

Signage Reference Manual for Bus Stop Shelter



Bus

UNCONTROLLED COPY

04 July 2022

Date of Print

Transit Signs for
Bus Stop Shelters

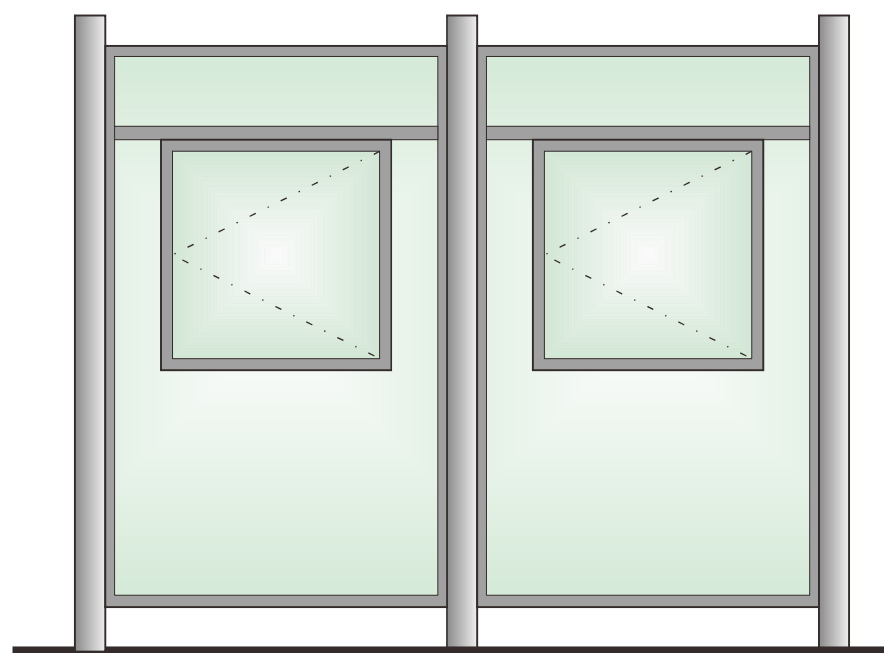


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- B6 : No Smoking Prohibition Sign
- B7 : Bus Stop Pole
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North Buona Vista Rd B01

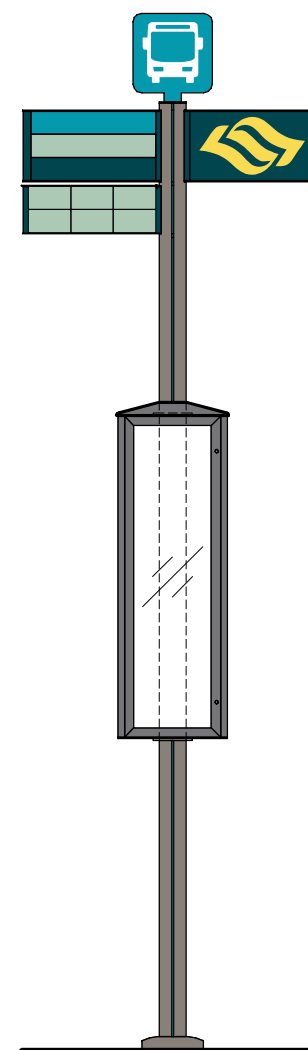
Bus Stop Shelter Address sign
sign code: IP4(AP)



Bus Stop Shelter Information/Notice Boards
sign code: NP6

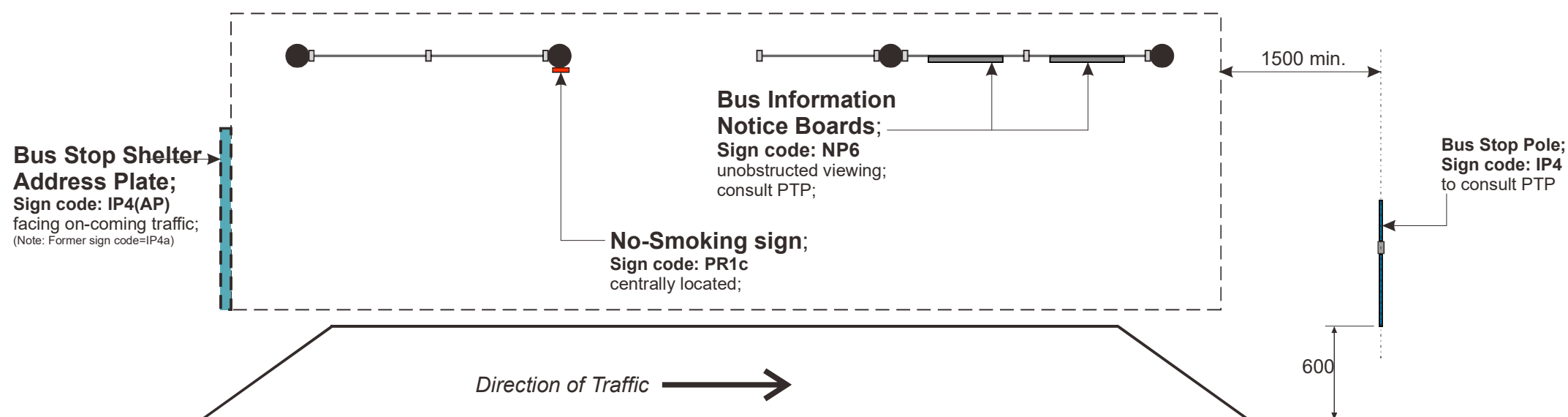


No Smoking Prohibition sign
sign code: PR1c



Bus Stop Pole
sign code: IP4

Bus Stop Shelter Sign Inventory (not to scale)



Sketch plan of Bus Stop Shelter Signage (not to scale)

NOTE: This schematic sketch plan is intended to indicatively show the provision of signage; it may not be a true representation of a bus stop shelter design.

Reference Manual: Bus Stop Shelter Signs

Bus Stop Shelter Signs

Bus stop shelters shall be provided with the following signs:-

- Bus Stop Shelter Address sign : Sign code: **IP4(AP)**
- Bus Stop Shelter Information / Notice Boards: Sign code: **NP6**
- No Smoking Prohibition sign: Sign code: **PR1c**
- Bus Stop Pole sign: Sign code: **IP4** (consult Public Transport Promotion Division - PTP)

SPECIAL NOTE on BUS STOP POLE:

Positioning of Bus Stop Pole:-

- LTA's Road Infrastructure Management (RIM) Division and PTP Division should be consulted on the guidelines for the setting-out and positioning of the Bus Stop Pole.

Provision of Bus Stop Pole:-

- **For Reconstruction / Relocation of Existing Bus Stops/Shelters:**
 - The existing Bus Pole Shall be reinstated by the Civil Contractor.
- **For New Bus Stops/Shelters:**
 - It is the scope of the Civil Contractor to provide the new Bus Stop Pole; the Civil Contractor must procure it through the Authority's term contractor for Bus Stop Pole (consult LTA's PTP Division).

SPECIAL NOTE on NOTICE BOARDS:

Although the minimum provision is stipulated as 2 nos. please note the following:-

- **For Reconstruction / Relocation of Existing Bus Stops/Shelters:**
 - The existing quantity of Notice Boards must be provided; i.e. if there are 3 or more Notice Boards, the same quantity must be provided. LTA's PTP Division must be consulted for confirmation.
- **For New Bus Stops/Shelters:**
 - LTA's PTP Division must be consulted to determine the quantity of Notice Boards to be provided.

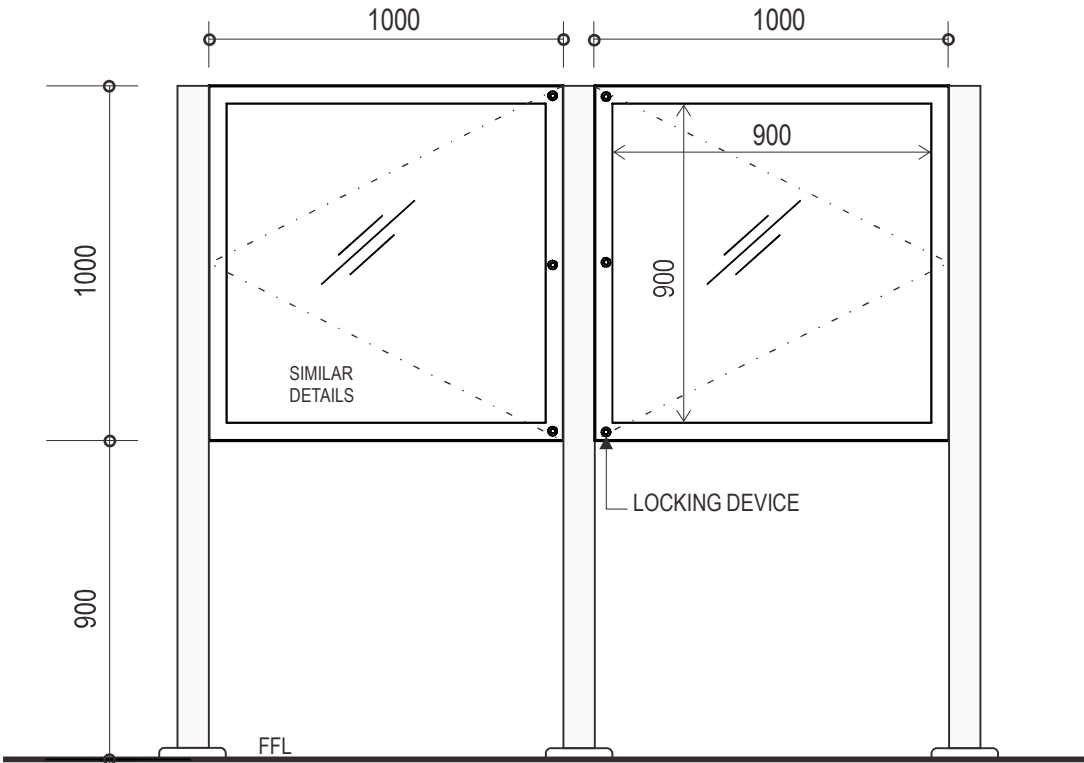
BUS STOP SHELTER NOTICE BOARD
WITH LED STRIP LIGHT C/W WITH
CLIP SECURED ON ALUM FRAME

LOCKING DEVICE

RAINSCREEN TO BE FRAMED
ON ALL SIDES

FFL

ELEVATION - BUS STOP SHELTER NOTICE BOARD
SURFACE MOUNTED - A SET OF 2 PANELS
(e.g. on Wall or Glazed Panel)



ELEVATION - BUS STOP SHELTER NOTICE BOARD
FLOOR MOUNTED - A SET OF 2 PANELS

GENERAL REQUIREMENTS:-

- EACH DOUBLE-SIDED NOTICE BOARD HAS 2 POSTERS, ONE VIEWED FROM THE FRONT AND THE OTHER FROM THE REAR.
- ACCESS FOR MAINTENANCE & INSTALLATION OF THE POSTER/S SHALL BE FROM THE OPENABLE FRONT PANEL. THE REAR GLASS PANEL IS FIXED.
- POWDER-COATED ALUM FRAME, PANEL & SUPPORTS TO GRAY:RAL9007
- SLIM PANEL WITH DEPTH OF 60mm MAXIMUM.
- OPENABLE FRONT PANEL WITH 4mm THK TEMPERED GLASS; SWING TO 60 DEGREES MINIMUM; VIEW SIZE OF THE GLASS FOR BOTH SIDES OF THE NOTICE BOARD IS 900mmx900mm.
- THE INTERNAL FACE OF BOTH GLAZED PANELS SHALL BE DESIGNED TO SECURE POSTERS OF 940mmx940mmx1mm.
- POSTERS SHALL BE SECURED WITH STAINLESS STEEL CLIPS THAT ARE PERMANENTLY FIXED ONTO THE ALUM FRAME OF THE PANELS. THE POSTERS SHALL FIT EXACTLY, BE VERTICALLY FLAT & SHALL NOT SLIP OR WARP. THE CLIPS SHALL NOT BE VISIBLE FROM THE VIEW AREA (THE FRONT OF THE GLASS PANEL)
- INTERNALLY, THERE SHALL BE AN OPENABLE (SWING) SEPARATOR OF 2mm THK ALUMINIUM COMPOSITE PANEL (GRAY COLOUR), HINGED ON ONE SIDE AND WITH A SIMPLE SECURING DEVICE AT THE OTHER SIDE. THIS SEPARATOR VISUALLY ISOLATES THE INTERNAL FACES OF THE FRONT AND REAR POSTERS. THE CLIPS SHALL NOT BE VISIBLE FROM THE VIEW AREA (THE FRONT OF THE GLASS PANEL)
- THE DESIGN OF THE NOTICE BOARD SHALL FACILIATE QUICK, EASY & UNOBSTRUCTED CHANGE OF THE POSTERS.
- LOCKING DEVICE - 3 NOS. PER PANEL: M6 STAINLESS STEEL SCREW WITH 4mm HEX-PROFILE SCREWED INTO THREADED BLIND (CONCEALED) RIVET NUTS.
- THE SIGN-BOX SHALL BE CONSTRUCTED TO A RATING OF IP65.
- STAINLESS STEEL HINGE or INTEGRATED CONCEALED HINGE.
- ALL COMPONENTS & MATERIALS SHALL BE DURABLE & CORROSION-RESISTANT; FIXING MATERIALS SHALL BE STAINLESS STEEL.
- CIRCULAR STAINLESS STEEL (GRADE 316) COVER PLATE WHERE REQUIRED TO CONCEAL THE BASE-PLATE; SECURED BY RECESSED STAINLESS STEEL HEX-PROFILE SCREWS.
- A REGISTERED PROFESSIONAL CIVIL ENGINEER SHALL BE ENGAGED FOR THE DESIGN AND ENDORSEMENT.
- FOR FLOOR MOUNTED VERSIONS, THE REQUIREMENT FOR ELECTRO-POTENTIAL BONDING/EARTHING SHALL COMPLY WITH CURRENT REGULATIONS, AND SHALL BE VERIFIED BY A LICENSED ELECTRICAL WORKER.

Reference Manual:
Bus Stop Shelter Signs

Bus Stop Shelter Notice Board
(for Bus Service Information)
Sign code: NP6
Double-sided panels

Basic specifications

Each bus stop shelter shall be provided with a minimum of 2 nos. Notice Board. More notice boards may be required for bus stops in the city or around town centres. This can be verified in consultation with the LTA's Public Transport Promotion (PTP) Division.

The information incorporated on the posters (provided by Transit Link) are basically bus services and their respective service routes, street index and fare pricing.

The Notice Boards shall be positioned under shelter, clear of obstructions to allow comfortable viewing and provided with concealed lighting. All electrical elements shall be concealed.

They can be either floor mounted on supports, or surface mounted on a wall or tempered glass panel.

Each notice board is typically double-sided, i.e. a poster at the front and another at the rear.

Single-sided Notice Boards: Where viewing is obstructed at the rear of the bus shelter, single-sided notice boards are allowed. In such instances, the rear of the notice board shall be sealed with a powder-coated aluminium panel.

SPECIAL NOTE on NOTICE BOARDS:

Although the minimum provision is stipulated as 2 nos. please note the following:-

- **For Reconstruction / Relocation of Existing Bus Stops/Shelters:**
 - *The existing quantity of Notice Boards must be provided; i.e. if there are 3 or more Notice Boards, the same quantity must be provided. LTA's PTP Division must be consulted for confirmation.*
- **For New Bus Stops/Shelters:**
 - *Especially for bus stops in the city area, around housing estate town centres, outside MRT stations and Bus Interchanges,-LTA's PTP Division must be consulted to determine if more Notice Boards need to be provided*

BUS STOP SHELTER NOTICE BOARD
WITH LED STRIP LIGHT C/W WITH
CLIP SECURED ON ALUM FRAME

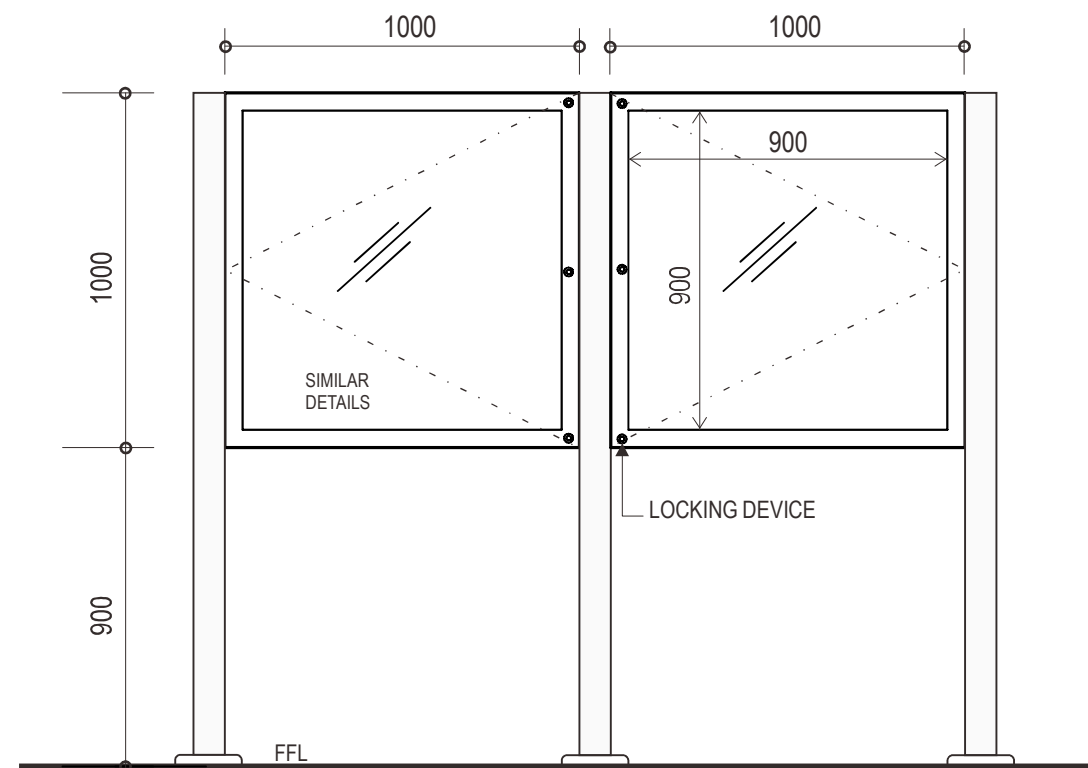
LOCKING DEVICE

RAINSCREEN TO BE FRAMED
ON ALL SIDES

FFL

ELEVATION - BUS STOP SHELTER NOTICE BOARD

SURFACE MOUNTED - A SET OF 2 PANELS
(e.g. on Wall or Glazed Panel)



ELEVATION - BUS STOP SHELTER NOTICE BOARD

FLOOR MOUNTED - A SET OF 2 PANELS

GENERAL REQUIREMENTS:-

- SINGLE-SIDED NOTICE BOARDS ARE VIEWED FROM FRONT ONLY.
- POWDER-COATED ALUM FRAME , PANEL & SUPPORTS TO GRAY:RAL9007
- SLIM PANEL WITH DEPTH OF 60mm MAXIMUM.
- OPENABLE FRONT PANEL WITH 4mm THK TEMPERED GLASS; SWING TO 60 DEGREES MINIMUM; VIEW SIZE OF THE GLASS IS 900mmx900mm.
- THE SIGNBOX SHALL BE DESIGNED TO INTERNALLY FIT A POSTER OF 940mmx940mmx1mm.
- THE POSTER SHALL BE SECURED WITH STAINLESS STEEL CLIPS. THEY SHALL FIT EXACTLY, BE VERTICALLY FLAT & SHALL NOT SLIP OR WARP. THE CLIPS SHALL NOT BE VISIBLE FROM THE VIEW AREA (THE FRONT OF THE GLASS PANEL)
- THE DESIGN OF THE NOTICE BOARD SHALL FACILITATE QUICK, EASY & UNOBSTRUCTED CHANGE OF THE POSTER.
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- STAINLESS STEEL HINGE or INTEGRATED CONCEALED HINGE.
- ALL COMPONENTS & MATERIALS SHALL BE DURABLE & CORROSION-RESISTANT; FIXING MATERIALS SHALL BE STAINLESS STEEL.
- CIRCULAR STAINLESS STEEL (GRADE 316) COVER PLATE WHERE REQUIRED TO CONCEAL THE BASE-PLATE; SECURED BY RECESSED STAINLESS STEEL HEX-PROFILE SCREWS.
- A REGISTERED PROFESSIONAL CIVIL ENGINEER SHALL BE ENGAGED FOR THE DESIGN AND ENDORSEMENT.
- FOR FLOOR MOUNTED VERSIONS, THE REQUIREMENT FOR ELECTRO-POTENTIAL BONDING/EARTHING SHALL COMPLY WITH CURRENT REGULATIONS, AND SHALL BE VERIFIED BY A LICENSED ELECTRICAL WORKER.

Reference Manual: Bus Stop Shelter Signs

Bus Stop Shelter Notice Board (for Bus Service Information)

Sign code: NP6

Single-sided panels

Basic specifications

Each bus stop shelter shall be provided with a minimum of 2 nos. Notice Board. More notice boards may be required for bus stops in the city or around town centres. This can be verified in consultation with the LTA's Public Transport Promotion (PTP) Division.

The information incorporated on the posters (provided by Transit Link) are basically bus services and their respective service routes, street index and fare pricing.

The Notice Boards shall be positioned under shelter, clear of obstructions to allow comfortable viewing and provided with concealed lighting. All electrical elements shall be concealed.

They can be either floor mounted on supports, or surface mounted on a wall or tempered glass panel.

SPECIAL NOTE on NOTICE BOARDS:

Although the minimum provision is stipulated as 2 nos. please note the following:-

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- *The existing quantity of Notice Boards must be provided; i.e. if there are 3 or more Notice Boards, the same quantity must be provided. LTA's PTP Division must be consulted for confirmation.*

- **For New Bus Stops/Shelters:**

- *Especially for bus stops in the city area, around housing estate town centres, outside MRT stations and Bus Interchanges,-LTA's PTP Division must be consulted to determine if more Notice Boards need to be provided*

Reference Manual:
Bus Stop Shelter Signs

Bus Stop Shelter Address Plate
Sign code: IP4(AP)

This sign carries the address of the bus stop shelter for easy identification, and the maintenance of an account for services.

- The sign consist of the following:
- Street Name
 - Unique B-series code issued by LTA’s division (Roads) in charge of bus shelter maintenance.

Location
Line of sight shall not be compromised by obstructions e.g. covered linkways etc.

The standard location of this sign is on the (typical)bus stop shelter canopy/roof, along the leading edge facing on-coming traffic. As an alternative, only if the standard location is not feasible, it can be positioned on the front of the shelter, parallel to the road.

For bus stop shelter with high canopy/roof, the sign shall be suspended with rigid brackets/rods along the leading edge facing on-coming traffic.

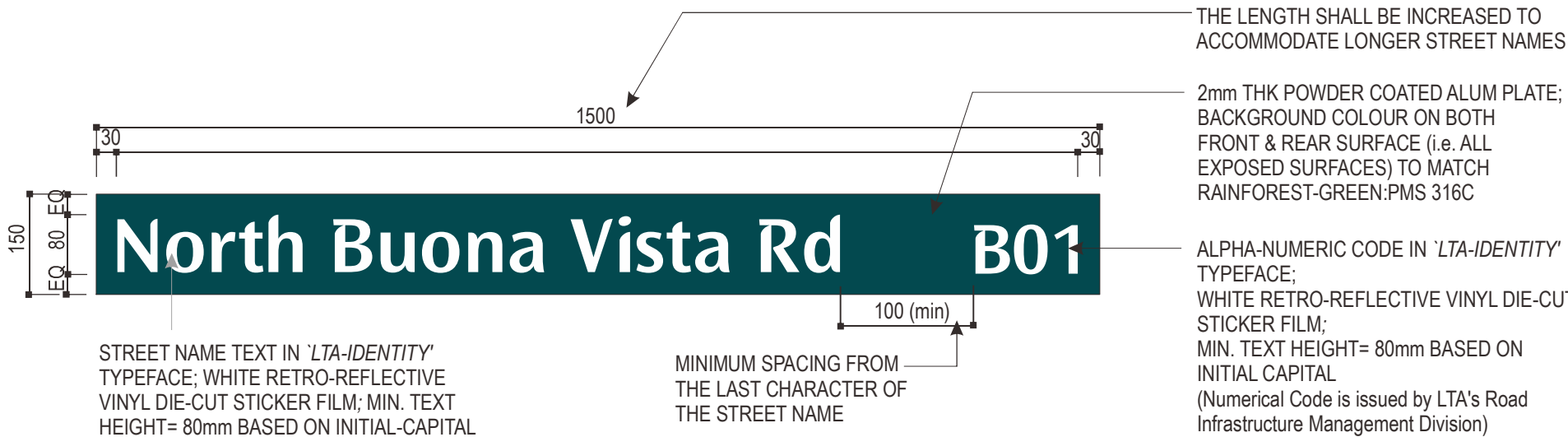
- Mounting
- The fixing shall be rigid
 - Fixed with stainless steel (Grade 316) bracket system or rigid hangers where appropriate.

Note on Typeface

- ‘LTA-identity’ is a proprietary typeface owned by the Authority.
- Signage contractor fabricating the sign may obtain a softcopy of the typeface from the Authority with an application for a user Licence and payment of a nominal Licence Fee.
- There may be a few signage contractors currently working on related transit projects, who may have already obtained the typeface.

Typeface: ‘LTA-identity’ :-

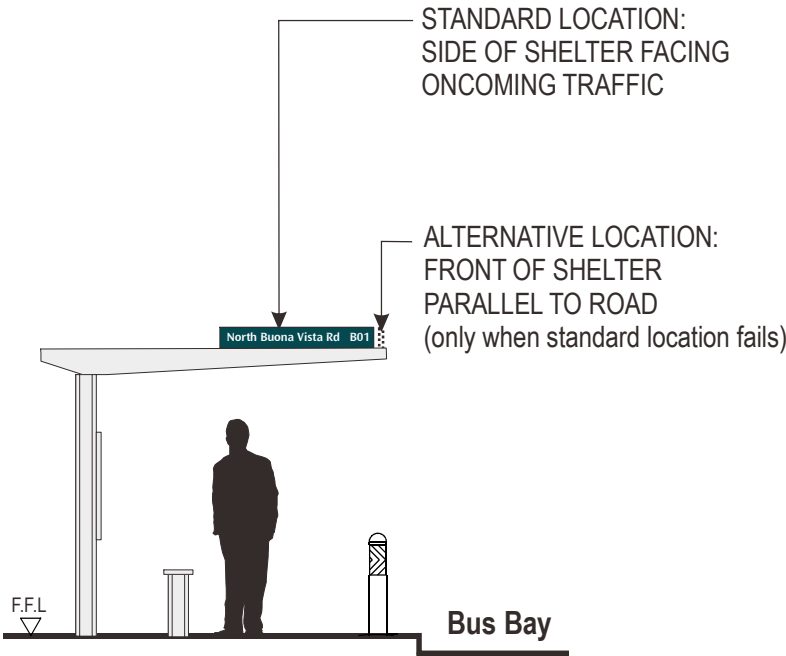
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
abcdefghijklmn
opqrstuvwxyz
1234567890



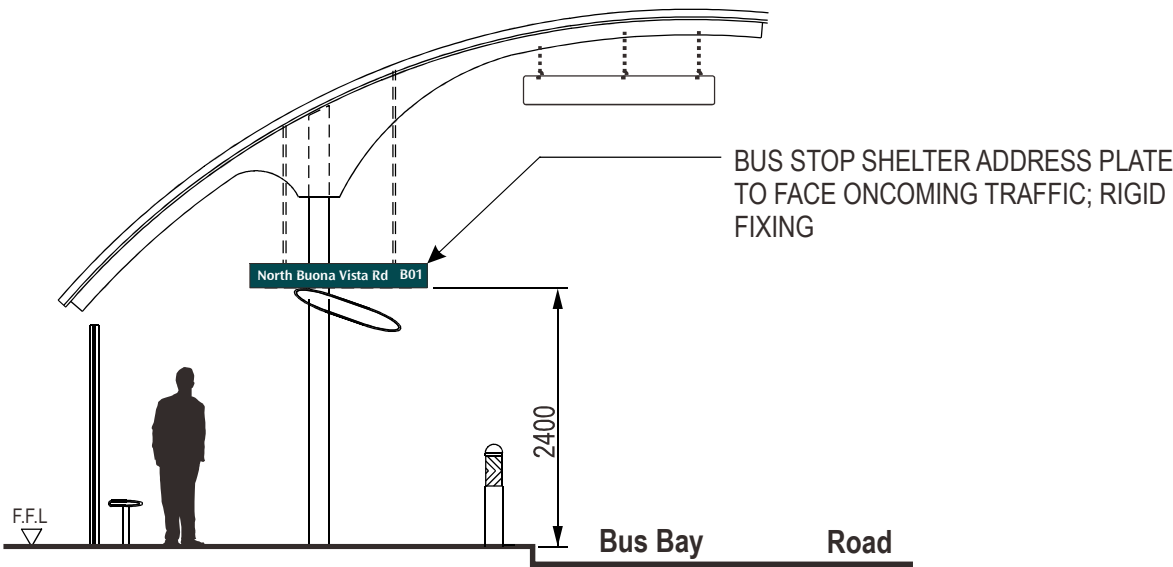
BUS STOP SHELTER ADDRESS PLATE
SIZE: 1500 x 150

GENERAL REQUIREMENTS:

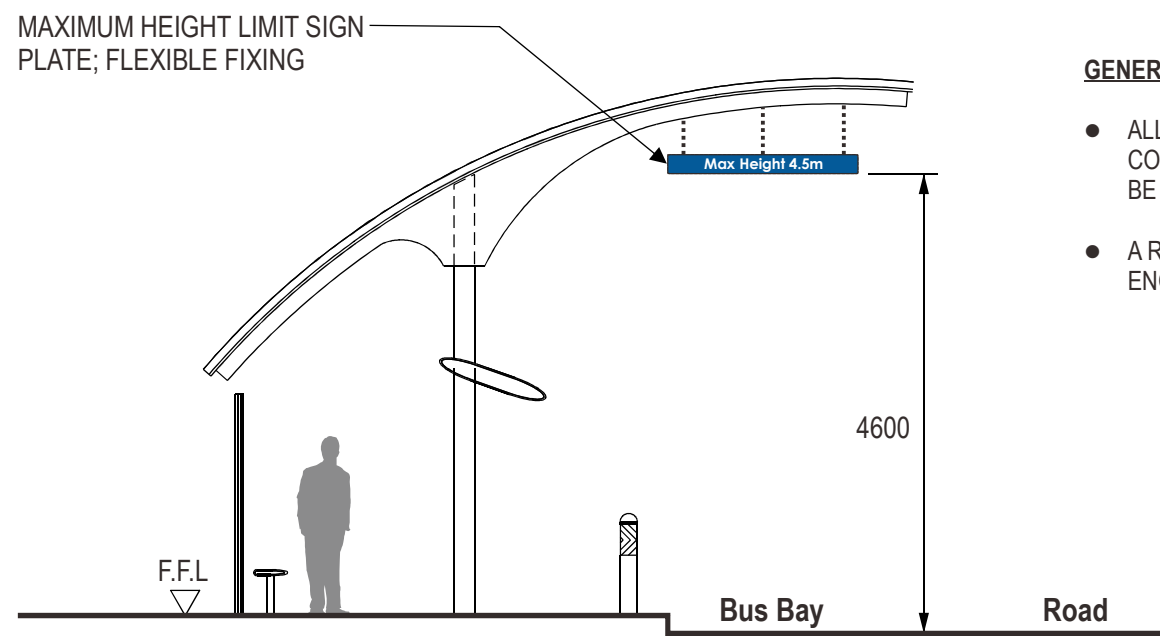
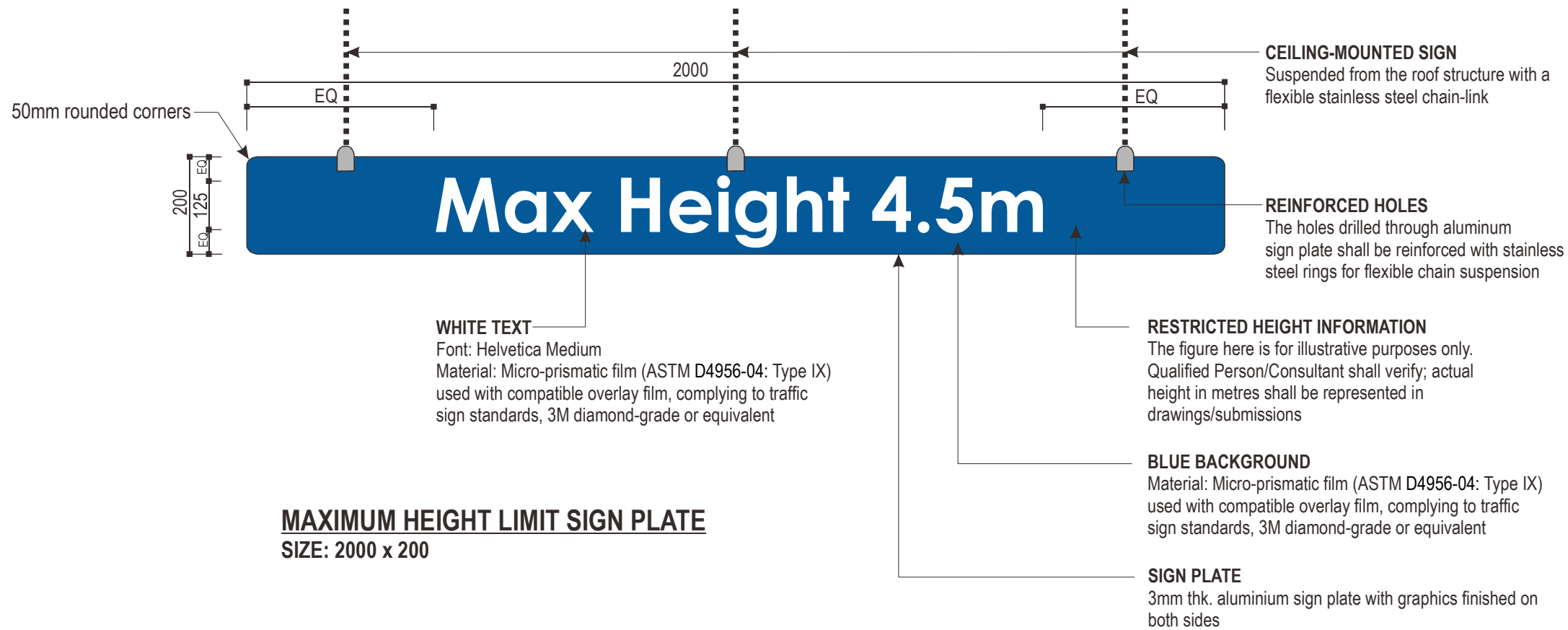
- TYPEFACE/FONT-TYPE: THE TYPEFACE USED FOR THE PLAN SUBMISSION IS FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL TYPEFACE 'LTA-IDENTITY' SHALL BE USED FOR FABRICATION OF THE SIGN.
- THE SIGN PLATE FIXING SHALL BE SECURE AND RIGID.
- ALL COMPONENTS & MATERIALS SHALL BE CORROSION RESISTANT.



SIDE ELEVATION OF
STANDARD BUS STOP SHELTER (TYPICAL)
(nts)



SIDE ELEVATION OF STANDARD BUS STOP SHELTER WITH HIGH ROOF
NEAR MRT STATION
(nts)



SIDE ELEVATION OF BUS STOP SHELTER WITH HIGH ROOF
(nts)

GENERAL REQUIREMENTS:-

- ALL COMPONENTS & MATERIALS SHALL BE DURABLE & CORRSION-RESISTANT; ALL SIGNAGE FIXING MATERIAL SHALL BE IN STAINLESS STEEL
- A REGISTERED PROFESSIONAL CIVIL ENGINEER SHALL BE ENGAGED FOR DESIGN AND ENDORSEMENT.

Reference Manual:
Bus Stop Shelter Signs

Shelter Height Limit Sign
Sign code: SHL

This sign is displayed as a mandatory instruction on the allowable height clearance of the bus stop shelter with high roof over the bus bay.

Location and Application

- This sign is suspended from the edge of the roof structure, facing on-coming traffic.

Graphics

- See illustration.
- The sign is finished on both sides with the similar artwork/text.

Mounting

- Fixing detail to be proposed by the Designer/Contractor to suit shelter roof detail.
- Detailing, material, specifications and construction shall take into consideration durability of the fixing against the wear and tear caused by the swaying of the hung sign plate.
- Robust design with safety factor to be considered in the event of vehicles knocking into the sign.

Note on Typeface

- 'LTA-identity' is a proprietary typeface owned by the Authority.
- Signage contractor fabricating the sign may obtain a softcopy of the typeface from the Authority with an application for a user Licence and payment of a nominal Licence Fee.
- There may be a few signage contractors currently working on related transit projects, who may have already obtained the typeface.

Reference Manual:
Bus Stop Shelter Signs

No Smoking Prohibition Sign
Sign code: PR1c

This sign is displayed at all bus stop and taxi shelters.
For adequate coverage, one sign is provided for every 9metre length of shelter.

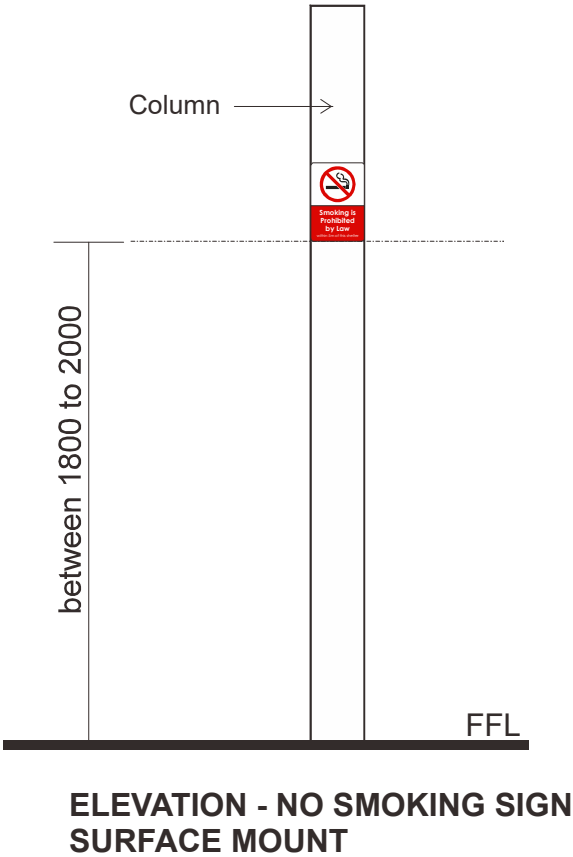
Location
It is centrally located at the bus stop shelter, usually on a column structure.

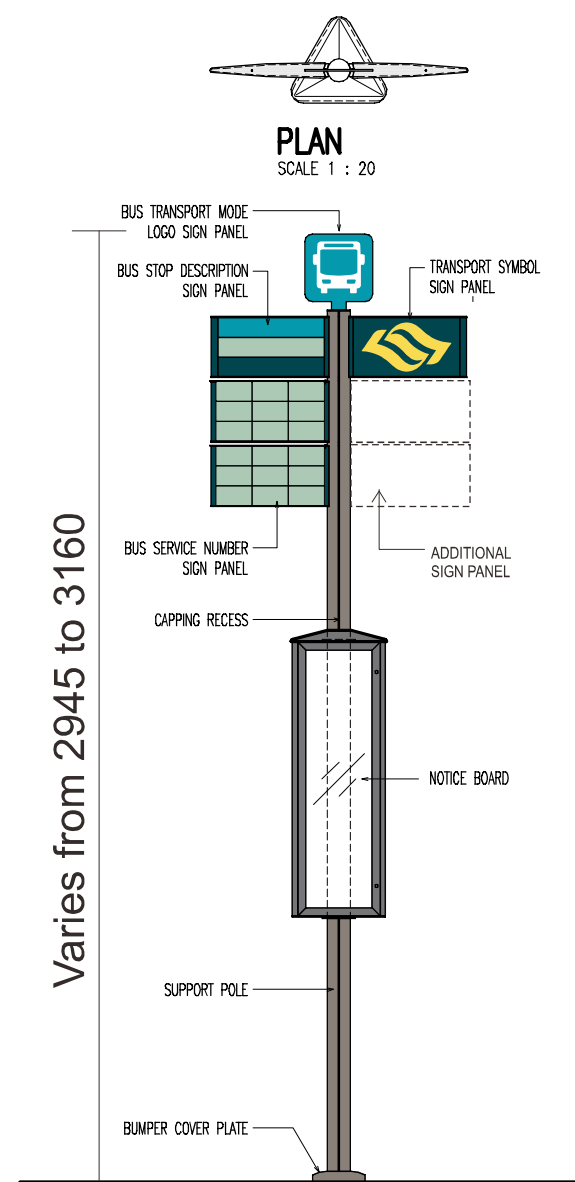
The text message on this sign was advised by the National Environmental Agency (NEA). Public enforcement is by NEA.

- Materials and Finishes
- (1) ‘ultra violet (UV)-cured’ printed graphics on 2mm thk anodised alum. installed with very high bond double-sided adhesive tape or alum. brackets
 - (2) If the sign needs to be installed to conform to the profile of a circular structure: ‘ultra violet (UV)-cured’ printed graphics on outdoor heavy-duty vinyl sticker against a backing of 1mm thick polycarbonate. installed with very high bond double-sided adhesive tape.



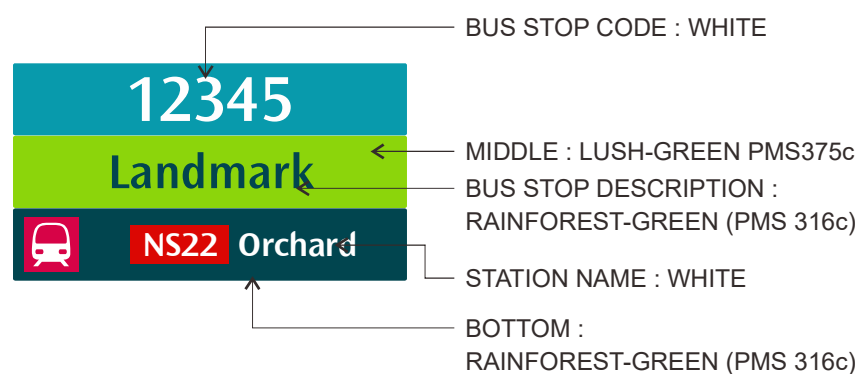
'NO-SMOKING' PROHIBITION SIGN
SIZE: 150 x 220



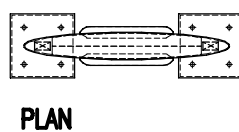


BUS STOP POLE: TYPE A

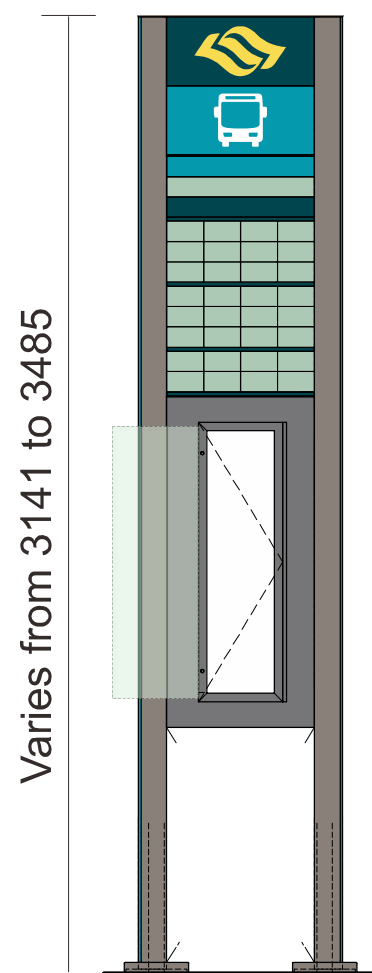
[There are sub-variations of Type A]



**BUS STOP DESCRIPTION
SIGN PANEL**

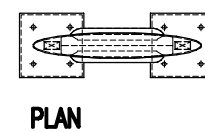


PLAN

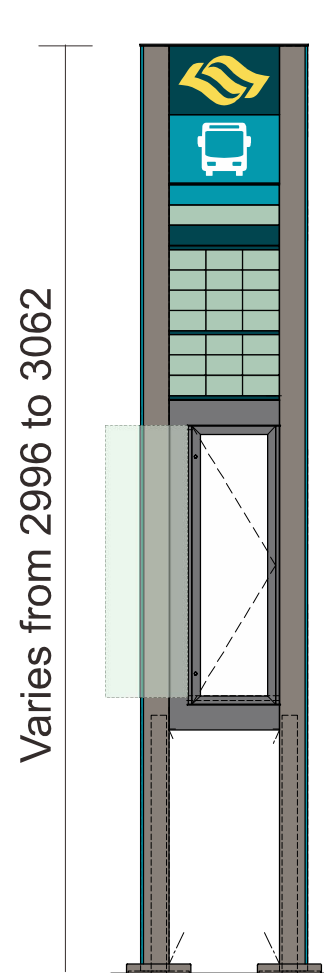


**BUS STOP POLE:
TYPE C**

[There are sub-variations of Type C]

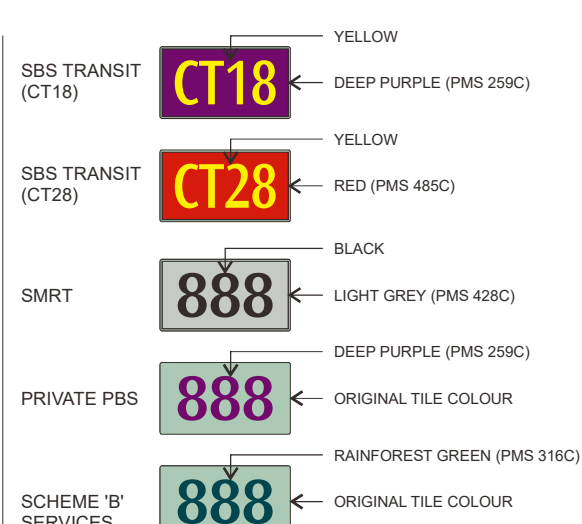
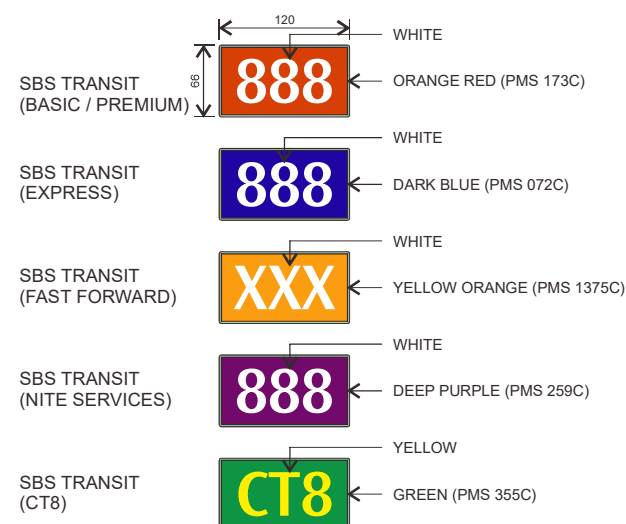


PLAN



**BUS STOP POLE:
TYPE D**

[There are sub-variations of Type D]



TILES ON BUS SERVICE SIGN PANEL

Reference Manual: Bus Shelter Signs

Bus Stop Pole Sign code: IP4

This sign is displayed at all bus stops. It identifies the bus stop and provides some basic information for commuters.

Typology

- IP4 (Type A) - Typical
- IP4 (Type C) - for bus stops within the city (CBD)
- IP4 (Type D) - for bus stops within HDB Town centres and around MRT stations

Public Transport Promotion Division (PTP)

Whilst the system-wide identity and branding is derived from the transit signage guidelines (DGM), the regulator & custodian of the bus stop pole implementation, application and specifications, is the Public Transport Promotion (PTP) Division. The division should be contacted for further details.

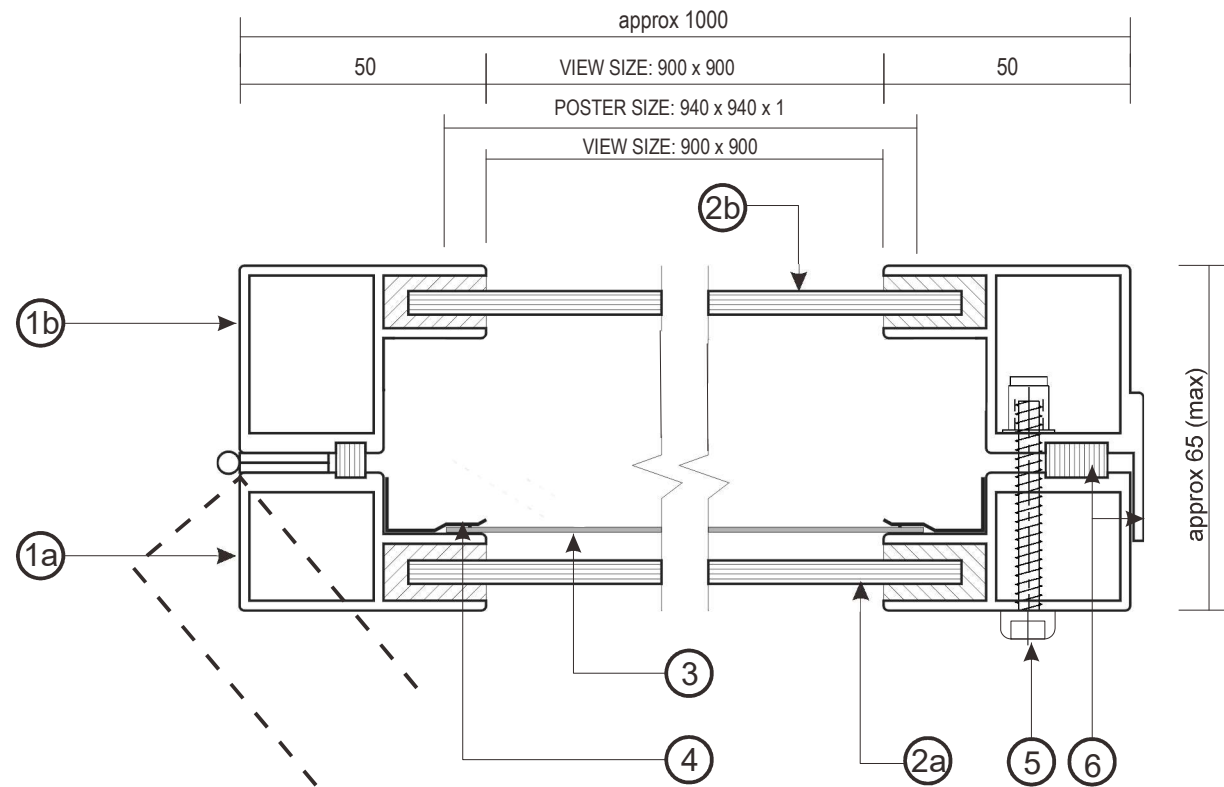
SPECIAL NOTE on BUS STOP POLE:

Positioning of Bus Stop Pole:-

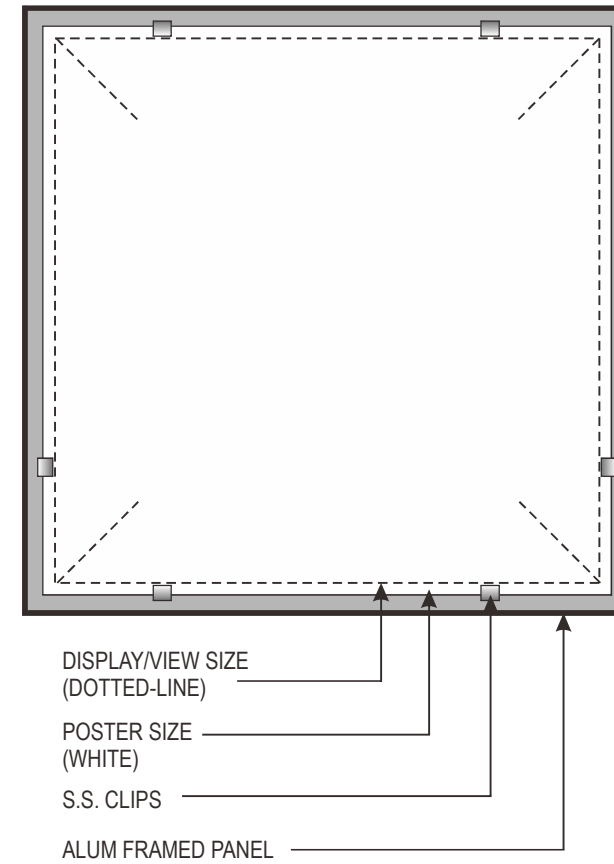
- LTA's Road Infrastructure Management (RIM) Division and PTP Division should be consulted on the guidelines for the setting-out and positioning of the Bus Stop Pole.

Provision of Bus Stop Pole:-

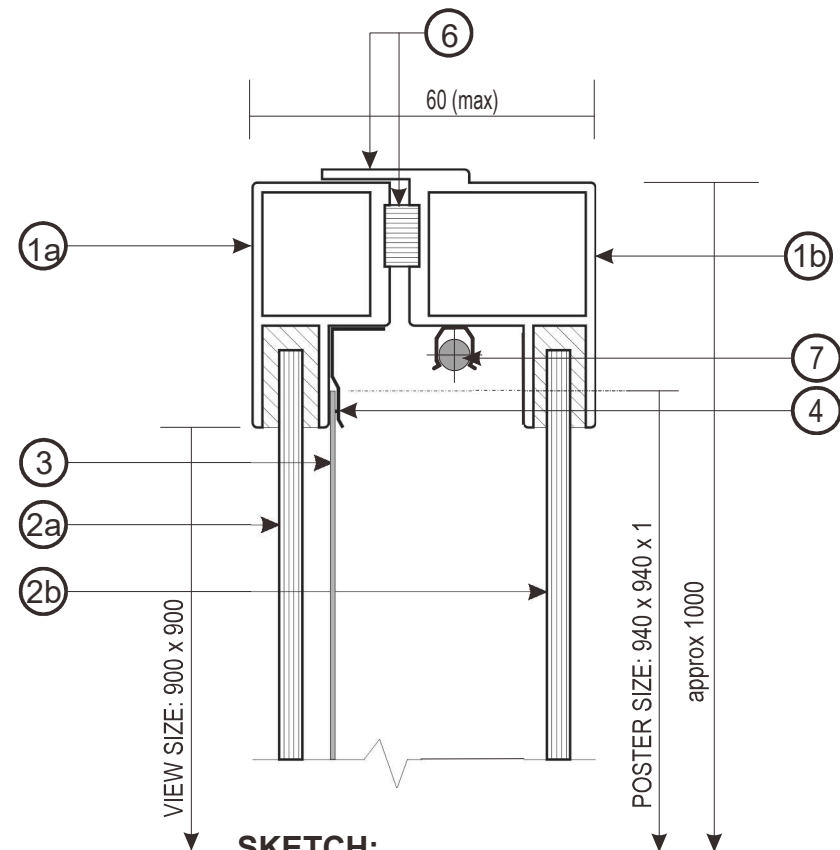
- **For Reconstruction / Relocation of Existing Bus Stops/Shelters:**
 - The existing Bus Pole Shall be reinstated by the Civil Contractor.
- **For New Bus Stops/Shelters:**
 - It is the scope of the Civil Contractor to provide the new Bus Stop Pole; the Civil Contractor must procure it through the Authority's term contractor for Bus Stop Pole (consult LTA's PTP Division).



**SKETCH:
LONGITUDINAL SECTION**
(Detailing illustrated here is not for construction;
notional to illustrate design criteria)



SKETCH: INTERNAL ELEVATION OF PANEL (nts)



**SKETCH:
CROSS SECTION**
(Detailing illustrated here is not for construction;
notional to illustrate design criteria)

LEGEND for ANNOTATIONS

- 1a: Alum framed openable panel
- 1b: Alum framed fixed panel
- 2a: Front tempered glass
- 2b: Alum panel
- 3: Poster
- 4: Stainless steel clips for posters
- 5: Locking Device
- 6: Detailing to Ip65
- 7: LED strip at top & bottom of alum frame

GENERAL NOTES:

- ALL DESIGN DRAWINGS INDICATE THE DESIGN & VISUAL INTENT, & ILLUSTRATE THE MANDATORY GEOMETRY AND EXPOSE SURFACES, THEY DO NOT NECESSARILY DESCRIBE ALL DETAILS REQUIRED FOR THE FULL PERFORMANCE OF THE WORKS.
- WHILST THE VISUAL & DESIGN INTENT SHOULD NOT BE BREACHED, THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING MEMBERS, DETAILS AND EXTRUSIONS IN ACCORDANCE WITH THE PERFORMANCE CRITERIA AND DESIGN SPECIFICATIONS.
- WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE AUTHORITY BEFORE PROCEEDING WITH ANY WORK.
- DIMENSIONS SHALL GOVERN, NOT SCALE DRAWINGS.
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER RELATED DRAWINGS AND SPECIFICATIONS

Reference Manual: Bus Stop Shelter Signs

Bus Stop Shelter Notice Board (for Bus Service Information)

The drawing is indicative only. Primarily, it illustrates design intent and performance criteria. Where proposed aluminium profile and detailing are different, design intent, performance criteria and dimensions must be complied.

Generally:-

- Notice Board to fit 1 poster.
- View size of the glazing is 900 x 900.
- Poster size is 940 x 940 x 1.
- Stainless steel clips to secure posters.
- Locking Device: stainless steel M6 screws with 4mm hex-profile.
- Constructed to IP65 rating.
- Facilitates quick change of poster
- Safe & Durable
- Maintenance-free

Basic Specifications & Performance Criteria

- Powder-coated (Gray: RAL9007) aluminium panel and supports.
- Slim panel of depth 65mm (maximum)
- Designed & constructed to IP65 rating, weather & insect resistant
- Stainless steel hinge or integrated aluminium profile hinge
- Openable front panel up to minimum of 60 degrees swing; the rear panel is fixed.
- Glazing: 4mm thk (minimum) tempered glass (verified with embossed markings). Glazing shall be mechanically fixed. Fixing with silicone only is not acceptable
- Display/View Size is 900 x 900 i.e. the glass panel seen by the viewer shall be exactly this size.
- Poster Material Size is 940 x 940 x 1; the securing of the posters shall fit this size exactly. There shall be no curling, sagging, warping, slipping of the posters installed. The contractor shall verify the fit with templates of the same size & thickness.
- The front poster is secured onto the front panel.
- Maintenance of poster: The design and construction of the notice board shall facilitate quick, easy and unobstructed installation and change of poster. When installing poster, the notice board there shall be no loose parts, or parts that need to be removed and/or replaced.
- Internal: Stainless steel clips with indentations for grip, shall be incorporated to hold the poster securely and to aid ease of poster change/updates; 1 pair at the top and another pair at the bottom; concealed from external view.
- The innards of the panel i.e. the fixing, clips, etc. shall not be seen by the viewer.
- Locking device: stainless steel button-head M6 screws with 4mm hex-profile with threaded blind rivet (concealed) nuts; 3 nos. per notice board
- All components and materials shall be corrosion resistant; stainless steel where available.
- Base cover where required to conceal base plate and bolts/nuts: Stainless steel in Grade 316. Secured with a stainless steel screw to a pre-installed bracket on the base plate. Fixing with silicone only, is not acceptable.
- The design and construction of all details of the notice board shall be safe (no sharp perturbances), and durable.
- The construction of the notice board shall be to a rating of IP65.
- Equipotential/earthing bonding (concealed) shall comply with current statutory regulations, verified and endorsed by a Licensed Electrical Worker.