Project 1120-11-03
WIS 26 – Breezewood Lane
US 41
Winnebago County

Traffic Management Plan

June 2007
Updated July 2011 (rev #1)
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- Attachment B – US 41 Traffic Study – Winnebago County Year 2035 Traffic Operations Analysis
- Attachment C – US 45 Detour Plan
- Attachment D – WIS 21 Detour Plan
- Attachment E – TRADAS ADT Volumes for July 2006
- Attachment F – WIS 76 Detour Plan
- Attachment G – CTH K Overpass Detour Plan
- Attachment H – Witzel Avenue Overpass Detour Plan
- Attachment I – US 41 SB Exit Ramp to WIS 21 Truck Detour Plan
- Attachment J – US 41 Winnebago County Construction Schedule
- Attachment K – Detail for Construction Access to USH 41
Executive Summary

Enclosed is the Traffic Management Plan (TMP) for the US 41 Winnebago County expansion project. This project is a Type 4 action as determined by Departments DRAFT guidelines for Work Zone Transportation Management Plan established in October 2006 and as currently published in the Facilities Development Manual (FDM) (updated August 2008). This TMP document lays out the project procedures for handling and managing traffic during the construction phase. It addresses overall work zone impacts, selected work zone management strategies, and incident management techniques expected to be implemented during various construction operations.

Because these type plans are considered “living “documents, a final TMP plan will not be complete until the construction plans approach finalization and then there are reporting activities as to the effectiveness of the TMP plan.

The original TMP was developed in June 2007. This July 2011 revision (rev #1) serves as an update to the TMP based on the completed and ongoing project work in Winnebago County.
Project Description

The US 41 project is a 17-mile project that plans to reconstruct US 41 from four to six lanes in Winnebago County (see map on page 6). The project extends ½ mile south of the WIS 26 interchange and extends ½ mile north of the Breezewood Lane interchange. The project includes reconstruction of the 9th Avenue, WIS 21, and US 45 interchanges. Moderate interchange improvements will be completed at WIS 44 and WIS 76 interchanges and minor improvements at WIS 26 interchange. Grade separations structures at 20th Avenue and Witzel Avenue will be replaced to meet vertical clearance requirements. New grade separation structures will be added at Lake Butte des Morts Drive and Fountain/Snell roads to provide local road connections near the US 41/45 interchange. The grade separation structures at County Y and CTH GG will also be replaced and the existing overpass structure at County G will be rehabilitated after the US 41 mainline improvements are completed.

The project is currently scheduled in the majors program to be constructed from 2009 to 2016. The project is funded through the Majors program and the schedule is subject to change based on project estimates and available funding. A current Winnebago County schedule is shown in Attachment J. This schedule best takes advantage of funding resources while accommodating alternating interchange closure along US 41. Some of the early projects (2009) were accelerated from the original planned year of 2010 to take advantage of ARRA funding.

The goal of the project is to expand US 41 from 4 to 6 lanes and upgrade the interchanges to handle the projected traffic volumes. Interchanges will be designed with ramp metering calculated into the ramp lengths so meters can be added in the future. The reconstruction of US 41 will provide a much safer facility with better merge/diverge design at the interchanges to handle the future projected traffic.

The proposed construction staging is being determined during the design process. One of the constraints placed on the project is that US 41 remains open to 2 lanes of traffic in each direction during the entire project duration. The reason this constraint has been placed on the project is the hourly volumes for US 41 exceed 1500 vehicles per lane per hour for the entire weekday from 6:00 am to 7:00 pm. Traffic does not reduce down during the daytime that a lane closure can be implemented without causing traffic backups. See Attachment E for traffic volumes. Northeast Region has experienced that by witnessing some of the county maintenance activities and the backup they cause. Nighttime lane closures will be allowed at times for structure demolition, girder placement, and traffic switches. This constraint is necessary to handle the volume of traffic using US 41. We plan to construct the project using various stages to maintain traffic on US 41. US 41 is the only major arterial that crosses the Lake Butte des Morts/Fox River system; alternative routes to handle the large traffic volumes are not present. We propose to close various interchanges and grade separation bridges during construction so we can go in, do the work, do it quickly, get it done, and stay out for a long time in the future. We believe this approach gets the construction done quicker and
a better quality product than trying to maintain traffic on cross streets and interchanges extending the work influence for longer periods of time.
Existing and Future Conditions

The Department developed the existing traffic data on US 41 in 2000 and updated it in 2005. The Department spent time collecting data on the mainline, ramps, and side roads so it could be used to study the existing traffic conditions and accurately project the future traffic of the facility. Attached is the technical memo entitled *US 41 Traffic Study – Winnebago County Base Year 2005 Traffic Volume Network* and is attached in **Attachment A**. The 2005 Annual Average Daily Traffic (AADT) Traffic Volumes on US 41 range from 44,800 on the south end of the project to the highest volume of 68,400 between WIS 21 and US 45. US 41 is used as a tourist route for access to northern Wisconsin so Friday pm and Sunday pm peaks are typical throughout the corridor. During peak travel times Friday night, US 41 northbound travelers experience backups from WIS 44 to US 45. The close interchange spacing in this area combined with the large Friday night peak traffic causes US 41 northbound traffic to be stopped or slowed down to less than 25 mph at peak times. Sunday afternoon return trips also causes backup on US 45 near US 41 as well.

Forecasted traffic projections were completed for years 2015 and 2035 in the technical memo entitled *US 41 Traffic Study – Winnebago County Year 2035 Traffic Operations Analysis* and are attached in **Attachment B**. The 2035 Traffic Volumes range from 80,000 to 111,000 within the project limits of WIS 26 to Breezewood Lane with the highest volumes between WIS 21 and US 45. Truck percentages in the corridor are included in **Attachment B** and average around 14%.

In 2000, the Department completed a crash study of the entire corridor. Five years (1994 – 1998) of crash records were reviewed for US 41 between WIS 26 and Breezewood Lane. Several segments have higher crash rates than statewide average but the northbound US 41 at the WIS 21 interchange and southbound US 41 at the US 45 interchange have significantly higher crash rates. Crash rates may be reduced during construction in the WIS 21 Interchange and US 45 Interchange because the construction staging plans will have those interchanges closed during construction and thus reducing the conflict.

Community and business concerns include addressing the congestion and safety of the corridor. Concerns were high regarding the WIS 21 area along with the Lake Butte des Morts crossing. The Lake Butte des Morts crossing does experience snow drifting issues while the lake is frozen and during low wind speeds from the west or northwest. Maintenance crews have to do continuous plowing and salting operations during those periods when drifting occurs.

The WIS 21 corridor has large commercial development along with high residential development to the west of US 41 that experiences traffic congestion during the am and pm peak. The community and business leaders asked the Department to address the congestion issues with the design. WisDOT accelerated the construction of this interchange to one construction season to minimize closures. Construction sequencing is discussed later in this report.
Work Zone Assessment Impacts

The designers have given considerable thought to the constraint of fitting a design that will allow two lanes in each direction be maintained during construction. This can be done throughout most of the corridor without much issue. Temporary bypass lanes will need to be constructed at the WIS 21 and US 45 interchanges to allow the work on US 41 mainline to be completed. Temporary bypass lanes along the east side of US 41 were chosen to allow the contractor the most room in which to work and the access materials. Quarries and borrow pits are available to the west of these interchanges.

Lane closures will be allowed at night for material deliveries or structure demolition. Because the existing traffic volumes are large and do not go below 1500 vehicle per hour per lane during daytime, only night-time/off-peak closures will be allowed. See Attachment E.

The US 45, WIS 21, and WIS 76 interchanges will be closed during construction. Proposed detour routes have been established and are attached in Attachments C, D and F. To minimize impacts to the local traffic during the interchange closures, improvements to the local road connections are scheduled prior to the interchange closures including the addition of turn lanes on STH 44, STH 21, and STH 114. The work at the Witzel Avenue Overpass, Lake Butte des Morts Overpass, Fountain/Snell Overpass, Washburn Street, and 9th Avenue Interchange will be done in advance so that when the interchanges are closed, the local traffic has a system that can handle the added capacity. In coordination with the public, the Department committed that no interchange would be fully closed longer than one construction season.

Closures along US 41 will be allowed during off-peak periods for structure demolition and girder placements on select structures along the US 41 Corridor. These closures will be take place in areas where traffic will be able to be routed off and back onto US 41 via interchange ramps adjacent to the structure in order to bypass the work zone. In areas where US 41 traffic is not able to bypass the work zone by using adjacent exit and entrance ramps, a 20-minute rolling closure will be used during off-peak periods or a detour route will be established. The detour routes for the CTH K overpass and Witzel Avenue overpass where traffic cannot be routed off and back on via interchange ramps are shown in Attachments G and H. In addition, during a brief period trucks will not be able to maneuver through the southbound US 41 exit ramp to WIS 21 due to construction activities on the ramp. A truck detour shown in Attachment I was used to bypass the exit ramp during the widening work.

Pedestrian/bicyclists will be impacted during construction when we close an interchange or overpass. Pedestrians/bicyclists will have to plan alternate routes around the construction.

The NE Region has currently scheduled other WisDOT projects to avoid conflicts while the US 41 project is under construction. Currently, resurfacing projects on WIS 76 are programmed in advanced of US 41 work so that WIS 76 can be used as a relief route. No
work is anticipated to be needed on the detour routes for US 45, WIS 21, and WIS 76 interchange closures. While side roads are under construction, various strategies will be used to get the work completed and maintain traffic on US 41. Strategies being considered are to allow short duration off peak lane closures, long-term shoulder closures, redirecting traffic onto ramps for off peak periods, intermediate completion dates for various aspects of work with potential/disincentive clauses.

NE Region will coordinate schedule with local community leaders, emergency services, schools, and local businesses so they can plan early the construction and necessary changes that impact them.

**Selected Work Zone Impact Management Strategies**

Numerous work zone traffic control strategies and devices will be considered in the upcoming projects on US 41. Some of the devices presently being considered are changeable message signs, fixed message signs, and variable speed message signs. Several strategies being considered are enhanced enforcement contracts, crash investigation sites, and temporary emergency pullouts.

**Early Improvements to Accommodate Future Interchange and Alternating Interchange Closures**

A construction staging and packaging schedule was developed to best minimize impact to the traffic along the Winnebago County section of US 41, minimize use of detours, and streamline construction operations.

One strategy was to alternate interchange closures and complete improvements to various interchanges early to accommodate alternating major interchange closures. From 9th Avenue up to Breezewood Lane interchange closure requirements were set as follows:

- 9th Avenue closure – WIS 44 and WIS 21 open
- WIS 21 closure – 9th Ave, Witzel Ave, and US 45 open
- US 45 closure – WIS 21 and WIS 76 open
- WIS 76 closure – US 45 and Breezewood Lane open
- Breezewood Lane closure – WIS 76 open

From south to north, various interchange and local road improvements were also planned to accommodate alternating interchange closures:

- WIS 26 (2009) - Project 1120-10-76 – Construct crash investigation sites so they are in place during 9th Avenue interchange closure (2011) and US 41 mainline reconstruction.
- WIS 44 (2009) – Project 1120-10-75 – Construct crash investigation site and turn lanes so improvements are in place during the 9th Avenue interchange closure (2011) and during US 41 mainline reconstruction.
• WIS 114 (2009) – Project 1120-09-73 – Construct turn lanes and signal improvements at WIS 114 to accommodate traffic during closure of the Breezewood Lane interchange (2011).
• WIS 21 (2010) – Project 1120-10-73 – Lengthen existing left turn lane at WIS 21 onto Oakwood Road so improvements are in place during the 9th Avenue interchange closure (2011) and during US 41 mainline reconstruction.
• WIS 76 (2010) – Project 1120-09-75 – Construct ultimate ramp improvements to allow WIS 76 to remain open during closure of the US 45 interchange (2011).

A second strategy was to develop separate TMP contracts to accelerate portions of mainline construction:
• US 41 North (Snell Road to Breezewood Lane) – Project 1120-09-83 – construct widening and bridges along northbound US 41 mainline to accommodate staging and scheduling of the ultimate mainline improvements under Project 1120-09-71.

A third staging strategy was to complete local road improvements prior to adjacent interchange reconstruction and closures to accommodate local traffic circulation around the interchanges and to also allow for acceleration of interchange reconstruction schedules:
• US 41 SB Widening across Lake Butte des Morts and Lake Butte des Morts Drive (2010) – Project 1120-11-74 and US 45/Fernau Avenue/Stillman Drive – construct overpass and local roads in the area of the US 45 interchange to allow for local circulation during closure of the US 45 interchange (2011). Project also include advanced lake fill within Lake Butte Des Morts and advance fill areas and construction of bridges in off-alignment areas within the US 45 interchange. Advance placement of lake fill and construction in off-alignment areas in the US 45 interchange will allow for construction of 1120-11-83 (2011-2012) to be accelerated and will minimize closure time of the US 45 interchange.
• Green Valley Road and Dixie Road (2010) – Project 1120-09-79 – Overlay local roads to accommodate heavy truck traffic from Neenah business areas during closure of the Breezewood Lane interchange (2011).

**Innovative Construction Contracting**
Unique contracting will be considered for US 41 that can speed up contracting and lessen the impacts to the travelling public. For example, A+B bidding and lane rental contracts will be considered but ultimately were not implemented on the corridor.
The methods used in the US 41 corridor to expedite contracts are Incentive/Disincentive clauses and interim completion dates with liquidated damages. These two methods are used in order to complete projects in a timely manner and to develop staging scenarios which closely tie work between project LETs while accommodating two lanes of traffic on US 41 during peak travel periods.

Almost all projects in the US 41 corridor have interim liquidated damages associated with interim completion dates to meet schedule, critical opening and closure dates, and other schedule requirements which allow the corridor construction to proceed in a timely and orderly manner. The liquidated damages used on the Winnebago County projects ranges from $150 - $5,000 and the amount is project dependent. Approval and coordination of the liquidated damage amounts was review and approved by Central Office prior to each PS&E.

Off-peak closures and night work will be implemented to minimize user delay. Interim liquidated damages will be implemented to ensure the contractor re-opens lanes to traffic by the time required. Off-peak closure periods and interim liquidated damages for failing to open lanes to traffic vary based upon project location. The interim liquidated damages for failing to open a lane traffic are shown below. The closure periods are discussed later in this report.

- Local road projects and projects over/under US 41 constructed in 2009/2010 used interim liquidated damages of $2000 for the initial penalty and an additional $2000 for each hour or portion thereof after the initial failure to open the lane.
- Projects on mainline US 41 constructed in 2010 and later used interim liquidated damages of $2000 for the initial penalty and an additional $2000 for each 15-minute period or portion thereof after the initial failure to open the lane.
- Project 1120-11-73 - US 45, Fernau Avenue, Snell Road, & Stillman Drive used liquidated damages of $1000 for the initial penalty and an additional $1000 per hour or portion thereof after the initial failure to open the lane on US 45.
- Project 1120-10-75 - WIS 26 – WIS 21 (WIS 44 Left Turn Lanes) used liquidated damages of $150 per hour per ramp (US 41 Ramps to WIS 44) for failing to re-open the ramp to traffic.

Projects (listed from south to north) within the US 41 corridor which used Incentive/Disincentive clauses in addition to the liquidated damages are described below:

- US 41; WIS 26 – WIS 44 – Project 1120-10-80 – Interim completion on US 41 mainline to allow traffic switches to occur with the adjacent Project 1120-10-72 and 1120-10-73.
- US 41; WIS 44 – Witzel Avenue – Project 1120-10-72 and 9th Avenue Interchange – Project 1120-10-73 – Interim completion on US 41 mainline to allow traffic switches to occur with the adjacent Project 1120-10-80.
- Witzel Avenue Interchange. – Project 1120-11-71 – complete work prior to Projects 1120-10-72 and 1120-10-73 to eliminate or minimize overlapping work zones.
• US 41; WIS 21 Interchange & Lake Butte des Morts Crossing – Project 1120-11-75 – interim completion on US 41 mainline to allow traffic switches to occur with the adjacent Project 1120-11-83.
• US 41; US 45 Interchange – Project 1120-11-83 – interim completion on US 41 mainline to allow traffic switches to occur with the adjacent Project 1120-11-75 and Project 1120-09-71.
• WIS 76 interchange - Project 1120-09-75 – complete work prior to Project 1120-09-83 to eliminate overlapping work zones.
• US 41 North TMP/Breezewood Lane interchange – Project 1120-09-83 – interim completion on US 41 mainline widening to allow US 41 mainline ultimate reconstruction work to begin under Project 1120-09-71.
• US 41; US 45 – Breezewood Lane - Project 1120-09-71 – Interim completion on US 41 mainline to allow traffic switches to occur with the adjacent Project 1120-11-83.

Traffic control devices, positive protection devices, off-peak lane closure, night work, and ramp closure

The numerous strategies listed above will be considered in final design. The strategies to be used in construction depend on the type of work, duration of the work, and the impacts to the travelling public. Traffic control devices will be implemented in accordance with MUTCD and WisDOT standards throughout the project.

Off-peak closure periods have been approved by the NER Traffic Section and will be implemented on the specified US 41 Winnebago County projects as shown in Table 1.

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Project Name</th>
<th>Off-Peak Closure Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1120-11-72</td>
<td>Fountain Avenue / Snell Road Overpass</td>
<td>8:00 pm – 5:00 am Sunday night – Friday morning</td>
</tr>
<tr>
<td>1120-11-73</td>
<td>US 45, Fernau Ave., Snell Rd, &amp; Stillman Drive</td>
<td>9:00 am – 2:00 pm &amp; 8:00 pm – 5:00 am (US 45)</td>
</tr>
<tr>
<td>*1120-11-71</td>
<td>Witzel Ave. Overpass, Washburn St., Koeller St., &amp; Rath Ln.</td>
<td>9:00 pm – 5:00 am Sunday night – Friday morning</td>
</tr>
<tr>
<td>*1120-11-74</td>
<td>Lake Butte des Morts Drive Overpass &amp; US 41 Southbound Grading Across Lake</td>
<td>8:00 pm – 5:00 am Sunday night – Friday morning</td>
</tr>
<tr>
<td></td>
<td>Butte des Morts</td>
<td></td>
</tr>
<tr>
<td>*1120-10-71</td>
<td>County K Overpass</td>
<td>9:00 pm – 5:00 am Sunday night – Friday morning</td>
</tr>
<tr>
<td>1120-09-75</td>
<td>US 45 – Breezewood Lane (WIS 76 Ramps)</td>
<td>7:00 pm – 6:00 am Sunday night – Friday morning</td>
</tr>
<tr>
<td>*1120-09-83</td>
<td>US 45 – Breezewood Lane US 41 Mainline Widening and Breezewood</td>
<td>7:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm –</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am</td>
</tr>
</tbody>
</table>
Table 1: US 41 Corridor Off-Peak Closure Periods

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Project Name</th>
<th>Off-Peak Closure Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interchange</td>
<td>Saturday night – Sunday morning</td>
</tr>
<tr>
<td>*1120-11-83</td>
<td>WIS 21 – US 45</td>
<td>9:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm – 7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am Saturday night – Sunday morning</td>
</tr>
<tr>
<td>1120-10-72</td>
<td>WIS 26 – WIS 21 (9th Avenue Interchange)</td>
<td>7:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm – 7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am Saturday night – Sunday morning</td>
</tr>
<tr>
<td>1120-10-73</td>
<td>WIS 26 – WIS 21 (WIS 44 – Witzel Avenue)</td>
<td>7:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm – 7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am Saturday night – Sunday morning</td>
</tr>
<tr>
<td>1120-10-80</td>
<td>WIS 26 – WIS 44</td>
<td>7:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm – 7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am Saturday night – Sunday morning</td>
</tr>
<tr>
<td>1120-09-71</td>
<td>US 45 – Breezewood Lane</td>
<td>7:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm – 7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am Saturday night – Sunday morning</td>
</tr>
<tr>
<td>*1120-11-75</td>
<td>WIS 21 Interchange &amp; Lake Butte des Morts Crossing</td>
<td>9:00 pm – 5:00 am Sunday night – Friday morning; 10:00 pm – 7:00 am Friday night – Saturday morning and 6:00 pm – 8:00 am Saturday night – Sunday morning</td>
</tr>
<tr>
<td>1120-10-75</td>
<td>WIS 26 – WIS 21</td>
<td>One Closure 6:00 pm – 6:00 am One Closure 9:00 am – 3:00 pm</td>
</tr>
</tbody>
</table>

*20-minute rolling closures will be used in off-peak periods on US 41 projects for bridge removals and girder placement for locations where traffic cannot be routed off and back on via interchange ramps.

Failure to open lanes to traffic after the allowed closure periods will result in assessment of interim liquidated damages. These are described in the Innovative Construction Contracting section of this report.

Traffic Control Meetings and Scheduling

All contracts will require the contractor to submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. This will allow active management of closure dates, closure durations, work causing the closure and detours to be used, emergency contacts, and other traffic management information. Traffic management meetings will also be scheduled as required with local agencies, project stakeholders, owner managers, owner engineers, contractors, document control and construction engineering personnel.
together to discuss traffic staging, closures and general impacts. Upon obtaining feedback from the meeting changes will be made, as required, to the traffic control plan.

The US 41 corridor team has designated a corridor Traffic Engineer, Brian Chlopek, to oversee all traffic control and traffic management coordination on all US 41 contracts.

**Community Involvement**
Work zone impacts have and will be addressed through community involvement prior to the project. Impacts and schedules will need to be communicated with the local officials and business leaders prior to the project so that they can plan accordingly. Businesses directly affected by construction will be allowed to provide temporary business signing during construction to help direct customers to their place of business. The temporary signing will follow the NE Region policy that is already in place.

**Incident Management**

*Tow/freeway service patrol*
Tow and freeway service patrols will be considered along US 41 corridor during construction activities. As part of a traffic mitigation program called Freeway Service Team (FST), the department has contracted with a private towing vendor to patrol parts of US 41 during peak hours, holidays and special events from 2011 through July 2013. To improve safety and minimize delay, contact 911 immediately for breakdowns or incidents in or near the construction work zone. FST will be dispatched directly to the scene to aid the vehicles that need to be removed.

*Deployment of 511*
511 has been deployed statewide and has been utilized to inform motorists on construction activities and traffic conditions along the US 41 corridor.

*State Traffic Operations Center - STOC*
The STOC will be used as the primary contact for any infrastructure repair needs. The STOC will as be utilized to either monitor or operate field devices deployed as part of the major projects.

*Law Enforcement*
The state patrol and other law enforcement agencies may be used for extra-ordinary enforcement purposes. The level of effort will need to be determined as the design of the project increases. Coordination will be completed with state patrol on a project by project basis.

*Coordinate with Media*
Coordination with the media will be critical to a successful project. Information such as lane closures times and locations, detour route changes and other planned events that affect traffic will be shared with the media in various methods. The current lane closure form will be utilized as ramp, lane or shoulder closures are needed. A US 41 corridor
website (http://www.us41.wisconsin.gov/) and social media such as Facebook and Twitter are used to provide traffic and project updates to the media and public.

**Local Detour Routes**
No local detour routes are planned. While work is taking place on the local routes, local municipalities may incorporate their own detours for those affected routes.

**Incident/Crisis Communication Plan**
An Incident/Crisis Communication Plan for the US 41 corridor in the Northeast Region has been developed to ensure accurate, consistent and timely communications; eliminate or minimize confusion; and to maintain credible relations with public officials, emergency response providers, the media, the public and all mutually identified stakeholders in the event of an incident or Emergency. The Incident/Crisis Communication Plan was last updated in June 2011 and is currently being maintained by the US 41 Traffic Engineer.

In addition, the Winnebago County Freeway Incident Management team meets once per month to discuss traffic incident response procedures. WisDOT has held crisis management workshops with local emergency response teams. A workshop was held in January 2010 and 2011. During the workshops, the US 41 staff and local response teams reviewed the US 41 corridor by segment in each stage to determine the approach to be taken during an incident. Future workshops will be scheduled as the work zone changes.

**Temporary Pullouts for Disabled Vehicles**
Temporary pullouts for disabled vehicles have been constructed in the following locations:
- Two temporary pullouts constructed between WIS 21 and US 45 under Project 1120-11-75
- One temporary pullout constructed between WIS 21 and US 45 under Project 1120-11-74
- One temporary pullout constructed between US 45 and WIS 76 under Project 1120-11-83,
- Two temporary pullouts constructed between WIS 76 and Breezewood Lane under Project 1120-09-83 will accommodate disabled vehicles during mainline reconstruction under Project 1120-09-71.

Crash investigation sites will also be constructed on the off-ramps to many of the interchanges.

**Temporary Crash Investigation Sites**
If any temporary crash investigation sites are constructed they are expected to be located where permanent ones will be placed as part of the projects.

Crash investigation sites constructed early as part of Project 1120-10-76 at WIS 26, Project 1120-10-75 at WIS 44, and as part of the Project 1120-09-75, WIS 76 will allow them to be utilized during construction. Other crash investigation sites will be
constructed as part of the ultimate configuration of the 9th Avenue, WIS 21, US 45, and Breezewood Lane interchanges.

**Special Events**
Certain special events affect US 41 that need to be considered and addressed through the project final design and special provisions. Green Bay Packer home games, Experimental Aircraft Association (EAA) Fly-in, Rock Fest, and Country USA country music festival are events that need to be addressed in final plans. A corridor-wide specification has been developed to incorporate into all Winnebago County contracts to notify the contractor of the working restrictions for these events. Coordination with law enforcement will occur prior to and during construction periods which overlap with these special events.

**Work Zone Safety Management Strategies**

**Speed Limit Reduction**
Regulatory speed limit will be reduced to 55 mph when traffic control requires counter-directional traffic. The regulatory speed limits will also be reduced to 55 mph when workers are present and working adjacent to the through lane of traffic. At all other times the regulatory speed limit will be 65 mph. Any hazards throughout the project should be identified with a warning sign with an appropriate advisory speed plaque.

**Law Enforcement Mitigation Contract**
The state patrol is being used for extra-ordinary enforcement purposes. The state patrol is typically on site to provide additional enforcement for rolling roadblocks, during girder placement, when implementing lane closures and setting barrier wall, and during traffic switches.

**Temporary Traffic Signals**
Temporary Traffic Signals were considered as a possible measure during design. No temporary signals were required on the corridor.

**Crash Cushions, Temporary Concrete Barrier, Warning Lights, Traffic Control Provisions, and Traffic Control Devices**
These items will be considered for use in the appropriate place and installation per MUTCD and WisDOT standards. Corridor specifications have been implemented for storing materials and equipment outside of the clear zone areas and for protecting bridge piers or hazards within the clear zone to ensure roadside safety during construction.

Special details and special provisions will be developed based on each individual project location to allow construction traffic to safely exit and enter live traffic. Construction of temporary access may be required in various locations. Access into the work zones from US 41 during peak periods is subject to approval by the engineer and has been accomplished using acceleration entrance lanes (Attachment K). Exiting from the work zone onto US 41 will only be allowed using a lane closure and construction traffic must run out of the closed lane. Once construction traffic is within a lane closure, construction
traffic must come to within 10 mph of posted speed before re-entering the live US 41 lane.

**Project Onsite Safety Training and Construction Safety Inspector**
An Owner Controlled Insurance Plan (OCIP) with a major safety component has been implemented on US 41. All on-site staff, contractors, subcontractors working on the project participate in mandatory safety training and monitoring.

**Street Sweeping**
Street sweeping with an appropriate level of hours will be used on contracts to keep pavement clear of debris and dirt and maintain roadway safety.

**Boat Traffic Control**
Traffic control details and appropriate warning devices will be used during the Lake Butte Des Morts lake fill and bridge replacement projects in order to safely maintain boat navigation on Lake Buttes Des Morts. Coordination will occur as required with Wisconsin DNR.

**Temporary In-pavement Reflectors and Glare Screens**
In-pavement reflectors and temporary glare screens on temporary concrete barrier will be used during stage construction in bypass and crossover areas to aid in keeping traffic in their designated lanes and maintain safety due to headlight glare.

**Snowplowing**
A corridor wide specification will be developed and placed in contracts to let the contractor know who will be responsible to perform snow removal operations for freeway and local roads that are open to through traffic during construction.

**Truck Mounted Attenuators**
Truck Mounted Attenuator (TMA) and operator, if required, and the appropriate number of hours will be used on US 41 mainline projects for use during operations which are directly next to live lanes of traffic which have limited mobility, limited ingress/regress, confined space, or as directed by the engineer.

**Community Involvement**
In March 2004, WisDOT met with City of Oshkosh local officials to investigate if any local arterials needed modifications or upgrades prior to the work on US 41. The local arterials that will be used during US 41 construction are already 4 lane arterials. DOT asked if turn lanes or signal timing adjustments needed to be done. The City did not think any turn lanes adjustments are needed and signal timings could be adjusted at time of construction if necessary.

WisDOT continued to meet with the local officials throughout design through the use of local official meetings and public information meetings approximately every six months. During construction progress meetings are held at the local field office and local officials participate in meetings on an as-needed basis.
Traffic Management Communication Plan

This plan actually starts during the public outreach part of the project, where we meet with local officials, businesses and citizens. We communicate about the project and receive feedback regarding issues, needs and concerns. This information is used in developing the traffic management communication plan.

Communication is targeted locally on commuters, area businesses and safety agencies. Regional and interstate communication focuses on tourists, trucking firms, and businesses.

There are a number of goals to be achieved with this communication. They include communicating the necessity for the work, the benefits once the work is completed, the project schedule, impacts and access plan and how to deal or cope with it.

Project updates and status will be issued frequently – hourly if necessary. Alternate routes will be suggested as appropriate. Safety messages will also be provided, including urging the public to slow down and be patient.

This information will be communicated to a number of venues. Included will be brochures and posters distributed throughout the corridor and both up and down state. Print and electronic media will be brought in as partners in the outreach. WisDOT will also provide updated information through its web site, e-mail, conventional mail, public service announcements, paid advertising (if needed) and public meetings.

The USH 41 corridor will include construction of roundabouts. Throughout design and construction, WisDOT has and will continue to complete outreach with a focus on educating and training the public about navigating through roundabouts. Tools used included rendering of roundabouts, computer simulations, distribution of educational materials, and holding workshops at local service organizations approximately two times per year. The outreach focuses on all modes of transportation including vehicular traffic, truck traffic, pedestrians, and bicyclists.

Motorist Information Strategies (MIS) (traveler)

STOC
The STOC will be used as the primary contact for any infrastructure repair needs. The STOC will be utilized to either monitor or operate field devices, which will be used in part to provide traveler information.

Portable Changeable Message Signs - PCMS
PCMS will be utilized throughout the project. The use will be for incident management, notification of lane, shoulder, and/or ramp closures, for truck traffic entering/exiting the work zone, and other traveler information necessary. A corridor-wide specification has
been implemented to obtain USH 41 Traffic Engineer approval prior to implementing the PCM.

Electronic Message Signs/ Work Zone Traveler Warning & Information Systems
(Intelligent Transportation System)
Permanent message boards are planned to be installed as part of the project. These signs could be utilized once installed if construction is ongoing downstream. A Portable Intelligent Transportation System (ITS) was implemented as part of the Winnebago County work in 2010 which makes early use of the corridor ITS during construction. A corridor wide specification is placed in each contract to notify the contractors of the portage ITS on the mainline US 41 projects. Message boards are in place on eastbound STH 26 for traffic destined for northbound USH 41 and on northbound USH 41 south of STH 26. A message board will also be installed for southbound USH 41 just north of STH 76. Temporary cameras (CCTV) have also been installed throughout the corridor to aid with traffic management during construction.

Highway Advisory Radio-HAR
HAR is not expected to be used as part of this project. The need for HAR has been diminished with the development of the 511 traveler information system.

Availability of Detour Routes
There are no readily available detour routes for US 41 along this segment of highway. An emergency detour route can be used, but it will not handle an extended period of high volumes of traffic directed to it.

Availability of Alternate Routes
Two alternate routes around the Lake Butte des Morts are signed. Other alternate routes are identified in the Green Bay/Fox Cities/Oshkosh Alternate Route Plan Guide, but are not signed. County highway departments have equipment available to sign an alternate route due to an incident on the freeway.

Alternate routes will not be signed through the City of Oshkosh but some traffic may choose to find alternate routes on their own in order to avoid the US 41 work zones. WisDOT completed a recent analysis of traffic that is self-diverting from USH 41 during the 2011 construction season. South of the Lake Butte Des Morts Causeway there is about a 38% drop in ADT. North of the Lake Butte Des Morts Causeway there is no diversion occurring with a slight increase in ADT. The City of Oshkosh has not reported any issues on the local or state highway system through the city due to the diversion. See table below:
### SNELL ROAD (NORTH OF US 45)

<table>
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<th>DATE</th>
<th>NB ADT</th>
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</thead>
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<tr>
<td>3/2/11</td>
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<td>26691</td>
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<tr>
<td>5/11/2011</td>
<td>30460</td>
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<td>After US 45 closure</td>
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<td>26832</td>
<td>54022</td>
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<tr>
<td>6/1/11</td>
<td>28574</td>
<td>27906</td>
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### 9th AVENUE / STH 21

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<td>20177</td>
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<td>6/3/09</td>
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<tr>
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<td>16677</td>
<td>21132</td>
<td>37809</td>
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</table>

**Lane Closure Planning System**
The Department has developed a Lane Closure Planning System on a statewide basis. The Lane Closure Planning System is utilized to track and inform motorists of construction operations so that they can plan ahead to anticipate or avoid delays.

**Bicycle & Pedestrian Information**
Bicycle and pedestrian information will be disseminated through the local officials and concerned groups as part of the regions public outreach for the projects. Alternate routes or closure of bicycle and pedestrian routes will occur on project by project basis. The Wiouwash Trail through the US 45 interchange will be maintained during construction and will be routed on the Lake Buttes Des Morts Drive overpass to cross US 41.
TMP Monitoring

Traffic Management Plan monitoring will be completed by the US 41 corridor Traffic Engineer, Brian Chlopek, who will oversee all traffic control and traffic management coordination on all US 41 contracts.

This July 2011 update serves as an update to the US 41 corridor TMP in Winnebago County. An Evaluation Report will be developed upon completion of construction to document lessons learned and provide recommendations on how to improve the WisDOT TMP process and/or modify the guidelines. The reports will address the following:

- A statement reflecting the usefulness of the TMP
- Updates necessary to correct oversights in the TMP
- Modifications made to the original plan and their level of success
- Public reaction to the TMP
- The maximum and average delay time encountered (e.g., average queues, slowdowns) during construction, and history of delay (if any) over the duration of the project
- If there were any peak traffic periods exceeding the predicted
- Frequency of legitimate complaints and the nature of those complaints
- Types and numbers of crashes that occurred during construction
- Types and numbers of safety service patrols incidents
- The level of success and performance log for each strategy of the TMP implemented
- Recommended or suggested improvements or changes for similar future projects

Contact Information:
Tom Buchholz, P.E.
Wisconsin Department of Transportation
944 Vanderperren Way
Green Bay, WI 54304
920-492-2227
ATTACHMENT A – US 41 Traffic Study – Winnebago County Base Year 2005 Traffic Volume Network
USH 41 Traffic Study – Winnebago County Base Year 2005 Traffic Volume Network

TO: Tom Buchholz/WisDOT Northeast Region
FROM: Andrea Guptail/CH2M HILL
       Brian Roper/ CH2M HILL
CC: Rich Coakley/ CH2M HILL
DATE: June 7, 2006
RE: Project I.D. 1120-11-03
     STH 26 – Breezewood Lane

Introduction

This memo summarizes existing traffic volumes within the study area. Figures depicting the traffic volumes are included in Appendices A-C. The study area extends from ½ mile south of the STH 26 interchange to ½ mile north of the Breezewood Lane interchange, a distance of 15 miles. The USH 41 mainline, ramps, and crossroads between STH 26 and Breezewood Lane, are included with the following interchanges:

- STH 26
- STH 44
- 9th Avenue
- STH 21
- USH 45
- STH 76
- Breezewood Lane

In addition, traffic data was collected at the CTH E overpass and along frontage roads near the USH 45 interchange.

Traffic Data Collection

In the fall of 2005, traffic data were collected throughout the study area. Twelve-hour turning movement counts were conducted at thirty-three intersections by staff from TranSmart Technologies, Inc. (TranSmart).

Mainline, ramp, and crossroad data was collected by Traffic Analysis and Design, Inc. (TAD) staff using Peek ADR 1000 automatic traffic recorders and by WisDOT staff at Automatic Traffic Recorder (ATR) stations located on USH 41. TAD’s mainline and ramp setups were meant to collect classification counts, while the crossroad locations only collected the total number of vehicles. Most of the mainline locations were recounted in May 2006.
Base Year Network Development

After the traffic data was collected, the individual values were reviewed for reasonableness and consistency. This process included comparison of daily, AM peak hour, and PM peak hour values to the 2004 Wisconsin Highway Traffic Volume Data book and to the 2000 base year network from the previous study. In addition, peak hour volumes from the turning movement counts were compared to the USH 41 ramp counts.

At the USH 41 mainline locations counted by TAD in the fall of 2005, the volumes were significantly lower than counts taken in previous years. Upon further review and discussion, it was determined that the setup used to collect classification data for both lanes simultaneously had unwittingly resulted in significant undercounting. As a result, the ATR data was used with the ramp volumes to synthesize the remaining mainline data. Many of these synthesized values were revised upward slightly after considering the factored recounts collected in May 2006.

This data was applied to the study network, with adjustments made as necessary to the individual values to achieve balanced traffic. The balanced AADT volumes for the mainline sections and ramps are shown in Appendix A. The AM and PM peak period traffic volumes for the mainline sections and ramps are shown in Appendix B. For the seven interchange crossroads and the two other locations, AM and PM peak period traffic volumes are shown in Appendix C.
Appendix A

Existing AADT Traffic Volumes

Summary Figures
Appendix B

Existing Mainline and Ramp

AM and PM Peak Hour Volumes

Summary Figures
Appendix C

Existing Intersection

AM and PM Peak Hour Volumes

Summary Figures
## LEGEND

000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

---

**USH 41 Traffic Study**

**Year 2005 Peak Hour Traffic Along STH 26**

**Winnebago County**

**Figure C-1**

---

### STH 26

<table>
<thead>
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<th>Lane</th>
<th>Traffic Volume</th>
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<tr>
<td>15 (15)</td>
<td>395 (400)</td>
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<td>15 (25)</td>
<td>35 (65)</td>
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<td>5 (10)</td>
<td>50 (85)</td>
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<tr>
<td>340 (350)</td>
<td>395 (400)</td>
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<tr>
<td>15 (5)</td>
<td>35 (65)</td>
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<tr>
<td>15 (15)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>340 (350)</td>
<td>395 (400)</td>
</tr>
<tr>
<td>15 (5)</td>
<td>35 (65)</td>
</tr>
<tr>
<td>15 (15)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>340 (350)</td>
<td>395 (400)</td>
</tr>
</tbody>
</table>

---

**NOT TO SCALE**
LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JUNE 2006

USH 41 Traffic Study
Year 2005 Peak Hour Traffic
Along CTH E
Winnebago County
Figure C-4
ATTACHMENT B – US 41 Traffic Study – Winnebago County Year 2035 Traffic Operations Analysis
MEMORANDUM

USH 41 Traffic Study – Winnebago County
Forecasted Traffic Volume Network

TO: Tom Buchholz/WisDOT Northeast Region
FROM: Andrea Guptail/ CH2M HILL
       Brian Roper/ CH2M HILL
COPIES: David Cipra/WisDOT Traffic Forecasting Section
        Walt Raith/East Central Wisconsin Regional Planning Commission
        Rich Coakley/ CH2M HILL
DATE: July 14, 2006
RE: Project I.D. 1120-11-03
     STH 26 – Breezewood Lane

Introduction

This memo summarizes forecasted traffic volumes within the study area. The USH 41 traffic study corridor extends from ½ mile south of the STH 26 interchange to ½ mile north of the Breezewood Lane interchange, a distance of 15 miles. The study includes freeway, ramp, and crossroad facilities at the following interchanges:

- STH 26
- STH 44
- 9th Avenue
- STH 21
- USH 45
- STH 76
- Breezewood Lane

In addition, forecasted traffic was developed at the CTH E overpass and along the frontage roads near the USH 45 interchange.

Traffic Forecasting Methodology and Assumptions

Existing Traffic Volumes

A common base year 2005 was used to develop forecasts along the USH 41 corridor. Existing peak hour and ADT volumes were obtained from traffic counts of the mainline segments and ramps and from intersection turning movements. These volumes were reviewed, adjusted, balanced, and subsequently established as accepted existing data.

The development of existing data was previously discussed in the USH 41 Traffic Study – Winnebago County Base Year 2005 Traffic Volume Network memorandum.
Existing Travel Demand Model

The corridor study limits are within the planning area covered by the East Central Wisconsin Regional Planning Commission (ECWRPC). As the regional Metropolitan Planning Organization (MPO), ECWRPC tracks data, applies travel demand models and coordinates with WisDOT’s Traffic Forecasting Section (TFS) to develop forecasted data for the area.

Currently, ECWRPC forecasts traffic to the year 2035 using a recently developed travel demand model which links the Fox Cities and Oshkosh urbanized areas. In contrast, forecasts for the previous corridor study completed in 2002 were to the year 2020 from two separate models.

Future Study Years

While establishing the scope of this project, two study years were designated for traffic projection on the corridor and at the interchanges. Given the estimated timing of construction, traffic forecasts were developed for the years 2015 (Construction Year) and 2035 (Design Year). Year 2015 traffic forecast figures are shown in Appendix B and year 2035 traffic forecast figures are shown in Appendices B and C.

The Year 2035 forecasts are more comprehensive, encompassing AADT and peak period projections for mainline, ramps, and intersections in the corridor. In contrast, only AADT forecasts of the mainline corridor were developed for Year 2015.

Forecast Development

ECWRPC provided two sets of Year 2035 ADT forecasts from the regional travel demand model. One set represented the unadjusted model assignment, while the other set had been adjusted to compensate for the difference between the 2004 ground counts and the base year assignments. Coverage included freeway segments, ramps, and crossroads.

WisDOT’s TFS also provided two sets of Year 2035 ADT forecasts for the mainline only. One set of forecasts was based on (but not the same as) the regional travel demand model. The other set had been adjusted to reflect professional judgment. In addition, the Year 2025 ADT and peak period forecasts prepared for the previous USH 41 corridor study were projected forward to Year 2035 to provide another point of comparison.

Year 2035 AADT forecasts for the USH 41 mainline and ramps were selected through a careful review of the various sources described above. The values were adjusted and balanced accordingly throughout the corridor. Year 2035 AADT forecast figures are shown in Appendix B. The Year 2015 AADT mainline forecasts were estimated by interpolating between the Year 2005 Base Network values and Year 2035 forecasts. Year 2015 AADT forecast figures are shown in Appendix A.

Year 2035 peak period forecasts for the USH 41 mainline and ramps were developed by applying the 30-year AADT growth rate to the balanced base year network. The resultant values were then adjusted and balanced accordingly throughout the corridor. Year 2035 peak hour forecast figures are shown in Appendix C.

Along the crossroads, the established Year 2035 ramp forecasts were used in conjunction with anticipated crossroad growth rates to generate peak period turning movement forecasts. The
resultant values were then adjusted and balanced accordingly along each crossroad. Year 2035 peak hour forecast figures are shown in Appendix C.

The forecasts presented in this memo have undergone review by staff from WisDOT TFS and ECWRPC. Both agencies have approved these forecasts for use in future operation analysis and design tasks.

**Truck Percentages**

Future pavement design calculations will require the estimate of truck percentages by axle classification for the construction and design years. For the USH 41 Traffic Study corridor, these percentages have been developed from existing and project-specific data. The percentages are applicable to both the construction and design year.

The USH 41 mainline truck classifications were based on the information contained in the 2004-Wisconsin Vehicle Classification Data book. Classification data was available for three segments along USH 41 within the USH 41 Traffic Study Corridor: north of STH 76, south of STH 21, and south of STH 26. For the remaining segments, the truck data was averaged between adjacent count locations. This information is presented in Table 1.

USH 41 ramp and crossroad truck classification data was obtained from traffic counts taken in October and November of 2005. This information is presented in Tables 2 and 3.
Table 1
USH 41 Mainline Traffic Information and Truck Classification

<table>
<thead>
<tr>
<th>Segment</th>
<th>AADT Volumes/Forecasts</th>
<th>Daily Truck Classification Percentages</th>
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<tr>
<td></td>
<td>2005</td>
<td>2015</td>
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<tr>
<td>USH 41 - Northbound</td>
<td></td>
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<tr>
<td>North of Breezewood On</td>
<td>38,700</td>
<td>45,000</td>
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<tr>
<td>STH 76 On to Breezewood Off</td>
<td>32,300</td>
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<td>USH 45 On to STH 76 Off</td>
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<tr>
<td>STH 21 On to USH 45 Off</td>
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<td>9th Avenue On to STH 21 Off</td>
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<td>27,300</td>
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<tr>
<td>USH 41 - Southbound</td>
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</tr>
<tr>
<td>North of Breezewood Off</td>
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<td>44,200</td>
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<tr>
<td>Breezewood On to STH 76 Off</td>
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<tr>
<td>STH 76 On to USH 45 Off</td>
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### Table 2

**USH 41 Ramp Traffic Information and Truck Classification**

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<tr>
<td>Breezewood Entrance Ramp</td>
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<td>USH 45 Exit Ramp</td>
<td>2,600</td>
<td>3,100</td>
</tr>
<tr>
<td>USH 45 Entrance Ramp</td>
<td>8,600</td>
<td>10,100</td>
</tr>
<tr>
<td>STH 21 Exit Ramp</td>
<td>7,800</td>
<td>9,400</td>
</tr>
<tr>
<td>STH 21 Entrance Ramp</td>
<td>4,800</td>
<td>6,400</td>
</tr>
<tr>
<td>9th Avenue Exit Ramp</td>
<td>7,300</td>
<td>8,900</td>
</tr>
<tr>
<td>9th Avenue Entrance Ramp</td>
<td>3,300</td>
<td>4,000</td>
</tr>
<tr>
<td>STH 44 Exit Ramp</td>
<td>8,100</td>
<td>9,900</td>
</tr>
<tr>
<td>STH 44 Entrance Ramp</td>
<td>3,300</td>
<td>4,700</td>
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<tr>
<td>STH 26 Exit Ramp</td>
<td>5,500</td>
<td>7,900</td>
</tr>
<tr>
<td>STH 26 Entrance Ramp</td>
<td>1,000</td>
<td>2,700</td>
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</table>
Table 3  
USH 41 Crossroad Traffic Information

<table>
<thead>
<tr>
<th>Segment</th>
<th>AADT Volumes/Forecasts</th>
<th>Daily Truck Classification Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2035</td>
<td>2D</td>
</tr>
<tr>
<td>Breezewood Lane</td>
<td>19,000</td>
<td>7.2%</td>
</tr>
<tr>
<td>Fountain Avenue</td>
<td>10,300</td>
<td>11.4%</td>
</tr>
<tr>
<td>Snell Road south of Fountain Avenue</td>
<td>12,200</td>
<td>-</td>
</tr>
<tr>
<td>Snell Road east of Fountain Avenue</td>
<td>8,200</td>
<td>-</td>
</tr>
<tr>
<td>Lake Butte des Morts Drive at USH 45</td>
<td>5,000</td>
<td>3.3%</td>
</tr>
<tr>
<td>Koeller Street /Rath Lane</td>
<td>800</td>
<td>-</td>
</tr>
<tr>
<td>STH 21</td>
<td>41,500</td>
<td>2.3%</td>
</tr>
<tr>
<td>Washburn Street at STH 21</td>
<td>10,000</td>
<td>-</td>
</tr>
<tr>
<td>CTH E</td>
<td>22,000</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
Appendix A

Year 2015

AADT Traffic Forecasts

Summary Figures
LEGEND
000  Balanced Average Daily Traffic

PREPARED JULY 2006

USH 41 Traffic Study
Year 2015 Average Daily Traffic Forecasts
8TH 26 to 8TH 44
Winnebago County
Figure A-1
LEGEND

000 Balanced Average Daily Traffic

PREPARED JULY 2006

USH 41 Traffic Study
Year 2015 Average Daily Traffic Forecasts

Winnebago County

Figure A-3

FOUNTAIN AVENUE

USH 41

SNELL ROAD

6,700

34,200

24,700

5,200

9,700

38,700

34,300

34,000

34,000

9,500

38,700

NOT TO SCALE
Appendix B

Year 2035

AADT Traffic Forecasts

Summary Figures
Figure B-2

WINNEBAGO COUNTY

USH 41 Traffic Study

Year 2035 Average Daily Traffic Forecasts
9th Avenue to USH 45

Prepared July 2006

LEGEND

000  Balanced Average Daily Traffic

Winnebago County
LEGEND
000  Balanced Average Daily Traffic

PREPARED JULY 2006

USH 41 Traffic Study
Year 2035 Average Daily Traffic Forecasts
9TH 76
Winnebago County
Figure B-3

FOUNTAIN AVENUE
USH 41
SNELL ROAD
SNELL ROAD

LEVELS ON = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

FILE NAME: aguptail 12-JUL-2006 \hercules\proj\WisDot

STH 76
FOUNTAIN AVENUE
USH 41
SNELL ROAD
SNELL ROAD

PREPARED JULY 2006

USH 41 Traffic Study
Year 2035 Average Daily Traffic Forecasts
9TH 76
Winnebago County
Figure B-3
LEGEND
000 Balanced Average Daily Traffic

PREPARED JULY 2006

USH 41 Traffic Study
Year 2035 Average Daily Traffic Forecasts
Breezewood Lane
Winnebago County
Figure B-4
Appendix C

Year 2035

AM and PM Peak Hour Traffic Forecasts

Summary Figures
LEGEND
000 (000): AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006

USH 41 Traffic Study
Year 2035 Peak Hour Traffic Forecasts
Sth 26 to Sth 44
Winnebago County
Figure C-1

LEVELS ON =
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

FILE NAME: \hercules\proj\WisDot\2130 (2315)

PLOT DATE: 12-JUL-2006
PLOT BY: AGUPTAIL
PLOT NAME: USH 41
PLOT SCALE: 24000:1.000000

USH 41 (805)

2190 (2390)

360 (560)

1090 (1090)

3950 (3480)

STH 26

USH 41

STH 44

2900 (2930)

450 (560)

1510 (1130)

3490 (4110)

3080 (3390)

450 (640)

1510 (1130)

3490 (4110)

2310 (2780)

550 (480)

1520 (1090)

860 (1360)

275 (640)

1320 (1090)

550 (480)

3490 (4110)

2310 (2780)

550 (480)

1520 (1090)

860 (1360)

275 (640)

1320 (1090)

550 (480)

3490 (4110)
LEGEND
000 (0000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006

USH 41 Traffic Study
Year 2035 Peak Hour Traffic Forecasts
9th Avenue to USH 45
Winnebago County
Figure C-2
LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006
LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006
NOT TO SCALE

LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006

UFD 41 Traffic Study
Year 2035 Peak Hour Traffic Forecasts
Along CTH E

Winnebago County
Figure C-8
LEGEND

000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006
**LEGEND**

000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006
LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006
LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006

USH 41 Traffic Study
Year 2035 Peak Hour Traffic Forecasts
Along STH 76
Winnebago County
Figure C-12.

NOT TO SCALE
LEGEND
000 (000) AM Peak Hour Traffic (PM Peak Hour Traffic)

PREPARED JULY 2006
Attachment C
ATTACHMENT D – WIS 21 Detour Plan
ATTACHMENT E – TRADAS ADT Volumes for July 2006
TRADAS ADT Volumes for JUL 2006

<table>
<thead>
<tr>
<th>Time Of Day (Hourly)</th>
<th>00:00</th>
<th>02:00</th>
<th>04:00</th>
<th>06:00</th>
<th>08:00</th>
<th>10:00</th>
<th>12:00</th>
<th>14:00</th>
<th>16:00</th>
<th>18:00</th>
<th>20:00</th>
<th>22:00</th>
<th>00:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT/Volume</td>
<td>0</td>
<td>500</td>
<td>1,000</td>
<td>1,500</td>
<td>2,000</td>
<td>2,500</td>
<td>3,000</td>
<td>3,500</td>
<td>3,750</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Capacity Per Lane Value: 1800 With 2 Of 2 Lanes Open = 3600 Total Available Capacity
- Capacity Per Lane Value: 1800 With 1 Of 2 Lanes Open = 1800 Total Available Capacity

Meta Data Section:

County: WINNEBAGO

TRADAS Site:
(700160) USH 41 SOUTH OF STH 21 OSHKOSH #3

Cardinal Direction:
Positive(+) North/East

Selected Days Of Week:
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

Number of Lanes in the Positive Direction = 2
Graph Creation Date/Time: Jun 01, 2007 08:27

Print Close  Zoom In | Zoom Out
TRADAS ADT Volumes for JUL 2006

Capacity Per Lane Value: 1800 With 2 Of 2 Lanes Open = 3600 Total Available Capacity
Capacity Per Lane Value: 1800 With 1 Of 2 Lanes Open = 1800 Total Available Capacity
Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday

Meta Data Section:
County: WINNEBAGO
TRADAS Site: (700160) USH 41 SOUTH OF STH 21 OSHKOSH #3
Cardinal Direction: Negative (-) South/West
Selected Days Of Week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
Number of Lanes in the Negative Direction = 2
Graph Creation Date/Time: Jun 01, 2007 08:28

http://transportal.cee.wisc.edu/applications/V-SPOC/Common_JSPs/PrintableGraph.jsp 6/1/2007
TRADAS ADT Volumes for JUL 2006

Counties: WINNEBAGO

TRADAS Site: (700001) USH 41 NORTH OF STH 76

Cardinal Direction: Negative(-) South/West

Selected Days Of Week:
- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Number of Lanes in the Negative Direction = 2

Graph Creation Date/Time: Jun 01, 2007 08:29

Print Close Zoom In | Zoom Out
ATTACHMENT G – CTH K Overpass Detour Plan
ATTACHMENT H – Witzel Avenue Overpass Detour Plan
ATTACHMENT I – US 41 SB Exit Ramp to WIS 21 Truck Detour Plan
ATTACHMENT J – US 41 Winnebago County Construction Schedule
<table>
<thead>
<tr>
<th>Contract Id</th>
<th>Project Id</th>
<th>Description</th>
<th>Project Amount</th>
<th>Contract Award</th>
<th>EARLIEST PRE</th>
<th>Start Date</th>
<th>Construction Start</th>
<th>Construction Finish</th>
</tr>
</thead>
</table>

**US 41 CORRIDOR PROGRAM**

**Revised 06/09/2011**

**Project Milestone Dates**

- **WIS 44 - WIS 21 Mainline**
- **WIS 26 - WIS 44 Mainline**
- **Breezewood Intchg**
- **US 45 - Breezewood Mainline**
- **WIS 21 Intchg & Lk Bdm Causeway**
- **Weigh In Motion**
- **2013**
- **2014**
- **2015**
- **2016**

**This report is intended for INTERNAL WisDOT USE ONLY as a source of information on the progress and workings of the US 41 Project.**
TRAFFIC CONTROL DETAIL FOR CONSTRUCTION ACCESS TO USH 41

FOR CONSTRUCTION TRAFFIC EXITING LIVE TRAFFIC LANES

FOR CONSTRUCTION TRAFFIC RE-ENTERING LIVE TRAFFIC LANES

NOTE:
SPACING AND LOCATIONS OF DEVICES IN THE FIELD SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER
SEE OTHER TRAFFIC CONTROL DETAILS AND STANDARD DETAIL DRAWINGS FOR LANE CLOSURE DETAILS
PORTABLE MESSAGE SIGN MESSAGES SHOULD READ:

FRAME 1
TRUCKS EXITING RIGHT

FRAME 2
TRAFFIC STAY LEFT

ATTACHMENT K