

## **RECOMMENDATIONS**

### **INTRODUCTION**

Much of the analysis in this report was intended to measure the validity of previously made recommendations. Two largely hypothetical land use scenarios, previously discussed, and the existing plans or current trend were measured against the adopted goals, objectives, and policies to provide a clear differentiation in each scenario's effect on urban development and associated costs.

The establishment of the long range transportation model for the Fond du Lac area was used to measure a number of previously proposed projects, as well as to measure the existing and future adequacy of the entire highway system. The following is a compilation of recommendations including land use, highway projects, transit system and other modal recommendations, as well as recommendations for additional study.

### **LAND USE**

Land use recommendations include the implementation of adopted land use policies, as published within this document. The recommendation for the Current Plans Scenario allowed for analysis to occur in a realistic and fairly quantitative arena in conjunction with the sewer service area planning process. A major vehicle for the implementation of the adopted policies rests in the sewer service area planning and amendment process.

### **TRANSPORTATION**

The overall goal of the transportation program is to achieve a safe, efficient, and environmentally sound transportation system that provides personal mobility for all segments of the population and supports the economy of the region. As stated in *Corridors 2020*, WisDOT's long-range highway improvement plan, "the development of an improved, efficient highway network can enhance the economic vitality of our state in the 21st century by creating an attractive environment in which business, industry, agriculture and tourism can grow." The recommendations of this plan are intended to meet these goals through the fulfillment of the underlying structure of goals, objectives and policies, while meeting the needs of the Fond du Lac area as projected under the recommended land use scenario.

The following recommendations stem both from this long range planning effort and the recommendations of other efforts as confirmed in this process. Recommendations for alternative modes of transportation to the automobile are also made, generally in terms of implementation of the adopted policies. Short range projects are identified and programmed in the 2006 Fond du Lac MPO Transportation Improvement Program (TIP).

Exhibit 72 is a listing of the recommendations, both committed and planned projects that were identified after analyzing current and proposed land uses, current deficiencies, as well as deficiencies projected to exist under the Current Plans (2035) Scenario, the preferred alternative.

The projects are categorized as expansion (E) and (B) if the facility is on the proposed bike route shown in Exhibit 72. The project recommendations included in the listing are also shown on a map

of the area, [Exhibit 73](#), following the listing. The number at the beginning of each listing corresponds to the numbers noted on the map.

## EXHIBIT 72

### TRANSPORTATION RECOMMENDATIONS

- 1)** (E) (B) Network Facility: **USH 151.** Cost: \$11,000,000  
Facility Segment: CTH D to STH 175.  
Jurisdiction: WisDOT.  
Proposed Project: Construct the 4 lane divided highway bypass from CTH D to STH 175.  
Implementation Date: Short range improvement, 0 – 15 years  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP. Planned construction for 2007-2008. WisDOT plans to relocate USH 151 onto the facility.  
**Plan Recommendation:** WisDOT should proceed with plans to construct the four lane facility with bike and pedestrian facilities. The travel model shows the new facility will likely operate with no deficiencies.
- 2)** (E) Network Facility: **USH 151 BYPASS GRADE SEPARATION** Cost: \$15,000,000  
Facility Segment: USH 151 Bypass  
Jurisdiction: WisDOT.  
Proposed Project: Officially map all intersections with the USH 151 Bypass to eliminate at-grade cross traffic, similar to USH 45.  
Implementation Date: Long range improvement, 15 -30 years.  
Actions Taken: Not scheduled.  
**Plan Recommendation:** Officially map all intersections with the USH 151 Bypass to eliminate at-grade cross traffic, similar to USH 45.
- 3)** (E) Network Facility: **USH 41** Cost: \$10,000,000  
Facility Segment: Townline Road to Lost Arrow Road  
Jurisdiction: WisDOT  
Proposed Project: Reconstruction of USH 41, widening to 6 lanes.  
Implementation Date: Long range improvement, 15 - 30 years.  
Actions Taken: Not scheduled.  
**Plan Recommendation:** WisDOT should proceed with plans to increase capacity on USH 41 within the plan horizon. The travel model shows deficiency on USH 41 when tested as 4 lanes.
- 4)** (E) Network Facility: **USH 41** Cost: \$8,000,000  
Facility Segment: CTH OO to the North County Line (NCL)  
Jurisdiction: WisDOT  
Proposed Project: Pavement replacement on USH 41 from CTH OO to the North County Line.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
**Plan Recommendation:** Pavement replacement on USH 41 from CTH OO to the North County Line.

- 5) (E) Network Facility: **USH 41 FREEWAY MODERNIZATION** Cost: \$100,000  
Facility Segment: Kohlman Road and Pioneer Road.  
Jurisdiction: WisDOT.  
Proposed Project: Design structures to meet interstate height and width standards.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Project should be constructed as programmed.
- 6) (E) Network Facility: **USH 41 FREEWAY MODERNIZATION** Cost: \$5,000,000  
Facility Segment: WCL and FVW Railroad Structure Reconstruction  
Jurisdiction: WisDOT.  
Proposed Project: WCL and FVW Railroad Structure Reconstruction  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: WCL and FVW Railroad Structure Reconstruction
- 7) (E) Network Facility: **USH 45 (MAIN STREET)** Cost: \$2,000,000  
Facility Segment: Western Ave to Scott St.  
Jurisdiction: WisDOT.  
Proposed Project: Reconstruct USH 45 from Western Ave to Scott St.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Reconstruct USH 45 from Western Ave to Scott St.
- 8) (E) Network Facility: **STH 175 (VAN DYNE ROAD)** Cost: \$4,000,000  
Facility Segment: Village of North Fond du Lac to the North County Line (NCL)  
Jurisdiction: WisDOT  
Proposed Project: Resurface STH 175 from the Village of North Fond du Lac to the North County Line.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Resurface STH 175 from the Village of North Fond du Lac to the North County Line.
- 9) (E) Network Facility: **STH 175** Cost: \$3,000,000  
Facility Segment: USH 41 to USH 45  
Jurisdiction: WisDOT  
Proposed Project: Resurface STH 175 from Fond du Lac to USH 151.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Resurface STH 175 from Fond du Lac to USH 151.
- 10) (E) Network Facility: **STH 23 (WEST JOHNSON STREET)** Cost: \$11,850,000  
Facility Segment: Townline Road to USH 41.  
Jurisdiction: WisDOT.  
Proposed Project: Reconstruct facility as a 4 lane highway.  
Implementation Date: Short range improvements 0 - 15 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct facility as a 4 lane highway.

- 11)** (E) (B) Network Facility: **STH 23 (EAST JOHNSON STREET)** Cost: \$11,000,000  
Facility Segment: From CTH K to the east out of the MPO area, as part of the 4 lane project between Fond du Lac and Plymouth.  
Jurisdiction: WisDOT  
Proposed Project: Reconstruct to a 4-lane expressway with bike and pedestrian facilities.  
Implementation Date: Short range improvement 0 - 15 years  
Actions Taken: Construction is scheduled for 2013.  
Plan Recommendation: Proceed with the 4-lane facility, identified as a Corridor 2020 connector highway by WisDOT.
- 12)** (E) Network Facility: **CTH K** Cost: \$4,000,000  
Facility Segment: USH 151 to CTH V.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct CTH K as a 4 lane facility from USH 151 to CTH V.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct CTH K as a 4 lane facility from USH 151 to CTH V.
- 13)** (E) (B) Network Facility: **CTH T (ESTERBROOK ROAD)** Cost: \$2,800,000  
Facility Segment: STH 23 to CTH OO.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct the stretch from STH 23 to CTH 000 to a four lane facility and construct a new 4 lane facility from CTH 000 to CTH OO.  
Implementation Date: Long range improvement, 15 – 30 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Proceed with plans to make CTH T (Esterbrook Road) a minor urban arterial and protect with corridor preservation for an ultimate 4 lane facility with bike and pedestrian facilities.
- 14)** (E) Network Facility: **CTH T** Cost: \$2,800,000  
Facility Segment: STH 23 to Esterbrook Rd.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct CTH T as a 4 lane facility from STH 23 to Esterbrook Rd.  
Implementation Date: Long range improvement, 15 – 30 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct CTH T as a 4 lane facility from STH 23 to Esterbrook Rd.
- 15)** (E) Network Facility: **CTH T** Cost: \$3,500,000  
Facility Segment: National Ave to CTH K.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct CTH T as a 4 lane facility from National Ave to CTH K.  
Implementation Date: Long range improvement, 15 – 30 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct CTH T as a 4 lane facility from National Ave to CTH K.

- 16)** (E) Network Facility: **CTH V** Cost: \$4,200,000  
Facility Segment: CTH VV to USH 45.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct to 4 lanes.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct CTH VV to a 4 lane facility from CTH V to USH 45.
- 17)** (E) Network Facility: **CTH V** Cost: \$3,000,000  
Facility Segment: CTH K to National Ave.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct to 4 lanes.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct CTH V from CTH K to National Ave. as a 4 lane facility.
- 18)** (E) Network Facility: **CTH VV (PIONEER ROAD)** Cost: \$14,500,000  
Facility Segment: Military Road to USH 45  
Jurisdiction: Fond du Lac County  
Proposed Project: Reconstruct Pioneer Road as a 4 lane facility.  
Implementation Date: Short range improvement 0 - 15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Proceed with the reconstruction of CTH VV (Pioneer Road) as a 4 lane facility. Travel model shows potential deficiencies occurring by 2035 under with the current 2 lane facility.
- 19)** (E) Network Facility: **CTH VV** Cost: \$14,500,000  
Facility Segment: Military Rd. to CTH 000.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Reconstruct CTH VV as a 4 lane facility from Military Rd. to CTH 000.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct CTH VV as a 4 lane facility from Military Rd. to CTH 000.
- 20)** (E) Network Facility: **CTH VV UNDERPASS** Cost: \$9,600,000  
Facility Segment: Morris St. to Hickory St.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Construct 4 lane rail underpass.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Construct CTH VV underpass of the Canadian National Railroad.

- 21)** (E) Network Facility: **6<sup>th</sup> STREET (USH 45)** Cost: \$957,000  
Facility Segment: Fond du Lac Ave to Main St.  
Jurisdiction: City of Fond du Lac.  
Proposed Project: Reconstruct 6<sup>th</sup> Street as a 4 lane facility from Fond du Lac Ave to Main St.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Reconstruct 6<sup>th</sup> Street as a 4 lane facility from Fond du Lac Ave to Main St.
- 22)** (E) Network Facility: **JOHNSON STREET (STH 23)** Cost: \$75,000  
Facility Segment: Pioneer Rd. to Prairie Rd.  
Jurisdiction: City of Fond du Lac.  
Proposed Project: Intersection safety improvements - AES  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Intersection safety improvements - AES
- 23)** (E) Network Facility: **LAKESHORE DRIVE RAILROAD OVERPASS** Cost:\$12,500,000  
Facility Segment: Connection between USH 45 and STH 175 (Winnebago St.)  
Jurisdiction: WisDOT.  
Proposed Project: Construction of an overpass over the Canadian National rail lines.  
Implementation Date: Long range improvement, 15 -30 years.  
Actions Taken: Not scheduled.  
Plan Recommendation: Further study on the construction of an overpass over the railroad and future alignment and connection with Winnebago Street and Lakeshore Drive.
- 24)** (E) Network Facility: **MASCOUTIN VALLEY TRAIL EXTENSION** Cost: \$390,000  
Facility Segment: CTH VV TO CTH VVW.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Extend the Mascoutin Valley Trail from CTH VV to CTH VVW.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Extend the Mascoutin Valley Trail from CTH VV to CTH VVW.
- 25)** (E) Network Facility: **PLANK TRAIL EXTENSION** Cost: \$1,000,000  
Facility Segment: USH 151 to MPAB.  
Jurisdiction: Fond du Lac County.  
Proposed Project: Extend the Plank Trail from USH 151 to the Metropolitan Planning Area Boundary.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Extend the Plank Trail from USH 151 to the Metropolitan Planning Area Boundary.

- 26)** (E) Network Facility: **PRAIRIE ROAD** Cost: \$1,000,000  
Facility Segment: Morningside Drive to CTH T.  
Jurisdiction: City of Fond du Lac  
Proposed Project: Construct with attainment of right of way.  
Implementation Date: Short range improvement 0 - 15 years  
Actions Taken: Not scheduled.  
Plan Recommendation: Construct approximately 0.5 miles between Morningside Drive and CTH T.
- 27)** (E) Network Facility: **WILD GOOSE/PRAIRIE TRAIL CONNECTOR** Cost: \$780,000  
Jurisdiction: Fond du Lac County.  
Proposed Project: Construct a 1.6 mile connector trail to link the Wild Goose and Prairie Trails.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Construct a 1.6 mile connector trail to link the Wild Goose and Prairie Trails.
- 28)** (E) Network Facility: **WILD GOOSE TRAIL EXTENSION** Cost: \$400,000  
Facility Segment: CTH VV to CTH VVW  
Jurisdiction: Fond du Lac County.  
Proposed Project: Construct a 0.75 mile extension to the Wild Goose Trail from CTH VV to CTH VVW.  
Implementation Date: Short range improvement, 0 -15 years.  
Actions Taken: Programmed in the 2006 Fond du Lac MPO TIP.  
Plan Recommendation: Construct a 0.75 mile extension to the Wild Goose Trail from CTH VV to CTH VVW.

**Corridor Preservation.** As noted in Exhibit 72, one recommendation is to officially map the USH 151 bypass to eliminate at-grade cross traffic. This will eliminate the risk of high speed crashes at intersections with the USH 151 bypass.

Another recommendation is to preserve corridors on the urban fringe which may serve as arterials for future traffic movement, the most notable being Esterbrook Road. Esterbrook Road should be examined as a future north-south arterial from CTH OO to CTH OOO. Access control and setbacks on this future arterial should also be examined.

Other projects for further study in addition to the grade separation of Lakeshore Drive would include rail mainline crossings through the Urbanized Area. A crossing at Subway Road, which is just north of Lakeshore Drive, should also be examined. Finally a crossing at CTH N, which is just north of Subway Road and provides access to USH 41, should also be studied in the future.

**Transit.** The Fond du Lac Area Transit System operates at a favorable level compared to transit systems of similar size throughout the state. Recommendations for transit include:

- Convert one hour routes to 30 minute routes, especially during peak hours.
- Expand service to efficiently serve the Urbanized Area population
- Research the benefits of a Regional Transit Authority (RTA) with other communities along the USH 41 corridor.
- Coordination of efforts with other area transit providers, as well as major employers

It is the recommendation of the East Central Wisconsin Regional Planning Commission (ECWRPC) that the Fond du Lac Urbanized Area along with the other Urbanized Areas within the ECWRPC planning region (the Fox Cities and Oshkosh Urbanized Areas) play a role in the examination of RTA benefits to the region. Local leaders should examine the potential development of state legislation permitting the creation of an RTA, and initiate the formation of an RTA comprised of municipalities throughout the ECWRPC region pending legislative action. The State of Wisconsin does not currently have legislation which allows the development of a Regional Transit Authority (RTA), an entity with the ability to collect taxes to be utilized for transit operation. The formation of such legislative language has been a substantial transportation issue throughout the state in recent years. From a regional perspective, USH 41 is the primary transportation corridor extending from the Green Bay Urbanized Area, through the Fox Cities and Oshkosh Urbanized Areas, and to the Fond du Lac Urbanized Area.

**Bicycle and Pedestrian.** The physical recommendations for bicycle and pedestrian facilities are also shown in Exhibit 72. It is not anticipated that existing highways will be retrofitted to accommodate bicycles without the occurrence of a reconstruction project. It is recommended that bicycle and pedestrian travel be considered in the design stages of all highway projects. Accommodations should be appropriate to traffic volumes, parking and other physical conditions, and safety for bicyclists, pedestrians, and automobile users.

The following recommended guidelines should be considered in the planning process:

- All new street construction and reconstruction projects located on roadways identified as bike routes should be designed to be in compliance with AASHTO standards for such routes.
- All new 4-lane urban sections intended to function as collectors or arterials should be constructed to a minimum curb-to-curb width of 56'. This would include an outside (curbside) lane of 14' and an interior lane of 12'.
- All existing 4-lane urban sections constructed to a width of 48' should be re-striped so that the outside (curbside) lane is 13' in width and the interior lane is 11'. They should be expanded to comply with the 52' minimum width at the time they are slated for reconstruction.
- All new 2-lane neighborhood collectors designed to accommodate on-street parking should have a minimum curb-to-curb width of 40'.
- When existing 2-lane collectors are upgraded, they should be built to a minimum standard which allows 14' for shared driving/biking lanes and 14' for shared parking/biking lanes. Lanes used strictly for motor vehicles should be 12' in width.
- Reconstruction of all rural collectors and arterials should include a striped and paved shoulder at least 5' in width adjacent to a 12' lane and 6' in width adjacent to an 11' lane. If speeds are in excess of 40 MPH paved shoulders should be at least 6'.
- Whenever possible, a minimum width of 16' should be provided on the exterior lane of all bridge decks at the time of their construction to accommodate bicycles. Even better, a 6' striped bike lane should be provided if it is possible to provide a 12' travel lane for motor vehicles.

- A sidewalk should be provided on at least one side and preferable both sides of the roadway. If feasible, these guidelines should be adhered to at the time existing bridge decks are replaced.
- Convenient access to the on-road bike route system should be available from off-road bicycle/pedestrian paths.
- Appropriate striping to define (and emphasize) bicycle movements should be undertaken on bike routes in those areas where significant vehicular turn movements and other points of congestion and conflicts between the bicycle and the motor vehicle occur.
- Appropriate diagonal striping with diamond markings should be considered on a case-by-case basis to better define shared bike/on-street parking lanes.
- A minimum width of 10' and preferably 12' should be used as the standard for all off-road bicycle/pedestrian paths.
- All urban sections constructed of concrete should have an integrated curb/gutter section with a minimum width of 5' to the pavement joint.
- Site plans should be reviewed to ensure pedestrian access to and between buildings included in the plan. Subdivisions should be reviewed to ensure appropriate pedestrian and bicycle facilities, including connections within the development and access to the subdivision from existing development.

**Freight.** Indications from the freight-oriented users during the advisory committee deliberations were that existing accessibility is good in the Fond du Lac area. Consideration of land use and truck route access in the location of freight-related and freight dependent facilities should be included in the planning process. This will help to insure the continued economic health of the area and to most efficiently use the existing highway network. Another recommendation is to transfer more freight back to rail. This will help alleviate congestion on our streets and highways, as well as reduce the “wear and tear” on the infrastructure as well.

**Intelligent Information Systems (ITS).** An ITS Strategic Deployment Plan was developed in May of 2001 for the Oshkosh, Fox Cities and Green Bay Urbanized Areas. All of these Urbanized Areas lie within the USH 41 corridor, the primary transportation facility in northeast and east central Wisconsin. It is recommended that the Fond du Lac Urbanized Area participate in the coordination and development of a regional ITS architecture/network. The proposed architecture and coordination improvements which were included within that plan are also listed within this plan as recommendations and include:

- Coordination between participating agencies
- Defining transportation needs and problems
- Facilitate an ITS technical team
- Develop a User Service Plan
- Development of a Regional ITS Architecture
- Technology identification and assessment
- Develop an Incident Management Plan

- Enhance reference markers
- Installation of over-height detection systems for commercial vehicles
- Deployment of additional road weather information systems
- Development of a Regional Virtual Traffic Operations Center
- Installation of portable changeable message signs
- Installation of closed-circuit television cameras
- Installation of permanent changeable message signs
- Traveler information broadcast via radio and television
- Advanced adaptive traffic signal coordination
- Advanced vehicle location/computer aided dispatch for emergency vehicles
- Advanced scheduling/dispatch system for paratransit service

**Congestion Management Strategies.** Although the Fond du Lac Urbanized Area does not have many congestion issues or infrastructure deficiencies, the Fond du Lac MPO has identified a number of congestion management strategies for the future. These strategies include:

**Capacity Expansion.** One of the most obvious congestion management strategies is capacity expansion. Capacity expansion is typically the last resort to alleviate congestion, based on the cost to add lanes.

**Transportation Systems Management.** Traffic signals, turn lanes, prohibiting turns, signal timing, and other forms of traffic controls can alleviate congestion by efficiently moving traffic. One such device that should be examined within the Fond du Lac Urbanized Area are timing mechanisms for trains. These systems can be used to notify drivers how long a train is anticipated to be at a particular crossing. This would allow drivers to consider alternative routes depending on the anticipated delay.

**Roundabouts.** Roundabouts are extremely efficient in moving traffic in a safe and efficient manner by reducing speeds and the number of conflict points between vehicles.

**Use of Alternative Modes of Transportation.** Obviously the majority of traffic is comprised of single occupancy vehicles. This increases traffic volumes and congestion. The use of alternative modes of transportation to the automobile will reduce traffic volumes.

**Elimination of On-Street Parking.** The elimination of on-street parking greatly improves traffic flow on a given facility. It also reduces crashes between vehicles which are trying to park or re-enter the facility and vehicles which are trying to travel through on the facility.