**Proposal for Demonstration to Advance New Pavement Technologies Pooled Fund**

* **Identification of the lead agency for the proposed project:** FHWA
* **Description of the specific research activities to be undertaken:** The Accelerated Implementation and Deployment of Pavement Technologies Program (AIDPT) was initiated as part of MAP-21 to advance the latest and best pavement technologies through FHWA/stakeholder collaborations. As stated in legislation, the program goals include:
* The deployment of new, cost-effective designs, materials, recycled materials, and practices to extend the pavement life and performance and to improve user satisfaction.
* The reduction of initial costs and lifecycle costs of pavements, including the costs of new construction, replacement, maintenance, and rehabilitation.
* The deployment of accelerated construction techniques to increase safety and reduce construction time and traffic disruption and congestion.
* The deployment of engineering design criteria and specifications for new and efficient practices, products, and materials for use in highway pavements.
* The deployment of new nondestructive and real-time pavement evaluation technologies and construction techniques.
* Effective technology transfer and information dissemination to accelerate implementation of new technologies and to improve life, performance, cost effectiveness, safety, and user satisfaction.

Since 2013, AIDPT, in partnership with State Departments of Transportation (DOTs), academia and industry, has identified asphalt and concrete paving advancements, and implemented effective strategies for rapid deployment of new and promising technologies. The AIDPT program has delivered resources to every state. Technology assistance and training has been provided to over 11,000 people through conferences, workshops, webinars, on-site visits and personal technology support to state agencies and industry. In addition, more than 100 technology transfer publications and articles have been developed. The FHWA has several additional AIDPT program activities planned through 2025.

This pooled-fund project will continue to achieve the goals of the AIDPT Program by serving as a mechanism to deploy and showcase pavement technologies and resources. Recent FHWA-led demonstration initiatives include increased in-place asphalt density and performance engineering concrete mixtures. To further and enhance the Program’s demonstration initiatives, the FHWA will identify up to four pavement technology topics for consideration under this pooled-fund project that align with the FHWA Pavement and Materials program areas. These program areas include Design, Materials, Quality Assurance, Construction, Sustainability, Management, and Preservation. FHWA will then collaborate with the contributing State DOTs to define the parameters of each of their state’s demonstration project.

The following topics have been identified for the initial solicitation; however, other topics may be considered by the Technical Advisory Committee (TAC).

* Development of performance-engineered mixed design programs for asphalt (PEMD) and concrete (PEM)
* Implementation of strategic pavement preservation programs
* Integration of sustainability and resiliency into decision-making process, technical frameworks, education efforts, and stakeholder engagement

The FHWA contribution to will be used to provide up to $250,000 to each of the selected demonstration project. In addition to the FHWA and state financial contributions, FHWA will provide up to 100 hours of technical assistance, and resources for developing case study reports and videos for each state’s DOT demonstration project. Examples of technical assistance that FHWA will provide include activities such as training through workshops and review of specifications. Additionally, FHWA will host a website for publishing case studies and other relevant project documents, as well as peer exchanges for showcasing lessons learned and best practices from the projects. Each state DOT will be required to participate in pooled fund meeting opportunities and actively collaborate with other states and FHWA to advance these initiatives. The state DOT will also be required to complete a report documenting the initiative and outcomes of selected state DOT demonstration projects by using a standard reporting template provided by FHWA.

* **Problem Statement:** A significant amount of highway funding is spent on pavements. To ensure the greatest return on these investments and accelerate the process of delivering safe, smooth, durable pavements in a state of good repair, FHWA is leading a pooled fund aimed at:
* Supporting and showcasing the implementation of innovative pavement technologies, products, and processes by State DOTs.
* Leveraging of Federal investments with State DOT partnerships.
* **Total estimated costs as well as the requested contribution (per participant, per fiscal year):** $2,050,000; Includes FHWA contribution of $2 million and contributions of $10,000 by at least 5 State DOTs.
* **Estimated duration of the project:** 5 years