

Service NEPA Environmental Assessment

Chicago-Detroit/Pontiac Rail Corridor Improvements

From Chicago, Illinois to Pontiac, Michigan



Prepared by the:

MICHIGAN DEPARTMENT OF TRANSPORTATION

In cooperation with the

**ILLINOIS DEPARTMENT OF TRANSPORTATION,
INDIANA DEPARTMENT OF TRANSPORTATION**

&

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION**

PREFACE

The National Environmental Policy Act (NEPA) of 1969 requires that the social, economic, and natural environmental impacts of any proposed action of the federal government be analyzed for decision-making and public information purposes. There are three classes of action. Class I Actions, which are those that may significantly affect the environment, require the preparation of an Environmental Impact Statement (EIS). Class II Actions (categorical exclusions) are those that do not individually or cumulatively have a significant effect on the environment and do not require the preparation of an EIS or an Environmental Assessment (EA). Class III Actions are those for which the significance of impacts is not clearly established. Class III Actions require the preparation of an EA to determine the significance of impacts and the appropriate environmental document to be prepared (40 C.F.R. § 1508.4) either an EIS or a Finding of No Significant Impact (FONSI).

This document is a Service NEPA Environmental Assessment for the proposed improvement to the Chicago-Detroit/Pontiac Rail Corridor in Illinois, Indiana and Michigan. This Service NEPA EA describes the type of service being proposed, Communities being served, types of operations (speed, electric, or diesel powered), ridership projections and major infrastructure components, improvement alternative being proposed and measures taken to minimize harm to the corridor. The completed EA will be made available to the public for two weeks for their review and comment. A press release will be sent out to media outlets throughout the three states notifying the public of an opportunity to review this document on the respective Illinois, Indiana and Michigan state department of transportation websites. Copies of the document may be reviewed at MDOT Region offices located in Southfield, Kalamazoo, and Jackson, Michigan. If review and comment by the public and interested agencies support the determination of “no significant impact”, a finding of no significant impact (FONSI) will be issued by the Federal Railroad Administration (FRA). If it is determined that the preferred alternative will have significant impacts that cannot be mitigated, the preparation of an EIS will be required.

This document was prepared by the Michigan Department of Transportation in cooperation with Illinois Department of Transportation, Indiana Department of Transportation, Federal Railroad Administration, and other members of the High Speed Rail project study team. Information contained in this document, was also furnished by other federal and state agencies, local units of government, public interest groups, and individual citizens.

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1.0 INTRODUCTION

1.1 Introduction

The Illinois Department of Transportation (DOT), Indiana Department of Transportation (DOT) and the Michigan Department of Transportation (DOT), in cooperation with the Federal Railroad Administration (FRA) are proposing to upgrade the existing Chicago-Detroit/Pontiac rail corridor which is part of the Chicago Hub High Speed Rail Corridor. The proposed improvements to the existing rail corridor in Illinois, Indiana and Michigan consist of a coordinated and comprehensive group of rail improvement projects that eliminate a series of chokepoints between Chicago, Illinois and Porter Indiana and improve track conditions and signals between Porter, Indiana and Ann Arbor, Michigan resulting in speed increases in this segment (Porter to Ann Arbor) to a maximum speed of 110 miles per (mph). The proposed improvements to the existing Chicago-Detroit/Pontiac rail corridor and station improvements are consistent with the Midwest Regional Rail Initiative (MWRRI) Plan of 1996.

The corridor includes segments owned by Grand Trunk Western Railroad (CN), Conrail Shared Asset Organization (CSAO), Norfolk Southern (NS), and Amtrak. The proposed improvements to the existing Chicago-Detroit/Pontiac rail corridor and station improvements are consistent with the Midwest Regional Rail Initiative (MWRRI) Plan.

This Service NEPA Environmental Assessment (EA) is an analysis of the existing rail corridor and the proposed improvements to this rail corridor that are needed to improve the level and quality of passenger rail service in Illinois, Indiana and Michigan. The EA will discuss the proposed infrastructure improvements, acquisition of railroad right of way and rolling stock, and station improvements. An analysis of potential impacts and measures to minimize impacts will also be discussed.

1.2 Project History

The proposed improvements to existing rail corridor are part of an overall Service Development Plan which is part of the Midwest Regional Rail Initiative (MWRRI) to improve the level and quality of passenger rail service in the Midwest. Since 1996, the Midwest Regional Rail Initiative (MWRRI) advanced from a series of service concepts including increased operating speeds, train frequencies, system connectivity, and service reliability into a well-defined vision for creating a 21st Century regional passenger rail system. This vision reflects a fundamental change in the manner in which passenger rail service is provided throughout the Midwest. This regional system would use existing rail rights-of-way shared with freight and commuter rail, modern equipment and advanced train control technologies to connect the population, economic, university and tourist centers of the nine Midwest states comprising the MWRRI. This vision has been transformed into a transportation plan known as the Midwest Regional Rail System (MWRRS).

The Midwest Regional Rail System (MWRRS) includes a rail network of more than 3,000 miles and serves nine states (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin). The features of the MWRRS include the following:

- Use of 3,000 miles of existing rail rights-of-way to connect rural, small urban, and major metropolitan areas
- Safe, comfortable, and reliable service to over 100 cities in the Midwest, linking the Region's major economic centers
- A "hub-and-spoke" passenger rail system providing service to and through Chicago to locations throughout the Midwest
- Access to approximately 80 percent of the region's 65 million residents
- Introduction of modern, state-of-the-art trainsets capable of operating at speeds up to 110 mph
- More and better amenities including first class seating for all, power outlets at each seat, wireless network access, and food service
- Provision of multi-modal connections to improve system access

As stated in the Midwest Regional Rail Initiative Project Notebook (Transportation Economics & Management Systems, Inc., 2004b), full implementation of the MWRRS would significantly improve Midwest passenger rail service by:

- Upgrading existing rail rights-of-way (ROW) to permit frequent, reliable, high-speed passenger train operations
- Accommodating operation of a hub-and-spoke passenger rail system that provides through-service and connectivity in Chicago to locations throughout the Midwest region
- Introducing modern train equipment that offers improved amenities operating at speeds of up to 110 mph
- Providing multimodal connections and feeder bus systems to improve access to the rail system
- Introducing a contracted rail operation that improves efficiency, reliability and on-time performance.

With full implementation the MWRRS would encompass approximately 3,000 route miles in the sponsor states and would attract approximately 13.6 million passengers annually. Approximately 90 percent of the Midwest region's population would be within an hour's ride of an MWRRS rail station and/or within 30 minutes of an MWRRS rail station (Transportation Economics & Management Systems, Inc., 2004b).

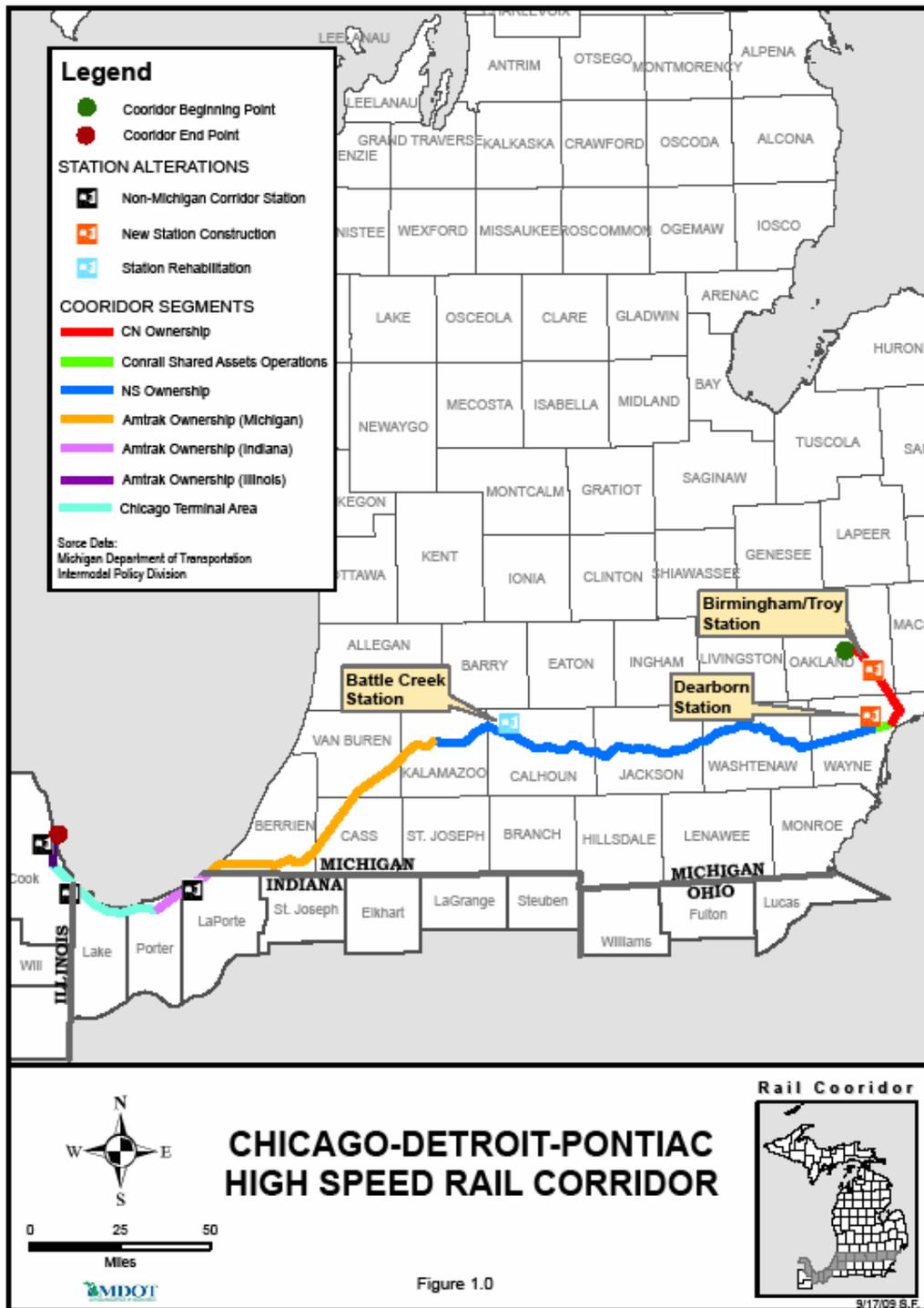
In order to improve the level and quality of passenger rail service in the Midwest, several corridors in the nine states were identified as corridors that needed to be improved. The Chicago-Detroit/Pontiac Rail Corridor was identified as one of the corridors that needed to be upgraded in order to improve the level and quality of passenger rail service in Illinois, Indiana and Michigan.

1.3 Project Area

The Project Corridor area consists of an existing rail corridor between Chicago, Illinois and Pontiac, Michigan. The Chicago-Detroit/Pontiac Rail Corridor is approximately 304 miles in length and traverses through 3 states -Illinois, Indiana, and Michigan. Within each state, the passenger rail service travels through many counties and cities. The Illinois portion of the Chicago to Detroit Corridor begins at the Illinois/Indiana state line and ends at The Chicago Union Station. This segment of 15 miles is entirely within the City of Chicago & Cook County. The Indiana portion of the Chicago to Detroit/Pontiac Corridor is 43 miles in length and begins at the Illinois/Indiana state line, ends at the Indiana/Michigan state line, and includes Lake, Porter, and La Porte Counties, Indiana. Finally, in Michigan, the Chicago to Detroit/Pontiac rail corridor is 246 miles and begins at the Michigan/Indiana state and ends at the Pontiac Station located in Oakland County, Michigan. The passenger rail system in Michigan travels through the counties of Berrien, Cass, Van Buren, Kalamazoo, Calhoun, Jackson, Washtenaw, Wayne and Oakland. The Chicago-Detroit/Pontiac Rail Corridor in Michigan also services the cities, New Buffalo, Niles, Dowagiac, Kalamazoo, Battle Creek, Albion, Jackson, Ann Arbor, Dearborn, Detroit, Birmingham/Troy, Royal Oak and ends at the Pontiac Station in Pontiac, Michigan.

Intercity passenger service in the Michigan portion of the corridor includes three daily round trips between Chicago and Detroit/Pontiac (*Amtrak Wolverine Service*); with an additional daily round trip from Battle Creek to Chicago (*Amtrak Blue Water Service*).

In Indiana, fourteen Amtrak trains (ten from Michigan and four from points east of Porter in Indiana) traverse the portion of the corridor owned by NS and ten trains per day operate over the portion owned by Amtrack. In Illinois, these fourteen trains continue operation across both NS and Amtrak ownership segments.



1.4 Purpose and Need for Action

The purpose of this project, and of the MWRRI, is to improve the existing rail infrastructure and facilities in Illinois, Indiana and Michigan in order to safely improve travel times, update equipment (replace the existing trainsets with up to 10 new trainsets), improve accessibility and reliability, and upgrade on-board and station amenities within the Chicago-Detroit/Pontiac Segment. The purpose of the project is also to maintain the long-term viability of the Chicago-Detroit/Pontiac High Speed Rail Corridor.

To address this need, the project proposes to acquire 134-miles of the Norfolk Southern (NS) Rail Line, as NS has plans to downgrade this segment of the existing corridor to a FRA Class II railroad (25 mph freight and 30-40 mph passenger) unless an alternative agreement is reached. The NS plan would impede any efforts to maintain existing level of service and schedule reliability. Thus, it is imperative that the control of the NS trackage between Dearborn and Kalamazoo be assumed by another entity to preserve the current level of rail services in this corridor.

1.5 Benefits to the Corridor

The proposed improvements to the existing rail corridor will generate an overall savings to users of the transportation network systems in each state. These benefits include:

- A reduction in travel times for users of the system in Illinois, Indiana, and Michigan
- A reduction in travel times and costs for users of other transportation modes as a result of lower congestion levels along the I-94/I-90/I-80/I-65 corridors
- Reduction in emissions as a result of travelers being diverted from air, bus and auto to rail travel
- Increased safety for those using the passenger rail service and users of other transportation modes resulting from reduced congestion.

One of the factors resulting in reduced travel times is the Incremental Train Control System (ITCT). Since 2005, trains have been operating at speeds up to 95 mph between Kalamazoo and Niles, Michigan. Later this year, MDOT is expecting FRA approval to increase speeds up to 110 mph from Kalamazoo to New Buffalo, Michigan. This positive train control technology is also being extended under an ARRA grant to Amtrak, from New Buffalo, Michigan to Porter, Indiana. Current train speeds in Michigan are shown in **Table 1.0**. After ITCS is extended on the NS Segment from Ann Arbor to Kalamazoo trains speeds up to 110 mph will be possible from Ann Arbor, Michigan to Porter, Indiana, a distance of over 200 miles. Norfolk Southern currently has a 30 mph restriction on both of its main tracks through the Englewood Interlocking. With removal of the Interlocking it is anticipated that operating speeds on Amtrak intercity passenger trains could be increased from 30 to 50 mph.

**Table 1.0
Train Speeds on the Michigan Rail Portion of the Chicago to Detroit Corridor**

	Chicago Terminal Area (40.24 miles)	Amtrak RR Indiana (18.3 miles)	CN RR (25.0 miles)	CSAO RR (5.0 miles)	NS RR (137 miles)	Amtrak RR Michigan (79 miles)	Michigan (246 miles)
Allowable (Range)	15-7- mph	30-79 mph	25-60 mph	15-70 mph	32-79 mph	45-95 mph	15-95 mph
Allowable (Average)	55 mph	60 mph	50 mph	55 mph	60 mph	70 mph	62 mph
Actual (Range)	15-70 mph	25-79 mph	15-60 mph	10-56 mph	25-79 mph	35-95 mph	10-95 mph
Actual (Average)	35 mph	54 mph	30 mph	25 mph	55 mph	60 mph	51 mph

The improvements to the existing rail corridor will improve access among Illinois, Indiana, and Michigan communities. This access will support existing industries, foster growth of new small businesses and encourage large businesses to distribute their operations more widely throughout Illinois, Indiana, and Michigan. Improved access will assist all of the universities and colleges in their roles as centers of higher learning, research, business development and medical services. According to the economic analysis that was conducted by Transportation Economic Management System, Inc. for the MWRRI plan, approximately 35,710 new permanent jobs will be created and \$654 million of extra household income will occur as a result of the improved access among Illinois, Indiana, and Michigan communities.

The improvements to the existing rail system will provide an enhanced alternative to auto and air travel that promotes environmental benefits, including reduced air pollutant emissions, less land use, and fewer habitat and water resource impacts compared to expanding existing highways and airports.

1.6 Decisions to be Made

The Illinois DOT, Indiana DOT, Michigan DOT and FRA must comply with all NEPA requirements when considering the impacts of their proposed action on the human, physical or biological environment. All potential impacts need to be identified and steps to minimize, mitigate or compensate for these impacts must be identified in the NEPA document. The NEPA process is intended to help public officials make decisions that are based on an understanding of environmental consequences and take actions that protect, restore, and enhance the environment (40 CFR 1500.1).

The purpose of this service NEPA EA is to provide FRA and the public with an understanding of the environmental consequences of the proposed action alternative that was developed to meet the project purpose and need. The EA is reviewed by federal, state, and local agencies, and the public.

The NEPA process for an EA is either completed when a Finding of No Significant Impact (FONSI) is issued by FRA; or it is determined that an Environmental Impact Statement is needed because the impacts are significant.

1.7 Connected Actions

The NEPA process also requires an evaluation of any connected actions to the proposed project. Connected action means that the actions are closely related; and therefore, should be discussed in the same environmental document. Actions are connected if they:

- Automatically trigger other actions which require environmental clearance
- Cannot or will not proceed unless other actions are taken previously or simultaneously, or
- Are interdependent parts of a larger action and depend on the larger action for their justification.

The following connected actions are part of the MWRRI, however these proposed connected action improvements have been studied under separate NEPA documents. The connected actions will improve the existing level of service and quality of passenger rail service on Chicago to Detroit/Pontiac rail corridor.

The proposed rail interlocking improvements planned for Beaubien, Milwaukee Junction, Delray, and CP YD external lines in West Detroit will benefit the consolidation of intermodal freight operations of NS and Canadian Pacific (CP) railroads at the existing Livernois-Junction yard in Southwest Detroit. Currently, MDOT is in the final stages of completing an Environmental Impact Statement (EIS) for the Detroit Intermodal Freight Terminal Project which will consolidate intermodal freight operations of NS and Canadian Pacific (CP) railroads at the existing Livernois-Junction Yard in Southwest Detroit. As part of the consolidation of railroads at the Livernois-Junction Yard, over 20 railroad interlocker locations which also includes the interlocking locations that are identified as part of the Chicago-Detroit/Detroit Rail Corridor Project, were identified in the EIS as needing to be improved for intermodal freight operations. The improvements to these external lines will benefit both passenger rail and freight traffic in Southwest Detroit.

In addition, the current Automatic Block System (ABS) will be converted to a Centralized Traffic Control (CTC) signaling between Milwaukee Junction and West Detroit Junction. This improvement will result in trains taking a more direct route between Dearborn and the Detroit New Center Station, avoiding congested freight train segments. Upon completion of the West Detroit connection track, simultaneous train operations for both passenger and freight trains will be possible, thereby increasing the efficiency of rail operations for all carriers including Amtrak.)

The proposed Englewood Flyover (METRA Rock Island District (RID) line) flyover over the NS rail line at Englewood Junction in Chicago, Illinois, would raise the existing two-

track (proposed three-track) Metra RID Line to fly over the existing three-track (proposed six-track) NS alignment. Since the Metra RID Line trains handle commuter traffic almost exclusively, their ability to travel up grades associated with a flyover structure surpasses that of a typical freight train. This proposed improvement will eliminate conflicts between Metra RID commuter trains and NS freight and Amtrak passenger trains. By eliminating these conflicts, the existing rail infrastructure can be used more efficiently and the capacity of both routes will be increased. The construction of the proposed Metra RID Flyover over the NS eliminates delays experienced by both freight and passenger trains using the NS Chicago Line; they will no longer be constrained by Metra's RID operations. The Metra RID Flyover over will expand the system capacity and improve operations. It also minimizes impacts to the environment and does not require property acquisition.

2.0 DESCRIPTION OF THE ALTERNATIVES

2.1 Introduction

The proposed improvements to the existing Chicago-Detroit/Pontiac Rail Corridor consist of a coordinated and comprehensive grouping of several projects with each having independent utility. Two alternatives were considered: 1) No Build Alternative for the Existing Rail Corridor, and 2) Proposed Improvement Alternative which includes making improvements on the existing rail corridor from Union Station in Chicago, Illinois to the Pontiac Station in Pontiac, Michigan. Each alternative is described below.

2.2 No Build Alternative for Existing Rail Corridor

This alternative involves taking no action to improve the Chicago-Detroit/Pontiac rail segment in Michigan. The existing rail line within the corridor would remain operational with an average speed of 51 mph with 3 daily round trips for passengers. However, the NS rail segment would be downgraded to a Class II railroad (25 mph freight and 30-40 mph passenger) which would impede any efforts to improve service along the NS segment. No upgrades or improvements to other segments of the rail line and stations other than routine maintenance would be implemented and the average speed due to the downgrade of the NS segment would decrease by 7 mph. Resulting travel times for passengers traveling between Pontiac and Chicago would be expected to increase up to 56 minutes. Train delays of up to 25 minutes for passenger and freight trains would continue making train service less reliable and effecting on-time performance.

The No Build Alternative would not improve the level and quality of passenger rail service in Michigan, Indiana and Illinois; or contribute to economic growth or strengthen each state's manufacturing, service, and tourism industries within the corridor.

Although this No Build alternative does not meet each state's long range plan to improve passenger rail service in Michigan, Indiana, Illinois; or Alternative is required under the National Environmental Policy ACT (NEPA). The No Build serves as a baseline comparison with the proposed Improvement Alternative being considered.

2.3 Proposed Improvement Alternative

The Proposed Improvement Alternative would include upgrading the existing rail corridor from Union Station in Chicago, Illinois to the Pontiac Station in Pontiac, Michigan in order to improve the level and quality of passenger rail services in Illinois, Indiana, and Michigan.

The proposed improvements will maintain and improve the corridor for existing intercity passenger rail. The annual ridership for the Wolverine Service is 472,393 passengers, while the ridership for the Blue Water Service is 136,538 passengers. With the proposed improvements, it is anticipated that over passenger service will increase to over 0.5 million passengers for the Wolverines Service, and over 138,000 passenger for the Blue Water Service. The improvements to the infrastructure are also intended to maintain rail speeds at 79 mph or to return segments of the corridor back to 79 mph from Pontiac to Ann Arbor, and up to 110 mph from Ann Arbor to Porter, Indiana. Improving and maintaining the existing rail line will prevent degradation of the capacity in the rail corridor by retaining the infrastructure already in place. The majority of the proposed improvements to the existing Chicago-Detroit/Pontiac rail corridor will occur in Michigan. The only other proposed improvement will be the Englewood Flyover in Chicago, which is a connected action and was studied and approved in September 2008 (see **Appendix A**).

The proposed improvements and acquisitions associated with the Proposed Improvement Alternative are described below:

Track Upgrades

- The existing jointed rail from Milwaukee Junction in West Detroit to the Pontiac Station in Oakland County would be replaced with a new continuous welded rail which will compliment the existing welded rail that is already in place from Michigan/Indiana state line to the Milwaukee Junction. New ballasts and ties are also part planned for two-thirds of the CN line from Pontiac to the West Detroit Junction in Detroit.
- The existing rail (CSAO RR) from West Detroit to Dearborn would require new ballast and tie replacements, and rail replacement
- The existing rail (NS RR) from Dearborn to Kalamazoo would require new ballast and tie replacements, and rail replacements.
- The existing rail (Amtrak line) from Kalamazoo to the state line would require rail replacement.

Construct of a New Connecting Track and One Mile of New Track

MDOT is proposing to construct a new connection track between the CSAO and CN railroads at West Detroit Junction which includes replacing a bridge over Junction Avenue, and constructing one mile of new track eastward to the Vinewood Interlocking.

Installation of New Crossovers

Several new crossovers will be installed on the rail corridor in Michigan: one immediately west of West Detroit Junction, one immediately east of West Detroit Junction, one near Vinewood Interlocking, and a universal crossover east of Vinewood Interlocking.

Grade Crossing Enhancements

- Grade crossing upgrades would occur throughout the corridor between Ann Arbor and Kalamazoo. Several 4-quadrant gates would be installed at crossings where trains speeds exceed 79 mph. Private crossings on this segment would be closed or equipped with gates and lights.

ITCS

The current Automatic Block System (ABS) located between Milwaukee Junction and West Detroit Junction in Detroit will be converted to a Centralized Traffic Control (CTC) signal. Centralized Traffic Control (CTC) train signalization will be installed, along with CTC controlled crossovers, connecting CN's two main tracks, which will allow for the increasing of train speeds and train capacity. The CTC will help alleviate train congestion, as well as, conflicts between freight and passenger trains, which should reduce delays and improve the consistency of Amtrak trains on-time performance. The improvements to this trackage should produce more fuel efficiency for both freight and passenger trains by reducing the time spent idling when awaiting clear track routes. Better on-time performance can bring increased ridership to Amtrak and while doing so, allow freight movements to reach their destinations in a more timely manner.

Acquisition

- MDOT will need to acquire 134-miles of the Norfolk Southern Rail line between Dearborn and Kalamazoo, Michigan. This acquisition would only occur if funding became available. This proposed acquisition element would allow MDOT to proceed with improvements which would result in maintaining speeds at 79 mph in this segment of the corridor.
- MDOT will also need to acquire additional right of way in order to connect the two lines and for constructing one mile of new track. MDOT is currently in the process of acquiring the needed right of way to make these improvements. Several crossovers will be installed: one immediately west of West Detroit

Junction, one immediately east of West Detroit Junction, one near Vinewood Interlocking, and a universal crossover east of Vinewood Interlocking (Railroad Interlockers are locations where trains must stop for one another. Interlockers are controlled by signals).

- Acquisition of rolling stock is also being proposed. MDOT is proposing to purchase up to 10 new trainsets which would replace existing trainsets.

Station Improvements

MDOT is proposing to replace two stations and rehabilitate a third station along the rail corridor. **Figure 1.0** shows the location of the three stations. Aerials maps of each station can be found in **Appendix B**. The first station is located in Birmingham. Currently, passenger rail services are accessed from a bus type rail shelter on an elevated platform in the city of Birmingham. This existing station has very limited space with on-street parking which has impacted its ridership, revenues and general attractiveness of service. There are no connections with other modes of transportation at this location. The new station will be constructed in Troy on 7 acres of land set aside for a transit center and will service both Troy and Birmingham. The design of the Transit Center with access to both vibrant communities will encourage increased passenger ridership, and expand multi-modal transit coordination and integration with other transit modes. A new pedestrian tunnel will connect from a location near the current loading platform in the city of Birmingham to the new Transit Center in the city of Troy. Plenty of parking will be available, and citizens which were once serviced by a low visibility, low safety/security station stop, will now be served by a very accessible, ADA compliant, highly secure/safe transportation Center which will connect with other transportation modes. The existing bus type rail shelter in Birmingham would be demolished, and the existing platform would remain, however the stairs and ramp would be removed for safety reasons.

The second new station is located in Dearborn, Michigan. The existing station located on Michigan along with another rail stop located in the Greenfield Village in Dearborn would no longer be used as a rail stops. A new station would be built that would replace the existing rail stops. The new station would be built adjacent to the Henry Ford Museum, within walking distance of Dearborn's West Downtown District, and less than a mile from on the greenway non-motorized trail to the University of Michigan-Dearborn and Henry Ford Community College (23,000 combined students). The new station would be built on a 7.5 acre site that is currently used as surface parking lot by the Ford Motor Land Services Corporation in Dearborn. The new facility will improve efficiency by eliminating the two rail stops in Dearborn and by locating the station in closer pedestrian proximity. The new station would be upgraded to an intermodal facility which would improve connectivity between trains and regional bus, shuttle, taxi and limousine services to areas in and around Dearborn, especially to Detroit Metropolitan Airport, which is ten minutes from Dearborn. The existing station located on Michigan Avenue will be placed on the market for sale, in hopes of finding a new owner and use. The existing platform at this location will remain, however the platform may be removed at a later date. The other

rail stop located in Greenfield Village is an historic structure with a platform. This historic structure along with the platform will remain, since it is part of the village.

The third station located in Battle Creek, Michigan will be rehabilitated. The Battle Creek Station, which is a part of the high-speed corridor, but located on CN track, is scheduled for interior and exterior renovations (\$3,620,552) to modernize and create a more user friendly facility for the rail, bus and taxi services housed/operating at the station. The existing station is a multi-modal transit station service by Amtrak's Wolverine Service and is also home to the Indian Trails and Greyhound intercity bus services. This station is located approximately halfway between the anchor cities of Detroit and Chicago. The renovations to this facility will bring it up to more modern standards, making it more attractive and user friendly to the public. The station has not any major renovations in the past 20 years, and the interior and exterior are showing signs of wear. The interior of the building would be renovated for a more modern feel. Mechanical, electrical, plumbing, security and technological modifications and upgrades, including ADA compliance are planned. New landscaping would be added to the outside of the building, along with parking and walkways.

3.0 AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MEASURES TO MITIGATE IMPACTS DURING CONSTRUCTION

The proposed infrastructure improvements, acquisition of railroad ROW and rolling stock, and station improvements were analyzed and it was determined that the proposed planned improvements along the corridor will not have a negative impact on the human, physical or biological environment. As with all proposed projects, Illinois, Indiana, and Michigan DOT conducted a review (visual inspections, literature searches, data base queries, coordination with state and federal resource agencies, etc.) and analysis of potential impacts. The result of this analysis and measures to minimize impacts are discussed in this section.

Since there are no proposed infrastructure improvement projects within the Chicago to Detroit/Pontiac Corridor in the State of Indiana, no negative effects to the environment will be accrued. The trains will travel on existing lines through areas already accustomed to rail traffic, both freight and passenger. The indirect results of planned project work in Michigan and Illinois will contribute to an improvement to the environment in Indiana in the following areas: public health and safety, noise and vibration, and air quality.

As previously discussed, the Englewood Flyover located in Chicago, Illinois is a connected action and was reviewed for potential impacts and measures to minimize impacts in a separate document – Environmental Class Action Determination (ECAD). The class action determination record for this project can be found in **Appendix A**. The indirect results of the Flyover and proposed improvement in Michigan will also improve the environment in Illinois in the following ways: public health and safety, noise and vibration, and air quality.

The following section discusses the affected environment, potential impacts, and measures to mitigation within the State of Michigan.

3.1 Air Quality

The U.S. Environmental Protection Agency designates conformity status to all areas in the U.S. for criteria pollutants listed in the National Ambient Air Quality Standards (NAAQS). The conformity status for an area that meets the NAAQS is in attainment. An area that exceeded the NAAQS for a given period of time is in non-attainment. An area that was in non-attainment but was able to meet the NAAQS over a given period of time, is redesignated to attainment/maintenance. The project corridor runs through nine counties. Jackson County is in attainment for all criteria pollutants. All other areas are in attainment/maintenance for 8-hour ozone. Washtenaw, Wayne, and Oakland Counties are in non-attainment area for fine particulate matter (PM_{2.5}). The rail line from the Birmingham/Royal Oak city line in Oakland County to Inkster Road in Wayne County is in an attainment/maintenance area for carbon monoxide (CO).” The proposed

improvements to the corridor will be included in the Regional Transportation Plan (RTP) and the Transportation Improvement Plan (TIP) after the project is approved for funding.

The concurrent construction period for each of the separate proposed improvements identified as part of the action alternatives will last 1 ½ to 2 ½ years. Projects lasting less than 5 years at a specific location are considered short term according to 40 CFR 93.123(c)(5) and do not require air quality analysis. Therefore, construction mitigation is not required, but several measures may be taken that include strategies that reduce engine activity or reduce emissions per unit of operating time. Construction equipment should be kept clean, tuned-up, and in good operating condition. MDOT's Standard Construction Specification Section 107.15(A) and 107.19 would apply to control fugitive dust during construction and cleaning of haul roads. All MDOT vehicles and equipment must follow MDOT Guidance #10179 (02/15/2009) Vehicle and Equipment Engine Idling.

The Proposed Improvement Alternative would have no significant impact on current or future air quality standards; and does not have the potential to exceed the National Ambient Air Quality Standards (NAAQS), or lead to the establishment of a new non-attainment area, or delay achievement of standard attainment. The proposed improvements to the corridor would over time, improve the air quality along the corridor by travelers diverting from air, bus and auto to rail travel.

The No Build Alternative would not have an immediate affect on air quality. However, overtime air quality conditions may worsen due to congestion on roadways and highways in Illinois, Indiana and Michigan.

3.2 Noise and Vibration

Noise and vibration from trains are a concern for communities. The Federal Railroad Administration (FRA) and Federal Transit Administration (FTA) have developed a guidance manual, *High Speed Ground Transportation Noise and Vibration Impact Assessment*, October 2005, to address noise and vibration impact assessments.

This project extends 304-miles from Chicago, Illinois to Pontiac, Michigan. A rail segment from Pontiac to West Detroit Junction maintains an average speed of 35 mph; with the proposed Improvement Alternative, the average speed will increase to 45 mph. The rail section that runs West Detroit Junction to the Indiana State Line maintains an average speed of 51 mph and will increase to 58 mph. Table 1.0 shows the allowable and actual speeds for the Rail Corridor.

The existing train traffic includes 3 passenger and 5 freight round trips per day. An additional passenger daily round trip on this rail line begins at Battle Creek to Chicago (*Amtrak Blue Water Service*). The proposed Improvement Alternative does not include any new service and or increase in the number of daily round trips. The trains will travel on existing rail lines through areas already accustomed to rail traffic, both freight and passenger, and the accompanying noise and vibrations. The proposed Improvement

Alternative will upgrade the existing rails from jointed to continuous welded rail (CWR) and the increased speed will reduce exposure time to train noise.

There are no FRA designated Quiet Zones along the proposed project corridor. No new crossings are included in the project. Signalization and updated signage will be used to alert people of the high speed train.

The guidance provides a vibration screening procedure to determine if any sensitive receivers are likely to receive ground-borne vibration impacts. The guidance suggested using a screening distance of 60 feet for rails that have passbys of 70 trains or less¹ with speeds less than 100 mph. There are no noise or vibration sensitive land uses within the 60 feet from the rail. The Improvement Alternative includes the purchase of new lighter and quieter cars and engines which can aid in the reduction of vibration impacts. Therefore, no noise or vibration impacts are expected. The track improvements plus the small number of trains is expected not to cause any vibration impacts.

The No Build Alternative would not create additional noise impacts.

The Proposed Improvements Alternative would not create additional noise or vibration impacts. Based on this information, no noise or vibration impacts are expected as a result of the proposed improvements within the rail corridor. The upgrade of the rail corridor, and increase in speed will reduce noise exposure to sensitive receivers already accustomed to rail noise. The use of new engines and cars will aid in reducing noise and vibrations. These proposed improvements will aid in the reduction of the noise and vibration produced by the existing rails.

Construction of the proposed improvements will result in a temporary increase in the ambient noise level in the vicinity of the project. The construction contract specifications should require that the contractor adhere with all Federal, state, and local noise abatement and control requirements. Construction noise on this project should be controlled by measures including but not limited to having construction equipment in good repair and fitted with "manufacturer recommended" mufflers.

3.3 Water Quality

The existing railroad corridor crosses or is adjacent to several water bodies including lakes, streams, drains, and rivers. Many of the streams within the corridor are classified as trout streams. Some stretches of the streams are not meeting state water quality standards and have approved Total Maximum Daily Loads (TMDLs) in Michigan. Based on the proposed improvements for the rail corridor and station improvements, the proposed Improvement Alternative will not have an impact on water quality.

¹ Table 8-1, Page 8-2, *High Speed Ground Transportation Noise and Vibration Impact Assessment*, Department of Transportation, Federal Railroad Administration, Office of Railroad Development, October 2005.

These improvements will not cause an increase in runoff, generate wastewater or alter surface or subsurface drainage to any protected waters listed in **Appendix C**.

The rail corridor also crosses over several navigable waterways. However, there will be no track work on the bridges that are over navigable waterways. Also, there are no navigable waterways present or directly adjacent to any of the three stations where work is proposed.

The rail corridor is primarily outside of the Michigan Coastal Zone Management Boundary, with the exception of the New Buffalo Station. However, no work is planned for this station or on tracks within this area. There are no coastal barrier resources, critical dunes or high risk erosion areas immediately adjacent to the rail corridor.

Currently, Section 404 of the Clean Water Act is delegated to the State of Michigan. No Section 10 waters are located within the project area. Therefore, coordination with the USACE (US Army Corps of Engineers) will not be required. The Michigan Department of Environmental Quality (MDEQ) has statutory timelines and a specific Transportation Permitting Section that MDOT and MDEQ created that streamlined the permitting process.

There is no essential fish habitat in the State of Michigan.

The proposed improvements in the rail corridor will not result in impacts to either shallow aquifers or deeper drinking water sources. A review of the MDEQ database revealed no areas of ground water contamination or leaching under storage tanks. Construction impacts would be limited to potential occurrences of sediment runoff which will not affect groundwater. Post construction impacts will be diminished in quality and any minor detection of hydrocarbons or metals would attenuate in the soil before reaching groundwater.

The proposed corridor crosses several municipal wellhead protection areas (whpa) in Chelsea, Jackson, Albion, and Kalamazoo. The proposed terminal building locations are within or in close proximity to several municipal whpas. Existing railroad land use would have been taken into account during the development of these whpa, and there will not be significant new impacts to the whpa that are located in close proximity to the new stations. The proposed action does not create a significant amount of impervious area or require a new whpa to be built. There will not be significant impacts to whpa as there is not a significant amount of impervious area being created at the two new stations (Troy and Dearborn) because each new site already has paved parking in place; and the new rail will not be a significant source of contamination.

The No-build Alternative would not cause a change in the water quality or impact lakes, streams, and rivers in Michigan.

The Proposed Improvement Alternative would not have a significant adverse effect on water quality.

3.4 Prime and Unique Farmlands

The proposed rail corridor improvements will require fee right of way (ROW), grading permits and easements for planned improvements at the West Detroit Junction area in the city of Detroit. A review of the city's zoning maps and ordinances indicate no agriculture or forestry zoning in the city, and therefore, no farmland Conversion Impact Rating form (AD-1006) will be required under the Farmland Protection Policy Act (FPPA).

A review of the entire rail corridor indicates that there are Michigan farmland and Open Space Public Act 116 (PA 116) parcels in the rural areas adjacent to the corridor. However, because no ROW will be acquired in these rural areas, a PA116 review is not required. No PA 116 parcels were identified in the city of Detroit where ROW will be acquired; therefore, no PA116 review is required.

The No Build Alternative would not have an impact on prime and unique farmland.

The Proposed Improvement Alternative would not have an impact on prime and unique farmland.

3.5 Wetlands

Based on the National Wetlands Inventory (NWI) mapping, wetlands are located within the rail corridor. A complete listing of wetland areas along the corridor can be found in Appendix C of this document. The proposed improvements may require temporary wetland impacts due to a minor culvert repairs/in-kind replacement at the Cook/Lake/Rudy Road complex in Cass County, and due to the installation of right of way fence along the corridor. If it is determined that wetlands will be impacted during construction, MDOT through a cooperative agreement with the MDEQ, will 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). All wetland impacts will be mitigated at the proper ratio per Executive Order 11990.

The No Build Alternative would have no impact on Wetlands.

The Proposed Improvement Alternative may impact wetlands. If so, a Part 303 Permit will be required; and MDOT through an agreement with MDEQ, will build or restore compensatory mitigation for any unavoidable wetland impact.

3.6 Ecologically Sensitive Areas and Threatened or Endangered Species

There are documented ecologically sensitive natural areas adjacent to the railroad corridor. The following ecologically sensitive natural areas are documented Flora adjacent to the railroad corridor: 1) Oak Barrens – Central Midwest Type, 2) Prairie Fen - Midwest Type, 3) Dry Mesic Prairie - High Prairie - Midwest Type, 4) Wet Prairie -

Midwest Type, 5) Coastal Plain Marsh - Great Lakes Type, 6) Wet-mesic Prairie – Tallgrass, Central Midwest Type and 7) Mesic Sand Prairie – Moist Sand Prairie, Midwest Type.

These areas each contain multiple plant species listed as Endangered, Threatened or Special Concern in the state of Michigan. Threatened and endangered species are legally protected by the State of Michigan’s Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, Part 365; and the Federal Endangered Species Act of 1973, as amended. Avoidance, minimization and mitigation strategies will be utilized to protect the species and their associated habitats during construction. Fence installation will be completed by a work method or within a seasonal time restriction that will avoid impacts to endangered species and their habitats. Culvert rehabilitation or replacement will be completed in-kind to minimize impacts to sensitive areas during construction. If impacts occur, they will be minimized and mitigated for in accordance with the state endangered species laws. Coordination with the Michigan Department of Natural Resources (MDNR) is under way to determine the potential for listed species within the project area. If it is determined that an Endangered Species Permit is required, the permit will be obtained prior to construction.

There are no federally listed plant species documented within the rail corridor. However, two federally listed animal species are present within the project area.

No impacts to the federally listed Indiana Bat are anticipated based upon the scope of work within the exiting rail corridor. Additionally, suitable habitat for the species is not present within the rail corridor.

The rail corridor bisects a portion of the Cook Lake/Rudy Road complex in Cass County that holds the federally endangered Mitchell’s Satyr butterfly. No impacts based upon the scope of work are anticipated. Construction activities will not impact wetland habitat in this area and all fence construction will be done in a manner as to not disturb suitable habitat.

The Proposed Improvement Alternative will not impact wildlife, as potential impacts to streams and wetlands will be temporary.

The Proposed Improvement Alternative may impact threatened or endangered species and their habitats within this rail corridor. Consultation with the Michigan Department of Natural Resources (MDNR) and the U.S. Fish and Wildlife Services (USFWS) are underway. MDOT has sent letters to both agencies asking them to review the site maps of the corridor and specie records to determine if the proposed planned improvement will have an effect on threatened and endangered species and their habitats within this rail corridor.

The No Build Alternative would not impact threatened and endangered species and their habitats within this rail corridor.

3.7 Floodplain

All of the major rivers and their tributaries that cross the railroad corridor have 100-year floodplain areas. However, the three stations are not located in the 100-year floodplain. Therefore, no permits will be required for the improvements to the stations located within the corridor. The proposed improvements to the 3 Stations would not impact the 100-year old floodplain.

The existing system of the railway corridor will not be altered as only repairs and/or-in-kind culvert replacement will be made if needed. The existing railway/drainage structures are not causing an existing flooding problem. The proposed work to the corridor will not result in any change in the natural and beneficial floodplain values, flood risk or damage, and will not have a potential for interruption or termination of a sole emergency.

If culvert repairs/in-kind replacements are needed, an MDEQ Part 31 permit will be required for work on culverts that have greater than 2 square miles of drainage area and fill in all locations that are in the 100-year floodplain.

The Proposed Improvement Alternative may impact the floodplain area if permits are needed for culvert repairs or in-kind replacements. However, the proposed culvert work will not have significant impacts to the affected floodplain areas.

The No Build Alternative would have no impact the floodplain located in the corridor area.

3.8 Coastal Zone

The rail corridor is primarily outside of the Michigan Coastal Zone Management Boundary. However, the newly constructed New Buffalo Station falls within the coastal zone boundary.

No additional work is planned for the New Buffalo Station or the rail tracks within that area that would result in a widening of the existing rail bed or other work that would require a federal consistency review with the MDEQ-Land and Water Management Division (LWMD) - Shoreland Management.

There are no coastal barrier resources, critical dunes or high risk erosion areas immediately adjacent to the rail corridor.

The three stations that have been identified for improvements are outside of the Coastal Zone Management Boundary.

The No Build Alternative will not impact the Coastal Zone Boundaries.

The Proposed Improvement Alternative will not impact the Coastal Zone Boundaries.

3.9 Navigable Waterways

The rail corridor crosses over several navigable waterways. However there will be no track work on the bridges or adjacent to bridges that are over Navigable waterways. There are no navigable waterways present or directly adjacent to any of the three stations where work is proposed. Therefore, no U.S. Coast Guard Coordination is required.

The No Build Alternative would not impact navigable waterways in Michigan.

The Proposed Improvement Alternative would not impact navigable waterways in Michigan.

3.10 Transportation

Rail infrastructure improvements will reduce congestion caused by passenger and freight trains sharing all rail lines. Travel times for both passenger and freight will be reduced and on-time arrival rates will improve due to increased train speeds and fewer delays. Improvements to the existing signal system will safeguard and improve efficient flows of passengers and freight, reduce delays by 10 minutes for passenger rail. Freight traffic that travels through this area will also benefit from these proposed improvements. Both passenger and freight service have experience delays due to congestion at West Detroit for up to 25 minutes over the current route. By separating passenger and freight movements through this area, delays will be minimized if not eliminated. The resulting increase in ridership on the existing level of service is anticipated to reduce traffic congestion and travel demand on the adjacent I-94 corridor.

3.11 Land Use

The existing Chicago-Detroit/Pontiac railroad corridor in Michigan is approximately 246-miles in length and runs adjacent to multiple land use types. These land use types include: agricultural, commercial, industrial and residential. Most of the existing track runs through rural areas with the stations being located in urban areas. The proposed improvements to the corridor and stations are not anticipated to change the land use patterns in the area. The existing stations in Dearborn will remain, but will not be used as rail stops; and the bus type rail shelter in Birmingham will be removed, however the platform will remain, but the stairs and ramp will be removed from the platform.

The No Build Alternative would have no impact on Land Use.

The Proposed Improvement Alternative would not change the land use patterns along the corridor.

3.12 Socioeconomic Conditions

The 304-mile rail corridor traverses through many large metro areas as well as rural areas in Illinois, Indiana, and Michigan. In Michigan, the population within the corridor varies from over 1,000,000 people in the Detroit-Warren-Livonia Area to less than 100 people in the rural areas along the corridor. Currently, Michigan has the highest unemployment rate in the nation. Michigan's statewide average is 15 percent, while the national average is approximately 9.5 percent. In the Detroit-Warren-Livonia Area, the unemployment rate for the month of June (2009) is 17.1 percent. This figure is almost double the national average.

The proposed corridor improvements and new stations will generate construction jobs and allow for new employment opportunities at the new stations or with businesses in the area that may wish to expand their operations or open new business to accommodate people who seek services within close proximity to the stations along the corridor. Construction jobs and permanent employment opportunities will help the state and local economy as well improve the commodity flow at national and international levels. The rail infrastructures improvements will reduce congestion caused by passenger and freight trains sharing rail lines, travel times for both passenger and freight will be reduced and on-time arrival rates will improve due to increased trains speeds and fewer delays.

The No Build Alternative would have no positive impact on the Communities along the corridor.

The Proposed Improvement Alternative would have a positive impact on the communities by generating construction jobs, allowing for new employment opportunities and reduce congestion.

3.13 Environmental Justice

The proposed rail corridor improvements will not have a disproportionately high and adverse affect on minority and low-income populations. There will be no displacements of residents or businesses, and the proposed improvements should have a positive affect on each of the communities. Many of the communities such as Detroit, Dearborn and Battle Creek have been identified as an Economically Distressed Areas (EDA) in Michigan. The closing of the Dearborn Station will not have a disproportionate or adverse effect on the residents since a new station would be built in Dearborn to replace the existing station. The new facility will improve efficiency for the passengers by consolidating the two rail stops into one new station. The new station would be upgraded to an intermodal facility which would improve connectivity between trains and regional bus, shuttle, taxi and limousine services in the area, especially to Detroit Metropolitan Airport, which is ten minutes from Dearborn. The existing station located on Michigan Avenue will be placed on the market for sale, in hopes of finding a new owner and use. The existing platform at this location will remain, however the platform may be removed at a later date. The other rail stop is located in Greenfield Village and is an historic

structure with a platform. This historic structure along with the platform will remain, since it is part of the village.

Approximately 91 percent of Michigan's populations live in areas considered economically distressed according to the federal definition, making Michigan one of the states most impacted by the recent recession. It is anticipated that the proposed corridor improvements and new stations will improve accessibility, mobility and generate construction jobs as well as permanent jobs for these communities.

The No Build Alternative would not have impact on minorities and low-income populations.

The Proposed Improvement Alternative would have a positive impact on minorities and low-income populations by improving accessibility, mobility and generating construction jobs as well as permanent jobs for these communities

3.14 Safety and Security

The installation of signalization and grade crossing improvements through out the corridor for passenger and freight rail (including four-quadrant crossing gates) will improve safety in the corridor.

Improvement in crossovers for passenger rail traffic will allow for a large reduction in conflict points between rail and freight in the West Detroit Junction area. The result will be greater safety for passenger trains in this area, increased reliability and reduced travel times by up to 10 minutes.

The improvements to these external lines will benefit both passenger rail and freight traffic in Michigan, as well as in Indiana and Illinois. In addition, the current Automatic Block System (ABS) will be converted to a Centralized Traffic Control (CTC) signaling between Milwaukee Junction and West Detroit Junction. This improvement will result in trains taking a more direct route between Dearborn and the Detroit New Center Station, avoiding congested freight train segments. Upon completion of the West Detroit connection track, simultaneous train operations for both passenger and freight trains will be possible, thereby increasing the efficiency of rail operations for all carriers including Amtrak.

3.15 Cultural Resources

3.15.1 Historic

There are multiple above-ground cultural and historic resources in the immediate vicinity of the rail corridor. A list of known and identified eligible, already listed, or potentially eligible above-ground historic resources can be found in **Appendix E**.

The planned improvements to the existing rail corridor and stations will not affect historic properties due to the following:

- The railroad work will have no affect if the work is in the existing right of way due to previous double track work just being reestablished.
- No existing public crossing will be closed.
- No permanent easement or fee right-of-way is acquired from historic above-ground resources. Proximity will be assumed as within 500 feet from the resource.
- None of the following private crossing will be closed
- All decorative fence installation is approved by an MDOT Historian. The decorative fence is proposed for a limited number of locations. While the woven wire and/or chain link fence is unobtrusive, the decorative fence is meant to stand out and may not be appropriate in some situations.
- No rehabilitation work on railroad bridges will occur aside from normal maintenance.
- No masonry culverts are replaced.
- All track work off existing ballast, crossing closures, crossing installation or improvements, pedestrian crossing installation or improvements, ADA compliance, and/or platform installation or improvements, within 500' in any direction of eligible or National Register-listed on the National Register include Niles, Dowagiac, and Kalamazoo. Depots eligible for listing on the National Register include Three Oaks, Galien, and Lawton.

MDOT has submitted a letter to the State Historic Preservation Office (SHPO) asking for concurrence with a no adverse effect determination for the proposed Railroad Corridor improvements from Pontiac to the Indiana State line. SHPO has determined that the proposed improvements to the corridor will have no adverse effect on historic properties within the area of potential effects provided the “scope of work” and the “No Adverse Effect Conditions” specified in the EA document is followed (See SHPO letter dated September 22, 2009 in **Appendix F**).

The proposed location for the Dearborn station is within the boundaries of the Greenfield Village and Henry Ford Museum National Historic Landmark District and near the National Register-eligible Ford Motor Company Engineering Laboratory and Power Plant.

The proposed station location for Dearborn has already been submitted to the State Historic Preservation Office and was given a “no adverse effect” determination by a letter dated September 8, 2008 (see **Appendix F**).

For the remaining stations at Troy/Birmingham and Battle Creek, there are no above-ground cultural or historic resources located in the immediate vicinity of the proposed improvements.

The No Build Alternative would have no impact on Historic Resources.

3.15.2 Archaeological

A review of the state archaeological site files and state site file maps at the Office of the State Archaeologist (OSA) was conducted. The file search identified 31 archaeological sites that possibly overlap the existing rail corridor. Twenty-three of these sites have either been determined not eligible for listing on the National Register or are 1) sites referenced by Hinsdale (1931) or other historical references that lack accurate locational information, 2) reported collections that lack accurate locational data that have never been field verified, or 3) sites that have been destroyed or otherwise disturbed. The eight remaining sites are lithic scatters or findspots for which more information is needed to evaluate their National Register eligibility. None of these sites are located in the vicinity of the project area where new right of way/work outside of the existing right of way is required. For the remaining portions of the rail corridor, MDOT and OSA agreed that the project would have no effect on these archaeological sites (See **Appendix F**).

The No Build Alternative would have no impact on archaeological sites.

3.15.3 Recreation and Section 4(f) Properties

There are many public recreational properties located adjacent to the proposed rail corridor. However, no right of way, grading permits or easements will be required from any public recreational property and access will be maintained to the public recreational properties, including trails, during construction. Additionally, the contractors will not park any vehicles or store any materials on the public recreational property. Therefore, no impacts will occur to any public recreational properties during construction.

The No Build Alternative would have no impact on Recreation and Section 4(f) Properties.

The Proposed Improvement Alternative would have no impact on Recreation and Section 4(f) Properties.

3.16 Hazardous Materials

Hazardous materials are not expected to be encountered during project construction and bulk transport of hazardous materials is not expected to occur as a result of this project. The proposed improvements to the rail corridor may result in the movement of limited quantities of hazardous materials, such as transport of material needed by an individual. All hazardous materials will be transported in accordance with federal hazardous materials regulations found in Title 49 of the Code of Federal Regulations. The U.S. Department of Transportation (DOT) enacts and enforces all hazardous material shipping laws. Compliance with DOT requirements will be overseen by the owners of the trains.

The No Build Alternative would have no impact on hazardous materials.

3.17 Hazardous Waste

A preliminary assessment of the rail corridor indicates limited quantities of contaminated media (soil, debris) may be encountered/generated during construction. Based on past sampling of this type of media, levels of contamination are not expected to have hazardous characteristics as defined by the Environmental Protection Agency (EPA), and therefore will not be classified as hazardous waste. All contaminated media generated during construction will be disposed of in accordance with state and federal laws at a licensed disposal facility.

All property acquisitions will be subject to due diligence inquiries in accordance with the ASTM protocols to ensure appropriate due care is taken to protect the environment and worker health and safety.

A Phase I site assessment is not required because the proposed excavation will not go deeper than 15 feet below the existing, there is no significant amount of below ground utility work, and there is no significant amount of new land purchases.

The No Build Alternative would have no impact on hazardous waste materials.

3.18 Construction Impacts

The proposed construction will result in a temporary increase in the ambient noise level at certain locations within the corridor. The construction contract specifications will require that the contractor adhere to all Federal, state, and local noise abatement and control requirements. Construction noise shall be controlled by measures including but not limited to having construction equipment in good repair and fitted with “manufacturer recommended” mufflers. The concurrent construction period for each of the separate proposed improvements throughout the corridor will last 1 ½ to 2 ½ years; therefore, air quality construction mitigation is not required, but measures may be taken to include strategies that reduce engine activity or reduce emissions per unit of operating time. Construction equipment should be kept clean, tuned-up, and in good operating condition. MDOT’s Standard Construction Specification Sections 107.5 (A) and 107.19 would apply to control fugitive dust during construction and cleaning of haul roads. All MDOT vehicles and equipment must follow MDOT Guidance #10179 (02/15/2009) Vehicle and Equipment Engine Idling.

3.19 Permits

The Proposed Improvement Alternative may require a permit under Part 303 (Wetlands). If it is determined during the design phase that culverts need to be replaced in-kind or repaired.

If culvert repairs/in-kind replacements are needed, a MDEQ Part 31 permit will be required for work on culverts that have greater than 2 square miles of drainage area and fill in all locations that are in the 100-year floodplain.

An MDEQ NPDES (National Pollutant Discharge Elimination System) construction site storm water permit will be required. The condition that five acres or greater of land disturbance has been met. The contractor will have a documented program and adequate procedures to comply with applicable soil erosion and sedimentation control regulations and shall control erosion and prevent sediment related to the project from entering waters of the State of Michigan or leaving the right of way.

The No Build Alternative would not require permits.

3.20 Maintaining Traffic

A roadway detour may be required for rail work in the West Detroit area. If a detour is required, traffic will be detoured on to other local roads. MDOT will coordinate with the city of Detroit in determining the detour route. Access to businesses and residences will be maintained at all time.

During the construction of the other planned improvements, MDOT will maintain traffic by part-width construction. MDOT would use the existing roadway to shift two-way traffic to one side of the roadway, while the other side would be closed to traffic during construction. These types of traffic disruptions would last less than a month for each planned improvement. MDOT will coordinate with local officials, residents, and business owners regarding construction schedules and any traffic disruption that may occur during construction.

The No Build Alternative would not impact traffic during construction.

The Proposed Improvement Alternative may impact traffic patterns during construction. If so, coordination with the locals and the community will need to take place.

3.21 Indirect and Cumulative

The Proposed Improvement Alternative may have an indirect and/or cumulative effect on the areas surrounding the stations and the corridor in Michigan, Indiana and Illinois. The proposed improvements to the rail line and stations may over time, see an increase in local traffic, new businesses, and possibly a need for additional housing, as the area adjacent to the stations and corridor become more desirable for the users of the system. In these current economic times, any increased money into these areas would be considered a positive economic opportunity to improve the quality of life for the impacted communities in Michigan, and for the communities that are adjacent to the corridor in Indiana and Illinois.

Cumulative effects resulting from known and anticipated improvements in the corridor are expected to be minimal since the majority of the stations already exist, and the area surrounding the stations are already developed and located in urban areas.

The No Build Alternative would have no impact on indirect and cumulative effects

4.0 MITIGATION

4.1 Mitigation Measures

The goal of mitigation measures is to preserve, to the greatest extent possible, existing neighborhoods, land use, and resources, while improving different modes transportation in the corridor. Although some adverse impacts are unavoidable, Illinois, Indiana and Michigan through the development, design, environmental, and construction processes takes precautions to protect as many social and environmental systems as possible.

Michigan Specific Mitigation Measures:

If it is determined that wetlands will be impacted during construction, MDOT through a cooperative agreement with the MDEQ, will 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).

Construction activities which include the general mitigation measures listed below are those contained in the Michigan Standard Specifications for Construction (3003). These measures include:

1. The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to ensure that those utilities not requiring relocation will not be disturbed. Relocated utilities may be temporarily interrupted for short time periods.
2. Accelerated erosion and sedimentation caused by construction will be controlled before it enters a water body or leaves the highway right-of-way by the placement of temporary or permanent soil erosion and sedimentation control measures as discussed in *Section 2.11*. The design plans will describe the erosion and sedimentation controls and their locations.
3. All regulations of the MDEQ governing disposal of solid waste must be complied with. When surplus or unsuitable material is to be disposed of outside 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. If federal funds are used for corridor improvements, Executive Order 11990 states that no surplus or unsuitable material is to be permanently disposed of in any public or private wetland area, regardless of size. In addition, no material is to be temporarily disposed of in any wetland, watercourse or floodplain without prior approval (and permit) by the appropriate resource agencies.
4. Disruption of traffic in the construction area will be minimized to the greatest extent possible. Although control of all construction-related

inconveniences is not possible, motorist and pedestrian safety will be ensured by placing signs in all construction areas. All lane closures, traffic shifts, short term detours, and changed travel patterns will be clearly marked. Access will be maintained to adjacent properties during construction to the extent possible.

5. Construction noise will be minimized by measures such as requiring construction equipment to have mufflers in good working order, 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 if at all possible. All local noise ordinances will be adhered to unless otherwise granted exception by the responsible municipality.
6. During the construction, the contractor will be responsible for adequate dust-control measures so as not to cause detriment to the safety, health, welfare, or comfort of any person, or cause damage to any property, residence or business.
7. All bituminous and Portland cement concrete proportioning plants and crushers must meet the requirements for the rules of Part 55 of Act 451, Natural Resource and Environmental Protection. Any portable bituminous or concrete plant or 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 or a general permit from the MDEQ. The permit process including any public comment period, if required, may take up to six months

Design plans will be reviewed by MDOT prior to contract letting in order to incorporate any additional social, economic, or environmental protection items. The active construction site will be reviewed to ensure that the mitigation measures proposed are carried out, and to determine if additional protection is required. More mitigation measures may be developed if additional impacts are identified. Specific mitigation items will be included on the design plans and permit applications. The final mitigation package will be reviewed by MDOT representatives, in cooperation with concerned state, federal, and local agencies.

5.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

5.1 Public Involvement

The proposed improvements to the Chicago-Detroit/Pontiac Corridor is part of the Midwest Regional Rail Initiative (MWRRI), for which information has been made available to the public through the MDOT's public web site for several years. Most recently, the concepts of high speed rail and the MWRRI have been presented to the citizens of Michigan through the development of Michigan's State Long Range Transportation Plan. The results of public involvement for the State Long Range Transportation Plan revealed solid interest on the part of the public for increased choices in the modes of available transportation choices, and improvement in connectivity among the different modes. Long range planning at the Metropolitan Planning Organization (MPO) level has also included public involvement and dissemination of information to the public about the MWRRI and local segments of the larger Chicago-Detroit/Pontiac Corridor such as the link between Ann Arbor and Detroit.

Public outreach for the proposed stations at Dearborn and Troy was conducted. The cities of Troy and Birmingham held public meetings between the Troy Planning Commission and the Birmingham Planning Board. A joint resolution was enacted to establish the Transit Center District boundaries and objectives for planning. Several years ago, a two day event was conducted to involve citizens, city staff and all other interested parties to create a plan that would meet with the approval of both communities. The public was in attendance both days and their input was used to plan for the new facility.

The city of Dearborn conducted workshops for the proposed station in Dearborn. All of the comments that were received from the public were incorporated in the final plan.

Although the city of Battle Creek has not held public meetings, the city has notified various interest groups, and has received many letters of support from local stakeholders including adjacent cities, local colleges, unions, transit agencies, etc.

The Service NEPA Environmental document and other related documents are available for public review on MDOT's Website: <http://www.michigan.gov/mdot/0,1607,7-151-11056-218528--,00.html>.

5.2 Agency Coordination

MDOT has coordinated with several resource agencies regarding the proposed improvement to the Chicago-Detroit/Pontiac high speed rail corridor in Michigan. Correspondence from Michigan's State Historic Preservation Office and the Office of State Archaeologist are included in **Appendix F**.

6.0 Conclusion

6.1 Conclusion

Illinois, Indiana, and Michigan have reviewed this project for potential impacts on the physical, human, and biological environments. Based on the information in this Environmental Assessment, along with field reviews and coordination with other agencies and the public, it is anticipated that the proposed improvements to the rail corridor will have no long-term significant negative impacts on the environment.

APPENDIX A

Class of Action Determination Document for the Englewood Flyover in Chicago, Illinois



Class of Action
Determination Document

CREATE Project P1
 Route: (Railroad Improvement Project at 83rd and State Streets) City: Chicago
 Section: County: Cook
 Location/Termini: 59th Street to 89th Street Job Number: P-30-008-04

Purpose and Need:

The CREATE PROGRAM

The overall goals of the Chicago Region Environmental and Transportation Efficiency (CREATE) Program are to improve freight and passenger rail operations, and to improve highway operations in the Chicago metropolitan area while reducing the environmental impacts of rail operations on the general public. The CREATE Program includes the development of five freight and passenger rail transportation corridors in the Chicago metropolitan area, and also includes rail-highway grade separation projects (over or under-passes to grade-separate railroads and highways) on existing rail lines outside the five corridors. (See Figure 1A, CREATE Program Map.)

Chicago area freight and passenger rail traffic suffers from congestion, low operating speeds and delays due to traffic demands that exceed the capacity of the Chicago Rail System. The development of the five rail corridors includes the upgrading of existing track structure, the double-tracking or triple-tracking of certain lines, the construction of rail-highway grade separations and rail-rail flyovers, the installation of new or improved signaling, and various other additions and improvements. These improvements will significantly improve freight and passenger rail operations.

In addition, the CREATE Program proposes re-routing existing Metra service in order to assist Metra in increasing their capacity and ability to adequately serve the region. Many stations do not have the capacity to handle additional trains which limits the ability for Metra to expand their services. Other stations, conversely, are under-utilized and represent a potential solution. The CREATE Program includes the installation of connections that will shift service to the under-utilized stations thereby enabling Metra to expand their system. The Program also benefits some Amtrak intercity trains.

Additionally, there are many rail-highway at-grade intersections throughout the Chicago metropolitan area that cause vehicular delays and congestion, and contribute to air pollution in the region. The construction of the rail-highway grade separations will improve traffic operations and air quality in the Chicago metropolitan area.

CREATE PROJECT P1

The purpose of this project is to provide a safer and more efficient rail transportation facility along the Metra Rock Island District (RID) Line and the Norfolk Southern (NS) Chicago Line. (See Figure 1, Location Map and Figure 2, Aerial Photo and Environmental Resource Map.) The existing at-grade crossing of these two lines is one of the Chicago area's major rail junctions. Metra trains are given priority over the freight and Amtrak trains which use the NS tracks. This results in capacity and operational problems with movements between NS's 47th Street Yard (west of Englewood) and Park Manor Yard (east of Englewood), as well as delays for NS and Amtrak trains on the NS Main Line as they wait for the Metra trains to clear the crossing.

The need of the proposed improvement is to address the system capacity and operational deficiencies, reduce train delays, and improve safety.

Project Alternatives:

The No-Action Alternative involves maintaining the existing crossing at its current level and location, and does not address the need for this project.

Three proposed Build Alternatives were evaluated to address the need of the project. They are summarized as follows:

Bypass Routing of the Metra Rock Island District Trains

This alternative analyzed the feasibility of operating the Metra RID trains on another route. Some of the primary considerations included:

- This alternative would require new connections and could result in new traffic conflicts between Metra and freight carriers.
- Property acquisition would be required.
- Dispatching coordination would be required between Metra, NS, Canadian National (CN) and Amtrak.
- Moving the RID Line to another route with less capacity and controlled by others is not feasible or practical.
- Metra has invested heavily in maintenance and capital improvements along the RID Line.
- Metra has a maintenance and layover facility for locomotives and cars at 47th Street along the RID line. Access to this facility would still have to be maintained.

After completion of a field inspection of the proposed bypass route, it was determined that use of a parallel route was not a viable and practical option because of the lack of dispatching control, additional delays, costs, property acquisitions, and environmental and economic impacts. Therefore, this alternative was dropped from further consideration.

NS Flyover over Metra RID at Englewood Junction

This alternative would raise the existing three-track (future six-track) NS alignment to fly over the existing two-track (future three-track) Metra RID Line. A six-track flyover would be considerably more than twice as costly as the required three-track flyover required to bring the Metra tracks up and over the NS tracks. Engineering challenges included:

- West of the Englewood Junction, the NS crosses over the Dan Ryan Expressway and under the CTA Green Line. The Dan Ryan Bridge would require reconstruction in addition to the required raising of the CTA Green Line to maintain adequate clearance over the NS. This would impact transit operations and likely require property acquisition.
- The total project length for the NS over Metra is much greater than the length required for Metra over the NS. This is due to the lower maximum grade for freight train operations (one percent vs. two percent). The increased length would increase the costs for all aspects of the projects – bridges, retaining walls, track, etc. and would create significantly greater impact on the community.
- The NS tracks within Englewood interlocking presently include three turnouts and one crossover. There would be a very high cost associated with the location and staging of this signalized interlocking onto a new flyover structure along the NS.

This alternative was not considered a viable and practical option because of its cost, operational efficiency issues, and environmental and economic impacts. Therefore, this alternative was dropped from further consideration.

Metra RID Flyover over the NS at Englewood Junction (Preferred Build Alternative)

This alternative would raise the existing two-track (proposed three-track) Metra RID Line to fly over the existing three-track (proposed six-track) NS alignment. Since the Metra RID Line trains handle commuter traffic almost exclusively, their ability to travel up grades associated with a flyover structure surpasses that of a typical freight train. This alternative faces similar challenges to the NS Flyover over Metra in that the Dan Ryan Expressway and CTA Green Line are in close proximity, as are the NS Park Manor Yard and other bridges over local streets. The following make this alternative more favorable:

- Commuter trains can negotiate steeper grades than freight trains (two percent vs. one percent) because of their high horsepower to tonnage ratio. The steeper grades allow for a considerable reduction in project length, and therefore a significant reduction in project cost.

- This steeper grade allows the Metra RID to return to existing grade prior to crossing under the CTA Green Line, thus avoiding impacts to the Green Line structure and transit operations along the Green Line.
- The grade also allows the connection from the NS Park Manor Yard to the Metra RID to occur near its existing location, thereby avoiding property acquisition and business displacement along the east side of the Metra RID.
- Only three tracks would be required on the flyover rather than the six tracks (4 NS, 1 CN, 1 Amtrak) required if the NS line were raised over the RID Line. The structure to carry the three tracks would be much less costly.

The proposed alignment of the flyover would be shifted to the west to reduce curvature, increase operating speeds, and to allow Metra to remain operational during construction. Besides the flyover structure, new bridge structures would be required at 67th Street, Wentworth Avenue, Dan Ryan Expressway, 61st Street and 59th Street. It is proposed to fill the existing viaducts at 66th and 60th Streets in lieu of constructing new bridges at those locations. This reduces the cost to move the existing 66th Street bridge. It also eliminates the cost to construct new bridges at both streets and to maintain the bridges in the future. Closing the 60th Street viaduct also allows greater flexibility in the design to minimize impacts to Metra operations during the various construction stages. The community will experience little or no adverse travel since there is an available crossing under the Metra RID only one block away from each location. The 61st Street viaduct is an alternate route for the 60th Street viaduct closure. Drainage improvements will be included for the 61st Street viaduct to provide positive drainage. Gaps in the sidewalk along 61st Street will be filled in between LaSalle and State Streets.

The proposed action will eliminate conflicts between Metra RID commuter trains and NS freight and Amtrak passenger trains. By eliminating these conflicts, the existing rail infrastructure can be used more efficiently and the capacity of both routes will be increased. The construction of the proposed Metra RID Flyover over the NS eliminates delays experienced by both freight and passenger trains using the NS Chicago Line; they will no longer be constrained by Metra's RID operations.

The Metra RID Flyover over the NS is the Preferred Build Alternative and will expand the system capacity and improve operations. It also minimizes impacts to the environment and does not require property acquisition. It will eliminate bottlenecks caused by the intersection of the crossing railroad tracks. It was selected because of its ability to satisfy the purpose and need of the project while not significantly affecting the natural and human environment. All other alternatives either do not satisfy the project purpose and need, result in more environmental impacts, or are more costly than the Preferred Build Alternative.

Environmental Consequences:

The following issue areas were identified as having "Impacts Present." See the ECAD Record for impacts/mitigation discussion.

- Social/Economic – Title VI and Other Protected Groups
- Social/Economic – Environmental Justice
- Noise & Vibration
- Natural Resources – Trees
- Special Waste

Environmental Commitments:

- Closure of the 66th and 60th Street viaducts will require aldermanic and City Council approvals. The City's viaduct closure process will be followed and continue in Phase 2 Design Engineering. If the viaducts are not approved for closure, the ECAD Document will be reassessed.
- The 60th Street viaduct will not be closed until the following 61st Street improvements are completed: Reestablishing the pavement crown and curb line to provide positive drainage. Continuous sidewalk along the north side of 61st Street will be provided from LaSalle Street to State Street.

- The noise and vibration analysis for this project will be reassessed if: a) the project is revised in a manner in which impacts of the project may change due to the project revisions (e.g. a new track alignment is moved closer to a receptor), or b) the CREATE Program's train model is updated due to projects being removed or added to the CREATE Program.
- Procurement and compliance with all federal, state and local permits (NPDES, 404, etc.) required for this proposed improvement will be the responsibility of the individual railroad(s), or their consultants or contractors, as applicable.
- No construction activities will be initiated on any portions of the property owned by the participating railroads and within the PSI footprint prior to the completion of the PSI, testing for lead paint and subsequent studies (as required). The remediation requirements as recommended in the PSI reports (if any) shall be implemented. The management of all excavated materials shall be in accordance with applicable federal and state laws and regulations during construction.
- Arrangements will be made to address construction site dust and ensure cleanliness during the project's construction. Adequate dust control will be provided during construction.

Public Involvement:

Temporary easements are required to construct some retaining walls. No proposed right-of-way is required and no significant impacts have been identified for this project. However, the proposed closures of 66th Street and 60th Street require public involvement activities.

A Public Information Meeting was held on June 26, 2007 at Antioch Baptist Church. The meeting was attended by over 60 people, including representatives from IDOT, City of Chicago, CTA, Metra, NS, and state and city elected officials. Eight people asked questions. Three comment sheets were submitted. One was a request to be added to the email contact list, another was in support of the project, and the third requested Metra to consider a new station at 63rd and State Street and to keep the viaduct open at 60th Street. Letters were mailed to two residents who asked specific questions about the 60th Street viaduct closure.

A Public Hearing was held on January 17, 2008 at the Antioch Baptist Church. 35 people attended the meeting, including IDOT, City of Chicago, Metra, NS, and state and city elected officials. Two people asked questions, two comment sheets were submitted, and one comment was recorded with the court reporter. Of the five total comments/questions made, two were statements in support of the project, one requested Metra to consider a new station at 63rd Street near Kennedy King College and inquired about employment opportunities, and two comments expressed concern about the 60th Street viaduct closure.

Three response letters were sent out. The first letter was sent to the resident inquiring about a new Metra station and employment. The response indicated that the project does not include any new station construction, but that his inquiry would be forwarded to Metra. A copy of the letter was provided to Metra. Regarding project related construction jobs, it was explained that construction related employment would be provided through Metra's bid process where local contractors and suppliers may have opportunities for construction related jobs and assignments. For long-term, non-construction related employment, a Contact List of Class I Railroad partners was provided such that he could inquire about employment opportunities with each of the railroads.

Letters were sent to the two residents with concerns about the 60th Street viaduct closure and dust control during construction. The letters indicated that based on the *Viaduct Closure Study* completed there would be minimal impacts from the closure because there are alternate two-way routes within one block of 60th Street. Changes to emergency response, walking patterns, and access to parks, schools and libraries would be minimal because of the existing roadway grid network. Adverse travel from the closure is expected to be minimal. The letter also stated that a viaduct closure ordinance will need to be passed by the City Council and that coordination will continue with the Alderman and City on this issue. Lastly, it was stated that the project partners (Metra, IDOT, and CDOT) have agreed to provide adequate dust control during construction to address concerns about construction site dust and cleanliness.

Conclusion: The attached Class of Action Determination Record documents the analyses and results accomplished to determine the appropriate level of environmental documentation for this project.

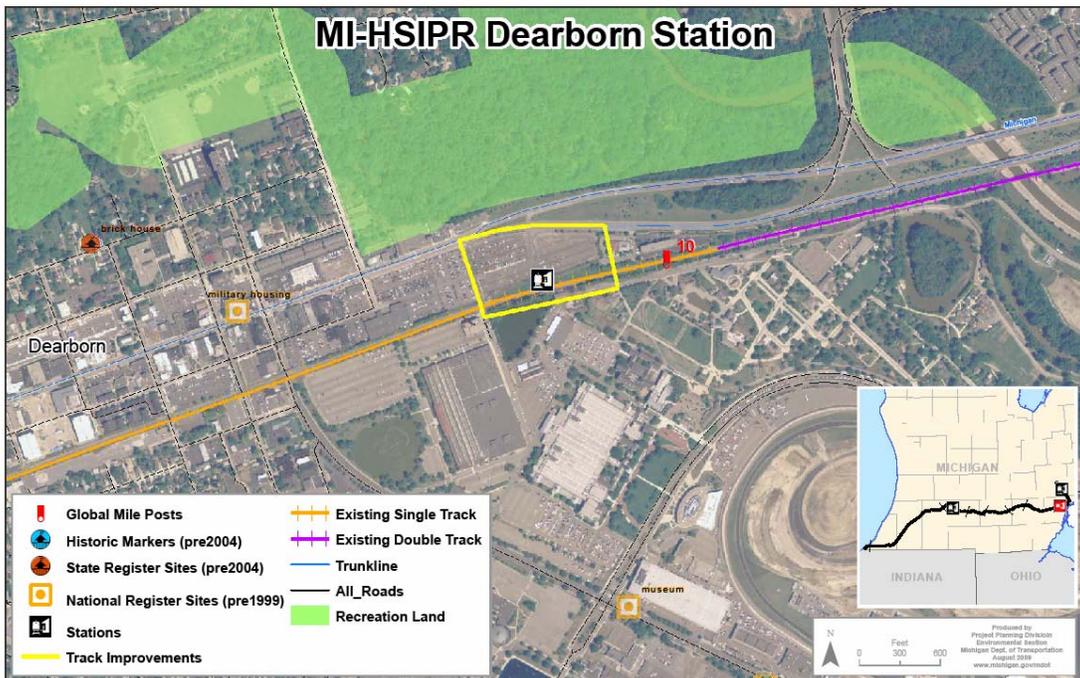
Based on the analyses of environmental consequences as documented in the attached Class of Action Determination Record, this project has been determined to meet the Categorical Exclusion definition contained in 23 CFR 771.117. The project will not induce significant impacts to planned growth or land use for the area; will not require the relocation of significant numbers of people; will not have a significant impact on any natural, cultural, recreational, historic or other resource; will not involve significant air, noise, or water quality impacts; will not have significant impacts on travel patterns; and will not otherwise, either individual or cumulatively, have any significant environmental impact.

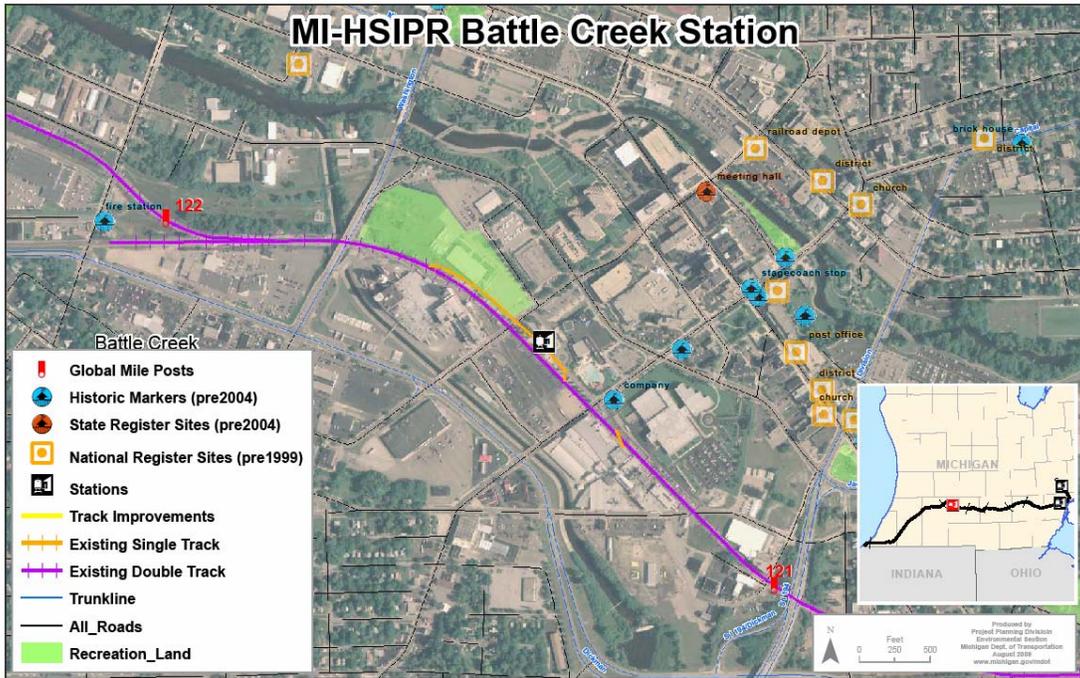
<u>George E. Weber, Jr.</u>	<u>9/29/08</u>
IDOT	Date
<u>Walt Zymarski</u>	<u>10/1/08</u>
Environment Section, Executive - IDOT Bureau of Design and Environment	Date
<u>Scott McQuinn</u>	<u>10/1/08</u>
FHWA Design Engineer	Date

OFFICE OF THE SECRETARY OF TRANSPORTATION, U.S. DEPARTMENT OF TRANSPORTATION

APPENDIX B

Aerial Location Maps of the 3 Rail Stations





APPENDIX C

Protected Waters

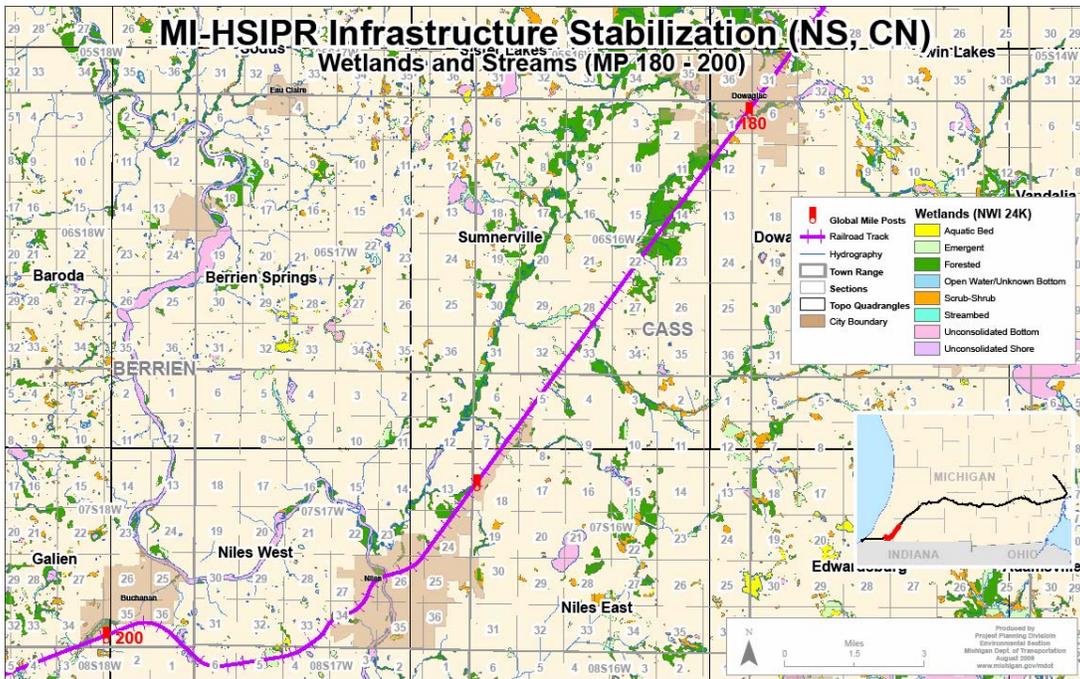
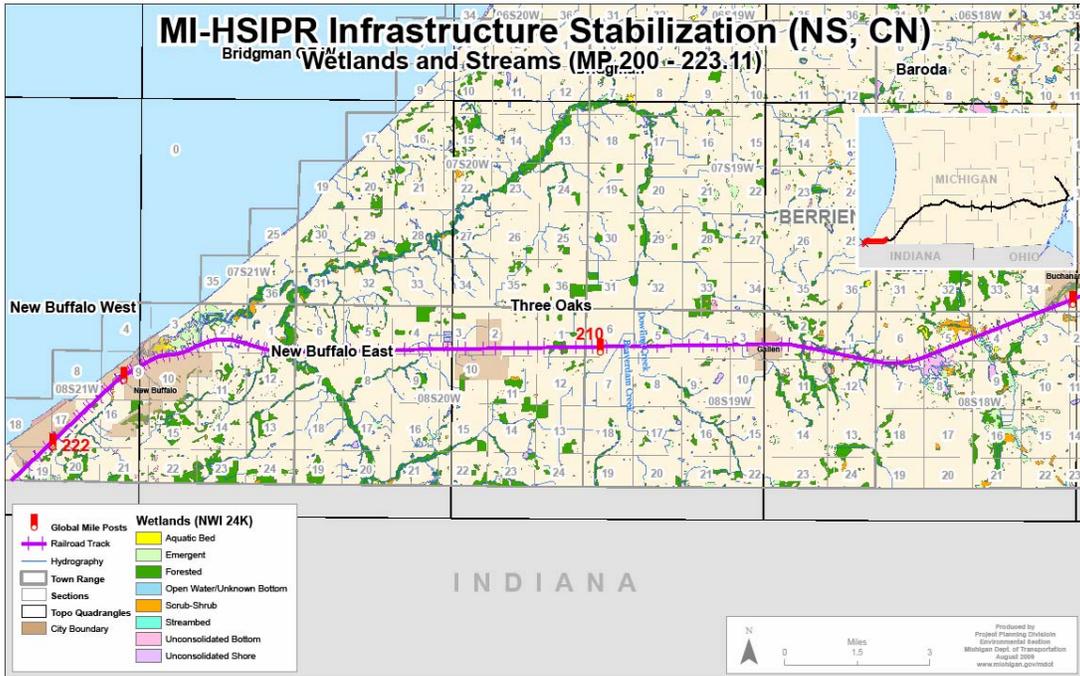
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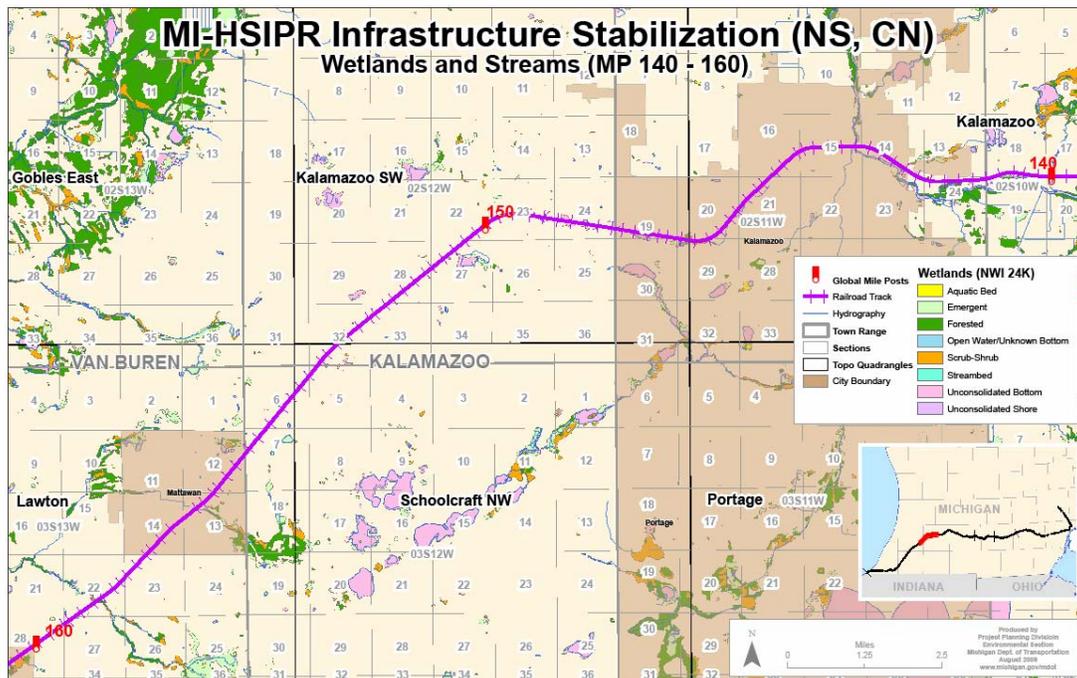
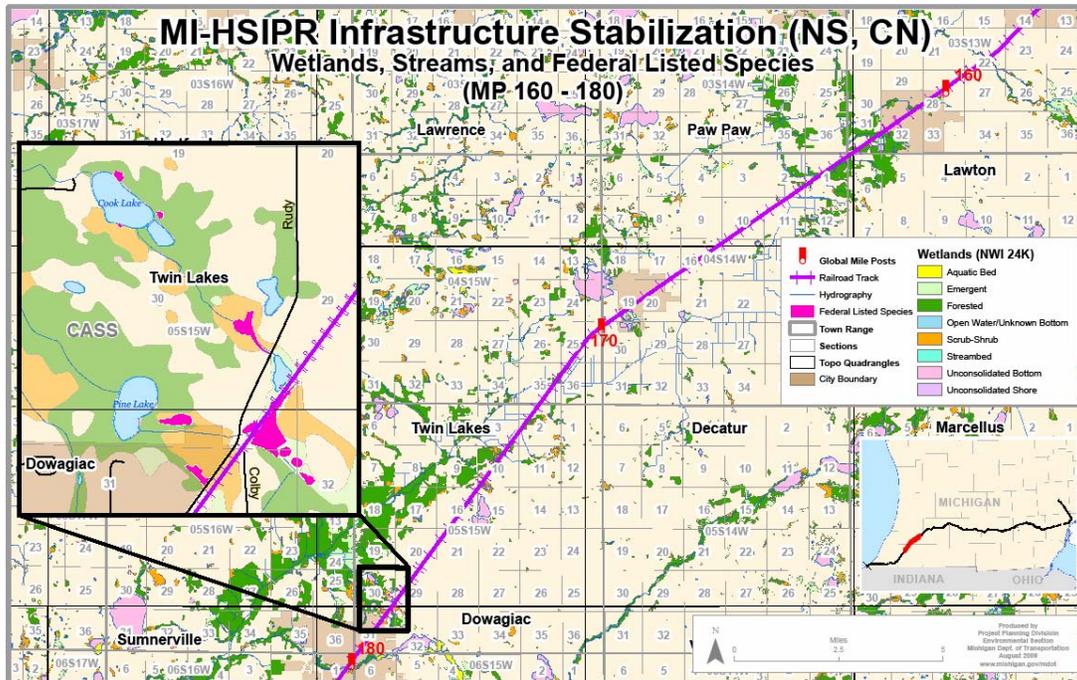
- Rouge River** (near Mile Post (MP) 16) - Not meeting water quality Standards for Biota
- Rouge River** (~2500 feet SW of MP 9) - Not meeting water quality Standards for Biota and E. Coli
- Geddes Pond / Huron River** (~500 feet NE of MP 34 to ~1400 feet SE of MP 37) - Not meeting water quality standards for E. Coli
- Huron River** (~500 feet NW of MP 37 and from 1450 feet to 2450 feet SE of MP 38) - Not meeting water quality standards for E. Coli
- Grand River** (~2700 feet NW of MP 76) - Not meeting water quality standards for E. Coli or Dissolved Oxygen
- Rice Creek** (~180 feet SW of MP 108) – TROUT STREAM
- Canal Race** (~1750 feet NE of MP 131) – TROUT STREAM
- Payne S Creek** (~2900 feet SW of MP156) – TROUT STREAM
- East Branch Paw Paw River** (~1000 feet NE of MP 159) – TROUT STREAM
- Lawton Drain** (~100 feet NE of MP 161) – TROUT STREAM
- West Branch Paw Paw River** (~400 feet NE of MP 162, ~3100 feet SW of MP 164) – TROUT STREAM
- Parallel to Dowagiac Creek tributary** (from ~ 400 feet SW of MP 171 to 4000 feet SW of MP 171, crosses at MP 171) – TROUT STREAM
- Parallel with a Dowagiac River tributary** (~750 feet SW of MP 172 to 600 feet SW of MP 173, crosses at MP 173) – TROUT STREAM
- Dowagiac River** (~650 feet NE of MP 174 and ~1800 feet NE of MP175) – TROUT STREAM
- Dowagiac River tributary** (~870 feet SW of MP 174) – TROUT STREAM
- Peavine Creek** (~1100 feet SW of MP 181, 400 feet NE of MP 183, 2300 feet NE of MP 184) – TROUT STREAM
- Pokagon Creek** (~1300 feet NE of MP 186) – TROUT STREAM

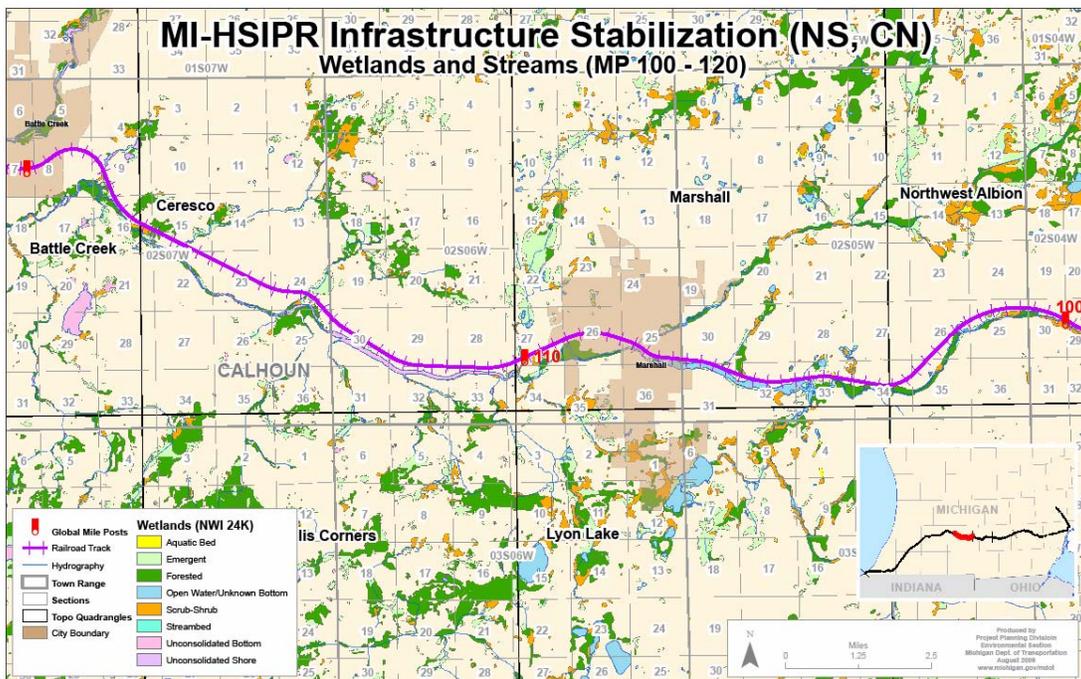
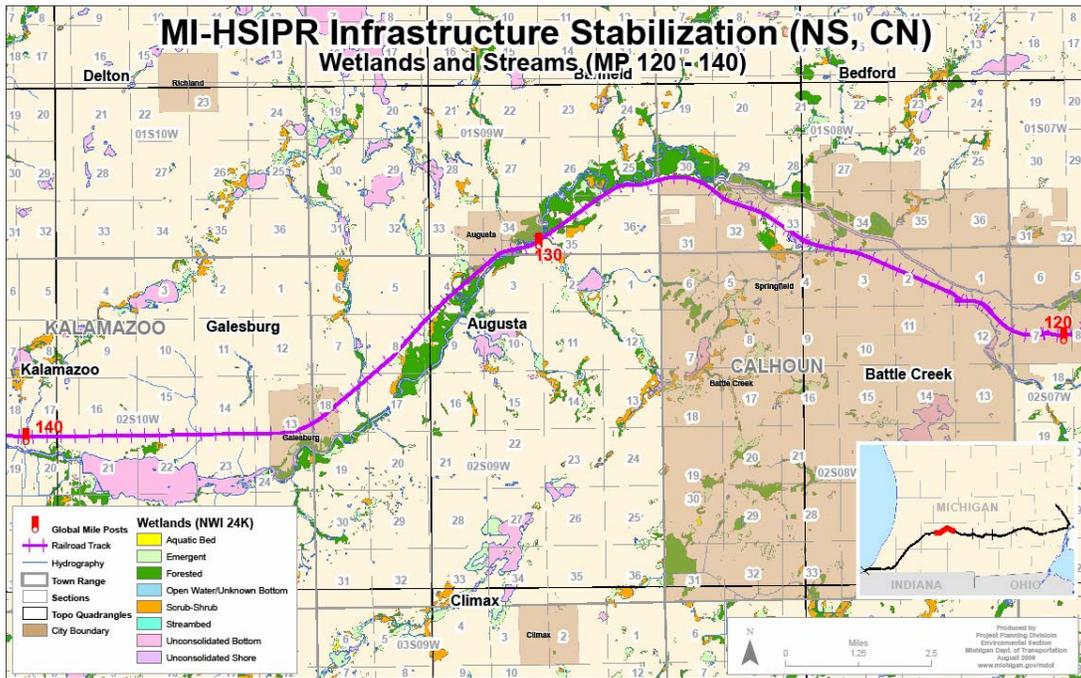
- ***McKinzie Creek*** (~2200 feet SW of MP 188) – TROUT STREAM
- ***Saint Joseph River*** (~700 feet NE of MP 193). – TROUT STREAM & Not meeting water quality standards for E. Coli
- ***McCoy Creek/Weaver Lake*** (~2400 feet NE of MP 201) – TROUT STREAM
- ***Parallel with Bakertown Drain*** (~2000 to 2700 feet northeast of MP 201, south of tracks) – TROUT STREAM
- ***Branch Creek*** (~200 feet SW of MP 202) – TROUT STREAM
- ***Galien River*** (~2600 feet W of MP 204) – TROUT STREAM
- ***South Branch Galien River tributaries*** (also known as Deer Creek) (~380 feet E of MP 213 and 1800 feet E of MP 214) – TROUT STREAM & Not meeting water quality standards for E. Coli

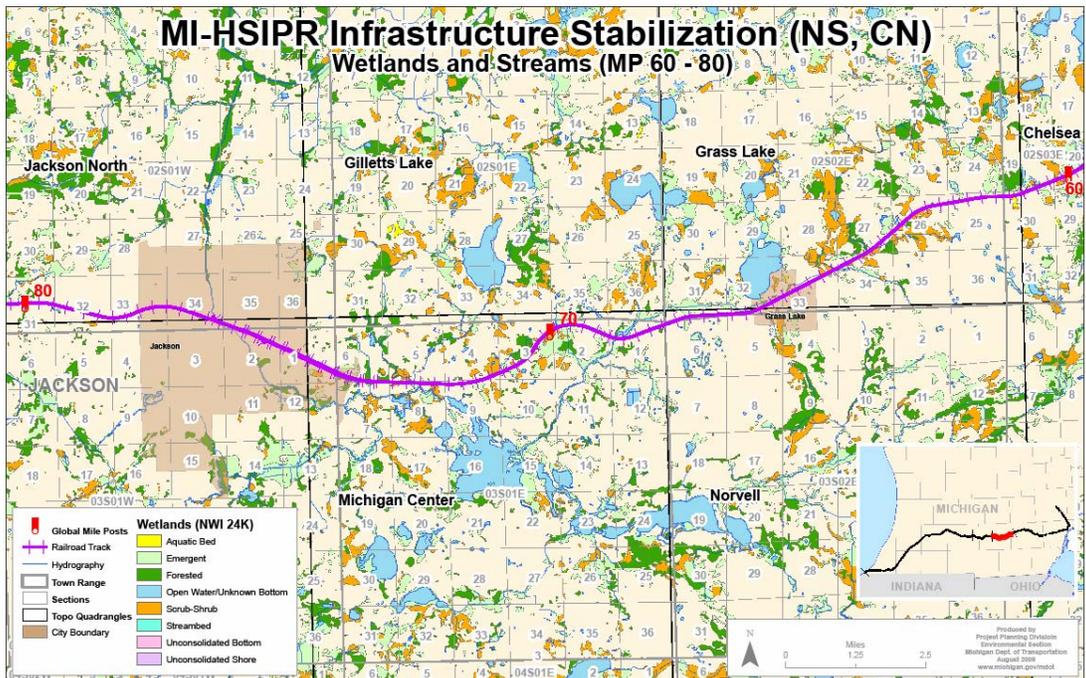
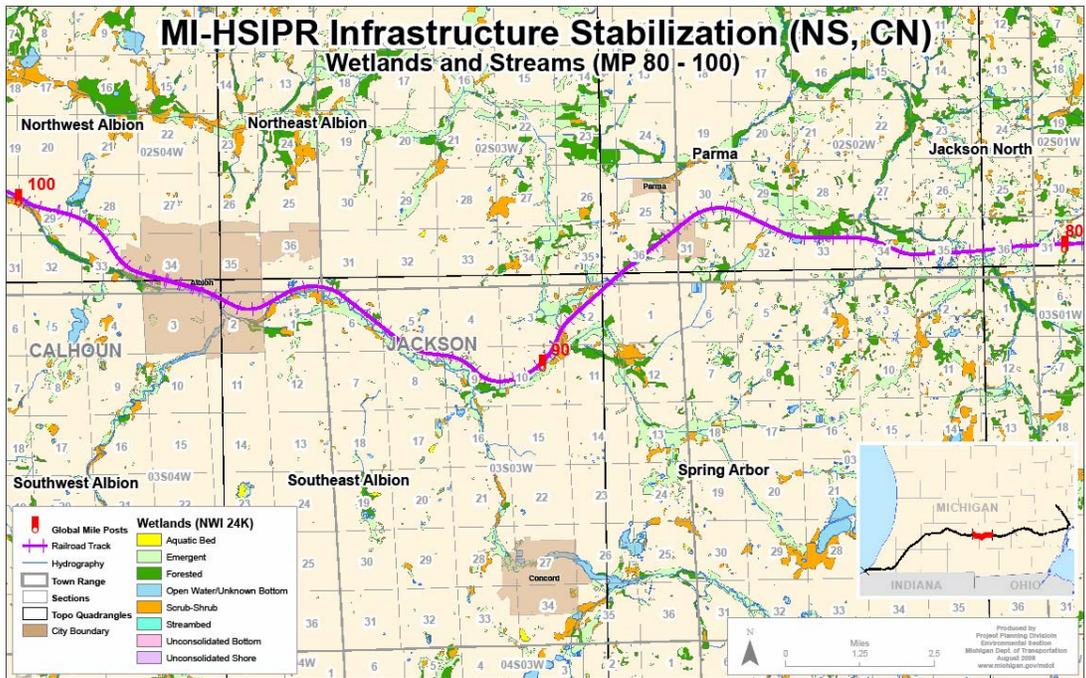
APPENDIX D

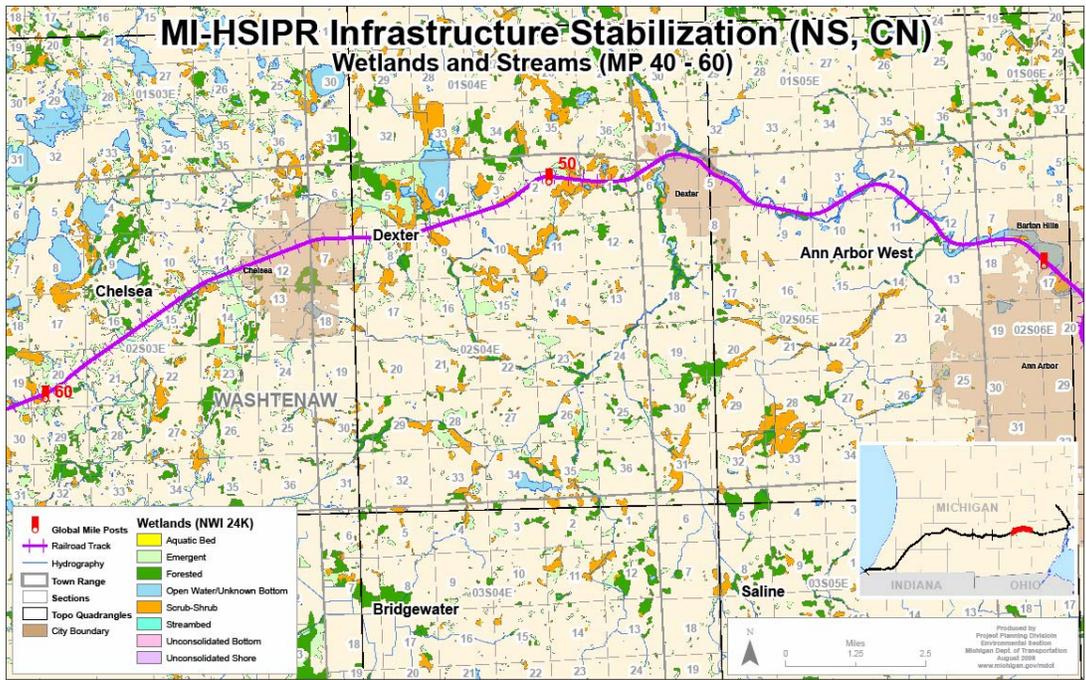
Maps of Wetland Areas along the Rail Corridor

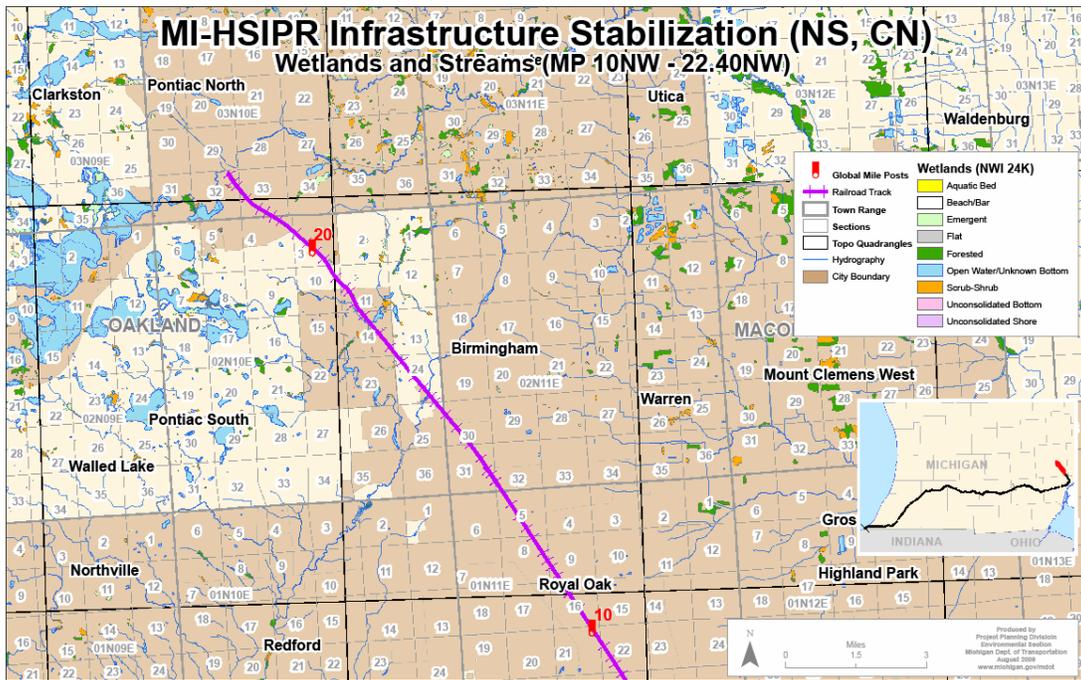
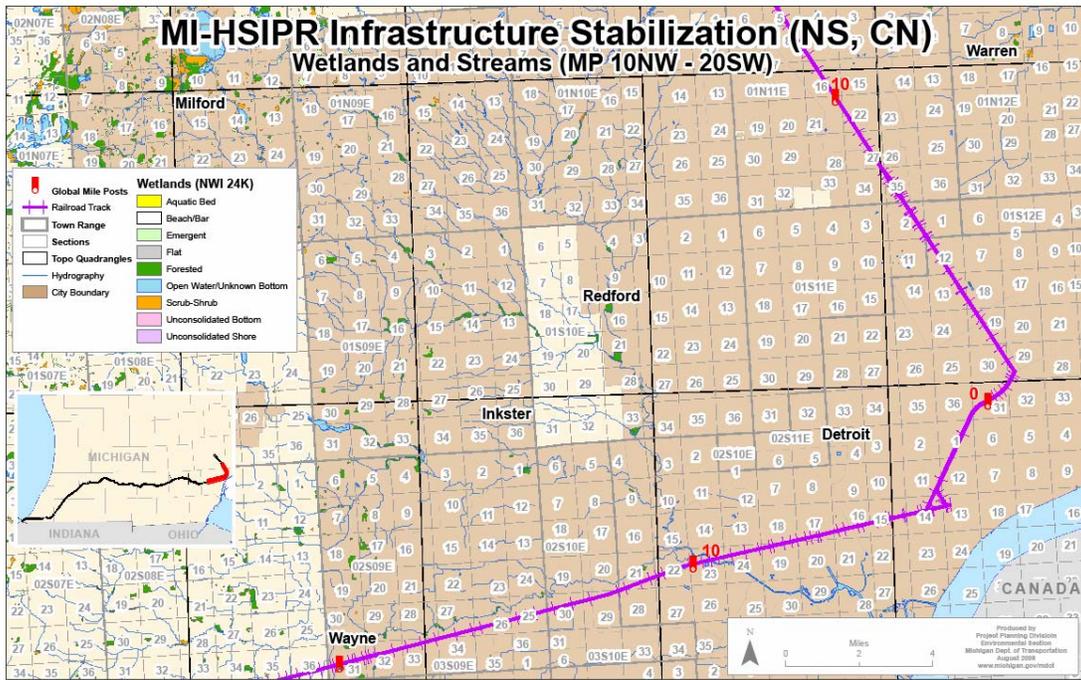












APPENDIX E

List of Known and identified eligible, already listed, or potentially eligible above-ground Historic Resources

The following is a list of known and identified eligible, already listed or potentially eligible above-ground historic resources.

Pontiac:

1. Potentially historic warehouse located west side of Franklin, south of Brush Street (at MP 22)
2. Potentially historic utility related building at the northwest quadrant of Rapid Street crossing of railroad tracks

Bloomfield Hills:

Historic Trowbridge Ct Bridge (R01-63998) crossing railroad between Trowbridge Rd/Burnham Rd and Kensington Rd. (southeast from MP 18) (T02N, R10E, Section 14)

Birmingham:

1. The Grand Trunk Depot (Big Rock Chop House), at 245 S Eton Street south of the railroad tracks is listed on the National Register
2. Clover Hill Park Cemetery, founded 1917, associated with Shaarey Zedek Synagogue. Historic eligibility has not been assessed but a potentially sensitive resource. Located near the NW quadrant of the railroad bridge over 14 Mile Road, cemetery abuts railroad right of way

Royal Oak:

1. Historic former streetcar powerhouse located on west side of tracks, at 711 S. Main Street, north of Lincoln Street in Royal Oak
2. On the opposite side of the tracks, south of Seventh Street is a potentially historic two-story building abutting the railroad right of way

Detroit:

1. No properties on or adjacent to Ford Junction Public Housing complex, east of tracks, south of the Davison Freeway (M-8) and MP 8, west of the Chrysler Freeway (I-75), and north of Commer Street.

Historic eligibility undetermined but the complex appears to have fair to good historic integrity
Potentially historic factory complex between railroad right-of-way, Chrysler Service Drive and Clay Street
Milwaukee Avenue industrial building adjacent to the tracks at St Antoine (east of Beaubien) will require survey for eligibility.

2. The Piquette Avenue Historic District is bounded by Woodward Avenue on

the west, Hastings Street on the east and extends approximately one block south of Piquette to the south and up to the Grand Trunk Railroad to the north.

3. Historic Ford Motor Company Piquette Avenue Model T plant (461 Piquette) is in proximity of the rail line at Piquette Avenue and Beaubien Street (built 1904, sold to Studebaker in 1911). The larger attached building was constructed by Studebaker Corporation in 1920 and is not considered to have historic associations to the former Ford Motor Company plant.

4. Two bridges carrying railroad over Woodward Avenue (X01-82131-5, and X01-82131-6) has not been formally evaluated but appears historic.

5. The New Amsterdam Historic District encompasses properties on or near three sequential east-west running streets, Burroughs, Amsterdam, and York, between 2nd Street and Woodward Avenue. Any work outside the ROW will require SHPO consultation and approval.

6. Historic warehouse located between the John C Lodge Expressway (M-10), W. Baltimore Street and the rail right-of-way

7. Crescent Brass & Trim, 5766 Trumbull, historic factory located on the SW quad of Trumbull and the railroad

8. Potentially historic properties are located in proximity at the northeast quadrant of Junction @ McGregor (southeast of Junction St crossing) and on Vinewood at the southeast quadrant of the Vinewood crossing. No impacts unless the buildings were to be removed by the project

9. West Detroit Junction (MP 3.43SW) to Town Line Interlocking (MP7.98SW): Historic bridges are present in this corridor. However, the proposed improvements will not impact the historic bridges.

Dearborn:

In Dearborn the tracks run adjacent to the north boundary of the Henry Ford Museum/Green Field Village. There is a historic power plant or factory located at the SW quadrant of the tracks and the Elm Street at-grade crossing. Numerous historic buildings, including a historic roundhouse and associated rolling stock are located adjacent to the tracks

Ypsilanti:

1. The Freighthouse north of Cross Street west of the railroad tracks is eligible for listing on the National Register

2. The Depot north of Cross Street east of the railroad tracks is potentially eligible for listing on the National Register

3. The Depot Town Historic District is located on Cross Street adjacent to the tracks.

Ann Arbor:

1. Potentially historic house located in the SW quad of the railroad crossing at East Delhi road (Scio Township).

2. The Depot (Gandy Dancer restaurant) east of the Broadway Street Bridge on the south side of the railroad tracks is listed on the National Register.

Dexter:

1. Island Lake Road Bridge

2. Mill Creek Bridge

Chelsea:

1. The Depot at 150 Jackson Street east of M-52 and on the north side of the railroad tracks is listed on the National Register.

2. A factory complex (tourist destination, shops and offices), and historic districts (residential and commercial) are located adjacent to the existing right-of-way. The Jiffy Mix complex, which may be eligible for listing in the National Register of Historic Places straddles the right-of-way.

Grass Lake:

1. The Depot at 210 East Michigan Avenue on the south side of the railroad tracks is eligible for listing on the National Register

2. Between Grass Lake Village east limits and North Lake Street the rail line runs directly north of (behind) historic residential and commercial historic districts

Jackson:

1. The Depot at 501 Michigan Avenue on the north side of the railroad tracks is listed on the National Register

2. Temple Beth El Cemetery is located south of the tracks adjacent to the West Street Bridge and is listed on the National Register

3. Historic properties abut the railroad right-of-way on the north

side from a line parallel with Ingham Street to Steward Street, and flank the railroad right-of-way on both sides from Steward Street to West Street.

Parma:

The Parma Mill-Hardware facility located south of the tracks and north of Mill Street has not been evaluated for historic eligibility

Albion:

The Depot east of North Eaton Street on the south side of the railroad tracks is eligible for listing on the National Register

Marshall:

Marshall has numerous historic resources but no impacts due to proposed siding is located within the existing right-of-way, south of River Street.

Battle Creek:

1. The Grand Trunk Depot is located on the north side of the tracks at or near the Baron Interlocking (MP 120.54).

2. Note: The historic Battle Creek No.4 Fire House is located at 174 S. Kendall Street (west of MP 122, and outside of current project limits).

Kalamazoo:

1. The Depot between Burdick and Rose Streets on the south side of the railroad tracks is listed on the National Register

2. Location from approximately 250 feet west of Burke Court to a point 400 feet east of Foresman Street

Lawton:

1. The Depot on the east side of M-40 north of the RR tracks is eligible for listing on the National Register

2. The Houppert Winery Complex at 646 North Nursery Road south of the railroad tracks is listed on the National Register

Dowagiac:

The Depot on the corner of Commercial and Depot Streets is listed on the National Register

Howard Township (Cass County):

The Thompson Road Bridge, built in 1919, is listed on the National Register.

Niles:

The Depot east of M-51 on the north side of the railroad tracks is listed on the National Register

Galien:

The Depot east of Cleveland Street south of the railroad tracks is eligible for listing on the National Register

Three Oaks:

1. The commercial building at 3 North Elm Street north of the railroad tracks is listed on the National Register
2. The commercial building at 14 North Elm Street north of the railroad tracks is listed on the National Register
3. The Depot at the north end of Oak Street on the south side of the railroad tracks is eligible for listing on the National Register

APPENDIX F

Coordination with the State historic Preservation Office and the Office of State Archaeologist



JENNIFER GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF HISTORY, ARTS AND LIBRARIES
LANSING

MARK HOFFMAN
ACTING DIRECTOR

September 22, 2009

SIGRID BERGLAND
MICHIGAN DEPARTMENT OF TRANSPORTATION
425 WEST OTTAWA
PO BOX 30050
LANSING MI 48909

RE: ER09-631 Pontiac-Detroit-Chicago Rail Corridor Project, Berrien, Van Buren, Kalamazoo, Calhoun, Jackson, Washtenaw, Wayne and Oakland Counties (FRA)

Dear Ms. Bergland:

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above. Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the proposed undertaking will have no adverse effect [36 CFR § 800.5(b)] on historic properties within the area of potential effects for the above-cited undertaking provided the "Scope of Work" and the "No Adverse Effect Conditions" specified in the project information are followed.

If you concur, the accompanying form must be signed by an agency official with legal and financial responsibility for the above-cited undertaking [36 CFR § 800.2(a)]. Please return the signed original to us. Please note that the Section 106 review process will not be complete and the Federal Railroad Administration's responsibility to comply with 36 CFR § 800.4, "Identification of historic properties," and 36 CFR § 800.5, "Assessment of adverse effects", will not be fulfilled until we have received this letter with the original signature of the agency official. If the agency official disagrees with this condition, then consultation with this office shall be reopened per 36 CFR § 800.5(a).

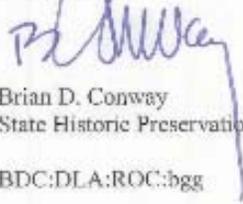
The views of the public are essential to informed decision making in the Section 106 process. Federal Agency Officials or their delegated authorities must plan to involve the public in a manner that reflects the nature and complexity of the undertaking, its effects on historic properties and other provisions per 36 CFR § 800.2(d). We remind you that Federal Agency Officials or their delegated authorities are required to consult with the appropriate Indian tribe and/or Tribal Historic Preservation Officer (THPO) when the undertaking may occur on or affect any historic properties on tribal lands. In all cases, whether the project occurs on tribal lands or not, Federal Agency Officials or their delegated authorities are also required to make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties per 36 CFR § 800.2(c-f).

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.

STATE HISTORIC PRESERVATION OFFICE, MICHIGAN HISTORICAL CENTER
702 WEST KALAMAZOO • P.O. BOX 30740 • LANSING, MICHIGAN 48909-8240
(517) 373-1630
www.michigan.gov/hal

If you have any questions, please contact Brian Grennell, Environmental Review Specialist, at (517) 335-2721 or by email at ER@michigan.gov. **Please reference our project number in all communication with this office regarding this undertaking.** Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,



Brian D. Conway
State Historic Preservation Officer

BDC:DLA:ROC:bigg

Enclosure(s)

Copy: Genell Schuerell, NTHP



JENNIFER GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF HISTORY, ARTS AND LIBRARIES
LANSING

DR. WILLIAM ANDERSON
DIRECTOR

SIGRID BERGLAND
MICHIGAN DEPARTMENT OF TRANSPORTATION
425 WEST OTTAWA
PO BOX 30050
LANSING MI 48909

RE: BR09-631 Pontiac-Detroit-Chicago Rail Corridor Project, Berrien, Van Buren,
Kalamazoo, Calhoun, Jackson, Washtenaw, Wayne and Oakland
Counties (FRA)

Dear Ms. Bergland:

We have received comments from the State Historic Preservation Office (SHPO) in regards to the
above-cited undertaking at the location noted above. We intend to follow the conditions as specified by
the SHPO.

I concur: *Sigrid Bergland* Date: 9/25/09

Printed name and title of agency official: SIGRID BERGLAND
CULTURAL RESOURCE COORDINATOR

From: Dean Anderson
To: James Robertson
Date: 9/25/2009 2:02PM
Subject: Re: ARRA High Speed Rail - Statewide

Jim,

I agree with the meeting notes. Thanks.

Dean

Dean L. Anderson, Historical Archaeologist
Michigan Historical Center
Box 30740
702 West Kalamazoo Street
Lansing, MI 48909-8240
E-mail: AndersonD15@michigan.gov
Phone: (517) 373-1618
Fax: (517) 241-4738

PLEASE NOTE that my email address has changed.
My new address is: AndersonD15@michigan.gov.

Michigan Archaeology Day at the Michigan Historical Museum is filled with discoveries from underground and underwater. Learn more about the Oct. 10 event when you discover your connections at www.michiganhistory.org.

>>> James Robertson 9/25/2009 11:50 AM >>>

Dear Dr. Anderson: site file research conducted for the above-referenced project identified 31 archaeological sites that possibly overlap the existing rail corridor. Twenty-three of these sites have either been determined not eligible for listing on the National Register or are 1) sites referenced by Hinsdale (1931) or other historical references that lack accurate locational information, 2) reported collections that lack accurate locational data that have never been field verified, or 3) sites that have been destroyed or otherwise disturbed. The eight remaining sites are lithic scatters or findspots for which more information is needed to evaluate their National Register eligibility. None of these sites are located in the vicinity of the few portions of the project where new right of way/work outside of the existing right of way is required. For the remaining portions of the rail corridor we agreed that the project would have no effect on these archaeological sites.

Please reply that you concur with these meeting notes and recommendations or provide me with your comments if you do not concur at this time. Thank you for your assistance on this project.

jar

James A. Robertson, Ph.D., RPA
Staff Archaeologist



JENNIFER GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF HISTORY, ARTS AND LIBRARIES
LANSING

DR. WILLIAM ANDERSON
DIRECTOR

September 8, 2008

DAVE WILLIAMS
FEDERAL HIGHWAY ADMINISTRATION
315 W ALLEGAN STREET
LANSING MI 48933

Post-it* Fax Note	7671	Date	9/8	# of pages	2
To	ELAINE ROBINSON	From			
Co./Dept.	CCRC	Co.	SHPO		
Phone #		Phone #	517-335-2721		
Fax #	517-288-7594	Fax #			

RE: ER02-169 Dearborn Rail Passenger Intermodal Station (DRPIS), Dearborn, Wayne County (FHWA)

Dear Mr. Williams:

We have reviewed the report *National Register of Historic Places Evaluation of the Henry Ford Filtration and Pumping Station and the Ford Motor Company Engineering Laboratory and Power Plant, Dearborn, Wayne County, Michigan*, and concur with the report's conclusions.

- The "Greenfield Village and the Henry Ford Museum" National Historic Landmark nomination form's boundary description makes it clear that the district includes the property associated with the facilities discussed in the report (the boundary description refers to Oakwood Blvd. incorrectly as Oakland Blvd.). But – the boundary justification states that the boundary encloses the Edison Institute property, including all property associated with the Henry Ford Museum and Greenfield Village.
- The NHL nomination makes no mention of the Filtration and Pumping Station and the Engineering Laboratory and Power Plant. Nor are they shown on the site plan that accompanies the nomination.
- Although located within the described boundaries, the Filtration and Pumping Station and the Engineering Laboratory and Power Plant property have never been part of the Edison Institute property containing Greenfield Village and the Henry Ford Museum. Their inclusion within the NHL boundary appears to be unintentional and a mistake. The NHL boundary description should be revised so that it truly describes just the property encompassed by Greenfield Village and the Henry Ford Museum.
- The Ford Motor Company Engineering Laboratory and Power Plant with their associated property appears to meet the national register criteria as a complex. The Henry Ford Filtration and Pumping Station has suffered a number of significant renovations and does not appear eligible for listing in the national register.

The proposed Dearborn Rail Passenger Intermodal Station project will take place across the Conrail line to the north from both the Greenfield Village/Henry Ford Museum NHL and the Engineering Laboratory and Power Plant property and will have no adverse effect on either of those historic resources.

Therefore, based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the effects of the proposed undertaking do not meet the criteria of adverse effect [36 CFR § 800.5(a)(1)]. Therefore, the project will have **no adverse effect** [36 CFR § 800.5(b)] on Greenfield Village and the Henry Ford Museum, which is a National Historic Landmark, nor on the Ford Motor Company Engineering Laboratory and Power Plant, which appear to meet the criteria for listing in the National Register of Historic Places.

STATE HISTORIC PRESERVATION OFFICE, MICHIGAN HISTORICAL CENTER
702 WEST KALAMAZOO STREET • P.O. BOX 30740 • LANSING, MICHIGAN 48909-8240
(517) 373-1630
www.michigan.gov/hal

The views of the public are essential to informed decision making in the Section 106 process. Federal Agency Officials or their delegated authorities must plan to involve the public in a manner that reflects the nature and complexity of the undertaking, its effects on historic properties and other provisions per 36 CFR § 800.2(d). We remind you that Federal Agency Officials or their delegated authorities are required to consult with the appropriate Indian tribe and/or Tribal Historic Preservation Officer (THPO) when the undertaking may occur on or affect any historic properties on tribal lands. **In all cases**, whether the project occurs on tribal lands or not, Federal Agency Officials or their delegated authorities are also required to make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties per 36 CFR § 800.2(c).

This letter evidences the FHWA's compliance with 36 CFR § 800.4 "Identification of historic properties" and 36 CFR § 800.5 "Assessment of adverse effects", and the fulfillment of the FHWA's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.5(c) "Consulting party review".

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.

If you have any questions, please contact Martha MacFarlane Faes, Environmental Review Coordinator, at (517) 335-2721 or by email at ER@michigan.gov. **Please reference our project number in all communication with this office regarding this undertaking.** Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,



Brian D. Conway
State Historic Preservation Officer

BDC:ROC:bgg

copy: Elaine Robinson, CCRG, Inc.

From: Dean Anderson
To: James Robertson
Date: 8/12/2009 11:14AM
Subject: Re: High Speed Rail - JN 22, 23, 24, 25, 26, 27

Jim,

I agree with your meeting notes. Thanks.

Dean

Dean L. Anderson, Historical Archaeologist
Michigan Historical Center
Box 30740
702 West Kalamazoo Street
Lansing, MI 48909-8240
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PLEASE NOTE that my email address has changed.
My new address is: AndersonD15@michigan.gov.

Take time this summer to relax and discover your connections to Michigan's past in the pages of Michigan History magazine. www.michiganhistorymagazine.com

>>> James Robertson 8/11/2009 5:09 PM >>>

Dear Dr. Anderson: On August 6 we discussed (JN 22, 23, 24, 25, 26, and 27. These are six proposed high speed rail projects from the Indiana state line to Pontiac that are being studied separately, but for which we are also considering indirect/cumulative impacts. Two additional projects that will be reviewed at a later date include a project (JN 28) for rail stations that are located within the six projects we discussed, as well as a tree removal project (JN 29) for a segment in Ann Arbor that was added subsequent to our meeting. My meeting minutes about the issues and impacts we discussed during our consultation regarding the above-referenced projects are as follows:

We discussed that, with few exceptions, no new right of way (ROW) or work outside the ROW will be required. Construction access will be from existing track and most construction activities will be related to rehabilitation of the existing track(s) and new track work. The former includes rehabilitation/replacement of rail, replenish track ballast with minor widening of existing ballast footprint, replace rail ties, install fencing, bridge/culvert repair/replacement, install CTC signalization, enhancement of grade crossings including new gates & signals, and closures of crossings at private roads. Roadway detours may be required for grade crossing improvements. New track work includes constructing new sidings, new crossovers and turnouts, and/or second main track. New track work includes all the

associated facilities described above for rehabilitation. Construction of new sidings and/or a new second track will use the facilities where the original second track once existed. Deviation of the new track from the original second track's location, if necessary, would be minor and only what was necessary to meet current safety standards.

We then discussed specific actions that might extend outside of the original two-track footprint and/or ROW. They are as follows:

1) Existing bridges and culverts are in place for new track and may require repair or replacement. No bridge replacements are anticipated. Culvert replacements may be required and would be on the original culvert construction footprint; however, replacement likely would be with a larger culvert. We agreed that culvert replacement would not likely impact significant, undisturbed archaeological sites and not require archaeological investigation.

2) We agreed that work at grade crossings/closures that might be outside the original grade crossing footprint and/or require grading permits/new ROW would not likely impact significant, undisturbed archaeological sites and not require archaeological investigation.

3) Several areas will require new ROW. For JN 24 they include new ROW at West Detroit and Milwaukee junctions and Beaubien interlocking. For JN 25 new ROW will be required from West Detroit Junction to past Vinewood Interlocking. And, for JN 27 new ROW will be required for construction of a multi-track layover yard. We agreed that all of these locations are located within urban areas that are previously disturbed, have a low potential for significant archaeological sites, and/or are the location of former rail trackage including but not limited to former mainline track, spurs, sidings, and/or yards. Consequently, we agreed that this work in the Proposed new ROW would not likely impact significant, undisturbed archaeological sites and not require archaeological investigation.

Overall, we concluded that JN 22, 23, 24, 25, 26, and 27 will not affect archaeological resources.

Please reply that you concur with these meeting notes or provide me with your comments if you do not concur at this time. Thank you for your assistance on this project.

jar

James A. Robertson, Ph.D., RPA
Staff Archaeologist
Environmental Section
Project Planning Division
Michigan Department of Transportation
425 West Ottawa
P.O. Box 30150
Lansing, MI 48909
Phone: 517-335-2637
Fax: 517-373-9255
E-Mail: RobertsonJ3@Michigan.gov