

1 | Introduction to MOVE 2042

1.0 | About Metropolitan Transportation Planning

What is the Metropolitan Planning Organization (MPO)

The **metropolitan planning organization (MPO)** is a federally- mandated and federally-funded transportation policy-making body composed of representatives of local government and public transportation agencies and authorities within the metropolitan region. MPOs were first introduced in the Federal-Aid Highway Act of 1962, which required the formation of an MPO for any urbanized area (UZA) with a population greater than 50,000.

The MPO is the policy framework designated to carry out the metropolitan transportation planning process that guides investment in the regional transportation system. As established by federal regulation, the Metropolitan Transportation Plan (MTP) “shall include both long-range and short-range strategies/actions that lead to the development of an integrated, multimodal, transportation system that facilitates the safe and efficient movement of people and goods in addressing current and future transportation demand.” (23 CFR 450.422, Federal Register May 27, 2016).

The planning process produces a suite of federally-mandated documents that guide investment: the long-range Metropolitan Transportation Plan (MTP), the Transportation Improvement Plan (TIP), which programs the implementation of specific projects to address the identified issues and needs, and the annual Unified Planning Work Program (UPWP).

Purpose and Primary Function

Congress created the MPO structure to ensure that regional decision-making for existing and future expenditures of Federal funds for transportation projects and programs is based in a continuing, cooperative, and comprehensive (“3 C”) planning process. Statewide and metropolitan transportation planning processes are governed by federal law (23 U.S.C. §§ 134–135) which requires transparency through public access to participation in the planning process, as well an electronic publication. The intent is that federal transportation funds will be spent in a manner grounded in region-wide plans developed through intergovernmental collaboration, rational analysis, and consensus-based decision making. The regional MPO provides the necessary vehicle to facilitate collaboration of regional government, interested parties/ stakeholders, and residents in the planning process. Emphasis is on recognizing that:

- Transportation investment means allocating scarce federal and other transportation funding resources appropriately;
- Transportation planning needs to reflect the region’s shared vision for its future;
- Adequate transportation planning requires a comprehensive examination of the region’s future, and investment alternatives.

Transportation planning must thus address a broad array of goals. Initial improvements in accessibility, mobility, safety, security, equity, and affordability should interact with environmental goals to reduce air pollution, greenhouse gasses, noise pollution, and minimize ecosystem impacts. All goals should work together to promote appropriate land uses, maintain community cohesion, improve livability, capitalize on opportunities for workforce development, widely engage the public, while reflecting the true costs of planned/proposed improvements and maintenance.

The regional Metropolitan Transportation Plan (MTP) must be consistent with the long-range statewide transportation plan developed by LADOTD. Updates to the MTP are required every five years except when, the region is an air-quality non-attainment area. The CRPC-MPO is currently in maintenance status for National Ambient Air Quality Standards (NAAQS), but has struggled in the past to achieve and maintain attainment. This status requires that the MTP document be updated every four years and that the regional plan must conform with the State Implementation Plan (SIP) for air quality developed by LADEQ, as described in Chapter 4, Environment.

Federal Designation

MPOs are designated by agreement between the governor and local governments that together represent at least 75% of the affected population. This includes the largest incorporated city, based on population. MPO boundaries may also be created in accordance with procedures established by applicable state or local law. MPOs self-certify that they have met all federal requirements when submitting a transportation improvement program to the state for inclusion in the statewide program.

Officially designated under federal law as the Baton Rouge Metropolitan Planning Organization, the Capital Region Planning Commission (CRPC) has been designated by the Governor of Louisiana as the MPO for the Baton Rouge Metropolitan Planning Area. The original designation of CRPC as the MPO was made in 1972.

As an urbanized area with a population over 200,000, the CRPC-MPO area has also been designated a Transportation Management Area (TMA) by the Secretary of the U.S. Department of Transportation (DOT). The TMA designation, defined in 49 U.S.C. 5303(k), recognizes the greater complexity of transportation issues in large urban areas. This designation gives the CRPC-MPO a stronger voice in identifying the regional freight network, setting priorities for implementing projects listed in the transportation improvement program and responsibility for additional planning products. The planning processes for MPOs in designated TMAs must be certified by the Secretary of Transportation as being in compliance with federal requirements.

About the Baton Rouge Urbanized Area

The MPO study area includes the entirety of East Baton Rouge and Ascension Parishes and the urbanized portions of West Baton Rouge, Livingston and Iberville Parishes. This area contains the municipalities of Baton Rouge, Zachary, Baker, Central, Denham Springs, Walker, Livingston, Gonzales, Sorrento, Donaldsonville, Port Vincent, French Settlement, St. Gabriel, White Castle, Plaquemine, Addis, Brusly, and Port Allen. The MPO study area (on the following page) is comprised of the Baton Rouge Urbanized Area (defined by the 2010 U.S. Census) and the greater Metropolitan Planning Area (MPA). Throughout this document this geographic area is referred to as the CRPC-MPO study area or the Capital Region MPA. Baton Rouge and CRPC MPO are used interchangeably throughout this document.

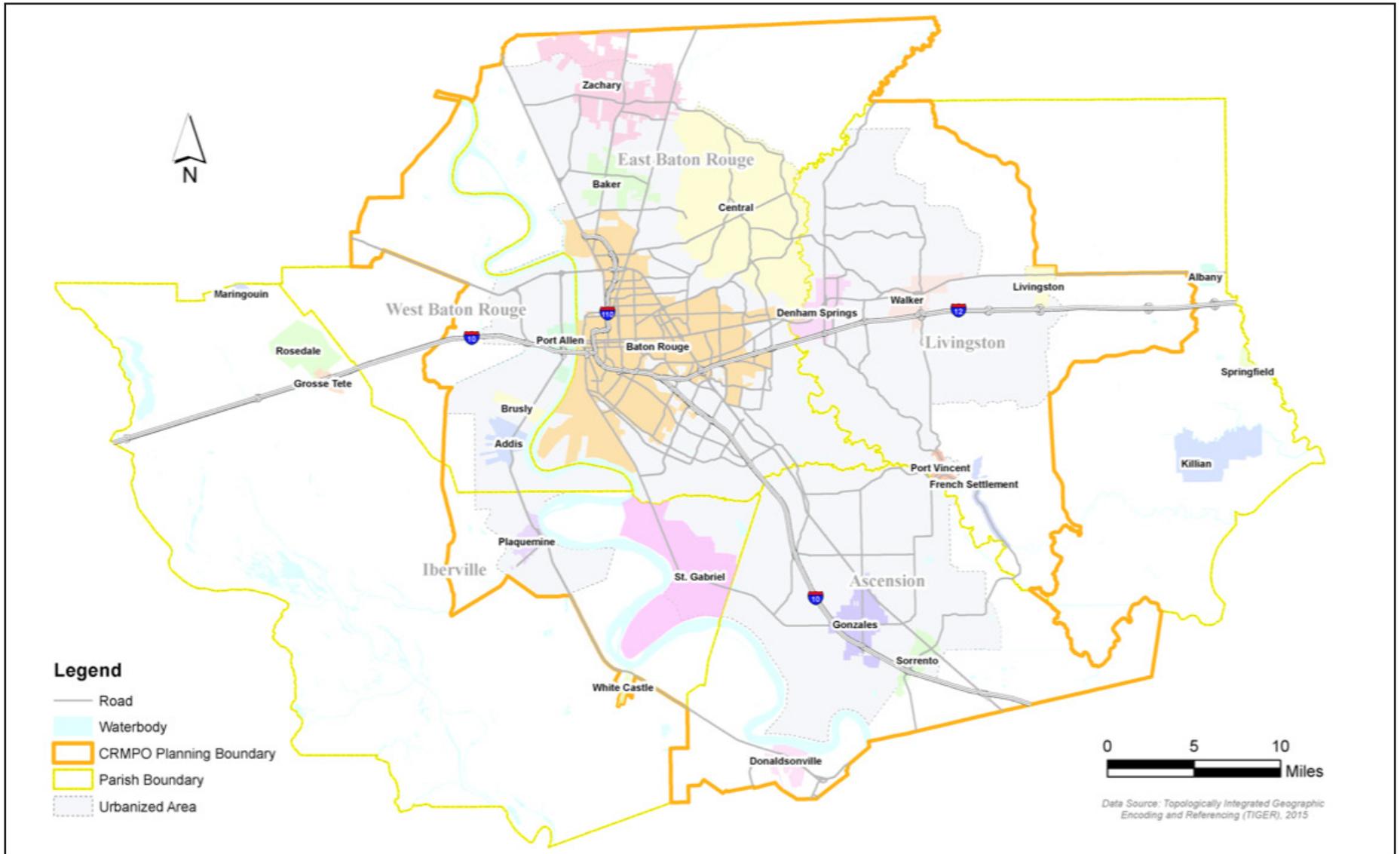


Figure 1-1: Capital Region Metropolitan Planning Area

1.1 | WHAT IS MOVE 2042?

Purpose and Authority of Plan

Move 2042 is the most recent update to the CRPC MPO's Metropolitan Transportation Plan (MTP). The MTP fulfills the Federal DOT requirements under MAP-21 and the FAST Act. As stated in 23 CFR 450, MAP-21 continued many provisions related to transportation planning from prior laws. The FAST Act made minor edits to the existing provisions to make the regulations consistent with current statutory requirements. Changes include a new mandate for State departments of transportation and metropolitan planning organizations (MPO) to take a performance-based approach to planning and programming; a new emphasis on the nonmetropolitan transportation planning process, by requiring States to have a higher level of involvement with nonmetropolitan local officials and providing a process for the creation of regional transportation planning organizations (RTPO); a structural change to the membership of the larger MPOs; a new framework for voluntary scenario planning; new authority for the integration of the planning and environmental review processes; and a process for programmatic mitigation plans.

Other changes include requiring States, MPOs, and public transit operators to integrate the goals, objectives, performance measures, and targets of those performance-based plans and processes into transit planning processes. FAST also continues implementation of the MAP-21 project delivery provisions concerning coordination between the transportation planning and environmental review processes, with the final rule amending existing planning regulations to add a reference to a new statutory process for integrating planning and the environmental review activities. Projects must be included in this document to be eligible for funding. When projects expand capacity, it must be shown they will not add to air quality issues.

The MTP will serve as the region's long-range metropolitan transportation vision and plan to meet future transportation needs for the 25 years until 2042, given recognized financial constraints. The MPO may revise the transportation plan at any time without a requirement to extend the horizon year.

Federal Requirements

MOVE 2042 meets Federal requirements by providing a blueprint to guide transportation planning and establish project priorities, from short- to long- range, to address transportation issues in the Capital Region. The current update to the regional MTP has been developed with the motto: Plan, Build, and Grow While Efficiently Moving People and Goods in the Capital Region.

The plan seeks to balance investment in various transportation modes with anticipated funding from federal, state and local sources. Federal requirements specify that the MTP be updated every five years to capture changing needs, new federal and state regulations and policies, and measure progress on transportation system management, improvements and air quality. In MPO areas not in attainment (or in maintenance) with federal air quality NAAQSs, the update period is shortened to every four years.

Maintenance status for NAAQS applies to a geographic region that the EPA previously designated as a non-attainment area for one or more pollutants pursuant to the Clean Air Act (CAA) Amendments of 1990 and subsequently re-designated as an attainment area, subject to the requirements to develop a maintenance plan under section 175A of the CAA, as amended (42. USC. 7058)

MTP Planning and Development Process

MTP planning process begins with an easily understood and communicated vision of the area's future that is then used to build consensus regarding the need for transportation improvements in the region. This vision is translated into a set of goals and objectives that will guide the development of transportation improvement projects, programs, and policies. The planning process seeks to determine how future resources can best be invested to expand and improve the existing transportation infrastructure. The Baton Rouge MPO identifies a variety of potential funding options and weighs the benefits of providing various modal options to meet anticipated travel demand. The study also takes into consideration the long-range implications of improvements for both individual communities and the larger environment.

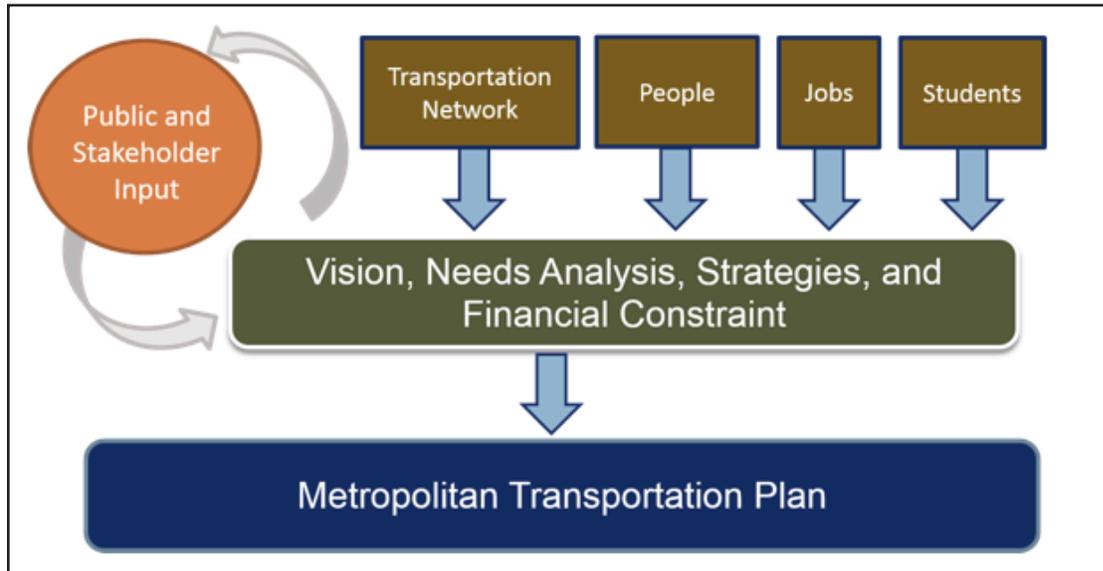


Figure 1-2: MTP Planning Process

The planning process is intended to fulfill the following responsibilities undertaken by the MPO:

- ✓ Provide opportunities for public involvement in development of the long-range plan
- ✓ Forecast future population and employment in the region and assess projected land uses
- ✓ Identify major growth corridors
- ✓ Analyze transportation needs and options, and develop alternative capital and operating strategies
- ✓ Estimate the impact of the transportation system on air quality and the environment
- ✓ Develop fiscally constrained plans and programs that serve both to preserve the existing system and provide for new capital investments.

Adoption of the MTP is the first step towards the implementation of a transportation project. Following formal adoption of the plan, a project can be programmed for design, right-of-way acquisition, or construction in the short-range Transportation Improvement Program (TIP), which identifies funding sources and the estimated amount of funding to be used. TIP is a management tool for implementing the projects programmed in the MTP. The projects in the TIP move towards implementation once the funds are authorized and obligated.

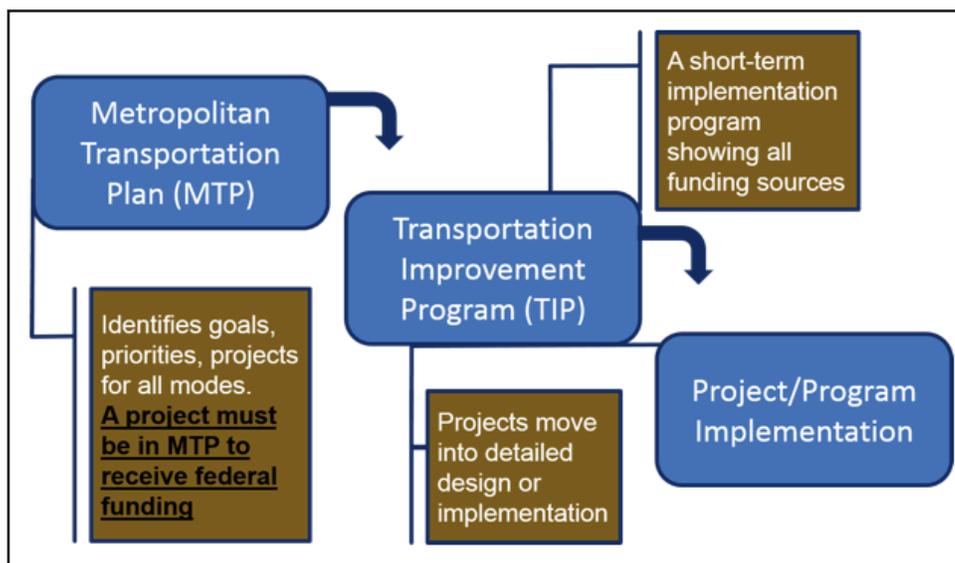


Figure 1-3: MTP Implementation Process

The process that will be used to adopt the MTP is as follows:

- ✓ The proposed list of projects will be published for public review and comment.
- ✓ Public input on the proposed list will be solicited through both the MPO website and through public meeting(s).
- ✓ Any further analysis requested by the MPO Policy Committee based on public comment will be conducted.
- ✓ The MPO Policy Committee will adopt a final fiscally constrained list of projects and approve the MTP.
- ✓ The MTP will be forwarded to LADOTD, the FHWA, and the FTA for their review and comment.

Amending and Modifying the MTP

As mentioned above, in non-attainment or maintenance areas the MTP is updated every four years. From time to time, projects or plan assumptions change. The federal process, requires inclusion of capacity or expansion projects in the regional transportation plan. When new projects arise, the plan must be amended. Since the Baton Rouge Capital Region is designated as a maintenance area for air quality (based on the 2008, 8-hr ozone standard), the following project changes require a MTP amendment and air quality conformity analysis.

- Addition of a new regionally significant roadway project irrespective of funding source. The project could be either widening an existing road or adding a new roadway. Regional significance of a project is determined collectively by the air quality interagency committee which is made up of members from the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Environmental Protection Agency (EPA), the Louisiana Department of Environmental Quality (LDEQ), the Louisiana Department of Transportation and Development (LADOTD), and the staff of the CRPC-MPO.
- Shifting of regionally significant project from among the three MTP timeframes requires the MTP to be amended. The projects in the MTP are programmed in three different time frames.
 - Short Range/Stage I (2018 – 2022)
 - Medium Range/Stage II (2023 – 2032)
 - Long Range/Stage III (2033 – 2042)

If a new federally funded project arises that is not regionally significant; or, if it is exempt from air quality conformity analysis, the MTP can be amended without air quality analysis so long as adherence to financial constraint is demonstrated. Projects that may be exempt from air quality analysis are those that generally improve air quality by reducing congestion such as transit or non-motorized improvements. Some safety projects may also be exempt from air quality conformity analysis. Projects that are entirely locally funded and that are not regionally significant do not necessitate a MTP amendment.

1.2 | TRANSPORTATION SYSTEM IN THE CAPITAL REGION

In the chapters that follow, MOVE 2042 seeks to answer key questions regarding future regional transportation needs in the CRPC-MPO study area:

- What do changing socio-demographics mean for transportation in the CRPC-MPO region? Where do people live and where are they moving? Where are jobs located now and in the future? How do demographics impact travel modes across the region?
- How do current and future land use, population, economic and travel patterns affect regional transportation, economy and quality of life?
- What do changing technologies mean for regional mobility and safety?
- How are growing environmental concerns affecting transportation choices?
- How can improvements in and greater access to public transportation affect traffic flows, connectivity and accessibility in the CRPC-MPO region?

- How can improved bike and pedestrian facilities affect individual health, connectivity and accessibility in the CRPC-MPO region?
- How do declining transportation revenues affect regional capacity to maintain existing system and make improvements for better traffic flow? How do we prioritize our limited resources?
- How does growth in MPO regional area freight demand impact traffic flow, congestion, and economic competitiveness?

Changing Socio-Demographics

Since 2000, most population growth in the CRPC-MPO study area has occurred outside the City of Baton Rouge corporate limits, although the city continues to have the region's highest population concentration. Livingston and Ascension Parishes, with extensive new subdivision development, have experienced the highest population growth among the five CRPC MPO parishes. Populations in the two parishes grew by almost 30% from 2000 to 2010. Although growth levelled off from 2010 to 2015, Ascension Parish still had a 10% increase, while Livingston had a 7% increase in population during that time period. In the fifteen years from 2000 to 2015, largely rural West Baton Rouge Parish had combined growth of nearly 15%, while urban East Baton Rouge Parish had modest growth and more rural Iberville Parish experienced a slight drop in population.

Elderly and disabled populations face special transportation challenges. Significant percentages of both groups either cannot drive or lack personal vehicles. In the CRPC MPO region, the challenges are further complicated by the dispersed settlement pattern and little or no public transit services in many areas. The challenges can be expected to increase as the regional population ages, where it is anticipated that people will age in place in suburban areas without access to transit.

Social and demographic changes are expected to have increasing impacts on travel demand and modal choices. A major factor is the trend toward what has been termed "Collaborative Consumption," with the millennial generation tending to own fewer cars. Car sharing and services like Uber, Lyft and ZipCar enable on-demand mobility without having to own a personal or family vehicle. This reduces worry about finding parking, speeding tickets, and paying for fuel and insurance.

Changing Technology

In addition to changing demographics, global technological developments already underway will continue and are expected to have increasing impacts on regional mobility and safety. The CRPC MPO emphasizes System Management and Integration, with projects that implement new technology systems to improve management and communication between transportation-related systems. Sample projects identified may include, but would not be limited to:

- Highway courtesy patrols;
- Congestion/Incident Management Systems;
- Advanced Traveler Information Systems (ATIS);
- Intermodal transportation facilities and systems (including CVISN);
- Traffic management center capital and Operations and Management costs;
- Data storage and transmission;
- ITS (Intelligent Transportation Systems) that integrate wireless communication into transportation infrastructure and vehicles.

The website Government Technology Online (Nov. 4, 2014) offered a short review of additional technological resources already available, in development, and anticipated. These are discussed in greater detail in other sections of the MTP document.

- **ITS**, such as synchronized traffic signals and electronic information and variable speed limit signs, improve traffic flows. Distributing real-time traffic data via social media and mobile apps helps users plan routes.
- **Autonomous and Connected Vehicles**, include vehicle-to-vehicle (V2V); vehicle-to- pedestrian (V2P); and vehicle-to-infrastructure (V2I) communications, known collectively as V2X, as well as self-driving vehicles that use LIDAR, GPS, optical cameras to process and analyze possible roadway scenarios and take appropriate action.

- **Electric Vehicles**, with supportive charging-station systems can create potential economic development opportunities.
- **Real-Time Driving Data** can link connected vehicles and infrastructure to enable learning from technology and practices of private companies with large fleets, as well as multi-modal networking through crowdsourcing, smartphone transit ticketing, calculating multi-trip options, and integrating car or bike sharing to solve “last mile” challenges of transit use.
- **New Materials:** Fuel efficiency standards motivate lower weight vehicles. Changes in design, through technologies like 3-D printing, have the potential to transform vehicle design.

Environmental Concerns

Growing environmental concerns have and will continue to affect transportation choices. Transportation has significant direct environmental impacts, which vary by mode and effect air, water and soil quality. Environmental impacts of the transportation network include being a major user of energy, burning most of the world’s petroleum, and the generation of resulting air pollution, as well as runoff that effects nearby soils and waterbodies. Emissions, including nitrogen oxides (precursors of ground-level ozone) and small particulates, contribute to ongoing air-quality attainment challenges in the CRPC region. Stop-and-go traffic congestion and automobile-oriented “sprawl” development increase emissions, while the latter also consume natural habitat and agricultural lands. Although environmental regulations have reduced individual vehicle emissions, these are offset by higher traffic volumes, congestion and longer commutes.

The Baton Rouge MSA is a maintenance area for national standards for ground-level ozone. This status is closely linked to vehicle exhaust emissions during peak traffic congestion times in hot weather months.

Paved highway and roadway facilities with inadequate drainage contribute to flood and runoff risks in storms and high-water events. Road and rail infrastructure can divert water flow which can result in ponding. The regional flooding in 2016 increased awareness about storm water management and the need for a collaborative approach to addressing drainage infrastructure needs.

Declining Transportation Revenue

The Federal Highway Trust Fund collects and distributes money raised through the fuel tax dedicated to federal highway and transit projects. The federal government provides roughly one-quarter of public spending on highways and mass transit, mostly in the form of grants to states, with states and localities funding the remainder. The trust fund’s primary source of revenue is federal taxes on gasoline and diesel fuel, which are 18.3 cents and 24.3 cents per gallon, respectively. The gas and diesel tax rates, which have not changed since 1993, account for 90% of the fund’s revenues. The remaining revenue is derived from taxes on sales of tires, trucks and trailers, as well as interest credited to the trust fund.

Federal fuel tax revenues to support the Trust Fund have declined due to improved vehicle fuel efficiency, while inflation has eroded the fund’s purchasing power. In recent years, the Trust Fund has consistently spent more than it receives in fuel tax revenues. Congress has addressed past shortfalls with temporary infusions from the general fund. Because the trust fund is prohibited from incurring a negative balance, states may periodically face payment delays or across-the-board cuts. Such incidents increase uncertainty, even for already authorized projects. Maintenance deferred due to fiscal limits increases long-term maintenance and replacement costs.

Annual deficits are expected to grow. By 2025, the Congressional Budget Office (CBO) predicts that the Highway Trust Fund will take in only \$38 billion, but spend \$60 billion, representing a \$22 billion deficit, based on current trends. If the Highway Trust Fund continues spending as projected by the CBO, it would generate a \$180 billion deficit over the next decade, pushing the potential cumulative shortfall to \$168 billion.

How does the decline in transportation revenues affect regional capacity to maintain existing system and make improvements for better traffic flow? Like its counterparts across the country, the CRPC MPO faces the need to find ways to do more, or at least the same, with less. Limited resources reduce capacity to keep existing transportation facilities in a state of good repair, let alone make needed improvements. Infrastructure in less than good repair affects regional traffic flows and decreases economic efficiency and vitality at the regional level. At the household level, infrastructure that is not maintained to a sufficient level increases individual transportation costs.

Summary

The CRPC MPO region is complex and is faced with many transportation challenges; not the least of which, is limited resources. Throughout the development of this plan update, the MPO reached out to citizens, business leaders, elected officials, state resources agencies and other stakeholders to ask hard questions about what we need, what we can afford and how we might look for creative ways to increase revenues. Given our constraints, MOVE 2042 seeks to identify ways to improve our system reliability and safety knowing that building roadway and bridge infrastructure to increase capacity, will be limited.