



Benefits of  
Modernizing  
**Wisconsin's**  
**HIGHWAY**  
**CORRIDORS**

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UNIVERSITY OF WISCONSIN  
WHITEWATER

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# Introduction

## Wisconsin's economy hinges on its ability to reliably move products and people.

For example, the state exported a record \$23.4 billion in 2014, led by industrial machinery and agricultural products—both of which place a heavy emphasis on timing and transportation logistics. Wisconsin factories employ 450,000 workers and represent the second highest concentration of manufacturers in the country.



At the other end of the spectrum, tourism represents an \$18.5 billion industry in Wisconsin that is fueled entirely by the state's transportation system.

*This study estimates the economic impacts of four projects to modernize existing highway corridors to meet the mobility and safety demands of an evolving economy.*

That's why a dependable highway network that allows for the safe and reliable flow of commerce is so critical to Wisconsin's future economic prospects.

This study estimates the economic impacts of four projects to modernize existing highway corridors to meet the mobility and safety demands of an evolving economy. It examines Major Highway Projects in which the Wisconsin Department of Transportation is planning a cumulative \$2 billion<sup>1</sup>

in improvements, with \$1.76 billion<sup>2</sup> remaining to be spent:

- **I-39/90 from Madison to the Wisconsin-Illinois state line, \$1.096.6 billion<sup>3</sup>;**
- **U.S. Highway 10/State Highway 441 in the Fox River Valley, \$394.8 million<sup>4</sup>;**
- **U.S. Highway 151/Verona Road on Madison's west side, \$149.0 million<sup>5</sup>; and**
- **State Highway 23 between Fond du Lac and Plymouth, \$120.3 million<sup>6</sup>.**

The University of Wisconsin-Whitewater Fiscal and Economic Research Center (FERC) was contracted to conduct analysis of the economic impact of the highway improvements and the growth of ancillary businesses in the affected communities.

# Total Economic Impact

The four road projects investigated in this study are expected to have a combined, short-term impact on Wisconsin's economy of just shy of \$3 billion.



- The construction activity will lead to the **creation of over 4,100 jobs** in the state from the road construction industry and their suppliers.
- After completion of the projects, **businesses will benefit by almost \$185 million annually** as a result of increased accessibility, reliability and road quality.
- The increased business will **support more than 1,700 jobs** going forward.

## TOTAL SHORT-TERM CONSTRUCTION IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	2,427	\$693,605,210	\$1,760,723,441
Indirect Effect	675	\$174,743,147	\$495,942,663
Induced Effect	1,050	\$227,883,958	\$710,560,443
<b>Total Effect</b>	<b>4,152</b>	<b>\$1,096,232,315</b>	<b>\$2,967,226,547</b>

## TOTAL ANNUAL BUSINESS IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	1,131	\$50,348,981	\$104,237,352
Indirect Effect	229	\$10,438,958	\$30,334,064
Induced Effect	393	\$15,977,087	\$49,805,855
<b>Total Effect</b>	<b>1,753</b>	<b>\$76,765,026</b>	<b>\$184,377,271</b>



PROJECT

# Interstate 39/90

The Interstate 39/90 corridor is vital to Wisconsin's economy, and to the

## economy of the entire Midwest.

The route's economic significance has only increased since 2009, when the University of Wisconsin's Center for Freight and Infrastructure Research and Education (CFIRE) estimated that \$650-\$800 million in commerce flows along the corridor each and every day.

Interstate 39/90 is the lynchpin for several recent economic development projects in communities along the corridor, including the recently announced plans of Dollar General to build a distribution center on a 124-acre site in the City of Janesville's Highway 11 Business Park just west of I-39/90. The facility will support Dollar General's retail sales distribution network in the Midwest and will also include an onsite truck maintenance facility and dispatch center. This project will create and support over 550 full-time jobs.

*"Now we're looking at a couple of years where certain properties that would be excellent commercial properties after the reconstruction will not be available for development."*

**Charles Haynes,**  
Beloit City Council President

The I-39/90 corridor is also vital to our state's burgeoning tourism industry. I-39/90 is Wisconsin's front porch, and this gateway to Wisconsin brings thousands of visitors to our state every day. These visitors bring their wallets. In 2014, visitors to Dane and Rock Counties spent an estimated \$1.2 billion on food, lodging, shopping, and visits to tourist-related attractions along the interstate corridor<sup>7</sup>.

Built in the early 1960s, all of the 11 interchanges along the I-39/90 corridor have outdated design features which contribute to safety concerns. Without corrective action, all sections of I-39/90 are expected to experience unstable traffic flow and stop-and-go conditions. In order to address these deficiencies, the project includes reconstruction and expansion of this corridor from four to six lanes and reconfiguration of the 11 interchanges.

### SHORT-TERM CONSTRUCTION IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	1,347	\$431,985,701	\$1,096,599,821
Indirect Effect	375	\$108,832,142	\$308,879,079
Induced Effect	583	\$141,928,881	\$442,545,624
<b>Total Effect</b>	<b>2,305</b>	<b>\$682,746,724</b>	<b>\$1,848,024,524</b>

### ANNUAL BUSINESS IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	707	\$31,258,470	\$64,044,940
Indirect Effect	138	\$6,318,875	\$18,329,201
Induced Effect	243	\$9,874,548	\$30,782,210
<b>Total Effect</b>	<b>1,088</b>	<b>\$47,451,893</b>	<b>\$113,156,351</b>

\*See page 8 for a description of methodology.



## PROJECT

# Verona Road

Fitchburg and Verona are two of the fastest growing communities in Dane County.

The region benefits from its proximity to Madison with many residents commuting to work in Wisconsin's capital city.

However, the region is home to a number of significant businesses in its own right including: Epic Systems, a world leader in health care software technology and one of Dane County's

largest employers, located in Verona; Saris Cycling Group, a manufacturer of bike racks, located in Fitchburg; and Sub-Zero/Wolf, a manufacturer of high-end kitchen appliances with locations in Madison and Fitchburg.

*"Sub-Zero Group, Inc., is a manufacturer of residential refrigeration and cooking products, and a company that distributes products globally. We understand the need for class A logistics here locally in Madison, Wisconsin and across the world. Sub-Zero supports the Wisconsin Department of Transportation, the Verona Road Business Coalition and the need to continue the Verona Road project."*

The first phase of the Verona Road Project, which includes construction of a single-point interchange at U.S. 18/151 intersection with U.S. 12/14 (Beltline) as well as additional capacity on Verona Road/Midvale Road between Raymond Road and Nakoma Road, is scheduled to be completed in 2016. The second phase includes construction of an interchange at the U.S. 18/151/County PD intersection as well as the continuation of the third lane in each direction on U.S. 18/151 from County PD to Raymond Road.

**Jerry Duhn, Vice President of Supply Chain**  
Sub-Zero Group, Inc.

The Verona Road corridor operates at

unacceptable levels of service, meaning unreliable travel conditions. Increased traffic volumes have led to an increase in congestion-related crashes. Between 2006 and 2008, the crash rate on Verona Road from the Beltline to County PD was two to three times the statewide average for a similar corridor, with 342 crashes.<sup>8</sup>

## SHORT-TERM CONSTRUCTION IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	275	\$58,695,873	\$149,000,032
Indirect Effect	76	\$14,787,521	\$41,968,814
Induced Effect	119	\$19,284,526	\$60,130,698
<b>Total Effect</b>	<b>470</b>	<b>\$92,767,920</b>	<b>\$251,099,544</b>

## ANNUAL BUSINESS IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	98	\$4,343,912	\$9,032,756
Indirect Effect	20	\$892,395	\$2,595,916
Induced Effect	34	\$1,377,514	\$4,294,052
<b>Total Effect</b>	<b>152</b>	<b>\$6,613,821</b>	<b>\$15,922,724</b>



PROJECT

# U.S. 10/State Highway 441

The U.S. 10/STH 441 project gives better access to the newly designated Interstate

## 41 with reconstruction of the I-41/STH 441/U.S. 10 system-to-system interchange.

Interstate status elevated U.S. 41 from a regionally-known freeway to a nationally recognized corridor, one with Interstate system standards for mobility and safety.

This is important as the Fox Cities Region was built on the paper industry and has grown into one of the country's largest manufacturing centers. Companies founded more than 100 years ago, such as Kimberly-Clark and Pierce Manufacturing, remain some of the region's largest employers. Easier access to the Interstate will allow for the more efficient movement of people and product, which will make communities along the route more competitive when large corporations are looking for market expansion locations.

The project also includes the reconstruction and expansion of approximately 6 miles of U.S. 10/STH 441 from 4 lanes to 6 lanes between Cold Spring Road (County B) and Oneida Street (U.S. 10) in Winnebago County and reconstruction of four other interchanges and the Roland Kampo Bridge.

The project addresses safety concerns and traffic demands on one of the region's most important transportation routes. Crash rates on U.S. 10/STH 441 exceed statewide averages for similar urban freeways.

*"The 441 project is vitally important to growth and prosperity in the Fox Cities. Any delay in the completion date will not only impact the formation of new development along that corridor, but undoubtedly affect the efficient movement of freight as well."*

**Mark Rahmlow, Vice President of Public Policy, Fox Cities Chamber of Commerce**

### SHORT-TERM CONSTRUCTION IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	583	\$155,524,345	\$394,800,036
Indirect Effect	162	\$39,181,963	\$111,203,256
Induced Effect	252	\$51,097,517	\$159,326,150
<b>Total Effect</b>	<b>997</b>	<b>\$245,803,825</b>	<b>\$665,329,442</b>

### ANNUAL BUSINESS IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	253	\$11,339,625	\$23,946,976
Indirect Effect	55	\$2,494,551	\$7,248,954
Induced Effect	89	\$3,637,507	\$11,339,350
<b>Total Effect</b>	<b>397</b>	<b>\$17,471,683</b>	<b>\$42,535,280</b>

\*See page 8 for a description of methodology.



PROJECT

# State Highway 23

Wisconsin State Highway 23 is an

**important east-west route which connects Fond du Lac and Sheboygan.**

It has been classified as a Corridors 2030 connector highway, meaning it has been determined to be a highly important state roadway. The project increases safety and enhances economic development opportunities by expanding the existing two-lane highway to a 4-lane expressway. The existing highway at each end of the project is already four lanes.

Since the beginning of 2015, there have been a series of accidents on Highway 23. Below is a list of serious incidents:

- **January 21** Three-vehicle accident causing the deaths of two individuals.
- **April 23** Two-vehicle crash with one serious injury.
- **May 14** Two-vehicle accident with one death.
- **June 25** Three-vehicle crash with one death and two injuries.
- **July 15** Three-vehicle accident with five injuries, including one requiring helicopter transport.
- **July 24** Four -vehicle accident with nine injuries.
- **August 30** Two-vehicle crash with one life-threatening injury.

*“As a two-lane highway, 23 increases travel time—effectively reducing access to regional businesses and potentially hindering economic growth. Local communities will struggle to grow and face increased transportation costs and consumer goods prices. Expansion translates to quicker, more relaxed travel and will increase tourism and access to regional recreational areas.”*

**Louie Gentine,**  
Owner and CEO of Sargento Foods

### SHORT-TERM CONSTRUCTION IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	222	\$47,399,291	\$120,323,552
Indirect Effect	62	\$11,941,521	\$33,891,514
Induced Effect	96	\$15,573,034	\$48,557,971
<b>Total Effect</b>	<b>380</b>	<b>\$74,913,846</b>	<b>\$202,773,037</b>

### ANNUAL BUSINESS IMPACT\*

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	OUTPUT
Direct Effect	73	\$3,406,974	\$7,212,680
Indirect Effect	16	\$733,137	\$2,159,993
Induced Effect	27	\$1,087,518	\$3,390,243
<b>Total Effect</b>	<b>116</b>	<b>\$5,227,629</b>	<b>\$12,762,916</b>

# Cost of Delay

**Delay of these projects will push back the benefits—economic and safety—and drive up the cost of the projects.**

Each year, the change in price of a market basket of consumer goods and services is measured by the Consumer Price Index (CPI). The Wisconsin Department of Transportation calculates a similar index called the Wisconsin Construction Cost Index (WCCI).

*Construction costs, and therefore the increases, are driven by commodities—fuel, concrete, asphalt and steel—subject to national and international market forces.*

Construction costs, and therefore the increases, are driven by commodities—fuel, concrete, asphalt and steel—subject to national and international market forces.

Wisconsin construction inflation has averaged around 5% a year since 2000, while the CPI has increased on average at a rate less than half of that.

To put this into perspective, what a dollar could buy in construction materials and services in 2000 costs almost \$2 today. On the consumer side, it would take around \$1.40 to buy the same \$1 worth of goods and services as in 2000.

Accordingly, construction inflation has a significant impact on the state transportation budget and the cost of specific projects. Consider the four Major Highway Projects

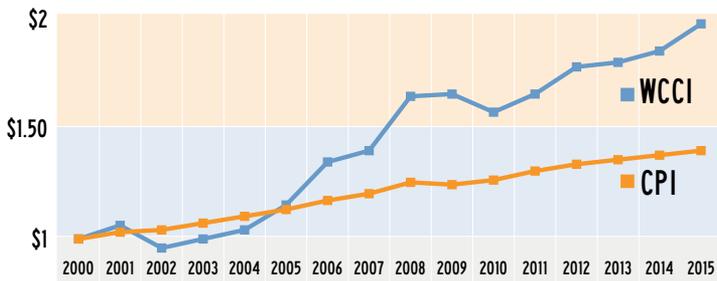
currently facing a delay of two years or more—I-39/90 Madison to Beloit, Verona Road in Madison, STH 23 from Plymouth to Fond du Lac and USH 10/441 in the Fox Valley. The cost to

complete these projects is \$1.76 billion so any delay is not simply “hitting the pause button.”

Looking at history, each year of delay

could increase the total cost of the projects by an estimated \$80 million—the equivalent of approximately 2.5 cents of the state’s existing gas tax.

**CONSTRUCTION COSTS OUTPACE CPI**



# Methodology

The Fiscal and Economic Research Center (FERC) at the University of Wisconsin–Whitewater analyzed the economic impact that the highway construction projects have on their local communities and the state of Wisconsin.

To calculate the impact of expenditures by the road construction, an IMPLAN input–output model was used. An IMPLAN model is capable of determining the overall economic impact that initial spending has on the local economy. The IMPLAN model uses data gathered in surveys and estimates to what extent different spending categories affect the local economy in terms of initial effect, direct effect, indirect effect, and induced effect. This Input/Output (I/O) Model provides a means to capture and measure these effects. It uses the following three effects to measure economic impact:

## • **Direct effect**

Production change associated with a change in demand for the good itself. It is the initial impact to the economy, which is exogenous to the model. In the case of the road construction, this includes the costs of planning, surveying, and any other labor or material costs incurred to reconstruct/modernize the road.

## • **Indirect effect**

The secondary impact caused by changing input needs of directly affected industries (e.g., additional input purchases to produce additional output). It concerns inter-industry transactions: the road construction industry has a demand for locally produced materials required to produce their product (perhaps gravel, asphalt, cement or concrete). The success of contractors affects all of their industry's suppliers.

## • **Induced effect**

Caused by changes in household spending due to the additional employment generated by direct and indirect effects. The induced effect measures the effects of the changes in household income: those individuals working in the road construction industry and the industry's suppliers spend money at restaurants, grocery stores and shops.

*The **Short-Term Construction Impact** comes from the dollars still to be spent on construction materials and services in order to modernize the highway. It ends when the project is completed. The Employment numbers reflect average annual employment during construction. The Labor Income and Output numbers reflect total activity over the multi-year project.*

*The **Annual Business Impact** accrues after the completion of the project and is the result of the modernization—increased accessibility, reliability and road quality.*

# Endnotes

- <sup>1</sup> Wisconsin Department of Transportation, *Report to the Transportation Projects Commission on the Status of the Major Highway Projects and Southeast Wisconsin Freeway Megaprojects*, August 2015, <http://wisconsin.gov/Documents/projects/6yr-hwy-impr/maj-hwy/status.pdf>.
- <sup>2</sup> Wisconsin Department of Transportation, *Report to the Transportation Projects Commission*, August 2015.
- <sup>3</sup> Wisconsin Department of Transportation, *Report to the Transportation Projects Commission*, August 2015.
- <sup>4</sup> Wisconsin Department of Transportation, *Report to the Transportation Projects Commission*, August 2015.
- <sup>5</sup> Wisconsin Department of Transportation, *Report to the Transportation Projects Commission*, August 2015.
- <sup>6</sup> Wisconsin Department of Transportation, *Report to the Transportation Projects Commission*, August 2015.
- <sup>7</sup> Wisconsin Department of Tourism, *County Total Economic Impact 2014*, <http://industry.travelwisconsin.com/research/economic-impact>.
- <sup>8</sup> Wisconsin Department of Transportation, *Verona Road (US 18/151) Project Overview*, <http://projects.511wi.gov/veronard/full-project-overview/>





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