

Advertising Signs Assessment Guidelines for Road Safety

A guide for municipality, traffic police and road directorate

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Introduction

Roadside advertising allows you to have your business seen throughout the day, not only by motorists but pedestrians too.

PURPOSE

Advertising plays an important social and economic role in today's society, with signs ranging from large billboards to small sandwich boards and more recently, electronic signs becoming a common feature along transport corridors. The Municipality and Traffic Police (MTP) have a key role in the assessment of advertising signs where they are visible from arterial roads. While MTP does not have a former procedure to undertake such assessments, there has been a need to make this type of document like a manual for MTP to provide greater flexibility, in line with national and international best practices. Particularly with the introduction of electronic signs, which continue to change the nature of advertising when compared to more traditional print-based signs. This document allows applicants to understand the type of information that MTP requires or considers when assessing the appropriateness of advertising signs.

DEFINITION OF ADVERTISEMENTS AND ADVERTISING SIGNS

An advertisement that constitutes development is any "advertisement or sign that is visible from a street, road or public place or by passengers carried on any form of public transport". An advertising hoarding is "a structure for the display of an advertisement or advertisements".

Further, an 'electronic sign' is considered to be any sign or advertising device that can be updated or changed electronically. This includes (but is not limited to) screens broadcasting still or moving images (e.g. videos or animations), LED/LCD screens/technology, 'scintillating' light displays (such as fiber optic or neon lights),

scrolling billboard/poster displays (e.g. a device with a number of advertising panels connected to form a strip that may be wound to sequentially display the advertising panels), tri-vision billboards, variable message signs (VMS) and any other similar devices. It does not include static illuminated light box signs, or flashing illuminated signs that cannot otherwise be changed (e.g. flashing or chasing bulbs).

ADVERTISING SIGNS AND ROAD SAFETY

The principal aim of advertising is to attract attention. This can present a safety issue when advertising distracts road users from the task of operating a vehicle in a safe manner. The trend towards the use of new and more powerful digital technology for advertising has increased the potential for distraction.

In effect, the presence of roadside advertising can:

- Distract drivers from the driving task;
- Compete with traffic control devices for the road user's attention;
- Result in visual clutter to the extent that traffic control devices cannot be easily seen and recognized by road users;
- Obscure or interfere with a road user's view of other vehicles and pedestrians;
- Where illuminated or reflective, 'dazzle' or cause discomfort to approaching road users;
- Encourage stopping, slowing down, or turning movements in inappropriate locations (this includes instances where drivers may be required to slow down/stop to view an advertisement due to illegibility);
- Desensitise road users to the presence of signage, thereby undermining the impact and credibility of traffic control devices.

LOCATION, PLACEMENT AND CLEARANCE

General

The placement of signs can impact road safety in terms of whether a sign may result in a distracting background to a traffic control device or otherwise interfere with its clarity.

Advertisements should not be erected in locations that would interfere with the effectiveness of, or obscure any official traffic control sign, device (including fixed speed cameras or point-to-point cameras), or signal. For example, illuminated advertisements should not be located within the direct line of sight of drivers approaching traffic signals.

The positioning of signs is critical in ensuring that they do not block drivers' sight lines of traffic control devices or at intersections, curves, or points of egress from properties. Furthermore, signs must not be located to dominate the road environment or diminish its legibility. As a general rule, advertising signs should be located such that they are outside of a driver's central field of view.

The proposed sign location should be inspected to determine if sight distance would be compromised including:

- A drive-through of the site as well as a detailed site inspection, and
- Consideration of what the advertisement could potentially be blocking.

For example, other signs, traffic control devices, or views of other cars or pedestrians.

Clear Zones

The placement of advertising signs within the road reserve reduces the separation distance from the carriageway, thereby increasing the risk of it being struck by an errant or oversized vehicle.

This, in turn, reduces the safety of the road environment, particularly along high-speed roads.

Where advertising signs are proposed within the road reserve of an arterial road they should meet appropriate clear zones for the posted speed limit in accordance with Iraqi Standards for roads and bridges.

In the event that these requirements are not met, the advertisement should be located as far back within the clear zone as practicable to minimize interference with traffic, and to reduce the risk of errant vehicles striking the advertisement. Appropriate mitigation measures may need to be employed in order to minimize the potential for the impact of the sign on errant vehicles. Sufficient vertical clearance must be provided in order to ensure that advertisements do not interfere with the operation of traffic control devices or become a physical hazard for road users or pedestrians. Where signs are located within the road reserve and above a pedestrian path they must also provide a minimum vertical clearance of 2.5 meters beneath the sign, while a minimum 5.5 meters clearance is required over carriageways.

Device Restriction Areas

There are locations where particular types of advertising should be restricted in order to ensure the safe and efficient operation of the arterial road network.

That is, maximizing the safety of the road environment by minimizing the risk of driver distraction in locations where a high level of concentration is required.

These locations are defined as 'Device Restriction Areas'. For example:

- Signalized and un-signalized intersections

- Pedestrian crossings
- Rail level crossings
- Driver decision-making points – in particular in the vicinity of traffic control devices where reading and interpreting is required
- Sharp bends and crests
- Locations of merging and diverging traffic, or where weaving maneuvers take place
- High road speed environments 80km/h and above (with the exception of Freeways and Expressways)

Device Restriction Areas are defined using a device restriction distance along a road corridor, which provides a ‘zone’ whereby the installation of advertising signs is required to abide by a ‘stricter’ set of rules in order to assist in alleviating potential additional safety concerns within these areas (this is dealt with more specifically in ‘Placement within Device Restriction Areas’ below).

The device restriction distance (d) for advertisements located on or visible from arterial roads (not including freeways and expressways or similar grade roads) is established in Table 1. The device restriction distances outlined in this table are contingent upon the speed environment in which the device is located. A diagram showing how the device restriction areas are measured is provided in Figure 1.

These restriction distances should generally be complied with; however, all proposals will be assessed on an individual basis. Larger distances may be required, depending upon the complexity of individual locations.

Where a proposal relates to a third-party sign visible from a Freeway or Expressway grade road the restriction areas are denoted by the value (v) as shown in Figure 2.

Where a sign is not subject to a Device Restriction Area but falls within an area of concern, such as (but not limited to) the following situations:

- Sharp bends and crests
- Locations of merging and diverging traffic or where weaving maneuvers take place

A value of 0.6V should be applied.

If an electronic sign is proposed to be located on a curve and the geometry, viewing angle or other factors make this undesirable (e.g. back to back horizontal curves or a curve with an advisory speed), the electronic sign is to be located prior to or beyond the curve(s) by a minimum distance of:

- 'd' (excluding freeway and expressways)
- '2.5V' for freeways and expressways

Table 1 – Advertising Signs Device Restriction Distances (General)

Speed Environment (km/h)	Desirable Restriction Distance 'd' (m)
50	60
60	80
70	105
80	130
90	160
100	191
110	225

Placement within Device Restriction Areas

Advertising signs should generally be installed outside of the 5° horizontal envelope around a driver’s line of sight to a Traffic Control Device, and not between signals.

Consideration for locating a sign within the 5° horizontal envelope or between signals will only be given when the location is not deemed to be complex.

Examples of a complex location include (but are not limited to) the close spacing of junctions/intersections or adjacent rail crossings. Signs located within the 5° horizontal envelope will need to be assessed for vertical clearances. The advertising sign must be at a minimum height of 12°, as measured from 1.1 meters above the road at a stopping sight distance in accordance with the speed zone in Table 2. The stopping sight distance should be measured from the stop line for signals, and from

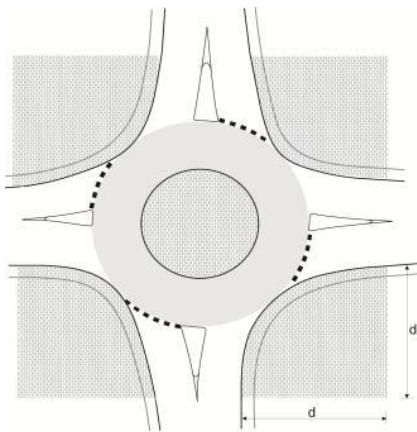
the traffic control device itself in other instances. No height restrictions apply for advertising signs located outside of the 5° horizontal envelope.

Table 2 – Road Speed and Stopping Sight distance

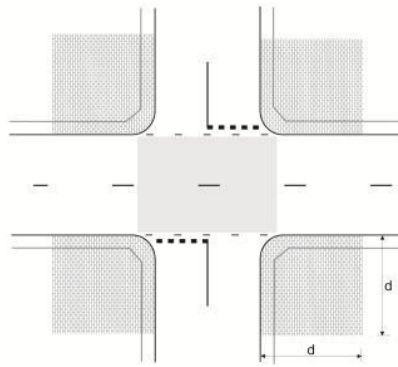
Road Speed (km/h)	Stopping Sight Distance (m)
≤60	80
70	105
80	130

- Advertising signs should generally be avoided in speed zones greater than 80km/h. However, consideration will be given to advertising signs in speed zones higher than 80km/h where the locality has no other distractions such as other signs, access points, or adjacent development, and the road is of a high standard (e.g. an advertising sign could be considered on a freeway/expressway with grade-separated interchanges and no direct property access, no adjacent development and no adjacent advertisements). In speed zones over 80km/h the advertising sign must, however, be located outside of any Device Restriction Areas.
- LED signs within a Device Restriction Area will only be considered if it conforms to all criteria within the ‘Road Safety Checklist – Additional for Electronic Signs’ (with the exception of roads over 80km/h where all signs must be located outside of any Device Restriction Area).

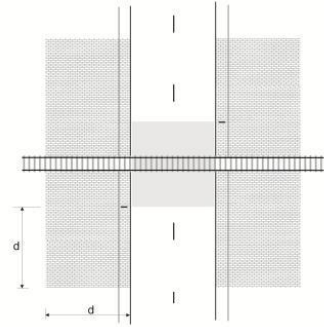
Figure 1 – Device Restriction Areas (General)



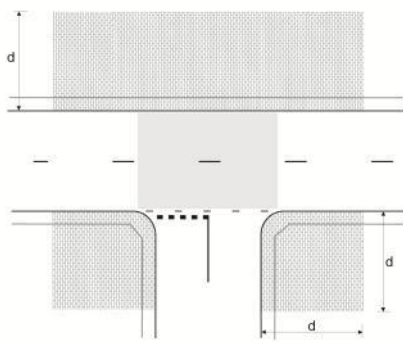
1. Roundabout



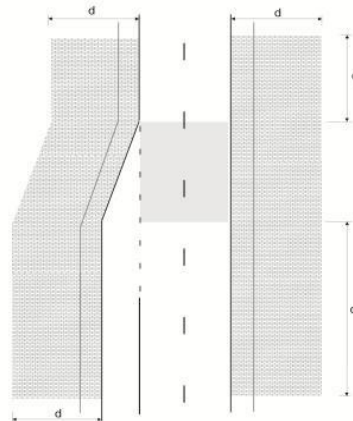
2. Intersection



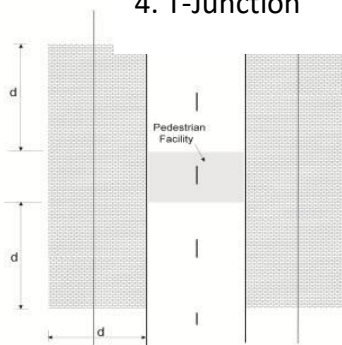
3. At-Grade Rail Level



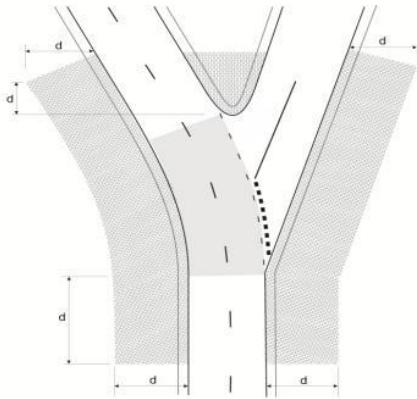
4. T-Junction



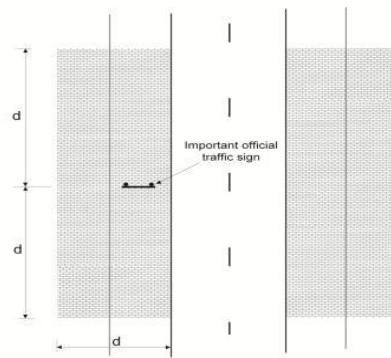
5. Terminating



6. Pedestrian Facility



7-Y-Junction



8. Official Traffic Sign or Traffic Control Device



Device Restriction Areas

d

Device Restriction Distance



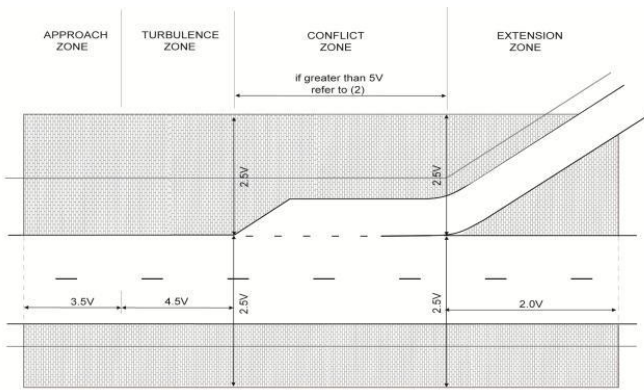
Property Boundary

Notes

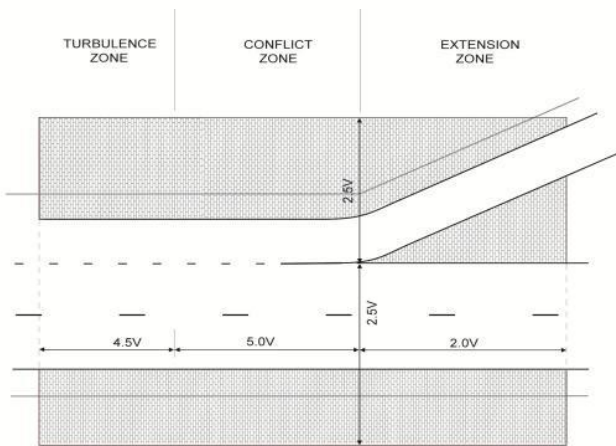
An important Official Traffic Sign or Traffic Control Device includes a major guide, regulatory or warning sign and includes traffic safety cameras.

In addition to the above situations it may be necessary to designate restriction on areas for other critical traffic situations.

Figure 2 – Device Restriction Areas (Freeways and Expressways)

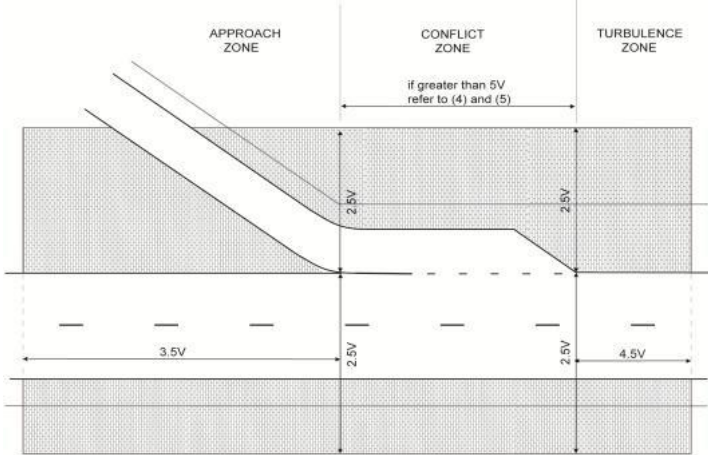


1-Off-Ramp

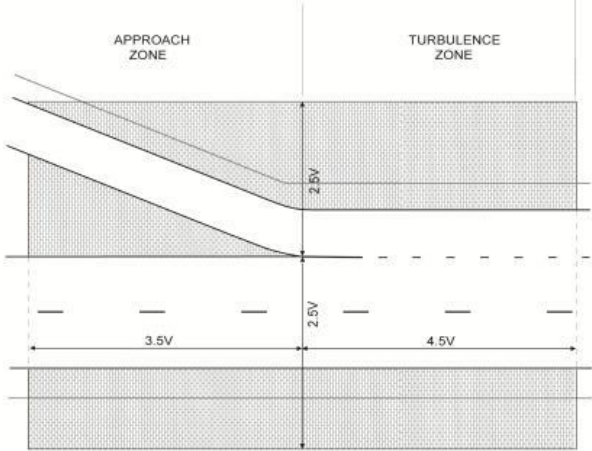


2-Off-Ramp with Added Lane

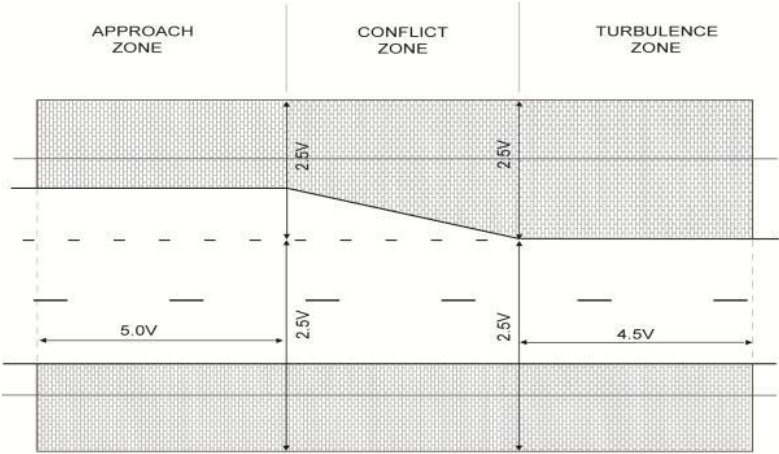
3-On-Ramp

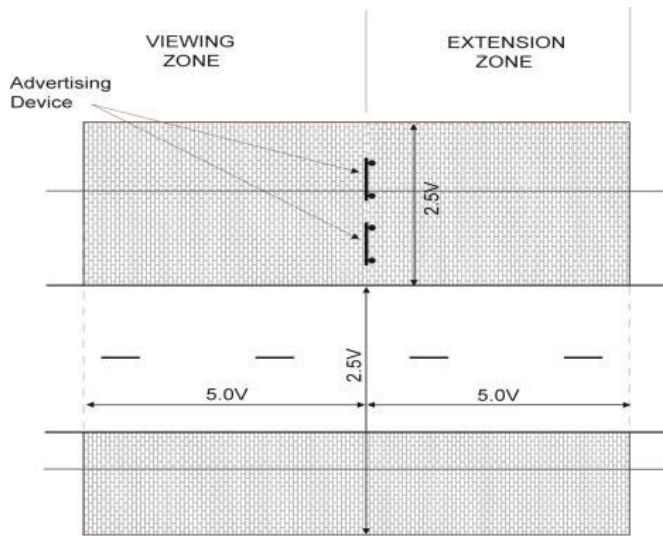


4-On-Ramp with Added Lane

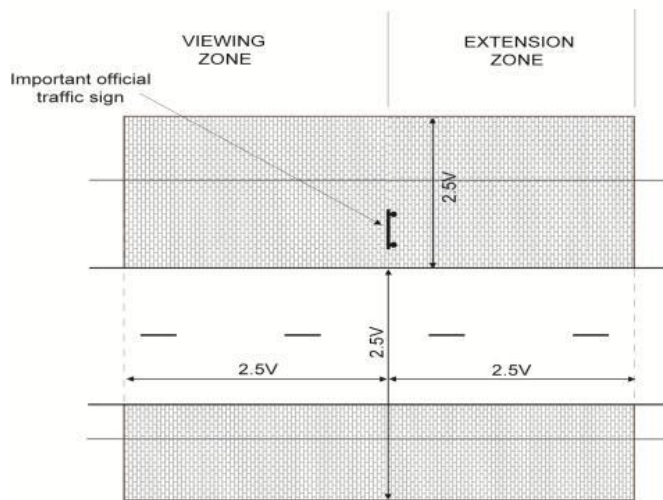


5-Terminating Lane





6-Advertising Sign



7-Official Traffic Sign or Traffic Control Device



Device Restriction Areas

V

"V" is the posted speed limit



Property Boundary

MEDIANS AND ROAD TRANSPORT INFRASTRUCTURE

MTP generally does not support advertising signs on electricity infrastructure, road lighting poles, road signs, or within the median of arterial roads.

Where advertisements overhang the carriageway and/or are affixed to structures such as bridges, tunnels, and pedestrian overpasses, appropriate vertical clearance must be provided to ensure the device will not become a physical hazard for larger vehicles. Therefore, the following principles should be considered:

- Provide a minimum vertical clearance of 5.5 meters over the carriageway (greater vertical clearance will be required where a road forms part of an Over Dimensional Route).
- Where overhanging the carriageway, no portion of the advertisement should protrude below the overhead portion of the bridge, unless it is wholly incorporated into the supporting structure.
- Provide adequate allowance for collision deflection of existing safety barriers in the design of the advertisement attachment.
- The infrastructure to which an advertisement is attached should have the adequate structural capacity to support the device, with all required engineering and regulatory standards being met.
- Advertisements should avoid creating a tunnel effect or blocking sightlines
- Advertisements should avoid being erected over open-faced barriers, where there is a need to maintain casual surveillance for pedestrians.
- Advertisements must be designed so that they do not impede the intended use of the infrastructure, or impair access to the bridge structure for maintenance or inspection purposes.

For bridges that have been designed in accordance with community input or values, the following principles should also be considered:

- Advertisements should not be located on bridges with significant names
- Attached advertisements should be sympathetic to the architectural qualities of the infrastructure

Note that the Guidelines only relate to bridges and infrastructure located on the arterial road network.

Furthermore, it is intended for future versions of this document to include specific guidance on the following:

- Advertising on public transport shelters
- Advertising on telephone booths
- Community message signs
- Banners and flags

PHYSICAL CHARACTERISTICS

The design size, shape, content, number, and operation of signs can impact the way that a sign is perceived and can therefore have an impact on road safety.

It is essential that an advertisement cannot be mistaken as an instruction to traffic.

The following questions should be considered:

- Does the advertisement look like a regulatory sign?
- Is it located where a regulatory sign is expected?
- Does it contain a blinking, spinning, or intermittent light that could be mistaken for a warning or danger signal?
- Does it invite drivers to move contrary to any traffic control device?
- Does it encourage drivers to turn where there is fast-moving traffic, or at locations where there is limited time to slow down and signal? *

* If advertising signs are required for way-finding purposes (e.g. indicating how to access adjacent housing estates or display centers) then special consideration is required to ensure that the content and location of these signs do not create further traffic hazards or driver confusion.

With respect to content, the use of arrows should be avoided.

Type, Size and Shape

The size and shape of advertisements should generally be limited to accepted industry standards, with shapes that could potentially be mistaken for a traffic control device avoided.

Portable Variable Message Signs are generally deemed to be traffic control devices for the purpose of warning or guiding drivers where traffic conditions have changed or will change in the future.

The use of these signs for advertising purposes has the potential to diminish the effectiveness of these signs when they are used for traffic control purposes. Subsequently, MTP does not support the use of these signs for advertising purposes.

Pavement and horizontal advertising (e.g. painted on roads) are generally not supported by MTP.

Color

The use of color can have a significant impact on the legibility of an advertisement/advertising device. Adequate contrast between the letters and their background can increase the overall visibility and clarity of a message, while poor contrast can make it difficult to read under even the best lighting conditions. This in turn can increase driver distraction as it may require longer or multiple glances to fully comprehend the message.

This is of particular concern in locations in close proximity to traffic signs. If the advertisement is highly illuminated or falls within the direct line of sight of drivers approaching the signs, a driver may not be able to see the signs or alternately, construe the advertisement as a legitimate instruction.

To minimize potential risks, the following principles should be considered:

- Advertisements should be designed to avoid the use of colors in combinations or shapes that could be interpreted as a traffic control device.
- Color choice and contrast should ensure good legibility for drivers travelling at the speed limit.

Message Type

Advertisements by their very nature are a distraction to road users, however, the distraction and subsequent conflict risk can be minimized through the use of sound

design techniques. To ensure that drivers are not required to spend an excessive amount of time reading and interpreting advertisements it is critical that the device content is clear, succinct, legible, and can be appreciated at a glance.

Content

- Advertisements should contain a single, self-contained message, that is not spread across multiple signs
- Advertisements should comply with the requirements of all current industry standards and codes of content
- Advertisements should not contain messages of a salacious, illegal, or controversial nature.

Symbols/Images

- Images/photographs or symbols used as part of advertisements should not depict or mimic traffic control devices.
- The use of abstract symbols should be minimized and, where used, should be accompanied by a text component.
- The use of highly stylized symbols should be avoided to promote ease of driver comprehension.

Number

In order to ensure that a balance between road safety and the provision of billboards can be achieved, the minimum spacing between billboards is as per Table 3. These separation distances promote the ability of each billboard to be read by a driver without being impacted by another billboard. With respect to smaller electronic, moving, or changing signs, only one sign of this nature should be visible to a driver at any time.

Table 3 – Spacing Between Billboards

Road Type and Speed Limit	Desirable Minimum Distance Between Billboards (visible to a single driver)
Freeway/Expressway or Arterial Road > 80 km/h	500m
Arterial Road 80 km/h	375m
Arterial Road 70 km/h	250m
Arterial Road ≤ 60 km/h	150m

References:

1. Department for Communities and Local Government (2007), Outdoor Advertisements and Signs: A Guide for Advertisers, Product 07HC04067, UK, accessed online 12/07/2011:
<http://www.communities.gov.uk/documents/planningandbuilding>
2. Department of Infrastructure, Energy and Resources (2006), Tasmanian Roadside Signs Manual, Government of Tasmania, accessed online 18/11/2011:
https://www.transport.tas.gov.au/roads_and_traffic_management
3. Adelaide City Council (2001), New Directions – City of Adelaide Park Lands Signage Plan, Brecknock Consulting in association with Martins Designs & Hemisphere Design, Adelaide, accessed online 16/11/11:
www.adelaidecitycouncil.com/