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A2.2 RIGHT-OF-WAY CONTROL

A2.2.1 Stop Sign (RA-1), Stop Sign Tabs (RA-1S1 to RA1S3), 4-Way Stop Tab (RA-1S4), All Way Stop Tab (RA-1S5)

A2.2.2 Yield Sign (RA-2)

A2.3 SPEED CONTROL

A2.3.1 Maximum Speed Sign (RB-1), KM/H Tab (RB-1S)

A2.3.2 Night Speed Sign (RB-3)

A2.3.3 Minimum Speed Sign (RB-4)

A2.4 TURN CONTROL

A2.4.1 Through Traffic Prohibited Sign (RB-10)

A2.4.2 Right (Left) Turn Prohibited Sign (RB-11)

A2.4.3 Right (Left) and Straight Through Prohibited Sign (RB-12)

A2.4.4 Turning Prohibited Sign (RB-13)

A2.4.5 Turn Right (Left) Sign (RB-14)

A2.4.6 Mandatory Straight Through Sign (RB-15)

A2.4.7 U-Turn Prohibited Sign (RB-16)

A2.4.8 Right (Left) Turn On Red Traffic Signal Prohibited Sign (RB-17), On Red Tab (RB-17T)

A2.4.9 Supplemental Turn Control Tab Signs (RB-9S, RB-11S1, RB-11S2)

A2.4.10 Left Turn Signal Sign (RB-18)

A2.4.11 Fire Truck Entrance Signals Tab Sign (RB-19S)

A2.4.12 Transit Signal Signs (RB-114/RB-114F, RB-115/RB-115F)

A2.5 DIRECTIONAL TRAFFIC CONTROL

A2.5.1 One-Way Sign (RB-21)

A2.5.2 Do Not Enter Sign (RB-23), Wrong Way Sign (RB-22), Do Not Enter Tab (RB-23T)

A2.5.3 Two-Way Traffic Sign (RB-24), Two-Way Traffic Tab (RB-24T)

A2.5.4 Keep Right/Keep Left Sign (RB-25)

A2.6 PASSING CONTROL

A2.6.1 Passing Prohibited Signs (RB-31, RB-33), ENDS Tab (RB-33S2), Do Not Pass Tab (RB-31T), Do Not Pass Bicycles Tab (RB-33T)

A2.6.2 Passing Permitted Sign (RB-32), Passing Permitted Tab (RB-32T)

A2.6.3 Keep Right Except to Pass Sign (RB-34)

A2.6.4 Slower Traffic Keep Right Sign (RB-35)

A2.6.5 Yield Centre Lane to Opposing Traffic Sign (RB-36)

A2.2 RIGHT-OF-WAY CONTROL

A2.2.1 Stop Sign (RA-1), Stop Sign Tabs (RA-1S1 to RA1S3), 4-Way Stop Tab (RA-1S4), All Way Stop Tab (RA-1S5)

A2.2.2 Yield Sign (RA-2)

A2.3 SPEED CONTROL

A2.3.1 Maximum Speed Sign (RB-1), KM/H Tab (RB-1S)

A2.3.2 Night Speed Sign (RB-3)

A2.3.3 Minimum Speed Sign (RB-4)

A2.4 TURN CONTROL

A2.4.1 Through Traffic Prohibited Sign (RB-10)

A2.4.2 Right (Left) Turn Prohibited Sign (RB-11)

A2.4.3 Right (Left) and Straight Through Prohibited Sign (RB-12)

A2.4.4 Turning Prohibited Sign (RB-13)

A2.4.5 Turn Right (Left) Sign (RB-14)

A2.4.6 Mandatory Straight Through Sign (RB-15)

A2.4.7 U-Turn Prohibited Sign (RB-16)

A2.4.8 Right (Left) Turn On Red Traffic Signal Prohibited Sign (RB-17), On Red Tab (RB-17T)

A2.4.9 Supplemental Turn Control Tab Signs (RB-9S, RB-11S1, RB-11S2)

A2.4.10 Left Turn Signal Sign (RB-18)

A2.4.11 Fire Truck Entrance Signals Tab Sign (RB-19S)

A2.4.12 Transit Signal Signs (RB-114/RB-114F, RB-115/RB-115F)

A2.5 DIRECTIONAL TRAFFIC CONTROL

A2.5.1 One-Way Sign (RB-21)

A2.5.2 Do Not Enter Sign (RB-23), Wrong Way Sign (RB-22), Do Not Enter Tab (RB-23T)

A2.5.3 Two-Way Traffic Sign (RB-24), Two-Way Traffic Tab (RB-24T)

A2.5.4 Keep Right/Keep Left Sign (RB-25)

A2.6 PASSING CONTROL

A2.6.1 Passing Prohibited Signs (RB-31, RB-33), ENDS Tab (RB-33S2), Do Not Pass Tab (RB-31T), Do Not Pass Bicycles Tab (RB-33T)

A2.6.2 Passing Permitted Sign (RB-32), Passing Permitted Tab (RB-32T)

A2.6.3 Keep Right Except to Pass Sign (RB-34)

A2.6.4 Slower Traffic Keep Right Sign (RB-35)

A2.6.5 Yield Centre Lane to Opposing Traffic Sign (RB-36)

A3 WARNING SIGNS

A1.6.10.2 Strip of Retroreflective Material

Where engineering judgment indicates a need to improve conspicuity of standard regulatory or warning signs during nighttime conditions, a vertical strip of retroreflective material may be used on regulatory and warning sign supports.

If a strip of retroreflective material is used on the sign support, it should be at least 50 millimetres in width, it should be placed full length of the support from the sign to within 0.5 metres above the edge of the roadway, and its color should match the background color of the sign, except:

a. That the color of the strip for the YIELD and DO NOT ENTER signs should be red, and

b. A fluorescent yellow green is alternatively permitted to be used on pedestrian crosswalk signs, and

c. That the color of the strip for Lane Designation signs should be white.

A2.4.12 Transit Signal Signs (RB-114/RB-114F, RB-115/RB-115F)

The purpose of the Transit Signal Sign (RB-114/RB-114F) is to make drivers aware that there are one or more separate signals to control transit vehicle movements.

The purpose of the Transit Priority Signal Sign (RB-115/RB-115F) is to make drivers aware that the transit priority display to control transit vehicle movement is part of a standard signal head assembly.

Guidance

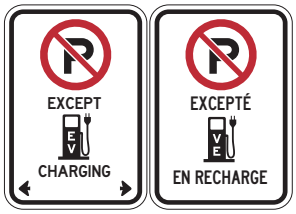
When used, the sign should be mounted in close proximity to one or more of the transit signal displays, either on the signal pole or mast arm.

RB-114
600 mm x 600 mm

RB-114F
600 mm x 600 mm

RB-115
600 mm x 600 mm

RB-115F
600 mm x 600 mm



RB-106 RB-106F
300 mm x 450 mm

A2.8.3.7 Parking Prohibited Except While Charging Sign (RB-106/RB-106F)

The Parking Prohibited Except While Charging sign (RB-106/RB-106F) indicates that parking is prohibited in the direction(s) indicated by the optional arrow(s), or directly in front of the sign if no arrows are present, except by electric vehicle(s) being actively charged through a permanently-installed charging device that is available in the parking space(s) delimited by this sign. Drivers using a portable charging device or generator may not use a parking space(s) delimited by this sign.

Standard

The Parking Prohibited Except While Charging sign (RB-106/RB-106F) must be used where parking is prohibited except by electric vehicles being actively charged through a permanently installed charging device that is available in the designated parking space(s).

A2.8.4 Parking Control at Loading Zones

The signs in this section are used to advise drivers of the parking regulations that apply to a section of street and what type of loading activities may take place in the designated zone (refer to Subsection A2.8.6 for multiple parking control sign use).

Typically, these signs are used for loading activities where the vehicle is left unattended for short periods of time while the goods are picked up or delivered.

RB-110 RB-110F
300 mm x 450 mm

A2.8.4.1 Commercial Loading Zone Sign (RB-110/RB-110F)

The Commercial Loading Zone sign (RB-110/RB-110F) indicates that parking is prohibited in the direction indicated by the arrow(s), except for the specific purpose of loading or unloading activities associated with a commercial vehicle.

Option

This sign may be used for a merchandise pick-up area near a store or any other use where a commercial vehicle needs to park for the specific purpose of loading or unloading goods.

A2.10 MISCELLANEOUS REGULATORY SIGNS

A2.10.1 Stop Line Sign (RC-4R/RC-4RF/RC-4L/RC-4LF)

The Stop Line sign (RC-4R/RC-4RF/RC-4L/RC-4LF) indicates the point at which drivers approaching a traffic control device must stop their vehicles.

Standard

The primary sign must be located on the right side of the road. An additional sign must be provided on the left of a one-way roadway or on the median of a divided roadway. In this case, the same sign text is used, but the arrow points down to the right, rather than down to the left.

Guidance

The sign should be directly in line with the stop line pavement marking.

The sign should be used where the location of the stop line is non-standard or where the required stopping position may not be obvious to drivers. The appropriate version (RC-4R or RC-4L) should be used depending on whether the sign is installed on the right side or the left side of the road.

The sign may be used without the matching stop line when used for a temporary condition.

RC-4R
600 mm x 750 mm

RC-4RF
600 mm x 750 mm

RC-5
600 mm x 600 mm

RC-5T
600 mm x 300 mm

RC-5TF
600 mm x 300 mm

RC-5S
600 mm x 300 mm

A2.10.2 Littering Prohibited Sign (RC-5), Do Not Litter Tab Sign (RC-5T/RC-5TF), Maximum Fine Tab Sign (RC-5S)

The Littering Prohibited sign (RC-5) indicates that it is illegal to discard litter or trash on or beside the road. Litter on the road and in the air interferes with the driving task, and also detracts from the appearance of roads.

Option

The sign may be installed at locations where, in the judgment of the road authority, it is required. The sign may be installed adjacent to roadways where it is found necessary to inform road users of regulations that prohibit littering. Evidence of non-compliance in the form of excessive litter would be a reason for using the sign.

The Do Not Litter tab sign (RC-5T, RC-5TF) may be used for introductory/educational purposes.

The supplementary tab sign (RC-5S) indicating the maximum fine for littering may be placed below the Littering Prohibited sign or tab.

RC-8
600 mm x 450 mm

A2.10.3 Keep Off Median Sign (RC-8/RC-8F)

Keep Off Median sign (RC-8, RC-8F) is used to prevent motorists from illegally crossing over the median strip between interchanges and at-grade intersections.

Standard

Keep Off Median sign must be placed on the median strip of divided highways only at locations where there is evidence that motorists are illegally crossing over the median strip. The sign, if used, must be installed on the median strip. Two signs, back to back on the same post, must be installed so as to be visible by both directions of traffic flow.

RC-8F
750 mm x 900 mm

A2.10.4 Seat Belt Sign (RC-6), Compulsory Tab Sign (RC-6S/RC-6SF), Optional Seat Belt Sign (RC-6F OPTIONAL)

The Seat Belt sign indicates that vehicle occupants must wear seat belts. Due to proven safety benefits, the use of seat belts is mandatory. For maximum effectiveness, the sign is placed where vehicles are about to enter the roadway, where passengers are most likely to require reminding about seat belts.

Option

The sign may be considered at entry points to a roadway system, such as border crossings, jurisdictional boundaries, ferry crossings, airports, freeway service centres, and exits from major traffic generators.

The supplementary tab sign (RC-6S) indicating that the use of seat belts is mandatory may be placed below the Seat Belt sign.

The optional Seat Belt Sign (RC-6 Optional) emphasizes provincial regulations and may be considered at locations that experience large tourist volumes, where motorist may be unfamiliar with provincial seat belt regulations.

RC-6
750 mm x 750 mm

RC-6S
750 mm x 300 mm

RC-6SF
750 mm x 300 mm

RC-6 OPTIONAL
2400 mm x 1200 mm

RB-18
600 mm x 750 mm

RB-18F
600 mm x 750 mm

A2.4.10 Left Turn Signal Sign (RB-18/RB-18F)

The purpose of the Left Turn Signal sign (RB-18) is to make drivers aware that there is a separate traffic signal head exclusively for left turns, in addition to the signal heads for other movements.

Guidance

When used, the sign should be mounted in close proximity to each of the left-turn signal heads, on either the signal pole or mast arm.

Option

The RB-18/RB-18F sign may be used to supplement one or more traffic signal heads which are exclusively controlling left turns, where the placement of the left turn traffic signals does not provide sufficient separation from the through traffic signals for the distinction to be clear to the driver.

RB-19SR
750 mm x 450 mm

RB-19SL
750 mm x 450 mm

A2.4.11 Fire Truck Entrance Signals Tab Sign (RB-19S)

The Fire Truck Entrance Signals tab sign (RB-19S) indicates to drivers that there is a signalized intersection at which fire trucks may be entering the road.

Standard

The Fire Truck Entrance Signals tab sign (RB-19S) is a supplementary tab sign which must be installed below each of the Traffic Control Signals at Fire Truck Entrance (Section B6.3). The appropriate right or left version must be used depending on the direction from which the fire trucks enter the intersection.

Option

The supplementary Percentage of Legal Axle Load tab sign (RB-82S1/RB-82S1F) may be used where a reduction in allowable load to a specified percentage of the non-restricted load is required.

The Maximum Weight Per Axle tab sign (RB-82S2/RB-82S2F) may be used where a reduction in load to a specified maximum weight is required.

The Sign Effective Period tab sign (RB-82S3/RB-82S3F) may be used in locations where the load restrictions are described in regulations or declared through media and where the Seasonal Load Restriction sign is left year-round, to inform truck traffic when the load restriction is in effect.

A2.9.4.8 Lane Use Restriction Sign (RB-68)

The Lane Use Restriction sign indicates that one or more classes of trucks, as prescribed by legislation, are prohibited in a traffic lane. The sign is typically used to prohibit heavy or long trucks from travelling on designated left lanes of roadways with three or more lanes in each direction, where they may impede the flow and/or visibility of other traffic.

Standard

The sign must be installed directly above the lane.

Option

It may be mounted on overpass structures or suspended by other means to be visible to drivers entering or proceeding along the road.

RB-68
900 mm x 1500 mm

A2.9.4.9 Engine Brake Prohibited Sign (RB-96/RB-96F), Begins Tab Sign (RB-96S1/RB-96S1F), Next XX KM Tab Sign (RB-96S3/RB-96S3F)

The Engine Brake Prohibited Sign may be used to indicate to drivers that the use of an engine brake is not allowed under normal circumstances and where local law prohibits the use of engine brakes.

Option

The Engine Brake Prohibited sign may be used on roadways where the use of engine retarding brakes ("Jake brakes") by commercial vehicle operators creates reoccurring noise and resulting in public complaints.

The supplementary tab signs RB-96S1 and RB-33S2 or RB-96S3 (RB-96S1F and RB-33S2F or RB-96S3F) may be used to define a specific zone.

RB-96
600 mm x 900 mm

WC-28T
600 mm x 300 mm

WC-28TF
600 mm x 300 mm

Option

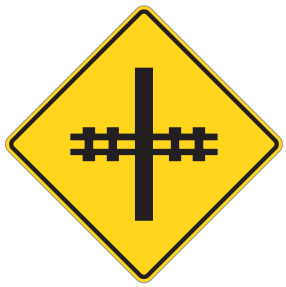
The Farm Vehicle sign may be used wherever farm tractors or other agricultural vehicles frequently travel in the roadway at low speed, turn into or out of an entrance, or cross a roadway.

The Farm Vehicle sign may be used with the WC-28T or WC-28TF tab sign to convey the meaning.

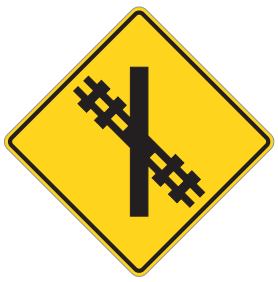
When there are two entrances between which farm vehicles regularly travel, a WA-28S tab may be added indicating the distance over which the hazard exists. This distance should not exceed 5 km. For longer distances, or where a major intersection is located between the two entrances, the Farm Vehicle sign should be repeated.

A3.8.5 Railway Crossing Warning Signs

A3.8.5.1 Railway Crossing Ahead Sign (WA-18/WA-18R/WA-18L), Railway Crossing on Side Street (3-leg) (WA-19R/WA-19L), Railway Crossing on Side Street (4-leg) (WA-20R/WA-20L)



WA-18
750 mm x 750 mm



WA-18R
750 mm x 750 mm

The Railway Crossing Ahead signs (WA-18, WA-19, WA20) warn drivers in advance of at-grade railway crossings.

Standard

The Railway Crossing Ahead signs must be installed in advance of all at-grade railway crossings that are in use.

The WA-18 sign must be provided in advance of an at-grade railway crossing that is oriented at a right-angle with respect to the roadway.

The WA-18R (or WA-18L) sign must be provided in advance of an at-grade railway crossing that is oriented at a skewed angle with respect to the roadway. The right or left version of the sign must be used as appropriate.

Situations exist where a major road and a rail line, which are parallel and in close proximity, intersect a minor road, such that insufficient distance is available on the minor road between the railway crossing and the major road for proper siting of the WA-18 sign. In such a situation, the WA-18 on the minor road between the major road and the railway crossing is supplemented by the WA-19 or WA-20, installed on the major road in advance of the intersection, facing both directions of traffic on the major road.

The right or left versions of WA-19 and WA-20 must be used as appropriate.

Table A3-1 suggests an appropriate placement condition for each warning sign, considering the applicable sight distance measurements. Reviewing the GDG is recommended in determining the need for a sign.

Other than sight distance, application guidance is provided for each sign. In most cases, a warning sign must be provided to highlight the presence of a particular condition. In some cases, multiple factors that may influence the collision risk should be considered. Collision risk is a product of collision frequency (probability) and severity. For example, on roadways with higher traffic volumes or a history of collisions, warning signs will likely have a greater benefit. Specific traffic volume or collision thresholds are not provided in this section; instead, the consideration of overall risk, including the local context and roadway classification may provide a more appropriate indication of the need for a particular warning sign.

Several of the warning signs could be applicable to off- or on-road bicycle facilities, should conditions justify the use of the signs. The terms “road”, “roadway”, “street” and “highway” are intended to encompass bikeways. The *Bikeway Traffic Control Guidelines for Canada* (TAC, 2012) should be consulted for specific guidance on the application of some of these signs.

A3.1.2 Classification of Warning Signs

Warning signs are classified into the following groups according to their particular function, as defined in Section A1.3.2:

- WA: Physical conditions signs
- WB: Traffic regulations ahead signs
- WC: Intermittent or moving hazard signs

This Manual contains the warning signs that are considered to be required across Canada. These signs have, for the most part, already been developed, tested, and implemented, by virtue of need and the processes in place at the Transportation Association of Canada. Any new signs for national consideration or signs developed locally should be treated as described in Section A1.10.

A determination of the appropriate sign to be used should be made in accordance with the criteria outlined in this Manual. The specifications for warning signs outlined here will adequately provide for most conditions that are encountered. If additional warning signs not contained in this Manual are needed, they should conform to the standard shape and colour for warning signs, and the message should be preferably conveyed with a symbol. If a word message is necessary, it should be brief and simple. New or substantially modified signs are typically considered for comprehension testing prior to inclusion in the Manual.

Once the governing condition for the warning sign in consideration is determined with the assistance of Table A3-1, Table A3-2 should be consulted for longitudinal placement information. Suggested advance placement distances for warning signs are shown in Table A3-2 for Condition A, B, and C. The distances have been calculated based on a deceleration rate of 12.24 km/h/s and human factors research documented in the TAC *Applied Human Factors in Road Safety Guide* (2013).

For the Condition A signs, since the desirable distances may be difficult to achieve in highly urbanized areas where available space for signs is limited and the visual environment is more complex, shorter distances may be used assuming quicker perception, reaction, reading, and/or manoeuvre times. The final sign placement should be determined based on contextual factors, such as the locations of intersections, driveways, or other traffic control devices or hazards between the warning sign and the related hazard.

The “Advisory Speed” for Condition C signs should be estimated based on the road feature. For horizontal curve signs, guidance for the selection of advisory speed is provided in Section A3.2. For other signs, the advisory speed will be based on the design speed of the road feature such as vertical deflections, reduced friction, or on precautionary braking for crossing road users.

Sign placement distances obtained from Table A3.2 should be adjusted for field conditions using engineering judgment to ensure the sign has been placed appropriately giving consideration to other sign locations, visibility, lighting conditions, angle, driver eye sightline, driver workload, etc. Where site conditions preclude the placement of a sign at the suggested distance upstream of a hazard, it is preferable to place the sign further upstream, allowing the driver more time to react. In lower speed urban areas, distances may be applied with some flexibility in the context of the placement guidance provided in Section A1.7 and above. Where there are multiple upcoming hazards, the signs should be sequenced in the order that the hazards are expected to be encountered. If a warning sign is considered to be too far from the hazard to be effective due to site conditions, such as an intersection between the sign and the hazard, the WA-30S Distance tab sign may be installed below the warning sign.

Some of the Condition D hazards do not have a definitive start or end (e.g., wildlife crossing). The distances shown for conditions A, B, or C may be used for the placement of the first sign in advance of the area that is known to be prone to these conditions, followed by repetition of the sign over the segment of the hazard based on placement distances provided under the guidance for these specific signs.

Since all of the minimum placement distances (Table A3-2) are a function of the posted speed, a change in posted speed may require that some warning signs be relocated. In addition, if any other deciding factor in sign placement is known to have changed, the warning signs impacted should be relocated accordingly.

c) A recorder notes the maximum instrument reading for each pass through the curve until a reading within the allowable inclination is achieved. Multiple passes may be required to obtain consistent results.

d) Advisory speeds are established based on the maximum speed that still provides a ball-bank reading within the limits noted above.

The vehicle used for testing should be an average-sized sedan with suspension in good condition and tires with average wear. Winter or deep-tread tires should not be used. Vehicles with high centres of gravity such as pick-up trucks, cargo vans, and sport utility vehicles are not acceptable test vehicles.

On new sections of road, it is desirable to have the lane markings or at least preliminary markings on the pavement before testing. Curve test results may vary by direction and a curve may not require signing, or identical signing, for both directions.

A3.2.2 Cross Street Within Curve Signs (WA-43R/WA-43L, WA-44R/WA-44L)

WA-43R
600 mm x 600 mm

WA-44R
600 mm x 600 mm

The Cross Street Within Curve signs (WA-43R/WA-43L, WA-44R/WA-44L) alert drivers travelling along a curve to expect the presence of an intersecting street and vehicles potentially entering the roadway.

Guidance

On approaches to an intersection where a Turn (WA-1) or Curve sign (WA-2/WA-3) is used, a line/stroke should be added to the Turn or Curve sign pictogram to indicate presence of an intersecting roadway that is concealed or unexpected, based on the guidance in Section A3.3.7 (Concealed or Unexpected Intersection signs).

Where a cross street is present on one side of the roadway, the WA-43R/WA-43L sign should be provided. Left or right variations of the sign depending on the curve direction and intersection location should be applied as appropriate.

Where a cross street is present on both sides of the roadway, the WA-44R/WA-44L sign should be provided. Left or right variations of the sign curve depending on the direction of the curve should be applied as appropriate.

Signs should reflect the intersection geometry as closely as possible. Where the pictogram accurately reflects the intersection configuration, a separate Concealed or Unexpected Intersection sign is not required.

The Advisory Speed tab sign (WA-7S) should be posted below a Reverse Sharp Curve or Reverse Curve sign, based on Table A3-3. If warranted for one or both curves, the advisory speed sign should indicate the safe speed on the more severe of the two curves.

A3.2.5 Winding Road Sign (WA-6R/WA-6L), Advisory Distance Tab (WA-28S/WA-28SF)

WA-6R
600 mm x 600 mm

WA-28S
600 mm x 300 mm

WA-28SF
600 mm x 300 mm

The Winding Road sign (WA-6R/WA-6L) indicates that there is a series of three or more turns or curves (as defined in the guidelines for turn and curve signs) with comparable advisory speeds and separated by relatively short tangent distances.

Standard

If the first turn or curve is to the right, a right Winding Road sign (WA-6R) must be used. If the first turn or curve is to the left, the left Winding Road sign (WA-6L) must be used.

The Winding Road sign must be installed at the beginning of the first turn or curve consistent with the guidance provided in Table A3-3.

Guidance

The Winding Road sign (WA-6R/WA-6L) should be used if there is a series of three or more turns or curves (as defined in the guidelines for turn and curve signs) separated by tangent lengths of less than 120 metres.

Where there are fewer than three turns or curves in succession, individual Single Turn or Single Curve signs (WA-1R/WA-1L, WA-2R/WA-2L, WA-3R/WA-3L) or Reverse Sharp Curve or Reverse Curve signs (WA-4R/WA-4L, WA-5R/WA-5L) should be used. The Winding Road sign is intended to reduce the number of signs used in a series of several turns or curves.

If a sharper curve follows a series of comparable curves, it should be signed separately using the Single Turn or Single Curve signs (WA-1R/WA-1L, WA-2R/WA-2L, WA-3R/WA-3L).

Option

The Advisory Speed tab sign (WA-7S) may be posted below a Winding Road sign, indicating the advisory speed based on the most severe of the curves.

A Supplementary tab sign (WA-28S/WA-28SF) may be appended indicating the distance over which the roadway contains a series of curves. e.g.,“NEXT 2 km”.

Additional guidance may be provided by the installation of Road Edge Delineation Marker signs (WA-37) or Chevron Alignment signs (WA-9).

Option

An engineering study may find that, given site-specific characteristics, it may be more effective to use a combination of delineators, chevrons (WA-9), pavement markings, or other positive guidance measures rather than a Checkerboard sign.

The Checkerboard sign (WA-8) may need to be preceded with a No Exit or Cul-de-sac sign (ID-31).

WA-36
450 mm x 900 mm

WA-36L **WA-36R**
300 mm x 900 mm

A3.2.7 Object Marker Sign (WA-36, WA-36L/WA-36R)

The Object Marker sign (WA-36) is used to mark obstructions immediately adjacent to the travel lane or within the road itself, such as bridge piers, introduced medians, curb extensions, wing walls, bridge rail ends, and traffic islands. If the obstruction cannot be removed or relocated, if the obstruction is not protected, and/or if the obstruction is not of a type that is breakaway or forgiving in a collision, then the decision to mark an obstruction should be consistent with the "clear zone" policy applicable to the roadway and consistent with the way other roadside hazards have been marked on the same section of roadway.

Standard

The WA-36R must be used to mark obstructions on the right side of the road, the WA-36L must be used to mark obstructions on the left side of the road, and the WA-36 marker must be used to mark an obstruction in the road, which may be passed on either side.

Guidance

Object Marker signs should be placed as closely as possible to the obstruction itself. When object markers or markings are applied to an obstruction that by its nature requires a lower mounting, the vertical mounting height should vary according to need.

Object marker signs should neither restrict visibility of pedestrians or downstream signs, nor be placed such that they may be obscured by pedestrians at intersections.

Option

The Object Marker sign may be used alone, or mounted below other signs such as the Keep Left/Keep Right (RB-25 L/R) or Double Arrow (WA-17) signs.

Under clear zone policies, depending on posted speed, Object Marker signs are typically not required for objects that are located greater than 5 metres from the edge of the travel lane if it is protected by a barrier, or for unprotected objects located greater than 10 metres from the edge of the travel lane.

WA-38
600 mm x 1660 mm
300 mm x 830 mm
(local roundabouts)

A3.2.11 Roundabout Directional Sign (WA-38)

The Roundabout Directional sign (WA-38) indicates to drivers the direction to follow in the roundabout.

Standard

A Roundabout Directional sign must be installed in the roundabout central island facing entering traffic to convey the direction of travel about the central island.

Guidance

The sign should be placed at a height 1.2 m above the near edge of the nearest traffic lane to the bottom of the sign.

Option

A One-Way sign (RB-21) may be installed directly above the Roundabout Directional sign to provide a regulatory component. The One-Way sign should be scaled to the same horizontal dimension as the Roundabout Directional sign and, therefore, should be either 1660 mm wide or 830 mm wide for local roundabouts. The use of the One-Way sign for local roundabouts should be carefully considered to ensure that the sign does not infer that the cross-street is one-way operation.

Two or more Roundabout Directional signs may be installed end-to-end to enhance the visibility of the central island.

WA-10
600 mm x 900 mm

A3.2.12 Ramp Advisory Speed Sign (WA-10, WA-10A/WA-10AF)

The Ramp Advisory Speed sign (WA-10) is used to advise drivers of the maximum advisory travel speed on a ramp or on a channelization leg.

Standard

The Ramp Advisory Speed sign must be used where an engineering study of roadway, geometric, or operating conditions shows the necessity of advising drivers of the maximum safe travel speed on a ramp or channelization leg. A road authority must provide ramp speeds in increments of 10 km/h, but with advisory speeds ending in “0” or “5”. A road authority should be consistent in using either the “0” or the “5” throughout the jurisdiction.

Guidance

Ramps with advisory speeds that are more than 15 km/h below the posted speed on the approach road should be posted with a Ramp Advisory Speed sign.

If the entrance to the ramp is from an intersection where the driver must either stop or complete a nearly right-angle turn (e.g., the entrance to a ramp from the side street at a diamond interchange), then there is no need for a Ramp Advisory Speed sign unless the ramp is long enough so that the driver can reasonably accelerate to a speed beyond the advisory ramp speed.

The advisory ramp speed is typically governed by one of three criteria:

- Limited forward visibility,
- Safe travel speed on a curve or portion of the curve, or
- Downstream conditions at the ramp terminal.

The Ramp Advisory Speed sign should be located on the right side of the ramp upstream of the physical gore but may be located on the left side of the ramp in the gore as dictated by the ramp geometry. Except on ramps where the right-side sign would not be visible, left-side ramp speed signs should not be used without a right-side sign since the left-side sign may not be legible from far enough upstream. Drivers may also confuse the left-side sign with the posted speed limit for the mainline. The typical uses for a left-side sign are multiple-lane ramps, ramp speeds that require extra emphasis/warning, and ramps where the right-side sign might be obscured.

WA-10A
600 mm x 900 mm

WA-10AF
600 mm x 900 mm

Option

For advisory ramp speeds that are 15 km/h or less below the posted speed limit of the approach road, a Ramp Advisory Speed sign is optional.

Ramp Advisory Speed signs may also be used where the traffic collision records indicate that excessive speed on the ramp or turning roadway is a contributing factor in collision occurrences.

Where there is a concern that the Ramp Advisory Speed sign is likely to be confused with the speed limit on the mainline, an amended version of the Ramp Advisory Speed sign that includes the term EXIT (WA-10A/WA-10AF) may be used. When the WA-10A/WA-10AF version is used, the inclusion of the units of measure (i.e., “km/h”) is optional.

Ramp Advisory Speed signs may be posted over the speed change lane(s) approaching the ramp if the space available at the roadside is insufficient or if a larger sign is required for additional emphasis. In some instances, it may be desirable to combine an overhead Ramp Advisory Speed sign with the Exit Direction sign (IF-2).

The Maximum Speed sign (RB-1) may be used in place of the Ramp Advisory Speed sign on ramps where speeding has been a particular problem and may be addressed through enforcement.

The Ramp Advisory Speed sign is preferable to the Maximum Speed sign because the yellow background is an important visual cue distinguishing the ramp speed from the mainline speed. The location of RB-1 signs on ramps should be such that they would not be perceived as mainline speed signs.

On very long ramps where the ramp's controlling curve is sufficiently far downstream of the gore, Turn or Curve signs (WA-1R/WA-1L, WA-2R/WA-2L, WA-3R/WA-3L) may be more suitable than Ramp Advisory Speed signs. The use of Turn or Curve signs instead of, or in addition to, Ramp Advisory Speed signs should be based on an engineering study of ramp length, configuration, etc.

Support

Methods for calculating speed and further guidance can be obtained from the TAC publication *Recommended Practices for Posting Ramp Speeds* (2011).

A3.3 INTERSECTIONS

Intersection warning signs are used to advise drivers of road features or traffic controls ahead, such as concealed or unexpected intersections.

A3.3.1 INTERSECTION TRAFFIC CONTROLS AHEAD

Under certain circumstances of limited visibility, when drivers are approaching a traffic regulation that may require response, warning signs may be used to advise the drivers of regulations ahead. The signs may also be required under other conditions where studies show that the use of these signs would improve safety. In addition, such warning signs may be used for an introductory period of three to six months when the regulation is first installed.

WB-1
750 mm x 750 mm

A3.3.2 Stop Ahead Sign (WB-1)

The Stop Ahead sign (WB-12T/WB-12TF) indicates the presence of a Stop sign (RA-1) ahead.

Standard

The Stop Ahead sign must be installed on any approach to an intersection controlled by a Stop sign (RA-1) where the visibility of the stop sign does not exceed the required stopping sight distance.

A3.8.1.2 Playground Area/Zone Sign (WC-3), Ends/Fin Tab Sign (WC-3S1/WC-3S1F)

WC-3
600 mm x 600 mm

WC-3S1
600 mm x 300 mm

WC-3S1F
600 mm x 300 mm

The Playground Area/Zone sign (WC-3) is used to indicate sections of roads adjoining public playgrounds, where the presence of children on or near the road, would represent an intermittent hazard. Depending on specific site characteristics, it may be necessary to designate a reduced speed limit. A playground "area" does not have an associated speed reduction while a playground "zone" does.

Standard

A Playground Area/Zone sign must be installed to mark the beginning of a specifically designated playground zone or playground area.

The Playground Area/Zone sign must be supplemented with a Maximum Speed sign (RB-1) for those locations where a playground zone is established rather than a playground area. The end of the playground zone must be delineated with the reinstatement of the normal speed limit with a Maximum Speed sign.

Guidance

In cases where the Maximum Speed (RB-1) sign is used it should be mounted with and immediately below the Playground Area sign, so that it may be clearly understood that the speed limit is in effect only for the area and period covered by regulations for speed zones in the vicinity of playgrounds.

On residential streets in urban or rural areas, the end of a Playground Area where a speed limit reduction has not been implemented should be delineated with the Playground Area/Zone sign (WC-3) with a supplementary Ends tab (WC-3S1/WC-3S1F), rather than by restating the normal speed limit with a Maximum Speed sign.

All signs should be oversized for speed limits of 70 km/h or more.

Option

Playground Area/Zone signs are discouraged for use along arterials or freeways, where the playground is fully fenced, setback from the road an appreciable distance, or if the playground does not have an entrance on the candidate roadway.

A3.8.2 Bicycle Warning Signs

Warning signs on bicycle routes or facilities advise cyclists of changes in physical conditions, traffic regulations, moving hazards, or temporary conditions.

On separate rights-of-way, appropriate warning signs may be installed as described in this Division (Warning Signs). Reduced-size signs must conform with the provisions of Section A1.6. The minimum sizes for signs to be used solely for active transportation facilities are shown in Table A1-5.

On shared rights-of-way, cyclists must comply with signing for drivers. Separate signing is not necessary.

Further application and installation guidance for all bicycle warning signs is provided in the TAC publication *Bikeway Traffic Control Guidelines* (2012).

A3.8.2.1 Reserved Bicycle Lane Ahead Sign (WB-10)

The Reserved Bicycle Lane Ahead sign (WB-10) is used to warn road users that they are approaching a reserved bicycle lane.

WB-10
750 mm x 750 mm

Guidance

The Reserved Bicycle Lane Ahead sign should be installed where drivers are required to execute a lane-change manoeuvre or transition to avoid the bicycle lane.

Option

The sign may be placed above or beside the road.

A3.8.2.2 Share the Road Sign (WC-19), Share the Road Tab Sign (WC-19S, WC-19SF)

The Share the Road sign (WC-19) is used to warn drivers that they are to provide adequate space for cyclists on the road. The sign also advises drivers to use extra caution on the upcoming section of the road and to maintain a safe lateral distance. The sign is used where side-by-side operation of the vehicular traffic and the bicycles is expected and where the required width for shared operation is available (minimum 4.3 metres, based on Section 5.3 of the *Geometric Design Guide for Canadian Roads* (2017)).

WC-19
600 mm x 600 mm

A3.8.2.4 Bicycle Crossing Sign (WC-7R/WC-7L), Crossing Tab Sign (WC-7S/WC-7SF)

The Bicycle Crossing Ahead sign (WC-7) indicates to drivers that they are approaching a location where a bicycle path crosses a road.

Guidance

The Bicycle Crossing Ahead sign should be used to alert road users of an upcoming location where a bicycle path crosses a road.

The right or left version of the Bicycle Crossing Ahead sign (WC-7R, WC-7L) should be used as appropriate so the bicycle symbol on the sign is oriented toward the centre of the road.

The supplementary Crossing tab sign (WC-7S/WC-7SF) should be used to convey the meaning of the Bicycle Crossing Ahead sign.

WC-7R
600 mm x 600 mm

WC-7S
600 mm x 300 mm

WC-7SF
600 mm x 300 mm

A3.8.2.5 Pedestrian and Bicycle Crossing Sign (WC-46R/WC-46L)

The Pedestrian and Bicycle Crossing Ahead sign (WC-46) indicates to drivers that they are approaching a location where a multi-use path crosses the road.

Guidance

The Pedestrian and Bicycle Crossing Ahead sign should be installed in advance of a location where a multi-use pathway crosses a road. This includes locations where signs and pavement markings are provided that permit cyclists to cross the roadway without dismounting.

The Pedestrian and Bicycle Crossing Ahead sign should not be provided at locations where traffic signal or stop sign control is provided for vehicular traffic.

The right or left version of the sign (WC-46R, WC-46L) should be used as appropriate so the pedestrian and bicycle symbols on the sign are oriented toward the centre of the road.

The Crossing supplementary tab sign (WC-7S/WC-7SF) should be used to convey the meaning of the Pedestrian and Bicycle Crossing Ahead sign.

WC-46R
600 mm x 600 mm

WC-47L
600 mm x 600 mm

A3.8.2.6 Multi-Use Trail Crossing Sign (WC-47R/WC-47L)

The Multi-Use Trail Crossing Ahead sign (WC-47) indicates to drivers that they are approaching a location where a multi-use trail for motorized and non-motorized users crosses a road.

Standard

The right or left version of the sign (WC-47R, WC-47L) must be used as appropriate so the symbols on the sign are oriented toward the centre of the road.

Guidance

The Multi-use Trail Crossing Ahead sign should be installed in advance of a location where a multi-use pathway crosses a road, if the pathway permits, or is known to be frequented by, motorized users. Otherwise, the Pedestrian and Bicycle Crossing Ahead sign (WC-46) should be used instead.

The supplementary Crossing tab sign (WC-7S/WC-7SF) should be used to convey the meaning of the Multi-Use Trail Crossing Ahead sign.

WC-44R
600 mm x 600 mm

WC-44T
600 mm x 300 mm

WC-44TF
600 mm x 300 mm

A3.8.2.7 Bicycle Trail Crossing Side Street Sign (WC-44R/WC-44L), Trail Crossing Tab Sign (WC-44T/WC-44TF)

The Bicycle Trail Crossing Side Street sign (WC-44) is used where a bicycle or multi-use path crosses an upcoming side street near the intersection, to alert drivers who may be turning into the crossroad to anticipate crossing cyclists immediately after the intersection.

Standard

The WC-44 left or right version must be used as appropriate.

Guidance

The Bicycle Trail Crossing Side Street sign should be used where a bicycle or multi-use path, which runs parallel to and in close proximity to the through road, intersects a crossroad such that insufficient distance is available on the crossroad between the bicycle trail crossing and the through road for proper siting of the WC-7 or WC-46 sign.

Option

The Trail Crossing tab sign (WC-44T/WC-44TF) may be used temporarily for educational purposes.

In addition to the Bump sign being provided for each bump, it may also be used to indicate that a whole section of road ahead has numerous bumps by including the supplementary tab sign (WA-28S/WA-28SF) to indicate the length of the bumpy section.

If none of the other tabs are required, a supplementary tab sign (WA-30S) may be used to indicate the distance to the bump.

A3.4.4 Neighbourhood Speed Hump Sign (WA-50), Speed Hump Tab Sign (WA-50T/WA-50TF)

WA-50
450 mm x 450 mm

WA-50T
450 mm x 225 mm

WA-50TF
450 mm x 225 mm

The Neighbourhood Speed Hump sign (WA-50) indicates a vertical deflection of the road surface including measures such as a speed hump, raised crosswalk, or raised intersection.

Standard

The Neighbourhood Speed Hump sign must be installed to warn of a traffic calming measure with a vertical profile, except at raised intersections and locations where traffic is controlled by a Stop sign (RA-1) or traffic signal.

Guidance

The sign should be placed as close as possible to the hump. If there are visibility constraints, such as curvature or foliage, the sign should be placed to allow drivers to decelerate in advance of the hump.

If the measure is at a location that is marked by another sign such as a School Crossing sign (RA-3) or a Pedestrian Crosswalk sign (RA-4), the Neighbourhood Speed Hump sign should be installed below the other sign.

Option

A supplementary Speed Hump tab sign (WA-50T/WA-50TF) may be provided to convey the meaning of the Neighbourhood Speed Hump sign.

An additional Neighbourhood Speed Hump sign, located in advance of the measure, with a supplementary tab sign (WA-30S), which indicates the distance to the vertical measure, may also be installed.

The measure may also be identified by pavement markings as described in Section C6.3.1.

Support

Further guidance is provided in the *Canadian Guide to Traffic Calming, Second Edition* (TAC, 2018).

WA-24
750 mm x 750 mm

WA-24S
600 mm x 300 mm

WA-24SF
600 mm x 300 mm

WA-24T1
600 mm x 300 mm

WA-24T1F
600 mm x 300 mm

WA-24T2
600 mm x 300 mm

WA-24T2F
600 mm x 300 mm

A3.4.6 Narrow Structure Sign (WA-24), One Lane Tab Sign (WA-24S/WA-24SF), Narrow Bridge Tab Sign (WA-24T1/WA-24T1F), Narrow Passage Tab Sign (WA-24T2/WA-24T2F)

The Narrow Structure sign (WA-24) indicates a structure, such as a bridge, culvert, underpass, overpass, or similar structure having a clear road width significantly less than the width of the approach road.

Standard

The Narrow Structure sign must be used to identify a bridge, culvert, underpass/overpass, or tunnel structure that:

- Has a clear two-lane roadway width less than 6 m, or
- Has a clear width less than the width of the approach travel lanes.

Clear width is normally measured as the narrowest point between any vertical structure beyond the outside edge of travel lanes (e.g., curb-to-curb, inside face of bridge rails, etc.).

Guidance

A Narrow Structure sign should be used to mark structures where the road approach shoulders are significantly narrowed or eliminated, even if the width of the travel lanes is maintained.

Where the structure has a clear road width of less than 5 m, thereby permitting only a single lane of traffic, a supplementary tab sign (WA-24S) should be added immediately below the Narrow Structure sign.

For single lane traffic control, refer to Section D2.8.1 for Yield to Oncoming Traffic combination signs (RA-2/TC-17S, RA-2/TC-17SF).

Option

Additional warning may be provided by the use of Object Marker signs (WA-36L or WA-36R).

The supplementary tab signs (WA-24T1, WA-24T1F, WA-24T2, WA-24T2F) may be provided to clarify the actual condition causing the roadway narrowing. The supplementary tab sign (WA-24T2, WA-24T2F) may be used where the roadway underpasses a structure.

WC-19S
600 mm x 300 mm

WC-19SF
600 mm x 300 mm

Guidance

The Share the Road sign should be used where a road configuration changes, such as the discontinuation of a bicycle lane.

The Share the Road sign should not be repeated along a road section where the road configuration does not change.

Option

The Share the Road sign may also be installed at problematic locations and for limited distance on road sections to remind drivers to share the road.

The supplementary Share the Road tab sign (WC-19S/WC-19SF) may be used to convey the meaning of the Share the Road sign.

"Sharrow" pavement markings (Section C4.1.5) can also be provided to reinforce the shared operations.

WC-20
600 mm x 600 mm

WC-20S
600 mm x 300 mm

WC-20SF
600 mm x 300 mm

A3.8.2.3 Shared Use Lane Single File Sign (WC-20), Single File Tab Sign (WC-20S/WC-20SF)

The Shared Use Lane Single File sign (WC-20) is used to warn drivers that cyclists are allowed full use of the lane ahead and to warn drivers that the lane is too narrow for side-by-side operation.

Standard

The supplementary Shared Use Lane Single File tab sign (WC-20S/WC-20SF) must be used to convey the meaning of the Shared Use Lane Single File sign.

Guidance

The Shared Use Lane Single File sign should be used on a bicycle route in advance of a location where the roadway narrows (e.g., at bridges or overpass locations), such that the vehicle lane(s) are too narrow for side-by-side operation. The minimum lane width required for side-by-side operation is 4.3 metres (*Geometric Design Guide for Canadian Roads* (2017)).

Shared use lane markings (Section C4.1.5) should be used to mark the location where cyclists should position themselves within the lane.

The sign should be used where a road configuration changes, such as the discontinuation of a bicycle lane.

The sign should not be repeated along a road section where the road configuration does not change.

A3.8 WARNING SIGNS FOR SPECIFIC TYPES OF ROAD USERS

A3.8.1 Pedestrian, School, and Playground Warning Signs

Signs in this section are intended to alert road users that pedestrians are expected to be present in the area and roadway crossings may be frequent. Where school or playgrounds abut the roadway, warning signs are provided to alert road users of the presence of children entering the roadway. Where appropriate, regulatory speed limit signs are used in conjunction with the warning signs. Further information is provided in the TAC publications *School and Playground Areas and Zones: Guidelines for Application and Implementation* (2006) and *Pedestrian Crossing Control Guide* (2018).

A3.8.1.1 School Area/Zone Sign (WC-1), End/Fin Tab Sign (WC-1S1/WC-1S1F)

WC-1
600 mm x 600 mm

WC-1S1
600 mm x 300 mm

WC-1S1F
600 mm x 300 mm

The School Area/Zone sign (WC-1) is provided where appropriate to warn drivers of the presence of a school and hence the possibility of children entering the roadway. Depending on specific site characteristics, it may be necessary to designate a reduced speed limit. A school “area” does not have an associated regulatory speed reduction while a school “zone” does.

Standard

A School Area/Zone sign must be installed to mark the beginning of a specifically designated school zone or school area.

The School Area/Zone sign must be supplemented with a Maximum Speed sign (RB-1) for those locations where a school zone is established rather than a school area. The end of the school zone must be delineated with the reinstatement of the normal speed limit with a Maximum Speed sign.

Guidance

Where a school abuts a road, advance warning should be provided to the driver approaching an area where children walk along or may cross the road. In these circumstances, the driver is required to exercise caution in proceeding through these areas. School area/zone signs should not be used in an attempt to improve safety at an established crossing; other devices have been developed for such a purpose.

In cases where the Maximum Speed sign is used, it should be mounted with and immediately below the School Area/Zone sign, so that it may be clearly understood that the speed limit is in effect for the area and time period covered by regulations for the speed zone in the vicinity of the school.

**IF-3
VARIABLE
DIMENSIONS**

**IF-3A
VARIABLE
DIMENSIONS**

**IF-3AF
VARIABLE
DIMENSIONS**

**IF-3 (ALTERNATE)
VARIABLE
DIMENSIONS**

A4.2.6.4 Ground-Mounted Gore Sign (IF-3, IF-3A/IF-3AF/IF-3 (ALTERNATE))

The Ground-Mounted Gore sign (IF-3) indicates the place of exit from the mainline road. Consistent use of this type of sign according to design conditions is important. Each gore should be treated similarly, whether the interchange has a single exit or multiple exits. Typical applications of Ground-Mounted Gore signs are shown in Figures A4-6 to A4-9, and E4-3 to E4-10.

Standard

The following provisions should be used in the design and application of the Ground-Mounted Gore sign:

a) The body of the sign carries the word EXIT and an arrow (IF-3A/IF-3AF),

b) Where interchange numbers are used, the interchange number replaces the word EXIT on the Ground-Mounted Gore sign,

c) The Ground-Mounted Gore sign must not present information not previously displayed on signs associated with the interchange exit, and

d) Breakaway, or yielding supports must be used for Ground-Mounted Gore signs due to their exposure at this location.

Guidance

The Ground-Mounted Gore sign should be located in the area between the main road and the ramp in all cases where overhead Exit Direction sign(IF-2) is absent.

Option

The Ground-Mounted Gore sign may be used to supplement the overhead Exit Direction sign (IF-2) where it is essential to clarify delineation

The rectangular version of IF-3 (ALTERNATE) may be used in the place of the traditional IF-3 sign.

IA-4
Vertical Dimension = 600 mm

A4.3.3 Fingerboard Sign (IA-5)

The Fingerboard sign (IA-5) guides drivers to small communities having a population of less than those centres shown on IA-1 to IA-4 signs.

Guidance

No more than three fingerboards should be installed on any one post.

Option

The sign may be used in place of Destination Direction or Destination Distance signs at the junction of numbered routes in urban areas or at key intersections on a local road system, where there is insufficient space to install large destination signs.

The sign may be used on numbered routes to direct drivers to municipalities on local roads. Where the population of these municipalities is over 1,000 inhabitants, Destination Direction signs (IA-1) should be used.

IA-5
Vertical Dimension = 225 mm

A4.3.5 Roundabout Advance Overhead Guide Sign (IA-8)

A Roundabout Advance Overhead Guide sign (IA-8) may be used at roundabouts on nonlocal roads as an option to replace a Roundabout Advance Diagrammatic Guide sign.

Guidance

Minimum upper-case letter height (H) should be 200 mm and arrows should be centreed over lanes where possible, even if this requires separate sign panels. Content should be consistent with the Roundabout Advance Diagrammatic Guide signs.

IA-8
VARIABLE DIMENSIONS

IA-9
VARIABLE DIMENSIONS

A4.3.6 Roundabout Exit Guide Sign (IA-9)

Guidance

A Roundabout Exit Guide sign (IA-9) should be installed on the splitter island at roundabout exits, facing circulating traffic.

Minimum upper-case letter height (H) should be 100 mm, although 150 mm is preferred. Content should be consistent with the applicable arm or direction on an Advance Diagrammatic or Overhead Guide sign.

IB-5F
1500 mm x 900 mm

A4.4.3 Bicycle Route Marker Sign (IB-23)

The Bicycle Route Marker sign (IB-23) provides route guidance for cyclists and indicates the streets, highways and separate facilities which form a bicycle route system.

Guidance

The Bicycle Route Marker sign should be placed at a distance of 20 to 30 metres in advance of, and following, each intersection or other decision point. This sign is not required when the Reserved Bicycle Lane signs (RB-90, RB-91) are used.

IB-23
450 mm x 450 mm

A4.4.4 Guide Sign Supplementary Tab Signs

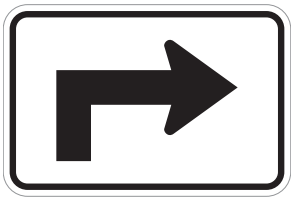
A4.4.4.1 Arrow Tab Signs (IS-5R/IS-5L, IS-6R/IS-6L, IS-7)

The Advance Turn Arrow tab sign (IS-5R/IS-5L, IS-6R/IS-6L) indicates to the driver advance information on a turn or change in the direction of a route. The Directional Arrow tab sign (IS-7, IS-8R or IS-8L, IS-9R OR IS-9L) indicates to the driver a turn or change in direction of a route. Arrow tab signs are used with a variety of signs, including Route Markers, Bicycle Route Markers, and off-road services signs.

Standard

The Arrow tab signs should be installed directly below a Route Marker (IB-1, IB-2)), a Bicycle Route Marker (IB-23), or an off-road services sign.

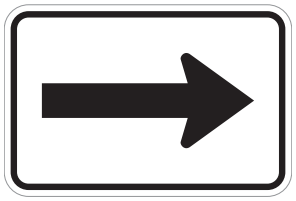
The Arrow tab signs must have the same colours as the signs or markers that they supplement, with appropriate border design.



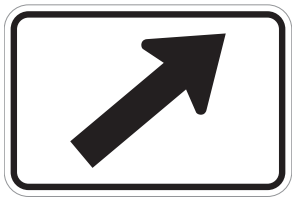
IS-5R
450 mm x 300 mm

IS-6R
450 mm x 300 mm

IS-7
450 mm x 300 mm



IS-8R
450 mm x 300 mm



IS-9R
450 mm x 300 mm

Where turns in different directions are indicated, Arrow tab signs (and their primary sign) for left turns must be mounted to the left of those for right turns.

Guidance

When more than one route turns, or is intersected, Route markers and Arrow tab signs should be arranged in the order shown in Figures E1-12 to E1-17. For bicycle routes, where more than one direction is possible, a single Bicycle Route Marker sign should be erected above two or more Arrow tab signs with the vertical order being left above through above right.

A4.4.4.2 Cardinal Direction Tab Signs (IS-10/IS-10F, IS-11/IS-11F, IS-12/IS-12F, IS-13/IS-13F)

Guidance

The Cardinal Direction tab signs (IS-10/IS-10F, IS-11/IS-11F, IS-12/IS-12F, IS-13/IS-13F) should be used at locations where drivers, in transferring from one route to another, might become confused as to the direction in which they would be travelling on the intersected route. They are installed below Route markers (IB-1, IB-2) as shown in Figures E1-12 to E1-17.

IS-10
450 mm x 300 mm

IS-11
450 mm x 300 mm

IS-12
450 mm x 300 mm

IS-13
450 mm x 300 mm

IS-10F
450 mm x 300 mm

IS-11F
450 mm x 300 mm

IS-12F
450 mm x 300 mm

IS-13F
450 mm x 300 mm

A4.5.2.4 Telephone Sign (IC-6), Telephone – TTY Tab Sign (IC-6S/ IC-6SF)

IC-6
600 mm x 600 mm

The Telephone sign (IC-6) indicates the availability of a public telephone.

Option

The "TTY" tab (IC-6S/IC-6SF) may be used to indicate a public telephone equipped with a Telephone Teletype Terminal (TTY) for persons with speaking and hearing difficulties.

The "ATS" tab (IC-6SF) is the French version indicating "Appareil TéléScripteur".

IC-6S
600 mm x 300 mm

IC-6SF
600 mm x 300 mm

A4.5.3 Transportation Services Signs

A4.5.3.1 Airport Signs (IC-11, IC-12)

IC-11
600 mm x 600 mm

The Airport sign (IC-11, IC-12) is used to indicate the direction to the airport, as well as the type of airport.

Guidance

The Airport sign should be used to indicate the direction to a large (IC-11) or small (IC-12) airport. For signing purposes, a small airport is considered as having no regularly scheduled jet aircraft passenger flights.

The Airport sign should bear the appropriate aircraft symbol for the type of airport and be installed in the appropriate orientation so as to direct the driver to travel straight or turn.

Option

The name of the specific airport may be added on a supplementary tab sign.

IC-12
600 mm x 600 mm

ID-23
900 mm x 900 mm

ID-23S
900 mm x 900 mm

ID-23S1
900 mm x 450 mm

ID-23SF
900 mm x 750 mm

ID-23S1F
900 mm x 450 mm

A4.6.4 Passing Lane Ahead Sign (ID-23), Passing Lane Ahead Tab Sign (ID-23S/ID-23SF, ID-23S1/ID-23S1F)

Guidance

The Passing Lane Ahead sign (ID-23) should be used to indicate that there is a passing opportunity ahead, and to discourage risky passing maneuvers prior to the climbing lane or passing lane.

The Passing Lane Ahead sign with the Passing Lane Ahead tab sign (ID-23S/ID-23SF) should be installed 2.0 km in advance of the additional lane. However, the distance shown on the Passing Lane Ahead tab sign may be reduced if the distance between the end of one passing lane and the start of the next, for the same direction of travel, is less than 2.0 km.

Where the distance from the end of one passing lane to the start of the next passing lane is less than 2.0 km, the Passing Lane Ahead sign should be installed at or beyond the end of the first, with the distance to the second passing lane indicated on the Passing Lane Ahead supplementary tab sign (ID-23S/ID-23SF).

The Passing Lane Ahead Length tab sign (ID-23S1/ID-23S1F) should indicate the total length of the climbing lane or passing lane in km.

Typical installations of the signs are shown in Figures E3-4 and E3-5.

Option

The Passing Lane Ahead sign may be used on two-lane roads where a climbing lane or passing lane is located at the stated distance ahead.

The Passing Lane Ahead Length tab sign is an optional tab that may be used with a Passing Lane Ahead sign (or Keep Right Except to Pass sign (RB-34/RB-34F)) located at the beginning of a climbing or passing lane to inform drivers of the total length of the climbing or passing lane, assisting them with their passing maneuvers.

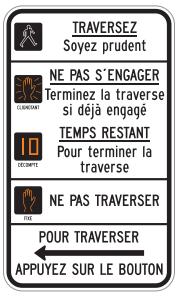
A4.6.12 Pedestrian Countdown Signal Information Sign (ID-18R/ ID-18RF/ID-18L/ID-18LF)

The Pedestrian Countdown Signal Information sign (ID-18R/ID-18RF/ID-18L/ID-18LF) is installed adjacent to the pedestrian pushbuttons to inform pedestrians of the interpretation of the pedestrian signals and Pedestrian Countdown Signals (PCS).

Guidance

The Pedestrian Countdown Signal Information right or left version (ID-18R and ID-18L) should be used as appropriate so that the arrow symbol on each sign points in the direction of the crossing.

ID-18R
225 mm x 375 mm



ID-18RF
225 mm x 375 mm

A4.6.13 Bicycle Signal Loop Detector Stencil Sign (ID-24/ID-24F)

Option

The Bicycle Signal Loop Detector Stencil sign (ID-24/ID-24F) may be used where a traffic control signal is loop activated and where a Signal Loop Detector Stencil marking (C4.1.6) is used to indicate where a cyclist should be positioned to activate a green signal phase.

ID-24
130 mm x 200 mm

ID-24F
130 mm x 200 mm

ID-7
600 mm X 900 mm

ID-7F
600 mm X 900 mm

A4.6.14 Avoid Engine Brake Sign (ID-7 and ID-7F)

The Avoid Engine Brake Sign may be used to indicate to drivers that they are in an area where the use of an engine brake may be disruptive to area residents.

Option

The Avoid Engine Brake sign (ID-7 and ID-7F) may be used in areas where the use of engine brakes is not normally required and where there are no regulations restricting the use of engine brakes.

The supplementary tab signs RB-96S1 and RB-33S2 or RB-96S3 (RB-96S1F and RB-33S2F or RB-96S3F) may be used to define a specific zone.

Alternatively, the RB-96 sign may be used where local law prohibits the use of engine brakes.

A4.6.15 Railway Emergency Notification Sign (ID-40/ID-40F/ID-40B)

Railway Emergency Notification signs (ID-40/ID-40F/ID-40B) are installed at railway crossings to provide information to railway crossing users so that they can report/notify railway companies about emergencies or malfunctioning traffic control devices at the railway crossings.

Standard

Railway Emergency Notification signs must be installed by the railway company at all railway at-grade crossings. Railway Emergency Notification signs must be installed in compliance with Transport Canada's *Grade Crossing Regulations*, *Grade Crossings Standards* and *Grade Crossing Handbook*.

Railway Emergency Notification signs must include the following information at a minimum:

a) The railway company's emergency telephone number established to receive reports about emergencies or malfunctions of the traffic control devices at the railway crossing,

A4.4 ROUTE MARKER SIGNS

Route marker signs indicate the route identity. The signs may use numbers, names, or other means of designation. Typical installations are illustrated on Figures E1-12 (intersection near side IB-2 assembly) and E1-13 (intersection far side IB-2 assembly). Other examples are shown on E1-14 to E1-17.

IB-1
450 mm x 600 mm

A4.4.1 Route Markers (IB-1/IB-1S, IB-2)

Route Marker signs (IB-1, IB-2) are used to mark numbered provincial highway routes.

Guidance

Selection of colour should be in conformance with Section A1.6 and Table A1-3. The Trans-Canada Highway Route Marker (IB-1) is only used to mark the TransCanada Highway.

The Provincial/Territorial Route Marker (IB-2) is of a special design as determined by each province or territory. Refer to local standards for specific sign designs. Examples of signage are shown for IB-2.

Double digit route numbers should have the font size reduced to fit within the boundaries of the maple leaf. Triple digit portions of the Trans-Canada Highway should use a blank version of the IB-1 sign as a trailblazer, with the route number shown on an accompanying Provincial/Territorial Route Marker or on a supplementary tab below the IB-1 sign.

The recommended minimum size for the standard Provincial/Territorial Route Marker is approximately 450 x 600 mm.

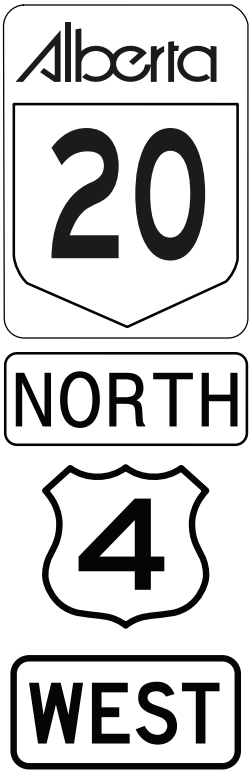
IB-1S
450 mm x 225 mm

Option

For single- and double-digit portions of the Trans-Canada Highway, the route number may be placed inside the maple leaf (IB-1).

The IB-1, leaving the maple leaf blank, with the route number place on a supplementary tab sign (IB-1S), may be used as a trailblazer for single- and double-digit highways if consistency with nearby three-digit Trans-Canada Highways is desired.

Oversized route markers (600 mm x 750 mm) may be used where special emphasis is needed, in urban areas and at the junction of major routes in rural areas.



IB-2
VARIABLE
DIMENSIONS

A5.1.1 Permanent Variable Messages Signs

Permanent Variable Message Signs (VMS) are customizable message boards capable of displaying text and/or text with graphics. “VMS” will be used to define all permanent VMS in subsequent sections. VMS are typically mounted on sign support structures and foundations designed to meet static and dynamic load conditions. Sign structures for VMS may be:

- Overhead spanning across a roadway,
- Cantilevered over the roadway, or
- Pole-mounted on the roadside or median barrier.

Sign support structures are typically protected by guide rail or crash cushions if they are within the clear zone in higher speed applications. Deployments in urban environments at posted speed limits of 60 km/h may not require as extensive protection.

Overhead signs typically provide the most visibility to all drivers across all lanes but also are the most expensive.

Cantilevered signs can provide satisfactory visibility as the sign still protrudes over a select number of the travelled lanes but may require a robust footing design.

Pole-mounted signs provide the least visibility of the three but are the least expensive and can be designed to suit most local grading applications.

In general, VMSs provide the greatest flexibility to display larger, detailed messages and can be designed and placed for maximum visibility (higher displays and/or displays over lanes).

VMSs are typically based on light-emitting diode (LED) technology which provides excellent visibility, longer bulb lifetime, and reduced power consumption compared to previous technologies. Older signs may have a lower pixel density resulting in a lower resolution than newer signs. As LED technology continues to be optimized, higher resolution signs are becoming an ideal alternative from a cost and energy efficiency standpoint. It should be noted that with the improvement in energy efficiency, heat dissipation is reduced and signs may be prone to snow build-up.

Individual LEDs form a pixel on a sign board. Each pixel is connected to an LED module which drives the pixel and its associated illuminance and colour (if applicable).

The pixel arrangement (namely the matrix) and how the signs are operated varies based on the sign type. Most VMS (and Portable Variable Message Signs (PVMS)) fall into the following four (4) categories:

TABLE A5-3
UNITS OF INFORMATION AND MESSAGE ANATOMY
(SOURCE: NYSDOT VMS GUIDELINES)

Phase 1			
Units of Information	**Information**	**Driver Question**	**VMS Answer**
1	Problem	What happened?	ACCIDENT AT EXIT 12 LEFT LANE CLOSED
1	Location	Where?	
1	Effect	What is the effect on traffic?	
Phase 2			
1	Audience	Who is the message for?	AIR SHOW TRAFFIC USE WANTAGH PKWY
1	Action	What is advised?	

A5.3.2 Message Length

Each unit of information should be structured to take about one second to read and comprehend (*Variable Message Sign Guidelines*, NYSDOT, August 2011). This rate of reading should be taken into consideration in the placement, size, and messages shown.

Only standard abbreviations should be used. Examples of standard abbreviations and unacceptable abbreviations are provided within Section A5.4.1.

A5.3.3 Alternating and Flashing Messages

PVMS and VMS can also display messages in multiple phases. A phase of signage may typically operate for 3 seconds, with a 0.5-second blank message, followed by another 3-second message that may be related to the initial phase.

Multi-phasing is typically used on smaller signs where a single phase is not enough to convey the message. In general, the following considerations should be made for alternating and flashing messages:

- Single-phase messages should be used whenever possible,
- If two-phase messages are used, ensure drivers have sufficient time to read both phases,

A5.3.5 Message Prioritization

The type of DMS and associated design and application intent may allow for the support of more than one messaging type. For VMS and PVMS applications which are intended to support more than one type of message, a messaging priority scheme should be developed to reflect the criticality of road conditions. In general, the following applications should be considered in order of priority:

1. Safety/Security of Travellers (e.g., significant road events, adverse weather)
2. Emergency Alerts (e.g., AMBER alerts)
3. Real-time Traveller Information (e.g., Travel Time)
4. Special Event (e.g., upcoming/current construction)
5. Public Education/ General Road Safety

A5.3.6 Message Credibility

It is important for the information on DMS to maintain a level of credibility by providing timely, relevant, and accurate, information. Credibility is maintained/improved by providing current traffic information directly impacting the driver's commute. Traffic information that is out-of-date, irrelevant, or inaccurate will decrease credibility and increase distrust of the information conveyed.

Furthermore, information not directly impacting the driver's commute also increases driver propensity to ignore messages. This may include general traffic safety messages and public service announcements. These types of messages should be used in moderation.

Blanking out the VMS when no conditions are present or when safety messages have been displayed for a considerable amount of time is an option.

Intended Word	Abbreviation
Through	THRU
Thursday	THURS
Trail	TR
Tuesday	TUES
Wednesday	WED
West	W
Westbound	WB

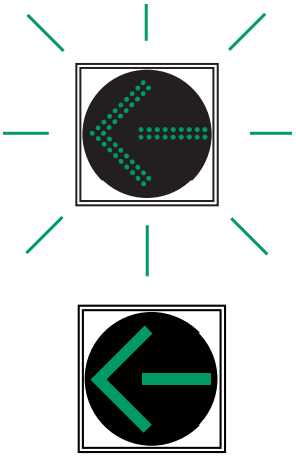
TABLE A5-6
LIST OF FRENCH ABBREVIATIONS

Name	Abbreviation
Dimanche	DIM
Lundi	LUN
Mardi	MAR
Mercredi	MER
Jeudi	JEU
Vendredi	VEN
Samedi	SAM
Nord	N
Est	E
Sud	S
Ouest	O
Autoroute	AUT or A-xxx
Route	RTE or R-xxx
Boulevard	BOUL
Chemin	CH
Avenue	AV
Rue	RUE
Rang	RG
Échangeur	ÉCH
Jonction	JCT.
Saint	ST
Sainte	STE
Premier	1ER
Première	1RE
Deuxième	2E

Option

Steady through and right arrows may be used where left turns are not permitted at intersections with one way streets.

B3.2.4.3 Flashing Left Green Arrow Indication



Standard

A Flashing Left Green Arrow indication must be displayed when it is intended to permit vehicular traffic facing this indication to enter the intersection only to make the movement indicated by the arrow, which can be limited to the interval of the protected portion of a phase sequence. Other movements may be permitted as required by other indications shown at the same time, but must not conflict with the movement in the direction indicated by the arrow.

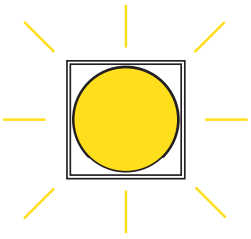
B3.2.4.4 Steady Amber Arrow Indication

Standard

A Steady Amber Arrow indication must be displayed when it is intended to warn vehicular traffic facing this indication shown alone, or in combination with another indication, that the protected movement indicated by the green arrow will be terminated. The traffic is subject to the rules applicable to a Steady Amber Ball indication.

B3.2.5 Flashing Ball Signal Indications

Flashing Ball indications include Flashing Amber Ball and Flashing Red Ball. The meanings of the flashing ball signal indications are described below.



B3.2.5.1 Flashing Amber Ball Indication

Standard

A Flashing Amber Ball indication must be displayed when it is intended to permit vehicular and pedestrian traffic facing this indication to proceed but with caution, after yielding to vehicles and pedestrians lawfully within the intersection or road.

The field of traffic safety research is evolving rapidly due to a new partnership between statisticians and traffic safety engineering. What has emerged from this research is a series of models that allow safety practitioners to predict the safety of a location based on past performance and the collision history observed at a set of similar unsignalized and signalized intersections.

The new models provide a prediction as to how an intersection is expected to perform (as either an un-signalized or signalized intersection) compared to how the intersection is currently performing. If the intersection is expected to perform at a lower collision rate when a traffic signal is installed and the level of improvement is merited, then a traffic signal should be considered on this basis. When these same equations are used at all locations where collision and traffic volume data are available, intersections could be ranked in order of the potential for reduction in future collisions if a signal were installed. This is a powerful tool for jurisdictions to have in their possession, since it is a defendable and objective means of determining when and where traffic signals should be placed.

B2.1.3 Physical Considerations

Physical considerations for evaluation of an intersection for signalization include grades, skew angle, alignments, and offsets.

Standard

The physical characteristics of the intersection and its approaches must be evaluated to determine whether a traffic control signal will operate safely and effectively.

Support

Examples of factors that are likely to make either the design or the safe/efficient application of traffic signal control difficult include the following:

a) Steep grades on one or more approach legs could make stopping or starting of vehicles difficult or impractical, especially during adverse road and weather conditions,

b) A severely skewed angle of intersection could result in excessively long vehicle and pedestrian clearance phases, non-standard signal displays and/or very inefficient signal operation,

Standard

When two or more arrow indications are displayed simultaneously, separate lenses must be used for each arrow. The shape and illumination of the arrow must be such as to make it clearly distinguishable under normal conditions of visibility. All arrow signal indications must have a black background.

Option

A bi-modal lens may be used to display, in proper sequence, both a flashing green arrow and a steady amber arrow indication.

Support

Arrow indications are most effective at locations where separate lanes are provided for any movement controlled by an arrow, and where correct lane usage can be strictly controlled, but may be required for proper traffic guidance under different configurations, as per engineering judgement. Section B3.3 indicates the position of arrow signal lenses within a traffic signal head.

B3.2.4.1 Types of Arrow Signal Indications

Different types of arrow signal indications include Steady Through and Right Green, Flashing Left Green and Steady Amber. The meanings of the arrow signal indications are described below.

B3.2.4.2 Steady Through and Right Turn Green Arrow Indications

Standard

A Steady Through or Right Turn Green Arrow indication must be displayed when it is intended to permit vehicular traffic to enter the intersection only to proceed in the direction indicated by the arrow. Other movements may be permitted as required by other indications shown at the same time, as long as they are not in conflict with vehicular traffic directed by the arrow indication(s).

Pedestrians facing the Steady Through Green Arrow indication must be permitted to proceed across the road within any parallel marked or unmarked crosswalk, unless otherwise directed by another traffic control device.

B3.2.9.3 Steady Red “X” Indication

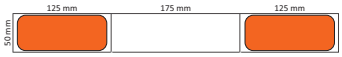
Standard

A Steady Red “X” indication must be displayed when a driver facing this indication must not drive in the lane over which the indication is located.

B3.2.9.4 Lane Control Signal Displays

Standard

The lane control signal must feature two types of displays; a Downward Pointing Green Arrow on a black background and a Red “X” symbol on a black background. The Red “X” symbol must be capable of steady and flashing operation. The two signals may be combined into a single face. The lenses must not be less than 300 mm x 300 mm.



B3.2.10 Rectangular Rapid Flashing Beacons (RRFB)

Rectangular Rapid Flashing Beacons (RRFB) are used to highlight other traffic control devices, particularly pedestrian crossing warning signs. RRFBs are high intensity flashing beacons that flash in a rapidly alternating "wigwag and simultaneous" flashing sequence. RRFBs consist of two rectangular-shaped amber indications, each with an LED-array based light source. Each RRFB indication is minimum 125 mm wide and 50 mm high placed 175 mm apart.

B3.2.11 LEDs for LED-Embedded Signs

Following the fundamental principle that the LEDs are intended to highlight the shape of the Stop (RA-1/RA-1F) or Yield sign (RA-2), and the dominant colour of these signs are red, the LEDs placed on these sign borders shall be red.

The chromaticity (colour regions) for the red LEDs shall be in accordance with the 1931 Commission internationale de l’éclairage (CIE) colour space provided in Table B3-1:

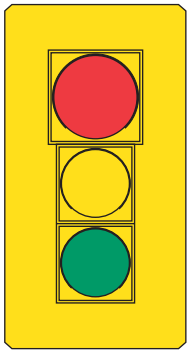
The driver's vertical vision is limited by the top of the windshield, resulting in a need for overhead indications to be placed at least 15 m beyond the stop line. Figure B3-6 illustrates the 15 degree vertical angle within which the signal heads should be placed.

B3.4.2 Influence of High Vehicles

Guidance

In addition to the physical constraints of an intersection approach, the lateral placement of signal heads should also consider the visibility of the signal indications for drivers following high vehicles. The placement should provide adequate horizontal and vertical separation of the signal heads for approaching drivers situated at the upstream end of the dilemma zone to see at least one set of signal indications when following a high vehicle.

The factors that should be considered in assessing the visibility of signal heads, where the driver's view may be obstructed by a high vehicle, are road geometry, design speed, spacing between vehicles, and the horizontal and vertical placement of the signal heads.



B3.4.3 Backboards

Backboards are used to improve the visibility (conspicuity) of traffic control signals both by making the signal head stand out from its surroundings, and by helping to prevent confusion due to distracting features in the background. Backboards may be advantageous when a signal head is located in front of a complex background or in front of the backdrop of the sky. The backboard is a rectangular border designed to closely fit the signal head.

Guidance

Backboards should be used on all signal heads where lowered conspicuity is deemed to be an issue, with particular consideration for the primary signal head. Backboards width should be at least 125 mm with an outside corner radius of approximately 50 mm. Backboards should be yellow in colour.

Guidance

Presence detection should be placed slightly set back from the intersecting through edge of pavement, and have coverage area that extends behind the stop lines a reasonable distance that is defined in conjunction with the gap or extension interval in the controller to determine the typical headways before the phase or movement will gap out. A typical configuration is shown in Figure 5-2.

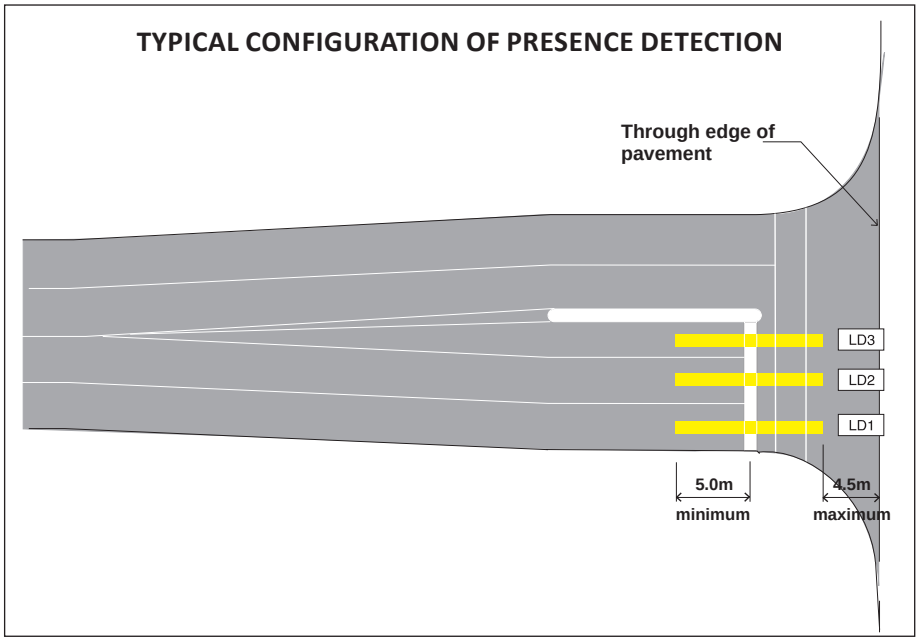


FIGURE B5-2

Option

Presence detection may be rectangular or irregular in shape; be lane selective (installed as separate zones in each lane), or all inclusive (installed as one zone across several lanes); and may have a user settable time delay (1 to 15 seconds) feature that allows vehicles to stop, pause, and continue without registering a call (as in right-turn lanes).

B5.2.2 Dilemma Zone Detection

Dilemma zone detection provides an extra level of safety for motorists travelling at a high speed towards a signalized intersection by providing reduced opportunity to encounter a signal change. The system uses detection zones located upstream of the intersection to sense approaching vehicles.

B6 OTHER TRAFFIC CONTROL SIGNALS

The description of other traffic control signals is organized as follows:

Section B6.1	General considerations for other traffic signals
Section B6.2	Traffic control signals at railway crossings
Section B6.3	Traffic control signals at fire truck entrances
Section B6.4	Traffic control signals at opening bridges
Section B6.5	Lane control signals

B6.1 GENERAL CONSIDERATIONS FOR OTHER TRAFFIC SIGNALS

This section includes a variety of traffic control devices that are based on the operating characteristics of traffic control signals. These devices include traffic control signals at railway crossings, at fire truck entrances, and at opening bridges, as well as lane control signals.

B6.2 TRAFFIC CONTROL SIGNALS AT RAILWAY CROSSINGS

Railway grade crossing warning system signals are used at at-grade railway grade crossings to warn vehicular traffic that a train is about to pass. The systems have signs, red flashing lights and may have gate arms.

Standard

Railway grade crossing warning signals must be installed in accordance with the Railway Safety Act, Grade Crossings Regulations, and Grade Crossings Standards.

Where interconnection is required, it must comply with Part 3.1.10 of the AREMA Communications and Signals Manual.

The interconnection of traffic signals with a warning system must:

a) Provide sufficient time for vehicles to clear the grade crossing before the arrival of railway equipment at the crossing surface, and

b) Prevent movement of road traffic from the intersection towards the grade crossing.

Where traffic signals are interconnected by warning systems, 4 hours continuous battery back-up must be provided for the traffic signals.

At locations with a high (more than 15 km/h) discrepancy between the posted speed limit and operating speeds, it is recommended that engineering, enforcement, and/or education measures be used to better reconcile the posted speed limit and operating speeds.

Condition 3: Gateway

AWFs should be considered at the first signalized intersection along a road transitioning from a predominantly rural environment to an urbanized environment. The condition is emphasized if:

a) The posted speed limit is 70 km/h or higher (Condition 2), and/or

b) The intersection at the gateway to the urbanized environment provides the first traffic signal after a long distance without traffic signals.

Condition 4: Approach Grade

AWFs should be considered on 60 km/h posted speed limit approaches where the downhill grade is 7 percent or more, and at 50 km/h posted speed limit approaches where the downhill grade is 12 percent or more. At posted speed limits of 70 km/h or more (Condition 2), the presence of a downhill grade should emphasize the need for an AWF.

Downhill grades on the approaches to intersections increase braking distances and therefore emphasize the need for AWFs.

Condition 5: Truck Traffic

AWFs should be considered along intersection approaches with a significant proportion of heavy trucks. Heavy trucks have reduced braking capabilities as compared to smaller vehicles and result in more severe collision consequences. The presence of heavy trucks on an intersection approach is a supporting condition and is not typically reason enough to provide an AWF; however, the presence of trucks in combination with other conditions may emphasize the need for an AWF, with the following guidance:

a) Less than 10 percent heavy trucks: no special consideration,

b) 10 to 15 percent heavy trucks: consider AWFs if other conditions are present.

c) Greater than 15 percent heavy trucks: strongly consider AWFs if other conditions present.

This condition may also take into consideration other heavy vehicles with reduced braking capabilities, such as recreational vehicles and vehicles pulling trailers.

Condition 6: Collision History

AWFs may be considered as a retrofit safety countermeasure at locations where there is an over-representation of correctable collision types. Correctable collision types are primarily those that occur during the amber and all-red phases of the signal, and those that involve entry on red due to a relatively inconspicuous signal.

Over-representation is determined by calculating the difference between the average number (per year) of correctable collisions at the treatment site, and the average number (per year) of correctable collisions at several other sites in the same jurisdiction having similar traffic volume, geometric and operational conditions. Consistent over-representation should be demonstrated for a period of not less than three years. The following guidance is provided:

a) An average of 2 or less over-represented collisions per year: no special consideration.

b) An average of 3 to 5 over-represented collisions per year: consider AWFs if other conditions present.

c) An average of 6 or more over-represented collisions per year: strongly consider AWFs.

Condition 7: Minor Road Traffic Volume

The available research suggests that AWFs along a major road approach are more effective in reducing collisions when the minor road traffic volume is relatively high. Minor road traffic volume can therefore be considered a supporting condition, and the following guidance is provided:

a) Minor road AADT of 3,000 or less: AWF less likely to be effective.

b) Minor road AADT of between 3,000 and 13,000: AWF may be effective.

c) Minor road AADT higher than 13,000: AWF more likely to be effective.

Isolated signalized intersections that fail to meet any of the conditions listed above should not require AWFs. Static “Signal Ahead” (WB-4) warning signs should be sufficient at these locations. For information on WB-4 sign, refer to Section A3.3.4.

Intersections equipped with long distance loop detectors that sense approaching vehicles and extend the green signal phase may be unsuitable for AWFs. A case specific assessment should be undertaken at such locations, taking into consideration signal controller capabilities and the need to provide predictable AWF operations.

COMPLETE INPUT FORM

Road Authority:	Trafficshire Signals Division
City:	Trafficshire, BC
Analysis Date:	2006 Jul 20, Thu
Count Date:	2003 Jul 10, Thu
Date Entry Format:	(yyyy-mm-dd)

Main Street (name)	25th Street
Side Street (name)	Trafficshire Avenue
Quadrant / Int #	NW - Int#50
press "CHECK SHEET" button to calculate results	**CHECK SHEET**

Comments

Consider pedestrian corridor instead of traffic control signal

Direction (EW or NS)	EW
Direction (EW or NS)	NS

Demographics		
Elem. School/Mobility Challenged(y/n)	y	
Senior's Complex	(y/n)	n
Pathways to School	(y/n)	y
Metro Area Population	#	968,000
Central Business District	(y/n)	y

Lane Configuration		Excel LT	Th & LT	Through	Th+RT+LT	Th + RT	Excel RT	Upstream Signal (m)	# of Thru Lanes
25th Street	WB	1		2			1	3,000	2
25th Street	EB		1			1		800	2
Trafficshire Avenue	NB				1				
Trafficshire Avenue	SB		1				1		

Are the Trafficshire Avenue NB right turns significantly impeded by through movements? (y/n) | y |

Other input		**Speed (km/h)**	**Truck %**	**Bus RT (y/n)**	**Median (m)**
25th Street	EW	60	19.7%	n	0.0
Trafficshire Avenue	NS		25.9%	y	

Set Peak Hours																				
Traffic Input	**NB**			**SB**			**WB**			**EB**			**Ped1**	**Ped2**	**Ped3**	**Ped4**				
	LT	**Th**	**RT**	**LT**	**Th**	**RT**	**LT**	**Th**	**RT**	**LT**	**Th**	**RT**	**NS**	**NS**	**EW**	**EW**				
													W Side	**E Side**	**N Side**	**S Side**				
7:30 - 8:00	31	23	15	54	8	85	13	375	26	50	447	12	2	10	10	10				
8:00 - 9:00	49	44	16	35	5	120	12	375	50	45	367	20	3	12	12	15				
11:30 - 12:30	50	11	24	55	13	115	20	390	80	56	345	22	25	15	15	15				
12:30- 13:30	68	18	28	93	12	100	12	381	111	45	344	30	25	25	20	20				
16:00 - 17:00	29	23	29	19	5	125	14	449	144	12	552	15	5	10	10	10				
17:00 - 18:00	48	16	24	27	9	100	13	329	93	15	513	28	3	15	15	15				
Total (6-hour peak)	**275**	**135**	**136**	**283**	**52**	**645**	**84**	**2,299**	**504**	**223**	**2,568**	**127**	**63**	**82**	**82**	**85**				
Average (6-hour peak)	**46**	**23**	**23**	**47**	**9**	**108**	**14**	**383**	**84**	**37**	**428**	**21**	**11**	**15**	**14**	**14**				

FIGURE B2-1

Option

Where an intersection under traffic signal control is in close proximity to a railway grade crossing warning system, interconnection of the train signals with the traffic signal may be required. The typical conditions which would suggest interconnection may be required are:

c) Traffic queues have the potential for extending across a nearby rail crossing, or

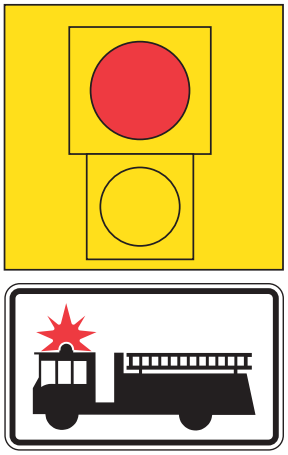
d) Traffic backed up from a nearby downstream railway crossing has the potential to interfere with signalized highway intersections.

Support

Transport Canada regulates the standards for warning systems for grade crossings. The placement and operation of train-approach traffic control signals are not specified in this Manual.

Additional guidance on determining when railway pre-emption might be required and detail on implementation is contained in *Preemption of Traffic Signals Near Railroad Crossings: A Recommended Practice* from the Institute of Transportation Engineers.

B6.3 TRAFFIC CONTROL SIGNALS AT FIRE TRUCK ENTRANCES



Traffic control signals for fire entrances are a special adaptation of a traffic control signal which is installed to assist fire vehicles in obtaining the right-of-way to gain access to a public road.

A traffic control signal at a fire truck entrance consists of a 300 mm Red Ball indication above a 200 mm or 300 mm Amber Ball indication mounted within a yellow backboard. The primary signal head is mounted over the quarter point on the far side of the intersection, and the secondary signal head is mounted on the far-right side of each intersection approach. A supplementary tab sign (RB-19SR or RB-19SL) is mounted below the two-section signal head to indicate the direction from which a fire vehicle would enter the road. Traffic control signals at a fire truck entrance and a typical installation are illustrated in Figure B6-1.

B7 FLASHING WARNING INDICATIONS

The description of flashing warning indications is organized as follows:

Section B7.1	Flashing beacons at intersections
Section B7.2	Rectangular rapid flashing beacons
Section B7.3	LED-embedded traffic signs

B7.1 FLASHING BEACONS AT INTERSECTIONS

Flashing Beacons are used at intersections where full traffic control signals are not required, but where, due to lack of visibility or other hazards, regulatory or warning signs are not sufficient. Either Flashing Amber Ball (Section B3.2.5.1) or Flashing Red Ball (Section B3.2.5.2) indications may be shown.

Standard

A Flashing Amber Ball indication must be displayed when it is intended that vehicular and pedestrian traffic facing this indication may proceed with caution, after yielding to vehicles and pedestrians lawfully within the intersection or road.

A Flashing Red Ball indication must be displayed when it is intended that vehicular and pedestrian traffic must stop before crossing the stop line or crosswalk on the near side of the intersection. If there is no crosswalk or stop line, traffic must stop before entering the intersection. Before proceeding, traffic is subject to the rules applicable after making a stop at a Stop sign (RA-1/RA-1F).

Guidance

Beacons should be used with considerable discretion because overuse of these devices may lead to their being disregarded by motorists. The decision to install flashing beacons should be based, at least in part, on a higher than expected collision risk, and the presence of a pattern of collisions of a type which should be prevented or reduced in number by the installation of the flashing beacon.

B7.1.1 Intersection Control and Installation of Flashing Beacons

Intersection Control applications include: overhead beacons mounted on suspension wire at the centre of an intersection; and the placement of flashers directly above Stop signs (RA-1/RA-1F) or Stop Ahead warning signs (WB-1).

TABLE B4-4

FORM FOR DETAILED ASSESSMENT OF THE REQUIREMENT FOR A PROTECTED LEFT-TURN PHASE	
Intersection:	
Street 1:	
Street 2:	
Date: Study Period: am peak / pm peak / other	
Analyst:	
Direction of travel under consideration:	

PART A: **SPECIAL CONDITIONS CRITERIA**	**CRITERION SATISFIED ?**	
	Yes	**No**
A1 Are railway or public transit vehicles operating in an exclusive right-of-way median which is parallel to the left-turn lane?		
A2 Are double left turns permitted where there is an opposing through movement?		
Is a protected left-turn phase recommended according to criterion A1 or A2? (Answer Yes if either A1 or A2 have a "Yes")		
If the answers to both A1 and A2 are "No", proceed to PART B – Negative Impact Criteria.		

PART B: **NEGATIVE IMPACT CRITERIA**	**CRITERION SATISFIED ?**	
	Yes	**No**
B1 Is there insufficient green time within the current cycle length to accommodate the proposed protected left-turn phase?		
B2 Will the protected left-turn phase encourage neighbourhood traffic infiltration?		
B3 Does an assessment of the proposed protected left-turn phase demonstrate that significant undesirable effects in terms of stops, delay, or increased fuel consumption will result?		
Are there any "Yes" answers in PART B – Negative Impact Criteria?		
If "Yes", protected left-turn phasing is undesirable.		
If the answers to all three of B1 to B3 are "No", proceed to PART C – Warrant Criteria.		

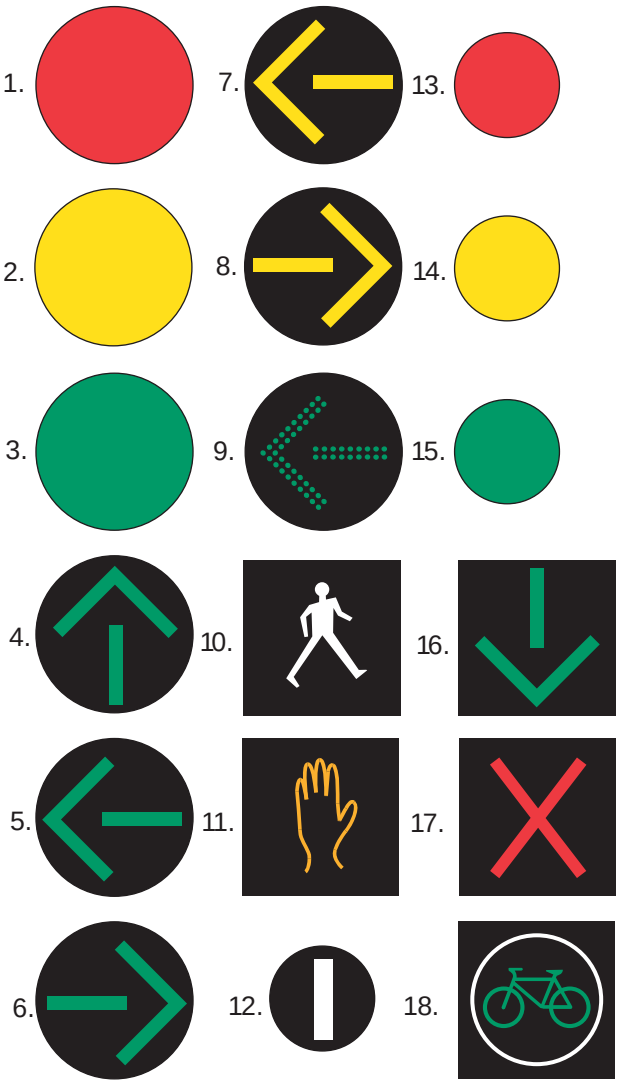
PART C WARRANT CRITERIA (Next page)

TABLE B4-4 (continued)

FORM FOR DETAILED ASSESSMENT OF THE REQUIREMENT FOR A PROTECTED LEFT-TURN PHASE	
Intersection:	
Street 1:	
Street 2:	
Date: Study Period: am peak / pm peak / other	
Analyst:	
Direction of travel under consideration:	

PART C: WARRANT CRITERIA	DATA	CRITERION	CRITERION SATISFIED?	
			Yes	No
(a) What is the average left-turn demand per cycle?		**≥ 3 pcu per cycle**		
(b) What percent of the left-turn volume is delayed more than one signal cycle?		**> 25% Delayed One Cycle**		
(c) What is the total number of left-turn collisions that have occurred:				
(i) during the two-hour left-turn study period within the past five years?		**> 6 within the past 5 years**		
(ii) during the two-hour left-turn study period within the past 12 months?		**> 2 within the past 12 months**		
(iii) on a daily basis within the past five years?		**> 20 within the past 5 years**		
(iv) on a daily basis within the past 12 months?		**> 5 within the past 12 months**		
(d) What is the average volume of left turns which clear during the intergreen per cycle?		**> 2 pcus per cycle**		
(e) Over the course of an hour, what is the percentage of cycles during which the queue from an exclusive left-turn lane spills back and blocks the adjacent through lane:				
(i) where there is only a single through lane?		**> 10%**		
(ii) where there are two or more through lanes?		**> 30%**		
(f) What is the left-turn in-service transit demand per hour?		**> 3 per hour**		
Are any of the following Warrant Criteria satisfied?				
C1 (a) and (b) (If "Yes", protected left-turn phase is warranted.)				
C2 (a) and (c) (If "Yes", protected left-turn phase is warranted.)				
C3 (a) and any two of (d), (e), or (f) (If "Yes", protected left-turn phase is warranted.)				
If the answers to all three of C1 to C3 are "No", left-turn phase is NOT warranted.				

SIGNAL LENSES



1. Red Ball - 300 mm
2. Amber Ball - 300 mm
3. Green Ball - 300 mm
4. Green Arrow (through) - 300 mm
5. Flashing Green Arrow (left) - 300 mm
6. Green Arrow (right) - 300 mm
7. Amber Arrow (left) - 300 mm
8. Amber Arrow (right) - 300 mm
9. Wide Fibre-Optic Green/Amber Arrow - 300 mm
10. Walking Pedestrian (Lunar White)
11. Hand (Portland Orange)
12. Transit Signal 200 mm (Lunar White)
13. Red Ball - 200 mm
14. Amber Ball - 200 mm
15. Green Ball - 200 mm
16. Lane Control Green Arrow 300 x 300 mm
17. Lane Control Red X - 300 x 300 mm
18. Green Bicycle
19. Amber Bicycle
20. Red Bicycle
21. Transit Signal (left) 200 mm (Lunar White)
22. Transit Signal (right) 200 mm (Lunar White)
23. Pedestrian Countdown Signal (300 mm shown)

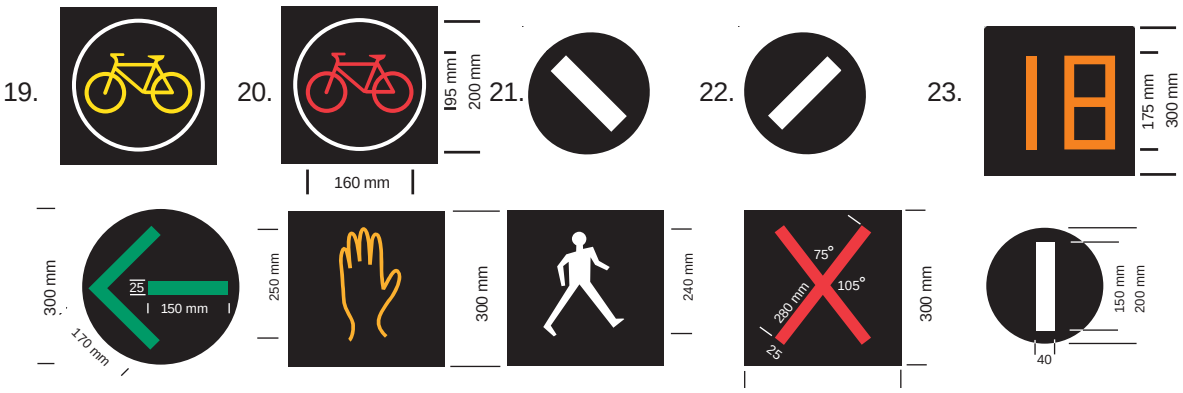


FIGURE B3-1

The pattern of the Raised Pavement Markers must simulate the pattern of the markings for which they are substituted. The normal spacing of Raised Pavement Markers, when substituting for painted markings, must be chosen in relationship to the standard length of the broken line segment.

Guidance

The colour of the Raised Pavement Markers should match the colour of the lines that they are supplementing or being substituted for.

The Raised Pavement Markers should be placed to one side of longitudinal pavement joints. A typical spacing for such applications is one Raised Pavement Marker for every second line segment.

Where double lines are to be supplemented, pairs of markers placed laterally in line with, or immediately outside of the two lines, should normally be used.

Solid lines should be supplemented at a spacing no greater than N where N equals the length of one broken line segment plus one gap, except left Edge Lines, which should be supplemented at a spacing no greater than N/2. Raised Pavement Markers generally should not supplement right Edge Lines.

Broken lines should be supplemented at a spacing no greater than 2N, except those identifying reversible lanes, which should be supplemented at a spacing no greater than N. Dashed lines should be supplemented with spacing appropriate for the application. Typical spacing for pavement markings through at-grade intersections is one raised marker for each short line segment or “dash”.

The impact of winter maintenance, particularly snowploughing, on the durability of Raised Pavement Markers should be taken into account when considering an installation.

Option

Raised Pavement Markers may be used as positioning guides with other longitudinal markings, without necessarily conveying information to the driver as to passing or lane use restrictions. In such applications, markers may be used, positioned between the two lines of a one-way or two-way no-passing zone, or positioned in line with or immediately adjacent to a single solid or broken Centre Line or Lane Lines.

Where the driver’s attention should be drawn to changes in travel path, such as sharp curves or transitions to reduce the number of lanes or to shift traffic laterally, the spacing may be reduced to one Raised Pavement Marker for each line segment, or less.

- Obstructions within the roadway, and
- Railway crossings.

The Directional Dividing Line will normally coincide with the geometric centre of the pavement. However, it may be located at an off-centre position to make the most efficient use of the road in circumstances such as:

a) Pavement width transitions,

b) Added turning lanes at intersections,

c) An uneven number of lanes on vertical or horizontal curves with limited sight distance,

d) An urban road with parking permitted on one side only,

e) A road with an uneven number of traffic lanes,

f) An urban road where reversible lane operation is used to accommodate peak-hour directional volumes, or

g) A divided roadway with unequal inside and outside shoulder widths.

C2.1.1 Directional Dividing Lines on Rural Roads

C2.1.1.1 Multi-Lane Undivided Rural Highways

Standard

The Directional Dividing Line must be a double solid yellow line on multi-lane undivided rural pavements of four or more lanes.

C2.1.1.2 Two-Lane Rural Highways

Standard

Where inadequate sight distance makes passing hazardous, the Directional Dividing Lines must be designed in accordance with geometric standards and marked in accordance with Section C2.2, No-Passing Zones.

Guidance

As a general guide, Directional Dividing Lines should be marked:

a) Throughout the length of two-lane pavements with a width of 6.0 m or more, which carry two-way peak-hour volumes of 200 vehicles or more,

b) Throughout the length of two-lane pavements with a width of 5.5 m to 6.0 m which carry two-way peak-hour volumes of 100 vehicles or more,

c) Throughout the length of two-lane pavements with a width of 5.0 m to 5.5 m which carry two-way peak-hour volumes of 50 vehicles or more,

d) In sections where the collision record indicates a need for defining the division of the road between traffic travelling in opposite directions, and

e) In areas where visibility is likely to be frequently reduced by atmospheric conditions.

Option

Where sufficient sight distance is available for passing, the Directional Dividing Line may be a broken yellow line (Figure C1-1).

C2.1.2 Directional Dividing Lines on Urban Roads

Guidance

The application of Directional Dividing Lines on urban roads should be used in accordance to Table C2-1.

TABLE C2-1
DIRECTIONAL DIVIDING LINES ON URBAN ROADS

Road Type	Number of Lanes for Moving Traffic	Type of Directional Dividing Line
High-Speed Arterial	4 or 4+	double solid yellow
Arterial	4 or 4+	single solid yellow
Arterial	< 4	single solid yellow (no passing) single broken yellow (where passing is permitted)
Undivided Controlled-Access Highway		same as multi-lane undivided rural highways (Section C2.1.1.1)
Other Urban Roads		single solid yellow—either continuous or at specific locations to indicate that passing is not permitted, such as at approaches to railway crossings and controlled intersections or where sight distance is restricted

C2.2.6 Warrants for Establishing No-Passing Zones

The warrants for the establishment of no-passing zones depend on the speed and the minimum sight distance necessary for safe passing at that speed. Sight distance on a vertical curve is the distance at which an object 1150 mm above the pavement surface can just be seen from another point 1150 mm above the pavement. Similarly, sight distance on a horizontal curve is the distance measured along the centre line of the lane (or the centre line of the right lane of a three lane highway) between two points 1150 mm above the pavement on a line tangent to any obstruction that cuts off the view on the inside of the curve.

Standard

A vertical or horizontal curve warrants a no-passing zone, and must be so marked, when the sight distance for the speed is less than the minimum sight distance listed in Table C2-2.

Guidance

The higher of the posted speed or the 85th-percentile speed, if this value is available, should be used as the speed in Table C2-2.

The application of solid lines for no-passing zones on horizontal curves on two-lane highways is shown in Figure C2-2. The basic method for establishing No Passing Zones on single and successive vertical curves is shown in Figures C2-3 and C2-4.

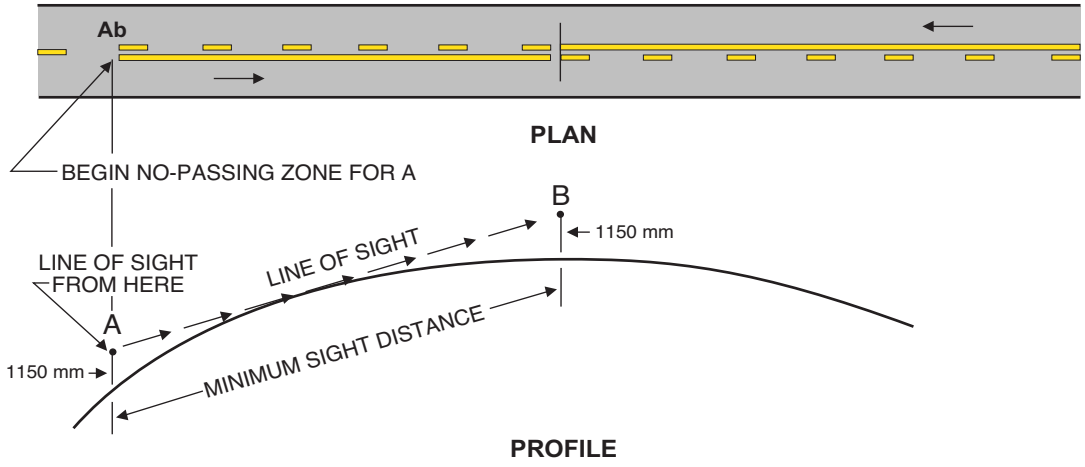
The beginning of a no-passing zone (Ab, Bb in Figures C2-2, C2-3, C2-4, and C2-5) is where the sight distance first becomes less than the minimum sight distance specified in Table C2-2. The end of the zone (Ae and Be in Figures C2-2 to C2-5) is where the sight distance again becomes greater than the minimum specified. The resulting solid line should not be less than 100 m in length. If the actual no-passing distance is less than 100 m in length, the solid line should be extended to 100 m in length with the additional length added at the beginning of the no-passing zone.

The detailed method of establishing the beginning and end of solid lines for no-passing zones on vertical curves is shown in Figure C2-3 and Figure C2-5.

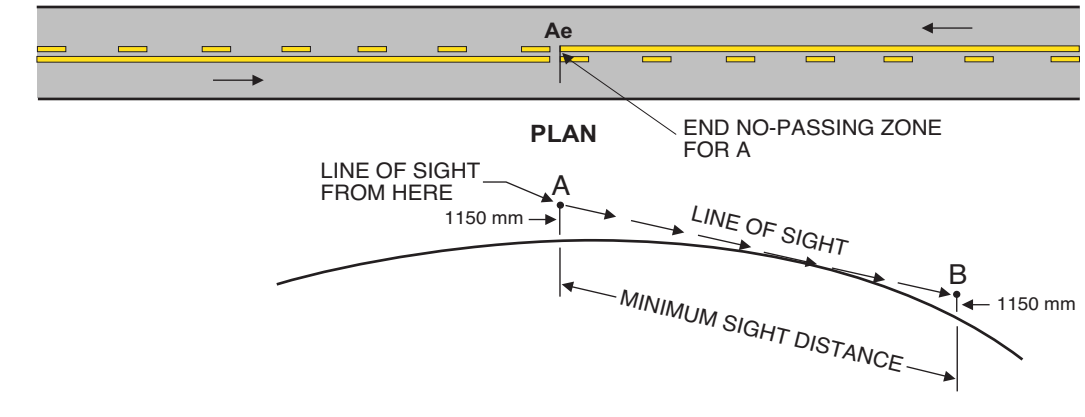
For successive vertical curves, the beginning and end of each successive solid line for each direction is established as shown in Figure C2-4. Where the end of a solid line in one direction lies within 100 m of the beginning of the next solid line in the same direction, the solid line in that direction should be made continuous over the intervening distance.

METHOD OF ESTABLISHING THE TERMINI OF NO-PASSING ZONES ON VERTICAL CURVES

STEP 1 { Commencing on the upgrade side of the curve, workers A and B pull the line taut with A sighting through the slot peephole in A's target to see B's target. At the point where the centre of B's target just visible to A. A then marks point Ae as shown in the sketch below.



STEP 2 { A and B continue over the vertical curve with A sighting B's target until the centre of B's target becomes just visible to A. A then marks a 'T' at point Ae, as shown in the sketch below.



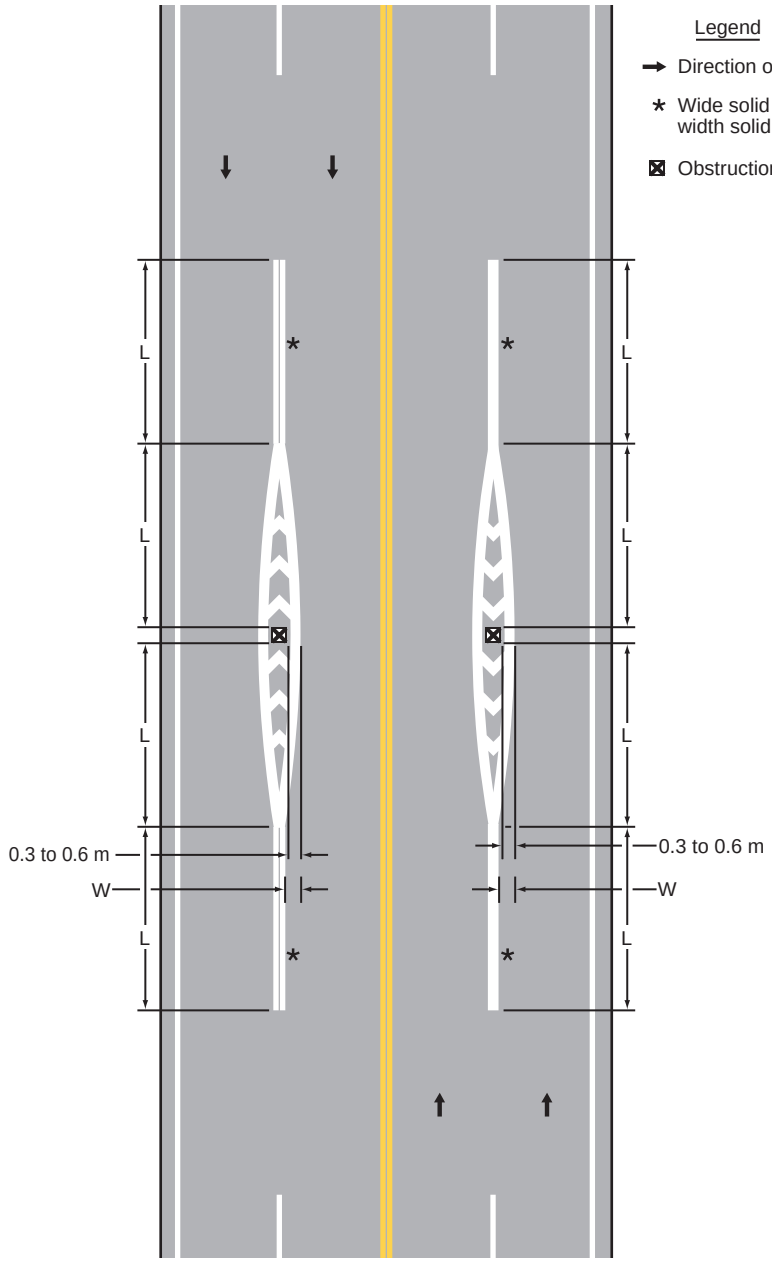
Note:
The begin and end marks (⊢ ⊣) are placed on the pavement so that their stems will point in the direction of the solid line to be applied.

Note:
In practice, it may be found that it will be more efficient to vary the sequence of the operation in a manner in which steps 1 and 4 are performed one after the other and steps 2 and 3 are performed one after the other.

FIGURE C2-5

MARKINGS FOR OBSTRUCTIONS IN THE ROADWAY, PART 2

C - Traffic passing in the same direction on both sides of an obstruction



For speeds of 70 km/h or more: L = 1.24 WS
For speeds of less than 70 km/h: L = 0.013 WS^2
S = Posted, 85th-percentile, or statutory speed in km/h
W = Offset distance in metres

Minimum length of: L = 30 m in urban areas
L = 60 m in rural areas

Length "L" should be extended as required by sight distance conditions

FIGURE C2-8

C2.5.1 Freeway Exit Only Lanes

Guidance

At off-ramps, where there is one (or more) exit only lane(s), a special pattern of markings should be used as follows:

a) A wide broken Continuity Line should commence in advance of the gore at a distance that would be travelled in 12 seconds (approximately 330 m at 100 km/h); this is illustrated in Figures E4-3 to E4-9 and Figures C2-10 and Figure C2-11,

b) For an Exit Only on Right lane, the markings are illustrated in Figure E4-4,

c) For an Exit Only on Left lane, the markings are illustrated in Figures E4-5 and E4-6,

d) For a two-lane Exit on Right with Optional Use, the markings are illustrated in Figures E4-7, C2-14, C2-15 and C2-17,

e) For a two-lane Exit Only on Right, a second wide broken Continuity Line should commence approximately 12 seconds of travel time from the gore and terminate at the beginning of a wide solid lane line 150 to 200 m before the Exit Direction Sign; this is illustrated in Figure E4-8, and

f) Pavement arrows may be added, as shown in Figures E4-3 to E4-9.

C2.6 GUIDING LINES

Guiding Lines may be used as an extension of the Centre Line or Lane Line(s) through an intersection to delineate the path of travel for turning vehicles.

Where intersection geometry or reduced visibility makes it desirable to provide guidance through an offset or skewed intersection or a complex multi-leg intersection where multi-turn lanes are used, a Guiding Line may be used to extend markings as necessary through the intersection area, as shown in Figures C2-18, E1-11, and E5-21.

Standard

Guiding Lines are dashed lines with segments and gaps of equal length not exceeding 0.5 m, as illustrated in Figure C1-1. The colour is the same as the colour of the line which is extended.

C2.8.2 Left-Turn Lanes

Left-turn lanes can increase intersection capacity, improve intersection operation, and reduce the incidence of rear-end collisions.

Standard

Left-turn lanes are defined by a solid line (for approximately 25 m), then a Continuity Line.

Where the left-turn lane is in one direction only, the typical layout is shown In Figure C2-24. For signalized intersections, where opposing left-turn lanes are used, the layout for each approach is as shown in Figure C2-25. Where left-turn lanes are required in alternate directions back-to-back for adjacent intersections, the layout in Figure C2-26 is used. Where multiple left turns are allowed for one direction, the layout in Figure C2-27 and E1-11 is used.

Guidance

Pavement arrows should be used where the taper becomes full width and at a point 5.0 m from the Stop Line or from the start of the radius. A third arrow should be used at the beginning of the 25 m solid line if the turn lane is longer than 50 m. Only one pavement arrow should be used if the length of the left-turn lane is 15 m or less.

Where a through lane terminates as a left-turn lane at an intersection, the typical markings should be similar to those shown in Figure E1-7. Where required, appropriate legislation should be enacted and a lane designation sign should be used. The lane is defined by a solid line for 25 m, then a Continuity Line for 60 m. Beyond this point, the lane is defined by the normal broken lane line. Pavement arrows should be used 5.0 m from the Stop Line or the start of the radius, at the beginning of the 25 m solid line, and at the 30 m and 60 m points of the Continuity Line.

Option

At unsignalized T-intersections where through vehicles frequently attempt to bypass slowed or stopped vehicles waiting to turn left, provided that an adequate paved shoulder exists, a left-turn slip-around (also called a shoulder bypass lane) may be added as shown in Figure C2-28. A slip-around lane may also be introduced to reduce collisions or improve traffic operations. A left-turn slip-around lane should be introduced only if a left-turn storage lane is not possible.

C3 TRANSVERSE PAVEMENT MARKINGS

Transverse markings are used for crosswalks, Stop Lines, railway crossings, parking, and gore area markings. All transverse markings are white, except for median gore areas, which are yellow.

Division C3 describes transverse markings and their application, and is organized as follows:

Section C3.1 Crosswalk lines
Section C3.2 Stop lines
Section C3.3 Gore areas
Section C3.4 Diagonal markings
Section C3.5 Parking lines

For more information on pedestrian crossings and the crossing terminology used in this section, please refer to the *Pedestrian Crossing Control Guide* (TAC 2017).

C3.1 CROSSWALK LINES

Crosswalk Lines are white lines, either solid parallel, perpendicular bars or a combination of both (Figure C1-3) extending entirely across the pavement, which define pedestrian crossing areas.

Guidance

The width of the crosswalk is usually determined by the widths of the sidewalks leading to the crosswalk and the number of pedestrians crossing, but should not be less than 2.5 m in width.

Crosswalk Line usage is described in detail in Section C7.2.1.

C3.1.1 Twin Parallel Line Crosswalk Markings

Twin Parallel Line Crosswalk markings feature two parallel white lines with a large space between the lines which delineates the pedestrian travel path. The typical markings are illustrated in Figure C3-1.

C3.2 STOP LINES

Stop Lines are used where it is important to indicate the point where a vehicle must stop in compliance with a traffic signal, a Stop sign, or other specific requirement to stop.

Standard

Stop Lines must be wide solid white lines not less than 300 mm nor more than 600 mm in width (Figure C1-3).

Guidance

Stop Lines should be used only where a control device is used at the location. Typical installations are indicated in Figures E1-1 to E1-4.

Where a crosswalk is used, the separation between the Crosswalk Line and the Stop Line should be 1.0 m, except where special circumstances require otherwise.

The Stop Line should extend from the right curb or pavement edge to the Directional Dividing Line or median island, if present, or, in the case of one-way streets, to the left curb or pavement edge.

C3.3 GORE AREAS

Gore areas are hatched pavement marking zones at the beginning of merging areas, at the end of diverging areas, approaching bike lanes and tracks, and on approach to objects within the roadway. They are marked as illustrated in Figure C3-2.

Standard

The borders of the gore areas must be shown as solid yellow lines where traffic passes the gore area in opposing directions and solid white lines where traffic in the same direction passes on both sides of the gore area.

Where traffic is allowed to pass on both sides of the object, the diverging lines must extend from the lane line to points 300 mm clear of the edges of the object and a maximum of 3.0 m further, parallel to it.

Where vehicles are required to pass to the right of the obstruction, the diverging lines must extend from the directional dividing line to points a minimum of 150 mm clear of the object. In addition, a second solid line must be placed one line width to the right. It must extend from a minimum of 30 m in advance of the beginning of the diverging lines and continue to the object. It may be extended further as an edge line parallel to the object

and joined with the diverging line on the other side. This second solid line may be omitted on low-speed urban streets where the Directional Dividing Line is made a solid line for 30 m or more in advance of the approach marking.

The lengths of the diverging lines will depend upon the width of the obstruction and the speed of the approach traffic.

Guidance

Wide solid lines should be used in locations where they have been used for adjacent markings.

Option

The interior of the gore area may be marked with diagonal lines to guide traffic away from the object, as described in Section C3.4 and illustrated in Figure C3-2.

C3.4 DIAGONAL MARKINGS

Diagonal Line markings indicate pavement areas which are not to be used as part of a travelled lane.

Standard

Where the traffic is required to pass to the right of an area marked with Diagonal Lines, the Lines must be yellow. The lines must be placed at an angle in the proportion of 2:1 in the direction of travel (2 units along the direction of travel to 1 unit perpendicular to it). They must be 450 mm to 600 mm wide and a minimum of 2000 mm apart.

Where the traffic may pass on both sides of an area marked with Diagonal Lines, the Lines must be white. The Lines must be angled both ways in a chevron pattern (Figure C3-2). They must be 450 mm to 600 mm wide and a minimum of 2000 mm apart.

Option

Diagonal Line markings may be used in median areas which separate lanes with opposing directions of traffic. They may also be used in the interior of gore areas.

Symbol markings may also be placed more frequently, as needed, in order to highlight the possible presence of bicycles.

Bike Boxes may contain a non-elongated Bicycle Symbol due to the size constraints.

Support

When applied on a bicycle route, symbol markings should be placed in advance of, and following each intersection as specified in various figures in the *Bikeway Traffic Control Guidelines for Canada* (TAC, 2012).

C4.1.5 Shared Use Lane Symbol

Shared Use Lane markings, or "Sharrows", are symbols placed on the pavement surface in the intended area of bicycle travel. The symbols raise awareness to both the driver and cyclist of the preferred positioning of each in the lane.

Standard

Two white chevron markings, with a stroke width of 100 mm spaced at 100 mm are placed ahead of the Bicycle Symbol, as shown in Figure C4-1.

In shared lane applications, the Sharrow must be placed immediately after an intersection and 10 m before the end of a block.

Guidance

Longitudinal spacing should be at intervals of 75 m (this spacing may be decreased but should not be increased, thus allowing drivers to identify at all times where they should be situated in relation to one another). In conflict zone applications, the minimum symbol spacing should be 1.5 m.

Support

Typical installations for shared use lane symbols are shown in the *Bikeway Traffic Control Guidelines for Canada* (TAC, 2012).

C4.1.6 Bicycle Detection Symbol

Option

The Bicycle Detection Symbol may be used to identify the most sensitive area of detection on a signal actuation loop where a bicycle will be best positioned to activate the signal. The symbol is illustrated in Figure C1-4.

C6.1.5 Pedestrian Crossings

Roundabouts should be designed to accommodate pedestrians where there is a reasonable possibility of pedestrian activity.

Standard

Pedestrian crosswalks must not be marked to or from the central island of roundabouts.

Guidance

If pedestrian facilities and splitter islands are provided, crosswalks should be marked across roundabout entrances and exits to indicate where pedestrians are intended to cross.

Option

RRFBs may be used to reinforce the pedestrian crossings at roundabouts, as shown in Figure E2-3.

Support

Refer to TAC's *Geometric Design Guide for Canadian Roads*: *Chapter 6 – Pedestrian Design Focus* and *Chapter 9 – Intersections,* for more information on pedestrian crossings at roundabouts.

C6.1.6 Example Signing and Marking Applications

The following sections illustrate examples of applications for signing and markings at a typical roundabout.

C6.1.6.1 Entry Signing at Roundabouts

Figures E2-1 and E2-2 show signs and markings at entries for single-lane, two-lane and three-lane roundabouts. Figure E2-6 shows a single lane approach opening up to two-lane roundabout entrance.

C6.1.6.2 Approach Signing for Single-Lane Roundabouts

Figure E2-4 shows approach signs and markings for a single lane roundabout. A side-mounted advance diagrammatic guide sign is depicted, although such a sign could be mounted overhead if there is insufficient boulevard space. Figure E2-5 shows signs and markings for a local street roundabout.

C6.1.6.3 Approach Signing for Two-Lane Roundabouts

Figures E2-7 to E2-10 show approach signs and markings for two-lane roundabouts with fully-channelized right turns. A side-mounted diagrammatic guide sign and an overhead guide sign are both depicted. The type of advance guide sign chosen should depend on factors such as approach sight distance and available boulevard space.

C6.1.6.4 Approach Signing for Two-Lane Roundabouts with Exclusive Left Turn

Figures E2-11 and E2-12 show approach signs and markings for a two-lane roundabout with an exclusive left turn. Both side-mounted diagrammatic and overhead guide signs are depicted. With this configuration a circulatory road lane line is required to guide the exclusive left-turn movement, but is optional elsewhere.

C6.1.6.5 Approach Signing for Three-Lane Roundabouts with Five Legs

Figures E2-13 and E2-14 show approach signs and markings for a complex 3-lane roundabout with 5 legs. Both side-mounted diagrammatic and overhead guide signs are depicted. With this configuration circulatory road lane lines are required from the 3-lane entries and from those entries having exclusive movements.

should be centred in the bicycle lane and should have a stroke width of at least 75 mm.

Option

On roadway segments with long distances between intersections and driveways, the symbols may be repeated at intervals of 300 m or more. On roadway segments with frequent occurrences of driveways, the symbol spacing may be reduced to 30 m.

An optional directional arrow may also be used where the direction of travel is not clear or additional guidance is required. For example, the arrow may be used on contraflow bike lanes or at intersections where cyclists will take different trajectories at or on the approach to an intersection depending on the turning movement they are making. The cyclist directional arrow is shown with the bicycle and diamond symbols in Figure C7-1.

Support

A typical bicycle lane installation is shown in Figure E5-12. Refer to TAC's *Bikeway Traffic Control Guideline for Canada* (2012) and TAC's *Geometric Design Guide for Canadian Roads: Chapter 5 - Bicycle Integrated Design* (2017) for additional information on bikeway facility design and implementation.

C7.1.2 Bicycle Lane Adjacent to Permanent On-Street Parking

Figure E5-13 illustrates the typical pavement marking applications for a bicycle lane adjacent to permanent on-street parking.

Standard

Dashed white bicycle lane lines must be used to indicate where a vehicle may cross into the bicycle facility to exit the parking lane. These are typically 1 m in length with 1 m spacing.

Guidance

It is recommended that a buffer should be provided between the parking lane and the bicycle lane.

C7.1.7 Typical Bicycle Lane Applications Downstream of Intersections

The pavement markings at an intersection may help to guide cyclists between facilities on either side of the intersection. They also highlight conflict areas where cyclists and motor vehicles will cross paths so that each user group is more aware of the other.

Guidance

Figure E5-19 and Figure E5-20 illustrate two design treatments on the downstream side of the intersection, which may consist of a bus bay or a far-side lane drop. In both of these situations, the bicycle lane downstream of the intersection remains aligned with the bicycle lane entering the intersection. Where the geometry of the roadway necessitates that motor vehicles cross the bicycle lane, the practitioner should consider using the aforementioned hierarchy of markings and treatments to indicate the conflict zone. Where sharrow markings or symbols are applied, the minimum separation should be 1.5 m.

C7.1.8 Typical Bicycle Lane Applications for Left Turning Cyclists

At an intersection where two roadways with bicycle lanes meet, consideration should be given to facilitating left-turn cycling manoeuvres.

Guidance

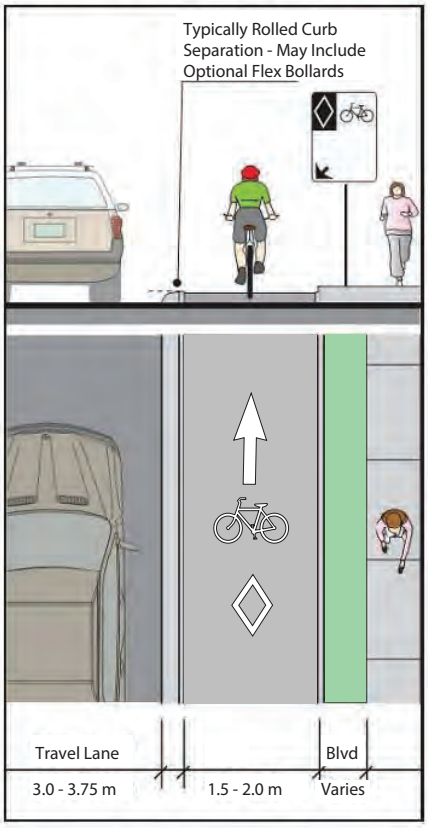
Figure E5-21 illustrates a typical plan view of an intersection with a separate left-turn bicycle lane ‘slot’ or ‘pocket’. Cyclists intending to make a left turn are expected to weave safely across the motor vehicle lanes prior to entering the bicycle lane slot. Designers may provide sharrow markings, or dashed guidelines as shown in Figure E5-21, to assist left-turning cyclists through the intersection from the turning slot to the bicycle lane on the far side of the intersection.

Option

On roads with multiple through lanes in each direction, practitioners may consider the application of left-turn queue boxes to assist less confident cyclists, as described later in this section.

CROSS-SECTIONS OF ONE-WAY AND TWO-WAY RAISED CYCLE TRACKS

ONE-WAY RAISED CYCLE TRACK



TWO-WAY RAISED CYCLE TRACK

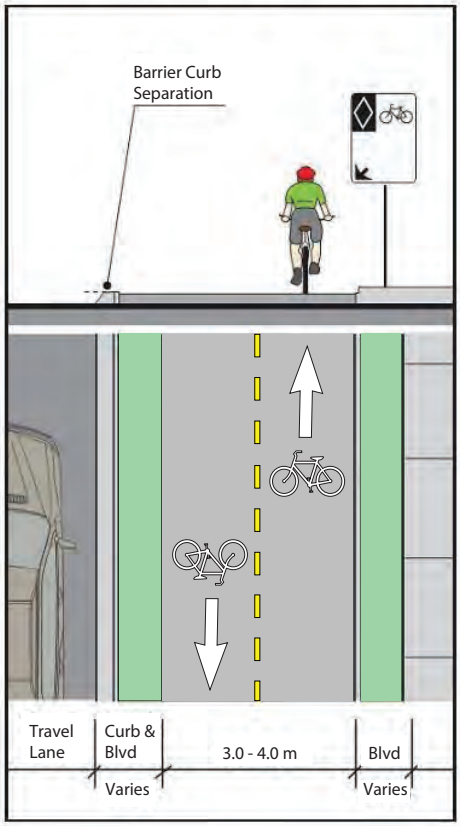


FIGURE C7-6

C7.2.1 Pedestrian Crosswalk Pavement Markings

Crosswalks are a painted area extending across the pavement that define a pedestrian crossing location. There are several formats of crosswalks in use, including twin parallel lines, zebra and ladder. It is important to use skid resistant materials for Pedestrian Crosswalk markings. The typical markings are illustrated in Figure C3-1. The use of crosswalk markings at roundabouts is described in Section C6.1.5. The use of decorative crosswalk pavement markings is described in section C7.2.3.

Standard

Pavement markings must not be used alone to indicate a pedestrian crossing. Crosswalk pavement markings must be a part of a system for pedestrian crossing control. The specific components of the system depend of the type of crossing control to be installed (GM, GM+, OF, or TS). The type of pavement markings to be used depends on the type of system and the operating environment.

Zebra Crosswalk markings are a recommended component which must be installed to ensure the effective operation of the crosswalk systems as follows: Zebra Crosswalk markings must be used at all school crosswalk locations (except TS1 and TS2), and Zebra crosswalk markings must be used at all GM+, Special Crosswalk, and RRFB installations, near or away from schools.

Where there is a Directional Dividing Line on a roadway approaching a crosswalk, a solid directional dividing lane line and solid lane lines must be used for a minimum of 15 m approaching the crossing.

Guidance

The width of the crosswalk is generally determined by the width of the connecting sidewalk and/or the number of pedestrians crossing. The minimum crosswalk width should be 2.5 m. At intersections, it is desirable that the line on the intersection side be placed at least 600 mm from the projected edge of the travelled lanes (Figure C3-2).

The stop line, if used, should be placed so that there is a 1 m separation from the crosswalk.

Option

Zebra Crosswalk markings are a desirable enhancement for GM type crosswalks even if they are not located in a school area. These markings may be applied at locations with large numbers or percentages of older pedestrians or locations with high activity of pedestrians with mobility or visual impairments and are particularly useful where pedestrian crossings are not provided with signal protection.

Zebra Crosswalk markings are an optional enhancement at mid-block or intersection pedestrian signal locations and at full traffic signal locations, where extra emphasis is required.

For crosswalks on the stop controlled legs of an intersection, where twin parallel line crosswalks are used and no stop line is provided, it may be desirable in rural areas and on relatively high-speed urban arterial roads, to increase the width of the crosswalk lines (300 mm wide suggested) to improve visibility for drivers.

Typical layouts for pedestrian crosswalk pavement markings are shown in Figures E1-1 to E1-4.

Support

Please refer to the *Pedestrian Crossing Control Guide* (TAC, 2018) for additional information.

C7.2.2 School Crossings

Designated school crossings are locations close to schools where school children have to cross enroute between home and school. Children are normally not as alert as adult pedestrians to the dangers of the roadway. The use of a school crosswalk and appropriate signage helps to warn drivers that extra caution is required since children may be present.

Standard

Crosswalk markings for school crosswalks, except for those at signalized intersections, must be similar to those for typical signs and markings crossings, with the exception of the use of the RA-3 sign in place of the RA-4 or RA-5 sign. The TAC *Pedestrian Crossing Control Guide* (2018) provides details of pavement marking and signing requirements.

Figure E3-1 illustrates installation details for a mid-block school crossing.

C7.2.3 Decorative Crosswalk Pavement Markings

In addition to standard pedestrian crosswalk markings described in C7.2.1, decorative pavement markings may also be used at crosswalks under conditions described here. Decorative pedestrian crosswalk pavement markings include the use of colour and other artwork.

Standard

Decorative pedestrian crosswalk pavement markings must not be used alone to indicate a pedestrian crossing. Crosswalk pavement markings must

be a part of a system for pedestrian crossing control as per the standard application described in C7.2.1.

All decorative pedestrian crosswalk pavement marking installations must be accompanied by and be located between typical twin parallel line crosswalk markings to ensure increased crosswalk conspicuity. The standard twin parallel line crosswalk markings must be separated from the decorative elements of a crosswalk by a minimum distance of 300 mm.

The decorative elements must not cover any part of the twin parallel lines and cannot be located outside of them.

Decorative pavement markings must not be installed on roadway facilities with posted speed limits greater than 50 km/h.

Decorative pavement marking installations must not be used at locations where zebra or ladder pavement markings are recommended or installed.

Decorative pedestrian crosswalk pavement markings must not be installed in school areas or at school crosswalks.

The installation of decorative pavement markings must be completed using skid resistant materials similar to those used to apply the adjacent standard crosswalk markings. Surface-applied retroreflective material must not be used for the decorative part of the crosswalk.

Three-dimensional artwork, as an optical illusion or otherwise, must not be used.

Graphics, words, other symbols or artwork for the purpose of advertising must not be used.

Text or regulated symbols directed at vehicle operators must not be used as a decorative element.

Use of a single standard colour as described in C1.7.2 between parallel lines of a crosswalk as a non-standard crosswalk treatment must be avoided.

Decorative pedestrian crosswalk pavement markings must not create a surface that can confuse vision-impaired pedestrians who rely on tactile treatments or cues for navigation.

Option

Decorative pavement markings may be installed at crosswalks where traffic signal systems (TS systems) with twin parallel line markings are present.

Support

Typical layouts of decorative pedestrian crosswalk pavement markings are the same as the typical layouts for pedestrian crosswalk pavement markings

shown in Figures E1-1 to E1-4, but with artwork contained between the twin parallel line crosswalk markings, as outlined in C7.2.3.

C7.3 RAILWAY CROSSINGS

Typical pavement markings at a railway crossing are illustrated in Figures E3-10, E3-11, E11-12 and E3-13.

Standard

Markings must be placed on all paved approaches to grade crossings where grade crossing signals or automatic gates are located, and at all other grade crossings where the prevailing speed of highway traffic is 60 km/h or greater. Markings must also be placed at crossings where engineering studies indicate a significant potential conflict between vehicles and trains. Where there is more than one lane on an approach, a separate set of markings must be placed in each lane.

No-passing zones must be used on the approaches to all at-grade railway crossings as illustrated in Figure E3-10 and Figure E3-11.

The Stop Lines are perpendicular to the road centreline. The separation between the tracks and the Stop Lines is a minimum of 5 m, measured to the nearest rail. The markings must be white.

Where railway tracks have been abandoned or their use discontinued, all related signs and markings must be removed. Signs indicating “TRACKS OUT OF SERVICE” may be installed until the tracks are removed or covered.

Option

If not required under the specific conditions noted above, pavement markings may be placed on a paved approach to a railway crossing where extra emphasis may be needed. These markings are not sufficient warning by themselves and must always be used in conjunction with signs and other devices.

Reduced size version of various symbols may be used to indicate to cyclists various messages where motorists are not required to see the symbol. These include reduced size Arrows and reduced size railway crossing symbols, as illustrated in Figure C1-4 and Figure C7-1, and as applied in Figure E3-10, Figure E3-11, and Figure E3-12.

Support

Please refer to the *Pedestrian Crossing Control Guide* (TAC, 2018) for additional information.

indicate a significant potential conflict between vehicles and trains. Where there is more than one lane on an approach, a separate set of markings must be placed in each lane.

No-passing zones must be used on the approaches to all at-grade railway crossings as illustrated in Figure E3-10 and Figure E3-11.

The Stop Lines are perpendicular to the road centreline. The separation between the tracks and the Stop Lines is a minimum of 5 m, measured to the nearest rail. The markings must be white.

Where railway tracks have been abandoned or their use discontinued, all related signs and markings must be removed. Signs indicating “TRACKS OUT OF SERVICE” may be installed until the tracks are removed or covered.

Option

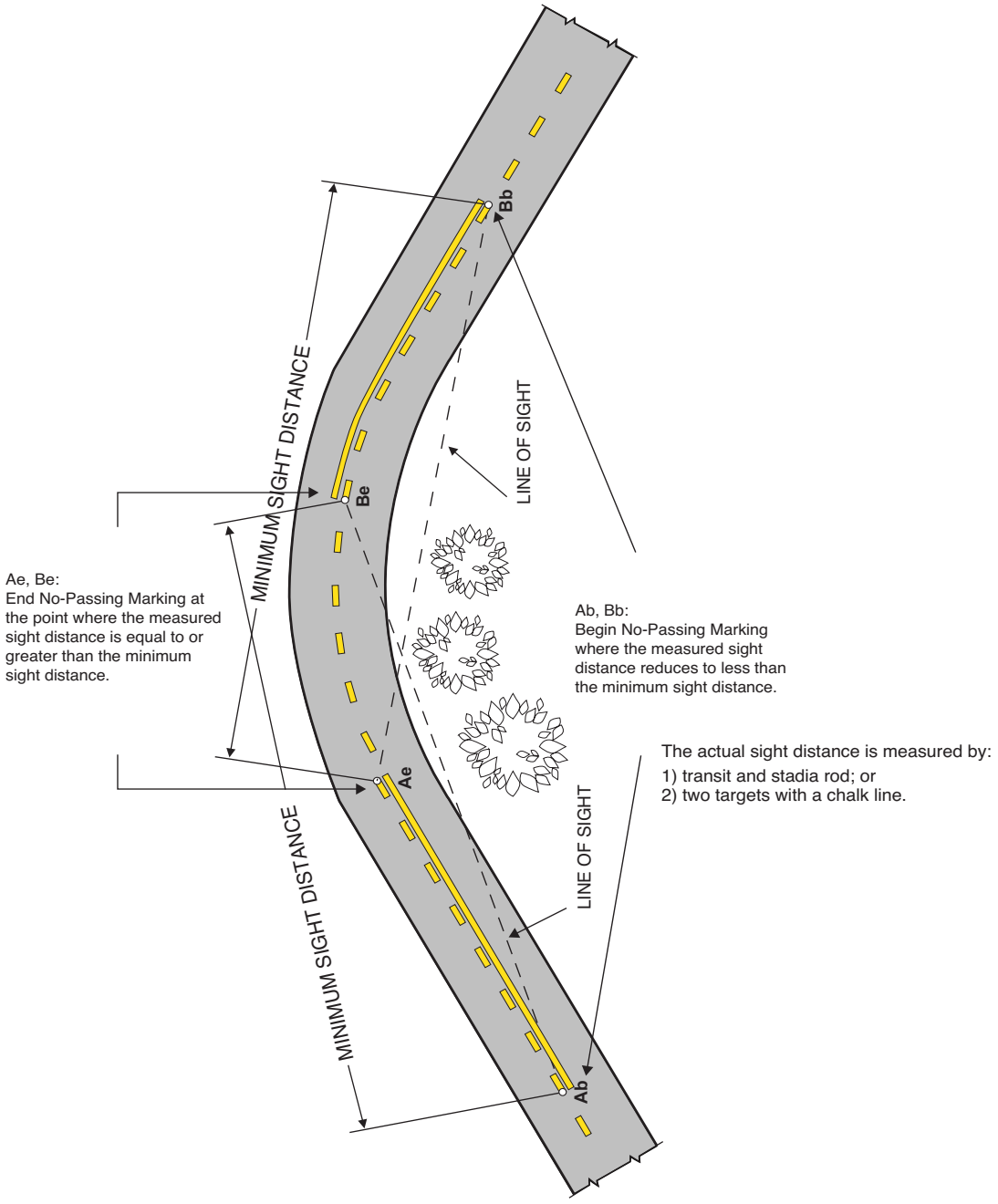
If not required under the specific conditions noted above, pavement markings may be placed on a paved approach to a railway crossing where extra emphasis may be needed. These markings are not sufficient warning by themselves and must always be used in conjunction with signs and other devices.

Reduced size version of various symbols may be used to indicate to cyclists various messages where motorists are not required to see the symbol. These include reduced size Arrows and reduced size railway crossing symbols, as illustrated in Figure C1-4 and Figure C7-1, and as applied in Figure E3-10, Figure E3-11, and Figure E3-12.

Support

Please refer to the *Pedestrian Crossing Control Guide* (TAC, 2018) for additional information.

METHOD OF ESTABLISHING NO-PASSING ZONES ON HORIZONTAL CURVES



NOTE:

- SEE TABLE C2-2 FOR MINIMUM SIGHT DISTANCES

FIGURE C2-2

C2.4.3 Taper Lengths for Pavement Width Transitions

Narrowing or widening of lane widths or dropping/adding a lane(s) are road characteristics that occur frequently. The ability of drivers to make these transitions safely requires appropriate and consistent pavement markings, signing, and taper lengths.

Guidance

Pavement markings are complementary to geometric design, so the practitioner should, if possible, access or understand the roadway geometric design. In curbed areas, transitions are defined by the roadway structures, while there is more flexibility in rural cross-sections, if the shoulders are paved. If information on the road design is not available, section 9.18 of the *Geometric Design Guide for Canadian Roads* (2017) (Table 9.18.1: Parallel Lane and Taper Lengths for Transition Between Undivided Four-Lane Roadway and Two-Lane Roadway and Figure 9.18.2: Transition Between Four-lane Divided and Two-Lane Roadway Merge), provides information on appropriate taper lengths for full lane transitions based on design speed and the desired lateral shift as shown in Table 9.18.1 and Figure 9.18.2.

For partial lane narrowing or widenings, the following formulae define the suggested relationships:

Merging Taper: $L = 0.6\ VW$

Diverging Taper: $L = 0.4\ VW$

where:

L = transition length needed to achieve the lateral shift, expressed in metres (m)

V = design speed (preferred) or 85th-percentile speed, expressed in kilometres per hour (km/h)

W = width of the lateral shift required, for example, to accommodate a left-turn lane and median (if applicable), expressed in metres (m)

D2.4 WORK ZONE NOTIFICATION SIGNS

D2.4.1 Construction Ahead Signs (TC-1, TC-1A)

TC-1
750 mm x 750 mm

TC-1A
750 mm x 750 mm

The Construction Ahead signs (TC-1, TC-1A) are used in the advance warning area to provide advance warning of a major work zone. These signs are generally used on long duration construction projects where road users may encounter various construction activities.

Guidance

On divided roadways, TC-1 and TC-1A signs should be installed on each side of the approaching lanes.

In urban areas, where the speed limit is 60 km/h or less, the TC-1A should not be necessary to supplement the TC-1 signs.

Option

In rural areas, a TC-1A may be added at a distance of 1.0 km in advance of the advance warning area. For high speed roads such as freeways and where long queues extend beyond the typical TC-1A location, additional TC-1A signs may be installed at a distance of 2.0 km or more (as indicated on the sign) from the advance warning area. The distance may be indicated on the sign below the word “CONSTRUCTION” or on a separate tab.

On major crossing roads, the TC-1 sign may be preceded by a TC-1A sign installed 1.0 km in advance of the intersection with the road under construction.

On roads which cross the road under construction, the TC-1 sign may be installed on the approach in advance of the road under construction.

D2.4.2 Road Work Sign (TC-2)

TC-2
750 mm x 750 mm

The Road Work sign (TC-2) indicates that work zone activities including minor maintenance or public utilities operations are in progress on or adjacent to the road, and that workers or equipment may be exposed to the road user.

Standard

A TC-2 sign must be installed in the advance warning area if a TC-1 sign or TC-3 sign is not used. A TC-2 sign must be installed if workers are present and if the road authority indicates that use of a TC-2 sign is conditional on the presence of workers. The TC-2 sign must be taken down when workers are not present.

TC-88
750 mm x 750 mm

TC-88F
750 mm x 750 mm

TC-12
450 mm x 450 mm

TC-12F
450 mm x 450 mm

TC-12S1
450 mm x 300 mm

TC-12S2R
450 mm x 300 mm

TC-12S3
450 mm x 300 mm

TC-12S
450 mm x 300 mm

TC-12SF
450 mm x 300 mm

TC-12A
1200 mm x 1200 mm

TC-12AF
1200 mm x 1200mm

TC-66
750 mm x 750 mm

D2.7.3 Ramp Closed Sign (TC-66/TC-66F)

The Ramp Closed sign (TC-66/TC-66F) is used where a ramp is closed temporarily.

Standard

The TC-66/TC-66F sign must be used at the entrance of the on or off ramp that is closed to all road users.

TEMPORARY CONDITIONS SIGNS PART A EQUIVALENTS

TC-59

TC-60

TC-72

TC-72S

TC-72SF

TC-73

TC-73S

TC-73SF

TC-78

TC-80

TC-81

TC-82

TC-83

TC-87

FIGURE D2-2 (CONT'D)

D2.5.1.1 Road Diversion Sign (TC-13R/TC-13L)

Standard

The Road Diversion sign (TC-13R/TC-13L) must be used to indicate where work closes a section of the normal road, and a short deviation is required which bypasses the activity area and returns to the normal road within a distance of 200 m or less.

The shape of the symbol must be similar to the diversion to be followed. The right (TC-13R) or left (TC-13L) version must be used as appropriate.

TC-13R
750 mm x 750 mm

D2.5.1.2 Lane Diversion Sign (TC-14R/TC-14L)

The Lane Diversion sign (TC-14R/TC-14L) is used to indicate a deviation of 200 m or less in length of two lanes.

Standard

This sign must only be used where two lanes deviate for 200 m or less. The shape of the symbol must be similar to the diversion to be followed. The right (TC-14R) or left (TC-14L) version must be used as appropriate.

Option

This sign may be used in place of the TC-13 sign on a multi-lane road where it is desirable to confirm to road users that no lanes are closed through the diversion.

TC-14R
750 mm x 750 mm

D2.5.1.3 Temporary Diversion Sign (TC-18R/TC-18L)

The Temporary Diversion Sign (TC-18R/TC-18L) is used to indicate a deviation of 200 m or less in length of three (or more) lanes.

Standard

The number of arrows on the TC-18 sign must match the number of lanes on the road. The shape of the symbol must be similar to the diversion to be followed. The right (TC-18R) or left (TC-18L) version must be used as appropriate.

Option

This sign may be used in place of the TC-13 or TC-14 sign on a multi-lane road where it is desirable to confirm to road users that no lanes are closed through the diversion.

TC-18R
750 mm x 750 mm

D2.5.2.3 Temporary Road Realignment Sign (3 lanes) (TC-19R/TC-19L)

TC-19R
750 mm x 750 mm

The Temporary Realignment Sign (TC-19) indicates a realignment of three (or more) lanes from the normal road.

Standard

The number of arrows on the TC-19 sign must reflect the number of lanes being shifted. The shape of the symbol must be similar to the realignment to be followed. The right (TC-19R) or left (TC-19L) version must be used as appropriate.

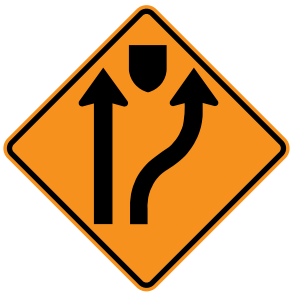
Guidance

The TC-19 signs should be used in advance of the realignment at the beginning of the deviation and, where appropriate, in advance of a realignment back to the normal road at the end of a deviation.

Option

The TC-19 sign may be used in place of the TC-15 or TC-16 sign on a multi-lane road where it is desirable to confirm to road users that no lanes are closed through the replacement.

D2.5.3 Temporary Obstruction Diversion (TC-20R/TC-20L)



TC-20R
750 mm x 750 mm

The obstruction diversion sign (TC-20) is used when there is an obstruction separating two lanes in the same direction.

Guidance

The TC-20 sign should be used when there is an obstruction between two lanes and one lane can travel past the obstruction without deviating from their alignment while the other lane passes around the obstruction.

Option

The WA-36 Object Marker may be used to mark the obstruction to indicate that it can be passed on either side.

D2.10.1.3 Sidewalk Closed Signage (TC-76/TC-76F, TC-77,TC-77F, TC-77AR/TC-77AL/TC-77ARF/TC-77ALF, TC-77BR/TC-77BL/ TC-77BL/TC-77BLF)

Sidewalk Closed Signage (TC-76/TC-76F, TC-77,TC-77F, TC-77AR/TC-77AL/ TC-77ARF/TC-77ALF, TC-77BR/TC-77BL/TC-77BL/TC-77BLF) is used to direct pedestrians in the event a pedestrian facility is temporarily closed. There are four types of signs used to direct pedestrians, depending on the location of the closure and alternative pedestrian facilities.

Standard

The Sidewalk Closed sign (TC-76/TC-76F) must be placed immediately in advance of a closed area, on both approaches to the closed area.

Guidance

The Sidewalk Closed – Use Other Side sign (TC-77/TC-77F) should be installed at the beginning of the restricted sidewalk when a parallel sidewalk exists on the other side of the roadway.

The Sidewalk Closed Ahead – Cross Here sign (TC-77A/TC-77AF) should be used to indicate to pedestrians that sidewalks beyond the sign are closed and to direct them to open crosswalks, sidewalks, or other travel paths.

The Sidewalk Closed – Cross Here sign (TC-77B/TC-77BF) should be positioned in advance of the sidewalk closure at an appropriate crossing location so that pedestrians are directed to an appropriate crossing facility, usually an existing intersection or mid-block crosswalk. The sign should be installed at the last appropriate opportunity to cross at a controlled or appropriate location before the full closure. This sign is not required if the TC-77 is already installed at a safe/protected crossing point.

Option

The TC-76/TC-76F sign may be installed at intersections preceding the closed sidewalk, and elsewhere along the closed sidewalk as needed.

Support

The TC-76 and TC-77 signs are typically mounted on a detectable barricade to encourage compliance and to communicate with pedestrians that the sidewalk is closed. Printed signs are not useful to many pedestrians with visual disabilities. A barrier or barricade detectable by a person with a visual disability is sufficient to indicate that a sidewalk is closed. If the barrier is continuous with detectable channelizing devices for an alternate route, accessible signing might not be necessary. An audible information device is needed when the detectable barricade or barrier for an alternate channelized route is not continuous.

TC-76
300 mm x 600 mm

TC-76F
300 mm x 600 mm

TC-77
300 mm x 600 mm

TC-77F
450 mm x 600 mm

TC-77AR
450 mm x 600 mm

TC-77ARF
450 mm x 600 mm

D3 TEMPORARY CONDITION DEVICES

Division D3 describes the most commonly used devices for road work operations and their application, and is organized as follows:

D3.1 GENERAL CONSIDERATIONS FOR TEMPORARY CONDITION DEVICES

Temporary condition devices are unique devices designed and used specifically for temporary conditions applications in work zones. The devices illustrated and described in Division D3 are those most commonly used for work zone operations across Canada.

Requirements related to design standards and installation are outlined in Sections D2.2 and D2.3, including the use of high intensity retroreflective sheeting on some devices.

D3.2 DELINEATION DEVICES

Delineation devices are used to delineate traffic space through a work zone including diversions, to channelize tapers in advance of closed lanes, and to delineate a separation between road work and the flow of traffic. These devices should be spaced in accordance with the distances shown in the appropriate typical layouts in Division D4. All delineation devices must be crashworthy.

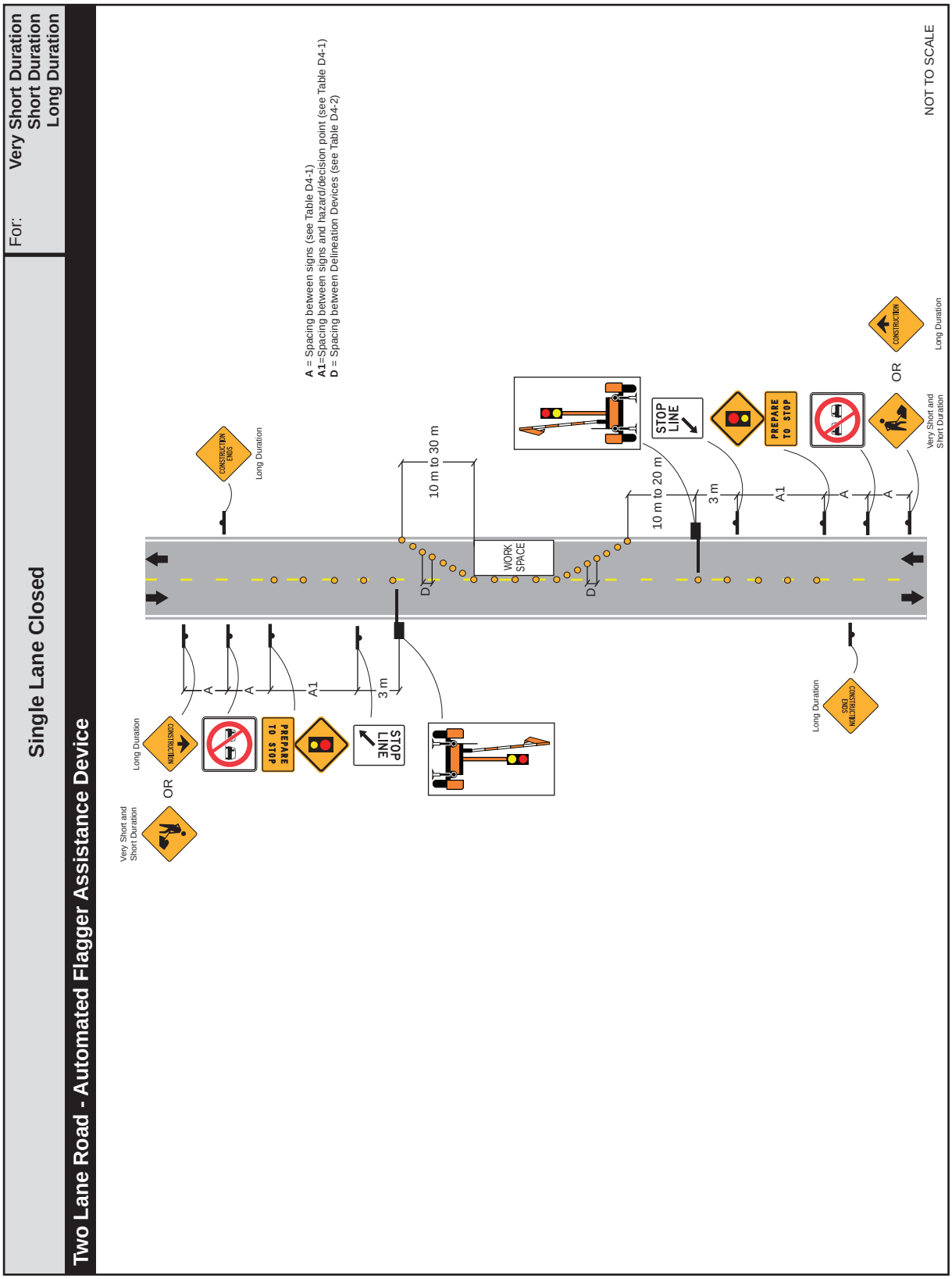

Two Lane Road - Automated Flagger Assistance Device
Single Lane Closed
For:
Very Short Duration
Short Duration
Long Duration
A = Spacing between signs (see Table D4-1)
A1=Spacing between signs and hazard/decision point (see Table D4-1)
D = Spacing between Delineation Devices (see Table D4-2)
NOT TO SCALE
CONSTRUCTION
Long Duration
OR
Very Short and Short Duration
PREPARE TO STOP
STOP LINE
A
A1
3 m
10 m to 30 m
10 m to 20 m
D
WORK SPACE
CONSTRUCTION ENDS

FIGURE D4-22

TABLE D4-4
DESIRABLE WORK ZONE CLEAR ZONE WIDTHS

Speed[1]	Work Zone Clear Zone[2,3]
50 km/h	3 m
60 km/h	4 m
70 km/h	5 m
80 km/h	6 m
90 km/h	7 m
100 km/h	9 m
110 km/h	9 m

[1]85th percentile speed prior to work starting (if a speed study is available) rounded to the nearest 10 km/h or normal posted regulatory speed

[2]Consider clear zones of greater distances in the following circumstances:

- On the outside of horizontal curves or other scenarios where vehicles are more likely to leave the travel lane,
- The lower portions of long downgrades or other significant vertical alignment features, and
- Steep fill slopes (greater than 4:1).

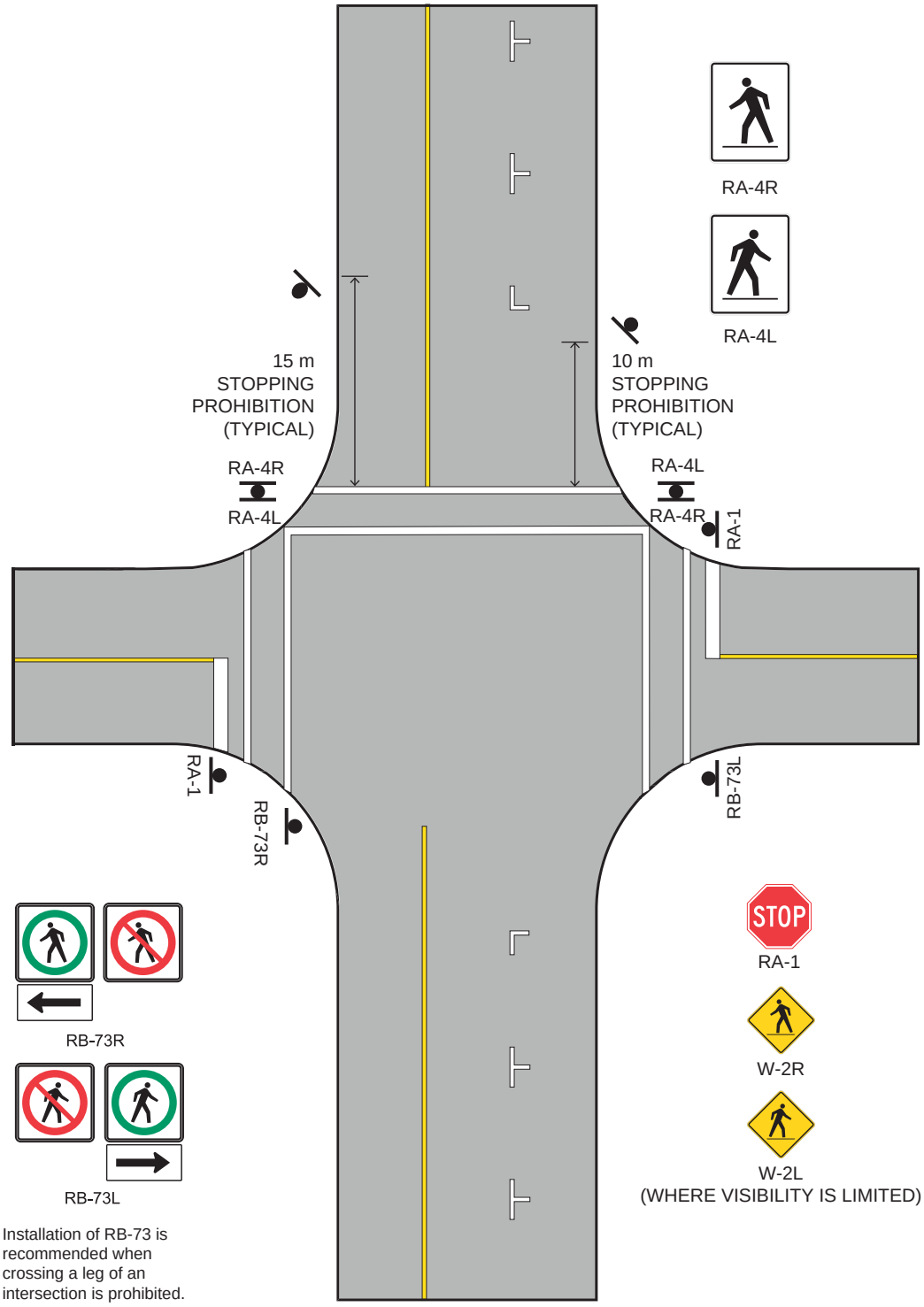
[3]Although the goal is to provide a recoverable area whenever possible, a reduced WZCZ in urban or restricted conditions may be appropriate. In urban or restricted conditions, the roadside environment (e.g., available right-of-way, utilities, built environment) is already in place and there is less flexibility in design. Use engineering judgment to determine if a reduced distance is appropriate or if hazards dictate that the desirable distances are applicable. Examples of hazards may include collision history, excavations, or steep drop-offs.

D4.4.2 Linear Space Restrictions

Situations may be encountered where the recommended values for taper lengths and buffer space cannot be achieved within the available linear space. Urban areas involving closely-spaced intersections are one example.

Under such conditions, taper lengths should only be compromised as a last resort. Where necessary, the longitudinal buffer space may be reduced or eliminated. Additional advance warning and delineation devices should be considered. Reducing or eliminating the longitudinal buffer space should only be undertaken once alternatives, such as relocating the taper and buffer space upstream of the intervening obstruction, have been considered and deemed impractical.

CROSSWALK INSTALLATION AT INTERSECTION

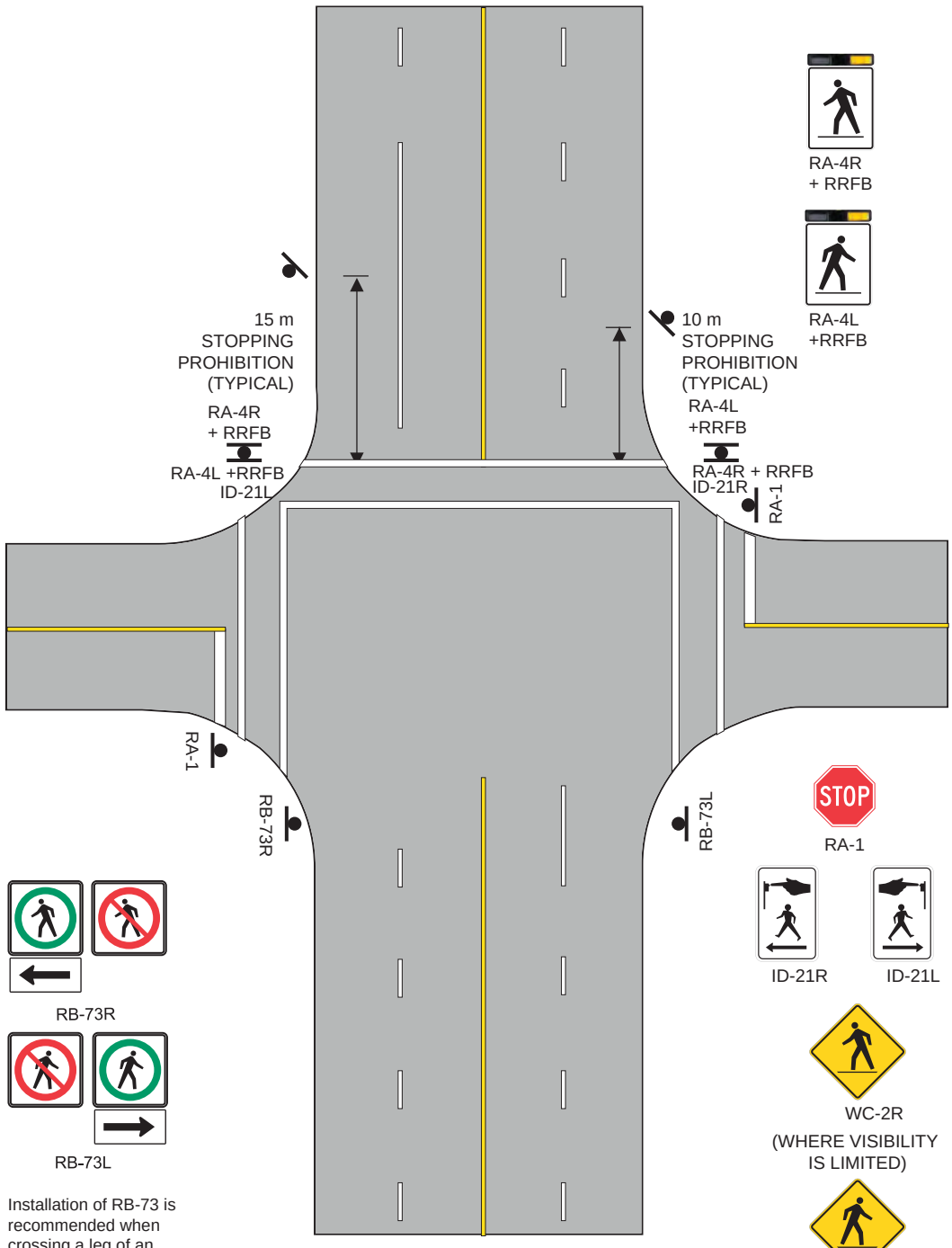


NOTE:

- WC-2 PEDESTRIAN CROSSWALK AHEAD SIGNS MANDATORY WHERE VISIBILITY OF CROSSWALK IS LIMITED, OPTIONAL OTHERWISE. LOCATE IN ACCORDANCE WITH CONDITION B IN TABLE A3-2

FIGURE E1-1

RRFB INSTALLATION AT INTERSECTION

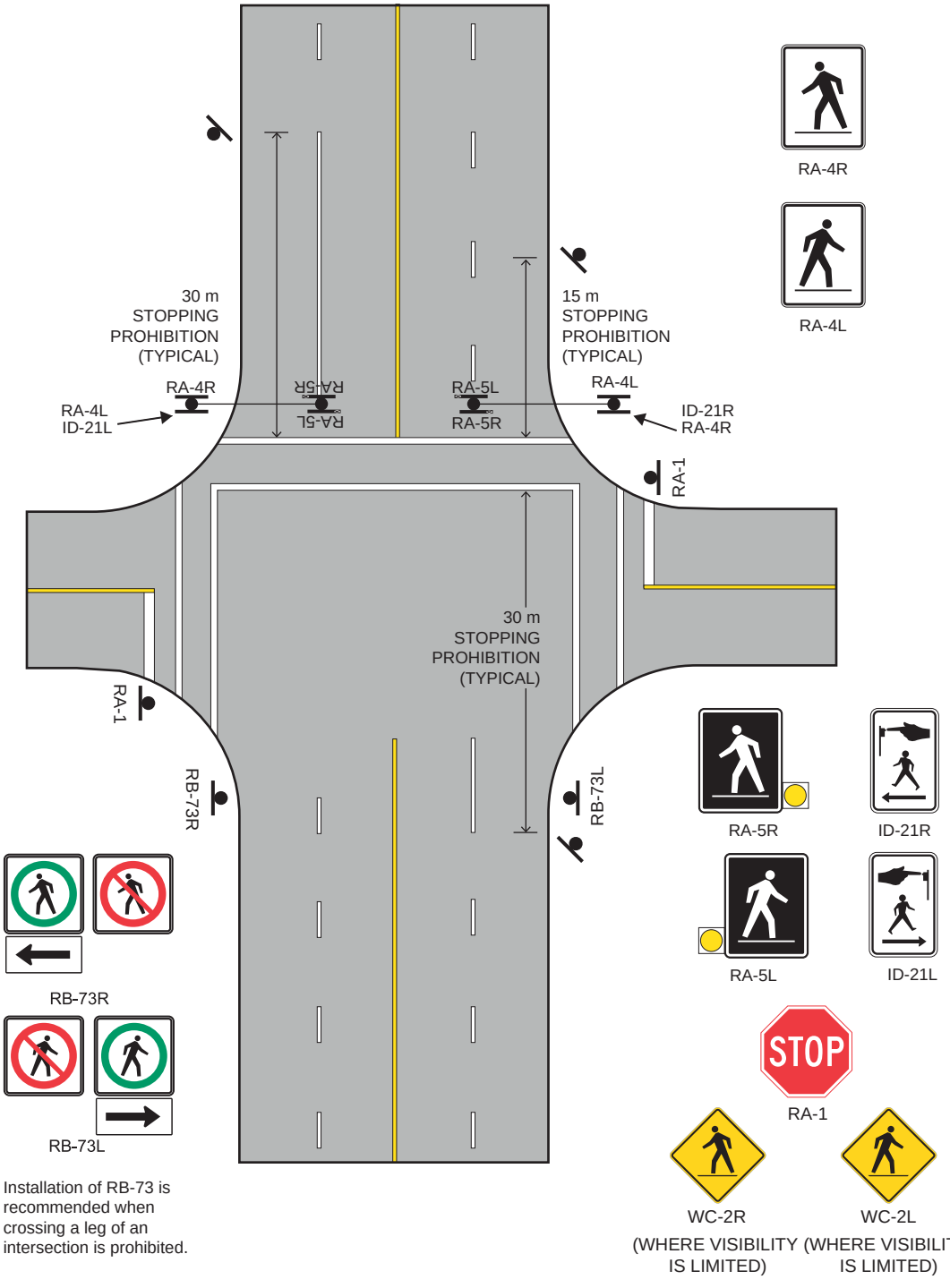


NOTE:

- WC-2 PEDESTRIAN CROSSWALK AHEAD SIGNS MANDATORY WHERE VISIBILITY OF CROSSWALK IS LIMITED, OPTIONAL OTHERWISE. LOCATE IN ACCORDANCE WITH CONDITION B IN TABLE A3-2.

FIGURE E1-2

SPECIAL CROSSWALK INSTALLATION AT INTERSECTION



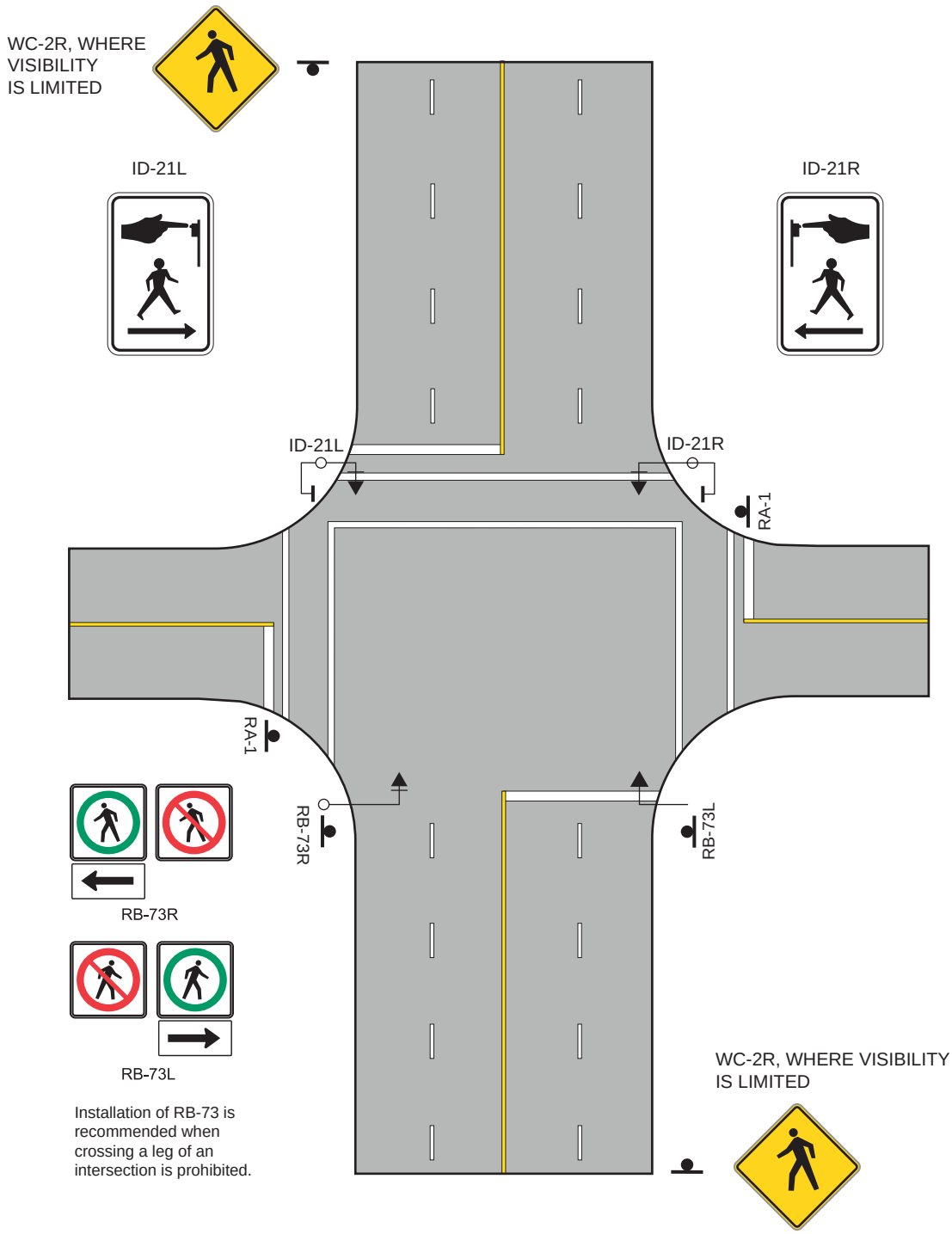
Installation of RB-73 is recommended when crossing a leg of an intersection is prohibited.

NOTE:

- WC-2 PEDESTRIAN CROSSWALK AHEAD SIGNS MANDATORY WHERE VISIBILITY OF CROSSWALK IS LIMITED, OPTIONAL OTHERWISE. LOCATE IN ACCORDANCE WITH CONDITION B IN TABLE A3-2

FIGURE E1-3

PEDESTRIAN SIGNAL INSTALLATION AT INTERSECTION

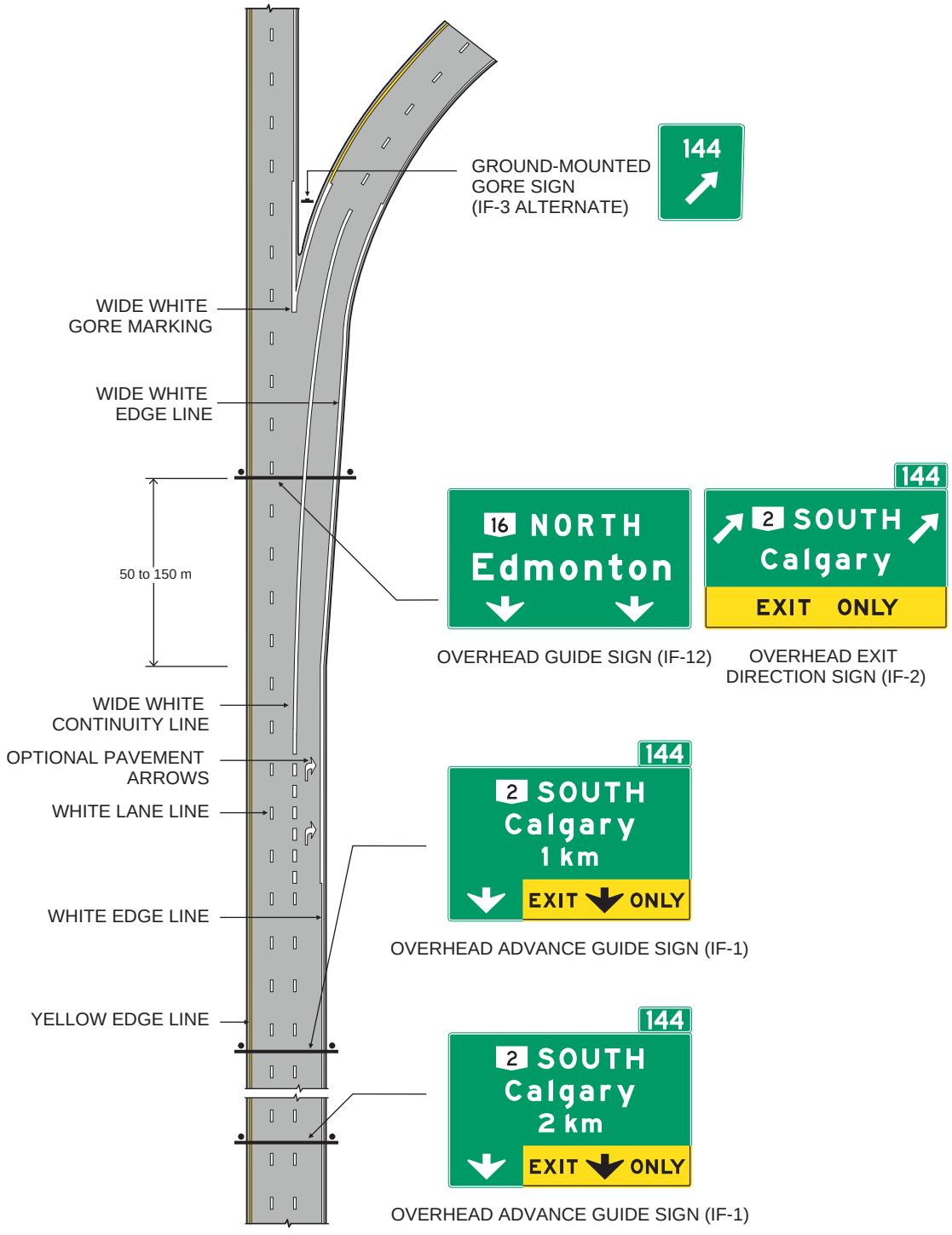


NOTES:

- IF PEDESTRIAN CROSSING DEMANDS JUSTIFY NEED, A CROSSWALK AND PEDESTRIAN SIGNAL MAY BE ADDED ON THE OTHER SIDE OF THE INTERSECTION.
- IF ONLY ONE CROSSWALK IS PAINTED, VEHICLE SIGNAL HEADS FOR BOTH DIRECTIONS MAY OPTIONALLY BE ABOVE CROSSWALK, MOUNTED BACK TO BACK

FIGURE E1-4

TWO-LANE MANDATORY/OPTIONAL EXIT ON RIGHT, OVERHEAD GUIDE SIGNING

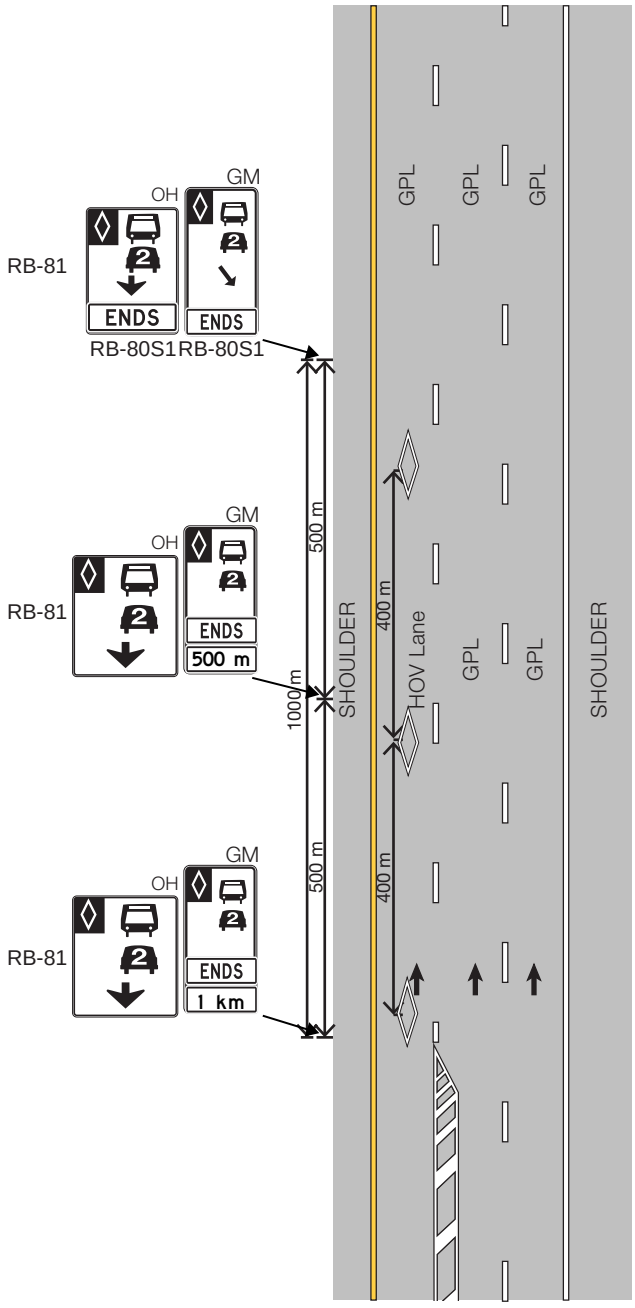


NOTES:

- ESSENTIAL GUIDE SIGNS ARE SHOWN. ADDITIONAL REGULATORY, WARNING AND GUIDE SIGNS MAY BE REQUIRED.
- SEE FIGURES C2-10 TO C2-13 FOR PAVEMENT MARKING DETAILS AT EXITS.

FIGURE E4-7

PAVEMENT MARKINGS AND SIGNS AT END OF A CONTINUOUS ACCESS (NON-BUFFERED) HOV LANE



NOTES:

- GPL = GENERAL PURPOSE LANE
- GM = GROUND-MOUNTED SIGNING
- OH = OVERHEA D MOUNTED SIGNING
- FOR PERMANENT HOV FACILITIES, GROUND-MOUNTED (GM) SIGNS SHOULD BE SUPPLEMENTED BY OVER-HEAD (OH) SIGNS

FIGURE E5-9

Sign #	Sign Name	Section
RB-4	Minimum Speed Sign	A2.3.3
RB-9S	Supplementary Turn Control Tab (Except Bicycles)	A2.4.9
RB-9SF	Supplementary Turn Control Tab (Except Bicycles) (French)	A2.4.9
RB-10	Through Traffic Prohibited Sign	A2.4.1
RB-11 (L/R)	Right (Left) Turn Prohibited Sign	A2.4.2
RB-11S1	Supplementary Turn Control Tab (Except Buses)	A2.4.9
RB-11S1F	Supplementary Turn Control Tab (Except Buses) (French)	A2.4.9
RB-11S2	Time / Day in Effect Tab	A2.4.9
RB-11S2F	Time / Day in Effect Tab (French)	A2.4.9
RB-12 (L/R)	Right (Left) and Straight Through Prohibited Sign	A2.4.3
RB-13	Turn Prohibited Sign	A2.4.4
RB-14 (L/R)	Turn Right (Left) Sign	A2.4.5
RB-15	Mandatory Straight Through Sign	A2.4.6
RB-16	U-Turn Prohibited Sign	A2.4.7
RB-17 (L/R)	Right (Left) Turn On Red Traffic Signal Prohibited Sign	A2.4.8
RB-17T	On Red Tab	A2.4.8
RB-17TF	On Red Tab (French)	A2.4.8
RB-18	Left Turn Signal Sign	A2.4.10
RB-18F	Left Turn Signal Sign (French)	A2.4.10
RB-19S (L/R)	Fire Truck Entrance Signals Tab	A2.4.11
RB-21	One Way Sign	A2.5.1
RB-22	Wrong Way Sign	A2.5.2
RB-22F	Wrong Way Sign (French)	A2.5.2
RB-23	Do Not Enter Sign	A2.5.2
RB-23T	Do Not Enter Tab	A2.5.2
RB-23TF	Do Not Enter Tab (French)	A2.5.2
RB-24	Two Way Traffic Sign	A2.5.3
RB-24T	Two Way Traffic Tab	A2.5.3
RB-24TF	Two Way Traffic Tab (French)	A2.5.3
RB-25 (L/R)	Keep Right/Keep Left Sign	A2.5.4
RB-31	Passing Prohibited Sign	A2.6.1
RB-31T	Do Not Pass Tab	A2.6.1
RB-31TF	Do Not Pass Tab (French)	A2.6.1
RB-32	Passing Permitted Sign	A2.6.2
RB-32T	Passing Permitted Tab	A2.6.2
RB-32TF	Passing Permitted Tab (French)	A2.6.2

Sign #	Sign Name	Section
ID-17	Cyclists Push button Ahead Sign	A4.6.9
ID-18(L/R)	Pedestrian Countdown Signal Information Sign (Left / Right)	A4.6.12
ID-18(L/R)F	Pedestrian Countdown Signal Information Sign (Left/Right) (French)	A4.6.12
ID-20(L/R)	Signalized Intersection Crossing Sign (Left/Right)	A4.6.11
ID-21(L/R)	Pedestrian Pushbutton Sign (Left/Right)	A4.6.10
ID-23	Passing Lane Ahead Sign	A4.6.4
ID-23S	Passing Lane Ahead Tab	A4.6.4
ID-23SF	Passing Lane Ahead Tab (French)	A4.6.4
ID-23S1	For X Km Tab	A4.6.4
ID-23S1F	For X Km Tab (French)	A4.6.4
ID-24	Bicycle Signal Loop Detector Stencil Sign	A4.6.13
ID-24F	Bicycle Signal Loop Detector Stencil Sign (French)	A4.6.13
ID-31	Cul-De-Sac Sign	A4.6.3
ID-31T	Cul-De-Sac Tab	A4.6.3
ID-32	Traffic Calmed Neighbourhood Sign	A4.6.5
ID-32S	Traffic Calmed Neighbourhood Tab	A4.6.5
ID-32SF	Traffic Calmed Neighbourhood Tab (French)	A4.6.5
ID-33	Photo Enforced Sign	A4.6.6
ID-34	Photo Enforced Community Entrance Sign	A4.6.7
ID-34F	Photo Enforced Community Entrance Sign (French)	A4.6.7
ID-40	Railway Emergency Notification Sign	A4.6.15
ID-40F	Railway Emergency Notification Sign (French)	A4.6.15
ID-40B	Railway Emergency Notification Sign (Bilingual)	A4.6.15
IF-1	Advance Guide Sign	A4.2.6.2
IF-2	Exit Direction Sign	A4.2.6.3
IF-3	Ground Mounted Gore Sign	A4.2.6.4
IF-3A	Ground Mounted Exit Gore Sign	A4.2.6.4
IF-3AF	Ground Mounted Exit Gore Sign (French)	A4.2.6.4
IF-3 (ALT)	Ground Mounted Exit Gore Sign (Alternate)	A4.2.6.4
IF-4	Interchange Sequence Sign	A4.2.6.5
IF-5	Diagrammatic Signs	A4.2.6.6
IF-6	Diagrammatic Signs	A4.2.6.6
IF-7	Diagrammatic Signs	A4.2.6.6
IF-8	Next Exit Supplementary Sign	A4.2.7.2
IF-8F	Next Exit Supplementary Sign (French)	A4.2.7.2

Sign Index by Sign Number

Sign #	Sign Name	Section
IA-1	Destination Direction Sign - Vertical 450 mm	A4.3.1
IA-2	Destination Direction Sign - Vertical 600 mm	A4.3.1
IA-3	Destination Direction Sign - Vertical 750 mm	A4.3.1
IA-4	Destination Distance Sign	A4.3.2
IA-5	Fingerboard Sign	A4.3.3
IA-6	Roundabout Advance Diagrammatic Guide Sign	A4.3.4
IA-7	Roundabout Advance Diagrammatic Guide Sign	A4.3.4
IA-8	Roundabout Advance Overhead Guide Sign	A4.3.5
IA-9	Roundabout Exit Guide Sign	A4.3.6
IB-1	Route Marker Sign (Trans-Canada Highway)	A4.4.1
IB-1S	Route Marker Sign (Trans-Canada Highway)	A4.4.1
IB-2	Route Marker Sign (Trans-Canada Highway)	A4.4.1
IB-3	Junction Sign - Abbreviated	A4.4.2
IB-4	Junction Sign	A4.4.2
IB-4F	Junction Sign (French)	A4.4.2
IB-5	Junction Sign - Large	A4.4.2
IB-5F	Junction Sign - Large (French)	A4.4.2
IB-23	Bicycle Route Marker Sign	A4.4.3
IC-1	Fuel Sign	A4.5.4.1
IC-1D	Fuel Diesel Sign	A4.5.4.1
IC-2	Food Sign	A4.5.4.3
IC-3	Trailer Camp Sign	A4.5.5.1
IC-4	Tent Camping Sign	A4.5.5.2
IC-5	Picnic Table Sign	A4.5.5.3
IC-6	Telephone Sign	A4.5.2.4
IC-6S	Telephone Tab - TTY	A4.5.2.4
IC-6SF	Telephone Tab - TTY (French)	A4.5.2.4
IC-7	Accommodation Sign	A4.5.4.4
IC-8	Travel Information Sign	A4.5.4.5
IC-9	Viewpoint Sign	A4.5.5.4
IC-10	Hospital Sign	A4.5.2.1
IC-11	Airport Sign - Large	A4.5.3.1
IC-12	Airport Sign - Small	A4.5.3.1
IC-13	Parking Sign	A4.5.3.2

Sign #	Sign Name	Section
RB-94F	Pathway Organization Sign - (Left/Right) - (French)	A2.9.1.9
RB-96	Engine Brake Prohibited Sign	A2.9.4.9
RB-96F	Engine Brake Prohibited Sign (French)	A2.9.4.9
RB-96S1	Begins Tab	A2.9.4.9
RB-96S1F	Begins Tab (French)	A2.9.4.9
RB-96S2	Tab:Ends	A2.9.4.9
RB-96S2F	Tab:Ends (French)	A2.9.4.9
RB-96S3	Next XX KM Tab	A2.9.4.9
RB-96S3F	Next XX KM Tab (French)	A2.9.4.9
RB-97	Roundabout Lane Designation Sign	A2.7.10
RB-98	Roundabout Lane Designation Sign	A2.7.10
RB-99	Roundabout Lane Designation Sign	A2.7.10
RB-100	Roundabout Lane Designation Sign	A2.7.10
RB-100S	Left Lane Tab	A2.7.10
RB-100SF	Left Lane Tab (French)	A2.7.10
RB-101	Roundabout Lane Designation Sign	A2.7.10
RB-102	Roundabout Lane Designation Sign	A2.7.10
RB-102S	Centre Lane Tab	A2.7.10
RB-102SF	Centre Lane Tab (French)	A2.7.10
RB-103	Roundabout Lane Designation Sign	A2.7.10
RB-104	Roundabout Lane Designation Sign	A2.7.10
RB-104S	Right Lane Tab	A2.7.10
RB-104SF	Right Lane Tab (French)	A2.7.10
RB-105	Roundabout Lane Designation Sign	A2.7.10
RB-106	Parking Prohibited Except While Charging Sign	A2.8.3.7
RB-106F	Parking Prohibited Except While Charging Sign (French)	A2.8.3.7
RB-110	Commercial Loading Zone Sign	A2.8.4.1
RB-110F	Commercial Loading Zone Sign	A2.8.4.1
RB-111	General Public Loading Zone Sign	A2.8.4.2
RB-111F	General Public Loading Zone Sign	A2.8.4.2
RB-112	Passenger Loading Zone Sign	A2.8.4.3
RB-112F	Passenger Loading Zone Sign	A2.8.4.3
RB-113	Parking Prohibited Except For Emergency Parking	A2.8.3.6
RB-113F	Parking Prohibited Except For Emergency Parking	A2.8.3.6
RB-114	Transit Signal Sign	A2.4.12
RB-114F	Transit Signal Sign (French)	A2.4.12

Sign #	Sign Name	Section
RB-115	Transit Priority Signal Sign	A2.4.12
RB-115F	Transit Priority Signal Sign (French)	A2.4.12
RC-4 (L/R)	Stop Line Sign (Left/Right)	A2.10.1
RC-4F (L/R)	Stop Line Sign (Left/Right) (French)	A2.10.1
RC-5	Littering Prohibited Sign	A2.10.2
RC-5S	Maximum Fine Tab	A2.10.2
RC-5T	Do Not Litter Tab	A2.10.2
RC-5TF	Do Not Litter Tab (French)	A2.10.2
RC-6	Seat Belt Sign	A2.10.4
RC-6 (OPT)	Optional Seat Belt Sign	A2.10.4
RC-6F (OPT)	Optional Seat Belt Sign	A2.10.4
RC-6S	Compulsory Tab	A2.10.4
RC-6SF	Compulsory Tab (French)	A2.10.4
RC-8	Keep Off Median Sign	A2.10.3
RC-8F	Keep Off Median Sign (French)	A2.10.3
TB-1	Emergency Detour Sign	D2.7.6.1
TB-1F	Emergency Detour Sign (French)	D2.7.6.1
TC-1	Construction Ahead Sign	D2.4.1
TC-1A	Construction Ahead Sign With Distance	D2.4.1
TC-2	Road Work Sign	D2.4.2
TC-3	Survey Crew Sign	D2.4.3
TC-4	Construction Ends Sign	D2.4.5
TC-4F	Construction Ends Sign (French)	D2.4.5
TC-5(L/R)	Temporary Lane Closed Ahead Sign (Left/Right)	D2.6.1
TC-6(L/R)	Lane Closure Taper Sign (Left/Right)	D2.6.2
TC-7(L/R)	Lane Closure Arrow Sign (Left/Right)	D2.6.3
TC-10	Detour Ahead Sign	D2.7.1
TC-10A	Detour Ahead Sign With Distance	D2.7.1
TC-10AF	Detour Ahead Sign With Distance (French)	D2.7.1
TC-10F	Detour Ahead Sign (French)	D2.7.1
TC-11	Detour Direction Markers (Through)	D2.7.2
TC-11F	Detour Direction Markers (Through) (French)	D2.7.2
TC-11R1	Detour Direction Markers (Right)	D2.7.2
TC-11R1F	Detour Direction Markers (Right) (French)	D2.7.2
TC-11L1	Detour Direction Markers (Left)	D2.7.2
TC-11L1F	Detour Direction Markers (Left) (French)	D2.7.2

Sign #	Sign Name	Section
TC-11R2	Detour Direction Markers (Right)	D2.7.2
TC-11R2F	Detour Direction Markers (Right) (French)	D2.7.2
TC-11L2	Detour Direction Markers (Left)	D2.7.2
TC-11L2F	Detour Direction Markers (Left) (French)	D2.7.2
TC-12	Detour Route Markers	D2.7.2
TC-12F	Detour Route Markers (French)	D2.7.2
TC-12A	Detour Route Markers	D2.7.2
TC-12AF	Detour Route Markers (French)	D2.7.2
TC-12S	Detour Route Markers Tab - Ends	D2.7.2
TC-12SF	Detour Route Markers Tab - Ends (French)	D2.7.2
TC-12S1	Detour Route Markers Tab	D2.7.2
TC-12S2	Detour Route Markers Tab	D2.7.2
TC-12S3	Detour Route Markers Tab	D2.7.2
TC-13(L/R)	Road Diversion Sign (Left/Right)	D2.5.1.1
TC-14(L/R)	Lane Diversion Sign (Left/Right)	D2.5.1.2
TC-15(L/R)	Road Realignment Sign (Left/Right)	D2.5.2.1
TC-16(L/R)	Lane Realignment Sign (Left/Right)	D2.5.2.2
TC-17S	Yield To Oncoming Traffic Combination Sign	D2.8.1
TC-17SF	Yield To Oncoming Traffic Combination Sign (French)	D2.8.1
TC-18(L/R)	Temporary Diversion Sign	D2.5.1.3
TC-19(L/R)	Temporary Road Realignment Sign - 3 lanes	D2.5.2.3
TC-20(L/R)	Temporary Obstruction Diversion Sign	D2.5.3
TC-21	Traffic Control Person Ahead Sign	D2.4.4
TC-22S	Temporary Advisory Speed Tab	D2.11
TC-23	Temporary Maximum Speed Sign	D2.11
TC-24	Temporary Two-Way Traffic Ahead Sign	D2.11
TC-25(L/R)	Left/Right Temporary Sharp Turn Sign	D2.11
TC-26(L/R)	Left/Right Temporary Turn Sign	D2.11
TC-27(L/R)	Left/Right Temporary Curve Sign	D2.11
TC-28(L/R)	Left/Right Temporary Reverse Turn Sign	D2.11
TC-29(L/R)	Left/Right Temporary Reverse Curve Sign	D2.11
TC-30	Temporary Checkerboard Signs	D2.11
TC-30(L/R)	Left/Right Temporary Checkerboard Signs	D2.11
TC-31	Temporary Chevron Alignment Sign	D2.11
TC-32	Object Marker	D2.11
TC-33(L/R)	Left/Right Temporary Winding Road Sign	D2.11

Sign #	Sign Name	Section
TC-34(L/R)	Left/Right Temporary Road Narrows Sign	D2.11
TC-35	Temporary Narrow Structure Sign	D2.11
TC-36S	Temporary Distance Advisory Tab - Next	D2.11
TC-36SF	Temporary Distance Advisory Tab - Next (French)	D2.11
TC-37S	Temporary Distance Advisory Tab	D2.11
TC-38S	Temporary Distance Advisory Tab	D2.11
TC-39	Temporary Hill Sign	D2.11
TC-39A	Temporary Hill Sign	D2.11
TC-40	Temporary Concealed Road Sign	D2.11
TC-41(L/R)	Temporary Concealed Road Sign (Left/Right)	D2.11
TC-42(L/R)	Temporary Concealed Road Sign (Left/Right)	D2.11
TC-43	Temporary T Intersection Sign	D2.11
TC-44	Temporary Y Intersection Sign	D2.11
TC-45(L/R)	Temporary Merge Sign (Left/Right)	D2.11
TC-46(L/R)	Temporary Added Lane Sign (Left/Right)	D2.11
TC-47	Grooved Pavement Sign	D2.9.1
TC-48	Soft Shoulder Sign	D2.9.2
TC-48F	Soft Shoulder Sign (French)	D2.9.2
TC-49	Pavement Drop Off Sign	D2.9.3
TC-50	Temporary Pavement Ends Sign	D2.11
TC-51	Temporary Bump Sign	D2.11
TC-52	Temporary Low Clearance Ahead Sign	D2.11
TC-53	Temporary Low Clearance Sign	D2.11
TC-54(L/R)	Temporary Truck Entrance Sign (Left/Right)	D2.11
TC-55	Temporary Slippery When Wet Sign	D2.11
TC-56	Temporary Bridge Ices Sign	D2.11
TC-57	Temporary Fallen Rock Sign	D2.11
TC-58	Temporary Divided Highway Begins Sign	D2.11
TC-59	Temporary Divided Highway Ends Sign	D2.11
TC-60	Temporary Divided Highway Ahead Sign	D2.11
TC-66	Ramp Closed Sign	D2.7.3
TC-66F	Ramp Closed Sign (French)	D2.7.3
TC-67	Closed Sign	D2.7.4
TC-67F	Closed Sign (French)	D2.7.4
TC-68	Bicycle Lane Closed Sign	D2.10.2.1
TC-68F	Bicycle Lane Closed Sign (French)	D2.10.2.1

Sign #	Sign Name	Section
TC-69	Temporary Ramp/ Exit Closed Ahead	D2.7.5
TC-69F	Temporary Ramp/ Exit Closed Ahead (French)	D2.7.5
TC-70	Bicycle Detour Markers (Through)	D2.10.2.2
TC-70F	Bicycle Detour Markers (Through) (French)	D2.10.2.2
TC-70R1	Bicycle Detour Markers (Right)	D2.10.2.2
TC-70R1F	Bicycle Detour Markers (Right) (French)	D2.10.2.2
TC-70L1	Bicycle Detour Markers (Left)	D2.10.2.2
TC-70L1F	Bicycle Detour Markers (Left) (French)	D2.10.2.2
TC-70R2	Bicycle Detour Markers (Right)	D2.10.2.2
TC-70R2F	Bicycle Detour Markers (Right) (French)	D2.10.2.2
TC-70L2	Bicycle Detour Markers (Left)	D2.10.2.2
TC-70L2F	Bicycle Detour Markers (Left) (French)	D2.10.2.2
TC-71	Bicycle Detour Markers - Detour Ends	D2.10.2.2
TC-71F	Bicycle Detour Markers - Detour Ends (French)	D2.10.2.2
TC-72	Shared Use Lane Single File Sign	D2.11
TC-72S	Shared Use Lane Single File Sign	D2.11
TC-72SF	Shared Use Lane Single File Sign (French)	D2.11
TC-73	Share the Road Sign	D2.11
TC-73S	Share the Road Sign	D2.11
TC-73SF	Share the Road Sign (French)	D2.11
TC-74	Temporary Pedestrian Detour Sign (Through)	D2.10.1.1
TC-74F	Temporary Pedestrian Detour Sign (Through) (French)	D2.10.1.1
TC-74R1	Temporary Pedestrian Detour Sign (Right)	D2.10.1.1
TC-74R1F	Temporary Pedestrian Detour Sign (Right) (French)	D2.10.1.1
TC-74L1	Temporary Pedestrian Detour Sign (Left)	D2.10.1.1
TC-74L1F	Temporary Pedestrian Detour Sign (Left) (French)	D2.10.1.1
TC-74R2	Temporary Pedestrian Detour Sign (Right)	D2.10.1.1
TC-74R2F	Temporary Pedestrian Detour Sign (Right) (French)	D2.10.1.1
TC-74L2	Temporary Pedestrian Detour Sign (Left)	D2.10.1.1
TC-74L2F	Temporary Pedestrian Detour Sign (Left) (French)	D2.10.1.1
TC-75	Temporary Pedestrian/ Bicycle Detour Sign (Through)	D2.10.1.2
TC-75F	Temporary Pedestrian/ Bicycle Detour Sign (Through) (French)	D2.10.1.2
TC-75R1	Temporary Pedestrian/ Bicycle Detour Sign (Right)	D2.10.1.2
TC-75R1F	Temporary Pedestrian/ Bicycle Detour Sign (Right) (French)	D2.10.1.2
TC-75L1	Temporary Pedestrian/ Bicycle Detour Sign (Left)	D2.10.1.2
TC-75L1F	Temporary Pedestrian/ Bicycle Detour Sign (Left) (French)	D2.10.1.2

Sign #	Sign Name	Section
TC-75R2	Temporary Pedestrian/ Bicycle Detour Sign (Right)	D2.10.1.2
TC-75R2F	Temporary Pedestrian/ Bicycle Detour Sign (Right) (French)	D2.10.1.2
TC-75L2	Temporary Pedestrian/ Bicycle Detour Sign (Left)	D2.10.1.2
TC-75L2F	Temporary Pedestrian/ Bicycle Detour Sign (Left) (French)	D2.10.1.2
TC-76	Sidewalk Closed Sign	D2.10.1.3
TC-76F	Sidewalk Closed Sign (French)	D2.10.1.3
TC-77	Sidewalk Closed Sign - Use Other Side	D2.10.1.3
TC-77F	Sidewalk Closed Sign - Use Other Side (French)	D2.10.1.3
TC-77A(L/R)	Sidewalk Closed Sign - Cross Here	D2.10.1.3
TC-77AF(L/R)	Sidewalk Closed Sign - Cross Here (French)	D2.10.1.3
TC-77B(L/R)	Sidewalk Closed Sign - Cross Here	D2.10.1.3
TC-77BF(L/R)	Sidewalk Closed Sign - Cross Here (French)	D2.10.1.3
TC-78	Pedestrian Crossing Sign	D2.11
TC-80	Stop Ahead Sign	D2.11
TC-81	Yield Ahead Sign	D2.11
TC-82	Signals Ahead Sign	D2.11
TC-83	Maximum Speed Ahead Sign	D2.11
TC-85	Temporary Remote Control Device Ahead	D2.8.2
TC-85S	Prepare to Stop Tab	D2.8.2
TC-85SF	Prepare to Stop Tab (French)	D2.8.2
TC-87	Bump Ahead Sign	D2.11
WA-1(L/R)	Single Turn Sign (Left/Right)	A3.2.1
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Detour Route Markers (French)	TC-12F	D2.7.2
Detour Route Markers (French)	TC-12AF	D2.7.2
Detour Route Markers Tab	TC-12S1	D2.7.2
Detour Route Markers Tab	TC-12S2(L/R)	D2.7.2
Detour Route Markers Tab	TC-12S3(L/R)	D2.7.2
Detour Route Markers Tab - Ends	TC-12S	D2.7.2
Detour Route Markers Tab - Ends (French)	TC-12SF	D2.7.2
Diagrammatic Signs	IF-5	A4.2.6.6
Diagrammatic Signs	IF-6	A4.2.6.6
Diagrammatic Signs	IF-7	A4.2.6.6
Directional Arrow Tab - Straight	IS-7	A4.4.4.1
Directional Arrow Tab (Left/Right)	IS-8(L/R)	A4.4.4.1
Directional Arrow Tab (Left/Right)	IS-9(L/R)	A4.4.4.1
Dismount And Walk Sign	RB-79	A2.9.2.7
Dismount And Walk Tab	RB-79T	A2.9.2.7
Dismount And Walk Tab (French)	RB-79TF	A2.9.2.7

Sign Name	Sign #	Section
Distance And Arrow Tab (Left/Right)	IC-18S(L/R)	A4.5.1.4
Distance Markers	IF-10	A4.2.7.4
Distance Tab	WA-30S	A3.3.4
Distance Tab	WA-29S	A3.4.8
Divided Highway Ahead Sign	WA-34	A3.5.3
Divided Highway Ahead Tab	WA-34T	A3.5.3
Divided Highway Ahead Tab (French)	WA-34TF	A3.5.3
Divided Highway Begins Sign	WA-31	A3.5.1
Divided Highway Begins Tab	WA-31T	A3.5.1
Divided Highway Begins Tab (French)	WA-31TF	A3.5.1
Divided Highway Ends Sign	WA-32	A3.5.2
Divided Highway Ends Tab	WA-32T	A3.5.2
Divided Highway Ends Tab (French)	WA-32TF	A3.5.2
Do Not Enter Sign	RB-23	A2.5.2
Do Not Enter Tab	RB-23T	A2.5.2
Do Not Enter Tab (French)	RB-23TF	A2.5.2
Do Not Litter Tab	RC-5T	A2.10.2
Do Not Litter Tab (French)	RC-5TF	A2.10.2
Do Not Pass Bicycles Tab	RB-33S1	A2.6.1
Do Not Pass Bicycles Tab (French)	RB-33S1F	A2.6.1
Do Not Pass Tab	RB-31T	A2.6.1
Do Not Pass Tab	WC-26S	A3.8.3.5
Do Not Pass Tab (French)	RB-31TF	A2.6.1
Do Not Pass Tab (French)	WC-26SF	A3.8.3.5
Do Not Stop On Tracks Sign	RB-59	A2.9.5.2
Double Arrow Sign	WA-17	A3.2.8
Electric Vehicle Charging Sign	IC-30	A4.5.4.2
Electric Vehicle Charging Sign (French)	IC-30F	A4.5.4.2
Emergency Detour Sign	TB-1	D2.7.6.1
Emergency Detour Sign (French)	TB-1F	D2.7.6.1
End Of Route Tab	IS-15	A4.4.4.4
End Of Route Tab (French)	IS-15F	A4.4.4.4
Ends Tab	RB-33S2	A2.6.1
Ends Tab	RB-80S2	A2.9.6
Ends Tab	WC-3S1	A3.8.1.2
Ends Tab (French)	RB-33S2F	A2.6.1

Sign Name	Sign #	Section
Ends Tab (French)	RB-80S2F	A2.9.6
Engine Brake Prohibited Sign	RB-96	A2.9.4.9
Engine Brake Prohibited Sign (French)	RB-96F	A2.9.4.9
Equestrian Sign (Horse with Rider)	WC-21	A3.7.8
Equestrian Sign (Horse-Drawn Vehicle)	WC-22	A3.7.8
Exit Direction Sign	IF-2	A4.2.6.3
Exit Only Panels	Panel 22-1	A4.2.6.8
Exit Only Panels	Panel 22-2	A4.2.6.8
Exit Only Panels	Panel 22-3	A4.2.6.8
Exit Only Panels	Panel 22-4	A4.2.6.8
Exit Only Panels	Panel 22-5	A4.2.6.8
Exit Only Panels	Panel 22-6	A4.2.6.8
Exit Only Panels (French)	Panel 22-1F	A4.2.6.8
Exit Only Panels (French)	Panel 22-2F	A4.2.6.8
Exit Only Panels (French)	Panel 22-3F	A4.2.6.8
Exit Only Panels (French)	Panel 22-4F	A4.2.6.8
Exit Only Panels (French)	Panel 22-5F	A4.2.6.8
Exit Only Panels (French)	Panel 22-6F	A4.2.6.8
Fallen Rock Sign	WC-6	A3.7.5
Farm Traffic Tab	WC-28T	A3.8.4.2
Farm Traffic Tab	WC-28TF	A3.8.4.2
Farm Vehicle Sign	WC-28	A3.8.4.2
Ferry Sign	IC-17	A4.5.3.3
Fin Tab	WC-1S1	A3.8.1.1
Fin Tab	WC-1S1F	A3.8.1.1
Fin Tab	WC-3S1F	A3.8.1.2
Fingerboard Sign	IA-5	A4.3.3
Fire Truck Entrance Sign (Left/Right)	WC-17(L/R)	A3.8.3.4
Fire Truck Entrance Signals Tab (Left/Right)	RB-19S(L/R)	A2.4.11
Fire Truck Entrance Tab	WC-17T	A3.8.3.4
Fire Truck Entrance Tab (French)	WC-17TF	A3.8.3.4
Food Sign	IC-2	A4.5.4.3
For X Km Tab	ID-23S1	A4.6.4
For X Km Tab (French)	ID-23S1F	A4.6.4
Fuel Diesel Sign	IC-1D	A4.5.4.1
Fuel Sign	IC-1	A4.5.4.1

Sign Name	Sign #	Section
General Public Loading Zone Sign	RB-111	A2.8.4.2
General Public Loading Zone Sign	RB-111F	A2.8.4.2
Grooved Pavement Sign	TC-47	D2.9.1
Ground Mounted Exit Gore Sign	IF-3A	A4.2.6.4
Ground Mounted Exit Gore Sign (French)	IF-3AF	A4.2.6.4
Ground Mounted Exit Gore Sign (Alternate)	IF-3 (ALT)	A4.2.6.4
Ground Mounted Gore Sign	IF-3	A4.2.6.4
Hairpin Curve Sign (Left/Right)	WA-45(L/R)	A3.2.3
Hill Sign	WA-21	A3.4.1
Hill Sign with Grade	WA-21A	A3.4.1
Hill Sign For Bicycles	WA-41	A3.8.2.10
Hospital Sign	IC-10	A4.5.2.1
Hours Of Operation Tab	IC-22S1	A4.5.2.2
Hours Of Operation Tab	IC-22S2	A4.5.2.2
Information Sign At Roundabout	IC-23	A4.5.5.9
In-Line Skating Prohibited Sign	RB-84	A2.9.1.2
Inspection Tab	RB-76T	A2.9.4.11
Inspection Tab (French)	RB-76TF	A2.9.4.11
In-Street School Crosswalk Sign	RA-8	A2.9.1.6
In-Street School Crosswalk Sign (French)	RA-8F	A2.9.1.6
Interchange Sequence Sign	IF-4	A4.2.6.5
Junction Sign	IB-4	A4.4.2
Junction Sign - Abbreviated	IB-3	A4.4.2
Junction Sign - Large	IB-5	A4.4.2
Junction Sign - Large (French)	IB-5F	A4.4.2
Junction Sign (French)	IB-4F	A4.4.2
Keep Off Median Sign	RC-8	A2.10.3
Keep Off Median Sign (French)	RC-8F	A2.10.3
Keep Right Except To Pass Sign	RB-34	A2.6.3
Keep Right Except To Pass Sign (French)	RB-34F	A2.6.3
Keep Right/Keep Left Sign	RB-25 (L/R)	A2.5.4
KM/H Tab	RB-1S	A2.3.1
Lake Sign	ID-3	A4.6.2
Lane Closure Arrow Sign (Left/Right)	TC-7(L/R)	D2.6.3
Lane Closure Taper Sign (Left/Right)	TC-6(L/R)	D2.6.2
Lane Diversion Sign (Left/Right)	TC-14(L/R)	D2.5.1.2

Sign Name	Sign #	Section
Lane Ends Sign (Left/Right)	WA-33(L/R)	A3.4.7
Lane Realignment Sign (Left/Right)	TC-16(L/R)	D2.5.2.2
Lane Use Restriction Sign	RB-68	A2.9.4.8
Left Lane Tab	RB-100S	A2.7.10
Left Lane Tab (French)	RB-100SF	A2.7.10
Left Lane Ends Tab	WA-33(LT)	A3.4.7
Left Lane Ends Tab (French)	WA-33(LTF)	A3.4.7
Left Turn Signal Sign	RB-18	A2.4.10
Left Turn Signal Sign (French)	RB-18F	A2.4.10
Left/Right Temporary Checkerboard Signs	TC-30(L/R)	D2.11
Left/Right Temporary Curve Sign	TC-27(L/R)	D2.11
Left/Right Temporary Reverse Curve Sign	TC-29(L/R)	D2.11
Left/Right Temporary Reverse Turn Sign	TC-28(L/R)	D2.11
Left/Right Temporary Road Narrows Sign	TC-34(L/R)	D2.11
Left/Right Temporary Sharp Turn Sign	TC-25(L/R)	D2.11
Left/Right Temporary Turn Sign	TC-26(L/R)	D2.11
Left/Right Temporary Winding Road Sign	TC-33(L/R)	D2.11
Limited Visibility Tab	WA-42S	A3.4.2
Limited Visibility Tab (French)	WA-42SF	A3.4.2
Littering Prohibited Sign	RC-5	A2.10.2
Load Restriction Sign	RB-82	A2.9.4.6
Low Clearance Ahead Sign	WA-26	A3.4.9
Low Clearance Sign (Immediate Overhead)	WA-27	A3.4.9
Low Ground Clearance at Railway Crossing Sign	WA-52	A3.8.5.2
Mandatory Straight Through Sign	RB-15	A2.4.6
Maximum Fine Tab	RC-5S	A2.10.2
Maximum Speed Ahead Sign	WB-9	A3.6.4
Maximum Speed Ahead Sign	TC-83	D2.11
Maximum Speed Sign	RB-1	A2.3.1
Maximum Tonnes Sign	RB-74	A2.9.4.5
Merge Sign (Left/Right)	WA-16(L/R)	A3.3.8
Merge Tab	WA-16T	A3.3.8
Merge Tab (French)	WA-16TF	A3.3.8
Minimum Speed Sign	RB-4	A2.3.3
Moose Crossing Sign	WC-14	A3.7.6
Motorcycles Prohibited Sign	RB-85	A2.9.7.1

Sign Name	Sign #	Section
Multi-Use Trail Crossing Sign	WC-47(L/R)	A3.8.2.6
Museum Sign	IC-20	A4.5.5.6
Narrow Bridge Tab	WA-24T1	A3.4.6
Narrow Bridge Tab (French)	WA-24T1F	A3.4.6
Narrow Passage Tab	WA-24T2	A3.4.6
Narrow Passage Tab (French)	WA-24T2F	A3.4.6
Narrow Structure Sign	WA-24	A3.4.6
Neighbourhood Speed Hump Sign	WA-50	A3.4.4
New Tab	WB-12T	A3.3.4
New Tab (French)	WB-12TF	A3.3.4
Next () Exits Area Sign	IF-9	A4.2.7.3
Next () Exits Area Sign (French)	IF-9F	A4.2.7.3
Next Exit Supplementary Sign	IF-8	A4.2.7.2
Next Exit Supplementary Sign (French)	IF-8F	A4.2.7.2
Next XX KM Tab	RB-96S3	A2.9.4.9
Next XX KM Tab (French)	RB-96S3F	A2.9.4.9
Night Speed Sign	RB-3	A2.3.2
Night Speed Sign (French)	RB-3F	A2.3.2
Number of Tracks Tab	RA-6S	A2.9.5.1
Object Marker	TC-32	D2.11
Object Marker Sign	WA-36	A3.2.7
Object Marker Sign (Left/Right)	WA-36(L/R)	A3.2.7
On Red Tab	RB-17T	A2.4.8
On Red Tab (French)	RB-17TF	A2.4.8
One Lane Tab (French)	WA-24SF	A3.4.6
One Way Sign	RB-21	A2.5.1
Open Tab	IC-22S3	A4.5.2.2
Open Tab	RB-75S3	A2.9.4.10
Open Tab (French)	IC-22S3F	A4.5.2.2
Open Tab (French)	RB-75S3F	A2.9.4.10
Opening Bridge Sign	WC-11	A3.7.4
Opening Bridge Tab	WC-11T	A3.7.4
Opening Bridge Tab (French)	WC-11TF	A3.7.4
Optional Seat Belt Sign	RC-6 (OPT)	A2.10.4
Optional Seat Belt Sign	RC-6F (OPT)	A2.10.4
Overhead Guide Sign	IF-12	A4.2.6.7

Sign Name	Sign #	Section
Parking Limit Control Sign	RB-53	A2.8.3.3
Parking Limit Control Sign (French)	RB-53F	A2.8.3.3
Parking Prohibited Except Buses Sign	RB-60	A2.8.3.4
Parking Prohibited Except For Emergency Parking	RB-113	A2.8.3.6
Parking Prohibited Except For Emergency Parking	RB-113F	A2.8.3.6
Parking Prohibited Except For Persons With Disability Sign	RB-71	A2.8.3.5
Parking Prohibited Except While Charging Sign	RB-106	A2.8.3.7
Parking Prohibited Except While Charging Sign (French)	RB-106F	A2.8.3.7
Parking Prohibited Part-Time Sign	RB-52	A2.8.3.2
Parking Prohibited Part-Time Sign (French)	RB-52F	A2.8.3.2
Parking Prohibited Sign	RB-51	A2.8.3.1
Parking Sign	IC-13	A4.5.3.2
Passenger Loading Zone Sign	RB-112	A2.8.4.3
Passenger Loading Zone Sign	RB-112F	A2.8.4.3
Passing Lane Ahead Sign	ID-23	A4.6.4
Passing Lane Ahead Tab	ID-23S	A4.6.4
Passing Lane Ahead Tab (French)	ID-23SF	A4.6.4
Passing Permitted Sign	RB-32	A2.6.2
Passing Permitted Tab	RB-32T	A2.6.2
Passing Permitted Tab (French)	RB-32TF	A2.6.2
Passing Prohibited Sign	RB-31	A2.6.1
Passing Prohibited Sign	RB-33	A2.6.1
Pathway Organization Sign - (Left/Right)	RB-94(L/R)	A2.9.1.9
Pathway Organization Sign - (Left/Right) - (French)	RB-94F(L/R)	A2.9.1.9
Pavement Drop Off Sign	TC-49	D2.9.3
Pavement Ends Sign	WA-25	A3.4.8
Pavement Ends Tab	WA-25T	A3.4.8
Pavement Ends Tab (French)	WA-25TF	A3.4.8
Pedestrian And Bicycle Crossing Ahead Sign	WC-46(L/R)	A3.8.2.5
Pedestrians and Motorcycles Prohibited Sign	RB-86	A2.9.7.2
Pedestrian Countdown Signal Information Sign (Left / Right)	ID-18(L/R)	A4.6.12
Pedestrian Countdown Signal Information Sign (Left/Right) (French)	ID-18(L/R)F	A4.6.12
Pedestrian Crossing Sign	TC-78	D2.11
Pedestrian Crosswalk Ahead Sign (Left/Right)	WC-2(L/R)	A3.8.1.3
Pedestrian Crosswalk Sign (Left/Right)	RA-4 (L/R)	A2.9.1.3
Pedestrian Pushbutton Sign (Left/Right)	ID-21(L/R)	A4.6.10

Sign Name	Sign #	Section
Pedestrians Prohibited Sign	RB-66	A2.9.1.1
Permitted Movement Tab	RB-61S	A2.9.4.2
Photo Enforced Community Entrance Sign	ID-34	A4.6.7
Photo Enforced Community Entrance Sign (French)	ID-34F	A4.6.7
Photo Enforced Red Light Tab	IS-33	A4.6.6
Photo Enforced Red Light Tab (French)	IS-33F	A4.6.6
Photo Enforced Reserved Lane Tab	IS-35	A4.6.6
Photo Enforced Reserved Lane Tab (French)	IS-35F	A4.6.6
Photo Enforced Sign	ID-33	A4.6.6
Photo Enforced Speed Tab	IS-34	A4.6.6
Picnic Table Sign	IC-5	A4.5.5.3
Playground Area Sign	WC-3	A3.8.1.2
Police Post Sign	IC-16	A4.5.2.3
Prepare To Stop At Railway Crossing Sign	WB-6	A3.8.5.4
Prepare To Stop At Railway Crossing Sign (Optional)	WB-6 (OPT)	A3.8.5.4
Prepare To Stop Sign	WB-5	A3.3.6
Prepare To Stop Sign (Optional)	WB-5 (OPT)	A3.3.6
Prepare To Stop Tab	WB-5S	A3.3.6
Prepare to Stop Tab	TC-85S	D2.8.2
Prepare To Stop Tab (French)	WB-5SF	A3.3.6
Prepare to Stop Tab (French)	TC-85SF	D2.8.2
Railway Crossing Ahead Sign (Left/Right)	WA-18(L/R)	A3.8.5.1
Railway Crossing on Cross Street (3-Leg) Sign (Left/Right)	WA-19(L/R)	A3.8.5.1
Railway Crossing on Cross Street Sign (4-Leg) (Left/Right)	WA-20(L/R)	A3.8.5.1
Railway Crossing Sign	RA-6	A2.9.5.1
Railway Crossing Sign	WA-18	A3.8.5.1
Railway Emergency Notification Sign	ID-40	A4.6.15
Railway Emergency Notification Sign (Bilingual)	ID-40B	A4.6.15
Railway Emergency Notification Sign (French)	ID-40F	A4.6.15
Ramp Advisory Speed Sign	WA-10	A3.2.12
Ramp Advisory Speed Sign (Exit)	WA-10A	A3.2.12
Ramp Advisory Speed Sign (Exit) (French)	WA-10AF	A3.2.12
Ramp Closed Sign	TC-66	D2.7.3
Ramp Closed Sign (French)	TC-66F	D2.7.3
Reserved Bicycle Lane Sign	WB-10	A3.8.2.1

Sign Name	Sign #	Section
Reserved Bicycle Lane Sign - Adjacent	RB-91	A2.9.2.9
Reserved Bicycle Lane Sign - Ends	RB-92	A2.9.2.9
Reserved Bicycle Lane Sign - Ends (French)	RB-92F	A2.9.2.9
Reserved Bicycle Lane Sign - Overhead	RB-90	A2.9.2.9
Reserved Lane Ahead Sign	WB-7	A3.6.2
Reserved Lane Crossing Sign	WB-8	A3.6.3
Reserved Lane Signs - Adjacent - 1 Or 2 Symbols	RB-81	A2.9.6
Reserved Lane Signs - Adjacent - 1 Or 2 Symbols (French)	RB-81F	A2.9.6
Reserved Lane Signs - Adjacent - 3 Or 4 Symbols	RB-81A	A2.9.6
Reserved Lane Signs - Adjacent - 3 Or 4 Symbols (French)	RB-81AF	A2.9.6
Reserved Lane Signs-Overhead-1 Or 2 Symbols	RB-80	A2.9.6
Reserved Lane Signs-Overhead-1 Or 2 Symbols (French)	RB-80F	A2.9.6
Reserved Lane Signs-Overhead-3 Or 4 Symbols	RB-80A	A2.9.6
Reserved Lane Signs-Overhead-3 Or 4 Symbols (French)	RB-80AF	A2.9.6
Reverse Curve Sign (Left/Right)	WA-5(L/R)	A3.2.4
Reverse Sharp Curve Sign (Left/Right)	WA-4(L/R)	A3.2.4
Right (Left) and Straight Through Prohibited Sign	RB-12 (L/R)	A2.4.3
Right (Left) Turn On Red Traffic Signal Prohibited Sign	RB-17 (L/R)	A2.4.8
Right (Left) Turn Prohibited Sign	RB-11 (L/R)	A2.4.2
Right (Left)Turn Only Lane Sign	RB-41 (L/R)	A2.7.3
Right Lane Ends Tab	WA-33(RT)	A3.4.7
Right Lane Ends Tab (French)	WA-33(RTF)	A3.4.7
Right Lane Tab	RB-104S	A2.7.10
Right Lane Tab (French)	RB-104SF	A2.7.10
Right Or Left Turn Only Lane Sign	RB-43	A2.7.5
River Sign	ID-2	A4.6.2
Road Diversion Sign (Left/Right)	TC-13(L/R)	D2.5.1.1
Road Narrows Sign	WA-23	A3.4.5
Road Narrows Sign (Left/Right)	WA-23(L/R)	A3.4.5
Road Narrows Tab	WA-23T	A3.4.5
Road Narrows Tab (French)	WA-23TF	A3.4.5
Road Realignment Sign (Left/Right)	TC-15(L/R)	D2.5.2.1
Road Work Sign	TC-2	D2.4.2
Roundabout Advance Diagrammatic Guide Sign	IA-6	A4.3.4
Roundabout Advance Diagrammatic Guide Sign	IA-7	A4.3.4
Roundabout Advance Overhead Guide Sign	IA-8	A4.3.5

Sign Name	Sign #	Section
Roundabout Arrow Tab - Left Manoeuvre	IS-36	A4.4.4.7
Roundabout Arrow Tab - Left/Straight Manoeuvre	IS-39	A4.4.4.7
Roundabout Arrow Tab - Right Manoeuvre	IS-38	A4.4.4.7
Roundabout Arrow Tab - Straight Manoeuvre	IS-37	A4.4.4.7
Roundabout Directional Sign	WA-38	A3.2.11
Roundabout Exit Guide Sign	IA-9	A4.3.6
Roundabout Lane Designation Sign	RB-100	A2.7.10
Roundabout Lane Designation Sign	RB-101	A2.7.10
Roundabout Lane Designation Sign	RB-102	A2.7.10
Roundabout Lane Designation Sign	RB-103	A2.7.10
Roundabout Lane Designation Sign	RB-104	A2.7.10
Roundabout Lane Designation Sign	RB-105	A2.7.10
Roundabout Lane Designation Sign	RB-97	A2.7.10
Roundabout Lane Designation Sign	RB-98	A2.7.10
Roundabout Lane Designation Sign	RB-99	A2.7.10
Roundabout Sign	WA-39	A3.3.5
Route Begins Tab	IS-16	A4.4.4.5
Route Begins Tab (French)	IS-16F	A4.4.4.5
Route Marker Sign (Trans-Canada Highway)	IB-1	A4.4.1
Route Marker Sign (Trans-Canada Highway)	IB-1S	A4.4.1
Route Marker Sign (Trans-Canada Highway)	IB-2	A4.4.1
Route Markers And Trailblazers	IF-11	A4.2.7.6
Route Markers And Trailblazers (French)	IF-11F	A4.2.7.6
School Area / Zone Sign	WC-1	A3.8.1.1
School Bus Entrance Sign (Left/Right)	WC-12(L/R)	A3.8.3.6
School Bus Stop Sign	WC-9	A3.8.3.7
School Bus Stop Tab	WC-9T	A3.8.3.7
School Bus Stop Tab (French)	WC-9TF	A3.8.3.7
School Crosswalk Ahead Sign (Left/Right)	WC-16(L/R)	A3.8.1.4
School Crosswalk Sign (Left/Right)	RA-3 (L/R)	A2.9.1.5
Seat Belt Sign	RC-6	A2.10.4
Second Train Event Sign	WC-27	A3.8.5.3
Second Train Event Tab	WC-27T	A3.8.5.3
Second Train Event Tab	WC-27TF	A3.8.5.3
Share The Road Sign	WC-19	A3.8.2.2
Share the Road Sign	TC-73	D2.11

Sign Name	Sign #	Section
Share the Road Sign	TC-73S	D2.11
Share the Road Sign (French)	TC-73SF	D2.11
Share The Road Tab	WC-19S	A3.8.2.2
Share The Road Tab (French)	WC-19SF	A3.8.2.2
Shared Pathway Sign	RB-93	A2.9.2.8
Shared Pathway Sign (French)	RB-93F	A2.9.2.8
Shared Use Lane Single File Sign	WC-20	A3.8.2.3
Shared Use Lane Single File Sign	TC-72	D2.11
Shared Use Lane Single File Sign	TC-72S	D2.11
Shared Use Lane Single File Sign (French)	TC-72SF	D2.11
Sharp Curve Sign (Left/Right)	WA-2(L/R)	A3.2.1
Side-Mounted Multiple Lane Designation Sign - Through (Left/Right)	RB-47 (L/R)	A2.7.9
Side-Mounted Multiple Lane Designation Sign (Left/Right)	RB-46 (L/R)	A2.7.9
Side-Mounted Multiple Lane Designation Signs - Variable	RB-49	A2.7.9
Sidewalk Closed Sign	TC-76	D2.10.1.3
Sidewalk Closed Sign (French)	TC-76F	D2.10.1.3
Sidewalk Closed Sign - Cross Here	TC-77A (L/R)	D2.10.1.3
Sidewalk Closed Sign - Cross Here	TC-77B (L/R)	D2.10.1.3
Sidewalk Closed Sign - Cross Here (French)	TC-77AF (L/R)	D2.10.1.3
Sidewalk Closed Sign - Cross Here (French)	TC-77BF (L/R)	D2.10.1.3
Sidewalk Closed Sign - Use Other Side	TC-77	D2.10.1.3
Sidewalk Closed Sign - Use Other Side (French)	TC-77F	D2.10.1.3
Signalized Intersection Crossing Sign (Left/Right)	ID-20(L/R)	A4.6.11
Signals Ahead Sign	WB-4	A3.3.4
Signals Ahead Sign	TC-82	D2.11
Single Curve Sign (Left/Right)	WA-3(L/R)	A3.2.1
Single File Tab	WC-20S	A3.8.2.3
Single File Tab (French)	WC-20SF	A3.8.2.3
Single Turn Sign (Left/Right)	WA-1(L/R)	A3.2.1
Slippery When Wet For Bicycles Sign	WC-45	A3.8.2.11
Slippery When Wet Sign	WC-5	A3.7.1
Slippery When Wet Tab	WC-5T	A3.7.1
Slippery When Wet Tab (French)	WC-5TF	A3.7.1
Slower Traffic Keep Right Sign	RB-35	A2.6.4
Slower Traffic Keep Right Sign (French)	RB-35F	A2.6.4
Snowmobile Crossing Sign	WC-10	A3.8.4.1

Sign Name	Sign #	Section
Snowmobile Crossing Tab	WC-10T	A3.8.4.1
Snowmobile Crossing Tab (French)	WC-10TF	A3.8.4.1
Snowmobile Route Sign	RB-64	A2.9.3.1
Snowmobiles Prohibited Sign	RB-65	A2.9.3.2
Soft Shoulder Sign	TC-48	D2.9.2
Soft Shoulder Sign (French)	TC-48F	D2.9.2
Special Crosswalk Overhead Sign (Left/Right)	RA-5 (L/R)	A2.9.1.8
Speed Hump Tab	WA-50T	A3.4.4
Speed Hump Tab (French)	WA-50TF	A3.4.4
Stop Ahead Sign	WB-1	A3.3.2
Stop Ahead Sign	TC-80	D2.11
Stop Line Sign (Left/Right)	RC-4 (L/R)	A2.10.1
Stop Line Sign (Left/Right) (French)	RC-4F (L/R)	A2.10.1
Stop Sign	RA-1	A2.2.1
Stop Sign (Bilingual)	RA-1B	A2.2.1
Stop Sign (French)	RA-1F	A2.2.1
Stop Sign Tab (Pictographic)	RA-1S1	A2.2.1
Stop Sign Tab (Pictographic)	RA-1S2	A2.2.1
Stop Sign Tab (Pictographic)	RA-1S3	A2.2.1
Stopping Prohibited Except Buses Sign	RB-58	A2.8.2.3
Stopping Prohibited Except For Persons With Disabilities Sign	RB-72	A2.8.2.4
Stopping Prohibited Part-Time Sign	RB-57	A2.8.2.2
Stopping Prohibited Part-Time Sign (French)	RB-57F	A2.8.2.2
Stopping Prohibited Sign	RB-55	A2.8.2.1
Straight Through Only Lane Sign	RB-45	A2.7.7
Straight Through Or Right (Left) Turn Only Lane Sign	RB-42 (L/R)	A2.7.4
Supplementary Tab - Effective Period	RB-82S3	A2.9.4.7
Supplementary Tab - Effective Period (French)	RB-82S3F	A2.9.4.7
Supplementary Tab - Max Weight Per Axle	RB-82S2	A2.9.4.7
Supplementary Tab - % Legal Axle Load	RB-82S1	A2.9.4.6
Supplementary Tab - Max Weight Per Axle (French)	RB-82S2F	A2.9.4.7
Supplementary Turn Control Tab (Except Bicycles)	RB-9S	A2.4.9
Supplementary Turn Control Tab (Except Bicycles) (French)	RB-9SF	A2.4.9
Supplementary Turn Control Tab (Except Buses)	RB-11S1	A2.4.9
Supplementary Turn Control Tab (Except Buses) (French)	RB-11S1F	A2.4.9
Survey Crew Sign	TC-3	D2.4.3

Sign Name	Sign #	Section
Tab: Fire Truck Entrance Signal (Left/Right)	ID-22S(L/R)	A4.6.4
Tab:Ends	RB-96S2	A2.9.4.9
Tab:Ends (French)	RB-96S2F	A2.9.4.9
Telephone Sign	IC-6	A4.5.2.4
Telephone Tab - TTY	IC-6S	A4.5.2.4
Telephone Tab - TTY (French)	IC-6SF	A4.5.2.4
Temporary Added Lane Sign (Left/Right)	TC-46(L/R)	D2.11
Temporary Advisory Speed Tab	TC-22S	D2.11
Temporary Bridge Ices Sign	TC-56	D2.11
Temporary Bump Sign	TC-51	D2.11
Temporary Checkerboard Signs	TC-30	D2.11
Temporary Chevron Alignment Sign	TC-31	D2.11
Temporary Concealed Road Sign	TC-40	D2.11
Temporary Concealed Road Sign (Left/Right)	TC-41(L/R)	D2.11
Temporary Concealed Road Sign (Left/Right)	TC-42(L/R)	D2.11
Temporary Distance Advisory Tab	TC-37S	D2.11
Temporary Distance Advisory Tab	TC-38S	D2.11
Temporary Distance Advisory Tab - Next	TC-36S	D2.11
Temporary Distance Advisory Tab - Next (French)	TC-36SF	D2.11
Temporary Diversion Sign	TC-18(L/R)	D2.5.1.3
Temporary Divided Highway Ahead Sign	TC-60	D2.11
Temporary Divided Highway Begins Sign	TC-58	D2.11
Temporary Divided Highway Ends Sign	TC-59	D2.11
Temporary Fallen Rock Sign	TC-57	D2.11
Temporary Hill Sign	TC-39	D2.11
Temporary Hill Sign	TC-39A	D2.11
Temporary Lane Closed Ahead Sign (Left/Right)	TC-5(L/R)	D2.6.1
Temporary Low Clearance Sign	TC-53	D2.11
Temporary Low Clearance Ahead Sign	TC-52	D2.11
Temporary Maximum Speed Sign	TC-23	D2.11
Temporary Merge Sign (Left/Right)	TC-45(L/R)	D2.11
Temporary Narrow Structure Sign	TC-35	D2.11
Temporary Obstruction Diversion Sign	TC-20(L/R)	D2.5.3
Temporary Pavement Ends Sign	TC-50	D2.11
Temporary Pedestrian Detour Sign (Left)	TC-74L1	D2.10.1.1
Temporary Pedestrian Detour Sign (Left) (French)	TC-74L1F	D2.10.1.1

Sign Name	Sign #	Section
Temporary Pedestrian Detour Sign (Left)	TC-74L2	D2.10.1.1
Temporary Pedestrian Detour Sign (Left) (French)	TC-74L2F	D2.10.1.1
Temporary Pedestrian Detour Sign (Right)	TC-74R1	D2.10.1.1
Temporary Pedestrian Detour Sign (Right) (French)	TC-74R1F	D2.10.1.1
Temporary Pedestrian Detour Sign (Right)	TC-74R2	D2.10.1.1
Temporary Pedestrian Detour Sign (Right) (French)	TC-74R2F	D2.10.1.1
Temporary Pedestrian Detour Sign (Through)	TC-74	D2.10.1.1
Temporary Pedestrian Detour Sign (Through) (French)	TC-74F	D2.10.1.1
Temporary Pedestrian/ Bicycle Detour Sign (Left)	TC-75L1	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Left)	TC-75L2	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Left) (French)	TC-75L1F	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Left) (French)	TC-75L2F	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Right)	TC-75R1	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Right)	TC-75R2	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Right) (French)	TC-75R1F	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Right) (French)	TC-75R2F	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Through)	TC-75	D2.10.1.2
Temporary Pedestrian/ Bicycle Detour Sign (Through) (French)	TC-75F	D2.10.1.2
Temporary Ramp/ Exit Closed Ahead	TC-69	D2.7.5
Temporary Ramp/ Exit Closed Ahead (French)	TC-69F	D2.7.5
Temporary Remote Control Device Ahead	TC-85	D2.8.2
Temporary Road Realignment Sign - 3 lanes	TC-19(L/R)	D2.5.2.3
Temporary Slippery When Wet Sign	TC-55	D2.11
Temporary T Intersection Sign	TC-43	D2.11
Temporary Truck Entrance Sign (Left/Right)	TC-54(L/R)	D2.11
Temporary Two-Way Traffic Ahead Sign	TC-24	D2.11
Temporary Y Intersection Sign	TC-44	D2.11
Tent Camping Sign	IC-4	A4.5.5.2
Through Traffic Prohibited Sign	RB-10	A2.4.1
Time / Day In Effect Tab	RB-11S2	A2.4.9
Time / Day In Effect Tab (French)	RB-11S2F	A2.4.9
Time of the Day / Day of the Week Tab	WB-7S	A3.6.2
Time of the Day / Day of the Week Tab (French)	WB-7SF	A3.6.2
To Route Tab	IS-17	A4.4.4.6
To Route Tab (French)	IS-17F	A4.4.4.6
Traffic Calmed Neighbourhood Sign	ID-32	A4.6.5

Sign Name	Sign #	Section
Traffic Calmed Neighbourhood Tab	ID-32S	A4.6.5
Traffic Calmed Neighbourhood Tab (French)	ID-32SF	A4.6.5
Traffic Control Person Ahead Sign	TC-21	D2.4.4
Trail Crossing Tab	WC-44T	A3.8.2.7
Trail Crossing Tab (French)	WC-44TF	A3.8.2.7
Trailer Camp Sign	IC-3	A4.5.5.1
Transit Priority Signal Sign	RB-115	A2.4.12
Transit Priority Signal Sign (French)	RB-115F	A2.4.12
Transit Signal Sign	RB-114	A2.4.12
Transit Signal Sign (French)	RB-114F	A2.4.12
Travel Information Sign	IC-8	A4.5.4.5
Truck Encroachment Sign	WC-26	A3.8.3.5
Truck Entrance Sign (Left/Right)	WC-8(L/R)	A3.8.3.3
Truck Entrance Tab	WC-8T	A3.8.3.3
Truck Entrance Tab (French)	WC-8TF	A3.8.3.3
Truck Inspection Station Advance Sign	RB-76	A2.9.4.11
Truck Inspection Station Exit Sign	RB-77	A2.9.4.12
Truck Inspection Station Sign	RB-75	A2.9.4.10
Truck Route Sign	RB-61	A2.9.4.2
Truck Route Tab	RB-61T	A2.9.4.2
Truck Route Tab (French)	RB-61TF	A2.9.4.2
Truck Speed Tab	WC-25T	A3.8.3.1
Truck Speed Tab (French)	WC-25TF	A3.8.3.1
Truck Tipping Sign (Left/Right)	WA-51(L/R)	A3.8.3.1
Trucks Maximum Speed Sign	RB-2	A2.9.4.1
Trucks Maximum Speed Sign (French)	RB-2F	A2.9.4.1
Trucks Prohibited Sign	RB-62	A2.9.4.3
Turn Prohibited Sign	RB-13	A2.4.4
Turn Right (Left) Sign	RB-14 (L/R)	A2.4.5
Turning Vehicles Yield To Bicycles And Pedestrians Sign	RB-38	A2.9.2.2
Turning Vehicles Yield To Bicycles And Pedestrians Sign (French)	RB-38F	A2.9.2.2
Turning Vehicles Yield To Bicycles Sign	RB-37	A2.9.2.1
Two Way Traffic Ahead Sign	WB-3	A3.6.1
Two Way Traffic Sign	RB-24	A2.5.3
Two Way Traffic Tab	WB-3T	A3.6.1
Two Way Traffic Tab	RB-24T	A2.5.3

Sign Name	Sign #	Section
Two Way Traffic Tab (French)	RB-24TF	A2.5.3
Two Way Traffic Tab (French)	WB-3TF	A3.6.1
Two-Way Left-Turn Lane Sign	RB-48	A2.7.8
Urgent Care Services Sign	IC-22	A4.5.2.2
Use Lower Gear Tab	WA-21S	A3.4.1
Use Lower Gear Tab (French)	WA-21SF	A3.4.1
U-Turn Prohibited Sign	RB-16	A2.4.7
Vertical Visibility Constraint Sign	WA-42	A3.4.2
Viewpoint Sign	IC-9	A4.5.5.4
Watch For Fallen Rock Tab	WC-6T	A3.7.5
Watch For Fallen Rock Tab (French)	WC-6TF	A3.7.5
Water Flooding On Roadway Sign	WC-50	A3.7.2
Weight Limit Control Sign	RB-63	A2.9.4.4
When Flashing Tab	WC-48S	A3.8.2.9
When Flashing Tab (French)	WC-48SF	A3.8.2.9
Wind Gusts Sign (Left/Right)	WC-24(L/R)	A3.8.3.2
Wind Gusts Tab	WC-24T	A3.8.3.2
Wind Gusts Tab (French)	WC-24TF	A3.8.3.2
Winding Road Sign (Left/Right)	WA-6(L/R)	A3.2.5
Wrong Way Sign	RB-22	A2.5.2
Wrong Way Sign (French)	RB-22F	A2.5.2
Yield Ahead Sign	WB-2	A3.3.3
Yield Ahead Sign	TC-81	D2.11
Yield Center Lane To Opposing Traffic Sign	RB-36	A2.6.5
Yield Center Lane To Opposing Traffic Sign (French)	RB-36F	A2.6.5
Yield Sign	RA-2	A2.2.2
Yield To Oncoming Traffic Combination Sign	TC-17S	D2.8.1
Yield To Oncoming Traffic Combination Sign (French)	TC-17SF	D2.8.1