

MDOT's Program Development

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MDOT's Area of Responsibility

MDOT is responsible for all the roads and bridges on MDOT's highway system, known as the trunkline system. MDOT's roads are those that start with "M", "I", or "US" (and some unsigned or old routes), such as M-43, M-59, I-94, I-96, US-131, etc. The MDOT jurisdiction includes approximately 9,700 route miles of state trunkline highways and approximately 4,413 bridges.

Michigan's transportation system, including roads, transit, non-motorized facilities, aviation, marine and inter-modal facilities, play an integral role in supporting the state and region's economy and quality of life for residents. Transportation investments are part of the state's overall economic development strategy.

This manual will concentrate on MDOT's roads and bridges.

FHWA's Area of Responsibility

The Federal Highway Administration (FHWA) carries out the federal highway programs in partnership with the state and local agencies, to meet the Nation's transportation needs. FHWA adds value to the delivery of the federal highway programs, by administering and overseeing these programs, to ensure that federal funds are used efficiently, consistent with laws, regulations and polices. In administering these federal funds, FHWA applies flexible and innovative financing techniques permissible under the law, and uses efficient administrative processes. FHWA and MDOT work cooperatively through a Stewardship Agreement. This agreement allows MDOT to act on FHWA's behalf for certain federal-aid funded projects, while other projects require full FHWA oversight and involvement. FHWA oversight begins at scoping and continues through construction.

The Federal-Aid Highway Program provides Federal financial resources and technical assistance to State and local governments for constructing, preserving and improving the National Highway System, a 160,000 mile network that carries 40 percent of the Nation's highway traffic. The program also provides resources for one million additional miles of urban and rural roads that are not on the System, that are eligible for Federal-aid.

Asset Management at MDOT

Asset management is a process to strategically manage the transportation system in a cost-effective and efficient manner.

The major elements of asset management

Asset management consists of five major elements:



1. Developing policy goals and objectives
2. Data collection
3. Planning and programming
4. Program delivery
5. Monitoring and reporting results

How transportation plans are communicated



It is critical to communicate expectations to all involved, both within the Michigan Department of Transportation (MDOT) and with governmental partners. MDOT's process incorporates three such plans: the Michigan Transportation Policy Plan, MDOT Business Plan, the State Long-Range Plan and other means of communication.

Michigan Transportation Policy Plan establishes the mission for Michigan's transportation system and provides a common framework within which this may be accomplished. In addition, this provides the role that the State Transportation Commission has for oversight for MDOT and it provides the public forum for transportation policy development.

MDOT Business Plan embodies the values of quality, teamwork, customer orientation, integrity and pride. It establishes specific strategic objectives for achieving MDOT's mission of providing the highest quality transportation services for economic benefit and improved quality of life.

The State Long-Range Plan/MI Transportation Plan (SLRP) is a guiding document for the public sector transportation investment decisions in Michigan, including those involving federal aid. These goals and objectives provide the framework for the MDOT to determine its core business processes and products, while maintaining financial constraint.

The SLRP is required by a federal planning regulation. It includes an extensive public involvement process through which stakeholders have input. The process is critical to the efforts which include a varied customer base in the development of a consensus on overall state transportation policy.

Mix of Fixes

When making candidate project selections for the highway program, MDOT strives to design programs that have a balanced "Mix of Fixes" framework as well as other strategic considerations.

What "Mix of Fixes" means

The "Mix of Fixes" strategy combines long-term fixes (Reconstruction or Replacement - 4R), medium-term fixes (Rehabilitation - 3R) and short-term fixes (Capital Preventive Maintenance). Reconstruction/Replacement and Rehabilitation are often referred to together as "R&R". Each fix category has a critical role in improving the future condition or maintaining the existing condition of the state highway network.

Brief definition of each category

- **Reconstruction** is the entire rebuilding of the roadway.
- **Replacement** refers to a bridge deck replacement, a superstructure replacement or to the entire rebuilding of a bridge.
- **Rehabilitation** is the application of structural enhancements, such as multiple course resurfacing or concrete pavement repair, that improves the roadway or overlaying a bridge deck and superstructure repair to improve a bridge.
- **Capital Preventive Maintenance (CPM)** consists of minor work to the roadway; for example, crack sealing or one course resurfacing; or bridge; for example, patching the deck or replacing pin & hangers. CPM projects are used to extend the pavement and bridge life

Why mix of fixes is used

MDOT's goal is to perform long-term fixes on the system, depending upon funds available, and use medium and short-term fixes as needed elsewhere. This mix of fixes is necessary because of strategy development, overall system health, the application of the appropriate fix at the correct time and accommodations of funding limitations. Utilizing a "Mix of Fixes" strategy, also varies the time when projects will need to be reconstructed, and therefore manages the pavement and bridge assets in the most efficient and cost effective way possible.

How Mix of Fixes is Determined

MDOT's Road and Bridge strategy is to select the most cost effective roadway and bridge treatments that will achieve and maintain MDOT's network condition goals. This selection is developed with input from the following:

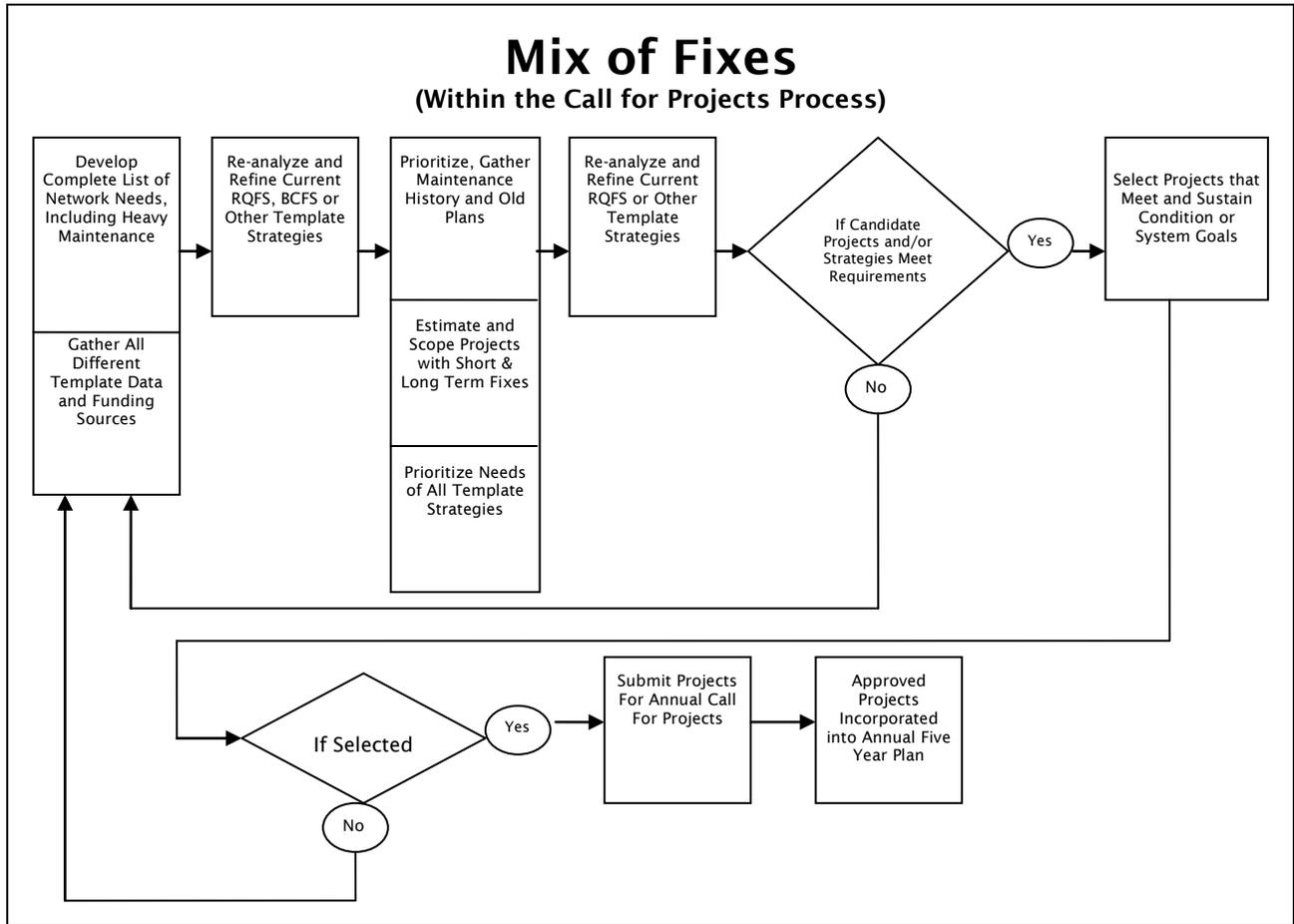
RQFS and BCFS

- Approved Road Quality Forecasting System (RQFS) or Bridge Condition Forecasting System (BCFS) Strategies. RQFS and BCFS are software programs that forecast future pavement and bridge conditions based on existing pavement and bridge conditions, funding levels and accepted MDOT strategies.
- Communication with Metropolitan Planning Organizations (MPOs), counties, cities, townships, tribal governments and stakeholders
- Pavement or Bridge Condition Data
- TSC/Region Field Reviews
- Template Funding Allocations
- Asset Management Plan

This mix of fixes is necessary because of strategy development, overall system health, the application of appropriate fixes at the correct time and accommodations of funding limitations.

The final selection is reviewed and approved in MDOT's annual Call For Projects Process and incorporated into MDOT's annual Five Year Program. Figure 2-1 illustrates a typical path for the program development and the use of the mix of fixes strategy.

Figure 2-1: Mix of Fixes within the Call For Projects Process



Road Rehabilitation & Reconstruction

How long R&R projects last



Reconstruction and Rehabilitation (R&R) fixes are applied to Remaining Service Life (RSL) Category I pavements.¹ Though it is a goal to delay the need for major rehabilitation as long as it is economically feasible, R&R is eventually needed to replace structural integrity of pavements. R&R consists of longer-term fixes for a pavement, generally extending its life from 10 to 25 years. Because of the greater pavement life extension they generate, R&R projects are more costly per mile than capital preventive maintenance (CPM).

¹ RSL Category 1 indicates pavements that have 2 or fewer years of remaining service life

Advantages and disadvantages of rehabilitation alone Rehabilitation applies structural enhancements to improve a pavement's load-carrying capability and extends the service life. Most rehabilitation projects are designed to last 10 to 20 years. Although less costly than reconstruction, rehabilitation of the entire network still requires a prohibitive level of investment.

Advantages and disadvantages of reconstruction alone Reconstruction involves the complete replacement of the pavement structure with a new long-term action that is designed to last at least 20 years, but is also the most costly fix. Like most transportation agencies, MDOT does not have sufficient funds to sustain the level of investment for continual reconstruction of the highway network.

Bridge Rehabilitation & Replacement

Bridge Deck Preservation Matrix



The condition of a bridge deck is usually the key indicator leading to a structure being considered for rehabilitation or replacement. The Bridge Deck Preservation Matrix is a tool that Bridge Engineers use when selecting the deck repair options. There are times when issues other than the condition of the deck will influence the rehabilitation or replacement of a bridge. These other indicators include (but are not limited to) super-structure deterioration, sub-structure deterioration, corridor coordination and functional obsolete issues such as underclearance or bridge width. For projects that include bridge reconstruction on the NHS roadways, that are functionally obsolete, early concurrence from FHWA may be requested to prevent changes in scope during the design phase.

Road and Bridge Capital Preventive Maintenance

Purpose of CPM

The Capital Preventive Maintenance (CPM) program was established in 1992 to keep good roads and bridges in good condition and address problems before the segment reached poor condition. CPM projects are cost effective, shorter-term fixes used to delay the deterioration of pavements to Category I. CPM projects are fixes aimed at preventing small problems from becoming critical. They are intended to address pavement problems before the structural integrity of the pavement has been severely impacted.

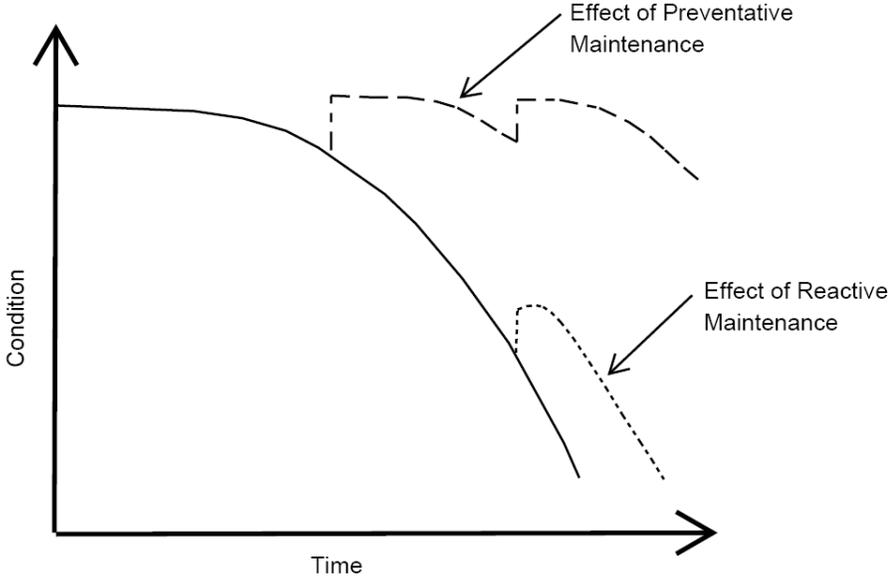
Advantages of CPM



Preventive Maintenance applies lower-cost treatments to slow the deterioration rate, maintain or improve the functional condition and extend the pavement's service life. With various short-term treatments, preventive maintenance (functional enhancement fix types) can extend pavement life an average of 5 to 10 years. Applied to the right road at the right time — when the pavements are mostly in good condition — Preventive Maintenance can maintain or slightly improve the network condition at a lower unit cost.

Figure 2-2 shows the benefit of Preventive Maintenance vs. Reactive Maintenance.

Figure 2-2: Effect of CPM or RM on Condition



The Preventive Maintenance program meets public expectations for safe, smooth, and well-maintained roads by applying cost-effective treatments to correct minor pavement deficiencies before the problems become major.

Examples of CPM Road fixes include treatments such as crack sealing, surface seals, thin asphalt overlays, diamond grinding, concrete patching, joint repair and pavement profiling to improve ride quality. Bridge fixes include joint replacement, pin & hanger replacement, deck patching, beam painting and HMA caps. CPM projects usually move pavements starting in category II, III, IV or V and increase their RSL (remaining service life) by one or occasionally two categories. Nonetheless, these are not “Band-Aid” fixes. They are proven asset management options which mitigate or delay highway asset deterioration, thus keeping pavements in good riding condition.



Limitations of CPM CPM fixes can only be applied a limited number of times. Eventually, pavements reach a level where deterioration leads to the breakdown of a pavement’s structural integrity.

Road and Bridge Reactive Maintenance

Reactive Maintenance (RM) is used to mitigate pavement problems that need attention and to address routine deficiencies that occur over time. Examples include filling potholes and replenishing shoulder gravel.

As discussed previously, for the benefit of road quality and cost, it is preferable to apply CPM fixes rather than to wait and use RM. Reactive and/or Routine Maintenance are not eligible for federal funding and use Michigan funding sources.

Bridge Capital Scheduled Maintenance

Purpose of CSM Bridge Capital Scheduled Maintenance (CSM) activities maintain the existing serviceability, and reduce deterioration rates on bridges. CSM work activities sustain the current bridge condition longer, whether the current condition is good or poor. The work proposed and performed is generally short in duration with little or no impact to traffic. The outcome from this program is to delay structural deterioration as long as possible.

Combining Fix Methods (Projects with Multiple Fix Types)

Combining the fix methods into a single comprehensive strategy achieves the most manageable highway network.



Projects with multiple fix types within a single project may appear more complex, but this often helps achieve the most cost effective fix for the roadway. Statewide, Region and TSC strategies are set up to include a “Mix of Fixes”. Therefore a variety of fix types should be chosen by each TSC/Region and may be mixed within a project(s) and/or a balanced yearly program.

CPM is an important component of the network strategy, allowing the Department to manage pavement condition. CPM delays costly R&R activities by extending the service life of the original pavement. The challenge is to ascertain the right time to apply a treatment to achieve maximum benefit or return on investment.

The Importance of Strategy

What a pavement and/or bridge strategy should do and how it is expressed

A pavement and/or bridge strategy is a collection of fixes. The most desirable strategy extends as much infrastructure life as possible over time given available funding. Strategies are expressed as the percentage of lane miles and/or numbers of bridges in a year that will undergo improvement.

MDOT funds are allocated through the Highway Capital Program, from the State MTF and Federal HTF revenues, which are overseen by the State Transportation Commission (STC). Each MDOT region develops a strategy for improving its roads and bridges using the Road Quality Forecasting System (RQFS) and Bridge Condition Forecasting System (BCFS) tools, as well as input from partners and stakeholders.

RQFS and BCFS



The RQFS and BCFS systems are software programs that forecast future pavement and bridge conditions based on user entered pavement and bridge funding levels and strategies and are an important part of MDOT's asset management strategy.

Working from the current pavement or bridge condition, age, type, deterioration rates and fix strategies, RQFS and BCFS estimate future condition of a road and bridge network (respectively). Once a

recommended strategy is identified, candidate road and bridge projects are selected that are consistent with the strategy and funds available. Road and bridge candidate projects are identified in concert, whereby project scheduling can be coordinated.

Note: The strategy should include how bridge work could affect the adjacent road (or vice versa). Some examples of this are increasing the vertical clearance of a structure may raise the adjacent road elevation or substandard road geometrics could affect the proposed bridge work (such as extending ramp acceleration/deceleration features could widen or lengthen a bridge).

Strategic Factors

Remaining Service Life

Definition of RSL



Strategies for managing the pavement network are developed using a pavement condition measure known as Remaining Service Life (RSL). RSL is the estimated number of years of remaining life in a pavement, until CPM treatments would no longer be cost effective and where R&R treatments would then be more appropriate (RSL of two years or less). RSL is derived from analysis of historical attributes including project history (treatment type & date), standardized service life benefit values per treatment type, and, when sufficiently available, mathematically modeled surface condition data (the MDOT Distress Index).

Pavement Condition Data

MDOT has a variety of means for monitoring network level pavement condition. The Planning Asset Management Section manages both the Sufficiency Report's Pavement Rating and the PASER (Pavement Surface Evaluation & Rating). Both of these condition measures are obtained by windshield surveys, performed annually. The Sufficiency Rating is provided by an evaluation and using a scale from 1 (best) to 5 (worst). The PASER Rating is based on a scale ranging from 10 (best) to 1 (worst). PASER is used to support the work of the Michigan Transportation Asset Management Council. The Construction & Technology Division's Pavement Management Section manages bi-annual collection of pavement imaging and laser measurements of surface roughness, wheel path rutting and crack/joint faulting. Detailed observation of imaging results in recorded distress types & severity levels, which are then translated into the Distress Index (DI) on a scale from 0 (best) to beyond 50 (poor threshold). Laser measures are translated into the International Roughness Index (IRI) and detected rut/fault magnitudes.

RSL categories

For purposes of analysis and reporting, pavements are grouped based on RSL by category:



Table 2-1: RSL Categories and Ratings

RSL Category	Amount RSL	Rating
I	0-2 years	Poor
II	3-7 years	Fair
III	8-12 years	Good
IV	13-17 years	Good
V	18-22 years	Good
VI	23-27 years	Good
VII	28-32 years	Good

Determining a Pavement and Bridge Strategy

The three types of road fixes

There are three basic categories of road fixes:

- Reconstruction and Rehabilitation (R&R)
- Capital Preventive Maintenance (CPM)
- Reactive Maintenance (RM) (RM is not usually specified in defining a strategy)

The four types of bridge fixes

There are four basic categories of bridge fixes:

- Replacement and Rehabilitation (R&R)
- Capital Preventive Maintenance (CPM)
- Capital Scheduled Maintenance (CSM)
- Reactive Maintenance (RM) (RM is not usually specified in defining a strategy)

Each pavement and/or bridge strategy has an associated cost. A variety of fixes will be more cost effective, when applied to pavement or bridges in various conditions. This is one of the important reasons that MDOT has determined the most effective network pavement strategies are those employing a Mix of Fixes.

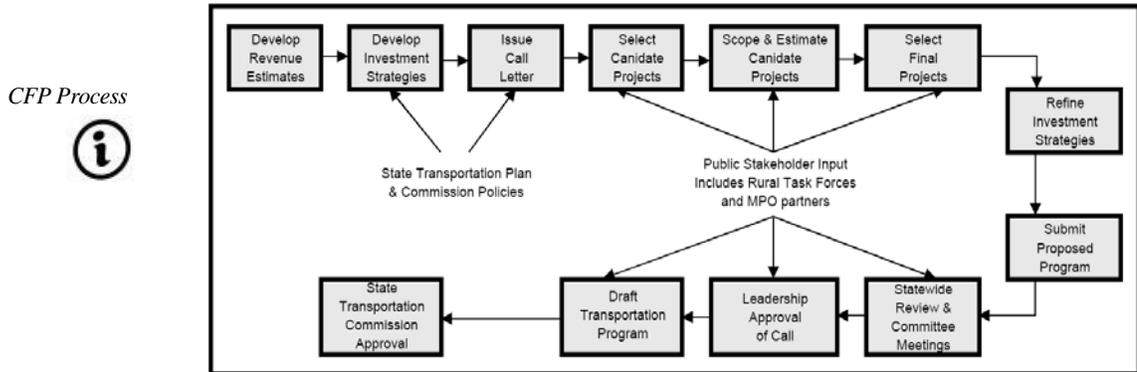
Call For Projects

MDOT issues an internal Call For Projects (CFP) annually (generally in December) for the Highway Program. The CFP memo and instructions are issued to all seven MDOT regions, which are responsible for proposing preservation projects. The CFP process guides the technical process of preservation project identification and is the mechanism used to implement State Transportation Commission (STC) policies and align MDOT's strategic direction. Key emphasis areas and strategic objectives are outlined and detailed technical instructions are issued. Target funding levels derived

from the investment strategy are also included in the instructions to MDOT regions.

Figure 2-3 illustrates the basic CFP process and high level steps required.

Figure 2-3: Call For Projects Process



Capacity Increase and New Road projects are selected and advanced through project development on the basis of statewide priorities. They are not handled through the annual CFP process.

Introduction to Funding Templates

A funding template is a source of money for proposed work. Template categories represent the type of work activities, facilities or features that receive an allocation of financial resources to accomplish approved transportation improvement strategies.

The most commonly used templates are listed below and comprise the majority of MDOT's projects. Construction projects may contain funding from multiple templates within the same project. Other, smaller, specialized template categories are not listed here.

Road Rehabilitation and Reconstruction

The R&R Program is the major instrument used to preserve pavements along MDOT's trunkline system. Implementing construction programs comprised of a balanced "Mix of Fixes" continue to be the major emphasis areas for this program. The intent of the R&R Program is to maintain the highest sustainable system health possible with available resources.

Road Capital Preventive Maintenance

The intent of the CPM Program is to implement planned strategies of cost effective treatments to existing roadway systems that preserve the system, slow pavement deterioration, and maintain or slightly improve the functional condition of the system.

Bridge Rehabilitation and Replacement, CPM and CSM

The purpose of the Bridge program is to preserve MDOT's trunkline bridges. It is a balanced strategy made up of bridge Replacement, Rehabilitation, Capital Preventive Maintenance and Capital Scheduled Maintenance. The emphasis area of this program is to address the needs of all structures of critical concern.

Safety

The Safety Program is a major component in the department's emphasis of addressing locations with safety concerns as part of the transportation program. The safety program includes safety improvements, median barrier, rumble strips, traffic signals, pavement markings and signs.

Safety improvements (i.e. addition of a center left turn lane, addition of a right turn lane, geometric improvements to accommodate signalization, median improvements and etc.) are the types of projects that support key focus areas of Michigan's Strategic Highway Safety Plan (SHSP). These locations are identified through the current Transparency Report (formally the Five Percent Report), High Crash List, Fatality and Serious Injury Regionwide Maps, 3R/4R Safety Reviews, pedestrian safety concerns, customer concerns and Pavement Friction Analyses. The project can also be combined with Road R&R projects.

Cable Median Barrier

As traffic volumes and congestion rise, the demand for effective median safety features increases. Cable median barrier is an adaptable traffic device ideally suited for use in existing medians to prevent cross-over crashes. It is one of the most effective safety measures that can be deployed to protect motorists.

An option for use of cable median barrier



Across the country, roadway agencies that have installed these types of barriers report a significant decrease in fatalities and in the severity of cross-over median crashes. Cable median barrier works as a retrofit on existing, relatively flat median areas and is also effective on sloped terrain. It generally costs less to install than other barrier systems, with low repair and maintenance costs, easily offset by the life saving and injury reducing benefits.

Other types of median barrier can be considered and includes guardrail and concrete barrier.

Rumble Strips

Rumble strips are a proven and cost effective countermeasure to lane departure crashes brought on by driver drowsiness, distraction and/or inattention. Since the late 1990s, MDOT has been systematically installing rumble strips on freeway shoulders, to the benefit of Michigan motorists.

In accordance with the March 8, 2007 decision of the Engineering Operations Committee and the Director, MDOT has expanded the application of rumble strips onto the rural, non-freeway system. This decision was made, in part, due to a national safety movement to expand rumble strip use to the non-freeway system to reduce fatalities and serious injuries. Evaluation of the initiative will be ongoing and details adjusted where necessary.

Where rumble strips are used



Rumble strip construction will be incorporated in the annual pavement marking program (after FY 2010 it will be incorporated in the project) and coordinated with the Region Pavement Management Engineers (for roadway condition data). Candidate locations are rural trunkline roads with 55 mph speeds and paved shoulder widths of 6' or greater. Proposed locations could be included in all construction contracts or combined into a Region-wide (or TSC-wide) contract. These should be identified as candidates for centerline and/or shoulder rumble strips.

Freeway Lighting

The intent of the Freeway Lighting Rehabilitation Program is to rehabilitate existing freeway lighting. MDOT owns over 200 miles of continuous freeway lighting utilizing either median-mounted lights or shoulder-mounted lights. The majority of freeway lighting is in Metro, Grand, Bay and University Regions.

Intelligent Transportation Systems

The Intelligent Transportation Systems (ITS) program encompasses the application of technology to improve the efficiency and safety of the transportation system. ITS applications use information, communication and sensor technology with the goal to achieve improved levels of safety and performance on all transportation modes.

Examples of ITS technology

Examples of this include changeable message signs, level of service indicators (traffic congestion), traffic cameras, ITS Operations Centers and etc.

Carpool Parking Lot

The purpose of the Carpool Parking Lot (CPL) Program is to provide Michigan citizens a safe and convenient facility for parking vehicles and sharing rides. This effort promotes the saving of fuel costs.

Secondary benefits associated with CPL facility usage include contributions to congestion mitigation, energy conservation and air quality improvement. The aforementioned purpose and benefits, along with growing demand, warrant continued program expansion and maintenance of assets. CPL facilities also have the potential for serving as multi-modal hubs (bike racks, bus stops and etc.).

Pump Station Capital Rehabilitation

Pump stations Stormwater pump stations are necessary to remove stormwater from highway sections that cannot be drained by gravity. Because of high costs and the potential problems associated with pump stations, their use is recommended only where other drainage systems are not feasible. When operation and maintenance costs are capitalized, a considerable expenditure can be justified for a gravity system. Alternatives to pump stations include deep tunnels, siphons, and infiltration systems (infiltration systems are often less than aesthetically pleasing and can create maintenance problems).

Alternatives to pump stations

Where to find out more about pump stations and their rehabilitation In 2005, the Pump Station Capital Rehabilitation program was created. To find out the location and condition of MDOT pump stations, contact your Region Maintenance staff.

Type II Noise Abatement

This program is to help abate traffic noise for those residences that were in place at the time a freeway was constructed and prior to 1976. The State Transportation Commission Policy #10136 authorizes the program. As stated by the State Transportation Commission Policy, funding is dependent on the size of the Road and Bridge Program. In years where the Road/Bridge Program, excluding Maintenance, is greater than \$1 billion, no more than one half of one percent may be spent on Type II Noise Abatement. In FY 2008 - FY 2011, the Road/Bridge Program, excluding Maintenance, may not exceed \$1 billion, therefore, the program funding is suspended.

Commercial Vehicle Enforcement

The Commercial Vehicle Enforcement (CVE) Program is to promote highway safety and security, protect highway infrastructure and enforce the general laws of the state as they pertain to Commercial Motor Vehicle operations.

CVE CFP and Infrastructure Strategy The **CVE Call For Projects and Infrastructure Strategy** is a document to improve the commercial vehicle enforcement infrastructure. The primary goals of the strategy are to ensure the safety and security of the public while protecting the roads from deterioration, due to overweight vehicles. This strategy is the result of a joint partnership



between the MDOT and the Michigan State Police Traffic Safety Division (MSP/TSD).

Enforcement Tools

MSP/TSD primarily uses four different types of tools for detecting and enforcing vehicle weight limits:

Weigh Stations are locations with fixed permanent scale decks to detect axle, tandem and gross vehicle weights. They are also used to perform safety/security checks and ensure regulatory compliance. In addition, weigh stations have available room to place vehicles out of service, until their deficiencies are corrected.

Weight in Motion (WIM) is a sensor that is placed within the pavement of a roadway's traveled lane. WIMs record vehicle weight and other information from vehicles traveling at normal highway speeds. The WIM can also transmit the vehicle's information wirelessly in real time to a laptop computer from a short distance away. The use of the wireless WIM is an effective method to isolate potential overweight vehicles. WIMs are also used for data collection of volume counts and commercial vehicle classification. This data can then be used by planning and engineering staff to analyze traffic trends and characteristics.

Safe Enforcement Sites (SES), are locations where MSP/TSD officers can perform safety inspections and/or weight enforcement operations in a safe manner. These sites may consist of rest areas, roadside parks, county road commission garages and wide shoulders. Ideally these sites should have a flat level area, for Weight and Safety.

Portable Intermittent Truck Weight Stations (PITWS) may be installed at a SES. A PITWS is a set of depressions designed for placement of portable scales. To obtain an accurate reading, it is essential that all axles be in the same plane. When PITWS are unavailable, blocks are placed under the vehicle by the officer to align the axles. Subsequently, with out a PITWS, labor and time to weigh a vehicle is greatly increased.

Enforcement Strategies

The current strategies used by the MSP/TSD vary depending on what type of enforcement operation is taking place.

A permanent weigh station can be operated by one officer and is capable of weighing 700 trucks per hour. Hours of operation of a weigh station will vary.

When other planned operations are not being performed, officers are often in their patrol vehicles patrolling for individual commercial vehicles in violation.

An effective field enforcement strategy is to use wireless WIM in conjunction with a SES. The strategy involves vehicles traveling along the roadway passing over a WIM. Information is transmitted to a laptop computer in a patrol vehicle. The WIM sensor is ± 5 percent accurate. Therefore, it is not used for enforcement but allows the officer to identify only an overweight vehicle without reducing the traffic flow. A reasonable location (approximately two miles between WIM and the SES is ideal according to the Motor Carrier Division) should be provided between the WIM and SES to allow the officer to stop the suspected overweight vehicle prior to the SES. This strategy increases the efficiency of the officer and greatly reduces the impact to other commercial vehicles.

The MSP/TSD also operates a Special Transportation Enforcement Team (STET). A STET is an operation where a MSP/TSD officers target specific violations. The location, time, and duration of these operations will vary. The STET provides the ability to monitor routes without weigh stations or locations where vehicles may try to bypass a permanent weigh station. The use of STET and SES provides the advantages of being mobile and eliminates the investment of constructing permanent locations. While the STET are in operation, other officers may be patrolling other roads for vehicles attempting to bypass an enforcement zone.

Roadsides

The Roadsides program is vital to Michigan citizens. The constructing, improving and restoring Michigan's rest areas, which are visited daily by the motoring public, are funded with this program. Additionally, Michigan residents utilize and enjoy miles of non-motorized facilities that have been constructed for pedestrians and bicyclist alike. Streetscape and landscaping is among some of the beautification initiatives that are provided by this template funding, in keeping Michigan a great place to live and work. Each of these project types are contained within the Roadsides template. This template may include standalone projects, work that is packaged with other templates or work combined with enhancement grants.