MICHIGAN DEPARTMENT OF TRANSPORTATION

MDOT

State Long-Range Transportation Plan 2005-2030

Environmental Mitigation Technical Report

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MI Transportation
MICHIGAN LONG RANGE TRANSPORTATION PLAN

Prepared by
The Michigan Department of Transportation

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Chapter 1. Introduction

Environmental Mitigation

> *Methods, strategies or actions to eliminate or reduce the negative effects, direct, indirect and cumulative, of a transportation project on the environment.*

The Michigan Department of Transportation (MDOT) works closely with federal, state and local agencies and the 12 federally-recognized Tribes throughout the transportation planning process to ensure appropriate stewardship and preservation of Michigan's cultural and natural resources. For a complete list of federal, state and local agencies refer to the *MI Transportation Plan, Environmental Technical Report*.

The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) (Pub. L. 109-59, August 10, 2005), requires that a long-range statewide transportation plan shall include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level.

Mitigation measures are necessary to mitigate any potential adverse impacts that may occur as a result of the proposed projects listed in *MI Transportation Plan*, "Corridors of Highest Significance." Mitigation measures may include avoidance, minimizing impacts by limiting the scope of the proposed project, rehabilitating or restoring the affected environment, and compensating for the impact by replacing or providing substitute resources. Mitigation measures include both temporary and permanent measures to minimize impacts during and after project construction.

This report discusses potential environmental mitigation activities. The *Environmental Technical Report* identifies existing sensitive environmental resources in the state. This report discusses how these resources may be impacted by transportation investments; what current environmental policies, procedures, and strategies at the state and federal level affect the planning, design and construction of transportation systems; and how an integrated approach entails safeguarding the state's natural resources by managing the trade-offs between valuable activities and access to those activities regardless of travel modes.

Chapter 2. Mitigation Measures

In the initial stages of project planning, all improvement projects are evaluated for the potential to impact property owners, archaeological and historic resources, endangered species, farmlands, public recreational properties, air quality, lakes and streams, fisheries, floodplains, wetlands, land uses, contaminated sites, and noise levels, as required by the various federal, state and local laws, rules and regulations.

The following is a list of mitigation measures that may be needed for each of the project(s) listed in *MI Transportation Plan*. The mitigation measures include:

Archaeological Resources

Mitigation for impacts to archeological resources is accomplished through avoidance or scientific excavation and documentation. Archeological surveys, including deep testing enable MDOT to locate potentially significant sites within transportation corridors.

Historic Resources

Mitigation for impacts to historic above-ground resources includes avoidance, minimization or documentation of the affected resource(s). Mitigation commitments are crafted on a case-by-case basis, and are developed through close consultation with key agency and stakeholder partners.

Coastal Resources

Impacts to coastal resources are minimized or mitigated by altering project plans and/or construction practices. MDOT also protects and promotes preservation of Michigan's shoreline communities through a variety of unique projects, including boardwalks, stairways and viewing platforms. These structures provide access while decreasing erosion and protecting plant and animal populations.

Wetlands

When unavoidable wetland impacts occur, MDOT consults with various resource agencies to develop replacement wetlands within the affected watershed. MDOT has also developed a wetland banking program that benefits the state's wetland resources by establishing new wetlands in advance of losses; by consolidating small mitigation projects into larger, better designed, and managed units; and by encouraging integration of wetland mitigation projects with watershed-based resource planning.

Floodplains

MDOT protects floodplains potentially affected by transportation projects through avoidance or by designing and sizing bridge openings, culverts and associated project

elements to allow water flows without increasing water levels upstream or downstream of the project.

Surface and Ground Water

Mitigation measures for impacts to surface and ground water are selected based on the type and amount of potential pollutants and the magnitude of the potential impacts. Mitigation may include avoiding the resource, altering project design or operational procedures, or using MDOT-approved Best Management Practices for stormwater runoff. Use of vegetated swales and detention/ retention ponds are examples of storm water management practices applied in transportation corridors.

Aquatic Resources and Fisheries

When impacts to fish communities and other aquatic resources cannot be avoided, MDOT protects these resources by effectively managing stormwater runoff, incorporating design features that minimize impacts to fisheries such as minimizing culvert length; and/or minimizing disruption to natural cycles such as not working within the stream during periods of spawning activities. Mitigation is most often done on-site, within the project area. When off-site mitigation is necessary, locations are selected from within the same watershed.

Plants, Animals and Habitats

Mitigation for impacts to threatened, endangered, and special concern plants, animals and their habitats may include the alteration of project plans and/or construction practices. MDOT strives to improve the existing habitats for threatened and endangered species through the Protected Areas Program. This statewide program actively manages endangered species habitat within MDOT right-of-way and includes activities such as strategic mowing practices, invasive species control, and the use of prescribed fire.

Air Quality

MDOT works closely with the Federal Highway Administration, the US Environmental Protection Agency, Michigan Department of Environmental Quality and the relevant Metropolitan Planning Organizations (MPO) to ensure that projects within transportation corridors meet the Clean Air Act requirements.

Noise

MDOT encourages local units of government to plan noise-neutral land uses along transportation corridors to avoid the need for expensive noise abatement in the future. In developed areas, MDOT analyzes noise levels within project areas. When a noise barrier is warranted and desired, MDOT works with the community to incorporate aesthetically-pleasing design features.

Right-of-Way Acquisition

Mitigation measures for impacted property owners, including minority and low-income populations, may include avoidance, minimizing the project scope, or compensation. All grading easements and fee right-of-way including displacements and relocations are acquired in accordance with federal and state laws.

Farmland Protection Policy Act Lands and Farmland and Open Space Preservation Lands Act 451, Part 361 (formerly PA 116 Lands)

MDOT consults with the US Department of Agriculture (USDA, Natural Resources Conservation Service (NRCS), and the Michigan Department of Agriculture (MDA) regarding impacts to any farmland that is under the farmland protections policy act and/or enrolled in the Farmland and Open Space Preservation Program. MDOT follows USDA and MDA regulations for acquiring right of way for transportation corridors.

Public Recreational Resources (Section 4(f) properties)

Mitigation for impacts to public recreational properties includes eliminating or minimizing the impacts. Appropriate mitigation measures, which are approved by the official with jurisdiction over the property, are included in the proposed project.

Recreational Lands Purchased or Improved with Land and Water Conservation Funds (Section 6(f) properties)

When impacts to Section 6(f) properties cannot be avoided, MDOT works with the US Department of the Interior and the Land and Water Conservation Fund applicant to replace the property used by the transportation project in size, value and function through a conversion process.

Land Use Impacts and, Indirect and Cumulative Impacts

Mitigation measures for land use and indirect and cumulative impacts may include changes in the proposed project and connected actions, revision to the design plans, avoidance, minimization, just compensation, and conservation measures.

Contaminated Sites

Mitigation measures for impacts to contaminated sites are shaped by the legal responsibilities established under Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451 (NREPA), as amended. To meet this legal responsibility, MDOT must properly handle and dispose of all excavated contaminated media (soil and groundwater) in accordance with NREPA and federal regulations. Other mitigation measures may include choosing a design alternative to avoid areas of contamination, conducting soil and groundwater sampling and analysis to further identify the location and extent of contamination, and implementing a worker health and safety plan.

Chapter 3. Mitigation Discussion

Michigan's focus on preservation of the existing highway system has resulted in a long-range plan containing few new proposals for improving capacity or adding new roads. Since many of the capacity improvement projects listed here have already undergone more detailed environmental analysis, including the identification of project-specific mitigation measures, this plan references, rather than repeats the mitigation specifics for each project.

Almost all of these projects predate SAFETEA-LU and have completed the planning and environmental analysis stages of their development. Projects which we anticipated would likely result in significant environmental impacts have undergone an Environmental Impact Statement (EIS). The EIS assists the decision-making process, requiring a clear statement of purpose and need for a proposed project, exploration of alternative solutions to the problem, identification and analysis of significant environmental issues and identification of mitigation measures to lessen the impacts of a project. The final approval document for the proposed project and mitigation is a Record of Decision or ROD.

An Environmental Assessment is conducted when MDOT needs to find out whether or not a proposed project will have significant environmental impacts. Through the process we conduct an investigation of the nature and importance of potential impacts. If the investigation determines that the impacts are not significant, then the federal agency issues a Finding of No Significant Impact or FONSI. The FONSI documents mitigation that lessens the project impacts. If the project will have significant impacts, the federal agency will require preparation of an EIS.

When MDOT can determine that projects do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts, they may proceed without the documentation noted above. Minor mitigation measures can help minimize impacts for these projects and may be included in the project scope.

Projects having a ROD issued:

1. I-94 from I-96 to Conner in Detroit, Wayne County has approval for widening and interchange reconstruction. FHWA issued a ROD in 2006.
2. I-75, between I-696 and M-59 in Oakland County has approval for widening to four lanes in each direction. FHWA issued a ROD in 2006.
3. I-94 between M-60 and Sargent Road in Jackson County received a ROD from

FHWA in 2007. This project calls for reconstruction of interchanges, bridges and eventual road widening.

4. M-24, between Brauer Road and I-69 in Lapeer County received a ROD in 2002 MDOT is building the four-lane boulevard in the northern portion, with plans to proceed with the southern portion once funding becomes available. MDOT is following up on mitigation commitments.
5. I-75 between I-696 and M-59, Oakland County widening to four lanes in each direction received a ROD from FHWA in 2006.
6. M-59 from I-96 to US-23 widening to a boulevard has received a ROD from FHWA in 2005. Construction has begun on the I-96 to Michigan Avenue section, with mitigation follow-up taking place during design, right-of-way and construction stages. Additional mitigation will occur with future work on the remaining section from Michigan Avenue to Whitmore Lake Road when funding is available.

Projects having a FONSI issued:

1. I-94 segment in Kalamazoo between US-131 and Sprinkle Road;

   FHWA issued a FONSI for this proposed freeway widening in 2002.

2. I-96 and I-196: I-196 from Market Street to I-96, I-96 from Leonard to north of M-11 and a portion of M-37/M-44 (East Beltline) in the City of Grand Rapids and Grand Rapids Twp.

   FHWA issued a FONSI for this freeway modernization including bridge rehabilitation and replacement, road reconstruction and the addition of a lane in 2006. Plans call for the work to be complete within the next decade.

3. Kalamazoo/Battle Creek International Airport (Kalamazoo);

   The Federal Aviation Administration (FAA) issued a FONSI for the construction of a new 4,100 foot general aviation runway and associated support facilities in 2006.

4. Southwest Michigan Regional Airport (Benton Harbor);

   FAA has issued a FONSI for a 6,000 foot runway extension.

5. Jackson County – Reynolds Field (Jackson);

   FAA has issued a FONSI for the construction of a new primary runway.

6. Capital City Airport (Lansing);
7. Muskegon County Airport (Muskegon);
8. Ambassador Bridge/Gateway Project, I-75 at Ambassador Bridge: This project

will address long-term congestion mitigation issues and provide direct access improvements between the Ambassador Bridge and I-75 and I-96. The project received a FONSI from FHWA in 1997.

Project receiving a Categorical Exclusion:

1. W. K. Kellogg Airport (Battle Creek). FAA has determined that the proposed addition of a parallel runway to an existing one will have minor environmental impacts.

Projects still undergoing NEPA review:

1. Detroit Intermodal Freight Terminal (DIFT);

   Consolidation of rail/truck transfer facilities in the Detroit area. A Draft Environmental Impact Statement outlined mitigation concepts. Negotiations with stakeholders regarding more detailed mitigation plans continue.

2. M-15, I-75 to I-69, Oakland and Genesee Counties. A Draft Environmental Impact Statement has been completed for proposed boulevard improvements. Corridor preservation and operational improvements are ongoing and will continue until sufficient construction money is identified. Once finances are in place, this project may proceed to the Final EIS. Conceptual mitigation measures are included in the Draft EIS.

3. Midwest Regional Rail Initiative;

   The Midwest Regional Rail Initiative (MWRRI) is a cooperative, multi-agency effort that began in 1996 and involves nine Midwest states (Indiana, Illinois, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin) as well as Amtrak, and the Federal Railroad Administration. An EIS will soon be underway for proposed improvements in Michigan. Likely areas of mitigation might include wetlands, noise, plants, animals and habitats, land use, and surface/ground water resources.

4. Ann Arbor-Detroit-Pontiac Passenger Rail/Bus Rapid Transit Initiative;
5. Grand Rapids Area Bus Rapid Transit Initiative;
6. Construction of a New Soo Lock;
7. Otsego County Airport (Gaylord);
8. Tulip City Airport (Holland);
9. US-127, St. Johns to Ithaca, Clinton and Gratiot Counties. Plans call for converting this section of highway to a limited-access freeway. FHWA issued a ROD in 1990. The project is undergoing a re-evaluation of the environmental documentation to analyze changes since the original ROD.

10. US-31 from M-45 to I-96/M-104 proposes to build a new highway between Holland and the Spring Lake area with a new crossing of the Grand River. MDOT is preparing a Final Environmental Impact Statement for this proposal.
11. Detroit River International Crossing (DRIC) Study. MDOT, in cooperation with Canada, is conducting an Environmental Impact Study for a new international border crossing of the Detroit River. The study is considering mitigation concepts.
12. The Blue Water Bridge Plaza study is underway in the Port Huron area to expand the toll/customs plaza to meet the 20-30 year needs of bridge users, inspection agencies and other stakeholders. The Draft Environmental Impact Statement should be released in 2007.

Planning Studies

1. The US-23 from M-14 to I-96 comprehensive study of the US-23 corridor between Ann Arbor and Brighton will examine existing conditions and future needs. This planning study will lead to the development of project concepts, which will receive environmental evaluation. The study will also consider potential mitigation measures. Likely areas of mitigation might include wetlands, noise, plants, animals and habitats, land use, and surface/ground water resources.
2. At the International Bridge in Sault Ste. Marie MDOT will conduct a feasibility study to preserve the facility and address long-term needs. The study should begin in 2008 and will include consideration of potential mitigation measures. Likely areas of mitigation might include archaeological resources and surface/ground water resources.

Chapter 4. Conclusion

Michigan's focus on preservation of the existing highway system and limited funding have resulted in a long-range plan containing few new proposals for improving capacity or adding new roads. Since many of the capacity improvement projects listed here have already undergone more detailed environmental analysis, including the identification of project-specific mitigation measures, this plan references, rather than repeats the mitigation specifics for each project.

Please refer to the individual environmental documents for the complete discussion of the environmental impacts and the specific mitigation measures.

Likewise, many of the airport projects have undergone detailed environmental analysis. Readers should refer to project-specific mitigation plans for more information.

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Providing the highest quality integrated transportation services for economic benefit and improved quality of life.