



#### 6-3-4.5 Width Restrictions

May 2022

Some highway construction projects require temporary lane width restrictions that cause problems for over-width load movements. Many of these moves are operating under annual permit and the permittees are unaware of the width restrictions. To help prevent inconvenience and the prospect of damage, signs are used to warn and direct the movers.

Multiple trip or annual permits for mobile homes are issued for loads up to 15 feet wide. Loads over 15 feet travel under single trip permits, and prior to permit issuance the route is checked. When loads up to 15 feet wide (plus one foot for shyness) cannot be accommodated through the work zone the signs described in this guideline are used. Therefore, signs are used when the effective width is less than 16 feet.

The width to be used on the signing is calculated by measuring laterally from centerline to object or object to object subtracting one foot for shyness. Drums, barricades, barriers and parapets also constitute lateral objects. Examples 1-5 at the end of this subject illustrate when width signing is required.

Post the W12-52, showing the numerical width in feet, in advance of one or more intersections or interchanges which will provide the mover an alternate route around the restriction. Check the adequacy of a logical alternate route when selecting the point at which the diversion is posted. Place a supplemental distance sign, WO57-52, installed beneath the W12-52. Post another W12-52 in advance of the restriction, generally along with the other construction warning signs. Install on both sides of a divided highway to enhance visibility

Post an R12-70 sign, Wide Loads Exceeding XX Ft, at the intersection or ramp where the diversion occurs, especially if the restricted highway is a freeway or expressway. An appropriate directional arrow is an acceptable supplement to this sign

Detour signing from the point of diversion to return to the highway is normally not needed. This is similar to a low clearance warning situation, where no alternate route is signed.

To avoid unnecessary signing and diversion of wide loads, accurate information must be obtained about the actual restriction. This information is entered into Lane Closure System (LCS) by Regional field staff. The information is used to update 511.

Projects having more than one lane open in a given direction, even though each lane might be somewhat narrowed, over-width traffic is often not diverted. Most multi-lane highways have shoulders that can be used temporarily to accommodate wide loads. An overhang from one lane to another can be tolerated for short distances such as ¼ mile. Therefore, width restriction signs are typically not necessary for restrictions on short stretches of multi-lane highways. Although, there may be higher volume segments where overhang from one lane to another is not desirable or longer stretches of multi-lane highways (1/4 mile or more) where adequate shoulders are not available, width restriction signs *may* be desirable. In these circumstances where the intent is to divert over width traffic, ensure LCS reflects what is represented on the width restriction signing.

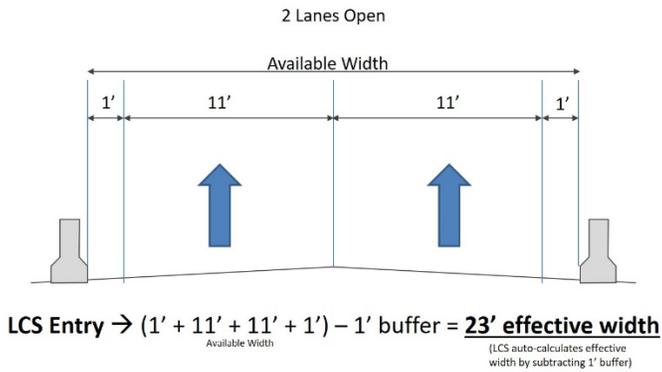
There may be staging situations where off-peak lane closures are utilized on multi-lane highways with closed shoulders. Width restriction signing is required during off-peak operations. Cover or remove width restriction signing during peak operations.

On roadways where one lane is open in each direction, width restriction signs are not needed if the available width including shoulder (including at bridges and crossovers) is more than 16 feet.

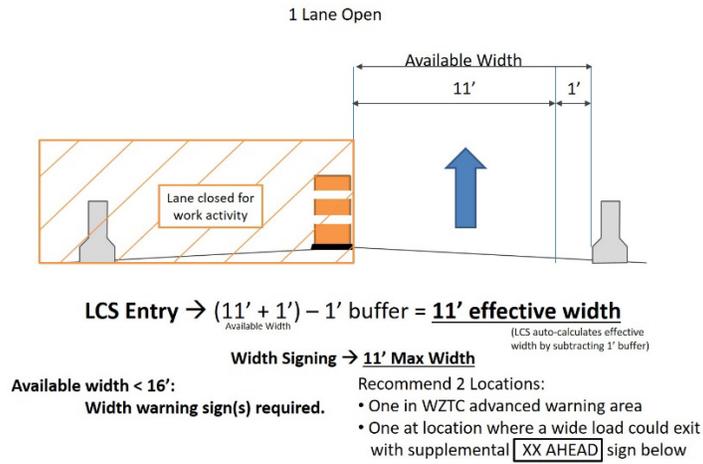
On 2-lane, 2-way roadways where only one lane is open with a flagging operation, width restriction signs are not required.

**Figure 1. Width Restrictions and Lane Closure System**

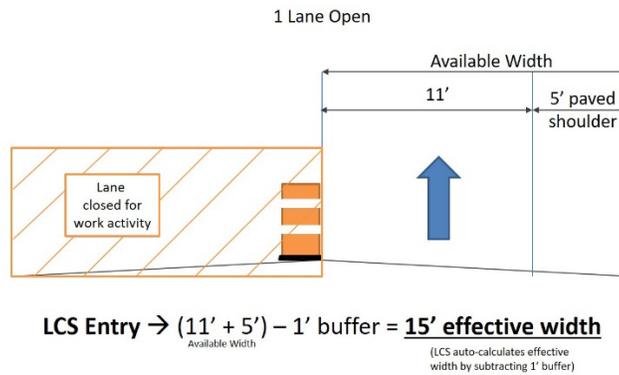
**Width Restrictions and Lane Closure System** Example 1



**Width Restrictions and Lane Closure System** Example 2



**Width Restrictions and Lane Closure System** Example 3



**Width Restrictions and Lane Closure System**

Example 4



**LCS Entry** →  $(12' + 12' + 5') - 1' \text{ buffer} = \mathbf{28' \text{ effective width}}$   
(LCS auto-calculates effective width by subtracting 1' buffer)

Available width ≥ 16': No width warning sign required.

Not changing the typical width available for this facility.

**Width Restrictions and Lane Closure System**

Example 5



**SB LCS Entry** →  $(12') - 1' \text{ buffer} = \mathbf{11' \text{ effective width}}$   
(LCS auto-calculates effective width by subtracting 1' buffer)

**Width Signing** → **11' Max Width**

Available width < 16':  
 Width warning sign(s) required.

- Recommend 2 Locations:
- One in WZTC advanced warning area
  - One at location where a wide load could exit with supplemental **XX AHEAD** sign below

**6-3-6 Freeway Service Team Policy and Procedure**

**January 2015**

**GENERAL**

The Freeway Service Team (FST) provides expedited relocation of disabled and crashed vehicles made possible by the presence of FST vehicles continuously patrolling designated segments of interstate and state highways during designated hours and through designated work zones. This continuous patrol will facilitate a quick response time to non-recurring traffic incidents such as breakdowns and traffic crashes, thus reducing the total time needed to clear the incident from the highway and restore normal traffic flow. Other examples of situations where FST services *may* be utilized include special events, inclement weather, and other highway emergencies. The primary goal of the service is safe, quick clearance of traffic incidents thereby improving safety and minimizing traffic delays and congestion. FST are frequently used as part of a project's work zone mitigation strategy and identified in the Transportation Management Plan (TMP). Please refer to [FDM 11-50-5 Attachment 5.4: "Example TMP Type Mitigation Strategies and Elements"](#) and [FDM 11-50-30.8](#).

Goals and Objectives

The goals and objectives of FST are to:

1. Maintain capacity in work zones and high volume freeway segments
2. Provide assistance free of charge to disabled motorists

3. Maintain consistent service
4. Minimize work zone delay
5. Provide scene safety
6. Clear traffic incidents
7. Provide traffic control
8. Provide scene management (law enforcement FST only)
9. Detect and verify incidents
10. Remove debris.

#### Applicability

Law enforcement FST operates during specified hours of the day all year round. Work zone FST contracts will be for the duration of construction projects. If FST efforts are showing that traffic is moving better when they are providing service in peak hours than in non-peak hours, the project team could extend the FST hours of operation. FST contracts include language for accommodating changing hours of service and mileage. Project managers must be aware of financial impacts as scope changes are developed.

The FST service will provide towing services to relocate a disabled vehicle to the designated drop-off locations of the highways or freeways. This service will enhance the safety and efficiency of subsequent operations by private towing service providers that remove vehicles from the designated drop-off locations.

All FST assistance and relocation services are provided free of charge to the motorist.

### **RESPONSIBILITIES**

#### Bureau of Traffic Operations (BTO)

1. Management of the FST program via FST program manager
2. Procurement of FST services
3. Notify project teams of contractor and hourly rates

#### Regional Project Development Section

Funding to cover FST charges must be included in budget and have a chargeable project ID.

#### Regional Traffic Engineers

Notify contractor of project start dates and required meetings. Some meetings that *may* be required are:

1. Preconstruction
2. Incident management
3. First responders.

#### Other Stakeholders

1. Regional communications manager
2. Law enforcement, fire, and EMS
3. Counties and local officials
4. Towing contractors
  - a. Patrolling contract work zones
  - b. Attending required meetings listed in 42.2.3

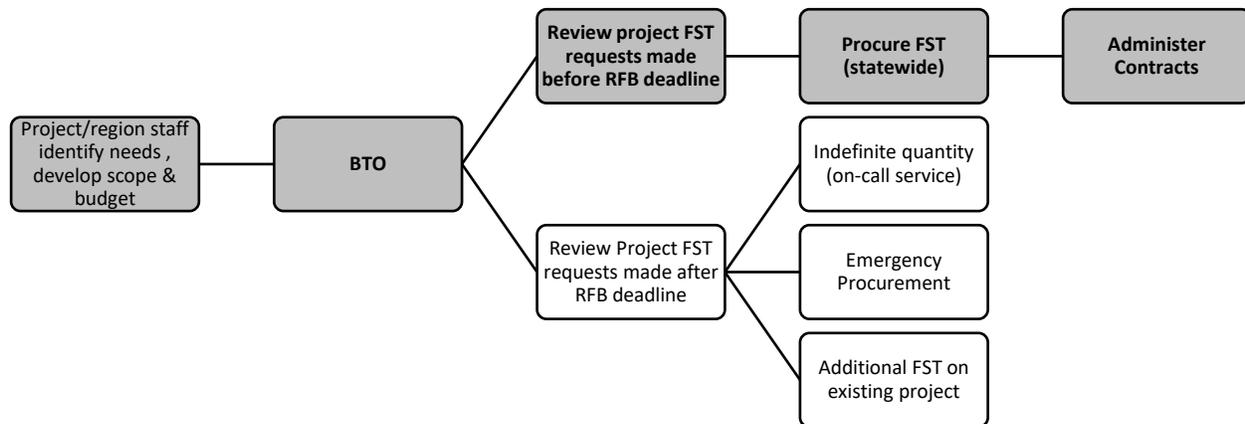
### **WORK ZONE FST**

Project design staff will work with regional traffic operations to identify and quantify the need for FST for work zone mitigation. FST expense is paid from the project mitigation budget. Requests for work zone FST are made by December 15<sup>th</sup> of the year prior to construction via email to the FST program manager. All FST contracts are bid together in a statewide Request for Bids (RFB).

1. December 15: FST requests due for next construction year
2. February: RFB issued
3. March: RFB selections made for construction season

Figure 1 shows the flowchart for implementing work zone FST.

**Figure 3. Work Zone FST Flowchart**



### Services to be Provided – General

The FST assists motorists whose vehicles have mechanical failure or have been involved in traffic crashes. The FST is responsible for clearing the highway of automobiles, motorcycles, small trucks, (vehicles with a gross vehicle weight of 8,000 pounds or less), and small nonhazardous debris. The FST relocates all cleared vehicles to the nearest drop-off location designated by the Contract Administrator. When responding to incident scenes, the FST provides assistance with traffic control as directed by law enforcement.

### Assistance to Law Enforcement, Including Emergency Traffic Control

FST *may* be requested to lend assistance to law enforcement, specifically to assist with emergency traffic control at an incident scene. FST follows the instructions of the officer at the scene of any incident. Once temporary traffic control devices are established and it is determined that law enforcement does not need an immediate tow, the FST *should* continue to patrol the route until contacted by law enforcement for towing services or to remove the traffic control devices.

## **6-3-7 Freeway Service Team Sponsorship**

**November 2016**

### **GENERAL**

The department initiated the Freeway Service Team (FST) Sponsorship Program as an innovative source of revenue. The Sponsorship Program is intended to improve the transportation system and benefit the traveling public by increasing their awareness of available services. Additional revenues further enable WisDOT to provide necessary services and enhance the safety and efficiency of the State's highway system.

FST sponsorships offer recognition to a business or other entity for supporting FSTs that improve work zone safety. Sponsorship agreements *may* include sponsor recognition placed on FST vehicles under contract with the department and or signs as outlined in MUTCD [2H.08](#).

### **GOALS AND OBJECTIVES**

The goals and objectives of FST Sponsorship are to:

- Create a public/private partnership to provide FST services
- Increase public awareness of program
- Provide sponsors an opportunities to promote traffic safety

### **RESPONSIBILITIES**

#### *Bureau of Traffic Operations (BTO)*

- Management of the FST program via FST Program Manager
- Procure FST services
- Procure FST sponsorship(s)

#### *Regional Traffic Engineers*

Notify BTO of preconstruction meetings and project start dates

#### *Other Stakeholders*

- Regional Communications Manager
- Law enforcement
- Counties and local officials
- Towing contractors

### ELIGIBLE SPONSORS

Eligibility for participation in the sponsorship program is limited to individuals, businesses and organizations that abide by state and federal laws that prohibit discrimination based on race, religion, color, age, sex, national origin, or sexual orientation, that do not promote illegal products or activities, and that do not harm the public image of the state or department.

### SPONSORSHIP RECOGNITION

#### *Vehicle marking, registered trademarks and lettering*

- A. The Sponsorship Contractor *may* apply markings and trademarks onto the FST trucks operated by Operator Contractors. The sponsor **shall** submit a design to WisDOT for approval.
- B. No other markings *may* be placed on or in the FST vehicles, unless otherwise approved by WisDOT.
- C. Any painting, placing, maintaining, repairing, adding or removing Vehicle Markings, Logos and Lettering must be conducted in such a manner as to not reduce the FST Operator Contractor's contractually required level of performance and availability.
- D. Operator Contractors are required to have backup trucks to be used in the event the primary truck is damaged. When the backup truck is in use the Sponsorship Contractor *may* provide magnetic markings to indicate that the truck is part of the FST. The sponsor **shall** submit a design to WisDOT for approval.
- E. WisDOT will determine when FST Operator Contractor contracts will end.
- F. The sponsor is responsible for removal of all markings, logos and lettering from operator vehicles within two weeks of notification by WisDOT.
- G. The Sponsorship Contractor is responsible for any damage to Operator Contractor vehicles as a result of graphics placement or removal.

### ROADSIDE SIGNAGE

The Sponsorship Contractor *may* indicate its sponsorship of the FST program through roadside signage placed at certain designated locations within or approaching work zones where FST Operator Contractor vehicles are operating.

- A. All Sponsorship Contractor signage **shall** be approved by WisDOT inclusive of design and placement. WisDOT reserves the right to require in certain circumstances signs to be removed, or placed in other locations at WisDOT's sole discretion.
- B. All signs **shall** comply at all times with Federal Highway Administration (FHWA) guidelines, and all applicable Federal and Wisconsin rules, regulations and laws in effect at the present and in the future.
- C. Acknowledgement signs **shall** be designed and installed as follows:
  - i. No more than two signs per direction along a single work zone, in locations approved by WisDOT.
  - ii. Signs (in one direction) *may* be spaced no closer than 3 miles apart except where approved by WisDOT.
  - iii. Sign logo, layout, size and design **shall** be in accordance with the requirements of the MUTCD.
  - iv. Signs shall be considered temporary and will be mounted on wooden posts. Sign size will be approved by WisDOT.
- D. WisDOT will approve all sign locations. The standard sign location will be 800' in advance of the "Road Work Ahead" sign.
- E. The minimum spacing between sponsorship acknowledgement signs and other signs should be:

- i. 150' on roadways with posted speed limits of 25 MPH or less.
  - ii. 200' on roadways with posted speed limits of 30 MPH to 45 MPH
  - iii. 500' on roadways with posted speed limits greater than 45 MPH
- F. WisDOT will determine when FST Operator Contractor contracts will end.
- G. Placing, replacing, maintaining, repairing, removing, covering or relocating signs must be done in accordance with WisDOT specifications. For questions contact the State Signing and Marking Engineer.

### OPERATOR UNIFORMS

The Sponsorship Contractor *may* choose to provide uniforms to FST Contractor Operator drivers. Uniforms must comply with the following:

- A. ANSI Class III compliant safety vests and pants. Vests **shall** have the Sponsors logo worn above the left chest pocket. Contractor **shall** provide enough sets of vests and pants such that each vehicle operator has clean sets of pants and vests.
- B. Sponsor colored baseball type hat. The hat **shall** be made entirely of fabric (no mesh style hats) and will have the Sponsor's logo on the front of the hat above the brim. Contractor **shall** provide enough hats such that the Operator Contractor *may* provide clean, legible hats as needed. FST Operator Contractor operators are not required to wear hats.
- C. Sponsorship Contractor supplied sponsor logo patches/embroideries/prints for the uniforms, **shall** be approved by WisDOT prior to ordering.

## 6-3-10 Work Zone Incident Management Plans (IMPs)

December 2011

### INTRODUCTION

An incident management plan is a set of strategies used to manage work zone traffic operations. These strategies include monitoring traffic conditions within the work zone and adjusting traffic operations based on changing conditions. IMPs address unplanned events or incidents for TMP project type 2 on freeways/expressways, and all TMP type 3 projects to ensure effective management of responses within the work zone. Formal IMP documents are not required for TMP type 2 projects on conventional highways, but if the project has detours or other temporary access restrictions, coordinate with emergency service providers regarding incident and access planning. Modify and update the IMP to address field issues as they occur. An IMP helps the contractor and the department to respond appropriately to incidents during construction within a reasonable timeframe in order to maintain traffic flow through the work zone safely. The IMP is part of the TMP and shall be submitted along with the TMP at the time of the completion of the draft PS&E. the draft IMP should be submitted along with the TMP worksheet at the time of the design study report (DSR).

It is the intent of WisDOT to minimize impacts and delays to motorists and to promote safety in work zones. Planning for traffic incidents that occur within work zones is a critical component of reducing delay and increasing the safety, mobility, and reliability of the highway system. The level of complexity of the IMP reflects the duration and complexity of the project and its impacts in the corridor/network. Long-term, complex reconstruction projects, such as the Marquette Interchange, necessitate comprehensive effort with procedures and processes to support the project. Short-term projects on lower-volume roads may simply require a meeting and/or some ongoing coordination with the appropriate local or regional emergency response agency.

Each project presents unique problems for emergency responders and the management of incidents that occur in the work zone. The intent of an IMP is to provide guidance and assistance in selecting mitigation strategies that meet the needs of WisDOT, the contractor, and emergency responders, while enhancing safety and mobility.

Answers to the questions listed below may help identify appropriate elements in the IMP.

1. How will this project impact emergency responses in this corridor?
2. Are there access issues for responding to incidents within the work zone?
3. If an incident closes the highway in one or both directions, how will traffic be rerouted?
4. Are there strategies to minimize project impacts on response agencies?
5. Are there strategies to minimize incident impacts on the public?

## 6. How will project personnel coordinate and assist emergency responders?

If it is determined that additional strategies are needed to ensure stakeholders' needs are met during construction, the strategies should be identified, documented, and implemented. They may include:

1. Contact lists for construction and utility personnel (include with IMP documentation when the contact lists become available)
2. Procedures for communicating with the contractor during an incident (include with IMP documentation when the procedures become available)
3. Procedures for updating response agencies on traffic control damages
4. Emergency access requirements
5. Variable message signs or other traveler information strategies
6. Detour routes to be used in the event of a long-term incident.

On more complex project where there is no traffic incident management in place, project staff and the contractor should meet with response agencies in the area to identify concerns and consider a full range of strategies to address these concerns. On project with multiple phases, it may be necessary to develop a plan for each phase of the project. The procedures and recommended strategies should be documented and distributed to all response agencies and construction personnel. Strategies that require implementation (e.g. signing, ITS devices, traffic management center, service patrol, etc.) should be planned and budgeted as part of the project and implemented at the start of the project. Training and follow-up sessions will be necessary to ensure that all agencies and construction personnel are familiar with the procedures in the plan. These should also be reviewed, revised, and updated as necessary throughout the life of the project.

Some of the tools that might be documented in the documentation include:

1. Incident levels and associated actions
2. List of response agencies
3. Roles and responsibilities of response agencies
4. Contact information and procedures
5. Scene management guidelines
6. Predetermined alternate routes
7. Resource information.

On any project, the minimum requirement should be to identify whether there is an existing program and determine the role of the contractor in implementing the program. Project staff or the contractor should also contact appropriate response agencies in the corridor to discuss their concerns with the proposed work zone and agree to procedures and strategies that will support traffic incident management. This communication and coordination is essential for any work zone. On more complex projects, this coordination will become more formalized and require the involvement of more stakeholders. It will necessitate a greater commitment of time and resources on the part of the contractor.

## **IMP REQUIREMENTS**

### Identity Stakeholders

In order to ensure work zones are safe and minimize the impact and delay to the traveling public, the plan should be developed in a collaborative effort with the emergency response and public safety community and incorporated into the transportation management plan. Planning for incidents that occur within work zones is a critical component for reducing delay and increasing the safety and reliability of the transportation system. Identify special events that may occur during the construction and may affect work times. Acquire special event coordinator contact information.

The regional project development section (PDS) is responsible for developing a project's TMP. The IMP should be developed by the regional PDS in coordination with the regional traffic section and Traffic Management Center (TMC).

### Costs

Determining the costs to procure and deploy certain traffic control devices and types of mitigation strategies need to be identified during the scoping of the project. At the latest, the costs should be determined with the TMP.

### Work Zone Incident Management Plan Standard Format (i.e., Incident Response Guide)

Each work zone IMP should include an incident response guide that provides a quick, in-the-field reference to response personnel. This ensures fast, effective, and consistent responses to incidents. The format listed below in Figure 1 is the standard table of contents that should be used when developing each IMP. The requirements of each section are described more in depth within this document.

**Figure 5. Work Zone Incident Management Plan Outline**

Project Summary
Checklists
TMC Checklist
Law Enforcement Checklist
Project Leader Checklist
Regional Incident Management Coordinator (RIMC) Checklist
Regional Duty Officer (RDO) Checklist
Emergency Contact Information (when it becomes available)
Alternate Routes
Available Barricade Locations for Ramp Closures
Activation of Traveler Information Systems
Normal Configuration
Operational Backups (No Incident)
Backups (Incident)
Closed Highway
Appendices
A. Alternate Route Maps (develop or insert if already available)
B. Queue Backup and Work Zone Location Maps
C. Emergency Access, Pullout and Traveler Information Equipment Location Map
D. Project Location Map
E. Traffic Volume Charts

### Project Summary

The project summary and description should be described in the IMP. It may simply be the description used in the TMP document. The project summary should describe the location and type of project, the number of construction stages including where the closures will occur and anticipated dates and special events that may affect the work zone. Also include a brief description of traffic volumes and any extraordinary circumstances that need to be accounted for.

### Checklists

Checklists are provided for use by the TMC, law enforcement, project leader, regional incident management coordinator (RIMC), and regional duty officer (RDO) in the event of an incident on the freeway/expressway system. Regular check-ins and after action reviews are recommended for all involved.

During an incident involving a work zone on the highway system, the TMC *should* follow the checklist below in order to collect the necessary information regarding the incident which occurred, contact the response team, and update the traveler information systems with appropriate up-to-date information.

#### TMC Checklist:

1. When receiving the call from law enforcement, ensure they provide the following information:
  - a. Location of incident
  - b. Whether it is located in a work zone
  - c. Affected lanes
  - d. Incident type
  - e. Approximate incident duration
  - f. Extent of backup
2. Must have immediate contact with:
  - a. RIMC when there is a full highway closure in one or both directions that is expected to last greater than two hours
  - b. RIMC whenever backups with or without an incident reach 3 miles or greater
  - c. PIO, if available
  - d. After incident and/or backup, ensure message boards are returned to lower level or normal configuration
  - e. RDO if contractor or project staff assistance is needed in a work zone

- f. SINS email sent for an incident blocking 50% or more of the highway lanes and/or a system ramp
  - g. Freeway Service Team (if available)
3. Once alternate routes are implemented, TMC will refer to the alternate route guide
4. Change traveler information in the following order:
  - a. Message boards
  - b. Message on highway advisory radio
  - c. Place 511 message if necessary
5. Regular check-ins

During an incident involving a work zone on the highway system, the responsible law enforcement agency should follow the checklist listed below in order to report the necessary information regarding the incident which occurred, identify the severity of the incident, and deploy traffic control.

#### Law Enforcement Checklist:

1. Contact dispatch to report any incident or backups and the following information:
  - a. Incident type
  - b. Location of incident
  - c. Best route to incident
  - d. Extent of backup
  - e. Establish a field command post
  - f. Whether incident is located in a work zone
  - g. Affected lanes
2. Identify incident classification
  - a. Minor – less than 30 minutes duration
  - b. Intermediate – 30 minutes to 2 hour duration
  - c. Major – duration greater than 2 hours
3. Initiate traffic control as appropriate
  - a. If traffic message boards are required, contact TMC
4. Inform media of highway incident (TIA)
5. State Patrol dispatch will contact TMC and advise the above information
6. If assistance is needed in work zone, contact TMC
7. If specialized equipment is needed in work zone, see contact list or list contacts:
  - a. Equipment type: \_\_\_\_\_ Contractor Contact: \_\_\_\_\_  
(Example: crane to move barrier wall)
  - b. At the conclusion of the incident, make appropriate demobilization notifications

The WisDOT project leader will follow the necessary steps during an incident.

#### Project Leader Checklist:

1. Project leader will contact event incident commander or State Patrol duty officer as situation warrants
2. Project leader will function as liaison for contractors
3. Project leader will contact project manager and/or project supervisor at backups of 5 miles or as situation warrants

The WisDOT regional incident management coordinator (RIMC) will follow the necessary steps during an incident.

#### RIMC Checklist:

1. RIMC will contact project leader as situation warrants
2. RIMC will contact event incident commander or State Patrol duty officer as situation warrants
3. RIMC will function as liaison for county highway departments
4. RIMC will contact DTSD regional duty officer at backups of 5 miles or as situation warrants

## 5. RIMC will perform regular check-ins

The WisDOT regional duty officer (RDO) will follow the necessary steps during an incident.

## RDO Checklist:

1. RDO will coordinate project resources with contractor or regional staff as situation warrants
2. RDO will coordinate media release as situation warrants
3. RDO will mitigate traffic displays if possible

Emergency Contact Information

This table should be a complete list of contacts that may be notified during an incident within the work zone and completed at the time of the pre-construction meeting or as soon as the contact information is known. Additional persons may be identified.

\*=Indicates number can be used 24 hours

AGENCY	CONTACT	OFFICE	CELL/OTHER
<b>TRAFFIC MANAGEMENT CENTER (TMC)</b>			
TMC	Main Number	800-375-7302*	414-227-2166 (Office)
<b>LAW ENFORCEMENT</b>			
Wis. State Patrol Emergency			
State Patrol Dispatch			
State Patrol Officers			
_____ County Sheriff			
_____ County Sheriff			
_____ Police Dept.			
_____ Fire Dept.			
_____ EMS			
<b>DOT REGION MANAGEMENT</b>			
Regional Duty Officer			
RIMC			
DOT Supervisor – PDS			
DOT Manager – PDS			
Regional Director			
Maintenance Supervisor			
Traffic Supervisor			
<b>COUNTY PERSONNEL</b>			
_____ County Commissioner			
_____ County Commissioner			
<b>PROJECT STAFF</b>			
Project Field Office			
Project Leader			
Project Manager			
<b>PRIME CONTRACTOR</b>			
Specialized Equipment Contractor			
<b>TRAFFIC CONTROL - GENERAL</b>			
General _____			
Message Boards _____			
<b>OTHER TRAFFIC/EMERGENCY CONTACTS</b>			
DOT Public Information Officer			
Freeway Service Team			
Special Events Coordinators			

Alternate Routes

If the corridor does not already have alternate routes established, project-specific alternate routes should be identified with each work zone on the highway system. Consistency in selecting alternate routes is an important aspect of the program. The following criteria provide a common starting point for evaluating potential alternate routes.

1. Use state highways whenever possible.
2. Consider long truck routes when available.
3. Avoid alternate routes with weight restrictions.
4. Avoid height restrictions imposed by bridge clearances, power lines, etc.
5. Avoid routes that require traffic to make 90-degree turns.
6. Avoid at-grade railroad crossings, especially those with a high number of trains.
7. Avoid four-way stops.
8. Select routes that carry traffic in the same general direction as the Interstate.
9. Minimize length of alternate routes.
10. Consider routes with coordinated signal timing plans or avoid routes with multiple uncoordinated signals.
11. Avoid traversing residential areas and school zones.
12. Carefully consider all routes options and closure requirements at interchanges, especially system interchanges.

Based on these criteria, a preliminary list of emergency alternate routes can be identified for freeway segments within a given study area. Potential routes should be evaluated to ensure that the roadway can handle freeway-type traffic volumes. A field review of potential emergency alternate routes should be conducted to confirm route selection. For further guidance in determining appropriate alternate routes, contact the TMC.

Provide a brief explanation of alternate routes. For example, "The preferred alternate routes for I-94 are the existing frontage roads. These provide quick access by traffic and limit the amount of adverse travel. If traffic backups extend beyond the listed access points, longer alternate routes can be implemented.

Explain alternate routes in detail below and provide alternate route maps in an appendix. For example, "For SB: Traffic can be diverted west on WIS 100 (Ryan Rd) to WIS 36, southwest on WIS 36 to US 45 to WIS 20 back to I-94. For NB: Traffic can be diverted west on WIS 20 to US 45, north on US 45 to WIS 36 to WIS 100 (Ryan Rd) and then east on WIS 100 back to I-94."

If traffic backups extend beyond the access points of the barricade locations listed, longer alternate routes can be implemented.

Provide information on who needs to be contacted for each alternate route option. For example, "Contact TMC, State Patrol, Racine County, Village of Caledonia when alternate routes are implemented. See contact list."

See appendix for alternate route map to be used for this project.

#### Available Barricade Locations for Ramp Closures

The IMP shall identify a list of the available barricade locations. During an incident, the incident commander organizes the ramp closures. Locations of barricades shall be included on the specialized equipment location map in the appendix.

Available Barricade Locations

Highway Ramp & Direction	Number of Barricades	Distance from Work Zone
<i>Ex. Hwy KR to I-94 East (SB) ramp</i>	<i>1 ramp gate</i>	<i>1 mile</i>

#### Activation of Traveler Information Systems Scenario Examples

Contact the TMC for activation of traveler information systems. Choose the sample messages below for use on traveler information devices.

##### **Normal Configuration**

Contact TMC

##### **Operational Backups (No Incident)**

*Radio Message:*

There are significant delays affecting motorists heading <direction> on <mainline highway> between <highway> and <highway> in <county> County. Motorists are encouraged to use alternate routes to avoid delays.

*Message Board # \_\_\_\_\_ at \_\_\_\_\_:*

Traffic Delay Ahead/Alternate Route Exit ##

Traffic Delay Ahead/Use Alternate Route

Delays XX Miles Ahead/Tune to AM #####

*Additional message boards can be placed along the highway to notify the motorist.*

### **Backups (Incident)**

*Radio Message:*

As of <date/time>, law enforcement is reporting that a traffic incident is adversely impacting motorists heading <direction> on <mainline highway> between <highway> and <highway> in <county> County. Motorists are encouraged to use alternate routes to avoid delays.

*Message Board # \_\_\_\_\_ at \_\_\_\_\_:*

Incident Ahead Use/Alternate Route Exit ##

Incident Ahead/Use Alternate Route

<Left/Right/Center> Lane Blocked/Expect Delays

<Left/Right/Center> Lane Blocked/Use Alternate Route

Delays XX Miles Ahead/Tune to AM #####

*Additional message boards can be placed along the highway to notify the motorist.*

### **Blocked Highway**

*Radio Message:*

As of <date/time>, law enforcement has closed <mainline highway> between <highway> and <highway> in <county> County to <direction> traffic. Motorists traveling <direction> must exit <mainline highway> and use alternate routes.

*Message Board # \_\_\_\_\_ at \_\_\_\_\_:*

Incident Ahead Use/Alternate Route Exit ##

Highway Closed Ahead/Exit at <highway>

Highway Closed Ahead/Follow Alternate Route

Highway Closed Ahead/Tune to AM #####

*Additional message boards can be placed along the highway to notify the motorist.*

Regularly review and revise the IMP to monitor current practices, identify and resolve issues to minimize frequency of incidents and severity. Assign an individual(s) on complex projects with the responsibilities of ensuring the IMP is up to date.