

**Guideline**

# **Event Traffic Management Design Guidelines**

**July 2022**

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## **1 Introduction**

### **1.1 Scope**

The *Event Traffic Management Design Guidelines* (ETMDG) provide guidance on traffic control measures and devices used to warn, instruct and guide road users in the negotiation of events on roads including footpaths, shared paths and bicycle paths adjacent to the roadway in a safe manner. It is applicable to traffic management for all types of events (see definition in Section 2.1) which cause interference or obstruction to the normal use of a road by any road user. It also provides guidance for the planning and design of traffic management arrangements with the aim of providing a safe traffic environment for event participants and spectators.

#### **1.1.1 Relationship to the temporary traffic management manuals and guidelines**

The Department of Transport and Main Roads' Queensland [Manual of Uniform Traffic Control Devices](#) (MUTCD) Part 3 and the [Queensland Guide to Temporary Traffic Management](#) (QGTTM) outline the requirements for traffic management for works on roads, and primarily considers construction and maintenance activities. While many of the principles are the same, neither the Queensland MUTCD nor QGTTM provides guidance about managing large numbers of pedestrians, cyclists and event-related transport. The temporary traffic management design solutions for work sites consider only risks associated with construction and maintenance activities.

The ETMDG are intended to provide guidance for the design and planning for event traffic management aspects that are not explicitly covered under the Queensland MUTCD Part 3 or the QGTTM. The ETMDG reference elements of the Queensland MUTCD Part 3 and QGTTM where relevant and it is recommended that the Queensland MUTCD Part 3 and the QGTTM be read in conjunction with these *Guidelines*.

The [Guideline – Traffic Management at Works on Roads](#) also provides information on the use of temporary traffic management devices.

The Department of the Premier and Cabinet's [Guidelines for Events in Queensland: Best practice guidelines for event delivery in Queensland](#) also include guidance regarding event operations, logistics and planning in general. This document refers to the guidelines listed earlier and to Transport and Main Roads' website when considering traffic and transport aspects of events.

### **1.2 Objective**

The primary objective of the ETMDG is to provide traffic management design competent persons (TMDs) with a framework for planning event traffic management in a manner that promotes the safety of event participants, event personnel, spectators and road users on and around public roads.

### **1.3 Principles**

The key principles for traffic management at works on roads have been outlined in the QGTTM. The key principles for traffic management at events are similar, but event participants / spectators and event costs take the place of road works and construction costs.

A key objective is to differentiate traffic management arrangements at events from those at a work site, to make the nature of the activities and potential hazards clear to road users. It should also be clear to both participants and road users in which parts of the roadway the event is occurring.

A significant difference between road works and events is that traffic management personnel and site supervisors have a greater ability to influence behaviour of workers than event organisers are likely to have over event participants / spectators.

#### 1.4 Innovation

Innovation should be encouraged at all stages of the event traffic management planning process when it results in better outcomes for the safety of the public, provides better value for money, minimises impacts to motorists and the public, or can be used to create unique event opportunities.

Such innovations may include use of:

- the road network to facilitate event objectives that align with community demands and expectations (for example, for a publicly accessible street party)
- event branding / signage to complement traffic management objectives (for example, supplementing advance warning and advance notification, providing travel advisory notices and wayfinding and so on), and
- use of devices / combination of devices to distinguish events from road works.

#### 1.5 Roles and responsibilities

Table 1.5 summarises roles relevant to traffic management for events, along with their responsibilities / functions.

**Table 1.5 – Definitions**

Role	Responsibility / function
Event organiser	The event organiser is the person principally responsible for organising the planning and logistics of an event, including the engagement of a TMD where required.
Event traffic marshal (ETM)	An event traffic marshal (ETM) is an individual authorised with temporary legal authority to undertake basic traffic control duties to direct traffic and road users in low risk environments during an event in accordance with the <a href="#">Event Traffic Marshal – Special Event Approved Procedure</a> .
Parking assistant	Parking assistants may direct drivers / people at locations off the roadway (for example, provide direction in off-road parking areas). They are not authorised to control traffic on a road.
Police officer	Police officers are able to control traffic at signalised intersections, direct others to control traffic and direct road users in contravention of road rules in accordance with the <i>Police Powers and Responsibilities Act 2000</i> .
Support vehicle driver	Support vehicle drivers perform event-related duties such as accompanying event participants (individuals or vehicles) moving along a roadway, or providing a 'sweep' function at the rear end of a mobile event.
Road infrastructure manager (RIM)	A RIM is a national, state or local government authority, or private road authority authorised to work in the road reserve.
Traffic controller	Accredited traffic controllers are able to stop or slow approaching traffic (on approaches 60km/h or less) in conformance with existing road rules. They cannot control traffic at signalised intersections, unless operating under police direction and the <a href="#">Traffic Controller Accreditation Scheme Approved Procedure</a> .



Role	Responsibility / function
Traffic management design competent person (TMD)	A TMD is a competent person (as defined by the Queensland MUTCD Part 3) who is appropriately qualified to design, develop, review and inspect traffic management plans and traffic guidance schemes.
Traffic management implement competent person (TMI)	A TMI is a competent person (as defined by the QGTTM) who has, through a combination of training, qualification and experience, acquired knowledge and skills enabling that person to correctly implement a traffic guidance scheme (TGS) as designed by the TMD.

## 1.6 Responsibility for safety

The primary principle in developing traffic management plans (TMPs) and traffic guidance schemes (TGSs) is ensuring the safety of event participants, spectators, event personnel (including ETMs) and road users.

All necessary steps should be followed during the planning stage to ensure that:

- road users and event participants are suitably warned of changed conditions, and
- the necessary protection, delineation, and illumination is provided to protect all road users and event participants.

## 2 Planning event traffic management

### 2.1 Events

An event is a gathering of people and / or vehicles of significant size that takes place on or adjacent to a public road that has a potential impact on road operations and the safety of road users, event participants, spectators and event personnel. Construction work, maintenance activities and the movement of excess mass and dimension vehicles through the road network are not considered to be events.

For the purposes of these guidelines, event activities are classified as either static or non-static. Static events are those that do not deviate from a specific location for the entire event duration. Events that are primarily static in nature include:

- street markets (for example, farmers market / village markets)
- filming
- community events (for example, PARKing Day)
- concerts
- sporting events, and
- festivals.

For non-static events, participants are generally not physically isolated from traffic. Events that are typically non-static include:

- cycling road races
- cycling tours / rides
- running races (for example, marathons)
- race walking

- triathlons
- fun runs and charity / fundraising walks
- parades (for example, Australia Day, Mardi Gras, zombie walks)
- marches (for example, ANZAC Day, Labour Day)
- planned protest marches
- military displays
- transportation of high profile people (for example, Head of State or Royalty), and
- motorcycle charity ride.

Many events consist of a mixture of static and non-static elements, stages or activities. For example, a cycling race on public roads would be considered non-static in nature, but the event might have a celebration zone / finish line area that requires closure of a section of public road for an entire day.

### **2.1.1 Design principles**

The QGTTM provides discussion on the principles for the development, installation and operation of TGSs for works on roads. Additional principles that apply to planning and designing traffic management for events are:

- ensure the protection of event participants, spectators and event personnel from hazards associated with general traffic
- provide adequate advance warning of changed road conditions to all road users (motorists, pedestrians and cyclists)
- plan to minimise impacts to all relevant stakeholders including government bodies, emergency services, public transport operators, local residents and businesses
- plan to minimise excessive traffic queues / delays and diversions, and
- ensure adequate documentation and data is prepared to show that proposed traffic arrangements will have the desired outcomes.

## **2.2 Event traffic management plans**

An event traffic management plan (ETMP) is a document that sets out the inputs, planning and design of traffic management arrangements required to facilitate an event with consideration of all relevant traffic impacts (refer to QGTTM Part 2). While an ETMP may serve many purposes, it should primarily be used to ensure that an event can be safely implemented with appropriate consideration and management of risks. A range of stakeholders may need to provide input and / or approval of ETMPs. The size and complexity of traffic management arrangements should be used as an indicator for the level of detail required in the ETMP.

Preparation of the ETMP is the responsibility of the designer. For complex events, the ETMP may be included as a subsidiary document to the Event Management Plan; however, from the perspective of understanding traffic risks and traffic activities it must stand alone.

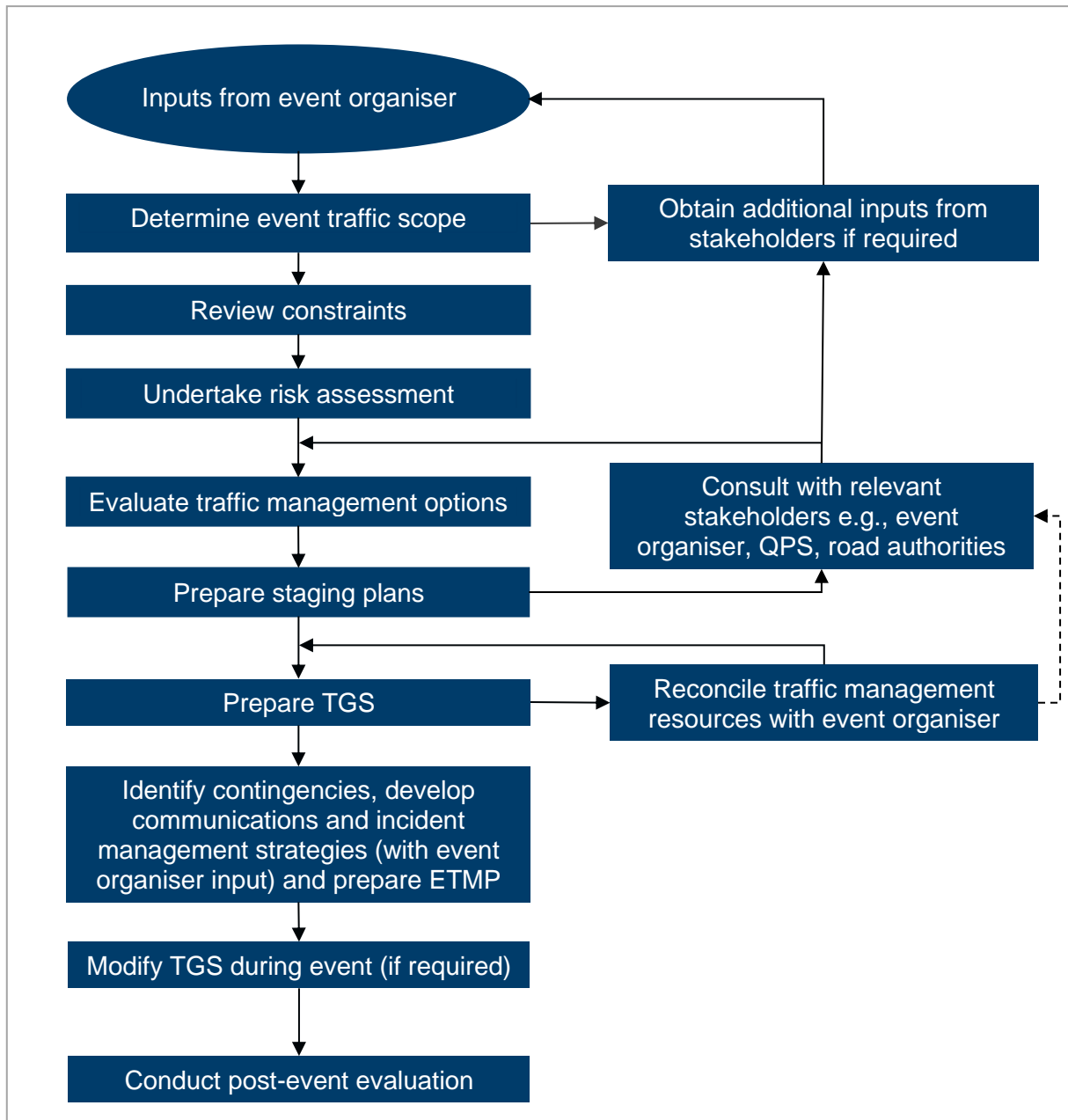
As a minimum, the plan should explain (and document where applicable) how the following topics have been considered:

- inputs (see Section 2.4)
- scope (see Section 2.5)
- risk management (see Section 2.6)
- options analysis (see Section 2.7)
- event staging plans (see Section 2.8)
- TGS (see Section 2.9)
- Traffic controllers and ETMs (see Section 2.10)
- implementation and removal (see Section 2.11)
- notification and communication (see Section 2.12)
- incident management (see Section 2.13), and
- post event evaluation (see Section 2.14).

### **2.3 Process**

While every event will differ in scale, complexity and characteristics, the application of a consistent planning process will assist designers in the development of appropriate solutions. A suggested process for ETMP development is outlined in Figure 2.3.

Figure 2.3 – Event traffic management plan development process



## 2.4 Inputs

### 2.4.1 Event organiser inputs

Before the scope of the event traffic management task can be defined, a wide range of input information should be collated to facilitate development of the ETMP. Input information should be sought from the event organiser or, in circumstances where information is not readily available or known, from organisers of similar events.

At a minimum, the types of input information provided by the event organiser should include event details:

- type of event
- location (route)
- number of participants / spectators / personnel
- duration
- timing
- setup and removal requirements, and
- associated activities.

#### **2.4.2 Other inputs**

Other inputs that should be obtained (via means such as conducting site inspections, online research and contacting road or public transport authorities) include:

- interfaces with roads, pathways and public transport infrastructure
- relevant road infrastructure manager (RIM) requirements
- traffic volumes (plus pedestrian and cyclist volumes, if relevant)
- public transport infrastructure and services
- parking requirements, and
- property and business access requirements.

### **2.5 Scoping process**

Once the relevant input information has been collated, the process of determining the scope of the event can commence. The following sections outline the key aspects of events which should be considered when undertaking the scoping exercise. During the scoping process, the need for further information may be identified. This information may need to be collected, or requested from the event organiser or other stakeholders.

#### **2.5.1 Size / scale**

The size of an event will determine the complexity and risk of managing traffic. When determining the scale of an event consideration should be given to the maximum expected:

- participants
- spectators, and
- event staff and employees (including officials, technical support crew, stall owners).

The geographic extent of the event may also affect the complexity and associated risks of necessary traffic management arrangements (that is, an event with many participants may only affect a short section of road, and an event with only a few dozen participants may be held over many kilometres).

#### **2.5.2 Type**

Events may be made up of multiple types of activities that may have different impacts on access, public transport and other traffic aspects. For each activity associated with the event it should be

determined whether the required traffic management involves static or non-static arrangements (see definitions in Section 2.1). This will form a part of the assessment of risks and options analysis for each activity.

### **2.5.3 Timing and duration**

Timing of the event activities is a key consideration as this may have impacts on safety and traffic performance. The following questions may assist to make decisions regarding timing:

- Can the event timing be changed to minimise traffic impacts?
- Does the timing impact on peak traffic periods (that is, will high traffic volumes impact on the proposed event and would traffic performance be affected)?
- Does the timing of the event coincide with any other events or seasonal traffic peaks?

### **2.5.4 Activities**

The following questions may assist when evaluating the activities associated with the event:

- Is there a sequence of activities involved with the event (for example, event setup, event teardown)?
- Are there multiple separate activities taking place at any single location (particularly for multi-day events) which requires activity specific TGSs (for example, ride or race followed by award ceremony or celebration)?
- Are there any special or additional activities taking place as part of the event that may introduce higher risks for traffic management (for example, fireworks, loud music, oversized vehicles)?

### **2.5.5 Location**

The location of the event may have bearing on traffic management complexities and influence the severity of risks. With respect to location, the following aspects should be considered:

- High-density urban environment (for example, CBD) versus rural area
- proximity to land uses that generate significant amounts of vehicular traffic (for example, shopping centres)
- proximity to land uses that are sensitive to traffic impacts (for example, child care centres, schools, retirement villages)
- proximity to locations where queueing may introduce high risks (such as motorway exits or blind corners), and
- location of key corridors for general travel, public transport, heavy vehicle routes.

### 2.5.6 Access

Any property accesses that will be affected by the event should be identified to plan detours or consult with stakeholder to make other arrangements. Therefore, the designer should consider the following regarding any affected access:

- Who uses the access?
- Does the access need to be maintained?
- When is the access used?
- Can the access be detoured?
- Can the access be closed?
- How long will the access be closed?

Additional planning may be required to maintain access to facilities and land uses that provide critical public services such as:

- hospitals and medical centres
- fire stations
- police stations
- ambulance stations, and
- schools

For events that require the closure of public roads that provide direct access to properties, if and how access can be managed through the road closure for local traffic entering / leaving private properties should be taken into consideration.

### 2.5.7 Parking

There are two aspects that should be considered regarding parking:

- Is existing parking affected (either on-street or off-street)?
- How does parking need to be managed to cater for event parking demands?

Changes to existing parking may have implications for both local users and the wider road network depending on the location, number and types of parking spaces affected. Impacts to existing parking should therefore be identified to effectively manage and provide appropriate alternative solutions.

Alternative solutions to consider include:

- alternative temporary parking
- increased public transport provisions or promoting the use of public transport to access the event, including Park 'n' Ride options, and
- dispersing designated parking and encouraging walking to the event.

Depending on the size, scale and location of the event, there may be significant event parking demands. The number of parking spaces required and available capacity of suitable car park locations should be considered so that requirements for temporary parking can be identified early (or parking demand strategies developed). Even if parking provisions are not provided for general attendees, drop off zones and / or persons with disability parking may need to be arranged.

Where event parking demands impact on traffic operations, the need to actively manage parking supply should be considered (for example, using time limit durations or pricing).

Where on- or off-street parking is typically permitted but the space is required for the safe operation of the event, consideration should be given to:

- how parking spaces can be closed or regulated in the lead up to the event, and
- what measures can be implemented to remove vehicles that contravene temporary parking regulations.

### **2.5.8 Logistics**

The TMD needs to be aware of traffic management requirements before, during and after an event.

There may be a number of event-related activities which require traffic management such as:

- event setup and teardown (for example, temporary infrastructure being erected on or near public roads) – these types of activities may be work activities and have associated risks, and the designer should refer to the Queensland MUTCD Part 3 and the QGTTM for designing traffic management for works on roads
- oversized deliveries (that is, wide or heavy trucks may require specialised traffic management) and heavy equipment such as cranes, and
- spectator locations and movements (for example, mass arrival and / or departure).

All logistics related activities that may require traffic management should be considered as part of the option analysis process.

## **2.6 Risk management**

Risk management involves the identification and analysis of traffic safety risks likely to arise during each stage of the event (that is, including prior, during and after the event takes place). All potential site-specific traffic management risks should be considered before conducting the options analysis with input from the event organiser. A formal risk assessment may assist in the identification of traffic management constraints / requirements (refer to QGTTM Part 10).

It is important to understand that event risks are inherently different from construction risks. Reasons for this include:

- events are less likely to involve large plant or equipment (which can be a hazard to road users)
- events generally do not create road side hazards, such as excavations and drop offs
- they generally involve more people than road work sites, increasing the total exposure to traffic
- participants / spectators may have reduced awareness of traffic hazards (in comparison to road workers who are often trained or briefed on the risk of working near traffic)
- the designer (and event organiser) has less control over event participants / spectators than works supervisors do over road workers who are employees or sub-contractors, and
- events can be spread over a large area, with diverse conditions; that is, the traffic risks at one part of may be much higher than at other parts of the same event.



The QGTTM provides further discussion on managing risk when preparing TGSs.

## **2.7 Options analysis**

To correctly identify an appropriate traffic management solution, a procedure should be followed to evaluate alternative options for each specific site / activity of the event. In general, most risks can be managed by one or a combination of the following high-level options as identified in the QGTTM.

### **2.7.1 Around (QGTTM Part 3 Section 3)**

Where an event fully occupies a carriageway or roadway and significant safety or performance benefits are desired, an 'around' treatment may be required. Closure of a road with an alternative detour may be an option. A number of traffic arrangements fall within this category, including contraflows, detours and the provision of a side-track.

It is noted that detours may require detailed planning, depending on their nature and complexity.

### **2.7.2 Through (QGTTM Part 3 Section 4)**

Through traffic management involves the passage of public road users through the event area which shall only be permitted where both the public traffic and the event activities can be adequately controlled. The through option may require the use of traffic control (for example, traffic controllers, ETMs, portable traffic signal systems (PTSS), portable traffic control devices (PTCD), manually-operated boom gates) to slow traffic on the approach or to stop traffic for short periods when required for the movement of event participants or spectators.

### **2.7.3 Past (QGTTM Part 3 Section 5)**

Traffic management past the event is the method of traffic management where complete elimination of traffic from the event area is not required. This method involves clear delineation and appropriate separation of traffic and event activities.

In contrast with an 'around' treatment, traffic management past the event generally involves providing for traffic on a separate section of the same carriageway where the activity is occurring. Lane closures and lateral shifts are examples of 'past' treatments.

### **2.7.4 Short-term low impact (QGTTM Part 5)**

Less complex traffic management arrangements may be suitable for short-term low impact activities. This may involve event activities that occur for short durations, with low participant numbers, where traffic volumes and speeds are appropriately low. Examples include:

- crossing a public road (obeying general road rules), and
- riding or walking along a road (where cycle lanes or footpaths are sufficient).

It is noted that where vulnerable users are involved or participant numbers are significant, an additional assessment of risk should be conducted.

### **2.7.5 Mobile (QGTTM Part 4)**

Mobile traffic management might be an appropriate event traffic management method when event vehicles move progressively along the roadway at speeds significantly lower than other traffic. This may be on the road or on the shoulder. Event activities which require the mobile works convoy to stop in traffic for less than one hour at one location may be treated as either mobile works (QGTTM Part 4)

or frequently-changing or constantly-moving works (in accordance with QGTTM Part 5). All signs and devices are either vehicle-mounted or moved along the roadway as the event progresses.

Additional risk assessment should be undertaken when designing the event's TGS under the mobile works provisions to ensure the suitability of the method for the specific event and the situation.

## **2.8 Event staging plans**

A staging plan (or diagram) should be prepared for each stage of the event to illustrate the general traffic management arrangements. Each staging plan should include clear details of elements such as:

- event location
- traffic routes for general traffic, public transport, active transport users
- event access routes and locations
- emergency access routes
- locations and details of affected local stakeholders
- notes on traffic control requirements
- delivery routes / locations
- spectator areas, and
- parking.

It should be noted that staging plans are not TGSs. While staging plans should be prepared to scale to demonstrate the viability of the proposed arrangements in a site-specific manner, they do not need to show individual traffic control devices or signs.

Staging plans are useful for:

- stakeholder communication
- coordination with other activities
- resource planning, and
- ensuring setup / switchover issues are not overlooked

## **2.9 Traffic guidance schemes**

For each staging plan, one or more TGSs may be required to implement traffic management arrangements. TGSs shall be designed by a TMD.

TGSs for events need to consider risks that differ from those associated with road worksites, but may use the QGTTM as a basis for design guidance on positioning of traffic control devices unless specific guidance is given herein.

TGSs for any individual activities associated with the event which are considered as work sites should be designed in accordance with the QGTTM.

## **2.10 Traffic controllers, police and event traffic marshals**

The use of traffic control personnel (that is, traffic controller, ETM or police) to manage traffic and / or event participants should be evaluated. As explained in Section 1.5, different types of traffic control personnel have different levels of authority. Other aspects that should be considered when selecting an appropriate resource include:

- type:
  - Is the resource appropriate for effectively and safely managing traffic and / or people?
  - Are the event activities occurring at a signalised intersection or a location where greater speed compliance is desired where police may be required?
- quantity:
  - Are additional traffic control resources required or could they be better utilised?
- location:
  - Is the traffic control resource proposed to be positioned in a safe location?
- shift breaks:
  - Is there an appropriate number of resources to undertake the task with respect to their appropriate length of shift?
- event participants and pedestrians:
  - Does the resource have appropriate levels of authority and experience regarding managing and directing the type of event participants and / or pedestrian for the event (for example, intoxicated spectators)?

### **2.10.1 Use of event traffic marshals**

ETMs may be used to control and direct traffic instead of accredited traffic controllers for events that require traffic control activities in low-risk environments. The use of ETMs must occur under the authorisation of an event organiser with a special event permit and be in accordance with the *Event Traffic Marshal – Special Event Approved Procedure*.

It is important to note that ETMs cannot control traffic in all situations. All assumptions and assessments of risk should be documented before the use of ETMs as part of a TGS is considered; however, if the road environment is assessed as being complex or high-risk, then traffic control shall only be undertaken by accredited traffic controllers or police officers.

As a minimum, the situations where the use of ETMs may be suitable must satisfy the following requirements:

- speed limit or speed environment of 60km/h or less
- highest traffic volume while the event is in progress of 200 vehicles per hour, and
- road type: two-way two-lane, or one-way one-lane.

Additional factors that should be considered when determining if an environment is low risk include:

- available sight distance
- road geometry
- road category
- road function
- timing of event
- volume and type of heavy vehicles
- number of event participants or spectators, and
- crash history.

Situations where the use of ETMs is not suitable include:

- where control of reversible flow arrangements (commonly known as shuttle flow) is required
- at a signalised intersection
- at an at-grade railway crossing
- on a multi-lane road, and
- on Category 2 and 3 roads..

TGSs that incorporate ETMs should clearly differentiate and label ETM and accredited traffic controller positions. The TGS shall include any necessary instructions for the activities each ETM is expected to undertake and identify what signs they may install.

ETMs may install official traffic signs if specified on the TGS, though generally this should be limited to the 'Traffic Controller Ahead / PREPARE TO STOP' sign. The 'Traffic Controller Ahead / PREPARE TO STOP' sign shall be placed as per the requirements of the QGTTM Part 3 Section 4.8 in advance of any location where ETMs are undertaking traffic control.

The use of four cones on the centreline (refer to AGTTM Part 3 Section 4.8) in advance of traffic controllers should be used for reversible flow arrangements only and is therefore not applicable to ETMs (as ETMs cannot be used at reversible flow arrangements); however, the use of the four cones in advance of the traffic controller elsewhere (other than reversible flow) is an option in the QGTTM and may also be used if desired for ETM operations.

### **2.11 Implementation and removal**

The QGTTM Part 6 should be referred to as guidance for the installation and removal of traffic control devices. The implementation of a TGS shall be performed by a traffic management implement competent person (refer to QGTTM Part 6).

Traffic controllers and ETMs may install, cover or remove signs for traffic control operations or other signs as specifically noted on the TGS.

Section 3.2.1 of these *Guidelines* provides details of sign designs specifically for use with events.

It is noted that events may require non-approved devices such as event participant wayfinding signage within the event area that may be installed and removed by event personnel if deemed safe.

## **2.12 Notification and communication**

There may be a range of stakeholders that will need to be communicated with regarding traffic impacts associated with the event.

A number of stakeholder groups and potential forms of communication relevant to each are outlined in the following sections.

### **2.12.1 Road users and residents**

Consideration should be given to what notification is required based on the level of traffic impacts associated with the event. Types of communication that may be appropriate include:

- letter drops (for local residents and businesses who require access)
- media advertisements (for example, TV, radio, social media and newspapers)
- local online message boards (for example, community pages)
- stakeholder email alerts
- traffic management centre notices, and
- pre-event traffic signage (for example, variable message signs (VMSs), corflute boards and so on).

### **2.12.2 Road infrastructure manager**

The relevant road infrastructure manager (RIM) may need to be involved in a detailed consultation process depending on the scale and complexity of the event in order to agree on details and grant necessary approvals. Through this process these parties may require the designer to provide details of:

- community notification strategy
- detour and advance warning strategy
- traffic signal operations strategy, and
- traffic management arrangements.

### **2.12.3 Public transport**

Events may have impacts on public transport operations, from both a network perspective (stop or road closures) and a demand perspective (particularly high-attendance events in major urban environments). The relevant public transport operator and authority should be consulted to determine the appropriate responsibilities and processes for:

- detour arrangements (both major and minor diversions)
- service delays
- additional public transport services to cater for demands associated with the event, and
- stop closures or relocations.

### **2.12.4 Emergency services**

Emergency services are a key stakeholder that use public roads to perform a critical community function. Where an event affects potential emergency vehicle routes, the relevant emergency services should be consulted to advise on any specific impacts or alternative arrangements.

In addition, emergency services should be advised where access arrangements are in place specifically for the event (particularly if the event has high risks of participant injury or a large number of participants).

### **2.12.5 Security**

While security arrangements are typically outside the scope of traffic management for an event, designers should note that event security and / or the Queensland Police Service (QPS) may have requirements that impact on traffic management arrangements. In these cases, consultation with the relevant stakeholders should be conducted to ensure that such requirements can be identified early in the planning process.

### **2.13 Incident management**

Incident management requirements when designing for traffic management at events should be considered. The ETMP should describe processes and procedures detailing how incidents within or adjacent to the event will be managed and documented. In addition, the relevant responsibilities and nominated contact persons should be provided.

For simple events, the incident management strategy may only require the directive to call '000' when required. For more complex events, the strategy may require planned alternative emergency detours, standby resources and a detailed incident management plan.

### **2.14 Post event traffic management plan evaluation**

Following the completion of the event, it is considered good practice to review the ETMP's effectiveness to evaluate and document any lessons learnt which can be applied to future events and ETMPs for related events. Aspects to consider during the evaluation should include:

- adequacy and effectiveness of traffic management devices to control traffic, pedestrians, spectators and event participants
- traffic performance during the event, and
- traffic-related complaints or incidents.

As part of the post event evaluation, the TMD may need to consult with relevant stakeholders such as the event organiser, road authorities, traffic controllers and police.

## **3 Designing for events**

### **3.1 Overview**

While designing TGSs for events involves many of the same traffic management techniques as designing for works on roads, some key areas of difference include:

- advance warning
- separating participants and spectators from traffic
- managing conflict points between participants and traffic.

The following sections provide guidance on these aspects of traffic management for events.

Section 3.2.1 of this ETMDG provides details of sign designs specifically for use with events. These signs have a sign number prefix 'ETM' and incorporate a specific black legend and fluorescent yellow

green background. ETM sign panels may be installed with other signs as required to form a multi-message sign.

All other signs included on the TGS (for example, lane status, speed limits, turn prohibition, road closed, detour, reduce speed, or traffic controller signs) are to be in the standard colours but may be installed with the event signs if required.

Signs for events are to be spaced as per the requirements of the QGTTM for construction or maintenance sites for similar or the same signs. Event signs are to be spaced a minimum distance (refer QGTTM Part 3 Table 2.2) from other signs (but may be incorporated into a multi-message arrangement with other signs when appropriate).

### **3.2 Advance warning**

Advance warning signs are used to inform the road user of changed road conditions ahead. To ensure that traffic management arrangements are credible to road users, advance warning signage selected for use should reasonably reflect the nature of the occurrence that road users will encounter (for example, the use of ROADWORK AHEAD signs in advance of an event where road works are not present is misleading). In the context of events, it is important that advance warning signs distinguish the activities taking place from those that would typically be associated with road construction or maintenance works.

For events, advance warning signs may be required to advise road users of:

- presence of event participants / spectators on or adjacent to the road
- reduced number of lanes or changes in lane priority
- road closures
- detours
- restrictions on lane use for event traffic, and
- direction to parking areas of spectators.

Associated intermediate advance signage and signage at the end of the event area (and any traffic arrangements associated with the event) should also be relevant to events.

Vehicle-mounted signs may be used with events that move progressively along the roadway.

While signs referred to in the Queensland MUTCD Part 3 and QGTTM may be suitable for the provision of advance warning, other advance warning signs may be more suitable for events (for example, EVENT AHEAD in lieu of ROADWORK AHEAD).

The following section presents additional signs that are relevant to events.

#### **3.2.1 Official traffic signs for events**

Signs that may be used in associated with event areas are listed in Table 3.2.1 and presented in the following sections.

**Table 3.2.1 – Signs for events**

<b>Sign</b>	<b>Sign number</b>	<b>Size (mm)</b>
EVENT AHEAD	ETM01_1 ETM01_2	600 x 600 1200 x 600
EVENT IN PROGRESS	ETM02_1 ETM02_2 ETM02_3	600 x 600 1200 x 600 1200 x 300
END EVENT	ETM03_1 ETM03_2	600 x 600 1200 x 600
Cyclists Racing (symbolic)	ETM04_1 ETM04_2	600 x 600 1200 x 600
Cyclists Riding (symbolic)	ETM05_1 ETM05_2	600 x 600 1200 x 600
Share the Road (event) 1m (symbolic)	ETM06_1 ETM06_2	600 x 600 1200 x 600
Share the Road (event) 1.5m (symbolic)	ETM09_1 ETM09_2	600 x 600 1200 x 600
SHARE THE ROAD (event)	ETM13_1 ETM13_2	600 x 600 1200 x 300
Runners (symbolic)	ETM07_1 ETM07_2	600 x 600 1200 x 600
Walkers (symbolic)	ETM08_1 ETM08_2	600 x 600 1200 x 600
NEXT ...km (event)	ETM10_1 ETM10_2	600 x 600 1200 x 300
CYCLING EVENT (day / date)	ETM11_1 ETM11_2	1200 x 600 1200 x 300
CYCLIST AHEAD CYCLIST FOLLOWING	ETM12_1 ETM12_2	1200 x 300 1200 x 300



**3.2.2 EVENT AHEAD (ETM01)**

The EVENT AHEAD sign is used on the approach to an event. This is the first sign a road user encounters and provides advance warning that event activities are taking place on or in proximity to the roadway ahead. The sign's purpose is to increase road user awareness of changed road conditions or increased risk associated with an event ahead.

*Figure 3.2.2(a) – EVENT AHEAD (ETM01\_1)*



*Figure 3.2.2(b) – EVENT AHEAD (ETM01\_2)*



**3.2.3 EVENT IN PROGRESS (ETM02)**

The EVENT IN PROGRESS sign is used as part of a multi-message sign to supplement other messages regarding road conditions, type of event or actions required of road users and, when used, is installed after the EVENT AHEAD signs. The purpose of this sign is to advise motorists that an event is currently taking place.

The 'NEXT ... km' (ETM10) sign may be used in conjunction with the EVENT IN PROGRESS sign to warn road users to expect event conditions over longer distances.

The installation of repeater EVENT IN PROGRESS signs at regular intervals may also be appropriate, with spacing determined by the length of the event and density of participants expected. If required, repeater signs should be spaced evenly along the event route with a maximum spacing relevant to the road environment and length between intersections which have event signs. Generally, a large event with lots of participants spread out along a route will require fewer repeater signs (as it will be obvious an event is continuing), than for an event of similar length with few participants where there will be large gaps between participants.

**Figure 3.2.3(a) – EVENT IN PROGRESS (ETM02\_1)**



**Figure 3.2.3(b) – EVENT IN PROGRESS (ETM02\_2)**



**Figure 3.2.3(c) – EVENT IN PROGRESS (ETM02\_3)**



### 3.2.4 END EVENT (ETM03)

The END EVENT sign is used at the departure end of the event area. Where used it should be located as close as practicable to the end of the event area (but outside the event area).

**Figure 3.2.4(a) – END EVENT (ETM03\_1)**



**Figure 3.2.4(b) – END EVENT (ETM03\_2)**



### 3.2.5 Cyclists Racing (symbolic) (ETM04)

The Cyclists Racing (symbolic) sign is used to indicate the presence of cyclists in a competitive cycling event. The sign gives warning to road users that cyclists participating in an event are located on, near or crossing the roadway. It is important that road users understand that cyclists may be racing, as it increases awareness that the cyclists may be travelling at speed, distracted, riding in groups, or overtaking.

The 'NEXT ...km' (ETM10) sign may be used in conjunction with the Cyclists Racing sign to warn road users to expect event conditions over longer distances.

**Figure 3.2.5(a) – Cyclists Racing (symbolic) (ETM04\_1)**



**Figure 3.2.5(b) – Cyclists Racing (symbolic) (ETM04\_2)**



### 3.2.6 Cyclists Riding (symbolic) (ETM05)

The Cyclists Riding (symbolic) sign is used to indicate the presence of cyclists in a mass-participation type event. The sign gives warning to road users that cyclists participating in an event are located on, near or crossing the roadway. It also increases awareness that the cyclists may be inexperienced riders and travelling slowly as part of a group and not involved in racing.

The 'NEXT ...km' (ETM10) sign may be used in conjunction with the cyclist riding sign to warn road users to expect event conditions over longer distances.

**Figure 3.2.6(a) – Cyclists Riding (symbolic) (ETM05\_1)**



**Figure 3.2.6(b) – Cyclists Riding (symbolic) (ETM05\_2)**



### 3.2.7 Share the Road (event) (ETM06, ETM09, ETM13)

The Share the Road (event) sign may be used to provide better awareness to road users at on-road cycling events where a separate travel path is not delineated or designated for cyclists. Its purpose is to remind motorists of the need to share the road safely with bicycle riders.

Use ETM06 for roads with a speed limit of 60km/h or less and ETM09 for roads with a speed limit over 60km/h. Use the actual (temporary or permanent) speed limit in place at the time to determine which 'Share the Road' sign to use.

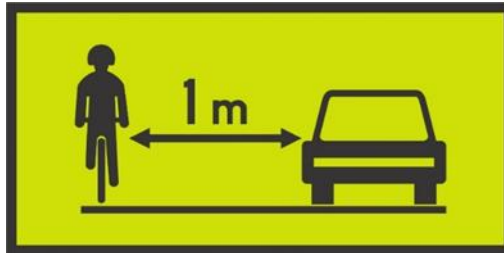
The SHARE THE ROAD message sign ETM13 must be used in conjunction with the ETM06 or ETM09 symbolic signs.

The 'NEXT ...km' (ETM10) sign may be used in conjunction with the Share the Road sign to warn road users to expect event conditions over longer distances.

**Figure 3.2.7(a) – Share the Road (ETM06\_1)**



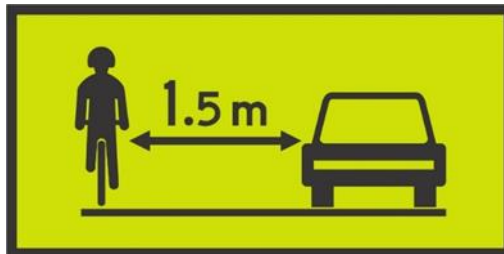
**Figure 3.2.7(b) – Share the Road (ETM06\_2)**



**Figure 3.2.7(c) – Share the Road (ETM09\_1)**



**Figure 3.2.7(d) – Share the Road (ETM09\_2)**



**Figure 3.2.7(e) – SHARE THE ROAD (ETM13\_1)**



**Figure 3.2.7(f) – SHARE THE ROAD (ETM13\_2)**



### 3.2.8 Runners (symbolic) (ETM07)

The Runners (symbolic) sign is used to indicate the presence of runners in a racing or fun run event. The sign gives warning to drivers that runners participating in an event are located on, near, or crossing the roadway. It also increases road user expectations of the potential of large numbers of participants ahead.

The 'NEXT ... km' (ETM10) sign may be used in conjunction with the Runners sign to warn road users to expect event conditions over longer distances.

**Figure 3.2.8(a) – Runners (symbolic) (ETM07\_1)**



**Figure 3.2.8(b) – Runners (symbolic) (ETM07\_2)**



### 3.2.9 Walkers (symbolic) (ETM08)

The Walkers (symbolic) sign is used to indicate the presence of walkers in a mass-participation event. The sign gives warning to drivers that walkers or marchers participating in an event are located on, near, or crossing the roadway. It also increases road user expectations of the potential of large numbers of slow moving participants ahead.

The 'NEXT ... km' (ETM10) sign may be used in conjunction with the Walkers sign to warn road users to expect event conditions over longer distances.

**Figure 3.2.9(a) – Walkers (symbolic) (ETM08\_1)**

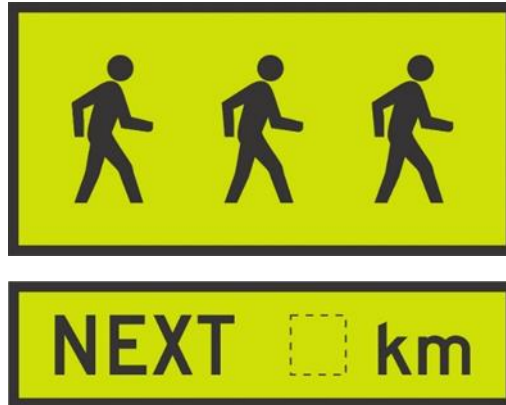


**Figure 3.2.9(b) – Walkers (symbolic) (ETM08\_2)**

**3.2.10 NEXT ...km (ETM10)**

The 'NEXT ...km' (ETM10) sign may be used in conjunction with the other event signs in the ETM series to warn road users to expect event conditions over longer distances.

**Figure 3.2.10(a) – NEXT ...km (ETM10\_1)**



**Figure 3.2.10(b) – NEXT ...km (ETM10\_2)**



### 3.2.11 CYCLING EVENT day / date (ETM11)

The 'CYCLING EVENT day/ date' (ETM11) sign may be used prior to a cycling event to give road users advance warning of the event day and to expect some delays or disruption to normal traffic arrangements on that day. This sign combination (both signs are to be used together) may be installed up to 14 days (but not less than seven days) prior to the event day and shall be removed immediately following the event.

VMS may be used in lieu of ETM11 signs.

**Figure 3.2.11(a) – CYCLING EVENT (ETM11\_1)**



**Figure 3.2.11(b) – Day / Date (ETM11\_2)**



### 3.2.12 CYCLISTS AHEAD / FOLLOWING (ETM12)

The 'CYCLISTS AHEAD / FOLLOWING' (ETM12) signs are vehicle mounted signs which may be used when support vehicles are used as part of a cycling event to protect cyclists travelling along the event route. The CYCLISTS AHEAD (ETM12\_1) sign is to be used on tail vehicles which follow the cyclists, while the CYCLISTS FOLLOWING (ETM12\_2) sign is used on lead vehicles which travel in advance of the cyclists to warn traffic approaching from the opposite direction.

**Figure 3.2.12(a) – CYCLISTS AHEAD (ETM12\_1)**



**Figure 3.2.12(b) – CYCLISTS FOLLOWING (ETM12\_2)**





### 3.3 Separating participants and spectators from traffic

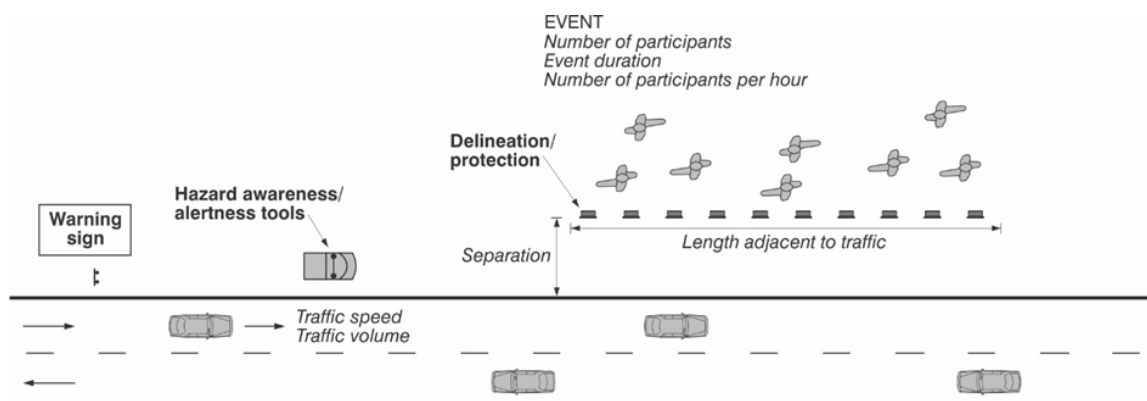
As outlined in Section 2.6 of the ETMDG, the risks associated with the interaction between traffic and events are different to those for construction and maintenance activities. Therefore, the specific nature of the activities of the event that may lead to conflict with traffic or create risks to spectators or persons participating in the event should be considered.

#### 3.3.1 Risk factors

Events on road may result in the risk of injury to event participants (for example, collision between an event participant and a vehicle) and members of the public (for example, a pedestrian or spectator could be hit by a cyclist participating in an event). When determining if and what measures should be implemented to manage these risks, the relevant input factors and how they influence the likelihood and consequence / severity of risk should be considered. Key input factors that may assist with evaluating event traffic management risks include:

- traffic volume
- traffic speed
- size of event (participant and spectator numbers)
- density and speed of event participants
- event duration
- length of event in proximity to traffic
- separation from traffic
- age of participants and spectators
- road geometry (lane width / alignment)
- weather conditions
- time of day, and
- static or non-static.

Figure 3.3.1 illustrates the input risk factors (in *italics*) and the control measures (that is, measures that can be used to control / manage risk, in **bold**) for the separation of event participants / spectators from general traffic.



Higher traffic volumes, higher numbers of event participants, longer event durations and longer areas of events parallel to the roadway are all measures of exposure. In general, the higher the exposure, the greater the likelihood of an incident occurring. In addition to the increase in risk profile associated with the exposure to these factors, the specific nature of the event and location (for example, crash history) at which the event conflicts with traffic will have a bearing on the degree of associated risk.

Due to the limited ability of the human body to withstand impact forces, higher traffic speeds increase the severity of collisions between event participants and vehicles. Higher speeds can also increase the likelihood of a collision, as they reduce the probability of an errant vehicle decelerating to a stop between the normal travel path and the event area.

### 3.3.2 Control measures

Some of the control measures available for managing the risk of events near traffic include:

- hazard elimination (detour)
- hazard separation (event is separated from moving traffic)
- hazard control (engineering treatment)
  - warning signs
  - hazard awareness / alertness tools
    - police vehicles
    - flashing arrow board
    - VMS, and/or
    - traffic controller with STOP / SLOW bat
- posted speed limit reduction
- delineation
- longitudinal channelising barricades, and
- temporary safety barrier systems.

These control methods can be used individually or in various combinations to achieve the desired level of risk management. The advantages and disadvantages of these control methods are discussed in Table 3.3.2.

**Table 3.3.2 – Control options**

Control options	Advantages	Disadvantages
Hazard elimination (for example, design event areas and courses to avoid or minimise interaction with traffic areas)	<ul style="list-style-type: none"> <li>• Eliminates or significantly reduces the risk of conflicts between event participants and road users</li> </ul>	<ul style="list-style-type: none"> <li>• May have a greater impact on road network performance (for example, travel times as a result of detours) and property access</li> </ul>

Control options	Advantages	Disadvantages
Warning signage	<ul style="list-style-type: none"> <li>• Increases awareness of event participants / spectators in proximity to roadway</li> <li>• Low cost</li> <li>• Erected and removed quickly for a non-static event</li> </ul>	<ul style="list-style-type: none"> <li>• Does not provide physical protection</li> <li>• Requires regular checks (during longer or multi-day events) for correct placement and visibility</li> </ul>
Hazard awareness / alertness tools: <ul style="list-style-type: none"> <li>• police vehicle</li> <li>• flashing arrow board</li> <li>• VMS</li> <li>• traffic controller or ETM with STOP / SLOW bat</li> </ul>	<ul style="list-style-type: none"> <li>• Improves driver alertness of events in locations where extra stimuli are competing for driver attention</li> <li>• Police presence improves event credibility and speed compliance</li> <li>• May assist in reducing vehicle speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Does not provide physical protection</li> <li>• Exposes traffic management personnel to traffic risks</li> <li>• Increased labour / equipment costs</li> </ul>
Speed limit reduction	<ul style="list-style-type: none"> <li>• Reduces the speed differential between vulnerable event participants / spectators (for example, runners or cyclists) and general traffic, and therefore crash severities</li> <li>• Makes navigation of changed traffic conditions easier</li> </ul>	<ul style="list-style-type: none"> <li>• Does not provide physical protection</li> <li>• May require supporting traffic control devices / measures to achieve the desired level of compliance (refer to the Queensland MUTCD Part 3, QGTTM and the <i>Guideline – Traffic Management At Works on Roads</i> for guidance on the use of supplementary devices to reduce speed)</li> <li>• Increased travel time for general traffic, particularly for long event courses</li> </ul>
Delineation <ul style="list-style-type: none"> <li>• participants to traffic</li> <li>• spectators to participants</li> <li>• participants to traffic</li> </ul>	<ul style="list-style-type: none"> <li>• Provides visual separation cues to road users in order to separate vulnerable road users from vehicles</li> <li>• Can provide directional cues for event participants</li> <li>• Closely spaced delineation provides improved cues for both motorists and participants</li> <li>• Spacing can be varied depending on situation / risk</li> <li>• Inexpensive relative to other physical protection devices such as temporary barriers</li> </ul>	<ul style="list-style-type: none"> <li>• Does not provide physical protection</li> <li>• Devices could become a hazard if knocked over and may be hazardous to event participants / spectators / road users</li> <li>• Reducing delineation spacing increases installation / removal time</li> <li>• Costs associated with installing and maintaining standard delineation devices, particularly for long-event courses</li> </ul>

Control options	Advantages	Disadvantages
Longitudinal channelising barricades ( <i>not safety barrier</i> )	<ul style="list-style-type: none"> <li>• Reduces the risk of participants / spectators encroaching into the path of general traffic</li> <li>• Provides visual separation cues to motorists in order to separate vulnerable road users from vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Set up / removal time may be greater than for delineation</li> <li>• Does not provide physical protection from errant vehicles</li> <li>• May provide false confidence – to participants (who may be less cautious) and to drivers (who may increase speeds)</li> <li>• Cost likely to be greater than for delineation</li> </ul>
Temporary safety barrier system	<ul style="list-style-type: none"> <li>• Reduces the collision risk of errant vehicles encroaching into the space used by participants / spectators</li> <li>• Reduces the collision risk of general traffic encroaching into the path of participants / spectators</li> <li>• Reduces the separation width required between traffic and vulnerable road users, potentially allowing for additional lanes of traffic to remain open</li> <li>• Sight screens can be installed to minimise traffic impacts and protect participants from objects thrown from moving vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• May be a hazard to occupants of errant vehicles</li> <li>• Significant set up / removal time</li> <li>• May require ongoing maintenance over the course of a longer event (for example, water filled barriers require topping up)</li> <li>• High cost to purchase or hire</li> <li>• Traffic speeds may increase</li> </ul>

### 3.4 Managing conflict points

Traffic management may be required at conflict points, especially where a change in priority is required (due to event participants or spectators needing free passage of movement) or where general traffic still has priority and management of event participants is required. Scenarios are presented in the following figures to illustrate the use of advance warning signage and manual control of traffic using traffic controllers and ETMs in the following situations:

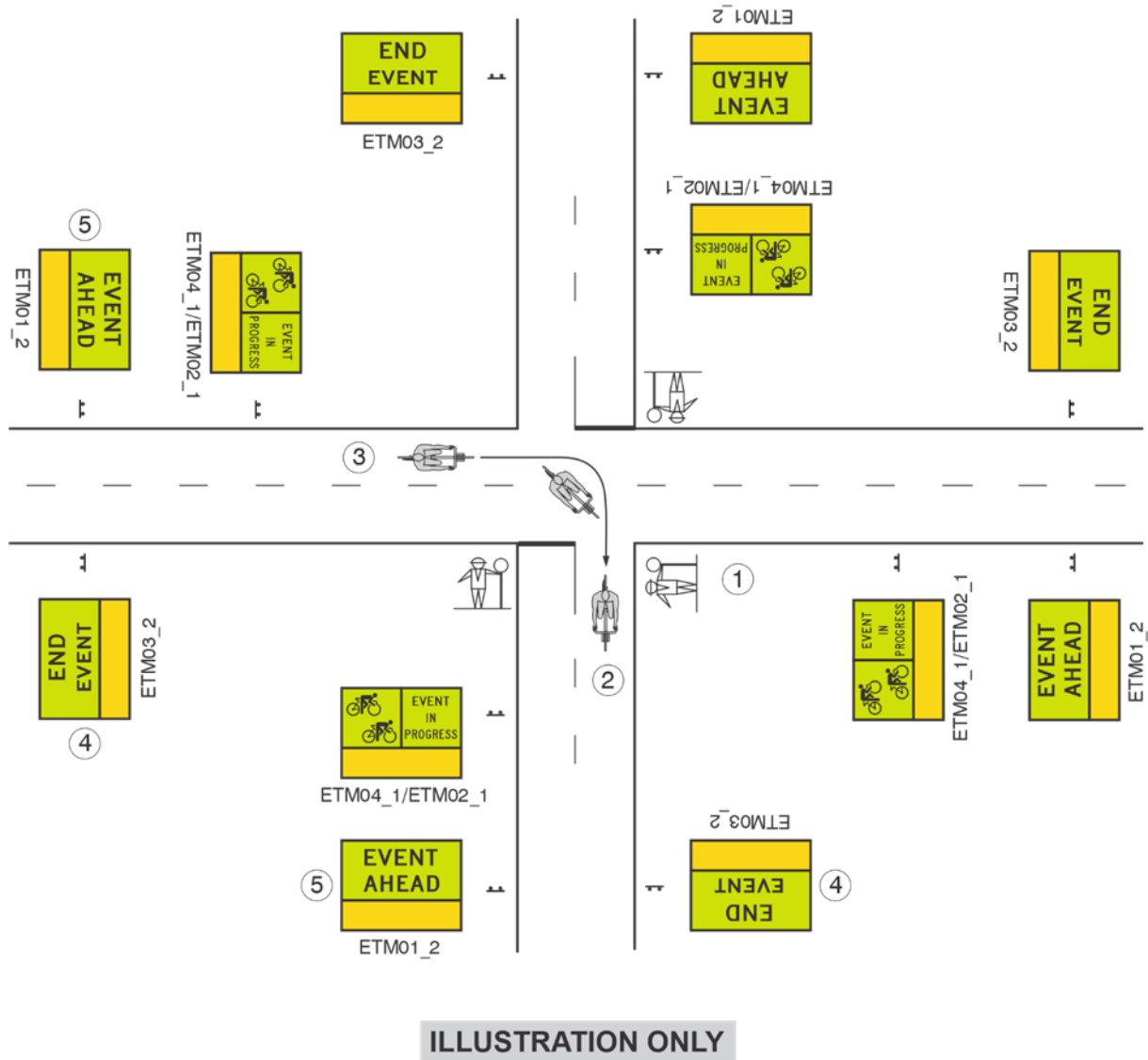
- unsignalised intersection (four-way)
- roundabout (four-way)
- pedestrian / cyclist crossings (mid-block and intersection), and
- through road (two-way).

When considering these scenarios, it is important to note that:

- the figures are **illustrative only** and a TGS showing the traffic control devices required and spacing / set-out arrangements must be designed for the site-specific situation by a TMD – examples of how to integrate other Queensland MUTCD traffic signs into these illustrations are provided in Appendix A
- requirements relating to the use of traffic controllers can be found in the QGTTM Part 7 and the *Traffic Controller Accreditation Scheme Approved Procedure (TCASAP)*
- requirements relating to the use of ETMs can be found in this ETMDG and the *Events Traffic Marshal – Special Events Approved Procedure*
- requirements relating to the signing of detours can be found in the QGTTM
- general traffic may need to be restricted along the event route and/or
- participants may be required to travel in a convoy or follow special instructions for participating in the event (including the road rules).

**Figure 3.4(a) – Unsignalised intersection: right turn from through road**

Event participants turning right from a through road onto a side road where it is desired to provide priority to the event participants and ensure that vehicles do not attempt to turn from the side roads while event participants are present. Use of traffic control to hold side road approaches and opposing through road approach.



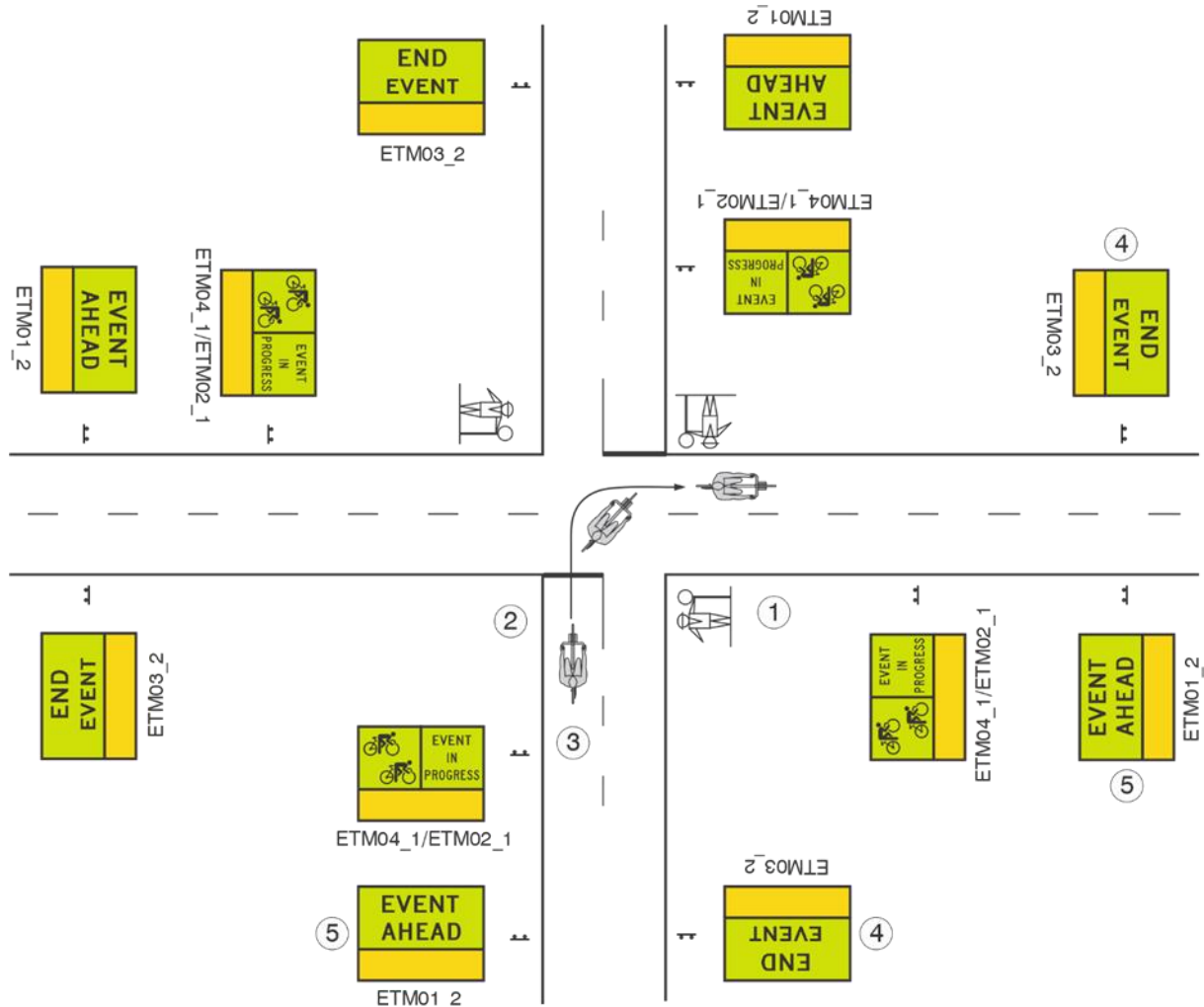
**ILLUSTRATION ONLY**

**Notes**

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queueing should be considered.
2. Pedestrians attempting to cross the road that event participants are turning into or from may also need to be controlled.
3. Controls may be put in place at the intersection to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic or traffic waiting and queued at the intersection to turn.
4. The END EVENT signs along the continuing event route will be replaced by EVENT IN PROGRESS signs where the event is still continuing in this direction.
5. The EVENT AHEAD signs along the continuing event route will not be required where the event is continuing in this direction and where all road users have passed an EVENT AHEAD sign previously.

**Figure 3 4(b) – Unsignalised intersection: right turn from side road**

Event participants turning right from a side road onto a through road where it is desired to provide priority to the event participants and prevent minor road vehicles from attempting to turn between gaps in event participants. Use of traffic control to hold side road approach and opposite through road approach.



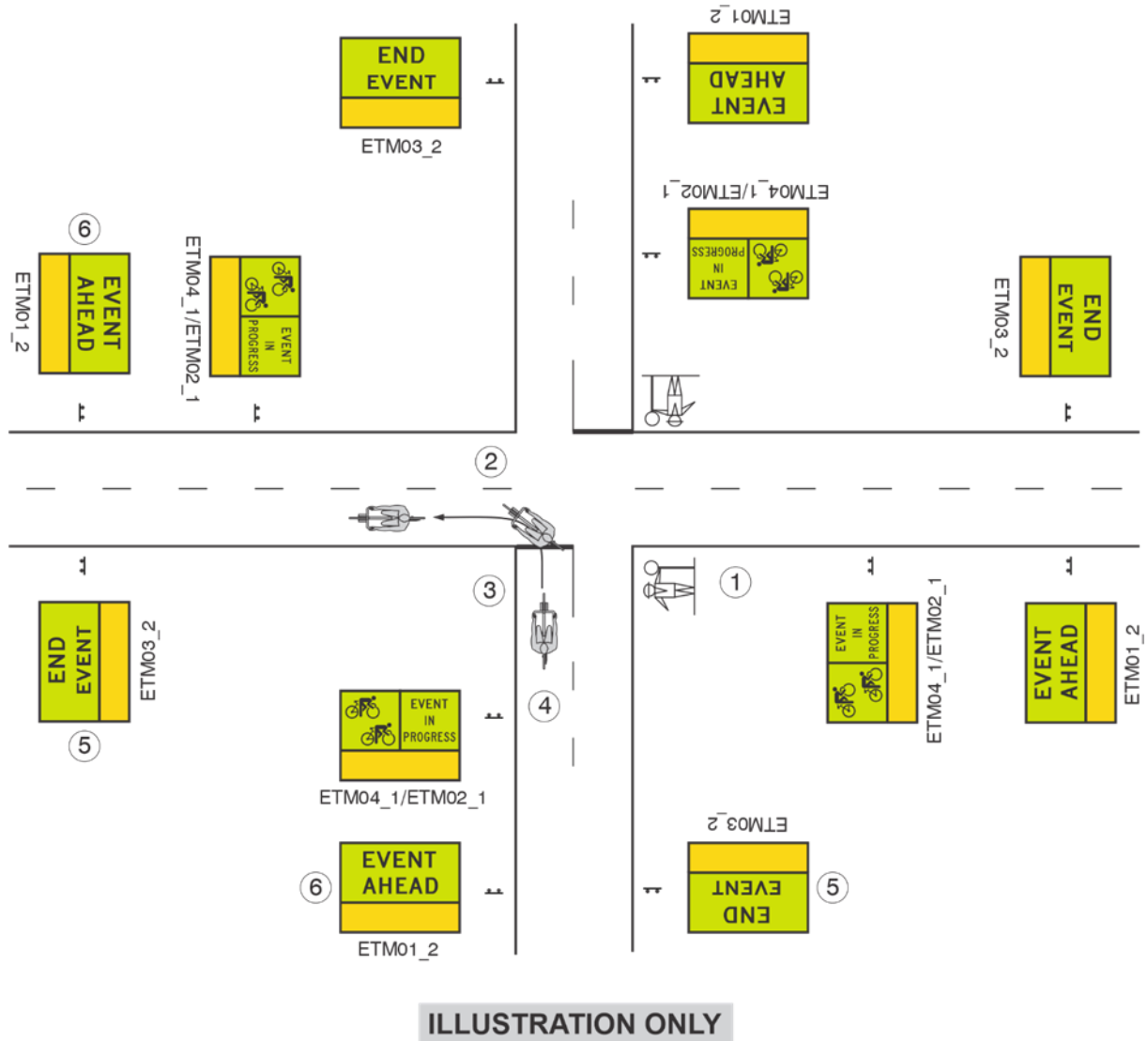
**ILLUSTRATION ONLY**

**Notes**

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.
2. Pedestrians attempting to cross the road that event participants are turning into or from may also need to be controlled.
3. Controls may be put in place at the intersection to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic or traffic waiting and queued at the intersection to turn.
4. The END EVENT signs along the continuing event route will be replaced by EVENT IN PROGRESS signs where the event is still continuing in this direction.
5. The EVENT AHEAD signs along the continuing event route will not be required where the event is continuing in this direction and where all road users have passed an EVENT AHEAD sign previously.

**Figure 3.4(c) – Unsignalised intersection: left turn from side road**

Event participants turning left from side road onto a through road where it is desired to provide priority to the event participants and prevent side road vehicles from attempting to turn between gaps in event participants. Use of traffic control to hold side road approaches and opposite through road approach.



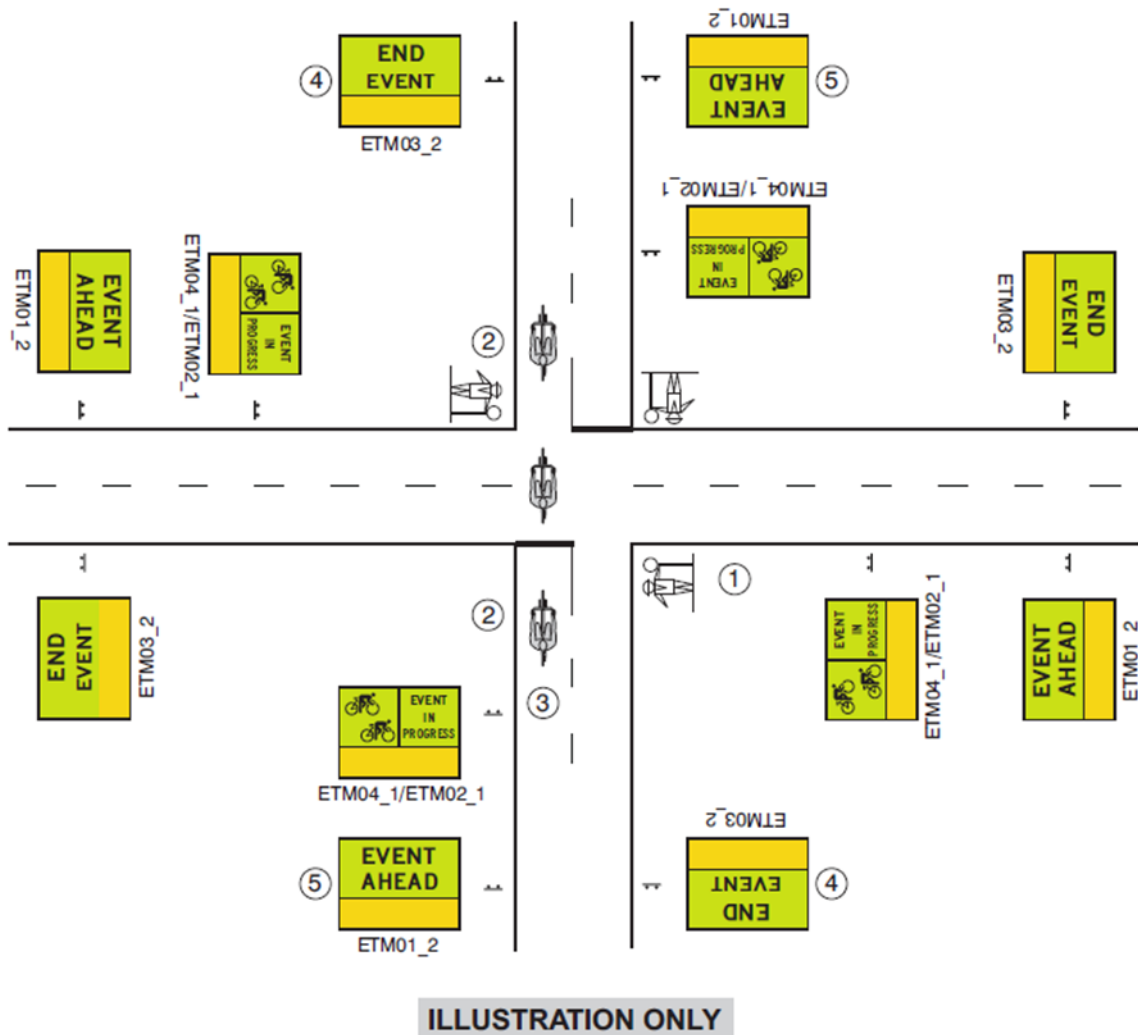
**Notes**

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.
2. Right turn movements from the through road to the side road may need to be held if the swept path of large vehicles conflicts with the travel path of event participants (for example, on freight routes).
3. Pedestrians attempting to cross the road that event participants are turning into or from may also need to be controlled.
4. Controls may be put in place at the intersection to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic or traffic waiting and queued at the intersection to turn.



**Figure 3.4(d) – Unsignalised intersection: through from side road**

Event participants travelling straight from side road across a through road where it is desired to provide priority to the event participants and prevent minor road vehicles from attempting to turn between gaps in event participants. Use of traffic control to hold side road approaches and opposite through road approach.

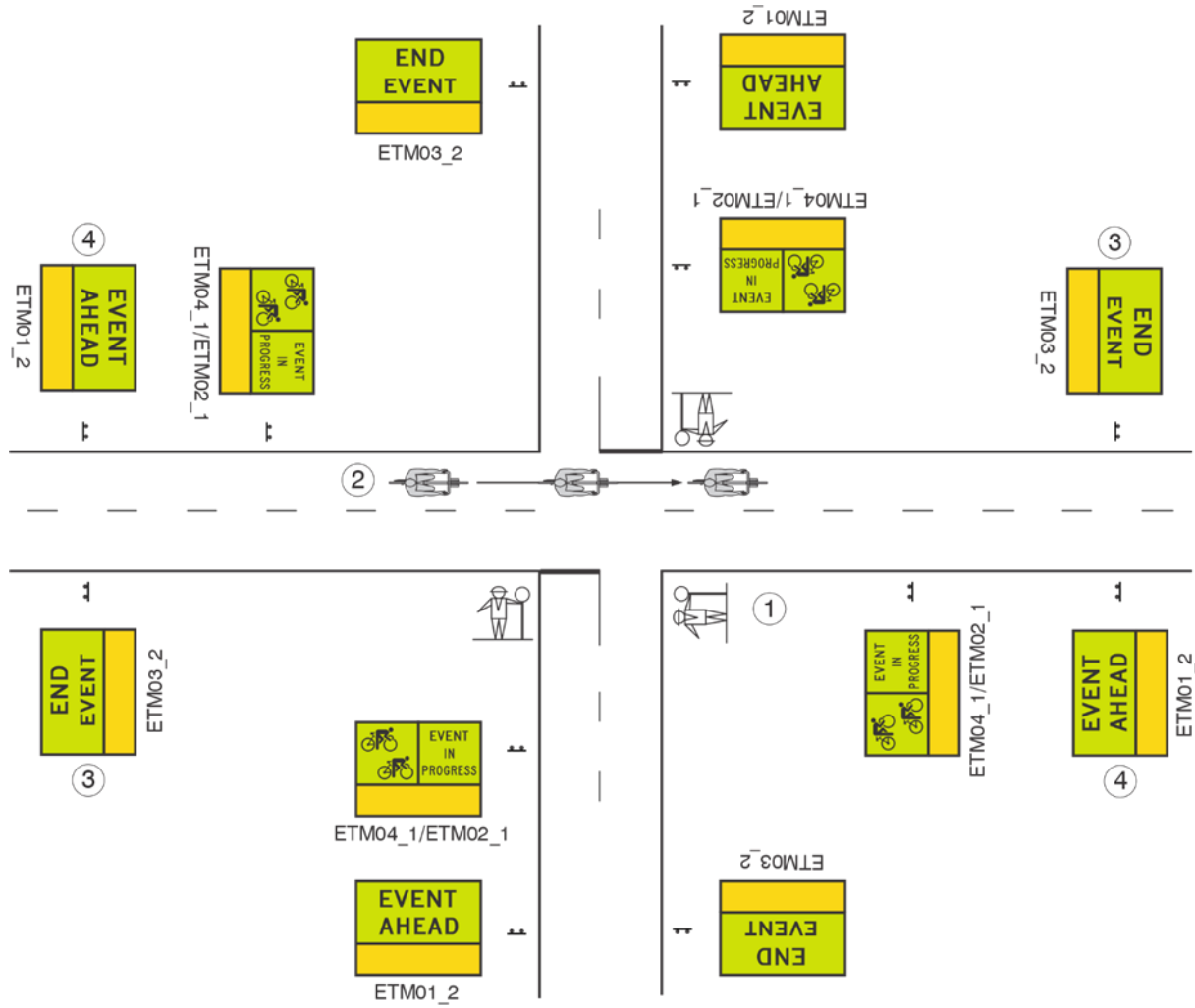


## Notes

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.
2. Pedestrians attempting to cross the road that event participants are using may also need to be controlled.
3. Controls may be put in place at the intersection to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic or traffic waiting and queued at the intersection to turn.
4. The END EVENT signs along the continuing event route will be replaced by EVENT IN PROGRESS signs where the event is still continuing in this direction.
5. The EVENT AHEAD signs along the continuing event route will not be required where the event is continuing in this direction and where all road users have passed an EVENT AHEAD sign previously.

**Figure 3.4(e) – Unsignalised intersection: through from through road**

Event participants travelling along a through road past a side road where it is desired to prevent opposing right-turn vehicles and side road vehicles from turning in front of event participants. Use of traffic control to hold side road approaches and opposite through road approach.



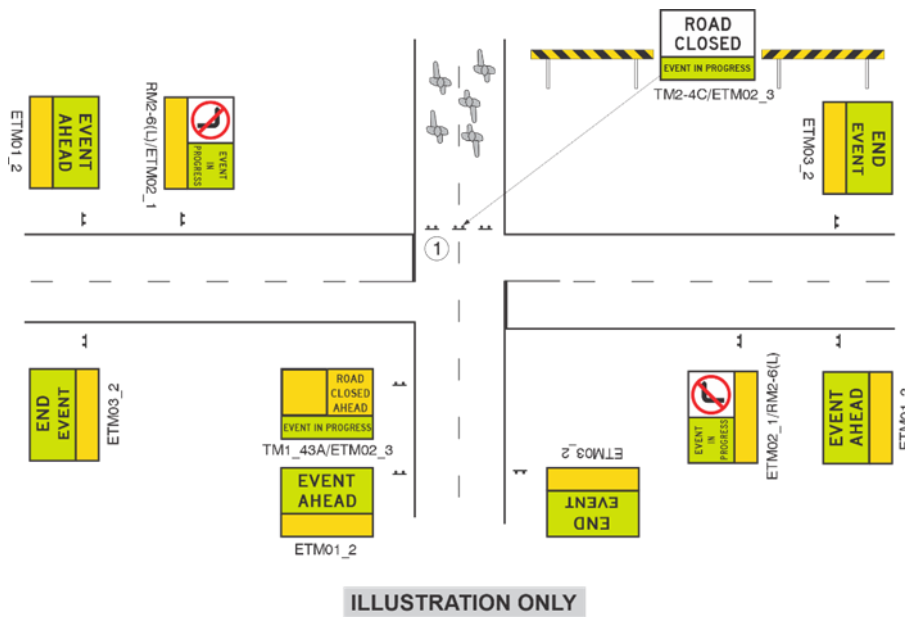
**ILLUSTRATION ONLY**

**Notes**

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.
2. Controls may be put in place at the intersection to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic or traffic waiting and queued at the intersection to turn.
3. The END EVENT signs along the continuing event route will be replaced by EVENT IN PROGRESS signs where the event is still continuing in this direction.
4. The EVENT AHEAD signs along the continuing event route will not be required where the event is continuing in this direction and where all road users have passed an EVENT AHEAD sign previously.

**Figure 3.4(f) – Unsignalised intersection: through road closed**

Through road closed at an intersection.

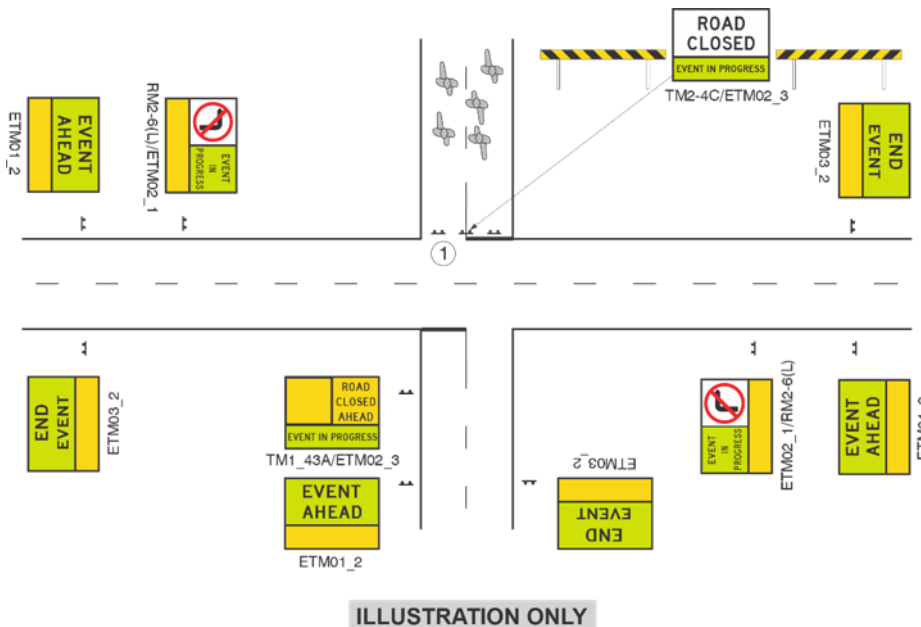


**Notes**

1. Where access to the closed section of roadway is to be maintained for vehicles associated with the event, manual traffic control may be required at the closure to manage access by removing / moving the barrier boards to allow access for event vehicles.
2. Refer to Appendix A, Figure A1 for an example layout.

**Figure 3.4(g) – Unsignalised intersection: side road closed**

Side road closed at an intersection.

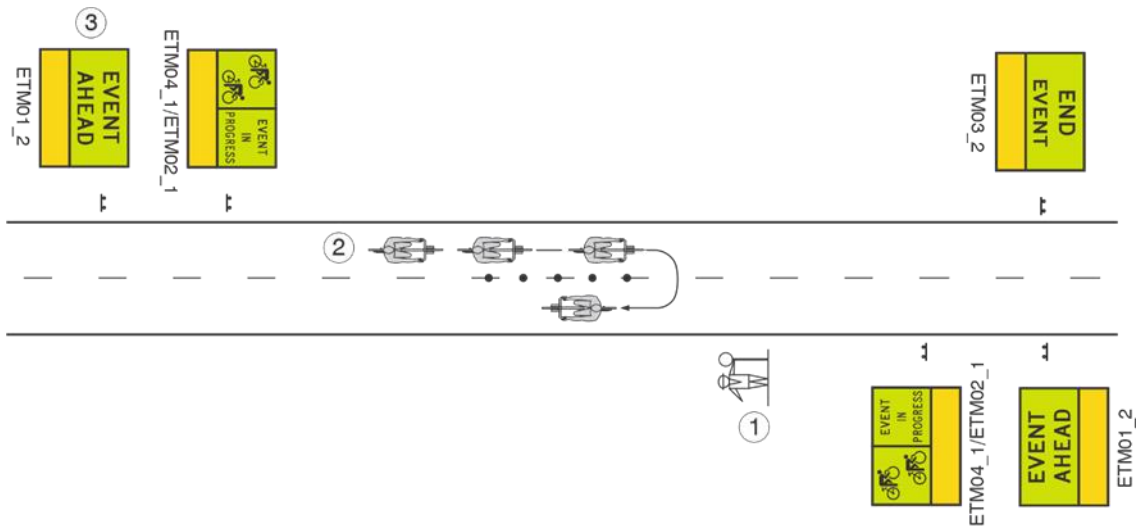


**Notes**

1. Where access to the closed section of roadway is to be maintained for vehicles associated with the event, manual traffic control may be required at the closure to manage access by removing / moving the barrier boards to allow access for event vehicles.

**Figure 3.4(h) – Through road: U-turn**

Event participants performing a U-turn at a mid-block location.



**ILLUSTRATION ONLY**

**Notes**

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.
2. Controls may be put in place to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic at the turn around point.
3. The EVENT AHEAD sign along the continuing event route will not be required where the event is continuing in this direction and where all road users have passed an EVENT AHEAD sign previously.

**Figure 3.4(i) – Pedestrian / cyclist crossing facility: close to intersection**

Event participants crossing the through road in close proximity to an intersection.

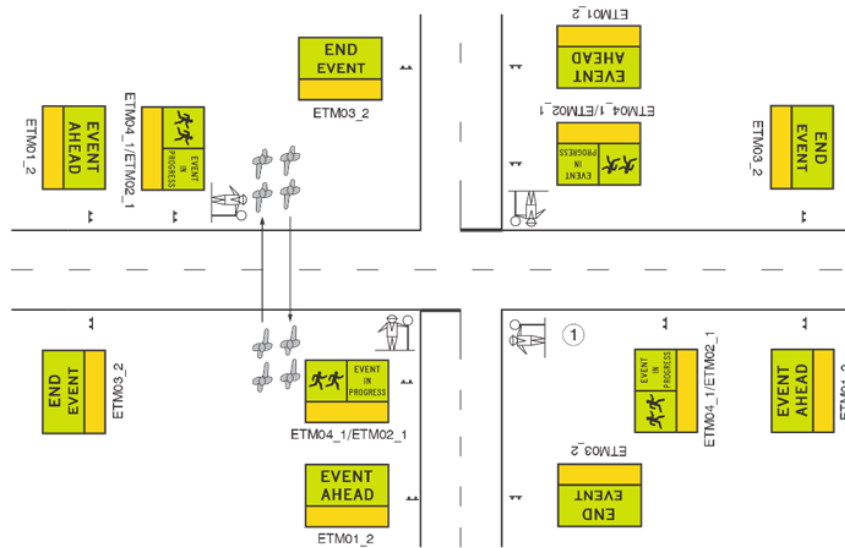


ILLUSTRATION ONLY

Notes

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.

**Figure 3.4(j) – Pedestrian / cyclist crossing facility: mid-block**

Event participants crossing a road at a mid-block location (that is, away from an intersection).

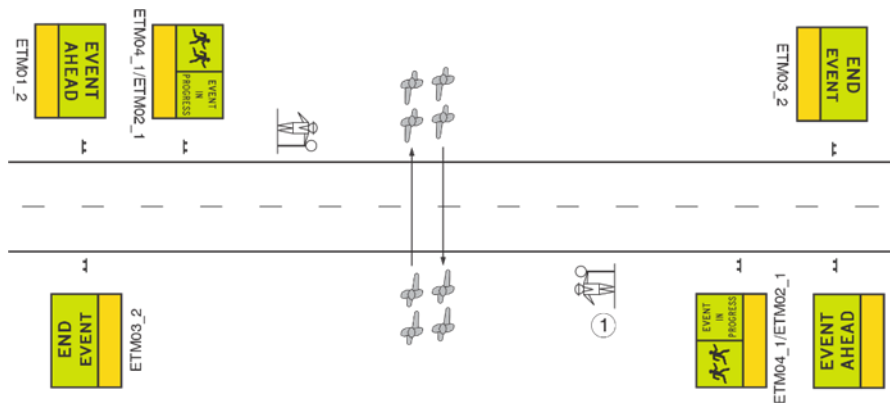


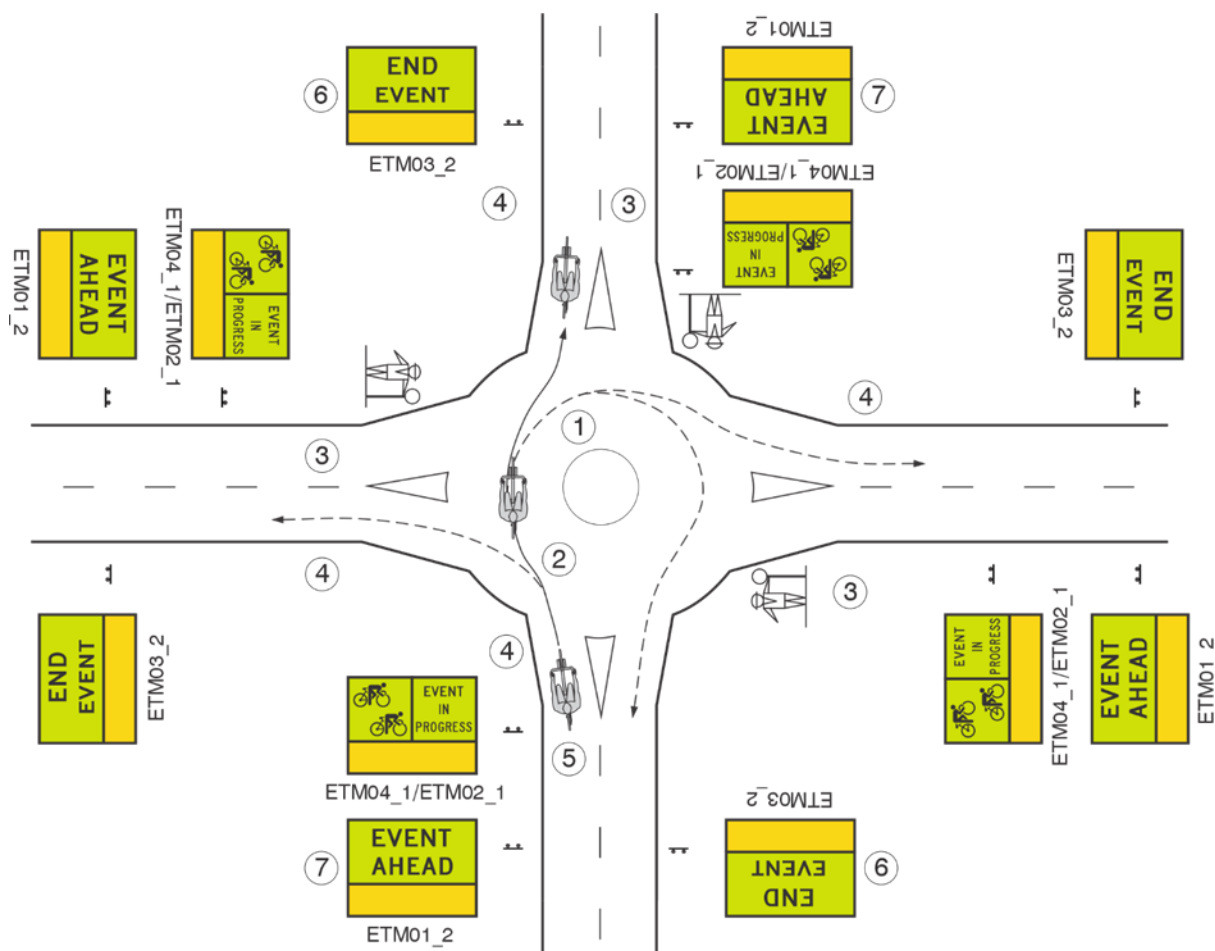
ILLUSTRATION ONLY

Notes

1. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queuing should be considered.
2. Refer to Appendix A, Figure A2 for an example layout.

**Figure 3.4(k) – Roundabout: right turn, left turn, through or U-turn**

Event participants turning right, left, travelling through or performing a U-turn at a roundabout. Use of traffic control to hold the other approach legs to the roundabout.



**ILLUSTRATION ONLY**

**Figure 3.4k**

**Notes**

1. This arrangement can be used for any movement of participants through a roundabout.
2. Additional traffic management measures may be required at multi-lane roundabouts.
3. Where frequent stoppages of vehicles are required, the impacts on traffic operations and/or vehicle queueing should be considered.
4. Pedestrians attempting to cross the road that event participants are turning into or from may also need to be controlled.
5. Controls may be put in place at the roundabout to manage traffic travelling in the same direction as event participants so that traffic impacts on event participant movements are minimised. For example from following / overtaking traffic or traffic waiting and queued at the roundabout to turn.
6. The END EVENT signs along the continuing event route will be replaced by EVENT IN PROGRESS signs where the event is still continuing in this direction.
7. The EVENT AHEAD signs along the continuing event route will not be required where the event is continuing in this direction and where all road users have passed an EVENT AHEAD sign previously.

## **4 Static events**

### **4.1 Types**

Static events typically do not deviate from a specific location for the duration of the event, and participants and spectators at these events are physically isolated / separated from general traffic (even if the event is in close proximity to a roadway). Static events may occur for a short period of time, or over an extended period (for example, multiple days).

Most events are static in nature, or at least involve some static arrangements as part of the event (for example, start / end locations for an on-road event). Static events can be broadly categorised as either on-road or off-road in nature. They can be held in a wide variety of locations such as:

- purpose-built facilities
- private land typically used for other purposes
- public spaces, and
- on public or private roads.

#### **4.1.1 On-road events**

At on-road static events all or part of the roadway becomes the event area at a fixed location for a period of time. This type of event may involve partial or full road closure, depending on the amount of space required for the event (participants and spectators) and traffic safety risks. As a result, they have the potential to significantly impact general traffic access and movements.

Examples of on-road static events include:

- street festivals
- filming, and
- community events (for example, PARKing Day).

##### **4.1.1.1 Diversion of traffic – detours**

Traffic management for events may require the diversion of traffic (that is, detours) around static on-road type of events. Requirements and recommendations for the operation of detours are given in the QGTTM Parts 2 and 3.

#### **4.1.2 Off-road events**

While events that take place off the roadway may not reduce traffic capacity due to lane closures, they may still introduce risks on the road network due to additional vehicle traffic and pedestrian activities associated with the event, particularly at event start and end times. Off-road events can also generate additional parking demands in the area and place additional demands on public transport and / or passenger transport services (for example, taxis or ride share).

Examples of off-road events include:

- concerts and performances
- markets (for example, farmers market / village markets)
- sporting events
- festivals, and
- community events (for example, school fetes).

#### **4.2 Risks**

Regardless of whether the event is held on, adjacent to or well away from a roadway, the transport demands and movements associated with a static event need to be managed appropriately for the safety of the surrounding public and event participants.

Specific risks associated with static events that may need to be considered include:

- vehicle access (particularly at event start / end)
- pedestrian access (particularly at event start / end)
- crowds in proximity to general traffic (for example, queuing at points of entry)
- pedestrian / vehicle conflict at access points or on the perimeter of the event
- motorist distraction (for example, fireworks, LED screens)
- parking and circulation (to prevent queuing on public roads)
- local access, and
- providing emergency access to events and maintaining emergency access to other properties.

#### **4.3 Specific considerations**

For static events with large patronage, alternative forms of transport (for example, public transport or personalised transport) to / from the event may need to be promoted in order to safely manage traffic operations and parking demands in the vicinity of the event.

When promoting the use of public transport, the need for additional temporary arrangements should be considered. Liaison with public transport operators should occur to determine the feasibility of, and requirements for, these arrangements.

Some examples of specific measures that may be required include:

- additional services on existing public transport lines
- specific bus / shuttle services to Park 'n' Ride locations
- temporary bus stops
- wayfinding signage within the venue and temporary stop locations, and
- crowd management at existing and temporary bus stops.

For large events in urban areas, there is likely to be an increased demand for personalised transport services (for example, taxis or ride-sharing). The availability of kerbside space (passenger loading / taxi zones) and the need to temporarily increase these provisions during events should be



taken into consideration, including balancing walking distances with the need to avoid congestion at venue access points.

Large static events may also potentially generate additional parking demands in concentrated areas. Careful consideration of the management of existing on-street parking and kerbside use allocations may be required, in addition to enforcement of restrictions. Events that do not take place at purpose-built facilities may require temporary parking or drop-off provisions for persons with disabilities close to pedestrian access points.

## **5 Cycling events**

### **5.1 Types**

In comparison to walking or running events, participants in any cycling event are likely to be travelling at a faster pace. Cycling events are often designed to pass through a range of road environments, with varying road cross sections, speeds and property access arrangements. Some cycling events may have marshals, volunteers, spectators and support vehicles along the length of the route.

The start and end of cycling events usually have the largest concentration of both cyclists and spectators, with a thinner spread of people in-between. As a result, risks may potentially be higher at the start and end as exposure to hazards is increased at those locations.

For the purposes of these guidelines, cycling events have been broadly categorised as either road races or rides and tours.

#### **5.1.1 Road races**

Road races are typically held on sealed roads, with riders competing either as individuals or in teams. These types of events require cyclists to be given priority over general traffic (so as not to influence race outcomes) and riders competing in road races require the space to be able to overtake other cyclists. This may require special permission, and roads are sometimes temporarily closed for such events. In most cases, these events operate with rolling closures and traffic management at conflict points is provided to maintain unimpeded movement by competitors. Team-based events also require space to allow riders to travel in groups.

Example types of road races include:

- single-day races
- time trials
- stage races, and
- triathlons.

#### **5.1.2 Rides and touring**

Organised bicycle rides and tours do not typically involve competition, but are held for recreational awareness or fundraising purposes. Courses for these events are likely to be held over a mixture of sealed roads and pathway facilities. Participants in these events can have a wide range of experience levels, from novice to competent. While some participants may be used to riding bicycles around traffic, they may be less experienced in riding with large groups of cyclists which, in some cases, can be a much higher risk than riding in general traffic conditions.

Examples of rides and tours held in Queensland include:

- cycle challenges
- fundraising rides, and
- adventure tours.

## **5.2 Risks**

While all forms of cycling (even on high quality off-road facilities) involve a degree of risk, cycling events introduce additional risks (or elevate existing risks) for riders. Specific risks associated with cycling events that may need to be considered include:

- rider behaviour
  - inexperienced cyclists
  - compliance with road rules / risk taking when racing or in a group riding mindset
  - interaction with pedestrians on shared use paths
- driver behaviour
  - courses with low driver expectation / awareness of cyclists
  - overtaking / impatience
- environmental factors
  - vehicle speeds, dusk / dawn visibility, vehicle mix, shoulder conditions
  - pavement condition (including potholes, and edge breaks)
  - pinch points, crossing locations, verge and refuge space, and
  - street lighting, and
- design factors
  - course routes that do not reflect normal demand / priority; for example, trying to cross from a side street.

Known and identified risks should be conveyed to participants in a timely manner prior to the event commencing. While the TMD would identify and mitigate the risks in preparing the TMP and TGS and pass this information onto the event organiser, the event organiser would be responsible for communicating these risks to the participants prior to the event.

## **5.3 Specific considerations**

### **5.3.1 Width**

Consideration should be given to the amount of space / width required to accommodate participants at cycling events. The space required may be greater in some parts of the event course, due to higher concentrations of participants (for example, at event start and finish) and due to terrain (for example, uphill sections, where inexperienced cyclists may struggle to keep their bicycle moving in a straight line).

The minimum cyclist operating widths adopted for the design of cycling infrastructure may provide a starting point for the determination of space requirements (see Austroads' *Guide to Road Design* Part 6A Section 3.2.2). Cyclists travelling at higher speeds (in events with higher concentrations of

participants) may require additional space as they may naturally tend to maintain a greater separation from adjacent or slower moving riders. Ride-style events are likely to attract participants with a wide range of abilities and speeds, which will require sufficient room for passing and to accommodate riders who walk their bikes up any steeper sections of the course.

### **5.3.2 Temporary restrictions**

On-road cycling events may require the closure of roads or temporary changes to roadway operating conditions, such as:

- temporary speed limits
- delineation of roadway space for use by event participants
- use of traffic control to provide priority to riders over general traffic at conflict points.

A process for reinstating general traffic conditions may be required (for example, by using UHF radio communications to relay information about the position of the last riders). For events where roads must be reopened, arrangements for sweep vehicles (also known as 'broom wagons') to pick up riders who fail meet cut-off times may be required.

## **6 Pedestrian / running events**

### **6.1 Types**

Pedestrian and running events vary in size, distance and duration. Their routes may occur on roads, footpaths, verges and shared paths where conditions frequently change (for example, available widths and surface conditions). They also involve a variety of people, including the participants, course marshals, volunteers and spectators.

The start and end points of the event typically has the largest volume of pedestrians along the route. This is due to participants spreading out as the event progresses and finally converging at the finishing area.

This section excludes discussion on the start and end locations of pedestrian and running events which are more appropriately covered in the static events section of this guideline. Due to the generally large numbers and likely clustering of participants at these locations, it is important that the appropriate event traffic management is in place for the nature of the event.

There are a variety of types of pedestrian and running events that take place in Queensland. These may vary in size depending on the level of publicity and sponsorship associated with the event. These events can be broadly broken into the following types:

- running (for example, charity / fundraising runs, marathons, road running races)
- walking (for example, charity / fundraising walks, walking races)
- combination (for example, triathlons).

## **6.2 Risks**

Specific risks associated with pedestrian / running events that may need to be considered include:

- driver expectations for encountering pedestrians (at locations where they are not typically present)
- visibility of participants (on or crossing roads) at dawn and dusk
- conflicts between participants and other pedestrians / path users
- the capacity of existing verges, islands and refuges to accommodate the expected concentrations of participants
- course routes on paths that cross driveways
- participant awareness of general traffic (particularly if attention is focused on the event).

Known and identified risks should be conveyed to participants in a timely manner prior to the event commencing. While the TMD would identify and mitigate the risks in preparing the TMP and TGS and pass this information onto the event organiser, the event organiser would be responsible for communicating these risks to the participants prior to the event.

## **6.3 Specific considerations**

### **6.3.1 Width**

As with cycling events, consideration should be given to the amount of space / width required to accommodate participants at pedestrian / running events. The space required may be greater in some parts of the event course, due to higher concentrations of participants (for example, at event start and finish).

The minimum operating spaces adopted for the design of pedestrian spaces and facilities may provide a starting point for the determination of space requirements (see Austroads' *Guide to Road Design* Part 6A Section 3.2.1); however, pedestrians moving at speed may require additional space over the minimum.

### **6.3.2 Participant compliance with road rules**

Large groups of pedestrian / runners participating in an event may be more likely to contravene road rules, either inadvertently because they are caught up in the moment of the event, or intentionally due to a belief of safety in numbers. Where the event takes place on roads that are not closed to general traffic, this may increase the risk of collisions with vehicles.

Consideration should be given to the use of event personnel (to encourage compliance with road rules at crossing locations) or traffic control personnel (at locations where significant concentrations of participants are likely to interact with general traffic and vehicle traffic is controlled in order to provide priority to event participants).

## **7 Parades / marches**

### **7.1 Types**

Parades and marches typically involve large groups of pedestrians (sometimes accompanied by a smaller number of vehicles or floats) moving at walking pace along roadways. They typically occupy the entire width of the carriageway along the route and occur in built-up areas (for example, central

business districts [CBDs]). They can be held for up to a few hours and involve a variety of people, including the participants, marshals and spectators.

In comparison to walking events which are likely to have a recreational or fundraising nature, parades and marches are typically celebratory, spectacular or a protest-type event.

While parades and marches are similar to running and walking events in that they also involve large numbers of pedestrians on foot, the nature of these events mean that they are typically held in the centre of urban environments. This can present different challenges depending on the scale of the urban centre.

Examples of parades and marches include:

- parades (for example, ANZAC Day, Australia Day, ticker tape events)
- marches (for example, Labour Day)
- novelty parades (for example, Zombie Walk)
- planned protest marches.

## **7.2 Risks**

Specific risks associated with parades and marches that may need to be considered include:

- driver distraction (for example, around novelty parades)
- network impacts in dense built-up areas
- participant behaviour around general traffic
- property access (resulting in vehicles entering closed carriageways).

## **7.3 Specific considerations**

In many rural towns, the main street can also act as the primary route for traffic passing through the area. Given that the main street also often links key community facilities and can be considered the centre of town, it is a natural candidate for holding these types of events. Consideration needs to be given to the suitability of alternate routes for through traffic, in terms of both the volume and type of traffic (for example, heavy and over-dimension vehicles).

Cities and other larger urban centres may not face the same issues in terms of the availability of suitable alternate routes for traffic; however, dense urban environments may pose other challenges such as:

- accommodating existing high levels of pedestrian traffic
- managing impacts on kerbside loading zones.

CBDs typically experience high levels of pedestrian activity under 'business as usual' conditions. Road and crossing closures implemented to facilitate parades or marches can lead to denser concentrations of pedestrians at alternate crossing points. Additional control measures (such as manual traffic control and crowd channelisation) may be required to manage pedestrians in the vicinity of crossings at intersections and mid-block locations.

The management of kerbside impacts may also require a greater level of focus in larger urban centres. In many CBDs and older urban areas, businesses may be reliant on kerbside parking and loading zones where on-site space is limited and commercial and retail facilities pre-date

contemporary development requirements for on-site servicing and parking. In areas where kerbside use is completely controlled / allocated, impacts on passenger loading, bus stops and taxi zones may also need to be considered.

Options for the management of impacts on kerbside use include:

- a communication strategy with neighbouring businesses / facilities
- provision of controlled vehicle access around the event for specific users / businesses
- temporary changes to kerbside use to provide alternative loading zone locations in the vicinity of the event.

## **8 Convoys and vehicle touring**

### **8.1 Types**

Convoys and vehicle touring involves multiple vehicles travelling together between destinations or on a planned route. Convoys typically involve a small or defined group of vehicles, while vehicle touring events can involve large numbers of vehicles travelling in 'single file' (or two abreast, in the case of motorcycles).

Examples of these types of events include:

- display or transportation of army / government officials
- transportation of high profile people (for example, Head of State or Royalty)
- motorcycle charity rides
- vintage / classic car rallies.

### **8.2 Risks**

Specific risks associated with convoys and vehicle touring events that may need to be considered include:

- unsafe overtaking manoeuvres (by non-participants) around long convoys as a result of driver impatience
- loss of integrity of the convoy (that is, 'breaking up'), where it includes vulnerable road users
- touring drivers stopping on shoulders and exiting vehicles to regroup or coordinate movements (increasing exposure to traffic collisions)
- groups of touring vehicles attempting to pull out into traffic together without waiting for appropriate gaps in traffic (in an attempt to 'keep together').

### **8.3 Specific considerations**

#### **8.3.1 Maintaining convoy integrity**

Irrespective of whether a convoy includes vulnerable road users or not, there may be reasons for which there is a desire to ensure that the integrity of a convoy is maintained (that is, no part of the convoy becomes separated from the remainder).

Management tools such as support vehicles (to clearly define the start and end of the convoy), employing traffic control on side road approaches (to ensure that general traffic does not attempt to turn into or across the convoy), and oversight of traffic signal operations (to allow the entire length of

the convoy to travel through a signalised intersection in a single signal phase) may assist with maintaining convoy integrity. Manual traffic control may also be required at locations where the convoy enters (or re-joins) the public road network: for example, when the procession resumes after a rest break at an off-road location.

While motorway environments do not pose the same challenges as lower order roads in terms of needing to manage intersecting roads and traffic signals, consideration is required for managing approaches to free-flow on and off ramps, and the larger headway distances between individual convoy members due to higher travel speeds.

### **8.3.2 Speed differential**

The speed differential between the convoy and general traffic may need to be managed if the convoy is travelling at a speed substantially below the posted speed limit or prevailing vehicle speeds. In addition to potentially exposing the convoy and general public to collision risks such as rear end crashes, such situations may lead to or increase traffic delays and / or congestion (particularly on two-lane, two-way roads).

Where substantial speed differentials cannot be avoided through the selection of an alternate route, the use of support vehicles (trailing the convoy) and / or pulling the convoy over to the side of the road (where the road environment / form permits) at regular intervals may assist in mitigating these risks.

### **8.3.3 Security requirements**

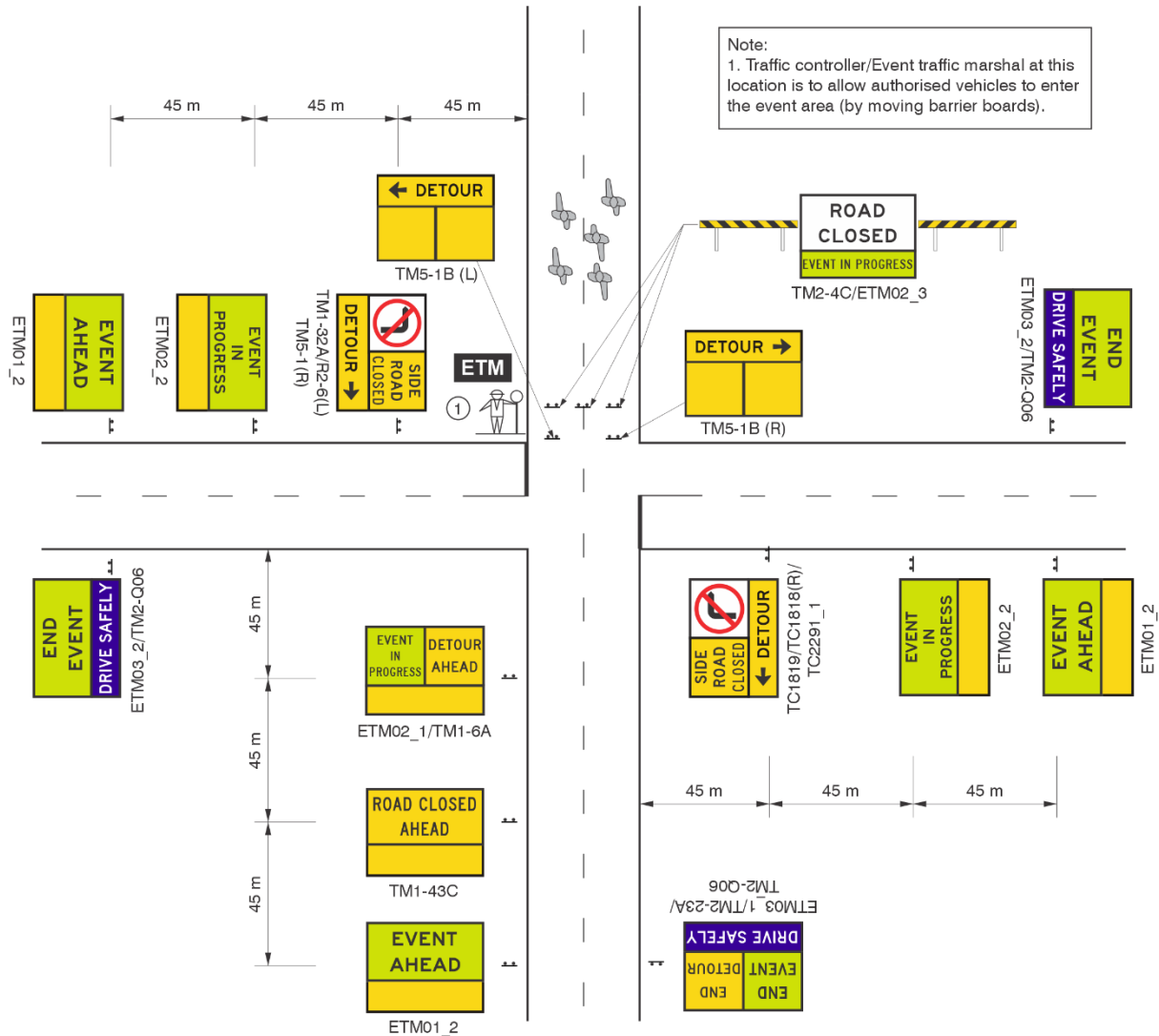
Some convoys will have significant security considerations. While security requirements are likely to be determined by state or federal police in conjunction with the event organiser, designers should liaise with the relevant stakeholders to incorporate these requirements into any traffic management arrangements.

## Appendix A

**Figure A1 – Unsignalised intersection: through road closed**

Through road closed at an intersection.

Figure A1 indicates an example of the event signs, the Queensland MUTCD Part 3 and the QGTTM signs required for this situation (based on Figure 3.4(f) for a 60km/h urban environment). The DETOUR signs will be dependent on the available detour routes around the road closure. Signs and other devices required for pedestrian management are not shown.



EXAMPLE ONLY

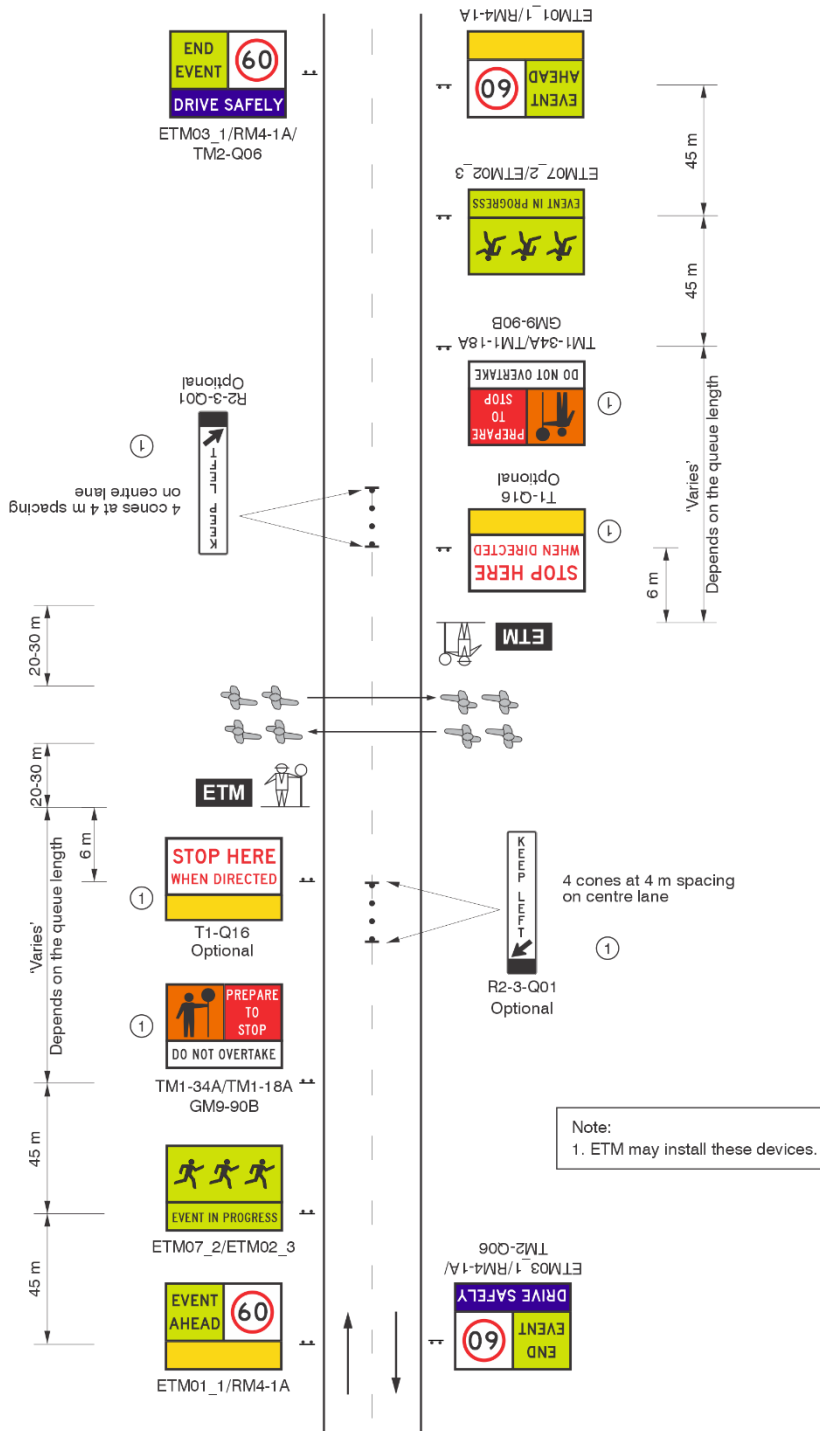
Figure A1



**Figure A2 – Pedestrian / cyclist crossing facility: mid-block**

Event participants crossing a road at a mid-block location (that is, away from an intersection).

Figure A2 indicates an example of the event signs, the Queensland MUTCD Part 3 and the QGTTM signs required for this situation (based on Figure 3.4(j) for an 60km/h, two-lane, two-way road. Signs and other devices required for pedestrian / spectator management are not shown.



EXAMPLE ONLY

Figure A2

