



# **BANGLADESH ROAD SIGN MANUAL**

# Traffic Signs Manual

Volume 1

Bangladesh Road Transport Authority  
Ministry of Communication



# Traffic Signs Manual

Volume 2  
Appendices

Bangladesh Road Transport Authority  
Ministry of Communication



**GOVERNMENT OF THE PEOPLE'S REPUBLIC OF  
BANGLADESH**

**TRAFFIC SIGNS MANUAL**

**VOLUME 1 OF 2**

**Bangladesh Road Transport Authority  
Ministry of Communications**

**MARCH 2000**

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## Foreword

The traffic signs in use in Bangladesh date from the 1930's and are inadequate for modern traffic conditions. The need for a new system of traffic signs has long been felt.

Government took up the task of developing new traffic signs in 1998. The objectives were to develop a sign system that would:

- suit the traffic and safety situation in Bangladesh
- conform to international conventions
- be affordable
- be understood by the public.

A special Technical Scrutiny Committee (TSC) was constituted in the Roads and Highways Department (RHD) to supervise the work of developing the new signs. The Committee included representatives of RHD, the Bangladesh Road Transport Authority (BRTA), the Local Government Engineering Department (LGED) and other relevant organisations. The sign proposals were then submitted to the Ministry of Communications for final approval, which was accorded in January 2000.

This Traffic Signs Manual provides the technical guidance needed to ensure that the new signs are designed and placed in a standard way. All road authorities must use the new signs, and all road users must act on the instructions and information they give. With everyone's co-operation the new signs can contribute significantly to smooth and safe travel in Bangladesh.



Mr Syed Rezaul Hayat  
Secretary, RRD  
Ministry of Communications

March 2000



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## A. Introduction

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This Traffic Signs Manual provides technical advice on the design, use, siting and manufacture of traffic signs in Bangladesh. A “traffic sign” means any object, device, line or mark on the road whose object is to convey to road users, or any specified class of road user, restrictions, prohibitions, warnings or information, of any description. The term traffic sign therefore includes not only signs on posts, but also road markings, delineators, road studs, traffic signals and other traffic control devices.

The signs described in this Manual form a new standard set of traffic signs for Bangladesh. They were chosen following a study of the signs needed for the road and traffic situation in Bangladesh, both now and in the future. Account was taken of signing practices in the region, as well as the need for the signs to conform to the provisions of the United Nations Convention on Road Signs and Signals (the Vienna Convention).

Once the new sign system has been in use for several years it will be reviewed, and amended where necessary.

For each sign, the Manual describes:

- when to use it
- what its layout or design should be
- what size it should be
- where it should be placed
- how it should be manufactured and erected

The Manual is arranged in this general order, with the first parts concerned with the principles governing the use and design of traffic signs, followed by separate sections on each of the major sign groups giving detailed information on every sign. The final sections give advice on the siting, manufacture, installation and maintenance of traffic signs.

The Manual has been written with the aim of improving the standard of traffic signing in Bangladesh in the interests of easy, safe travel. The adoption of a uniform set of signs will be a big step forward, but there must also be uniformity in their use and siting. The advice given in the Manual covers all types of roads and traffic situations, and should be followed by everyone involved in the signing of roads in Bangladesh. If further advice is needed contact the Bangladesh Road Transport Authority or the Road Safety Division of the Roads and Highways Department.

The Bangladesh Police have practical experience of managing the traffic problems on our roads, and they are also responsible for enforcing the instructions given by the regulatory signs. Their advice and support will often be helpful in ensuring that new signs are as effective as possible.

## B. Legal Aspects

The Motor Vehicles Ordinance, 1983 provides the legal basis for traffic signing in Bangladesh. The principal provisions are:

*Section 89.(1)* Government or any approved authority may erect traffic signs

*Section 89.(2)* Only those traffic signs illustrated in the Ninth Schedule of the Ordinance shall be used

*Section 89.(7)* Government can alter or add to the set of approved traffic signs in the Ninth Schedule by notice in the *official Gazette*

*Section 92* Every driver of a motor vehicle must obey the instructions given by traffic signs

The Ninth Schedule contains drawings of just 30 signs. The designs are generally outdated and important signs are missing. Because of this, many road authorities and projects have resorted to designing and installing their own traffic signs, and this has resulted in a wide variation in sign designs and practices. The Ministry of Communications intends to replace the signs in the Schedule with the set of signs described in this Manual. In the meantime, everyone is urged to use the new signs, because of the overriding importance of achieving a consistent approach to signing throughout Bangladesh.

## C. General Principles of Traffic Signs

Clear and efficient signing is an essential part of the road system, and a road with poor signing or with badly maintained signs is not functioning well. Road users depend on signing for information and guidance, and road authorities depend on signing for traffic control and regulation, and for road safety.

The key requirements for each traffic sign are that it should:

- meet a need
- command attention
- be legible
- convey a simple, clear meaning at a glance
- be placed so as to give road users time to respond
- command respect

Signs must only be used where there is a clear need for them. The incorrect or unnecessary use of a sign annoys drivers, and when this happens frequently, drivers lose respect for the sign, and it becomes ineffective in situations where it is really needed. For the same reason, avoid using signs which impose a restriction which will be very unpopular and difficult to enforce. Drivers will stop taking signs seriously when they see others ignoring them without being caught.

Using standard signs assists in their quick recognition, as does uniformity of shape, colour and lettering for each type. To obtain the full benefits of standardisation, the signs must be used in a consistent manner.

It is important that the message be presented in a simple way. The new signs make a great use of pictorial symbols, as these are much more effective than words, and can be understood by those who cannot read. Signs with words are used only where there is no alternative.

Signs must have sufficient impact to be noticed by drivers. This has been taken into account in the design of the signs, but the size and siting of the sign are also relevant. For most signs there are several permitted sizes, and it is largely the speed of the traffic at the site that determines which size is appropriate.

The symbols and legends on signs must be easy to read. This has influenced the design of the symbols, lettering, letter spacing, colours, etc., but size is again of most importance, as drivers who are travelling fast need to be able to recognise a sign from a long distance away. This means that the symbols and lettering need to be large enough to enable drivers to recognise them at the required distance.

Traffic signs must be visible at night. They should preferably be reflectorised so that they show up clearly in vehicle headlights.

Traffic signs should be constructed and erected so that they will last for many years without any attention apart from occasional cleaning.

## **D. Types of Signs**

The three main functions of traffic signs are to regulate, warn and inform. There is a different group of signs for each function, and the signs in each group have a uniform shape to help drivers recognise them quickly. The three groups are:

Regulatory Signs. These signs give orders. They tell drivers what they must not do (prohibitory), or what they must do (mandatory). Most of them take the form of a circular disc, although two signs, the Stop sign and the Give Way sign, have distinctive individual shapes.

Warning Signs. These warn drivers of some danger or difficulty on the road ahead. Most of them take the form of an equilateral triangle with point upwards.

Information Signs. Most of these signs give drivers information to enable them to find their way to their destination. It is a varied group of signs, but they are all either square or rectangular in shape.

Another important group of signs are Road Markings. These can regulate, warn and inform, and some help clarify or emphasise the message given by other signs.

The Manual also covers Traffic Signals and Supplementary Plates.

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## E. Description, Design and Use of Signs

### E1 Determining the Sign Size

Each sign can be used in one of several standard sizes. The choice of size depends on the type of site where the sign is going to be installed. At the beginning of the sub-sections for Regulatory, Warning and Information signs there is a table which gives the sign size to use for each site type. The site types are defined largely by the traffic speed. **By “traffic speed” is meant the 85<sup>th</sup> percentile speed of motor vehicle traffic, i.e., the speed which only 15% of vehicles exceed.** Ideally this should be determined from a speeds survey, but, with practice, engineers should be able to estimate it well enough from observing the traffic. It is the speed of the faster-moving vehicles at the site where the sign will be installed. Note that this is unlikely to be the same as the design speed of the road, or the signed speed limit, if any. **The site type / sign size has to be determined separately for each site.**

For some signs there is the option to use very large sizes. This is to allow for situations where it is necessary for the sign to command the attention of all drivers – because of the importance of the message or because experience has shown that drivers have been ignoring a standard-sized sign and this has led to accidents.

### E 2 Regulatory Signs

#### E2.1 Purpose and Use

Most regulatory signs are the means of putting into practical effect the regulation or control of traffic. For example, they may impose restrictions on speed, on the turning of traffic at a junction, or on waiting.

Regulatory signs are either mandatory or prohibitory.

The mandatory signs give instructions to drivers about what they must do - the Stop and Give Way signs being examples. Most other mandatory signs such as the Keep Left sign are circular with a white symbol and border on a blue background.

The prohibitory signs, of which there are many more types, give instructions to drivers about what they must not do - signs banning turns or entry being examples. Speed restriction signs and signs for parking restrictions are further examples. Most are circular and have a red border.

Regulatory signs must only be used where it is considered essential that traffic be controlled for safety reasons or for efficient use of the road system. Drivers will take more notice of them if they can see why they are needed. It is important to be realistic when setting speed restrictions. And a Stop sign should not be used where it would be safe to have a Give Way sign.

## E2.2 Sizes and Siting

Sizes of regulatory signs are given in Table 1.

**Table 1 Size of Regulatory Signs**

Site type	Diameter of sign (mm)
Signs attached to traffic signal heads	300
Sites where space is limited (e.g., on narrow traffic islands)	450
Traffic speeds up to 50 km/h – such as single carriageway town and village roads and minor rural roads	600
Traffic speeds between 50 km/h and 80 km/h	750
Sites where additional emphasis is required – because of very high speeds and / or a bad accident record	900

Stop signs, Go signs and Give Way signs are normally 750mm high.

Regulatory signs are normally sited at or near the point where the instruction applies. It is important to make sure that there is no confusion about which road they refer to. Drivers must be able to see the sign from at least 75 metres away (refer also to Table 7 in Section F) so that they have time to read the message and act on it. Regulatory signs are placed at the left-hand side of the road, but a second sign on the right-hand side may be used where extra emphasis is needed.

## E2.3 Speed Limit Signs

Speed limits should be both reasonable and enforceable. They should only be imposed where there is a clear need to control speeds for the safety of road users. Speed limits that are set unrealistically low cause drivers to lose respect for the whole signing system.

The lowest recommended speed limit is 25 km/h, and this should only be used in exceptional circumstances – such as a very narrow or temporary bridge, or where there are so many pedestrians or rickshaws that traffic must proceed very slowly. Consider using traffic calming measures, such as road humps, to reinforce the speed limit.

It is recommended that a standard speed limit of 40 km/h is applied for towns and villages where there is moderate pedestrian traffic or there is a narrow through road. Where there is a village with few pedestrians and a wide main street, the speed limit may be raised to 50 km/h. This speed limit may also apply to towns with good quality wide roads. A maximum speed limit of 60 km/h can be applied in towns, but only where there are few pedestrians, and the road is wide and of a high geometric standard.

The only speed limits that should be signed are: 25, 40, 50, 60. Do not confuse drivers by using other limits.

Be cautious about imposing speed limits over short sections, such as sharp bends - in these situations a warning sign together with delineation measures will generally have more effect than a speed limit sign.

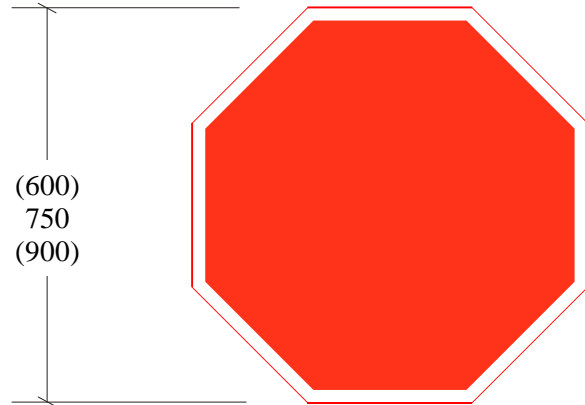
## E2.4 Schedule of Regulatory Signs

Details of each of the regulatory signs are shown on the following pages. The permissible sizes for each sign are indicated alongside the sign diagram.

A1	Stop and Give Way
A2	Give Way
A3	No Entry
A4	No Motor Vehicles
A5	No Trucks
A6	No Handcarts
A7	No Animal-Drawn Vehicles
A8	No Pedestrians
A9	No Rickshaws
A10	No Cycles
A11	No Tractors or Slow-Moving Vehicles
A12	No Vehicles Carrying Explosives
A13	No Vehicles Over Length Shown
A14	No Vehicles Over Height Shown
A15	No Vehicles Over Width Shown
A16	No Vehicles Over Maximum Gross Weight Shown
A17	Axle Weight Limit
A18	No Parking
A19	No Stopping
A20	No Overtaking
A21	No Passing Without Stopping
A22	No Right Turn
A23	No Left Turn
A24	No U Turn
A25	No Use of Horn
A26	Special Speed Limit
A27	National Speed Limits Apply
A28	Temporary Stop Sign
A29	Temporary Go Sign
A30	Restriction Ends
A31	Ahead Only
A32	Turn Left
A33	Keep Left
A34	Turn Left Ahead
A35	Small Roundabout
A36	Pass Either Side
A37	One Way Traffic
A38	One Way Street
A39	Route for (rickshaws) Only
A40	Route for Cycles Only

COLOURS:

Background : RED  
Border : WHITE



DESCRIPTION:

Octagonal sign with red background indicating stop and give way.

APPLICATION:

This sign is used at junctions where visibility is poor or it is unsafe for vehicles to enter the junction without stopping. It can also be used at rail crossings with no barriers where the visibility is very restricted. The sign instructs drivers to bring their vehicles to a complete stop and not proceed until it is safe to do so. Supplementary plate D7 **must** be added until the new signs have been in use for five years.

LOCATION:

The sign should be sited on the left hand side 1.5 metres in advance of the F1 Stop line. For additional emphasis a second sign can be put on the right hand side. When the Stop sign cannot be seen from 75 metres away a second sign with supplementary plate D1 should be installed 45 metres in advance of the Stop line. The sign must only be used when it is unsafe for vehicles to enter the major road without stopping. This depends on how far drivers can see along the major road in each direction as they approach the junction. This is called the visibility distance. If the visibility distance is less than that indicated below then there is a case for a Stop sign.

<b>Major Road Traffic Speed (km/h)</b>	50	60	80
<b>Visibility Distance (m)</b>	30	45	70

The visibility distance is measured from the minor road centre line at a point 3 metres in advance of the edge of the major road carriageway.

VARIATION:

None

**GIVE WAY**

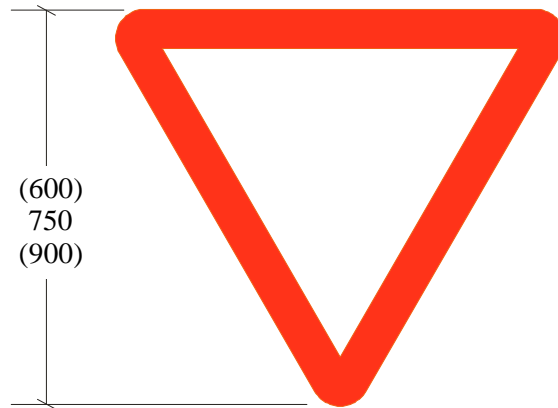
**A2**

**TRAFFIC SIGNS MANUAL**

COLOURS:

Background : WHITE

Border : RED



DESCRIPTION:

Triangular sign with point downwards having a red border and white background indicating that traffic should Give Way.

APPLICATION:

This sign is used at junctions (including roundabouts) to indicate who has priority - and where the visibility is sufficiently good not to need a Stop sign. The sign instructs drivers not to proceed unless the way is clear. The sign can also be used at rail crossings with no barriers, and where the road is too narrow for two way traffic, such as at single track bridges - in which case the Give Way sign is only displayed on one approach. Supplementary plate D8 **must** be added until the new signs have been in use for five years.

LOCATION:

The sign must only be used in conjunction with an F2 Give Way line. The sign should be sited on the left hand side of the road about 1.5 metres in advance of the Give Way line. For greater emphasis an additional sign can be put on the right hand side. When the Give Way sign cannot be seen from 75 metres away a second sign with supplementary plate D1 should be installed 45 metres in advance of the Give Way line.

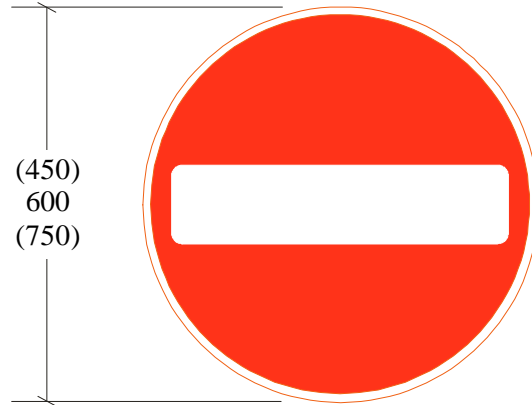
VARIATION:

None.



COLOURS:

Background : RED  
Border, : WHITE  
central bar



DESCRIPTION:

Circular sign with red background and white bar across centre indicating no entry for traffic ahead.

APPLICATION:

The sign indicates that vehicular traffic is prohibited from entering the road ahead. The sign applies to all vehicles including cycles, rickshaws and carts. Supplementary plate D17 **must** be added until the new signs have been in use for five years.

LOCATION:

The signs should be located at a junction, so that vehicles can take an alternative route. They are put on both sides of the entrance to the road to which entry is prohibited. The signs should be easily seen and if necessary they should be angled so that they directly face oncoming traffic.

VARIATION:

None.

COLOURS:

Background : WHITE

Border,  
diagonal : RED

Vehicles : BLACK



DESCRIPTION:

Circular sign with symbols of a motorcycle above a car overlaid by a red diagonal line from top left to bottom right indicating no motor vehicles.

APPLICATION:

This sign indicates areas where **motorised** vehicles are prohibited. Cycles and rickshaws are acceptable in these areas. The sign is usually used in urban areas. An example of this would be a market area.

LOCATION:

Signs to be located to allow motorised vehicles to use an alternative route. The sign should be displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

None.

COLOURS:

Background : WHITE

Border,  
diagonal : RED

Vehicle : BLACK



DESCRIPTION:

Circular sign with a symbol of a truck overlaid by a red diagonal line from top left to bottom right indicating no trucks.

APPLICATION:

The sign indicates where trucks are prohibited and will mostly be used in urban areas. An example of this would be a narrow road where there is difficulty for vehicles wider than cars to pass each other. The sign can be used to prevent truck nuisance in residential areas.

LOCATION:

Signs to be located to allow trucks to use an alternative route. The sign should be displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

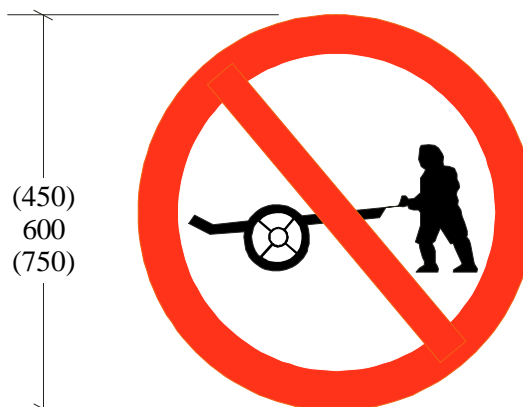
None.

**COLOURS:**

Background : WHITE

Border, diagonal : RED

Handcart : BLACK



**DESCRIPTION:**

Circular sign with a symbol of a handcart overlaid by a red diagonal line from top left to bottom right indicating no handcarts.

**APPLICATION:**

The sign indicates areas where handcarts are prohibited and will usually be used in urban areas. An example of this would be a narrow road where a slow moving handcart would cause considerable congestion.

**LOCATION:**

Signs to be located to allow handcarts to use an alternative route. The sign should be displayed on the left hand side of the road at the beginning of the restriction.

**VARIATION:**

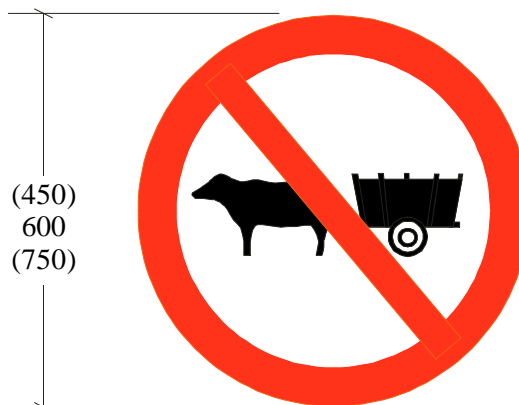
None.

COLOURS:

Background : WHITE

Border,  
diagonal : RED

Bullock Cart : BLACK



DESCRIPTION:

Circular sign with a symbol of a bullock cart overlaid by a red diagonal line from top left to bottom right indicating no animal-drawn vehicles.

APPLICATION:

This sign indicates areas where animal-drawn carts are prohibited and will usually be used in urban areas. An example of this would be a narrow street where a slow moving cart would cause considerable congestion.

LOCATION:

Signs to be located to allow drivers of carts to use an alternative route. The sign should be displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

None.

**COLOURS:**

Background : WHITE

Border,  
diagonal : RED

Pedestrian : BLACK



**DESCRIPTION:**

Circular sign with a symbol of a pedestrian overlaid by a red diagonal line from top left to bottom right indicating no pedestrians.

**APPLICATION:**

This sign indicates sections of road where pedestrians are prohibited, such as certain bridges or flyovers where separate provision has been made for pedestrians. The sign is likely to be ignored unless it is only used in areas where it is considered absolutely necessary.

**LOCATION:**

Signs to be located to allow pedestrians to use an alternative route. The sign should be highly visible and be displayed on the left hand side of the road at the beginning of the restriction.

**VARIATION:**

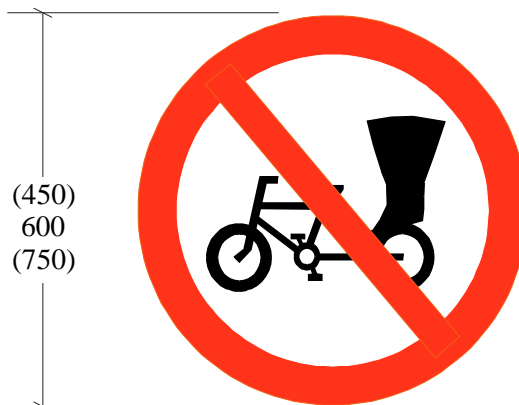
None.

COLOURS:

Background : WHITE

Border,  
diagonal : RED

Rickshaw : BLACK



DESCRIPTION:

Circular sign with a symbol of a cycle rickshaw overlaid by a red diagonal line from top left to bottom right indicating no rickshaws.

APPLICATION:

This sign indicates areas where rickshaws are prohibited and will usually be used in urban areas. An example of this would be a main road where it is desirable to exclude rickshaws in order to maximise traffic capacity and prevent accidents. The sign is likely to be ignored unless it is only used in areas where it is considered absolutely necessary.

LOCATION:

Signs to be located to allow rickshaws to use an alternative route. The sign should be highly visible and be displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

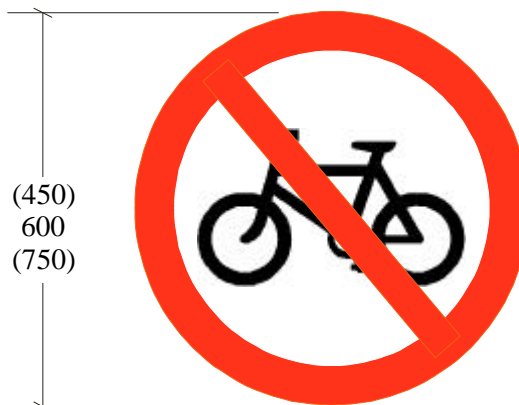
None.

**COLOURS:**

Background : WHITE

Border,  
diagonal : RED

Cycle : BLACK



**DESCRIPTION:**

Circular sign with a symbol of a pedal cycle overlaid by a red diagonal line from top left to bottom right indicating no cycles.

**APPLICATION:**

This sign indicates areas where cycles are prohibited and will usually be used in urban areas. An example of this would be a main road where it is desirable to exclude cycles in order to maximise traffic capacity and prevent accidents. The sign is likely to be ignored unless it is only used in areas where it is considered absolutely necessary.

**LOCATION:**

Signs to be located to allow cycles to use an alternative route. The sign should be highly visible and be displayed on the left hand side of the road at the beginning of the restriction.

**VARIATION:**

None.



COLOURS:

Background : WHITE

Border,  
diagonal : RED

Tractor : BLACK



DESCRIPTION:

Circular sign with a symbol of a tractor overlaid by a red diagonal line from top left to bottom right indicating no tractors or slow-moving vehicles.

APPLICATION:

This sign indicates areas where tractors and slow-moving vehicles are prohibited. An example of this would be a main road where it is desirable to exclude slow-moving vehicles in order to maximise traffic capacity and prevent accidents. The sign is likely to be ignored unless it is only used in areas where it is considered absolutely necessary.

LOCATION:

Signs to be located to allow tractors and slow-moving vehicles to use an alternative route. The sign should be highly visible and be displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

None.

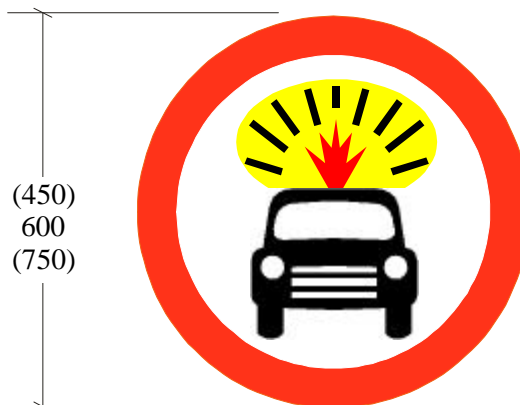
**NO VEHICLES  
CARRYING EXPLOSIVES**

**A12**

**TRAFFIC SIGNS MANUAL**

COLOURS:

- Background : WHITE
- Border : RED
- Vehicle : BLACK
- Explosion : RED FLAME  
YELLOW CLOUD  
BLACK BLAST MARKS



DESCRIPTION:

Circular sign with a symbol of an exploding vehicle indicating no vehicles carrying explosives.

APPLICATION:

This sign indicates areas where vehicles carrying explosives are prohibited. It is used in those rare situations where an accidental explosion could have disastrous consequences, such as at or near oil or gas installations or other hazardous sites. The sign should only be used where there is a significant risk.

LOCATION:

The sign should be highly visible and be displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

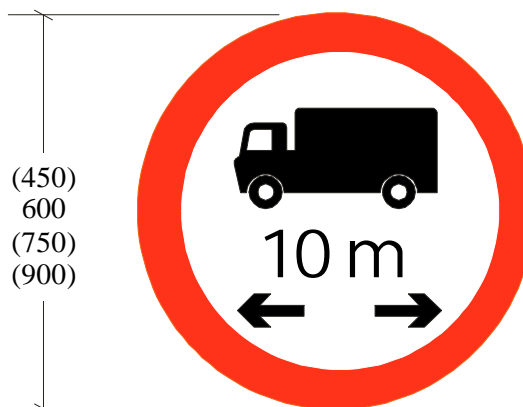
None.

COLOURS:

Background : WHITE

Border : RED

Vehicle,  
text, arrows : BLACK



DESCRIPTION:

Circular sign with a symbol of a truck with numbers and arrows beneath indicating the maximum length of truck allowed to use the road ahead.

APPLICATION:

This sign indicates areas where vehicles over the length indicated are prohibited. An example would be where the geometry of the road ahead is too tight to allow vehicles over the length indicated to pass. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

Signs to be located to allow prohibited vehicles to use an alternative route. The sign should be highly visible and displayed on the left hand side of the road at the beginning of the restriction.

VARIATION:

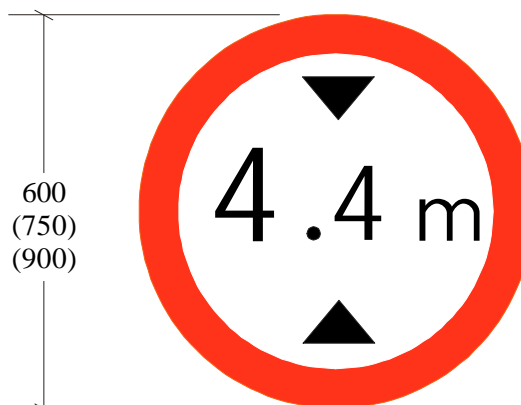
None.

COLOURS:

Background : WHITE

Border : RED

Text, arrows : BLACK



DESCRIPTION:

Circular sign with numbers and arrow heads indicating maximum height available due to an obstruction ahead.

APPLICATION:

This sign indicates where vehicles over the height indicated will not be able to negotiate the obstruction ahead. It is always used with the Height Limit Ahead sign (B20) which is sited in advance of the sign and will have the same number on it. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The sign should be highly visible. The best position will be on the obstruction at a point above the centre of the carriageway. An additional sign may be placed on the left hand side on or near the obstruction.

VARIATION:

None.

COLOURS:

Background : WHITE  
Border : RED  
Text, arrows : BLACK



DESCRIPTION:

Circular sign with numbers and arrow heads indicating maximum width of the vehicle.

APPLICATION:

This sign indicates that vehicles over the width indicated are prohibited on the road ahead because of an obstruction which limits the width of the carriageway. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The sign should be highly visible and should be located on the left hand side of the road at or near the obstruction.

VARIATION:

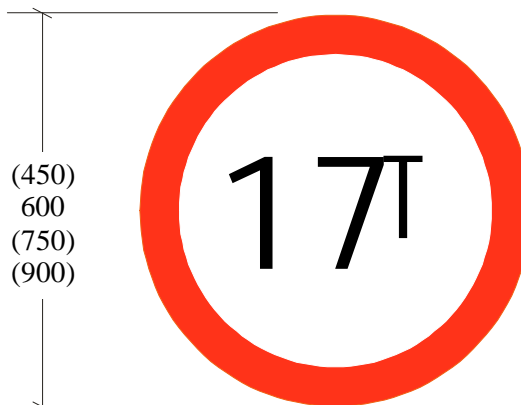
None.

COLOURS:

Background : WHITE

Border : RED

Text : BLACK



DESCRIPTION:

Circular sign with numbers indicating weight limit for the road ahead.

APPLICATION:

This sign indicates where vehicles over the gross weight indicated in tonnes are prohibited on the road ahead. It is usually used at bridges and other structures which cannot safely support heavy vehicles. It can be used to keep heavy trucks off unsuitable roads. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

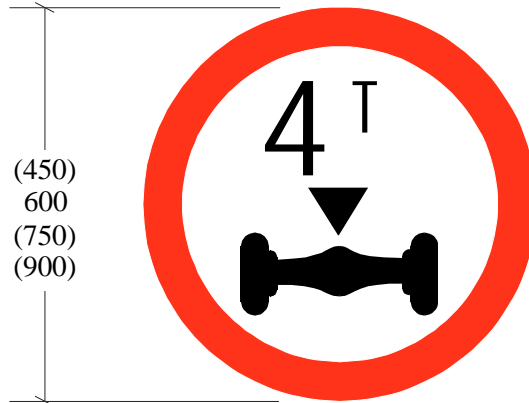
Signs to be located to allow prohibited vehicles to use an alternative route. The sign should be placed on the left hand side of the road at the point where the restriction starts.

VARIATION:

None.

COLOURS:

Background : WHITE  
Border : RED  
Symbol, text, arrow : BLACK



DESCRIPTION:

Circular sign with numbers with the weight limit in tonnes above a symbol of an axle indicating the axle weight limit ahead.

APPLICATION:

This sign indicates where vehicles with an axle weight over the axle weight indicated are prohibited. This will usually be as a result of restrictions on a bridge. It is often more appropriate to specify the maximum safe load of a structure in terms of axle weight rather than laden weight. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

Signs to be located to allow prohibited vehicles to use an alternative route. The sign should be located on the left hand side of the road at the point where the restrictions start.

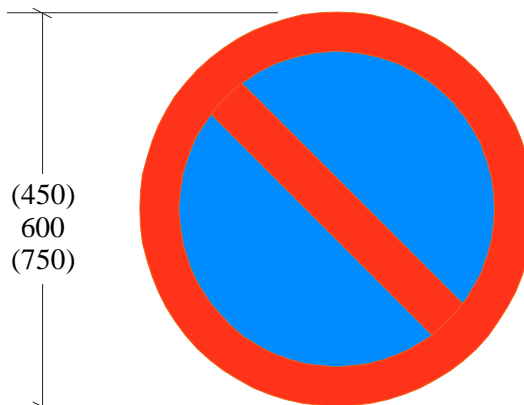
VARIATION:

None.

COLOURS:

Background : BLUE

Border,  
diagonal : RED



DESCRIPTION:

Circular sign with blue background and a red diagonal line from top left to bottom right indicates no "parking" of any vehicle is allowed. "Parking" means keeping a vehicle stationary for any time longer than is necessary to pick up or set down persons or to load or unload goods.

APPLICATION:

This sign demarcates areas where parking is prohibited at all times. The restriction only applies to the side of the road on which the sign is placed. It should only be used where there would be a serious parking problem such as on a narrow, busy street or too close to a major junction. The No Parking line marking (F11) should be used wherever restrictions apply. Where there are many parking restrictions in a small area it may be sufficient to use No Parking lines (F11) and no signs. Supplementary plate D2 may be used to indicate over what distance the restriction is applicable. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The sign is displayed on the side of the road to which it is applicable. The sign should be repeated at each major junction and at 200 metre intervals between junctions.

VARIATION:

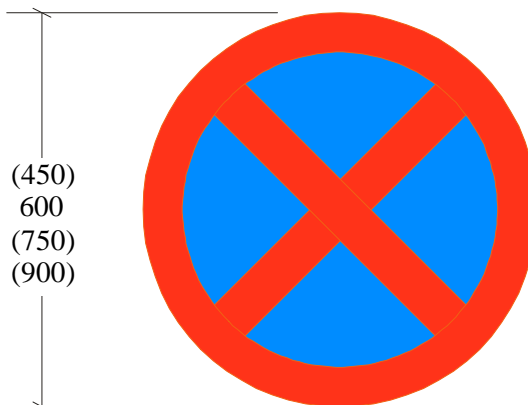
None.



COLOURS:

Background : BLUE

Border,  
diagonals : RED



DESCRIPTION:

Circular sign with two red diagonal lines crossing at right angles to each other indicating that "stopping" is not allowed. "Stopping" means keeping a vehicle stationary for the time needed to pick up or set down persons or to load or unload goods.

APPLICATION:

This sign demarcates the areas where stopping and waiting is not allowed. It is used in urban areas where it is essential to ban vehicles from stopping, e.g., on heavily-trafficked or high-speed roads where stopping would cause congestion and accidents. Supplementary plate D2 may also be used to indicate the distance over which the restriction is applicable. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

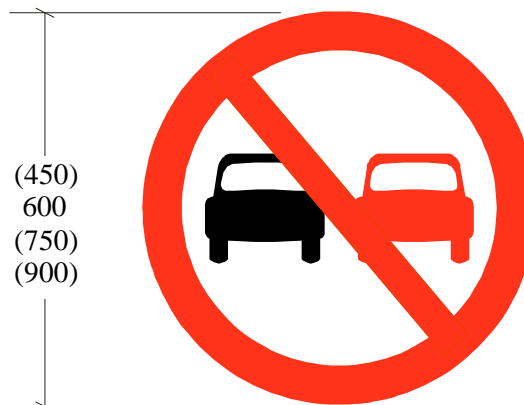
LOCATION:

The sign should be displayed on both sides of the road at the beginning of the restriction. The sign should be repeated after junctions and every 400 metres between junctions.

VARIATION:

COLOURS:

Background : WHITE  
 Border, diagonal : RED  
 Cars : left-hand BLACK  
           right-hand RED



DESCRIPTION:

Circular sign with two car symbols overlaid by a red diagonal line from top left to bottom right indicating that overtaking is prohibited.

APPLICATION:

This sign indicates to drivers that they are not allowed to overtake motor vehicles travelling in the same direction. The sign is only used where overtaking would be extremely dangerous, such as at busy priority junctions on high-speed roads, and / or where there is a bad record of overtaking accidents. Normally the F6 Barrier Line road marking is used on its own to prohibit overtaking in unsafe situations.

LOCATION:

The sign should be displayed on the left hand side of the road at the beginning of the no overtaking restriction. The sign should be repeated after every junction and every 400 metres between junctions. The end of the overtaking restriction is to be marked by an A30 Restriction Ends sign.

VARIATION:

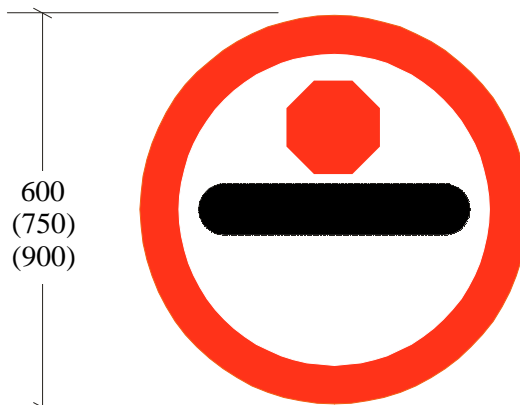
None.

COLOURS:

Background : WHITE

Border,  
symbol : RED

Bar : BLACK



DESCRIPTION:

Circular sign with small STOP sign underlined by a bar indicating that all vehicles must stop before passing.

APPLICATION:

Used on roads other than junctions or roundabouts where it is a requirement to stop before passing. An example would be at a customs checkpoint. The sign would normally be used with warning sign B37. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The sign should be displayed at the point where vehicles have to stop.

VARIATION:

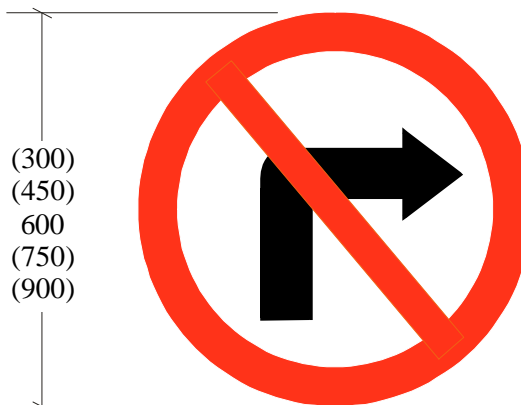
An inscription such as CUSTOMS or POLICE written in Bangla may included below the black bar.

COLOURS:

Background : WHITE

Border,  
diagonal : RED

Arrow : BLACK



DESCRIPTION:

Circular sign with right turn arrow overlaid by a red diagonal from top left to bottom right indicating no right turn.

APPLICATION:

Where turning right into a side road at a junction is prohibited. This normally occurs where either the side road is one way in the opposite direction or vehicles waiting to turn right would cause traffic congestion.

LOCATION:

The sign should be displayed before the junction and be positioned on the left hand side of the road for a single carriageway. On a dual carriageway the sign should be put on the median. At signalized junctions a 300mm diameter sign should be mounted alongside and to the right of the green signal.

VARIATION:

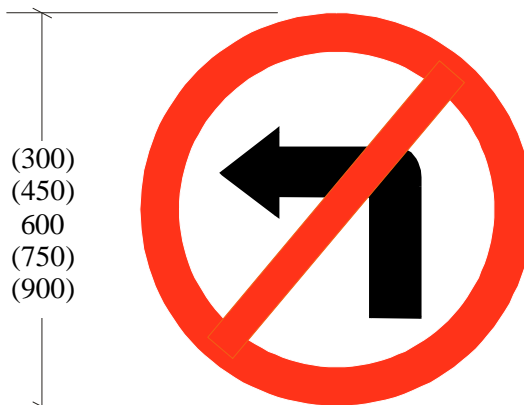
None.

**COLOURS:**

Background : WHITE

Border,  
diagonal : RED

Arrow : BLACK



**DESCRIPTION:**

Circular sign with left turn arrow overlaid by red diagonal from top right to bottom left indicating no left turn.

**APPLICATION:**

Where turning left into a side road at a junction is prohibited. This will normally occur where the side road is one way in the opposite direction.

**LOCATION:**

The sign should be displayed before the junction and be positioned on the left hand side of the road. At signalized junctions a 300mm diameter sign should be mounted alongside and to the left of the green signal.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE

Border,  
diagonal : RED

Arrow : BLACK



**DESCRIPTION:**

Circular sign with U turn arrow overlaid by red diagonal from top right to bottom left indicating no U turns.

**APPLICATION:**

Where it is prohibited for vehicles to reverse their direction by making a U turn. This will usually be because the manoeuvre is dangerous or will cause congestion, such as at a gap in the median on a high-speed road, or at a busy junction.

**LOCATION:**

The sign should be sited on the left hand side of the road at the point where the turn would be made. On a dual carriageway the sign should be positioned on the median. At signalized junctions a 300mm diameter sign should be mounted alongside and to the right of the green signal.

**VARIATION:**

None.

COLOURS:

Background : WHITE

Border,  
diagonal : RED

Horn : BLACK



DESCRIPTION:

Circular sign with a symbol of a horn overlaid by red diagonal from top left to bottom right indicating that the use of vehicle horns is prohibited.

APPLICATION:

This sign is used outside hospitals in particular and elsewhere in built-up areas where the use of vehicle horns is prohibited.

LOCATION:

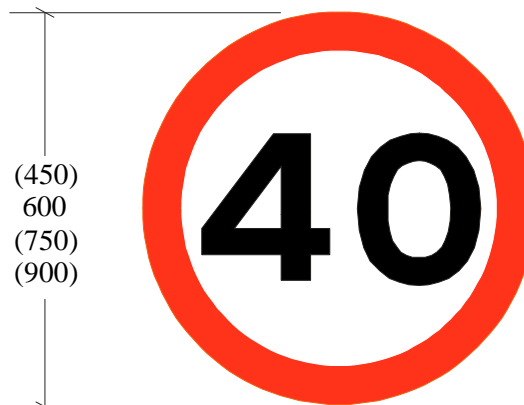
The sign should be displayed on the left hand side of the road at the beginning of the restriction and repeated after each major junction.

VARIATION:

None.

COLOURS:

Background : WHITE  
Border : RED  
Number : BLACK



DESCRIPTION:

Circular sign with numbers indicating the speed limit.

APPLICATION:

The sign shows the maximum permitted speed in kilometres per hour for the section of road ahead. Do not impose a speed limit unless it is essential for road safety. Unrealistically low speed restrictions will be ignored, which will make the signing look silly. Only use limits of 25, 40, 50, and 60 - see Section E2.3. Always ensure that the end of the speed restricted section is marked, either with the A27 sign or with another A26 sign indicating a different speed limit. Where the special speed limit is to apply only to a particular type of vehicle this should be indicated on a supplementary plate - such as D20 or D21. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The sign should be positioned on both sides of the road, for maximum impact. The sign should be repeated after every major junction and about every 400 metres between junctions. The 40 km/h signs are not usually repeated in towns.

VARIATION:

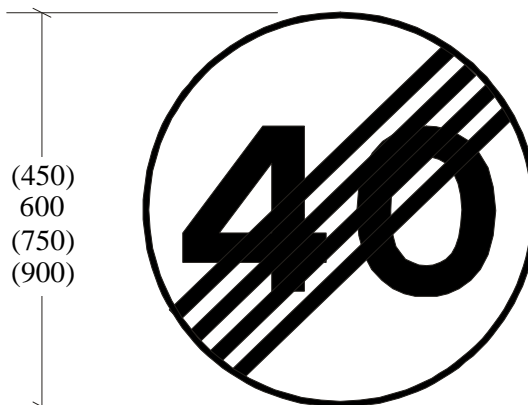
None.



COLOURS:

Background : WHITE

Diagonals, : BLACK  
numbers



DESCRIPTION:

Circular sign with four narrow diagonals from top right to bottom left, and numbers indicating end of speed restriction.

APPLICATION:

The sign should be used to mark the end of a speed restriction. National speed limits apply for the section of road ahead. The speed limit shown must be the same as on the preceding A26 sign. Omission of the sign will cause uncertainty with drivers who will not know where the national speed limits apply. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

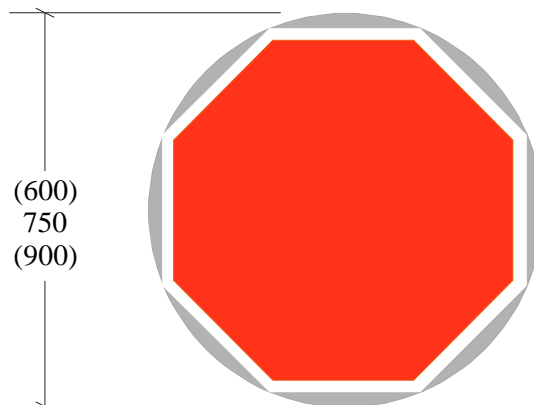
The sign should be positioned on both sides of the road. It is usually mounted back to back with the A26 sign.

VARIATION:

None.

COLOURS:

Background : RED  
Border : WHITE  
Sign plate : GREY



DESCRIPTION:

Circular sign with red octagon symbol. It is used as a temporary stop sign.

APPLICATION:

The sign is mostly used to control traffic where one-way working is temporarily necessary, such as at roadworks. It forms one side of a manually operated stop/go board. It can also be used by police officers and other authorised persons to tell vehicles to stop. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

See section E7 Signs at Roadworks for guidance on how and where temporary traffic control should be used.

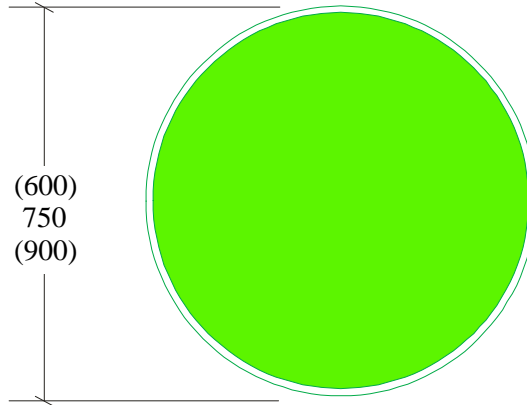
VARIATION:

None.

COLOURS:

Background : GREEN

Border : WHITE



DESCRIPTION:

Circular sign with green disk.

APPLICATION:

The sign is mostly used to control traffic at one-way working, such as at roadworks. It forms one side of a manually operated stop/go board. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

See section E7 Signs at Roadworks for guidance on how and where temporary traffic control should be used.

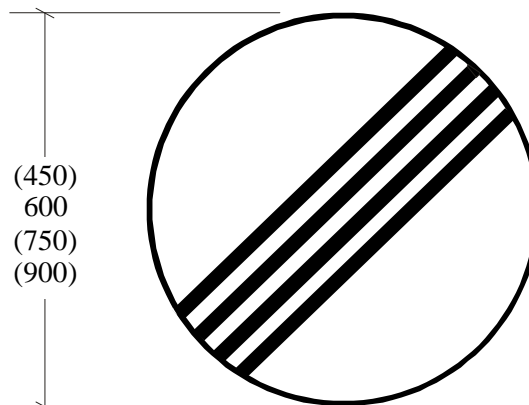
VARIATION:

None.

COLOURS:

Background : WHITE

Border,  
diagonals : BLACK



DESCRIPTION:

Circular sign with four narrow diagonals from top right to bottom left indicating end of restriction.

APPLICATION:

This sign is used at the end of a restriction other than a speed limit. A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The sign should be highly visible and displayed on the left hand side of the road at the end of the restriction.

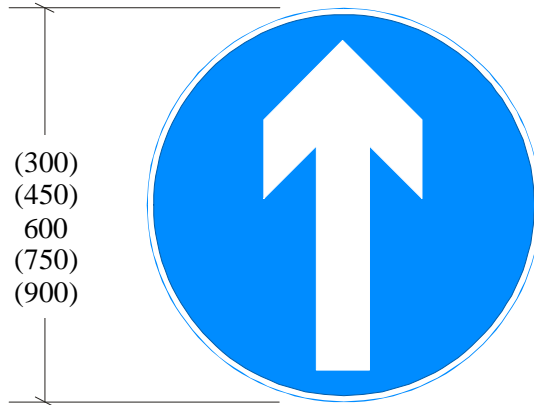
VARIATION:

Where there is likely to be confusion about which restriction the sign refers to, a full-size light grey coloured copy of the restriction sign may be incorporated.

COLOURS:

Background : BLUE

Border,  
arrow : WHITE



DESCRIPTION:

Circular sign with single arrow indicating ahead only.

APPLICATION:

This sign indicates that at the junction vehicular traffic may proceed in a forward direction only. Typically the sign will be used at the approach to a junction in a one way system to indicate the direction of traffic flow. Supplementary plate D13 One Way may be added to explain why the sign is being used.

LOCATION:

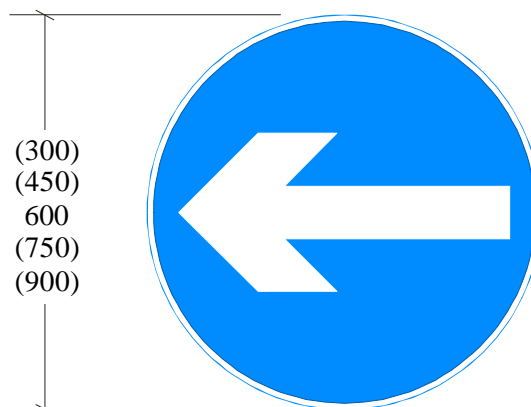
The sign should be sited on both sides of the road before a junction where the only permitted traffic movement is ahead.

VARIATION:

None.

COLOURS:

Background : BLUE  
Border, : WHITE  
arrow



DESCRIPTION:

Circular sign with single arrow indicating the direction to be followed at a junction.

APPLICATION:

Vehicular traffic may only proceed in the direction indicated by the arrow. Typically the sign will be used at a junction in a one way system. It is also commonly used on roundabout central islands (opposite entrances) to stop drivers going the wrong way round the roundabout. Another use is to indicate the direction of flow to traffic joining a dual carriageway from a side road.

LOCATION:

The sign should be seen clearly and easily. When used on traffic islands it may be mounted with the lower edge 1 metre above the carriageway so that it is directly in the beam of vehicle headlights.

VARIATION:

Arrow may point to the right.

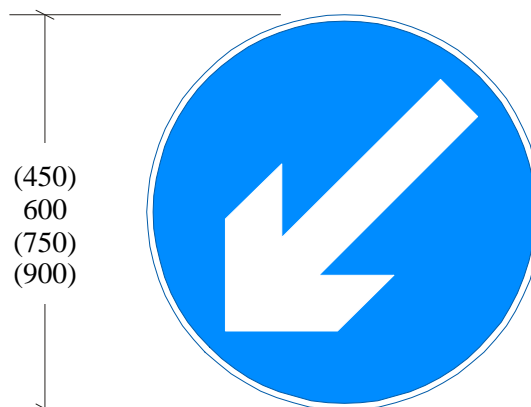
**KEEP LEFT**  
(right if arrow points right)

**A33**

**TRAFFIC SIGNS MANUAL**

COLOURS:

Background : BLUE  
Border, : WHITE  
arrow



DESCRIPTION:

Circular sign with single arrow to indicate Keep Left (or Right if the arrow points right).

APPLICATION:

Vehicular traffic may only proceed by keeping to the side indicated by the arrow. The sign is used to mark obstructions, such as traffic islands, medians on dual carriageways, and work areas at roadworks. The Keep Right sign is only used at temporary roadworks.

LOCATION:

The sign must be placed on or close to the beginning of the obstruction with adequate clearance between the sign and the edge of the carriageway. When used on traffic islands it may be mounted with the lower edge 1 metre above the carriageway so that it is directly in the beam of vehicle headlights.

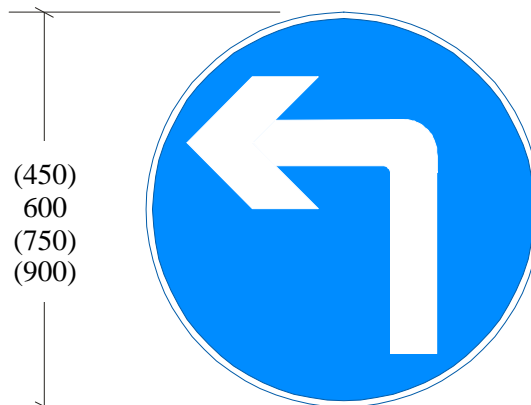
VARIATION:

Arrow may point downwards to the right, to indicate Keep Right.

COLOURS:

Background : BLUE

Border, : WHITE  
arrow



DESCRIPTION:

Circular sign with single arrow indicates Turn Left (or Right) ahead.

APPLICATION:

The sign gives advance warning that vehicular traffic must turn ahead in the direction indicated by the arrow. Supplementary plates D13 One Way or D14 Dual Carriageway may be attached to the post below the sign. There must be an A32 Turn Left (Right) sign at the point where the turn is made.

LOCATION:

The signs should normally be sited on the left hand side of the road about 30 - 50 metres in advance of the junction.

VARIATION:

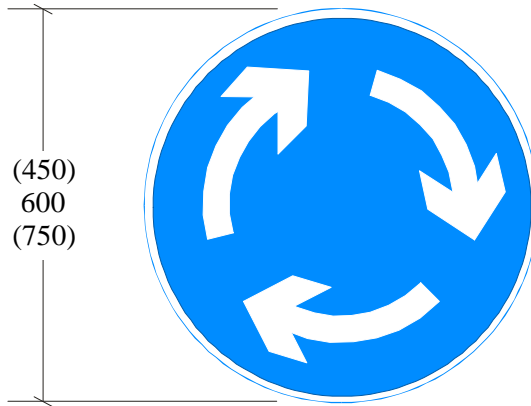
Arrow may point to the right.



COLOURS:

Background : BLUE

Border, : WHITE  
arrows



DESCRIPTION:

Circular sign with three curved arrows signifying a roundabout.

APPLICATION:

This sign indicates that drivers must give way to vehicles entering the roundabout from the right and then proceed in the direction of the arrows. It is used in place of A2 Give Way signs at situations where it is not obvious to drivers that they are entering a roundabout - such as where the centre island is only marked in paint on the carriageway.

LOCATION:

The sign is to be located on the left hand side about 1.5 metres in advance of the F2 Give Way line. A B9 warning sign must be used in advance of the roundabout if there is no C28map-type advance direction sign.

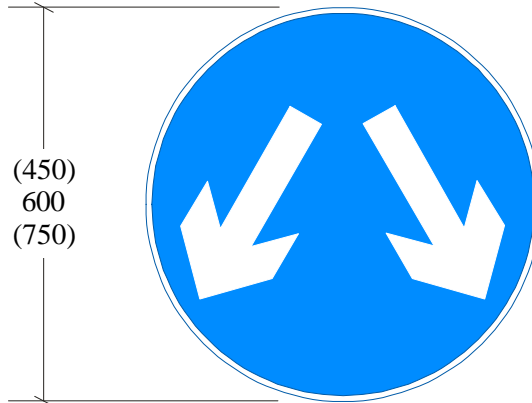
VARIATION:

None.

COLOURS:

Background : BLUE

Border,  
arrows : WHITE



DESCRIPTION:

Circular sign with two arrows pointing downwards and outwards allowing traffic to pass either side.

APPLICATION:

This sign indicates vehicular traffic may reach the same destination by proceeding either side of the sign. The sign is used to mark obstructions such as a traffic island, bridge pier or areas at roadworks - but only where the traffic will merge again once it has got past the obstruction.

LOCATION:

To be effective the sign must be placed at the beginning of the obstruction with adequate clearance between the sign and the road edge. When used on traffic islands it may be mounted with the lower edge 1 metre above the carriageway so that it is directly in the beam of vehicle headlights.

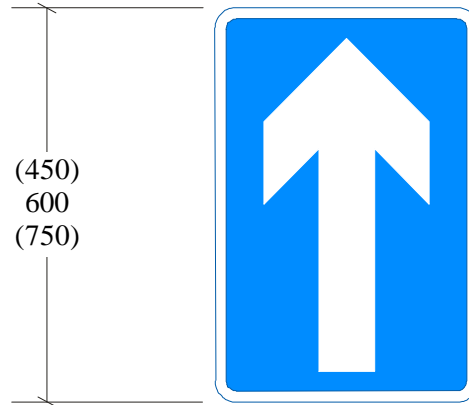
VARIATION:

None.

COLOURS:

Background : BLUE

Border,  
arrow : WHITE



DESCRIPTION:

Rectangular sign with vertical upward pointing arrow indicating ahead only.

APPLICATION:

This sign is to be used to indicate one way traffic only. It is not used at junctions - see sign A31.

LOCATION:

The sign should be sited on both sides of the road at the beginning of the one way system, and then every 100 metres thereafter. Refer to Figure 12 in Section F.

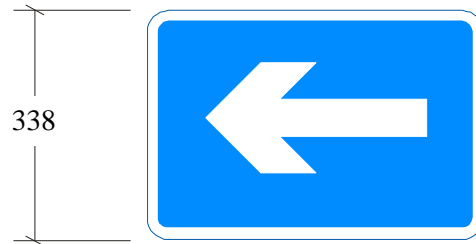
VARIATION:

None.

COLOURS:

Background : BLUE

Border,  
arrow : WHITE



DESCRIPTION:

Rectangular sign with arrow indicating direction of permitted travel.

APPLICATION:

This sign is used to remind road users that they are on a one way street. The sign is particularly useful when it is placed at a pedestrian crossing or opposite a well-used private access. However, sign A32 should be used at exits from petrol stations and car parks.

LOCATION:

The sign should be mounted parallel to the traffic flow, with the arrow pointing in the direction of travel. It can be put on one or both sides of the road, as appropriate. Refer to Figure 12 in Section F.

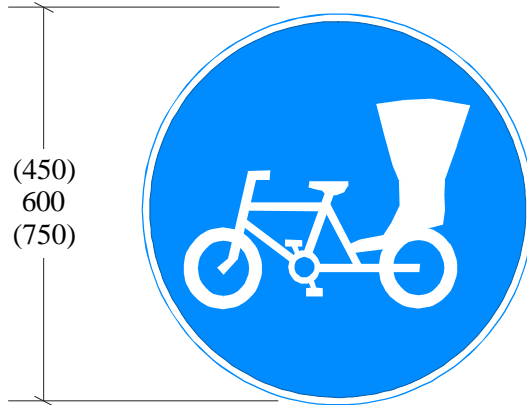
VARIATION:

Arrow may be reversed.

COLOURS:

Background : BLUE

Border,  
symbol : WHITE



DESCRIPTION:

Circular sign with symbol of a vehicle type.

APPLICATION:

This sign is used to notify the drivers of vehicles of one or more types that the route, track or lane ahead is reserved for them and that they must use it. The sign depicted here applies to cycle rickshaws. With the use of the appropriate vehicle symbol it could be made to apply to buses, trucks, motorcycles, baby taxis, or a combination of these.

LOCATION:

The sign is placed at the start of the reserved route, and after every major access point.

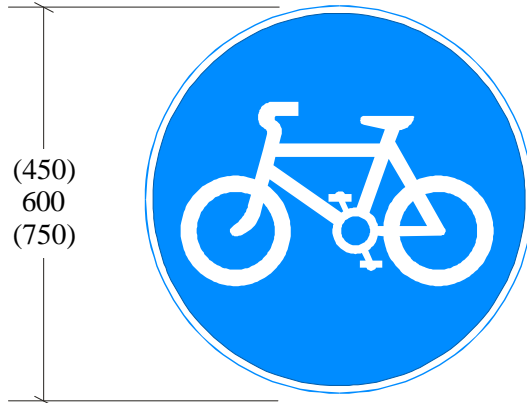
VARIATION:

Symbol may be replaced by those for other vehicle types - either singly or in combination.

COLOURS:

Background : BLUE

Border,  
symbol : WHITE



DESCRIPTION:

Circular sign with symbol of a pedal cycle.

APPLICATION:

This sign is used to notify cyclists that the route, track or lane ahead is reserved for them and that they must use it.

LOCATION:

The sign is placed at the start of the reserved route, and after every major access point.

VARIATION:

None.

## E3 Warning Signs

### E3.1 Purpose and Use

Warning signs are used to alert drivers to danger or potential danger ahead. They indicate a need for extra caution by road users and may require a reduction in speed or other manoeuvre. This section contains advice on when to use each sign.

Adequate warning signs can greatly assist road safety. To be most effective however, they should be used sparingly. Their frequent use to warn of conditions which are otherwise readily apparent tends to detract from their effectiveness.

Do not use warning signs in situations where the problem is obvious, or is so minor that no extra care is necessary. If they are over-used, drivers will lose respect for them. This is particularly true when specifying signs for urban roads. Side road junctions for example are not usually a danger when traffic speeds are low.

Warning signs are very important at roadworks. See Section E7 for guidance on when and how to use them.

Most warning signs are triangular in shape with a red border encompassing a black symbol on a white background. The black symbol represents the hazard. Sometimes additional information is put onto a supplementary plate below the main sign.

Drivers must be able to see the sign from at least 75 metres away (refer also to Table 7 in Section F) so that they have time to read the message and act on it. Warning signs are placed at the left-hand side of the road.

It takes time for a driver to act on the message given by a sign and slow the vehicle down to a safe speed. Therefore signs must be sited sufficiently far ahead of the hazard to allow for this. Signs must also be large enough to be read clearly by drivers travelling at above average speeds. Table 2 gives the sizes and siting distances for each site type. If it is necessary to site the sign away from the standard position, the distance to the hazard should be indicated on the supplementary plate D1.

**Table 2 Size and Siting of Warning Signs**

Site type	Height of triangle (mm)	Distance of sign from hazard (m)
Traffic speeds up to 50 km/h – such as single carriageway town and village roads and minor rural roads	600	45
Traffic speeds between 50 km/h and 70 km/h	750	90
Traffic speeds between 70 km/h and 80 km/h	900	150
Sites where additional emphasis is required – because of very high speeds and / or a bad accident record	1200	150-200

Some non-standard warning signs are sized and sited differently, and, where this is the case, the necessary information will be given on the sign page.

### **E3.2 Schedule of Warning Signs**

Details of each of the warning signs are shown on the following pages. The permissible sizes for each sign are indicated alongside the sign diagram.

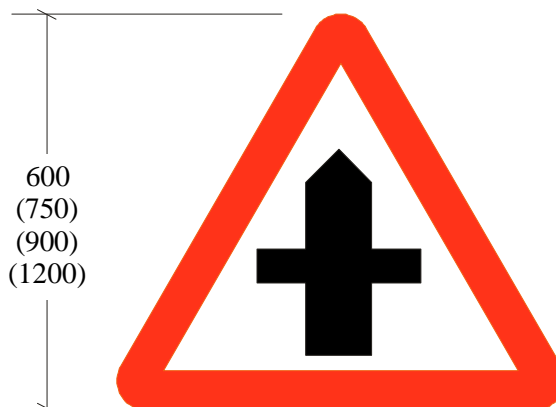
B1	Crossroads
B2	Major Road Ahead (Crossroads)
B3	Side Road Right
B4	Staggered Junction
B5	T Junction
B6	Y Junction
B7	Traffic Merges From Left
B8	Merge with Traffic From Right
B9	Roundabout
B10	Sharp Bend to the Right
B11	Hairpin Bend to Right
B12	Double Bend First Left
B13	Sharp Change of Direction to the Left
B14	Road Narrows on Both Sides
B15	Road Narrows on the Right
B16	Dual Carriageway Ends
B17	Traffic Signals
B18	Steep Hill Downwards
B19	Steep Hill Upwards
B20	Height Limit Ahead
B21	Two Way Traffic Straight Ahead
B22	Two Way Traffic Crosses One Way Road
B23	Pedestrian Crossing
B24	Pedestrians in Road Ahead
B25	Children
B26	Cattle
B27	Wild Animals
B28	River Bank
B29	Uneven Road
B30	Slippery Road
B31	Road Hump
B32	Low Flying Aircraft
B33	Falling Rocks
B34	Dangerous Dip
B35	Narrow Bridge
B36	Other Danger
B37	Checkpoint
B38	Road Works
B39	Loose Chippings
B40	Cycles and Rickshaws
B41	Dangerous Shoulder



- B42 Ferry
- B43 Blind Persons
- B44 Railway Level Crossing without Gate or Barrier
- B45 Railway Level Crossing with Gate or Barrier
- B46 Count-down Markers
- B47 Location of Railway Crossing
- B48 T Junction Chevron
- B49 Dangerous Obstruction (one-sided)
- B50 Dangerous Obstruction (two-sided)
- B51 Temporary Diversion Ahead
- B52 Layout of Temporary Traffic Diversion Ahead
- B53 Direction of Temporary Diversion
- B54 Lane Closed to Traffic Ahead (temporary)
- B55 Sharp Change of Direction (temporary diversion)
- B56 Delineator Post
- B57 Flood Gauge

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol indicating crossroad with minor road.

**APPLICATION:**

This sign warns that there is a crossroads ahead - with a minor road. The sign will not be required where advance direction signs are used, or at junctions controlled by traffic signals.

**LOCATION:**

The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

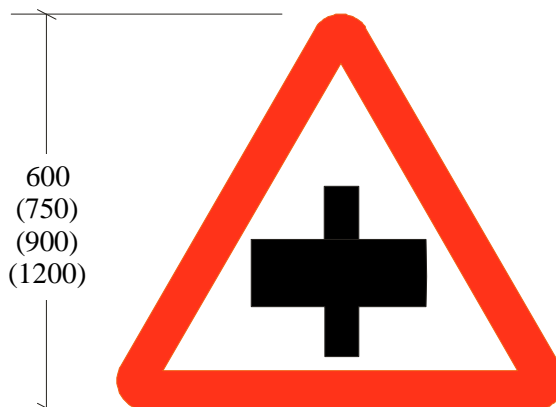
None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol indicating major crossroad.

**APPLICATION:**

This sign warns that there is a crossroads ahead - with a major road. The sign will not be required where advance direction signs are used or at junctions controlled by traffic signals.

**LOCATION:**

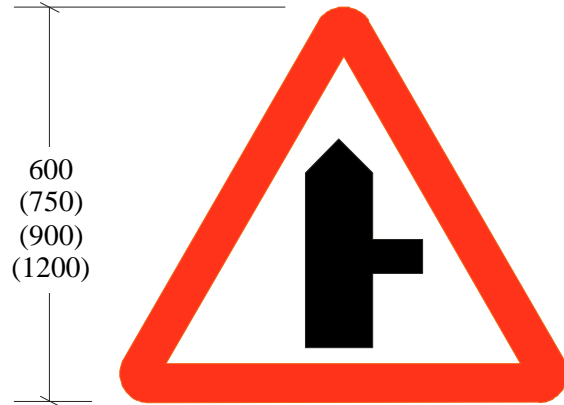
The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol indicating a junction with a minor road to the right (left).

**APPLICATION:**

This sign warns that there is a junction ahead with a side road on the right (left if symbol reversed). The sign will not be required where advance direction signs are used, or at junctions controlled by traffic signals. Minor side roads in towns and villages should not be signed unless there is a safety problem.

**LOCATION:**

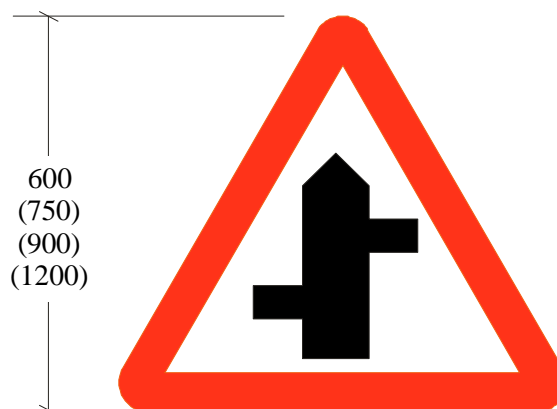
The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

Symbol may be reversed to indicate a minor road to the left.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing staggered junction with two minor roads.

**APPLICATION:**

This sign warns that there is a staggered junction with minor side roads to the left and right ahead. The distance between the two side roads should be less than 200 metres otherwise the side roads should be signed separately. The sign will not be required where advance direction signs are used, or at junctions controlled by traffic signals. Minor side roads in towns and villages should not be signed unless there is a safety problem.

**LOCATION:**

The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

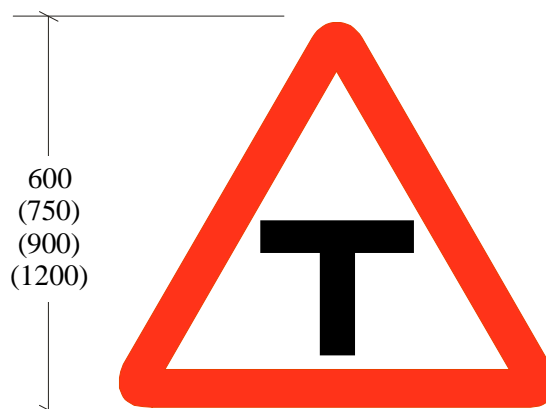
Symbol can be reversed to indicate minor road on the right followed by one on the left.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a T junction.

**APPLICATION:**

The sign warns that there is a T junction ahead where a left or right turn can be made. The sign will not be required where advance direction signs are used, or at junctions controlled by traffic signals. Minor junctions in towns and villages should not be signed unless there is a safety problem.

**LOCATION:**

The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

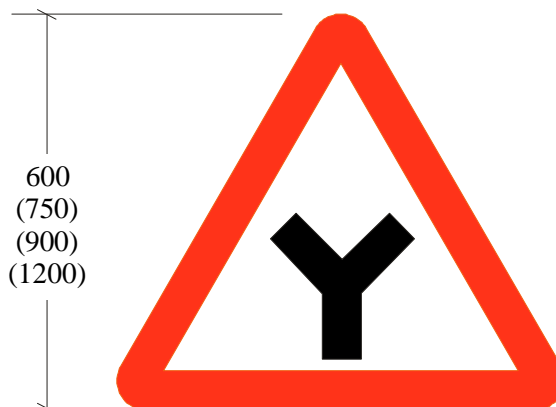
None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a Y junction.

**APPLICATION:**

This sign warns that there is a Y junction ahead. The sign will not be required where map-type advance direction signs are used, or at junctions controlled by traffic signals. Minor junctions in towns and villages should not be signed unless there is a safety problem.

**LOCATION:**

The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

The symbol may be altered to suit the actual layout of the junction. The approach to the junction shall always be represented by a vertical route symbol.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing a road joining from the left.

**APPLICATION:**

This sign warns that traffic will be merging in from the left. It is most often used on high-speed dual-carriageway roads in advance of an entry road coming in from the left. The sign will not normally be necessary where the junction is controlled by traffic signals.

**LOCATION:**

The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

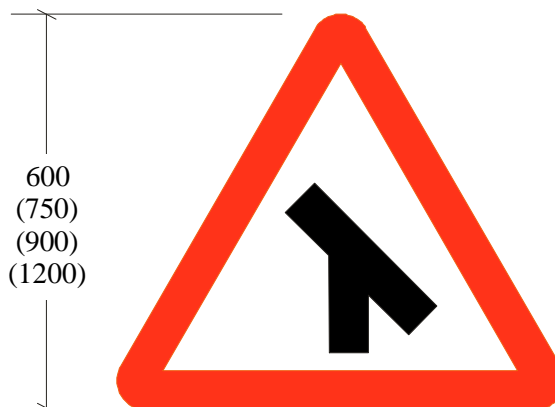
**VARIATION:**

None.



**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing the road ahead joining in with another.

**APPLICATION:**

This sign warns that traffic on this carriageway will be merging with traffic from the right which will have priority. The sign is most often used on one-way roads which are merging into a high-speed dual-carriageway road. The sign will not normally be necessary where the junction is controlled by traffic signals.

**LOCATION:**

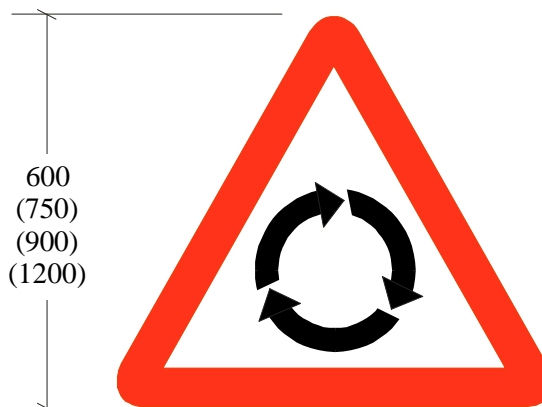
The sign will be positioned on the left hand side of the road, in advance of the junction. For extra warning emphasis put a second sign on the right hand side of the road. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with three curved arrows forming a circle indicating a roundabout.

**APPLICATION:**

This sign warns that there is a roundabout ahead. The sign will be used in the absence of C28 map-type advance direction signs or where there have been accidents caused by drivers failing to see the roundabout in time to slow down.

**LOCATION:**

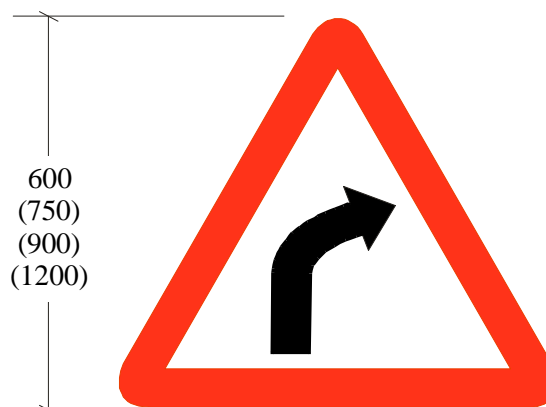
The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with an arrow showing a right hand bend (left if symbol reversed).

**APPLICATION:**

This sign warns that there is a right hand (left hand) bend ahead which a driver may find difficult to negotiate without reducing speed significantly - and where he cannot easily see how sharp it is. Bends which come after a long straight section, or which are very different from other bends on the road, are particularly dangerous and may need to be signed. This sign tends to be over-used, and this confuses drivers and makes the signing appear silly and unnecessary.

**LOCATION:**

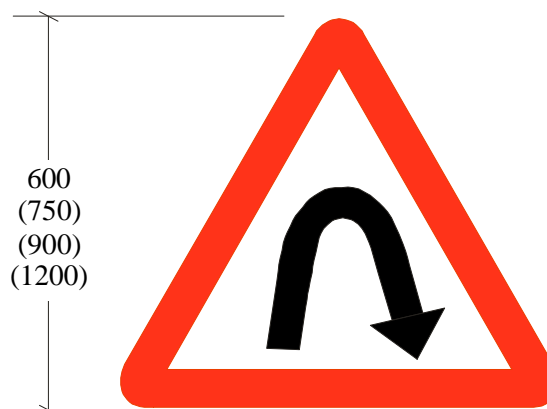
The sign will be positioned on the left hand side of the road, in advance of the bend. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

The symbol can be reversed to show a sharp left hand bend.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with a U shaped arrow to the right (or left).

**APPLICATION:**

This sign warns of a sharp bend where the change of direction is so considerable as to amount to a reversal of direction. It should only be used where the driver will need to significantly reduce speed or if it is difficult to see the bend in advance.

**LOCATION:**

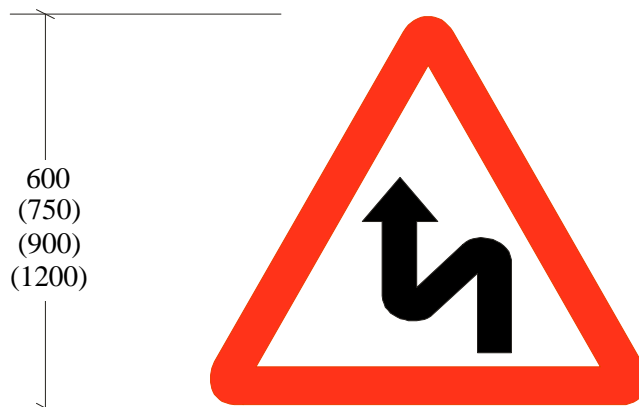
The sign will be positioned on the left hand side of the road, in advance of the bend. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

The symbol can be reversed to show a hairpin bend to the left.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with arrow showing a sharp left (right) bend followed by a sharp right (left) bend.

**APPLICATION:**

This sign warns that there is a double bend ahead first to the left (right) and then to the right (left) which a driver may find difficult to negotiate without slowing down, and which is not easy to see when approaching. This sign is only used where the distance between the first bend and the second is less than 250 metres. Where there is a series of bends, supplementary plate D2 may be added to the post below the sign indicating over what distance the sharp bends continue.

**LOCATION:**

The sign will be positioned on the left hand side of the road, in advance of the first bend. The size of the sign and distance from the hazard will be as detailed in Table 2.

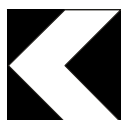
**VARIATION:**

The symbol can be reversed to show a double bend first to the right.

**COLOURS:**

Background : BLACK

Chevrons : WHITE



Single chevron variation

**DESCRIPTION:**

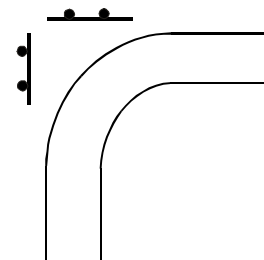
Rectangular sign with white direction chevrons on a black background indicating a sharp change of direction.

**APPLICATION:**

This sign is mostly used at dangerously sharp bends, especially those where it is difficult to appreciate the sharpness when approaching. It is very effective in preventing run-off-road accidents. The sign is also used to indicate to drivers entering a roundabout that they must turn sharp left to go round the central island. The standard sign is 600mm high, but this can be increased where extra visual impact is needed. It is recommended that the sign be reflectorised.

**LOCATION:**

The sign is positioned so that it faces drivers as they approach the bend - see diagram. It is important that the sign cannot be seen from a vehicle approaching in the opposite direction. On a long bend it may be necessary to repeat the sign at 10 - 20 metre intervals around the bend so that at least one sign is always visible. At roundabouts the sign is placed on the central island opposite each entry point. The sign will normally be mounted so that it is directly in the beam of vehicle headlights.

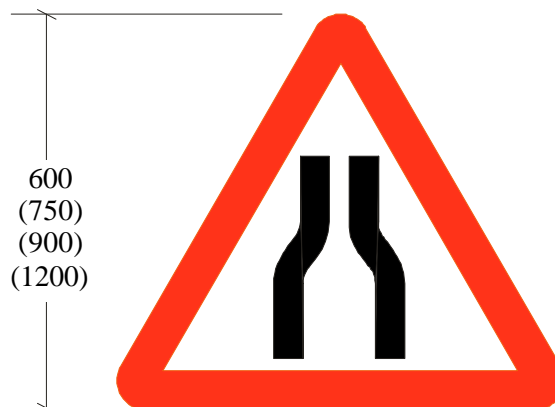


**VARIATION:**

The symbol can be reversed to indicate a sharp bend to the right. A series of single chevron signs may be used at flatter curves that are hazardous, or where there are site difficulties (such as at embankments and cuttings). However single chevron signs are not as conspicuous as the normal sign.

**COLOURS:**

Background : WHITE  
 Border : RED  
 Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol indicating the width of the road ahead becoming narrower.

**APPLICATION:**

This sign warns that the width of the road ahead will suddenly become narrower. The sign is not to be used where the reduction in width is gradual. Supplementary plate D6 should be attached when the road narrows to a single track. The sign should not be used to warn of the end of a dual carriageway - sign B16 is the appropriate sign for this purpose.

**LOCATION:**

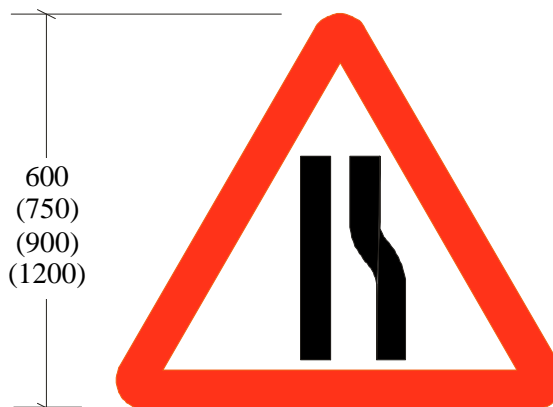
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol indicating the width of the road ahead narrowing from the right (left).

**APPLICATION:**

This sign warns that the width of the road ahead will suddenly become narrower from the right (left). The sign is often used at roadworks. The sign should not be used where the reduction in width is gradual.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

The symbol can be reversed to indicate that the road ahead narrows from the left.

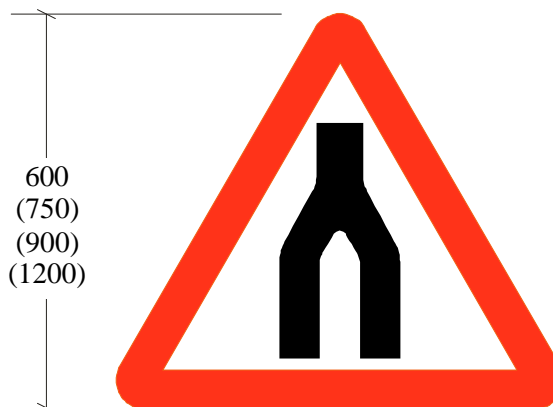


**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing split carriagewaysmerging.

**APPLICATION:**

This sign warns that the dual carriageway ends and becomes a two lane road ahead.

**LOCATION:**

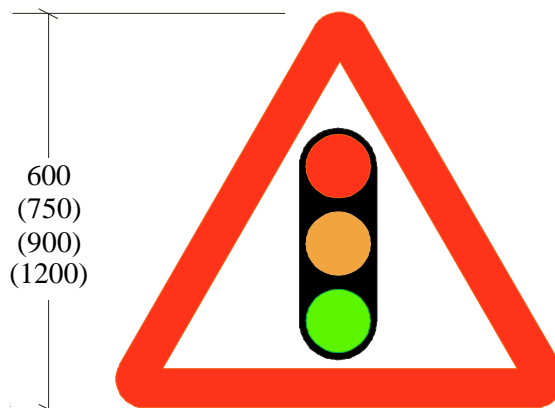
The sign will be positioned on the left hand side of the road in advance of the change from dual carriageway to single carriageway. A second sign will be put on the median. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK, RED,  
AMBER, GREEN



**DESCRIPTION:**

Triangular sign with symbol of a traffic signal.

**APPLICATION:**

This sign warns that there are traffic signals ahead, including signals controlling pedestrian crossings and temporary signals at roadworks. In towns the sign is only used where the signals cannot be seen from 75 metres away (or 100 metres if the traffic speed exceeds 50 km/h).

**LOCATION:**

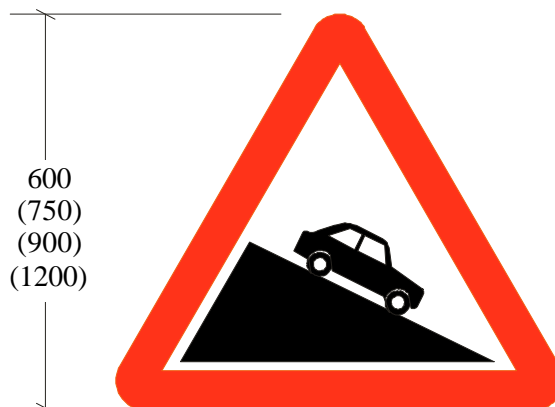
The sign will be positioned on the left hand side of the road in advance of the signals. The size of the sign and distance from the signals will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing a car on a steep downhill gradient. Note that the symbol is not reversed if the road goes down to the left.

**APPLICATION:**

The sign should be used to give advance warning of a steep hill with a gradient of 7% or more. Supplementary plate D2 may be added below the sign indicating over what distance the steep gradients continue. The actual gradient (specified as a percentage to the nearest whole percentage number) shall be specified on a supplementary plate if the gradient exceeds 10%.

**LOCATION:**

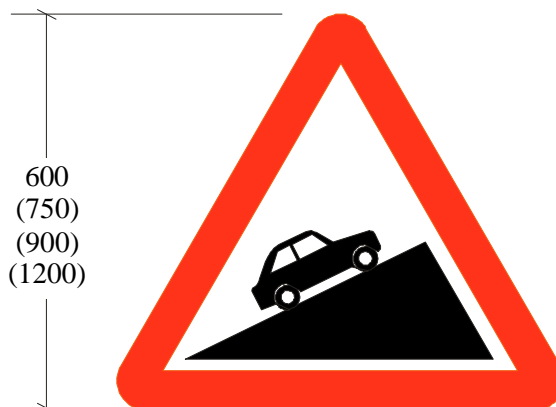
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing a car on a steep uphill gradient. Note that the symbol is not reversed if the road goes up to the left.

**APPLICATION:**

This sign should be used to give advance warning of a steep hill where the gradient exceeds 10%. Supplementary plate D2 may be added below the sign indicating over what distance the steep gradients continue. The actual gradient (specified as a percentage to the nearest whole percentage number) shall be specified on a supplementary plate.

**LOCATION:**

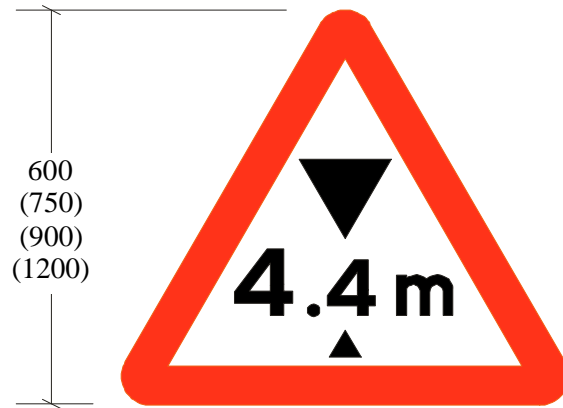
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign indicating a height restriction ahead - with a large and small triangular arrow above and below the text.

**APPLICATION:**

This sign warns drivers that they are coming to an overhead structure with limited headroom. Regulatory sign A14 No Vehicles Over Height Shown must be displayed at the obstruction and will show the same height restriction.

**LOCATION:**

Sign to be positioned on the left hand side of the road in a location to allow prohibited vehicles to use an alternative route. The size of the sign will be as detailed in Table 2.

**VARIATION:**

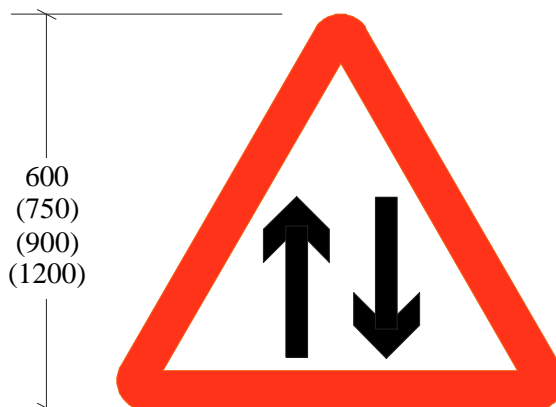
None.

**COLOURS:**

Background : WHITE

Border : RED

Arrows : BLACK



**DESCRIPTION:**

Triangular sign with two opposite pointing arrows indicating two way traffic flow.

**APPLICATION:**

This sign warns that there is two way traffic ahead. It is used where a dual carriageway road ends and becomes a two way road, and also where a one way street changes to a two way street.

**LOCATION:**

The sign is positioned on the left hand side of the road at the beginning of the two way section. It is advisable to put a second sign 100 metres further on, as a reminder. The size of the sign will be as detailed in Table 2.

**VARIATION:**

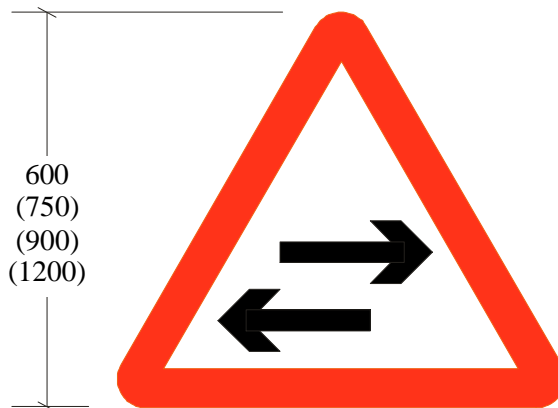
None.

**COLOURS:**

Background : WHITE

Border : RED

Arrows : BLACK



**DESCRIPTION:**

Triangular sign with two opposite pointing arrows.

**APPLICATION:**

This sign is used on a one way road to indicate that a road it crosses or joins carries two way traffic. The sign will not be required at junctions controlled by traffic signals.

**LOCATION:**

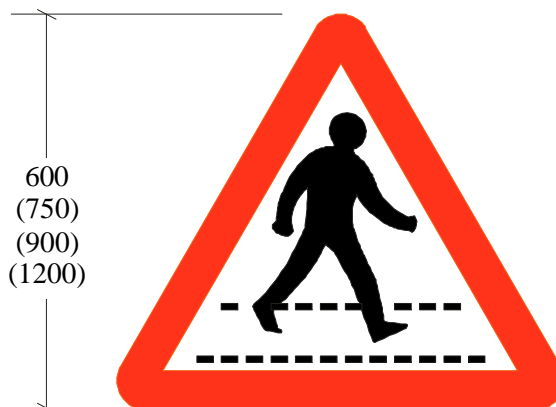
The sign will be positioned on the left hand side of the road, in advance of the junction. The size of the sign and distance from the junction will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a man walking across a pedestrian crossing.

**APPLICATION:**

This sign warns of a pedestrian crossing ahead. It must be positioned on the approach to pedestrian crossings that are difficult to see or that are on high speed roads. It is not normally used to warn of pedestrian crossings that are within a junction controlled by traffic signals.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the crossing. The size of the sign and distance from the crossing will be as detailed in Table 2.

**VARIATION:**

None.

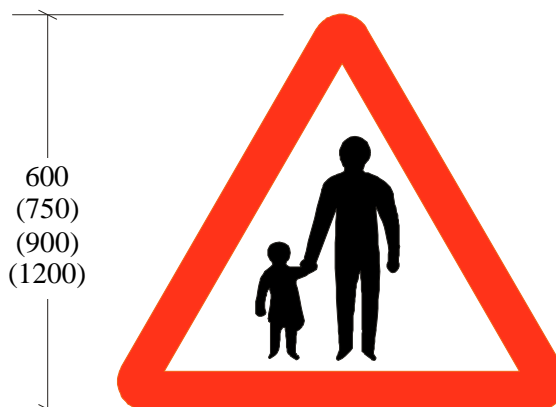


**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a man holding a child's hand.

**APPLICATION:**

This sign warns that the section of road ahead has no footway and there are many pedestrians walking in the road. The sign should not be used unless there is a serious problem. Where the hazard occurs over a long section, supplementary plate D2 can be used.

**LOCATION:**

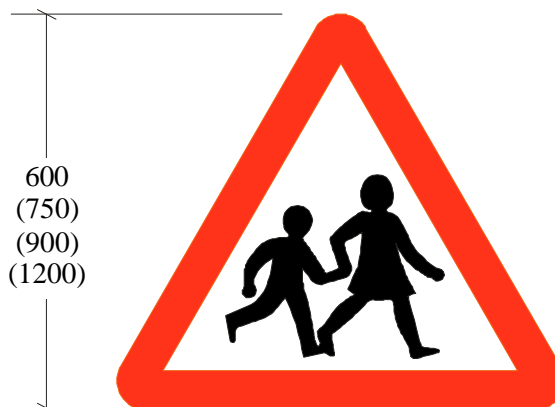
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of two children holding hands.

**APPLICATION:**

This sign warns that the section of road ahead is used by children. Typical situations are near schools, and routes to and from schools and play areas. Where the sign is to be sited near a school, supplementary plate D3 School may be used.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

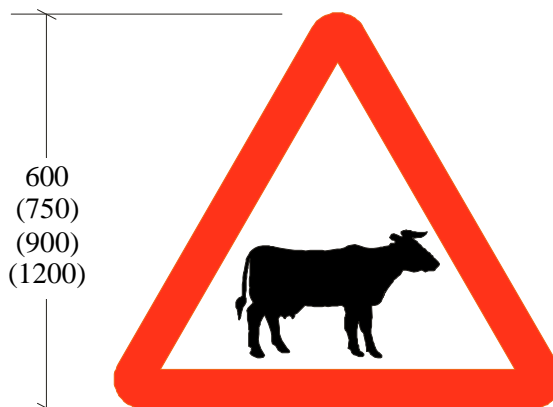
None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a cow.

**APPLICATION:**

This sign warns that cattle are likely to be crossing the road ahead. The sign is used where there are often cattle crossing or moving along a road. The sign should not be used unless it is a serious problem. Where the hazard extends for some distance, supplementary plate D2 may be added to the sign.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a deer.

**APPLICATION:**

The sign warns that wild animals are likely to be crossing the road ahead. The sign is used where there are often wild animals crossing the road and it is a major safety hazard. Where the hazard extends for some distance, supplementary plate D2 may be added beneath the sign.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with a symbol showing a car falling into a river from a high bank.

**APPLICATION:**

This sign warns that the road passes close to the edge of deep water where there is a danger that vehicles may fall in.

**LOCATION:**

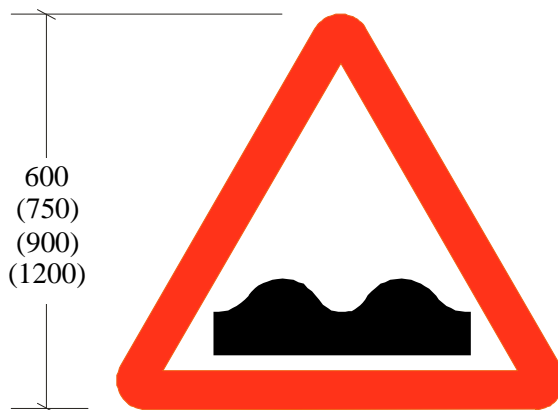
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign showing a section through two bumps in the road.

**APPLICATION:**

The sign warns that the section of road ahead has a defective surface (potholes, ridges, sunken areas, etc.). The sign should only be used where it is unsafe for traffic to continue at normal speed. The sign is for temporary use only and should be removed after the road has been repaired. Where the hazard extends for some distance, supplementary plate D2 may be added to the sign.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
 Border : RED  
 Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing a car with skid marks behind it.

**APPLICATION:**

This sign warns that the section of road ahead is likely to be unusually slippery. The most likely reason for this will be a defective road surface which is 'bleeding' bitumen. The sign will generally be a temporary sign and should be removed as soon as the road has been cleared or repaired. Where the hazard extends for some distance, supplementary plate D2 may be added beneath the sign.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol showing a section through a road hump.

**APPLICATION:**

This sign warns that there are road humps ahead which are designed to slow traffic. The sign must always be used where there are road humps, as serious accidents can occur if drivers are not warned about them. Road authorities should ensure that the sign is well maintained and is replaced quickly if stolen or damaged. It is recommended that the sign be reflectorised. Where there are a series of humps, supplementary plate D2 must be added beneath the sign.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hump will be as detailed in Table 2. It is advisable to put a second sign at the hump itself, as a reminder. Where there are a series of humps they should be individually signed if the humps are more than 150 metres apart or if there are junctions within the series.

**VARIATION:**

None.



**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign showing a symbol of an aircraft.

**APPLICATION:**

This sign warns that the road ahead is crossed by the flight path of low flying aircraft - usually where a road passes close to the end of a runway. It warns drivers to be prepared for the sight and sudden loud noise of low flying aircraft.

**LOCATION:**

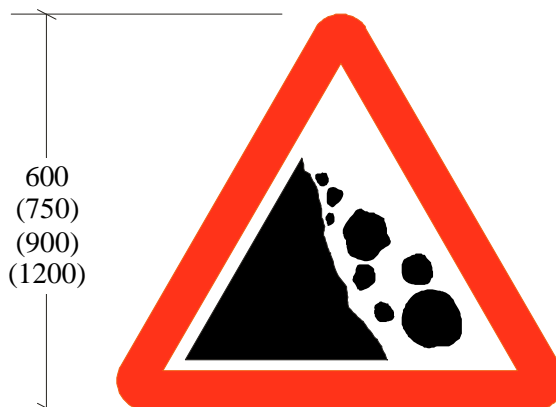
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign showing rocks falling down a hillside.

**APPLICATION:**

This sign warns that the side slopes alongside the road are unstable and liable to rock falls which may result in debris landing on the road. Where the hazard extends for some distance, supplementary plate D2 may be added to the sign.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

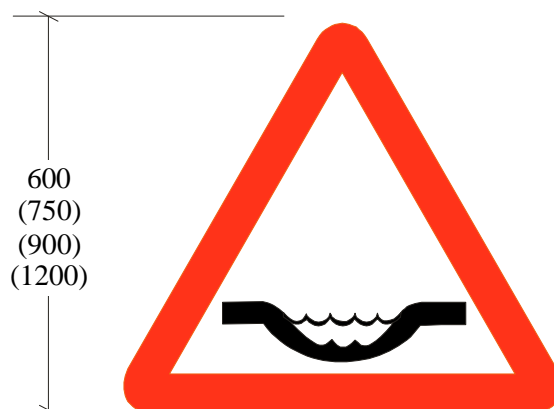
The symbol may be reversed where rock falls are to the right.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign showing a dip in the road filled with water.

**APPLICATION:**

To warn that the road ahead passes through a drift or crosses a low causeway which is prone to flooding. These sections should be properly signed because a dip in the road is difficult to see in advance. Supplementary plate D5 Flooding may be added beneath the primary sign.

**LOCATION:**

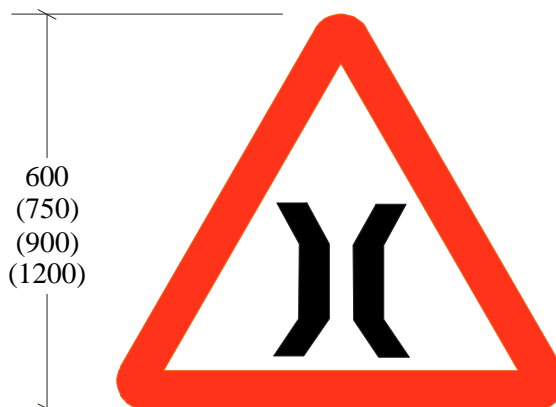
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign showing a restriction in the roadwidth ahead.

**APPLICATION:**

This sign warns that the bridge ahead is a narrower width than the normal road cross section. It should only be used where the narrowing of the carriageway is significant, sudden, and a danger to road users. The sign will not normally be necessary at bridges where only the shoulders are narrowed or there are footways instead of shoulders. If it is a single track bridge, supplementary plate D9 **must** be used, and an A2 Give Way sign together with F2 Give Way line should be positioned on one of the approaches to the bridge.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

COLOURS:

Background : WHITE

Border : RED

Diagram : BLACK



DESCRIPTION:

Triangular sign with an exclamation mark.

APPLICATION:

This sign is used to warn of miscellaneous hazards for which there is no specific warning sign. Examples include: road accidents, flooded roads, roads blocked by fallen trees, and traffic censuses. It **must** always have a supplementary plate attached that tells drivers of what hazard to expect. In general this will be a temporary road sign which should be removed after the hazard has been cleared.

LOCATION:

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

VARIATION:

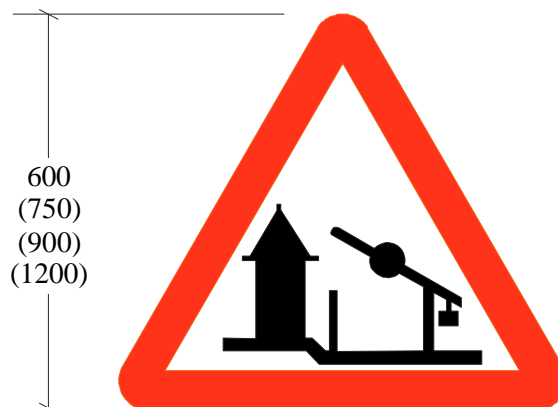
None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a checkpoint.

**APPLICATION:**

This sign warns drivers to slow down and be prepared to stop at the checkpoint ahead. At checkpoints it will be necessary to use regulatory sign A21 to stop all vehicles at the checkpoint.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a workman.

**APPLICATION:**

The sign warns drivers of a temporary obstruction caused by men working in the road ahead. In practice this sign is used for all roadworks regardless of whether the work is being carried out by manual labour. The sign is a temporary sign. The sign may be used with supplementary plate D18 to mark the end of the roadworks.

**LOCATION:**

The sign will normally be positioned on the left hand side of the road in advance of the hazard. On dual carriageways a second sign will be placed on the median. The size of the sign and distance from the hazard will be as detailed in Table 2. However, where there is a series of warning signs, such as at major roadworks, the sign position may need to be altered in order to keep at least 50 metres between signs. It will always be the first sign that drivers see when approaching roadworks. See also Section E7.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a car displacing stone chips.

**APPLICATION:**

This sign warns that there are loose stone chips on the road surface ahead. It is used in advance of sections of road which have been recently gravelled or sealed with stone chippings. It warns drivers to slow down to prevent chippings from being thrown up by the wheels. It is a temporary sign which should be removed as soon as there is no longer a problem.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

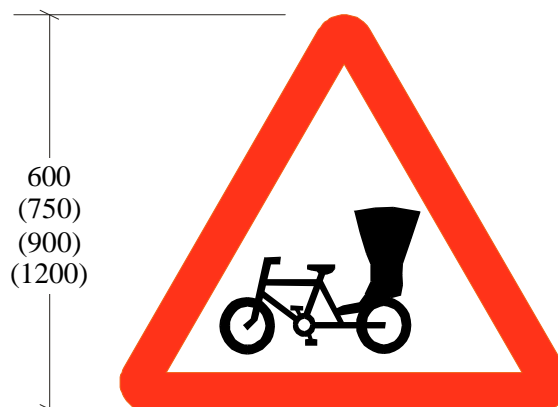


**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a rickshaw.

**APPLICATION:**

This sign warns drivers that the section of the road ahead is used by pedal cycles and rickshaws. The sign is only used where drivers must slow down and take extra care to avoid collisions with rickshaws - for example, where rickshaws cross a road with fast-moving traffic.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

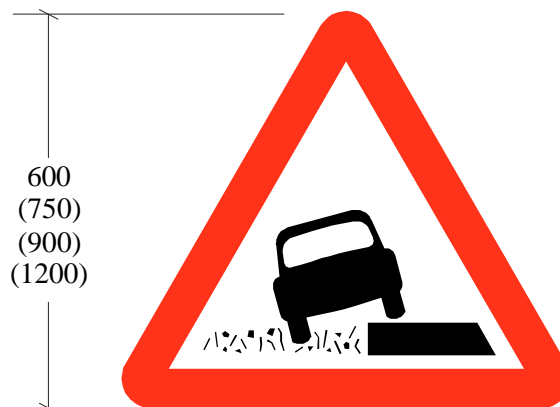
None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a car sinking into a soft shoulder.

**APPLICATION:**

This sign is used to warn drivers that the road ahead has a dangerous shoulder. The shoulder might be badly worn away, or very soft and slippery. Where possible the shoulder should be re-built, and then the sign can be removed. If the danger is seasonal, the season should be indicated on a supplementary plate.

**LOCATION:**

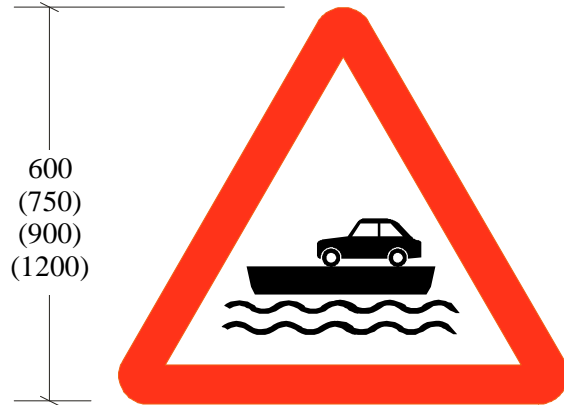
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of ferry.

**APPLICATION:**

This sign warns drivers to slow down as they are approaching a ferry. Where there is a risk that vehicles might fall into the water, sign B28 should be used.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a blindman.

**APPLICATION:**

This sign warns drivers to slow down as they are approaching an area where blind persons may be walking - such as near a hostel or school for blind persons.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2.

**VARIATION:**

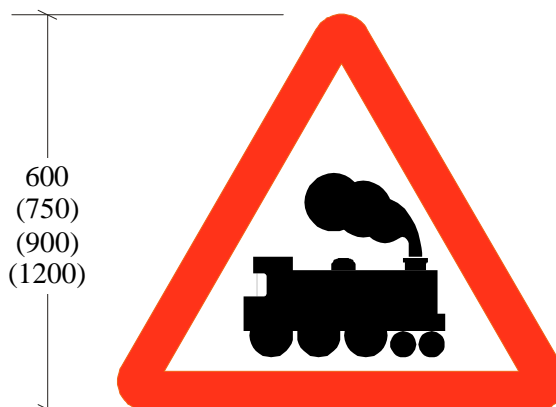
None.

**COLOURS:**

Background : WHITE

Border : RED

Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a steam locomotive.

**APPLICATION:**

This sign warns that there is a railway crossing ahead without gates or a barrier. Where there is a need for greater warning emphasis, the sign should be used in combination with sign B46 Count-down Markers.

**LOCATION:**

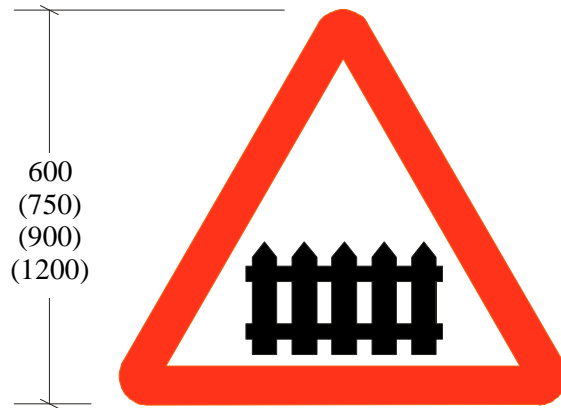
The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2. For extra warning emphasis put a second sign on the right hand side of the road. This will also be helpful where the approach to the crossing is on a left hand bend.

**VARIATION:**

None.

**COLOURS:**

Background : WHITE  
Border : RED  
Diagram : BLACK



**DESCRIPTION:**

Triangular sign with symbol of a fence.

**APPLICATION:**

This sign warns that there is a railway crossing ahead with gates or a barrier. Where there is a need for greater warning emphasis, the sign should be used in combination with sign B46 Count-downMarkers.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The size of the sign and distance from the hazard will be as detailed in Table 2. For extra warning emphasis put a second sign on the right hand side of the road. This will also be helpful where the approach to the crossing is on a left hand bend.

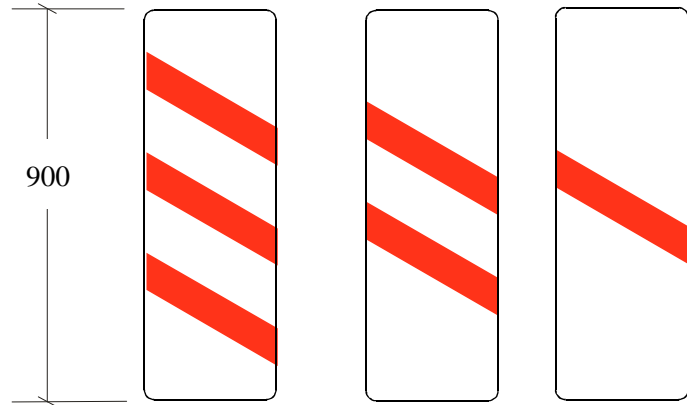
**VARIATION:**

None.

**COLOURS:**

Background : WHITE

Bars : RED



**DESCRIPTION:**

Rectangular sign with red bands indicating distance to railway level crossing.

**APPLICATION:**

This sign may be used on the approach to railway level crossings to give greater warning emphasis. The three-banded marker should be sited under sign B44 or B45, and the two subsequent markers at two-thirds and one-third the distance between the sign and the crossing respectively.

**LOCATION:**

The markers will be positioned on the left hand side of the road as described above. If the markers are sited on the right hand side of the road (e.g., at a sharp bend) the bars should be reversed so that they point downwards to the road.

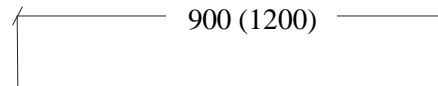
**VARIATION:**

None.

**COLOURS:**

Background : WHITE

Border : RED



This "half cross" is added where there is more than one rail track.

**DESCRIPTION:**

Sign in the form of a cross with a red border.

**APPLICATION:**

This sign indicates the location of a railway crossing and is sited close to the crossing point. It is used at all crossings whether or not they have gates or barriers. Where the crossing is not controlled by sign E5 Rail Crossing Signal, and there are no gates or barriers (or these are not operating at all times) the sign should be used in combination with sign A2 Give Way and associated marking F2 (or sign A1 Stop and marking F1 if the drivers' view along the rail track is severely restricted). The A2 or A1 signs will normally be mounted beneath the sign. It is recommended that the sign be reflectorised.

**LOCATION:**

The sign will be positioned on the left hand side of the road within 5 - 10 metres of the nearest rail line. The larger size of sign will be used where extra visual impact is needed, such as on wide roads or where vehicles approach at high speed. If necessary, a second sign should be positioned on the right hand side of the road.

**VARIATION:**

The "half cross" is added where vehicles have to cross more than one rail track.



**COLOURS:**

Background : BLACK

Chevrons : WHITE



**DESCRIPTION:**

Rectangular sign with white chevrons pointing to the left and mirrored for the right side of the sign.

**APPLICATION:**

The sign is used at a T junction to direct traffic to the left or right only. The sign is sited opposite the minor road entrance to the junction. It should only be used where drivers may fail to recognise the junction as they approach it along the minor road.

**LOCATION:**

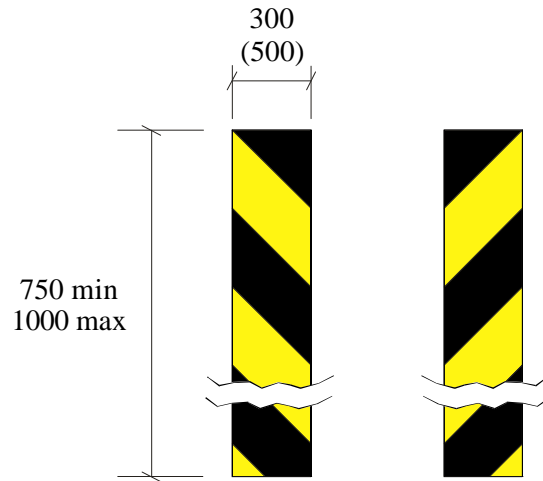
The sign is sited in a highly visible position opposite the minor road entrance to the junction. It can be combined with C32 or C33 direction signs on a grey backing board for a neater appearance (see Figures 7, 8 & 9 in Section F).

**VARIATION:**

When the sign is to be put on a backing board with direction signs its length may be adjusted to suit that of the other signs.

COLOURS:

Alternating BLACK and  
YELLOW



DESCRIPTION:

Rectangular sign with diagonal stripes from top left to bottom right for left side obstruction; from top right to bottom left for right side obstruction.

APPLICATION:

This sign is used to highlight an obstruction which is close to the edge of the carriageway - such as a bridge parapet or bridge pier. The yellow stripes point downwards towards the side where the traffic shall pass. The sign plate may be fixed to the end of the obstruction. Another option is to paint the stripes on the obstruction (either on the end facing the traffic or a larger area) but the marking may not show up well at night.

LOCATION:

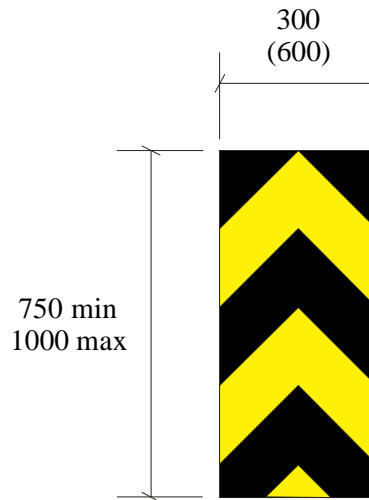
The sign is normally mounted on the obstruction.

VARIATION:

None.

**COLOURS:**

Alternating BLACK and  
YELLOW



**DESCRIPTION:**

Rectangular sign with arrow shaped stripes facing upwards.

**APPLICATION:**

This sign is used to highlight an obstruction which is close to the edge of the carriageway and where traffic can pass either side. It can also be used to draw attention to a channelising island where traffic streams divide.

**LOCATION:**

The sign is sited either on an obstruction or on the nose of a channelising island where traffic streams divide.

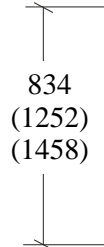
**VARIATION:**

None.

**COLOURS:**

Background : YELLOW

Border,  
text : BLACK



**DESCRIPTION:**

Rectangular sign with text stating "Diversion Ahead" in both Bangla and English.

**APPLICATION:**

This temporary sign warns that due to roadworks, or a temporary obstruction of the carriageway, there is a diversion in operation ahead.

**LOCATION:**

The sign will be positioned on the left hand side of the road in advance of the hazard. The distance from the hazard will be as detailed in Table 2.

**VARIATION:**

None.

**COLOURS:**

Background : YELLOW

Border, : BLACK  
arrows

Obstructions, : RED  
off-road areas



**DESCRIPTION:**

Rectangular sign with diagrammatic layout of the traffic diversion ahead.

**APPLICATION:**

This sign shows the layout of a diversion ahead. This particular design shows the diversion of two lanes of traffic onto the opposite carriageway of a dual carriageway road, but the design can be varied to show other layouts, including those for the return of diverted traffic to the proper road or carriageway. The sign is only to be used for temporary diversions such as roadworks, and then only when the volume or speed of the traffic makes it necessary. When used in advance of a diversion it should be preceded by sign B51 Temporary Diversion Ahead.

**LOCATION:**

The sign will be positioned on the left hand side of the road and generally within 50 metres of the start of the layout shown on the sign. On a dual carriageway road a second sign should be placed on the median. Supplementary plate D1 may be added to indicate distance.

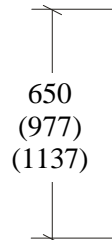
**VARIATION:**

Sign can be altered to show different layouts.

**COLOURS:**

Background : YELLOW

Border,  
text, arrow : BLACK



**DESCRIPTION:**

Rectangular sign with Diversion written in Bangla and English with arrow below pointing to the right (left).

**APPLICATION:**

This temporary sign is used to sign a diversionary route through an urban area. It is used at junctions - at the start of the route and along the route. The start of a diversion road in a rural area will normally be marked by sign B55.

**LOCATION:**

The sign is used at the beginning of the diversion.

**VARIATION:**

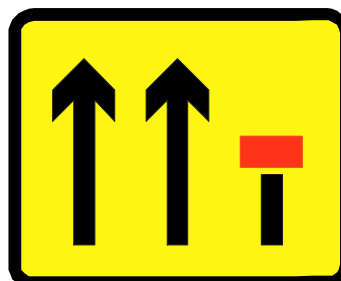
Arrow may point to the left.

**COLOURS:**

Background : YELLOW

Border,  
arrows : BLACK

Bar : RED



**DESCRIPTION:**

Rectangular sign with two black arrows representing lanes open to traffic plus one with a red bar across it to denote that it is closed.

**APPLICATION:**

This sign warns that one or more lanes are closed to traffic ahead. This particular design shows that the right hand lane of a three-lane carriageway is closed to traffic ahead, but the design can be varied to show other lane closures. The sign is only to be used for temporary lane closures on roads with more than one lane in each direction. The sign may be used with supplementary plate D1 to indicate the distance to the start of the lane closure.

**LOCATION:**

The sign will be positioned on the left hand side of the road at a point 100 metres in advance of the start of the lane closure. On dual carriageways a second sign should be positioned at the right hand side of the carriageway on the median. On roads with traffic speeds in excess of 50 km/h there must be a second set of signs at a point 200metres in advance of the lane closure.

**VARIATION:**

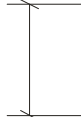
Sign can be altered to show different arrangements of lanes and lane closures.

**COLOURS:**

Background : BLACK

Chevrons : YELLOW

(400)  
600  
(750)




**DESCRIPTION:**

Rectangular sign with yellow chevrons pointing to the left (right) to indicate the direction that traffic must take.

**APPLICATION:**

This sign is used at a sharp deviation of route to the left (right) at or near road works or other temporary obstructions. The sign is the temporary version of B13 and indicates in which direction traffic should go. It is often used at lane closures and the start of diversions off the normal carriageway. Additional signs may be needed for extra emphasis or to better show the route to be followed.

**LOCATION:**

The sign is used at the point where the traffic has to make a sharp change in direction. It should be positioned so that it directly faces the drivers.

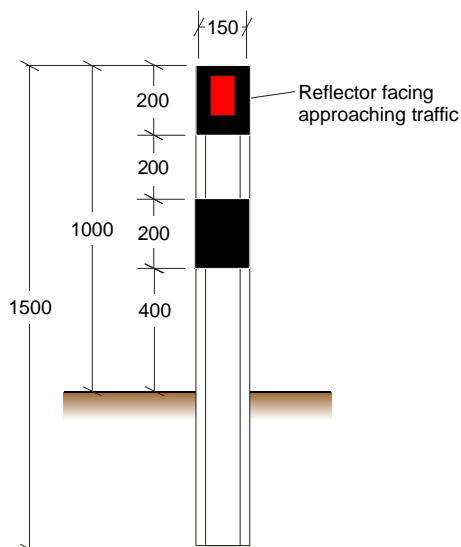
**VARIATION:**

Chevrons may point to the right.



**COLOURS:**

- Post : WHITE with BLACK STRIPES
- Reflective element : RED on left side facing traffic  
WHITE on right side



**DESCRIPTION:**

Post painted with black and white stripes and with a reflective element fixed at the top.

**APPLICATION:**

Delineators are principally used to highlight the road edge at bends. They help the driver understand where the road is going, and can be very effective in preventing run-off-road accidents. Other uses include marking obstructions, and drawing attention to places where the road alignment or geometry is hazardous - such as the approach to a narrow bridge. It is important that they function well at night, so at least every other post should be fitted with reflectors.

**LOCATION:**

Delineators are erected 600mm from the road edge. Drivers should be able to see at least three delineators at any one time as they drive through the hazardous section. The following table gives the recommended spacing at bends:

Radius of horizontal curve (m)	Spacing of post delineator (m)
30.0	6.0
50.0	8.0
100.0	10.0
200.0	15.0
300.0	20.0
400.0	25.0
500.0	30.0

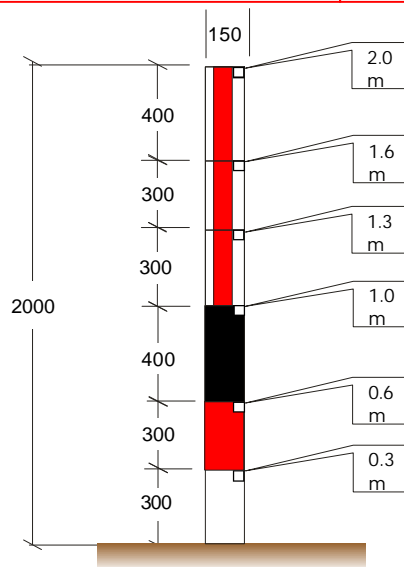
The line of delineators should extend a little way beyond the ends of the curve. At other hazardous locations the spacing should be between 2 and 10 metres depending on what gives the best indication of the route through the hazard. If delineators are needed for straight sections they should be uniformly spaced at 50-70m intervals - in pairs, one on each side of the road.

**VARIATION:**

None.

COLOURS:

Post : WHITE with  
BLACK AND RED  
SECTIONS



DESCRIPTION:

Post with coloured sections indicating depth of water.

APPLICATION:

This sign indicates the depth of water covering the road. It is used at causeways and other places where flooding is known to take place. It is a double-sided sign so that the depth of water can be seen by road users on both approaches.

LOCATION:

The sign should be erected at or near the place where the water is deepest. However, where the flooding extends over a long section of the road the sign should be repeated at intervals. One sign should be easily visible to drivers before they enter the water. The sign must be firmly anchored in the ground and may need to be protected around its base, so as to better withstand impacts from flood debris.

VARIATION:

None.

## E4 Information Signs

### E4.1 Route Signs - General

Route signs are the most important of the Information Signs. They give drivers information to enable them to find their way to their destination. Good route signing helps:

- To reduce delay and frustration
- To keep traffic flowing smoothly and safely through junctions
- To promote commerce and tourism

Route signs belong to one of three major groups:

- a) **Advance Direction Signs** - which give a driver information about his route ahead before he reaches a road junction
- b) **Direction Signs** - which give route information at a junction
- c) **Route Confirmation Signs** - which appear after the junction and give confirmation of the route ahead

### E4.2 Route Signs – Design Principles

Destinations on route signs must be given in Bangla and English, and the Bangla words will generally appear above the English words. Refer to Volume 2 for advice on which destinations are to be signed. It is important that the signing is consistent along the route. Once a destination appears on an advance direction sign or direction sign it must appear on all subsequent route signs until that place is reached. No more than four destinations are permitted on one sign. No more than two destinations are permitted for any one direction, except on route confirmation signs. Where two or more destinations are shown for one direction the nearest destination will be at the top of the list. The destinations in Bangla will be listed separately and above the destinations in English. Route signs may include important destinations that can be reached indirectly by following one of the roads that is being signed.

Route signs are colour coded to help drivers differentiate between major and minor roads. Basically, those signs referring to National Highways will have white lettering on a green background, and all others will have black lettering on a white background – but see Table 3 for more specific advice.

Route signs will show National Highway route numbers, but not those for regional or other roads.

There are three alternative layouts for advance direction signs. One is called *map-type* and, as the name suggests, shows a map of the junction – sign C28 is an example. Another is the *stack-type* that lists the destinations alongside direction arrows – sign C29 is an example. The third design is solely for signs that give lane information and are mounted overhead – sign C31. Map-type signs are generally larger than stack-type, and thus more expensive, but they give drivers a better understanding of how the junction is arranged. They should always be used where there is a roundabout or where the junction layout is in any way complex. Stack-type signs should only be used at simple junctions, and should not indicate more than three directions.

Small-sized warning signs and regulatory signs may be incorporated into advance direction signs and direction signs if the information will be essential in deciding which route to take – height and weight restrictions are an example.

Advice on the detailed layout of route signs is given in Volume 2.

**Table 3 Colour Code for Route Signs**

Route sign group	Road type on which sign is positioned	Road type to which sign refers	Colours of sign (lettering / background)
Advance Direction and Direction Signs	National Highway	National Highway	White on Green (see note below)
		Other	Black on White
	Other roads	National Highway	White on Green
		Other	Black on White
Route Confirmation Signs	National Highway	National Highway	White on Green
Temporary diversion signs	All roads	All roads	Black on Yellow

Note: Where the sign gives information on both National Highways and other roads it will have white lettering on a green background throughout.  
Signs on National Highways through towns which refer exclusively to local in-town destinations will have black lettering and symbols on a white background.

### E4.3 Route Signs – Sizes and Siting

Route signs are not standard sizes. Never try and squeeze route information onto a sign plate of a specific size. You must first determine the size of the lettering to be used, which has to be large enough for drivers to read at a distance. The lettering sizes are set out in Table 4 below:

**Table 4 Lettering Sizes for Route Signs**

Site type	Capital letter height (English script) (mm)
Traffic speeds up to 50 km/h	100
Traffic speeds between 50 km/h and 70 km/h	150
Traffic speeds between 70 km/h and 80 km/h. Roads with more than two lanes in the direction of travel. Signs mounted overhead.	175

Once the lettering size has been chosen, the design should proceed according to the layout rules, which are set out in Volume 2.

Drivers must be able to see the sign from at least 75 metres away (refer also to Table 7 in Section F) so that they have time to read the message and act on it. Direction signs are placed at the junction and point along the route shown on the sign. Route confirmation signs are usually sited 100 metres beyond the junction. Advance direction signs should be sited as shown in Table 5.

**Table 5 Siting of Advance Direction Signs**

<b>Site type</b>	<b>Distance of sign from junction (m)</b>
Traffic speeds up to 50 km/h	45
Traffic speeds between 50 km/h and 70 km/h	90
Traffic speeds between 70 km/h and 80 km/h	150

**E4.4 Other Information Signs**

These information signs serve one of several purposes:

- To mark special facilities or restrictions
- To give civic or geographical information such as the name of a town or village
- To give information about facilities ahead such as parking places, lay-bys, picnic areas, telephones, etc.

**E4.5 Schedule of Information Signs**

Details of each of the information signs are shown on the following pages:

C1	No Through Road
C2	Pedestrian Crossing
C3	Parking Place
C4	Filling Station
C5	Breakdown Service
C6	Telephone
C7	Overnight Accommodation
C8	First-Aid Post
C9	Hospital
C10	Refreshments
C11	Restaurant
C12	Picnic Site
C13	Mosque
C14	Temple
C15	Church
C16	Fire Station
C17	Toilets
C18	Recommended Route for (pedestrians, cycles and rickshaws)
C19	Lane for (cycles and rickshaws)
C20	Lane Ahead for (cycles and rickshaws)
C21	Bus Stop
C22	Taxi Park
C23	Police Station
C24	Toll Road or Bridge
C25	Place Identification Sign
C26	Exit from Built-Up Area
C27	Pedestrian Route

#### **E4.6 Schedule of Route Signs**

Details of each of the route signs are shown on the following pages :

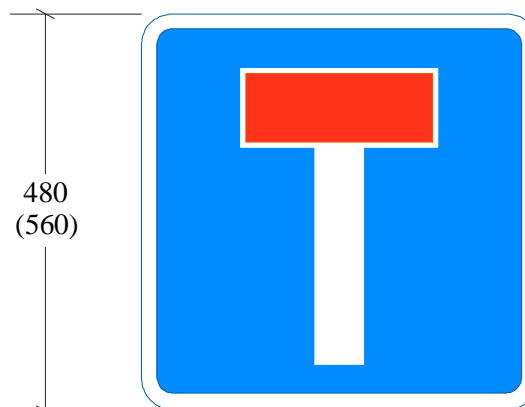
C28	Advance Direction Sign (map-type – National Highways)
C29	Advance Direction Sign (stack-type – National Highways)
C30	Advance Direction Sign (stack-type – minor routes)
C31	Advance Direction Sign (mounted overhead)
C32	Direction Sign (National Highways)
C33	Direction Sign (minor routes)
C34	Direction Sign (temporary diversion)
C35	Route Confirmation Sign (National Highways)

COLOURS:

Background : BLUE

Border : WHITE

Diagram : RED crosshead  
WHITE leg



DESCRIPTION:

Square sign with T junction indicating no through road.

APPLICATION:

This sign indicates that the road ahead is not a through route - either because it stops or because it is closed to traffic with barriers or obstructions. Where the closure is some way down the road, supplementary plate D1 may be added to the sign.

LOCATION:

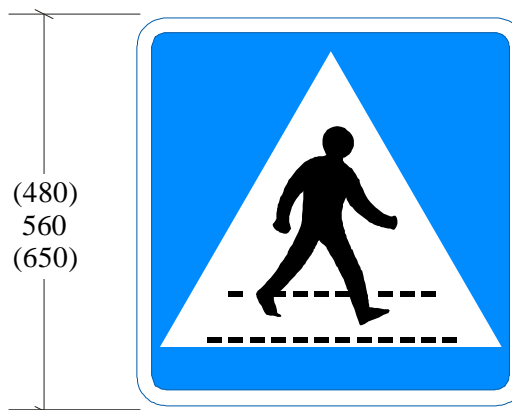
The sign is located on the left hand side at the entrance to roads where there is no through road for vehicles. It can be positioned on both sides of the road if considered necessary.

VARIATION:

None.

COLOURS:

Background : BLUE  
 Border : WHITE  
 Diagram : BLACK & WHITE



DESCRIPTION:

Square sign with symbol showing pedestrian on a pedestrian crossing.

APPLICATION:

The sign marks the place where there is a pedestrian crossing. The sign is for the benefit of drivers and pedestrians alike. Article 92.3 of The Motor Vehicles Ordinance 1983 states that *"Every driver of a motor vehicle shall stop on the appropriate line near every pedestrian crossing so marked where there is a pedestrian on the crossing"*. The sign should not normally be used where the pedestrian crossing is controlled by traffic signals.

LOCATION:

The sign is located on the left hand side of the road facing the traffic, about 1.5 metres in advance of the crossing. The sign is repeated for the opposite side. Warning sign B23 should be used in advance of the crossing, if the crossing is difficult to see, or it is on a high-speed road.

VARIATION:

None.



COLOURS:

Background : BLUE

Border, letter : WHITE



DESCRIPTION:

Square sign with letter P indicating parking.

APPLICATION:

This sign indicates that parking is permitted. It is used in one of the following ways:

1. To indicate that on-street parking is permitted. The sign should normally be sited at 50 metre intervals along the length of the parking area. The sign is mounted with its plate parallel to the traffic flow.
2. To indicate an off-street car park. The sign should normally be sited at or near the entrance.
3. To indicate a lay-by where parking is permitted. A sign should be placed at the beginning of the lay-by.

A supplementary plate explaining in Bangla the meaning of the sign **must** be added until the new signs have been in use for five years.

LOCATION:

The parking place sign should be positioned on the side on which parking is allowed.

VARIATION:

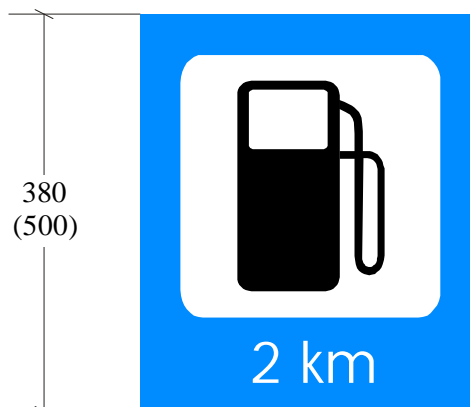
None.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK

Text : WHITE



DESCRIPTION:

Square sign with symbol of a fuel pump, and optional panel below with arrow or text indicating the direction or distance respectively to the filling station.

APPLICATION:

This sign gives information on the location of a filling station.

LOCATION:

The sign is positioned on the left hand side of the road at the entrance to the filling station, or at the junction with a road leading to the filling station (arrow) or in advance of the filling station (distance).

VARIATION:

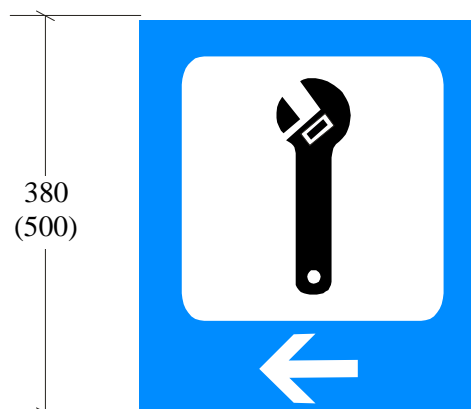
The distance information may be omitted or replaced by an arrow.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK

Arrow : WHITE



DESCRIPTION:

Square sign with symbol of a spanner, and optional panel below with arrow or text indicating the direction or distance respectively to a breakdown service.

APPLICATION:

This sign indicates the location of breakdown services.

LOCATION:

The sign is positioned on the side of the road adjacent to the breakdown service area, or at the junction with a road leading to the service area (arrow) or in advance of the service area (distance).

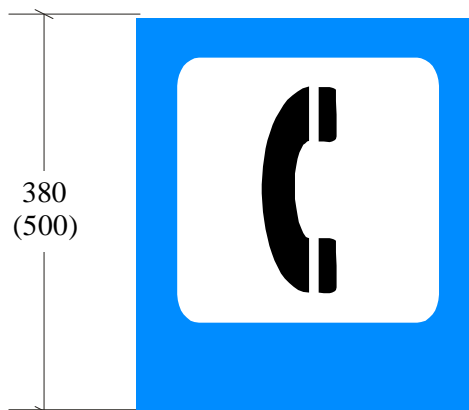
VARIATION:

The arrow may be reversed, or be omitted, or be replaced by distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of telephone handset, and optional panel below with arrow or text indicating the direction or distance respectively to the telephone.

APPLICATION:

This sign indicates the location of a telephone for public use.

LOCATION:

The sign should be located on the same side of the road and adjacent to the public telephone, or at the junction with a road leading to the telephone (arrow) or in advance of the telephone (distance).

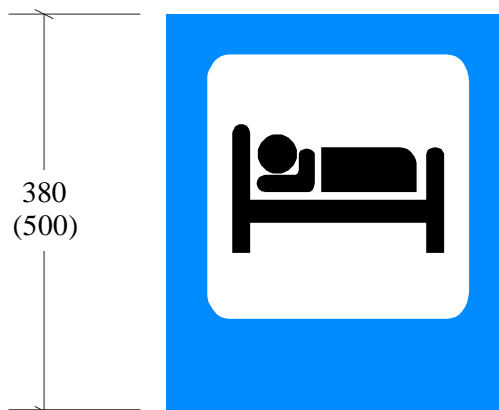
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of a bed, with optional panel below with arrow or text indicating direction or distance respectively to overnight accommodation.

APPLICATION:

This sign indicates the location of overnight accommodation.

LOCATION:

The sign should be located on the same side of the road and adjacent to the overnight accommodation, or at the junction of a road leading to the overnight accommodation (arrow) or in advance of the overnight accommodation (distance).

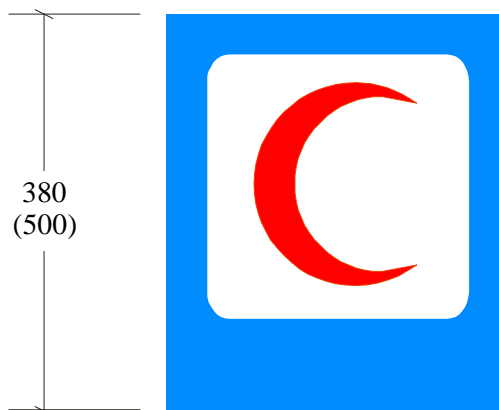
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : RED



DESCRIPTION:

Square sign with a red crescent, and optional panel below with arrow or text indicating the direction or distance respectively to the first aid post.

APPLICATION:

This sign indicates the location of a first aid post.

LOCATION:

The sign should be located on the same side of the road and adjacent to the first aid post, or at the junction of a road leading to the first aid post (arrow), or in advance of the first aid post (distance).

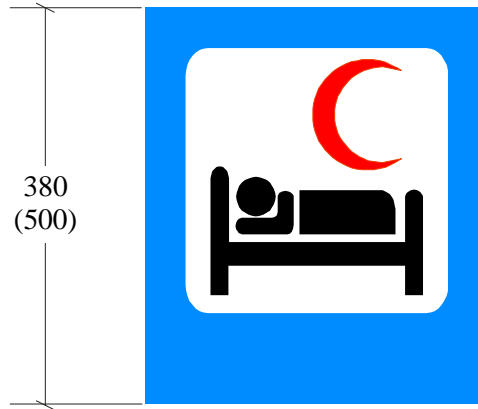
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK  
with RED crescent



DESCRIPTION:

Square sign with symbol of a bed with a red crescent above and optional panel below with arrow or text indicating the direction or distance respectively to the hospital.

APPLICATION:

This sign indicates the location of a hospital.

LOCATION:

The sign should be located on the same side of the road and adjacent to the hospital, or at the junction with a road leading to the hospital (arrow) or in advance of the hospital (distance).

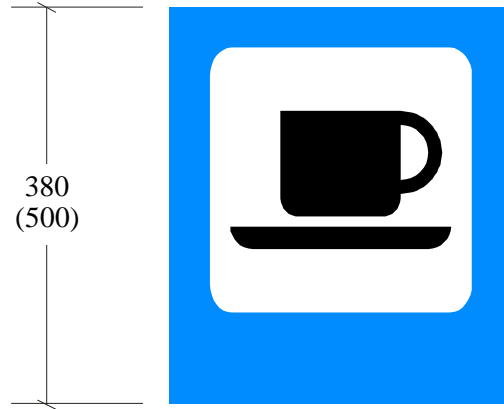
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of a cup and saucer, and optional panel below with arrow or text indicating the direction or distance respectively to the refreshments.

APPLICATION:

This sign indicates that refreshments are available at this location.

LOCATION:

The sign should be located on the same side of the road and adjacent to the place where the refreshments are on sale, or at the junction with a road leading to the refreshments (arrow), or in advance of the refreshments (distance).

VARIATION:

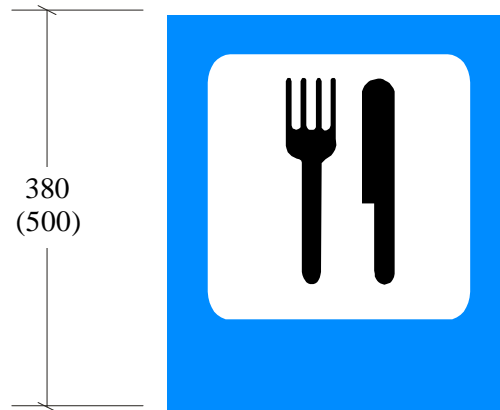
Bottom panel may include arrow or distance information.



COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbols of knife and fork, and optional panel below with arrow or text indicating the direction or distance respectively to the restaurant.

APPLICATION:

This sign indicates the location of a restaurant.

LOCATION:

The sign should be located on the same side of the road and adjacent to the restaurant, or at the junction leading to the restaurant (arrow) or in advance of the restaurant (distance).

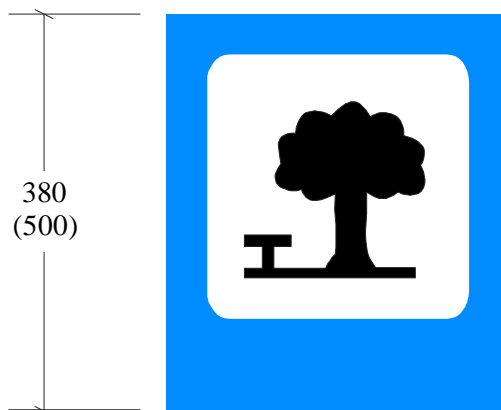
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of a tree adjacent to a table, and optional panel below with arrow or text indicating the direction or distance respectively to the picnic site.

APPLICATION:

This sign indicates the location of a picnic site.

LOCATION:

The sign should be located on the same side of the road and adjacent to the picnic site, or at the junction with a road leading to the picnic site (arrow) or in advance of the picnic site (distance).

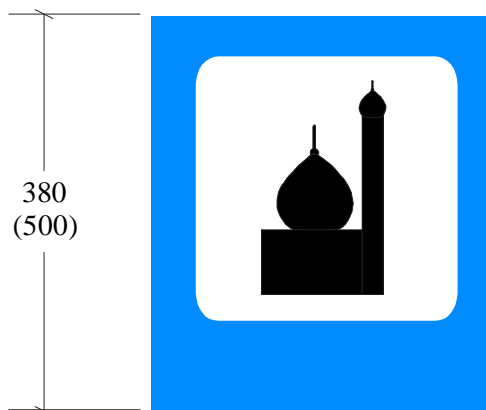
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of a mosque, and optional panel below with arrow or text indicating the direction or distance respectively to the mosque.

APPLICATION:

This sign indicates the location of a mosque.

LOCATION:

The sign should be located on the same side of the road and adjacent to the mosque, or at the junction with a road leading to the mosque (arrow) or in advance of the mosque (distance).

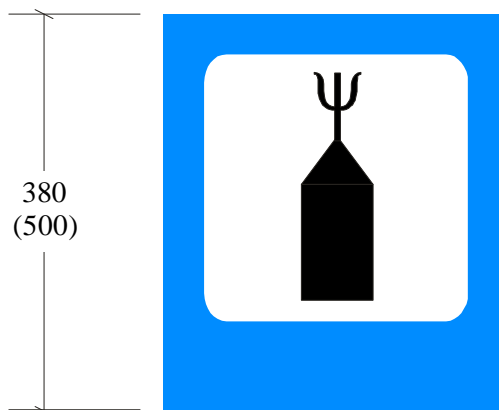
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of a temple, and optional panel below with arrow or text indicating the direction or distance respectively to the temple.

APPLICATION:

This sign indicates the location of a temple.

LOCATION:

The sign should be located on the same side of the road and adjacent to the temple, or at the junction with a road leading to the temple (arrow) or in advance of the temple (distance).

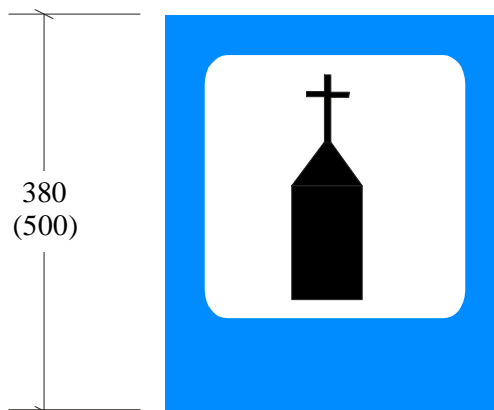
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbol : BLACK



DESCRIPTION:

Square sign with symbol of a church, and optional panel below with arrow or text indicating the direction or distance respectively to the church.

APPLICATION:

This sign indicates the location of a church.

LOCATION:

The sign should be located on the same side of the road and adjacent to the church, or at the junction with a road leading to the church (arrow) or in advance of the church (distance).

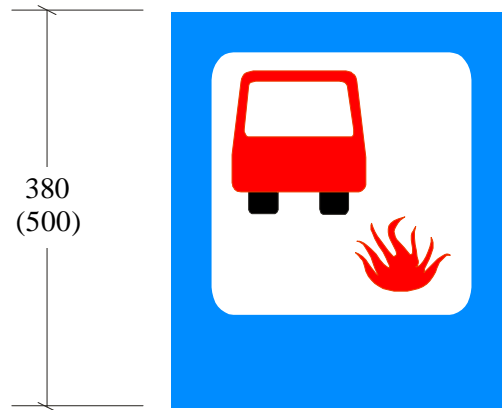
VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
with WHITE inset

Symbols : RED



DESCRIPTION:

Square sign with symbols of a fire engine and fire, and optional panel below with arrow or text indicating the direction or distance respectively to a fire station.

APPLICATION:

This sign indicates the location of a fire station.

LOCATION:

The sign should be located on the same side of the road and adjacent to the fire station, or at the junction with a road leading to the fire station (arrow) or in advance of the fire station (distance).

VARIATION:

Bottom panel may include arrow or distance information.

**TOILETS**

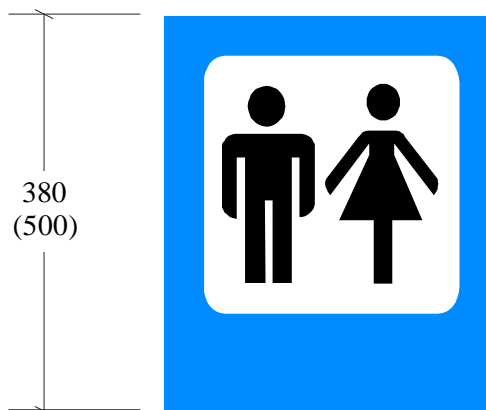
**C17**

**TRAFFIC SIGNS MANUAL**

COLOURS:

Background : BLUE  
with WHITE inset

Symbols : BLACK



DESCRIPTION:

Square sign with symbols of a man and a woman, and optional panel below with arrow or text indicating the direction or distance respectively to public toilets.

APPLICATION:

This sign indicates the location of public toilets.

LOCATION:

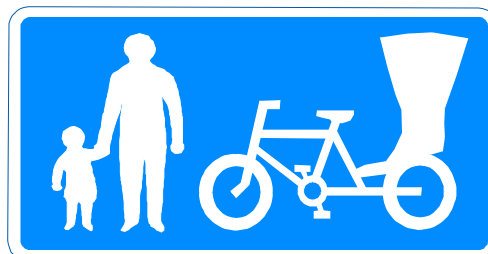
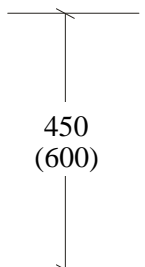
The sign should be located on the same side of the road and adjacent to the toilets, or at the junction with a road leading to the toilets (arrow) or in advance of the toilets (distance).

VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE  
Border : WHITE  
Symbols : WHITE



DESCRIPTION:

Rectangular sign with symbols of a man and child together with rickshaw.

APPLICATION:

This sign is used to indicate a recommended route for one or more classes of road user - in this case, pedestrians and rickshaws. It is only used where the route is separate from the main carriageway or is physically segregated from it by a barrier. Sign C19 should be used to sign a lane dedicated to one or more classes of vehicle.

LOCATION:

The sign should be located at the beginning of the route. It should be repeated just past each junction and at sufficient intervals to ensure that the distance between signs does not exceed 300 metres.

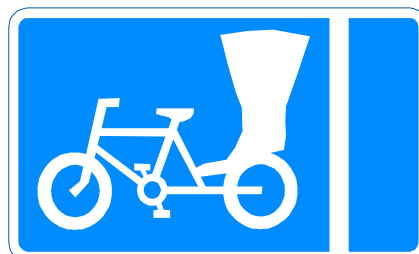
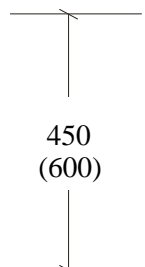
VARIATION:

Other symbols representing vehicle types may be used, either alone or in combination. A white arrow may be added below the symbols to indicate the way to the start of the route.



COLOURS:

Background : BLUE  
Border : WHITE  
Symbols : WHITE



DESCRIPTION:

Rectangular sign with symbol of a rickshaw, together with a white vertical bar representing a lanemarking.

APPLICATION:

This sign is used to indicate a lane dedicated to one or more vehicle types, in this case cycles and rickshaws. Alternative vehicle types include baby taxis, motorcycles, buses and trucks, either alone or in combination. The sign is always used together with the F19 lane marking. Sign C20 gives advance warning. Sign C19 is an advisory sign. Where it is thought necessary to make the use of the lane by the specified vehicles mandatory (and prohibit its use by other vehicles) then sign A39 should be used at the start of the lane.

LOCATION:

The sign should be located at the beginning of the route. It should be repeated just past each junction and at sufficient intervals to ensure that the distance between signs does not exceed 300metres.

VARIATION:

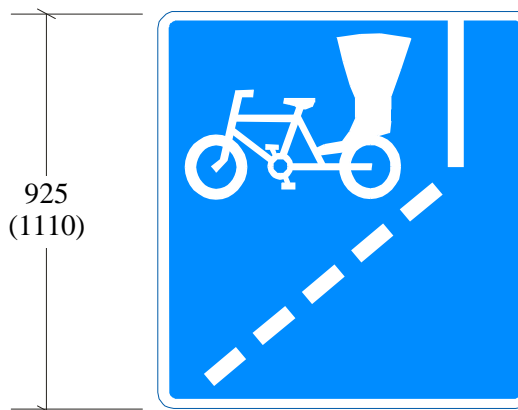
Other symbols representing vehicle types may be used, either alone or in combination.

**COLOURS:**

Background : BLUE

Border : WHITE

Symbol : WHITE



**DESCRIPTION:**

Rectangular sign with symbol of a rickshaw, together with lines representing lanemarkings.

**APPLICATION:**

This sign is used to inform road users that there is a lane ahead dedicated to a specific type, or types, of vehicle, in this case cycles and rickshaws. Alternative vehicle types include baby taxis, motorcycles, buses and trucks, either alone or in combination. The sign is always used together with the F19 lanemarking and sign C19 (orA39).

**LOCATION:**

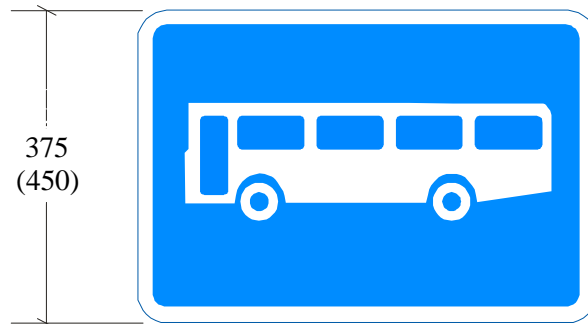
The sign should normally be sited on the left hand side of the road about 20 metres in advance of the start of the lane.

**VARIATION:**

Other symbols representing vehicle types may be used, either alone or in combination. Design may be adapted to show a lane to the right.

COLOURS:

Background : BLUE  
Border : WHITE  
Symbol : WHITE



DESCRIPTION:

Rectangular sign with symbol of a bus pointing to the left.

APPLICATION:

This sign is used to indicate the location of a bus stopping place. The sign is particularly useful at bus bays where, apart from indicating to passengers the location of the bus stop, it discourages other drivers from parking there.

LOCATION:

The sign should normally be located at the point where the buses stop. However, where there is a bus bay, it can be sited at the start of the bay.

VARIATION:

None.

COLOURS:

- Background : BLUE
- Border : WHITE
- Symbol : WHITE with  
BLACK lettering



DESCRIPTION:

Rectangular sign with the symbol of a taxi and optional panel below with arrow or text indicating the direction or distance respectively to the taxi park.

APPLICATION:

This sign is used to indicate that taxi parking is permitted. The sign should normally be sited at 50 metre intervals along the length of the parking. The sign plate should be mounted parallel to the traffic flow.

LOCATION:

The taxi park sign should be positioned on the side of the road on which parking is allowed.

VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE

Border : WHITE

Lettering : WHITE



DESCRIPTION:

Rectangular sign with the word Police in Bangla and English and optional panel below with arrow or text indicating the direction or distance respectively to the Police station.

APPLICATION:

This sign is used to indicate the location of a Police Station or Police Post.

LOCATION:

The sign should be positioned at or near a Police Station or Police Post.

VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : BLUE

Border : WHITE

Lettering : WHITE



DESCRIPTION:

Rectangular sign with the word Tolls in Bangla and English and optional panel below with arrow or text indicating the direction or distance respectively to a point where tolls are collected.

APPLICATION:

This sign is used to indicate to drivers that they are approaching a point where tolls will be collected for the use of the road or bridge.

LOCATION:

The sign may be positioned: at the toll collection point; between 45 and 150 metres in advance of the toll collection point; at a junction with a road which provides an alternative route to the toll road.

VARIATION:

Bottom panel may include arrow or distance information.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with a place name in Bangla and English.

APPLICATION:

This sign is used to help drivers on major routes identify where they are. It is used at the boundary of cities, towns and villages. It also notifies road users that the general rules (where prescribed) governing road traffic in built-up areas shall apply from that point onwards.

LOCATION:

The place identification sign should be sited on the left hand side of the road at the entry to the built up area.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text, : BLACK  
diagonal



DESCRIPTION:

Rectangular sign with a place name in Bangla and English, and a diagonal stripe indicating the exit from the built up area.

APPLICATION:

This sign is used to notify road users that the general rules (where prescribed) governing road traffic in built-up areas cease to apply from that point onwards. It also helps drivers identify where they are. It is used at the boundary of cities, towns and villages.

LOCATION:

The sign should be sited on the left hand side of the road at the exit to the built up area. It may be mounted on the back of a C25 Place Identification sign.

VARIATION:

None.



COLOURS:

Background : BLUE  
Border : WHITE  
Symbol : WHITE  
Lettering



DESCRIPTION:

Rectangular sign with: chevron indicating direction, name of facility or place, and symbol of a walkingman.

APPLICATION:

This sign is used to indicate a pedestrian route to important places, or facilities such as libraries, public toilets, railway stations, etc.

LOCATION:

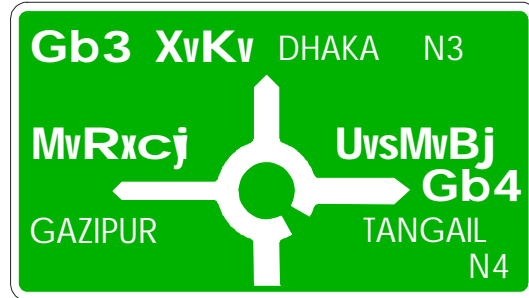
The sign should be positioned where it will be clearly seen by pedestrians wishing to follow the route.

VARIATION:

None.

COLOURS:

Background : GREEN  
Border, symbols : WHITE  
text



DESCRIPTION:

Map-type sign showing a junction in the form of a roundabout. The junction is between two NationalHighways and another road.

APPLICATION:

This sign is used to give drivers information about the junction ahead. Map-type signs like this are used at all roundabouts and any junction where the layout is not easily understood on approach. Because this sign refers to NationalHighways it has white lettering on a green background, but it can also be used for junctions between minor routes, in which case it will have black lettering on a white background. Refer to Section E4.2 and Volume 2 for design advice. The lettering size should be determined from Table 4.

LOCATION:

The sign should be positioned at the left hand side of the road in advance of the junction - refer to Table 5 for the distance.

VARIATION:

The sign may show different junction layouts. Where appropriate it will have black lettering on a white background - refer to Table 3.

COLOURS:

Background : GREEN

Border, arrows : WHITE  
text



DESCRIPTION:

Stack-type sign showing a junction between two National Highways.

APPLICATION:

This sign is used to give drivers information about the junction ahead. Stack-type signs like this are suitable for the simpler junctions (not more than three directions), and will often be smaller and cheaper than their map-type equivalent. Refer to Section E4.2 and Volume 2 for design advice. The lettering size should be determined from Table 4.

LOCATION:

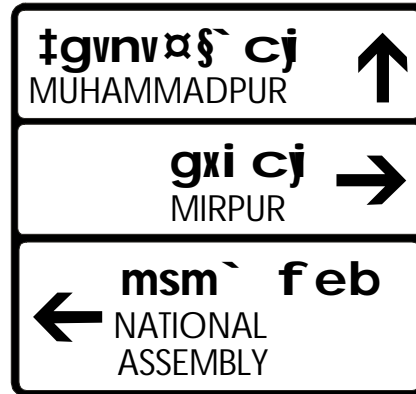
The sign should be positioned at the left hand side of the road in advance of the junction - refer to Table 5 for the distance.

VARIATION:

The sign may show different junction layouts.

COLOURS:

Background : WHITE  
Border, arrows : BLACK  
text



DESCRIPTION:

Stack-type sign showing a crossroads between minor routes.

APPLICATION:

This sign is used to give drivers information about the junction ahead. It is the minor routes version of sign C29. It should only be used where the volume of turning traffic at the junction warrants it, or where it can be justified on safety grounds. At roundabouts and complex junctions a map-type sign (C28) should be used. Refer to Section E4.2 and Volume 2 for design advice. The lettering size should be determined from Table 4.

LOCATION:

The sign should be positioned on the left hand side of the road in advance of the junction - refer to Table 5 for the distance.

VARIATION:

The sign may show different junction layouts.

COLOURS:

Background : GREEN  
Border, arrows : WHITE  
text, symbol



DESCRIPTION:

Overhead sign showing lane information in advance of a junction.

APPLICATION:

Overhead signs like this may be the most effective type of advance direction sign where the road has more than two lanes of traffic going in the same direction. It is used to advise drivers which lane to take in readiness for the junction ahead. Refer to Section E4.2 and Volume 2 for design advice. The lettering size will normally be 175mm (capital letter height, English script).

Note the aircraft symbol. This is used to show that an airport can be reached by going in the direction indicated. It can be used on any route sign - see Volume 2 for advice on positioning.

LOCATION:

The sign is mounted over the carriageway. The lower edge of the sign plate should be 5.7 metres above the highest point of the carriageway. Normally the sign will be sited about 150 metres before the junction, but this can be increased to suit the lane layout or for the better management of traffic. The sign may be repeated for additional emphasis, but the distance between the signs must be at least 70 metres.

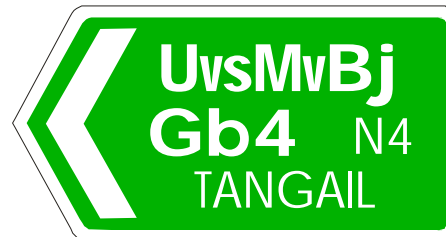
VARIATION:

The sign may show different lane arrangements. Where appropriate it will have black lettering on a white background - refer to Table 3.

COLOURS:

Background : GREEN

Border, chevron, : WHITE  
text



DESCRIPTION:

Sign shows the direction to be taken to reach the specified destination.

APPLICATION:

This sign is used at the junction and refers to a National Highway. It repeats the information given on an advance direction sign (if any). Refer to Section E4.2 and Volume 2 for design advice. The lettering size should be determined from Table 4.

LOCATION:

The sign is normally placed on the left hand side of the road as close as possible to the point at which the turning is made. The sign points in the direction to be taken. In the case of the exits from a roundabout the sign should be placed on the splitter island, or, if this is not possible, on the left hand side of the exit. Refer to Figures 7, 8 and 10 in Section F. It is important to check that the sign does not block the view of drivers entering the junction.

VARIATION:

The layout of the sign may be altered to suit a turn to the right.

**COLOURS:**

Background : WHITE

Border, chevron, : BLACK  
text



**DESCRIPTION:**

Sign shows the direction to be taken to reach the specified destination.

**APPLICATION:**

This sign is used to indicate local destinations and minor routes at junctions. It is the minor routes version of sign C32. It repeats the information given on the advance direction sign (if any). This sign may not always be necessary at urban junctions where there is an advance direction sign. Refer to Section E4.2 and Volume 2 for design advice. The lettering size should be determined from Table 4.

**LOCATION:**

The sign is normally placed on the left hand side of the road as close as possible to the point at which the turning is made. The sign points in the direction to be taken. In the case of the exits from a roundabout the sign should be placed on the splitter island, or, if this is not possible, on the left hand side of the exit. Refer to Figure 9 in Section F. It is important to check that the sign does not block the view of drivers entering the junction.

**VARIATION:**

The layout of the sign may be altered to suit a turn to the right.

COLOURS:

Background : YELLOW

Border, chevron, : BLACK  
text



DESCRIPTION:

Signs shows the direction to be taken to reach the specified destination. The yellow background denotes that it is a temporary sign.

APPLICATION:

This sign is used at junctions to direct traffic on a diversionary route. It can be used on National Highways and minor routes. Refer to Section E4.2 and Volume 2 for design advice. The lettering size should be determined from Table 4.

LOCATION:

The sign is normally placed on the left hand side of the road as close as possible to the point at which the turning is made. It is important to check that the sign does not block the view of drivers entering the junction.

VARIATION:

The layout of the sign may be altered to suit a turn to the left.



COLOURS:

Background : GREEN

Border, text : WHITE



DESCRIPTION:

Route confirmation sign to be used after junctions on National Highways. The sign shows the National Highway route number, the destinations to be reached, and their distance.

APPLICATION:

This sign is used to remind drivers on National Highways of the route they are taking. It should be used after every major junction and at intervals of no more than 20 kilometres between junctions. At junctions it repeats the destinations given on the advance direction signs. Destinations shall be listed in the order in which drivers will reach them (nearest at the top). It is recommended that the first destination be the next destination (repeating the advance direction sign) and the last destination be either the final destination on the road, or a major centre of population reached by the road. No more than four destinations should appear on the signs. Distances shall be given to the nearest kilometre. The lettering size should be determined from Table 4.

LOCATION:

The sign should be positioned at the left hand side of the road. The sign is normally sited 100 metres after a junction and should be beyond any bus bay or carriageway widening associated with the junction. Between junctions, signs should be sited at intervals of no more than 20 kilometres.

VARIATION:

The design of the sign will vary according to the location in which it is used.

## **E5 Other Signs**

### **E5.1 Supplementary Plates**

Supplementary plates give additional information or clarify the message given by the main signs. They are mostly used with regulatory or warning signs. They are never used on their own. The supplementary plates are normally mounted below the primary sign leaving a gap of 75mm between them. However, they can also be combined on a grey backing board – see Section F2 - and this makes a stronger sign that is less vulnerable to vandalism. Where the message on the sign is in both Bangla and English the Bangla will be at the top. The English text will have a capital letter height of 60mm. The most commonly-used supplementary plates are listed in the schedule below and are described on the following pages. Where necessary other plates may be used, but make sure that the message they give is short and clear.

### **E5.2 Schedule of Supplementary Plates**

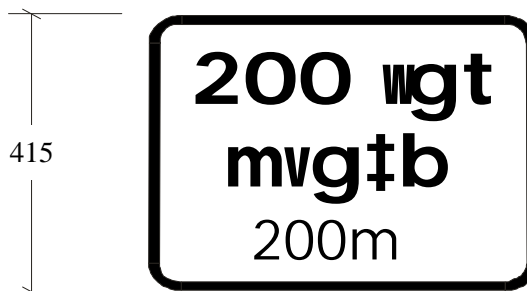
Details of each of the supplementary plates are to be found on the following pages :

D1	Distance
D2	Distance over which Hazard or Restriction Extends
D3	School
D4	Except Buses
D5	Flooding
D6	Single Track Road
D7	Stop
D8	Give Way
D9	Single Track Bridge
D10	Road Closed
D11	Accident
D12	40 km/h
D13	One Way
D14	Dual Carriageway
D15	No Parking
D16	Time Period
D17	No Entry
D18	End
D19	Car
D20	Truck
D21	Bus
D22	Motorbike
D23	Baby Taxi / Tempo
D24	Pedal Cycle
D25	Rickshaw
D26	Arrow to the Right
D27	Disabled

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English indicating distance in metres.

APPLICATION:

This sign tells drivers the distance in metres to a hazard, or to the point where an instruction or restriction applies. It is most often added to warning signs - it gives additional emphasis to the warning, and may be useful with such signs as the B20 Height Limit Ahead sign and the Railway Level Crossing signs, B44 and B45. It should also be used whenever the warning sign is not the standard distance from the hazard.

LOCATION:

The sign is attached to the post below a regulatory, information or warning sign. This sign is never used on its own. The distance is given to the accuracy shown on the table below:

Distance	Accuracy
<150m	to nearest 25m
150m-1km	to nearest 50m
1km-5km	to nearest 0.5km
>5km	to nearest 1km

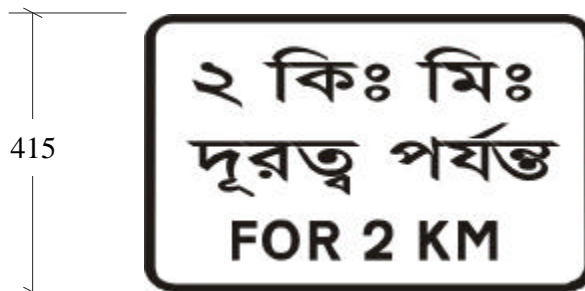
VARIATION:

An arrow (as in sign D26) may be added below the text to indicate direction.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English indicating distance in metres.

APPLICATION:

This sign gives the distance over which the hazard extends or the restriction applies.

LOCATION:

The sign is attached to the post below a regulatory, information or warning sign. This sign is never used on its own. The distance is given to the accuracy shown on the table below:

Distance	Accuracy
<150m	to nearest 25m
150m-1km	to nearest 50m
1km-5km	to nearest 0.5km
>5km	to nearest 1km

VARIATION:

An arrow (as in sign D26) may be added below the text to indicate direction.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to warn that there is a school ahead. The plate is used with the B25 Children warning sign.

LOCATION:

This sign is attached to the post below the B25 Children sign. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to warn that the primary sign refers to all vehicles except buses. For example it may be used with the A3 No Entry sign to indicate that the road ahead is closed to all vehicles except buses.

LOCATION:

To be attached to the post below a regulatory sign. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to warn that the road ahead is flooded, or is often flooded.

LOCATION:

This sign is attached to the post below a warning sign such as B34 Dangerous Dip or B36 Other Danger. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to warn that the road ahead is not wide enough for two vehicles to pass each other. It is normally used with the B14 and B15 Road Narrows signs.

LOCATION:

To be attached to the post below a warning sign. The sign is never used on its own.

VARIATION:

None.



COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with the word STOP in Bangla.

APPLICATION:

The sign explains that the primary sign means STOP. It may be used until road users become familiar with the meaning of the A1 Stop sign. It may also be mounted below the A21 No Passing Without Stopping sign.

LOCATION:

The sign is attached to a post below the regulatory Stop sign A1 or sign A21. The sign is never used on its own.

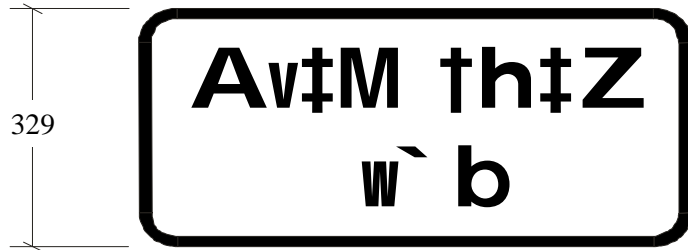
VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with words GIVE WAY in Bangla.

APPLICATION:

This sign explains to drivers that the primary sign means GIVE WAY. It may be used until road users become familiar with the meaning of the A2 sign. It can also be used with the A35 Small Roundabout sign to remind drivers of the priority rule.

LOCATION:

The sign is attached to a post below the regulatory A2 Give Waysign or A35 Small Roundabout sign. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign clarifies the meaning of the primary sign, B35 Narrow Bridge. It warns that the bridge ahead is single track because it is not wide enough for two vehicles to pass each other.

LOCATION:

The sign is attached to a post below the B35 Narrow Bridge sign. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

The sign is for temporary use to warn drivers that the road ahead is closed, and is normally used together with the B36 Other Dangers sign.

LOCATION:

The sign is temporarily attached to the post below a direction sign or a B36 sign and is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to warn that there is an accident ahead.

LOCATION:

This sign is attached to the post below a temporary sign which will normally be a B36 Other Danger sign. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla.

APPLICATION:

This sign gives the speed limit in Bangla.

LOCATION:

The sign is attached to the post below sign A26 Special Speed Limit. The sign is never used on its own.

VARIATION:

Other speeds can be specified.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to warn that the road ahead is one-way.

LOCATION:

The sign is attached to the post below a regulatory sign such as A31, A32 and A34. The sign is never used on its own.

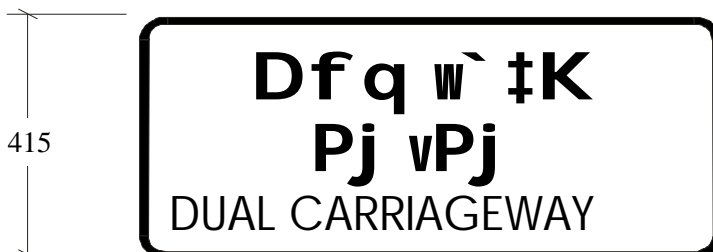
VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used with regulatory signs at junctions to warn drivers that they are joining a dual carriageway.

LOCATION:

This sign is attached to the post below a regulatory sign such as A1, A2, A32 or A34. The sign is never used on its own.

VARIATION:

None.



COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with words NO PARKING in Bangla.

APPLICATION:

This sign is used to explain that primary sign A 18 means No Parking.

LOCATION:

The sign is attached to the post below the A18 No Parking sign. The sign is never used on its own.

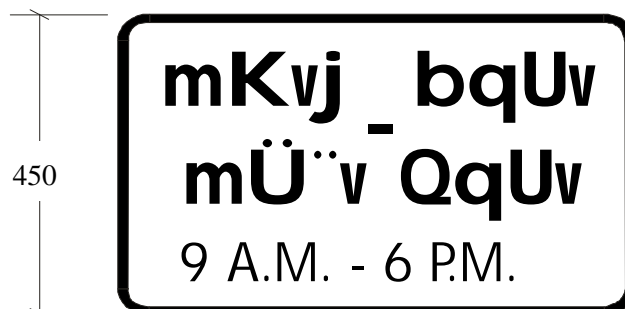
VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to indicate the time period over which a restriction is applicable, or a hazard is present, or a facility is available.

LOCATION:

To be attached to the post below a regulatory, information or warning sign. It will most often be used with sign A18 No Parking, sign A4 No Motor Vehicles and sign A5 No Trucks. The sign is never used on its own.

VARIATION:

The time period shown on the plate will vary.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with words NO ENTRY in Bangla.

APPLICATION:

This sign is used to explain that primary sign A3 means No Entry.

LOCATION:

The sign is attached to the post below the A3 No Entry sign. The sign is never used on its own.

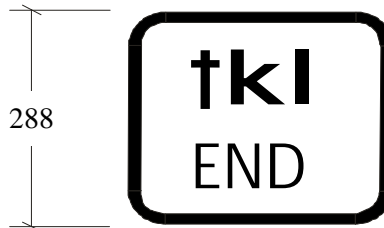
VARIATION:

None.

COLOURS:

Background : WHITE

Border, text : BLACK



DESCRIPTION:

Rectangular sign with text in Bangla and English.

APPLICATION:

This sign is used to tell drivers that the hazard or restriction referred to on the primary sign has ended. It is most often used with sign B38 Road Works.

LOCATION:

To be attached to the post below the primary sign. It is never used on its own.

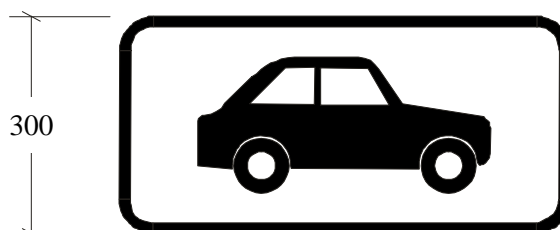
VARIATION:

None.

**COLOURS:**

Background : WHITE

Border, pictogram : BLACK



**DESCRIPTION:**

Rectangular sign with symbol of car.

**APPLICATION:**

This sign is used to indicate that the primary sign refers to cars only. It is most often used with the C3 sign to denote a parking place for cars only.

**LOCATION:**

The sign is attached to the post below the primary sign. It is never used on its own.

**VARIATION:**

None.

COLOURS:

Background : WHITE

Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of truck.

APPLICATION:

This sign is used to indicate that the primary sign refers to trucks only. It is most often used with sign C3 to indicate a parking place for trucks only.

LOCATION:

The sign is attached to the post below the primary sign. It is never used on its own.

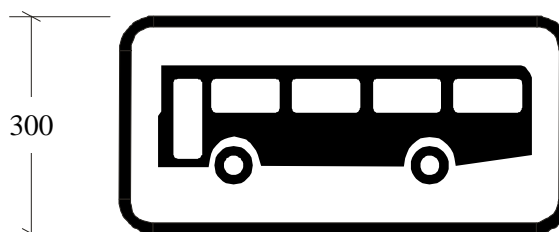
VARIATION:

None.

COLOURS:

Background : WHITE

Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of bus.

APPLICATION:

This sign is used to indicate that the primary sign refers to buses only. It is most often used with sign C3 to denote a parking place for use by buses only.

LOCATION:

The sign is attached to the post below the primary sign. It is never used on its own.

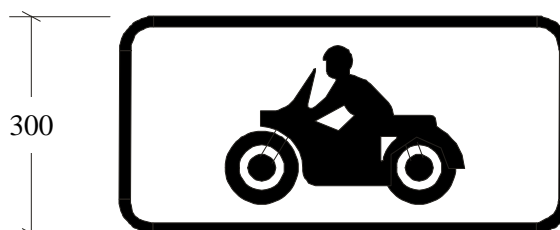
VARIATION:

None.

COLOURS:

Background : WHITE

Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of motorbike.

APPLICATION:

This sign is used to indicate that the primary sign refers to motorbikes only. It is most often used with sign C3 to denote a parking place for motorbikes only.

LOCATION:

The sign is attached to the post below the primary sign. It is never used on its own.

VARIATION:

None.



COLOURS:

Background : WHITE

Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of baby taxi.

APPLICATION:

This sign is used to indicate that the primary sign refers to baby taxis and tempos. It is most often used with sign C3 to denote a parking place for baby taxis and tempos only.

LOCATION:

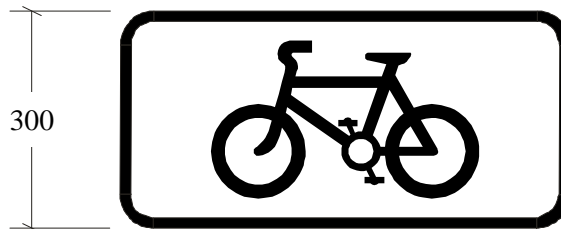
The sign is attached to the post below the primary sign. The sign is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE  
Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of pedal cycle.

APPLICATION:

This sign is used to indicate that the primary sign refers to pedal cycles only. It is most often used with sign C3 to denote a parking place for pedal cycles only.

LOCATION:

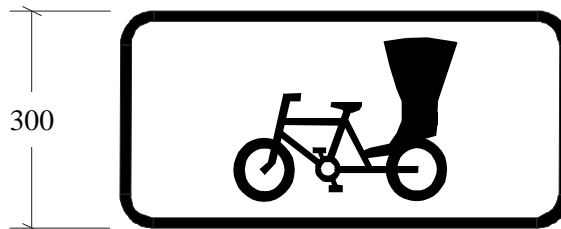
The sign is attached to the post below the primary sign. It is never used on its own.

VARIATION:

None.

COLOURS:

Background : WHITE  
Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of rickshaw.

APPLICATION:

This sign is used to indicate that the primary sign refers to rickshaws only. It is most often used with sign C3 to denote a parking place for rickshaws only.

LOCATION:

The sign is attached to the post below the primary sign. It is never used on its own.

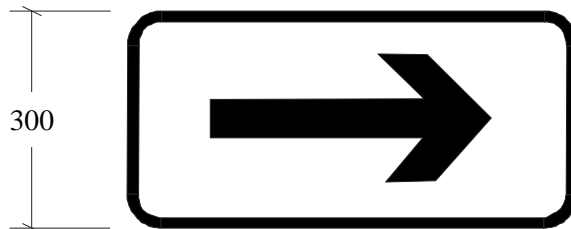
VARIATION:

None.

COLOURS:

Background : WHITE

Border,  
arrow : BLACK



DESCRIPTION:

Rectangular sign with arrow to the right (left).

APPLICATION:

The sign is used to indicate that the message on the primary sign applies to the section of road in the direction of the arrow.

LOCATION:

The sign is attached to the post below the primary sign. It is never used on its own. Where the primary sign already has one supplementary plate the arrow symbol should be added to that plate, usually beneath the legend.

VARIATION:

Arrow may be reversed.

COLOURS:

Background : WHITE

Border, pictogram : BLACK



DESCRIPTION:

Rectangular sign with symbol of person in a wheelchair.

APPLICATION:

This sign is used to indicate that the primary sign refers to disabled drivers and passengers. It is most often used with sign C3 to denote a parking place for vehicles with disabled drivers or passengers.

LOCATION:

To be attached to the post below the primary sign. It is never used on its own.

VARIATION:

None.

## **E5.6 Design and Mounting of Signal Heads**

The minimum diameter for normal signal lenses is 200mm, but 300mm is preferred, especially at large and busy junctions. All arrow signals, pedestrian signals, and signals mounted overhead must have lenses that are at least 300mm in diameter. The signal lamps should be mounted on a black backing board to make them more visible, and should have hoods to prevent them being seen by drivers on other approaches.

Signal heads on upright posts should be mounted so that their lower edge is about 2.3 metres above carriageway level. The signal should be close to the kerb or edge of the carriageway, but leave sufficient clearance to prevent the signal head being struck by vehicles. Where the signals are mounted overhead the lowest edge should be 5.7 metres above the carriageway.

## **E5.7 Schedule of Traffic Signals**

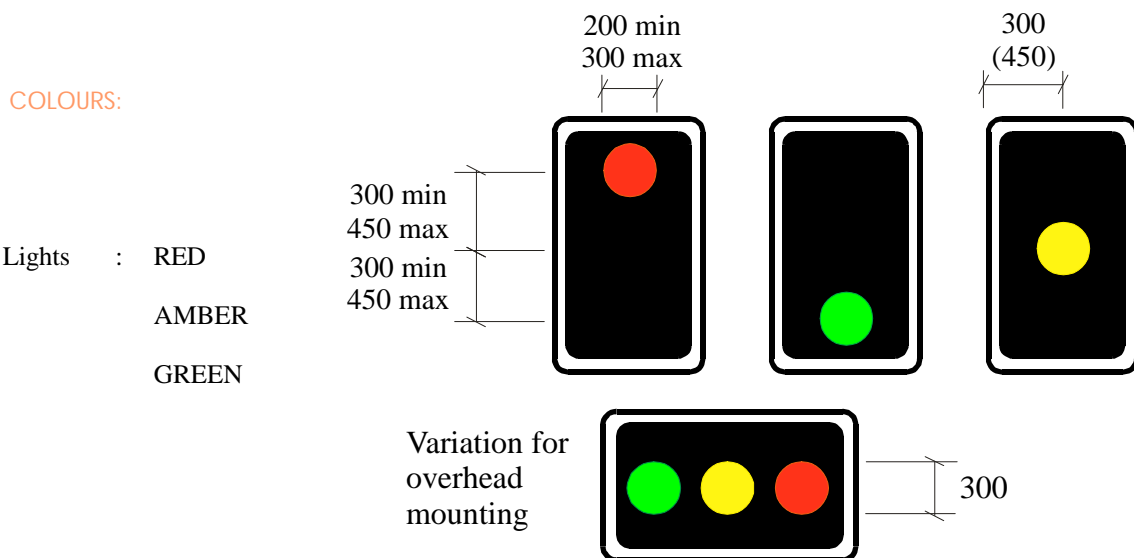
Details of each type of traffic signal are shown on the following pages :

- E1 Signals – Standard Arrangement
- E2 Green Signal in the form of an Arrow
- E3 All Signals in the form of Arrows
- E4 Supplementary Green Arrow
- E5 Rail Crossing Signal
- E6 Pedestrian Signals

**SIGNALS -  
STANDARD ARRANGEMENT**

**E1**

**TRAFFIC SIGNS MANUAL**



**DESCRIPTION:**

Traffic signals for the control of vehicular traffic at road junctions. The signal sequence is RED - GREEN - AMBER and then back to RED.

**APPLICATION:**

Traffic signals are used to control conflicting streams of traffic at a junction in order to minimise delay and reduce accidents.

**LOCATION:**

The positioning of signals at junctions is discussed in detail at the beginning of this section.

**VARIATION:**

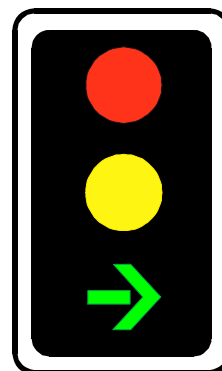
Where the signals are mounted over the carriageway the signal lamps may be arranged horizontally as shown above. Note that the red signal lamp must always be at the right-hand end.

COLOURS:

Lights : RED  
AMBER  
GREEN ARROW

350 min  
450 max

350 min  
450 max



300

DESCRIPTION:

Traffic signals for the control of vehicles moving in the direction shown by the arrow. The green signal takes the form of an arrow. The arrow may also point upwards (for traffic going straight ahead) or left. The signal sequence is RED -GREENARROW - AMBER, then back to RED.

APPLICATION:

This signal is used at signalized junctions to control movements in a specific direction. A lane must be provided for the sole use of the traffic making this movement, and it should be marked with the appropriate F12 lane arrow. Note that the green arrow gives drivers the right of way to move in that direction, so there should be no conflicting traffic movements when the signal is lit.

LOCATION:

The positioning of signals at junctions is discussed in detail at the beginning of this section.

VARIATION:

The arrow may also point upwards or to the left. A second green arrow may be added alongside the main arrow, so that movement can be permitted in two directions, e.g., AHEAD and RIGHT, or AHEAD and LEFT.

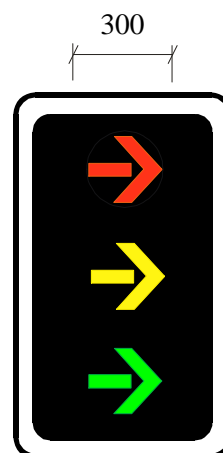


**COLOURS:**

Lights : RED ARROW  
          : AMBER ARROW  
          : GREEN ARROW

350 min  
450 max

350 min  
450 max



**DESCRIPTION:**

Traffic signals for the control of vehicles moving in the direction shown by the arrow. The arrows may also point upwards (for traffic going straight ahead) or left. The signal sequence is RED ARROW - GREEN ARROW - AMBER ARROW, and then back to RED ARROW.

**APPLICATION:**

This signal is used at signalized junctions to control turning movements, especially right turns. The use of a separate signal head with red, amber and green arrows gives very good control and the signals are easily understood. This is the preferred method of controlling turning traffic in most situations. A lane must be provided for the sole use of the turning traffic and it should be marked with the appropriate F12 lane arrow. Note that the green arrow gives drivers the right of way to move in that direction, so there should be no conflicting traffic movements when the signal is lit.

**LOCATION:**

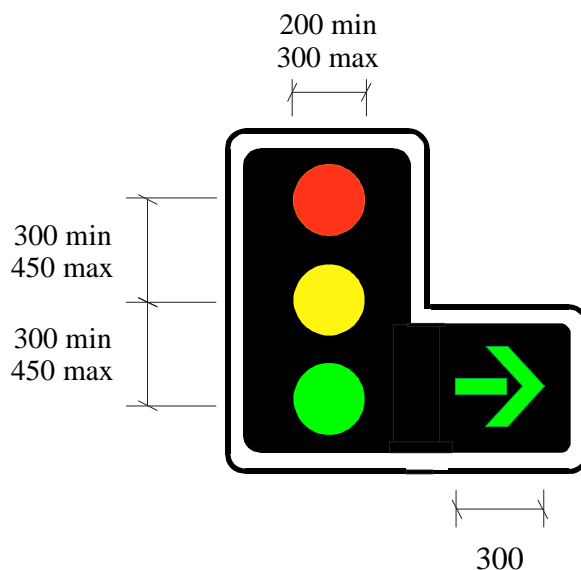
The positioning of signals at junctions is discussed in detail at the beginning of this section.

**VARIATION:**

The arrows may also point upwards or to the left. Where the signals are mounted over the carriageway the signal lamps may be arranged horizontally, in which case the red arrow will always be at the right hand end and the green arrow at the left-hand end.

**COLOURS:**

Lights : RED  
AMBER  
GREEN  
GREEN ARROW



**DESCRIPTION:**

Traffic signals for the control of vehicular traffic at road junctions. The green arrow may point left, in which case it will be positioned to the left of the full green signal.

**APPLICATION:**

The green arrow signal, when lit, tells drivers that they may turn right (left). They may do this even if the main signal is red. A lane must be provided for the sole use of the turning traffic and should be marked with the appropriate F12 lane arrow. The green arrow gives drivers the right of way to turn in that direction, so there should be no conflicting traffic movements when the signal is lit. Where the green arrow is not followed by a full amber it is good practice to make the green arrow flash for three seconds to warn drivers that they are about to lose their right of way.

This signal is an alternative to the E3 signal.

**LOCATION:**

The positioning of signals at junctions is discussed in detail at the beginning of this section.

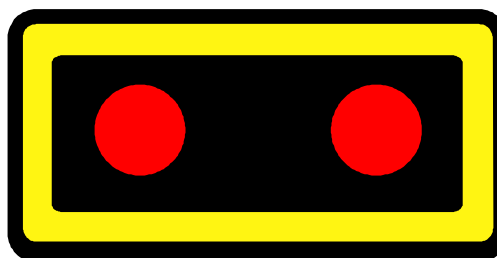
**VARIATION:**

The arrow may point left, in which case it will be positioned to the left of the full green signal.

**COLOURS:**

- Background : BLACK
- Border : YELLOW
- Lights : RED

200 min



**DESCRIPTION:**

Light signal for the control of traffic at railway level crossings. The two red lights flash alternately to indicate that traffic must stop because there is a train coming or passing.

**APPLICATION:**

This signal is used to control traffic at railway level crossings. It is recommended that this signal, together with gates or barriers, be used at all rail crossings. The diameter of the signal lamps must be at least 200 mm, but 300 mm diameter lamps are preferred. The flashing red lights may be supplemented by a sound signal. An F1 Stop line must be marked on the road to indicate to drivers where to stop when the red lights are flashing.

**LOCATION:**

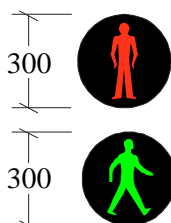
The sign will be positioned within 5 - 10 metres of the nearest rail line and where it can easily be seen by drivers halted at the stop line. It can be at the left hand side of the road, but it may be more visible if it is mounted above the carriageway. Where it is necessary to make the signal more prominent (such as on a left hand bend) a second signal may be positioned on the right hand side of the road.

**VARIATION:**

A signal which flashes white when the level crossing is open to traffic may be added. This also indicates to drivers that the light signal is working.

COLOURS:

Lights : RED  
GREEN



DESCRIPTION:

Pedestrian signals for controlling pedestrian crossings. The signal sequence is RED, GREEN, FLASHING GREEN, and then back to RED.

APPLICATION:

Pedestrian signals can only be used in conjunction with traffic signals. Signal controlled pedestrian crossings may be appropriate where traffic speeds are high or where pedestrian flow is very heavy. However, drivers and pedestrians may not respect the signals unless a policeman is present. Crossings with pedestrian signals can also be incorporated into junctions controlled by traffic signals.

LOCATION:

The location of the pedestrian signals is discussed at the beginning of this section - see also Figure 11 in Section F.

VARIATION:

None.

---

## **E6 Road Markings**

### **E6.1 Classes of Marking**

Road markings are classified as follows:

- Transverse lines which are laid across the road at right angles to the flow of traffic
- Markings at pedestrian crossings
- Longitudinal lines which are laid along the road parallel to the flow of traffic
- Miscellaneous markings

### **E6.2 Purpose and Use**

The purpose of road markings is to control, warn, or guide road users. They may be used to supplement other traffic signs or they may be used alone. Their major advantage is that they can give a continuing message to the driver. Thus they can be used to guide drivers in the correct positioning of their vehicles so that the traffic flows smoothly and safely. Some help clarify or emphasise the meaning of other signs. Improved road marking is often the most cost-effective solution to traffic and accident problems.

The markings have the limitation that they get covered up by dirt, and they wear away quite quickly on heavily-trafficked roads. Nevertheless, they serve a very important function in conveying to drivers information and requirements which might not otherwise be possible by post-mounted signs.

Where traffic congestion occurs extensive use of road markings is essential to ensure that full use is made of the available road space. In particular, widespread use of lane markings is desirable; by enhancing lane discipline they add to the safety of traffic, besides improving traffic flows. And at junctions road markings can be very useful in showing drivers where to stop and look.

It is strongly recommended that road markings be considered in detail at the design stage of new or improved junctions.

### **E6.3 Reflectorisation**

At night it becomes much more difficult to see and understand the road and junctions ahead. Road markings can be of great help, especially when they are reflectorised so that they reflect light from vehicle headlights. The improved efficiency of reflectorised lines is substantially reduced when the lines are wet, although they are still at least as good as unreflectorised lines. Because of their advantage over unreflectorised lines in dry weather much more use of reflectorised lines is justified. Reflectorisation is costly, but it is worth doing for the more important markings, such as:

- Transverse Stop and Give Way lines (sign F1 and F2);
- No overtaking (barrier) lines (sign F6)
- All markings at major junctions
- Centre and edge of carriageway lines on sections of main road with many curves – where this is too costly, consider reflectorising every third mark.

## E6.4 Reflective Road Studs

Reflective road studs can be very effective at night, but they are costly, and so are likely to be used only where clear guidance at night is critical for safety or smooth traffic flow. White coloured reflective road studs may be used with barrier lines, warning lines, and lane lines. Red coloured studs are used for edge lines and for outlining physical traffic islands. Table 6 below indicates the spacing of reflective road studs for each type of longitudinal road marking.

**Table 6 Spacing of Reflective Road Studs**

Type of road marking	Colour shown by stud	Spacing of road studs (m)	
		Urban	Rural
F5 Lane Line	White	12	18
F7 Warning Line	White	6	9
F6 Barrier Line	White	4	6
F9 Edge Line	Red	12	18

## E6.5 Visibility Surveys for Centre Line Markings

A system of centre line markings has been specified which provides a means of prohibiting overtaking on lengths of road where the forward visibility is very limited because of bends, or crests. The standard centre line (F5 lane line) is a broken white line, and this becomes a continuous line (F6 barrier line) where overtaking is prohibited. Where the visibility is marginal (neither clearly safe for overtaking nor unsafe), a warning line (F7) is used. The standard of visibility justifying the use of these lines varies according to the traffic speed at the site, and is specified on the appropriate sign page.

The visibility distance is measured at a point 1.2 metres above the road along the centre line to the reference mark at the same height. Two observers at the required visibility distance apart move forward along the centre line. The observer in front carries the reference mark, and the other observer makes marks on the carriageway as the reference mark disappears, and reappears.

When surveying visibility distances it is important that the sight lines should not be confined within the highway boundary. Detailed instructions for assessing visibility distances are given below.

At the approach to a bend which is likely to require an F6 barrier line the two observers get into the centre of the road and space themselves apart by the required visibility distance – see the F6 sign page.

They then walk towards the bend at the same pace so that they keep the same distance apart. The leading observer, “B”, has a white band (tape is convenient) across his back 1.2 metres above the ground – this is the reference mark. The following observer, “A”, carries a stick of the same height. From time to time A dips and views B’s band from the top of the stick. When B’s band is just disappearing from view A calls ‘halt’ and A marks his position ‘A1’. They then proceed at the same spacing until B’s band again comes into view, when A marks his position

‘A2’. Points A1 and A2 give the beginning and the end of the F6 barrier line for that direction of travel. They then reverse their functions and repeat in the opposite direction, with A in the lead and B following. Once the length of the barrier line has been determined the observers adjust their spacing to the ‘warning’ distance and the exercise is repeated to ascertain the length of the warning lines.

Each member of the Survey Team should wear a high-visibility jacket for their personal safety. A Road Works warning sign (Sign B38) should be placed at the roadside in advance of the survey site and this should be followed by a Road Narrows warning sign (Sign B15). At both ends of the survey site, traffic should be directed to the left either by the use of two Keep Left signs (Sign A33) placed back to back in the centre of the road or by the use of traffic cones and flagmen. Traffic speeds past the survey site may need to be restricted to a safe level.

The survey will proceed much more quickly if the two observers are in vehicles. The vehicles should be fitted with trip meters for accurate distance measuring, and the observers should communicate using two-way radios.


### **E6.6 Schedule of Road Markings**

Details of each of the types of road markings are to be found on the following pages :

F1	Stop Line at Stop Sign or Traffic Signals
F2	Give Way Line
F3	Pedestrian Crossing
F4	Signal-Controlled Pedestrian Crossing
F5	Lane Line
F6	Barrier Line
F7	Warning Line
F8	Traffic Island
F9	Edge of Carriageway
F10	Extended Transverse Line extended across side road junctions
F11	No Parking
F12	Traffic Lane Arrows
F13	Diverge Arrow
F14	Give Way Marking
F15	Chevron Marking
F16	Yellow Box
F17	Road Hump
F18	Special Speed Limit
F19	Lane (for cycles and rickshaws) only
F20	Zig-Zag Line

COLOURS:

Road marking : WHITE

400 



DESCRIPTION:

The stop line is a continuous white line 400mm wide at right angles to the flow of the traffic. It is recommended that all stop lines be reflectorised.

APPLICATION:

This line is used wherever there is an A1 Stop sign, an E5 rail crossing signal, or a junction controlled by traffic signals. The line normally extends from the edge of the road to the centre line, but, if this distance is less than 2.75 metres, the line should be extended across the full width of the road.

LOCATION:

The stop line will normally be marked in line with the edge of the through road carriageway. A stationary vehicle at the stop line will then be in the best position to see in all directions at the junction. The stop line can be up to 1.5 metres before the edge line if there is a risk of collision with through road traffic (see F10 diagram). At traffic signals the line is normally located 1 metre before the signal. Figure 6 in Section F shows the use of a stop line at a signalized junction.

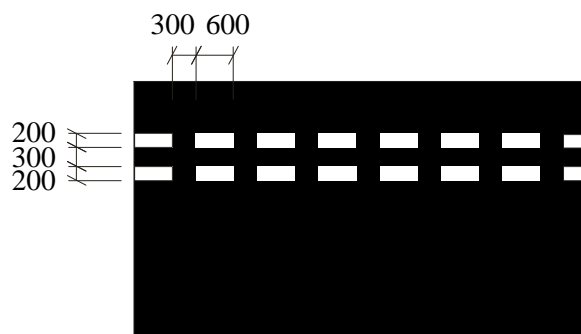
VARIATION:

None.



COLOURS:

Road marking : WHITE



DESCRIPTION:

The give way line is a double broken white line at right angles to the flow of traffic. The two lines are 200mm wide with 600mm marks and 300mm gaps. It is recommended that these lines be reflectorised.

APPLICATION:

This line is used wherever there is an A2 Give Way sign. It may also be used on its own at minor junctions that do not have give way signs, and at F3 pedestrian crossings. The line normally extends from the road edge to the centre line of the road, but, if this distance is less than 2.75 metres, the line should be extended across the whole road. Where there is a need for extra emphasis it should be supplemented by the F14 Give Waymarking.

LOCATION:

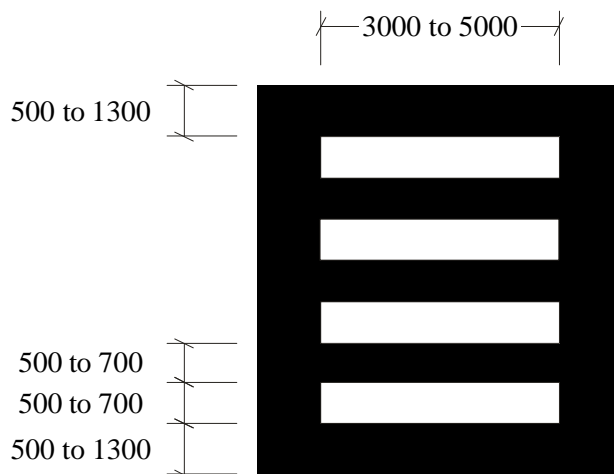
The give way line will normally be marked in line with the edge of the through road carriageway or circulatory edge of a roundabout. The give way line can be up to 1.5 metres before the edge line if there is a risk of collision with through road traffic (see F10 diagram). At F3 type pedestrian crossings it will be 1.5 metres before the crossing markings. Figures 7 to 11 in Section F give examples of where give way lines are used.

VARIATION:

None.

COLOURS:

Road marking : WHITE  
stripes



DESCRIPTION:

The uncontrolled pedestrian crossing is indicated by white stripes. The standard width is 4 metres, but 3 metres may be adequate for less busy crossings on low-speed roads. The stripe nearest the kerb should be black.

APPLICATION:

Drivers are required by law (Article 92.3 of The Motor Vehicles Ordinance) to stop for pedestrians on the crossing. Even though drivers do not obey this rule, there are still benefits from providing crossings, because it is safer if pedestrians cross together with others at one well-sited place. Vehicles must not stop on the crossing. Pedestrian crossings must only be provided where there is a strong need for them, and where they are going to be well-used.

LOCATION:

The crossing must be sited as close as possible to where most pedestrians want to cross. Pedestrian guardrail may be needed to channel pedestrians to the crossing. Sign C2 Pedestrian Crossing and marking F20 Zig-Zag line must always be used. Drivers must be able to see the signs from at least 75 metres away (100 metres on roads with traffic speeds greater than 50 km/h) and the use of sign B23 Pedestrian Crossing should be considered if the visibility is marginal. Figure 11 in Section F shows a typical layout.

VARIATION:

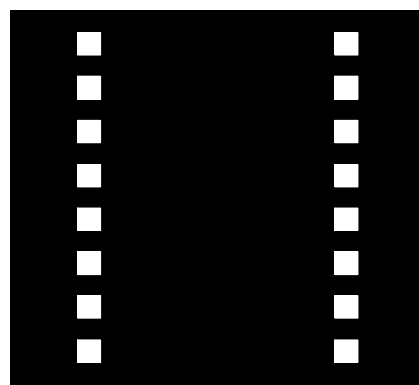
None.

COLOURS:

Road marking : WHITE

500 - 700  
500  
500

2500 to 5000



100

**DESCRIPTION:**

Pedestrian crossings controlled by traffic signals are marked by two 100mm wide broken white lines at right angles to the traffic flow with a 500mm mark and a 500mm gap. The width of the crossing will generally be 2500 with a maximum of 5000 for a particularly busy crossing.

**APPLICATION:**

The pedestrian crossing is controlled by E6 type pedestrian signals which work with E1 signals for the control of vehicles. They are mostly used at signalized junctions. They can also be provided away from junctions at places where large numbers of pedestrians have to cross a heavily-trafficked road, but drivers and pedestrians may ignore them unless a policeman is present.

**LOCATION:**

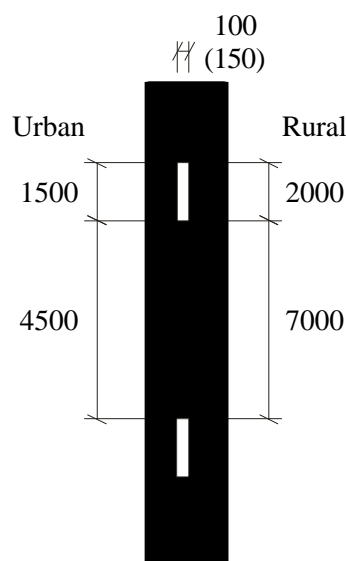
The crossing must be sited as close as possible to where most pedestrians want to cross. Pedestrian guardrail may be needed to channel pedestrians to the crossing. Drivers must be able to see the crossing from at least 75 metres away (100 metres on roads with traffic speeds greater than 50 km/h) and the use of B17 Traffic Signals signs should be considered if the visibility is marginal. The F20 Zig-Zag line must always be used. Figures 6 and 11 in Section F show typical layouts.

**VARIATION:**

None.

COLOURS:

Road marking : WHITE



DESCRIPTION:

Broken longitudinal white line 100mm wide along the centre line of the road. Lane lines have a 1.5 metre mark followed by a 4.5 metre gap in urban areas and a 2 metre mark followed by a 7 metre gap in rural areas. Where additional emphasis is required the line thickness should be increased to 150mm.

APPLICATION:

This line is used to divide the carriageway into traffic lanes. On a two lane road it is used as a centre line. It is essential for traffic safety, and must be marked on every two-way road that has a carriageway width of 5.5 metres or wider. Road authorities should give priority to keeping these markings in good condition.

LOCATION:

The lane linemarking is used on all roads with a width of 5.5metres or wider.

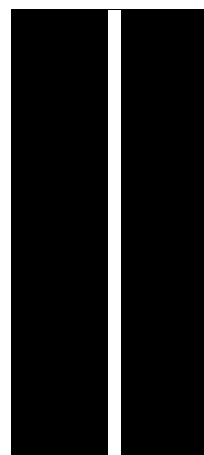
VARIATION:

None.

COLOURS:

Road marking : WHITE

100  
100  
(150)



**DESCRIPTION:**

Continuous longitudinal white line 100mm wide along the centre line of the road. It is recommended that these lines are reflectorised. Where additional emphasis is required the line thickness should be increased to 150mm. Drivers must not cross the line except in an emergency or to gain access to buildings or land fronting the road.

**APPLICATION:**

The barrier line is used to prohibit overtaking on sections of single carriageway road where it is unsafe to do so. This is usually because it is not possible to see far enough ahead, and the table below gives the visibility distances below which barrier line should be used. Barrier lines must be a minimum of 50 metres long - if the visibility survey indicates a barrier line of less than 50 metres, the line should be extended equally at both ends. If the visibility survey indicates a gap in the barrier line that is shorter than the appropriate visibility distance, this should be ignored and the barrier line be made continuous. Do not mark it on carriageways that are narrower than 5.7 metres - use the F7 warning line instead. In towns the barrier line should be used only where essential for traffic control and safety.

**LOCATION:**

Visibility distance below which a barrier line is justified:

Traffic speed	Visibility distance (m)
50 - 59 km/h	60
60 - 69 km/h	80
70 - 79 km/h	100
80 km/h	120

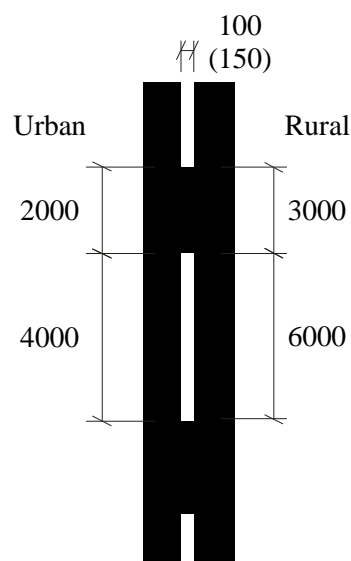
The visibility distance is measured along the centre line at a height of 1.2 metres above the carriageway and should be checked wherever there is a bend, hill crest or dip in the road.

**VARIATION:**

None.

COLOURS:

Road marking : WHITE



DESCRIPTION:

Broken longitudinal white line consisting of long marks with short gaps. It is normally 100mm wide, but where additional emphasis is required the line thickness should be increased to 150 mm. It is recommended that these lines are reflectorised.

APPLICATION:

This line is a traffic lanemarking for use where there is a hazard ahead. It tells drivers that crossing the line, although not prohibited, may be dangerous. It is used as:

- a) a centre line and lane line on the approach to junctions, traffic islands, and pedestrian crossings;
- b) a centre line on the approach to a barrier line, and at other places where the visibility is below the standard (see below).

Type a) warning lines shall be between 20 and 80 metres long depending on traffic speed. Type b) warning lines shall never be shorter than 50 metres, and, if the visibility survey indicates the need for a warning line that is less than 20 metres long, the warning line can be omitted. Do not mark it on carriageways narrower than 5.5 metres.

LOCATION:

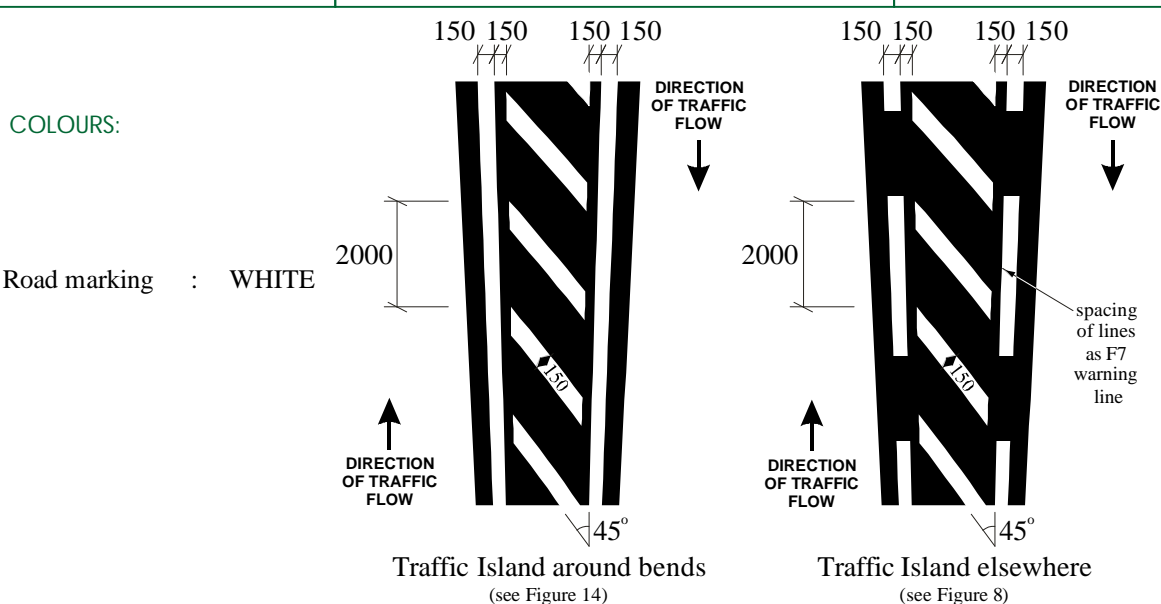
The visibility criteria for the use of warning lines at bends, hill crests and dips in the road is as follows:

Traffic speed	Visibility distance (m)
50 - 59 km/h	125
60 - 69 km/h	150
70 - 79 km/h	175
80 km/h	200

The visibility distance is measured along the centre line at a height of 1.2 metres above the carriageway.

VARIATION:

None.



DESCRIPTION:

The markings take the form of diagonal hatching bordered by a warning line or barrier line, and the diagonals are angled to deflect traffic. The lines bordering the marking should taper at a rate of 1 in 20 (or 1 in 30 where additional emphasis is required) until the full width is reached. It is recommended that these markings are reflectorised.

APPLICATION:

The message to drivers is "Do not enter painted area except in an emergency". The marking has several uses. It guides vehicles past a physical traffic island in the centre of the carriageway, and may also be used on its own to form what is called a "ghost island" - see Figure 8 in Section F. It can also be used in the centre of the carriageway on bends to discourage vehicles from encroaching into the opposite carriageway - see Figure 14.

LOCATION:

The markings will normally be symmetrical about the road centre line and will be constructed in the locations noted above.

VARIATION:

None.

COLOURS:

Road marking : WHITE



DESCRIPTION:

Edge of carriageway denoted by a white continuous line 100mm wide. Where additional emphasis is required the line thickness should be increased to 150mm.

APPLICATION:

Edge markings help define the edge of the carriageway on rural roads. They are particularly useful on busy roads which have many bends, and in such situations they should be reflectorised so that they show up at night. They are also good for guiding drivers onto narrow bridges or other difficult road sections. On roads with hard shoulders they show where the carriageway ends and the shoulder starts. Edge line markings should not normally be used where the carriageway width is less than 6 metres.

LOCATION:

The line marks the edge of the carriageway. Where there is a hard shoulder the edge line shows where the carriageway stops and the shoulder starts.

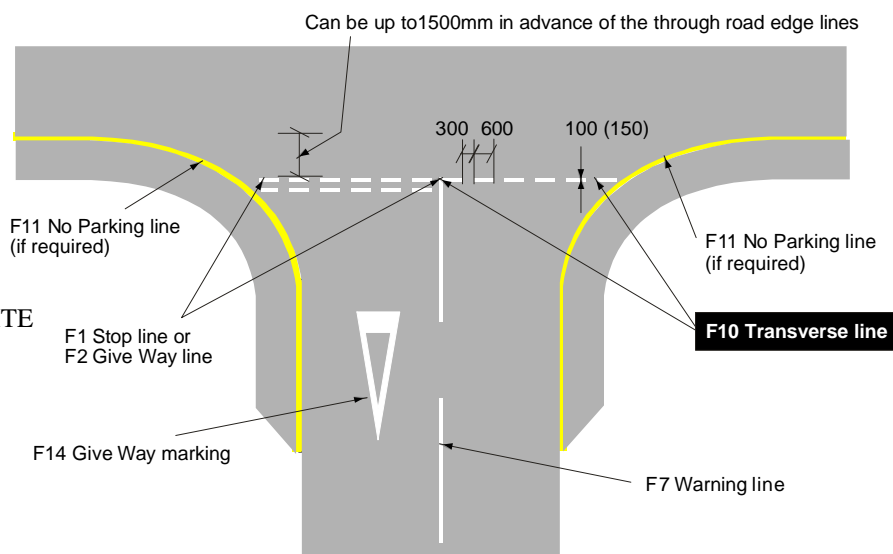
VARIATION:

None.



COLOURS:

Road marking : WHITE



DESCRIPTION:

The extended transverse line is a 100mm wide broken white line with 600mm marks and 300mm gaps. Where additional emphasis is required the line thickness should be increased to 150mm.

APPLICATION:

The line is used to indicate the edge of the main road carriageway through junctions (except signalized junctions). It is usually an extension of a stop line or a give way line, but it may also be used to indicate the edge of the main road carriageway at acceleration and deceleration lanes, gaps in a median, and lay-bys.

LOCATION:

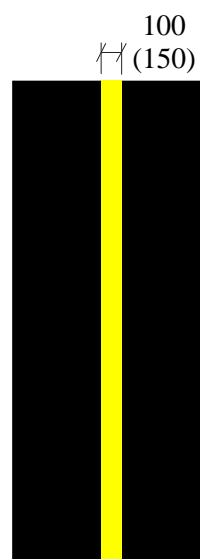
At junctions the line is normally marked in line with the front of the stop line or give way line.

VARIATION:

None.

COLOURS:

Road marking : YELLOW



DESCRIPTION:

Edge of carriageway road marking which indicates that parking is prohibited. It is a continuous yellow line 100mm wide. Where additional emphasis is required the line thickness should be increased to 150mm.

APPLICATION:

This edge marking is used where parking needs to be prohibited because it would obstruct traffic or be hazardous. On rural roads it should be used where parking would be very hazardous, such as sharp bends and the approaches to narrow bridges and road humps. In these situations the line should be 150mm wide and should extend for at least 30 metres either side of the hazard. In urban areas the marking can be used to prevent parking that would cause obstruction or interfere with visibility, such as in or near junctions. A18 No Parking signs may be used with the marking, but this is not essential.

LOCATION:

In urban areas it is recommended that the line be marked on the kerb face, as this reduces wear and avoids the line being obscured by road dirt. Otherwise the line should be marked about 250mm out from the kerb. On rural roads the line is marked at the edge of the carriageway.

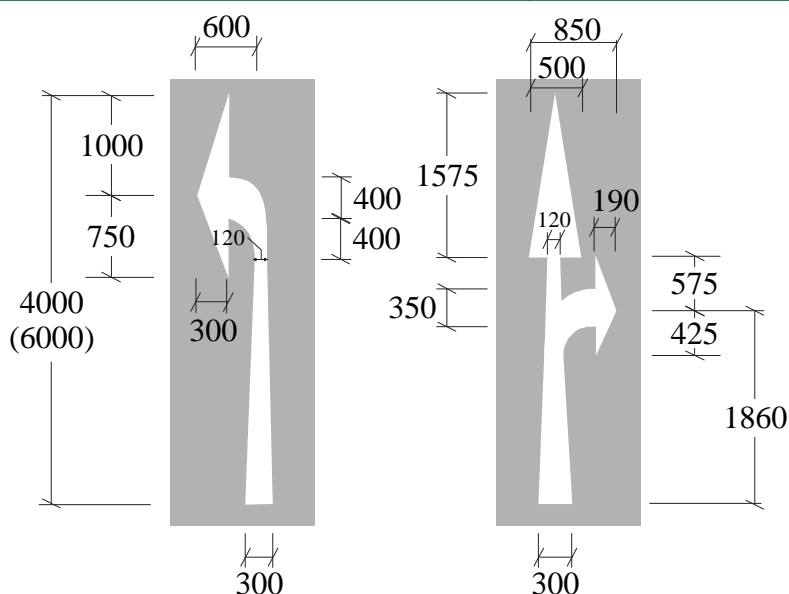
VARIATION:

None.

COLOURS:

Road marking : WHITE

The 6 metre arrow has the same width dimensions as the 4 metre arrow.



DESCRIPTION:

White arrows with single or multiple heads indicating direction. It is recommended that these markings be reflectorised. The 6 metre arrows should be used on roads where the traffic speed exceeds 60 km/h.

APPLICATION:

Arrow markings are used to indicate to drivers which lane they should take when approaching a junction. No more than two directions can be shown on one arrow.

LOCATION:

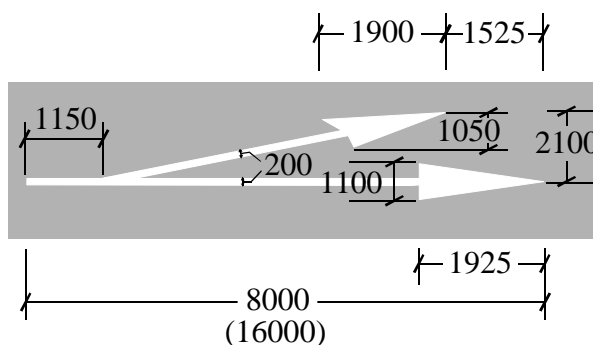
There are usually two arrow markings per lane. Where lanes approach stop or give way lines one arrow will be 15 metres from the line and the second will be a further 30 metres away - see Figure 6 in Section F. Where 6 metre arrows are used the distances should be increased by 50% .

VARIATION:

Arrangement of arrow heads may be varied.

COLOURS:

Road marking : WHITE



The 16 metre arrow has the same width dimensions as the 8 metre arrow.

DESCRIPTION:

White line which splits into two arrows. The 16 metre long version should be used on roads where the traffic speed exceeds 60 km/h.

APPLICATION:

This arrow indicates the start of a special lane on the approach to a junction. This could be a deceleration lane for traffic turning left or a lane dedicated to right-turning traffic. It helps to ensure that the full length of the lane is used.

LOCATION:

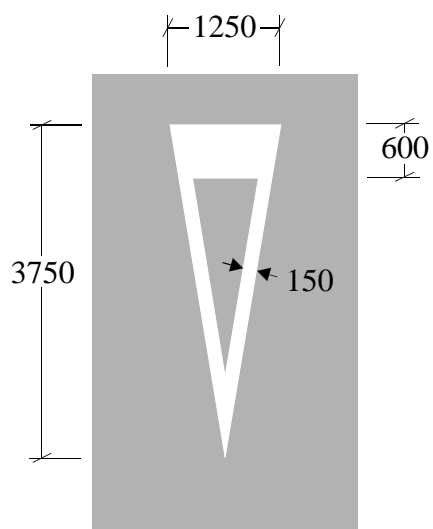
The arrow is positioned on the through lane alongside the start of a special lane. Figure 8 shows a typical layout.

VARIATION:

The arrow may be reversed to suit a special lane which starts on the right-hand side.

COLOURS:

Road marking : WHITE



DESCRIPTION:

Hollow triangular marking.

APPLICATION:

This marking may be used to give extra emphasis to the F2 Give Way line. It is never used on its own.

LOCATION:

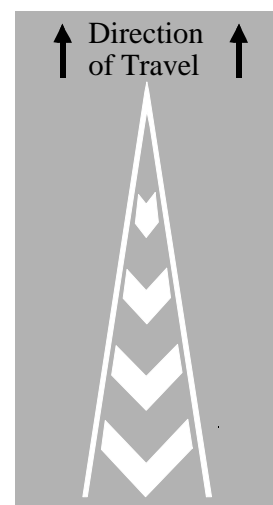
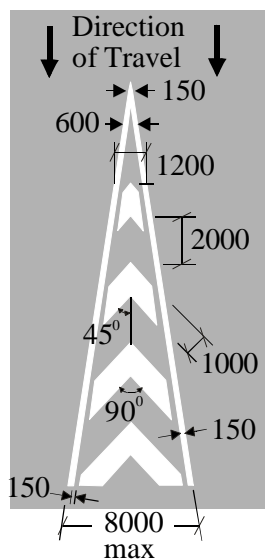
The marking is normally positioned so that the base of the triangle is about 3 metres in advance of the Give Way line, but this distance may be increased up to a maximum of 15 metres, if it makes the marking easier to see. Where the approach to the junction is divided into two or more lanes, put a marking in the centre of each lane. A typical layout is shown on the diagram for the F10 marking.

VARIATION:

None.

COLOURS:

Road marking : WHITE



DESCRIPTION:

White chevron marking with chevrons arranged so that they deflect vehicles.

APPLICATION:

This chevron marking is used either to deflect drivers from the nose of a channelising island where a traffic stream divides, or to extend the nose of a channelising island where two traffic streams merge. In each case the chevrons point towards the oncoming traffic. The marking must not be used to separate traffic streams going in opposite directions (see F8 marking).

LOCATION:

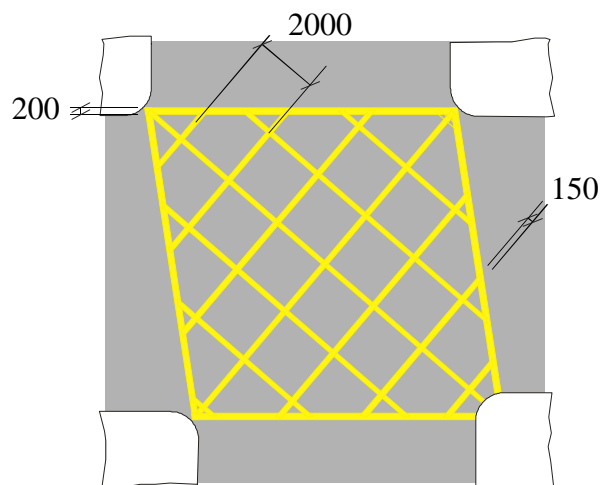
The marking is used at the nose of a channelising island where two traffic streams diverge or merge.

VARIATION:

There are two versions, as shown above.

COLOURS:

Road marking : YELLOW



DESCRIPTION:

The marking takes the form of a yellow box enclosing yellow cross-hatched diagonal lines.

APPLICATION:

This marking means "Do not enter unless your exit is clear". It is used at junctions (especially signalized junctions) to try and prevent traffic queuing across the junction and obstructing the passage of the cross traffic. If drivers obey the instruction there should be less congestion and accidents, but only use this marking if there is a serious problem that cannot be dealt with in other ways. The marking can help prevent vehicles from blocking access to fire stations and hospitals. Because this marking will be unfamiliar to drivers, it may be necessary to erect temporary information signs which explain its meaning.

LOCATION:

The yellow box is marked on the carriageway at junctions

VARIATION:

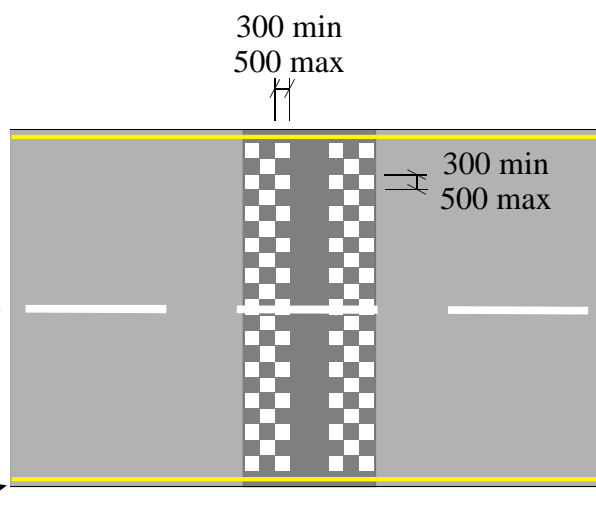
The overall size and shape of the marking can be varied to suit the junction layout.

COLOURS:

Road marking : WHITE

F7 Warning line

F11 No Parking line



DESCRIPTION:

A white chequerboard marking across the width of the road hump and on both sides. The squares that make up the chequerboard should have sides of between 300mm and 500mm depending on road width and the speed of approaching traffic.

APPLICATION:

This marking must be used on all road humps that are designed to slow traffic. They help make the hump more visible to drivers, and should be maintained in good condition. F7 warning lines and F11 No Parking lines will generally be used with the minor order to discourage overtaking and parking in the vicinity of the hump.

LOCATION:

The marking is only used on road humps.

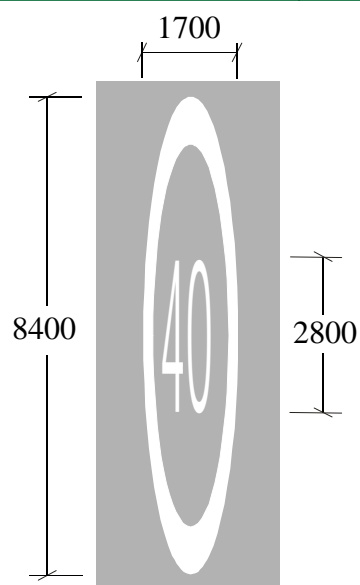
VARIATION:

None.



COLOURS:

Road marking : WHITE



**DESCRIPTION:**

White roundel with numerals indicating special speed limit. The marking is elongated in the direction of travel so that it can be more easily read by drivers.

**APPLICATION:**

This marking is used to give additional emphasis to an A26 Special Speed Limit sign. It will most often be used as part of a package of engineering measures designed to reduce speeds through a town or village.

**LOCATION:**

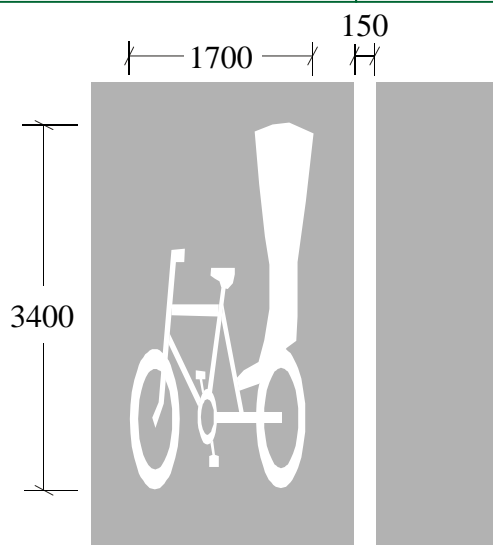
It should be marked in the centre of the lane, and normally not more than 50 metres beyond the A26 Special Speed Limit sign. It can be repeated, but the distance from the A26 sign should not exceed 500 metres.

**VARIATION:**

Speed limits other than 40 km/h may be shown.

COLOURS:

Road marking : WHITE



**DESCRIPTION:**

Longitudinal white line 150mm wide together with white rickshaw symbol. The symbol is elongated in the direction of travel so that it can be more easily read by drivers.

**APPLICATION:**

This is used to mark a lane which is reserved for cycles and rickshaws. It is always used with C19 and C20 signs. The marking can be adapted to suit lanes reserved for other types of vehicles, such as baby taxis, buses, and trucks.

**LOCATION:**

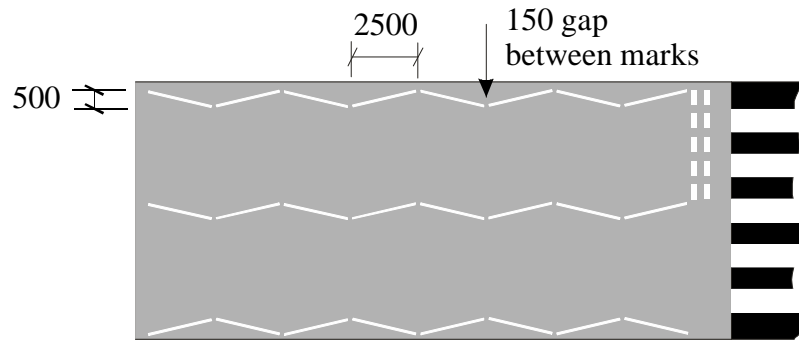
The lane will normally be marked along the left-hand (nearside) part of the carriageway. The rickshaw symbol should be marked at the start of the lane and after every major access point. Between access points the symbol should be marked at intervals of not more than 200 metres.

**VARIATION:**

Symbol may be replaced by those for other vehicle types - either singly or in combination.

COLOURS:

Road marking:  
WHITE lane line  
and edge line



DESCRIPTION:

White broken lane line 100mm wide with marks in zig-zag form, plus white broken edge lines 100mm wide also in zig-zag form. There are normally eight marks in each line, but where a longer approach warning is required the number of marks may be increased to 20.

APPLICATION:

This marking is used to warn drivers that they are approaching a pedestrian crossing, and prohibit overtaking and parking. It is recommended that it be used at all uncontrolled and signal-controlled pedestrian crossings. It must not be used at pedestrian crossings within signalized junctions. Overtaking, parking, and “stopping” is prohibited within the area bounded by the zig-zag lines. “Stopping” means keeping a vehicle stationary for the time needed to pick up or set down persons or to load or unload goods.

LOCATION:

The marking is laid on the approaches to pedestrian crossings.

VARIATION:

The number of marks may be increased up to 20.

## **E7 Signs at Roadworks**

All roadworks, however minor, must be carried out in a safe manner and with due regard to the need to keep traffic delays to a minimum. The key to this is good signing. The next few pages contain a practical guide to the layout and signing of temporary road works. It has been designed so that it can be copied and distributed to road contractors and others who are involved in road works.

# ***SAFETY AT ROADWORKS***

## **A Code of Practice for Signing at Roadworks**

### **Principles**

Everyone responsible for work on or near the road has a duty to try and prevent road accidents. All roadworks, no matter how small, must be properly signed. This leaflet shows you what to do.

Good signing **WARNS, INFORMS** and **DIRECTS**. It warns road users that there is a hazard ahead, so that they can be ready to take action. It informs them of what kind of thing to expect, so that they know what manoeuvre or action they will need to make. And it directs them how to pass through the hazard in a safe manner. Good signing also helps protect the road workers and keeps traffic delays to a minimum.

**Plan ahead** - It is your responsibility to sign your works safely, so think what signs and cones you will need before you leave the depot. This leaflet will help you decide what you need. Get Police advice in difficult or dangerous situations.

**Be seen** - All persons working on or near the road must wear brightly-coloured clothing, preferably an orange or yellow waistcoat.

**Face the traffic when setting out signs** - Put the *Road Works Ahead* warning sign out first and then move towards the works site, and always try and face the traffic when you set out the signs and cones.

**Check the signs carefully** - Ask yourself this question: “Will someone coming along the road in either direction understand exactly what is happening and what is expected of them?” As the works proceed, alter the signing so that it is always consistent with the work that is going on.

**Fix the signs properly** - In most cases it will be best to fix the signs on upright poles set in heavy, concrete block bases. This will help prevent theft and stops the signs from being blown over or dislodged by moving traffic. If the works are to last more than a few weeks fix the sign poles into proper concrete foundations. Check the signs regularly to see if they are all still in place, and clean them if they get dirty.

**Ensure the signs are visible at night** - Make every effort to finish the work before dark, but, if this is not possible, use reflective signs and cones, and preferably supplement them with flashing lights.

**Remove unnecessary signs** - Never leave signs on the road once they are no longer needed. This annoys drivers and leads to distrust of roadworks signing.

**Keep the site tidy** - Take up as little road space as possible, and store construction materials and equipment off the road if you can. When you have finished make sure that the road surface has been properly reinstated and that there are no dangerous holes or trenches. Clean away any mud or gravel.

**Always use the standard signs - do not design your own** – Design details for each sign are given in Volume 2 of the Traffic Signs Manual.

### **The Basic Signs You Will Need**



The *Road Works Ahead* sign is the first sign to be seen by the driver, so place it well before the work site - about 45 metres in town and 90 metres on rural roads - but on a high-speed National Highway it should be at least 150 metres away. Put the sign where it can be seen from a distance. For example, if the works are just after a bend in the road, put the sign before the bend. This sign has a black symbol on a white background, all within a red triangle.

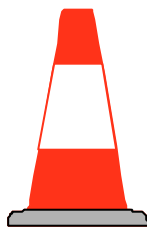


within a red triangle.

The *Road Narrows Ahead* sign warns drivers which side of the road is obstructed. Place it midway between the *Road Works Ahead* sign and the works site. Make sure you use the appropriate sign on each approach to the obstruction. This sign has a black symbol on a white background, all



Place *Keep Left* or, if appropriate, *Keep Right*, signs at the beginning and end of the works - at the point where the works extend furthest into the road. This sign has a white arrow on a light blue background.



Place a line of *Traffic Cones* to guide pedestrian and vehicle traffic past the works. Leave some working space between the line of cones and the actual excavation or works area. Traffic cones should be red, and, if used at night, should preferably have white reflective sleeves. Where theft is likely to be a problem oil drums painted red and white may be used instead.



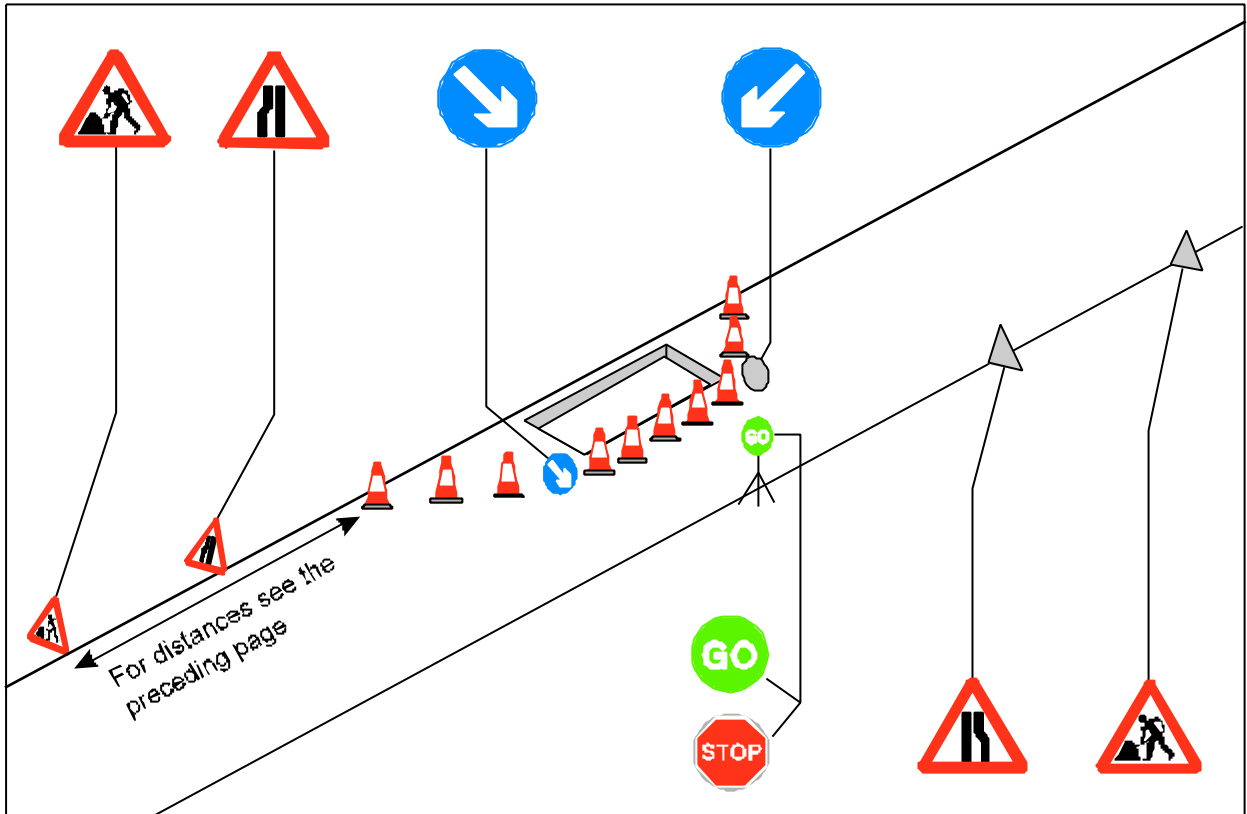
Where there is a lot of traffic or the works site is very long, you will need to control traffic manually using these *STOP / GO* boards. If the obstruction is less than 30 metres long and is on a straight section of road you will only need a single board operating at one end or in the middle. Do not use flags, as these can be confusing, and make sure that the boards are operated by a responsible adult. Provide training if necessary.

Sign plates should normally be 750mm in diameter (750mm high triangle). On low-speed (40km/h or less) single carriageway roads 600mm high signs will normally be adequate.

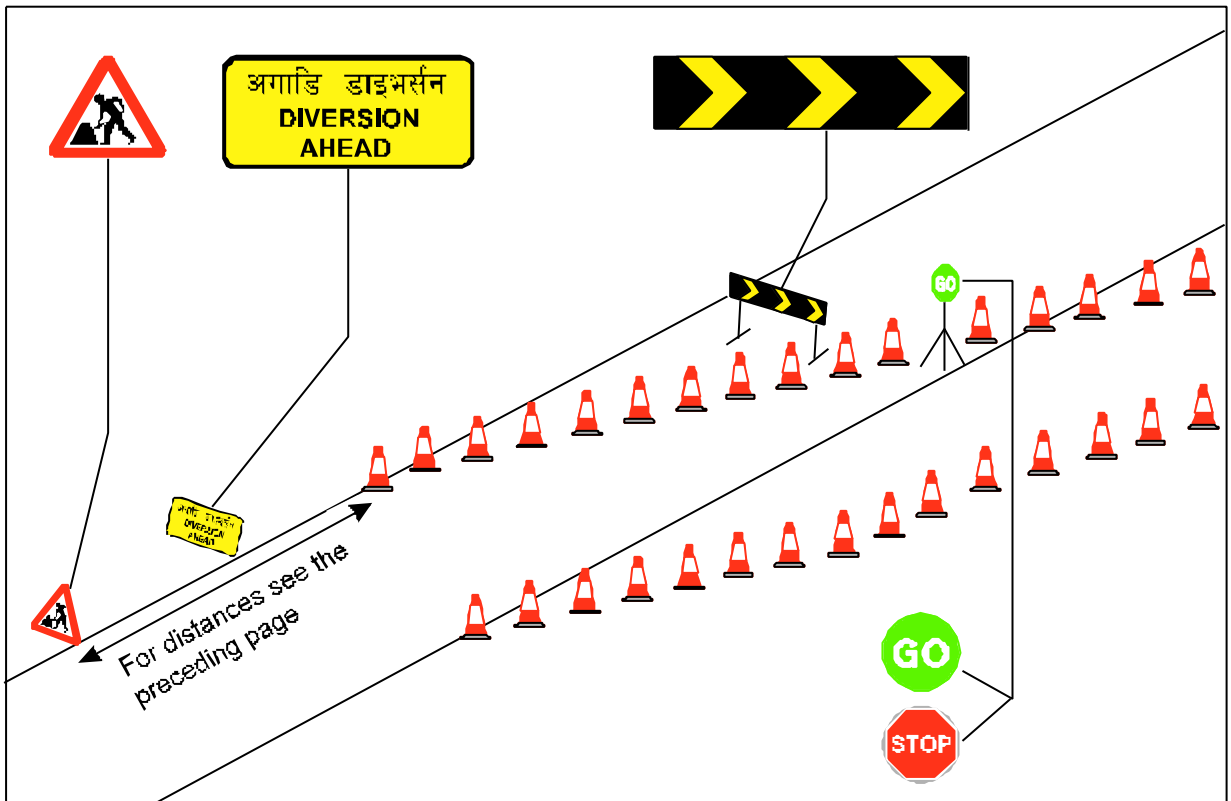
### Sign Layouts

Shown on the next page are sign layouts for two typical roadworks operations. For ease of illustration the advance signing is shown close to the works site, but in practice it would be much further away - see the advice given on this page.

### Basic layout



### Road diversion



**Suppliers of Traffic Sign and Safety Products**

Local sign painters can often supply painted traffic signs at a reasonable price. Make sure that they use the standard designs as set out in Volume 2 of the Traffic Signs Manual. The Road Safety Division in the Roads and Highways Department can advise you on how to obtain reflective traffic signs, and other traffic safety equipment.

**Contractor's Responsibility for Signing**

Where contractors are employed to do roadworks it must be made clear in the contract that they are responsible for providing signing in accordance with this Code of Practice. The recommended wording is:

*“The contractor shall take all necessary measures for the safety of traffic, pedestrians and workmen during the roadworks. The contractor shall provide, erect, operate and maintain signs, markings, lights, barricades and traffic control equipment in accordance with the Bangladesh Road Transport Authority’s Code of Practice for Signing at Roadworks, as modified by the Engineer or the Client’s Representative.”*

Supervising Engineers and Client’s Representatives have a duty to ensure that contractors meet their obligations, and should be prepared to impose such penalties as are provided under the contract, if the contractor fails to maintain an acceptable standard of signing. The contractor will be more likely to provide adequate signing, if it is detailed in the list of works to be done. This way the contractor will get paid for each sign supplied and placed correctly. The Road Safety Division in the Roads and Highways Department can provide standard specifications and advise on appropriate rates.



## F. The Mounting and Positioning of Traffic Signs

### F1 Introduction

The way signs are arranged and positioned is very important for their effectiveness. There are four things to consider:

- whether the sign will be mounted with other signs, or with a backing board
- its position in relation to the edge of the carriageway
- the height of the sign plate and its angle to the road
- where it is to be sited in relation to the junction, hazard, etc., to which it refers

General advice on sign mounting and positioning is given below. Where there are special requirements for a specific sign, these are referred to on the sign page. The recommendations should be used as a guide, because the precise positioning can only be determined on site. There are often limitations on where signs can be placed, especially in urban areas. Always check that:

- the signs are clearly visible from the appropriate distance
- there is no confusion about which road they refer to
- the signs do not obstruct the view of drivers
- the signs are not placed where they could be struck by vehicles

If necessary, alter the siting or mounting to overcome the problem.

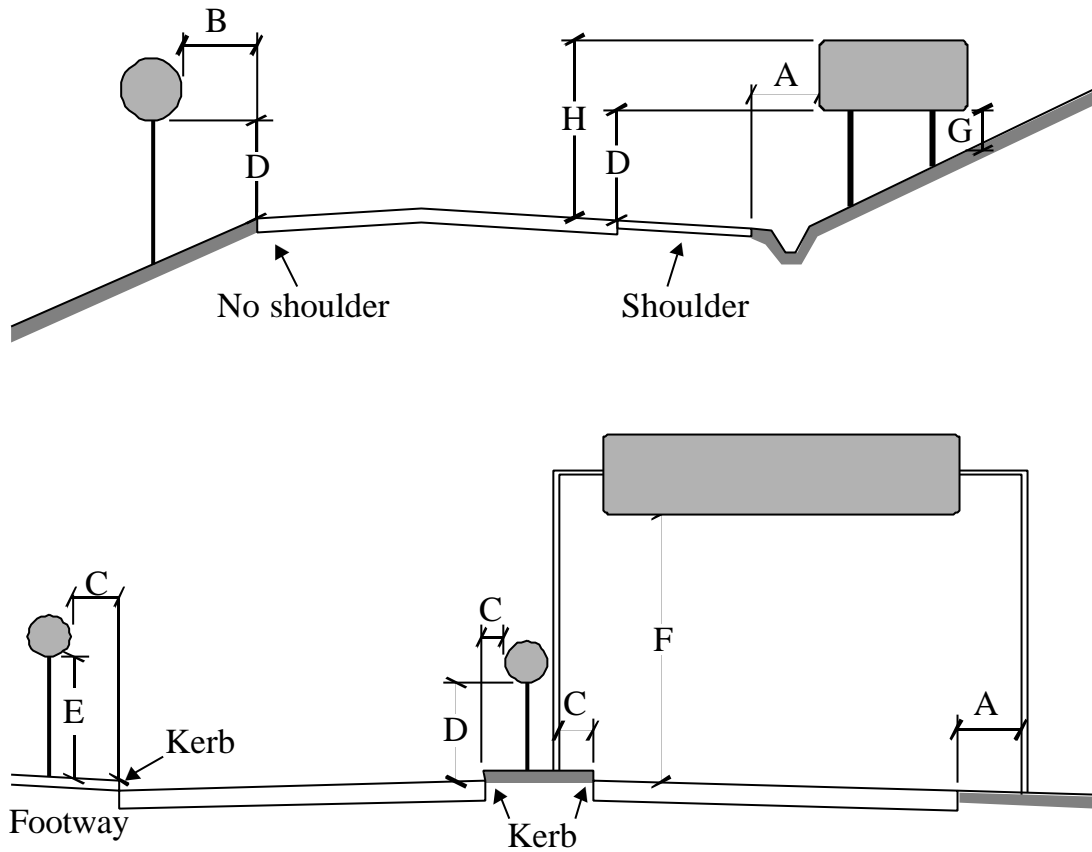
### F2 Mounting

**Mounting height** - Signs should normally be mounted so that the lower edge of the primary sign plate is 1.8 metres above the highest point of the carriageway - see Figure 1. Mounting the sign at this height helps to discourage vandalism and theft. Where the sign is mounted over or alongside a footway (or footpath) the lowest edge should be 2.1 metres above footway level. Some signs are used at non-standard mounting heights and where this is the case it will be specified on the sign page. Signs should never be mounted less than 1 metre above carriageway level, as below this level they will get too dirty from rain splash and vehicle spray.

**Mounting height for overhead signs and signals** - New signs and signals on gantries and mast arms should have 5.7 metres clearance between the bottom edge and the carriageway. This allows for the possibility that the carriageway level might rise when the road is resurfaced. Road authorities should ensure that there is always 5.4 metres clearance between overhead structures and the carriageway.

**Clearance from the edge of the carriageway** - Signs must be set back from the road to reduce the risk of them being hit by passing vehicles. On unkerbed roads the nearest edge of a sign should be at least 600mm clear of the road shoulder and should not be less than 1 metre from the edge of the carriageway – see Figure 1. On kerbed roads the edge of the sign should be not less than 300mm from the kerb face. Signs on traffic islands are especially vulnerable to being hit, and a small-size sign may have to be used to achieve the necessary clearance. Avoid siting signs at places where vehicles park on the shoulder.

Figure 1 Heights and Clearances



	Minimum (mm)	Desirable (mm)	Maximum (mm)
A	600	1000	2500
B	1000	1500	2500
C	300	600	
D	1000	1800	2500
E	2100	2100	2500
F	5400	5700	
G	750		
H			5000

**Multiple signs** - Two signs can be mounted on the same sign pole. When two warning signs are mounted together the sign at the top should refer to the nearest of the two hazards. When two rectangular signs are being mounted on the same poles it looks neater if the two signs are made the same width.

**Supplementary plates** - These plates are mounted beneath the primary sign to which they refer and there is normally a gap of 75mm between them – see Figure 2. Supplementary plates are more easily vandalised than larger signs. One solution, though more costly, is to combine the supplementary plate with the primary sign on the same sign plate or backing board.

**Backing boards** - Signs can sometimes be difficult to see against their background. Where this is a problem they can be mounted on grey or yellow backing boards. Backing boards also make sign assemblies look neater – see Figure 3. Yellow backing boards (Figure 4) can be very effective but should only be used for important signs in difficult-to-see situations. If yellow backing boards are very widely used people will stop noticing them. An alternative way of making a sign more noticeable is to increase its size.

**Angle of the sign plate** - Sign plates are normally mounted so that they face the driver. The plate should be angled slightly away from the road to avoid mirror reflection when illuminated by vehicle headlights - see Figure 5.

### F3 Siting

Signs should generally be sited on the left-hand side of the road. However, at sharp left-hand bends it may be better to put the sign on the right-hand side of the road where it will be more noticeable. A26 Special Speed Limit signs are always put on both sides of the road for maximum impact.

Most warning signs, and some route signs, have to be sited in advance of the hazard or junction to which they relate. The distance depends on the traffic speed at the site. Guidance on siting distances is given in the section of the manual on each sign group. It is important to be consistent, so that drivers will become familiar with the rate at which they have to slow down. When signs have to be sited far away from their standard position, a supplementary plate may be used to give the distance to the junction or hazard. It is better to increase the distance between a sign and the junction or hazard to which it relates, rather than decrease it.

Regulatory signs are normally sited at or near the point where the instruction applies. Care must be taken to ensure that there is no confusion about which road they refer to.

Signs are designed to be read from a specific distance that varies with sign size, and size is determined by the traffic speed at the site. The sign must be sited where it can be seen from this distance. The visibility distances are set out in Table 7.

**Table 7 Visibility Distance Requirements**

<b>Traffic speed (km/h)</b>	<b>Visibility distance to the sign (m)</b>
50	75
60	100
70	150
80	200

Where two traffic signs are needed, such as on the approach to a sharp bend leading onto a narrow bridge, the sign for the nearest hazard should be seen first. The second sign should be placed at least 50 metres further on, to prevent it being obscured by the first sign (where the traffic speed is 50 km/h or less a 30 metre separation will be sufficient). Where this is difficult to achieve consider mounting the two signs on the same pole.

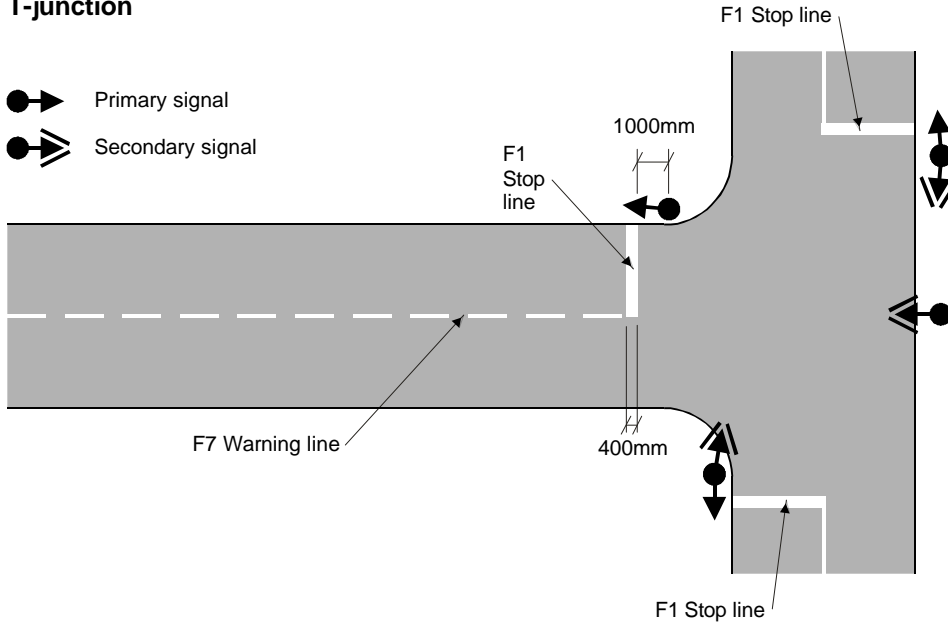
## **F4 Layout of Traffic Signs in Typical Locations**

On the following pages are a number of diagrams showing layouts of traffic signs in typical locations. The diagrams are as follows:

Figure 6	Traffic Signals at a Crossroad and a T junction
Figure 7	Major T junction
Figure 8	Major Junction with Ghost Island
Figure 9	Minor T Junction
Figure 10	Roundabout
Figure 11	Pedestrian Crossings
Figure 12	One Way System
Figure 13	Centre Line Markings
Figure 14	Road Markings Around a Wide Bend

### T-junction

- ➔ Primary signal
- Secondary signal



### Crossroads

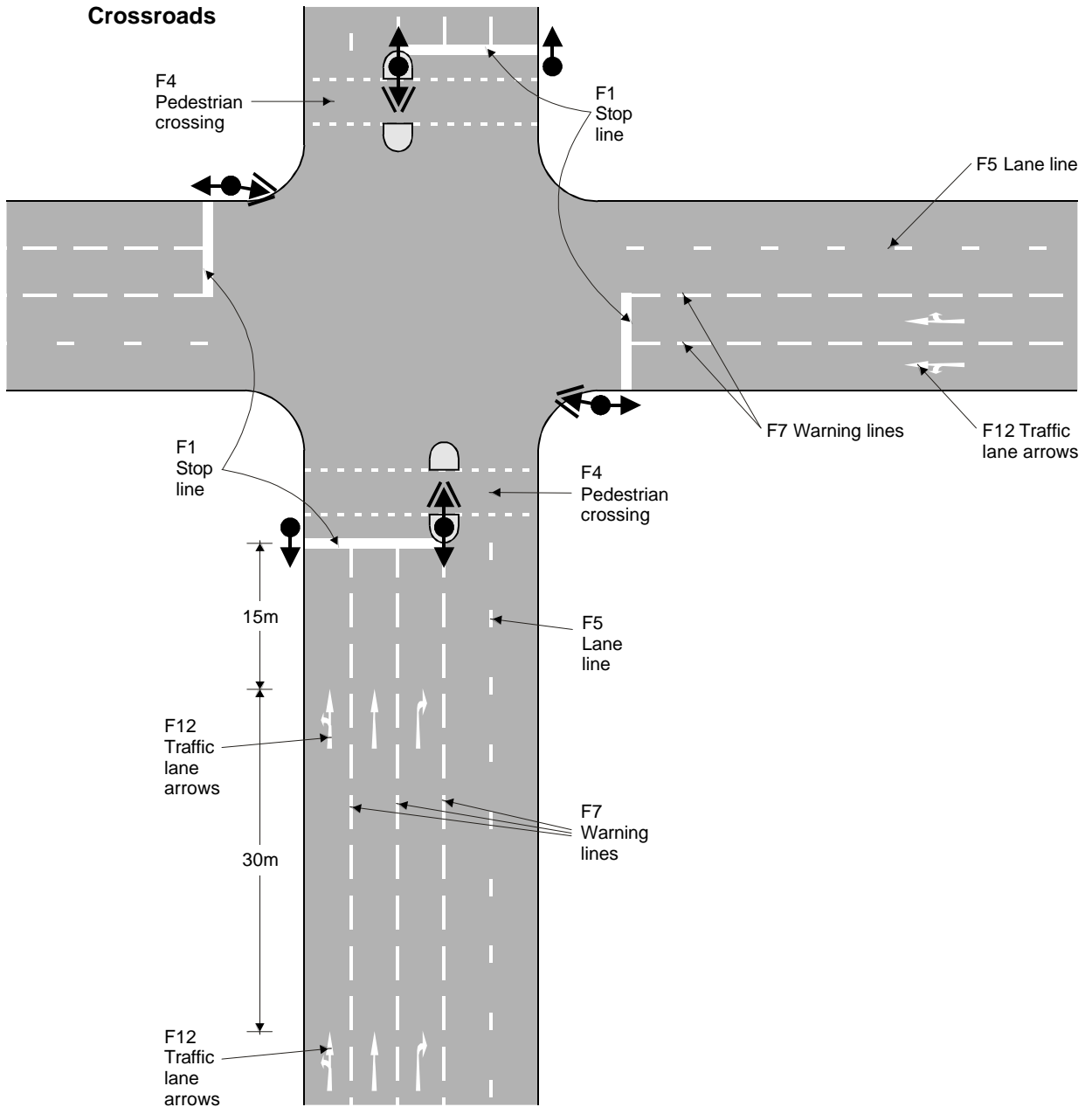
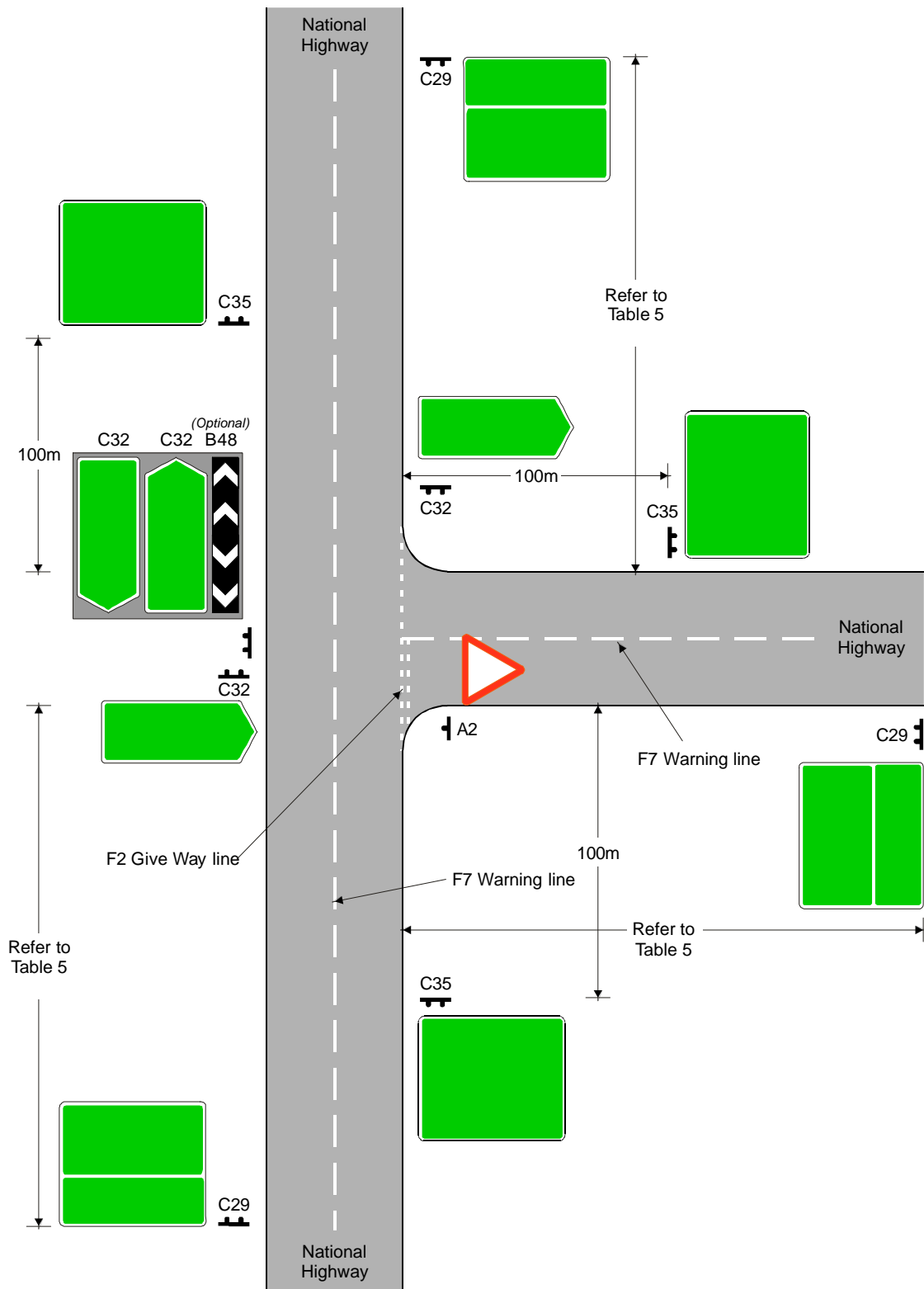
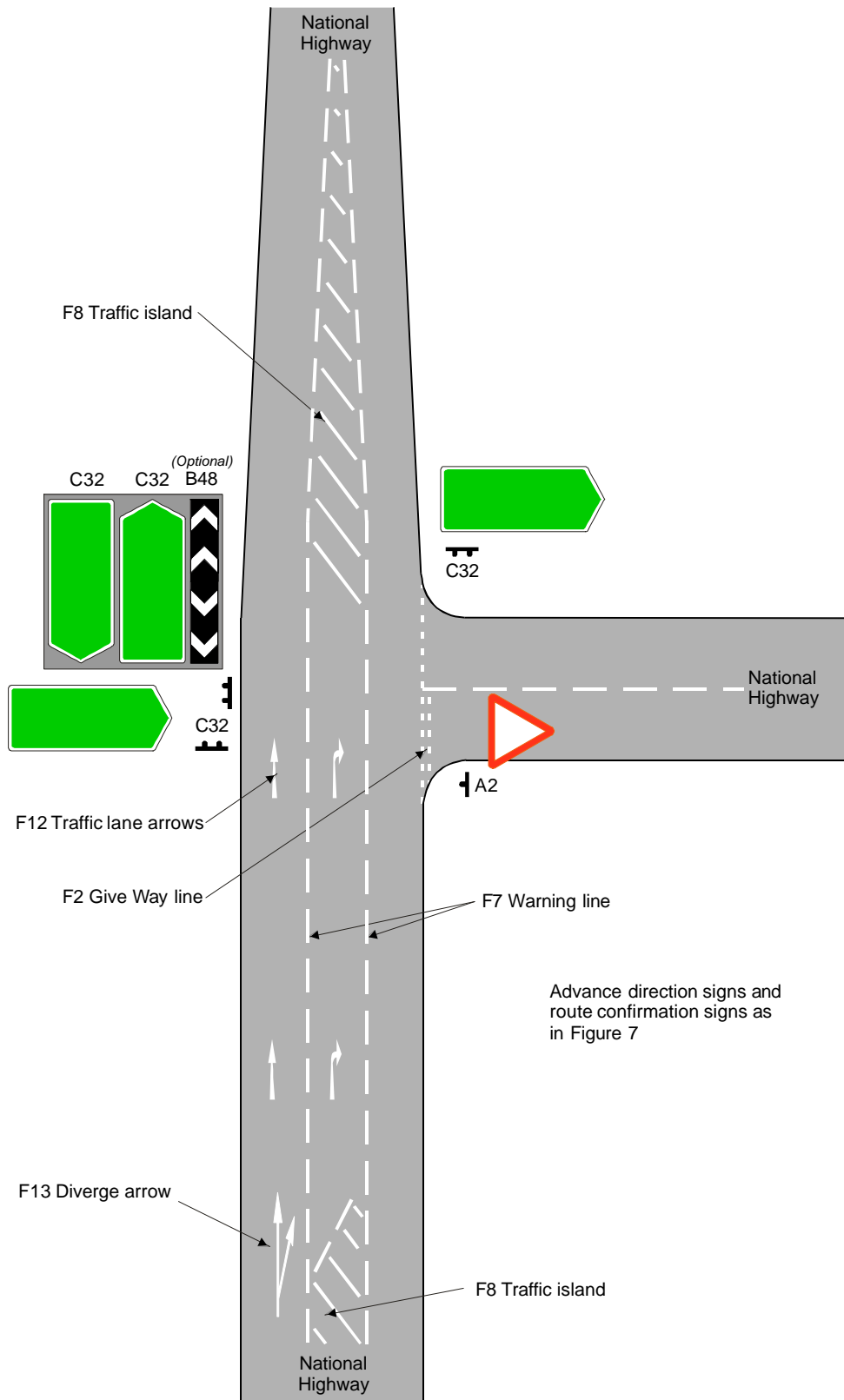


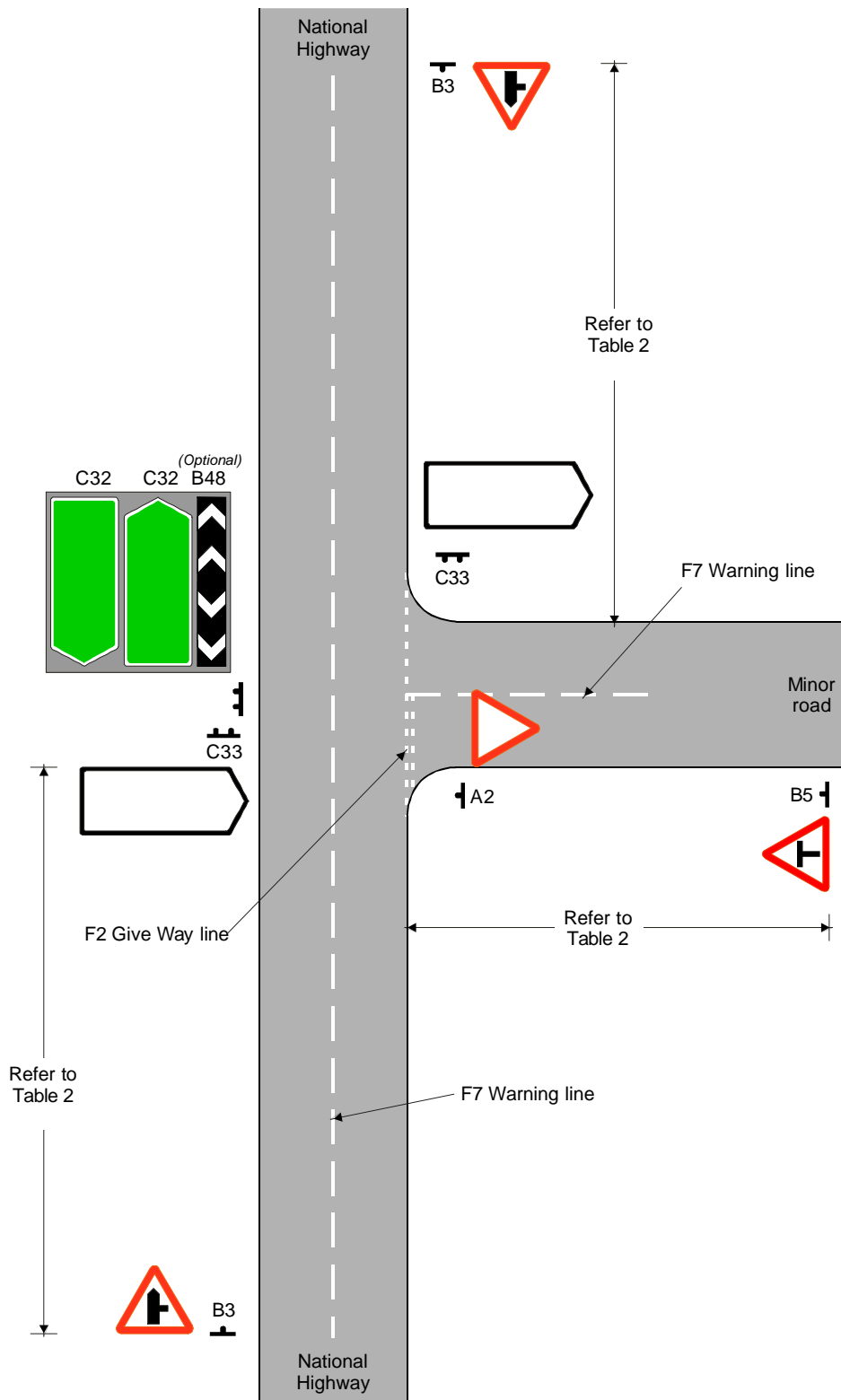
Figure 6 Traffic Signals at a Crossroad and a T-junction



**Figure 7 Major T junction.**  
(Junction of two National Highways.)

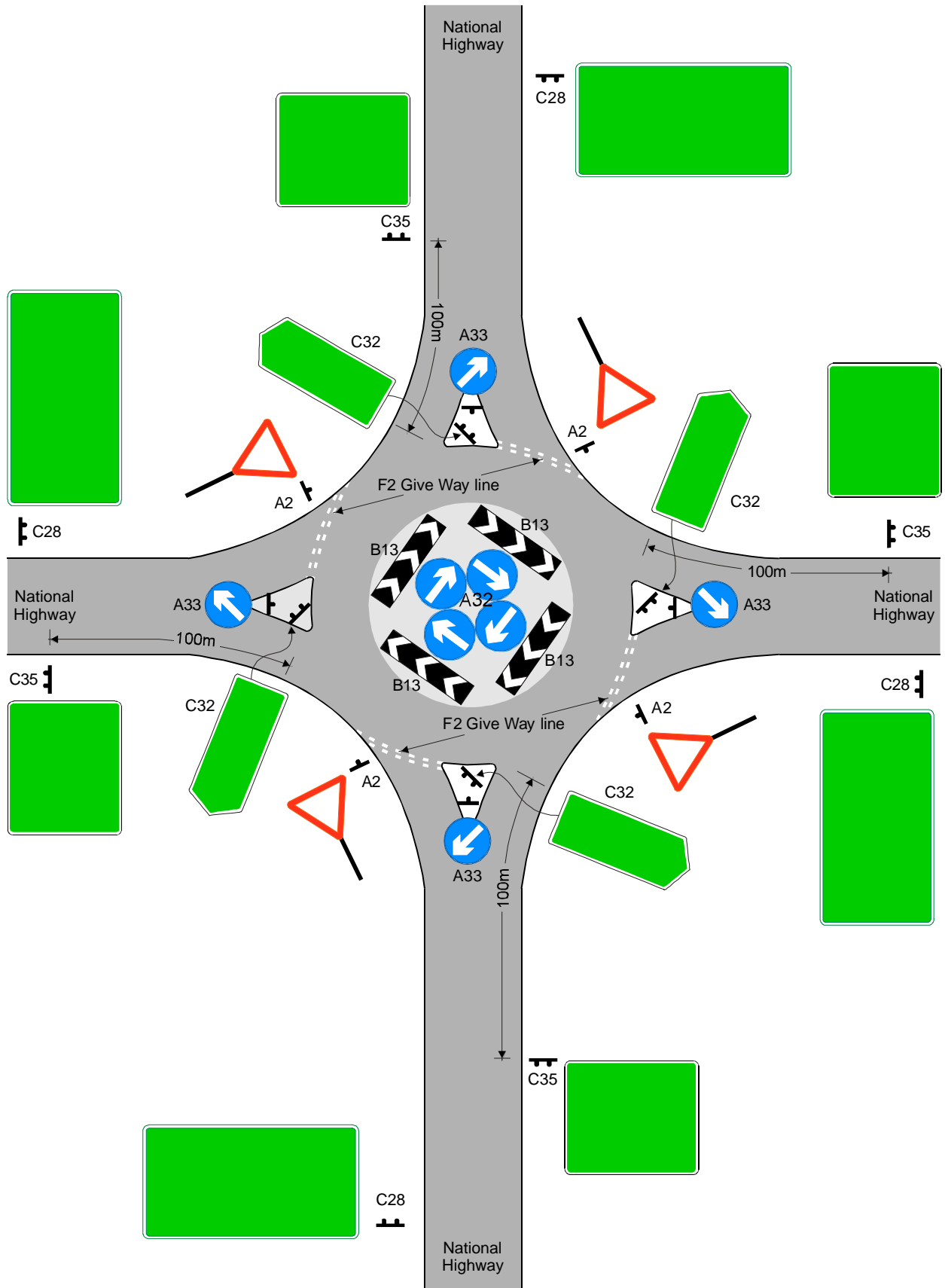


**Figure 8 Major Junction with Ghost Island**  
*(Junction of two National Highways.)*

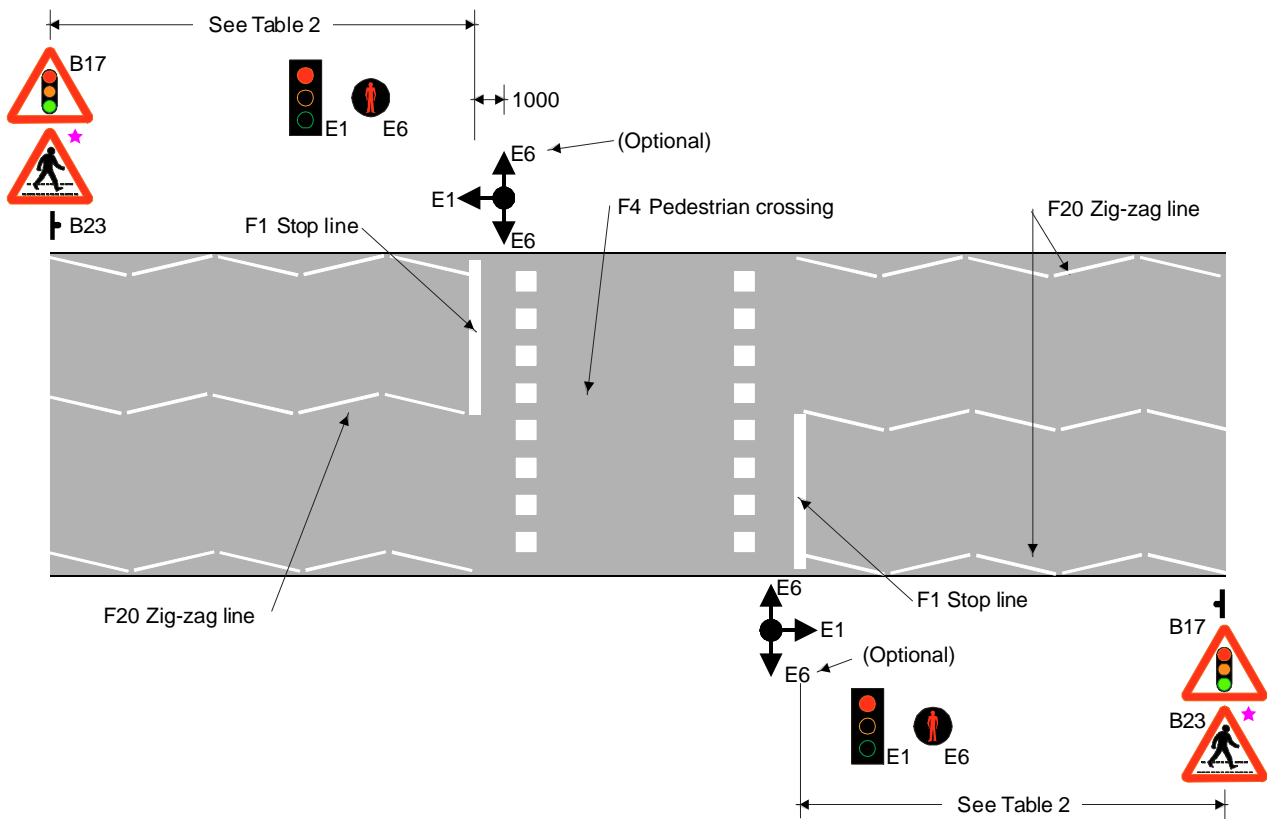
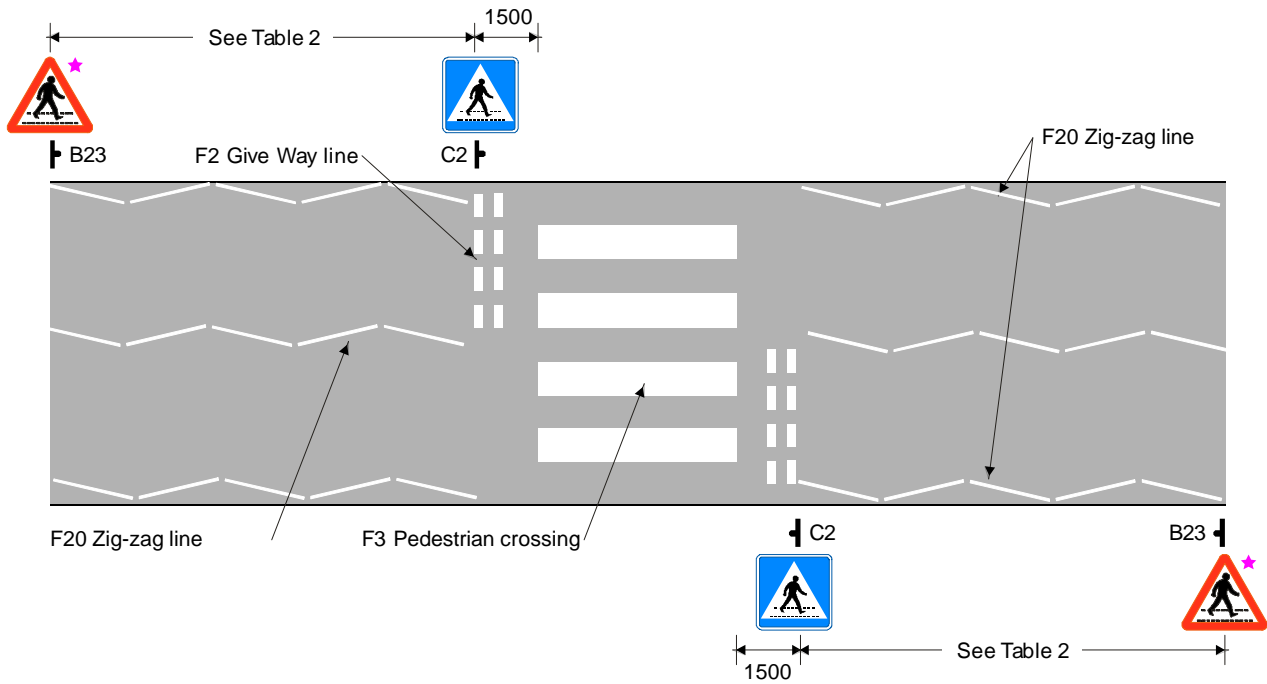


**Figure 9 Minor T junction.**  
*(Junction of a National Highway with a minor road.)*





**Figure 10 Roundabout**  
*(Junction of two National Highways)*



**Figure 11 Pedestrian Crossings**

All dimensions are in millimetres

★ Only necessary on high-speed roads or where crossing is difficult to see

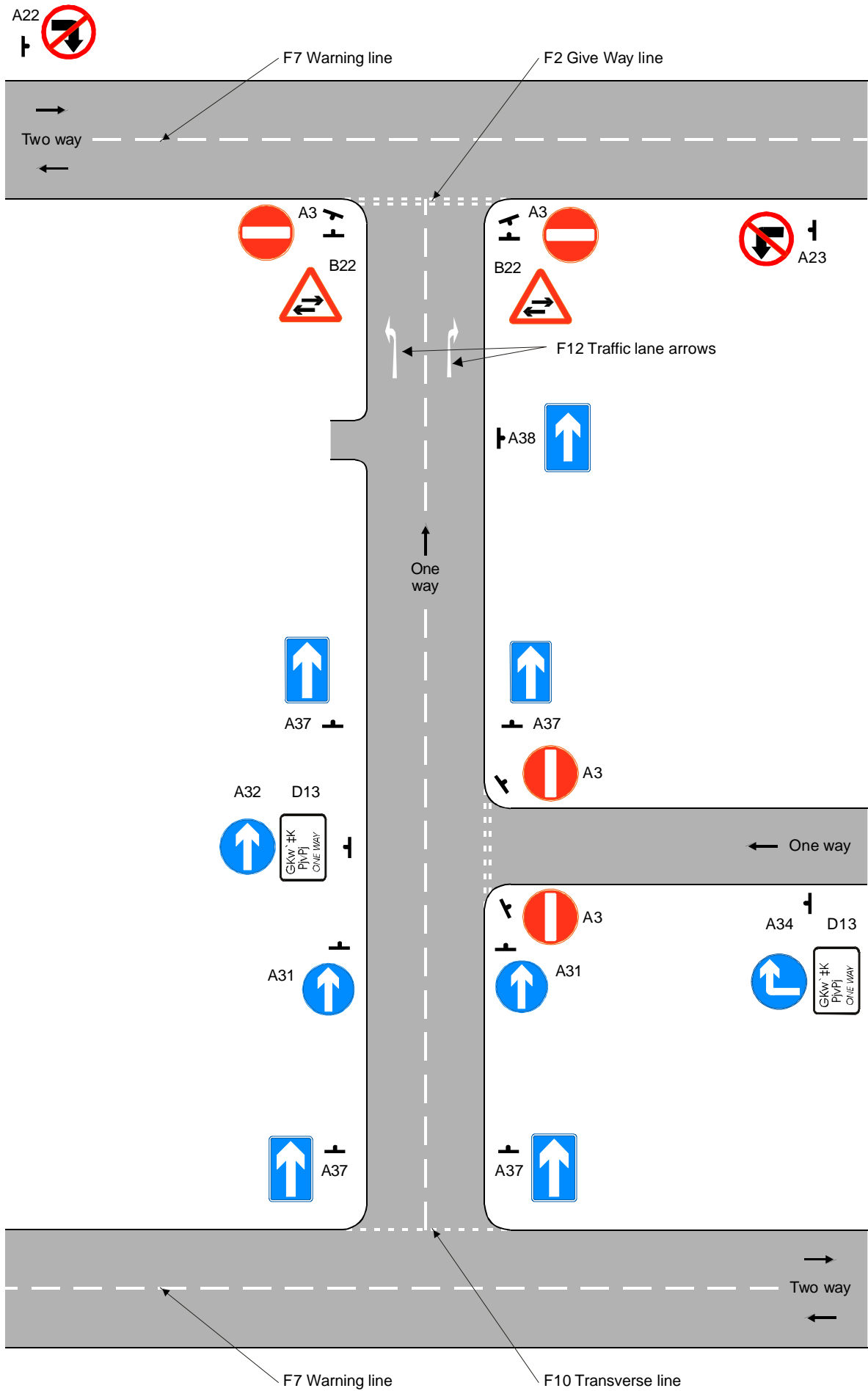
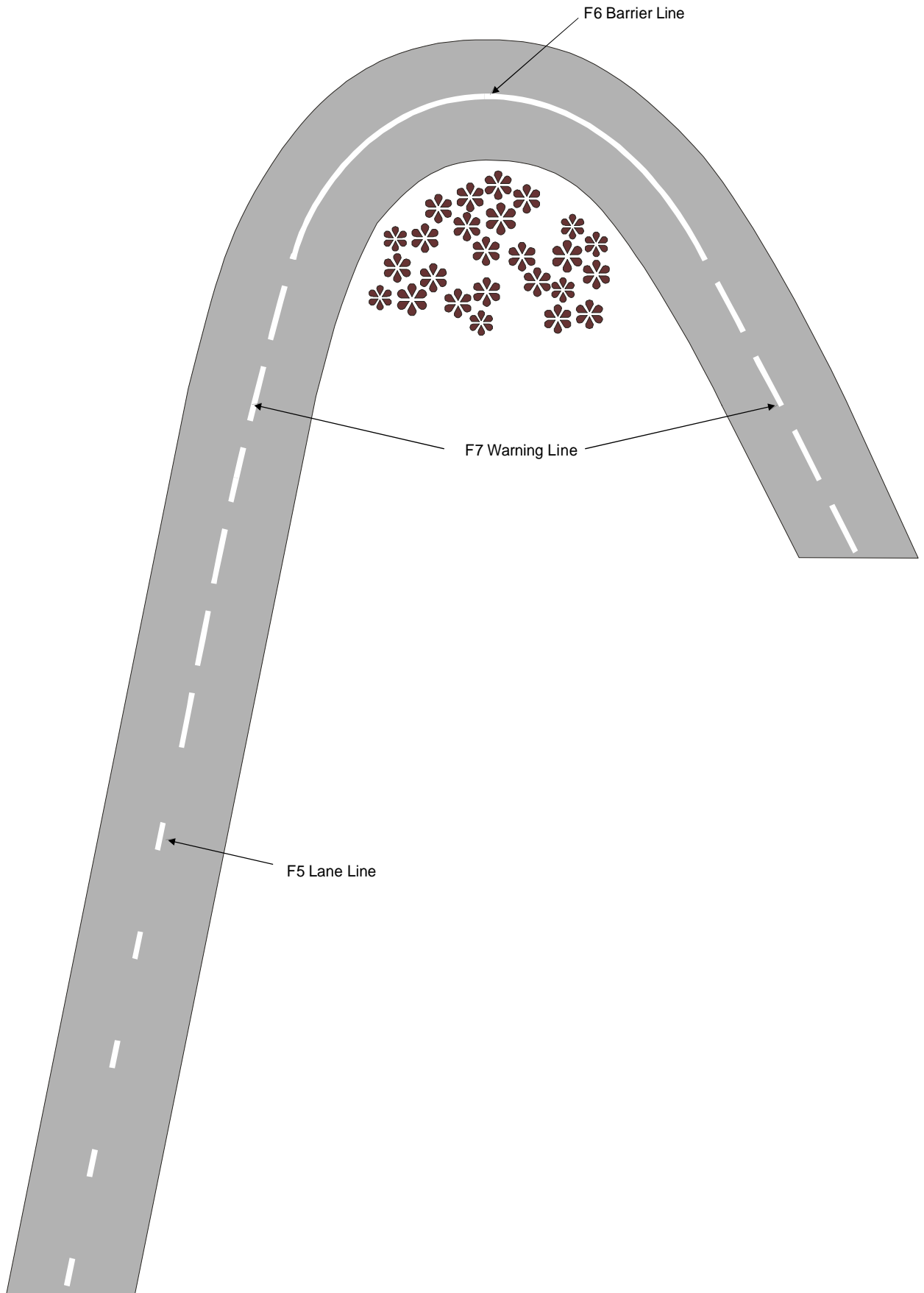
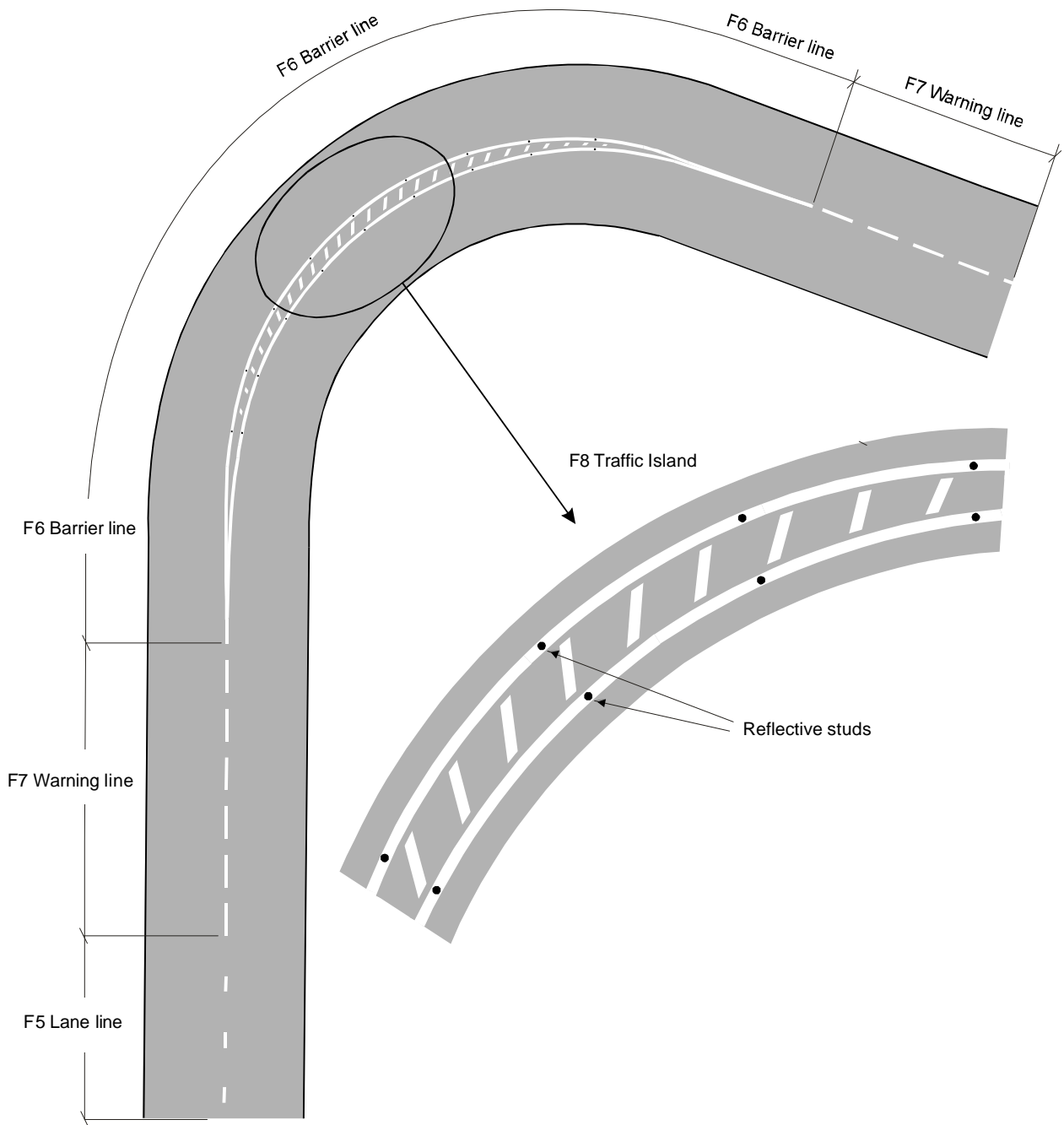


Figure 12 One Way System



**Figure 13 Centre Line Markings**



**Figure 14 Road Markings Around A Wide Bend**

This type of marking is used at wide bends to keep opposing traffic streams apart

## G. Sign Materials and Manufacture

This section contains detailed advice on how to make traffic signs, but it is not an approved technical specification for signs in Bangladesh. Any person or authority wishing to procure signs must satisfy themselves that the specification they use will meet their requirements.

### G1 Post-mounted Traffic Signs

#### G1.1 General Requirements

The materials used in the signs and the method of construction shall comply with British standards (BS873 'Road Traffic Signs and Internally Illuminated Bollards' – Part 6, 1983) or the equivalent American standards (FP-85 Federal Highway Administration 'Standard Specification for Construction of Roads and Bridges on Federal Highway Projects'). Alternative standards of construction may be proposed, but in all cases they must conform to an internationally-recognised standard. The elements of a traffic sign are:

- sign face – the design may be produced by coating the sign plate or applying reflective sheeting
- sign plate (or sub-strate)
- sign support frame
- sign poles

#### G1.2 Colours

Standard colours must be used on a traffic sign and these should comply with the Table 4 chromaticity co-ordinates and Table 5 luminance factors taken from BS873: Part 6: 1983 or the equivalent American standards FP-85, section 718.01(a) or ASTM D4956 American Society for Testing and Materials 'Standard Specification for Retroreflective Sheeting for Traffic Control'. For comparative purposes the following gloss paint colours specified in BS 381C 'Specification for colours for identification, coding and special purposes' will satisfy the colour requirements:

Red	No. 537	Signal Red
Orange	No. 557	Light Orange
Yellow	No. 355	Lemon Yellow
Green (1)	No. 226	Middle Brunswick Green
Green (2)	No. 225	Light Brunswick Green
Blue	No. 109	Middle Blue
Grey	No. 693	Aircraft Grey

Green (1) is the background colour used for route signs. Green (2) is used for the green parts of other signs.

#### G1.3 Reflectorisation

*What is reflectorisation ?* - Traffic signs are reflectorised by making the sign face from retroreflective sheeting. This is a special type of reflective material which reflects light back to the light source. For simplicity this will be referred to hereafter as reflective sheeting.

**Which signs ?** - All signs should preferably be reflectorised so that they can be easily seen at night when illuminated by vehicle headlights. However, reflectorised signs are much more costly than coated, non-reflective signs. The general advice is that all critically important signs, such as Stop and Give Way signs, should be reflectorised, along with all signs on National Highways and major roads in towns.

**Fully reflectorised or partly reflectorised ?** - Signs should preferably be fully reflectorised so that they look the same at night as they do during the day. The standard regulatory and warning signs are normally made from white sheeting which has been overprinted using special inks. The black symbols are made from black non-reflective sheeting that is fixed on top. Non-standard signs, such as route signs, are made by cutting out the letters, symbols, and borders from sheeting of the appropriate colour and fixing them down onto sheeting of the background colour. One option with route signs that have a green background is to coat the sign plate green (or use green non-reflective sheeting) and then apply letters and symbols made from white reflective sheeting – there is a cost saving, but the sign will not be as visible at night as a fully-reflectorised sign. When purchasing signs it is essential to specify whether they are to be fully or partly reflectorised.

**Grades of reflective sheeting** - It is essential to specify which grade of reflective sheeting is to be used, as there are several, each with quite different performance characteristics. Specifications and names vary between manufacturers, but see Table 8 for a general guide to what is available. Table 9 gives typical reflective performance standards for each colour.

**Table 8 Grades of Reflective Sheeting**

Grade (typical name)	Minimum Coefficient of Retroreflection *	Typical length of warranty (years)	Recommended application
Engineer	70	3	Non-critical signs – dark sites
High Intensity	250	7	All signs – most situations
Diamond	430	7	Critical signs in difficult situations

\* For white sheeting; measured in candelas per lux per square metre; observation angle is 0.2 and entrance angle is –4; measurements are made in accordance with ASTM E810 ‘Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting’.

**Table 9 Typical Reflective Performance Standards by Colour**

Grade	Minimum Coefficient of Retroreflection *				
	White	Red	Yellow	Green	Blue
Engineer	70	14.5	50	9	4
High Intensity	250	45	170	45	20
Diamond	430	110	350	45	20

\* Measured in candelas per lux per square metre; observation angle is 0.2 and entrance angle is –4; measurements are made in accordance with ASTM E810 ‘Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting’.

Signs made from High Intensity grade sheeting are suitable for almost all situations. They perform three times as well as Engineer grade signs and the extra cost of the whole sign will often be no more than 10 – 20%. Also, the effective life of the sign is much longer. Signs made from Diamond grade sheeting are for exceptionally difficult situations, such as brightly-lit areas.

**Sign warranties** - It is recommended that sign manufacturers be required to give a warranty for their signs, and this should be endorsed by the sheeting manufacturer. This is a good way of ensuring that the signs will be of proper quality. The warranty for the sheeting will typically say that, if the retroreflective performance of the sign falls below a specified minimum during the warranty period, the manufacturer will replace the sign, or restore it to its original performance.

**Other requirements** -

The reflective sheeting shall generally conform to the following requirements:

- a) The surface of the sheeting shall be smooth and flexible. No cracking shall occur when bent. Reflective sheeting shall have high durability under all weather conditions, heat and moisture and be strongly fungus-resistant.
- b) The sheeting shall not delaminate, blister, crack, peel and chip during the manufacturing process and during its expected service life.
- c) The sheeting supplied shall be free from dirt, solid lumps, scales, and ragged edges.
- d) The colour of the sheeting shall be even and free from any spots or loss of colour. The colour shall not fade appreciably under local weather conditions during its expected service life.
- e) Colours of sheeting used must correspond to the colours of the sheeting supplied as samples.
- f) All inks, sheeting, and film used on the sign must either be from the same manufacturer or be approved by the main sheeting manufacturer.
- g) The reflective surface of the sheeting shall be durable and remain sharp and glareless during its expected service life. Bad weather conditions such as rain, dew, etc., shall not considerably reduce the reflectivity.
- h) The reflective surface of the sheeting shall be easily cleaned with soap and water with no adverse effect on its reflectivity and durability when used on the roads.
- i) The adhesive used on the backing of the sheeting shall give a high quality bonding to clean, smooth and grease-free aluminium or other sign plates approved by the sheeting manufacturer. The adhesive shall withstand the conditions without allowing the sheeting to peel.

#### **G1.4 Sign Plates, Sign Plate Preparation, and Coatings**

Sign plates will normally be aluminium or steel. Generally the sign plates for all fully reflective signs will be aluminium. Sign manufacturers will often insist on using aluminium if they have to give a warranty covering the whole sign. Steel sign plates may be used for non-reflective or partially reflective signs. Plywood is another option, and this material may be less attractive to thieves. Sign plates made of reinforced concrete will not be acceptable.

**Aluminium** - If aluminium is chosen, the aluminium sheeting shall be 2mm thick unless otherwise specified. After any cutting and punching has been completed all sharp edges shall be uniformly



rounded off and smoothed down. The metal plate shall be degreased and all scale/dust removed to obtain a smooth, plain surface. After cleaning, metal shall not be handled except by a device or clean canvas gloves. There shall be no opportunity for metal to come into contact with grease, oil, or other contaminants prior to the application of the reflective sheeting.

**Steel** - Steel plates will usually be 1.5 – 2mm thick. After any cutting, welding and punching has been completed all sharp edges shall be uniformly round off and smoothed down. The plates shall be thoroughly cleaned. If reflective sheeting is to be applied the plates will normally then be hot dip galvanised. Alternatively, if they are to be painted, they will be given a prime coat. There shall be no opportunity for the metal to come into contact with grease, oil or other contaminants prior to the application of the reflective sheeting.

**Coating** - Parts of the sign plate not covered by reflective sheeting (including the reverse of the plate and the back support frame) will normally be coated by painting, stove enamelling or powder coating processes. The colour of the reverse of sign plates and support frame shall be grey or black.

Where sign plates are to be painted it shall be done by applying two coats of enamel paint. Automotive enamel is often used. The legends, borders, symbols, designs, etc., shall be made by spraying enamel paint using appropriate templates. Hand application of paints shall not be allowed. All painted surfaces shall be free from cracks and blisters.

All coated surfaces shall be warranted by the manufacturer against peeling, blistering and excessive fading for a period of one year from installation.

### **G1.5 Sign Reference Information**

Finished sign plates should be clearly and durably marked on the back with the following information:

- the name, trade mark or other means of identification of the manufacturer
- the name, trade mark or other means of identification of the sheeting manufacturer
- the grade of the reflective sheeting used in the manufacture of the sign face
- the month and year of manufacture
- the name of the road authority that owns the sign.

### **G1.6 Back Support Frame**

Unless otherwise specified aluminium sign plates, and steel sign plates greater than 0.1 square metres in area, must be supplied with a back support frame of a size and design which prevents the plate being deformed by wind pressure, or manipulation by vandals (other than severe attack). The frame will normally be made of a steel angle riveted or bolted to the sign plate, and shall incorporate brackets to enable the sign plate to be bolted to the sign post.

All screws, bolts, nuts, washers, rivets, etc., must be protected against corrosion. Steel fixings that come into contact with aluminium must be coated so as to prevent corrosion through electrolytic action.

The complete sign, when mounted on its support shall be rigidly locked in position to resist twisting.

### **G1.7 Frames, Supports and Fittings**

Steel frames shall be freed from scale and rust and then be primed or galvanised. When the frame is of welded construction the weld areas shall be freed of scale and treated to give a protection equivalent to that given to the remainder of the frame. The frame shall be fabricated prior to the application of any finishing coat.

Steel fittings and accessories such as clips, brackets, screws, bolts, nuts, rivets and washers shall be prepared and finished as above.

The reverse of signs should have a top coat finish colour of either grey or black. All posts shall be painted in alternate black and white stripes at 200 to 250mm band widths.

### **G1.8 Checklist of Sign Tender Requirements**

It is recommended that sign suppliers be asked to provide at least the following information and items when submitting their tenders:

- Name of sign manufacturer and sheeting manufacturer
- Performance standards of the reflective sheeting, preferably endorsed by a reputable test laboratory
- Letter of warranty, endorsed by the sheeting manufacturer
- A sample of the reflective sheeting for each colour and grade to be used
- A sample sign
- Details of the back support frame (unless included in the sign specification)
- A written declaration that the signs to be supplied will meet all the requirements in the specification.

## **G2 Traffic Signals**

The construction of traffic signals shall comply with BS 505: 1971 'Road Traffic Signals'. Alternative methods of construction may be proposed but in all cases they must conform to an internationally-recognised standard.

Standard colours must be used on traffic signals and these should comply with BS1376: 1974 or the equivalent American standards.

## **G3 Road Markings**

### **G3.1 Road Paint**

The paint used for road markings should be manufactured specifically for this purpose and should comply with BDS 1151: 1986 ‘Specification for Pavement Marking Paints’ or BS6044: 1987 (1995) ‘Specification for Pavement Marking Paints’ or the equivalent American standards. Pavement marking paint normally contains chlorinated rubber for better wearing resistance. It should be quick-drying, durable, and have a good skid-resistance. The paint may be applied by brush or machine. However when ordering paint the proposed method of application must be specified to ensure that the correct type of paint is supplied.

### **G3.2 Thermoplastic**

Hot sprayed plastic or thermoplastic should comply with BS3262: 1987 ‘Specification for Hot-applied Thermoplastic Road Marking Materials’ or American standards. Check also that it is suitable for use in tropical conditions. The initial cost is higher than for paint, but it is far more durable, so it may be the most cost-effective option.

### **G3.3 Reflectorised Markings**

Road paint and thermoplastic can be reflectorised by the addition of reflecting glass beads, called ballotini. They may either be mixed into the paint or plastic or be applied to the marking while it is still wet or molten. Check that the paint or plastic has been manufactured for use with glass beads. The ballotini should comply with BS6088: 1981 (1993) ‘Specification for Solid Glass Beads for use with Road Markings’ or American standards.

## **G4 Reflective Road Studs**

Road studs (sometimes called raised reflective pavement markers) should comply with BS873: Part 4 : 1987 ‘Specification for road studs’ or the equivalent American standards. The following points should be considered when specifying studs:

- Glass lenses are much more resistant to wear than plastic
- Corner cube reflectors have a better reflective performance than bi-convex lenses
- Strong fixing is vital for safety – studs may be manufactured for use either with a road nail and adhesive, or adhesive alone. It is not advisable to use road nails on a surface dressed road, as it is likely to result in a weakness in the impermeable surfacing that could lead to local failure.

## **H. The Installation of Traffic Signs**

This section contains detailed advice on how to install traffic signs, but it is not an approved technical specification for sign installation in Bangladesh. Any person or authority wishing to install signs must satisfy themselves that the specification they use will meet their requirements.

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## **H1 Installation of Post-mounted Signs**

### **H1.1 Mounting Posts**

Posts should be manufactured in accordance with the Bangladesh Standards applicable to the particular material, such as BDS 1031: 1983 'Mild Steel Tubes, Tubulars and other Wrought Steel Fittings'. The most common practice is to use 50mm internal diameter galvanised steel tube. This provides good, strong support to the sign plate, but it can cause considerable damage and injury when hit by an out-of-control vehicle. Smaller diameter tube and lightweight C channel can help reduce the risk of serious injury, though weak and flimsy posts may get vandalised or stolen. If tubes are used there must be a cap over the top of the tube to keep rainwater out. Posts constructed from reinforced concrete will not normally be acceptable, because they are too strong and rigid.

Care should be taken to prevent the rotation of the post in its foundation. This may be achieved by passing a length of bar through holes drilled in the base of the post below ground level. For additional rigidity, the bar can be welded to the base of the post.

### **H1.2 Fixing**

Sign plates (and frame if used) should be fixed to the mounting post or posts in a way which enables them to be removed for repair or replacement. A typical method of fixing signs to a circular post is by the use of half clips (pipe clamps) which are riveted, bolted or welded to the sign plate or the back support frame. Another method for signs with two mounting posts is for the back support frame to have four flanges, two at the top and two at the bottom. The sign is then fixed to the sign post by bolting through the post and the flange.

Each type of sign plate and mounting post presents its own fixing problem, but the aim should be to provide a fixing for the sign plate (and frame if used) so that, whilst it can be removed for replacement purposes, it is held firmly enough to withstand the loading to which it will be subjected. All nuts, bolts, washers etc., should be galvanised to protect them against corrosion. Steel fixings that come into contact with aluminium must be coated to prevent corrosion through electrolytic action.

In order to help prevent theft of the sign, the ends of the threads of fixing bolts should be filed down, or deformed with a hammer, or the thread spot-welded.

Where a sign is mounted on a single post, care should be taken to prevent the forced rotation of the sign round it. In the case of a circular post this may be achieved by means of a pointed grub screw in the clip which is screwed into the post.

### **H1.3 Foundations**

The type of foundations required, particularly for the larger route signs, will vary with the local soil conditions. Foundations may be in mass concrete or reinforced concrete. The buried section should be at least one-third the overall length of the post. Unless otherwise specified the foundation for a single post should be at least 0.1 cubic metres of class 15 concrete. After

pouring, it should be properly compacted with a tamper. The top surface should be smooth with a slight slope outwards from the post to ensure proper drainage. The top surface of the finished concrete should not be proud of the surrounding ground surface as the provision of foundation blocks or plinths will enable vandals to reach the sign plate more easily.

The foundation should be designed and placed at such a depth that it will safely support the sign under its loading conditions without causing failure due to shear or heave in the surrounding soil. Special precautions should be taken to ensure the adequacy of foundations in made up ground. Foundation for the large route signs should not be 'covered up' until they have been inspected and approved by the Engineer.

Temporary struts should be used to hold the post in position until the foundation is complete, making sure that the post is vertical and that the sign plate is level and at the correct angle to the road. It is recommended that the installation date is painted on the back of the sign.

## H2 Application of Road Markings

Road markings may be laid either by hand or by machine. The choice will depend on such factors as the type of material, the pattern of the marking, how frequently the pattern is repeated, and on the amount to be laid. In busy urban areas consideration has to be given to clearing the street of parked vehicles; the only alternative may be to operate at night.

It is essential that all types of road markings should be skid-resistant in wet conditions. Adequate skid resistance is particularly important where the camber or crossfall is steep and at junctions where turning traffic includes an appreciable number of two-wheeled vehicles.

As it is not possible to lay road markings to precise dimensions and in order to allow for the markings "spreading" in service, certain tolerances in the prescribed dimensions can be permitted. Typical tolerances are given below:

<i>Specified Dimension</i>	<i>Permitted Tolerance</i>
<i>(a) Longitudinal lines (centre lines, edge lines, etc)</i>	
length of mark	plus or minus 10%
width of mark	plus 10%
alignment	150mm on a straight and 300mm on a curve
<i>(b) Transverse lines (stop lines, give way lines) and other markings</i>	
length and width	plus or minus 5%
alignment	20mm
location (chainage)	500mm

The maximum projection of the line marking above the surface is 6mm. It is particularly important that this should not be exceeded because of the danger to traffic, especially to two-wheeled vehicles, and to pedestrians. Where markings are relaid over existing markings after surface dressing of the carriageway, care should be taken to ensure the overall projection of the markings does not exceed 6mm.

Markings must not be laid until the correct temporary traffic signs are in place. The road surface must be clean and dry, and completely free from dirt, grease or any other material that might prevent the paint from adhering properly. It is recommended that compressed air be used to clean the road surface. New surfaces must be allowed to weather and compact for at least 72 hours before applying markings. The outline of the marking should be marked on the road surface with chalk or paint spots. It is worth making templates for the more complicated markings such as arrows.

Road paint may be applied by brush or by machine. Application rates vary considerably, depending on the method of application and the roughness of the road surface, but they are generally between 0.4 and 0.7 litres/m<sup>2</sup> (1.5 to 2.5m<sup>2</sup>/litre).

Thermoplastic is usually supplied in powder form and this is melted in a pre-heater which is often mounted on a truck. From there it may be laid as a screed using a bucket and mould or a wheeled pram, though some types are designed for use with a spray machine.

Where glass beads are to be applied to the wet paint or plastic the application rate will normally be between 300 and 400gm/m<sup>2</sup>.

Traffic must not be allowed over the markings until they are dry. On completion the longitudinal lines should present a smooth visual flow to the eye with no kinks or sudden bends.

### **H3 Installation of Road Studs**

#### **H3.1 Bonded Road Studs**

It is essential that bonded road studs are fixed in accordance with the manufacturer's instructions. The road surface should be cleaned and dust, oil, grease and other contaminants removed. New surfaces should be allowed to weather and compact for at least 72 hours prior to the installation of studs.

The adhesives referred to in BS 873: part 4 may not be suitable for conditions in Bangladesh. Best results are likely to be obtained from a bituminous adhesive designed for use in tropical conditions. In cases of doubt the adhesive manufacturer's advice should be obtained on whether the adhesive is appropriate to the surface in question. If this is not practical, consideration should be given to making the supplier responsible for the fixing of road studs and making him undertake to replace any road studs which become loose within a specified time.

Any settling of fillers or pigments in the adhesive components should be completely dispersed by stirring before use. If it is a two-pack adhesive the components should be thoroughly mixed just before use. Where the adhesive has to be heated care should be taken not to let it boil, as this is likely to weaken it. The manufacturer's instructions should be followed regarding the application of the adhesive and any safety precautions. The adhesive should be used as quickly as possible after mixing and never after it has started to set in the container. The whole of the bottom surface of the road stud should be allowed to set sufficiently before allowing traffic to over run the stud.

Road studs should not be installed on white lines or on joints in the road surface. It is advisable to install them when the road surface is completely dry and when the road surface temperature is greater than 4°C unless the manufacturer of the adhesive recommends that it is suitable for use in other conditions.

### **H3.2 Anchored Road Studs**

It is essential that anchored road studs are fixed in accordance with the manufacturer's instructions. The road surface will normally have to be drilled to accept the road nail. Often an epoxy adhesive / putty is used as grout.

## **I. Maintenance of Traffic Signs**

### **I1. General**

A high standard of maintenance of signs, signals and road markings is essential if they are to fulfil their purpose. It is a waste of money to provide signs and then to allow them to lose their effectiveness by subsequent deterioration.

All signs and markings should be inspected at regular and frequent intervals both by day, and when appropriate, for reflectivity at night. They should be renewed as necessary. Signs become less effective not only when characters or colouring deteriorate, but also when dirty or damaged or displaced as a result of accidents or vandalism. Damaged or dirty signs lessen road users' respect for the signs. A periodic inspection of signs should be made to ensure their early repair and/or replacement when necessary, and after-dark inspections should be made of reflectorised signs. Regular cleaning of all signs is essential.

It is not possible to recommend suitable renewal intervals for markings as these will depend very much on the type of line, the material comprising the marking and on the road traffic conditions. Nevertheless a carriageway marking maintenance programme should be adopted to keep the road markings under constant review to ensure that the markings are maintained to a high state of effectiveness at all times, particularly on heavily trafficked roads.

Markings should be renewed or relaid when they have been removed or damaged by roadworks. New surfaces should preferably be allowed to settle and harden up for a few weeks before applying markings. Arrangements should be made to protect road studs during surface dressing operations.

### **I2. Maintenance Regime**

#### **I2.1 Record Keeping and Inspection**

The key to good maintenance is proper record-keeping and regular inspection. An inventory of markings, signs, and other road furniture is helpful. In addition to a description of the item and its location, it can usefully include installation and inspection dates, and repair details. The inventory number should be painted on the back of the sign plate.

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Inspections should be made at least twice a year, preferably after routine cleaning has been done.

The things to look for are:

- signs that are missing or in the wrong location
- signs that are pointing the wrong way or are tilting
- signs that are hidden by trees or bushes
- posts that are loose in their foundations
- sign plates that are loose
- corrosion of sign plates and posts
- accident or other damage
- flaking or faded sign faces and painted surfaces
- poorly reflecting sign faces (best checked at night)
- worn or faded road markings.

Keep good records of the faults that are found and the action taken.

## **I2.2 Cleaning**

Signs should be cleaned at least twice a year, and priority should be given to low-mounted signs. Cut back any long grass, bushes or tree branches which hide the sign face. Use water and a mild detergent to wash the sign and take care not to scratch the surface. Rinse the sign in clean water to remove all traces of detergent. Road tar can be cleaned off with petrol or white spirit, but be careful not to dissolve the paint, and rinse well afterwards.

## **I2.3 Repairs**

Minor repairs and repainting can be done on-site. Repainting should only be done in dry weather and after proper preparation of the surface. Do not apply paint to reflective sheeting, because this will make it non-reflective. Similarly, do not use ordinary road paint on reflectorised road markings.

## **I2.4 Storage and Transport of Signs**

Signs are expensive. Always store them where they cannot be damaged. Stack them vertically, if possible, and put sheets of cardboard or thick paper between them to prevent the sign faces from getting scratched. Take care when loading signs on and off trucks, and do not allow them to bounce around while being transported.



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## **J. Appendices (Volume 2)**

- J1 Working Drawings**
- J2 Sign Lettering (Bangla and English)**
- J3 Layout of Route Signs**
- J4 Destinations to be shown on Route Signs**