

#### 2.13.4 At-a-Glance Display (AGD) Board

At-A-Glance Display Board is used for displaying information of the train arriving/ departing from that platform along with coach composition in mono colour. Train information and coach positions are displayed alternatively. These are generally provided at foot-over bridges.

TRAIN No.	EXPT. TIME				A/D	PF No.	
12345	ENG	GRD	SLR	S1	S2	S3	S4
	S5	S6	S7	S8	S9	S10	S11
	PC	B1	B2	B3	A2	A3	H1
	SLR	<=>	LAD	GEN	GEN		

TRAIN No.	EXPT. TIME	A/D	PF No.
12345	10:10	A	10
RAJDHANI EXPRESS			

Figure 16: At- a- Glance Display (AGD) Board

#### 2.13.5 Coach Guidance Display (CGD) Board

Coach Guidance Display Board is used to indicate position of coach No. scheduled for arrival/ departure from that platform for guidance of passengers in mono colour.

TRAIN /COACH No. <b>15046</b>	TRAIN /COACH No. <b>S12</b>	TRAIN /COACH No. <b>GEN</b>	TRAIN /COACH No. <b>ENG</b>
TRAIN /COACH No. <b>एस-12</b>	TRAIN /COACH No. <b>अना.</b>	TRAIN /COACH No. <b>इंजिन</b>	
Train No.	Coach No.	Coach No.	Coach No.

Figure 17: Coach Guidance Display (CGD) Board

### 2.13.6 Display Monitor/LED TV

Display Monitor/ LED TV (Industrial grade capable of working 24x7) is used to display train information similar to that being displayed on Multiline Display Board. Display monitor are generally provided in the enquiry offices, waiting rooms or at any suitable Indoor application only.

23-May-20

BARDDHAMAN

18:03:04

TRAIN NO	TRAIN NAME	A/D	TIME	PF NO
37843	बर्द्धमान लोकल	अनिश्चित देरी		
37848	हावड़ा लोकल	D	00:00	2
12341	अग्निविना एक्सप्रेस	A	19:24	3
53045	रामपुर हाट सवारी गाडी	A	18:21	4
12348	हावड़ा एक्सप्रेस	A	18:29	5
53047	रामपुर हाट सवारी गाडी	रद्द की गई है		
37850	हावड़ा लोकल	परिवर्तीत समय		
11106	प्रथम स्वतंत्रता संग्राम एक्स	परिवर्तीत मार्ग		

Welcome To The Indian Railway Station ,We Wish You A Happy and Safe Journey ,भारत

Discard

Last Updated: 23-05-20 18:03:04

23-May-20

BARDDHAMAN

18:15:42

TRAIN NO	TRAIN NAME	A/D	TIME	PF NO
37843	BARDDHAMAN LOCAL		Indf. Late	
12341	AGNIVEENA EXPRESS	A	19:24	1
53045	RAMPUR HAT PASSENGER	A	18:21	4
53047	RAMPUR HAT PASSENGER		Cancelled	
37850	HOWRAH LOCAL		Rescheduled	
11106	P S SANGRAM EXP.		Diverted	

12341 - AGNIVEENA EXPRESS

ENG	EOG	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	C1	C2	D1
D2	D3	GEN	GEN	GEN	EOG									

Welcome To The Indian Railway Station ,We Wish You A Happy and Safe Journey ,भारत

The service is

Last Updated: 23-05-20 10:16:17

Figure 18: Display Monitor/LED TV

### 2.13.7 NTES Integration

The central server can also extract information from NTES of Railways and should be integrated with the same at all the stations for effective information dissemination for passengers.

### 2.13.8 CAP Integration

NDMA (National Disaster Management Authority) has implemented Common Alerting Protocol (CAP), also called Sachet for geo targeted dissemination of disaster alerts through various media. The display Boards to be provided at stations should be integrated with CAP/Sachet (in near future) so that geo targeted alerts can be delivered to passenger at stations through these display systems.

## 2.14 Illumination

Signage shall preferably be internally illuminated when provided in Station Building and Platform areas. Wherever, non-illuminated boards are provided, sufficient illumination shall be ensured with the help of external lighting.

Signage shall be illuminated wherever required from back using Single/Multiple LED Modules each with IP 65 protection of white colour and rating of appropriate watts. Modules should be uniformly placed in a manner that at least one LED Module every 12 — 16 sq. inch of surface required illumination. Each signage should have an individual power supply adaptor for illumination of all LED installed in signage. The power supply adaptor should be placed inside signage and power supply adaptor should be connected using a plugin type connector connected to mains supply. LED to be used with five-year replacement warranty and specifications of LED module and Driver should be as per table below:

### 2.14.1 Module:

Table 3: LED Module Technical Specifications

Parameter	Module
Module Wattage(W)	≥1 W
Colour Temp (K)	6500K
LED module make	OSRAM/GE CURRENT/LUCO LED/SLOAN
Chip	OSRAM/CREE/NICHIA/LUMILED/SAMSUNG
Module Lumen/Watt	≥150 lm/W
IP Rating	IP66
Beam Angle	≥160
SDCM (colour consistency, binning)	=/< 3.0
CRI	>80
Burning Hrs	50K @Tc Max (L70 B50)
LM79/ERP Report (Energy Related Product)	Yes
LM80 Certificate	YES
BIS Certificate	IS 10322 (Part5/Sec7)- IEC 60598-2-20
CE/RoHS	Yes
Operating Voltage	24V
Operating Temp	-25 to +70 Degree Celsius

## 2.14.2 LED Driver Specification

Table 4: LED Driver Technical Specifications

Parameter	Value
Power Factor	0.95
Input Voltage Range	180V - 270V
THD	<5%
IP Rating	IP67
Line to Earth Surge Protection	6 KV
Line to Neutral Surge Protection	4KV
Efficiency	90%
Expected Lifetime	50K Hrs
CE/ENEC/CB	Yes
BIS Certificate	IS15885
Protections	Yes

- To promote energy efficiency, the lux levels of the illuminated signage boards except emergency signages should be reduced to 50% in selected time slots when the ambient light is still available, or when the passengers/users are below 20% of the average peak hour traffic at the station. Use of Technology to remotely access and control shall be promoted.

## 2.15 Other Design Considerations

- Name of the station shall be shown in full, as in the Working Time Table issued by Railways.
- The Indian Railway logo shall be following the guidelines issued by Indian Railways from time to time. It can be downloaded from the weblink: (<https://IndianRailways.gov.in/Railwayboard/prdirectorat/uploads/pdf/IR%20logos.pdf>).
- Use of abbreviations should be kept to the minimum and only in places where due to space constraints the text has to be reduced. Further abbreviations used should be easily understandable. Some acceptable abbreviations are: Jn. for Junction, AC for Air Conditioned, PRS for Passenger Reservation System, RMS for Rail Mail Service, ROB for Road over bridge, FOB for Foot Over Bridge, SM for Station Master, TTE for Travelling Ticket Examiner, etc.
- Avoid using the ampersand (&), use 'and' instead. For example: Left luggage **and** lost property.

- When used in continuous text, a character space should not be inserted either side of the hyphen. For example: self-service. Also, italics or script texts should be avoided.
- A hyphen should not be used to indicate a time or day period, the term 'to' should be used instead, for example: "Monday to Saturday" or "18:00 to 21:00".
- Dates should be displayed in the order of day, month, year i.e., dd mm yyyy e.g., 01 Jan 2017. Suffixes such as 1<sup>st</sup> or 2<sup>nd</sup> should not be used. The preferred abbreviation for months is as follows: Jan, Feb, Mar, Apr, May Jun, Jul, Aug, Sept, Oct, Nov and Dec.
- The symbol for the Indian Rupee shall be as per the Bureau of Indian Standards IS 13194:1991. The typeface "₹" as the symbol for the Indian Rupee shall be used. The words "INR" or "Rs." shall be avoided on signages everywhere without exception. The characters "₹" and "p" should not appear together in the same figure. For example, values equal to or greater than ₹ 1 should be shown with the "₹" symbol, i.e., ₹ **2.00** and values less than ₹ 1 should be shown with the character "p", i.e., **20p**. The decimal point should be represented with a full point ".".
- The terms 'number' and 'No.' should not be used in phrases such as 'platform 5' or 'telephone +91-XXXXXXXXXX'.
- All times should be shown in the 24-hour clock. A colon ":" should be inserted between the hours and minutes
- Upper case letters (capitals) are only used for the initial letter of a sentence or line of information on a sign panel. All other text is to be displayed in lower case.
- Information of Disabled Friendly Facilities may be provided as per the facility available at the station and as per the statutory requirements.
- The commercial retails at stations shall have standardised and similar size/ format of utility boards.

\*\*\*\*\*



## Section - 3

### Standard Types of Signages

(Refer Para 1.2 (c))


**Note:** The colour coding shall be as per Para 2.4: Colour Scheme. Various sign board shapes and types proposed in this document, along with type code and examples, are as following:


#### 3.1 Flat Signage Indoor

Signage Type		Example
Non-illuminated Double Side (Back-to-Back) Signage	F1	
Non-Illuminated or Illuminated (Wall Mounted) Single Side Signage	F2	

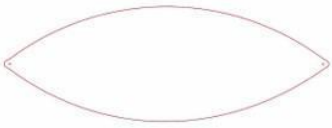

Illuminated Double Side (Back-to-Back) Signage	F3	
Illuminated (Wall Mounted) Single Side Signage	F4	







### 3.2 Flat Signage Outdoor



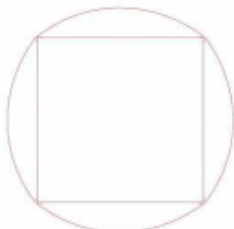

Signage Type		Example
Circulating area Flat double-sided signage	C1	

Circulating area Flat Single sided signage	C2	
---	----	--

### 3.3 Illuminated Elliptical Signage

Signage Type	Type Code	Shape	Example
Double sided Horizontal Elliptical	E1		

Single sided Horizontal Elliptical	E2		
Double sided Horizontal Semi- Elliptical	E3		
Single sided Vertical Semi- Elliptical	E4		

Double sided Vertical Semi- Elliptical	E5		
Four-sided pole mounted Elliptical	E6		

\*\*\*\*\*

## Section - 4

### Technical Specifications

#### 4.1 Materials:

The material for signages recommended above shall be non- reflective matt finish. The surface shall be processed to prevent glare. Some suggested materials for signage include Aluminium Composite Panel (ACP), acrylic, Concrete, Steel, wood etc. The frame of the sign boards should be sturdy and corrosion resistant. The material for fabrication of the frame box should preferably be powder coated aluminium sheet or fibreglass. The signages meant to be installed without any shelter or roof above should be designed as to prevent entry of water inside, even under heavy rains. Weatherproof polymer lining should be used. The general technical specifications of the material which are for guidance only and are not mandatory of the material for different type of signage boards are outlined below:

##### 4.1.1 Elliptical Illuminated Boards:

All the elliptical signage shall be illuminated. The display sheet shall be of unbreakable translucent polycarbonate sheet of 2mm to 3mm thickness. The approved colour text and graphics shall be printed / router cut on monomeric calendered vinyl of 100 µm thickness and shall be firmly pasted on display sheets. The text / graphics matter visibility shall not be less than 160 deg.

The Top Profile of Elliptical Board shall preferably be made up of Aluminium Alloy (6063-T6) Extruded profile anodised to 15 µm +/- 3 µm. The profile nominal wall thickness shall be 2 mm. The reflective metallic silver PU particle coated granules shall be provided on the internal face of the profile. The edges of the profile shall be rounded. The profile shall have a suitable slot at an angle of 80-84 degree to firmly hold the polycarbonate sheet to its required shape. Bottom, top and side Profile shall be made of the same material having 2mm to 5mm wall thickness. The frame of elliptical boards shall preferably be made of Extruded Anodised hollow aluminium profile of size not less than 1.2 mm thickness and anodized to minimum 15µm thickness (Grade AC-15) in approved colour. Anodizing coating shall be as per IS: 1868 or latest amendment.

##### 4.1.2 Aluminium Composite Panel (ACP) Boards:

Board material Aluminium Composite Panel of 4mm total thickness sheet with 0.5mm thick aluminium foil skin on both sides along with minimum 25-micron PVDF coating on top coil and polymer/epoxy coating on Back Coil of 4 to 7 microns. The sheet shall be fixed on aluminium substructure of required size fixed with stainless steel fastenings system and making 25mm grooves and applying non staining and non-streaking sealant with Baker rod. ACP boards can be used with either Vinyl Sheet or Retro reflective sheet.

##### 4.1.3 Aluminium Sheets:

Aluminium sheets used for sign boards shall be of smooth, hard and corrosion resistant aluminium alloy conforming to IS 736 material designation 24345 or 1900. The sheets shall be used with digitally printed reflective vinyl graphic.

## **4.2 Adhesives:**

Two types of adhesives can be used to paste the base sheeting with top surface sheet. Pressure sensitive adhesive of the aggressive tack type requires no heat, solvent or other preparation for adhesion to a smooth clean surface. Tack free adhesive activated by heat requires heat for making a durable bond between materials. The heat is generally applied in a heat vacuum applicator. The adhesive thus formed shall have a durable bond to smooth, corrosion and weather resistant surface of the base plate such that it shall not be possible to remove the sheeting from the sign base material in one piece by use of sharp instrument. The surface preparation and application process shall be in accordance with the manufacturer's specifications.

## **4.3 Fabrication:**

The base material shall be first removed of any grease, oil, scale/dust or any other contaminants with the help of either acid or hot alkaline to obtain a smooth plain surface before the application of top surface sheet. If the base material surface is rough, approved surface primer shall be used. After cleaning, the materials shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of top surface material.

Complete sheets of the material shall be used on the signs except where it is unavoidable. At splices, sheeting with pressure sensitive adhesives shall be overlapped not less than 5 mm. Sheeting with heat activated adhesives may be splices with an overlap not less than 5 mm or butted with a gap not exceeding 0.75 mm. The material shall cover the sign surface evenly and shall be free from twists, cracks, and folds. Cut-outs to produce legends and borders shall be bonded with the sheeting in the manner specified by the manufacturer.

## **4.4 Text, Pictograms and Arrows:**

The information on the sign boards shall either be screen printed or of cut outs. Screen printing shall be processed and finished with materials and in a manner specified by the sheeting manufacturer. Cut-outs shall be of materials as specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer.

\* \* \* \* \*

## Annexure A

### Do's and Don'ts

(Refer Para 2.1 and 2.5)

Examples of rightly (designated with ✓) and wrongly (designated with ✗) ranged text on signs:

#### i. Alignment:

Alignment and ranging must follow the direction of arrows. That is, if the arrow is pointing *Right*, then the text must be aligned to the *Right*. Change in gradient/ramp location shall be informed by sign in advance especially in fast moving spaces.

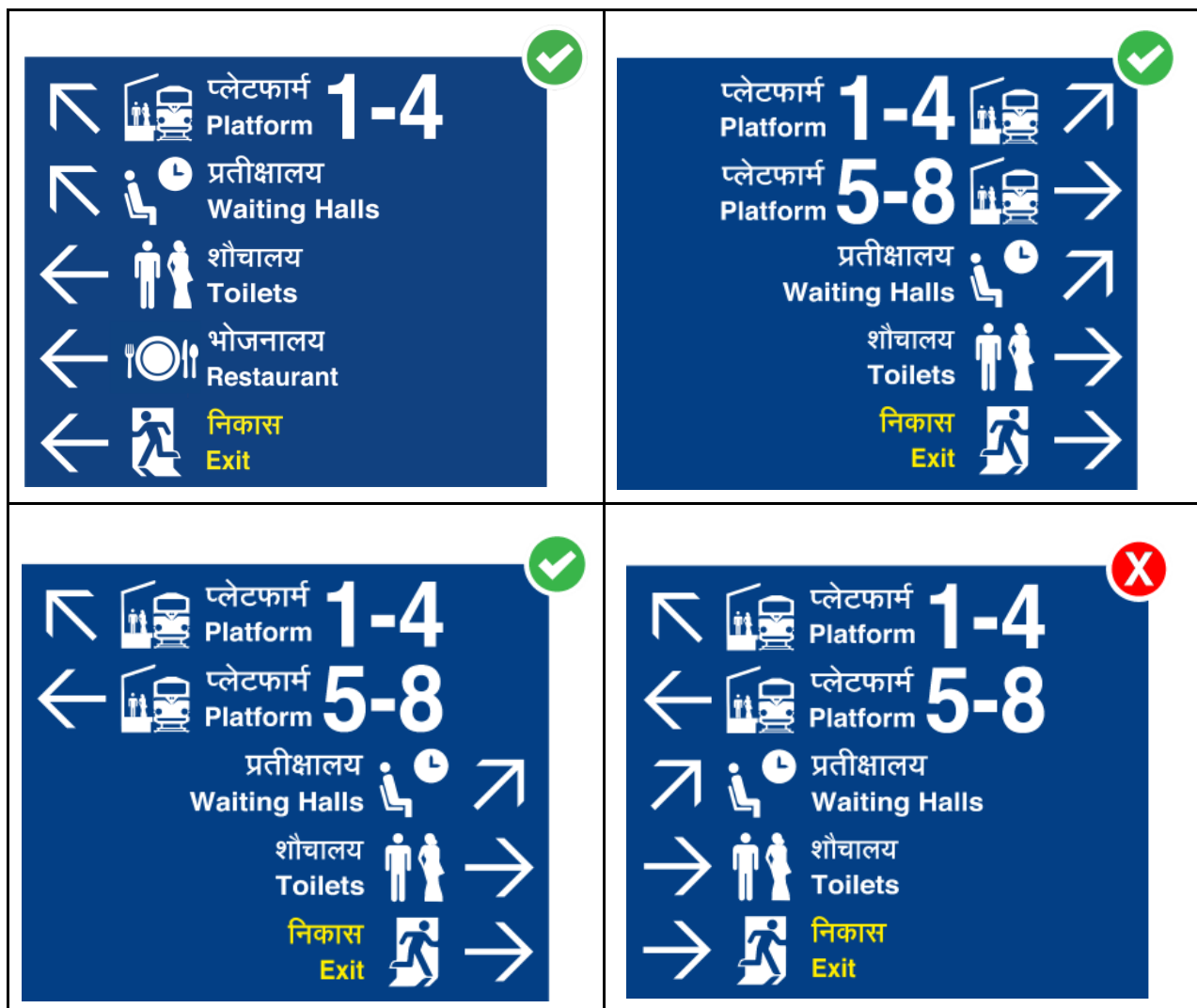


Figure 19: Example of Right and Wrong Text Layout

## ii. Information Hierarchy:

A hierarchy of importance should be followed within the station premises correlating with the station users' needs.

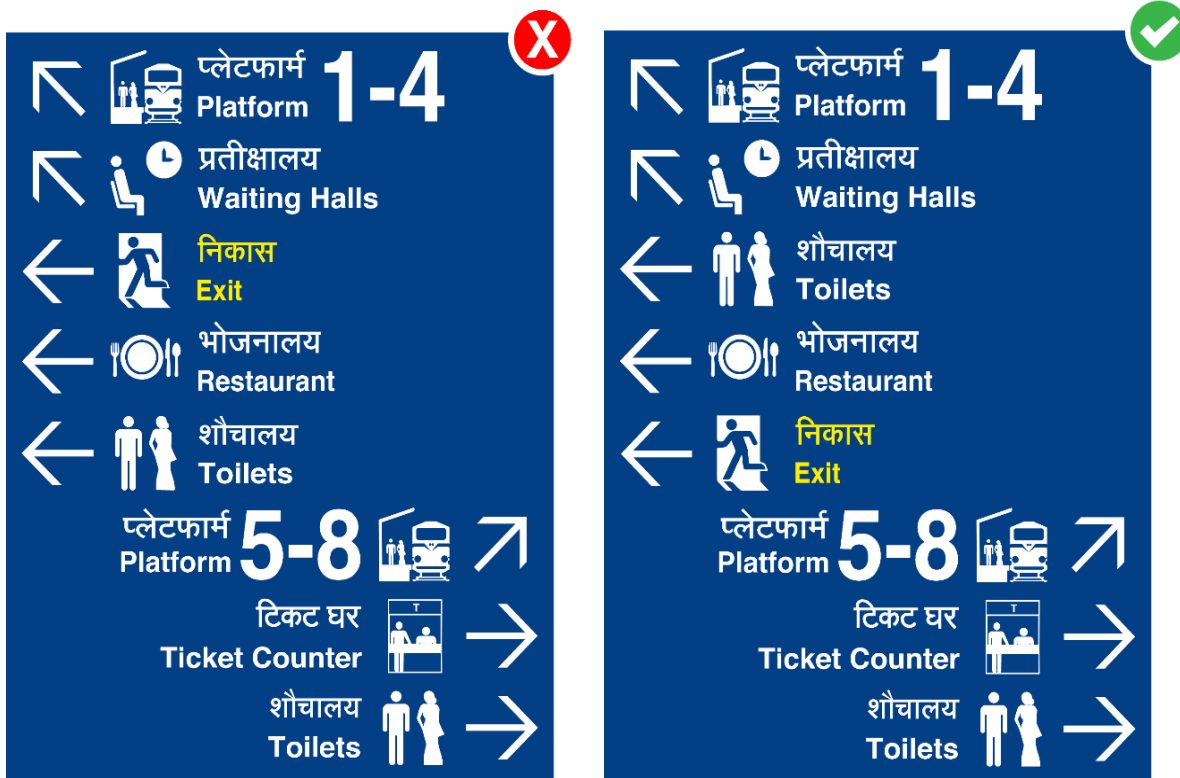


Figure 20: Examples of right and wrong informational hierarchy

\*\*\*\*\*

## Annexure B

### Pictograms

(Refer Para 2.6)

The visual depiction of the pictogram icons is given in the table below. The Pictograms illustrated here are shown in monochrome and colour may be suitably changed as per the colour scheme mentioned in Para 2.4. The vector images of the illustrated below pictograms can be directly downloaded from Railway Board Website.

				
Platform	Ticket Counter	Assistance	Information	Lost and Found
				
Gents Toilet	Ladies Toilet	Divyangjan Friendly Toilets	Ladies Divyangjan Toilet	Gents Divyangjan Toilet
				
Divyangjan Water Tap	Drinking water fountain	Wheel Chair Assistance	Accessible Ramp	Tourist Info.
				
Waiting Hall	Executive Lounge/AC Waiting Hall	Squat	Drinking Water	Lift



Wi-Fi Zone



CCTV



EV Charging



A.T.V.M



A.T.M.



Vision Impaired



Hearing impaired



Limited walking capability



Pedestrian



Sahyog Counter



Escalator



Escalator - Up



Escalator - Down



Travelator



Cloak Room



Stairs



Stairs - Up



Stairs - Down



Accessible Emergency Exit



Railway Offices



Fire Extinguisher



Litter



Caution wet floor



Recycle



Taxi



Bus



Bicycle



Two-Wheeler



Three-Wheeler



Parking



Station Manager



Pedestrian



Mobility Assistance



No Smoking



Baby Care



Meeting point



Retiring Room/  
Dormitory



Running room /  
TTE Lobby



Mobile Charging



Priority seating



Priority Seating



Soap Dispenser



Hand Dryer



O.R.H.



Book Stall



Restaurant



Exit

If a representative icon is not available in the list, then reference shall be drawn from Industry wide used good icons and used with approval of concerned DRM.

\*\*\*\*\*

## Annexure C

### Signages for a Small/Medium Size Station

Indicative type of boards and their positioning for a small/medium station is illustrated as under. The location, type of board and graphic are indicative for the purpose of guidance only, actual type of board, location and matter on sign board may be decided based on the station specific requirements like space availability, location of various utilities, viewing distances etc. However, the graphics should be developed as per the guidelines in this document:

Board Positioning and Board Type	Board Drawing
Signage board proportions showing text/line spacing	
<p>Station name sign on Gantry at each main entrance to circulating area Type: C2</p> <p>Size: L (value as required) X Height 750 mm;</p>	
<p>Station name sign on Gantry at each main entrance to circulating area (When used with lane identification) Type C2</p> <p>Size: L (value as required) X Height 900 mm</p>	