
Traffic Incident Management Plan

Design Manual

Chapter 9

Traffic Control

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Traffic incident management (TIM) plans are developed to ensure the safety and security of Iowa's transportation network. All traffic critical projects require a TIM plan assessment to determine the appropriate level of effort needed to ensure adequate incident response. This can range from a TIM Plan for use only during construction, to a full review and plan with the Multi-Discipline Safety Team (MDST).

TIM plans contain traffic management techniques with the goal of enhancing the safety of the immediate area surrounding the incident, allowing for quicker clearance times and ensuring the safety of on-scene emergency responders as well as the traveling public. The ultimate goal is to reduce incident clearance time and return the roadway to a normal state of operations. This not only reduces queue lengths, it reduces the risk of secondary incidents.

The goals of TIM planning include:

- Ensuring the safety of on-scene emergency responders.
- Enhancing the safety of the immediate area surrounding the incident, allowing for quicker clearance times.
- Reducing queue lengths and secondary incidents.
- Managing emergency vehicle lighting.
- Improving emergency traffic control procedures.
- Quickly deploying and implementing pre-planned diversion routes.
- Coordinating and ensuring early communication between emergency responders and the traffic management center.
- Coordinating between dispatch and response activities and coordination with local agencies.

TIM plans are created by many stakeholders including city/county/state engineers, city/county/state law enforcement, first responders, public works, communication centers (emergency and traffic), towing and cleanup services, secondary road authorities, and the DOT. These groups work together to have a plan in place for each responder to ensure all bases are covered in the event of a traffic incident. Having pre-defined roles eliminates initial coordination timing and helps minimize the overall length of time capacity restrictions are in place on the roadway.

TIM Plan Assessment

The Office of Traffic Operations should be consulted to determine the level of effort needed to ensure proper TIM plan development and implementation whenever any of the following conditions exist:

- The number of through lanes is reduced,
- Construction activities close ramps or restrict access,
- Lanes are restricted so a disabled vehicle blocks passage for all vehicles in a single direction, i.e. TBR on both sides of a single lane (traffic in a chute), contra-flow design with no access, etc.,
- Adjacent projects may impact incident management diversion routes, or
- Construction activities close or restrict access to diversion route.

Permanent TIM plans exist for most interstate highways throughout the state. These TIM plans and associated diversion routes can be viewed at:

<http://iowadot.maps.arcgis.com/apps/webappviewer/index.html?id=26be7f4e18b644cda6a94fd831d4ddc8>

These plans are modified, or new plans created, for each significant traffic staging change during a roadway construction or maintenance project.

The Office of Traffic Operations will develop or modify the TIM plan and review with the Multi-Discipline Safety Team as required.

Diversion Route Plan

Plans are developed to implement diversion routes for incidents on a stretch of roadway which result in traffic delays exceeding 30 minutes. Delays of this magnitude cost both time and money to Iowa's economy, and the national economy. According to research performed by the FHWA, a 30 minute lane blockage equates to two hours of extra delay for travelers.

Diversion Route Signing Improvements

TIM plans typically provide for diversion routes when it becomes necessary to divert traffic in response to an incident. Once established, these routes are not always signed. The presence of a construction work zone on the major road may increase the risk and likelihood of having to use these diversion routes. Consideration should be given to reviewing and providing or enhancing any diversion route signing in response to this increased risk.

Additional PDMS and CCTV on Diversion Route

Construction work zones often provide increased risk of a traffic incident causing increased impact on traffic flow and safety. For example, if the work zone staging decreases the size of shoulders resulting in disabled vehicles impeding or blocking traffic, additional considerations may be indicated to mitigate this additional impact. One of these considerations is adding additional intelligent work zone (IWZ) devices such as Portable Dynamic Message Signs (or PDMS, see Section [9C-5](#)) and closed circuit TV (CCTV) cameras to incident diversion routes to facilitate management of traffic during traffic diversion. Refer to the Office of Maintenance [I.M. 1.255](#) for more on incident management.

Traffic Monitoring with Incident Response

Each TIM plan includes provisions that are aimed at improving emergency traffic control procedures with the goal of quick deployment of responders and timely implementation of pre-planned diversion routes. Managing emergency vehicle lighting is included in incident plans to reduce the distraction and possible blinding effect emergency vehicle lighting may present. TIM plans also include emergency traffic control procedures to ensure that the incident response itself does not create a situation that results in secondary crashes and incidents.

Traffic monitoring with incident response provides 24 hour continuous monitoring of traffic control devices and incident response for emergency situations on projects during complex traffic situations. The vehicle operator traverses the project throughout the entire traffic control zone. The operator:

- Re-erects, repairs, or replaces defective devices.
- Keeps all travel lanes and shoulders available for use by assisting motorists or removing obstructions promptly and safely.
- Summons further assistance as needed.
- Provides notification to Iowa DOT Transportation Management Center (TMC) and emergency responders (when appropriate) when events occur in the work zone that involve traffic crashes and/or traffic queuing events.

Communications Plan

Each TIM plan includes a communication plan for coordinating and ensuring early communication between emergency responders and the traffic management center, as well as coordinating between dispatch and response activities and coordination with local agencies. These communication plans, procedures, and protocols are essential to ensure that all stakeholders are well informed and engaged in providing the appropriate response to each incident.

Chronology of Changes to Design Manual Section: 009F-008 Traffic Incident Management Plan

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