National Transportation Safety Board
Office of Highway Safety
Washington, DC 20594

HWY24MH013

HIGHWAY FACTORS ATTACHMENT

Traffic Incident Management System Guidelines

(15 Pages)

TRAFFIC INCIDENT MANAGEMENT SYSTEM (TIMS)

GUIDELINES

1. Purpose

A. Ensure that an Ohio Turnpike and Infrastructure Commission (OTIC) Guideline exists to manage traffic backups and travel delays.

B. Ensure that a flexible and adaptable system exists to effectively provide the most efficient and safe travel for Turnpike customers.

2. Scope and Application

A. Establishes a graduated response operational plan to manage traffic backups and/or travel delays, beginning with the initial notification and continuing through conclusion of the event.

B. Defines the inter-departmental coordination to facilitate the delivery of assistance and communications to mitigate a traffic backup and/or travel delay.

C. Assigns specific functional responsibility to the appropriate OTIC departments and contracted entities.

3. Notifications

A. The OTIC Communications Center will notify OTIC personnel based on the current Incident Notification List (INL).

B. The TIMS Coordinator will update the Incident Management Team (IMT) as situation change or information becomes available.

4. Definitions

A. TRAFFIC ADVISORY: This is the 24-hour advanced notification is issued to key OTIC personnel when traffic delays are anticipated

B. TRAFFIC WATCH: This is the initial alert is issued to key OTIC personnel when normal traffic flow is impeded.

C. TRAFFIC WARNING: This is the alert issued to key OTIC personnel when a traffic backup exceeds 3 miles and is causing a travel delay greater than 15 minutes AND this condition is expected to continue or become more severe.

Traffic Warnings may also be issued immediately upon notification of a traffic incident that is expected to cause significant traffic backups and/or travel delays.

D. TIMS Coordinator: Assist all involved in clearing the roadway with verification, response, and clearance times to expeditiously remove a motor vehicle crash or incident from the roadway, resulting in a safer roadway environment for both incident responders and motorists. Typically, this position will be held by the Traffic Engineer or their designee. In the absence of the Traffic Engineer, the Maintenance Engineer will serve as the TIMS Coordinator.

E. Incident Management Team (IMT): A standing team of trained personnel from various operational departments activated to support incident management. The IMT will provide the command-and-control infrastructure that is required to manage the logistical, planning, operational, safety and public relations issues related to the incident/emergency. The size of this team is intentionally small to facilitate prompt decisions and actions. The IMT consists of the following personnel, or their designee:

   a. Traffic Engineer (TIMS Coordinator)
   b. Executive Director
   c. Chief Engineer/Deputy Executive Director
   d. Maintenance Engineer
   e. Safety Services Manager
   f. Safety Operations Supervisor
   g. Director of Marketing & Communications
   h. Director of Toll Operations
   i. Director of Service Plaza Operations
   j. OSHP Liaison

   The IMT is responsible for requesting additional personnel for the Communications Center and/or Customer Service Representatives.

   In addition to the IMT, the following personnel are also provided communications related to incident management and decisions by the IMT:

   a. Customer Service Center Manager
   b. Chief Financial Officer
   c. General Counsel

F. Traffic Diversions: The issuance of a Traffic Warning shall prompt discussions amongst the TIMS Coordinator and on scene OTIC Personnel to determine the viability of diverting traffic off the mainline, which Toll Plazas are best suited to handle the diverted traffic, etc. (Note: Regular tolls are collected during diversions.)

G. Toll Free Operations: Toll free exiting of traffic must be approved by the Executive Director or designee prior to implementation. In general, allowing vehicles to exit the Turnpike without paying tolls will only be used for short durations to ease extreme traffic congestion. Regular toll collection shall be resumed as soon as traffic conditions will allow.

H. OTIC Incident Commander: Provides on-scene communication to the OTIC Communications Center regarding the details of the incident. During normal hours, this is typically the Section Foreman (or an Assistant Foreman in their absence), until the arrival of the Division Superintendent. As the OTIC Communications Center dispatches appropriate agencies (EMS, Fire, DVS, EPA, etc.), they will coordinate with the OTIC Incident Commander to ensure efficient access to the scene. The OTIC Incident Commander also provides information to the TIMS Coordinator periodically to keep the IMT informed of on-scene updates.

5. Operational Guidelines

A. Anticipated Traffic Delays: Twenty-four (24) hours prior to an anticipated traffic delay, the Traffic Engineer or designee shall notify the Communications Center Operations Supervisor of the location(s), activity(ies), and time(s). Notifications of anticipated traffic delays shall prompt the following actions:

a. Communications Center shall issue a Traffic Advisory to key OTIC personnel.

b. The Traffic Engineer or designee shall ensure the pre-positioning of the Portable Changeable Message Boards (PCMB) prior to the affected location(s).

B. Traffic Incidents: After the Communications Center is first notified of a traffic incident, the highest-ranking OTIC Maintenance person on the scene shall update the OTIC Communications Center regarding the traffic status (i.e. Estimated time to travel through backup, location of backup, stopped traffic, backup has cleared, etc.) at regular 15 minute intervals until the backup has cleared. Updates may also be provided by the Ohio State Highway Patrol (OSHP). The OTIC Communications Center shall issue updates to key OTIC personnel, which will generally be classified as a TRAFFIC WATCH or TRAFFIC WARNING, as follows:

a. TRAFFIC WATCH: ***{Backup < 3 Miles, Delay < 15 Minutes}***
An initial alert is issued to key OTIC personnel when normal traffic flow is impeded. Additional Traffic Watch notifications may be issued to provide updates when the incident does not escalate to the WARNING level.

b. TRAFFIC WARNING: ***{Backup > 3 Miles, Delay > 15 Minutes}***
This alert is issued to key OTIC personnel when a traffic backup exceeds 3 miles and is causing a travel delay greater than 15 minutes AND this condition is expected to continue or become more severe. Traffic Warnings may also be issued immediately upon notification of a traffic incident that is expected to cause significant traffic backups and travel delays. The issuance of a Traffic Warning shall prompt the following actions:

i. OTIC IMT determines the necessity of activating the Incident Management Center (IMC)
ii. Traffic Diversion discussions between Maintenance and Toll

iii. Public notifications issued by the Marketing & Communications Department
iv. OTIC Communication Center will provide notification to Ohio Department of Transportation's Statewide Traffic Management Center (ODOT TMC). See Appendix B for contact information.
v. Consider establishing a Staging Area for Disabled Vehicle Service (DVS) provider and Emergency Personnel (Fire, Ambulance, etc.).

c. Communications: To facilitate an expedient resolution of incidents, it is imperative the following Communication Guidelines be respected:
i. Radio communications with field personnel are restricted to IMT only
ii. Phone communications with field personnel are restricted to IMT only
iii. IMC access is restricted to IMT only

C. Coordination of External Agencies: If the subject incident has the potential to affect the following external agencies then the Radio Room shall contact them. See Appendix B for contact information.
a. PA Turnpike 1-717-939-9551 ext. 8
b. IN Turnpike 1-574-651-2480
c. ODOT 1-614-387-2438
d. County Sheriff
e. Other Police Departments

D. Protecting the back of the Queue
During traffic backups an IRV, Law Enforcement Officer, Maintenance Personnel or Zone Person shall maintain a 1000' distance behind the rear of stopped traffic while moving forward or backward (as needed) to maintain the proper distance. They shall utilize all necessary emergency lighting, message board or arrow board and remain off the roadway when possible.

E. Media Inquiries
The Marketing and Communications Director, alongside the OSHP Public Information Officer, will handle all media requests related to the incident. The Executive Director will only provide written statements.

6. Traffic Conditions and recommended Action Plans

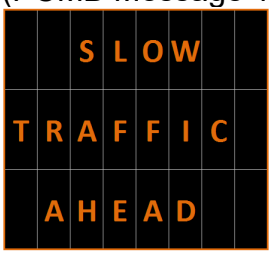
Each incident is unique and dependent on the specific situation; therefore, the following Action Plans are intended for general guidance only.

A. Less Than 3 Mile Traffic Backup (beyond first arrow board OR incident location):

a. TRAFFIC WATCH issued by Communications Center

i. PCMB on mainline prior to backup, typical message:

[SLOW TRAFFIC AHEAD] [BE PREPARED TO STOP]
(PCMB Message 1)



b. Maintenance or Construction zones causing traffic backups should be reduced if possible

c. *A TRAFFIC WARNING may be issued if conditions require it.*

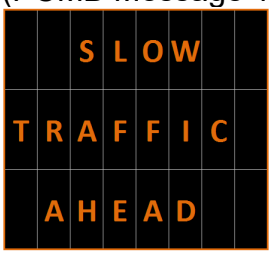
B. <u>Greater Than 3 Mile Traffic Backup</u> (beyond first arrow board OR incident location):

a. *A TRAFFIC WATCH may remain in place based on status update from OTIC Roadway personnel or OSHP*

b. TRAFFIC WARNING issued by Communications Center

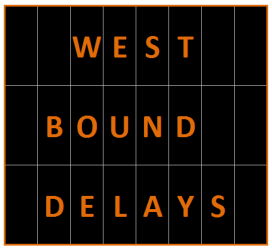
c. Implement "TRAFFIC WARNING" Operational Guidelines

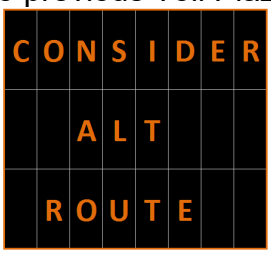
i. PCMB on mainline prior to backup, typical message:
[SLOW TRAFFIC AHEAD] [BE PREPARED TO STOP]
(PCMB Message 1)



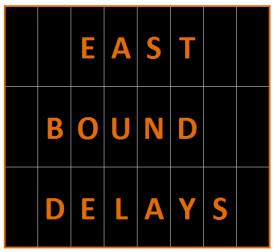
d. Mobilize additional PCMBs on mainline and within Toll Plazas to provide additional advance notification to customers and for potential traffic diversion

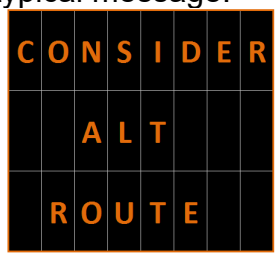
i. PCMB on mainline prior to previous Toll Plaza, typical message:





ii. PCMB within Toll Plaza, typical message:





7. Traffic Diversions

A. Diversion Process

Traffic incidents requiring diversions are unpredictable, unique occurrences which restrict traffic flow. They are unplanned events such as emergencies and crashes, and each must be addressed individually.

Emergencies affecting the health and safety of the traveling public can occur that necessitate action on OTIC's part before all the necessary equipment and personnel can be gathered to establish Temporary Traffic Control (TTC) per the OMUTCD, OTIC and ODOT Standard Construction Drawings (SCD) and Traffic Engineering Manual (TEM). Circumstances such as these call for judgment in regard to the initial TTC devices deployed (based on availability) when using less than what is desirable. As soon as practical, devices and equipment that comply with the OMUTCD should be placed to control traffic.

OMUTCD Section 6I.01 "*For traffic incidents, particularly those of an emergency nature, TTC devices on hand may be used for the initial response as long as they do not themselves create unnecessary additional hazards.*"

OMUTCD Section 6I.02 "*Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.*

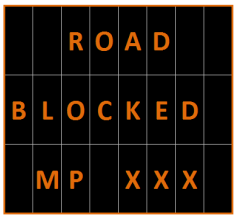
Guidance:
02 If the traffic incident is anticipated to last more than 24 hours, applicable procedures and devices set forth in other Chapters of Part 6 should be used."

OTIC personnel will implement either a voluntary or mandatory diversion based on the expected closure time.

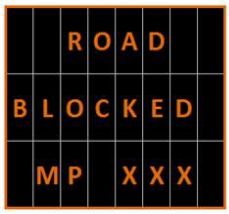
Refer to the OTIC Playbook for specific diversion route details.

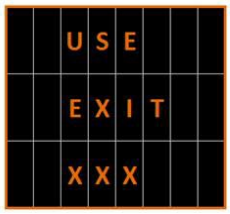
a. Voluntary Diversion (Turnpike will be closed for a short period of time, Turnpike is not closed but motorists are encouraged to use next exit, period of low traffic volume and sufficient visibility, etc.)

i. On the PCMB prior to the Toll Plaza upstream of the closure point the Communications Center will implement the following message:



On PCMB prior to the one above the Communications Center will implement the following message:

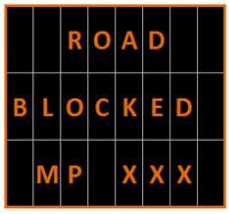


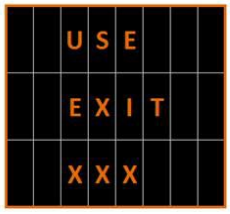


Note: If available, the above message should be placed on additional PCMBs prior to the two noted above.

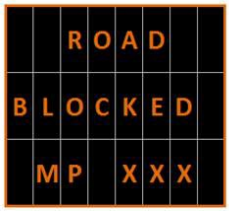
b. Mandatory Diversion (Turnpike will be closed for an extended period of time, period of high traffic volume, low visibility, etc.)

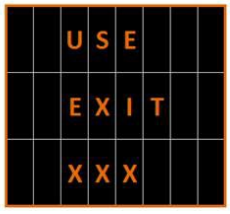
i. The Communications Center will implement the following message on the PCMB prior to the TP upstream of the closure point.





The Communications Center will implement the following message on the PCMB prior to the one above.





Note: If available, this message should be repeated on additional PCMBs prior to the two noted above.

ii. Prior to Closing:

Once a decision is made to implement a mandatory diversion all effort should be made to contact the affected political subdivision(s) (i.e. city, village, township, county sheriff, ODOT TMC, etc.) to notify them of the impending closure. Also, to check and make sure the facility we are diverting traffic on to is not closed due to weather, being detoured, etc.

OHIO TURNPIKE DETOUR incident management signs shall be used placed along the diversion route to help guide motorists.

TIMS Coordinator (or designee) should contact all long combination vehicle (LCV) companies to notify them of the diversion.

iii. Implementing the Closure:

The following guidelines are based on free flow traffic at the exit point. All effort should be made to implement the closure with the assistance of law enforcement.

Implementation requires a minimum of two maintenance vehicles with arrow boards. The Incident Response Vehicle (IRV) or available maintenance vehicle should be placed on the inside shoulder at the closure point.

The closure procedure begins by erecting ***"EMERGENCY SCENE AHEAD"*** sign(s) approximately 2 miles upstream of the exit point. If possible, one sign should be placed on each side of the live traffic lanes. Place a flare(s) at the base of each sign. This will help draw attention to the sign.

At this time the maintenance vehicles with arrow boards shall enter the traffic stream and create a rolling roadblock.

Approaching the exit point the maintenance vehicles should stagger to guide motorists towards the exit ramp; however, the vehicles should be careful to not allow motorists to pass between them.

The IRV or maintenance vehicle on the inside shoulder should place cones or flares across the Turnpike in a tapered line to guide motorists towards the exit point. As traffic starts to exit, the

arrow boards and vehicles can be placed on the backside of the cones/flares.

Once traffic is effectively exiting the Turnpike, law enforcement, the IRV or available maintenance vehicle should sit 1000' prior to the back of the traffic queue to warn motorists of the diversion.

It is recommended that all response vehicles be positioned on the same side of the roadway even though the freeway is closed. This will serve to facilitate quicker lane openings as the incident de-escalates.

iv. Screening Motorists:

Depending on the location of the diversion it may be helpful to have Toll Plaza Personnel screen entering motorists to keep them from traveling towards the diverted area. Contact Tolls to discuss the limits of the screening effort.

When screening is in effect motorists should be given the option of not entering the Turnpike by u-turning at the Toll Plaza. This excludes LCVs. LCVs entering the Turnpike should be given the following options:

1. Travel away from the diversion or
2. Towards the diversion with the understanding that they will have to wait until the road is reopened.

Toll Collectors should supply motorists with preprinted diversion maps. Refer to OTIC Playbook Appendix for preprinted diversion maps.

The dynamic message signs (DMS) located above the toll plaza lanes are capable of displaying messages to assist in the screening process. The Director of Toll Operations shall utilize the DMS as necessary to assist in screening motorists.

B. Trapped Traffic

Anytime a full freeway closure occurs, consideration must be given to managing and addressing traffic trapped between the incident and the closure point. Depending on the expected length of the closure, the IMT may need to address this issue. Clearing trapped traffic is difficult. It may take several hours before any of these methods may be implemented. The method chosen depends on many variables.

The following are examples of methods to deal with trapped traffic:

a. Reversing Motorists
Depending on incident location, traffic may be reversed and sent back to the closest exit. Coordination at the exit ramp is needed to alternate between diverted traffic and reversed traffic. Commercial traffic may have difficulty with this option. It is imperative that the speed of the reversed traffic is controlled with a rolling road block or a law enforcement escort.

b. Utilizing Crossovers
   i. U-turning Motorists
   Depending on the location, traffic may be sent back to the previous exit by U-turning them through a median crossover. For short term closures commercial vehicles should not be included in this maneuver.

   In two-lane and three-lane sections opposing traffic should be reduced to a single lane using standard lane closure techniques or periodically stopped.

   If the crossover is too close to an exit ramp it may be difficult for U-turning traffic to get up to speed and cross lanes to utilize the exit ramp. If this is the case, then traffic traveling in the opposing direction of the stopped traffic will need to be held periodically to allow for U-turn movements of the stopped vehicles.

   ii. Wrong Way Traffic (Signal 100)
   Depending on location, traffic may drive through one crossover, driven single file the wrong way along the Turnpike past the incident, then crossed back over through the next available crossover. Opposing traffic needs to be stopped during this operation.

The IMT will ask on scene personnel if there are any eligible crossover locations available to perform the maneuvers described above.

c. Utilizing Back Gates / Maintenance Gates
Traffic may be allowed to exit the Turnpike through a Service Plaza back gate or a Maintenance Gate. The IMT will ask on scene personnel if there are any eligible back gate and/or maintenance gate location. See Section 4G for guidance on “Toll Free Operations”.

C. Diversion Limitations
Diversions at the following locations may be difficult to implement due to geometric reasons or Automatic Toll Payment Machines (ATPM):

Limitations are listed in Appendix A.

D. Discontinuing a Diversion
Communications Center will update key OTIC personnel and ODOT TMC of termination of backup, re-opening of mainline roadway, etc.

8. PCMB Assistance

A. Scope

When multiple events or unusual incidents are occurring on the Turnpike that inundates the Communications Center staff the TIMS Group may assist with programming of the Portable Changeable Message Boards (PCMBs). This permits the Communications Center Staff to remain focused on the events and coordination of the incidents. In addition, it will provide an efficient method to notify Commission customers, personnel, incident responders and Disabled Vehicle Service operators

B. PCMB Transfer

a. The TIMS Leader will confer with the on-call Communications Center Supervisor. (I.e. Safety Services Manager or Operations Supervisor) about the situation(s) and determine if PCMB transfer should occur for the subject incident.

b. Once the PCMB transfer is initiated the on-call Communications Center Supervisor will notify the Communications Center of the transfer.

c. The TIMS Leader will determine the PCMBs to activate and messages to display. (I.e. Schedule 21, 22, etc.)

d. The TIMS Leader shall notify key OTIC personnel of the transfer.

C. PCMB Assignment and Activation

a. The TIMS Leader may assign the PCMB programming to an Incident Management Team (IMT) member or multiple personnel and provide the PCMB locations and messages to display.

b. Upon completion of the PCMB programming, the assigned IMT personnel shall notify the TIMS Leader of the PCMB status. (I.e. 11W Activated, 67.6WB, 14W Inoperable 71.7WB, etc.)

c. When activation is completed, the TIMS Leader shall notify the on-call Communications Center Supervisor of the situation. The on-call supervisor shall notify the Communication Center of the PCMB status

d. Any change in PCMB messaging during the events shall only be completed by the TIMS leader or assigned IMT personnel the task.

D. PCMB Deactivation

a. Deactivation of the PCMBs shall be initiated by the TIMS Leader. Deactivation will be assigned to either the Communications Center staff or IMT Personnel.

E. PCMB Responsibility

a. The TIMS leader will confer with the on-call Communications Center Supervisor about the situation(s) and determine if PCMB responsibility should be transferred back to the Communications Center.

b. Once the PCMB transfer is initiated the on-call Communications Center Supervisor will notify the Communications Center of the transfer.

9. Extended Incidents

When a major incident requires the Turnpike to be closed for an extended period of time or there are multiple incidents along the Turnpike the following may occur:

A. Communications Center
Additional Radio Operator(s) should be called in to assist with communications. The Safety Services Manager will coordinate this effort.

B. Customer Service
Outside of normal business hours it may be necessary to call in Customer Service personnel to assist with the influx of customer calls. This would allow the Communications Center personnel to deal with the incident(s). The Customer Service Center Manager will coordinate this effort.

C. OMUTCD
If the diversion is expected to last more than 24 hours all effort should be made to install the traffic control devices shown in the OTIC Incident Management Playbook.

D. PCMB Location
If possible, place a PCMB(s) on the intersecting street to alert motorists of the closure prior to entering the Toll Plaza.

E. Wireless Emergency Alerts (WEA)
The Maintenance Engineer and Director of Marketing and Communications are the turnpike's designated WEA personnel and have the training and contacts necessary to request utilization of the State of Ohio's WEA system. Upon determination by the IMT that the incident requires the utilization of the WEA, the Maintenance Engineer or Director of Marketing and Communications shall make the request.

Appendix A

Diversion Limitations

TP 13 WB	The WB approach has geometric challenges. Vertical curve on approach reduces sight distance.
TP 13	Untolled/Unstaffed Plaza
TP 25	Untolled/Unstaffed Plaza
TP 34	**This interchange is closed from 4/1/24 – 9/1/24** Untolled/Unstaffed Plaza
TP 39	Untolled/Unstaffed Plaza
TP 52 EB	The EB approach has geometric challenges. Horizontal curve on approach reduces sight distance.
TP 52	ATPM 10-10:30pm to 6-6:30am
TP 59	ATPM 10-10:30pm to 6-6:30am
TP 64	ATPM 10-10:30pm to 6-6:30am
TP 71	None
TP 81	ATPM 24 hours
TP 91	ATPM 10-10:30pm to 6-6:30am
TP 110	ATPM 10-10:30pm to 6-6:30am
TP 118	ATPM 10-10:30pm to 6-6:30am
TP 135 WB	The WB approach has geometric challenges. Vertical curve on approach reduces sight distance.
TP 135	ATPM 24 hours
TP 140 WB	The WB approach has geometric challenges. Horizontal and vertical curve on approach reduces sight distance.
TP 140	ATPM 7pm to 6am
TP 142 EB	The EB approach has geometric challenges. Horizontal and vertical curve on approach reduces sight distance.

TP 142 ATPM 10-10:30pm to 6-6:30am

TP 145 EB The EB approach has geometric challenges. Horizontal curve on approach reduces sight distance.

TP 151 None

TP 152 WB The WB approach has geometric challenges. Horizontal and vertical curve on approach reduces sight distance.

TP 152 ATPM 10-10:30pm to 6-6:30am

TP 161 EB The EB approach has geometric challenges. Horizontal curve on approach reduces sight distance.

TP 173 None

TP 180 ATPM 10-10:30pm to 6-6:30am

TP 187 None

TP 193 ATPM 10-10:30pm to 6-6:30am

TP 209 ATPM 10-10:30pm to 6-6:30am

TP 215 Untolled/Unstaffed Plaza

TP 216 Untolled/Unstaffed Plaza

TP 218 None

TP 232 Untolled/Unstaffed Plaza

TP 234 WB The WB approach has geometric challenges. Horizontal curve on approach reduces sight distance.

TP 234 Untolled/Unstaffed Plaza