

# Why improve I-94?



- Traffic capacity, operations, and safety
  - System is experiencing traffic growth
  - Without roadway expansion, slowdowns and backups will continue to occur compromising safety and traffic operating conditions
  - Level of Service (LOS) is a qualitative measure of highway traffic operations
    - Grade LOS on a scale from “A” (no congestion) to “F” (extreme congestion)
    - LOS C is the acceptable level of service for this high priority freeway

# Why improve I-94?



- Expansion to 6-lanes between US 12 and WIS 65 is needed to maintain traffic mobility and safety



*Traffic backup during a crash incident along I-94*

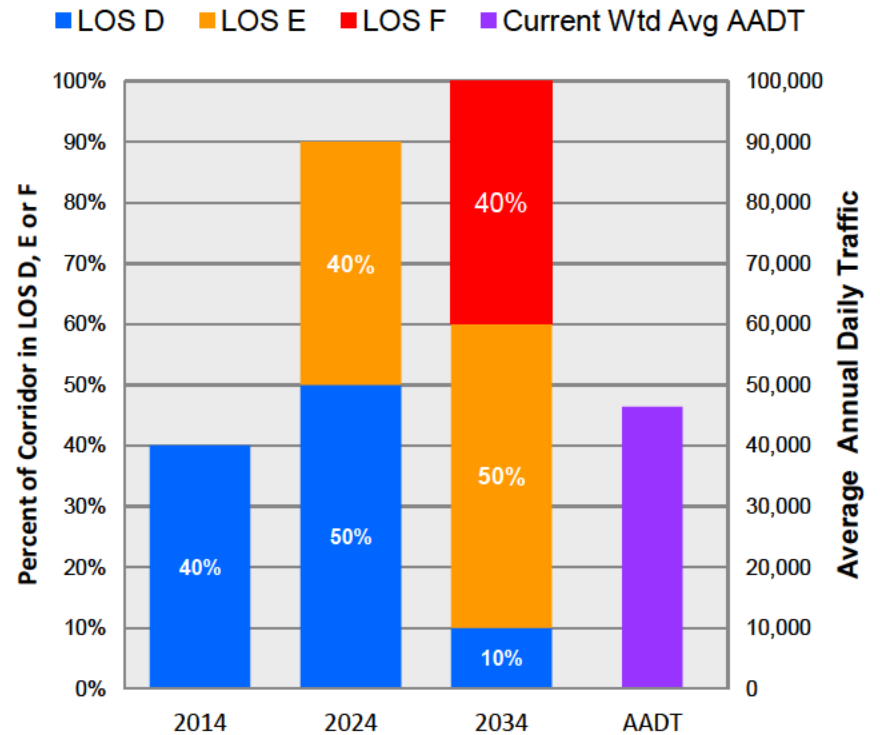
# Why improve I-94?



Expected percent of corridor with LOS D or worse:

- 40% in 2014
- 90% in 2024
- 100% in 2034

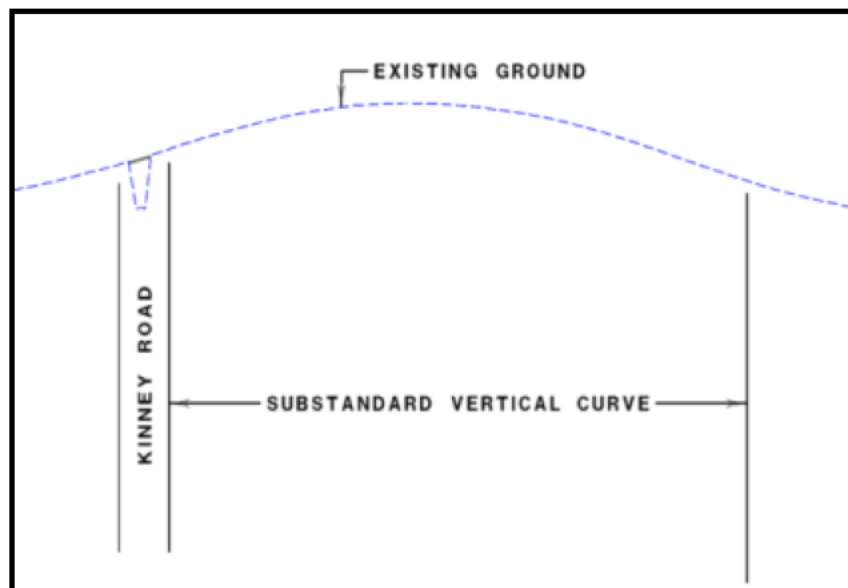
### Percent of I-94 with Congestion





# Why improve I-94?

- Design features
  - System built in 1958 (over 55 years old)
  - The roadway has substandard design features compared to today's safer design standards



*Substandard vertical curve near Kinney Road*



# Why improve I-94?

- Aging bridges and pavement
  - Deteriorating narrow overpass bridges cannot be rehabilitated
  - Pavements have been overlaid three times and full depth replacement is needed



*Aging bridges with substandard clearance over 100<sup>th</sup> Street*



# Why improve I-94?

- Movement of goods
  - Trucks handle 90 percent of all freight in Wisconsin
  - Trucks account for 24 percent of daily total traffic on I-94



*Heavy truck traffic  
along I-94*

# Public Involvement Process



- 2 well-attended public involvement meetings
- 3 local official meetings used for additional input
- Frequent and ongoing coordination with public agencies, local communities, residents, and businesses
- Public Hearing on Preferred Alternative
  - Nearly 47 people attended; 3 gave testimony
  - Clear support for the project from the public and local officials
  - Stakeholders understood and agreed with the need to address the aging infrastructure and traffic needs along IH 94

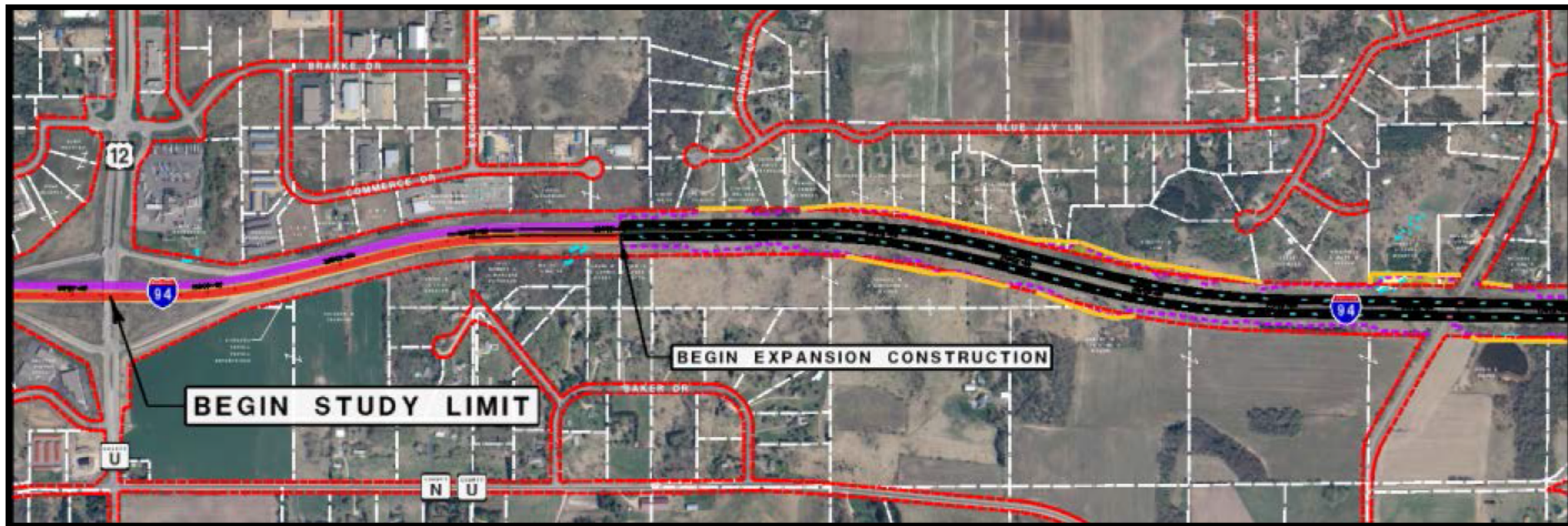
# Planning for the Future



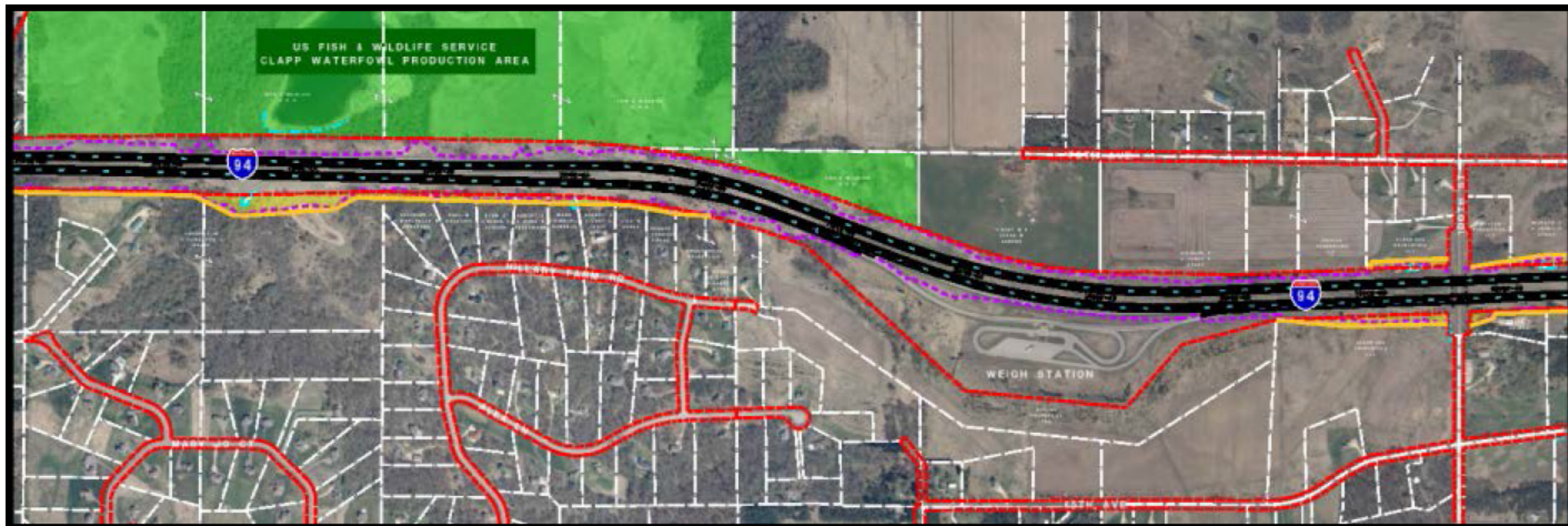
- Mainline I-94 improvements
  - US 12 through the WIS 65 interchange: reconstruct and expand I-94 roadway and bridges from 4-lanes to 6-lanes to address capacity needs
  - WIS 65 to east of 130th Street: reconstruct 4-lane roadway and bridges to accommodate project staging and deteriorating infrastructure
  - Improvements:
    - Pavement and drainage system reconstruction on existing alignment
    - Replace 6 overpass bridges
    - No access changes and no interchange improvements



# US 12 – Kinney Road



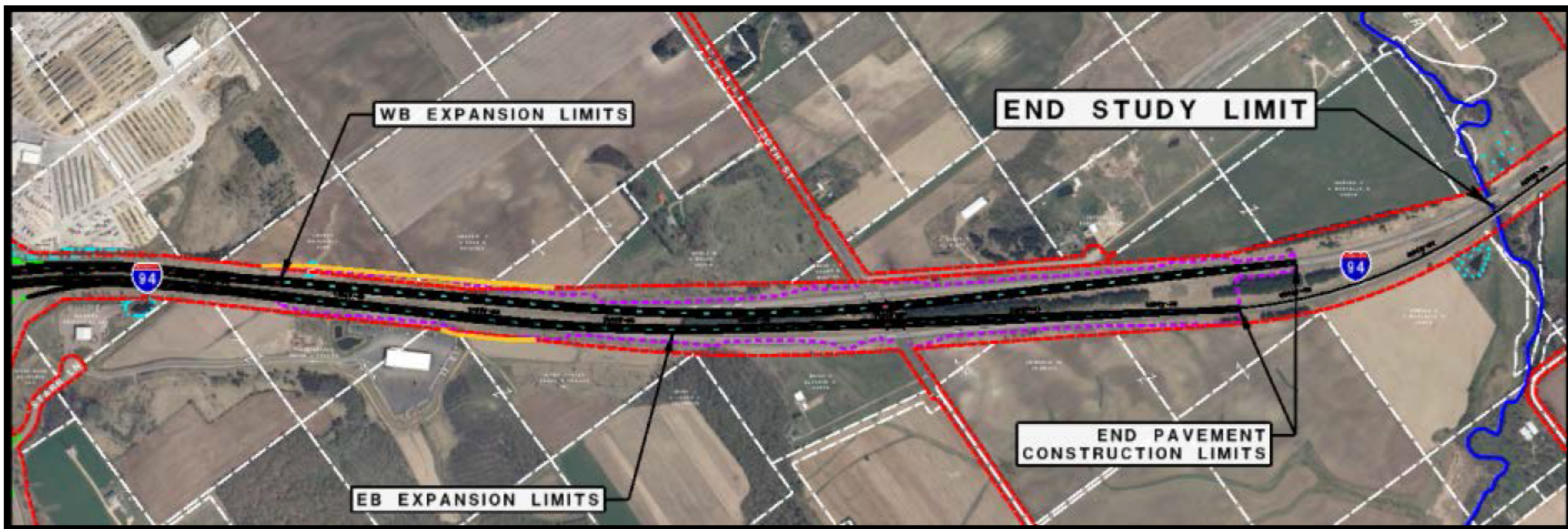
# Kinney Road – 100<sup>th</sup> Street



# 100<sup>th</sup> Street – WIS 65



# WIS 65 – 130<sup>th</sup> Street



# Planning for the Future



- Mainline I-94 improvements
  - Bridge and pavement rehabilitation or replacement would need to occur whether or not expansion is enumerated
  - Full pavement replacement would need to occur by 2026

# Planning for the Future



- Estimated right of way needs – 23 acres
- Relocations – none
- Avoids US Fish and Wildlife Clapp Waterfowl area
- Estimated wetland impacts – <1 acre
- Floodplain impacts – none
- Archaeological and historic resources – none
- Noise – no abatement measures proposed

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## **Chapter 8**

### **PROJECT DETAIL WIS 50**

- **Need and Concept Summary**
- **Project Summary**



## STH 50 (IH 94 to 43<sup>rd</sup> Avenue) 4.4 Miles in Kenosha County



### Traffic Data

Year	Average Annual Daily Traffic (AADT)
Existing 2014	30,100 – 36,700 AADT
Projected 2024	34,300 – 42,600 AADT
Projected 2034	37,600 – 46,800 AADT

### Mobility Data

Year	Percent of Corridor with Level of Service (LOS) D, E, or F		
	Moderately Congested	Severely Congested	Breakdown Conditions
Existing 2014	0% LOS D	11 % LOS E	0% LOS F
Projected 2024	41% LOS D	0% LOS E	11% LOS F
Projected 2034	0% LOS D	70% LOS E	11% LOS F

### Safety Data

Percent of Corridor with Crash Frequency or Crash Severity Greater than the Statewide Average	72%
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### Financial Data

Estimated Cost (2014 dollars)	\$93 million
Benefit Cost Analysis -- Benefit Cost Ratio	8.5

## **NEED:**

The need for the proposed improvements is based on traffic and safety concerns, and pavement and bridge deficiencies.

- Traffic Condition -- Average Annual Daily Traffic (AADT) volumes throughout the corridor currently vary between 30,100 and 36,700 and are expected to grow about to 37,600 to 46,800 by 2034. This is about a 1.4 percent average growth per year on WIS 50.

Due to the high traffic volumes, seven intersections along the corridor already operate with movements at LOS E or F. Most notably, the intersection with WIS 31 has extremely heavy turning volumes that operate at LOS E and F today. In the future, 15 intersections along the corridor are expected to operate with movements at LOS E or F.

- Safety Concerns –The majority of crashes involved rear-end and angle collisions, indicative of congestion and conflicts between through-traffic and turning-traffic. From 2008 and 2012, nearly 72% of the corridor had crash rates or crash severities greater than the statewide average for this type of facility.
- Roadway Condition – WIS 50 was recently resurfaced in 2012. This is the last rehabilitation prior to full reconstruction. The 2012 resurfacing is expected to provide satisfactory pavement condition until the reconstruction occurs with the Major project.
- Bridge Condition – The bridges which carry STH 50 over the Canadian Pacific, Union Pacific, and 77<sup>th</sup> Avenue are narrow and have substandard vertical clearance. The bridges have undergone numerous rehabilitations and are deteriorating to the point where further repair is not economical and replacement is needed.
- Route Importance – STH 50 is a principal arterial with great local and regional importance. Being located off I-94, STH 50 serves a wide variety of travelers in addition to the local traffic. STH 50 is also an oversized, overweight (OSOW) truck route from the western project limits to STH 31, and then continuing north on STH 31.

## **CONCEPT:**

The general improvement concepts are as follows:

- Widen the existing 4-lane highway west of 57th Avenue to a 6-lane facility. The remainder of the corridor, east of 57<sup>th</sup> Avenue, will be reconstructed using the existing 4-lane highway (no additional driving lanes).
- Reconstruct the corridor to an urban roadway to reflect ongoing/planned development in the STH 50 corridor including: curb and gutter on outside shoulders, a raised grass median, and paved outside shoulders that can be used by transit vehicles and disabled vehicles during emergencies.
- Provide more capacity at all intersections, including a jug-handle design at the WIS 50/WIS 31 intersection to accommodate the heavy through and turning traffic. The recommended corridor design will improve traffic progression significantly along the corridor, enhance safety for all users and provide safe pedestrian accommodations, while maintaining the visibility and access to local businesses.
- Implement access management techniques (restrict median openings, close driveways and use existing local roads/future local service roads where possible to provide property access).

# WIS 50

RECONSTRUCTION PROJECT



## Project Summary

I-94 to 43<sup>rd</sup> Ave., Kenosha County

FONSI Signed: April 2007

EA Re-evaluation Signed: July 2014

# Presentation Outline

- Project location
- Why improve the STH 50 corridor?
  - Significance of STH 50 corridor
  - Current and future congestion
  - Needs of STH 50
  - Roadway capacity
  - Traffic safety
  - Pavement, mainline design, and geometric deficiencies
  - Support regional planning efforts
  - Public support for the project
- Preparing for the Future
  - Corridor design elements
    - Mainline design
    - Intersection and interchange designs