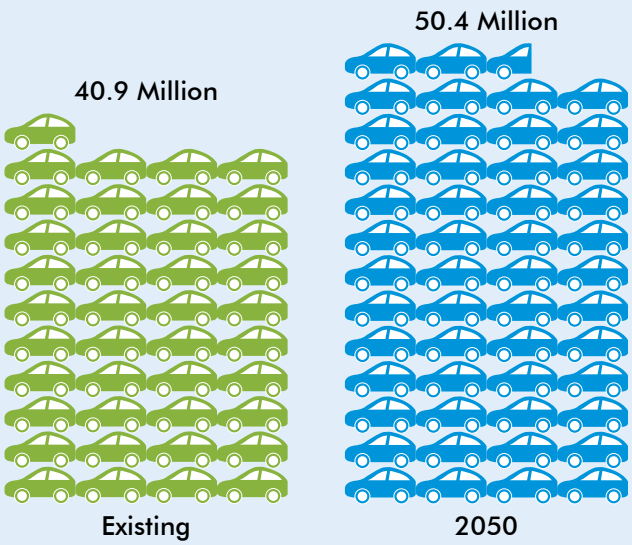
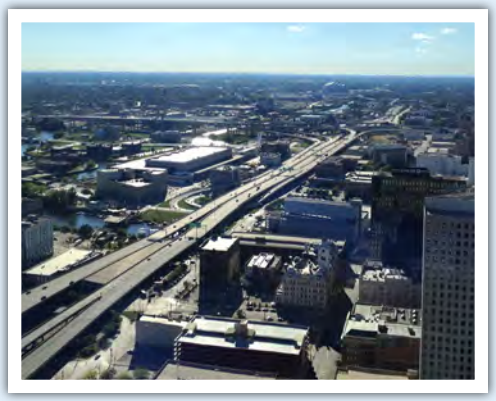
ARTERIAL STREETS & HIGHWAYS

The VISION 2050 development process considered arterial street and highway capacity expansion only after solutions such as expanded public transit, bicycle and pedestrian facilities, more efficient land use, and other strategies were considered to address congestion. VISION 2050 recommends an arterial street and highway system designed to serve the expected increase in vehicle-miles of travel in the Region of 23 percent by the year 2050, with an 8 percent increase in arterial system lane-miles over the next 34 years. The year 2050 arterial system is designed to address forecast year 2050 congestion, resulting in slightly reduced overall traffic congestion, travel time delay, and average automobile trip times when compared to current levels. In addition, implementing the recommended arterial improvements would improve overall safety and maintain the condition of the pavement and bridges along the planned arterial system.

VEHICLE–MILES OF TRAVEL (AVERAGE WEEKDAY)





Freeway (I-794) in Milwaukee
Credit: SEWRPC

WHAT ARE ARTERIAL STREETS AND HIGHWAYS?

Arterial streets and highways are streets and highways that primarily provide mobility, as opposed to access to adjacent homes and businesses. They serve the through movement of traffic and provide transportation service between major subareas of an urban area or through the area. Arterial streets and highways include freeways, which have controlled access and grade-separated interchanges, and surface arterials, which have at-grade intersections and may have driveways along them.

Surface Arterial (STH 32) in Kenosha
Credit: SEWRPC

PRESERVE VS. IMPROVE VS. EXPAND

- **Preserve: refers to maintaining the existing capacity of the through traffic lanes of a roadway when it is reconstructed**
- **Improve: means to "widen," or add capacity to the through traffic lanes of an existing roadway when it is reconstructed**
- **Expand: refers to constructing a new roadway**

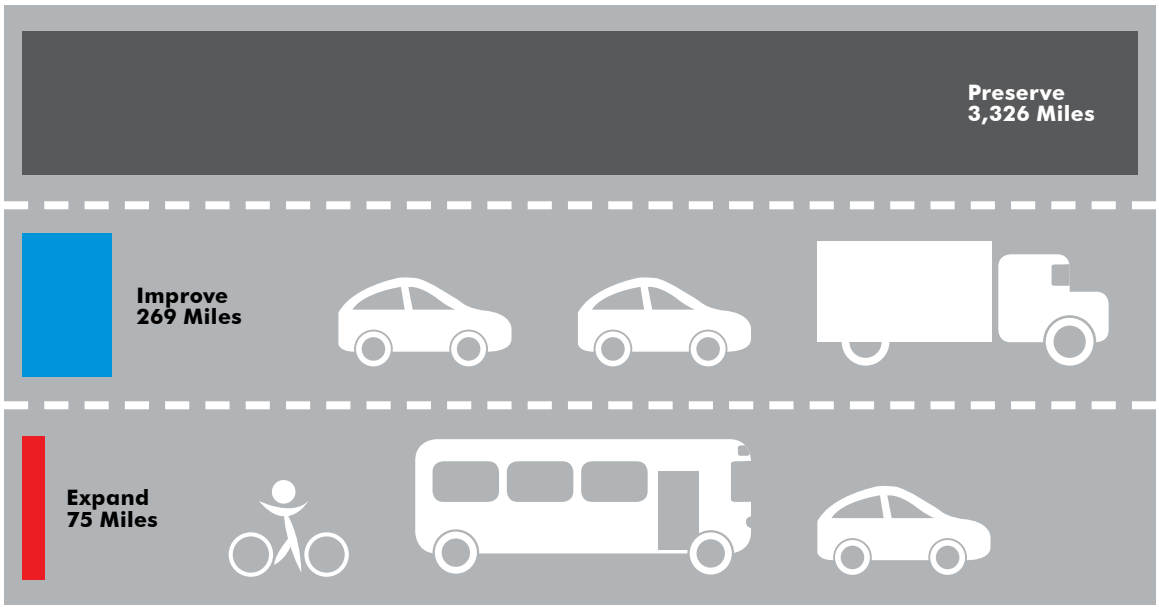
KEY RECOMMENDATIONS

➤ **Keep the Region's arterial street and highway system in a state of good repair**

Maintain the Region's arterial streets and highways—including pavement, bridges, and all other infrastructure in the roadway right-of-way—in a state of good repair to provide for safe and efficient travel. As they carry a higher level of people and goods each day, preserving the condition of arterial streets and highways is important to achieving a high standard of living for the Region's residents and for giving the Region a competitive edge in terms of retaining and attracting businesses. This is done through routine maintenance, periodic rehabilitation, and reconstruction of roadways, bridges, and other highway infrastructure.

Sound asset management practices are necessary to effectively utilize limited funding resources. When WisDOT prepares its Federally required asset management plan for the pavement and bridges of roadways on the National Highway System (NHS) in the State, the plan should also include the state trunk highways not on the NHS. Local governments in the Region should also develop and implement asset management plans for the arterial and nonarterial roadways under their jurisdiction.

3,670 MILES OF ARTERIAL STREETS AND HIGHWAYS UNDER VISION 2050



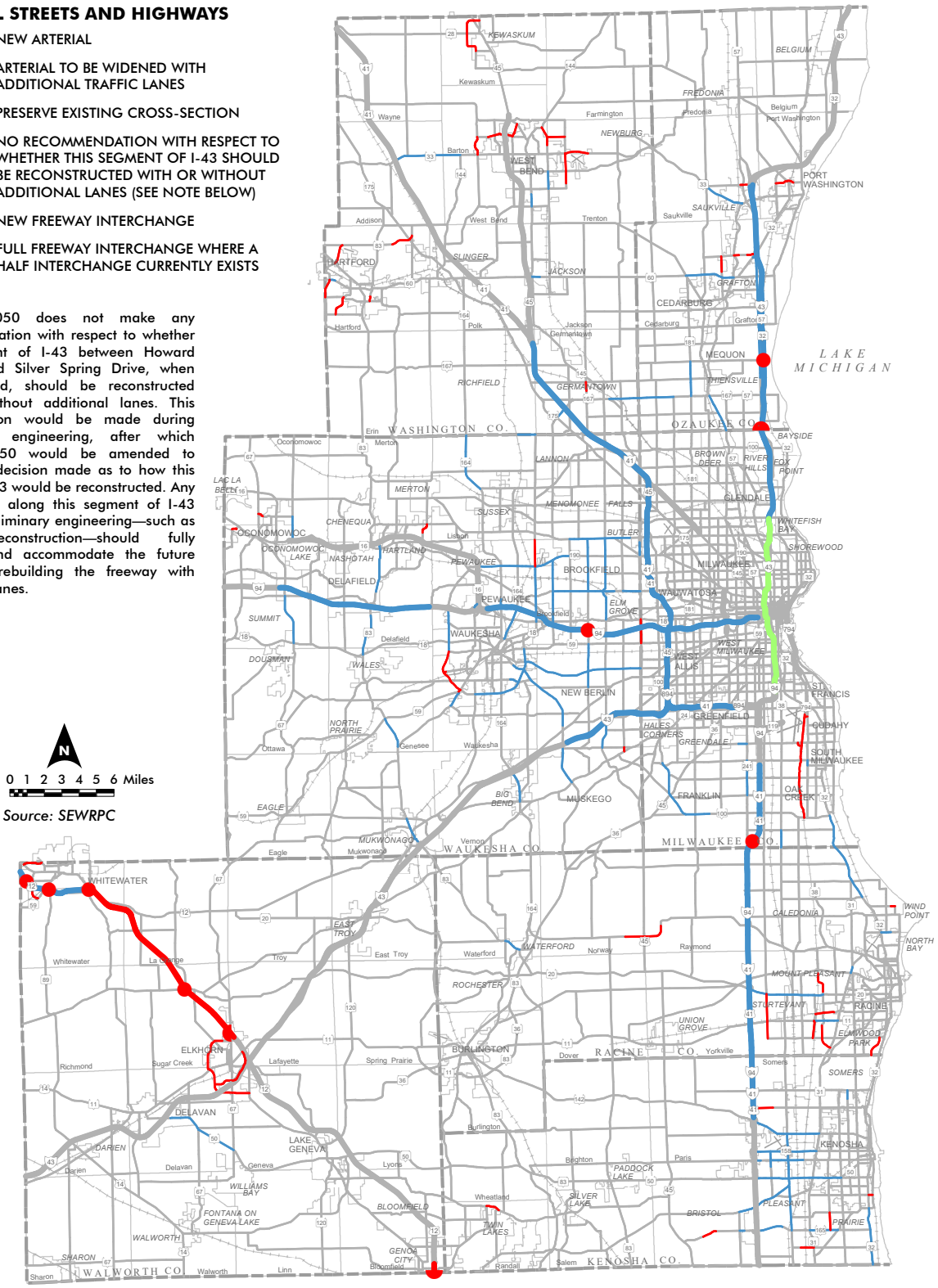
VISION 2050 ARTERIAL STREET & HIGHWAY SYSTEM

ARTERIAL STREETS AND HIGHWAYS

- NEW ARTERIAL
- ARTERIAL TO BE WIDENED WITH ADDITIONAL TRAFFIC LANES
- PRESERVE EXISTING CROSS-SECTION
- NO RECOMMENDATION WITH RESPECT TO WHETHER THIS SEGMENT OF I-43 SHOULD BE RECONSTRUCTED WITH OR WITHOUT ADDITIONAL LANES (SEE NOTE BELOW)
- NEW FREEWAY INTERCHANGE
- FULL FREEWAY INTERCHANGE WHERE A HALF INTERCHANGE CURRENTLY EXISTS

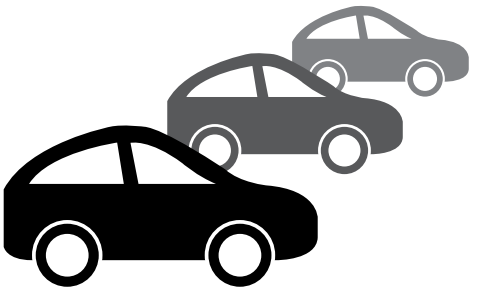
NOTE:

VISION 2050 does not make any recommendation with respect to whether the segment of I-43 between Howard Avenue and Silver Spring Drive, when reconstructed, should be reconstructed with or without additional lanes. This determination would be made during preliminary engineering, after which VISION 2050 would be amended to reflect the decision made as to how this segment I-43 would be reconstructed. Any construction along this segment of I-43 prior to preliminary engineering—such as bridge reconstruction—should fully preserve and accommodate the future option of rebuilding the freeway with additional lanes.



Source: SEWRPC

Complete Street in Charlotte
Credit: North Carolina Department of Transportation



46%

of workshop attendees in fall 2015 said it was **"VERY IMPORTANT" to address congestion on the Region's freeways.**

(compared to 34% "Somewhat Important" and 20% "Not Important")

➤ Incorporate "complete streets" concepts for arterial streets and highways

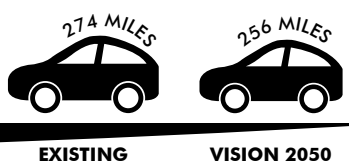
Complete streets is a roadway design concept related to providing for the safe and convenient travel of all roadway users (of all ages and abilities) traveling by various modes (walking, biking, transit, or automobile) within a road's right-of-way. Complete streets concepts should be considered as part of the construction and reconstruction of streets, and bike lanes or widened travel shoulders should be added during restriping where sufficient street width already exists.

➤ Expand arterial capacity to address residual congestion

Widen approximately 269 route-miles to provide additional through traffic lanes, representing about 7 percent of the total arterial street and highway system mileage in VISION 2050, including 101 miles of existing freeways. These recommended widenings are shown as blue lines on the map. In addition, construct 75 miles of new arterial facilities, representing about 2 percent of the total arterial system mileage, which are shown as red lines on the map. Of the total of about 344 route-miles of planned arterial capacity expansion, about 77 miles, or 22 percent, are part of a committed project—currently underway or recommended as part of a completed or nearly completed preliminary engineering study. These highway improvements are recommended to address the congestion that may not be alleviated by the land use, TSM, TDM, bicycle and pedestrian, and public transit measures included in VISION 2050.

Each arterial street and highway project will undergo preliminary engineering by the project sponsor prior to construction. Preliminary engineering will consider alternatives, including options with and without additional lanes, and VISION 2050 will be amended if necessary to reflect the conclusion of the preliminary engineering process.

ABOUT 7% **FEWER MILES** of the Region's arterial street and highway network would experience congestion during rush hour under VISION 2050 compared to today.



➤ Avoid, minimize, or mitigate environmental impacts of arterial capacity expansion

Arterial street and highway capacity expansion has been developed through the VISION 2050 planning process to avoid, if at all possible, impacts to environmentally sensitive resources. However, in instances where impacts to these areas are unavoidable, these impacts should be minimized or mitigated to preserve the Region's natural resource areas.

➤ Address safety needs on the arterial street and highway network

Minimize traffic crashes, particularly crashes involving fatalities and serious injuries, on the arterial street and highway system. Also minimize bicycle and pedestrian-related crashes, reduce conflicts between automobiles and public transit vehicles, and reduce vehicle traffic conflicts. Ways to reduce conflicts include freeway modernization, mitigating freeway congestion to reduce rear-end crashes, implementing alternative intersection types, and managing access along arterials. VISION 2050 also recommends that the Commission, working with WisDOT and local governments, develop a Regional Safety Implementation Plan (RSIP). The RSIP would identify and prioritize arterial intersections and corridors with severe crash rates, and identify measures to reduce the number and severity of crashes.

➤ Address security needs related to the arterial street and highway system

State and local governments in the Region should continue to work with the Federal government and the Commission to address the security needs related to the arterial street and highway system. Related security efforts, in which the Commission plays a supporting role, involve preventing and responding to attacks affecting the arterial system. They include conducting periodic vulnerability assessments and monitoring and strengthening vulnerable infrastructure; developing and maintaining county and local government all hazards mitigation plans; maintaining a resilient regional arterial network that provides alternative routes during disruptions; increasing transportation system resiliency to flooding; and updating and implementing evacuation route policies.

Wetland in Northwestern Walworth County
Credit: SEWRPC

FREEWAY MODERNIZATION

Modernization refers to upgrading a roadway to current design standards to increase safety and improve the roadway's efficiency.

The Region's freeway system was originally built in the 1950s, 1960s, and 1970s and has many deficiencies in design—left-hand exits and entrances, lack of shoulders, service interchanges spaced too close to freeway-to-freeway interchanges, and multipoint exits.

As the freeway system is reconstructed segment-by-segment, it should be "modernized" to address these existing design deficiencies.