For the TRAFFIC SAFETY COUNCIL

STATUS REPORT

January 12, 2005

ACTION PLAN for UPDATING the

WisDOT 2001-03 STRATEGIC HIGHWAY SAFETY PLAN
The WisDOT 2001-03 Strategic Highway Safety Plan included action plans to address the following seven emphasis areas:

- Institute Graduate Driver Licensing
- Improve the Design and Operation of Intersections
- Increase Seat Belt Use
- Increase Driver Safety Awareness
- Improve Data and Decision Support Systems
- Keep Vehicles on the Roadway & Minimize the Consequences of Leaving the Roadway
- Reduce Impaired Driving

In September 2003, the Traffic Safety Council was provided with a summary report on the status of action for each of these emphasis areas. Good progress had been made in some areas, but on the whole, much work remained to be done.

In December 2003, WisDOT staff participated in a national workshop for states that are involved in the NCHRP-sponsored “lead states” initiative to implement elements of the AASHTO Strategic Highway Safety Plan. Wisconsin is involved as a lead state for “Reducing Crashes at Unsignalized Intersections” and for the “Integrated Safety Management Process” (also known as the “Comprehensive Highway Safety Plan” initiative). At its 12/11/03 meeting, the Council was briefed on the workshop. More detailed updates on each initiative were provided at the 2/5/04 Council meeting.

The balance of this document includes the following:

**Pages 3-7:** Status report on Council action as of 1/4/05 in updating the 2001-03 Strategic Highway Safety Plan to guide agency resource commitments in tactically important safety emphasis areas in 2004-06.

**Pages 8-22:** Summary on status of action to date and background description for each of the new 10 highest ranked safety issue areas, shown in rank order.

**Pages 23-34:** Summary of past/current activities in the Department in each of the remaining 16 safety issue areas, shown in rank order.
Step 1: Confirm that the WisDOT Board of Directors values highway safety as a top priority emphasis area for the agency and endorses the leadership of the Traffic Safety Council in an update of the Strategic Plan action elements for 2004-2006.

**Status:** This was accomplished at the 2/17/04 meeting of the Board of Directors during a briefing presented on behalf of the Council by Major Dan Lonsdorf and Dennis Hughes (Division of State Patrol/Bureau of Transportation Safety).

Step 2: Confirm that the 24 highway safety issue areas that formed the conceptual framework for the 2001-03 Strategic Plan (i.e. the 22 issue areas identified in the 1998 AASHTO Strategic Highway Safety Plan, plus two additional issue areas identified by the Council) are still appropriate for use in the update of the Strategic Plan for 2004-06.

**Status:** This was accomplished at the 3/4/04 meeting of the Traffic Safety Council. In addition, the TSC identified two new emphasis areas (i.e. “Improve traffic incident management” and “Reduce speed-related crashes”), bringing the total to 26 safety emphasis areas.

Step 3: Update data that appeared in the environmental scan document developed prior to the 2000 strategic safety plan event.

**Status:** This was accomplished in time for the 3/4/04 meeting of the TSC, at which time the Council reviewed the environmental scan summary.

Step 4: Review the updated environmental scan summary. Identify opportunities for action that: (a) are within the agency’s area of responsibility, (b) within the agency’s capacity to influence, and (c) address critically important highway safety issues. In so doing, give due consideration to past and current agency commitments to action, as well as to priorities established by the Board of Directors.

**Status:** This was accomplished at the 4/1/04 meeting of the TSC. In a manner consistent with the rank ordering exercise in 2001, equal weight was given to the agency’s ability to influence and the issue’s importance relative to the number of traffic crashes, injuries and deaths associated with it.
The results of this exercise are shown below, with the 26 issue areas in rank order by their composite rating score. Seven of the 10 highest ranked issue areas were among the eight issue areas identified for action planning in the 2001-03 strategic safety plan (shown in shading in the table below). The only item from the 2001-03 Top 8 priority list that declined appreciably was “Institute Graduated Driver Licensing”, which dropped to 18th because the task had essentially been accomplished.

<table>
<thead>
<tr>
<th>2004 Rank Order</th>
<th>Composite Rating</th>
<th>Highway Safety Issue Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>69.36</td>
<td>Increase seat belt use/air bag effectiveness</td>
</tr>
<tr>
<td>2</td>
<td>66.83</td>
<td>Improve design/operation of intersections</td>
</tr>
<tr>
<td>3</td>
<td>62.14</td>
<td>Improve data/decision support systems</td>
</tr>
<tr>
<td>4</td>
<td>61.09</td>
<td>Reduce speed-related crashes</td>
</tr>
<tr>
<td>5</td>
<td>58.35</td>
<td>Reduce impaired driving</td>
</tr>
<tr>
<td>6</td>
<td>54.92</td>
<td>Minimize consequences of leaving roadway</td>
</tr>
<tr>
<td>7</td>
<td>53.63</td>
<td>Design safer work zones</td>
</tr>
<tr>
<td>8</td>
<td>52.23</td>
<td>Reduce head-on and cross-median crashes</td>
</tr>
<tr>
<td>9</td>
<td>51.44</td>
<td>Keep vehicles on the roadway</td>
</tr>
<tr>
<td>10</td>
<td>51.00</td>
<td>Increase driver safety awareness</td>
</tr>
<tr>
<td>11</td>
<td>47.21</td>
<td>Sustain proficiency in older drivers</td>
</tr>
<tr>
<td>12</td>
<td>43.51</td>
<td>Insure drivers licensed / competent</td>
</tr>
<tr>
<td>13</td>
<td>41.55</td>
<td>Improve motorcycle safety</td>
</tr>
<tr>
<td>14</td>
<td>41.36</td>
<td>Curb aggressive driving</td>
</tr>
<tr>
<td>15</td>
<td>39.57</td>
<td>Improve traffic incident management</td>
</tr>
<tr>
<td>16</td>
<td>38.95</td>
<td>Drive more safely in inclement weather</td>
</tr>
<tr>
<td>17</td>
<td>37.96</td>
<td>Make truck travel safer</td>
</tr>
<tr>
<td>18</td>
<td>33.76</td>
<td>Institute Graduated Driver Licensing</td>
</tr>
<tr>
<td>19</td>
<td>33.53</td>
<td>Create more effective processes/SMS</td>
</tr>
<tr>
<td>20</td>
<td>33.49</td>
<td>Make walking/street crossing safer</td>
</tr>
<tr>
<td>21</td>
<td>30.87</td>
<td>Insure safer bicycle travel</td>
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<tr>
<td>22</td>
<td>24.83</td>
<td>Keep drivers alert</td>
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<tr>
<td>23</td>
<td>19.37</td>
<td>Enhance EMS to increase survivability</td>
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<tr>
<td>24</td>
<td>19.06</td>
<td>Reduce deer and other animal crashes</td>
</tr>
<tr>
<td>25</td>
<td>16.46</td>
<td>Reduce vehicle-train crashes</td>
</tr>
<tr>
<td>26</td>
<td>13.69</td>
<td>Increase safety enhancements in vehicles</td>
</tr>
</tbody>
</table>
**Step 5**: Develop consensus on critically important highway safety issue areas that the agency should address in 2004-06.

**Status**: This was a discussion item at the 4/1/04 and the 6/3/04 meetings of the TSC. Rather than immediately forming work groups to focus attention on the highest rated issue areas, it was decided that more thought should be given to the task, at least for the 10 highest ranked items (e.g. it might be wise to combine some of the engineering-related items into a single work group assignment).

The Council affirmed that ALL issue areas on the 26-item list are tactically important to the Department in pursuit of its traffic safety mission. So, issue areas outside the Top Ten should not be ignored.

**Step 6**: Brief the Board of Directors on the consensus list of emphasis areas. Secure their concurrence with the list. Solicit “sponsors” for each emphasis area.

**Status**: The Board of Directors was briefed on the composite results of the rank ordering exercise for the 26 issue areas at their 4/13/04 meeting. However, there was no solicitation of project sponsors at that time.

A second briefing of the Board by Major Lonsdorf occurred on 1/4/05. The Secretary and Deputy Secretary affirmed their support for updating the Plan and indicated they will determine which members of the Department’s senior management team are best suited to serve as project sponsors for the Top Ten emphasis areas.

**Step 7**: Identify a working group for each emphasis area. Their charge will be to develop feasible, prudent action plans that can be accomplished by the end of 2006.

**Status**: Major Lonsdorf, Jerry Smith and Dennis Hughes (DSP/BOTS) were tasked with developing a first draft outline of suggested sponsors for workgroups for each of the 10 highest ranked issue areas. However, this task has not yet been accomplished.

**Step 8**: WisDOT staff will provide a status report on strategic plan progress at the second national Integrated Safety Management Process lead state workshop.

**Status**: ISMP was removed from the agenda of the May 2004 national workshop for lead states. Instead, a separate Comprehensive Safety Plan
The conference was held October 19-21, 2004 in Kansas City, with a greatly expanded guest list. The first national peer exchange for DOT safety engineers was also scheduled to coincide with the workshop.

Dennis Hughes (DSP/BOTS) and Graham Heitz (DTID/Bureau of Highway Operations) represented WisDOT at the Kansas City event. Bill Bremer (FHWA/WI Division Office) also attended. Over 125 staff from 47 state DOT’s and USDOT attended the conference. [For details, see the 10/27/04 summary distributed to the Traffic Safety Council.]

**Step 9**: Working groups prepare written action plans for each emphasis area and submit to the Council for review and approval.

**Status**: See notes on Step 7 above.

**Step 10**: Working groups lead implementation efforts on each emphasis area and provide quarterly status reports to the Council.

**Status**: The original timeline was for work groups to present status reports at each Traffic Safety Council meeting beginning September 2004. However, there has been no substantive action to date by the Traffic Safety Council to establish work groups.

**Step 11**: Council representatives brief the Board of Directors on the status of action elements of the Strategic Plan.

**Status**: This was accomplished. On behalf of the Council, Major Lonsdorf presented a quarterly status report at the 8/31/04 meeting of the BOD.

The Board reaffirmed the Department’s traffic safety performance goals for traffic crashes, injuries and fatalities (i.e. goal is a 5% reduction from the most recent 5-year average).

The Board also endorsed the long-term traffic safety goal that has been adopted by USDOT, AASHTO and other national organizations, which is a traffic fatality rate of 1.0 death per 100 million vehicle miles of travel by 2008. (Wisconsin’s fatality rate was 1.40 in 2003 and has been in the 1.26-1.44 range since 1992; the US fatality rate has been approximately 1.5 every year since 1999.) The Board also discussed “Zero Traffic Deaths” as a long-term traffic safety goal.
At the 8/31/04 meeting, the Board was informed by Bruce Matzke (FHWA/WI Division Office) that Wisconsin has been identified as one of 16 “opportunity states” by USDOT, based on poor safety performance in CY2002 (i.e. increased number of traffic fatalities, and increased traffic fatality rate per 100M VMT).

At the 1/4/04 meeting of the Board, Bill Bremer (FHWA/WI Division Office, Safety Engineer) reiterated FHWA’s commitment to assist with WisDOT efforts to improve the state’s traffic safety performance, including continued support for updating the Strategic Safety Plan.

**Step 12:** Conclude implementation activities on action plan elements no later than December 2006.

**Status:** See notes on Step 10 above.
#1: INCREASE SEAT BELT USE

**2001-03 Project #1:** Support Safety Belt Coalition efforts in seeking passage of standardized enforcement of safety belt law

**2001-03 Project #2:** Implement standard enforcement of seatbelt law (if passed)

**2004-06 Project Sponsor:** To be named

Project #1 Objectives:
1. Support and encourage the Wisconsin Safety Belt Coalition
2. Provide key messages to public via media publicity and advertisements beginning in March 2001

Project #2 Objectives:
1. Provide support and education to law enforcement agencies on standard enforcement seatbelt law
2. Provide education/information to the motoring public on the new seatbelt law
3. Provide key messages to public via media publicity and advertisements beginning once the law is passed

Team Leader: **Don Hagen** (DSP/Bureau of Transportation Safety)

Accomplishments:
- For decades, BOTS has given high priority to using a portion of federal funds made available to WisDOT for improving safe driving behaviors to coordinate a wide array of efforts designed to increase seatbelt use and correct use of child passenger safety equipment. In FY2005, BOTS will invest over $2 million in federal formula and incentive grant funds in this program area.
- Since 2001, BOTS staff have attended every meeting of the WI Safety Belt Coalition, but have refrained from directly engagement in Coalition lobbying efforts.
- Using federal safety funds, seatbelt use promotional efforts by BOTS have been on-going, including increased use of paid media.
- Seatbelt use field observation surveys have been conducted annually, under contract by UW-Whitewater staff. Seatbelt use in WI reached its highest recorded level (72.4%) in Spring 2004.
• In February 2003, Office of Public Affairs staff researched the experience of states that have enacted standard seatbelt enforcement laws and produced significant background documentation on the merits of standard enforcement.

• In April 2003, BOTS staff testified for positive information at the public hearing for Assembly Bill 90 (standard seat belt enforcement). AB-90 was later amended to include a sunset provision that would be triggered by results of a 3-year study of racial profiling or by failure to receive federal incentive funding as a result of enacting a standard enforcement seat belt law. [**AB-90, as amended, was referred to committee by an Assembly floor vote in early 2004; it died upon adjournment of the 2003-04 legislative session.**]

• Using federal safety funds, seatbelt use has been the primary focus of two statewide law enforcement mobilization efforts coordinated by BOTS in 2003 and 2004.

• In January 2004, BOTS staff testified for positive information at the public hearing for Assembly Bill 724, which would require the use of infant seats or booster seats for children under age 8, based on age and weight. The bill would also increase forfeitures for violations, with the revenue used to create a grant program to provide child seats to low income families. [**NOTE: AB-724 passed in committee and was referred to the Joint Finance Committee; it died upon adjournment of the 2003-04 legislative session. BOTS staff reviewed technical drafting instructions for a similar bill that will be introduced in the 2005-06 session.**]

• In Spring 2004, the DOT Executive Assistant tasked a cross-divisional work group to update the 2003 OPA briefing paper on the merits of enacting a standard seat belt enforcement law.

• In September 2004, the DOT Executive Assistant tasked DSP staff to develop a briefing paper on the issue of racial profiling and related traffic stop data collection.

• In November 2004, BOTS staff attended a meeting of the Wisconsin Safety Belt Coalition. Draft copies of a standard enforcement seat belt use bill that will be introduced in the 2005-06 legislative session were distributed, as well as draft copies of a child booster seat bill (patterned after AB-724). The bill will reiterate most elements of AB-90, as amended, including a statewide traffic stop data collection requirement.

**AASHTO Strategic Safety Plan Status:** In 2004, NCHRP Report 500/Volume 11: “A Guide for Increasing Seatbelt Use” was published. The Guide elaborated on
three objectives and associated strategies that would improve the use and effectiveness of occupant restraint systems:

- Initiate programs to maximize use of occupant restraints by all vehicle occupants
- Ensure that restraints for children of all ages are properly used
- Provide access to appropriate information, materials, and guidelines for those implementing programs to increase occupant restraint use

**Assessment:** DOT has given passive support to the Safety Belt Coalition effort. Standard enforcement legislation passed in committee, but failed to reach a floor vote. Future legislative success will depend on how racial profiling concerns are addressed.

Seatbelt use in Wisconsin reached its highest recorded level (72.4%) since statewide monitoring began in 1987.

The project sponsor identified for this emphasis area in the 2001-03 strategic plan has been promoted to Deputy Secretary.

**#2: IMPROVE THE DESIGN AND OPERATION OF INTERSECTIONS**

**2001-03 Project:** Improve the design and operation of intersections

**2004-06 Project Sponsor:** To be named

**Objectives:**
1. Implement a comprehensive program to improve driver guidance at intersections on the State Trunk Highway (STH) system
2. Reduce the number and severity of intersection crashes on the STH system
3. Effectively communicate the project objectives and results

**Team Leaders:** Graham Heitz and John Corbin (DTID/Bureau of Highway Operations)

**Accomplishments:**
- In 2002, a work group of DTID and Division of Transportation Districts staff brainstormed ideas for a detailed action plan to improve intersection design/operation.
• In 2003, DTID/BHO staff worked with DTD Districts 1, 3, 4, 5, 6, 7 and 8 to replicate DTD District 2’s computer-based identification of high-hazard intersections on STH roadways.

• DTID entered into formal agreement with UW-Madison Dept of Civil & Environment Engineering to create the Traffic Operations & Safety (TOPS) Lab. A TOPS program manager (Todd Szymkowski) was retained and has become an active participant in the work of the Traffic Safety Council.

• The TOPS Lab was awarded a $200,000 contract by DTID to analyze intersection crashes and run off the road crashes. Relevant intersection data for each DTD district were updated thru 2001. TOPS Lab staff produced preliminary results of crash characteristics for each of 18 intersection types.

• In Summer 2003, WisDOT accepted an invitation to be a lead state in implementing NCHRP Report 500/Volume 5: A Guide for Addressing Unsignalized Intersections Collisions. A work order was signed with the TOPS Lab to assist WisDOT in implementing the guide. [Eight states (WI, WA, NC, MO, MN, IN, CA, AZ) are involved in the lead state initiative.]

As part of the work order, in September 2004, the TOPS Lab completed an analysis of unsignalized intersection crashes, based on 4-years of crash data (2000-03), for Janesville and Watertown. The latest results include a list of the top 20 unsignalized intersections with a high frequency of crashes; the graphic presentations of crashes by collision type and intersections by crash frequency; and geographic location maps. The TOPS Lab continues to support the lead state initiative.

• In October 2004, DTID convened a cross-divisional meeting to develop consensus on WisDOT policy regarding potential deployment of cameras for red-light-running (and other) traffic law enforcement purposes.

• In 2005, the TOPS Lab will lead a research effort to evaluate red light running (RLR) in Milwaukee. The magnitude of RLR will be quantified, and several new technologies to improve the safety of RLR will be evaluated.

AASHTO Strategic Safety Plan Status: In 2003, NCHRP Report 500/Volume 5: “A Guide for Reducing Collisions at Unsignalized Intersections” was published. The Guide elaborated on nine objectives and associated strategies that would improve the safety at unsignalized intersections:

• Improve management of access near unsignalized intersections
• Reduce frequency and severity of intersection conflicts through geometric improvements
• Improve sight distance at unsignalized intersections
• Improve availability of gaps in traffic and assist drivers in judging gap sizes at unsignalized intersections
• Improve driver awareness of intersections as viewed from the intersection approach
• Choose appropriate intersection traffic control to minimize crash frequency and severity
• Improve driver compliance with intersection traffic control devices and traffic laws at intersections
• Reduce operating speeds on specific intersection approaches
• Guide motorists more effectively through complex intersections

In 2004, NCHRP Report 500/Volume 12: “A Guide for Reducing Collisions at Signalized Intersections” was published. The Guide elaborated on seven objectives and associated strategies that would improve the safety at signalized intersections:

• Reduce frequency and severity of intersection conflicts through traffic control and operational improvements
• Reduce frequency and severity of intersection conflicts through geometric improvements
• Improve sight distance at signalized intersections
• Improve driver awareness of intersections and signal control
• Improve driver compliance with traffic control devices
• Improve access management near signalized intersections
• Improve safety through other infrastructure treatments (e.g. improve pavement conditions, coordinate signal operations near railroad crossings, move signal hardware out of the clear zone)

Assessment: Work on this issue area is in progress, but most of the accomplishments to date have not been directly linked to the action plan that was defined during the January 2001 emphasis area action plan event.

Both project sponsors from 2001-03 have retired. Replacements have been found for the two original project team leaders.
#3: IMPROVE DATA AND DECISION SUPPORT SYSTEMS

[TSC Decision on 10/7/04: This emphasis area should be paired up with Issue #19: “Create more effective decision processes/safety management systems.” The TSC needs to decide on how best to portray this pairing in this status report document.]

2001-03 Project: Improve data and decision support systems

2004-06 Project Sponsor: To be named

Objectives:
1. Implement an automated traffic crash system to decrease data collection time, reduce resources needed to collect data, and improve the quality of data
2. Improve dissemination and availability of crash data
3. Improve safety analysis processes through the consistent and uniform use of WisDOT analytical tools
4. Improve safety decision-making processes through the consistent use of technology, performance responsibilities, accountability and funding on a Department-wide basis

Team Leader: Pat McCallum (Division of Motor Vehicles/Bureau of Driver Services)

Accomplishments:

(1) Crash Data System Improvements
- In 1999, BOTS secured federal Section 411 incentive grant funding to perform a Traffic Records Assessment, support a State Traffic Records Coordinating Committee (TRCC), support the TRCC’s development of a Strategic Plan for Highway Safety Information System (“Traffic Records”) improvements, and to support implementation of the priority initiatives identified in the Plan.

- In 2002 and 2003, the TRCC gave top priority to automating crash records and improving location data. BOTS was directed to use Section 411 funds for this purpose.

- DMV successfully implemented the National Model TraCS (Traffic and Criminal Software) for internal entry of the Driver Report (July 2002) and Police Accident Report (September 2003), and has begun work on the automation of crash data collection for law enforcement.
• The Wisconsin TraCS Task Force, consisting of 10 law enforcement agencies from across the state, was formed in October 2003 to develop the crash report forms. The Task Force developed four crash forms: the Wisconsin Motor Vehicle Accident Report (MV4000), and the Abbreviated Car/Deer, Amended and Driver Information Exchange forms.

• DMV began pilot testing the new crash data collection system with four LE agencies in Fall 2004 (i.e. DSP/District-1, Dane County Sheriff, Calumet County Sheriff, Fond du Lac Police Department). Statewide rollout is expected in mid-2005. The end product will include a suite of forms, including crash reports, uniform traffic citation, and warning citation.

• DMV established the Wisconsin TraCS Steering Committee and the Information Technology Coordination Subcommittee to coordinate the development of TraCS forms, since coordination of the development and deployment of forms is essential to the success of TraCS and the overall usefulness of the statewide suite.

• Wisconsin TraCS crash project has expanded to include the Uniform Traffic Citation, Warning Citation, and strong possibility that the Incident and CMV Inspection forms will also be added to the statewide suite of forms. DMV is also testing an e-Citation using TraCS software. The initial pilot sites are Madison and Sun Prairie Police Departments, plus DSP.

• DMV and DSP are collaborating to redesign computer systems to electronically capture OWI-related arrest data: Breath-test alcohol levels from Intoxinet sites and Wisconsin State Laboratory of Hygiene; AODA assessment results; and alcohol education reports from technical colleges. The project will also work to share the data with law enforcement, district attorneys, and the courts for their decision-making.

• In 2004, the first full year of emergency department patient data was made available for linkage to traffic crash data, hospital discharge data and mortality files within the Crash Outcome Data Evaluation System (CODES) data set.

• DSP/BOTS publishes three annual crash facts books, including two that focus on alcohol and motorcycle issues. BOTS also publishes special interest fact sheets and short monographs, as well as the annual federally-required data-heavy Highway Safety Plan, all of which are available in pdf format on the WisDOT Internet site.
(2) Crash Location Data Improvements

- In 2003, the Public Safety Incident Location Work Group, a subcommittee of the TRCC, made recommendations to the full Committee and to the WisDOT Traffic Safety Council for improvements in crash reporting and other public safety reporting.

- In late 2003, a cross-divisional crash location work group was formed in WisDOT. In January 2004, their recommendations were submitted to the Deputy Secretary. One of their recommendations, that DMV staff be responsible for reference point coding to improve timeliness of location-specific crash data on STH roadways, will be implemented in 2005.

- In September 2004, a multi-jurisdictional, multi-agency Dane County Coordinated Public Safety Incident Location Project was completed under the direction of the TRCC. The effort compared three existing systems: (a) Iowa’s Center for Transportation Research and Education (CTRE); (b) Dane County; and (c) City of Madison. Mapping applications were evaluated, along with key crash and incident mapping requirements. The project report provided insights on related issues that other counties and the State will face in developing standards and procedures for mapping public safety location data.

- Currently, the TOPS Lab is working closely with WisDOT and FHWA to explore the possibility of integrating the existing Wisconsin Local Road (WisLR) and STH base maps to provide a single, statewide geo-spatial base map. Realizing an all-in-one base map will substantially boost crash location mapping.

**Assessment:** Several objectives have been completed and progress continues to be made on automating crash data collection and improving dissemination and availability of crash data.

One of the project sponsors for this emphasis area in the 2001-03 strategic plan has left DOT.

A federally-funded peer assessment of Wisconsin’s traffic records system has been scheduled for February-March 2005.
#4: REDUCE SPEED-RELATED CRASHES

**2001-03 Project:** This was not a high priority emphasis area for 2001-03

**2004-06 Project Sponsor:** To be named

**Objective:** Reduce the number and severity of speed-related crashes

**Team Leader:** To be named

**Accomplishments:**

- Multi-jurisdictional speed enforcement events were conducted in the Madison area on USH 12/18 (The Beltline) and USH 151 in an effort to reduce speed-related crashes.

- Aerial speed enforcement efforts were jointly sponsored by the Wisconsin State Patrol, Dane County Sheriff’s Department and the Dane County Traffic Safety Commission on roadways plagued with congestion, excessive weaving traffic patterns, and speeds in excess of the posted limit.

- Annual “Speedwave” federal grants (totaling over $600,000 in FFY2005) are administered by the DSP/Bureau of Transportation Safety to local law enforcement agencies in communities/counties with unusually high proportions of speed-related fatalities and severe injuries.

- Wisconsin received approval from the Federal Highway Administration (FHWA) in early 1999 to install an experimental series of painted chevrons on the travel lanes from I-94 westbound to I-894 westbound, in an effort to slow down large trucks, which had exhibited an unusually high propensity for rollover crashes. The chevron concept has been used successfully in Japan; Wisconsin was the only highway system in the United States to receive approval to implement the system. Evaluations completed a year later demonstrated reductions in overall speeds and crashes.

- To reduce speed-related crashes, a roundabout intersection was opened in October of 1999 in the Village of Howard in Brown County. Research has indicated that roundabouts can lower speeds in intersections, reduce overall crashes by 40%-60% on average, reduce injury crashes between 35%-80%, and nearly eliminate incapacitating injury and fatal crashes. *(American Planning Association Newsletter, Vol. 27, Issue 4, Fall 2002)*
• The TOPS Lab completed a research project to evaluate the effectiveness of overhead speed signs on the Milwaukee freeway system. The results indicated that the additional signing had little effect on the average and 85th percentile operating speeds.

**AASHTO Strategic Safety Plan Status:** “Speed” was not one of the 22 elements of the 1998 AASHTO Strategic Safety Plan.

**Assessment:**
#5: REDUCE IMPAIRED DRIVING

2001-03 Project #1: Reduce impaired driving (overall)

2001-03 Project #2: Reduce impaired driving through designated driver/safe rider programs

2004-06 Project Sponsor: To be named

Project #1 Objectives:
1. Reduce the number and severity of impaired driving crashes
2. Establish a broad based coalition

Project #2 Objectives:
1. Reduce the number and severity of impaired driving crashes
2. Make program a widely acceptable alternative to driving after drinking
3. Develop a substructure to support Designated Driver and Safe Ride programs
4. Raise public awareness of program

Team Leader: To be named

Accomplishments:
• For decades, BOTS has given high priority to using a portion of federal funds made available to WisDOT for improving safe driving behaviors to coordinate a wide array of impaired driving prevention and intervention efforts. In FY2005, BOTS will invest over $4 million in federal formula and incentive grant funds in this program area, including over $1.4 million on prevention/intervention activities targeting persons under age 21.

• In 2001, as directed by 1999 Wisconsin Act 109, in cooperation with the Department of Corrections and Department of Health & Family Services, BOTS funded a consultant study to evaluate alternatives to incarceration for repeat Operating While Intoxicated (OWI) offenses. The report assessed the use of treatment programs and other alternatives as ways to reduce the length of or need for jail time for repeat offenders. The report was published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/safety-incarcerationreport.pdf

• In February 2002, BOTS hosted a multi-state regional forum on impaired driving issues. After the forum, an informal Wisconsin impaired driving coalition was formed.
In 2002, as directed by Governor McCallum in his veto message for 2001 Wisconsin Act 16 (the budget bill), DSP staff studied the use, performance, effectiveness and policy implications of passive alcohol sensors for detecting alcohol-impaired drivers. The study results were documented in a report that was published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/pascomplete.pdf

A new law lowering the prohibited alcohol concentration to 0.10 AC for 1st offense OWI was enacted in July 2003 (effective September 30, 2003). BOTS staff released results of a preliminary evaluation of performance measures thru the first nine months of the law in September 2004 (i.e. alcohol-related fatalities were 17% lower than during a comparable 9-month period prior to the 0.08 law, and alcohol-related non-fatal injuries were 10% lower).

A per se drugged driving law (2003 Wisconsin Act 97) was enacted (effective December 19, 2003). The new law made it illegal to operate a motor vehicle with any detectable amount of controlled substances in the driver’s system (i.e. violations are equivalent to OWI with a prohibited alcohol concentration).

A new state-funded Safe Rider grant program was launched in 20 counties in late 2001 (funded via $5 increase in the OWI surcharge); Tavern League of Wisconsin Foundation is the program coordinator, with BOTS acting as fiscal agent. A program evaluation report was prepared by BOTS in Spring 2004 and was published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/saferide.pdf

A research project based on changing social norms toward drinking and driving among 21-34 year olds was launched in 2002 (funded via federal Section 410 incentive grant thru BOTS. These “Road Crew” pilot projects were established in four communities. A program evaluation report was prepared by UW-Madison School of Business in early 2004 and was published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/roadcrew-twopage.pdf

BOTS produces an annual evaluation report summarizing the activities and client populations of 13 county-level pre-trial intensive supervision programs for repeat OWI offenders, which are funded through a blend of federal alcohol incentive funding and a state appropriation. The reports also include a long-term analysis of recidivism by program clients, which indicates program clients are less likely to re-offend and have a longer time interval to the date of re-offense than non-clients. Seven other counties have expressed interest in BOTS funding to start their own programs. The evaluation report is published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/intervention.pdf
In April 2003, BOTS hosted a peer review assessment of the state’s programs to address impaired driving. The assessment team reviewed: program management, prevention efforts, deterrence efforts, driver licensing, and treatment/rehabilitation programs. The assessment report was published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/assessment03.pdf

In 2004, DMV staff evaluated the long-term recidivism of OWI offenders following completion of either of the two standard curriculum, education-based courses (Group Dynamics and Multiple Offender Program). They found that students who successfully completed GD or MOP were less likely to re-offend and had a longer time interval to the date of re-offense than OWI offenders who were referred to GD or MOP but did not complete the course.

BOTS is developing a strategic action plan for reducing impaired driving, based in part, on recommendations from the April 2003 impaired driving program assessment. As appropriate, the action plan will also be informed by the NCHRP Report 500 initiative and by the National Highway Traffic Safety Administration’s December 2003 Integrated Project Team report on ways to reduce the occurrence and consequences of motor vehicle fatalities and injuries related to impaired driving.


Assessment: An effective statewide impaired driving coalition was started, but did not evolve into a substantive force. Work has begun on a strategic action plan.

Two of the project sponsors from 2001-03 have left DOT, and the other has been promoted to Deputy Secretary.

The previous team leader retired in Spring 2004, but has returned to work on a temporary basis, pending recruitment of a full-time permanent replacement.
#6: KEEP VEHICLES ON THE ROADWAY
and
#9: MINIMIZE THE CONSEQUENCES OF LEAVING THE ROADWAY

| 2001-03 Project #1: Keep vehicles on the roadway |
| 2001-03 Project #2: Minimize the consequences of leaving the roadway |
| 2004-06 Project Sponsor: To be named |

Objectives:
1. Implement a comprehensive program to improve driver guidance on the State Trunk Highway (STH) system
2. Reduce the number of run off the roadway (ROR) crashes
3. Reduce the severity of ROR crashes on the STH system
4. Effectively communicate the project objectives and results

Team Leaders: Dick Lange and John Corbin (DTID/Bureau of Highway Operations)

Accomplishments:
- In 2001, DTID initiated the Strategic Highway Operations Program (SHOP), which featured installation of advanced cross-street signs on National Highway System roadways, more shoulder rumble strips, and raised pavement markers on rural 4-lane highways).
- In 2002, a work group of DTD managers developed recommendations to assign “safety” duties to specific personnel in each DTD district office.
- As sub-contractors to the TOPS Lab, in 2004, researchers at Marquette University completed an analysis of run-off-the-road crashes on rural 2-lane highways. The study not only automated the process of producing crash reports, but it also provided a sliding-window analytical tool, which can assist engineers in identifying road segments with high crash rates on the STH system.
- In 2003-04, DTID and DTD staff cooperated on a functional inventory analysis for the first-ever comprehensive business plan to guide WisDOT
traffic operations policy and programs. The Traffic Operations Plan will be finalized in November 2004.

AASHTO Strategic Safety Plan Status: In 2003, NCHRP Report 500/Volume 3: “A Guide for Addressing Collisions with Trees in Hazardous Locations” was published. The Guide elaborated on two objectives and associated strategies that would reduce the number of head-on crashes with trees that resulting in fatalities:

- Prevent trees from growing in hazardous locations
- Eliminate hazardous conditions related to trees along the roadway and/or reduce the severity of collisions with trees

In 2003, NCHRP Report 500/Volume 5: “A Guide for Addressing Head-On Collisions” was published. The Guide elaborated on three objectives and associated strategies that would reduce the number of head-on crashes resulting in fatalities:

- Keep vehicles from encroaching into the opposite lane
- Minimize the likelihood of crashing into an oncoming vehicle

In 2003, NCHRP Report 500/Volume 6: “A Guide for Addressing Run-Off-Road Collisions” was published. The Guide elaborated on three objectives and associated strategies that would reduce the number of run-off-road (ROR) crashes resulting in fatalities:

- Keep vehicles from encroaching on the roadside
- Minimize the likelihood of crashing into an object or overturning if the vehicle travels off the shoulder
- Reduce the severity of the ROR crash

In 2003, NCHRP Report 500/Volume 7: “A Guide for Reducing Collisions on Horizontal Curves” was published. The Guide elaborated on two objectives and associated strategies that would improve safety along horizontal curves:

- Reduce the likelihood of a vehicle leaving its lane and either crossing the roadway centerline or leaving the roadway at a horizontal curve
- Minimize the adverse consequences of leaving the roadway at a horizontal curve

In 2004, NCHRP Report 500/Volume 8: “A Guide for Reducing Collisions Involving Utility Poles” was published. The Guide elaborated on three objectives and associated strategies that would reduce the number and severity of crashes involving utility poles, luminaire poles, traffic signal supports, and other poles:
• Reduce the hazard of specific utility poles in high-crash and high-risk locations
• Prevent placing utility poles in high-risk locations
• Minimize the likelihood of crashing into a utility pole when vehicles run off the road

In August 2004, WisDOT was invited to participate in the lead state effort to implement the strategies identified in NCHRP Report 500/Volume 7 (Curves) and NCHRP Report 500/Volume 8 (Utility Poles). However, the invitations were declined.

Assessment: SHOP initiatives were suspended when funding for non-construction related safety and traffic operations initiatives dissipated in the 2003-2005 state budget due to Joint Finance Committee action.

In 2003, broader DTD work force planning initiatives superceded implementation of the 2002 work group recommendations regarding consolidation of “safety” duties in DTD district offices.

Significant attention is being paid to elements of these issue areas by the NCHRP Report 500 initiative.

Both project sponsors identified for this emphasis area in the 2001-03 strategic plan have retired.

#7: DESIGN SAFER WORK ZONES

2001-03 Project #1: This was not a high priority emphasis area for 2001-03

2004-06 Project Sponsor: To be named

Objectives:
1. Reduce the number and severity of crashes in work zones on the state trunk highway (STH) system.

2. Enhance work zone safety through education by developing and promoting public awareness announcements and materials.

3. Enhance work zone safety on freeway projects with added enforcement and other speed management methods.

Team Leader (temporary): Tom Notbohm (DTID/Bureau of Highway Operations)
Accomplishments:

- A WisDOT Work Zone Management & Safety Task force was formed in mid-2004 to consider new ways to improve safety in work zones. Pilot projects are being developed that will require analysis and evaluation in 2004-05.

- Every year, during spring/summer, work zone safety awareness is a high profile topic in materials produced by the Office of Public Affairs.

- Project-specific traveler information (e.g. Highway Advisory Radio, 1-800 road condition reports) and advance signage (e.g. changeable message signs) are routinely used for long-duration construction projects.

- In 2004, DTID developed updated guidelines for the use of Portable Changeable Message Signs (PCMS) for work zone operations. All WisDOT Work Zone Traffic Control guidelines can be found at: http://dotnet/dtid%5Fbho/extranet/bhomanuals/tgm/ch06.htm

- The TOPS Lab has proposed a project to evaluate statewide work zone safety and speed in work zones. The project would result in a suite of tools to provide convenient and real-time assessment of strategies and technologies implemented in work zones to reduce speeds and improve safety to motorists and personnel working in the work zone.

- In April 2005, WisDOT will convene a “Work Zone Management and Safety Workshop.” The tentative agenda emphasizes three components: media, education, and strategic planning.

Background: There are nearly 2,000 work zone crashes a year on Wisconsin’s different highway systems. About half of the WZ crashes occur on the Interstate or rural STH system. How crashes are coded as work zone-related varies by law enforcement agency. The number of WZ crashes has dropped over the last decade due to extensive training, public awareness campaigns, and new traffic standards, but more needs to be done.


Assessment: This has become a high profile “workplace safety” issue for the Department and local agencies and project contractors.
#8: REDUCE HEAD-ON AND ACROSS-MEDIAN CRASHES

**2001-03 Project #1:** Evaluate the across-median crashes on freeways and expressways with the UW-Madison Traffic Operations Lab

**2004-06 Project Sponsor:** To be named

**Objectives:**
1. Reduce the number and severity of across-median crashes in work zones on the State Trunk Highway (STH) system.
2. Develop centerline treatments to reduce head-on crashes on two-lane roads.

**Team Leader:** Dick Lange  (DTID/Bureau of Highway Operations)

**Accomplishments:**
- In 2003, DTID/BHO analysis identified across-median crash problems on a specific freeway. The results of the investigation led to inclusion of a median barrier in the project.

- In response to nationwide concerns about across-median crashes on divided highways, in December 2003, FHWA directed every state DOT to conduct a review of across-median crashes on divided highway. States had 180 days to complete their reviews. An $80,000 contract was awarded to the TOPS Lab to evaluate the problem of across-median crashes on divided highways. Initial preliminary results were provided in October 2004. [*The WisDOT review will exceed the level of detail required by the FHWA 180-day directive.*] Countermeasure strategies are being developed for policy consideration.

- Centerline rumble strips are being considered by DTID for use on undivided roadways with a history of frequent cross-centerline crashes. TOPS Lab research staff are involved with others in evaluating the effectiveness of C/L rumble strips.

**Background:** Preliminary analysis of crash records, based on a manual review, has indicated across-median crashes on divided highways may be more common that previously believed. This was due, in large part, to imperfect recording of relevant descriptive data in the uniform accident report form. Recent research indicated at least 741 across-median crashes occurred in Wisconsin in 2001-03.
AASHTO Strategic Safety Plan Status: In 2005, NCHRP will publish a guidance document for reducing head-on crashes on freeways.

Assessment: This is a work-in-progress.

#10: INCREASE DRIVER SAFETY AWARENESS

2001-03 Project: Create greater safety awareness

2004-06 Sponsor: To be named

Objective:
1. Develop statewide, coordinated public information and education campaigns for a variety of safety issues:
   - Safety at intersections
   - Impaired driving
   - Seat belts
   - Spring/summer
   - Fall/holidays
   - Winter
   - Special emphasis/events

Team Leader: To be named

Accomplishments:
- Topical and seasonal public information/education (PI/E) campaigns have been conducted with regularity every year, with special focus on seat belt use and impaired driving. Seasonal safety themes have been highlighted when appropriate (e.g. deer crash avoidance during spring and fall peak periods, back-to-school safety in late August).
- Statewide omnibus traffic safety survey was conducted in 2002 to establish baseline level of knowledge, attitude and self-reported behavior/
- In 2004, steps were taken to insure closer coordination between DSP and the Office of Public Affairs in public outreach efforts for highway safety (e.g. Directors of OPA and the Bureau of Transportation Safety now meet monthly to discuss upcoming safety-related PI/E events and campaigns)

AASHTO Strategic Safety Plan Status: In 2005, NCHRP will publish a guidance document on distracted/fatigued drivers.
Assessment: Multiple safety-related PI/E campaigns have been conducted since 2001, but were not conducted in a manner dramatically different from the pre-Strategic Safety Plan routine.

One of the 2001-03 team leaders retired in 2002, and the other took a new assignment in 2003. In 2004, new directors were appointed to lead the Office of Public Affairs and the DSP Bureau of Transportation Safety. The previous project sponsor was promoted to Deputy Secretary.

#11: SUSTAIN PROFICIENCY IN OLDER DRIVERS

Related Activities:

- DMV Bureau of Driver Services offers a wide variety of products and services that benefit older drivers (e.g. a large print condensed version of the Motorist Handbook, issuing limited driver licenses, networking with statewide organizations and advocates to identify/meet the needs of aging drivers) The BDS nurse/consultant, Jennifer Enright-Ford does outreach to local senior citizens groups, health care professionals, support groups, health organizations, and family members.

- In June 2000, in conjunction with the annual Governor’s Highway Safety Conference, BOTS convened a 1-day conference on “Safe Mobility in an Aging Society.” A variety of speakers addressed the challenges of the aging process and the role that WisDOT can play to insure safety and mobility for older drivers, passengers and pedestrians. Later in 2000, the keynote speaker from the conference presented at a WisDOT Senior Managers meeting.

- In July 1999, DTD, DTID and DTIM staff attended the “Older Driver Design Handbook” FHWA training course. In May 2001, DTD, DTID and DTIM staff attended the “Human Factors Workshop”, another FHWA training course for engineering staff. Both of these courses will be repeated for WisDOT staff in Spring 2005.

- In 2001, as part of the Strategic Highway Operations Program, DTID directed the installation of advanced crossroad name signs on National Highway System roadways. DTID has also upgraded the sign sheeting retroreflectivity standards for certain types of highway signage.

- In 2003-04, the Assembly considered legislation (AB-575) that would shorten the driver license renewal cycle for drivers beginning at age 75. DMV staff worked with the bill author to refine the draft language, but the
Department did not take a position on the bill during the legislative debate. *(A similar bill, AB-789, was introduced in the 1999-2000 session.)*

- In October 2004, DMV staff briefed the Governor’s Council on Highway Safety on current procedures available to families and physicians for referring potentially high-risk drivers for review and testing. *(The efficacy of the procedures were evaluated by DMV in a project sponsored by the WisDOT Council on Research in 1999-2000.)*

**AASHTO Strategic Safety Plan Status:** In 2004, NCHRP Report 500/Volume 9: “A Guide for Reducing Collisions Involving Older Drivers” was published. The Guide elaborated on five objectives and associated strategies that would sustain proficiency in older drivers:

- Plan for an aging population by establishing a broad-based coalition to address older adults’ transportation needs
- Improve the roadway and driving environment to better accommodate the special needs of older drivers
- Identify older drivers at increased risk of crashing and then intervene
- Improve the driving competency of older adults in the general driving population
- Reduce the risk of injury and death to older drivers and passengers involved in crashes

In August 2004, WisDOT was invited to participate in the lead state effort to implement the strategies identified in NCHRP Report 500/Volume 9. However, the invitation was declined. *[Only one state (LA) accepted the invitation.]*

**#12: INSURE DRIVERS ARE LICENSED AND COMPETENT**

**Related Activities:**

- DMV Bureau of Driver Services provides an array of driver licensing and control functions that are designed, collectively, to insure drivers are licensed and competent. These include licensing requirements (testing, retesting, operating restrictions), license withdrawals due to violations or disqualification, license reinstatement, and driver improvement programs.

• In 2004, DMV cooperated with municipal judges in the City of Milwaukee on an amnesty program designed to restore drivers, who were suspended due to failure to pay forfeitures, to full license status.

AASHTO Strategic Safety Plan Status: In 2003, NCHRP Report 500/Volume 2: “A Guide for Addressing Collisions Involving Unlicensed Drivers and Drivers with Suspended or Revoked Licenses” was published. The Guide elaborated on five objectives and associated strategies that would keep unlicensed, suspended or revoked drivers off the road:

• Apply special enforcement practices (e.g. increased enforcement in specific areas, routinely link traffic citation to driver record, “hot sheets”)
• Restrict mobility through license plate modification or removal
• Restrict mobility through vehicle modification (e.g. immobilization, seizure, impoundment, installation of ignition interlock device)
• Restrict mobility through direct intervention with offenders
• Eliminate the need to drive by providing alternative transportation

#13: IMPROVE MOTORCYCLE SAFETY

Related Activities:
• Since the mid-1990’s, BOTS staff have published the annual Wisconsin Motorcycle Safety Facts Book, which is a statistical digest of motorcycle information. The report is published on-line at: http://www.dot.wisconsin.gov/safety/motorist/crashfacts/docs/motorcyclefacts.pdf

• In 2003, BOTS staff held two summit meetings with leaders of the state’s motorcycling community to discuss the alarming increase in motorcyclist fatalities.

• In 2004, BOTS staff organized the first-ever state level conference on implementing elements of the National Agenda for Motorcycle Safety. A strategic action plan to follow thru on related initiatives was developed in Summer 2004. The plan was published on-line at: http://www.dot.wisconsin.gov/library/publications/topic/safety/motorcycleplan.pdf

• At several motorcycle rallies across the state in 2004, DSP troopers assigned to motorcycle patrol have given demonstrations on crash avoidance. For a large motorcycle rally in northern Wisconsin that was plagued by a poor safety record in recent years, in 2004, DSP offered funding to local law enforcement agencies to supplement officer availability, but the funding was not accepted due to limits in local staffing resources.
In 2004, enrollment in the Basic Rider Education course (sponsored by BOTS, but taught by instructors at Wisconsin Technical College System campuses) increased by more than 1,000 students over 2003 enrollments.

In 2004-05, a Wisconsin motorcycle rights advocacy group will sponsor a university-based survey research effort to conduct follow up interview with families of fatally-injured motorcyclists, in an effort to determine the riding experience and habits, as well as the formal rider training, of the victims.

A NCHRP-sponsored research project is evaluating the safety effects of rumble strips for motorcycle operation.

AASHTO Strategic Safety Plan Status: In 2005, NCHRP will publish a Report 500 guidance document for reducing crashes involving motorcycles. [WisDOT was invited to send a representative to a November 2004 focus group meeting being convened by the consultant team that is under contract to NCHRP to develop this guide, but no one was available to attend.]

#14: CURB AGGRESSIVE DRIVING

Related Activities:

In 1998-2000, a cross-divisional work group of DOT staff, in concert with representatives from local law enforcement and others with an interest in the topic, formed the “Road Rage Task Force.” The task force sponsored a baseline survey of Wisconsin drivers on their attitudes and self-reported behaviors associated with aggressive driving. The DSP and over 60 local law enforcement agencies participated in a special data collection study, using the special studies portion of the MV4000 uniform traffic accident report form, to collect baseline data on aggressive driving crashes.

In 2000, BOTS sponsored the statewide “Let It Ride” public information/education campaign, which encouraged drivers to control their responses to driving environment conditions that can trigger aggressive behavior.

In 2000, as part of the Road Rage Task Force effort, BOTS developed a performance measure for aggressive driving, based on the annual number of citations entered on the DMV Driver Record File for a select list of traffic violations. [In 2003, aggressive driving-related convictions represented 33.9% of all traffic-related convictions – the lowest proportion recorded since detailed conviction data became available in 1970.]

AASHTO Strategic Safety Plan Status: In 2003, NCHRP Report 500/Volume 1: “A Guide for Addressing Aggressive-Driving Collisions” was published. The
Guide elaborated on two objectives and associated strategies that would reduce the occurrence and safety consequences of aggressive driving:

- Deter aggressive driving in specific populations, including those with a history of such behavior, and at specific locations
- Improve the driving environment to eliminate or minimize the external “triggers” of aggressive driving

**#15: IMPROVE TRAFFIC INCIDENT MANAGEMENT**

**Related Activities:**

- Since 1995, the Southeastern Wisconsin Traffic Incident Management Enhancement (TIME) Program has served as a national model for sustained and structured partnerships between the transportation and public safety communities, and the public and private sectors. Highly successful freeway safety patrol models have been implemented in Milwaukee, Waukesha, Racine and Kenosha Counties through the TIME Program to reduce secondary crashes, avoid traffic incident delay, and improve the safety of emergency responders.

- The TIME Program has piloted a county highway maintenance emergency traffic management initiative known as the Traffic Response Unit (TRU). The TRU vehicle is a rapid response resource to provide traffic control in support of emergency responders on high-speed freeways. This responsive emergency traffic management capability supplements the regional MONITOR Freeway Traffic Management System, which uses CCTV surveillance, traffic detectors, ramp meters, permanent electronic Dynamic Message Signs, Highway Advisory Radio, and broadcast traffic media partnerships to optimize traffic safety on the Southeastern Wisconsin Freeway System.

- The Southwestern Wisconsin Intelligent Transportation System (SWITS) Program has piloted similar freeway safety patrol programs on the Beltline (USH 12/14/18/151) in Madison. SWITS has also led the state in establishing a methodology and approach for planning and implementing emergency alternate routes to improve traffic safety during partial or full freeway closures. These initiatives have included the testing of a “Blue Route” alternate route concept along I-39/90/94 in the Madison area.

- DTD-District 3 (Green Bay) has developed and administers county-wide traffic incident management programs in three “Fox Cities” counties along the USH 41 Corridor. These programs support critical incident debriefings, alternate route planning, and traveler warning and information services through Portable Changeable Message Signs (PCMS).
• DTD-D4 (Wisconsin Rapids) is implementing a work zone traffic incident management program in conjunction with the STH 29 “Bypass” Freeway Reconstruction Project in Wausau.

• The first statewide Traffic Operations Plan (TOP) is under development by DTID-Bureau of Highway Operations, and DTD is recognizing the need for statewide Traffic Incident Management program support activities and resources. A corresponding Traffic Operations and Public Safety Interoperability Study (TOPSIS) is providing insights into traffic incident management operational practices, as well as functional and system requirements for interoperable communications and data sharing network capabilities.

TOP and TOPSIS will provide highway corridor operations infrastructure development recommendations for consideration within the Connections 2030 Long Range Transportation Plan.

• Statewide ITS Software is being updated, and the DSP Computer-Aided Dispatch System is becoming operational. Program planning is being completed for Wisconsin’s component of the National 5-1-1 Traveler Information System. These capabilities will enable improved traffic incident detection and more effective and timely traveler warning and information services – particularly on Wisconsin’s freeway and expressway “Backbone” system.

AASHTO Strategic Safety Plan Status: In June 2004, AASHTO convened a multi-organizational public safety and transportation initiative known as the National Traffic Incident Management Coalition (NTIMC), with funding support from FHWA. DTID’s State Traffic Engineer chairs the NTIMC. Among other priority national actions, the NTIMC is collaborating with AASHTO in the development of a “Guide for Emergency Transportation Operations”. The Guide will be a resource to WISDOT and other state DOT’s in expanding their efforts to protect responders and reduce hazardous traffic conditions associated with traffic incidents.
#16: DRIVE MORE SAFELY IN INCLEMENT WEATHER

Related Activities:

- Following a 10-fatality crash in foggy conditions on I-43 in Sheboygan County in October 2003, DTID staff conducted a long-term trend analysis of all crashes that occurred during times of reduced visibility in the I-43 Milwaukee-Green Bay corridor.

- In May 2004, in cooperation with FHWA, the TOPS Lab hosted the 2nd National Highway Visibility Conference.

- In 2004, under a WisDOT work order, the TOPS Lab completed a national scan of state-of-the-art road safety audit and road-weather management practices. The draft report literature review was submitted to WisDOT for initial review; the report will be finalized in January 2005.

  Under the same work order, in 2004, the TOPS Lab distributed a request for information survey to all 50 states and most Canadian provinces. Only half of the agencies responded, probably because they had already responded to a recent survey conducted for NCHRP Synthesis 336 on road safety audits. In February 2005, the TOPS Lab will summarize their survey results, in conjunction with results reported in Synthesis 336.

  Also under this work order, the TOPS Lab is conducting agency interviews, using a variety of methods (e.g. telephone calls, e-mail, and personal interviews). Trends related to road-weather safety management will be included in a summary report of the interview findings, which will be completed in March 2005.

  In parallel to the literature review and agency interviews, the TOPS Lab is developing a Road-Weather Safety Framework and Countermeasure Plan. The framework will incorporate institutional considerations and condition-specific countermeasures and will be completed in March 2005.

  Also as part of this project, Wisconsin weather-related crash data and weather event data are being compiled. A detailed safety analysis will be conducted to determine the most likely causal factors in crashes that occur during inclement weather conditions. This will include an evaluation of pavement skid friction under different weather conditions. In addition to the crash analysis, the TOPS Lab will generate an approach to prioritizing candidate auditable sites, and an audit process will be developed for: (1) existing roadways; (2) roadway being rehabilitated with minor geometric improvements; and (3) new or soon-to-be-reconstructed roadways while still in the planning/design phase.
• In 2005, when crash data from the 2004-05 winter driving season become available, BOTS and DTID/BHO will cooperate on a long-term correlation analysis of traffic crashes and the Department’s winter severity index.

**#17: MAKE TRUCK TRAVEL SAFER**

**Related Activities:**

- **Size/Weight Enforcement:** The primary mission of DSP inspection personnel is to insure that commercial carriers operate within statutory or permitted size (length, height, width) and weight limitations. Carriers are checked to make sure they have proper registration, fuel tax, insurance and authority credentials. Enforcement activities are conducted at State Patrol safety and weight inspection facilities as well as through mobile enforcement using portable scales.

- **Motor Carrier Advisory Council:** Since the early 1990’s, DMV has consulted on a regular basis with an advisory council of representatives from the trucking industry (e.g. motor carriers, shippers, drivers, and truck stop operators). The Council has advised WisDOT on an array of topics, most of which address making the travel environment safer for commercial vehicle operations and all road users (e.g. large truck parking availability, Commercial Driver Licensing, hours of service reform, streamlining oversize/overweight permitting).

- **MCSAP Plan:** DSP inspection personnel conducted over 34,000 MCSAP inspections of large commercial vehicles in 2003. DSP prepares an annual program plan for the agency’s federally-funded Motor Carrier Safety Assistance Program (MCSAP) activities. The annual MCSAP plan is published on the WisDOT intranet at: [http://dotnet/dsp/bfst/mc/mcsap/cvsp2003website.pdf](http://dotnet/dsp/bfst/mc/mcsap/cvsp2003website.pdf)

- **CVISN:** WisDOT has been working for several years to implement a Commercial Vehicle Information Systems and Network to improve the agency’s business functions related to screening motor carrier safety credentials and size/weight enforcement.

- **Improve and enhance truck safety data:** Wisconsin recently implemented the Aspen application as a means of collecting roadside inspection data. This will significantly improve the quality of the inspection data and the timeliness of uploading the information to federal databases.

- **Increase safety belt use among CMV operators:** Wisconsin is a recent recipient of a special federal MCSAP grant that will be used to establish a baseline of safety belt usage among its CMV operators within the state. The results of this survey will be utilized in developing future enforcement
strategies. Education and outreach materials will also be distributed through various medias throughout Wisconsin.

- **Strengthen commercial driver’s license (CDL) requirements and enforcement:** The Division of State Patrol (DSP) and Division of Motor Vehicles (DMV) currently conduct covert audits of its third-party testers. MCSAP also funds a full-time CDL auditor position within the DMV.

- **Increase enforcement activities related to traffic enforcement:** In response to crash data that suggested driver-related behavior significantly contributed to the cause of large truck crashes, the DSP implemented a special emphasis enforcement program that focused additional enforcement resources on behavior-related traffic violations during high crash periods.

- **New Entrant Program:** Title 49 CFR, Part 385 requires that all new motor carriers receive a New Entrant Audit (NEA) within the first 18 months of operation - preferably within the first 6 months of operation. Wisconsin continues to be a national leader in the New Entrant Program in an effort to reduce crashes by educating new carriers and assuring their compliance with the Federal Motor Carrier Safety Regulations (FMCSR’s).

**AASHTO Strategic Safety Plan Status:** In 2004, NCHRP Report 500/Volume 13: “A Guide for Reducing Collisions Involving Heavy Trucks” was published. The Guide elaborated on seven measures that could be pursued to improve the safety performance of large trucks:

- Reduced truck driver fatigue
- Strengthen the Commercial Driver License program
- Increase knowledge about sharing the road
- Improve maintenance of heavy trucks
- Identify and correct unsafe roadway and operational characteristics
- Improve and enhance truck safety data
- Promote industry safety initiatives

**#18: INSTITUTE GRADUATED DRIVER LICENSING**

**Related Activities:**

- In 2000, DMV implemented the phase-in of the new Graduated Driver License. The GDL law was designed to give new, young drivers a healthier, safer start to their driving career by requiring more practice time prior to getting a probationary license, restricting teen drivers from being on the road during late night hours, limiting the number of passengers riding with teen drivers, and allowing teen drivers a longer and safer driving experience before earning an unrestricted license.
• In August 2004, BOTS staff conducted a long-term trend analysis of crash involvement rates of teen drivers during the first three calendar years of the Wisconsin’s GDL law (2001-03). [The study indicated 15% fewer 16-year old drivers were involved in traffic crashes, 18% fewer were involved in fatal crashes and 20% fewer were involved in non-fatal injury crashes.]

• More detailed analysis of the safety effects of the GDL law is in-progress by DSP staff.

#19: CREATE MORE EFFECTIVE DECISION PROCESSES/SAFETY MANAGEMENT SYSTEMS

[Traffic Safety Council decision on 10/7/04: This emphasis area should be paired up with #3: “Improve data and decision support systems”, with Martha Florey (DSP/Bureau of Transportation Safety) serving as co-team leader]

Related Activities
• In 2002-2003, a work group of DTD district staff completed a safety plan as part of the Division’s strategic business planning process. The group recommended that each district have a safety engineer with oversight responsibility for a coordinated safety program. Other recommendations addressed improvements in the data and analytical tools available to district staff, as well as improvements in procedures and programs using the data. DTD districts have implemented some of the recommendations (e.g. placing a safety engineer in each district). Work on the remaining recommendations will be led by DTID/Bureau of Highway Operations.

• In Summer 2003, WisDOT accepted an invitation to be a lead state in implementing NCHRP Report 501: “Integrated Safety Management Process.” [A total of 16 states are involved in this lead states initiative.] On behalf of the Traffic Safety Council, Dennis Hughes (DSP) and Todd Szymkowski (TOPS Lab) attended the December 2003 meeting of ISMP lead states. [The Council’s efforts to articulate a 2004-06 strategic safety plan has been guided, to some extent, by the decision process outlined in the ISMP guidance document.]

The guest list for the 2004 meeting of ISMP lead states was expanded to include all interested state DOT’s. As a consequence, 47 states were represented at a Kansas City conference in October 2004. Dennis Hughes (DSP), Graham Heitz (DTID/Bureau of Highway Operations), and Bill Bremer (FHWA/WI Division Office) represented Wisconsin.
• In October 2003, Dennis Hughes (DSP) represented the Department at the 2nd National Safety Leadership Conference. The forum was sponsored by the Safety Conscious Planning (SCP) Work Group, a coalition of federal, state and local transportation planners whose shared objective is to promote and monitor the development of analytical tools and decision processes designed to assist state DOT’s and metropolitan planning organizations (MPO’s) to more fully integrate safety into transportation project design and selection.

In September 2004, Dennis Hughes and Doug Dalton (DTIM) attended the 3rd National Safety Leadership Conference on this topic.

• In December 2004, DTIM sponsored the 2-day FHWA training course on SCP. Participants were planning staff from Wisconsin’s 13 MPO’s, DTIM and DTD/District-1, plus BOTS staff.

• With federal highway safety funding provided by BOTS, in March/April 2005, DTIM will host a statewide SCP forum. It will be modeled after similar forums held in a dozen other states, but the format and content will be tailored to best meet the needs of Wisconsin MPO’s.

• In Fall 2004, with support from DSP, staff in DTIM prepared briefing papers on a variety of traffic safety issues for consideration by the Connections 2030 Steering Group. In November 2004, the WisDOT Traffic Safety Council participated in a stakeholder input/discussion session with C2030 staff.

#20: MAKE WALKING/STREET CROSSING SAFER

Related Activities:

• In 2002, DTIM produced the Wisconsin Pedestrian Policy Plan, as part of the agency’s long-range Corridors 2020 transportation policy planning project. The plan was published on-line: [http://www.dot.wisconsin.gov/projects/state/docs/ped2020-summary.pdf](http://www.dot.wisconsin.gov/projects/state/docs/ped2020-summary.pdf)

• Detailed design, planning, and program information for pedestrian safety and mobility will be included in a best practices guide that will be published by DTIM in 2005.

• In May 2001, DTD, DTID and DTIM staff attended the “Human Factors Workshop”, an FHWA training course for engineering staff. The course content addressed pedestrian safety issues. The course will be repeated for WisDOT staff in Spring 2005.
• DTID and DTIM staff developed a 6-hour training on “Basics of Pedestrian Accommodation.” The course is made available several times each year to WisDOT engineering staff.

• In Summer 2004, DSP/BOTS hired a new Pedestrian/Bicycle Safety Program Manager.

• In October 2004, the first-ever statewide Wisconsin Pedestrian/Bicycle Conference was held in Stevens Point.

• TOPS Lab research staff have been involved with the development and implementation of Accessible Pedestrian Signals (APS).


• Reduce pedestrian exposure to vehicular traffic
• Improve sight distances and/or visibility between motor vehicles and pedestrians
• Reduce vehicle speed
• Improve pedestrian and motorist safety awareness and behavior

#21: INSURE SAFER BICYCLE TRAVEL

Related Activities:
• In 1998, DTIM produced the Wisconsin Bicycle Policy Plan, as part of the agency’s long-range 2020 transportation policy planning project. The plan was published on-line: http://www.dot.wisconsin.gov/projects/state/docs/bike2020-summary.pdf

• Detailed design, planning, and program information for bicycle facilities were addressed in DTIM’s Bicycle Facility Design Handbook, which was published in January 2004 and is available on-line: http://www.dot.wisconsin.gov/projects/state/docs/bike-facility.pdf

• DTID and DTIM staff developed a 6-hour training on “Basics of Bicycle Accommodation.” The course is made available several times each year to WisDOT engineering staff.

• In Summer 2004, DSP/BOTS hired a new Pedestrian/Bicycle Safety Program Manager.
The first-ever statewide Wisconsin Pedestrian/Bicycle Conference will be held October 2004.


#22: KEEP DRIVERS ALERT

Related Activities:

- WisDOT policy is to install continuous shoulder rumble strips on rural divided highways to mitigate run-off-road crashes.

- In 1998-99, BOTS staff, in concert with representatives from local law enforcement and others with an interest in the topic, formed a task force to investigate hazards associated with cell phone use by drivers.

- In the past several legislative sessions, many bills have been introduced to restrict cell phone use by drivers – but none have been passed. WisDOT staff have provided technical insight on the issue at public hearings and in informal contacts with legislators.

- In 2002, DSP troopers conducted a special data collection study on cell phone usage by drivers involved in traffic crashes, using the special studies portion of the MV4000 uniform traffic accident report form. The study results were published on-line: http://www.dot.wisconsin.gov/statepatrol/docs/cell-phone-use-in-crashes.pdf

AASHTO Strategic Safety Plan Status: In 2005, NCHRP will publish a guidance document for reducing crashes involving distracted and fatigued drivers.
#23: ENHANCE EMERGENCY MEDICAL SERVICES TO INCREASE SURVIVABILITY

Related Activities:

- Except for conducting annual inspections of ambulances and promulgating administrative rules governing ambulance equipment, WisDOT is not directly responsible for regulating/licensing EMS personnel or coordinating improvements in EMS-related services in Wisconsin. These duties are the responsibility of the Department of Health & Family Services.
- BOTS staff maintain working relationships with DHFS staff and with statewide associations that advise DHFS on issues related to EMS services.
- BOTS provides $30,000 annually in federal safety funding to train and equip first responders in rural areas.

AASHTO Strategic Safety Plan Status: In 2005, NCHRP will publish a guidance document for improving rural EMS to increase crash survivability.

#24: REDUCE DEER AND OTHER ANIMAL CRASHES

Related Activities:

- For over a decade, BOTS has produced an annual monograph summarizing motor vehicle-deer collision patterns and trends.

- In 1999, DTID won funding approval from the WisDOT Council on Research for a long-term evaluation of potential links between the agency’s roadside vegetation management policy and motor vehicle-deer collisions. The scope of the investigation was eventually re-directed and broadened to address all issues related to motor vehicle-deer collisions. In April 2000, a regional conference on the topic was convened in Milwaukee, with technical assistance provided by the Sand County Foundation, a private, non-profit natural resources organization.

- In late 2000, DTID entered into a contractual relationship with the UW-Extension to create and support a Deer-Vehicle Crash Information Clearinghouse. Since 2002, the DVCIC has convened three annual regional seminars on deer crashes, featuring presentations by experts from across the US and Canada. In 2004, the DVCIC completed an exhaustive review of existing research literature on deer-vehicle countermeasures. A summary of the review can be found on-line at: http://www.deercrash.com DVCIC staff remain actively involved in national work groups on the topic and in 2004 became co-investigators for a new national pooled-fund study of wildlife crossings.
• WisDOT continues its role as co-sponsor of a 3-year national pooled-fund study to field-test active sensors along rural highways (in Montana and Pennsylvania) designed to detect the presence of large animals in the right-of-way and mitigate the hazard by alerting motorists.

• WisDOT is currently seeking co-sponsors for a new national pooled-fund study to establish a Deer-Vehicle Crash Information Resource Center. The DVCIR would expand upon the data/information-sharing and research review/compilation role that the Midwest DVCIC has played for the past several years.

• In Fall 2003, OPA coordinated the first-ever joint press conference with DNR and AAA-Wisconsin to alert the public to the hazards of driving during the peak season for motor vehicle-deer collisions.

#25: REDUCE VEHICLE-TRAIN COLLISIONS

Related Activities:
• DTID manages the agency’s federal funds intended to improve railroad crossing safety. At least half of these funds must be spent on railroad crossing warning devices; the remaining portion is available for warning devices and other safety-related improvements at railroad crossings (e.g. upgraded crossing surface, channelization, separation structures, roadway relocations, closures).

• DTIM, DTID and DTD staff maintain the Railroad Crossing Information System, which includes rail crossing inventory data (track data, train crossing frequency and speed, approach roadway data, motor vehicle crossing frequency and speed). The RCIS interfaces with the Federal Railroad Administration’s database, which includes crash data reported by railroad companies.

• DTID staff are actively involved with the Wisconsin chapter of Operation Lifesaver, Inc., a private non-profit organization dedicated to increasing public awareness of hazards associated with railroad crossings.

• TOPS Lab research staff have evaluated the StopGate® system for improving safety at railroad crossings. StopGate systems have been installed at two sites (Madison and Monroe).
#26: INCREASE SAFETY ENHANCEMENTS IN VEHICLES

Related Activities: None to date and none planned since vehicle design is largely a federal function.

AASHTO Strategic Safety Plan Status: The four action items identified in the Plan to increase vehicle-related safety enhancements were initiatives that can only be addressed at the national level. They included the following:

- Expand the delivery of information regarding proper use of anti-lock braking systems (ABS) and incorporate the information into driver education programs.

- Assess the adequacy of available technology for detecting carbon monoxide (CO) in motor vehicles and take steps to reduce the nation’s annual death toll (350 motor vehicle occupants) from CO poisoning.

- Expand the scope of Intelligent Transportation System (ITS) research to better address safety issues associated with motorcycles (e.g. include motorcycles in the design of improved collision warning systems and improved detection systems for dedicated left-turn lanes at signalized intersections).

- Convene a national work group to identify remedies to growing concerns about significant incompatibilities between some vehicle designs and roadside features such as guide rails, slide slopes, culverts and others that result in increased injury potential in crashes.