

PART A—SIGNS

Division 3

WARNING SIGNS

A3.1 TO A3.8

SIGNS

WARNING

A3

MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CANADA

A3 WARNING SIGNS

The description of warning signs and their application is organized as follows:

- Section A3.1 General considerations for warning signs
- Section A3.2 Road alignment
- Section A3.3 Intersections
- Section A3.4 Specific road features
- Section A3.5 Divided highway transitions
- Section A3.6 Traffic regulations ahead
- Section A3.7 Intermittent or moving hazards
- Section A3.8 Temporary warning tab signs

Warning signs used for pedestrian crossing control are described in Division A6. Warning signs used for temporary conditions (TC series) are described in Part D.

A3.1 GENERAL CONSIDERATIONS FOR WARNING SIGNS

A3.1.1 Application of Warning Signs

Warning signs indicate in advance conditions on or adjacent to a road that will normally require caution and may require a reduction in vehicle speed. Adequate warning signs offer a higher level of safety and a more efficient traffic flow for drivers.

However, the overuse of warning signs may promote disrespect for traffic control devices, and the use of such signs should be kept to a minimum. Improved highway design will generally have the effect of reducing the need for warning 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 hazards signs.

A determination of the appropriate sign to be used should be made in accordance with the criteria outlined in this Manual. When there is doubt about which sign to use, the one requiring the minimum restrictions should be installed. The specifications for warning signs outlined here will adequately provide for most conditions which are encountered. However, 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 conveyed with a symbol. If a word message is necessary, it should be brief and simple.

A3.1.3 Design of Warning Signs

Warning signs convey their message by their shape and colour as well as by symbols or words. Specifically, most warning signs are diamond shaped with a yellow background. Words, symbols and borders should be black, but some elements of symbols contained on the signs may include other colours (see Table A1-2).

Warning signs used for temporary conditions, however, have orange backgrounds as shown in Part D of this Manual.

Minimum dimensions for each sign are presented in the following sections. Where conditions require increased visibility, larger signs should be used. All dimensions are increased proportionately.

A3.1.4 Location of Warning Signs

Warning signs are placed to provide advance warning of a condition primarily for drivers who may not be familiar with the road. Therefore, it is very important that thought and care be given to their location and installation. Warning signs are normally installed between a minimum of 50 m and a maximum of 150 m in advance of the corresponding condition. However, in some locations, the physical situation will require different distances. In those cases, trial runs should be made by day and by night to determine the most effective location and installation characteristics for each situation. In cities, where speeds are relatively low, warning signs usually should be placed closer to the location of the condition than on rural highways.

Warning signs must be installed in accordance with Section A1.7.

A3.1.5 Bicycle Path Warning Signs

Warning signs on bicycle paths 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 sign size for any use is 450 mm x 450 mm.

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

A3.2 ROAD ALIGNMENT

Changes in road alignment may require the use of warning signs to advise drivers of such conditions. Abrupt turns or curves, or the termination of road sections, may involve hazardous driving situations unless drivers are advised in advance of these conditions.

Warrants for the specific use of curve and turn signs and Advisory Speed tab signs are specified in Table A3-1.

The safe speed is determined by ball bank indicator, and is the speed shown on the Advisory Speed tab sign (WA-7S).

The maximum practical speed is an indication of the maximum speed that reasonably could be maintained over a section of road in advance of the curve under consideration, having regard to pavement and shoulder widths, horizontal and vertical alignment, sight distance and other controlling factors. This does not necessarily coincide with the design speed of the road.

TYPICAL APPLICATION OF WARNING SIGNS

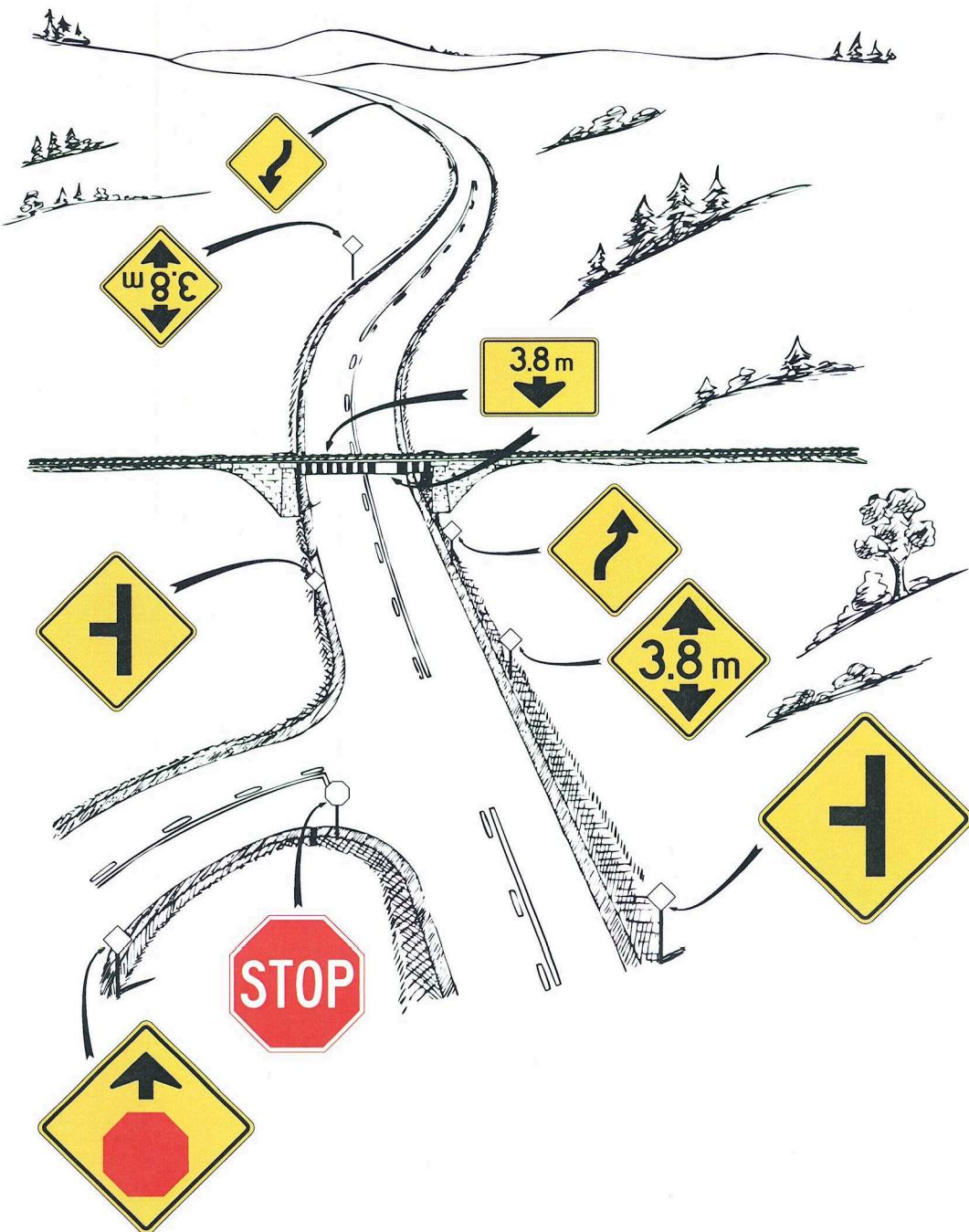


FIGURE A3-1

TYPICAL APPLICATION OF WARNING SIGNS

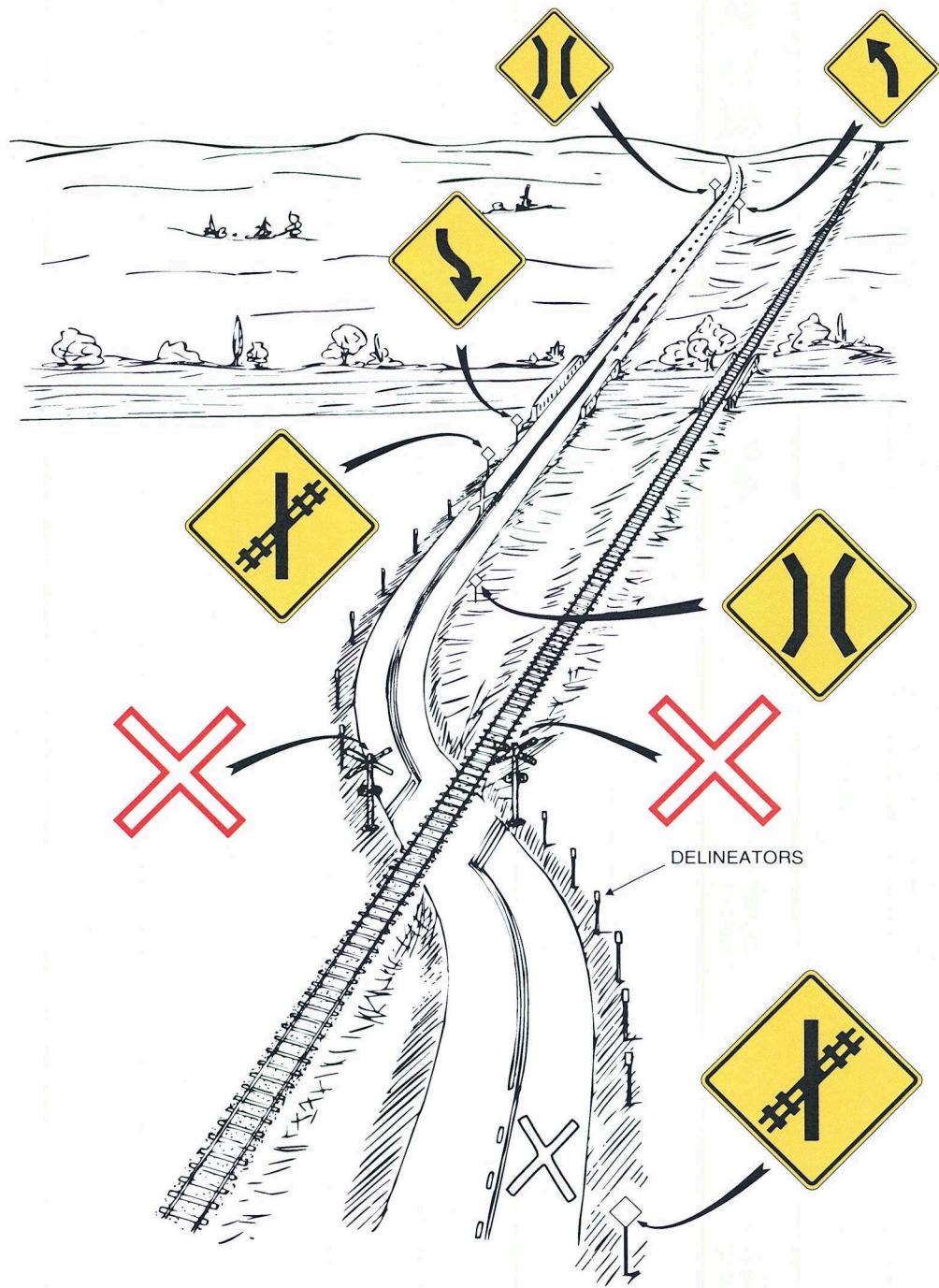


FIGURE A3-2

TABLE A3-1
TURN AND CURVE WARNING SIGNS TO BE USED UNDER
VARIOUS CONDITIONS

Speed Limit km/h	Maximum Practical Speed km/h	Safe Speed in km/h on Turn or Curve							
		90	80	70	60	50	40	30	20
100	100	WA-3	WA-3*	WA-3*	WA-2*	WA-2*	WA-2*	WA-2*	WA-2*
	90		WA-3*	WA-3*	WA-2*	WA-2*	WA-2*	WA-2*	WA-2*
	80		WA-3*	WA-2*	WA-2*	WA-2*	WA-2*	WA-2*	WA-2*
	70			WA-2*	WA-2*	WA-2*	WA-2*	WA-2*	WA-2*
	60				WA-2*	WA-2*	WA-2*	WA-2*	WA-2*
90	100		WA-3	WA-3*	WA-3*	WA-2*	WA-2*	WA-2*	WA-2*
	80			WA-3*	WA-3*	WA-2*	WA-2*	WA-2*	WA-2*
	70				WA-3*	WA-2*	WA-2*	WA-2*	WA-2*
	60					WA-2*	WA-2*	WA-2*	WA-2*
80	80-100			WA-3	WA-3*	WA-2*	WA-2*	WA-2*	WA-2*
	70				WA-3*	WA-2*	WA-2*	WA-2*	WA-2*
	60					WA-2*	WA-2*	WA-2*	WA-2*
70	90-100				WA-3	WA-2*	WA-2*	WA-2*	WA-2*
	70-80				WA-3	WA-2*	WA-2*	WA-2*	WA-2*
	60					WA-3*	WA-2*	WA-2*	WA-2*
60	90-100					WA-2*	WA-2*	WA-2*	WA-2*
	80					WA-2*	WA-2*	WA-2*	WA-2*
	60-70					WA-3*	WA-2*	WA-2*	WA-2*
50	70-80					WA-2*	WA-2*	WA-2*	WA-2*
	60					WA-3*	WA-2*	WA-2*	WA-2*
	30-50						WA-2*	WA-2*	WA-2*

* The Advisory Speed tab sign (WA-7S) is used in these cases. The safe speed is the speed shown on the Advisory Speed tab sign;
 WA-4 may be used in place of WA-2 where appropriate for reverse curves;
 WA-1 may be used where safe speeds are less than shown (Include WA-7S);
 WA-5 or WA-6 may be used in place of WA-3 in all cases where appropriate for reverse curves;
 WA-2 is used in place of WA-3 when the safe speed is less than two-thirds of the design speed or speed limit.

A3.2.1 Single Turn and Curve Signs (WA-1, WA-2 and WA-3)

The Single Turn and Single Curve signs indicate that there is a single turn or curve in the road ahead. The signs should be used when required by the warrants outlined in Table A3-1. The Advisory Speed tab sign (WA-7S) is used only where required by the warrants outlined in Table A3-1. When the speed at which a curve may be safely driven falls below two-thirds of the design speed or the speed limit, whichever is greater, the Turn sign (WA-2) must be used.

Additional protection may be provided by the installation of Delineation Markers (WA-37) or Chevron Alignment signs (WA-9).

The right or left version of the signs is used as appropriate.



WA-1R

600 mm x 600 mm



WA-2R

600 mm x 600 mm



WA-3R

600 mm x 600 mm

A3.2.2 Reverse Turn Sign (WA-4)



WA-4R

600 mm x 600 mm

A3.2.3 Reverse Curve Sign (WA-5)



WA-5R

600 mm x 600 mm

A3.2.4 Winding Road Sign (WA-6)



WA-6R

600 mm x 600 mm

Additional protection may be provided by the installation of Delineation Markers (WA-37) or Chevron Alignment signs (WA-9). The Advisory Speed tab sign (WA-7S) is used only where required by the warrants outlined in Table A3-1.

Where there are fewer than five curves or turns in succession, normally one or more Reverse Turn or Reverse Curve signs should be used.

The Winding Road sign should be installed at the beginning of the first curve or turn.

A3.2.5 Advisory Speed Tab Sign (WA-7S)

The Advisory Speed tab sign may be used in conjunction with standard warning signs. It is not used alone. Table A3-1 indicates when the tab sign is used with turn and curve warning signs. It is installed immediately below the warning sign, and on the same post. The speed shown should be in multiples of 10 km/h. In no case should the sign be installed until the advisory speed has been determined by accepted traffic engineering procedures and officially approved by the road authority.



WA-7S

450 mm x 450 mm

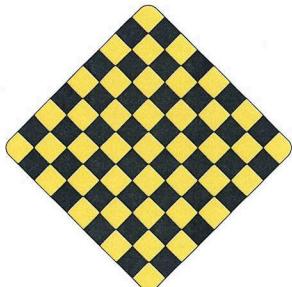
A3.2.6 Checkerboard Sign (WA-8)

The Checkerboard sign (WA-8) indicates the termination of a road. It is applied where the driver cannot proceed either straight ahead or to the left or right at the terminal point. The sign should be installed at the point at which the road terminates, and should always be located directly in line with the path of the approaching vehicle.

The Checkerboard signs (WA-8R and WA-8L) indicate an abrupt change of alignment at a turn or curve. The black arrow indicates the direction taken by the curve or turn. The sign should be installed at the turn or curve, and should always be located directly in line with the path of the approaching vehicle.

The right or left version is used as appropriate.

At T intersections, a WA-8B sign may be used. It should be located directly in line with the path of approaching vehicles on the road that forms the stem of the T. It should be located on the far side of the intersecting road opposite the approaching driver.



WA-8

750 mm x 750 mm



WA-8R

750 mm x 750 mm



WA-8B

750 mm x 750 mm



WA-9

450 mm x 600 mm

A3.2.7 Chevron Alignment Sign (WA-9)

Chevron Alignment signs may be used to provide additional guidance to drivers where there is a change in the horizontal alignment of the road.

Chevron Alignment signs should be used where the difference between the design speed (or posted speed if lower) on the approach and the safe speed in the turn or curve (as shown on the advisory speed tab sign) is 35 km/h or greater.

Where the difference between the design speed (or posted speed if lower) on the approach and the safe speed in the turn or curve (as shown on the Advisory Speed tab sign) is less than 35 km/h, Chevron Alignment signs may be considered under the following conditions:

- (a) where there is an off-road and/or head-on collision history, and/or truck collision history of one correctable collision per year over three consecutive years; or
- (b) where engineering study indicates that additional curve warning is needed to make the curve or turn more apparent, or
- (c) where the curve is severe and driver compliance with the advisory speed limit is low.

Chevron Alignment signs should not be used to indicate obstructions in the roadway, roadway width transitions such as lane drops and approaches to narrow bridges, and the end of minor street approaches of T-intersections.

Chevron Alignment signs may be used in conjunction with Turn and Curve Warning signs, Checkerboard signs, Delineation Markers, pavement edge lines, and raised pavement markers. However, Chevron Alignment signs are not to be installed on the same pole support device as the signs or Delineation Markers.

The recommended sign spacing by curve radius and approximate design speed is shown in Table A3-2. For a single-lane approach, the first Chevron Alignment sign should be placed directly in front of the driver on the approach. For a multi-lane approach, a Chevron Alignment sign should be placed directly in front of each approach lane. The signs should be installed until the change in alignment eliminates the need for the signs.

The signs should be installed to lateral standards outlined in section A1.7.2 and at a height of 1.2 m above the near edge of the nearest traffic lane to the bottom of the sign. The sign installation height may be adjusted due to road geometry, as illustrated in Figure A3-3.

Chevron Alignment signs along the tangent approach may be considered after an on-site review under the following conditions:

- (a) where the road geometry prevents the first two Chevron Alignment signs from being visible upon approach; or
- (b) where the horizontal curve is along a rural section where due to lack of visual cues, additional guidance may be required.

The recommended spacings of the tangent approach Chevron Alignment signs are illustrated in Figure A3-4.

Further details are documented in the *Guidelines on the Use and Installation of Chevron Alignment Signs* available from the Transportation Association of Canada.

TABLE A3-2
RECOMMENDED SPACING FOR CHEVRON ALIGNMENT SIGNS

CURVE RADIUS (m)	APPROXIMATE DESIGN SPEED OF CURVE (km/h)*		RECOMMENDED SPACING (m)
	Rural or High-Speed Urban	Low-Speed Urban	
30	25 to 30	35 to 40	13
40	30 to 35	35 to 40	16
50	35 to 40	40 to 45	20
60	40 to 45	40 to 45	22
70	40 to 45	45 to 50	24
80	45 to 50	45 to 50	27
90	45 to 50	45 to 50	29
100	50 to 55	50 to 55	30
125	55 to 60	50 to 55	35
150	60 to 65	55 to 60	38
175	65 to 70	n/a**	42
200	70 to 75	n/a	45
225	75 to 80	n/a	48
250	75 to 80	n/a	51
275	80 to 85	n/a	53
300	85 to 90	n/a	56
350	85 to 95	n/a	61
400	90 to 100	n/a	65
450	95 to 105	n/a	69
500	100 to 110	n/a	73
550	105 to 115	n/a	77
600	105 to 115	n/a	80
700	110 to 125	n/a	87
800	115 to 130	n/a	93
900	120 to 140	n/a	98

* Posted or advisory speed may be used if is known to be less than the design speed, or if the design speed is unknown.

SIGN INSTALLATION HEIGHT ADJUSTMENT FOR SUPERELEVATED CURVES

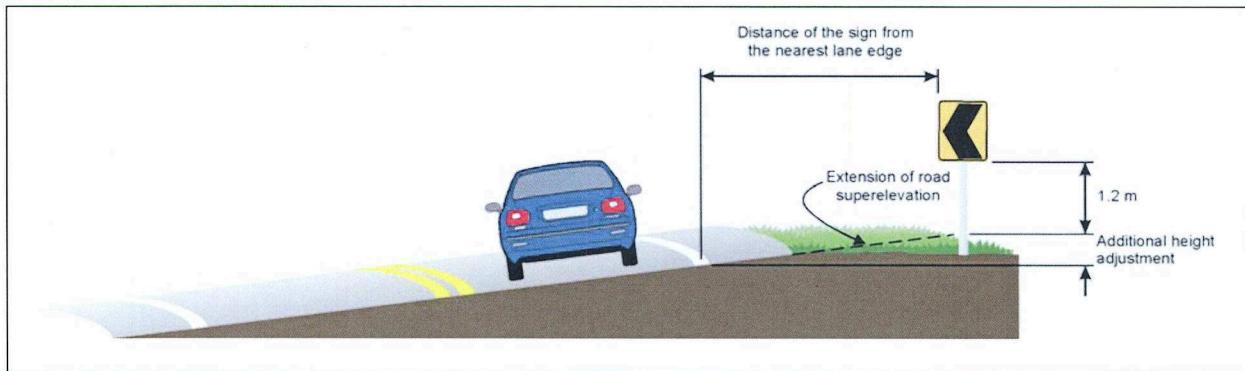


FIGURE A3-3

SPACING FOR CHEVRON ALIGNMENT SIGNS ON APPROACH TO CURVES

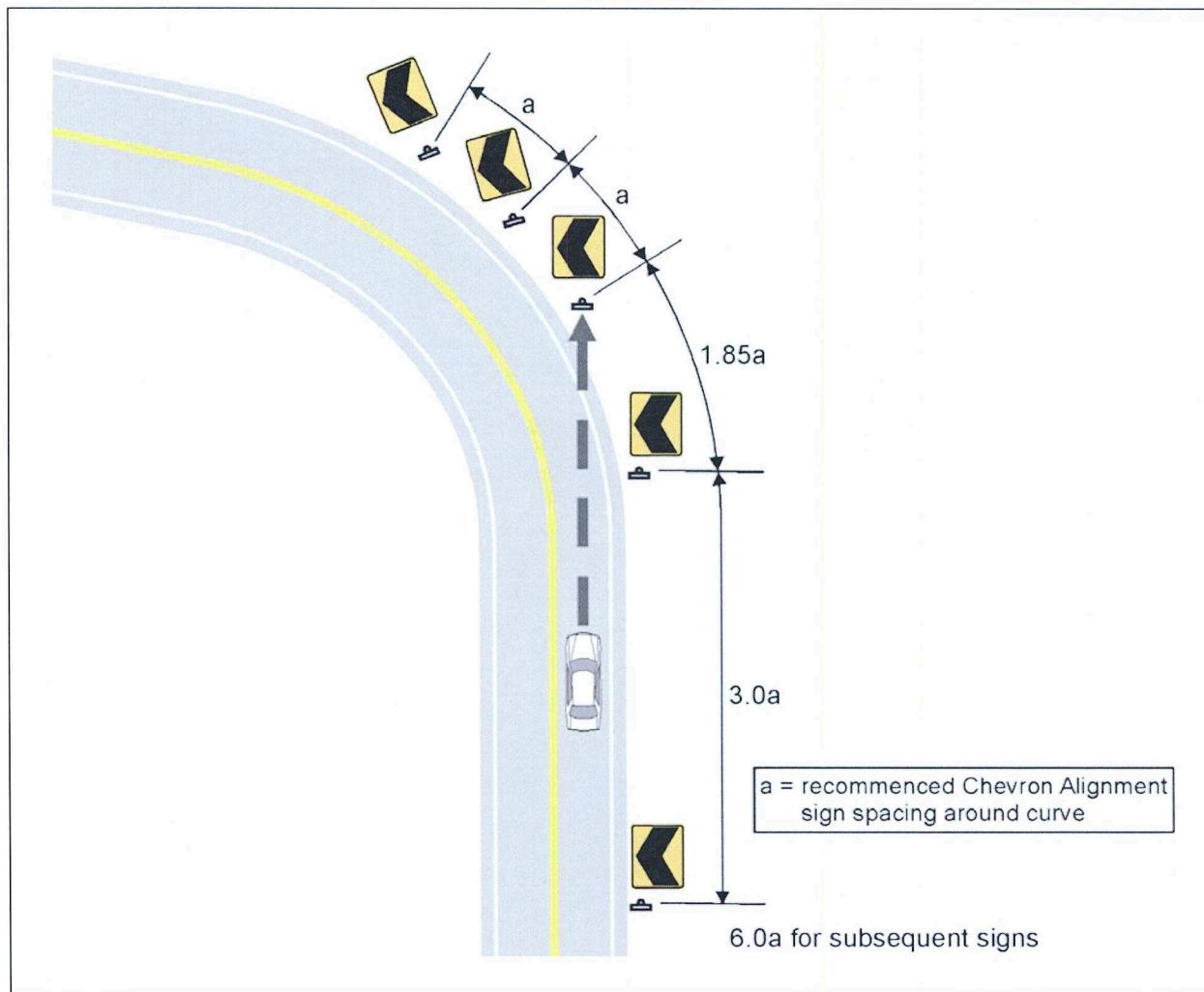


FIGURE A3-4

A3.2.8 Ramp Advisory Speed Sign (WA-10)



WA-10
600 mm x 900 mm



WA-10A
600 mm x 900 mm

The Ramp Advisory Speed sign (WA-10) should be used where an engineering study of roadway, geometric, or operating conditions shows the necessity of advising drivers of the maximum safe speed on a ramp or on a channelization leg. The speed shown should be in multiples of 10 km/h, and determined by accepted engineering procedures. If desired, ramp speed may be posted in increments of 10, with numerals ending in a “5” rather than a “0”. This may further distinguish ramp speed signs from mainline regulatory speed limits.

In general, 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. For advisory ramp speeds that are 10 to 15 km/h below the posted speed limit of the approach road, a Ramp Advisory Speed sign is optional. 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 that the driver can reasonably accelerate to a speed beyond the advisory ramp speed.

A Ramp Advisory Speed sign may also be used where the crash record indicates that excessive speed on the ramp or turning roadway is a factor in crashes.

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) may be used. Inclusion of the units of measure (i.e., “km/h”) is optional.

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, and drivers may 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.

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.

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 clue 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 when the ramp controlling curve is sufficiently far downstream of the gore, Turn or Curve signs (WA-1, WA-2, WA-3) 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.



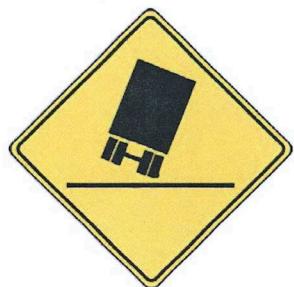
WA-10AF
600 mm x 900 mm

A3.2.9 Truck Tipping Sign (WA-51)

The Truck Tipping Sign indicates to truck drivers the potential of rollover so they may negotiate a ramp or horizontal curve at an appropriate speed. Advisory speed tab sign WA-7S may be used with this sign.

The appropriate right (WA-51R) or left (WA-51L) version indicates the direction which trucks may tip.

A temporary educational tab sign, "Truck Speed" (WC-25T) or "Vitesse pour Camions" (WC-25TF) may also be used in conjunction with the Advisory Speed Tab sign (WA-7S).



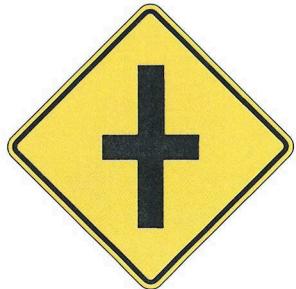
WA-51R
750 mm x 750 mm

A3.3 INTERSECTIONS

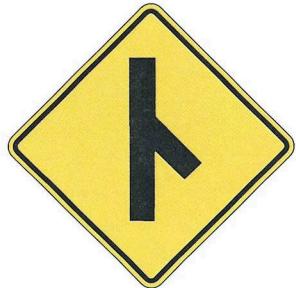
Intersection warning signs are used to advise drivers of road features ahead, such as concealed or unusual intersections.

A3.3.1 Concealed Road Signs (WA-11, WA-12 and WA-13)

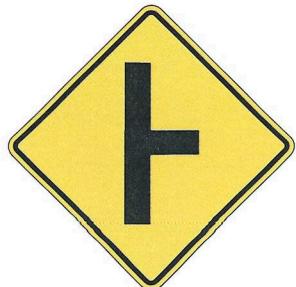
Concealed Road signs are installed on major roads only in advance of crossroads or intersecting bikeways where the vision triangle is inadequate, and where the crossroads or intersecting bikeways are concealed to the extent that a driver on the major road would not be adequately prepared for turning movements or cross traffic.



WA-11
600 mm x 600 mm



WA-12R
600 mm x 600 mm



WA-13R
600 mm x 600 mm

A3.3.2 T Intersection Sign (WA-14)

The T Intersection sign is used to warn drivers approaching a T intersection on the road that forms the stem of the T. The sign must not be used on an approach where traffic is required to stop before entering the intersection. Under these conditions a Stop Ahead sign (WB-1) must be used instead.



WA-14

600 mm x 600 mm

A3.3.3 Y Intersection Sign (WA-15)

The Y Intersection sign is used to warn drivers approaching a Y intersection on the road that forms the stem of the Y. It should not be used at a Y intersection that is channelized by traffic islands, nor where junction signs or route markers are present.



WA-15

600 mm x 600 mm

**WA-16R****750 mm x 750 mm**

A3.3.4 Merge Sign (WA-16)

The Merge sign indicates that merging movements may be encountered. It is placed in advance of a point where two roads converge and where no turning movement conflicts occur. The sign should be installed on the side of the road on which merging traffic will be encountered, so that it is visible to drivers on both roads, and in such a position as not to obstruct the driver's view of those vehicles about to merge. Where the sign is not visible from both roads, a sign should be installed on both roads.

A Merge sign may be warranted under the following conditions:

- (a) Where the merging traffic condition is not obvious to the driver; and
- (b) Where the length of the acceleration lane including taper exceeds the value in Table A3-3.

Where the length of the acceleration lane including taper is less than the values shown in Table A3-3, a Stop or Yield sign should be installed on the minor road.

The Merge sign must not be used in place of a Lane Ends sign.

The right or left version is used as appropriate.

**TABLE A3-3
MERGE SIGN WARRANTS**

DESIGN SPEED FOR THROUGH HIGHWAY (km/h)	THE LENGTH OF ACCELERATION LANE INCLUDING TAPER (m)
50	50
60	60
70	65
80	70
90	80
100	85
110	90

A3.3.5 Added Lane Sign (WA-35)

The Added Lane sign indicates that two roads converge and merging movements are not required. When used, the sign should be installed in advance of the point of convergence where it is visible from both roads. Where the sign is not visible from both roads, a sign should be installed on each road.

The right or left version is used as appropriate.



WA-35R

900 mm x 900 mm

A3.4 SPECIFIC ROAD FEATURES

Certain specific road features such as railway crossings, hills, bumps, narrow structures, changes in road surface or obstructions may necessitate the use of warning signs to advise drivers of such conditions.

A3.4.1 Double Arrow Sign (WA-17)

The Double Arrow sign indicates that traffic is permitted to pass on either side of an island or obstruction in the road.

On an island, it should be mounted as close to the approach end as practicable. It should be mounted on the face of, or just in front of, a pier or other large obstruction. The Object Marker (WA-36) is normally placed below the WA-17 sign.

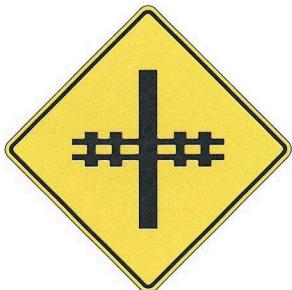
Where traffic must keep to the right of the island or other obstruction, the Keep Right sign (RB-25) is used instead.



WA-17

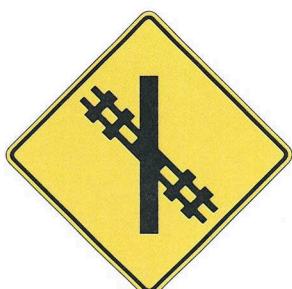
600 mm x 600 mm

A3.4.2 Railway Crossing Ahead Signs (WA-18, WA-19 and WA-20)



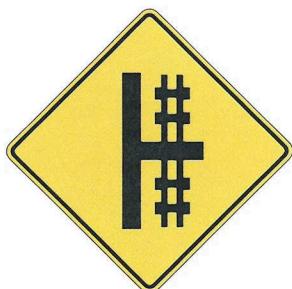
WA-18

750 mm x 750 mm



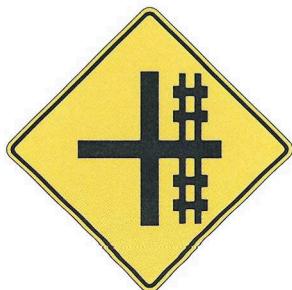
WA-18R

750 mm x 750 mm



WA-19R

750 mm x 750 mm



WA-20R

750 mm x 750 mm

The Railway Crossing Ahead sign is used to warn drivers in advance of all at-grade railway crossings.

On divided roads and on one-way streets or bikeways, it may be desirable to install an additional sign on the median or on the left side of the road.

If there is an intersection between the railway crossing and the railway crossing sign, an additional sign or signs may be required.

Situations exist where a major road or bikeway 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 or bikeway for proper siting of the WA-18 sign. In such a situation the WA-18 on the minor road between the major road or bikeway and the railway crossing is replaced by the WA-19 or WA-20, installed on the major road or bikeway in advance of the intersection, facing both directions of traffic on the major road or bikeway.

The right or left version is used as appropriate.

Where used solely for bicycle traffic, minimum sign dimensions are 450 mm x 450 mm.

The typical installation of signs and pavement markings at a railway crossing is illustrated in Figure C1-6.

A3.4.3 Hill Signs (WA-21 and WA-41)

The Hill sign (WA-21) indicates a steep downgrade. It is used only in advance of a downgrade of six percent or more where the length of the grade is equal to or greater than the length shown in Table A3-4. It is also used for grades of 6% or more where any part of the grade is on a horizontal curve with a radius less than 500 m.



WA-21

750 mm x 750 mm

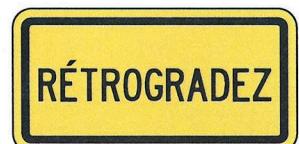
TABLE A3-4
GRADE AND LENGTH GUIDELINES FOR HILL SIGN

Grade	Minimum Length
6%	600m
7%	300m
8%	250m
9%	150m
11%	120m
13%	100m
15%	60m



WA-21S

450 mm x 225 mm



WA-21SF

450 mm x 225 mm



WA-21A

750 mm x 750 mm



WA-41

450 mm x 450 mm

A supplementary tab sign (WA-21S) may be used with the Hill sign.

For grades of 6% or more, having a length of more than 1000 m, the WA-21A sign may be used. The % grade is incorporated within the WA-21A sign. Grades should be rounded to the next highest 1%. A supplementary tab sign (WA-28S) indicating the length of the grade may also be used.

The Hill Sign for Bicycles (WA-41) is used on bikeways in advance of a downgrade of 10% or more where the length of the downgrade is 50 m or more. It is also used where the grade is on a horizontal curve which makes higher speeds dangerous.

A Distance Advisory supplementary tab sign (WA-28S) may be used to indicate the length of bikeway over which the cyclist can expect to encounter the grade.

A3.4.4 Bump Sign (WA-22)



WA-22

750 mm x 750 mm

The Bump sign indicates a sharp change in the profile of the road that is sufficiently abrupt that when the bump is crossed at speeds 25% greater than the speed limit for that section of the road, it will cause one or more of the following conditions:

- a hazardous condition;
- considerable discomfort for passengers;
- a shifting of cargo; or
- deflection of a vehicle from its true course.

A supplementary tab sign (WA-30S) may be used to indicate the distance to the bump.

The Bump sign may also be used to indicate that the section of road ahead has numerous bumps. A supplementary tab sign (WA-28S) may be used to indicate the length of the bumpy section.

A3.4.5 Road Narrows Sign (WA-23)

The Road Narrows sign indicates a reduction in the width of road. It applies only in cases where no reduction occurs in the number of traffic lanes (see WA-33). Pavement markings and/or Delineation Markers may also be used to mark the transition.

On divided roadways, or one-way streets, an additional sign may be installed on the median or on the left side of the road.

The right or left version is used as appropriate.



WA-23

750 mm x 750 mm



WA-23R

750 mm x 750 mm

A3.4.6 Narrow Structure Sign (WA-24)**WA-24**

750 mm x 750 mm

**WA-24S**

600 mm x 300 mm

**WA-24SF**

600 mm x 300 mm

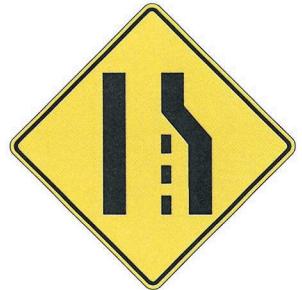
A3.4.7 Lane Ends Sign (WA-33)

The Lane Ends sign indicates that the number of lanes of pavement is reduced either from the right or the left. Pavement Markings and/or Delineation Markers may also be used to mark the transition.

On divided roads or on one-way streets, particularly where the left lane ends, two such signs may be installed, one on the right side and the other on the median or the left side of the road.

The right or the left version is used as appropriate.

The supplementary tab sign (WA-30S) may be used to indicate the distance to the start of the taper. A typical installation of WA-33 signs on a Passing/Climbing Lane is shown in Figures A4-3 and A4-4 in section A4.



WA-33R

750 mm x 750 mm

A3.4.8 Pavement Ends Sign (WA-25)

The Pavement Ends sign indicates that a hard-surfaced road or bikeway (i.e. asphalt or concrete) is about to end, and that its continuation has a gravel surface.



WA-25

750 mm x 750 mm



WA-26

750 mm x 750 mm



WA-27

900 mm x 600 mm



WA-28S

600 mm x 300 mm



WA-28SF

600 mm x 300 mm



WA-29S

600 mm x 300 mm



WA-30S

600 mm x 300 mm

A3.4.9 Low Clearance Signs (WA-26 and WA-27)

The Low Clearance signs indicate the maximum amount of overhead clearance at low bridges, underpasses, and under other structures. Such signs must be used at all points where the clearance is less than 150 mm greater than the maximum height of a vehicle plus its load permitted under Provincial law. In any case, it must be used where the clearance is less than 4.3 m. All vertical clearance distances displayed on Low Clearance signs should be rounded to the nearest 0.1 m less than actual.

The WA-26 sign is installed to indicate a low clearance ahead. The WA-27 sign is installed on the overhead structure immediately above the centre line of the pavement of each lane.

A3.4.10 Distance Advisory Tab Signs (WA-28S, WA-29S and WA-30S)

The Distance Advisory tab sign (WA-28S) indicates the length of road or bikeway over which the driver can expect to encounter the condition specified on the corresponding warning sign.

The distance from the advance warning sign to the location of the condition may be indicated by using the WA-29S (distance in kilometres) or WA-30S (distance in metres) supplementary tab sign. All distances shown in metres should be rounded to the nearest 50 m.

The tab sign must be mounted immediately below the corresponding warning sign.

A3.4.11 Object Marker (WA-36)

The Object Marker is used to mark obstructions adjacent to or within the road or bikeway, such as bridge piers and traffic islands. The Object Marker may be used alone, or mounted below other signs. The WA-36 marker is used to mark an obstruction in the road or bikeway which may be passed on either side.

The WA-36R is used to mark obstructions on the right side of the road or bikeway. The WA-36L is used to mark obstructions on the left side of the road or bikeway.



WA-36
450 mm x 900 mm



WA-36R
300 mm x 900 mm



A3.4.12 Delineation Marker (WA-37)

Road-edge Delineation Markers are effective aids for night driving. Delineators are to be considered as guide markings rather than warning devices and must never be substituted for a proper warning sign. They may be used on long continuous sections of highway or through short sections where there are changes in horizontal alignment, particularly where the night collision frequency is high or the alignment at night is confusing.

Delineation markers consist of reflector units mounted on suitable supports. The units reflect either yellow or white light such that they comply with the principles for pavement edge lines as described in Division C1.

When used on long continuous sections of undivided road, bidirectional delineation (i.e., markers visible from opposite directions) are installed on both sides of the road. When used on a divided road, unidirectional delineation markers are installed on both sides of the road.

Delineation markers are installed 1.2 m above the edge of the pavement to the centre of the marker head. They are placed approximately 0.6 m clear of the shoulder but in no case more than 4.0 m nor less than 1.2 m from the edge of the pavement. See illustration in Figure A3-5. In any case, the lateral clearance distance should be consistent throughout the posted section.

On straight sections of road, delineation markers should be spaced 60 m apart. Where driveways, side roads or other obstructions interrupt this regular spacing, the marker affected is moved a distance not to exceed one-quarter of the normal spacing, or omitted entirely.

On the approaches to and throughout horizontal curves, the spacing should be such that five markers are always visible to the right of the road. The recommended spacing for Delineation Markers on horizontal curves is shown in Table A3-5.

ROAD EDGE DELINEATION MARKERS

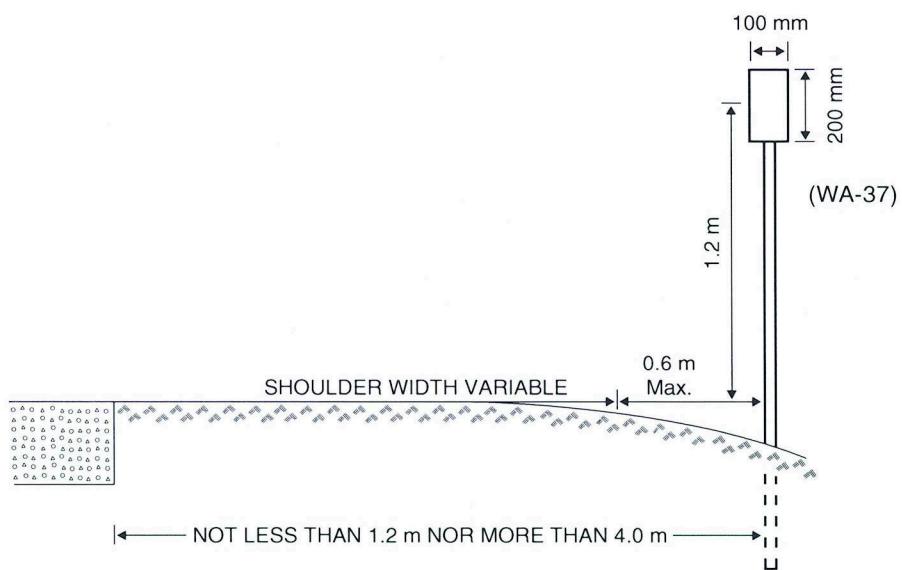


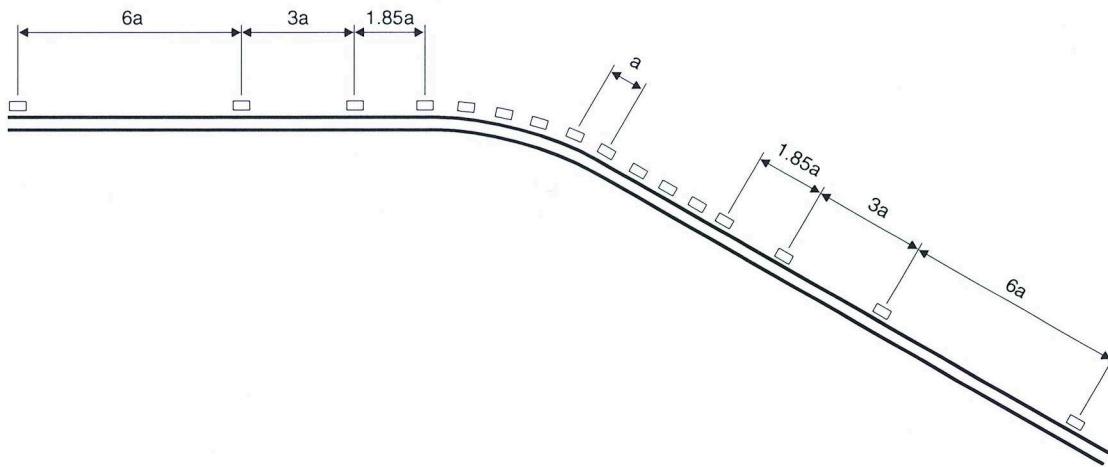
FIGURE A3-5

TABLE A3-5
SPACING OF DELINEATION MARKERS ON
HORIZONTAL CURVES

RADIUS (R)	SPACING ON CURVE ¹	SPACING IN ADVANCE OF AND BEYOND CURVE		
		1 ST SPACE ²	2 ND SPACE ³	3 RD SPACE ⁴
(m)	(m)	(m)	(m)	(m)
1500	42	60	60	60
1000	35	60	60	60
500	24	45	60	60
350	20	38	60	60
250	17	32	52	60
200	15	29	46	60
150	13	25	40	60
100	11	20	33	60
75	9	18	28	57
60	8	16	25	51
40	7	13	21	42

Note:

1. spacing on curve; $a = 2(\sqrt{0.3R})$ where R = radius in metres
maximum spacing on curve = 60 m
minimum spacing on curve = 5 m
2. spacing to 1ST delineator = 1.85a
3. spacing to 2ND delineator = 3a
4. spacing to 3RD delineator = 6a



A3.4.13 Neighbourhood Speed Hump Sign (WA-50)

The Neighbourhood Speed Hump sign indicates a vertical deflection of the road surface including measures such as a speed hump, raised crosswalk or raised intersection as described in the *Canadian Guide to Neighbourhood Traffic Calming* (TAC 1998).

The sign must be installed at the location of each vertical measure, except where traffic is controlled by a Stop sign.

When the vertical measure is installed 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 WA-50 sign is installed below the other sign.

An additional WA-50 sign, 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 C3.7.



WA-50
450 mm x 450 mm

A3.4.14 Vertical Visibility Constraint Sign (WA-42)

The Vertical Visibility Constraint sign may be used in advance of a crest vertical curve to advise road users to reduce speed as they approach and traverse the hill, as only limited stopping sight distance is available. A supplementary tab sign (WA-42S) is recommended with this sign.



WA-42
600 mm x 600 mm



WA-42S
450 mm x 225 mm



WA-42SF
450 mm x 225 mm

A3.5 DIVIDED HIGHWAY TRANSITIONS

The signs in this section may be used to warn drivers of a transition from undivided to divided road operation or from divided to undivided operation. Typical pavement markings and sign placement are illustrated in Figures C2-8 and C2-9.



WA-31

750 mm x 750 mm

A3.5.1 Divided Highway Begins Sign (WA-31)

The Divided Highway Begins sign indicates the transition from an undivided to a divided road cross-section ahead. It is used on the approaches to a section of road where the opposing flows of traffic are separated by a median.



WA-32

750 mm x 750 mm

A3.5.2 Divided Highway Ends Sign (WA-32)

The Divided Highway Ends sign indicates the transition from a divided to an undivided road cross-section ahead. It is used before the end of a section of divided road as a warning of two-way traffic ahead.

The sign should be installed on both sides of the roadway.



WA-34

750 mm x 750 mm

A3.5.3 Divided Highway Ahead Sign (WA-34)

The Divided Highway Ahead sign indicates to drivers that they are approaching an intersection with a divided road.

A3.6 TRAFFIC REGULATIONS AHEAD

Under certain circumstances of limited visibility, when drivers are approaching a traffic regulation that may require some response, warning signs may be used to advise the drivers of regulations ahead. In addition, such warning signs may be used for an introductory period of three to six months when the regulation is first installed.

A3.6.1 Stop Ahead Sign (WB-1)

The Stop Ahead sign indicates the presence of a Stop sign (RA-1) ahead.

Limited visibility due to conditions such as horizontal and vertical curves, parked vehicles, foliage, and/or high vehicle speeds should be considered in determining the need for these signs. In some cases, the advance sign may be used due to poor performance of the Stop sign.



WB-1
750 mm x 750 mm

A3.6.2 Yield Ahead Sign (WB-2)

The Yield Ahead sign indicates the presence of a Yield sign (RA-2) ahead.

Limited visibility due to conditions such as horizontal and vertical curves, parked vehicles, foliage, and/or high vehicle speeds should be considered in determining the need for these signs. In some cases, the advance sign may be used due to poor performance of the Yield sign.



WB-2
750 mm x 750 mm

A3.6.3 Two-Way Traffic Ahead Sign (WB-3)

The Two-Way Traffic Ahead sign indicates to drivers on a one-way road that they are approaching a section with two-way traffic operation. Thus, the normal rules of the road for two-way operation will apply.

**WB-3**

750 mm x 750 mm

A3.6.4 Signals Ahead Sign (WB-4)

The Signals Ahead sign indicates the presence of traffic control signals ahead. It may be used where the signals are not visible for a distance of 120 m. It may also be installed in other cases where vehicle speeds or conditions of visibility justify its use. The sign may also be used for an introductory period when new signals have been installed.

**WB-4**

600 mm x 600 mm

A3.6.5 Prepare to Stop Sign (WB-5)

The Prepare to Stop sign with an advance warning flasher (AWF) indicates to drivers in advance of a traffic control signal that there is a high probability of having to stop for a red signal indication.

Engineering studies should be conducted and engineering judgement applied to confirm that an advance warning flasher represents the optimal solution for the treatment site under consideration.

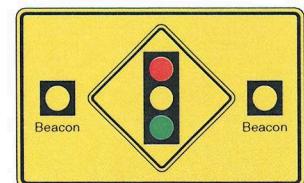
The conditions that may prompt consideration for an advance warning flasher are:

- (a) Limited sight distance - where the sight distance of the first primary signal is less than the stopping sight distance;
- (b) Minimum speed - intersections with approaches having a posted speed limit greater than or equal to 70 km/h;
- (c) Gateway - the first signalized intersection along a road transitioning from a predominantly rural environment to an urbanized environment;
- (d) Approach grade - at 60 km/h posted speed intersection approaches where the downhill grade is 7 percent or more, and at 50 km/h posted speed approaches where the downhill grade is 12 percent or more. At speeds of 70 km/h or more, the presence of a downhill grade should emphasize the need for an AWF;
- (e) Truck traffic - intersection approaches with a significant proportion of the traffic being heavy trucks;
- (f) Collision history - retrofit safety countermeasure at locations where there is an over-representation of correctable collision types, including 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; and
- (g) Minor road traffic volume - when minor road volumes have an average annual daily traffic (AADT) of 13,000 vehicles or greater.

Although the presence of one of these conditions may justify the provision of an AWF, the combination of two or more of these conditions would more strongly indicate the justification for an AWF. Minimum speed, truck traffic and minor road traffic volume should be considered supporting conditions, and by themselves would not typically require the provision of an AWF. Further information is available in the *Advance Warning Flashers: Guidelines for Application and Installation* (TAC 2005).



WB-5
900 mm x 900 mm



WB-5 (OPTIONAL)
2400 mm x 1500 mm



WB-5S
2400 mm x 300 mm



WB-5SF
2400 mm x 300 mm

The sign should be installed in a conspicuous position adjacent to the travelled lanes or above the travelled lanes at a distance from the intersection that takes into account road geometry, vehicle types, and speed limit.

A yellow backboard (WB-5 Optional) may be used in conjunction with the basic sign. The sign with the backboard is the preferred design for an overhead sign.

Two alternating flashing amber beacons interconnected with the signal controller are used with the sign. The flash rate for beacons is prescribed in Table B3-2.

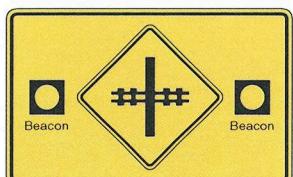
The time to commence flashing operation should be selected after consideration of geometry, speed limit and local driver behaviour. The flashing of these beacons must commence prior to the end of the green indication and must continue for the duration of the red indication on that approach to the intersection. Early or late flasher activation will negate the basic warning function of the sign.

The supplementary tab sign (WB-5S) may be used to supplement the sign.

A3.6.6 Prepare To Stop At Railway Crossing Sign (WB-6)



WB-6
900 mm x 900 mm



WB-6 (OPTIONAL)
2400 mm x 1500 mm

The Prepare to Stop at Railway Crossing sign indicates to drivers in advance of a railway crossing that there is a high probability of having to stop for the railway crossing signals ahead. The primary function of this is to reduce dilemma zone incidents.

This sign should only be used where engineering studies have indicated that this sign is warranted. Factors which should be considered include:

- (a) train and vehicle speeds;
- (b) train volumes;
- (c) traffic volumes, particularly heavy trucks;
- (d) visibility;
- (e) highway grades; and
- (f) collision experience.

Without restricting the intended usage, the Prepare to Stop at Railway Crossing sign may be warranted at signalized crossings where one or more of the following conditions exist:

- (a) on roads with a speed limit of 90 km/h or greater;
- (b) where sight restrictions are present;
- (c) at the bottom of a hill or downgrade of considerable length; or
- (d) where environmental conditions frequently restrict visibility.

The engineering study should consider each direction of vehicular traffic separately since this sign may not be necessary on each side of the railway crossing.

The sign should be installed in a conspicuous position adjacent to the travelled lanes or above the travelled lanes at a distance from the crossing that takes into account road geometry, vehicle types, and speed limit.

A yellow backboard (WB-6 Optional) may be used in conjunction with the basic sign. The backboard is the preferred design for an overhead sign.

Two alternating flashing amber beacons, interconnected with the railway crossing, are used with the sign. The flash rate for beacons is prescribed in Table B3-2.

The time to commence flashing operation should be selected after consideration of geometry, speed limit, and local driver behaviour. The flashing of the beacons must commence prior to the start of the red flashing indication at the railway crossing signal and must be displayed for the duration of the red flashing indication. Early or late beacon activation will negate the basic warning function of the sign.

When the Prepare to Stop at Railway Crossing sign is used, the Railway Crossing Ahead sign (WA-18) need not be used.

The supplementary tab sign (WB-5S) may be used to supplement the sign.

A3.6.7 Reserved Lane Ahead Sign (WB-7)

The Reserved Lane Ahead sign indicates to drivers that they are approaching a reserved lane. The signs may be placed above or beside the road.

The supplementary tab sign WB-7S may be used to show the time(s) of day and the days of the week when the lane is reserved.

The supplementary tab sign WA-30S may be used to indicate the distance to the start of the reserved lane.



WB-7
750 mm x 750 mm



WB-7S
600 mm x 300 mm



WB-7SF
600 mm x 300 mm



WB-8

750 mm x 750 mm

A3.6.8 Reserved Lane Crossing Sign (WB-8)

The Reserved Lane Crossing sign indicates to drivers that they are approaching a cross street on which there is a near-side reserved lane. The sign is used where right-turning drivers are required to turn into the lane adjacent to the reserved lane.

It may be used for an introductory period when the reserved lane is initially installed or at locations where there is a high violation rate for vehicles entering the reserved lane from an intersecting road.



WB-9

750 mm x 750 mm

A3.6.9 Maximum Speed Ahead Sign (WB-9)

The Maximum Speed Ahead sign indicates to drivers that they are approaching a section of road where the maximum legal speed is reduced. It must always be followed by the Maximum Speed sign (RB-1) at a distance of not less than 100 m, nor more than 250 m.



WB-10

750 mm x 750 mm

A3.6.10 Reserved Bicycle Lane Ahead Sign (WB-10)

The Reserved Bicycle Lane Ahead sign may be used to warn drivers that they are approaching a reserved bicycle lane. This sign should be considered where drivers are required to execute a manoeuvre to avoid the bicycle lane. The signs may be placed above or beside the road.

A3.7 INTERMITTENT OR MOVING HAZARDS

Under certain circumstances, warning signs are required to advise drivers of potential hazards involving the possibility of an event that may require a response. Such situations include slippery pavement conditions, or fallen rocks or landslides. The sign must be removed when the hazard ceases to exist.

A3.7.1 Slippery When Wet Sign (WC-5 and WC-45)

The Slippery When Wet sign indicates that an extraordinarily slippery condition exists when the pavement is wet. The use of this sign should be kept to a minimum, and upon the correction of the slippery condition, the sign must be removed.

On rural highways, the sign should be installed at intervals of 3.0 km or less on long sections of slippery pavement. In urban areas, these distances should be greatly reduced.

The Slippery When Wet for Bicycles sign (WC-45) advises of an extraordinarily slippery condition when the surface of the bicycle facility is wet. Use should be limited as with the Slippery When Wet sign. The sign should be installed at regular intervals of approximately 1.0 km.



WC-5
750 mm x 750 mm



WC-45
450 mm x 450 mm

A3.7.2 Fallen Rock Sign (WC-6)

The Fallen Rock sign indicates to drivers that they are approaching an area which is susceptible to falling rock or landslides, and that fallen rock or debris may be present on the road. The sign should be installed at a distance of 100 m to 250 m in advance of such areas and the installation should be repeated as often as necessary.



WC-6
750 mm x 750 mm

A3.7.3 Bicycle Crossing Signs



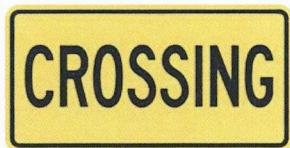
WC-7R

600 mm x 600 mm

A3.7.3.1 Bicycle Crossing Ahead Sign (WC-7)

The Bicycle Crossing Ahead sign indicates to drivers that they are approaching a location where a bicycle path crosses a road. The right or left version of the sign (WC-7R, WC-7L) is used as appropriate so the bicycle symbol on the sign is oriented toward the centre of the road.

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



WC-7S

600 mm x 300 mm



WC-7SF

600 mm x 300 mm

A3.7.3.2 Pedestrian and Bicycle Crossing Ahead Sign (WC-46)



WC-46R

600 mm x 600 mm

The Pedestrian and Bicycle Crossing Ahead sign indicates to drivers that they are approaching a location where a multi-use path crosses the road. The right or left version of the sign (WC-46R, WC-46L) is 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) must be used to convey the meaning of the Pedestrian and Bicycle Crossing Ahead sign.

A3.7.3.3 Bicycle Trail Crossing Side Street Sign (WC-44)

The Bicycle Trail Crossing Side Street sign indicates to drivers that a bicycle path, which runs parallel 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 sign.

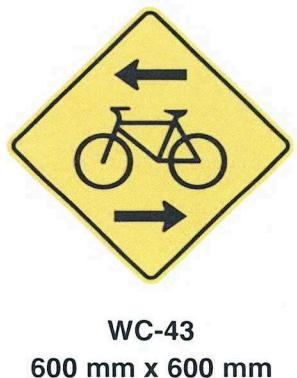
The left or right version is used as appropriate.

The temporary Trail Crossing tab sign (WC-44T) is used for educational purposes.



A3.7.3.4 Contraflow Bicycle Lane Crossing Sign (WC-43)

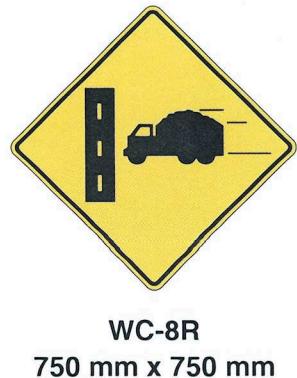
The Contraflow Bicycle Lane Crossing sign indicates to drivers that they are approaching a road with one-way vehicular traffic and a contraflow bicycle lane.



A3.7.4 Truck Entrance Sign (WC-8)

The Truck Entrance sign indicates to drivers that they are approaching a location at which trucks are entering, leaving or crossing the road or bikeway and where an unusual manoeuvre or physical condition such as inadequate sight distance or steep grades presents an uncommon degree of hazard.

The appropriate right or left version indicates the direction from which trucks enter the highway or bikeway.



A3.7.5 School Bus Stop Ahead Sign (WC-9)

The School Bus Stop Ahead sign indicates to drivers that they are approaching a school bus stop. The sign is installed where horizontal curves, vertical curves or foliage limit sight distance to less than the minimum stopping sight distance.



WC-9

750 mm x 750 mm

Relocation of the bus stop to a location with adequate visibility of the stopped bus should first be assessed.

The supplementary tab sign (WA-30S) may be used to indicate the distance to the school bus stop.

A3.7.6 Snowmobile Crossing Sign (WC-10)

The Snowmobile Crossing sign indicates to drivers that they are approaching a location where a snowmobile trail crosses the road.



WC-10

750 mm x 750 mm

A3.7.7 Opening Bridge Sign (WC-11)

The Opening Bridge sign indicates to drivers that they are approaching a bridge that can be opened to permit the passage of boats.



WC-11

750 mm x 750 mm

A3.7.8 School Bus Entrance Sign (WC-12)

The School Bus Entrance sign indicates to drivers that they are approaching a location at which school buses are entering, leaving, or crossing the road and where an unusual manoeuvre or physical condition such as inadequate sight distance or steep grades presents an uncommon degree of hazard. This sign should only be used if relocation of the bus entrance to a location with adequate physical conditions is not practicable or feasible.

The appropriate right or left version indicates the direction from which school buses enter the road.

This sign may be used only for school buses. It must not be used for other types of buses. The sign must not be used in place of Concealed Road signs (WA-11, WA-12, WA-13).

The supplementary tab sign (WA-30S) may be used to indicate the distance to the school bus turning movement.



WC-12R

750 mm x 750 mm

A3.7.9 Deer Crossing Sign (WC-13)

The Deer Crossing sign indicates to drivers that they are approaching an area where it is known that deer often cross the road.

The warning signs should be spaced no closer than 8.0 km apart unless there is a major intersection within an 8.0 km section between signs. In this case, it may be desirable to install an additional sign beyond the intersection.



WC-13

600 mm x 600 mm

A3.7.10 Moose Crossing Sign (WC-14)

The Moose Crossing sign indicates to drivers that they are approaching an area where it is known that moose often cross the road.

The warning signs should be spaced no closer than 8.0 km apart unless there is a major intersection within an 8.0 km section between signs. In this case, it may be desirable to install an additional sign beyond the intersection.



WC-14

600 mm x 600 mm

A3.7.11 Cattle Crossing Sign (WC-15)

The Cattle Crossing sign indicates to drivers that they are approaching a fixed location where cattle frequently cross the road. The sign must be removed when cattle crossing conditions cease to exist.

The sign should be installed not less than 100 m nor more than 250 m in advance of the crossing.



WC-15
750 mm x 750 mm

A3.7.12 Fire Truck Entrance Sign (WC-17)

The Fire Truck Entrance sign indicates to drivers that they are approaching a location at which fire trucks are entering, leaving or crossing the road and causing an unusual degree of hazard.

The sign should be considered where high traffic volumes, lack of visibility, collision experience, high vehicle speeds, delay of fire truck entry or frequent fire truck entry are a factor. This sign must not be used where traffic control signals at a fire truck entrance are installed.

The appropriate right or left version indicates the direction from which fire trucks enter the road.



WC-17R
750 mm x 750 mm

A3.7.13 Horse with Rider Sign (WC-21)

The Horse with Rider sign indicates to drivers that they are approaching an area where it is known that horses with riders may be expected to travel on or cross the road and constitute a hazard.



WC-21

600 mm x 600 mm

The signs should be placed no closer than 8.0 km apart. If there is a major intersection or major point of access of horses with riders to the road within a signed 8.0 km length, additional signs may be installed either beyond the major intersection or in advance of the major point of access of horses with riders.

A3.7.14 Horse-Drawn Vehicle Sign (WC-22)

The Horse-Drawn Vehicle sign indicates to drivers that they are approaching an area where it is known that horse-drawn vehicles may be expected to travel on or cross the road and constitute a hazard.



WC-22

600 mm x 600 mm

The signs should be spaced no closer than 8.0 km apart. If there is a major intersection or major turning movement of horse drawn vehicles at a specific intersection or point of access to the road within a signed 8.0 km length, additional signs may be installed.

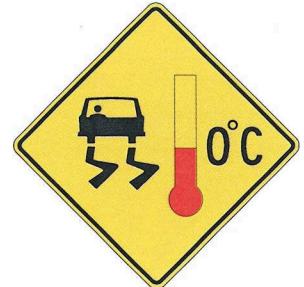
The sign should be installed approximately 150 metres in advance of the intersection or point of access unless the signing interferes with any other traffic control signs. For major intersections at which there are no significant turning movements of horse-drawn vehicles, the sign should be installed beyond the intersection.

A3.7.15 Bridge Ices Sign (WC-23)

The Bridge Ices sign indicates that the surface of a bridge or an overpass may be icy or frosted before the adjacent road when the temperature approaches the freezing point. The use of this sign may only be considered if one or more of the following conditions exist:

- (a) There is a recurring collision experience attributable to bridge icing;
- (b) The bridge is exposed to spray or high humidity conditions;
- (c) There is horizontal or vertical curvature on the bridge; or
- (d) It is a steel-decked bridge.

The sign may be removed when seasonal conditions dictate.



WC-23

750 mm x 750 mm

A3.7.16 Wind Gusts Sign (WC-24)

The Wind Gusts Sign is to warn truck drivers of strong winds or wind gusts that may cause the driver to lose control of their vehicle.

The appropriate right and left version (WC-24R and WC-24L) indicates which direction the truck may tip from wind gusts.

The Wind Gusts educational tab sign (WC-24T) may be used.



WC-24R

750 mm x 750 mm



WC-19
600 mm x 600 mm



WC-19S
600 mm x 300 mm



WC-19SF
600 mm x 300 mm

A3.7.17 Share the Road Sign (WC-19)

The Share the Road sign is used to warn drivers that they are to provide adequate driving space for cyclists and other vehicles on the road. The sign also advises drivers to use extra caution on the upcoming section of the road.

This sign is to be used where a road configuration changes, such as the discontinuation of a bicycle lane.

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

A3.7.18 Shared Use Lane Single File Sign (WC-20)

The Shared Use Lane Single File sign 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. Shared use lane markings should be used to mark the location where cyclists should position themselves within the lane.

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



WC-20

600 mm x 600 mm

**SINGLE
FILE**

WC-20S

600 mm x 300 mm

**FILE
INDIENNE**

WC-20SF

600 mm x 300 mm

A3.7.19 Advance Warning of Bicycles Signs (WC-48 and WC-49)

The Advance Warning of Bicycles signs indicate to drivers in advance of a confined structure that there is a high probability of encountering a cyclist in the area.

As a general rule, these signs should only be used where engineering study have indicated that these signs are warranted. Factors which should be considered include:

- a) vehicle speeds;
- b) bicycle volumes;
- c) traffic volumes, particularly heavy trucks;
- d) visibility;
- e) road grades; and
- f) collision experience.

The engineering study should consider each direction of traffic separately since these signs may not be warranted on both ends of the structure.

The signs should be installed in a conspicuous position adjacent to the travelled lanes or above the travelled lanes at a distance from the confined structure that takes into account road geometry, vehicle types, and operating speeds. The When Flashing supplementary tab sign (WC-48S) must be used to supplement the signs.

A yellow backboard (WC-48 Optional, WC-49 Optional) may be used in conjunction with the basic signs. The signs with the backboard are the preferred design for overhead signs. The dimensions of the internal diamond warning sign of this optional assembly are 900 mm x 900 mm.

Two alternating flashing amber beacons interconnected with the cyclist's push buttons, are used with the signs. The flash rate for beacons is prescribed in Table B3-2. The time to commence flashing operation should be selected after consideration of geometry, speeds and local motorist and cyclist behaviour. The flashing of these beacons must commence prior to the cyclist entering the confined structure and must continue for the duration that the cyclist is in or on the structure.

Information signs ID-15, ID-16 and ID-17 are used in conjunction with the cyclists push buttons.



WC-48
900 mm x 900 mm



WC-49
900 mm x 900 mm



WC-48F
900 mm x 900 mm



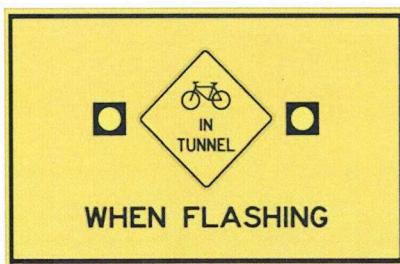
WC-49F
900 mm x 900 mm

WHEN FLASHING

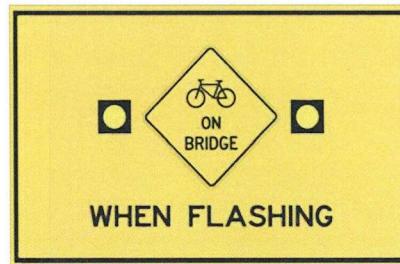
WC-48S
2400 mm x 300 mm

QUAND LES FEUX CLIGNOTENT

WC-48S
2400 mm x 300 mm



WC-48 (OPTIONAL)
2400 mm x 1500 mm



WC-49 (OPTIONAL)
2400 mm x 1500 mm



WC-48F (OPTIONAL)
2400 mm x 1500 mm



WC-49F (OPTIONAL)
2400 mm x 1500 mm

A3.8 TEMPORARY WARNING TAB SIGNS

A temporary warning tab sign may be used for an introductory period when a sign is first installed.

A3.8.1 “New” Tab Sign (WB-12T)

The “New” tab sign is used only in conjunction with other traffic control signs where necessary to provide added emphasis during an introductory period. The tab sign is installed either above or below the primary traffic control sign, and on the same post. The “New” tab sign is to be removed after an introductory period not to exceed 6 months.



WB-12T
900 mm x 450 mm



WB-12TF
900 mm x 450 mm

A3.8.2 Other Temporary Warning Tab Signs (WA-16T to WC-44TF)

Most temporary warning tab signs indicate in word form the same message represented by a symbol on the primary sign. Temporary tab signs may be used to convey the meaning of symbols during their introductory period. A temporary tab sign would normally be used for an educational period when a new sign is first introduced and drivers may not yet be familiar with the sign. The tab sign will usually be removed after an introductory period of three to six months. In situations where the primary sign is used at few locations within a geographic area, the tab sign may remain for longer.



WA-16T
600 mm x 300 mm



WA-16TF
600 mm x 300 mm



WA-22T
450 mm x 225 mm



WA-22TF
450 mm x 225 mm

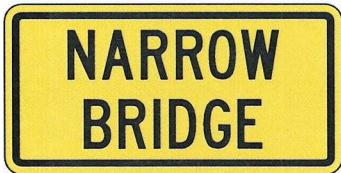


WA-23T
600 mm x 300 mm



WA-23TF
600 mm x 300 mm

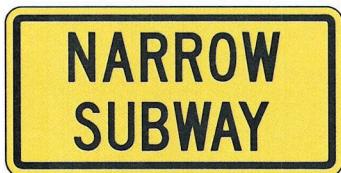
**A3.8.2 Other Temporary Warning Tab Signs
(WA-16T to WC-44TF)**



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



WA-25T
600 mm x 300 mm



WA-25TF
600 mm x 300 mm



WA-31T
600 mm x 300 mm



WA-31TF
600 mm x 300 mm



WA-32T
600 mm x 300 mm



WA-32TF
600 mm x 300 mm

**A3.8.2 Other Temporary Warning Tab Signs
(WA-16T to WC-44TF)**



WA-33RT
600 mm x 300 mm



WA-33RTF
600 mm x 300 mm



WA-33LT
600 mm x 300 mm



WA-33LTF
600 mm x 300 mm



WA-34T
600 mm x 300 mm



WA-34TF
600 mm x 300 mm



WA-35T
600 mm x 300 mm



WA-35TF
600 mm x 300 mm



WA-50T
450 mm x 225 mm

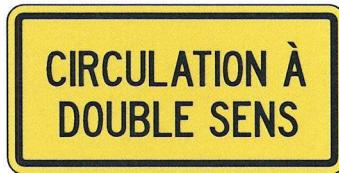


WA-50TF
450 mm x 225 mm

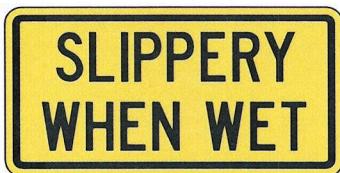
**A3.8.2 Other Temporary Warning Tab Signs
(WA-16T to WC-44TF)**



WB-3T
600 mm x 300 mm



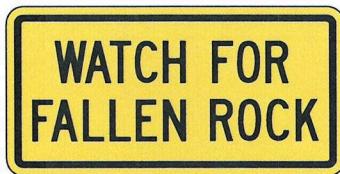
WB-3TF
600 mm x 300 mm



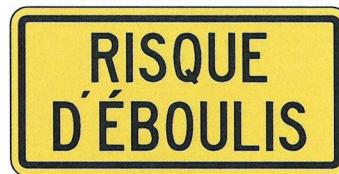
WC-5T
600 mm x 300 mm



WC-5TF
600 mm x 300 mm



WC-6T
600 mm x 300 mm



WC-6TF
600 mm x 300 mm



WC-8T
600 mm x 300 mm



WC-8TF
600 mm x 300 mm

**A3.8.2 Other Temporary Warning Tab Signs
(WA-16T to WC-44TF)**



WC-9T
600 mm x 300 mm



WC-9TF
600 mm x 300 mm



WC-10T
600 mm x 300 mm



WC-10TF
600 mm x 300 mm



WC-11T
600 mm x 300 mm



WC-11TF
600 mm x 300 mm



WC-17T
600 mm x 300 mm



WC-17TF
600 mm x 300 mm

**A3.8.2 Other Temporary Warning Tab Signs
(WA-16T to WC-44TF)**



WC-23T
600 mm x 300 mm



WC-23TF
600 mm x 300 mm



WC-24T
600 mm x 300 mm



WC-24TF
600 mm x 300 mm



WC-25T
600 mm x 300 mm



WC-25TF
600 mm x 300 mm



WC-44T
600 mm x 300 mm



WC-44TF
600 mm x 300 mm

