

PN.01 PURPOSE

The purpose of this project is to identify a WIS 64/US 63 corridor that meets future transportation and safety needs so that corridor preservation efforts can begin as soon as possible. The future WIS 64/US 63 preferred alternative should create a transportation system that compliments planned land uses and preserves highway mobility on the study corridor while also addressing local transportation needs and minimizes impacts to sensitive areas.

PN.02 NEED

Several factors contribute to future mobility within the corridor and influence the type and schedule of the WIS 64/US 63 planned improvements. The need for the proposed action to provide safe and efficient travel within the corridor for the existing and long-term travel demands extends into many categories:

1. System Linkage
2. Area Growth
3. Safety
 - a. Crash Rates
 - b. Intersection Crashes
 - c. Crash Types
 - d. Crash Severity
 - e. Contributing Factors
4. Traffic Operations
 - a. Traffic Volumes
 - b. Vehicle Mix
 - c. Rural Two-Lane Operation
 - d. Intersection Operation
 - e. Traffic Signal Warrants
5. Existing Deficiencies
6. Corridor Preservation

While the first five needs are more fundamental to the project, the sixth need, corridor preservation, is derived from the initial five fundamental needs. Once the best improvement alternative is selected that meets the needs for system linkage, area growth, safety, traffic operations, and existing deficiencies, then corridor preservation will be needed to effectively carry out the transportation plan and minimize the construction impacts to property owners, wetlands, waterfowl production areas, agricultural lands, and archeological sites.

The following sections describe these needs.

PN.03 SYSTEM LINKAGE

This WIS 64/US 63 corridor is an important regional corridor for Wisconsin transportation. WIS 64 is designated as a connector highway from the Minnesota state line to US 63. Here, the designated connector route continues north along US 63. Connector routes, as identified in the Corridors 2020 State Highway Plan, provide accessibility to cities and regions around the state and play a vital role in economic development. The Wisconsin Department of Transportation (WisDOT) is currently updating the long-range transportation plan for the state. The new plan is titled Connections 2030 and it builds in part on the Corridors 2020 State Highway Plan. Connections 2030 also identifies the study corridor as part of the "Indian Head Lakes Corridor." It notes that this corridor is part of a major passenger and freight corridor and is critical in connecting the tourism/recreation areas of northwestern Wisconsin to the Twin Cities market.

WIS 64 is a four-lane expressway from the Minnesota state line to WIS 65 in New Richmond. It is the primary route for those destined to the northwestern part of the state and those connecting with the backbone route of US 53 and connector routes of US 8 and US 2.

During the 1990s, St. Croix County was one of the fastest growing counties in the state. St. Croix County growth has significantly outpaced that of the state as a whole. Villages are expanding and subdivisions are appearing in once rural areas. The rural setting combined with its proximity to economic centers of the Twin Cities and Eau Claire is attracting new residents. Figure PN.04-1 compares the population and housing growth in St. Croix County to the statewide average rate. Housing units in the county increased 24 percent from 1980 to 1990 and 31 percent from 1990 to 2000. This amounts to a net housing increase of over 60 percent in 20 years.

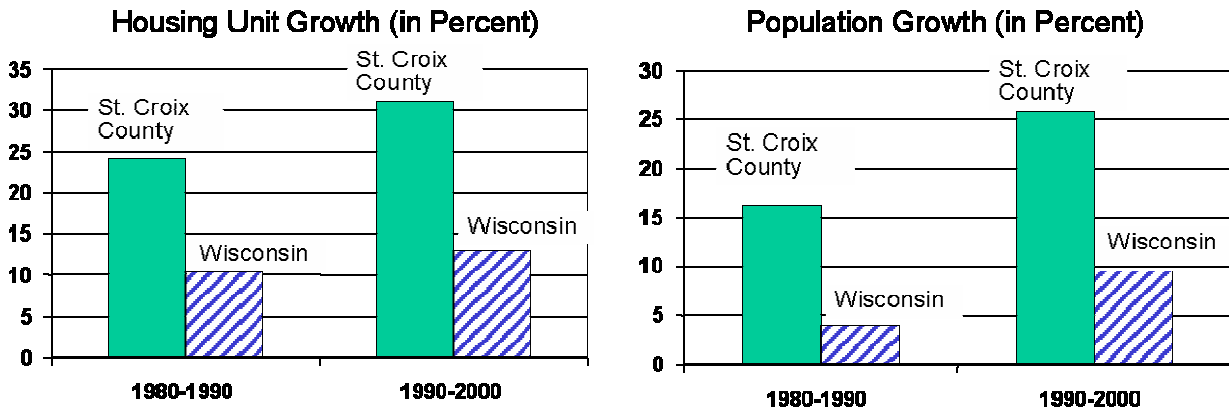


Figure PN.04-1 St. Croix County Growth Compared to Wisconsin Growth

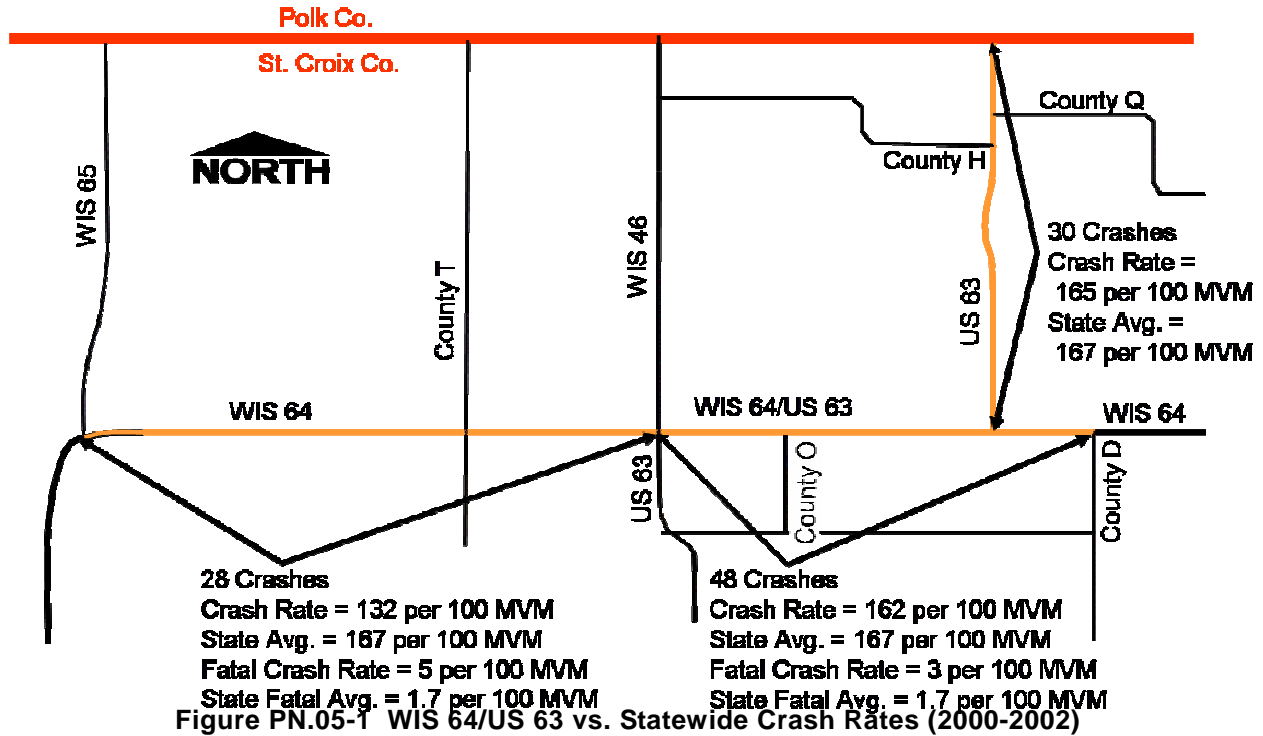
From 1980 to 1990, St. Croix County's population increased 16 percent while Wisconsin's population only increased 4 percent. From 1990 to 2000, St. Croix County's population increased almost 26 percent compared to Wisconsin's 10 percent. In the period from 1990-2000 Somerset, Hudson, Baldwin, and New Richmond were the four fastest growing municipalities within the County, with Somerset growing at a rate of 45.2 percent. Additionally, the WIS 64/US 63 corridor experiences a substantial amount of tourist-oriented traffic, particularly on weekends. US 63 and WIS 64 is the primary link between the Twin Cities, southern Minnesota, and Iowa to northern Wisconsin tourist destinations such as Turtle Lake, Hayward, and Bayfield. This tourist traffic combined with local traffic illustrates WIS 64's importance to regional mobility and access.

PN.05 SAFETY

The relative safety of a roadway can be assessed by analyzing the crash data and comparing it to statewide averages for roadways of similar characteristics. This section will review crash rates, intersection crashes, crash types, crash severity, and contributing factors.

A. Crash Rates

Crash records obtained from WisDOT were used to determine the crash rates for three segments of the WIS 64 Corridor. Data from 2000-2002 was used to determine the overall crash rates and the fatal crash rates for each segment. These rates were then compared to the state averages for the same three-year period. The number of crashes, crash rates, and state average crash rates for each segment are shown in Figure PN.05-1.



All three of the segments studied had total crash rates below the statewide average. Two segments, however, had fatal crash rates that were well above the state average. The segment between WIS 65 and WIS 46 had two fatal crashes during the three-year period resulting in a fatal crash rate of 5 per 100 million vehicle miles (MVM), which is almost three times higher than the statewide average. The segment from WIS 46 to County D had one fatal crash resulting in a fatal crash rate of 3 per 100 MVM, which is almost double the statewide average. There were no crashes resulting in a fatality on US 63 from WIS 46 to the Polk County line during the years analyzed.

B. Intersection Crashes

Crash records were obtained from WisDOT for each of the intersections within the project limits. Between 2000 and 2002, there were 27 isolated intersection crashes.

The number of crashes and the intersection crash rates for each intersection are illustrated in Table PN.05-1. The entering volume for each intersection was estimated using the average daily traffic values for each entering mainline and side road segment.

INTERSECTION	Total Crashes	Estimated Side Road ADT	Estimated Entering ADT	Intersection Crash Rate
WIS 65 and WIS 64	9	2100	9495	0.71
WIS 64 and County T	3	1800	4985	0.40
WIS 64 and WIS 46	4	4200	4425	0.42
WIS 64 and County D	1	440	1100	0.59
WIS 64/US 63 and US 63 N	9	550	3895	1.85
US 63 and County H	1	320	3320	0.25

Intersections not listed had no crashes from 2000-2002

Table PN.05-1 Intersection Crash Rates, 2000-2002

In general, intersection crash rates above 1.5 crashes per million entering vehicles indicate a need for investigation of intersection improvements. The intersection of WIS 64 and US 63 North had a crash rate above this value. This intersection had nine crashes during the three-year period resulting in a crash rate of 1.85. Table PN.05-2 provides detailed information about the crashes at

each intersection including the time, date, manner of collision, severity, and contributing factors. In addition to a high crash rate, the intersection of WIS 64 and US 63 North had an unusually high number of rear-end-type crashes. While there were no rear-end crashes at any of the other intersections during the three-year period, there were five rear-end crashes at this intersection, accounting for 56% of the crashes. Three of these crashes occurred when vehicles moving eastbound through the intersection collided with vehicles slowing or waiting to turn left. Of the nine crashes at this intersection, four of the crashes (44%) involved injuries. The high crash rate combined with the high frequency of crashes with injuries and rear-end-type crashes indicates a need for further investigation and consideration of safety improvements at this intersection. It should also be noted that while the intersections of WIS 64 with WIS 65 and County T had low crash rates, both intersections had a fatal crash during the three-year period studied. Four of the crashes (40%) at the County T intersection also involved injuries. Improvements to this CTH T, US 63/ WIS 64/ WIS 46, and US 63 / WIS 64 are being studied for possible inclusion in a 2010 paving project for WIS 64/US 63.

Information		Manner of Collision					Severity			Contributing Factor		
Date	Time	Angle	Sideswipe	Rear End	Non Collision	Total	PD	INJ	FAT	Weather	Alcohol	Driver
WIS 65 & WIS 64												
5/20/2000	9:00 AM	1	-	-	-	1	-	1	-	-	-	FTY
9/11/2000	9:00 AM	1	-	-	-	1	1	-	-	-	-	FTY
9/29/2000	4:00 PM	1	-	-	-	1	1	-	1	-	-	FTY
5/22/2001	5:00 PM	1	-	-	-	1	-	1	-	WET	-	FTY
8/2/2001	6:00 PM	1	-	-	-	1	1	-	-	-	-	FTY
8/24/2001	10:00 AM	1	-	-	-	1	-	1	-	-	-	FTY
12/20/2001	3:00 PM	1	-	-	-	1	1	-	-	-	-	OTR
5/27/2002	5:00 PM	1	-	-	-	1	-	1	-	-	-	FTY
10/15/2002	1:00 PM	1	-	-	-	1	1	-	-	-	-	FTY
	<i>Total</i>	9	0	0	0	9	5	4	1	1	0	9
WIS 64 & County T												
9/30/2000	5:00 PM	1	-	-	-	1	1	-	-	-	Y	FTY
11/16/2001	8:00 AM	1	-	-	-	1	1	-	-	-	-	FTY
5/26/2002	4:00 PM	1	-	-	-	1	-	-	1	WET	-	FTY
	<i>Total</i>	3	0	0	0	3	2	0	1	1	1	3
WIS 64 & WIS 46												
7/29/2000	6:00 PM	-	1	-	-	1	1	-	-	-	-	ID
5/6/2001	9:00 PM	1	-	-	-	1	-	1	-	WET	-	FTY
10/12/2001	5:00 AM	-	-	-	1	1	1	-	-	-	-	-
10/4/2002	8:00 PM	1	-	-	-	1	1	-	-	-	-	FTY
	<i>Total</i>	2	1	0	1	4	3	1	0	1	0	3
WIS 64 & County D												
8/25/2001	1:00 PM	1	-	-	-	1	1	-	-	-	-	FTY
	<i>Total</i>	1	0	0	0	1	1	0	0	0	0	1
WIS 64/US 63 & US 63												
1/17/2000	8:00 AM	-	-	1	-	1	1	-	-	-	-	ID
8/6/2000	10:00 AM	-	-	-	1	1	1	-	-	-	-	ID
8/7/2000	9:00 AM	-	1	-	-	1	1	-	-	-	-	IO
10/27/2000	1:00 PM	-	-	1	-	1	1	-	-	-	-	FTY
6/21/2001	7:00 AM	-	-	1	-	1	-	1	-	-	-	ID/FVC
6/24/2001	9:00 AM	-	-	1	-	1	-	1	-	-	-	ID
5/24/2002	9:00 PM	-	-	1	-	1	-	1	-	-	Y	DC
7/27/2002	9:00 PM	1	-	-	-	1	-	1	-	-	-	DTC
8/6/2002	10:00 AM	1	-	-	-	1	1	-	-	-	-	ID
	<i>Total</i>	2	1	5	1	9	5	4	0	0	1	9
US 63 & County H												
6/19/2002	6:00 AM	-	1	-	-	1	1	-	-	WET	-	LOC
	<i>Total</i>	0	1	0	0	1	1	0	0	1	0	1

Table PN.05-2 Intersection Crash Information, 2000-2002

C. Crash Types

The types of crashes for the three segments of the WIS 64/US 63 study corridor are illustrated in Figure PN.05-2.