



FHWA's Office of Human Environment (HEPH) develops and implements programs and activities that advance multimodal innovation, improve the human environment, and enrich human interaction with transportation systems.

The Federal Highway Administration's (FHWA) Office of Planning, Environment, and Realty offers research opportunities to improve transportation decision making and promote efficiency while protecting communities and the environment. The Office supports and conducts research that:

- ◆ Informs Decision Making on Transportation Investments
- ◆ Reduces Negative Environmental Impacts and Enhances Benefits
- ◆ Enhances Quality of Life
- ◆ Accelerates Project Delivery
- ◆ Advances the Transportation Planning Process

Research Focus

The Office's efforts focus on supporting the advancement of livability, documenting the local and regional economic development impacts of highways, planning and implementing research, and managing human environment-related funded programs. The resulting research is focused on the following areas:

- ◆ Quality of life and environmental justice
- ◆ Community impact assessments
- ◆ Pedestrians, bicyclists, and micromobility
- ◆ Context-sensitive solutions and design
- ◆ Economic development
- ◆ Research program management and outreach
- ◆ The National Highway System (NHS)
- ◆ Multimodal networks and recreational trails

These efforts are directed toward providing technical assistance, tools, and training on highway systems and complementary modes of transportation.

Office's research seeks to identify methods to help FHWA stakeholders effectively evaluate project and program impacts and identify, improve, and implement sound mitigation options. The Office aims to improve coordination and communication between State departments of transportation (SDOTs), partner agencies, and the public to ensure project understanding and create new efficiencies.

Staff Contact: [Mike Neathery](#), 202-366-1257.

FEATURED RESEARCH ACTIVITIES

Fostering Innovation in Pedestrian and Bicycle Transportation Pooled Fund Study

This pooled fund focuses on bicycle and pedestrian network planning, safety, design issues (design flexibility, developing crash modification factors, network connectivity), traffic control devices (experimenting on innovative markings, signals, and signs), and other issues designed by participants. For more information, please visit the [pooled fund website](#).

Staff Contact: [Darren Buck](#), 202-366-1362.

Toward a Shared Understanding of Pedestrian Safety: An Exploration of Context, Patterns, and Impacts

[Shared Understanding of Pedestrian Safety report](#) provides context on pedestrian safety issues, crash patterns and contributing factors, and resulting impacts that may help orient readers from diverse sectors to identify shared concerns and opportunities to make a difference. It also includes a focus on background and context on what makes pedestrians unsafe and what safety risks, patterns, and gaps in knowledge have been identified to date, to support a more shared understanding of the nature of the problem needing to be addressed.

Staff Contact: [Darren Buck](#), 202-366-1362.

Impacts of Electric Bicycles (ebikes) on the Transportation Network and Trail System

This research will compile information on the impacts of ebikes on the transportation network and trail systems. The effort includes a literature review on the impacts of ebikes, with a focus on safety, ridership trends, and impacts to infrastructure and natural resources. The review will investigate existing practices for regulating ebikes in different contexts (rural, suburban, urban), and public lands. The research will provide information on data collection and analysis methodologies, and produce 10 or more case studies that examine the use, impacts, and regulation of ebikes by States, local jurisdictions, and Federal Land Management Agencies.

Staff Contact: [Christopher Douwes](#), 202-366-5013.

E-Scooters Management in Mid-Size Cities in the United States

This research examined several case studies to provide additional observations around micro-mobility. Interviews were conducted with large, midsize, and small communities in addition to the FHWA and the National Association of City Transportation Officials to gather perspectives on key emerging issues, challenges and potential guidance. Primary topics explored included; regulation and permitting, safety, and infrastructure design. Insights and lessons learned from interviews were presented

at the ITE conference in Austin, TX in Summer 2019. The final [E-Scooters report](#) summarized consistent themes and potential next steps.

Staff Contact: [Wesley Blount](#), 202-366-0799.

The Basics of Micromobility and Related Motorized Devices for Personal Transport

This [info brief](#) provides an overview of powered forms of micromobility and compares features of micromobility with a spectrum of other traditional and emerging forms of transportation. It references and builds upon micromobility definitions created by the Society of Automotive Engineers (SAE), a standards-developing organization and professional association.

Staff Contact: [Wesley Blount](#), 202-366-0799.

Considerations for Deploying Automated Driving Systems (ADS) Around Schools

This [white paper](#) is intended for audiences developing ADS technologies designed to navigate through or in the vicinity of school zones. It may also be beneficial to a variety of stakeholders in communities affected by those deployments. It summarizes the challenges of ADS deployment from technical, policy, infrastructure, and educational perspectives, and stakeholders will gain a general understanding to inform conversations before ADS are deployed broadly near schools. The result of the research is a set of ten recommendations that highlight the variety of challenges that will need to be addressed by ADS developers and local stakeholders prior to broad deployment.

Staff Contact: [Wesley Blount](#), 202-366-0799.

Strategies for Accelerating Multimodal Project Delivery

This report identifies specific strategies and techniques for accelerating multimodal project delivery, prioritizing ways to efficiently and effectively build out connected multimodal networks in concert with major highway, intersection, and bridge projects. It includes standalone pedestrian and bicycle projects, retrofits in-built environments, fixed and flexible route transit and intermodal projects, and as ongoing

maintenance activities. [Strategies for Accelerating Multimodal](#) highlights proven techniques that agencies are using to get high quality results, and opportunities to address barriers or delays in the project delivery process.

Staff Contact: [Wesley Blount](#), 202-366-0799.

Toolkit on Innovative Finance Strategies to Accelerate Bicycle and Pedestrian (Active Transportation) Project Delivery

This research builds on *Strategies for Accelerating Multimodal Project Delivery* and "Diversifying DOT's Build America Bureau (BAB) Portfolio to Include Underutilized Stakeholders" to compile, analyze, and document best practices for innovative finance strategies to accelerate bicycle and pedestrian project delivery. The research will highlight innovative finance approaches for implementing active transportation projects in various community contexts.

Staff Contact: [Fleming El-Amin](#), 202-366-0233.

Economic Development and Highway Right-Sizing

This research produced a white paper, fact sheets, and case studies on "right-sizing" highway segments. Context-sensitive solutions like right-sizing are an innovative approach to addressing this aging infrastructure, providing the opportunity to develop community-oriented transportation policies that promote safety, community well-being, and help the community achieve broader economic development goals. The products look at the typical processes involved in right-sizing and details some of the economic development outcomes of numerous completed projects. For more information, please visit the [Economic Development website](#).

Staff Contact: [Stefan Natzke](#), 202-366-5010.

Resources for Managing Mobility Options at the Curb

New mobility concepts and solutions, from micromobility and ride-hailing services to innovative demand response bus services, are providing travelers with flexible, and tailored transportation options. This research project is to develop additional curbside

management resources that will allow communities to inventory their streets to make informed decisions on how to best manage their transportation system starting at the curb. In the near term, the products will give jurisdictions research and tools to assess current resources and develop implementation projects. In the long term, this work can help communities develop strategies that address identified conflict points and to pursue desired curb usage and policies.

Staff Contact: [Jeff Price](#), 202-493-0280.

Public Safety Awareness Technology Evaluation

Five DOT Agencies; Pipeline and Hazardous Materials Safety Administration, National Highway Traffic Safety Administration, Federal Railroad Administration, Federal Transit Administration, and FHWA are collaborating to identify existing and emerging technologies to increase public safety awareness and reduce surface transportation injuries and fatalities. The research will identify detection and messaging methods, and develop test protocols to apply those findings to specific safety alert systems.

Staff Contact: [Christopher Douwes](#), 202-366-5013.

Rails with Trails: Lessons Learned

This research studied effective practices to plan, design, construct, operate, and maintain rails-with-trails facilities. It describes methods to ensure railroad and trail safety and security, promote active transportation and health and wellness, support network connectivity and economic development, and enhance the environment.

Staff Contact: [Christopher Douwes](#), 202-366-5013.

Pedestrian and Bicycle Information Center

FHWA has a cooperative agreement with the University of North Carolina Highway Safety Research Center to develop, synthesize, promote, and distribute bicycling and walking information to improve the quality of life in communities through the increase of safe walking and bicycling as a viable means of transportation and physical activity. For more information, please visit the [PBIC website](#).

Staff Contact: [Wesley Blount](#), 202-366-0799.