British Columbia
Disaster Response Transportation Primer

A primer for the safe and coordinated movement of emergency personnel, resources and impacted persons following a disaster event in BC.

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FORWARD

British Columbia is susceptible to numerous natural hazards including earthquakes, tsunamis, floods and wildfires. Recent global natural disasters have clearly indicated that post-disaster transportation is a crucial element in response and recovery following a major emergency event. There is no doubt that it is paramount to establish and coordinate the safe movement of emergency personnel, resources and impacted persons during a disaster event.

While the management of priority routes was greatly improved with the designation of disaster response routes in 1995 in the Metro Vancouver and Greater Victoria areas, stakeholder feedback and a review in 2013 determined there was a clear need for an update to reflect the cross-jurisdictional, multi-modal (use of road, rail, marine and air capabilities) and multi-disciplinary characteristics of the transportation network.

The original priority route concept has evolved to encompass all aspects of transportation and a renaming of the system to Disaster Response Transportation (DRT). This evolution has resulted in the preparation of this primer, which describes the general framework of multi-modal disaster response transportation and its core principles. This framework builds on and replaces the previous concepts of disaster response routes (DRRs) and the integrated network of emergency transportation (iNET).

The purpose of the DRT primer is to help establish a common understanding of DRT strategies and terminology among local, provincial and federal governments and authorities as well as private transportation owners and providers operating in British Columbia.

The DRT primer provides the basics and should be read with additional plans and guides that currently exist or are under development at the regional and local levels to comprise the complete plans and strategies for the safe and coordinated movement of emergency personnel, resources and impacted persons following a disaster event that results in significant and negative impacts to transportation networks.

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- BC Ministry of Transportation and Infrastructure
- Emergency Management BC
- North Shore Emergency Management
- Integrated Partnership for the Regional Emergency Management (Metro Vancouver)
- City of Burnaby
- City of Vancouver
- Township of Langley
- City of Langley
- Port of Vancouver
- Saanich Police
- Capital Regional District
- BC Ferries
- Mainroad Group
- Royal Canadian Mounted Police
- Regional Emergency Management Partnership (Capital Region)

INTRODUCTION

The BC Disaster Response Transportation (DRT) system is a set of integrated, cross-jurisdictional and multi-modal strategies and methods for the safe and coordinated movement of emergency personnel, resources and impacted persons following a disaster event that results in significant negative impacts to transportation networks.

The DRT system is intended to enable different governments, agencies and stakeholders to align their disaster preparedness plans and activities such that they will be similar and consistent across jurisdictions and transport modes.

The aspects of the DRT system are scalable. It may or may not be necessary to utilize all parts of this system during a disaster.

The decision to apply any part of this system remains with the transportation or emergency response authority of the impacted or supporting jurisdiction.

In accordance with the Federal Emergency Response Plan (FERP), Transport Canada (TC) is responsible for emergency support when it relates to Air, Marine and Rail transportation.

Depending on the nature and scope of the situation or emergency, TC may rely on existing authorities, if applicable, to restrict movement of regulated transportation conveyances, goods and people or seek voluntary compliance (e.g. stop, detain, redirect, refuse entry to a zone, port, airport, restrict or close domestic airspace, etc.).

TC may also rely on instruments authorized by law, such as exemptions, that lessen regulatory requirements and facilities/increase the movement of regulated transportation conveyances, goods and people as well as seeking voluntary compliance (e.g. increase hours of service for trucking, emergency certificates, interim orders, exemptions, etc.). This would be used to mitigate the impacts of increased absenteeism on the transportation industry.

The Ministry of Transportation and Infrastructure (MoTI), the provincial technical lead for certain natural hazards; including earthquakes, tsunamis, floods and wildfires is responsible for Emergency Road support.

Emergency Management BC (EMBC) coordinates provincial government stakeholder ministries, private and public stakeholders to organize the various aspects of provincial and regional staging areas.

The DRT Planning Guide is written to achieve a mutual understanding through common language of processes to provide a foundational platform for further development of disaster transportation initiatives.

While the DRT system may be dependent on the following aspects of disaster response, this system does not include strategies for damage assessment of transportation infrastructure, regional decision-making, disaster debris removal, or technical aspects of inter-agency communications.

ASPECTS OF THE DRT SYSTEM

1. The DRT system is a standard to enable various levels of government and stakeholder agencies to align their disaster transportation plans and actions such that they will be compatible across jurisdictions and transport modes.

2. The DRT system is made up of elements that can be utilized separately or in combination to the extent needed to achieve the response and recovery objectives for the specified operational period.

3. The DRT system is to be applied by those required to achieve the response and recovery objectives for the specified operational period. The DRT Critical Routes system includes road, air, marine and rail capabilities.

4. It is best practice to communicate and coordinate with affected jurisdictions, agencies and other stakeholders prior to the activation of the DRT system.

5. Recurring education and exercising are important factors for effective application of the DRT system.

MITIGATION

CRITICAL ROUTES

To proactively eliminate or reduce the negative impacts of disasters before they occur, critical routes are identified pre-event:

- To purposefully develop key routes for resilience planning, and

- To categorize transportation infrastructure in order to purposefully plan that there will be key routes available, at minimum, for emergency responders and emergency resources immediately after a disaster.

Critical routes may include a combination of municipal, provincial and federal infrastructure and are the primary corridors of movement in an impact area.

- Pre-disaster, critical route infrastructure should be engineered to meet performance levels necessary to support all types of traffic post-disaster.

- Post-disaster, critical route infrastructure will have priority for reconnaissance, damage assessment and re-establishment of use.

Critical regional and provincial routes are vital to the functioning of the transportation network in the impact area and the movement of emergency resources cross-jurisdictionally at the regional level.

Critical local routes are essential for the movement of emergency resources at the local level.

While critical routes are chosen with the latest knowledge and intelligence regarding resiliency, the possibility still exists of actual critical routes post-disaster deviating from pre-designated critical routes due to the unpredictable nature of disasters.

PREPAREDNESS

Preparedness comprises activities for an effective and coordinated approach to operational readiness.

Examples of preparedness activities include:

- Mapping and updating of critical routes
- Establishment of memorandums of understanding for staging areas and community points of distribution
- Mapping and updating of transportation nodes
- Maintaining databases of suppliers or providers of emergency transportation resources (vehicles, vessels, etc.)
- Maintaining databases of suppliers of heavy equipment resources
- Maintaining interoperable communication systems
- Maintaining emergency responder notification systems
- Maintaining traveller information systems
- Responder education
- Responder exercises
- Public education

Ideally, the databases of critical routes, staging areas and suppliers will be centralized, accessible to stakeholders, user-maintained (stakeholders to be the custodian of their own information and update their own information) and time-limited (information is retained for a specified period after which it will expire and be deleted unless re-entered).

TRANSPORTATION NODES

A transportation node is any designated location within a transportation route or network where resources, personnel or vehicles (and/or vessels, aircraft, etc.) can enter or change route. Potential transportation nodes should be identified in the preparedness phase. Listed below are specific types of transportation nodes.

Staging Areas

Staging areas are movement control points where resources are received, prioritized and organized prior to deployment. The location of staging areas will depend on the location of the emergency event(s) and the dynamics of impacts, requirements, and availability of facilities and resources. There are provincial, regional or local staging areas, as follows:

- Provincial: initial receipt and sorting of inter-provincial, national or international resources
- Regional: intermediate management of resources within or in close proximity to the impact area
- Local: a location managed by the local government to receive, store or forward resources within the municipality for response and recovery activities

EMBC is to coordinate provincial government stakeholder ministries and other private and public stakeholders to organize the various aspects of provincial and regional staging areas.

Local governments are to coordinate private and public stakeholders to organize the various aspects of local staging areas in their jurisdiction.

Staging areas are established based on local plans and hazard risk assessments, using multiagency agreements to enhance capability during times of need.

Staging areas will be maintained for as long as required during response and recovery.

Community Points of Distribution

Community points of distribution (CPODs) are locations where emergency supplies are disseminated to the public following a disaster. The need for a CPOD is based on the capability and capacity of infrastructure to support normal distribution of goods, such as food, water or other supplies. The local authority determines the need for, location of, management of and the commodities to be distributed at the CPOD.

Transfer Points

Locations or facilities where the transfer of resources and/or personnel can occur between one mode of transport to another.

RESPONSE

Response includes effective and integrated strategies that aim for regional mobility after a disaster.

EMERGENCY RESPONDER NOTIFICATION SYSTEMS

These consist of coordinated, timely, accurate and secure methods to inform emergency responders of the condition of transportation routes.

Existing examples of emergency responder notification systems include dispatch centres, the use of dedicated radio frequencies, paging systems, local email distribution lists, etc.

TRAVELLER NOTIFICATION/ INFORMATION SYSTEMS

These consist of coordinated, timely and accurate methods to inform the general public of the condition of transportation routes. These also include coordinated, timely and accurate messaging methods to direct and/or manage the movement of the travelling public

Existing examples of traveller notification/information systems include DriveBC, dynamic message signs, Twitter, news media, etc.

DISASTER RESPONSE ROUTES (DRRS)

DRRs are used to expedite movement for official purposes to achieve emergency response or recovery objectives. DRRs may utilize available road, air, marine and rail capabilities. DRRs are not designated pre-event. DRRs are determined at the time of the event based on the needs of response and recovery and available options. DRRs may or may not coincide with critical routes.

DRRs are coordinated regionally and/or provincially by the Transportation Branch located within the Provincial Regional Emergency Operations Centres (PREOCs) and the Provincial Emergency Coordination Centre (PECC).

DRRs are not automatically activated because there are a number of situation-dependent factors that influence activation. (Refer to DRR Activation.)

There are various methods to achieve expedited movement, including the following:

Short Term DRRs

Short term DRRs consist of coordinated convoys for emergency personnel and resources. When short term DRRs are utilized, police or peace officer escort will be used to move the convoy.

Medium Term DRRs

Medium term DRRs are those DRRs established during a local and/or provincial state of emergency when the power to control or prohibit travel to or from any area of British Columbia is in effect.

For road transportation, the general public will be restricted from DRRs with the use of traffic control devices and mechanisms. DRRs may utilize both directions of travel (e.g. both north-bound and south-bound), one direction of travel (e.g. north-bound only) or specific lanes of travel (e.g. HOV or bus lane only).

Long Term DRRs

Long term DRRs may be required after the local and / or provincial states of emergency have expired.

For road transportation, long term DRRs require one of or both:

a) a municipal council to pass a resolution or bylaw to restrict use of municipal roads; or

b) the province to make a regulation to restrict use of provincial highways.

The general public will be restricted from DRRs with the use of traffic control devices and mechanisms.

Emergency Transportation for Impacted Persons

This comprises the provision of transport of the impacted persons for public safety by extraordinary, potentially multi-modal methods where pre-emergency options are not available.

Example: impacted persons are separated from their place of residence due to closed/damaged roads/bridges and no alternate road detour exists.

The movement of impacted persons should be conducted separately from the movement of emergency personnel and resources, where practical.

Emergency Transportation for Emergency Personnel and Resources

This is the provision of priority transport of emergency personnel and resources by extraordinary, potentially multi-modal methods where pre-emergency options are not available.

Example: a group of emergency responders are separated from their place of work due to closed/damaged roads/bridges and no alternate road detour exists.

RECOVERY

Strategies for the efficient and coordinated movement of resources required for restoration of the affected communities.

The identified critical routes are used as a reference to prioritize the restoration of routes for regional mobility for all traffic.

Long term DRRs may be used during recovery.

Examples of short term recovery tasks include:

- initiating clean up and repair measures,

- resuming basic municipal services,

- planning for the restoration of facilities and

- coordinating all municipal-wide recovery initiatives.

Examples of long term recovery efforts include:

- debris management,

- hazard mitigation,

- permanent housing reconstruction,

- commercial facilities reconstruction,

- transportation systems reconstruction,

- environment rehabilitation,

- long-term economic recovery implementation and

- programs to support psycho-social and emotional support for evacuees or those affected by the emergency.

DRR ACTIVATION

GENERAL STEPS FOR ACTIVATION

Emergency responders should only use damaged routes after safety assessments have deemed the damaged routes safe for emergency use. Only those DRRs needed should be activated and used for defined time periods.

Before a DRR or DRR network can be activated post-event, the following must be determined:

1. **WHO & WHY:** Determine what emergency personnel, resources and/or impacted persons need extraordinary, prioritized transport in order to achieve response or recovery objectives.

2. **WHERE:** Identify the origins and destinations of the required prioritized people/goods.

3. **WHAT:** Assess the condition, capacity and serviceability of transportation routes to determine the most viable route.

4. **HOW:** Arrange and coordinate transport and traffic management.

5. **WHEN:** Define the time periods for the agreed upon DRR or DRR network and advise affected stakeholders.

PROCESS TO ACTIVATE

Single jurisdiction activation of a DRR that does not affect any other jurisdiction requires notification to stakeholders, including the applicable Provincial Regional Emergency Operations Centre (PREOC). Notification to neighbouring jurisdictions is recommended.

Requests for a cross-jurisdictional and potentially multi-modal DRR are made to the applicable PREOC, where the requests are prioritized and coordinated by the Transportation Branch. Prioritization is guided by the British Columbia Emergency Management System (BCEMS) goals.

Coordination of the DRR will occur at the PREOC/PECC and includes the following steps:

1. Confirmation and Prioritization of Needs
2. Selection and Approval of DRR
3. Planning and Development
4. Implementation
5. Demobilization

Request/ Needs	Selection/ Approval	Planning	Implementation	Demobilization
• Receipt of DRR Request	• Identify desired route	• Develop public communications plan	• Implement communications plan	Receipt of demobilization request from requestor and confirmation of successful
• Confirmation need(s) required capacities	• Identify transportation infrastructure owners	• Develop users communication plan	• Implement traffic control plan	
	• Identify staging area requirements	• Develop staffing plan	• Implement staffing plan	• Notification to transportation infrastructure owners
• Priorization of DRR Requests	• Confirm capacity/ availability of infrastructure	• Develop traffic control plan • Develop demobilization plan	• Implement signage plan	• Communicate to the public • Implement demobilization plan

TRANSPORT PRIORITY AND IDENTIFICATION

Transport priority is guided by the British Columbia Emergency Management System (BCEMS) response goals as listed in Table 1.

In 1999, MoTI claimed the DRR symbol as an Official Mark (also called a Prohibited Mark). Since then, MoTI has given consent for others to use the DRR symbol to indicate the bearer is permitted to access DRRs or emergency transportation for emergency responders. Upon publication of this document,

MoTI no longer gives consent for others to use the DRR symbol for this purpose; therefore, possession of a piece of identification that includes the DRR symbol is no longer valid evidence for accessing DRRs or emergency transportation for emergency responders.

Utilization of DRRs will require the following identification:

1. Canadian or provincial government issued photo identification (e.g. driver's licence, BC Services Card, Canadian passport, Protocol Identity Card[2]) and

2. Employment identification (e.g. business cards or other identification issued by the employer).

This identification is for transportation only and unrelated to identification required for security purposes.

2 Protocol Identity Cards are issued to foreign representatives andmembers of their families upon accreditation by Global Affairs Canada.

Table 1. Guide for Transport Priority

Priority	Definitions (per BCEMS Goals) In the first 72 hours, those required to:	Examples In the first 72 Hours, those required to:
1st	1. Ensure the health and safety of first responders 2. Save lives	• Put out fires and control hazards • Rescue people missing or trapped in damaged structures • Diagnose, treat and support the sick and injured • Transport sick and injured persons to places of treatment • Maintain law and order • Assess, operate and maintain DRT infrastructure • Perform authorized evacuations • Support and manage an activated EOC
2nd	3. Reduce Suffering 4. Protect public health 5. Protect critical infrastructure	• Protect public health and prevent the spread of communicable disease • Provide emergency social service assistance to individuals who are forced to leave their homes • Offer short-term volunteer support to local authorities during emergency response • Transport displaced people to points of collection (mass transit) • Repair, protect or re-establish critical infrastructure necessary to sustain response efforts • Maintain business continuity for services necessary to support response and recovery efforts
3rd	6. Protect property 7. Protect the environment 8. Reduce economic and social losses	• Protect private and community property during response • Assess and mitigate environmental impacts • Activate BCP to reduce loss of employment, investment and development during response