Moving Healthy:

Linking FHWA Programs and Health

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Introduction

This document provides information on Federal Highway Administration (FHWA) programs, initiatives, tools, and resources that influence or are influenced by health. Although FHWA does not have a single, specific program that focuses solely on health, it is implicit in a broad range of existing programs. This brochure describes FHWA programs, funding sources, and tools that can support health-related issues in communities across the country.

As part of its responsibility to administer the Federal-aid Highway Program (FAHP), a federally assisted but State-administered program, FHWA and its partners work within several vital laws designed to protect human and environmental health, including the National Environmental Policy Act (NEPA), the Clean Air Act, the Clean Water Act, and Title VI of the Civil Rights Act of 1964. These laws ensure that transportation projects do not severely or inequitably impact human or natural environments. FHWA distributes Federal-aid Highway funds to the States for the planning, construction, reconstruction, and improvement of roadways. To that end, FHWA oversees the planning, environmental review, design, construction, and maintenance processes for all projects that receive Federal-aid funding. Figure 1 illustrates the transportation planning and project development process.

The Federal Highway Administration and the Federal-aid Highway Program

FHWA supports State and local governments in the planning, design, construction, and maintenance of the Nation's highway system. The Agency's mission is to improve mobility on the Nation's highways through national leadership, innovation, and program delivery. FHWA programs are designed to ensure that the Nation's highways address the needs of the public without sacrificing safety, environmental quality, or equity.

FHWA distributes funding to States through the Federal-aid Highway Program (FAHP) for projects identified through the transportation planning process (see Figure 1). Each State receives a specified apportionment of FAHP funding. FHWA oversees the planning, development, and construction of Federal-aid projects by its State and local partners and is responsible for determining project eligibility for Federal-aid funds.

For additional information about the FAHP process, please see FHWA's website for MAP-21, Moving Ahead for Progress in the 21st Century (**http://www.fhwa.dot.gov/map21/**), as well as questions and answers about MAP-21 funding for highways (**http://www.fhwa.dot.gov/map21/qandas/qafunding.cfm**).

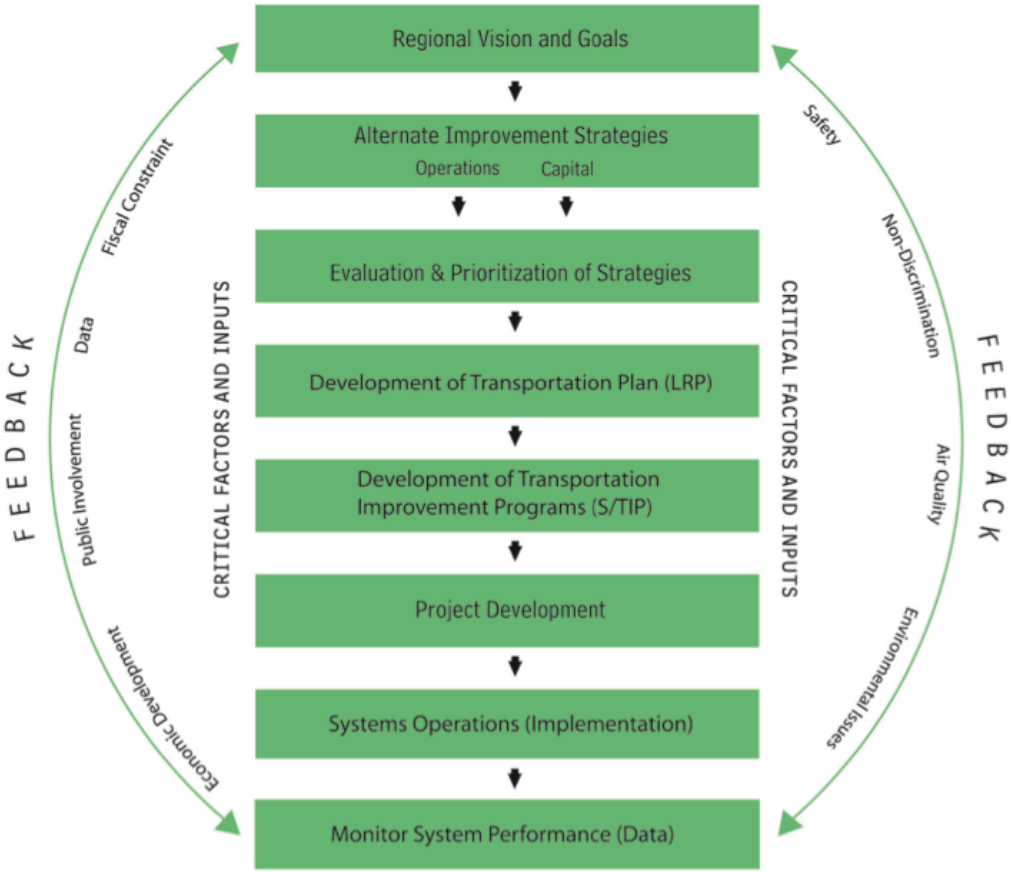

Figure 1: Overview of the transportation planning process.

Source: FHWA/FTA TPCB Briefing Book

Health and Transportation

FHWA's programs and responsibilities promote positive health outcomes and mitigate negative health outcomes. For example, FHWA provides programs and resources that communities can use to promote positive health impacts, such as safe and accessible facilities for biking and walking. These programs support local and State initiatives as well as the work of other Federal agencies, including the U.S. Department of Housing and Urban Development (HUD) and U.S. Environmental Protection Agency (EPA).

FHWA also works with its State and local partners to mitigate the negative outcomes associated with building and operating highways. FHWA's programs ensure that new and existing roads do not adversely or inequitably affect the public through pollution, degradation of the environment, or risk to personal safety. Moreover, FHWA oversees a transportation planning process for federally funded roads, which ensures that the Nation's highway system will continue to provide safe and efficient access to vital services. FHWA and its State and local transportation partners work with natural resource and other environmental agencies to protect environmental and human health.

Health Practitioner Involvement in Transportation Decisionmaking

Many communities across the country are increasingly interested in linkages between health and transportation. Components of the transportation decisionmaking process can offer health practitioners an opportunity to participate in the process. Most notably, public health professionals can participate in the transportation planning process as part of public involvement and outreach efforts or as a member of an advisory committee or cross-disciplinary partnership. State transportation agencies and metropolitan planning organizations (MPOs) often seek the participation of a variety of related fields in developing a long-term vision for their transportation system, developing and reviewing transportation plans, and analyzing and evaluating the impacts of proposed locations and designs for specific projects. These agencies often create advisory committees to inform the transportation project development process. Based on best practices from case studies on MPOs, FHWA has developed a framework for incorporating health considerations into the transportation planning processes, which includes the following elements:

- Motivations – Motivations for MPOs' integration of health into their plans and programs include political leadership, partner initiatives, community interest, local and State government initiatives, national priorities and programs, or research and analysis.
- Transportation Planning Process – MPOs can formally integrate health at multiple stages of the transportation planning process, including regional visioning, metropolitan transportation goals, and performance monitoring.
- Early Actions – MPOs often start with outreach and communications activities that establish relationships and build support for an improved understanding of health-related activities. These actions can allow MPOs to incorporate structural changes to the transportation planning process that can help shape investments and other decisions.
- Structural Changes – Structural changes to the transportation planning process can include incorporating health into metropolitan transportation goals, establishing technical committees that consider health topics, and using health in project screening or selection criteria. These activities can result in institutionalized and measurable integration of health considerations into the metropolitan planning process.

The Metropolitan Area Transportation Planning Practices for Healthy Communities white paper and case studies, developed as a technical resource for interested MPOs and their partners, are available on the FHWA Health in Transportation web page (**http://www.fhwa.dot.gov/planning/health_in_transportation/**).

FHWA Programs and Initiatives

FHWA programs and initiatives contribute to healthy communities by promoting and providing funding for programs and projects that encourage active living and minimizing and mitigating the negative externalities associated with building, maintaining, and operating a national network of roads.

Air Quality

FHWA is responsible for ensuring that transportation activities do not jeopardize progress towards national and local air quality goals. Poor air quality can severely affect the health of all, but particularly at-risk populations such as children, elderly adults, and individuals with respiratory conditions. Mobile Source Air Toxics (MSAT) and Transportation Conformity, discussed below, represent two of FHWA's most significant air quality responsibilities. FHWA's Air Quality website (**http://www.fhwa.dot.gov/environment/air_quality/**) also includes links to other relevant laws and regulations (**http://www.fhwa.dot.gov/environment/air_quality/conformity/laws_and_regs/**) and policy and guidance (**http:/www.fhwa.dot.gov/environment/air_quality/conformity/policy_and_guidance/**).

Source: FHWA

Mobile Source Air Toxics

Mobile source air toxics are pollutants from motor vehicles for which there are no established National Ambient Air Quality Standards (NAAQS) and no conformity criteria which State and local agencies must maintain. The Environmental Protection Agency (EPA) issued the Final Rule for the Control of Hazardous Air Pollutants from Mobile Sources in 2007. These engine and fuel standards are projected to reduce MSAT over the next 30 years, according to EPA.

To address stakeholder concerns and requests for MSAT analysis during project development and alternative analysis, FHWA developed the Interim Guidance on Air Toxic Analysis in NEPA Documents (**http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/aqintguidmem.cfm**), which provides a tiered approach for analyzing MSAT in NEPA documents. Depending on specific project circumstances, FHWA has identified three levels of analysis: (1) no analysis for projects with no potential for meaningful MSAT effects; (2) qualitative analysis for projects with low potential MSAT effects; or (3) quantitative analysis to differentiate alternatives for projects with potentially high MSAT effects.

FHWA's ongoing work in air toxics includes a research program to explore and quantify the contribution of vehicle sources to air emissions, the establishment of policies for addressing mobile source emissions in environmental reports, and the assessment of scientific literature on health impacts associated with motor vehicle emissions. The Agency also develops and evaluates methods for analyzing and forecasting future emissions from proposed transportation facilities and vehicle fleets, which can be used to inform decisionmakers and the public in discerning project alternatives.

Additional MSAT information is available on FHWA's Air Toxics website: **http://www.fhwa.dot.gov/environment/air_quality/air_toxics**.

Transportation Conformity

Transportation conformity establishes the framework for improving air quality to protect public health and the environment. Conformity means that FHWA and Federal Transit Administration (FTA) funding and approvals are given to highway and transit activities that will not cause new air quality violations, worsen existing air quality violations, or delay timely attainment of the relevant air quality standard. FHWA applies air quality goals to transportation plans, transportation improvement programs, and projects funded or approved by FHWA or FTA in areas that do not meet, or previously have not met, NAAQS for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. Regulations governing transportation conformity are found in Title 40 of the Code of Federal Regulations, 40 CFR Parts 51 and 93: **http://www.fhwa.dot.gov/environment/air_quality/conformity/rule.cfm**.

The Clean Air Act (CAA) requires that, in areas experiencing air quality problems, transportation planning must be consistent with air quality goals. This is determined through the transportation conformity process. In its role as the steward of the Federal-aid transportation planning process, FHWA must ensure that all transportation plans are consistent with air quality goals and that, where CAA goals are not being met, State and local transportation agencies find ways to reduce vehicle emissions by developing transportation plans, programs, and projects that will help the area attain the standard. FHWA developed Transportation Conformity: A Basic Guide for State & Local Officials (**http://www.fhwa.dot.gov/environment/air_quality/conformity/guide/**) as a tool for State and local officials to understand transportation conformity and how conformity requirements relate to transportation investments in their communities.

FHWA's Transportation Conformity website (**http://www.fhwa.dot.gov/environment/air_quality/conformity/**) provides links to relevant laws and regulations, policy and guidance, and research.

Bicycle and Pedestrian Program

FHWA's Bicycle and Pedestrian Program promotes bicycle and pedestrian transportation planning, safety, and accessibility. The Bicycle and Pedestrian Program also issues guidance and is responsible for overseeing that requirements in legislation are understood and met by the States and other implementing agencies. To promote and facilitate the increased use of nonmotorized transportation, each State is required to have a bicycle and pedestrian coordinator in its State Department of Transportation. The coordinator's responsibilities include developing facilities for use by pedestrians and bicyclists and establishing public educational, promotional, and safety programs for using such facilities. State coordinators can help with State-specific questions. Visit: **http://www.walkinginfo.org/assistance/contacts.cfm**.

Source: www.pedbikeimages.org/Dan Burden

Source: U.S. Global Change Research Program

Climate Change

FHWA acknowledges the potential effects of global climate change on the Nation's transportation system, as well as the contribution of greenhouse gas (GHG) emissions from transportation sources to global climate change. FHWA also recognizes that the issues involved in climate change are complex and focuses its resources on supporting transportation and climate change research, providing technical assistance to stakeholders, and coordinating climate change activities within U.S. Department of Transportation (U.S. DOT) and other Federal agencies. FHWA's climate change activities focus on three primary areas: (1) mitigating the impacts of transportation on global climate change through strategies to reduce GHG emissions; (2) preparing for the projected impacts of global climate change on the Nation's transportation infrastructure; and (3) ensuring that transportation decisions incorporate balanced choices among environmental, economic, and social values. Additional information is available on FHWA's Climate Change website: **http://www.fhwa.dot.gov/environment/climate_change/index.cfm**.

Environmental Review

In accordance with NEPA, FHWA is committed to the examination and avoidance of potential impacts to the social and natural environment when considering approval of proposed transportation projects. In addition to evaluating the potential environmental effects, the NEPA review process accounts for the transportation needs of the public in reaching a decision that is in the best overall public interest. Through NEPA, FHWA takes into account the potential impacts of projects on the human and natural environment and the public's need for safe and efficient transportation. The NEPA review process requires an assessment of numerous impacts, ranging from aesthetics to wildlife habitat. Several key metrics evaluate the potential human health outcomes and impacts, including: air quality; noise; safety; continued access to existing parks, recreational and cultural resources; environmental justice; water quality; and access to safe transportation systems. FHWA's Environmental Review Toolkit (**http://www.environment.fhwa.dot.gov/index.asp**) contains additional information about the environmental review process.

FHWA promotes the incorporation of environmental justice principles into NEPA analysis through Technical Advisory 6640.8A (**http://environment.fhwa.dot.gov/projdev/impta6640.asp**) and a supplemental guidance memo (**http://environment.fhwa.dot.gov/projdev/guidance_ej_nepa.asp**). FHWA has also published Integrating Road Safety into NEPA Analysis: Practitioner's Primer (**http://environment.fhwa.dot.gov/projdev/pd6rs.asp**) that promotes the integration of road safety considerations into NEPA analysis. This primer includes case studies of agencies that have voluntarily employed Health Impact Assessments as a tool in determining the impacts of a proposed project. Many context sensitive solutions (CSS) resources are available at **www.fhwa.dot.gov/planning/css/**.

Nondiscrimination

Federally funded transportation projects must comply with Title VI of the Civil Rights Act of 1964, to ensure that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Federally funded transportation projects must also comply with the Americans with Disabilities Act (ADA) and Age Discrimination Act to ensure that transportation facilities can be safely accessed by people with disabilities.

U.S. DOT and FHWA also promote environmental justice through Orders 5610.2(a) (**http://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/order_56102a/index.cfm**) and 6640.21A (**http://www.fhwa.dot.gov/legsregs/directives/orders/664023a.htm**), respectively, which outline Agency policies promoting transportation decisions that (1) meet the needs of all people, (2) avoid disproportionately high and adverse impacts on minority and low-income populations, and (3) minimize and/or mitigate unavoidable impacts by identifying concerns early in the planning phase and providing offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods. Environmental justice policies are designed to identify and avoid discrimination and adverse environmental or public health effects and interrelated social and economic effects.

FHWA's Environmental Justice website (**http://www.fhwa.dot.gov/environment/environmental_justice/**) provides access to executive orders establishing environmental justice as part of every Federal Agency's mission. FHWA also offers case studies (**http://www.fhwa.dot.gov/environment/environmental_justice/case_studies/**), effective practices, (**http://www.fhwa.dot.gov/environment/environmental_justice/effective_practices/**), and other important resources (**http://www.fhwa.dot.gov/environment/environmental_justice/resources/**) on environmental justice and public involvement.

Noise

FHWA is responsible for developing noise standards for the construction, reconstruction, and operation of federally funded highways and requires that highway agencies investigate traffic noise impacts of highway projects in accordance with Title 23 of the Code of Federal Regulations (CFR), Part 772. FHWA encourages control of highway noise through three primary methods: (1) land use planning and control in the vicinity of highways to avoid future noise impacts; (2) control of major sources of noise in accordance with Noise Control Act of 1972; and (3) mitigation of adverse highway traffic noise effects in accordance with NEPA. Additional information and tools are available on FHWA's Highway Traffic Noise website: **http://www.fhwa.dot.gov/environment/noise/**.

Planning

Source: www.pedbikeimages.org/Dan Burden

Transportation planning is a cooperative process designed to foster involvement by all users of a transportation system in a proactive public participation process conducted by State Departments of Transportation, MPOs, and transit operators. The planning process recognizes the critical links between transportation and other societal goals and issues, including land use, economic development, environmental quality, social equity, safety, and security. Transportation planning requires developing strategies for operating, managing, maintaining, and financing an area's transportation system in such a way as to advance the area's long-term goals. FHWA administers a Federal transportation planning process that can help communities, regions, and States implement transportation projects and programs that encourage physical activity, improve access to community health resources, contribute to better air and water quality, and increase safety and security for travelers. FHWA's Planning website (**http://www.fhwa.dot.gov/planning/index.htm**) provides access to all legislation, regulations, and guidance (**http://www.fhwa.dot.gov/hep/legreg.htm#t23**) associated with the Federal-aid transportation planning process. Regulations pertaining to transportation planning are located in Title 23, Code of Federal Regulations, Part 450 (**http://www.fhwa.dot.gov/hep/23cfr450.htm**).

Safety

FHWA's Safety Program supports the Department's main mission and the Safety Strategic Goal to "enhance public health and safety by working toward the elimination of transportation-related deaths and injuries" by developing, evaluating, and promoting the use of lifesaving countermeasures, including rumble strips, guard rails, cable barriers, medians and pedestrian crossing islands, hazard removal, and highway redesign. FHWA also encourages collaboration between State and local partners to implement data-driven and multidisciplinary approaches to safety. FHWA focuses on ensuring that roadway facilities are safe for all users, including bicyclists and pedestrians. Additional information about tools and resources is available on FHWA's Safety website (**http://safety.fhwa.dot.gov/**).

Sustainable Communities

Context Sensitive Solutions (CSS)

Through its CSS resources, FHWA also promotes interdisciplinary approaches to transportation planning and designing transportation facilities that are tailored to their setting; preserve scenic, aesthetic, historic, and environmental resources; and maintain safety and mobility. CSS principles outline a collaborative, interdisciplinary, holistic, and efficient approach to developing transportation projects that involves community members, elected officials, interest groups, and government agencies in planning and designing transportation projects. CSS projects often incorporate sustainability and livability considerations. Many CSS resources are available at **www.contextsensitivesolutions.org**.

Infrastructure Voluntary Evaluation Sustainability Tool (INVEST)

INVEST is a practical, web-based, collection of best practices intended to help transportation practitioners measure sustainability in highway projects. INVEST is a voluntary internet-based tool that enables State, regional, and local transportation agencies to evaluate the sustainability of their transportation plans, projects, and programs. INVEST provides users with the information necessary to balance the economic, environmental, and social impacts of highways. INVEST can be a valuable tool for transportation agencies and others looking to learn more about sustainability and integrate sustainable best practices into their plans, projects, and programs. For information about INVEST, go to **https://www.sustainablehighways.org/**.

Partnership for Sustainable Communities

FHWA promotes approaches to transportation planning that balance many impacts and aspects of the transportation system. In 2009, U.S. DOT joined HUD and EPA to form the Partnership for Sustainable Communities with the goal of helping communities to improve access to affordable housing, increase transportation options, and lower transportation costs while also protecting the environment. As part of the Partnership, the three agencies incorporate the six principles of livability into Federal funding programs, policies, and future legislative proposals:

- Provide more transportation choices;
- Promote equitable, affordable housing;
- Enhance economic competitiveness;
- Support existing communities;
- Coordinate and leverage Federal policies and investment; and
- Value communities and neighborhoods.

Additional information about the Partnership for Sustainable Communities is available at **www.sustainablecommunities.gov**.

Water Quality

Transportation activities, including highway construction and maintenance as well as stormwater runoff from impervious highway surfaces, can affect the quality of nearby bodies of water. FHWA provides information and guidance to Federal, State, and local agencies to prevent or mitigate impacts on water quality from transportation activities and the resulting effects on human and environmental health. FHWA provides access to best practices in stormwater management as well as in water quality planning through its Environmental Review Toolkit website (**http://environment.fhwa.dot.gov/index.asp**).

FHWA Funding Sources

In addition to promoting effective practices and ensuring compliance with regulations in administering the Federal-aid Highway Program, FHWA provides funding to State, regional, and local agencies for projects that can impact or relate to health. While most sources of funding within the Federal-aid Highway Program can be used in a manner that supports healthy transportation, the funding sources discussed below offer the most direct link to health.

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

The CMAQ Program supports surface transportation projects and other related efforts that contribute to air quality improvements and provide congestion relief. In administering CMAQ funds, FHWA encourages the greatest emissions reductions per dollar spent. CMAQ funds can support a wide range of projects, including efforts to foster increased use of public transportation and bicycle and pedestrian transportation, modifications to diesel truck fleets to reduce emissions, expansion of alternative fuel vehicle infrastructure, and strategies to improve traffic flow.

FHWA's CMAQ website (**http://www.fhwa.dot.gov/environment/air_quality/cmaq/**) provides additional information on CMAQ project eligibility requirements, funding apportionments, and previous projects funded through the Program.

Highway Safety Improvement Program (HSIP)

HSIP is a core Federal-aid program designed to achieve significant reductions in traffic fatalities and serious injuries on all public roads through the implementation of roadway infrastructure safety improvements. In order to receive funding through HSIP, the Program requires each State to engage in a multidisciplinary process with State and local highway safety stakeholders to develop a Strategic Highway Safety Plan (SHSP), which outlines data-driven emphasis areas and strategies for reducing highway fatalities and injuries. HSIP funds may be used to deploy safety improvements to roadway infrastructure, in accordance with the State's SHSP, that address safety concerns based on data analysis. HSIP also includes dedicated funding for safety improvements at railway-highway crossings and on local and rural roads. Moreover, if a State can demonstrate that it has met its infrastructure safety needs, it may use up to 10 percent of its HSIP funds for non-infrastructure safety projects (e.g., education, enforcement, and emergency response programs).

Additional information about the HSIP is available on the FHWA Office of Safety's HSIP website (**http://safety.fhwa.dot.gov/hsip/**).

Transportation Alternatives Program

Transportation Alternatives Program (TAP) funding is available to plan, design, and construct facilities for pedestrians and bicyclists as well as safe routes for non-drivers to access daily needs. TAP funding may also be used for environmental mitigation activities. TAP includes Recreational Trails Program (RTP) funds as an optional set aside, which may be used to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational uses. Safe Routes to School activities are also eligible for TAP funding. Projects eligible under TAP or the RTP are broadly eligible for Surface Transportation Program funds.

FHWA's TAP (**http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm**) and RTP websites (**http://www.fhwa.dot.gov/environment/recreational_trails/index.cfm**) provide additional information about eligible projects.

FHWA-Sponsored or -Promoted Tools and Resources

FHWA has developed, participated in the development of, or supported a variety of tools and resources that can help both transportation professionals and health practitioners identify and address the health impacts of transportation. The following tools, resources, and practices cover many of the health-related topics discussed above:

- **Active Transportation**
  - National Center for Safe Routes to School (**www.saferoutesinfo.org**)
  - National Transportation Enhancements Clearinghouse (**http://www.ta-clearinghouse.info/**)
  - Pedestrian and Bicycle Information Center (**www.pedbikeinfo.org**)
- **Air Quality/Environment**
  - Environmental Review Toolkit **(www.environment.fhwa.dot.gov)**
  - INVEST Sustainable Highways Self-Evaluation Tool (**https://www.sustainablehighways.org/**)
  - Motor Vehicle Emission Simulator (**www.epa.gov/otaq/models/moves**)
  - Traffic Noise Model (**www.fhwa.dot.gov/environment/noise/traffic_noise_model**)

- **Planning**
  - Community Impact Assessment (**www.CIAtrans.net** and **www.fhwa.dot.gov/environment/community_impact_assessment**)
  - Context Sensitive Solutions (**www.fhwa.dot.gov/planning/css/**)
  - Integrated Land Use and Transportation Tool Kit, Design Guidelines and Standards (**http://www.fhwa.dot.gov/planning/processes/land_use/land_use_tools/index.cfm#sect1**)
  - Transportation Planning Capacity Building– Bicycle and Pedestrian Planning (**http://www.planning.dot.gov/focus_bicycle.asp**)
- **Safety**
  - Crash Modification Factors Clearinghouse (**www.cmfclearinghouse.org**)
  - Highway Safety Manual (**www.highwaysafetymanual.org**) and SafetyAnalyst (**www.safetyanalyst.org**)
  - Road Safety Audits (**www.safety.fhwa.dot.gov/rsa**)
  - Roadway Safety Professional Capacity Building Program (**http://rspcb.safety.fhwa.dot.gov/**)

Additional Information

For additional information about any of the topics covered in this brochure, please contact the FHWA Office of Planning, Environment, and Realty, the FHWA Office of Safety, or your local Federal-aid Division Office. Contact information for FHWA staff is available at:

https://www.fhwa.dot.gov/about/staff.cfm.

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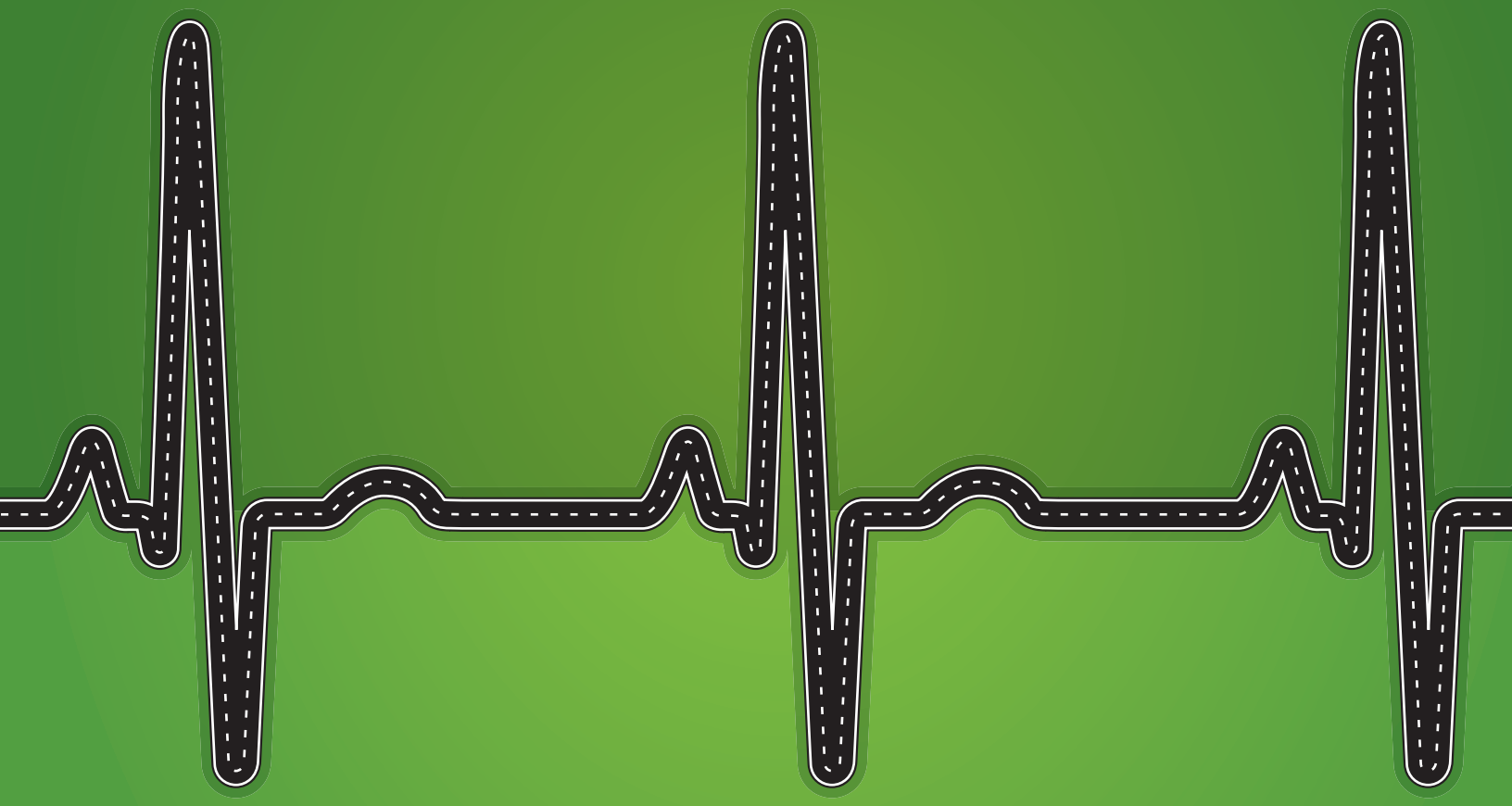

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