

# SPREADING ASPHALT PAVEMENT TECHNOLOGY INNOVATION

MOBILE ASPHALT TECHNOLOGY CENTER



U.S. Department  
of Transportation

**Federal Highway  
Administration**

# MATC

is on the move to serve the asphalt pavement community

**The Mobile Asphalt Technology Center is committed to spreading the awareness and accessibility to the latest asphalt pavement innovations. As part of the Federal Highway Administration (FHWA) Office of Preconstruction, Construction, and Pavements, we are focused on helping transportation professionals improve durability, safety, efficiency, and quality in the paving process.**

The MATC program brings hands-on education, technology demonstrations, field pavement evaluations, and asphalt materials and mixture testing straight to transportation departments and their partners. We work to introduce new and emerging asphalt materials and construction technologies to State transportation agencies and industry — bridging the gap between research and implementation. The desired outcomes from the MATC program include:

- Longer-Life Pavements
- Safer, More Effective Methods and Quality Results
- More Informed and Better Connected Pavement Workforce



*“Because MATC staff collaborate with asphalt professionals from across the country and are involved in testing diverse materials, they are able to validate innovative strategies being implemented in Florida’s asphalt paving program.”*

— Howie Moseley, State Bituminous Materials Engineer, Florida Department of Transportation (FDOT)

*“It was great to experience the significant capabilities of the MATC and understand the value it provides our industry. The personnel present were knowledgeable and provided valuable technician-to-technician support.”*

— Brandon Milar, Director of Technical Services, California Asphalt Paving Association

**A long-standing commitment to the transportation professionals, including,**

*State Departments of Transportation (DOTs)  
Industry Partners  
Local Public Agencies  
Highway Engineering Consultants and Academia*

Pavement is our

# PASSION

If asphalt pavements in your state are struggling to endure the combined effects of vehicles, weather, and time — MATC staff can help. We offer on-site field evaluations, laboratory testing, and recommendations to improve pavement quality. And where current asphalt pavement testing is lacking effectiveness and clarity, MATC can deliver the latest innovations with equipment demonstrations and loans. When there is a breakthrough and improvement in pavement technologies, MATC staff are eager to spread the word through deployment activities, educational events, industry conferences, and technical information.

- New concepts and tools for material testing and selection
- Better test protocols for asphalt mixture performance
- Innovative equipment that assists in asphalt pavement construction
- Design methods that improve pavement durability as well as safety
- On-site performance testing tools and evaluation
- Processes that result in higher quality asphalt pavements
- Successful practices from agencies and contractors around the country

## Move Forward With the Mobile Asphalt Technology Center



Hands-On Demos and  
On-site Trainings



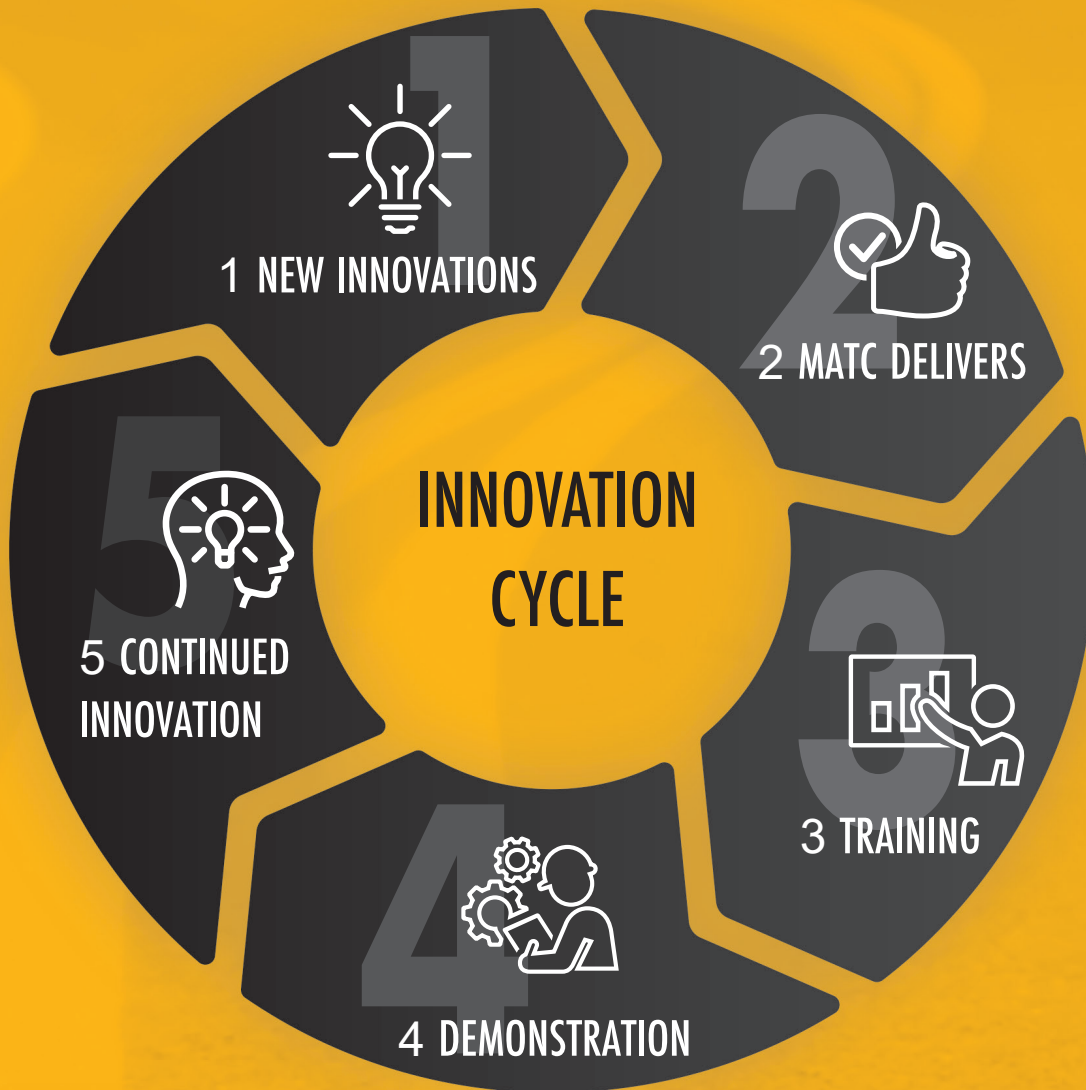
Direct Testing, Results and  
Recommendations



Equipment Loans



Technical Assistance with  
Asphalt Practices and  
Specifications



**1** 1. Researchers and developers create new innovations in pavement technologies and methodologies.

**2** 2. The MATC introduces the most viable innovations to pavement professionals in order to test on their local paving project, without the commitment of their resources.

**3** 3. The MATC visits an on-site project to provide classroom and hands-on training on laboratory and field testing of the latest technologies, as well as multiple subsequent workshops to round out the educational experience.

**4** 4. Professionals invite the MATC to various events around the country to discuss and demonstrate the latest technologies and practices that encourage longer-lasting, safer, and efficient asphalt pavement solutions.

**5** 5. Innovation continues as pavement professionals interact with MATC staff to share their experiences related to the implementation of new pavement materials, mixture, and construction technologies.

# INNOVATION

delivered to your doorstep

**The Mobile Asphalt Technology Center program travels across the United States to provide pavement professionals with boundless opportunities for the implementation of technical advancements.**

When you see the MATC trailer driving into your community, you can expect education on the most state-of-the-art pavement testing equipment, along with knowledgeable experts who are eager to share new concepts and capabilities with you. Our innovations are deployed — comprehensively with the utmost care — directly to the professionals who ultimately lead the improvement of our nation's infrastructure.

## **Project Site Visits**

The MATC staff are subject matter experts with a national perspective that provides agencies and industry first-hand exposure to new technologies to facilitate implementation.

## **Education**

Our experts introduce new standards, equipment, and materials straight to DOTs and other highway professionals in comprehensive hands-on sessions. We ensure concepts will not only be introduced but provide strategies for their implementation into everyday practice. The MATC also provides educational support related to the implementation of Balanced Mix Design to agencies and their stakeholders to achieve the high-quality performance of roadway pavements.

## **Testing**

The MATC collaborates with the Turner-Fairbank Highway Research Center's Asphalt Binder Mixture Laboratory (ABML) to provide advanced asphalt binder performance testing, opportunities for evaluating and improving asphalt testing procedures, as well as pavement performance analysis.



Photographs by David Heisler

### *Mixture Tests*

- IDEAL-CT for crack resistance
- IDEAL-RT for rut resistance
- Overlay Test for reflective cracking
- Flexibility Index Test (I-FIT) for fracture resistance
- Hamburg Wheel Track Test for rut/moisture resistance

### *Material Tests*

- X-Ray Fluorescence (XRF) Spectrometer for binder's or markings' chemical elements
- Extended aging binder testing
- FTIR binder molecular analysis
- Various intermediate new binder parameters
- Automated extraction

### *Field Tests*

- Paver-Mounted Thermal Profiler for real-time mat temperature
- Pulse Induction Test for in-situ pavement thickness
- Various devices for measurement of pavement texture
- Dielectric Profiling System for mat and joint density

### **Customized Training Workshops**

Test results and observations from the project site visit are presented in a classroom setting for agencies and industry to further facilitate new technology and methodology implementation.

### **Equipment Loan Program**

Transportation agencies and industry are loaned equipment to gain hands-on experience and obtain exposure to new technologies prior to making a resource commitment. Upon request, we provide training to help support the implementation of these technologies.

### **Technical Leadership**

MATC provides instructional documents on topics related to identified national trends that encourage agencies and industry to evaluate and improve their specifications and practices.

Are you ready to pave the way  
to longer-lasting asphalt for  
your community?

Learn more at <https://www.fhwa.dot.gov/MATC/> or contact us at [FHWA-MATC@dot.gov](mailto:FHWA-MATC@dot.gov) to schedule a technology demonstration, training, or equipment loan today.



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**MATC is part of:**  
Federal Highway Administration  
Office of Preconstruction, Construction, and Pavements

FHWA MATC Program Management  
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*Photograph by David Heisler*  
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