JESSE KREMER
STATE REPRESENTATIVE • 59TH ASSEMBLY DISTRICT

October 28, 2015
Transportation Committee Public Hearing
Assembly Bill 330

Thank you Mr. Chair and members of the Transportation Committee for allowing me to speak to you today on this bill.

It is no secret that Wisconsin's transportation fund has reached a tipping point. Many roads, bridges and highways are in desperate need of repair and many projects sit unfinished - posing daily hazards to motorists around the state. Our transportation fund is simply unable to keep pace with the growing scope and number of current and new projects. This is illustrated by the governor's recent request for $200 million in bonding to help offset delays on some of the state's more crucial projects. Despite these obvious funding shortfalls, an additional $180 million was just approved this month by the Joint Finance Committee for a new Department of Transportation (DOT) headquarters at the Hill Farms site in Madison. It is time that we take a different approach.

AB 330 is an attempt, albeit a small one, to help curb some of our non-vital transportation expenditures so that we can help our transportation fund become more solvent. Originally introduced as a budget motion earlier this year, this legislation aims to curb three statewide transportation expenditures: vertical, swing arm ramp gates, digital message boards and closed circuit TV cameras. While these "intelligent roadway" implements are *useful* additions to our highway system, their continued, extensive use is simply not *vital* to the rudimentary function of our transportation system. Discontinuation of these expenditures will free up additional funds for much needed road repairs and maintenance.

The first of the three non-essential implements addressed by this bill are the highway on-ramp gates. These gates are railroad-style arms that require manual operation to raise and lower in the event of a highway emergency. The rationale behind their implementation is, understandably, to limit the amount of time an officer spends closing a ramp. At a cost of $12 – $15,000 per gate (not including maintenance), DOT has already installed over 400 gates costing between $5 and $6 million. This bill would halt installation of the remaining 180 gates, saving between $2 and $3 million.

It is important to note that despite other available, more cost effective options, DOT has almost exclusively chosen to implement this type of gate. Less costly and equally as effective alternatives include type III barricades (the common orange and white "Road Closed" barricades, often stabilized with sandbags), typically under $400 each, and horizontal swing arm gates with orange and white ramp closed signage.

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The reality is that each gate option requires some amount of staff or officer time to operate, but none require an officer to be stationed at the on-ramp for an extended period of time. The same desired result, saving officer time, can be achieved with other gate options at a much lower cost.

The second category addressed in this bill are the dynamic message boards, also known as digital message signs or "DMS." These signs alert drivers to highway travel times and conditions, as well as traffic death statistics and other messaging. These signs can be either side mounted or overhead, costing $80-$90,000 and $180-$190,000 per unit, respectively.

The third category, closed circuit television (CCTV), allows officials to monitor highway travel conditions. Per DOT, CCTV systems cost $55,000 each. By the end of 2017, 139 digital message signs and 410 closed circuit television systems are planned to have been installed statewide. This bill seeks to halt the remaining planned installations of **14** DMS over the biennium, saving anywhere between $1.1 and $2.6 million; and **58** remaining CCTV installations, saving approximately $3 million.

It is unwise to spend taxpayer dollars on more costly options when more economical options are readily available, or when more pressing needs like maintaining existing roads exist. The DOT's use of these non-essential highway additions must be stopped until our state's transportation fund is more stable. In times like these, it is incumbent on us as legislators to take a close look at where we can make cuts. These are items that we can easily live without, especially considering most of these items have nearly seen full implementation. This bill could free up anywhere between $6 and $9 million to be used for existing road maintenance. I believe that we owe it to our constituents to consider all avenues of cost savings, no matter how small or seemingly insignificant.

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Wisconsin Department of Administration
Division of Executive Budget and Finance

Fiscal Estimate - 2015 Session

☒ Original ☐ Updated ☐ Corrected ☐ Supplemental

LRB Number **15-2810/2**	Introduction Number **AB-0330**

Description
Prohibiting the Department of Transportation from installing certain equipment on highways

Fiscal Effect

State:

☒ No State Fiscal Effect
☐ Indeterminate
- ☐ Increase Existing Appropriations
- ☐ Decrease Existing Appropriations
- ☐ Create New Appropriations
- ☐ Increase Existing Revenues
- ☐ Decrease Existing Revenues
- ☐ Increase Costs - May be possible to absorb within agency's budget ☐ Yes ☐ No
- ☐ Decrease Costs

Local:

☐ No Local Government Costs
☐ Indeterminate
1. ☐ Increase Costs ☐ Permissive ☐ Mandatory
2. ☐ Decrease Costs ☐ Permissive ☐ Mandatory
3. ☐ Increase Revenue ☐ Permissive ☐ Mandatory
4. ☐ Decrease Revenue ☐ Permissive ☐ Mandatory
5. Types of Local Government Units Affected
   - ☐ Towns ☐ Village ☐ Cities
   - ☐ Counties ☐ Others
   - ☐ School Districts ☐ WTCS Districts

Fund Sources Affected **Affected Ch. 20 Appropriations**

☐ GPR ☐ FED ☐ PRO ☐ PRS ☐ SEG ☐ SEGS

Agency/Prepared By	Authorized Signature	Date
DOT/ Mae Knowles (608) 266-8370	Jennifer Peters (608) 267-6979	10/28/2015

Fiscal Estimate Narratives

DOT 10/28/2015

LRB Number **15-2810/2**	Introduction Number **AB-0330**	Estimate Type **Original**
Description Prohibiting the Department of Transportation from installing certain equipment on highways		

Assumptions Used in Arriving at Fiscal Estimate

The use of overhead message signs, traffic cameras and ramp gates are not mandated. The department installs the devices based on recommendations and guidance from the Federal Highway Administration (FHWA) and the US Department of Transportation. These devices provide beneficial information for motorists planning their routes, and for first responders managing incidents resulting from crashes and severe weather.

- Overhead signs - $180,000 to $190,000 ($75,000 hardware; $105,000 to $125,000 installation).
- Traffic cameras - $55,000 (includes cost of camera, camera pole and base, underground infrastructure, communication link(s) and power service).
- Ramp gates - $12,000 to $15,000 (based upon the gate arm length).

The installation of these items is paid as a highway maintenance expense. If installation of these items is prohibited, the department would spend this money on other highway maintenance activities.

Long-Range Fiscal Implications

None.

Wisconsin Department of Transportation

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DATE: October 28, 2015

TO: Members, Assembly Committee on Transportation
The Honorable Keith Ripp, Chair

FROM: Tom Rhatican, Assistant Deputy Secretary
Wisconsin Department of Transportation

SUBJECT: Assembly Bill 330 (prohibiting of overhead message signs, traffic cameras and on-ramp gates on highways)

Chairman Ripp and Committee Members:

The Wisconsin Department of Transportation (WisDOT) would like to provide some important background information to committee members as you consider 2015 Wisconsin Assembly Bill 330 (AB 330). AB 330 relates to prohibiting the department from installing overhead message signs, traffic cameras and on-ramp gates on any highway. The department is opposed to AB 330.

Increase the capacity of our system through technology

WisDOT is focused on improving safety, mobility and commerce. Increasingly, due to technology, we are able to control in real time, the traffic and travel conditions on major highways and to share that information to improve the operation of the highway system. The State Traffic Operations Center uses tools such as overhead dynamic message signs, traffic cameras, and ramp gates to:

- Monitor traffic conditions
- Provide real-time traveler information
- Provide traffic and incident information notification
- Communicate with drivers through traffic management devices

These tools are part of an integrated traffic management system that also uses:

- Central software
- Detection
- Ramp meters

- Signal systems
- 511 phone, web and mobile app
- Social media
- Portable changeable message signs
- Highway advisory radio

We are able to partner and communicate with law enforcement, first responders, the media, and perhaps most importantly, *with drivers on the road.*

The further development of the traffic operations system will significantly improve mobility and safety, and reduce the effects of congestion when travel is disrupted on freeways or surface streets within urban corridors. Well integrated traffic control management systems significantly improve roadway capacity, reduce travel times, and enhance safety.

While current Wisconsin Statutes do not mandate the use of these devices, WisDOT follows recommendations and guidance from The Federal Highway Administration (FHWA), and the U.S. Department of Transportation (U.S. DOT). WisDOT follows guidance set forth in Section 1201 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which establishes the Real-Time System Management Information Program for State DOTs. States are required to provide accurate and reliable travel information on construction activities, roadway or lane blocking incidents, roadway weather observations, and travel times. WisDOT utilizes dynamic message signs and traffic cameras to meet the requirements and ensure the traveling public is aware of changing road conditions in real-time.

The department also provides assistance in homeland security through camera feeds broadcasted at the State Emergency Operations Center, which includes the National Guard Joint Operations Center. The center is able to use the cameras as a source of information to monitor statewide emergency management and public safety activities. Dependent upon scale of activities, ramp gates and DMS are also utilized.

Dynamic Message Signs: Real-time messages to drivers

Based on the U.S. DOT Research and Innovative Technology Administration Report No. FHWA-JPO-11-140, Dynamic Message Signs (DMS) are one of the highest ranked technology equipment in both mobility and safety benefits. At the end of 2015, WisDOT will employ 141 DMS, 76 which are overhead signs, that give drivers the information they need to make informed decisions based on the traffic levels ahead of them. We employ four types of DMS: butterfly, side-mounted, cantilever, and full-span overhead. Overhead DMS are estimated to cost between $170,000 and $190,000 each for hardware and installation. Five more are planned for 2016 and 2017.

Typical traffic-related messages that run on a DMS are extremely beneficial to the commuting public and help ensure motorists arrive on time and plan their routes accordingly. Some of these messages include:

- **Crash or Incident:** These messages are up stream of an incident and warn drivers of lanes or freeways being closed due to a crash or incident. They explain the *what* and *where* of the situation, along with an action for the driver to take. An example would be, "FREEWAY BLOCKED, 2 MILES AHEAD, USE ALT ROUTE."

- **Construction Closures, Delays, and Alternate Routes:** These messages provide motorists with traffic information that affect their route. Messages for construction closures explain where and when the closures will happen to help ensure motorists plan their routes accordingly.

- **Special Events:** Notify motorists of anticipated delays for high volume attendance. Special event messages also provide traffic direction or routes for infrequent travelers.

- **Inclement Weather:** Snow, sleet, ice, fog, and blowing snow are all serious conditions that when messaged for provide beneficial information when planning your travel or traveling at appropriate speeds.

- **Traffic Related Safety:** Driving sober, using your seatbelt, and not texting while driving are typical messages displayed on DMS.

DMS signs may be positioned in several ways. The overhead position may be chosen for:

- **Best viewing** - Similar to the white-on-green signs located in sign bridges, DMS on overhead sign bridges provide the best viewing by all motorists. The Manual on Uniform Traffic Control Devices (MUTCD) require that a DMS message should be legible from a distance of 600 feet at night and 800 feet during the day. This is very important in three or more lane facilities. Typically, these are the facilities that are experiencing heavy traffic, a high percentage of trucks, and reoccurring congestion during peak travel times. Motorists in these situations would have a hard time reading a ground-mount sign from a distance of 600 to 800 feet away.

- **Messaging Capabilities** - Ground-mount signs are smaller in physical size and have less messaging capabilities. The MUTCD requires 18-inch characters on roadways with speeds over 55 mph. The larger overhead signs provide more character spaces to communicate multiple travel times, construction messaging, and other special alerts.

- **Space** - Often times, urban areas do not physically have enough room to accommodate a ground-mount sign located on the side of the roadway. The right-of-way may be tight or there is an adjacent sound wall, retaining wall, frontage road, or other highway feature that doesn't accommodate this type of install. There are typically many other competing signs in the urban areas and a ground-mount sign tends to diminish in effectiveness.

Messaging partnerships to benefit the public

The WisDOT has recently built joint partnerships, which have resulted in increased awareness and usage of DMS, as well as positive results and feedback.

In April 2015, the Wisconsin DNR declared a Red Flag Warning in 22 counties; the most widely spread declaration of its kind in decades. On critical fire days, the State Traffic Operations Center (STOC) responded quickly and placed messages on DMS placed along major roadways in high fire risk areas and alerted the public of extreme fire danger conditions and discouraged introducing fire into the outdoors.

The Department of Justice also heavily relies on the STOC to help increase awareness of Silver and Amber alerts across the state. Currently, in the year 2015 the control room has posted 34 Silver Alerts and two Amber Alert messages to date.

Traffic Cameras: Eyes on the road

In conjunction with DMS, the WisDOT heavily relies on traffic cameras to help build a common operating picture across all responding agencies to confirm incidents, determine delays, and ensure first responders are able to safely respond. Currently, 424 traffic cameras are due to be online at the end of 2015, with a majority located on freeways and interstates. However, 73 are located on key arterials to allow for assessment and facilitate traffic management of an entire transportation corridor, which includes the freeway and its alternate routes. These cameras enable WisDOT to divert and manage traffic appropriately based upon real time conditions. Traffic cameras are estimated to cost $55,000 each. Thirty more cameras are planned for 2016 and 2017.

The traffic cameras are mainly controlled and maintained at the Statewide Traffic Operations Center (STOC) in Milwaukee, where operators can control camera pan, tilt and zoom to assess traffic operations, which include traffic incidents, road conditions, and congestion. WisDOT's Division of State Patrol also actively uses the cameras to inform dispatching, resourcing and incident scene management decisions.

Additionally, video touring streams are provided to County Sheriff's, County Maintenance, other first responders (fire, EMS, emergency management, etc.), the

media, and the general public via channel 36.6; MPTV traffic. Also, video snapshots are captured every three minutes and automatically posted to the 511 Wisconsin mobile app and website.

Developing best practices in incident management

WisDOT also automatically archives all traffic video for 72 hours and retains specific video of interest beyond the 72-hour timeframe. These video archives are valued by response and public safety agencies. In 2014, 865 video requests were received and 788 have been received to date in 2015.

There are various benefits from the use of traffic cameras and their recorded footage. Wisconsin DOT, Wisconsin's first response community and the public benefits from the use of these devices by:

- Building a broad common operating picture and situational awareness during emergencies
- Communicating observations (notifying law enforcement, other first responders and the general public)
- Allowing faster incident confirmation and assessment
- Faster response time to the correct location
- Allowing WisDOT to coordinate, facilitate, enable, or assist with response efforts quickly (ramp metering, signal system adjustments, ramp gate closures, dynamic message signing, Freeway Service Teams, etc.)
- Verifying wrong way driver alerts
- Alerting media (feeds to sensitive incident scenes are cut)

Another large area of benefit includes the impact to the Traffic Incident Management Enhancement Program (TIME), which follows the Federal Highway Administration's (FHWA) National Unified Goal of responder safety; safe, quick clearance; and prompt, reliable, interoperable communications. Video clips can be used for traffic incident management education and training to ensure these goals are met and first responders and the commuting public remain safe.

Ramp Gates: Freeing up first responders

The TIME Program also oversees the utilization of ramp gates and the physical closure of freeway on-ramps when the mainline is blocked due to traffic incidents, HazMat spills or severe weather. Ramp gates operate by a mechanical gate arm that can be manually lowered to provide a physical barrier preventing motorists from accessing the Interstate and highways. The gates are used as a safety feature to help:

- Mitigate severe congestion caused by incidents or severe weather.

- Prohibit access to the roadway and allow first responders to work in a safer environment while clearing an incident
- Provide for quicker clearance of an incident and reduce the possibility of secondary incidents

Ramp gate use is described in the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), section 2B.68.

Lessons learned the hard way

Ramp gates are similar to having insurance - while you cannot predict an accident, having them in place in case of a significant incident is important to ensure a readily safe environment. In February of 2008, a severe winter storm hit Wisconsin. During a roughly 48-hour period, a large portion of Wisconsin experienced heavy snowfall and blizzard-like conditions that led to citizens needing emergency assistance. During the morning hours of February 6, a series of seemingly unrelated traffic incidents started a chain of events which eventually lead to a backup on Interstate 39/90 that stretched from just south of Madison to, at times, the Illinois border.

During this scenario there were no ramp gates in place to block off the interstate and vehicles continued to stack up. Approximately 2,000 vehicles spent an evening and cold night stranded on a 20-mile stretch of the interstate. In the wake of this emergency, Wisconsin Emergency Management learned that the state must develop plans to shut down the Interstate if warranted, even if that means not offering a re-route to transiting traffic. This led the department to reevaluate the need and placement of ramp gates throughout the state to ensure this type of emergency would not affect the commuting public again.

Prior to installation of ramp gates, free-standing "Type III" barricades were placed at many on-ramps and could be dragged or carried into position to block off a ramp by law enforcement. This required more time and personnel resources to close an on-ramp. Ramp gates enable a single law enforcement officer to restrict access to a roadway quickly, safely and efficiently, without the need for the officer to physically block the on-ramp with barricades or a cruiser. This then permits the officer to assist in the mitigation of the traffic incident in another capacity.

By the end of calendar year 2015, 537 ramp gates will be installed statewide in the five WisDOT regions. The current guidance requires interstate corridors with a mainline Annual Average Daily Traffic (AADT) count of greater than 35,000 to have a ramp gate(s) installed. While deployment recommendations are based on AADT, other factors must be evaluated before adding a ramp gate. Ramp gates continue to be installed as part of scheduled highway projects. Installation of eighty-four more are planned in 2016 and 2017, at a cost of $12,000 to $15,000 each. Cost savings and safety improvements are being realized due to a fewer number of first responders required to close off and monitor an on-ramp.

Crucial elements of an integrated system

The U.S. DOT states a reduction of up to 25% in crashes and 10% to 20% reduction in delay can be accomplished from freeway operations and active traffic management, while incident and emergency management can reduce incident duration by 30% to 40%. Overhead message signs, traffic cameras and ramp gates enable the department to work best with law enforcement and emergency responders and provide the safest highway system possible.

These devices are important strategies in effective Transportation Systems Management and Operations (TSM&O), which is defined in Moving Ahead for Progress in the 21st Century Act (MAP-21), as an integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and and improve the security, safety and reliability of the transportation system.

If you have any questions, please contact me or Nate Yahn, WisDOT legislative advisor, at (608) 266-1114.

WISCONSIN SHERIFFS & DEPUTY SHERIFFS ASSOCIATION

To: Chairperson Keith Ripp
Members, Assembly Committee on Transportation
From: Wisconsin Sheriffs and Deputy Sheriffs Association
Date: October 28, 2015
Re: **Opposing Assembly Bill 330 – Prohibitions on Public Safety Equipment**

The Wisconsin Sheriffs and Deputy Sheriffs Association (WS&DSA) is a statewide organization created in 1945 and works to facilitate law enforcement, prevent crime, apprehend criminals and protect life and property of the citizens of Wisconsin.

Assembly Bill 330 would prohibit the Department of Transportation (DOT) from installing any highway overhead message boards, traffic cameras, or on-ramp gates. The WS&DSA opposes AB 330 because the equipment prohibited by the bill is critical to preserving public safety.

Highway on-ramp gates are utilized by public safety and emergency management personnel during an emergency, vehicle accident, or weather event. Highway on-ramp gates allow an officer in his or her patrol car to quickly put the gate in place, and carry on with other duties as they respond to an emergency. For smaller law enforcement agencies especially, this is a necessary asset.

Dynamic message signs (DMS), also prohibited under AB 330, are commonly seen providing important information about travel time and roadway safety. During an emergency, natural disaster, or in situations involving a missing person, DMS provide crucial information. For example, DMS are used to alert the public about Amber Alerts; and during weather events DMS keep the motoring public informed about potential road closures.

Highway cameras allow motorists to stay informed of traffic conditions, and are sometimes used when law enforcement investigate traffic accidents. Daily, traffic highway cameras help monitor roadways and traffic flow; and in a state with severe winter weather, highway cameras keep motorists and law enforcement informed of rapidly changing road conditions.

The equipment AB 330 attempts to prohibit are critical to public safety; therefore, Wisconsin Sheriffs and Deputy Sheriffs Association respectfully opposes Assembly Bill 330.

If you have any questions, please contact either Rebecca Ballweg or R.J. Pirlot of the Hamilton Consulting Group at (608) 258-9506.