

## 1.0 Executive Summary

US 151 is a major corridor in Wisconsin, extending from the far southwest corner of the state near Dubuque, Iowa, northeast to the city of Manitowoc, for a distance of approximately 220 miles. It is part of the National Highway System (NHS) and is identified as a backbone route in the WisDOT Connections 2030 program. Connections 2030 is part of WisDOT's long-range highway improvement plan and is designed to provide links to key employment and population centers throughout the Wisconsin. This segment of US 151 is part of the "Wild Goose" Corridor which is a major passenger and freight route that connects Green Bay and the Fox River Valley to Madison and locations farther south and west.

This study was initiated by WisDOT to analyze a portion of the US 151 corridor for conversion to a freeway facility between the cities of Columbus and Waupun in Dodge County. This study is the first of three planned phases and involves collecting data; obtaining input from regulatory agencies, local officials, and the general public; and preparing conceptual roadway plans for freeway conversion of this 27-mile long segment. Subsequent phases will involve preparing an environmental assessment (EA) to document potential impacts, and mapping the corridor through Wisconsin State Statute 84.295. The statute is a long-term planning tool that allows WisDOT to officially designate and preserve highway corridors as freeways.

Traffic volumes along US 151 have increased at a rate of over 3% per year for the majority of the length of the corridor since 1995. Traffic forecasts indicate these volumes will continue to increase and reach a range between 18,450 and 26,375 by the year 2035. A crash analysis revealed that across the entire corridor, crash and injury rates typically exceeded average rates for similar types of facilities across the state. The study also indicated that most of the accidents occurred in the rural expressway segments. The crash rates for the bypass segments were found to be typically lower than statewide rates for similar facilities.

Even though the corridor is anticipated to provide adequate capacity for many years into the future, the at-grade intersections and numerous private entrances are anticipated to experience increases in crashes. Intersection crash rates are below the typical rate threshold for similar types of highways; however, the crash rates aren't the only criteria to analyze. The relatively high speeds of these types of expressway facilities combined with numerous at-grade intersections and private access points increase the potential for more severe crashes and fatalities, even if the total number of crashes appears insignificant. Increasing traffic volumes will result in even fewer gaps for at-grade access at intersections and will increase higher risk driver behavior at those locations.

WisDOT also realizes the significance of land use within the study area and the importance of balancing land use with a functional transportation system. Knowledge of existing land use patterns near US 151 is essential to assessing the impacts of US 151 improvements on the local communities and their future development. Conversely, the existing and planned development near US 151 can provide insights into how best to design and configure US 151 to freeway standards.

One goal of this study is to develop a long-term access plan to accommodate future use and area transportation needs. Access management involves planning and management of the number and location of driveway connections, field entrances, and public roadway

intersections to help maintain safe, efficient movement of traffic. It also helps to prevent the roadway from becoming too congested while still providing adequate access to adjacent lands. While growth and development are usually beneficial for area economies, they can result in too many access points located too close together if not properly managed. If access is not controlled, speed limits may have to be lowered as a result of increasing conflicts and crashes.

The 27-mile study corridor includes segments around the Cities of Beaver Dam and Waupun that currently function as freeway facilities. This study focused more on the rural segments between Columbus and Beaver Dam and between Beaver Dam and Waupun, where numerous at-grade intersections and private entrances are present. Conceptual plans involving options for freeway conversion have been developed for further analysis in the next phase of the project, which will involve the preparation of an environmental document.

The study identifies potential long-term solutions for addressing conversion to a full freeway facility. Given that the construction associated with converting US 151 to a full freeway is not in WisDOT's 6-year program and likely more than 10 years away, WisDOT may decide to implement other interim improvements to meet the needs of the facility users prior to any full reconstruction to a freeway. These could include safety improvements, intersection modifications, geometric upgrades, or access changes phased in over a number of years. The intent would be that any such improvements would be designed so that they are compatible with the future freeway conversion that was used to develop the official map as part of the 84.295 process.

This report is intended to summarize the results of the first of three phases associated with the development of the official corridor map. The environmental document phase is anticipated to involve the preparation of an environmental assessment (EA) adhering to the requirements of the National Environmental Policy Act (NEPA) and the Wisconsin Environmental Policy Act (WEPA), followed by the completion of the official map within the next three to five years.