

KERAJAAN MALAYSIA

**MANUAL ON TRAFFIC
CONTROL DEVICES**

STANDARD TRAFFIC SIGNS



ATJ 2A/85 (Pindaan 2019)

MANUAL ON TRAFFIC CONTROL DEVICES STANDARD TRAFFIC SIGNS

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Manual On Traffic Control Devices
Standard Traffic Signs

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Jabatan Kerja Raya
Cawangan Jalan



Ketua Pengarah Kerja Raya
Jabatan Kerja Raya Malaysia
Jalan Sultan Salahuddin
50582 Kuala Lumpur

FOREWORD

The purpose of this manual is to establish uniformity in design and application of all traffic signs and control devices in Malaysia for the benefit of road users, road and traffic authorities, and manufacturers of traffic signs.

As practices in road infrastructure change over time, it is imperative for Jabatan Kerja Raya (JKR) to continuously update and improve the standard guidelines. The previous version on **Arahan Teknik (Jalan) 2A/85: “Manual on Traffic Control Devices: Standard Traffic Signs”** published by JKR is superseded by this new **Arahan Teknik (Jalan) 2A/85 (Pindaan 2019): “Manual on Traffic Control Devices: Standard Traffic Signs”**.

It must be noted that the signs’ designs and application standards indicated in this Arahan Teknik and those in series 2/85 are to be followed at all times.

The specifications in this manual are recommended to be used for all new signs and for all replacements of existing signs which have outlived their usefulness.

This manual will be reviewed and updated from time to time to cater for the changes on policies and current requirements. In this respect any comments and feedback regarding this manual should be forwarded to:-

Cawangan Jalan
Ibu Pejabat Jabatan Kerja Raya Malaysia
Tingkat 21, Menara PJD
No. 50, Jalan Tun Razak
50400 Kuala Lumpur
Email: ussj.jkr@1govuc.gov.my

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Ir. Aminah Binti Sulaiman (Chairman)	JKR
Ir. Hj. Abdul Rahman Bin Baharuddin	JKR
Ir. Khadijah Binti Basar	JKR
Encik Mohd Nadzrin Bin Saaban	JKR
Encik Sofian Bin Abu Kassim	JKR
Puan Eda Fatimawati Binti Ahmad Fuzi	JKR
Cik Valerie Ivy Kinsely Kulai	JKR
Puan Norjuliza Azlina Binti Mohd Basri	JKR
Puan Nurulhuda Binti Jamaluddin	MIROS
Puan Hawa Binti Mohamed Jamil	MIROS
Puan Norliza Binti Kamaludin	JKR
Encik En. Wong Thian Chiun	JKR
Encik Ahmad Qushairi Bin Ya	JKR
Encik Adiratna Wira Bin Adnan	JKR
Encik Amirul Ain Bin Amran	DBKL
Cik Aminah Binti Ali	JKR
Ir. Mohammad Ashari Bin Muda	JKR
Encik Jawahar Nehru a/l Sockalingam	JKR
Encik Abdul Razak Bin Hj. Alias	JPJ
Encik Azzaharin Bin Allias	JPJ
Encik Dayalan Rainoo Raj	JKR

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1.0 TRAFFIC CONTROL DEVICES

1.1 Purpose of Traffic Control Devices

The purpose of traffic control devices and warrants for their use is to help ensure road safety by providing for the orderly and predictable movement of all traffic (motorised and non-motorised), and to provide the necessary guidance and warnings to ensure the safe and informed operation of every road user on the road.

1.2 Requirements of Traffic Control Devices

To be effective, all traffic control devices should meet the following five elementary requirements:

- (a) They should fulfil an important need.
- (b) They should command attention.
- (c) They should convey a clear simple meaning.
- (d) They should command the respect of road users.
- (e) They should give adequate time for proper response.

1.3 Effectiveness of Traffic Control Devices

The effectiveness of traffic control devices used is directly dependent upon the degree to which the above-mentioned basic requirements are met. To ensure these requirements are fulfilled, consideration must be given to five major factors viz. design, placement, operation, maintenance and uniformity.

- a. Design of devices should ensure that such features as size, contrast, colours, shape, composition and lighting or reflectorisation are combined to draw attention of devices, that shape, size, colours and simplicity of message combine with placement to permit adequate time for response; and that uniformity, legibility, reasonableness and size to command respect.
- b. Placement of the device should ensure that it is within the optimum visual cone, i.e. 10° to 20° on the horizontal axis of the cone base and 5° to 8° on the vertical axis, of the viewer so that it will command attention; that it is positioned with respect to the point, object, or situation to which it applies to aid in conveying the proper meaning; and that its location, combined with suitable legibility, is such that a driver travelling at normal speed has adequate time to make the proper response.

- c. Operation or application should ensure that appropriate devices and related equipment are installed to meet the traffic requirements at a given location. Furthermore, the devices must be placed and operated in a uniform and consistent manner to ensure, to the extent possible, that vehicle operators can be expected to properly respond to the device, based on their previous exposure to similar traffic control situations.
- d. Uniformity of traffic control devices simplifies the task of the road user because it aids in recognition and understanding. It aids road users, police officers, and traffic courts by giving everyone the same interpretation. It aids JKR and road authority officials through economy in manufacture, installation, maintenance and administration. In other words, uniformity means treating similar situations in the same way. The use of uniform traffic control devices does not constitute uniformity. A standard device used where it is not appropriate is as objectionable as a non- standard device; in fact, this may worse, in that such misuse may result in disrespect at those locations where the device is really needed.

2.0 SCOPE OF THIS MANUAL

This manual prescribes standards for the signing within the right-of-way of all classes of public highways and also to major and minor trunk road. Detailed standards for Regulatory signs, which are divided into Prohibitive and Mandatory signs, are given in Part 1 and Warning Danger Signs in Part 2 respectively.

The specifications set forth in this manual applies to the range of traffic signs provided in the latest versions of ATJ 2B/85 (Traffic Sign Applications) and Arahan Teknik (Jalan) 2C/85 (Temporary Signs and Work Zone Control).

All the standard drawings in this manual are identified by a two-letter and numeral reference, e.g. RP1 – Regulatory Prohibitive sign number 1 – refers to the standard BERHENTI sign, and except for Guide signs that include place names, all the standard traffic signs in this country shall conform to the relevant drawings illustrated here in.

Other standard requirements such as symbol templates and lettering series for the traffic signs are given in Appendix 1 through Appendix 4.

3.0 TRAFFIC SIGNS

3.1 Application of Traffic Signs

Each standard traffic sign shall be displayed only for the specific purpose prescribed. Signs required by road condition or restrictions shall be removed immediately when those conditions cease to exist, or the restrictions are withdrawn. Before any new road, detour or temporary route is opened to traffic all necessary signs shall first be put in place. Identical conditions should always be marked with the same type of sign.

3.2 Effectiveness of Traffic Signs

The effectiveness of any traffic sign depends upon its attention, meaning, time and respect values. The increased volume and speed of traffic on our roads today has made the requirements of directional signing more exacting. All unofficial and non-essential traffic signs such as illegally installed private advertisement should be removed as they distract road users' concentration on the necessary signs.

It must be recognised that urban conditions differ from those in rural areas in such aspects as speed, frequency of intersections, traffic congestion, number of pedestrians, parking, lighting, etc., that sometimes necessitate the traffic signs to be applied and located differently. If this occurs, the general principles set in this manual, as to colour, design, shape and size should be followed wherever practicable.

3.3 Excessive Use of Traffic Signs

Excessive use of traffic signs is bad practice and care should be taken not to install too many signs. A conservative use of regulatory and warning signs is recommended as these signs, if used to excess, tend to lose their effectiveness. On the other hand, a frequent display of route number markers and directional signs to keep the road user informed of his location and his course will not lessen their value.

3.4 Standardisation of Traffic Signs

In situations where messages are required other than those herein provided for, the signs shall be of the same shape and colour as standard signs of the same functional type.

The basic requirements of a traffic sign are that it be legible to those for whom it is intended and that it be understood in time to permit proper response. This means high visibility, lettering or symbols of adequate size, short word messages, and simple symbol designs for quick comprehension by a road user approaching a sign at high or low speed. Standardised colours and shapes are specified so that the several classes of traffic signs can be promptly recognised.

3.5 Design of Traffic Signs

Uniformity in design includes shape, size, colour, word messages, symbols illumination or reflectorisation. The document shows many typical standard traffic signs approved for use on the roads. All symbols shall be like those shown, and where a word message is applicable, the wording shall be as therein provided. Standardisation of these designs does not preclude further improvement by minor changes in the proportion of symbols, width of borders, or layout of word messages, but all shapes and colours shall be as indicated.

3.6 Function of Traffic Signs


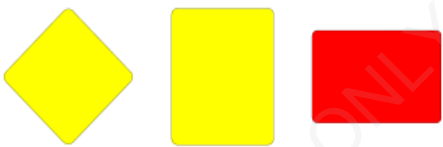
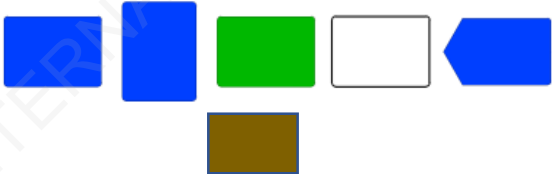
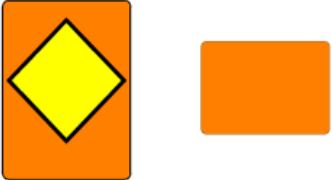
Traffic signs are used to regulate, warn or guide road users. Traffic signs should be used only where necessary and justified by factual data and studies in deriving its necessity and use. Traffic signs are important where specific regulations are to be applied at places or at times only, or in the case where hazards are not self-evident. They also provide information to the highway routes, directions, destinations and points of interest. Traffic signs are commonly not needed to confirm rules of the road. The functionality of traffic signs is classified as follows:

- (a) As a regulatory sign to provide notice of traffic laws and regulations and for the authority to impose precise requirements upon the actions of road users. Regulatory signs give notice of traffic laws and regulations, can refer in this document to Section 2A where RP – regulatory prohibitive and RM – regulatory mandatory.

- (b) As a warning danger sign to call attention to conditions on, or adjacent to, roads that are potentially hazardous to traffic operations and to call attention to potentially hazardous roadway conditions or unusual traffic movements which are not readily apparent to on-coming traffic. They impose the responsibility upon the individual road user to employ added caution, can refer to Section 2B where WD – warning danger. In Road Transport Rules, all warning danger is also defined as “danger (D).
- (c) Temporary signs are used to notify road users of specific hazards which may be encountered when temporary operations are underway and consist of standard temporary sign drawings and their application in the work zones (Refer to the latest version of Arahan Teknik (Jalan) 2C/85).
- (d) As a guide sign to show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural section 2C where G D - information, can refer to guide destination, GX – guide distance, GI – guide information and GR – guide route marker. (Refer to the latest version of ATJ 2E/87 (Pindaan 2015).
- (e) As a destination sign to be placed at overhead structures such as gantry or butterfly gantry to provide a guide for road users to destination routes.

In order to differentiate these functions, traffic signs are shaped differently, such as those listed below:

Sign Types, Shapes and Colours

REGULATORY	
WARNING	
GUIDE	
TEMPORARY	

3.7 Colour Code for Traffic Sign

The following colour code has been established and identified by JKR to be used in conveying traffic control information.

Note:

The colours coded from table 1 are used for road furniture, other than traffic sign faces, such as road markings, traffic signal and traffic sign posts, guardrails, kerbs and so on, and should be of gloss finish paint or, of higher quality material.

Yellow – No 356 British Standard 381C (Golden Yellow)

White – Part 1 clause 1.3.2 and 1.3.3 British Standard 873

Black – Part 1 clause 1.3.2 and 1.3.3 British Standard 873

Orange – British Standard 0.004

Note:

The colours used for all traffic sign faces should be comparable to that formed by the chromaticity coordinates, as shown in **TABLE 1** and should be of retro-reflective material.

TABLE 1: CHROMATICITY COORDINATES

COLOUR	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329
Yellow	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472
Orange	0.558	0.352	0.636	0.364	0.570	0.429	0.506	0.404
Green	0.026	0.399	0.166	0.364	0.286	0.446	0.207	0.771
Red	0.648	0.351	0.735	0.265	0.629	0.281	0.565	0.346
Blue	0.140	0.035	0.244	0.210	0.190	0.255	0.065	0.216
Brown	0.430	0.340	0.610	0.390	0.550	0.450	0.430	0.390
Fluorescent Yellow Green	0.387	0.610	0.369	0.546	0.428	0.496	0.460	0.540
Fluorescent Yellow	0.497	0.520	0.446	0.483	0.512	0.421	0.557	0.442
Fluorescent Orange	0.583	0.416	0.535	0.400	0.595	0.351	0.645	0.355

Source: ASTM D4956-09 Standard Specification for Retro-reflective Sheeting for Traffic Control

4.0

TYPICAL REGULATORY PROHIBITIVE AND MANDATORY SIGNS



REGULATORY PROHIBITIVE AND MANDATORY SIGNS

Scale : Not to scale

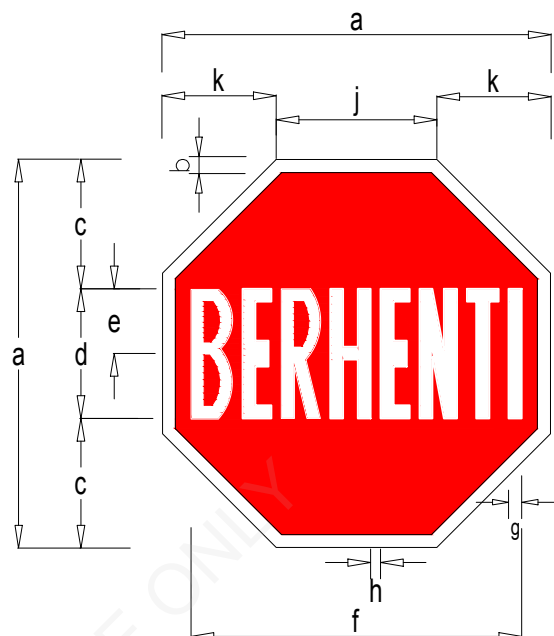
RP 1. STOP AT INTERSECTION

A sign placed at an intersection indicating that driver is required to stop before entering a priority or major road. This sign is octagonal in shape.

Colour:

Background - Red
Border - White
Lettering - White

SIGN	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	h	j	k
Minimum	600	20	200	200	100	510	20	15	250	180
Other size	900	30	300	300	150	765	30	25	370	260



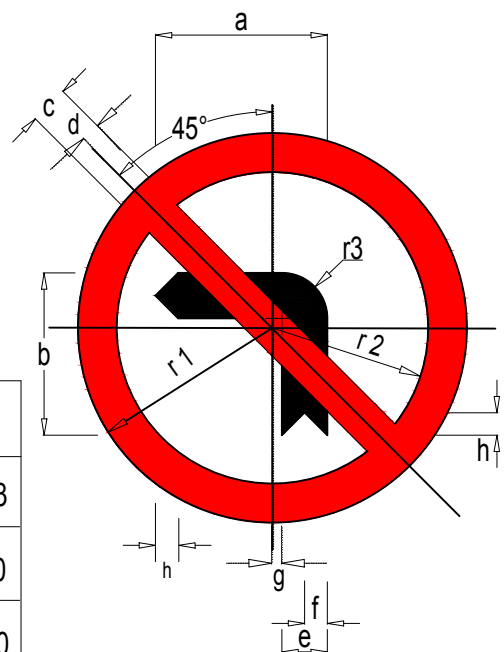
RP 2a. TURNING TO THE LEFT PROHIBITED

An approach sign to a junction/intersection where left turning is not allowed.

Colour:

Circle and Diagonal - Red
Symbol - Black
Background - White

	DIMENSIONS (mm)										
OPERATING	a	b	c	d	e	f	g	h	r1	r2	r3
Minimum	265	250	60	30	70	35	15	35	300	240	70
Normal	335	320	75	40	90	45	20	45	375	300	90
When used with traffic signal	140	130	30	15	40	20	10	20	150	125	35



REGULATORY PROHIBITIVE SIGN

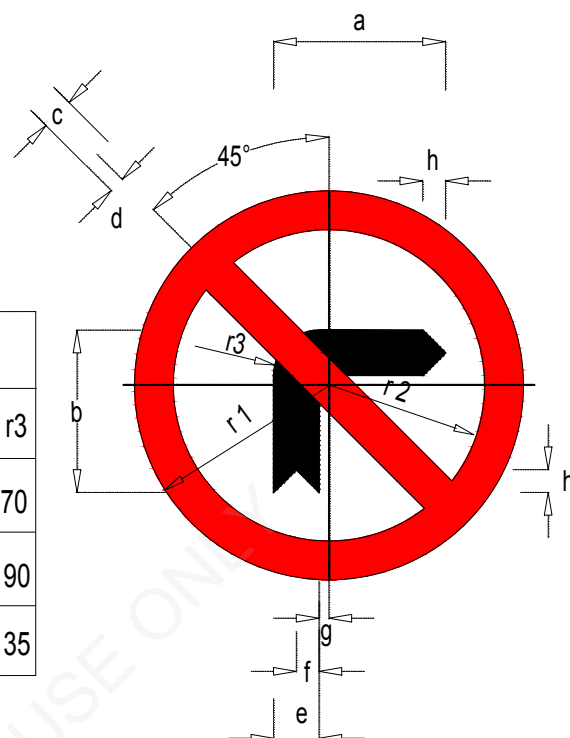
Scale : Not to scale

RP 2b. TURNING TO THE RIGHT PROHIBITED

An approach sign to a junction/intersection where right turning is not allowed.

Circle and Diagonal	-	Red
Symbol	-	Black
Background	-	White

	DIMENSIONS (mm)											
OPERATING	a	b	c	d	e	f	g	h	r1	r2	r3	
Minimum	265	250	60	30	70	35	15	35	300	240	70	
Normal	335	320	75	40	90	45	20	45	375	300	90	
When used with traffic signal	140	130	30	15	40	20	10	20	150	125	35	

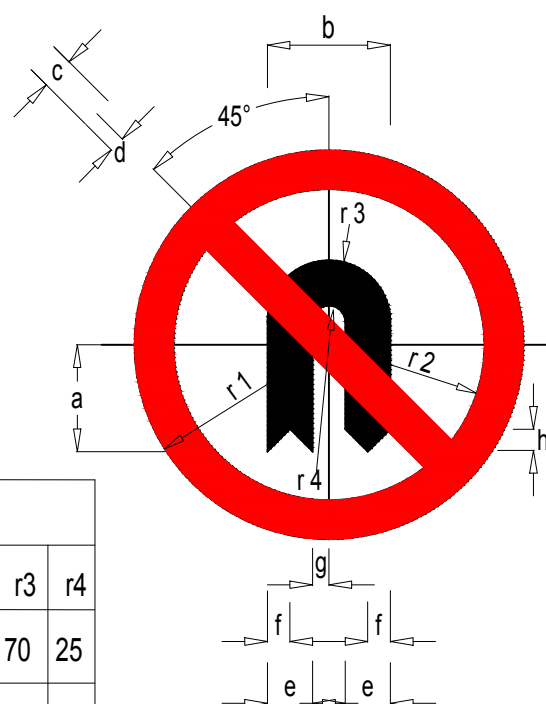


RP 3. U-TURN PROHIBITED

An approach sign to a junction/intersection where vehicles are not allowed to make U-turn.

Circle and Diagonal	-	Red
Symbol	-	Black
Background	-	White

	DIMENSIONS (mm)											
SIGN	a	b	c	d	e	f	g	h	r1	r2	r3	r4
Minimum	165	190	60	30	70	35	15	35	300	240	70	25
Normal	335	320	65	32.5	90	45	20	45	375	250	90	30



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

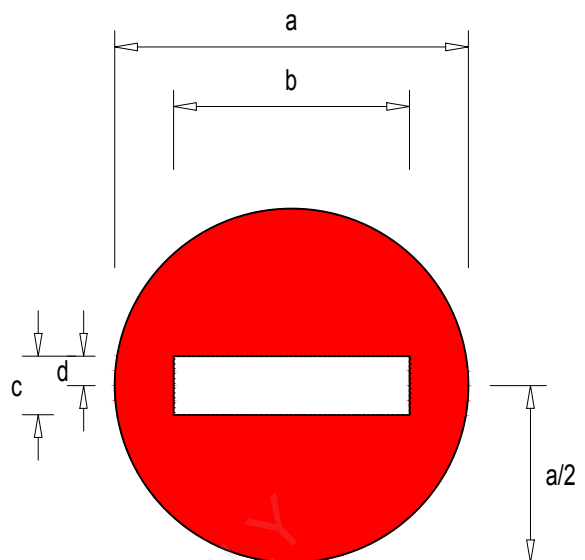
RP . 4 : NO ENTRY FOR ANY VEHICLE

An approach sign to a road where vehicles are not allowed to enter.

COLOUR:

Symbol - White
Background - Red

SIGN	DIMENSIONS (mm)			
	a	b	c	d
Minimum	600	400	100	50
Normal	750	500	125	62.5



RP . 5 : NO ENTRY FOR VEHICLES HAVING TOTAL WEIGHT EXCEEDING THE SPECIFIED WEIGHT

An approach sign to a road where vehicles exceeding the specified weight are not allowed to enter. "8T" given here as an example denotes vehicles with total weight of 8 tons and above are not allowed to enter.

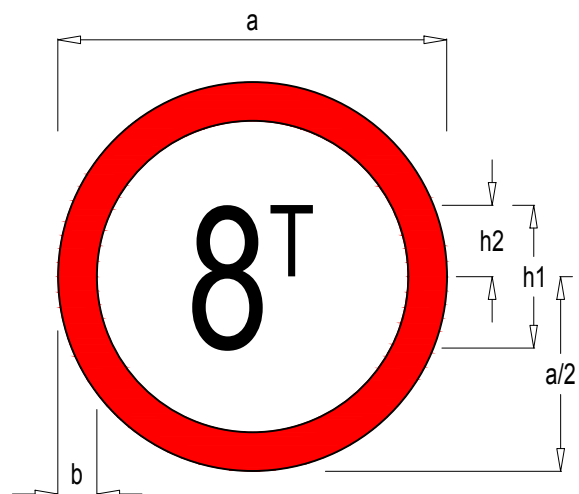
COLOUR:

Background - White
Symbol - Black
Circle - Red

LETTERING

Ccridge Narrow with height as specified

SIGN	DIMENSIONS (mm)			
	a	b	h1	h2
Minimum	600	60	220	110
Normal	750	75	275	140



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP. 6a : NO ENTRY FOR VEHICLES HAVING OVERALL HEIGHT EXCEEDING THE SPECIFIED HEIGHT

A sign indicating an area where vehicles exceeding certain height are prohibited from entering. "3.5m" is given as an example to denote that vehicles with an overall height exceeding 3.5 m are not allowed to enter.

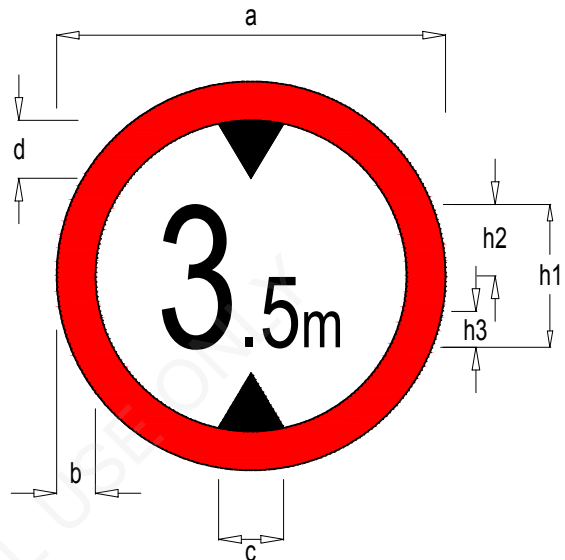
SIGN	DIMENSIONS (mm)						
	a	b	c	d	h1	h2	h3
Minimum	600	60	100	90	220	110	55
Normal	750	75	125	110	275	140	70

COLOUR:

Background	-	White
Symbol	-	Black
Circle	-	Red

LETTERING

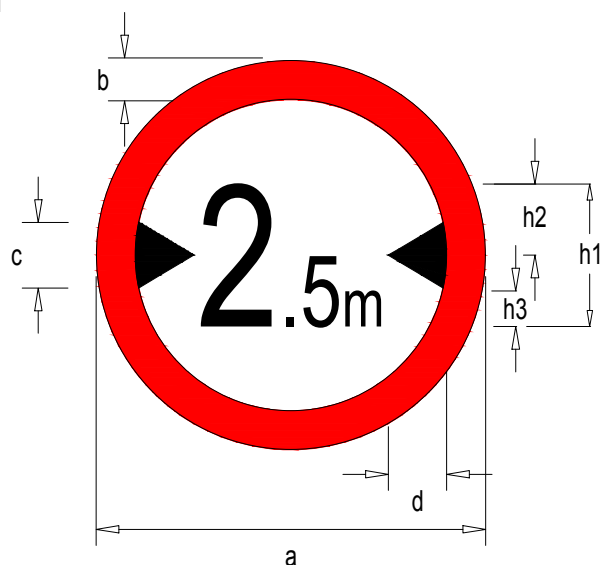
Ccrige Narrow with height as specified



RP 6b. NO ENTRY FOR VEHICLES HAVING OVERALL WIDTH EXCEEDING THE SPECIFIED WIDTH

A sign indicating an area where vehicles exceeding certain width are prohibited from entering. "2.5m" is given as an example to denote that vehicles with an overall height exceeding 2.5 m are not allowed to enter.

Colour, Lettering and Dimensions as in RP 6a.



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 7. SPEED LIMIT

A sign indicating the starting point of a Speed Limit Zone along a section of road where the posted maximum speed limit applies. "50" is the speed limit in km/h given here as an example. An additional panel (optional) may be provided bearing an inscription "MULA" or "TAMAT" to denote the start or end of a Speed Limit Zone (eg. RP9a).

COLOUR:

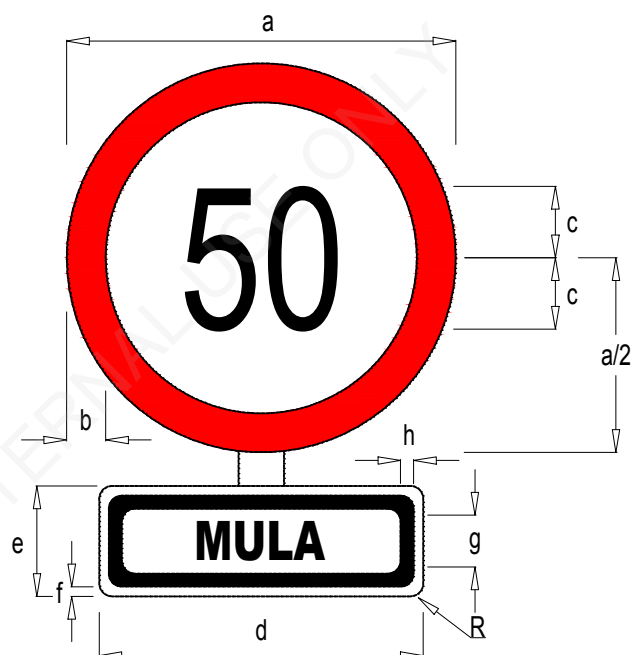
Background	-	White
Symbol	-	Black
Circle	-	Red

LETTER PLATE:

Background	-	White
Symbol	-	Black
Border	-	Black

Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



LETTERING TYPE

Ccridge Narrow with height as specified

SIGN	DIMENSIONS (mm)								
	a	b	c	d	e	f	g	h	R
Minimum	600	60	110	500	170	15	80	20	20
Normal	750	75	140	625	210	20	100	25	25



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

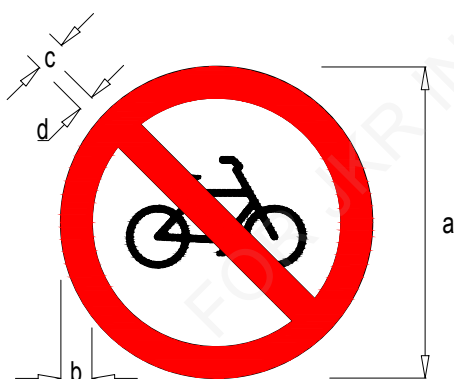
RP.8 : NO ENTRY FOR ANIMAL DRAWN VEHICLES / CARTS OF ALL FORMS, TRICYCLES, BICYCLES, TRISHAW, MOTOR CYCLES, BULLOCK CART AND MOPEDS

A regulatory sign approaching a road where slow moving vehicles such as animal drawn carts of all forms, tricycles, trishaws, bicycles, motorcycles or mopeds are not allowed to enter. The appropriate symbols of the vehicles shall be used where applicable. Shown below are examples of the signs:

- (a) Animal drawn vehicles/Carts of all forms
- (b) Bicycle
- (c) Motorcycle
- (d) Tricycle
- (e) Moped
- (f) Trishaw
- (g) Bullock cart
- (h) Other slow moving vehicles



(a) Animal drawn vehicles / carts of all forms, Tricycles, Trishaws and Bicycle



(b) Bicycle



(c) Motorcycle

SIGN	DIMENSIONS (mm)			
	a	b	c	d
Minimum	600	60	60	30
Normal	750	75	75	37.5

COLOUR:

Background	-	White
Symbol	-	Black
Circle & Diagonal	-	Red



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 8. NO ENTRY FOR ANIMAL DRAWN VEHICLES CARTS OF ALL FORMS, TRICYCLES, BICYCLES, TRISHAW, MOTOR CYCLES, BULLOCK CART AND MOPEDS



(d) Tricycle



(e) Moped



(f) Trishaw



(g) Bullock cart



(h) Other slow moving vehicles

SIGN	DIMENSIONS (mm)			
	a	b	c	d
Minimum	600	60	60	30
Normal	750	75	75	37.5

COLOUR:

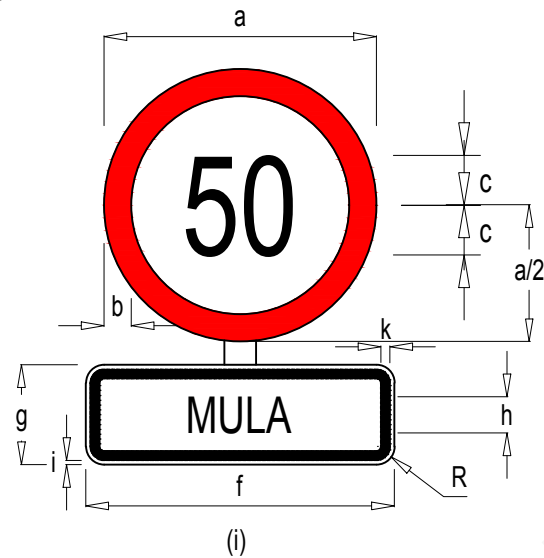
Background	-	White
Symbol	-	Black
Circle & Diagonal	-	Red



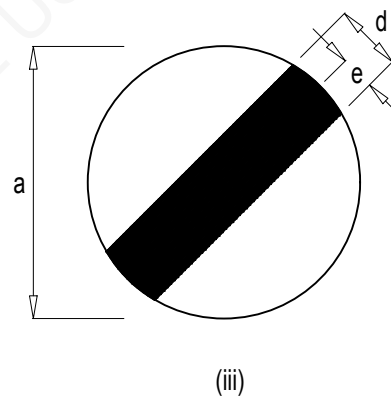
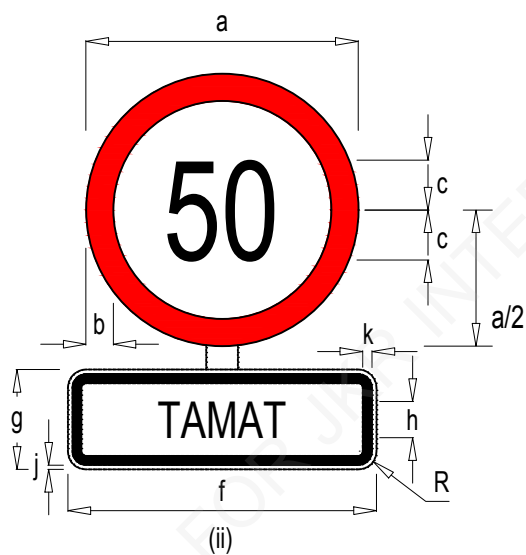
REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 9a. (i) START OF SPEED LIMIT



RP 9a. (ii) or (iii) END OF SPEED LIMIT



Colour and Lettering as in RP.7

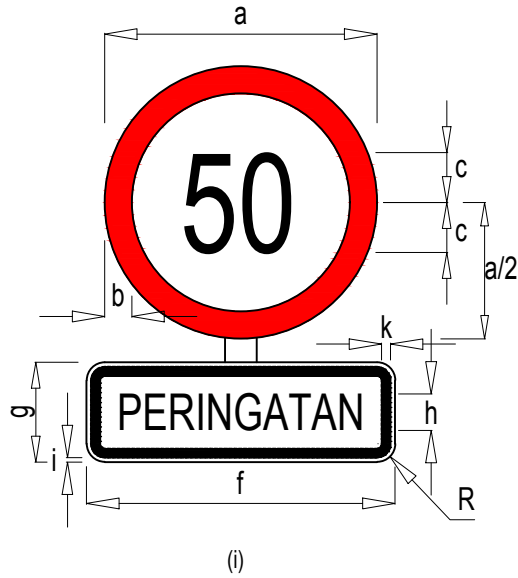
SIGN	DIMENSIONS (mm)										
	a	b	c	d	e	f	g	h	j	k	R
Minimum	600	60	110	150	75	680	220	80	10	20	40
Normal	750	75	140	190	95	850	275	100	15	25	50



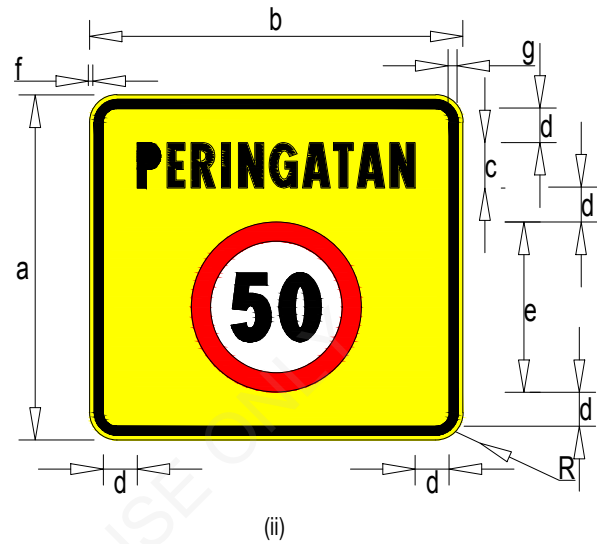
REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 9b. SPEED LIMIT ZONE REMINDER



or



Colour, Lettering and Dimensions for Item (i) as in RP.7

For Item (ii):

Colour:
 Background - Yellow
 Lettering - Black
 Symbol - White Interior with Red Circle

SIGN	DIMENSIONS (mm)							
	a	b	c	d	e	f	g	R
Normal	795	860	105	80	400	10	20	60



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

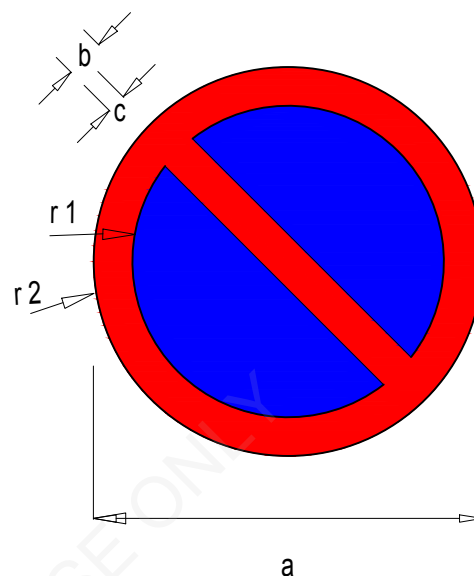
RP 10. PARKING PROHIBITED

A sign indicating an area where vehicles are not allowed to park.

Colour:

Circle and Diagonal - Red
Background - Blue

SIGN	DIMENSIONS				
	a	b	c	r1	r2
Minimum	600	60	30	300	240
Normal	760	75	40	380	300



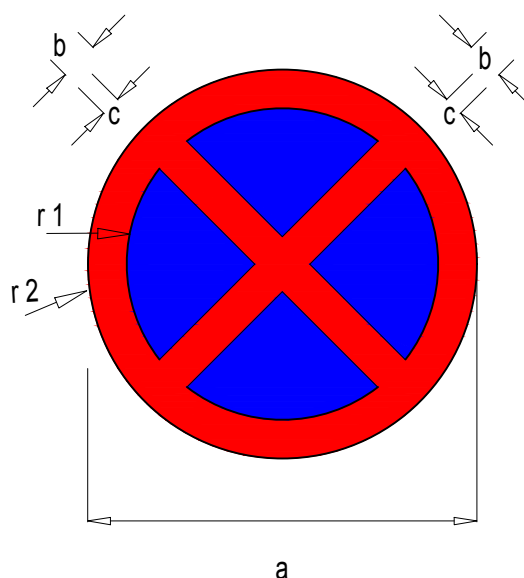
RP 11. STOPPING PROHIBITED

A sign indicating an area where vehicles are not allowed to stop.

Colour:

Circle and Diagonal - Red
Background - Blue

SIGN	DIMENSIONS				
	a	b	c	r1	r2
Minimum	600	60	30	300	240
Normal	760	75	40	380	300



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

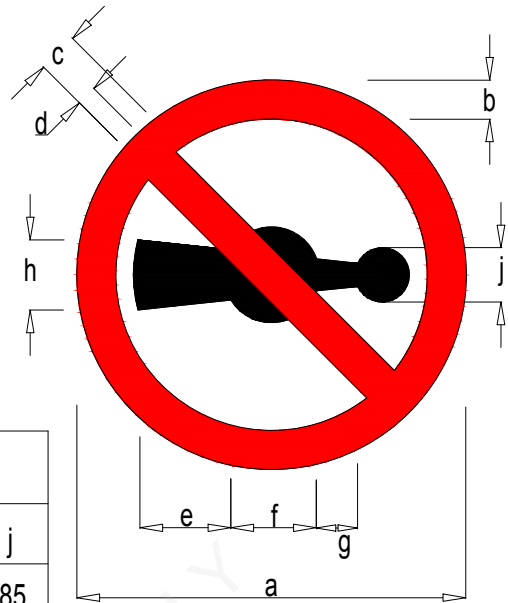
RP 12. RESTRICTION ON USE OF HORNS

A sign indicating an area where vehicles are prohibited to horn.

Colour:

Circle and Diagonal	-	Red
Symbol	-	Black
Background	-	White

SIGN	DIMENSIONS (mm)								
	a	b	c	d	e	f	g	h	j
Minimum	600	60	60	30	140	130	65	110	85
Normal	750	75	75	37.5	175	165	80	135	105



RP 13. GIVE WAY

A sign indicating the point on a road where the approaching vehicle must give way to the traffic from the other connecting road. An additional panel (optional) bearing the inscription "BERI LALUAN" may be attached together.

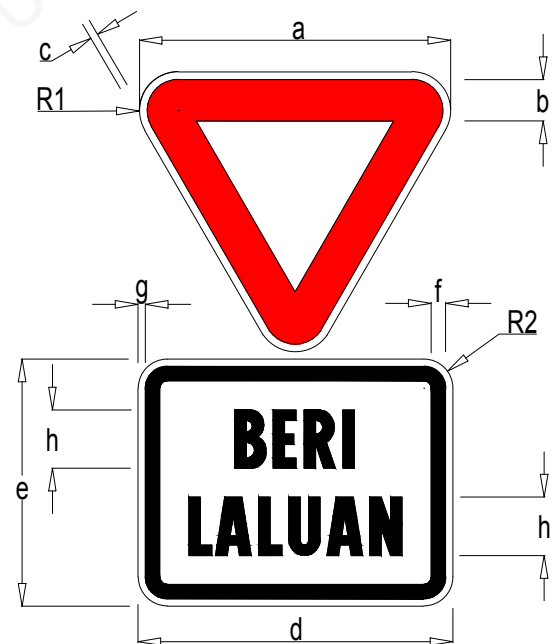
Colour:

Main Panel - White Background with Red Border

Additional Panel - White Background with Black Letterings

Notes:

For safety reasons, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



SIGN	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	h	R1	R2
Minimum	600	80	15	600	480	30	15	110	75	45
Normal	750	100	20	750	600	35	20	140	95	70



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 14. STOP CHILDREN CROSSING

A sign to be exhibited by a school crossing patrol at places where children cross the road on their way to or from school between the hours of six in the morning and seven in the evening.

Colours, Dimensions and Lettering as in RP 1.

Additional lettering "KANAK-KANAK MELINTAS" to be 50mm in height.



RP 15. NO OVERTAKING

A sign indicating the point along a road beyond which overtaking is not allowed. An additional panel (optional) bearing the inscription "DILARANG MEMOTONG" may be attached together.

Colours and Lettering as in RP 7.



SIGN	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	h	i	r
Minimum	600	60	60	30	340	20	10	80	630	60
Normal	750	75	75	37.5	425	25	15	100	790	75



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 16. HEAVY VEHICLES FORBIDDEN TO OVERTAKE

A sign indicating the point along a road beyond which overtaking is not allowed for heavy vehicles. An additional panel (optional) bearing the inscription “DILARANG MEMOTONG” may be attached together.

Note:

Heavy vehicles are vehicles of unladen weight exceeding 5000 kg. which are used to carry load or passengers.

Colours and Lettering as in RP 7.

Dimensions as in RP 15



RP 17. HEAVY VEHICLES PROHIBITED FROM DRIVING ON THE RIGHT LANE

A sign indicating the point along a road beyond which heavy vehicles are prohibited from driving on the right lane. An additional panel (optional) bearing the inscription “DILARANG MEMANDU DI LORONG KANAN” may be attached together.

Note:

Heavy vehicles are vehicles of unladen weight exceeding 5000 kg. which are used to carry load or passengers.

Colours and Lettering as in RP 7.

Dimensions as in RP 15.

Dimensions for additional plate:



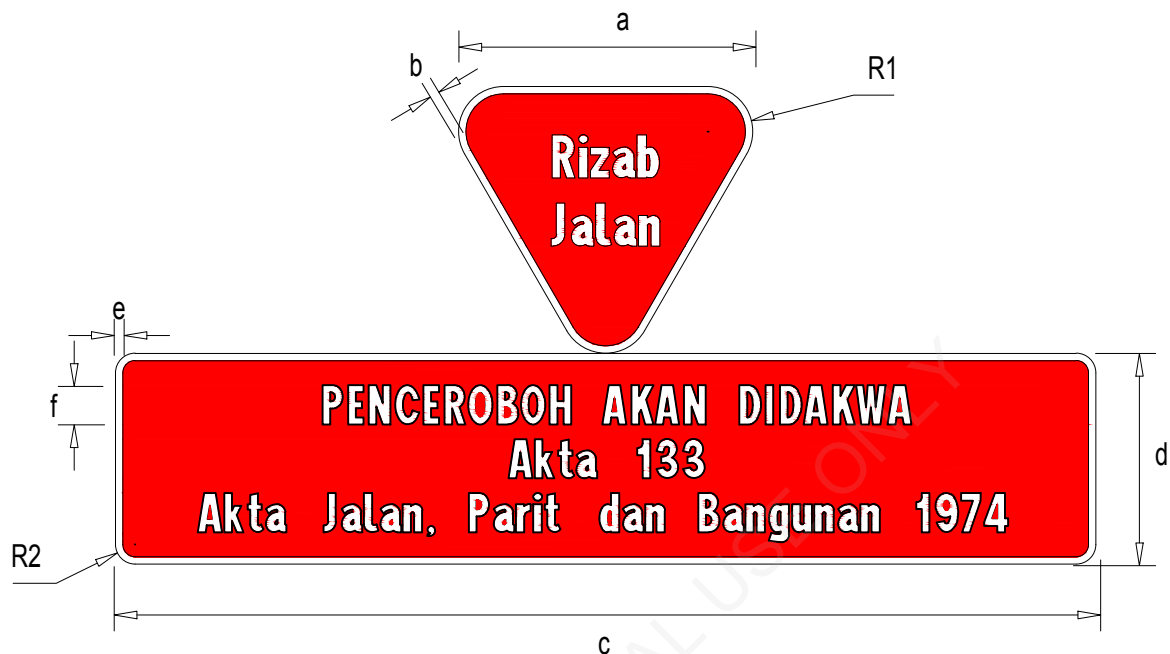
SIGN	DIMENSIONS (mm)	
	a	b
Minimum	580	550



REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RP 18. ROAD RESERVE



SIGN	DIMENSIONS (mm)							
	a	b	c	d	e	f	R1	R2
Minimum	600	15	2000	430	15	80	90	40
Normal	750	20	2500	540	20	100	120	50

COLOUR:

- Background - White
- Symbol - Black

LETTER PLATE

Crige Narrow with height as specifed

- background - Red
- Lettering - White
- Borde - White



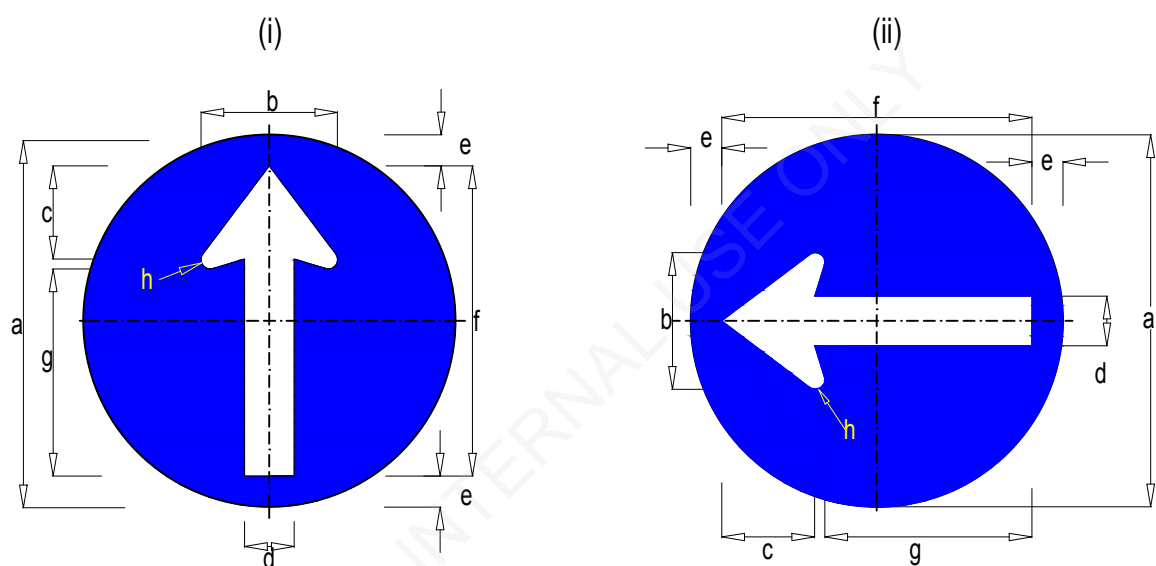
REGULATORY PROHIBITIVE SIGN

Scale : Not to scale

RM.1 : DIRECTION TO BE FOLLOWED

A sign indicating the direction to be followed. The direction of the arrow may vary to suit the direction of travel that vehicles must strictly comply.

- (i) Go Straight
- (ii) Turn Left (Right if symbol reversed)
- (iii) Turn Left Ahead (Right if symbol reversed)
- (iv) Turn Left or Go Straight (Right or Straight if symbol reversed)



Colour:
 Symbol - White
 Background - Blue

Dimensions:

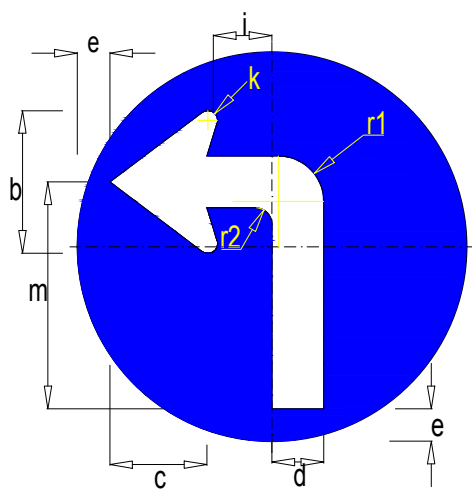
SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	g	h
Minimum	600	220	140	80	50	480	320	15
Normal	750	275	180	100	60	600	400	20



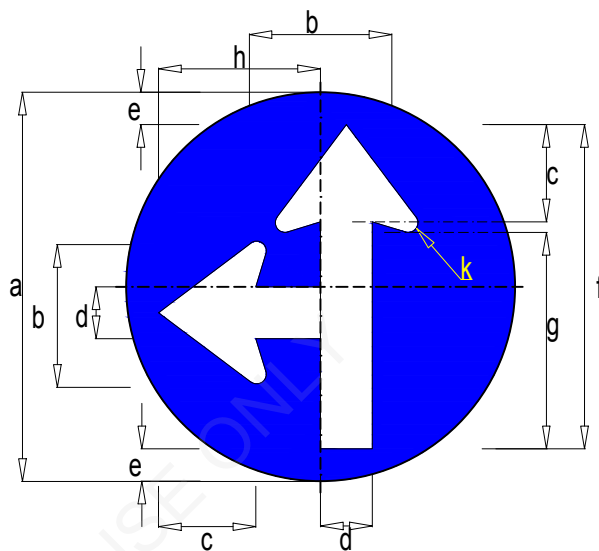
REGULATORY MANDATORY SIGNS

Scale : Not to scale

(iii)



(iv)



Colour:

Symbol - White
Background - Blue

Dimensions:

SIGNS	DIMENSIONS (mm)												
	a	b	c	d	e	f	g	h	i	k	m	r1	r2
Minimum	600	220	150	90	50	500	330	250	90	15	350	70	25
Normal	750	275	190	100	65	625	420	310	110	20	440	90	30

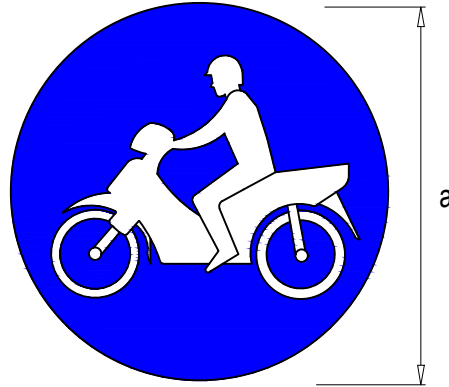


REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 2. DEDICATED LANE

A sign indicating the type of vehicle that can travel on the roadway. It is applicable to:



(i) Motorcycles with engine capacity below 250cc

Colour:

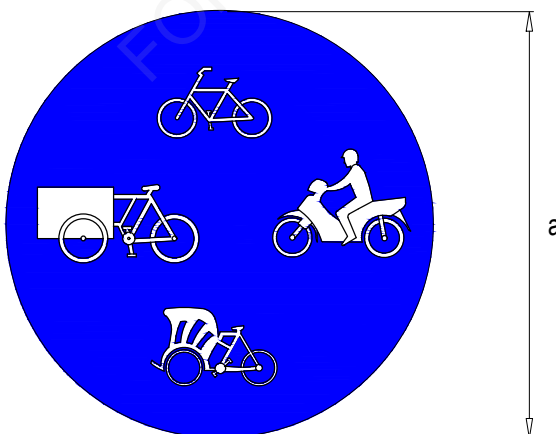
Symbol - White
Background - Blue

Lettering: Ccrige Narrow with height of 100mm

Dimensions:

SIGNS	DIMENSIONS (mm)
	a
Minimum	600
Normal	750

Applicable to bicycles, tricycles, trishaws, mopeds, motorcycles and animal drawn vehicles/ carts of all forms wherever the corresponding sign is inticated



Colour:

Symbol - White
Background - Blue

Dimensions:

SIGNS	DIMENSIONS (mm)
	a
Minimum	600
Normal	750



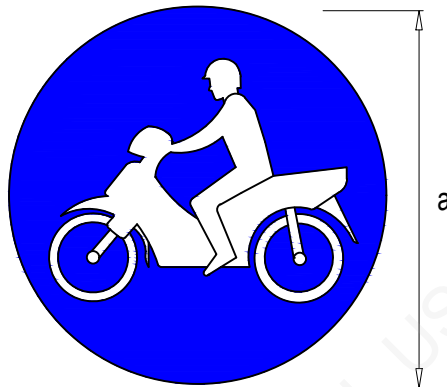
REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 2. DEDICATED LANE

A sign indicating the type of vehicle that can travel on the roadway. It is applicable to:

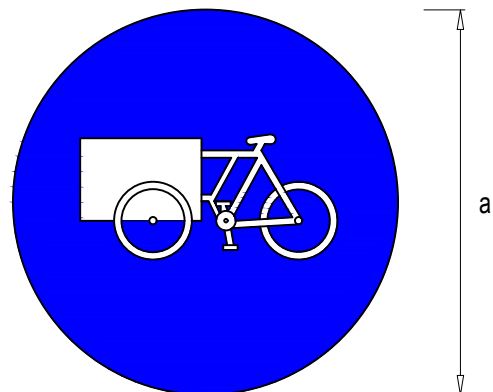
- (i) Motorcycles (with or without engine capacity restriction)
- (ii) Bicycles
- (iii) Tricycles
- (iv) Mopeds
- (v) Trishaws
- (vi) Animal drawn vehicles/ carts of all forms



(i) Motorcycles (with or without engine capacity restriction)



(ii)Bicycles



(iii) Tricycles

SIGNS	DIMENSIONS (mm)
	a
Minimum	600
Normal	750

COLOUR :

Background	-	Blue
Symbol	-	White

Note:

Symbol templates refer to Appendix 1



REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM.2 : DEDICATED LANE



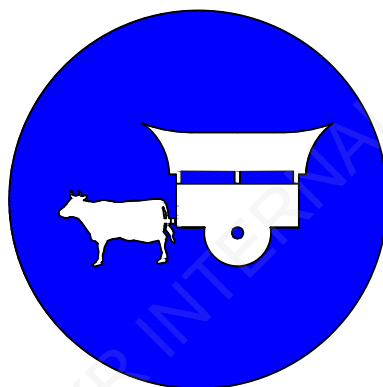
a

(iv) Mopeds



a

(v) Trishaws



a

(vi) Animal Drawn Vehicles / Carts of all forms

SIGNS	DIMENSIONS (mm)
	a
Minimum	600
Normal	750

COLOUR :

Background	-	Blue
Symbol	-	White

Note:

Symbol templates refer to Appendix 1

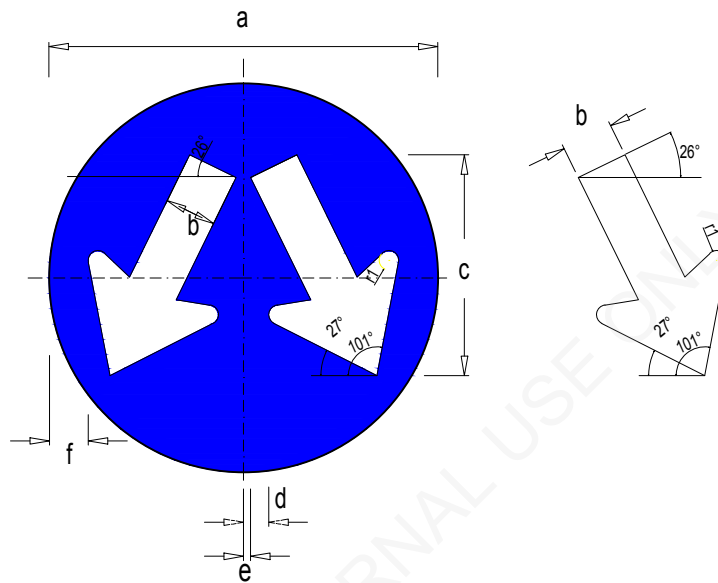


REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 3. VEHICLE MAY PASS EITHER SIDE

A sign indicating the point where traffic may pass on either side to reach the destination.



Colour:

Symbol - White
Background - Blue

Dimensions:

SIGNS	DIMENSIONS (mm)						
	a	b	c	d	e	f	r1
Minimum	600	80	340	40	10	60	15



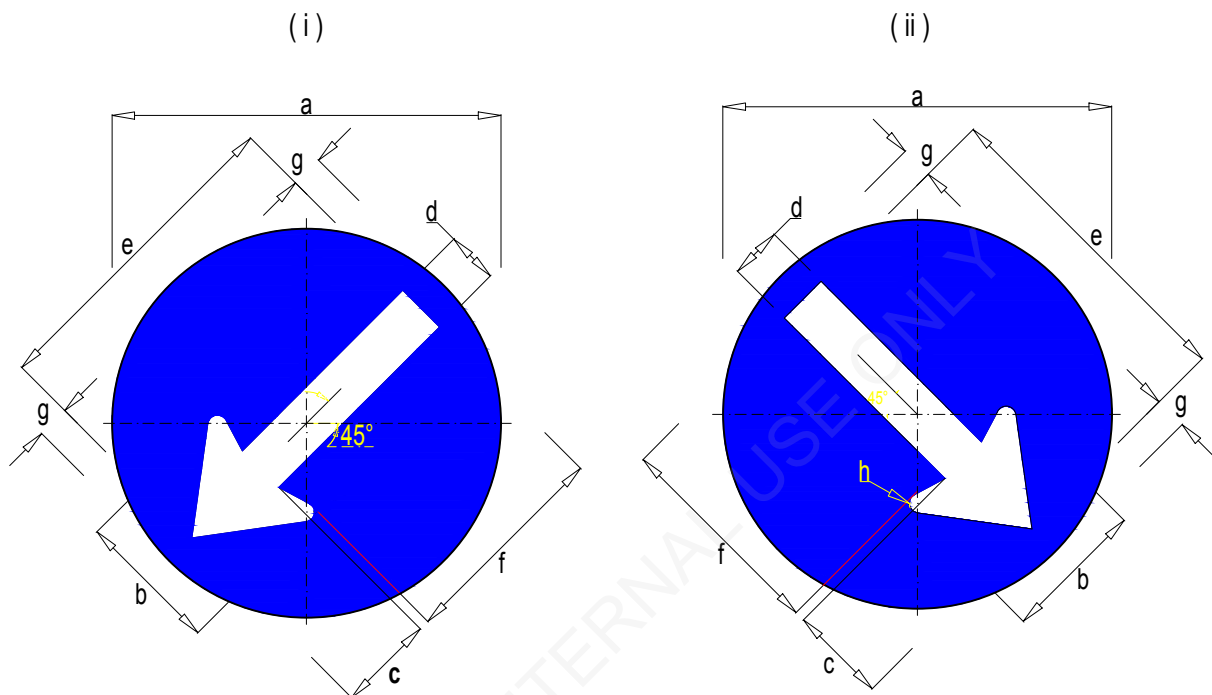
REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 4. KEEP LEFT & KEEP RIGHT

A sign indicating the point where traffic need to:

- (i) Keep Left or;
- (ii) Keep Right



Colour:

Symbol - White
Background - Blue

Dimensions:

SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	g	h
Minimum	600	220	150	80	500	330	50	15
Normal	750	290	130	120	625	495	65	20



REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 5. HEAVY VEHICLES KEEP LEFT

A sign indicating that heavy vehicles are required to use the left most lane.



Colour:

Lettering - White
Background - Blue

Note:

L' = Internal length in between borders calculated from letters & spacing

B = Thickness of border = $1.5\% \times L'$ or 20 mm whichever is greater

C = Distance between edge of sign panel & outer edge of border = $0.5 \times B$

R = 40mm

Lettering size to be determined based on carriageway speed.

Speed Limit (km/h)	Single Carriageway Letter Height, H (mm)	Multiple Carriageway / Gantry Letter Height, H (mm)
Speed Limit > 90km/h	400	450
80km/h < Speed Limit ≤ 90km/h	250	300
60km/h < Speed Limit ≤ 80km/h	200	250
Speed Limit ≤ 60km/h	150	200



REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 6. USE LEFT LANE UNLESS OVERTAKING

A sign indicating that vehicles are required to take the left most lane unless they wish to overtake other vehicles.



Colour, Dimensions and Lettering same as RM 5.

SIGNS	DIMENSIONS (mm)	
	a	b
Minimum	620	850



REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 7. TURN LEFT IF THERE IS NO VEHICLE OR PEDESTRIAN

A sign placed at a signalised junction where vehicles are allowed to turn left when there is no vehicle from the right or crossing pedestrian in their path.



Colour, Dimensions and Lettering same as RM 5.

SIGNS	DIMENSIONS (mm)	
	a	b
Minimum	835	1060

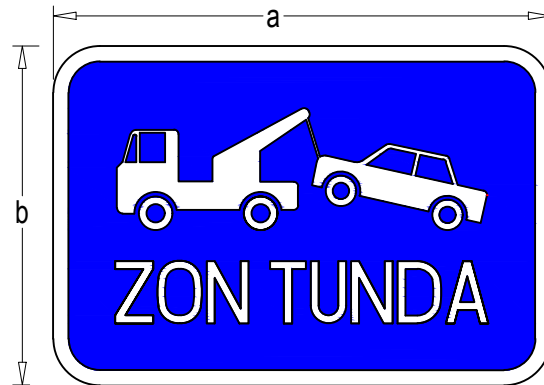


REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 8. TOW-AWAY ZONE

A sign indicating an area where parking is prohibited and illegally parked vehicle shall be towed away



Colour:
 Symbol - White
 Background - Blue

Dimensions:

SIGNS	DIMENSIONS (mm)	
	a	b
Minimum	600	400
Normal	750	480

RM 9. WHEEL CLAMPING ZONE

A sign indicating an area where parking is prohibited and illegally parked vehicle shall be clamped.



Colour same as RM. 9

Lettering to be used is Ccrige Narrow 100mm

Dimensions:

SIGNS	DIMENSIONS (mm)	
	a	b
Minimum	600	620
Normal	750	775



REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 10. PARKING FOR THE DISABLED

A sign indicating a parking lot allocated for handicapped drivers only. Additional panel (optional) may be attached to indicate other information or penalties for offenders.



Colour:	
Symbol/Lettering	- White
Border	- White
Background	- Blue
Additional Plate	- Black Lettering/Border on White Background

Dimensions:

SIGNS	DIMENSIONS (mm)												
	a	b	c	d	e	f	g	h	j	k	l	m	n
Minimum	600	450	20	30	150	10	200	250	40	360	460	60	30



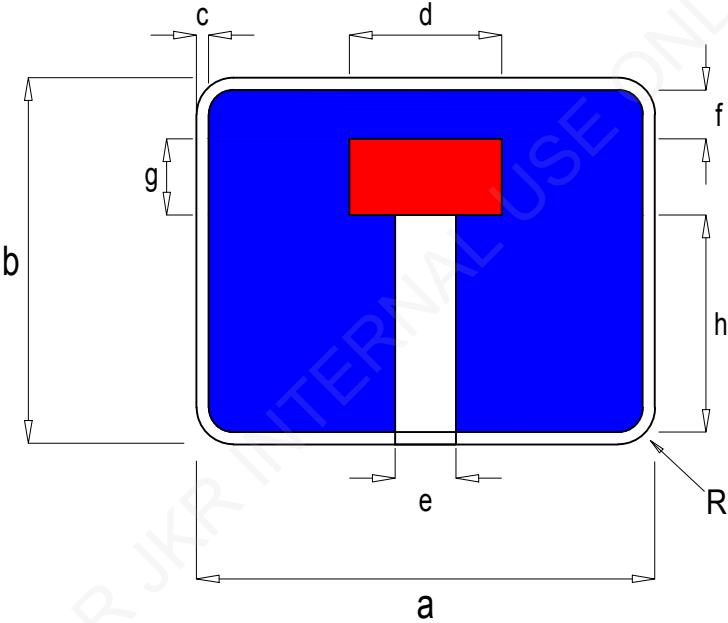
REGULATORY MANDATORY SIGNS

Scale : Not to scale

RM 11. NO THROUGH ROAD

A sign indicating that there is no through way straight ahead.

Colour:
Border/Vertical Rectangle - White
Horizontal Rectangle - White
Background - Blue



Dimensions:

SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	g	h
Minimum	750	600	20	250	100	80	125	355



REGULATORY MANDATORY SIGNS

Scale : Not to scale

5.0 TYPICAL WARNING DANGER SIGNS



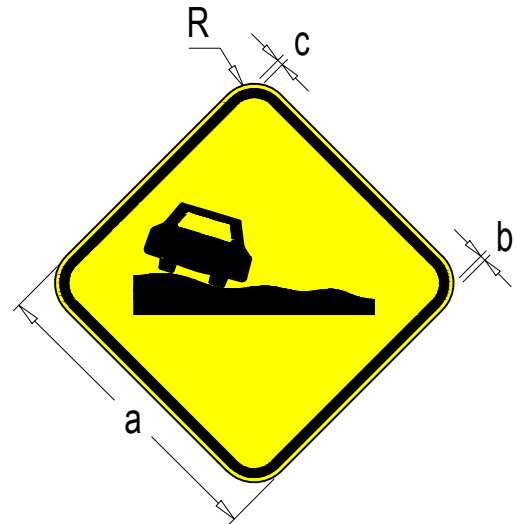
REGULATORY MANDATORY SIGNS

Scale : Not to scale

WD. 1 UNEVEN ROAD

Used at approach to dips, hump bridges or ridges or for section where the carriageway is in bad condition.

SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115



WD. 2 DANGEROUS BENDS

Used at the approach to double bends or a succession of more than two bends :-

- (a) First to the left (WD. 2a)
- (b) First to the right (WD. 2b)

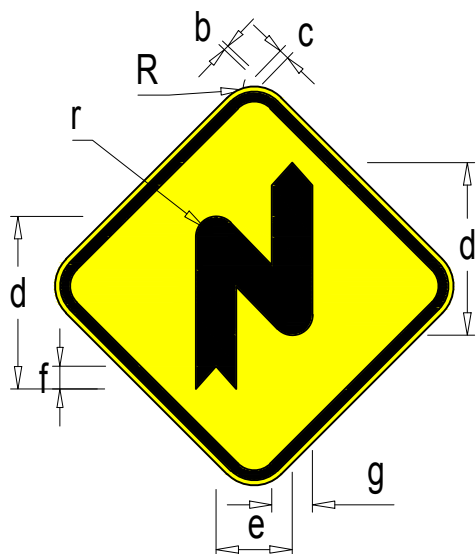
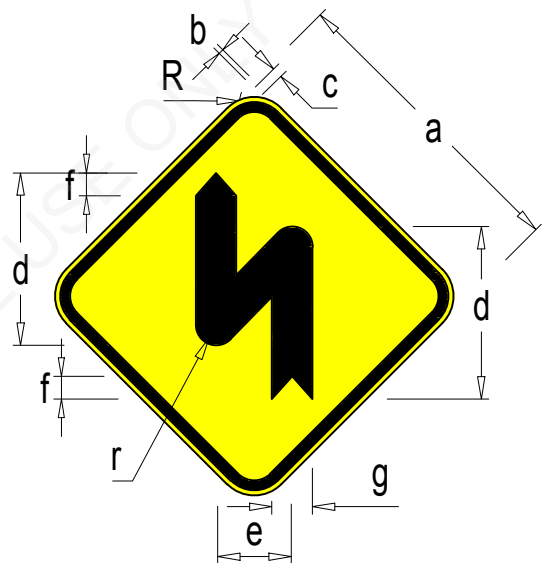
SIGNS	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	r	R	
Minimum	400	10	10	230	100	30	50	25	50	
Normal	600	10	15	340	150	45	80	40	75	
Other Sizes	750	15	20	430	190	55	90	45	95	
	900	15	25	510	225	65	110	55	115	

COLOUR :

Background - Yellow
Border/Symbol - Black

Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



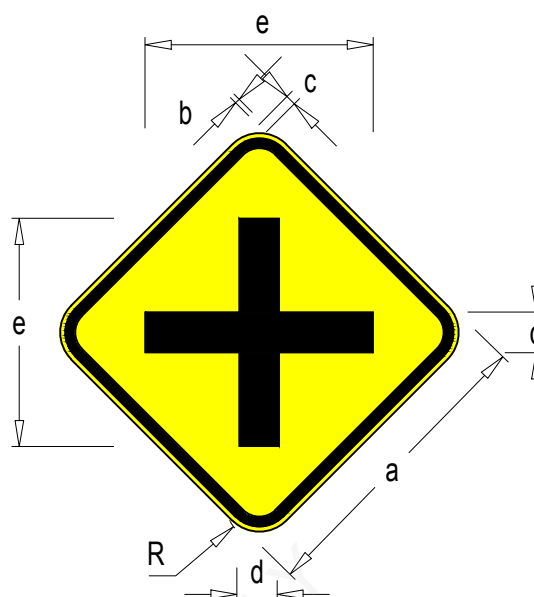
WARNING DANGER SIGNS

Scale : Not to scale

WD 3. ROAD INTERSECTION

Used to indicate the presence of an obscured cross-road intersection On through highway, variations of the symbol can be used to denote Different cross road configurations, such as curved or skewed cross roads.

SIGNS	DIMENSIONS (mm)					
	a	b	c	d	e	R
Minimum	400	10	10	50	300	50
Normal	600	10	15	80	450	75
Other Sizes	750	15	20	90	560	95
	900	15	25	120	675	110



COLOUR :

Background - Yellow

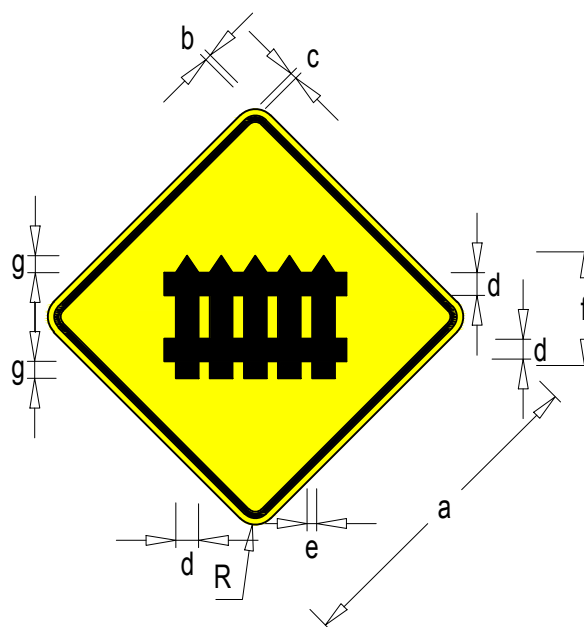
Symbol - Black

Border - Black

WD 4. LEVEL CROSSING WITH GATES

Used on each roadway at approach to at-grade crossing with gates.

SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	g	R
Minimum	400	10	10	30	15	160	20	50
Normal	600	15	15	40	20	240	30	75
Other Sizes	750	20	20	50	25	300	40	95
	900	25	25	60	30	340	50	115



COLOUR :

Background - Yellow

Symbol - Black

Border - Black

Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



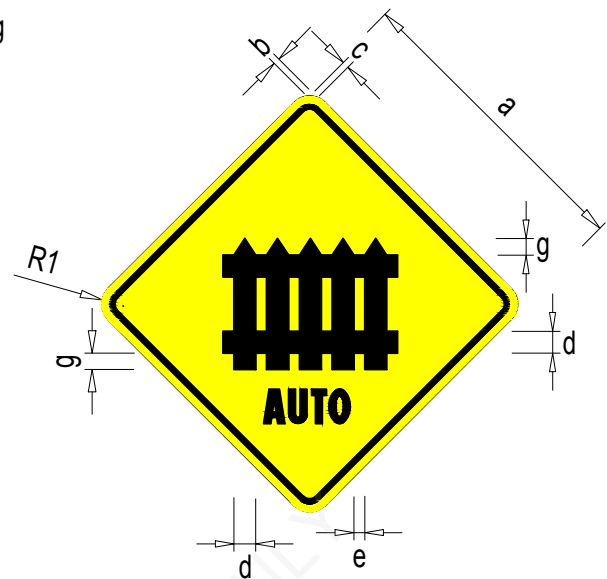
WARNING DANGER SIGNS

Scale : Not to scale

WD. 5 RAILWAY AUTOMATIC LEVEL CROSSING

Used at approach on each roadway to at-grade crossing with automatic gates.

SIGNS	DIMENSIONS (mm)						
	a	b	c	d	e	f	R1
Minimum	400	10	10	30	15	20	50
Normal	600	10	15	40	20	30	75
Other Sizes	750	15	20	50	25	40	95
	900	15	25	60	30	50	115



COLOUR :

Background	-	Yellow
Symbol	-	Black
Lettering	-	Black
Border	-	Black
Letter Plate Background	-	White

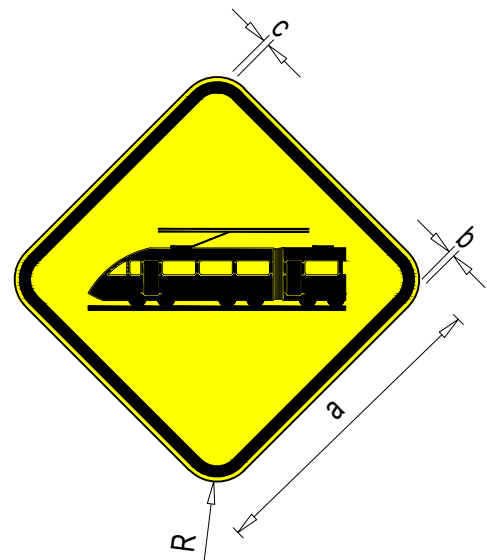
LETTERING:

Ccrige Narrow with 80mm letter height

WD. 6 LEVEL CROSSING WITHOUT GATE

Used at approach on each roadway to at-grade crossing without gates.

SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115



** Symbol template refer to Appendix 1

COLOUR :

Background	-	Yellow
Symbol	-	Black
Lettering	-	Black

Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



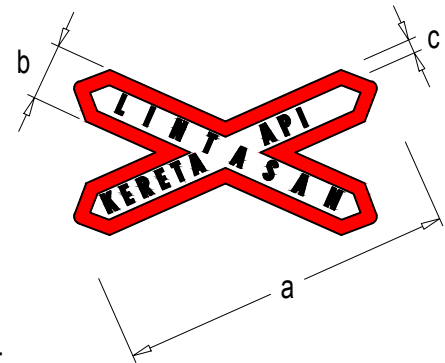
WARNING DANGER SIGNS

Scale : Not to scale

WD. 7 LEVEL CROSSING WITHOUT GATE

Additional sign to be used only in conjunction with sign no WD.6 above to be situated in the immediate vicinity of the railway line. If sufficient space is not available the sign may be placed with its points directed upwards and downwards.

SIGN	DIMENSIONS (mm)		
	a	b	c
Minimum	1200	200	50



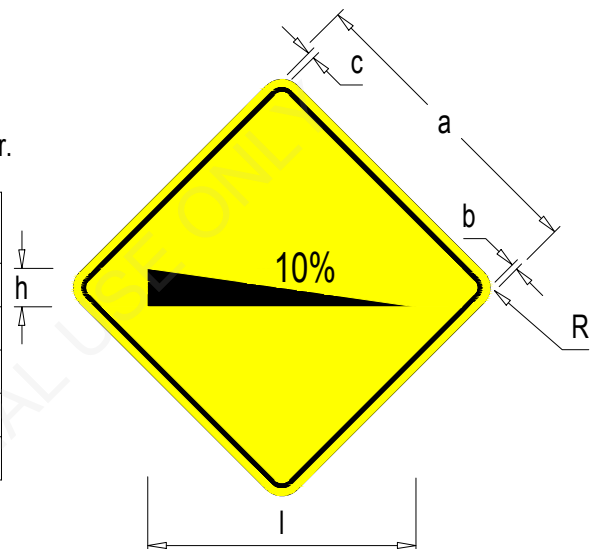
COLOUR :
Background - White
Border - Red

WD. 8 DANGEROUS DESCENT

Used at approach where the descent exceeds 1:10 or the local conditions are such that it constitutes a danger.

SIGNS	DIMENSIONS (mm)					
	a	b	c	h	l	R
Minimum	400	10	10	50	350	50
Normal	600	10	15	75	450	75
Other Sizes	750	15	20	100	550	85
	900	15	25	125	600	115

COLOUR :
Background - Yellow
Symbol - Black
Border - Black

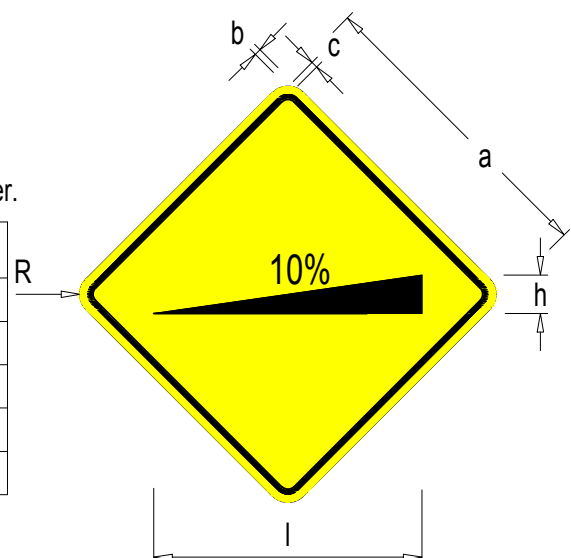


WD. 9 DANGEROUS ASCENT

Used at approach where the ascent exceeds 1:10 or the local conditions are such that it constitutes a danger.

SIGNS	DIMENSIONS (mm)					
	a	b	c	h	l	R
Minimum	400	10	10	50	350	50
Normal	600	10	15	75	450	75
Other Sizes	750	15	20	100	550	95
	900	15	25	125	600	115

COLOUR :
Background - Yellow
Symbol - Black
Border - Black



Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



WARNING DANGER SIGNS

Scale : Not to scale

WD. 10 LEFT AND RIGHT BEND

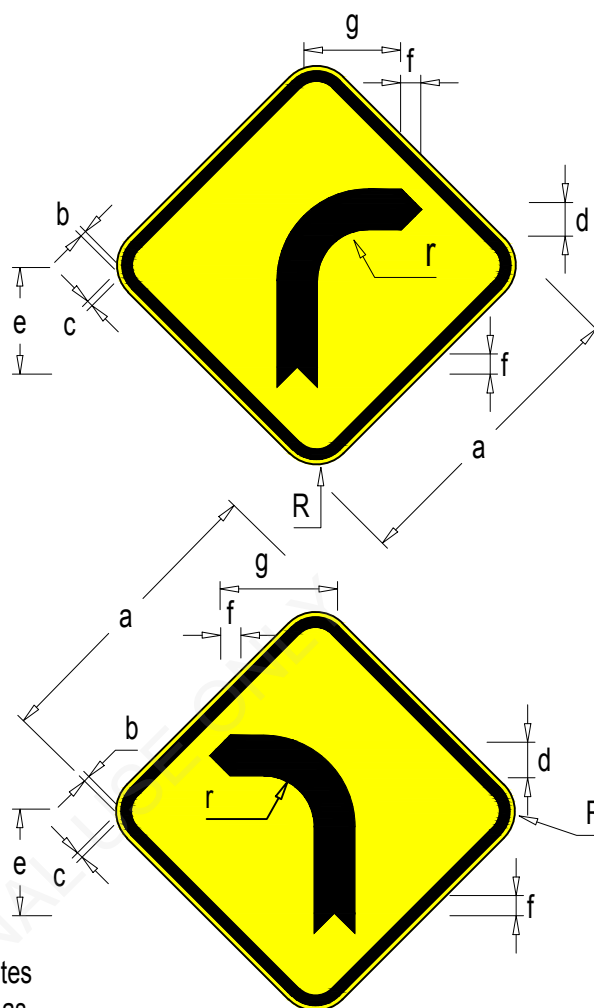
Used at approach of single bend which is dangerous owing to physical characteristics or reduced visibility.

- a) To the right (WD.10a)
- b) To the left (WD.10b)

SIGNS	DIMENSIONS (mm)								
	a	b	c	d	e	f	g	r	R
Minimum	400	10	10	40	150	20	150	60	50
Normal	600	10	15	50	225	30	225	100	75
Other Sizes	750	15	20	60	275	35	275	125	95
	900	15	25	70	300	45	300	130	115

COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black



WD. 11 WINDING ROAD

Used at approach section of winding road. The figure indicates the distance over which the road is winding (15 km is given as an example here)

SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	R1	R2
Minimum	400	10	10	500	170	20	50	20
Normal	600	15	15	500	170	20	75	20
Other Sizes	750	20	20	500	170	20	95	20
	900	25	25	500	170	20	115	20

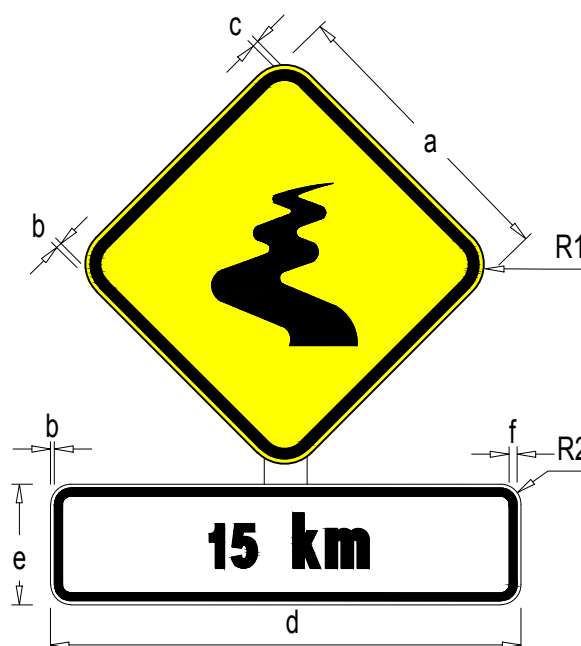
COLOUR :

Background	-	Yellow
Border / Symbol	-	Black
Lettering	-	Black
Letter Plate Background	-	White

LETTERING : Ccrige Narrow with 100 mm letter height

Note

For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300 mm



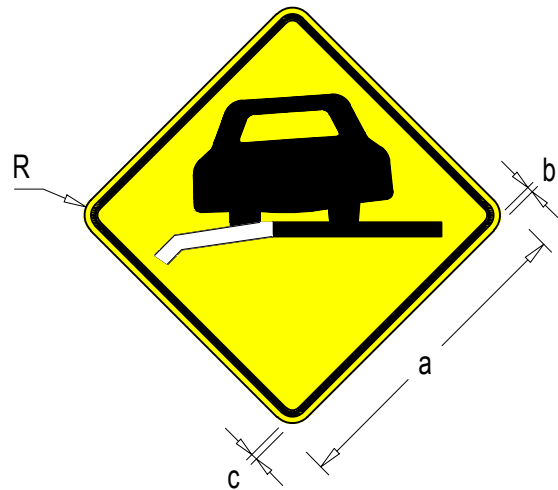
WARNING DANGER SIGNS

Scale : Not to scale

WD. 12 SOFT ROAD SIDE TABLE

Used at approach of areas where the side tables of the road / road shoulder are soft and dangerous

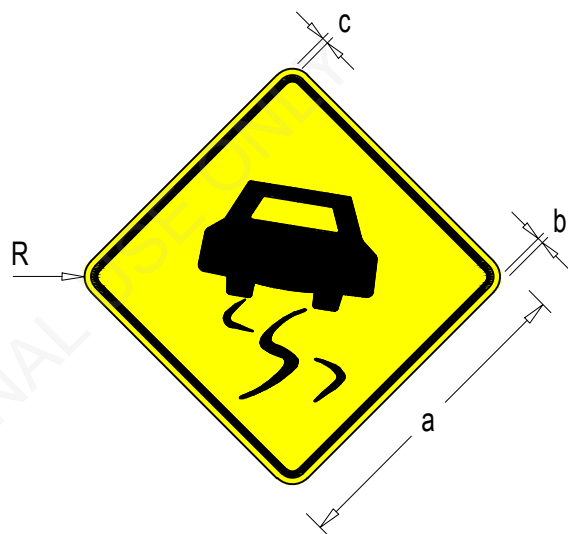
SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115



WD. 13 SLIPPERY CARRIAGEWAY

Used at approach of section where under certain conditions the road surface may be slippery

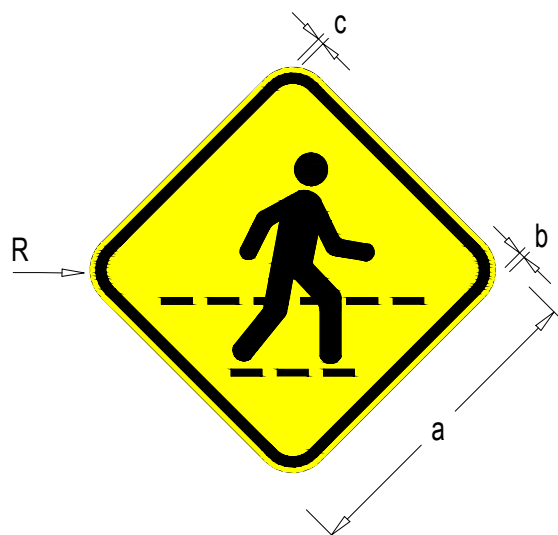
SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115



WD. 14 PEDESTRIAN CROSSING

Used at approach to places where pedestrian cross the roads

SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115



COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black

Note

For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300 mm



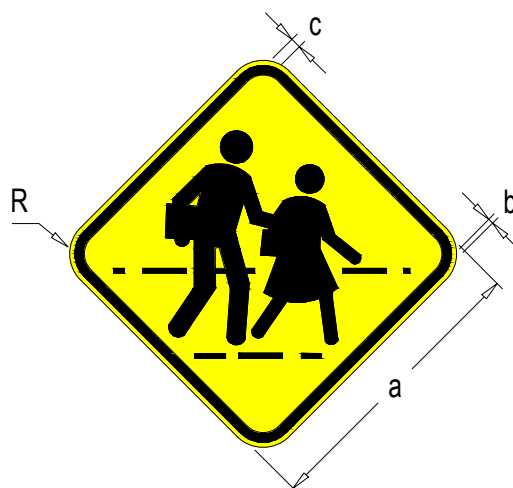
WARNING DANGER SIGNS

Scale : Not to scale

WD. 15 CHILDREN CROSSING

Used at approach to places frequented by school children
(e.g. near school or playground)

SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115

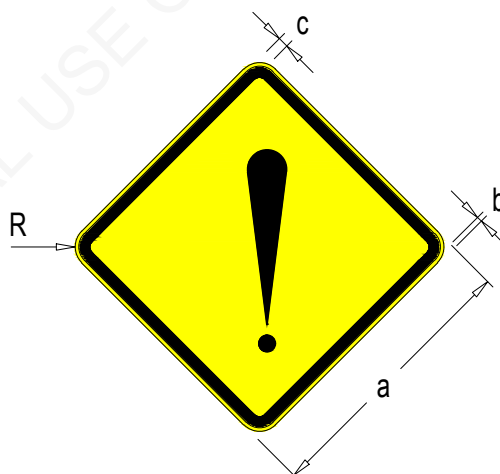


COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black

WD. 16 OTHER DANGER

Used at the approach of danger other than the legal sign available. An additional rectangular plate bearing an inscription or symbol may be placed underneath this sign



WD. 17 AWAS

Used at approach of a danger ahead

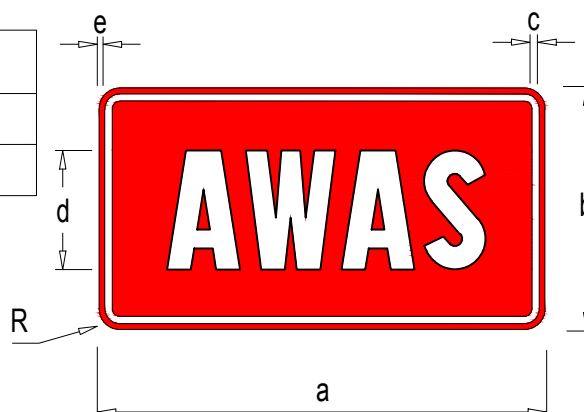
SIGNS	DIMENSIONS (mm)					
	a	b	c	d	e	R
Minimum	1000	500	15	300	10	65

COLOUR :

Background	-	Red
Border	-	White
Lettering	-	White

Note

For safety reason, borders & corners of sign should be rounded
on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300 mm



WARNING DANGER SIGNS

Scale : Not to scale

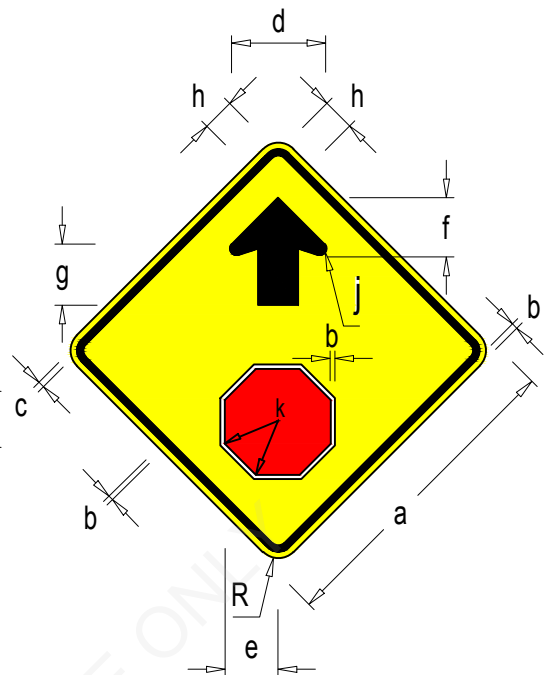
WD. 18 STOP SIGN AHEAD

Used in advance of a 'STOP' sign controlling an intersection where the 'STOP' sign may not be sufficiently visible far ahead to enable a driver to stop safely at the stop line.

SIGNS	DIMENSIONS (mm)										
	a	b	c	d	e	f	g	h	j	k	R
Minimum	400	10	10	60	70	70	85	20	15	100	50
Normal	600	10	15	90	110	100	125	30	15	125	75
Other Sizes	750	15	20	120	145	130	165	40	20	150	95
	900	15	25	150	170	150	200	50	25	175	115

COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black



WD. 19 GIVE WAY SIGN AHEAD

Used in advance of a 'GIVE WAY' sign controlling an intersection where the 'GIVE WAY' sign may not be sufficiently visible far ahead to enable a driver to give way before reaching intersection.

SIGNS	DIMENSIONS (mm)											
	a	b	c	d	e	f	g	h	j	k	R1	R2
Minimum	400	10	10	150	40	730	340	15	10	80	50	40
Normal	600	10	15	225	60	730	340	15	10	80	75	40
Other Sizes	750	15	20	275	75	730	340	15	10	80	95	40
	900	15	25	330	90	730	340	15	10	80	115	40

COLOUR :

Background	-	Yellow
Border / Symbol	-	Black
Letter Plate Background	-	White
Red border band and white interior and border for the triangle		
LETTERING : Ccrige Narrow		

Notes:

- For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300 mm.

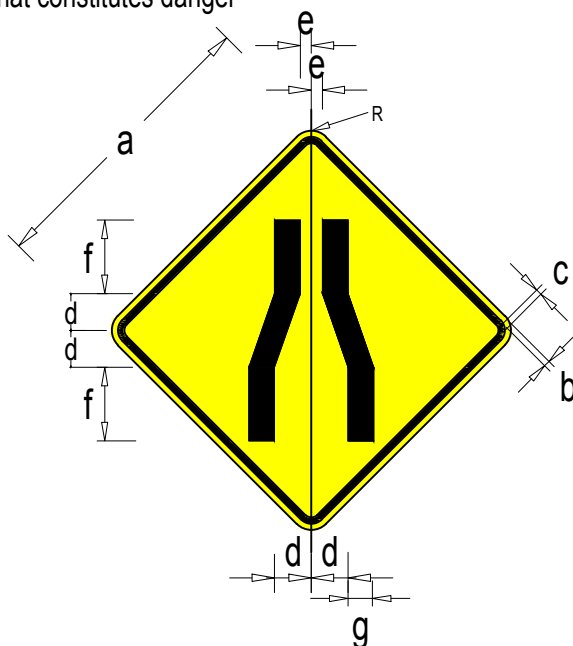


WARNING DANGER SIGNS

Scale : Not to scale

WD. 20 CARRIAGEWAY NARROWS

Used at approach of a narrow carriageway where the carriageway narrows symmetrically on each side that constitutes danger



SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	g	R
Minimum	400	10	10	50	15	100	35	50
Normal	600	10	15	75	20	150	45	75
Other Sizes	750	15	20	85	25	185	50	95
	900	15	25	100	30	225	55	115

WD. 22 TRAFFIC SIGNAL AHEAD

Used in advance of signalised intersection

SIGNS	DIMENSION (mm)												
	a	b	c	d	e	f	g	h	j	k	r	R1	R2
Minimum	400	10	10	150	40	15	340	730	80	10	35	50	40
Normal	600	10	15	225	60	20	340	730	80	15	50	75	40
Other Sizes	750	15	20	270	75	25	340	730	80	20	65	95	40
	900	15	25	330	90	30	340	730	80	25	75	115	40

COLOUR :

Background - Yellow

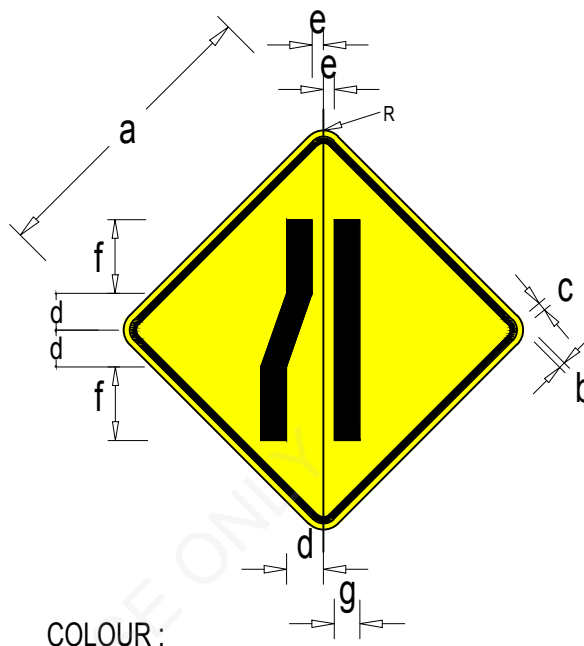
Border / Lettering - Black

Letter Template Background - White

Black symbol except that the disc are of red, yellow & green from the top

WD. 21 ROAD NARROWS

Used at approach of a road narrowing on the left



COLOUR :

Background - Yellow

Border / Symbol - Black



LETTERING : Ccrige Narrow



WARNING DANGER SIGNS

Scale : Not to scale

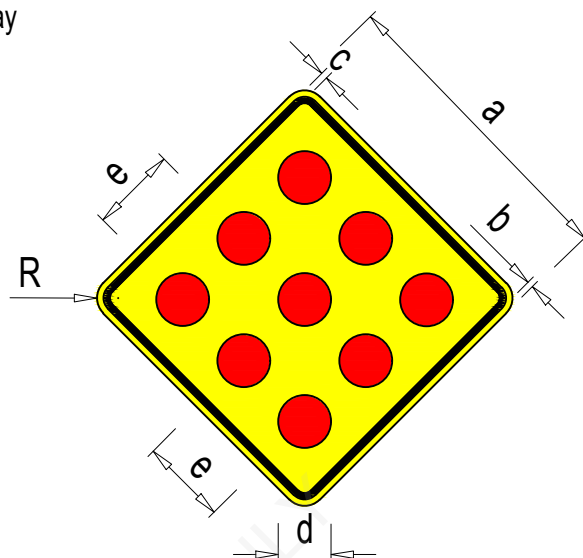
WD. 23 OBSTRUCTION

Used to mark an obstruction in the middle of a carriageway or exit gores or beginning of traffic island.

SIGNS	DIMENSIONS (mm)					
	a	b	c	d	e	R
Minimum	400	10	10	75	120	50
Normal	600	10	15	110	180	75
Other Sizes	750	15	20	140	225	95
	900	15	25	160	270	115

COLOUR :

Background	-	Yellow
Border	-	Black
Circle	-	Red



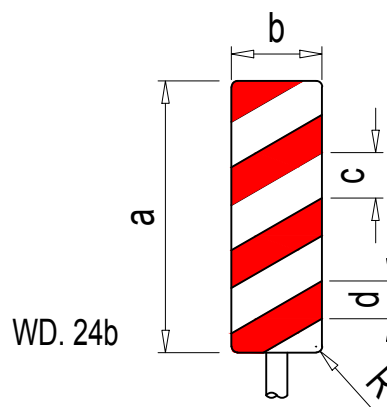
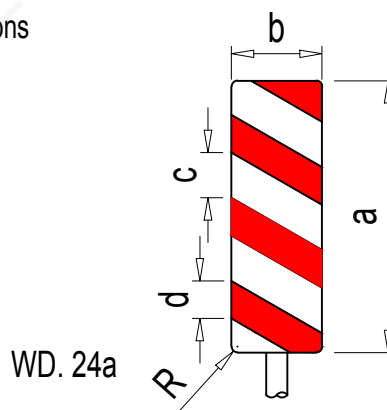
WD. 24a & 24b OBSTRUCTION MARKER

Used to delineate bridge ends, underpass and other obstructions within the shoulder. Also used when the roadway clearance between bridge parapets is less than the width of the pavement on the approach to the bridge. Used at the approach to locations where rock or earth from hillsides or cut slopes may fall on to the roadway

SIGNS	DIMENSIONS (mm)				
	a	b	c	d	R
Minimum	900	300	150	150	40

COLOUR :

White background
with sloping red stripes



WARNING DANGER SIGNS

Scale : Not to scale

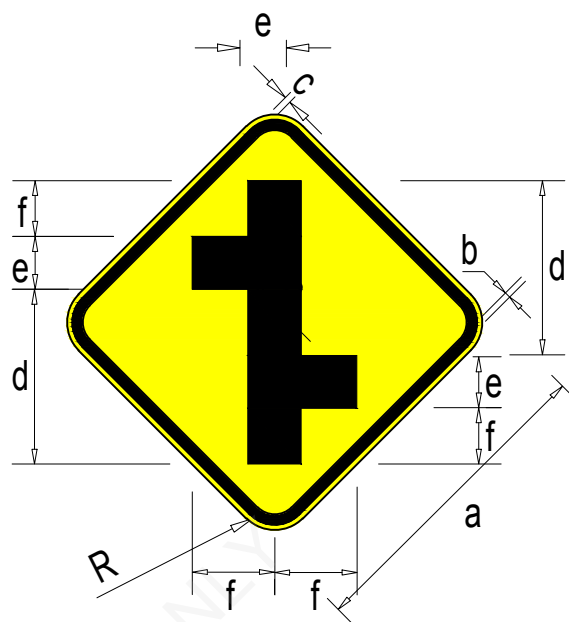
WD. 25 STAGGERED JUNCTIONS

Used at approach to staggered junctions

SIGNS	DIMENSIONS (mm)						
	a	b	c	d	e	f	R
Minimum	400	10	10	220	70	70	50
Normal	600	10	15	330	100	100	75
Other Sizes	750	15	20	410	125	130	95
	900	15	25	500	150	160	115

COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black



WD. 26 STAGGERED JUNCTIONS WITH ONE ROAD CLOSED TO TRAFFIC

Used if one of the junction is one way and traffic cannot enter from that direction

SIGNS	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	r	h	R
Minimum	400	10	10	220	70	100	100	50	20	50
Normal	600	10	15	330	100	150	150	75	30	75
Other Sizes	750	15	20	410	125	180	200	90	40	95
	900	15	25	500	150	225	220	110	45	115

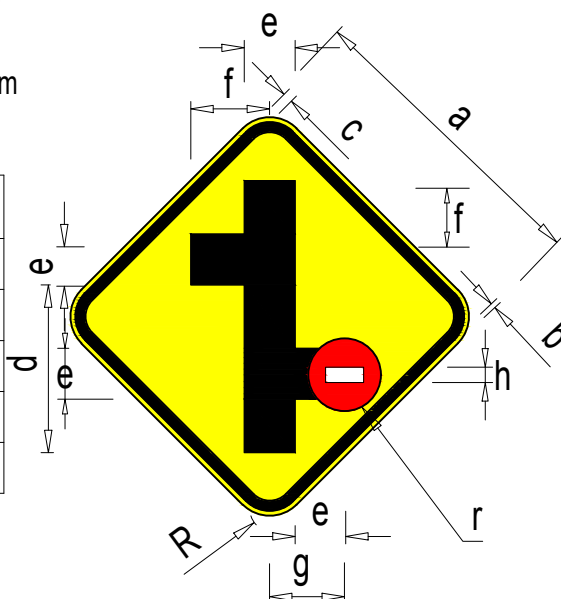
COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black

In addition, the no entry sign is to follow the colour as gazetted

Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



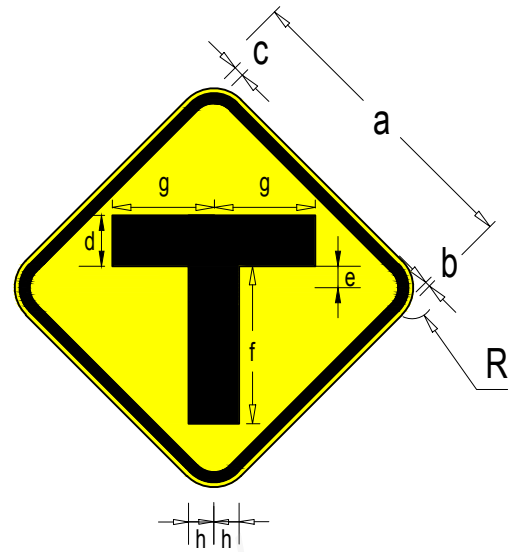
WARNING DANGER SIGNS

Scale : Not to scale

WD. 27a ROAD JUNCTION ON THE LEFT & RIGHT

Used at the approach of a road junction to the left & right

SIGNS	DIMENSIONS (mm)								
	a	b	c	d	e	f	g	h	R
Minimum	400	10	10	70	30	200	130	30	50
Normal	600	10	15	100	40	310	200	50	75
Other Sizes	750	15	20	125	50	390	250	60	95
	900	15	25	150	60	470	300	75	115



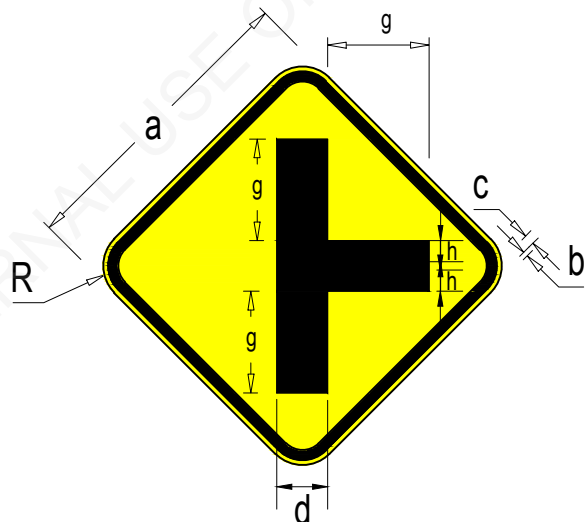
COLOUR :

Background	-	Yellow
Symbol	-	Black
Border	-	Black

WD. 27b ROAD JUNCTION ON THE RIGHT

Used at the approach of a road junction to the right

SIGNS	DIMENSION (mm)						
	a	b	c	d	g	h	R
Minimum	400	10	10	70	130	35	50
Normal	600	10	15	100	200	50	75
Other Sizes	750	15	20	125	250	60	95
	900	15	25	150	300	75	115



WD. 27c ROAD JUNCTION ON THE LEFT

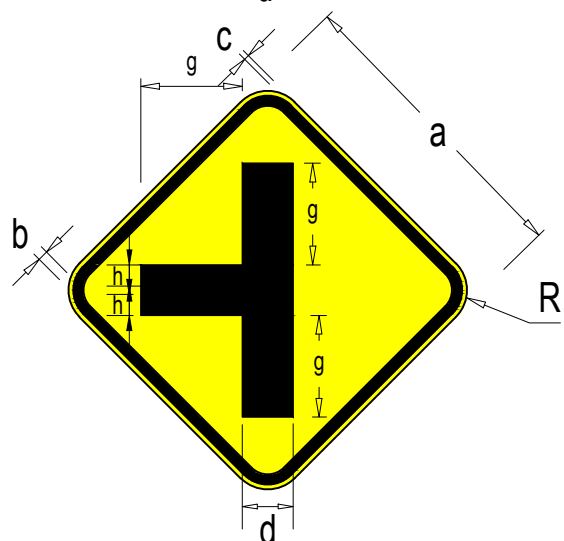
Used at the approach of a road junction to the left

COLOUR :

Background	-	Yellow
Border	-	Black
Symbol	-	Black

Note:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.

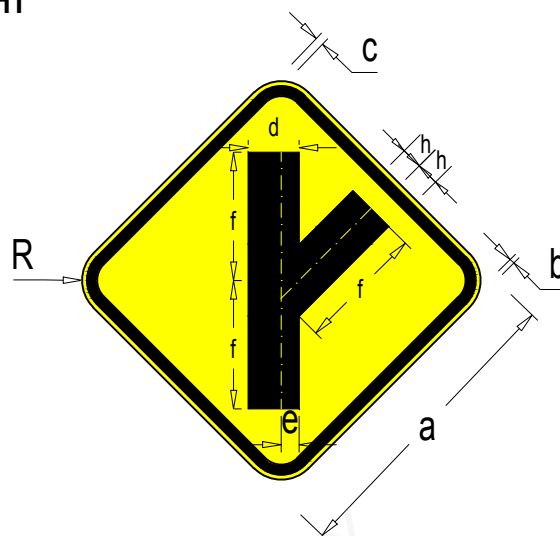


WARNING DANGER SIGNS

Scale : Not to scale

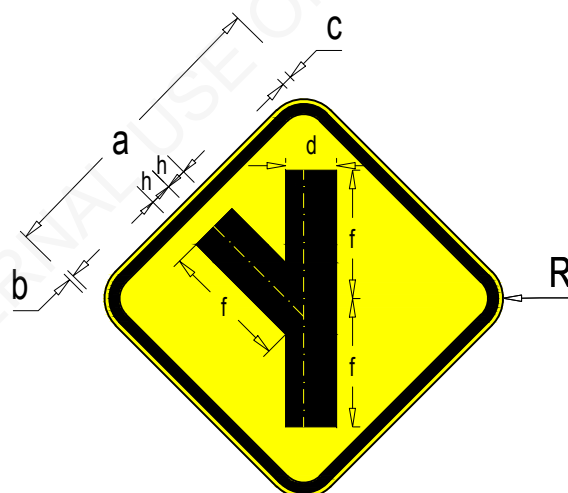
WD. 27d ROAD JUNCTION ON THE RIGHT

Used at the approach of a road junction to the right



WD. 27e ROAD JUNCTION ON THE LEFT

Used at the approach of a road junction to the left



SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	h	R
Minimum	400	10	10	70	25	185	35	50
Normal	600	10	15	100	35	275	50	75
Other Sizes	750	15	20	125	45	340	60	95
	900	15	25	150	55	410	75	115

COLOUR :

Background - Yellow
Symbol - Black
Border - Black

Note:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.

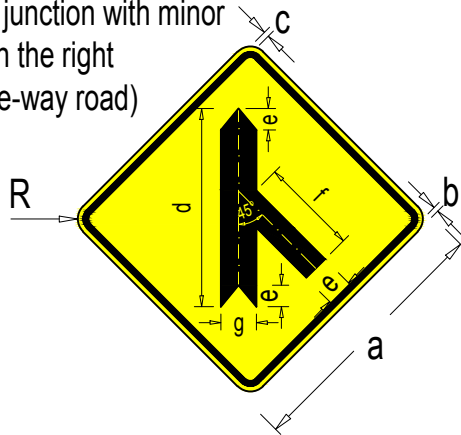


WARNING DANGER SIGNS

Scale : Not to scale

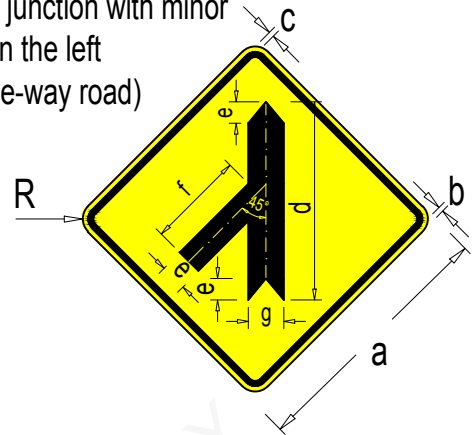
WD. 28a ROAD JUNCTION WITH MINOR ROAD ON THE RIGHT

Used at approach of a road junction with minor road on the right (for one-way road)



WD. 28b ROAD JUNCTION WITH MINOR ROAD ON THE LEFT

Used at approach of a road junction with minor road on the left (for one-way road)



COLOUR :

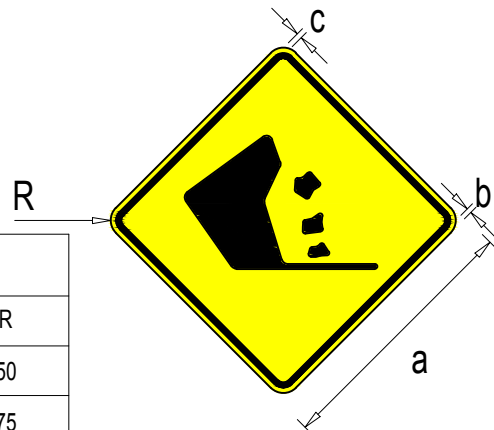
Background - Yellow
Symbol - Black
Border - Black

SIGNS	DIMENSION (mm)							
	a	b	c	d	e	f	g	R
Minimum	400	10	10	300	30	150	50	50
Normal	600	10	15	450	45	220	75	75
Other Sizes	750	15	20	550	55	280	90	95
	900	15	25	675	65	335	110	115

WD. 29 ROCK FALLING OR SLIDE

Used at approach to locations where rocks or earth may fall onto the roadway

SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115



COLOUR :

Background - Yellow
Symbol - Black
Border - Black

Note:

- 1) The symbol may be shown in a reversed direction
- 2) Symbol template refer to Appendix 1
- 3) For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.

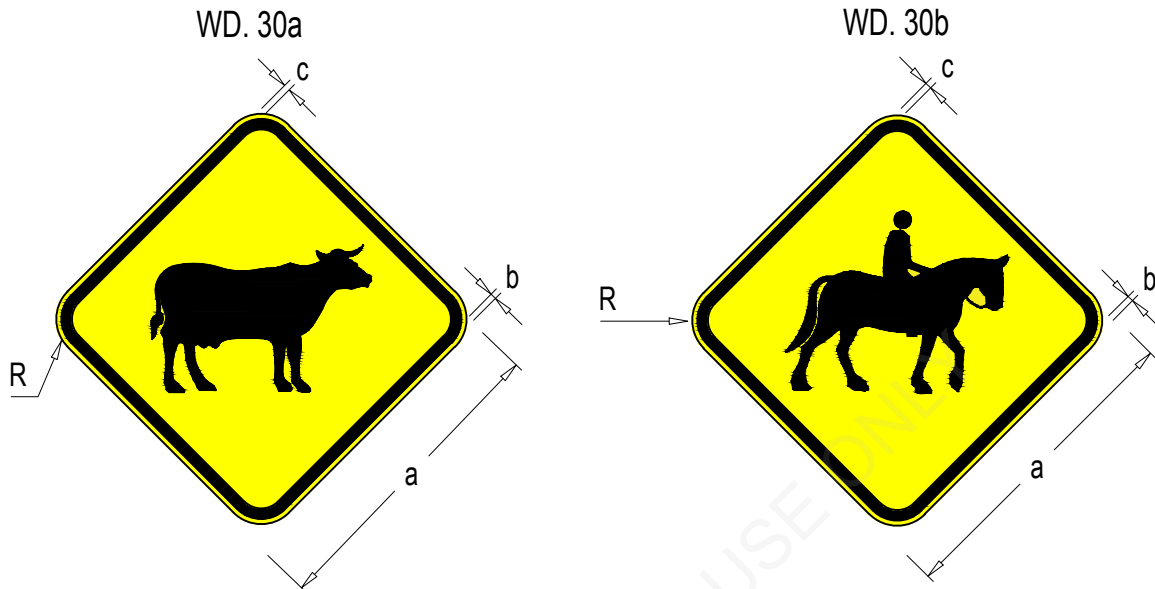


WARNING DANGER SIGNS

Scale : Not to scale

WD. 30a & 30b LIVESTOCK CROSSING & HORSE CROSSING

Use in advance of location where cattle or other livestock such as horses may be expected to cross or wander onto the road



SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115

COLOUR :

Background	-	Yellow
Border / Symbol	-	Black

Note:

- 1) The direction of the cattle or horse can be reversed
- 2) For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



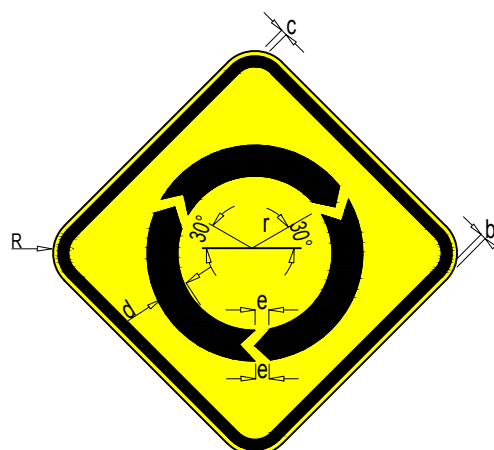
WARNING DANGER SIGNS

Scale : Not to scale

WD 31. ROUNDABOUT AHEAD

Used at approach to roundabout

SIGNS	DIMENSIONS (mm)						
	a	b	c	d	e	r	R
Minimum	400	10	10	30	20	100	50
Normal	600	10	15	45	30	150	75
Other Sizes	750	15	20	55	40	185	95
	900	15	25	65	50	225	115



COLOUR :

Background - Yellow

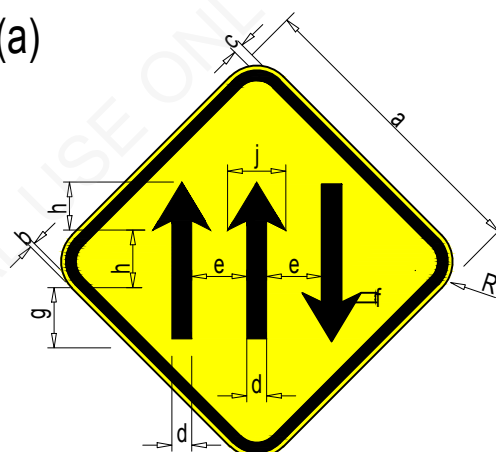
Border / Symbol - Black

WD 32. CLIMBING LANE

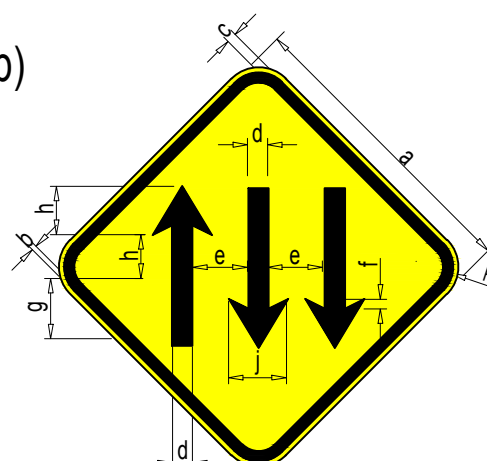
Used at approach of a section of a road having an additional climbing lane or three-lane carriageway with two-way traffic in one direction and one-way in the other direction

SIGNS	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	h	j	R
Minimum	400	10	10	20	80	10	100	50	60	50
Normal	600	10	15	30	120	15	150	75	90	75
Other Sizes	750	15	20	35	150	20	185	95	110	95
	900	15	25	40	180	25	225	110	135	115

(a)



(b)



Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.

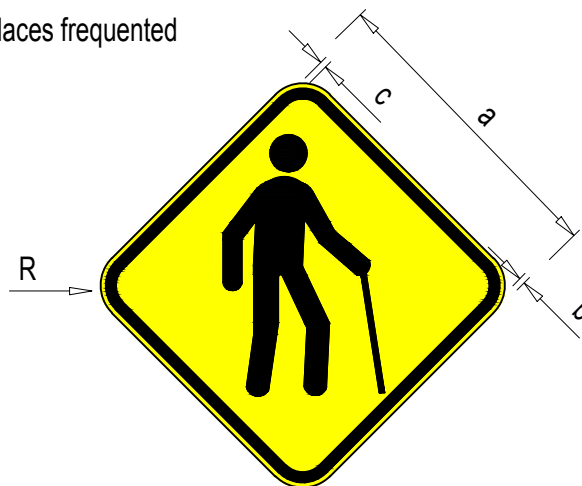


WARNING DANGER SIGNS

Scale : Not to scale

WD. 33 BLIND PEOPLE

Used at approach to places frequented by blind people



WD. 34 CROSSING FOR DISABLED PEOPLE

Used at approach to places where disabled persons cross the road



SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115

COLOUR :

Background - Yellow
Border / Symbol - Black

Note:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



WARNING DANGER SIGNS

Scale : Not to scale

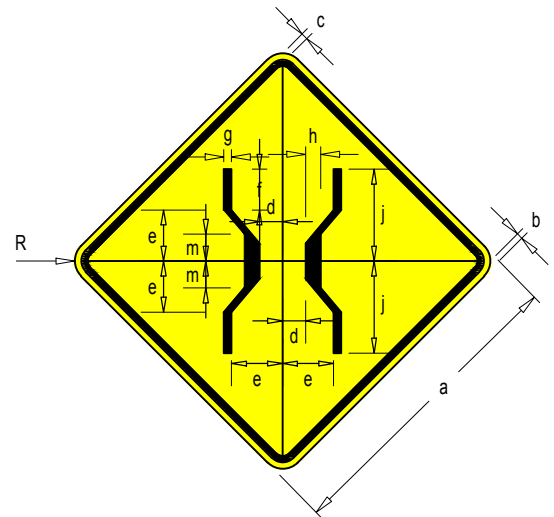
WD. 35 NARROW BRIDGE

Used in advance of a bridge or culvert having a roadway clearance less than the width of the roadway

SIGNS	DIMENSIONS (mm)										
	a	b	c	d	e	f	g	h	j	m	R
Minimum	400	10	10	250	50	100	10	50	120	25	50
Normal	600	10	15	375	75	150	15	75	180	35	75
Other Sizes	750	15	20	450	90	180	20	165	220	45	95
	900	15	25	550	110	225	25	200	270	55	115

COLOUR :

Background - Yellow
Border / Symbol - Black



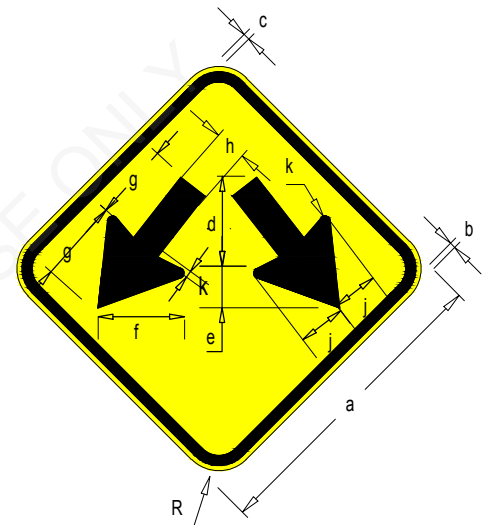
WD. 36 DOUBLE ARROW

Used to indicate that traffic is allowed to pass on either side of an island or any obstruction on a road

SIGNS	DIMENSIONS (mm)										
	a	b	c	d	e	f	g	h	j	k	R
Minimum	400	10	10	250	50	100	100	50	60	10	50
Normal	600	10	15	375	75	150	150	75	90	10	75
Other Sizes	750	15	20	450	90	180	195	165	110	15	95
	900	15	25	550	110	225	235	200	130	20	115

COLOUR :

Background - Yellow
Border / Symbol - Black



WD. 37 TWO - WAY TRAFFIC

Used as an indication of a transition from a separate one - way traffic to a two - way traffic

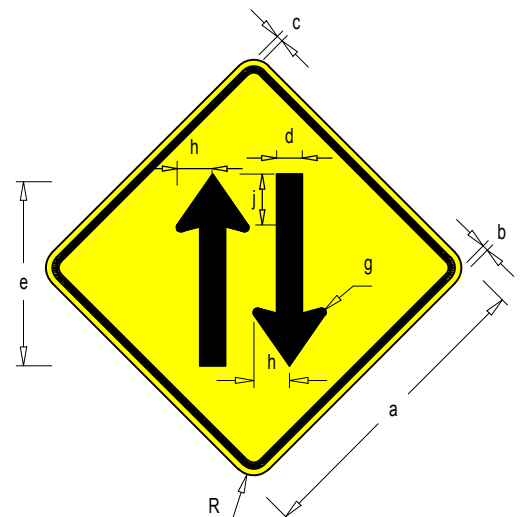
SIGNS	DIMENSIONS (mm)									
	a	b	c	d	e	f	g	h	j	R
Minimum	400	10	10	40	300	10	10	50	85	50
Normal	600	10	15	60	450	15	15	75	125	125
Other Sizes	750	15	20	80	560	20	20	100	165	165
	900	15	25	100	675	25	25	125	200	200

COLOUR :

Background - Yellow
Border / Symbol - Black

Notes:

For safety reason, borders and corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.

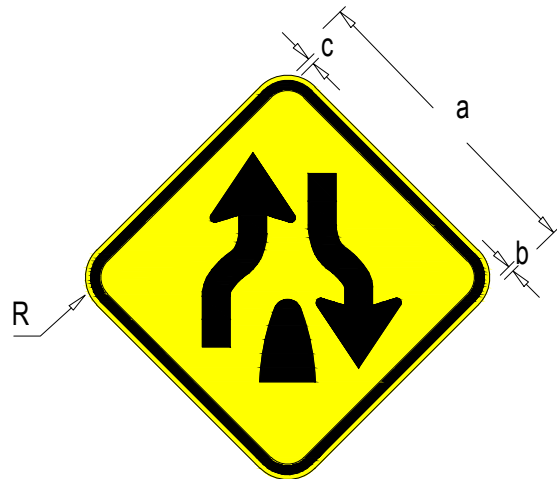


WARNING DANGER SIGNS

Scale : Not to scale

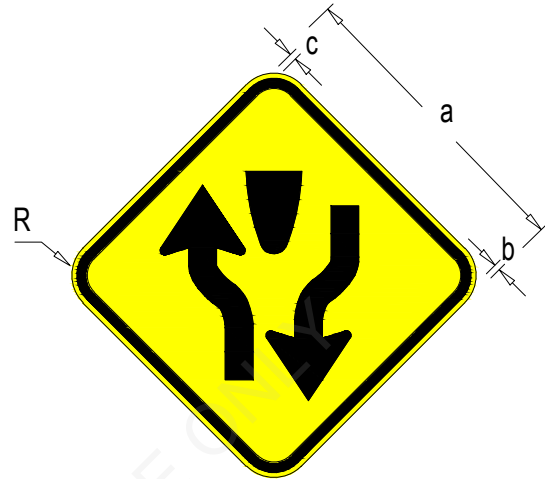
WD. 38a DIVIDED HIGHWAY (ROAD) ENDS

Used at the end of a divided road as a warning of two-way traffic ahead



WD. 38b DIVIDED HIGHWAY (ROAD) AHEAD

Used at approach indicating a section of a road (not an intersection or junction) where the apposing flows of traffic are separated by a physical barrier.



COLOUR:

Background	-	Yellow
Symbol	-	Black
Border	-	Black

Notes:

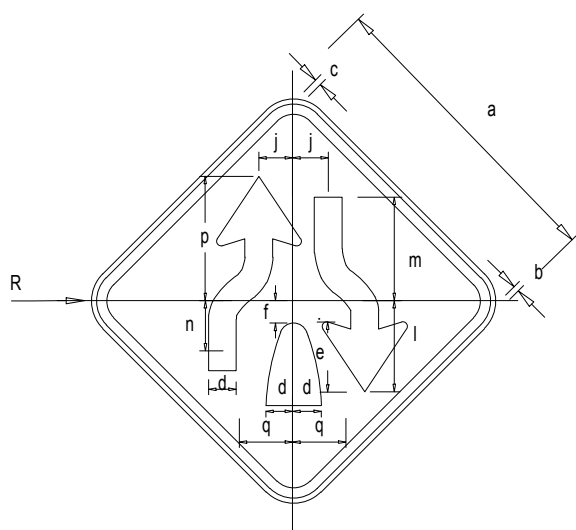
- 1) Details of WD.38 signage as per described in the next page
- 2) For safety reason, corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.



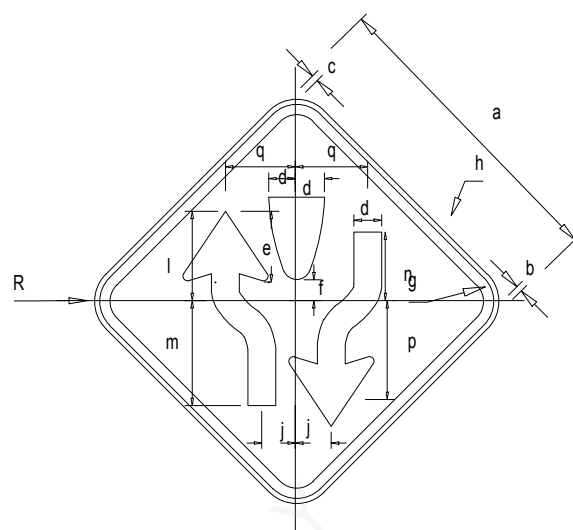
WARNING DANGER SIGNS

Scale : Not to scale

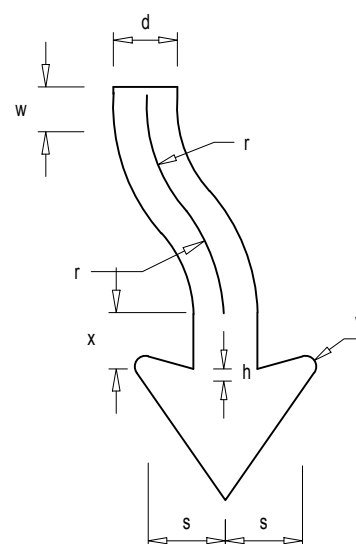
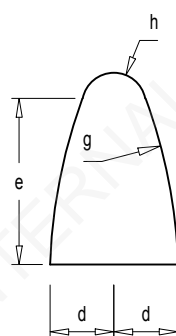
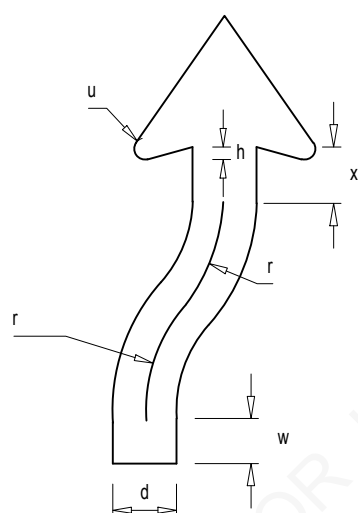
DETAILS OF WD. 38



WD. 38a



WD. 38b



SIGNS	DIMENSIONS (mm)																						
	a	b	c	d	e	f	g	h	j	k	l	m	n	p	q	r	s	t	u	v	w	x	R
Minimum	400	10	10	40	100	50	330	20	50	25	130	150	100	180	100	100	50	85	10	10	30	50	50
Normal	600	10	15	60	150	75	500	30	75	35	195	225	150	270	150	150	75	125	15	15	40	60	75
Other Sizes	750	15	20	80	200	100	625	40	100	45	250	290	200	340	200	200	95	165	20	20	50	70	95
	900	15	25	100	250	125	750	50	125	55	300	350	235	400	235	250	115	200	25	25	55	80	115



WARNING DANGER SIGNS

Scale : Not to scale

WD. 39a & 39b CHEVRON DELINEATOR

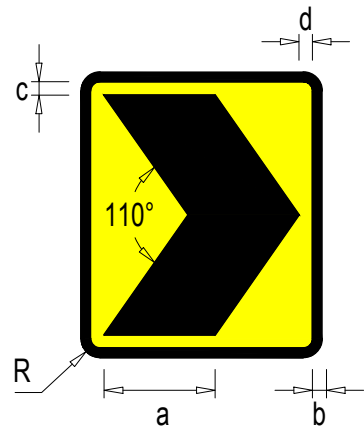
Used to provide guidance for motorist in areas where there is a hazardous change in horizontal alignment

	DIMENSIONS (mm)		
	900mm x 750mm	750mm x 600mm	600mm x 450mm
a	375	300	210
b	25	15	10
c	20	15	10
d	20	15	10
R	95	75	60

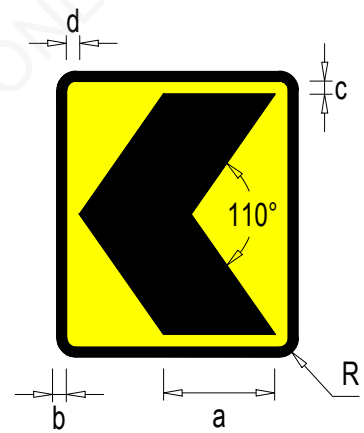
COLOUR :

Background	-	Yellow
Symbol	-	Black
Lettering	-	Black

WD. 39a



WD. 39b



Notes:

For safety reason, corners of sign should be rounded on radius 'R' approximately 1/8 of lesser side dimensions but not exceeding 300mm.

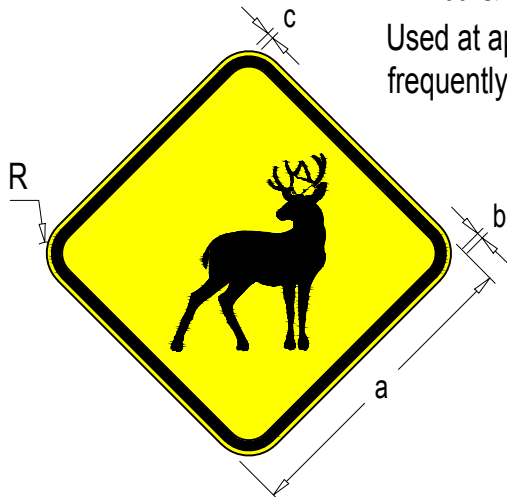


WARNING DANGER SIGNS

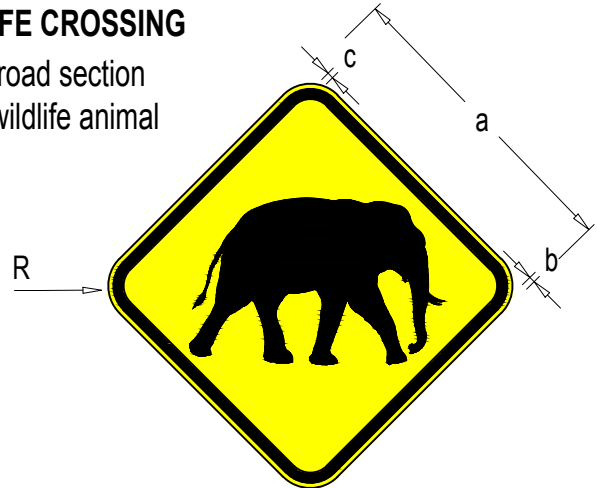
Scale : Not to scale

WD. 40a & 40b WILDLIFE CROSSING

Used at approach of a road section frequently crossed by wildlife animal



WD. 40a



WD. 40b

COLOUR :
 Background - Yellow
 Symbol - Black
 Border - Black

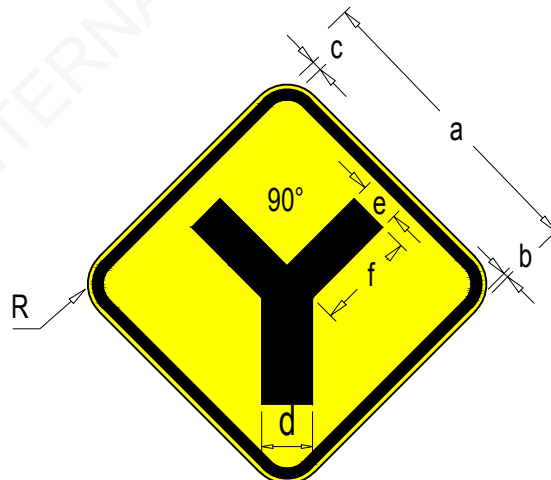
SIGNS	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other Sizes	750	15	20	95
	900	15	25	115

Notes:

1. The direction of the animal can be reversed
2. Different animal silhouette may be used to indicate the type of animal relevant to the warning
3. Symbol template refer to Appendix 1

WD. 41 ROAD JUNCTION ON THE LEFT & RIGHT

Used for road diverging perpendicular to the left and right



COLOUR :
 Background - Yellow
 Symbol - Black
 Border - Black

SIGNS	DIMENSIONS (mm)							
	a	b	c	d	e	f	h	R
Minimum	400	10	10	70	35	140	130	50
Normal	600	10	15	100	50	210	200	75
Other Sizes	750	15	20	125	60	265	250	95
	900	15	25	150	75	315	300	115

Note

For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm



WARNING DANGER SIGNS

Scale : Not to scale

WD. 42 ADVANCE WARNING FOR SCHOOL ZONE

Used at approach to school zone as a reminder to road users that they have to slow down

COLOUR :

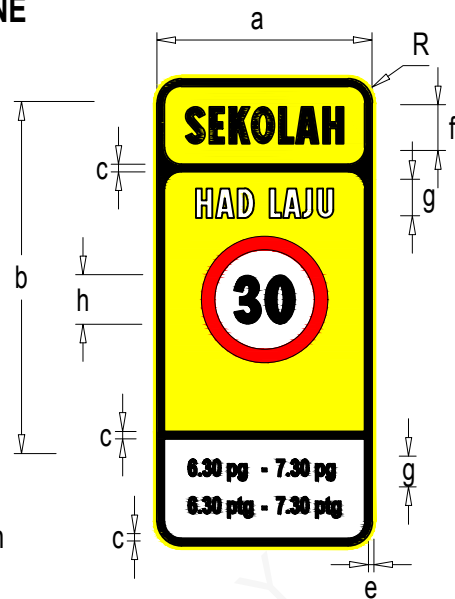
Background	-	Yellow
Border	-	Black
Lettering	-	Black

LETTERING:

Ccridge Narrow with height as specified

Note:

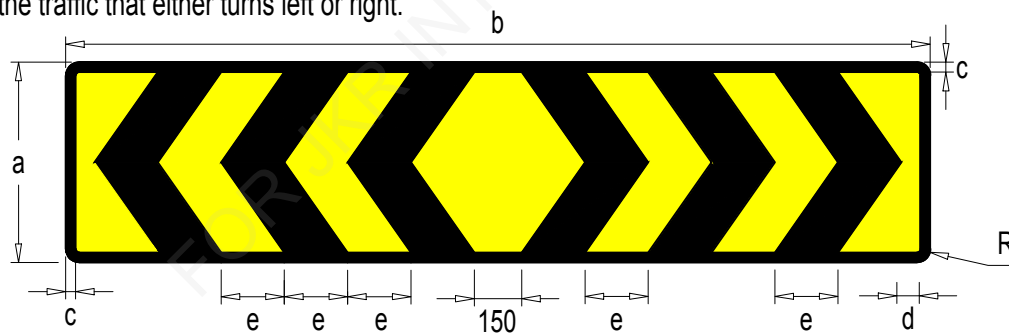
School operating time can be changed according to situation



Sign	DIMENSIONS (mm)							
	a	b	c	e	f	g	h	R
Minimum	480	600	15	10	80	60	110	60
Normal	600	750	20	15	100	80	130	75

WD. 43 CHEVRON

Used to delineate the 'T' junctions and placed on the road facing the traffic that either turns left or right.



a	600 mm
b	2620 mm
c	15 mm
d	20 mm
e	200 mm
R	75 mm

COLOUR :

Background	-	Yellow	- (Reflective)
Border	-	Black	- (Non - reflective)
Chevron	-	Black	- (Non - reflective)

Note :

- Signs shall not be placed less than 1.8m from edge of road. Mounting height to be 1.5m from road level to the bottom edge of signs
- For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm



WARNING DANGER SIGNS

Scale : Not to scale

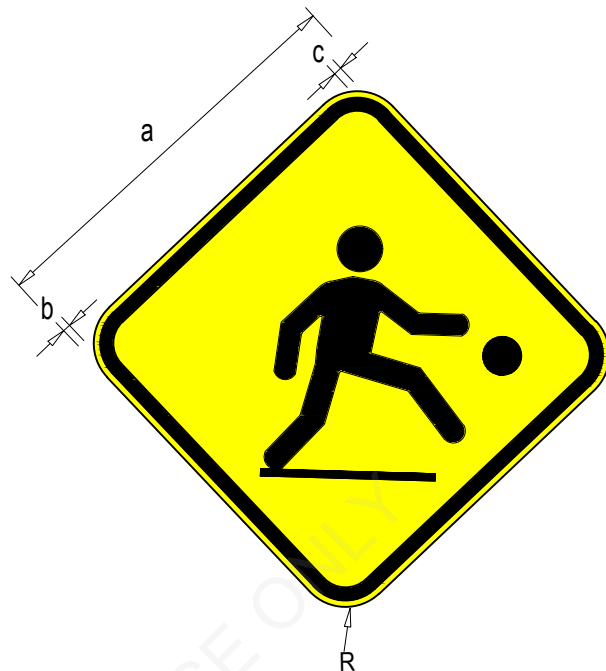
WD. 44 PLAYGROUND

Used at approach to playgrounds

SIGN	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other sizes	750	15	20	95
	900	15	25	115

Colour:

Background - Yellow
Border / symbol - Black



** Symbol template refer to Appendix 1

WD. 45a KURANGKAN LAJU

Used to indicate that road users need to slow down

DIMENSIONS (mm)				
a	b	c	d	R
100	75	20	10	60

COLOUR:

Background - Yellow
Lettering - Black
Border - Black

LETTERING:

CCrige Narrow

Note:

- 1) 40 km/j is shown as an example. Details dimension for speed sign is as per WD. 46d.
- 2) For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm



WARNING DANGER SIGNS

Scale : Not to scale

WD. 45b SPEED SIGN

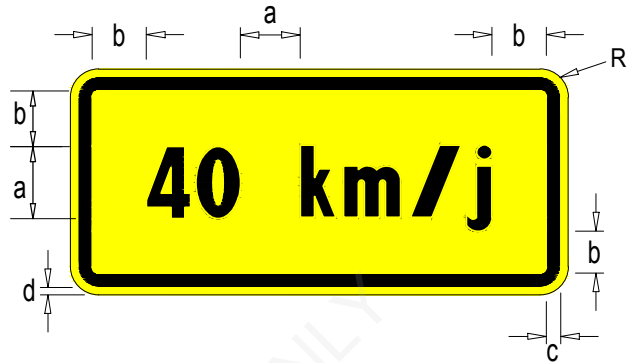
'40 km/j' can be replaced with another speed depending on the situation / location / scenario

DIMENSIONS (mm)				
a	b	c	d	R
100	75	20	10	60

COLOUR:

Background - Yellow
Lettering - Black
Border - Black

LETTERING: CCrige Narrow



WD. 46a WARNING SIGN APPROACHING TO LANDSLIDE PRONE AREA

Used at approach of landslide prone areas

DIMENSIONS (mm)								
a	a2	b	c	d	3/4 H	e	H	R1
930	15	1300	20	10	150	120	200	170

COLOUR:

Background - Red
Lettering - White
Border - White

LETTERING:

CCrige Narrow



Note:

For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm



WARNING DANGER SIGNS

Scale : Not to scale

WD. 46b WARNING SIGN APPROACHING TO HUMP



DIMENSIONS (mm)							
a	b	c	d	3/4 H	e	H	R1
930	1085	20	10	150	120	200	170

WD. 46c WARNING SIGN APPROACHING TO ACCIDENT PRONE AREA



COLOUR:

- Background - Red
- Lettering - White
- Border - White

LETTERING: Ccridge Narrow

Note:

For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm.

Warning signs which contain the word "AWAS" shall be in red and white colour scheme.

DIMENSIONS (mm)									
a	a2	b	c	d	3/4 H	e	H	R1	
930	150	1260	20	10	150	120	200	170	



WARNING DANGER SIGNS

Scale : Not to scale

WD. 47 HUMP AHEAD SIGN

Used at approach indicating a hump ahead where the traffic has to slow down.

(35 km/h is shown as an example)

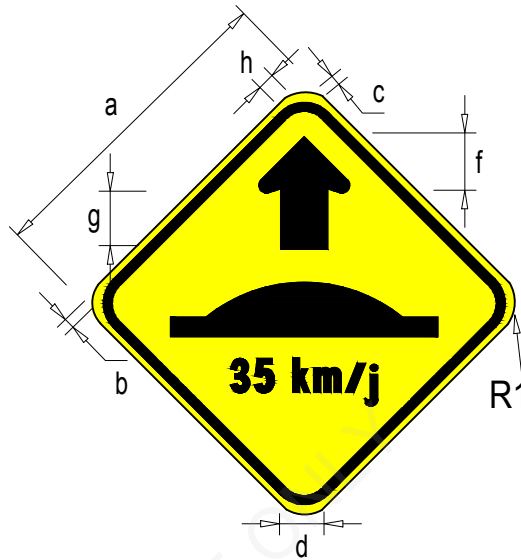
SIGN	DIMENSIONS (mm)							
	a	b	c	d	f	g	h	R1
Minimum	400	10	10	60	70	85	20	50
Normal	600	10	15	90	100	125	30	75
Other sizes	750	15	20	120	130	165	40	95
	900	15	25	150	150	200	50	115

COLOUR:

Background	-	Yellow
Border / symbol/ arrow	-	Black
Lettering	-	Black

LETTERING:

Ccridge Narrow with 100 mm letter height



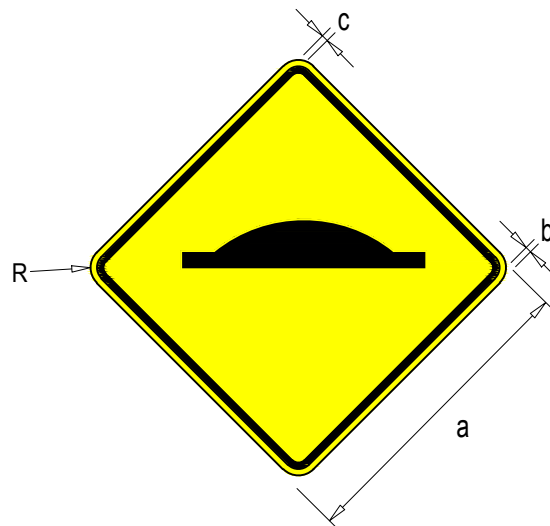
WD. 48 HUMP

Used to indicate the hump on the road

SIGN	DIMENSIONS (mm)			
	a	b	c	R
Minimum	400	10	10	50
Normal	600	10	15	75
Other sizes	750	15	20	95
	900	15	25	115

Colour :

Background	-	Yellow
Border / symbol	-	Black



Note:

For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm



WARNING DANGER SIGNS

Scale : Not to scale

WD. 49 SPEED LIMIT ZONE REMINDER SIGN (OPTIONAL)

DIMENSIONS (mm)							
a	b	c	d	e	f	g	R
1670	1780	200	150	750	20	15	200

COLOUR:

Background - Yellow
 Lettering - Black
 Border - Black

LETTERING: Ccrige Narrow

Note: Details of speed limit symbol as per RP. 7



WD. 50 WARNING SIGN APPROACHING TO SPEED LIMIT ZONE

DIMENSIONS (mm)							
a	b	c	d	e	f	g	R
2270	2160	200	150	750	20	15	270

COLOUR:

Background - Yellow
 Lettering - Black
 Border - Black

LETTERING: Ccrige Narrow

Note: Details of speed limit symbol as per RP. 7



Note:

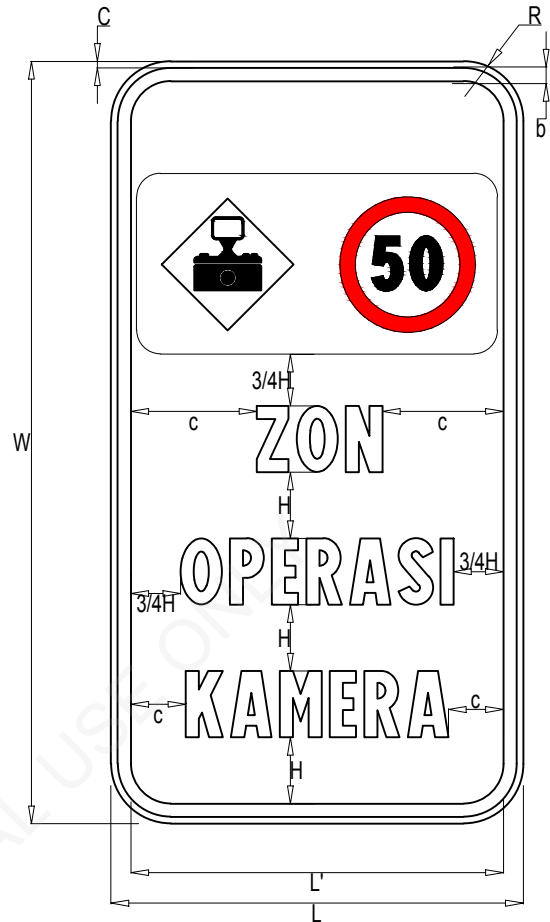
For safety reason, borders & corners of sign should be rounded on radius 'R' approximately $\frac{1}{8}$ of lesser side dimensions but not exceeding 300mm



WARNING DANGER SIGNS

Scale : Not to scale

WD 51. ZON UNDER CAMERA SURVEILLANCE



LEGEND :

H = Height of capital letter used
c = Distance showing that words or symbols must be centralised

Speed Limit (km/h)	Letter Height, H (mm)	Camera Box Dimension (mm)		Post Height
		a	b	
80km/h < Speed Limit ≤ 90km/h	250	600	10	Refer to ATJ2B/85, JKR/SPJ/1988 and Standard Drawings for Roadworks
60km/h < Speed Limit ≤ 80km/h	200	500	10	
Speed Limit ≤ 60km/h	150	400	10	

DIMENSIONS	
L = Overall length of sign panel	Varies
L' = Internal length in between borders	Calculated from letters and spacing
W = Overall height of sign panel	Varies
R = Internal radius of border	2 % x L'
B = Thickness of border	1.5 % x L' or 20mm whichever is greater
C = Distance between edge of sign panel and outer edge of border	0.5 x B

COLOUR:

Background - Yellow
Border - Black
Lettering/Symbol - Black

LETTERING: Corrigé Narrow

Notes:

For safety reason, borders and corners of sign should be rounded on radius approximately 1/8 of lesser side dimensions but not exceeding 300mm.



WARNING DANGER SIGNS

Scale : Not to scale

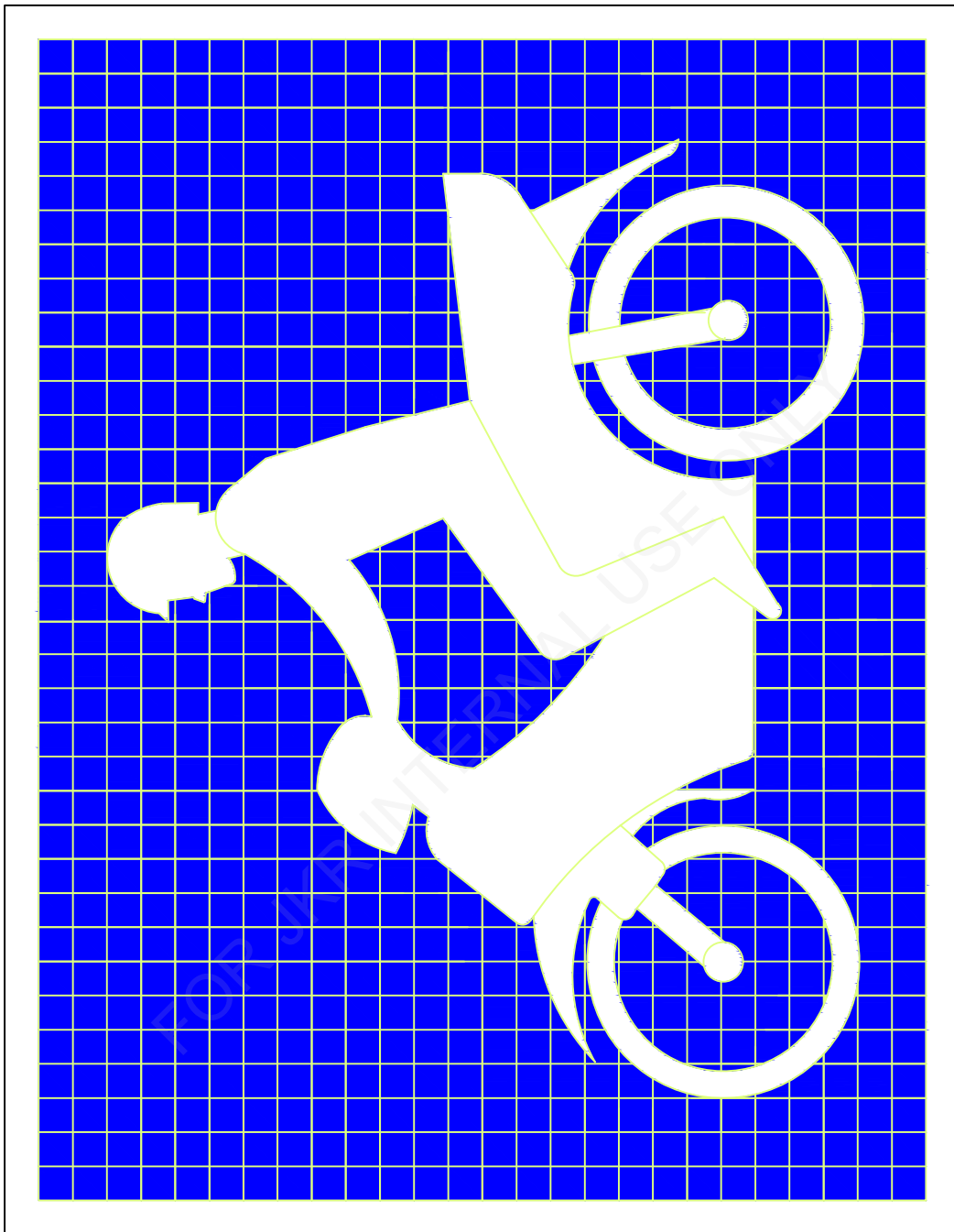
APPENDIX 1 SYMBOL TEMPLATES

FOR JKR INTERNAL USE ONLY



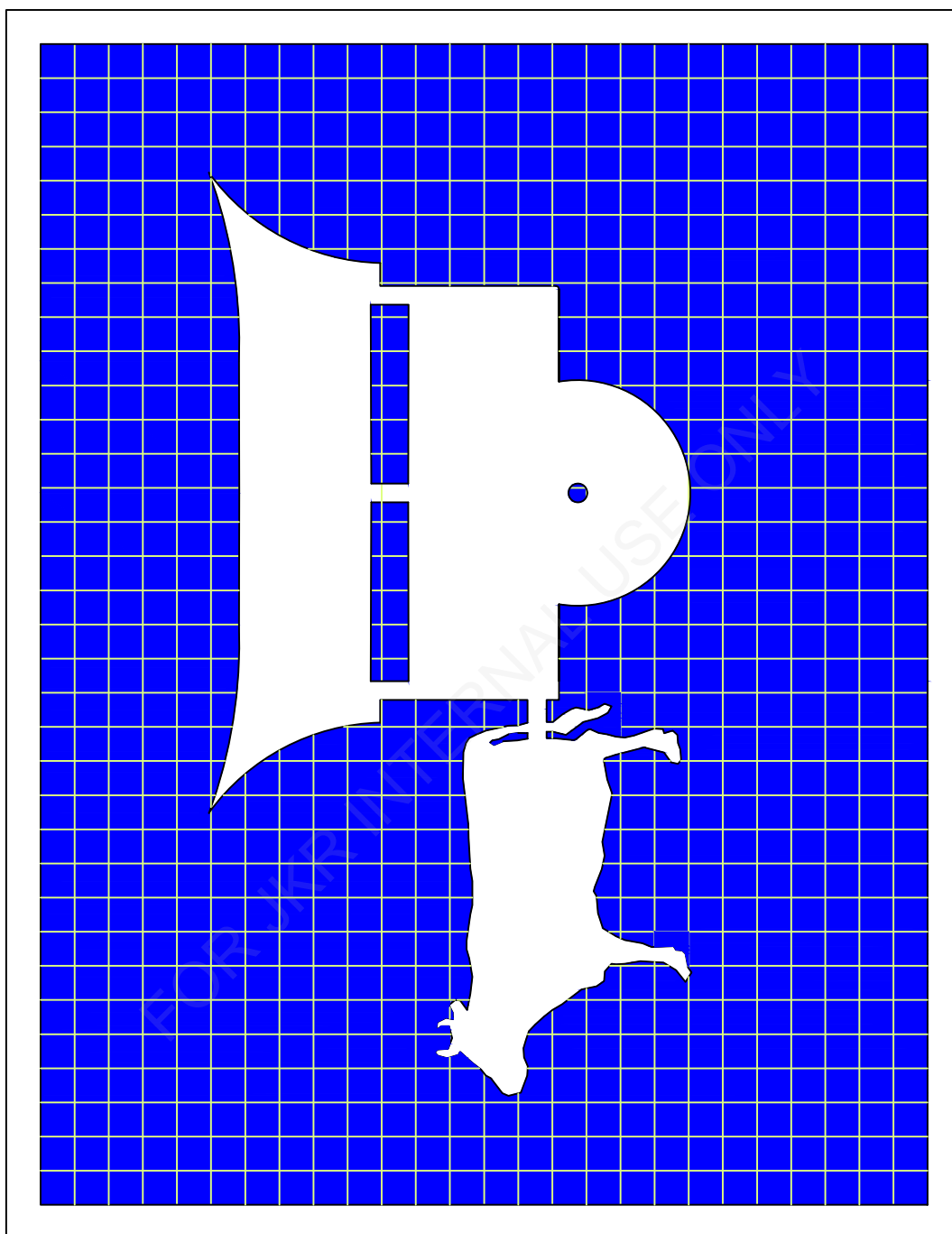
REGULATORY MANDATORY SIGNS

Scale : Not to scale



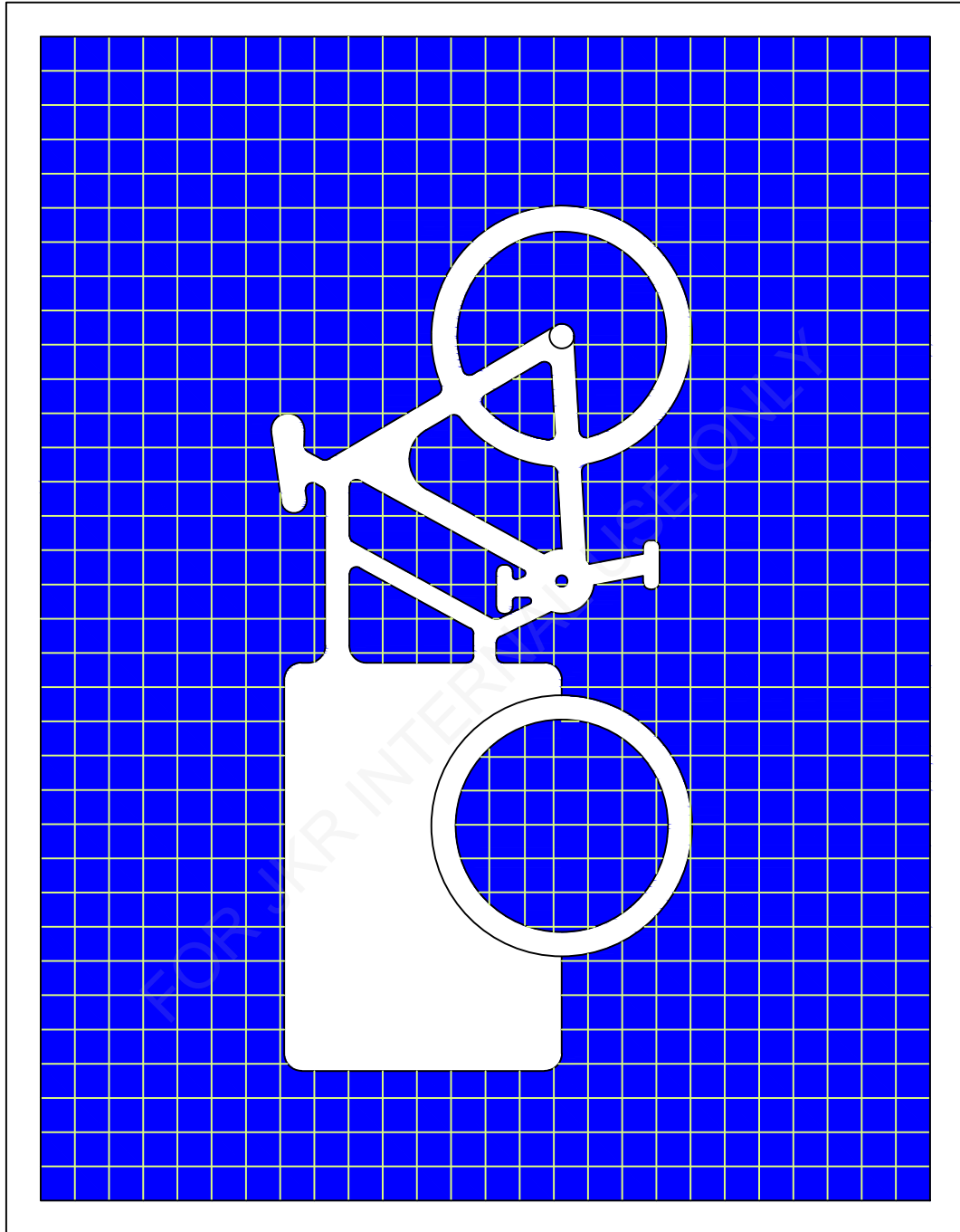
SYMBOL TEMPLATE - MOTORCYCLE

Scale : Not to scale



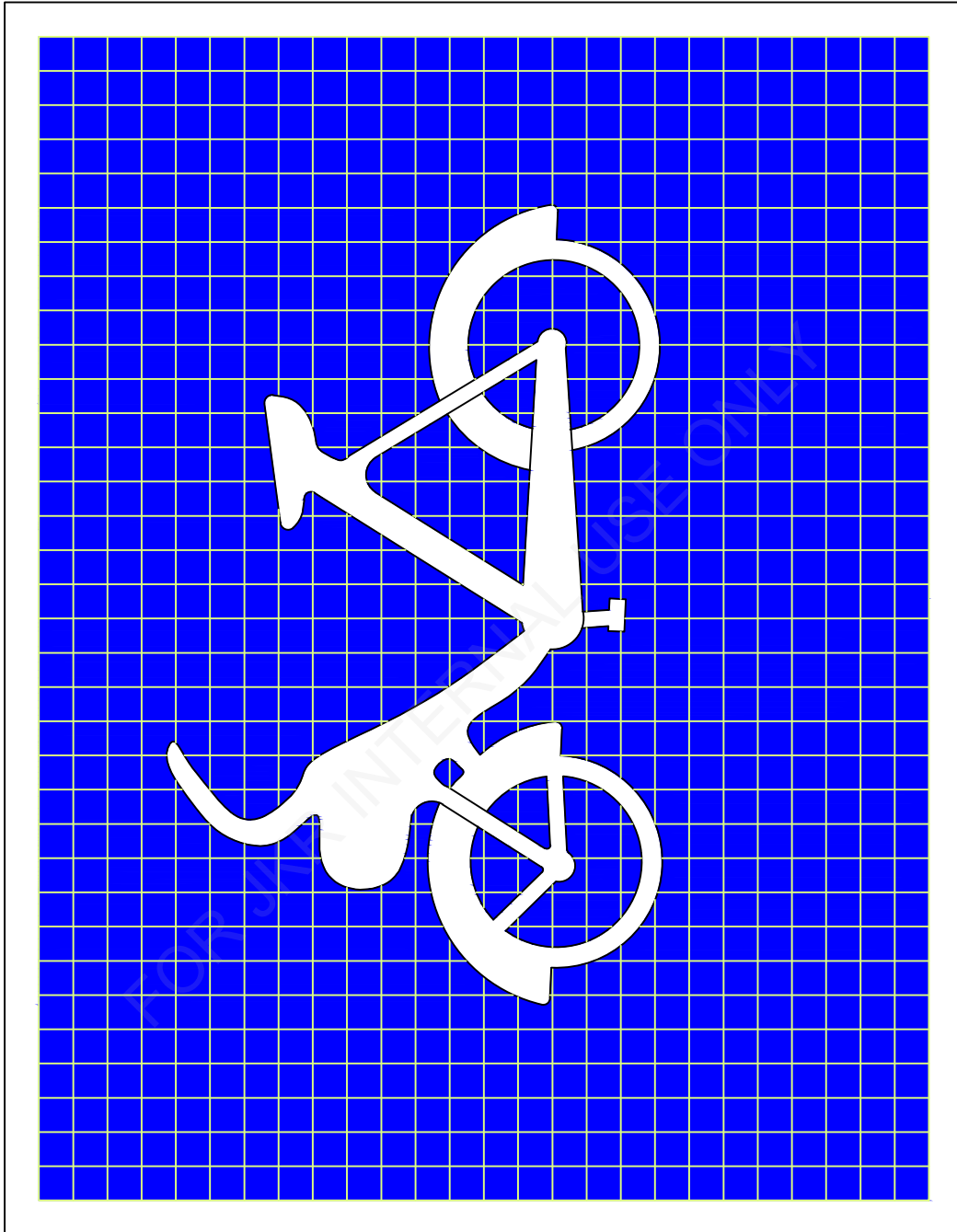
SYMBOL TEMPLATE - ANIMAL DRAWN VEHICLES / CARTS

Scale : Not to scale



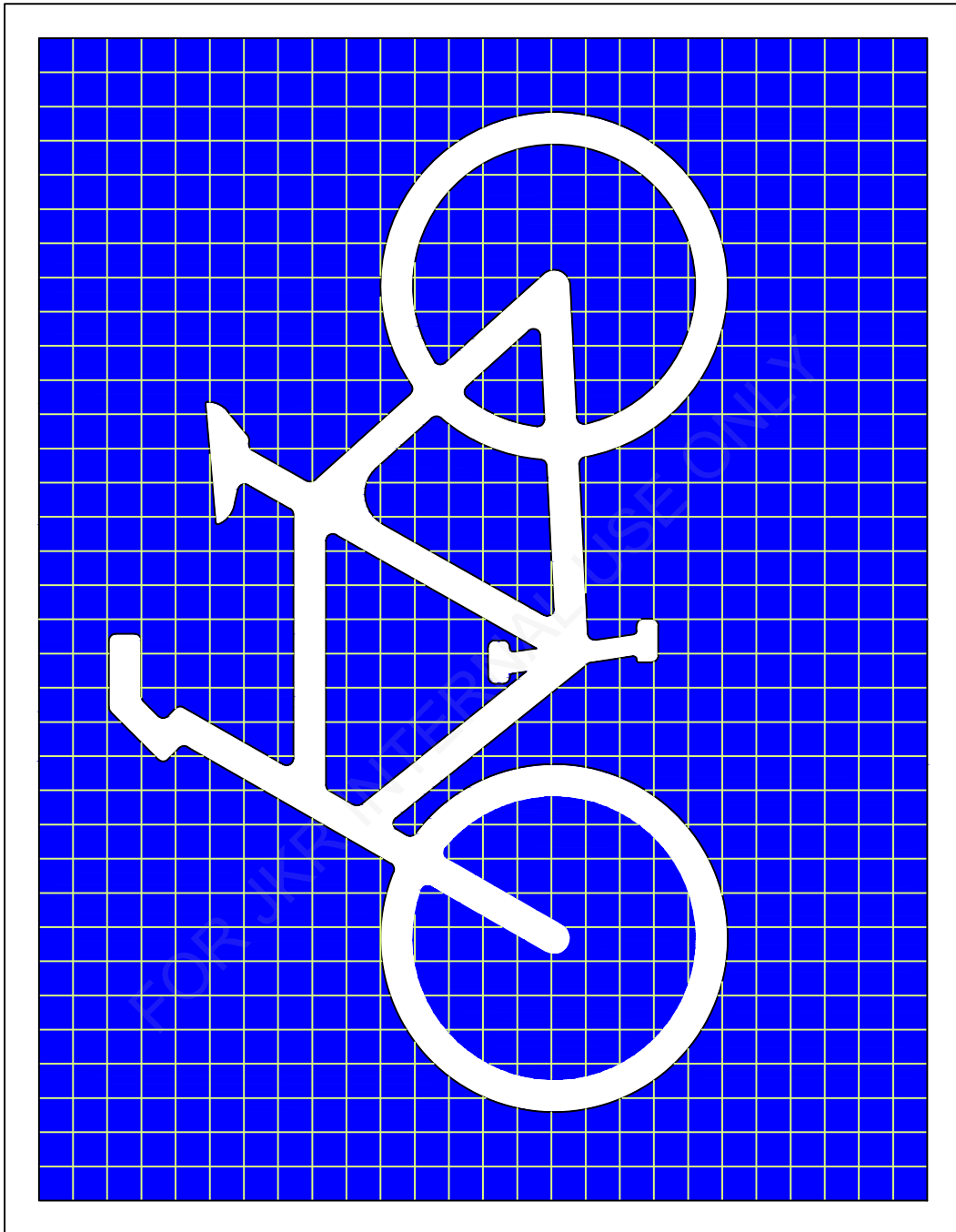
SYMBOL TEMPLATE - TRICYCLE

Scale : Not to scale



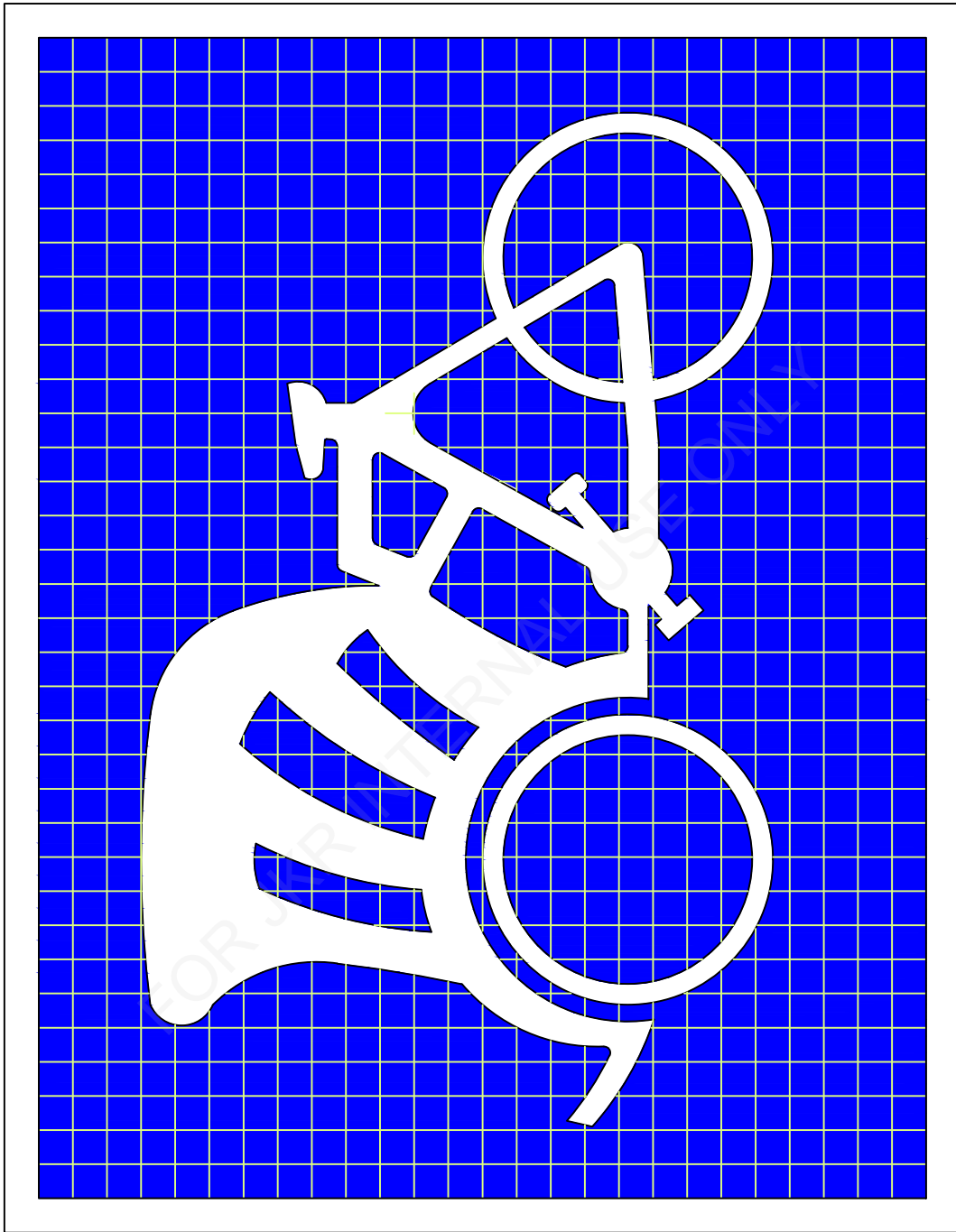
SYMBOL TEMPLATE - MOPED

Scale : Not to scale



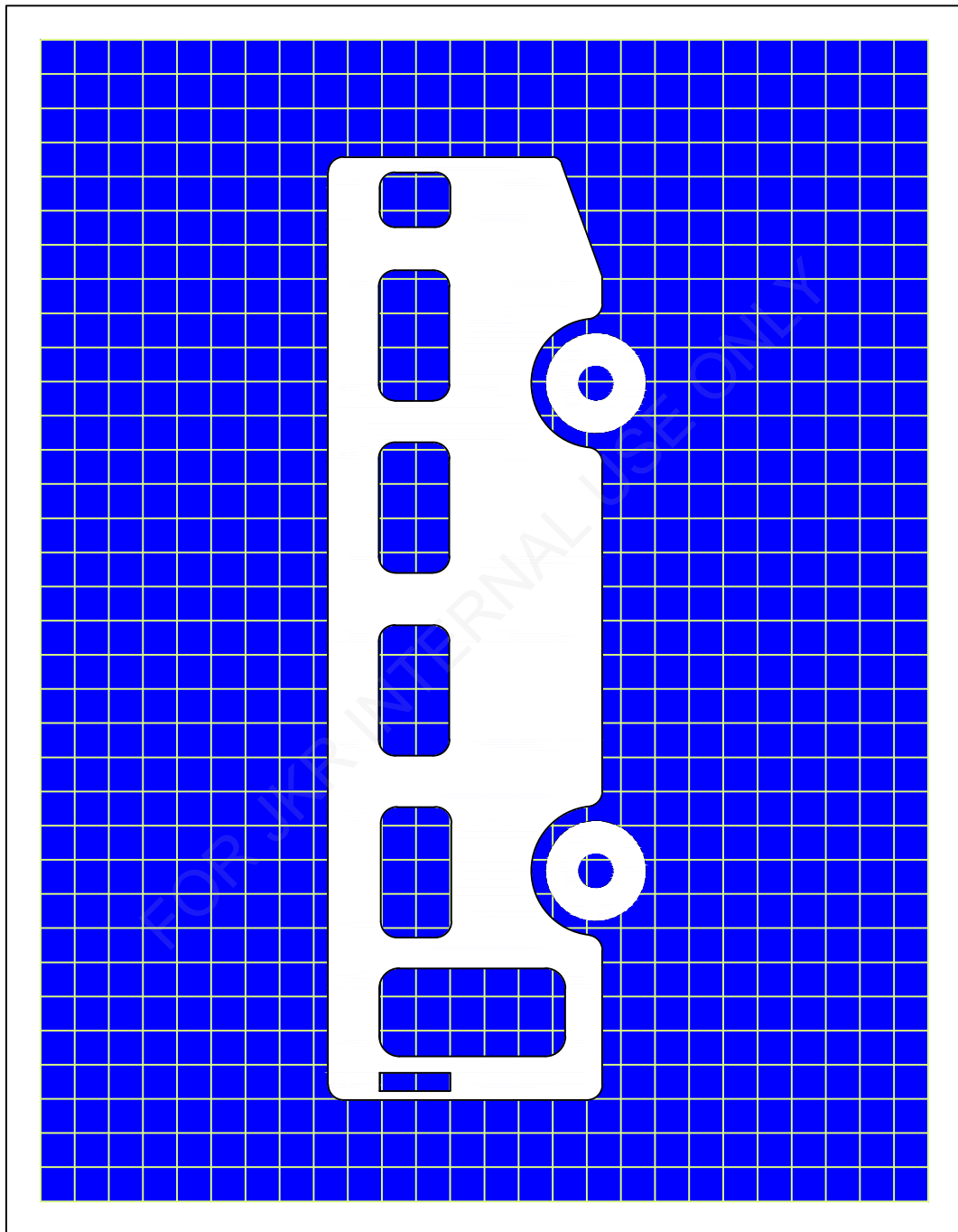
SYMBOL TEMPLATE - BICYCLE

Scale : Not to scale



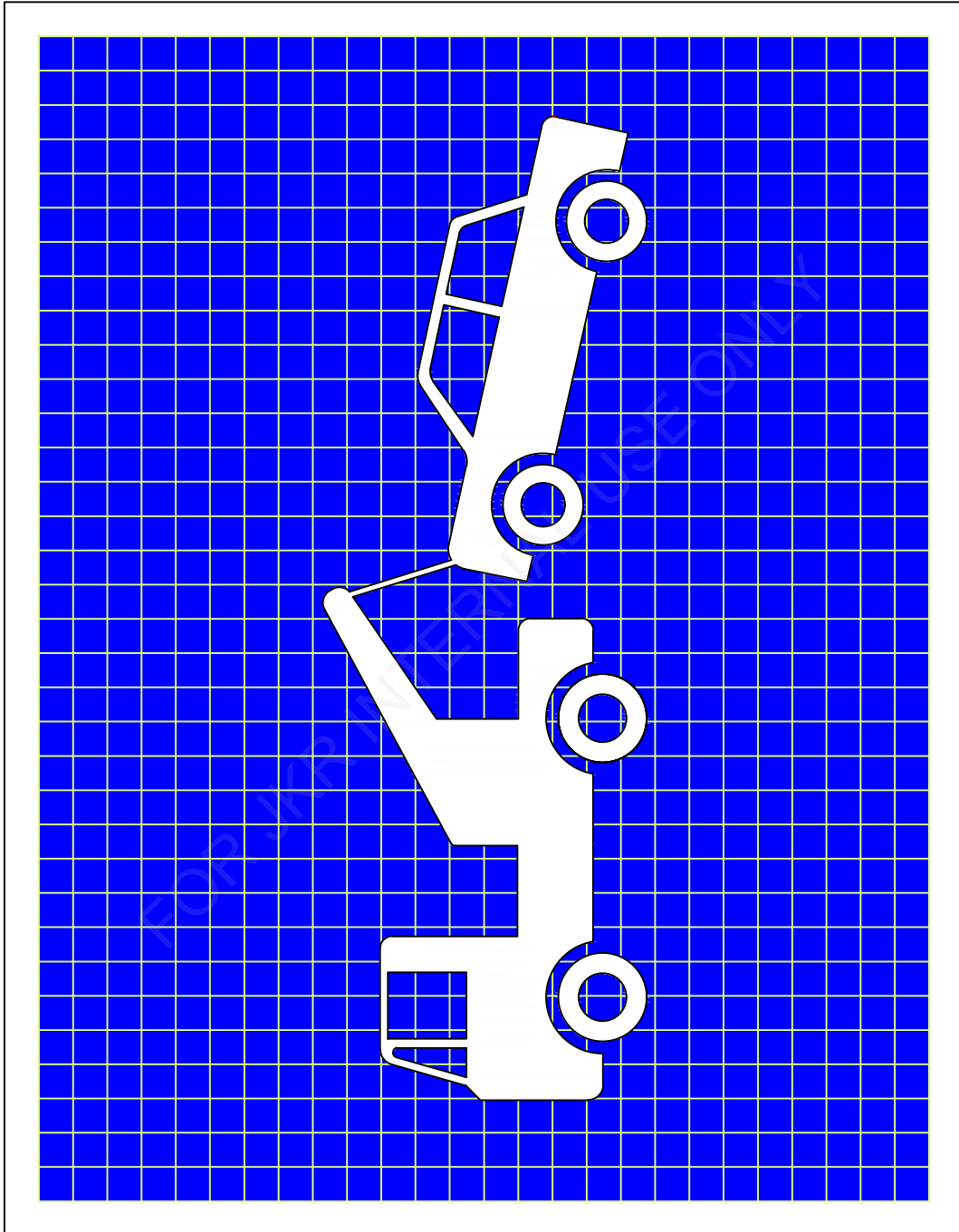
SYMBOL TEMPLATE - TRISHAW

Scale : Not to scale



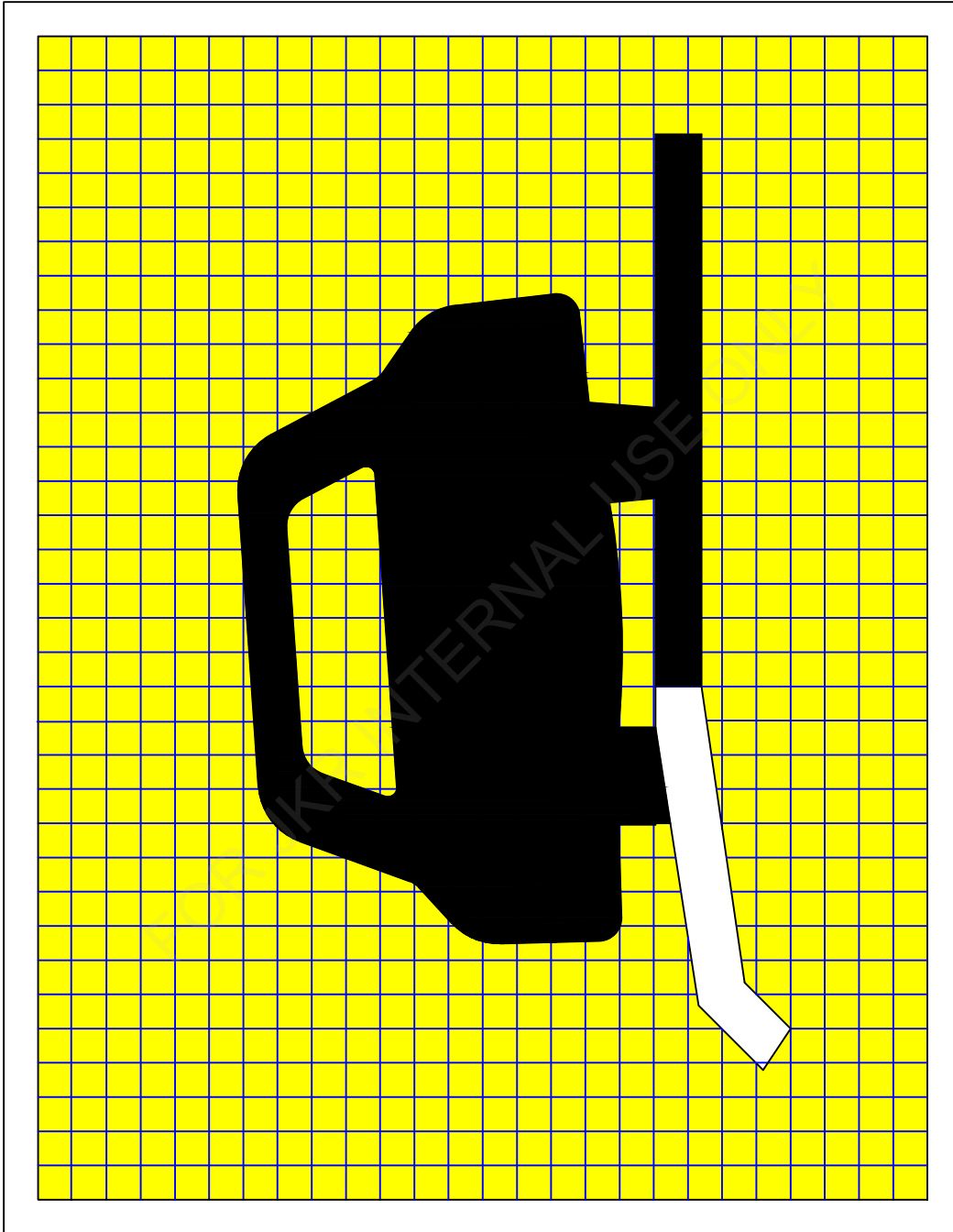
SYMBOL TEMPLATE - BUS STOP

Scale : Not to scale



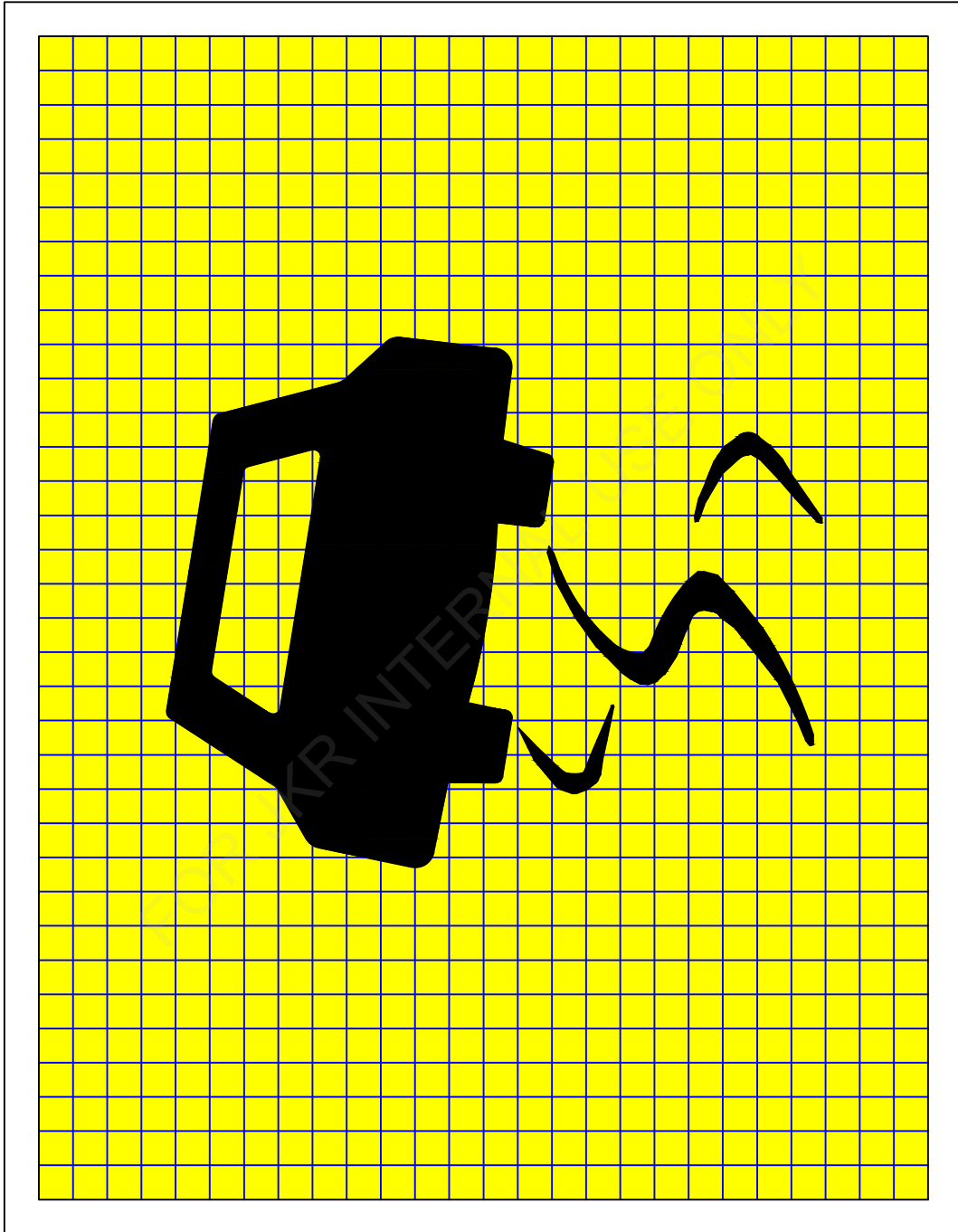
SYMBOL TEMPLATE - TOW AWAY ZONE

Scale : Not to scale



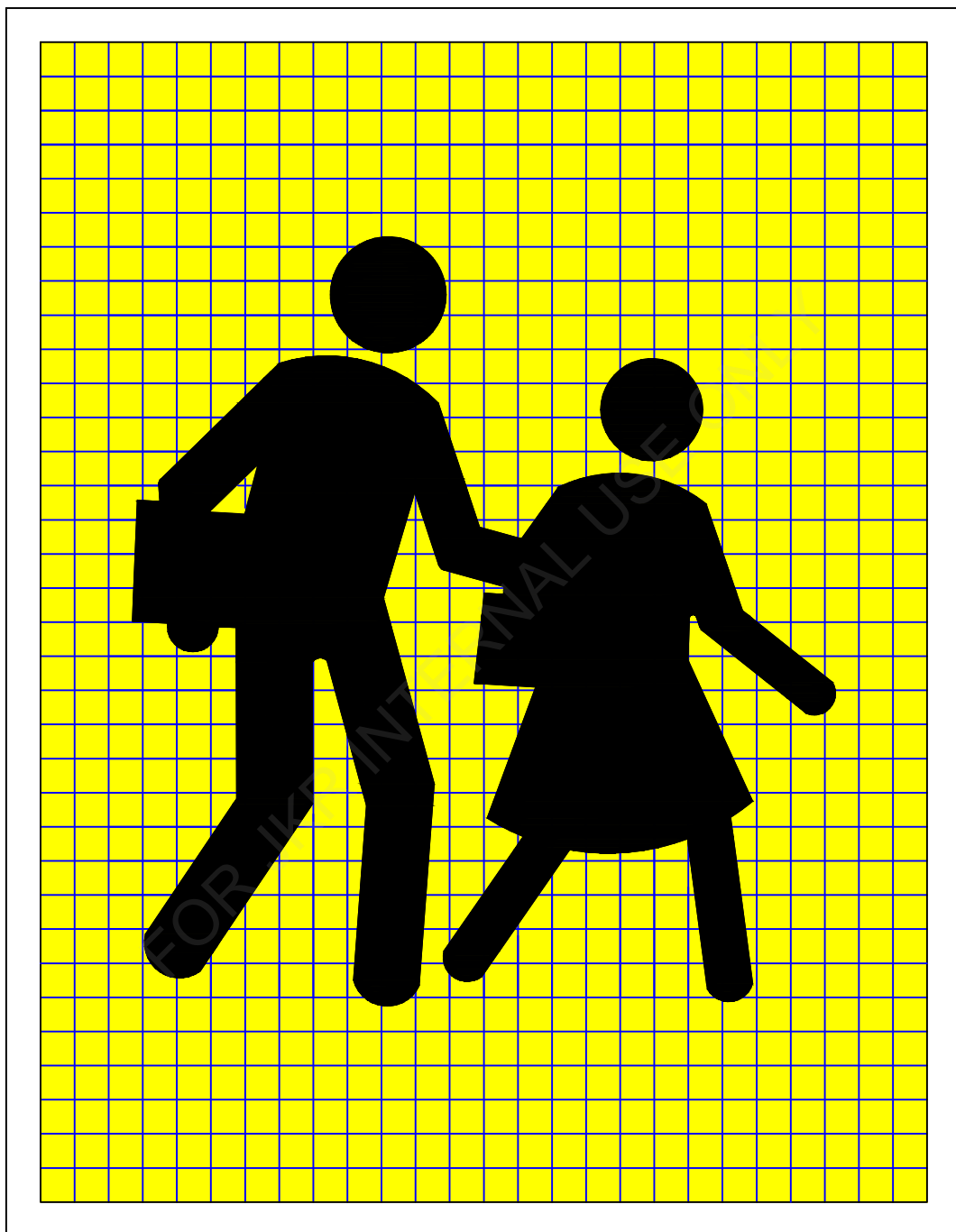
SYMBOL TEMPLATE - SOFT ROAD SIDE TABLE

Scale : Not to scale



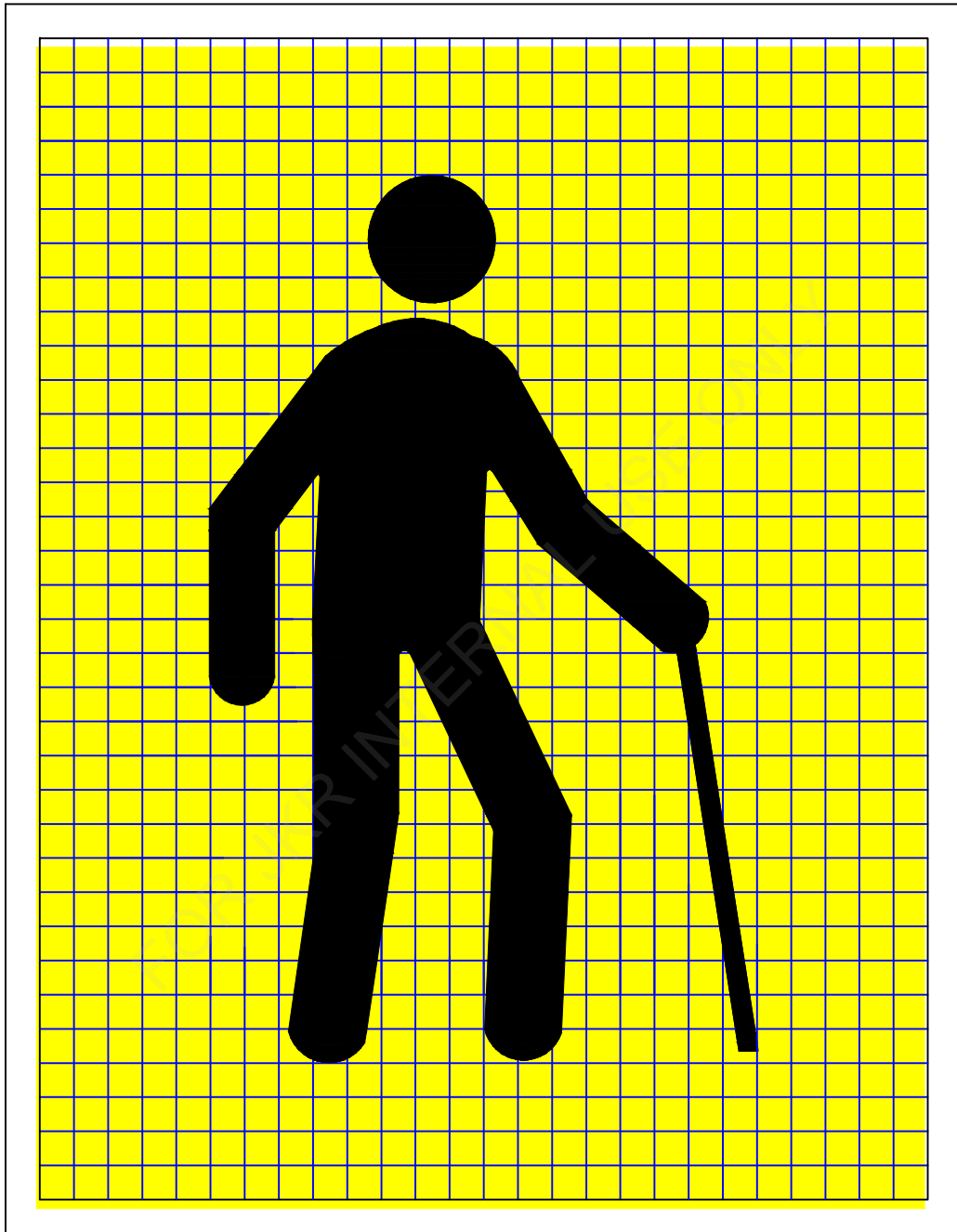
SYMBOL TEMPLATE - SLIPPERY CARRIAGEWAY

Scale : Not to scale



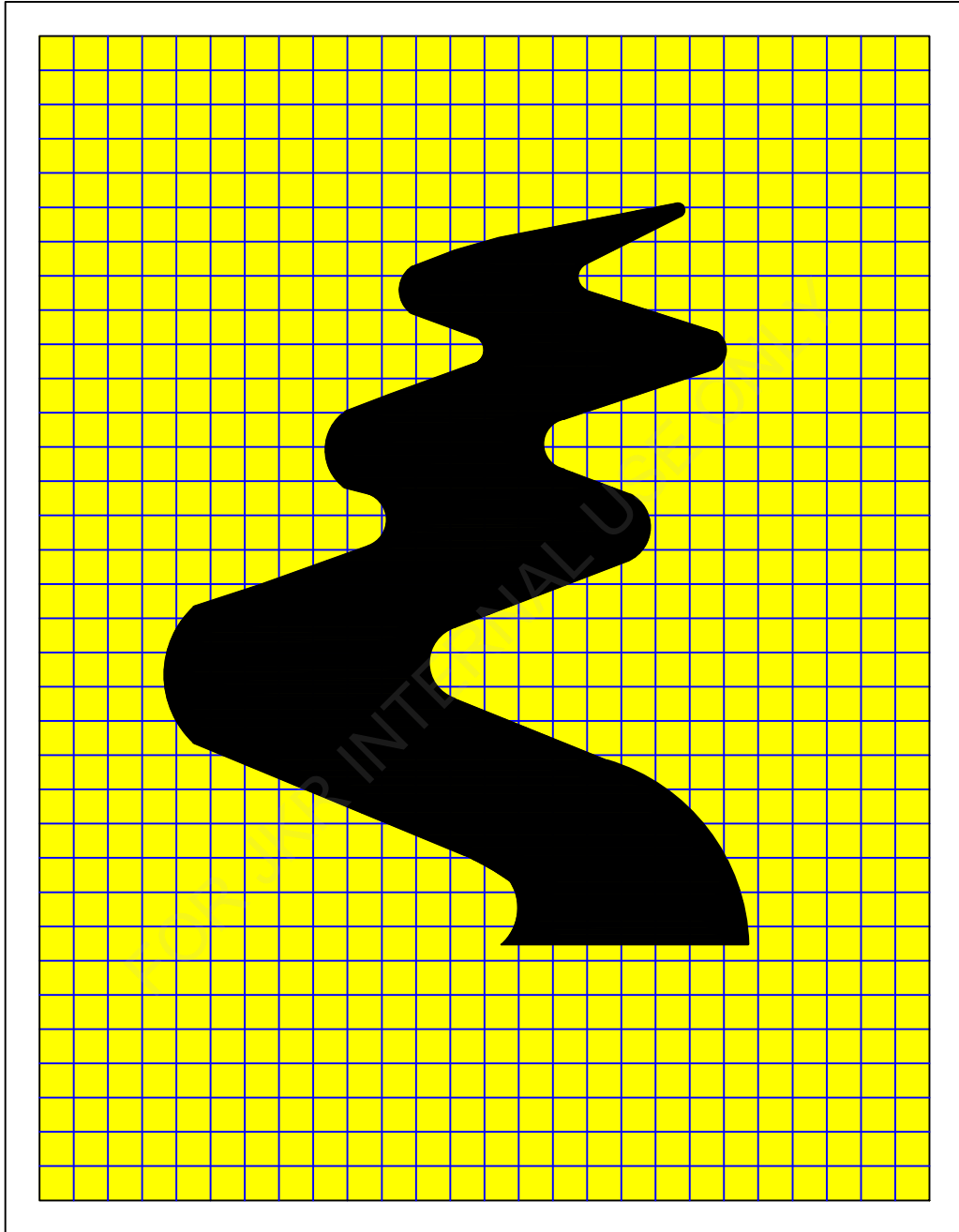
SYMBOL TEMPLATE - CHILDREN CROSSING

Scale : Not to scale



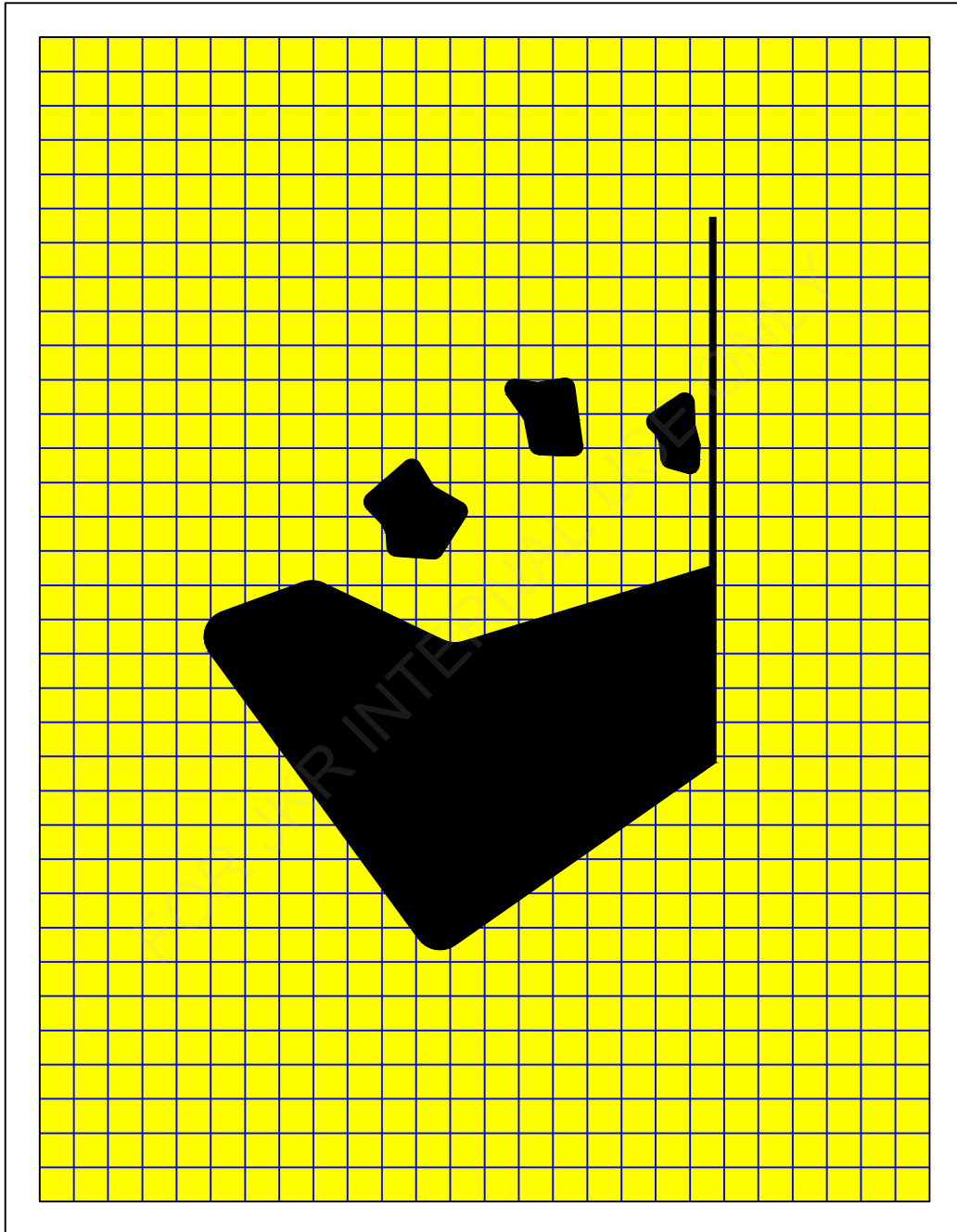
SYMBOL TEMPLATE - BLIND PEOPLE

Scale : Not to scale



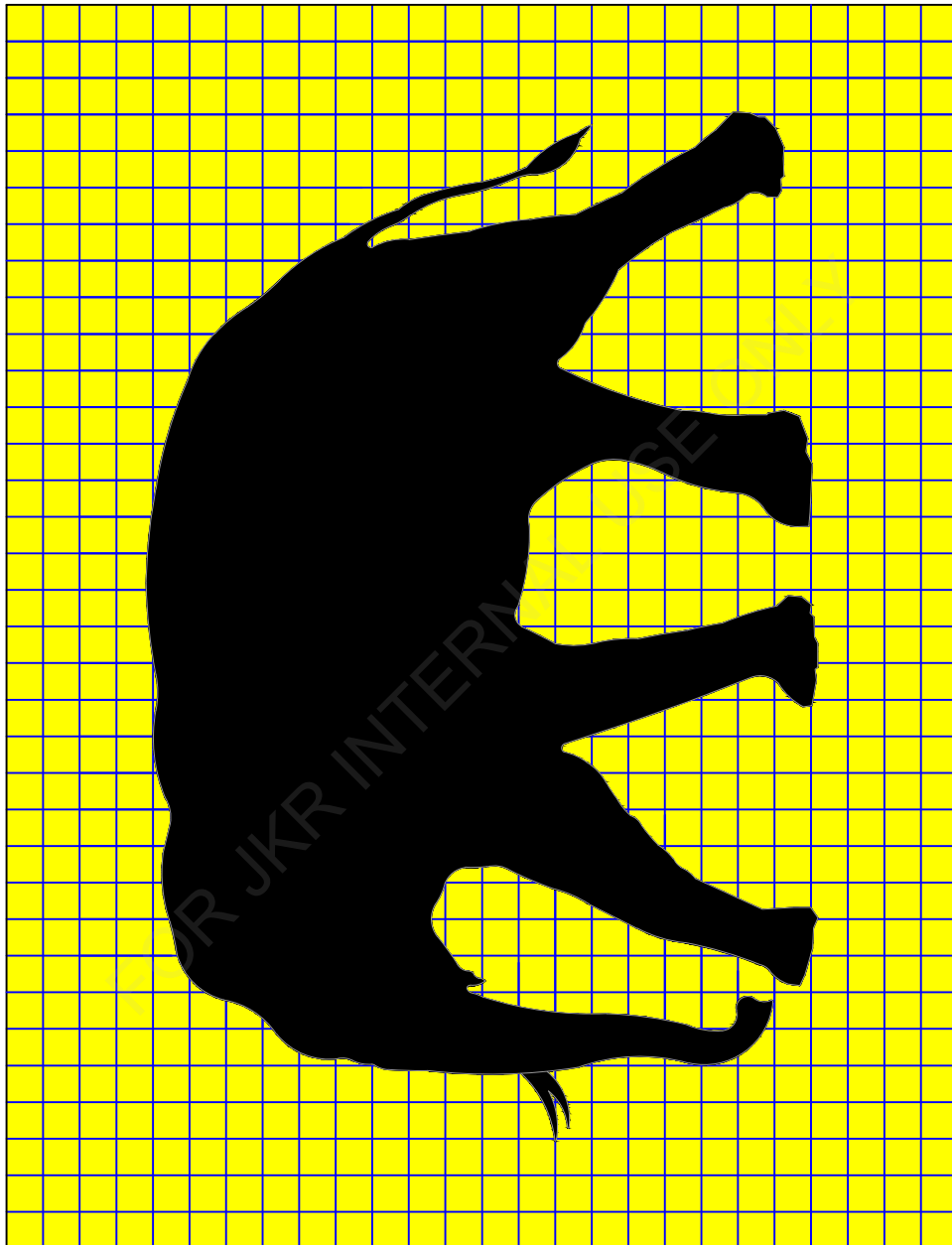
SYMBOL TEMPLATE - WINDING ROAD

Scale : Not to scale



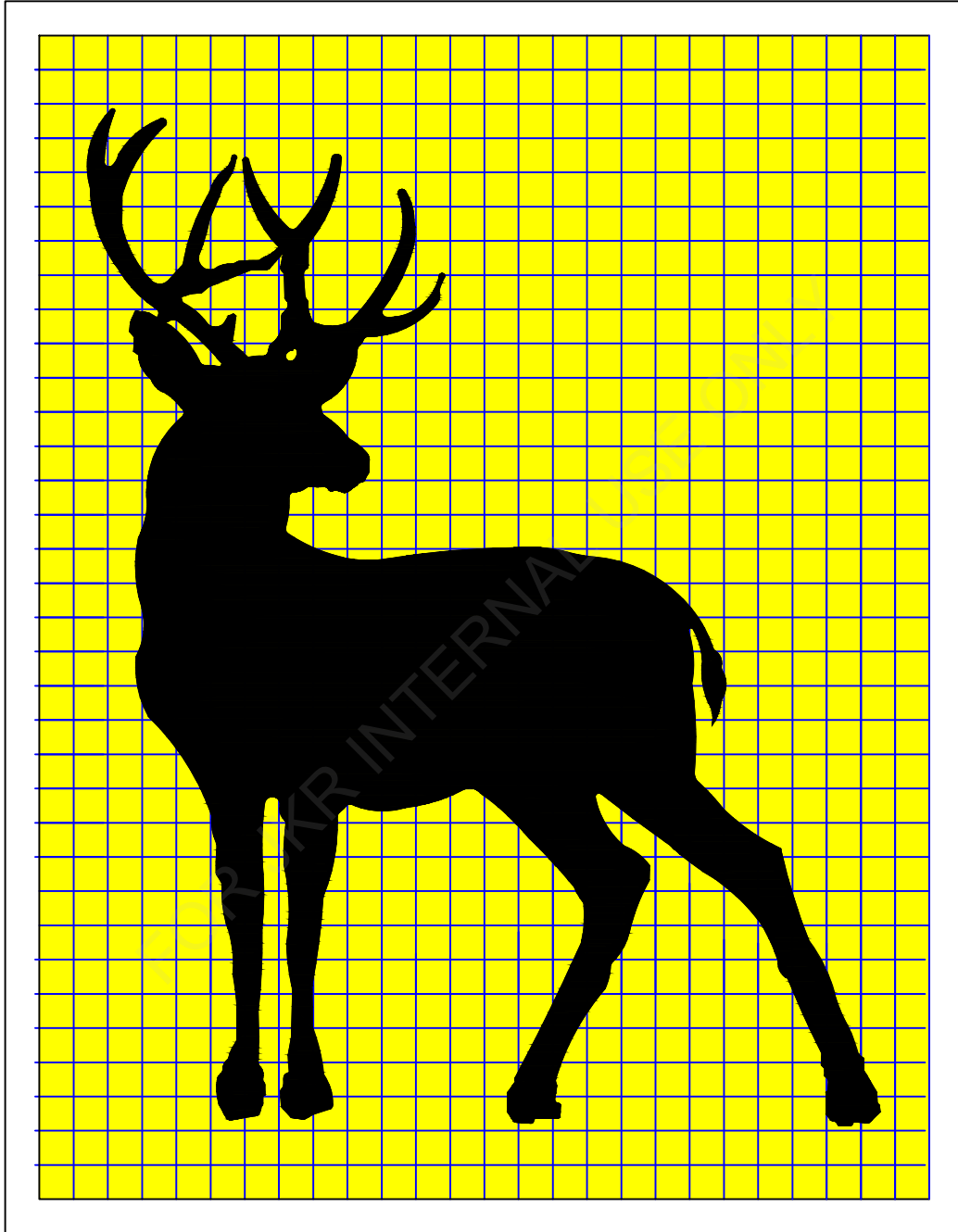
SYMBOL TEMPLATE - ROCK FALLING OR SLIDE

Scale : Not to scale



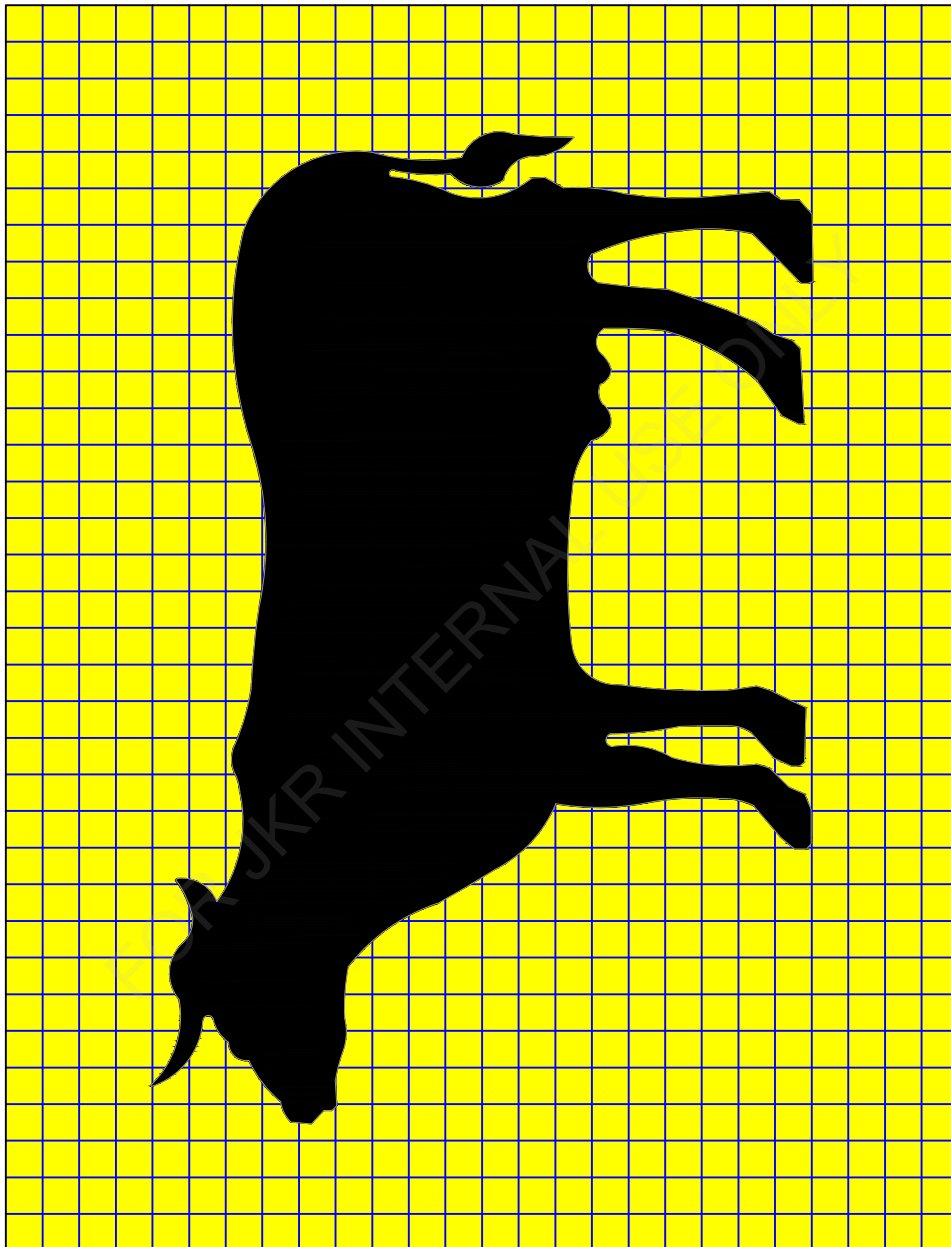
SYMBOL TEMPLATE - WILDLIFE CROSSING

Scale : Not to scale



SYMBOL TEMPLATE - WILD LIFE CROSSING

Scale : Not to scale



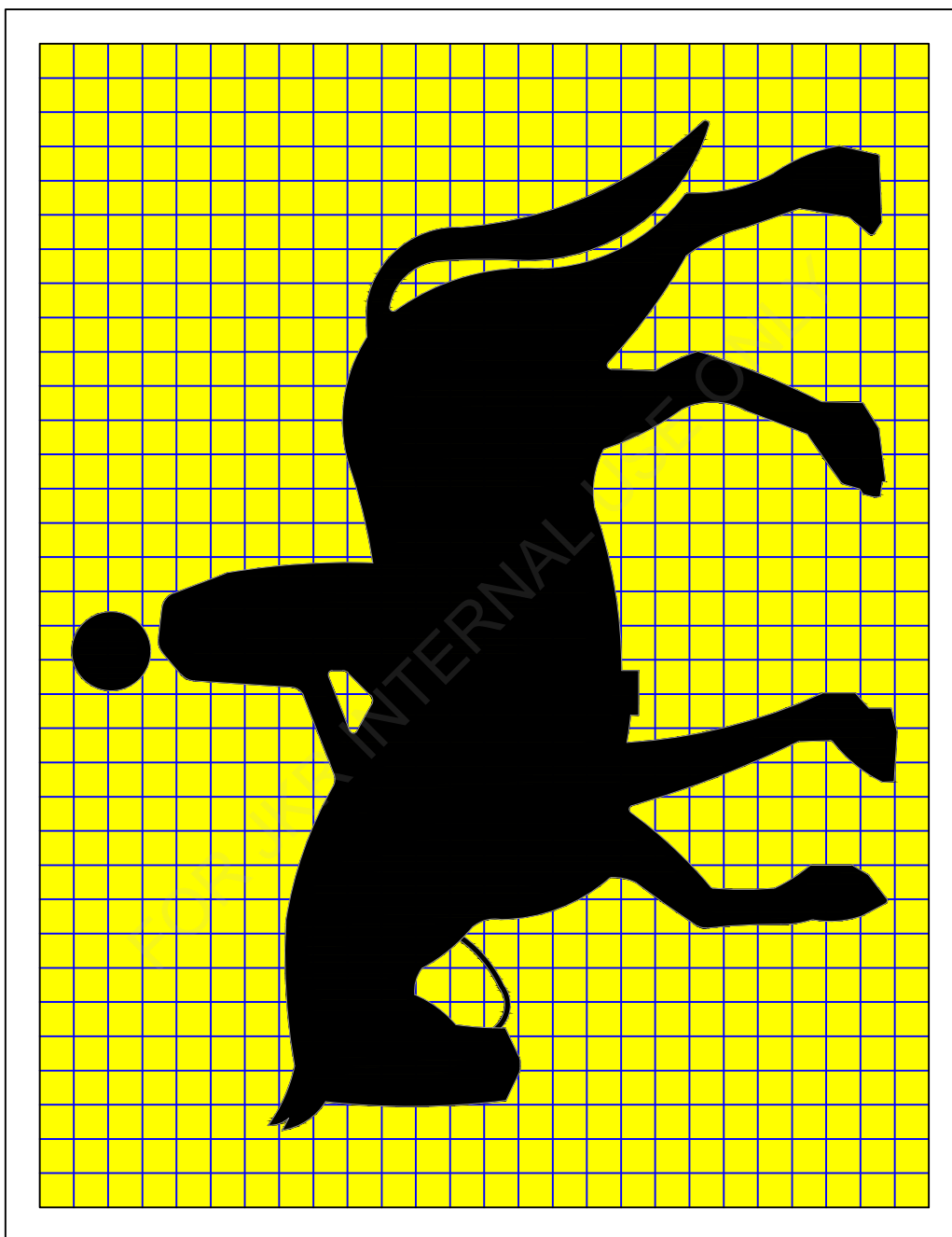
SYMBOL TEMPLATE - LIVESTOCK CROSSING

Scale : Not to scale



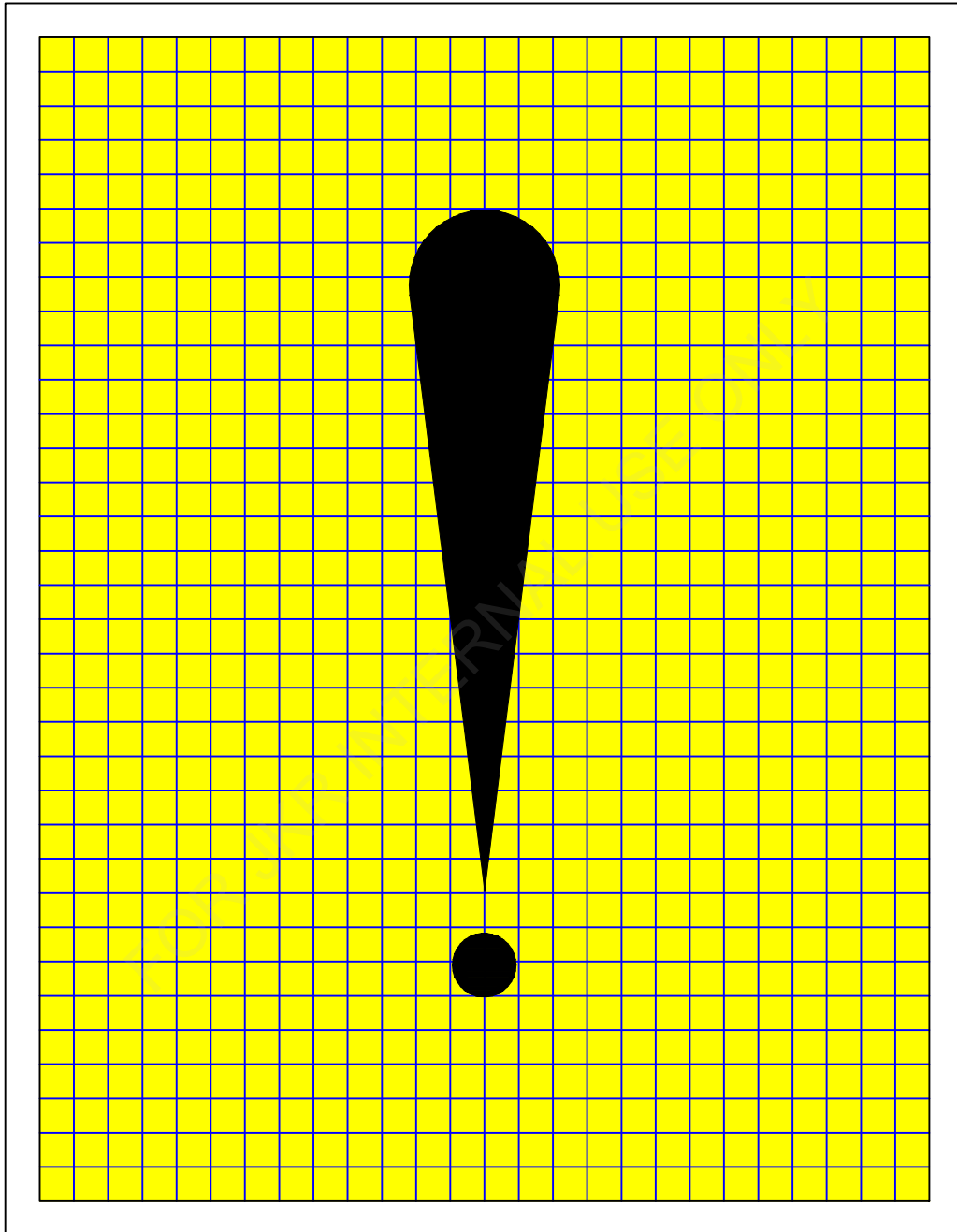
SYMBOL TEMPLATE - PEDESTRIAN CROSSING

Scale : Not to scale



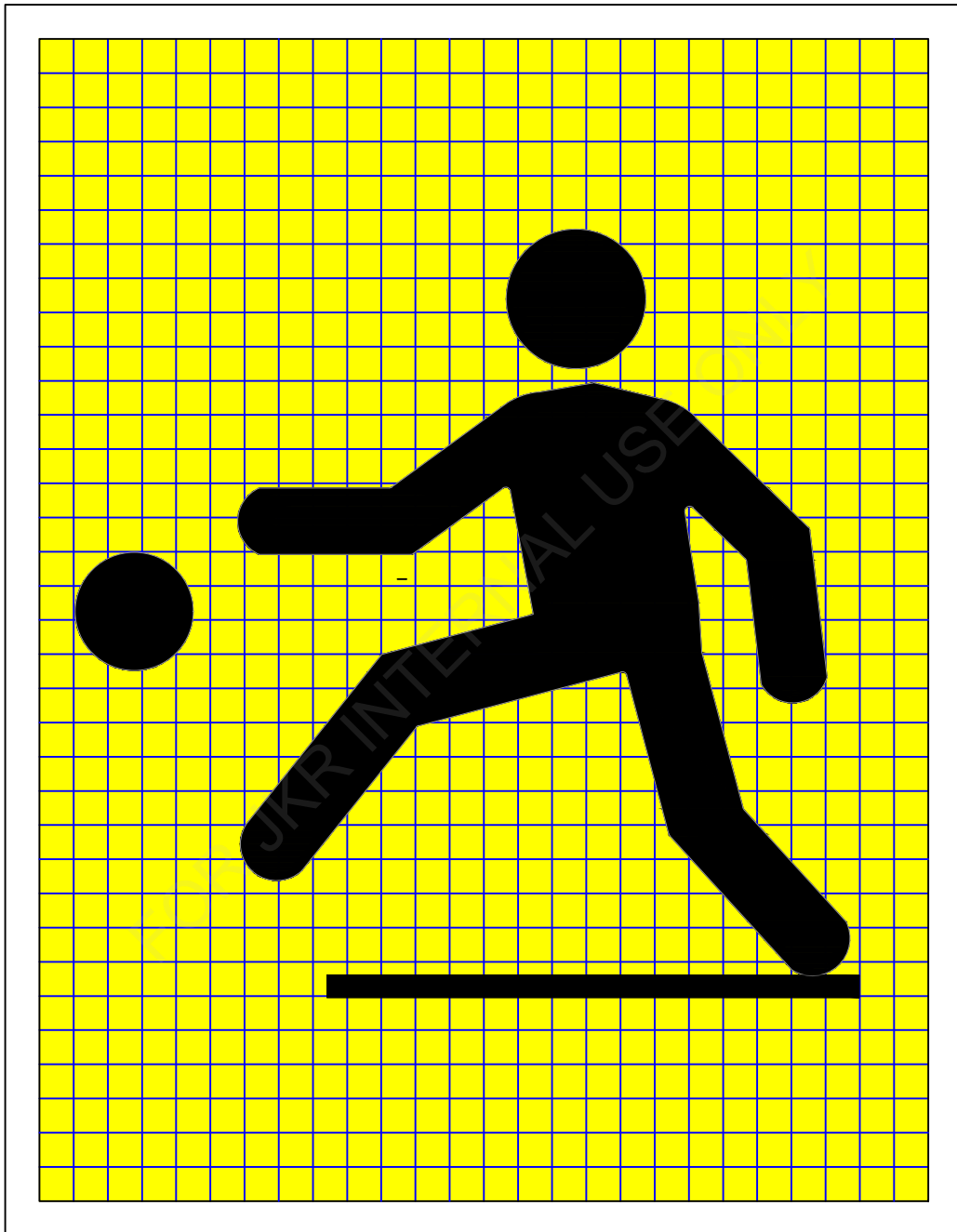
SYMBOL TEMPLATE - HORSE CROSSING

Scale : Not to scale



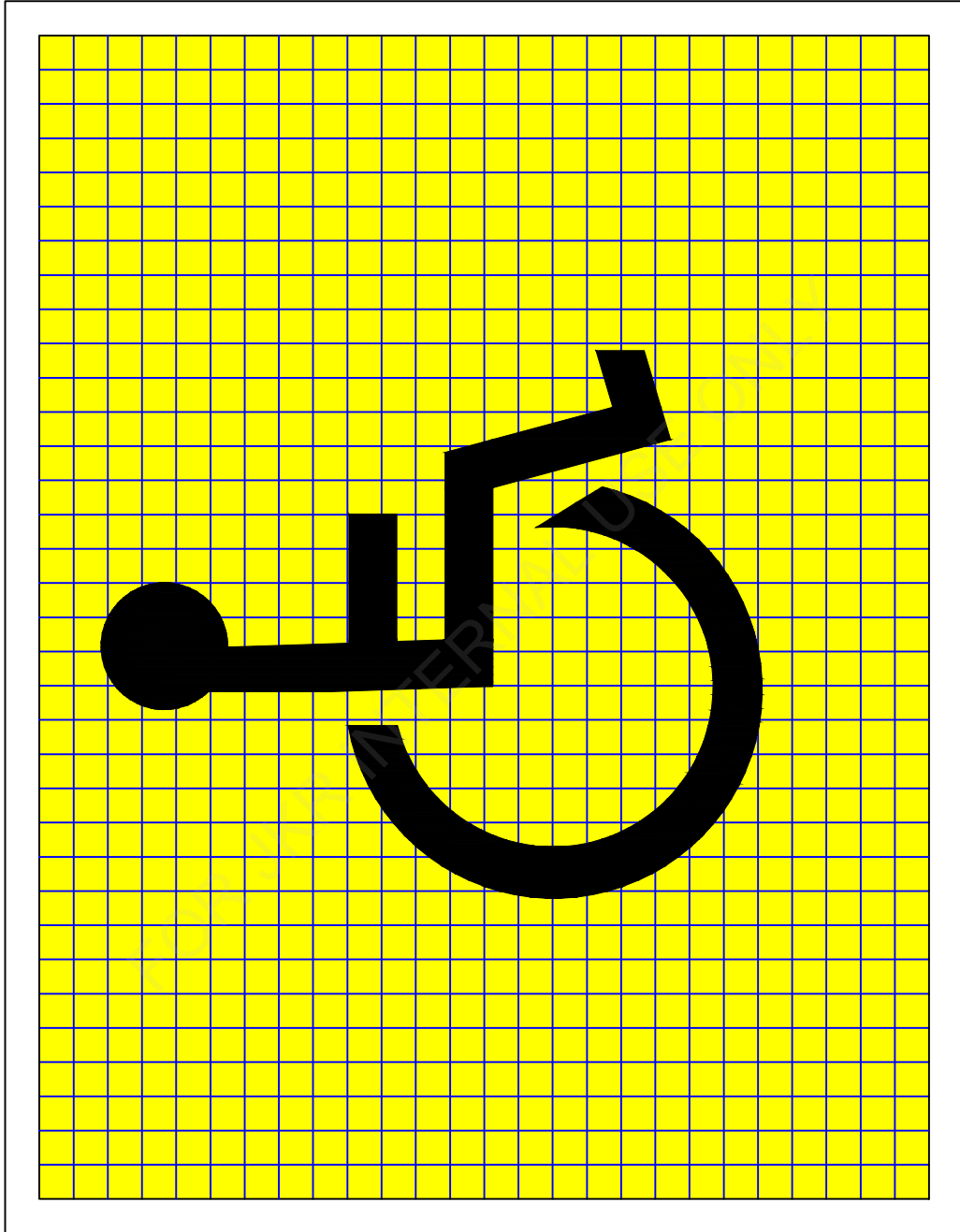
SYMBOL TEMPLATE - OTHER DANGER

Scale : Not to scale



SYMBOL TEMPLATE - PLAYGROUND

Scale : Not to scale



SYMBOL TEMPLATE - DISABLED PEOPLE

Scale : Not to scale

APPENDIX 2 LETTERING

FOR JKR INTERNAL USE ONLY



REGULATORY MANDATORY SIGNS

Scale : Not to scale

A B C D E F G

H I J K L M N

O P Q R S T U

V W X Y Z



LETTERING - CCRIGE NARROW UPPER CASE

a b c d e f

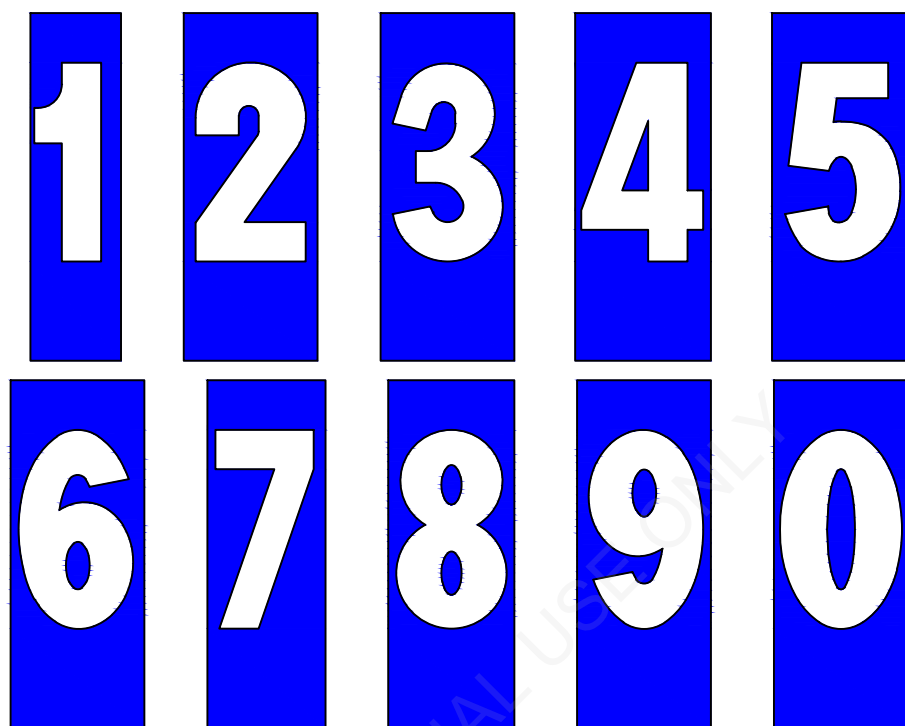
g h i j k l

m n o p q r

s t u v w x y z



LETTERING - CCRIGE NARROW LOWER CASE



Ccridge Narrow Numbers



ALPHABET	k ₁	k ₂	w ₁	W	ALPHABET	k ₁	k ₂	w ₁	W
A	0.061	0.061	0.594	0.715	a	0.048	0.061	0.509	0.618
B	0.133	0.085	0.521	0.739	b	0.091	0.061	0.455	0.606
C	0.073	0.061	0.582	0.715	c	0.055	0.055	0.448	0.558
D	0.133	0.073	0.564	0.770	d	0.048	0.109	0.448	0.606
E	0.121	0.067	0.442	0.630	e	0.048	0.061	0.473	0.582
F	0.133	0.048	0.394	0.576	f	0.042	0.024	0.418	0.485
G	0.073	0.115	0.576	0.764	g	0.061	0.103	0.455	0.618
H	0.127	0.127	0.533	0.788	h	0.085	0.085	0.485	0.655
I	0.121	0.121	0.200	0.442	i	0.085	0.085	0.194	0.364
J	0.030	0.121	0.321	0.473	j	0.024	0.097	0.339	0.461
K	0.133	0.048	0.545	0.727	k	0.097	0.024	0.473	0.594
L	0.127	0.048	0.370	0.545	l	0.097	0.024	0.303	0.424
M	0.121	0.121	0.642	0.885	m	0.091	0.091	0.776	0.958
N	0.121	0.121	0.539	0.782	n	0.097	0.097	0.461	0.655
O	0.067	0.067	0.600	0.733	o	0.048	0.048	0.485	0.582
P	0.121	0.048	0.515	0.685	p	0.091	0.048	0.467	0.606
Q	0.061	0.067	0.600	0.727	q	0.048	0.103	0.455	0.606
R	0.121	0.048	0.558	0.727	r	0.091	0.042	0.339	0.473
S	0.061	0.073	0.521	0.655	s	0.048	0.048	0.448	0.545
T	0.036	0.036	0.424	0.497	t	0.033	0.024	0.430	0.487
U	0.121	0.121	0.521	0.764	u	0.097	0.091	0.467	0.655
V	0.048	0.061	0.594	0.703	v	0.048	0.048	0.509	0.606
W	0.048	0.061	0.776	0.885	w	0.048	0.048	0.667	0.764
X	0.061	0.061	0.545	0.667	x	0.048	0.048	0.467	0.564
Y	0.061	0.061	0.594	0.715	y	0.048	0.042	0.503	0.594
Z	0.061	0.061	0.461	0.582	z	0.048	0.048	0.412	0.509

k₁ & k₂ = SPACING CONSTANT

w₁ = LETTER WIDTH

W = MOSAIC WIDTH



UNIT LETTER HEIGHTS/WIDTHS, SPACING CONSTANT, MOSAIC SIZES
(CCRIGE NARROW LETTERS)

CCRIGE NARROW NUMBERS				
NUMERAL	k_1	k_2	w_1	W
1	0.061	0.133	0.303	0.497
2	0.091	0.091	0.515	0.657
3	0.061	0.109	0.545	0.715
4	0.042	0.091	0.594	0.727
5	0.079	0.091	0.570	0.739
6	0.073	0.103	0.552	0.727
7	0.061	0.073	0.455	0.588
8	0.079	0.079	0.545	0.703
9	0.073	0.085	0.558	0.715
0	0.073	0.073	0.594	0.739

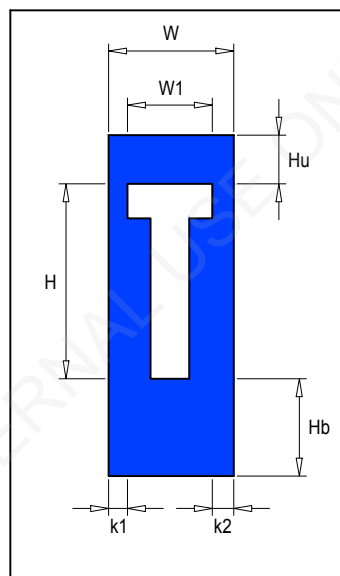
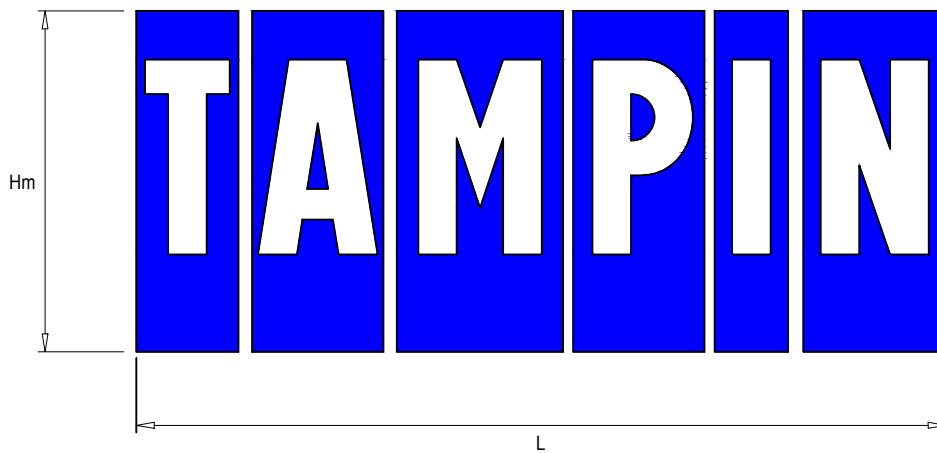
k_1 & k_2 = SPACING CONSTANT

w_1 = LETTER WIDTH

W = MOSAIC WIDTH



UNIT NUMERAL WIDTH, SPACING CONSTANTS, MOSAIC SIZES
(NORMAL & NARROW NUMBERS)



LETTER TYPE - NARROW

HEIGHT OF LETTER : H = 250 mm

The above calculation is as follows:-

From formulae:-

$$L = \{ SW_T - (k_1 + k_2) \} H$$

Where $SW_T = W + W + W + \dots + W$

k_1 = Constant for first letter 'T'

k_2 = Constant for last letter 'N'

$$L = \{ (0.497 + 0.715 + 0.885 + 0.685 + 0.442 + 0.782) - (0.036 + 0.121) \} \times 250$$

$$= \{ (4.006 - 0.157) \} \times 250$$

$$= 3.849 \times 250$$

$$= 962.25 \text{ say } 965 \text{ mm}$$

To calculate height of mosaic (H_m) :-

$$H_u = 0.085 H$$

$$H_b = 0.364 H$$

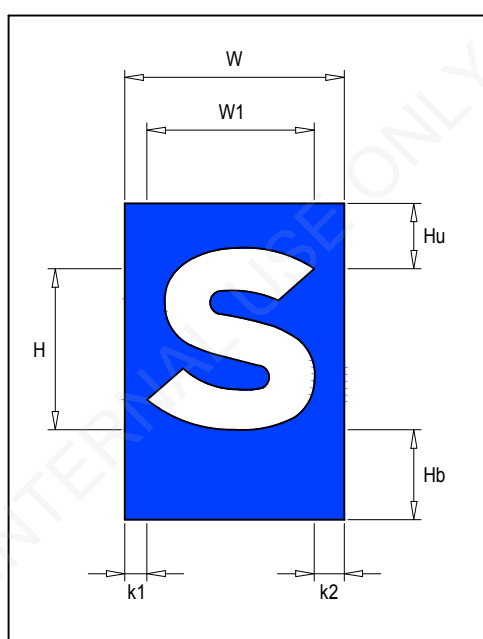
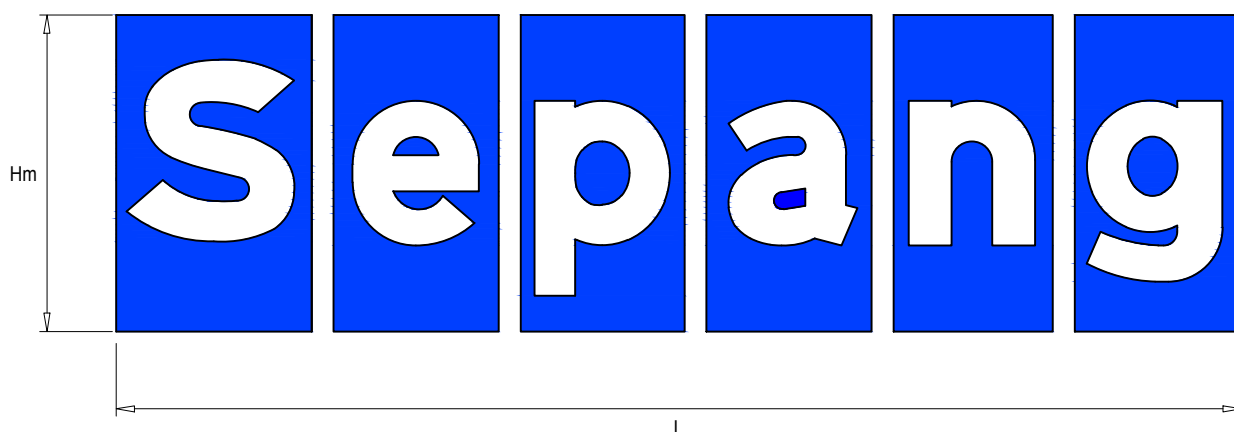
$$H_m = H_u + H + H_b$$

$$= 0.085 (250) + 250 + 0.364 (250)$$

$$= 362.3 \text{ say } 365 \text{ mm}$$



TYPICAL WORD FORMATIONS AND SAMPLE CALCULATION
(CCRIGE NARROW LETTERINGS)



LETTER TYPE - NORMAL

HEIGHT OF LETTER : $H = 250$ mm

The above calculation is as follows:-

From formulae:-

$$L = \{ S W - (k_1 + k_2) \} H$$

$$\text{Where } SW = W_s + W_e + W_p + \dots W_g$$

k_1 = Constant for first letter 'S'

k_2 = Constant for last letter 'G'

$$\begin{aligned} L &= \{ (1.042 + 0.800 + 0.861 + 0.794 + 0.842 + 0.830) - (0.073 + 0.115) \} \times 250 \\ &= \{ (5.169) - (0.188) \} \times 250 \\ &= 4.981 \times 250 \\ &= 1245.3 \quad \text{say } 1250 \text{ mm} \end{aligned}$$

To calculate height of mosaic (H_m)

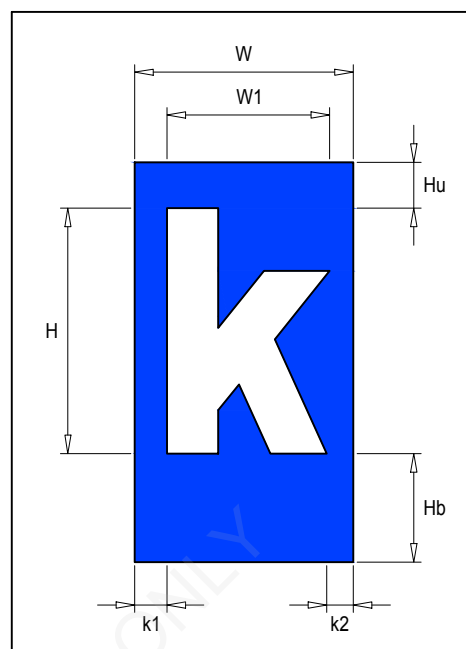
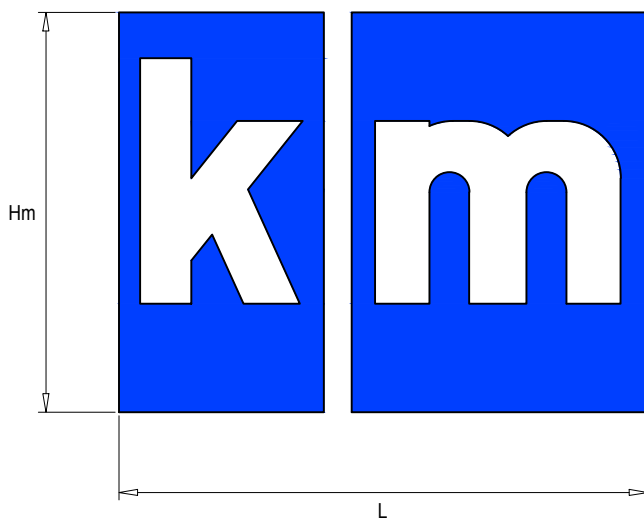
$$H_u = 0.085 H$$

$$H_b = 0.364 H$$

$$\begin{aligned} H_m &= H_u + H + H_b \\ &= 0.085 (250) + 250 + 0.364 (250) \\ &= 362.3 \quad \text{say } 365 \text{ mm} \end{aligned}$$



TYPICAL WORD FORMATIONS AND SAMPLE CALCULATION
(NORMAL LETTERINGS)



LETTER TYPE - NORMAL

Height of upper case letter : $H = 250$ mm

The above calculation is as follows:-

From formulae:-

$$L = \{ S W - (k_1 + k_2) \} H$$

$$\text{Where } SW = W_k + W_m$$

k_1 = Constant for first letter 'k'

k_2 = Constant for last letter 'm'

$$L = \{ (0.806 + 1.230) - (0.097 + 0.115) \} \times 250$$

$$= (2.036 - 0.212) \times 250$$

$$= (1.824) \times 250$$

$$= 456 \quad \text{say } 460 \text{ mm}$$

To calculate height of mosaic (H_m)

$$H_u = 0.085 H$$

$$H_b = 0.364 H$$

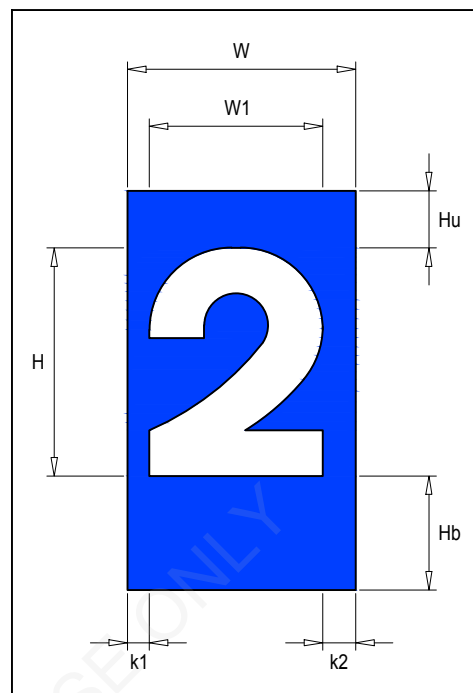
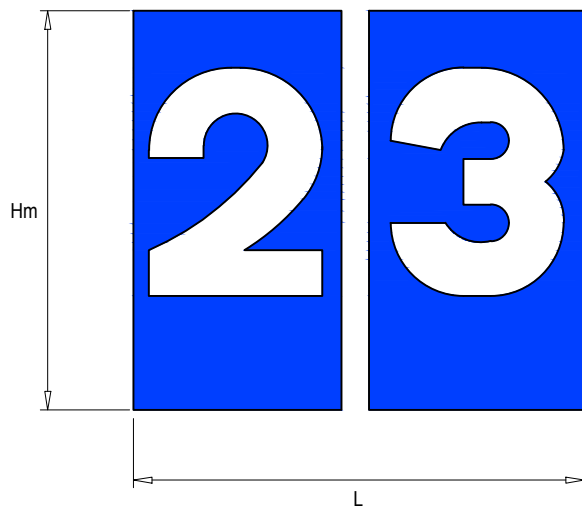
$$H_m = H_u + H + H_b$$

$$= 0.085 (250) + 250 + 0.364 (250)$$

$$= 362.3 \quad \text{say } 365 \text{ mm}$$



TYPICAL WORD ARRANGEMENTS AND SAMPLE CALCULATION
(NORMAL LETTERINGS)



LETTER TYPE - NORMAL
HEIGHT OF LETTER : H = 250 mm

The above calculation is as follows:-
From formulae:-

$$L = \{ S W - (k_1 + k_2) \} H$$

Where SW = $W_2 + W_3$

k_1 = Constant for first letter '2'

k_2 = Constant for last letter '3'

$$\begin{aligned} L &= \{(0.848 + 0.933) - (0.036 + 0.121)\} \times 250 \\ &= \{(1.781) - (0.157)\} \times 250 \\ &= 1.624 \times 250 \\ &= 406 \quad \text{say } 410 \text{ mm} \end{aligned}$$

To calculate height of mosaic (Hm)

$$H_u = 0.085 H$$

$$H_b = 0.364 H$$

$$H_m = H_u + H + H_b$$

$$= 0.085 (250) + 250 + 0.364 (250)$$

$$= 362.3 \quad \text{say } 365 \text{ mm}$$



TYPICAL NUMBER FORMATIONS AND SAMPLE CALCULATION
(NORMAL LETTERINGS)

APPENDIX 3

MOUNTING

(No. of Posts Vs. Area of Signs)



REGULATORY MANDATORY SIGNS

Scale : Not to scale

Typical Example of Nos. of Posts vs Area of Sign

MAXIMUM AREA OF SIGN (SQ.m.)	NO. OF POST		
	1	2	3
0.929	76.2mm x 10G	60.22mm x 8G	
1.394		88.99mm x 8G	
1.859		88.99mm x 8G	
2.324		88.99mm x 8G	
2.788		114.3mm x 7G	
3.252		114.3mm x 7G	
3.716		114.3mm x 7G	
4.181		114.3mm x 7G	
4.645		114.3mm x 7G	
5.109		114.3mm x 7G	
5.574		114.3mm x 7G	
6.039		139.7mm x 7G	114.3mm x 7G
6.503		139.7mm x 5G	114.3mm x 7G
6.968		139.7mm x 5G	114.3mm x 7G
7.432		139.7mm x 5G	114.3mm x 7G
7.897		139.7mm x 5G	114.3mm x 7G
8.361		168.28mm x 5G	139.7mm x 5G
8.826		168.28mm x 5G	139.7mm x 5G
9.295		168.28mm x 5G	139.7mm x 5G
9.755		168.28mm x 5G	139.7mm x 5G

NOTES:

- 1) Values in the table are measurements of outer gauge diameters of hollow sections and the gauge.
- 2) Use values of either column only.
- 3) RC Footing to be designed accordingly.



TYPICAL EXAMPLE OF NO. OF POSTS VS AREA OF SIGNS

APPENDIX 4

STANDARD TRAFFIC SIGNS

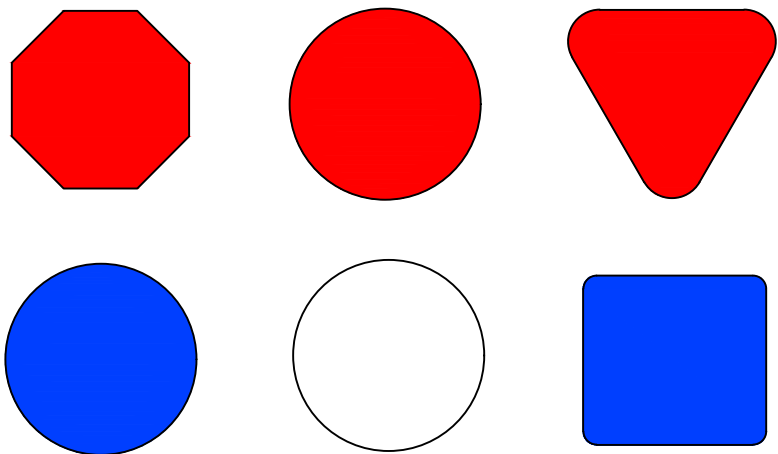
(COLOURS)



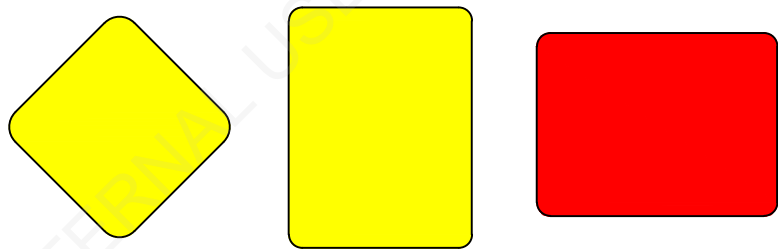
REGULATORY MANDATORY SIGNS

Scale : Not to scale

REGULATORY



WARNING



SIGN TYPES, COLOUR AND SHAPES

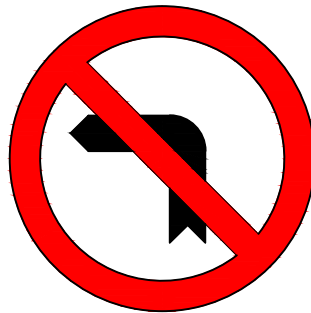
Scale : Not to scale

RP 1



STOP AT INTERSECTION

RP 2a



NO LEFT TURN

RP 2b



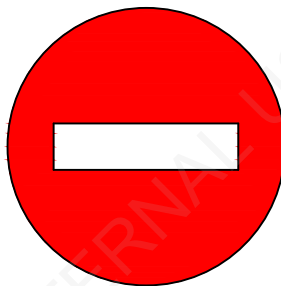
NO RIGHT TURN

RP 3



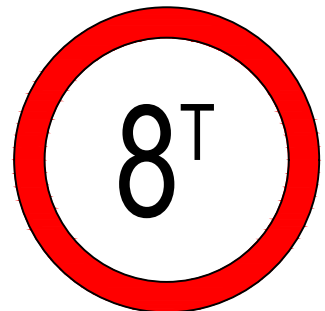
NO U-TURN

RP 4



NO ENTRY FOR ANY VEHICLE

RP 5



NO ENTRY FOR VEHICLES HAVING
TOTAL WEIGHT EXCEEDING THE
SPECIFIED WEIGHT

RP 6a



NO ENTRY FOR VEHICLES HAVING
OVERALL HEIGHT EXCEEDING THE
SPECIFIED HEIGHT

RP 6b



NO ENTRY FOR VEHICLES HAVING
TOTAL WIDTH EXCEEDING THE
SPECIFIED WIDTH

RP 7



SPEED LIMIT



REGULATORY PROHIBITIVE SIGNS

Scale : Not to scale

<p>RP 8a</p>  <p>NO ENTRY FOR ANIMAL DRAWN VEHICLES / CARTS OF ALL FORM</p>	<p>RP 8b</p>  <p>NO ENTRY FOR BICYCLE</p>	<p>RP 8c</p>  <p>NO ENTRY FOR MOTORCYCLE</p>
<p>RP 8d</p>  <p>NO ENTRY FOR TRICYCLE</p>	<p>RP 8e</p>  <p>NO ENTRY FOR MOPED</p>	<p>RP 8f</p>  <p>NO ENTRY FOR TRISHAW</p>
<p>RP 8g</p>  <p>NO ENTRY FOR BULLOCK CART</p>	<p>RP 8h</p>  <p>NO ENTRY FOR OTHER SLOW MOVING VEHICLES</p>	
	<p>REGULATORY PROHIBITIVE SIGNS</p> <p>Scale : Not to scale</p> <p>106</p>	

<p>RP 9a (i)</p>   <p>START OF SPEED LIMIT</p>	<p>RP 9a (ii)</p>   <p>END OF SPEED LIMIT</p>	<p>RP 9a (iii)</p>  <p>END OF SPEED LIMIT</p>
<p>RP 9b (i)</p>   <p>SPEED LIMIT ZONE REMINDER</p>	<p>RP 9b (ii)</p>  <p>SPEED LIMIT ZONE REMINDER</p>	<p>RP 10</p>  <p>NO PARKING</p>
<p>RP 11</p>  <p>NO STOPPING</p>	<p>RP 12</p>  <p>RESTRICTION ON USE OF HORNS</p>	<p>RP 13</p>   <p>GIVE WAY</p>
	<p>REGULATORY PROHIBITIVE SIGNS</p> <p>Scale : Not to scale</p> <p>107</p>	

RP 14



STOP CHILDREN CROSSING

RP 15



NO OVERTAKING

RP 16



HEAVY VEHICLES FORBIDDEN
TO OVERTAKE

RP 17



HEAVY VEHICLES PROHIBITED
FROM DRIVING ON THE RIGHT LANE

RP 18

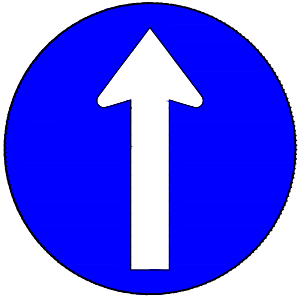
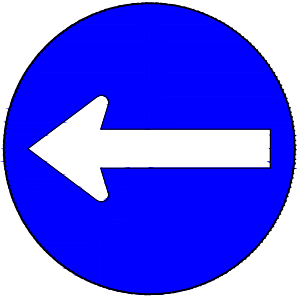
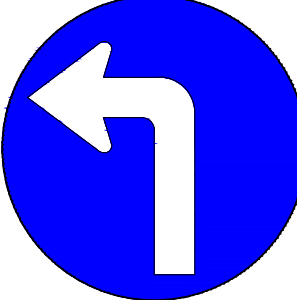
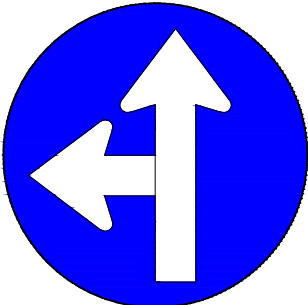
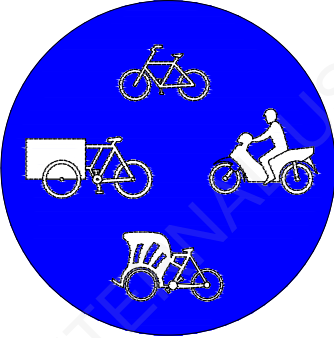


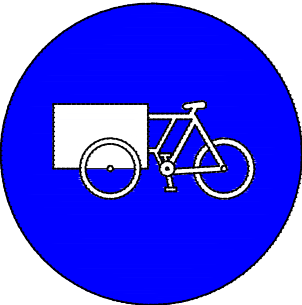




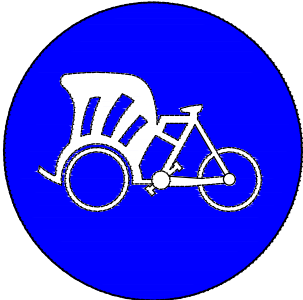
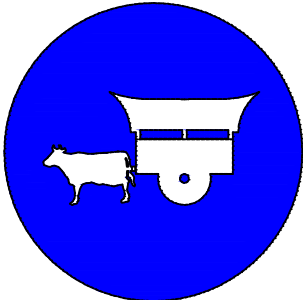
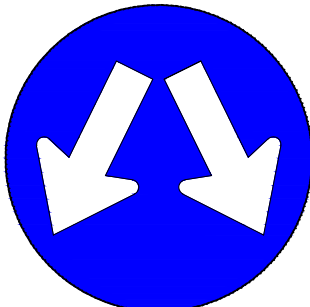
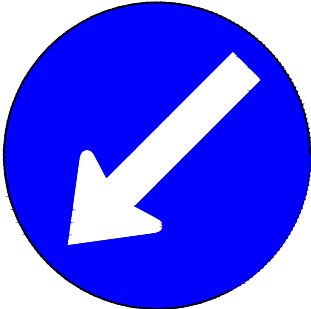
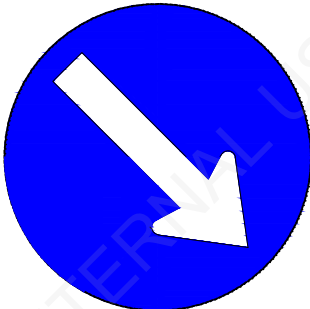





ROAD RESERVE



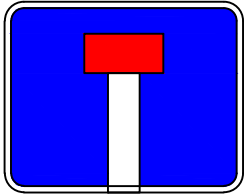



REGULATORY PROHIBITIVE SIGNS

Scale : Not to scale

<p>RM 1(i)</p>  <p>GO STRAIGHT</p>	<p>RM 1(ii)</p>  <p>TURN LEFT (RIGHT IF SYMBOL REVERSED)</p>	<p>RM 1(iii)</p>  <p>TURN LEFT AHEAD (RIGHT IF SYMBOL REVERSED)</p>
<p>RM 1(iv)</p>  <p>TURN LEFT OR GO STRAIGHT (RIGHT IF SYMBOL REVERSED)</p>	<p>RM 2</p>  <p>DEDICATED LANE</p>	<p>RM 2 (i)</p>  <p>DEDICATED LANE MOTORCYCLE</p>
<p>RM 2 (ii)</p>  <p>DEDICATED LANE BICYCLE</p>	<p>RM 2 (iii)</p>  <p>DEDICATED LANE TRICYCLES</p>	<p>RM 2 (iv)</p>  <p>DEDICATED LANE MOPEDS</p>
	<p>REGULATORY MANDATORY SIGNS</p>	
<p>Scale : Not to scale</p>	<p>109</p>	

<p>RM 2 (v)</p>  <p>DEDICATED LANE TRISHAWS</p>	<p>RM 2 (vi)</p>  <p>DEDICATED LANE ANIMAL DRAWN VEHICLES / CARTS OF ALL FORM</p>	<p>RM 3</p>  <p>VEHICLES MAY PASS EITHER SIDE</p>
<p>RM 4 (i)</p>  <p>KEEP LEFT</p>	<p>RM 4 (ii)</p>  <p>KEEP RIGHT</p>	<p>RM 5</p>  <p>HEAVY VEHICLES KEEP LEFT</p>
<p>RM 6</p>  <p>USE LEFT LANE UNLESS OVERTAKING</p>	<p>RM 7</p>  <p>TURN LEFT IF THERE IS NO VEHICLE OR PEDESTRIAN</p>	<p>RM 8</p>  <p>TOW-AWAY ZONE</p>
	<p>REGULATORY MANDATORY SIGNS</p>	
<p>Scale : Not to scale</p>	<p>110</p>	

<p>RM 9</p>  <p>WHEEL CLAMPING ZONE</p>	<p>RM 10</p>  <p>PARKING FOR THE DISABLED</p>	<p>RM 11</p>  <p>NO THROUGH ROAD</p>
	<p>REGULATORY MANDATORY SIGNS</p> <p>Scale : Not to scale</p>	

WD 1



UNEVEN ROAD

WD 2a



DANGEROUS BENDS

WD 2b



DANGEROUS BENDS

WD 3



ROAD INTERSECTION

WD 4



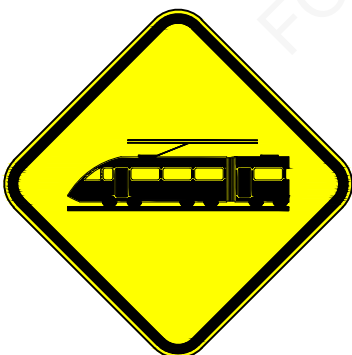
LEVEL CROSSING WITH GATES

WD 5



RAILWAY AUTOMATIC
LEVEL CROSSING

WD 6



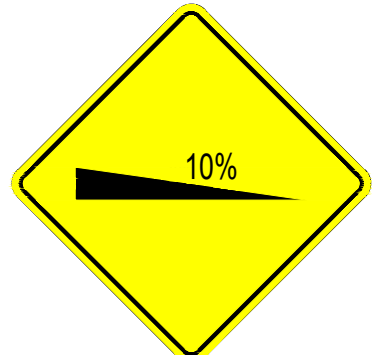
LEVEL CROSSING
WITHOUT GATES

WD 7



LEVEL CROSSING
WITHOUT GATES

WD 8



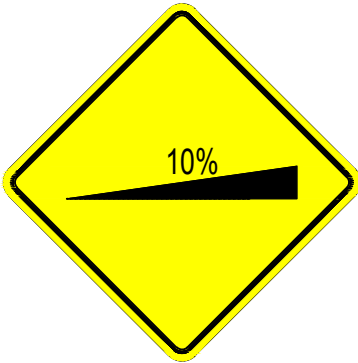
DANGEROUS DESCENT



WARNING DANGER SIGNS

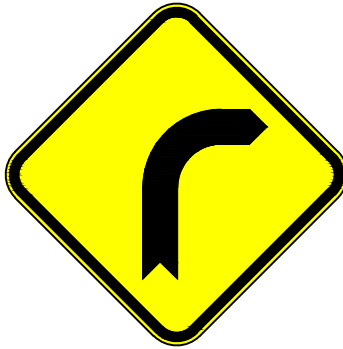
Scale : Not to scale

WD 9



DANGEROUS ASCENT

WD 10a



RIGHT BEND

WD 10b



LEFT BEND

WD 11



WINDING ROAD

WD 12



SOFT ROAD SIDE TABLE

WD 13



SLIPPERY CARRIAGEWAY

WD 14



PEDESTRIAN CROSSING

WD 15



CHILDREN CROSSING

WD 16



OTHER DANGER



WARNING DANGER SIGNS

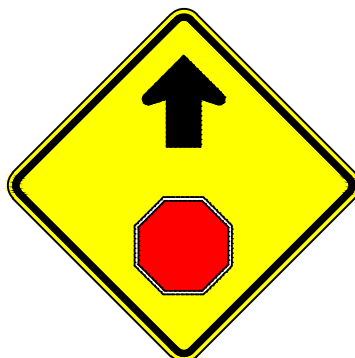
Scale : Not to scale

WD 17



AWAS

WD 18



STOP SIGN AHEAD

WD 19



GIVE WAY SIGN AHEAD

WD 20



CARRIAGEWAY NARROWS

WD 21



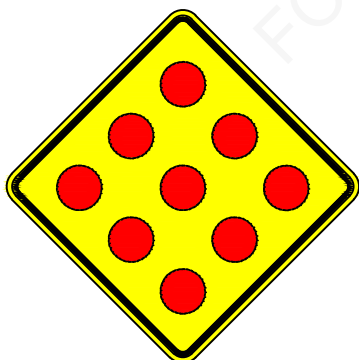
ROAD NARROWS

WD 22



TRAFFIC SIGNAL AHEAD

WD 23



OBSTRUCTION

WD 24a



OBSTRUCTION MARKER

WD 24b



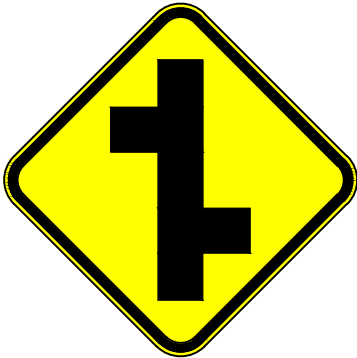
OBSTRUCTION MARKER



WARNING DANGER SIGNS

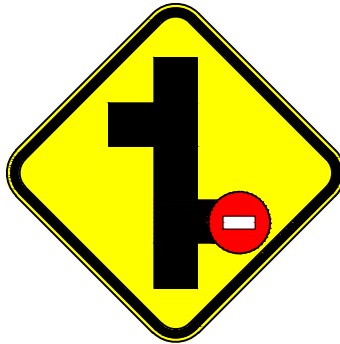
Scale : Not to scale

WD 25



STAGGERED JUNCTIONS

WD 26



STAGGERED JUNCTIONS WITH
ONE ROAD CLOSED TO TRAFFIC

WD 27a



ROAD JUNCTION ON THE
LEFT & RIGHT

WD 27b



ROAD JUNCTION ON THE RIGHT

WD 27c



ROAD JUNCTION ON THE LEFT

WD 27d



ROAD JUNCTION ON THE RIGHT

WD 27e



ROAD JUNCTION ON THE LEFT

WD 28a



ROAD JUNCTION WITH
MINOR ROAD ON THE RIGHT

WD 28b



ROAD JUNCTION WITH
MINOR ROAD ON THE LEFT



WARNING DANGER SIGNS

Scale : Not to scale

WD 29



ROCK FALLING OR SLIDES

WD 30a



LIVESTOCK CROSSING

WD 30b



HORSE CROSSING

WD 31



ROUNDBOUT AHEAD

WD 32a



CLIMBING LANE

WD 32b



CLIMBING LANE

WD 33



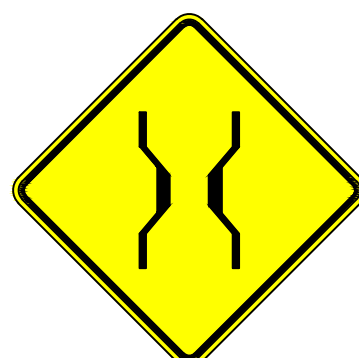
BLIND PEOPLE

WD 34



CROSSING FOR DISABLED
PEOPLE

WD 35



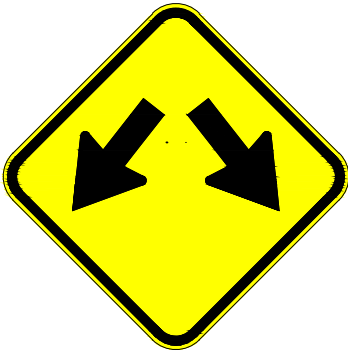
NARROW BRIDGE



WARNING DANGER SIGNS

Scale : Not to scale

WD 36



DOUBLE ARROW

WD 37



TWO-WAY TRAFFIC

WD 38a



DIVIDED HIGHWAY (ROAD) ENDS

WD 38b



DIVIDED HIGHWAY (ROAD) AHEAD

WD 39a



CHEVRON DELINEATOR

WD 39b



CHEVRON DELINEATOR

WD 40a



WILDLIFE CROSSING

WD 40b



WILDLIFE CROSSING

WD 41















ROAD JUNCTION ON THE
LEFT & RIGHT



WARNING DANGER SIGNS

Scale : Not to scale

<p>WD 42</p>  <p>ADVANCE WARNING FOR SCHOOL ZONE</p>	<p>WD 43</p>  <p>CHEVRON</p>	<p>WD 44</p>  <p>PLAYGROUND</p>
<p>WD 45a</p>  <p>KURANGKAN LAJU</p>	<p>WD 45c</p>  <p>SPEED SIGN</p>	<p>WD 46a</p>  <p>WARNING SIGN APPROACHING LANDSLIDE PRONE AREA</p>
<p>WD 46b</p>  <p>WARNING SIGN APPROACHING HUMP</p>	<p>WD 46c</p>  <p>WARNING SIGN APPROACHING ACCIDENT PRONE AREA</p>	
	<p>WARNING DANGER SIGNS</p> <p>Scale : Not to scale</p> <p>118</p>	

<p>WD 47</p>  <p>HUMP AHEAD SIGN</p>	<p>WD 48</p>  <p>HUMP</p>	<p>WD 49</p>  <p>SPEED LIMIT ZONE REMINDER (OPTIONAL)</p>
<p>WD 50</p>  <p>WARNING SIGN APPROACHING SPEED LIMIT ZONE</p>	<p>WD 51</p>  <p>ZONE UNDER CAMERA SURVEILLANCE</p>	
	<p>WARNING DANGER SIGNS</p> <p>Scale : Not to scale</p> <p>119</p>	

REFERENCES

1. Arahan Teknik (Jalan) 2A/85, Manual on Traffic Control Devices: Standard Traffic Sign, Jabatan Kerja Raya Malaysia
2. Arahan Teknik (Jalan) 2B/85, Manual on Traffic Control Devices: Traffic Sign Application, Jabatan Kerja Raya Malaysia
3. Arahan Teknik (Jalan) 2C/85, Manual on Traffic Control Devices: Temporary Signs and Work Zones Control, Jabatan Kerja Raya Malaysia
4. Arahan Teknik (Jalan) 2E/87 (Pindaan 2015), Guide Signs Design and Application, Jabatan Kerja Raya Malaysia
5. Road Transport Rules (Compilation of 47 Rules) (As At 5th February 2010), International Law Book Services
6. Expressway Signing Systems – Guidelines and Design Application (T1/07), Lembaga Lebuhraya Malaysia
7. Guidelines on Traffic Control and Management Devices Part 1 Introduction to Traffic Signs, Road Engineering Association of Malaysia
8. Manual on Uniform Traffic Control Devices, 2009, Federal Highway Administration, US Department of Transport
9. Amendment to the Road Transport Rules, 2018, JKR Malaysia.