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Emergency Detour Route



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Guideline and Best Practices

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Introduction

Ontario's Highways carry over 8 million drivers and 9 million registered vehicles. Thousands of businesses rely on highways to move more than \$1.2 trillion worth of goods to domestic and international markets annually. The Ministry of Transportation believes that a safe, efficient and seamlessly-integrated transportation system is a key component to economic prosperity and growth.

Moving people and goods across the province safely and efficiently is a considerable challenge. While Ontario maintains an impressive safety record in North America, incidents occur on provincial highways resulting in delays to the transportation of goods and services and impacts to the driving public.

To reduce these delays and impacts, the Ministry of Transportation (MTO), Ontario Good Roads Association (OGRA), Ontario Provincial Police (OPP), and representatives from various municipalities in Ontario comprised a task force to develop Guidelines and Best Practises that will allow a safe and orderly control of traffic on Emergency Detour Routes.

This document is the result of significant efforts and contributions from these stakeholders. With their cooperation, experience and expertise, these Guidelines and Best Practices were developed to provide guidance to road authorities and affected agencies in the development and operation of Emergency Detour Routes (EDR).

Given the diversity in our large province, the information contained within this document may not encompass every situation that exists. It is expected that further cooperation, negotiations and discussions will be required to successfully identify and operate EDR's.

This document is maintained by:

Ministry of Transportation
Engineering Standards Branch - Traffic Head Office
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1.0 PURPOSE

To assist in the identification and management of alternate traffic routes and provide guidance, co-ordination, and accurate information to the affected jurisdictions regarding the implementation of Emergency Detour Routes (EDR).

2.0 SCOPE

These guidelines will apply to all effected agencies in situations where the Ontario Provincial Police (OPP) must make an emergency full closure on a provincial highway and activate the agreed detour routes through the affected municipality. These guidelines will address the selection and use of alternate routes, traffic control requirements, responsibilities and transportation limitations within the routes of travel.

The EDR Guidelines and Best Practices is considered to be a "living document" that should be reviewed and updated as required - at least every two years.

At this time, the EDR Guidelines and Best Practices does not include specific details regarding a highway closure as a result of a major evacuation or for prolonged capital construction projects with identified detour routes.

3.0 DEFINITIONS

Closures, Long-Term: Anticipated to last longer than 5 hours.

Closures, Medium-Term: A closure anticipated to last longer than a Short-Term Closure (see above) yet under five hours.

Closures, Short-Term: Anticipated to be between one half to one (0.5 – 1.0) hour in duration.

Detour Route(s): Categorized to conform to a medium or long-term closure. Utilizes provincial highways, primary regional roads and city streets. There may be a need for multiple detour routes through some jurisdictions.

EDR: Emergency Detour Route – a route defined by the road authority through their jurisdiction that will be signed for use by detoured traffic

Local Police Services: Relates to the geographical boundary under which Police Services serve the underlying jurisdictions. Specifically related to a Regional Police Service, Municipal Police Service and in cases where these entities do not exist, refers to the Ontario Provincial Police.



MTO: Ministry of Transportation

Municipalities: Incorporated Cities, Towns, or urban areas within a Regional Municipality, County or District.

Municipal Road Authority: The various categories of municipalities has been reduced to three under the new Municipal Act; upper-tier municipalities within a two-tier system, lower-tier municipalities within a two-tier system and single-tier municipalities – those that are not part of a two-tier system.

OPP: Ontario Provincial Police

4.0 PLANNING ASSUMPTIONS

- 4.1 Recommendations established for the EDR have been developed to be flexible so that the same principles and guidelines can be applied to road closures for reasons other than those presented in this document.
- 4.2 A prolonged closure of the highway and the detouring of traffic onto alternate routes may cause impacts on the detour route and adjoining roadways. The designated detour routes may become severely congested or impassable due to the detoured traffic.
- 4.3 Implementation of the detour routes may have an adverse impact on accessibility to healthcare, hospital, transportation, and educational facilities in and around the detour routes. In addition economic, lodging and traffic related issues will also need to be monitored and addressed depending on the severity and status of the closure.
- 4.4 In areas with larger populations that encompass an EDR and provincial highway, closures will have a greater impact.
- 4.5 The extent of delays during a road closure depend on several factors such as time of occurrence, severity of the incident, weather conditions, location of the incident, construction activities, and the possibility of secondary incidents resulting in additional closures.
- 4.6 A set procedure for emergency reporting and communicating is essential to maximize the sharing of vital information by all levels of emergency services and support agencies and between jurisdictions. A co-ordinated communications process is also essential to ensure that consistent actions and accurate information is being provided to all agencies and to the public. In some cases, there may be duplication of contacts which is acceptable as a contingency measure provided the information is consistent.
- 4.7 Regular and constant communication by the same individuals during a closure is important to ensure information relayed to the media/public is consistent. As



well, repeated/regular notification is often required for drivers to fully understand all the information. MTO will make use of intelligent transportation systems to inform the general public of updates and closure information as appropriate.

- 4.8 The Municipal road authority may request the OPP to suspend the detouring of traffic from the highway to assist in clearing congestion and maintaining a safe flow of traffic through their jurisdiction.
- 4.9 The implementation of the EDR will affect multiple jurisdictions and agencies within each of those jurisdictions. There is a critical need for co-ordination of communication and resources between jurisdictions.

5.0 BEST PRACTICES

- 5.1 The legal authority to close a provincial highway rests with the OPP. The decision to close a provincial highway shall be at the sole discretion of the Ontario Provincial Police (OPP). If necessary, the decision to close the highway may involve consultations with other emergency service agencies (ie. Fire, MTO, etc.) responding to the highway incident.
- 5.2 The appropriate Local Police Service (or municipality if no Local Police Service exists) should be advised by the OPP when a decision is made to activate the EDR.
- 5.3 When implementing the EDR, OPP shall ensure that the appropriate agencies have been notified prior to opening and directing traffic from the highway onto the EDR. Affected agencies must recognize that drivers may choose the EDR in advance of any notification by the OPP.
- 5.4 The OPP is responsible for co-ordinating communication between existing police service agencies during emergency closures.
- 5.5 The EDR shall be activated when the OPP determines there is a need for a medium or long-term closure. Short-term closures will not require initiation of the EDR as it is anticipated that it would take less time to clear the highway closure than it would take to activate the EDR, detour traffic around the closure and deactivate the EDR. Note that a short-term closure does not preclude the use of the EDR.
- 5.6 Oversize/overweight loads travelling under permit have a route defined in their permit application. Therefore, they are not permitted on any other route, including an EDR. OPP will assist in the enforcement by requiring these loads to remain on the highway. Road User Safety Division of the MTO may also be considered as a contact to provide assistance with enforcement.
- 5.7 The detouring of traffic from the highway onto the EDR shall be the responsibility of the OPP. Discussions in the preparation of the EDR should review the



resources available to assist the OPP. (ie. Municipal staff, MTO staff, Maintenance Contractors, etc).

5.8 Additional detour routes should be utilized to:

- provide alternatives for long-term closures as identified in the planning stages
- act as a back-up route when initial routes are not available or congested

5.9 Affected agencies should conduct emergency operations in accordance with their established procedures. The use of an EDR should form part of these procedures and should not impact those pre-determined mandates.

5.10 All detour signs placed after December 31, 2003 should be manufactured and installed in accordance to the Ministry of Transportation EDR sign policy, to increase consistency and aid in motorist recognition of EDR signs throughout the province.

5.11 The municipal road authority should be responsible for determining the need to temporarily change their traffic signal timings and signs along the EDR or within their road network. This should be determined/discussed as an EDR is being selected.

6.0 ACTIVATION OF THE EDR

6.1 The legal authority to close a provincial highway rests with the OPP. The decision to close a provincial highway and to initiate the EDR shall be at the sole discretion of the Ontario Provincial Police (OPP). If necessary, the decision to close the highway may involve consultations with other emergency service agencies (ie. Fire, MTO, etc.) responding to the highway incident.

6.2 When activating the EDR, OPP shall ensure that the appropriate agencies have been notified prior to opening and directing traffic off the highway and onto the detour routes.

6.3 Activation of the EDR takes place when:

- An incident results in the full closure of lanes in either one or both directions of the highway; and
- The duration of the closure is anticipated to extend beyond a short-term closure.

6.4 The above conditions may result when one or more of the following occur.



- A traffic incident causing personal injury and/or a fatality. For this condition, the highway is generally closed for an extended period of time.
- A traffic incident requiring the closure of all available lanes to ensure the safety of emergency services personnel, clean up crews or injured parties.
- A traffic incident requiring the closure of lanes to allow for the investigation of the incident and evidence protection.
- A traffic incident resulting in debris over the roadway or a spill of materials.
- An incident occurring on the highway requiring police crime investigation.
- Emergency repair of the highway facility or structures.

7.0 FACTORS TO CONSIDER WHEN AN EDR IS ACTIVATED

Depending on the nature of the closure and the highway being closed, it may not be necessary to implement all traffic elements of the EDR. At the initial stages of the incident, an assessment is required by the OPP to determine the severity of the incident and traffic elements to be implemented. The anticipated duration of the highway closure should be regularly reviewed and may result in different traffic elements being implemented throughout the duration of the closure.

Key factors to consider when the EDR is activated may include:

- 7.1 OPP to close the highway at an appropriate interchange/intersection prior to the incident. If the nearest major interchange/intersection is not acceptable due to a secondary incident, poor diversion routing, construction, or other unforeseen circumstances, the closure point should be moved back to an appropriate interchange/intersection.
- 7.2 If EDR signs are the “flip down” type, discussions are required between EDR participants to determine which resources should open EDR signs located on roadways and ramp terminals.
- 7.3 OPP resources should establish a communications link with local police service agencies, if one exists, to ensure a co-ordination with municipal road authorities. Prior to directing traffic on the EDR, OPP will request confirmation from local police services that the “flip down” EDR signs have been opened, any necessary additional signs have been placed, and personnel (if necessary) are stationed on roadways other than provincial highways.
- 7.4 OPP resources should divert and direct traffic from the highway to the agreed EDR detour routes.



- 7.5 OPP resources should restrict access to the closed highway at the first interchange/intersection immediately upstream of the incident. Additional access restrictions at further preceding interchanges/intersections or locations may be required to reduce queues on the closed highway.
- 7.6 Municipal staff, MTO and OPP resources should provide regular updates regarding the condition or status of an EDR. These updates should provide information regarding construction or maintenance activities, restrictions, or special events which may impact the use of the EDR.
- 7.7 Based on the location and anticipated duration (medium-term or long-term) of the closure as established by the OPP, local police services in conjunction with the municipal road authority are to identify and open “flip down” EDR signs.
- 7.8 During the incident, local police services, if one exists, should relay traffic conditions on the EDR to the OPP and contact the municipal road authority to implement signal timing plans if available. The design of the signal timing plans should take place in the consultation or preliminary stage when the EDR routes are being identified.
- 7.9 OPP and local police services, if one exists, should provide ongoing public notification on the location of the closure, the anticipated duration and a recommendation to follow the identified EDR.
- 7.10 Local police services, if one exists, should provide traffic control assistance at critical intersections on the diversion routes where appropriate (e.g. at intersections where signal timing plans cannot be implemented or are not able to accommodate traffic flows, and at major stop sign controlled intersections or railway crossings on the EDR).
- 7.11 Monitoring of traffic conditions on the detour routes and communication between municipal agencies will increase the efficiency of the detour. Agencies should attempt to monitor the use of the detour to identify possible improvements during the incident or for discussion during the debriefing meetings.
- 7.12 Local police services, if one exists, should provide assistance in facilitating the movement of emergency vehicles through the community.
- 7.13 Municipal road authorities should strictly enforce NO PARKING restrictions on and adjacent to the detour routes to alleviate congestion if activated.

8.0 INCIDENT CHARACTERISTICS TO CONSIDER

- 8.1 Location of closure
- 8.2 Number/direction of closure



- 8.3 Anticipated duration of closure
- 8.4 Construction/maintenance activities in area
- 8.5 Time of day
- 8.6 Day of week
- 8.7 Weather conditions
- 8.8 Evacuation requirements

9.0 TERMINATION OF THE EDR

The EDR is terminated by the OPP when:

- The need for the highway closure is no longer prevalent. This may consist of a partial opening; and
- Traffic flows on the diversion routes have returned to relatively normal levels.
- Once OPP have determined that a partial or full opening of traffic lanes on the highway is acceptable and that the traffic flows on the diversion routes have returned to relatively normal levels, the OPP will request the road authorities to close all EDR signs if they are the “flip down” type.

10.0 RESPONSIBILITIES AND FUNCTIONS

When/if activated, a jurisdiction’s Emergency Plan will supersede the responsibilities and functions noted in this document.

This section of the plan outlines the responsibilities and functions of the agencies for a full closure of a provincial highway due to an unscheduled traffic incident.

It should be noted that the agency responsibilities and functions listed in this section of the EDR are not “all inclusive” as they primarily focus on transportation related duties.

10.1 ONTARIO PROVINCIAL POLICE

- OPP officer on scene notifies the OPP Communications Centre regarding the activation and termination of the EDR, and provides direction and control on and off the highway facility.



- OPP Communications Centre notifies local police services if available, and MTO contacts of the need to activate the EDR, provides direction to open “flip down” signs on the EDR, and follows in house OPP protocol for closure.
- OPP officer on scene manages all ramp/intersection/interchange closures. MTO Maintenance Contractors/staff may be available to provide assistance with closing/opening the highway.
- OPP officer on scene evaluates the conditions and determines the incident duration and whether EDR activation is necessary.
- OPP officer on scene ensures proper secondary activation notification through local police services if one exists, prior to opening and directing traffic onto the detour.
- OPP Communications Centre acts as Incident Command and initiates communication for the detour operation with any of the following:
 - Local Police Services (if one exists)
 - Emergency services
 - Municipal Road Authority (if no Local Police Services exist)
 - Ministry of Transportation
 - Media
 - Towing Companies
 - Ministry of the Environment
- OPP officer on scene determines when to reopen the highway and deactivate the EDR.
- OPP officer on scene with the assistance of EDR parties, provides closure information from the incident scene and along the detour route, to the OPP Communications Centre for distribution.

10.2 LOCAL POLICE SERVICES (if one exists)

- Local Police Services contact municipal road authority and informs them of the activation and location of the EDR along with the expected duration.
- In conjunction with the municipal road authority, identify and open flip-down EDR signs for the agreed diversion routes on all non-provincial roadways as requested by the OPP.



- Relay traffic conditions on detour routes to the OPP officer on scene and contact municipal road authority and request that signal priority plans be implemented where required.
- Provide on-going notification to OPP officer on scene regarding traffic congestion/operation on detour route.
- Provide traffic control assistance at critical intersections as outlined on the agreed upon routes.
- Provide assistance, if requested, in facilitating the movement of emergency vehicles through the community.
- Request area municipalities, where applicable, to provide by-law enforcement on NO PARKING restrictions on and adjacent to the detour routes to alleviate congestion in the area.
- Ensures the detour routes are followed and load restrictions obeyed.
- Provides enforcement along the detour routes as necessary.
- Upon communication from the OPP that the closure is over, coordinate the closing of flip-down EDR signs with the municipal road authority on non-provincial diversion routes.

10.3 MUNICIPAL ROAD AUTHORITY

- Involves MTO, OPP, Local Police Services in EDR route selection - identifying and evaluating factors that may affect the route such as:
 - Safety – able to safely accommodate increased traffic volumes
 - Turning Radii – ability to accommodate large vehicles
 - Signal Operations – timings may need to be changed to accommodate EDR
 - Structures – max loads/width restrictions
 - Major Crossings – waterways/environmentally sensitive areas/Rail/Transit
 - Traffic Sensitive Areas – neighbourhoods/hospital areas/school zones/etc.
 - Geometrics – steep hills/narrow streets/etc.
 - Local Load Restrictions – during spring thaws
 - Dust / Maintenance – gravel or soft surfaced roads/shoulders
 - Length of Routes – longer may discourage use
 - Other Alternatives – advising of delays/alt routes
 - Surrounding Road Network (other jurisdictions) – compatibility/coordination
- Maintains all EDR signs within their jurisdiction.



- Responsible for the operations and maintenance of the infrastructure under their jurisdiction.
- Provide input to local police services if one exists, on current/planned construction activities that may impact traffic flow on detour routes.
- Provide assistance in contacting private/public utilities when required.
- Responsible for the maintenance and operation of all traffic control signals under their jurisdiction and identifying/implementing signal timing priority plans.
- Consult with local police services if one exists, when signal timing priority plans should be terminated following the opening of a highway closure.
- Maintain contact with Local Police Services if one exists, and adjacent municipal road authorities identifying/communicating:
 - potential traffic impacts on adjacent routes,
 - recommending mitigating measures/diversion routes
 - maintenance, construction or other activities that may be occurring on the EDR.
- Act as a liaison between adjacent municipal road authorities and local police services if one exists.
- Assist with the co-ordination, support, logistics and planning associated with the EDR plan.
- Maintain and implement internal call-out procedure following confirmation from OPP/Local Police Services of the activation of an EDR route.

10.4 MINISTRY OF TRANSPORTATION

- Maintains all EDR signs placed on provincial right-of-way.
- Responsible for the operations and maintenance of the provincial infrastructure system.
- Provide assistance to OPP as requested.
- Provide input to OPP regarding current construction activities on MTO facilities that may impact traffic flows approaching the closure or along any provincial portion of the detour route.
- Provide assistance in contacting private or public utilities if required in the operation of the EDR.



- Review EDR plans submitted by the municipal road authority to obtain EDR signs while maintaining provincial consistency.
- **NOTE:** All new EDR signs placed after December 31, 2003 should conform to the Ministry of Transportation Emergency Detour Route Signing Policy to establish provincial consistency.

Those with an earlier version of signs in place will be provided with new EDR signs for replacement. The installation of the new signs may be performed as part of the municipality's normal sign maintenance operations or at other suitable times as determined by the municipality.

MTO will install the ramp signs following the placement of the new EDR signs on the EDR by the municipality.

11.0 CALL OUT PROCEDURES

The following call out procedure is to be followed after an incident has occurred that will require activation of the EDR. Figure 1 provides a graphical representation of the contacts/call outs to be followed.

OPP officer on the scene is to contact the OPP Communications Centre.

The OPP Comm Centre is to contact the following agencies:

- Local Police Services (if one exists)
- Emergency Services
- Municipal Road Authorities (if no Local Police Service exists)
- Ministry of Transportation
- Media
- Towing Companies
- Ministry of Environment (if required)

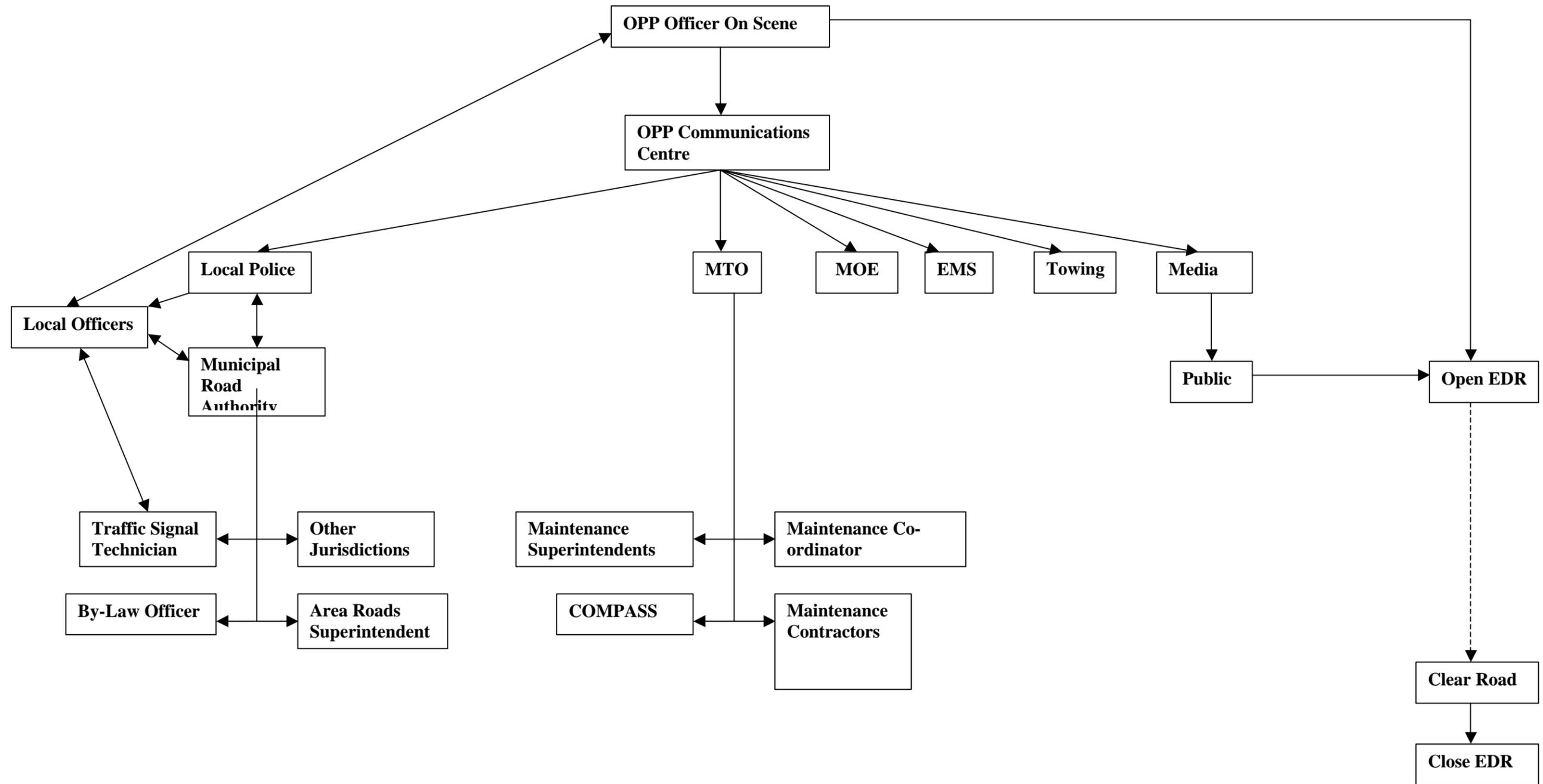
Local Police Services (if one exists) should contact the following:

- Municipal Road Authority
- Maintain communications with the OPP

Municipal Road Authority should contact the following:

- Adjacent municipal road authorities
- Municipal Area Roads Supervisor
- Municipal Traffic Signals Engineer/Analyst
- Municipal By-Law Officer
- School Boards
- Public/private utilities
- Maintain communications with the OPP and/or local police services if one exists

Figure 1: Callout Procedures





Ministry of Transportation should contact the following:

- Maintenance Contractors
- Maintenance Coordinators/Superintendents
- COMPASS
- Public/private utilities
- Maintain communications with the OPP
- GO Transit
- VIA Railways

12.0 DEBRIEFING

After every activation of the EDR, the municipal road authority should conduct a debriefing session within 30 days of the event. It may be desirable to hold one debriefing session for multiple activations, provided the debriefing takes place within 30 days of the earliest event. All participating parties in the incident should be involved in the debriefing session.

13.0 REQUIREMENTS FOR EDR SIGNING

Municipal road authorities located adjacent to a provincial highway requesting the establishment of an Emergency Detour Route should work together with OPP, local police services if one exists, other affected municipal road authorities and the MTO to provide the following information.

- A detailed plan indicating single or various alternate routes that have municipal council acceptance and could be used to accommodate diverted traffic off of a provincial facility, around the closure, and back onto the provincial facility. The planning process may include the input of local police or OPP.
- Identify routes/locations for placement of ministry Emergency Detour Route (EDR) signs including trailblazing in advance of all decision points.
- Identify routes to be considered for implementation of signal timing priority plans if applicable.
- Identify potential critical locations where additional traffic control is required and/or desired to assist diverted traffic.
- Agreement from local police services, area municipal road authorities, and MTO on the roles and responsibilities as outlined in this document.
- A 24 hour Emergency Contact List with names and numbers for Local Police Communications Centre, and various municipal contacts including: Traffic Signals Technician, Area Roads Superintendent, By-Law Officer and other affected municipal road authorities.



- MTO will include contact numbers for MTO, MOE and maintenance contractors.
- Once agreement has been reached, a copy of the plan will be provided to all parties.
- The ministry will provide the EDR signs to the municipality for installation on roads under their jurisdiction. These signs should be in place prior to the placement of EDR signs on provincial right-of-way by MTO.
- Any changes to the approved plans must be forwarded to all parties i.e. Municipal Road Authority, OPP Communications, Local Police Communications, MOE, and MTO Regional Traffic Office. The changes will be sent by the party responsible for the change.

Example. If the municipal signal technician 24 hour emergency contact has changed to another individual then it is the responsibility of the municipal road authority to send out the new contact name and number to ALL parties.

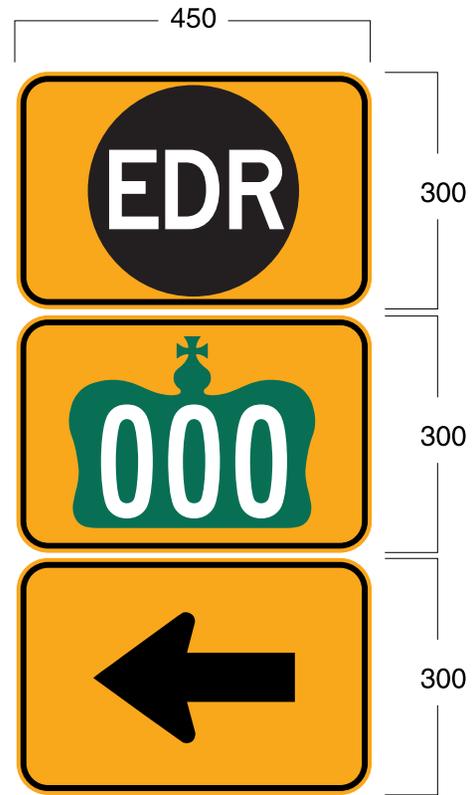
EDR Trailblazer's



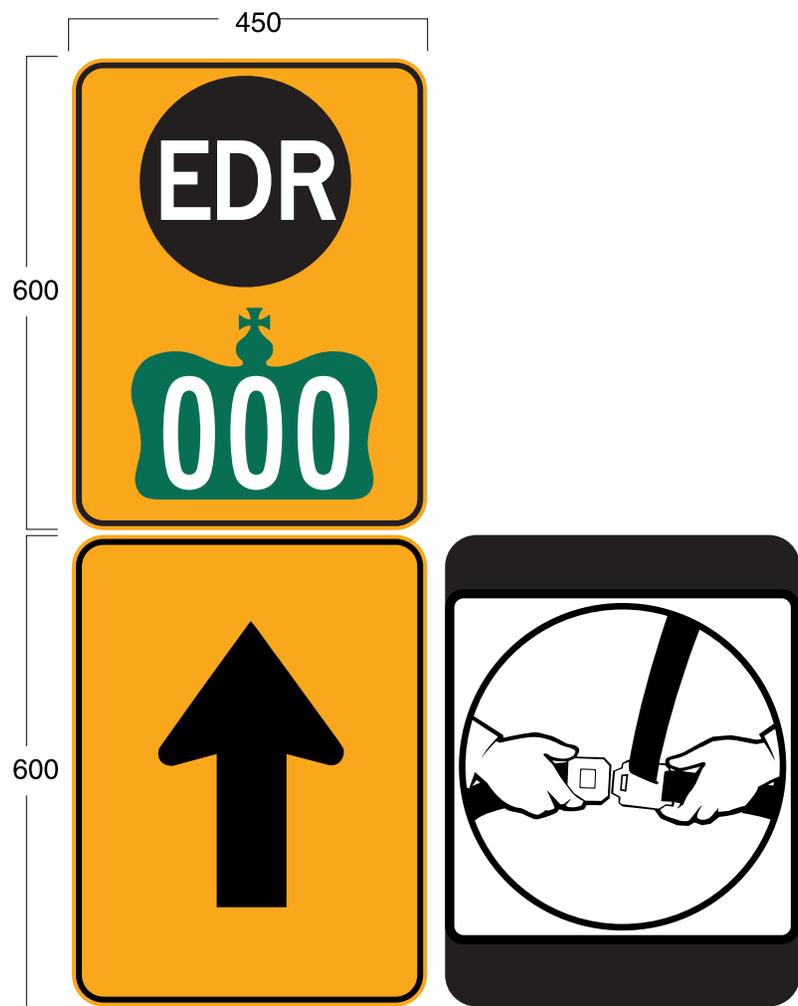
Ministry of Transportation
The Traffic Office
Traffic Operations Engineering Section

May 20, 2003

Trailblazer A



Trailblazer B



High Reflectivity Micro-Prismatic Fluorescent Yellow

To show when arrow is flipped up

EDR Mainline

May 20, 2003

(1200 x 2400)



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185

175
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"Via"
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"EDR" 621
Text 190

High Reflectivity Micro-Prismatic Fluorescent Yellow