

Chapter 10

Operational & Management Strategies

The IIJA legislation continues to emphasize the inclusion of operational and management strategies to improve the performance of existing transportation facilities in order to relieve vehicular congestion and to maximize the safety and mobility of people and goods.

The purpose of identifying and utilizing operational and management strategies is to improve the overall performance of the system and to reduce the number of costly widening (capacity) projects and the frequency of total roadway reconstruction projects on the area's roadway network. Jackson participates in and promotes a variety of transportation strategies that support reducing congestion, prolonging the life of the existing facilities, and maximizing the safety and mobility of people and goods. These strategies also support the plan goals of addressing operations, maintenance, preservation, and accessibility.

Programs

Asset Management

Asset management is defined as the process of maintaining, upgrading and operating physical assets cost-effectively, based on a continuous, physical inventory and condition assessment.

The Jackson MPO is actively involved in the asset management process for federal-aid roads in Jackson County and the City of Jackson. One of the goals of the statewide asset management program, overseen by MDOT, is to maximize pavement life by applying the correct "fix" at the right time. Half of all federal-aid eligible roads are inventoried each year by a trained team of field surveyors to determine deterioration levels. The team consists of representatives from MDOT, the Region 2 Planning Commission and either the Jackson County Department of Transportation or the City of Jackson. Each of the local agencies has access to the PASER rating system and the RoadSoft software to use the results of the field data. The City of Jackson and the Jackson County Department of Transportation have chosen to survey all local roads and use this information within their own pavement management and forecasting process. Each road agency is responsible for its own pavement management system. Data for the federal-aid eligible road system has been inventoried annually since 2003.

Figure 10-1
Weathered Asphalt Road



Jackson supports this effort with its involvement in training personnel, field surveying, equipment maintenance, assistance to the local agencies, and reporting the data to MDOT.

Capital Preventative Maintenance

This strategy is one of the implementation steps that can result from the asset management activity. Jackson promotes the timely resurfacing, repaving, repainting, redecking, signal upgrading, and other preventative maintenance activities that extend the life of the existing transportation system infrastructure. Many of the projects can be small in scope, while others are not significant enough to be listed within the context of the Long Range Transportation Plan. The local road agencies conduct the activities primarily as maintenance work using state and local funding.

**Figure 10-2
Filling Potholes**



The Jackson MPO supports these activities through the annual asset management program and the inclusion of MDOT Capital Preventative Maintenance funding in the TIP.

General Maintenance

By maintaining existing facilities in the best possible condition, the transportation system is sustained and functions more safely for users. Activities considered to be general maintenance include minor resurfacing, crack and chip sealing applications, ice and snow removal, traffic signal maintenance, pot hole filling, sign and pavement marking replacement and upkeep, street cleaning and debris removal, and landscaping activities including mowing, tree trimming, and general roadside maintenance.

The Jackson MPO supports these activities through the funding of sign upgrade projects, enhancement projects, and through participation in the asset management program.

Safety Management

Although many of the activities in the CPM and maintenance categories result in improved safety, safety is a secondary benefit. Activities that are directly related to improving the safety and operation of the transportation system include the development of projects to address high crash locations and intersections, adding specific safety features to existing roadways and bridges, improving geometrics or design, and promoting public safety programs.

Jackson County has also developed a Hazard Mitigation Plan in accordance with state and federal government guidelines. The purpose of the plan is to protect the health, safety and economic interests of residents and businesses by reducing the impacts of natural and technological hazards through hazard mitigation planning, awareness, and implementation. For more information about this plan, see Chapter 14.

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) activities involve the addition of facilities, services, and/or technological enhancements designed to improve mobility and safety. Such activities can include computerized signal controls, automated transit fare collection systems, and transit vehicle locator systems. Future activities that could possibly occur include real-time motorist/trucker information with changeable message signs and a centralized traffic monitoring station. Neither the City nor JCDOT have plans for ITS technology.

The Jackson MPO supports ITS activities through its participation in the Regional ITS Architecture and Deployment Plan by the MDOT University Region Office for Jackson County.

Access Management

Access management involves establishing policies and implementing projects that will reduce or eliminate driveways, roadway access points, median openings, and street connections with the intention of improving safety, reducing congestion, and enhancing traffic mobility by reducing conflict points. Application of the best practices of access management has benefits for motorists, bicyclists, pedestrians, transit, government agencies, and communities by helping to maintain the capacity of the road system.

Success with access management requires that several players be involved in the process including, but not limited to, MDOT, local road agencies, property owners, developers, and local planning commissions. MDOT is involved in access management studies to preserve access along state highway corridors. This process involves bringing together all of the stakeholders to develop an access control plan, along with associated land use and zoning changes. Other access management activities include driveway consolidation and shared use, use of medians and/or turning restrictions, construction of frontage roads, and the development of educational materials for the general public, planning commissions, and developers.

The Jackson MPO supports access management procedures through its participation on MDOT steering committees for access management studies within the Jackson area.

Congestion Management

The FAST Act requires that problem areas identified by the congestion management system be considered in developing metropolitan and statewide transportation plans and improvement programs. MDOT's Congestion Management System (CSM) includes the identification of alternative strategies to alleviate congestion while enhancing the mobility of persons and goods. Under the CSM regulations, general purpose road widening can only be

**Figure 10-3
Construction on US-127**



considered after careful evaluation of the congestion reduction impacts of low-cost improvements such as traffic signal projects, local traffic engineering projects, and transit/ridesharing improvements.

A congestion management system will require continuous data collection and system monitoring. The extent of the program will be determined by MDOT in consultation with MPOs, local officials, transit operators, and other transportation officials.

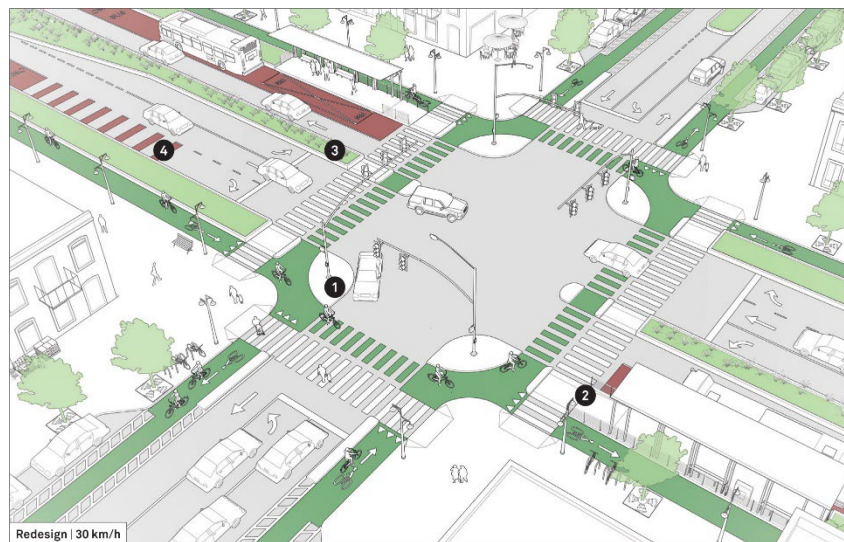
The Jackson MPO will continue to support the development of a congestion management system strategy with uniform performance measures across modes and jurisdictions for the use and analysis of traffic volume and congestion data among local road agencies and MDOT.

Complete Streets

Complete Streets are streets designed and operated to enable safe use and support mobility for all users. This includes people of all ages and abilities, regardless of whether they are traveling as drivers, pedestrians, bicyclists, or public transportation riders. The Region 2 Planning Commission, Jackson County DOT, and the City of Jackson passed Complete Streets resolutions in 2006. The Michigan Legislature passed Complete Streets legislation in 2010.

Figure 10-4 provides an example of Complete Streets. In this example, the streets support the use of vehicles, pedestrians, bicycles, and public transit. While the streets support cars with turn lanes and traffic signals as they normally would, cars are not their only priority. Pedestrians are given wide, complete sidewalks along with crosswalks and signals at the intersection. Bike lanes (highlighted dark green) are built so that they have physical separation from cars and pedestrians, and the intersection is designed to protect cyclists from turning cars while they are waiting or turning right. Buses are supported through bus lanes (highlighted red) which allow them to not get stuck in traffic with other cars, and to also not hold up cars while they are stopped. People using the bus are provided a covered shelter that is easily accessible by walking or cycling. The streets are also given grassy center medians to separate both directions of traffic and the speed limit is reduced to 30 km/h (about 20 mph) to provide more safety to pedestrians and cyclists.

Figure 10-4
Example of Complete Streets



Non-Motorized Management

Effective accommodation of pedestrians and users of the non-motorized transportation devices available today is important for the safe and efficient operation of the entire transportation system. In the Jackson MPO study area, this includes active involvement in the Walkable Communities Coalition, an advisory committee to the Jackson City Council and the Jackson County Planning Commission.

The local agencies are actively involved in the planning, designing, and implementation of non-motorized projects. MDOT produced a non-motorized map for the University Region's ten-county planning area that was completed in 2017.

In May of 2020, R2PC completed the Jackson City + County Non-Motorized Plan. This plan lays out an interconnected network of trails that could be developed across the county, with nine priority routes highlighted. This plan also outlines other bicycle infrastructure that can be developed, such as bike parking, a uniform sign system, and bike sharing stations. The costs of developing this trail network and the possible funding sources are all outlined in the plan. The Jackson MPO will look to implement the recommendations of this plan as opportunities arise and funding becomes available.

The Jackson MPO supports the activities through participation in the Walkable Communities Coalition, and by providing assistance and coordination with area communities in the development of non-motorized and recreational trail plans and projects. The Jackson MPO will also continue to offer assistance to area jurisdictions in funding non-motorized transportation projects.

Public Transit Management

JATA currently uses MDOT's Public Transit Management System to maintain current capital equipment and operational data and to determine future needs. The Jackson MPO will continue to provide assistance to JATA in maintaining and updating its databases as required. The Jackson MPO will continue to advocate and encourage connectivity between transit and other modes of transportation, and continue to promote public transit through its funding of capital equipment including buses, vans, and shelters.

Figure 10-5
JATA Bus Garage

