Environmental Assessment
I-375 Improvement Project
in Detroit, Wayne County, Michigan

December 2020

Prepared by the Michigan Department of Transportation in cooperation with the U.S Department of Transportation Federal Highway Administration.

Environmental Assessment for I-375 Improvement Project

I-75 South of Mack Avenue to Detroit Riverfront Located in Detroit, Wayne County, Michigan

MDOT Control Section 82111, 82195, 82196, 82251, 82072, Job Number 130035

Prepared by:
Michigan Department of Transportation
in cooperation with the
U.S. Department of Transportation
Federal Highway Administration

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Preface

The National Environmental Policy Act (NEPA) of 1969 requires that the social, economic, cultural, and natural environmental impacts of any proposed action by 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 – either an EIS or a Finding of No Significant Impact (FONSI).

This document is an EA for the proposed changes to Interstate Highway 375 (I-375) from I-75 south of Mack Avenue to the Detroit Riverfront, Michigan. It describes the Practical Alternatives, identifies a Preferred Alternative, and analyzes potential impacts and the measures taken to minimize harm to the Project area. It will be distributed to the public and to various federal, state, and local agencies for review and comment. A formal public hearing on this study will then be held. If review and comment by the public and interested agencies support the determination of “no significant impact,” this EA will be forwarded to the Federal Highway Administration (FHWA) with a recommendation that a FONSI be issued. 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 HNTB for the Michigan Department of Transportation (MDOT), in cooperation with the FHWA and other members of the I-375 study team. The study team includes representatives from the following areas of expertise within MDOT: Design, Planning, Real Estate, Environment, Traffic and Safety, Bridges, and Construction. Other federal and state agencies, local units of government, public interest groups, and individuals also provided information for this EA.

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List of Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
APE	Area of Potential Effect(s)
BACT	Best Available Diesel Retrofit Control Technology
BMP	Best Management Practices
BRT	Bus Rapid Transit
CAAA	Clean Air Act as Amended in 1990
CAADT	Commercial Average Annual Daily Traffic
CBD	Central Business District
CFR	Code of Federal Regulations
City	City of Detroit
CNE	Common Noise Environment
CO	Carbon Monoxide
CPBU	Cost per Benefited Receptor Unit
CSO	Combined Sewer Overflow
dB	Decibel
DDOT	Detroit Department of Transportation
DNR	Department of Natural Resources
DTA	Dynamic Traffic Assignment
EA	Environmental Assessment
EB	Eastbound
EGLE	Michigan Department of Environment, Great Lakes, and Energy
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FSA	Fee Simple Acquisition
GAC	Government Advisory Committee
IACR	Interstate Access Change Request
IAWG	Michigan Transportation Conformity Interagency Workgroup
IHSDM	Interactive Highway Safety Design Model
LAC	Local Advisory Committee
LAWCON	Land and Water Conservation Fund Act
LEP	Limited in English Proficiency
LOS	Level of Service
MDOT	Michigan Department of Transportation
MPH	Miles Per Hour
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standard

NAC	Noise Abatement Criteria
NB	Northbound
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHS	National Highway System
NO_2	Nitrogen Dioxide
NPDES	National Pollution and Discharge Elimination System
NREPA	Natural Resources and Environmental Protection Act of 1994
NRHP	National Register of Historic Places
O_3	Ozone
OHWM	Ordinary High-Water Mark
OWJ	Owner with Jurisdiction
PACS	Project Area Contamination Survey
PASER	Pavement Surface Evaluation and Rating
Pb	Lead
PEL	Planning and Environmental Linkages
PM	Particulate Matter
PPM	Parts Per Million
PSI	Preliminary Site Investigation
ROW	Right-of-Way
RSA	Road Safety Audit
RTA	Regional Transit Authority of Southeast Michigan
SB	Southbound
SEMCOG	Southeast Michigan Council of Governments
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SMART	Suburban Mobility Authority for Regional Transportation
SO_2	Sulfur Dioxide
TNM	Traffic Noise Model
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
WB	Westbound

1. Introduction

This Environmental Assessment (EA) describes the effects of proposed improvements to Interstate 375 (I-375). It discusses the Project's purpose and need; summarizes the Project alternatives; presents the reasons that the Michigan Department of Transportation (MDOT) selected the Preferred Alternative and evaluates potential Project-related effects to the human and natural environment. The EA also discusses ways to avoid, minimize, or mitigate these impacts.

What is the purpose of an environmental assessment?

The National Environmental Policy Act (NEPA) requires federal agencies to prepare an EA when they are planning a project that may significantly affect the environment. The EA provides a complete picture of a project, from beginning to end. It describes why the transportation project is needed, the alternatives studied, potential effects, and public and agency comments. This allows environmental effects to be considered equally – alongside other considerations such as feasibility and cost – in decisions made about a project.

The EA is made available for public review, and a public hearing is held to present its conclusions. MDOT and FHWA must consider all the comments received during this process before making a final decision about a project.

1.1. Project Description

After more than 50 years of use, I-375 including the I-75/I-375 Interchange and bridges is nearing the end of its useful service life and requires modernization. The current condition is one of the primary drivers of the I-375 Improvement Project purpose and need, along with the opportunity to help the city of Detroit meet certain economic development and land use planning goals for the vicinity.

The I-375 freeway was constructed as a limited-access, depressed, urban freeway about one mile in length. The Project area is within the city of Detroit in Wayne County, Michigan; see **Figure 1**. The following extents define the project area:

- I-375 from I-75 to south of Jefferson Avenue to the Detroit Riverfront, including I-375 west to where it ties into Beaubien Street
- I-75 from south of Mack Avenue to west of John R Street
- I-75/I-375 Interchange, including all ramps, and the Gratiot Avenue Connector
- Gratiot Avenue from south of Beaubien Street to east of the Dequindre Cut Greenway
- Jefferson Avenue from Beaubien Street to Rivard Street

The project area is defined to include reconstruction of the I-75/I-375 Interchange and to provide a direct connection to the Detroit Riverfront. The original project limits ended at the Gratiot

Avenue Connector approach and did not include the Gratiot Avenue bridge over the Dequindre Cut Greenway. However, because of stakeholder input and the existing poor condition of the bridge, the project limits were extended to include replacement of bridge over the Dequindre Cut Greenway.

I-375 is a median-divided, below-grade, urban freeway with two northbound and southbound lanes between Jefferson Avenue and Lafayette Avenue. The freeway has three lanes in each direction from Lafayette Avenue to the I-75 interchange. Seven bridges connect surface streets over I-375 along the Project corridor.

I-375 is at the east edge of the city of Detroit's central business district (CBD) and provides freeway access directly to Jefferson Avenue, the Renaissance Center, Hart Plaza and the financial district. Land uses in this area include business, residential, and urban open space.

MDOT is managing the Project in partnership with the Federal Highway Administration (FHWA). The study identified the Project's purpose and need; developed, screened and refined alternatives, and selected the Preferred Alternative evaluated in this document. Stakeholders in the study include commuters, tourists, residents, businesses, entertainment venues, places of worship, and schools. Stakeholder participation was solicited early and often during the study process. Meetings with a Local Advisory Committee (LAC) and Government Advisory Committee (GAC), created for the study, helped to inform technical analyses and refine alternatives. Input given by residents, property owners, public officials, businesses, and other stakeholders at public and individual meetings also played a vital role in the study of I-375.

In the officially adopted regional plans, SEMCOG's *2045 Regional Transportation Plan for Southeast Michigan*, the project is included as project Number 13286 (SEMCOG, 2013). Design and Right-of-Way (ROW) of the project is included in the *Fiscal Year 2020-2023 Transportation Improvement Program for Southeast Michigan* project Number 522 and obligated in 2020 and 2021 respectively (SEMCOG, 2019). In September 2020, construction of the project was removed from the current TIP and proposed for inclusion in the year 2027.

Figure 1: Project Location

1.2. Project Background

I-375 opened to traffic in 1964 to provide direct freeway access to downtown Detroit. MDOT and FHWA studied the reconstruction of I-375 in 2000. At that time, an EA and Finding of No Significant Impact (FONSI) were completed, and design was completed and approved, but it was not constructed due to lack of funding. The proposed reconstruction was focused on providing a stronger vehicular connection to the Renaissance Center and East Riverfront for proposed casino developments. Since the 2000 EA was completed and the FONSI issued, the casinos have permanently established in other locations and the land use along the riverfront has changed to be more residential, retail and recreational, requiring a greater degree of pedestrian level access. Furthermore, new developments in Eastern Market, the Event Area and Greektown has changed the character and future vision along the east side of downtown. Consequently, the corresponding transportation needs of MDOT, the city of Detroit, and the local stakeholders have changed, and the formerly approved concept does not meet the current nor future projected needs for the surrounding area.

What is a Planning and Environmental Linkages (PEL) Study?

A PEL is a transportation study that is completed during the planning phase of a project to identify reasonable alternatives and considers environmental, community, and economic benefits and impacts. A PEL is a collaborative process, including public involvement, that identifies goals for a project.

In 2014, MDOT conducted a Planning and Environmental Linkages (PEL) study to identify and analyze alternative ways to address the needs of I-375. This study, which FHWA approved on February 22, 2016, included extensive public outreach efforts to update and identify current needs, detailed in **Section 5.2.1 Previous Public Meetings**. The 2014 PEL included the development of a purpose and need and the identification of six “Illustrative Alternatives” and two “I-375/I-75 Illustrative Interchange Alternatives.” The PEL was a joint effort among FHWA, MDOT, the Detroit Downtown Development Authority, the Detroit Riverfront Conservancy and stakeholders. **Chapter 3 Alternatives** of this EA describes the study of the Illustrative Alternatives and the process by which those alternatives were screened and refined to reach a Preferred Alternative during the EA process.

1.3. Project Information

Background material, such as the PEL, and supporting technical memorandums developed for the I-375 Improvement Project can be found on the Project website at www.michigan.gov/i375study.

2. Purpose and Need

What is a Purpose and Need Statement?

A Purpose and Need Statement defines the transportation problems that a project must solve. The purpose is the "what"; it explains the problem the project is intended to address. The need is the "why"; it is the evidence that a transportation problem exists.

The Purpose and Need Statement is used to compare project alternatives and sets the baseline for evaluating the alternatives. The analysis will not further consider alternatives that do not meet the basic needs of a project.

2.1. Background

The Project's purpose and need identified in the 2014 PEL study has been updated in consideration of recent changes in the area surrounding I-375, including the following new land use and transportation plans and development:

- Emerging vision and plans for the East Jefferson corridor, East Riverfront, Greektown, and Eastern Market.
- Transit updates including the *Regional Transit Master Plan* the Regional Transit Authority of Southeast Michigan (RTA) completed in 2016; a bus rapid transit study along Woodward Avenue and Gratiot Avenue corridors, the launch of the QLine Streetcar on Woodward Avenue, and the *Comprehensive Operations Analysis* that the Suburban Mobility Authority for Regional Transportation (SMART) completed in 2019.
- Greater emphasis, planning and implementation of bicycle networks in the city, including the launch of bicycle-share MoGo in Detroit.
- New private commercial and residential development underway in downtown Detroit, including a plan for redevelopment of the Brewster-Douglass property on the northwest corner of the I-75/I-375 Interchange and the University of Michigan's Detroit Center for Innovation at the former Wayne County Jail site on Gratiot Avenue.
- Rapidly changing transportation technologies including autonomous and connected vehicles and other emerging mobility options.
- The city of Detroit's *Strategic Plan for Transportation*, released in September 2018, outlining the City's four-year vision to improve its transportation system.
- The city of Detroit's *Downtown Detroit Transportation Study,* released December 2018, detailing the City's plans for to improve the downtown transportation system for all users.

2.2. Project Purpose

The purpose for the I-375 Improvement Project is to identify a transportation improvement alternative that will achieve the following goals:

- Address outdated interchange design, deteriorated bridges and roadways with an appropriate solution, which considers safety, operations and long-term lifecycle costs.
- Address existing and future transportation needs and roadway safety for all users.
- Improve connectivity to surrounding areas for both vehicular and nonmotorized users, and enhance connections to existing and planned transit services, which may result in improved community health.
- Enhance access to enable future development and other placemaking opportunities envisioned in official land use and long-term economic development plans.

2.3. Project Need

The I-375 Improvement Project will address the needs described in the following sections.

2.3.1. Outdated Design

The I-375 and I-75/I-375 Interchange and the freeway bridges are outdated and no longer reflect current roadway design standards. The 2014 PEL study included a *Road Safety Audit* (RSA), which identified safety deficiencies along I-375 and at the I-75/I-375 Interchange. The RSA also provided recommendations to address these problem areas.

The deficiencies identified in the project area include a tight roadway curve at the south end of I-375 (Jefferson Avenue Curve), tight curves along mainline northbound I-75 mainline, inadequate distance to merge into traffic at Larned Street and Lafayette Avenue, inadequate visibility on southbound I-375 at the Lafayette Avenue exit, and confusing left lane entrance and exit ramps at Madison Avenue. Other roadway curves do not meet current design standards and need to be lengthened to improve the driver's ability to safely see other traffic.

2.3.2. Condition of Bridges and Roadways

What is 'structurally deficient'?

In order for a bridge to be considered structurally deficient it must have a condition rating of four (poor) or less for either the bridge deck, superstructures, substructures or culverts, based on standards set by the National Bridge Inventory. The bridge deck is the section that serves as the roadway for vehicles, the superstructure holds the deck, and the substructure holds the superstructure.

The bridges that cross I-375 and the I-75/I-375 Interchange are important facilities for motorized (vehicles) and nonmotorized (pedestrians, wheelchairs and bicyclists) users. See **Table 1** for condition details for each bridge. Using the National Bridge Inventory, bridge components are rated on a scale of nine to zero, nine is new, eight to seven is good, six to five is fair, four is poor, and anything less than three is critical.

There are seven bridges that cross over I-375. Of those bridges, structural components of Larned Street and Jefferson Avenue are rated poor, classifying them as structurally deficient. The remaining bridge components are rated five (good) or better. There are 13 bridges located

within the I-75/I-375 Interchange and four that cross I-75, none of which are classified as structurally deficient. The components of those bridges are all rated five (good) and better. The project also includes the Gratiot Avenue bridge over the Dequindre Cut Greenway, of which the deck is rated poor classifying it as structurally deficient.

Table 1: Bridge Inventory

	Year Built	Last Rehab	Structurally Deficient	Deck	Super-structure	Sub-structure
Bridges over I-375						
Hastings St	1962		No	Fair	Fair	Fair
Jefferson Ave.	1962		Yes	Poor	Poor	Fair
Larned St.	1960		Yes	Poor	Fair	Poor
Lafayette St.	1960	1990	No	Good	Good	Fair
M-3 (Gratiot Ave.)	1963	1996	No	Good	Good	Fair
Monroe St.	1959	1996	No	Fair	Good	Good
Madison Ave.	1964		No	Fair	Good	Fair
I-75/ I-375 Interchange						
Brush St. Entrance Ramp (over I-75 Turning Roadway)	1970	1998	No	Good	Fair	Fair
Brush St. Entrance Ramp (over I-75 SB to EB Gratiot Ave. Connector Ramp)	1970	1998	No	Good	Good	Good
Gratiot Ave. Connector (EB over I-375)	1964	1998	No	Good	Fair	Good
Gratiot Ave. Connector (WB over I-375)	1964	1998	No	Good	Good	Good
Gratiot Ave. Connector (EB over NB I-375 to SB I-75)	1964	1998	No	Good	Fair	Fair
Gratiot Ave. Connector (WB over NB I-375 to SB I-75)	1964	1998	No	Good	Fair	Fair
Gratiot Ave. Connector (EB over SB I-75 to EB Gratiot Ave.)	1970	1998	No	Good	Good	Good

	Year Built	Last Rehab	Structurally Deficient	Deck	Super-structure	Sub-structure
Gratiot Ave. Connector (WB over SB I-75 to EB Gratiot Ave.)	1970	1998	No	Good	Good	Good
SB I-75 to EB Gratiot Ave. (over I-75)	1964	1998	No	Good	Good	Good
NB I-75 to NB I-75 Ave. (over I-375)	1964		No	Fair	Good	Good
NB I-375 to SB I-75 (over I-75)	1963	1998	No	Good	Fair	Fair
WB Gratiot Ave. Connector to SB I-75 (over I-75)	1963	1998	No	Good	Good	Good
Russell St. (over Gratiot Ave. Connector)	1970	2006	No	Good	Good	Fair
Bridges over I-75						
Brush St.	1970		No	Fair	Fair	Fair
John R St.	1970	1998	No	Good	Fair	Fair
Wilkins St.	1961	2007	No	Good	Good	Good
Mack Ave.	1961	2007	No	Good	Good	Good
Bridge over Dequindre Cut Greenway						
Gratiot Ave.	1929	1970	Yes	Poor	Fair	Fair

Source: MDOT Highway Bridge Report, March 13, 2020

MDOT evaluates pavement condition annually using the Pavement Surface Evaluation Rating (PASER) rating system. The PASER rating system uses a visual inspection to rate surface pavement as Poor, Fair or Good. The most recent assessment, done in 2019, rates I-375 pavement as Poor. The I-75/I-375 Interchange pavement is rated both Fair and Poor (Michigan Transportation Asset Management Council, 2019).

2.3.3. Existing and Future Transportation Needs

2.3.3.1. Traffic Operations

The following operational issues occur within the project limits:

- Congestion occurs along Jefferson Avenue west of I-375 due to high traffic volumes and inefficient mix of direct and indirect turn movements in the boulevard section.

- Slowdowns occur on southbound I-375 at the section between I-75 and Lafayette Avenue where southbound I-75 vehicles must weave across the freeway to exit between the northbound I-75 on-ramp and the Lafayette Avenue off-ramp. Additionally, in the morning rush hour there is poor level of service (LOS) due to this weaving as well as vehicles backing up from the Lafayette Avenue ramp onto the I-375 freeway.
- In the evening rush hour, there is congestion on northbound I-75 from west of the study area (west of M-10) to the Mack Avenue off-ramp. This is due to the low speed exit ramp vehicles take to stay on I-75 and the weave and merge maneuvers within the interchange. The left lane of the northbound I-75 to northbound I-75 ramp has an undesirable left lane merge with the northbound I-375 traffic entering I-75.

What is 'level of service'?

Level of service (LOS) is a "grading" system to present the degree of traffic congestion on a roadway on a letter scale from LOS A (best) to LOS F (worst). LOS A represents near ideal traffic flow, while LOS F represents a breakdown of the traffic flow. See **Figure 15** for a full description of each level.

2.3.3.2. Safety

The following factors contribute to the need for safety improvements along I-375 for vehicular traffic:

- Geometric deficiencies increase the potential for crashes in the Project area, such as:
  - Northbound I-75 curve over I-375,
  - Southbound I-375 curve onto East Jefferson Avenue,
  - Madison Avenue off-ramp curve over southbound I-375,
  - Left-sided exit and entrance ramps to and from Madison Avenue and Gratiot Avenue, and
  - Merge at northbound I-375 and northbound I-75 where three lanes from northbound I-375 merge with two lanes from northbound I-75 to form four lanes.
- The backups caused by traffic congestion increase the potential for crashes in the Project area.
- Poor sight distance and crashes along the Jefferson Avenue Curve leading in and out of the CBD.
- Left turn movements, such as West Jefferson Avenue and Beaubien Street, create conflict points and vehicular safety issues.

The following factors contribute to the need for safety improvements for nonmotorized users:

- Sidewalk gaps, missing pedestrian crossings, narrow walkways, and fast traffic without buffers creates a need for safer access for all nonmotorized users.
- Confusing roadway configurations for nonmotorized users that contribute to safety concerns, such as:

  - East Jefferson Avenue near the northbound I-375 Service Drive,
  - Westbound Gratiot Avenue connecting to the Gratiot Avenue Connector where there is free-flow traffic and unsafe crossing maneuvers for pedestrians on the north side of the roadway,
  - Lack of a sidewalk on the north side of the roadway near the Gratiot Avenue Connector and Gratiot Avenue, and
- Large blocks and vacant properties contribute to safety concerns for pedestrians.

2.3.4. Connectivity and Access Issues

The I-375 freeway and I-75/I-375 Interchange create a lack of connectivity for vehicles and pedestrians between the CBD, Greektown, stadiums, Eastern Market, the neighborhoods to the east, and the Detroit Riverfront.

The existing service drives and I-375 do not connect to the Detroit Riverfront, a popular developing area for commercial, residential, and recreational activity. Some of the new developments in the area include the River East development, University Prep Science & Math High School, Michigan Department of Natural Resources (DNR) Outdoor Discovery Center, Orleans Landing residential development, Presbyterian Village, and Roberts RiverWalk Hotel (MDOT, 2014). It is also home to the RiverWalk, Iron Belle Trail, and planned Joe Louis Greenway.

2.3.4.1. Vehicular

The existing roadway configuration in the Project area provides poor connectivity and confusing vehicular access to CBD destinations through the I-75/I-375 Interchange and the Gratiot Avenue Connector. The following factors contribute to connectivity and access issues:

- Due to the close spacing of the ramps, operational issues such as short weaving distances between northbound I-75 to the southbound I-375 off-ramp at Lafayette Avenue can make exiting the freeway difficult for vehicles (MDOT, 2014).
- At the northern end of the corridor, I-375 does not have a direct connection to Gratiot Avenue. The existing connection the Gratiot Avenue Connector shifts traffic onto northbound Gratiot Avenue, making it difficult for those who intend to head south towards the CBD.
- The Madison Avenue ramps only access northbound I-75, with no access to southbound I-75.
- At the southern end of the corridor, I-375 directs southbound traffic onto westbound Jefferson Avenue, and those wishing to travel eastbound have only indirect access, providing limited connectivity to the riverfront and development east of the Renaissance Center (MDOT, 2014).
- Limited east-west access between Lafayette Park and downtown Detroit, between Gratiot Avenue and Jefferson Avenue. Access is limited to three bridge crossings, including Monroe Street, Lafayette Avenue, and Larned Street. There is no access across at Clinton Street and Macomb Street.
- Limited east-west direct access between the Event Area and Eastern Market between Gratiot Avenue and Wilkins Street.

- Limited north-south direct access between Brush Park and Eastern Market and the Detroit Riverfront.
- Indirect access for vehicles coming to the north wanting to access the Renaissance Center parking east of the Renaissance Center.

2.3.4.2. Nonmotorized and Transit

The undesirable transit and nonmotorized environments along I-375 and Jefferson Avenue corridors include long pedestrian crossing distances, lack of bicycle facilities, poor connectivity to existing transit services, and noise and speed of freeway traffic (MDOT, 2014). Connections between the CBD and the eastside neighborhoods are limited for nonmotorized users by complicated vehicular movements and the deteriorating state of some of the bridges spanning I-375. Examples of connectivity and access issues include:

- Long distance between the Gratiot Avenue and Monroe Street bridge crossing with insufficient sidewalk width on the north side of the Monroe Street bridge.
- Marked bicycle accommodations on Jefferson Avenue and Lafayette Avenue end at the northbound Chrysler Service Drive before entering the CBD.
- No direct bicycle access from the Chrysler Service Drives to and from the RiverWalk.
- No direct crossing to the Eastern Market from the Dequindre Cut Greenway across Gratiot Avenue.
- Limited options along I-375 corridor to access the Eastern Market or Brush Park for bicycles and pedestrians. Brush Street must be used to access Brush Park and Russell Street must be used to access the Eastern Market.
- Gratiot Avenue Connector divides the Eastern Market and only allows pedestrian connectivity at Russell Street and the pedestrian bridge near Market Street.
- Division Street pedestrian bridge, between Brush Park and Eastern Market, does not have curb ramps that are compliant with the Americans with Disabilities Act (ADA) at the crossings of the service drives.
- Transit routes leading out of the dense CBD and urban core are limited to only four corridors that cross the freeway facility to provide connections to the east and northeast.

2.3.5. Enable Future Development and Placemaking

2.3.5.1. Consistency with Local and Regional Planning

New land use plans, such as the *Your! Detroit East Riverfront Study,* detail new visions for the city of Detroit (City of Detroit, 2017). In the Project area, the City envisions better connectivity between the neighborhoods and the Detroit River. The City also encourages development, preserving the residential character of neighborhoods east of I-375, supporting quality of life, improving access and safety, and enhancing nonmotorized travel options.

The I-375 corridor currently does not support those objectives. It is a barrier between the CBD and the neighborhoods, does not connect to the riverfront, and lacks safe nonmotorized infrastructure. I-375 was built in a different era and the City now envisions reconnecting the East Lafayette neighborhoods and the East Jefferson Avenue corridor with the CBD, as well as additional connectivity within the CBD. The city completed the *East Jefferson Corridor*

Enhancement Plan in 2019 and has plans to further study the corridor in the future. Updates are necessary for the infrastructure to match the future vision of the community and its plans.

3. Alternatives

This chapter describes the alternatives MDOT considered for the I-375 Improvement Project and the process by which a Preferred Alternative was selected. The alternatives development process began in 2014 with the PEL study, see **Section 1.2 Project Background**, which, with stakeholder input, identified the purpose and need for the Project, see **Chapter 2 Purpose and Need.** The PEL study identified six Illustrative Alternatives and two Illustrative Interchange Alternatives which were carried forward into this environmental assessment and screened, resulting in the selection of Practical Alternatives 4 and 5. These two remaining alternatives were presented to the public and studied in greater detail, refinements were made, resulting in the selection of Practical Alternative 5. Through further stakeholder engagement, Practical Alternative 5 was refined into four additional Practical Alternatives, 5A with Direct Lefts, 5A with Indirect Lefts, and 5B with Direct Lefts, and 5B with Indirect Lefts. Those four alternatives were screened and ultimately Practical Alternative 5B with Direct Lefts was selected as the Preferred Alternative, which is studied in this environmental assessment, see **Chapter 4 Affected Environment and Potential Impacts**.

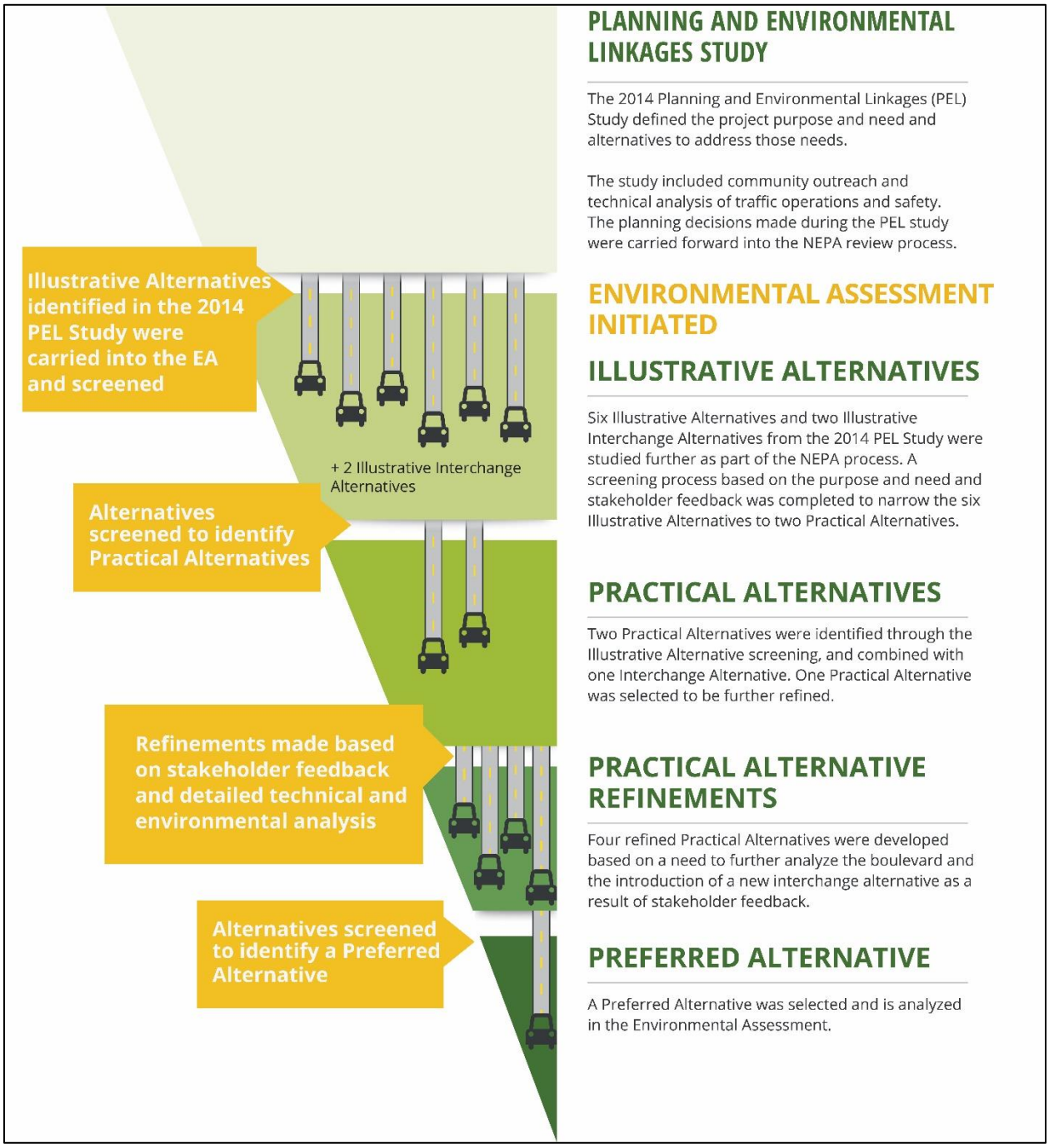
As a result of the alternatives analysis, MDOT's Preferred Alternative for I-375 is to de-designate it as an interstate highway and re-designate it as a state route. The existing freeway would be removed and replaced with a new boulevard aligned along the west side of the I-375 corridor. Gratiot Avenue and the new boulevard will intersect at-grade, meaning the two roadways cross at the same level as the local street grid. Access to I-75 will be via a new interchange north of Gratiot Avenue that provides access to and from the CBD and Eastern Market and many other destinations in the vicinity. The Preferred Alternative is described in more detail in **Section 3.2 Preferred Alternative**

3.1. Alternatives Screening

To satisfy NEPA requirements under 40 Code of Federal Regulations (CFR) 1508.9(b), MDOT first considered a broad range of alternatives for the I-375 Improvement Project, including the alternative to do nothing (the "No-Build Alternative") and low-cost measures. See **Figure 2** for a diagram that shows the Project's complete screening process, which will be detailed in the sections below**.**

At all steps of the process, the alternatives were developed and screened, relying heavily on public, stakeholder, and agency input as well as technical analysis. **Chapter 5 Public Participation and Agency Coordination** provides more details about how the project used public and agency participation in the planning and decision-making process.

Figure 2: Alternatives Screening Process



3.1.1. No-Build Alternative

Consideration of a “No-Build Alternative” is a requirement of the NEPA process. This alternative would maintain the existing configuration of the I-375 roadway and the I-75/I-375 Interchange and would rely on routine maintenance, such as pavement and bridge maintenance, to keep the roadway operational.

What is a No-Build Alternative?

The No-Build or No-Action Alternative is one that occurs if the proposed project was not constructed. This provides a baseline condition against which to compare the socioeconomic and environmental impacts of the build alternatives, as well as the ability to meet the Project purpose and need.

The I-375 No-Build Alternative would result in:

- Continued use of transportation facilities that do not meet current design standard.
- Existing ramps that currently operate over capacity during peak periods will continue to be congested.
- Continued high crash potential, specifically at the southbound exit ramps to Lafayette Avenue and Congress and Larned streets as well as the Jefferson Avenue Curve.
- Continued limited connectivity for vehicular and nonmotorized users.
- Limitations to current and future economic development plans.

Based on the above conditions, the No-Build Alternative does not meet the Project purpose and need and so was dismissed from further consideration, see **Chapter 2 Purpose and Need**.

3.1.2. Low Cost Alternatives

MDOT also considered the alternative of implementing activities that maximize the efficiency of the present system including the following:

- Transportation demand management measures, such as improving multimodal facilities and providing bus rapid transit (BRT), to reduce vehicular demand.
- Transportation system management and operation measures, such as low-cost planning techniques, to improve utilization of existing transportation facilities.

The PEL study considered and dismissed these as stand-alone alternatives because they do not meet the I-375 Improvement Project purpose and need to address the existing roadways' and bridges' conditions or designs, see **Chapter 2 Purpose and Need**.

3.1.3. Illustrative Alternatives

The 2014 PEL study identified six "Illustrative Alternatives" and two "Illustrative I-75/I-375 Interchange Alternatives." Those were carried into the EA, refined, and ultimately results in the Preferred Alternative through the screening and refinement process conducted during the EA process. The Illustrative Alternatives and Illustrative Interchange Alternatives are described as follows:

- Illustrative Alternative 1 – Reconstruct Freeway As-Is with Ramp Improvements: This alternative would reconstruct the freeway as-is in its current footprint.
- Illustrative Alternative 2 – Reconstruct Freeway with Riverfront Connection: This alternative includes the same features as Illustrative Alternative 1 and would add a surface-level

riverfront connector roadway between East Jefferson Avenue and Atwater Street east of Schweizer Place.

- Illustrative Alternative 3 – Freeway Transitions to Surface Street at Larned Street: In this alternative I-375 would transition from a freeway to a surface-level boulevard with four lanes in each direction south of Lafayette Avenue.
- Illustrative Alternative 4 – Convert the I-375 Freeway to Surface Street with East Alignment: This alternative would convert I-375 to a surface-level boulevard with four lanes in each direction south of Gratiot Avenue and shift roadway to the east (neighborhood) side.
- Illustrative Alternative 5 – Convert the I-375 Freeway to Surface Street with West Alignment: This alternative would convert I-375 to a surface-level boulevard with four lanes in each direction south of Gratiot Avenue and shift roadway to the west (CBD) side.
- Illustrative Alternative 6 – One-Way Pair of Surface Streets and Below-Grade Greenway: This alternative would convert I-375 to surface-level, one-way streets with four lanes in each direction south of Gratiot Avenue.
- Illustrative Interchange Alternative 1: This alternative would eliminate the left-hand ramps to Madison Avenue and converts the Gratiot Avenue Connector to a surface-level roadway with a signalized intersection at Russell Street. The roadway configuration in the I-75/I-375 Interchange would closely match the existing configuration.
- Illustrative Interchange Alternative 2: This alternative would reconfigure the I-75/I-375 Interchange and creates a through-traffic movement for I-75. I-375 would transition to a surface-level roadway south of the interchange, with a signalized intersection at Gratiot Avenue. It would eliminate the Gratiot Avenue Connector and create new direct access points to Brush Street from southbound I-75 and from Brush Street to northbound I-75.

Screening criteria were used to evaluate these Illustrative Alternatives, which concluded that Illustrative Alternatives 4 and 5, both of which are boulevard alternatives, and Illustrative Interchange Alternative 2 best met the Project purpose and need. They were found to be the most consistent with city of Detroit land use plans, economic development opportunities, enhanced pedestrian and community access, and placemaking opportunities. Although these alternatives may impact residential and business properties and would introduce additional delays for some travelers; their overall benefits were found to outweigh their potential impacts and so MDOT advanced them for further study in the EA, retitling them as the “Practical Alternatives.”

3.1.4. Practical Alternatives

The next step in the alternatives analysis was to present Practical Alternatives 4 and 5 to the LAC and GAC at a November 2017 meeting and to the public at the December 5, 2017 public meeting. These meetings were followed up with additional one-on-one stakeholder meetings. Based on the input received at these events and more detailed engineering analysis and impact evaluation, MDOT concluded that a refinement of Illustrative Alternatives 4 and 5 combined with Illustrative Interchange Alternative 2 would address the Project purpose and need. The following sections provide details on the identified Practical Alternatives. For additional information on the alternatives, see the *I-375 Geometric Technical Memorandum*.

3.1.4.1. Practical Alternative 4

Practical Alternative 4 would convert the I-375 freeway to a surface-level boulevard with four lanes in each direction south of Gratiot Avenue, see **Figure 3** and **Figure 5**. Features of the mainline for Practical Alternative 4 would include:

- Transitioning the freeway from its existing depressed grade at Gratiot Avenue to meet the local street grade at Clinton Street.
- Eliminating both service drives.
- Shifting the boulevard section to the east (neighborhood) side and continuing it as a local street south of Jefferson Avenue, connecting directly to Atwater Street, see **Figure 3.**
- Adding a new riverfront connection east of Schweizer Place.
- Constructing a shared-use path connecting the RiverWalk to Antietam Avenue; providing a landscaped buffer between the path and the neighborhood side ROW line.
- Adding a new local road along the western (CBD) edge of the I-375 corridor from Larned Street to Clinton Street to improve mobility and reduce congestion along the boulevard.
- Aligning the boulevard closer to the existing Schweizer Place alignment in a way that minimizes impacts to existing properties south of Jefferson Avenue as well as the historic Christ Church Detroit.

Features of the I-75/I-375 Interchange are similar to Illustrative Interchange Alternative 2 with the following refinements made to the Illustrative Interchange Alternative to develop the I-75/I-375 Interchange:

- Realigning I-375 freeway mainline through the interchange to reduce ROW impacts.
- Realigning mainline I-75 to minimize ROW impacts.
- Realigning northbound I-75 and northbound I-375 roadways so that northbound I-75 enters from the right, allowing I-75 traffic to utilize Mack Avenue.
- Realigning southbound I-75 and southbound I-375 roadways such that southbound I-75 is on the right-side of the freeway, allowing traffic from Mack Avenue to more safely access southbound I-75 and to improve operations.
- Prohibiting traffic flow to and from Mack Avenue interchange from I-375.
- Constructing Gratiot Avenue as a grade-separated interchange going over I-375.

3.1.4.2. Practical Alternative 5

Practical Alternative 5 is illustrated in **Figure 4** and in **Figure 6**. Practical Alternative 5 is similar to Practical Alternative 4 except it shifts the boulevard along the western (CBD) side of the corridor instead of the eastern (neighborhood) side. Practical Alternative 5 would also include the same changes to Illustrative Interchange Alternative 2 that are described above for Practical Alternative 4, the only difference being related to where it ties into the boulevard with the western alignment. With the western I-375 boulevard alignment, this alternative best accommodates potential economic development opportunities envisioned in the City's land-use plans for the corridor of creating a transition between the neighborhoods to the east and the CBD, see **Section 2.3.5.1 Consistency with Local and Regional Planning**.

Figure 3: Practical Alternative 4 Cross-Section

**Viewer is looking north*

Figure 4: Practical Alternative 5 Cross-Section

**Viewer is looking north*

Figure 5: Practical Alternative 4

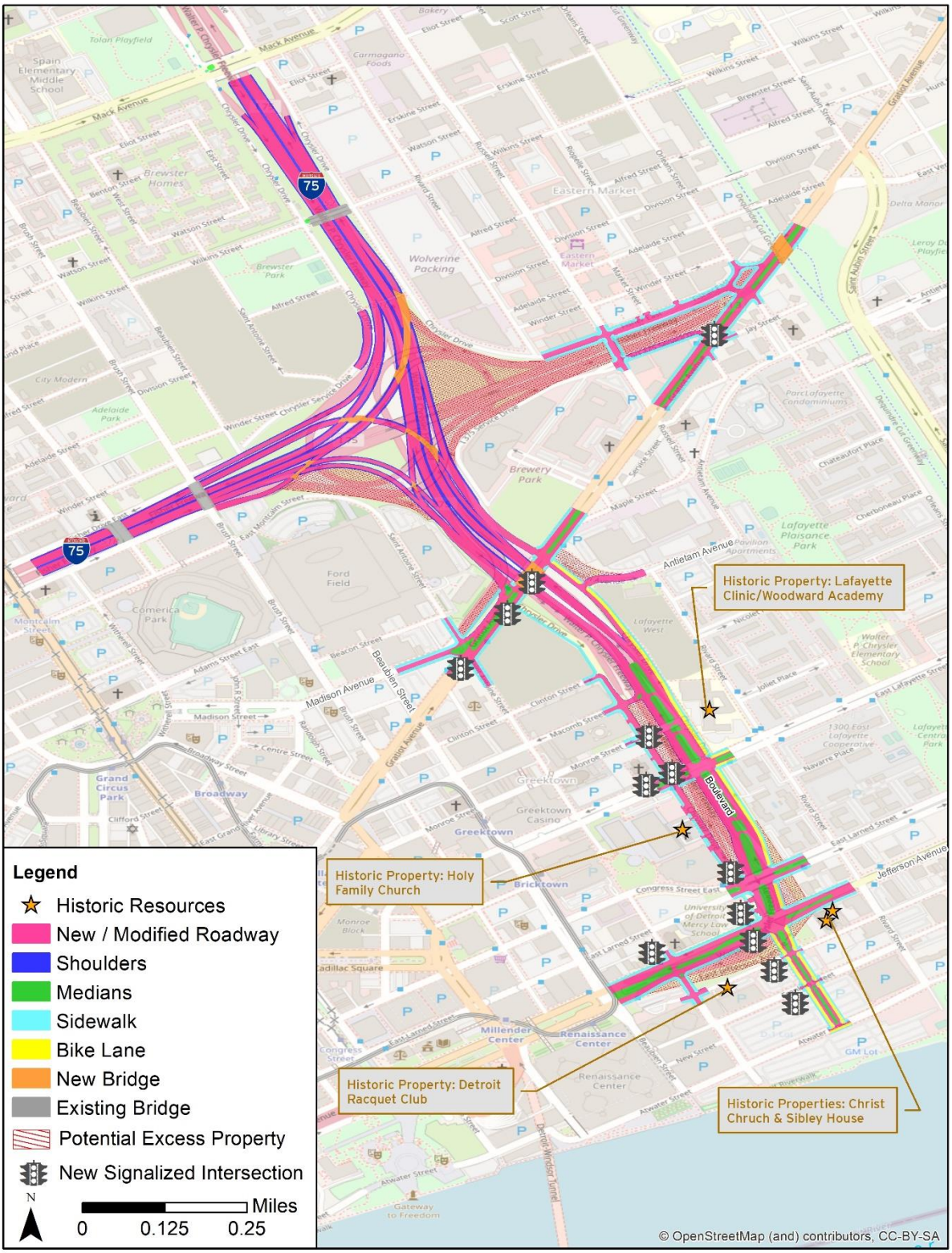
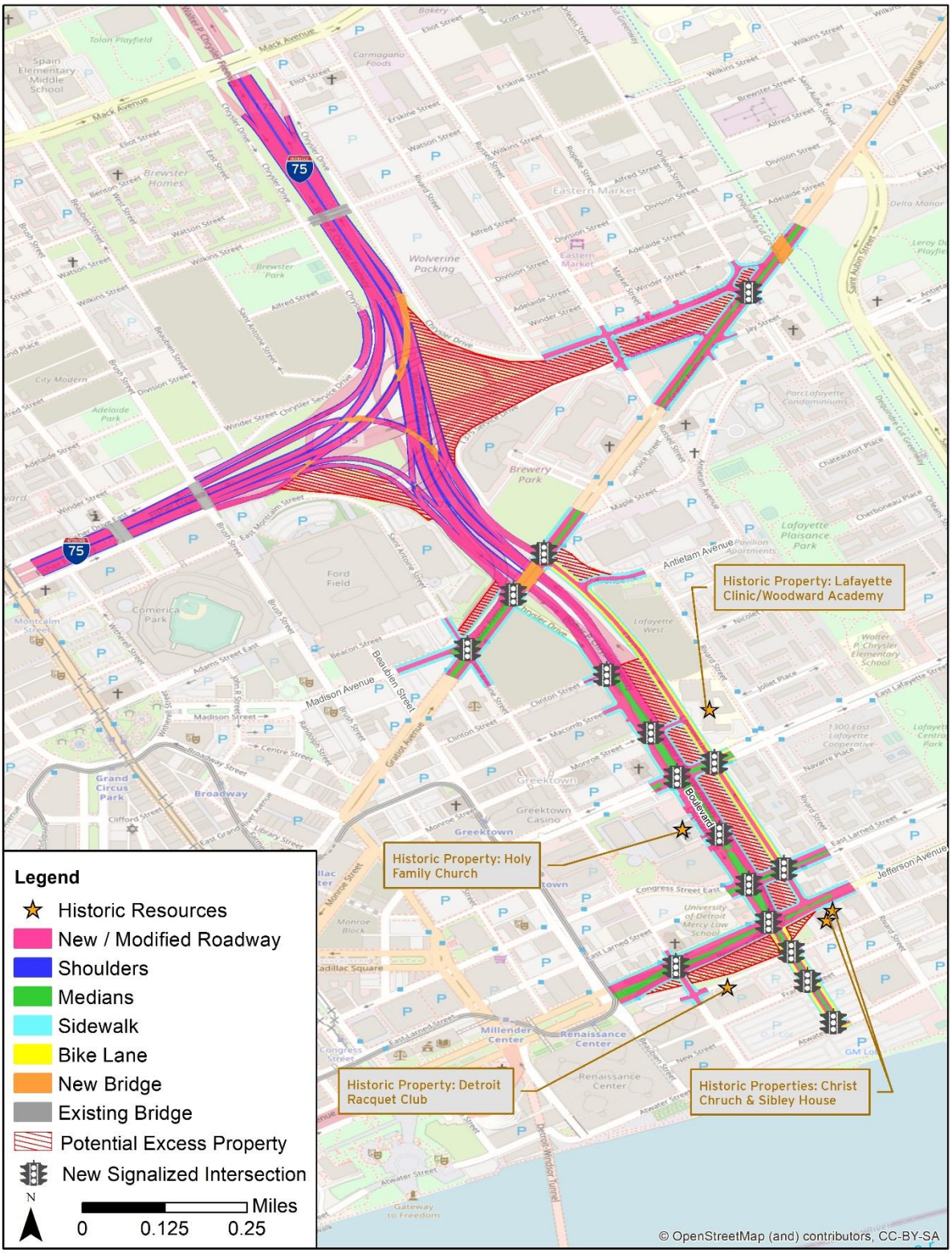


Figure 6: Practical Alternative 5



3.1.4.3. Evaluation of the Practical Alternatives and Selection of Practical Alternative 5

Overall, Practical Alternatives 4 and 5 would have similar impacts to the natural and human built environment. Each also would provide similar benefits related to transit and nonmotorized features and have similar safety improvements. They would affect parking the same and would provide the same traffic operations benefits and impacts. Practical Alternative 5 would require acquisition of slightly more ROW (1.82 acres for Practical Alternative 4 and 2.04 acres for Practical Alternative 5). Practical Alternative 4 would not impact historic properties while Practical Alternative 5 would potentially impact only one site, Holy Family Roman Catholic Church. Noise impacts would also be similar with 34 and 37 receptors being adversely affected for Practical Alternative 4 and 5 respectively. Overall, the analysis showed little difference between the impacts of the two Practical Alternatives, see **Appendix A** for an impact comparison of Practical Alternatives 4 and 5**.**

MDOT presented Practical Alternatives 4 and 5 to the public at the December 5, 2017 public meeting, see **Chapter 5 Public Participation and Agency Coordination** for details. Based on supportive feedback from the public meetings, as well as from workshops with the city of Detroit and one-on-one meetings with stakeholders in the Project area, Practical Alternative 5 was carried forward for further evaluation because stakeholders expressed preference for the boulevard to be aligned on the west side of the corridor. This was desired because it would create placemaking opportunities, enhance nonmotorized access and maintain a separation between the CBD and neighborhoods to the east. Although Practical Alternative 5 had a slightly greater impact, it was found to best accommodate the city's vision for the corridor. The boulevard aligned on the west (CBD) side would:

- Provide better access in and out of the CBD.
- Create an additional buffer for neighborhoods to the east.
- Maintain access to existing driveways on the west side of the boulevard, which would otherwise require long driveways cutting into the landscape.
- Maintain/reconfigure access on the east side of the boulevard to access the east-west roadways. For example, the Jean Rivard Apartments access along the service drives will be permanently removed. The project will incorporate appropriate access along Larned Avenue and Lafayette Avenue that provides similar, but slightly more indirect access.

3.1.5. Refinements to Practical Alternative 5

Once the western alignment was decided, MDOT proceeded to refine Practical Alternative 5 to further address public and agency input about better fitting the boulevard into the urban context. These refinements were developed through a series of 11 workshops with MDOT, the city of Detroit, and the Southeast Michigan Council of Governments (SEMCOG), as well as LAC and GAC meetings and numerous one-on-one stakeholder meetings, see **Chapter 5 Public Participation and Agency Coordination** for details.

To better fit an urban context, MDOT considered fewer lanes and a smaller footprint, with the goal being to achieve a better experience for nonmotorized users. Another consideration was creating potential excess property, which could be used for development opportunities alongside Lafayette Park on the east edge of the corridor. Also, design adjustments were made to better

accommodate access to Holy Family Roman Catholic Church and Blue Cross Blue Shield on the west side of the I-375 Service Drives. Refinements also included an updated alignment on Schweizer Place to reduce ROW impacts.

Nonmotorized access was improved with an added cycle track on the east side of the corridor, wider sidewalks, extension of bicycle lanes along Montcalm Street from Brush Street to the Dequindre Cut Greenway, and reductions in the median width of the boulevard. Intersection refinements included reduced curb radii, pedestrian-crossing islands, high-visibility crosswalks, and single-stage pedestrian crossings.

Stakeholders asked that MDOT reduce the size of the I-75/I-375 Interchange to potentially open more property for economic development and to improve connectivity between Gratiot Avenue, Eastern Market, Brush Park, and East Lafayette. As a result, in addition to the initial I-75/I-375 Interchange included in the Practical Alternatives (5A), MDOT evaluated a new interchange alternative (5B). Further evaluation of direct and indirect left turns along the boulevard was also completed to assess differences in traffic flow, connectivity, nonmotorized access, and safety.

What is an indirect left or 'Michigan Left'?

An indirect left, or "Michigan Left," occurs when an intersection does not permit a direct left turn. Instead, a driver proceeds through the intersection, making a U-turn at the median (note route of blue line on map).

At left: Example indirect left intersection at Woodward Avenue and Seven Mile Road. Source: Google Maps, 2018

The evaluation resulted in four Practical Alternatives, which were derived from the original Practical Alternative 5:

- Practical Alternative 5A with Direct Lefts
- Practical Alternative 5A with Indirect Lefts
- Practical Alternative 5B with Direct Lefts
- Practical Alternative 5B with Indirect Lefts

The refinements resulted in a roadway and interchange that better fits the urban setting, reflecting the feedback heard through stakeholder engagement, while meeting the I-375 Improvement Project purpose and need. Additionally, direct lefts were found to better fit the context of the project, reducing travel time for vehicles and the distance needed for pedestrians to cross the boulevard due to a narrower roadway width.

See the *I-375 Geometric Technical Memorandum* for full details on the refined Practical Alternatives.

3.2. Preferred Alternative Description

After the analysis described in the above sections, MDOT selected a Preferred Alternative, which was Practical Alternative 5B with Direct Lefts, as refined. As demonstrated above, the alternatives analysis involved identifying alternatives that met the Project's purpose and need, comparing the impacts of each viable alternative, and assessing if they met local plans and policies. Throughout the development and selection of Preferred Alternative, MDOT coordinated closely with the city of Detroit, FHWA, SEMCOG, local agencies, stakeholders, and the Project's LAC and GAC. Stakeholder desires and needs are reflected in the Preferred Alternative.

Stakeholders expressed a preference for connectivity provided by the new interchange, enhanced access with direct left turns, nonmotorized connections to the riverfront and east to west along Montcalm Street, pedestrian and bicycle safety, access to the Greektown Garage, considerations for special events, improvements for stormwater, and opportunity for economic development and placemaking. **Chapter 5 Public Participation and Agency Coordination** details the full stakeholder engagement process.

3.2.1. Boulevard Design Concept

Figure 7 shows a plan view of the Preferred Alternative boulevard concept. The boulevard concept was adopted based on local stakeholder input that envisions the experience along the proposed boulevard for future land uses, access to the CBD, a buffer for the neighborhood to the east, robust streetscape, commercial uses, and a quality place to walk and bicycle. The proposed boulevard could include wayfinding connections to the riverfront, a vista to the water heading south, easy navigation to and from the proposed boulevard with one-way to two-way street conversions, artful visual graphics for crosswalks, and excellent transit access. The proposed boulevard crossings at Lafayette Avenue and Jefferson Avenue were discussed at length during stakeholder engagement due to their importance in connecting eastside neighborhoods to the CBD, resulting in improvements at both crossings discussed in **Section 4.2.1 Nonmotorized**.

A cross section for the Preferred Alternative is illustrated in **Figure 8**. The proposed setback from the curb to a building edge would be approximately 25 feet, though there are expected to be exceptions in certain locations. The Preferred Alternative would accommodate a wider sidewalk on the west side (20-feet) than on the east side (10-feet) for increased pedestrian space. The east side of the boulevard would be designed to accommodate bicycle traffic with a two-way cycle track. Wide sidewalks along both sides of the boulevard and a cycle track along the east side would extend from the Atwater Street to Montcalm Street and provide pedestrian and bicycle connectivity from the boulevard to the Event Area, which includes the Theatre District, and Eastern Market, see **Figure 19**. Sidewalks that extend north over Montcalm Street and I-75 connect to the Service Drive north of I-75 to provide pedestrian connectivity to Brush Park.

The Preferred Alternative design also reduces stormwater runoff from the Project area that is discharged directly into the Detroit River, either through a new independent outfall or the reduction in impervious surface, as discussed in **Section 4.14 Water Resources**. This design will use Best Management Practices (BMPs) to limit or reduce the discharge of pollutants into the river.

Figure 7: Preferred Alternative Plan View

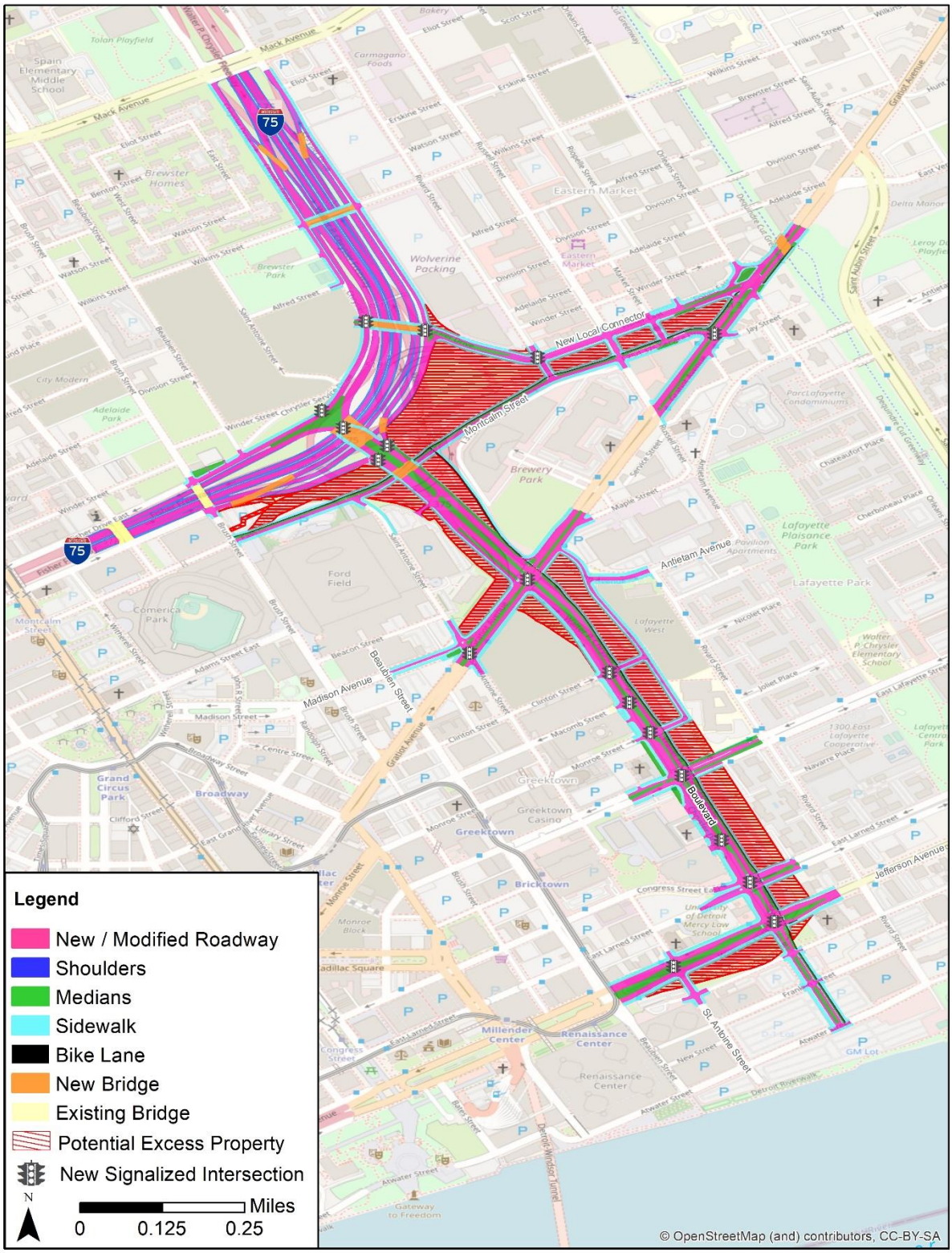
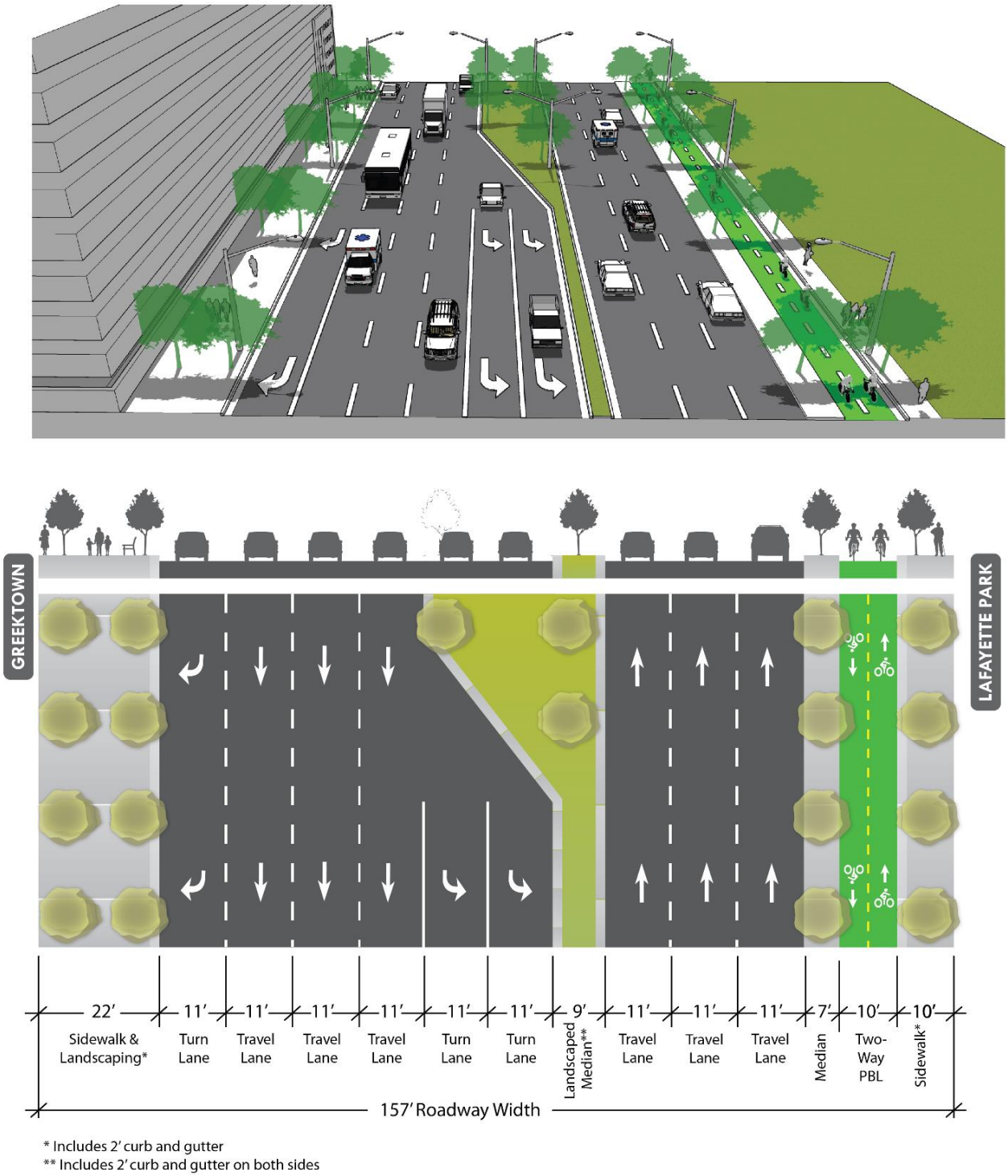


Figure 8: Preferred Alternative Boulevard Cross Section



Viewer is looking north

3.2.2. I-75/I-375 Interchange

The I-75/I-375 Interchange would be an urban-type interchange, reconnecting local connections between the Event Area, Brush Park, and Eastern Market, such as through Montcalm Street and the new local connector. It eliminates left-lane exits and better utilizes the I-75 Service Drives. The interchange would also eliminate the need for large flyover ramps, so all bridges and roadways remain at-grade while on the I-75 freeway and ramps are depressed or below grade. The layout is as follows:

- Northbound and southbound I-75 freeway traffic will move through the proposed interchange at speeds of up to 55 miles per hour (mph).
- Southbound I-75, near Mack Avenue, will stay right to exit and allows the driver to choose between two movements:
    - Vehicles stay right and exit to the Service Drive, with access to the following roadways:
        - Local connector roadway to Eastern Market, via left turn from the Service Drive,
        - Brush and John R streets, Woodward Avenue and the existing Service Drive west of the Project area, or
    - Vehicles stay left to remain on the southbound boulevard.
        - Southbound boulevard traffic travels under the new local connector to the intersection of the northbound boulevard traffic.
        - Separating the southbound boulevard traffic from the service drives and connector intersections results in a safer and more easily drivable intersection for all users.
- Northbound I-75 vehicles, near Brush Street, will stay right to exit and allows the driver to choose between two movements for exiting to local streets:
    - Vehicles stay to the right to access the southbound boulevard, or
    - Vehicles stay to the left and exit to the Service Drive, with access to the following roadways:
        - Local connector roadway to Eastern Market, via right turn from the Service Drive,
        - Wilkins Street and the existing Service Drive north of the Project area.
- Northbound boulevard vehicles connect to I-75 with the following possibilities:
    - Vehicles stay in the left three lanes to pass through the major intersection and continue to southbound I-75, or
    - Vehicles stay in the right two lanes to turn right onto the ramp to northbound I-75. The third lane from the left allows through or right-turn movements.
    - Northbound traffic from the boulevard will enter either northbound or southbound I-75 on the right.
- The ramps to and from Mack Avenue on I-75 are braided ramps, meaning the ramps pass over other ramps to and from the boulevard using bridges to separate the roadways and ramp traffic. This eliminates dangerous weaving, or conflict points, for

more detail see page 35 of the *I-375 Geometric Technical Memorandum*. The braided ramp configuration at Mack Avenue would affect the following local traffic movements:

- Vehicles coming from the northbound boulevard will not able to exit to Mack Avenue.
- Vehicles entering the southbound I-75 from Mack Avenue will not able to exit to the boulevard.
- Vehicles wishing to make the above movements would have to use local streets.

3.2.3. Gratiot Ave./Madison Ave./St. Antoine St. Intersections

The Preferred Alternative I-75/I-375 Interchange design affects the design of the Madison Avenue, St. Antoine Street and Gratiot Avenue intersection, as well as the Gratiot Avenue intersection with the boulevard, see **Section 3.2.2 I-75/I-375 Interchange**. These intersections are complex due to the tight spacing, angles and proximity to the I-75/I-375 Interchange.

Left turns from Gratiot Avenue would be prohibited during normal operations. Additional analysis will be performed during final design to refine traffic operations for special events. During normal operations, there will be dual right-turn lanes at the Gratiot Avenue intersection with the boulevard from the southbound boulevard to westbound Gratiot Avenue and from westbound Gratiot Avenue to the northbound boulevard. The Gratiot Avenue and boulevard intersection would provide more accessibility for nonmotorized users and would provide more opportunity for placemaking and economic development around the intersection.

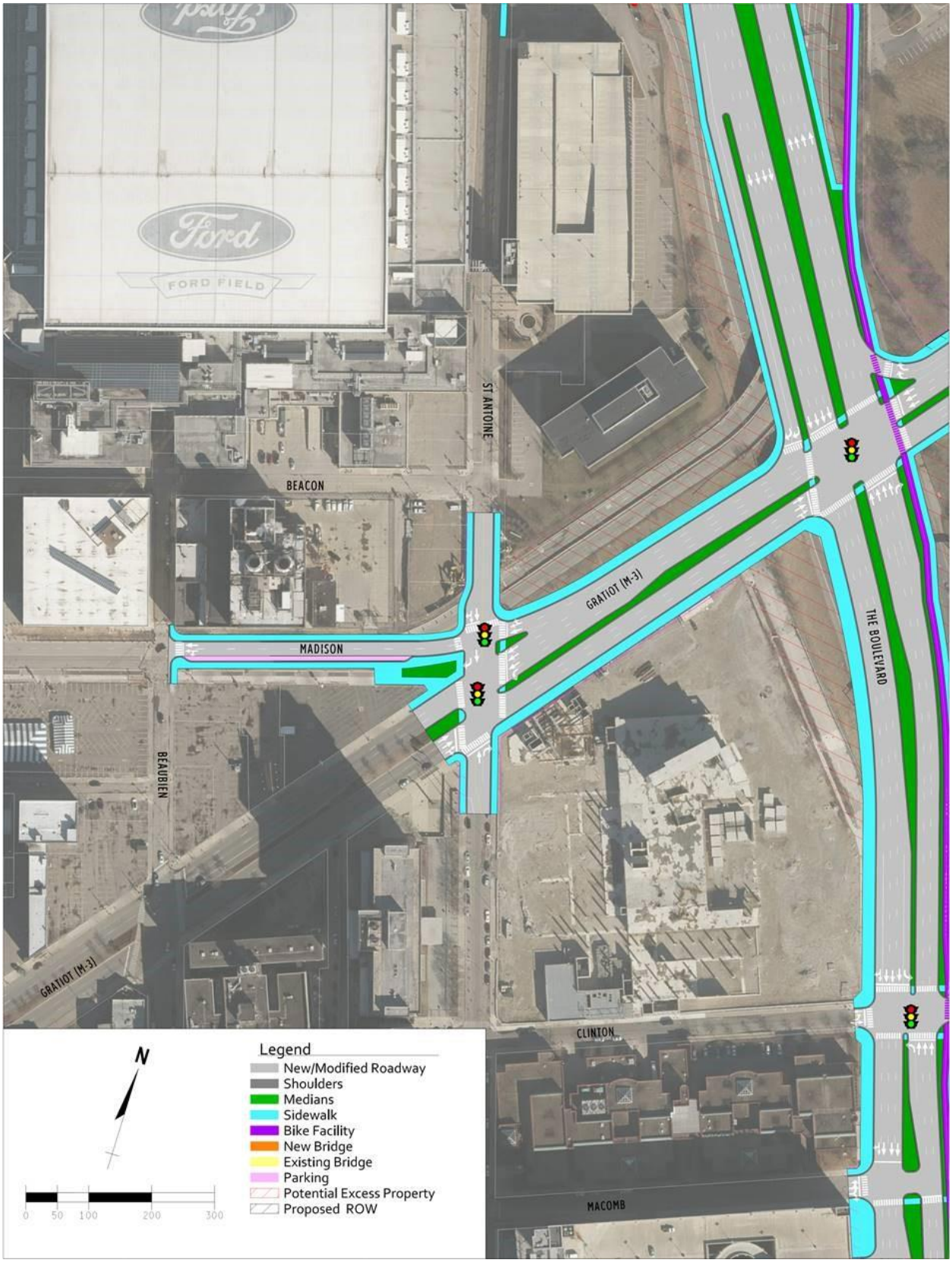
Many concepts for the Gratiot Avenue/Madison Avenue/St. Antoine Street intersection were analyzed. This included evaluating vehicular and nonmotorized access, inbound and outbound traffic in the area, and safety, both during normal periods and during special events. **Figure 9** shows the resulting preferred layout based on the evaluation.

To address prioritization for inbound access to the Events Area, Madison Avenue would be one-way westbound between Gratiot Avenue and Beaubien Street. Vehicles traveling eastbound on Madison Avenue from event venues would still access Gratiot Avenue via either Beaubien or Brush streets, one to two blocks west of the St. Antoine Street intersection

St. Antoine Street would be a two-way roadway from Montcalm Street to Lafayette Avenue. Vehicles would pass through the intersections with Madison Avenue and Gratiot Avenue, two intersections that are immediately adjacent to one another. Vehicles on St. Antoine Street would be able to turn right or go through at the intersection of Madison Avenue and Gratiot Avenue, but not turn left. Left turns would be prohibited from eastbound Gratiot Avenue to northbound St. Antoine Street or westbound Madison Avenue.

There were stakeholder concerns regarding special event traffic and egress from the Theatre District/Events Area. Additional analysis will be performed during final design to refine traffic operations for special events with the Preferred Alternative.

Figure 9: Detail of the Preferred Alternative Intersections near Ford Field

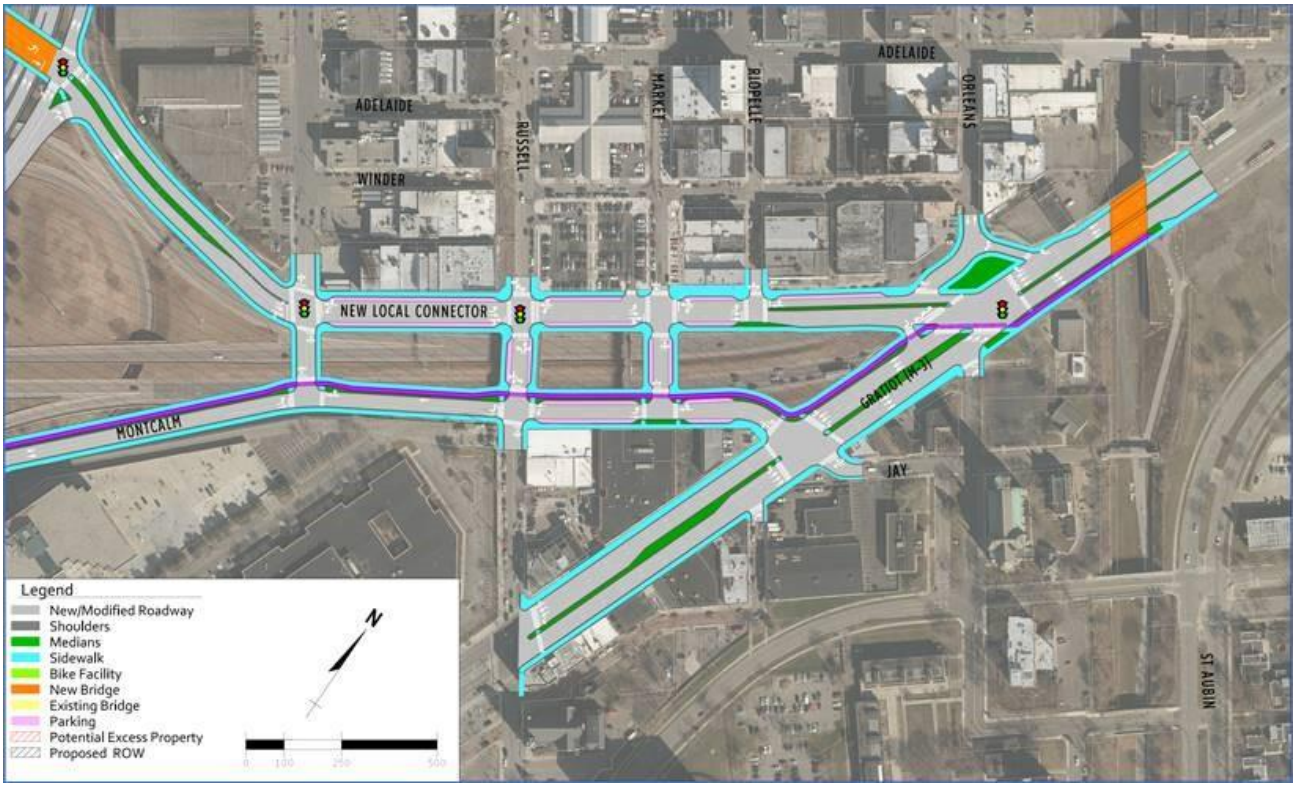


3.2.4. Eastern Market Area

In the Preferred Alternative, the Gratiot Avenue Connector would be removed, and Gratiot Avenue and the boulevard would intersect at-grade, meaning the two roadways would cross at the same elevation, see **Figure 10**. This design would match closely with the local street grid and improve east-west connections and reestablish the local street grid, improving accessibility for all users. Additional connectivity is enhanced by a north-south connection at Jay Street which would improve vehicular access from Lafayette Park and Eastern Market, as well as a north-south connection at Market Street, which would improve access between Gratiot Central Meat Market and Eastern Market, currently being served by a pedestrian bridge. Extending Montcalm Street from Brush Street to Gratiot Avenue improves connectivity and access for both vehicular and nonmotorized users. Adding a cycle track along Montcalm Street would connect the Dequindre Cut Greenway to Eastern Market and the CBD in the north.

A new local connector street would also be established along the alignment of the Fisher Service Drive. This connector provides direct access from Brush Park to Gratiot Avenue and also maintains the existing service drive connection up to Mack Avenue. Access to Brush Park is established through the establishment of a new bridge over I-75. The connector would allow for two lanes eastbound, one lane westbound and a continuous two-way left turn lane. The connector also retains on-street parking where feasible.

Figure 10: Detail of the Preferred Alternative at Eastern Market



3.2.5. Jefferson Avenue

The existing "Jefferson Avenue Curve," the exit from I-375 onto Jefferson Avenue, will be replaced with an at-grade signalized intersection at East Jefferson Avenue and the new boulevard, see **Figure 7**. Jefferson Avenue would be a median-divided multi-lane boulevard with a new intersection at St. Antoine Street and an intersection with the new boulevard. The intersection at St. Antoine Street would be signalized and have a total of four lanes in the eastbound direction with three through-lanes and a right through-lane. Eastbound left turns onto St. Antoine Street would be prohibited. In the westbound direction the intersection of St. Antoine Street has three through-lanes and two left-turn lanes. Access to the Detroit-Windsor Tunnel, an important international crossing, is not altered.

Pedestrian crossings of Jefferson Avenue at St. Antoine Street would not be permitted, and pedestrians would be required to use the north-south crosswalks at Beaubien Street or the new boulevard. The intersection of Jefferson Avenue and the new boulevard would be signalized and will allow left turns eastbound and southbound. Pedestrian crossings would be permitted across all legs of the intersection and pedestrian refuges are available in the medians.

On-street bicycle accommodations would be provided on the east leg of the intersection of Jefferson Avenue. These on-street bicycle accommodations would provide access to the two-way cycle track located on the east side of the boulevard. The bicycle accommodations will not extend west along Jefferson Avenue, west of the boulevard. However, the design of the intersection does not preclude a potential future extension to the west.

3.3. Preferred Alternative and Purpose and Need

The Preferred Alternative meets the Project purpose and need by addressing the design and condition of the existing roadway network; addressing existing and future transportation needs; improving connectivity for vehicular and nonmotorized users; and enhancing access to support official land use and long-term economic development plans, see **Chapter 2 Purpose and Need**.

3.3.1. Outdated Design

The Preferred Alternative addresses the outdated design of the freeway through the replacement of bridges and pavement and removal of the Jefferson Avenue Curve. Additionally, the I-75/I-375 Interchange will be reconfigured to reduce confusing entrance and exit ramps and reduce vehicular weaving by maintaining I-75 through traffic in the left lanes and exiting all traffic on the right. This Preferred Alternative removes all left lane exits and merges on the freeway. The Preferred Alternative will also reconstruct the pavement and bridges in the corridor.

3.3.2. Existing and Future Transportation Needs

The Preferred Alternative includes elements that will address existing and future transportation needs for all users and all modes and abilities. Multi-modal features including sidewalks with generous pedestrian space, a two-way cycle track on the boulevard and Montcalm Street and bicycle lanes crossing the boulevard increase safety for nonmotorized users. These elements improve access and connectivity for nonmotorized users as well as vehicular traffic. However,

the Preferred Alternative also increases the number of conflict points at intersections for pedestrians and bicyclists. The same is true for vehicular traffic due to the shift from a freeway to an at-grade boulevard.

The Preferred Alternative is also designed so as not to preclude future retrofitting to address changes in transportation technologies and services, such as autonomous and connected vehicles, better addressing the needs of multiple modes of transportation in the foreseeable future.

3.3.3. Connectivity and Access Issues

Connectivity and access in the Project area will be enhanced by new surface streets, as the freeway is brought to grade with the surrounding land uses, and the addition of the riverfront connection. The Preferred Alternative includes several new connections at Clinton Street, Montcalm Street, and a new local connector near Eastern Market. These new connections will provide access between neighborhoods and districts including the Event Area, Brush Park, Eastern Market, and CBD.

The Preferred Alternative includes protected and signalized crossings for pedestrians and additional cycle tracks that will create new opportunities for active transportation in the area. The sidewalks along the boulevard will generally be 10 feet on the east side and 20 feet on the west side from the back of the curb to accommodate pedestrian safety and placemaking. Separated buffered cycle tracks will run north-south and east-west along certain routes providing access from the riverfront to Eastern Market, Brush Park, and surrounding areas.

Increased access to Jefferson Avenue and the riverfront will improve connectivity for all users, including transit, creating an opportunity for increased transit service in the corridor.

3.3.4. Enable Future Development and Placemaking

With the western boulevard alignment, the Preferred Alternative accommodates potential economic development opportunities envisioned in the City's land use plans for the corridor, such as the *Your! Detroit East Riverfront Study* and the *Eastern Market Neighborhood Framework Plan.* Their land use and economic development plans support a boulevard on the west edge of the corridor, which results in potential development and placemaking opportunities on the east edge of the corridor, providing a separation between downtown and the neighborhoods east of I-375. The reduction in the median width of the boulevard, from Practical Alternative 5 to the Preferred Alternative, provides additional potential for placemaking. The potential excess property, that may be available, could be an open green space in the interim.

4. Affected Environment and Potential Impacts

This chapter describes the human and natural environment within the Project area and the potential impacts that would result from the Preferred Alternative. **Section 4.20 Project Mitigation Summary (Green Sheet)** of this report summarizes mitigation measures that can be applied to the Project to address the identified impacts.

As noted in **Chapter 3 Alternatives**, the No-Build Alternative does not meet the purpose and need for the I-375 Improvement Project, and it was not carried forward for further study.

The affected environment and potential impacts of the Preferred Alternative are summarized in **Table 2**. Greater detail can be found in the following sections.

Table 2: Affected Environment and Potential Impacts Summary

Study Parameters	Preferred Alternative	Mitigation
Public Transportation Options and Access		
	Benefit by providing infrastructure to support expanded transit service, improved bus stop placement, and new routes with more direct east-west connections and access to the CBD.	Temporary or permanent bus stop relocation will be coordinated with the DDOT and SMART. Route detours will use local streets and will be coordinated between MDOT, City of Detroit, and the transit providers.
Operations		
Nonmotorized	Benefit by adding marked pedestrian crossings, addition of two-way cycle tracks and providing a new connection to the riverfront.	None
Vehicular	2-minute added traffic delay in the morning peak hour 7-minute added traffic delay in the evening peak hour	None
Safety		
Pedestrian	Impact by an increased number of conflict points with vehicles. Benefits by improved pedestrian facilities.	BMPs for urban and nonmotorized design will be utilized to improve vehicular and pedestrian traffic safety, such as countdown pedestrian signals, refuge islands where feasible, and protected left-turn movements at signalized intersections.

Study Parameters	Preferred Alternative	Mitigation
Bicycle	Impact by the increased number of conflict points with vehicles. Benefit by the addition of a two-way protected cycle track along the boulevard and Montcalm Street.	No Turn on Red signs will be added for vehicles approaching the protected cycle tracks. Other BMPs for urban and nonmotorized design will be utilized to improve vehicular and nonmotorized traffic safety, such as, the use of protected left-turn movements at signalized intersections, enhanced signing, and pavement markings.
Vehicle	Impact by the addition of more intersections. Benefit from reduced speeds at the boulevard and eliminating the Jefferson Avenue Curve.	BMPs will be utilized to reduce speeds, such as creating a gateway appearance and utilizing traffic calming measures.
Parking		
	449 spaces removed	None
Social and Economic Impacts		
Land Use	Benefit	None
Community Characteristics	Benefit	None
Public Facilities and Services	Benefit	None
ROW Fee Simple Acquisition (FSA) Temporary Easement	 3.24 acres 0.87 acres	The purchase of private property will be conducted in accordance with state and federal laws. All temporary grading easement areas will be returned to existing condition or better before the construction completion.
Relocations	0	None
Economic Impacts	Benefit	None
Environmental Justice	Not disproportionately high or adverse	None
Title VI	Not disproportionately high or adverse	None

Study Parameters	Preferred Alternative	Mitigation
Homeless People	Potential impact from the removal and/or reconstruction of the bridges along I-375 that may require moving homeless people and their belongings out of the ROW.	MDOT will work with the city of Detroit to give the homeless notice of construction and assist them with finding services to help them find alternative housing.
Historic Resources		
Archaeological Sites	No adverse effect	MDOT will conduct archaeological monitoring in the necessary areas.
Historic Above-Ground	No adverse effect	MDOT will maintain access to Holy Family Roman Catholic Church and Mrs. Solomon Sibley House during construction and will monitor construction near the southern edge of the Eastern Market Historic District should work extend beyond the curb line.
Section 6(f)		
	None	None
Section 4(f)		
	Temporary impact to the Dequindre Cut Greenway by the replacement of the Gratiot Avenue bridge as well as a hiking portion of the RiverWalk/Iron Belle Trail that is within the Project area. There will be temporary ROW impacts of 1.143 acres for the Dequindre Cut Greenway and 0.393 acres for the RiverWalk/Iron Belle Trail. Temporary impact to Holy Family Roman Catholic Church and Mrs. Solomon Sibley House. Potential impact to Eastern Market Historic District.	Access will be maintained during construction and when construction has been completed, the properties will be returned to as good, or better condition.
Air Quality		
	None	None
Noise Impacts		
	27 impacted receptors	None. There is no feasible way to build a noise wall that provides enough benefit for the receptors.

Study Parameters	Preferred Alternative	Mitigation
Contaminated Properties		
	Potentially 12	MDOT will complete the recommended Phase II Preliminary Site Investigation (PSIs) for sites within the Project footprint during final design.
Agricultural Resources		
	None	None
Natural Resources		
Vegetation	None	During the Project's design, the existing natural and ornamental vegetative cover, including trees, will be preserved and replaced where possible. A landscape guide will be developed with public input in the design phase of the project that further details plan for vegetation.
Threatened and Endangered Species	None	None
Fish and Wildlife	None	The "Migratory Bird" Special Provision will be included in the final plan package to prevent swallows and/or migratory birds from establishing active nests just prior to construction.
Water Resources		
Wetlands	0 acres	None
Surface Water	Potential impact	The Project will include BMPs to protect surface water quality, resources and minimize the overall impact on surface water.
Floodplains	0 acres	None
Groundwater	None	None
Water Quality -- Impervious Surfaces	80.8 acres, 9% less than the existing amount of impervious surface	The Project will include BMPs to protect water quality, preserve water resources and minimize the overall impact on aquatic resources.
Short-Term Construction		
	Impact	MDOT will follow MDOT Standard Specifications for Construction for mitigation regarding maintenance of traffic, soil erosion and sedimentation control, construction air quality, construction noise, and construction vibration.

4.1. Public Transportation

The Preferred Alternative would provide new routing opportunities, connectivity, and access for public transportation.

Within the city of Detroit there are several public transit agencies. The RTA, an agency responsible for coordinating regional transit and allocating state and federal funds, does not operate any transit routes. The Detroit Department of Transportation (DDOT) operates bus service within the city limits. SMART operates mainly in the areas outside of Detroit in Oakland, Macomb, and Wayne counties, with limited service offered within the city of Detroit. Additionally, the Detroit Transportation Company operates the People Mover, an automated people mover, in downtown Detroit just outside of the project area.

Active transit routes running within the project area are shown in **Figure 11**. Along I-375, DDOT route 95 Ryan Express uses the Madison Avenue ramp to access I-75. DDOT route 80 Villages Direct uses Chrysler Drive to access I-375 to I-75 to exit at Mack Avenue. While SMART does not have routes along I-375 proper, there are routes that operate along the crossroads such as Gratiot Avenue and Jefferson Avenue.

In addition to the existing transit, the *Regional Master Transit Plan*, developed by the RTA in 2016, proposes express service along East Jefferson Avenue, from downtown Detroit to Clinton Township and BRT along Gratiot Avenue, from downtown Detroit to M-59 in Clinton Township (RTA, 2016). The city of Detroit has also expressed intentions to add improved transit service to East Jefferson Avenue, detailed in the *East Jefferson Corridor Enhancement Plan* as coordinating services, deploying enhancements, such as bus boarding islands, and eventually adding enhanced bus service which would run at higher frequencies and carry more passengers (City of Detroit, 2019).

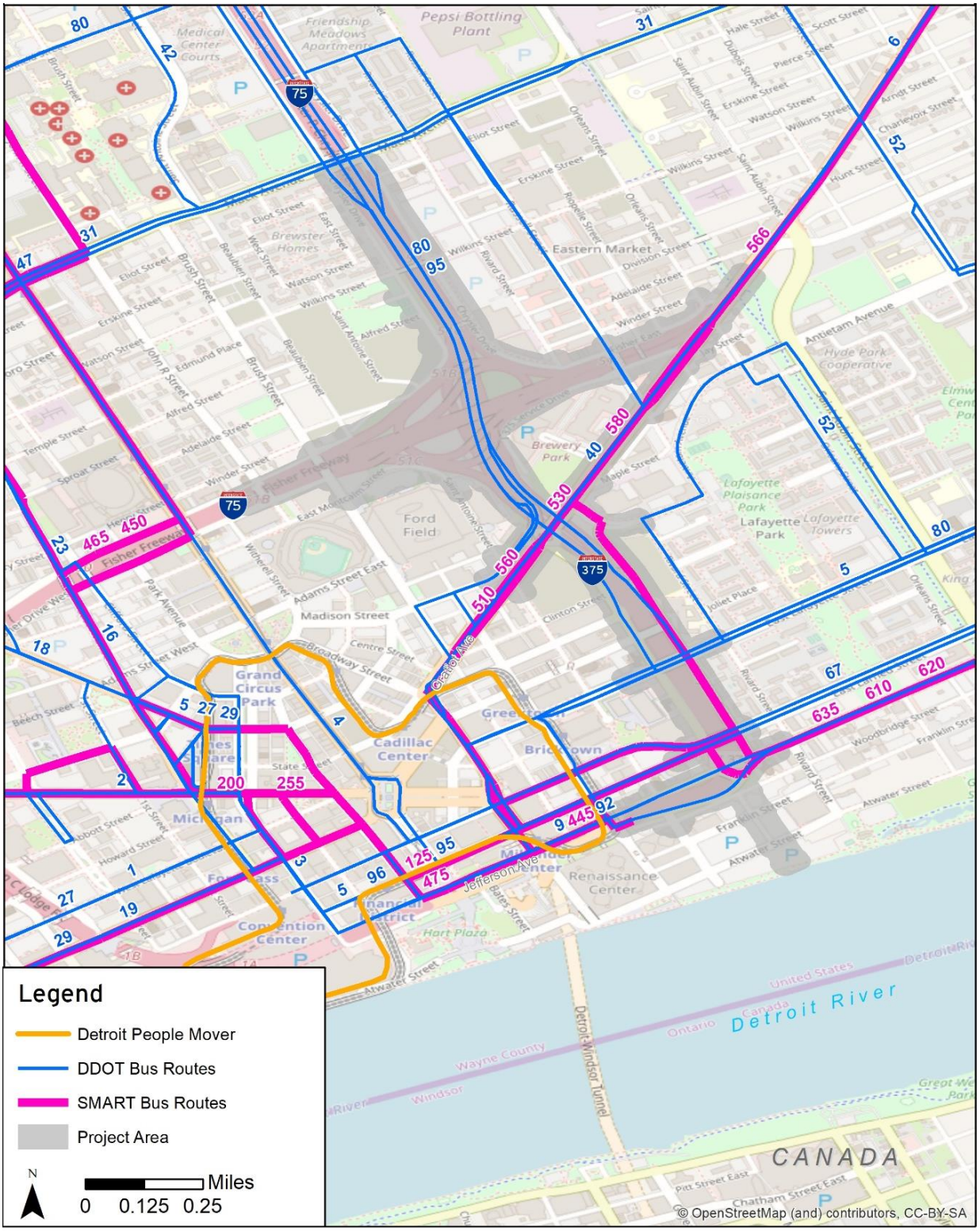
The Preferred Alternative includes new at-grade local street crossings that will improve pedestrian and bicycle access to transit services, wider sidewalks and cycle track facilities, which improve access for SMART and DDOT riders. In addition, the Preferred Alternative provides the infrastructure to support expanded transit service to the riverfront, enhanced routing along East Jefferson Avenue, improved bus stop placement, and new routes with more direct east-west connections and access to the CBD. The Preferred Alternative is also compatible with the RTA's plans for BRT on Gratiot Avenue and city of Detroit transit expansion plans.

Both SMART and DDOT use I-375 to move buses between route termini, which may be impacted during construction. SMART uses I-375 to move buses between route termini and garages on approximately 150 trips (19 routes) on the average weekday. DDOT also uses I-375 to move buses to route termini and estimates a small potential impact on their westside routes.

DDOT anticipates limited construction impacts to Route 80 and 95. They also anticipate improved connectivity to Gratiot Avenue, and the potential to improve access to Woodward Avenue, Van Dyke Avenue/Lafayette Avenue, and Jefferson Avenue. The riverfront connection to Atwater Street, provides a new opportunity for service or as an operational turnaround point. The Preferred Alternative may also result in changes to route schedules and travel times. There is potential for new routes under the Preferred Alternative for both SMART and DDOT, however, neither provider currently has specific plans.

Early coordination with transit agencies will take place during the development of maintenance of traffic plans to ensure access to transit stops will be maintained during construction. Coordination with transit agencies will be ongoing during the pre-construction and construction phases to ensure that transit riders are given adequate notice of any changes and that any adjustments in transit stops or routes are addressed appropriately. I-375 is used to move buses between route termini in downtown Detroit and garage facilities without carrying passengers, also known as deadheading. These movements will be coordinated with transit agencies during construction and can be addressed by allowing additional time to deadhead and/or use of alternate routes as appropriate. These additional travel times would not impact transit services as they would occur either before or after passenger service.

Figure 11: Active Transit Routes



Source: Detroit Transportation Company, 2015, DDOT and SMART, 2018

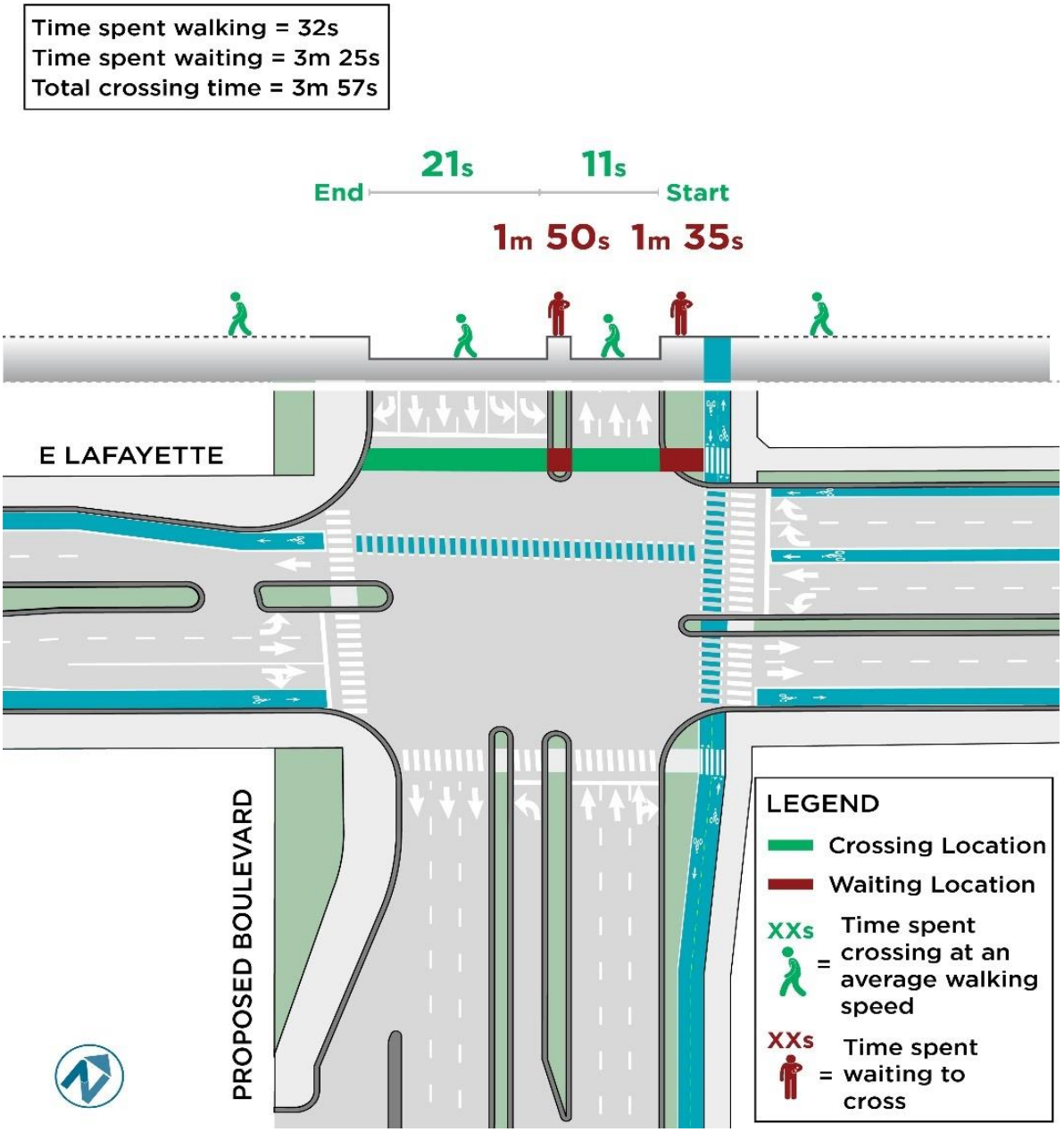
4.2. Nonmotorized Operations and Vehicular Operations

The following sections discuss vehicular and nonmotorized operations for the Preferred Alternative.

4.2.1. Nonmotorized

The Preferred Alternative would improve nonmotorized operations in the Project area, however, it does increase pedestrian and bicycle crossing time with the boulevard configuration, as compared to the existing condition. Wait times will likely be longer during peak hour traffic and shorter during off-peak hour traffic. Pedestrian crossing times range from 1 minutes and 31 seconds to 3 minutes and 57 seconds, depending on what phase in the cycle a pedestrian approaches the boulevard. See **Figure 12** for an illustration of a pedestrian experience for the Preferred Alternative when a pedestrian has to wait for each phase of the traffic signal, with a total crossing time of 3 minutes and 57 seconds to cross the entire roadway (350 feet). The crossing time represents the longest time a pedestrian would have to wait to cross the roadway, including the full length of the signal cycle for a two-cycle pedestrian crossing. The median width between the northbound and southbound direction will be six-feet wide, which will allow pedestrians enough room to wait for the next walk signal if pedestrians are unable to cross in one walk cycle. Pedestrian signals will include a countdown to help pedestrians cross safely.

Figure 12: Preferred Alternative Pedestrian Experience



**Traffic signal timing allows for pedestrians to cross in one cycle at any location where median island is less than 6 feet. Median islands utilized for waiting are 6 feet or more between the curbs, meeting US Access Board requirement R305.4.1.*

The Preferred Alternative provides sidewalks up to 20 feet wide on the west side of the boulevard and 10 feet wide on the east side of the boulevard. Along the east side of the boulevard, a two-way protected cycle track acts as a buffer between the sidewalk and the travel lanes. In addition, signalized intersections will have marked pedestrian crossings. The pedestrian crossings will have pedestrian refuges located within the medians that are a minimum of six feet wide.

The Preferred Alternative addresses priority nonmotorized corridors; the proposed boulevard, Jefferson Avenue, Lafayette Avenue and Montcalm Street. Along the boulevard, plans include a two-way protected cycle track on the east edge, see **Figure 13**. The cycle track begins on the boulevard at Atwater Street and continues north of Gratiot Avenue and connects to Montcalm Street using an independent bicycle and pedestrian only pathway. The cycle track extends along Montcalm Street to the west to Brush Street and to the east to Gratiot Avenue. The cycle track then continues north along Gratiot Avenue to connect to the Dequindre Cut Greenway. No Turn on Red signs will be added to the signalized roadway approaches for each cycle track to reduce the number of vehicle and nonmotorized conflicts. This would keep vehicles from blocking the cycle track and improve safety at the signalized intersections.

The connection of the cycle track along Montcalm Street was considered a safer and better option than bicycle lanes along Gratiot Avenue. Montcalm Street has lower speeds and lower traffic volumes, where it is possible to include a two-way protected cycle track. Gratiot Avenue does not have the available width to include a cycle track and standard bicycle lanes would be incorporated. Montcalm Street also creates a grid for nonmotorized users that is in line with city of Detroit plans for north-south bicycle lanes on Brush Street paralleling the Midtown Loop to the north and nonmotorized facilities on Lafayette Avenue to the south. In addition, the inclusion of bicycle lanes along Gratiot Avenue would result in additional real estate impacts, particularly at the Gratiot Avenue intersection with the boulevard. The footprint of the intersection, in order to accommodate vehicular traffic and bicycle lanes, would require additional ROW to be purchased.

On Jefferson Avenue, conceptual plans include bicycle lanes on each side of Jefferson Avenue within the project area east of the boulevard, see **Figure 14**. There are no new bicycle lanes planned for Jefferson Avenue west of the boulevard, however, the boulevard cycle track will connect to the existing bicycle lanes east of the boulevard on Jefferson Avenue with on-street bicycle lanes and will be consistent with the City's nonmotorized plans.

The Preferred Alternative also provides a connection from the boulevard cycle track to existing bicycle lanes on Lafayette Avenue. In alignment with the *Downtown Detroit Transportation Study* the Lafayette Avenue intersection design will connect to the bicycle lanes to the east and include facilities through the boulevard intersection (City of Detroit, 2018). These proposed facilities enhance bicycle operations in the Project area by providing dedicated lanes for bicycles and improving connectivity with existing bicycle facilities. Overall connectivity will improve for pedestrians and bicyclists seeking to travel both east-west and north-south within the corridor.

Figure 13: Preferred Alternative Nonmotorized

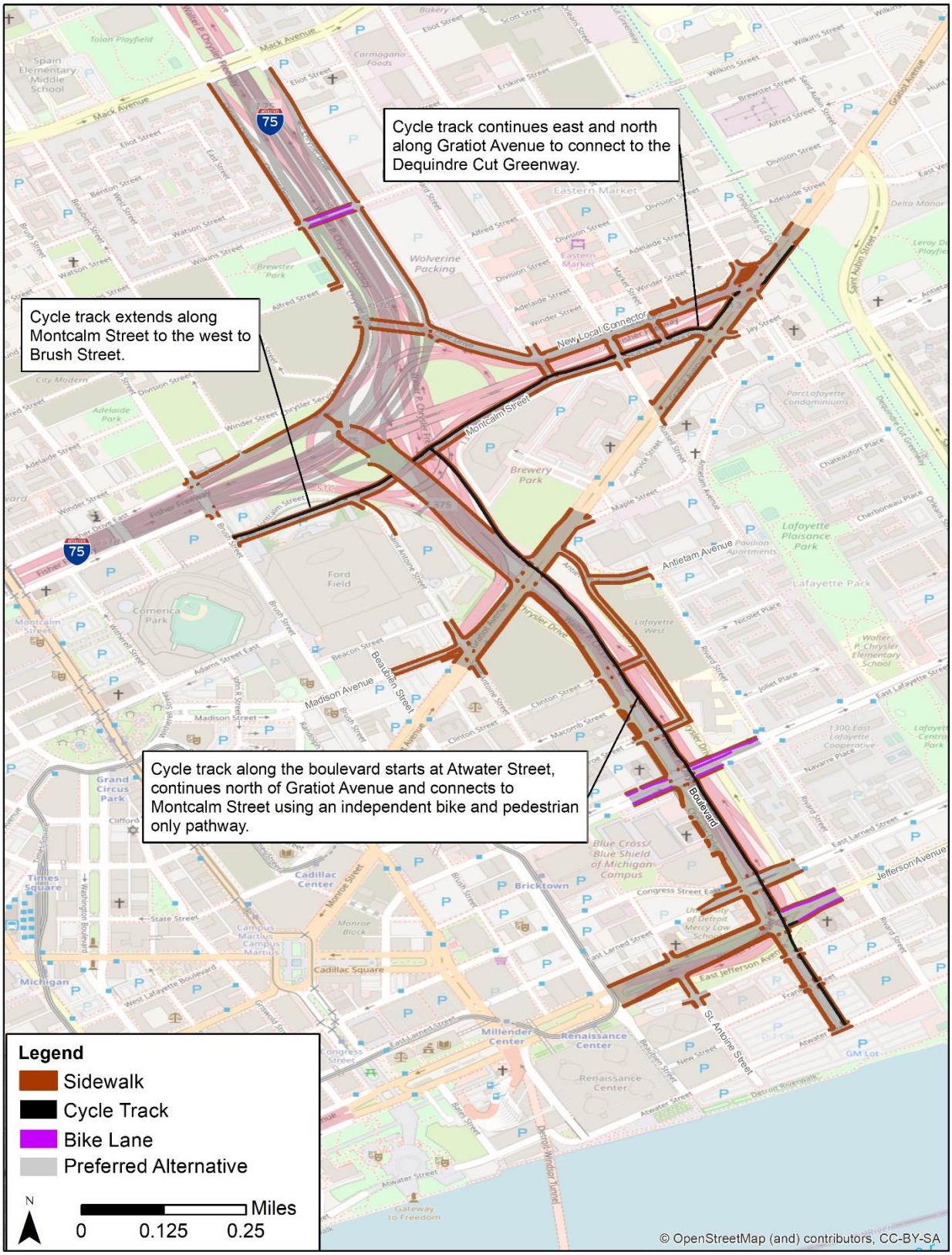
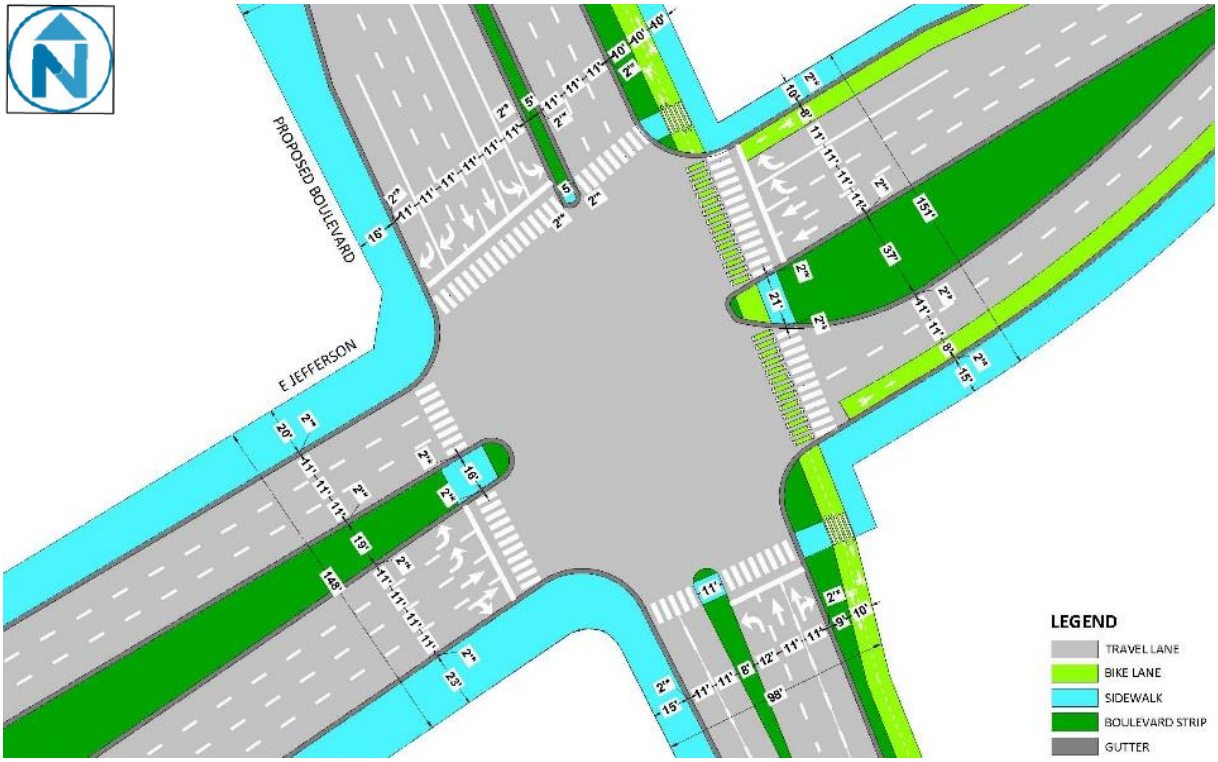


Figure 14: Proposed Boulevard and Jefferson Avenue Intersection



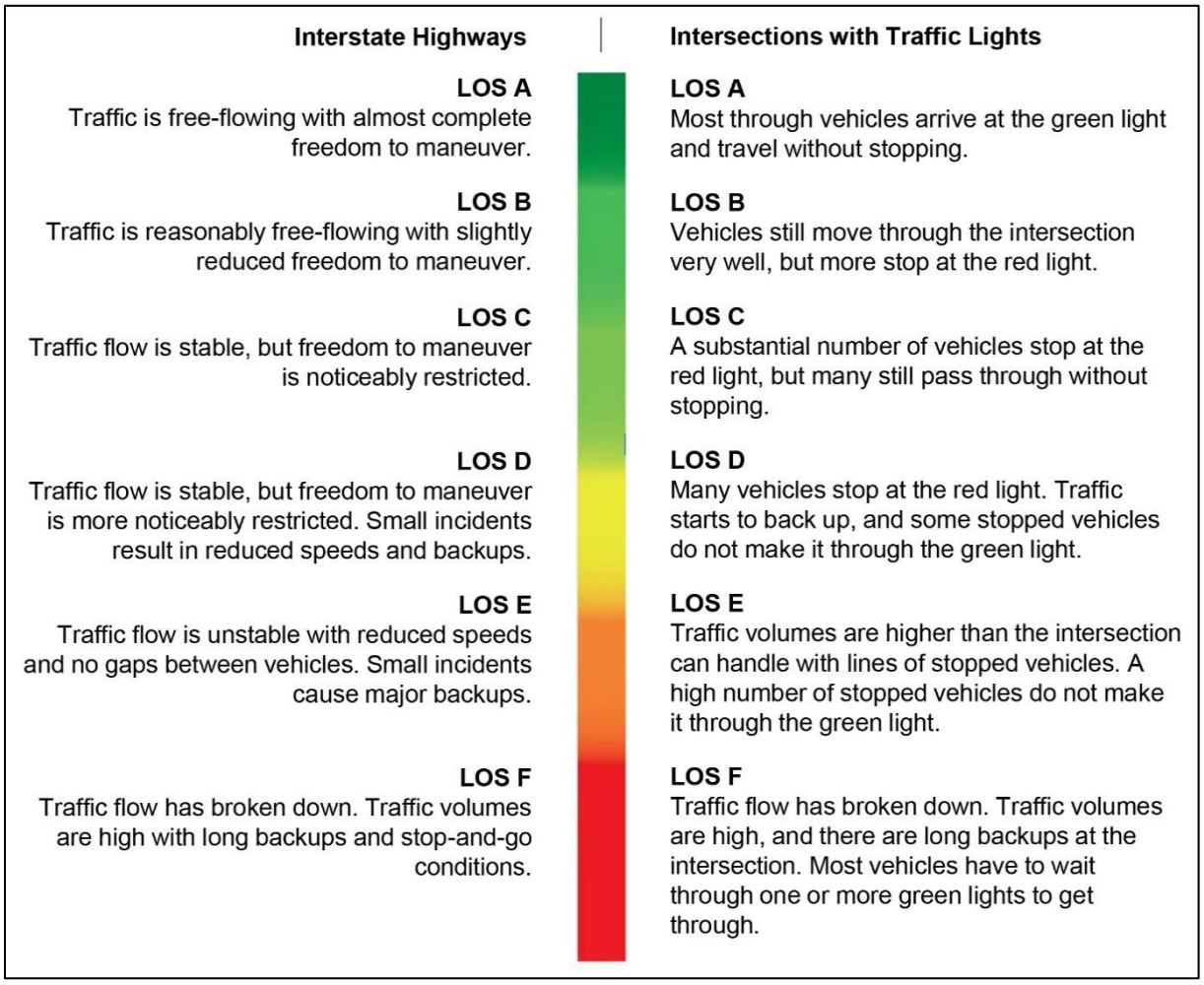
** Sidewalk and curb lane measurements do not include two-foot gutter width.*

4.2.2. Vehicular

Due to the change from a limited access freeway to an at-grade surface street, extensive traffic modeling was conducted using a variety of software models. It was important to understand how traffic patterns would change as a result of the freeway becoming a signalized boulevard. I-375 was built at a time when there were more people working and living within downtown Detroit. By the year 2040, employment and population are still not expected to reach the levels achieved in 1950. Many of the roadways, including I-375, have excess capacity and do not experience a lot of congestion. The traffic modeling found that some of the I-375 traffic would reroute to other roadways within downtown. As a result, the Preferred Alternative accommodates fewer vehicles due to the proposed boulevard design. The reduced capacity along the boulevard results in reduced traffic volumes for several sections of I-375.

Congestion is evaluated for this Project using LOS, with LOS A (best) to LOS F (worst). **Figure 15** provides descriptions of the various LOS on Interstate highways and signalized intersections.

Figure 15: Level of Service



MDOT analyzed vehicular operations with existing traffic volumes collected in 2017 and with future traffic volumes based on the SEMCOG Travel Demand Model and Dynamic Traffic Assignment (DTA) model. MDOT used the SEMCOG Travel Demand Model to estimate the amount of traffic that will travel on the roadways in the Project area for the design year 2040.

What is the Dynamic Traffic Assignment (DTA) model?

In mid-2018, SEMCOG created a sophisticated DTA traffic model of downtown Detroit and immediate surrounding area to evaluate the impacts of converting I-375 from a freeway to a surface-street. This type of model provides a detailed analysis of how traffic patterns may shift and change with the conversion of I-375 and shows what other roadways may or may not have more traffic as a result of the change. The model was run multiple times to find the shortest drive time or best route for all vehicles within the network.

MDOT then analyzed traffic operations for the AM and PM peak hours – the morning and evening rush hours – of an average weekday. MDOT's minimum standard for peak operations is LOS E in urban areas, with desired LOS D when practical. Projected travel time estimates throughout the Project area also utilized a traffic operational analysis.

What are 'AM and PM peak hours'?

AM and PM peak hours occur during the time which people are commuting to and from work, also known as rush hour, creating the greatest volume of traffic on the roadway. For the purposes of this EA, "AM peak" refers to 7:30-8:30 a.m. and "PM peak" refers to 4:30-5:30 p.m.

In the Preferred Alternative, using SEMCOG's DTA model, modeling suggests more than 20% of peak period demand on I-375 will reroute to other corridors and disperse among other available parallel routes. This is due to excess capacity available on the existing street grid and new available routes. The corridors that have the highest reroute traffic are:

- M-10 from I-75 to Jefferson Avenue
- Brush Street from I-75 to Jefferson Avenue
- Mack Avenue from I-375 to St. Aubin Street
- Randolph Street from Gratiot Avenue to Jefferson Avenue
- Beaubien Street from Gratiot Avenue to Jefferson Avenue
- Congress Street from M-10 to Beaubien Street

None of the corridors with high rerouting traffic are residential in nature. These corridors were analyzed further to verify the capacity for rerouting traffic. The analysis found that nine intersections may need roadway or signal improvements to achieve a LOS D or better after the construction of the I-375 Improvement Project:

- Brush Street at Larned Street – Restrict parking on southbound Brush Street to provide an additional travel lane.
- Beaubien Street at Gratiot Avenue – Add a southbound protected left turn signal phase for Gratiot Avenue if there are excessive delays.
- Beaubien Street at Larned Street – Add a southbound protected left turn signal phase for Beaubien Street if there are excessive delays.
- Congress Street at Beaubien Street – Convert one parking lane to a driving lane to reduce congestion during peak hours.
- Congress Street at Washington Boulevard – Convert one parking lane to a driving lane to reduce congestion during peak hours.
- Mack Avenue at Russell Street – Add a dedicated left turn lane for northbound and a dedicated right turn lane for eastbound.

- Randolph Street at Gratiot Avenue – Enforce no northbound left turns from Randolph Street to Gratiot Avenue and change the westbound through lane to a shared westbound left/through lane on Gratiot Avenue.
- Brush Street at Gratiot Avenue – Add a westbound left turn lane on Gratiot Avenue and provide a protective/permissive signal phase.
- Woodward Avenue at Adams Avenue – Upgrade the northbound permissive left turn signal phase to a protected/permissive signal phase if there are excessive delays.

Congestion should be monitored during and after construction to determine if these improvements will be needed, as they are based on future year 2040 modeled volumes. More information can be found in the *I-375 Expanded Study Area Analysis Technical Memorandum.* There are no expected increases in traffic along Rivard Street due to the residential nature of the roadway and the lack of direct access to Gratiot Avenue.

Under the Preferred Alternative access to local roads and the boulevard will be improved. The Preferred Alternative includes a one-way to two-way conversion for Macomb Street between Beaubien Street and the boulevard. Clinton Street will connect to both the boulevard and the local roads. Currently, Clinton Street access is not available from I-375. In addition, Gratiot Avenue will connect to the boulevard. As a result of these additional connections, providing multiple points of access into and out of downtown, a higher portion of vehicular trips are expected to start and end toward the northern portions of the I-375 corridor, with fewer trips toward the south end at Jefferson Avenue. Under the existing condition, due to limited access, more trips begin at the southern end of the corridor in order to head north.

As part of MDOT's I-94 Modernization Project, MDOT is implementing Active Traffic Demand Management techniques to improve traffic along Gratiot Avenue. These improvements include modernizing traffic signals and adding signal controllers that prepare the roadway for autonomous vehicles. These changes will improve travel in and out of downtown Detroit for vehicles and for transit.

Table 3 presents the travel times for the AM and PM peak hour for the Preferred Alternative.

Table 3: Preferred Alternative Peak Hour Travel Times

Segment Name	From	To	Distance (Miles)	AM Travel Time (Minutes)	PM Travel Time (Minutes)
Southbound (SB) I-75 / SB I-375 / Jefferson Ave.	Mack Ave.	Jefferson Ave. at Woodward Ave.	1.9	6.5	6.1
Jefferson Ave. / Northbound (NB) I-375 / NB I-75	Jefferson Ave. at Woodward Ave.	Mack Ave.	2.0	10.7	11.7
Westbound (WB) Gratiot Ave.	Gratiot Ave. Connector	St. Antoine St.	0.7	3.4	3.2
Eastbound (EB) Gratiot Ave.	St. Antoine St.	Gratiot Ave. Connector	0.7	2.3	3.0
SB I-75 / SB I-375	Mack Ave.	Greektown Parking Garage	1.2	3.3	2.9
NB I-375 / NB I-75	Greektown Parking Garage	Mack Ave.	1.1	2.9	3.5
I-75 NB	Third Ave.	Mack Ave.	1.5	1.6	1.6
I-75 SB	Mack Ave.	Third Ave.	1.5	1.5	1.6
Boulevard at Atwater St. to I-75 NB (Mack Ave.)	Atwater St.	I-75 NB (Mack Ave.)	1.7	4.7	6.7
I-75 SB (Mack Ave.) to Boulevard at Atwater St.	I-75 SB (Mack Ave.)	Atwater St.	1.7	5.4	4.7

During the morning rush hour, all freeway segments of the Preferred Alternative are expected to operate at acceptable levels. The intersection of Jefferson Avenue and the boulevard is expected to experience some congestion (LOS E), as well as two intersections along Lafayette Avenue at St. Antoine Street and Rivard Street. Overall, all intersections are expected to operate acceptably. LOS results for the Preferred Alternative AM peak are shown in **Figure 16**.

During the evening rush hour, all freeway segments of the Preferred Alternative are expected to operate at acceptable levels. The intersection of Jefferson Avenue at the boulevard is expected to experience some congestion (LOS E), as well as the intersection of Jefferson Avenue and St. Antoine Street. This is due to heavy eastbound traffic volumes along Jefferson Avenue approaching the boulevard. LOS results for the Preferred Alternative PM peak are shown in **Figure 17**.

Figure 16: Preferred Alternative AM Peak Hour Levels of Service

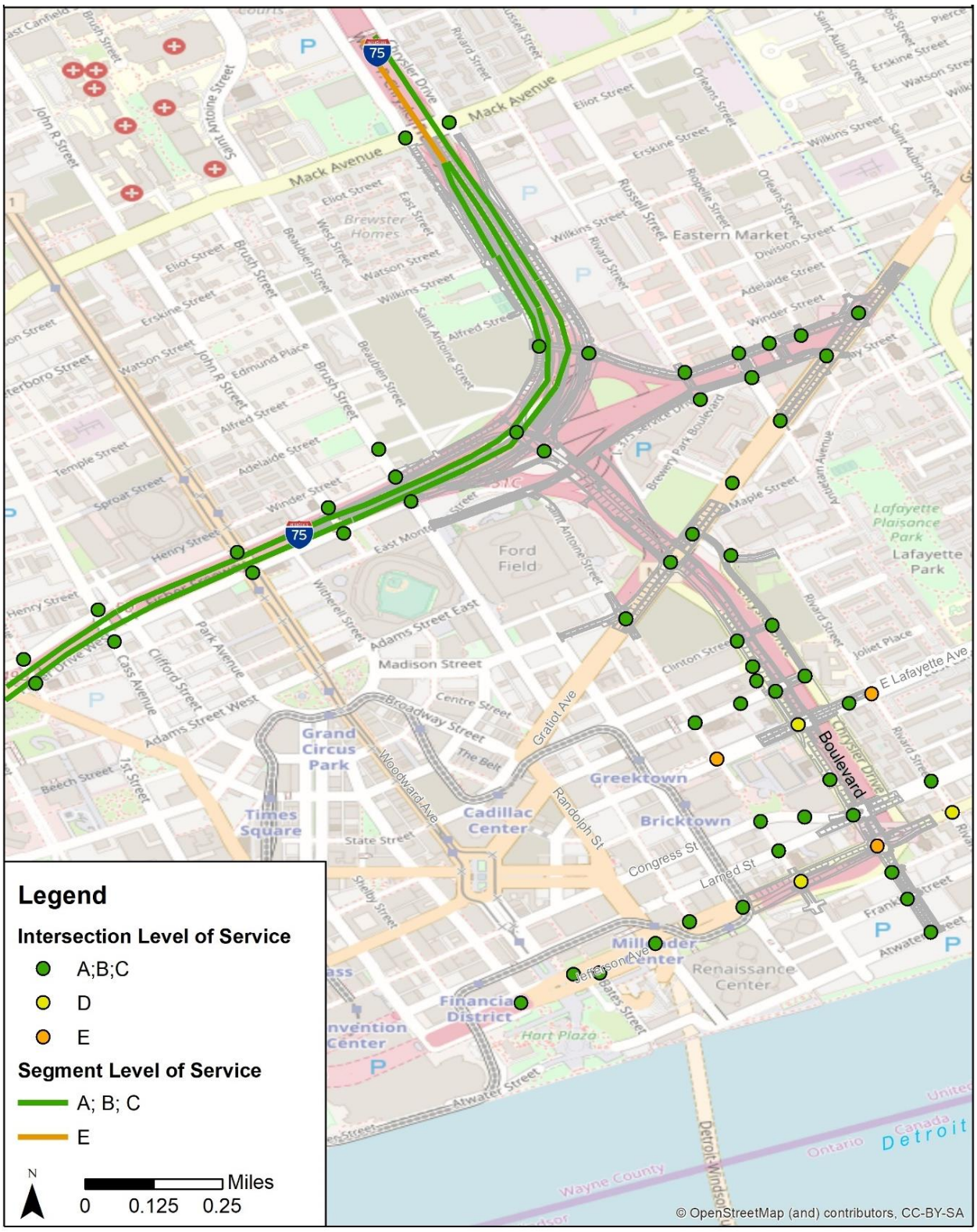
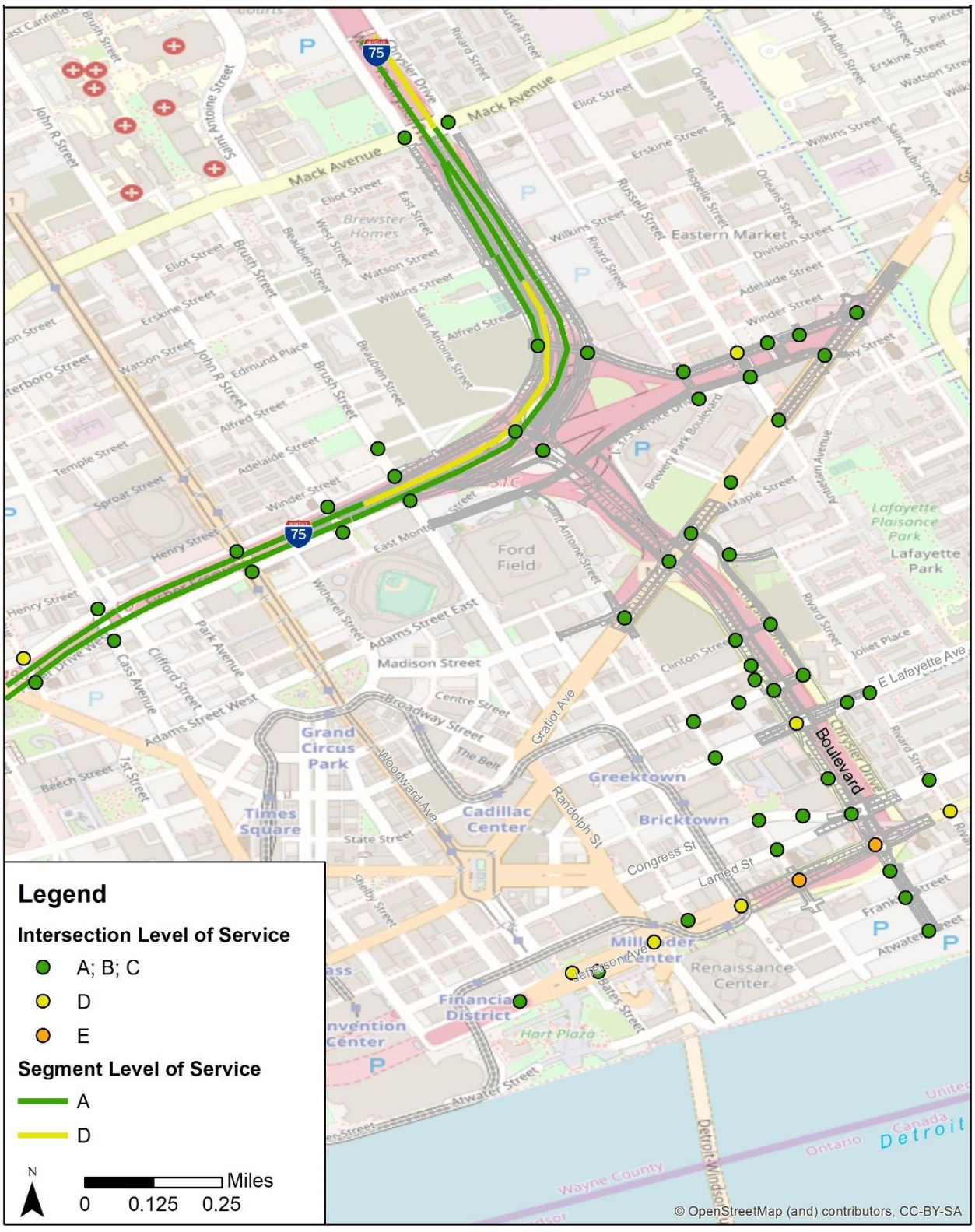


Figure 17: Preferred Alternative PM Peak Hour Levels of Service



4.3. Nonmotorized Safety and Vehicular Safety

The following sections discuss how the Preferred Alternative affects safety for pedestrians, bicycles and vehicles.

4.3.1. Pedestrian Safety

The Preferred Alternative addresses the need to enhance the pedestrian environment by creating more surface street connectivity, providing wider sidewalk facilities, and improving landscaping opportunities in the corridor.

There is a lack of existing pedestrian facilities in the Project area. Pedestrians cross I-375 using roadway overpasses that lack buffers between pedestrian and vehicular traffic. On the service drives, existing sidewalks are approximately six feet in width. In addition, there are gaps in existing sidewalks, missing pedestrian crossings, and narrow walkways.

The Preferred Alternative will provide pedestrian refuge islands, or pedestrian safety islands, at signalized locations along the new boulevard. Pedestrian refuges improve safety for nonmotorized users by providing a safe location to wait in the median for pedestrians that are unable to cross in one walk cycle. New signalized intersections at Clinton Avenue, Macomb Avenue, Monroe Street, Lafayette Avenue, Larned Street, Congress Street, and Jefferson Avenue provide additional pedestrian amenities, including enhanced crosswalks with countdown pedestrian signals, which provide pedestrians with designated crossing locations throughout the Project area.

Accessible pedestrian signals or detectors are not included in the Preferred Alternative. These types of signals provide information in non-visual formats; such as audible tones, speech messages, and/or vibrating surfaces. The primary technique that pedestrians who have visual disabilities use to cross streets at signalized locations is to initiate their crossing when they hear the traffic in front of them stop and the traffic alongside them begin to move, which often corresponds to the onset of the green interval. If there is future demand and requests for accessible pedestrian signals are received, MDOT will conduct an engineering study that considers the needs of pedestrians in general, as well as the information needs of pedestrians with visual disabilities. The engineering study would make a recommendation as to whether to install these additional signal devices considering the factors listed in section 4E.09 of the *Michigan Manual on Uniform Traffic Control Devices*.

Changes to the pedestrian environment along the west side of the corridor will include widening the existing sidewalks to 20 feet, which will improve walkability and placemaking opportunities that are not present in the existing corridor. Wide 10-foot sidewalks buffered by a cycle track improves safety for pedestrians along east side of the boulevard. Ending the proposed local road at Monroe Street will eliminate additional intersections, reducing interactions between motorized traffic and pedestrians along Lafayette Avenue and Larned Street. Sidewalks, curb ramps and other pedestrian facilities included in the Preferred Alternative will be compliant with ADA standards.

Pedestrian accessibility is improved with the Preferred Alternative, creating more pedestrian access east and west and also north and south. For east and west connectivity, there would be a new crossing at Clinton Street connecting the CBD and Lafayette Park as well as a pedestrian

connection along Montcalm Street connecting the Theatre District/Events Area and Eastern Market. There are improved north and south connections between Brush Park to the Detroit Riverfront and between Eastern Market and Lafayette Park.

The Preferred Alternative utilizes direct left turns from the boulevard to select local streets in lieu of using U-turns, or “Michigan lefts.” Using direct lefts will reduce the width of the median and boulevard, creating a narrower section with reduced pedestrian crossing distances and additional space for potential development on the east side of the boulevard. However, the addition of direct left turns along the boulevard increases the number of conflict points between vehicular and non-motorized traffic within the intersection, which can increase the risk of crashes. Best Management Practices (BMPs) for urban and nonmotorized design will be utilized to improve vehicular and nonmotorized traffic safety, such as, the use of protected left-turn signal phases at signalized intersections, enhanced signing, and pavement markings.

Several BMPs already included in the Preferred Alternative are no-turn-on-red for westbound vehicles approaching the boulevard, due to the cycle track on the east side of the boulevard. This will reduce the amount of crashes between vehicles and nonmotorized users. Another BMP that was added was the removal of free-flow westbound right-turn from Gratiot Avenue onto the Gratiot Avenue Connector. This improves nonmotorized safety in the area by eliminating a major conflict point between vehicles and bicyclists. People on foot or riding a bicycle will not have to contend with a free flow of vehicles blocking their path.

4.3.2. Bicycle Safety

The Preferred Alternative provides new, dedicated, protected bicycle facilities that improve bicycle safety in the Project area, see **Section 4.2.1 Nonmotorized**.

Bicycle safety considers bicycle facilities and the level of separation from vehicular traffic, and how bicycles must interact with other nonmotorized users, such as other bicyclists and pedestrians.

The addition of direct left turns increases the number of conflict points within the intersection, which can increase the risk of crashes. BMPs for urban and nonmotorized design will be utilized to improve vehicular and nonmotorized traffic safety, such as, the use of protected left-turn signal phases at signalized intersections, enhanced signing, and pavement markings. Westbound no-turn-on-red will be implemented along the boulevard at cycle track locations. This BMP will potentially reduce the amount of crashes between vehicles and nonmotorized users and will also keep vehicles from blocking the cycle track.

4.3.3. Vehicular Safety

The Preferred Alternative eliminates the Jefferson Avenue Curve, a high-crash location in the Project area. The new I-75/I-375 Interchange is also anticipated to reduce crashes due to the updated geometrics and design. The Preferred Alternative reduces travel speeds to 35 mph along the boulevard from the existing freeway speeds of 55 mph, which would reduce the severity of potential crashes. It is expected that converting I-375 to a slower speed boulevard will reduce the number of high-speed rear-end crashes that currently occur on southbound I-375 at the off-ramps to Lafayette Avenue, East Jefferson Avenue, and the Jefferson Avenue Curve.

The safety recommendations made in the 2014 RSA were taken into consideration and incorporated into the design where applicable. This included the removal of the Jefferson Avenue Curve, removing the weaving and merging areas along I-375 and I-75, and incorporating lighting throughout the Project area.

A predictive crash analysis was conducted using a newly developed, federally sponsored software package titled Interactive Highway Safety Design Model (IHSDM). The software compares the design of the No-Build Alternative to the Preferred Alternative in order to determine the expected number of crashes. It was found that with the addition of more at-grade intersections and traffic lights, crashes could increase along the boulevard. However, the number of crashes along I-75 is expected to decrease. Overall, the number of crashes is expected to increase by 3%, with the majority of these crashes along the boulevard and at intersections. These are expected to be lower speed crashes typically resulting in less serious injuries. Protected left-turn phasing, lighting, and introducing no-turn-on-red are some measures that were utilized in the software that reduced the predicted number of crashes.

The transition from a freeway section to a boulevard surface street section has been identified as a safety focus. This area will need to be designed to slow vehicles as they approach the boulevard section. BMPs will be used in this high speed to low speed transition area to improve safety. A series of signals prior to the boulevard will help in reducing speeds. Other potential measures also include creating a gateway appearance prior to the transition and utilizing traffic calming measures to increase driver awareness of the speed change. Additional components included in the design to reduce crashes will be high visibility crosswalks and pedestrian countdown signals. Not all safety measure can be input into the software package but are known to reduce crashes. Continued review of safety measures to reduce crashes will be conducted throughout the design phase.

4.4. Parking

Due to adjustments for safety and operations, the Preferred Alternative impacts on-street parking as well as private parking lots within the Project area. Net impacts to parking are summarized in **Table 4** and shown in **Figure 18**.

Two areas that would be impacted by a decrease in available parking are the northbound I-375 Service Drive between Jefferson Avenue and Antietam Avenue and the northbound I-75 Service Drive from Rivard Street to Mack Avenue.

The parking on the northbound I-375 Service Drive between Jefferson Avenue and Antietam Avenue is on-street parking that is not metered. Current land use abutting the service drive is multi-family residential and government/institutional. Future development along the corridor may create additional parking needs in the area.

The parking on the northbound I-75 Service Drive from Rivard Street to Mack Avenue is on-street parking that is not metered in the Eastern Market area. This parking primarily serves Eastern Market's Core Market area, which is bounded my Mack Avenue to the north, Gratiot Avenue to the south, I-75 to the west, and Saint Aubin Street to the east, on days when the market is open and on special event days. Eastern Market hosts events that draw people from all over the Metro Detroit region, including a Saturday Market and a street market on Sundays, among other markets events.

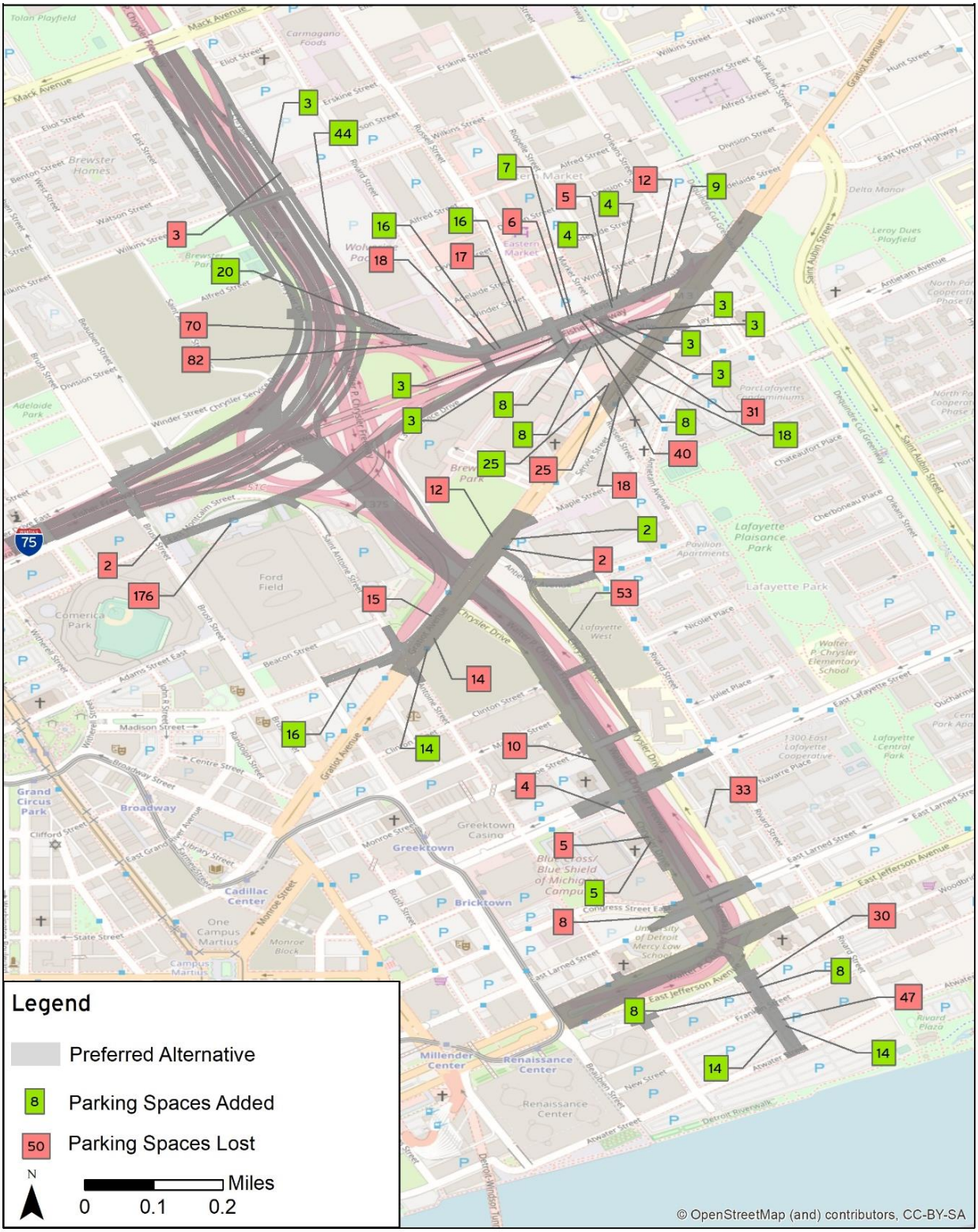
Within the Core Market area, there are 438 existing on-street spaces and 1,125 existing parking lot spaces available to the public. There are also 713 spaces for employee/permit parking. The most desirable location for parking in Eastern Market is along Russell Street or in public shed parking lots. These areas typically fill up with cars even on non-market days (City of Detroit, 2019). Parking along the northbound I-75 Service Drive is less frequently used during typically weekdays. Parking concerns on event days are acknowledged in *The Eastern Market Neighborhood Framework Plan* (City of Detroit, 2019). The plan suggests that parking congestion can be alleviated through parking management programs to better manage the distribution of parking throughout the Core Market area (City of Detroit, 2019).

The Preferred Alternative will create new access between the Event Area and Eastern Market, opening up additional parking opportunities. The new connection at Montcalm Street includes sidewalks and a cycle track that would allow visitors to park and then use the nonmotorized facilities to reach their destination.

Table 4: Preferred Alternative Parking Impacts

Location	Net Parking Impact	Existing Type	Future Type
EB and WB Gratiot Avenue Connector Service Dr. between Rivard St. and Gratiot Ave.	31 removed	On-street	On-street
Gratiot Ave./Madison Ave. west of I-375	1 added	On-street	On-street
NB I-375 Service Dr. between Jefferson Ave. and Antietam Ave.	86 removed	On-street	On-street
NB I-75 Service Dr. from Rivard St. to Mack Ave.	88 removed	On-street	On-street
SB I-375 Service Drive between Gratiot Ave. and Larned St.	14 removed	On-street	On-street
655 Larned St.	8 removed	Private surface lot	On-street
Gratiot Ave. East of I-375	12 removed	On-street	On-street
260 Schweizer Pl.	22 removed	Private surface lot	On-street
689 Franklin St.	8 added	Private surface lot	On-street
665 Atwater St.	14 added	Private surface lot	On-street
1000 Franklin St.	33 removed	Private surface lot	On-street
Ford Field – Lot 4	176 removed	Private surface lot	Not applicable
Ford Field – Lot 5	2 removed	Private surface lot	Not applicable
Net Total:	449 removed		

Figure 18: Parking Changes



4.5. Social and Economic Factors

The social and economic analysis for the I-375 Improvement Project focused on an area extending one-quarter mile beyond the Project area. The analysis uses socioeconomic demographic data from 11 U.S. census tracts, as defined by the 2010 U.S. Census, that are either fully or partially contained within the socioeconomic study area, see **Appendix B**, which includes a map of the census tracts.

Defined neighborhoods and districts located in or near the socioeconomic study area are listed below and identified in **Figure 19**.

- **Eastern Market:** Includes a public market, food retailers, restaurants, commercial and residential.
- **Event Area:** Special event area including Ford Field, Little Caesars Arena, Comerica Park, and the Theatre District.
- **Downtown East:** Includes businesses, Greektown, and the University of Detroit Mercy.
- **Renaissance Center:** Includes the Renaissance Center, headquarters to General Motors, and amenities such as access to the RiverWalk and a People Mover station.
- **East Riverfront:** Public access to the river, new residential and commercial developments, residential, and facilities such as the Michigan DNR Discovery Center.
- **Lower East Central:** Dense residential area east of I-375 including East Lafayette neighborhoods, such as Lafayette Park, the Dequindre Cut Greenway, and public parks.
- **Emerging Midtown South:** Includes Brewster-Douglass property and the Brush Park neighborhood.
- **Downtown CBD:** Majority business district with commercial office space and residential.
- **Civic Center:** Include municipal buildings, such as the Coleman A. Young Municipal Center, Detroit Riverfront, and some commercial.

Figure 19: Socioeconomic Study Area

4.5.1. Land Use

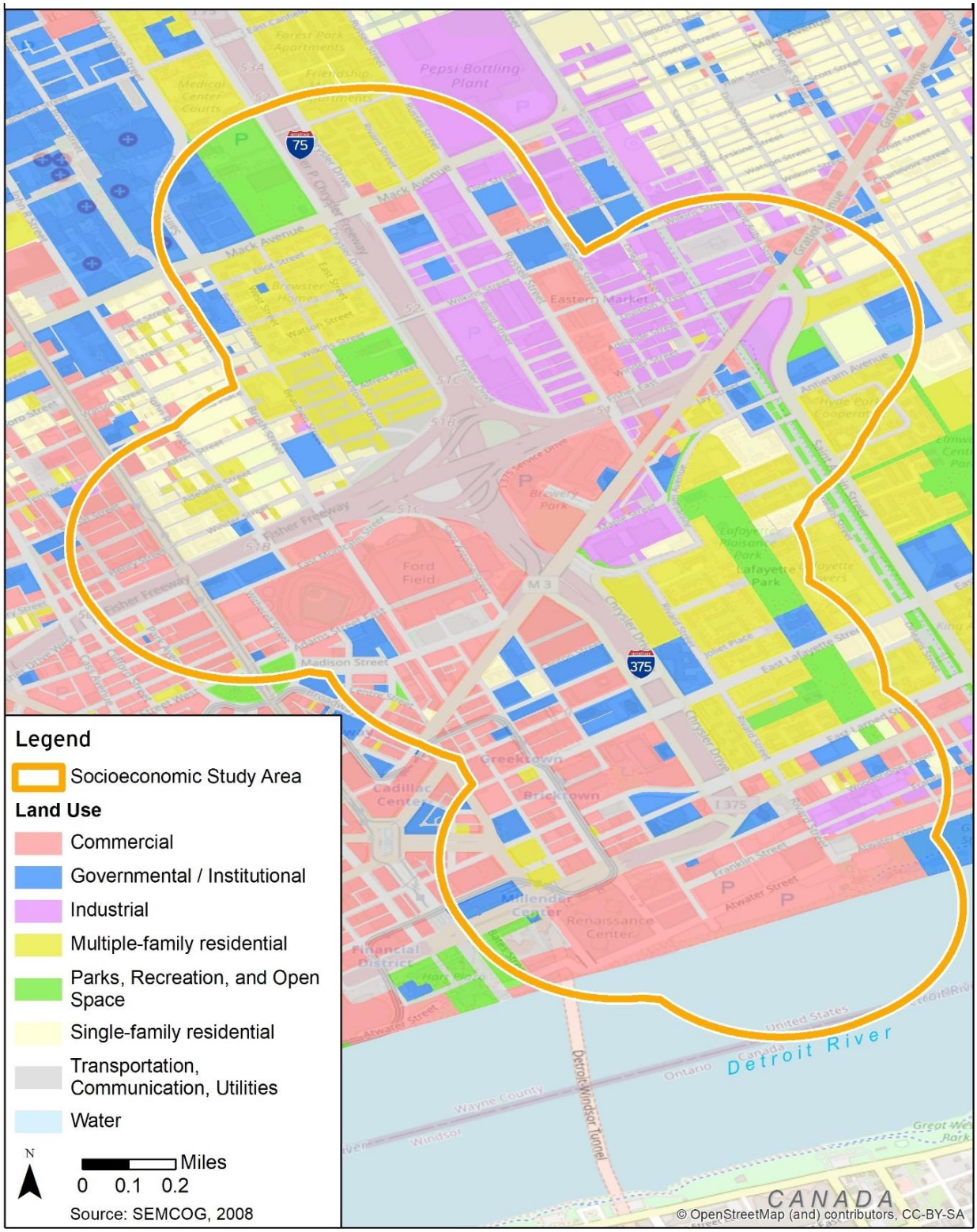
The Preferred Alternative is consistent with zoning, planned development and local land use plans.

The socioeconomic study area includes a mix of the following zoned land uses: commercial, governmental/institutional, industrial, residential, parks and open space, transportation, communication, and utilities, as shown in **Figure 20**.

I-375 lies along the border between Detroit's CBD and the residential neighborhoods of East Lafayette, part of the Lower East Central district. South of Jefferson Avenue there is mixed commercial and residential. The land northeast of the I-75/I-375 Interchange is used for commercial and office space. There are large vacant properties immediately within the socioeconomic study area and numerous surface parking lots exist in the Project area.

The Project is one part of the city's overall strategy to promote redevelopment and renewal in the city. The Project would convert I-375 to a surface-level street, requiring 3.24 acres of ROW, see **Section 4.5.4 Right-of-Way**. The Preferred Alternative may also potentially create excess property that could be used as developable land on the east side of I-375, see **Section 4.15 Indirect and Cumulative Effects**. These changes are consistent with the City's long-term vision for the area, as documented in the *Your! Detroit East Riverfront Study* (City of Detroit, 2017).

Figure 20: City of Detroit Existing Land Use



4.5.2. Community Characteristics and Cohesion

What is 'community cohesion'?

Community cohesion is how residents feel and interact with their neighborhood. Characteristics such as population density, and renter versus household ownership affect community cohesion. Access to local businesses and places of worship, community events, employment, and local investment opportunities, as well as the availability of community resources also contribute to community cohesion.

The Preferred Alternative will not directly impact community resources. It is anticipated to provide infrastructure that supports stronger community cohesion. The Preferred Alternative includes wider sidewalks, more connectivity east and west and around the I-75/I-375 Interchange, cycle tracks along the boulevard and east to west along Montcalm Street that better connect the community. The Preferred Alternative also includes several new connections at Clinton Street, Montcalm Street, and a new local connector near Eastern Market.

In the early 1960s, the city of Detroit implemented an urban renewal program that resulted in the demolition of the Black Bottom and Paradise Valley neighborhoods, both prominent African American districts located on Detroit's Near East Side, which were replaced by I-375 and Lafayette Park, a mixed-income development combining residential townhouses, apartments and high-rises with commercial areas (MDOT, 2014). I-375 created a divide between the CBD and the neighborhood to the east. The dense residential and commercial streets were demolished and replaced with a depressed freeway with east and west connectivity provided by bridges over the freeway. The Preferred Alternative would remove the barrier of the depressed freeway, creating a more visually connected community.

Regional shifts by companies, such as Quicken Loans, have brought thousands of employees to offices in the CBD, resulting in extensive building renovations, changed travel patterns, increased occupancy, and increased residential demand and construction in the area. Economic activity is increasing along Detroit's East Riverfront, including mixed-use developments such as Orleans Landing anchored by the RiverWalk. Several corporations and institutions adjacent to I-375 and the nearby East Riverfront District have also made investments in redevelopment. These efforts have solidified their presence and changed the concentration of major destinations in Detroit.

In addition to residential and commercial developments, educational institutions and places of worship also serve populations within the socioeconomic study area, see **Section 4.5.3 Public and Community Facilities and Services**.

The visual character of the socioeconomic area is composed of urban developments with development-specific landscaping, the trees and garden space associated with parts of East Lafayette, the RiverWalk to the south, and commercial buildings. The I-375 freeway dominates the Project area with minimal landscaping features.

Higher population density exists south of I-75, in areas that include Lafayette Park and the riverfront (Rivertown, east end of the Renaissance Center District, and south end of Lower East

Central District), and the Detroit CBD. **Figure 21** shows the population density for the project area.

The vacancy rate in the socioeconomic study area is 19%, ranging among the census tracts from 7% to 49%. By comparison, the average vacancy rate in the city of Detroit is 30% and 18% in Wayne County. In general, the lower vacancy rates occur in areas with predominantly commercial and industrial land use, while the higher vacancy rates occur in areas with predominately residential land use. The highest vacancy rates, 45% and 49%, occur in census tracts where the residential areas are outside of the socioeconomic study area, meaning that most of the vacancies are likely outside of the socioeconomic study area.

Owner occupied housing accounts for 14% of the housing in the socioeconomic study area, ranging among the census tracts from 1% to 64%. By comparison, owners occupy 49% of the housing in Detroit and 63% of the housing in Wayne County.

Households with no available vehicle account for 40% of the households in the socioeconomic study are, ranging among the census tracts from 16% to 63%. In general, census tracts with a higher percentage of renter occupied housing have a higher percentage of households with no available vehicle. By comparison, households with no available vehicles account for 25% of the households in Detroit and 14% of the households in Wayne County.

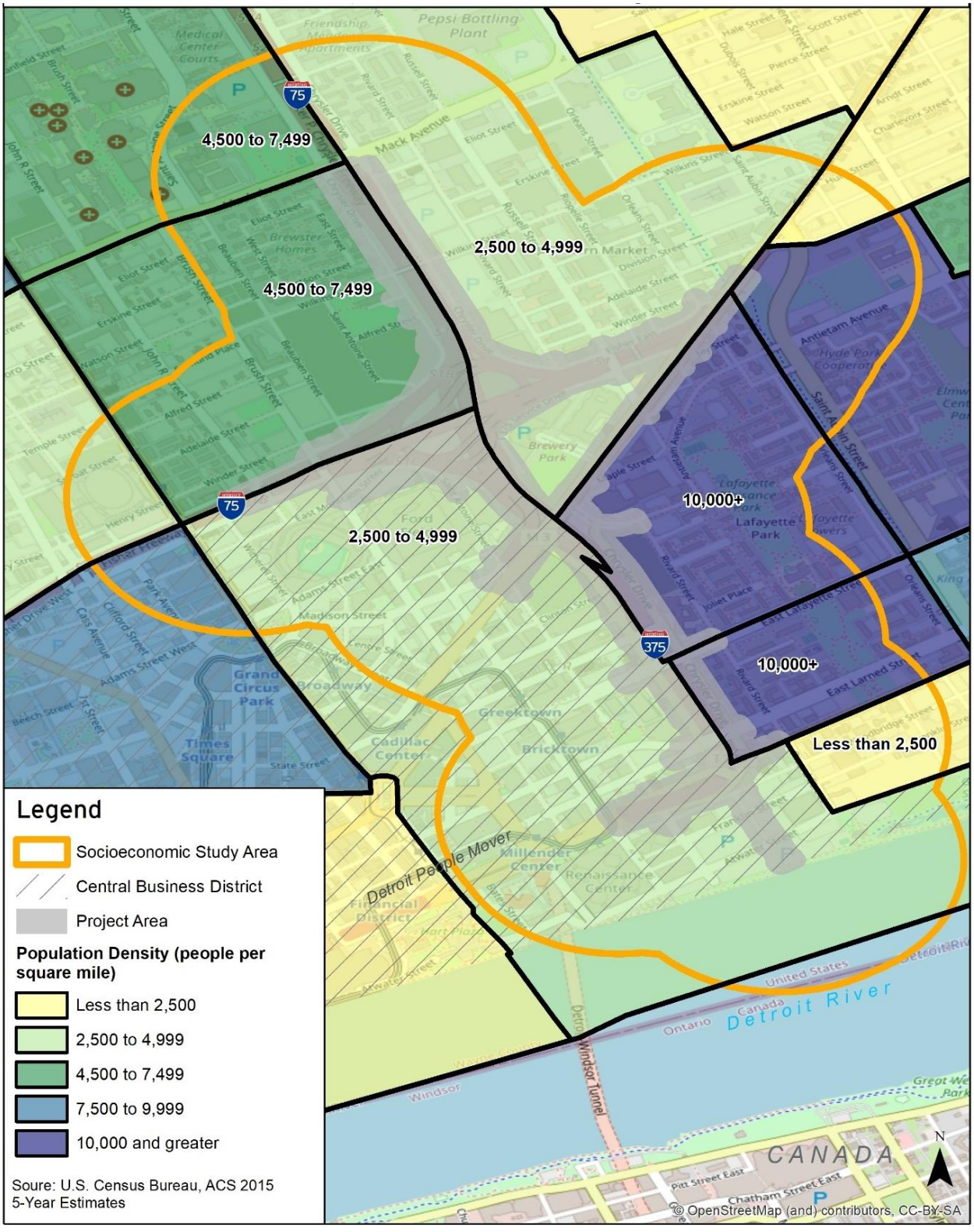
See **Appendix B** for detailed information about the vacancy rates, housing, and the availability of vehicles in the socioeconomic study area.

Replacing the I-375 freeway with a boulevard that provides direct access at signalized intersections will improve connectivity between areas with high population density, the Detroit CBD, the riverfront, Jefferson Avenue and other areas of planned development. This improved connectivity will support the City's future vision for the area.

The Preferred Alternative will provide more direct access to the surface streets leading to and from the new boulevard. The Preferred Alternative also provides more access to multi-modal facilities and will improve connectivity for nonmotorized travelers, including those from households with no vehicles. These improvements include new pedestrian and bicycle facilities, shorter crossing distances at intersections, and improved access to transit. The city of Detroit and the East Lafayette neighborhood have indicated a desire to preserve the historic character of the existing neighborhoods. The new boulevard will include landscaping and other aesthetic treatments that will improve the visual character of the area.

The Preferred Alternative will make land available that could be used to support a logical transition between the CBD and existing neighborhoods to the east. The potential excess property that may be available for public or private use that, depending on future zoning determined by the City, could include open space, commercial or residential. This land could open new opportunities for placemaking and development that would reconnect areas east and west of I-375 by replacing the freeway with urban streets.

Figure 21: Population Density



4.5.3. Public and Community Facilities and Services

What are public and community facilities and services?

Public and community facilities and services include libraries, hospitals, parks and recreation areas, police and fire, schools, places of worship, and other cultural attractions.

The Preferred Alternative would not require any relocations of public or community facilities. By providing additional routes across I-375 and facilities for pedestrians and bicycles, MDOT anticipates the Preferred Alternative would improve access to public and community facilities and services in and around the Project area; such as from Lafayette Park to the riverfront and Eastern Market and two-way access across Gratiot Avenue from Jay Street.

Locations of public and community facilities and services within the Project and socioeconomic study areas are shown in **Figure 22**.

The Preferred Alternative would create additional roadways across the Project area, specifically at Clinton Street, Montcalm Street, and a new local connector roadway from Eastern Market to Gratiot Avenue, that add new east to west access in the corridor, see **Figure 7**. Additionally, a new vehicular and nonmotorized connection to Atwater Street will be provided. This new connection will add new direct access close to the riverfront.

The Preferred Alternative will remove existing bridges over I-375 and replace them with surface-level, signalized intersections at Clinton Street, Monroe Street, Lafayette Avenue, Larned Street, and Jefferson Avenue. The introduction of a surface-level boulevard with intersections, in place of an access-controlled freeway, provides more access to the corridor.

Figure 22: Public Services and Facilities

4.5.4. Right-of-Way

What is right-of-way?

Land that is owned by a state or local government for transportation use is called right-of-way (ROW). There are three types:

- Fee simple acquisition is the acquisition of all rights and interests of the land.
- Permanent easement is when the property owner retains ownership but MDOT is allowed continued use of the property for construction and future maintenance.
- Temporary easement is a use of a property that will be restored completely after the impact. MDOT would be allowed use of the property for construction but the property owner retains ownership.

The land use in the Project area is currently residential, commercial/office, industrial, institutional, and event venues, among others. There are two types of ROW needs anticipated for the Project: permanent fee simple acquisition (FSA) and temporary easement.

The Preferred Alternative would result in 3.24 acres of permanent FSA and 0.87 acres of temporary easement; see **Table 5** and **Figure 23**. After construction the Preferred Alternative may create 31.6 acres of potential excess property that could be suitable for public use and/or private development.

The Preferred Alternative would acquire permanent ROW, such as the land needed to extend Montcalm Street from Brush Street to Gratiot Avenue, extend the boulevard to Atwater Street, and to accommodate the interchange design. Temporary easements allow for short-term access to the land for temporary utility work and construction staging, such as at St. Antoine Street, south of Lafayette Avenue.

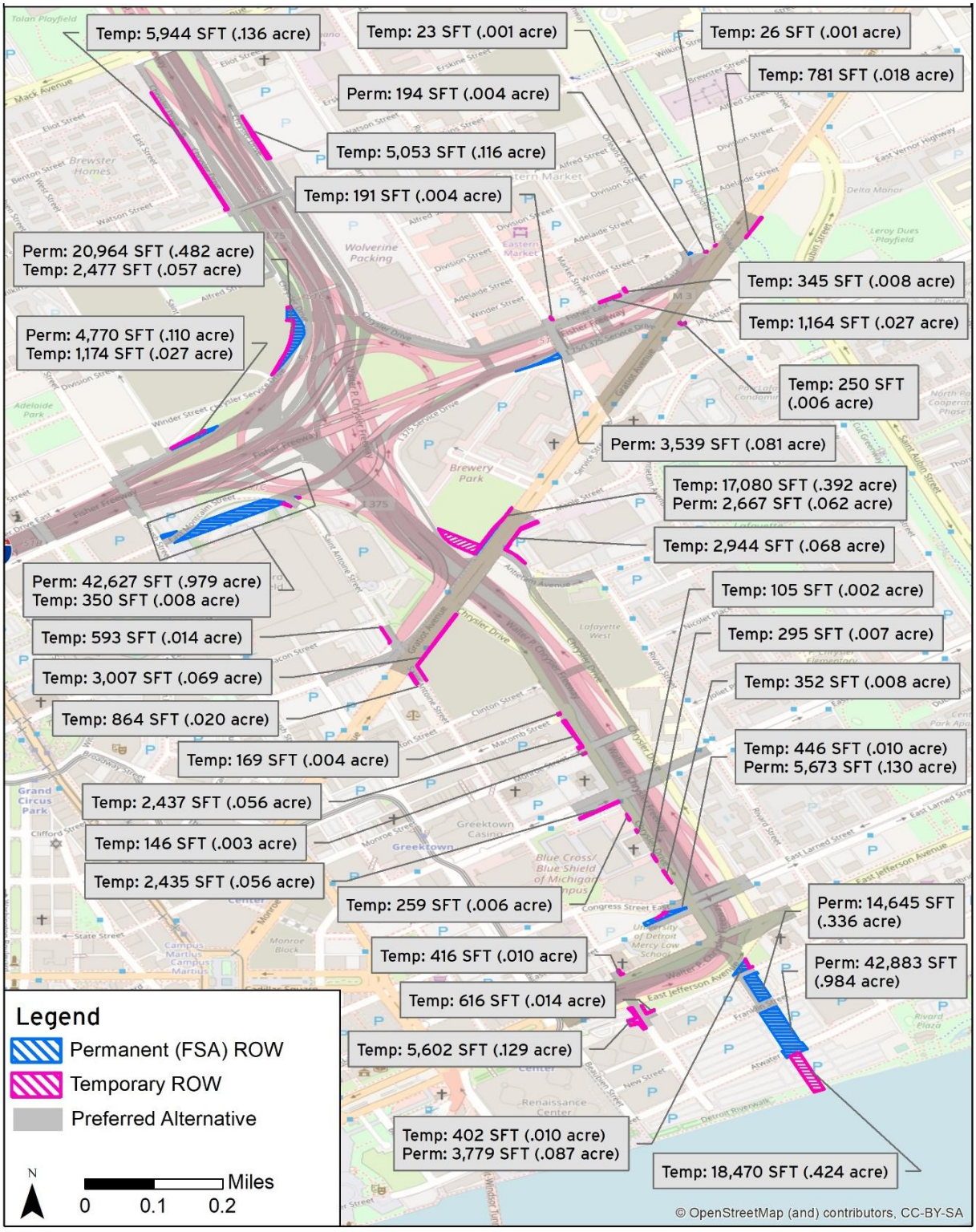
The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, would regulate the purchase of private property to build the Preferred Alternative.

Table 5: Right-of-Way Needs

Land Use	Permanent FSA (Acres)	Temporary Easement (Acres)
Residential	0.63	0.11
Commercial	2.52	0.75
Church	0.09[1]	0.01
Total	3.24	0.87

[1]*Permanent FSA includes a portion of a parcel owned by Christ Church Detroit.*

Figure 23: Temporary and Permanent Right-of-Way Needs



Source: Detroit Open Data, 2017 Parcel Map

The Preferred Alternative's surface streets and the I-75/I-375 Interchange require less physical space than the existing freeway. This results in potential excess property. In accordance with MDOT's *Real Estate Procedures Manual*, FHWA approval will be required for any potential release of property (limited access ROW) which was originally secured for I-375. Due to the significant change in highway orientation and operation proposed by this Project, a post construction engineering and operations review will be performed to determine the necessary ROW requirements for the continued operation, maintenance, and safety of the new facility.

Any potential land which has been determined as no longer required for highway purposes and deemed excess property will be handled in accordance with the FHWA and MDOT standard practices. The excess property may be made suitable for sale or other use. Existing utilities will be evaluated at a later stage in the project. Following construction, MDOT will plant grass seed on the excess property and coordinate maintenance, such as mowing, to provide a green space for the period following construction during which the land is being held.

Figure 24 shows potential excess property as a result of the Project, that could become developable and taxable property under the Preferred Alternative.

Figure 24: Potential Excess Property

Source: City of Detroit Parcel maps

4.5.5. Economic Considerations

Jobs are generally concentrated in the CBD and the industrial areas in and around the Project area. Median household incomes in the socioeconomic study area range from $10,500 to $45,000, see **Figure 25** and **Appendix B**. Generally, higher incomes are concentrated in the Detroit CBD and the areas immediately to the south and to the east of I-375. For comparison, the median household income is $26,000 in Detroit and $41,000 in Wayne County. Existing property values in the socioeconomic study area vary widely and are largely dependent on the existing land use, see **Figure 26**.

The census tracts surrounding the Project area are designated as Opportunity Zones. Enacted through the 2017 Tax Cuts and Jobs Act, Opportunity Zones are designed to incentive capital investments in economically distressed communities (USEDA, 2020).

A minor amount of new permanent ROW is required to build the Preferred Alternative, see **Section 4.5.4 Right-of-Way**. The conversion of this land to transportation use will have minimal effects to tax revenues. The design of the Preferred Alternative will result in changes to parking, see **Section 4.4 Parking**. However, since most of the parking being removed is located on service drives and is not metered, there will be minimal effects to revenue. It is also anticipated that potential excess property may be available for development, see **Section 4.5.4 Right-of-Way**. The potential sale of this land and possible conversion to private development may result in increased property tax revenues.

During construction, visibility and access to some area businesses may be reduced on a short-term basis. This could result in negative effects to business and sales tax revenues in the short term. To minimize these impacts, access to businesses will be maintained to the greatest extent possible throughout construction, see **Section 4.17 Short-Term Construction Effects and Constructability**.

Figure 25: Median Household Income

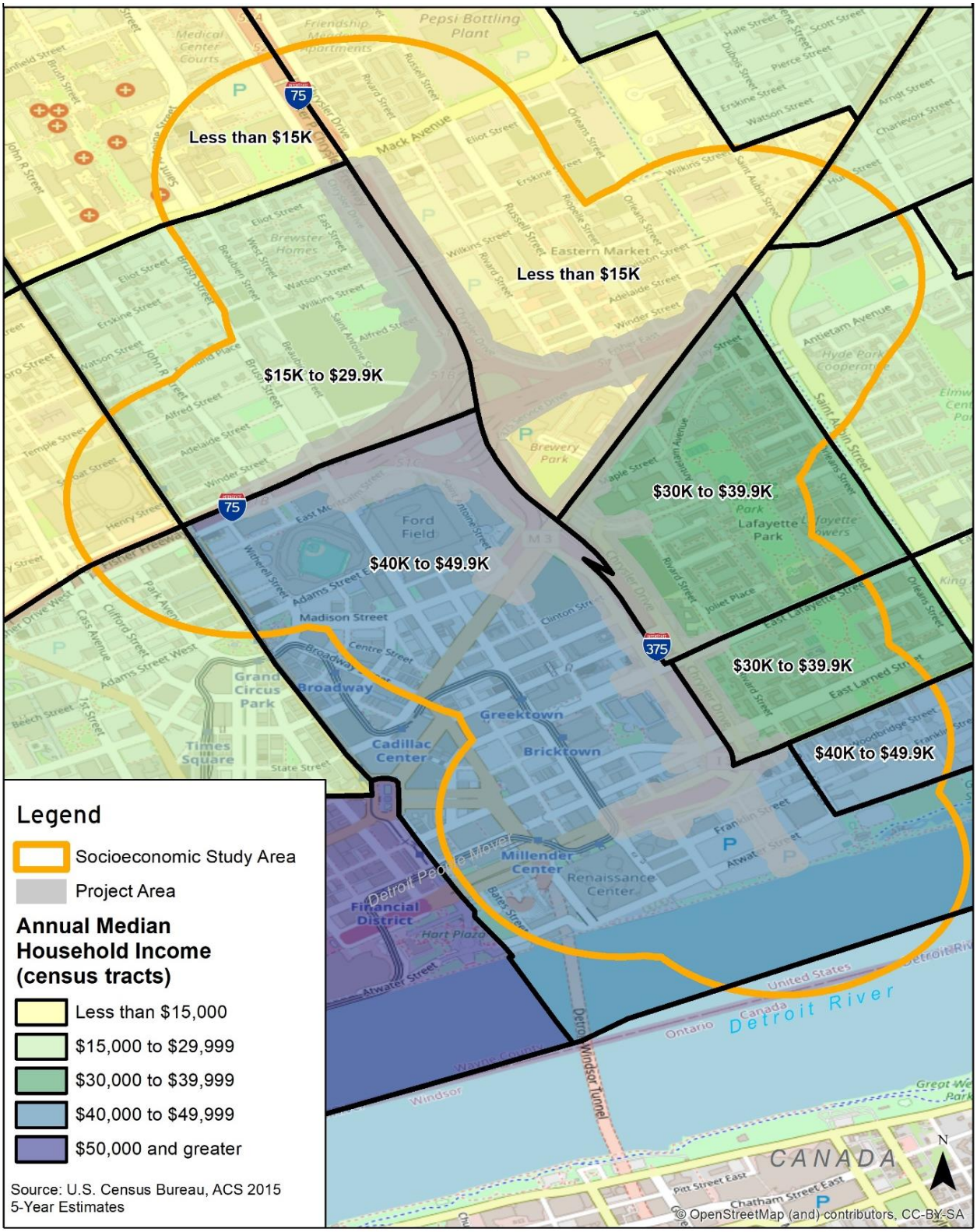


Figure 26: Property Values

4.5.6. Environmental Justice and Title VI

This section discusses potential impacts of the Preferred Alternative on low-income and minority populations and groups, or "environmental justice" populations. This section also addresses Title VI of the Civil Rights Act.

4.5.6.1. Low Income and Minority Population

Although low-income and minority populations are present, with the mitigation measures discussed in this section, the Preferred Alternative would not cause disproportionately high and adverse effects.

Low-income and minority populations are protected under Presidential Executive Order 12898 on Environmental Justice, which sets out objectives and procedures to identify, address, and avoid disproportionately high and adverse human health or environmental effects of federally funded projects on minority and low-income populations.

The environmental justice policy has three major parts:

- Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects of the Project, on minority and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the decision-making process.
- Prevent the denial of, reduction in, or delay in the receipt of benefits by minority and low-income populations.

Minority persons are defined as Black, Hispanic, Asian American, American Indian, or Alaskan Native. A low-income person is one whose median household income is at or below the Department of Health and Human Services poverty guidelines. A low-income population is any readily identifiable group of low-income persons who live in geographical proximity and are similarly impacted by a proposed project. To help identify the presence of low-income and minority populations, MDOT completed an analysis of U.S. Census data.

Figure 27 and **Table 6** show the percentage of low-income individuals in the socioeconomic study area. Low-income individuals make up 39% of the population in the socioeconomic study area. By comparison, low-income individuals make up 40% of Detroit's population and 25% of Wayne County's population. In general, the areas in the northern and western portions of the socioeconomic study area have higher percentages of low-income individuals.

Figure 28 and **Table 6** show the percentage of minority individuals in the socioeconomic study area. Minority individuals make up 80% of the socioeconomic study area. By comparison, minority individuals make up 91% of the population in the city of Detroit and 50% of the population in Wayne County. These data indicate the presence of low-income and minority people and MDOT therefore set out to avoid disproportionately high and adverse human health or environmental effects and to set forth a public involvement program to have full and fair participation by all potentially affected communities in the decision-making process.

Table 6: Census Data

	Total Population	Percentage of Minority Populations	Percentage of Individuals below the Poverty Level	Percentage of Individuals who may be Limited in English Proficiency (LEP)
Socioeconomic Study Area	20,990	79.8%	38.9%	0.9%
City of Detroit	641,341	90.9%	40.3%	4.3%
Wayne County	1,663,012	50.2%	25.0%	4.9%

U.S. Census Bureau 2011-2015 American Community Survey 5-Year Estimates

A public participation program was implemented that included outreach to the potentially affected community groups, business owners, and residents around the Project area. This input not only informed the decision-making process through the development of the Preferred Alternative, but it also helped MDOT identify affected stakeholders and determine if there would be any disproportionate impacts borne by the low-income and minority population. See **Chapter 5 Public Participation and Agency Coordination** for full details on the meetings, events and project website.

One low-income population that is difficult to identify is the homeless population. MDOT finds that homeless people sometimes occupy areas within the existing transportation ROW; primarily under bridges where they can find shelter from rain and snow. The number of people that may be affected by a transportation project varies through the year or even day by day. The Preferred Alternative includes removal and/or reconstruction of all the bridges along I-375 and therefore may require moving homeless people and their belongings out of the ROW. To mitigate this potential impact, the Project plans will require the contractor to coordinate with the Detroit Department of Human Services, the Michigan Department of Community Health, and the local police authority in advance of construction. These agencies, in turn, will notify the affected homeless people in advance to allow them to clear their belongings before construction begins. During final design, MDOT will also explore methods for cooperating with local shelters and other community services to provide alternate housing for homeless people.

The Preferred Alternative requires 3.24 acres of new permanent ROW, but no residential relocations or business displacements are required, see **Section 4.5.4 Right-of-Way**. Acquisition assistance and advisory services will be provided by MDOT in accordance and compliance with Act 31, Michigan P.A. 1970; Act 227, Michigan P.A. 1972; Act 149, Michigan P.A. 1911, as amended; Act 87, Michigan P.A. 1980, as amended, Act 367 Michigan P.A. 2006, as amended; Act 439, Michigan P.A. 2006, as amended, and the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Federal Law 91-646) (Uniform Act), as amended; and Act 87, Michigan P.A. 1980, as amended. MDOT will inform individuals, businesses, and nonprofit organizations of the impacts, if any, of the Project on their property.

A noise analysis completed for the Preferred Alternative predicted that future noise impacts will occur in areas where minority and/or low-income individuals reside. As discussed in **Section 4.8**

Noise and Vibration, placing a noise barrier to address these impacts was found to be infeasible because it would not reduce the noise levels, that is it would not produce a 5 dB(A) reduction for 75% of the impacted receptors.

MDOT has coordinated with the city of Detroit on land use and development issues. The Preferred Alternative is consistent with the City's future vision for development and redevelopment in the area. Future development and affordable housing will largely be determined by local plans and regulations, such as the *Your! Detroit East Riverfront Study* and the city of Detroit's *Master Plan of Policies*. Increases to property values and rents may occur in the adjacent residential area to the Project, negatively impacting low-income populations. More information on these indirect land use effects can be found in **Section 4.15.1 Indirect Effects**.

MDOT anticipates that the benefits of the Preferred Alternative outweigh the impacts to low income and minorities based on public input received, how that input was incorporated into the design, and the application of the mitigation measured discussed in this section. Benefits identified include:

- Dedicated bicycle and pedestrian facilities, including at-grade crossings, which increases access for those who do not own or use a car or need to gain access to transit.
- Enhanced infrastructure that supports expanded transit service to the riverfront, improved bus stop placement, and opportunities for new transit routes that provide more direct east-west connections and improved access to the CBD.
- Improved connectivity through the added street connections east to west and north to south.
- Improved visual environment through incorporation of landscaping and other aesthetic elements, which contributes positively to residents' quality of life.

Based on this assessment MDOT found that the Preferred Alternative would not cause disproportionately high and adverse effects on minority or low-income populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23.

Figure 27: Low-Income

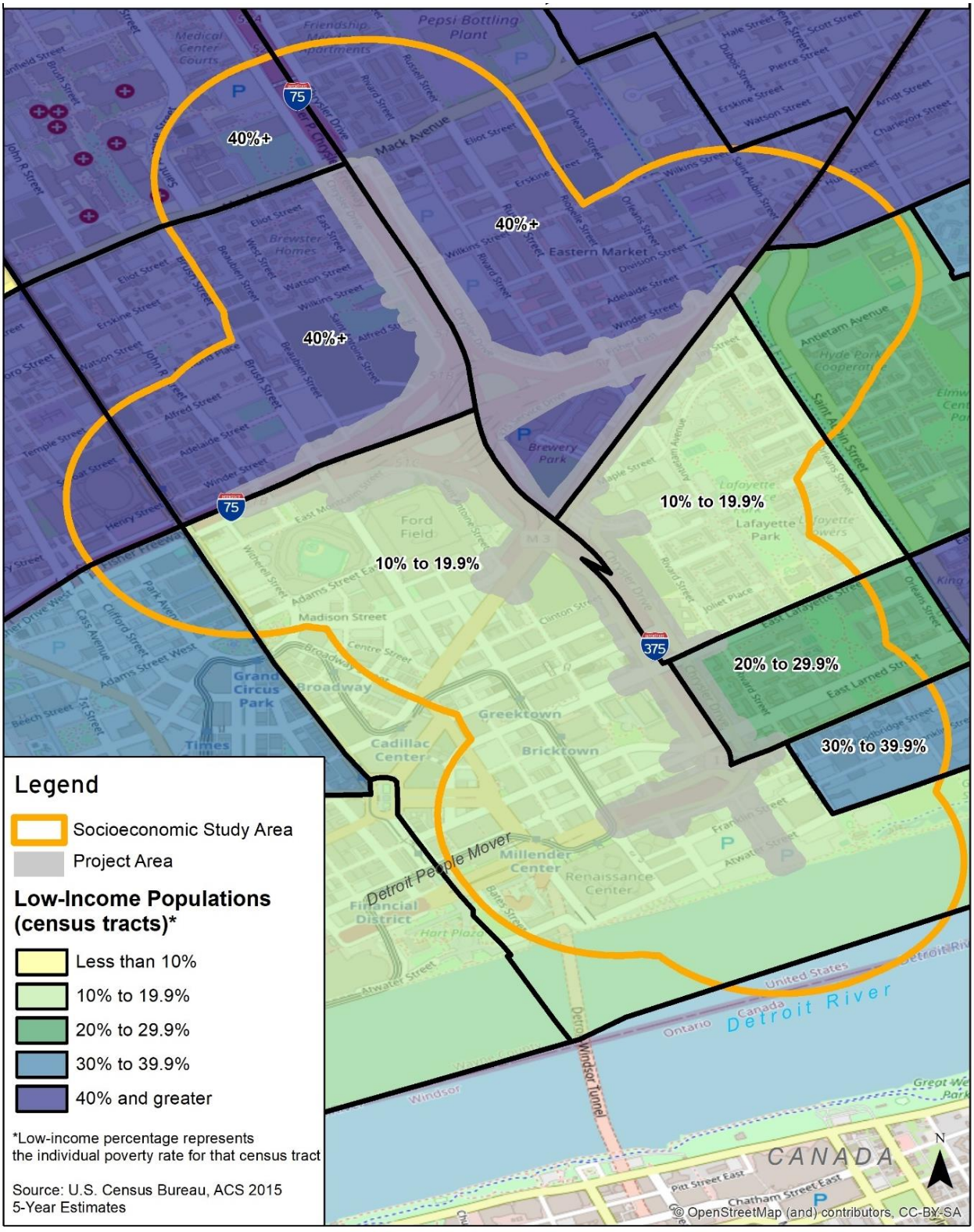
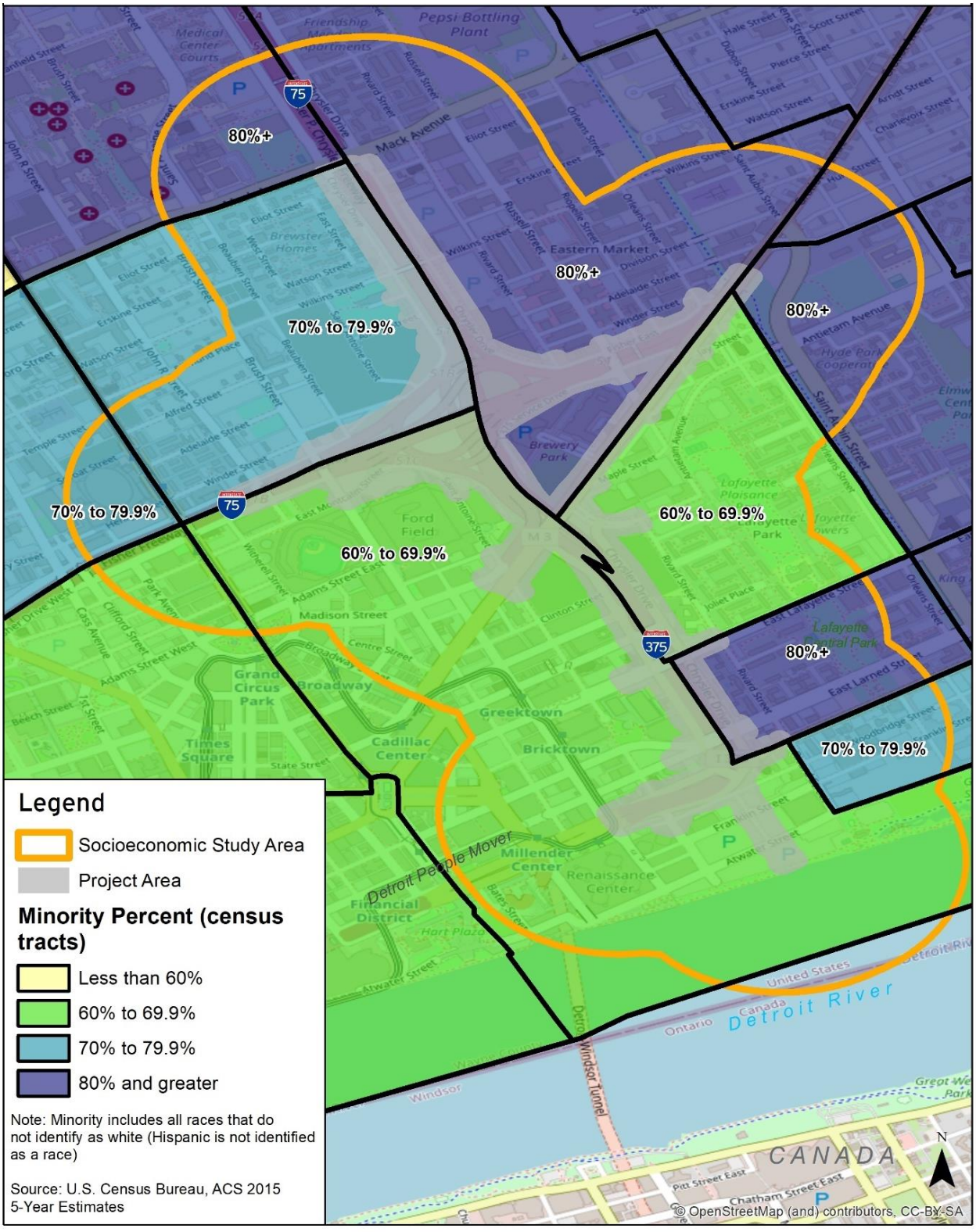


Figure 28: Minority Populations



4.5.6.2. Title VI

In conformance with Title VI of the Civil Rights Act of 1964 (Title VI), MDOT does not anticipate the Preferred Alternative would negatively impact those that are protected under Title VI, including individuals with limited English proficiency, older adults, children, or persons with disabilities. Title VI states that, “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance” (United States, 1964). FHWA's Title VI program builds upon that and includes sex, age, disability and low-income within the covered classes (FHWA, 2017).

No groups of people have been or will be excluded from participating in public involvement activities, denied the benefit of the Project or subjected to discrimination in any way on the basis of race, age, sex, national origin, or disability.

Section 4.5.6.1 Low Income and Minority Population, addresses how the Project would impact minority and low-income populations; the following information relates to other protected or underserved population groups in the socioeconomic study area, see also **Appendix B**:

- Individuals with limited English proficiency make up 1% of the total population in the socioeconomic study area. By comparison, 4% of Detroit’s population and 5% of Wayne County’s population have limited English proficiency.
- Older adults (age 65 or older) make up 18% of the total population in the socioeconomic study area. By comparison, 12% of Detroit’s population and 14% of Wayne County’s population are older adults.
- Children under 5 years old make up 4% of the total population in the socioeconomic study area. By comparison, 7% of the population in both Detroit and Wayne County are children younger than 5.
- Persons with one or more disabilities account for 25% of the total population in the socioeconomic study area. By comparison, 20% of Detroit’s population and 16% of Wayne County’s population have at least one disability.

The Preferred Alternative’s impacts and benefits to protected or underserved population groups would be similar to those reported in **Section 4.5.6.1 Low Income and Minority Population**.

4.6. Historic Resources

Historic resources are protected under Section 106 of the National Historic Preservation Act of 1966 (NHPA), which requires federal agencies to consider the effects of their undertakings (this Project) on historic properties and give the Advisory Council on Historic Preservation (ACHP), if participating, a reasonable opportunity to comment on such undertakings.

What is a historic resource?

Historic properties are defined as architectural and archaeological resources that are listed on, or eligible for listing on, the National Register of Historic Places (NRHP).

What is the Area of Potential Effect?

The Area of Potential Effect (APE) is a geographic area in which a project may directly or indirectly cause changes in the character or use of historic properties.

To comply with Section 106 of NHPA, MDOT conducted studies and analyses to identify historic resources within the Project area, evaluate their significance and integrity, and determine to the extent possible the effects this Project will have on historic properties eligible for or listed in the NRHP.

MDOT in consultation with the Michigan State Historic Preservation Office (SHPO) established the Area of Potential Effect (APE) for the above-ground resources and archaeological sites. **Figure 29** and **Figure 30** show the APE for the Preferred Alternative, archeological sites and above-ground, respectively.

Commonwealth Heritage Group prepared the *Land Use History and Assessment of Archaeological Potential Report* and *Above-Ground Survey and Impacts Evaluation* for the Project, conducting research and investigations to identify above-ground resources and archaeological sites. Also evaluated was the significance of the identified cultural resources and determined the possible effect of the Project on significant and possibly significant cultural resources. MDOT consulted with SHPO on the APE and results of the investigations including the NRHP eligibility of selected properties and the effects of the Project on significant and possibly significant cultural resources. SHPO concurred with MDOT's determination of no adverse effect for historic above-ground or archaeological resources on September 16, 2020. **Appendix C** includes the SHPO concurrence letter for the determination of eligibility for archaeological sites 20NW284 and 20WN331 and the letter for the determination of effect for historic above-ground resources and archaeological sites.

Figure 29: Area of Potential Effect for Archaeological Sites

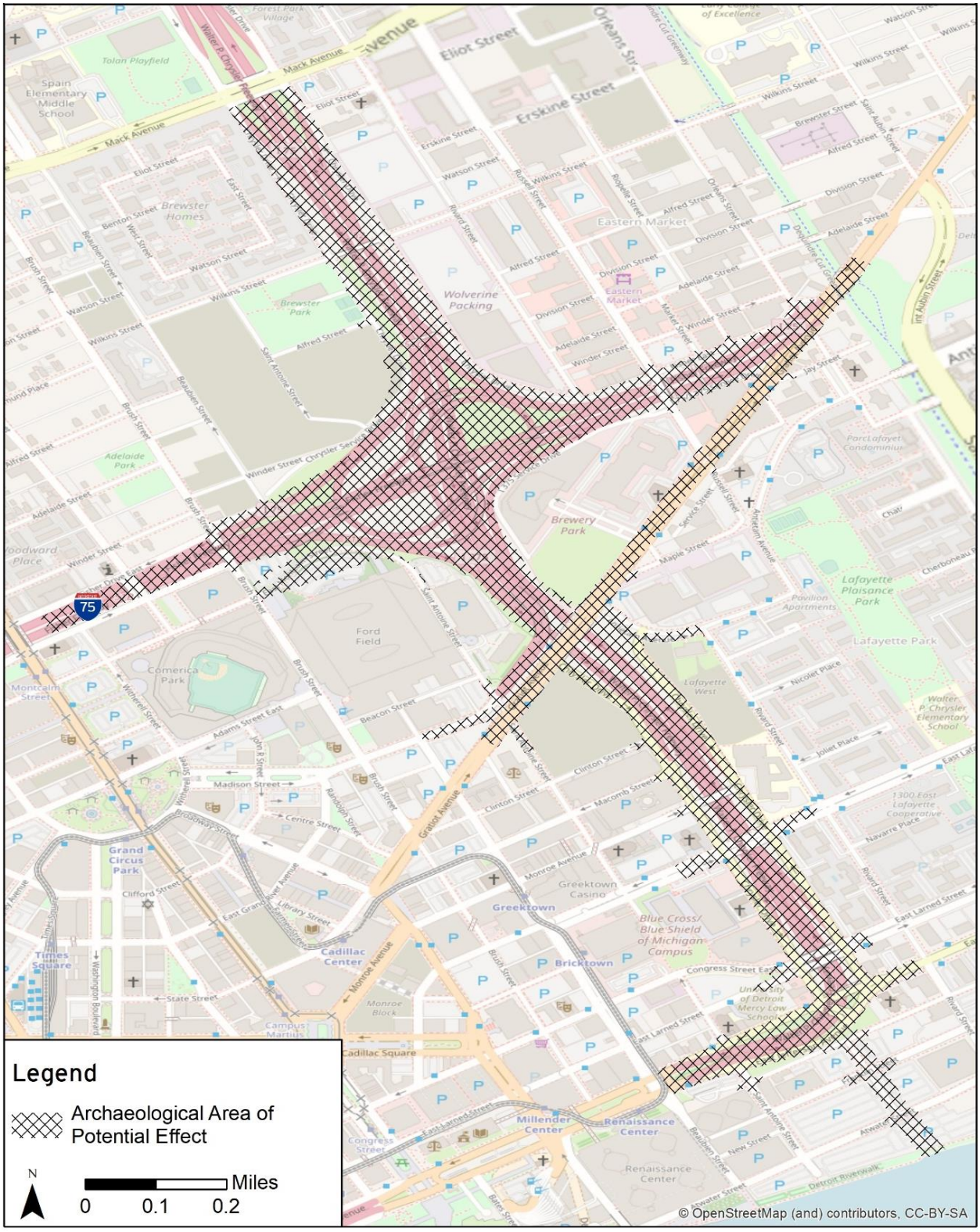
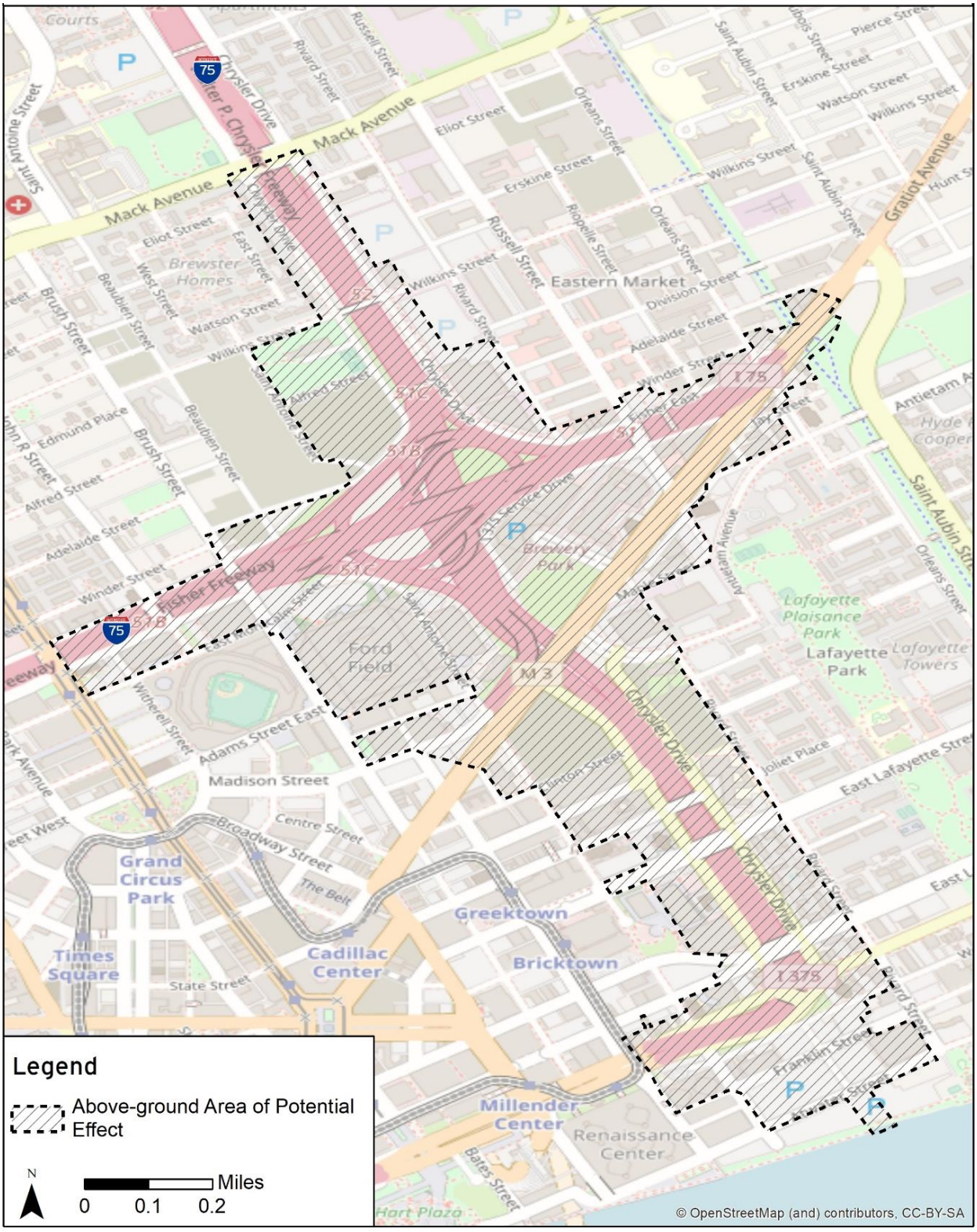


Figure 30: Area of Potential Effect for Above-Ground Survey



4.6.1. Archaeological Sites

The Preferred Alternative could potentially impact four archaeological sites.

Based on the land-use history study conducted for the Project, five of the 11 archaeological sites identified within or adjacent to the Project area have been destroyed or have compromised integrity due to the extensive development and redevelopment over the past 200 years. In addition, SHPO already has deemed two sites, 20WN1029 and 20WN107, ineligible, and they do not require further investigations.

Two sites of potential concern, 20WN284 and 20WN331, are city cemeteries that closed and intentionally abandoned in the 19th century. They have been determined not eligible for listing in the NRHP and are thus not significant historic properties pursuant to Section 106 procedures. While historical records indicate that all the remains were exhumed and reburied in other city cemeteries, past construction has encountered human remains that evidently were missed during the exhumation process.

A third site of concern, 20WN431, is an 18th century farmstead, and/or a Native American site of unknown age.

The 20WN1055 site is a 19th century industrial/residential site that was previously subjected to Phase III mitigation work. No investigations of the site are planned. MDOT has previously mitigated the adverse effects to the portion of the site located within the Project area.

Lastly, MDOT has consulted with all 12 federally recognized Indian Tribes about possible Project-related impacts to Native American archaeological sites, see consultation letters dated June 27, 2017, in **Appendix C**. Tribal representatives have not raised concerns about impacts to Native American archaeological sites.

Depending on the specific impacts of the final construction design in the areas around 20WN284 and 20WN331, MDOT may monitor construction where ground disturbing takes place within the original boundaries of those cemeteries.

While the Preferred Alternative has been identified, design of the proposed realignment and widening of Schweizer Place and relocation of utilities, at this time, is not sufficiently detailed to develop a survey strategy for determining the presence of significant archaeological sites. After design is sufficiently complete, then a survey of 20WN431 will be completed. In addition, any NRHP eligible archaeological sites would be mitigated through data recovery, since such sites would be important for the information, they may yield about local and regional history and prehistory, but not for preservation in place. If any eligible archaeological sites are discovered, MDOT shall consult with SHPO staff to develop and execute an acceptable data recovery plan in accordance with Michigan law and legal mandates.

Appendix C includes documentation of MDOT's coordination with SHPO and finding of no adverse effect.

4.6.2. Historic Above-Ground Resources

The APE for the Preferred Alternative has 45 historic resources, 33 of which are a part of the Eastern Market Historic District. Of those properties, there is potential to impact three of them, Holy Family Roman Catholic Church, Mrs. Solomon Sibley House and the properties in the

Eastern Market Historic District. There is the potential for temporary work beyond the curb line at the southern edge of the Eastern Market Historic District. During construction of the boulevard, Holy Family Roman Catholic Church and Mrs. Solomon Sibley House may incur temporary impacts to access. Roadway and sidewalk construction will result in temporary impacts to 1.52 acres of frontage at Holy Family Roman Catholic Church and 0.17 acres of frontage at the Mrs. Solomon Sibley House. Access will be maintained to the properties during and after construction. These temporary impacts will not permanently affect the historic character of the aforementioned properties.

Table 7 summarizes the Above-ground historic resources within the Project APE that are listed in or eligible for listing in the NRHP, which include buildings, structures, and historic districts. They are also shown on the map in **Figure 31**. The *Above-Ground Survey and Impacts Evaluation* identified three additional properties that were determined to be eligible for the NRHP.

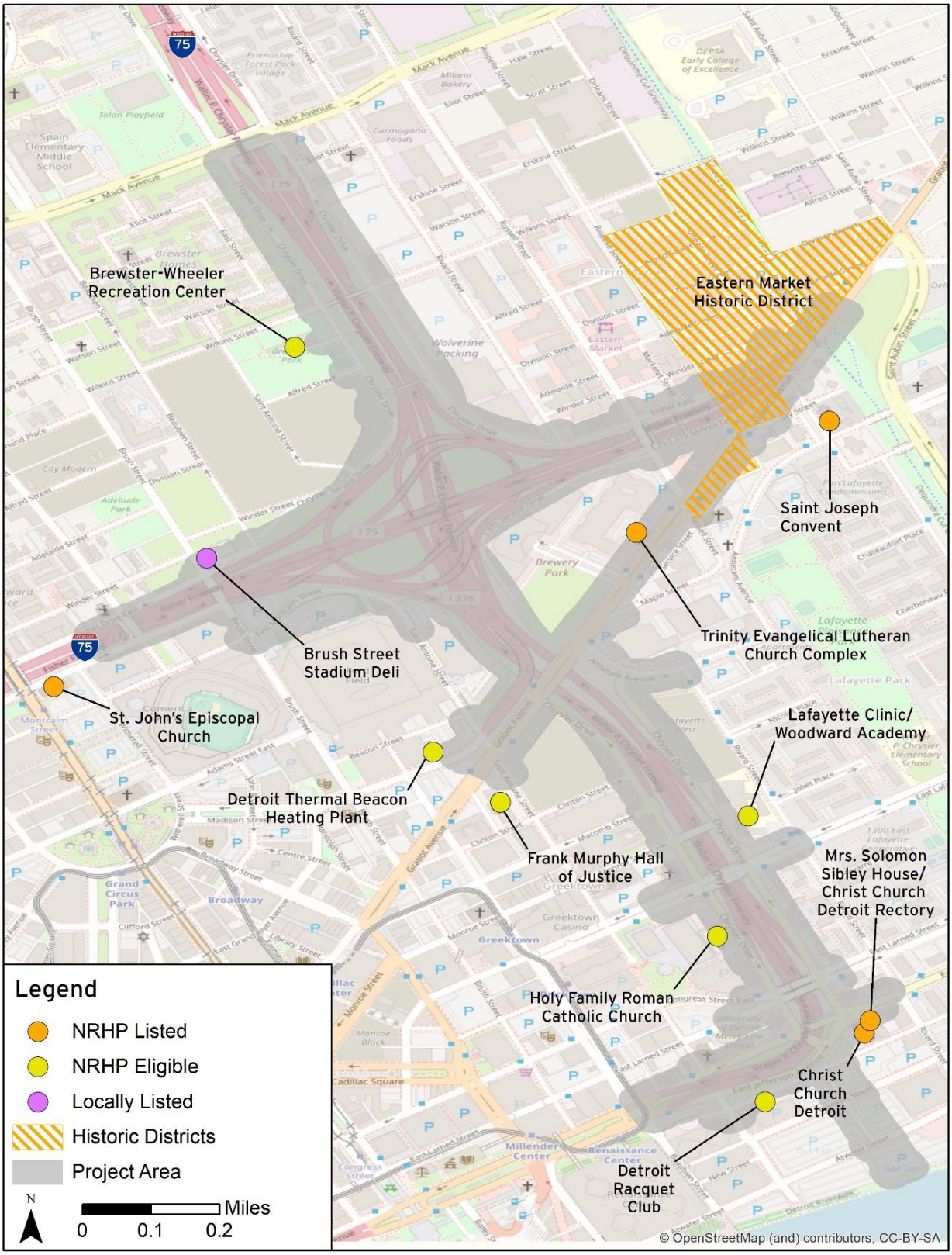
Appendix C includes documentation of MDOT's coordination with SHPO and finding of no adverse effect.

Table 7: Above-Ground Resources Listed or Eligible for NRHP

Resource	Description	NRHP/Local Historic District
Lafayette Clinic/Woodward Academy, 951 E. Lafayette Ave.	The building has served has both a school and an elementary school. It was completed in 1955.	Eligible
Detroit Racquet Club, 626 East Woodbridge St.	Built in 1902 and designed by Albert Kahn.	Eligible
Christ Church Detroit, 960 East Jefferson Ave.	The church was built in 1846.	Listed in NRHP
Mrs. Solomon Sibley House/Christ Church Detroit Rectory, 976 East Jefferson Ave.	Built in 1848 by Mrs. Sarah Sproat Sibley. Christ Church Detroit purchased the house in 1925.	Listed in NRHP
Holy Family Roman Catholic Church, 641 Walter P. Chrysler Highway	Built in 1909–1910.	Eligible
Trinity Evangelical Lutheran Church Complex, 1345 Gratiot Avenue	Gothic Revival church with an attached Tudor Revival parish house. Built 1927–1931 and designed by William Edgerton N. Hunter.	Listed, Trinity Evangelical Lutheran Church Complex
St. Joseph Convent, 1828 Jay Street	Italianate-style convent constructed in 1865, associated with St. Joseph Roman Catholic Church across the street. Wing addition, built ca. 1896.	Listed, St. Joseph Roman Catholic Parish Complex

Resource	Description	NRHP/Local Historic District
St. John's Episcopal Church, 2326 Woodward Avenue (50 E. Fisher Freeway)	Gothic Revival church constructed in 1859–1861.	Listed, St. John's Episcopal Church
Brush Street Stadium Deli, 2458 Brush Street	One-story commercial building constructed in 1946.	Locally listed, Brush Park City of Detroit Local Historic District
Eastern Market Historic District (33 Properties)	Commercial buildings and factories in or near the Eastern Market.	Listed in NRHP
Detroit Thermal Beacon Heating Plant, 541 Madison Ave.	Five-story steam generation plant, constructed in 1926.	Eligible
Frank Murphy Hall of Justice, 1441 St. Antoine St.	Twelve-story Brutalist-style building, constructed in 1966–1970 and designed by Eberle M. Smith, architect.	Eligible
Brewster-Wheeler Recreation Center, 2900 St. Antoine St.	Large community center originally constructed in 1917 as a library and extensively remodeled and expanded in 1929.	Eligible; Brewster-Wheeler City of Detroit Local Historic District

Figure 31: Above-Ground Resources Listed or Eligible for NRHP



4.6.3. Mitigation

MDOT will conduct archaeological monitoring of the recommended sites, between Jefferson Avenue and Atwater Street, prior to the construction of the Preferred Alternative. If MDOT discovers an inadvertent find, it would stop all work in the area and begin an investigation. If needed, MDOT would complete the appropriate mitigation measures before resuming ground-disturbing activities. MDOT will maintain access to Holy Family Roman Catholic Church and Mrs. Solomon Sibley House. MDOT will also monitor construction near the southern edge of the Eastern Market Historic District should work extend beyond the curb line.

4.7. Air Quality

The air quality analysis for the Preferred Alternative was completed in compliance with the Clean Air Act as amended in 1990 (CAAA), NEPA, and related federal regulations and FHWA guidance that provides the procedures followed by MDOT, along with the department's own procedures. The federal government established the CAAA to ensure that transportation projects meet national air quality standards to protect public health and welfare. The air quality analysis addresses project level conformity in accordance with 40 CFR Parts 51 and 93, presents a discussion on carbon monoxide (CO), fine particulate matter ($PM_{2.5}$), and qualitatively discuses mobile source air toxics (MSAT). A full air quality analysis, the *I-375 Improvement Project Air Quality Technical Report*, was completed concurrently with the EA and is included in **Appendix D**.

4.7.1. Basic Air Quality Information

The following sections describe the background information and requirements for the air quality analysis.

4.7.1.1. National Ambient Air Quality Standards (NAAQS)

Under the CAAA, the U.S. Environmental Protection Agency (EPA) established the National Ambient Air Quality Standards (NAAQS), which set maximum allowable concentration limits for the following six criteria pollutants, see **Table 8**, Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO_2), Ozone (O_3), Particulate matter (PM_{10}, 10-micron and smaller along with $PM_{2.5}$, 2.5 micron), and Sulfur Dioxide (SO_2).

Areas in which air pollution levels persistently exceed the NAAQS may be designated as "nonattainment." States in which a nonattainment area is located must develop a state implementation plan (SIP) detailing policies and regulations that will bring about attainment of the NAAQS. Maintenance areas are areas that formerly had been designated as nonattainment but currently meet the NAAQS for the criteria pollutant(s). These areas must undergo conformity analysis for a designated number of years to show that they continue to meet the federal air quality standard.

Table 8: National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		Primary	8 hours	9 parts per million (ppm)	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		Primary and secondary	Rolling 3-month Average	0.15 µg/m^3 [a]	Not to be exceeded
Nitrogen Dioxide ($N0_2$)		Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and secondary	1 year	53 ppb [b]	Annual mean
Ozone (0_3)		Primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	Primary	1 year	12 µg/m^3	Annual mean, averaged over 3 years
		Secondary	1 year	15 µg/m^3	Annual mean, averaged over 3 years
		Primary and secondary	24-hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	Primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide ($S0_2$)		Primary	1 hour	75 ppb [d]	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed March 8, 2018

[a] *In areas designated non-attainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar-quarter average) also remain in effect.*

[b] *The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.*

[c] *Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards. On April 23, 2018, the FHWA published a memorandum providing interim guidance on the reinstated 1997 8-hour ozone standard. The standard was revoked in April 2015 with the establishment of the 2008 8-hour ozone standard. A Federal court decision reinstated the 1997 standard.*

[d] *The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated non-attainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (Title 40, CFR, Part 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.*

4.7.1.2. Transportation Conformity

Transportation conformity is required under the CAAA to ensure that federally supported highway and transit project activities are consistent with the purpose of the air quality SIP. Conformity to the SIP means that transportation activities will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS or required interim milestones. The EPA transportation conformity rule (40 CFR 51.390 and Part 93) establishes the criteria and procedures for determining whether transportation activities conform to the SIP. Conformity applies to transportation activities in nonattainment and maintenance areas for transportation-related pollutants.

4.7.1.3. Attainment Status

The Project area is located within the Metropolitan Detroit-Port Huron Intrastate Air Quality Control Region No. 123. Wayne County is currently in attainment status for four of the six criteria pollutants. A portion of Wayne County has been classified as being in non-attainment for Sulfur Dioxide SO_2 (2010), but the project is not located in that portion of the county. Wayne County is considered a Maintenance Area for the 24-hour $PM_{2.5}$ standard. Wayne County is also in maintenance for the 1997 8-hour ozone standard and non-attainment for the 2015 8-hour ozone standard. As such, the project is required to meet Transportation Conformity Rule requirements found in 40 CFR Part 93.

As aforementioned in **Section 1.1 Project Description**, the Project is included in SEMCOG's *2045 Regional Transportation Plan for Southeast Michigan*, project Number 13286 (SEMCOG, 2013). Design and ROW of the project is included in the *Fiscal Year 2020-2023 Transportation Improvement Program for Southeast Michigan* project Number 522 (SEMCOG, 2019). In September 2020, construction of the project was removed from the current TIP and proposed for inclusion in the year 2027. SEMCOG adopted its *2045 Regional Transportation Plan* on March 14, 2019, in conformance with the transportation planning requirements of USC Titles 23 and 49, the CAAA, and related regulations.

4.7.2. Criteria Pollutants Analysis

4.7.2.1. Carbon Monoxide (CO)

What is Carbon Monoxide (CO)?

Carbon Monoxide (CO) is an odorless and colorless gas that is the major pollutant from gasoline fueled vehicles.

A CO analysis was completed in April of 2018 on the then current alternatives when the project area was in maintenance for CO. The results of that CO microscale air quality modeling indicated that CO concentrations for the project would not exceed the 1-hour (35 parts per million [ppm]) or 8-hour (9 ppm) NAAQS. The area has since then been designated full attainment for CO by the EPA (July 30, 2019).

4.7.2.2. Particulate Matter 2.5 ($PM_{2.5}$)

What is Fine Particulate Matter ($PM_{2.5}$)?

Fine particulate matter ($PM_{2.5}$) includes microscopic solids or liquid droplets. Motor vehicles (i.e., cars, trucks, and buses) emit $PM_{2.5}$ in their exhausts, as well as from brake and tire wear. Vehicles also cause dust from paved and unpaved roads to be re-suspended in the atmosphere.

The Project air quality analysis found that the Preferred Alternative is not a project of air quality concern. Therefore, the Project meets all federal air quality requirements and standards for $PM_{2.5}$.

EPA issued the final, amended Transportation Conformity Rule on March 10, 2006. The Rule requires a hot-spot analysis to determine project-level conformity in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. A hot-spot analysis is an assessment of localized emissions impacts from a proposed transportation project and is only required for projects of air quality concern.

The SEMCOG Michigan Transportation Conformity Interagency Workgroup (IAWG) has established a process to be used in Southeast Michigan for identifying transportation projects of local air quality concern requiring a $PM_{2.5}$ hot-spot analysis. The IAWG has established general criteria for projects requiring $PM_{2.5}$ hot-spot analysis, based on EPA guidance and interagency consultation. These criteria have been passed on to MDOT project-level review staff, and MDOT is responsible for bringing potential projects of air quality concern for $PM_{2.5}$ to the IAWG for interagency consultation and determination on whether the project is or is not a project of air quality concern.

The MDOT 2015 traffic data for the project corridor shows annual average daily traffic (AADT) of 43,800 to 72,100 and commercial annual average daily traffic (CAADT) of 270 (for full project corridor), which makes the diesel traffic less than 1% of the traffic. Average annual daily traffic in the future year (2040) is projected to increase to between 49,600 and 81,700 with a similar increase in CAADT to 310 diesel vehicles. Therefore, the I-375 corridor does not have the diesel traffic that warrants it a project of air quality concern for $PM_{2.5}$ based on the IAWG general criteria and was not brought forth for interagency consultation.

4.7.2.3. Mobile Source Air Toxics (MSAT)

What are Mobile Source Air Toxics (MSAT)?

Mobile Source Air Toxics, or MSATs, are compounds that are known to cause serious health and environmental effects and are emitted from on-road and off-road vehicles and equipment. They include on-road mobile sources, non-road mobile sources (for example, airplanes), area sources (for example, dry cleaners), and stationary sources (for example, factories or refineries).

The Preferred Alternative meets the criteria for "Low Potential for MSAT effects" in accordance with the FHWA's Updated Interim Guidance on Air Toxics Analysis in NEPA Documents (FHWA, 2016).

In addition to establishing the NAAQS, EPA regulates air toxics, such as MSATs. In April 2007, under authority of the Clean Air Act Section 202(l), EPA signed a final rule, Control of Hazardous Air Pollutants from Mobile Sources, which sets standards to control MSAT. Under the rule, EPA set standards on fuel composition, vehicle exhaust emissions, and evaporative losses from portable containers. Beginning in 2011, refineries were required to limit the annual benzene content of gasoline to an annual average refinery average of 0.62%. The rule also sets a new vehicle exhaust emission standard for non-methane hydrocarbon including MSAT compounds, which were phased in between 2010 and 2013 for lighter vehicles and between 2012 and 2015 for heavier vehicles.

In October 2016 FHWA's guidance (*Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*) for analyzing MSATs for highway projects requires using the most recent version of EPA's *Motor Vehicle Emissions Simulator* (MOVES2014b) modeling software for air quality analysis on documents prepared in accordance with NEPA regulations.

Diesel PM is the dominant component of MSAT emissions, making up 50% to 70% of all priority MSAT pollutants by mass, depending on calendar year. The FHWA developed a tiered approach with three categories for analyzing MSAT in NEPA documents, depending on specific project circumstances:

- No analysis for projects with no potential for meaningful MSAT effects,
- Qualitative analysis for projects with low potential MSAT effects, or
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The *Air Quality Technical Report* found that the Project could increase MSAT levels in a few localized areas in which the surface boulevard is closer to the public; however, EPA's vehicle and fuel regulations would bring about significantly lower MSAT levels in the future than are present currently.

4.8. Noise and Vibration

The noise analysis presents the existing and future noise levels at various locations receptors to evaluate potential project-related noise impacts and recommend mitigation if warranted. The determination of noise abatement measures and locations complies with the Federal Highway Administration's (FHWA's) *Procedures for Abatement of Highway Traffic Noise and Construction Noise* as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 722), July 2010, and the Michigan Department of Transportation (MDOT): *Highway Noise Analysis and Abatement Handbook*, dated July 2011 (Handbook). The Handbook complies with the State Transportation Commission Policy 10136 Noise Abatement, dated October 17, 2019.

Highway improvement projects categorized as Type I according to 23 CFR 772.5 are required to undergo a noise analysis. The project is being studied as a Type I project because it includes substantial horizontal and vertical alterations. A full noise abatement analysis, the *I-375 Traffic Noise Analysis Technical Memorandum*, was completed concurrently with the EA.

4.8.1. Basic Noise Information

The following sections describe the basic noise information including federal and state regulations and guidance.

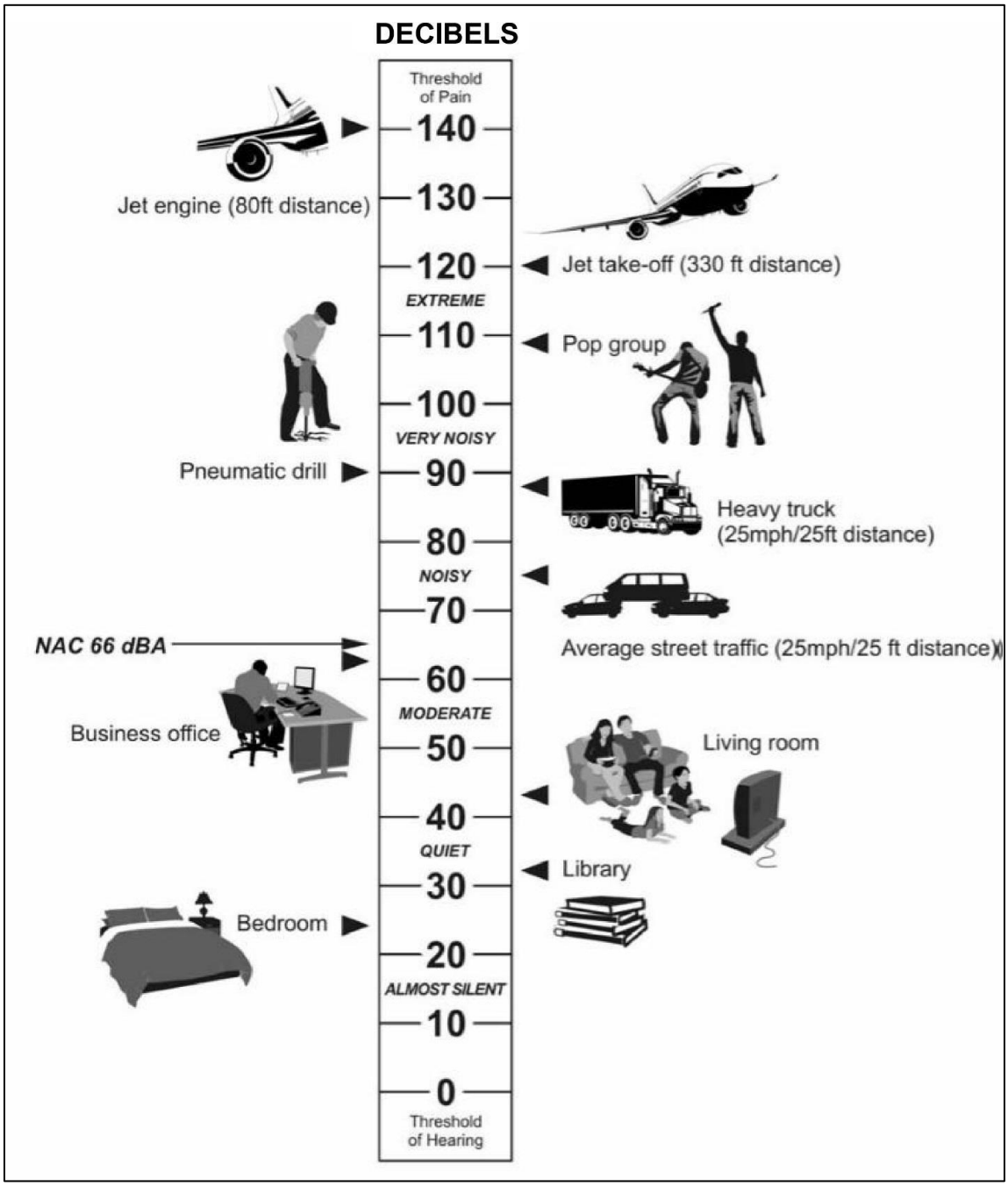
4.8.1.1. Acoustic Concepts

Noise versus Sound

Noise is unwanted sound. Sound is a form of vibration that causes pressure variations in elastic media such as air and water. These pressure variations commonly are measured in decibels (dB).

The unit of measurement for sound is the dB, and the decibel scale is a logarithmic representation of the actual sound pressure. A level of 0 dB corresponds to the lower limit of audibility, or the ability to be heard, while 140 dB produces a sensation more like pain than sound. **Figure 32** provides sound levels of typical noise sources. A doubling of the energy level would result in a 3-dB increase, which would be barely noticeable to the human ear. A change of 10 times the energy level would result in a 10-dB change in the sound level, which would be perceived as a doubling the apparent loudness, see **Table 9**.

Figure 32: Sound Levels of Typical Noise Sources



Source: Adopted from "Environmental Criteria for Road Traffic Noise", Environmental Protection Authority, South Sydney, NSW, May 1999, Page 38.

The human ear has a non-linear sensitivity to noise, meaning a sensitivity that is not equal across all frequencies. To account for this in noise measurements, electronic weighting scales are used to define the relative loudness of different frequencies. Environmental work widely uses the "A" weighting scale because it closely resembles the non-linearity of human hearing. Therefore, the unit of measurement for an A-weighted noise level is dB(A).

Table 9: Logarithmic Nature of Sound

Change in L_{eq} (1h) Sound Level Relative Loudness in the Natural Environment	
+/- 3 dB(A)	Barely Perceptible Change
+/- 5 dB(A)	Readily Perceptible Change
+/- 10 dB(A)	Considered Twice or Half as Loud

It is necessary to use a method of measure that will account for the time-varying nature of sound, as noise levels vary over time, in this case traffic noise, when studying environmental noise. The equivalent sound pressure level L_{eq}) is defined as the continuous steady sound level that would have the same total A-weighted sound energy as the real fluctuating sound measured over a given period of time. As a result, the three characteristics of noise combine to form a single descriptor (L_{eq} in dB(A)) that is used to evaluate human response to noise and has been chosen for use in this study. The time-period used to determine traffic noise levels is one hour and uses the descriptor $L_{eq(1h)}$.

4.8.1.2. Federal Regulations and Guidance

Title 23, CFR, Part 772, July 2010 (FHWA, 2010) presents FHWA's *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. This regulation, along with other guidance documents written to explain the regulation, sets forth the process for performing a traffic noise analysis.

The process includes the following:

- Identification of highway traffic noise impacts.
- Examination of potential abatement measures.
- Gathering of public input approval for reasonable and feasible abatement measure.
- Incorporation of reasonable and feasible highway traffic noise abatement measures into the highway project.
- Coordination with local officials to provide helpful information on compatible land use planning and control.
- Identification and incorporation of necessary measures to abate construction noise.

The highway traffic noise impact identification process involves a review of the existing land use activity categories that parallel the highway corridor and determining existing and future noise levels within those areas. Existing land use of developed lands is identified by inspecting aerial photography and performing site reconnaissance. Highway traffic noise analyses are also performed for undeveloped lands that have received a building permit.

After the existing and proposed land uses are established, ambient noise levels are measured along the corridor with simultaneous traffic counts. The measured noise levels are then compared to modeled noise levels based on the traffic counts. The model is validated if measured highway traffic noise levels and predicted highway traffic noise levels for the existing conditions are within +/- 3 dB(A). This modeling, as required by the FHWA, is performed with the Traffic Noise Model (TNM) version 2.5. Once the model is validated, TNM is used to model

the existing and the future build loudest hour for traffic noise analysis. Field measurements are not used in the analysis to identify highway noise impacts.

The FHWA Noise Abatement Criteria (NAC), which is presented in 23 CFR 772, establishes the NAC for various land uses, and is presented in **Table 10**. A traffic noise impact is defined as a future noise level that approaches or exceeds the NAC; or a future noise level that creates a substantial noise increase over existing noise levels. An approaching noise level is defined as being at least one dB(A) less than the noise level value listed in the NAC for Activity Category A through G. For Activity Category C/D land uses, NAC C is applied if an exterior use is present, and NAC D is applied if there is no exterior use or if abatement (e.g., a noise barrier) for NAC C is not feasible and reasonable. The FHWA allows states to define a substantial noise increase as an increase of anywhere between 5 and 15 dB(A).

Table 10: Noise Abatement Criteria (NAC)

Activity Category	Activity Criteria[a, b] $L_{eq}(h)$[c]	Activity Criteria[a, b] L10(h)[d]	Evaluation Locator	Activity Description
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	70	Exterior	Residential
C	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	55	Interior	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[e]	72	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	N/A	N/A	N/A	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	N/A	N/A	N/A	Undeveloped lands that are not permitted.

Source: Highway Noise Analysis and Abatement Handbook, Michigan Department of Transportation, 2011.

Note: MDOT defines a noise impact as a 10 dB(A) increase between the existing noise level to the design year predicted noise level, OR a predicted design year noise level that is 1 dB(A) less than the levels shown in Table 10.

[a,b] *Either $L_{eq}(h)$ or L10(h) (but not both) may be used on a project. MDOT uses $L_{eq}(h)$. The $L_{eq}(h)$ and L10(h) Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.*

[c] *L_{eq} is the equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with $L_{eq}(h)$ being the hourly value of L_{eq}.*

[d] *L10 is the sound level that is exceeded 10% of the time (90th percentile) for the period under consideration, with L10 being the hourly value of L10.*

[e] *Includes undeveloped lands permitted for this activity category*

4.8.1.3. State Rules and Procedures

The Handbook is the State's tool for implementing 23 CFR 772. The Handbook expands on 23 CFR 772 by refining definitions and establishing milestones within the design phase for the completion of noise impact analysis and mitigation development.

The Handbook includes the following definitions:

Noise Impact: A substantial noise increase or a predicted design year noise level that is one dB(A) less, equal to, or greater than the NAC level.

Substantial Noise Increase: A 10 dB(A) or greater increase between the existing noise level and the design year predicted noise level.

Feasible Noise Barrier: A barrier that has no construction impediments, meets safety requirements for the traveling public, and provides at least 5 dB(A) noise reduction for 75% of the impacted receptors.

Reasonable Noise Barrier: A barrier:

- With a preliminary construction cost that is not more than 3% above the allowable cost per benefited receptor unit ($47,489 in 2019 dollars);
- That reduces design year traffic noise levels by 10 dB(A) for at least one benefited unit and at least a 7 dB(A) reduction for 50% or more of the benefited units;
- That is approved by a majority of the benefited residents and property owners during the final design phase.

Cost Effective Noise Barrier: A noise barrier analyzed for environmental clearance with a preliminary construction cost that is not more than 3% above the allowable cost per benefited receptor unit (CPBU) of $47,489 (year 2019), assuming a $45.00 per square foot noise barrier construction cost.

Benefited Receptor: A receptor that receives a 5 dB(A) or greater traffic noise reduction as a result of a proposed noise barrier.

Design Year Reduction Goal: Design year reduction goal by 10 dB(A) for at least one benefited receptor and provide at least a 7 dB(A) reduction for 50% or more of the benefited receptor sites.

Permitted Development: Any presently undeveloped lands that have received a building permit from the local township or city.

4.8.1.4. FHWA Traffic Noise Model

FHWA's Traffic Noise Model (TNM) version 2.5 is FHWA's computer model for highway traffic noise prediction and analysis. The following parameters are used in this model to calculate an hourly $L_{eq(1h)}$ at a specific receiver location:

- Distance between roadway and receiver
- Relative elevations of roadway and receiver
- Hourly traffic volume in light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles
- Vehicle speed
- Ground absorption
- Topographic features, including retaining walls and berms

Highway noise sources have been divided into five types of vehicles; automobiles, medium trucks, heavy trucks, buses, and motorcycles. Each vehicle type is defined as follows (Anderson, Lee, & Menge, 1998) :

- Automobiles – all vehicles with two axles and four tires, includes passenger vehicles and light trucks, less than 10,000 pounds.
- Medium trucks – all vehicles having two axles and six tires, vehicle weight between 10,000 and 26,000 pounds.
- Heavy trucks – all vehicles having three or more axles, vehicle weight greater than 26,000 pounds.
- Buses – all vehicles designed to carry more than nine passengers.
- Motorcycles – all vehicles with two or three tires and an open-air driver/passenger compartment.

4.8.2. Impact Analysis

The following sections summarize the impacts identified in the *I-375 Traffic Noise Analysis*.

4.8.2.1. Field Measurement (TNM Validation)

The Project area was divided into 13 common noise environments (CNEs) to facilitate the analysis of highway noise of areas of like land uses. The study area land use includes residential, places of worship, school, hotel, retail, commercial, industrial and recreational areas. Existing noise level measurements were conducted on October 26, 2017, at 13 representative sites in the project corridor. A 15-minute measurement was taken at each site. The CNE and field measurements sites are illustrated in detail in the exhibits in **Appendix E**.

TNM was used to validate the predicted noise levels through comparison with the measured and predicted noise levels. Comparing the modeled noise levels to the measured noise levels validates the noise model for use on the specific project. Traffic counts were taken concurrently with the noise measurements at all the sites and used in the model. All the modeled data compared within three dB(A) of the measured levels, which satisfies the MDOT requirement for validating noise measurements. **Table 11** compares the measured and modeled noise levels.

Table 11: Comparison of Measured and Modeled Noise Levels

Field Site	Measured Noise Level (dB(A) L_{eq}(1h))	Modeled Noise Level (dB(A) L_{eq}(1h))	Difference (dB(A) L_{eq}(1h))
FS-1	71.8	69.5	-2.3
FS-2	61.3	63.9	2.6
FS-3	67.4	70.3	2.9
FS-4	72.2	71.8	-0.4
FS-5	62.6	62.3	-0.3
FS-6	68.8	71.2	2.4
FS-7	66.2	65.1	-1.1
FS-8	67.3	64.7	-2.6
FS-9	62.3	62.0	-0.3
FS-10	69.8	69.3	-0.5
FS-11	67.8	68.5	0.7
FS-12	62.3	63.6	1.3
FS-13	72.3	69.3	-3.0

4.8.2.2. Predicated Noise Levels and Impact Analysis

MDOT used TNM version 2.5 to model existing (2017) and design year (2040) worst hourly traffic noise levels within the Project noise analysis study area. Nine noise receivers were modeled as NAC D (interior use) land use because no observable exterior area of frequent human use was identified.

The noise analysis found that predicted future design year (2040) noise levels near the Preferred Alternative would approach or exceed the NAC at 27 residences. The noise levels at these 27 impacted receptors would range from 66.0 to 73.9 dB(A) L_{eq} (h).

Changes in noise levels under the Preferred Alternative would range from -6.2 to 5.3 dB(A) compared with existing conditions. Therefore, none of the predicted future noise levels would substantially exceed existing noise levels.

Detailed tables with predicted noise levels by receiver, along with exhibits that show the location of measurement sites, modeled receivers and evaluated noise barriers, are included in **Appendix E**.

Table 12 provides a summary of the predicted noise levels by CNE.

Table 12: Predicted Noise Levels

CNE	Ranges of $L_{eq(h)}$ Noise Levels, dB(A)			Number of Impacts
	Existing	Preferred Alternative	Change from Existing	
A[2]	42.0 – 74.5	41.4 – 73.9	-2.5 – 2.8	19
B[1]	--	--	--	0
C	43.7 – 69.1	41.8 – 67.8	-4.1 – 5.3	8
D[2]	48.7 – 66.0	44.3 – 64.0	-4.4 – -0.4	0
E	56.4 – 60.1	56.9 – 61.9	0.5 – 1.8	0
F	59.4 – 59.5	58.6 – 58.8	-0.9 – -0.6	0
G	56.2 – 61.6	55.7 – 61.6	-0.5 – 0	0
H[2]	41.1 – 61.8	41.6 – 62.1	-0.2 – 0.5	0
I	47.7 – 67.3	46.7 – 63.1	-6.2 – 0.6	0
J[2]	41.7 – 52.8	42.7 – 54.0	1.0 – 1.2	0
K[2]	46.0 – 69.8	42.9 – 66.0	-3.8 – -2.7	0
L[2]	36.1 – 63.2	39.8 – 64.9	-2.2 – 3.7	0
M[2]	42.8	41.8	-1.0	0

[1] This CNE contains a vacant building (Category G) which was not analyzed for noise impact.
[2] These CNEs contain interior receptors (Category D) and predicted interior noise levels are included in the ranges.

4.8.3. Abatement Analysis

Based upon the requirements of Title 23, CFR, Part 772, MDOT reviewed various methods to mitigate the noise impact of the proposed Project improvements. MDOT evaluated two noise barriers:

- Noise Barrier (NB1) – On the west side of I-75 between Wilkins Street and Mack Avenue to potentially mitigate the noise impact from the Preferred Alternative for residences in Brewster Homes along the southbound I-75 Frontage Road.
- Noise Barrier 2 (NB2) – On the north side of I-75 between approximately 250 feet west of Woodward Avenue to John R Street, designed to mitigate noise impact for second-floor residential balconies along the I-75 Frontage Road.

The analysis found that NB1 was not acoustically feasible per MDOT's noise policy because it did not achieve a 5 dB(A) reduction for 75% of the impacted receptors. NB2 was acoustically feasible but not reasonable, as the estimated cost per benefited receptor ($84,706) would

exceed the allowable cost per benefited receptor ($47,489 in 2019 dollars). In addition, the retaining walls along I-75 between Woodward Avenue and Brush Street were constructed over 50 years ago and are not proposed to be moved or reconstructed as part of the project; therefore, noise barriers constructed immediately adjacent or attached to these retaining walls would likely require additional costs, approximately $132,450 assuming $150 per linear foot, to update the retaining walls to withstand the dead load or wind loads from a noise barrier. **Table 13** and **Table 14** include the NB1 and NB2 barrier analysis results.

What is 'feasible'?

Feasible means the noise barrier has no construction impediments, meets safety requirements for the traveling public, and provides at least 5 dB(A) noise reduction for 75% of the impacted receptors.

Table 13: Evaluated Noise Barrier Summary

Noise Barrier ID	Receiver IDs	Existing Noise Levels dB(A)	Future Noise Levels dB(A)		Noise Reduction dB(A)	Barrier Length (ft)	Barrier Height (ft)
			Without barrier	With Barrier			
NB1	C9-C20; C68-C98	44.0-69.1	41.8-67.8	41.4-66.1	0-2.2	561	30
NB2	A1.2-A58	42.0-71.0	41.4-72.0	39.7-65.7	0.2-10.9	883	27-30

Table 14: Noise Barrier Designs Analyzed

Barrier ID	# of Total Impacted	Number of Attenuated Locations						Cost ($45 per sq. ft)	Cost/Benefit	Feasible[a]	Reasonable[b]
		≥ 5 dB(A)			≥ 7 dB(A)		≥ 10 dB(A)				
		# of Impacted	% of Total Impacted	# of Total Benefitting	#	% of Benefited				(Y/N)	(Y/N)
NB 1	8	0	0%	0	0	0%	0	$757,440	NA	N[d]	N
NB 2	5	4	80%	15	6	40%	1	$1,270,590[c]	$84,706	Y	N

Source: HNTB analysis, 2020

a) MDOT requires that noise barriers achieve a 5 dB(A) reduction at 75 percent of the impacted receptors. If a barrier cannot achieve this, abatement is considered to not be acoustically feasible. Noise barrier abatement also might not be feasible due to constructability or safety constraints.

b) The design year attenuation requirement for Michigan is to provide a noise reduction of 10 dB(A) for at least one benefited receptor and at least a 7 dB(A) reduction for 50 percent or more of the benefited receptor sites.

c) Includes an estimated additional cost of $132,450 for potential retaining wall updates.

d) Noise barrier is not feasible because a 5 dB reduction was not achieved at 75 percent of the impacted receptors.

4.8.4. Highway Traffic Induced Vibration

Automobiles, trucks, and buses do not typically generate enough vibration to be a concern, except under specific situations, such as pavement irregularities adjacent to sensitive locations. Studies to assess the impact of operational traffic induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings. Normal living activities (e.g., closing doors, walking across floors, operating appliances) within a building have been shown to create greater levels of vibration than highway traffic. There are no Federal requirements directed specifically to highway traffic induced vibration.

4.8.5. Mitigation

The two noise barriers (NB1 and NB2) did not meet MDOT's preliminary feasible and reasonableness criteria. Noise barriers were not analyzed on retaining walls that are not being updated with the project. MDOT does not intend to install highway traffic noise abatement. If it subsequently develops during final design that these conditions have substantially changed, abatement measures will be reanalyzed. **Section 4.17 Short-Term Construction Effects and Constructability** discusses short-term (construction-related) noise impacts.

4.9. Section 6(f)

The Preferred Alternative would not impact Section 6(f) properties.

Section 6(f) of the Land and Water Conservation (LAWCON) Fund Act requires that a property using LAWCON money be kept and used for public outdoor recreation unless approved by the National Park Service. LAWCON funds were not used to purchase facilities in the Project area, therefore there are no Section 6(f) properties within the Project area.

4.10. Section 4(f)

The Preferred Alternative will not have adverse impacts to any Section 4(f) properties.

Section 4(f) of the U.S. Department of Transportation Act of 1966 (Title 49, USC, Section 303) requires analysis of impacts to publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites that are affected by federal transportation projects. Specifically, 23 C.F.R. 774.13(d) sets forth the criteria to determine if a temporary occupancy of Section 4(f) land is so minimal as to not constitute a use within the meaning of Section 4(f).

No publicly owned wildlife and waterfowl refuges are located within the Project area.

Publicly owned parks and recreational areas in the Project area include:

- Brush-Adelaide Park
- Antietam Park

- Dues Playfield
- Lafayette Plaisance Park
- Lafayette Central Park
- Grand Circus Park
- Harmonie Park
- Dequindre Cut Greenway
- RiverWalk/Iron Belle Trail

Of those that are listed, the Dequindre Cut Greenway and RiverWalk/Iron Belle Trail will be temporarily impacted. There are no anticipated impacts to the other publicly owned parks or recreation areas.

The Dequindre Cut Greenway, a depressed two-mile nonmotorized trail, runs along the eastern edge of the Project limits. The Preferred Alternative includes the replacement of the Gratiot Avenue bridge, which crosses over the Dequindre Cut Greenway. There will be a temporary ROW impact of 1.143 acres. All trail nonmotorized traffic will be maintained at all times via the existing trail or detours. When construction has been completed, the trail will be returned to as good, or better condition. MDOT completed coordination with the owner with jurisdiction (OWJ), the Detroit Riverfront Conservancy, on November 13, 2020. See **Appendix C** for the signed letter documenting coordination.

The RiverWalk and Iron Belle Trail are nonmotorized trails that run along the Detroit River, through downtown Detroit, and the Project area. The RiverWalk accommodates pedestrians and bicyclists alike. A hiking portion of the Iron Belle Trail utilizes a portion of the RiverWalk within the Project area. There will be temporary ROW impacts of 0.393 acres. All nonmotorized traffic will be maintained at all times via the existing trail or detours. When construction has been completed, the trail will be returned to as good, or better condition. MDOT completed coordination with the OWJ, the Detroit Riverfront Conservancy, on November 13, 2020. See **Appendix C** for the signed letter documenting coordination.

The Joe Louis Greenway, a planned trail, includes portions of the Dequindre Cut Greenway, RiverWalk, and Iron Belle Trail. Any temporary mitigation would be the same as those applied to the aforementioned trails.

The Preferred Alternative would temporarily impact these recreational Section 4(f) resources. The Dequindre Cut Greenway will require a temporary detour for nonmotorized traffic during construction of the Gratiot Avenue bridge replacement. Likewise, if any construction is required to maintain the stormwater outfall, which runs underneath the RiverWalk and Iron Belle Trail, MDOT might designate a temporary detour for nonmotorized traffic.

Two historic resources and one historic district on or eligible for listing in the NRHP as reported in **Section 4.6 Historic Resources** would be affected during construction of the boulevard. This includes the Holy Family Roman Catholic Church at 641 Walter P. Chrysler Highway, the Mrs. Solomon Sibley House at 976 East Jefferson Avenue and the Eastern Market Historic District. Roadway and sidewalk construction will result in temporary impacts to 1.52 acres of frontage at Holy Family Roman Catholic Church and 0.17 acres of frontage at the Mrs. Solomon Sibley House. The Eastern Market Historic District may incur similar temporary impacts if work extends beyond the curb line. MDOT will work to avoid and minimize impacts. Access will be maintained

to the properties during and after construction. These temporary impacts will be mitigated with detours during construction and the work will not permanently affect the use, features, or activities of the Section 4(f) resources.

To assess impacts MDOT coordinated with SHPO, which is the OWJ over historic properties. SHPO determined that under Section 106 of the National Historic Preservation Act, the Project will have no adverse effect on historic properties; documentation is included in **Appendix C**. The impacts would not be an adverse effect because no structures would be affected, and the Project would not alter, directly or indirectly, the characteristics of the property that would qualify it for inclusion in the NRHP in a manner that would diminish the integrity of the property. With this finding, MDOT recommends Section 4(f) *de minimis* impact findings for the three affected properties, meaning that this minor use will not affect occupancy, facilities, or functions, or create substantial noise or visual effects.

4.11. Contaminated Materials

MDOT conducted a *Project Area Contamination Survey* (PACS) to assess lands within one-quarter mile of I-375 to identify sites with potential soil and/or groundwater contamination. The survey area includes high-density, urban, commercial with interspersed residential and industrial land uses. In total, the PACS assessed 156 sites for potential contamination,12 of which were ranked high for potential to encounter contamination.

The 12 sites which were ranked high were identified for a Phase II Preliminary Site Investigation (PSI) that MDOT will complete during the Project's final design phase, see **Table 15** and **Figure 33**. If necessary, MDOT will also physically investigate the nature and extent of existing contamination and determine a strategy for addressing it. The results of the PSI, physical investigations, and applicable requirements for material handling and disposal and worker protection will be included in the Project plan package. The Special Provision for "Non-Hazardous Contaminated Material Handling and Disposal" will be included in the Project proposal and a miscellaneous quantity will be set up.

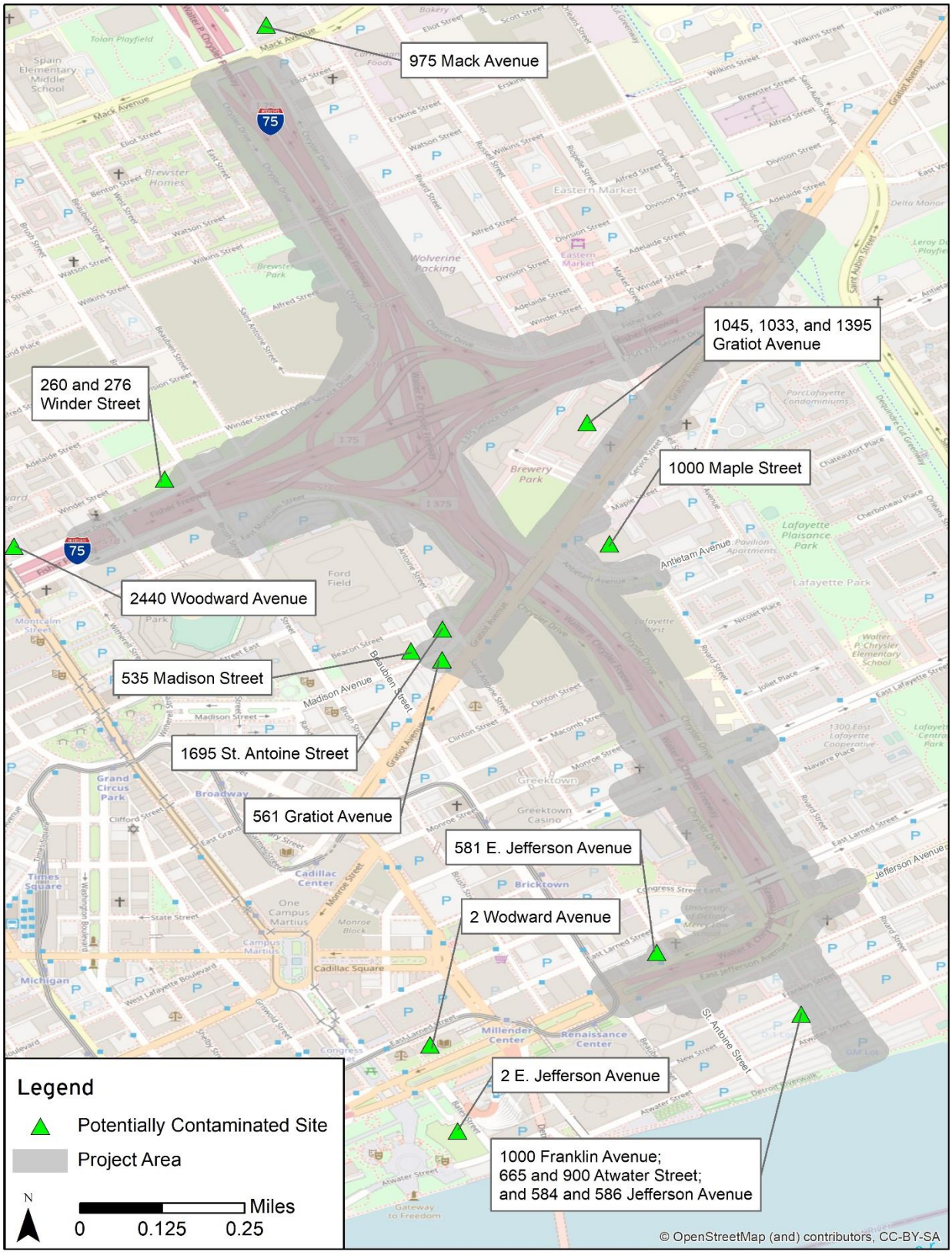
Table 15: Contaminated Sites Recommended for Phase II PSI

Address	Potential Concern	Potential to Encounter Contamination
2 East Jefferson Avenue	A filling station is identified at the site with two underground storage tanks (USTs) present.	High
1000 Maple Street	The site is shown as a filling station and auto repair facility with three USTs.	High
1045, 1033 and 1395 Gratiot Avenue	The site is shown as a filling station with one UST.	High

Address	Potential Concern	Potential to Encounter Contamination
975 Mack Avenue	The site is listed as a Shell Service Station with two LUSTs having closed status. The site is shown as a filling station.	High
260 and 276 Winder Street	The site is shown as a filling station with three USTs present.	High
2440 Woodward Avenue	The site is shown as a filling station with three USTs present.	High
1695 St. Antoine Street	A filling station with three USTs is identified.	High
535 Madison Avenue	One 500,000-gallons capacity fuel oil UST is currently in use and reported to have been installed in 1972, associated with the Beacon Heating Plant.	High
561 Gratiot Avenue	The site is listed as a Former Shell Station and has an open leaking UST dated 2000.	High
581 East Jefferson Avenue	A filling station is identified at the site with two USTs.	High
2 Woodward Avenue	The listing is associated with the City of Detroit Department of Public Works and it is unknown what material is being used or for what process.	High
1000 Franklin Avenue; 665 and 900 Atwater Street; and 584 and 586 Jefferson Avenue	The site was formerly used by Ford Motor Company. The site is also on the leaking UST database as having closed three USTs between 1995 and 1999. A total of five USTs have been removed from the ground.	High

Fill material needed to convert I-375 to a boulevard south of Gratiot Avenue will likely come from existing mounds of earth within MDOT ROW at the I-75/I-375 Interchange. Removal of the existing mounds is needed to build the new interchange and will help balance the earthwork on the project. In case fill material is needed from outside sources, MDOT will require testing to ensure it conforms with applicable the Michigan Department of Environment, Great Lakes, and Energy's (EGLE) and EPA requirements for contaminants.

Figure 33: Contaminated Sites Recommended for Phase II PSI



4.12. Agricultural Resources

The Preferred Alternative would not impact agricultural resources. The Project area is urbanized and does not include any agricultural resources.

A review performed by MDOT found that the city of Detroit has no agriculture or forestry zoning districts, and the Project would not generate Farmland Protection Policy Act-related impacts. Additionally, no land within the Project area is enrolled in Michigan's Natural Resources Environmental Protection Act, 1994 Public Act 451 as amended, Part 361 the Farmland and Open Space Preservation Program (formerly Public Act 116).

4.13. Natural Resources

The following sections discuss potential Project-related impacts to natural resources. The Preferred Alternative would not produce major impacts to the natural environment, which is urbanized with limited vegetation, landscape or natural areas.

4.13.1. Vegetation

The Preferred Alternative would require clearing and grading of existing vegetation, including tree removal, to construct the new roadways and a bicycle and pedestrian only pathway.

Vegetation includes trees, shrubs, grass, and other plants that are not associated with a body of water. The Project area does not include forested or wooded areas, although landscaping trees are adjacent to existing roadways and in developed areas.

During the Project's design, MDOT would try to preserve the existing natural and ornamental vegetative cover, including trees. If trees must be removed from the front of a residence, the property owner will be given appropriate notice and offered replacement trees to mitigate the loss of trees (MDOT, 2012). A landscape guide will be developed in the design phase of the project that further details plan for vegetation in the corridor.

4.13.2. Threatened and Endangered Species

The Preferred Alternative would not impact federal or state-listed threatened or endangered species.

The Federal Endangered Species Act of 1973 provides protections for threatened or endangered plant and animal species and their habitats. MDOT consulted with the U.S. Fish and Wildlife Service (USFWS) to ensure that the study does not jeopardize the continued existence of any species listed on the threatened and endangered species list. The Michigan DNR is responsible for the protection of state endangered and threatened species under Part 365 PA 451, the *Natural Resources and Environmental Protection Act of 1994* (NREPA).

The USFWS, in a letter dated July 10, 2017, identified no known threatened or endangered federally listed species in the Project area, see **Appendix C**.

MDOT searched records of known, state-listed species and found three peregrine falcon territories are about 1,800 feet from the Project area. The shielding of adjacent buildings and

substantial distance would protect this species from Project-related impacts and as such no impacts are anticipated.

The most recent records of the eastern fox snake near the Project area is a 2011 sighting on Atwater Street in front of Chene Park. The urban nature of the Project corridor, which does not adjoin the Detroit River, does not include suitable habitat for the eastern fox snake; therefore, the Project would not impact this species.

Several records for listed mussel species occur in the Detroit River; however, consultation with USFWS and the Michigan DNR determined that the Project would not impact freshwater mussels, see **Appendix C**.

4.13.3. Fish and Wildlife

The Preferred Alternative would not negatively impact wildlife.

MDOT did not conduct specific wildlife surveys in the Project area because it contains mostly highly developed urban land uses; therefore, any wildlife within the Project area is likely tolerant of human disturbance. MDOT does not anticipate any Project-related impacts to aquatic, terrestrial wildlife, migratory birds, species of concern, or forest sensitive species.

If there are migratory birds present, MDOT will follow the provisions of the Migratory Bird Treaty Act regarding nest removal, as well as, to prevent swallows and/or migratory birds from establishing active nests prior to construction.

4.14. Water Resources

4.14.1. Wetlands

The Preferred Alternative would not impact wetlands in the Project area.

MDOT reviewed land use and aerial photographs, soil maps, and EGLE's *Wetlands Map Viewer*, and found no wetlands within the Project area (EGLE, 2020).

4.14.2. Surface Waters

The Preferred Alternative, depending on the construction activity, could impact the Detroit River through the construction of a new independent outfall or improvement of the existing combined sewer overflow (CSO) outfall sewers.

The Project is in the Detroit River watershed. The Detroit River is the only surface water resource in the Project area. A Coastal Zone Management Area also exists along the Detroit River within the Project area. The Project area does not contain designated trout streams, natural rivers, or wild or scenic rivers.

The full extent of the impact would be determined during final design. If the Project requires construction work below floodplain elevation or the ordinary high-water mark (OHWM), the department would be required to obtain permits from EGLE and the U.S. Army Corps of Engineers (USACE), because the Detroit River is a navigable waterway.

Construction of a new outfall or reconstruction of the existing CSO sewers may also impact the Coastal Management Area. MDOT will coordinate all proposed design work with EGLE and the USACE as needed, to secure the necessary environmental permits.

The Project area lies within an urban environment where a combination of closed, storm sewer systems, open-channel conveyance systems and detention storage facilities would accommodate stormwater runoff. MDOT will utilize permanent BMPs such as green infrastructure like vegetated swales and bioretention (rain gardens), and pervious pavements where possible to slow runoff and help filter pollutants before the runoff enters receiving waters. During construction, MDOT would also consider other temporary BMPs such as check dams, sediment traps, and silt fences, where appropriate.

The operation and maintenance of the Preferred Alternative may generate indirect and cumulative effects to the Detroit River. **Section 4.15 Indirect and Cumulative Effects** discusses these impacts.

4.14.3. Floodplains

The Preferred Alternative may require construction, staging, or other activities in floodplain areas by constructing a new independent outfall or reconstructing the existing CSO outfall sewers.

MDOT evaluated the Project area using Flood Insurance Rate Maps provided by the Federal Emergency Management Agency. If the Project requires construction work below floodplain elevation or the OHWM, the department would be required to obtained permits from EGLE and the USACE, because the Detroit River is a navigable waterway.

4.14.4. Groundwater

The Preferred Alternative would not directly or permanently impact groundwater.

The Project area does not include any sole-source aquifers. (U.S. Environmental Protection Agency, 2017). Municipal water service, with no private or municipal wells, serves the corridor. Local topography implies that shallow groundwater movement is likely to the south toward the Detroit River. Due to the urban nature of the corridor, abandoned water wells and septic systems are unlikely to be present.

The Preferred Alternative would not create any new routes for movement of groundwater pollution. Furthermore, the Preferred Alternative will not result in a measurable change to the available water supply or recharge areas. MDOT would address the known underground storage tank, and any previously unknown abandoned water wells or septic systems encountered during construction in accordance with the department's *Standard Specifications for Construction*. MDOT would also evaluate BMPs, such as bioretention (rain gardens), detention storage facilities, vegetated swales and pervious pavements, where appropriate to minimize the potential for groundwater pollution.

4.14.5. Water Quality

The Project area is urbanized, and a combination of closed storm sewer systems, open-channel conveyance systems, and detention storage facilities controls most surface runoff.

The Preferred Alternative would reduce the amount of impervious surfaces in the Project area by 9% from 88.8 acres to 80.8 acres. Eliminating the Gratiot Avenue Connector, introducing a boulevard section with medians and other open green space within the corridor ROW would reduce impervious surface area overall, despite the wider sidewalks, which would be up to 20 feet in width. Reduced impervious surfaces within the drainage region will generate lower quantities and velocities of stormwater runoff.

The Preferred Alternative will consider BMPs to protect water quality, preserve water resources and minimize the overall impact on aquatic resources. The selection and design of the BMPs will be evaluated during the Project's final design and the drainage design will meet the requirements of MDOT's *Road Design Manual, Drainage Manual,* MDOT-Statewide MS4 Permit and *Standard Specifications for Construction* as well as applicable local stormwater permit requirements.

4.15. Indirect and Cumulative Effects

The previous sections primarily considered the direct impacts, which construction of the I-375 Improvement Project would produce. The following sections discuss the Project's potential indirect and cumulative effects, which are impacts not directly related to construction.

What are 'indirect effects'?

Indirect effects are impacts that a project causes; however, the effects occur at a later time or in an area that is farther away from the project. Indirect effects must be "reasonably foreseeable," or highly likely to occur because of the project.

What are 'cumulative effects'?

Cumulative effects are effects on the community or natural environment that occur from adding the impacts of one project along with other past, present and likely-to-occur projects. When added together, minor impacts from several different and somewhat small projects could result in a greater impact on the community and natural environment.

4.15.1. Indirect Effects

The Preferred Alternative could cause indirect effects by causing planned land use changes and development to occur sooner or to a greater degree.

The city of Detroit maintains a *Master Plan of Policies,* which incorporates maps showing future land use and the transportation network that illustrate the city's vision for its urban form and promote infill development (City of Detroit, 2017 as amended). Other initiatives such as the *Your! Detroit East Riverfront Study* establish a framework to guide future public investments and development in and near the Project area (City of Detroit, 2017).

The Preferred Alternative would replace the I-375 freeway with a boulevard, aligned on the west side of the corridor, and would reconstruct the I-75/I-375 Interchange. The new surface-level boulevard would provide direct access at signalized intersections and would improve connectivity among residential areas, the Detroit CBD, the Detroit Riverfront, and other areas of planned development.

The Preferred Alternative may create available potential excess property that would be taxable land and could be developed for other uses, see **Section 4.5.4 Right-of-Way** for details on how potential excess property will be handled in accordance with FHWA and MDOT standard practices. Local plans and the real estate market would control the ultimate uses and development of those properties.

Future land use changes could also impact historic resources; however, existing local, state, and federal regulations and policies that protect historic resources would help avoid or minimize these impacts. The city of Detroit must approve all new development, helping avoid and minimize negative effects of future land use changes.

Property values and rents may increase in adjacent residential areas, resulting in a negative impact on residents in low-income areas, including pricing out existing owners and renters. The city of Detroit recognizes this issue and has implemented a number of programs and policies to address this issue, such as the Inclusionary Housing Ordinance, the Community Benefits Ordinance, the Housing Rehabilitation and Development Program, and the Preservation Program.

The Preferred Alternative would also provide the infrastructure to support the City's vision to strengthen and improve neighborhoods through infill development, increased transit opportunities, and improved pedestrian and bicycle facilities.

During the public engagement process, residents in East Lafayette expressed concerns about parking on neighborhood streets during special events. The Preferred Alternative would improve connectivity between the East Lafayette neighborhood and the Event Area – home to Little Caesar's Arena, Ford Field, and Comerica Park – for both motorized and nonmotorized traffic. Connectivity is also improved to Eastern Market. This increased connectivity may produce the indirect effect of encouraging visitors to park on neighborhood streets, which could lead to traffic congestion, parking shortages, or tailgating.

To address this concern, the city of Detroit could use zoning, parking restrictions and enforcement, or other regulations to limit parking by nonresidents. As outlined in Detroit's *Strategic Plan for Transportation,* the City is exploring strategies to implement parking policies that keep pace with and sustain both the business community and the quality of life for residents (City of Detroit, 2018). The City's implementation of new parking policies and initiatives to manage parking facilities, coupled with enforcement of local parking regulations, will help to avoid and minimize parking concerns in the East Lafayette neighborhood.

The Preferred Alternative would not produce indirect effects to natural resources.

4.15.2. Cumulative Effects

The Preferred Alternative would replace the freeway with a surface-level boulevard and improve connectivity to, from, and among neighborhoods that the original freeway construction left divided. The city's long-term vision for investment and coordinated efforts, which include the Preferred Alternative, would have the cumulative effect of improving the quality of life and livability of the Project area.

The City's *Master Plan of Policies* establishes goals and policies for city design; community organizations; neighborhoods and housing; parks, recreation and open space; public safety;

and transportation and mobility (City of Detroit, 2017 as amended). The *Your! Detroit East Riverfront Study* outlines the City's goals for improving public safety, promoting development, and enhancing transportation options through the introduction of parks, greenways, and development along Jefferson Avenue (City of Detroit, 2017). The study reimagines Jefferson Avenue as a gateway to the riverfront, connected with bicycle lanes and pedestrian access. The Preferred Alternative is consistent with and supports the goals and policies outlined in the plan. The Preferred Alternative includes at-grade signalized intersections with the new boulevard, connecting the eastside neighborhoods to the CBD and the boulevard to the riverfront.

The Preferred Alternative would not produce cumulative effects to natural resources.

4.16. Utilities

It is anticipated that utilities in the following locations may need to be rerouted or relocated to accommodate new roadway or bridge structures:

- Utilities within or along the bridge structures over I-375 and I-75
- Utilities under, adjacent to, and/or crossing I-375 and I-75
- Utilities under, along, and/or crossing Gratiot Avenue and the Gratiot Avenue bridge

The extent of impacts to existing utilities due to the proposed fill will be determined during the next phase of design. Prior to completing design, MDOT will coordinate with owners of all known utilities to determine if their facilities will require modification, protection or relocation to accommodate the proposed fill.

MDOT will continue coordination with utility providers prior to and during construction to avoid and minimize service disruptions. Utility owners will be responsible for relocating utility infrastructure prior to and during construction.

4.17. Short-Term Construction Effects and Constructability

Short-term construction effects may occur while the Preferred Alternative is being built.

The duration for construction of this project will depend on construction staging and maintenance of traffic requirements. It is currently estimated construction could take up to four years to complete in order to maintain at least two lanes of traffic on I-75 and direct access to the CBD along I-375. During the design phase, MDOT will evaluate opportunities to reduce the duration of construction.

A maintenance of traffic plan will be developed as part of the design and construction phases to minimize impacts. Safety measures will be incorporated to include local and state police, fire departments, ambulance services, school districts and transit providers to minimize disruption of services and will be notified in advance of construction activities. Traffic signs and notices published in the local media will alert the public early about major construction activities that could disrupt the community.

Construction of the Preferred Alternative will likely require closure of some or all traffic lanes on the existing I-375 freeway and the I-75 freeway through the I-75/I-375 Interchange. A full closure could result in a shorter construction duration and reduce overall construction impacts. Cross-streets may also have lane closures during construction. Road closures and lane restrictions

result in increased travel times and distances and potentially increase congestion along other local streets during construction. Detour information will be posted for vehicular and nonmotorized traffic. To the greatest extent possible, access to the service drives and adjacent properties will be maintained throughout construction, with limited short-term closures as needed to reconstruct private driveways.

Emissions from construction equipment or dust from construction activities could cause a temporary increase in air pollution levels. Compliance with MDOT's *Standard Specifications for Construction* includes provisions for dust control during construction will minimize impacts to air quality (MDOT, 2012). Construction will also adhere with MDOT's anti-idling policy (Policy #10179).

While not required, there are several measures that could be considered to reduce engine activity or reduce emissions per unit of operating time. Operational agreements that reduce or redirect work or shift times to avoid community exposures can have positive benefits. Also, technological adjustments to construction equipment, such as off-road dump trucks and bulldozers, could be an appropriate strategy. The EPA recommends Best Available Diesel Retrofit Control Technology (BACT) to reduce diesel emissions. Typically, BACT requirements can be met through the retrofit of all diesel-powered equipment with diesel oxidation catalysts or diesel particulate filters, and other devices that provide an after-treatment of exhaust emissions.

Construction noise will be minimized by measures such as requiring that construction equipment have mufflers, that portable compressors meet federal noise level standards for that equipment, and that all portable equipment be placed away from or shielded from sensitive noise receptors if at all possible. All local noise ordinances will be adhered to.

Some construction activities have the potential to generate vibration levels that are enough to cause architectural and structural damage. Equipment such as jackhammers, pavement breakers, hoe rams, augur drills, pile drivers, bulldozers, and backhoes produce vibration during construction. MDOT will develop a vibration monitoring program prior to construction that will identify locations sensitive to vibration, conduct preliminary review of vibration sensitive structures, and making reparations if construction-related damage occurs. Basement/foundation videotaping prior to construction will be offered for structures within 150 feet of areas where vibration effects could occur.

It is not anticipated that staging and storage (including haul roads, parking, materials, temporary access, etc.) will occur on public recreational resources/properties.

Erosion and sediment control will be managed per MDOT standards. Specific erosion and sedimentation control plans and a stormwater pollution prevention plan will be developed, coupled with compliance with the National Pollutant Discharge Elimination System (NPDES) permit, these measures help minimize sedimentation impacts during construction.

Construction activities will generate solid wastes requiring offsite disposal. Wastes most often generated during construction include vegetation, old pavement and miscellaneous debris. Solid waste will be disposed in accordance with state and federal laws. Accidental spills of regulated materials and waste during construction will be handled in accordance with local, state and federal laws and procedures. Types of materials used for construction activities, such as fill material, and any necessary testing of material will be determined during the detailed design phase as more soil data and detailed drainage analysis are completed.

Coordination with the public during construction will occur through a public website, stakeholder and property owner mailings.

4.18. Permits and Authorizations

Construction of the Preferred Alternative requires a permit to construct from the city of Detroit. MDOT will obtain the applicable permits and/or certifications prior to the start of construction. Appropriate permit conditions will be included in the Project's construction documents, and all conditions of the permits will be followed during construction.

EGLE administers floodplain permits under the provisions of Part 31, Water Resources Protection, of NREPA. The Project proposes to occupy, fill, or grade lands in the Detroit River's floodplain to construct a new independent outfall or to reconstruct existing CSO outfall sewers, therefore this permit will be needed to commence this work. The purpose of this permit is to assure that channels and floodways are not inhibited, and that the capacity of the floodway is not unduly restricted.

EGLE is also responsible for protecting the natural resources and the public trust waters of Michigan's inland lakes and streams under the authority of Part 301, Inland Lakes and Streams, of NREPA. If construction activities need to occur below the OHWM of the Detroit River this permit will be required under state review.

The USACE also has federal jurisdiction over navigable waterbody impacts incurred below the OHWM of a surface water. Through coordination with the USACE, a general Nationwide Permit 7, Outfall Structures and Associated Intake Structures, was determined to be applicable for the construction activity proposed for the Preferred Alternative at the Detroit River. Documentation from this Environmental Assessment will be provided to the USACE for review to assess whether the Project meets the general Nationwide Permit 7 requirements.

As the Preferred Alternative will disturb an area of soil greater than five acres and have storm water discharge into the Detroit River, EGLE NPDES MDOT Permit No. MI0057364 (MDOT-Statewide MS4) requires that the MDOT Construction Field Services apply for a NPDES construction permit.

4.19. Community Enhancements

As part of the Project, MDOT identified potential community enhancements that would benefit the local community, see the **Community Enhancements** of Section **4.20 Project Mitigation Summary (Green Sheet)** .

The Preferred Alternative replaces the I-375 freeway with a boulevard, aligned on the west side of the corridor, and the reconstruction of the I-75/I-375 Interchange. The new surface-level boulevard provides at-grade access to Lafayette Park, reconnecting historic communities separated in the early 1960s through an urban renewal program. Replacing the I-375 freeway with a boulevard also creates potential excess property that could utilized as a green space, that MDOT would maintain, until future land use has been determined.

Throughout the Project area, nonmotorized improvements will create improved walkability and greater access to community resources. The Project includes wide sidewalks and a two-way

cycle track, creating access from the riverfront to Eastern Market and surrounding areas, see **Section 4.2.1 Nonmotorized** for more information on new nonmotorized connections.

With the construction of a new independent stormwater outfall or utilizing existing CSO outfall sewers to the Detroit River, the overall volume conveyed to the existing CSO system and the city's Wastewater Treatment Plant will be greatly reduced from the Project area. This will reduce flooding risks of the system and the properties of City of Detroit Water and Sewerage Department customers. This also reduces the city's operational and maintenance costs of the need to otherwise treat this stormwater.

4.20. Project Mitigation Summary (Green Sheet)

Project Mitigation Summary "Green Sheet"

For the Preferred Alternative

December 2020

I-375 Environmental Assessment

This mitigation summary "Green Sheet" contains the Project-specific mitigation measures being considered at this time. An updated "Green Sheet" will be prepared and included in the Finding of No Significant Impact (FONSI) for the Project. The mitigation items and commitments identified below may be modified during the final design, right-of-way (ROW) acquisition or construction phases of the Project. The Project mitigation will be tracked and sign-off on the mitigation commitments will occur as the Project progresses through the various phases: design, ROW acquisition, construction and maintenance.

Mitigation Measures

1. **Public Transportation**

   a. Early coordination with transit agencies will take place during the development of maintenance of traffic plans to ensure access to transit stops will be maintained during construction. Coordination with transit agencies will be ongoing during the pre-construction and construction phases to ensure that transit riders are given adequate notice of any changes and that any adjustments in transit stops or routes are addressed appropriately.

2. **Nonmotorized Safety and Vehicular Safety**

   a. *Pedestrian and Bicycle Safety* - The Preferred Alternative will create new pedestrian and bicycle facilities in the corridor. The sidewalks along the boulevard will be between 10 feet and 20 feet on the west side of the boulevard and 10 feet on the east side of the boulevard. Cycle tracks will be provided north and south, connecting to existing and planned nonmotorized infrastructure. All pedestrian street crossings, including sidewalk ramps and the crosswalk on the bridge over I-75 will be upgraded to meet Americans with Disabilities Act (ADA) standards. Best Management Practices (BMPs) for urban and nonmotorized design will be utilized to provide vehicular and nonmotorized traffic safety, such as, the use of protected left-turn signal phases at signalized intersections, enhanced signing, and pavement marking.

      If there is future demand and requests for accessible pedestrian signals are received, the Michigan Department of Transportation (MDOT) will conduct an engineering study that considers the needs of pedestrians, as well as the information needs of pedestrians with visual disabilities. The engineering study would make a recommendation as to whether to install these additional signal devices considering the factors listed in section 4E.09 of the *Michigan Manual on Uniform Traffic Control Devices*.

   b. *Vehicle Safety* - The transition from a freeway section to a boulevard surface street section has been identified as a safety focus. This area will be designed to slow vehicles as they approach the boulevard section. BMPs will be used in this high speed to low speed transition area to improve safety. Potential measures include creating a gateway

appearance prior to the transition and utilizing traffic calming measures to increase driver awareness of the speed change.

c. *Vehicle Operations* - A special event analysis around the Event Area, which includes the Theater District, will be conducted to further refine intersection operations related to event traffic. This includes the project limits along the boulevard from Clinton Street north to I-75 and the Gratiot Avenue/Madison Avenue/St. Antoine Street intersection to the west.

3. Social and Economic Environment

a. *Right-of-Way* – The Project requires 3.24 acres of permanent ROW and 0.87 acres of temporary ROW. The purchase of private property to build the Project will be conducted in accordance with state and federal laws, including the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended." All temporary grading easement areas will be graded and stabilized before the construction completion.

In accordance with MDOT's *Real Estate Procedures Manual*, the Federal Highway Administration (FHWA) approval will be required for any potential release of limited access ROW which was secured originally for I-375. Due to the significant change in highway orientation and operation proposed by this project, a post construction engineering and operations review will be performed to determine the necessary ROW requirements for the continued operation, maintenance, and safety of the new facility. In the interim, MDOT will plant grass seed on potential excess property and coordinate maintenance, such as mowing, to maintain the green space while the land is being held.

b. *Homeless People* – A Special Provision for "Relocation and Site Cleanup" will be included in the Project plan package to establish procedures for relocating unauthorized occupants off of the Project site. The contractor will coordinate with the Detroit Department of Human Services, the Michigan Department of Community Health, and the local police authority in advance of construction. These agencies, in turn, will notify the homeless people in advance to allow them to clear their belongings before construction begins. During final design, MDOT will also explore methods for cooperating with local shelters and other community services to provide alternate housing for homeless people.

4. Cultural Environment

a. *Historic Resources* **–** MDOT will conduct the following actions during final design when proposed I-375 roadwork and utility relocations limits are identified:

- Between Jefferson Avenue to Atwater Street along Schweizer Place, review and determine if archaeological surveys and/or data recovery are needed or if monitoring during construction would be required.
- For both identified cemeteries, sites 20WN284 and 20WN331, review and determine if archaeological monitoring will be required during construction. If MDOT discovers an inadvertent find, it would stop all work in the area and begin an investigation. If needed, MDOT would complete the appropriate mitigation measures before resuming ground-disturbing activities.
- Access to Holy Family Roman Catholic Church and Mrs. Solomon Sibley House will be maintained during construction.
- Monitor construction near the southern edge of the Eastern Market Historic District should work extend beyond the curb line.

5. **Section 4(f)**

   a. *Historic Resources (Section 4(f))* - Access to Holy Family Roman Catholic Church, Mrs. Solomon Sibley House, and the southern edge of the Eastern Market Historic District will be maintained during construction.

   b. *Recreational Properties (Section 4(f))* – The following properties have been determined to qualify as Section 4(f) properties with a temporary impact.

      i. *Dequindre Cut Greenway* – This plan will be designed in consultation with and be approved by a representative staff member from the Detroit Riverfront Conservancy. Mitigation will commence in the Project's construction phase. When construction has been completed, the trail will be returned to as good, or better condition.

      ii. *RiverWalk/Iron Belle Trail* – This plan will be designed in consultation with and be approved by the Detroit Riverfront Conservancy. Mitigation will commence in the Project's construction phase. When construction has been completed, the trail will be returned to as good, or better condition.

For these properties:

      i. The contractor will not be allowed to store or stage on recreational property other than within the approved consent to grade and consent to construct sidewalk areas and while actively reconstructing the Trail surfaces.

      ii. Tree removals on the recreational properties will replaced at a 2:1 ratio, and coordination will occur with the City regarding the tree types and locations.

      iii. All trail pedestrian traffic will be maintained at all times via the existing trails, construction of temporary trails, or pedestrian detours.

      iv. The pedestrian detour routes will be signed.

      v. Longitudinal pedestrian barrier will be used in areas where the trail is crossing through active construction areas.

      vi. Protective fencing will be provided during construction.

6. **Hazardous/Contaminated Material**

   a. *Contaminated Sites* – A Project Area Contamination Survey (PACS) identified sites with potential soil and/or groundwater contamination and recommended more detailed study through a Phase II Preliminary Site Investigation (PSI). MDOT will complete the recommended Phase II PSI for sites within the Project footprint during the Project's final design. If necessary, MDOT will perform additional physical investigations to determine the nature and extent of existing contamination and determine a strategy for addressing it. The results of the PSI, physical investigations, and applicable requirements for material handling and disposal and worker protection will be included in the Project plan package. The Special Provision for "Non-Hazardous Contaminated Material Handling and Disposal" will be included in the Project proposal and a miscellaneous quantity will be set up.

      If fill material is needed from outside sources, MDOT will require testing to ensure it conforms with applicable Michigan Department of Environment, Great Lakes, and Energy (EGLE) and U.S. Environmental Protection Agency (EPA) requirements for contaminants.

7. Natural Environment

a. *Vegetation* – During the Project's design, the existing natural and ornamental vegetative cover, including trees, will be preserved where possible. If trees must be removed from the front of a residence, the property owner will be given appropriate notice and offered replacement trees. A landscape guide will be developed with public input during the design phase of the project and will emphasize native species and not include invasive species.

b. *Fish and Wildlife* – When swallows or other migratory birds are present, nest removal will be conducted in accordance with the provisions of the Migratory Bird Treaty Act. A Special Provision for "Migratory Birds Protection" will be included in the final plan package.

c. *Water Quality* – The Project will include BMPs to protect water quality, preserve water resources and minimize the overall impact on aquatic resources. BMPs will meet the conditions of MDOT's National Pollution and Discharge Elimination System (NPDES) Permit Requirement. The selection and design of the BMPs will be determined during the Project's final design in coordination with the City of Detroit Water and Sewerage Department and the Great Lakes Water Authority and will meet the requirements of MDOT's Road Design Manual, Drainage Manual, and Standard Specifications for Construction.

   i. If construction work is needed below floodplain or the ordinary high-water mark (OHWM), permits will be necessary from (EGLE and the U.S. Army Corps of Engineers (USACE). All proposed design work will be coordinated with EGLE and the USACE as needed, to secure the necessary environmental permits.

   ii. MDOT will coordinate with the Detroit Water and Sewerage Department to identify measures to incorporate green infrastructure into the Project's design and to separate stormwater from existing combined sewers in the Project area.

8. Utilities

a. Prior to completing design, MDOT will coordinate with owners of all known utilities to determine if their facilities will require modification, protection or relocation to accommodate the proposed fill.

   MDOT will continue coordination with utility providers prior to and during construction to avoid and minimize service disruptions. Utility owners will be responsible for relocating utility infrastructure prior to and during construction.

9. Construction

MDOT will follow *MDOT Standard Specifications for Construction* for mitigation regarding maintenance of traffic, soil erosion and sedimentation control, construction air quality, construction noise, and construction vibration.

a. *Maintenance of Traffic* – During the Project's design phase, MDOT will develop a detailed traffic management plan that will outline how the Project will be built and how traffic will be managed during construction, including detour routes for any closures. To the greatest extent possible, access to the service drives and adjacent properties will be maintained throughout construction, with limited short-term closures as needed to reconstruct private

driveways. All temporary vehicle, pedestrian, or nonmotorized detours will be signed, and notices will be placed in local media prior to the start of the detour.

b. *Emergency Services* - Local and state police, fire departments, ambulance services, school districts and transit providers will be notified in advance of construction activities to minimize disruption of services. Traffic signs and notices published in the local media will alert the public early about major construction activities that could disrupt the community.

c. *Bus Transit (DDOT and SMART)* – Temporary or permanent bus stop relocation will be coordinated with the Detroit Department of Transportation (DDOT) and the Suburban Mobility Authority for Regional Transit (SMART). Route detours will use local streets and will be coordinated between MDOT, city of Detroit, and the transit providers.

d. *Soil and Erosion Control* – Earth disturbance activities associated with this Project will require a National Pollutant Discharge Elimination System from the Michigan EGLE to discharge storm water from the construction site. Both the MDOT Metro Region Soils Unit and Construction Field Services Division will review the soil erosion and sedimentation control measures developed for the Project for compliance with Part 91 of the Soil Erosion and Sedimentation Control, of the Natural Resources Environmental Protection Act, 1994 Public Act 451 as amended. Once approved, Construction Field Services will apply for the NPDES permit. Construction sites must be inspected every seven days or within 24 hours, including weekend days regardless if the contractor is working or not, after a precipitation even that results in a discharge from the site.

e. *Construction Air Quality* – The Project will be constructed in accordance with MDOT's *2012 Standard Specifications for Construction* provisions for dust control to minimize impacts to air quality during construction.

f. *Construction Noise* – Construction noise will be minimized by measures such as requiring that construction equipment have mufflers, that portable compressors meet federal noise standards for that equipment, and that portable equipment be placed away from or shielded from sensitive noise receptors to the greatest extent possible. Temporary noise impacts from construction activities will be minimized through compliance with applicable local, state, and federal noise control and ordinance requirements.

g. *Construction Vibration* – MDOT will develop a vibration monitoring program prior to construction that will identify locations sensitive to vibration, conduct preliminary review of vibration sensitive structures, and make reparations if construction-related damage occurs.

   Basement/foundation videotaping prior to construction will be offered for structures within 150 feet of areas where vibration effects from construction activities could occur; where pavement and/or bridges will be removed; or where piling and/or steel sheeting is planned. These areas will be identified during the Project's design phase and monitoring will occur before, during, and after the construction phase. A Special Provision for "Monitoring Vibrations" will be included in the Project plan package.

Community Enhancements

1. *Nonmotorized* – MDOT will continue to refine nonmotorized opportunities as a part of the Project and work with local agencies and stakeholder groups to create connectivity and access.

2. *Green Space* – Following construction a green space may be created with the potential excess property, which MDOT will maintain until future land use has been determined.
3. *Stormwater Management* – As a part of this project, MDOT will work to reduce flooding risks. The construction of a new independent stormwater outfall or utilizing existing combined sewer overflow (CSO) outfall sewers to the Detroit River, the overall volume conveyed to the existing CSO system and the City's Wastewater Treatment Plant will be greatly reduced from the Project area.
4. *Land Use* – MDOT will support Detroit's efforts to implement any future land use plans.
5. *Aesthetics/Context Sensitive Design* – MDOT will continue to work on aesthetics, coordinating with the community and the city of Detroit, to develop a guide that maintains the character of the corridor post-construction.

   During and after the design phase of the study, MDOT will engage with stakeholders on how to recognize the historical significance and contributions of Black Bottom and Paradise Valley, communities which were displaced in conjunction with the original I-375 construction.

5. Public Participation and Agency Coordination

This chapter discusses the ways in which public and agency feedback were collected and how it influenced the design of the I-375 Improvement Project. Public participation occurred through the following methods:

- LAC and GAC, two advisory committees set up for the project team to share and obtain feedback at important decision-making milestones during the project.
- Public meetings to share information with the greater public on the status of the Project and to gain public feedback as the project progressed.
- Direct emails to study team members.
- One-on-one meetings to share information and obtain feedback relevant to specific stakeholders.
- Neighborhood meetings which brought the project team to specific neighborhoods to share information and obtain feedback.
- A Project website, www.michigan.gov/i375study, regularly updated with project information and public participation summaries.
- Continuous opportunity for comment via email to MDOT-I-375Corridor@michigan.gov.

Feedback received from agencies, the public, study area residents, businesses and other stakeholders led to design changes to reduce impacts and better meet the communities' priorities and needs.

5.1. Local Advisory Committee and Government Advisory Committee

Two advisory committees, the LAC and GAC, were established to provide a direct connection with local and government groups in the region. The purpose of the committee meetings was to foster two-way communication between the study team and stakeholders to help inform the technical analysis and refine the alternatives being considered. Meetings were generally scheduled around key decision-making milestones to obtain feedback prior to sharing with the larger public.

Groups invited to the LAC included neighborhood associations, religious organizations, educational institutions, local businesses, and local non-profits. The GAC is made up of staff from transit agencies, civic groups, city departments, state and federal elected representatives, departments of the Michigan government, and local fire and police services.

LAC and GAC meetings were held consecutively on the same day and in the same location. Identical information was presented to the both groups. **Table 16** summarizes the logistics and topics discussed at the LAC and the GAC meetings.

Table 16: Local Advisory Committee and Government Advisory Committee Meetings

Date	Location	Topics Discussed	Key Takeaways
Meeting No.1 May 1, 2017	MDOT Operations & Service Center 1060 W. Fort St., Detroit	• Project overview and schedule • Purpose and need • Illustrative Alternatives	Importance of safety, mobility, and impacts to businesses
Meeting No. 2 June 21, 2017	University of Detroit Mercy School of Law 651 E. Jefferson Ave., Detroit	• Study updates • Public meeting summary • Traffic updates • Alternatives refinement	• Need to consider transit • Need to evaluate how alternatives would provide a buffer between the CBD and the neighborhoods east of I-375 • Need to identify opportunities for economic development
Meeting No. 3 August 29, 2017	1300 Lafayette East Cooperative 1300 E. Lafayette Ave., Detroit	• Alternatives screening and results • Traffic updates	• Traffic severity speed, and increase in conflict points • The impact a boulevard would have on safety for vehicles and nonmotorized • Potential impact to Holy Family Roman Catholic Church
Meeting No. 4 November 14, 2017	Rattlesnake Club 300 River Place Dr., Detroit	• Practical Alternatives • Refinement process	• Concern over access to Eastern Market and special events traffic • Land use of potential excess property • Speed limit of the boulevard • Safety concerns
Meeting No. 5 July 11, 2018	Horatio Williams Foundation 1010 Antietam Ave., Detroit	• Study updates • Alternatives refinement • EA status	• Concern over access, sale and use of potential excess property • Noise mitigation • Timeframe of construction • Pedestrian and bicycle safety • Concern for the number and timing of signals and resulting traffic congestion
Meeting No. 6 December 13, 2018	MDOT Operations & Service Center 1060 W. Fort St., Detroit	Refinements to Practical Alternative 5	• Signal timing and optimization to reduce travel delays during peak hours • Gratiot median width and how it will be reduced at intersections for left turns • Crossing times along the boulevard • Pedestrian and bicycle facilities along the boulevard

Date	Location	Topics Discussed	Key Takeaways
Meeting #7 September 17, 2019	Crain's Communications, Brewery Park 1155 Gratiot Ave. Detroit	• Practical Alternatives 5A and 5B Direct and Indirect • Traffic updates • Stakeholder coordination	• General consensus in favor of the new Practical Alternative 5B interchange • Indirect left turn will increase travel distance and time • Connectivity at Monroe Street • Direct left turns provide a better nonmotorized connections • Concern about vehicle access at Greektown Garage with indirect left turns • Concern for vehicles exiting the Blue Cross Blue Shield garage during peak periods • Interest in access, sale and use of potential excess property

5.2. Public Meetings

5.2.1. Previous Public Meetings

The 2014 PEL study included two public meetings. At the first public meeting, the feedback received confirmed that I-375 is a barrier between the CBD and neighborhoods to the east, and general concern about traffic, congestion, connectivity, nonmotorized enhancements, and interest in a riverfront connection were discussed. At the second meeting, the Illustrative Alternatives were presented, and feedback received indicated that Illustrative Alternatives 3-6 were preferred over Illustrative Alternatives 1-2. The public and stakeholders agreed with the removal of the Jefferson Avenue Curve and elimination of the Gratiot Avenue Connector.

5.2.2. Public Meeting No. 1

The first public meeting for the I-375 Improvement Project was held from 5-7:30 p.m. on May 17, 2017, at Eastern Market in Detroit (Shed 5, 2934 Russell Street in Detroit). The location was selected to accommodate those who live and work in the corridor. A press release was issued on May 2, 2017, notifying the public of public meeting. MDOT also reached out to the community through the LAC and GAC, asking every member to reach out to their communities to share the invite. The sign-in sheets recorded a total of 84 attendees.

The public meeting presented the Project purpose and need, six Illustrative Alternatives and two Illustrative Interchange Alternatives. The meeting was organized around a presentation given by MDOT and the city of Detroit, with two roundtable breakout discussions.

The primary purpose of the meeting was to gather feedback on the purpose and need, discuss the alternatives, and facilitate an open dialogue between stakeholders, residents, MDOT and the city of Detroit. Comments were collected through a variety of methods at the meeting: on MDOT hard-copy comment forms, interactive placemats provided at each seat, and facilitators who documented comments during roundtable discussions.

Most of the feedback received from the public meeting acknowledged the need to improve I-375. Although public and stakeholder comments expressed support for various Illustrative Alternatives, including freeway Illustrative Alternatives 1 and 2, Illustrative Alternative 5 received more support than the other alternatives. Illustrative Alternative 4 also received support in the comments. This was taken into account when selecting Practical Alternatives 4 and 5, detailed in **Section 3.1 Alternatives Screening.**

In the verbal and written comments there were also requests to improve traffic and congestion; and to improve access and safety for vehicular, pedestrian, and bicyclists alike. Many comments also focused on the type of land uses that the city should consider for any potential new developments. Public and elected officials' comments also expressed that the project should include a memorialization to acknowledge the history of the corridor and its placement through the historic Paradise Valley and Black Bottom neighborhoods.

MDOT incorporated and considered feedback from the public meeting in the Department's evaluation of the Illustrative Alternatives. Illustrative Alternatives 4 and 5 were combined with Illustrative Interchange Alternative 2 and selected to move forward as Practical Alternatives.

5.2.3. Public Meeting No. 2

The second public meeting, an open house, was from 4-7:30 p.m. on December 5, 2017 at the Michigan DNR Outdoor Adventure Center, 1801 Atwater Street in Detroit.

Two press releases issued on November 20 and November 28, 2017 notified the public about the meeting. MDOT also asked the LAC and GAC to ask each of their committee members to share the invite with their respective communities. The sign-in sheets recorded a total of 110 attendees.

The meeting was an open house from 4 to 5 p.m., with formal project presentations at 5 and 6 p.m., resuming the open-house format after the presentations. The study team described the two Practical Alternatives and the No-Build Alternative. The presentations covered the alternatives screening process, the Practical Alternatives refinements, and the traffic analysis.

The feedback from the second public meeting focused on the need to provide multimodal facilities and access; interest for potential development in the Project area; neighborhood impacts; safety for all transportation modes; and traffic operations. Specific concerns included the removal of the Gratiot Avenue Connector; some disappointment that the freeway was not being considered as a Practical Alternative, and concern about development and preservation of the neighborhoods.

In response to these comments, MDOT made the following refinements to the Practical Alternatives:

- Added a new north to south local road along the I-375 corridor to each Practical Alternative to increase access,
- Modified the I-75/I-375 Interchange to improve traffic flow, and
- Realigned the boulevard at the southern end to minimize impacts to Christ Church Detroit.

5.3. One-on-One Stakeholder Meetings

The study team met one-on-one with stakeholders to share Project updates, information relevant to specific stakeholders and solicit feedback. Seventy one-on-one meetings were held throughout the course of the study. These meetings enabled stakeholders to provide valuable input at key points throughout the decision making process.

5.4. Other Outreach Efforts

Third parties also conducted independent surveys about the I-375 improvements. Representative Stephanie Chang, Michigan State Representative for House District 6, conducted a survey on the six Illustrative Alternatives in her district from June-September 2017. *Curbed Detroit* also ran an informal poll on the Illustrative Alternatives in the article *Poll: What should happen to I-375?* on July 7, 2017.

Both of these studies provided insights early in the project into public sentiment on the six Illustrative Alternatives and two Illustrative Interchange Alternatives. The survey conducted by Representative Stephanie Chang, found that the top three important factors for MDOT to consider when evaluating the Illustrative Alternatives were Air Quality/Health Impact, Noise Impact, and Safety Impact. The survey found that the top favored alternative was Illustrative Alliterative 2, and that when ranking a preference of three alternatives, Illustrative Alternative 5 was most popular, followed closely by Illustrative Alternative 6 and 4.

The *Curbed Detroit* poll found that out of 1118 participants, 36% preferred illustrative Alternative 6 and 24% preferred Illustrative Alternative 4. There was a tie for third favored alternative between Illustrative Alterative 2 and 5 at 14%.

5.5. Agency Coordination

MDOT coordinated with local, state and federal agencies to get their feedback and approval for different aspects of the I-375 study. **Table 17** summarizes these efforts. **Appendix C** includes copies of coordination documents.

Table 17: Agency Coordination Summary

Agency	Topic	Date of Coordination
• City of Detroit Water and Sewerage Department • Detroit Housing Commission • DDOT • Detroit Future City • Michigan Department of Community Health • Michigan Department of Environmental Quality[1] • Michigan Department of Natural Resources • Michigan State Historic Preservation Office • Michigan State Housing Development Authority • National Park Service – Midwest Region • RTA • SEMCOG • SMART • U.S Army Corps of Engineers, Detroit District • U.S. Department of Housing and Urban Development • EPA • USFWS	• Project overview • Early coordination	• June 5, 2017 • July 10, 2017 • July 12, 2017 • July 18, 2017 • August 8, 2017
• Bay Mills Indian Community • Grand Traverse Band of Ottawa and Chippewa Indians • Hannahville Indian Community • Keweenaw Bay Indian Community • Lac Vieux Desert Band of Lake Superior Chippewa Indians • Little River Band of Ottawa Indians • Little Traverse Bay Bands of Odawa Indians • Match-e-be-nash-she-wish Band of Pottawatomi Indians • Nottawaseppi Huron Band of Potawatomi • Pokagon Band of Potawatomi Indians • Saginaw Chippewa Indian Tribe of Michigan • Sault Ste. Marie Tribe of Chippewa Indians of Michigan	• Section 106 consulting parties	• June 27, 2017
• Michigan State Historic Preservation Office	• Determination of Effects • Determination of Eligibility	• October 15, 2018
• USFWS	• Mussel Coordination	• March 23, 2020

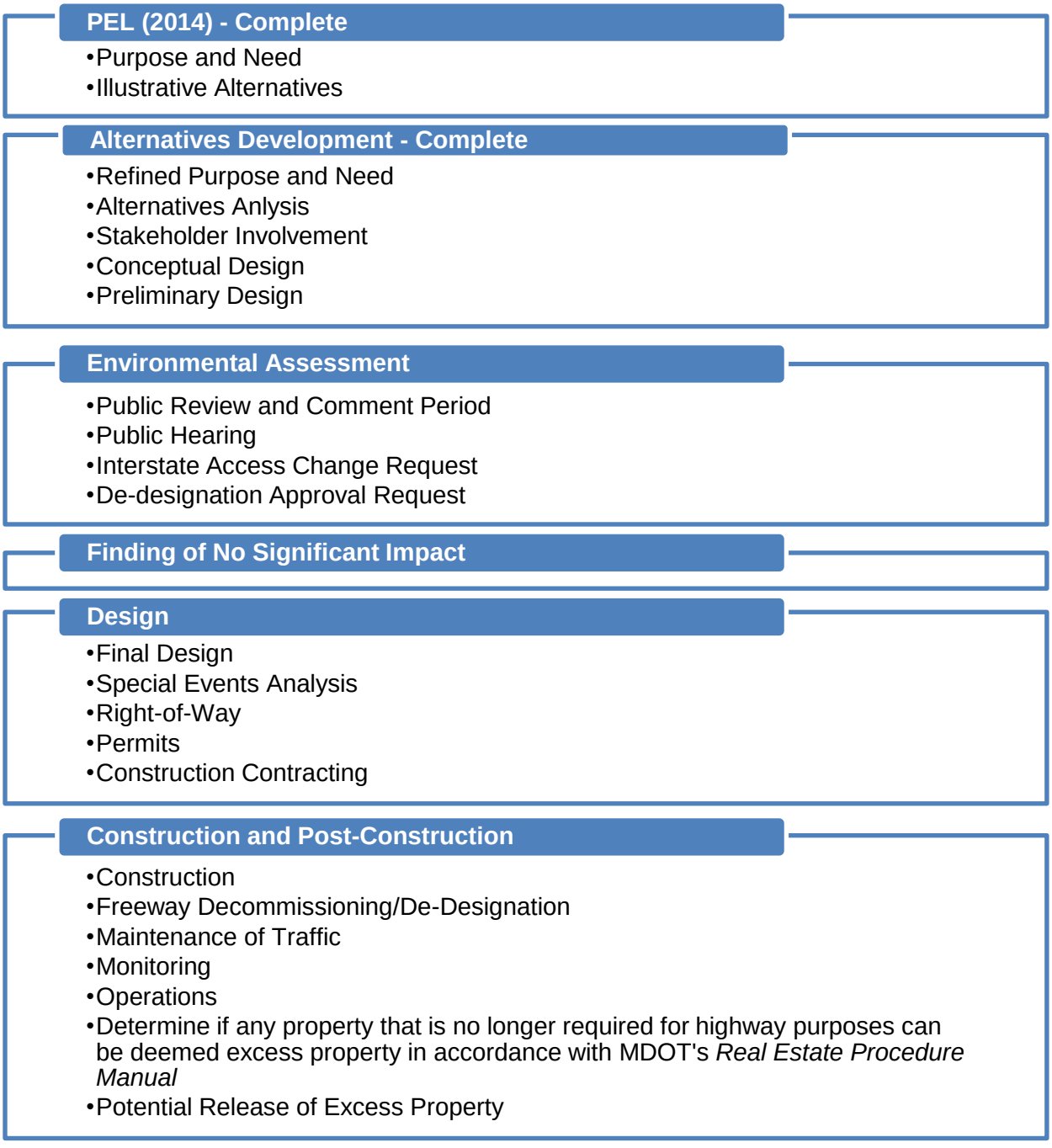
Agency	Topic	Date of Coordination
• Michigan State Historic Preservation Office	• Response to Section 106 Addendum Reports	• July 27, 2020
• Michigan State Historic Preservation Office	• Determination of Effects • Determination of Eligibility	• August 10, 2020

[1]The Michigan Department of Environmental Quality (MDEQ) was officially reorganized into the Michigan Department of Environmental, Great Lakes, and Energy (EGLE) in 2019.

6. Next Steps

This chapter outlines the next steps in the I-375 Improvement Project. **Figure 34** describes the development process of the I-375 Improvement Project.

Figure 34: Development Process



6.1. Public Review and Comment Period

This EA and other Project information will be available for the public and agencies to review for at least 45 days either online or via email. Hard copies will be available upon request since viewing locations may not be open due to the COVID-19 pandemic. MDOT will publish a legal notice in local newspapers that the EA is available for review at least 15 days before the public hearing. Comments will continue to be collected for a minimum of 15 days following the public hearing, which will mark the end of the public comment.

6.2. Public Hearing

After the EA is made available to the public, a public hearing will be held. The public hearing is a formal process in which the public can appear before MDOT to have their comments documented for inclusion in the EA. Due to public health concerns, virtual outreach will be held to supplement an in-person hearing. Virtual public outreach will offer the same opportunity to engage and provide comment for the record.

At both the in-person and virtual outreach event, the public will have the opportunity to review EA materials, and provide comments publicly at the hearing or in a written statement. An official transcript of the public hearing will be prepared. Written comments will be accepted for 15 days after the public hearing.

6.3. Freeway De-Designation

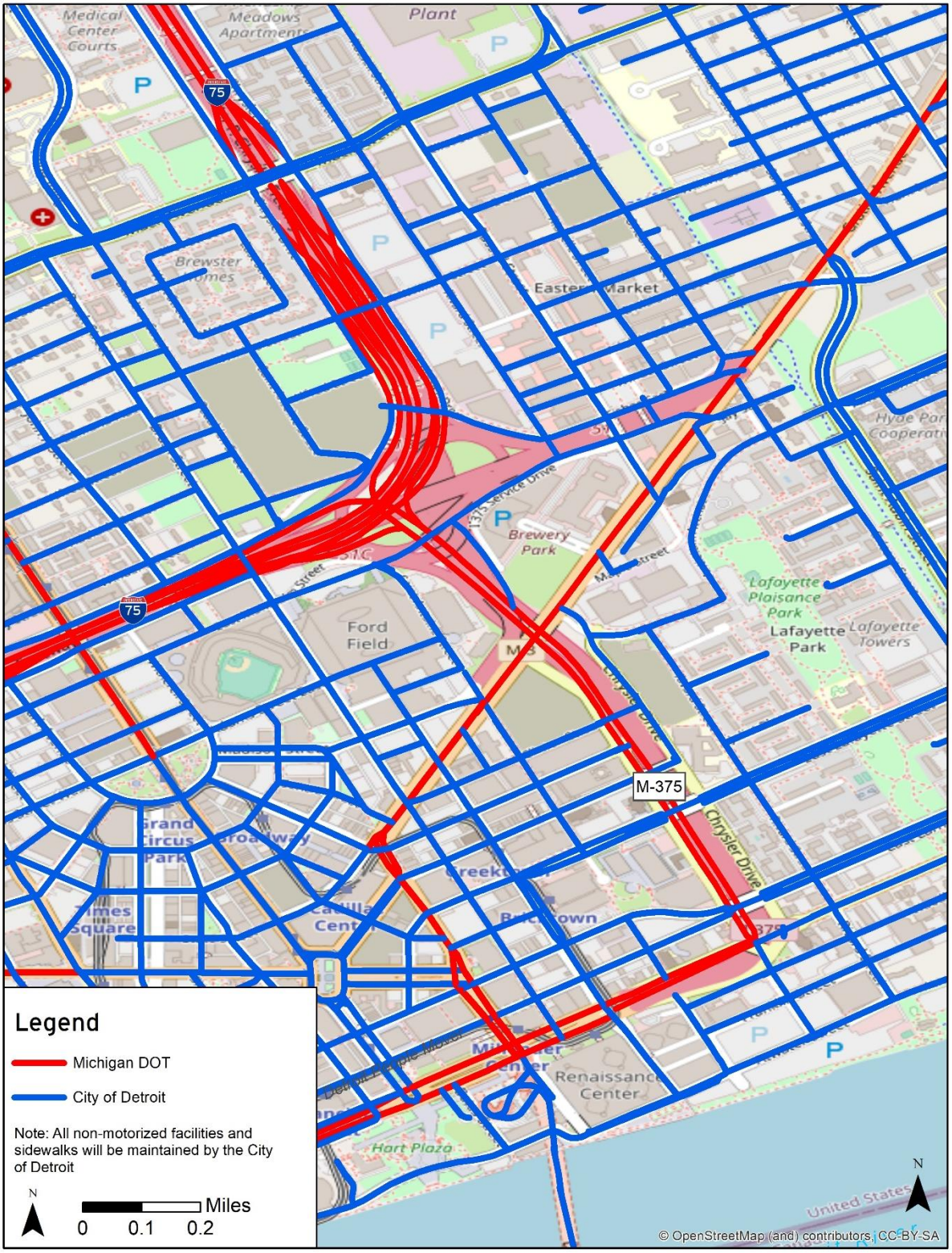
The I-375 Improvement Project will require the permanent de-designation of I-375 south of the interchange with I-75, including the de-designation of the roadway as a freeway. In addition, the Gratiot Avenue Connector would be removed from the National Highway System (NHS). De-designation is a federal action to permanently change or remove a roadway facility from the NHS. As part of the change in the NHS, I-375 would be renamed to M-375. This action requires the FHWA approval following the issuance of a FONSI. The proposed de-designation of I-375 is addressed in a separate submittal, *I-375 De-Designation Request,* that outlines future road jurisdiction, national truck network, national freight network, and national functional classification. **Figure 35** shows the proposed jurisdiction of the freeway and nearby roadways.

6.4. Finding of No Significant Impacts

If the FHWA determines that the proposed action does not result in significant impacts, then FHWA will issue a FONSI. The FONSI concludes the NEPA process and is the final decision document identifying the Selected Alternative that will proceed to final design. The FONSI will include the EA errata sheet to describe changes made to the proposed Project or mitigation measures due to comments received during the public hearing and the document availability period.

The issuance of a FONSI will also begin the mitigation follow-up process to ensure Project mitigation commitments are included in the Project design and implemented during construction.

Figure 35: Proposed Jurisdiction



6.5. Interstate Access Change Request

The I-375 Improvement Project will require a change in access at the I-75/I-375 Interchange which requires the submittal of an Interstate Access Change Request (IACR). The IACR is developed during the NEPA process, however, it is not approved until after the approval of the FONSI. The proposed interchange access changes are not anticipated to have substantial adverse impact on the safety and operation of I-75 (including mainline lanes; existing, new, or modified ramps, and ramp intersections with crossroads; or on the local street network under existing and future traffic volumes).

On May 22, 2017, the FHWA updated the "Policy on Access to the Interstate System," as published under Title 23, USC, Section 111. This update streamlines and eliminates duplication with the NEPA process. The policy is intended to identify a clear need for a change in access. To evaluate this need, eight policy points were developed.

Six of the eight policy points previously documented in the last FHWA policy (Vol. 74, No. 165) will now be addressed solely within the NEPA document and include:

- The existing network with reasonable improvements cannot satisfactorily address the need (**Section 3.1.1 No-Build Alternative**),
- Consideration of all reasonable alternatives (**Section 3.1 Alternatives Screening**),
- Consistent with local and reginal land use and transportation plans (**Section 2.3.5.1 Consistency with Local and Regional Planning**),
- Need for systematic study of effects (**Chapter 4 Affected Environment and Potential Impacts**),
- Coordination with related development (**Section 3.3.4 Enable Future Development and Placemaking**), and
- Coordination with environmental evaluation and approval process (**Section 3.2.2 I-75/I-375 Interchange** and **Chapter 4 Affected Environment and Potential Impacts**) (FHWA, 2017).

The remaining two policy points are addressed in an IACR technical report that focuses on the safety, operational and engineering aspects of the IACR Report and include:

- No significant adverse impact on safety and operations, and
- Connects to a public road, provides for all movements and designed to appropriate standards (FHWA, 2017).

The IACR for the I-375 Improvement Project will be made available on the project website, www.michigan.gov/i375study.

6.6. Design of the Preferred Alternative

After the issuance of the FONSI, MDOT will move into final design for the Project, proceed with any ROW transfers or acquisitions, and obtain the proper Federal, State and local permits and approvals. During design, MDOT will develop a maintenance of traffic plan to maintain access to residences and businesses during the construction period. A special event analysis around the Event Area, which include the areas and Theater District, will be conducted to further refine intersection operations related to event traffic. This includes the project limits along the

boulevard from Clinton Street north to I-75 and the Gratiot Avenue/Madison Avenue/St. Antoine Street intersection to the west.

Context Sensitive Solutions meetings will occur in this phase to determine aesthetics, landscaping, and any special design features.

During the design phase, there will be an opportunity to engage with stakeholders on how to acknowledge the historical significance and contributions of Black Bottom and Paradise Valley, communities which were displaced in conjunction with the original I-375 construction.

6.7. Construction

After the Project's design is complete, MDOT will execute a contract for construction. During construction, access to residences and businesses will be maintained.

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