4. What Are Mitigation and the Proposed Measures to Reduce Harm?

Mitigation is defined as the elimination or reduction of the negative environmental effects of a project. It includes measures to address any damage to the environment caused by such effects through replacement, restoration, compensation or any other means.

This section applies to all DRIC Build Alternatives.

The goal of mitigation is to preserve, to the greatest extent possible, existing communities, land use, and natural resources, while improving transportation. Although some adverse impacts are unavoidable, precautions will be taken to protect social and environmental systems through environmental review, design, and construction processes. Construction activities that include the mitigation measures listed below are those currently contained in the MDOT 2003 "Standard Specifications for Construction."

The following sections discuss the mitigation concepts that are being considered at this time for the proposed project. Without the benefit of detailed design plans and data, conceptual mitigation ideas are proposed as a means to avoid or reduce adverse impacts on certain resources. If the project advances to the design phase, MDOT's design plans will incorporate any additional social, economic, or environmental protection items prior to contract letting. More mitigation measures may be developed, if additional impacts are identified.

Specific mitigation measures will be included in the design plans and permit applications. A Project Mitigation Summary "Green Sheet," which identifies proposed mitigation, is included at the end of this section.

4.1 Rules that Guide Right-of-Way Acquisition and Relocation

A *Conceptual Stage Relocation Plan* has been prepared (Appendix A). It outlines the expected relocations at this stage of the study and the availability of replacement residential and commercial properties. It will be updated for the FEIS.

The following standard procedures related to relocation will be followed.

Compliance with State and Federal Laws – Acquisition and relocation assistance and services will be provided by MDOT in accordance and compliance with Act 31, Michigan P.A. 1970; Act 227, Michigan P.A. 1972; Act 87, Michigan P.A. 1980, as amended; Act

367, Michigan, P.A. 2006; Act 439 Michigan P.A. 2006; and, the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. MDOT will inform individuals, businesses and non-profit organizations of the impact, if any, of the project on their property. Every effort will be made, through relocation assistance, to lessen the impact when it occurs.

Residential – MDOT is required by statute to determine the availability of comparable, decent, safe and sanitary housing for eligible displaced individuals. MDOT has specific programs to implement the statutory and constitutional requirements of property acquisition and relocation of eligible displacees. Appropriate measures will be taken to ensure that all eligible displaced individuals are advised of the rights and benefits available and courses of action open to them.

Business and Non-profit Organizations – MDOT is required by statute to offer relocation assistance to displaced businesses and non-profit organizations. MDOT has specific programs that will implement the statutory and constitutional requirements of property acquisition and relocation of eligible displacees. Appropriate measures will be taken to ensure that all eligible displaced businesses or non-profit organizations are advised of the rights, benefits, and courses of action open to them. Displaced businesses and organizations will be encouraged to relocate within the same community. A number of business owners indicated they chose their current location because it fell within the Detroit Empowerment Zone and/or Renaissance Zone. Forty-three out of 50 businesses interviewed have requested that they be relocated in or near Delray.

Purchasing Property – MDOT will pay just compensation for fee purchase or easement use of property required for transportation purposes. "Just compensation" as defined by the courts is the payment of "fair market value" for the property rights acquired, plus allowable damages to any remaining property. "Market value" is defined as the highest price estimated, in terms of money, that the property would bring if offered for sale on the open market by a willing seller, with a reasonable time allowed to find a purchaser, buying with the knowledge of all the uses to which it is adapted, and for which it is capable of being used.

Relocation Information – A booklet entitled "Your Rights and Benefits" detailing the relocation assistance program can be obtained from the Michigan Department of Transportation, Real Estate Support Area, PO Box 30050, Lansing, Michigan, 48909 or phone (517) 373-2200. It is online at: http://www.michigan.gov/documents/rightsbenefits_25499_7.pdf.

What is Just Compensation?

"Just compensation," as defined by the courts, is the payment of a "fair market value" for property rights that are acquired, plus allowable damages to any remaining property.

What is Fair Market Value?

Fair market value is defined as the highest price estimated, in terms of money, the property would bring if offered for sale in the open market by a willing seller with reasonable time allowed to find a purchaser, buying with the knowledge of all the uses to which is adopted and for which it is capable of being used.

Property Acquisition Information – A booklet entitled "Public Roads & Private Property" detailing the purchase of private property for transportation projects can be obtained from the Michigan Department of Transportation, Real Estate Support Area, P. O. Box 30050, Lansing, Michigan, 48909 or phone (517) 373-2200. It is online at: http://www.michigan.gov/ documents/pubprivate_25498_7.pdf.

4.2 Environmental Justice/Title VI

The impacts of the proposed Practical Alternatives will have an adverse effect on all EJ/Title VI population groups in the study area. However, as previously stated in Section 3.1.5 of the DEIS, the Practical Alternatives will be further evaluated to determine if the impacts would have a disproportionately high and adverse effect on low-income populations in the study area. To mitigate for any adverse impacts to EJ/Title VI population groups, and other impacts that may have a disproportionately high and adverse effect on low-income population groups, MDOT, along with other agencies and the community, have developed mitigation measures that would avoid, minimize and/or mitigate for any adverse impacts. The mitigation measures include: 1) A Conceptual Stage Relocation Plan that outlines the expected relocations at this stage of the study and the availability of replacement residential and commercial properties, and relocation assistance as defined in the plan. The conceptual stage relocation plan will be updated for the FEIS; and, 2) Barrier Walls for security around the plaza perimeter. These mitigation measures are just two of the measures MDOT is proposing for this project. More mitigation measures may be developed, if additional impacts are identified. A Project Mitigation Summary "Green Sheet," which identifies proposed mitigation for this project, is included at the end of this section.

4.3 What Will the Mitigation be Around the Plaza?

Barrier walls for security would be provided around the plaza perimeter as an integral part of the proposed project. Barrier walls in areas sensitive to noise, such as Southwestern High School, Fort Wayne and residential uses, as discussed in Section 3.7, would be of sufficient height to abate noise (per MDOT's Noise Policy), as well as provide security. Landscaped buffering will also be part of the plaza construction.

4.4 Noise Walls

Preliminary noise analysis of the Practical Alternatives identified reasonable and feasible noise walls along the north side of I-75. It is anticipated similar walls will be identified, at a more refined level, for the Preferred Alternative. If the

Representative Michigan Noise Wall

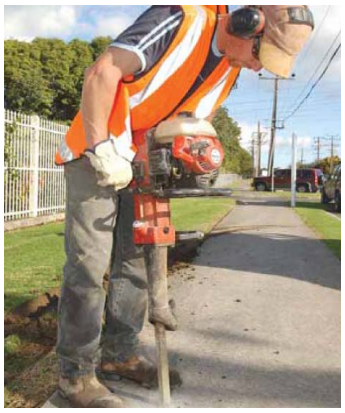
Source: The Corradino Group of Michigan, Inc.

project proceeds to design, provisions would be made for fire hydrant access through noise walls. Discussions with the adjacent community and emergency services agencies will identify locations where access through the wall may be necessary. Where there are extensive lengths of noise wall, locked panels are sometimes provided to allow emergency personnel access through the walls. Coordination with the local community and the City of Detroit regarding these issues and aesthetics would be conducted in the design phase of the project. Final noise wall locations will be defined in the FEIS for the Preferred Alternative.

4.5 Construction Noise and Vibration Impacts

Construction generates noise and vibration impacts. Barrier walls for security purposes, included in plaza design, will be installed first, to the extent practicable, to minimize such noise in Delray, including Southwestern High School.

Noise and vibration will be minimized.



Source: The Corradino Group of Michigan, Inc.

MDOT will minimize construction noise by measures such as requiring that construction equipment have mufflers; that portable compressors meet federal noise-level standards for that equipment; and, that all portable equipment be placed away from or shielded from sensitive noise receptors, where feasible. Detroit's noise ordinance will be honored to ensure local noise standards are met.

Where pavement must be fractured, structures must be removed, and/or piling or steel sheeting must be driven, care will be taken to prevent vibration damage to adjacent structures. In areas where construction-related vibration is possible, basement surveys will be offered. These areas will be identified during the design phase, and surveys will be conducted before construction begins to allow documentation of any damage caused by MDOT construction. Geotechnical analysis conducted for the project will aid in the understanding of potential vibration impacts and mitigation. Vibration impacts are not anticipated at this time, but will be reviewed again during the design phase.

4.6 Control of Air Pollution during Construction

The construction contractors will be required to comply with all federal, state and local laws and regulations governing the control of air pollution.

Dust Control – During construction, adequate dust-control measures will be maintained to avoid detriment to the safety, health, welfare, or comfort of any person, or cause damage to any property or business.

Bituminous and Concrete Plants – All bituminous and Portland cement concrete proportioning plants and crushers will meet the requirements of the rules of Part 55 of Act 451, Natural Resources and Environmental Protection. Any portable bituminous or concrete plant and crusher must meet the minimum 250-foot setback requirement from any residential, commercial, or public assembly property. The contractor may be required to apply for a permit to install the plant or for a general permit from the MDEQ. The permit process, including any public comment period, if required, may take up to six months.

What are Bituminous and Concrete Plants?

For major projects, concrete and asphalt (bituminous) mixing plants may be set up near the project for the duration of construction. Rules have been established to protect the public from any air quality impacts.

Dust collectors must be provided on all bituminous plants. Dry, fine aggregate material removed from the dryer exhaust by the dust collector must be returned to the dryer discharge unless otherwise directed by the Project Engineer.

Construction emissions may represent a large new source of $PM_{2.5}$ emissions. The implementation of a construction emissions reduction plan may be considered to target emissions from construction sources. This plan might include actions such as: retrofitting off-road construction equipment; using ultra-low sulfur fuels for all equipment; limiting the age of on-road vehicles used in construction projects; minimizing engine operations; restricting construction activities around certain more sensitive receptors, like Southwestern High School; instituting fugitive dust control plans; using diesel particulate traps and oxidation catalysts; and, using existing power sources or clean fuel generators, rather than temporary power generators.

4.7 Soil Erosion and Sedimentation Control

Accelerated sedimentation caused by project-related construction will be controlled before it enters a water body or leaves the highway property (right-of-way). This will be done by installing temporary or permanent erosion and sedimentation control measures. MDOT has developed a series of standards for erosion control items to be included on design plans. The design plans will describe the erosion controls and their locations. Payment is made to the contractor for items in the design plans specifically developed for the project.

What are Soil Erosion and Sedimentation?

Soil erosion is the washing away or wearing down of soil. Sedimentation is a process that deposits soil and debris on the ground surface and/or in bodies of water.

MDOT has on file with the Michigan Department of Environmental Quality (MDEQ) an approved operating soil erosion and sedimentation control program which ensures

compliance with Part 91, Soil Erosion and Sedimentation Control of Act 451, as amended. MDOT has been designated an "Authorized Public Agency" and is self-regulated in its efforts to comply with Part 91. MDEQ may, however, inspect and enforce soil erosion and sedimentation control practices during construction to ensure that MDOT and the contractor are in compliance with Part 91 and the acceptable erosion and sedimentation control program.

The following is a partial list of the mitigation measures for this project to be carried out in accordance with permit requirements.

- All construction operations will be confined to the project property (right-of-way) limits or acquired easements.

- Areas disturbed by construction activities will be stabilized and vegetated within five days after final grading has been completed. Appropriate temporary erosion and sedimentation controls will be implemented where it is not possible to permanently stabilize a disturbed area. All temporary controls will be maintained until permanent soil erosion and sedimentation controls are in place and functional.

- Special attention will be given to protecting natural vegetative growth outside the project's construction limits from unnecessary removal or siltation. Natural vegetation, in conjunction with other sedimentation controls, provides filtration of surface runoff.

- Protection of storm sewer inlets will be done to prevent sediment from entering the storm sewer system.

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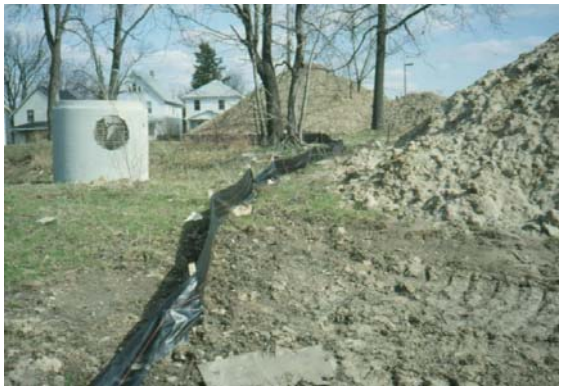

Source: The Corradino Group of Michigan, Inc.

- The contractor is responsible for preventing the tracking of material onto local roads and streets. If material is tracked onto roads or streets, it shall be removed at the contractor's expense.

4.8 Surface Water Quality

Adequate soil erosion and sedimentation control measures will be implemented. A combination of detention basins, sediment basins and vegetated ditches will be used to promote infiltration. This will reduce the potential impacts on water quality from added runoff and associated pollutants, including deicing salts and heavy metals. Stormwater

management plans will be developed that collect, detain, and treat all stormwater from the bridge, plaza, and interchanges. Stormwater management designs will meet National Pollutant Discharge Elimination System requirements. Proper designs will ensure that no significant water quality impacts will result from stormwater discharge.

What is the National Pollutant Discharge Elimination System (NPDES)?

The NPDES is a permitting system designed to reduce the discharge of pollutants to the nation's waters.

Construction is expected to occur from land. Ships and barges will deliver materials to existing docks such as at McCoig, the Port of Detroit and/or Renaissance Logistics. Details, including maintaining navigation, would be part of the permit application to the U.S. Coast Guard, U.S. Army Corps of Engineers and the Michigan Department of Environmental Quality.

4.9 Groundwater Quality

The sealing of water wells, septic systems, and sewer lines for the protection of groundwater quality will be ensured by the enforcement of MDOT specifications imposed on the contractor during construction. For houses or other structures with sewer service that are relocated or must be razed, sewer lines will be filled with concrete grout at the basement level, and water will be turned off at the street. The sewer line to any septic tank must be filled at the basement level. Where abandoned water wells exist, they will be filled with grout applied from the bottom up through a conduit extended to the bottom of the well. One continuous operation will be used until the well is filled. The contractor must also meet all local and Michigan Department of Community Health (MDCH) requirements.

What is Groundwater?

Groundwater is naturally occurring water beneath the ground surface, where soil pore spaces or fractures and voids in rock are fully saturated. Groundwater is protected, as it often is used as a domestic water source though wells.

Demolition contractors will generally be allowed 60 to 90 days for the site to be completely cleared. However, no more than 48 hours will be permitted following removal of any structure to fill the foundation to ground level. MDOT will take independent action to fill the foundation, charging its costs to the contractor, if the foundation is not filled within this time. The MDEQ notification procedures for demolitions will be followed.

The above specifications have been approved by the Michigan Department of Community Health. The contractor will also be referred to the local health department for assistance when special conditions, such as flowing wells or wells with a high artesian head, are encountered. If high water tables are encountered in cut sections, special methods will be used to reduce negative effects on the area groundwater.

Drainage structures will be built as necessary along the pavement to drain the roadway sub-base. Edge drains will be used to intercept horizontal seepage. Stone baskets will be used to maintain and reroute the flow of springs when any springs are found below the roadway. Intercepted water will be discharged into an available storm sewer.

4.10 Wetland Mitigation

Preliminary consultation with agencies for wetlands was undertaken during delineation. Mitigation of proposed wetland impacts has followed three sequential steps: 1) avoidance of wetlands where feasible, 2) minimization of unavoidable impact by adjustments to the project alignment and typical cross-section, and 3) compensatory wetland construction or restoration. The first two steps have been integral to project development. Specific mitigation measures will be done in accordance to all applicable statutes administered by appropriate agencies.

Wetlands areas were evaluated, and efforts were made in the location of the Build Alternatives to avoid and minimize wetland impacts.

Wetland Area Affected – Corridor X-11

Source: The Corradino Group of Michigan, Inc.

Compensatory wetland restoration or creation is planned to mitigate unavoidable impacts to approximately 0.01 acres of wetlands in the X-11 corridor, if that corridor is selected. This area is made up of wetlands resulting from past site disturbances. This wetland is classified as Palustrine Emergent/Persistent/Temporarily Flooded (PEM2A) and Palustrine Scrub-Shrub/Broad-leaved Deciduous/ Temporarily Flooded (PSS1A) and is located between asphalt fill and a concrete seawall adjacent to the Detroit River. Runoff from the adjacent fill flows into this wetland and discharges through a break in the seawall. Dominant vegetation includes giant reed grass, sandbar willow and cottonwood. Soils consist of sand, gravel, and asphalt fill. The significance of the wetland functions is minimal.

MDOT, through a cooperative agreement with MDEQ, would build or restore compensatory mitigation for unavoidable wetland impacts using a “Moment of Opportunity” site allowed under the General Permit Category of Part 303 of P.A. 451 (1994, as amended).

4.11 Migratory Birds

Migratory birds could hit bridge towers or cables and, sometimes, die. The degree to which this could happen is unknown. Consultation with the U.S. Fish and Wildlife Service will be undertaken to identify bridge design and operation features that might minimize impacts.

4.12 What Happens to Existing Vegetation?

The existing natural and ornamental vegetative cover will be retained, wherever and whenever possible, within the public right-of-way limits. Replacement vegetation will be established in a timely manner, using seed and mulch or sod where the existing ground cover must be removed.

Trees within public right-of-way will be saved as long as safety requirements are met. All property owners will be notified before any trees in front of their residences are removed. These owners will be offered replacement trees to help offset the aesthetic and/or functional loss of the trees.

Replacement tree species, numbers, and planting recommendations will be made jointly by MDOT's Roadside Development Unit or the Region Resource Specialist as part of the project design process. This will follow contact and coordination with adjacent property owners. For those owners who request replacement trees, the trees are to be replaced (with the property owners' approval) on their property as close to the right-of-way line as possible. The property owners will then assume the responsibility for maintaining these trees.

4.13 Parks

Rademacher Park and its associated Recreation Center, plus the Post-Jefferson Playlot, are located within the plaza footprint. Mitigation for their use is being discussed with the Detroit Recreation Department (see Section 5.6).

4.14 Cultural Resources

A number of cultural resources will be affected by the project. Coordination with the SHPO will continue, consistent with the draft Memorandum of Agreement in Appendix E, in order to document impacts and mitigation measures. A final MOA on the Preferred Alternative will be signed by the MDOT, FHWA and SHPO and will be included in the FEIS. An "unanticipated finds" plan will be developed to provide detailed procedures to

deal with significant cultural resources which may be identified during project implementation. This plan will establish procedures to evaluate and treat these resources. The procedures include stopping work, examining findings, determining eligibility and documenting results.

4.15 Contamination

An *Initial Site Assessment and Preliminary Site Investigation Technical Report* (ISA/PSI) was prepared to determine if any known or potential sites of environmental contamination exist that could affect the project design, cost, or schedule. The ISA/PSI covered existing right-of-way (ROW), proposed fee ROW, proposed grading permits and proposed easements. The process included field reconnaissance with business owners, review of federal and state records, and review of historical land use records.

The Initial Site Assessment examined more than 100 commercial, industrial and vacant sites for contamination impacts. Twenty-six medium- and high-rated sites that could potentially be acquired for the project were identified. Low-rated sites do not require any further attention. Recommendations for each medium- and high-rated site include Preliminary Site Investigation for most of the sites. Further assessment of the regulatory status and site conditions of others is also recommended. A PSI has been completed on two properties to which access was granted. Other PSIs will be completed once a Preferred Alternative has been selected and access can be obtained by provisions in Michigan law. It is anticipated that some of the sites with limited surface soil impacts from petroleum, metals, etc., can be remediated by limited soil removal. Sites with large areas of soil contamination may be amenable to capping to prevent exposure, especially if the contaminants are non-volatile and relatively immobile.

Contamination areas will be marked on all construction plans. A Utility Plan will also be prepared to ensure no deep utility cuts will impact and/or spread existing contamination. Any structures acquired for the project would be tested for asbestos-containing materials and lead-containing materials before demolition. A Risk Assessment Plan will be developed to include a Worker Health and Safety Plan. All contaminated materials will be properly disposed. All monitoring wells will be properly sealed and abandoned.

4.16 Disposal of Surplus or Unsuitable Material

Some materials resulting from demolition or earth moving are suitable for use as fill or for other construction purposes, but many are not. Surplus or unsuitable material generated by the removal of structures, trees, etc., will be disposed in accordance with the following provisions:

- All regulations of the MDEQ governing disposal of solid wastes will be complied with.

- Inert debris may be used as a basement fill to a depth not less than two feet below the ground level, if the basement is not within the roadway cross-section. Debris used as fill will be covered with at least two feet of clean soil to fill voids. Basement walls will be removed to ground level.

- When surplus or unsuitable material is to be disposed outside of the right-of-way, the contractor shall obtain and file with MDOT written permission from the owner of the property on which the material is to be placed. No surplus or unsuitable material is to be permanently disposed of in any public or private wetland area, watercourse, or floodplain. No temporary disposal of material will occur in any public or private wetland area, watercourse, or floodplain without prior approval (and permit) by the appropriate resource agencies.

4.17 Maintaining Traffic during Construction

The disruption of traffic in the construction area will be minimized to the extent feasible. All construction areas and altered traffic patterns will be clearly marked during the construction phase. Access will be maintained to properties to the extent possible. A preliminary construction staging program for the Preferred Alternative will be developed and will be the subject of ongoing review to ensure the constructability of the project and minimize impacts to the local neighborhoods and the motoring public. The traffic impacts will focus on I-75, as the plaza and proposed Detroit River crossing do not affect major roads except Fort Street (M-85) and Jefferson Avenue, which will both be bridged. Short-term temporary detours may be necessary at those two streets.

Informing the public of current and upcoming construction/traffic related concerns will be an important part of the construction process. Public awareness will be maintained throughout the project by addressing public concerns and, providing specific information, duration and location of detours, lane closures, alternative routes, upcoming activities, and anticipated construction deadlines. Public awareness will be completed through the use of a Motorist Information Plan, which will provide as much information as possible to visitors, motorists, area residents, and business owners through the use of temporary electronic message signs, the project Web site (www.michigan.gov/mdotstudies), and the project hotline (1.800.900.2649).

4.18 Continuance of Public Utility Service

The large number of major utilities in the area has led to extensive contact with utilities at the Practical Alternatives stage to coordinate timing of utility relocations and changes. Numerous utilities will require relocation or adjustment. Coordination between MDOT and the affected utility company will continue during design, prior to actual construction. Any necessary utility connections to the plaza will be designed to current standards, which may require upgrading some utilities in the project area. Service to the project area will be maintained with temporary connections during construction, so, service interruptions will be minimized.

4.19 National Geodetic Survey Monuments

The project area will be reviewed prior to construction to determine whether any U.S. Department of Commerce, National Geodetic survey monuments (http://www.ngs.noaa.gov) will be disturbed. If so, 90-day notification will be given to the Department of Commerce.

4.20 Environmental Permits

In addition to permits needed to advance the project to construction, construction activities will involve obtaining permits to ensure appropriate steps are taken to protect existing/remaining resources. Impacts on bodies of water such as lakes, streams, drains and wetlands will require permits under federal and state law:

Federal

- Executive Order 11990 (Wetland Protection)
- Clean Water Act of 1977, as amended: Section 401, State Water Quality Certification; Section 402(p), National Pollutant Discharge Elimination System (NPDES), storm water permit; and, Section 404, related to dredge and fill.
- Rivers and Harbors Act of 1899, Sections 9 and 10

Federal Executive Order 11990 on Wetland Protection states that when federal funds are used on a project, allowing impacts to any wetland (regardless of size) will require that there be no practicable alternative to impacts on that wetland.

Section 401 of the Clean Water Act of 1977, as amended, requires certification from the state's water quality agency (MDEQ) to ensure that the discharge of dredged or fill material complies with the provisions of the Federal Water Pollution Control Act.

Section 402(p) of the Clean Water Act, and subsequent regulation under 40 CFR 122.26, requires coverage under a National Pollutant Discharge Elimination System (NPDES) Storm Water discharge permit for construction projects that involve land clearing or disturbance of one acre or greater. Permit application requirements include: 1) a location map and description of the nature of the construction activity; 2) location of the proposed discharge; 3) total area of the site and area to be disturbed; 4) an estimate of the runoff coefficient of the site and the increase in impervious area after construction is complete; and, 5) the nature of the fill. The intent of these requirements is to reduce impacts on water quality during and after construction.

Section 9 of the Rivers and Harbors Act of 1899 states it is unlawful to "construct...any bridge…over or in…navigable waters of the United States until the consent of Congress to the building of such structures shall have been obtained and…the plans for the same shall have been submitted to and approved by the Chief of Engineers…" Section 10 of the Act states it "shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of…the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers…"

Section 404 of the Clean Water Act of 1977, as amended, requires the specification of a disposal site for all dredge and fill work in the navigable waters of the United States.

State – Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended:

- Part 31, Water Quality and Floodplains
- Part 55, Air Pollution Control
- Part 301, Inland Lakes and Streams
- Part 303, Wetlands Protection

A Part 31 floodplain permit is required for dredging and placing fill within any floodplain boundaries. This permit is reviewed and issued in conjunction with the Part 301 Permit.

A Part 55 Air Pollution Control permit-to-install, or general permit, is required for any portable bituminous or concrete plant or crusher. Also see Section 4.6.

Part 301 controls construction below the ordinary high-water mark of streams. It is issued in conjunction with the Part 303 permit.

A Part 303 Wetland permit is required for any wetland disturbance, temporary as well as permanent.

4.21 Additional Mitigation or Modifications

The final mitigation package will be reviewed by MDOT, in cooperation with appropriate state, federal, and local agencies.

Some changes to the early mitigation concepts discussed in this document may be required when design proceeds. These mitigation concepts will be implemented to the extent possible. Where changes are necessary, they will be designed and field reviewed before permits are applied for or construction begins.