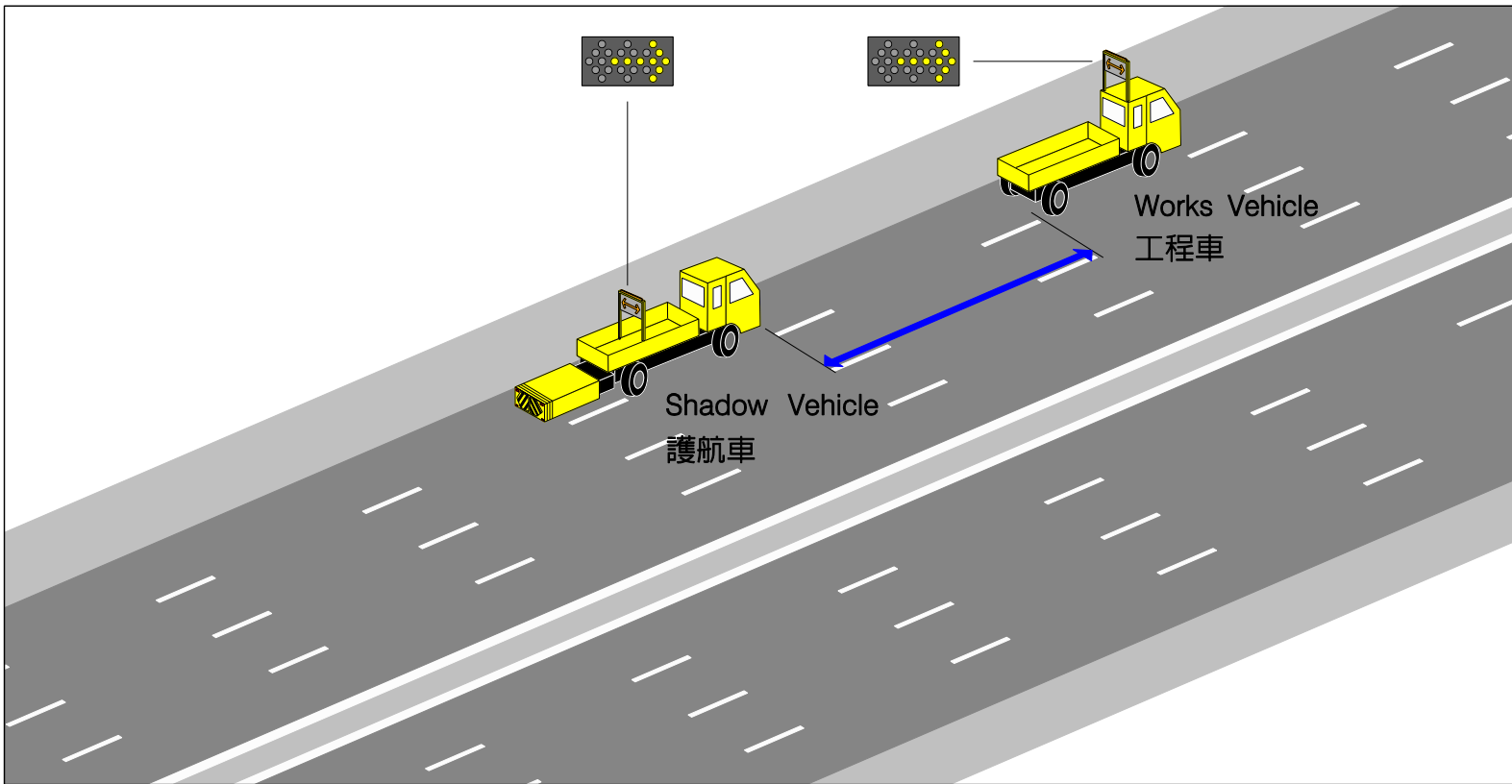


Fig. A1 Mobile Lane Closure

圖 A1 流動性行車線封閉



Key to Track Layouts 車道分佈索引




-  See Table B1 in Annex B for the buffer distances
請參看附件乙內乙一表所示的緩衝距離
-  Multiple Sequence Warning Sign (MSWS)
可作多種順序指示的警告燈號
-  TMA (Level 3)
緩撞裝置 (第三級)

Table B1 - Table for Buffer Distance³

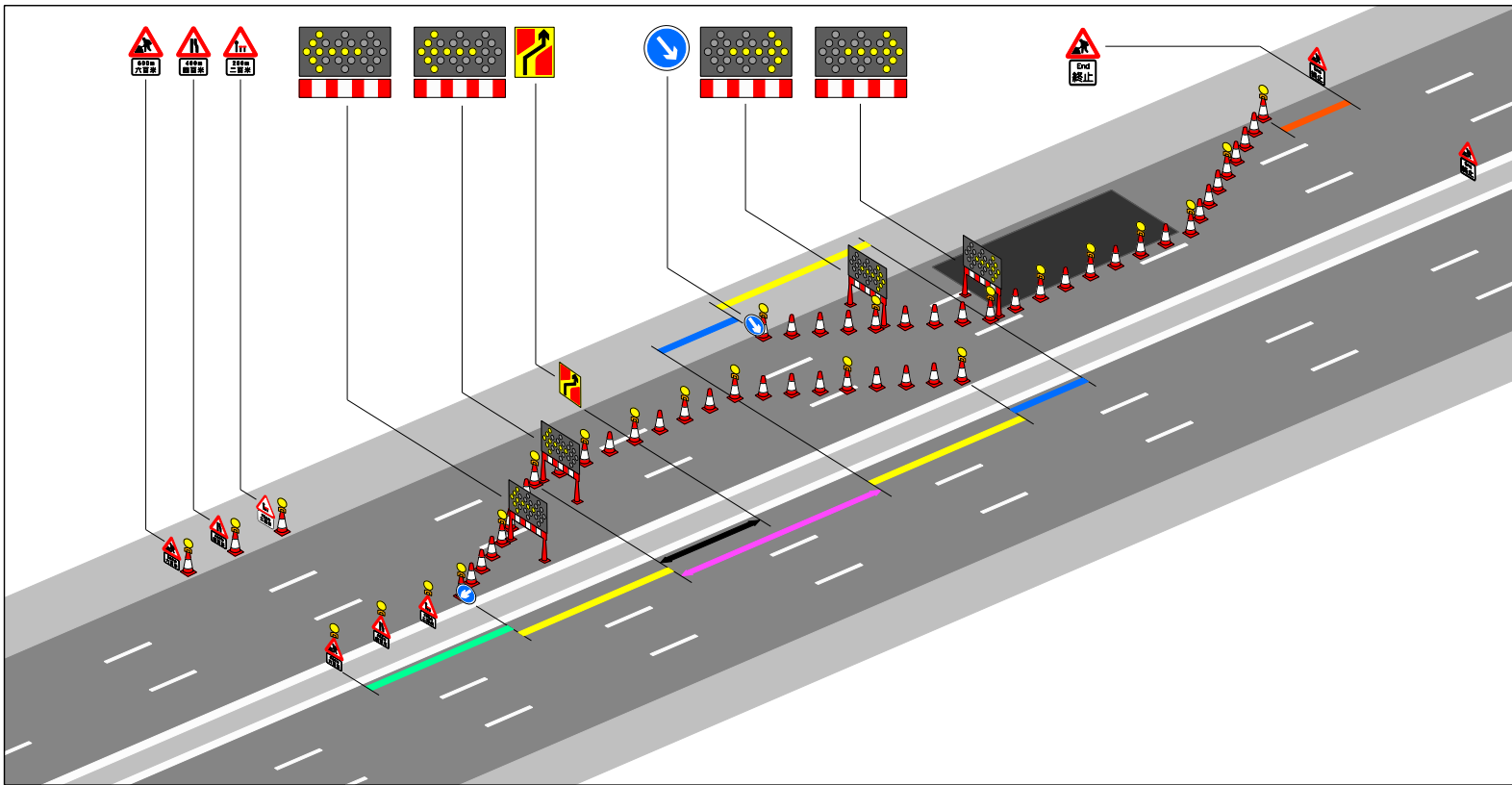
表乙一 - 緩衝距離表³

For Shadow Vehicles Weighing 10,000 kg or More 適用於護航車的重量為 10 公噸或以上		
Speed Limit (km/h) 速度限制 (公里／小時)	Recommended Distance (m) ¹ 推薦距離 (米) ¹	
	Stationary Operation 固定的作業	Mobile Operation ² 流動的作業 ²
Greater than 大於 80	45	55
70 – 80	30	45
Less than 小於 70	25	30
For Shadow Vehicles Weighing Less than 10,000 kg 適用於護航車的重量為 10 公噸或以下		
Speed Limit (km/h) 速度限制 (公里／小時)	Recommended Distance (m) ¹ 推薦距離 (米) ¹	
	Stationary Operation 固定的作業	Mobile Operation ² 流動的作業 ²
Greater than 大於 80	55	70
70 – 80	40	55
Less than 小於 70	30	30

- ¹ Recommended distance (m) is the distance between the front of the shadow vehicle and the beginning of works area which is the first worker/operation/vehicle to be protected.
推薦距離 (米) 為介乎護航車前端及工程範圍的起點，意指要保護的前面工人／作業／車輛。
- ² Distances are appropriate for mobile operation speeds up to 25 km/h.
這些距離適用於流動作業時速度為每小時 25 公里或以下。
- ³ The buffer distances are suitable for shadow vehicles with or without a TMA.
表列緩衝距離同時適用於設有或未設有緩衝裝置的護航車。
- ⁴ The Shadow Vehicle shall keep a distance of at most 100m from the Works Vehicle(s).
護航車應與工程車保持不多於 100 公尺的距離。

Fig. C1 Layout of signs for a slow and a middle lane closure for works on a 3-lane expressway

圖 C1 在三線快速公路封閉慢線及中線時採用的標誌分佈



Note:

1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).

2. One metre high cones should be used, see para. 3.8 for spacing.

3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

注意：

1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。

2. 應使用一米高的圓錐筒，間距請參看3.8段。

3. 預先警告標誌應與高亮度閃動標燈同用。

Key to Track Layouts 車道分佈索引

See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離

See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離

See Table D for taper length
請參看丁表所示楔形路段的長度

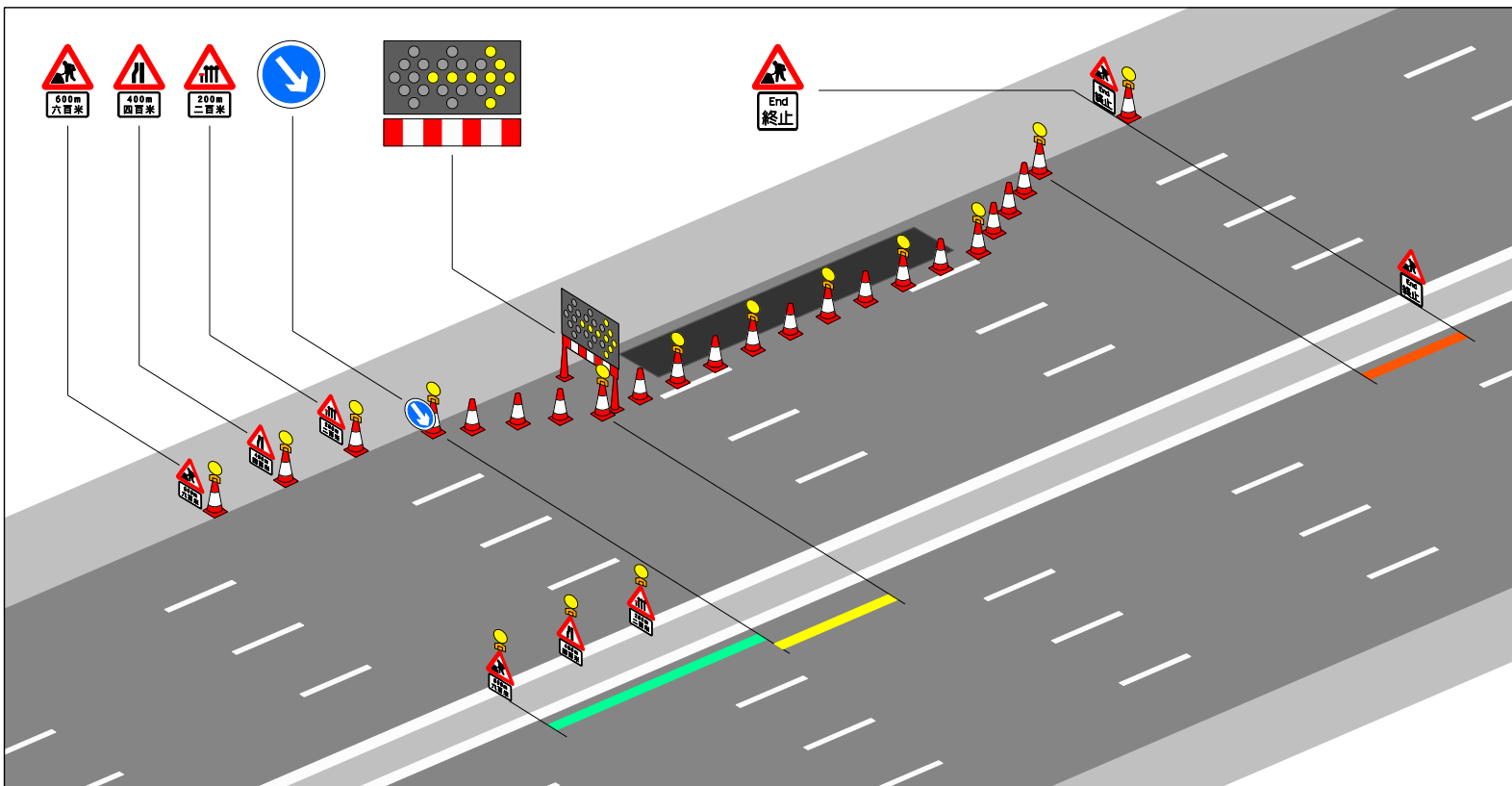
Half of the taper length shown in Table D
丁表所示楔形路段的一半長度

90m
90 米

180m
180 米

Works area
施工地區

圖 C2 在四線快速公路封閉慢線時採用的標誌分佈



1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).




2. One metre high cones should be used, see para. 3.8 for spacing.

注意：

1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。

3. 預先警告標誌應與高亮度閃動標燈同用。

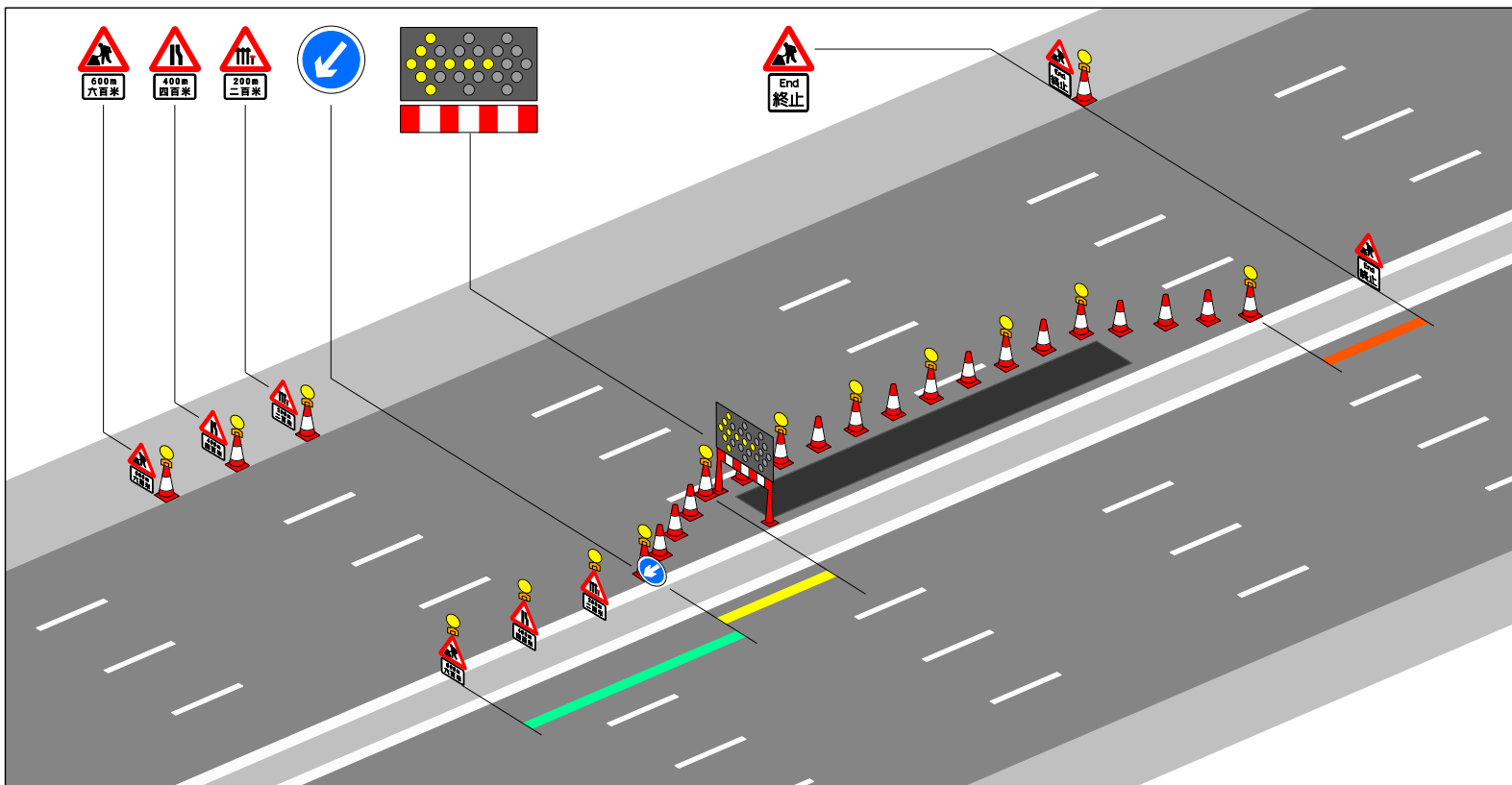
Key to Track Layouts 車道分佈索引

-  See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離
-  See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離
-  See Table D for taper length
請參看丁表所示楔形路段的長度

■ Works area
施工地區

Fig. C3 Layout of signs for a fast lane closure for works on a 4-lane expressway

圖 C3 在四線快速公路封閉快線時採用的標誌分佈



Note:

1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).

2. One metre high cones should be used, see para. 3.8 for spacing.

3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

注意：

1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。

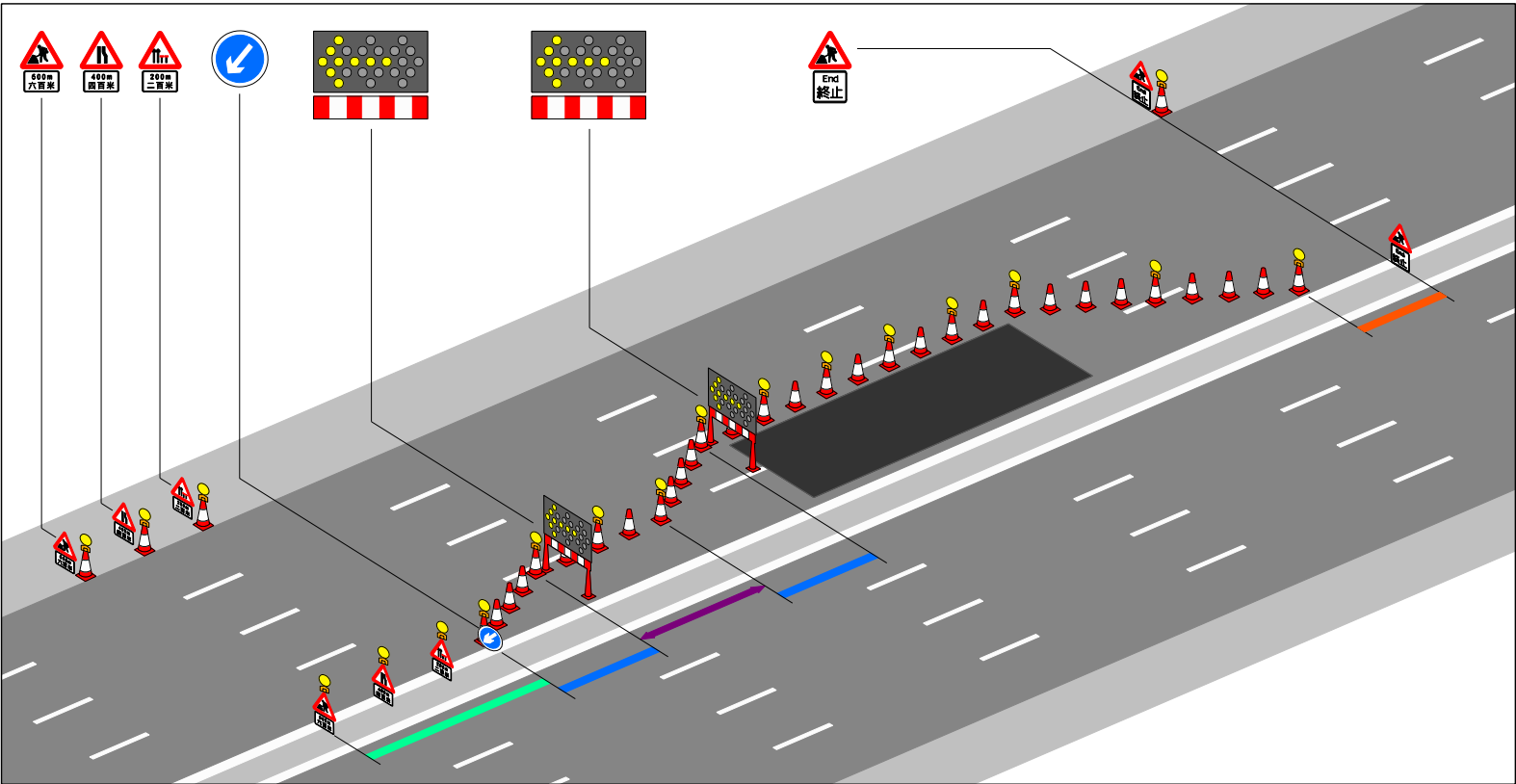
2. 應使用一米高的圓錐筒，間距請參看3.8段。

3. 預先警告標誌應與高亮度閃動標燈同用。

Key to Track Layouts 車道分佈索引

- See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離
- See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離
- See Table D for taper length
請參看丁表所示楔形路段的長度
- Works area
施工地區

Fig. C4 Layout of signs for a fast lane and a second fast lane closure for works on a 4-lane expressway
圖 C4 在四線快速公路封閉快線及第二快線時採用的標誌分佈



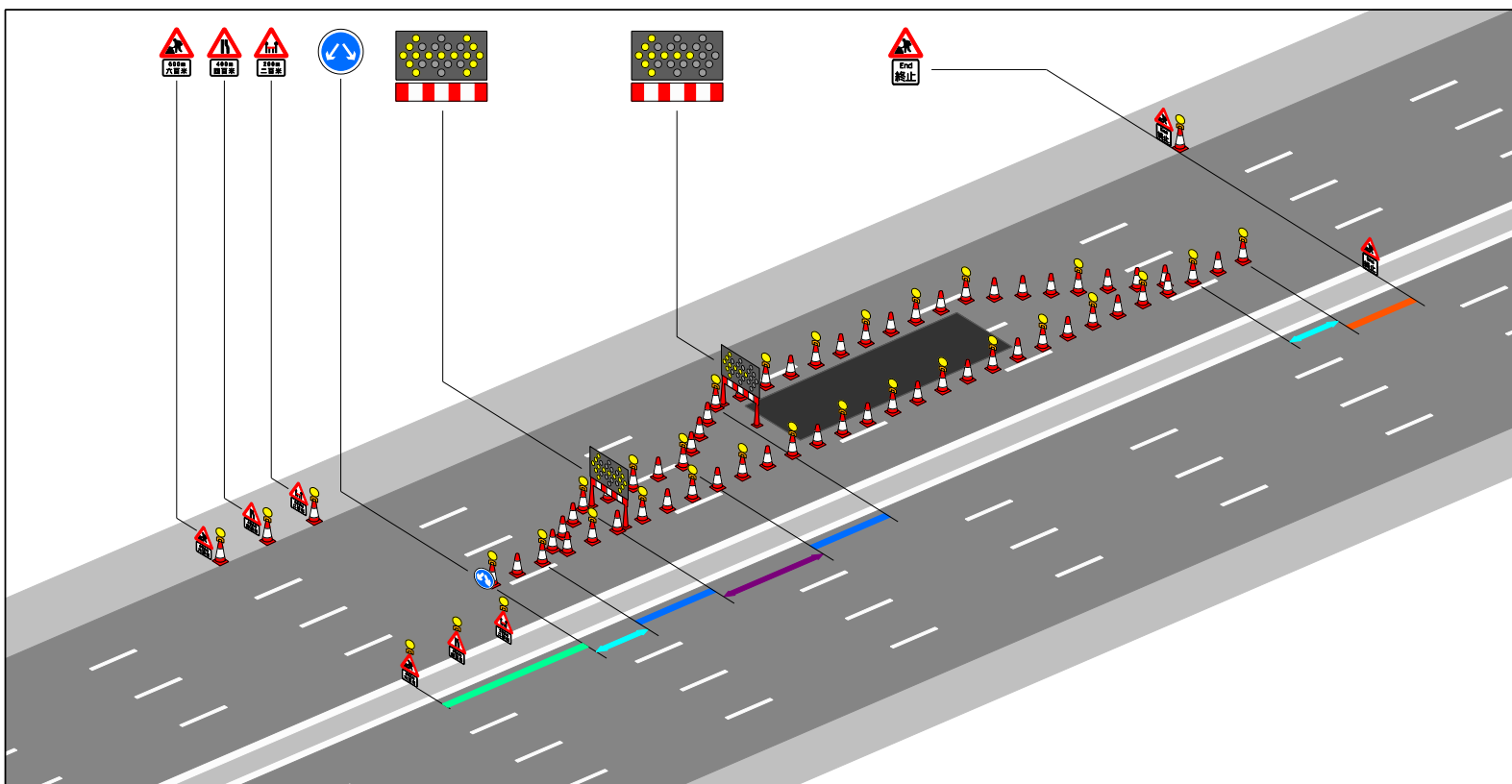
- Note:
1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).
 2. One metre high cones should be used, see para. 3.8 for spacing.
 3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

- 注意：
1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。
 2. 應使用一米高的圓錐筒，間距請參看3.8段。
 3. 預先警告標誌應與高亮度閃動標燈同用。

- Key to Track Layouts 車道分佈索引
- See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離
 - See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離
 - Half of the taper length shown in Table D
丁表所示楔形路段的一半長度
 - 100m
100 米
 - Works area
施工地區

Fig. C5 Layout of signs for a second slow lane and a second fast lane closure for works on a 4-lane expressway

圖 C5 在四線快速公路封閉第二慢線及第二快線時採用的標誌分佈



Note:

1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).

2. One metre high cones should be used, see para. 3.8 for spacing.

3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

注意:

1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。

2. 應使用一米高的圓錐筒，間距請參看3.8段。

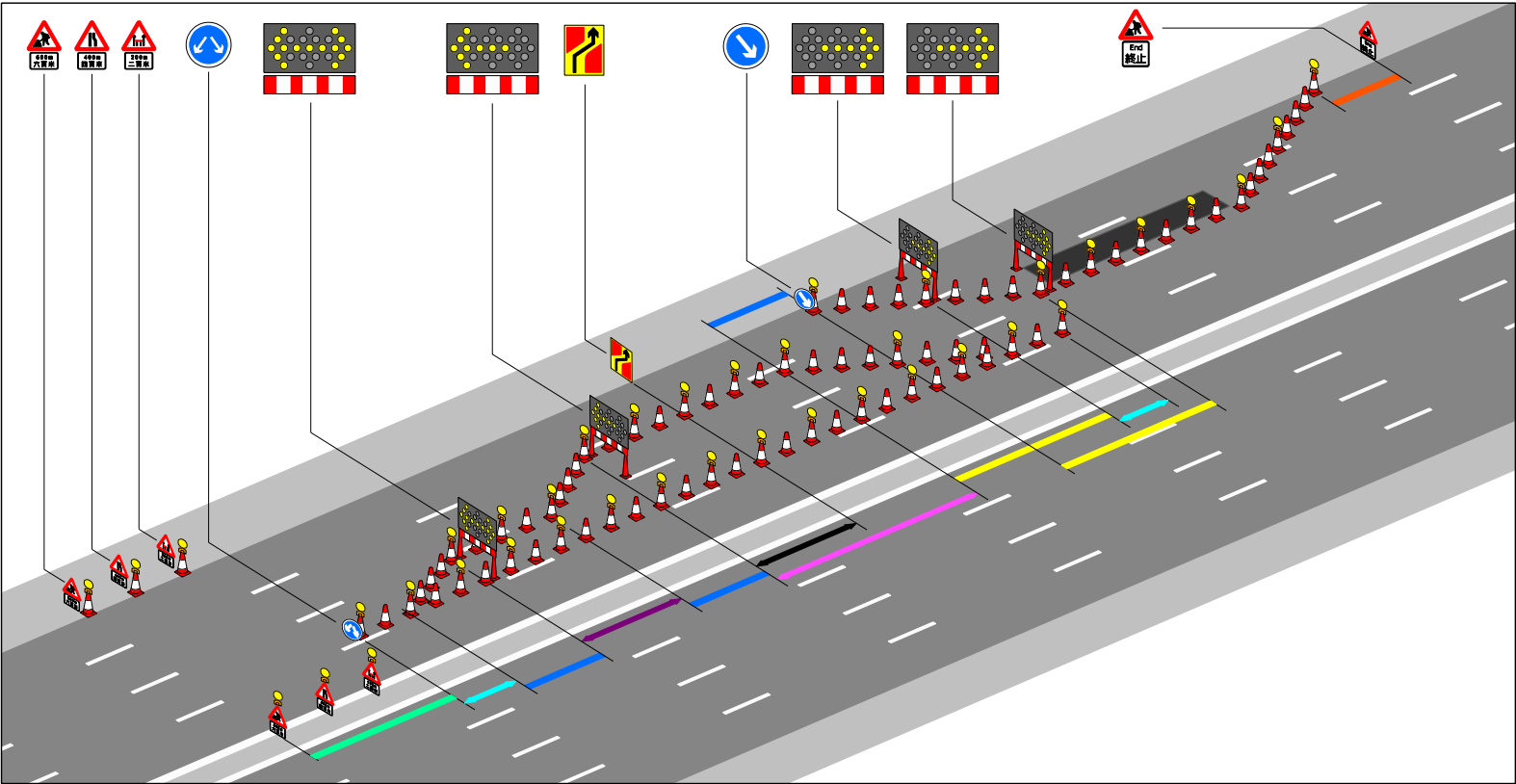
3. 預先警告標誌應與高亮度閃動標燈同用。

Key to Track Layouts 車道分佈索引

- See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離
- See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離
- Half of the taper length shown in Table D
丁表所示楔形路段的一半長度
- ↔ 50m
50 米
- ↔ 180m
180 米
- Works area
施工地區

Fig. C6 Layout of signs for a second slow lane closure for works on a 4-lane expressway

圖 C6 在四線快速公路封閉第二慢線時採用的標誌分佈



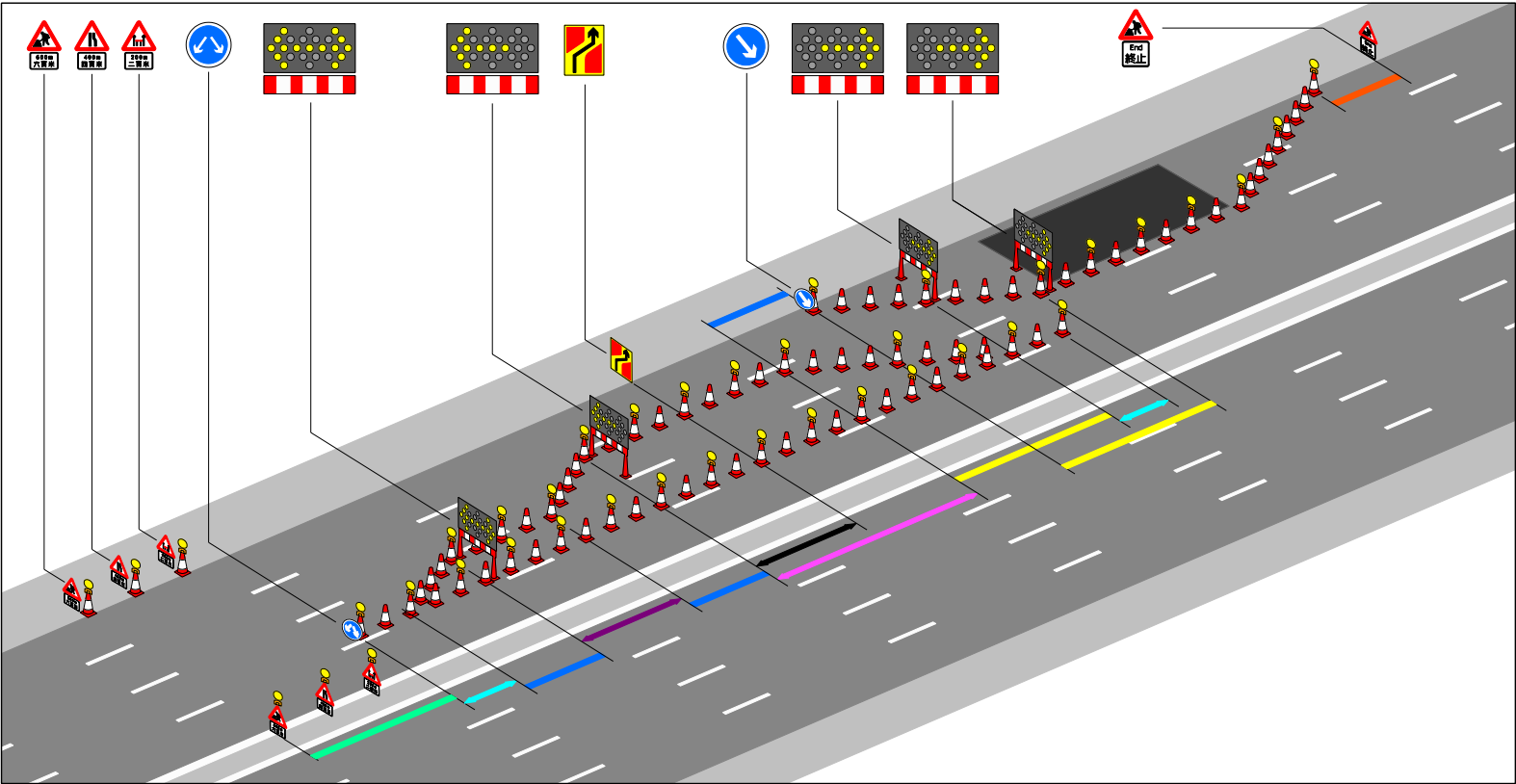
- Note:
1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).
 2. One metre high cones should be used, see para. 3.8 for spacing.
 3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

- 注意：
1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。
 2. 應使用一米高的圓錐筒，間距請參看3.8段。
 3. 預先警告標誌應與高亮度閃動標燈同用。

- Key to Track Layouts 車道分佈索引
- See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離
 - See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離
 - See Table D for taper length
請參看丁表所示楔形路段的長度
 - Half of the taper length shown in Table D
丁表所示楔形路段的一半長度
 - 50m
50 米
 - 90m
90 米
 - 100m
100 米
 - 180m
180 米
 - Works area
施工地區

Fig. C7 Layout of signs for a slow lane and a second slow lane closure for works on a 4-lane expressway

圖 C7 在四線快速公路封閉慢線及第二慢線時採用的標誌分佈



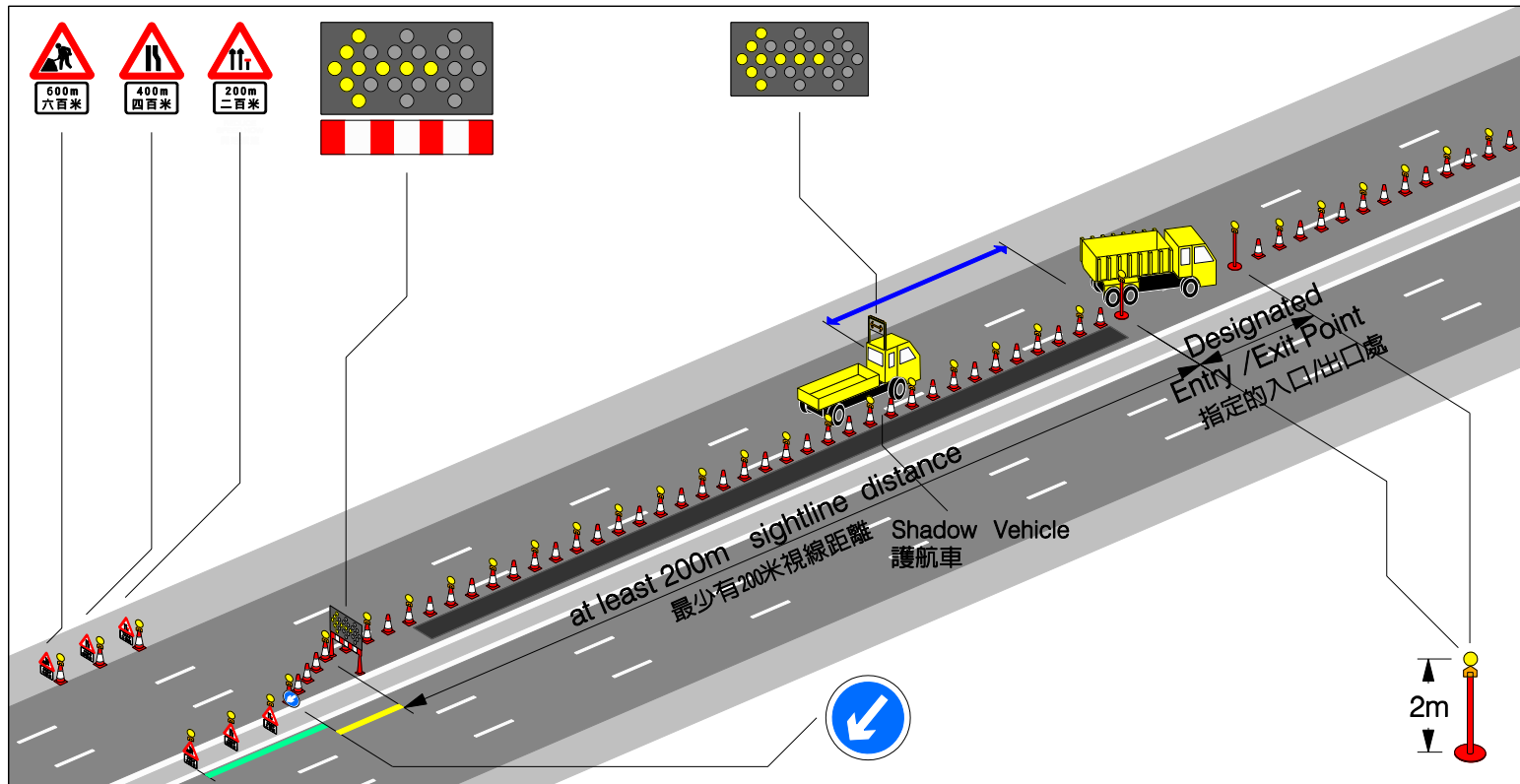
- Note:
1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).
 2. One metre high cones should be used, see para. 3.8 for spacing.
 3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

- 注意：
1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。
 2. 應使用一米高的圓錐筒，間距請參看3.8段。
 3. 預先警告標誌應與高亮度閃動標燈同用。

- Key to Track Layouts 車道分佈索引
- See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離
 - See Table C for distance of 'End of Road Works' Sign after road works
請參看丙表所示道路工程之後的「道路工程終止」標誌的距離
 - See Table D for taper length
請參看丁表所示楔形路段的長度
 - Half of the taper length shown in Table D
丁表所示楔形路段的一半長度
 - 50m
50 米
 - 90m
90 米
 - 100m
100 米
 - 180m
180 米
 - Works area
施工地區

Fig. D1 Entry /Exit Arrangement of Vehicles

圖 D1 車輛出入安排



Note:

1. Unless otherwise stated, all paragraph and table no. in this figure should refer to those in the current Code of Practice for the Lighting, Signing and Guarding of Road Works (See relevant extract in Annex F).

2. One metre high cones should be used, see para. 3.8 for spacing.

3. Advance Warning Signs should be supplemented by high intensity flashing beacons.

4. Shadow or Works Vehicles equipped with MSWS and strobe lights may enter the lane closures without further escorts by Shadow Vehicles.

注意:

1. 除非另外指明，否則本圖所示的所有段落及表格號碼均是對應現有“道路工程的照明、標誌及防護工作準則”中所載的（參看有關節錄於附件己）。

2. 應使用一米高的圓錐筒，間距請參看3.8段。

3. 預先警告標誌應與高亮度閃動標燈同用。

4. 裝備有可作多種順序指示燈號及閃燈的護航車/施工車輛可在無護航車護送下進入已封閉之行車線。

Key to Track Layouts 車道分佈索引

See Table B for distance of first sign
請參看乙表所示的第一個標誌的距離

The taper length shown in Table D
丁表所示楔形路段的長度

Works area
施工地區

See Table B1 in Annex B for the buffer distances
請參看附件乙內乙一表所示的緩衝距離

Multiple Sequence Warning Sign (MSWS)
多種順序指示的警告燈號

Two-metre high revolving amber light post
兩米高之旋轉燈

**Table E1 – Luminous Intensity of Multiple Sequence Warning Sign
(MSWS) Lights
(Luminance limits on reference axis)**

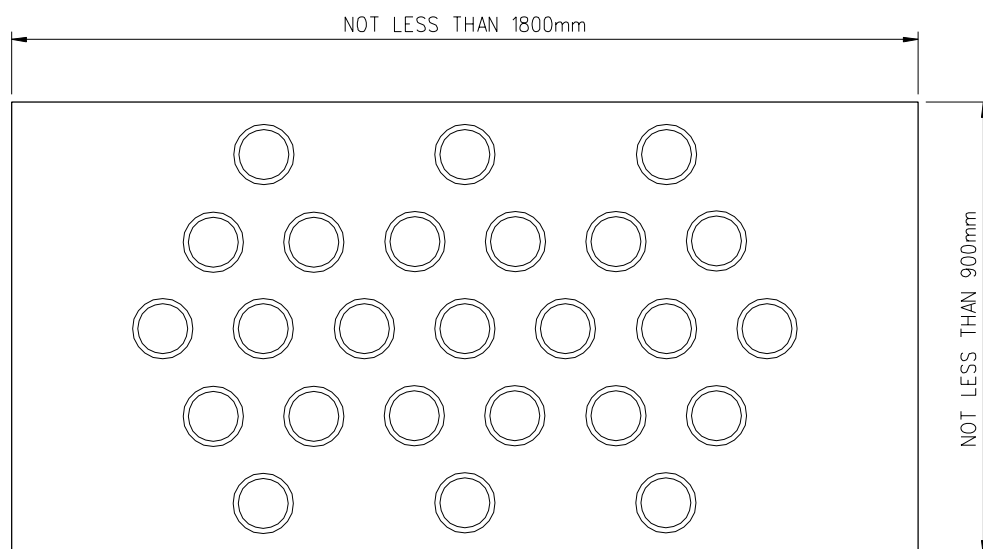
Ambient Illuminance (Lux)	Luminance (cd/m ²) (Amber Colour)	
	Minimum	Maximum
> 4,000 & ≤ 40,000	6,200	10 times the values of the minimum on the left
> 400 & ≤ 4,000	1,100	
> 40 & ≤ 400	300	
≤ 40	200	5 times the values of the minimum on the left

- Notes
- (i) The intensity in any directions within 5° to the right and left of the reference axis and within 5° below the reference axis must be at least 50% of the measured intensity on the reference axis.
 - (ii) When the sign is set for 40,000 Lux and 400 Lux (in tunnel) tests, the sign shall achieve the relevant luminance value without the external illumination (solar simulator OFF).
 - (iii) The minimum luminance ratio shall be in accordance with Table E2 below for all illuminance between 400 and 40,000 Lux at the reference angles in (i) above.
 - (iv) For ambient illuminance over 40,000 Lux, the sign luminance shall be twice the value of the corresponding one for above 4,000 Lux and below 40,000 Lux.

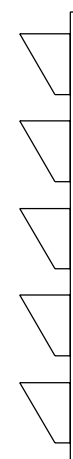
Table E2 – Minimum Luminance Ratio

Minimum Luminance Ratio (Amber Colour)	
On reference axis	Off reference axis
10	5

Note : For illuminances below 400 Lux (e.g. tunnels or night-time), there is no luminance ratio requirement.

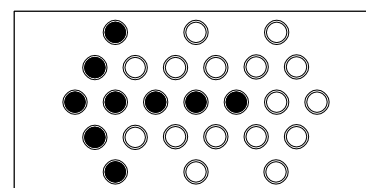
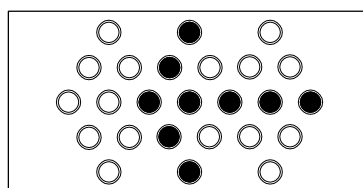
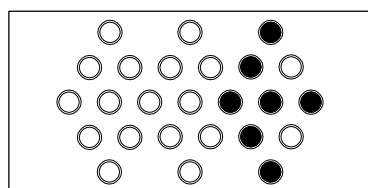


ELEVATION
(SCALE:- 1:15)

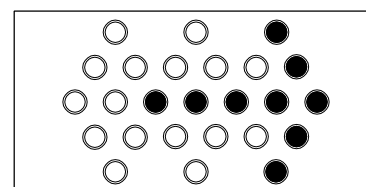
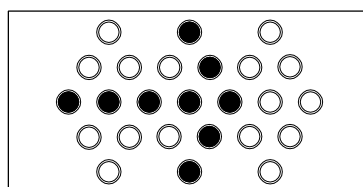
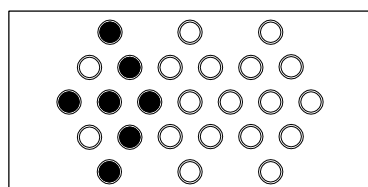


SECTION
(SCALE:- 1:15)

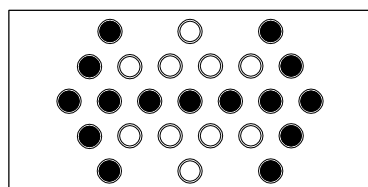
(a) PASS ON THE LEFT SEQUENCE



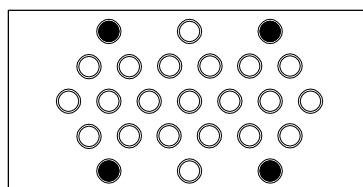
(b) PASS ON THE RIGHT SEQUENCE



(c) PASS TO RIGHT AND LEFT



(d) HAZARD



title

MULTIPLE SEQUENCE
WARNING SIGN

drawn by

CAD

date

27/5/03

drawing no.

MSWS - G

scale

NTS OR
AS SHOWN

approved

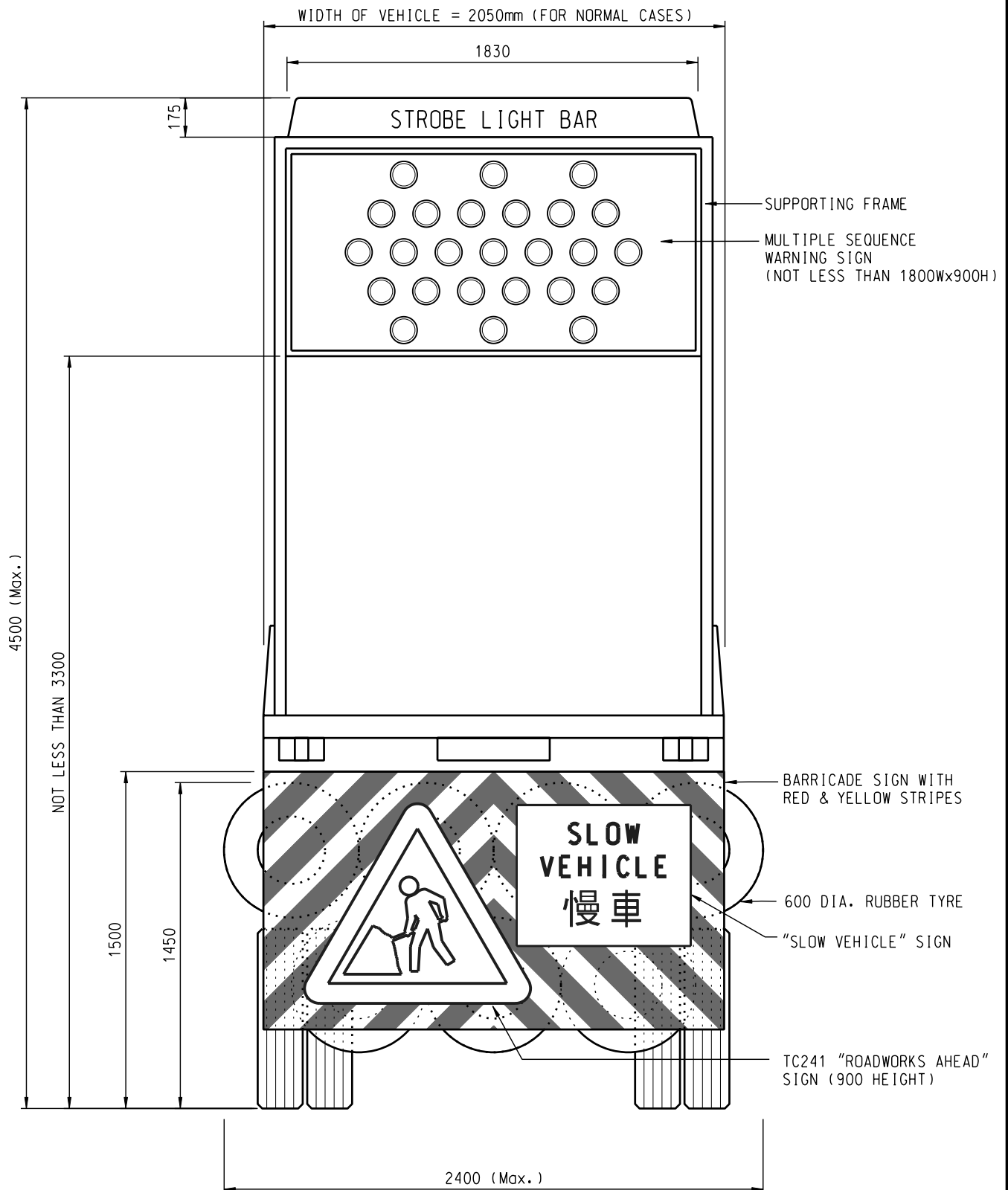
date

office

HIGHWAYS /R & D DIVISION




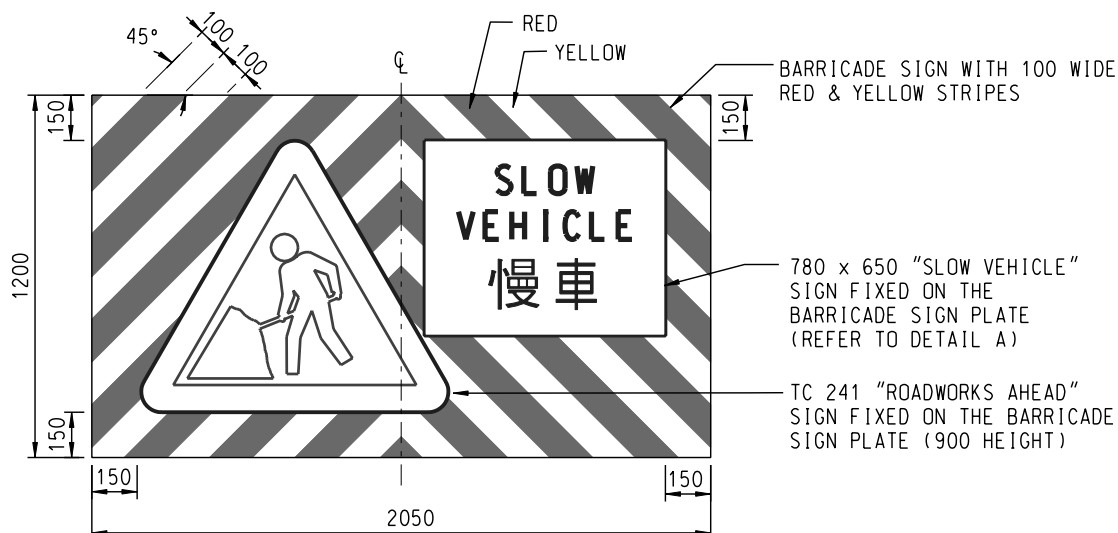
**HIGHWAYS
DEPARTMENT
HONG KONG**



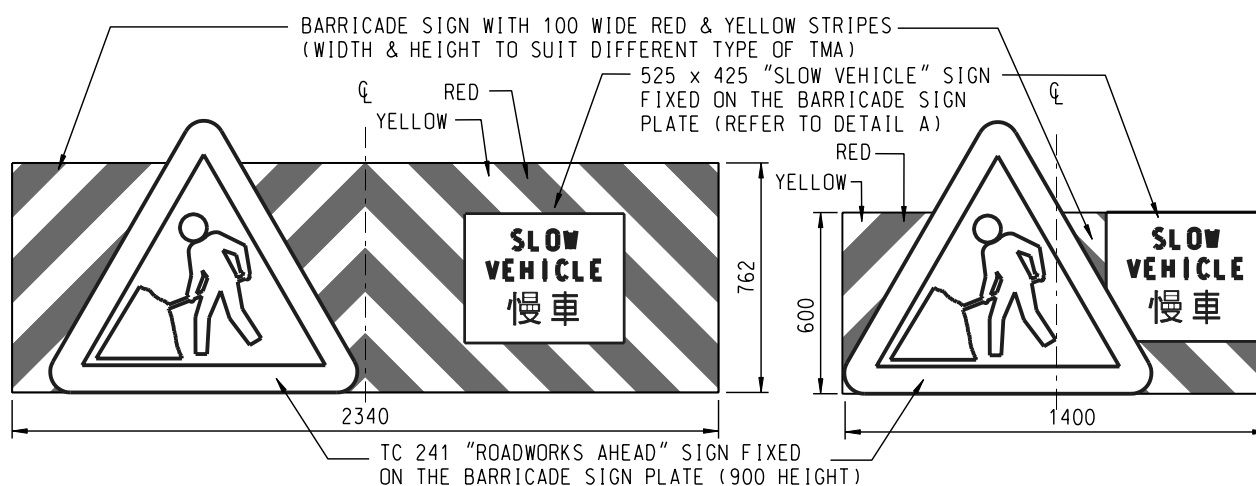
Notes:

1. All dimensions are in millimetres.
2. Details of barricade sign, "ROADWORKS AHEAD" sign and "SLOW VEHICLE" sign are given on Drg. No. MSWS-SIGN. The details may be changed for accommodation of vehicle rear lights to suit the licensing requirements of Transport Department and exact details shall be proposed for acceptance.

title TYPICAL REAR DETAILS OF WORKS VEHICLE / SHADOW VEHICLE WITHOUT TMA	drawn by Leo T Chan	date Sep 04	drawing no. MSWS-WV	scale Not to scale
	approved	date		
	office HIGHWAYS /R & D DIVISION		 HIGHWAYS DEPARTMENT HONG KONG	



REAR MARKING AND SIGNS FOR WORKS VEHICLE / SHADOW VEHICLE WITHOUT TRUCK MOUNTED ATTENUATORS (TMA)

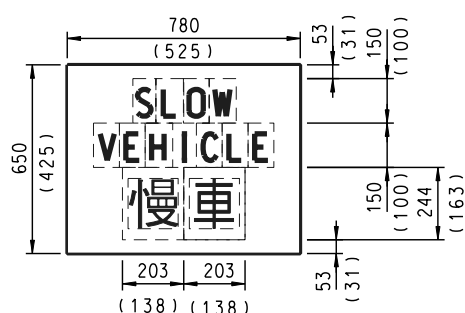


REAR MARKING AND SIGNS FOR SHADOW VEHICLE WITH TMA


Notes:

1. All dimensions are in millimetres.
2. The sizes of barricade sign for shadow vehicle with TMA are to illustrate the positioning of "ROADWORKS AHEAD" sign and "SLOW VEHICLE" sign. The actual size to be adopted and the relative positions of "ROADWORKS AHEAD" sign and "SLOW VEHICLE" sign shall be proposed by the Contractor for acceptance.
3. Sign plate shall be aluminium plate of at least 3mm thick for barricade sign and 1.5mm thick for "ROADWORKS AHEAD"/"SLOW VEHICLE" sign.
4. All sign face sheet material, sign face material, edge sealant, clear coat lacquers and silk screen inks used shall be mutually compatible.
5. All sign faces shall be retro-reflective material of Class 2, BS EN 12899-1:2001. Any part of the back of the 3 signs shall be grey colour if exposed to sight.
6. For "SLOW VEHICLE" sign, the detail shall be as follows:
 - (i) Alphabet style:
 - (a) Letters - Transport Heavy (Transport Department Standard Drawing No. RS/S/20 refers)
 - (b) Chinese Characters - Avector Chinese True Type Fonts (Hong Kong) 全真字庫(港人版) - 粗黑
 - (ii) Colour:

Background - White; Characters & Letters - Red
 - (iii) The rectangular lines forming the tiles do not form part of the actual sign.
 - (iv) The dimensions in brackets apply to "SLOW VEHICLE" sign for shadow vehicle with TMA.



DETAIL 'A'
SLOW VEHICLE SIGN

title TYPICAL REAR DETAILS OF WORKS VEHICLE / SHADOW VEHICLE	drawn by Leo T Chan	date Sep 04	drawing no. MSWS-SIGN	scale Not to scale
	approved	date		
	office HIGHWAYS /R & D DIVISION		 HIGHWAYS DEPARTMENT HONG KONG	

3.8 Cones should be placed close enough together to give an impression of continuity and an appearance of substance. The following maximum cone spacings should be followed:

- Tapers and edges of temporary diversion routes —
- 2m — normal lead in tapers; and on both sides of temporary traffic lane diversions not along existing traffic lanes.
 - 1m — 45° lead in tapers where traffic control is used, or at end tapers.
 - 1m — edges of temporary pedestrian ways adjoining and encroaching onto a carriageway

Along and parallel to traffic lanes —

- 3m — for approach speed up to but not more than 70 km/h
- 9m — at tight bends and near slip roads on roads with approach speed over 85 km/h; and for approach speed 70–85 km/h. (In this situation Road Hazard Warning Lanterns are required to be placed midway between cones and to be mounted on cones. Effectively the road users will see cones at 4.5m maximum spacing with lanterns on every other cones.)
- 18m — for approach speed over 85 km/h and including expressways, except at tight bends or near slip roads. (In this situation Road Hazard Warning Lanterns are required to be placed midway between cones and to be mounted on cones. Effectively the road users will see cones at 9m maximum spacing with lanterns on every other cones.)

3.8 圓錐筒之間最大的間距須如下文所述：

楔形路段及臨時改道路線邊緣 —

- 2米 — 楔形路段一般所需的引入路段；及在並非沿著現有行車線的臨時改道行車線兩旁。
- 1米 — 在成45度角的楔形路段引入段而該路段亦有交通管制措施，或在楔形引出路段。
- 1米 — 佔用行車道並與行車道連接的臨時行人路邊緣。

沿著行車線並與其平行 —

- 3米 — 在來車速度每小時最高不超過70公里的路上。
- 9米 — 在來車速度超過每小時85公里的道路的急彎及近連接路之處；及在來車速度介乎每小時70至85公里之間的路上。
(在這情況下，道路須在兩個圓錐筒之間放置危險警告燈，並須安裝在圓錐筒上，令道路使用者可每隔4.5米看到一個圓錐筒，並每隔一個圓錐筒看到一盞道路危險警告燈。)
- 18米 — 在來車速度超過每小時85公里的道路，包括快速公路，但在急彎或近連接路的道路除外。
(在此情況下，須在兩個圓錐筒之間放置危險警告路燈，並須安裝在圓錐筒上，令道路使用者可每隔9米看到一個圓錐筒，並可每隔一個圓錐筒看到一盞道路危險警告燈。)

3.12 Lanterns should be placed at regular intervals along the line of the obstructions. Individual lanterns should normally be placed midway between successive traffic cones (and therefore follow the same 3, 9 and 18 metre spacing) when placed approximately parallel to the line of traffic. The following maximum lantern spacing should be followed:

Tapers and edges of temporary diversion routes —
8m — normal lead in tapers;

4m — on both sides of temporary traffic lane diversions not along existing traffic lanes, and edges of temporary pedestrian ways adjoining and encroaching onto a carriageway;

1m — 45° lead in tapers where traffic control is used, and end tapers.

Along and parallel to existing traffic lanes —

3m — for approach speed up to but not more than 70 km/h

9m — at tight bends and near slip roads on roads with approach speed over 85 km/h; and for approach speed 70-85 km/h.

18m — for approach speed over 85 km/h and including expressways, except at tight bends or near slip roads.

Lanterns could be placed on the ground or mounted on stands or cones, a maximum of 1.2 m above the ground, except that on roads with approach speed over 70 km/h, mounting on cones is the only acceptable method. When used to protect the leading edge of a sign, lanterns should be carefully placed so that they do not obscure the face of the sign.

When provided on expressways or roads with approach speed over 85 km/h, lanterns should be mounted on cones so that the lens is 1200 mm above the road surface to make them clearly visible above the line of 1000 mm high traffic cones.

3.12 警告燈應沿著障礙物路線相隔固定距離放置。一般而言，當大約與行車線平行放置時，每個警告燈應放置在前後兩個交通圓錐筒的正中間（因此亦依照上述的3、9及18米間距）。下文是應遵守的警告燈最大間距：

楔形路段及臨時改道路線 —

8米 — 楔形路段一般所需的引入路段；及楔形引出路段；

4米 — 並非沿著現有行車線的臨時改道行車線兩旁；及臨時行人路邊緣連接及佔用行車道；

1米 — 在成45度角的楔形路段引入路段而該路段亦有交通管制措施；

沿著行車線並與其平行 —

3米 — 來車速度最高不超過每小時70公里的道路

9米 — 在來車速度超過每小時85公里的道路的急彎及近連接路之處；及在來車速度介乎每小時70至80公里之間的路上，

18米 — 在來車速度超過每小時85公里的道路，包括快速公路，但有急彎或近連接路的道路除外。

警告燈可放置地上或安裝在支架或圓錐筒，並距離路面以上1.2米，但來車速度超過每小時70公里的道路，則只可將警告燈裝置在圓錐筒上。如用警告燈保護標誌的邊緣，則警告燈應小心放置，使警告燈不致遮著標誌牌面。

在快速公路或在來車速度超過每小時85公里的道路，警告燈應放置圓錐筒上，路燈半透明外殼距離路面以上1200毫米，使道路使用者在一列高1000毫米的交通圓錐筒上方亦可清楚看見。

Annex F - Relevant Extract from Existing CoP
附件己 — 來自現有工作準則的有關節錄

Table B Siting of Advance Warning Signs 乙表設置預先警告標誌的位置

Estimated approach Speed of Cars (km/h) 估計來車時速 (公里)	Distance of first sign in advance of road works (m) 道路工程與第一個標誌的距離 (米)	Minimum number of signs in advance of road works 道路工程前面設置標誌的最少數目	Minimum visibility distance of driver to first sign (m) 駕駛人士應能在這距離之前看到第一個標誌 (米)
Up to 50 50以下	Not less than 40 不少過40	2	50
50 to 70 50至70	40-100	2	60
70 to 85 70至85	100-300	3	70
Over 85 超過85	300-600	3	80
Expressways 快速公路	600	3	80

Table C Siting of 'End of Road Works' Sign 丙表設立道路工程終止標誌的位置

Estimated approach Speed of Cars (km/h) 估計來車時速 (公里)	Distance beyond the works (m) 工程範圍之後的距離 (米)
Up to 50 50以下	10-30
50 to 85 50至85	30-55
Over 85 超過85	45-90

Table D Length of Approach Tapers 丁表楔形引入路段長度

Width of Hazard (m) 危險處闊度 (米)	Estimated approach Speed of Car (km/h) 估計來車時速 (公里)			
	Up to 50 50以下	50-70 50至70	70-85 70至85	Over 85 超過85
2.4	20	30	45	60
2.7	23	34	51	69
3.0	26	38	58	76
3.4	29	42	63	84
3.7	32	46	69	91
4.3	36	52	78	108
4.9	40	60	90	122
5.5	44	68	102	138
6.1	49	76	114	152
6.7	54	84	126	168
7.3	60	90	138	182
Minimum Size of Cones (mm) 圓錐筒的最小尺寸 (毫米)	750	750		1000
Cone Spacing (m) 圓錐筒間距 (米)	2	2		2