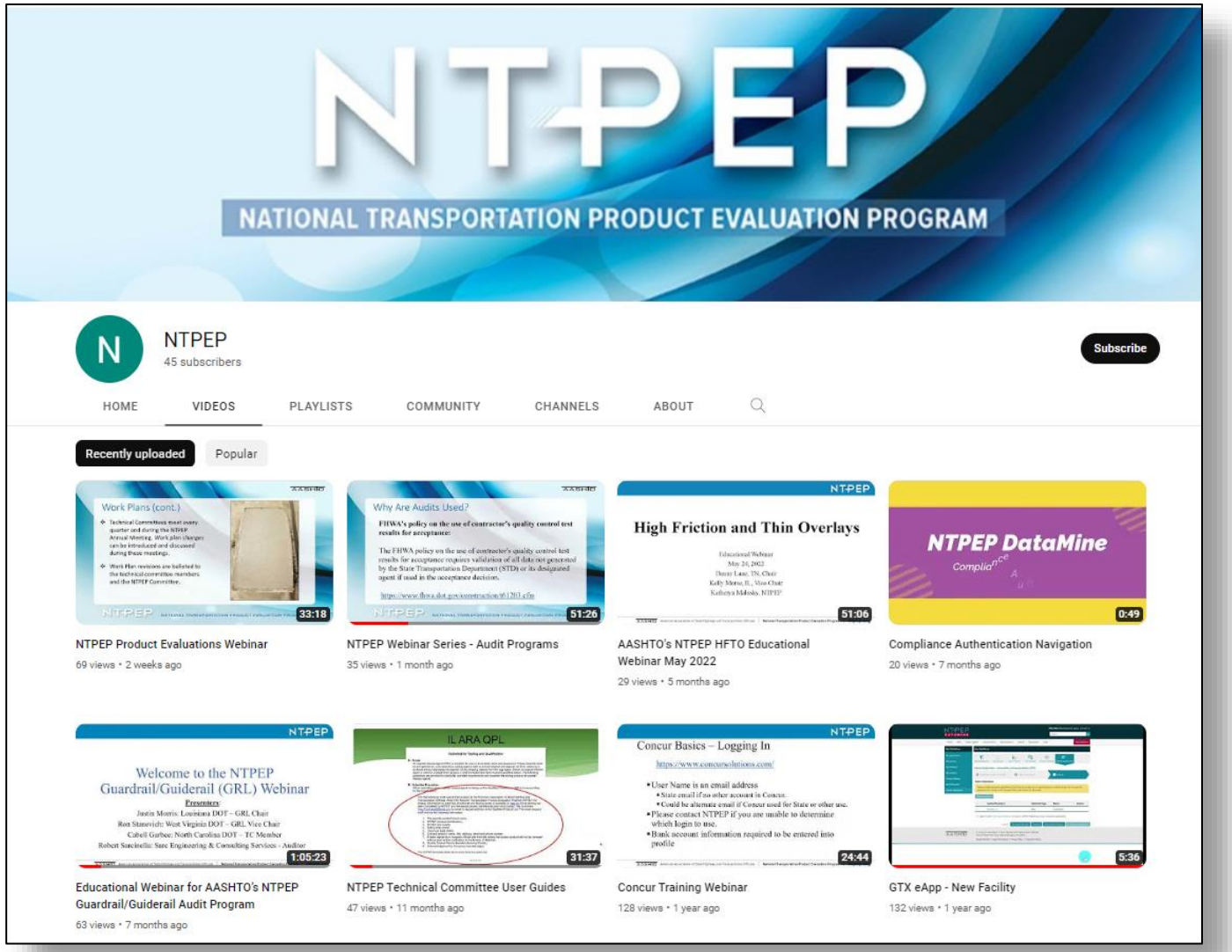
- Webinars describing individual program evaluations and/or audits
- “How to” videos for using DataMine, balloting, and more.
- Available from the AASHTO Product Evaluation & Audit Solutions Homepage.



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AASHTO Product Evaluation & Audit Solutions (Formerly NTPEP)

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About

AASHTO Product Evaluations & Audit Solutions combines the professional and physical resources of the AASHTO member departments in order to evaluate materials, products, and devices of common interest

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