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**Federal Highway Administration**

**Michigan Division**

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May 4, 2018

In Reply Refer To:
HDA-MI

Mr. Kirk T. Steudle, P.E.
Director
Michigan Department of Transportation
425 W Ottawa St
Lansing, MI 48933

Approval of the Administrative Re-evaluation of the Environmental Impact Statement and Record of Decision for the Gordie Howe International Bridge Project
City of Detroit, Wayne County, Michigan, (C.S. 82900, J.N. 113716)

Dear Director Steudle:

The Federal Highway Administration (FHWA) received your request for concurrence of the re-evaluation of the Environmental Impact Statement for the Gordie Howe International Bridge (GHIB) project, previously known as the Detroit River International Crossing project, as enclosed in your letter dated May 3, 2018. A re-evaluation of the Final Environmental Impact Statement and Record of Decision is required by the Code of Federal Regulations (23 CFR 771.129 (c)).

After careful consideration, FHWA concurs with the re-evaluation. Because of the size of the re-evaluation document, an electronic signed copy has been uploaded to your ProjectWise system for your records. A hard copy can be made available upon request. If you have any questions, please contact myself (mark.lewis@dot.gov / 517-702-1846), or Patrick Marchman (patrick.marchman@dot.gov / 517-702-1820).

Sincerely,

Mark G. Lewis, PE

Mark G. Lewis, P.E.
Program Development Team Leader

For: Russell L. Jorgenson, P.E.
Division Administrator

jba
By e-mail
cc: Mohammed Alghurabi, MDOT
Mark Van Port Fleet, MDOT
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File Directory: O:\FHWA Records\ENVI Environmental - Planning and Program Development\ENVI 2 National Environmental Policy Act (NEPA) and Related Documents
File Name: GHIB re-evaluation of EIS Approval transmittal_MGL_MAY042018

# Re-evaluation of the Gordie Howe International Bridge Project: Final Environmental Impact Statement

The Michigan Department of Transportation (MDOT), in consultation with the Federal Highway Administration (FIIWA), is conducting a re-evaluation of the Environmental Impact Statement (EIS) for the Gordie Howe International Bridge Project in Detroit, Michigan, and Windsor, Ontario, per 23 CFR 771.129(c).

## *General Project Description & National Environmental Policy Act (NEPA) Project History*

The proposed Gordie Howe International Bridge Project (previously known as the Detroit River International Crossing and the New International Trade Crossing) is located in the cities of Detroit, Michigan and Windsor, Ontario. It is a bi-national effort to provide safe, efficient movement of people and goods across the U.S. – Canadian border at the Detroit River, including improved connections to national, provincial and regional systems such I-75 and Highway 401. The proposed project is in the Southeast Michigan Council of Governments (SEMCOG) 2040 Regional Transportation Plan (RTP) and the 2017-2020 Transportation Improvement Program (TIP).

In summary, the Gordie Howe International Bridge project over the Detroit River includes:

- Construction of a new border crossing between Detroit, Michigan and Windsor, Ontario.
- New U.S. border inspection plaza.
- Replacement of the existing interchange with I-75 in the area defined by Livernois Avenue and Dragoon Street in Detroit, Michigan.
- Replacement of five existing pedestrian/bicycle bridges over I-75. Four of the pedestrian/bicycle bridges would be constructed near their original locations; while the fifth bridge will be built at Junction Street instead of Morrell Street.
- Property acquisition of residential and commercial properties (both occupied and vacant) and non-profit entities.
- Construct a new railroad spur to Zug Island which will divert a maximum of 2 trains per day that pass by the former Southwestern High School and which will also result in the elimination of all idling trains.

A map showing the project footprint of the Gordie Howe International Bridge Project can be found in Appendix A.

The re-evaluation of the FEIS will assess any changes to the project, its surroundings and impacts, and any new issues identified since the final EIS was approved by FHWA in November 2008. The Re-evaluation will also address any changes to environmental regulations or requirements that have occurred and their effect on the final EIS.

The project's NEPA history includes:

- FHWA approved the Draft EIS in February 2008.
- FHWA approved the Final EIS November 2008
- FHWA issued the ROD in January 2009.
- Re-evaluation of the Proposed Right of Way for the NITC (now known as the Gordie Howe International Bridge) Project. FHWA concurred with MDOT's findings on July 23, 2013.

- Re-evaluation of the reconstruction and relocation of multiple city of Detroit sewers/siphons that cross I-75 for the Gordie Howe International Bridge Project. FHWA concurred with MDOT's findings on January 12, 2017.
- Re-evaluation of the Relocation of Public and Private Utilities for the Gordie Howe International Bridge Project. FHWA concurred with MDOT's findings on May 18, 2017.

**Basis for the Re-evaluation**

MDOT is required to perform a re-evaluation of the Gordie Howe International Bridge Project FEIS before each phase of the project. Per 23 CFR 771.129, a re-evaluation of the NEPA FEIS is required prior to FHWA approving a major step to advance the project. A re-evaluation considers changes in the project's design and laws/regulations, and determines whether the NEPA document is still valid or needs to be supplemented.

**Purpose and Need for the Project**

The purpose and need for the Gordie Howe International Bridge remains valid "to provide safe, efficient and secure movement of people and goods across the U.S. – Canadian border at the Detroit River to support the economies of Michigan, Ontario, Canada, and the United States; and to support the mobility needs of national and civil defense to protect the homeland."

Since the issuance of the ROD in 2009, there has been a renewed commitment on the part of the U.S. and Canada to improve cross-border connectivity and efficiency, support the economies of Michigan and Ontario; and to support the mobility needs of national and civil defense.

As documented in the FEIS, the project will:

- Provide new border-crossing capacity to meet increased long-term demand.
- Improve System connectivity to enhance the seamless flow of people land goods.
- Improve border operations and processing capability to accommodate the flow of people and goods.
- Provide reasonable and secure crossing options in the event of incidents, maintenance, congestion or other disruptions.

*1. Border-Crossing Capacity*

The need to provide new border-crossing capacity to meet increased long-term demand and to address future mobility requirements still exists. The Gordie Howe International Bridge regional model was updated; as the overall growth in traffic forecast post-September 11, 2001 and post-Great Recession has decreased but is trending back positive. There is a strong upwards trend in the Commercial traffic which shows the predictions reaching 2005 volumes again by 2025 (See figures 1, 2 and 3).

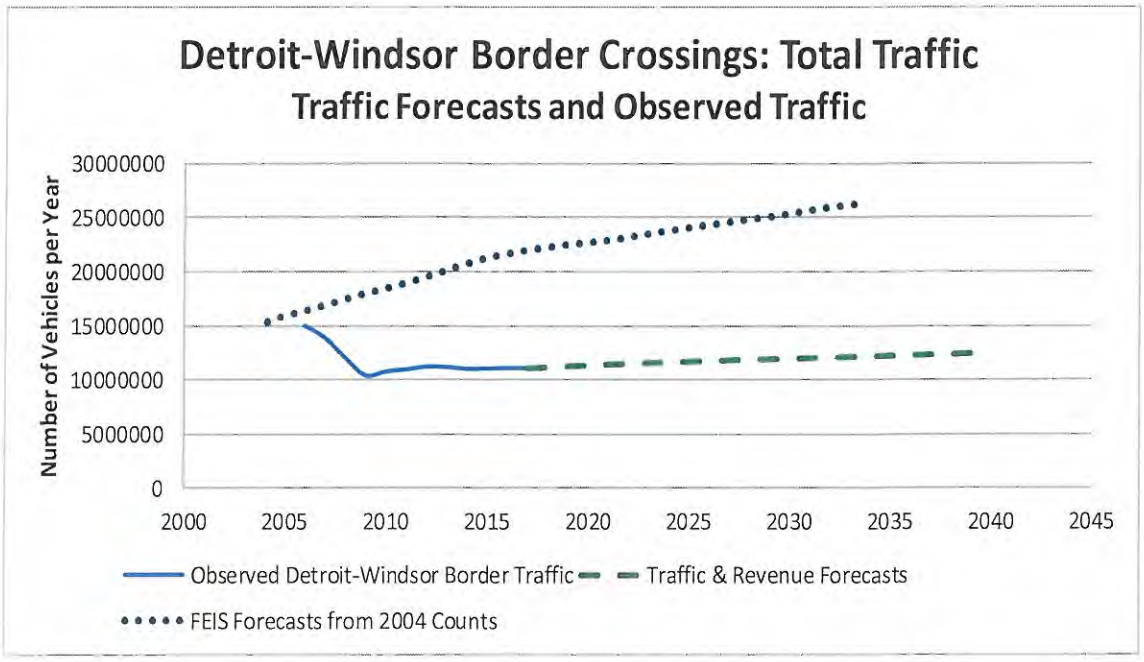
The Gordie Howe International Bridge Traffic Analysis Report (TAR) Level 3 update analyzed the capacity and operations of the surrounding transportation network in the 2040 forecast year. The Gordie Howe International Bridge is expected to have minimal operational impact on the surrounding surface streets while providing direct freeway access for the forecasted increase of cross-border traffic in the Detroit-Windsor area.

To meet long-term border crossing needs, sufficient capacity is needed on all elements of a border crossing system, including access roads, inspection facilities and on the crossings themselves. The Gordie Howe International Bridge is the only proposed project in the Detroit/Windsor corridor that includes improvements to all the elements of a border crossing system sufficient to meet long-term border crossing capacity and redundancy needs.

Constraints within the existing border crossing network include:

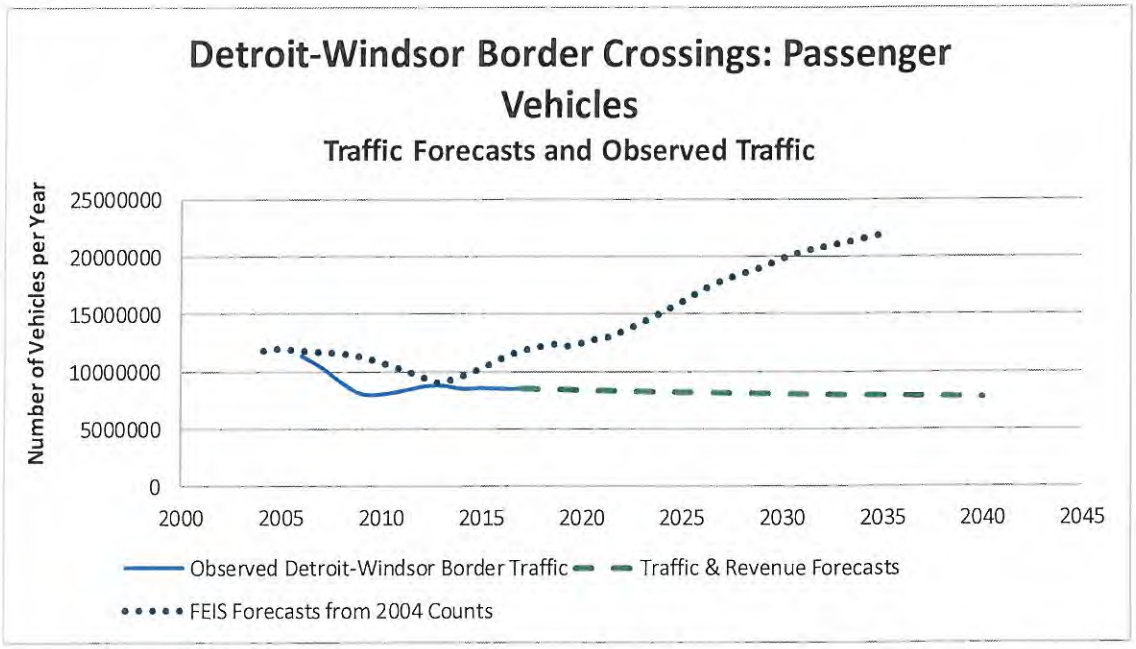
- Detroit-Windsor tunnel's inability to accommodate large trucks due to tight entry/exit configurations. As truck traffic continues to see increases at the border crossing, the vast majority of the increase in truck traffic would have to utilize the Ambassador Bridge.
- The access road from the Ambassador Bridge to the expressway in Canada, Huron Church Road will begin to reach capacity before the bridge does. No capacity improvement along this corridor are planned at this time.
- Aging infrastructure at the Detroit River crossings will require continuous maintenance and rehabilitation.

**Figure 1**



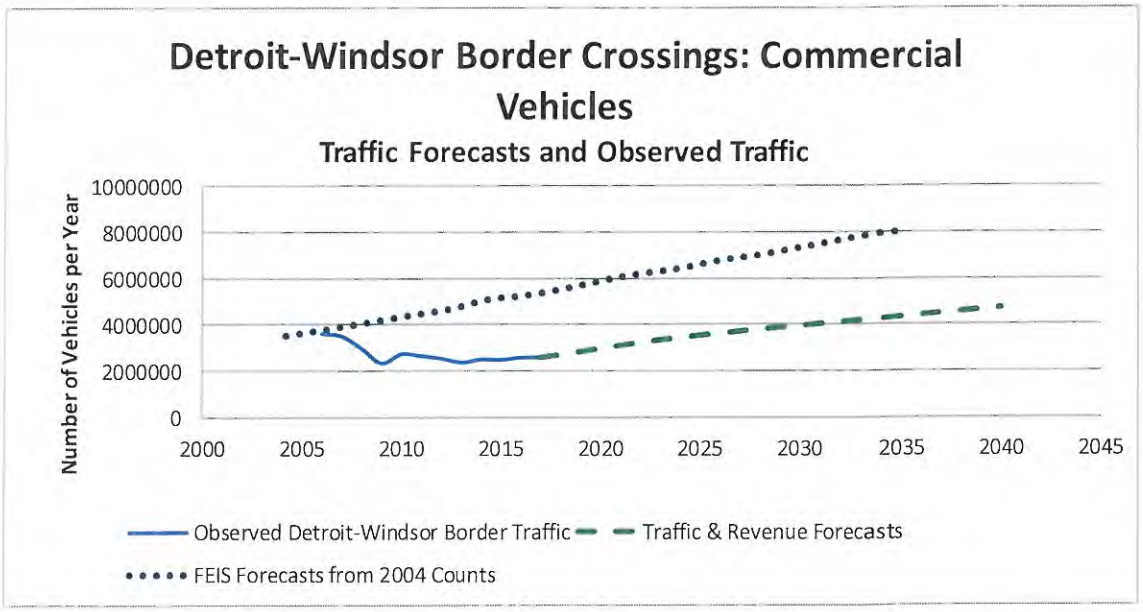

Source: DRIC FEIS, 2008. Bridge and Tunnel Operators Association and CDM Smith, 2017. Does not include busses and misc. vehicles.

**Figure 2**




Source: DRIC FEIS, 2008. Bridge and Tunnel Operators Association and CDM Smith, 2017. Does not include busses and misc. vehicles.

**Figure 3**




Source: DRIC FEIS, 2008. Bridge and Tunnel Operators Association and CDM Smith, 2017. Does not include busses and misc. vehicles.

2. *System Connectivity*

The second need for the Gordie Howe International Bridge project is to improve system connectivity between the U.S. Interstate Highway system in Michigan and the Canadian freeway Highway 401. The Gordie Howe International Bridge project would provide direct freeway to freeway connections on both sides of the U.S./Canadian border.

3. *Operations and Processing Capabilities*

The third need is for improvements to operations and processing capabilities at the inspection plazas on both sides of the border. The existing facilities adjacent to the Ambassador Bridge and the Detroit-Windsor Tunnel are landlocked by existing roadways and other significant features which restrict future expansion, and limits the ability of the border agencies to ensure public safety and process passenger and freight vehicles.

The Gordie Howe International Bridge would improve operation and processing facilities on both sides of the U.S./Canadian border.

4. *Redundancy*

The final need is for reasonable and secure crossing options in the event of incidents, maintenance, congestion or other disruptions. This is frequently referred to as the need for redundancy.

Redundant crossings are essential to maintain the seamless flow of people and goods in the event of disruptions to the normal flow of traffic. The proposed Gordie Howe International Bridge Project would satisfy the need for redundancy by offering a complete border crossing facility which is spatially separated from the other crossings.

The Ambassador Bridge and the Detroit-Windsor Tunnel are both used to transport goods and people between Detroit, Michigan and Windsor, Ontario. The physical constraints of the tunnel dimensions preclude it as a viable option for a high percentage of commercial traffic crossing the border. Therefore, there is a critical need for an alternative route that can accommodate the high volume of commercial traffic which regularly uses the Detroit-Windsor trade corridor. A new crossing would help provide additional infrastructure capacity at the border if the flow of traffic at one crossing is disrupted.

**Travel Demand Modeling**

Supplemental Travel Demand Modeling was conducted to support the Traffic Analysis, Noise Assessment and Air Quality Analysis as part of the National Environmental Policy Act (NEPA) Re-evaluation for the Gordie Howe International Bridge (GHIB) project. The travel demand modeling was required in order to update the base year to 2015 and the forecast years to 2025 and 2040. Also included was a validation of the model for the base year, and the review of the model outputs for 2040

The Southeast Michigan Council of Governments (SEMCOG) E6 regional travel demand model was used in conjunction with their latest 2040 Regional Transportation Plan to develop preliminary forecasts for 2025 and 2040. After review of the volumes along the international crossings, and in comparison to the 2017 CDM Smith's Investment Grade Traffic and Tolling Revenue (IGTAR) Study which was conducted for the Windsor-Detroit Bridge Authority (WDBA), it was decided the CDM Smith forecast provided the best available crossing data. Therefore, this analysis incorporated the domestic trips from the SEMCOG E6 model and the international trips from the latest 2017 CDM Smith's IGTAR.

The modeling process used to integrate the SEMCOG E6 model with SEMCOG's domestic trip tables and the latest Origin Destination (OD) trip tables for international bridge crossings was developed by WSP. More details regarding integrating CDM Smith's International Bridge Crossing OD trips into SEMCOG Regional Model Zone can be found in the Supplemental Travel Demand Modeling Report (2018) at: http://www.michigan.gov/mdot/0,1607,7-151-9621_11058_36266---,00.html.

**Induced Demand from an Additional Detroit River International Crossing**

In 2008, MDOT studied the potential for induced demand that might result from an additional international crossing at the Detroit River[1]. Induced demand, for the purpose of that study and this current analysis, is additional growth and redistribution of population and employment in SEMCOG's seven county region solely generated because of increased accessibility provided by a new international bridge crossing of the Detroit River.

Table 1 shows the growth in demand for the SEMCOG Region from 2005 to 2035. There is a very small increase in population and employment over and above otherwise anticipated growth due to increased accessibility. Roughly 40 percent of this increase would be expected to occur in Wayne County, and only a small portion of this growth will affect the international crossings themselves, making the impact to traffic volumes on the crossings even less. In addition, given the proximity of the crossings and their locations in a largely built-up area, it is expected this will hold true for the current analysis. Thus, the same 2040 socio-economic forecasts were used for developing both the no build and the build scenarios.

**Table 1**
**Growth and Induced Demand for SEMCOG Region, 2005 to 2035**

| Measure | Population | Employment |
|---|---|---|
| 2005 Base | 4,938,807 | 2,780,162 |
| 2035 Baseline | 5,526,780 | 3,220,732 |
| Change 2005 to 2035 | 587,973 | 440,570 |
| Additional Induced Demand from Border Crossing | 4,563 | 3,352 |
| Percent induced demand of Growth | 0.80% | 0.80% |

Source: The Corradino Group 2008

**Traffic Analysis**

The Level 1 and Level 2 TARs were completed in conjunction with the Draft Environmental Impact Statement in 2008. In December 2008, a Level 3 TAR was conducted to present the final travel demand model assignments and traffic analysis for the Preferred Crossing Alternative. The future year for the Level 1, Level 2, and Level 3 reports was 2035.

A new future horizon year of 2040 is now required to be evaluated to verify if recommendations from the previous Level 3 TAR are still valid as this project moves closer to construction. The previous 2035 Preferred Alternative scenario was compared to the future build year of 2040.

[1] Induced Demand Analysis Technical Report – The Detroit River International Crossing Study. Michigan Department of Transportation. January 2008.

The Level 3 Traffic Analysis with the 2040 future build year was completed using the results of the *Highway Capacity Software (HCS7)* and *VISSIM* modeling software to evaluate the potential traffic impacts on the U.S. side of the border for the No-Build and Preferred Alternative. Capacity analyses were conducted for three peak periods (AM, Midday and PM) for 2040. Measures of effectiveness include: traffic density along freeway segments, level of service, average delay at signalized intersections, as well as travel time along the freeway mainline. The 55 mainline, merge/diverge and weave segments previously analyzed for 2035 conditions, were analyzed under 2040 conditions. In comparison to the 2035 TAR, the LOS degraded along twenty-five segments throughout the AM, Midday and PM peak. The other segments all resulted in the same or better results as 2035 analysis. Some segments improved slightly from the 2035 analysis, which is due to the newer version of the HCS software (HCS7) being utilized for the 2040 traffic analysis where algorithms in the software were updated to reflect the latest research and evaluation methodology. Volume changes were minor along the mainline, therefore unless the LOS was on the cusp of two delay threshold values it was not the cause of the increase.

The HCS analysis was supplemented by a VISSIM model to analyze the complexity of traffic operation interaction along the freeway. More detail on the results from the HCS7 & and VISSIM models can be found in the Level 3 Traffic Analysis Technical Report 2040 Update at: http://www.michigan.gov/mdot/0,1607,7-151-9621_11058_36266---,00.html.

In summary, the majority of segments and intersections operate at an acceptable LOS. Two segments, operate below an acceptable LOS, those segments are: westbound I-96 mainline two-lane section to the Ambassador Bridge on-ramp which operates at LOS E in the AM peak (both 2035 and 2040 analysis), and eastbound I-96 from the Ambassador Bridge off-ramp to SB I-75/I-96 Merge which operates at LOS E in the PM peak (2040 analysis, under 2035 operates at LOS D). Congestion at these locations is localized and does not affect adjacent interchanges and freeways.

**Right of Way**

The footprint of this project has not changed since the ROD was issued in January 2009. In 2013, when right of way acquisition commenced, the number of relocations/displacements changed. A field survey of the project area conducted in 2013, included 142 residential Displacements, 43 Commercial Displacements and 8 Non-Profit Entities displacements for a total of 194 relocations/displacements.

In 2017, there were 424 relocations that would be required. The reason for the increase in the number of relocations/displacements is because there were, at times, multiple relocations for a single parcel.

Table 2 shows the parcel type, the number of parcels for each type, the number of parcels that are project ready and the total relocations for each parcel types.

**Table 2**
**Gordie Howe International Bridge Project Property Status**

| Parcel Type | Number | Parcel Project Ready (PPR) Parcels | Total Relocations |
|---|---|---|---|
| Commercial- Not Occupied | 31 | 25 | 23 |
| Commercial - Occupied | 27 | 7 | 45 |
| Commercial - Vacant | 4 | 2 | 0 |
| Industrial - Not Occupied | 8 | 0 | 5 |
| Industrial - Occupied | 18 | 4 | 48 |
| Industrial - Vacant | 2 | 0 | 0 |
| Residential- Not Occupied | 62 | 59 | 22 |
| Residential - Occupied | 160 | 126 | 281 |
| Residential - Vacant | 2 | 2 | 0 |
| Vacant | 322 | 250 | 0 |
| Total Parcels: | 636 | 475 | 424 |

Note: Sometimes there were multiple relocations for a single parcel. Thus, there may be more relocations than the number of parcels within a certain category.

Since the FEIS was approved, there have been no changes to the laws and regulations governing acquisition, and relocation assistance and services required for ROW acquisition.

**Pedestrian Bridges**

The proposed Gordie Howe International Bridge Project would require the removal and replacement of five pedestrian bridges over I-75. Four of the pedestrian bridges over I-75 (Beard, Waterman, Solvay and a bridge between Lansing and McKinstry will be constructed with at grade crossings.

The fifth pedestrian bridge was to be constructed at Morrell, but after discussions with City of Detroit officials and the CHASS (Community Health and Social Services) Center, it was determined that Junction Street would be a better location to safely accommodate the residents who travel from north of I-75 to south of I-75 each day to utilize the CHASS Center. A cross section of the Junction Street Pedestrian Bridge is included in Appendix B. which is located on the south side of I-75. The Junction Bridge will be designed differently than the other four pedestrian bridges because of the grade elevations that are present at Junction and I-75.

The new pedestrian bridges will comply with all Americans with Disabilities Act (ADA) requirements.

**Environmental Justice**

The Gordie Howe International Bridge Project will have a disproportionately high and adverse effect on minority and low-income populations in the Delray Community in Southwest Detroit, Michigan. All mitigation and enhancement measures discussed in the Project Mitigation Summary "Green Sheet" and in the Memorandum of Agreement in the Environmental Impact Statement and Record of Decision will be implemented throughout design, construction and operation of the bridge and associated facilities. Community outreach (which includes meetings, project websites, and presentations) with the residents, business owners, community groups and local governments will continue during final design, construction and operations and maintenance.

**Air Quality**

***Background***

A re-analysis of the Gordie Howe International Bridge project air quality analysis was completed to confirm that the project meets current conformity requirements as defined in the 1990 Clean Air Act Amendments (CAAA) are met. The re-analysis was performed for this re-evaluation because there have been numerous changes and updates to air quality regulations, guidance, and models for determining project-level air quality conformity since the approval of the Detroit River International Crossing (now referred to as the Gordie Howe International Bridge) FEIS in November 2008. These include the following:

- U.S. Environmental Protection Agency's (EPA) replacement of the MOBILE6.2 emissions factor model with the Motor Vehicle Emission Simulator (MOVES) in 2010. The re-analysis used the current model version, MOVES2014a.

- EPA's release of *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and $PM_{10}$ Nonattainment and Maintenance Areas* (latest version November 2015).

- EPA's release of the latest carbon monoxide (CO) hot-spot guidance, Using *MOVES2014 in Project-Level Carbon Monoxide Analyses* (latest version March 2015), which is linked to EPA's earlier 1992 guidance, *Guideline for Modeling Carbon Monoxide from Roadway Intersections.*

- U.S. Federal Highway Administration's (FHWA) release of *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents* (latest version October 2016).

- The continuing local interest in greenhouse gases (GHG) and the improvement of EPA's MOVES2014a GHG utility.

The project configuration and local study area has not significantly changed since the issuance of the original 2008 air quality analysis for the Detroit River International Crossing.

The U. S. Environmental Protection Agency (EPA) designates areas in violation of the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The air quality condition for the project area has improved since the 2008 analysis. The EPA designations for the project area in 2008 included nonattainment for the annual fine particulate matter ($PM_{2.5}$) standard; and attainment/maintenance for the 1- and 8-hour ozone ($O_3$), course particulate matter ($PM_{10}$), and carbon monoxide (CO) standards. The 1-hour ozone standard was revoked in 2005. The standards have been tightened since 2008 for 8-hour $O_3$ and $PM_{2.5}$. The project area is currently in attainment/maintenance for the 24-Hour $PM_{2.5}$ and CO standards.

The 2016 Michigan Department of Environmental Quality's (MDEQ) *Annual Air Quality Report* shows the $PM_{2.5}$ levels are below the NAAQS as recorded from the monitors closest to the project area. The area is on track to achieve a full attainment designation for CO in 2019 after having maintained CO levels below the NAAQS for 20 years. The project area is currently in attainment for ozone. The ozone standard was tightened in 2015 and the EPA will designate areas with a degree of violation in 2018.

***Interagency Consultation***

The interagency consultation process was followed to evaluate and choose the models, and associated methods and assumptions used in the air quality analysis. The metropolitan planning organization (MPO) for the project area is the Southeast Michigan Council of Governments (SEMCOG), which has an interagency working group that reviews conformity for all transportation projects within its area. The group is called the Michigan Transportation Conformity Interagency Workgroup (MITC-IAWG). The Gordie Howe International Bridge project air quality analysis interagency consultation group was comprised of a subset of representatives from the MITC-IAWG. The Gordie Howe International Bridge project interagency consultation group included representatives from the Federal Highway Administration (FHWA), EPA, Michigan Department of Environmental Quality (MDEQ), Michigan Department of Transportation (MDOT) and SEMCOG. Interagency consultation process documentation and the approved methodology is discussed in the Air Quality Technical Report – Appendix A. The Air Quality Technical Report can be found at: http://www.michigan.gov/mdot/0,1607,7-151-9621_11058_36266---,00.html.

***Transportation Conformity (NAAQS)***

Transportation conformity is divided into two parts: mesoscale (regional) and microscale (hot-spot). A transportation project is required to meet conformity on a regional scale by its inclusion in the area's Transportation Improvement Plan (TIP). SEMCOG is the administrator of the area's TIP for the seven southeast Michigan counties including Wayne County, which is the location of the Gordie Howe International Bridge Project. SEMCOG has included the Gordie Howe International Bridge Project in the 2017-2020 TIP (#12940), indicating its associated emissions will not have an adverse effect on the ability of Southeast Michigan to meet the applicable air quality goals.

A project meets microscale conformity through hot-spot analysis which focuses on roadways within the project limits. A project meets conformity when, through analysis, the modeled receptors around the project roadways meet or are below the NAAQS. The area is currently in attainment/maintenance for CO and $PM_{2.5}$ as previously stated. The Interagency consultation group determined the Gordie Howe International Bridge Project was a project of local air quality concern from predicted traffic and operational characteristics and thus CO and $PM_{2.5}$ hot-spot analyses were required.

Hot-spot analysis includes two parts:

- Emissions data as calculated and produced in the MOVES2014 model from vehicle, fuel, and traffic characteristics information. The emission factor calculations for the project's opening year are based on the year 2022. Since then, it has been discussed that the project has the possibility of opening in 2023. As the emission factors for 2022 are more conservative (higher) than the 2023 factors, the 2022 emission factors were applied in all project-level analyses.

- Dispersion calculations using computer models, CAL3QHC for CO and AERMOD for $PM_{2.5}$ with additional traffic operation, geographic, and meteorological data was used to determine the direction and extent of the pollutants' effect.

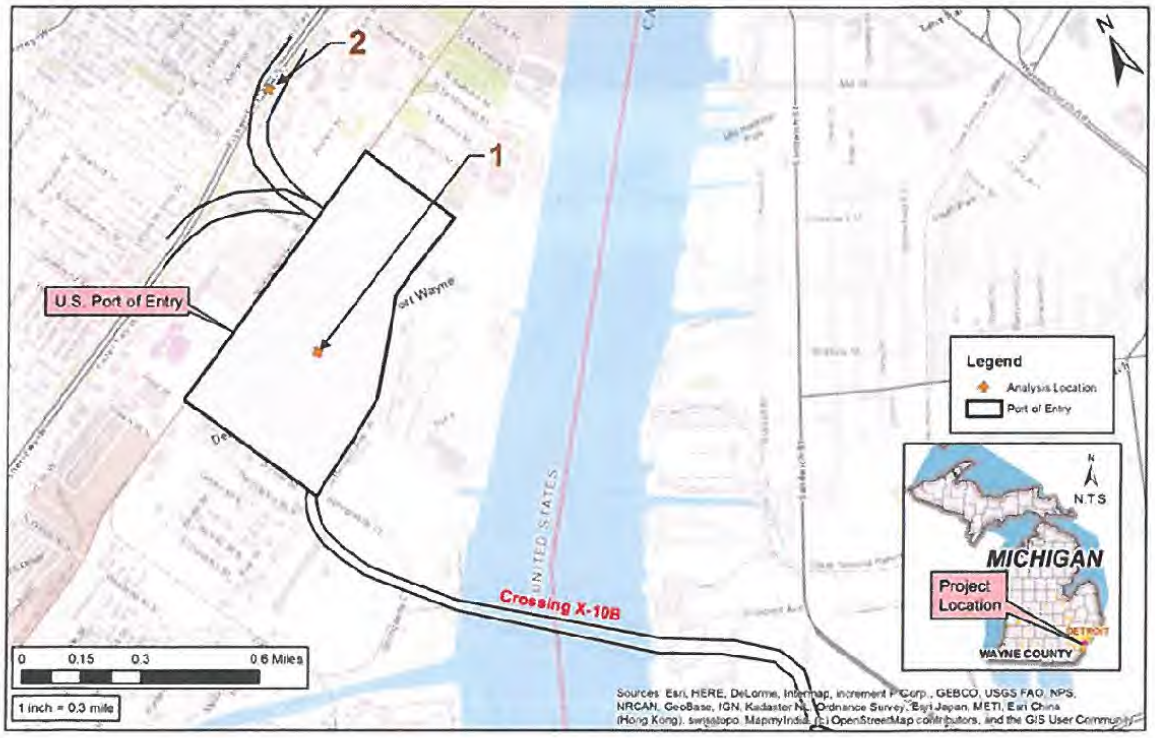
***Carbon Monoxide (CO) Analysis***

The CO analysis was conducted according to the EPA's latest carbon monoxide (CO) hot-spot guidance, Using *MOVES2014 in Project-Level Carbon Monoxide Analyses* (March 2015), which is linked to EPA's earlier 1992 guidance, *Guideline for Modeling Carbon Monoxide from Roadway Intersections*. The CO analysis details are presented in Appendix B of the Air Quality Technical Report (2008) which can be found at: http://www.michigan.gov/mdot/0,1607,7-151-9621_11058_36266---,00.html.

No intersections within the project area met the level of service to require a CO analysis. A hot-spot CO analysis was conducted at two locations identified as having the potential to increase localized CO concentrations. Locations are as follows (Figure 4):

1. **Inspection Plaza**: at the inspection plaza, there will be an increase in traffic operating at slow speeds as well as idling traffic, and truck starts due to the project.
2. **I-75 South Ramps**: at these ramps approaching the inspection plaza, there are increased traffic volumes and new ramps. These ramps were also analyzed in the original air quality analysis performed for this project in 2008.[2]

**Figure 4**
**CO Analysis Locations**




[2] Michigan Department of Transportation (MDOT), *Air Quality Impact Analysis Technical Report, Detroit International Crossing Study*, February 2008.

Receptor maps of the modeled locations are presented below in Figures 5 through 8.

**Figure 5**
**Inspection Plaza, Build Roadways and Receptors**

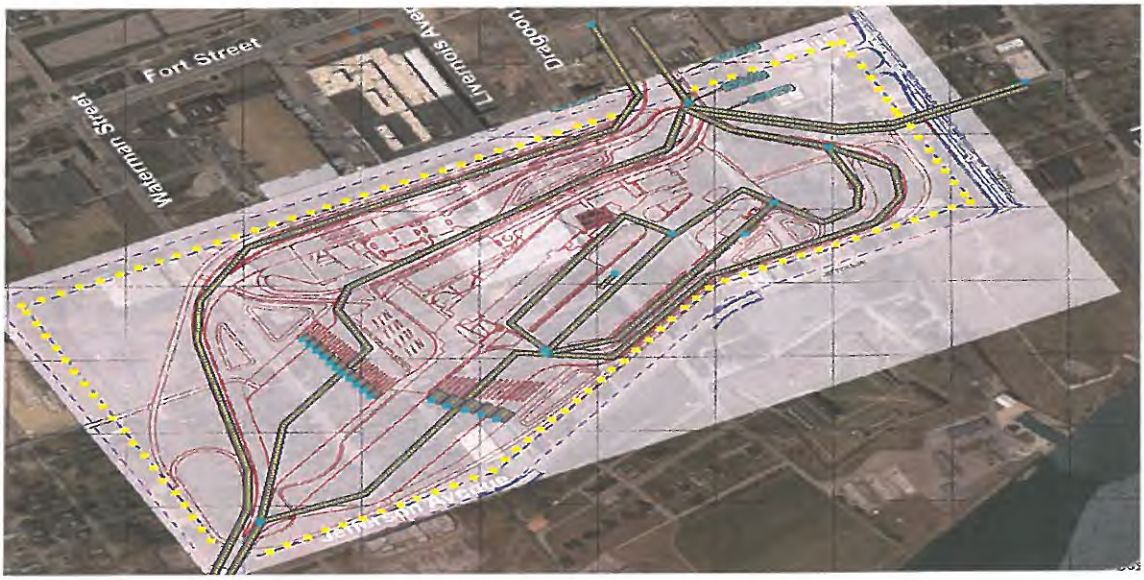



**Figure 6**
**Inspection Plaza, Existing and No Build Roadways and Receptors**

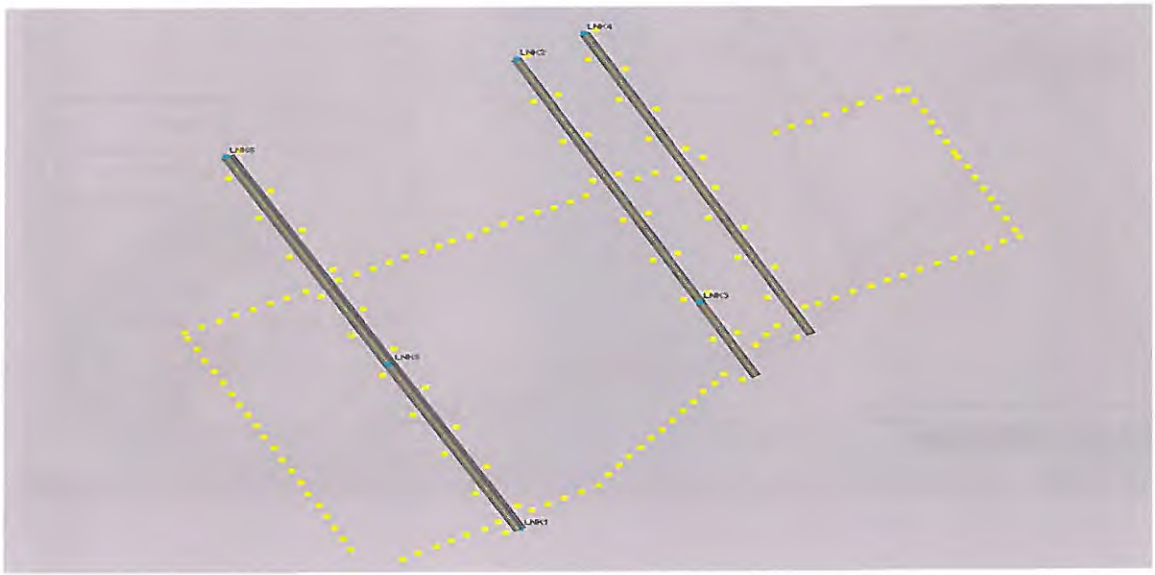


**Figure 7**
**I-75 Ramps, Existing and No Build Roadways and Receptors**

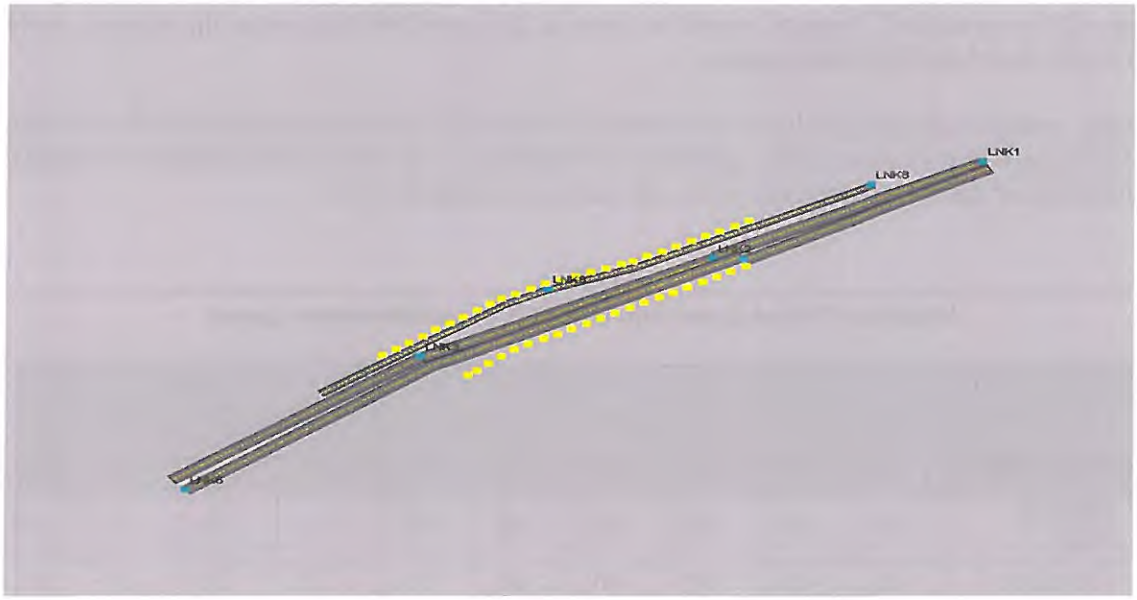
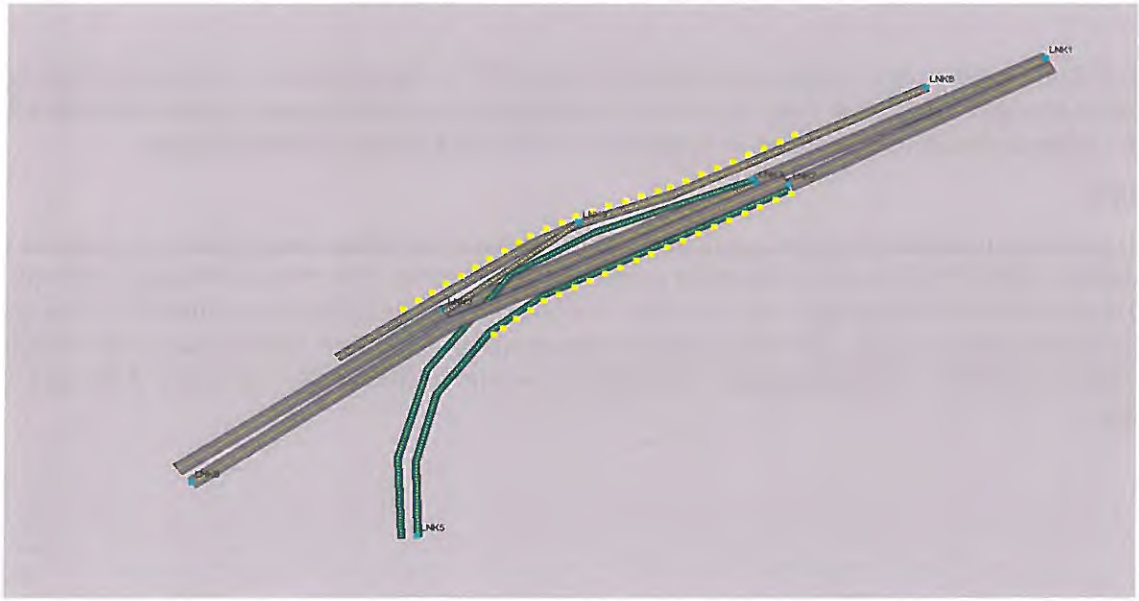



**Figure 8**
**I-75 Ramps, Build Roadways and Receptors**




Maximum one-hour CO levels were predicted for the exiting, opening (2023) and the design year (2040). The maximum one-hour CO concentrations are shown in Table 3. The CO levels estimated by the model are the maximum concentrations that could be expected to occur at each air quality receptor site analyzed. This assumes simultaneous occurrence of several worst-case conditions: peak hour traffic conditions, conservative vehicular operating conditions, low wind speed, low atmospheric temperature, neutral atmospheric conditions, and maximizing wind direction.

As shown in Table 3, the Build alternative is predicted to slightly increase CO levels near the inspection plaza in the AM and PM peak period in 2023, as compared to the No Build alternative. Otherwise, future 2023 and

2040 CO levels for both the Build and No Build are the same as the existing conditions near the inspection plaza.

The future CO levels at the I-75 ramps, would be lower in 2023 and 2040 than under the existing conditions, for both the No Build and Build alternatives.

In summary, a microscale CO analysis was conducted to determine if the proposed project has the potential to cause or exacerbate a violation of the applicable CO standards. The result of this analysis, concludes there are no violations of the NAAQS for any of the alternatives or analysis years.

**Table 3**
**Predicted Worst-Case One-Hour CO Concentrations (ppm)**

| | | | 2023 | | | | 2040 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Existing | | No Build | | Build | | No Build | | Build | |
| Intersection | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| Inspection Plaza | 2.5 | 2.5 | **2.5** | **2.5** | **2.6** | **2.6** | 2.5 | 2.5 | 2.5 | 2.5 |
| I-75 Ramps | 3.5 | 3.5 | **3.1** | **3.1** | **3.1** | **3.1** | 2.7 | 2.8 | 2.7 | 2.7 |

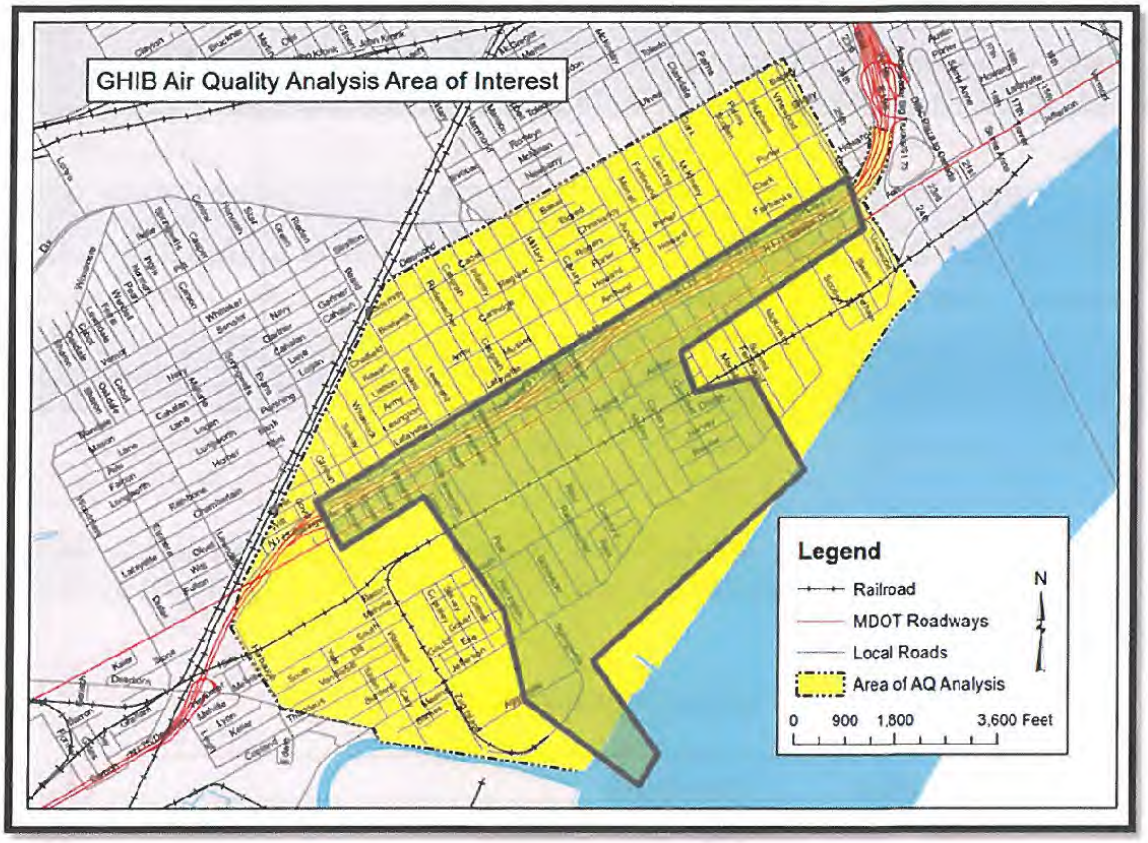
Notes: Concentrations = modeled results + 1-hour CO background.
1-hour CO background = 2.5 ppm; 1-hour CO standard = 35 ppm.
Abbreviations: AM = morning; PM = evening; ppm = parts per million.

A 24-Hour $PM_{2.5}$ analysis was conducted according to the EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and $PM_{10}$ Nonattainment and Maintenance Areas* (November 2015). The $PM_{2.5}$ analysis details are presented in Appendix C of the Air Quality Technical Report.

***Study Area***

The $PM_{2.5}$ analysis included all major components of the project, including ramps from I-75, portions of the I-75 mainline, and the plaza facility (including inspection area) among other project elements, and any other affected roadways within the project area, as shown in Figure 9. The analysis was performed for the opening and design years of the project. All major mobile sources within the yellow shaded area shown in Figure 9 were included in the $PM_{2.5}$ hotspot analysis. The analysis was performed for the opening and design years of the project.

**Figure 9**
**$PM_{2.5}$ Hotspot Study Area**




## Emission Analysis

The analysis divided the roadways into links including the pass-through traffic on the plaza. Volume and speed data for each link was obtained from the traffic analysts for AM peak, midday, PM peak, evening and overnight traffic conditions. For each analysis link and analysis year, MOVES was run 5 times (AM peak, midday, PM peak, evening and overnight) using the winter quarterly climate conditions, as developed by SEMCOG, for December, January and February.

Traffic projections were given for the time periods shown in Table 4, with the combined time periods being used for PM hotspot modeling.

**Table 4**
**Traffic Analysis Combinations Using Time Periods Defined in SEMCOG Model**

| Name | Description | From | To | # of Hours | Time period for PM modeling |
|---|---|---|---|---|---|
| Period 1 | A.M. Peak | 6:30 AM | 9:00 AM | 2.5 | A.M. peak |
| Period 2 | Midday | 9:00 AM | 3:00 PM | 6 | Midday |
| Period 3 | P.M. Peak | 3:00 PM | 6:30 PM | 3.5 | P.M. peak |
| Period 4 | Evening | 6:30 PM | 10:00 PM | 3.5 | Evening |
| Period 5 | Overnight | 10:00 PM | 6:30 AM | 8.5 | Overnight |

In addition to pass-thru vehicle traffic, vehicles will be idling and restarting at the inspection plaza. To account for these additional emissions, estimates of vehicular wait times (vehicle soak times) were provided and are shown in Table 5.

**Table 5**
**MOVES2014 Soak Times**

| Operating Mode | Description |
|---|---|
| 101 | Soak Time < 6 minutes |
| 102 | 6 minutes <= Soak Time < 30 minutes |
| 103 | 30 minutes <= Soak Time < 60 minutes |
| 104 | 60 minutes <= Soak Time < 90 minutes |
| 105 | 90 minutes <= Soak Time < 120 minutes |
| 106 | 120 minutes <= Soak Time < 360 minutes |
| 107 | 360 minutes <= Soak Time < 720 minutes |
| 108 | 720 minutes <= Soak Time |

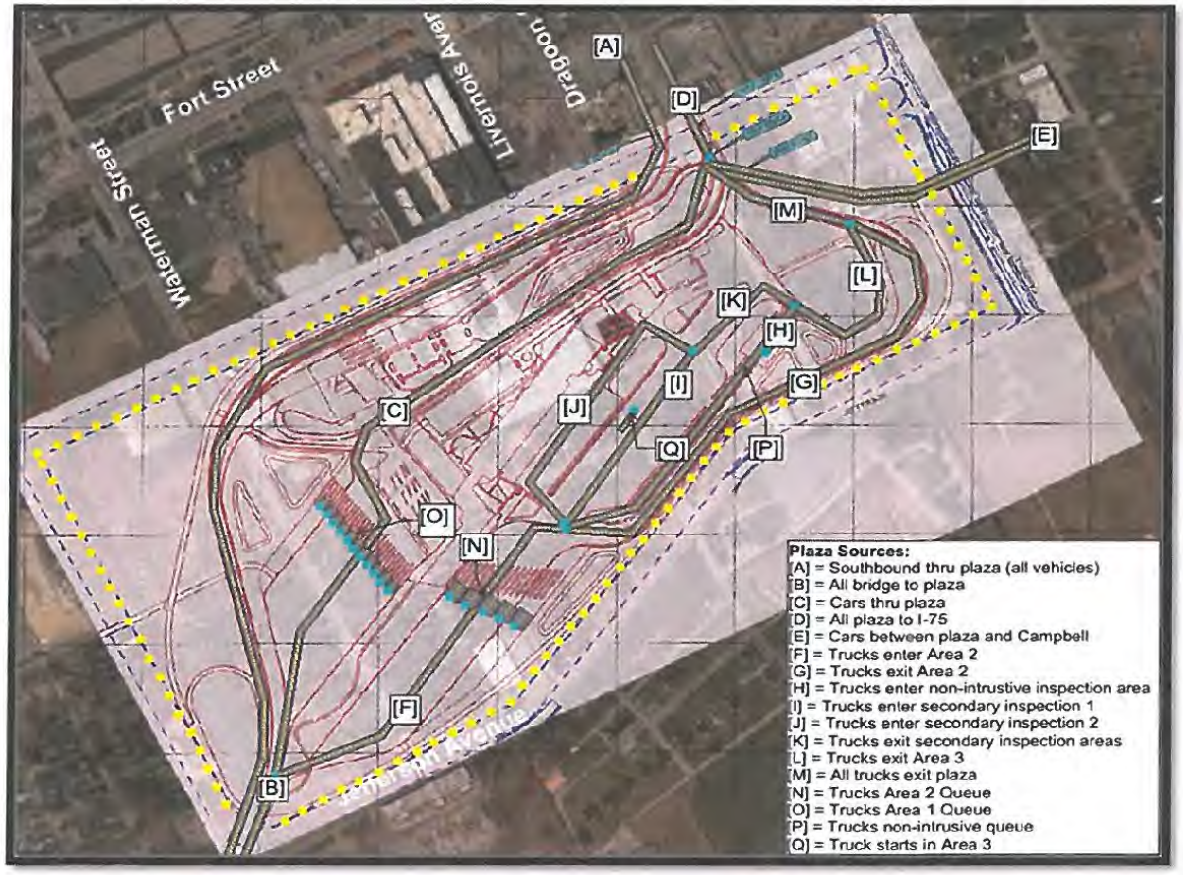
Road dust was not included in the in the $PM_{2.5}$ analysis. SEMCOG stated during consultation that road dust is not considered a significant source of $PM_{2.5}$ emissions and does not include it in their regional conformity analysis. Construction emissions were not included because construction will not occur at any individual location for more than five years. No additional sources of $PM_{2.5}$ emissions were included. It is assumed that $PM_{2.5}$ concentrations due to any other nearby emissions sources are included in the ambient monitor values used for background concentrations. In addition, this project is not expected to result in changes to emissions from nearby sources.

**Hot-spot Analysis**

EPA's AERMOD air dispersion model was used to estimate concentrations of $PM_{2.5}$ due to project operations. Using spatial analysis in a geographic information system (GIS) environment, the location of the emission sources (roads, ramps, and plaza) were translated into AERMOD's input format.

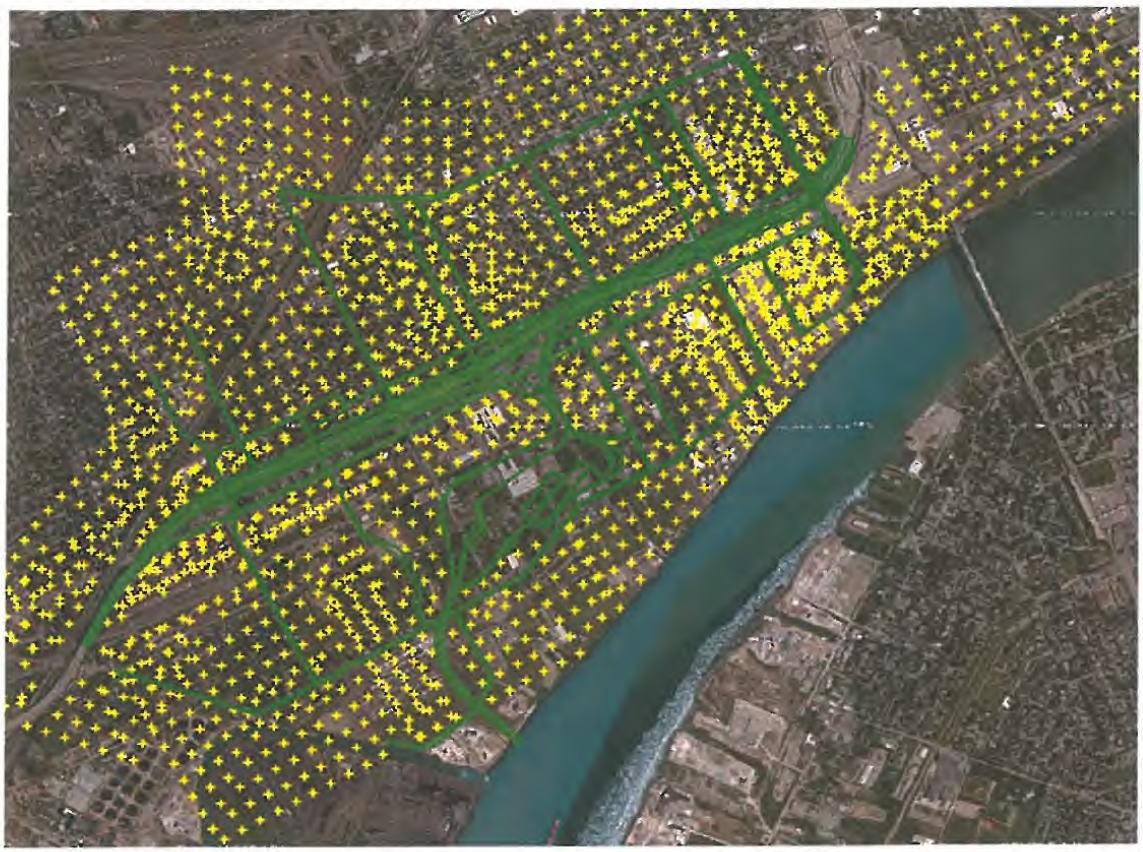
Link-specific inputs included length, mixing zone width, hourly volume, and emission factors. Traffic data was provided for the opening and design years of the project. This information was used to calculate release heights and initial vertical dimensions for each roadway link (area source). Figure 10 shows all of the roadway links modeled in the assessment (grey area sources). As recommended in EPA's *"Guideline on Air Quality Models"* (Appendix W to 40 CFR Part 51), five consecutive years of the most recent, representative and readily available meteorological data were used for the dispersion modeling analysis.

**Figure 10**
**Plaza Area Sources**




Receptors were placed in order to estimate the highest concentrations of $PM_{2.5}$ to determine any possible violations of the NAAQS. Highest concentrations are expected to occur near the areas with the highest-volume roadways and near areas where vehicles are restarting and/or idling. Receptors were placed along the right of way, five meters away from any project features, such as roadways, buildings, etc., and in a grid with receptors placed 50, 100, 200, 300, 400, and 500 meters (164, 328, 656,984, 1312, and 1640 feet, respectively) from the centerline of the roadway with 100 meter (328 feet) horizontal spacing. Receptors that fell within five meters (16 feet) of any project feature or other locations where the public would normally be present for a limited time were removed, as per the PM guidance. Figure 11 shows the receptor placement around the Study Area.

**Figure 11**
**$PM_{2.5}$ Receptor and Area Source Locations outside the Plaza Area**
**And Local Roads with Significant Increase in Project Created Diesel Traffic**



**Background concentrations**

Two possible sources for the background concentration were identified through interagency consultation: the EPA design values and the three-year average value from the three air quality monitors closest to the project area. The interagency group agreed to choose the conservative (worse-case) value.

EPA design values shown in Table 6 shows the $PM_{2.5}$ 24-hour background value is 27 $\mu g/m^3$ (micrograms per cubic meter) based on all monitors within the Detroit-Ann Arbor area.

**Table 6**
**EPA 24 hour $PM_{2.5}$ Design Values for Detroit Maintenance Area**

AQS Data Query: 06/20/17; Last updated: 07/14/17

| Designated Area (2006 NAAQS) | State | EPA Region | Designation Status [1] | 2014-2016 24-hour Design Value ($\mu g/m^3$) [2, 3, 4, 5] | Met 2006 NAAQS? [3, 4] |
|---|---|---|---|---|---|
| Allentown | PA | 03 | Maintenance | 24 | yes |
| Birmingham | AL | 04 | Maintenance | 23 | yes |
| Canton-Massillon | OH | 05 | Maintenance | 24 | yes |
| Charleston | WV | 03 | Maintenance | 19 | yes |
| Chico | CA | 09 | Nonattainment | 26 | yes |
| Cleveland-Akron-Lorain | OH | 05 | Maintenance | 25 | yes |
| Detroit-Ann Arbor | MI | 05 | Maintenance | 27 | yes |
| Fairbanks | AK | 10 | Nonattainment | 106 | no |
| Harrisburg-Lebanon-Carlisle-York | PA | 03 | Maintenance | 31 | yes |
| Imperial County | CA | 09 | Nonattainment | 35 | yes |

$PM_{2.5}$ monitors located near the study area are shown in Figure 12. Data collected from these monitors are shown in Table 7. The table shows the three-year average monitored value, collected from 2014-2016, for the $PM_{2.5}$ 24-hour background concentration is 26 $\mu g/m^3$. Therefore, the EPA design value of 27 $\mu g/m^3$ was applied to provide the most conative analysis.

**Figure 12**
**$PM_{2.5}$ Air Monitoring Locations**

**Table 7**
**$PM_{2.5}$ 24 hour 98th Percentile Monitored Values ($ug/m^3$)**

| Year | County | City | CBSA | Address | 98th Percentile |
|---|---|---|---|---|---|
| | | | | | |
| 2016 | Wayne | Dearborn | Detroit-Warren-Dearborn, MI | 2842 Wyoming | 26 |
| | | | | 2842 Wyoming | 25 |
| | | Detroit | | 2000 W. Lafayette | 21 |
| | | | | 150 Waterman | 26 |
| | Average | | | | 25 |
| 2015 | Wayne | Dearborn | Detroit-Warren-Dearborn, MI | 2842 Wyoming | 28 |
| | | | | 2842 Wyoming | 25 |
| | | Detroit | | 2000 W. Lafayette | 22 |
| | | | | 2000 W. Lafayette | 26 |
| | | | | 150 Waterman | 27 |
| | Average | | | | 26 |
| 2014 | Wayne | Dearborn | Detroit-Warren-Dearborn, MI | 2842 Wyoming | 27 |
| | | | | 2842 Wyoming | 27 |
| | | Detroit | | 2000 W. Lafayette | 26 |
| | | | | 2000 W. Lafayette | 28 |
| | | | | 150 Waterman | 24 |
| | Average | | | | 26 |
| Three Year Average ($\mu g/m^3$) | | | | | 26 |

As shown in Figure 11, 1,875 receptors were analyzed to determine if the project has the potential to violate the applicable $PM_{2.5}$ NAAQS. The modeled concentrations, including background, are compared to the 24-Hour $PM_{2.5}$ NAAQS in Table 8. No violation of the NAAQS has been predicted.

**Table 8**
**24-hour $PM_{2.5}$ Concentrations ($\mu g/m^3$)**

| Site Description | 2023 | 2040 |
|---|---|---|
| Inspection Plaza | 31 | 28 |

Notes: 24-hour $PM_{2.5}$ background = 27 $\mu g/m^3$
24-hour $PM_{2.5}$ standard = 35 $\mu g/m^3$
Abbreviation: $\mu g/m^3$ = micrograms per cubic meter

***Summary***

The PM hotspot results are documented in the Air Quality Technical Report. Due to the large volume of input and output files created for this analysis, they are available electronically upon request.

In summary, a microscale $PM_{2.5}$ analysis was conducted to determine if the proposed project has the potential to cause or exacerbate a violation of the 24-Hour $PM_{2.5}$ standard. The results of the analysis show there are no violations of the NAAQS for any of the alternatives or analysis years.

**Mobile Source Air Toxics (MSAT)**

In addition to the criteria pollutants for which there are NAAQS, the EPA also regulates air toxics. Toxic air pollutants are those pollutants known or suspected to cause cancer or other serious health effects. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

A MSAT analysis was conducted according to FHWA's *Updated Interim Guidance Update on Air Toxic Analysis in NEPA Documents* (October 2016). The MSAT analysis details are presented in the Air Quality Technical Report – Appendix D.

The FHWA's Interim Guidance groups projects into the following tier categories:

1. No analysis for projects without potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

Based on FHWA's recommended tiering approach, the project falls within the Tier 3 approach (i.e. for projects with higher potential for MSAT effects). In accordance with FHWA's recommendation, USEPA's MOVES2014a was used to calculate annual MSAT pollutant burdens for the No Build Alternative and the Build Alternative. In addition, it was recommended by the FHWA Resource Center on a June 29, 2017 conference call with the FHWA Resource Center and MDOT, that MSATs also be quantified for the existing scenario.

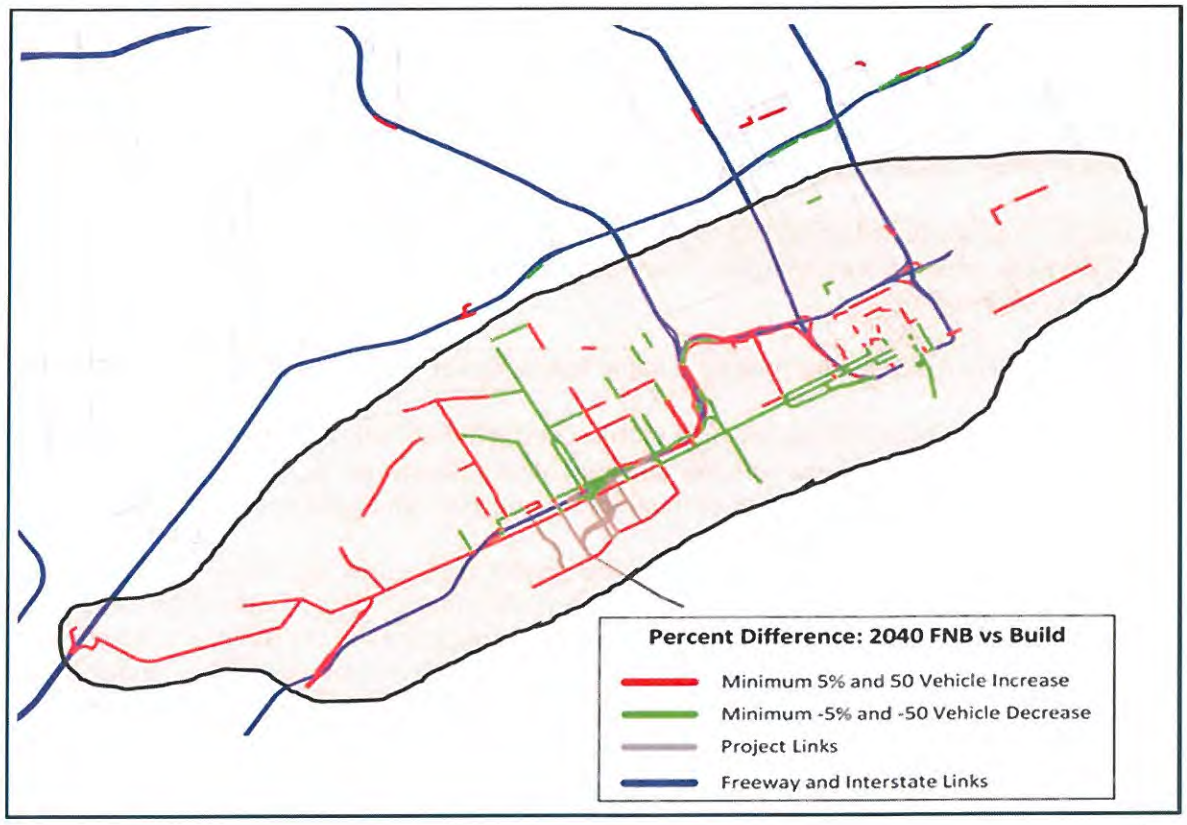
The MSAT study area included the project limits plus roadways within the affected environment. FHWA defines the affected environment as, "the transportation network directly affected by the project.[3]" The roadways within the affected environment were defined based on available project-specific information considering changes in such metrics as:

- ± 5% or more in annual average daily traffic (AADT) on congested highway links
- Links with 50 or more vehicles AADT
- Project specific knowledge and consideration of local circumstances

[3] *"Frequently Asked Questions (FAQ) Conducting Quantitative MSAT Analysis for FHWA NEPA Documents"*
*https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/moves_msat_faq.cfm*

Figure 13 shows the 2040 MSAT Network Links with over 50 Vehicles +/-5% Change in AADT.

**Figure 13**
**2040 MSAT Network Links with over 50 Vehicles +/- 5% Change in AADT**



The results of the MSAT analysis for the existing conditions, opening year (2023) and design year (2040) are shown in Table 9.

**Table 9**
**Predicted MSAT Emission Burdens (tons/year)**

| Year | Scenario | VMT | 1,3-Butadiene | Acetaldehyde | Acrolein | Benzene | Diesel Particulate Matter | Ethylbenzene | Formaldehyde | Naphthalene | Polycyclic Organic Matter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing | 182,014,996 | 0.09 | 0.51 | 0.07 | 0.74 | 4.96 | 0.36 | 0.97 | 0.11 | 0.05 |
| 2023 | No Build | 169,551,898 | 0.02 | 0.17 | 0.02 | 0.23 | 1.91 | 0.10 | 0.39 | 0.04 | 0.02 |
| | *% Change from Existing* | -7% | -80% | -66% | -64% | -69% | -62% | -72% | -60% | -64% | -67% |
| | Build | 177,414,027 | 0.02 | 0.19 | 0.03 | 0.24 | 2.10 | 0.10 | 0.42 | 0.04 | 0.02 |
| | *% Change from Existing* | -3% | -79% | -63% | -61% | -68% | -58% | -71% | -56% | -61% | -65% |
| | *% Change from No Build* | 5% | 5% | 7% | 8% | 3% | 10% | 3% | 8% | 7% | 6% |
| 2040 | No Build | 168,814,386 | 0.001 | 0.06 | 0.01 | 0.07 | 0.44 | 0.03 | 0.19 | 0.02 | 0.004 |
| | *% Change from Existing* | -7% | -99% | -87% | -87% | -90% | -91% | -93% | -81% | -87% | -92% |
| | Build | 178,688,937 | 0.001 | 0.07 | 0.01 | 0.08 | 0.51 | 0.03 | 0.21 | 0.02 | 0.004 |
| | *% Change from Existing* | -2% | -99% | -86% | -86% | -90% | -90% | -92% | -78% | -85% | -92% |
| | *% Change from No Build* | 6% | 14% | 12% | 12% | 5% | 15% | 6% | 12% | 12% | 6% |

*Future vs. Existing*
The 2023 Build MSAT burdens would be 56% to 79% lower, and 2023 No Build MSAT burdens would be 60% to 80% lower than the existing MSAT burdens.

The 2040 Build MSAT burdens would be 99% to 78% lower, and 2040 No Build MSAT burdens would be 99% to 81% lower than the existing MSAT burdens.

*Build vs. No Build*
The Build MSAT burdens would be 3% to 10% higher than the No Build burdens in the 2023; and 5% to 15% higher than the No Build burdens in the 2040.

***Greenhouse Gases (GHG)***

A Greenhouse gas (GHG) analysis was conducted using EPA's MOVES2014a model to calculate annual GHG pollutant burdens for the existing scenario, the No Build Alternative and the Build Alternative. The GHG analysis details are presented in the Air Quality Technical Report - Appendix E.

The results of this analysis for the existing conditions, opening year (2023) and design year (2040) are shown in table 10.

**Table 10**
**Predicted GHG Emission Burdens (tons/year)**

| Year | Scenario | $CO_2e$[1] |
|---|---|---|
| | Existing | 96,822 |
| 2023 | No Build | 77,681 |
| | *% Change from Existing* | *-20%* |
| | Build | 81,637 |
| | *% Change from Existing* | *-16%* |
| | *% Change from No Build* | *5%* |
| 2040 | No Build | 61,375 |
| | *% Change from Existing* | -37% |
| | Build | 66,400 |
| | *% Change from Existing* | -31% |
| | *% Change from No Build* | 8% |

[1] $CO_2e$, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of $CO_2$ that would create the same amount of warming.

This table presents the GHG emission burdens calculated with and without the project. As, shown, in the opening year of the project (2023), GHG emission burdens would be lower under both No Build and Build conditions, when compared to existing GHG burdens. Build GHG burdens would be 5% higher than the No Build burdens in the year 2023. In 2040, GHG emission burdens continue to show a decrease under both the No Build and Build conditions, when compared to existing conditions. The Build GHG burdens would be 8% higher than the No Build burdens in the year 2040.

***Air Quality Analysis Summary***

The project conforms to the CO and $PM_{2.5}$ NAAQS. Although the MSAT burdens from the Build scenario are calculated to be slightly higher than the No Build scenario, operational and procedural activities will be incorporated in the Build scenario to aid in reducing the level of MSAT concentrations, as well as other pollutants. Some of these include:

- Efficiencies can be expected from increased enrollment in the NEXUS (auto) and FAST (truck) programs when a clear lane through the border area becomes available with the Gordie Howe

International Bridge project. This efficiency will lessen the time trucks idle within the system, through reduced queuing and more preprocessed paperwork.

- With a new plaza, the number of Gamma Ray Inspection Technology (GRIT) lanes at the Detroit-Windsor border will increase, reducing queuing and idling. GRIT is part of the non-intrusive inspection of trucks coming into the U.S.
- U.S. Customs and Border Protection has instituted a policy requiring trucks to turn off their engines when they pull into the secondary inspection area.
- Implementation of Intelligent Transportation System to inform the traveling public, especially heavy-duty trucks, on crossing times giving them the ability to choose the most efficient travel route.

Moreover, recent air quality monitoring data from the project area indicates air quality has improved in southeast Michigan since the signing of the ROD in 2009. Overall, the EPA expects pollution levels from vehicle emissions to continue to decline in the future.

**Noise**

***Background***

A traffic noise abatement re-analysis was completed for the Gordie Howe International Bridge project re-evaluation due to the numerous changes and updates to FHWA's highway noise analysis and abatement regulations and guidance, and MDOT's rules and procedures since the approval of the Detroit River International Crossing FEIS in November 2008. These include the following:

- Revisions of FHWA 23 CFR 772 – *Procedures for Abatement of Highway Noise and Construction Noise* (Published in the Federal Register in July 2010; implemented in July 2011).

  The most noteworthy changes in 23 CFR 772 included: expanding the Noise Abatement Criteria (NAC) from five to seven land use categories; how dwelling unit equivalents (DUE) are calculated; how "feasibility and reasonableness" are determined; and the required use of the FHWA traffic Noise Model version 2.5 (TNM 2.5).

- FHWA *Highway Traffic Noise: Analysis and Abatement Guidance* (latest version December 2011).

- FHWA *Noise Policy FAQs* (March 2015).

- MDOT *Highway Noise Analysis and Abatement Handbook* (July 2011).

The three noise barriers found feasible and reasonable as part of the DRIC *Noise Study Technical Report* (November 2007) and included in the DRIC's ROD (2009) were assessed for acoustic effectiveness. Areas in the project area that did not receive recommended abatement in the 2007 study were assessed for noise abatement using the 2011 FHWA and MDOT regulations and guidelines.

***Noise Abatement Analysis and Results***

Noise level estimates were determined for the build alternative using 2040 peak hour traffic volume projections. The three 2009 recommended noise barriers were adjusted to achieve the optimum acoustic effectiveness which resulted in adding the extensions to Barrier 2 and Barrier 3 properties

The analysis found that the extensions to the Original Noise Barrier 2 and Barrier 3 were warranted under the Preferred Alternative highway improvement. The noise barrier extensions provide abatement for other impacted properties. The total linear length of noise barrier construction at the time of the ROD was 0.78

miles. But, with the extensions to Barrier 2 and Barrier 3, the total length is 1.44 miles. A summary of the noise abatement analysis findings for the three original noise barriers is provided in Table 11. These barriers with extensions remain recommended due to the abatement commitment made in the Green Sheet in the 2009 ROD.

**Table 11**
**Noise Wall Analysis Results for Original Noise Barriers**

| ORIGINAL BARRIER | WALLS APPROVED IN ROD (LENGTH IN FEET) | COMMENTS | WALLS APPROVED IN UPDATED ANALYSIS |
|---|---|---|---|
| Original Wall 1 SB | From Green Street to Waterman Street (1,310 ft.) | Wall 1 almost the same as before. | Revised Wall 1 SB (1,250 ft.) from Green Street to Waterman Street |
| Original Wall 2 SB | From Dragoon to Junction (1,488 ft.) | Wall 2 western terminus extended further west from Dragoon to just east of Livernois Avenue. Eastern terminus ends just east of Junction Street. | Revised Wall 2 (1,921 ft.) runs along Ramp H to SB I-75 |
| Original Wall 3 SB | From East of Campbell to Clark (1,520 ft.) | Wall 3 western and eastern terminus points extended from what was in ROD. | Revised Wall 3 (2,134 ft.) runs along Ramp H east of Junction to Clark Ave. |

In addition to the noise barrier locations recommended in the ROD, the noise impact analysis identified three new locations were abatement consideration was warranted. The lengths of the 3 new potential noise abatement areas were analyzed and found not to be feasible and reasonable at any of the locations (southbound New Barriers 1A, 1B,4A, 4B and New NB Barrier 6) shown in Table 12. One of the potential barriers provided adequate noise reduction based on MDOT's feasibility and reasonableness requirements, but all three noise barriers were found to exceed MDOT's $45,942 (2017) maximum allowable cost per benefiting dwelling limit. Therefore, these three new barriers are not recommended for further consideration. A summary of the three new barrier locations is provided in Table 12.

**Table 12**
**Noise Wall Analysis Results for Potential New Noise Barriers**

| POTENTIAL BARRIER LOCATION | LENGTH EVALUATED | COMMENTS | POTENTIAL NEW FINDINGS |
|---|---|---|---|
| New SB Barrier 1A & 1B | 1,447 combined feet | Located adjacent to SB I-75 and RAMP H. Extends from Springwells and Green Streets. | Not Recommended -exceeded $45,942 Maximum CPBU Cost Effectiveness Limit. |
| New SB Barrier 4A & 4B | 1,397 combined feet | Located adjacent to SB I-75 Service Drive. Extends from just east of Waterman Street to Livernois Avenue. | Not Recommended -exceeded $45,942 Maximum CPBU Cost Effectiveness Limit. |
| New NB Barrier 6 | 982 feet | Located adjacent to NB Service Drive from east of Campbell to east of Morrell Street. | Not Recommended -exceeded $45,942 Maximum CPBU Cost Effectiveness Limit. |

The details of the re-evaluation analysis which include noise measurements and traffic counts at each of the noise sensitive areas are presented in the Gordie Howe International Bridge Project Build Year 2040 Noise Technical Report, which is available at: : http://www.michigan.gov/mdot/0,1607,7-151-9621_11058_36266---,00.html.

***Statement of Likelihood***

The Michigan Department of Transportation intends to install highway traffic noise abatement in the form of noise barriers as listed in Table 11. Preliminary indications of likely abatement measures are based on preliminary design for barrier costs and noise reduction as reported in Section 5 of the Traffic Noise Analysis Report (2018). If it subsequently develops during final design these conditions have substantially changed, the abatement measures might not be provided. A final decision of the installation and aesthetics of the abatement measures will be made through public involvement during the project's final design and the Context Sensitive Design process.

**Construction Noise**

Construction noise will be minimized by incorporating the recommended standard measures which include the following:

- Limit the number and duration of idling equipment on site;
- Provide mufflers or silencers to construction equipment operated by internal combustion engines and maintain all construction equipment in good repair;
- Reduce noise from all stationary equipment by utilizing suitable enclosures;
- Minimize the use of back-up alarms:
- Schedule and space truck loading and unloading operations to minimize noise impacts;
- Limit operation of heavy equipment and other noisy procedures to daylight hours whenever possible; and
- Locate equipment and vehicle staging areas as far from noise sensitive areas as

Additionally, MDOT will incorporate public involvement activities to relate to public concerns, such as the following:

- Informing the public when work is going to be performed;
- Keep a telephone log of complaints, and act on those complaints when possible;
- Adhered to all existing local ordinances regarding construction noise.

**Vibration**

Areas where vibration effects could occur due to pavement and bridge removal activities or where piling and/or steel sheeting is planned will be identified during final design. Prior to the commencement of construction, basement/foundation surveys will be conducted on structures located in Historic Fort Wayne and other structures (outside of Historic Fort Wayne) that are within 150 feet of any construction activity where vibration effects are a concern. A list of structures to be monitored will be documented and used to monitor vibration effects on properties before, during and after the construction has been completed on Gordie Howe International Bridge Project. A separate list will also be prepared and kept on file, for those property owners who refused access to their properties.

**Historic Properties**

Numerous historic and potentially historic properties were identified within and adjacent to the Area of Potential Effect. Two historic properties (Kovacs Bar and St. Paul AME Church) which are eligible for listing in the National Register of Historic Places ("**NRHP**") will be adversely affected through their removal. One NRHP-eligible (Berwalt Manor Apartment Building) and one NRHP-listed property (Historic Fort Wayne) will receive specific upgrades that result in a No Adverse Effect determination. Several individual historic properties and three potential historic districts were identified within and adjacent to the Area of Potential Effect; it was determined that these historic properties and districts would face no effect or no adverse effect. Care will be taken to ensure project refinements do not result in adverse effects to these properties located adjacent to or near the proposed project area. The historic properties and potential Historic Districts are listed below:

- Brass Manufacturing Building
- Detroit Copper and Brass Rolling Mills Complex
- Detroit Harbor Terminal Building
- Detroit Police Old Fourth Precinct
- Detroit Savings Bank
- Detroit Union Produce Terminal
- Engine Co. #29 West Jefferson
- Frank Beard School
- Historic Fort Wayne
- Masonic Temple
- MI Bell Telephone
- Military Avenue Presbyterian church
- Motz Burgers
- Olivet Presbyterian Church
- Southwestern High School
- Hubbard Farms Historic District (Local HD, appears NRHP eligible)
- Military Area Historic District (potential)
- Springwells Historic District: Determined NOT Eligible (per Detroit Historic District Advisory Board)

The Berwalt Manor and Historic Fort Wayne have been the subject of numerous discussions within MDOT and with State Historic Preservation Office (SHPO). The Governor's Office and the National Park Service

were involved in discussion regarding Historic Fort Wayne (relative to master plan, visioning, and existing easements). Berwalt Manor (Apartment Building) residents will be offered new windows and an HVAC system to reduce noise levels as a result of the new ramp that will be located very close to the building.

MDOT in coordination with the State Historian worked with community interests to assure there are no adverse historic impacts to the Detroit Union Produce Terminal (which is adjacent to the Area of Effect) during the installation of power hookups that allow trucks to be shut down while unloading or out of service.

MDOT's Historian has performed documentation of Kovacs Bar and St Paul AME Church as part of the mitigation commitments expressed in the project's Memorandum of Agreement (MOA). Documentation has included extensive research, fact checking, photography and interviews with the property owners. The documentation can be found athttp://www.michigan.gov/mdot/0,1607,7-151-9621_11058_36266---,00.html.

**Archaeological sites**

Two historic period archaeological sites (20WN1132 and 20WN1133) located within the project area were determined eligible for listing on the NRHP. As part of mitigation, MDOT consulted with the State Archaeologist in 2015, and conducted field investigations to establish vertical and horizontal boundaries for the two sites, which were successfully relocated. As a result of these investigations, MDOT's Senior Archaeologist and the State Archaeologist concurred neither site is eligible for listing on the NRHP. However, both MDOT and the State Archaeologist agree the Gordie Howe International Bridge Project is at risk of inadvertently encountering finds of historical/and or archaeological significance, possibly including human remains, during construction.

Prior to construction of the Gordie Howe International Bridge Project, a human remains protocol ("**Human Remains Protocol**") will be developed to supplement MDOT's Construction Advisory #2013-03 to ensure that inadvertent finds of human remains during construction are handled appropriately.

The construction contract for the Gordie Howe International Bridge Project will contain the following provisions:

(i) The construction contract will include the following text:

"Significant archaeological deposits and/or human remains could be present within the project area. MDOT's Construction Advisory #2013-03 and the Human /Remains Protocol MUST be followed if archaeological materials or bones of any kind are encountered."

The Construction Advisory #2013-03 and the Human Remains Protocol will be reviewed with the contractors, which includes a review of the types of evidence that indicate an archaeological site and/or a human burial that would require a temporary stoppage of construction per MDOT's 2012 Standard Specifications for Construction; and

(ii) A meeting will be held two months before construction begins to establish protocol for lines of communication and agency roles if human remains are encountered during construction. Attendees must include representatives from the City of Detroit Police Department, Wayne County Medical Examiner's Office, Wayne County Coroner's Office, MDOT and other appropriate team members. This meeting will be the basis for developing the final Human Remains Protocol.

(iii) All contractors' field supervisors and project inspectors must be provided with MDOT's Construction Advisory #2013-03 and the Human Remains Protocol prior to the pre-construction meetings. One

month before project construction begins, every construction contractor shall attend a pre-construction meeting before each contractor begins its particular construction tasks;

(iv) MDOT must be notified of any inadvertent finds and/or changes that will include ground-disturbing construction in areas not previously given environmental clearance. No construction may proceed until additional environmental clearance and/or notice to resume construction is obtained.

**Recreational Properties**

The proposed Gordie Howe International Bridge Project will impact the South Rademacher Park and its associated recreation center, plus the Post-Jefferson Playlot in the city of Detroit which are protected under Section 4(f) of the Department of Transportation Act. All three properties fall within the plaza footprint. As mitigation for the properties, it was agreed the City would be compensated for the property, facilities and recreational functions. See correspondence (Appendix C) dated November 19, 2008 between MDOT and the City of Detroit Recreation Department. However, since the ROD was issued in January 2009, the Post-Jefferson Playlot was vacated by the City and purchased by the Michigan Land Bank Authority in 2016. The South Rademacher Park and Recreation Center are still owned by the City of Detroit. After an appraisal of the properties and approval by City Council, the City has accepted a monetary compensation for the two recreational facilities that are needed for the new plaza.

The following is a list of other public recreational properties protected under Section 4(f) of the Department of Transportation Act, and located adjacent to or near the proposed project area and shall be avoided during construction:

- City of Detroit Park at the northwest corner of Melville and Green streets
- Clark Park
- Cottrell-Erie Park
- Delray Public Access Boat Ramp
- Harvey-Junction Park
- Historic Fort Wayne
- Southwestern High School Athletic Fields (which is now owned by Sakthi Automotive who constructed a new structure on this site).

If the scope of work changes to include any permanent or temporary property (including fee right-of-way, easements, consents to grade, consents to construct, or any other form of permanent or temporary acquisition) from any public recreational property, additional review by MDOT is required.

All project plans shall include the following statement: "The Private Sector Partner shall not park any vehicles or store any materials on public recreational property and access shall be maintained to the properties at all times".

**Contaminated Sites**

Environmental contamination was found to be present in the Gordie Howe International Bridge Project footprint, which is shown in Appendix A. Initial site assessments were performed on approximately 100 commercial, industrial, and vacant sites to investigate for potential contamination in 2007. Of the approximately 100 sites, 26 sites were determined to be rated medium to high risk of being impacted by soil or ground water contamination. Of those 26 sites, the Gordie Howe International Bridge project would impact

23 sites of these sites. Preliminary Site Investigations (PSIs), which involve drilling soil borings to collect soil and groundwater samples for laboratory analysis were completed for six sites with the understanding that additional PSIs would be conducted on the remaining 17 sites affected by the Gordie Howe International Bridge project.

Due to the age of the previous assessments and investigations, MDOT decided to do Project Area Contamination Surveys (PACS) on all 636 commercial, industrial, residential parcels and vacant sites in the project footprint. The PACS reports identifies each property as either a low, medium or high risk of environmental contamination. PSIs are recommended for Medium and High risk parcels. Of the 636 parcels surveyed, over 200 parcels required PSIs. MDOT's Environmental Owners Representative Consultant ("**EORC**") is managing five environmental consulting firms to conduct PSIs on the medium and high risk parcels. MDOT is acquiring all of the property for the Gordie Howe International Bridge project under a Covenant Not to Sue agreement with the Michigan Department of Environmental Quality (MDEQ), so that all of the contaminated property can be acquired without taking on environmental liability as long as the PSI reports are shared with the MDEQ. MDOT will follow due care procedures as required under Section 20107a of Part 201, *Environmental Remediation, of Michigan's Natural Resources and Environmental Protection Act*, 1994 PA 451, as amended, which requires that owners and operators take due care measures to ensure that existing contamination on a property does not cause unacceptable risks and is not exacerbated (the "**Due Care Plan**"). The EORC will manage a limited remediation activity contract to clean up grossly contaminated parcels of property and remove abandoned underground storage tanks prior to the new bridge being constructed. During construction, the Due Care Plans from the EORC will be implemented which includes removal of contaminated soils that conflict with the work on the project. MDOT will require the Private Sector Partner to implement the associated Due Care Plans from the EORC. The consultant shall be responsible for removal of remaining contaminated soils where contamination conflicts with Project work.

The Private Sector Partner shall:

- Detail areas of contamination in all construction plans as defined in PSI reports and existing site remedial investigation reports.
- Follow Due Care Plans from the PSI reports and adhere to restrictions identified in restricted closures.
- Develop a Utility Plan to ensure that utility cuts will not impact and/or spread existing contamination.
- Submit Utility Plan for acceptance by the appropriate state agency and Private Sector Partner.
- Design the bridge piers to include measures to prevent migration of contaminated groundwater and contamination of deep aquifers.
- During design, construction, and operation, prevent exacerbation of existing contamination using measures that include but are not limited to the Bentonite Plug Special Provision.
- Ensure that construction and operation does not interfere with existing caps or remediation systems or system replacement without approval from the appropriate MDEQ and Private Sector Partner.
- Accommodate and potentially assume existing and ongoing site remediation activities.
- Ensure design specifications include provisions to handle contaminated material, including groundwater per MDOT and/or MDEQ Special Provision for non-hazardous contaminated material handling and disposal, special provision for dewatering system for contaminated groundwater, and special provision for dewatering system for Petroleum contaminated groundwater.
- Follow the MDEQ notification procedures for demolition, if demolition is required.

**Tree Removals and Replacements**

Tree removals will occur on residential, commercial and industrial properties. For those properties in which tree removals are required from the remaining residential properties within the project footprint, tree replacements will be offered to the homeowners.

Tree replacement species and the numbers for trees to be planted on the remaining residential properties, including historical properties, and for designated project green spaces will be determined by the property owner and appropriate Project representative. No invasive species will be allowed for replacements.

There are no seasonal restrictions on the removal of trees. Tree removals must comply with MDOT standards.

**Migratory Birds**

Migratory bird collisions and navigation disruptions will be considered during the construction of the new bridge and lighting that will be placed on the new bridge. A lighting design solution will require additional coordination with the Federal Aviation Administration (FAA), US Fish and Wildlife Service (USFWS), SHPO, MDEQ MDOT and their Canadian equivalents). The types of lighting solutions will depend on the final bridge design. The lighting solution must be determined before construction begins on the new bridge.

**Utilities**

A separate re-evaluation for the relocation of public and private utilities was approved by FHWA in May 9, 2017. The re-evaluation included a drawing of each of the utilities that will be relocated as a result of the Gordie Howe International Bridge.

**Stormwater**

Stormwater management will be incorporated into the project's final design plans. The Private Sector Partner shall design and build a detention basin in the plaza footprints to detain and release stormwater at current flow rates before entering the Detroit Water and Sewer Department (DWSD) and/or Great Lakes Water Authority's systems. The design plan for the detention basin shall be submitted and accepted by MDOT before construction begins. Project Co shall also submit design plans for post-construction BMPs and detention/retention to MDOT for approval. Detention chambers were constructed in the I-75 slopes within MDOT's right of way to handle runoff from I-75 ramps and roadway. Drainage will flow into existing sewers or existing outfall structures which outlet to the Detroit River.

MDOT will need to enter into a stormwater connection agreement which will allow MDOT to connect the storm water collection system for the Gordie Howe International Bridge Project to the existing combined storm and sanitary sewer system and/or to the outfall structures.

**Permits**

Multiple environmental permits will be required for the Gordie Howe International Bridge Project:

- MDOT has already obtained several permits which include the Presidential Permit, which is required for all new international bridge crossings and facilities between the United States and Canada. The permit was issued in April 2013 and will need to be renewed by April 2023.

- Permits for Michigan Public Act 451, Part 31 (Water Quality and Floodplains), Part 55 (Air Pollution Control), and Part 301 (Inland Lakes and Streams) are required from the MDEQ. A joint permit under Act 451, Parts 31, 301 and 303 and the U.S. Army Corps Engineers (USACE) Section

10 of the Rivers and Harbors Act is required. The joint permit was issued in September 2013 and was renewed in February 2018. The permit will need to be renewed by February 2023, if construction has not begun. All requirements and restrictions in the permit must be adhered to.

- Coverage under the National Pollutant Discharge Elimination System (NPDES), which is issued by the MDEQ is also required. The Notice of Coverage will be submitted before construction begins.

- Section 9 of the Rivers and Harbors Act Permit is required from the U.S. Coast Guard. All Detroit navigational requirements listed in the permit will be followed. The Permit was obtained in May 2014 and renewed in September 2017. The permit will need to be renewed in September 2020 if construction has not begun.

- A permit under Michigan's Tall Structure Act 259, is required for any bridge structure over 200 feet above ground level. The Michigan's Tall Structure permit was issued in April 2018.

- The Federal Aviation Administration (FAA) under the Federal Aviation Regulation (FAR) Part 77, is responsible for an airspace obstruction evaluation to determine the bridge structure's impact to navigable airspace. Notification to FAA is required at least 45 days prior to construction.

### *Changes in Design*

The project footprint for the Gordie Howe International Bridge Project has not changed since the approval of the FEIS and ROD. However, there have been design changes made to the Junction Street Pedestrian Bridge and to the proposed local streets.

The local streets are being designed using the Complete Streets approach which allows for safe travel by those walking, cycling, driving automobiles, and riding public transportation. A cross section of each of the local complete streets can be found in Appendix D.

## Changes in Laws or Regulations

### *Air Quality*

There have been numerous changes and updates to air quality regulations, guidance, and models for determining project-level air quality conformity since the approval of the ROD in 2009. The changes include the following:

- The U.S. Environmental Protection Agency's (EPA) has replaced the MOBILE6.2 emissions factor model with the Motor Vehicle Emission Simulator (MOVES) in 2010.

- In 2015, EPA released the *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas.*

- In 2015, EPA released the latest carbon monoxide (CO) hot-spot guidance, Using *MOVES2014 in Project-Level Carbon Monoxide Analyses,* which is linked to EPA's earlier 1992 guidance, *Guideline for Modeling Carbon Monoxide from Roadway Intersections.*

- In 2016, U.S. Federal Highway Administration (FHWA) released an *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents.*

MDOT has conducted an air quality analysis to confirm that it meets current conformity requirements as defined in the 1990 Clean Air Act Amendments (CAAA) are met.

***Noise***

In February 2011, Code of Federal Regulations Title 23 Part 772 (23 CFR 772) *Procedures for Abatement of Highway Traffic Noise and Construction Noise* was revised. This revision in noise policy and procedures was implemented on July 11, 2011, through revised FHWA guidance and MDOT's *Highway Noise Analysis and Abatement Handbook*. The new regulations require a noise impact and abatement analysis for new or significantly altered highway projects (i.e., new interchange or adding capacity to the interstate).

No significant changes were identified that would alter the noise impact and abatement analysis and conclusions as reported in the November 2008 FEIS and the January 2009 ROD. MDOT has conducted a new noise impact and abatement analysis which has been previously discussed in this re-evaluation.

***Northern Long-eared Bat and the Indiana Bat***

Since the publication of the EIS and the first re-evaluation (2013), the USFWS has listed the northern long-eared bat (NLEB) as threatened under the Endangered Species Act (ESA) in 2015.

In 2015, MDOT determined removal of trees outside the winter season (October 1 – March 31) is not likely to adversely affect the Indiana bat or NLEB, and requested USFWS concurrence with this determination (See MDOT's letter in Appendix G). The USFWS concurred (See USFWS concurrence letter in Appendix E), that the proposed actions are not likely to adversely affect the Indiana bat or NLEB.

***Eastern Massasauga Rattlesnake (EMR)***

On September 30, 2016, the Eastern Massasauga Rattlesnake (EMR) was listed as threatened under ESA. The EMR occupies wetlands and adjacent uplands throughout the lower peninsula of Michigan as well as Bois Blanc Island. The Gordie Howe International Bridge Project was reviewed by MDOT endangered species staff, who found no regulated habitat in the corridor. No further review or coordination with the USFWS is required.

**MDOT Conclusion**

MDOT has concluded that the ROD for the Gordie Howe International Bridge Project (FHWA-MI-EIS-05-01-F) is still valid for the current project, and that no additional NEPA documentation outside of this re-evaluation is necessary. With the submission of this document, MDOT requests approval of this re-evaluation.

5/3/18
Date

Lori Noblet
Lori Noblet
NEPA MEGA Project Manager
Michigan Department of Transportation

5/3/18
Date

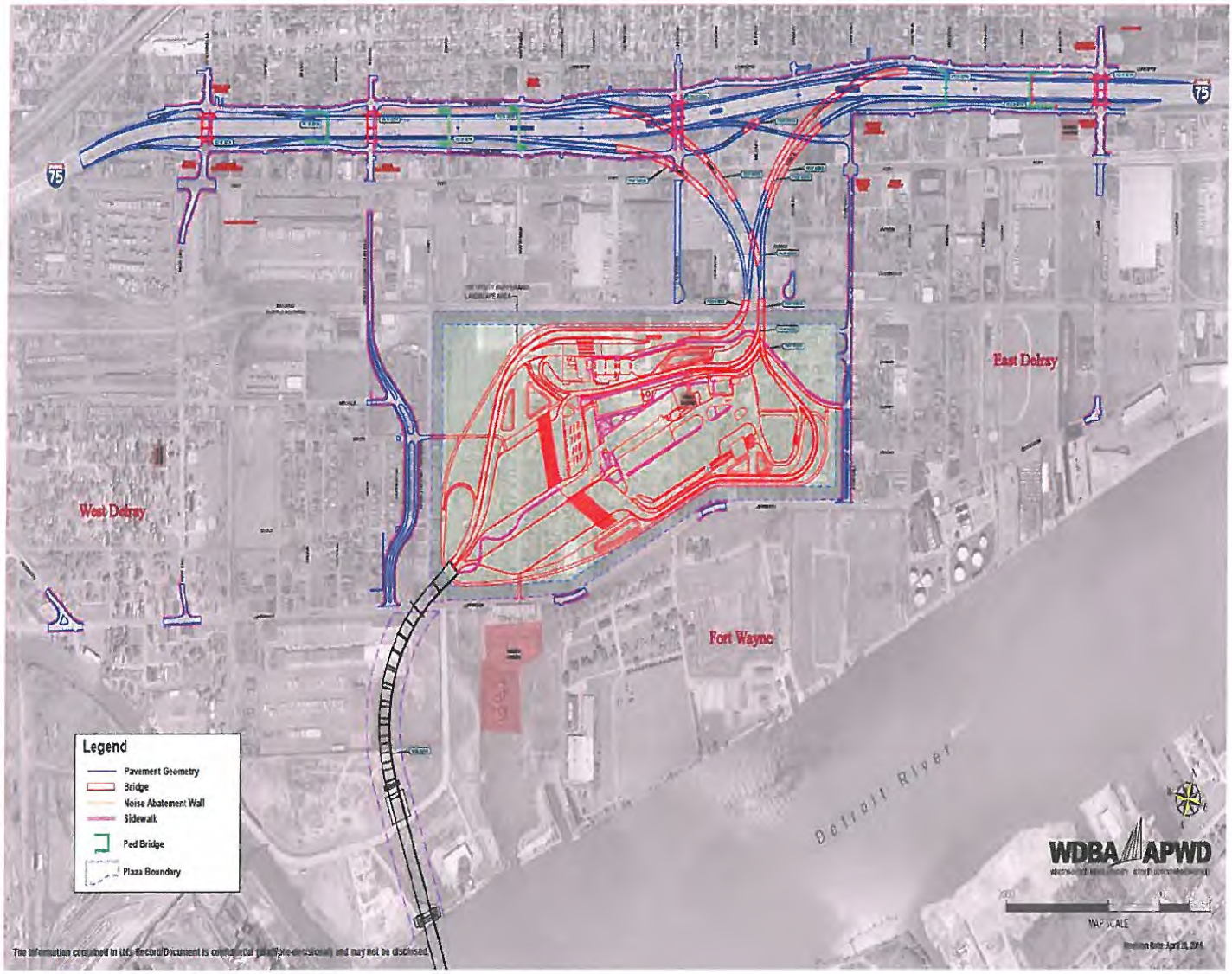
mohammed alghurabi
Mohammed S. Alghurabi, PE
Senior Project Manager
Michigan Department of Transportation

5/4/18
Date

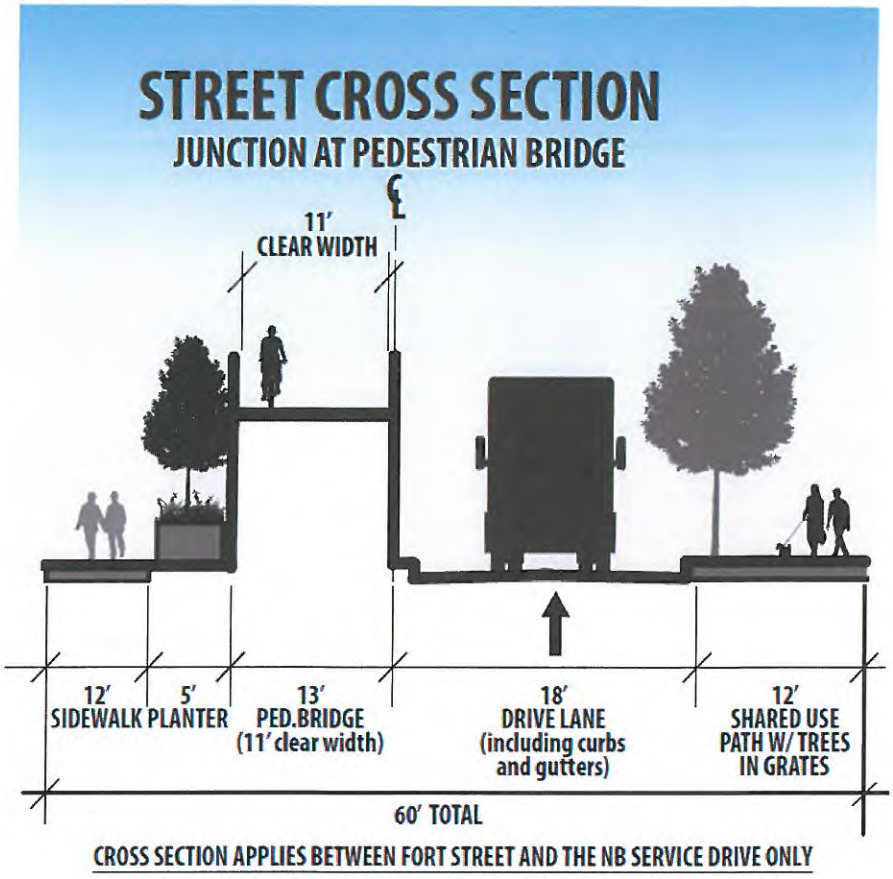
Russell L. Jorgenson
Russell L. Jorgenson, PE
FHWA Michigan Division Administrator

# ATTACHMENT A
# Gordie Howe International Bridge Project Footprint

# Gordie Howe International Bridge



# APPENDIX B
# Junction Street Pedestrian Bridge
# Cross Section


STREET CROSS SECTION
JUNCTION AT PEDESTRIAN BRIDGE
11'
CLEAR WIDTH
12'
SIDEWALK
5'
PLANTER
13'
PED.BRIDGE
(11' clear width)
18'
DRIVE LANE
(including curbs
and gutters)
12'
SHARED USE
PATH W/ TREES
IN GRATES
60' TOTAL
CROSS SECTION APPLIES BETWEEN FORT STREET AND THE NB SERVICE DRIVE ONLY

# APPENDIX C
# Recreation Correspondence

November 19, 2008

Ms. Alicia C. Minter, Deputy Director
Detroit Recreation Department
Executive Office
Northwest Activities Center
18100 Meyers Road
Detroit, Michigan 48235

Dear Ms. Minter:

The Michigan Department of Transportation (MDOT) is completing work on a Final Environmental Impact Statement (FEIS) regarding the Detroit River International Crossing (DRIC) project, which is a proposal to construct and operate a new border crossing, a plaza containing both a federal inspection station and bridge operations and maintenance facilities, and a new interchange to connect the bridge and plaza to I-75. The proposed project would be located in the Delray area of Detroit, immediately adjacent to Historic Fort Wayne, a property owned and operated by the Detroit Recreation Department. The proposed project would also result in the removal of three park facilities.

As part of that project, and to mitigate for any proximity impacts the project may have on Historic Fort Wayne, MDOT is proposing to include the following actions:

1. Create streetscape improvements (including landscaping and lighting) on Campbell Street from its intersection with the proposed I-75 exit ramp north of Fort Street to West Jefferson Avenue, and the reconstruction of Campbell Street as a narrow median boulevard between the plaza entrance and West Jefferson Avenue.
2. Create streetscape improvements along West Jefferson Avenue from Clark Street to Westend Street. Create streetscape improvements along Clark Street south of the I-75 interchange to West Jefferson Avenue.
3. Provide signage directing travelers to Fort Wayne. Create and print brochures showing the change in access to Fort Wayne. MDOT will consult with the city on the design and distribution of the brochures and signs.
4. Pay for an update to the 2003 master plan to revisit the Fort entryway options.
5. Implement an entryway treatment for Fort Wayne on their property or other city property to improve wayfinding and visibility per the updated Fort Wayne master plan. Pay for reconfiguration of portions of Fort Wayne streets impacted by changes to the entryway.

MURRAY D. VAN WAGONER BUILDING • P.O. BOX 30050 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 373-2090

Ms. Alicia Minter
Page 3
November 19, 2008

Federal guidelines require written documentation from you agreeing to the proposed work. A concurrence statement is provided at the bottom of this letter. Please sign where indicated and return this letter to MDOT for inclusion in the project's files by November 13, 2008.

MDOT will continue to work with the Detroit Recreation Department in the further development of these items during the design phase of the proposed project. We seek a mutual goal in making sure that the proposed project complements Fort Wayne's setting and its operations, improving access and signage so that future visitors may find and enjoy the Fort.

Thank you for your participation in helping MDOT to resolve these environmental concerns and in identifying appropriate mitigation for park removal and for any proximity impacts the DRIC may have on Historic Fort Wayne. Through our collaboration, we believe we have developed a plan of action that meets the needs of both agencies while minimizing and mitigating project-related impacts. If you have any concerns or require additional information please let me know and we will address your needs immediately. I look forward to hearing from you soon regarding your approval.

Sincerely,

mohammad alghirabi

Mohammed Alghurabi, Senior Project Manager
Detroit River International Crossing Study

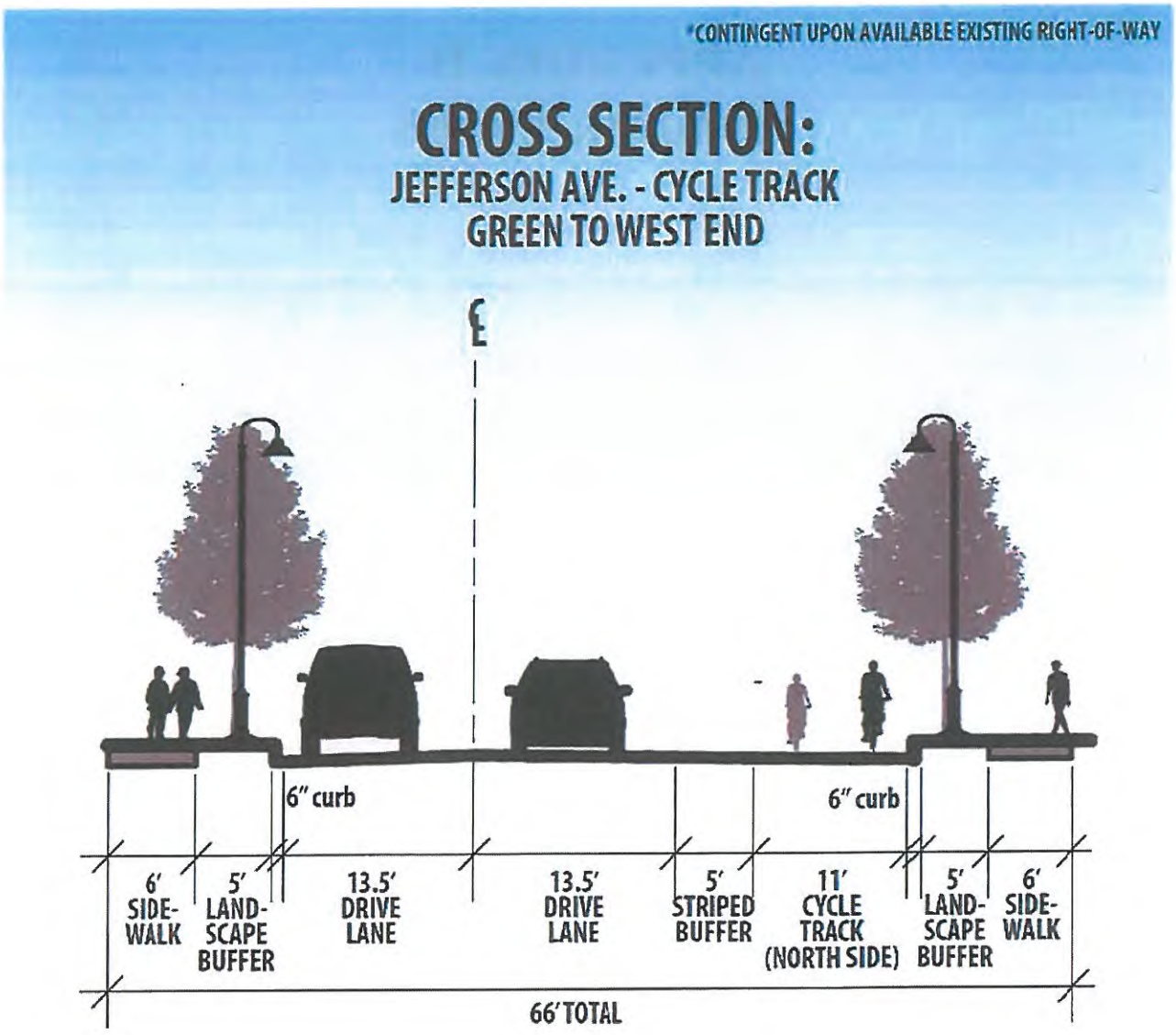
cc: LaReina Wheeler, Detroit Department of Environmental Affairs
Vincent Anwunah, Detroit Recreation Department
Tim Karl, Detroit Recreation Department
James Conway, Detroit Recreation Department
Ryan Rizzo, FHWA
David Williams, FHWA
Geralyn Ayers, MDOT

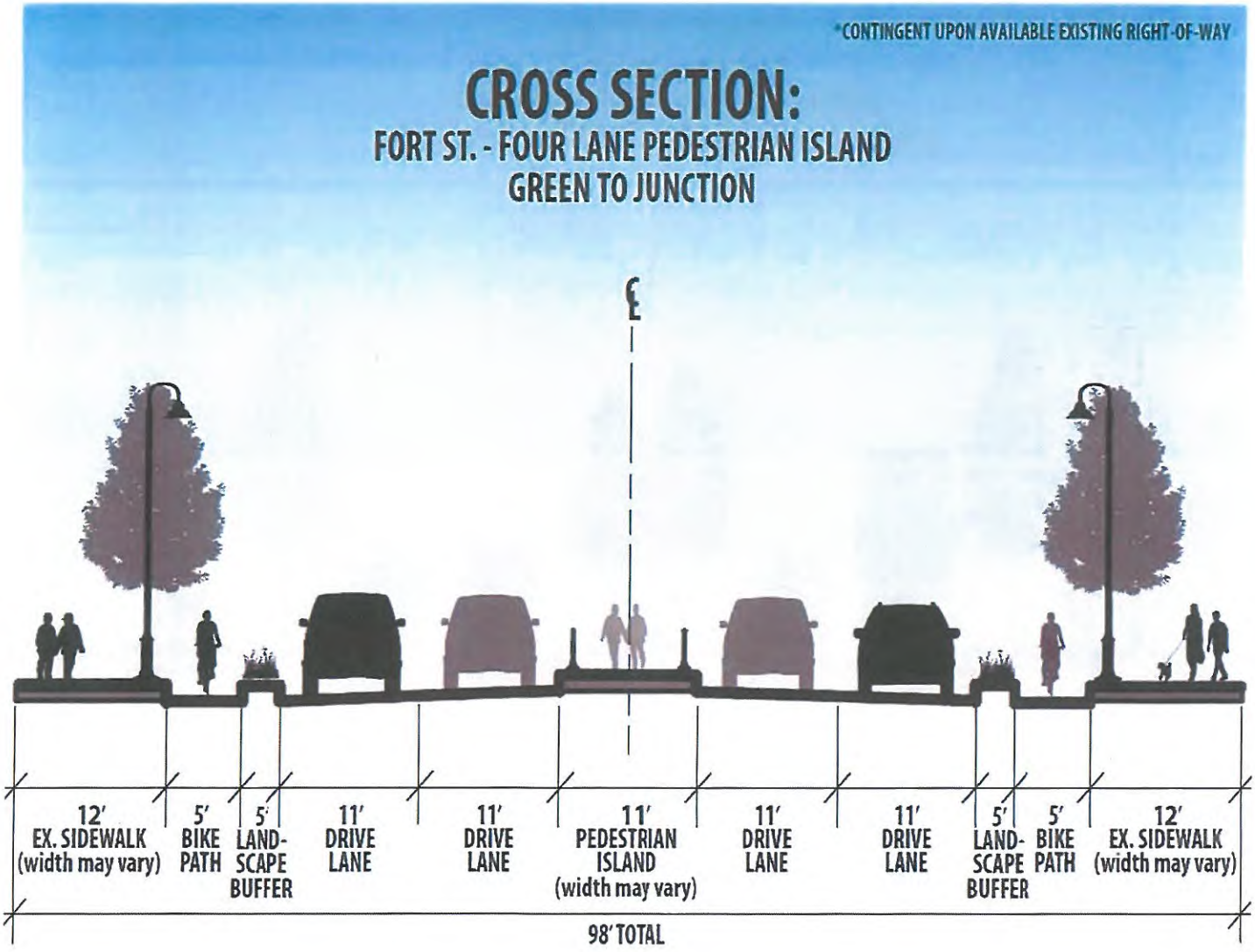
The City of Detroit, Recreation Department, supports the MDOT proposal to improve the entrance, fencing, and streetscaping adjacent to Jefferson Avenue at Historic Fort Wayne in connection with the Detroit River International Crossing project in the City of Detroit, Wayne County, Michigan.

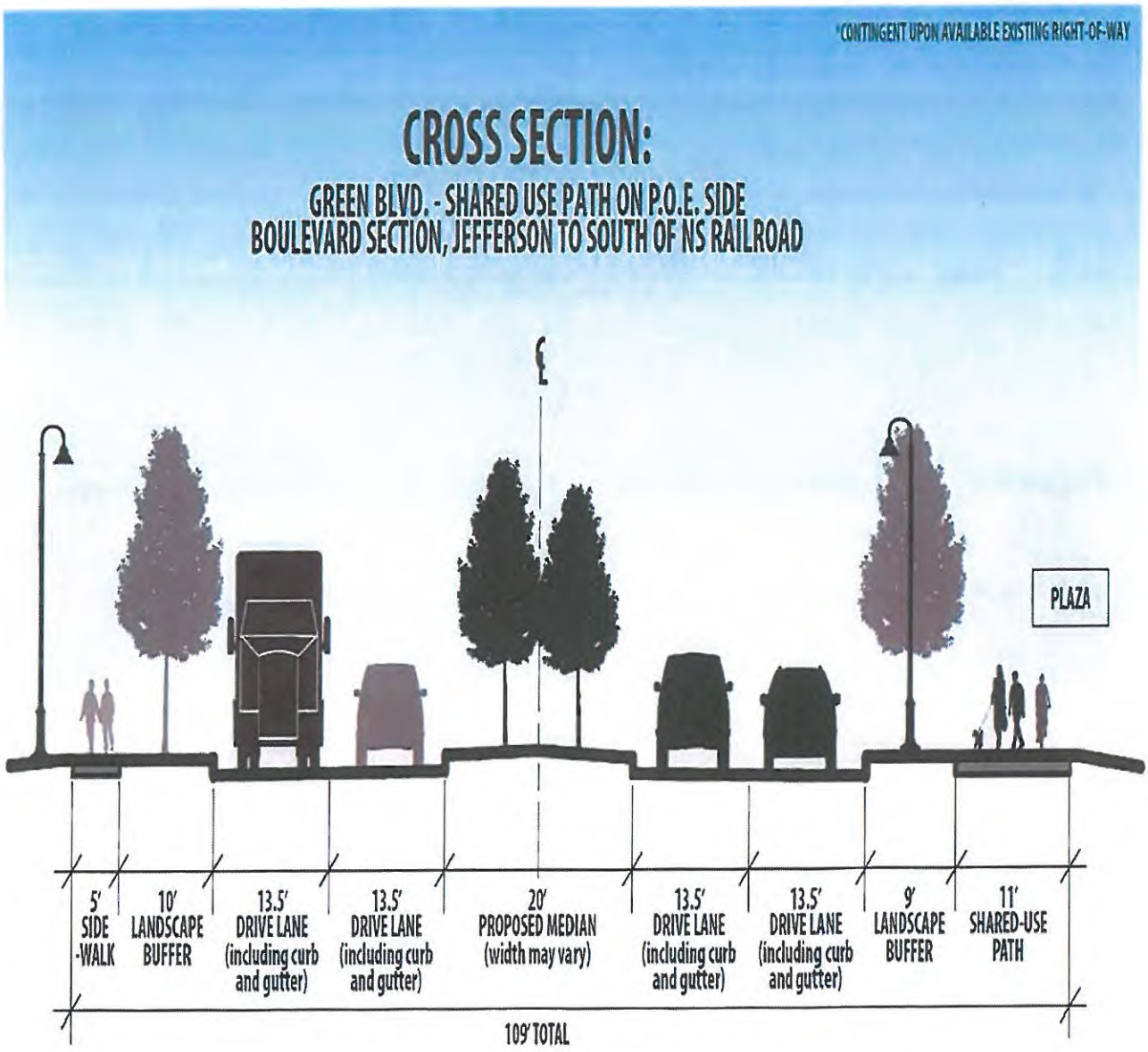
I concur: _____ Date: 11/19/08

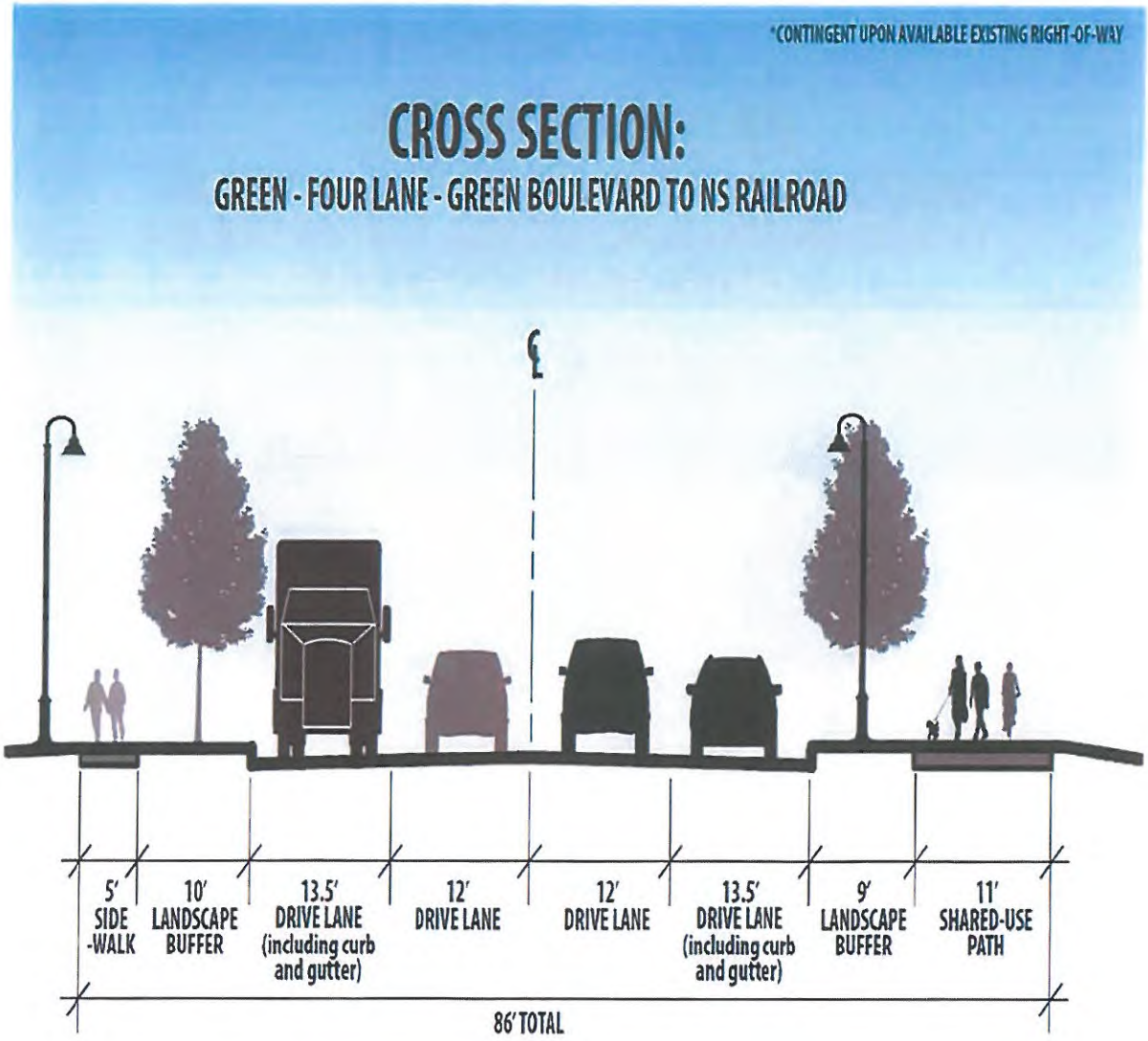
Alicia Minter, Deputy Director, Detroit Recreation Department

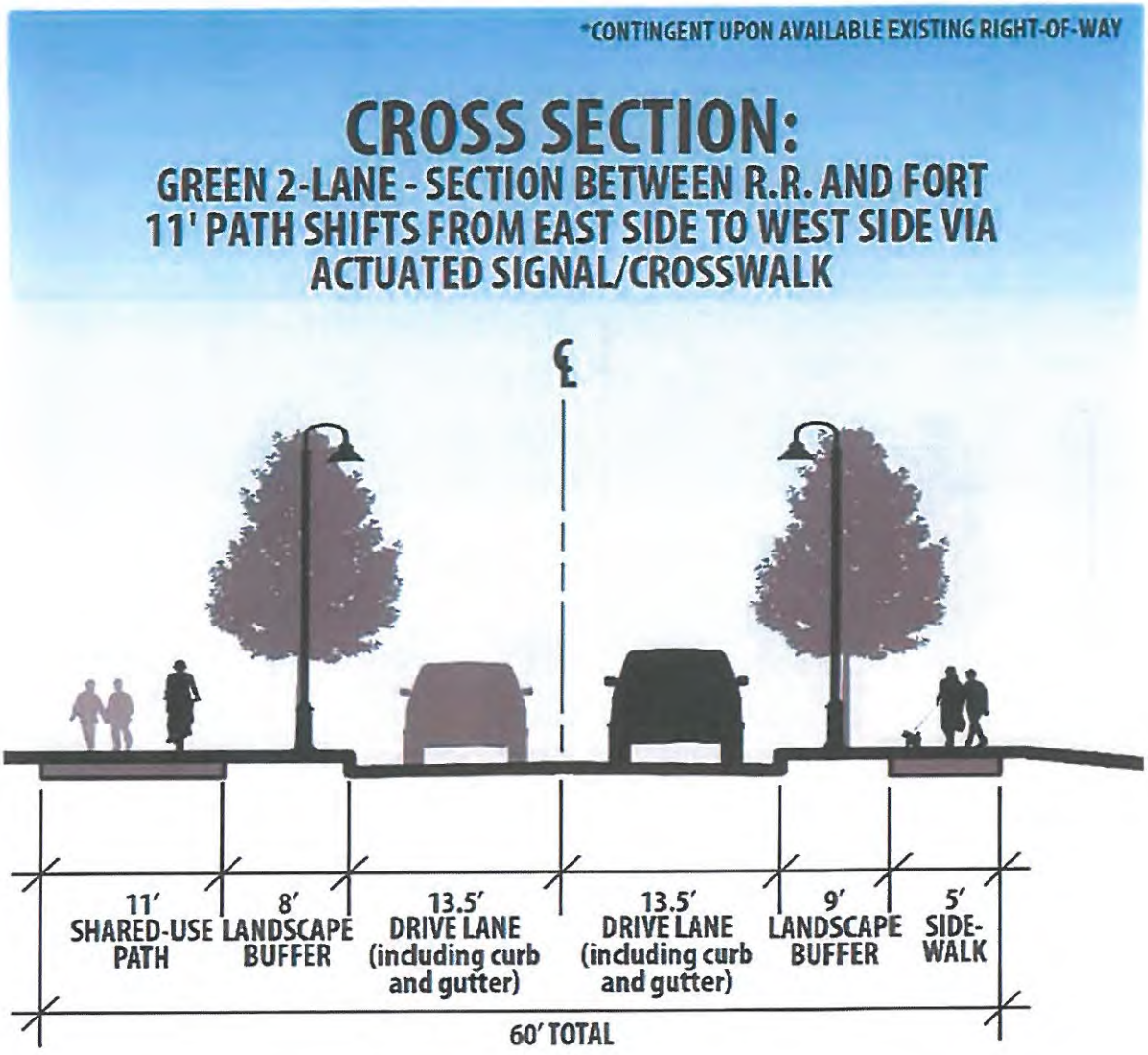
# APPENDIX D
# Complete Streets

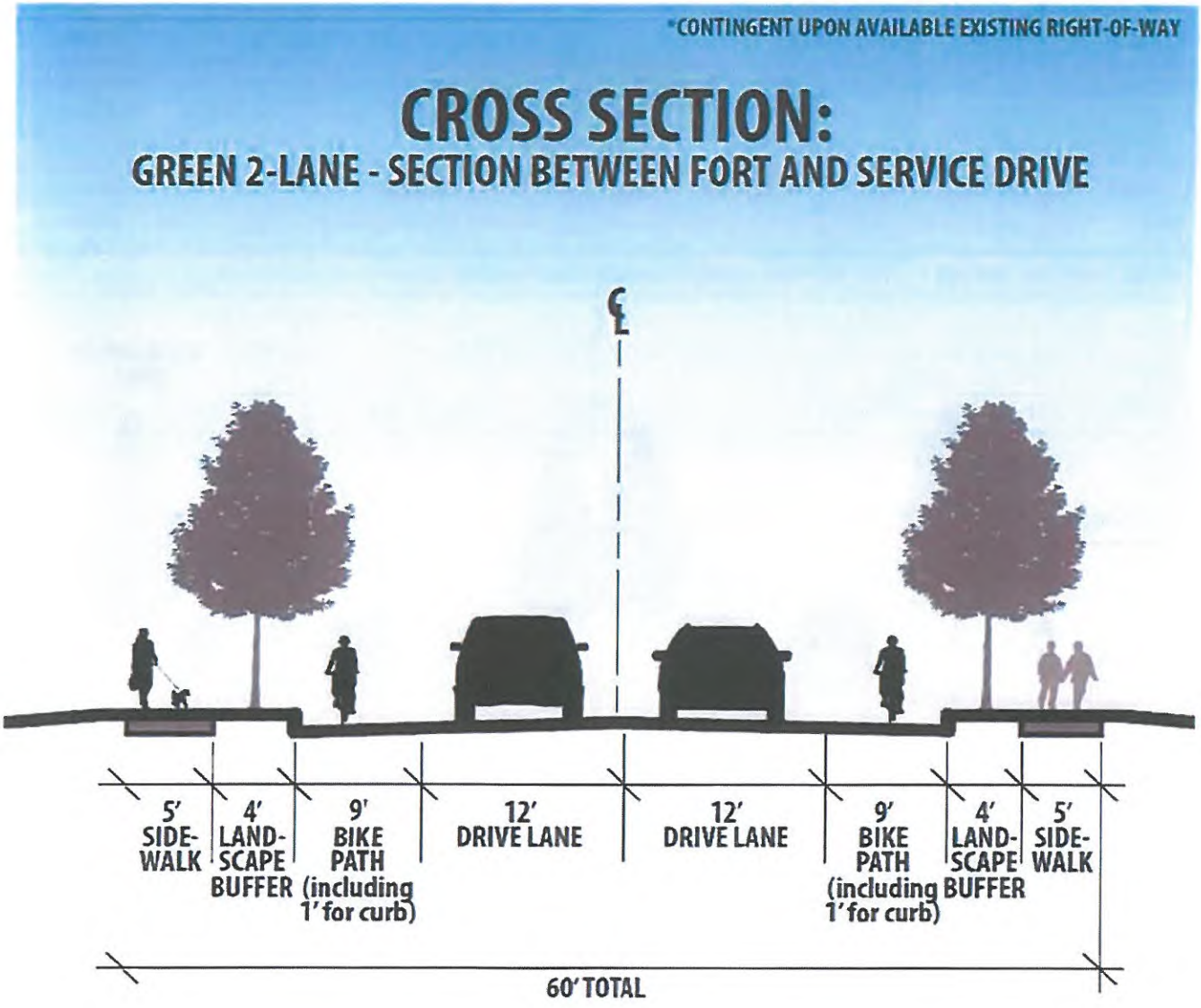

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
JEFFERSON AVE. - CYCLE TRACK
GREEN TO WEST END
℄
6" curb
6" curb
6' SIDE-WALK
5' LAND-SCAPE BUFFER
13.5' DRIVE LANE
13.5' DRIVE LANE
5' STRIPED BUFFER
11' CYCLE TRACK (NORTH SIDE)
5' LAND-SCAPE BUFFER
6' SIDE-WALK
66' TOTAL

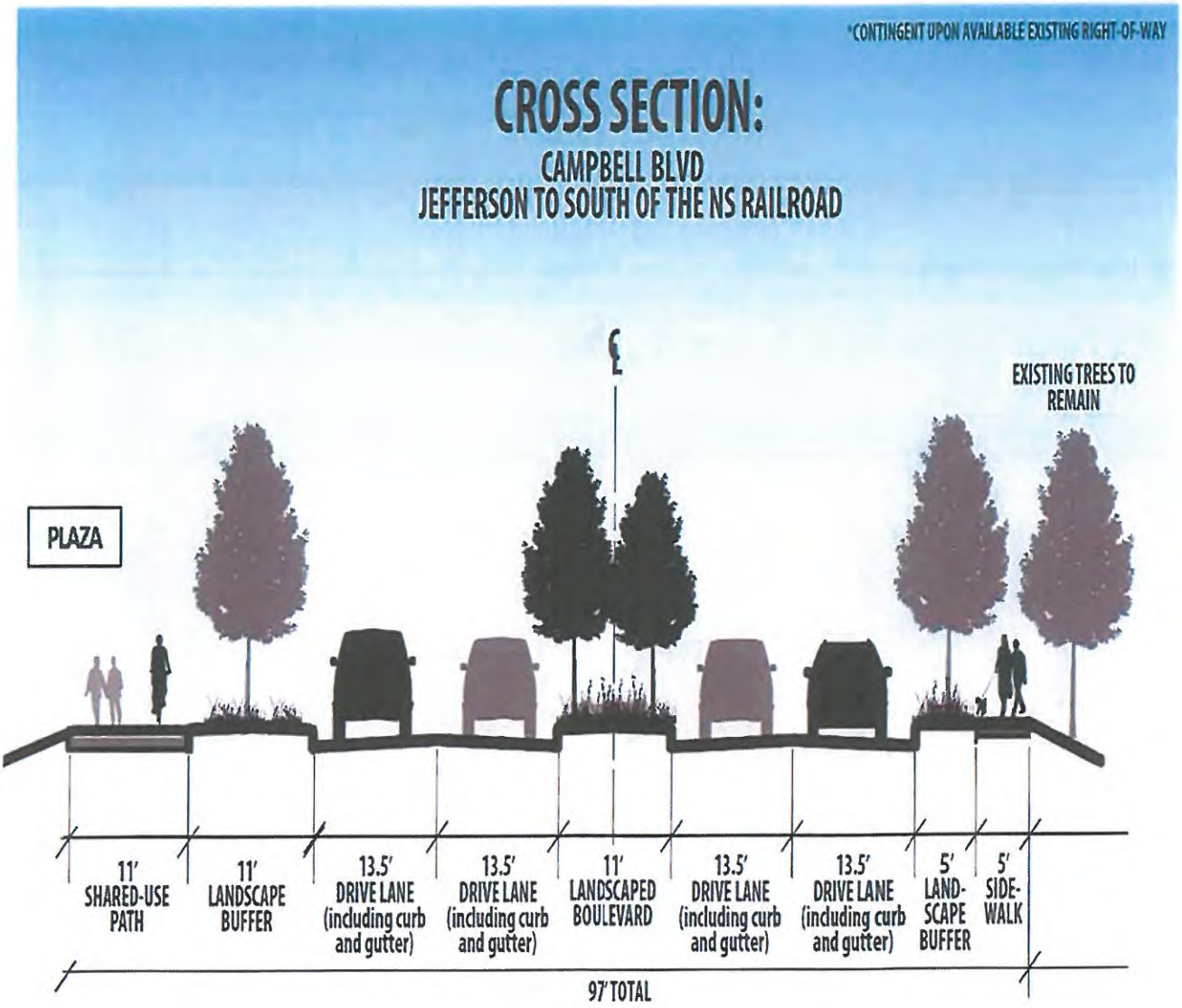

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
FORT ST. - FOUR LANE PEDESTRIAN ISLAND
GREEN TO JUNCTION
℄
12′ EX. SIDEWALK (width may vary)
5′ BIKE PATH
5′ LAND-SCAPE BUFFER
11′ DRIVE LANE
11′ DRIVE LANE
11′ PEDESTRIAN ISLAND (width may vary)
11′ DRIVE LANE
11′ DRIVE LANE
5′ LAND-SCAPE BUFFER
5′ BIKE PATH
12′ EX. SIDEWALK (width may vary)
98′ TOTAL

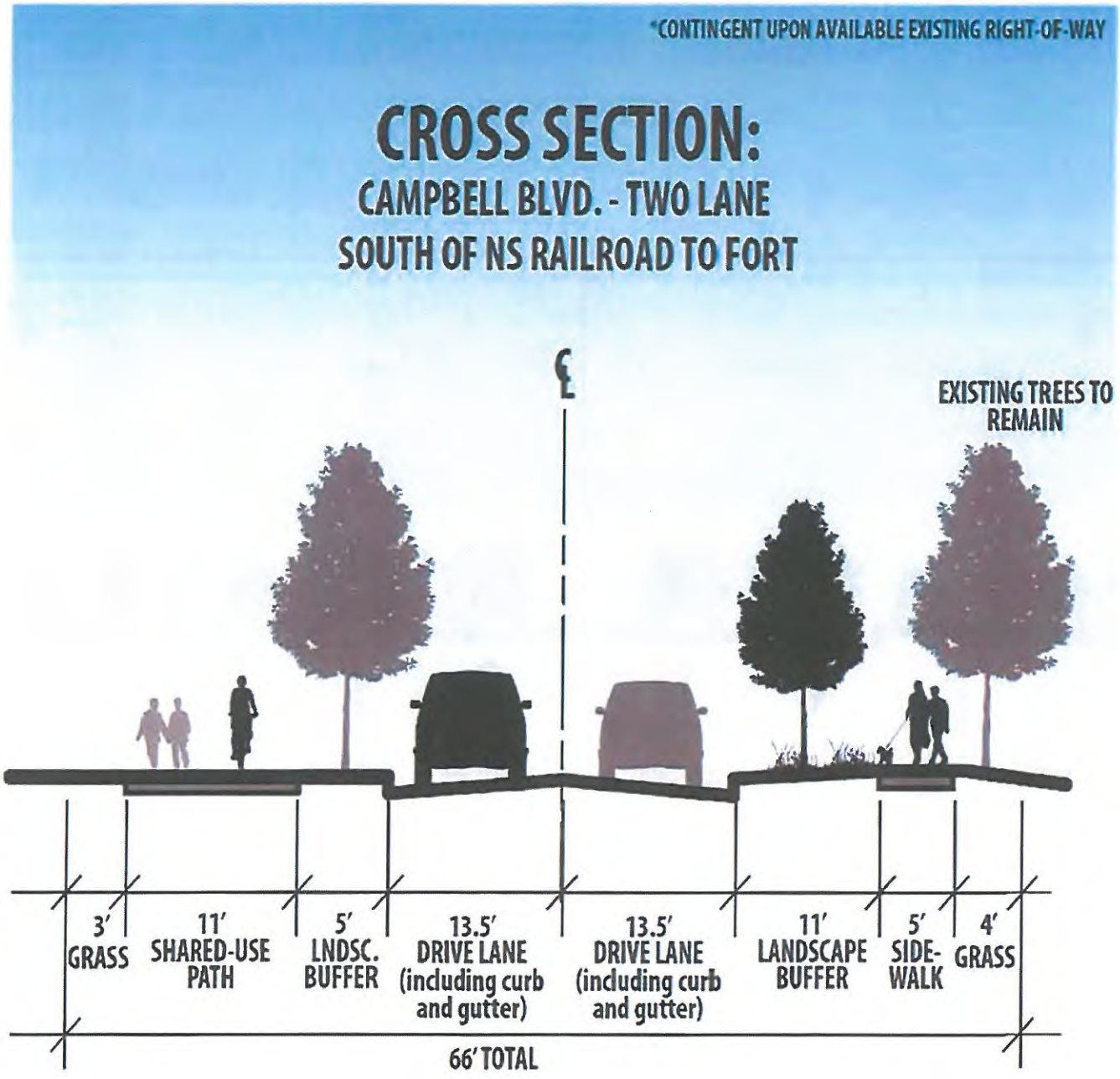

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
GREEN BLVD. - SHARED USE PATH ON P.O.E. SIDE
BOULEVARD SECTION, JEFFERSON TO SOUTH OF NS RAILROAD
℄
PLAZA
5' SIDE -WALK
10' LANDSCAPE BUFFER
13.5' DRIVE LANE (including curb and gutter)
13.5' DRIVE LANE (including curb and gutter)
20' PROPOSED MEDIAN (width may vary)
13.5' DRIVE LANE (including curb and gutter)
13.5' DRIVE LANE (including curb and gutter)
9' LANDSCAPE BUFFER
11' SHARED-USE PATH
109' TOTAL

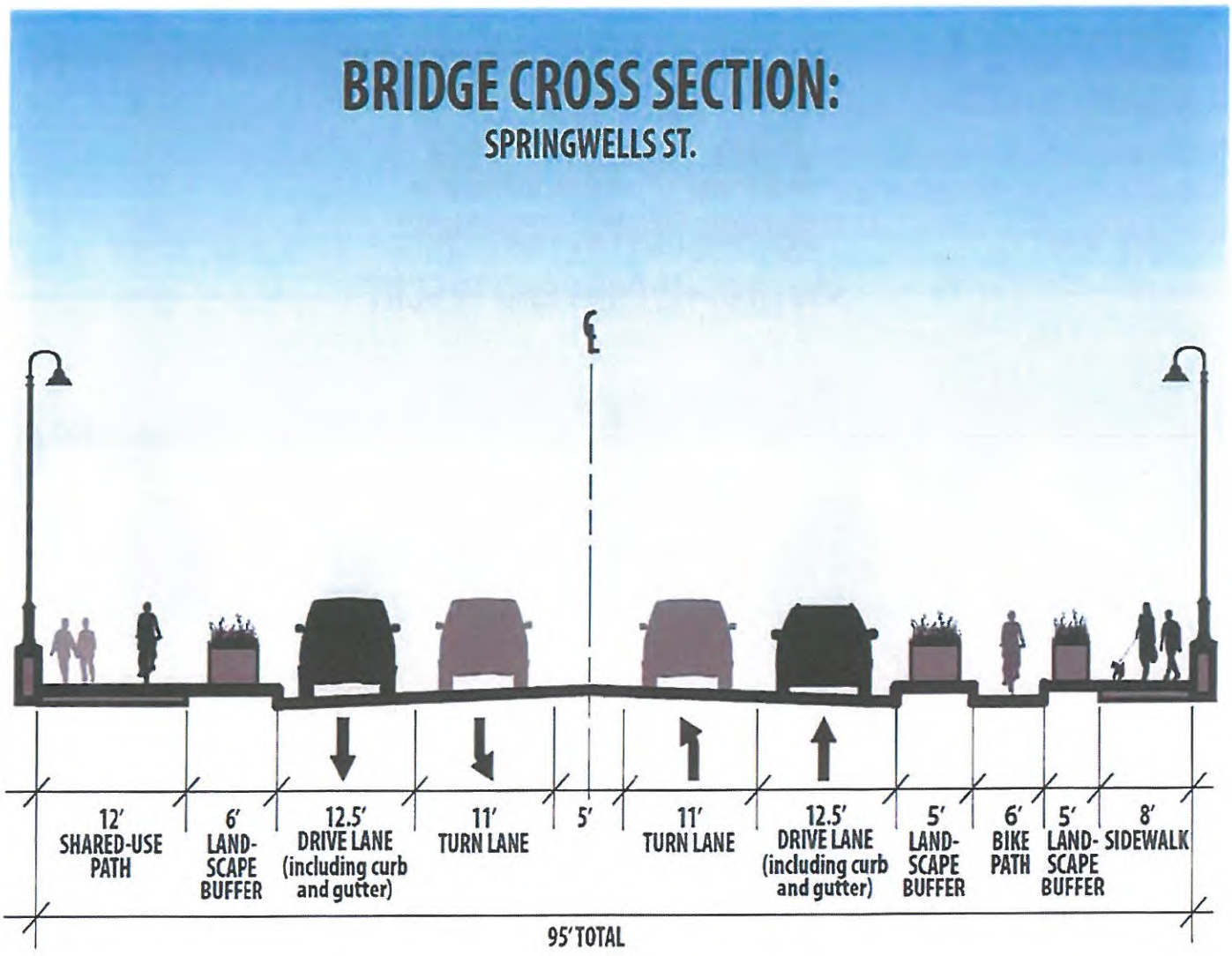

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
GREEN - FOUR LANE - GREEN BOULEVARD TO NS RAILROAD
℄
5' SIDE -WALK
10' LANDSCAPE BUFFER
13.5' DRIVE LANE (including curb and gutter)
12' DRIVE LANE
12' DRIVE LANE
13.5' DRIVE LANE (including curb and gutter)
9' LANDSCAPE BUFFER
11' SHARED-USE PATH
86' TOTAL

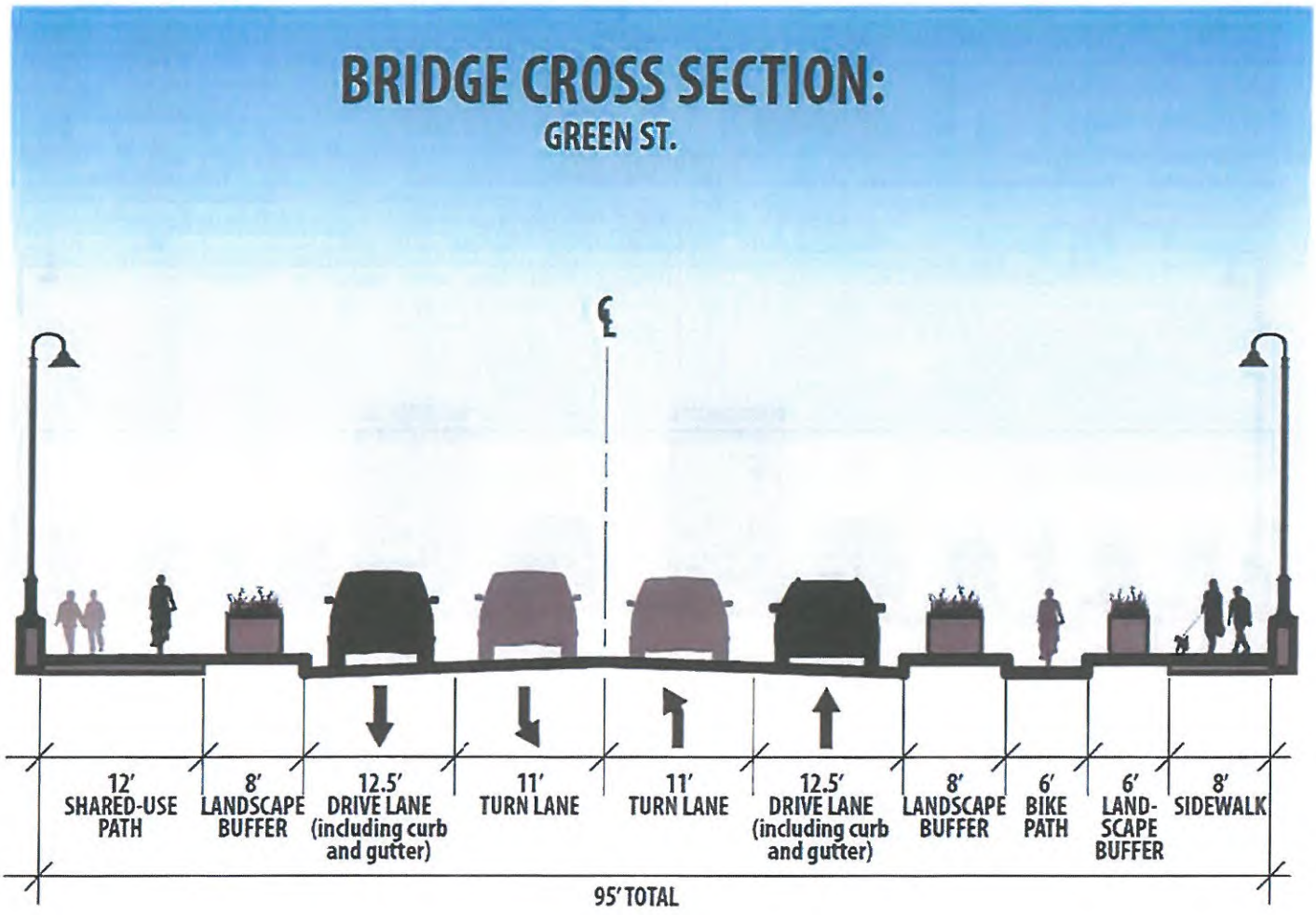

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
GREEN 2-LANE - SECTION BETWEEN R.R. AND FORT
11' PATH SHIFTS FROM EAST SIDE TO WEST SIDE VIA
ACTUATED SIGNAL/CROSSWALK
℄
11′
SHARED-USE
PATH
8′
LANDSCAPE
BUFFER
13.5′
DRIVE LANE
(including curb
and gutter)
13.5′
DRIVE LANE
(including curb
and gutter)
9′
LANDSCAPE
BUFFER
5′
SIDE-
WALK
60′ TOTAL

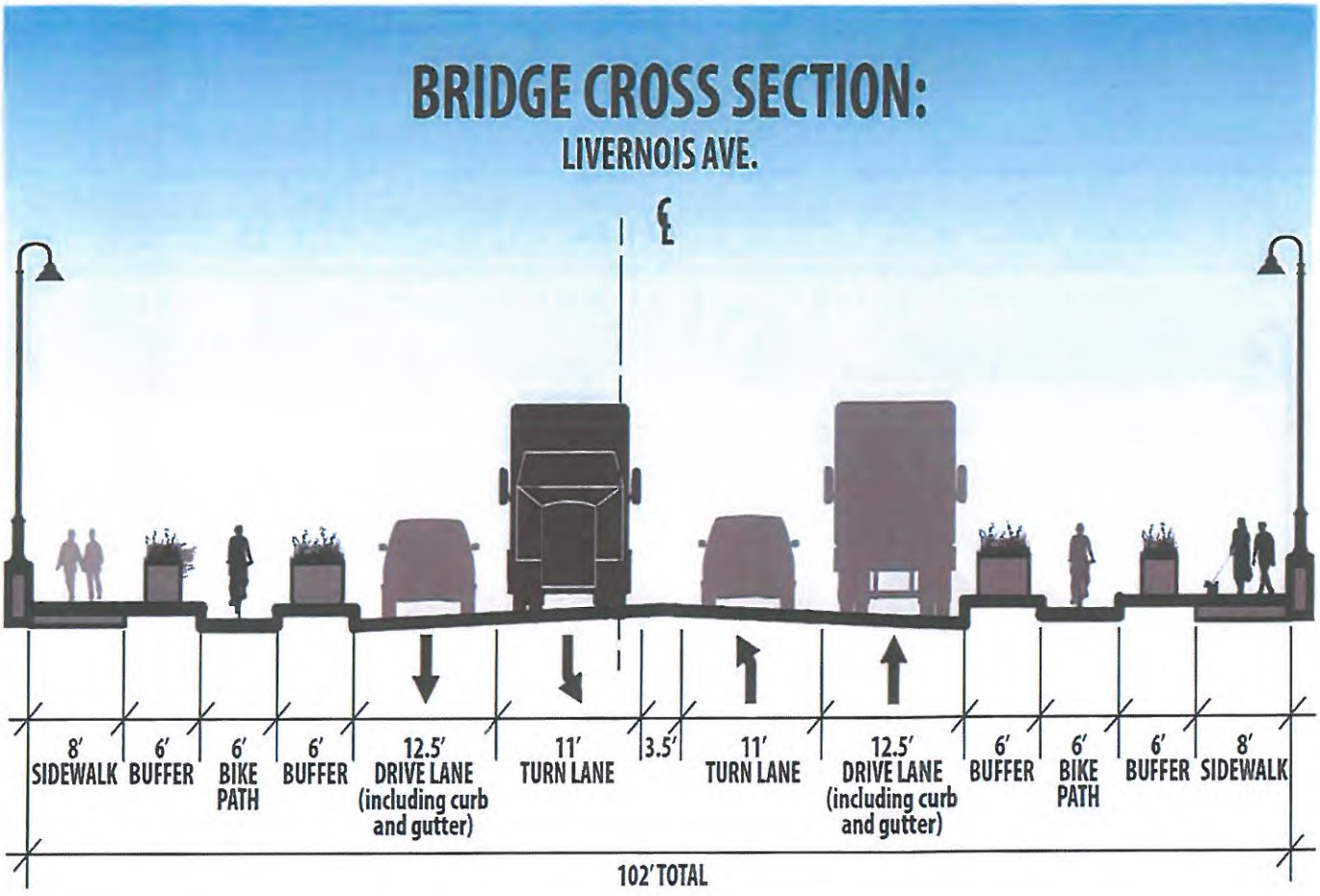

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
GREEN 2-LANE - SECTION BETWEEN FORT AND SERVICE DRIVE
5' SIDE-WALK
4' LAND-SCAPE BUFFER
9' BIKE PATH (including 1' for curb)
12' DRIVE LANE
12' DRIVE LANE
9' BIKE PATH (including 1' for curb)
4' LAND-SCAPE BUFFER
5' SIDE-WALK
60' TOTAL

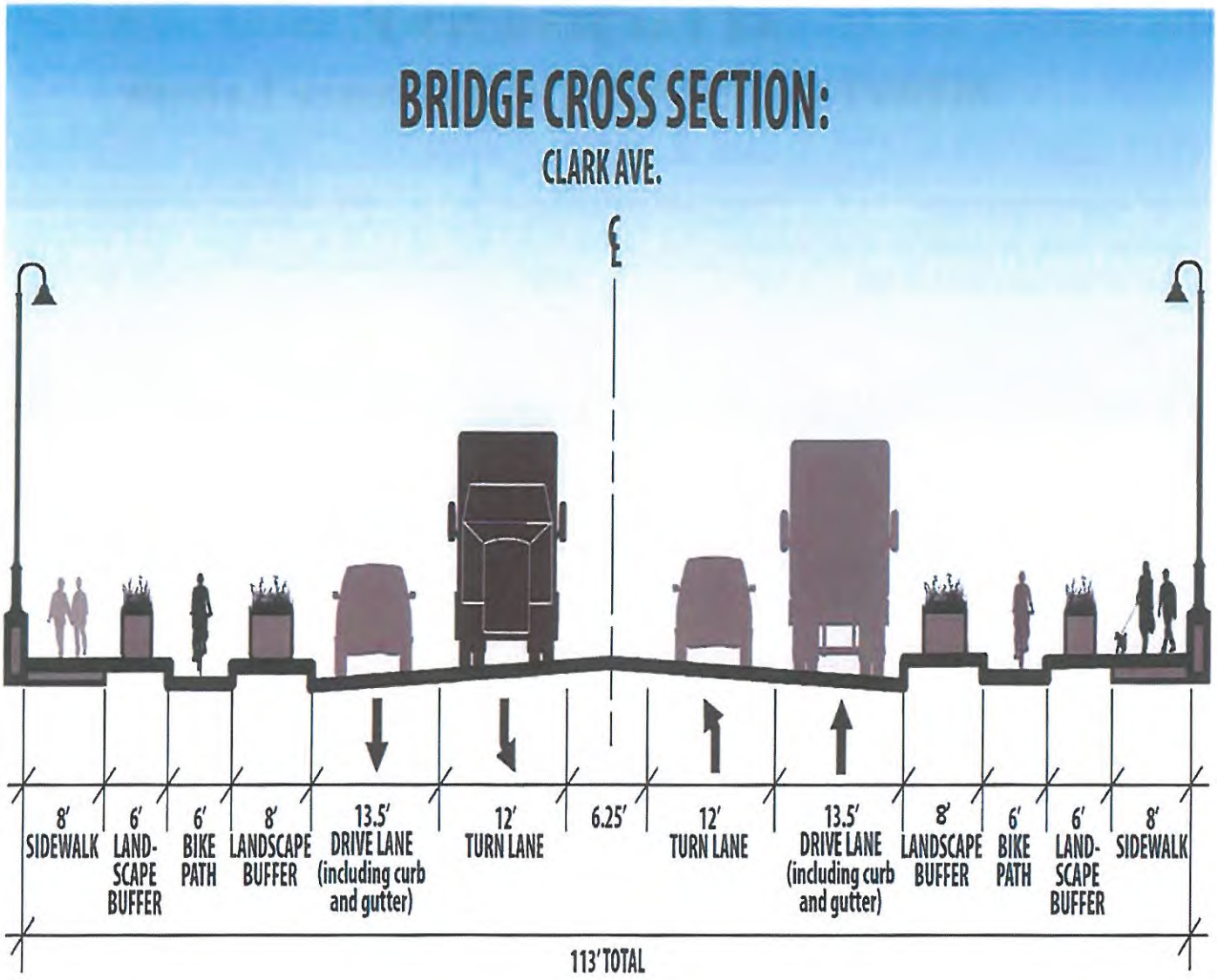

*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
CAMPBELL BLVD
JEFFERSON TO SOUTH OF THE NS RAILROAD
EXISTING TREES TO REMAIN
PLAZA
11' SHARED-USE PATH
11' LANDSCAPE BUFFER
13.5' DRIVE LANE (including curb and gutter)
13.5' DRIVE LANE (including curb and gutter)
11' LANDSCAPED BOULEVARD
13.5' DRIVE LANE (including curb and gutter)
13.5' DRIVE LANE (including curb and gutter)
5' LAND-SCAPE BUFFER
5' SIDE-WALK
97' TOTAL


*CONTINGENT UPON AVAILABLE EXISTING RIGHT-OF-WAY
CROSS SECTION:
CAMPBELL BLVD. - TWO LANE
SOUTH OF NS RAILROAD TO FORT
℄
EXISTING TREES TO REMAIN
3' GRASS
11' SHARED-USE PATH
5' LNDSC. BUFFER
13.5' DRIVE LANE (including curb and gutter)
13.5' DRIVE LANE (including curb and gutter)
11' LANDSCAPE BUFFER
5' SIDE-WALK
4' GRASS
66' TOTAL


BRIDGE CROSS SECTION:
SPRINGWELLS ST.
12' SHARED-USE PATH
6' LAND-SCAPE BUFFER
12.5' DRIVE LANE (including curb and gutter)
11' TURN LANE
5'
11' TURN LANE
12.5' DRIVE LANE (including curb and gutter)
5' LAND-SCAPE BUFFER
6' BIKE PATH
5' LAND-SCAPE BUFFER
8' SIDEWALK
95' TOTAL


BRIDGE CROSS SECTION:
GREEN ST.
12' SHARED-USE PATH
8' LANDSCAPE BUFFER
12.5' DRIVE LANE (including curb and gutter)
11' TURN LANE
11' TURN LANE
12.5' DRIVE LANE (including curb and gutter)
8' LANDSCAPE BUFFER
6' BIKE PATH
6' LAND-SCAPE BUFFER
8' SIDEWALK
95' TOTAL


BRIDGE CROSS SECTION:
LIVERNOIS AVE.
℄
8' SIDEWALK
6' BUFFER
6' BIKE PATH
6' BUFFER
12.5' DRIVE LANE (including curb and gutter)
11' TURN LANE
3.5'
11' TURN LANE
12.5' DRIVE LANE (including curb and gutter)
6' BUFFER
6' BIKE PATH
6' BUFFER
8' SIDEWALK
102' TOTAL


BRIDGE CROSS SECTION:
CLARK AVE.
℄
8' SIDEWALK
6' LAND-SCAPE BUFFER
6' BIKE PATH
8' LANDSCAPE BUFFER
13.5' DRIVE LANE (including curb and gutter)
12' TURN LANE
6.25'
12' TURN LANE
13.5' DRIVE LANE (including curb and gutter)
8' LANDSCAPE BUFFER
6' BIKE PATH
6' LAND-SCAPE BUFFER
8' SIDEWALK
113' TOTAL

# ATTACHMENT E
# MDOT & USFWS Concurrence Letters

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

KIRK T. STEUDLE
DIRECTOR

10 July 2015

Scott Hicks, Supervisor
Fish and Wildlife Service
East Lansing Field Office
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6360

Dear Mr. Hicks,

The Michigan Department of Transportation (MDOT), on behalf of the Federal Highway Administration, is re-initiating consultation under section 7 of the Endangered Species Act of 1973, as amended (Act) for the Gordie Howe International Bridge (GHIB) previously known as the New International Trade Crossing (NITC) located in Wayne County. This project involves the construction of a new bridge, plaza, interchange, and the removal of trees that could provide roosting habitat for the listed Indiana Bat (*Myotis sodalis*) and Northern Long-eared Bat (*Myotis septentrionalis*).

Based upon previous discussions with the USFWS and information known about the species, thresholds for "may affect, not likely to adversely affect" have been established. Due to the unique, non-linear qualities of this project, an alternative analysis is provided along with photos and mapping.

The GHIB project is located in Wayne County. As stated above, the project consists of a new international bridge, plaza, and interchange; this new infrastructure requires the acquisition of real estate and the clearing of numerous areas. The approximate project boundary can be found attached to this informal consultation letter. Trees are found within the project area in the road right-of-way, as tree lines, and in small groups on vacant, industrial, or residential properties. While trees within the project area do possess some roost characteristics (photos attached), MDOT proposes no seasonal tree removal restrictions (i.e., no winter cutting required) and a "may affect, not likely to adversely affect" determination based on the following factors:

- The surrounding area is primarily urban in land use and does not represent suitable landscape scale habitat for Indiana Bat or Northern Long-eared Bat.
- No sizeable, contiguous wood lot, wetland, or forest cover occurs within 1.0 mile of the project area.
- There is very little to no natural riparian habitat associated with the Detroit River or Rouge River near the project area.
- Cutting is generally restricted to individual trees, groups of trees, or lines of trees.

MURRAY D. VAN WAGONER BUILDING • P.O. BOX 30050 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 373-2090

LH-LAN-0 (01/03)

Should you have any questions or require further information, please contact me at your earliest convenience.

Sincerely,

Jeff Grabarkiewicz

CC: Patrick Marchman
Lori Noblet

IN REPLY REFER TO:

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
East Lansing Field Office (ES)
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6316

July 13, 2015

Mr. Jeff Grabarkiewicz
Environmental Services Section
Michigan Department of Transportation
P.O. Box 30050
Lansing, MI 48909

Re: Project Modification Review Request, Informal Consultation for the Gordie Howe International Bridge (previously known as the New International Trade Crossing [NITC]) in Wayne County, Michigan

Dear Mr. Grabarkiewicz:

Thank you for your letter of July 10, 2015 requesting consultation under section 7 of the Endangered Species Act of 1973, as amended (Act) for modifications to the above referenced project. The project consists of a new international bridge, plaza, and interchange and requires the acquisition of real estate and the clearing of numerous areas. This includes the removal of trees within the road ROW, as tree lines, and in small groups on vacant, industrial, or residential properties.

In a letter dated May 12, 2015, you determined that the project was not likely to adversely affect Indiana bats (*Myotis sodalis*) or northern long-eared bats (*Myotis septentrionalis*), and our office (FWS) provided concurrence in a letter dated June 12, 2015. Since this correspondence, you have proposed to abandon seasonal tree removal restrictions described in your original request. You have determined that removal of trees outside the winter season (October 1 - March 31) is not likely to adversely affect Indiana bats or northern long-eared bats and are requesting concurrence with your determination.

Indiana Bat
In Michigan, summering Indiana bats roost in trees in riparian forests, lowland/floodplain and upland woodlands, and forested wetlands, from approximately April through October. Indiana bats may summer in a wide range of habitats, from highly altered landscapes to intact forests. Roost trees vary considerably in size, but those used by Indiana bat maternity colonies are typically greater than 9 inches dbh. Male Indiana bats have been observed roosting in trees as small as 3 inches dbh. During the winter, Indiana bats hibernate predominantly in caves and abandoned mine portals.

Northern Long-eared Bat
During the summer, northern long-eared bats typically roost singly or in colonies underneath bark or in cavities, crevices, or hollows of both live and dead trees (typically ≥3 inches dbh). The species has also been found roosting in structures, such as barns, sheds and bridges, occasionally. These bats roost and

forage in upland and lowland woodlots, tree-lined corridors, and forested wetlands. During the winter, NLEBs hibernate predominantly in caves and abandoned mine portals.

On April 2, 2015, a final rule was published in the *Federal Register* listing the NLEB as threatened, along with an interim species-specific rule under section 4(d) of the Act, which lessens ESA restrictions that do not provide conservation benefit for the bat. Under section 7 of the Act, federal agencies must consult with the Service to ensure that any action they authorize, fund, permit or carry out does not jeopardize the existence of a listed species. This requirement does not change when a 4(d) rule is implemented; however, with a 4(d) rule in place, any actions taken by an agency that are exempted in the 4(d) rule will not require an incidental take statement in a biological opinion. The final rule for the NLEB went into effect on May 4, 2015.

According to your description, the proposed project may require the removal of some trees with characteristics favorable to tree-roosting bats (including cavities, crevices, and exfoliating bark). We concur that the proposed actions are not likely to adversely affect Indiana bats or NLEB for the following reasons:

- The surrounding area is primarily urban in land use and does not represent suitable habitat for Indiana bats or NLEB.
- No sizeable wood lots or forest cover occur within 1.0 mile of the project area.
- Cutting is generally restricted to individual trees, groups of trees, or lines of trees.

Based on the above, potential effects of the project on Indiana bats and NLEB are discountable.

This precludes the need for further action on this project as required by section 7 of the Act. If the project is modified or new information about the project becomes available that indicates listed species or critical habitat may be affected in a manner or to an extent not previously considered, you should reinitiate consultation with this office.

We appreciate the opportunity to cooperate with you in conserving endangered species. If you have any questions regarding these comments, please contact Jenny Bohrman, of this office, at (517) 351-7261 or Jennifer_Bohrman@fws.gov.

Sincerely,

Scott Hicks

Scott Hicks
Field Supervisor

cc: Dan Kennedy, MDNR, Wildlife Division, Lansing
Patrick Marchman, Environment and ROW Manager, FHWA, Lansing