

ENVIRONMENTAL EVALUATION OF FACILITIES DEVELOPMENT ACTIONS

Wisconsin Department of Transportation
DT2094 8/2005

Project ID 3230-03-00	Funding Source <input type="checkbox"/> State Only <input type="checkbox"/> Federal <input checked="" type="checkbox"/> State and Federal	Federal Number
Project Name (Highway, Airport, Rail Line) STH 50 Corridor Study		Project Termini <u>Study Area:</u> I-94 to 43 rd Avenue <u>Project Limits:</u> Just east of 116 th Avenue to just east of 43 rd Avenue
Section	County Kenosha	Estimated Project Cost (Include R/W Acquisition) \$56.6 Million (2006 dollars)

It is determined, after review of the comments from the public, and coordination with other agencies, that this action would not significantly affect the quality of the human environment. This document is a

Finding of No Significant Impact (FONSI)

Environmental Assessment (EA) No Significant Impacts Indicated by Initial Assessment

Environmental Assessment (EA) EIS Required

Environmental Report (2-ER)

(Signature) _____
(Date)

(Title)

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(Title)

(Signature) _____
(Date)
WisDOT Project Manager
 Region, Aeronautics,
 Transit, Local Roads, Rails & Harbors

(Signature) _____
(Date)
Director, Bureau of Equity & Environmental Services

(Signature) _____
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 FHWA, FAA, FTA, FRA

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Note: The STH 50 Corridor Study was initially started in 1998 but was put on hold in August 1999 due to lack of staffing resources within WisDOT. The study was restarted in 2003. Therefore, the information presented in this Environmental Assessment is based on a combination of engineering, environmental, community involvement and agency coordination information developed through 1999 and updated information developed after the study was restarted in 2003.

1. Description of Proposed Action (Attach project location map and other appropriate graphics).

The approximate 4.4-mile (7 km) STH 50 study area extends from I-94 in the Village of Pleasant Prairie to 43rd Avenue in the City of Kenosha (see **Exhibit 1**). The project construction limits begin just east of Kilbourn Road Ditch near 116th Avenue and end just east of 43rd Avenue (the east limit of STH 50 over which WisDOT has jurisdiction as a connecting highway). The proposed action is to develop a long-range improvement plan to improve traffic flow and safety on STH 50, preserve its traffic carrying capacity, update the 1987 STH 50 access management plan, and to preserve the land needed for future transportation improvements. The general improvement concepts are summarized as follows:

- Construct an urban roadway to reflect ongoing/planned development in the STH 50 corridor (curb and gutter on outside shoulders, raised grass median)
- Widen the existing 4-lane highway west of 57th Avenue to a 6-lane facility (additional driving lane in each direction)
- Reconstruct/widen the existing 4-lane highway east of 57th Avenue (no additional driving lanes)
- Provide paved outside shoulders for transit and disabled vehicles and for additional traffic capacity during emergencies
- Provide more capacity at local road intersections
- Implement access management techniques (restrict median openings, close driveways and use existing local roads/future local service roads where possible to provide property access)
- Reduce the 55 mph (90 km/h) speed limit in the western part of the corridor to 45 mph (70 km/h)
- Add a multi-use path along STH 50 (WisDOT will grade the path as part of the STH 50 project; further development will depend on local cost share)
- There will be strip right-of-way acquisition at some locations but no business or residential displacements

More detailed information on proposed improvements for the Recommended Alternative is provided under Alternatives, page 6.

2. Purpose and need of proposed action. Include description of existing facilities, abutting facilities, and how the action links into the overall transportation system. When appropriate, show that commitment for future work is not being made without evaluation, and that viable alternatives in a larger framework are not being unduly foreclosed.

PURPOSE

The purpose of the proposed action is to develop a long-range plan for STH 50 that provides additional traffic capacity, improves traffic flow and safety for local and through traffic, provides access management measures to help preserve the traffic carrying capacity on STH 50 and that preserves the land needed for future transportation improvements.

NEED

The need for the proposed improvements is based on a combination of factors that include system linkage and route importance, traffic demand, safety, and access management. These factors are discussed as follows. Existing and abutting facilities are discussed on page 5.

System Linkage and Route Importance

STH 50 is included in Wisconsin's portion of the National Highway System (NHS) adopted under the 2005 *Safe, Accountable, Flexible, Efficient Transportation Equity Act* (SAFETEA). NHS routes are important to interstate travel and national defense, connect with other transportation modes, and are essential for interstate commerce.

STH 50 is a designated multi-lane connector under WisDOT's *Corridors 2020 Plan* developed to provide a network of high-quality highways linking the state's economic centers. Connector highways are important links to economic and tourism centers on the Corridors 2020 backbone system.

STH 50 is a major east-west facility in Kenosha County providing access to I-94 for the Village of Pleasant Prairie and City of Kenosha. Through the study area, STH 50 is functionally classified as a Primary Urban Arterial intended to carry a high volume of through traffic while also serving local traffic and providing access to adjacent development.

Traffic Demand

The 2035 *Regional Transportation System Plan for Southeastern Wisconsin* (SEWRPC Planning Report No. 49, June, 2006) indicates the need for capacity expansion on STH 50 and several roadways in and near the STH 50 corridor:

- STH 50—6 lanes between I-94 and 39th Avenue
- 104th Avenue—4 lanes between STH 50 and STH 158
- STH 158—4 lanes between I-94 and STH 31
- CTH S—4 lanes between I-94 and STH 31
- Roosevelt Road—4 lanes between STH 50 and Sheridan Road
- 39th Avenue—4 lanes between STH 50 and 85th Street
- 60th Street/CTH K—4 lanes between 30th Avenue/CTH G and Sheridan Road

Existing (2002) and Design Year (2030) Average Daily Traffic (ADT) volumes on STH 50 and major side roads are summarized in Table 1. Traffic on STH 50 is expected to more than double by Design Year 2030. Today’s traffic west of STH 31 ranges from 24,600 to 32,300 and is expected to reach a range of 59,650 to 74,075 in 2030. Existing traffic east of STH 31 ranges from 21,700 to 30,700 and is expected to reach 53,650 to 62,400 in 2030. Average truck traffic in the STH 50 corridor is approximately 5% of the total ADT.

**Table 1
Existing and Future Traffic**

STH 50 Segments	Existing ADT (2002)	Forecast ADT (Design Year 2030)
I-94 to 104th Avenue	24,600	59,650
104 th Avenue to 88 th Avenue	26,300	59,800
88 th Avenue to STH 31	32,300	74,075
STH 31 to 52 nd Avenue	30,700	62,400
52 nd Avenue to 43 rd Avenue	21,700	53,650
Major Side Roads		
104 th Avenue (CTH HH)	3,500	5,325
STH 31 north of STH 50	30,500	45,275
STH 31 south of STH 50	21,900	43,950
52 nd Avenue north of STH 50	4,400	6,025
52 nd Avenue south of STH 50	8,900	10,075

WisDOT design guidelines for urban arterials/Corridors 2020 connectors indicate the following traffic thresholds for an acceptable Level of Service (LOS) D¹. Highways operating at LOS D are defined as having moderate congestion.

- I-94 to 70th Avenue (Design Class UA3): Top of traffic threshold for a 4-lane facility is 36,000 ADT.
- 70th Avenue to 52nd Avenue (Design Class U5): Top of traffic threshold for a 4-lane facility is 63,000 ADT.
- 52nd Avenue to 43rd Avenue (Design Class U4): Top of traffic threshold for a 4-lane facility is 41,000 ADT.

Design Year traffic in the I-94 to 70th Avenue segment (59,650—74,075) is well above the 4-lane threshold and traffic in the 70th Avenue to 52nd Avenue segment (62,400) is approaching the 4-lane threshold. Design Year traffic in the 52nd Avenue to 43rd Avenue segment (53,650) is above the 4-lane threshold.

¹ Level of Service (LOS) is a measure of roadway congestion using rankings ranging from LOS A to LOS F with LOS A exhibiting free-flow traffic and LOS F exhibiting severe congestion that approaches gridlock. LOS D (moderate congestion) is considered acceptable on urban arterial highways like STH 50.

Safety

Crash data in the STH 50 corridor for 2000 through 2001 is summarized in Table 2. The average crash rate for the STH 50 corridor was well above the statewide average rate for similar highways in all three years. The majority of crashes involved rear-end collisions (49% of the total) and angle hits (35% of the total), indicative of congestion and conflicts between through traffic and turning traffic.

Table 2
STH 50 Crash Data (2000 through 2002)

Year	Crashes Involving Injuries	Crashes Involving Property Damage Only	Total Crashes	STH 50 Average Crash Rates	Statewide Average Crash Rates
2000	104 ¹	143	247	562	322
2001	75 ¹	76	151	344	289
2002	81	88	169	385	280
Totals	260	307	567		

1. Included one fatality

According to WisDOT's 2004 intersection crash data the average crash rates at the higher volume intersections in the STH 50 corridor were as follows:

- STH 31—0.81
- 57th Avenue—0.95
- 88th Avenue—0.98
- 104th Avenue—1.07
- 60th Avenue—1.08
- 70th Avenue—1.36

An intersection crash rate of 1.0 or higher is the threshold for considering improvements. All of the STH 50 intersections are above or approaching this threshold. This situation will worsen as traffic volumes increase.

Access Management

Access management is essential to balancing the competing needs of providing access to land development and maintaining safe and efficient traffic flow on STH 50. Effective use of access control improves travel capacity, safety, and maintenance of uniform travel speeds. Access management includes a supporting system of roadways that serve adjacent land use and direct traffic to side roads to the extent practicable.

At the state level, STH 50 is a designated access management corridor under WisDOT's Statewide Access Management Plan that sets forth guidelines for maintaining a high level of service for through traffic while providing reasonable local road and property access. The plan's goal is to seek a balance between public investments in highway improvements and the need for land development, tax base growth, and job creation.

At the local level, formal access management guidelines have been followed in the STH 50 corridor since the mid 1980's. The original *Highway Access and Development Plan for STH 50* was published jointly by the Village of Pleasant Prairie, Kenosha County, City of Kenosha and WisDOT in 1987. This plan covers STH 50 between I-94 and 60th Avenue and was prepared to help preserve the traffic carrying capacity on STH 50, and to accommodate ongoing and planned development. It includes guidelines for median opening locations, access roads, and relocation or closure of driveway connections to STH 50.

As part of the present STH 50 Corridor Study, the 1987 Access Plan has been updated to address expected development trends and traffic growth in the corridor through Design Year 2030, to cover the entire STH 50 project corridor between I-94 and 43rd Avenue, and to be consistent with the proposed STH 50 improvements. The plan includes the access management measures proposed as part of the STH 50 improvements and additional local service road/property access layouts outside the STH 50 project "footprint" that will serve as a tool for local officials, existing businesses and development interests in making future development decisions in the STH 50 corridor.

This Environmental Assessment only evaluates the impacts of proposed access management measures that would be constructed by WisDOT as part of the STH 50 improvements. The proposed STH 50 improvements neither necessitate nor foreclose any future access management measures that would be implemented by local governments in accordance with the updated Access Management Plan. Copies of the current Access Management Plan are available at the Village of Pleasant Prairie, City of Kenosha, Kenosha County, and the WisDOT Southeast Region Office in Waukesha.

EXISTING AND ABUTTING FACILITIES

The western segment of the STH 50 corridor (I-94 to STH 31) has transitioned to suburban/urban land use with ongoing and planned residential, commercial and institutional development on both sides of STH 50. In this segment, STH 50 is generally a 4-lane divided rural roadway. There are signalized intersections at 118th Avenue, 104th Avenue, 88th Avenue, 70th Avenue, and STH 31. The remaining local street intersections are stop-sign controlled. STH 50 is grade-separated over the two railroads west of STH 31. The ramps at the railroad grade separation provide access primarily to industrial properties north of STH 50. The posted speed limit in the western segment ranges from 50 to 55 mph (80-90 km/h). The speed limit is reduced to 35 mph (55 km/h) near I-94, and to 40 mph (65 km/h) near STH 31.

The eastern segment (STH 31 to 43rd Avenue) is in a more densely developed urban area with numerous driveways and local street intersections. In this segment, STH 50 is a 4-lane divided urban roadway with auxiliary lanes to accommodate turning movements. In addition to the signalized intersection at STH 31, there are signals at 60th Avenue and 52nd Avenue. The remaining local street intersections are stop-sign controlled. There is an at-grade railroad crossing near 52nd Avenue. The posted speed limit in the eastern segment ranges from 30 to 40 mph (50 to 65 km/h) and varies between the eastbound and westbound lanes.

In general, existing STH 50 does not have substantial horizontal or vertical alignment deficiencies. The main deficiencies are lack of capacity for existing and future traffic, numerous access points and related safety concerns. There are no designated on-road or off-road bicycle facilities in the STH 50 corridor. Sidewalks are present on both sides of STH 50 from 52nd Avenue to 43rd Avenue.

The westerly construction limit for the proposed STH 50 improvements evaluated in this Environmental Assessment is based on an adjacent WisDOT STH 50 project that extends from 128th Avenue west of I-94 to approximately 1,200 feet (366 meters) east of 118th Avenue (just east of the Kilbourn Road Ditch crossing). The adjacent STH 50 project (*STH 50 Reconstruction at I-94, Phase 1*, Project I.D. 1032-10-70) is targeted for construction in 2011. Its purpose is to upgrade STH 50 through the I-94 interchange area to current safety standards, reduce congestion and crashes, reduce the number of driveway connections to STH 50, and to replace deteriorated pavement and structures. STH 50 will be reconstructed to a 6-lane divided urban roadway and the existing box culvert at Kilbourn Road Ditch will be extended.

3. Summary of the alternatives considered and if they are not proposed for adoption, why not. Identify which, if any, of the alternatives is the recommended alternative.

No Build Alternative

Under the No Build Alternative, STH 50 would not be widened to provide additional traffic capacity. The existing highway would bear future traffic increases with effects on congestion, mobility, operational characteristics and safety. Any future improvements would consist of those that attempt to maintain the current service levels, keep the driving surface in good condition and address safety concerns at spot locations. The No Build Alternative is not a viable alternative for addressing key purpose and need factors (future traffic demand, safety concerns and access management). The No Build Alternative serves as a baseline for comparison to the Build Alternatives.

Access Management without Roadway Capacity Improvements

Access management in the STH 50 corridor is currently being implemented in accordance with the 1987 Access Management Plan that covers the STH 50 segment between I-94 and 60th Avenue. Implementing the plan's guidelines with respect to local access roads and driveway consolidations or closures has helped to preserve the carrying capacity on STH 50 as development has progressed in the corridor. However, access management is not a viable stand-alone alternative for addressing future traffic demand and safety concerns. As noted earlier, traffic in the STH 50 corridor is expected to more than double by Design Year 2030 and will approach or exceed the threshold volumes for a 4-lane highway.

Capacity Improvements without Access Management

Providing additional capacity on STH 50 would address future traffic demand. However, without continued and more aggressive access management, safety concerns would worsen in the future due to continued development and more local traffic entering and exiting STH 50. As noted earlier, the majority of the crashes in the STH 50 involve rear-end collisions and angle hits indicative of congestion and conflicts between through traffic and local traffic.

Capacity Improvements with Access Management (Recommended Alternative)

This alternative would address key project purpose and need factors (improve traffic flow and safety on STH 50 and its side road intersections, preserve the traffic carrying capacity on STH 50, and provide reasonable access to existing and proposed development). The general concepts for proposed improvements under the Recommended Alternative are summarized on page 2. Key elements of the Recommended Alternative are summarized below by project section. Existing and proposed roadway typical sections are shown in **Exhibit 2** and the proposed improvement concept plans are provided in **Appendix A**.

116th Avenue to 57th Avenue

- Widen existing 4-lane rural roadway to 6-lane urban facility
 - Three 12-foot (3.6-meter) lanes in each direction
 - 40-foot (12-meter) raised grass median
 - 6-foot (2-meter) paved shoulders with gutter
 - 12-foot (3.6-meter) paved outside shoulders with gutter
- Grade additional 10-foot (3-meter) strip for future multi-use path
- Install new signal at 94th Avenue
- Close existing 83rd Avenue on north side of STH 50 and connect to frontage road segment
- Provide auxiliary lanes for ramps to and from 77th Avenue
- Reconstruct STH 50/STH 31 intersection with jug handles (loop roads) in two quadrants; **see page 7 for discussion of design options considered at the STH 50/STH 31 intersection**
- Access management would include closing approximately 19 existing driveway connections to STH 50 and providing new access to affected properties from an adjacent side road or a new consolidated driveway location

57th Avenue to 52nd Avenue

- Reconstruct/widen existing 4-lane roadway
 - Two 12-foot (3.6-meter) lanes in each direction
 - 32-foot (10-meter) raised grass median
 - 12-foot (3.6-meter) paved outside shoulders with gutter
- Grade additional 10-foot (3-meter) strip for future multi-use trail
- Replace open ditch with terrace area
- Provide more capacity at 52nd Avenue intersection
- Access management would include closing approximately 4 existing driveway connections to STH 50 and providing new access to affected properties from an adjacent side road or a new consolidated driveway location.

52nd Avenue to 43rd Avenue

- Reconstruct/widen existing 4-lane urban roadway
 - Two 12-foot (3.6-meter) lanes in each direction
 - 30-foot (9-meter) raised grass median
- 5-foot (1.5-meter) sidewalk on both sides
- Provide more capacity at local road intersections
- Provide median barrier on STH 50 to prevent left turns from 43rd Avenue
- Access management would include closing approximately 9 existing driveway connections to STH 50 and providing new access to affected properties from an adjacent side road or a new consolidated driveway location.

STH 50/STH 31 Intersection Alternatives

The STH 50/STH 31 intersection has the highest traffic and most crashes of all intersections in the STH 50 corridor as well as business development in all quadrants. It is a challenging intersection in terms of developing a workable solution that addresses traffic operations and safety on STH 50 while still providing reasonable access to business development in the four intersection quadrants. The build alternatives that were developed and evaluated based on input from the project's Advisory Committee, affected business owners and the public are summarized as follows.

Expanded At-Grade Intersection

The expanded at-grade intersection was the "baseline" improvement concept considered for the STH 50/STH 31 intersection. It was presented at the second public information meeting in February, 1999. Based on additional engineering and traffic modeling, the expanded at-grade intersection was refined to include the following key features:

- 4 through lanes, 2 left turn lanes and 1 right turn lane in each direction on STH 50
- 3 through lanes, 2 left turn lanes and 1 right turn lane in each direction on STH 31

The expanded at-grade intersection alternative was eliminated from further consideration for the following key reasons:

- Highest motorist delay of all build alternatives considered
- Signal cycle length of about 180 seconds compared to WisDOT's acceptable cycle length of 90-120 seconds
- Impacts on adjacent development including substantial right-of-way acquisition

Grade Separated Interchange

The grade separated interchange was developed in response to concerns about the operational characteristics and magnitude of impacts that would occur with the expanded at-grade intersection. The initial grade separated alternative was also presented at the February 1999 public information meeting. Based on additional engineering, variations of the grade separated alternative were considered and discussed with the Project Advisory Committee. Key features of all grade separation alternatives included the following:

- Uses bridges to carry STH 50 over STH 31 or STH 31 over STH 50
- Separates STH 50 and STH 31 traffic movements and eliminates need for traffic signal at this intersection

The grade separated interchange was eliminated from further consideration for the following key reasons:

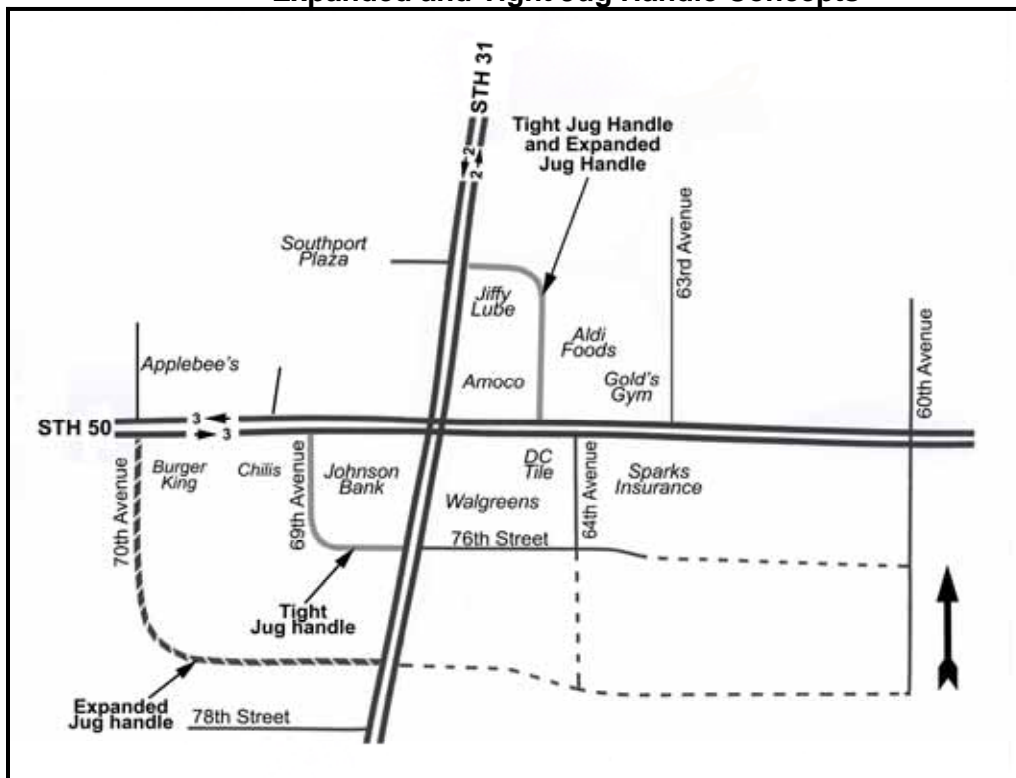
- Substantial changes in access for adjacent businesses
- Obscured business visibility due to structures and retaining walls
- Strong opposition from adjacent businesses

Jug Handle Alternatives

Based on continued concern from area businesses about proposed improvements at the STH 50/STH 31 intersection, WisDOT developed and evaluated the jug handle concept as a possible compromise solution that would address traffic flow and safety needs on STH 50 while still providing reasonable access to businesses in the intersection quadrants. The jug handle alternatives would use jug handles (loop roads) in the southwest and northeast intersection quadrants to replace southbound to eastbound and northbound to westbound left turn lanes within the STH 50/STH 31 intersection. Eastbound to northbound and westbound to southbound left turns would be accommodated within the intersection. Two jug handle concepts (expanded jug handle and tight jug handle) were evaluated for consideration at the third public information meeting in June 2005. Based on traffic modeling and operational analyses, the tight jug handle was identified and displayed as the recommended alternative.

The general concepts for the expanded and tight jug handle alternatives are illustrated in Figure 1.

Figure 1
Expanded and Tight Jug Handle Concepts



The **Expanded Jug Handle Alternative** would have the following key features:

- Jug handle in southwest quadrant uses existing 70th Avenue right-of-way and new right-of-way along 77th Street
- Jug handle in northeast quadrant requires new right-of-way
- Jug handles replace southbound to eastbound and northbound to westbound left turn lanes within STH 50/STH 31 intersection
- Eastbound to northbound and westbound to southbound left turns provided within STH 50/STH 31 intersection
- STH 31/76th Street and STH 50/69th Street intersections closed
- Traveling through STH 50/STH 31 intersection would require more than one signal cycle

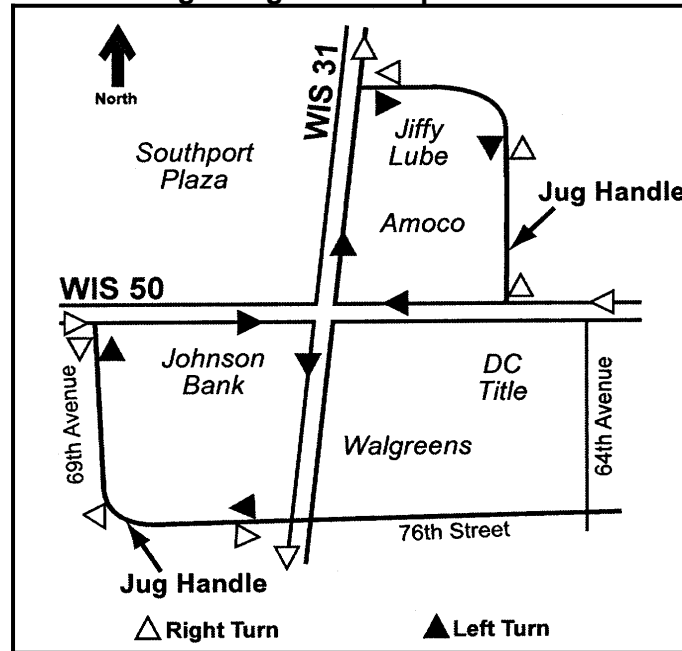
The Expanded Jug Handle Alternative was eliminated from further consideration for the following key reasons:

- Would not serve traffic as well as the tight jug handle and would operate at LOS D compared to LOS C for the tight jug handle
- Traveling through the STH 50/STH 31 intersection would cause more delay than for the tight jug handle (it would take more than one signal cycle due to the additional jug handle length in the southwest quadrant)
- Approximately \$1 million more to construct than the tight jug handle
- Requires approximately 8 acres (3.2 ha) new right-of-way compared to 4.5 acres (1.8 ha) for the tight jug handle
- Affects approximately 36 parcels compared to 29 for the tight jug handle

The **Tight Jug Handle Alternative (Recommended Alternative)** would have the key features summarized below. Operations for the Tight Jug Handle Alternative are illustrated in Figure 2:

- Jug handle in southwest quadrant uses existing 69th Avenue and 76th Street right-of-way
- Jug handle in northeast quadrant requires new right-of-way
- Jug handles replace southbound to eastbound and northbound to westbound left turn lanes within STH 50/STH 31 intersection
- Eastbound to northbound and westbound to southbound left turns provided within STH 50/STH 31 intersection
- Traveling through the STH 50/STH 31 intersection would require one signal cycle due to eliminating left turn phase on STH 31

**Figure 2
Tight Jug Handle Operations**



- Drivers on STH 31 who want to turn left onto STH 50 would go through the intersection and use the jug handles as indicated by the dark arrows on the diagram
- There is no change for drivers on STH 50 who want to turn left onto STH 31
- Drivers on STH 50 who want to turn right onto STH 31 would use the jug handles as indicated by the white arrows on the diagram
- There is no change for drivers on STH 31 who want to turn right onto STH 50.

The Tight Jug Handle Alternative was selected as the recommended alternative for the following key reasons:

- Better traffic operations (LOS C compared to LOS D for the expanded jug handle)
- Average delay in traveling through STH 50/STH 31 intersection would be about 15 seconds/vehicle less than for the expanded jug handle
- Approximately \$1 million less to construct than the expanded jug handle
- Affects approximately 29 parcels affected compared to 36 for the expanded jug handle
- Approximately 4.5 acres (1.8 ha) of new right-of-way compared to 8 acres (3.2 ha) for the expanded jug handle

WisDOT acknowledges that the recommended tight jug handle alternative will not solve all of the local access needs and concerns at the STH 50/STH 31 intersection. Access will need to be provided and managed through a combination of STH 50 improvements and local actions such as providing alternative and shared access to some adjacent properties. The tight jug handle alternative represents the best compromise with respect to improving traffic flow and safety on STH 50 and STH 31 while providing reasonable access to existing development in the intersection quadrants.

Single Point Diamond Alternative

The single point diamond alternative was developed and evaluated in response to concerns about limited access to businesses in the STH 50/STH 31 intersection quadrants with the Tight Jug Handle Alternative. It was presented at the fourth public information meeting in August 2006. The single point diamond is a non-conventional interchange design used in urban and suburban areas where adjacent development and limited right-of-way precludes constructing a conventional diamond interchange. The single point diamond grade separates the involved roadways. This allows free flow traffic movement on the depressed roadway (no turning movements) and provides turning movements to and from the elevated roadway. A single point diamond interchange is illustrated in Figure 3.

**Figure 3
Single Point Diamond Interchange Illustration**



At the STH 50/STH 31 intersection, the Single Point Diamond Alternative would have the following key features:

- Grade separation with STH 50 over STH 31
- STH 50 raised about 3 feet (1 meter) from 69th Avenue to 64th Avenue
- STH 31 lowered about 17 feet (5.2 meters) below STH 50 from 76th Street to Southport Mall
- 4 through lanes, 2 left turn lanes and 1 right turn lane in each direction on STH 50
- 2 through lanes in each direction and raised median on STH 31
- Access to STH 50 from STH 31 from 69th Avenue with right-in and right-out only turning movements
- STH 31 would have signalized intersection at 78th Street and there would be right-in and right-out only turning movements at 76th Street and Southport Mall entrance

The Single Point Diamond Alternative was eliminated from further consideration for the following key reasons:

- Requires pump station/structure to prevent intersection flooding
- Pump station requires additional right-of-way in northwest intersection quadrant
- Pump station/structure at least \$1 million to construct
- Problems draining the depressed STH 31 roadway likely
- Requires a complex traffic handling plan to allow construction under traffic
- No operational or business access advantages compared to the recommended tight jug handle
- Requires 2 residential displacements on STH 31 north of STH 50 and would affect approximately 48 parcels compared to 29 for the tight jug handle
- Approximately \$3 million more to construct than the tight jug handle

4. In general terms, briefly discuss the construction and operational energy requirements and conservation potential of the various alternatives under consideration. Indicate whether the savings in operational energy are greater than the energy required to construct the facility.

Construction energy is that required in raw materials and equipment to build or maintain the highway. Operational energy is the direct consumption of fuel by vehicles using the roadway. The No Build Alternative would require long-term expenditure of construction energy to maintain the existing roadway in a usable condition. The construction energy required to reconstruct/widen the existing roadway will be recovered over time by reducing long-term maintenance energy expenditure and through savings in operational energy. In the long-term, savings in operational energy will outweigh the construction energy expended in making the proposed improvements.

5. Describe existing land use (Attach land use maps if available).

a. Land use in immediate area

Land use in the western portion of the STH 50 corridor includes a mix of commercial and retail development, office complexes, health care facilities and residential subdivisions. There are a few remaining open tracts of land in the western portion of the corridor that are planned for conversion to commercial or residential uses in the future. For example, the previously vacant land on the VK Development property located on the south side of STH 50 between 104th Avenue and 88th Avenue has recently been partially developed with an Aurora health care facility and a Famous Dave's Restaurant, and there are plans to add a Target store. The eastern portion of the STH 50 corridor (STH 31 to 43rd Avenue) is fully developed with a mix of commercial and residential properties. Some undeveloped land in the STH 50 corridor that is planned and zoned for future commercial or residential development is being used temporarily for limited crop production (soybeans, cabbage) through arrangements between developers/municipalities who own the land and area farmers. These areas include a portion of the City of Kenosha parkland east of 116th Avenue, a portion of land south of STH 50 between the Kilbourn Road Ditch and 104th Avenue, and a portion of the City of Kenosha property north of STH 50 and east of 88th Avenue.

b. Land use in area surrounding project area

Land use in the surrounding area is similar to that along the STH 50 corridor.

6. Briefly identify adopted plans for the area and discuss whether the proposed action is compatible with the plan. (For example, the following may be considered: Regional Planning Commission Plans, Transportation Improvement Program, State Transportation Improvement Plan, Local zoning and land use plans, DOT Storm water Management Plans, others.)

2035 Regional Transportation System Plan for Southeastern Wisconsin (SEWRPC Planning Report No. 49, June, 2006). STH 50 is included in the plan as a capacity expansion project (6 lanes from I-94 to 39th Avenue).

2010 Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin (SEWRPC Planning Report No. 43, January 1995, and 2020 Amendment, December, 2001). STH 50 is not shown as an existing or proposed on-street bicycle route. Within the STH 50 project limits, 104th Avenue, 88th Avenue and 52nd Avenue are shown as proposed on-street bicycle routes.

2007-2010 Transportation Improvement Program (TIP) for Southeastern Wisconsin (SEWRPC, December, 2006). The STH 50 project is included in the 2007-2010 TIP as a Highway Preservation project under project number 20: Engineering/environmental studies for reconstruction, rehabilitation, or capacity expansion of State Trunk Highways identified for such improvements in the SEWRPC Plan (Regional Transportation System Plan).

A Comprehensive Plan for the Kenosha Urban Planning District (SEWRPC Community Assistance Planning Report No. 212, December 1995). This plan, adopted in 1996, serves as the Comprehensive Plan for the Village of Pleasant Prairie and City of Kenosha under Wisconsin's Comprehensive Planning Law, Section 66.1001, Wisconsin Statutes. The recommended land use along the STH 50 corridor through year 2010 includes a mix of low to high density residential development, commercial, governmental and institutional development, and isolated industrial development (primarily along the railroad corridor). Since 1996, the plan has been amended as needed to reflect any changes in planned land use and to promote orderly development in the Pleasant Prairie and Kenosha communities.

Wisconsin Administrative Code Chapter TRANS 401

TRANS 401 governs construction site erosion control and storm water management for WisDOT projects. Erosion control and storm water management measures developed in the project's engineering phase will be consistent with TRANS 401 requirements.

7. Early coordination with Agencies.

a. Intra-Agency Coordination

i) Bureau of Aeronautics

No - Coordination is not required. Project is not located within 2 miles (3.22 kilometers) of a public or military use airport, nor would the project change the horizontal or vertical alignment of a transportation facility located within 6.44 kilometers (4 miles) of a public use or military airport.

Yes - Coordination has been completed and project effects have been addressed. Explain.

ii) Regional Office Real Estate Section

No - Coordination is not required because no inhabited houses or active businesses will be acquired.

Yes - Coordination has been completed. Project effects and relocation assistance have been addressed.

Conceptual Stage Relocation Plan attached as Exhibit ____.

b. Interagency Coordination

See agency coordination summary on page 14. Agency correspondence is provided in **Appendix B**.

Agency Coordination Summary

Note: Agency correspondence is provided in Appendix B	COORDINATION	COMMENTS
	Correspondence Attached Y/N	Explain or give results. If no correspondence is attached to this document, indicate when coordination with the agency was initiated and if available, when coordination was completed. Agency letters provided in Appendix B .
STATE AGENCY		
Agriculture (DATCP)	Y	April 24, 1998 and January 5, 1999 —Letters to DATCP providing information on the proposed improvements, existing and planned land use in the corridor. January 13, 1999 —Letter from DATCP indicating AIS not required.
Natural Resources (DNR)	Y	April 24, 1998 —Initial letter to DNR notifying them about proposed project. May 14, 1998 —Letter from DNR noting interest in the Kilbourn Road Ditch crossing and associated floodplain/environmental corridor, and providing information on potential Special Concern species. February 18, 1999 —Letter to DNR updating them on the proposed STH 50 improvements, preliminary wetland impact information, and preliminary storm water management information. August 1, 2005 —Consultant project manager attended the DOT/DNR liaison meeting at WisDOT to provide an update on the project and natural resource impacts. July 24, 2006 —Letter to DNR updating them on the proposed STH 50 improvements, wetland impacts, Kilbourn Road Ditch crossing and other aspects. December 1, 2006 —Letter to DNR updating them on the proposed STH 50 improvements and letting them know that the Kilbourn Road Ditch crossing is now part of an adjacent WisDOT project (STH 50/I-94 interchange improvements). December 5, 2006 —Letter from DNR acknowledging removal of the Kilbourn Road Ditch from the STH 50 project, asking whether there are other stream crossings, and providing information on construction impacts, erosion control and potential threatened/endangered resources.
State Historical Society (SHS)	Y	March, 1999 —Initial Section 106 Form, Archaeological Survey Field Report and Architecture/History Survey sent to the WisDOT Bureau of Equity and Environmental Services. At this time the project was put on hold due to lack of resources in WisDOT and the material was not sent to the SHS. October, 2003 —Updated Section 106 Form, archaeological and historic structure survey materials sent to the SHS. December 11, 2003 —SHS concurred in results of archaeological and historic structure investigations (see signed Section 106 Form in Appendix B).
Wisconsin Department of Administration Coastal Management Program (CZMP)	Y	July 25, 2006 —Letter to CZMP notifying them about proposed project. December 1, 2006 —Letter to CZMP updating them on the proposed project. December 27, 2006 —Letter from CZMP indicating a coastal zone consistency review is not required.
FEDERAL AGENCY		
Advisory Council on Historic Preservation (ACHP)	N	Coordination not required.
US Army Corps of Engineers (USACE)	Y	April 24, 1998 —Letter to USACE notifying them about proposed project. April 30, 1998 —Letter from USACE providing information on previous wetland determinations conducted by SEWRPC in and near the STH 50 corridor. July 24, 2006 —Letter to USACE updating them on the proposed improvements and providing information on wetland impacts. December 1, 2006 —Letter to USACE updating them on the proposed project.
	Y	December 5, 2006 —Letter from USACE indicating the proposed STH 50 improvements would likely be eligible for a General Permit under Section 404 of the Clean Water Act.
US Environmental Protection Agency (EPA)	N	Coordination not required.

Agency Coordination Summary (Continued)

National Park Service (NPS)	N	Coordination not required.
Natural Resource Conservation Service (NRCS)	N	Coordination not required; no farmland impacts.
US Coast Guard (USCG)	N	Coordination not required.
US Fish & Wildlife Service (FWS)	Y	April 24, 1998 —Initial letter to FWS notifying them about the proposed improvements. May 20, 1998 —Letter from FWS providing information on federally-listed threatened or endangered species (none would be affected). February 18, 1999 —Letter to FWS providing updated information on the proposed improvements, wetland impacts, and other aspects.
	Y	March 17, 1999 —Letter from FWS reiterating earlier information on federally-listed threatened or endangered species (none would be affected). July 24, 2006 —Letter to FWS updating them on the proposed improvements and wetland impacts.
	Y	August 14, 2006 —Letter from FWS indicating no federally listed threatened or endangered species in the project's area of potential effect; noted wetland impacts should be avoided to the extent possible and mitigated where loss is unavoidable; recommended that Kilbourn Road Ditch crossing be improved to facilitate passage of fish and other aquatic species.
Other (Identify)		
Native American Tribes	Y	January 28, 1999 —Initial letter to 11 Native American Tribes notifying them about the proposed improvements (see list below). February 3, 1999 —Letter from Menominee Indian Tribe of Wisconsin acknowledging that the proposed improvements will not affect cultural resources.
	Y	February 10, 1999 —Letter from Lac du Flambeau Tribal Historic Preservation Office indicating no information to provide and recommending coordination with the Menominee and Ho-Chunk Tribes.
	Y	February 16, 1999 —Letter from Ho-Chunk Tribe indicating no information to provide and requesting copies of additional materials pertinent to the project.
	Y	August 21, 2003 —Letter to 16 Native American Tribes updating them on the proposed improvements (see list below). August 21, 2003 —Letter from Ho-Chunk Department of Heritage Preservation indicating no objections to the proposed project.
	Y	September 23, 2003 —Letter from Sac and Fox Nation of Missouri indicating an interest in the proposed improvements in terms of any cultural materials that might be located during construction.

The January 28, 1999 initial coordination letter was sent to the following Native American Tribes:

Bad River Band Lake Superior Chippewa (no response)
Forest County Potawatomi (no response)
Ho-Chunk Nation (response received)
La Courte Oreilles (no response)
Lac du Flambeau (response received)
Menominee Tribe (response received)
Oneida Tribe (no response)
Red Cliff Band of Superior Chippewa (no response)
Sokogon Chippewa Community (no response)
St. Croix Chippewa (no response)
Stockbridge Munsee (no response)

The August 21, 2003 update letter was sent to the following Native American Tribes:

Bad River Band of Lake Superior Chippewa (no response)
Forest County Potawatomi (no response)
Ho-Chunk Nation (response received)
Oneida Nation (no response)
Red Cliff Band of Superior Chippewa (no response)
Sokogon Chippewa Community (no response)
Prairie Band Potawatomi (no response)
La Courte Oreilles (no response)
Lac du Flambeau (no response)
Menominee Tribe (no response)
St. Croix Chippewa (no response)
Stockbridge Munsee Community (no response)
Iowa Tribe of Oklahoma (no response)
Sac and Fox Nation of Missouri (response received)
Sac and Fox Nation of the Mississippi in Iowa (no response)
Minnesota Mdewakanton Sioux (no response)

c. Local Government Coordination

LOCAL UNIT OF GOVERNMENT	COORDINATION	COMMENTS
	Correspondence Attached (Y/N)	Explain or give results. If no correspondence is attached to this document, indicate when coordination with the agency was initiated and if available, when coordination was completed.
(Coordination with local units of government is summarized below)		

January 7, 1998—Meetings with Village of Pleasant Prairie and City of Kenosha to initiate data gathering and to discuss initial project activities for the STH 50 Corridor Study.

February 11, 1998—Access management workshop with representatives from WisDOT, local governments, and SEWRPC. The purpose of the workshop was to introduce the STH 50 corridor study and to provide an overview on access management aspects that would be applicable to STH 50. The workshop also provided background information relevant to the alternatives that would be developed for STH 50 and to provide context for updating the 1987 STH 50 Access Management Plan.

June 9, 1998—Meeting with local government officials (Village of Pleasant Prairie, City of Kenosha, Kenosha County) to review the STH 50 Corridor Study objectives/progress, and to obtain feedback on the access management concepts being considered.

August, 1998—Establishment of a Project Advisory Committee (PAC) with representatives from the Village of Pleasant Prairie, City of Kenosha, Kenosha County, Kenosha Area Business Alliance, and the Southeastern Wisconsin Regional Planning Commission.

September 8, 1998—First PAC meeting held to update members on the study, review proposed updates for the 1987 Access Management Plan, present information on existing STH 50 conditions, forecast traffic for design year 2020, initial alternatives for the STH 50/STH 31 intersection, to provide background information on access management principles and guidelines used to update the access management plan, and to obtain PAC member input on materials to be presented at the first public information meeting.

December 17, 1998—Second PAC meeting held to obtain input on the proposed updates to the 1987 Access Management Plan, review the engineering concept plan for proposed STH 50 improvements, and review the initial range of grade-separated alternatives for the STH 50/STH 31 intersection.

January 22, 1999—Third PAC meeting held to review and narrow the range of alternatives being considered for the STH 50/STH 31 intersection, review comments from PAC members on the engineering concept plans for proposed STH 50 improvements, and obtain input on materials to be presented at the second public information meeting.

July 7, 1999—Fourth PAC meeting held to review the latest alternatives being considered for the STH 50/STH 31 intersection, report on the results of meetings with affected businesses, obtain input from PAC members, and provide an update on the status of the engineering concept plans and updates to the 1987 Access Management Plan.

August 1999—Meeting with the City of Kenosha to discuss the Mayor’s concerns with the STH 50/STH 31 alternatives and his contention that other parallel roadways in the area should be studied for possible capacity expansion or other improvements before proceeding with improvements on STH 50. His point was that if other roadways were improved, the need for capacity expansion and access management on STH 50 might be alleviated to some extent. The mayor also requested a comparison between the adopted 1987 Access Management Plan and the updated plan being proposed for the STH 50 Corridor Study. This information was provided by the study team in September 1999.

August 11, 2003—Letter to local officials from WisDOT noting restart of the STH 50 Corridor Study and indicating that meetings would be scheduled in the near future.

September 11, 2003—Meeting with Village of Pleasant Prairie to restart the STH 50 Corridor Study, review previous project activities, proposed STH 50 improvements/alternatives considered, outline upcoming activities, and present the revised project schedule.

October 20, 2003—Meeting with City of Kenosha to restart the STH 50 Corridor Study, review previous project activities, proposed STH 50 improvements/alternatives considered, outline upcoming activities, and present the revised project schedule.

October 2003—Meeting with Kenosha County to restart the STH 50 Corridor Study, review previous project activities, proposed STH 50 improvements/alternatives considered, outline upcoming activities, and present the revised project schedule.

December 15, 2003—Meeting with Village of Pleasant Prairie to provide an update on the STH 50 Corridor Study, to review the latest engineering concept plan, and to review the updated Access Management Plan.

March 25, 2004—Meeting with City of Kenosha to provide an update on the STH 50 Corridor Study, to review the latest engineering concept plan, and to review the updated Access Management Plan.

April 22, 2005—Fifth PAC meeting to update members on project restart activities, provide an update on the status of the engineering concept plans, the updated Access Management Plan, present the recommended alternative at the STH 50/STH 31 intersection, and to review upcoming activities and the project schedule.

June 3, 2005—Letter from City of Kenosha providing comments on the latest engineering concept plan.

June 17, 2005—Meeting with Village of Pleasant Prairie to review their comments on the engineering concept plans and updated Access Management Plan.

July 6, 2005—Letter from Village of Pleasant Prairie providing additional comments on the engineering concept plans and updated Access Management Plan.

June 26, 2006—Sixth (final) PAC meeting to provide an update on project activities since the April 22, 2005 PAC meeting, review the recommended improvement plan east and west of the STH 50/STH 31 intersection, review alternatives for the STH 50/STH 31 intersection including the new single point diamond interchange design.

September 21, 2006—Letter from Village of Pleasant Prairie providing comments on the project's functional plans.

January 5, 2007—WisDOT meeting with business interests in the STH 50/STH 31 intersection area regarding a possible design refinement to the jug handle west of Johnson Bank in the southwest quadrant of the intersection.

February 12, 2007—WisDOT met with the Village of Pleasant Prairie Plan Commission at their request, to review the STH 50 functional plan and access management plan.

Summary of Environmental Factors/Effects

ENVIRONMENTAL FACTORS	EFFECTS				COMMENTS
	Adverse	Benefit	None	* N/A	
SOCIO-ECONOMIC FACTORS					
General Economics			X		The project requires expenditure of public funds to construct. This cost will be offset by reductions in long-term maintenance and crash related costs. The project will not change the potential for economic development. See page 28 for more information.
Community & Residential	X	X			There will be short-term inconvenience during construction for local roadway users. Access will be maintained during construction. Benefits will include reduced congestion and improved safety. No occupied residential displacements are required. One vacant/dilapidated house will be acquired. See page 29 for more information.
Economic Development and Business	X	X			There will be short-term inconvenience during construction for traffic serving businesses. Access will be maintained during construction. Benefits will include reduced congestion and improved safety. Access to some businesses will be less convenient/direct than it is today. No business displacements are required. See page 33 for more information.
Agriculture				X	Minor strip taking of land currently being used for crop production but zoned and planned for future development; minor strip taking from land within the City of Kenosha parkland parcel that is presently being rented out for crop production. Factor sheet not required.
Environmental Justice				X	There are no environmental justice populations in the project's area of potential effect. See pages 21 and 36 for more information.
NATURAL ENVIRONMENT FACTORS					
Wetlands	X				The project requires a total of approximately 0.25 acre (0.10 ha) of wetland from 4 wetland areas; 0.1 acre (0.04 ha) is from ADID wetlands. See page 38 for more information.
Streams & Floodplains			X		Drainage culverts along STH 50 will be replaced or extended as part of the proposed improvements. The existing box culvert at Kilbourn Road Ditch will be extended as part of an adjacent project (Project I.D. 1032-10-70). A small culvert pipe under 88 th Avenue may be extended to accommodate minor widening of 88 th Avenue. This culvert pipe provides a hydraulic connection between the portion of Wetland W-4 east of 88 th Avenue and the portion west of 88 th Avenue. A small tributary to Pike Creek ends in the wetland area east of 88 th Avenue. There is no stream crossing as such at this location. WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding erosion control and stormwater management to minimize the potential for adverse effects. Factor sheet not required.
Lakes or Other Open Water				X	None in project's area of potential effect. Factor sheet not needed.
Upland Habitat				X	There is only a minor amount of upland habitat along the STH 50 corridor, primarily within the existing grass side slopes and back slopes. Factor sheet not required.

Summary of Environmental Factors/Effects (continued)

Erosion Control			X		There is a potential for erosion related sedimentation in wetlands during construction. WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding erosion control to minimize the potential for adverse effects. See page 44 for more information.
Stormwater Management			X		WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding stormwater management to minimize the potential for adverse effects. See page 46 for more information.

PHYSICAL ENVIRONMENT FACTORS

Air Quality			X		The project is exempt from permit requirements under NR 411. The project is included in the 2007-2010 TIP for Southeastern Wisconsin. There will be no air quality impacts as a result of the proposed action. See page 49 for more information and see Appendix C for a discussion of Mobile Source Air Toxics (MSAT).
Construction Stage Sound Quality			X		WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply. See page 51 for more information.
Traffic Noise	X				The noise analysis indicates noise impacts at 4 representative noise receptor locations. See page 53 for more information.

CULTURAL ENVIRONMENTAL FACTORS

Section 4(f) and 6(f)				X	The City of Kenosha owns and administers a parcel of land adjacent to Kilbourn Road Ditch north of STH 50 (see Appendix A , sheet 1). Telephone coordination with the city indicates this parcel is mapped as “parkland” but is not used or intended for use as a public recreational area (see telephone conference memo in Appendix B). The parcel was dedicated to the city through land development and is being preserved as an open space/floodplain environmental corridor. A portion is also being rented out for crop production. Section 4(f) does not apply because this parcel of land is not a public use recreational area or wildlife refuge, and because the multiple use concept applies to this parcel. No LAWCON, Stewardship or similar federal or state funds were used in purchase of the land. Factor sheet not required.
Historic Resources			X		The historic structure investigation did not identify any historic structures in the project’s area of potential effect. The SHS has concurred in this finding (see signed Section 106 Form in Appendix B). Factor Sheet not required.
Archaeological Resources			X		The archaeological survey did not identify any archaeological sites in the project’s area of potential effect. The SHS has concurred in this finding (see signed Section 106 Form in Appendix B). Factor Sheet not required.
Hazardous Substances or USTs			X		Six potential petroleum contamination sites have been identified for possible Phase 2 investigations. See page 56 for more information.
Aesthetics			X		The visual setting will be changed due to the expanded scale of the new highway (additional traffic lanes and turning lanes). However due to the primarily commercial setting along the STH 50 corridor, this change is not expected to have an adverse effect on viewer groups. See page 58 for more information.
Coastal Zone			X		The proposed action is consistent with Wisconsin Coastal Management Program (WCMP) goals (see WCMP letter in Appendix B). Factor sheet not required.
Other					

* N/A – Blacked out cells in this column require a check in at least one of the other columns.

ENVIRONMENTAL COST MATRIX Transportation Improvements

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS		
		No Build	Recommended ¹	
Project Length	Miles (Km)	4.4 (7)	4.4 (7)	
Cost (2006 \$)				
Construction	Million \$	0	51.0	
Real Estate	Million \$	0	5.6	
Total	Million \$	0	56.6	
Land Conversions				
Total Area Converted to R/W	Acres (Hectares)	0	13.2 (5.3)	
Wetland Area Converted to R/W	Acres (Hectares)	0	0.25 (0.10)	
Upland Area Converted to R/W	Acres (Hectares)	0	Minor	
Other Area Converted to R/W	Acres (Hectares)	0	12.9 developed land (5.2)	
Real Estate				
Number of Farms Affected	Number	0	0	
Total Land From Farm Operations Required	Acres (Hectares)	0	0 0	
AIS Required	Yes/No/NA	NA	N/A	
Farmland Rating	Score	NA	N/A	
Total Farm Buildings Required	Number	N/A	N/A	
Housing Units Required	Number	0	1 (vacant, dilapidated structure)	
Commercial Units Required	Number	0	0	
Other Buildings or Structures Required	Number (Type)	0	0	
Environmental Issues				
Floodplain	Yes/No	No	No	
Stream Crossings	Number	0	No	
Endangered Species	Yes/No	No	No	
Historic Properties	Number	0	0	
Archeological Sites	Number	0	0	
Section 106 MOA Required	Yes/No	No	No	
Section 4(f) Evaluation Required	Yes/No	No	No	
Environmental Justice Issues	Yes/No	No	No	
Air Quality Permit	Yes/No	NA	No	
Design Year Noise Sensitive Receptors	Number	NA	10 representative noise receptors modeled	
No Impact	Number	NA	6 representative noise receptors	
Impacted (exceed dBA levels)	Number	NA	4 representative noise receptors	
Contaminated Sites	Number	0	6 sites identified for Phase 2 investigation	
Note:				
1. The Recommended Alternative is capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.				

8. Describe how the project development process complied with Executive Order 12898 on Environmental Justice.

EO 12898 requires agencies to achieve environmental justice by identifying and addressing disproportionately high and adverse human health and environmental effects on minority populations and low-income populations, including the interrelated social and economic effects. Include those covered by the Americans with Disabilities Act and the Age Discrimination Act.

a. Identify sources of data used to determine presence of minority populations and low-income populations.

- | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> Windshield Survey | <input type="checkbox"/> Survey Questionnaire | <input type="checkbox"/> Door to Door |
| <input type="checkbox"/> WisDOT Real Estate | <input checked="" type="checkbox"/> US Census Data | <input type="checkbox"/> Official Plan |
| <input type="checkbox"/> Real Estate Company | | |
- Identify Real Estate Company
 Human Resource Agency
 Identify Agency

- Public information meetings and individual meetings with affected property owners

Identify Plan, Approval Authority and Date of Approval

b. Indicate whether a minority population or a low-income population, including the elderly and the disabled, is in the project's area of influence.

- i) The requirements of EO 12898 are met if both "No" boxes are checked below.

- No minority population is in the project's area of influence.
 No low-income population is in the project's area of influence.

The project is located in the Village of Pleasant Prairie and City of Kenosha. The 2000 census data indicates the following population characteristics for these municipalities:

<u>Village of Pleasant Prairie</u>	<u>City of Kenosha</u>
Total population—16,136	Total population—90,352
White—95.5% of total population	White—85.7% of total population
Black or African American—1.5% of total population	Black or African American—8.6% of total population
American Indian and Alaska Native—0.4% of total population	American Indian and Alaska Native—1.0% of total population
Asian—1.4% of total population	Asian—1.3% of total population
Hispanic or Latino—3.4% of total population	Hispanic or Latino—10% of total population
Percentages add to more than 100% because individuals may report more than one race.	

The per capita income for the Village of Pleasant Prairie is \$26,087, and \$19,578 for the City of Kenosha compared to the national poverty line per capita income of approximately \$9,310.

During the project's public involvement activities the study team had an opportunity to visit with the majority of residents/landowners in the project's area of potential effect. There is no indication that the proposed improvements would affect any populations subject to Environmental Justice requirements. There are no Environmental Justice concerns with the proposed action.

- ii) If either or both of the "Yes" boxes are checked, item c) below must be completed.

- Yes, a minority population is within the project's area of influence.
 Yes, a low-income population is within project's area of influence.

c. How was information on the proposed action communicated to the minority and/or low- income population(s)? Check all that apply.

Not applicable.

- | | | |
|-------------------------------------------------------|------------------------------------------------|-------------------------------------|
| <input type="checkbox"/> Advertising | <input type="checkbox"/> Brochures | <input type="checkbox"/> Newsletter |
| <input type="checkbox"/> Notices | <input type="checkbox"/> Utility Bill Stuffers | <input type="checkbox"/> E-mail |
| <input type="checkbox"/> Public Service Announcements | <input type="checkbox"/> Direct Mailings | <input type="checkbox"/> Key Person |
| <input type="checkbox"/> Other (Identify) | | |

d. Identify how input from the minority population and/or low-income population was obtained. Check all that apply.

Not applicable.

- | | | |
|---------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------|
| <input type="checkbox"/> Mailed Survey | <input type="checkbox"/> Door-to-door interview | <input type="checkbox"/> Focus Group Research |
| <input type="checkbox"/> Public Meeting | <input type="checkbox"/> Public Hearing | <input type="checkbox"/> Key Person Interview |
| <input type="checkbox"/> Targeted Small Group Informational Meeting | | <input type="checkbox"/> Targeted Workshop/Conference |
| <input type="checkbox"/> Other (Identify) | | |

e. Indicate any special provisions that were made to encourage participation from the minority population and/or low-income population(s).

Not applicable.

- | | | |
|--------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> Interpreter | <input type="checkbox"/> Listening Aids | <input type="checkbox"/> Accessibility for Elderly and Disabled |
| <input type="checkbox"/> Transportation Provided | <input type="checkbox"/> Child Care Provided | <input type="checkbox"/> Sign Language |
| <input type="checkbox"/> Other (Identify) | | |

9. Briefly summarize the status and results of public involvement. Briefly describe how the public involvement process complied with EO 12898 on Environmental Justice.

September 23, 1998—First public information meeting held to present the study scope, activities and schedule, review proposed access management techniques for the STH 50 corridor, and review concepts for improving the STH 50/STH 31 intersection. The meeting was open house from 5:30 to 8:30 p.m. with a presentation at 6:30 and was attended by approximately 100 people. The meeting notice was published in the Kenosha News and individual notices were sent to the project’s mailing list (abutting residential and business owners, local officials, agencies and other interests). Most people supported the need to manage access in the STH 50 corridor and the need to address increasing traffic and safety concerns. While there were some concerns about median opening locations and property access, several people stated that traffic backups on STH 50 are becoming worse and that it is difficult to turn safely to and from STH 50. It was also noted that traffic is attempting to avoid STH 50 by cutting through residential neighborhoods.

February 25, 1999—Second public information meeting held to present the latest access management proposals, the engineering concept plans for upgrading STH 50, and alternatives for the STH 50/STH 31 intersection (at-grade intersection, grade separation with STH 50 over STH 31, grade separation with STH 31 over STH 50). The meeting was open house from 4:30 to 8:00 p.m. with a presentation at 6:00 and was attended by approximately 75 people. The meeting notice was published in the Kenosha News and individual notices were sent to the project’s mailing list (abutting residential and business owners, local officials, agencies and other interests). Most people continued to support the need for access management and capacity improvements to STH 50. There was concern about changes in business access with all of the STH 50/STH 31 intersection alternatives. Most people expressed a preference for the at-grade alternative noting that the grade separated alternatives would be visually intrusive and would cause the most impacts with respect to access.

June 30, 2005—Third public information meeting to provide information on project restart activities and schedule, and to present the latest proposed improvements and access management plans including the proposed jug handle alternative at the STH 50/STH 31 intersection. The meeting was open house from 4:30 to 7:30 p.m. and was attended by approximately 60 people. The meeting notice was published in the Kenosha News and individual notices were sent to the project's mailing list (abutting residential and business owners, local officials, agencies and other interests). There continues to be overall support for improving traffic flow and safety on STH 50 including access management. There was also continued acknowledgement that planned development along the STH 50 corridor will cause additional congestion and safety concerns as traffic increases. The main comments and concerns focused on the practicability of the jug handle alternative at the STH 50/STH 31 intersection, how access would be provided to individual existing businesses, and how the local access management recommendations would be implemented in the future.

August 29, 2006—Fourth (final) public information meeting to provide information on the recommended tight jug handle alternative, the single point diamond alternative developed since the previous public information meeting, other alternatives previously considered, and other project aspects. The meeting was open house from 4 to 7 p.m. and was attended by approximately 60 people. The meeting notice was published in the Kenosha News and individual notices were sent to the project's mailing list (abutting residential and business owners, local officials, agencies and other interests). There continues to be overall support for improving traffic flow and safety on STH 50 including access management. There was also continued acknowledgement that planned development along the STH 50 corridor will cause additional congestion and safety concerns as traffic increases. The main comments and concerns focused on the STH 50/STH 31 intersection alternatives, changes in property access at other locations, and concerns about restricted turning movements (median opening locations, right-in and right-out only turns at some driveways and local road intersections).

In addition to the public information meetings, there were several meetings and contacts with local officials and business interests during the development and refinement of the preliminary access management plan and STH 50 improvement concepts. Key meetings and other contacts included the following:

June 1998—Meeting with STH 50 business owners to review the preliminary access management plan.

March 1999—Meetings with Johnson Bank and Walgreen's to discuss their concerns with the STH 50/STH 31 alternatives being considered.

April 1999—Letter to business owners in the STH 50/STH 31 intersection area to let them know that the grade separated alternative with STH 31 over STH 50 had been dropped from further consideration and that the remaining alternatives (at-grade intersection, grade separation with STH 50 over STH 31) were being evaluated further in an attempt to provide better access to businesses in the intersection quadrants.

May 1999—Meeting with Kenosha County and Kenosha Area Business Alliance representatives to update businesses on the refinements made to the STH 50/STH 31 alternatives. This is the meeting at which the concept of a "jug handle" alternative was introduced. This alternative was generally well received by meeting participants as it addressed some of their earlier concerns with the at-grade and grade separated alternatives.

February 2001—Meeting with the Village of Pleasant Prairie, City of Kenosha, Heartland Development and Johnson Bank to discuss proposed development in the southwest quadrant of the STH 50/STH 31 intersection. The discussion also included review of the preliminary jug handle alternative being considered at that time. This meeting was requested by local officials on behalf of Heartland Development and Johnson Bank. Although it was requested after the project was put on hold in August 1999, WisDOT and consultant representatives attended to find out what was being proposed by the developer and to reiterate/review the proposed jug handle improvement concept.

January 5, 2007—WisDOT meeting with business interests in the STH 50/STH 31 intersection area regarding a possible design refinement to the jug handle west of Johnson Bank in the southwest quadrant of the intersection.

The public involvement process was inclusive of all residents and population groups in the project corridor and did not exclude any persons because of income, race, color, religion, national origin, sex, age or handicap.

a. Identify groups (e.g., elderly, handicapped), minority populations and low-income populations that participated in the public involvement process. This would include any organizations and special interest groups.

Not applicable.

b. Describe, briefly, the issues, if any, identified by any groups, minority populations and/or low-income populations during the public involvement process.

Not applicable.

c. Briefly describe how the issues identified above were addressed. Include a discussion of those that were avoided as well as those that were minimized and those that are to be mitigated. Include a brief discussion of proposed mitigation, if any.

Not applicable.

Traffic Summary

	ALTERNATIVE: Recommended Alternative					
	SEGMENT TERMINI	I-94 to 104 th Avenue	104 th Avenue to 88 th Avenue	88 th Avenue to STH 31	STH 31 to 52 nd Avenue	52 nd Avenue to 43 rd Avenue
TRAFFIC VOLUMES	Year					
Existing ADT	2002	24,600	26,300	32,300	30,700	21,700
Construction Year ADT	2010	49,025	49,900	60,175	55,800	48,350
Construction + 10 ADT	2020	54,550	54,550	67,925	59,150	51,050
Design Year ADT	2030	59,650	59,800	74,075	62,400	53,650
Design Year DHV	2030	5,726	5,741	7,111	5,990	5,150
Existing PHV	2002	2,681	2,867	3,521	3,346	2,365
Construction Year PHV	2010	5,344	5,439	6,559	6,082	5,270
Construction + 10 PHV	2020	5,946	5,946	7,404	6,447	5,564
TRAFFIC FACTORS	K200	5,726	5,741	7,111	5,990	5,150
Design Year	D (%)	50/50	50/50	50/50	50/50	50/50
	T (% of ADT)	5	5	5	5	5
	T (% of DHV)	5	5	5	5	5
	Level of Service	D	D	D	D	D
SPEEDS						
Existing	Posted	55 mph (90 km/h)	50 mph (80 km/h)	50 mph (80 km/h)	40 mph (65 km/h)	30 mph (50 km/h)
Design Year	Posted	45 mph (70 km/h)	45 mph (70 km/h)	45 mph (70 km/h)	40 mph (65 km/h)	30 mph (50 km/h)
	Project Design Speed	50 mph (80 km/h)	50 mph (80 km/h)	50 mph (80 km/h)	45 mph (70 km/h)	35 mph (55 km/h)
OTHER (Specify)	P (% of ADT)	10.9	10.9	10.9	10.9	10.9
	K (% of ADT)	9.6	9.6	9.6	9.6	9.6

ADT = Average Daily Traffic

K100, 200 or % = K100 = Rural, K200 = Urban, % = ADT in DHV

T = Trucks

DHV = Design Hourly Volume

D = % DHV in predominate direction of travel

P = % ADT in peak hour

K8 = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day (only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code Chapter NR 411).

ENVIRONMENTAL ISSUES

Indicate whether the issue listed below is a concern for the proposed action or alternative. If the issue is a concern, explain how it is to be addressed or where it is addressed in this environmental document.

1. Would the proposed action stimulate substantial secondary environmental effects?

- No
 Yes - Explain or indicate where addressed.

Ongoing and planned development in the STH 50 corridor is taking place in accordance with local/regional land use and transportation plans that include future capacity expansion on STH 50. Development is also following the recommendations in the 1987 Access Management Plan for the STH 50 corridor (*Highway Access and Development Plan for STH 50 between I-94 and 60th Avenue*). Impact causing activities for the STH 50 project relative to secondary (induced) impacts would be capacity expansion and access management measures. Under the No Build Alternative, congestion due to increasing traffic volumes and deteriorating safety could make the STH 50 corridor less attractive for desirable future development. Capacity expansion and additional access management under the Build Alternative will allow development to continue as planned, and may facilitate more desirable planned land use patterns.

2. Would the creation of a new environmental effect result from this proposed action?

- No
 Yes - Explain or indicate where addressed.

3. Would the proposed action impact geographically scarce resources?

- No
 Yes - Explain or indicate where addressed.

4. Would the proposed action have a precedent-setting nature?

- No
 Yes - Explain or indicate where addressed.

5. Is the degree of controversy associated with the proposed action high?

- No, the primary controversy is with changes in access to some businesses along the STH 50 corridor.
 Yes - Explain or indicate where addressed.

6. Would the proposed action have any conflicts with official agency plans or local, state, or national policies, including conflicts resulting from potential effects of transportation on land use and land use on transportation demand?

- No
 Yes - Explain or indicate where addressed.

7. Would the proposed action contribute to cumulative environmental impacts of repeated actions?

- No
 Yes - Explain or indicate where addressed.

Direct effects of the STH 50 project include approximately 0.25 acres (0.10 ha) of wetland impact which would contribute to cumulative wetland loss in the Des Plaines River and the Pike River watersheds within which the STH 50 project is located. The STH 50 wetland impact will be fully mitigated in accordance with WisDOT's *Wetland Mitigation Banking Technical Guideline*. There will ultimately be no net loss of wetlands due to the proposed STH 50 improvements. No indirect effects were identified that would contribute to cumulative environmental impacts.

ENVIRONMENTAL COMMITMENTS

Identify and describe any commitments made to protect the environment. Indicate when the commitment should be implemented and who in WisDOT would have jurisdiction to assure fulfillment for each commitment.

ATTACH THIS PAGE TO THE DESIGN STUDY REPORT

- A. General Economics**—None
- B. Community & Residential**—Provide local and emergency access during construction. WisDOT is responsible for developing the traffic control plan and coordinating with local governments.
- C. Commercial & Industrial**—Same as above
- D. Agriculture**—None
- E. Environmental Justice**—None
- F. Wetlands**—WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding erosion control and stormwater management to minimize the potential for wetland impacts. Unavoidable wetland loss will be fully compensated in accordance with WisDOT's *Wetland Mitigation Banking Technical Guideline*. At this time, it is anticipated that total wetland compensation will be approximately 0.4 acre (0.2 ha) assuming a maximum 1.5:1 replacement ratio.
- G. Streams & Floodplains**— WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding erosion control and stormwater management to minimize the potential for minor drainage structure replacements or extensions. There are no stream crossings.
- H. Lakes or Other Open Water**—None
- I. Upland Habitat**—None
- J. Erosion Control**— WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding erosion control to minimize potential adverse effects.
- K. Stormwater Management**— WisDOT will follow TRANS 401 and the WisDOT/DNR Cooperative Agreement amendment regarding stormwater management to minimize the potential for adverse effects.
- L. Air Quality**
- The project is exempt from permit requirements per Wisconsin Administrative Code – Chapter NR 411 criteria.
- A construction permit is required for this project and an application has been submitted to the Department of Natural Resources Bureau of Air Management. Construction on the project will not begin until the Construction Permit has been issued. See the Air Quality Factor Sheet.
- A construction permit is required for this project and has been issued by the Department of Natural Resources Bureau of Air Management. The Construction Permit Number is _____. See the Air Quality Factor Sheet.
- M. Construction Stage Sound Quality**
- No receptors are located in the project area. No impacts are anticipated from construction noise.
- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
- N. Traffic Noise**—None
- O. Section 4(f) and 6(f)**—None
- P. Historic Resources**—None
- Q. Archaeological Resources**—The SHS has requested that a qualified archaeologist monitor construction at the Vale Cemetery. WisDOT is responsible for securing the services of a qualified archaeologist.
- R. Hazardous Substances or USTs**—Six potential petroleum contamination sites have been identified for possible Phase 2 investigations; WisDOT is responsible for conducting investigation and ensuring any subsequent remediation is carried out.
- S. Aesthetics**—None
- T. Coastal Zone**—None
- U. Other**—None

GENERAL ECONOMICS IMPACT EVALUATION

DT2078 2004

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

1. Describe, briefly, the existing economic characteristics of the area around the project.

This could include type(s) of farming, retail or wholesale businesses, manufacturing, tourism, or other elements contributing to the area's economy and potentially affected by the project.

The economy in the STH 50 corridor and surrounding area is primarily based on businesses oriented to local consumers in the Village of Pleasant Prairie, City of Kenosha and surrounding area. This is supported by SEWRPC's traffic data that indicates approximately 65% of the traffic in the STH 50 Corridor between I-94 and STH 31 has one or more trip ends within about ½ mile north and south of STH 50. The types of businesses in the STH 50 corridor and surrounding area include retail/grocery stores, restaurants, churches, health care facilities, office parks, insurance and banking services, appliance, furniture and household product stores, car dealerships, car washes, and auto supply/service. With the exception of restaurants, gas stations and motels, the majority of businesses are not largely dependent on through (drive by) traffic.

2. Discuss the economic advantages and disadvantages of the proposed action. Indicate how the project would affect the characteristics described in item 1 above.

The proposed improvements will improve traffic flow and safety on STH 50 and will provide long-term access management strategies for existing and planned development. The proposed action would not change the economic characteristics of the STH 50 corridor or surrounding area. Planned development will continue to occur with or without the proposed STH 50 improvements.

3. In general, will the proposed action increase or decrease the potential for economic development in the area influenced by the project?

The proposed improvements will not increase or decrease the potential for economic development. The access management strategies being implemented as part of the STH 50 improvements and those that would be implemented outside the STH 50 corridor by local governments will provide safer ingress and egress to commercial and residential development along the corridor.

COMMUNITY OR RESIDENTIAL IMPACT EVALUATION

DT2075 2004

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

1. Give a brief description of the community or neighborhood affected by the proposed action.

Community/Neighborhood Name: <i>Village of Pleasant Prairie</i>	
Community/Neighborhood Population: 16,136	Community is Unincorporated: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Community/Neighborhood Characteristics:

The following community characteristics are from the 2000 census:

- Total owner occupied households—4,805
- Total rental households—1,014
- Average household size (owner occupied)—3
- Average household size (rental)—2
- Total labor force—8,512
- Unemployment rate—3.2%
- Employment sectors—34% management, professional and related; 26% sales and office occupations; 10% construction, extraction and maintenance occupations; 17% production, transportation and material moving occupations; and 13% service occupations.

Community/Neighborhood Name: <i>City of Kenosha</i>	
Community/Neighborhood Population: 90,352	Community is Unincorporated: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Community/Neighborhood Characteristics:

The following community characteristics are from the 2000 census:

- Total owner occupied households—21,388
- Total rental households—13,023
- Average household size (owner occupied)—3
- Average household size (rental)—2
- Total labor force—46,025
- Unemployment rate—4.2%
- Employment sectors—28% management, professional and related; 27% sales and office occupations; 8% construction, extraction and maintenance occupations; 21% production, transportation and material moving occupations; and 16% service occupations.

2. Identify and discuss the existing modes of transportation and their traffic within the community or neighborhood.

The primary transportation mode is the automobile (single occupancy vehicle use for commuting to work is 86% in the Village of Pleasant Prairie and 81% in the City of Kenosha). The mean travel time to work is 27 minutes for Pleasant Prairie and 23 minutes for Kenosha. The City of Kenosha operates 3 bus routes with stops on STH 50. Traffic information is provided on page 25.

3. Identify and discuss the probable changes resulting from the proposed action to the modes of transportation and their traffic within the community or neighborhood.

The proposed action will not change the type or volume of auto or bus traffic on STH 50. The wider/paved shoulders on STH 50 will enhance safety for buses/passengers by providing a sheltered "lane" for accelerating, decelerating, and stopping to load and unload. The adjacent multi-use path will enhance passenger safety by providing a flat area to wait for a bus and get on and off the bus.

4. Briefly discuss the proposed action's effect(s) on existing and planned land use in the community or neighborhood.

The proposed action will have no effect on existing and planned land use. Planned development in the STH 50 corridor will occur with or without the STH 50 improvements.

5. Address any changes to emergency services or other public services during and after construction of the proposed project.

Access will be maintained during construction for emergency and other public services. Following construction, the improved roadway will result in safer roadway conditions and more efficient response times for emergency and public service traffic in the project area due to increased roadway capacity, reduced congestion, additional turning capacity at intersections, and fewer conflicts between turning traffic and through traffic.

6. Describe any physical or access changes and their effects to lot frontages, driveways, or sidewalks. This could include effects on side slopes or driveways (steeper or flatter), reduced terraces, tree removal, vision corners, sidewalk removal, etc.

The terrain along the STH 50 corridor is flat; therefore, changes in driveway and side road profiles will be minimal. Access to adjacent properties will be maintained but controlled with respect to the number and types of driveways allowed. Several direct driveway connections to STH 50 will be closed with alternate access provided from side roads or through consolidation with an adjacent driveway.

7. Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have, overall, on the community/neighborhood. Also include and identify any minority population or low-income population that may be affected by the proposed action.

No community facilities or minority/low income populations will be affected by the proposed action.

8. Place an "X" in the appropriate box below if one of the populations indicated would be affected by the proposal. Give a brief description of the community/neighborhood and population affected by the proposed action. Include demographic characteristics of those affected by the proposal.

For the populations shown below, The Orders issued by the U.S. Department of Transportation and its implementing agencies to satisfy the requirements of Executive Order 12898 require an evaluation to determine whether a minority and/or low-income population would experience a disproportionately high and adverse effect. If any of the populations shown below are affected, form DT2093, Environmental Justice Impact Evaluation, along with the remaining items on this worksheet, will need to be completed to satisfy Environmental Justice requirements.

a. Is disabled population affected?

- No
 Yes - See form DT2093, Environmental Justice Impact Evaluation.

b. Is elderly population affected?

- No
 Yes - See form DT2093, Environmental Justice Impact Evaluation.

c. Are minority populations affected?

- No
 Yes - See form DT2093, Environmental Justice Impact Evaluation.

d. Are low-income populations affected?

- No
 Yes - See form DT2093, Environmental Justice Impact Evaluation.

9. Identify and discuss, in general terms, factors that residents have indicated to be important or controversial.

In general, area residents support the proposed improvements (additional capacity on STH 50 and additional turning capacity at side road intersections). Some residents and business owners have expressed concern about the loss of direct driveway access to STH 50, lack of median openings at their properties (resulting in right-in and right-out only turning movements), and less direct access to their properties for consumers and service vehicles. There also continues to be concern about indirection and changes in access for businesses due to the proposed tight jug handle alternative at the STH 50/STH 31 intersection.

10. Indicate the number and type of any residential buildings that would be removed because of the proposed action. If either item 10a or 10b is checked, items 11 through 18 do not need to be addressed or included in the environmental document.

- a. None
- b. No occupied residential building will be acquired as a result of this project.

One vacant, dilapidated house will be acquired to provide a stub access road to serve properties on the south side of STH 50, east of the UP Railroad (see Appendix A, Sheet 3).

- c. Occupied residential building(s) will be acquired. Provide number and description of buildings, e.g., single family homes, apartment buildings, condominiums, duplexes, etc. If item 10c is checked, you must complete items 11 through 18.

11. Estimate the number of households that would be displaced from the occupied residential buildings identified in item 10c above.

Total Number of Households to be Relocated: Not applicable
 (Note that this number may be greater than the number shown in 10c) above because an occupied apartment building may have many households.)

a. Number by Ownership

Number of Households Living in Owner Occupied Building: Not applicable
 Number of Households Living in Rented Quarters: Not applicable

b. Number of households to be relocated that have

1 Bedroom	2 Bedrooms	3 Bedrooms	4 or More Bedrooms
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Not applicable.

c. Number of relocated households by type and price range of dwelling

Number of Single Family Dwellings	Price Range
Number of Multi-Family Dwellings	Price Range
Number of Apartments	Price Range

Not applicable.

12. Describe the relocation potential in the community (number of available and comparable dwellings by location, type and price).

Not applicable.

13. Identify all the sources of information used to obtain the data in item 12.

<input type="checkbox"/> WisDOT Real Estate	<input type="checkbox"/> Multiple Listing Service (MLS)
<input type="checkbox"/> Newspaper Listing(s)	<input type="checkbox"/> Other – Identify

Not applicable.

14. Indicate the number of households to be relocated that have the following special characteristics.

Number of Minority Households	Number of Elderly Households
Number of Households with Disabled Residents	Number of Low-Income Households
Number of Households Made up of a Large Family (5 or more individuals)	Number of Households with no Special Characteristics
Number of Households for Which it is not Known Whether They Have Special Characteristics	

Not applicable.

15. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24.

Not applicable.

16. Identify any difficulties or unusual conditions for relocating households displaced by the proposed action.

Not applicable.

17. Indicate whether Special Relocation Assistance Service will be needed. Describe any special services or housing programs needed to remedy identified difficulties or unusual conditions noted in item #14 above.

- No (not applicable)
- Yes - Describe services that will be required.

18. Describe any additional measures which would be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected.

Not applicable.

ECONOMIC DEVELOPMENT AND BUSINESS IMPACT EVALUATION

DT2095 2005

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

1. Describe the economic development or existing business areas affected by the proposed action.

The types of businesses in the STH 50 corridor include retail/grocery stores, restaurants, churches, health care facilities, office parks, insurance and banking services, appliance, furniture and household product stores, car dealerships, car washes, and auto supply/service.

2. Identify and discuss the existing modes of transportation and their traffic within the economic development or existing business area.

The primary transportation mode is the automobile (single occupancy vehicle use for commuting to work is 86% in the Village of Pleasant Prairie and 81% in the City of Kenosha). Shipping and receiving goods and products to and from businesses in the STH 50 corridor is primarily done with trucks. The City of Kenosha operates 3 bus routes with stops on STH 50. Traffic information is provided on page 25.

3. Place an "X" in the appropriate box below if one of the populations indicated would be affected by the proposal. Give a brief description of the community/neighborhood and population affected by the proposed action. Include demographic characteristics of those affected by the proposal.

For the populations shown below, The Orders issued by the U.S. Department of Transportation and its implementing agencies to satisfy the requirements of Executive Order 12898 require an evaluation to determine whether a minority and/or low income population would experience a disproportionately high and adverse effect. If any of the populations shown below are affected, DT2093, Environmental Justice Impact Evaluation, along with the remaining items on this worksheet, will need to be completed to satisfy Environmental Justice requirements.

- Disabled population is not affected.
- Disabled population is affected. See DT2093, Environmental Justice Impact Evaluation.
- Elderly population is not affected.
- Elderly population is affected. See DT2093, Environmental Justice Impact Evaluation.
- Minority population is not affected.
- Minority population is affected. See DT2093, Environmental Justice Impact Evaluation.
- Low-income population is not affected.
- Low income population is affected. See DT2093, Environmental Justice Impact Evaluation.

4. Identify and discuss effects on the economic development potential and existing businesses that are dependent upon the transportation facility for continued economic viability.

- The proposed project will have no effect on a transportation-dependent business or industry.
- The proposed action will change the conditions for a business that is dependent upon the transportation facility. Identify effects, including effects that may occur during construction.

5. Estimate the number of businesses and jobs that would be created or displaced because of the project.

a. Total number created	X None
--------------------------------	--------

Number created by type including number of jobs.

Retail businesses created		Retail jobs created	
Service businesses created		Service jobs created	
Wholesale businesses created		Wholesale jobs created	
Manufacturing businesses created		Manufacturing jobs created	

b. Total number displaced	X None
----------------------------------	--------

Number displaced by type and number of jobs.

Retail businesses displaced		Retail jobs displaced	
Service businesses displaced		Service jobs displaced	
Wholesale businesses displaced		Wholesale jobs displaced	
Manufacturing businesses displaced		Manufacturing jobs displaced	

6. Identify any special characteristics of the created or displaced businesses or their employees.

a. Number of created businesses by special characteristics	X None
-------------------------------------------------------------------	--------

Created businesses that will employ elderly/serve elderly	
Created businesses that will employ disabled/serve disabled	
Created businesses that will employ low income people/serve low income people	
Created businesses that will employ a minority population/serve a minority population	

b. Number of displaced businesses by special characteristics	X None
---------------------------------------------------------------------	--------

Displaced businesses that employ elderly/serve elderly	
Displaced businesses that employ disabled/serve disabled	
Displaced businesses that employ low income people/serve low income people	
Displaced businesses that employ a minority population/serve a minority population	

7. Is Special Relocation Assistance Needed?

- No (not applicable)
- Yes – Describe special relocation needs.

8. Describe the business relocation potential in the community.

Not applicable.

9. Identify all the sources of information used to obtain the data in item 8.

- WisDOT Real Estate
- Newspaper listing(s)
- Multiple Listing Service (MLS)
- Other - Identify

Not applicable.

10. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24.

Not applicable.

11. Identify any difficulties for relocating a business displaced by the proposed action and describe any special services needed to remedy identified unusual conditions.

Not applicable.

12. Describe any additional measures which would be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected.

Not applicable.

13. Generally describe both the beneficial and adverse effects accruing to:

a. The area's economic development potential or existing business area caused by the proposed action. Include any factors identified by business people that they feel are important or controversial.

The improved roadway will result in safer conditions and more efficient response times for emergency vehicles and other public service traffic in the project area due to increased roadway capacity, reduced congestion, additional turning capacity at intersections and fewer conflicts between turning traffic and through traffic. Those business owners whose direct driveway connections to STH 50 will be removed and/or whose access will be limited to right-in and right-out only turning movements have expressed concern about less direct access to their properties for customers and delivery trucks. In particular, businesses in the STH 50/STH 31 intersection quadrants where the jug handle alternative is proposed are concerned about less direct/convenient access to (or from) their properties.

b. The employment potential and existing employees in businesses affected by the proposal. Include, as appropriate, a discussion of effects accruing to minority populations or low-income populations.

Not applicable.

ENVIRONMENTAL JUSTICE IMPACT EVALUATION

DT2093 3/2005

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

Instructions: For definitions of Environmental justice protected populations, visit: www.fhwa.dot.gov/legsregs/directives/orders/6640-23.htm; www.aoa.gov/prof/poverty-guidelines/poverty-guidelines.asp

1. Determine the presence and estimate the size of the minority population and/or low-income population affected by the proposed action.

- No minority populations or low-income populations are present in the project's area of influence. (Process is complete.)
- Yes, a minority population or low-income population is located in the project's area of influence. (Proceed with the evaluation.)

2. Identify and give a brief description of the minority populations or low-income populations affected by the proposed action. Include the relative size of the populations and their pertinent demographic characteristics. (Check all that apply.)

Not applicable.

<input type="checkbox"/> Black (having origins in any of the black racial groups of Africa)		
<input type="checkbox"/> Low income	<input type="checkbox"/> Elderly	<input type="checkbox"/> Disabled
<input type="checkbox"/> Hispanic (of Mexican, Puerto Rican, Cuban or South American, or other Spanish culture or origin, regardless of race)		
<input type="checkbox"/> Low income	<input type="checkbox"/> Elderly	<input type="checkbox"/> Disabled
<input type="checkbox"/> Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands)		
<input type="checkbox"/> Low income	<input type="checkbox"/> Elderly	<input type="checkbox"/> Disabled
<input type="checkbox"/> American Indian and Alaska Native (having origins in any of the original people of North American and who maintains cultural identification through tribal affiliation or community recognition)		
<input type="checkbox"/> Low income	<input type="checkbox"/> Elderly	<input type="checkbox"/> Disabled
<input type="checkbox"/> White and any combination of the above.		
<input type="checkbox"/> Low income	<input type="checkbox"/> Elderly	<input type="checkbox"/> Disabled
<input type="checkbox"/> Non-minority low-income population		
<input type="checkbox"/> Elderly	<input type="checkbox"/> Disabled	

3. As a result of public involvement and inter-agency coordination, identify and describe issues of concern or controversy to the minority population or low-income population.

Not applicable.

- No issues of concern or controversy identified.
- Issues of concern or controversy identified below. Describe issues and how they were resolved.

4. Based on data and scientific analyses (e.g., modeling, regression analysis, etc.), identify and describe effect(s) to the minority population or low-income population. Not applicable.

Indicate which other environmental factors are involved or inter-related.

- | | | |
|---------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> General Economics | <input type="checkbox"/> Community & Residential | <input type="checkbox"/> Economic Development & Business |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Wetlands | <input type="checkbox"/> Streams & Floodplains |
| <input type="checkbox"/> Lakes & Other Open Water | <input type="checkbox"/> Upland | <input type="checkbox"/> Erosion Control |
| <input type="checkbox"/> Stormwater Management | <input type="checkbox"/> Air Quality | <input type="checkbox"/> Construction Stage Sound Quality |
| <input type="checkbox"/> Traffic Noise | <input type="checkbox"/> Section 4(f) & 6(f) | <input type="checkbox"/> Historic Resources |
| <input type="checkbox"/> Archeological Resources | <input type="checkbox"/> Hazardous Substances & USTs | <input type="checkbox"/> Aesthetics |
| <input type="checkbox"/> Coastal Zone | <input type="checkbox"/> Noise | <input type="checkbox"/> Other |

(NOTE: 3 and 4 above may overlap)

5. Indicate whether effects to a minority population or a low-income population are beneficial or adverse.

Not applicable.

- Only beneficial effects will occur. Describe effects on affected population and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to enhance beneficial effects. (Process is complete.)
- Identified adverse effects are proportionate to those experienced by the general population. Describe effects on affected population and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to avoid, minimize, or mitigate adverse effects. (Process is complete.)
- Identified effects are disproportionately high and adverse. A disproportionately high and adverse effect means an adverse effect that: 1) is predominately borne by a minority population and/or a low-income population; or 2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Describe disproportionately high and adverse effects on affected population and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to avoid, minimize, or mitigate disproportionately high and adverse effects or enhance beneficial effects.

6. Indicate whether the individuals in the affected population(s) are protected under Title VI of the 1964 Civil Rights Act. (Title IV prohibits discrimination on the basis of race, color, or country of origin. See item 2 above for definitions of Title VI minorities.) Not applicable.

- No – Title VI protections do not apply, but other requirements under the Age Discrimination Act or Americans With Disabilities Act do apply. Describe effects and how they will be avoided, minimized or mitigated.
- Yes - Title VI protections apply. Describe any special services, considerations, or mitigation that will be used to avoid, minimize, or mitigate effects to Title VI individuals.

7. Will the Alternative/Project be carried out even with disproportionately high and adverse effects on a minority population or low-income population? Not applicable.

- No, the Alternative/Project will not be carried out because of disproportionately high and adverse effects on a minority population or low-income population.
 - There is no substantial need for the Alternative/Project.
 - Another alternative with less severe effects on the minority population or low-income population can meet the needs of this and is practical.
- Yes, the Alternative/Project will be carried out with the mitigation of disproportionately high and adverse effects.
- Yes, a substantial need for the Alternative/Project exists based on the overall public interest. Alternatives that would have less adverse effects on minority populations or low-income populations have either:
 - Adverse social, economic, environmental, or human health impacts that are more severe; or
 - Would involve increased costs of an extraordinary magnitude.

8. Identify and discuss mitigation and enhancement efforts to address disproportionately high and adverse effects to Title VI protected minority people if different from those shown in item 5 above.

Not applicable.

WETLANDS IMPACT EVALUATION

DT2099 2004

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

1. Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other.

Affected wetlands are summarized in the following table and the locations are shown on the project maps in Appendix A. The proposed improvements would impact a total of approximately 0.25 acre (0.10 ha) from 4 wetland areas. Approximately 0.1 acre (0.04 ha) involves ADID wetlands (wetland W-1 located in the Kilbourn Road Ditch primary environmental corridor).

Wetland Impact Summary

Wetland Location (See maps in Appendix A)	Wetland Type/Project Effects	Impact Area Acres (ha)
Wetland W-1—Sheet 1 (south side of STH 50, east of 116 th Avenue)	Excavated open water pond adjacent to Kilbourn Road Ditch; pond has wetland fringe that includes Riparian Emergent (RPE) and Shrub Scrub (SS) wetland types; vegetation includes Reed canary grass, cattails, box elder and willows; ADID wetland; functional values include stormwater/flood attenuation and wildlife habitat; impacts to north edge due to widening STH 50.	0.1 (0.04)
Wetland W-2—Sheet 1 (south side of STH 50, east side of 104 th Avenue)	Combination of Shallow Marsh (SM) and Wooded Swamp (WS) wetland types; vegetation includes cattails, silver maple, willows, poplar and green ash; functional values include stormwater attenuation and wildlife habitat; impacts to this wetland have been avoided.	No impact
Wetland W-3—Sheet 2 (south side of STH 50, east of 91 st Avenue)	Shallow Marsh (SM) cattail depression; functional value is primarily stormwater attenuation; impacts to northern edge due to widening STH 50 and providing a multi-use path adjacent to STH 50.	0.1 (0.04)
Wetland W-4—Sheet 2 (both sides of 88 th Avenue, north of STH 50)	Shallow Marsh (SM) cattail depression west of 88 th Avenue; Shallow Marsh (SM) and Wooded Swamp (WS) east of 88 th Avenue; wetland areas connected by small culvert under 88 th Avenue; small tributary to Pike Creek ends in portion of wetland east of 88 th Avenue; vegetation east of 88 th Avenue includes cattails, willows, silver maple, box elder; functional value west of 88 th Avenue is primarily stormwater attenuation; functional values east of 88 th Avenue include stormwater attenuation and wildlife habitat; impact to portion of wetland west of 88 th Avenue due to improving the 88 th Avenue/74 th Street intersection.	.01 (.004)

Wetland Impact Summary (continued)

Wetland Location (See maps in Appendix A)	Wetland Type/Project Effects	Impact Area Acres (ha)
Wetland W-5—Sheet 2 (south of STH 50, both sides of 88 th Avenue)	Shallow Marsh (SM) cattail pocket; functional value is primarily stormwater attenuation; impacts to this wetland have been avoided.	No impact
Wetland Location (see concept plans in Appendix A)	Wetland Type/Project Effects	Impact Area Acres (ha)
Wetland W-6—Sheet 3 (south of STH 50, west of STH 31 and south of 69 th Avenue)	Wet Meadow (M) and Shrub Scrub (SS); vegetation includes Reed canary grass, cattails, box elder, green ash and willows; functional value is primarily stormwater attenuation; impacts to north edge due to widening 69 th Avenue (southwest quadrant jug handle) to provide additional turning capacity.	0.04 (0.02)
Subtotal ADID Wetlands		0.1 (0.04)
Total all Wetlands		0.25 (0.10)

2. Describe the location of wetland(s) affected by the proposal. Include wetland name(s), if available. (Use maps, sketches, or other graphic aids.)

See wetland summary table.

3. This wetland is:

- Isolated from stream, lake or other surface water body
Wetlands W-2, W-3, W5, and W-6 are isolated.
- Not contiguous, but within 5-year floodplain.
- Contiguous (in contact) with a stream, lake, or other water body
Identify corresponding stream, lake, or other water body by name or town-range location:

Wetland W-1 is contiguous to Kilbourn Road Ditch. A small tributary to Pike Creek ends in the portion of Wetland W-4 east of 88th Avenue.

NOTE: If wetland is contiguous or adjacent to a stream, complete form DT2097, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete form DT2071, Lake or Water Body Impact Evaluation.

4. List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland. (List should include both permanent and seasonal residents).

The wetlands provide habitat for a variety of songbirds, reptiles and amphibians. Due to their small size and surrounding development, waterfowl use is limited.

5. Are there any known endangered or threatened species affected by the project?

- No

DNR's updated letter on the STH 50 project (see December 5, 2006 letter in Appendix B) indicates the following species or communities could potentially be present in the broad project area:

- Dickcissel (Special Concern bird)
- Double-striped bluet (Special Concern dragonfly)
- Pirate perch (Special Concern Fish)
- American fever-few (Threatened plant)
- Prairie white-fringed orchid (Threatened plant)
- Waxleaf Meadowrue (Special Concern plant)
- Wet-Mesic Prairie

Based on review of habitat requirements for these species and field inspection along STH 50, there are no known locations within the project's area of effect that would provide suitable habitat. Coordination with DNR in a future engineering design phase will be done to verify whether any surveys would need to be done to check for these species or their potential habitat.

- Yes - Identify the species and indicate whether it is on Federal or State lists.
- Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.
- Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

6. FHWA Wetland Policy

- Not Applicable - Explain
- Individual Wetland Finding Required - Summarize why there are no practicable alternatives to the use of the wetland.
- Statewide Wetland Finding. NOTE: All must be checked for the Statewide Wetland Finding to apply.
 - Project is either a bridge replacement or other reconstruction within 0.5 km (0.3 mile) of the existing location.
 - The project requires the use of 3 hectares (7.4 acres) or less of wetlands.
 - The project has been coordinated with the DNR and there have been no significant concerns expressed over the proposed use of the wetlands.

7. Erosion control or stormwater management measures that will be used to protect the wetland are shown on form (either or both)

- DT2080, Erosion Control Impact Evaluation
- DT2076, Stormwater Impact Evaluation
- Neither form - Briefly describe measures to be used

8. Section 404 Permit

- Not Applicable - No fill to be placed in wetlands
- Applicable - Fill will be placed in wetlands. Indicate area of wetlands filled
Approximately 0.25 acre (0.10 ha)
- Individual Section 404 Permit required
- General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 Compliance.
Indicate which GP or LOP required.
 - Non-Reporting GP
 - Provisional LOP
 - Provisional GP (See December 5, 2006 COE letter in Appendix A)
 - Programmatic GP

9. Section 10 Waters. For navigable waters of the United States (Section 10) indicate which Nationwide Permit is required. Not applicable.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers (USACE) is:

- Not Required
- Required
- Submitted on (Date)

Status of PCN

- USACE has made the following determination on (Date)
- USACE is in the process of review, anticipated date of determination is (Date)

10. Identify wetland type(s) that will be filled or converted to another use. Use the DOT Wetland Bank System. (See FDM Procedure 24-5-10, Figure 2.) If the National Wetlands Inventory (NWI) or Wisconsin Wetlands Inventory (WWI) are used to identify the types of wetlands, translate them to the DOT Wetland Bank System, wetland types.

a. Approximate areas of wetlands filled or converted by type.

Wetland Type	Area of Wetland Type Acres (Hectares)
Riparian Emergent (RPE)	0.05 (0.02)
Shrub Scrub (SS)	0.07 (0.03)
Shallow Marsh (SM)	0.11 (0.04)
Wet Meadow (M)	0.02 (0.01)
Total	0.25 (0.10)

11. Wetland Mitigation

(NOTE: Avoidance and minimization mitigation are required.)

a. Wetland Avoidance

i) Describe methods used to avoid the use of wetlands such as using a lower level of improvement or placing the roadway on new location, etc.

Due to the scattered location of wetlands adjacent to STH 50 and its side roads, it is not possible to avoid wetland impacts. The Recommended Alternative is the only improvement level that meets project purpose and need. Lower improvement levels such as not providing additional capacity on STH 50 and not providing additional turning capacity at side road intersections would perpetuate existing congestion and safety concerns and would not address project purpose and need. Impacts to Wetlands W-2 and W-5 were avoided by keeping the proposed side road improvements within existing disturbed roadbed area.

ii) Indicate the total area of wetlands avoided

It is estimated that approximately 0.01 acre (0.004 ha) of wetland impact was avoided at Wetland W-2 and approximately 0.17 acre (0.7 ha) at Wetland W-5.

b. Minimize the amount of wetlands affected

i) Describe methods used to minimize the use of wetlands such as steepening of side slopes or use of retaining walls, equalizer pipes, upland disposal of hydric soils, etc.

Measures to minimize wetland impacts will include keeping the roadway slopes as steep as practicable, disposal of any excavated wetland soil on the new roadway slopes or in an upland area, and strict temporary and permanent erosion control such as silt fence, ditch checks, and erosion bales to minimize sedimentation into adjacent wetlands. Use of a retaining wall in the vicinity of Wetland W-1 at Kilbourn Road Ditch minimizes potential wetland impacts at this location.

ii) Indicate the total area of wetlands saved through minimization

Unknown at this time based on the level of engineering detail available.

c. Compensation for unavoidable loss

Is compensation of unavoidable wetland loss required?

- Yes
- No. Explain.

d. Type and amount of compensation

- On-Site Replacement- Wetland replacement located in the general proximity of the project site within the same local watershed. These replacements are often contiguous to the project.

Wetland type of on-site replacement
Total area of on-site replacement

- Near-Site or Off-site Replacement - Replacement opportunity for wetland compensation within a 5-mile (8.05-kilometer) corridor centered over the highway alignment or a wetland replacement located away from the project site, generally outside the project's local watershed.

Wetland type of off-site replacement:
Total area of off-site replacement:

- No near or off-site replacement - Describe reasons no near or off-site opportunities were found.
- Wetland Mitigation Bank Site - A wetland compensation site containing wetland credit areas and wetland types from bank developed wetland restoration/creation projects or surplus areas from the wetland compensation projects of specific DOT facility development projects.

Indicate name or location of wetland mitigation bank site to be used for the replacement of unavoidable wetland loss.

At this time, the WisDOT Southeast Region Office is planning to mitigate the STH 50 wetland loss at either the STH 50 wetland bank site or the Jacobson wetland bank site.

Wetland type of bank-site replacement

The 71-acre (29 ha) STH 50 wetland bank site consists primarily of wet meadow and shallow marsh wetland types with some areas of shrub scrub types. The 320-acre (130 ha) Jacobsen wetland bank site consists of wet meadow and shallow marsh wetland types and several thousand tree seedlings have been planted to ultimately produce areas of wooded swamp wetland.

Total area of bank-site replacement

Based on the wetland types and amount affected by the STH 50 project, it is anticipated that total wetland compensation will be approximately 0.4 acre (0.2 ha) assuming a maximum 1.5 : 1 replacement ratio.

Describe decision process used to determine the use of the bank-site and provide any coordination documentation with regulatory or resource agencies.

Unavoidable wetland loss will be fully compensated in accordance with WisDOT's *Wetland Mitigation Banking Technical Guideline*. The final decision on wetland mitigation will be made by WisDOT in the project's design engineering phase. At this time, the WisDOT Southeast Region Office is planning to mitigate the STH 50 wetland loss at either the STH 50 Wetland Bank site or the Jacobsen Bank site. Wetland mitigation will be coordinated with DNR and the U.S. Army Corps of Engineers during the Section 404 Permit application process.

The U.S. Environmental Protection Agency in cooperation with the U.S. Army Corps of Engineers implemented an Advanced Identification Program (ADID) to identify wetlands that are generally suitable or not suitable for discharge of fill material. Within the project area ADID wetlands are those mapped wetlands that occur within the boundaries of the primary environmental corridor adopted in 1985. In southeastern Wisconsin, advanced identification of such wetlands was undertaken in consultation with SEWRPC and the DNR to redirect development outside of primary environmental corridors.

At the Federal level, the classification is advisory and does not constitute either a permit approval or denial. In Wisconsin, however, ADID wetlands are part of a special category of wetlands to be protected, "wetlands in areas of special natural resource interest" (NR 103.04, Wis. Adm. Code.) Fill into these wetlands is generally not in conformance with the Clean Water Act's Section 404 (b)(1) guidelines; however, fill is justifiable when there is no feasible alternative. The WDNR and WisDOT have a wetland compensatory mitigation agreement which recognizes that the loss of ADID wetlands may be unavoidable in transportation projects. When fill is justifiable, the Wisconsin Banking Technical Guidelines allow a discretionary increase in the compensatory ratio due to the red flag nature of these wetlands. A discretionary 0.5 increase in the ratio is usually included in the ratio of debit for wetlands associated with this project.

EROSION CONTROL

DT2080 2005

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating	Factor sheet is applicable to entire project corridor

1. Give a brief description of existing and proposed slopes in the project area, both perpendicular and longitudinal to the project. Include both existing and proposed slope length, percent slope and soil types.

Terrain along the STH 50 corridor is flat. Existing roadway slopes vary, ranging to 3:1 steepness. Proposed roadway slopes will range from 3:1 to 4:1 steepness at most locations. Soils along the STH 50 corridor are in the Varna-Elliot-Ashkum association (*A Comprehensive Plan for the Kenosha Urban Planning District*, SEWRPC Community Assistance Planning Report No. 212, December 1995). These soils are well drained to poorly drained with a silty clay loam to clay subsoil.

2. Indicate all natural resources to be affected by the proposal that are sensitive to erosion, sedimentation, or waters of the state quality degradation and provide specific recommendations on the level of protection needed.

- No - There are no sensitive resources affected by the proposal.
 Yes - Sensitive resources exist in or adjacent to the area affected by the project.

<input checked="" type="checkbox"/> River/stream	<input checked="" type="checkbox"/> Wetland	<input type="checkbox"/> Lake	<input type="checkbox"/> Endangered species habitat
<input type="checkbox"/> Other – Describe			

3. Are there circumstances requiring additional or special consideration?

- No additional or special circumstances are present.
 Yes - Additional or special circumstances exist. Indicate all that are present.

<input type="checkbox"/> Areas of groundwater discharge	<input type="checkbox"/> Areas of groundwater recharge (fractured bedrock, wetlands, streams)
<input type="checkbox"/> Long or steep cut or fill slopes	<input type="checkbox"/> Overland flow/runoff
<input type="checkbox"/> Other – Describe any unique or atypical erosion control measures to be used to manage additional or special circumstances.	

4. Describe overall Erosion Control strategy to minimize adverse effects and/or enhance beneficial effects.

Guidelines and regulations for minimizing the potential for erosion and sedimentation for highway projects include the WisDOT Facilities Development Manual, Chapter 10—*Erosion Control and Storm Water Quality*, Wisconsin Administrative Code Chapter TRANS 401—*Construction Site Erosion Control and Storm Water Management Procedures for Department Actions*, and the WisDOT/DNR Cooperative Agreement Amendment—*Memorandum of Understanding on Erosion Control and Storm Water Management*. Key concepts are summarized as follows.

Basic Principles and Best Management Practices

- The proposed improvements will be planned to fit topography, soils, drainage patterns, and natural vegetation to the extent practicable.
- The size of exposed areas at any one time and the duration of exposure will be minimized.
- Control measures will be used to prevent erosion and sedimentation in sensitive areas (proper design of drainage channels with respect to width, depth, gradient, side slopes, and energy dissipation); protective groundcover (vegetation, mulch, erosion mat or riprap); diversion dikes and intercepting embankments to divert sheet flow away from disturbed areas; and sediment control devices (retention/detention basins, ditch checks, erosion bales and silt fence).
- Disturbed areas will be protected from off-site runoff and sediment will be prevented from leaving the construction site.
- Runoff velocities will be kept low by maintaining short slope lengths, low gradients, and vegetative cover.
- Disturbed areas will be stabilized as soon as practicable (temporary vegetation, mulch, stabilizing emulsions).

Geometric Design Features and Erosion Control Facilities

- Smooth grade lines with gradual changes will be used.
- Natural and existing drainage patterns will be preserved to the extent possible.
- Stabilized slopes, soil, and streambanks will be left undisturbed where possible.
- Trees and shrubs will be preserved, and over-clearing will be prevented or minimized.
- Irregular ditch profiles and steep gradients will be avoided where possible.
- Vegetated ditches and drainage channels with wide, rounded cross sections will be used where applicable.
- Culverts will be located and aligned to avoid erosion at the outlet and inlet.
- An undisturbed buffer will be left between disturbed soil and sensitive areas where possible.
- Using permanent and temporary seeding and sodding, mulch, erosion mat, and riprap will protect the soil surface.
- Sediment will be removed and velocities reduced by using erosion bales, silt fence, stone or rock ditch checks, sediment traps and basins.

Erosion Control Implementation Plan

An Erosion Control Implementation Plan (ECIP) that includes all erosion control commitments will be developed during the project's engineering phase. The ECIP is required to be submitted to DNR and WisDOT by the construction contractor two weeks prior to the preconstruction conference. WisDOT needs to approve the plan and obtain concurrence from DNR prior to implementation.

5. Erosion control measures reached consensus with the appropriate authorities as indicated below.

<input type="checkbox"/> WDNR	<input type="checkbox"/> County Land Conservation Department	<input type="checkbox"/> Native American Tribe
<input type="checkbox"/> Army Corp of Engineers		

(All Erosion Control measures (i.e., the Erosion Control Plan) shall be coordinated through the DOT-DNR liaison process and TRANS 401 except when Tribal lands of Native Americans are involved. DNR's concurrence is not forthcoming without an Erosion Control Plan. In addition, TRANS 401 requires the contractor prepare an Erosion Control Implementation Plan (ECIP), which identifies timing and staging of the project's erosion control measures. The ECIP should be submitted to the WDNR and to WisDOT 14 days prior to the preconstruction conference (Trans 401.08(1)) and must be approved by WisDOT before implementation. On Tribal lands, coordination for 402 (erosion) concerns is either to be coordinated with the tribe affected or with the U.S. Environmental Protection Agency (EPA). EPA or the Tribes have the 401 water quality responsibility on Trust lands. Describe how the Erosion Control/Stormwater Management plan can be compatible.)

Specific erosion control measures will be developed by WisDOT in the project's engineering design phase, and will be coordinated with DNR.

6. Identify the temporary and permanent erosion control measures to be utilized on the project. Consult the FDM Chapter 10 and the Products Acceptability List (PAL).

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------|
| <input checked="" type="checkbox"/> Minimize the amount of land exposed at one time | <input checked="" type="checkbox"/> Detention basin |
| <input checked="" type="checkbox"/> Temporary seeding | <input checked="" type="checkbox"/> Vegetative swales |
| <input checked="" type="checkbox"/> Silt fence | <input type="checkbox"/> Pave haul roads |
| <input checked="" type="checkbox"/> Ditch checks | <input type="checkbox"/> Dust abatement |
| <input type="checkbox"/> Erosion or turf reinforcement mat | <input checked="" type="checkbox"/> Rip rap |
| <input checked="" type="checkbox"/> Ditch or slope sodding | <input type="checkbox"/> Buffer strips |
| <input type="checkbox"/> Soil stabilizer | <input type="checkbox"/> Dewatering – Describe method |
| <input checked="" type="checkbox"/> Inlet protection | <input type="checkbox"/> Silt screen |
| <input type="checkbox"/> Turbidity barriers | <input type="checkbox"/> Temporary diversion channel |
| <input type="checkbox"/> Temporary settling basin | <input checked="" type="checkbox"/> Permanent seeding |
| <input checked="" type="checkbox"/> Mulching | <input type="checkbox"/> Other - Describe |

DNR recommended the following erosion control and water quality protection measures (see December 5, 2006 letter in Appendix B):

- If dewatering is required, sediment-laden water shall be pumped into an adequate sediment basin prior to discharge to a wetland or waterway.
- Excess fill material should be stockpiled in upland areas an adequate distance from wetlands and waterways and stockpiles shall be protected against erosion.
- Appropriate erosion control measures will be applied to any borrow or fill areas.
- Grinding slurry should not be allowed to drain to wetlands or waterways.
- Erosion control check dams of washed stone should be provided in ditches at strategic locations; other measures should include silt fence, siltation basins, sodding, seeding, mulching, erosion mat and riprap as applicable.

STORMWATER IMPACT EVALUATION

DT2076 2005

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating <input type="checkbox"/> Factor sheet is applicable to entire project corridor <input checked="" type="checkbox"/>	

Surrounding land use and a discussion of adopted plans are described on DT2094, Environmental Evaluation of Facilities Development Actions.

1. Indicate whether the affected area may cause a discharge or will discharge to the waters of the state (Trans 401.03). Special consideration should be given to areas that are sensitive to water quality degradation. Provide specific recommendations on the level of protection needed.

- No water special natural resources are affected by the proposal.
- Yes – Water special natural resources exist in the project area.

<input checked="" type="checkbox"/> River/stream	<input checked="" type="checkbox"/> Wetland	<input type="checkbox"/> Lake	<input type="checkbox"/> Endangered species habitat
<input type="checkbox"/> Other - Describe			

2. Indicate whether circumstances exist in the project vicinity that require additional or special consideration, such as an increase in peak flow, total suspended solids (TSS), or water volume.

- No additional or special circumstances are present.
- Yes - Additional or special circumstances exist. Indicate all that are present.

<input type="checkbox"/> Areas of groundwater discharge	<input type="checkbox"/> Areas of groundwater recharge	<input type="checkbox"/> Stream relocations
<input type="checkbox"/> Overland flow/runoff	<input type="checkbox"/> Long or steep cut or fill slopes	<input type="checkbox"/> High velocity flows
<input type="checkbox"/> Cold water stream	<input type="checkbox"/> Impaired waterway	<input type="checkbox"/> Large quantity flows
<input type="checkbox"/> Exceptional/outstanding resource waters	<input type="checkbox"/> Increased backwater	
<input type="checkbox"/> Other – Describe any unique, innovative, or atypical stormwater management measures to be used to manage additional or special circumstances.		

3. Describe the overall stormwater management strategy to minimize adverse effects and enhance beneficial effects.

Guidelines and regulations for highway project stormwater management include the WisDOT Facilities Development Manual, Chapter 10—*Erosion Control and Storm Water Quality*, Wisconsin Administrative Code Chapter TRANS 401—*Construction Site Erosion Control and Storm Water Management Procedures for Department Actions*, and the WisDOT/DNR Cooperative Agreement Amendment—*Memorandum of Understanding on Erosion Control and Storm Water Management*. The overall stormwater management strategy for the proposed improvements to STH 50 will include the following:

- Limit disturbance of natural drainage features and vegetation
- Prior to land disturbance, prepare and implement an approved erosion and sediment control plan.
- Protect areas that provide important water quality benefits and/or that are susceptible to erosion and sediment loss.
- Reduce direct discharge of highway runoff into streams and wetlands by having it flow through a filter strip, vegetated swale, or detention/retention facility.
- Vegetated grass strips or grass swales adjacent to the highway could remove about 65% of suspended sediments.

4. Indicate how the stormwater management plan will be compatible with fulfilling Trans 401 requirements.

A specific stormwater management plan will be developed by WisDOT in consultation with DNR in the project's engineering design phase. The plan will be developed in view of the overall stormwater management strategies discussed in item 3.

5. Identify the stormwater management measures to be utilized on the project.

- | | |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Swale treatment (parallel to flow) Trans 401.106(10) | <input type="checkbox"/> In-line storm sewer treatment, such as catch basins, non-mechanical treatment systems |
| <input checked="" type="checkbox"/> Vegetated filter strips (perpendicular to flow) | <input checked="" type="checkbox"/> Detention/retention basins - Trans 401.106(6)(3) |
| <input type="checkbox"/> Distancing outfalls from waterway edge | <input type="checkbox"/> Buffer areas - Trans 401.106(6) - Describe |
| <input type="checkbox"/> Constructed stormwater wetlands | <input type="checkbox"/> Infiltration - Trans 401.106(5) |
| | <input type="checkbox"/> Other |

In a future design phase, WisDOT may consider detention/retention basins if needed for stormwater management. Such facilities may require new right-of-way.

6. Indicate whether any Drainage District may be affected by the project.

- No – There will be no effects to a recognized drainage district.
 Yes - Identify the affected drainage district.

Has initial coordination with drainage board been completed?

Not applicable.

- No
 Yes - Discuss results.

Has initial coordination with Department of Agriculture, Trade and Consumer Protection (DATCP) been completed?

Not applicable.

- No
 Yes - Discuss results.

7. Indicate whether the project is within DOT's Phase I or Phase II stormwater management area.

(NOTE: See Procedure 20-30-1, Figure 1, Attachment A4 the Cooperative Agreement between the Wisconsin Departments of Transportation and Natural Resources. Contact Bureau of Equity and Environmental Services Stormwater Engineer or the District Environmental Coordinator for more details on the following areas.)

- No - The project is outside of WisDOT's stormwater management area.
 Yes - The project affects one of the following regulated by a WPDES stormwater discharge permit issued by the DNR.
- WisDOT storm sewer system located within municipalities with populations > 100,000.
 - WisDOT storm sewer system located within a notified owner of municipal separate storm sewer systems.
 - Urbanized areas as defined by the U.S. Census Bureau, NR216.02(3).

Project is located in the Kenosha Urbanized Area

- Municipal separate storm sewer systems serving > 10,000.

8. Has the affect of downstream properties been considered?

Not applicable. Due to the nature of the proposed improvements (reconstruct existing roadway) the area of potential effect for project-related stormwater runoff is localized to land abutting STH 50.

- No
- Yes – Coordination is in process.

9. Are there any property acquisitions for stormwater management purposes?

- No - There are no property acquisitions required for stormwater management purposes.
- Yes - Complete the following.
 - Safety measures, such as fencing, flooding, are not needed for potential conflicts with existing and expected surrounding land use.
 - Safety measures are needed for potential conflicts with existing and expected surrounding land use.
Describe proposed safety measures.

AIR QUALITY IMPACT EVALUATION

DT2072 2004

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating	Factor sheet is applicable to entire project corridor

Carbon Monoxide**1. Is this project exempt from air quality analysis under Wisconsin Administrative Code – NR 411**

- No – NR 411 exemptions do not apply
 Yes – NR 411 exemption(s) apply – Identify exemption(s) and explain why project is exempt.

The following exemptions apply:

- For any modified road or highway segment located in a metropolitan county, an increase in the peak hour volume of less than 1,200 vehicles per hour.
- A maximum shift in the nearest roadway edge of less than 12 feet toward any potential receptor located within the new intersection boundary for any modified intersection.

2. An air quality analysis was required

- No
 Yes – Identify the air quality modeling technique or program used to perform the analysis. Attach the Maximum Projected Carbon Monoxide (CO) Concentrations worksheet to this evaluation to illustrate the results.

3. If an air quality analysis was performed, will a Construction Permit be required to address air quality before the project may proceed

- No
 Letter of concurrence from DNR Bureau of Air Management requested. (See attached request letter – Exhibit)
 Letter of concurrence received from DNR Bureau of Air Management. (See attached Exhibit)
 Yes – Indicate:

Date Permit Requested

Or Date of Permit

See **Appendix C** for a discussion of Mobile Source Air Toxics (MSAT).

Ozone

4. Is the project located in a county which is designated non-attainment or maintenance for ozone

- No
 Yes – One of the following boxes must be checked

This project is included in the approved Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) endorsed by the region's Metropolitan Planning Organization (MPO). The TIP was found to conform by the Federal Highway Administration and the Federal Transit Administration. Provide RTP Name, TIP name, TIP number and conformity finding date(s).

RTP Name: 2020 Regional Transportation System Plan for Southeastern Wisconsin	TIP Name: 2007-2010 Transportation Improvement Program for Southeastern Wisconsin
MPO Name: Southeastern Wisconsin Regional Planning Commission (SWERPC)	TIP Number: 20 Type of Project: Highway Preservation (HP) Engineering/environmental studies for reconstruction, rehabilitation, or capacity expansion of State Trunk Highways identified for such improvements in the SEWRPC Plan (Regional Transportation System Plan for Southeastern Wisconsin).

Conformity Finding Date(s): January 14, 2005

- This project is located outside of a Metropolitan Planning Organization's boundaries and has received a positive conformity determination per the rural conformity section of the WisDOT/WDNR Memorandum of Agreement regarding determination of conformity. Provide conformity finding date.
- This project is located outside of a Metropolitan Planning Organization's boundaries, it is a project comparable to one of those described in 40 CFR 93.126 and is included in the State Transportation Improvement Program (STIP).
- This project is exempt per 40 93.127
- Other—Describe
-

CONSTRUCTION STAGE SOUND QUALITY IMPACT EVALUATION

DT2074 2005

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

1. Identify and describe residences, schools, libraries, or other noise sensitive areas near the proposed action and which will be in use during construction of the proposed action. Include the number of persons potentially affected.

A large portion of the land use abutting the STH 50 corridor is commercial and therefore not considered sensitive with respect to construction noise. There are residential subdivisions and scattered single family homes near the west end of the corridor and denser residential development at the east end of the corridor. Based on the number and types of residential dwelling units fronting on STH 50, the number of affected people is estimated to be in the 60-80 range.

2. Describe the types of construction equipment to be used on the project. Discuss the expected severity of noise levels including the frequency and duration of any anticipated high noise levels.

The types of construction equipment would include trucks, graders, dozers, other earth moving equipment and paving equipment.

NOTE: If a copy of the "Construction Equipment Sound Level" figure is not available from the District Environmental Coordinator, a copy may be obtained from the Central Office Noise Engineer.

The noise generated by construction equipment will vary greatly, depending on equipment type/model/make, duration of operation and specific type of work effort. However, typical noise levels may occur in the 67 to 107dBA range at a distance of 50 feet (15.2 meters). The figure on the following page shows typical noise levels for a variety of construction equipment. Adverse effects related to construction noise are anticipated to be of a localized, temporary, and transient nature.

3. Describe the construction stage noise abatement measures to minimize identified adverse noise effects.

WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.

CONSTRUCTION EQUIPMENT	SOUND LEVEL (dBA) AT 15m (50 feet)					
	60	70	80	90	100	110
EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES						
Earth Moving						
Compactors (Rollers)		██████████				
Front Loaders		████████████████████				
Backhoes		████████████████████████████████████████				
Tractors		████████████████████████████████████████				
Scrapers, Graders		████████████████████████████████████████				
Pavers			██████████			
Trucks			████████████████████			
Materials Handling						
Concrete Mixers		████████████████████				
Concrete Pumps			██████████			
Cranes (Movable)		████████████████████				
Cranes (Derrick)			██████████			
Stationary						
Pumps	██████████					
Generators		████████████████████				
Compressors		████████████████████				
Impact Equipment						
Pneumatic Wrenches			██████████			
Jack Hammers and Rock Drills		████████████████████				
Impact Pile Drivers (Peaks)				██████████		
Other						
Vibrator		████████████████████				
Saws		██████████				

Construction Equipment Sound Levels

Source: U.S. Report to the President and Congress on Noise, February, 1972

TRAFFIC NOISE IMPACT EVALUATION

DT2092 2005

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

Need for Noise Analysis

1. Is the proposed action considered a Type I project? (A type I project is defined as a project that involves construction of a roadway on new location or the physical alteration of an existing highway which substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes.)

- No – Complete only form DT2074, Construction Stage Sound Quality Impact Evaluation.
 Yes – Complete form DT2074, Construction Stage Sound Quality Impact Evaluation and the rest of this sheet.

Traffic Data

2. Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on DT2094, Environmental Evaluation of Facilities Development Action, Traffic Summary Basic Sheet.

- No
 Yes – Indicate volumes and explain why they were used.
Automobiles: Vehicles per hour
Trucks: Vehicles per hour or % of AADT

3. Identify and describe the noise analysis technique or program used to identify existing and future sound levels. A receptor location map shall be included with this document.

Existing and future traffic noise levels were evaluated using the FHWA Traffic Noise Model (TNM) version 2.5. Noise receptors are shown on the project concept plans in **Appendix A**.

4. Identify sensitive receptors, e.g., schools, libraries, hospitals, residences, etc. potentially affected by traffic sound.

Sensitive noise receptors abutting STH 50 include single-family and multi-family homes.

5. If this proposal is implemented will future sound levels produce a noise impact?

- No
 Yes, the impact will occur because
 The Noise Abatement Criteria (NAC) is approached (1 dBA less than the NAC) or exceeded.
 Existing sound levels will increase by 15 dBA or more.

The noise analysis results are presented in the noise impact summary table on the following page.

Noise Impact Summary

Receptor Location or Site Identification (see Appendix A)	Distance from C/L of Near Lane to Receptor feet (meters)	Number of Families or People Typical of this Receptor Site	Sound Level Leq ¹ (dBA)			Impact Evaluation		
			Noise Abatement Criteria ² (NAC)	Future Sound Level (Design Year 2030)	Existing Sound Level (2002 traffic)	Difference in Future and Existing Sound Levels (Column E minus Column F)	Difference in Future Sound Levels and NAC (Column E minus Column D)	Impact or No Impact ³
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
R1 Multi-family (Appendix A, sheet 1)	110 (33)	± 4 families	67	69	65	+4	+2	I
R2 Hospital (Appendix A, sheet 1)	340 (104)	± 20 people	67	62	58	+4	-5	NI
R3 Single-family (Appendix A, sheet 1)	60 (18)	± 3 people	67	72	69	+3	+5	I
R4 Single-family (Appendix A, sheet 1)	230 (70)	± 3 people	67	59	55	+4	+8	NI
R5 Multi-family (Appendix A, sheet 1)	80 (24)	± 4 families	67	67	64	+3	0	I
R6 Single-family (Appendix A, sheet 2)	70 (21)	± 3 people	67	57	55	+2	-10	NI
R7 Commercial (Appendix A, sheet 2)	130 (40)	± 8 people	72	66	63	+3	-6	NI
R8 Single-family (Appendix A, sheet 4)	60 (18)	± 3 people	67	65	60	+5	+2	NI
R9 Single-family (Appendix A, sheet 4)	55 (17)	± 3 people	67	67	63	+4	0	I
R10 Mobile homes (Appendix A, sheet 4)	120 (37)	± 3 families	67	64	60	+4	+3	NI

¹ Use whole numbers only.

² Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter TRANS 405.04, Table 1. The Noise Abatement Criterion is 67 dBA for residential development and 72 dBA for commercial development. The NAC levels are based on outdoor noise at first row and first floor noise receptors.

³ An impact occurs when future sound levels exceed existing sound levels by 15 dBA or more, or future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dBA less than the Noise Abatement Criteria). Therefore an impact occurs when the sound level is 66 dBA for residential development and 71 dBA for commercial development. In column I, the noise impact status is indicated by I = Impact and N = No Impact.

6. Will traffic noise abatement measures be implemented?

- Not applicable – Traffic noise impacts will not occur.
- No – Traffic noise abatement is not reasonable or feasible (explain why). In areas currently undeveloped, local units of government shall be notified of predicted sound levels for land use planning purposes. **A copy of this written notification shall be included with this document.**

Noise abatement is not reasonable or feasible in an urban/suburban setting with numerous driveways and side roads and mixed residential and commercial development. For noise barriers to be effective in reducing sound levels they must be continuous (no breaks or openings) and must extend a sufficient distance beyond the noise sensitive receptors. The numerous driveways and side roads on STH 50 preclude use of a continuous barrier. In addition, the mix of residential and commercial development and the need to provide access to the adjacent commercial development would preclude extending noise barriers a sufficient distance beyond the sensitive noise receptors (residential development).

A copy of the Noise Notification for the STH 50 project is included in **Appendix D**.

- Yes – Traffic noise abatement has been determined to be feasible and reasonable. Describe any traffic noise abatement measures proposed to be implemented. Explain how it will be determined whether or not those measures will be implemented.

HAZARDOUS SUBSTANCES OR UNDERGROUND STORAGE TANKS (USTs)

DT2079 10/2004

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating Factor sheet is applicable to entire project corridor	

1. Briefly describe the results of the Phase 1 hazardous materials assessment for this alternative. Do not use property identifiers (owner name, address or business name).

The initial Phase 1 assessment identified a total of 33 potential contamination sites along the STH 50 corridor. Based on further analysis with respect to proposed improvements, right-of-way acquisition and the potential for encountering environmental contaminants, 6 potential petroleum contamination sites were identified for possible further Phase 2 investigation.

2. Which contaminants are known or suspected to be affecting sites on this alternative?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes, how many sites 6	Petroleum
<input type="checkbox"/> No	<input type="checkbox"/> Yes, how many sites	Hazardous Waste
<input type="checkbox"/> No	<input type="checkbox"/> Yes, how many sites	Closed Landfill Sites
<input type="checkbox"/> No	<input type="checkbox"/> Yes, how many sites	Open Landfill Sites
<input type="checkbox"/> No	<input type="checkbox"/> Yes, how many sites	Farm/Agricultural/Other Dump Sites
	<input type="checkbox"/> Yes, how many sites	Other

3. How many sites require further investigation?

6 sites are recommended for further investigation.

Were any sites not included in the Phase 1 assessment?

- No
 Yes How many?

Why were they not reviewed?

Preferred Alternative

4. Describe the results of any additional investigation (include number of sites investigated, level of investigation, and results for each site).

Investigations included all properties abutting STH 50 and intersection areas where improvements are being proposed. The initial assessment identified a total of 33 potential contamination sites along the STH 50 corridor. Based on further analysis with respect to proposed improvements, right-of-way acquisition and the potential for encountering environmental contaminants, 6 sites were identified for further Phase 2 investigation:

- Drug store (former gas station site)—DNR closed this UST site in 1995. However, site maps indicate residual petroleum contamination may be present.
- Truck parts business (former machine shop)—Interviews indicated no tanks on site; however, because of the type of industry on this property there is a potential for petroleum contamination.
- Gas station—Property has two 7,500 gallon steel USTs. Due to the age of the tanks (35 years old) there is a potential for petroleum contamination.
- Auto/truck sales business (formerly auto center and petroleum company)—Previous USTs were removed from the site; soil samples indicated potential for petroleum contamination.
- Gas station—Three active USTs, four were closed previously; property on State LUST list; DNR investigations indicate potential for petroleum contamination.
- Gas station—Seven USTs removed in 1994 and 3 new USTs installed; previous reports indicate potential for petroleum contamination.

5. Describe measures taken in selection of this alternative to avoid hazardous materials contamination for this project, for example: changes in location, changes in design, or relocation of utilities.

No special measures were required to avoid hazardous materials contamination for the proposed STH 50 improvements.

6. For areas where contamination cannot be avoided by the proposed alternative, describe the remediation measures to be incorporated into the design, (e.g., waste handling plan, remediation of contamination, design changes to minimize disturbances).

The WisDOT Southeast Region Office will work with all concerned parties to insure that the disposition of any petroleum contamination is resolved to the satisfaction of the Wisconsin DNR, WisDOT BEES, and FHWA before acquisition of any questionable site, and before advertising the project for letting. Non-petroleum sites will be handled on a case-by-case basis with detailed documentation and coordination with FHWA as needed.

AESTHETICS IMPACT EVALUATION

DT2062 2003

Alternative Capacity expansion with intersection improvements, access management, and the tight jug handle alternative at the STH 50/STH 31 intersection.	Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Length of Project This Sheet is Evaluating	Factor sheet is applicable to entire project corridor

1. Identify and briefly describe the visual character of the landscape. Include elements in the viewshed such as landforms, waterbodies, vegetation and human developments.

The visual character of the STH 50 corridor is typical of urban arterial corridors that include a mix of commercial, industrial and residential development. There is very little open space remaining in the STH 50 corridor except for the Kilbourn Road Ditch floodplain.

2. Indicate the visual quality of the viewshed and identify landscape elements that would be visually sensitive.

The visual quality of the corridor is considered low to medium. While residential subdivisions and commercial development properties have been landscaped to some extent, there are no outstanding elements that enhance the visual appearance of the corridor.

3. Identify the viewers who will have a view of the improved transportation facility and those with a view from the improved transportation facility. Indicate the relative numbers (low, medium, high) of each group.

Viewers of the improved transportation facility include persons living in the adjacent residential subdivisions and remaining single-family homes adjacent to STH 50, persons who work in office buildings or other businesses that have windows facing STH 50. The relative number of viewers for this group is medium. Traffic in the STH 50 corridor ranges from 21,000 to 32,300 vehicles per day. Assuming mostly single occupancy vehicles, this is a good indicator of the number of persons with a view from STH 50. The relative numbers from this viewing group is high.

4. Indicate the relative time of day (morning, afternoon, evening, night) and the approximate amount of viewing time each viewer group would have each day.

Viewing time for persons living or working along the STH 50 corridor varies. Presumably, most residents would view the highway during evening hours when they are home from work. Most workers in the corridor would view the highway during morning and afternoon hours. The amount of viewing time for travelers in the STH 50 corridor would greatest during morning and afternoon peak traffic hours due to increased travel time through the corridor.

5. Describe whether and how the project would affect the visual character of the landscape.

The visual scale of STH 50 will be increased (more pavement area) due to widening from 4 to 6 lanes and adding turn lanes at several local street intersections.

6. Indicate the effects the project would have on the viewer groups.

The project will not substantially change the visual character of the corridor for travelers on STH 50. Residents and workers along the STH 50 corridor will see a wider highway.

7. Identify and discuss reasonable mitigation measures to avoid or minimize adverse visual effects or enhance positive aesthetic effects of the project.

To some extent, the raised grass median along most of the STH 50 corridor will help break up the sense of additional pavement and the proposed multi-use trail will provide a visual buffer between adjacent development and the highway. The Village of Pleasant Prairie and City of Kenosha could also consider landscaping along the multi-use trail in the future.