## Contents

3 Existing Conditions, Environmental Impacts, and Measures to Mitigate Adverse Impacts ..........3-1

3.1 Geographic Setting ........................................................................................................ 3-2

3.2 Land Use and Land Use Planning .................................................................................. 3-2

3.2.1 Affected Environment ............................................................................................. 3-2

3.2.2 Land Use Impacts ................................................................................................... 3-7

3.2.3 Measures to Minimize and Mitigate Adverse Land Use Impacts ......................... 3-10

3.3 Transportation Service ................................................................................................. 3-10

3.3.1 Affected Environment ............................................................................................. 3-10

3.3.2 Transportation Impacts .......................................................................................... 3-14

3.3.3 Measures to Minimize and Mitigate Adverse Transportation Impacts ................. 3-26

3.4 Utilities ......................................................................................................................... 3-28

3.4.1 Affected Environment ............................................................................................. 3-28

3.4.2 Utility Impacts ......................................................................................................... 3-29

3.4.3 Measures to Minimize and Mitigate Adverse Utility Impacts ............................... 3-30

3.5 Residential Development ............................................................................................ 3-31

3.5.1 Affected Environment ............................................................................................. 3-31

3.5.2 Residential Development Impacts .......................................................................... 3-32

3.5.3 Measures to Minimize and Mitigate Adverse Residential Impacts ....................... 3-32

3.6 Commercial and Industrial Development .................................................................... 3-33

3.6.1 Affected Environment ............................................................................................. 3-33

3.6.2 Commercial and Industrial Development Impacts ................................................ 3-34

3.6.3 Measures to Minimize and Mitigate Adverse Commercial and Industrial Impacts ................................................................................................................................. 3-35

3.7 Institutional and Public Services .................................................................................... 3-37

3.7.1 Affected Environment ............................................................................................. 3-37

3.7.2 Institutional and Public Service Impacts .................................................................. 3-40

3.7.3 Measures to Minimize and Mitigate Adverse Institutional and Public Services Impacts ................................................................................................................................. 3-43

3.8 Socioeconomic Characteristics ....................................................................................... 3-44

3.8.1 Affected Environment ............................................................................................. 3-44

3.8.2 Socioeconomic Impacts ......................................................................................... 3-52

3.8.3 Measures to Minimize and Mitigate Adverse Socioeconomic Impacts ......... 3-58

3.9 Environmental Justice ................................................................................................ 3-59

3.9.1 Environmental Justice Background ........................................................................ 3-59

3.9.2 Identification of Existing Minority Populations and Low-income Populations 3-61

3.9.3 Coordination with and Participation of Minority Populations and Low-income Populations ................................................................................................................................. 3-65

3.9.4 Identification of Disproportionately High and Adverse Effects on Minority Populations and Low-Income Populations .................................................................................................................. 3-66

3.9.5 Project Benefits ....................................................................................................... 3-73

3.9.6 Interstate Investment Effects on Transit .................................................................. 3-96

3.9.7 Environmental Justice Summary ........................................................................... 3-103

3.10 Visual Character/Aesthetics ........................................................................................ 3-104

3.10.1 Visual Resource Background ................................................................................ 3-104

3.10.2 Affected Environment ......................................................................................... 3-106
3.10.3 Aesthetic Impacts .................................................................................................................. 3-108
3.10.4 Measures to Minimize and Mitigate Adverse Aesthetic Impacts ........................................... 3-110

3.11 Surface Water and Fishery ......................................................................................................... 3-111
3.11.1 Affected Environment ........................................................................................................... 3-111
3.11.2 Surface Water and Fishery Impacts ...................................................................................... 3-113
3.11.3 Measures to Minimize and Mitigate Adverse Surface Water and Fishery Impacts ...................... 3-115

3.12 Environmental Corridors and Natural Areas ............................................................................. 3-118
3.12.1 Affected Environment ........................................................................................................... 3-118
3.12.2 Environmental Corridor and Natural Area Impacts ............................................................... 3-118
3.12.3 Measures to Minimize and Mitigate Adverse Environmental Corridor and Natural Area Impacts .................................................................................................................. 3-119

3.13 Floodplains and Hydraulics ......................................................................................................... 3-119
3.13.1 Affected Environment ........................................................................................................... 3-119
3.13.2 Floodplain Impacts .............................................................................................................. 3-120
3.13.3 Measures to Minimize and Mitigate Adverse Floodplain Impacts ........................................... 3-121

3.14 Groundwater and Water Supply ................................................................................................. 3-121
3.14.1 Affected Environment ........................................................................................................... 3-121
3.14.2 Groundwater and Water Supply Impacts ............................................................................. 3-121
3.14.3 Measures to Minimize and Mitigate Adverse Groundwater and Water Supply Impacts .................................................................................................................. 3-121

3.15 Wetlands ....................................................................................................................................... 3-121
3.15.1 Affected Environment ........................................................................................................... 3-122
3.15.2 Wetland Impacts ................................................................................................................. 3-122
3.15.3 Measures to Minimize and Mitigate Adverse Wetland Impacts .............................................. 3-122

3.16 Upland Habitat and Woodland .................................................................................................. 3-123
3.16.1 Affected Environment ........................................................................................................... 3-123
3.16.2 Upland Habitat and Woodland Impacts .................................................................................. 3-124
3.16.3 Measures to Minimize and Mitigate Adverse Upland Habitat and Woodland Impacts .................................................................................................................. 3-124

3.17 Wildlife ....................................................................................................................................... 3-124
3.17.1 Affected Environment ........................................................................................................... 3-124
3.17.2 Wildlife Impacts ................................................................................................................... 3-125
3.17.3 Measures to Minimize and Mitigate Adverse Wildlife Impacts .............................................. 3-125

3.18 Threatened and Endangered Species ......................................................................................... 3-125
3.18.1 Affected Environment ........................................................................................................... 3-125
3.18.2 Threatened and Endangered Species Impacts ....................................................................... 3-127

3.19 Noise ......................................................................................................................................... 3-129
3.19.1 Affected Environment ........................................................................................................... 3-129
3.19.2 Noise Impacts ....................................................................................................................... 3-131
3.19.3 Measures to Minimize and Mitigate Adverse Noise Impacts ................................................. 3-135

3.20 Air Quality .................................................................................................................................... 3-145
3.20.1 Affected Environment ........................................................................................................... 3-145
3.20.2 Air Quality Impacts ............................................................................................................... 3-148
3.20.3 Measures to Minimize and Mitigate Adverse Air Quality Impacts ........................................... 3-153

3.21 Hazardous Materials ................................................................................................................ 3-153
3.21.1 Affected Environment ........................................................................................................... 3-153
3.21.2 Hazardous Materials Impacts ............................................................................................. 3-154
3.21.3 Measures to Minimize and Mitigate Adverse Hazardous Material Impacts 3-154
3.22 Soil Resources .............................................................................................................. 3-155
3.22.1 Affected Environment ........................................................................................... 3-155
3.22.2 Soil Impacts .......................................................................................................... 3-155
3.22.3 Measures to Minimize and Mitigate Adverse Soil Impacts .................................... 3-155
3.23 Cemeteries ................................................................................................................... 3-156
3.23.1 Affected Environment ........................................................................................... 3-156
3.23.2 Cemetery Impacts ............................................................................................... 3-158
3.23.3 Measures to Minimize and Mitigate Adverse Cemetery Impacts .......................... 3-159
3.24 Historic Properties ....................................................................................................... 3-160
3.24.1 Affected Environment ........................................................................................... 3-160
3.24.2 Historic Property Impacts .................................................................................... 3-169
3.24.3 Measures to Minimize Harm .............................................................................. 3-176
3.24.4 Measures to Mitigate Adverse Historic Property Impacts .................................... 3-176
3.24.5 Coordination and Consultation ......................................................................... 3-177
3.25 Archaeological Resources ............................................................................................ 3-177
3.25.1 Affected Environment ........................................................................................... 3-177
3.25.2 Archaeological Impacts ....................................................................................... 3-178
3.25.3 Measures to Minimize and Mitigate Adverse Archaeological Impacts ................. 3-178
3.25.4 Coordination and Consultation ......................................................................... 3-178
3.26 Recreational Resources/Public Use Land ..................................................................... 3-179
3.26.1 Affected Environment ........................................................................................... 3-179
3.26.2 Recreational Resource/Public Use Land Impacts .................................................. 3-181
3.26.3 Measures to Minimize and Mitigate Adverse Recreational Resource/ Public Use Land Impacts ................................................................. 3-182
3.27 Construction ................................................................................................................. 3-182
3.27.1 Construction Costs .............................................................................................. 3-182
3.27.2 Operation and Maintenance Cost ....................................................................... 3-183
3.27.3 Construction Employment .................................................................................. 3-183
3.27.4 Construction Impacts ......................................................................................... 3-184
3.28 Indirect Effects ............................................................................................................. 3-189
3.28.1 Step 1—Scoping, Selecting Tools/Activities, and Determining Study Area .......... 3-190
3.28.2 Step 2—Inventory the Study Area and Notable Features .................................... 3-192
3.28.3 Steps 3 and 4—Identify Impact Causing Activities of the Proposed Project Alternatives and Identify Potentially Significant Indirect Effects ......................................................... 3-201
3.28.4 Steps 5 and 6—Analyze the Indirect Effects and Evaluate Assumptions; Assess Consequences and Identify Mitigation Activities ..................................................... 3-202
3.29 Cumulative Effects ....................................................................................................... 3-209
3.29.1 Describe the Affected Environment, and Determine the Environmental Consequences and Potential Mitigation Measures ............................................................ 3-212
3.30 Relationship of Local and Short-term Uses versus Long-term Productivity ................. 3-221
3.31 Irreversible and Irretrievable Commitments of Resources ........................................... 3-222

Tables
3-1 Land Use and Development Plans in the I-94 East-West Corridor Study Area .......... 3-3
3-2 Acres of Land Converted to Right-of-Way ................................................................. 3-9
3-3 2050 Projected Peak Period Travel Timea ................................................................ 3-15
3-4 Freeway Access Changes ................................................................. 3-18
3-5 Estimated Local Road Crash Changes Compared with No-Build Alternatives ......................... 3-21
3-6 Bicycle and Pedestrian Accommodations on Cross Streets in the I-94 East-West Corridor ........ 3-25
3-7 Population 2010-2020 and 2040 Projected Population ............................................................... 3-25
3-8 Minority Population 2010-2020 .................................................................................................. 3-46
3-9 Population by Race/Ethnicity, 2020 ......................................................................................... 3-47
3-10 Study Area Households 2010-2020 and 2040 Projected Households .................................... 3-48
3-11 Median Household Income (2019) ......................................................................................... 3-49
3-12 Historical and Projected Employment for Milwaukee County ................................................ 3-51
3-13 Tax Base Impacts ..................................................................................................................... 3-55
3-14 I-94 East-West Corridor Minority Population (2020) ............................................................. 3-63
3-15 Population by Race/Ethnicity (2020) ..................................................................................... 3-63
3-16 Median Household Income (2020) ....................................................................................... 3-64
3-17 Median Household Income in Census Block Group Nearest to I-94 ...................................... 3-64
3-18 Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives ... 3-74
3-19 Percent of No Vehicle Available by Race/Ethnicity in Milwaukee County .......................... 3-99
3-20 Mode of Travel to Work by Race/Ethnicity in the City of Milwaukee .................................... 3-100
3-21 Increase in Impervious Surface ............................................................................................. 3-115
3-22 Measured Existing Noise Levels ............................................................................................ 3-131
3-23 Comparison of Measured and Modeled Noise Levels ............................................................ 3-131
3-24 Noise Level Criteria for Considering Barriers ........................................................................ 3-132
3-25 Change in Design Hour Noise Levels by Alternative ........................................................... 3-134
3-26 Impacted Noise Receptors Summary ..................................................................................... 3-134
3-27 Acoustical Mitigation – Summary of Feasible and Reasonable Noise Barriers ..................... 3-137
3-28 Summary of Noise Barrier Analysis for the 8-lane Hybrid Interchange Alternative ............... 3-138
3-29 Summary of Noise Barrier Analysis for the 8-lane Diverging Diamond Interchange Alternative .................................................................................................................. 3-139
3-30 Summary of Noise Barrier Analysis for the 6-lane Hybrid Interchange with Half Interchange at Hawley Road ................................................................. 3-141
3-31 Summary of Noise Barrier Analysis for 6-lane Hybrid Interchange with Full Interchange at Hawley Road .................................................................................. 3-142
3-32 Summary of Noise Barrier Analysis for the 6-lane Diverging Diamond Interchange with Half Interchange at Hawley Road ............................................................ 3-143
3-33 Summary of Noise Barrier Analysis for the 6-lane Diverging Diamond Interchange with Full Interchange at Hawley Road ................................................................. 3-144
3-34 National Ambient Air Quality Standards .............................................................................. 3-145
3-35 Comparisons of MSAT Emissions (tons per year) ................................................................. 3-151
3-36 GHG Emissions as CO2e (million metric tons) ...................................................................... 3-153
3-37 Parks and Recreation Resources Adjacent to I-94 ................................................................. 3-179
3-38 Other Parks and Recreation Resources in the Study Area .................................................... 3-180
3-39 Construction Noise/Distance Relationships ............................................................................. 3-185
3-41 Population for Milwaukee and Waukesha Counties—1960 to 2020 ..................................... 3-193
3-42 Population Projections—Milwaukee and Waukesha Counties—2050 .................................... 3-193
3-43 Indirect Effects Primary Study Area—Housing Units ............................................................. 3-194
3-44 Indirect Effects Primary Study Area Employment—2010 and 2016 .................................... 3-194
3-45 Indirect Effects Primary Study Area—Racial Composition ................................................... 3-195
3-46 Indirect Effects Primary Study Area—Persons in Poverty ..................................................... 3-196
3-47 Indirect Effects Primary Study Area—Modes of Transportation to Work of Workers 16 and Older ................................................................. 3-196
3-48 List of Past, Present, and Reasonably Foreseeable Future Actions ................................................................. 3-210

Exhibits
3-1 I-94 Corridor and Municipal Boundaries
3-2 Existing Land Use
3-3 Cemeteries Adjacent to I-94
3-4 Milwaukee County Transit System Routes
3-5 Major Transmission Line Crossings and Adjustment Options
3-6 Residential Displacements
3-7 Commercial Displacements
3-8 Schools and Churches in the I-94 East-West Corridor
3-9 Socioeconomic Study Area Map
3-10 Historic Aerial (1937) of the I-94 East-West Corridor, East of Stadium Interchange
3-11 Historic Aerial (1937) of the I-94 East-West Corridor, West of Stadium Interchange
3-12 1960 Minority Population
3-13 Minority Population in Study Area and Surrounding Communities
3-14 Persons Living Below Poverty Level in Study Area and Surrounding Communities
3-15 Access to/from I-94 near Hawley Road for 8- and 6-Lane Alternatives (Half Interchange at Hawley Road)
3-16 Households with No Vehicles
3-17 Visual Impact Assessment Landscape Units and Key Observation Points
3-18a Key Observation Point 9
3-18b Key Observation Point 10
3-18c Key Observation Point 11
3-18d Key Observation Point 12
3-19 Key Observation Point 6
3-20 Stormwater Best Management Practices
3-21a Proposed Stormwater Basins (West of Stadium Interchange)
3-21b Proposed Stormwater Basins (East of Stadium Interchange)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 1 of 7)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 2 of 7)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 3 of 7)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 4 of 7)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 5 of 7)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 6 of 7)
3-22a 8- and 6-Lane Alternatives Noise Validation Sites (Page 7 of 7)
3-22b Proposed Noise Barriers 8-Lane Alternative – Hybrid Interchange (Page 1 of 6)
3-22b Proposed Noise Barriers 8-Lane Alternative – Hybrid Interchange (Page 2 of 6)
3-22b Proposed Noise Barriers 8-Lane Alternative – Hybrid Interchange (Page 3 of 6)
3-22b Proposed Noise Barriers 8-Lane Alternative – Hybrid Interchange (Page 4 of 6)
3-22b Proposed Noise Barriers 8-Lane Alternative – Hybrid Interchange (Page 5 of 6)
3-22b Proposed Noise Barriers 8-Lane Alternative – Hybrid Interchange (Page 6 of 6)
3-22c Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 1 of 7)
3-22c Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 2 of 7)
3-22c Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 3 of 7)
3-22c Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 4 of 7)
3-22c Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 5 of 7)
3-22c Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 6 of 7)
3-22d Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 1 of 6)
3-22d Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 2 of 6)
3-22d Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 3 of 6)
3-22d Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 4 of 6)
3-22d Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 5 of 6)
3-22d Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 6 of 6)
3-22e Proposed Noise Barriers 6-Lane Alternatives – Diverging Diamond Interchange (Page 1 of 6)
3-22e Proposed Noise Barriers 6-Lane Alternatives – Diverging Diamond Interchange (Page 2 of 6)
3-22e Proposed Noise Barriers 6-Lane Alternatives – Diverging Diamond Interchange (Page 3 of 6)
3-22e Proposed Noise Barriers 6-Lane Alternatives – Diverging Diamond Interchange (Page 4 of 6)
3-22e Proposed Noise Barriers 6-Lane Alternatives – Diverging Diamond Interchange (Page 5 of 6)
3-22e Proposed Noise Barriers 6-Lane Alternatives – Diverging Diamond Interchange (Page 6 of 6)
3-23 Historic Properties Located in the Area of Potential Effect
3-24 Northwestern Branch, Veterans Affairs’ Property Land Transfer Map
3-25 Soldiers’ Home Boundaries Adjacent to I-94
3-26 Recreational Resources/Public Use Lands
3-27 Indirect Effects Analysis Primary Study Area
3-28 Indirect Effects Analysis Secondary Study Area
3-29 Indirect Effects Analysis Primary Study Area – Existing Land Use
3-30 Indirect Effects Analysis Secondary Study Area – Existing Land Use
SECTION 3
Existing Conditions, Environmental Impacts, and Measures to Mitigate Adverse Impacts

Section 3 provides background information on regional and local planning, the built environment, socioeconomic characteristics and trends, archaeological and historical resources, public use land, and the natural environment in the I-94 East-West Corridor. The information establishes the context for the proposed improvements and the potential impacts of the alternatives identified in Section 2.2.

Section 3 also identifies the beneficial and adverse social, economic, and environmental impacts that the I-94 East-West Corridor alternatives may have, and conceptual measures to minimize and mitigate adverse impacts that cannot be avoided. Section 3.28, Indirect Effects, considers the indirect effects of the project, whereas Section 3.29, Cumulative Effects, considers the cumulative effects resulting from this project when added to other past, present, and reasonably foreseeable future actions. The discussion of existing conditions, impacts, and mitigation measures is arranged by the following topics:

- Land use
- Transportation
- Utilities
- Residential development
- Commercial and industrial development
- Institutional and public services
- Socioeconomic characteristics
- Environmental justice
- Visual character
- Surface water and fishery
- Environmental corridors and natural areas
- Floodplains and hydraulics
- Groundwater
- Wetlands
- Upland habitat
- Wildlife
- Threatened and endangered species
- Noise
- Air quality
- Hazardous materials
- Soil resources
- Cemeteries
- Historic sites
- Archaeological resources
- Recreational resources/public use land
- Construction
- Indirect effects
- Cumulative effects

FHWA and WisDOT developed an Impact Analysis Methodologies document in collaboration with Cooperating and Participating Agencies to communicate and document a structured approach to analyzing impacts of the proposed project and its alternatives.

Impacts to most resources remain the same as identified for the 2016 Final EIS preferred alternative; in fact, there are reduced impacts to some resources due to design refinements. The 8- and 6-lane alternatives would require less right-of-way than the 2016 Final EIS preferred alternative and require less residential and business displacements.

Section 3 of the Supplemental Draft EIS was updated from the 2016 Final EIS to account for the following:

- The most up-to-date data for each resource
- Design updates to the 8-lane alternative as noted in Section 2.2
- Addition of the 6-lane alternatives
• Addition of a diverging diamond interchange option at the Stadium Interchange (the 2016 Final EIS preferred alternative had a hybrid interchange at the Stadium Interchange).
• Additional public and agency input

3.1 Geographic Setting

The I-94 East-West Corridor is in the City of Milwaukee in Milwaukee County, Wisconsin. The City of West Allis, City of Wauwatosa, and Village of West Milwaukee are nearby. The project corridor, which extends approximately 3.5 miles along I-94 from west of 70th Street to 16th Street, is urban with a mixture of residential, commercial, and publicly owned property, and a crossing of the Menomonee River (Exhibit 3-1).

The project is in an area known as the Eastern Ridges and Lowlands, which extends from the Wisconsin−Illinois border to Green Bay. The area was alternately scoured by the advancing movement of glaciers and covered by layers of till left behind when the glaciers retreated (Curtis 1959; Martin 1965; Paull 1977). Topography in the I-94 East-West Corridor is generally flat with gentle changes in elevation. Elevation ranges from approximately 590 feet above sea level along I-94 at the Menomonee River to 730 feet above sea level along I-94 at the 68th Street/70th Street interchange.

3.2 Land Use and Land Use Planning

The 8- and 6-lane alternatives were analyzed for compatibility with existing and future planned land use and for consistency with local plans and policies.

3.2.1 Affected Environment

3.2.1.1 Land Use Planning

SEWRPC is the metropolitan planning organization for the seven counties in southeastern Wisconsin, including Milwaukee County. One of SEWRPC’s principal responsibilities is to prepare a comprehensive plan for the physical development of the region. Regional planning involves cooperation and participation from state and federal agencies; local planning, transportation, and public works departments; transit providers; private utilities; environmental organizations; and the public. SEWRPC’s regional planning is on an advisory basis. Local, state, or federal agencies are responsible for implementing the plans based on additional focused planning, programming, and engineering/environmental studies, such as those conducted by WisDOT.

Municipalities and Milwaukee County guide land use and development along the I-94 East-West Corridor with land use plans that vary in age and detail. WisDOT reviewed the applicable regional and local land use, development, and conservation plans as part of this study. Table 3-1 lists regional and local land use plans in place along the I-94 East-West Corridor.
Table 3-1. Land Use and Development Plans in the I-94 East-West Corridor Study Area

<table>
<thead>
<tr>
<th>SEWRPC Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin (SEWRPC 2016)—reviewed and updated by SEWRPC in 2020</td>
</tr>
<tr>
<td>A Regional Freeway System Reconstruction Plan for Southeastern Wisconsin (SEWRPC 2003)</td>
</tr>
<tr>
<td>A Transportation Improvement Program for Southeastern Wisconsin: 2021-2024 (SEWRPC 2020b)</td>
</tr>
<tr>
<td>A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin (SEWRPC 1997), Amendment to the Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin—SEWRPC Amendment to Planning Report No. 42 (SEWRPC 2010a)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City of Milwaukee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Strategy for the City of Milwaukee (City of Milwaukee 1988); updated 2002</td>
</tr>
<tr>
<td>Citywide Policy Plan (City of Milwaukee 2010)</td>
</tr>
<tr>
<td>City of Milwaukee Industrial Land Analysis (City of Milwaukee 2021)</td>
</tr>
<tr>
<td>West Side Area Plan (City of Milwaukee 2009a)</td>
</tr>
<tr>
<td>Near West Side Comprehensive Plan (City of Milwaukee 2017); the plan focuses on corridors within the Near West Side but does not make recommendations for improving access to I-94.</td>
</tr>
<tr>
<td>Menomonee Valley 2.0 Comprehensive Area Plan (City of Milwaukee 2015); the plan focuses on transportation projects within the Menomonee Valley but does not make recommendations for improving access to I-94.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City of Wauwatosa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Plan 2008–2030 (City of Wauwatosa 2008)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City of West Allis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft 2040 Comprehensive Plan (City of West Allis 2021)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Village of West Milwaukee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Plan (Village of West Milwaukee 2019)</td>
</tr>
</tbody>
</table>

Section 1.4.1, Land Use and Transportation Planning, discusses VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin (SEWRPC 2016) and the 2021-2024 Transportation Improvement Program for Southeastern Wisconsin. The following paragraphs summarize key regional and local plans that are not summarized in Section 1.4.1.

**City of Milwaukee Citywide Policy Plan (City of Milwaukee 2010).** The plan states in its transportation section (subsection IV, A, 4.) that the city will “continue to support freeway upgrades which do not require increases in width and do not require double decking, while supporting freeway upgrades that provide space for future multi-modal options.”
City of Milwaukee Industrial Land Analysis (City of Milwaukee 2021). This is an update to the City’s 2004 Industrial Land Analysis and analyzes the City’s industrial sector and a plan for future decision-making. The analysis is a tool in making decisions regarding industrial land use and zoning. The analysis notes access to I-94 as an asset and opportunity for various industrial districts. Additionally, for the Menomonee River Valley, the analysis notes to “Use the scheduled I-94 rebuild project as an opportunity to improve interstate and local street connections into and out of the Valley.”

City of Milwaukee West Side Area Plan (City of Milwaukee 2009a). The plan recommends “the reconstruction of I-94 and the Zoo Interchange at the minimum footprint necessary to accommodate public health, safety, and welfare; at a minimum cost to the taxpayer; and the minimum amount of land dedicated to roadway or paved surfaces.”

City of West Allis Draft 2040 Comprehensive Plan (City of West Allis 2021). The City of West Allis’ Comprehensive Plan benchmarks existing conditions within the city and provides a long-term vision for the city’s future growth. The proposed Washington Street extension as part of the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road supports an objective stated in Chapter 9 (Redevelopment Opportunities) of the City of West Allis Draft 2040 Comprehensive Plan that calls for an east-west Washington Street connection between 60th Street/Hawley Road and 70th Street through the former Allis-Chalmers plant site.

A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin—SEWRPC Planning Report Number 42 (SEWRPC 2010a). In 1997, SEWRPC completed a regional natural areas and critical species habitat protection and management plan. The plan identified the high-quality natural areas, critical species habitats, wetlands, environmental corridors, and significant geological and archaeological sites in southeastern Wisconsin, and made recommendations for protecting those resources.

The 2010 plan updated the protected species lists, as well as the laws concerning protected species. It also updated known locations for natural areas and critical species habitat sites. The 1997 plan and 2010 update identified the following resources within the I-94 East-West Corridor:

- Stadium Bluff Woods (critical species habitat)
- Soldiers’ Home Reef (significant geographical area)

The two essentially compose one site on the wooded bluff between the VA Campus and American Family Field parking area, south of I-94. The bluff supports a population of forked aster (Aster furcatus), a state-designated threatened species. The site is also identified as a “geological site significant in the history of science.” Additional information regarding the Soldiers’ Home Reef, which is an NHL, is in Section 3.24, Historic Properties.

A Land and Water Resource Management Plan for Milwaukee County: 2021–2030, Community Assistance Planning Report No. 312 (Second Edition) (SEWRPC 2021). The plan inventories land use, natural resource data, soil erosion levels, and water quality data. In addition, it addresses the principal land and water resource issues identified by the Milwaukee County Land and Water Resource Management Plan Advisory Committee. The concerns included loss of wetlands, woodlands, environmental corridors, and other green space. The plan also includes working goals to protect, maintain, and restore land and water resources in Milwaukee County.

2050 Facilities Plan (MMSD 2021). The Milwaukee Metropolitan Sewerage District (MMSD) 2050 Facilities Plan recommends water pollution abatement for MMSD’s planning and sewer-service area through 2050. It identifies facilities, programs, operational improvements, and policies necessary to
achieve the water resource goals inspired by the public, as well as those required under state and federal law. The entire I-94 East-West Corridor is within MMSD’s service area.

3.2.1.2 Existing Land Use

Existing land use in the I-94 East-West Corridor (Exhibit 3-2) is generally high-density urban development: commercial, residential, institutional, industrial, parks, transportation, and utilities. Section 3.4, Utilities; Section 3.5, Residential Development; Section 3.6, Commercial and Industrial Development; and Section 3.7, Institutional and Public Services provide additional detail on existing land use along I-94.

70th Street to Hawley Road

North of I-94 between 70th Street and 68th Street, O'Connor Street serves as a frontage road to I-94. The Girl Scouts of Wisconsin Southeast headquarters and the Girl Scouts’ Milwaukee Service and Resource Center is at 70th Street and an electrical substation is between 69th and 68th streets. Between 68th Street and Hawley Road, overhead electrical transmission lines and towers are adjacent to I-94. North of the power lines is a single-family residential neighborhood, interspersed with multifamily houses, businesses, a school, and a park. Bluemound Road (roughly 0.4 mile north of I-94) is a commercial corridor between 66th Street and Hawley Road.

The land use south of I-94 between 70th Street and Hawley Road is mainly single-family residential with some multifamily units, a school, and a park. The Hank Aaron State Trail is roughly 0.4 mile south of I-94.

The area by the proposed Washington Street extension (8-lane alternative and 6-lane alternative with half interchange at Hawley Road) is a mixture of industrial, commercial, and office complexes separated by large parking areas. A WisDOT maintenance building (Southeast Region Service Facility) is on the west side of Hawley Road in the path of the proposed extension. A residential area is south of the proposed extension.

The area surrounding the 70th Street/Greenfield Avenue intersection is generally commercial, including a bank and a retail/office complex. There are senior-living apartments in the southwest quadrant of the intersection. The National Avenue/Greenfield Avenue intersection is mainly commercial/retail uses. A church is on the west end of the intersection. Northwest of the Brewers Boulevard/National Avenue intersection is the VA Campus, including the Soldiers’ Home NHL and Historic District. Northeast of the Brewers Boulevard/National Avenue intersection is a large manufacturing plant. South of National Avenue is a dense retail corridor.
Hawley Road to General Mitchell Boulevard

Between Hawley Road and General Mitchell Boulevard, three cemeteries are adjacent to I-94: Beth Hamedrosh Hagodel Cemetery, Wood National Cemetery, and Spring Hill Cemetery (Exhibit 3-3). The Beth Hamedrosh Hagodel Cemetery is north of I-94 from Dana Court to a point roughly 650 feet to the east. The northern portion of the Wood National Cemetery is east of the Beth Hamedrosh Hagodel Cemetery to the Zablocki Drive bridge. North of the cemeteries are overhead electrical transmission lines and towers, and to the north of the power lines is Calvary Cemetery. Mitchell Boulevard Park is east of the cemeteries between Bluemound Road and I-94. Spring Hill Cemetery and Wood National Cemetery are south of I-94 with Anshai Lebowitz Cemetery south of Spring Hill Cemetery.

Wood National Cemetery is part of the 125-acre VA Campus mainly south of I-94 to National Avenue. Along with Wood National Cemetery, the VA Campus has a VA Medical Center, regional office, and benefits center. What is now the VA Campus was established in the 1860s as the Northwestern Branch, National Home for Disabled Volunteer Soldiers. A cluster of older buildings, some dating from the 19th century, and the cemetery are an NHL. Another NHL, the Soldiers’ Home Reef NHL, is also on the VA Campus.

Additionally, there is a single-family residence, a cemetery maintenance business, and Monreal’s Encore Gentlemen’s Club (an adult-oriented business) on Dana Court in the northeast quadrant of the Hawley Road interchange.

General Mitchell Boulevard to WIS 175/Brewers Boulevard (includes Stadium Interchange)

The area west of the Stadium Interchange and south of I-94 is dominated by American Family Field, a stadium for Major League Baseball’s Milwaukee Brewers, and its parking lots. North of I-94, there is a combination of residential (Story Hill neighborhood) and commercial land uses, and a parking lot for American Family Field.

WIS 175/Brewers Boulevard to 35th Street

Land uses east of the Stadium Interchange, north of I-94, are generally residential and commercial. The neighborhoods in this area are The Valley/Pigsville and Merrill Park. There is also an American Family Field parking lot between 44th Street and WIS 175.

The area south of I-94, east of the Stadium Interchange, is part of the Menomonee Valley and is mainly industrial. It has several parking lots for American Family Field. There is also an electrical transmission line and the Park Hill electrical substation.
There are commercial and industrial properties east of WIS 175 north of the Stadium Interchange and along Brewers Boulevard (43rd Street industrial/commercial corridor), most notably a Molson Coors brewery.

The Menomonee River and Canadian Pacific Rail line cross under I-94 just east of 44th Street. Green spaces and the Hank Aaron State Trail are along the Menomonee River.

35th Street to 16th Street

North of I-94, the Merrill Park neighborhood is between 35th Street and 27th Street. The neighborhood has single-family, two-family, and multifamily housing. The three main commercial corridors in this segment are Wisconsin Avenue, 35th Street, and 27th Street. Between 25th Street and 16th Street, are businesses and some Marquette University buildings.

South of I-94 from 35th Street to 27th Street, there are overhead electrical transmission lines and towers. There are also several commercial and industrial properties. East of 25th Street to 16th Street, Badger Truck Center is south of I-94, along with other businesses. The Menomonee Valley, which is home to many businesses and Potawatomi Hotel and Casino, is just south of I-94. The interchange at I-94 and 25th/26th Street is a key access point to the Menomonee Valley.

3.2.2 Land Use Impacts

3.2.2.1 Conformity with Local and Regional Plans

Sections 1.3.1 and 3.2.1 summarize relevant local and regional plans prepared by SEWRPC and the municipalities in the study area. SEWRPC’s VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin (SEWRPC 2016) recommends adding capacity to I-94.

No-build Alternative

The No-build alternative does not conform to SEWRPC’s VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin, which calls for modernization and capacity expansion of I-94 in the study area.

8- and 6-Lane Alternatives

The 8-lane alternative conforms to SEWRPC’s VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin. VISION 2050 includes the widening of I-94 between 70th Street and 16th Street in the fiscally constrained transportation plan (2021 to 2025). The 6-lane alternatives (both Hawley Road interchange options) do not conform to VISION 2050.

As noted in Section 3.2.1.1, the City of Milwaukee’s Citywide Policy Plan supports freeway projects that do not increase the width, do not require double decking, and provide space for future multi-modal options. The 8-lane alternative and both 6-lane alternatives partially meet these provisions in that they remain on-alignment and limit most of the improvements to I-94 within the existing right-of-way; however, all the alternatives conflict with the Citywide Policy Plan for no “increases in width.”
The Washington Street extension (8-lane alternative and 6-lane alternative with half interchange at Hawley Road) would be consistent with the City of West Allis Comprehensive Plan, which recommends “extending Washington Street to connect 60th and 70th Streets.” As part of the I-94 East-West Project, Washington Street would be extended to provide a connection between 60th Street and 70th Street to make it easier for drivers on Hawley Road to access the 68th Street/70th Street interchange with I-94 (Exhibit 2-1). The Washington Street extension would also provide new street access to the former Allis-Chalmers site. This would support an objective in Chapter 9 (Redevelopment Opportunities) of the City of West Allis 2040 Comprehensive Plan that calls for an east-west Washington Street connection between 60th Street/Hawley Road and 70th Street through the former Allis-Chalmers plant site. While the City of West Allis has expressed concern over losing any freeway access at Hawley Road (even partial access), the 6-lane alternative with full interchange at Hawley Road does not include the Washington Street extension, and therefore does not meet the objective in Chapter 9.

The local and regional plans identified in Table 3-1 do not make recommendations for the type of interchange at the Stadium Interchange.

3.2.2.2 Direct Land Use Changes

The project would require WisDOT to acquire land next to I-94. Most of the land acquired would be strips of land adjacent to I-94 in the Stadium Interchange and to the east. Some land currently used as highway right-of-way may potentially no longer be needed as right-of-way. WisDOT may declare the land excess right-of-way, and it could be converted to a different land use. The future of the land depends on a WisDOT right-of-way declaration of the land as excess right-of-way, as well as the City of Milwaukee’s zoning and land development process, which permits and/or restricts the type of use.

No-build Alternative

Under the No-build alternative, no direct land use changes would occur.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would require the acquisition of approximately 42 to 49 acres of non-highway land (Table 3-2). Land that may be acquired is residential, commercial, utility, and American Family Field parking. No property would be acquired from the cemeteries adjacent to I-94. Land use adjacent to I-94 would likely not change as a result of the proposed action (Section 3.28, Indirect Effects).

The amount of new right-of-way required is a reduction from the 73 acres of new right-of-way required as part of the 2016 preferred alternative. The amount of new, non-highway right-of-way was reduced for the following reasons:

- Revisions to the Washington Street and Hawley Road alignments resulted in about 5 less acres of new right-of-way
- Revisions to the design at the eastbound 68th Street entrance ramp, 35th Street interchange, and 27th Street interchange resulted in the reduction of residential and commercial relocations. With there no longer a need to acquire these full properties, there was a 3-acre reduction in the amount of new right-of-way required.

---

1 Hawley Road turns into 60th Street at the Hank Aaron State Trail.
• It is anticipated that the two electrical substations impacted (see Section 3.4) will be relocated within existing highway right-of-way, thus, acreage for a new substation is not included in the new right-of-way needed like it was for the 2016 preferred alternative (4 acres). In addition, a 3-acre easement for the railroad was included as part of the 2016 Final EIS calculation and should not be included as permanent now right-of-way required, thus was not included as part of the total for this Supplemental EIS.

• The 2016 Final EIS included temporary limited easements (TLEs) as part of the total new right-of-way required. A TLE is required when WisDOT must use a portion of land to construct a highway project and is limited in purpose and time. WisDOT’s right to use the property will terminate upon completion of construction. Most of the TLEs required are associated with reconstruction of the Stadium Interchange. Due to the fact that TLEs will not become permanent new highway right-of-way, they were not included as part of the calculation of new right-of-way required (a reduction of about 10 acres of new right-of-way required).

For both the hybrid and diverging diamond Stadium Interchanges, the 6-lane alternative with half interchange at Hawley Road would require 48 acres of new right-of-way and the 6-lane alternative with full interchange at Hawley Road would require 42 acres of new right-of-way. The 8-lane alternative would require 49 acres of new right-of-way (preferred alternative).

The reconstructed diverging diamond interchange would have a slightly smaller footprint (5 acres less) than the proposed hybrid interchange; however, the right-of-way impact would be the same because the reduced area would be within existing WisDOT right-of-way. The 6-lane alternative with full interchange at Hawley Road requires less right-of-way than the other alternatives because it would not construct the Washington Street extension or other off-interstate improvements.

Table 3-2. Acres of Land Converted to Right-of-Way

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hybrid Interchange</td>
</tr>
<tr>
<td>6-lane Alternative (with half interchange at Hawley Road)</td>
<td>48</td>
</tr>
<tr>
<td>6-lane Alternative (with full interchange at Hawley Road)</td>
<td>42</td>
</tr>
<tr>
<td>8-lane Alternative</td>
<td>49</td>
</tr>
<tr>
<td>2016 Final EIS Preferred Alternative</td>
<td>73</td>
</tr>
</tbody>
</table>

**Bold** = preferred alternative
Most of the new right-of-way acquired is near the Stadium Interchange. A majority of the land acquired would come from American Family Field, We Energies, and/or ATC properties. Only a minor amount of new right-of-way would come from businesses or residences. Approximately 0.4 acre of new right-of-way would come from residential properties. This includes strip takings and the one residential displacement (see Section 3.5.2).

Approximately 8 acres of new right-of-way would come from businesses, including strip takings and six business displacements (see Section 3.6.2).

Under the 8- and 6-lane alternatives, the Park Hill and Greves Street electrical substations would be relocated (see Section 3.4, Utilities, for additional information). They would need to be replaced nearby. A combined replacement substation site would be approximately 2 to 3 acres, and standalone substation sites would be approximately 1.5 to 2 acres each. It is assumed the new substation site(s) would be within existing highway right-of-way and a final determination on location will occur prior to completion of the Supplemental Final EIS/Record of Decision for this project.

3.2.3 Measures to Minimize and Mitigate Adverse Land Use Impacts

Alternatives were designed to stay within the existing right-of-way as much as possible to minimize the impact on surrounding property. Where it is not possible to remain within existing right-of-way, FHWA and WisDOT would compensate property owners in accordance with applicable laws and regulations for land acquired from residences, businesses, utilities, and American Family Field (see Sections 3.4.3, 3.5.3, 3.6.4, and 3.7.3).

Revisions to the 8-lane alternative design resulted in a reduction to the total amount of new right-of-way required for this project. Changes to the Washington Street and Hawley Road alignments along with refinements at the 68th Street, 35th Street, and 27th Street interchanges resulted in a reduction of acres of new right-of-way required for the project.

Some land currently used as highway right-of-way may potentially no longer be needed as right-of-way. WisDOT may declare the land excess right-of-way, and it could be converted to a different land use.

3.3 Transportation Service

3.3.1 Affected Environment

3.3.1.1 Bus Transit

Both intra-county and inter-county bus services use I-94, providing transportation services to those traveling in and through the study area.
Intra-County Bus

The Milwaukee County Transit System (MCTS) is the largest local transit operator in Wisconsin. MCTS provides transit services for all of Milwaukee County and paratransit services (Transit Plus) for the elderly, persons with disabilities, and people with conditions that prevent them from using MCTS buses. Prior to 2020 and the Covid-19 pandemic, Freeway Flyer express service used I-94. Freeway Flyer routes operated during weekday morning and evening rush hours, providing service between park-and-ride lots and downtown Milwaukee. As of August 2022, MCTS continues to have a “temporary suspension” of Freeway Flyer routes that use I-94 (Routes 44 (State Fair Park Flyer) and Route 79 (Menomonee Falls Flyer)) due to operational challenges from the COVID-19 pandemic (MCTS 2022). Route 44U continues to operate and uses I-94 in the study area, but only operates during fall and spring university semesters.

There are no park-and-ride lots in the I-94 East-West Corridor study area; however, a park-and-ride lot is just west of the study area at 76th Street and I-94. Several MCTS routes operate on local streets in the study area (Exhibit 3-4). MCTS routes cross I-94 on 70th Street, 68th Street, Hawley Road, 35th Street, and 27th Street. Several routes parallel I-94 along Wisconsin Avenue, Bluemound Road, Canal Street, National Avenue, and Greenfield Avenue. In January 2015, MCTS introduced the GoldLine “MetroExpress” Route on Wisconsin Avenue, parallel to I-94. The MetroExpress routes are limited-stop services that operate at a high frequency.

Construction of MCTS’s East-West BRT project started in June 2021 and will replace the GoldLine “MetroExpress” Route. WisDOT committed $300,000 to the project through the Statewide Transit Planning (“Section 5304”) program, which supports local and regional transit planning efforts by offering funding for relevant studies and plans. Eighty percent of this funding was via federal funding with the remaining 20 percent via state funding. The 9-mile BRT route will connect downtown Milwaukee, Marquette University, Milwaukee’s Near West Side, Wauwatosa, and the Milwaukee Regional Medical Center. The BRT route will operate primarily along Wisconsin Avenue, Bluemound Road, and a portion of 92nd Street. Ultra-modern battery-electric buses will serve 33 individual, state-of-the-art stations between Milwaukee’s lakefront and the Watertown Plank Road Park & Ride lot. BRT service is expected to start in 2023. The BRT route is expected to average more than 9,500 weekday riders and increase overall transit ridership in the corridor by 17 percent (Milwaukee County 2022).

Inter-county Bus

The Washington County Commuter Express provides eight weekday trips from West Bend to downtown Milwaukee and eight trips from downtown Milwaukee to West Bend on I-94 through the study area. The Washington County Commuter Express also provides three weekday trips from West Bend to and from the Milwaukee Regional Medical Complex and VA Medical Center, and six weekday trips to and from Marquette High School, Marquette University, and downtown Milwaukee to West Bend.

Coach USA operates five commuter bus routes using I-94:

- Routes 901, 904, and 905 provide a total of 15 trips each weekday from Waukesha County to downtown Milwaukee and 14 trips each weekday from Milwaukee to Waukesha County via I-94.
The routes operate between 5:00 AM and 8:00 PM. (Note: As of summer 2022, several trips are suspended until further notice due to operational challenges from the COVID-19 pandemic.)

- The Airport Express route provides 12 daily roundtrips on I-94 from Waukesha to downtown Milwaukee, General Mitchell International Airport, Racine, Kenosha, and Chicago O’Hare International Airport.

- The University of Wisconsin–Whitewater route provides service between Whitewater and downtown Milwaukee via I-94 while school is in session (September through May). There is one trip from Whitewater to Milwaukee on Friday afternoons and one trip from Milwaukee to Whitewater on Sunday evenings. The route uses the State Fair Park & Ride lot (I-94 and 76th Street), and the Milwaukee Intermodal Facility (5th Street and St. Paul Avenue).

The Megabus offers service to destinations throughout the Midwest. Two daily roundtrips between Minneapolis and Milwaukee use I-94.

Greyhound Bus Lines provides four to six daily trips from Milwaukee to Minneapolis and Minneapolis to Milwaukee along I-94.

Lamers Bus Lines provides daily routes with roundtrips running between Milwaukee and Wausau, Milwaukee and Green Bay, and Milwaukee and Wisconsin Rapids via Madison. The Milwaukee to Wisconsin Rapids route uses I-94 within the study area.

Badger Bus operates five daily roundtrips between Madison and Milwaukee on I-94, with a stop in downtown Milwaukee.

In 2019, Amtrak began operating bus service between Milwaukee and Green Bay with stops in Appleton, Oshkosh and Fond du Lac, which serves as an extension of its Hiawatha rail line between Milwaukee and Chicago. This bus service uses I-94 and has two daily roundtrips.

3.3.1.2 Rail Service

Passenger Rail Service

Amtrak provides one daily roundtrip between downtown Milwaukee and destinations west (western terminus is Seattle, Washington) on the Empire Builder. There are no stops in the I-94 East-West Corridor, and the nearest stop is at the Milwaukee Intermodal Station east of the study area. West of the study area, the nearest stop is Columbus, Wisconsin, 75 miles northwest of the study area. Amtrak operates the service on tracks owned by the Canadian Pacific Railway. The tracks cross under I-94 on the east side of the Stadium Interchange.

In March 2022, federal funding was approved for a second daily roundtrip train service between Chicago, Milwaukee, and St. Paul, Minnesota. The service is expected to be operable by 2024 (Spoto 2022).
Freight Rail Service

A Canadian Pacific Railway line travels through the I-94 East-West Corridor. The Canadian Pacific Railway’s main line between western Canada and Chicago follows I-94 on its south side between the project’s east terminus to the Stadium Interchange and crosses under I-94 on the east side of the Stadium Interchange. Approximately 33 trains per day use this rail line.

3.3.1.3 Highway Traffic and Operational Characteristics

I-94 is part of the National System of Interstate and Defense Highways. According to AASHTO’s *A Policy on Design Standards—Interstate System* “The National System of Interstate and Defense Highways is the most important in the United States. It carries more traffic per kilometer (mile) than any other comparable national system and includes the roads of greatest significance to the economic welfare and defense of the nation. The highways of this system must be designed in keeping with their importance as the backbone of the nation’s highway systems. To this end, they must be designed to ensure safety, permanence, utility and flexibility to provide for predicted traffic growth” (AASHTO 2016). I-94 is a designated federal and state “long truck route,” allowing longer commercial vehicles to use the freeway. I-94 is also a designated “backbone” route in WisDOT’s *Connections 2030 Long-Range Multimodal Transportation Plan* (WisDOT 2009). Backbone routes are high-level multilane (or planned multilane) divided highways that connect major economic centers to the national transportation network.

The I-94 East-West Corridor links the Marquette and Zoo interchanges, effectively connecting Milwaukee County’s eastern and western freeway systems. In addition to serving long-distance travelers, the study-area freeway system is an important commuter route for many of the over 450,000 employees who work in Milwaukee County and approximately 220,000 employees who work in Waukesha County. Reverse commuting is particularly strong between Milwaukee and Waukesha Counties. More workers per day travel from Milwaukee County to Waukesha County (60,353) than from Waukesha County to Milwaukee County (58,271) (Walsh 2019). Hourly traffic data collected for I-94 within the project corridor for the years 2019 through 2022 also indicated a near even split between eastbound and westbound travel during the morning and afternoon peak hours.

As discussed in Section 1.4.2 and as shown in Exhibit 1-2, I-94 connects many local destinations. Many of the destinations create a constant daily traffic demand. Other destinations, such as American Family Field or Wisconsin State Fair Park, host large events that place increased demand on the freeway system at varying times. In the study area, I-94 currently carries between 158,000 and 178,000 vpd on an average weekday (Year 2019 volumes; Exhibit 1-12).

During the heaviest traffic periods, the level of service on I-94 ranges between level of service D (moderate congestion) and level of service F (extreme congestion). Several segments of I-94 currently operate at level of service E (severe congestion) or level of service F during the peak period (Exhibit 1-14 and Exhibit 1-15). Even though population (see Table 3-7) and employment (see Table 3-12) has decreased in Milwaukee County between 2010 and 2020, traffic on I-94 in the study area continues to increase (see Section 1.4.5.1). Based on these existing traffic volumes and levels of service, additional capacity is currently required on I-94 in the project area to alleviate existing congestion and allow I-94 to operate at a desirable level of service. Furthermore, I-94 serves more than just the local population. It is an interstate that serves national and regional traffic along with local trips.

The crash rates for most of I-94, WIS 175, and Brewers Boulevard in the study area exceed the statewide average. Most crash rates on this part of I-94 are 1 to 2 times higher than the statewide average, and several sections are 2 to 4 times higher than the statewide average (see Section 1.4.3).
Other state and U.S. highways that parallel I-94 are Greenfield Avenue/National Avenue (WIS 59) and Bluemound Road/Wisconsin Avenue (US 18). 27th Street/Layton Boulevard (WIS 57) is perpendicular to I-94.

3.3.1.4 Bicycle and Pedestrian

Bicycling is not permitted on I-94 or WIS 175; however, biking is permitted on surrounding local roads in the study area. The Oak Leaf Trail, Hank Aaron State Trail, and on-street routes serve bicyclists and pedestrians. Currently, bike lanes, which are a portion of the road designated specifically for cyclists, are on:

- 16th Street north of I-94
- 17th Street north of I-94
- 27th Street from St. Paul Avenue to south of I-94
- 35th Street from Park Hill Avenue to south of I-94
- Wisconsin Avenue from 37th Street to 44th Street
- Wells Street from Hawley Road to 44th Street
- Bluemound Road from Story Parkway to Hawley Road

Bike routes are usually more direct arterial roads with wider curb lanes that allow motorists and cyclists to travel safely side-by-side. Designated bike routes are:

- Clybourn Street from 16th Street to 34th Street
- 59th Street north of I-94
- 60th Street north of I-94
- 64th Street from Adler Street to Fairview Avenue
- Fairview Avenue from 59th Street to 67th Street
- Stevenson Street from 67th to 72nd Street

See Section 3.26, Recreational Resources/Public Land Use, for more information regarding the Oak Leaf Trail and Hank Aaron State Trail. Sidewalks are on almost all streets that cross I-94.

3.3.2 Transportation Impacts

3.3.2.1 Bus Transit

The No-build alternative would not directly affect bus transit service, including MCTS routes and intra-county bus services. However, congestion, safety, and deteriorated pavement on I-94 would not be addressed, which could reduce the effectiveness of bus transit.

None of the 8- or 6-lane alternatives would preclude bus transit service as shown in VISION 2050. No MCTS routes or inter-county bus service would be directly impacted. All of the routes could continue service along their existing routes. The improved level of service and safety on I-94 would benefit buses using I-94. Local arterial street traffic volumes may be lower under the 8-lane alternative because some trips along arterials may shift to I-94, which may improve bus transit times, including the East-West BRT route. Streets that carry MCTS routes may be closed during construction, which would require a detour (Section 3.27.4).
3.3.2.2 Rail Service

There would be no impacts to passenger rail or freight rail service under any of the alternatives. None of the alternatives would preclude passenger rail service, as shown in VISION 2050.

3.3.2.3 Highway Traffic and Operational Characteristics

Freeway

This section compares the No-build alternative with the 8- and 6-lane alternatives with respect to how traffic flows. Level of service is used to measure traffic flow, and is explained in Section 1.4.5, Traffic Volumes, and illustrated in Exhibit 1-11. The following discussion focuses on traffic in the morning and afternoon peak periods in the year 2050, the project’s design year, because they represent the highest anticipated traffic volumes.

**No-build Alternative**

Under the No-build alternative, by 2050, increased traffic volumes would cause I-94 eastbound to operate at level of service E or F during the morning and afternoon peak periods, while westbound I-94 would generally operate at level of service F during the morning and afternoon peak periods. Peak period travel times for the No-build alternative range from 9-14 minutes. For detailed information see Section 1.4.5 and illustrated in Exhibits 1-16 and 1-17.

**8- and 6-Lane Alternatives**

Under the 8-lane alternative in 2050, I-94 would generally operate at level of service C or D during the morning and afternoon peak periods in both directions (Exhibits 2-19, 2-20, 2-21, and 2-22). Morning and afternoon peak period travel times through the study area would be about 5 minutes in both directions (Table 3-3). Congestion would occur in some areas on I-94 by the year 2050, but speeds generally would not drop below 40 mph in these areas.

### Table 3-3. 2050 Projected Peak Period Travel Time

<table>
<thead>
<tr>
<th>Peak</th>
<th>I-94 Eastbound Travel Time</th>
<th>I-94 Westbound Travel Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8-lane</td>
<td>6-lane Half Hawley</td>
</tr>
<tr>
<td>Morning peak</td>
<td>4.8–5.0</td>
<td>4.9–8.6</td>
</tr>
<tr>
<td>Afternoon peak</td>
<td>4.8–4.9</td>
<td>4.9–8.0</td>
</tr>
</tbody>
</table>

* Travel times are reported for the hybrid interchange option at the Stadium Interchange. I-94 travel times are expected to be the same with the diverging diamond interchange.

**Bold** = preferred alternative.

min = minute(s)

For both 6-lane alternatives (half interchange at Hawley Road option and full interchange at Hawley Road option) in 2050, I-94 would generally operate at level of service E or F for most of the corridor in the morning and afternoon peak periods in both directions (Exhibits 2-19, 2-20, 2-21, and 2-22); this is the case for both Stadium Interchange options. Table 2-2 identifies where level of service E or F would occur and the approximate duration. Congestion in these locations generally impacts I-94 traffic operations for 3 to 4 hours of each weekday peak period with speeds dropping to less than 20 mph in these areas. This suggests that design modernization alone would not fully accommodate forecast demand along I-94. Traffic modeling also suggests that the congestion along I-94 would negatively
impact peak period traffic operations on WIS 175 and Brewers Boulevard approaching the Stadium Interchange. In addition, traffic congestion along I-94 may negatively impact adjacent freeways I-41, I-43, and I-894.

For the 6-lane alternative with half interchange at Hawley Road, eastbound morning and afternoon peak period travel times would range from about 5 to 9 minutes, while westbound morning and afternoon peak period travel times would range from about 5 to 14 minutes (Table 3-3). For the 6-lane alternative with full interchange at Hawley Road, eastbound morning and afternoon peak period travel times would range from about 5 to 10 minutes, while westbound morning and afternoon peak period travel times would range from 5 to 14 minutes (Table 3-3).

Peak period travel times for the 6-lane alternatives range widely while the 8-lane alternative travel times are generally consistent. This is indicative of less congestion and more operational consistency along I-94 for the 8-lane alternative.

**Stadium Interchange**

**No-build Alternative**

Under the No-build alternative, I-94 at the Stadium Interchange would operate at level of service E or F in the 2050 peak period. The Stadium Interchange ramp movements would only be controlled by ramp metering. Congestion on I-94 would constrain future operations of Stadium Interchange ramps for all interchange movements and would result in increased delay on the ramps and WIS 175 and Brewers Boulevard approaches.

**Hybrid Interchange Option**

For the 8-lane alternative, the hybrid interchange would operate at level of service C or better for all interchange movements in 2050. This does not account for delay incurred at the entrance ramp meters. The queues on the I-94 exit ramps would not back up onto I-94 and thus would not impact I-94 mainline traffic.

For the 6-lane alternative, the hybrid interchange would operate at level of service D overall toward the end of each peak period in 2050. Mainline congestion from I-94 would impact operations at the Stadium Interchange, which would increase intersection delay and degrade service.

**Diverging Diamond Interchange Option**

For the 8-lane alternative, the diverging diamond interchange operates at level of service D or better in the 2050 peak period for all interchange movements. This does not account for delay incurred at the entrance ramp meters. The queues on the I-94 exit ramps would not back up onto I-94 and thus would not impact I-94 mainline traffic.

For the 6-lane alternative, the diverging diamond interchange generally operates at level of service E to F during the morning peak period. This is due to I-94 mainline congestion and queuing associated with the 6-lane alternative, which restricts the ability for Stadium Interchange traffic to enter I-94. The diverging diamond largely operates at level of service C to D during the afternoon peak period for the 6-lane alternative.
Local Roads

No-build Alternative

The No-build alternative would continue to divert additional freeway traffic onto local streets during morning and afternoon peak hours because there would not be enough capacity on I-94 to handle the forecast traffic volumes.

8- and 6-Lane Alternatives

Traffic flow on local roads depends on the alternative identified for I-94 and the Stadium Interchange option. For the 8- and 6-lane alternatives with a half interchange at Hawley Road, additional traffic would use the 68th Street/70th Street interchange due to the lack of Hawley Road access from westbound I-94. Traffic would increase along 70th Street (2,500 vpd relative to full interchange at Hawley Road) but generally would not increase along 68th Street.

With the diverging diamond interchange at the Stadium Interchange, an additional 2,100 vpd would be anticipated along 35th Street south of I-94 compared to the hybrid interchange. This is primarily due to the diverging diamond interchange having less capacity due to traffic signals and lower speeds. As a result, some drivers would divert to other roads such as 35th Street (and to a lesser extent 68th Street, Hawley Road, and 27th Street) because the travel time would be similar.

As part of the alternatives with a half interchange at Hawley Road, WisDOT would construct some off-interstate improvements to provide additional capacity on local streets. Extending Washington Street would make it easier for drivers on Hawley Road to access the 68th Street/70th Street interchange, and changes at three intersections (70th Street/Greenfield Avenue; National Avenue/Greenfield Avenue; and Brewers Boulevard/National Avenue) would improve local road operations. See Section 3.3.3, Measures to Minimize and Mitigate Adverse Transportation Impacts, for more information.

Some local road intersections would operate at level of service E or F in the peak periods in the project’s design year (2050) with no improvements to the intersections. With the improvements to the local road intersections, these intersections would mostly operate at level of service D or better. The analysis indicates that the intersection improvements identified in the 2016 Final EIS are still valid for the 8- and 6-lane alternatives based on the updated 2050 forecasts.

For all alternatives, Park Hill Avenue would be removed between 34 and 36th streets to accommodate the improved 35th Street interchange ramps. At the 27th Street interchange, the 27th Street and St. Paul Avenue intersection would be improved by adding left- and right-turn lanes to increase its capacity. The 8- and 6-lane alternatives would continue to funnel traffic onto local roads (28th Street, 26th Street, 25th Street, and Clybourn Street) at the 27th Street interchange.

Freeway Access Changes

No-build Alternative

I-94 access would remain the same under the No-build alternative.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would change access to/egress from I-94 at some interchanges. Both the 8- and 6-lane alternatives would change I-94 access at Hawley Road, General Mitchell Boulevard and 35th Street. Access to Wisconsin Avenue from WIS 175 would also change. Section 2 and Table 3-4 describe the changes.
### Table 3.4. Freeway Access Changes

<table>
<thead>
<tr>
<th>Interchange</th>
<th>Alternative</th>
<th>Change in Access</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>68th Street/70th Street</td>
<td>All</td>
<td>No change</td>
<td>No impact</td>
</tr>
<tr>
<td>Hawley Road</td>
<td>6-lane (half Hawley) and 8-lane</td>
<td>Eliminates westbound exit and eastbound entrance to/from Hawley Road</td>
<td>No freeway access via Hawley Road to/from the east, eliminating freeway access to businesses and residences along Hawley Road from the east.</td>
</tr>
<tr>
<td></td>
<td>6-lane (full Hawley)</td>
<td>No change</td>
<td>No impact</td>
</tr>
<tr>
<td>General Mitchell Boulevard</td>
<td>Hybrid Stadium Interchange</td>
<td>Access to General Mitchell Boulevard via new exit ramps to 44th Street for eastbound traffic and exit ramps to a new north frontage road for westbound traffic</td>
<td>Change in access to American Family Field, VA Campus, and Story Hill from I-94.</td>
</tr>
<tr>
<td>Diverging Diamond Stadium Interchange</td>
<td></td>
<td>Access to General Mitchell Boulevard via a “hook” ramp for eastbound traffic and exit ramp to a new north frontage road for westbound traffic</td>
<td></td>
</tr>
<tr>
<td>35th Street</td>
<td>All</td>
<td>No access to/from 35th Street and WIS 175/Brewers Boulevard</td>
<td>Access would continue to be provided to 35th Street from I-94. Traffic on WIS 175/Brewers Boulevard could access 35th Street from Wisconsin Avenue or National Avenue.</td>
</tr>
<tr>
<td>25th/26th/28th Street</td>
<td>All</td>
<td>Interchange in same configuration as it is today</td>
<td>Maintains similar traffic patterns as today.</td>
</tr>
<tr>
<td>Wisconsin Avenue (from WIS 175)</td>
<td>Hybrid Stadium Interchange</td>
<td>No access between northbound WIS 175/Brewers Boulevard and Wisconsin Avenue</td>
<td>Access would continue to be provided to southbound WIS 175/ Brewers Boulevard from Wisconsin Avenue and to/from Wisconsin Avenue and I-94 via WIS 175.</td>
</tr>
</tbody>
</table>

#### 3.3.2.4 Safety

The 8- and 6-lane alternatives would improve safety on I-94. Recently, methods and tools have been developed to quantify safety as part of the transportation project development process. One of these tools is the Interactive Highway Safety Design Model (IHSDM). The IHSDM is an FHWA-developed software that analyzes crash frequency and crash severity along freeways, highways, arterials, ramps, and intersections. The model implements part C of the Highway Safety Manual and multiple NCHRP projects since 2016. IHSDM estimates the number of crashes based on traffic volume and roadway features such as curves, lane and shoulder width, length of deceleration and acceleration lanes, and weaving lengths. It should be noted that the IHSDM does not consider congestion, amongst other factors, as part of the crash projections.
No-build Alternative

Under the No-build alternative, none of the existing safety issues on I-94 would be addressed. The crash rate would likely remain the same or worsen by 2050. The predictive safety analysis projects that the No-build alternative would have approximately 2,611 total crashes between 2025 and 2034 along the I-94 mainline, which is 478 to 557 more crashes than the 8- and 6-lane alternatives. Congestion would continue to increase, and as a result, more traffic would divert to local streets. In general, travel on local streets takes longer than travel on freeways, and crash rates are also higher on local streets than freeways (based on WisDOT crash data). Higher traffic volumes on local streets also increase the potential for car-pedestrian and car-bicycle crashes.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would improve safety on I-94 compared to the No-build alternative. Lower crash rates are due to upgrading I-94 to current design standards in most locations, removing the left-hand ramps at General Mitchell Boulevard and the Stadium Interchange, and improving ramp spacing. Crash data from the Marquette Interchange (I-94/I-43/I-794, just east of 16th Street) and Zoo Interchange before and after their reconstruction support this conclusion. Following the reconstruction of the Marquette Interchange in 2008, the total crash rate decreased by 48 percent. Following the reconstructions of the Zoo Interchange in 2018, the total crash rate decreased by 29 percent.

Mainline I-94. Along mainline I-94 (not including ramps and intersections), per IHSDM analysis, the 8-lane alternative is predicted to reduce crashes by 18 percent (with hybrid Stadium Interchange) to 21 percent (with diverging diamond Stadium Interchange) compared with the No-build alternative. The 6-lane alternative with half interchange at Hawley Road is predicted to reduce crashes on I-94 by 20 percent (diverging diamond interchange) to 21 percent (hybrid interchange) compared with the No-build alternative. The 6-lane alternative with full interchange at Hawley Road is predicted to have more crashes than the half interchange option because with the full interchange, there are more potential conflicts between I-94 traffic and traffic that is entering and exiting at Hawley Road. Due to the 8-lane alternative having higher traffic volumes than the 6-lane alternatives, the 8-lane alternative is predicted to have the lowest crash rate (crashes per VMT) of all the alternatives.

Stadium Interchange and Mitchell Boulevard Interchange. At the Stadium Interchange and Mitchell Boulevard Interchange ramps and intersections between 2025 and 2034 (a 10-year analysis period), the 8- and 6-lane alternatives with the hybrid interchange are predicted to have 5 percent fewer crashes than the No-build alternative. Meanwhile, the 8- and 6-lane alternatives with the diverging diamond interchange are predicted to have 16 percent and 12 percent more crashes, respectively, than the No-build alternative. While the diverging diamond interchange is predicted to have slightly less fatal crashes than the hybrid interchange, the diverging diamond would have more injury and property damage only crashes. More exiting traffic from I-94 will travel through a signalized intersection with the diverging diamond interchange due to the elimination of the free-flow flyover ramps included with the hybrid interchange). Both Stadium Interchange build alternatives downgrade the current system (free-flow) interchange, introducing more vehicle conflict points through added intersections; however, they remain safe and are suitable for their intended use of moving traffic in a constrained urban corridor. A diverging diamond interchange is one of the safest and most efficient types of service interchanges. The increase in crashes is a trade-off of providing a lower-level interchange type (system interchange vs service interchange).

I-94 Mainline plus all ramps and intersections between 70th Street and 16th Street. For the I-94 mainline, including all ramps and ramp intersections, the 8-lane alternative is predicted to reduce
crashes by 4 percent with the hybrid Stadium Interchange and increase crashes by 2 percent with diverging diamond Stadium Interchange, compared with the No-build alternative. The 6-lane alternative with half interchange at Hawley Road is predicted to reduce crashes by 5 percent with the hybrid Stadium Interchange and increase crashes by 1 percent with the diverging diamond Stadium Interchange, compared with the No-build alternative. The 6-lane alternative with full interchange at Hawley Road is predicted reduce crashes by 1 percent with the hybrid Stadium Interchange and increase crashes by 3 percent with the diverging diamond Stadium Interchange, compared to the No-build alternative.

While mainline I-94 is safer for the 8- and 6-lane alternatives compared to the No-build alternative, when accounting for the Stadium Interchange and all service interchanges, the results vary. This is due to:

- The existing Stadium Interchange being a system interchange with no intersection conflict points versus the 8- and 6-lane alternatives downgrading this interchange to a hybrid or service interchange. The increase in crashes is caused by an increase in conflict points at the ramp terminal intersections.
- The hybrid interchange has fewer crashes than the diverging diamond interchange due to fewer intersection conflict points.
- Although there are more predicted crashes with the diverging diamond interchange compared to a system and hybrid interchange, the interchange is considered safe by WisDOT and is suitable for its intended use of moving traffic in a constrained urban corridor.

The 6-lane alternative with half interchange at Hawley Road would redirect some traffic to local roadways, which would cause some increase in crash frequency along these streets. As a result of no eastbound I-94 access to Hawley Road, drivers would exit I-94 at adjacent interchanges and use local roads to replace the lost access at Hawley Road. This diversion would not occur with the 6-lane alternative with full interchange at Hawley Road because the Hawley Road interchange would remain open.

While the 8-lane alternative has only a half interchange at Hawley Road, it has the largest reduction in local road crashes because it has the largest reduction in local road traffic volumes. Table 3-5 shows the predicted local road crashes for the 8- and 6-lane alternatives relative to the No-build Alternative. These are changes in the number of crashes per year when compared to the no-build condition at select local road intersections. A positive number reflects an increase in the number of crashes per year, while a negative number reflects a decrease in the number of crashes per year. The 8-lane alternative is predicted to result in the decrease of about 7 crashes per year on local roads due to this alternative resulting in a lower volume of traffic on some local roads.

---

2 Includes immediately adjacent local roadways to I-94: Greenfield Avenue, National Avenue, Bluemound Road, Wisconsin Avenue, Hawley Road, 27th Street, 35th Street, and 70th/68th Street.
Table 3-5. Estimated Local Road Crash Changes Compared with No-Build Alternatives

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Crashes/Year</th>
<th>10-Year Crash Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fatal and Injury</td>
<td>Property Damage Only</td>
</tr>
<tr>
<td>6-lane Alternative (with half interchange at Hawley Road)</td>
<td>1.1</td>
<td>2.1</td>
</tr>
<tr>
<td>6-lane Alternative (with full interchange at Hawley Road)</td>
<td>-0.9</td>
<td>-1.6</td>
</tr>
<tr>
<td>8-lane Alternative</td>
<td>-2.8</td>
<td>-5.1</td>
</tr>
</tbody>
</table>

Note: **Bold** signifies preferred alternative.

The 8-lane alternative and 6-lane alternative with full interchange at Hawley Road would have narrow lanes and shoulders in the approximately 2,000-foot segment from Hawley Road to Zablocki Drive to avoid encroachment on the adjacent cemeteries. FHWA and WisDOT have adopted AASHTO’s *A Policy on Design Standards—Interstate System* (2016) standard freeway lane widths of 12 feet and consideration of 12-foot paved shoulders where truck traffic exceeds 250 hourly traffic volume in the design year. The 6-lane alternative with half interchange at Hawley Road would have standard lane widths but narrow shoulders in this segment. Narrow lanes on an interstate lead to a reduced level of service because motorists are less likely to stay within their lanes and therefore tend to slow down, which is a safety issue. On any high-speed roadway, the primary safety concerns with reducing lane width are crashes related to lane departure. Narrow lanes generally result in a greater number of run-off-road crashes, sideswipe crashes, rear-end crashes if operations deteriorate, reduced free-flow speed, and large vehicles leaving their lanes into other lanes or the shoulder. Safe and efficient traffic operations can also be adversely affected by not providing adequate shoulder width.

According to the *Safety Prediction Methodology and Analysis Tool for Freeways and Interchanges* (NCHRP 2012) going from a 12-foot-wide lane to a 10.5-foot-wide lane would increase fatal plus injury crashes by 7.5 percent. In addition, going from a 6-foot-wide inside shoulder to a 2-foot-wide inside shoulder would increase fatal plus injury crashes by 8 percent. All alternatives would reduce crashes on I-94 compared to the No-build alternative despite narrow lanes and/or shoulders between Hawley Road and Zablocki Drive. This is due to improved design and less congestion on I-94.

**Additional Safety-related Concerns of the 8- and 6-Lane Alternatives**

Based on the data and analysis set forth in this Supplemental Draft EIS, WisDOT and FHWA’s position is that alternatives will meet nationally accepted design criteria, unless meeting the criteria would incur a high level of impact that cannot be reasonably mitigated, or would compromise another purpose and need factor. As part of developing alternatives, WisDOT and FHWA balanced safety and traffic operations improvements with costs and impacts. If a portion of the alternative does not meet existing design criteria, a design exception will be required and documented during final design. In addition, there are other design elements that are concerns from a safety standpoint, even though these design elements would not require a design exception.

FHWA and WisDOT have adopted AASHTO’s *A Policy on Design Standards—Interstate System* (2016) standard freeway lane widths of 12 feet and consideration of 12-foot paved shoulders where truck traffic exceeds 250 hourly traffic volume in the design year. Based on the information in the following paragraphs, this criterion cannot be met for the section of I-94 between the cemeteries.

Under the 8-lane alternative, I-94 would have less than 12-foot driving lanes and narrow shoulders in the approximate 2,000-foot segment from Hawley Road to Zablocki Drive, to avoid encroachment on the...
adjacent cemeteries. For eastbound traffic, there would be less than 12-foot lanes for 1,610 feet, less than 12-foot inside shoulders for 1,460 feet, and less than 12-foot outside shoulders for 1,390 feet. For westbound traffic, there would be less than 12-foot lanes for about 1,500 feet, less than 12-foot inside shoulders for 1,480 feet, and less than 12-foot outside shoulders for 1,075 feet. Lane widths would be as narrow as 11 feet for roughly 30 feet in each direction, and shoulders would be as narrow as 2 feet.

For the 6-lane alternative with the half interchange at Hawley Road, I-94 would have 12-foot driving lanes and narrow shoulders in the segment from Hawley Road to Zablocki Drive. The 6-lane alternative with full interchange at Hawley Road would have less than 12-foot driving lanes and narrow shoulders in this segment, similar to the 8-lane alternative. The shoulder widths would vary in the segment between the cemeteries because the available right-of-way varies. For eastbound traffic with the half interchange at Hawley Road, the outside shoulder would be 9 feet and the inside shoulder would be 5 feet; for westbound traffic, the outside shoulder would be 7.5 feet and the inside shoulder would be 4.5 feet. For eastbound traffic with the full interchange at Hawley Road, the outside shoulder would be about 4 feet, and all other shoulders for eastbound and westbound traffic would be 2 feet. East and west of the cemeteries, for all alternatives, I-94 would have standard 12-foot lanes and 12-foot shoulders.

Narrow lanes and/or narrow shoulders would create operational and safety issues. The narrow lanes and/or shoulders would not provide the room needed to adequately address the emergency response activities and clearing of incidents. Shoulders less than 8 feet do not provide the needed space to shield the vehicles directly involved in the incident, and the narrower shoulders and/or narrower lanes and lack of auxiliary lanes would likely require closing 2 travel lanes to deal with incidents. Closing two travel lanes would have safety and operational impacts on I-94, and the traffic would be diverted onto local streets. Narrow shoulders would make it more difficult for emergency vehicles to get through this part of I-94 while responding to an issue on another part of the freeway system.

Reduced sight distance (stopping sight distance and decision sight distance) could add safety and operational risks in some situations. Lack of sight lines to incident locations, stalled vehicles, or objects in the roadway would reduce drivers’ ability to avoid these situations.

The 8- and 6-lane alternatives would not meet the decision sight distance standard for a 400-foot length east of Hawley Road near the eastbound exit to the Stadium Interchange, which would increase the risk for safety and operational problems. Also, there would be less-than-minimum decision sight distance for a 600-foot length segment west of Zablocki Drive near the westbound exit ramp to 68th Street/70th Street.

Both the 8- and 6-lane alternatives would require a design exception for inadequate sight distance in the cemetery area. The slight curve on I-94 through the cemeteries, combined with the narrow shoulders, would cause the concrete median barrier to reduce sight distance. In addition, the 8- and 6-lane alternatives would require a design exception for inadequate stopping sight distance on the eastbound exit ramp to 26th Street and westbound entrance ramp from 28th Street.

The exact mitigation elements to make drivers aware of narrow lanes and narrow shoulders, along with the sight distance concern, will be addressed as part of final design.

For the 8-lane alternative, the weaving distance between the westbound Hawley Road entrance ramp and westbound exit ramp to 68th Street would be slightly short of the 1,000-foot minimum weaving distance on a freeway between exit and entrance ramps. The auxiliary lanes between the 68th Street and Hawley Road ramps would help address the less-than-minimum weaving distance. However, during higher traffic volume times of the day or when vehicles on I-94 are closely spaced in the outside lane, the shorter weave length would add to the crash risk due to the reduced interaction time between vehicles entering and exiting the ramps with mainline traffic. Also, the eastbound exit ramp to Hawley
Road would occur after a curve, meeting only minimum stopping sight distance, which raises the risk of having safety and operational problems. There would be a similar situation for the westbound entrance ramp at Hawley Road.

Additionally, snow removal would be more difficult in the area where there are narrow shoulders. Snowplow drivers could shove the snow along the freeway until the shoulder widens enough to store the snow. Milwaukee County, which is responsible for clearing snow from freeways, stated that for major storm events it might be necessary to close the outside lane of I-94 until it could adequately remove the snow. A snow blower or front-end loader would remove the snow overnight, which is more expensive and would require closing 2 of the 4 lanes.

Under the 8-lane alternative and 6-lane alternative with full interchange at Hawley Road, if oversize/overweight vehicles were permitted to use I-94 through Milwaukee, the vehicles would require the use of 2 travel lanes through the narrow cemetery area due to the 11-foot lanes and minimal shoulders. Oversize/overweight vehicles would be permitted to use this portion of I-94 only during off-peak travel periods to minimize the disruption of normal traffic flow.

For both Stadium Interchange alternatives the westbound entrance ramp from the Stadium Interchange to westbound I-94, though meeting the entrance ramp design criteria, would not provide sufficient shoulder width at the end of the ramp to allow an emergency relief area if a driver is not able to merge onto the mainline by the end of the ramp. Because the shoulder width would be constrained adjacent to the cemetery, a shoulder for a vehicle to stop on or drive along is not available. Drivers would be traveling at or near freeway speed as they reach the end of the ramp, and a fairly long shoulder length would be needed to allow for either adequate deceleration length to come to a stop or additional length for the driver to find a gap in the mainline traffic when merging off the shoulder.

Narrow lanes and/or narrow shoulders could make off-tracking (deviating from their lane) by larger trucks a risk. A look at crash history on westbound I-94 between 16th Street and 35th Street (reconfigured with 11-foot lanes and narrow shoulders) has not indicated any crash problems, though the longer length of the cemetery curves may add to a higher potential of truck off-tracking under some situations.

The interchange and ramps at 28th/26th/25th Streets would remain in an existing split-ramp interchange configuration. This adds safety and operational risks, due to interchange traffic having to drive along sections of city streets where traffic crashes and congestion levels are higher, and creates confusion to unfamiliar drivers.

### 3.3.2.5 Bicycle/Pedestrian Impacts

No new bike and pedestrian accommodations would be built under the No-build alternative. Under the 8- and 6-lane alternatives, WisDOT would build bike and pedestrian accommodations at cross streets, interchanges, overpasses, and underpasses in accordance with the USDOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations (USDOT 2010) and Federal Highway Administration Bicycle and Pedestrian Planning, Program, and Project Development (FHWA 2019). The USDOT’s Bicycle and Pedestrian Accommodation Plan encourages state departments of transportation and other agencies to design and operate roadway rights-of-way to enable safe access for all users, including bicycle facilities and pedestrian walkways. Wisconsin State Statute 84.01(35) notes that WisDOT shall give due consideration to establishing bikeways and pedestrian ways in all new highway construction and reconstruction projects funded in whole or in part from state funds or federal funds. For the 8- and 6-lane alternatives, no existing bicycle or pedestrian facilities would be eliminated. Local roads reconstructed as part of this project will include pedestrian accommodates to meet or exceed...
what was existing and include bike lanes or shared-use lanes. Specific pedestrian and bicycle accommodations will be determined during final design.

Bicycle and pedestrian accommodations would also be considered for the Washington Street extension and the local road intersection improvements as part of final design. Existing pedestrian and bicycle access at these locations would remain and access would be added or improved in certain locations.

Several bicycle and pedestrian improvements are part of the 8- and 6-lane alternatives, detailed in Section 2.2.1 and shown on Exhibit 2-6:

- A connection between the Hank Aaron State Trail and the Oak Leaf Trail along 44th Street and Wells Street, traveling under I-94 east of the Stadium Interchange. Between Selig Drive and Bluemound Road, the existing path/sidewalk on the west side of 44th Street would remain, and WisDOT would construct a 10-foot shared-use path on the east side of 44th Street. North of Bluemound Road, the existing 6-foot sidewalk on the west side of 44th Street would remain, and WisDOT would add shared-lane pavement markings for bikes along 44th Street and Wells Street.

- A new access point to the Hank Aaron State Trail at 64th Street. This paved connection would be about 50 feet long and provide access to the trail directly from Dickinson Street, near 64th Street. Currently, there is no Hank Aaron State Trail access between 68th and 60th Streets. Approximately three blocks to the north, 64th Street crosses under I-94 (the only street to do so between 68th and 60th Streets), making it a good location to provide access to the trail for those north of I-94.

- Contingent on future electrical substation relocation plans in the immediate area, a connection between 32nd Street and Greves Street to provide better access to the Menomonee Valley. WisDOT would construct a 10-foot shared-use path connecting 32nd Street with Greves Street. On Greves Street, the existing 6-foot sidewalk would remain and WisDOT would add a new sidewalk from 25th Street to St. Paul Avenue on the north side of Greves Street. WisDOT would also add shared-lane pavement markings for bikes.

- A shared-use path along 25th Street for bicycles and pedestrians to connect the area north of I-94 to the Menomonee Valley. WisDOT would construct a 10-foot shared-use path on the west side of 25th Street north of St. Paul Avenue, and a 10-foot shared-use path on the east side of 25th Street south of St. Paul Avenue. Having the shared-use path on the west side of 25th Street north of St. Paul Avenue avoids conflict with I-94 ramp movements and the path on the east side of 25th Street, south of St. Paul Avenue allows the path to connect to the existing path south of the project limits. WisDOT would also add 6-foot sidewalks along 26th Street and signalized intersections at 25th/26th Streets and St. Paul Avenue, allowing pedestrians and bicyclists to safely cross these streets to access the path via crosswalks at the signalized intersections.

Table 3-6 shows where bicycle and pedestrian accommodations are located, and if they would be provided as part of 8- and 6-lane alternatives. The table also notes any constraints to providing full bicycle and pedestrian access.

I-94, Brewers Boulevard, and WIS 175 have no bicycle or pedestrian accommodations. Reconstructed portions of Zablocki Drive would also have no separate bicycle facility because traffic volumes are low enough to allow for bicycles on the street, and widening Zablocki Drive to provide additional bicycle and pedestrian accommodations may have an adverse impact on the Soldiers’ Home NHL. The new north frontage road between Yount Drive and General Mitchell Boulevard would have an existing trail parallel to it, making an additional bicycle facility unnecessary.

There would be no permanent adverse impacts to the Hank Aaron State Trail or Oak Leaf Trail. See Section 3.26 for additional information regarding the Hank Aaron State Trail and Oak Leaf Trail.
### Table 3-6. Bicycle and Pedestrian Accommodations on Cross Streets in the I-94 East-West Corridor

<table>
<thead>
<tr>
<th>Location</th>
<th>Existing</th>
<th>Proposed</th>
<th>Constraints to providing full bicycle and pedestrian accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ped</td>
<td>Bike</td>
<td>Ped</td>
</tr>
<tr>
<td>70th Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>68th Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>O’Connor Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Kearney Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>69th Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>64th Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Hawley Road</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Dana Court</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Zablocki Drive</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>General Mitchell Boulevard</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>North Frontage Road (between General Mitchell Boulevard and Yount Drive)</td>
<td>N/A</td>
<td>N/A</td>
<td>Y</td>
</tr>
<tr>
<td>Yount Drive</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>46th Street</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
</tr>
<tr>
<td>44th Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Bluemound Road</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Selig Drive</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>35th Street</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>
Table 3-6. Bicycle and Pedestrian Accommodations on Cross Streets in the I-94 East-West Corridor

<table>
<thead>
<tr>
<th>Location</th>
<th>Existing</th>
<th>Proposed</th>
<th>Constraints to providing full bicycle and pedestrian accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park Hill Avenue</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Existing and proposed sidewalks only on the north side of the street. The south side is immediately adjacent to I-94.</td>
</tr>
<tr>
<td>32nd Street</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>27th Street</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>26th Street</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>25th Street</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>St. Paul Avenue</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Existing sidewalk on north side only from 29th Street to 25th Street. Proposed sidewalk would be on both sides through the area.</td>
</tr>
<tr>
<td>National Avenue (at Brewers Boulevard)</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Brewers Boulevard</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Brewers Boulevard (south of National Avenue)</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Washington Street</td>
<td>N/A</td>
<td>N/A</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>New construction</td>
</tr>
</tbody>
</table>

Stadium District = Southeast Wisconsin Professional Baseball Park District

3.3.3 Measures to Minimize and Mitigate Adverse Transportation Impacts

Section 3.27, Construction, describes measures to manage congestion during construction as a result of lane closures on I-94 and adjacent local streets. WisDOT developed a draft 30% Transportation Management Plan (TMP) Report in April 2022 to coordinate and manage traffic impacts associated with construction (Appendix B-5). This documentation is a draft, and the potential improvements and related costs for mitigation will vary based on final design, construction timing, and construction staging. The document identified ways that transit can be used to mitigate the construction delays for all users in the corridor and identify transit infrastructure improvements that could remain post-construction for potential, future transit service improvements. WisDOT identified spending $25-$30 million on transit for operational (additional bus runs, maintaining headways) and infrastructure (signals, bus stops, lane modifications) costs for construction traffic mitigation.

As part of the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, WisDOT would construct off-interstate improvements to mitigate the traffic impacts of partially closing the Hawley Road interchange. The improvements are extending Washington Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange, and improvements at three local road intersections to improve local road operations under the partial closure of the Hawley Road interchange.
Existing Washington Street is about 0.5 mile south of I-94 and currently intersects 70th Street and dead ends a few blocks to the east. A new Washington Street alignment would be constructed to provide a connection between 70th Street and Hawley Road/60th Street. Connecting 70th Street to Hawley Road/60th Street via Washington Street would provide convenient access to and from Hawley Road from the 68th Street/70th Street interchange for traffic that would no longer be able to enter I-94 eastbound or exit from I-94 westbound at Hawley Road.

In addition to the Washington Street connection, WisDOT has identified three local road intersections for improvements to mitigate traffic congestion because of the partial closure of the Hawley Road interchange. Each of the intersections would see a modest increase in traffic volumes as a result of the access change at Hawley Road. The following are the local road intersections:

- 70th Street/Greenfield Avenue
- National Avenue/Greenfield Avenue
- Brewers Boulevard/National Avenue

At the 70th Street/Greenfield Avenue intersection, WisDOT would restripe the pavement to extend the southbound left-turn lane and improve the traffic signals to improve traffic operations. No right-of-way acquisition would be required for the improvements.

At the National Avenue/Greenfield Avenue intersection, WisDOT would restripe the pavement and improve the traffic signals. Along National Avenue, northeast-bound National Avenue would be restriped to provide for a combined left and through lane, along with a right-turn lane. This would eliminate approximately 100 feet of on-street parking (about five parking spots). For southwest-bound National Avenue, a combined left and through lane, along with a right-turn lane, would be provided. This would eliminate approximately 150 feet of on-street parking. Along Greenfield Avenue, a left-turn lane and a combined through and right-turn lane would be provided in each direction. This would remove about 70 feet of parking along westbound Greenfield Avenue.

At the Brewers Boulevard/National Avenue intersection, WisDOT would restripe traffic lanes and improve traffic signals. A second left-turn lane would be added to northbound Brewers Boulevard. Along National Avenue, west of Brewers Boulevard, the second westbound through lane would be extended by 500 feet to a spot between 45th and 46th streets. In addition, a right-turn lane would be provided from westbound National Avenue to the VA entrance at General Mitchell Boulevard/47th Street. This was requested by the VA to improve access to its campus, and it would improve traffic operations along National Avenue.

WisDOT and FHWA would coordinate with Canadian Pacific Railway to minimize interruptions to rail service while replacing the I-94 bridge over the Canadian Pacific Railway. WisDOT and FHWA would also work with MCTS and inter-county bus service providers to minimize disruption to their routes during construction (see Section 3.27.4.4).

With the half interchange at Hawley Road, WisDOT would modify the I-94 signage along key arterials to direct drivers to the 68th Street/70th Street interchange or the Stadium Interchange. If needed, as part of the TMP, traffic calming measures could be installed along residential streets adjacent to the Hawley Road interchange, like Main Street and Adler Street south of I-94 and Dixon Street north of I-94. Under the half interchange at Hawley Road, traffic calming measures would deter drivers from using these residential streets to reach the 68th/70th Street interchange. These mitigation measures may vary based on final design, construction timing, and construction staging.
3.4 Utilities

3.4.1 Affected Environment

There are many underground and overhead utilities in the project corridor. The utilities noted in this section are “major” utilities: electrical and gas transmission lines, large water lines, and sewers (over 84-inch).

3.4.1.1 Electrical

ATC owns a 138-kilovolt overhead electrical transmission line corridor (consisting of three lines and a spare circuit) that generally parallels I-94 and crosses it twice. On the east end of the I-94 East-West Corridor, the electrical transmission lines originate at a substation north of I-94 at 27th Street. The transmission lines cross the freeway just west of the substation and run parallel south of I-94 before crossing over I-94 again just east of General Mitchell Boulevard. The lines parallel the north side of I-94 to the west study limit at 70th Street. West of Hawley Road to the west study limit, the lines are on two parallel sets of transmission towers. The line also crosses the southern end of the Stadium Interchange (Exhibit 3-5). ATC also has an underground transmission line that crosses I-94 at 70th Street.

There are four electrical substations along I-94: north of I-94 at 27th Street, south of I-94 on Greves Street (at about 30th Street), the Park Hill substation south of I-94 just east of the Stadium Interchange, and north of I-94 between 69th Street and 68th Street.
3.4.1.2 Gas
Gas mains are below local streets and below freeway crossings. Also, a high-pressure gas line runs north-south through the east end of the Stadium Interchange. A 20-inch gas main crosses over I-94 on the 25th Street bridge.

3.4.1.3 Water
All the drinking water in the study area comes from the Milwaukee Water Works. Water mains are below local streets and at freeway crossings. A 48-inch water line crosses under I-94 at Hawley Road. East of the Stadium Interchange along 44th Street, 36-inch and 30-inch water lines cross under I-94. A 12-inch line crosses under I-94 just east of 35th Street, and a 24-inch line crosses under I-94 at 32nd Street. A 12-inch line crosses I-94 under the 27th Street bridge deck. A 36-inch water line crosses under WIS 175 just south of Bluemound Road.

3.4.1.4 Sewer
Sewer mains are below local streets and at freeway crossings. A 96-inch MMSD sewer crosses under I-94 just east of Hawley Road. A 31-foot-deep tunnel of MMSD’s Inline Storage System (also known as the Deep Tunnel) crosses under I-94 east of 44th Street. An access shaft to the tunnel is just north of I-94 on the east side of 44th Street. An 84-inch sewer runs along 40th Street and crosses I-94. An 84-inch MMSD sewer and inline storage system crosses under the 35th Street bridge just south of I-94. A 96-inch combined sewer crosses under I-94 at St. Paul Avenue/27th Street. A 144-inch combined sewer crosses under I-94 at 26th Street.

3.4.1.5 Fiber Optics
Three fiber optic lines run the length of the project, parallel to and under I-94. Other fiber optic lines cross under I-94.

3.4.2 Utility Impacts

3.4.2.1 No-build Alternative
Under the No-build alternative, no utility impacts would occur.

3.4.2.2 8- and 6-Lane Alternatives
The 8- and 6-lane alternatives would require moving 16 overhead electrical transmission towers and lines east of General Mitchell Boulevard and the two electrical substations south of I-94, including one just east of the Stadium Interchange (Park Hill) and at Greves Street. The transmission towers and lines west of General Mitchell Boulevard and north of I-94 would not need to be moved under any of the alternatives.

ATC, the owner of the Park Hill substation, and We Energies, the owner of the Greves Street substation, are currently evaluating potential locations for new substations (Exhibit 3-5).

ATC and We Energies are currently evaluating three combined sites for the replacement of the Park Hill and Greves Street substations. One potential combined site is located at the former Red Star Yeast
property west of 27th Street south of I-94. This is considered the most viable site. Another site is south of Greves Street west of 27th Street that would occupy both City of Milwaukee property and a portion of the Thiel Tannery property. A third potential site is a property owned by the Rexnord Industries LLC (Falk) in the Menomonee Valley, south of I-94 and west of 27th Street. Falk is one of the main users of electricity provided by the Greves Street substation.

ATC is looking at separate locations for a standalone substation to replace the Park Hill substation. One site is west of 44th Street between Selig Drive and I-94. Another site being investigated by ATC is confidential.

A final determination on location will occur prior to completion of the Supplemental Final EIS/Record of Decision for this project. It is anticipated that the combined sites would occupy approximately 2 to 3 acres, and standalone substations for ATC and We Energies would occupy approximately 1.5 to 2 acres for each. It is anticipated these site(s) will be within existing highway right-of-way.

All alternatives would require about 15 acres of We Energies land (mostly south of I-94, east of WIS 175) converted to new I-94 right-of-way.

The 96-inch combined sewer crossing under I-94 at St. Paul Avenue from 27th Street to 25th Street may be relocated south of St. Paul Avenue. The 144-inch combined sewer crossing under I-94 at 26th Street may be relocated to the east side of 26th Street.

Several smaller electrical lines would likely need to be relocated, as well as phone lines, cable lines, storm sewers, and sanitary sewers. The 20” gas line along the 25th Street bridge will continue to be evaluated into final design. It is desirable to remove the gas line from the bridge. WisDOT will continue to coordinate with We energies on the final location of this gas line.

The extension of Washington Street and improvements to local road intersections would have no impact on major utilities.

3.4.3 Measures to Minimize and Mitigate Adverse Utility Impacts

WisDOT would compensate utilities for relocating their facilities and/or compensate for acquisition of real estate interests in compliance with state and federal law. Most utilities that are currently in WisDOT’s right-of-way would be moved by the utility companies without compensation from WisDOT. WisDOT and FHWA would continue coordinating with utilities, municipalities, and Milwaukee County to avoid or minimize interruptions in service during construction. The estimate of utility relocation costs for all alternatives is about $100 million (in 2021 dollars).
3.5 Residential Development

3.5.1 Affected Environment

West of the Stadium Interchange, there are residential neighborhoods north and south of I-94 and in the northwest quadrant of the Stadium Interchange. The residences west of Hawley Road are mostly single-family and two-family units. North of I-94, houses are separated from I-94 by an electrical transmission line corridor.

South of I-94, 22 houses are adjacent to I-94 between 70th Street and Hawley Road: 16 are single-family homes; 5 are two-family homes; and 1 is a 16-unit apartment building at Kearney Street and 70th Street.

In the northeast quadrant of the Hawley Road interchange, on Dana Court there is one single-family residence and one apartment above a commercial establishment.

The Story Hill neighborhood is in the northwest quadrant of the Stadium Interchange. It is mostly single-family housing with some two-family residences and one 34-unit apartment complex (Story Apartments).

East of the Stadium Interchange, in the northeast quadrant, the Valley Park neighborhood has single-family, two-family, and multifamily homes. There are no residences south of I-94 east of the Stadium Interchange. The neighborhood north of I-94 is a mix of single-family, two-family, and multifamily residences. Most residences are buffered from I-94 by Park Hill Avenue. The largest multifamily building is the City of Milwaukee Housing Authority’s 120-unit Merrill Park housing development for the elderly and disabled on 33rd Street and Park Hill.

There are no residences adjacent to the Washington Street extension (Exhibit 2-1). There are some residences near the three local road intersection improvements, including senior apartments in the southeast quadrant of the 70th Street/Greenfield Avenue intersection.
3.5.2 Residential Development Impacts

3.5.2.1 Displacement Impacts

No-build Alternative

No residential displacements would occur under the No-build alternative.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would displace one residence along the I-94 eastbound entrance from 68th Street (Exhibit 3-6). In addition to the one displacement (0.13 acre), the 8- and 6-lane alternatives would acquire property-only from an additional 20 residences, resulting in an additional 0.24 and 0.21 acre, respectively, of new right-of-way required from residential properties.

The number of residential displacements was reduced from eight in the 2016 Final EIS to one in this Supplemental Draft EIS. Input from the community and local governments led WisDOT to refine the 8- and 6-lane alternatives to reduce residential displacements. Section 2.2.1 describes the design refinements WisDOT made since the 2016 Final EIS.

3.5.2.2 Neighborhood Splitting

None of the alternatives would split a neighborhood. I-94 and its ramps would remain in its existing corridor, and largely within the existing right-of-way.

3.5.3 Measures to Minimize and Mitigate Adverse Residential Impacts

The alternatives were designed to stay within the existing right-of-way as much as possible to minimize the impact on surrounding residences. Due to design refinements, the number of residential displacements was reduced to one from eight for the preferred alternative identified in the 2016 Final EIS. All property acquisition will comply with state and federal law, including providing payment of just compensation for residences displaced for a federally funded transportation project (Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended [Uniform Act]). Acquisition price, replacement dwelling costs, moving expenses, increased rental or mortgage payments, closing costs, and other relocation costs are covered for residential displacements.

Under state law, no person or business would be displaced, unless a comparable replacement dwelling, business location, or other compensation (when a suitable replacement business location is not available) would be provided. Compensation is available to all displaced persons without discrimination. Prior to appraisals and property acquisition, an authorized relocation agent would interview each owner and renter to be relocated in order to determine their needs, desires, and unique situations associated with relocating. The agent would explain the relocation benefits and services each owner may be eligible to receive.

Property acquisitions not involving residential, business, or other building relocations would be compensated in accordance with federal and state laws. Federal property acquisition law provides for payment of just compensation for property acquired for a federally funded transportation project (Uniform Act). Before initiation of property acquisition, WisDOT provides information explaining the acquisition process and the state’s Eminent Domain Law set forth in Wis. Stat. § 32.05. A professional appraiser inspects the property to be acquired. Property owners are invited to accompany the appraiser to ensure that full information about the property is taken into consideration. Property owners may also obtain an independent appraisal. Based on the appraisal, the value of the property is determined and
that amount is offered to the owner. If agreement on fair market value cannot be reached, the owner would be advised of the appropriate appeal procedure.

A search of available housing from local realtor listings in July 2022 reported 12 homes of similar price ($150,000 to $200,000) to the only displaced residence, within roughly 1 mile of I-94 west of WIS 175/Brewers Boulevard (www.shorewest.com; accessed July 2022).

Septic tanks, drain fields, or wells on acquired properties would be abandoned in accordance with state regulations and local zoning standards. WisDOT will survey all buildings to be demolished to determine whether asbestos or lead paint is present. All appropriate and applicable engineering and regulatory controls will be followed during the handling and disposal of asbestos-containing material and lead-based paint. Contractors must comply with regulations of the USEPA; asbestos National Emission Standards for Hazardous Air Pollutants; the Occupational Safety and Health Administration regulations on asbestos removal; local government regulations; and all other applicable regulations. The most recent editions of all applicable standards, codes, or regulations shall be in effect. Persons performing asbestos abatement must comply with all training certification requirements, rules, regulations, and all state and federal laws regarding asbestos removal.

Before a contractor demolishes a building that may contain or is known to contain asbestos, the contractor must notify the WDNR and the Wisconsin Department of Health and Family Services at least 10 working days before starting the work, using WDNR Form 4500-113: “Notification for Demolition and/or Renovation and Application for Permit Exemption.”

Demographic data for the areas in which the residential displacement would occur do not indicate age, disability, or income characteristics that would require special relocation consideration or services. WisDOT also coordinated with potential relocated residents prior to and during public meetings, and no special relocation considerations or services were identified at those times. If unusual circumstances were to arise during real estate activities, WisDOT real estate personnel would be available to provide appropriate relocation services and accommodate any special relocation consideration or services that may arise.

During the project’s final design phase, WisDOT would design lighting in accordance with national standards and in such a way to minimize the amount of freeway lighting that enters adjacent residential neighborhoods. Freeway lighting would be designed similar to what it is today, focused on lighting in the median.

3.6 Commercial and Industrial Development

3.6.1 Affected Environment

I-94 is a major regional and national route serving economic and commercial centers. Commercial and industrial development occurs throughout the I-94 East-West Corridor, with the highest concentration along the east segment and arterials adjacent to I-94 such as Bluemound Road, Wisconsin Avenue, National Avenue, and Brewers Boulevard.

Between 66th Street and Hawley Road, Bluemound Road is home to more than 35 businesses. There are two businesses on Dana Court in the northeast quadrant of the Hawley Road interchange. There are a
number of manufacturing and office properties adjacent to the Washington Street extension. There is commercial/retail development around each of the three local road intersections to be improved.

There are commercial and industrial properties east of WIS 175 north of the Stadium Interchange and along Brewers Boulevard (43rd Street industrial/commercial corridor), most notably a Molson Coors brewery. The Brewers Boulevard/Frederick Miller Way/Canal Street interchange provides access to businesses in the Menomonee Valley.

East of the Stadium Interchange, there are commercial properties on Wisconsin Avenue, 35th Street, 27th Street, and National Avenue. The Menomonee Valley, which lies south of I-94, is an industrial area that the City of Milwaukee has redeveloped since 1999 and that has attracted 35 companies. On 27th and 35th streets just north of I-94, there are several businesses, including a gas station, walk-in health clinic, veterinary clinic, and courier service.

3.6.2 **Commercial and Industrial Development Impacts**

I-94 is access-controlled, meaning no business entrances connect directly to the freeway. There are few service-oriented businesses near interchanges (a gas station near the 35th Street interchange and another near the 27th Street interchange) that rely on freeway travelers to be profitable. Businesses’ employees, patrons, shippers, and suppliers of businesses depend on I-94 to varying degrees for their continued viability.

3.6.2.1 **No-build Alternative**

No businesses would be relocated under the No-build alternative. Access to and from businesses to/from I-94 would remain the same as today. However, without improvements to the I-94 corridor, commercial and industrial businesses that rely on access to and from I-94 would experience deterioration in safety, traffic operations, and overall travel time reliability. Continued and frequent maintenance of the deteriorated pavement on I-94 would cause further lane closures and increased congestion and limit interchange access to businesses.

3.6.2.2 **8- and 6-Lane Alternatives**

The 8- and 6-lane alternatives would displace six active business on four properties, totaling approximately 7 acres, all east of 27th Street (Exhibit 3-7). The displacements are Central Bark Doggy Day Care; Milwaukee Dog Training Club (within Central Bark Doggy Day Care building and used December through February); MKE Junk Junkies; a private storage/warehouse building on Greves Street; Badger Truck Center; and a private storage building on West St. Paul Avenue.
In addition to the six displacements (7 acres), the 8- and 6 lane alternatives would acquire property-only from an additional 15 commercial properties, resulting in an additional 1.3 acres of new right-of-way required from business properties. The number of business displacements was reduced from 11 in the 2016 Final EIS to six in this Supplemental Draft EIS. Input from the community and local governments led WisDOT to refine the 8- and 6-lane alternatives to reduce business displacements. Section 2.2.1 describes the design refinements WisDOT made since the 2016 Final EIS.

As part of the 2016 Final EIS, the City of West Allis and City of Milwaukee expressed concern about the loss of some or all freeway access at the Hawley Road interchange for several reasons, including reduced freeway access to businesses. West Allis notes that freeway proximity is a key selling point to prospective employers and the possibility of closing the Hawley Road interchange would stall its efforts to attract additional business and could cause some existing employers to leave West Allis (2016 Final EIS; Appendix D, D-76). West Allis notes that some large employers on Hawley Road in West Allis have other locations in the Milwaukee area that would use the Hawley Road interchange to and from the east to reach their other locations. The City of Milwaukee expressed concern with the removal of access along any part of I-94, noting it would significantly impact businesses that depend on current freeway access. The City of Milwaukee also expressed concern about impacted businesses relocating outside the City of Milwaukee, resulting in a loss of tax base for the city. Section 3.8.2.4 discusses potential tax base impacts and notes based on the alternative selected, the City of Milwaukee could lose between 0.001 and 0.003 percent of its total property tax revenue.

Under the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, partially closing Hawley Road would change access to/from I-94 for businesses along Hawley Road and cross streets near I-94. Access would be provided to Hawley Road to and from the west on I-94. Extending Washington Street to make it easier for drivers on Hawley Road to access the 68th Street/70th Street interchange and improvements at three local road intersections to improve local road operations would mitigate the traffic impacts of partially closing the Hawley Road interchange (see Section 3.3.3).

The 8- and 6-lane alternatives would reduce crashes and congestion on I-94 compared to the No-build alternative. Reduced congestion on I-94 reduces travel time for area businesses for the movement of goods and services within and through the region. Improved travel times would allow for greater movement of goods and services on the freeway system.

Access to businesses would be maintained during construction, although commuters, business patrons, shippers, and suppliers may experience inconvenience and additional travel time (see Section 3.27, Construction). During construction, traffic would be diverted from I-94, especially if interchange ramps are closed for extended periods. Access to businesses may be rerouted to alternate routes.

### 3.6.3 Measures to Minimize and Mitigate Adverse Commercial and Industrial Impacts

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on surrounding businesses. In the 2016 Final EIS, the preferred alternative would relocate 11 businesses. Through public feedback and design refinements, WisDOT was able to reduce the number of relocated businesses to 6.

Where it was not possible to avoid properties, commercial and industrial acquisitions and relocations would be in accordance with the Uniform Act. In addition to providing just compensation for property

---

3 The 2016 Final EIS states 10 businesses but did not account for two businesses (Central Bark and Milwaukee Dog Training Club) operating out of one building.
acquired, additional benefits are available to eligible displaced businesses, including relocation advisory services, reimbursement of moving expenses, and down-payment assistance. Under state law, no person would be displaced unless a comparable business location or other compensation (when a suitable business location replacement is not practical) is provided. Compensation is available to all displaced businesses without discrimination.

Before initiating property acquisition activities, property owners would be contacted and given a detailed explanation of the acquisition process and Wisconsin’s Eminent Domain Law set forth in Wis. Stat. § 32.05. Any property acquired would be inspected by one or more professional appraisers. The property owner would be invited to accompany the appraiser during the inspection to ensure that the appraiser is informed of every aspect of the property. Property owners would be given the opportunity to obtain an appraisal by a qualified appraiser that would be considered by WisDOT in establishing just compensation. Based on the appraisals, the value of the property would be determined and that amount offered to the owner.

Before a contractor demolishes a building that may contain or is known to contain asbestos, the contractor must notify WDNR and the Wisconsin Department of Health Services at least 10 working days before starting the work, using WDNR Form 4500-113: “Notification for Demolition and/or Renovation and Application for Permit Exemption.”

Available data indicates that there are no age, ethnic, handicapped, or minority characteristics that would require special relocation consideration for any business displacement. If unusual circumstances were to arise during the business relocation, WisDOT personnel would be available to provide appropriate services and accommodate any special relocation consideration or services. There are two businesses that would be potentially difficult to relocate. Badger Truck Center, Inc., and Central Bark Doggy Day Care are franchisee establishments that operate within a designated territory. As part of their franchise agreements, they are not allowed to relocate within a specified distance of another franchisee. There is potential for Badger Truck to relocate near its existing site.

A search of a commercial realty website in May 2022 (www.loopnet.com) listed more than 10 commercial/industrial locations in the City of Milwaukee that would be adequate replacement sites for some businesses that would be displaced as a result of the project.

Based on the listings, there is a sufficient number of available properties for displaced businesses. However, the availability of vacant commercial and industrial locations is always in flux. As businesses relocate in the future, the number of business and commercial listings may change, but it appears likely that sufficient replacement business buildings would be available when required.

Under the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, WisDOT would modify the I-94 signage along key arterials to direct drivers to the 68th Street/70th Street interchange or the Stadium Interchange. If needed, traffic calming measures could be installed along residential streets adjacent to the Hawley Road interchange, like Main Street and Adler Street south of I-94 and Dixon Street north of I-94. WisDOT would also construct off-interstate improvements to mitigate the traffic impacts of partially closing the Hawley Road interchange. The improvements are extending Washington Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange and improvements at three local road intersections to improve local road operations under the partial closure of the Hawley Road interchange.
3.7 Institutional and Public Services

3.7.1 Affected Environment

3.7.1.1 Fire, Ambulance, and Police Protection

The City of Milwaukee is served by the Milwaukee Fire Department, which provides services from 36 fire stations. The Milwaukee Fire Department has fire stations on 84th Street, 64th Street, Burnham Street, James Lovell Street, and two on 30th Street that respond to calls within the I-94 East-West Corridor. Other fire stations are also sometimes called, depending on the location of the incident. The fire department also uses I-94 to respond to calls that are not on I-94 and for non-emergency duties.

I-94 in the study area is completely within City of Milwaukee Police District 3. The City of Milwaukee Police Department has jurisdiction over the local roads, while the Milwaukee County Sheriff’s Department patrols I-94. There are no police or sheriff’s offices within the I-94 study area.

3.7.1.2 Schools

The I-94 East-West Corridor is completely within the City of Milwaukee, which is served by Milwaukee Public Schools (MPS). Although the Wauwatosa School District and West Allis-West Milwaukee School District are not adjacent to I-94, they are served by local roads that connect to I-94 in the study area. There are eight schools within roughly 0.5 mile of I-94—four public and four private or charter (Exhibit 3-8). No schools are immediately adjacent to I-94.

There are three MPS schools in the study area. MacDowell Montessori School, two blocks north of I-94 at 6415 Mount Vernon Avenue, has students in kindergarten through high school, and the high school includes the International Baccalaureate program. Hawley Environmental School, 0.6 mile north of I-94 at 5610 West Wisconsin Avenue, provides a special focus on environmental education. It serves children in kindergarten through 5th grade. Burbank School is at 6035 West Adler Street, about 0.2 mile south of I-94. Burbank School serves children in kindergarten through 8th grade.

Marquette University High School is a private high school at 3401 West Wisconsin Avenue, about 0.4 mile north of I-94. Messmer St. Rose Catholic School is at 514 North 31st Street, about three blocks north of I-94. Woodlands School is an independent charter school at 5510 Bluemound Road, about 0.5 mile north of I-94.

While not adjacent to this segment of I-94, students attending Marquette University and Milwaukee Area Technical College (MATC) West Campus may use I-94 and interchanges in the study area to access their schools. The Marquette University campus is immediately north of I-94, east of 16th Street. Access to campus is gained from the 25th/26th/28th Street interchange. The MATC West Campus is on 70th Street, about 0.75 mile south of I-94.

3.7.1.3 Places of Worship

There are 21 churches within roughly 0.5 mile of I-94 (Exhibit 3-8). No churches are adjacent to I-94.
3.7.1.4 Cemeteries

Three cemeteries (Beth Hamedrosh Hagodel Cemetery, Wood National Cemetery, and Spring Hill Cemetery) abut I-94 between Hawley Road and General Mitchell Boulevard (Exhibit 3-3). The Anshai Lebowitz Cemetery is south of I-94, directly south of Spring Hill Cemetery. Calvary Cemetery is north of I-94, directly north of Beth Hamedrosh Hagodel Cemetery and Wood National Cemetery. For information on cemeteries, please see Section 3.23, Cemeteries.

3.7.1.5 Girl Scouts of Wisconsin Southeast Service and Resource Center

The Girl Scouts of Wisconsin Southeast Service and Resource Center is on 70th Street one block north of I-94. The resource center is available to assist the 23,000 Girl Scouts in Kenosha, Milwaukee, Racine, Waukesha, and Washington counties; southern Ozaukee County; and East Troy in Walworth County. There are three other service and resource centers in southeastern Wisconsin (New Berlin, Racine, and Kenosha).

3.7.1.6 VA Campus, including the Clement J. Zablocki VA Medical Center

There is a VA regional office, VA benefits center, Wood National Cemetery, and a medical research facility on the 125-acre VA Campus. Altogether, there are approximately 4,500 employees at the VA Campus. What is now the VA Campus was established in the 1860s as the Northwestern Branch, National Home for Disabled Volunteer Soldiers. A cluster of older buildings, some dating to the 19th century, and the cemetery are an NHL and historic district. See Section 3.24, Historic Properties, and Section 4.

The Clement J. Zablocki VA Medical Center is at 5000 W. National Avenue. It is the second-largest VA Medical Center in the U.S. It provides primary, secondary, and tertiary medical care in over 400 hospital beds and had over 850,000 visits in 2019 (U.S. Department of Veterans Affairs 2019). The nursing-home care unit of 113 beds offers geriatric programming, and 356 domiciliary beds, which are the focus of programs in substance abuse rehabilitation, psychiatric rehabilitation, and post-traumatic stress disorder care.

Wood National Cemetery is run by the VA’s National Cemetery Administration. It is the only National Cemetery in Wisconsin. More than 39,000 people are buried in the cemetery. All cemetery plots are occupied, and only spouses of those already interred may be buried in the cemetery in the future. There are three to five burials per week.

Other facilities on the VA Campus include the Spinal Cord Injury Center, which provides care for veterans with spinal cord injuries. Services include annual exams, an apartment complex designed to help veterans adjust to a
domestic environment, therapies, and an adapted sports program. Fisher House Wisconsin, opened in 2016, houses veterans and their families who are receiving care at the VA hospital. The Community Living Center provides nursing home-like care for veterans. Also, the VA’s Milwaukee Regional Benefit Office is on the Milwaukee VA Campus.

Access to the VA Campus is from National Avenue on the south (just west of Brewers Boulevard), Washington Street on the west, and Zablocki Drive via Bluemound Road and the General Mitchell Boulevard interchange with I-94 on the north. Traffic counts taken in 2013 indicate that about 250 to 300 people use the General Mitchell Boulevard interchange to access the VA Campus in the morning and afternoon peak hours, which amounts to 20 percent of the people coming and going to the VA Campus. The other 80 percent use National Avenue or Washington Street to access the VA Campus. Based on analysis of 2019 data, peak hour demand is similar to 2013. It is difficult to access the VA Campus from the General Mitchell Boulevard interchange on Milwaukee Brewers’ game days because of the amount of traffic using the interchange to access American Family Field. The VA Medical Center indicated that Zablocki Drive gets more use on Brewers’ game days.

The VA Medical Center operates shuttle buses that take veterans around the Milwaukee area. Medical center staff said that its drivers are instructed not to use the General Mitchell Boulevard interchange because they feel it is unsafe due to the short ramps.

3.7.1.7 American Family Field

American Family Field, the 43,000-seat stadium of the Milwaukee Brewers, is in the southwest quadrant of the Stadium Interchange. It has parking lots in all four quadrants of the interchange. The stadium was funded through a public-private venture between the Southeast Wisconsin Professional Baseball Park District (Stadium District) and the Milwaukee Brewers. The property and its improvements are owned by the Stadium District (71 percent) and the Milwaukee Brewers (29 percent). The entire property covers about 227 acres.

American Family Field hosts 81 regular-season Milwaukee Brewers baseball games each season, generally running from April through September. American Family Field is an important landmark for the City of Milwaukee, Milwaukee County, southeastern Wisconsin, and the entire state of Wisconsin. Total attendance per season for these 81 games between 2015 and 2019 (pre–Covid-19 pandemic seasons) ranged from 2.3 to 2.9 million people. With a retractable roof, fans are guaranteed a comfortable environment to watch a baseball game, no matter the weather outside. Tailgating in the parking lots around American Family Field is also an important element of attending a Brewers game.

American Family Field also hosts non-baseball events such as concerts during the spring, summer, and fall. The American Family Field parking lots serve as the home to community runs (5K to half-marathon), Covid testing, community events, and used car sales. American Family Field provides year-round accommodations for both business functions and social events and includes a restaurant that is open throughout the year.
The General Mitchell Boulevard interchange with I-94 and the Canal Street/Frederick Miller Way interchange with Brewers Boulevard are the two freeway access points into the American Family Field parking lots. There are also local street access points into the parking lots. Efficient ingress and egress is an important aspect of the fan experience at American Family Field. Arrival of fans to the stadium tends to be spread out over a longer period than departure from the stadium. According to the Stadium District, the goal is to allow patrons to be driving at normal freeway speed 45 minutes after a game ends. Most games end between 10:00 PM and 10:30 PM, when freeway volumes are relatively low. About 12 games a year are played on weekday afternoons and end between 4:00 PM and 4:30 PM, when the afternoon rush hour is underway. The 45-minute goal is much more difficult to achieve after weekday games.

3.7.1.8 WisDOT Southeast Region Service Facility (Sign Shop)

The WisDOT Southeast Region Service Facility is at 935 South 60th Street in West Allis, approximately 0.5 mile south of I-94. WisDOT units working out of this building are:

- Signing and Marking Field Unit
- Electrical Field Unit
- Highway Lighting Field Unit
- Engineering Services Unit (Materials, Soils, Asphalt)
- Data Analysis
- Surveying
- Bridge Maintenance

3.7.2 Institutional and Public Service Impacts

3.7.2.1 Fire, Ambulance, and Police Protection

No-build Alternative

The No-build alternative would not directly impact fire, ambulance, or police services within the I-94 East-West Corridor. As congestion increases, response time may be slower for emergency services.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives could impact the way emergency responders access I-94; however, all streets crossing I-94 would remain in place. A fire station is on 64th Street, one block north of I-94. Under the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, emergency vehicles would continue to access westbound I-94 at Hawley Road but would use new access points to reach incidents on eastbound I-94, most likely the 68th Street/70th Street interchange. The Washington Street extension would provide improved access south of I-94 from Hawley Road (and 60th Street) west to 70th Street and north to the 68th Street/70th Street interchange.

Under all alternatives, access to General Mitchell Boulevard from I-94 would change, which would affect the way fire and police would respond to calls from American Family Field and the VA Campus. The VA Medical Center director said that as long as Zablocki Drive remains open between Bluemound Road and the VA Campus, he has no concerns about emergency response time.

With the hybrid interchange at the Stadium Interchange, new entrance and exit ramps to and from 44th Street and a new north-south local street (tentatively referred to as 46th Street) would be constructed beneath the Stadium Interchange (Exhibit 2-5). All entrance and exit ramps would be located on the right-hand side of traffic. 44th and 46th Streets would connect to Selig Drive and the new
3-lane frontage road north of I-94. The new frontage road would pass over Yount Drive and connect to General Mitchell Boulevard near the existing westbound I-94 exit ramp at General Mitchell Boulevard. These connections would provide access to American Family Field and the VA Campus for emergency services.

For the diverging diamond interchange, all entrance and exit ramps would be located on the righthand side of traffic. These connections would provide direct access to American Family Field parking and the VA Campus for emergency services without traveling through new intersections. Traffic exiting I-94 westbound would exit the freeway just west of the 35th Street overpass, travel over WIS 175, and connect to General Mitchell Boulevard north of the freeway. Traffic exiting I-94 eastbound would exit I-94 just west of General Mitchell Boulevard and travel east through the hook ramp (between Yount Drive and WIS 175) and connect to General Mitchell Boulevard north of the freeway at the same location as the westbound exit. See Exhibit 2-10.

The narrow inside and outside shoulders (as narrow as 2 feet) along I-94 as it passes by the cemeteries may impact access for emergency vehicles traveling through the area and responding to crashes along I-94. Often, emergency vehicles use the shoulder to drive around slowed traffic to access a crash on the freeway. Additionally, the reduced shoulder size does not provide a storage area for vehicles that may have been in a minor crash. This results in the vehicles remaining in a travel lane and blocking traffic.

3.7.2.2 Schools

No-build Alternative

The No-build alternative would not impact schools in the I-94 East-West Corridor.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would not impact schools in the I-94 East-West Corridor. No changes in school district boundaries are anticipated as a result of the proposed action.

3.7.2.3 Places of Worship

No-build Alternative

The No-build alternative would not impact places of worship in the study area.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would not impact places of worship in the study area.

3.7.2.4 Cemeteries

No-build Alternative

The No-build alternative would not acquire land from cemeteries or displace any graves.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would not acquire land from cemeteries or displace any graves. See Section 3.23, Cemeteries; Section 3.24, Historic Properties; and Section 4, Final Section 4(f) Evaluation.
3.7.2.5 Girl Scouts of America

**No-build Alternative**

The No-build alternative would not impact the Girl Scouts of Wisconsin Southeast Service and Resource Center.

**8- and 6-Lane Alternatives**

The 8- and 6-lane alternatives may require a very narrow strip of land from the Girl Scouts property (approximately 20 square feet).

3.7.2.6 VA Campus, including the Clement J. Zablocki VA Medical Center

**No-build Alternative**

The No-build alternative would not impact the Clement J. Zablocki VA Medical Center or adjacent VA facilities. VA Medical Center shuttle drivers would continue to avoid the General Mitchell Boulevard interchange.

**8- and 6-Lane Alternatives**

The 8- and 6-lane alternatives would change access to General Mitchell Boulevard from I-94, which is one of the access points to the VA Campus. With the hybrid option at the Stadium Interchange, a new local road interchange with I-94 would be built about 0.5 mile east of General Mitchell Boulevard, but it may not be as convenient for VA employees, patients, and visitors. The VA Medical Center does not see this as detrimental, but the National Cemetery Administration is concerned about the new access point being farther away because it would become more difficult for funeral processions to reach Wood National Cemetery. A local road connection from the new interchange within the Stadium Interchange to General Mitchell Boulevard would provide access to the Wood National Cemetery and VA Campus.

Like the hybrid interchange, the diverging diamond interchange would change access to Wood National Cemetery and the VA Campus. Traffic exiting I-94 westbound will exit the freeway just west of the 35th Street overpass travel over WIS 175 and connect to General Mitchell Boulevard north of the freeway. Traffic exiting I-94 eastbound will exit I-94 just west of General Mitchell Boulevard and travel east through the hook ramp (between Yount Drive and WIS 175) and connect to General Mitchell Boulevard north of the freeway at the same location as the westbound exit. See Exhibit 2-10.

The 8-lane alternative and 6-lane alternative with half interchange at Hawley Road would change access for those who visit the VA Campus via Hawley Road from I-94. The VA noted that many of its 4,500 employees, as well as some of the 1 million patients per year, use the Hawley Road interchange to access its campus. All of the ambulance providers that access the VA Medical Center by freeway use the Hawley Road interchange. With the half interchange option, visitors who access the VA Campus via Hawley Road from eastbound I-94 would continue to do so. There would be no westbound I-94 exit to Hawley Road, but most traffic using I-94 westbound to access the VA Campus would exit farther to the east at Brewers Boulevard or use the reconfigured General Mitchell Boulevard access.

A right-turn lane from National Avenue to General Mitchell Boulevard would be constructed as part of the Brewers Boulevard/National Avenue intersection improvements. As part of this improvement, approximately 0.4 acre of VA property (from the Soldiers’ Home NHL) would be required for transportation right-of-way.
3.7.2.7 American Family Field

No-build Alternative

The No-build alternative would not impact American Family Field. Access to and from American Family Field would remain the same, but there would not be the added capacity to I-94 and the exit/entrance ramps that comes with the 8- and 6-lane alternatives. Over time, as traffic volumes increase on I-94, the No-build alternative may increase the time it takes to enter or leave an event at American Family Field given the lack of capacity.

8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would change the freeway access points to and from American Family Field. The 8- and 6-lane alternatives would change access to General Mitchell Boulevard from I-94, which would alter American Family Field’s internal ring road and change where fans enter and exit the parking lots. The Brewers and the Stadium District expressed concerns early in the study about the change in access to General Mitchell Boulevard from I-94 and how it would affect their ability to unload the parking lot efficiently after a game. Throughout the project, WisDOT, the Brewers, and the Stadium District engaged in regular, constructive dialogue. Reviews and comments from the Brewers and the Stadium District regarding the I-94 access to and from General Mitchell Boulevard are reflected in the alternatives. WisDOT’s traffic analysis shows that both the hybrid interchange and diverging diamond interchange options for the Stadium Interchange would have more capacity than the existing General Mitchell Boulevard and Stadium interchanges. With the hybrid interchange, a frontage road between Yount Drive and General Mitchell Boulevard north of I-94 would be constructed to mitigate changes in parking lot access (see Section 3.7.3). The diverging diamond interchange would not change parking lot access.

The hybrid interchange would require 11 acres of existing parking and remove approximately 440 parking spaces for fans and 940 parking spaces for staff, mainly south of I-94. The diverging diamond interchange would require 12 acres of existing parking and remove approximately 610 parking spaces for fans and 890 parking spaces for staff, mainly south of I-94. This numbers will continue to be updated as Stadium Interchange design is further refined. To replace some of the lost parking, new parking spaces could be located on existing WisDOT right-of-way that would no longer be required for the reconstructed Stadium Interchange (see Section 3.7.3).

3.7.2.8 WisDOT Southeast Region Service Facility (Sign Shop)

The 8-lane alternative and 6-lane alternative with half interchange at Hawley Road would relocate the WisDOT Southeast Region Service Facility to allow construction of the Washington Street extension.

3.7.3 Measures to Minimize and Mitigate Adverse Institutional and Public Services Impacts

Alternatives were designed to stay within the existing right-of-way as much as possible to minimize the impact on surrounding institutions and public services.

WisDOT and FHWA would replace or compensate the Stadium District for American Family Field parking spaces that are lost and compensate the Stadium District for land that is acquired. WisDOT may do one or more of the following to replace the lost parking: construct new parking lots on existing open land or existing WisDOT right-of-way that would no longer be required; build more of the proposed roadways over the parking lots on bridges to provide for parking under the bridges; or compensate the Stadium District to construct a new parking structure. WisDOT and FHWA would continue working with the
Stadium District and the Milwaukee Brewers to ensure efficient ingress and egress of the parking lots before and after games.

WisDOT and FHWA would compensate Girl Scouts of America for any land acquired as part of the project.

As requested by the VA (2016 Final EIS; Appendix D, letter D-27), WisDOT and FHWA would maintain the Zablocki Drive connection between Bluemound Road and the VA Campus. The VA noted that this northern access route improves safety and traffic congestion on the VA Campus and is an additional evacuation route. It also provides access to the portion of Wood National Cemetery north of I-94. All alternatives maintain this northern connection separate from General Mitchell Boulevard. See Section 3.23.3, Section 3.24.4, and Section 4.5 for additional mitigation measures for the VA Campus.

The Washington Street extension would mitigate the traffic impacts on the VA, cemeteries, and emergency services of partially closing the Hawley Road interchange by making it easier for drivers on Hawley Road to access the 68th Street/70th Street interchange. Connecting 70th Street to Hawley Road/60th Street via Washington Street would provide convenient access to and from Hawley Road from the 68th Street/70th Street interchange for traffic that would no longer be able to enter I-94 eastbound or exit from I-94 westbound at Hawley Road.

WisDOT would likely build a new Service Facility in the Milwaukee area to replace the 60th Street building.

### 3.8 Socioeconomic Characteristics

#### 3.8.1 Affected Environment

The I-94 East-West Corridor is in Milwaukee County in southeastern Wisconsin. The entire I-94 East-West Corridor is within the City of Milwaukee, but the cities of Wauwatosa and West Allis and the Village of West Milwaukee are nearby. This is an urban area with a developed transportation network. While some commercial districts in the corridor are slated for redevelopment, the area is currently fully developed and densely populated.

Exhibit 3-9 shows the I-94 East-West Corridor study area. Residential, commercial, and some community land uses lie both north and south of I-94 west of the Stadium Interchange and north of I-94 east of the Stadium Interchange. East of the Stadium Interchange, I-94 is at the edge of a bluff that descends south into the industrial Menomonee Valley from the residential areas to the north.

**Historic Development**

Land use east of the Stadium Interchange has been consistent through the years, based on historical aerial photographs back to 1937. I-94 lies on the north edge of the Menomonee Valley. The natural bluff and valley are a natural dividing line between the north and south sides of I-94. Historical aerial photographs show residential districts to the north of what is now I-94 and commercial and industrial areas to the south (Exhibit 3-10) (Wisconsin State Cartographer’s Office 2015). Construction of I-94 took advantage of the bluff’s physical feature without dividing the largely working-class Irish neighborhoods. Based on the review of these historic aerial photographs and the existing I-94 alignment, approximately 200 buildings between the Stadium Interchange and 16th Street were removed for the original
construction of I-94. Exhibit 3-11 shows the percentage of minority residents in each Census tract adjacent to I-94 from the 1960 Census. All Census tracts had a minority percentage of less than 5 percent with the exception of the Soldiers’ Home and a tract north of I-94 between 35th and 29th streets which had a 17 percent minority population.

West of the Stadium Interchange, the residences near I-94 were built around an interurban rail line that ran along the north edge of what is now I-94 (Exhibit 3-12). Thus, I-94 was constructed in a corridor that already served a transportation use. Unlike local streetcars, which operated on city streets and as part of the city’s greater urban environment, interurban lines had dedicated rights-of-way. The interurban line right-of-way in which I-94 was constructed went from downtown Milwaukee to Waukesha County. West of what is now the Stadium Interchange, the interurban line traveled between the VA Campus and Calvary Cemetery.

The interurban system patronage decreased with the rise of automobile ownership and eventually ended in the mid-1950s, prior to I-94’s construction. I-94’s construction was in response to traffic congestion. A 1946 Origin-Destination Traffic Survey for the Milwaukee metropolitan area, conducted by the State Highway Commission of Wisconsin and local governments within Milwaukee County, recommended the construction of two major expressway corridors intersecting in Milwaukee, with one being the route that would become I-94. WisDOT completed the original construction of I-94 between 16th and 70th streets in 1963.

Some impacts of I-94’s construction can be seen in historical aerial photographs compared with current aerials. For instance, historic aerials show nine north-south roads that connected on either side of what is now I-94 (Exhibits 3-10 and 3-12). Following the construction of I-94, four out of the nine streets remained: Hawley Road, 64th Street, 68th Street, and 70th Street. I-94 was wider than the interurban line, resulting in homes and businesses being displaced. Based on the review of historic aerial photographs and the existing I-94 alignment, approximately 150 buildings between 70th Street and Hawley Road were removed for the original construction of I-94.

While the I-94 construction impacted neighborhoods, it also benefited those living in the study area. I-94 improved safety and congestion on local roadways by removing through traffic from local roads and placing it on a higher-capacity and safer freeway. I-94 also afforded residents and businesses more efficient and convenient travel to and from destinations outside of the local community. While construction of I-94 closed off some local access, it broadened access to areas beyond the study area.

**Current Travel Trends**

Today, I-94 serves travelers within the study area, those traveling to and from the study area, and those traveling through the study area. A 2019 peak period traffic study (StreetLight 2019) shows that 38-48 percent of trips on I-94 in the I-94 East-West Corridor were trips that started and ended within the project limits (70th Street to 16th Street). That is, trips where the vehicle entered I-94 somewhere within the project limits and the same vehicle exited I-94 within the project limits. The study also determined that 21-23 percent of the trips on I-94 originated from within the project limits and traveled beyond the project limits, while 16-18 percent of trips on I-94 originated outside the project limits and ended within the project limits. Finally, 15-21 percent of travelers were merely moving through the study area (that is, trips began and ended outside of the project limits). For more information, refer to Section 1.4.2.

This implies that 4 out of 5 travelers during peak period began or ended (or both) their freeway trips in the study corridor; therefore, improvements to I-94 would substantially benefit access within and to and from the study area. See Section 3.8.2.1 for information on the project’s benefits to those living in and doing business in the study area.
Based on existing WisDOT traffic counts and future traffic conditions from SEWRPC’s design year (2050) forecast, during both the morning and afternoon peak periods, the traffic split between eastbound and westbound traffic is close to 50/50.

### 3.8.1.1 Population Levels and Trends

I-94 serves long-range travelers, inter-urban commuters, local residents, employees and businesses within the study area.

Population in the City of Wauwatosa grew slightly between 2010 and 2020, while Milwaukee County, the City of Milwaukee, City of West Allis, and Village of West Milwaukee, as well as the study area, declined (Table 3-7). According to the Wisconsin Department of Administration’s 2040 population projections, all municipalities in the I-94 East-West Corridor study area are predicted to gain population between 2020 and 2040.

As part of the VISION 2050 process, SEWRPC completed population projections for the period from 2010 to 2050 based on a major analysis of regional population. This information serves as the basis for the preparation of the regional land use and transportation plans. SEWRPC projected a range of future population levels—high, intermediate, and low—for the region (Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha counties). This approach recognizes the uncertainty in any effort to predict future socioeconomic conditions. SEWRPC’s Advisory Committee on Regional Population and Economic Forecasts considered the intermediate projection the most likely to occur for the region as a whole.

Per SEWRPC’s analysis, the region’s population is projected to increase from about 2.02 million people in 2010 to 2.35 million people in 2050 under the intermediate growth scenario. Milwaukee County’s population is expected to grow by about 3 percent to 976,700 people in the year 2050. This is 4 percent less total population in Milwaukee County compared to the Wisconsin Department of Administration’s 2040 population projections. SEWRPC population projections are not available at the municipal level.

#### Table 3-7. Population 2010-2020 and 2040 Projected Population

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>947,735</td>
<td>939,489</td>
<td>-0.9%</td>
<td>1,016,250</td>
</tr>
<tr>
<td>City of Milwaukee</td>
<td>594,744</td>
<td>577,222</td>
<td>-3.0%</td>
<td>627,400</td>
</tr>
<tr>
<td>West Allis</td>
<td>60,411</td>
<td>60,325</td>
<td>-0.1%</td>
<td>61,850</td>
</tr>
<tr>
<td>Wauwatosa</td>
<td>46,421</td>
<td>48,387</td>
<td>4.2%</td>
<td>49,270</td>
</tr>
<tr>
<td>West Milwaukee</td>
<td>4,259</td>
<td>4,114</td>
<td>-3.4%</td>
<td>4,580</td>
</tr>
<tr>
<td>Study Area</td>
<td>121,173</td>
<td>116,132</td>
<td>-4.2%</td>
<td>-</td>
</tr>
</tbody>
</table>

Sources: U.S. Census Bureau 2010 Census; U.S. Census Bureau 2020 Census; Wisconsin Department of Administration Demographic Services Center 2013

In 2020, minorities accounted for 62.8 percent of the population within the study area, while the minority population for all of Milwaukee County was 51.4 percent and 67.7 percent for the City of Milwaukee (Exhibit 3-13 and Table 3-8). Between 2010 and 2020, the minority population in Milwaukee

---

4 Volume I, Chapter 6 of SEWRPC’s VISION 2050 report provides an overview of the underlying methodology and assumptions that went into the year 2050 projections.
County grew by 11.6 percent, while the minority population within the study area grew by 2.4 percent during the same timeframe.

Table 3-8. Minority Population 2010-2020

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>432,777</td>
<td>45.7%</td>
<td>482,969</td>
<td>51.4%</td>
<td>11.6%</td>
</tr>
<tr>
<td>City of Milwaukee</td>
<td>374,614</td>
<td>63.0%</td>
<td>390,803</td>
<td>67.7%</td>
<td>4.3%</td>
</tr>
<tr>
<td>West Allis</td>
<td>10,864</td>
<td>18.0%</td>
<td>18,776</td>
<td>31.1%</td>
<td>72.8%</td>
</tr>
<tr>
<td>Wauwatosa</td>
<td>5,811</td>
<td>12.5%</td>
<td>8,999</td>
<td>18.6%</td>
<td>54.9%</td>
</tr>
<tr>
<td>West Milwaukee</td>
<td>1,733</td>
<td>41.2%</td>
<td>2,362</td>
<td>57.4%</td>
<td>36.3%</td>
</tr>
<tr>
<td>Study Area</td>
<td>71,151</td>
<td>58.7%</td>
<td>72,890</td>
<td>62.8%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

Sources: U.S. Census Bureau 2010 Census; U.S. Census Bureau 2020 Census

In Milwaukee County, African Americans are the largest minority population, accounting for 25.6 percent of the population. Hispanics or Latinos, who account for 16.3 percent of the population, are the second largest minority population in Milwaukee County. Within the study area, however, the ranks are switched. Hispanics or Latinos are the largest minority population, accounting for 30.5 percent, and African Americans are the second largest minority group, accounting for 22.1 percent of the population (see Table 3-9)

Table 3-9. Population by Race/Ethnicity, 2020

<table>
<thead>
<tr>
<th>Area</th>
<th>White</th>
<th>Black or African American</th>
<th>American Indian and Alaska Native</th>
<th>Asian</th>
<th>Native Hawaiian or Other Pacific Islander</th>
<th>Some Other Race</th>
<th>Two or More Races</th>
<th>Hispanic or Latino (of any race)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>456,520</td>
<td>240,416</td>
<td>3,878</td>
<td>45,989</td>
<td>262</td>
<td>4,227</td>
<td>35,180</td>
<td>153,017</td>
</tr>
<tr>
<td></td>
<td>48.6%</td>
<td>25.6%</td>
<td>0.4%</td>
<td>4.9%</td>
<td>0.0%</td>
<td>0.4%</td>
<td>3.7%</td>
<td>16.3%</td>
</tr>
<tr>
<td>City of Milwaukee</td>
<td>186,419</td>
<td>218,273</td>
<td>2,365</td>
<td>29,969</td>
<td>166</td>
<td>2,971</td>
<td>20,753</td>
<td>116,306</td>
</tr>
<tr>
<td></td>
<td>32.3%</td>
<td>37.8%</td>
<td>0.4%</td>
<td>5.2%</td>
<td>0.0%</td>
<td>0.5%</td>
<td>3.6%</td>
<td>20.1%</td>
</tr>
<tr>
<td>West Allis</td>
<td>41,549</td>
<td>3,540</td>
<td>497</td>
<td>1,515</td>
<td>17</td>
<td>244</td>
<td>2,752</td>
<td>10,211</td>
</tr>
<tr>
<td></td>
<td>68.9%</td>
<td>5.9%</td>
<td>0.8%</td>
<td>2.5%</td>
<td>0.0%</td>
<td>0.4%</td>
<td>4.6%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Wauwatosa</td>
<td>39,388</td>
<td>2,840</td>
<td>73</td>
<td>1,659</td>
<td>17</td>
<td>160</td>
<td>2,031</td>
<td>2,219</td>
</tr>
<tr>
<td></td>
<td>81.4%</td>
<td>5.9%</td>
<td>0.2%</td>
<td>3.4%</td>
<td>0.0%</td>
<td>0.3%</td>
<td>4.2%</td>
<td>4.6%</td>
</tr>
<tr>
<td>West Milwaukee</td>
<td>1,752</td>
<td>564</td>
<td>26</td>
<td>102</td>
<td>0</td>
<td>23</td>
<td>182</td>
<td>1,465</td>
</tr>
<tr>
<td></td>
<td>42.6%</td>
<td>13.7%</td>
<td>0.6%</td>
<td>2.5%</td>
<td>0.0%</td>
<td>0.6%</td>
<td>4.4%</td>
<td>35.6%</td>
</tr>
<tr>
<td>Study Area</td>
<td>43,242</td>
<td>25,715</td>
<td>736</td>
<td>6,007</td>
<td>54</td>
<td>460</td>
<td>4,528</td>
<td>35,390</td>
</tr>
<tr>
<td></td>
<td>37.2%</td>
<td>22.1%</td>
<td>0.6%</td>
<td>5.2%</td>
<td>0.1%</td>
<td>0.4%</td>
<td>3.9%</td>
<td>30.5%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2020 Census
3.8.1.2 Households

The number of households influences the number of trips made in the region. Within the study area, the number of households increased 0.2 percent between 2010 and 2020 (Table 3-10). According to the Wisconsin Department of Administration’s 2040 household projections, between 2020 and 2040, the number of households in Milwaukee County is expected to grow to 437,853, an increase of 14.1 percent, which is higher than the municipalities in the study area.

### Table 3-10. Study Area Households 2010-2020 and 2040 Projected Households

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>383,591</td>
<td>383,703</td>
<td>&lt;0.1</td>
<td>437,853</td>
<td>14.1</td>
</tr>
<tr>
<td>City of Milwaukee</td>
<td>231,121</td>
<td>229,227</td>
<td>-0.8</td>
<td>258,462</td>
<td>12.7</td>
</tr>
<tr>
<td>West Allis</td>
<td>27,454</td>
<td>27,431</td>
<td>-0.1</td>
<td>29,937</td>
<td>9.9</td>
</tr>
<tr>
<td>Wauwatosa</td>
<td>20,440</td>
<td>20,474</td>
<td>0.2</td>
<td>23,109</td>
<td>12.9</td>
</tr>
<tr>
<td>West Milwaukee</td>
<td>2,007</td>
<td>2,027</td>
<td>1.0</td>
<td>2,296</td>
<td>13.4</td>
</tr>
<tr>
<td>Study Area</td>
<td>44,170</td>
<td>44,239</td>
<td>0.2</td>
<td>N/A</td>
<td>-</td>
</tr>
</tbody>
</table>

Sources: U.S. Census Bureau 2010 Census; U.S. Census Bureau 2016-2020 American Community Survey 5-Year Estimates; Wisconsin Department of Administration Demographic Services Center 2013

* Data from the Wisconsin Department of Administration are only available at the county and municipality level, and cannot be provided for the study area.

SEWRPC also completed households projections for the period from 2010 to 2050 as part of the VISION 2050 process. Under the intermediate growth scenario, SEWRPC projected the number of households in the Region would increase by 172,300 households, or 22 percent, from 800,100 households in 2010 to 972,400 households in 2050. Households in Milwaukee County would increase by about 7 percent, to 409,600 households in 2050. This is 6.5 percent less total households in Milwaukee County as compared to the Wisconsin Department of Administration’s 2040 population projections.

3.8.1.3 Income

Based on U.S. Census Bureau data from the 2016–2020 American Community Survey (ACS) 5-Year Estimates, the median household income in the study area was lower than the median household income for Milwaukee County and cities of Milwaukee, Wauwatosa and West Allis, and Village of West Milwaukee (Table 3-11).

The U.S. Department of Health and Human Services (HHS) annually publishes poverty guidelines to determine financial eligibility for certain programs. The poverty guidelines are updated periodically in the Federal Register by HHS under the authority of 42 USC 9902(2). The HHS guidelines are a simplification of the U.S. Census Bureau’s poverty thresholds for administrative purposes. For instance, determining financial eligibility for certain federal programs. According to the HHS guideline, in 2020 a family/household containing four persons is considered to be living in poverty if the total income of the family/household is less than $26,200 (U.S. Department of Health and Human Services 2022).

The U.S. Census Bureau’s poverty statistics represent the number of people below the U.S. Census Bureau poverty thresholds. The poverty thresholds are the original version of the federal poverty measure and are updated each year by the U.S. Census Bureau. The thresholds are used mainly for
statistical purposes—for instance, preparing estimates of the number of Americans in poverty each year. In other words, all official poverty population figures are calculated using the poverty thresholds, not the guidelines. Neither the U.S. Census Bureau nor the HHS tabulates the number of people below the HHS poverty guidelines. The best approximation for the number of people below the HHS poverty guidelines in a particular area would be the number of persons below the U.S. Census Bureau poverty thresholds in that area.

Following the Office of Management and Budget’s Statistical Policy Directive 14, the U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in poverty. If a family’s total income is less than the family’s threshold, then individuals in that family are considered to be in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using the Consumer Price Index. For example, in 2020, a family of four with two children under the age of 18 would be considered in poverty if the family’s total income were less than $26,246 (U.S. Census Bureau 2020c).

Exhibit 3-14 shows the areas where poverty rates are greatest along the corridor. Based on census data from the 2016–2020 ACS 5-Year Estimates, the percentage of persons living in poverty is greater in the study area (26 percent) than it is in Milwaukee County (18 percent), City of Milwaukee (25 percent), West Allis (11 percent), Wauwatosa (6 percent), and West Milwaukee (13 percent).

<table>
<thead>
<tr>
<th>Area</th>
<th>Median Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>$52,260</td>
</tr>
<tr>
<td>City of Milwaukee</td>
<td>$43,125</td>
</tr>
<tr>
<td>West Allis</td>
<td>$53,634</td>
</tr>
<tr>
<td>Wauwatosa</td>
<td>$84,306</td>
</tr>
<tr>
<td>West Milwaukee</td>
<td>$41,267</td>
</tr>
<tr>
<td>Study Area</td>
<td>$39,710</td>
</tr>
</tbody>
</table>

Table 3-11. Median Household Income (2019)

Source: U.S. Census Bureau 2016-2020 ACS 5-Year Estimates

### 3.8.1.4 School Demographics

A key community resource is the schools that provide a center for neighborhood families. Changes to schools, such as altering access routes, may affect the social fabric of a community. As noted in Section 3.7.1.2, there are eight schools within the I-94 East-West Study Corridor—four public and four private or charter schools (Exhibit 3-8). The information for the public schools in the following list was obtained from Wisconsin’s Information Network for Successful Schools. No schools are immediately adjacent to I-94. The public school demographics and economic statuses within the study area are:

- In the 2020-2021 school year, MacDowell Montessori School had 823 students. Student demographics were 54 percent African American, 25 percent white, 11 percent Hispanic or Latino, 7 percent two or more ethnic groups, 2 percent Asian or Pacific Islander, and 1 percent Native American. In the same school year, 55 percent of students were low-income (GreatSchools 2021).

- In the 2020-2021 school year, Burbank Elementary School had 607 students. Student demographics were 36 percent African American, 27 percent Asian or Pacific Islander, 13 percent white, 18 percent Hispanic or Latino, 1 percent Native American, and 4 percent two or more ethnic groups. In the same year, 80 percent of the students were low-income (GreatSchools 2021).
In the 2020-2021 school year, Hawley Environmental School had 376 students. Student demographics were 66 percent African American, 7 percent white, 14 percent Hispanic or Latino, 5 percent Asian or Pacific Islander, 7 percent two or more ethnic groups, and 1 percent Native American. In the same year, 77 percent of the students were low-income (GreatSchools 2021).

The private school demographics within the study area are as follows:

- Marquette University High School is an all-boys school with 1,028 students composed of 82 percent white and 18 percent non-white students (Private School Review 2021).
- Messmer St. Rose School is a co-ed school with 390 students and is composed of 100 percent non-white students (Private School Review 2021).
- Woodlands School, a co-ed charter school, has 352 students and is composed of 50 percent non-white students and 50 percent white students (GreatSchools 2021).

As noted in Section 3.7.2.2, the 8- and 6-lane alternatives would not impact any of the schools in the I-94 East-West Corridor. No changes in school district boundaries are anticipated and none of the transportation modifications would affect access to and from these schools as a result of the proposed action.

### 3.8.1.5 Post-High School Education

As noted in Section 3.7.1.2, students attending Marquette University and MATC West Allis Campus may use I-94 and interchanges in the study area to access their schools.

#### Milwaukee Area Technical College West Allis Campus

The MATC West Allis Campus is at 1200 S. 71st Street, about 0.5-mile south of I-94. Approximately 15,000 students attend classes there.

#### Marquette University

Marquette University is a private university at 1250 W. Wisconsin Avenue and extends several blocks along Wisconsin Avenue. Marquette University is separated from the study area freeway right-of-way by Clybourn Street. The university had an enrollment of 11,550 students during the 2020-2021 school year.

### 3.8.1.6 Non-English Speaking

The presence of non-English speaking or English as a second language may present communication obstacles and limit a person’s ability to understand and offer input on changes to their environment. The study area has a higher proportion of Hispanic population than other areas in the Milwaukee metropolitan area (see Table 3-9). Based on WisDOT’s stakeholder outreach, there is a substantial Spanish-speaking population in the Layton Boulevard West neighborhoods, which are about 1 mile south of I-94 between Brewers Boulevard and Layton Boulevard (27th Street). Public outreach efforts during the environmental study have been made available in English and Spanish to allow for maximum participation.

### 3.8.1.7 Employment

Employment can greatly influence the transportation volumes and travel patterns. As an example, I-94 has the same number of vehicles in each direction during rush hour because employment centers are spread throughout the Milwaukee and Waukesha counties. Table 3-12 shows the historical and projected employment for Milwaukee County. The table compares employment growth between 1980
and 2020, and potential growth between 2020 and 2050. Milwaukee County is projected to add about 150,000 jobs between 2020 and 2050, a 33 percent increase. Milwaukee County is expected to continue to be an employment hub for southeastern Wisconsin, and employment is expected to remain steady.

Table 3-12. Historical and Projected Employment for Milwaukee County

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>581,700</td>
<td>604,700</td>
<td>618,300</td>
<td>575,400</td>
<td>457,906</td>
<td>608,900</td>
<td>150,994</td>
<td>33.0</td>
</tr>
</tbody>
</table>

Sources: SEWRPC 2013; U.S. Census Bureau 2016-2020 ACS 5-Year Estimates

Milwaukee County has a high concentration of employment in education, health, and manufacturing. The county is home to over 24 post-secondary schools. Additionally, local hospitals serve and provide specialty care to patients from the surrounding area. The share of employment in manufacturing is about 1.2 times higher than the U.S. average (Job Center of Wisconsin 2019). This means that I-94 will continue to be an important corridor to support the economic movement of goods and services.

3.8.1.8  Transportation

In Milwaukee County, 5 percent of workers use public transportation to commute to work. Within the study area, 7 percent of workers use public transportation to commute to work, while 81 percent of workers drive or carpool to work.

In Milwaukee County, 13 percent of homes do not have a vehicle. Within the study area, 17 percent of homes do not have a vehicle (ACS 5-year estimates, 2020).

3.8.1.9  Health Condition

Potential health-related impacts from living near freeways and other high-volume roads may occur from airborne pollutants emitted from motor vehicles. Data on community health typically are aggregated at the county level and difficult to find below the county level.

Carbon monoxide may reduce the amount of oxygen distributed throughout the body by the bloodstream. Nitrogen oxides are one of the main precursors in ground-level ozone and may affect the delicate structure of lung tissue. Fine particulate matter can penetrate the sensitive respiratory tract and affect health (USEPA 2015). Sensitive individuals may be affected by low-level pollutant exposure. All three pollutants are emitted from vehicle engines, among other sources (see Section 3.20, Air Quality).

WisDOT and FHWA investigated asthma rates, which are related to air quality. Asthma is a chronic lung disease affecting approximately 7 percent of children and 8 percent of adults in the U.S. (CDC 2019). The exact cause of asthma is unknown, but it is thought to be caused by both environmental and genetic factors. According to the Wisconsin Department of Health Services, Wisconsin’s asthma prevalence estimates in 2018 was 10.3 percent for adults and 10.7 percent for children. Between 2018 and 2020, Milwaukee County had the highest rate of asthma-related emergency room visits and hospitalizations in the state (Wisconsin Department of Health Services 2020). The study area’s average asthma rate is 11.7 percent, which is higher than the nation, state, and Milwaukee County (CDC 2021).

3.8.1.10  Age

The median age for Milwaukee County is less than the Wisconsin statewide median age. Based on ACS data (5-year estimate, 2016-2020), the median age is 35 in Milwaukee County and 39.6 in Wisconsin.
Additionally, 76 percent of the population in Milwaukee County is 18 and over, while the population of 65 and over is 13.6 percent.

While there is not a large elderly population, there is a senior living community just north of I-94 at 33rd Street and Park Hill Avenue. The City of Milwaukee’s Merrill Park low-income housing development has 60 one-bedroom units for those 62 and older and 60 one-bedroom units for elderly, disabled, or near elderly persons (over 50 years of age).

### 3.8.1.11 Disability

Based on ACS data (5-year estimate, 2016-2020), persons with a disability account for 12.4 percent of Milwaukee County’s population and 12.7 percent in the City of Milwaukee. The census data do not indicate where persons with disabilities live within the City of Milwaukee; however, the City of Milwaukee’s Merrill Park low-income housing development, just north of I-94 at 33rd Street and Park Hill Avenue, includes people with mobility disabilities.

### 3.8.2 Socioeconomic Impacts

#### 3.8.2.1 Neighborhood and Community Cohesion

Roadway expansion or changing access can affect the physical and social settings, community services, and other factors that promote a sense of community among residents. Community cohesion is the ability of people to communicate and interact with each other in ways that lead to a sense of community. Cohesion is reflected in the neighborhood’s ability to function and be recognized as a singular unit. Community cohesion includes buildings and services important to the community, such as churches, commercial development, social services, municipal buildings and services, parks, and schools. Residential and commercial displacements can impact community cohesion.

**No-build Alternative**

Under the No-build alternative, WisDOT would not acquire any residential or commercial properties. The existing roadway network would remain in place. However, there would be no safety or congestion benefits for drivers on I-94, including the Washington Street extension, which would minimize cut-through traffic through neighborhoods. The existing noise barriers would remain but no new noise barriers would be constructed.

**8- and 6-Lane Alternatives**

The 8- and 6-lane alternatives would not divide any neighborhoods. All crossroads over/under I-94 and WIS 175/Brewers Boulevard would remain (see Section 3.5.2, Residential Development Impacts, and Section 3.6.2, Commercial and Industrial Development Impacts).

The 8- and 6-lane alternatives would displace one residence, but no impacts on community cohesion are anticipated. In addition, the commercial displacements do not include services or businesses that are unique to the neighborhoods, and there are opportunities in the area for these businesses to relocate, so no adverse community cohesion impacts are anticipated.

Most access points to and from I-94 would be maintained and they would be reconstructed to be safer than they are currently, ensuring existing commuter routes are not interrupted. Some access from WIS 175 cannot be maintained for lack of safe weaving distances (see Section 3.3.2.4 for more information). For instance, all alternatives would not provide access to/from 35th Street and WIS 175/Brewers Boulevard. However, traffic on WIS 175/Brewers Boulevard could access 35th Street from
Wisconsin Avenue or National Avenue. Also, there would not be access between northbound WIS 175/Brewers Boulevard and Wisconsin Avenue for the hybrid interchange at the Stadium Interchange, but that access would be provided with the diverging diamond interchange. Access would remain from Wisconsin Avenue to southbound WIS 175/Brewers Boulevard and to/from Wisconsin Avenue and I-94 via WIS 175. This change would not affect community cohesion because there are other access points within a half mile. This change in access would improve safety and reduce congestion which benefits both regional and local travelers.

The 6-lane alternative with full interchange at Hawley Road would maintain full interchange access at Hawley Road and the Hawley Road crossing of I-94.

While the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road would maintain I-94 access to and from the west and maintain the Hawley Road crossing of I-94, it would remove I-94 access to and from the east.

This access change may make access to the neighborhoods and communities that currently use the Hawley Road interchange to and from the east less convenient; however, there are several interchanges nearby (as close as 0.5 mile away to the west at the 68th/70th Street interchange) that serve these neighborhoods and the cities of Milwaukee and West Allis (Exhibit 3-15). The potential to have reduced access at the Hawley Road interchange would not diminish community cohesion.

To access eastbound I-94 from the Hawley Road area under 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, travelers north of I-94 can use Bluemound Road/Wisconsin Avenue to connect with WIS 175 and then I-94, which is not out of direction for those traveling eastbound. There are approximately 500 residences between I-94 and the Hank Aaron State Trail to the south that are closer to the Hawley Road interchange than the 68th/70th Street interchange. National average states that households take five trips per day and only one to two of those are work-related, others being local trips to schools or errands, such as grocery shopping (FHWA 2009). If approximately half of the households needed to travel eastbound on I-94, then about 500 trips per day would require an average distance of 0.5 mile over the existing commute in order to access I-94 eastbound via the 68th/70th Street interchange rather than the Hawley Road interchange and add about 1 minute to the average trip. This amounts to approximately 250 extra miles per day or 91,000 miles per year. The extra miles may also add cars on east-west residential streets between Hawley Road and 68th Street, adding traffic and safety concerns. To address this concern, the 8-lane alternative would extend Washington Street so travelers south of I-94 would have a more direct route and avoid traveling through the neighborhood streets to access the 68th/70th Street interchange.

Currently, no transit routes enter or exit I-94 at Hawley Road. MCTS Route 64 runs on Hawley Road. None of the alternatives would impact Route 64.

Changing access at General Mitchell Boulevard, 35th Street, and WIS 175/Wisconsin Avenue would affect how vehicles access the adjacent areas. The proposed changes associated with the 8- and 6-lane alternatives would improve safety, and none would impact neighborhoods or community cohesion because access is maintained to adjacent neighborhoods.

The project’s purpose is to make it more convenient for people to access the study area and easier for local residents to use I-94 to access opportunities both within and outside the I-94 East-West Corridor. While some changes in access may increase the length of some trips, improving I-94 would benefit those living in and doing business in the study area by improving safety and reducing congestion on I-94.
3.8.2.2 Isolation of Distinct Groups, Real or Perceived

No-build Alternative

The No-build alternative would not isolate any distinct groups or neighborhoods adjacent to I-94, but as congestion continues to worsen, there is the potential for isolation through congestion as people avoid the area and find alternative routes.

8- and 6-Lane Alternatives

Since the 8- and 6-lane alternatives would not create a new corridor, no isolation of distinct groups is anticipated beyond the existing condition (see Section 3.5.2, Residential Development Impacts). Changes in access, as described in Section 3.3.2.3, would not isolate any distinct groups because comparable access would be provided.

3.8.2.3 Changes in Property Values

No-build Alternative

Under the No-build alternative, WisDOT would not acquire property or change the existing highway system. Property values would not change due to the No-build alternative. An indirect impact of the No-build alternative is that as congestion continues to worsen, businesses in the area may lose business or choose to relocate, which could reduce property values.

8- and 6-Lane Alternatives

Residents who live near I-94 have expressed concern over the potential for their property values to decrease if I-94 is closer to their homes after it is reconstructed. I-94 would move farther away from the Story Hill neighborhood.

This concern is frequently cited in regard to highway reconstruction projects. Home resale values are affected by numerous variables, including location, home condition, mortgage rates, and the economy. Under the 8- and 6-lane alternatives, I-94 would be reconstructed similar to where it is today, but to determine a net change to property values due to the wider right-of-way would be difficult because the project includes noise walls and changes in access that may also increase or decrease property values. While there has been some research on the topic, it is difficult to rely on the results of a study to draw meaningful conclusions given the variables. As part of any large transportation project, WisDOT evaluates the impacts that may lead to diminishing property values and mitigates for specific impacts to the extent practicable and allowed by law, such as noise and visual impacts, to minimize the impacts on property values. The mitigation measures are developed with community input from the beginning of the project through final design stages.

WisDOT would fairly compensate property owners whose property is acquired as part of the project under the Uniform Act. Sections 3.5.3 and 3.6.4 of this document provide additional information about the Uniform Act.

3.8.2.4 Tax-Base Impacts

No-build Alternative

There would be no property acquisitions under the No-build alternative and no changes in the tax-base impacts.
8- and 6-Lane Alternatives

For the 8- and 6-lane alternatives, WisDOT would acquire some private buildings and properties, removing them from property tax rolls.

WisDOT assessed the potential tax base loss for the City of Milwaukee, Village of West Milwaukee, and City of West Allis, using the city’s tax rate. The information was obtained from the city’s assessor’s office. (Note: The city tax rate consists of money going to the city and does not include tax for such entities as school districts, MATC, and MMSD.) In 2021, the tax rate was $10.16 per $1,000 taxed for the City of Milwaukee, $12.02 per $1,000 for the City of West Allis and $28.17 per $1,000 taxed for the Village of West Milwaukee.

The tax-base impact for each alternative was determined using 2021 assessment figures. For properties that would be entirely acquired, the full assessed value of the property was included in the tax-base impact assessment. For those properties in which a portion of land would be acquired, the percentage of land being taken from the property was multiplied by the assessed land value of the property to approximate the impact on the property tax base. There are several publicly owned or tax-exempt properties in the study area, such as American Family Field, ATC and We Energies that are not on property tax rolls.

Table 3-13 lists the tax base loss and property tax revenue loss for each alternative. Generally, the 6-lane alternative (full interchange at Hawley Road) has less of an impact on the property tax base as it would not acquire property in the City of West Allis. There are no differences in tax base loss and property tax revenue loss between the hybrid interchange and diverging diamond interchange.

Table 3-13. Tax Base Impacts

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Tax Base Loss</th>
<th>Property Tax Revenue Loss</th>
<th>Tax Base Loss</th>
<th>Property Tax Revenue Loss</th>
<th>Tax Base Loss</th>
<th>Property Tax Revenue Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-lane Alternative (half interchange at Hawley Road)</td>
<td>$2,864,463.36 (0.009% of total tax base)</td>
<td>$29,102.95 (0.003% of total property tax revenue)</td>
<td>$7,788.43 (0.002% of total tax base)</td>
<td>$219.40 (0.002% of total property tax revenue)</td>
<td>$7,788.43 (0.002% of total tax base)</td>
<td>$219.40 (0.002% of total property tax revenue)</td>
</tr>
<tr>
<td>6-lane Alternative (full interchange at Hawley Road)</td>
<td>$2,869,198.24 (0.009% of total tax base)</td>
<td>$29,151.05 (0.003% of total property tax revenue)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>8-Lane</td>
<td>$2,891,977.16 (0.009% of total tax base)</td>
<td>$29,382.49 (0.003% of total property tax revenue)</td>
<td>$7,788.43 (0.002% of total tax base)</td>
<td>$219.40 (0.002% of total property tax revenue)</td>
<td>$84,905.32 (0.002% of total tax base)</td>
<td>$1,020.56 (0.001% of total property tax revenue)</td>
</tr>
</tbody>
</table>

Note: The full-value tax base values from 2020 were used as these are the most recent values (collected in 2021) and therefore the most representative.

Bold = preferred alternative.

Using 2021 property tax rates, the 8- and 6-lane alternatives would cause a property tax revenue loss of approximately $29,000 for the City of Milwaukee. The 8-lane alternative and 6-lane alternative with half interchange at Hawley Road would cause a property tax revenue loss of approximately $200 for the Village of West Milwaukee, and $1,000 for the City of West Allis. The 6-lane alternative (full interchange...
at Hawley Road) would have no impact on property tax revenue for the Village of West Milwaukee and City of West Allis.

Planned redevelopment would increase local tax bases and help pay for the cost of public services that are already in place. The 8- and 6-lane alternatives would also ease the movement of goods and access to services and employment opportunities near a large population base in the primary study area, which can lead to enhanced business operations and potentially new development opportunities.

3.8.2.5 Effect on Community Facilities

No-build Alternative

Community facilities refers to public and semi-public services that are open to all, and provide assistance, recreation, or education. Examples include libraries, senior centers, health clinics, and schools. The No-build alternative would not directly affect community facilities. However, an increase in congestion could make it harder to provide community services.

8- and 6-Lane Alternatives

None of the alternatives would displace community facilities. The preferred alternative from the 2016 Final EIS displaced the Concentra Urgent Care clinic on 35th Street. Through design refinements, this health care clinic will remain and will no longer be displaced as part of any 8- or 6-lane alternatives.

All alternatives would reconfigure the General Mitchell Boulevard interchange, which would impact access to the VA Campus and American Family Field. The alternatives would also convert some American Family Field parking into freeway right-of-way. Section 3.7.2 provides detailed information about institutional and public service impacts. Under the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, the Hawley Road interchange ramps to and from the east would be removed.

The VA Medical Center stated that Hawley Road access is very important for employees and patients (2016 Final EIS; Appendix D, D-28). The VA Medical Center said that most ambulances that access the medical center use the Hawley Road interchange with I-94. The ambulances are carrying ambulatory patients to and from the medical center; the VA Medical Center does not have an emergency room.

The VA Medical Center said a half interchange at Hawley Road would meet the VA Medical Center’s needs, as most of the traffic to and from the medical center that uses the Hawley Road interchange is going to or from the west. Traffic accessing the VA Campus from the east would continue to use the Stadium Interchange or the new local road interchange within the Stadium Interchange. Additionally, at the request of the VA, a right-turn lane from National Avenue to General Mitchell Boulevard would be constructed at the National Avenue and General Mitchell Boulevard/47th Street intersection as part of the Brewers Boulevard/National Avenue intersection improvements, which would improve access to the VA Campus. See Section 3.7.2.6 for additional information on impacts to the VA Campus.

As noted in Section 3.7, the 8- and 6-lane alternatives would have no impacts on any community centers or places of worship.

3.8.2.6 Effect on Social Groups

WisDOT developed and implemented a public involvement program to assess the project’s effect on several social groups including elderly, minority, low-income, persons with disabilities, pedestrians, and bicyclists. Section 3.9.3 documents targeted outreach to minority and/or low-income population. Additionally, the I-94 East-West Corridor Study Environmental Justice Plan and Preliminary Analysis,
prepared in October 2021 and updated in July 2022 (Appendix D), provided a plan for engaging the environmental justice population in the study area. Section 5 of the 2016 Final EIS, Public Involvement and Agency Coordination during Draft EIS Preparation and Prior to Draft EIS Availability, and Section 6 of the 2016 Final EIS, Public Involvement and Agency Coordination Following Draft EIS Availability and Public Hearing, provide a broader overview of the community outreach program to involve agencies, stakeholders, people within a 2-mile radius, and anyone interested in the project development and potential environmental consequences.

No-build Alternative

The No-build alternative would not directly affect elderly, minority, low-income, or persons with disabilities or any building or program that serves or houses these persons. Compared to the 8- and 6-lane alternatives, the No-build alternative would have higher crash rates and congestion but would not have an adverse impact on non-drivers to the extent it would on drivers who use I-94 regularly. This higher level of congestion on I-94 would cause some drivers to divert to local streets, causing more congestion on local roads. This greater amount of traffic on local roads would make them less safe for pedestrians and bicyclists on those roads.

8- and 6-Lane Alternatives

Changing access at the Hawley Road and/or General Mitchell Boulevard interchanges may change how patients access the VA Medical Center; however, because there are multiple access points, it would not prevent their use of it.

Efficient movement of goods and services on I-94 would benefit non-drivers and transit users to the same extent as other social groups. The proposed improvements would affect bicyclists, pedestrians, and transit users less than drivers who use I-94 regularly, and these users would not experience the benefits of the 8- and 6-lane alternatives to the extent that drivers would experience benefits. However, non-drivers would experience benefits through improved bike and pedestrian facilities.

Wisconsin State Statute 84.01(35) notes that WisDOT shall give due consideration to establishing bikeways and pedestrian ways in all new highway construction and reconstruction projects funded in whole or in part from state funds or federal funds. Section 3.3.2.6 and Table 3-6 note where bicycle and pedestrian facilities exist today along the corridor. Under the 8- and 6-lane alternatives, no existing bicycle or pedestrian facilities would be eliminated. Bicycle facilities would be added in some locations where they do not currently exist. Bicycle and pedestrian facilities will remain on roads that cross I-94, connecting both sides of the interstate for those without access to motorized transportation. Additionally, several bicycle and pedestrian improvements were added to all alternatives:

- A connection between the Hank Aaron State Trail and the Oak Leaf trail along 44th Street and Wells Street, traveling under I-94 east of the Stadium Interchange.
- A new access point to the Hank Aaron State Trail at 64th Street.
- A connection between 32nd Street and Greves Street to provide better access to the Menomonee Valley
- Widened sidewalk along 25th Street and bicycle and pedestrian accommodations at 25th and 26th Street intersections with St. Paul Avenue.

---

5 Contingent on future electrical substation relocation plans in the immediate area.
Transit riders who use I-94 would benefit from the improved safety under the 8- and 6-lane alternatives. Transit riders who use I-94 would also benefit from reduced congestion as part of the 8-lane alternative. Adding capacity to I-94 would reduce traffic volumes on some local streets near the corridor, which could benefit transit riders who use those streets.

3.8.2.7 Construction Effects on Communities and Neighborhoods

Constructing the project would include removing bridges and roadways; constructing and widening bridges; constructing retaining walls; installing barriers and traffic control measures; drainage improvements, earthwork, lighting, and paving. Impacts of construction are temporary increases in noise, vibrations, dust, and particulate emissions; temporary changes to visual surroundings due to construction and construction equipment; and detours, lane closures or road closures. Section 3.27 provides additional information regarding construction impacts.

Construction is planned to occur in phases over 5 years, and would be staged in segments that would reduce the likelihood of more than one neighborhood being affected for over 2 years. WisDOT would maintain access to businesses, homes, and community facilities, as well as I-94 and WIS 175/Brewers Boulevard. Construction would not divide communities or neighborhoods; however, there may be fluctuations in patronage to affected businesses due to perceived or real changes in access and construction nuisances. Any temporary neighborhood divisions during construction due to bridge replacements would be mitigated by detour routes for vehicles, pedestrians, and bicyclists.

3.8.3 Measures to Minimize and Mitigate Adverse Socioeconomic Impacts

WisDOT and FHWA developed alternatives to minimize socioeconomic impacts and modified the alternatives to further reduce socioeconomic impacts based on public input. The 8- and 6-lane alternatives include the following features that minimize impacts on residences, businesses, community facilities, and access points:

- Maintains comparable access points to and from I-94 and connectivity east of the Stadium Interchange.
- The Washington Street extension would mitigate the traffic impacts of partially closing the Hawley Road interchange by making it easier for drivers on Hawley Road to access the 68th Street/70th Street interchange. Connecting 70th Street to Hawley Road/60th Street via Washington Street would provide convenient access to and from Hawley Road from the 68th/70th Street interchange for traffic that would no longer be able to enter I-94 eastbound or exit from I-94 westbound at Hawley Road.

Due to refined design, coordination with local municipalities, and taking in to consideration public comments on the 2016 Final EIS Preferred Alternative, the alternatives studied as part of this EIS have less impacts than the 2016 Final EIS Preferred Alternative. The number of residential displacements was reduced from eight in the 2016 Final EIS to one in this Supplemental Draft EIS and the number of commercial relocations reduced to 6 from 11 in the 2016 Final EIS.

WisDOT would continue to coordinate with the public and communities during future design phases. Improved travel reliability and safety on I-94 can also support economic development, which can help offset unavoidable impacts to the tax base. Section 3.3, Transportation Service; Section 3.5, Residential Development; Section 3.6, Commercial and Industrial Development; Section 3.7, Institutional and Public Services; Section 3.10, Visual Character/Aesthetics; Section 3.19, Noise; and Section 3.20, Air Quality, provide information on measures that would minimize socioeconomic impacts.
3.9 Environmental Justice

WisDOT and FHWA recognize the importance of considering environmental justice in project development. This section describes the opportunities provided to minority and/or low-income populations to actively participate in the project’s planning process and evaluates whether the project would result in any disproportionately high and adverse effects on these populations. For this Supplemental Draft EIS, this section was updated to reflect the most recent demographic data from the U.S. Census Bureau, the 2020 Census and the 2016-2020 ACS 5-year estimate data. The updated information and analysis do not differ greatly from the information, analysis, and results presented in the 2016 Final EIS.

3.9.1 Environmental Justice Background

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by the President on February 11, 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. The order also directs each agency to develop a strategy for implementing environmental justice. The order is also intended to promote nondiscrimination in federal programs that affect human health and the environment and provide minority and low-income communities with access to public information and public participation.

Subsequent USDOT and FHWA Orders reinforced Executive Order 12898:

- U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (updated May 2021 (DOT Order 5610.2C)
- FHWA Order 6640.23A, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (FHWA 2012)

DOT Order 5610.2C sets forth the DOT policy to consider environmental justice principles in all (DOT) programs, policies, and activities. It describes how the objectives of environmental justice are integrated into planning and programming, rulemaking, and policy formulation. The Order also notes the following, which is included in the environmental justice analysis for this project:

- DOT shall collect, maintain, and analyze information on the race, color, national origin, and income level of persons adversely affected by DOT programs, policies, and activities, and use such information in complying with DOT Order 5610.2C (Section 3.9.2)
• Provide meaningful opportunities for public engagement with members of minority populations and low-income populations during the planning and development of programs, policies, and activities (including the identification of potential effects, alternatives, and mitigation measures) (Section 3.9.3)

• Ensure that disproportionately high and adverse human health and environmental effects on minority populations and low-income populations are avoided, minimized or mitigated in a manner consistent with DOT Order 5610.2C and Executive Order 12898 (Section 3.9.4)

Section 3.9.2 identifies existing minority and low-income persons in the study area and surrounding communities. Section 3.9.3 describes how outreach opportunities were provided to minority populations and low-income populations, as well as access to information and participation in outreach events. Section 3.9.4 provides an analysis of project impacts and identifies if there are disproportionately high and adverse effects on minority populations and low-income populations.

FHWA Order 6640.23A directs FHWA to comply with Executive Order 12898 by conducting an environmental justice analysis. WisDOT and FHWA completed an environmental justice analysis for this project to determine whether the proposed project has the potential to incur disproportionately high and adverse effects upon minority populations or low-income populations. For any high and adverse effects found to be borne disproportionately by low-income and minority populations, the analysis examines mitigation measures, offsetting benefits, and impacts of other system elements in accordance with FHWA Order 6640.23A (as well as DOT Order 5610.2C).

FHWA’s Guidance on Environmental Justice and NEPA (2011) advises FHWA offices on the process for addressing environmental justice during National Environmental Policy Act (NEPA) review. It informs FHWA on how to proceed if there are disproportionately high and adverse effects on minority populations and low-income populations.

As part of the Supplemental Draft EIS process, WisDOT and FHWA reviewed the potential impacts of the I-94 East-West Corridor project, determined the impacts of this project on the general population and natural resources, and then assessed whether the impacts were disproportionately borne by low-income populations or minority populations. The following impact categories were identified as potentially having an impact on the general population, as well as minority populations and low-income populations in the I-94 East-West Corridor (see Section 3.9.4 for additional information):

• Freeway access changes
• Residential and business displacements
• Institutional and public services
• Noise
• Construction impacts
• Indirect and cumulative effects

The benefits of a proposed transportation project may be considered when determining whether any disproportionately high and adverse effects on minority and/or low-income populations would occur.

---

6 Adverse effects are defined in FHWA Order 6640.23A as the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of human-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community’s economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.
The I-94 East-West Corridor project would provide a number of benefits, including reduced congestion, improved safety, improved local circulation through road improvements and moving traffic from local roads to I-94, and economic benefits (ability to access employment). The project benefits would accrue to the traveling public, nearby residents, including minority and low-income populations, and those doing business in the study area. Local residents that use I-94 to access opportunities both within and outside the I-94 East-West Corridor would benefit due to this project. Section 3.9.5 provides additional information regarding the project benefits.

The I-94 East-West Corridor Study Environmental Justice Plan and Preliminary Analysis was originally prepared in August 2013 and updated in December 2021 and July 2022 for updated demographic information. The plan was created at the beginning of the study and was incorporated into the project at the earliest stages and continues to be incorporated. The I-94 East-West Corridor Study Environmental Justice Plan and Preliminary Analysis reflects WisDOT’s interest in assessing impacts, ensuring public involvement opportunities, providing meaningful access to project information, and soliciting input from minority populations and low-income populations. The document provides existing demographic information present in the I-94 East-West Corridor study area, along with a plan for assessing environmental justice data and impacts, and a plan for engaging minority populations and low-income populations in the study area. The I-94 East-West Corridor Study Environmental Justice Plan and Preliminary Analysis identified a set of goals, recommended target audiences, and proposed deliverables. The plan also defined criteria to identify and communicate with minority and/or low-income persons within the study area, as well as strategies to assess and mitigate potential impacts to those populations.

3.9.2 Identification of Existing Minority Populations and Low-income Populations

To determine the presence of minority populations and low-income populations in the I-94 East-West Corridor study area, WisDOT used census tract, block group, and block data, supplemented by the study team’s extensive public involvement program and other relevant data sources. For this Supplemental Draft EIS, WisDOT used the most recent 2020 Census data and ACS 5-year (2016–2020) estimates for demographic data to compare the various analysis areas.

Section 3.8, Socioeconomic Characteristics, provides demographic information on the population in the corridor, including identification of ethnicity, age, mobility status, and income levels of the population. Additionally, the I-94 East-West Corridor Environmental Justice Plan and Preliminary Analysis provides additional demographic data related to minority populations and low-income populations.

The I-94 East-West Corridor is within the City of Milwaukee and adjacent to the cities of Wauwatosa and West Allis and the Village of West Milwaukee. WisDOT identified the minority and/or low-income populations at the following scales to understand the impacts that potentially could be felt by the communities adjacent to the freeway system:

---

7 Census blocks are the smallest statistical area for basic demographic data such as total population, race, and ethnicity (U.S. Census Bureau 2021). Census tracts are larger statistical subdivisions of a county that are relatively permanent compared to the census block, which changes every 10 years (U.S. Census Bureau 2021). Some demographic data, like poverty level, are only available at the census tract level.
1. A study area (route tendency corridor) that reflects the area within which a motorist would choose to take I-94 as their preferred route if traveling in to or out of the area (at a certain distance from I-94 on each crossroad, a driver will choose another freeway or major arterial for their trip rather than I-94). The area is generally within 2 miles on either side of I-94 (Exhibit 3-9).

2. Within a 1-mile corridor of the freeway centerline. This area reflects the neighborhoods most influenced by traffic along I-94.

3. Within a 0.5-mile corridor from the freeway centerline (0.5 mile both north and south of the centerline).

4. Within a 1,000-foot corridor from the freeway centerline (1,000 feet both north and south of the centerline).

5. City of Milwaukee and City of West Allis.

The I-94 East-West Corridor is a highly developed urban area with commercial, industrial, transportation, recreational, and residential development directly adjacent to I-94. The analysis finds that populations within 0.5 mile and 1,000 feet of the corridor are most likely to experience direct and/or indirect effects given the proximity to the construction and operation of the freeway. Within the 1,000-foot corridor, residences and business would experience the highest degree of direct impacts from the project, including potential property acquisition, relocation, noise, and nuisances associated with construction. Those beyond these distances receive the benefits of the project, with less of the direct or indirect impacts of the I-94 East-West Corridor project.

The City of Milwaukee serves as a good comparison to the I-94 East-West Corridor study area because the entire project corridor is within the City of Milwaukee and has a similar level of urban land use. The City of West Allis is also used as a comparative measure because, as part of the 2016 Final EIS, the City of West Allis has stated concerns about impacts to minority populations and low-income populations in their community as a result of this project.

The demographic information in the following subsections describes the minority and/or low-income populations found along the I-94 East-West Corridor. The data show that higher percentages of both minority and/or low-income populations are concentrated east of the Stadium Interchange and north of I-94 (Exhibits 3-13 and 3-14).

3.9.2.1 Minority Populations

Within the study area, 1-mile corridor, 0.5-mile corridor, and 1,000-foot corridor of I-94, minorities comprised between 49 and 63 percent of the population in each corridor (Table 3-14). These percentages are similar to what was found using 2010-2014 ACS 5-year estimate data as part of the project in 2016. The percentage of minority residents in these corridors is less than the City of Milwaukee as a whole (67.7 percent).

Table 3-8 in Section 3.8, Socioeconomic Characteristics, shows the minority population numbers in the I-94 East-West Corridor in both 2010 and 2020. The study area minority population increased by about 15 percent between 2010 and 2020. The City of Milwaukee, West Milwaukee, West Allis and Wauwatosa’s minority population also increased. Exhibit 3-13 shows the areas where minorities make

---

8 As part of the rescinded 2016 Record of Decision (ROD) for this project, Appendix B of the ROD provided updated demographic data using the “Not Hispanic or Latino, White Alone” category to more accurately account for minority populations than was shown in the 2014 Draft EIS and 2016 Final EIS. The minority population data in this Supplemental Draft EIS will show a notable increase from the 2016 Final EIS but remains similar to what was concluded in the rescinded 2016 ROD.
up the greatest percent of the total population along the corridor. These areas are generally east of the Stadium Interchange and north of I-94.


<table>
<thead>
<tr>
<th>Location</th>
<th>2020 Total Population</th>
<th>2020 Minority Population</th>
<th>2020 percent of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Milwaukee</td>
<td>577,222</td>
<td>390,803</td>
<td>67.7%</td>
</tr>
<tr>
<td>West Allis</td>
<td>60,325</td>
<td>18,776</td>
<td>31.1%</td>
</tr>
<tr>
<td>Study Area</td>
<td>116,132</td>
<td>72,890</td>
<td>62.8%</td>
</tr>
<tr>
<td>1-mile corridor</td>
<td>39,270</td>
<td>19,166</td>
<td>48.8%</td>
</tr>
<tr>
<td>0.5-mile corridor</td>
<td>20,247</td>
<td>9,960</td>
<td>49.2%</td>
</tr>
<tr>
<td>1,000-foot corridor</td>
<td>9,706</td>
<td>4,969</td>
<td>51.2%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2020 Census

The I-94 East-West Corridor study area has a greater percentage of Hispanics or Latinos than the City of Milwaukee as a whole and a lower percentage of African Americans than the City of Milwaukee as a whole. While African Americans are the largest minority group in the City of Milwaukee, Hispanics or Latinos are the largest minority group in the I-94 East-West Corridor study area. In the study area in 2020, 30.5 percent of the population was Hispanic or Latino of any race, while 22.1 percent of the population was African American. The Hispanic or Latino population is generally south of I-94, east of the Stadium Interchange, and the African American population generally resides north of I-94 and east of the Stadium Interchange (Table 3-15).

Table 3-15. Population by Race/Ethnicity (2020)

<table>
<thead>
<tr>
<th>Area</th>
<th>White</th>
<th>Black or African American</th>
<th>American Indian and Alaska Native</th>
<th>Asian</th>
<th>Native Hawaiian or Other Pacific Islander</th>
<th>Some Other Race</th>
<th>Two or More Races</th>
<th>Hispanic or Latino (of any race)</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Milwaukee</td>
<td>186,419</td>
<td>218,273</td>
<td>2,365</td>
<td>29,969</td>
<td>166</td>
<td>2,971</td>
<td>20,753</td>
<td>116,306</td>
<td>577,222</td>
</tr>
<tr>
<td></td>
<td>32.3%</td>
<td>37.8%</td>
<td>0.4%</td>
<td>5.2%</td>
<td>0.0%</td>
<td>0.5%</td>
<td>3.6%</td>
<td>20.1%</td>
<td></td>
</tr>
<tr>
<td>West Allis</td>
<td>41,549</td>
<td>3,540</td>
<td>497</td>
<td>1,515</td>
<td>17</td>
<td>244</td>
<td>2,752</td>
<td>10,211</td>
<td>60,325</td>
</tr>
<tr>
<td></td>
<td>68.9%</td>
<td>5.9%</td>
<td>0.8%</td>
<td>2.5%</td>
<td>0.0%</td>
<td>0.4%</td>
<td>4.6%</td>
<td>16.9%</td>
<td></td>
</tr>
<tr>
<td>Study Area</td>
<td>43,242</td>
<td>25,715</td>
<td>736</td>
<td>6,007</td>
<td>54</td>
<td>460</td>
<td>4,528</td>
<td>35,390</td>
<td>116,132</td>
</tr>
<tr>
<td></td>
<td>37.2%</td>
<td>22.1%</td>
<td>0.6%</td>
<td>5.2%</td>
<td>0.0%</td>
<td>0.4%</td>
<td>3.9%</td>
<td>30.5%</td>
<td></td>
</tr>
<tr>
<td>1-mile corridor</td>
<td>20,104</td>
<td>9,031</td>
<td>235</td>
<td>1,860</td>
<td>31</td>
<td>192</td>
<td>1,772</td>
<td>6,045</td>
<td>39,270</td>
</tr>
<tr>
<td></td>
<td>51.2%</td>
<td>23.0%</td>
<td>0.6%</td>
<td>4.7%</td>
<td>0.1%</td>
<td>0.5%</td>
<td>4.5%</td>
<td>15.4%</td>
<td></td>
</tr>
<tr>
<td>0.5-mile corridor</td>
<td>10,287</td>
<td>4,185</td>
<td>135</td>
<td>1,029</td>
<td>15</td>
<td>111</td>
<td>959</td>
<td>3,526</td>
<td>20,247</td>
</tr>
<tr>
<td></td>
<td>50.8%</td>
<td>20.7%</td>
<td>0.7%</td>
<td>5.1%</td>
<td>0.1%</td>
<td>0.5%</td>
<td>4.7%</td>
<td>17.4%</td>
<td></td>
</tr>
<tr>
<td>1,000-foot corridor</td>
<td>4,737</td>
<td>1,780</td>
<td>99</td>
<td>321</td>
<td>4</td>
<td>62</td>
<td>517</td>
<td>2,186</td>
<td>9,706</td>
</tr>
<tr>
<td></td>
<td>48.8%</td>
<td>18.3%</td>
<td>1.0%</td>
<td>3.3%</td>
<td>0.0%</td>
<td>0.6%</td>
<td>5.3%</td>
<td>22.5%</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2020 Census

3.9.2.2 Low-income Populations

Low-income people have fewer mobility options to meet their basic travel needs and they face problems that reduce their quality of life and productivity (FTA 2013).
The median household income in the study area is higher than the median household income for the 1-mile and 0.5-mile corridors but is less than the City of Milwaukee and 1,000-foot corridors (Table 3-16). In addition, Table 3-17 records the median incomes nearest to I-94 to show where low-income populations reside in the areas next to I-94. The low-income populations generally reside on the far eastern portion of the project limits, north of I-94. The low end of the median household income range north of I-94 between 27th Street and 16th Street can be attributed to a large student population in this area.

**Table 3-16. Median Household Income (2020)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Median Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Milwaukee</td>
<td>$43,125</td>
</tr>
<tr>
<td>West Allis</td>
<td>$53,634</td>
</tr>
<tr>
<td>Study Area</td>
<td>$39,710</td>
</tr>
<tr>
<td>1-mile corridor</td>
<td>$27,109</td>
</tr>
<tr>
<td>0.5-mile corridor</td>
<td>$27,109</td>
</tr>
<tr>
<td>1,000-foot corridor</td>
<td>$47,908</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau; 2016-2020 ACS 5-year estimate data

**Table 3-17. Median Household Income in Census Block Group Nearest to I-94**

<table>
<thead>
<tr>
<th>Location of Block Group</th>
<th>Median Household Income &lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>North of I-94 between 68th Street and Hawley Road</td>
<td>$47,900–$50,500</td>
</tr>
<tr>
<td>South of I-94 between 68th Street and Hawley Road</td>
<td>$47,900–$50,500</td>
</tr>
<tr>
<td>North of I-94 between Hawley Road and Stadium Interchange (Story Hill)</td>
<td>$97,000</td>
</tr>
<tr>
<td>North of I-94 between Stadium Interchange and 35th Street</td>
<td>$32,100</td>
</tr>
<tr>
<td>North of I-94 between 35th Street and 27th Street</td>
<td>$21,100</td>
</tr>
<tr>
<td>North of I-94 between 27th Street and 16th Street</td>
<td>$9,100–$25,900</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau; 2016-2020 ACS 5-year estimate data

<sup>a</sup> The range indicates that more than one census block represents this portion of the study area, so both low and top range of median household income are presented.

There are more people living in poverty (households at or below the HHS poverty threshold, $26,200 for a family/household containing four persons in 2020) in the study area (26 percent), 1-mile corridor (28 percent), and 0.5-half-mile corridor (38 percent) than in the City of Milwaukee (25 percent) and West Allis (12 percent). **Exhibit 3-14** shows where poverty rates are greatest. These areas are generally east of the Stadium Interchange and north of I-94. Section 3.8.1.3 provides a detailed explanation of how the poverty level is determined.

### 3.9.2.3 Minority-owned Business and Disadvantaged Business Enterprises

Of the roughly 30 businesses near I-94, at least six are minority-owned: Monreal’s Encore Gentlemen’s Club, TJ’s on 35th, Hometown gas station, St. Paul Veterinary Clinic, BP Pantry 41 gas station, and INTEC. Due to design refinements since the 2016 Final EIS, none of these businesses would be displaced as part
of this project. As part of the 2016 Final EIS preferred alternative, Monreal’s Encore Gentlemen’s Club, TJ’s on 35th, Pantry 41, and St. Paul Veterinary Clinic would have been displaced.

These businesses do not provide goods and services that are unique to an ethnic group, such as an ethnic grocery store or store that serves as a community gathering spot. Non-minority-owned businesses in the corridor also do not provide services that cannot be obtained elsewhere near the corridor, but they may provide employment opportunities to minority and/or low-income workers. Section 3.9.4.2 provides detailed information on the potential business locations.

3.9.2.4 Users of I-94

As noted in Section 1.4.2 and Section 3.8.1, I-94 serves travelers within the study area, those traveling to and from the study area, and those traveling through the study area. The I-94 East-West Data Collection: OD Data Comparison, a peak period traffic study, shows that about 80 percent of travelers during peak periods began or ended (or both) their freeway trips in the study corridor. Additional analysis using StreetLight origin-destination data showed the percentage of low-income and/or minority users of I-94 in the study area is similar to the percentage of low-income and minority populations in the Milwaukee metropolitan area. Thus, the project would benefit both minority and low income population users of I-94 and non-environmental justice population users of I-94 to the same proportion.

Improvements to I-94 would also benefit those living in and doing business in the study area. Improvements to safety and reductions in congestion along I-94 (two elements of the project’s purpose and need) would make it more convenient for people to access the study area and easier for residents to use I-94 to access opportunities both within and outside the I-94 East-West Corridor. In addition to making I-94 safer, an improved I-94 would draw large trucks and other traffic off local roads, making them safer not only for vehicles, but also for bicyclists and pedestrians in the area. Removing heavy truck traffic from local roads away from schools, churches, and other community buildings is a benefit of improving I-94.

Traffic analysis shows an almost even split in traffic by direction for both the morning and afternoon peak periods. This means the I-94 East-West corridor equally serves those who live in Milwaukee County and travel to Waukesha County for work and those who live in Waukesha County and travel to Milwaukee County for work. As noted in a 2019 Wisconsin Department of Workforce Development technical report, Journey to Work: Commuting and “Reverse Commuting” between Milwaukee and Waukesha Counties (Walsh 2019), more workers travel from Milwaukee County to Waukesha County than from Waukesha County to Milwaukee County. More than 25 percent of the Waukesha County workforce lives in Milwaukee County while only 12 percent of the Milwaukee County workforce lives in Waukesha County. Many of these Milwaukee County residents working in Waukesha County are people who live in the I-94 East-West Corridor study area and use their vehicle on I-94 to travel to and from work. The StreetLight origin-destination data show that I-94 west of the Stadium Interchange has a higher percentage of westbound trips originating in census block groups with higher minority populations and a higher percentage of eastbound trips ending in block groups with higher minority populations. This shows that people living along the I-94 East-West Corridor in the City of Milwaukee use I-94 to access jobs west of the study area.

3.9.3 Coordination with and Participation of Minority Populations and Low-income Populations

WisDOT provided opportunities for engagement and input by minority and low-income populations as part of the overall public involvement program for the I-94 East-West Corridor project. One of the guiding principles of environmental justice is to provide meaningful involvement by all potentially
affected communities in the transportation decision-making process. Executive Order 12898, DOT Order 5610.2C, and FHWA Order 6640.23A require agencies to provide opportunities for minority populations and low-income populations to engage in the public participation process. This helps decision makers better balance the benefits of the project against its adverse impacts and consider options to avoid, minimize, or mitigate adverse impacts to minority populations and low-income populations.

Sections 5 and 6 of the 2016 Final EIS and Section 5 of this Supplemental Draft EIS describe WisDOT's public involvement process. The I-94 East-West Corridor Study Environmental Justice Plan and Preliminary Analysis provided a plan for engaging minority populations and low-income populations in the study area.

WisDOT's public involvement plan for the I-94 East-West Corridor study (I-94 East-West Public Involvement Plan), available on the project website, is designed to seek input from a broad range of stakeholders. It is intended to help ensure that the preferred alternative reflects, to the extent practicable, the views of those who use I-94 and its interchanges, adjacent neighborhoods and businesses, local officials, and other interest groups. The public involvement process was, and will remain, open to all residents and population groups in the study area with targeted outreach efforts to specifically attract input from persons of low-income and/or minority status. The public involvement plan was updated in August 2021 and will continue to be updated and revised during the subsequent preliminary design, final design, and construction phases of the project.

3.9.3.1 Targeted Stakeholder Outreach

Targeted stakeholder outreach events increased awareness about the I-94 project and provided opportunities for all populations, including minority and/or low-income populations, to be involved in the decision-making process. Targeted outreach included stakeholder interviews, meetings with neighborhood groups and community based organizations, Community Advisory Committee (CAC), Transit Technical Advisory Committee (TTAC), Business Advisory Committee (BAC), and Technical Advisory Committee (TAC) meetings, door-to-door outreach to those nearest to the project limits, focus meetings with tribes, special interest groups meetings, and public meetings and public hearings. Targeted outreach provided opportunities for WisDOT to engage residents and business owners, including social service providers, community leaders, and other representatives. The following paragraphs describe how these efforts included targeted outreach to representatives of minority and/or low-income populations.

2012-2016 Outreach

At the beginning of the project development process in 2012, WisDOT interviewed community organizations, local officials, and social service providers that serve the minority and/or low-income populations in the study area. These groups included the African American Chamber of Commerce, Hispanic Chamber of Commerce, Hunger Task Force (subsequently closed and relocated outside the project area), Milwaukee Urban League, The Business Council, 16th Street Community Health Center, Cesar E. Chavez Business Improvement District (BID), University of Wisconsin–Milwaukee (UWM) Children’s Environmental Health Sciences Core Center, Potawatomi Hotel and Casino, Milwaukee Latino Health Coalition, Centro Hispano of Milwaukee, and the City of Milwaukee. Meetings with the groups led to the project team setting up meetings with additional community groups, as suggested by groups in the initial meetings.

Through its outreach WisDOT found that Marquette University High School was a centrally located venue for large portions of the minority and/or low-income populations, the location was accessible by MCTS routes, the building was Americans with Disabilities Act (ADA)–compliant, and has ample parking.
Based on this information, with the exception of the first series of public involvement meetings, Marquette University High School served as one of two venues for all subsequent public involvement meetings and the public hearing during the Draft and Final EIS stage of the project. For public convenience, all public involvement meetings and the public hearings were held at two locations in the project corridor, one on the west side of the Stadium Interchange and one at Marquette University High School east of the Stadium Interchange.

WisDOT also conducted a public meeting, co-sponsored with the Milwaukee Urban League, in November 2014, about 1 month prior to the public hearings. The meeting was held at the WDNR Southeast Region headquarters on North Avenue and Dr. Martin Luther King Jr. Drive with the goal of providing information to and receiving input form the African-American community. Prior to this meeting, WisDOT funded radio advertisements providing details on the meeting. WisDOT gave a presentation on the project’s limits, purpose and need, schedule, alternatives considered, and upcoming public hearings. The presentation was followed by questions/comments from attendees.

The main themes WisDOT heard during the meetings were concerns about reducing freeway reconstruction costs, maintaining access to I-94, and improving transit. Sections 5.1.6 and 6.5.3 of the 2016 Final EIS include a summary of outreach activities to groups that represent minority and/or low-income populations.

Other key input received included validating that Spanish was the most common second language among minority groups in the study area, determining which newspapers and community newsletters would reach the large number of minority and/or low-income populations, and which community leaders WisDOT should keep informed to disseminate project updates and encourage participation. The project website provided a link to Spanish-translated project information, including directions on how to contact Spanish-speaking staff.

The CAC assisted the study team in identifying and understanding project purpose and need issues, developing and evaluating alternatives, evaluating impacts, and sharing project information with other community interests. Members of community groups and representatives from each of the adjoining neighborhoods representing minority or low-income populations were specifically invited to participate in the CAC meetings to ensure full representation and an opportunity to provide input (see Section 5.1.1 for more information regarding the CAC). The CAC members were charged with representing their community, as well as distributing information to their community members. The members discussed conceptual ideas, as well as impacts, such as safety and snow removal, property acquisition, noise, visual impacts, and methods of public outreach.

Additionally, members of minority community groups were invited and participated in the Indirect and Cumulative Effects focus group meeting conducted in June 2013. The meeting included leaders that represent both minority and/or low-income populations, specifically, leaders from the African American Chamber of Commerce, Wisconsin Housing and Economic Development Authority, Layton Boulevard West Neighbors, Village of West Milwaukee, City of Milwaukee, and Potawatomi Bingo Casino.

In July 2012, August 2012, May 2013, June 2013, and May 2015, WisDOT contacted Native American tribal chairs or tribal historic preservation officers to inform and update them about the project and provide an opportunity to comment on the project. WisDOT contacted tribal leaders from the following tribes:

• Bad River Band of Lake Superior Chippewa Indians of Wisconsin
• Forest County Potawatomi Community of Wisconsin
• Ho-Chunk Nation
The Forest County Potawatomi Community of Wisconsin historic preservation office commented on potential impacts to cemetery lands. They expressed that cemeteries in the corridor were once occupied by the Potawatomi ancestors and, therefore, land disturbance would concern the Potawatomi tribe. While only one tribe provided comments, WisDOT continued to organize opportunities to receive input. In October 2012 and April 2013, WisDOT attended meetings with tribal historic preservation officers to provide updates on the I-94 project.

Once the alternatives retained for detailed study were identified and potential property impacts were preliminarily determined as part of the 2014 Draft EIS, WisDOT conducted door-to-door visits targeted on those living closest to where property owners (both residential and businesses) may be affected. A total of 54 properties were visited and called, and, when direct access was unsuccessful, the team mailed certified letters to reach the property owners and residents. These efforts did reveal that five of the potentially affected businesses are minority-owned and this was confirmed as part of this Supplemental Draft EIS. It also provided property owners a direct, one-on-one opportunity to discuss how WisDOT and FHWA conduct property acquisition through the Uniform Act. Additional meetings took place with the five minority-owned businesses in July and August 2015 to provide an update on project status and obtain information on employees and customers.

2020 and Beyond Outreach

With the re-start of the I-94 East-West Corridor project in 2020, WisDOT continued to meet with a broad range of stakeholders. A new advisory committee, the TTAC, was developed. The TTAC was formed to gain input on transit opportunities associated with the I-94 East-West Corridor and discuss general mobility and access concerns of transit, such as unmet transit needs in the corridor. Participants on the TTAC include transit operators in the region, transit experts, and neighborhood and community groups. WisDOT also continued to meet with the CAC, BAC, and TAC.

Since June 2020, WisDOT has conducted over 200 in-person or virtual meetings with local governments, elected officials, local community groups, local businesses, state and federal agencies, and the advisory committees. WisDOT met with stakeholders such as the Hispanic Chamber of Commerce, African American Chamber of Commerce, Forest County Potawatomi Community of Wisconsin, and Near West Side Partners, Inc. These meetings provided an opportunity for WisDOT to present project information but also to directly hear about study area opportunities and concerns from local groups representing environmental justice populations.

Meetings were also conducted with neighborhood and community organizations such as Milwaukee Inner-City Congregations Allied for Hope (MICAH), Black Health Coalition of Wisconsin, Johnson’s Woods neighborhood, Hilltopper neighborhood, Tribal Labor Advisory Committee, Coalition for More Responsible Transportation, National Association for the Advancement of Colored People, Milwaukee Urban League, 1000 Friends of Wisconsin and Wisconsin Environment, Inc., and Fix at Six Group. These
groups have minority and/or low-income members or represent the concerns of environmental justice populations.

In addition to meetings with community and neighborhood organizations, WisDOT participated in several public events to provide minority and/or low-income populations with project information and to hear their thoughts on the project. This included attending National Night Out events at three Milwaukee Police Department Districts and in the City of Wauwatosa, City of West Allis, and Village of West Milwaukee; the Near West Side Partners’ “Brat for Your Thoughts” event, and the Near West Side to Hank Aaron Trail Walk & Ride community event to discuss bicycle and pedestrian connectivity in the project corridor; United Community Center’s Community Resource fair; and the VIA CDC Ice Cream Social and Community Resource Fair. WisDOT conducted an East Leg Connectivity Workshop to discuss bike and pedestrian accommodations east of the Stadium Interchange. WisDOT also met with the SEWRPC Environmental Justice Task Force regarding project approach.

Additionally, the project website (https://wisconsindot.gov/Pages/projects/by-region/se/94stadiumint/default.aspx) is a source for up-to-date public information. The website has information on purpose and need, alternatives, maps, schedule, contact information, and materials provided at past meetings and outreach. There is a link to sign up for project updates by subscribing to the distribution list and an online comment form to provide input. There is also a Spanish-language webpage providing the same project information.

3.9.3.2 Public Meetings and Public Hearings

In addition to the efforts and initiatives described in Sections 5 and 6 of the 2016 Final EIS and Section 5 of this Supplemental Draft EIS, WisDOT specifically and proactively engaged the minority community to ensure meaningful opportunities for their participation in the decision-making process. All of the public involvement meetings were announced through newsletters sent to local officials, elected officials, neighborhood associations, business interests, adjacent property owners, state and federal agencies, Native American Tribes, and other interests and stakeholders. WisDOT also worked with community-based organizations, such as Near West Side Partners, for project outreach and to listen to concerns of residents and other stakeholders. Notifications were mailed to all residents and property owners within approximately 1 mile of I-94 and to anyone who expressed an interest in the project. Notifications were also translated into Spanish and mailed to neighborhoods with a high presence of Spanish-speaking residents, such as the Layton Boulevard West neighborhoods. Newsletters were also dropped off at libraries, city halls, and courthouses in the study area. The meetings were advertised in the Milwaukee Journal Sentinel, Waukesha Freeman, Community NOW, Community Journal (an African American newspaper), Milwaukee Courier (an African American newspaper), Milwaukee Times (an African American newspaper), Spanish Journal (a Spanish-English bilingual newspaper), and El Conquistador (a Spanish-language newspaper) and through local radio and television announcements. Meeting notices and other information were posted in both English and Spanish on the project website and translators were made available at the public involvement meetings and 2014 Public Hearings.

WisDOT made public involvement meetings accessible to residents living in the study area. As noted in Section 3.9.3.1, for public convenience, all public involvement meetings and the public hearings were held at two locations in the project corridor, one on the west side of the Stadium Interchange and one on the east side.

The Marquette University High School venue was selected based on a recommendation from Merrill Park Neighborhood Association and because the surrounding Merrill Park neighborhood contains a high percentage of minority and/or low-income residents. According to 2020 Census data, the four census tracts closest to Marquette University High School have between 30 and 67 percent of residents
living in poverty, and the minority population percentage of those four tracts combined is over 80 percent. WisDOT selected the location with the intent of making it convenient for minority and/or low-income residents to ensure all residents had an opportunity to engage in the public information process.

Section 5.1.2 of the 2016 Final EIS summarized the series of public involvement meetings conducted prior to the release of the Draft EIS. The public involvement meetings were conducted to receive input throughout the development of the project and environmental analysis. Section 6.1 of the 2016 Final EIS provides a summary of the public hearing. The meetings were well-attended by minority populations.

In March 2021 WisDOT conducted a YouTube Live virtual public involvement meeting. This public involvement meeting was conducted virtually due to COVID-19 restrictions in effect for large group gatherings at that time. Notice of the meeting was placed on the project’s website and postcards were sent to local residents and those interested in the project to inform them of the meeting. The slides shown during the presentation were also available real-time in Spanish. An interactive comment form was available, and questions were responded to during the meeting.

In December 2021 a series of public involvement meetings were conducted to inform the public of the alternatives being analyzed as part of the Supplemental Draft EIS. Much like the previous public involvement meetings, WisDOT made the meetings accessible to residents living on both the east and west ends of the study area with the meetings held at two locations in the project corridor, one on the west side of the Stadium Interchange (Tommy Thompson Youth Center at Wisconsin State Fair Park) and one on the east side. Marquette University High School was not available for WisDOT to use as a meeting site due to COVID-19 concerns. Thus, the meeting on the east side of the corridor was held at the WDNR office at 1027 W. St. Paul Street in Milwaukee. To ensure project information was clear and understandable for everyone in attendance, graphics and maps were used to the extent possible. Handouts were also provided in English and Spanish, and Spanish interpreters were available to help if requested. Meeting materials in both English and Spanish were also available on the project website for those unable to attend the meetings in person.

An additional series of PIMs was conducted in June 2022. These meetings focused on the revised Stadium Interchange options along with new information since the December 2021 meetings. Meetings were held on both the west and east ends of the study corridor at Tommy Thompson Youth Center at Wisconsin State Fair Park and Marquette University High School. At the May 2022 TTAC meeting, participants were happy to learn that the June PIM would return to Marquette University High School. To ensure project information was clear and understandable for everyone in attendance, graphics and maps were used to the extent possible. Handouts were also provided in English and Spanish, and Spanish interpreters were available to offer assistance if requested. Meeting materials in both English and Spanish were also available on the project website for those unable to attend the meetings in person.

### 3.9.3.3 Input on Alternatives Based on Environmental Justice Population Comments

Through the outreach to and interaction with minority populations and low-income populations, several alternatives or enhancements to alternatives were suggested. The project team evaluated these alternatives and incorporated elements of the alternatives to the alternatives where reasonable from a cost and impact standpoint.

Following the project re-start in 2020, WisDOT received comments from the public, as well as advocacy groups representing minority populations and low-income populations, asking WisDOT to analyze a 6-lane alternative as part of the project. A 6-lane alternative was dismissed in the 2016 Final EIS because
it would not meet the project’s purpose and need related to providing level of service D or better traffic operations in the 2040 design year. However, based on public requests, it is being reconsidered as part of the Supplemental Draft EIS using most recent data and public input.

Early in the study the project team heard from several neighborhood organizations about the importance of maintaining existing access along I-94, particularly the 35th Street and 25th/26th/28th Street interchanges. Removing interchange access would improve traffic operations on I-94 and meet AASHTO guidance for the spacing of interchanges in an urban area. However, WisDOT met with groups such as Layton Boulevard West Neighbors, Merrill Park Neighborhood Association, Clarke Square Council, and Bluemound Heights Neighborhood Group who desired to maintain existing freeway access. Similar comments were heard at public involvement meetings. Based on the support for maintaining these interchanges, the 35th Street and 25th/26th/28th Street interchanges remained as part of the project. As part of the design refinements since 2016, based on information heard from community organizations and cooperation with the City of Milwaukee, WisDOT was able to avoid 3 residential relocations and along 35th Street and four business relocations along 27th and 35th Streets.

Representatives from the Clarke Square Council, Hispanic Chamber of Commerce, and Cesar E. Chavez BID requested that WisDOT construct a new interchange at 16th Street and I-94. The study team reviewed this request but determined that the close proximity to the 13th Street interchange and the 25th/26th/28th Street interchange, along with the system ramps in the Marquette Interchange immediately east of 16th Street, would make this ramp cost-prohibitive to construct and would result in several business displacements. This interchange was not included as part of the project.

Local community organizations also advocated for better pedestrian connections to the Menomonee Valley from the neighborhoods north of I-94. Based on this desire, WisDOT added several bicycle and pedestrian improvements as part of the 8- and 6 lane alternatives (detailed in Section 2.2.1 and shown on Exhibit 2-6):

- A shared-use path along 25th Street for bicycles and pedestrians to connect the area north of I-94 to the Menomonee Valley. WisDOT would construct a 10-foot shared-use path on the west side of 25th Street north of St. Paul Avenue, and a 10-foot shared-use path on the east side of 25th Street south of St. Paul Avenue. Having the shared-use path on the west side of 25th Street north of St. Paul Avenue avoids conflict with I-94 ramp movements and the path on the east side of 25th Street, south of St. Paul Avenue allows the path to connect to the existing path south of the project limits. WisDOT would also add 6-foot sidewalks along 26th Street and signalized intersections at 25th/26th Streets and St. Paul Avenue, allowing pedestrians and bicyclists to safely cross these streets to access the path via crosswalks at the signalized intersections.

- Contingent on future electrical substation relocation plans in the immediate area, a connection between 32nd Street and Greves Street to provide better access to the Menomonee Valley. WisDOT would construct a 10-foot shared-use path connecting 32nd Street with Greves Street. On Greves Street, the existing 6-foot sidewalk would remain and WisDOT would add a new sidewalk from 25th Street to St. Paul Avenue on the north side of Greves Street. WisDOT would also add shared-lane pavement markings for bikes.

- A connection between the Hank Aaron State Trail and the Oak Leaf Trail along 44th Street and Wells Street, traveling under I-94 east of the Stadium Interchange. Between Selig Drive and Bluemound Road, the existing path/sidewalk on the west side of 44th Street would remain, and WisDOT would construct a 10-foot shared-use path on the east side of 44th Street. North of Bluemound Road, the existing 6-foot sidewalk on the west side of 44th Street would remain, and WisDOT would add shared-lane pavement markings for bikes along 44th Street and Wells Street.
Minority and environmental advocacy groups requested that WisDOT include transit as part of the alternatives or a specific transit alternative. Section 2.5.2 of the 2016 Final EIS explains how transit as a standalone alternative would not meet the project’s purpose and need. For that reason, transit as a standalone alternative was eliminated from consideration.

VISION 2050 and the FCTS recommend arterial street and highway improvements “to address the residual congestion that would not be alleviated by [the other] recommended land use, systems management, demand management, bicycle and pedestrian facilities, and public transit measures” (SEWRPC 2020a). In other words, the traffic forecasts for the I-94 corridor and other highways in southeastern Wisconsin represent the “residual traffic” that will continue to use the street and highway system and increase congestion and safety concerns, even after full implementation of the public transit, bicycle and pedestrian, TSM, and TDM elements.

The 8- and 6-lane alternatives would not preclude bus transit service, as shown in SEWRPC’s VISION 2050. No MCTS routes or inter-county bus service would be permanently impacted by the project. All of the routes could continue to provide service along their existing routes. The improved level of service and safety on I-94 would benefit buses using I-94. Local arterial street traffic volumes may be lower under the 8-lane alternative because some trips along arterials may shift to I-94, which may improve bus transit service.

WisDOT also contributed $300,000 to Milwaukee County’s BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center. The study was completed by Milwaukee County to explore BRT along a corridor paralleling I-94 between downtown Milwaukee and the Milwaukee Regional Medical Center. Construction began in 2021 and service is anticipated to start by 2023, allowing the BRT line to be operational prior to I-94 East-West Corridor construction. The route is north of I-94, following Wisconsin Avenue from downtown Milwaukee to Hawley Road and then Bluemound Road west of Hawley Road to 95th Street where it turns north toward the Milwaukee Regional Medical Center. The BRT route will provide transit users with more efficient, environmentally friendly, and higher frequency service with all-electric buses, dedicated bus lanes, traffic signal priority, off-board fare collection, optimized station locations, and raised platforms that allow for easy boarding. There would be no direct impacts to the BRT route as a result of the I-94 East-West Corridor project.

Additionally, WisDOT subsidizes the Amtrak Hiawatha train route between Milwaukee and Chicago along with the Amtrak Thruway I-41 Bus Service, which provides two daily roundtrip buses between Green Bay and Milwaukee, with stops in Appleton, Oshkosh, and Fond du Lac. WisDOT also upgraded the train shed at the Milwaukee Intermodal Station in 2016, providing a new mezzanine over the tracks, with escalators and elevators that connect to new, ADA-compliant platforms.

WisDOT has committed to using $25 million to $30 million in construction mitigation funding during construction of the I-94 East-West Corridor to enhance transit during construction. WisDOT worked with MCTS to analyze all MCTS routes adjacent to I-94 and routes potentially impacted by the project to identify the direct and indirect impacts during construction. This includes routes along 35th Street, Hawley Road, 68th Street, The Purple Line along 27th Street, Greenfield Avenue/National Avenue (WIS 59), Wisconsin Avenue, and the East-West BRT line opening in 2023.

The 30% TMP, created in early 2022, reviews potential impacts of I-94 East-West construction on MCTS services and develops conceptual mitigation measures. A conceptual mitigation program was developed based on coordination with MCTS, traffic and construction analyses, and impact assessments. The

---

9 Funding was through the Statewide Transit Planning ("Section 5304") program.
conceptual mitigation program includes measures for additional buses to maintain headways, infrastructure improvements, additional frequencies to mitigate traffic impacts and other funding to support MCTS staffing and outreach during construction. This plan allows for flexibility during I-94 East-West construction to adjust the plan based on what measures are working well and any new measures or technology that may not currently be available. The plan also takes into consideration the potential for permanent transit facility structure measures that could serve as long-term transit system upgrades. The Draft 30% TMP plan was shared with CAC and TTAC and they were provided an opportunity to comment on the document. The plan also calls for continued community input during construction.

3.9.4 Identification of Disproportionately High and Adverse Effects on Minority Populations and Low-Income Populations

The project purpose and need explains why the project is needed and how the current conditions (congestion, crashes, and pavement and structure condition) will worsen under the No-build alternative. These conditions affect every user. For the 8- and 6-lane alternatives, the beneficial and adverse impacts on the overall population, including the minority and/or low-income populations, have been analyzed in Sections 3.1 through 3.29 of this Supplemental Draft EIS. The potential impacts that may affect minority populations and low-income populations are summarized in this section.

WisDOT worked in a multi-disciplinary fashion to avoid and minimize impacts to the extent possible. Alternatives were designed to stay within the existing right-of-way as much as possible to minimize the impact on residents and businesses adjacent to I-94.

The minimization efforts allowed the design team to reduce cost, narrow shoulders, and reduce certain elements of the interchange designs to minimize construction footprint and property acquisition. In addition, WisDOT has modified certain standard safety design parameters, such as reduced weave length between interchanges to maintain maximum access within the project while improving safety to the greatest extent possible. WisDOT and FHWA’s position is that alternatives will meet nationally accepted design criteria, unless meeting the criteria would incur a high level of impact that cannot be reasonably mitigated, or would compromise another purpose and need factor. WisDOT and FHWA balanced safety along I-94 with access, which environmental justice communities said is important.

Table 3-18 summarizes the impacts for each resource analyzed for the 8- and 6-lane alternatives, as well as any mitigation that would reduce or eliminate the impacts. The alternatives were designed to minimize impacts as much as possible while still meeting project purpose and need. The last column in Table 3-18 notes if there is potential for an adverse impact on the general population and environmental justice populations. Where there is a potential for adverse impacts, even short-term, a more detailed review follows in Sections 3.9.1 through 3.9.5 to demonstrate specifically where and whom would likely be affected and to help assess whether there is a disproportionately high and adverse effect on a minority or low-income population. This analysis provides a review of whether the adverse impact is predominantly borne by this population or is appreciably more severe or greater in magnitude on the minority and/or low-income population than the adverse impact suffered by the non-minority or non-low-income population.
Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
</table>
| Land Use and Land Use Planning | Conforms to local and regional plans.  
   Acres of land converted to new right-of-way (acres required same for hybrid/diverging diamond interchanges):  
   • 8-lane: 49 acres  
   • 6-lane full Hawley interchange: 42 acres (assumes no Washington Street extension and local intersection improvements)  
   • 6-lane half Hawley interchange: 48 acres  
   Most of the new right-of-way required comes from utilities and the Stadium District.  
   Due to refined design, coordination with local municipalities, and taking into consideration public comments on the 2016 Final EIS Preferred Alternative, the alternatives studied as part of this EIS require less new right-of-way than the 73 acres required for the 2016 Final EIS Preferred Alternative. | Property acquisition would be fairly compensated for residences and residential property; compensation per Uniform Act. | Direct land use impacts are mostly in the form of strip takings from properties adjacent to I-94. These impacts are mostly from land owned by utilities and the Stadium District. The impacts on private landowners are spread throughout the corridor and not concentrated in one location. The impacts of land use changes would not be disproportionately high and adverse to environmental justice populations. |
### Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway Traffic and Operational Characteristics</td>
<td>As part of the 8-lane alternative and the 6-lane alternative with half interchange at Hawley Road, WisDOT would construct some off-interstate improvements to mitigate the traffic impacts of partially closing the Hawley Road interchange. These improvements are extending Washington Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange and improvements at three local road intersections to improve local road operations under the partial closure of the Hawley Road interchange. Improvements to local road intersections include traffic signals, restriping lane configuration, and addition of turn lanes at Brewers Boulevard/National Avenue intersection. Section 3.3.3 provides more information.</td>
<td>8-lane alternative: Beneficial impacts; no adverse impacts. 6-lane alternatives: Additional congestion and higher crash rates than 8-lane alternatives. Congestion on I-94 would result in additional traffic on local roads, impacting local traffic, pedestrians, and bicyclists. Traffic operations are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
<tr>
<td>8-lane alternative: I-94 would generally operate at level of service C or D during the morning and afternoon peak periods in both directions (2050). This is the case for both Stadium Interchange options. Morning and afternoon peak period travel times the length of the corridor would be about 5 minutes in both directions. Congestion would occur in some areas on I-94 by the year 2050, but speeds generally would not drop below 40 mph in these areas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-lane full Hawley interchange: I-94 would generally operate at level of service E or F for most of the corridor in the morning and afternoon peak periods in both directions (2050). Congestion in these locations generally impact I 94 traffic operations for 3 to 4 hours of each weekday peak period with speeds dropping to less than 20 mph in these areas. Morning peak period travel times the length of the corridor would be about 5-10 minutes eastbound and 5-14 minutes westbound. Afternoon peak period times would be about 5-8 minutes eastbound and 5-11 minutes westbound.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-lane half Hawley interchange: I-94 would generally operate at level of service E or F for most of the corridor in the morning and afternoon peak periods in both directions (2050). Congestion in these locations generally impact I 94 traffic operations for 3 to 4 hours of each weekday peak period with speeds dropping to less than 20 mph in these areas. Morning peak period travel times the length of the corridor would be about 5-9 minutes eastbound and 5-13 minutes westbound. Afternoon peak period times would be about 5-8 minutes eastbound and 5-14 minutes westbound.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
</table>
| Freeway Access Change | All alternatives:  
- Wisconsin Avenue from WIS 175: No access between northbound WIS 175/Brewers Boulevard and Wisconsin Avenue with the hybrid Stadium Interchange.  
- No access to/from 35th Street and WIS 175/Brewers Boulevard.  
- No impact on transit routes.  
8-lane and 6-lane with half interchange at Hawley Road alternatives:  
There would be no I-94 access at Hawley Road to and from the east, eliminating one access point to residences and businesses in the area. | The extension of Washington Street makes it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange to access I-94. Section 3.3.3 provides more information. There are adequate alternative routes and interchanges that provide access to these residences and business along Hawley Road. Traffic on WIS 175/Brewers Boulevard could access 35th Street from Wisconsin Avenue or National Avenue. Signage could be put in place to inform motorists of these routes. | Changes in access result in impacts to the general population. These changes in access would also impact environmental justice populations but would do so at a similar degree as the overall population. The impacts of changing access to and from I-94 in some locations would not be disproportionately high and adverse to environmental justice populations. For additional analysis of potential impacts to access changes, see Section 3.9.4.1. |
### Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
</table>
| Safety           | All alternatives improve safety on I-94 due to improving design over the existing design, removal of left-hand ramps, and improved ramp spacing.  
8-lane alternative: reduce crashes on mainline I-94 by 18 percent (hybrid interchange)/21 percent (diverging diamond interchange) compared to the No-build alternative.  
6-lane half Hawley interchange: reduce crashes on mainline I-94 by 21 percent (hybrid interchange)/20 percent (diverging diamond interchange) compared to the No-build alternative.  
6-lane full Hawley interchange: reduce crashes on I-94 by 12 percent compared to the No-build alternative.  
Due to traffic volume differences in the alternatives, the 8-lane alternative has the lowest crash rate (crashes per vehicle miles traveled) of all the alternatives. The partial removal of the Hawley Road interchange would redirect some traffic to local roadways, which may cause some increase in crash frequency along these streets.  
At the Stadium Interchange, the 8 and 6-lane alternatives with the hybrid interchange are predicted to have 5 percent less crashes than the No-build alternative. The 8- and 6-lane alternatives with the diverging diamond interchange are predicted to have 16 percent and 12 percent more crashes, respectively, than the No-build alternative. Both Stadium Interchange build alternatives downgrade the current system (free-flow) interchange, introducing more vehicle conflict points through added intersections; however, they remain safe and are suitable for their intended use of moving traffic in a constrained urban corridor. | Dynamic traffic management tools to warn drivers of closed lanes in the narrow segment, advance warning signs alerting drivers to the narrow lanes and narrow shoulders, and other tools like reflectors on the center median barrier wall and the outside barrier wall would likely be implemented to make the narrow lane/narrow shoulder segment as safe as possible. | Safety improvements are not anticipated to have adverse effects on the general population or environmental justice population. |
### Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
</table>
| Bicycle/Pedestrian          | Existing pedestrian and bicycle access along the study corridor would remain under all alternatives, and access would be added or improved in certain locations as part of the USDOT’s Bicycle and Pedestrian Accommodation Plan. Improvements include:  
  - Connection between the Hank Aaron State Trail and the Oak Leaf Trail along 44th Street and Wells Street, traveling under I-94 east of the Stadium Interchange  
  - A new access point to the Hank Aaron State Trail at 64th Street  
  - A connection between 32nd Street and Greves Street to provide better access to the Menomonee Valley  
  - A shared-use path along 25th Street for bicycles and pedestrians to connect the area north of I-94 to the Menomonee Valley | No mitigation is required. | Improvements to bicycle and pedestrian infrastructure are not anticipated to have adverse effects on the general population or environmental justice population. |
| Residential Development     | There is one residential relocation. The 2016 Final EIS had 8 residential relocations.          | Compensation for property acquired from residences per Uniform Act. | The relocation of one residence is an adverse impact. High and adverse effects of this relocation are not disproportionately borne by minority and/or low-income population. For additional analysis of potential impacts to minority populations and low-income populations, see Section 3.9.4.2. |
### Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
</table>
| Commercial and Industrial Development | All alternatives would displace 6 active businesses (all east of the Stadium Interchange). The 2016 Final EIS had 11 commercial displacements.  
Reduced crashes and congestion on I-94 increase savings for area businesses in both the travel time and capacity of the freeway for the movement of goods and services.  
Reduced access to/from I-94 at Hawley Road could impact businesses. | Compensation for commercial and industrial acquisition per Uniform Act. Relocation opportunities are available.  
WisDOT would construct some off-interstate improvements to mitigate the traffic impacts of partially closing the Hawley Road interchange. These improvements are extending Washington Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange and improvements at three local road intersections to improve local road operations under the partial closure of the Hawley Road interchange. | The displacement of 6 businesses is an adverse effect. However, high and adverse effects are not disproportionately borne by minority and/or low-income population. For additional analysis of potential impacts to minority populations and low-income populations, see Section 3.9.4.2. |
<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional and Public Services</td>
<td>8-lane and 6-lane with half Hawley interchange: Change how some people access the VA Campus and how vehicles access I-94 from the VA Campus. Displace WisDOT Southeast Region Service Facility. Hybrid Alternative: The change in access to General Mitchell Boulevard through the use of the 44th/46th Street interchange and use of frontage roads to access General Mitchell Blvd would change how some people access American Family Field. All alternatives: Acquires land from American Family Field parking lots. Narrow shoulders and lanes may impact access for emergency vehicles traveling through cemetery area.</td>
<td>WisDOT and FHWA would compensate property owners for any land acquired. Elimination of some parking from the American Family Field parking lots could be mitigated through the construction of parking structures on site or building more of the proposed roadways over the parking lots on structure (bridges) to provide for parking under the bridges. The Washington Street extension would mitigate the traffic impacts on institutions (VA, emergency services) of partially closing the Hawley Road interchange by making it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange. Connecting 70th Street to Hawley Road/60th Street via Washington Street would provide convenient access to and from Hawley Road from the 68th/70th Street interchange for traffic that would no longer be able to enter I-94 eastbound or exit from I-94 westbound at Hawley Road. Improvements at three local road intersections, including the Brewers Boulevard/National Avenue intersection, would improve local road operations under the partial closure of the Hawley Road interchange. A new dedicated right-turn lane would be provided from National Avenue to the VA Campus.</td>
<td>The impacts to institutional and public services are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
</tbody>
</table>
### Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood and Community Cohesion/</td>
<td>No division of neighborhoods. Property acquisition does not require community facilities.</td>
<td>No additional mitigation is required. The pedestrian and bicycle connection enhancements added as part of the revised alternatives Local community organizations also advocated for better pedestrian connections to the Menomonee Valley from the neighborhoods north of I-94.</td>
<td>Community cohesion and socioeconomic impacts are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
<tr>
<td>Socioeconomic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>Would not lower visual quality as it would resemble current freeway.</td>
<td>No additional mitigation is required.</td>
<td>Visual impacts are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
<tr>
<td>Surface Water and Fishery</td>
<td>Increasing impervious surface results in higher stormwater peak flows Stadium Interchange would result in new bridges over the Menomonee River.</td>
<td>Best management practices (BMPs) such as stormwater detention, filters, swales, and inline storage would be used to collect and store the runoff, reducing the peak flow of discharge to the Menomonee River. No additional mitigation measures required.</td>
<td>Surface water impacts are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
</tbody>
</table>
Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise</td>
<td>Based on noise modeling, noise would exceed thresholds for sensitive receptors for 54 to 73 noise receptors (Washington Street extension does not impact any additional receptors).</td>
<td>Where feasible and reasonable and if a simple majority of benefited receptors vote, in accordance with WisDOT policy, noise barriers would be constructed in areas where residences are next to I-94.</td>
<td>All alternatives would result in increased traffic noise levels beyond the existing noise levels, and the levels would exceed the FHWA Noise Abatement Criteria, resulting in an adverse impact to the general population. The adverse impacts associated with increased traffic noise would not be more severe or greater in magnitude on environmental justice populations than the noise impacts on non-environmental justice populations. All populations would be affected to the same degree by increases in traffic noise levels. The noise impacts of the project would not be disproportionately high and adverse to environmental justice populations. For additional analysis of potential impacts to minority populations and low-income populations, see Section 3.9.4.3.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>The project meets transportation conformity requirements. Project emissions of criteria pollutants would not cause violations to NAAQS. MSAT emissions may increase at certain locations along the project corridor, however, MSAT emissions would be lower in future years regardless which alternative is selected.</td>
<td>No mitigation is required.</td>
<td>Air quality impacts are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
<tr>
<td>Hazardous</td>
<td>52 sites may require further investigation prior to construction. Bridges to be removed may contain asbestos.</td>
<td>WisDOT would develop remediation measures for contaminated sites that cannot be avoided. Special provision 203-005, bid item 203.0210s would be included in the construction plans to address asbestos abatement.</td>
<td>Hazardous materials impacts are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
</tbody>
</table>


### Table 3.18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historic Properties</td>
<td>No adverse effect on historic properties.</td>
<td>Appropriate measures to minimize harm to historic properties have been discussed as part of the Section 106 consultation process and through the development of the Programmatic Agreement. As part of the project, a low wall would be constructed adjacent to Wood National Cemetery south of I-94 within WisDOT right-of-way. As stipulated in the Programmatic Agreement, additional consultation would also consider the need for a similar low wall on the north side of I-94 within WisDOT right-of-way.</td>
<td>Impacts on historic properties are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
<tr>
<td>Recreational Resources/Public Use Land</td>
<td>Potential short-term closure of Hank Aaron State Trail along 44th Street during construction. At the south end of Mitchell Boulevard Park, General Mitchell Boulevard would be reconstructed within its existing footprint, and no right-of-way acquisition from Milwaukee County would be required.</td>
<td>Develop a detour route for the Hank Aaron State Trail extension that follows 44th Street. All sidewalks and landscaping would be restored.</td>
<td>Impacts on recreational resources are not anticipated to have adverse effects on the general population or environmental justice population.</td>
</tr>
</tbody>
</table>
Table 3-18. Summary of Potential Impacts and Mitigation for I-94 Supplemental Draft EIS Alternatives

<table>
<thead>
<tr>
<th>Analysis Element</th>
<th>8-lane Alternative (Preferred Alternative)/6-lane Alternative with Half Interchange at Hawley Road/6-lane Alternative with Full Interchange at Hawley Road</th>
<th>Mitigation Measures</th>
<th>Adverse Impacts on General Population/Environmental Justice Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Beneficial economic effects in the form of jobs, increase in local expenditures on materials and services. Noise, emissions, and dust from equipment; demolition and construction; vibration; traffic and transit diversions; pedestrian and bicycle detours from construction zones; erosion and siltation; and material sources and disposal of demolition waste.</td>
<td>Dust control during construction would be accomplished in accordance with WisDOT’s Standard Specifications for Highway and Structure Construction (WisDOT 2022). Transportation demand management in addition to modifying staging to reduce diversions and road closures. WisDOT has committed to using traffic mitigation funding before and during construction of the I-94 East-West Corridor to invest in local intersection infrastructure. Develop a transportation management plan (TMP) to coordinate and manage impacts associated with construction. Modifying detour routes, such as removing parking short-term to increase capacity. BMPs for water quality and soil erosion consistent with WDNR guidelines.</td>
<td>As noted in Section 3.9.2, those living within 1,000 feet of the corridor have a minority population and low-income population percentage lower than that of the City of Milwaukee as a whole. While the construction impacts of the project constitute adverse effects, they do not disproportionately impact minority and/or low-income populations. For additional analysis of potential impacts to minority populations and low-income populations, see Section 3.9.4.4.</td>
</tr>
</tbody>
</table>
3.9.4.1 Freeway Access Change

Effects to Overall Population

As noted in Section 3.3.2.3 and Table 3-4, the 8- and 6-lane alternatives would change some access to/from I-94, but it would remain easily accessible for adjacent residents, businesses, and workers. To improve safety and traffic operations, access would only be partially altered at the Hawley Road (for the 8-lane alternative and 6-lane alternative with half interchange with Hawley Road), 35th Street and Wisconsin Avenue/WIS 175 interchanges. While access would be restricted for some movements, there are nearby interchanges which result in minimal out of direction travel due to the restricted movements.

The Hawley Road interchange is the only interchange that may be partially removed under the alternatives that remain under consideration (the General Mitchell Boulevard interchange would be reconfigured for both Stadium Interchange options). The Hawley Road interchange provides access to residences, businesses, and key institutions in Milwaukee and West Allis.

The Hawley Road interchange with I-94 is a key route for employees and patients to access the VA Campus. The other key entrance access point from I-94, Brewers Boulevard via the Stadium Interchange, would not be affected by the 8- or 6 lane alternatives. Additionally, at the request of the VA, a right-turn lane from National Avenue to General Mitchell Boulevard would be constructed at the National Avenue and General Mitchell Boulevard/47th Street intersection as part of the Brewers Boulevard/National Avenue intersection improvements, which would improve access to the VA Campus.

Access to General Mitchell Boulevard would change with the hybrid interchange would change with ramps to and from I-94 connecting to local roads (44th Street or 46th Street, a new north-south street) under the Stadium Interchange and the use frontage roads to access General Mitchell Boulevard (Exhibit 2-5). 44th and 46th Streets would connect to Selig Drive and the new 3-lane frontage road north of I-94. The new frontage road would pass over Yount Drive and connect to General Mitchell Boulevard near the existing westbound I-94 exit ramp at General Mitchell Boulevard. These connections would continue to provide access to American Family Field parking, the VA campus, and the Story Hill neighborhood. To access I-94 eastbound from General Mitchell Boulevard, drivers would use an entrance ramp from 46th Street, south of I-94. To access I-94 westbound, drivers would use a ramp from 44th Street, north of I-94.

Access to General Mitchell Boulevard would change with the diverging diamond due to the need to avoid impacting the cemeteries, improve the short and unsafe merge distances entering and exiting I-94, and to remove the left-hand entrances and exits. However, unlike the hybrid interchange, the diverging diamond interchange ramps to and from I-94 would connect directly to General Mitchell Boulevard (Exhibit 2-10).

As discussed in Section 3.3.2.4 and Table 3-4, the hybrid Stadium Interchange and diverging diamond Stadium Interchange options for the 8- and 6-lane alternatives would change some access at and near the Stadium Interchange. Some access from WIS 175 cannot be maintained for lack of safe weaving distances. For instance, 8- and 6-lane alternatives would not provide access to/from 35th Street and WIS 175/Brewers Boulevard. Vehicles on I-94 would continue to be able to exit at 35th Street. Traffic on WIS 175/Brewers Boulevard could access 35th Street from Wisconsin Avenue or National Avenue. Also, there would be no access from northbound Brewers Boulevard/WIS 175 to the Wisconsin Avenue interchange on WIS 175 with the hybrid interchange, but that access would remain with the diverging diamond interchange. Access would continue to be provided to southbound WIS 175/Brewers Boulevard from Wisconsin Avenue and to/from Wisconsin Avenue and I-94 via WIS 175.
Connectivity across I-94 for those with and without vehicles would remain the same. No existing crossroads over or under I-94 would be closed.

These changes in access also would not alter transit routes. No transit routes enter I-94 from Hawley Road or exit I-94 at Hawley Road. Currently, MCTS Route 64 runs along Hawley Road. The half interchange at Hawley Road would not impact the operations or route of this transit route.

These changes in access result in impacts to the general population.

**Effects to Environmental Justice Populations**

The 8-lane alternative and the 6-lane alternative with half interchange at Hawley Road would change access at the Hawley Road interchange. According to the 2016-2020 ACS 5-year estimates, approximately 14 percent of the population in the census blocks within 0.4 mile north and south of the Hawley Road interchange have incomes below the poverty level compared to 28 percent for the study area. Approximately 40 percent of the population is minority compared to 60 percent for the study area. The impacts of eliminating movements to and from the east at Hawley Road would not be disproportionately high and adverse to environmental justice populations.

The Clement J. Zablocki VA Medical Center on the VA Campus on National Avenue south of I-94 provides healthcare to veterans. Some of the medical center patients are low-income and/or minority. The VA does not track the percentage of its patients that are minority. It does ask for income information for its patients that have a service-related disability. Of those patients that are asked to provide income information, 40 percent have an annual income below $34,616 (VA only asks if the patient is above or below this threshold). The half interchange at Hawley Road would not impact any existing transit routes to or from the VA Campus because no routes access I-94 at Hawley Road. The VA-requested right-turn lane from National Avenue to General Mitchell Boulevard would improve access to the VA Campus. The change in access to some visitors of the VA Campus would not be disproportionately high and adverse to environmental justice populations.

The changes in access at General Mitchell Boulevard and at the Stadium Interchange would be the same for the population as a whole. Access to General Mitchell Boulevard will still be provided from I-94. As previously noted, as an alternative route to access 35th Street from WIS 175/Brewers Boulevard, traffic could access 35th Street from Wisconsin Avenue or National Avenue.

These changes in access would impact environmental justice populations but would do so at a similar degree as the overall population. **The impacts of changing access to and from I-94 in some locations would not be disproportionately high and adverse to environmental justice populations.**

**Change in Access Mitigation**

The mitigation as a result of changes in access will address impacts to the general population as well as the environmental justice population. Based on input from the public at the initial public involvement meetings and meetings with local interest groups early in the project, WisDOT committed to maintaining existing access to and from I-94 to the greatest extent practicable. Removing interchange access would improve traffic operations on I-94. There are five service interchanges and one system interchange on I-94 in the 3-mile-long project corridor. General AASHTO guidance is there should be 1 mile between interchanges in an urban area. If WisDOT were to follow this guidance, half of the interchanges in the study area would need to be eliminated.

While a change of access may provide short-term inconvenience, there would still be many access points to/from I-94, WIS 175, and Brewers Boulevard. If the Hawley Road interchange is reconstructed as a half interchange, Washington Street, approximately 0.5 mile south of I-94, would be extended to provide a
connection between 60th Street/Hawley Road and 70th Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange with I-94. The Washington Street extension would reduce the amount of through-neighborhood traffic due to the lack of access eastbound at Hawley Road interchange.

In addition to the Washington Street connection, WisDOT would improve three local road intersections to mitigate traffic congestion if the Hawley Road interchange is reconstructed as a half interchange. Each of the following intersections would see a modest increase in traffic volumes as a result of the access change at Hawley Road:

- 70th Street/Greenfield Avenue
- National Avenue/Greenfield Avenue
- Brewers Boulevard/National Avenue

### 3.9.4.2 Residential and Business Displacements

#### Effects to Overall Population

The 8- and 6-lane alternatives would displace one residence and six businesses, a reduction from the 2016 Final EIS. This is an impact to the general population.

At the time of the 2016 Final EIS, the preferred alternative had 8 residential relocations. Input from the community and local governments led WisDOT to refine the 8- and 6-lane alternatives so only one residence would be displaced. The residence displaced is located south of I-94, east of 66th Street.

Since the 2016 Final EIS, WisDOT reduced the number of business relocations from 11 to 6. Input from the community and local governments led WisDOT to refine the 8- and 6-lane alternatives to reduce business relocations. All of the potentially relocated businesses are east of the Stadium Interchange and are in industrial or commercial districts on large arterial roadways near the I-94 interchanges (see Exhibit 3-7).

#### Effects to Environmental Justice Populations

The percentage of minority residents in the census block group where this residential displacement would occur is 44 percent (U.S. Census Bureau 2020a), and the median household income is $50,469 (U.S. Census Bureau 2020b). Three of the residential relocations identified in the 2016 Final EIS were along 35th Street in a block group that is 61 percent minority with a median income of $32,800. As part of the alternatives studied in the Supplemental EIS, these residences will no longer be relocated.

In the 2016 Final EIS, four of the potential business displacements for the preferred alternative were minority owned. The St. Paul Veterinary Clinic (minority-owned) and BP Pantry 41 gas station (minority-owned) on 27th Street, TJ’s on 35th bar (minority-owned), and INTEC, an insulation contractor on 25th Street, would no longer be displaced by any I-94 East-West alternatives. In addition, the Concentra Urgent Care on 35th Street, just north of I-94, would no longer be relocated. West of the Stadium...
Interchange, a cemetery maintenance business and the minority-owned Monreal’s Encore Gentlemen’s Club north of I-94 on Dana Court (just east of Hawley Road) would no longer be displaced.

The remaining six businesses displaced are: Central Bark Doggy Day Care, Milwaukee Dog Training Club (within Central Bark Doggy Day Care building and used December through February), MKE Junk Junkies, a private storage/warehouse building on Greves Street, Badger Truck Center, and a private storage building on West St. Paul Avenue. Of the six remaining businesses to be relocated, four businesses owners identified themselves as white, while two businesses owners did not respond.

While some of the potentially relocated businesses are in areas that have a large percentage of minority population, they do not provide unique goods and services that are unique to an ethnic group in the area, such as an ethnic grocery store or store that serves as a community gathering spot. Additionally, no non-minority-owned businesses relocated as a result of this project are solely focused on serving low-income or minority customers or employ mainly low-income or minority employees. The relocated businesses are more regionally-focused rather than local businesses that serve the neighborhood, so relocating would not have as much of an impact as if the businesses provided goods and services to those in the immediate area.

While the one residential and six business displacements constitute adverse effects, they do not disproportionately impact minority and/or low-income populations.

Residential and Business Displacement Mitigation

The mitigation of residential and business displacements will address impacts to the general population as well as the environmental justice population. All property acquisitions would receive compensation and relocation assistance in accordance with the state and federal law, including the Uniform Act. In addition, WisDOT has researched relocation opportunities (see Sections 3.5.3 and 3.6.4, Measures to Minimize and Mitigate Adverse Residential and Commercial and Industrial Impacts, respectively).

WisDOT would facilitate finding and making available comparable housing before any resident is required to move, regardless of whether that person owns or rents their home. In working with residents that would be displaced by the project, WisDOT would identify replacement housing options that consider such factors as proximity to commercial and community facilities, schools (if applicable), an individual’s place of employment, and accessibility to transit. A search of available housing from local realtor listings in July 2022 reported 12 homes of similar price ($150,000 to $200,000) to the displaced residence, within roughly 1 mile of I-94 west of WIS 175/Brewers Boulevard (www.shorewest.com; accessed July 2022).

A search of a commercial realty website in May 2022 (www.loopnet.com) listed more than 10 commercial/industrial locations in the City of Milwaukee that would be adequate replacement sites for some businesses that would be displaced as a result of the project. Based on the listings, there are sufficient available properties for displaced businesses. However, the availability of vacant commercial and industrial locations is always in flux. As businesses relocate in the future, the number of business and commercial listings may change, but it appears likely that sufficient replacement business buildings would be available when required. WisDOT would assist as required under applicable laws in the event sufficient replacement buildings would not be available.
3.9.4.3 Noise

Effects to Overall Population

Traffic noise is the primary source of noise within about 500 feet of the freeway and there are locations where the traffic noise levels exceed the FHWA Noise Abatement Criteria (see Section 3.19, Noise). All alternatives would result in increased traffic noise levels beyond the existing noise levels, and the levels would exceed the FHWA Noise Abatement Criteria, resulting in an adverse impact to the general population. Any increase in noise as a result of the project would be localized and confined to areas adjacent to I-94.

Effects to Environmental Justice Populations

As noted in Section 3.9.2, those living within 1,000 feet of the corridor have a minority population and low-income population percentage lower than that of the City of Milwaukee as a whole. The adverse impacts associated with increased traffic noise would not be more severe or greater in magnitude on environmental justice populations than the noise impacts on non-environmental justice populations, and all populations would be affected to the same degree by increases in traffic noise levels. The noise impacts of the project would not be disproportionately high and adverse to environmental justice populations.

Noise Mitigation

Based on projected future (2050) peak period traffic volumes, WisDOT will build new traffic noise barriers, where feasible and reasonable per existing WisDOT policy, in areas where residences are adjacent to I-94 (see Section 3.19). These barriers would be on both sides of I-94 between 70th Street and Hawley Road, near the Story Hill neighborhood, and north of I-94 east of the Stadium Interchange. If a simple majority of benefited receptors vote for a proposed noise barrier, the noise barrier would be constructed and the noise levels in the neighborhood would be lower than the existing noise level. This mitigation will address noise impacts to the general population as well as the environmental justice population.

3.9.4.4 Construction Impacts

Effects to Overall Population

Construction impacts, which are temporary, would be experienced primarily by residents and businesses adjacent to I-94. Construction impacts would be temporary and end once construction is complete. Construction would last from about 6 months to 2 years in any one location about 5 years overall, with the greatest effects occurring in the earlier stages of construction. Temporary impacts during construction include:

- Temporary increases in emissions from construction vehicles
- Temporary increases in construction noise
- Potential release of hazardous material contaminants due to ground-disturbing activities
- Temporary increases in traffic congestion and diversion to local streets
- Temporary visual impacts due to construction activities and materials

Travelers, transit riders, and commuters on I-94 would experience inconveniences and additional delay during construction. Construction impacts are described in Section 3.27, Construction.
Effects to Environmental Justice Populations

Those people living close to the freeway would experience noise, dust, more traffic on local streets, and temporary ramp closures during construction. As noted in Section 3.9.2, those living within 1,000 feet of the corridor have a minority population and low-income population percentage lower than that of the City of Milwaukee as a whole. While the construction impacts of the project constitute adverse effects, they do not disproportionately impact minority and/or low-income populations.

Construction jobs would be created as a result of the project. There is no data to confirm if the jobs would be filled by people representing minority and/or low-income populations. However, previous southeastern Wisconsin freeway projects illustrate the creation of opportunities for minority workers and minority contractors. Based on the Infrastructure Investment and Jobs Act (IIJA), P.L. 117-58, FHWA allows states and other recipients and subrecipients to utilize local or other geographic and economic hiring preferences on their Federal-aid highway projects. In addition, similar WisDOT projects have historically invested in Disadvantaged Business Enterprise (DBE) firms (minority-owned). As of mid-2021, the Zoo Interchange project utilized over 100 DBE firms, with over $120 million in contracts. Local businesses benefit from this work as DBE firms are often local firms.

Construction Impact Mitigation

The impacts of construction would affect all populations to the same degree and mitigation measures have been identified to minimize impacts. Prior to construction, a plan would be developed to establish construction phases, estimated durations, appropriate sequencing, and community outreach and communication commitments. Access to and from I-94 during construction would be maintained to the extent possible, or alternative access would be provided. If alternative access is not available, the specific construction activity would be reviewed to determine if it could occur during non-peak hours.

A draft 30% TMP Report was completed in April 2022 and a final report will be developed during the final design phase and implemented to minimize impacts to travelers, transit riders, and commuters on I-94 during construction.

3.9.4.5 Indirect and Cumulative Effects

The following provides a summary of the indirect and cumulative effects of the project as it relates to consideration of environmental justice. See Sections 3.28 and 3.29 for additional detail regarding the indirect and cumulative effects of the project, respectively.

Indirect Effects on Minority Populations and Low-Income Populations

The indirect effects analysis for the I-94 East-West Corridor considers potential indirect land use effects related to adding a new travel lane in each direction and modifying existing interchange access points. The analysis also considered potential encroachment-alteration effects related to the expansions of infrastructure. The following text summarizes the aspects of the indirect effects analysis that relate to minority populations and low-income populations in the study area. There are minimal direct impacts as a result of this project, thus, the scale of potential indirect impacts is also small. See Section 3.28 for study area definition and more details about the indirect effects analysis.

In terms of indirect land use effects, the 8- and 6-lanes alternatives are expected to reduce congestion along a section of I-94 linking major economic centers in Milwaukee and Waukesha counties. Reduced congestion is expected to facilitate planned redevelopment within the primary study area and at the same time could induce some development in Waukesha County by reducing the commute time between outlying areas and downtown. However, the magnitude of these land use effects are not
expected to be substantial because the primary and secondary study area’s land use patterns have developed around a mature transportation system that already has a great deal of transportation accessibility. In most areas, the 8- and 6-lane alternatives maintain the existing access points and would continue to support neighborhood revitalization and planned redevelopment within the primary study area.

Several stakeholders interviewed by the project team in late 2021 feel that planned development that may be facilitated by the I-94 East-West Corridor project would be positive and would help implement land use plans and economic development goals within the primary study area. Planned redevelopment would increase local tax bases and help pay for the cost of public services that are already in place. Redevelopment that could be facilitated by the project would also increase the movement of goods and access to services and employment opportunities near a large population base in the primary study area. This could benefit minority and low-income populations because most business corridors within the primary study area are close to minority and low-income populations and are accessible by transit, and in some cases by walking and biking.

The greatest likelihood for indirect impacts to neighborhoods is due to the freeway’s proximity to the neighborhoods. Some homes would be closer to the freeway or freeway ramps as a result of the 8- or 6-lane alternatives due to the wider footprint of I-94 and the entrance and exit ramps. The change is borne mostly by homes west of the Stadium Interchange, but some residences east of the Stadium Interchange would be closer to on- and off-ramps of I-94. Census data, supplemented by neighborhood meetings, indicate that a majority of adjacent residences are not minority-owned/occupied.

The original construction of I-94 did split some of the west segment neighborhoods, but the 8- and 6-lane alternatives would not create any new divisions because the cross roads would be maintained. The indirect impacts on neighborhoods west of the Stadium Interchange would be minimal because the attributes that make these neighborhoods desirable places to live—central locations, close to downtown, historic architecture, and compact walkable neighborhoods—would not be changed by the project.

In addition, WisDOT reduced the footprint of the Stadium Interchange design as part of the design process, further shifting the interchange from Story Hill. Both the hybrid interchange and diverging diamond interchange require less area than the existing Stadium Interchange with the diverging diamond interchange requiring 5 less acres than the hybrid interchange. The diverging diamond interchange would also be about 25 feet lower than the hybrid and existing interchanges.

The potential for indirect impacts to neighborhoods is less likely east of the Stadium Interchange due to the business-oriented land use south of I-94 and the mix of residences and businesses north of I-94. Interchange access to the neighborhoods served by the 35th Street interchange would remain in all directions for all alternatives and access to 27th Street would stay essentially the same.

The indirect effects analysis considered the potential for business-related encroachment-alteration effects. The half interchange at Hawley Road could have negative effects to existing and planned development along the 60th Street corridor in West Allis. The loss of access in this area could result in businesses moving out of the area, which would potentially cause blighting conditions from underutilized or vacant buildings. This effect would be minimized by the Washington Street extension that WisDOT intends to construct between 60th and 70th streets as part of the half interchange at Hawley Road alternatives.

The indirect effects of the project would be borne proportionately by the non-environmental justice populations and the environmental justice population. Thus, this project would not have disproportionately high and adverse indirect effects on environmental justice populations.
Cumulative Effects on Minority Populations and Low-Income Populations

The cumulative effects analysis for the I-94 East-West corridor considers impacts on the environment, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions. The following paragraphs summarize the aspects of the cumulative effects analysis that are most relevant to minority populations and low-income populations. The timeframe for the cumulative effects analysis was updated to the year 2050, roughly 25 years after project construction. This coincides with the design year, but also reflects the availability of data. The current regional land use and transportation plan time horizons are 2050. See Section 3.29 for study area definition and more details about the cumulative effects analysis.

As discussed in Section 3.8, Socioeconomic Characteristics, the neighborhoods west of Hawley Road were split by the original construction of I-94 in 1963, with four of the original nine roadways that connected in a north-south direction still connecting today. The original I-94 construction relocated approximately 150 buildings between 70th Street and Hawley Road and 200 buildings between the Stadium Interchange and 16th Street. Exhibit 3-11 shows minority population percentages by Census tract from the 1960 Census. The 1960 Census broke out population by white, black, or other race. West of the Stadium Interchange, with the exception of the tract housing the Soldiers’ Home, each Census tract had a minority population of less than 1 percent. East of the Stadium Interchange, the minority population in the Census tracts ranged from about 1 percent to 17 percent in the Census tract between 35th and 29th Streets.

While the original construction of I-94 relocated homes and businesses, it also benefitted those living along what would become I-94. I-94 improved safety and congestion on local roadways by removing through traffic from local roads and placing it on a higher-capacity freeway better equipped to handle the larger volume of traffic. I-94 also afforded local residents more efficient and convenient travel to destinations outside of the study area. Many of these benefits are similar to the Purpose and Need of the current I-94 East-West Corridor study, such as improving safety, decreasing crashes, and accommodating existing and future traffic volumes at an acceptable level of service.

Just as with the I-94 East-West Corridor project, other recent, current, and foreseeable southeastern Wisconsin freeway reconstruction projects in Milwaukee County may result in property acquisition, changes in access, visual changes, changes in air quality, and noise impacts. But like the I-94 East-West Corridor project, based on the environmental justice analyses conducted, the completed projects mitigated impacts and did not result in disproportionately high and adverse impacts on minority populations and low-income populations. Furthermore, these recent, current, and foreseeable projects have only minimal overlaps on the same neighborhoods and population as the I-94 East-West Corridor project. Therefore, there is not a cumulative disproportionately high and adverse effect on minority populations and low-income populations.

The cumulative effects analysis considered the effects to regional land use patterns based on the recommendations in SEWRPC’s VISION 2050 for the regional freeway system in southeastern Wisconsin. The cumulative effects analysis also considered the proposed 8- and 6-lane alternatives for the I-94 East-West corridor and other past, present, and future actions in Table 3-47.

As construction of the Interstate system greatly improved accessibility to outlying areas and as a growing population and market forces attracted people to suburban locations, the value of central downtown locations diminished and disinvestment occurred (Boarnet and Haughwout 2000). Low-income and minority residents in central city locations became isolated as people with economic means...
moved to suburban locations. As jobs decentralized, it became increasingly difficult for transit-dependent, low-skilled workers to obtain employment.

As discussed in Section 3.28, Indirect Effects, the spatial mismatch between low-income workers and available low-skilled jobs is present in the Milwaukee area as documented by researchers at the University of Wisconsin–Milwaukee (University of Wisconsin–Milwaukee Center for Economic Development 2004) and the Wisconsin Department of Workforce Development (Walsh 2019). As previously noted, the flow of workers on I-94 from Waukesha County to Milwaukee County is nearly identical to, but slightly greater than, that from Milwaukee County to Waukesha County. The balance of commuters to Waukesha County is largely driven by employees working in lower paying and lower skilled positions. The primary concern raised by project opponents is that adding new travel lanes to the freeway system in Milwaukee and Waukesha counties could continue to facilitate low-density development patterns in Waukesha County and increase the number of jobs that are not accessible by transit.

As noted in the indirect effects analysis (Section 3.28), adding capacity to this segment of I-94 could induce some development in Waukesha County by reducing the commute time between outlying areas and downtown Milwaukee. However, while construction of I-94 in Milwaukee and Waukesha counties, in combination with post-1950s historical development patterns, played a role in decentralizing development and jobs in the past, the study team determined through analysis of available data that widening I-94 in Milwaukee and Waukesha counties would have a much smaller cumulative effect on regional land use patterns and redistribution of population and employment between Milwaukee and Waukesha counties. As discussed in Section 3.28, Indirect Effects, the land use patterns in Milwaukee and Waukesha counties have developed around a mature transportation system that already has a great deal of transportation accessibility.

Research shows that the extent of land use effects is influenced by the maturity of the regional transportation system, and greater effects are associated with new roads compared with existing roads that are expanded (NCHRP 2002; Boarnet and Haughwout 2000). Because so much development has occurred, it is difficult to distinguish the role of the freeway from other factors that influence development.

Improving transit access to jobs in suburban locations outside Milwaukee County requires coordination of federal, state, and local agencies. Potential mitigation measures that would help improve transit access to jobs in suburban locations are described in Section 3.29 and include freeway measures, regional transit measures, transit funding measures, housing measures, and land use measures.

The cumulative effects analysis considered cumulative air quality effects, which is a topic of concern for all populations, including minority populations and low-income populations in the I-94 freeway corridor. The project, along with other activities and developments in the study area, may have a cumulative impact on air quality in the region. Other activities in the region such as continued regional traffic growth are sources of air pollutants. Average weekday traffic along the I-94 project corridor is expected to increase by over 5 percent by 2050, and current and future development in the region has the potential to continue to impact air quality.

To obtain federal funding, the reconstruction of the I-94 East-West Corridor must be included in transportation plans that conform to the SIP. At the regional level, SEWRPC prepares a TIP to achieve conformance with the SIP. Conformity with the SIP means projects contained in the TIP will not worsen air quality or delay attainment of air quality standards. The I-94 East-West Corridor project is included in the 2021-2024 TIP as Project Number 56: “Implementation of the Preferred Alternative resulting from the NEPA processes’ Record of Decision for reconstruction and modernization of IH 94 (East-West
freeway) from 70th St to 16th St in the City of Milwaukee.” The project was amended in July 2021 to reflect an increase in preliminary engineering and other project costs in 2021 and a decrease in preliminary engineering costs in 2022. Thus, while the project may contribute to a cumulative air quality impact, it is not expected to be a substantial contributor, as measured by current pollutant standards. In July 2016, FHWA and the FTA determined the SEWRPC VISION 2050 fiscally constrained transportation system is in conformance with the transportation planning requirements of Titles 23 and 49 USC, the Clean Air Act Amendments, and related regulation. The I-94 East-West Corridor project is included in the SEWRPC VISION 2050 fiscally constrained transportation plan.

In July 2022, the Transportation Conformity Workgroup determined the project is not a project of local air quality concern for particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers (PM2.5). In addition to meeting air quality standards, there is growing concern over the direct and cumulative effect of mobile source air toxics (MSATs). WisDOT and FHWA evaluated the potential change in MSATs from the 8- and 6-lane alternatives and the No-build alternative. Section 3.20, Air Quality, contains detailed discussions of MSAT analysis. When a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions may increase. However, this could be offset by increases in speeds and reductions in congestion, which are associated with lower MSAT emissions.

As discussed in Section 3.9.4, the Wisconsin Department of Health Services reports a high prevalence of asthma occurring among minorities, particularly African Americans. Asthma attacks or episodes are triggered by several factors, including allergens, infections, and irritants such as chemicals, tobacco smoke, and air pollution. The most recent data on statewide asthma statistics show Milwaukee County has the second-highest rate of asthma hospitalization and hospital emergency department visits in the state (Wisconsin Department of Health Services 2020). Menominee County, a rural county in northern Wisconsin, has the highest rates. Air emissions from I-94 East-West Corridor could have a cumulative effect on air quality, which could, along with other contributing environmental factors, trigger asthma episodes in adjacent neighborhoods. Since the I-94 East-West Corridor project would meet air quality standards, this effect is expected to be minimal due to reduced traffic congestion. As the Department of Health Services reports, proper asthma management, which includes receiving the influenza vaccine, visiting the doctor for routine asthma visits, and having a written asthma management plan, can limit or prevent asthma attacks. Limiting exposure to asthma triggers is also an important part of managing asthma, and exposure to environmental tobacco smoke is noted as both a cause of asthma in children and an asthma trigger.

### 3.9.5 Project Benefits

Under the DOT and FHWA environmental justice orders and FHWA environmental guidance, the benefits of a proposed transportation project may be considered when determining whether any disproportionately high and adverse effects on minority and/or low-income populations would occur. As noted in DOT Order 5610.2C:

\[ \text{In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas.} \]

The I-94 East-West Corridor project would reduce congestion, improve safety, improve local circulation, and economic benefits based on the potential of redevelopment and improved traffic flow and reducing crashes. The following subsections provide information on the project benefits and, while all
populations within the study area would realize these benefits to some extent, there are elements that could accrue to a higher degree to minority and/or low-income populations.

### 3.9.5.1 Reduced Congestion
While traffic volumes would remain high, I-94 congestion would decrease with the 8-lane alternative, resulting in travel time savings. Section 3.3.2.3 discusses I-94 traffic and operational characteristics in detail. In 2050 under the 8-lane alternative, I-94 would generally operate at level of service C or D during the morning and afternoon peak periods in both directions. Congestion would occur in some areas on I-94 by the year 2050, but speeds generally would not drop below 40 mph in these areas. In comparison, under the No-build alternative in 2050, increased traffic volumes will generally cause I-94 eastbound to operate at level of service E or F during the morning and afternoon peak periods, while westbound I-94 will generally operate at level of service F during the morning and afternoon peak periods.

For both 6-lane alternatives (half interchange at Hawley Road option and full interchange at Hawley Road option) in 2050, I-94 would generally operate at level of service E or F in the morning and afternoon peak periods in both directions. Congestion in these locations generally impact I-94 traffic operations for 3 to 4 hours of each weekday peak period with speeds dropping to less than 20 mph in these areas.

As discussed in Section 3.9.6, while minority populations in the City of Milwaukee generally use transit slightly more than the white population for traveling to work, most commuting by minority populations and workers below the poverty level is by car. Improving travel time and reducing congestion could reduce fuel and other automobile operating costs for low-income and minority populations.

Transit is also dependent on traffic flow. Transit users, which include minority populations and low-income populations, would benefit from reducing traffic congestion on I-94. The 8-lane alternative would also reduce traffic on local roads compared to the No-build Alternative and 6-lane alternatives. The improvements would benefit all transit users, including those who are dependent on transit, which often includes low-income populations.

### 3.9.5.2 Improved Safety
Safety improvements benefit everyone: drivers, passengers, commuters, and commercial deliveries, all of which can benefit minority populations and low-income populations. The 8-lane alternative would improve safety and decrease congestion on I-94 while the 6-lane alternatives would improve safety as compared to the No-build alternative. Improved traffic operations on I-94 will also remove some traffic from local roads, especially larger trucks. This may benefit pedestrian and bicyclist safety on these local roads.

### 3.9.5.3 Improved Local Circulation
The 8-lane alternative would reduce the number of vehicles that use parallel local roadways to circumvent congestion on I-94. For the alternatives with a half interchange at Hawley Road, Washington Street would be extended to provide a new local road connection to assist in providing a convenient connection between Hawley Road and 70th Street.

Near West Side Partners, Inc. has been working to revitalize the 27th Street commercial corridor, and consider convenient access to the freeway essential to its efforts. This includes a new development at 27th Street and Wells Street that will transform an abandoned building to a mix of uses that includes a commercial kitchen, business incubator, and affordable apartments. The State of Wisconsin will provide $5 million for this development with Near West Side Partners, Inc. providing an additional $5 million in
private investment. The kitchen will provide fresh, affordable meals to address food insecurity for local residents and will produce nutritious school meals for low-income students throughout southeastern Wisconsin. Safe and efficient access to I-94 via 27th Street will help this initiative.

Additionally, bicycle and pedestrian routes would be improved as part of the 8- and 6-lane alternatives. Existing pedestrian and bicycle access would remain and access would be added or improved in certain locations. Several bicycle and pedestrian improvements are part of the 8- and 6-lane alternatives (Exhibit 2-6):

- A connection between the Hank Aaron State Trail and the Oak Leaf trail along 44th Street and Wells Street, traveling under I-94 east of the Stadium Interchange
- A new access point to the Hank Aaron State Trail at 64th Street
- A connection between 32nd Street and Greves Street to provide better access to the Menomonee Valley
- Widened sidewalks along 25th Street and bicycle and pedestrian accommodations at the 25th and 26th Street intersections with St. Paul Avenue

3.9.5.4 Economic Benefits

The project would provide economic benefits that would be most experienced by service and labor workers, which can include low-income and minority populations. The potential for planned redevelopment may provide new employment opportunities. Additionally, improved traffic flow and reducing crashes also converts to economic productivity in terms of a person's ability to access employment and provide deliveries efficiently and safely.

Economic benefits can also be experienced by low-income and minority populations during construction. Based on the Infrastructure Investment and Jobs Act (IIJA), P.L. 117-58, FHWA allows States and other recipients and subrecipients to utilize local or other geographic and economic hiring preferences on their Federal-aid highway projects. In addition, similar WisDOT projects have historically invested in Disadvantaged Business Enterprise (DBE) firms (minority owned). As of mid-2021, the Zoo Interchange project utilized over 100 DBE firms, with over $120 million in contracts. Local businesses benefit from this work as DBE firms are very often local firms.

3.9.6 Interstate Investment Effects on Transit

The focus of the I-94 East-West Corridor Project is to determine the appropriate course of action for the future of I-94 from 70th Street to 16th Street. Other documents, specifically SEWRPC's VISION 2050, reviewed the applicability of only implementing transit improvements in the region and foregoing highway improvements. VISION 2050 determined that even with the doubling of existing transit services as recommended in the plan, I-94 still needs to be reconstructed with added capacity. This section discusses the data and information used in analyzing the issue of transit funding within the overall context of a transportation plan.

The American Civil Liberties Union, Sierra Club, Black Health Coalition, NAACP, MICAH, and the City of Milwaukee have raised the issue (on this or previous freeway studies) of highway funding levels versus transit funding levels. This section addresses the concern raised by groups that expanding capacity of I-94—in the context of SEWRPC’s VISION 2050 recommendations—would have a disproportionately high and adverse impact on low-income and minority groups for the following reasons:
The state and federal funds expended for capacity expansion would reduce the opportunity to fund mass transit services that would benefit low-income and minority residents.  

The minority or low-income groups are less likely to have access to vehicles and, therefore, less likely to benefit from the freeway capacity expansion compared to suburban commuters, who are more likely to be white and have higher income.

The issue is related to the groups’ position, raised during SEWRPC’s freeway system plan development, that the recommended expansion of the southeastern Wisconsin freeway system violates Title VI of the 1964 Civil Rights Act by allocating money to freeways at the expense of transit. Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin in programs and activities receiving federal financial assistance. Specifically, Title VI provides that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

However, SEWRPC’s recommendation to widen the southeastern Wisconsin freeway system needs to be evaluated in the context of its overall transportation plan. The regional transportation plan evaluates street and highway capacity expansion (freeway and surface arterial) and makes recommendations to address the residual traffic volumes and congestion that may not be alleviated by recommended land use, public transit, bicycle and pedestrian, systems management, and demand management measures (SEWRPC 2020a). VISION 2050 recommends a doubling of existing transit services, including rapid transit systems as well as local bus service (see Section 1). SEWRPC’s 2020 review of VISION 2050 reaffirmed the regional transportation planning process as outlined previously, while acknowledging this increase in transit is not likely to happen without a change in funding levels. Also, public transit carries about 2 percent of total weekday travel in southeastern Wisconsin, while an estimated $190 million (Year of Expenditure dollars) average annual capital and operating costs are devoted to public transit under the VISION 2050 FCTS (SEWRPC 2020a).

Furthermore, SEWRPC does not implement any of its recommendations. Local, county, state, or special districts implement recommendations for the transportation facilities and systems they have jurisdiction over as they see fit, and funding allows.

As part of its report *A Regional Freeway System Reconstruction Plan for Southeastern Wisconsin*, SEWRPC (2003) looked at the impacts of the recommended freeway system reconstruction plan on

---

10 Wisconsin Statute 84.01(2) states, “The department [of transportation] shall have charge of all matters pertaining to the expenditure of state and federal aid for the improvement of highways, and shall do all things necessary and expedient in the exercise of such supervision.” Conversely, WisDOT does not operate or maintain any transit systems in the state. However, at the direction of the state legislature, WisDOT began providing funding to local transit systems for operating expenses in 1973, using both state and federal funds. Eligible project costs are limited to the operating expenses of an urban mass transit system (Wisconsin Statute 85.20 and TRANS 4.04(1)). In 2021, WisDOT provided $192.7 million in state transit operating assistance to mass transit systems. Approximately 96% of this aid was distributed to transit systems providing bus service.

On average, state operating assistance covers about 32 percent of transit operating expenses statewide. In 2018, nearly $64.2 million of WisDOT’s transit funding went to MCTS, representing 37 percent of MCTS’s operating budget. WisDOT also provided about $3.8 million, or about 42 percent, of the Waukesha transit system’s operating budget in 2018, which includes funding for commuter bus service between Waukesha and Milwaukee. Federal funds also contribute to the transit systems.

Since 1989, Wisconsin has partnered with Illinois to provide operating support for Amtrak’s Hiawatha service between Milwaukee and Chicago. Wisconsin provides 75 percent of the non-federal, non-Amtrak operating cost. In 2021, WisDOT spent approximately $7 million on passenger rail, which includes Amtrak’s Hiawatha service.

At the federal level, 15.5 percent of the federal gasoline tax (2.86 cents of the 18.4 cent per gallon tax on gasoline) goes to the Mass Transit Account of the Highway Trust Fund.
minority populations and low-income populations in the SEWRPC planning area (Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha counties). The I-94 East-West Corridor with 8 lanes was included as part of the recommended freeway reconstruction plan. The analysis concluded that the southeastern Wisconsin freeway plan would have no disproportionately high and adverse impacts on minority or low-income populations. The analysis noted there could be beneficial effects to minority and/or low-income populations because of improved accessibility and peak hour travel times. This analysis was confirmed as part of the 2020 update of VISION 2050 (see Appendix N of VISION 2050: Equity Analysis of the VISION 2050 Transportation Component of the 2020 update to VISION 2050). Based on the results of this access evaluation, it was concluded that no area of southeastern Wisconsin, including areas with higher-than-average proportions of minority populations and low-income populations, would disproportionately bear the impact of the planned freeway and surface arterial capacity improvements. As the segments of freeway to be widened under either VISION 2050 or the FCTS would directly serve areas of minority populations and low-income populations, these populations would benefit from the expected improvement in highway accessibility to employment associated with the freeway widenings.

Some minority and transit advocacy groups have stated that while a balanced transportation system is recommended, highways receive more funding than transit and, as a result, the level of transit services has stayed the same or decreased in recent years (after an expansion of transit service in Milwaukee in the late 1990s). According to the 2021 Survey of State Funding for Public Transportation, published by AASHTO, Wisconsin ranks 16th nationally in per-capita state operating support for transit (AASHTO 2021). The top of the list is generally dominated by densely populated East Coast states that rely heavily on urban rail systems and states that feature large metropolitan areas.

The MCTS is the largest local transit operator in Wisconsin. MCTS provides transit services for all of Milwaukee County and paratransit services (Transit Plus) for the elderly, persons with disabilities, and people with conditions that prevent them from using MCTS buses.

There are no park-and-ride lots in the I-94 East-West Corridor; however, a park-and-ride lot is just west of the study area at 76th Street and I-94. MCTS Freeway Flyer routes and several other MCTS routes operate on local streets in the I-94 corridor study area (Exhibit 3-4). MCTS routes cross I-94 on 70th Street, 68th Street, Hawley Road, 35th Street, and 27th Street. Several routes also parallel I-94 along Wisconsin Avenue, Bluemound Road, Canal Street, National Avenue, and Greenfield Avenue. In January 2015, MCTS introduced the GoldLine “MetroEXpress” Route, which travels along Wisconsin Avenue, parallel to I-94. BRT will effectively replace the GoldLine, taking the busiest portion of that local route and elevating it to a premium, high-frequency service. It will then serve as a rapid connector to local north-south and downtown routes. The east side portion of the retired GoldLine will be supported by service on Route 30 which uses Wisconsin Avenue. To the west, the retired GoldLine to Brookfield Square will be bridged by an extension of Waukesha Metro to the Milwaukee Regional Medical Center.

People who use I-94 by local or inter-city bus travel may not use I-94 as often as those who use an automobile, and therefore may not benefit from the proposed action as much as those who use I-94 regularly in an automobile. However, non-automobile users of I-94 would benefit from the improved level of service and safety on I-94. Local arterial street traffic volumes may be lower under the 8-lane alternative because some trips along arterials may shift to I-94, which may improve bus transit service.

---

11 As of August 2022, MCTS Freeway Flyer Routes 44 and 79 are suspended indefinitely. Route 44U is only operation during fall and spring university semesters.
In Milwaukee County, 13 percent of homes do not have a vehicle (ACS 5-Year Estimates, 2018). Census tracts with a high percentage of households with no vehicle are concentrated in the northern part of the County, in the City of Milwaukee (Exhibit 3-16). In the I-94 East-West Corridor, there are high percentages (40-59.9 percent) of households with no vehicles adjacent to I-94 on the south side, and northeast of the Stadium Interchange.

Minority populations are less likely to own a vehicle than non-minority populations (Table 3-19). For example, in Milwaukee County, 25.5 percent of Black/African American households, and 10.1 percent of Hispanic households own no vehicle, whereas 8.3 percent of White households own no vehicle.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent of No Vehicle Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (non-Hispanic)</td>
<td>8.3</td>
</tr>
<tr>
<td>Black/African American</td>
<td>25.5</td>
</tr>
<tr>
<td>American Indian and Alaskan Native</td>
<td>13.4</td>
</tr>
<tr>
<td>Asian and Pacific Islander</td>
<td>7.7</td>
</tr>
<tr>
<td>Other Minority</td>
<td>11.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: SEWRPC 2020a

Although some individuals that can afford a car choose not to have one, WisDOT assumes that by-and-large individuals that do not own a vehicle in Milwaukee are low-income and thus Executive Order 12898 on environmental justice applies. As noted above, many also meet the Executive Order 12898 minority definition.

Per comments on the 2016 Final EIS from those who opposed the project, widening I-94 to reduce congestion, improve safety, and address deteriorated pavement and bridges will not benefit people without vehicles, at least not to the extent it will benefit people with vehicles, who, in southeastern Wisconsin, are more likely to be white. This, combined with the long-term trend of decreasing transit service, is a cumulative adverse effect on those with no vehicle. The impact is two-fold:

- Widening I-94, and other freeways and select highways in southeastern Wisconsin may have an incremental effect on the long-term trend of jobs leaving Milwaukee County to adjacent counties which are harder to reach by transit. Of course, many factors play a role in this trend, such as lower property taxes and land costs, crime or the perception of crime, and others. This trend is not unique to southeastern Wisconsin nor is it a new phenomenon.
- Decreasing transit service makes it harder to reach those suburban jobs for low-income Milwaukee residents, who are more likely to be minority.

SEWRPC also assessed the impact on environmental justice populations of implementing the freeway and surface arterial capacity recommendations in the FCTS. It found that there would not be a disproportionate impact on low-income or minority populations. However, the predicted 35 percent reduction in transit service in the FCTS would, in SEWRPC’s analysis, be a disparate impact on the region’s low-income, minority, and disabled populations (SEWRPC 2020a).

To address this cumulative effect, a more effective way to get Milwaukee residents to suburban jobs could be implemented. Modest attempts have been made by WisDOT and by MCTS, with mixed results. Options are:
1. More peak hour transit service from City of Milwaukee’s north side to suburban Milwaukee County communities and to Waukesha County.

2. Last-mile service from establish transit stops in suburban Milwaukee County and Waukesha County to employers’ doorstep.

3. Some combination of both.

WisDOT alone cannot implement enhance transit service like this. Nor can WisDOT increase its transit funding without legislative direction. It would need to be led by MCTS, Waukesha Metro, local governments or a consortium of all three. WisDOT funds already provided to MCTS and Waukesha Metro could be used to enhance this type of transit service, at the risk of cuts elsewhere. Legislative funding priorities at the state and national level could change and increase transit funding, but WisDOT has no control over this. None of these options could be implemented as part of the I-94 East-West Corridor project.

Data shows that in Milwaukee County, people without access to an automobile are largely low-income, City of Milwaukee residents. According to 2016-2020 ACS 5-Year Estimates data for Milwaukee County and the City of Milwaukee, about 85 and 82 percent of workers, respectively, drove alone or carpooled to work. In the I-94 East-West Corridor study area, about 81 percent of workers drove alone or carpooled to work. For workers below the poverty level in Milwaukee County and the City of Milwaukee, about 85 percent and 83 percent of workers, respectively, drove alone or carpooled to work. Most workers not driving to work used public transportation or walked.

The data also noted that most commuting by minority populations is by car (Table 3-20). The percentage of African Americans who drive alone or carpool to work is slightly less than the white population, while all other minority populations drive alone or carpool to work at a greater percentage than the white population.

Additionally, data collected for this study concluded that about 80 percent of the traffic on I-94 during the peak period in the I-94 East-West Corridor enter or exit I-94 within the corridor (between 70th Street and 16th Street) (StreetLight 2019); therefore, improvements to I-94 would substantially benefit access within and to and from the study area. Improvements to I-94 would also benefit those living in and doing business in the study area. Improvements to safety and reductions in congestion along I-94, part of the project’s purpose and need, would make it more convenient for people to access the study area and easier for local residents to use I-94 to access opportunities both within and outside the I-94 East-West Corridor.

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>White</th>
<th>Black or African American</th>
<th>American Indian and Alaska Native</th>
<th>Asian</th>
<th>Some Other Race</th>
<th>Two or More Races</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drove alone or carpooled</td>
<td>81.7%</td>
<td>80.1%</td>
<td>86.5%</td>
<td>84.0%</td>
<td>88.8%</td>
<td>82.5%</td>
<td>89.4%</td>
</tr>
<tr>
<td>Public transportation</td>
<td>4.2%</td>
<td>11.7%</td>
<td>3.3%</td>
<td>3.9%</td>
<td>4.9%</td>
<td>5.7%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Other (taxi, motorcycle, bike, walk)</td>
<td>8.1%</td>
<td>3.2%</td>
<td>4.6%</td>
<td>7.0%</td>
<td>3.3%</td>
<td>5.6%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Work at home</td>
<td>6.0%</td>
<td>4.9%</td>
<td>5.5%</td>
<td>5.1%</td>
<td>3.0%</td>
<td>6.3%</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Source: 2016-2020 ACS 5-year estimates; Table B08105
Based on existing WisDOT traffic counts and future traffic conditions from SEWRPC’s design year (2050) peak hour forecast, during both the morning and afternoon peak periods, the traffic split between eastbound and westbound traffic is close to 50/50.

Based on census data, low-income populations are more likely to depend on transit than moderate- and high-income populations in Milwaukee County and the City of Milwaukee. As a result, decreases in transit funding may have an adverse impact on the low-income population more than the overall population.

Using demographic data based on where trips start and stop when using the I-94 East-West Corridor, WisDOT found the percentage of low-income and or minority drivers on this segment of I-94 is similar to the percentage of low-income and minority populations in the Milwaukee metro area. Thus, low-income and/or minority populations tend to use the I-94 East-West Corridor at the same rate as non-minority users.

WisDOT’s Connections 2030 Long-Range Multimodal Transportation Plan (WisDOT 2009) recommends an increase in the level of transit services to increase access to jobs, healthcare, and shopping, particularly for minority populations and low-income populations that may not have easy access to a car. While WisDOT’s long-range plan does recognize the importance of transit, there are numerous other factors that influence which recommendations are implemented and at what time the implementations occur.

Despite WisDOT’s recommendation, various policy issues complicate state funding of transit, including the following:

- State statute prohibits state funding of capital costs for transit projects unless directed by the legislature and Governor in the state budget.
- Historically, there has been little agreement among local governments on whether or how to spend federal transit funds in southeastern Wisconsin. Recent funding for transit has taken place through a single entity, such as the City of Milwaukee’s The Hop streetcar and Milwaukee County’s East-West BRT line.
- Unique among similarly sized metro areas around the country, transit in southeastern Wisconsin is funded by state funds and local property taxes rather than a dedicated funding source, such as sales tax.

As noted above, the focus of the I-94 East-West Corridor study is to determine the appropriate course of action for the future of I-94 from 70th Street to 16th Street. Other documents, specifically SEWRPC’s VISION 2050 regional transportation plan, reviewed the applicability of only implementing transit improvements in the region and foregoing highway improvements. VISION 2050 determined that even with the doubling of existing transit services as recommended in the plan, I-94 still needs to be reconstructed with added capacity.

VISION 2050 and the FCTS plan recommend arterial street and highway improvements “to address the residual congestion that would not be alleviated by the other recommended land use, systems management, demand management, bicycle and pedestrian facilities, and public transit measures” (SEWRPC 2020a). In other words, the traffic forecasts for the I-94 corridor and other highways in southeastern Wisconsin represent the “residual traffic” that will continue to use the street and highway system and increase congestion and safety concerns, even after full implementation of the public

---

12 As of June 2022, Connect 2050, the subsequent statewide, long-range transportation plan to Connections 2030, has not been completed.
transit, bicycle and pedestrian, TSM, and TDM elements. The purpose of this I-94 East-West Corridor study is to select the best alternative for meeting the purpose and need goals along this segment of I-94.

The outcome of this study would not affect highway or transit funding levels. For example, if the 6-lane alternative were identified as the preferred alternative, the cost savings between the 6-lane alternatives and the 8-lane alternative could not be spent by WisDOT on transit services without authorization from the state legislature through the state’s biennial budget process. No matter which alternative is implemented, it would not directly increase or decrease transit funding levels. Transit funding levels are set by the governor, state legislature, and Congress, not WisDOT and FHWA.  

Given that WisDOT does not operate a transit system, WisDOT is currently assisting other entities to implement transit in the Milwaukee area. WisDOT subsidizes the Amtrak Hiawatha train between Milwaukee and Chicago. WisDOT upgraded the train shed at the Milwaukee Intermodal Station in 2015. Additionally, WisDOT contributed $300,000 to Milwaukee County’s BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center. The study was completed by Milwaukee County to explore the development of BRT along a corridor paralleling I-94 between downtown Milwaukee and the Milwaukee Regional Medical Center. Construction began in 2021 and service is anticipated to start by 2023, so the BRT line would be in operation prior to the start of potential I-94 East-West Corridor construction. The route is north of I-94, following Wisconsin Avenue from downtown Milwaukee to Hawley Road and then Bluemound Road west of Hawley Road to 95th Street where it turns north toward the Milwaukee Regional Medical Center. The BRT route will provide transit users with more efficient, environmentally friendly, and higher-frequency service due to the utilization of all-electric buses, dedicated bus lanes, traffic signal priority, off-board fare collection, optimized station locations, and raised platforms that allow for easy boarding. There would be no direct impacts to the BRT route as a result of the I-94 East-West Corridor project.

Local residents, including minority populations and low-income populations informed WisDOT that maintaining existing access points along I-94 is vital to their communities from a residential and business access standpoint. Maintaining existing access benefits both the overall population and minority populations and low-income populations through improved travel times and access to goods and services, amongst other benefits. The 8- and 6-lane alternatives largely do that. People who commute to work by transit may still use the freeway to access shopping and recreational activities. Major regional destinations such as American Family Field, Wisconsin State Fair Park, and downtown Milwaukee are easily accessed from I-94.

Once construction is finished, existing transit routes would not be negatively affected. No current or planned transit routes use the Hawley Road or General Mitchell Boulevard interchanges with I-94. During construction, some routes may be detoured. The project would not preclude any future transit services recommended in the regional transportation plan.

The 8-lane alternative may provide some benefit to transit routes used by minority populations and low-income populations. Transit routes that use I-94 would experience an improved level of service on the interstate, improving travel times and reliability. Additionally, greater capacity on the interstate may draw more drivers to I-94, improving level of service on local arterial streets, which, in turn, may improve travel times and reliability for transit routes traveling along the arterial streets.

---

13 Under certain circumstances, federal highway funds can be expended on transit capital projects if the project meets certain conditions. See Title 23 USC 119(d)(2)(G).

14 Funding was through the Statewide Transit Planning (“Section 5304”) program.
Residents who do not own a vehicle and do not routinely use the bus system would not necessarily benefit from an improved I-94 from a travel standpoint, but may benefit from increased economic opportunities within communities. Also, there would be no direct adverse impact on the segment of population that does not own a vehicle.

### 3.9.7 Environmental Justice Summary

When making an environmental justice determination, DOT Order 5610.2C and FHWA Order 6640.23A direct project proponents to consider the impacts of a project and who may be affected, then consider the mitigation proposed for these impacts, and finally consider any offsetting benefits to minority and/or low-income populations.

The environmental justice study area for the project was defined to identify populations that would be directly and indirectly affected by the project. The study areas (1,000 feet, 0.5 mile, 1 mile, and 2 miles from the project limits) capture populations, including minority and/or low-income, that would experience both direct and indirect impacts, as well as benefits the project would provide. Exhibits 3-13 and 3-14 show the locations of minority and/or low-income residents in the study area, respectively. As illustrated in the exhibits, populations within the study area vary, but the northeast portion of the study area is 40 to 100 percent minority and 20 to 80 percent low-income populations. The west portion of the study area is 0 to 40 percent minority and 0 to 40 percent low-income populations. The southeast portion of the study area is mostly industrial commercial with no population. Property acquisition, displacement, changes in access, visual impacts, noise, and construction impacts would be experienced by both minority and/or low-income populations and non-minority and/or non-low-income populations. Based on the information set forth above, the impacts do not result in any adverse impacts considered disproportionately high and adverse to environmental justice populations.

Both negative and positive effects would occur for minority and/or low-income populations, but do not differ substantially between the 8- and 6-lane alternatives. Non-minority and non-low-income populations would be impacted to the same degree, the impacts are substantially mitigated, and the benefits offset the short-term residual impacts that may occur.

The I-94 East-West Corridor project would provide substantial benefits that would positively affect minority and/or low-income populations. The benefits of the 8-lane alternative include reduced congestion, which results in time savings for all commuters. While the majority of minority and/or low-income commuters drive, reduced congestion also improves transit performance and reliability. The project would improve safety and reduce crashes on mainline I-94 by over 10 percent, a benefit received by all users, including local road users. The 8-lane alternative and 6-lane alternative with a half interchange at Hawley Road would change access at the Hawley Road interchange. While this changes access to businesses and residents along and near Hawley Road, the 68th/70th Street interchange is less than 0.5 mile west, and the Stadium Interchange can also be used to access this area via National Avenue and Bluemound Road. Additionally, as part of the 8-lane alternative and the 6-lane alternative with half interchange at Hawley Road, WisDOT would extend Washington Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange.

The 2016 Final EIS stated that the I-94 East-West Corridor project would not result in disproportionately high and adverse effects under Executive Order 12898, DOT Order 5610.2(a), and FHWA Order 6640.23A as a result of implementing the preferred alternative. Most project impacts would be limited in scope, and others would be mitigated by implementing effective mitigation measures. The preferred alternative as identified in the 2016 Final EIS met the project purpose and need and provided substantial benefits that would positively affect minority and low-income populations as well as the general public.
Since completion of the 2016 Final EIS, due to refined design, coordination with local municipalities, and taking into consideration public comments on the 2016 Final EIS Preferred Alternative, the alternatives studied as part of this EIS have less impacts than the 2016 Final EIS Preferred Alternative. Key revisions of the alternatives analyzed as part of this EIS include:

- 1 residential relocation, down from 8 with 2016 Final EIS preferred alternative
- 6 commercial relocations, down from 11 with the 2016 Final EIS preferred alternative
- 42-49 acres of new right-of-way required, down from 73 acres with the 2016 Final EIS preferred alternative
- Additional bicycle and pedestrian improvements

Based on the information available and analysis conducted, FHWA does not believe that there is a disproportionately high and adverse effect to environmental justice populations. FHWA is seeking additional input on environmental justice impacts before making a final determination in the Supplemental Final EIS/ROD.

### 3.10 Visual Character/Aesthetics

#### 3.10.1 Visual Resource Background

A visual impact assessment, available on the project website, was conducted as part of the 2014 Draft EIS and 2016 Final EIS to assess the visual impacts of the alternatives retained for detailed study at that time, including an 8-lane alternative similar to the 8-lane alternative evaluated in this Supplemental Draft EIS. The design refinements that have occurred since the 2016 Final EIS (refer to Section 2.2.1) do not change the visual impact assessment previously conducted. The 6-lane alternatives studied in this Supplemental Draft EIS have similar visual impacts to the 8-lane alternative, and therefore the visual impact assessment previously conducted remains relevant for this Supplemental Draft EIS.

The assessment of the changes to the visual environment was prepared using the FHWA visual assessment methodology ([Guidelines for the Visual Impact Assessment of Highway Projects](https://www.fhwa.dot.gov/environment/visual)) which has been successfully applied by FHWA and state highway departments to evaluate transportation projects. The methodology provides a way to quantitatively rate and compare changes in visual quality and provides decision makers with a way to compare alternatives.

The FHWA methodology considers the viewing sensitivity of people who would view changes associated with a highway project. The visual assessment process provides a comprehensive assessment of the landscape character through which the existing and proposed highway traverses. It also is used to determine the type and degree of visual impact for various viewers. People who would view the potential changes associated with the I-94 East-West Corridor study are residents, motorists driving on I-94 or on roads near it (both locals and non-locals passing through the area), people visiting cemeteries, workers, business customers, and business owners. Residents are considered to have high visual sensitivity to changes in the viewed landscape because of their familiarity with it and their frequent and long viewing duration. Some residents in the study area have full or partial views of I-94, and changes to those views may be of concern to them.

Changes to the visual environment are measured by determining how a proposed project would change the visual quality for selected representative views. Visual quality is an assessment of the composition of the character-defining features for the selected views. The goal of the visual quality assessment is to answer the following questions: Is this particular view common or dramatic? Is it a pleasing composition...
(with a mix of elements that seem to belong together) or not (with a mix of elements that do not belong together or are eyesores and contrast with the other elements in the surroundings)? Visual quality is evaluated in terms of vividness, intactness, and unity. These three characteristics are described as follows:

- **Vividness** is the degree of drama, memorability, or distinctiveness of the landscape components.
- **Intactness** is a measure of the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. High intactness means that the landscape is free of eyesores and is not broken up by features that appear to be out of place.
- **Unity** is the degree of visual coherence and compositional harmony of the landscape considered as a whole. High unity frequently attests to the careful design of individual components and their relationship in the landscape.

These three characteristics together determine the visual quality of the viewed environment. To determine existing visual quality and to assess impacts to viewers, the FHWA methodology uses numeric ratings. The ratings help to establish the existing visual quality of a view from selected viewpoints and to determine how the existing visual quality of the view would change (can be negative or positive) with the project in place. Visual quality is rated between 1 (low) and 7 (high). The visual quality ratings and their descriptors are as follows:

- 1—Very Low
- 2—Low
- 3—Moderately Low
- 4—Average
- 5—Moderately High
- 6—High
- 7—Very High

For this visual impact assessment, the level (negligible, moderate, or substantial) of impact intensity was determined based on FHWA methodology. The impact assessment evaluated the degree to which the proposed project would change the existing visual quality category of a viewed landscape and considered the viewer sensitivity (high, moderate, and low) of people who would view the proposed project in the landscape. An impact with substantial intensity is defined as a change in the existing visual quality category by (a) two or more categories (for example, from high to moderate or moderate to low) in an area where people with high or moderate viewing sensitivity would see it; or (b) one category in an area where people with very high viewing sensitivity would see it. An impact with moderate intensity is defined as a change in the existing visual quality category by one category (for example, high to moderately high, or moderately low to low) in an area where people with moderate viewer sensitivity would see it. An impact with negligible intensity is defined as (a) a change in the existing visual quality category by one category (for example, high to moderately high, or moderately low to low) in an area where people with moderate viewer sensitivity would see it; or (b) areas where the proposed project would not change the existing visual quality categories and would be seen by viewers with high, medium, or low viewing sensitivity.

Members of the study team with expertise in visual impact assessments and/or environmental planning, landscape architecture and architecture reviewed existing condition photographs from 12 representative locations (key observation points [KOPs]) (Exhibit 3-17) and assigned each a visual quality rating. The study team then evaluated and rated photographic simulations of alternatives that were developed for the KOPs to determine impacts (Exhibits 3-18 and 3-19). The ratings allowed an assessment to be made of the degree of impact the alternatives would have on visual quality.
The KOPs are used for representing existing views, establishing visual quality, and for developing simulations of the various alternatives so that differences can be analyzed and impacts determined. The KOPs were identified and approved with input from stakeholders where there was concern that the 8- and 6-lane alternatives would impact existing views.

Although the results provide an accurate depiction of how the alternatives might appear (based on current levels of design), all engineering design work associated with alternatives is preliminary, and many details need to be finalized. The simulations indicate the form and scale of the alternative being simulated to assist in determining how the alternative would change the visual character and visual quality of the view from the KOP. Final design details and design refinements, including aesthetic enhancements, would occur after the project’s environmental process is complete.

### 3.10.2 Affected Environment

The degree of visibility of I-94 varies greatly by location. Terrain, trees, buildings, and the elevation of I-94 (various parts are below, at, or above grade) can block views. Except for areas near American Family Field, the areas from which I-94 can be seen generally range from those adjacent to the highway to areas several blocks away.

The land use and character of the viewed landscape along I-94 vary considerably by location. The west segment is mainly residential, as is the area north of I-94 and east of the Stadium Interchange. In between the residential areas are visually distinctive areas that include cemeteries, American Family Field and its parking lots and the Menomonee Valley industrial area. To assist in describing existing conditions and potential impacts from the project alternatives, the study area was divided into six landscape units that have distinctive visual characteristics that differ from the other landscape units (Exhibit 3-17). From west to east, the landscape units are as follows:

1. West End
2. Cemeteries
3. Story Hill
4. American Family Field
5. Merrill Park
6. Menomonee Valley

Landscape Unit 1 (West End) is largely residential, although two large-scale features (I-94 and the overhead electrical transmission line) introduce non-residential visual features into this landscape unit. Both I-94 and the electrical transmission line greatly influence the landscape character of areas near them as well as visual quality.

The visual character and quality of areas south of I-94 is much different from areas to the north. I-94 is more visible to residential areas from the south than from the north. The visibility of I-94 from areas to the south varies. In addition, I-94’s influence on character and visual quality varies greatly by location. There are a number of residences adjacent to I-94 (or to exit/entrance ramps serving it) along north-south oriented streets that dead-end against I-94. Some residences have unobstructed views of I-94, whereas vegetation and fences screen views of the highway from other residences. The visual character of I-94 is typical of a major interstate highway, and adjacent areas with unobstructed views of it are influenced by its presence. The visual quality ratings for most of the areas adjacent to I-94 range from moderately low to low depending on how much of the electrical transmission line and I-94 are visible.

One KOP was selected for Landscape Unit 1. KOP 1 (West Dixon Street) was selected to represent a residential area south of I-94.
Outside of and farther south of Landscape Unit 1, the area surrounding the Washington Street extension is industrial and commercial in nature (Exhibit 2-1). There are several large industrial and commercial buildings surrounded by large parking lots. Views from the Washington Street extension are generally of the immediately surrounding land uses with little views of objects in the distance.

The western edge of Landscape Unit 2 (Cemeteries) is Hawley Road, and its eastern boundary is General Mitchell Boulevard. Within the landscape unit are five cemeteries: Wood National Cemetery, Beth Hamedrosh Hagodel Cemetery, Calvary Cemetery, Anshai Lebowitz Cemetery, and Spring Hill Cemetery. The electrical transmission line described in Landscape Unit 1 passes through Landscape Unit 2, north of I-94. South of the VA Cemetery, south of I-94, is the VA Campus, including the Zablocki VA Medical Center.

The following five KOPs were selected to represent views of I-94 from cemeteries on each side of I-94:

- KOP 2 (Dana Court adjacent to Beth Hamedrosh Hagodel Cemetery)
- KOP 3 (Beth Hamedrosh Hagodel Cemetery)
- KOP 4 (Wood National Cemetery [within Soldiers’ Home NHL] north of I-94)
- KOP 5 (Spring Hill Cemetery)
- KOP 6 (Wood National Cemetery [within Soldiers’ Home NHL] south of I-94)

The visual quality of the five KOPs and other areas within this landscape unit was about average. The cemeteries (and their associated lawns, trees, headstones and monuments) added vivid and memorable visual elements to this landscape unit. However, the presence of I-94 detracts from overall visual quality. Because I-94 is at grade, it is possible to see over it; therefore, there are strong visual connections between cemeteries on both sides of I-94, and these connections create a unique and fairly visually intact setting for this landscape unit.

Landscape Unit 3 (Story Hill) includes the Story Hill neighborhood, in the northwest quadrant of the Stadium Interchange, west of Yount Drive. The southern portion of Landscape Unit 3 is closest to I-94 and American Family Field parking areas. Residences are approximately 170 feet from the north edge of I-94 but are higher in elevation than the interstate, so residents do not see the roadway or traffic from most locations. Residents do have views of I-94 signs in some locations. No residences are directly adjacent to I-94. Story Parkway is between the residences and I-94, and there is vegetation south of the parkway and an adjacent slope that blocks most outward views. Views of American Family Field, parking areas, the overhead electrical transmission line towers and conductors (“wires”), and hills to the south are possible from several locations. Most areas farther to the east and north along Story Parkway have outward views that are similarly screened. Near the intersection with Yount Drive, there are more open areas, so views of American Family Field, parking areas, Stadium Interchange, and hills beyond are possible, particularly when deciduous trees and shrubs have no foliage. Residents are sensitive viewers in this landscape unit.

Four KOPs were selected for this landscape unit to represent the views of residents to the south and east. The four KOPs are:

- KOP 7 (Story Parkway)
- KOP 8 (Story Parkway near Pinecrest Street)
- KOP 9 (Story Parkway near Clarendon Place) (Exhibit 3-18a)
- KOP 10 (Yount Drive and Story Parkway) (Exhibit 3-18b)

KOPs 7 and 8 face south and have views of American Family Field, a unique and memorable feature, and views of less memorable features such as parking areas around the stadium and I-94 signs. Roadside vegetation blocks much of the view from KOPs 7 and 8, particularly when there is foliage on deciduous
trees. The overall visual quality of views from this part of Story Hill is generally average. KOPs 9 and 10 are on the east side of the Story Hill neighborhood. They have views of WIS 175, the Stadium Interchange, hills beyond and American Family Field parking in the foreground. The visual quality of views in this area is generally moderately low.

Landscape Unit 4 (American Family Field) includes American Family Field and its parking lots, the Stadium Interchange, segments of I-94 and WIS 175, railroad tracks and a portion of the Hank Aaron State Trail (roughly 0.5 mile south of I-94). Most of the land in this landscape unit is devoted to parking, industry, and transportation, and has a utilitarian character. People who are considered viewers in Landscape Unit 4 are temporary viewers either passing through the area on transportation infrastructure, or people attending an event at American Family Field. Due to the temporary nature of their visits in this landscape unit and their likely attention to the activities they are watching or participating in, their viewer sensitivity is considered low. Because of the lack of sensitive viewers in this landscape unit and its utilitarian character, no KOP was selected for Landscape Unit 4.

Landscape Unit 5 (Merrill Park) is a residential neighborhood north of I-94. Park Hill Avenue is lined with residences and parallels the north side of I-94. Several north-south-oriented residential streets come to a dead-end at I-94. Vegetation is present within some parts of the I-94 right-of-way and may screen, or partially screen, views of I-94 from some of the residences.

Two KOPs were selected for Landscape Unit 5 to represent views from residences (Exhibits 3-18c and 3-18d). The two KOPs are KOP 11 (36th Street and Park Hill Avenue) and KOP 12 (32nd Street and Park Hill Avenue). I-94 is the major visual feature from the residences north of I-94. The general visual quality of views toward I-94 is moderately low.

Landscape Unit 6 (Menomonee Valley) is the Menomonee Valley, south of I-94. The area is industrial and commercial and has few sensitive viewers. I-94 passes to the north above this low-lying landscape unit, and views of it are often interrupted by large-scale features such as industrial/commercial buildings and elevated roads/overpasses. Because of the lack of sensitive viewers in this landscape unit and its utilitarian character, no KOP was selected for Landscape Unit 6.

3.10.3 Aesthetic Impacts

Highways are prominent features in the landscape that can affect the visual quality of the natural and built environment. Likewise, the visual quality of the adjacent natural and built environment affects highway travelers’ visual experience. FHWA Technical Advisory T6640.8A provides guidance on the preparation and processing of environmental documents (FHWA 1987). It states that when potential for visual impacts exists, an environmental study should identify the impacts to the existing resource, and the relationship of the impact to potential viewers of and from the project, as well as measures to avoid, minimize, or reduce the adverse impact.

As part of the aesthetic impacts analysis, the potential for noise barriers and how they could change viewshed along the project corridor and influence visual quality was not analyzed in detail. The reason is that the location of noise barriers would not be decided until later in the study process, after local residents have the opportunity to decide if they want the noise barriers. Based on noise analysis in Section 3.19.3, noise walls would be feasible and reasonable in several locations along I-94. In general, the addition of noise barriers would change the viewshed for viewers immediately behind them, particularly for motorists driving on I-94. With noise barriers, views from I-94 of adjacent areas would generally be blocked or interrupted. However, for most viewers looking toward I-94, the presence of noise barriers would not significantly alter the viewsheds associated with the alternatives discussed in this section.
3.10.3.1 No-build Alternative

The No-build alternative would not change the visual character of the study area.

3.10.3.2 8- and 6-Lane Alternatives

At the west end of the study corridor (west of Hawley Road), the 8- and 6-lane alternatives would essentially retain I-94 at its current elevation west of Hawley Road. Because the 8- and 6-lane alternatives would have essentially the same grade and close to the same width as the existing freeway, its character would not change, nor would the visual quality of views toward it from residences to the north and south. Views of motorists driving on this part of I-94 would also not change greatly. The reconstruction of the 68th Street/70th Street interchange (alignment the same as existing alignment) would not change the character or visual quality of areas near the interchange. The removal of freeway entrance and exit ramps at the Hawley Road interchange, for the half interchange under the 8-lane alternative and 6-lane alternative option, would not change the character of the freeway corridor or the visual quality of views toward I-94 from areas near it or from the freeway by passing motorists. The 8- and 6-lane alternatives west of Hawley Road would have an impact of negligible intensity on the visual quality of views toward I-94 from nearby areas.

The 8- and 6-lane alternatives would remain at-grade as they travel past the cemeteries. Existing views toward I-94 and beyond from the cemeteries would essentially remain the same. A wall would be built south of I-94 to partially screen views of I-94 from Wood National Cemetery. The existing wood fence north of I-94 would be replaced with a fence/wall of a similar height. As a result, views from the cemeteries would no longer include I-94. Motorists on I-94 would have less opportunity to see Wood National Cemetery. The 8- and 6-lane alternatives would slightly change the appearance of I-94 (and remove the interchanges—most of which are not seen by sensitive viewers within the cemeteries) from the cemeteries, and could lower visual quality for visitors. However, it would not reduce current visual quality by one rating or more; therefore, its impact would be of negligible intensity and would enhance the viewshed for those in the cemeteries (Exhibit 3-19). The 8- and 6-lane alternatives would have an impact of negligible intensity.

In the area between the cemeteries and the Stadium Interchange, the 8- and 6-lane alternatives would not significantly change the views of I-94 from the Story Hill neighborhood.

The Washington Street extension, constructed as part of the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, would have minimal visual impacts on the surrounding viewers. The extension would consist of adding a new at-grade roadway to an already cluttered visual environment. The construction of the Washington Street extension would not reduce the low visual quality of views in the area by one rating or more. The Washington Street extension would have an impact of negligible intensity on the visual quality of the area.

The reconstructed Stadium Interchange would be in Landscape Unit 4 (American Family Field) but would continue into or be seen from nearby Landscape Units 3 (Story Hill), 5 (Merrill Park), and 6 (Menomonee Valley). The closest part of the Stadium Interchange segment to sensitive viewers is the northwest quadrant near the southern and eastern edges of the Story Hill neighborhood. Various ramps would depart or merge with I-94. Additionally, a revised local road network would be evident within the American Family Field property. The eastern part of the Story Hill neighborhood is not as high above adjacent terrain as the southern-southeastern part is, but some areas have expansive existing views that include major highways (I-94, WIS 175, etc.), parking areas for American Family Field, and parts of Milwaukee several miles away.
The diverging diamond interchange would be approximately the same height as the existing interchange, whereas the hybrid interchange would be approximately 25 feet higher than the existing interchange/diverging diamond interchange. The reconstructed Stadium Interchange (both hybrid interchange and diverging diamond interchange options) would include high elevated freeway lanes and ramps that would be seen to varying degrees. Much like today, components of the reconstructed Stadium Interchange would be seen from parts of the Story Hill neighborhood during leaf-off conditions.

The reconstructed Stadium Interchange (both hybrid interchange and diverging diamond interchange options) would not greatly change the visual quality of outward views from the neighborhood or block views of vivid or memorable elements, such as American Family Field. Views from much of Story Parkway are blocked during leaf-on times of the year by trees and shrubs planted along Story Parkway. Changes associated with the reconstructed Stadium Interchange would not reduce the visual quality ratings of views by one or more categories. The impact of the reconstructed Stadium Interchange on views from the Story Hill neighborhood toward I-94 and the Stadium Interchange area would be of negligible intensity.

East of the Stadium Interchange, the 8- and 6-lane alternatives would pass through and/or be visible from Landscape Units 5 (Merrill Park) and 6 (Menomonee Valley). Landscape Unit 6 is industrial and does not contain sensitive viewers. No KOPs were selected or simulations developed for Landscape Unit 6. Two KOPs were selected from Landscape Unit 5 because it contains a residential area. All alternatives would have the same alignment west of 32nd Street. East of 32nd Street, the 8- and 6-lane alternatives would be close to the existing alignment, about 150 feet south of the existing alignment at 29th Street.

Elevated bridges associated with the 8- and 6-lane alternatives have the most potential to impact views. However, because many of the views in the area already include views of transportation infrastructure and many are from elevated areas, introducing components of each alternative would be consistent with the character of much of the landscape unit. The alternative’s components that could be visible within the landscape unit would not lower the existing average to low visual quality of views in this landscape. The intensity of the impacts would be negligible.

The difference between the 8- and 6-lane alternatives is that the 8-lane alternative would introduce an additional lane in each direction, introducing more pavement in the viewshed. However, the intensity of the impacts on the visual quality of views toward I-94 from nearby areas would be negligible.

3.10.4 Measures to Minimize and Mitigate Adverse Aesthetic Impacts

The 8- and 6-lane alternatives minimize the visual impact of the project. The diverging diamond interchange is approximately 25-feet lower than the existing interchange and the proposed hybrid interchange, minimizing the visual impact of the Stadium Interchange. On previous WisDOT Southeast Freeways projects, such as the Marquette Interchange, I-94 North-South Corridor, and Zoo Interchange, community-sensitive design (CSD) efforts during final design identified concepts for visual benefits and minimization of impacts resulting from a larger-scale freeway. As part of the 2015-2017 State of Wisconsin budget, funding is no longer available for CSD aesthetic mitigation or enhancement unless required as mitigation through a federal rule or to replace a previous aesthetic treatment eliminated during project construction.

Wisconsin State Statute 85.0205 notes that WisDOT “... may not expend more than 1.5 percent of the project costs of any highway improvement project on elements that the department determines are
primarily related to the aesthetic preferences of communities adjacent to the project, generally known as community sensitive solutions.” However, it does note that the department can spend more than this 1.5 percent if is reimbursed by another party, such as a local municipality. WisDOT Facilities Development Manual (FDM) 11-3 also notes that “It is WisDOT policy to use a “Community Sensitive Design” (CSD) approach to enhance transportation project development and resulting solutions. CSD is an approach of creating public works projects that function safely, efficiently, and are pleasing to both the users and the neighboring communities.”

Other federal laws such as Section 106 do require mitigation for impacts. The Draft Programmatic Agreement for this project between WisDOT and the Section 106 consulting parties includes stipulations for the design and look of the walls, landscape, and signage adjacent to the Soldiers’ Home National Historic Landmark and National Register Historic District. There is also a stipulation for the aesthetic options for the potential noise barrier along Story Parkway, adjacent to Story Hill Residential Historic District 2 and 3.

### 3.11 Surface Water and Fishery

#### 3.11.1 Affected Environment

The I-94 East-West Corridor is in the Menomonee River watershed, and I-94 crosses the Menomonee River near 44th Street.

**3.11.1.1 Menomonee River Watershed**

The Menomonee River watershed, part of the Milwaukee River Basin, has 96 miles of rivers and streams, and it drains 136 square miles in Milwaukee, Ozaukee, Washington, and Waukesha counties. Land cover within the watershed is primarily urban or suburban (52 percent) with significant agriculture (22 percent) and open water and open space (14 percent) cover.

The Menomonee River is 33 miles long and is a tributary to the Milwaukee River. The river originates in the Village of Germantown and the City of Mequon and flows in a southeasterly direction before it meets the Milwaukee and Kinnickinnic rivers in the Milwaukee Harbor Estuary. Urban land use in the watershed increased roughly 25 percent between 1990 and 2000. In the I-94 East-West Corridor, land use adjacent to the Menomonee River is primarily industrial (WDNR 2010).
The Milwaukee Metropolitan Sewerage District (MMSD) removed 4,600 feet of concrete from the bed of the Menomonee River from north of Wisconsin Avenue, to approximately 500 feet south of I-94. This eliminated a barrier to fish passage between Lake Michigan and upstream stretches of the river. As part of the project, a 58-foot-wide concrete lining was removed and the river was restored with a more natural, meandering streambed, with rock riffles and pools in which fish can rest. Removal of the lining also opened 20 miles of tributaries and 17 miles of the main river—through Wauwatosa to Lepper Dam at Mill Pond Park in Menomonee Falls—to fish migration (“MMSD to spend $3.98 million to remove Menomonee River concrete,” Milwaukee Journal Sentinel, May 6, 2013).

Fishery

The fishery in the watershed is dominated by species that can tolerate low dissolved oxygen and other water quality impairments. Most notable is the exotic invasive common carp species, which has increased from 2 percent to nearly 40 percent of the catch from 1975 to present. Carp are likely having a negative effect on the overall fishery in this watershed by destroying habitat and competing with native fish species for food and spawning areas. Data also indicate an apparent, relatively recent, gain of brook trout, brown trout, black crappie, walleye, and greater redhorse. The species were all observed in the lower portions of the Menomonee River and seem to be associated with the removals of the Falk dam and the drop structure at 45th Street. Other species that have increased in abundance include smallmouth bass, an intolerant fish species, and walleye, which is probably indicative of the WDNR’s stocking conducted pursuant to walleye population restoration efforts in the Lower Milwaukee River and Harbor since 1995 (WDNR 2010). Some species of trout and salmon also use the river to spawn during spring and fall (WDNR 2012, 2013).

Water Quality

The Menomonee River is on WDNR’s “Impaired Waters,” list with a Section 303(d) designation. A Section 303(d) designation means that the water body does not meet federal Clean Water Act standards. The pollution types present include fecal coliform, unspecified metals, polychlorinated biphenyls (PCBs), total phosphorus and E. coli. Recreational restrictions are in place due to pathogens, chronic aquatic toxicity, contaminated fish tissue and low dissolved oxygen.

According to WDNR’s Menomonee River Watershed (2010), “In the 1980s the US and Canada signed an agreement to improve water quality in the Great Lakes. A major focus is targeting ‘Areas of Concern’ (AOCs), like the Milwaukee Estuary, which suffer from a long history of toxic contamination. Recently, the Milwaukee AOC was expanded to include the Menomonee River from the estuary 12.5 miles upriver

---

15 The concrete remains where the Menomonee River crosses under I-94.
to where the Little Menomonee River flows under Highway 100. Federal, state and local agencies have developed a plan to begin cleaning up and restoring the Milwaukee AOC. The plan identifies 11 impairments to the Menomonee River and its tributaries. Ultimately, each of these impairments must be addressed and ‘delisted,’ or removed from the list of impairments for the Milwaukee AOC. Project priorities include the removal of concrete river linings near the American Family Field Baseball Stadium and increasing in-stream habitat near the mouth of the river.”

In 2018, MMSD developed total maximum daily load (TMDL) limits as a third party on behalf of the WDNR for the watersheds within the Milwaukee area, including the Menomonee River (WDNR 2019). TMDLs were established for fecal coliform bacteria, phosphorous and sediment. Using this knowledge, the design team evaluated the proposed stormwater best management practices (BMPs) for the pollutants, which are described in greater detail below.

### 3.11.1.2 Stormwater Collection

Stormwater that runs off I-94 is collected in storm sewers. About half the storm sewers eventually discharge to the Menomonee River. The east end of the study area, from roughly 38th Street through the eastern project limit, is in MMSD’s combined sewer service area. Stormwater collected there is directed to combined sewers that flow to the sewage treatment plant, and is treated before discharge to Lake Michigan.

There is a stormwater retention basin in the Washington Street corridor.

### 3.11.2 Surface Water and Fishery Impacts

#### 3.11.2.1 Water Quality

Water quality impacts can occur due to stormwater runoff from highways. Runoff pollution is rainwater or melting snow that washes off roads, bridges, parking lots, rooftops and other impermeable surfaces. As it flows over the surfaces, the water picks up dirt, rubber and metal deposits from tire wear, antifreeze and engine oil that has dripped onto the pavement, pesticides and fertilizers, and discarded cups, plastic bags, cigarette butts, pet waste and other litter. The contaminants are carried into lakes, rivers, and streams and have the potential to affect water quality, vegetation, and associated aquatic life (USEPA 1995).

Water quality impacts are associated with constructing, operating, and maintaining roadways. The primary construction impact is the potential for erosion and siltation into streams. An increase in suspended sediment can reduce aquatic productivity by limiting photosynthesis, lowering oxygen levels, and covering food sources and fish spawning areas.

During normal roadway operation, pollutants can be washed from the roadway surface by stormwater runoff to nearby water bodies. The effects of the pollutants would be greatest at locations that discharge directly to waterways. Winter maintenance includes applying deicing agents, normally salt and sand. Deicing salts can also affect water quality by increasing the chloride levels during runoff and snowmelt. Salt flows into ditches and travels to receiving waterways. Salt spray from passing vehicles drifts as a mist and deposits on vegetation and soil.

The most common deicing agent used in Wisconsin is sodium chloride, commonly referred to as road salt. According to Transportation Research Board Special Report 235, Highway Deicing: Comparing Salt and Calcium Magnesium Acetate (1991), impacts of road salt can adversely affect roadside vegetation, streams, and groundwater, but the impacts depend on a wide range of factors. Traffic levels, wind direction, and intensity and frequency of salt application affect the extent of damage to vegetation.
Threshold levels vary based on the species, temperature, light, humidity, wind, soil type, drainage patterns, precipitation, plant size, and water availability.

In general, chloride is thought to be more harmful to plants than sodium. Chloride can cause stress similar to drought conditions when it accumulates in plants. Sodium’s impact can be detrimental to plant growth but is less direct. A 1990 Nevada DOT study found that the slope of the roadside is a key factor in determining where salt reaches vegetation (Caltrans and Nevada DOT 1990). In flat areas, the salt exposure was an average of 17 feet from the edge of pavement.

Runoff from roadways or melting snow enters the ground through ditches adjacent to I-94. Studies have found that concentrations are highest within 5 to 10 feet of the edge of pavement, but some studies have found increased sodium and chloride levels in soil up to 30 feet from the pavement. Salt spray can deposit on leaves and branches. Road salt can enter water supplies by percolation through soil into groundwater.

Stormwater runoff from pavement typically is warmer than stream water and, therefore, increased runoff can potentially raise stream temperatures. Increased stream water temperatures can impair habitat for cold-water aquatic species by lowering the amount of dissolved oxygen available and increasing the amount of biological activity, further affecting dissolved oxygen levels.

### 3.11.2.2 Water Quantity

The amount of stormwater runoff from highways increases proportionately to the amount of impervious surface (that is, pavement). The 8- and 6-lane alternatives would increase runoff from I-94 compared to the No-build alternative. In general, an increase in runoff volume can increase the velocity of the runoff, thus increasing the potential for erosion and increased sediment (Bent et al. 2001).

In response to the potential impacts of increased stormwater runoff, WisDOT and FHWA are evaluating several BMPs to minimize the peak discharge rate of runoff that enters water bodies, reduce the flow's velocity, and improve the water quality of the runoff (that is, remove sediment and pollutants).

The WisDOT/WDNR Cooperative Agreement contains a Memorandum of Understanding regarding stormwater discharges to waters of the state. The Memorandum of Understanding requires WisDOT to implement a stormwater management program for its projects that is consistent with Section 402(p) of the Clean Water Act, Chapter 283 of the State Statutes, and Chapter NR 216 Wisconsin Administrative Code.

Wisconsin Administrative Code Chapter NR 151 establishes runoff pollution performance standards for transportation facilities. As it applies to this project, the rule requires removal of 40 percent of total suspended solids compared to no runoff management controls.

### 3.11.2.3 No-build Alternative

Under the No-build alternative, stormwater would continue to drain off the existing pavement and generally enter area waterways and ditches untreated. Water that drains off bridges would fall directly into waterways below. Few areas of I-94 would have treatment techniques to remove suspended solids from stormwater runoff. Less stormwater would drain off I-94 into the Menomonee River under this alternative compared to the 8- and 6-lane alternatives, but the level of pollutants would be higher.

### 3.11.2.4 8- and 6-Lane Alternatives

Under the 8- and 6-lane alternatives, there would be more stormwater runoff because I-94 would have more pavement due to an additional lane (for the 8-lane alternative only), wider shoulders in some
locations, and longer on- and off-ramps. However, the water that would be collected from I-94 would be treated better than it is today.

The increase in impervious area for the I-94 East-West Corridor is provided in Table 3-21. The 8-lane alternative would increase impervious area by 31 percent, while the 6-lane alternatives (both Hawley Road Interchange options) would increase impervious area by 25 percent. This would be less than a 0.1 percent increase in the total amount of impervious surface in the Menomonee River watershed. In comparison, the preferred alternative in the 2016 Final EIS (At-grade alternative in the west segment and On-alignment alternative in the east segment) would increase impervious surface by 90 percent.

Peak flows would increase due to the increase in impervious surface. Stormwater BMPs have been evaluated for effectiveness throughout the project limits, in available open spaces. MMSD’s comments on the Draft EIS expressed concern over the increase in impervious surface (2016 Final EIS; Appendix E, page E-20).

Stormwater BMPs have been evaluated to collect and treat runoff from not only the pavement but also from the surrounding green space that is tributary to the pavement. Wherever practicable, stormwater detention would be proposed to collect and store the runoff, reducing the peak flow of discharge to the Menomonee River. Reducing the peak flow discharged to the Menomonee River slightly reduces flood risk and other public safety hazards.

Runoff from the Washington Street extension would go into the existing City of West Allis stormwater collection system. WisDOT would continue to work with West Allis to implement stormwater strategies to adequately manage and minimize the runoff volume and quality, in accordance with WisDOT policies.

<table>
<thead>
<tr>
<th>Table 3-21. Increase in Impervious Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative</td>
</tr>
<tr>
<td>6-lane (half interchange at Hawley Road)</td>
</tr>
<tr>
<td>6-lane (full interchange at Hawley Road)</td>
</tr>
<tr>
<td>8-lane</td>
</tr>
</tbody>
</table>

a Percentages are reported for the hybrid interchange. percentages would be similar for the diverging diamond interchange.Bold = preferred alternative

3.11.3 Measures to Minimize and Mitigate Adverse Surface Water and Fishery Impacts

In the study phase, various stormwater BMPs were evaluated. During the next subsequent project design phases, BMPs would be further refined in coordination with WDNR, local municipalities, and MMSD to meet all required guidelines for a federally funded project.

WisDOT would work with communities and MMSD during the project’s final design phase to calculate stormwater measurements and to address stormwater management, both from a water quality and water quantity standpoint. WisDOT would further assess the water quality and quantity management options during the final design phase. WisDOT would comply with Wisconsin Administrative Code NR 151 and WisDOT’s Memorandum of Understanding on Erosion Control and Stormwater Management with WDNR. WisDOT would engage in further discussions with WDNR, MMSD, and other partner communities during design to identify additional stormwater management measures that may be cost-effective to implement, consistent with WisDOT’s stormwater management policies.
WisDOT would obtain a WDNR Transportation Construction General Permit to comply with TMDLs. The permit is required for WisDOT directed and supervised projects with one or more acres of land disturbance. The permit authorizes WisDOT to discharge stormwater to waterways in accordance with conditions set forth in the permit.

WisDOT would implement stormwater management techniques for the 8- and 6-lane alternatives. Per WDNR’s request, the project’s conceptual stormwater management plan should evaluate the impact of runoff release rates for 100-year and 2-year storm events.

The 8- and 6-lane alternatives would increase impervious area and therefore increase the amount of stormwater runoff from I-94. However, the alternatives would also provide the opportunity for BMPs to treat the runoff and bring I-94 in compliance with Wisconsin’s stormwater management regulations that limit the amount of pollution in runoff.

BMPs can be used for stormwater management. BMP options are described in the following list and shown in Exhibit 3-20. For the purpose of this evaluation, the variety of stormwater BMPs are discussed as potential, but for water quality and quantity modeling, wet stormwater retention basins were used as the most practical and efficient practice.

The following are the BMP options:

- **Retention Basins (Wet Detention Basins)**—Retention basins have a permanent pool of water year-round. The permanent pool allows pollutant particles in stormwater runoff to settle over an extended period of time. Nutrient uptake also occurs through increased biological activity.

- **Dry Detention Basins**—A dry detention basin typically is designed to store runoff and discharge it slowly to reduce the peak discharge downstream. As normally designed, the basins typically have little effect on the volume of stormwater released to the receiving water. Peak flow reduction is often accomplished through use of a multistage outlet structure that allows increased discharge as water levels in the basin increase.

- **Infiltration Devices**—Infiltration can be achieved through use of trenches or grass swales. Infiltration devices are used to slow the water flow so that more water is absorbed into the ground and more pollutants are removed from runoff. Due to the potential extent of contaminated soils throughout this study area, the use of infiltration devices may be discouraged.

- **Grass-lined Ditches**—This BMP generally helps reduce suspended solids to meet the regulatory goal of NR 151, which establishes runoff pollution performance standards for transportation facilities.

- **Trapezoidal Swale through Infield**—This BMP combines grass ditch treatment with peak flow reduction and is considered the same level of suspended solid control as grass ditches.

- **Vegetated Rock Filters**—This BMP may be used at outfalls to waterways or anywhere concentrated runoff leaves the right-of-way. It is similar in concept to a level spreader, which attempts to reintroduce sheet flow and provides a small amount of peak flow and volume reduction.

- **Swale Blocks/Ditch Checks**—Swale blocks/ditch checks are small earthen berms constructed in the bottom of a ditch at regular intervals to detain runoff from frequent storms. This BMP provides peak flow reduction and may provide infiltration benefits depending on soil conditions.

- **Inline Storage**—This method is not desirable from a water quality standpoint, but would manage water quantity. Storm sewer pipes would be designed larger than normal to provide storage in the sewer during rain, then the water is gradually released after the rain ends.
• **Biofiltration Basins**—Biofiltration basins are similar to infiltration devices and appear from the surface to look like a garden area. They use engineered soil, underdrains, native vegetation, and shallow detention to allow flows to be stored on the surface and slowly infiltrate to the subsoils or in cases of contaminated or poorly drained soils, drain through underdrain to a storm sewer. In narrow or restricted land space areas, stormwater biofiltration systems may be used within ditch areas, between mainline and frontage road lanes, or within ramp areas.

• **Stormwater Trees**—This BMP may be used in the project corridor or watershed to reduce runoff. Stormwater trees absorb stormwater during a rainfall event, absorb carbon dioxide, serve as an urban canopy to reduce urban heat zones, and reduce erosion during rainfall events.

To comply with Wis. Stat. § 87.30 and Wis. Admin. Code. Ch. NR 216, and to address concerns raised by MMSD, WisDOT, and FHWA are investigating retention/detention basins to manage stormwater from the proposed improvements. The retention/detention ponds would also improve water quality by allowing solid pollutants (sand, grit, etc.) to settle out of the water before it flows into storm sewers or streams. If the retention/detention ponds are built, WisDOT would provide landscaping around the pond. Potential locations for retention/detention basins include the following:

• **West of Stadium Interchange (Exhibit 3-21a)**—Biofiltration basins or retention basins may be placed between the ramps at the 68th Street/70th Street interchange. A few opportunities for retention are provided at the Hawley Road interchange, within the infields, east of Hawley Road, north of I-94, and potentially south of I-94. Stormwater from I-94 in the area through the cemeteries would be best served using storm sewer conveyance to the ponds at Hawley Road.

• **East of Stadium Interchange (Exhibit 3-21b)**—Stormwater retention basins within the Stadium Interchange may be between the freeway and ramps or under bridges within the WisDOT right-of-way. Two vacant MMSD parcels east of the Stadium Interchange may serve as potential locations for retention basins. East of the Stadium Interchange, stormwater retention basins may be located within areas of the existing I-94 alignment. Areas under bridges may also be used for stormwater retention and provide the additional benefit of shading and reducing thermal pollution to the streams. WisDOT would consider using permeable pavement in areas of the American Family Field parking lot that need to be reconstructed as a result of the project.

In 2018, the MMSD developed TMDL limits on behalf of WDNR for the watersheds within the Milwaukee area, including the Menomonee River and its tributaries (WDNR 2018). TMDL is the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. TMDLs were established for fecal coliform bacteria, phosphorus, and sediment. WisDOT would continue to comply with TMDLs and current NR 151 requirements for stormwater management.

East of about 38th Street, I-94 drains to a combined sanitary and storm sewer system. The drainage design team evaluated separating the freeway stormwater runoff from the combined sewer, with the desire to drain the treated runoff from the proposed stormwater ponds to the Menomonee River. A few potential obstacles were identified. The Menomonee Valley is adjacent to the freeway. The Valley has historically been used as a rail yard with tracks existing to this day. Potentially hazardous soils and materials are located throughout the valley area and could be situated between the freeway and the future storm sewer outfalls to the Menomonee River. There is potential for the 8- and 6-lane alternatives to avoid conveyance to the river to provide the water quality/quantity controls within the WisDOT right-of-way and adjacent available open space.

The Marquette Interchange Project introduced the stormwater management strategy (Marquette Approach) of separating the “first flush” or low flows of storm events to the combined sewer and
allowing the higher and cleaner flows to discharge to the river. This was seen as a win-win approach because MMSD would still treat the portion of stormwater runoff with the highest pollutant levels, but not be overtaxed with the higher flows. This example may be evaluated for this project during a later phase when the extent of contamination within the Menomonee Valley can be more adequately assessed. MMSD’s comments on the Draft EIS encouraged WisDOT to follow the Marquette Approach. TMDL’s may offer a new challenge that should be evaluated with the Marquette Approach, as well as the costs involved in installing additional storm sewer to route the higher flows to the river.

3.12 Environmental Corridors and Natural Areas

3.12.1 Affected Environment

As defined by SEWRPC, environmental corridors are areas in the landscape containing especially high-value natural, scenic, historic, scientific, and recreational features. In southeastern Wisconsin, they generally lie along major stream valleys, around major lakes, and in the Kettle Moraine area. The features occur in an essentially linear pattern of relatively narrow, elongated areas.

Primary environmental corridors include a variety of important natural resource and resource-related elements and are at least 400 acres in size, 2 miles long, and 200 feet wide. The primary environmental corridors include some of the best remaining woodlands, wetlands, and wildlife habitat areas in southeastern Wisconsin. The corridors have great environmental and recreational value. Their preservation in an essentially open, natural state will serve to maintain a high level of environmental quality in some segments of the study area.

In the I-94 East-West Corridor, the only primary environmental corridor is along the Menomonee River, where it crosses under I-94 east of 44th Street. The primary environmental corridor is very narrow within the study area, consisting basically of the Menomonee River and a few feet on either side of the river.

There are no secondary environmental corridors, natural areas, or isolated natural resource areas within the I-94 East-West Corridor.

Milwaukee County is designated a Coastal Area by Wisconsin’s Coastal Zone Management Program; however, there are no special coastal areas in the I-94 East-West Corridor. Based on WisDOT’s review and coordination with the Coastal Management Program, the project appears to be consistent with the Coastal Management Program’s goals.

3.12.2 Environmental Corridor and Natural Area Impacts

3.12.2.1 No-build Alternative

Under the No-build alternative, the primary environmental corridor in the I-94 East-West Corridor would not be affected.
3.12.2 8- and 6-Lane Alternatives

The reconstructed Stadium Interchange (both hybrid interchange and diverging diamond interchange options) would result in several new bridges built over the Menomonee River primary environmental corridor. The bridges would span both the Menomonee River and associated primary environmental corridor.

3.12.3 Measures to Minimize and Mitigate Adverse Environmental Corridor and Natural Area Impacts

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on surrounding environmental corridors. There are no feasible Stadium Interchange options that could completely avoid impact to the linear primary environmental corridor. Alternatives were designed to minimize impacts to the primary environmental corridor in this location by clear spanning it.

3.13 Floodplains and Hydraulics

3.13.1 Affected Environment

Floodplains help control flooding by decreasing water velocities and temporarily storing floodwater, thus also removing nutrients and providing erosion control. Floodplains also provide wildlife habitat and corridors for wildlife movement. The functions vary among locations, depending upon vegetative cover, waterway hydrology, and distance from the waterway. I-94 crosses the Menomonee River’s 100-year floodplain just east of the Stadium Interchange. The floodplain is roughly 125 feet wide under I-94.

Local roadways in the study area also cross the 100-year floodplain associated with the Menomonee River at Wisconsin Avenue, Selig Drive, Frederick Miller Way/Canal Street, 35th Street, 27th Street/Layton Boulevard, Canal Street (just east of 27th Street), and 25th Street. All local road bridges over the floodplain would remain in place. There is no floodplain in the Washington Street corridor.

A Conditional Letter of Map Revision (CLOMR) was issued by MMSD in summer 2022 for revised floodplain boundaries along the Menomonee River from North Avenue in Wauwatosa to the convergence with the Milwaukee River in Milwaukee. A Letter of Map Revision (LOMR) formally modifies the floodplain boundaries (flood fringe and/or floodway) for a certain area. The CLOMR incorporates already completed and proposed stormwater projects along the Menomonee River, updated hydrologic and hydraulic data, and utilizes new, improved topographic data. Once all the projects are constructed, a LOMR will be submitted for FEMA review. Official map changes will be processed upon approval of the LOMR. It is anticipated that completion of the remaining Menomonee River will happen by 2026. MMSD does not expect the area under the freeway to change from what is in the new CLOMR when it is mapped for the LOMR, because all of the remaining construction is upstream.

16 Flood fringe is the portion of the floodplain outside the floodway that is usually covered with water from the 100-year flood or storm event.
3.13.2 Floodplain Impacts

Executive Order 11988 on Floodplain Management, as amended by Executive Order 13690, and 23 CFR § 650A–Bridges, Structures, and Hydraulics, direct federal agencies to take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. The Executive Order also requires agencies to elevate structures above the flood base wherever possible. The purpose of the order is to avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplain and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Through the Waterway Crossings and Other Floodplain Encroachments amendment in the WisDOT/WDNR Cooperative Agreement, WisDOT is required to determine the impact of new or modified bridges and box culverts on the 100-year flood elevation. A hydraulic analysis of both existing and proposed conditions is conducted to determine if the bridge or culvert causes a change in the 100-year flood elevation. Property owners, local zoning authorities, and the WDNR are notified if the base flood elevation increases by more than 0.01 foot. It should be noted that minor lengthening of most box culverts often do not require a hydraulic analysis unless there are known deficiencies in hydraulic capacity.

WisDOT is required to assist affected municipalities in updating floodplain information in its zoning ordinance for submittal to FEMA, if requested. WisDOT provides the municipalities with the results of the analysis, the hydraulic models developed, mapping, and other exhibits developed for analysis.

3.13.2.1 No-build Alternative

The No-build alternative would not affect the floodplain.

3.13.2.2 8- and 6-Lane Alternatives

New freeway bridges across the Menomonee River would cross the 100-year floodplain but, except for new bridge piers, would not place fill into the floodplain. All bridges would be sized to pass a 100-year flood without interruption to traffic due to flood damage to the roadway or structures, and would not increase headwater elevations by more than the permissible 0.01 foot. The floodplain structures would not interrupt or terminate a transportation route needed for emergency vehicles or routes that serve as an area’s only evacuation route. All floodplain crossings would be constructed in accordance with the WisDOT/WDNR Cooperative Agreement (WisDOT/WDNR 2020). Crossings would be consistent with local floodplain management goals and objectives, which include maintaining the natural and beneficial floodplain values and avoiding support of incompatible floodplain development. Additionally, floodplain crossings would be designed to avoid impacts to existing flood profiles on adjacent landowners’ properties.

If the LOMR noted in Section 3.13.1 is approved, the potential relocation sites for the relocated electrical substations would be within flood fringe area, which is permissible under applicable law. WisDOT will reassess floodplain impacts if the floodplain boundary is modified. WisDOT will conform to FEMA regulatory requirements regarding floodplain impacts with the proposed relocation of electrical substations in the flood fringe area.
3.13.3 Measures to Minimize and Mitigate Adverse Floodplain Impacts

Alternatives were designed to span the Menomonee River floodplain, and minimize impacts to the floodplain in accordance with the WisDOT/WDNR Cooperative Agreement and local floodplain management goals and objectives. No mitigation measures are needed.

3.14 Groundwater and Water Supply

3.14.1 Affected Environment

Groundwater sustains lake levels, provides the base flows for streams, and comprises a major source of water supply for domestic, municipal, and industrial users. Like surface water, groundwater is susceptible to depletion in quantity and to deterioration in quality. Lake Michigan is the source of drinking water in the study area. Milwaukee Water Works provides water to the cities of Milwaukee, Wauwatosa, West Allis, and the Village of West Milwaukee in the I-94 East-West Corridor (see Section 3.4, Utilities).

According to USEPA’s list of Designated Sole-Source Aquifers, there are no sole-source aquifers in Wisconsin as defined by Section 11424(e) of the Safe Drinking Water Act (USEPA 2004).

3.14.2 Groundwater and Water Supply Impacts

3.14.2.1 No-build Alternative

The No-build alternative would not affect groundwater or drinking water supply.

3.14.2.2 8- and 6-Lane Alternatives

The 8- and 6-lane alternatives are not expected to adversely affect drinking water supply or localized shallow groundwater.

Because sizable dewatering or depressurizing activities are not anticipated during construction, temporary impacts on the groundwater system are not expected or would be minimal in isolated locations such as the Menomonee River area or other low-lying areas. No noteworthy changes in chemical characteristics of the surface material are anticipated, and no degradation of water quality entering the shallow aquifer is expected.

No groundwater drinking wells are known to exist in the study area.

3.14.3 Measures to Minimize and Mitigate Adverse Groundwater and Water Supply Impacts

No mitigation measures are needed.

3.15 Wetlands

The Corps of Engineers’ Wetland Delineation Manual (1987) defines wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions.” According to the 1987 manual, to be considered a jurisdictional wetland, the following three criteria must be met: (1) a prevalence of hydrophytic vegetation, (2) the presence of hydric soils, and (3) wetland hydrology.
3.15.1 Affected Environment

WisDOT conducted wetland delineations within the I-94 East-West Corridor in August 2021. Wetland determinations and boundaries were estimated based on signs of wetland hydrology and dominant hydrophytic vegetation. Wetland delineations identified three wetlands, totaling 0.41 acre, adjacent to I-94 in the study area system:

- A palustrine emergent wetland north of the Stadium Interchange, immediately east of WIS 175
- A palustrine emergent wetland north of I-94 east of General Mitchell Boulevard
- A palustrine forested wetland south of I-94 east of General Mitchell Boulevard, near American Family Field Parking

The Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline (WisDOT 2002) was used to classify wetlands in the I-94 East-West Corridor.

USEPA, in cooperation with the Corps of Engineers, has implemented an advance identification (ADID) program to define if wetlands and other waters are generally suitable for discharge of dredged or fill material. In southeastern Wisconsin, advanced identification of such wetlands was undertaken in consultation with SEWRPC and WDNR to support objectives of the area-wide water quality management plan that seeks to preserve high-value aquatic areas by redirecting development outside primary environmental corridors. Discharging dredged or fill material into wetlands and other waters in primary environmental corridors is generally considered not in conformance with the Clean Water Act’s Section 404(b)(1) guidelines. None of the wetlands identified are ADID wetlands.

3.15.2 Wetland Impacts

3.15.2.1 No-build Alternative

No wetlands would be affected under the No-build alternative.

3.15.2.2 8- and 6-Lane Alternatives

The 8- and 6-lane alternatives would impact 0.05 acre of wetlands. There is no difference in wetland impacts for the hybrid interchange and diverging diamond interchange at the Stadium Interchange. The 8- and 6-lane alternatives would impact 0.04 acre of the wetland north of I-94 east of General Mitchell Boulevard, and 0.01 acre of the wetland immediately next to WIS 175. Given their locations, avoidance is not practicable.

3.15.3 Measures to Minimize and Mitigate Adverse Wetland Impacts

Presidential Executive Order 11990, Protection of Wetlands, requires federal agencies to avoid, to the extent practicable, long- and short-term adverse impacts associated with the destruction or modification of wetlands. More specifically, the order directs federal agencies to avoid new construction in wetlands unless there is no practicable alternative. The order states that where wetlands cannot be avoided, the proposed action must include all practicable measures to minimize harm to wetlands.

The Clean Water Act’s Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR Part 230) are administered by USEPA and the Corps of Engineers. The guidelines state that dredged or fill material should not be discharged into aquatic ecosystems (including wetlands), unless it can be demonstrated that there are no practicable alternatives to such discharge, that such discharge will not have unacceptable adverse impacts, and that all practicable measures to mitigate adverse impacts are undertaken.
3.15.3.1 Measures to Minimize Harm

In accordance with state and federal agency policies and regulations for wetland preservation, including the Section 404(b)(1) Guidelines for Specifications of Disposal Sites for Dredged or Fill Material (40 CFR part 320), the following subsections summarize wetland mitigation strategies for the I-94 East-West Corridor study.

Avoid and Minimize Wetland Impacts

Because wetlands are scattered along the I-94 East-West Corridor, including in the ditches that drain the freeway, it is not possible to avoid wetland impacts completely during freeway reconstruction.

The 8- and 6-lane alternatives maintain the roadway within the existing right-of-way. While wetlands can and do occur in the right-of-way, the alternatives limit impacts to wetlands that have historically been affected by roadway construction and operation. The improvements at the Stadium Interchange have been designed to avoid higher-quality wetlands, such as fringe wetlands along the Menomonee River, which will be bridged. The Washington Street extension was also designed, within the limits of safe design standards, to minimize the impact to the retention pond.

WisDOT will investigate additional measures to minimize wetland impacts, such as keeping roadway side slopes as steep as practicable, disposing of excavated material on new roadway side slopes or in upland areas, minimizing sedimentation and siltation into adjacent wetlands by using strict erosion control measures, and using detention ponds, where allowed, to reduce pollutant loading and protect cold-water streams from sedimentation.

3.15.3.2 Measures to Mitigate Wetland Impacts

Wetland Compensation

Compensation for unavoidable wetland loss will be carried out in accordance with the Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline developed as part of the WisDOT/WDNR Cooperative Agreement on Compensatory Wetland Mitigation and the regulations for compensatory wetland mitigation issued jointly by the Corps of Engineers and USEPA in May 2008 (33 CFR § 325, 33 CFR § 332, and 40 CFR § 230 [April 10, 2008]). A wetland mitigation plan will be developed during the project’s final design phase, in consultation with state and federal agencies.

3.16 Upland Habitat and Woodland

3.16.1 Affected Environment

Upland habitat occurs in environmental corridors, isolated natural areas, and other tracts of land that have forested or grassland cover. Although most of the land adjacent to I-94 in the study area is developed, there are upland habitat and wooded areas in the ATC transmission line corridor, along the Menomonee River, Bluff Park, and Story Parkway.

A swath of upland habitat is along the ATC transmission line corridor north of I-94 between 68th Street and 61st Street, and a small line of trees is south of I-94 from 65th Street to 61st Street. Along the Washington Street extension, there is a linear swath of upland habitat.

In the Stadium Interchange area, there is upland habitat in the southwest and southeast quadrants as part of the utility corridor between I-94 and the American Family Field parking lots and in the northeast quadrant in a strip along I-94 between I-94 and the Valley Park/Merrill Park neighborhoods. East of the Stadium Interchange, a corridor of upland habitat is along the ATC transmission line corridor south of
I-94 and on the bluff that leads down to the Menomonee Valley. North of I-94, a small line of trees is between I-94 and residences to the north.

Woodlands have important direct values as wildlife habitat and outdoor recreation. Woodlands also have indirect values for reducing soil erosion and stream sedimentation, reducing runoff, maintaining water tables, streams, and lake levels and promoting groundwater recharge. The Menomonee River corridor is classified as a primary environmental corridor. (See Section 3.12, Environmental Corridors and Natural Areas, for more information.)

No land in the I-94 East-West Corridor is enrolled in Wisconsin’s Managed Forest Law program, which provides tax incentives to landowners who adhere to sustainable forestry practices.

### 3.16.2 Upland Habitat and Woodland Impacts

#### 3.16.2.1 No-build Alternative

The No-build alternative would not affect upland habitat or woodland.

#### 3.16.2.2 8- and 6-Lane Alternatives

Under the 8- and 6-lane alternatives, some small swaths of upland habitat adjacent to I-94 may be impacted. For the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, the Washington Street extension would cut across a 50-foot-wide swath of upland habitat.

The reconstructed Stadium Interchange (both hybrid interchange and diverging diamond interchange options) would acquire approximately 12 acres of upland habitat from the utility corridor south of I-94 and less than 5 acres of the tree line in the northeast quadrant. East of the Stadium Interchange, the 8- and 6-lane alternatives would impact the upland habitat south of I-94.

Because improvements would occur adjacent to the highway, upland impacts are strip or “edge takings.” New woodland edges created by highway right-of-way may experience tree loss from the drying effects of wind, sun, and exposure to road runoff. Additionally, the Menomonee River crossing will have room for wildlife to cross under the freeway adjacent to the stream.

### 3.16.3 Measures to Minimize and Mitigate Adverse Upland Habitat and Woodland Impacts

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on surrounding upland habitat and woodland. No mitigation measures were identified. As part of the Section 106 Programmatic agreement, a landscape plan will be prepared for the area adjacent to the Soldiers’ Home National Historic Landmark and National Register Historic District. In addition, for the work along National Avenue, adjacent to the Soldiers’ Home National Historic Landmark and National Register Historic District, the Programmatic Agreement has a stipulation to minimize impact to identified heritage trees within the NHL, as defined in the Soldiers’ Home Historic American Landscape Survey.

### 3.17 Wildlife

#### 3.17.1 Affected Environment

Wetland and upland communities in the study area provide habitat for a variety of mammals, songbirds, waterfowl, raptors, amphibians, insects, and reptiles.
3.17.2 Wildlife Impacts

3.17.2.1 No-build Alternative
The No-build alternative would not affect wildlife.

3.17.2.2 8- and 6-Lane Alternatives
The 8- and 6-lane alternatives would have similar impacts on wildlife in the study area, mainly as a result of impacts to upland habitat. The primary impact associated with the loss of upland plant communities is loss of wildlife habitat that serves movement corridors and provides cover for breeding, foraging, and resting. Other wildlife impacts caused by removing vegetation include interrupting the natural succession to mature communities, increasing the potential for soil erosion, and reducing aesthetic value.

Additionally, the Menomonee River crossing under I-94 will have room for wildlife to cross under the freeway adjacent to the river.

3.17.3 Measures to Minimize and Mitigate Adverse Wildlife Impacts
Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on wildlife along the I-94 corridor. No mitigation measures were identified.

3.18 Threatened and Endangered Species

3.18.1 Affected Environment

3.18.1.1 State-listed Species
The WDNR Bureau of Natural Heritage Conservation indicated on September 30, 2021, that the following threatened and endangered species may be present in the project corridor:

- Four endangered plants
- One threatened plant
- Six special concern plants
- One plant community
- One endangered animal
- One threatened animal
- Eight special concern animals

3.18.1.2 Federally listed Species
In March 2022, the U.S. Fish and Wildlife Service (USFWS) indicated by letter that there are threatened, endangered and/or candidate species known to occur in the study area or its vicinity and could be impacted by this project, including Rusty Patched Bumble Bee Federal High Potential Zone.

- Threatened animals:
  - Northern long-eared bat (Myotis septentrionalis)
- Endangered animals:
  - Rusty patched bumble bee (Bombus affinis)
- Candidate animals:
  - Monarch butterfly (Danaus plexippus)
Under Section 7 of the Endangered Species Act, federal agencies are required to consult with USFWS to ensure that proposed actions do not jeopardize any listed species or destroy or modify critical habitat.

In March 2022, USFWS announced a proposal to reclassify the northern long-eared bat as endangered under the federal Endangered Species Act. The bat is currently listed as threatened. The final reclassification decision will be completed by the end of November 2022 and the 4(d) rule will no longer be in effect. WisDOT will update its consultation with USFWS as needed. WisDOT does not anticipate a change in the effects determination.

A field survey for the rusty patched bumble bee (RPBB) (Bombus affinis) was completed in August 2021. The study area from 70th Street to S. Layton Boulevard/N. 27th Street is in the High Potential Zone for the RPBB. The first objective of the field survey was to assess the study area for potentially high-quality suitable foraging and/or nesting habitat for the RPBB. These areas were found to be low quality RPBB feeding habitat and woodlands potentially suitable for RPBB nesting or overwintering habitat and not to be high-quality areas for the following reasons:

- These areas are near the interstate; impacts are within the median of roads or immediately adjacent.
- Past construction activities have disturbed the project area, and soils are likely composed of compacted soils and dense with gravels.
- Impacted areas receive influxes of salt from plowing activities and/or runoff from the roadway.
- Little diversity of nectar resources is present. Flowering species are dominated by invasive species. Invasive species do not supply the RPBB with their “superfoods”; these “superfoods” include wild bergamot, prairie clover, hyssop, goldenrod, joe-pye weed, coneflowers, native thistles, aster, leadplant, jewelweed, mountain mint, native spirea, and wild cranberry. Goldenrod and jewelweed were observed in portions of the project area intermixed with invasive species.
- Invasive species are prevalent and dominant throughout the project area.

This field reconnaissance is not an official RPBB survey but rather an attempt to capture the general habitat in the study area. The threatened, endangered, or special concern plant species may be present if suitable habitat is found. Field surveys will be conducted during final design, closer to project construction. If any areas identified as potential or quality habitat could be impacted by the 8- and 6-lane alternatives, more intensive and species-specific surveys will be conducted (see Section 3.18.3).

The tri-colored bat is a candidate species and is proposed for listing. WisDOT will coordinate with USFWS regarding this species and include additional information in the Supplemental Final EIS/ROD.

### 3.18.1.3 Other Protected Species

The Migratory Bird Treaty Act of 1918 states that unless permitted by regulation, it is unlawful to kill or capture migratory birds or destroy their eggs and nests. The law protects barn swallows that commonly nest under bridges.

---

17 https://www.fws.gov/midwest/Endangered/insects/rpbb/rpbbmap.html
18 https://www.fws.gov/midwest/Endangered/insects/rpbb/pdf/HabitatAssessmentFormGuideByXercesForRPBB.pdf
3.18.2 Threatened and Endangered Species Impacts

3.18.2.1 No-build Alternative

The No-build alternative would not affect threatened or endangered species.

3.18.2.2 8- and 6-Lane Alternatives

Impacts to state-listed species may occur and will be evaluated in accordance with WDNR guidance once field surveys are conducted closer to construction. Impacts to federal-listed species may occur but are not likely to adversely affect these species. Impacts will be evaluated in accordance with USFWS guidance once field surveys are conducted.

Northern Long-Eared Bat

The corridor is a highly urbanized area with very little suitable habitat for the northern long-eared bat. The corridor is a highly urbanized area with very little suitable habitat for the northern long-eared bat. Less than 20 acres of trees could be taken from throughout the study area, but only about 10 acres are considered potential suitable habitat for the northern long-eared bat. The maximum area of trees taken in one spot will be 3 acres. The average area of trees taken in any one spot is less than 1 acre. Evaluation of the proposed project has indicated that the project may affect but is not likely to adversely affect the northern long-eared bat. As of September 30, 2021, coordination with WDNR has indicated that there are no known, occupied roost trees or hibernacula within 0.25 mile of the proposed study area.

On March 22, 2022, the U.S. Fish and Wildlife Service announced a proposal to reclassify the northern long-eared bat as endangered under the Endangered Species Act. This is anticipated to be finalized by the end of November 2022. Based on this change from threatened to endangered, the Section 4(d) of the Endangered Species Act is nullified because it does not apply to endangered species. The determination of “may affect but is not likely to adversely affect” was obtained under the Section 4(d) rule. Based on this change, as part of the Supplemental Final EIS/ROD, WisDOT and FHWA will use the FHWA, FRA, FTA Programmatic Consultation for Transportation Projects affecting NLEB to determine the project impact on the northern long-eared bat. It is anticipated this consultation will reach the same conclusion of “may affect but is not likely to adversely affect”.

Monarch Butterfly

Regarding the monarch butterfly, there are no Section 7 requirements for candidate species unless the proposed action is likely to jeopardize the species’ continued existence. The proposed project will not jeopardize the monarch butterfly’s continued existence and no further action is needed.

Rusty Patched Bumble Bee

This project includes disturbing low-quality RPBB feeding habitat and woodlands potentially suitable for RPBB nesting or overwintering habitat. Furthermore, using the assisted determination key (Appendix C), the project may affect but is not likely to adversely affect the RPBB for the following reasons:

- The project does not include seed collection.
- WisDOT will not use herbicide treatment in non-mowed areas with flowering species; WisDOT can mow these areas during strategic timetables before construction begins to minimize any impacts to foraging insects.
- There are no upland grasslands, shrublands, forest, and woodland edges within the project that contain native sources of pollen and nectar that constitute as nesting habitat.
• There are no forest or woodland edges within the project that contain native plants that provide pollen and nectar that constitute as overwintering habitat.

• There is no newly planted foraging habitat within the project area.

Due to the impacts on low-quality feeding habitat and on low-quality nesting and overwintering habitat, WisDOT has made the determination that this project “may affect but is not likely to adversely affect” the RPBB. On September 26, 2022, WisDOT received concurrence from USFWS on the “may affect but not likely to adversely affect” RPBB determination based on a consultation package WisDOT provided documenting the field conditions based on survey and potential acreage impacts.

3.18.2.3 Measures to Minimize and Mitigate Adverse Threatened and Endangered Species Impacts

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on potential threatened and endangered species’ habitats along the I-94 corridor.

Prior to construction, WisDOT will consult with WDNR in accordance with the WisDOT/WDNR Cooperative Agreement Memorandum of Understanding On Endangered and Threatened Species Consultation to develop appropriate measures to mitigate potential adverse impacts to state-listed species. During final design, the area of impact to potential habitats as identified in the field survey will be determined. WisDOT and WDNR will consult on additional species surveys, as needed. If a listed threatened or endangered species is present and cannot be avoided, WisDOT and WDNR will initiate incidental take consultation in accordance with the Wisconsin Statute 29.604 “Endangered and threatened species protected.” The statute requires a consideration of mitigation measures to reduce the impact and a public notice before the permit can be issued.

Bridges and culverts will be inspected to determine if any migratory birds are present. If swallows are present in the study area, WisDOT will remove their nests from the underside of bridges prior to construction, between August 20 and May 15. The nests are unoccupied during this period. After swallow nests are removed, WisDOT will place nets under the bridge to keep swallows from re-establishing nests on bridges that are going to be removed.

Following FHWA’s User’s Guide, WisDOT made an effect determination that the project “may affect, not likely to adversely affect” the northern long-eared bat. Proper documentation was submitted to USFWS on December 17, 2021. After the 30-day evaluation period for the verification letter no further notification was received from USFWS. This indicates the project may proceed as planned.

Avoidance and minimization measures to limit impacts to the northern long-eared bat include modifying all aspects of the project to avoid tree removal in excess of what is required to implement the project safely. Tree removal within potential habitat will occur outside of the active season and areas will be clearly marked to stay within limits. Bridge surveys will be conducted no more than 7 days prior to the start of construction to ensure northern long-eared bats have not started to use the structure.

To minimize potential indirect effects on bats or aquatic insects which may provide forage, WisDOT will implement erosion, sediment, and stormwater controls to protect water quality, wetlands, and streams. Where feasible, vegetated swales will be used to assist with filtering sediment and other pollutants from roadside drainage. Temporarily disturbed areas created from construction activities will be revegetated.

WisDOT proposes restoration of any potential RPBB habitat with native wildflower seed mix following disturbance.
To minimize potential effects on air quality, construction contractors will use proactive measures to prevent discharges of dust into the atmosphere that may unreasonably interfere with the public and adjacent properties or may be harmful to plants and animals.

3.19 Noise

As part of the Supplemental Draft EIS, a new traffic noise study was conducted to evaluate the traffic noise impacts of the 8-lane and 6-lane alternatives, along with the hybrid interchange and diverging diamond interchange at the Stadium Interchange, being considered as part of this Supplemental Draft EIS for the I-94 East-West Corridor Study. The same six noise barriers that were considered reasonable and feasible as part of the 2016 Final EIS preferred alternative were also determined to be reasonable and feasible as part of the new traffic noise study for the 8- and 6-lane alternatives.

3.19.1 Affected Environment

Sound is a form of vibration that causes pressure variations in elastic media such as air and water. Noise is an unwanted and disruptive sound. The ear is sensitive to pressure variation and perceives it as sound. The intensity of these pressure variations causes the ear to detect different levels of loudness. These pressure differences are most commonly measured in decibels.

The decibel (dB) is the unit of measurement for sound. The decibel scale audible to humans spans approximately 140 dB. A level of zero dB corresponds to the lower limit of audibility, while 140 dB produces a sensation more like pain than sound. The decibel scale is a logarithmic representation of the actual sound pressure variations. Therefore, a 26 percent change in the energy level only changes the sound level 1 dB. The human ear would not detect this change except in a controlled environment. Doubling the energy level would result in a 3-dB increase, which would be barely perceptible in the natural environment. Tripling the energy sound level would result in a clearly noticeable change of 5 dB in the sound level. A change of 10 times the energy level would result in a 10 dB change in the sound level. This would be perceived as a doubling (or halving) of the apparent loudness.

The human ear has a non-linear sensitivity to noise. To account for this in noise measurements, electronic weighting scales are used to define the relative loudness of different frequencies. The “A” weighting scale is widely used in environmental work because it closely resembles the non-linearity of human hearing. Therefore, the unit of measurement for a decibel A-weighted noise level is dBA.

Traffic noise is not constant. It varies as each vehicle passes a point. The time-varying characteristics of environmental noise are analyzed statistically to determine the duration and intensity of noise exposure. In an urban environment, noise is made up of two distinct parts. One is ambient, or background noise. Wind noise and distant traffic noise make up the acoustical environment surrounding the project. These sounds are not readily recognized but combine to produce a non-irritating ambient sound level. This background sound level varies throughout the day, being lowest at night and highest during the day. The other component of urban noise is intermittent and louder than the background noise. Transportation noise and local industrial noise are examples of this type of noise. It is for these reasons that environmental noise is analyzed statistically.

The statistical descriptor used for traffic noise is Leq. Leq is the constant, average sound level that, over a period of time, contains the same amount of sound energy as the varying levels of the traffic noise. The Leq correlates reasonably well the effects of noise on people. It is also easily measurable with integrating sound level meters. The time period for traffic noise is 1 hour. Therefore, the unit of measure for traffic noise is Leq(1h) dBA.
Highway noise sources have been divided into the five types:

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

Noise levels produced by highway vehicles can be attributed to three major categories:

- Running gear and accessories (tires, drive train, fan, and other auxiliary equipment)
- Engine (intake and exhaust noise, radiation from engine casing)
- Aerodynamic and body noise

Tires are the dominant noise source at speeds greater than 20 to 30 mph for cars and 50 mph for trucks.19 Tire sound levels increase with vehicle speed but also depend upon road surface, vehicle weight, tread design and wear. Change in any of these can vary noise levels. At lower speeds, especially in trucks and buses, the dominant noise source is the engine and related accessories.

3.19.1.1 Noise Level Measurements

Existing noise level measurements were conducted on September 29, 2021, at 6 locations, including 5 representative residential areas and at 1 location in the Spring Hill Cemetery adjacent to I-94. In addition, an existing noise level measurement for the Washington Street extension was conducted, near residential areas in the vicinity of Washington Street. The measurements were made in accordance with FHWA guidelines using an integrating sound level analyzer meeting American National Standards Institute and International Electrical Commission Type 1 specifications. Noise measurements were taken for a period of 15 minutes at each of the residential sites and Spring Hill Cemetery. Traffic counts were not taken at Washington Street.20 The traffic counts were broken out by automobiles, medium trucks, heavy trucks, buses, and motorcycles because each classification of vehicle produces different noise levels. **Table 3-22** presents the measured existing noise level collected at the 6 sites. The locations of the field sites are shown in Exhibit 3-22a.

3.19.1.2 Comparison of Field Data Versus Modeled Noise Levels

Traffic data counted during the field noise measurements was used to model the noise level from the 6 field measurement locations using the FHWA Traffic Noise Model (TNM) Version 2.5. The FHWA TNM is a computer program used for predicting noise impacts in the vicinity of highways. TNM 2.5 is a nationally accepted model that is required by FHWA to be used on all federal-aid highway projects.

The field measurements were then compared to the output from TNM to confirm the applicability of the computer model to the specific conditions in the I-94 study area. The traffic data from the 6 sites were used in the TNM to model the field data. The modeled noise levels at the 6 sites with concurrent traffic

---


20 Traffic counts were not taken at Washington Street because it currently does not connect between 70th Street and Hawley Road.
counts all compared within ±3 dB of the field measured levels. This represents reasonable correlation, because the human ear can barely distinguish a 3 dB change in the Leq(1h) noise level in the urban environment. Table 3-23 presents the site-by-site comparison.

Since the TNM 2.5 modeled field data were within ±3 dB of the measured noise levels, the model is assumed to be valid for this study. At this point in the environmental analysis, the field measurements and the modeled noise levels using the traffic counts taken during the field noise measurements are set aside for the remainder of the noise analysis.

Table 3-22. Measured Existing Noise Levels

<table>
<thead>
<tr>
<th>Field Site</th>
<th>Site Description and Distance from Road</th>
<th>Noise Level dBA Leq (1h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Residence, 125 feet from westbound I-94 centerline and 5 feet west of 63rd Street</td>
<td>60.2</td>
</tr>
<tr>
<td>2</td>
<td>Spring Hill Cemetery, 123 feet from eastbound I-94 centerline and 73 feet southeast of the mausoleum</td>
<td>69.2</td>
</tr>
<tr>
<td>3</td>
<td>Bike Path, 145 feet west of Yount Drive and 82 feet from westbound I-94 centerline</td>
<td>72.7</td>
</tr>
<tr>
<td>4</td>
<td>Open Space/Indian Hill Sled Run, 249 feet from westbound I-94 centerline and 302 feet from intersection of N 41st Street and W. Mt. Vernon Avenue</td>
<td>57.4</td>
</tr>
<tr>
<td>5</td>
<td>Residence, corner of W. Park Hill Ave and N. 31st Street; 79 feet from westbound I-94 centerline</td>
<td>71.4</td>
</tr>
<tr>
<td>6</td>
<td>Sav On Foods parking lot, Clybourn Street; 215 feet from WB I-94 centerline</td>
<td>67.0</td>
</tr>
<tr>
<td>7</td>
<td>807 S 60th St West Allis (for the Washington Street extension)</td>
<td>60.9</td>
</tr>
</tbody>
</table>

Table 3-23. Comparison of Measured and Modeled Noise Levels

<table>
<thead>
<tr>
<th>Field Site</th>
<th>Noise Level, dBA Leq</th>
<th>Difference in Noise Level, dBA Leq Modeled Noise Level Minus Measured Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Measured</td>
<td>Modeled</td>
</tr>
<tr>
<td>1</td>
<td>60.2</td>
<td>62.6</td>
</tr>
<tr>
<td>2</td>
<td>69.2</td>
<td>71.5</td>
</tr>
<tr>
<td>3</td>
<td>72.7</td>
<td>74.8</td>
</tr>
<tr>
<td>4</td>
<td>57.4</td>
<td>59</td>
</tr>
<tr>
<td>5</td>
<td>71.4</td>
<td>74.3</td>
</tr>
<tr>
<td>6</td>
<td>67</td>
<td>67.1</td>
</tr>
</tbody>
</table>

3.19.2 Noise Impacts

The noise analysis presents the modeled existing and future noise levels at various locations in the study area. The determination of noise abatement measures and locations is within the framework of WisDOT’s Facilities Development Manual, Chapter 23, Noise, effective November 15, 2021, which is WisDOT’s FHWA-approved noise policy pursuant to 23 CFR Part 772. Table 3-24 presents the noise level criteria for considering barriers abutting various land uses. The noise level descriptor used is the equivalent sound level, Leq (1h), defined as the steady state sound level which, in a stated time period (usually 1 hour) contains the same sound energy as the actual time-varying sound.
Noise abatement measures will be considered when the predicted noise levels approach or exceed those values identified for the appropriate activity category in Table 3-24, or when the predicted traffic noise levels substantially exceed the existing noise levels. “Approach” is defined as being within 1 dBA less than the noise levels shown in Table 3-24. WisDOT has defined an increase over existing noise levels of 15 dB or more as being a noise impact.

### Table 3-24. Noise Level Criteria for Considering Barriers

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>Leq(h) (dBA) (Evaluation Criteria)</th>
<th>Description of Land Use Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57 (Exterior)</td>
<td>Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.</td>
</tr>
<tr>
<td>B</td>
<td>67 (Exterior)</td>
<td>Residential</td>
</tr>
<tr>
<td>C</td>
<td>67 (Exterior)</td>
<td>Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.</td>
</tr>
<tr>
<td>D</td>
<td>52 (Interior)</td>
<td>Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.</td>
</tr>
<tr>
<td>E</td>
<td>72 (Exterior)</td>
<td>Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A–D or F.</td>
</tr>
<tr>
<td>F</td>
<td>-</td>
<td>Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.</td>
</tr>
<tr>
<td>G</td>
<td>—</td>
<td>Undeveloped lands that are not permitted.</td>
</tr>
</tbody>
</table>


a “Leq” means the equivalent steady-state sound level, which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same period. For purposes of measuring or predicting noise levels, a receptor is assumed to be at ear height, or 5 feet above ground. “Leq(h)” means the hourly value of Leq.

b Includes undeveloped lands permitted for this activity category or publicly owned recreation lands formally designated in a public agency’s master plan.

c Use of interior noise levels shall be limited to situations where a determination has been made that exterior abatement measures will not be feasible and reasonable and after exhausting all outdoor mitigation options.

FHWA’s TNM 2.5 was used to model existing (2019) and future (2050) noise levels for each of the alternatives under consideration. Noise levels were calculated based on traffic volumes in SEWRPC’s traffic model. SEWRPC’s traffic model is used because it averages traffic counts from throughout the year. The 8- and 6-lane alternatives were modeled to determine future (2050) noise levels. This includes noise modeling of the Washington Street extension for the 8-lane and 6-lane with half interchange at Hawley Road alternatives.

The following parameters were used in FHWA’s TNM 2.5 model to calculate an hourly Leq(1h) at a specific receiver location:
SECTION 3—EXISTING CONDITIONS, ENVIRONMENTAL IMPACTS, AND MEASURES TO MITIGATE ADVERSE IMPACTS

- Distance between roadway and receiver
- Relative elevations of roadway and receiver (all receivers are assumed to be 5 feet off the ground)
- Hourly traffic volume in light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles
- Vehicle speed
- Roadway grade
- Topographic features, including retaining walls and berms
- Noise source height of vehicles

Exhibit 3-22a shows the noise measurement locations Field Site (FS)-1 through FS-7, while Exhibits 3-22b, 3-22c, 3-22d, and 3-22e show 175 representative receiver locations numbered R1 to R9, N1 through N123, and NR1-NR26, plus the noise measurement locations FS-1 through FS-17. Representative receivers are sites typical of the applicable land use category near the existing or proposed highway route that may be used to represent the sound levels at similar land uses along the route. These receivers were selected to model the representative noise impacts at outdoor areas of frequent human use at 158 residential receivers representing 670 residences (including apartments), one active sports area, one recreation facility, one educational facility, four cemeteries, one day care center, one park, one restaurant, one dentist, and one hospital.

The results of the computer modeling by alternative are presented in Appendix E, Traffic Noise Impact and Acoustical Mitigation Summary. The noise levels for each alternative are independent of other alternative noise levels. Therefore, the data presented in Appendix E are appropriate for any combination of alternatives.

It should be noted that the noise levels obtained from the field sites differ from the noise levels listed in Appendix E. The noise levels in Appendix E are the modeled noise levels based on SEWRPC’s existing and future design year traffic volumes and existing I-94 design conditions and the proposed design of the 8- and 6-lane alternatives. Noise impacts are calculated based on the traffic counts provided by SEWRPC’s traffic model, which uses traffic counts from throughout the year and averages them, producing more accurate results than one 15-minute traffic count at a specific point in time. See Section 3.19.1.2 for more information on the comparison of field data and modeled noise levels.

Prediction of noise levels is one step in assessing potential traffic noise impacts and abatement strategies. Noise impacts were measured by calculating the difference between the modeled existing condition and the modeled future condition during the design hour. The design hour is the hour before or after the morning or afternoon peak hour, when traffic is generally at its loudest. The TNM 2.5 output for the existing noise level is used instead of the field noise level measurement because the TNM 2.5 noise level is a more accurate representation of the average noise level at a specific location at the loudest hour of the day. During the field measurement, several factors could influence the noise measurement that are not present daily. Noises that are extraneous from traffic (birds, people, machinery, etc.) could influence the noise measurement reading during the 15-minute period. Additionally, the field measurement is not necessarily taken during the loudest time of the day. However, the study team needs to know the noise level during the loudest time of the day to determine if the predicted noise levels exceed or approach the noise level criteria for considering noise barriers.

The horizontal and vertical alignment of the freeway would be substantially different in some areas than today. Therefore, in some areas design-year noise levels could change by as much as 4 dBA for the
8-lane alternative, and 3 dBA for the 6-lane alternatives compared to existing noise levels. The projected changes in the study are summarized by alternative in Table 3-25. The projected number of properties that would be exposed to design-year noise levels that approach or exceed the levels in Table 3-24 are presented in Table 3-26.

Table 3-25. Change in Design Hour Noise Levels by Alternative

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Change in Noise Level, dBA $L_{eq}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-lane alternative with hybrid interchange</td>
<td>-4 to +4</td>
</tr>
<tr>
<td>8-lane alternative with diverging diamond interchange</td>
<td>-3 to +4</td>
</tr>
<tr>
<td>6-lane alternative with half interchange at Hawley Road and hybrid interchange</td>
<td>-4 to +3</td>
</tr>
<tr>
<td>6-lane alternative with full interchange at Hawley Road and hybrid interchange</td>
<td>-4 to +3</td>
</tr>
<tr>
<td>6-lane alternative with half interchange at Hawley Road and diverging diamond interchange</td>
<td>-4 to +3</td>
</tr>
<tr>
<td>6-lane alternative with full interchange at Hawley Road and diverging diamond interchange</td>
<td>-4 to +3</td>
</tr>
<tr>
<td>Washington Street Extension (only with 8-lane alternative and 6 lane alternatives with half interchange at Hawley Road)</td>
<td>-1 to +12</td>
</tr>
</tbody>
</table>

**Bold** = preferred alternative

Table 3-26. Impacted Noise Receptors Summary

<table>
<thead>
<tr>
<th>Receptor Type</th>
<th>8-lane Alternative with Hybrid Interchange</th>
<th>8-lane Alternative with Diverging Diamond Interchange (Preferred Alternative)</th>
<th>6-lane Half Hawley Alternative with Hybrid Interchange</th>
<th>6-lane Full Hawley Alternative with Hybrid Interchange</th>
<th>6-lane Alternative with Half Hawley Interchange and Diverging Diamond Interchange</th>
<th>6-lane Alternative with Full Hawley Interchange and Diverging Diamond Interchange</th>
<th>Washington Street Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residences</td>
<td>66 (239)$^a$</td>
<td>73 (238)</td>
<td>60 (208)</td>
<td>59 (202)</td>
<td>66 (220)</td>
<td>66 (220)</td>
<td>0</td>
</tr>
<tr>
<td>Active sports areas</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recreation facilities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Educational facilities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>5 (4)</td>
<td>6 (4)</td>
<td>5 (4)</td>
<td>5 (4)</td>
<td>5 (4)</td>
<td>5 (4)</td>
<td>0</td>
</tr>
<tr>
<td>Day care center</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Park</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

$^a$ (#) indicates the number of unique properties represented by the receptors

**Bold** = preferred alternative

In addition to the I-94 improvements, spot improvements are being proposed near three intersections for the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road: National Avenue/Brewers Boulevard/General Mitchell Boulevard, National Avenue/Greenfield Avenue/
62nd Street, and Greenfield Avenue/70th Street. The proposed improvements include restriping pavement to add turn lanes or increase the lengths of existing turn lanes, and the addition of a proposed right-turn lane to improve access to the Milwaukee VA Medical Center. All the proposed improvements are designed to improve traffic operations. Traffic noise impacts are associated with the National Avenue/Brewers Boulevard intersection improvements for the 8-lane alternative with diverging diamond interchange (see Table 3-29).  

3.19.3 Measures to Minimize and Mitigate Adverse Noise Impacts

Based upon the requirements of 23 CFR 772 and within the framework of Facilities Development Manual 23, Noise, various methods were reviewed to mitigate the noise impact of the proposed improvements. Among those considered were restricting truck traffic to specific times of the day, prohibiting trucks, altering horizontal and vertical alignments, property acquisition for construction of noise barriers or berms, property acquisition to create buffer zones to prevent development that could be adversely impacted, soundproofing public use or nonprofit institutional buildings (Land Use Activity Category D only), berms, and sound barriers.

Restricting or prohibiting trucks is counter to the project’s purpose and need. Design criteria and recommended termini for the proposed project preclude substantial horizontal and vertical alignment shifts that would produce noticeable changes in the projected acoustical environment. Due to right-of-way limitation, the construction of noise berms is neither feasible nor reasonable. Soundproofing was not considered because there are reasonable and feasible exterior measures. Therefore, only the construction of noise barriers was reviewed. Abatement is recommended only when it is feasible and reasonable to construct a noise barrier.

Facilities Development Manual 23, Noise, has established criteria for determining feasibility and reasonableness and is summarized as follows:

- The barrier must provide at least 5-dB reduction to be considered feasible.
- One receptor or common use area must meet the 9-dB design goal for the noise barrier to be considered for reasonableness.
- A noise barrier must reduce noise levels by at least 8 decibels for a receptor or common use area to be considered as benefited for the purposes of determining reasonableness. The total cost of the barrier may not exceed $50,000 per abutting residence.
- If a common noise environment exists within the project termini, cost-averaging of multiple barriers within the common noise environment may occur as part of the reasonableness determination. Noise barriers exceeding $100,000 per benefited receptor cannot be included in the cost averaging. The order of cost averaging of eligible multiple barriers will start with the most cost-effective noise barrier decreasing to the second most cost-effective barrier to the third, etc., until the average cost approaches or equals but does not exceed $50,000 per benefited receptor. The noise barriers included in the cost averaging may be carried forward for a determination of whether they will be incorporated into the project. The department must receive a vote of support for the project from a simple majority of all votes cast by the owners or residents of the benefited receptors.

Based on the number and location of impacted receptors for each alternative, a total of 15 noise barriers (12 for all alternatives with an additional barrier (8a) for the diverging diamond option at the

Traffic noise impacts of the National Avenue/Brewers Boulevard intersection improvements were only analyzed for the 8-lane alternative with diverging diamond interchange (preferred alternative).
Stadium Interchange, and 13 and 14 for the 8-lane alternative with diverging diamond interchange (preferred alternative) were analyzed for eight residential areas and three cemeteries abutting the corridor that would be exposed to noise levels that approach or exceed the noise level criteria for considering barriers for each of the alternatives. A summary of the noise barriers is presented in Tables 3-27 to 3-33 and shown on Exhibits 3-22b, 3-22c, 3-22d, and 3-22e. Tables 3-27 to 3-33 present the results of the noise barrier analysis, including barrier location, future Leq(1h) noise levels without and with a barrier, barrier length and height, estimated cost, number of residential units benefited, noise reduction provided by the barrier, and cost per residential unit for each alternative.

It should be noted that options to avoid impacts to overhead powerlines and other utilities located north of I-94 between 68th Street and Hawley Road under the 8-lane alternatives and both 6-lane alternatives were investigated. Shifting I-94 roadway south in this area, locating the noise barrier north of the ATC towers, or reducing the height of the barrier to avoid impacts to the overheard utilities were considered. Shifting the roadway to the south or moving the barrier to the north of the ATC towers were eliminated as options from consideration due to right-of-way impacts and additional costs. Barrier 4A, a reduced height barrier, was found to be reasonable and feasible with its reduced height and avoids the additional cost of relocating ATC towers that would be required by Barrier 4 for the 8- and 6-lane alternatives. See Tables 3-27 to 3-33 and Exhibits 3-22b, 3-22c, 3-22d, and 3-22e.

The final step in the reasonableness determination is to cost average the multiple noise barriers within the common noise environment on all noise barriers costing less than $100,000 per unit. Cost averaging for the 8-lane hybrid interchange alternative provided cost reasonableness for one additional barrier (Barriers 3) for a total of six barriers. Cost averaging for the 8-lane diverging diamond interchange alternative provided cost reasonableness for three additional barriers (Barriers 3, 9, and 10) for a total of six barriers. Cost averaging for the 6-lane with full Hawley interchange alternative provided cost reasonableness for one additional barrier (Barrier 3) for a total of six barriers. Cost averaging for the 6-lane diverging diamond interchange with either the half Hawley or full Hawley interchange provided cost reasonableness for two additional barriers (Barriers 3 and 10) for a total of six barriers (Exhibits 3-22b, 3-22c, 3-22d, and 3-22e).

The same six noise barriers that were considered reasonable and feasible as part of the 2016 Final EIS preferred alternative were also determined to be reasonable and feasible as part of the new traffic noise study conducted as part of this Supplemental Draft EIS for the 8-lane alternative with the diverging diamond Stadium Interchange (preferred alternative).

The noise analysis for the Washington Street extension identified 15 receivers representing 120 residences along 60th Street/Hawley Road, Dickinson Street, and 70th Street for the Washington Street connection project. No noise levels exceed the noise level criteria for the Washington Street extension; therefore, no noise barriers are recommended in the Washington Street extension area.

During the final design phase of the project as the roadway profiles and retaining walls are more accurately defined relative to the surrounding areas, the location of feasible and reasonable noise mitigation will be reassessed. If final design results in substantial changes in roadway design from the conditions modeled for the Supplemental Draft EIS or Supplemental Final EIS, noise abatement measures will be reviewed. A final decision on the installation of abatement measures will not be made until the project’s final design has progressed to a point where barrier siting can be confidently determined and until the public involvement process is complete. The public involvement process will solicit the viewpoints of residents and property owners who benefit by the construction of the feasible and reasonable noise barriers to determine whether noise abatement will be likely to be incorporated into the project.
<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>8-Lane Hybrid Interchange Alternative</th>
<th>8-Lane DDI Alternative</th>
<th>6-Lane Hybrid Interchange with Half Hawley Alternative</th>
<th>6-Lane Hybrid Interchange with Full Hawley Alternative</th>
<th>6-Lane DDI with Half Hawley Interchange Alternative</th>
<th>6-Lane DDI with Full Hawley Interchange Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes (with Cost Averaging)</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>8A</td>
<td>SB 175 From Blue Mound to Parkway</td>
<td>NA</td>
<td>No</td>
<td>NA</td>
<td>NA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>Yes</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>Yes</td>
<td>Yes (with Cost Averaging)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>12</td>
<td>WB Clybourn From 17th to 19th</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>13</td>
<td>EB National Avenue from S 48th Street east 27’</td>
<td>NA</td>
<td>No</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>14</td>
<td>EB National Avenue from 50’ east of S 47th Street 48’</td>
<td>NA</td>
<td>No</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Number of Feasible and Reasonable Noise Barriers**

|                      | 5 | 3 | 6 | 5 | 4 | 4 |

**Number of Cost Averaged Feasible and Reasonable Noise Barriers**

|                      | 1 | 3 | 0 | 1 | 2 | 2 |

**Total Number of Feasible and Reasonable Noise Barriers**

|                      | 6 | 6 | 6 | 6 | 6 | 6 |
### Table 3-28. Summary of Noise Barrier Analysis for the 8-lane Hybrid Interchange Alternative

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Existing Noise Levels (dBA)</th>
<th>Range of 2050 Future Leq Noise levels (dBA)</th>
<th>Noise Reduction (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Costa</th>
<th>Total Benefitted</th>
<th>Estimated Barrier Cost per Benefitted Receiver</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>64-70</td>
<td>67-74</td>
<td>63-68</td>
<td>1-9</td>
<td>20</td>
<td>1229</td>
<td>$737,010</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>61-67</td>
<td>65-70</td>
<td>60-65</td>
<td>4-7</td>
<td>30</td>
<td>1384</td>
<td>$1,245,750</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>63-77</td>
<td>62-77</td>
<td>57-63</td>
<td>4-18</td>
<td>16,26,26</td>
<td>3335</td>
<td>$2,423,430</td>
<td>45</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>64-74</td>
<td>57-65</td>
<td>2-12</td>
<td>16 to 26</td>
<td>3513</td>
<td>$14,253,480c</td>
<td>48</td>
</tr>
<tr>
<td>4A</td>
<td></td>
<td>61-72</td>
<td>64-74</td>
<td>57-65</td>
<td>2-12</td>
<td>12 to 20</td>
<td>2914</td>
<td>$1,334,790</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>62-68</td>
<td>63-76</td>
<td>62-66</td>
<td>1-10</td>
<td>12</td>
<td>1060</td>
<td>$381,450c</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>65-77</td>
<td>65-78</td>
<td>60-65</td>
<td>5-13</td>
<td>18</td>
<td>1349</td>
<td>$728,460</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>61-69</td>
<td>62-70</td>
<td>54-65</td>
<td>2-11</td>
<td>20</td>
<td>1041</td>
<td>$624,600</td>
<td>17</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>58-69</td>
<td>59-69</td>
<td>59-64</td>
<td>0-8</td>
<td>18</td>
<td>331</td>
<td>$178,740</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>57-74</td>
<td>57-73</td>
<td>56-65</td>
<td>0-13</td>
<td>20,22</td>
<td>814</td>
<td>$532,830</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>61-75</td>
<td>62-73</td>
<td>55-63</td>
<td>3-16</td>
<td>20</td>
<td>2082</td>
<td>$1,249,200</td>
<td>28</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>73</td>
<td>70</td>
<td>66</td>
<td>4</td>
<td>30</td>
<td>330</td>
<td>$297,000</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>WB Clybourn From 17th to 19th</td>
<td>64-69</td>
<td>63-70</td>
<td>62-68</td>
<td>0-8</td>
<td>14</td>
<td>688</td>
<td>$288,960</td>
<td>1</td>
</tr>
</tbody>
</table>

a Based on $30.00 per square foot; b Based on cost averaging of multiple barriers within the common noise environment for the 8-lane hybrid interchange alternative (see Section 6.2.2 in Appendix E for a description of how costs are averaged); c Costs include expense of relocating approximately 12 ATC towers.
### Table 3-29. Summary of Noise Barrier Analysis for the 8-lane Diverging Diamond Interchange Alternative

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Existing Noise Levels (dBA)</th>
<th>Range of 2050 Future Leq Noise levels (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Cost</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without Barrier</td>
<td>With Barrier</td>
<td>Noise Reduction (dBA)</td>
<td>Height (feet)</td>
<td>Total Length (feet)</td>
</tr>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>64-70</td>
<td>67-74</td>
<td>63-68</td>
<td>1-9</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>61-67</td>
<td>65-70</td>
<td>60-65</td>
<td>2-7</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>63-77</td>
<td>62-77</td>
<td>57-63</td>
<td>1-18</td>
<td>12,22,22</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>64-74</td>
<td>57-65</td>
<td>2-12</td>
<td>16 to 26</td>
</tr>
<tr>
<td>4A</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>64-74</td>
<td>58-65</td>
<td>1-12</td>
<td>12,18,20</td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>62-68</td>
<td>63-76</td>
<td>62-66</td>
<td>1-10</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>65-77</td>
<td>66-78</td>
<td>60-64</td>
<td>5-13</td>
<td>18</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>61-69</td>
<td>64-70</td>
<td>58-65</td>
<td>1-12</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>58-69</td>
<td>60-70</td>
<td>60-65</td>
<td>0-8</td>
<td>20</td>
</tr>
<tr>
<td>8A</td>
<td>SB 175 From Blue Mound to Parkway</td>
<td>58-66</td>
<td>60-70</td>
<td>60-65</td>
<td>0-8</td>
<td>30</td>
</tr>
</tbody>
</table>
Table 3-29. Summary of Noise Barrier Analysis for the 8-lane Diverging Diamond Interchange Alternative

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Range of Existing Noise Levels (dBA)</th>
<th>Range of 2050 Future Leq Noise Levels (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Costa</th>
<th>Total Benefitted</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without Barrier</td>
<td>With Barrier</td>
<td>Without Barrier</td>
<td>With Barrier</td>
<td>Height (feet)</td>
<td>Total Length (feet)</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>57-74</td>
<td>58-73</td>
<td>58-68</td>
<td>0-13</td>
<td>20</td>
<td>814</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>61-75</td>
<td>61-73</td>
<td>57-64</td>
<td>1-15</td>
<td>20</td>
<td>2082</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>73</td>
<td>70</td>
<td>68</td>
<td>2</td>
<td>30</td>
<td>330</td>
</tr>
<tr>
<td>12</td>
<td>WB Clybourn From 17th to 19th</td>
<td>64-69</td>
<td>62-70</td>
<td>55-68</td>
<td>0-11</td>
<td>30</td>
<td>2052</td>
</tr>
<tr>
<td>13</td>
<td>EB National Ave from S. 48th East 27 feet</td>
<td>66</td>
<td>67</td>
<td>63</td>
<td>4</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>14</td>
<td>EB National Ave from 50 feet east of S. 47th 48 feet</td>
<td>46</td>
<td>46</td>
<td>42</td>
<td>4</td>
<td>30</td>
<td>48</td>
</tr>
</tbody>
</table>

a Based on $30.00 per square foot; b Based on cost averaging of multiple barriers within the common noise environment for the 8-lane diverging diamond interchange alternative (see Section 6.2.2 of Appendix E for a description of how costs are averaged); c Costs include expense of relocating approximately 12 ATC towers.
Table 3-30. Summary of Noise Barrier Analysis for the 6-lane Hybrid Interchange with Half Interchange at Hawley Road

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Range of 2050 Future Leq Noise levels (dBA) Without Barrier</th>
<th>Range of 2050 Future Leq Noise levels (dBA) With Barrier</th>
<th>Noise Reduction (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Costa</th>
<th>Total Benefitted</th>
<th>Estimated Barrier Cost per Benefitted Receiver</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>64-70</td>
<td>67-74</td>
<td>62-67</td>
<td>3-9</td>
<td>16</td>
<td>1235</td>
<td>$553,280</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>61-67</td>
<td>64-69</td>
<td>60-65</td>
<td>3-7</td>
<td>30</td>
<td>1346</td>
<td>$553,280</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>63-77</td>
<td>62-77</td>
<td>57-65</td>
<td>2-15</td>
<td>12,20,20</td>
<td>3236</td>
<td>$1,073,688</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>63-73</td>
<td>57-64</td>
<td>2-12</td>
<td>18 to 26</td>
<td>3514</td>
<td>$14,131,556c</td>
<td>48</td>
</tr>
<tr>
<td>4A</td>
<td>WB I-94 From Hawley to Zablocki</td>
<td>62-68</td>
<td>63-76</td>
<td>62-65</td>
<td>1-10</td>
<td>12</td>
<td>1060</td>
<td>$356,020</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>65-77</td>
<td>65-77</td>
<td>60-65</td>
<td>4-12</td>
<td>16</td>
<td>1349</td>
<td>$604,268</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>61-69</td>
<td>62-69</td>
<td>57-64</td>
<td>2-11</td>
<td>20</td>
<td>1041</td>
<td>$582,960</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>58-69</td>
<td>60-69</td>
<td>59-64</td>
<td>0-8</td>
<td>14</td>
<td>331</td>
<td>$129,892</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>57-74</td>
<td>56-72</td>
<td>56-65</td>
<td>0-11</td>
<td>8,16,18</td>
<td>814</td>
<td>$343,112</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>61-75</td>
<td>63-72</td>
<td>54-63</td>
<td>1-16</td>
<td>20</td>
<td>2082</td>
<td>$1,165,920</td>
<td>27</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>73</td>
<td>70</td>
<td>65</td>
<td>5</td>
<td>30</td>
<td>320</td>
<td>$268,800</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>64-69</td>
<td>62-70</td>
<td>62-68</td>
<td>0-8</td>
<td>14</td>
<td>688</td>
<td>$269,696</td>
<td>1</td>
</tr>
</tbody>
</table>

a Based on $30.00 per square foot; b Based on cost averaging of multiple barriers within the common noise environment for the 6-lane hybrid interchange with half Hawley interchange alternative (see Section 6.2.2 of Appendix E for a description of how costs are averaged); c Costs include expense of relocating approximately 12 ATC towers.
Table 3-31. Summary of Noise Barrier Analysis for 6-lane Hybrid Interchange with Full Interchange at Hawley Road

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Existing Noise Levels (dBA)</th>
<th>Range of 2050 Future Leq Noise Levels (dBA)</th>
<th>Noise Reduction (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Costa</th>
<th>Total Benefitted</th>
<th>Estimated Barrier Cost per Benefitted Receiver</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>64-70</td>
<td>67-74</td>
<td>62-66</td>
<td>3-10</td>
<td>20</td>
<td>1235</td>
<td>$691,600</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>61-67</td>
<td>64-69</td>
<td>59-65</td>
<td>3-7</td>
<td>30</td>
<td>1346</td>
<td>$1,130,500</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>63-77</td>
<td>62-73</td>
<td>56-63</td>
<td>3-16</td>
<td>12,20,20</td>
<td>3236</td>
<td>$2,030,924</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>64-73</td>
<td>56-68</td>
<td>2-13</td>
<td>18 to 26</td>
<td>3514</td>
<td>$14,163,000c</td>
<td>52</td>
</tr>
<tr>
<td>4A</td>
<td>WB I-94 From Hawley to Zablocki</td>
<td>61-72</td>
<td>63-73</td>
<td>57-64</td>
<td>2-12</td>
<td>12, 16, 18, 20</td>
<td>2875</td>
<td>$1,317,316</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>62-68</td>
<td>63-67</td>
<td>62-65</td>
<td>1-10</td>
<td>12</td>
<td>1060</td>
<td>$356,020</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>65-77</td>
<td>65-77</td>
<td>60-65</td>
<td>4-12</td>
<td>16</td>
<td>1349</td>
<td>$604,268</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>61-69</td>
<td>62-69</td>
<td>57-64</td>
<td>2-11</td>
<td>20</td>
<td>1041</td>
<td>$582,960</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>58-69</td>
<td>60-69</td>
<td>59-64</td>
<td>0-8</td>
<td>14</td>
<td>331</td>
<td>$129,892</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>57-74</td>
<td>56-73</td>
<td>56-65</td>
<td>0-11</td>
<td>12,14,18</td>
<td>814</td>
<td>$332,444</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>61-75</td>
<td>61-72</td>
<td>57-62</td>
<td>1-16</td>
<td>20</td>
<td>2082</td>
<td>$1,166,088</td>
<td>28</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>73</td>
<td>70</td>
<td>65</td>
<td>5</td>
<td>30</td>
<td>320</td>
<td>$268,800</td>
<td>N/A</td>
</tr>
<tr>
<td>12</td>
<td>WB Clybourn From 17th to 19th</td>
<td>64-69</td>
<td>62-70</td>
<td>62-68</td>
<td>0-8</td>
<td>14</td>
<td>688</td>
<td>$269,696</td>
<td>1</td>
</tr>
</tbody>
</table>

a Based on $30.00 per square foot; b Based on cost averaging of multiple barriers within the common noise environment for the 6-lane hybrid interchange with full Hawley interchange alternative (see Section 6.2.2 of Appendix E for a description of how costs are averaged); c Costs include expense of relocating approximately 12 ATC towers.
### Table 3-32. Summary of Noise Barrier Analysis for the 6-lane Diverging Diamond Interchange with Half Interchange at Hawley Road

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Existing Noise Levels (dBA)</th>
<th>Range of 2050 Future Leq Noise levels (dBA)</th>
<th>Noise Reduction (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Cost$^a$</th>
<th>Total Benefitted</th>
<th>Estimated Barrier Cost per Benefitted Receiver</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>64-70</td>
<td>67-74 to 62-67</td>
<td>3-9</td>
<td>16 to 1235</td>
<td>$592,800</td>
<td>16</td>
<td>$37,050</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>61-67</td>
<td>64-67 to 59-60</td>
<td>1-8</td>
<td>30 to 1346</td>
<td>$1,211,400</td>
<td>9</td>
<td>$134,600</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>63-77</td>
<td>62-77 to 57-64</td>
<td>1-16</td>
<td>12,22,22</td>
<td>$1,982,160</td>
<td>35</td>
<td>$56,633</td>
<td>Yes$^b$</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>64-73 to 56-68</td>
<td>1-12</td>
<td>18 to 26</td>
<td>$14,283,570</td>
<td>45</td>
<td>$317,413</td>
<td>No</td>
</tr>
<tr>
<td>4A</td>
<td></td>
<td>61-72</td>
<td>64-73 to 57-68</td>
<td>1-12</td>
<td>12,18 to 26</td>
<td>$1,391,880</td>
<td>29</td>
<td>$47,996</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>62-68</td>
<td>63-76 to 62-65</td>
<td>1-10</td>
<td>12 to 1060</td>
<td>$381,450</td>
<td>1</td>
<td>$381,450</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>65-77</td>
<td>65-77 to 61-65</td>
<td>4-12</td>
<td>16 to 1349</td>
<td>$647,430</td>
<td>1</td>
<td>$647,430</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>61-69</td>
<td>63-70 to 57-64</td>
<td>0-12</td>
<td>20 to 1041</td>
<td>$624,600</td>
<td>19</td>
<td>$32,874</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>58-69</td>
<td>60-70 to 60-65</td>
<td>0-9</td>
<td>14 to 331</td>
<td>$139,170</td>
<td>1</td>
<td>$139,170</td>
<td>No</td>
</tr>
<tr>
<td>8A</td>
<td>SB 175 From Blue Mound to Parkway</td>
<td>58-66</td>
<td>61-66 to 58-61</td>
<td>0-8</td>
<td>30 to 359</td>
<td>$323,100</td>
<td>1</td>
<td>$323,100</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>57-74</td>
<td>58-73 to 58-67</td>
<td>0-10</td>
<td>10,16 to 814</td>
<td>$378,120</td>
<td>8</td>
<td>$47,265</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>61-75</td>
<td>62-72 to 58-63</td>
<td>1-15</td>
<td>20 to 2082</td>
<td>$1,249,200</td>
<td>23</td>
<td>$54,313</td>
<td>Yes$^b$</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>73</td>
<td>70 to 67</td>
<td>3</td>
<td>30 to 330</td>
<td>$297,000</td>
<td>0</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>12</td>
<td>WB Clybourn From 17th to 19th</td>
<td>64-69</td>
<td>62-70 to 62-68</td>
<td>0-8</td>
<td>14 to 688</td>
<td>$288,960</td>
<td>1</td>
<td>$288,960</td>
<td>No</td>
</tr>
</tbody>
</table>

$^a$ Based on $30.00 per square foot; $^b$ Based on cost averaging of multiple barriers within the common noise environment for the 6-lane diverging diamond interchange with half Hawley interchange alternative (see Section 6.2.2 of Appendix E for a description of how costs are averaged); $^c$ Costs include expense of relocating approximately 12 ATC towers.
### Table 3-33. Summary of Noise Barrier Analysis for the 6-lane Diverging Diamond Interchange with Full Interchange at Hawley Road

<table>
<thead>
<tr>
<th>Barrier #</th>
<th>Location</th>
<th>Existing Noise Levels (dBA)</th>
<th>Range of 2050 Future Leq Noise levels (dBA)</th>
<th>Noise Reduction (dBA)</th>
<th>Barrier Characteristics</th>
<th>Estimated Barrier Cost$</th>
<th>Total Benefitted</th>
<th>Estimated Barrier Cost per Benefitted Receiver</th>
<th>Feasible and Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EB I-94 From N 72nd to 68th</td>
<td>64-70</td>
<td>67-74</td>
<td>62-66</td>
<td>3-9</td>
<td>16</td>
<td>1235</td>
<td>$592,800</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>WB I-94 From N 68th to 72nd</td>
<td>61-67</td>
<td>64-67</td>
<td>59-60</td>
<td>1-8</td>
<td>30</td>
<td>1346</td>
<td>$1,211,400</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>EB I-94 From N 68th to Hawley</td>
<td>63-77</td>
<td>62-76</td>
<td>57-63</td>
<td>1-16</td>
<td>12,22,22</td>
<td>3236</td>
<td>$1,982,160</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>WB I-94 From Hawley to 68th</td>
<td>61-72</td>
<td>64-73</td>
<td>56-68</td>
<td>1-12</td>
<td>18 to 26</td>
<td>3546</td>
<td>$14,302,770</td>
<td>No</td>
</tr>
<tr>
<td>4A</td>
<td></td>
<td>61-72</td>
<td>64-73</td>
<td>57-68</td>
<td>1-12</td>
<td>12,18 to 26</td>
<td>2875</td>
<td>$1,411,410</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>EB I-94 From Hawley to Zablocki</td>
<td>62-68</td>
<td>63-76</td>
<td>62-65</td>
<td>1-10</td>
<td>12</td>
<td>1060</td>
<td>$381,450</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>WB I-94 From Zablocki to Hawley</td>
<td>65-77</td>
<td>65-77</td>
<td>61-65</td>
<td>4-12</td>
<td>16</td>
<td>1349</td>
<td>$647,430</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>WB I-94 From Yount to General Mitchell</td>
<td>61-69</td>
<td>64-70</td>
<td>57-64</td>
<td>0-12</td>
<td>20</td>
<td>1041</td>
<td>$624,600</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>NB 175 From Parkway to Blue Mound</td>
<td>58-69</td>
<td>60-70</td>
<td>60-65</td>
<td>0-8</td>
<td>18</td>
<td>331</td>
<td>$178,740</td>
<td>No</td>
</tr>
<tr>
<td>8A</td>
<td>SB 175 From Blue Mound to Parkway</td>
<td>58-66</td>
<td>61-66</td>
<td>58-61</td>
<td>0-8</td>
<td>30</td>
<td>359</td>
<td>$323,100</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>WB Park Hill from 37th to End</td>
<td>57-74</td>
<td>58-73</td>
<td>58-67</td>
<td>0-10</td>
<td>10,16</td>
<td>814</td>
<td>$378,120</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>WB Park Hill from 29th to 35th</td>
<td>61-75</td>
<td>62-72</td>
<td>58-63</td>
<td>1-15</td>
<td>20</td>
<td>2082</td>
<td>$1,249,200</td>
<td>Yes</td>
</tr>
<tr>
<td>11</td>
<td>WB Clybourn From 25th to 26th</td>
<td>73</td>
<td>70</td>
<td>67</td>
<td>3</td>
<td>30</td>
<td>330</td>
<td>$297,000</td>
<td>No</td>
</tr>
<tr>
<td>12</td>
<td>WB Clybourn From 17th to 19th</td>
<td>64-69</td>
<td>62-70</td>
<td>62-68</td>
<td>0-8</td>
<td>14</td>
<td>688</td>
<td>$288,960</td>
<td>No</td>
</tr>
</tbody>
</table>

$ Based on $30.00 per square foot; $ Based on cost averaging of multiple barriers within the common noise environment for the 6-lane diverging diamond interchange with full Hawley interchange alternative (see Section 6.2.2 of Appendix E for a description of how costs are averaged); $ Costs include expense of relocating approximately 12 ATC towers.
3.20 Air Quality

3.20.1 Affected Environment

3.20.1.1 Clean Air Act and National Ambient Air Quality Standards

Under the Clean Air Act of 1970 (last amended in 1990), the USEPA is required to establish National Ambient Air Quality Standards (NAAQS) for pollutants considered to be harmful to public health and the environment. To date, USEPA has established NAAQS for six criteria pollutants:

- Carbon monoxide (CO)
- Nitrogen dioxide (NO2)
- Ozone (O3)
- Particulate matter (including particulate matter with aerodynamic diameter equal to or less than 10 micrometers [PM10] and PM2.5)
- Sulfur dioxide (SO2)
- Lead (Pb)

Congress directed USEPA to update the standards with current science at least every 5 years, and that any proposals to revise the standards should be based solely upon the best current scientific evidence and opinion on public health effects and not on economic impacts. Since initially setting standards in the early 1970s, USEPA has revised the standards six times through 2010. On October 26, 2015, USEPA revised the 8-hour NAAQS for ground-level ozone to 70 parts per billion (ppb). The final rule became effective on December 28, 2015. Current NAAQS are shown in Table 3-34.

Table 3-34. National Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>Primary Standards</th>
<th>Secondary Standards</th>
<th>Standard Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>8 hours</td>
<td>0.070 ppm</td>
<td>0.070 ppm²</td>
<td>Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years</td>
</tr>
<tr>
<td>PM10</td>
<td>24 hours</td>
<td>150 µg/m³</td>
<td>150 µg/m³</td>
<td>Not to be exceeded more than once per year on average over 3 years</td>
</tr>
<tr>
<td>PM2.5</td>
<td>Annual arithmetic mean</td>
<td>12 µg/m³</td>
<td>15 µg/m³</td>
<td>Annual mean, averaged over 3 years</td>
</tr>
<tr>
<td>PM2.5</td>
<td>24 hours</td>
<td>35 µg/m³</td>
<td>35 µg/m³</td>
<td>98th percentile, averaged over 3 years</td>
</tr>
<tr>
<td>CO</td>
<td>8 hours</td>
<td>9 ppm</td>
<td>—</td>
<td>Not to be exceeded more than once per year</td>
</tr>
<tr>
<td>CO</td>
<td>1 hour</td>
<td>35 ppm</td>
<td>—</td>
<td>Not to be exceeded more than once per year</td>
</tr>
<tr>
<td>NO2</td>
<td>Annual arithmetic mean</td>
<td>0.053 ppm</td>
<td>0.053 ppm</td>
<td>Annual mean</td>
</tr>
<tr>
<td>NO2</td>
<td>1 hour</td>
<td>100 ppb</td>
<td>—</td>
<td>98th percentile of 1-hour daily maximum concentrations, averaged over 3 years</td>
</tr>
</tbody>
</table>
### Table 3-34. National Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>Primary Standards</th>
<th>Secondary Standards</th>
<th>Standard Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO2</td>
<td>3 hours</td>
<td>—</td>
<td>0.5 ppm</td>
<td>Not to be exceeded more than once per year</td>
</tr>
<tr>
<td>SO2</td>
<td>1 hour</td>
<td>0.075 ppm(^b)</td>
<td>—</td>
<td>99th percentile of 1-hour daily maximum concentrations, averaged over 3 years</td>
</tr>
<tr>
<td>Lead</td>
<td>Calendar quarter</td>
<td>1.5 µg/m(^3) (c)</td>
<td>1.5 µg/m(^3) (c)</td>
<td>Not to be exceeded</td>
</tr>
<tr>
<td>Lead</td>
<td>Rolling 3-month average</td>
<td>0.15 µg/m(^3)</td>
<td>—</td>
<td>Not to be exceeded</td>
</tr>
</tbody>
</table>

Source: USEPA 2021a

\(^a\) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) ozone standards also remain in effect in some areas.

\(^b\) The previous sulfur dioxide standards (0.14 ppm 24-hour and 0.03 ppm annual) will remain in effect in certain areas: (a) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (b) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO2 standards or does not meet the requirements of an SIP call under the previous SO2 standards (40 CFR 50.4(3)). An SIP call is an USEPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.

\(^c\) In areas designated nonattainment for the lead standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m\(^3\) as a calendar quarter average) also remain in effect.

µg/m\(^3\) = micrograms per cubic meter
ppb = parts per billion (by volume)
ppm = parts per million (by volume)

The Clean Air Act Amendments of 1977 and 1990 required all states to submit a list to USEPA identifying those air quality regions, or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that exceed the NAAQS for any criteria pollutant are designated as non-attainment areas for that pollutant. The Clean Air Act Amendments also established time schedules for the states to attain the NAAQS.

The primary pollutants from motor vehicles are unburned hydrocarbons, nitrogen oxides (NOx), carbon monoxide and particulate matter. Volatile organic compounds and nitrogen oxides can combine in a complex series of reactions, catalyzed by sunlight, to produce photochemical oxidants, such as ozone and nitrogen dioxide (NO2). Because these reactions take place over a period of several hours or longer, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources. Therefore, ozone and nitrogen oxides are of regional concern. The modeling procedures for ozone and nitrogen dioxide require long-term meteorological data and detailed area-wide emission rates for all potential sources.

Particulate matter includes microscopic solids or liquid droplets. Motor vehicles (i.e., cars, trucks, and buses) emit direct particulate matter in their exhausts, as well as from brake and tire wear. Vehicles also cause dust from paved and unpaved roads to be re-suspended in the atmosphere. Gaseous precursors in vehicle exhaust, including NOx, volatile organic compounds, sulfur oxides (SOx) and ammonia (NH3), may react in the atmosphere to form secondary particulate matter. Particulate matter can penetrate deep into the lungs and cause health problems, such as heart attacks, aggravated asthma, coughing, or difficult breathing. People with heart or lung diseases, children, and older adults are the most
susceptible to particle pollution exposure, although healthy people may also experience temporary symptoms from exposure to elevated levels of particulate matter pollution (USEPA 2021b).

Carbon monoxide is a colorless and odorless gas that is the by-product of incomplete combustion and is the major pollutant from gasoline-fueled motor vehicles. Carbon monoxide emissions are greatest from vehicles operating at low speeds and prior to complete engine warm-up (within roughly 8 minutes after starting). Congested urban roads tend to be the principal problem areas for carbon monoxide.

Exceeding the NAAQS pollutant levels does not necessarily constitute a violation of the standard. Some of the criteria pollutants (including carbon monoxide) are allowed one exceedance of the maximum level per year, while for other pollutants, the NAAQS levels cannot be exceeded. Violation criteria for other pollutants are based on recorded exceedances. Table 3-34 lists the allowable exceedances for USEPA criteria pollutants under NAAQS.

The project is in Milwaukee County within the Southeastern Wisconsin Intrastate Air Quality Control Region #239. Milwaukee County is designated as in nonattainment for the 2015 ozone NAAQS and is in maintenance for 2006 PM2.5 NAAQS. The area is in attainment or unclassified for other criteria pollutants (USEPA 2021c).

3.20.1.2 Mobile Source Air Toxics (MSAT)

In addition to establishing the NAAQS for criteria pollutants, USEPA regulates air toxics. MSATs are compounds emitted from on-road vehicles, non-road vehicles and equipment that are known to cause serious health and environmental effects.

Controlling air toxic emissions became a national priority with the Clean Air Act Amendments of 1990. Congress mandated that USEPA regulate 188 air toxics, also known as hazardous air pollutants. USEPA has assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in USEPA’s Integrated Risk Information System (IRIS) (USEPA 2018). In addition, USEPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from USEPA’s National Air Toxics Assessment (USEPA 2014). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter (POM). While FHWA considers these nine compounds the priority MSATs, the list is subject to change and may be adjusted in future USEPA rules. Unlike the criteria pollutants, MSATs do not have ambient air quality standards.

Transportation projects may affect the regional or local air toxics concentrations because of the MSAT emissions from vehicles. MSAT emissions are expected to be lower than current levels in future years nationwide because of stringent emission standards, improvements in fuel economy, and fleet turnover (FHWA 2016).

3.20.1.3 Greenhouse Gases

Greenhouse gases are trace gases that trap heat in the earth’s atmosphere. Some greenhouse gases such as carbon dioxide (CO2) occur naturally and are emitted to the atmosphere through natural processes and human activities. Others (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and fluorinated gases (USEPA 2021d).

Human activity is the cause of increased GHG concentrations. Industrial activities have raised atmospheric carbon dioxide levels by nearly 50 percent since 1750 (NASA 2022). The majority of
greenhouse gas emissions in Wisconsin come from five energy-based economic sectors: electricity generation, residential, commercial, industrial, and transportation. In 2017, Wisconsin's greenhouse gas emissions were 122.2 million metric tons CO2e,\(^{22}\) 1.8 percent of total U.S. emissions in 2017 (WDNR 2020). Electricity generation is the top contributor to the greenhouse gas emissions in Wisconsin (33%), followed by transportation (23%).

### 3.20.2 Air Quality Impacts

The air quality impact analysis for this project was conducted in accordance with WisDOT, FHWA, and USEPA technical guidance and procedures.

#### 3.20.2.1 Transportation Conformity

Transportation conformity requirements apply to highway and transit projects in nonattainment and maintenance areas for the NAAQS. Because the project is in Milwaukee County which is designated as in nonattainment for ozone and is in maintenance for PM2.5, the project is subject to transportation conformity requirements. Conformity of the project is demonstrated at both regional and project levels.

At a regional level, a project is required to be included in the latest conforming regional transportation plan and the TIP. If the design concept, scope, and “open-to-traffic” schedule of a proposed transportation project are the same as described in the regional transportation plan and TIP, the project meets regional conformity requirements for purposes of project-level conformity demonstration.

The project is included in VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin (SEWRPC 2016), which was determined by FHWA and FTA to meet conformity requirements on July 28, 2016. The project is also in the Second Edition of VISION 2050 (SEWRPC 2020a) and SEWRPC’s A Transportation Improvement Program for Southeastern Wisconsin: 2021-2024, Project Number 56 as “Implementation of the Preferred Alternative Resulting from the NEPA Processes’ Record of Decision for Reconstruction and Modernization of IH 94 (East-West) Freeway from 70th ST. to 16th ST in the City of Milwaukee (3.5 MI)” (SEWRPC 2020b). Because the previously selected preferred alternative in the 2016 Final EIS is the 8-lane alternative, the 2021-2024 TIP indicates that “The Wisconsin Department of Transportation (WisDOT) is currently reassessing alternatives developed as part of the National Environmental Policy Act (NEPA) process previously conducted for the project, including alternatives with and without additional travel lanes. Following the completion of the reassessment and a preferred alternative is selected, WisDOT will seek a new Record of Decision from the Federal Highway Administration (FHWA).” Conformity for the Second Edition of Vision 2050 and the 2021-2024 TIP was demonstrated by SEWRPC in December 2020 (USDOT 2020). The project description in the RTP and TIP will be updated if the ROD selects an alternative with a different design concept and scope.

The reassessment of the alternatives in this Supplemental EIS included the 8-lane alternative that was the preferred alternative of the 2016 Final EIS (WisDOT 2016a), and 6-lane alternatives with a half interchange and a full interchange option at Hawley Road. At the Stadium Interchange, a hybrid interchange option and a diverging diamond interchange option are included in the reassessment for both the 8- and 6-lane alternatives.

\(^{22}\) CO2e accounts for carbon dioxide and the other greenhouse gases.
3.20.2.2 PM2.5 Hot-Spot Analysis

For projects in nonattainment and maintenance areas for carbon monoxide, PM10, and PM2.5, it is necessary to check the transportation conformity requirements under 40 CFR 93.116 to see if a hot-spot analysis is required. Because the project is in a PM2.5 maintenance area, localized PM2.5 impacts were evaluated to determine if the project would cause any new violations of the PM2.5 NAAQS or increase the frequency or severity of any existing violation for these pollutants.

WisDOT evaluated the project’s potential to cause localized PM2.5 impacts and concluded the project is unlikely to cause new violations or contribute to existing violations of the PM2.5 NAAQS. The evaluation followed the criteria listed in Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (USEPA 2021e). According to this guidance, the first step in the PM2.5 hot spot evaluation is to determine if the project is a Project of Local Air Quality Concern. Projects that are not a Project of Local Air Quality Concern do not require a detailed PM2.5 hot-spot analysis because, in general, they would not substantially affect ambient PM2.5 concentrations and are unlikely to cause or contribute to new or continued localized violation of the NAAQS.

USEPA specified in 40 CFR 93.123(b)(1) that a Project of Local Air Quality Concern are certain highway and transit projects that involve significant levels of diesel vehicle traffic, such as major highway projects and projects at congested intersections that handle significant diesel traffic, or any other project that is identified in the SIP as a localized air quality concern.

The project’s 8-lane hybrid interchange option was the preferred alternative in the 2016 Final EIS. WisDOT and WDNR prepared a white paper I-94 East West Corridor Study Fine Particulate Matter Hot Spot Analysis Requirements in August 2013 and an addendum to the white paper in 2015 to address design changes of the project. The white paper and the addendum concluded that the project was not a Project of Local Air Quality Concern. In June 2015, FHWA, USEPA, FTA, and WDNR concurred that the 8-lane alternative was not a project of local air quality concern under 40 CFR 93.123(b)(1), and it met the requirements of the Clean Air Act and 40 CFR 93.116 without a PM2.5 hot-spot analysis (WisDOT 2016a).

For the reassessment of the alternatives in this Supplemental EIS, the 8-lane alternative remains. The 6-lane alternative with two options at the Hawley Road interchange are added to the Supplemental EIS. At the Stadium Interchange, a diverging diamond interchange option for both the 8- and 6-lane alternatives are also added. Analysis years are also changed. The Supplemental EIS’ analysis years are existing year 2019, opening year 2030, and horizon year 2050. WisDOT prepared an updated evaluation of the PM2.5 hot spot analysis requirements using the traffic information corresponding to the new analysis years. WisDOT concluded that the 8- and 6-lane alternatives, regardless of the design options of the alternatives at Hawley would not be of local air quality concern. The determination was concurred by FHWA, USEPA, FTA, and WDNR through the interagency consultation in May 2022. An updated I-94 East West Corridor Study Fine Particulate Matter Hot Spot Analysis Requirements white paper that included the analysis of the diverging diamond option at the Stadium interchange was resubmitted to the Transportation Conformity Interagency Consultation Workgroup on July 19, 2022. The determination in the white paper remains the same—the project is not a project of local air quality concern regardless of the alternative selected. The determination was concurred by FHWA, USEPA, FTA, and WDNR through the interagency consultation process in July 2022. Therefore, the project would meet the conformity requirements of 40 CFR 93.116 without a quantitative PM2.5 hot-spot analysis. Documentation of WisDOT’s evaluation and interagency consultation are in Appendix F-1.
3.20.2.3 Carbon Monoxide

FHWA Technical Advisory TA 6640.8A states, “Carbon monoxide is a project-related concern and as such should be evaluated in the Draft EIS. A microscale carbon monoxide analysis is unnecessary where such impacts (project carbon monoxide contribution plus background) can be judged to be well below the 1- and 8-hour National Ambient Air Quality Standards (or other applicable State or local standards). This judgment may be based on the following: (1) previous analyses for similar projects; (2) previous general analyses for various classes of projects; or (3) simplified graphical or ‘look-up’ table evaluations. In these cases, a brief statement stating the basis for the judgment is sufficient.”

The study area is in attainment for carbon monoxide, therefore, project level conformity analysis for carbon monoxide is not required. Nonetheless, traffic conditions at affected intersections in the study area were reviewed to determine if the project would cause accumulation of carbon monoxide at intersections that have the potential to cause new violations of carbon monoxide NAAQS. According to USEPA’s Guideline for Modeling Carbon Monoxide from Roadway Intersections, intersections at level of service D, E, or F or those that have changed to level of service D, E, or F because of increased volumes of traffic or construction related to a new project in the vicinity should be considered for carbon monoxide hot spot modeling. Intersections that are level of service A, B, or C are not expected to require further analysis, i.e., the delay and congestion would not likely cause or contribute to a potential carbon monoxide exceedance of the NAAQS (USEPA 1992).

WisDOT reviewed the traffic conditions at intersections affected by the project (Appendix F-2). Only signalized intersections are included in the evaluation. The unsignalized intersections have much lower traffic volumes than the signalized intersections, thus are not expected to have substantial amount of carbon monoxide emissions to cause localized impacts. The level of service of all affected signalized intersections under the No-build alternative and all of the design options of the 8- and 6-lane alternatives are at A, B, or C. Therefore, the 8- and 6-lane alternatives are not expected to cause new violations to the carbon monoxide NAAQS. Further carbon monoxide analysis is not needed.

3.20.2.4 Mobile Source Air Toxics Analysis

Transportation projects may affect the regional or local air toxic concentrations because of MSAT emissions from vehicles. Potential MSAT effects from the project operation were evaluated following the FHWA memorandum titled Updated Interim Guidance on Air Toxic Analysis in NEPA Documents (FHWA 2016). FHWA developed a tiered approach, with three categories for analyzing MSAT impacts, depending on specific project circumstances:

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

Because the average daily traffic (ADT) in the study area would be greater than 150,000 vehicles and some of the freeway segments are or would be shifted closer to residential areas, according to FHWA’s updated interim guidance, the project is considered to have high potential for MSAT effects. A quantitative MSAT analysis was performed using USEPA’s MOVES3 model for the existing condition of 2019, and the No-build and 8- and 6-lane alternatives for 2030 and 2050. Comparisons of MSAT emissions are summarized in Table 3-35. Details of the MSAT modeling methodologies and results are in Appendix F-3.
Table 3-35. Comparisons of MSAT Emissions (tons per year)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Annual Emissions 2019</th>
<th>Annual Emissions 2030</th>
<th>Annual Emissions 2050</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Existing Condition</td>
<td>8-Lane Hybrid</td>
<td>6-lane Hybrid</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>0.130</td>
<td>0.008</td>
<td>0.008</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.198</td>
<td>0.399</td>
<td>0.405</td>
</tr>
<tr>
<td>Acrolein</td>
<td>0.153</td>
<td>0.030</td>
<td>0.031</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.574</td>
<td>0.624</td>
<td>0.632</td>
</tr>
<tr>
<td>DPM</td>
<td>11.314</td>
<td>1.850</td>
<td>1.891</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>0.965</td>
<td>0.476</td>
<td>0.482</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2.293</td>
<td>0.544</td>
<td>0.552</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>0.242</td>
<td>0.040</td>
<td>0.040</td>
</tr>
<tr>
<td>POM</td>
<td>0.094</td>
<td>0.016</td>
<td>0.016</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17.963</strong></td>
<td><strong>3.988</strong></td>
<td><strong>4.058</strong></td>
</tr>
</tbody>
</table>

**Bold** = preferred alternative

DDI = diverging diamond interchange
Projected MSAT emissions from the No-build and 8- and 6-lane alternatives in the study area are relatively similar for 2030 or 2050, and there are no noticeable differences of emissions between the various design options of each alternative. The 8-lane alternative would have slightly higher MSAT emissions than No-build and the 6-lane alternative, consistent with the VMT changes among these alternatives. However, the differences of the total MSAT emissions between the 8-lane alternative options and the No-build are less than 2 percent, and the differences between the total MSAT emissions of the 6-lane alternative options and the No-build alternative are less than 0.5 percent in 2030 and 2050.

The MSAT emissions in 2050 are the lowest among all analysis years despite the highest projected VMT in 2050 when compared with the No-build and 8- and 6-lane alternatives’ VMT in 2019 and 2030. The total MSAT emissions of the No-build and 8- and 6-lane alternatives in 2030 are approximately 73 percent to 74 percent lower than the 2019 emissions and total MSAT emissions in 2050 is approximately 82 percent lower than the emissions in 2019.

While there would be slight increases of MSAT emissions levels of the 8- and 6-lane alternatives, overall MSAT emission levels are not substantially different among these alternatives. In 2050, MSAT emissions would be lower than current levels as shown in Table 3-34. This trend is consistent with the FHWA finding that annual MSAT emissions are projected to decrease by more than 90 percent between 2010 and 2050 even with VMT increases (FHWA 2016) because of the vehicle fleet turnover, improved fuel economy, and implementation of stringent emission control requirements.

The proposed improvements to the project corridor would have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher under the 8- and 6-lane alternatives than under the No-build alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded freeway sections under the 8-lane alternative when additional travel lanes would be constructed.

In summary, the localized level of MSAT emissions for the project’s 8- and 6-lane alternatives could be higher relative to the No-build alternative at certain locations, but this effect could be offset by increases in speeds and reductions in traffic delays (which are associated with lower MSAT emissions). Also, MSATs would be lower in other locations when traffic shifts away from them. On a regional basis, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that, in almost all cases, will cause regionwide and corresponding localized MSAT levels to be significantly lower than today.

This MSAT analysis is a basic analysis of the likely MSAT impacts of the proposed project. Because of the limitations of information and methodology of the analysis, a discussion of the limitation and unavailable information is included in Appendix F-3 in accordance with CEQ regulations regarding incomplete or unavailable information (40 CFR 1502.22[b]). The discussion is taken from Appendix C of the Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents (FHWA 2016).

### 3.20.2.5 Greenhouse Gases

Currently, no national standards have been established regarding greenhouse gases, nor has USEPA established criteria or thresholds for ambient greenhouse gas concentrations pursuant to its authority to establish motor vehicle emission standards for CO2 under the Clean Air Act. The greenhouse gas analysis included emissions from existing conditions in 2019, and No-build and 8- and 6-lane alternatives in 2030 and 2050. Greenhouse gas emissions were estimated using USEPA’s MOVES3 program and the same
methodology as described in Appendix F-3 for MSAT. A summary of the greenhouse gas emissions of the project is in Table 3-36.

**Table 3-36. GHG Emissions as CO2e (million metric tons)**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>2019</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>0.402</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>No Build</td>
<td>NA</td>
<td>0.324</td>
<td>0.303</td>
</tr>
<tr>
<td>8-lane Hybrid Interchange</td>
<td>NA</td>
<td>0.331</td>
<td>0.311</td>
</tr>
<tr>
<td>6-lane Hybrid Interchange with Half Hawley</td>
<td>NA</td>
<td>0.325</td>
<td>0.305</td>
</tr>
<tr>
<td>6-lane Hybrid Interchange with Full Hawley</td>
<td>NA</td>
<td>0.325</td>
<td>0.305</td>
</tr>
<tr>
<td>8-lane Diverging Diamond Interchange</td>
<td>NA</td>
<td>0.330</td>
<td>0.310</td>
</tr>
<tr>
<td>6-lane Diverging Diamond Interchange with Half Hawley</td>
<td>NA</td>
<td>0.325</td>
<td>0.305</td>
</tr>
<tr>
<td>6-lane Diverging Diamond Interchange with Full Hawley</td>
<td>NA</td>
<td>0.325</td>
<td>0.305</td>
</tr>
</tbody>
</table>

**Bold** = preferred alternative

There are no substantial differences of greenhouse gas (GHG) emission levels between the No-build and 8- and 6-lane alternatives in 2030 and 2050. GHG emissions from the 8-Lane alternative are slightly higher than No-build and the 6-Lane alternative in future years due to its higher VMT. Greenhouse gas emissions of No-build and 8- and 6-lane alternatives are lower in 2030 and 2050 than in 2019, likely due to improved fuel economy. The greenhouse gas emissions in 2030 are approximately 16 percent to 18 percent lower than 2019. Emissions in 2050 are 21 percent to 23 percent lower than in 2019.

**3.20.2.6 Conclusion**

Based on the air quality analyses completed for the proposed improvements, this project will not contribute to any violation of the NAAQS. The project meets transportation conformity requirements, and neither carbon monoxide nor PM2.5 levels will exceed the air quality standards. MSAT emissions of the 8- and 6-lane alternatives would be slightly higher than No-build in future years, however, MSAT emissions in the study area would be lower than existing condition in future years.

**3.20.3 Measures to Minimize and Mitigate Adverse Air Quality Impacts**

No mitigation measures identified. The project is not anticipated to cause adverse impacts to air quality.

**3.21 Hazardous Materials**

**3.21.1 Affected Environment**

WisDOT conducted a Phase 1 Hazardous Material Assessment in November 2020 that included a records search of State and Federal databases, aerial photographs, topographic maps, historical as-builts, Sanborn maps, and windshield surveys. Sources reviewed for information include regulatory agency (USEPA and WDNR) listings, and past or present land use that would indicate the potential for the use or management of hazardous materials or the generation of hazardous waste. If such information was found, the parcel was noted as a potential hazardous material site/parcel. Based on this initial record search, 367 potential hazardous materials sites and/or parcels were identified adjacent to I-94. The following are the initial findings:
Based on the proposed right-of-way acquisition and project excavation requirements, 192 sites and/or parcels were recommended for additional record searches. Of those, 98 are leaking underground storage tanks (LUSTs) or emergency repair program (ERP) sites. ERP sites are locations other than LUSTs that have contaminated soil and/or groundwater. Examples include industrial spills (or dumping) that need long-term investigation, buried containers of hazardous substances and closed landfills that have caused contamination. Contaminated soils and underground storage tanks may be encountered if utilities are proposed at these sites in the future. The vacant city-owned parcel that would be required as a replacement site for the ATC substation contains free product (diesel fuel).

Of the 192 sites subjected to additional record searches under the 8- and 6-lane alternatives, 51 sites have been recommended for field sampling and testing.

Bridges to be demolished on this segment of I-94 have asbestos containing materials. Bridges with asbestos containing materials will be addressed by special provisions to be included in the construction plans. The contractor will be responsible for completion of the Notification of Demolition and/or Renovation (WDNR Form 4500-113). The inspection reports are available at WisDOT’s regional office in Waukesha.

The Phase 1 Hazardous Materials Assessment conducted for the Washington Street extension and local road improvements mapped an additional 212 sites. Based upon the location, 47 sites were recommended for additional assessment. Of those 47 sites, 16 have been recommended for field sampling and testing.

3.21.2 Hazardous Materials Impacts

3.21.2.1 No-build Alternative
The No-build alternative would not affect any potentially contaminated sites.

3.21.2.2 8- and 6-Lane Alternatives
Near the Stadium Interchange, Brewers Boulevard and the parking lot next to it are built on a capped landfill to the north of the interchange. The 8- and 6-lane alternatives would require building bridge piers in the capped area.

Farther to the east, the 8- and 6-lane alternatives would impact a capped contaminated former coal gasification plant.

As noted, the bridges to be demolished on this segment of I-94 contain asbestos. Additionally, WisDOT considers all paint on bridges to be lead-based paint. Buildings to be acquired under the 8- and 6-lane alternatives could also contain asbestos or lead-based paint.

3.21.3 Measures to Minimize and Mitigate Adverse Hazardous Material Impacts
Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on hazardous materials locations along the I-94 corridor. During design, WisDOT will develop remediation measures for contaminated sites that cannot be avoided. Disturbance near potentially contaminated sites will be minimized to the extent possible and practicable. As applicable, the construction contract special provisions will include a Notice to Contractor describing the potential contamination with names and locations of sites. The areas of potential contamination will be marked on the plan sheets with reference to check the Notice to Contractor in the special provisions.
The regional WisDOT office will work with concerned parties to ensure that disposition of any petroleum contamination is resolved to the satisfaction of WDNR, WisDOT, and FHWA before acquisition.

During the project’s real estate acquisition phase, WisDOT will survey all buildings and structures that need to be demolished to determine whether asbestos or lead-based paint is present. All appropriate and applicable engineering and regulatory controls will be followed during the handling and disposal of asbestos containing materials and lead-based paint. Contractors must comply with USEPA regulations; National Emission Standards for Asbestos; the Occupational, Safety, and Health Administration regulations on asbestos removal; local government regulations; and all other applicable regulations. The most recent editions of all applicable standards, codes, or regulations shall be in effect. Additionally, any person performing asbestos abatement must comply with all training certification requirements, rules, regulations, and laws of the State of Wisconsin regarding asbestos removal.

Special provision 203-005, bid item 203.0210s will be included in the construction plans to address asbestos abatement. The contractor will be responsible for completion of the Notification of Demolition and/or Renovation (WDNR Form 4500-113).

### 3.22 Soil Resources

#### 3.22.1 Affected Environment

Soils in the study area were formed mainly in material that was laid down through glaciation and have a high clay content. Soil associations provide a general idea of the soils within an area and consist of a landscape that has a distinctive proportional pattern of soils.

The general soil association present through most of the study area is the Ozaukee-Morley-Mequon association. The U.S. Department of Agriculture Natural Resource Conservation Service Soil Survey states that the Ozaukee-Morley-Mequon association is well-drained to somewhat poorly drained soils that have a subsoil of silt-loam and silt clay, formed in thin loess and silt clay loam glacial till on moraines. The land in this soil association has intermittent “clay” bluffs and of gently sloping to rolling ridges that roughly parallel the Lake Michigan shoreline.

#### 3.22.2 Soil Impacts

None identified.

#### 3.22.3 Measures to Minimize and Mitigate Adverse Soil Impacts

No mitigation measures identified.
3.23 Cemeteries

3.23.1 Affected Environment

There are five cemeteries in the study area, three of which (Beth Hamedrosh Hagodel Cemetery, Spring Hill Cemetery, and Wood National Cemetery) share a property line with I-94 between Hawley Road and General Mitchell Boulevard (Exhibit 3-3).

North of I-94 is the Beth Hamedrosh Hagodel Cemetery that opened in 1924 and continues to be an active Jewish Orthodox cemetery. A cemetery access road lies along the fence line with I-94 in part of the cemetery. East of where the access road ends some graves and holy books are buried in the area along I-94. Some of the headstones are just a few feet from the fence marking the boundary between the cemetery and I-94. I-94 is just a few feet from the other side of the fence. Access to Beth Hamedrosh Hagodel Cemetery is from Dana Court on the west side of the cemetery. The original southern boundary of the cemetery extended into what is now I-94 right-of-way, which was purchased by the State of Wisconsin in the 1950s. There is no documentation in the cemetery records to suggest there were ever graves within the part of the cemetery that is now I-94 right-of-way or that any graves were moved for I-94 construction.

Spring Hill Cemetery, south of I-94 across from Beth Hamedrosh Hagodel Cemetery, is a non-denominational cemetery, although most of the people buried in the cemetery are of the Jewish faith. It opened in 1876, and it is still active. A mausoleum abuts I-94 on the northeast corner of the cemetery and a cemetery maintenance building abuts I-94 in the northwest corner. Between these two structures is a 30- to 40-foot-wide grassy area along I-94. A cemetery access road lies between the grassy area and the northernmost graves. Access to the cemetery is from Hawley Court, which is a short, dead-end street off Hawley Road on the west side of the cemetery. The original northern boundary of the cemetery extended into what is now I-94 right-of-way, which was purchased by the State of Wisconsin in the 1950s. It is the opinion of cemetery officials that, prior to the construction of I-94, no graves were located in the part of the cemetery that is now I-94 right-of-way, and no graves were moved for I-94 construction.

Anshai Lebowitz Cemetery, south of Spring Hill Cemetery, is a Jewish Orthodox cemetery with about 2,500 interments. Anshai Lebowitz Cemetery’s access is on Hawley Court.
East of the Beth Hamedrosh Hagodel Cemetery and Spring Hill Cemetery, I-94 bisects Wood National Cemetery. Most of the cemetery is south of I-94. Established in 1871 as the Soldiers’ Home Cemetery on the grounds of the National Asylum for Disabled Soldiers, it was renamed “Wood Cemetery” in 1937 in honor of General George Wood. It became a National Cemetery in 1973 and contains approximately 39,200 interments. Those buried in the cemetery include veterans of conflicts ranging from the War of 1812 to the Iraq War. The Zablocki Drive bridge over I-94 connects the two sections of the cemetery. Funeral processions and cemetery maintenance equipment use the Zablocki Drive bridge to cross I-94. The cemetery has three to five burials per week. Construction plans show that 42 graves were removed from the future I-94 right-of-way in the 1950s. A 1957 Grading and Drainage Plan prepared by WisDOT has an area labeled “42 graves” under the current I-94 right-of-way. A cemetery plat of those 42 graves was used to determine that all 42 graves had been relocated to other sites prior to the construction of I-94. The discovery and relocation of the 42 graves is documented in Report on Graves Moved from Block 8, Wood National Cemetery, I-94 East-West and Stadium Interchange, Milwaukee County Project ID: 1060-27-00 (WisDOT 2013b). The construction of I-94 involved excavating down about 10 feet below the elevation of the adjacent cemeteries, so it is unlikely that graves were left in place under the freeway, since most burials are about 6 feet below ground.

Wood National Cemetery is a contributing element of the Soldiers’ Home NHL. See Section 3.24, Historic Properties, and Section 4 for more information. Access to the cemetery is from National Avenue on the south and Bluemound Road on the north (via Zablocki Drive and General Mitchell Boulevard). A portion of the south end of Wood National Cemetery is not part of the NHL or Historic District. The Washington Street entrance on the southwest side of the cemetery connects to Hawley Road.
Calvary Cemetery is north of the Beth Hamedrosh Hagodel and Wood National cemeteries. Calvary Cemetery is the oldest operating Catholic cemetery in the City of Milwaukee. The 75-acre site is owned by the Milwaukee Archdiocese, and was consecrated in 1857. The property features hilly terrain and winding drives amid more than 80,000 interments. Calvary Cemetery is eligible for inclusion on the National Register of Historic Places (National Register). See Section 3.24, Historic Properties, and Section 4 for more information. Calvary Cemetery’s access point is on Bluemound Road east of Hawley Road and west of Zablocki Drive.

3.23.2 Cemetery Impacts

3.23.2.1 No-build Alternative

The No-build alternative would not affect any of the cemeteries adjacent to I-94.

3.23.2.2 8- and 6-Lane Alternatives

For the 8- and 6-lane alternatives and both Stadium Interchange options, no graves would be displaced, and no property would be acquired from the three cemeteries adjacent to I-94.

For the 8-lane alternative, a fourth lane of traffic would be provided in each direction, which would result in the edge of the nearest travel lanes coming closer to the cemeteries than they are today (approximately 5-6-ft closer). With the 6-lane alternatives both inside and outside shoulders would be wider than the 8-lane alternative and the edge of travel lane would be a slightly further away from the cemetery compared to the 8-lane alternative. I-94 will generally be at the same elevation as it is today under both the 6 and 8-lane alternatives. Exact horizontal location and elevation of I-94 in this area will continue to be refined as the design progresses. For the 8-lane alternative and 6-lane alternative with half interchange at Hawley Road, there would be access to and from these cemeteries to/from the west. Visitors to these cemeteries from the east would need to exit in the Stadium Interchange and use Bluemound Road or Main Street to reach Hawley Road. Under the 6-lane alternative with full interchange at Hawley Road, the Hawley Road interchange with I-94 would remain as a full interchange.

The 8- and 6-lane alternatives would change access to General Mitchell Boulevard from I-94. With the hybrid option at the Stadium Interchange, a new local road interchange with I-94 would be built about 0.5 mile east of General Mitchell Boulevard. A local road connection from the new interchange within the Stadium Interchange to General Mitchell Boulevard would provide access to the cemeteries (see Exhibit 2-5).

With the diverging diamond option at the Stadium Interchange, traffic exiting I-94 will connect directly to General Mitchell Boulevard north of the freeway. Traffic exiting I-94 eastbound will exit I-94 just west of General Mitchell Boulevard and travel east through the hook ramp (between Yount Drive and WIS 175) and connect to General Mitchell Boulevard, providing access to cemeteries (see Exhibit 2-10).

For the 8- and 6-lane alternatives, the VA’s National Cemetery Administration is concerned that vibration could cause alignment issues with the headstones. They noted alignment of the headstones is a key element to the visual setting of a National Cemetery.
3.23.3 Measures to Minimize and Mitigate Adverse Cemetery Impacts

Alternatives were designed to avoid impact on the cemeteries adjacent to I-94. No graves would be relocated.

WisDOT would replace the Zablocki Drive bridge across I-94. The 8- and 6-lane alternatives would continue to provide access to Wood National Cemetery (and the VA Campus in general) via General Mitchell Boulevard (see Table 3-4).

A wall would be built south of I-94 to partially screen views of I-94 from Wood National Cemetery (see Section 3.24.3). The existing wood fence north of I-94 would be replaced with a fence/wall of a similar height.

WisDOT and FHWA will continue to work with the National Cemetery Administration to determine the impacts of vibration from I-94. WisDOT and FHWA, in coordination with Section 106 consulting parties, will prepare a Monitoring Plan to address concerns about construction related vibration impacts adjacent to the Soldiers’ Home NHL and Historic District. The Monitoring Plan will include a raise and align survey for grave markers within Wood National Cemetery.

Further measures to minimize and mitigate impacts to the Wood National Cemetery (as a contributing element of the Soldiers’ Home NHL) and Calvary Cemetery (eligible for listing on the National Register) are discussed in Sections 3.24.3 and 3.24.4.

No mitigation measures are planned for the Beth Hamedrosh Hagodel, Spring Hill, or Anshai Lebowitz cemeteries; however, coordination with all cemeteries near the project will continue throughout the design process and into construction.

Per the project’s Programmatic Agreement related to Section 106 of the National Historic Preservation Act (NHPA), if human remains are inadvertently/accidentally discovered during implementation of the project, all ground disturbing activities in the immediate area of the discovery shall halt until the following actions have been carried out, in accordance with Wisconsin Statute 157.70 and the Native American Graves Protection and Repatriation Act, as required. WisDOT shall immediately implement measures to protect the human remains from inclement weather and vandalism, and notify appropriate law enforcement officials to determine whether or not the remains are subject to a criminal investigation by local or federal authorities. The VA’s National Cemetery Administration will be notified and consulted if human remains are discovered within or adjacent to Wood National Cemetery.
3.24 Historic Properties

3.24.1 Affected Environment

Section 106 of the NHPA requires federal agencies (in this case, FHWA) to consider the effects of their undertakings on historic properties and consult with parties that have an interest in historic properties that may be affected by the undertaking. For this project, WisDOT and FHWA have consulted with the National Park Service and the Wisconsin SHPO, which have consulting roles in the Section 106 consultation process. The Advisory Council on Historic Preservation has elected to participate in the Section 106 process. Other Section 106 consulting parties (consulting parties) include the VA, the National Cemetery Administration, City of Milwaukee Historic Preservation Commission, Archdiocese of Milwaukee (owner of Calvary Cemetery), the Forest County Potawatomi, and two non-governmental historic preservation organizations, the Milwaukee Preservation Alliance and the National Trust for Historic Preservation. WisDOT and FHWA have been meeting with the consulting parties since July 2013. See Sections 5 and 6 and the Documentation for Consultation available on the project website for more information about the Section 106 consultation process, which has been reopened to review the changes to the project as a part of this Supplemental Draft EIS.

WisDOT investigated the built environment within the Area of Potential Effects (APE), which was created in consultation with the consulting parties and has been revised and updated for the Supplemental Draft EIS. An architectural historian reviewed the project’s APE in summer 2020 to determine if there were any structures or areas potentially eligible for the National Register that were not identified as part of the Section 106 consultation and the 2016 Final EIS, and if the APE needed to be revised. The revised APE for this project includes the properties adjacent to I-94, WIS 175/Brewers Boulevard, and other roads crossing over or under I-94 that would be reconstructed. The APE encompasses the entirety of the identified historic districts that intersect with or are adjacent to I-94 (Exhibit 3-23) as well as two properties listed in the National Register since 2016. For buildings or districts within the APE that had not previously been evaluated, WisDOT prepared Determinations of Eligibility to assess their eligibility for the National Register of Historic Places (National Register).

The 8-lane alternative and 6-lane alternative with half interchange at Hawley Road include additional off-interstate intersection improvements outside the original APE. Separate, individual APEs have been developed in consultation with the consulting parties for each of the intersections proposed for off-interstate improvements under the alternatives that provide only partial access at the Hawley Road interchange. These areas are Greenfield Avenue at 70th Street, National Avenue at Greenfield Avenue,
an extension of Washington Street, and the intersection of National Avenue and Brewers Boulevard. See Exhibit 3-23 for the additional areas of investigation.

The NHPA defines “historic property” as resources that are listed in the National Register or meet criteria for eligibility for listing in the National Register. According to National Register Bulletin No. 15, How to Apply the National Register Criteria for Evaluation, “the quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association” and that meet one or more of the following criteria:

- Criterion A—that are associated with events that have made a significant contribution to broad patterns of our history
- Criterion B—that are associated with the lives of persons significant in our past
- Criterion C—that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D—that have yielded or may be likely to yield, information important in prehistory or history (National Park Service 1997)

NHLs are “nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, fewer than 2,500 historic places bear this national distinction” (National Park Service 2014). All NHLs are also listed in the National Register.

The following lists the historic properties found in the original APE for this project:

- Calvary Cemetery
- Northwestern Branch, National Home for Disabled Volunteer Soldiers NHL
- Northwestern Branch, National Home for Disabled Volunteer Soldiers Historic District
- Soldiers’ Home Reef NHL
- Story Hill Residential Historic District 1
- Story Hill Residential Historic District 2 and 3

Two properties in the study area have been listed in the National Register since completion of the 2016 Final EIS:

- West St. Paul Avenue Industrial Historic District
- 16th Street Viaduct

The following are the identified historic properties within the APEs for the off-interstate intersection improvements, outside the original APE:

- Northwestern Branch, National Home for Disabled Volunteer Soldiers NHL (Brewers Boulevard/National Avenue intersection)
- Paradise Theater (National Avenue/Greenfield Avenue intersection)

Section 110(f) of the NHPA requires that the federal agency, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to any NHL that may be directly and adversely affected by an undertaking. The federal agency shall request the Advisory Council on Historic Preservation to participate in any consultation to resolve adverse impacts on NHLs. Section 110(f) of the Act is codified in 54 USC 306107. Regulations associated with Section 110(f) are at 36 CFR 800.10.
The following are descriptions of the identified historic properties in the revised APE.

### 3.24.1.1 Northwestern Branch, National Home for Disabled Volunteer Soldiers National Historic Landmark

The VA Campus, except for the more recent Zablocki Medical Center, is part of the Northwestern Branch, National Home for Disabled Volunteer Soldiers National Historic Landmark (Soldiers’ Home NHL), which was designated in 2011 (Exhibit 3-24). Wood National Cemetery, adjacent to both sides of I-94, is a contributing element of the Soldiers’ Home NHL as are the roadways within the NHL boundaries (Exhibit 3-25).

The Soldiers’ Home NHL is nationally significant under NHL Criterion 1 for its association with events that contributed to our past; and under NHL Theme IV, shaping the political landscape; and government institutions, under Health/Medicine. Other areas of significance are architecture, landscape architecture, and social history. The Soldiers’ Home NHL is an “outstanding representation of the development of a national system of medical and residential benefits for disabled veterans” (National Park Service 2010). The Soldiers’ Home was designed around the high bluffs and deep ravines in a park-like setting; the buildings and curving roads took advantage of the existing topography, dense woods, and long views. The NHL property maintains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. The Soldiers’ Home NHL period of significance is 1866 to 1930 (National Park Service 2010).

The Soldiers’ Home was established in 1865. Following the organization of the Soldiers’ Home system, a National Board of Managers designated the first three branches: an Eastern branch in Maine, a Central Branch in Ohio, and the Northwestern Branch in Milwaukee. The Milwaukee Soldiers’ Home campus is the only one of the three original sites to have its Soldiers’ Home intact. Since the 2016 Final EIS, some changes have occurred within the NHL, including demotion, rehabilitation, and new construction. The Milwaukee Soldiers Home project, completed in March 2021, included the rehabilitation of six buildings, including Old Main, into 101 housing units for veterans and their families who are homeless or at risk of homelessness. In 2022, the power plant, also known as the 1895 steam plant, was demolished, but the cream city bricks will be used in repairs and replacements for other buildings on the campus.

The cemetery was established in 1871 as the Soldiers’ Home Cemetery to inter the remains of soldiers who died while in the care of the Soldiers’ hospital. The cemetery was renamed Wood Cemetery in 1937 in honor of General George Wood. The cemetery is a contributing resource to the NHL district and together with the planned landscape are significant resources. The landscape was designed by Thomas Budd Van Horne, who had previously planned military cemeteries at Chattanooga, Tennessee (1863) and Marietta, Georgia (1864). He designed the landscape and cemetery at the Milwaukee property in the Picturesque style, which included the overall site plan, the circulation patterns around the campus, building locations, and water features. The design incorporated the natural landscape features, and, in accordance with the Picturesque style, took full advantage of the existing viewshed from all vantage points.

It became a National Cemetery in 1973 and is one of seven National Cemeteries in Wisconsin. Veterans of conflicts ranging from the War of 1812 to the Iraq War are buried in the cemetery. There are approximately 30,000 burials and grave markers in the cemetery, which by design are visible from nearly every building in the district. The 19th century Picturesque style generally used the existing topography to create curving pathways and carriageways to provide transport, but also to control views while traversing the landscape. Van Horne’s design included landscaped areas for repose and reflection by creating a relaxing and tranquil setting. The landscape design of the cemetery area evoked a sense of serenity with the planting of shade trees around the original lake, filled in for the construction of I-94 in
1962. Although I-94 divided the cemetery (forty-two graves were relocated out of the path of the freeway), the northern section of the cemetery is included in the NHL because it continues to serve its original purpose and a pathway connects the two sides of the cemetery (National Park Service 2010).

What is now known as Zablocki Drive within the Soldiers’ Home NHL was originally constructed between 1937 and 1951, after the Soldiers’ Home NHL’s period of significance (1867–1930). The original Zablocki Drive connected to Blummond Road on the north and ended at the streetcar line on the south, which today is the electrical transmission line corridor. In 1959, the Zablocki Drive bridge over I-94 was opened to traffic and a new roadway was constructed to connect the bridge to General Mitchell Boulevard near the Story Parkway/General Mitchell Boulevard intersection. Between 1963 and 1973, the Zablocki Drive bridge connection to General Mitchell Boulevard was removed and the Zablocki Drive alignment that previously stopped at the streetcar line was extended to the bridge to form Zablocki Drive’s current alignment. Although the roadway system within the NHL is a contributing element of the Soldiers’ Home NHL and the National Register district, Zablocki Drive is not identified as a contributing or a non-contributing element of the NHL or Historic District. North of I-94, it is not built in the same curvilinear design as the other roadways within the Soldiers’ Home NHL. Rather, it is mostly straight, with earth berms supporting the roadway in some locations and modest cuts into the landscape in other locations rather than using the existing landscape. Nor does it take advantage of the existing viewshed like other roadways in the NHL. As a result, it does not evoke the feeling of the picturesque/designed historic landscape.

Currently, the VA owns and maintains Zablocki Drive, with the following exception: WisDOT owns and maintains the Zablocki Drive bridge over I-94. Zablocki Drive is in the Soldiers’ Home NHL, while the portion of the Zablocki Drive bridge within I-94 right-of-way is not within the Soldiers’ Home NHL. Zablocki Drive serves as a direct connection from Blummond Road to the VA Campus for the public and VA staff, as well as a connection across I-94 for cemetery maintenance, which includes moving off-road maintenance equipment.

Most of the 20th century development has taken place outside the historic core of the original Soldiers’ Home. Post-1930 building and development was planned and constructed south of the historic core of the campus, separated physically and visually from the main campus. Most of the original viewsheds have been maintained throughout the 20th century development and growth of the VA Campus. Most elements of the designed, picturesque landscape are intact, except for several of the lakes and water features. Due to the separation between the historic core of the campus and the major modern buildings and development, the historic core of the campus retains a high degree of integrity as a cohesive unit (National Park Service 2010).

The NHL district contains approximately 90 acres, which does not include large modern buildings outside the period of significance nor their associated parking lots. Of the 90 acres within the district, about 41 acres, on both sides of I-94, comprise the Wood National Cemetery. The federal military cemetery covers 50.1 acres in total, but only 41.1 acres are within the NHL boundary, 36.1 acres south of I-94 and 5 acres north of I-94 (see Exhibit 3-24). The remaining 9 acres of the cemetery are outside the boundaries of the NHL and outside the period of significance. This newer cemetery has roughly 6,000 burials and uses flat granite headstones. It is north of N. Washington Drive and south of the railroad line (National Park Service 2010).

3.24.1.2 Northwestern Branch, National Home for Disabled Volunteer Soldiers Historic District

The Soldiers’ Home Historic District was listed in the National Register on June 3, 2005, for its significance on the national level. It is listed under Criterion A for its significance as a collection of
resources, which documents and illustrates the development of care of disabled veterans as a nationwide program of the federal government that ultimately established the Veterans Administration. The district is also significant under Criterion C, Architecture, for the largely intact group of institutional resources created for the care of disabled and aged veterans of U.S. wars. The district (including buildings, structures, objects and the designed landscape) maintains a high integrity of location, association, feeling, design, materials, and workmanship. The period of significance for the National Register district is 1867 to 1955 (National Park Service 2005).

The boundary of the National Register district is similar to the Soldiers’ Home NHL boundary, except the National Register boundary extends into the western half of Mitchell Boulevard Park because this area contained the original entrance to the Soldiers’ Home (Exhibits 3-24 and 3-25). The National Register district emphasizes, to a greater extent than the NHL the history, development, and growth of the VA and extends the period of significance to include this broader history through 1955. The NHL includes roughly 90 acres, while the National Register district has 150 acres (see Exhibit 3-24). Resources built between 1930 (the end of the NHL period of significance) and 1955 are considered non-contributing resources in the NHL, but are within the period of significance of the National Register district. As with the NHL, Wood National Cemetery and the landscape design are contributing elements of the Soldiers’ Home Historic District (National Park Service 2005, 2010).

The Soldiers’ Home Historic District’s history and context are approximately the same as the Soldiers’ Home NHL’s history. The history and development of Wood National Cemetery, adjacent to both sides of I-94, is identical to that of the NHL.

3.24.1.3 Soldiers’ Home Reef National Historic Landmark

The Soldiers’ Home Reef is a designated NHL and is within the boundaries of the Soldiers’ Home NHL. The geological feature is along the east limit of the VA property approximately 0.25 mile south of I-94. The geological feature was discovered in the 1830s by Increase A. Lapham, Wisconsin’s first scientist. By the 1860s, it was recognized that the feature was the remains of 400-million-year-old fossil reefs, making them the first ancient reefs discovered in North America and among the first described anywhere in the world. Soldiers’ Home Reef is a steep, rocky hill mostly covered in vegetation. The boundary follows the north and east face of the reef for approximately 560 feet and then back about 250 feet from that face (National Park Service 1993).

The Soldiers’ Home Reef was listed on the National Register and designated an NHL on November 4, 1993. The Soldiers’ Home Reef is nationally significant under Criterion A as an important site in the history of geology in the United States and, for the central role, it played in the recognition of fossil reefs throughout North America. It is significant under Criterion B for its association with the 19th and early 20th century geologists James Hall, Thomas Crowder Chamberlin, and Increase Allen Lapham, the last of which is also from Wisconsin. The period of significance of the NHL is 1836 to 1939. The Soldiers’ Reef NHL retains integrity of location, association, design, materials, workmanship, and feeling. The integrity
of setting has been diminished by the construction and use of the adjacent American Family Field (National Park Service 1993).

### 3.24.1.4 Calvary Cemetery

Calvary Cemetery is the oldest operating Catholic cemetery in the City of Milwaukee. The 75-acre site is owned by the Milwaukee Archdiocese and was consecrated in 1857. The property features hilly terrain and winding drives amid more than 80,000 internments. The cemetery’s entrance is on Bluemound Road east of Hawley Road and west of Zablocki Drive (Exhibit 3-23). The southern boundary of the cemetery is about 150 feet north of I-94 at its closest point.

Calvary Cemetery is eligible for listing in the National Register under Criterion C for the notable design features and historical associations of the cemetery grounds and architectural value of the chapel. The cemetery exhibits high style qualities of the Late Victorian and Classical Revival periods. It is also possibly eligible under Criterion B: Important Persons, as the burial place of numerous early settlers and key figures in the history and development of Milwaukee and Wisconsin.

The defining feature of the cemetery is a large hill on the east side of the property. Known as “Jesuit Hill” or “Chapel Hill,” it is one of the highest points in Milwaukee and an attractive final resting place for a number of local Catholic clergy. Initially, a large wooden cross topped the hill, but it was replaced in 1899 by the current chapel. In addition to the burials of some of the city’s more prominent historical figures, Calvary Cemetery is also home to two intact and representative Erhard Brielmaier–designed buildings and eight monumental vaults, graves, and mausoleums. Its period of significance is 1857 to 1922.

There are 690 soldiers’ graves at the far south end of Calvary Cemetery. Wood National Cemetery maintenance staff maintain the headstones while Calvary Cemetery mows the grass adjacent to the headstones.

While the setting and feeling of the cemetery were diminished by the construction and use of the adjacent freeway, there are sufficient trees (in spring and summer) and winding roads to distract from the visual and audible intrusions. The cemetery retains integrity of association, feeling, location, materials, workmanship, and design.
3.24.1.5  Story Hill Residential Historic District 1

Story Hill Residential Historic District 1 is bounded by Wisconsin Avenue on the north, Bluemound Road on the south, 51st Street on the west, and WIS 175 on the east which includes the residential lots of the original subdivision development, platted in 1911. See Exhibit 3-23. This district makes up just over 18 acres with a total of 102 properties; 90 properties are contributing elements to the district, while 12 are non-contributing. The period of significance of the district is 1909-1936. It is eligible for listing in the National Register under Criterion C as a good example of a cohesive collection of architectural styles from the early 20th century, including, Colonial Revival, Craftsman, and Arts and Crafts styles. The local firm George Schley & Sons designed and built a number of the houses in the district and local architects Charles W. Valentine and Frank W. Andree designed some of the residences (WisDOT 2011).

Due to original deed restrictions, the district still conveys its unique and specific time and place. Restrictions included single-family houses only and consistent setbacks from the road. The houses are modest in scale, one and a half to two stories, and generally have stucco exteriors. The district has a significant concentration of architect-designed buildings from the 1910s and 1920s that retain a high degree of integrity (WisDOT 2011). The district retains integrity of design, materials, workmanship, location, and association.

3.24.1.6  Story Hill Residential Historic District 2 and 3

The 30-acre Story Hill Residential Historic District 2 and 3 is eligible for listing in the National Register under Criterion C for its significant concentration of Period Revival-style residences, as well as Craftsman-style bungalows and contemporary-style residences. Due to the original deed restrictions, the district evokes a distinct time and place. Restrictions included single-family houses only and consistent setbacks from the road (as well as no farm animals), and the developer reserved the right to refuse designs for aesthetic reasons. The houses are generally modest in scale and share brick, stucco, and stone-veneer exteriors. Well-known Milwaukee architects Hugo C. Haeuser and Roy J. Jacobs and the George Schley & Sons architectural firm designed houses within the district. The district contains 150 contributing buildings and 3 non-contributing.
buildings. The district retains a high degree of integrity as demonstrated by the high number of contributing structures. The period of significance is 1924 to 1963 (WisDOT 2013c). The district retains integrity of design, materials, workmanship, location, and association. The setting has been impacted by the elevated roadways within the viewshed of the district.

The historic district is bounded by the south curb line of Bluemound Road on the north, the curb line of Story Parkway on the south and east, and Mitchell Boulevard Park on the west, which encompasses the Story Hill No. 2 and Story Hill No. 3 subdivisions, both platted in the 1920s. Story Parkway and Bluemound Road are not included in the historic district boundaries because they were not an integral part of the development of the district. The boundaries are based in the 1920s residential property lines, so the exterior roadways are not included (WisDOT 2013c).

### 3.24.1.7 West St. Paul Avenue Industrial Historic District

The West St. Paul Avenue Industrial Historic District was listed in the National Register in 2018 under Criterion C for its demonstration of late 19th century and 20th century architecture with construction having occurred from 1888 to 1951. The district is on the south side of I-94 near the eastern terminus of the project, covering 27.7 acres along West St. Paul Avenue, including 272 to 405 North 12th Street, 324 to 422 North 15th Street, and 1101 to 2045 West St. Paul Avenue in Milwaukee (see Exhibit 3-23).

The district contains 24 buildings of which 22 are contributing resources and 2 are noncontributing resources. Twelve contributing resources and one noncontributing resource are in the western portion of the district west of 16th Street. Of the 13 resources within the western portion, 9 are within view of the project. The district is separated, roughly at its middle, by the 16th Street Viaduct. The remaining district resources are east of the 16th Street Viaduct, and the project would not be visible from these properties.

The West St. Paul Avenue Industrial Historic District is significant for its commercial and industrial architecture, which is representative of the Menomonee River Valley. Several significant architects are associated with the district. The district is a collection of single-story and low-rise industrial and commercial buildings that represent one of Milwaukee’s most architecturally intact historic industrial areas. The district was historically occupied by manufacturing businesses that offered tinware, wood products, heating supplies, and electronic controls. Architectural styles in the district are Queen Anne, Neo-Gothic Revival, 20th Century Commercial, and Contemporary.
3.24.1.8 16th Street Viaduct

The 16th Street Viaduct, also called the James E. Groppi Unity Bridge, was built in 1929. The 4,000-foot-long steel girder bridge was designed to carry traffic over the Menomonee Valley. The viaduct from West Clybourn Street on the north to West Pierce Street on the south. The structure is significant for civil rights events that occurred in 1967 and 1968. It was listed in the National Register under Criterion A in May 2019.

The 16th Street Viaduct passes over I-94; 16th Street is the easternmost terminus of the I-94 East-West Corridor project, though construction would end closer to 17th Street. The viaduct stands above the revised APE; only the bridge foundations are within the West St. Paul Avenue Industrial Historic District boundary; the bridge is considered neither a contributing nor a noncontributing resource to that district.

No construction work would take place on or adjacent to the viaduct and it is outside the limits of construction. The project would not impact the viaduct, so it is not discussed further in the impacts section below.

3.24.1.9 Off-interstate Intersection Improvements

The historic properties discussed in the following paragraphs are within the individual APEs for the off-interstate intersection improvements, as shown in Exhibit 3-23.

Northwestern Branch, National Home for Disabled Volunteer Soldiers National Historic Landmark

This is the same property described in Section 3.24.1.1. The Soldiers’ Home Historic District has a different boundary in the southern portion of the property. The historic district boundary does not reach as far south as National Avenue, but the NHL boundary does.

Paradise Theater

The former Paradise Theater (now the Epikos Church) was designed and built by Urban F. Peacock in 1929 in the 20th century revival style. It sits on a triangular lot formed by Greenfield and National avenues in the City of West Allis, Milwaukee County. It exhibits Classical, Art Deco, and French Renaissance stylistic elements. The opulent auditorium and lobby are largely intact, including ceramic tile floors, decorative plaster moldings with fruit and flower motifs, and the original grand staircase. The auditorium seating and the original ticket booth also remain.

The former Paradise Theater is a local example of a building type that was once commonly found in downtown and neighborhood areas of most communities throughout the U.S. in the 1920s. It is eligible for the National Register under Criterion C for its architectural elements and as a very good example of a
1920s theater that exhibits interior or exterior integrity (WisDOT 2015). In September 2015 SHPO concurred that the former Paradise Theater is eligible for the National Register.

### 3.24.2 Historic Property Impacts

Section 106 of the NHPA and the implementing regulations require federal agencies or other agencies receiving federal assistance to consider the effects a proposed undertaking may have on historic properties. When considering the potential for adverse effects, all reasonably foreseeable impacts must be taken into account, including direct, indirect, and cumulative impacts.

The Advisory Council on Historic Preservation has developed regulations that guide federal agencies on how to assess effects of their undertakings on historic properties. Effects to historic properties are defined in the following ways:

- **No Historic Properties Affected**: Either no historic properties are present, or there is no effect of any kind, neither harmful nor beneficial, on the historic properties.

- **No Adverse Effect**: There is an effect, but the effect is not harmful to those characteristics that qualify the property for inclusion in the National Register.

- **Adverse Effect**: There is an effect, and that effect diminishes the characteristics that qualify the property for inclusion in the National Register.

An Adverse Effect is found when an undertaking may alter (directly or indirectly) any characteristic of a historic property that qualifies the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)(1)). In the September 24, 2014, Revised Assessment of Adverse Effects Determination for the I-94 East-West Corridor Project from 16th Street to 70th Street, Milwaukee, WI memorandum (available on the project website), FHWA, with input from Section 106 consulting parties, determined whether the alternatives retained for detailed study would have adverse effects on historic properties in the APE. An addendum to the September 2014 effects memorandum, dated November 2, 2015, updated the effects determinations to include the off-interstate improvements. This addendum is also available on the project website. For properties such as the West St. Paul Avenue Industrial Historic District and the 16th Street Viaduct, that have been newly identified or are impacted in a different way than identified in the 2016 EIS and based on consultation, FHWA will issue an effects determination through submittal of the e106 form documentation.

Under the 8- and 6-lane alternatives, no land would be acquired from any of the historic properties along I-94. About 0.40 acre of land would be required from the Soldiers’ Home NHL near the Brewers Boulevard/National Avenue intersection as part of the off-interstate improvements. This land is required to provide a right-turn lane to the VA Campus from National Avenue. Some of the alternatives under consideration could have an Adverse Effect on identified historic properties. FHWA and WisDOT, through continued Section 106 consultation, are affirming the previous determination in the 2016 Final EIS of No Adverse Effect to Historic Properties. This section reviews the previously identified historic properties and the historic properties identified since the 2016 Final EIS.

#### 3.24.2.1 Northwestern Branch, National Home for Disabled Volunteer Soldiers National Historic Landmark and Historic District

The 8- and 6-lane alternatives were designed to avoid right-of-way acquisition of property adjacent to I-94, including from the Soldiers’ Home NHL and the Soldiers’ Home Historic District. There would be an acquisition of 0.40 acre of land from the NHL for a right-turn lane provided from westbound National
Avenue to the VA entrance at General Mitchell Boulevard/47th Street. This was requested by the VA to improve access to their campus and would improve traffic operations along National Avenue. No graves would be disinterred from Wood National Cemetery, a contributing element of the NHL. The discussion of impacts is combined to cover both the Soldiers’ Home NHL and the Soldiers’ Home Historic District because the impacts are very similar. An exception is the reconstruction of General Mitchell Boulevard, which is within the Soldiers’ Home Historic District but not the Soldiers’ Home NHL.

Under the 8- and 6-lane alternatives, I-94 would be about the same elevation as it is today between the two sections of the NHL north and south of I-94. This alternative would maintain a visual connection between the two parts of Wood National Cemetery on both sides of I-94. Views from the cemetery would be similar to those of existing I-94. Additionally, the Zablocki Drive bridge of I-94 at the east end of the Soldiers’ Home NHL and Soldiers’ Home Historic District would be replaced at its present location. The existing viewshed from Wood National Cemetery includes I-94, Cavalry Cemetery, the overhead electrical transmission line corridor, American Family Field, the Soldiers’ Home NHL and Soldiers’ Home Historic District, and some of the newer structures on the VA Campus outside the NHL and historic district.

Existing noise levels were modeled in the Spring Hill Cemetery at Field Validation Site 2, located 123 feet from eastbound I-94 centerline and 73 feet southeast of the mausoleum (Exhibit 3-22a) and at four noise receptor locations, including FS-5 located 35 feet north of the Civil War Soldiers’ and Sailors monument, FS-6, located 200 feet north of I-94, and west of Zablocki Drive and at receptor locations (N49 and N50) (Exhibits 3-22b, 3-22c, 3-22d, and 3-22e). The existing noise levels were modeled to be 71.5 dBA at Field Validation Site 2, 68 dBA at FS-5, 72 dBA at FS-6, 69 dBA at N49, and 77 dBA at N50. Future noise levels are expected to increase 1 dBA at FS-5, N49, and N50, and remain the same at FS-6, under the preferred alternative. The noise levels stay the same or increase by only 1 dBA because the preferred alternative includes a 3.5-foot safety barrier that the existing alignment does not have. Therefore, all three receptors north of I-94 (N49, N50 and FS-6) experience some noise shielding from the new safety barrier.

The noise impacts in the NHL and historic district are approximately the same under both the full Hawley Road interchange and half interchange at Hawley Road options when compared to the current conditions, with noise levels remaining the same, decreasing by 1 dBA or increasing by 1 dBA at each of the noise receptors. While the existing noise levels may not be consistent with the original Picturesque design, the future noise levels would remain consistent with either the six-lane or 8-lane alternative options. Therefore, the preferred alternative would not diminish the integrity of setting and feeling from the current condition. The noise levels in the NHL and historic district would remain the same or increase or decrease by 1 dBA under the preferred alternative, thus would not contribute to project effects on the NHL and historic district.

Vibration impacts to Wood National Cemetery during operation of the improved freeway would be similar to the existing vibration impacts from the current I-94 corridor. However, during construction, depending on the types of machinery used, vibration could cause the ground to move, which could cause flat and vertical grave markers to shift. The alignment of the grave markers is an integral part of the aesthetic of a National Cemetery, so a shift in alignment would impact the integrity of the cemetery.

The Zablocki Drive bridge over I-94 would be replaced in the same location. This would require reconstruction of short segments of Zablocki Drive on each side of the new bridge (about 340 feet north of I-94 and 210 feet south of I-94). The portion of the Zablocki Drive bridge over I-94 right-of-way is not in the Soldiers’ Home NHL boundary or Soldiers’ Home Historic District; however, the approach roadways to the new bridge are in both the NHL boundary and Soldiers’ Home Historic District. The alignment of Zablocki Drive would not change from its current alignment, thus not altering the historic
landscape (as noted in Section 3.24.1, Zablocki Drive was not built at the same time or the same design as the other roadways in the Soldiers’ Home NHL and Soldiers’ Home Historic District).

For both Stadium Interchange options, General Mitchell Boulevard would be reconstructed for about 350 feet north of I-94 and about 100 feet south of I-94. The roadway would remain on its existing alignment and be lowered a few feet from its current elevation. General Mitchell Boulevard’s footprint would remain the same, and all sidewalks would be replaced. North of I-94, this reconstruction would occur outside the Soldiers’ Home NHL but inside the Soldiers’ Home Historic District. South of I-94, reconstruction of General Mitchell Boulevard would occur within the Soldiers’ Home Historic District, and a small portion of the reconstruction would be within the Soldiers’ Home NHL.

For both Stadium Interchange alternatives (hybrid interchange or diverging diamond interchange), replacing the bridge on Zablocki Drive and reconstructing General Mitchell Boulevard south of I-94 would require a temporary easement consisting of about 2 acres of Soldiers’ Home NHL property and 3 acres of Soldiers’ Home Historic District property (the boundaries Soldiers’ Home Historic District and Soldiers’ Home NHL differ near General Mitchell Boulevard south of I-94, thus the difference in the amount of temporary easement required).

About 0.40 acre of land would be required from the Soldiers’ Home NHL near the Brewers Boulevard/National Avenue intersection as part of the off-interstate improvements. This land is required to provide a right-turn lane to the VA Campus from National Avenue. See Section 3.24.2.7 for more information on this improvement.

In summary, there would be no substantial noise or visual impact to the Soldiers’ Home NHL and Soldiers’ Home Historic District. The district would still convey its design significance, its architectural significance, and its association with the VA and care for disabled veterans.

FHWA, in consultation with the SHPO and consulting parties, has determined that the 8- and 6-lane alternatives could be designed to have No Adverse Effect on the Soldiers’ Home NHL and Soldiers’ Home Historic District under 36 CFR 800.5(b) (FHWA 2022). As the culmination of the Section 106 consultation process, the Amended Programmatic Agreement will stipulate the appropriate design review processes and other steps to be taken to ensure there will be No Adverse Effect on the Soldiers’ Home Historic District and the Soldiers’ Home NHL. The Amended Programmatic Agreement will be available as part of the Supplemental Final EIS/ROD.

3.24.2.2 Soldiers’ Home Reef NHL

The Soldiers’ Home Reef NHL is about 0.25 mile from I-94. The setting of the Soldiers’ Home Reef NHL would be slightly altered by the changes in roadway configuration with the hybrid alternative and diverging diamond alternative at the Stadium Interchange, but it is shielded by vegetation and is roughly 1,200 feet from the existing I-94 and over 1,000 feet from the proposed I-94, so the impacts would be minimal. The integrity of setting has already been compromised from the construction and regular use of American Family Field, which is adjacent to the Soldiers’ Home Reef NHL. The integrity of location, association, materials, workmanship, design, and feeling would not be impacted by the two alternatives.

It is anticipated that FHWA, through Section 106 consultation with the SHPO and consulting parties, will determine that there would be No Adverse Effect from the 8- and 6-lane alternatives on the Soldiers’ Home Reef NHL, under 36 CFR 800.5 (FHWA 2022).
3.24.2.3 Calvary Cemetery

Calvary Cemetery is significant as the final resting place of a number of influential individuals who made outstanding contributions to the history of Milwaukee and for embodying the high style qualities of Late Victorian and Classical Revival architecture (WisDOT 2013d).

Noise levels under the 8- and 6-lane alternatives would be comparable to existing noise levels (a projected decrease of 1 dBA, which is not perceptible to the human ear). There is an existing line of trees between the cemetery and the freeway, which would remain and would continue to provide a visual buffer between the cemetery and I-94 from most vantage points. The current viewshed, which includes I-94, includes overhead electrical transmission lines, and a 6- to 8-foot retaining wall along the transmission line corridor (outside WisDOT right-of-way).

No right-of-way would be acquired from the property, the noise increase would not be perceptible, and the minor visual impact would be minimized by the distance from the freeway and screening provided by existing trees and other vegetation. The 8- and 6-lane alternatives would not alter or change the architectural significance of the property or its association with influential local individuals. The 8- and 6-lane alternatives would not diminish the historic integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.

It is anticipated that FHWA, through Section 106 consultation with the SHPO and consulting parties, will determine that there would be No Adverse Effect from the 8- and 6-lane alternatives on the Calvary Cemetery, under 36 CFR 800.5 (FHWA 2022).

3.24.2.4 Story Hill Residential Historic District 1

Under the reconstructed Stadium Interchange (both hybrid interchange and diverging diamond interchange options), no right-of-way would be acquired from the Story Hill Residential Historic District 1. WIS 175 between Bluemound Road and Wisconsin Avenue would not be reconstructed, so the freeway would not be any closer to the historic district than it is currently. Between Bluemound Road and I-94, WIS 175 would be reconstructed and would move slightly east, away from the historic district. A new local street would be built on the west side of WIS 175 but would be several hundred feet south and east of the district and would not be visible from the district.

No right-of-way would be acquired and there would be no indirect impacts that would diminish the integrity of the features or attributes that contribute to the historic significance of Story Hill Residential Historic District 1. The district would retain its integrity of location, association, feeling, setting, workmanship, design, and materials. The district would continue to convey its architectural significance under Criterion C.

It is anticipated that FHWA, through Section 106 consultation with the SHPO and consulting parties, will determine that there would be No Adverse Effect from the 8- and 6-lane alternatives on the Story Hill Residential Historic District 1, under 36 CFR 800.5 (FHWA 2022).
3.24.2.5 Story Hill Residential Historic District 2 and 3

No land would be acquired from the Story Hill Residential Historic District 2 and 3 under the 8- and 6-lane alternatives.

The freeway would be approximately the same elevation it is currently directly adjacent to the historic district. With the hybrid interchange, the highest point of the new Stadium Interchange would be about 25 feet higher than the existing interchange. The Stadium Interchange would be moved slightly to the south, farther from the district. A new frontage road north of I-94 would connect the new local road interchange within the Stadium Interchange to General Mitchell Boulevard. This frontage road would be in the same location as the existing westbound I-94 exit ramp to General Mitchell Boulevard.

With the diverging diamond interchange, the new Stadium Interchange would be approximately the same height as the existing interchange. As a result of the hook ramp required by the diverging diamond interchange, the total width of I-94 and its entrance/exit ramps between General Mitchell Boulevard and WIS 175 is slightly greater than the hybrid interchange. As in the hybrid interchange, the additional width is shifted south away from the Story Hill neighborhood.

Under the 8- and 6-lane alternatives, the viewshed from the historic district to the south would remain essentially the same as the existing viewshed. There would be minimal visual impacts to the district. The interchange with I-94 at General Mitchell Boulevard would be removed, but comparable local street access to/from I-94 would be provided.

Noise levels would increase by 1 to 3 decibels at most of the receptors in the Story Hill Historic District 2 and 3. The noise levels are considered a noise impact not because of the increase but because they currently exceed the noise level criteria at several locations in the district. The increase in noise levels would not impact the setting and feeling of the district because 3 decibels is imperceptible to the human ear and because the future noise levels will be similar to current conditions. Story Hill Residential Historic District 2 and 3 meets the requirements for the construction of a noise barrier to reduce noise levels at benefited receptors. Impacts to the district related to Section 106 regarding the construction of a noise barrier have not been determined. Some consulting parties have stated that if a noise wall were built adjacent to the Story Hill Residential Historic District 2 and 3, it could have an adverse visual effect on the district. While a noise wall could visually diminish the integrity of setting and feeling in the southern portion of the district, FHWA and WisDOT believe that the visual effect could be minimized aesthetically. The Programmatic Agreement will include a stipulation to prepare a Noise Barrier Plan, in consultation with the consulting parties and signatories to the Programmatic Agreement. If a simple majority of the benefited receptors vote in favor of the noise barrier, the Noise Barrier Plan would be implemented. If there is not a simple majority for the noise barrier by the benefited receptors, then the wall will not be constructed, and the Noise Barrier Plan will not be implemented.

There would be no direct impacts to the district. No right-of-way would be acquired and no significant visual or noise impacts are expected under the 8- and 6-lane alternatives and both Stadium Interchange options. The district would retain integrity of setting, feeling, association, location, design, workmanship, and materials. The district is significant for its collection of early 20th century residential structures and the 8- and 6-lane alternatives would not reduce the district’s ability to convey this significance. In the event the community opts for a noise barrier, FHWA will assess the impacts to the district from construction of the barrier. The Amended Programmatic Agreement will specify the steps to be taken to assess effects and mitigate them, as indicated. It is anticipated that FHWA, through Section 106 consultation with the SHPO and consulting parties, will determine that there would be No Adverse Effect from the 8- and 6-lane alternatives on the Story Hill Residential Historic District 2 and 3,
under 36 CFR 800.5 (FHWA 2022). A final decision on the construction of a noise barrier adjacent to the
district may be made prior to completion of the ROD or during the final design phase.

3.24.2.6 West St. Paul Avenue Industrial Historic District

No land would be acquired from the West St. Paul Avenue Industrial Historic District under the 8- and
6-lane alternatives. Project activities would be adjacent to the western portion of the district. The
eastbound I-94 retaining wall would be shifted to the south by about 50 feet on the west end and by
about 20 feet near the east end. This reconfiguration would remain entirely within the existing WisDOT
right-of-way and would not intrude on the district’s boundaries nor on private property. I-94 and the
eastbound retaining wall are within the district’s viewshed. Portions of the existing eastbound retaining
wall are visible from within the district, but the slightly revised freeway alignment would be shielded and
not visible from the contributing resources within the eastern portion of the district east of 16th Street.

Two contributing resources are in the western portion of the district that is adjacent to the eastbound
retaining wall. The two resources are separated from the existing I-94 by a modest rise in topography,
chain link fence, landscape, and the existing retaining wall. The project would shift the reconfigured
eastbound retaining wall and freeway an average of about 20 feet to the south. To the rear of the
contributing resources, the eastbound retaining wall location would shift about 30 feet to the south, to
about 12 feet north of the district’s northern boundary.

Construction of the eastbound retaining wall would require temporary grading changes and a
permanent grade reduction ranging from about 2 feet to 10 feet. The eastbound retaining wall profile
would be about 3 feet lower than its existing elevation, though the total height would be about 10 feet
to 20 feet higher to match the grade requirements. The eastbound retaining wall would be constructed
to look similar to the existing wall.

WisDOT has determined that that there would be No Adverse Effect from the 8- or 6 lane alternatives
on the West St. Paul Avenue Industrial Historic District under 36 CFR 800.5. The proposed activities
would require the removal of vegetation within the WisDOT right-of-way, which includes mostly
deciduous trees and brush. This natural feature developed after the district’s period of significance, and
it is not considered a contributing feature of the district. No right-of-way would be acquired and no
significant visual or noise impacts are expected under the 8- and 6-lane alternatives. There would be no
direct impacts to the district and the alternatives would not alter or change the character of the district
in a manner that diminishes the historic integrity of the district. The district would retain integrity of
setting, feeling, association, location, design, workmanship, and materials. There would be no adverse
effects on the district from the project.

The Wisconsin SHPO has not yet concurred with the effects findings, which are part of the ongoing
Section 106 consultation and will be captured in the Section 106 Amended Programmatic Agreement,
which will be included in the Record of Decision. FHWA has not completed consultation with the
consulting parties regarding impacts to the West St. Paul Avenue Industrial Historic District from the 8-
and 6-lane alternatives.

3.24.2.7 Off-interstate Intersection Improvements

Brewers Boulevard/National Avenue Intersection

Soldiers’ Home NHL

The improvements at the Brewers Boulevard/National Avenue intersection include changes to National
Avenue at General Mitchell Boulevard, an entrance to the VA Campus, and specifically the VA Medical
Center. The improvements to National Avenue at General Mitchell Boulevard include extending the westbound through-lane an additional 500 feet and constructing a westbound dedicated right-turn lane onto General Mitchell Boulevard. This dedicated right-turn lane would require the acquisition of 0.4 acre of land from the Soldiers’ Home NHL on its southern boundary (Exhibit 3-23). None of the heritage trees identified in the Historic American Landscape Survey (Berglin and Roise 2012) would be directly impacted; the land to be acquired is an open, grassy area. The area north of National Avenue between General Mitchell Boulevard and Brewers Boulevard is an area of grass, trees, and a newly constructed parking lot and is part of the Soldiers’ Home NHL, except for the extreme southeast corner. The area on the west side of General Mitchell Boulevard is an open parking lot that serves the VA Medical Center; this area is not within the Soldiers’ Home NHL boundary.

During consultation, some parties expressed concern about the new construction causing visual impacts to the NHL, particularly to the landscape features and setting, as well as impacts to the heritage trees. FHWA and WisDOT will continue to consult with the Village of West Milwaukee and consulting parties to identify a design option that least protrudes into the Soldiers’ Home NHL. FHWA will also avoid removing the existing trees in the area of the improvements; specifically, the tree identified as a heritage tree, which is a roughly 35-year-old Norway Maple (tree #209) (Berglin and Roise 2012). The Programmatic Agreement for the I-94 East-West Corridor project will be executed prior to finalization of the ROD and will include stipulations regarding the design of this intersection and the impacts on the NHL and its trees.

The loss of 0.40 acre as part of the improvements would not be a significant impact to the NHL. This area is the far southern boundary of the NHL, and the 0.40 acre will not be visible from Wood National Cemetery, nor from the buildings and structures that make up the Soldiers’ Home NHL complex. Traffic at the intersection of General Mitchell Boulevard and National Avenue will not increase due to the added turn lane. The NHL will retain its integrity of location, design, setting, materials, workmanship, feeling, and association.

It is anticipated that FHWA, through Section 106 consultation with the SHPO and consulting parties, will determine that there would be No Adverse Effect from the 8- and 6-lane alternatives on the Soldiers’ Home NHL under 36 CFR 800.5 (FHWA 2022).

National Avenue/Greenfield Avenue Intersection

Paradise Theater

The Paradise Theater is on a triangular lot formed by Greenfield and National avenues at the intersection with 62nd Street. Improvements at this intersection will not require any property acquisition. Improvements to Greenfield Avenue will include changes to the signal timing, restriping to create a dedicated left-turn lane and a combined through and right-turn lane in each direction, and the elimination of 70 feet of parking on the westbound lane. Improvements to National Avenue also include signal timing, restriping to create a dedicated right-turn lane, and the elimination of 100 feet of parking on the southbound lane. These improvements intend to decrease the current backup on the left turn onto 62nd Street.

The changes to the traffic patterns on Greenfield and National avenues would have minimal noise impacts on the Paradise Theater compared to existing conditions. The traffic volume changes would not be such that it would measurably increase the noise level at this location. The theater is eligible for listing on the National Register because it is a very good example of a 1920s theater that exhibits a high degree of exterior and interior integrity. The improvements to the intersection will not alter the appearance of the theater and will not impact the ability to use the building, which is now a church. The
building will retain its integrity of location, design, setting, materials, workmanship, feeling, and association.

It is anticipated that FHWA, through Section 106 consultation with the SHPO and consulting parties, will determine that there would be No Adverse Effect from the 8- and 6-lane alternatives on Paradise Theater, under 36 CFR 800.5 (FHWA 2022).

3.24.3 Measures to Minimize Harm

Appropriate measures to minimize harm to historic properties were identified as part of the Section 106 consultation process and will be detailed in the Amended Programmatic Agreement. WisDOT and FHWA met regularly with the Section 106 consulting parties through execution of the Programmatic Agreement in 2016 and during the SEIS continuation of consultation. To ensure the No Adverse Effect finding, the Amended Programmatic Agreement will include minimization measures that include plans for: freeway design review, construction staging, Wood National Cemetery wall design, landscaping, and signage, among other stipulations. The Amended Programmatic Agreement will be executed prior to finalization of the ROD and will be included in the ROD.

To reduce impacts to Wood National Cemetery and the Soldiers’ Home NHL and Soldiers’ Home Historic District, WisDOT and FHWA determined from the beginning of the design process that no graves would be moved as a result of this project. As part of the project, a low wall would be constructed adjacent to Wood National Cemetery both north and south of I-94 within WisDOT right-of-way. The specific materials, design, appearance, and height and size of the walls will be determined through consultation and a Wall Design Plan, as stipulated in the Programmatic Agreement. The low wall was requested by the National Cemetery Administration to address their concerns regarding noise and visual impacts in close proximity to the freeway. A low wall would not be an adverse effect on the NHL. As stipulated in the Programmatic Agreement, the draft Design Plan for the Wood National Cemetery walls will be submitted to Signatories and Consulting Parties for review and comment prior to implementation.

The 8- and 6-lane alternatives would stay within the existing interstate footprint as much as possible. The 8- and 6-lane alternatives would move I-94 south, away from the Story Hill Residential Historic District 2 and 3, reducing noise and visual impacts to the district. If a noise wall is built adjacent to Story Hill Residential Historic District 2 and 3, it could have an Adverse Effect on the district. While a noise wall could visually diminish the integrity of setting and feeling in the southern portion of the district, FHWA and WisDOT believe that the visual effect could be minimized aesthetically. This determination will be made during the final design phase, in accordance with the Amended Programmatic Agreement.

WisDOT and FHWA, in coordination with Section 106 consulting parties, and in accordance with the Amended Programmatic Agreement, will prepare a Monitoring Plan to address concerns about construction related vibration impacts adjacent to the Soldiers’ Home NHL and Historic District. The Monitoring Plan will include a raise and align survey for grave markers within Wood National Cemetery.

3.24.4 Measures to Mitigate Adverse Historic Property Impacts

Under the 8- and 6-lane alternatives, it is anticipated that there would be no adverse effects on historic properties, but the Section 106 consultation process, which discussed effects on historic properties, is ongoing. The 2016 Programmatic Agreement was written to ensure there would be no adverse effects on historic properties. Through the ongoing Section 106 consultation process, the Programmatic Agreement will be amended or updated, as appropriate, for any newly identified effects on historic properties and for newly National Register–eligible or National Register–listed historic properties.
3.24.5 Coordination and Consultation

The Section 106 consultation process was reopened in 2021 to discuss changes to the project footprint, an updated APE, and historic properties identified since 2016. The Section 106 consultation process is ongoing to identify historic properties outside the previous APE or those that have been listed in the National Register since 2016 and to identify impacts to the historic properties from the updated project elements. Through the ongoing Section 106 consultation process, the Programmatic Agreement will be amended or updated, as appropriate, for any newly identified effects on historic properties and for newly National Register–eligible or National Register–listed historic properties. The Section 106 consultation process will culminate in an executed Programmatic Agreement, which will be included in the ROD.

3.25 Archaeological Resources

3.25.1 Affected Environment

WisDOT’s archaeological investigations in the study area were carried out in accordance with the Guidelines for Public Archaeology in Wisconsin, as revised. The archaeological investigations were designed to fulfill responsibilities for identifying, recording, and managing cultural resources as stipulated under Section 106 of the NHPA of 1966. The Phase 1 investigation (identification) occurred in 2012 and included an extensive literature search of published reports, site forms, and reports on previously recorded sites on file at regional libraries, historical societies, and the Wisconsin Historical Society. The investigations included visual inspection, pedestrian field survey, surface collection, and shovel tests as needed to verify the presence or absence of archaeological material along the project corridor. The results are documented in *Archaeological Investigations I-94 East-West and Stadium Interchange 70th Street to 25th Street, National Avenue to Lisbon Avenue, Milwaukee County Project ID1060-27-00* (WisDOT 2013a). The APE for the archaeological study includes areas of existing and proposed right-of-way.

A background document search of the Wisconsin Historic Preservation Database found five archaeological sites adjacent to the existing I-94 right-of-way. The archaeological fieldwork conducted in 2012 reexamined these previously identified archaeological sites. During the field investigations, no new archaeological resources, materials, or sites were encountered. There are no archaeological sites in the Washington Street corridor.

Two of the five sites listed in the Wisconsin Historic Preservation Database were prehistoric sites (both were listed as burial sites). The other three sites were historic cemeteries that are all active today (Beth Hamedrosh Hagodel, Spring Hill, and Wood National cemeteries; see Section 3.23). Parts of these three cemeteries were within what is now the I-94 right-of-way. The three cemeteries’ boundaries were adjusted to accommodate the construction of I-94 in the 1950s and 1960s.

The following previously reported archaeological sites, not discussed in Section 3.23, Cemeteries, are in or near the original APE:

- An unnamed site, in the northeast quadrant of the Stadium Interchange, was previously reported to contain a single burial and associated artifacts. Previously, the site was badly disturbed by a charge of dynamite, and currently, the site is covered by roadway, concrete, and surface parking. No evidence of the site was encountered during the 2012 investigation, and indications are that the site was heavily disturbed by previous construction.
• An unnamed site is in the northeast quadrant of the Stadium Interchange, near Merrill Park. Previously burials were found while excavating a gravel pit at this site. No evidence of the site was encountered during the 2012 investigation, and the site was heavily disturbed by previous roadway and residential construction.

Additional investigations were carried out in 2015 to ascertain the presence or absence of archaeological sites within the individual APEs for the off-interstate intersection improvements. The methodology for these investigations was the same as for the previous investigations. The investigated area for the additional archaeological investigation included areas of existing and proposed right-of-way.

No additional archaeological sites were identified during the additional investigations carried out in the individual APEs for the off-interstate intersection improvements.

In summer 2020 and again in spring 2022, an archaeological resources literature review was completed to see if there were any newly identified cultural resource studies or sites within the APE and if they would be impacted by the 8- and 6-lane alternatives. A search of the Wisconsin Historic Preservation Database indicated seven previously recorded archaeological sites within the APE. None of the previously recorded sites include a National Register eligibility recommendation or determination.

3.25.2 Archaeological Impacts

3.25.2.1 No-build Alternative
The No-build alternative would not affect any identified archaeological sites.

3.25.2.2 8- and 6-Lane Alternatives
The 8- and 6-lane alternatives would not encroach into any identified archaeological sites. The archaeological survey concluded that the extensions along Washington Street, 25th Street, St. Paul Avenue, Dickinson Street, Wells Street, and the Hank Aaron State Trail would not impact any identified archaeological sites.

3.25.3 Measures to Minimize and Mitigate Adverse Archaeological Impacts
Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on archaeological resources adjacent to I-94. No adverse impacts to archaeological resources were identified. The amended Programmatic Agreement will include stipulations regarding the inadvertent discovery of human remains during construction activities and archaeological monitoring within areas that could possibly contain human remains during construction activities.

3.25.4 Coordination and Consultation
The Section 106 consultation process was reopened in 2021 to discuss changes to the project footprint, an updated APE, and historic properties identified since 2016. The Section 106 consultation process is ongoing to identify historic properties outside the previous APE or those that have been listed in the National Register since 2016 and to identify impacts to the historic properties from the updated project elements. Through the ongoing Section 106 consultation process, the Programmatic Agreement will be amended, as appropriate, for any newly identified effects on historic properties and for newly National Register–eligible or National Register–listed historic properties. The Section 106 consultation process will culminate in an executed Programmatic Agreement, which will be included in the ROD.
3.26 Recreational Resources/Public Use Land

Parks that are adjacent to I-94 and are subject to Section 4(f) of the 1966 U.S. Department of Transportation Act (49 United States Code [U.S.C.] 303[c]), such as Mitchell Boulevard Park and Valley Park, are further described in Section 4. This section documents the impacts to parks and recreation areas that are not subject to Section 4(f). To avoid duplication, impacts to parks and recreation areas that are subject to Section 4(f) are only briefly noted here. Other parks and recreation resources that are in the study area but not directly adjacent to I-94 are included in Table 3-37 and their locations are shown in Exhibit 3-26.

3.26.1 Affected Environment

The City of Milwaukee, Milwaukee County, MPS, and WDNR own parks and other public use areas adjacent to I-94 (Table 3-37 and 3-38). See Exhibit 3-26 for locations of these parks and public use areas.

It has been determined that all the parks and trails that are adjacent to I-94 or cross I-94 are significant, publicly owned parks and recreation areas subject to Section 4(f). Two of the Section 4(f) properties, Doyne Park and the Oak Leaf Recreational Trail, are also subject to the requirements of Section 6(f) of the Land and Water Conservation Fund (LWCF) Act, as amended (16 USC 4601), because Milwaukee County used LWCF grants to develop the park and trail. These areas are described in detail in Section 4. One exception is the Hank Aaron State Trail extension, which is described in this section.

American Family Field is discussed in Section 3.7, Institutional and Public Services.

<table>
<thead>
<tr>
<th>Name and Location</th>
<th>Size or Length</th>
<th>Type of Park and/or Function</th>
<th>Ownership</th>
<th>Site Features and Characteristics</th>
<th>Subject to Section 4(f) or 6(f)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doyne Park</td>
<td>35.4 acres</td>
<td>Park and Golf Course</td>
<td>Milwaukee County</td>
<td>Open space, shrubs and trees, parking, 9-hole golf course, park building, soccer field, tot lot, basketball court, Oak Leaf Trail</td>
<td>4(f) and 6(f)</td>
</tr>
<tr>
<td>Oak Leaf Recreational Trail</td>
<td>114 miles</td>
<td>Recreational Trail</td>
<td>Milwaukee County</td>
<td>Off-road paved trails, parkways, municipal streets</td>
<td>4(f) and 6(f)</td>
</tr>
<tr>
<td>Hank Aaron State Trail</td>
<td>10 miles</td>
<td>Multi-use Trail</td>
<td>WDNR</td>
<td>Off-road paved trails and on-road routes</td>
<td>No</td>
</tr>
<tr>
<td>Hank Aaron State Trail Extension</td>
<td>0.9 mile</td>
<td>Designated Route</td>
<td>WDNR</td>
<td>On-road route</td>
<td>No</td>
</tr>
<tr>
<td>Mitchell Boulevard Park</td>
<td>16.6 acres</td>
<td>Park</td>
<td>Milwaukee County</td>
<td>Open space, native plantings, parking, picnic shelter, restrooms, tot lot, public art</td>
<td>4(f)</td>
</tr>
<tr>
<td>Story Parkway</td>
<td>8 acres</td>
<td>Parkway</td>
<td>Milwaukee County</td>
<td>Open area, American Family Field Pedestrian Walkway, sidewalk</td>
<td>4(f)</td>
</tr>
<tr>
<td>Bluff Park</td>
<td>4 acres</td>
<td>Wooded Area</td>
<td>WDNR</td>
<td>Shrubs and trees, American Family Field Pedestrian Walkway, Yount Drive, sidewalk</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table 3-37. Parks and Recreation Resources Adjacent to I-94

<table>
<thead>
<tr>
<th>Name and Location</th>
<th>Size or Length</th>
<th>Type of Park and/or Function</th>
<th>Ownership</th>
<th>Site Features and Characteristics</th>
<th>Subject to Section 4(f) or 6(f)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Family Field</td>
<td>227 acres</td>
<td>Professional Baseball Park</td>
<td>Southeast Wisconsin Professional Baseball District and Milwaukee Brewers</td>
<td>American Family Field Stadium, parking lots, access roads, Helfaer Field, Sausage Haus</td>
<td>No</td>
</tr>
<tr>
<td>Valley Park</td>
<td>1.5 acres</td>
<td>Park</td>
<td>Milwaukee County</td>
<td>Multi-use path, open space, tot lot, flood control structure</td>
<td>4(f)</td>
</tr>
</tbody>
</table>

### Table 3-38. Other Parks and Recreation Resources in the Study Area

<table>
<thead>
<tr>
<th>Name and Location</th>
<th>Size or Length</th>
<th>Type of Park and/or Function</th>
<th>Ownership</th>
<th>Site Features and Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juneau Playfield</td>
<td>7.6 acres</td>
<td>Community Playground</td>
<td>City of Milwaukee</td>
<td>Softball diamond, sports field, tennis courts, basketball courts, playground, concrete kickball field, and field house</td>
</tr>
<tr>
<td>65th and Stevenson Green Space</td>
<td>3.4 acres</td>
<td>Open Space</td>
<td>City of Milwaukee</td>
<td>Open space and sitting area with benches</td>
</tr>
<tr>
<td>MacDowell Montessori School Sports Field and Track</td>
<td>2 acres</td>
<td>Sports Field and Track</td>
<td>Milwaukee Public School District</td>
<td>Sports field and track</td>
</tr>
<tr>
<td>Burbank Playfield and Johnson’s Woods</td>
<td>10.7 acres</td>
<td>School Playground and Community Park</td>
<td>Milwaukee Public School District</td>
<td>Softball diamonds, playfield, wading pool, green space, trees, children’s play area</td>
</tr>
<tr>
<td>Three Bridges Park</td>
<td>24 acres</td>
<td>Park and Outdoor Education Center</td>
<td>City of Milwaukee and State of Wisconsin</td>
<td>Hiking trails, river access for fishing and canoeing, community gardens, new bike/pedestrian bridges to surrounding communities, and Mitchell Park Domes</td>
</tr>
<tr>
<td>Marquette University High School Sports Fields</td>
<td>10 acres</td>
<td>Sports Fields and Track</td>
<td>Marquette University High School</td>
<td>Sports stadium, practice fields, and tennis courts</td>
</tr>
<tr>
<td>Merrill Park</td>
<td>11.6 acres</td>
<td>Park</td>
<td>City of Milwaukee</td>
<td>Baseball diamond, two softball diamonds, football/soccer field, tennis courts, playground, field house, park shelter, wading pool, and children’s play area</td>
</tr>
<tr>
<td>34th Street and Mt. Vernon Play Area</td>
<td>0.2 acre</td>
<td>Play Area</td>
<td>City of Milwaukee</td>
<td>Play area with jungle gym</td>
</tr>
<tr>
<td>Arlington Heights Park</td>
<td>1.5 acres</td>
<td>Park</td>
<td>City of Milwaukee</td>
<td>Jungle gym, playfield, and softball field</td>
</tr>
</tbody>
</table>
### Table 3-38. Other Parks and Recreation Resources in the Study Area

<table>
<thead>
<tr>
<th>Name and Location</th>
<th>Size or Length</th>
<th>Type of Park and/or Function</th>
<th>Ownership</th>
<th>Site Features and Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitchell Park</td>
<td>61 acres</td>
<td>Park and Conservatory</td>
<td>Milwaukee County</td>
<td>Horticulture conservatory, parking, basketball courts, picnic area, volleyball courts, soccer field, softball diamond, tot lot, wading pool, sports fields, pavilion, concrete stage, pond, and football field</td>
</tr>
<tr>
<td>Community Garden at 26th Street and W. Clybourn Street</td>
<td>0.5 acre</td>
<td>Community Garden</td>
<td>City of Milwaukee</td>
<td>Garden</td>
</tr>
</tbody>
</table>

#### 3.26.1.1 Hank Aaron State Trail

The Hank Aaron State Trail is a multi-use trail that crosses Milwaukee County from the lakefront near Maier Festival Park to the Oak Leaf Trail, at the Milwaukee County/Waukesha County line roughly 375 feet south of Bluemound Road. The Hank Aaron State Trail is owned by WDNR and includes 10 miles of dedicated trails and marked on-street routes. The trail is open to walkers, runners, bicyclists, and skaters and provides an off-road asphalt path from its western boundary to the 6th Street viaduct and the use of bike lanes and sidewalks from 6th Street to the lakefront. The Hank Aaron State Trail west of 37th Street is subject to the rail banking provisions of the 1983 National Trails System Act. This means that the portion of the corridor along former rail lines, even though owned by WDNR, must be maintained so that it could be returned to use as a rail corridor, if needed, at some point in the future.

The trail acquisition was funded by the WDNR Stewardship Funds. Trail construction was funded by WisDOT (including federal Congestion Mitigation and Air Quality Improvement program funds).

As part of the Zoo Interchange study, WisDOT and WDNR developed a Memorandum of Understanding and concluded the Hank Aaron State Trail’s primary use is for transportation, not recreation, thus, is not subject to Section 4(f). Also, the rail banking provisions of the National Trails Systems act and 23 CFR 774.11(h) and 23 CFR 774.13(f) support this determination.

The Hank Aaron State Trail Extension crosses under I-94 along 44th Street. Additionally, the Hank Aaron State Trail follows along the north side of Canal Street just south of I-94 near 32nd Street.

#### 3.26.2 Recreational Resource/Public Use Land Impacts

**3.26.2.1 No-build Alternative**

The No-build alternative would not acquire land from any parks or recreational resources. I-94 would not be any closer to any parks or recreational facilities under the No-build alternative.

**3.26.2.2 8- and 6-Lane Alternatives**

It is anticipated that no right-of-way would be acquired from any parks or other recreational facilities. Under the 8- and 6-lane alternatives, the westbound I-94 exit ramp to the new local road interchange within the Stadium Interchange would be closer to Valley Park than ramps in the current Stadium Interchange. However, there would be no direct or indirect impacts that would substantially impair the recreational features or attributes of Valley Park.

The on-road portion of the Hank Aaron State Trail that follows 44th Street (the Hank Aaron State Trail Extension) may be closed during reconstruction of I-94 over 44th Street. As noted previously in Section 3,
there is potential for a noise barrier to be constructed near Story Hill Residential Historic District 2 and 3. The current concept for a noise barrier would be to place the barrier along the south side of Story Parkway. A vote on the noise barrier by Story Hill residents will be held after Supplemental Final EIS approval. If a noise barrier would be built on Milwaukee County’s Story Parkway, the decision to build using right-of-way acquisition or through an easement will be determined during the final design phase.

General Mitchell Boulevard would be reconstructed in the south end of Mitchell Boulevard Park. The road would stay within its existing footprint and no right-of-way acquisition from Milwaukee County would be required.

3.26.3 Measures to Minimize and Mitigate Adverse Recreational Resource/ Public Use Land Impacts

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on recreational resources/public use land near I-94. If 44th Street is closed during construction, WisDOT and WDNR would develop a detour route for the Hank Aaron State Trail Extension that follows 44th Street. In addition, WisDOT would construct a permanent connection between the Hank Aaron State Trail and Oak Leaf Trail along 44th Street and Wells Street, traveling under I-94 east of the Stadium Interchange. WisDOT would also construct a new access point to the Hank Aaron State Trail at 64th Street, a shared-use path connecting 32nd Street with Greves Street (contingent on future electrical substation relocation plans), and a shared-use path along 25th Street to improve bicycle and pedestrian connections in the I-94 East-West Corridor (see Section 3.3.2.5).

WisDOT would purchase a temporary easement from Milwaukee County to access General Mitchell Boulevard to reconstruct it. All sidewalks and landscaping along General Mitchell Boulevard affected by the reconstruction would be restored.

3.27 Construction

This section identifies effects that would be expected during the construction phase. Construction activities for the I-94 East-West Corridor would include removing existing structures and roadways, bridge construction and widening, retaining wall construction, earthwork, utility relocations, drainage improvements, traffic control, traffic signals, barrier installation, lighting, and paving.

Many factors would influence actual construction. Although funding for construction will be committed prior to the ROD, the specific timing of the funding will not be determined until late in the final design phase, prior to the development of the Financial Plan. A Financial Plan is required for all federally-assisted projects with an estimated total cost of over $500 million, in accordance with 23 USC 106(h). The duration of construction is expected to last approximately 5 years. Like most transportation projects, construction details cannot be fully defined until design advances past the conceptual stage.

3.27.1 Construction Costs

3.27.1.1 No-build Alternative

The No-build alternative would not incur construction costs. However, the I-94 East-West Corridor would eventually need to be replaced, which would incur future construction costs, which may be higher. Replacing the I-94 East-West Corridor in its current configuration would cost an estimated $421 million in 2021 dollars. Resulting maintenance costs of the I-94 East-West Corridor under the No-build Alternative are discussed as follows.
3.27.1.2 8- and 6-Lane Alternatives

The immediate economic impact of the 8- and 6-lane alternatives would be expenditure of state and federal funds to reconstruct this segment of I-94. The cost includes such items as actual construction cost, design, real estate acquisition, utility relocation, and construction management. The cost also includes consideration of project risks. The 8-lane alternative would cost $1.19 billion to $1.28 billion in 2021 dollars; the 6-lane alternative with full interchange at Hawley Road would cost about $1.12 billion to $1.21 billion in 2021 dollars; and the 6-lane alternative with half interchange at Hawley Road would cost about $1.15 billion to $1.24 billion in 2021 dollars. The diverging diamond interchange would cost about $70 million to $90 million less than the hybrid interchange.

The cost estimate is in 2021 dollars, and the ultimate cost will be higher due to inflation. WisDOT and FHWA will conduct a Cost and Schedule Risk Assessment prior to the Supplemental Final EIS/ROD, which will estimate year-of-expenditure dollars.

WisDOT prioritized minimizing impacts during design, which contributed to higher costs for the 8- and 6-lane alternatives. Designing the project to reduce costs would result in more impacts.

3.27.2 Operation and Maintenance Cost

3.27.2.1 No-build Alternative

The economic impact of the No-build alternative would be the long-term cost of maintaining this segment of I-94, including pavement resurfacing or replacement, and bridge rehabilitation or replacement. The No-build alternative would have continual repair and maintenance costs, but a value is difficult to determine. As the facility continues to deteriorate, the level of effort and associated costs would increase. Increased traffic volumes, particularly heavy trucks, would contribute to the frequency of required pavement maintenance. The public and local governments would experience increased costs associated with crashes compared to the 8- and 6-lane alternatives given the increased demand on ancillary roads and alternate routes.

3.27.2.2 8- and 6-Lane Alternatives

Maintenance costs under the 8- and 6-lane alternatives would be less than for the No-build alternative because the pavement and bridges would be new, but a value is difficult to determine. Snow removal costs would be higher for the 8- and 6-lane alternatives than for the No-build alternative.

3.27.3 Construction Employment

Substantial short-term economic impacts would result from the 8- and 6-lane alternatives compared to the No-build alternative. The impacts may be measured by increases in state output/economic activity, employment, and job earnings. Construction expenditures would occur over the duration of construction, directly creating new demand for construction materials and jobs. The direct impacts would lead to indirect or secondary economic impacts, as output from other industries increases to supply the construction industry.

The direct and indirect impacts of construction expenditures cause firms in all industries to employ more workers, leading to induced impacts as the additional wages and salaries paid to workers lead to higher consumer spending, creating new demand in many other economic sectors.

The construction job opportunities for this project will consist of a combination of new jobs and shifting of existing construction jobs to this project. The following types of construction jobs are required for this project:
• Concrete workers
• Truckers
• Heavy equipment operators
• Electricians
• Iron workers
• General laborers
• Engineers
• Landscapers

Based on the Infrastructure Investment and Jobs Act (IIJA), P.L. 117-58 FHWA allows States and other recipients and subrecipients to utilize local or other geographic and economic hiring preferences on their Federal-aid highway projects. In addition, similar WisDOT projects have historically invested in Disadvantaged Business Enterprise (DBE) firms (minority owned). As of mid-2021, the Zoo Interchange project utilized over 100 DBE firms, with over $120 million in contracts. Local businesses benefit from this work as DBE firms are very often local firms.

3.27.4 Construction Impacts

The discussion in this section pertains to the 8- and 6-lane alternatives. If the No-build alternative were selected, no construction impacts, other than regular maintenance, would occur in the short term. However, WisDOT would have to perform maintenance on this segment of I-94 more frequently and eventually replace it, resulting in periodic lane closures, construction noise, dust, and other impacts as portions of freeway are replaced.

3.27.4.1 Noise

Noise will be generated by construction equipment used to reconstruct I-94 and portions of the local roadway system. Typical construction equipment would include dump trucks, graders, cranes, bulldozers, pile-driving equipment, and pavement construction equipment. The noise generated by the construction equipment will vary greatly, depending upon the equipment type and model, mode and duration of operation, and specific type of work effort; however, typical noise levels may occur in the 75 to 95 dB range (at 50 feet). Other distance-typical noise level ranges are shown in Table 3-39.

Variations in building setbacks and land use, local intensity of specific construction activities, and sequencing and timing of construction will result in varying degrees of exposure to construction noise and hence varying levels of resulting impacts. Adverse impacts related to construction noise are anticipated to be of a localized, temporary, and transient nature. Construction noise would be controlled in accordance with WisDOT Facilities Development Manual Procedure 23-40-1.

To reduce the potential impact of construction noise, special WisDOT provisions would require operation of motorized equipment in compliance with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. All motorized construction equipment would be required to have mufflers constructed in accordance with the equipment manufacturer’s specifications or a system of equivalent noise-reducing capacity. WisDOT would also require that mufflers and exhaust systems be maintained in good operating condition, free of leaks and holes. In addition, where possible, noise walls will be constructed prior to most mainline construction.
Table 3-39. Construction Noise/Distance Relationships

<table>
<thead>
<tr>
<th>Distance from Construction Site (feet)</th>
<th>Range of Typical Noise Levels (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>82-102</td>
</tr>
<tr>
<td>50</td>
<td>75-95</td>
</tr>
<tr>
<td>100</td>
<td>69-89</td>
</tr>
<tr>
<td>200</td>
<td>63-83</td>
</tr>
<tr>
<td>300</td>
<td>59-79</td>
</tr>
<tr>
<td>400</td>
<td>57-77</td>
</tr>
<tr>
<td>500</td>
<td>55-75</td>
</tr>
<tr>
<td>1000</td>
<td>49-69</td>
</tr>
</tbody>
</table>

Sources: USEPA and WisDOT

3.27.4.2 Vibration

Groundborne vibration has the potential to affect nearby buildings. Impact pile driving are associated with high levels of vibration. Excavation and backfilling can generate vibration that is perceptible or noticeable in nearby buildings.

Vibration created by the movement of construction vehicles such as graders, loaders, dozers, scrapers, and trucks generally is the same order of magnitude as the vibration caused by heavy vehicles traveling on streets and highways. In general, groundborne vibration from vehicles on streets is not sufficient to impact adjacent buildings.

Buildings that are in good structural condition would likely not be affected by construction-related vibration. WisDOT will coordinate with adjacent property owners prior to construction to determine if any buildings near construction areas are in poor structural condition. WisDOT will meet City of Milwaukee vibration ordinances.

There is some concern regarding vibration impacts to grave markers at the Wood National Cemetery. Mitigation for this potential impact is discussed in Section 3.24.4.

3.27.4.3 Air Quality (Emissions and Dust)

Demolition and construction activities can result in short-term increases in dust and equipment-related particulate emissions in and around the study area. Equipment-related particulate emissions could be minimized if the equipment is well maintained. The potential air-quality impacts will be short-term, occurring only while demolition and construction work is in progress and local conditions are appropriate.

Air quality impacts during construction would be generated by motor vehicle, machinery, and particulate emissions resulting from earthwork and other construction activities. Construction vehicle activity and the disruption of normal traffic flows may result in increased motor vehicle emissions within certain areas. Construction vehicle emission impacts could be mitigated through implementing and maintaining a comprehensive traffic control plan, enforcing emission standards for gasoline and diesel construction equipment, and stipulating that unnecessary idling and equipment operation is to be avoided.
Several air-quality construction mitigation best practices are available to assist in reducing diesel emission impacts from construction equipment. Off-road diesel engines can contribute significantly to the levels of particulate matter and nitrogen oxides in the air. In recent years, USEPA has set emissions standards for engines used in most new construction equipment. However, construction equipment can last for a long time, and it may take several years before all equipment is furnished with engines that meet USEPA standards. To address this, WisDOT and FHWA can implement several strategies to reduce emissions from the older engines that are in operation today, which are discussed as follows.

Reducing pollutant emissions from older off-road diesel engines can occur through a variety of strategies, including the following: reducing idling, properly maintaining equipment, using cleaner fuel, and retrofitting diesel engines with diesel-emission control devices. By reducing unnecessary idling at the construction site, emissions will be reduced, and fuel will be saved. Proper maintenance of the diesel engine will also allow the engine to perform better and emit less pollution through burning fuel more efficiently. Switching to fuels that contain lower levels of sulfur reduces particulate matter. Using ultra-low sulfur diesel does not require equipment changes or modification. Using fuels that contain a lower level of sulfur also tends to increase the effectiveness of retrofit technologies. Retrofitting off-road construction equipment with diesel-emission control devices can reduce particulate matter, nitrogen oxides, carbon monoxide, or hydrocarbons, in addition to other air pollutants. Diesel particulate filters can be used to physically trap and oxidize particulate matter in the exhaust stream, and diesel oxidation catalysts can be used to oxidize pollutants in the exhaust stream (USEPA 2008b). In the final design phase, WisDOT will consider including the measures on a voluntary or mandatory basis. USEPA’s comments on the 2016 Draft EIS suggested several measures to reduce diesel emissions from construction equipment during construction. WisDOT will coordinate with WDNR to consider these additional measures for inclusion in contract specifications (2016 Final EIS; Appendix E, letter E-10).

Fugitive dust impacts generated by construction would be mitigated by standard dust control measures. The measures may include the frequent watering of construction sites that have large expanses of exposed soil, watering debris generated during the demolition of existing structures, washing construction vehicle tires before they leave construction sites, and securing and covering equipment and loose materials prior to travel.

Dust control during construction would be accomplished in accordance with WisDOT’s Standard Specifications for Highway and Structure Construction (WisDOT 2022), which requires applying water or other dust control measures during grading and on haul roads. The location and operation of concrete batch plants would be in accordance with the Standard Specifications, and any special provisions developed during coordination with WDNR regarding air-quality standards and emissions. Any portable-material plants would be operated in accordance with WDNR air-quality requirements/guidelines. Demolition and disposal of residential or commercial buildings is regulated under WDNR’s asbestos renovation and demolition requirements (Wisc. Admin. Code, Ch. NR 447).

### 3.27.4.4 Traffic/Conceptual Construction Staging

**Construction Related Traffic Diversion**

During construction, traffic would be diverted from this segment of I-94, especially if interchange ramps are closed for extended periods. Other freeways and local streets will experience increased traffic volumes during construction as a result. Once a preferred alternative is identified, WisDOT will begin developing the construction staging plan. After the construction staging plan is developed, WisDOT will analyze how much traffic would be diverted from I-94 and the routes to which the traffic would divert. Preliminary TMP impacts have been assessed in the draft 30% TMP Report, prepared in April 2022.
Several local streets adjacent to I-94 such as National Avenue, Greenfield Avenue, Wisconsin Avenue, and Bluemound Road would likely see an increase in traffic as vehicles divert from I-94 during construction.

**Transit, Pedestrian, and Bicycle Impacts**

MCTS Freeway Flyer routes that use I-94 would be able to pass through the I-94 construction on their normal routes. Local street closures and entrance and exit ramp closures may require bus route modifications. MCTS routes that pass over or under I-94 on local streets may be modified if the local streets are closed during construction.

Wisc. Stat. § 84.01(35) states that WisDOT shall give due consideration to establishing bikeways and pedestrian ways in all new highway construction and reconstruction projects funded in whole or in part from state funds or federal funds. Pedestrians and bicyclists that cross over or under I-94 may need to temporarily modify their routes during construction, including along the Hank Aaron State Trail Extension on 44th Street and the Hank Aaron State Trail at 70th Street. As noted, local street closures would be staged to minimize or avoid closure of adjacent streets at the same time.

**Measures to Mitigate Traffic Diversion Impacts**

During the final design phase, WisDOT and FHWA would evaluate the diversion routes to determine if improvements to the routes are necessary. In addition to roadway improvements, signal timing modifications, temporary signals, parking restrictions, intersection improvements, incident management, and demand management options may be instituted during construction to ease potential congestion and delay.

Freeway and local street lane closures would be staged to ease disruptions to the extent possible. Other mitigation measures may include the following:

- Adding MCTS buses and increasing frequencies to maintain headways, improving transit infrastructure, and providing funding to support MCTS staffing and outreach during construction.
- Holding workshops to determine methods to reduce the effects of construction on area businesses, residents, commuters, community services, and special events.
- Implementing a community involvement plan to inform the public, including radio, internet, print, and television.
- Encouraging businesses to modify their work schedules and/or shipping schedules to avoid peak traffic hours.
- Improving detour routes and other routes due to increased traffic resulting from freeway construction.

**3.27.4.5 Water Quality/Erosion**

Construction in and near waterways would be performed in accordance with WisDOT’s *Standard Specifications for Highway and Structure Construction*, Wisconsin Administrative Code Chapter NR 151—Runoff Management, and the WisDOT/WDNR Cooperative Agreement. WisDOT would obtain a WDNR

---

23 As of August 2022, MCTS Freeway Flyer Routes 44 and 79 are suspended indefinitely. Route 44U is only operation during fall and spring university semesters.
Transportation Construction General Permit to comply with TMDLs. The permit authorizes WisDOT to discharge stormwater to waterways in accordance with conditions set forth in the permit.

Appropriate techniques and BMPs, as described in the WisDOT Facilities Development Manual, would be employed to prevent erosion and to minimize siltation to environmentally sensitive resources in the study area. Erosion control devices would be installed before erosion-prone construction activities begin.

There is potential for erosion during construction as soils are disturbed by excavation and grading. WisDOT’s construction contractor would use standard erosion control devices and BMPs to reduce and control the deposit of sediment into environmentally sensitive resources before erosion-prone construction begins. The construction contractor would be required to prepare an erosion control implementation plan that includes all erosion control commitments made by WisDOT while planning and designing the project. The construction plans and contract special provisions must include the specific erosion control measures agreed on by WisDOT in consultation with WDNR. WDNR will review the Erosion Control Implementation Plan. The following measures may be used during construction:

- Minimizing the amount of land exposed at one time
- Silt fencing
- Sedimentation traps
- Dust abatement
- Turbidity barriers
- Street sweeping
- Inlet protection barriers
- Temporary seeding
- Erosion mats
- Ditch or slope sodding
- Seeding and mulching exposed soils

Under revisions to the WisDOT/WDNR Cooperative Agreement, Memorandum of Understanding on Erosion Control and Stormwater Management, following construction, disturbed land would be re-seeded with a mix of fast-growing grasses. Drainage systems would be maintained, restored, or re-established in a manner that would not impound water.

Additional impact mitigation techniques during construction would include the following, as needed, at a particular location:

- If dewatering were required, dirty water would be pumped into a stilling, or settling, basin before it would be allowed to re-enter a stream.

- Trenched-in erosion bales would be installed in areas of moderate velocity runoff; clean-aggregate ditch checks would be installed in ditches with moderate- to high-velocity runoff during and after construction; and ditches would be protected with erosion bales and matting in conjunction with seeding.

- Storing and fueling construction equipment would be done in upland areas, away from environmentally sensitive areas. Accidental spills during refueling at construction sites or as a result of an accident involving hazardous material haulers would be handled in accordance with local government response procedures. First response would be through local fire departments and emergency service personnel to ensure public safety and to contain immediate threats to the environment. Depending on the nature of the spill, WDNR would then be notified to provide additional instructions regarding cleanup and restoration of any affected resources. The cost of
cleanup operations is the responsibility of the contractor or carrier involved in the spill. Further, WisDOT’s Standard Specifications state that public safety and environmental protection measures shall be enforced by the construction contractor.

- Contractors would be required to follow WDNR guidelines for ensuring that construction equipment used in or near waterways is adequately decontaminated for zebra mussels and plant exotics, including purple loosestrife and Eurasian milfoil.

Section 3.11, Surface Water and Fishery, provides additional information regarding water quality mitigation and BMPs.

3.27.4.6 Material Source/Disposal Sites

The construction contractor is responsible for selecting material source sites for gravel and soil. Material would most likely be obtained from local quarry sites. Unusable excavated material would be disposed of by the contractor in accordance with WisDOT’s Standard Specifications for Highway and Structure Construction, or special provisions to ensure protection of wetlands and waterways. Local zoning, reclamation plans, and other approvals may be needed for material source/disposal sites.

Soil and excavated material (including vegetation) would be stockpiled or disposed of in an upland area, away from wetlands, streams, and other open water. Where applicable, silt fence would be placed between the disposal area and wetland and open water areas.

If any material sources are necessary to construct the project, appropriate erosion control measures would be applied to these sites during and following construction; and following use, such sites would be properly seeded, mulched, and protected from erosion.

Any portable materials plants would be properly treated to prevent erosion, and WDNR would be able to review site plans, including any gravel-washing operations, high-capacity wells, and site closure/restoration.

3.28 Indirect Effects

In 2016, WisDOT completed the I-94 East-West Corridor Study Indirect and Cumulative Effects Analysis report (WisDOT 2016b). For this Supplemental EIS, an additional analysis was completed to update and validate the findings of the previous indirect effects analysis. The complete Indirect and Cumulative Effects Analysis for the Supplemental Environmental Impact Statement technical report is in Appendix G.

The analysis steps for the original indirect effects analysis, summarized in the following subsections, were reviewed and updated as necessary to reflect changes to the project alternatives, current conditions, and stakeholder input, and to confirm any changes to the project’s indirect effects. Indirect effects analysis updates include the following:

- Conducted 15 supplemental stakeholder interviews in November/December 2021. The interview list was vetted with the project’s community partner groups, and many of the interviewees are the same people interviewed in 2013.

- Revised the timeframe of the analysis from 2040 to 2050

- Updated the study area inventory of notable features based on the most recent, up-to-date data

- Updated demographic data using the most recent census information

- Reviewed information and data in the context of a new regional plan, SEWRPC’s VISION 2050
• Updated/verified indirect effect determinations

The 2016 Final EIS details the previous indirect effects analysis and background information regarding how the analysis was completed. The indirect effects information in this Supplemental Draft EIS builds upon the findings from the 2016 Final EIS, and the information provided should be considered in combination with the prior conclusions.

The Council on Environmental Quality (CEQ) defines **indirect effects** as project impacts “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems” (40 CFR 1508.1(g)(2)).

The Wisconsin Department of Transportation (WisDOT) Guidance for Conducting an Indirect Effects Analysis (November 2014) was used to guide the evaluation of indirect effects for the I-94 East-West Corridor (WisDOT 2014). The WisDOT guidance is based on the methodology outlined in the National Cooperative Highway Research Program (NCHRP) Report 466, *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (NCHRP 2002).

The analysis used the following six-step methodology as provided in the guidance:

1. **Step 1—Scoping, selecting the tools/activities, and determining the study area**
2. **Step 2—Inventory the study area and notable features**
3. **Step 3—Identify the impact causing activities of the proposed project alternatives**
4. **Step 4—Identify the potentially significant indirect effects**
5. **Step 5—Analyze the indirect effects and evaluate assumptions**
6. **Step 6—Assess consequences and identify mitigation activities**

### 3.28.1 Step 1—Scoping, Selecting Tools/Activities, and Determining Study Area

**3.28.1.1 Scoping Indirect Effects**

The original indirect effects analysis completed for the Draft EIS in 2014 and Final EIS in 2016 undertook a detailed qualitative analysis based on local and regional trend data; land use, transportation, and economic development plans; natural and historic resource inventories; and input from local and regional stakeholders in accordance with WisDOT’s indirect effects guidance document.

It was determined that a new detailed analysis would not be required for the supplemental indirect effects analysis for the following reasons:

- The updated 8-lane alternative is similar to the preferred alternative evaluated in the 2016 Final EIS, and the 6-lane alternatives have a near-identical alignment as the 8-lane alternative and similar impacts.
- The geographic setting has not changed substantially because the communities and neighborhoods surrounding the project corridor are fully developed urban communities with relatively stable land

---

24 The original indirect effects analysis completed for the Draft EIS in 2014 and Final EIS in 2016 was based on the prior WisDOT guidance document from 2007 (WisDOT 2007a). The analysis steps from the 2014 guidance document remain the same, and therefore, the overall evaluation steps for the indirect effects remain valid.
use patterns and socioeconomic trends, and the project area remains a vital regional link between Milwaukee and Waukesha counties, the region’s major population and economic centers.

- The purpose and need factors for the project have not changed; only the data and information have been updated.

Furthermore, the likely indirect effect issues of the current 8- and 6-lane alternatives largely remain the same as the 2016 Final EIS. This includes concerns about the project’s potential to indirectly affect the quality of neighborhoods and the vitality of business areas adjacent to the project area, and the potential for the project to influence local and regional land use patterns. As a result, this updated indirect effects analysis uses a qualitative analysis approach informed by updated demographic data, updated local and regional land use and transportation plans, and recent input from local stakeholders.

3.28.1.2 Stakeholder Interviews

For the Supplemental EIS analysis, new stakeholder meetings were held in late 2021 to confirm the study area boundaries, update land use and economic development trends, and obtain input on the potential indirect effects of the project’s 8- and 6-lane alternatives. WisDOT chose the stakeholders based on their knowledge of land use and socioeconomic trends in the study area and in coordination with local community partners to capture a comprehensive perspective.

Based on the stakeholder interviews, common themes emerged about the study area with regard to transportation initiatives, development, and socioeconomic trends:

- Desire to reduce travel speeds and reckless driving on local arterials
- Strong focus on pedestrian and bicycle safety and connectivity, especially north-south connections crossing the freeway
- Redevelopment efforts continuing within districts and corridors identified in the original indirect effects analysis
- Ongoing efforts for neighborhood revitalization continuing within the study area communities
- Support for efficient and reliable vehicular travel and public transit to ensure transportation access for employees and freight travel

3.28.1.3 Study Area and Timeframe

Two study areas—primary and secondary—were evaluated for the indirect effects analysis in the original Draft EIS in 2014 and Final EIS in 2016. The primary study area includes portions of Milwaukee, West Milwaukee, Wauwatosa, and West Allis that are adjacent to the project corridor (Exhibit 3-27).

The secondary study area is all of Milwaukee and Waukesha counties (Exhibit 3-28). These study areas are specifically for indirect effects analysis and are not the same as other socioeconomic study areas in the EIS. The purpose of the secondary study area was to evaluate intraregional land use trends that may be influenced by the I-94 East-West Corridor. The study team included these two counties for the regional analysis because I-94 is a major transportation link between the region’s two largest counties in terms of population and employment, and past trends show that the largest movement of population and employment in the region has occurred between these two counties. It was determined that the primary and secondary study areas remain valid, because they align with potential land use and development changes that could result from the project alternatives.

In the original indirect effects analysis, the timeframe for the indirect effects analysis was 2040, which was about 20 years after the anticipated implementation of the proposed I-94 East-West Corridor.
project at that time. Twenty years is long enough for indirect effects to unfold but is not so far into the future that the effects become too difficult for the study team to reasonably anticipate, or for local and regional stakeholders to provide meaningful feedback. For the supplemental analysis, the study team reviewed local plans and available forecast information and determined that the timeframe for the updated analysis is 2050, approximately 25 years after the proposed implementation of the project. The 2050 timeframe aligns with the horizon year of VISION 2050, the region’s long-range transportation and land use plan, and is also the forecast year for traffic analyses developed to support the project. This timeframe applies for analysis of all resources considered.

3.28.2 Step 2—Inventory the Study Area and Notable Features

To update the study area inventory, the supplemental analysis includes updated socioeconomic data, local and regional plan updates, and study area trends noted during stakeholder interviews. Most data sources used for this supplemental analysis do not yet reflect the potential impacts of the ongoing COVID-19 pandemic; therefore, the long-term demographic and economic impacts of the pandemic are not yet known or are just now being studied. Therefore, WisDOT used the stakeholder interviews to understand the latest trends affecting the study areas and the potential effects to socioeconomic and land use trends from the pandemic.

3.28.2.1 Socioeconomic Data and Trends

Socioeconomic data were updated using the most recent census data. Sections 3.8 and 3.9 of this Supplemental Draft EIS provide detailed socioeconomic data. The updated data relies on 2020 Decennial Census data for counties, municipalities, and census tracts when available. 2016-2020 American Community Survey 5-year estimates were used for topics at the census tract level where Decennial Census data is not yet available. The updated data were used to determine whether the study areas have changed since the original indirect effects analysis. The Indirect and Cumulative Effects Analysis for the Supplemental Environmental Impact Statement technical report provides an extensive demographic overview.

Population

The primary study area had a population of 171,705 in 2020, a decrease of 4,227 people (2.4 percent) since 2010. This is a slight change from the original indirect effects analysis that showed an increase of 887 people (0.5 percent increase) between 2000 and 2010 for the primary study area. Table 3-40 details the population trends of the primary study area census tracts, comparing the 2010 population to the 2020 population (U.S. Census Bureau 2010b, 2020a).

Between 2010 and 2020, the populations for the Milwaukee and West Milwaukee portions of the primary study area experienced slight decreases in the population at 3.3 percent and 4.4 percent, respectively. The Wauwatosa and West Allis portions of the primary study area experienced increases in population with a 2.2 percent and 0.1 percent increase, respectively.

Table 3-40. Primary Indirect Effects Study Area Population—2000, 2010, 2020

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute</td>
<td>Percent</td>
<td>Absolute</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>City of Milwaukee</td>
<td>134,590</td>
<td>135,042</td>
<td>130,589</td>
<td>452</td>
<td>-4,453</td>
</tr>
<tr>
<td>City of West Allis</td>
<td>17,363</td>
<td>17,867</td>
<td>17,878</td>
<td>504</td>
<td>11</td>
</tr>
</tbody>
</table>
Village of West Milwaukee & 4,249 & 4,305 & 4,114 & 56 & 1.3 & -191 & -4.4 \\
City of Wauwatosa & 18,843 & 18,718 & 19,124 & -125 & -0.7 & 406 & 2.2 \\
Primary Study Area Total & 175,045 & 175,932 & 171,705 & 887 & 0.5 & -4,227 & -2.4 \\

Sources: U.S. Census Bureau, Census of Population 2000, 2010, and 2020

Milwaukee County’s population peaked in 1970 at over 1 million people. Between 2010 and 2020, Milwaukee County experienced a slight decline in population with a loss of 8,246 people (0.9 percent). Waukesha County continued with its moderate growth between 2010 and 2020, gaining 17,087 people, a gain of 4.4 percent. Table 3-41 details the historical population trends for the secondary study area (SEWRPC 2013).

### Table 3-41. Population for Milwaukee and Waukesha Counties—1960 to 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Milwaukee County</th>
<th>Waukesha County</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Change from Previous Decade</td>
</tr>
<tr>
<td></td>
<td>Absolute Number</td>
<td>Percent Change</td>
</tr>
<tr>
<td>1960</td>
<td>1,036,041</td>
<td>164,994</td>
</tr>
<tr>
<td>1970</td>
<td>1,054,249</td>
<td>18,208</td>
</tr>
<tr>
<td>1980</td>
<td>964,988</td>
<td>-89,261</td>
</tr>
<tr>
<td>1990</td>
<td>959,275</td>
<td>-5,713</td>
</tr>
<tr>
<td>2000</td>
<td>940,164</td>
<td>-19,111</td>
</tr>
<tr>
<td>2010</td>
<td>947,735</td>
<td>7,571</td>
</tr>
<tr>
<td>2020</td>
<td>939,489</td>
<td>-8,246</td>
</tr>
</tbody>
</table>

Source: SEWRPC 2013, U.S. Census Bureau 2020

Between 2010 and 2050, Milwaukee County is expected to continue to decrease its share of the regional population, from 46.9 percent of the region’s population in 2010 to 41.5 percent in 2050. Waukesha County is expected to continue to increase its regional population share from 19.3 percent in 2010 to 20.4 percent in 2050. Table 3-42 shows SEWRPC’s population projections for Milwaukee County and Waukesha County (SEWRPC 2013). The county population projections remain the same as analyzed in the original indirect effects analysis. SEWRPC reviewed the forecasts as part of the 2020 update of VISION 2050 and determined that the plan forecasts remain valid for long-range planning purposes (SEWRPC 2020a).

### Table 3-42. Population Projections—Milwaukee and Waukesha Counties—2050

<table>
<thead>
<tr>
<th>Area</th>
<th>2010</th>
<th>2050</th>
<th>Absolute Change</th>
<th>Percent Change</th>
<th>Percent of Region (2010)</th>
<th>Percent of Region (2050)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee County</td>
<td>947,735</td>
<td>976,704</td>
<td>28,969</td>
<td>3.1</td>
<td>46.9</td>
<td>41.5</td>
</tr>
<tr>
<td>Waukesha County</td>
<td>389,891</td>
<td>481,369</td>
<td>91,478</td>
<td>23.5</td>
<td>19.3</td>
<td>20.4</td>
</tr>
<tr>
<td>Region (Milwaukee, Waukesha, Kenosha, Racine, Ozaukee, Washington, and Walworth counties)</td>
<td>2,019,970</td>
<td>2,354,000</td>
<td>334,000</td>
<td>16.5</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Housing

Since 2010, the number of housing units in the primary study area has increased by 3.4 percent even though the overall population of the study area declined during this time. Table 3-43 shows the housing units in the indirect effects primary study area in 2010 compared to 2020 (U.S. Census Bureau 2010b, 2020a).

<table>
<thead>
<tr>
<th>Location</th>
<th>Housing Units (2010)</th>
<th>Housing Units (2020)</th>
<th>Absolute Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Milwaukee</td>
<td>54,914</td>
<td>56,985</td>
<td>2,071</td>
<td>3.8</td>
</tr>
<tr>
<td>City of West Allis</td>
<td>8,468</td>
<td>8,495</td>
<td>27</td>
<td>0.3</td>
</tr>
<tr>
<td>Village of West Milwaukee</td>
<td>2,460</td>
<td>2,160</td>
<td>-300</td>
<td>-12.2</td>
</tr>
<tr>
<td>City of Wauwatosa</td>
<td>8,292</td>
<td>9,030</td>
<td>738</td>
<td>8.9</td>
</tr>
<tr>
<td>Total Primary Study Area</td>
<td>74,134</td>
<td>76,670</td>
<td>2,536</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2006-2010; U.S. Census Bureau, DEC Redistricting Data, 2020

Employment

Table 3-44 outlines the employment levels for the indirect effects primary study area census tracts, comparing the 2006 to 2010 and 2012 to 2016 ACS reporting periods from the Census Transportation Planning Products files (AASHTO 2014). The data from 2012 to 2016 are the most recent data available but do not reflect recent economic trends or the COVID-19 pandemic. All primary study area communities experienced job losses between the two time periods with a total decrease of 8.3 percent.

<table>
<thead>
<tr>
<th>Location</th>
<th>Primary Study Area</th>
<th>2006–2010</th>
<th>2012–2016</th>
<th>Absolute Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Milwaukee</td>
<td></td>
<td>112,190</td>
<td>105,390</td>
<td>-6,800</td>
<td>-6.1</td>
</tr>
<tr>
<td>City of West Allis</td>
<td></td>
<td>10,835</td>
<td>8,910</td>
<td>-1,925</td>
<td>-17.8</td>
</tr>
<tr>
<td>Village of West Milwaukee</td>
<td></td>
<td>5,765</td>
<td>4,450</td>
<td>-1,315</td>
<td>-22.8</td>
</tr>
<tr>
<td>City of Wauwatosa</td>
<td></td>
<td>8,895</td>
<td>7,440</td>
<td>-1,455</td>
<td>-16.4</td>
</tr>
<tr>
<td>Primary Study Area Total</td>
<td></td>
<td>137,685</td>
<td>126,190</td>
<td>-11,495</td>
<td>-8.3</td>
</tr>
</tbody>
</table>

Source: AASHTO Census Transportation Planning Products

County employment projections did not change from the original indirect effects analysis. SEWRPC reviewed the forecasts as part of the 2020 VISION 2050 update and determined that the plan forecasts remain valid for long-range planning purposes.

Traffic analysis shows an almost even split in traffic by direction for both the morning and afternoon peak periods. This means that the I-94 East-West Corridor equally serves those who live in Milwaukee County and travel to Waukesha County for work and vice versa. As noted in a 2019 Wisconsin Department of Workforce Development technical report, Journey to Work: Commuting and “Reverse
Commuting” between Milwaukee and Waukesha Counties (Walsh 2019), more workers travel from Milwaukee County to Waukesha County than from Waukesha County to Milwaukee County. More than 25 percent of the Waukesha County workforce lives in Milwaukee County, whereas only 12 percent of the Milwaukee County workforce lives in Waukesha County. Many of these Milwaukee County residents working in Waukesha County are people who live in the I-94 East-West Corridor study area and use their vehicle on I-94 to travel to and from work. The StreetLight origin-destination data show that I-94 west of the Stadium Interchange has a higher percentage of westbound trips originating in census block groups with higher minority populations and a higher percentage of eastbound trips ending in block groups with higher minority populations. This shows that people living along the I-94 East-West Corridor in the City of Milwaukee use I-94 to access jobs west of the study area.

Racial Composition

In comparison to data in the original indirect effects analysis, the indirect effects primary study area still contains a majority-minority population at 57 percent of the population, compared to 57.1 percent in 2010 (U.S. Census Bureau 2010b, 2020b). Consistent with the original indirect effects analysis, the largest minority groups remain Hispanic and Black or African American. Between 2010 and 2020, Hispanic populations increased by 5.7 percent, while Black or African American populations decreased by 16.7 percent within the indirect effects primary study area. Table 3-45 shows the racial composition for the census tracts in the indirect effects primary study area.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Total Primary Study Area (2010)</th>
<th>Total Primary Study Area (2020)</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>74,433</td>
<td>72,798</td>
<td>-2.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>46,821</td>
<td>49,469</td>
<td>5.7</td>
</tr>
<tr>
<td>Black or African American</td>
<td>38,892</td>
<td>32,411</td>
<td>-16.7</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1,250</td>
<td>962</td>
<td>-23.0</td>
</tr>
<tr>
<td>Asian</td>
<td>7,672</td>
<td>8,432</td>
<td>9.9</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>105</td>
<td>19</td>
<td>-81.9</td>
</tr>
<tr>
<td>Other</td>
<td>273</td>
<td>268</td>
<td>-1.8</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>3,964</td>
<td>4,883</td>
<td>23.2</td>
</tr>
<tr>
<td>Total Population</td>
<td>173,410</td>
<td>169,242</td>
<td>-2.4</td>
</tr>
<tr>
<td>Total Minority Population</td>
<td>98,977</td>
<td>96,444</td>
<td>-2.6</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2010 Census of Population; U.S. Census Bureau, American Community Survey, 5-Year Estimates 2016-2020

Poverty

Table 3-46 shows the percentage of the population in poverty for the indirect effects primary study area in 2010 and 2020 (U.S. Census Bureau 2010b, 2020b). Poverty declined within the indirect effects primary study area from 30 percent in 2010 to 25.7 percent in 2020.
Table 3-46. Indirect Effects Primary Study Area—Persons in Poverty

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Milwaukee</td>
<td>34.4</td>
<td>31.1</td>
</tr>
<tr>
<td>City of West Allis</td>
<td>16.2</td>
<td>13.1</td>
</tr>
<tr>
<td>Village of West Milwaukee</td>
<td>16.7</td>
<td>12.6</td>
</tr>
<tr>
<td>City of Wauwatosa</td>
<td>6.2</td>
<td>6.4</td>
</tr>
<tr>
<td>Total Primary Study Area</td>
<td>30.0</td>
<td>25.7</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2006-2010; U.S. Census Bureau, American Community Survey, 5-Year Estimates 2016-2020

Transportation to Work

The indirect effects primary study area had a slight increase in workers who drove alone and walked to work (Table 3-47). The percentage of workers who carpooled and took public transportation modes declined slightly during this time period.

Table 3-47. Indirect Effects Primary Study Area—Modes of Transportation to Work of Workers 16 and Older

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>67.4</td>
<td>67.1</td>
</tr>
<tr>
<td>Carpool</td>
<td>13.5</td>
<td>10.7</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>7.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Walked</td>
<td>7.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Other/Worked from Home</td>
<td>3.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2006-2010; U.S. Census Bureau, American Community Survey, 5-Year Estimates 2016-2020

3.28.2.2 Land Use, Transportation, and Development Patterns

For the supplemental analysis, WisDOT reviewed land use information and local and regional plans, and conducted stakeholder interviews to update the land use and development trends analyzed in the original indirect effects analysis.

Since the original indirect effects analysis, the regional transportation and land use plan, VISION 2050, has been updated (SEWRPC 2020a). SEWRPC’s VISION 2050 guides the land use and transportation vision within the seven-county southeastern Wisconsin region that includes both the primary and secondary study areas.

Exhibit 3-29 shows the land use pattern of the primary study area, updated with 2015 land use data, the most recent data available. These general land uses, business/commercial corridors, redevelopment areas, and neighborhood revitalization areas with the primary study area remain the same as the original indirect effects analyses.
Exhibit 3-30 shows the land use pattern of the secondary study area, updated with 2015 land use data. The map shows the more urbanized and compact areas of Milwaukee County and the eastern side of Waukesha County (New Berlin, Elm Grove, Brookfield, Menomonee Falls, Waukesha) transition to areas of development surrounded by open space and agricultural land use.

**Primary Study Area**

**City of Wauwatosa**

City of Wauwatosa staff noted several areas of redevelopment occurring within the city, with most occurring in areas along the I-41 corridor, outside the primary study area.

The *City of Wauwatosa Comprehensive Plan* published in 2008 was analyzed in the original indirect effects analysis and remains the guiding document for land use and development in Wauwatosa (City of Wauwatosa 2008). Similarly, *The Village of Wauwatosa: A Strategic Development Plan* continues to guide the development of the Tosa Village as analyzed in the original indirect effects analysis (City of Wauwatosa 2014). In 2019, the city completed the Village Reconstruction & Streetscaping project that provides a new vision for the streetscaping and pedestrian experience in the Village. The *Wauwatosa East Town North Avenue Plan*, as analyzed in the original indirect effects analysis, continues to guide development, land use, and transportation along North Avenue in Wauwatosa (City of Wauwatosa 2010). The city anticipates continued investment in small-scale neighborhood-oriented businesses within this corridor, redevelopment of key sites, and ongoing rehabilitation of existing buildings.

**City of West Allis**

City of West Allis staff indicated that the community is becoming more racially diverse and they expect that trend to continue. Development interest in West Allis’ redevelopment areas remains strong with space to absorb more multi-family residential development and demand for neighborhood commercial redevelopment. The city’s central location in the region and its freeway access were noted by City staff as key factors driving business and residential demand within West Allis.

City staff noted that the city’s industrial past means that many redevelopment opportunities require cleanup of contaminated land, along with utilities and street infrastructure, which often require city support using tax increment financing. As a result, developing in West Allis can be more complex and more costly, and this can make it challenging for West Allis to compete for development with other suburban communities that do not have these challenges.

Redevelopment has continued in West Allis since the original indirect effects analysis. In the Six Points area (near 65th Street and Greenfield Avenue, 1 mile south of I-94), 177 apartments and a 20,000-square-foot medical clinic were completed in 2018 to 2019 with another multi-family development proposed. The City continues to market and support the redevelopment of various properties within the Six Points area. The Milwaukee Mile area is identified as a redevelopment area due to its highly visible land with strong potential. The Milwaukee Mile is an auto racetrack that is part of State Fair Park. As of 2022 few races are held at the speedway.

In 2021, the City updated its *2030 Comprehensive Plan* to year 2040 (City of West Allis 2021). The plan notes that over the past 10 years the City has seen growth in residential and commercial value and although the City is fully developed, property values continue to increase through various redevelopment efforts (City of West Allis 2021). In the 2040 update, the vision and goals of West Allis remain the same as the *2030 Comprehensive Plan*, which was analyzed in the original indirect effects analysis. The 2040 plan will continue to guide land use and development for the next 20 years.
The plan aims to “provide a safe and efficient multi-modal transportation network that will effectively serve the travel needs within the city and region” (City of West Allis 2021). The transportation goals within the plan focus on the development of complete streets, efficient vehicular movement, and coordination with other agencies. The comprehensive plan recommends the extension of Washington Street to connect 60th Street and 70th Street, which could support the continued redevelopment of the area.

In the supplemental interview with West Allis staff, transit service was noted as a key transportation asset for the community. Staff highlighted that MCTS service in the city has been scaled back, reducing transit coverage. Furthermore, City staff support potential future opportunities for BRT in West Allis and last-mile connections to transit.

**Village of West Milwaukee**

In line with the original analysis, the Miller Park Way corridor continues to be a focus of Village of West Milwaukee redevelopment efforts. There are two new key development areas within the village: the former Komatsu site and the former Rexnord site. The former Komatsu site is approximately 44 acres along National Avenue, about 1 mile south of I-94 near Brewers Boulevard/Miller Park Way, that will be available for redevelopment upon relocation of Komatsu’s corporate campus to the Harbor District in Milwaukee. The second major development site is Rexnord’s campus on Greenfield Avenue, which is about 1.5 miles south of I-94, west of Miller Park Way. Both of these redevelopments would likely take 5 to 10 years to fully redevelop and would require local tax increment financing support. Beyond redevelopment sites, Village staff noted strong retail vitality along Miller Park Way and a lack of space for any new residential development outside the redevelopment sites. Staff also noted recently proposed development plans including a GE Healthcare plant on Electric Avenue, about 2 miles south of I-94, west of Miller Park Way. Finally, staff highlighted freeway access as a key factor for development because it provides efficient access to the village from the region.

Since the original indirect effects analysis, West Milwaukee adopted a new comprehensive plan, the 2019 Comprehensive Plan Update (Village of West Milwaukee 2019). The updated plan notes the built-out nature of West Milwaukee as a key challenge as the village looks to grow over the next 20 years. The plan reaffirms Miller Park Way as the key anchor for commercial and industrial redevelopment. Key redevelopment areas noted within the plan include Village Center (Rexnord campus), Gateway District (Komatsu), National Avenue, and Miller Park Way. The plan envisions the Komatsu redevelopment site as a gateway destination with mixed use and commercial uses. The Rexnord redevelopment site is imagined as a village center with neighborhood-scale mixed use that can serve as a downtown for the village. The rest of the plan does not recommend major changes to land use and development because the community is largely built out except for the larger redevelopment opportunities.

**City of Milwaukee**

The City of Milwaukee’s development is guided by comprehensive planning efforts in the neighborhoods in the I-94 East-West Corridor study area. Neighborhood land use, character, and cohesion remain largely the same as discussed in the original indirect effects analysis.

According to interviews with City development staff, there is continued demand for residential homes in the city’s traditional walkable neighborhoods. These traditional walkable neighborhoods are compact, dense neighborhoods anchored by strong commercial districts such as the Lower East Side and the Third Ward. Other walkable neighborhoods in Milwaukee’s central city continue to struggle with declining

---

25 South of National Avenue, what is now Brewers Boulevard is still called Miller Park Way.
populations and challenged revitalization efforts, such as Midtown and Washington Park. The Menomonee Valley development trends are similar to the original indirect effects analysis because it continues to be an important employment center with many residents from adjacent neighborhoods employed in the valley.

Milwaukee’s downtown has seen continued strong residential demand with several multi-family developments completed in recent years, increasing the total housing units in the downtown area to over 20,000 according to local officials. The downtown has seen the development and ongoing planning of major projects in recent years such as the Deer District, the Couture, Wisconsin Center Expansion, and several multi-family residential developments. City of Milwaukee staff also expects continued strong demand for residential development near employment centers. Staff from Milwaukee Downtown, BID 21, an organization that supports the interests of the downtown Milwaukee business community, echoed these trends, noting that despite the pandemic there have been a number of residential projects moving forward in recent years. The BID staff highlighted that the locational benefits of downtown and ease of transportation access were likely factors for the demand for ongoing residential development in the downtown area. City staff anticipate that this demand will drive office-to-residential conversions in downtown and near-downtown areas in upcoming years.

WisDOT spoke to local neighborhood groups and organizations to better understand current development trends in neighborhoods outside the downtown area. VIA CDC, a community development corporation that focuses on Milwaukee’s near south side, noted a recent increase in small-business development as more local residents are looking to start their own businesses. Near West Side Partners, which represents an area north of I-94 and west of downtown and covers a large part of the I-94 East West Corridor project area, noted that anchor institutions remain key to the development trends of the neighborhood, such as Harley-Davidson, the Ambassador Hotel, Marquette University, and the Molson-Coors brewery. Menomonee Valley Partners noted that the valley is close to being fully built out with the remaining available land being mostly brownfield. A brownfield has the presence or potential presence of a hazardous substance, pollutant, or contaminant, which is more complex to develop. The Clarke Square neighborhood to the southeast of the project area is home to many local businesses along Cesar Chavez Drive. In recent years, the Clarke Square Neighborhood Initiative has worked with the Cesar E. Chavez BID to maintain and grow local businesses, including pop-up spaces to encourage small-business development.

WisDOT reexamined the following City of Milwaukee plans and noted any updates since the original analysis:

- **Near West Side Area Comprehensive Plan**: The plan was amended on January 29, 2017. The 2017 amendment included an updated North 27th Street Corridor Strategy. The strategy focuses on the development of the corridor between Highland Avenue and West St. Paul Avenue using zoning and land use; transportation; urban design and landscaping; and Crime Prevention Through Environmental Design (City of Milwaukee 2017).

- **Milwaukee West Side Area Plan**: The plan remains the same as when examined for the original indirect effects analysis (City of Milwaukee 2009a).

- **Redevelopment Plan for The Avenues West**: The plan remains the same as when examined for the original indirect effects analysis (City of Milwaukee 2009b).
• **Menomonee Valley Area Plan**: The plan was updated in 2015 and focuses on continued sustainable development that supports industry, entertainment, community, and natural resources (City of Milwaukee 2015).

• **Downtown Area Plan**: The plan is currently being updated. The update, named Connec+ing MKE, aims to “shape the next two decades of development, policies, and programs that enable a more walkable, vibrant, diverse, inclusive and resilient downtown” (City of Milwaukee 2018).

Major development projects that have been proposed or completed in Milwaukee since the original indirect effects analysis include the following:

• The Couture: A 44-story residential development in downtown Milwaukee. This project is currently under construction.

• Fiserv Forum and Deer District: A 714,000-square-foot entertainment arena with a 30-acre entertainment district surrounding the arena. The arena was completed in 2018, and the Deer District is planned for additional development.

• Wisconsin Center Expansion: A 112,000-square-foot expansion of the convention center in downtown Milwaukee. This project is under construction.

In 2018, the City of Milwaukee adopted a Complete Streets Policy. The policy defines Complete Streets as “facilities that are safe, comfortable and convenient for users of all travel modes, including walking, use of mobility aids, bicycling, riding public transportation, and driving motor vehicles.” Milwaukee’s Multimodal Transportation Department is tasked with implementing complete streets throughout the city. Recent projects within the primary study area include the Hawley Road Lane Reconfiguration, which involved new pavement markings on Hawley Road, about 1 mile north of I-94, to improve pedestrian, bicyclist, and driver safety, and the 27th Street Rapid Implementation Initiative, which used paint, colored pavement markings, and flexible posts to create curb extensions at four intersections, approximately 0.5 mile north of I-94, to increase the safety and comfort of people walking, biking, and driving. Milwaukee County’s East-West BRT, currently under construction, will travel through the primary study area in Milwaukee. Since the original indirect effects analysis, Milwaukee also started operating its streetcar, The Hop, which carries passengers between the Milwaukee Intermodal Station and Milwaukee’s Lower East Side with stops throughout downtown.

**Secondary Study Area**

**Milwaukee County**

Milwaukee County is a largely developed area with limited undeveloped land. The project team met with staff from SEWRPC to discuss development trends in the primary and secondary study areas. SEWRPC staff noted strong growth in the warehousing and industrial sector throughout the region leading to improved job growth compared to the past 20 years. In recent years the region has seen a stronger emphasis on multi-family residential developments, as opposed to single-family. In Milwaukee County, SEWRPC noted that neighborhoods with cultural and recreational amenities near downtown and easy transportation access are in high demand, whereas some other neighborhoods have struggled with divestment and its effects.

Since the completion of the original indirect effects analysis, a number of transportation improvements have moved forward within Milwaukee County, including The Hop streetcar and Milwaukee County’s BRT. In 2021, MCTS underwent a system redesign branded as MCTS NEXT. MCTS NEXT resulted in higher-frequency routes with more connection points to provide more reliable service to riders (Milwaukee County Transit System n.d.).
**Waukesha County**

Waukesha County has a mixture of urbanized areas and non-urbanized areas. To confirm land use and development trends in Waukesha County, the project team interviewed the Waukesha County Business Alliance staff. They noted strong development demand throughout Waukesha County as it continues to grow in population. Transportation was highlighted as a key development factor as companies in the region continue to hire employees and access freight mobility.

The Comprehensive Development Plan for Waukesha County, approved in 2009, remains the guiding document for development within Waukesha County and was analyzed in the original indirect effects analysis (Waukesha County Department of Parks and Land Use 2009). Municipalities throughout Waukesha County maintain separate comprehensive plans that guide development for those communities.

3.28.2.3 **Natural and Historic Resources**

Since the original indirect effects analysis, the natural resources in the indirect effects primary study area largely remain unchanged and preserved from development. Since the 2016 Final EIS, two properties in the study area have been added to the National Register:

- West St. Paul Avenue Industrial Historic District
- 16th Street Viaduct

The natural, biological, and recreational resources within the secondary study area largely remain intact since the original indirect effects analysis. According to SEWRPC, the most significant remaining natural resources in Milwaukee County are in environmental corridors. Approximately 94 percent of all primary environmental corridors within the region are protected from incompatible development.

3.28.3 **Steps 3 and 4—Identify Impact Causing Activities of the Proposed Project Alternatives and Identify Potentially Significant Indirect Effects**

3.28.3.1 **No-build Alternative**

The impact-causing activities of the No-build alternative relate to its lack of action, which does not address the purpose of and need for the project with respect to safety concerns, existing highway deficiencies, and future traffic demand. Under this alternative, congestion and vehicle crashes would continue to increase, resulting in greater travel times and less reliable travel throughout the corridor. Additionally, more commuter traffic would shift to local arterials to avoid the congested freeway, which could diminish the neighborhood and business environments along several corridors in the primary study area by increasing pedestrian-vehicle conflicts.

The No-build alternative could have indirect effects on land use because transportation mobility would decline, hindering economic development potential in the primary study area and causing development to shift to other areas of the region that are less congested and have more reliable travel times.

3.28.3.2 **Build Alternatives**

The impact-causing activities of the alternatives are as follows:

- Modernization and adding a new travel lane in each direction (8-lane alternative)
- Modernization (6-lane alternative)
• Changes to interchange access (8- and 6-lane alternatives)
• Project impacts on adjacent resources (8- and 6-lane alternatives)

The changes to mobility that would result from the project’s new travel lanes or modernization could influence decisions about local and intraregional development locations. Modifications to existing interchange access points could cause indirect land use effects by changing the economic competitiveness of an area based on whether a build alternative maintains, increases, or reduces local access to I-94. Encroachment of I-94 could indirectly affect neighborhood quality of life and the vitality of business corridors.

3.28.4 Steps 5 and 6—Analyze the Indirect Effects and Evaluate Assumptions; Assess Consequences and Identify Mitigation Activities

Step 5 evaluates the likelihood and magnitude of the indirect effects for the 8- and 6-lane alternatives and the No-build alternative. Step 6 discusses the consequences of the indirect effects identified in Step 5 that may result from the 8- and 6-lane alternatives and discusses potential mitigation measures that could be used by WisDOT and other agencies to minimize those effects.

For purposes of this document, these two steps were combined and are presented by the following types of indirect effects:

• Indirect land use effects:
  — Related to new travel lanes for the primary study area
  — Related to new travel lanes for the secondary study area
  — Related to interchange modifications for the primary study area

• Indirect encroachment alteration effects:
  — Neighborhoods
  — Businesses

3.28.4.1 Indirect Land Use Effects Introduction

The following subsections update the original indirect effects analysis and (1) evaluate the land use effects of the project’s impact-causing activities and (2) consider the magnitude of those effects.

Indirect Land Use Effects Related to New Travel Lanes—Primary Study Area

Based on supplemental stakeholder feedback and the updated inventory, the study team confirmed that the findings related to new travel lanes in the original indirect effects analysis are still valid for the primary study area. Nearly all stakeholders interviewed stated that the reconstruction and modernization of the I-94 East-West Corridor are important to the vitality of residential and business areas in the primary study area.

The improved mobility and travel time reliability of the 8-lane alternative would facilitate development within the primary study area because people and businesses would not be deterred from the area by traffic congestion. This is consistent with the findings of the 2016 Final EIS. The 6-lane alternatives would also support the economic competitiveness and vitality of the primary study area by modernizing the freeway, increasing safety and improving traffic operations compared to the No-build alternative. However, the magnitude of this effect is not expected to be substantial.

As a result, improved mobility could have the following effects within the primary study area as detailed in the original analysis:
• Maintain the economic competitiveness of the existing business districts and neighborhoods by improving access to workers and facilitating freight movement.

• Encourage redevelopment of former industrial areas and underused parcels by maintaining and improving freeway access.

• Improve the business environment along local streets by reducing traffic that diverts from the freeway to local streets, which would improve pedestrian mobility and safety and increase customer patronage of businesses.

• Support the vitality of the numerous regional cultural, recreational, and entertainment venues that draw visitors from the region and beyond.

These land use effects are expected for both the 8- and 6-lane alternatives because both alternatives would improve mobility over the No-build alternative. However, traffic analysis shows that the 8-lane alternative would result in less traffic diversion to local streets than the 6-lane alternative and, therefore, may help facilitate local community plans to enhance the neighborhood and business vitality within existing business districts. Less-congested local streets improve safety for other travel modes and potentially create opportunities for an enhanced pedestrian environment and more efficient transit and bike operations.

Although adding additional travel lanes would help facilitate planned development in the primary study area, the magnitude of this effect is not expected to be substantial. The primary study area is a fully developed urban area with established land use patterns. Also, it has an extensive arterial network and numerous connections to the regional freeway system. As a result, the incremental mobility provided by new travel lanes in this context is not likely to be great enough to substantially change land use patterns within the primary study area.

Based on stakeholder feedback, the study team determined that planned development that may be facilitated by the 8- and 6-lane alternatives would generally be seen as positive and would help implement land use plans and economic development goals within the primary study area. Planned redevelopment and neighborhood revitalization would increase local tax bases and help pay for the cost of public services that are already in place. Redevelopment that could be facilitated by the 8- and 6-lane alternatives would also increase the availability of goods and services and employment opportunities near a large population base in the primary study area. This could benefit minority and low-income populations that tend to rely more on transit trips, because most businesses within the primary study area are accessible by local transit services and in some cases by walking and biking. Furthermore, redevelopment and infill development help maintain the viability of existing urbanized areas and reduce the pressure to develop in outlying areas of the region.

**Indirect Land Use Effects Related to New Travel Lanes—Secondary Study Area**

Based on supplemental stakeholder feedback and the updated review of plans and trends in the inventory, the study team confirmed that the findings in the original indirect effects analysis are still valid for the secondary study area. The effects for the secondary study area have been updated to reflect information from VISION 2050 and current conditions.

The 8- and 6-lane alternatives would support planned development in Milwaukee County and Waukesha County because the I-94 corridor is an important regional corridor connecting the region’s two largest employment and population centers. Modernizing the freeway would improve mobility between these destinations by reducing peak period travel times for commuters and improving the reliability of freight distribution. As a result, improved mobility between Milwaukee and Waukesha counties could facilitate
additional residential and business development as planned by local governments throughout the counties.

These land use effects are expected for both the 8- and 6-lane alternatives because both alternatives would modernize the freeway and improve mobility over the No-build alternative. However, the effect of planned development is expected to be greater under the 8-lane alternative because it would reduce congestion more than the 6-lane alternative and provide more mobility and travel time reliability.

It is reasonable to assume the 8-lane alternative would support ongoing development in Waukesha County by reducing congestion and travel times. The magnitude of this development is not anticipated to be substantial compared to existing conditions or the levels of development anticipated by VISION 2050. Although the original construction of I-94 greatly improved accessibility to Waukesha County and most likely helped to facilitate the spread of development in Waukesha County, adding a new travel lane in each direction is expected to have a much smaller effect on land use patterns for three reasons:

1. I-94 throughout Milwaukee and Waukesha counties is an existing freeway corridor that is part of a mature regional transportation system that already has a high degree of accessibility via existing interchanges.
2. Travel-time savings during peak travel periods are not expected to be great enough to substantially change regional land use patterns or to substantially shift development from one area of the region to another.
3. Land use patterns and development have already been established around I-94 and other transportation corridors in the region. Because so much development has occurred, it is difficult to distinguish the role of the freeway from other factors that influence development, especially because the region already has a high level of transportation accessibility, and employment centers already are distributed throughout Milwaukee and Waukesha counties and other parts of the region.

The 6-lane alternatives would also perpetuate the redistribution of population and employment between Milwaukee and Waukesha counties because I-94 already connects the two counties and already provides access to lands in Waukesha County. In addition, Waukesha County has an established arterial network that connects to the regional freeway system, and even the less-developed portions of the county are accessible by the region’s transportation system.

It was also noted in some of the supplemental stakeholder interviews and through demographic data that there is a continued trend of residents living in downtown Milwaukee and Milwaukee County working in Waukesha County, which results in increased levels of reverse commuting. The higher level of congestion of the 6-lane alternatives could make it more challenging for downtown residents and other Milwaukee County residents to commute to other counties, especially to Waukesha County, which has the second-largest number of jobs in the region.

The primary concern raised by some local stakeholders is that adding new travel lanes could facilitate the continued redistribution of the population and employment from Milwaukee to Waukesha counties and induce development in Waukesha County. Development that may be facilitated in Waukesha County by the build alternatives, particularly under the 8-lane alternative, could increase the number of jobs that are not accessible by transit in Waukesha County. A lack of transit access affects the ability of lower-income, transit-dependent populations in the City of Milwaukee to obtain employment, and it concentrates poverty within central city neighborhoods.

The MCTS provides good coverage to employment centers within Milwaukee County. However, access to employment centers outside Milwaukee County is limited due to the lack of routes that cross the
county line, unreasonable travel times (greater than 90 minutes), or transit schedules that are not coordinated with worker shifts. Although the automobile is the dominant mode of travel for minority and low-income populations in the primary study area, these populations tend to have fewer vehicles available and, as a result, are more likely to rely on transit to get to work (SEWRPC 2020a).

The equity analysis completed for the 2020 Review and Update of VISION 2050 states that the significant improvement and expansion of transit recommended by VISION 2050 would drastically improve access to jobs by transit and expand opportunities for people without access to a vehicle including people of color, low-income populations, and people with disabilities (SEWRPC 2020a). However, the equity analysis concludes that without additional funding to implement the VISION 2050 public transit element, a disparate impact on these population groups is likely to occur within the region as access to jobs outside Milwaukee County for transit-dependent populations will continue to be limited (SEWRPC 2020a).

The equity analysis states that the funding disparity is likely to continue as current Wisconsin legislation limits local government revenue generation and WisDOT’s ability to allocate funds to different programs (SEWRPC 2020a). Under current law, WisDOT is not able to provide capital funding for transit outside traffic mitigation measures during construction projects. Also, local units of government and transit operators lack the state legislative authority to generate dedicated transit funds and form RTAs.

Despite the challenges with transit funding in the region, some transit improvements are proceeding within Milwaukee County. MCTS recently implemented MCTS NEXT to better align routes with current job centers and destinations, improve the rider experience, and create faster service with more connections. Also, with the support of a federal Small Starts grant, MCTS is constructing the state’s first BRT route, East-West BRT, with revenue service anticipated to start in 2023 that will connect downtown Milwaukee with the Regional Medical Center. At the same time, MCTS has begun planning for the system’s next BRT route generally along 27th Street, which is also expected to seek funding through the federal Small Starts grant program. In addition, the FlexRide Milwaukee pilot program was launched in February 2022 to provide on-demand service between five stops served by MCTS in Milwaukee’s north and northwest side neighborhoods and employers in the Menomonee Falls and Butler service area. A recent grant from the State of Wisconsin will allow the FlexRide program to expand to sites in the south and west suburbs.

The 30% TMP, created in early 2022, reviews potential impacts of I-94 East-West construction on MCTS services and develops conceptual mitigation measures. A conceptual mitigation program was developed based on coordination with MCTS, traffic and construction analyses, and impact assessments. The conceptual mitigation program includes measures for additional buses to maintain headways, infrastructure improvements, additional frequencies to mitigate traffic impacts and other funding to support MCTS staffing and outreach during construction. In addition, the 8-lane alternative is expected to reduce the amount of traffic that diverts to local arterial streets. Fewer vehicles on local streets improve the pedestrian environment and can help provide opportunities to implement dedicated transit infrastructure such as transit-only lanes along arterials.

As previously identified, implementation of both the 8- and 6-lane alternatives would modernize the freeway, resulting in improved mobility between Milwaukee and Waukesha counties. The alternatives could facilitate additional residential and business development as planned by local governments throughout the counties. Residential and business developments may not have access to transit systems depending on location. As mentioned previously, a few transit improvements are underway to better connect workers with jobs outside Milwaukee County. However, as stated in the SEWRPC VISION 2050 equity analysis, the transit funding disparity is likely to continue.
The 2016 Final EIS provides additional discussion about potential mitigation measures and responsible agencies that could address the indirect land use effects resulting from adding new travel lanes for the secondary study area.

**Indirect Land Use Effects Related to Interchange Modifications—Primary Study Area**

The primary study area land uses have developed around the existing freeway access points which are important for the continued redevelopment of business areas and ongoing revitalization of neighborhoods within the primary study area. In most areas, the 8- and 6-lane alternatives maintain existing access along I-94 and would continue to support neighborhood revitalization and planned redevelopment within the primary study area. In a few areas, access is modified or eliminated, which could result in some negative effects on development. Proposed mitigation would lessen these potential negative effects. Proposed interchange modifications are generally the same for the 8- and 6-lane alternatives except as noted in the following subsections.

**Stadium Interchange**

With the hybrid interchange, all exit ramps from I-94 to WIS 175/Brewers Boulevard would be free-flow (no traffic signals). A traffic signal on WIS 175/Brewers Boulevard would control through traffic and left turns onto I-94. With the diverging diamond interchange, northbound and southbound WIS 175/Brewers Boulevard traffic would cross to the opposite side of the roadway at two signalized intersections north and south of I-94.

With the diverging diamond interchange, northbound and southbound WIS 175/Brewers Boulevard traffic would cross to the opposite side of the roadway at two signalized intersections north and south of I-94. Traffic on WIS 175/Brewers Boulevard would drive on the opposite side of the roadway than what is customary through the interchange. This allows left turns entering I-94 to occur without stopping or crossing oncoming traffic. The diverging diamond interchange would be a 2-level interchange (not counting the local streets at the lowest level) approximately the same height as the existing interchange.

The modernization of the Stadium Interchange with either the hybrid option or diverging diamond option is not expected to have indirect land use effects because it will maintain the flow of traffic moving between the freeway and the land uses to the north and south including the Miller Park Way business district in West Milwaukee and the State Street district in Wauwatosa. In addition, the new interchange will not impact the existing interchanges along WIS 175 to the north and access points to the south of the project area.

**General Mitchell Boulevard Interchange**

I-94 access to and from General Mitchell Boulevard interchange would be reconfigured to avoid impacting the cemeteries and improve the short and unsafe merge distances on I-94.

No land use effects are expected from either interchange option because the land around the interchange is developed and the Menomonee River and Canadian Pacific Railway make access to the adjacent land challenging. Also, the area already has access through the WIS 175 interchange at Wisconsin Avenue, and the new local road interchange within the Stadium Interchange would not cause a noticeable change in traffic patterns in the area.

---

26 This information is available in Section 3.28 of the 2016 Final EIS as well as the January 2016 I-94 East-West Corridor Indirect and Cumulative Effects Analysis report that was part of the Supplementary CD Material for the 2016 Final EIS which can be accessed at: https://wisconsindot.gov/Documents/projects/by-region/se/94ew-study/supplementary-materials.pdf.
Hawley Road Interchange

Two options are being considered for the reconstruction of the Hawley Road Interchange. A full Hawley Road interchange similar to the existing configuration could be built with the 6-lane alternative only. This option would continue to support the business and neighborhood districts that rely on this access to the north and south of the freeway.

Another option under consideration is a half Hawley Road interchange with access to and from the west only. This is an option for both the 8- and 6-lane alternatives. To mitigate the traffic impacts of partially closing the Hawley Road interchange, WisDOT would extend Washington Street between 68th Street and Hawley Road in West Allis to better accommodate traffic that currently uses the Hawley Road entrance and exit ramps to and from the east.

Although the original indirect effects analysis indicated that the partial closure of the Hawley Road interchange could have a negative effect on development in the City of West Allis, current stakeholder interviews with City staff indicated that the Washington Street extension would mitigate this effect. The new road would support the city’s planned development within the Summit Place redevelopment district that seeks to revitalize the vacant former Allis-Chalmers manufacturing buildings.

Indirect Encroachment-Alteration Effects—Primary Study Area

Encroachment-alteration effects occur when a project action could potentially change the natural, cultural, historic, or socioeconomic conditions at some time in the future.

Stakeholders expressed concerns about widening the footprint of the freeway, relocations, noise, and air quality and how those impacts could affect the quality of neighborhoods and business corridors next to the freeway over time. Also, many stakeholders discussed concerns about vehicles speeding as they enter and exit freeway ramps and how that reduces safety in adjacent neighborhoods.

The 8- and 6-lane alternatives evaluated in the Supplemental EIS reflect efforts to reduce physical impacts outside the freeway right-of-way. In addition, right-of-way impacts are mostly at the interchanges, particularly the Stadium Interchange, and are similar for all the alternatives. As such, the potential for encroachment-alteration effects on neighborhoods and business districts is reduced since the original indirect effects report was prepared.

Neighborhood Encroachment-Alteration Effects

One residence would be displaced by the project (compared to eight displacements for the preferred alternative in the 2016 Final EIS). The project would also move the freeway closer to some, but not all, adjacent neighborhoods. The single residential displacement is just south of the 68th Street eastbound on-ramp to I-94. This house would be displaced under both the 8- and 6-lane alternatives.

Although the right-of-way would increase under the 8- and 6-lane alternatives, expanding the freeway generally would not encroach upon residential areas because the right-of-way impacts are largely located on the south side of the freeway away from residential neighborhoods and/or from utility corridors or undeveloped land. Neighborhoods in the 68th Street area, where the residence would be displaced, would have the greatest likelihood for encroachment-alteration effects due to neighborhoods located on both the north and south sides of the freeway.

The project would also incorporate bike and pedestrian connections into all alternatives including new connections to the Hank Aaron State Trail, new bike lanes, and new sidewalks in certain areas. During the supplemental interview process, stakeholders indicated that the trail connections along with other...
nonmotorized improvements contribute to neighborhood vitality and quality of life by providing amenities that make adjacent areas more desirable as places to live and recreate.

Local arterials serving neighborhoods would experience more traffic under the 6-lane alternative because more traffic is expected to divert from the freeway to local arterials because of expected freeway congestion with this alternative. The 8-lane alternative would reduce congestion on I-94, which would reduce the through traffic diverting to local arterials. Stakeholders expressed concerns about excess traffic along local arterials and discussed how the amount of traffic and speed of traffic creates safety concerns and makes it more challenging to implement local plans for complete streets along local arterials.

Residential areas near arterials and highways may be exposed to higher levels of transportation-related air pollutants because lower speeds and starting/stopping associated with congestion can increase the level of air pollutants in the atmosphere. In comparison to the No-build alternative, the 8- and 6-lane alternatives would reduce congestion along the freeway and minimize traffic that diverts to local streets. This would improve air quality by reducing idling and stop-and-go traffic. As mentioned previously, the 8-lane alternative is expected to have less congestion and fewer vehicles are expected to divert to local arterials; therefore, this alternative may provide more air quality benefits to nearby residential areas. Also, transportation-related air pollutants throughout the region have been declining and are expected to continue to decline through 2050 due to federal fuel and vehicle economy standards and improved emissions controls, despite anticipated increases in regional traffic volumes (SEWRPC 2020a). This trend will reduce the exposure to transportation-related air pollutants among residents in the region, including minority and low-income residents along the I-94 East-West Corridor, regardless of the alternative that is selected for I-94.

Furthermore, WisDOT would incorporate feasible and reasonable noise barriers into the project next to residential areas to mitigate noise impacts, improving neighborhood quality of life for those near the freeway. The final decision on noise barriers will be made in a later project phase with input from affected residents.

Local governments in the primary study area are also planning to improve neighborhoods. The City of Milwaukee maintains a toolkit of various neighborhood investments and housing programs and is implementing various Complete Streets projects throughout the city. West Allis, Wauwatosa, and West Milwaukee are also engaged in community revitalization and preservation through a range of planning and economic development strategies. In addition, the continued presence of neighborhood associations and community-based organizations in the primary study area help maintain a stable and cohesive neighborhood environment.

Although neighborhoods adjacent to I-94 are likely already affected by their proximity to various degrees, the project is not expected to diminish neighborhood quality of life or vitality within the primary study area. The neighborhoods west of the Stadium Interchange remain some of the City of Milwaukee’s more stable, middle-class neighborhoods that have relatively lower poverty rates, higher homeownership rates, and fairly stable population figures, which could moderate the encroachment effects. The attributes that make the neighborhoods adjacent to the freeway desirable places to live, such as a central location, close proximity to downtown, historic architecture, and compact, walkable neighborhoods, would not be changed by this project.

The project presents an opportunity to replace aging infrastructure, provide noise barriers and minimize congestion along local arterials, which may improve local air pollution from stop-and-go traffic, and enhance the pedestrian and transit environment. At the same time, access will be maintained to
neighborhoods and improved to current design standards, making conditions safer for I-94 users. New bike and pedestrian connections will also be incorporated into the project to improve local connectivity.

**Business Encroachment-Alteration Effects**

Six business relocations are anticipated for the project and are the same under the 8- and 6-lane alternatives. This is compared to 11 business displacements in the 2016 Final EIS. Of the 5 businesses that will no longer be displaced due to design refinements, four were minority-owned (St. Paul Veterinary Clinic and BP Pantry 41 gas station on 27th Street; TJ’s on 35th baron 35th Street; and Monreal’s Encore Gentlemen’s Club north of I 94 on Dana Court (just east of Hawley Road)). Although five of the business displacements are south of I-94 in the Menomonee Valley, based on input from local stakeholders, the business relocations are not expected to impact the overall business vitality of the Menomonee Valley. The business relocations are also not expected to disrupt revitalization efforts along the 27th Street corridor because the project will not impact anchor institutions throughout the Near West Side neighborhood.

WisDOT has worked closely with the Menomonee Valley Partners, the Near West Side Partners, and businesses and property owners in the area where business relocations would occur to design the freeway on- and off-ramps in a manner that best serves the needs of its users. The ramps will remain in generally the same locations between 25th and 28th Streets; however, improvements will be made to modernize the ramps to improve traffic flow and accessibility to the area, which is desired by local stakeholders. Also, the business relocations will be mitigated through WisDOT’s relocation efforts, consistent with state and federal laws, to relocate businesses to similar nearby locations.

Many local stakeholders noted that the local arterials in the primary study area experience large traffic volumes, which can diminish the vitality of business districts along these corridors. Too much congestion can discourage people from patronizing local businesses. As noted previously, the 8-lane alternative is expected to reduce the number of vehicles diverting to local arterials because it will handle more traffic along the freeway. More traffic is expected to divert to local arterials under the 6-lane alternative because more traffic congestion would remain along the freeway. As a result, the 8-lane alternative may contribute to greater business district vitality within the primary study area.

Throughout the project corridor, access to businesses will be maintained with reconstructed interchanges in generally the same configuration and location. One exception is the Hawley Road interchange, which could be rebuilt as a partial interchange with access to and from the west only under both build alternatives. This would reduce direct freeway access to the Renaissance Place offices and Summit Place Business Park in West Allis. However, the staff from the City of West Allis confirmed that the extension of Washington Street mitigates this impact and provides needed local connectivity to distribute traffic between Hawley Road and the 68th/70th Street interchanges. As a result, the half Hawley Road interchange is not expected to impact the business vitality of the area.

**3.29 Cumulative Effects**

As part of the 2014 Draft EIS and 2016 Final EIS, WisDOT completed a cumulative effects analysis. For this Supplemental EIS, the cumulative effects analysis was updated to account for changes in alternatives since the conclusion of the 2016 Final EIS. The complete *Indirect and Cumulative Effects Analysis for the Supplemental Environmental Impact Statement* technical report is in Appendix G.

The assessment methodology remains unchanged from the 2016 Final EIS. The 2016 Final EIS details the previous cumulative effects analysis, and the cumulative effects information in this Supplemental Draft EIS builds on the findings from the 2016 Final EIS.
CFR Title 40 defines cumulative effects as follows:

Cumulative effects . . . are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency . . . or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

(40 CFR 1508.1(g)(3))

This supplemental cumulative effects analysis updates the evaluation completed for the 2016 Final EIS. The analysis was updated to account for the following:

- A revised 8-lane alternative (identified as the preferred alternative in the 2016 Final EIS), a 6-lane alternative with a half interchange at Hawley Road, a 6-lane alternative with a full interchange at Hawley Road, and a diverging diamond interchange alternative at the Stadium Interchange
- Changes in direct and indirect impacts

The timeframe for cumulative analysis generally considers past projects that occurred within the past 20 years. The timeframe for the analysis of future projects was updated to the year 2050, roughly 25 years after project construction. This coincides with the design year, but also reflects the availability of data. The current regional land use and transportation plan time horizons are 2050.

Table 3-48 summarizes a current list of past, present, and future actions that occurred within the timeframe for analysis described in the preceding paragraph and, for cumulative effects, were considered in combination with the I-94 East-West Corridor. The direct impacts that resulted from past projects adhered to the laws, rules, and regulations that were in effect at the time the projects were evaluated. Appropriate mitigation measures, consistent with rules, regulations, and laws were also implemented. Information specific to conditions and trends for the resources evaluated for cumulative impacts is documented in the indirect and cumulative effects analysis prepared for the 2016 Final EIS with additional information presented in this supplemental indirect and cumulative effects analysis.

It should be noted that not all capacity expansion projects identified in SEWRPC regional plans come to fruition. Notable examples include a Calhoun Road interchange along I-94 in Waukesha County and an extension of 124th Street in Milwaukee and Waukesha counties. These projects have been part of SEWRPC plans for many years, but to date there has been no effort to implement them.

Table 3-48. List of Past, Present, and Reasonably Foreseeable Future Actions

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Action</th>
<th>Location within Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>Canal Street reconstruction</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Declining transit service levels</td>
<td>Milwaukee and Waukesha counties</td>
</tr>
<tr>
<td>Past</td>
<td>Fiserv Forum</td>
<td>Downtown Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Historic urban/suburban development</td>
<td>Milwaukee and Waukesha counties</td>
</tr>
<tr>
<td>Past</td>
<td>I-794 Lake Interchange ramp modifications and associated local road improvements (Lakefront Gateway Project)</td>
<td>Downtown Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Marquette Interchange reconstruction</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>MCTS Express Routes</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Past</td>
<td>MCTS NEXT—system redesign</td>
<td>Milwaukee County</td>
</tr>
</tbody>
</table>
Table 3-48. List of Past, Present, and Reasonably Foreseeable Future Actions

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Action</th>
<th>Location within Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>Menomonee Valley redevelopment</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Miller Park/American Family Field construction</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Milwaukee Streetcar Phase 1 Route</td>
<td>Downtown Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>MMSD flood management projects and creek restorations</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Past</td>
<td>Oak Creek Coal Power Plant expansion</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Past</td>
<td>Original construction of US 45, I-94, I-794 and I-894</td>
<td>Milwaukee and Waukesha counties</td>
</tr>
<tr>
<td>Past</td>
<td>Reconstruction and widening of I-94 North-South corridor</td>
<td>Milwaukee, Racine and Kenosha counties</td>
</tr>
<tr>
<td>Past</td>
<td>Redevelopment of former industrial areas</td>
<td>Milwaukee, West Allis, West Milwaukee, and Wauwatosa</td>
</tr>
<tr>
<td>Past</td>
<td>Speed limit change from 65 to 70 mph</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Past</td>
<td>US 41 Interstate Conversion (I-41 signing)</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Past</td>
<td>VA Campus and medical center</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Valley Power Plant conversion</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Past</td>
<td>Zoo Interchange freeway reconstruction</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Past</td>
<td>North Avenue expansion</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Past</td>
<td>Calhoun Road expansion</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Past</td>
<td>West Waukesha Bypass</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Past</td>
<td>WIS 164 expansion</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Past</td>
<td>New I-94/Drexel Avenue interchange</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Present</td>
<td>Countywide sanitary sewer repairs</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Present</td>
<td>Development of former Park East freeway corridor</td>
<td>Downtown Milwaukee</td>
</tr>
<tr>
<td>Present</td>
<td>MCTS East-West Bus Rapid Transit (E-W BRT)</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Present</td>
<td>Freeway reconstruction and rehabilitation of US 45/I-41</td>
<td>Milwaukee, Waukesha, and Washington counties</td>
</tr>
<tr>
<td>Present</td>
<td>Freeway reconstruction and modernization/expansion of I-43</td>
<td>Milwaukee and Ozaukee counties</td>
</tr>
<tr>
<td>Present</td>
<td>New I-43/Highland Road interchange</td>
<td>Ozaeke County</td>
</tr>
<tr>
<td>Present</td>
<td>Milwaukee Streetcar Lakefront Line</td>
<td>Downtown Milwaukee</td>
</tr>
<tr>
<td>Present</td>
<td>MMSD flood management and fish passage projects</td>
<td>Menomonee River watershed</td>
</tr>
<tr>
<td>Present</td>
<td>MMSD flood management of Kinnickinnic River Watershed</td>
<td>Kinnickinnic River Watershed</td>
</tr>
<tr>
<td>Present</td>
<td>MMSD flood management of Milwaukee River Watershed</td>
<td>Milwaukee River Watershed</td>
</tr>
<tr>
<td>Present</td>
<td>The Couture</td>
<td>City of Milwaukee</td>
</tr>
</tbody>
</table>
Table 3-48. List of Past, Present, and Reasonably Foreseeable Future Actions

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Action</th>
<th>Location within Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>MMSD Menomonee River restoration projects</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Future</td>
<td>Ongoing Deer District development</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Future</td>
<td>Freeway reconstruction and potential widening of I-94 through Waukesha County</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Future</td>
<td>I-794 Structures Reconstruction</td>
<td>Milwaukee County</td>
</tr>
<tr>
<td>Future</td>
<td>Lakefront Gateway Plaza</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Future</td>
<td>WIS 175 Study</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Future</td>
<td>Ongoing development in Waukesha County</td>
<td>Waukesha County</td>
</tr>
<tr>
<td>Future</td>
<td>Ongoing redevelopment of former industrial areas</td>
<td>Milwaukee, West Allis, West Milwaukee, and Wauwatosa</td>
</tr>
<tr>
<td>Future</td>
<td>Redevelopment of Milwaukee Mile at State Fair Park</td>
<td>West Allis</td>
</tr>
<tr>
<td>Future</td>
<td>Schlitz Park expansion</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Future</td>
<td>Streetcar Phase 2—Arena, Bronzeville, and Walker’s Point Extensions</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Future</td>
<td>Wisconsin Convention Center expansion</td>
<td>City of Milwaukee</td>
</tr>
<tr>
<td>Future</td>
<td>North-South Bus Rapid Transit</td>
<td>Milwaukee County</td>
</tr>
</tbody>
</table>

3.29.1 Describe the Affected Environment, and Determine the Environmental Consequences and Potential Mitigation Measures

This section describes the resources that could experience cumulative effects as a result of the 8- and 6-lane alternatives and the other past, present, and reasonably foreseeable actions listed in Table 3-48. To determine the resources that would be evaluated for cumulative effects, the study team reviewed the direct and indirect effects (Sections 3.2 through 3.28), considered stakeholder input described in Section 3.28.1.2, considered public input gathered during the December 2021 and June 2022 public involvement meetings, considered agency input obtained as part of this study, and considered the demographic, land use, and natural, recreational and historic resources information discussed in Section 3.28.2. The resources evaluated for cumulative effects in this Supplemental Draft EIS are the same as in the 2016 Final EIS and include:

- Environmental Corridors and Stream crossings
- Surface Water Quality and Quantity
- Businesses
- Neighborhoods
- Municipal Tax Base
- Historic Properties
- Regional Land Use Patterns of Transit, Land Use, and Jobs
- Air Quality
- Construction Impacts

For each resource, the analysis reviews the affected environment established as the baseline condition and the resources’ capacity to withstand stress in relation to regulatory thresholds. The environmental
consequences analysis for each resource is updated or validated based on updated direct and indirect effects of the alternatives. The analysis also updates or validates avoidance, minimization, and mitigation measures WisDOT can undertake to manage cumulative effects to the extent practical, as well as local, state, and federal ordinances and laws that can further manage effects. The findings of the analysis are summarized by resource in the following sections. No substantial cumulative effects are anticipated.

3.29.1.1 Environmental Corridors and Stream Crossings

All alternatives would cross the Menomonee River; no new crossings would be created. The construction of new bridges for the reconstructed Stadium Interchange for both the hybrid interchange and diverging diamond interchange at the Stadium Interchange would not impact the environmental corridor along the Menomonee River.

MMSD’s ongoing investment in the Menomonee River watershed and SEWRPC’s regional land use plan continue the long-term preservation of environmental corridors. The likelihood of a cumulative effect to primary environmental corridors from other development actions would be limited. Clear-spanning the river can minimize the potential direct impact and the cumulative effect of highway development in the environmental corridor. Since the 2016 Final EIS, MMSD removed the concrete bed in the Menomonee River from north of Wisconsin Avenue to I-94. The 2016 Final EIS conclusion that the project may cumulatively affect the Menomonee River environmental corridor was changed as part of this Supplemental Draft EIS to a conclusion of no cumulative effect. MMSD’s ongoing investment in the Menomonee River watershed, SEWRPC’s regional land use plan recommendations, and local plan implementation continue the long-term preservation of environmental corridors. The likelihood of a cumulative effect to primary environmental corridors from other development actions would be limited.

Potential temporary effects from construction would be avoided and minimized by using WisDOT’s *Standard Specifications for Highway and Structure Construction* (2022) and complying with Wisconsin’s Trans 401 regulations (WisDOT 2013) that oversee construction-site erosion control and stormwater management. Local governments would continue to be responsible for regulating, through land use policies, zoning, and permitting rules, development that could affect environmental corridors.

When considered with data presented in the indirect and cumulative effects analysis prepared for the 2016 Final EIS and information presented in this supplemental indirect and cumulative effects analysis for this Supplemental Draft EIS, the project, in combination with past, present, and reasonably foreseeable future actions would not cumulatively affect the Menomonee River environmental corridor.

3.29.1.2 Surface Water Quality and Quantity

Under the 8- and 6-lane alternatives, there would be more stormwater runoff because I-94 would have more pavement due to an additional lane (for 8-lane alternative only), wider shoulders in some locations, and longer on- and off-ramps. The 6- and 8-lane alternatives would increase the impervious area by 25 percent or 31 percent, respectively. This would be less than a 0.1 percent increase to the total amount of impervious surface in the Menomonee River watershed.

The percent increase in impervious surface under the 8- and 6-lane alternatives is less than the preferred alternative from the 2016 Final EIS. The conclusion that the project would not cumulatively impact water quality and quantity, after mitigation, remains the same. WisDOT would use BMPs to reduce the level of pollutants in stormwater runoff compared with existing conditions and provide the opportunity to bring I-94 and the local roadway system in compliance with Wisconsin’s stormwater management regulations. BMPs can also minimize the amount of runoff entering water bodies and reduce flow velocity. The use of retention/detention basins to manage stormwater from the proposed
improvement is being evaluated along all sections of the project as the most practical and efficient practice.

Compared with the No-build alternative, implementing BMPs for stormwater control under the 8- and 6-lane alternatives could mitigate the direct effects of existing and increased stormwater runoff, which would reduce the cumulative effects of past projects and other reasonably foreseeable future roadway projects, resulting in overall fewer effects than the current condition as a result of project implementation. These measures, which would include stormwater retention, focus on stormwater quality but have a secondary benefit of managing stormwater volume.

WDNR and local governments are responsible for monitoring the performance of stormwater management measures and taking corrective actions for non-WisDOT projects. To mitigate the impact of nonpoint source runoff, NR 151 sets forth performance standards for stormwater quality-control measures. For example, 80 percent of the total suspended solids from site runoff must be removed on new construction sites 1 acre or larger. After construction, permanent measures must be in place to continue removing 80 percent of total suspended solids in stormwater runoff from the site.

The I-94 East-West Corridor Project would increase impervious area and contribute to more stormwater runoff. However, WisDOT would implement BMPs to control stormwater runoff volume and reduce the level of pollutants in runoff. Therefore, the I-94 East-West Corridor Project, in combination with past, present, and reasonably foreseeable future actions, is not expected to have a cumulative effect on surface water quality and quantity, after mitigation.

### 3.29.1.3 Businesses

The 8- and 6-lane alternatives would displace up to six active businesses, compared to 11 businesses in the 2016 Final EIS. This direct project impact, when combined with other past, present, and future freeway reconstruction projects, could cumulatively affect businesses within Milwaukee County. Southeastern Wisconsin freeway reconstruction projects in Milwaukee County that have been completed, are under construction, or are in the planning phase have impacted up to 16 businesses. Additional businesses may be relocated in Milwaukee County as the remaining segments of I-94, I-894, and I-41 are reconstructed in the future. Maintaining jobs in Milwaukee County remains important for minority and low-income populations dependent on transit because most areas of the county are accessible by transit.

When considered with data presented in the indirect and cumulative effects analysis prepared for the 2016 Final EIS and information presented in this Supplemental Draft EIS indirect and cumulative effects analysis, the business impacts are not expected to have a substantial cumulative effect on the Milwaukee County economy. Business displacements are expected to be offset by business development in other nearby areas (the project is expected to have the indirect effect of facilitating planned redevelopment within the primary study area). Adequate commercial sites are available in the City of Milwaukee such that businesses can be relocated within the city. WisDOT’s acquisition and relocation program would facilitate relocation assistance.

### 3.29.1.4 Neighborhoods

Well-established neighborhoods remain throughout the study area. Existing transportation infrastructure provides reliable access to employment and cultural centers and facilitates movement of people and goods—which encourages continued investment in neighborhoods.

Conversely, infrastructure in and adjacent to neighborhoods, particularly neighborhoods that have been impacted by past infrastructure development, can cause direct impacts such as right-of-way acquisition,
displacements, and increased air, noise and visual impacts. The combination of these impacts can negatively impact quality of life. Neighborhoods close to large infrastructure become more vulnerable to these impacts as the infrastructure expands.

The I-94 East-West Corridor project has one residential displacement (compared with eight displacements for the preferred alternative in the 2016 Final EIS). Southeastern Wisconsin freeway reconstruction projects in Milwaukee County that have been completed, are under construction, or are in the planning phase have impacted up to 33 residencies. Additional residences may be relocated in Milwaukee County as the remaining segments of I-94, I-894, I-43, and I-41 are reconstructed in the future. This is particularly true for the City of Milwaukee, which has multiple freeway corridors within its boundaries and had a substantial loss of residences from the original construction of the freeway system.

When considered with data presented in the indirect and cumulative effects analysis prepared for the 2016 Final EIS and information presented in this Supplemental Draft EIS indirect and cumulative effects analysis, the I-94 East-West Corridor project would not contribute a substantial cumulative impact to neighborhoods. Other aspects of the project can minimize the potential cumulative effect of the project. Noise barriers are feasible and reasonable along the project corridor. Traffic currently using local streets to avoid freeway congestion would also divert back to I-94 under the 8-lane alternative, potentially reducing congestion on local streets and improving air quality from less stop-and-go traffic. Improved traffic operations reduce emissions, which benefits air quality.

As roadways are reconstructed, WisDOT develops design measures that avoid and minimize impacts to adjacent neighborhoods to the greatest practicable extent. Where reasonable and feasible, noise barriers are constructed to mitigate unavoidable noise impacts. Additionally, per the Uniform Act, WisDOT will provide relocation assistance, including buying the residence, moving expenses, increased rental or mortgage payments, closing costs, and other relocation costs. Additional mitigations are developed specific to individual projects to further minimize the cumulative impact of freeway reconstruction on adjacent neighborhoods.

The I-94 East-West Corridor Project, in combination with past, present, and reasonably foreseeable future actions, is not expected to have a substantial cumulative effect on neighborhoods because direct impacts would be avoided, minimized, or mitigated, as described above.

3.29.1.5 Municipal Tax Base

The 8- and 6-lane alternatives studied as part of this Supplemental Draft EIS reduce the impact on the municipal tax base compared to the impact reported in the 2016 Final EIS. Impacts are reduced from between approximately $6.5 million and $7.6 million in assessed value loss to approximately $2.9 million. The impact on lost annual local tax revenue is reduced from between $61,000 and $71,000 to roughly $30,000. The City of Milwaukee had a full-value tax base of $31.5 billion in 2020, while the City of West Allis had a full-value tax base of $4.3 billion and the Village of West Milwaukee had a full-value tax base of $410 million (Wisconsin Department of Revenue 2021).

Although the project could cumulatively affect local government tax bases in Milwaukee County when combined with past, present, and future freeway reconstruction projects, the impact is reduced and would likely be offset by the benefit of freeway modernization on adjacent redevelopment areas. Enhanced access to these areas may help attract new investments in the area. The planned redevelopment would increase local tax bases and help pay for the cost of public services that are already in place. Build alternatives would also ease the movement of goods and access to services and employment opportunities near a large population base in the primary study area, which can enhance
business operations and potentially provide new development opportunities. Therefore, a substantial cumulative impact on the municipal tax base is not anticipated.

3.29.1.6 Historic Properties

WisDOT updated the APE and survey of historic properties in 2022 to confirm previously identified properties and identify additional potentially historic properties along I-94 and other roads that would be reconstructed as part of the project.

Two properties in the study area have been listed in the National Register since completion of the 2016 Final EIS:

- West St. Paul Avenue Industrial Historic District
- 16th Street Viaduct

During the 2016 Final EIS, FHWA and WisDOT developed measures that avoid and minimize effects on historic properties. As part of the Supplemental EIS process, Section 106 consultation has been reinitiated and is ongoing. It is anticipated that the build alternatives would be designed to have No Adverse Effect on the Soldiers’ Home NHL and Historic District. The project’s Programmatic Agreement, which was completed as part of the 2016 Final EIS and is being updated, stipulates the appropriate design review process and other steps to be taken to ensure there will be No Adverse Effect on the Soldiers’ Home NHL and Historic District. Additional avoidance and minimization measures developed for the build alternatives would have No Adverse Effect on the remaining historic properties in the APE. Although consultation is ongoing, it is anticipated that there will be No Adverse Effect to the newly designated properties as well.

The project, when combined with other past, present, and future freeway reconstruction projects, is not anticipated to cumulatively affect historic resources. Existing federal and state laws, as well as local historic preservation policies, help preserve properties that are eligible for or listed in the National Register, including NHLs, which minimizes the cumulative effect.

3.29.1.7 Regional Land Use Patterns of Transit, Land Use, and Jobs

The 2016 Final EIS concluded that the project would have a minor cumulative effect on regional land use patterns. The updated evaluation of cumulative effects on regional land use patterns considered the recommendations for the regional freeway system in southeastern Wisconsin and the status of its implementation in combination with the 8- and 6-lane alternatives for the I-94 East-West Corridor Project and the other past, present, and future actions in Table 3-48 to fully assess the potential cumulative effect to regional land uses and its consequences. The analysis of historical and current land use patterns is described in 2016 Final EIS cumulative effects analysis. This section describes updates based on SEWRPC’s VISION 2050 long-range land use and transportation plan. Consistent with the 2016 Final EIS, this Supplemental Draft EIS concludes that the I-94 East-West Corridor Project would not have a substantial cumulative effect on regional land use patterns.

The land use component of VISION 2050 recommends focusing development within planned urban service areas but recognizes that the implementation of land use recommendations relies on the local, county, state, and federal agencies, local municipal governments, and the private sector (SEWRPC 2020a). The plan update recognizes that most residential development is within planned urban service areas, but new single-family residential development is occurring at lower densities than recommended and development of prime agricultural land is occurring in locations inconsistent with the plan. SEWRPC continues to recommend land use development as described in its updated plan.
VISION 2050 continues to recommend significant improvement and expansion of the public transit system, implementing programs that improve access to suburban employment and implementing initiatives promoting transit use and improved quality of service. Although there has been a modest increase in transit service, MCTS reduced service on five freeway flyer routes and eliminated Joblines and five special service routes in response to funding shortfalls. SEWRPC also identified that without additional funding, service levels are expected to decline by about 35 percent by 2050 under the FCTS rather than increase by 100 percent as recommended in the VISION 2050 plan (SEWRPC 2020a).

As described in the 2016 Final EIS cumulative effects analysis, historical land use and transportation development have resulted in concentrating low-income residents in central city locations as people with economic means moved to suburban locations. Also, as jobs decentralized, it became increasingly difficult for transit-dependent and low-skilled workers to obtain employment in areas of the region not served by public transportation.

The changes in the regional land use pattern discussed in the 2016 Final EIS cumulative effects analysis raised concerns about the social and economic implications for portions of the population. The primary concern raised by local stakeholders during the original analysis is that adding new travel lanes to the freeway system in Milwaukee and Waukesha counties could continue to facilitate low-density development in Waukesha County and increase the number of jobs that are not accessible by transit. The American Civil Liberties Union, Sierra Club, Black Health Coalition, NAACP, MICAH, and the City of Milwaukee specifically raised the issue of the cumulative impact of highway expansion and the lack of transit investment on segregated communities of color.

Wisconsin legislation (Section 85.062(2), Wisconsin Statutes) limits WisDOT’s ability to provide capital funding for transit outside traffic mitigation measures during construction projects. WisDOT provides funds to local transit agencies for operating expenses. On average, state operating assistance covers about 34 percent of transit operating expenses statewide (Wisconsin Legislative Fiscal Bureau 2021). In 2020, nearly $68.4 million of WisDOT’s transit funding went to MCTS, representing 43 percent of MCTS’s operating budget (Wisconsin Policy Forum 2021).

A SEWRPC analysis compared the Milwaukee metropolitan area to its peer metro areas on key measures including transportation (SEWRPC 2020c). Of 28 metro areas evaluated, Milwaukee is one of the few metro areas that do not have a dedicated source of local funding for transit. The analysis concluded that although the Milwaukee area highway system performs well compared to peer areas, it lags behind with respect to public transit. The Milwaukee area has among the highest transit service levels per capita but has seen a 39 percent decline in ridership since 2010, among the most severe decline among peer areas. Other peer metro areas that do not have dedicated transit funding provide substantially less (one-fifth to one-half) service per capita when compared to Milwaukee. SEWRPC concludes that action is needed to fund transit services to avoid further service reductions to levels below other peer metro areas with no dedicated funding (SEWRPC 2020c).

SEWRPC’s VISION 2050 plan identifies equitable access as one of the key plan themes. As part of the VISION 2050 plan development and 2020 update, SEWRPC completed an equity analysis of the long-range transportation plan. The analysis concluded that no areas within SEWRPC’s planning area would disproportionately bear the impact of the planned freeway and surface arterial capacity improvements. Although VISION 2050 transit recommendations would improve transit access to goods and services for communities of color, as well as low-income populations and persons with disabilities, the analysis concluded that without additional funding for transit, a disproportionate impact to these populations is likely. SEWRPC does not have the authority to implement transit recommendations and relies on local, county, state, or special districts to implement transit investments based on local policies and available funding.
As the original cumulative effects analysis notes, the original construction of I-94 in Milwaukee and Waukesha counties in combination with post-1950s historical development patterns played a large cumulative role in the decentralization of development and jobs in the past. The study team has determined that the subsequent improvements to and widening of I-94 in Milwaukee and Waukesha counties would have a much smaller cumulative effect on regional land use patterns and redistribution of the population and employment between Milwaukee and Waukesha counties (NCHRP 2002; Boarnet and Haughwout 2000). Population, employment, and development trends observed in the original cumulative effects analysis remain valid. The 2020 update of VISION 2050 recognizes the impact of market forces on the location, intensity, and character of future urban development, as well as the role local communities play in development decisions (SEWRPC 2020a).

Several stakeholders who participated in outreach in 2021 for the updated indirect and cumulative effects analysis affirmed that freeway modernization is not the primary driving force behind housing and employment decisions within the region. The majority of stakeholders emphasized that reliable transportation infrastructure, including freeways, and maintaining transportation access are key to maintaining business investment and growing development regardless of location. In addition to freeway investment, many stakeholders, particularly in Milwaukee County, supported investment in transit and bike and pedestrian access, not only for employees, but also for the value the investment brings to improved quality of life. Refer to Appendix G for stakeholder outreach summaries.

The 2020 update to VISION 2050 notes that freeway improvements under the VISION 2050 transportation plan or the FCTS would serve areas of minority populations and low-income populations, who would benefit from improved highway accessibility to employment because the personal automobile is the dominant mode of transportation for all residents. Although the 8- and 6-lane alternatives may not have a substantial adverse cumulative effect on low-income and minority populations, the anticipated transit funding that would be available in the FCTS would likely result in a disproportionate impact to transit-dependent populations and their ability to access jobs and services.

Among recommendations to improve access to jobs and services in the region, SEWRPC’s updated VISION 2050 plan notes the following progress:

- Provide a mix of housing types near employment-supporting land uses: The update notes that providing a mix of housing types near concentrations of employment, along with a multimodal transportation system, is key to promoting accessibility to jobs. Milwaukee County has seen most of the new multifamily residential development in the region, but similar development is occurring in other counties, which may increase access to jobs. Most single-family residential development has occurred at lower-than-recommended densities, which may not improve access to jobs for moderate-wage workers. Only 25 percent of low-income housing development occurred outside Milwaukee County, and more development of this type of housing would support SEWRPC’s recommendation. Housing types are controlled by local government zoning regulations.

- Encourage and accommodate economic growth: The update recommends development of major economic activity centers to encourage growth. Fifty-one percent of new economic development occurred in major activity centers. Twenty-five percent of multifamily development occurred in 27 of 37 communities with a major economic activity center. Forty-eight percent of affordable housing constructed in communities with major activity centers since 2010 has been family units (SEWRPC 2020a).

- Develop a rapid transit network, develop commuter rail corridors and improve and expand commuter bus services, improve existing express bus service and add service in new corridors, and increase the frequency and expand the service area of local transit: Progress has been minimal in
implementing the VISION 2050 transit element. The plan recognizes that without additional revenue, the region will not be able to implement the recommended transit system. The funded portion of the transit system identified under the fiscally constrained transportation plan includes an anticipated reduction of about 10 percent in service levels from 2014 levels, despite added service including MCTS express bus routes, new streetcar service, and anticipated East-West BRT service.

- Implement programs to improve access to suburban employment centers: The update found that no additional programs were known to be created that support the last-mile journey from bus stops to employment. In 2018 the State of Wisconsin awarded approximately $2.7 million to support transportation services and vehicle purchases that connected employees to jobs in areas lacking comprehensive transit services. SEWRPC also created the Workforce Mobility Team in coordination with the Regional Transit Leadership Council to assist connections between jobs and workers in southeastern Wisconsin. The FlexRide Milwaukee service was launched in February 2022 as a pilot to connect north and northwest side residents in Milwaukee with jobs in Menomonee Falls and Butler.

Potential mitigation measures described in the original cumulative effects analysis to reduce the cumulative impact of insufficient transit access remain valid, including the following:

- Freeway Project-Related Measures: WisDOT coordinating with local transit providers and funding transit access improvements during freeway construction. As part of the Supplemental EIS, WisDOT is pledging $25 million to $30 million in transit for construction traffic mitigation.

- Regional Transit Implementation-Related Measures: Implementing regional transit recommended by VISION 2050. This mitigation would need to be implemented by the state legislature who would need to create a regional transit authority.

- Transit Funding-Related Measures: Identifying and implementing a dedicated source of transit funding. Implementation of a dedicated source of transit funding is dependent upon state legislation to create local dedicated transit funding and a renewal of adequate annual state financial assistance to transit.

- Housing: Local government implementation of VISION 2050 recommendations to help to address the existing and projected jobs/housing imbalance

- Land Use: Local government consistency with the VISION 2050 land use recommendations to help the region develop in a more compact manner that can support transit

As described above, the I-94 East-West Corridor Project would not have a substantial cumulative effect on regional land use patterns. Improving and widening I-94 is not a driving force of land use decisions in the region. Although there could be a disparate cumulative effect to transit dependent populations in combination with past, present, and reasonably foreseeable future actions, WisDOT would employ mitigation measures to improve transit access. WisDOT has committed to using $25 million to $30 million in construction mitigation funding during construction of the I-94 East-West Corridor to enhance transit during construction. WisDOT worked with MCTS to analyze all MCTS routes adjacent to I-94 and routes potentially impacted by the project to identify the direct and indirect impacts during construction. This includes routes along 35th Street, Hawley Road, 68th Street, the Purple Line along 27th Street, Greenfield Avenue/National Avenue (WIS 59), Wisconsin Avenue, and the East-West BRT line opening in 2023.

The 30% TMP, created in early 2022, reviews potential impacts of I-94 East-West construction on MCTS services and develops conceptual mitigation measures. A conceptual mitigation program was developed
based on coordination with MCTS, traffic and construction analyses, and impact assessments. The conceptual mitigation program includes measures for additional buses to maintain headways, infrastructure improvements, additional frequencies to mitigate traffic impacts, and other funding to support MCTS staffing and outreach during construction. This plan allows for flexibility during I-94 East-West construction to adjust the plan based on what measures are working well and any new measures or technology that may not currently be available. The plan also takes into consideration the potential for permanent transit facility structure measures that could serve as long-term transit system upgrades. The Draft 30% TMP plan was shared with CAC and TTAC and they were provided an opportunity to comment on the document. The plan also calls for continued community input during construction.

### 3.29.1.8 Air Quality

The study area is within the Southeastern Wisconsin Intrastate Air Quality Control Region #239. Milwaukee County remains in attainment status for five of the six criteria pollutants and has been redesignated to a maintenance area for PM$_{2.5}$ (refer to Section 3.20, Air Quality, for more information). The most recent update of SEWRPC’s FCTS, which is based on the regional land use and transportation plan (VISION 2050) conforms with air quality standards (SEWRPC 2020a).

WisDOT updated air quality analyses based on projected 2050 traffic volumes. Analyses validated the finding in the 2016 Final EIS that the I-94 East-West Corridor project will not contribute to any violation of the NAAQSs. MSAT emissions decrease with any of the build alternatives compared to existing conditions, and neither carbon monoxide (CO) nor PM$_{2.5}$ levels would exceed the air quality standards.

As noted in Section 3.20.2, the localized level of MSAT emissions for the 8- and 6-lane alternatives could be higher relative to the No-build alternative, but increased speed, reduced congestion, and traffic shifts from local streets could offset MSAT emissions. However, as shown with the MSAT results, on a regional basis, USEPA’s vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

When considered with data presented in the indirect and cumulative effects analysis prepared for the 2016 Final EIS and information presented in this Supplemental Draft EIS indirect and cumulative effects analysis, the I-94 East-West Corridor would meet air quality standards, and the findings of the air quality cumulative effects analysis, including the analysis of health effects and greenhouse gas emissions, remain valid. The cumulative effects of the 8- and 6-lane alternative are not expected to be substantial due to reduced traffic congestion.

### 3.29.1.9 Construction Impacts

WisDOT continues to reconstruct the 270-mile Southeastern Wisconsin freeway system as it nears the end of its service life. WisDOT constructed major portions of the freeway system and is planning for the reconstruction of additional segments.

Potential cumulative construction impacts include increased traffic diverted to the local street network and the lack of transit options allowing travelers to choose alternative transportation and help alleviate local street traffic congestion. Other construction-related impacts could include noise and vibration, air quality, and water quality.

Measures to avoid and minimize cumulative impacts remain valid, including the following (these measures would be implemented by WisDOT):

- Evaluating the diversion routes to determine needed route improvements. Additional congestion management measures on local roads include signal timing modifications, temporary signals,
parking restrictions, intersection improvements, incident management, and demand management options.

- Promoting transit or carpool use. And depending on additional coordination with local officials, WisDOT will spend $25 million to $30 million in transit for construction traffic mitigation.
- Holding workshops to determine methods to reduce the effects of construction on area businesses, residents, commuters, community services, and special events
- Implementing a community involvement plan to inform the public, including radio, internet, print, and television
- Improving detour routes and other routes due to increased traffic resulting from freeway construction

The cumulative effect of temporary noise and vibration impacts managed through WisDOT’s special provisions for construction include requirements for contractors to maintain equipment and operate in compliance with relevant local, state, and federal laws and regulations. Other ongoing construction projects are also typically subject to nuisance ordinances, including the City of Milwaukee’s Chapter 80 nuisance ordinance.

Adherence to USEPA dust and air emissions standards for equipment and onsite management strategies remains valid. Standard dust control measures such as onsite watering and equipment cleaning minimize impacts. For other construction projects, the City of Milwaukee’s nuisance ordinance also regulates the excessive discharge of air-polluting materials such as dust.

Cumulative effects on water quality from construction activities are managed through compliance with WisDOT’s Standard Specifications for Highway and Structure Construction, Wisconsin’s Trans 401 regulations, the WDNR Transportation Construction General Permit, and the WisDOT/WDNR Cooperative Agreement (2020). For other construction projects, existing WDNR and City of Milwaukee stormwater regulations enforce water quality.

The I-94 East-West Corridor Project, in combination with past, present, and reasonably foreseeable future actions, could have cumulative effects due to increased traffic diverted to the local street network and the lack of transit options. Other cumulative effects could include noise and vibration, air quality, and water quality. However, WisDOT adhere to local, state, and federal standards for construction and avoid and minimize potential cumulative effects; therefore, there would not be a substantial cumulative effect. Due to WisDOT’s ability to implement mitigation measures, cumulative construction related impacts are not anticipated to be substantial.

### 3.30 Relationship of Local and Short-term Uses versus Long-term Productivity

Highway construction projects require the investment or commitment of resources in the study area. Short-term uses refer to the immediate consequences of the project, whereas long-term productivity relates to direct and indirect effects on future generations.

The No-build alternative would involve minimal short-term and localized construction impacts associated with pavement and structure maintenance and spot safety improvements. Projected traffic growth in the study area would further reduce the operational efficiency of the existing highway, reducing safety, and mobility, and result in the possible loss of economic growth opportunities, within and outside the study corridor, reflecting the importance that the corridor holds on the region and state.
The following are short-term consequences of the 8- and 6-lane alternatives:

- Committing public funds to construct the highway improvements. Because highway funding is derived mainly from vehicle user fees and motor fuel taxes, motorists using the highway ultimately pay for the improvements.
- Converting residential and commercial land, wetland, and other uses to transportation uses.
- Acquiring right-of-way from some residential properties, which may result in non-conforming lot sizes and residences that are closer to I-94.
- Increasing travel time and inconvenience for through and local traffic, area residents, and businesses during the construction period.
- Generating construction noise and dust that may affect residences, schools, and businesses near construction areas.

Long-term benefits of the 8- and 6-lane alternatives include the following:

- Reduced congestion and increased safety.
- Increased operational energy efficiency.
- Added roadway capacity to address future traffic demand.
- Redevelopment potential of adjacent land.

The local short-term impacts and use of resources by the 8- and 6-lane alternatives are consistent with maintenance and enhancement of long-term productivity.

### 3.31 Irreversible and Irretrievable Commitments of Resources

The No-build alternative would involve substantial commitments of resources to maintain the existing deteriorating pavement and structures, and to make spot safety improvements. Under the 8- and 6-lane alternatives, land acquired for highway construction is considered an irreversible commitment during the time period such land is used for highway purposes. Considerable amounts of fossil fuel, labor and highway construction materials such as cement, aggregate and asphaltic material would be required. Considerable labor and natural resources would be used in the fabrication and preparation of construction materials. The resources generally are not retrievable. However, they are expected to remain in adequate supply.

Expenditure of public funds for construction of the 8- and 6-lane alternatives is considered an irretrievable commitment. In addition, land converted from private to public use would reduce local tax revenues.

As an alternative to total use of new resources, clean construction demolition materials and recycled cement or asphaltic materials will be considered. Depending on current technology available when the project would be constructed, alternative types and sources of materials may be available.

The proposed commitment of resources is based on the concept that residents in the study area, region, and state would benefit from the improved quality of the highway. Benefits, which are expected to outweigh the commitment of resources, will include improved safety, preservation of an important transportation corridor, and reduced travel times, depending on the alternative identified.
Exhibit 3-2
Existing Land Use

LEGEND
- Commercial/Industrial
- Communications and Utilities
- Parks and Open Lands
- Residential
- Governmental and Institutional

Source: SEWRPC.
NOTES: The East-West BRT will replace the GoldLine MetroExpress Route. BRT service is expected to start in 2023. As of August 2022, MCTS Freeway Flyer Routes 44 and 79 are temporarily suspended. Route 44U is only in operation during fall and spring university semesters.
Exhibit 3-8: Schools and Churches in the I-94 East-West Corridor

Legend:

1. Chinese Community Baptist Church
2. Nativity Lutheran Church
3. Fairview Evangelical Lutheran Church
4. Marian Shrine
5. Iglesia Jesucristo Alfa y Omega
6. Church of God of Prophecy
7. St. Vincent Pallotti Church
8. Sacred Heart Parish
9. Free Will Church of God
10. West Side Church of God in Christ
11. Saint Rose of Lima Roman Catholic Church
12. Our Saviour’s Lutheran Church
13. St. Paul’s Lutheran Church
14. St. Emanuel Cogic
15. Central United Methodist Church
16. Grand Avenue Congregational Church
17. Apostolic Worship Center
18. Redeemer Lutheran Church
19. Palms Branch Baptist Church
20. Christian Faith Fellowship East

Schools:
1. MATC West Campus
2. Montessori High School
3. Burbank Elementary School
4. Woodlands School
5. Hawley Environmental School
6. Marquette University High School
7. St. Rose and St. Leo Catholic School
8. Marquette University

Project Limits

Supplemental Environmental Impact Statement
Exhibit 3-10

Historic Aerial (1937) of the I-94 East-West Corridor, east of Stadium Interchange

Note: Roadways are shown in current location
NOTE: Census Tract 0108B comprises the VA Campus.
Historic Aerial (1937) of the I-94 East-West Corridor, west of Stadium Interchange

Note: Roadways are shown in current location
Minority Population in Study Area and Surrounding Communities

SOURCE: U.S. Census Bureau 2020 Decennial Census

Exhibit 3-13

Minority Population

- Milwaukee County: 482,969 (51.4%)
- City of Milwaukee: 390,803 (67.7%)
- City of Wauwatosa: 8,999 (18.6%)
- City of West Allis: 18,776 (31.1%)
- Village of West Milwaukee: 2,362 (57.4%)

Corridors:
- Travel Dispersion Corridor: 72,890 (62.8%)
- 1-Mile Corridor: 19,166 (48.8%)
- 1/2-Mile Corridor: 9,960 (49.2%)
- 1000-Foot Corridor: 4,969 (51.2%)

Municipal Boundary:

% of Total Population

- No Population
- 0.1% - 19.9%
- 20% - 39.9%
- 40% - 59.9%
- 60% - 79.9%
- 80% - 100%
Exhibit 3-14
Persons Living Below Poverty Level in Study Area and Surrounding Communities

SOURCE: U.S. Census Bureau 2016-2020 ACS 5-year Estimates
Exhibit 3-15

Access to/from I-94 near Hawley Road for 8- and 6-Lane Alternatives (Half Interchange at Hawley Road)
Existing Condition: From Story Parkway looking southeast over Yount Drive towards the Stadium Interchange, American Family Field parking areas, and the northeastern edge of American Family Field.

Simulation: Reconstructed Stadium Interchange.
Existing Condition: From Yount Drive (just east of Story Parkway) looking southeast towards entrance to American Family Field, parking areas, and the Stadium Interchange.

Simulation: Reconstructed Stadium Interchange.
Existing Condition: From 36th Street north of Park Hill Avenue looking south.

Simulation: 8- and 6-Lane Alternatives.
Existing Condition: From 32nd Street north of Park Hill Avenue looking south at I-94 overpass.

Simulation: 8- and 6-Lane Alternatives.
Existing Condition: From Wood National Cemetery (south of I-94) looking north at north parcel of Wood National Cemetery.

Simulation: 8- and 6-Lane Alternatives with connection to VA from Mitchell Boulevard south of I-94.
Exhibit 3-20
Stormwater Best Management Practices

Wet Detention Basin

Dry Detention Basin

Infiltration Devices

Grass Ditch

Trapezoidal Swale

Vegetated Rock Filter

Swale Block/Ditch Check

In-line Storage
Exhibit 3-21b
Proposed Stormwater Basins (East of Stadium Interchange)
LEGEND
- Validation Site
- Field Reading Site
- Distance from Centerline
- 500 ft Buffer
- Proposed Design

Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).

Exhibit 3-22a
8- and 6-Lane Alternatives Noise Validation Sites (Page 1 of 7)
Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).
Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).
Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).
Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).
Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).
Locations on the map identified and labeled receptor may be utilized as individual receptor locations or may be receiver locations representative of multiple receptors with the exception of properties protected by Section 4(f).
Exhibit 3-22b
Proposed Noise Barriers 8-Lane Alternative – Hybrid (Page 6 of 6)
Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 1 of 7)
Exhibit 3-22c

Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 2 of 7)
Proposed Noise Barriers 8-Lane Alternative – Diverging Diamond Interchange (Page 5 of 7)
Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 2 of 6)
Exhibit 3-22d

Proposed Noise Barriers 6-Lane Alternatives – Hybrid Interchange (Page 5 of 6)
Exhibit 3-22e

Proposed Noise Barriers 6-Lane Alternative – Diverging Diamond Interchange (Page 2 of 6)
Exhibit 3-22e

Proposed Noise Barriers 6-Lane Alternative – Diverging Diamond Interchange (Page 3 of 6)
Proposed Noise Barriers 6-Lane Alternative – Diverging Diamond Interchange (Page 4 of 6)
Exhibit 3-22e

Proposed Noise Barriers 6-Lane Alternative – Diverging Diamond Interchange (Page 5 of 6)
Exhibit 3-22e
Proposed Noise Barriers 6-Lane Alternative – Diverging Diamond Interchange (Page 6 of 6)
Exhibit 3-23
Historic Properties Located in the Area of Potential Effect

- Calvary Cemetery (BMI-0023)
- Story Hill Residential Historic District #1
- Story Hill Residential Historic District #2 and #3
- Northwestern Branch, National Home for Disabled Volunteer Soldiers National Historic Landmark
- Soldiers Home Reef National Historic Landmark
- Northwestern Branch, National Home for Disabled Volunteer Soldiers Historic District
- Paradise Theater
- 16th Street Viaduct
- West St Paul Avenue Industrial Historic District
- Project APE

Legend:
- Project APE

Scale in Feet: 0, 1,000, 2,000, 3,000, 4,000

Supplemental Environmental Impact Statement

Department of Transportation
Federal Highway Administration

Historic Properties Located in the Area of Potential Effect
LAND TRANSFER HISTORY

The original site of the Northwestern Branch contained approximately 400 acres. Over the course of the twentieth century, the VA disposed of excess land it no longer needed. By 1957, the VA had transferred approximately 125 acres in the northeast corner of the site to the county and city for the purpose of building the Milwaukee County Baseball Stadium as well as an east-west expressway (areas A, B, and C). The VA then transferred approximately 16 acres of land in the northern portion to the city in 1969 (area D). An easement covering approximately 3 acres of land in the southeastern corner of the campus was granted to the State of Wisconsin in 1971 for the expansion of 44th Street, which eventually became Highway 41 (area E). Between 1974 and 1985, nearly 46 acres of land occupied by the cemetery along the western boundary were conveyed to the National Cemetery Administration, which maintains jurisdiction of Wood National Cemetery to this day (area F). The property boundaries changed as the VA disposed of excess land. These changes are reflected in the HALS boundary, which encompasses approximately 125 acres and is delineated below.
Exhibit 3-25
Soldiers’ Home Boundaries Adjacent to I-94

LEGEND

- Northwestern Branch, National Home for Disabled Volunteer Soldiers Historic District
- Northwestern Branch, National Home for Disabled Volunteer Soldiers National Historic Landmark
Exhibit 3-26
Recreational Resources/Public Use Lands

LEGEND

- Section 4(f) Recreational Resource
- Non Section 4(f) Recreational Resource
- Park Boundaries

1. Juneau Playfield
2. 65th and Stevenson Green Space
3. MacDowell Montessori School Sports Field and Track
4. Burbank Playfield and Johnson's Woods
5. Doyne Park (Section 6(f) Resource)
6. Mitchell Boulevard Park
7. Story Parkway
8. Bluff Park
9. American Family Field
10. Valley Park
11. Marquette University High School Sports Fields
12. Merrill Park
13. 34th Street & Mt. Vernon Play Area
14. Arlington Heights Park
15. Three Bridges Park
16. Mitchell Park
17. Community Garden at 26th Street and W. Clybourn Street
18. Marquette University Sports Field and Track

Project Limits

1. Oak Leaf Trail (Section 4(f) and 6(f) Recreational Resource)
2. Hank Aaron State Trail (Non Section 4(f) Recreational Resource)
3. Hank Aaron State Trail Extension (Non Section 4(f) Recreational Resource)
4. Three Bridges Park
5. Mitchell Park
6. Community Garden at 26th Street and W. Clybourn Street
7. Marquette University Sports Field and Track

North

Supplemental Environmental Impact Statement
Exhibit 3-28
Indirect Effects Analysis Secondary Study Area

Supplemental Environmental Impact Statement