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# Policy and Assessment Guidelines for

## Digital Advertising Signs

D24#681194
September 2024

# Policy and Assessment Guidelines for Digital Advertising Signs

This document is authorised by the Executive Director Network Operations.
Please submit all comments and requests to the Manager Traffic Management Services.

**Authorisation**

As Executive Director Network Operations, I authorise the issue and use of this document – *Policy and Assessment Guidelines for Digital Advertising Signs.*

M Langroudi

A / EXECUTIVE DIRECTOR NETWORK OPERATIONS

5/9/2024

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# Document Control

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# Amendments

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# 1. Introduction

Main Roads Western Australia (Main Roads) in conjunction with local governments, manages and controls roadside advertising signs to:

- Maintain safety for all road users.
- Prevent adverse impacts on the visual amenity of the roadside environment and surrounding areas.
- Ensure signs comply with planning schemes.

**Approval for digital signs must be sought from both Main Roads (in line with this policy) and the relevant local government or planning authority.**

### Safety is the overarching priority

Main Roads must be satisfied that the installation of roadside advertising signs within or visible from state roads, or near traffic control signals, does not pose a potential safety hazard to road users, including pedestrians and riders.

### Robust, data-driven, and consistent assessment process

The assessment process criteria adopted by this policy have been developed through a comprehensive data-driven analysis of the Western Australian road network and associated crash history.

### Traffic control signals have priority

Traffic control signals (TCS) include traffic signals, lane use management signs, and variable message signs. It is critical that drivers can see TCS without obstruction. This policy prioritises TCS over roadside advertising signs to maximise safety for all road users.

# 2. Scope

## 2.1 Digital signs subject to this policy

This policy applies to all gazetted highways and main roads (state roads) controlled by Main Roads, as well as sections of the Western Australian road network where a traffic control signal (TCS) is situated.

This policy also applies to applications for new digital signs or conversion of existing static signs:

- within state roads (approval required)
- within 500 m of a state road **and** visible from a state road (approval required), or
- within 100 m of a TCS on all roads, including local roads (approval recommended).

Where multiple signs are located together on the same, or abutting structures, they will be assessed as a single sign.

## 2.2 Digital signs not covered by this policy

This policy does not apply to:

- Digital signs that are specifically exempt from approval under Main Roads' (*Control of Advertisements) Regulations 1996*:

"*(1) These regulations do not apply –*

*(a) to a sign that does not exceed 1.0 $m^2$ in area and indicates that the premises to which the sign is affixed or on which the sign is erected are for sale or for letting;*

*(b) to a sign that does not exceed 0.4 $m^2$ in area and indicates the name, or the name and the business, of the occupier of premises if the sign –*

*(i) is affixed to a building on the premises; or*

*(ii) is erected or affixed on or behind the building line of the premises;*

*(c) to a sign that does not exceed 0.2 $m^2$ in area and indicates the name, or the name and the business, of the occupier of premises if the sign is erected on or affixed to a place that is between the boundary of a road and the building line of the premises; or*

*(d) subject to subregulation (2), to a sign inside a building.*

*(2) These regulations apply to a sign inside a building if the sign –*

*(a) can be lighted internally or externally by artificial light provided, or mainly provided, for that purpose; and*

*(b) is directed primarily at persons travelling in or on vehicles.*

*(3) For the purposes of subregulation (1) –*

*(a) the area of a sign is to be ascertained by reference to a notional rectangle enclosing the outermost portions of the sign; and*

*(b) only that part or those parts of the sign which are reasonably capable of being seen and discerned from any one direction at a time are to be counted when computing the area.*"

- Digital signs that are more than 500 m from a state road or are unable to be observed by a driver.
- Lighting installations associated with public art, or aesthetic light displays, or projections on landmark buildings.
- Digital business signs (as per the definition in Section 4).

**Main Roads may also intervene in any case where advertising signs breach road safety principles.**

# 3. Roles and Responsibilities

## 3.1 Powers and obligations

Primary and subsidiary legislation is in place to control the installation and display of roadside advertising signs. This includes, *The Main Roads Act 1930 and Main Roads (Control of Advertisements) Regulations 1936*.

*The Road Traffic Administration Act 2008 (Section 140)* also warrants that light emitting devices in or visible from a road reserve should not distract a road user or cause a risk of danger.

As a result of this legislation, Main Roads has the authority to approve roadside advertising signs visible from state roads. Main Roads is also responsible for ensuring TCS are not obscured or rendered difficult to read, and that light emitting devices do not cause a risk of danger.

Roadside advertising planning approval is the responsibility of the relevant planning authority. Therefore, for roads not covered by this policy, Main Roads recommends the relevant road authority apply this policy.

## 3.2 Responsibilities

Main Roads, local government (and/or other relevant planning authorities), and the applicant for a digital roadside sign all have responsibilities associated with Main Roads' digital sign application process. These are as set out in Table 1 below.

*Table 1: Roles and responsibilities of Main Roads, the applicant, and planning authority*

| Role | Responsibility |
|---|---|
| **Applicant** | • Seeks planning approval from the relevant local government or planning authority.<br>• Arranges a pre-lodgement meeting with Main Roads – Network Operations.<br>• Prepares and submits the Digital Sign Application Form in line with this policy. (See Section 9 for the application form.)<br>• Provides indemnity to Main Roads and maintains insurance if the sign is within a state road reserve. |
| **LGA, or relevant planning authority** | • Conducts own planning/approval process for digital signs located within their jurisdiction. Refers application for digital signs covered under this policy to Main Roads. |
| **Main Roads WA** | • Assesses application against the Main Roads Policy and Assessment Guidelines for Digital Advertising Signs (this policy). |

# 4. Definitions

| Term | Definition |
|---|---|
| Aesthetically objectionable | The unacceptable adverse affect on the combined quality of built, natural, and cultural aspects that make up an area and provide its unique sense of place and visual amenity caused by proposed development. |
| Blank screen | A single colour displayed on a sign intermittently between advertising content. |
| Casualty crash | A road crash that results in a fatality, or a person requiring hospitalisation or medical treatment. |
| Clear zone | As described in Austroads '*Guide to Road Design - Part 6: Roadside Design, Safety and Barriers*', and the '*MRWA Supplement to Austroads Guide to Road Design - Part 6*', located on Main Roads' website. |
| Community information messages | Being those displayed by government agencies as specifically approved by Main Roads. |
| Controlled pedestrian crossing | A traffic signal controlled mid-block pedestrian crossing, warden-controlled crossing, zebra crossing, or wombat crossing. |
| Crash Risk Category Map | A map of the Western Australian road network identifying road segments and intersections with crash risk levels ranging from 1 to 4. These levels are further explained within the policy. (The Crash Risk Category Map will be provided by Main Roads to the applicant upon request.) |
| Critical movement prohibition zone (CMPZ) | 3D zone around a merge or diverge movement, where the placement of a digital sign is prohibited. |
| Digital business signs | A digital sign displaying only the name, or logo, of an on-premises business, that has:<br>A. A display area less than 100 $m^2$ (individually or combined), and<br>B. A dwell time greater than 3 months, and<br>C. Static contents related to on-premises business, and<br>D. Luminance levels less than 300 $cd/m^2$ during the day and 150 $cd/m^2$ during the night.<br>If a digital business sign does not meet the above criteria, then it is considered an advertising sign and is subject to assessment and approval under this policy. |
| Digital sign | Roadside advertising device based on light emitting diode or fibre optic matrix technology, or other technology that is capable of displaying a limited/unlimited range of text and graphical images, which can be electronically changed by remote or automatic means. |

| Term | Definition |
|---|---|
| Digital sign application form | Document that sets out the sign details, approvals and undertakings, including operation and maintenance arrangements to ensure the sign will be managed so as to conform to this policy at all times. |
| Diverge zone | Where a lane splits into two or more lanes, normally at an intersection or off-ramp on a grade separated highway/ freeway. The zone is measured as per Figure 15. |
| Driver | For the purposes of this policy, a driver means the driver of a motor vehicle, a motorcyclist, a cyclist, or an eRideable user. |
| Dwell time | The period during which the content on the digital sign display area is constant. |
| Landscape and visual assessment (LaVA) | The analysis of changes in the appearance of the landscape due to development (see Appendix 2 for requirements). |
| Landscape character | The combined quality of built, natural and cultural aspects that make up an area and provide its unique sense of place. |
| Merge zone | Where two lanes join together to form a single lane, normally after an intersection or at an on-ramp on a grade separated highway/freeway. The zone is measured as per Figure 14. |
| Policy | This document. |
| Proportion of drivers (PD) | Refers to the ratio of drivers who observe a transition in content on a digital road sign. |
| Road reserve | The area adjacent to a road that is owned and/or managed by the relevant road authority. |
| Road sign | Refers to a board, plate, screen, road marking, or other device whether or not illuminated, displaying words, figures, symbols, or anything else to direct or warn traffic on, entering, or leaving a road. |
| Roadside advertising sign | For the purposes of this policy, any sign used to communicate information including (but not limited to) advertising, business signs, 'public interest' advertising and messages, and construction site screening. |
| State roads | Gazetted highways and main roads (state roads) controlled by Main Roads Western Australia. Maps of state roads can be obtained from Main Roads' website at (www.mainroads.wa.gov.au). |
| Traffic control signal (TCS) | Any traffic signal, lane use management sign, variable, or digital message sign operated by Main Roads or other road authority. |

| Term | Definition |
|---|---|
| Traffic control signal prohibition zone (TPZ) | The 3D zone around a traffic control signal where the placement of a digital sign is prohibited. |
| Visibility distance | The distance from which 50% of a digital sign display area can be viewed from the roadway. This value may be capped at a maximum of 1 km. |
| Visual amenity | The overall quality of views that people enjoy of their surroundings. |

# 5. Process

## 5.1 Process overview

The application for a digital advertising sign will follow the process shown in Figure 1 below.

Main Roads approval may be contingent on special conditions to be adhered to by the owner/ operator of the digital advertising sign.

**A separate approval of the digital sign is required by the relevant planning authority, local government, or Western Australian Planning Commission (WAPC).**

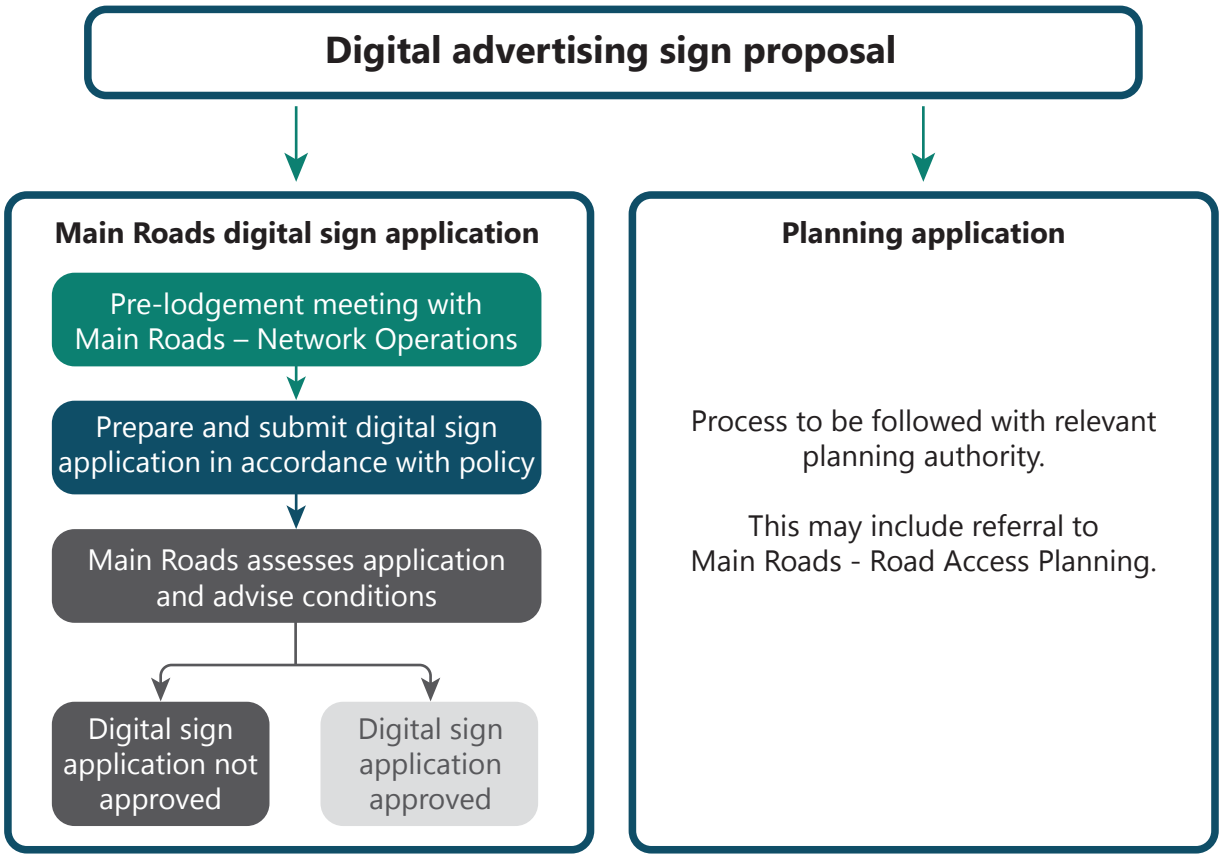



*Figure 1: Digital sign application process*

**It is recommended that Main Roads be consulted before submission of any application under this policy, and before finalising planning approval from a local government or planning authority.**

## 5.2 Assessment criteria

The assessment of a digital sign application will follow the process shown in Figure 2.

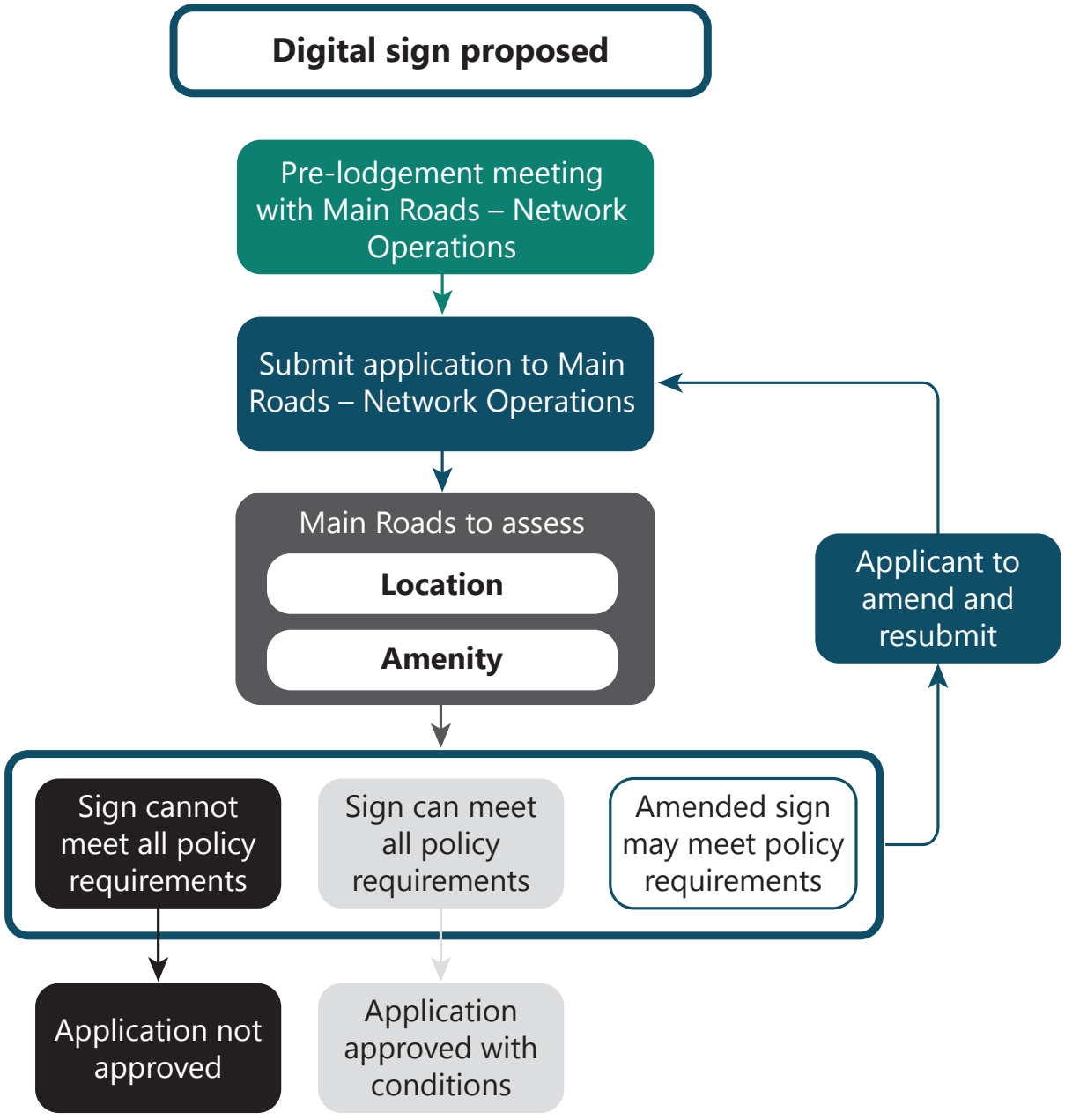



*Figure 2 - Digital sign assessment process*

### 5.2.1 Recommended pre-lodgement meeting

Prior to submitting the Digital Sign Application Form, applicants are advised to arrange a pre-lodgement consultation meeting with Main Roads – Network Operations.

To arrange a meeting: email: advertisingsigns@mainroads.wa.gov.au or call the Main Roads Customer Information Centre on **138 138** and request to speak to someone within Network Operations about a digital sign application.

Main Roads – Network Operations will provide initial advice regarding the likely approval (or not) of a proposed digital sign, and may suggest measures the applicant could take to bring a proposal in line with this policy.

**A separate approval of the digital sign is required by the relevant planning authority, local government, or WAPC.**

**Applicants are encouraged to use the Digital Signs Application Form to guide their submission.**

### 5.2.2 Assessment

The digital advertising sign proposal will be assessed by Main Roads under the following two key criteria:

**Location**

This refers to the digital sign's location on the road network in terms of:

- Road segment or intersection safety performance.
- Placement relative to the roadway.
- Placement relative to TCS.
- Features of the roadway.

*Refer to Section 6 for more details on location.*

**Amenity**

Amenity is assessed at the proposed site to ensure the advertising sign does not create an aesthetically objectionable road environment, or adversely impacts residents or the wider community. A LaVA may be requested as per Section 7.4.

Main Roads will also advise if any future works are planned in the proximity of the proposed digital sign.

## 5.3 Conditions of assessment

Following Main Roads' assessment of the proposed digital sign, requirements and conditions will be determined. These may include:

- Physical adjustments to the proposal.
- Permits to construct.
- Additional infrastructure requirements.
- Operating conditions in terms of:
  - content dwell time,
  - illuminance/luminance.
- Period of approval - being the expiry of the approval to operate a digital sign pending the outcome of a safety review by Main Roads.

*Refer to Section 8 for detailed requirements and conditions and restrictions.*

# 6. Location

## 6.1 Location assessment summary

The location assessment ensures the proposed section of the road network or intersection is suitable for a digital sign, and that sign placement does not pose an unsatisfactory safety risk to road users.

*This process considers:*

1. Crash risk for roads and intersections of a similar nature.
2. Long-term casualty crash trends at the proposed sign location.
3. Visibility of the sign to road users.
4. Proximity of the sign to TCS.
5. Proximity of the sign to merge/diverge road sections.

The parameters determined during this part of the assessment process are used to calculate the minimum allowable dwell time, and any other restrictions or operating conditions the applicant is required to meet.

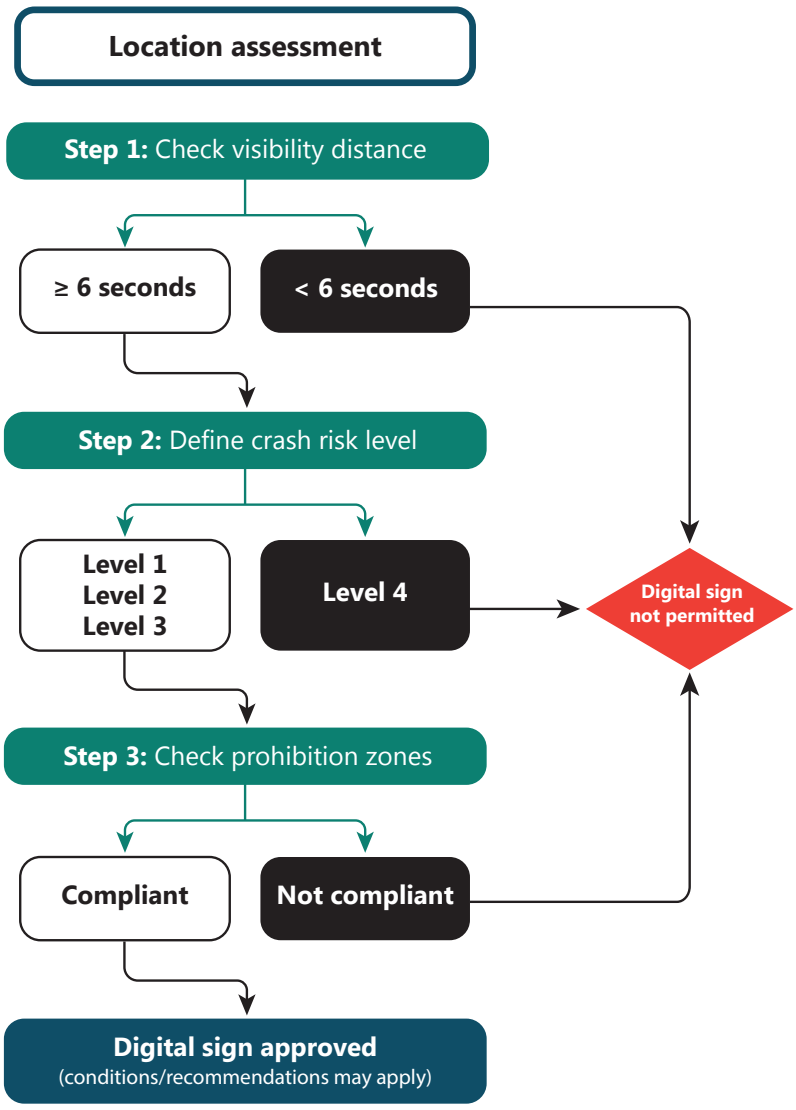



*Figure 3: Location assessment summary overview*

## 6.2 Visibility distance

Visibility distance is the distance between the point where a driver has uninterrupted visibility of a sign and the location of the sign itself. (An interruption is defined as a physical obstruction.)

Uninterrupted visibility is required as sporadic or short visibility times may lead to undue distraction.

The visibility distance is measured from the centre of the digital sign display area to the farthest point along the road (in the verge side lane) where at least 50% of the display area is visible.

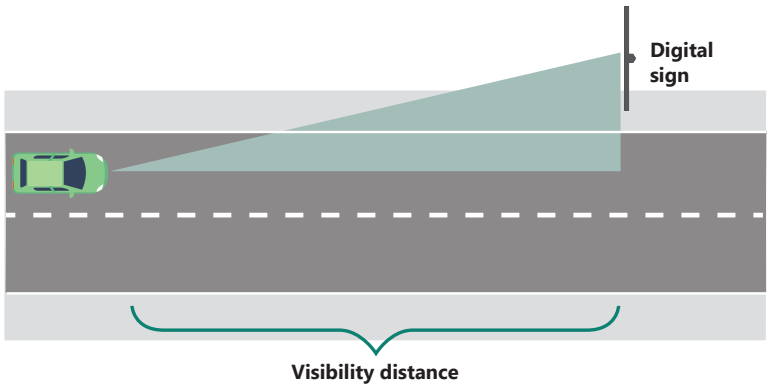



*Figure 4: Sign visibility distance from a road*

A digital sign will be deemed visible from a roadway if the orientation of the display area (or part thereof) is more than 20 degrees to the through-traffic alignment, as shown in Figure 5. Note that the digital sign may have a different visibility distance for each road from which it is visible.

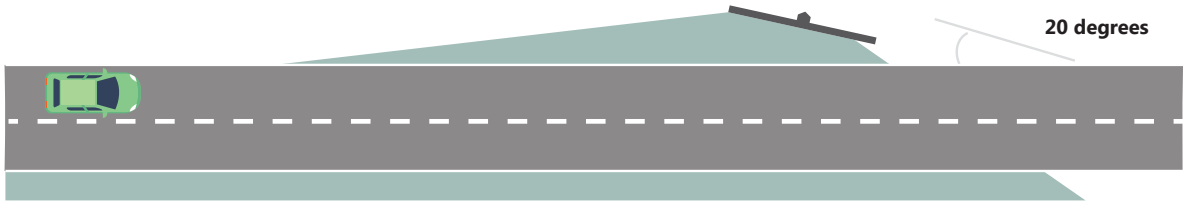



*Figure 5: Sign orientation visible from a road*

Additionally, a minimum of 6 seconds visibility is required. Table 2 shows the required distances (m) within specific speed zones to achieve the minimum visibility requirement.

*Table 2 - Minimum required visibility distance*

| Speed limit (km/h) | Minimum visibility distance required (m) |
|---|---|
| 50 | 83 |
| 60 | 100 |
| 70 | 117 |
| 80 | 133 |
| 90 | 150 |
| 100 | 167 |
| 110 | 183 |

**Digital signs with the display area equal to or less than 6 m²:**

There is no minimum visibility distance for digital signs with the display area equal to or less than 6 m².

## 6.3 Crash risk category

### 6.3.1 Introduction

The introduction of external distractions (such as digital signs) at busy road locations, with more demanding driving tasks or higher crash records, may have a detrimental impact on road safety.

To help determine the level of risk of the Western Australian road network, a crash risk category of level 1, 2, 3 or 4 is assigned to categorise each road section and intersection.

**Level 1**

- Level 1 intersections and road segments are generally in low complexity environments, with simple driving task requirements and lower than average crash rates.
- Digital signs are likely to be acceptable within level 1 intersections or road segments.
- All roads and intersections subject to permanently posted or area speed limits of 40 km/h or lower, may be considered crash risk level 1.

**Level 2**

- Level 2 recognises that at some road sections or intersection types, drivers require increased concentration on the task, and that distraction from a digital sign is more likely to result in a crash.
- Digital signs within level 2 intersections or road segments therefore have longer dwell times applied.

**Level 3**

- Some road sections and intersections have significant casualty crash records higher than other roads of a similar nature, and are assigned a crash risk category of level 3.
- For a digital sign to be approved within a level 3 intersection or road segment, Main Roads must be satisfied that the digital sign will not increase the risk of a casualty crash.
- Approval may be contingent on various conditions and restrictions being met such as:
  - limited hours of operation
  - extended dwell times
  - reduced luminance
  - restricting visibility from high-risk road sections
  - other installation requirements and operating conditions as determined by Main Roads.

**Level 4**

- A small number of intersections and road segments on the Western Australian road network have been identified as having extremely high casualty crash records.
- The addition of any distractions at these sites may create an unacceptable risk of a casualty crash. These sites have been assigned a crash risk category of level 4.
- No digital signs will be permitted if they are classified as a level 4 site.

### 6.3.2 Determining the crash risk category

The crash risk category to be used for assessment of the proposed digital sign is the highest crash risk category of any road section or intersection on the approach to and departure from the digital sign *(refer to the Crash Risk Category Map)*. The approach assessment extends to 6 seconds visibility distance (see Section 6.2, Table 2). The departure assessment extends to the distances as detailed in Table 3 (below).

*Table 3 - Digital sign departure distance to be used for crash risk category determination*

| Speed zone (speed limit) | Digital sign departure distance |
|---|---|
| **60 km/h and below** | 50 m |
| **70 km/h or 80 km/h** | 100 m |
| **90 km/h and above** | 150 m |

The figure below represents how these distances should be used to determine the crash risk category.

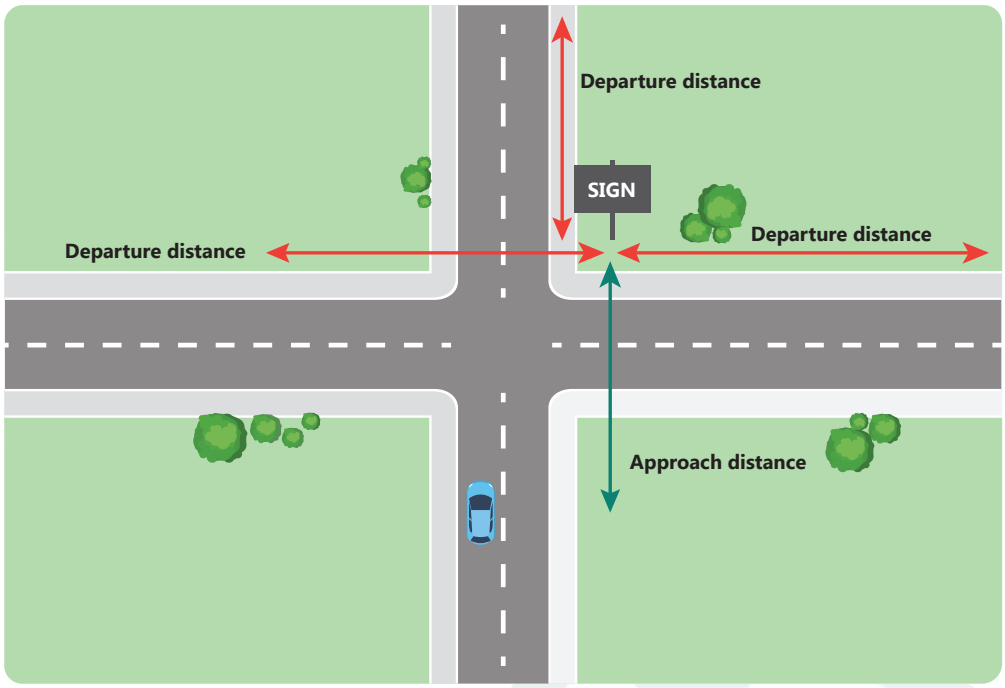



*Figure 6: Approach and departure distances for crash risk category determination*

*Note: If there is a level 4 intersection within the calculated assessment distance, but the sign location is outside the intersection assessment zone (below), then the intersection is treated as a level 3 intersection.*

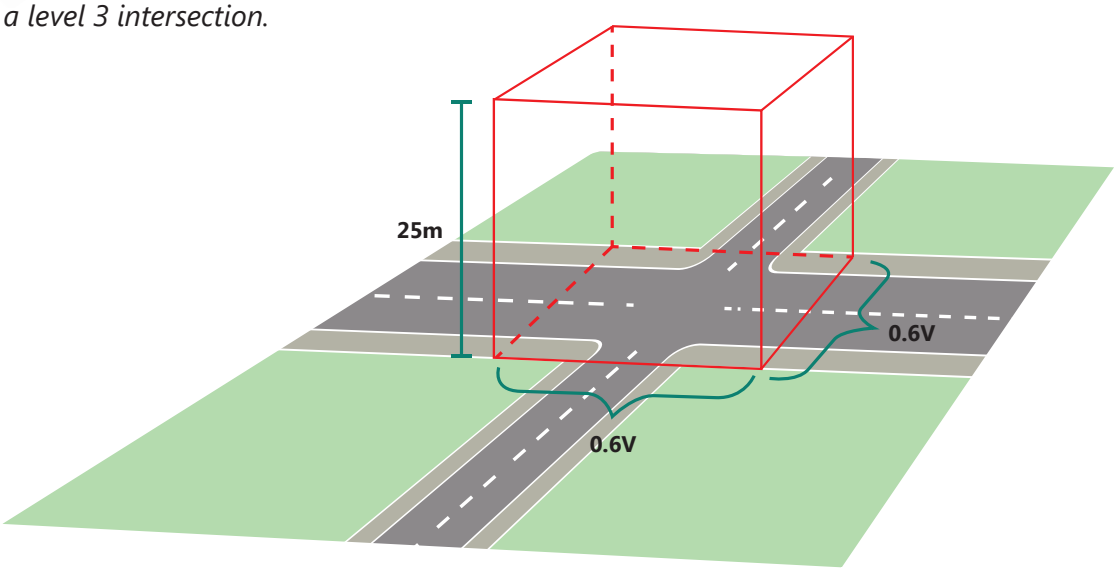



*Figure 7: Intersection assessment zone*

**Main Roads will provide advice on crash risk categories appropriate for a proposed digital sign at the pre-lodgement meeting.**

**Digital signs with the display area equal to or less than 6 m²:**

Crash risk categories apply to all digital signs. However, digital signs with a display area equal to or less than 6 m² will be allowed in level 4 locations subject to extended dwell time conditions (see Section 8.3).

*Refer to Appendix 1 for more information on crash risk level categorisation.*

## 6.4 Prohibition zones

### 6.4.1 Obstruction of a road sign

Digital signs must not obstruct a driver's view at a point where they may need to react (brake or change lanes).

The minimum distance between the digital sign and a road sign should be 0.6 V, where V = posted speed limit in km/h.

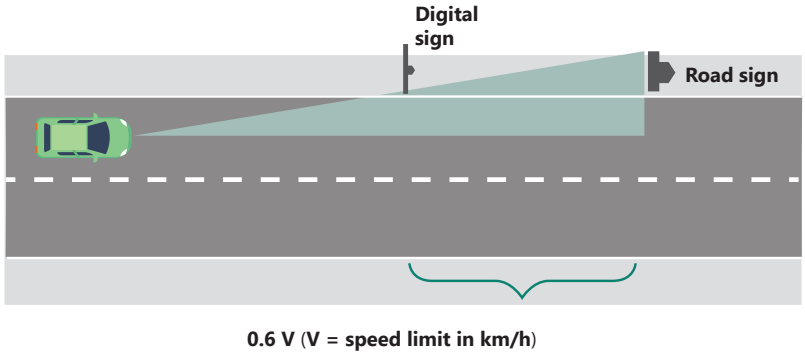



*Figure 8: Obstruction of road sign*

**Digital signs with the display area equal to or less than 6 m²:**

The same criteria applies to digital signs with the display area equal or less than 6 m². The minimum distance between the digital sign and a road sign should be 0.6 V, where V = posted speed limit in km/h.

### 6.4.2 Interference with a traffic control signal (TCS)

A TCS must always be visible to road users as misinterpretation or failure to observe a TCS increases the likelihood of high severity crash outcomes.

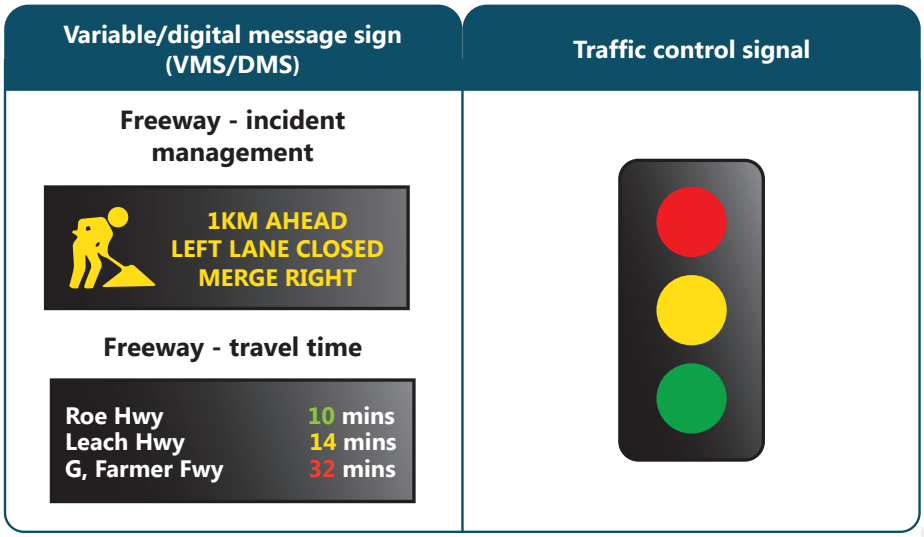



*Figure 9: Common traffic control signals (TCS)*

A digital advertising sign must not be positioned where it may be too close (in front, besides, above, or behind) a TCS. The resulting offset adjacent, above and behind the TCS is called the TCS prohibition zone (TPZ).

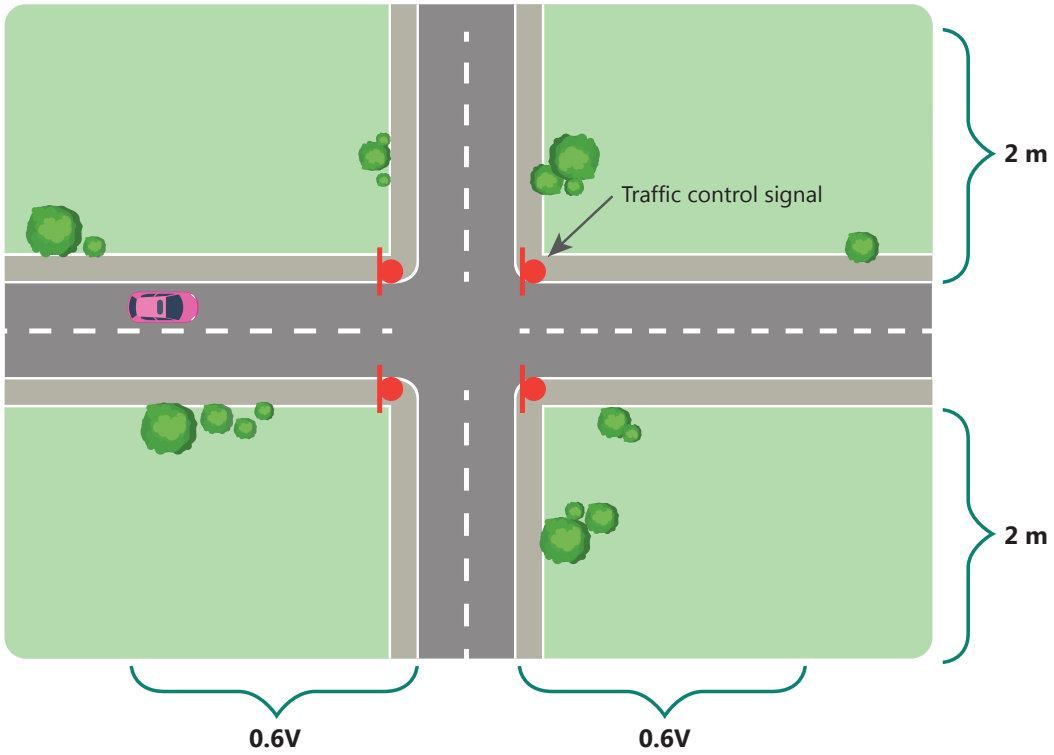



*Figure 10: Traffic control signal prohibition zone*

If a proposed digital sign is within the area shown above, the minimum vertical offset must be 7 m.

The vertical offset is measured from the road pavement to the lower edge of the digital sign, as shown in the figure below.

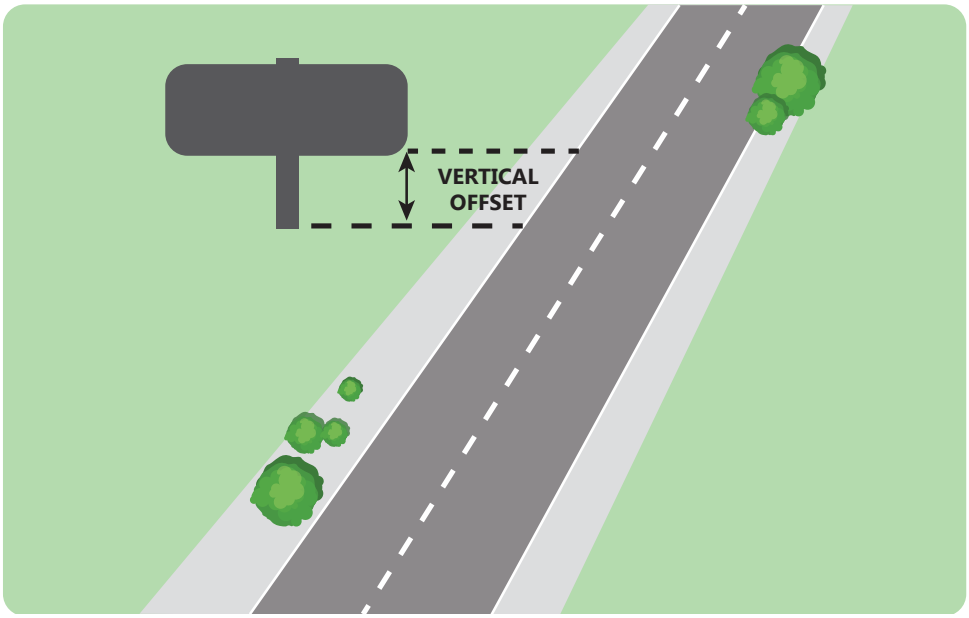



*Figure 11: Vertical offset*

For all other locations, the minimum vertical offset must be 3 m. This minimum offset is required as drivers must be able to observe traffic, pedestrians, cyclists, or eRideable users.

**Digital signs with the display area equal to or less than 6 m²:**

There is no minimum vertical offset for digital signs with the display area equal to or less than 6 m². However, if the digital sign is positioned behind a TCS (within 0.6 V), the bottom of the sign must not be lower than 4 m from the road pavement.

### 6.4.3 Lane use management signs (LUMS)

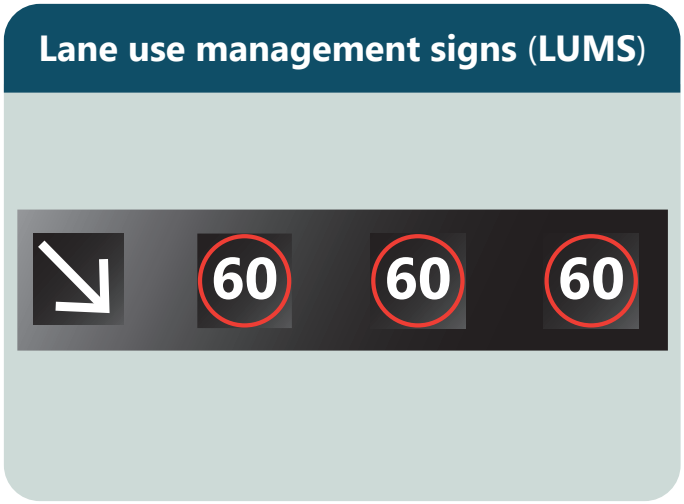



*Figure 12: Lane use management signs*

A digital sign must not be close to lane use management signs on a freeway, where a driver may need to make a critical decision such as reduce speed, change lanes, etc. A prohibition zone is provided to exclude digital signs from these sections of the road network. The prohibition zone extends vertically, indefinitely.

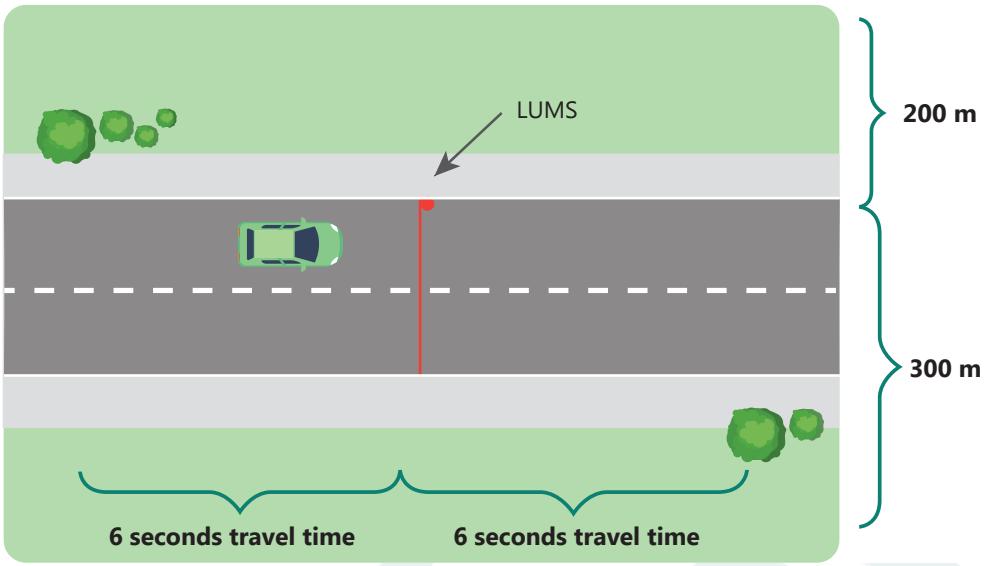



*Figure 13: LUMS prohibition zone*

### 6.4.4 Critical movement prohibition zone

At merge and diverge locations, drivers are required to observe vehicles in adjacent lanes as well as on the forward roadway. Weaving movements are common, and additional distractions may increase the risk of a crash.

A critical movement prohibition zone (CMPZ) is provided to exclude digital signs from these sections of the road network. The CMPZ extends vertically, indefinitely.

The **CMPZ for diverge does not apply** on single-lane carriageways, or roads with a speed zone of 70 km/h or lower.

The **CMPZ for merge and diverge does not apply** on roads with a speed zone of 50 km/h or lower, or for bus lane merges.

#### 6.4.4.1 Merge and diverge

A driver negotiating a merge should not be distracted by a digital sign whilst approaching a lane transition area, or when within the lane transition area itself. A digital sign must not be located within the CMPZ as shown in Figures 14 and 15.

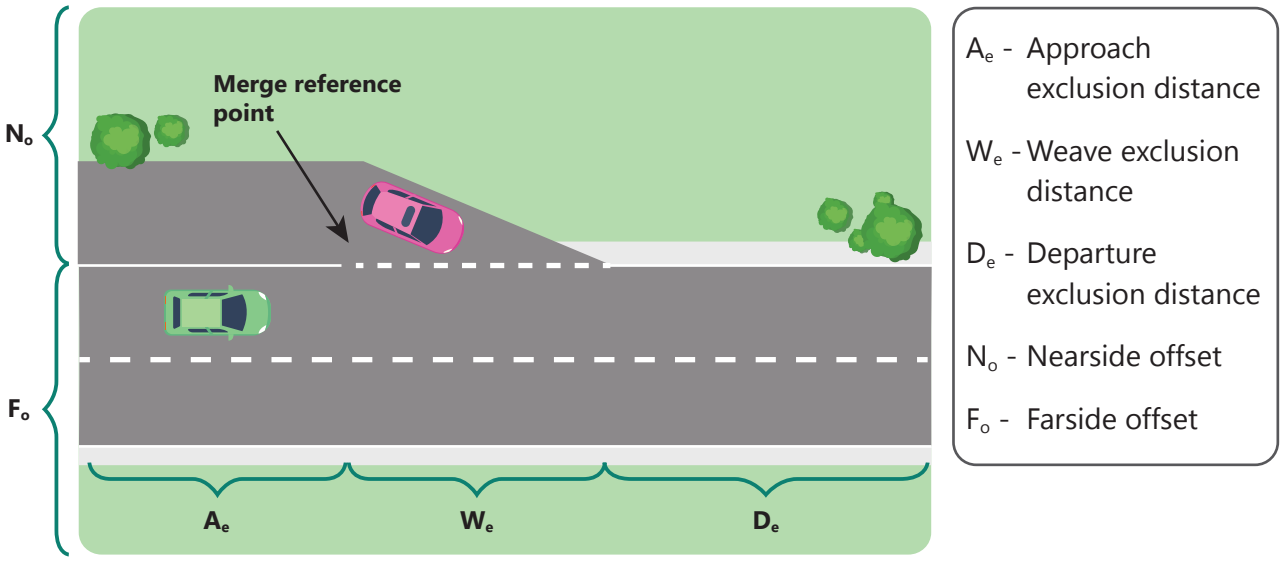



*Figure 14: Critical movement prohibition zone (CMPZ) for merge*

The CMPZ for a merge zone is assigned from the point where the two lanes begin to converge, i.e., the start of the merge taper (the merge reference point shown in Figure 14) to the distances shown in Table 4.

Drivers should not be subject to additional distractions at diverge zones, as some drivers make late decisions to exit and can cut across verge side lanes to reach the diverge. Other drivers need to be alert to these movements and take evasive actions if necessary.

On a multi-lane high-speed road, the CMPZ for a diverge zone is assigned from the point where the divergent lane starts to form. This is the reference point as shown in Figure 15. (CMPZ dimensions are provided in Table 4.)

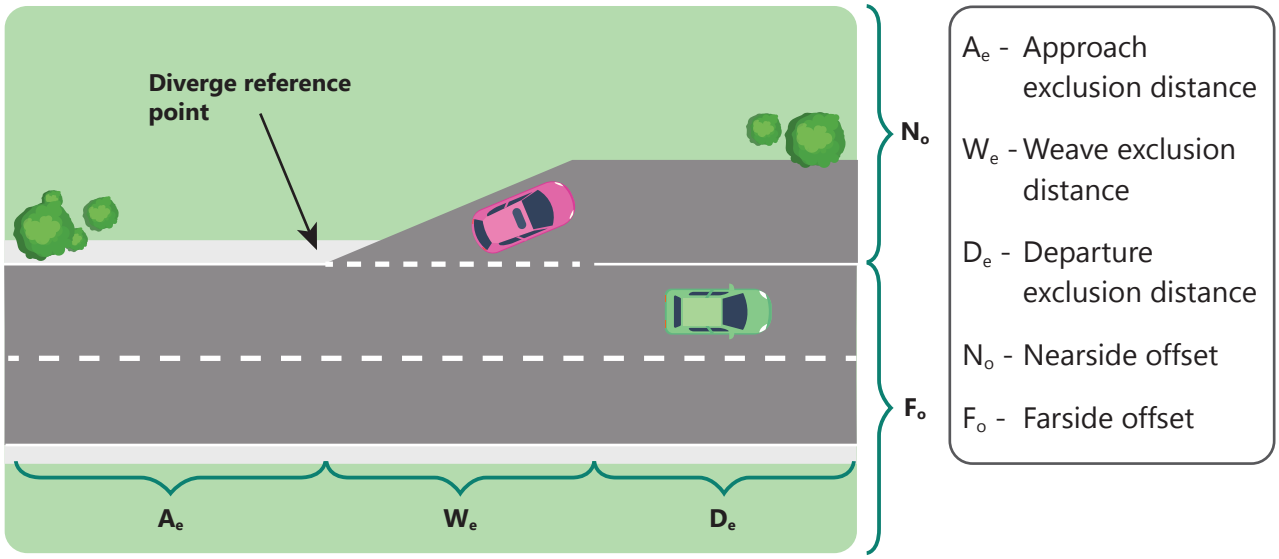



*Figure 15: Critical movement prohibition zone (CMPZ) for diverge*

*Table 4: Critical movement prohibition zone dimensions for merge and diverge road sections*

| Speed zone (speed limit) | $A_e$ (approach exclusion distance) | $W_e$ (weave exclusion distance) | $D_e$ (departure exclusion distance) | $N_o$ (nearside offset) | $F_o$ (farside offset) |
|---|---|---|---|---|---|
| | m | m | m | m | m |
| **60 km/h** | 100 | As marked | 100 | 40 | 200 |
| **70 km/h** | 115 | As marked | 115 | 40 | 200 |
| **80 km/h** | 135 | As marked | 135 | 200 | 300 |
| **90 km/h** | 150 | As marked | 150 | 200 | 300 |
| **100 km/h** | 170 | As marked | 170 | 200 | 300 |
| **110 km/h** | 185 | As marked | 185 | 200 | 300 |

**Digital signs with the display area equal to or less than 6 m²:**

The above criteria still applies.

# 7. Amenity

## 7.1 Introduction

Digital signs should be designed and located to preserve or improve visual amenity within the road reserve and adjoining areas visible from road or roadside vantage points.

Opportunities to improve visual amenity, by consolidating existing signage, or by ensuring advertising impact and location is appropriate for the road environment/streetscape and/or intended audience, are key considerations in the preservation and improvement of visual amenity.

## 7.2 Locations where advertising signs will not be supported

Main Roads will not support advertising signs within the road reserve, or on land visible from state roads, where it is considered obtrusive and/or in opposition to the character of the area, e.g.:

- Landscapes and views valued by the community i.e., scenic, city, rural, water bodies and/or foreshores.
- Visually prominent landforms such as rock outcrops and elevated features such as ridges, hills, and escarpments.
- Cultural and heritage sites, features or designations including Aboriginal heritage sites.
- Roadside vantage points, road sections and structures such as designated tourist, scenic, flora or other tourism routes.
- Roadsides that feature urban design treatments, structures, public art, or landscaping.

## 7.3 Guidance on improving the aesthetics and placement of advertising signs

Placement of digital signs should enable them to blend with existing elements of the streetscape within the context of other built forms (or natural attractive scenery), to preserve the visual landscape, character and/or view/s.

Height, position, and illumination are also key elements influencing aesthetics. However, digital signage and/or supporting structures should also:

- Maintain the skyline when viewed from the road reserve or surrounding area.
- Align with the architectural elements and character of surrounding buildings, structures, and tree canopies.
- Not protrude above buildings, structures, and tree canopies.
- Consolidate existing signage where possible, to reduce the proliferation of signage.
- Be surface mounted where possible and integrated within the façade.
- Supporting structure colours should integrate with, or match surroundings/predominant background (e.g., sky, vegetation).
- Be screened/modified to minimise light spill to adjacent properties (particularly in residential areas).

## 7.4 Landscape and visual assessment (LaVA)

A landscape and visual assessment (LaVA) will be required when a proposed digital advertising sign does not comply with the following aesthetic and placement requirements:

1. Maintain the skyline when viewed from the road reserve or surrounding area.
2. Align with the architectural elements and character of surrounding buildings, structures, and tree canopies.
3. Not protruding above buildings, structures, and tree canopies.
4. Consolidate existing signage where possible, to reduce the proliferation of signage.
5. Be surface mounted where possible and integrated within the façade.
6. Supporting structure colours should integrate with or match surroundings/predominant background (e.g., sky, vegetation).
7. Be screened/modified to minimise light spill to adjacent properties (particularly in residential areas).

*Please refer to Appendix 2 for information on how to complete a LaVA assessment, when a proposed digital sign does not meet the above requirements.*

**Digital signs with the display area equal to or less than 6 $m^2$:**

A LaVA is not required.

# 8. Conditions and Restrictions

## 8.1 Introduction

Main Roads may place restrictions and conditions on the approval of a digital sign to ensure the objectives of this policy are met.

Typical restrictions and conditions include:

- installation requirements
- operating conditions, and
- a period of approval.

**Main Roads may also recommend conditions for a digital sign under planning regulations.**

Main Roads **will not** provide digital sign approval where:

1. It has a display area greater than 6 $m^2$ and is on a road section or intersection that has a crash risk category of level 4.
2. The visibility distance is less than six seconds travel time *(refer to Table 2 - Minimum required visibility distance)*.
3. It is within any prohibition zone.
4. The display area exceeds 100 $m^2$ (may be assessed on a case-by-case basis in locations where the speed is 40 km/h or lower).
5. The top of the display area is greater than 20 m above the nearest road pavement - unless the sign is attached to a building façade. If the sign is attached to a building façade, it should not be higher than the top of the building façade.
6. The display content includes animation, movement, pulsing, flashing or similar lighting variations.
7. It has a display area less than 6 $m^2$ and is within 30 m of an existing digital sign, unless the sign is not directed towards drivers.
8. It has a display area greater than 6 $m^2$ and is visible from the same vantage point of an existing digital sign greater than 6 $m^2$.
9. It is otherwise contrary to this policy.

## 8.2 Installation requirements and conditions

### 8.2.1 Placement within a road reserve

1. Digital signs less than 6 $m^2$ installed within the road reserve must be integrated with/designed in sympathy with facilities providing public benefit e.g., bus shelters, illuminated street name signs, seating, rubbish bins and similar.
2. Digital signs and supporting structures must not cause any obstruction to pedestrians, cyclists or eRideable users.
3. Digital signs must not be placed within the clear zone of a road carriageway or cycleway. (Note: this may be a larger offset for oversize/overmass vehicle routes.)

4. Digital signs must not obstruct a road users' view (including pedestrians, cyclists and eRideable users) of adjacent road carriageways, cycleways, and footpaths.
5. Digital signs must not obstruct pedestrian access along a road verge, even if no formal path is present.

### 8.2.2 Approval required for construction and maintenance on a state road reserve

Prior to a digital sign being installed on a state road reserve, the applicant will be required to obtain approval from Main Roads to work in a road reserve. The *Procedure for Seeking Approval to Undertake Works within the Main Roads Reserve* is available on Main Road's website, or by contacting the Main Roads' Customer Information Centre on 138 138.

*Refer to Section 10 - References and Related Documents.*

### 8.2.3 Indemnity

The owner of a digital sign located within a state road reserve is required to indemnify and keep indemnified: the Commissioner of Main Roads and their servants and agents, against any claim or proceeding (and any costs and expenses incurred as a result) that may be made or brought by any person or corporation against the Commissioner of Main Roads and their servants and agents, arising out of the erection, or existence or operation of the advertising device.

### 8.2.4 Insurance

The owner of a digital sign located within a state road reserve shall, with respect to that sign, establish and maintain a public liability insurance policy with a reputable insurer.

The owner must effect and maintain (to the satisfaction of the Commissioner of Main Roads) insurance, which covers claims in respect of:

- Loss of, or damage to, or loss of use of, any real or personal property.
- The personal injury, disease, or illness to, or death of any person arising out of the erection, or existence or operation of the advertising device.

The owner of a digital sign located beyond a state road reserve shall also satisfy the public liability insurance requirements of the local government.

#### 8.2.4.1 Date of insurance

The owner of the digital sign must ensure the insurance (referred to above to be effected and maintained) is in force on the date of the erection of the digital sign and is maintained during the existence or operation of the approved digital sign.

#### 8.2.4.2 Evidence of insurance

The owner of the digital sign shall provide the Commissioner of Main Roads with evidence of such insurance as required.

### 8.2.5 Additional requirements

As a result of the location and amenity assessments in line with Sections 6 and 7 of this policy, Main Roads may request adjustments to the digital sign application including, but not limited to:

- Placement relative to TCS, road carriageway, or critical decision-making points for drivers.
- Orientation of the display area.
- Form of construction and physical road safety.
- Installation of additional infrastructure to the road network to mitigate potential safety risk at the site.
- Any other characteristic as deemed necessary by Main Roads to limit detrimental impacts on road safety.

Such requirements will need to be addressed for Main Roads to provide approval under the Main Roads digital sign application process.

## 8.3 Sign operating conditions

All digital signs must meet the operating conditions set out in any approval granted by Main Roads under this policy. Operating conditions are determined as per the requirements and conditions set out below.

These requirements and conditions are based on the principle of maintaining a safe road network and reducing the potential to distract drivers and other road users at critical decision-making points.

### 8.3.1 Light emitting devices

The *Road Traffic Administration Act 2008 (Section 140)*, which applies to all roadways in Western Australia, warrants that light emitting devices, in or visible from a road reserve, should not distract a driver, or cause a risk of danger.

Where a digital sign is adjacent to a TCS, in an otherwise uncluttered road environment, road users might observe the digital sign in preference to the TCS. This may be a result of the digital sign being larger, brighter, and/or having unfamiliar or changing content.

The owner and operator of the digital sign may be notified to rectify the device where it is the opinion of Main Roads that a digital sign is likely to:

- confuse a driver
- adversely affect traffic, or
- increase risk.

### 8.3.2 Changes in display content

The display of a digital sign may change regarding brightness, text or image displayed. These should be managed to reduce distraction to drivers.

#### 8.3.2.1 Transition

A digital sign is most likely to draw a driver's attention when the displayed content changes. The transition between images or messages should change instantaneously. As a maximum, the transition must occur within 100 milliseconds.

Transitions between messages or images must not include any effects such as fade, zoom or fly-in effects, and no blank screen between messages.

The brightness of a digital sign should be managed when content changes from primarily dark shades to light shades to ensure contrast is transitioned. This will ensure the sign does not appear to flash.

#### 8.3.2.2 Flashing, strobing, pulsing

No portion of the digital sign display should emit a flashing, pulsing, or strobing effect.

#### 8.3.2.3 Animation

Movement in a driver's peripheral vision is highly likely to distract, and potentially draw their attention away from the forward roadway.

Digital signs should not display moving images (or lighting) or change in a way that produces an impression of movement.

Animation of any sort shall not be displayed on a digital sign that can be seen by a driver on a roadway or cycleway.

### 8.3.3 Dwell time

Dwell time is the period during which the content on the digital sign display area is constant.

A principle of this policy is that a driver should see no more than one transition of a digital sign display as they pass the sign. Also, the greater the proportion of drivers that witness a content change, the greater the road safety risk posed by the digital sign.

The dwell times calculated in Table 6, limit the proportion of drivers (PD) observing a transition of display content on a digital sign to less than 100% under free-flowing traffic conditions.

This policy further limits the PD observing a change in the transition of display content under free-flowing traffic conditions to:

**1.** The minimum dwell time to be calculated as per the below:

$$\text{Dwell time} = \frac{V}{(S \times 0.28 \times PD_f)}$$

Where:

***a)*** ***Visibility distance (V)*** is a distance, in metres, as determined under Section 6.2 of this policy. The visibility distance will be 6 seconds of travel time for dwell time calculation purposes.

***b) Speed (S)*** is the legal speed limit, in km/h, for the road segment adjacent to the sign.

***c) Proportion of drivers (PD)*** is as per Table 5 (below).

*Table 5: Proportion of drivers (PD)*

| Level 1 | | Level 2 | | Level 3 | |
|---|---|---|---|---|---|
| **Speed limit** | **PD** | **Speed limit** | **PD** | **Speed limit** | **PD** |
| **110** | 30% | **110** | 20% | **110** | 10% |
| **100** | | **100** | | **100** | |
| **90** | 40% | **90** | 30% | **90** | 20% |
| **80** | | **80** | | **80** | |
| **70** | 50% | **70** | 40% | **70** | 30% |
| **60** | | **60** | | **60** | |

***d) Horizontal offset ($O_h$)*** is the horizontal offset in metres.

The horizontal offset is measured from the far edge of the digital display area to the left-hand kerb, or edge of the left-hand lane. The figures below indicate how to measure horizontal offsets for digital signs positioned left or right of the carriageway.

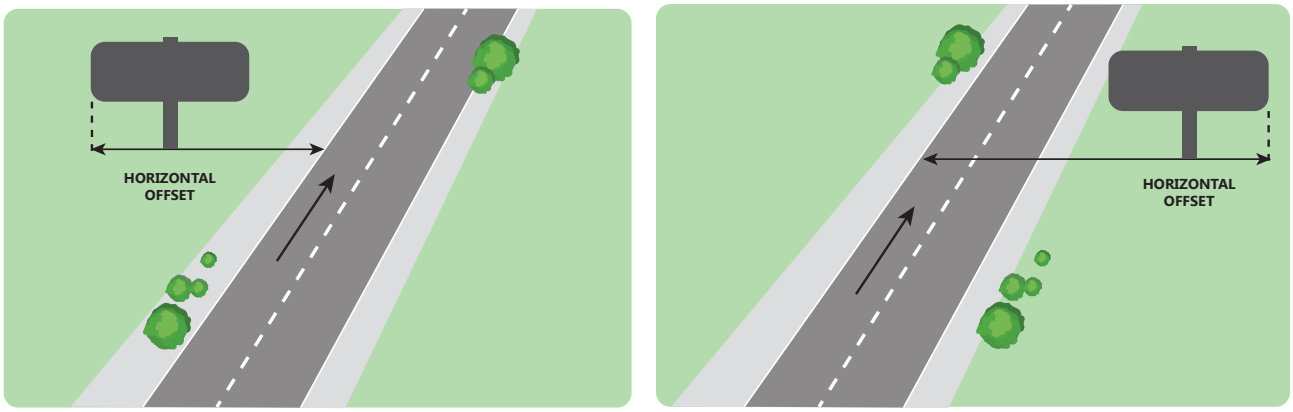



*Figure 16: Horizontal offsets*

***e) Factored proportion of drivers (PDf)*** is the proportion of drivers observing a display transition factored down to account for increased risk relative to the sign being further from the road.

The further from the forward roadway a digital sign is positioned, the more likely a driver is to be distracted in their peripheral vision and turn their direction away from the road.

To account for this increased risk, the target proportion of drivers (PD) is factored down as a function of the horizontal offset ($O_h$) and the visibility distance (V).

***Factored proportion of drivers (PDf)*** is calculated as follows, where $O_h$ must be less than twice V.

$$PD_f = \frac{PD \times (V - \frac{1}{2} O_h)}{V}$$

*Table 6: Dwell time*

| | Level 1 | | | Level 2 | | | Level 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | <70 km/h | 80-90 km/h | >100 km/h | <70 km/h | 80-90 km/h | >100 km/h | <70 km/h | 80-90 km/h | >100 km/h |
| Offset (0m-50m) | 10 | 15 | 20 | 15 | 20 | 30 | 20 | 30 | 60 |
| Offset (50m-100m) | 15 | 20 | 25 | 20 | 25 | 35 | 25 | 35 | 70 |
| Offset (>100m) | 20 | 25 | 30 | 25 | 30 | 40 | 35 | 45 | 80 |

2. At sites where the digital sign is only viewable from roads with speed zones of 40 km/h or less, the minimum dwell time will be 10 seconds.
3. For digital signs that may be viewed from multiple roads, the dwell time calculation shall be undertaken for each approach, and the longest dwell time calculation will be applied.
4. In accordance with the *Road Traffic Administration Act 2008 (Section 140)*, Main Roads may also notify a digital sign operator that they need to adjust the dwell time on an approved and installed digital sign, based on general road safety principles and risk mitigations. This is assessed on a case-by-case basis.

**Digital signs with the display area equal to or less than 6 m$^2$:**

For digital signs with a display area of 6 m$^2$ or less, the minimum dwell time will be 10 seconds
- on roads of 50 km/h or lower (where the sign is not within a level 4 location),
- on roads 60 km/h or above (where the sign not within either a level 4 location or in a prohibition zone).

If the location does not meet the above criteria, the minimum dwell time will be 30 seconds.

### 8.3.4 Luminance and illumination

Where a digital sign is brighter than the surrounding ambient light, it can draw attention away from the roadway, vulnerable road users, and TCS. This creates a significant hazard.

Therefore, luminance levels should not exceed those of static signs under street lighting within the road environment. This may require digital signs to be turned off at night in areas with no street lighting.

Due to the rapid rate of change in ambient light during dusk and dawn, digital sign luminance levels output during these periods must be actively managed. Any change in luminance shall be applied during the transition between display content.

*AS-NZS 4282 - Control of the Obtrusive Effects of Outdoor Lighting* provides guidance on the effects of outdoor lighting with respect to lit surfaces and glare toward road users. *(Refer to Section 10 - References and Related Documents)*. This standard provides guidance on the luminance that may be acceptable from a lit surface such as a digital sign, as well as the threshold increment used to assess glare impacts on drivers.

*Table 7: Maximum allowable luminance in various road environments based on AS-NZS 4282*

| Environmental zone* | Description | Day cd/m² | Night cd/m² |
|---|---|---|---|
| A4 | Town and city centres and other commercial areas with generally high off-street ambient lighting e.g., major shopping/commercial centres | 500 | 350 |
| A3 | Suburban areas in towns and cities with generally medium off-street ambient lighting e.g., shopping/café strips | 400 | 250 |
| A2 | Sparsely inhabited rural and semi-rural areas with occasional off-street ambient lighting | 400 | 150 |
| A1 | Relatively uninhabited rural areas with no off-road lighting | 300 | zero |
| A0 | Intrinsically dark | zero | zero |

** Environmental zone as defined in AS-NZS 4282 Table 3.1*

## 8.4 Displayed content

### 8.4.1 Replication of a road sign

*The Road Traffic Code 2000 R.297(5)* warrants that nothing in or visible from any road reserve should replicate a road sign. See below for excerpt:

*"(5) A person must not erect, establish, place, maintain or display, on a road, anything that –*

*(a) is a false representation of, or a colourable imitation of, a traffic sign or traffic control signal."*

**The digital sign must not display images of road signs or traffic control signals.**

### 8.4.2 Sequential content

Messages that are displayed over a sequence of images or text have the potential to capture a driver's attention for an extended period and increase the risk of a crash.

Generally, digital signs must not show messages that are conveyed through a sequence of displayed content. However, community information messages may display sequential text to a maximum of three (3) panels displayed at three (3) second intervals.

### 8.4.3 Legibility of text

Text displayed on a digital sign intended for a driver to read whilst passing must be large enough to be legible, and not require the driver to strain to focus on the text.

All other text displayed on the digital sign must be small enough that it is not a distraction to a driver and may be read only from a stationary vehicle, or by other road users (such as pedestrians).

### 8.4.4 Complexity of message

The greater the quantity of information in a digital sign, the longer it will take to read, and hence the longer a driver may be distracted from the driving task.

The number of elements displayed on a digital sign should generally be no more than ten. Where a word, object, or logo may be counted as an element.

### 8.4.5 Instructions to drivers

The content displayed on a digital sign should not include any instructions to drivers or images that may be interpreted as directions.

Words that convey directions, such as turn, stop, enter or similar, should not be displayed.

Arrows that direct a driver to a destination should not be displayed.

Website addresses, phone numbers and social media instructions should not be displayed unless small enough that it is not a distraction to a driver and may be read only from a stationary vehicle, or by other road users (such as pedestrians).

## 8.5 Advertising standards and community expectations

The Advertising Standards Bureau administers a national system of advertising self-regulation through the Advertising Standards Board and the Advertising Claims Board. This system is recognised by various authorities throughout Australia, based on an understanding that advertisers have a common interest in promoting community-accepted standards of advertising.

The Advertising Standards Bureau administers a general code of ethics for advertising developed by the Australian Association of National Advertisers, as well as specific codes for such areas as:

- marketing to children
- food and beverages (including 'fast foods')
- motor vehicles
- alcohol and drugs
- weight management.

*In relation to this policy:*

1. Advertising content determined to breach any advertising code administered by the Advertising Standards Bureau, or any state or national legislation, must not be displayed on a roadside advertising sign/digital sign.
2. Advertising signs should not display extreme emotional material, especially content that could be threatening or anxiety-provoking.
3. Themes and messages in juxtaposition to the surrounding land-use should not be displayed.
4. Advertising content should meet community standards and expectations in all settings.

*Refer to* www.adstandards.com.au *for more information.*

## 8.6 Period of approval

### 8.6.1 Expiry

All approvals granted to operate a digital advertising sign under this policy will have an expiry timeframe.

The approval will expire on the following (whichever comes first):

"*I. 15 years; or*

*II. the date a revocation becomes effective under Regulation 10 of the Main Roads (Control of Advertisements) Regulations 1996 (WA); or*

*III. 6 months after the date on which the Proponent receives notice in writing from Main Roads that the removal of the advertisement is necessary or convenient for the exercise of Main Roads functions under the Main Roads ACT 1930 (WA) or the Land Administration Act 1997 (WA)."*

### 8.6.2 Post operation review

A post operation audit (POA) may be undertaken by an independent accredited road safety auditor after 18 months of operation. If the POA findings highlight a safety issue that is linked directly to the advertising sign, the crash risk level and associated dwell times will be reassessed.

A post operation study (POS) which focuses on the effects of the placement and operation of the sign must be carried out in accordance with the *Main Roads Policy and Guidelines for Road Safety Audit* (refer to Section 10 - References and Related Documents) after a 36-month period of the operation but within 42 months of the signs' installation. The road safety check must be carried out by an independent accredited road safety auditor.

A copy of the report is to be provided to Main Roads, and any safety concerns identified by the auditor relating to the operation or installation of the sign must be rectified by the applicant.

# 9. How to Apply: Digital Sign Application Form

Please download the application form via the Main Roads' website. Once complete submit the form to: advertisingsigns@mainroads.wa.gov.au.

| DIGITAL SIGN APPLICATION FORM | | | |
|---|---|---|---|
| ***Policy Application*** | | | |
| **Proximity to state roads** | Is the proposed sign within 500 m of a state road? | ☐ Yes | ☐ No |
| | Which state roads are within 500 m? | | |
| | Is the proposed sign visible from a state road? | ☐ Yes | ☐ No |
| | Which state roads will the sign be visible from? | | |
| | Are any traffic control signals within 100 m of the proposed sign? | ☐ Yes | ☐ No |
| | What sort of traffic control signal? | | |
| ***Sign Details*** | | | |
| **Application contacts** | Sign owner: | | |
| | Postal address of sign owner: | | |
| | Contact name for application: | | |
| | Email address: | | |
| | Telephone number: | | |
| **Land tenure details** | Sign location: | | |
| | Property owner: | | |
| | Property owner contact: | | |
| **Sign details** | Sign dimensions (width (m) x height (m)) | | |
| | Display area (m2): | | |
| | Is the sign mounted on a building façade? | ☐ Yes | ☐ No |
| | Is the sign mounted on another structure? | ☐ Yes | ☐ No |
| | Is the sign positioned within the road reserve? | ☐ Yes | ☐ No |
| | What is the visibility distance from each of the roads the sign will be visible from. | | |
| | What is the vertical offset (measured from the road pavement to the lower edge of the sign). | | (metres) |
| ***Aerial Image*** | | | |
| Attach an aerial image showing the location of the proposed sign, its orientation and intended audience (mark on the plan where the additional images are captured from). | | | |

# 10. References and Related Documents

| Document number | Description |
|---|---|
| D24#681201 | Application and Assessment Guidelines for Static Advertising Signs |
| D18#604581 | Procedure for Seeking Approval to Undertake Works Within the Main Roads Reserve |
| AS-NZS 4282 2019 | Control of the Obtrusive Effects of Outdoor Lighting |
| D15#159750 | Main Roads Policy and Guidelines for Road Safety Audit |

# 11. Appendices

| Appendix | Title |
|---|---|
| **Appendix 1** | Crash Risk Map Methodology |
| **Appendix 2** | LaVA Assessment Requirements |

# Appendix 1: Crash Risk Map Methodology

## 1. Introduction and scope

The crash risk map methodology outlines how intersections and road sections with a hierarchy above "access road" are allocated to the following crash level categories:

**Level 1**
**Level 2**
**Level 3**
**Level 4**

**Note:** Hierarchies above access road include primary distributor, regional distributor and local distributor. All intersections and road sections that exclusively involve access roads are categorised as level 1 (as shown on the map).

## 2. Definitions

**Intersection categories**

Intersections are categorised by:

a) *Control:* signalised or non-signalised (i.e., 'Give Way' or 'Stop' signs)

b) *Type:* merge, T-junction, crossroads and roundabout

c) *Complexity:*
- simple (all approaches single carriageway)
- complex (at least one approach is a dual carriageway)

d) *Speed limit grouping:*
- low (60 km/h or less)
- medium (70 km/h or 80 km/h)
- high (90 km/h or above)

**Road section categories**

This applies to sections of the carriageway up to 300 m in length.

Road sections are categorised by:

a) *Type:* single or dual

b) *Speed limit grouping:*
- low (60 km/h or less)
- medium (70 km/h or 80 km/h)
- high (90 km/h or above)

## 3. How benchmarks are set

Benchmarks are used to be able to determine the casualty crash frequency rate for road sections and intersections.

These benchmarks are established by determining the average casualty crash frequency rate from

a) a selected groups of road intersections, and

b) a selected group of intersections.

Road sections and intersections included in the calculation include:

- any intersection with at least one intersecting road being a highway or state road, which is also located within the metropolitan region, and
- any road section on a highway or state road within the metropolitan region.

**Note: These roads and intersections are used as they are likely to have the highest traffic flows and are the locations where roadside advertising is most likely to be placed.**

The resulting benchmark calculations used to determine casualty crash frequency levels for any specific road section or intersection are as follows:

1. For intersections: 0.622 per year
2. For road sections: 0.086 per year

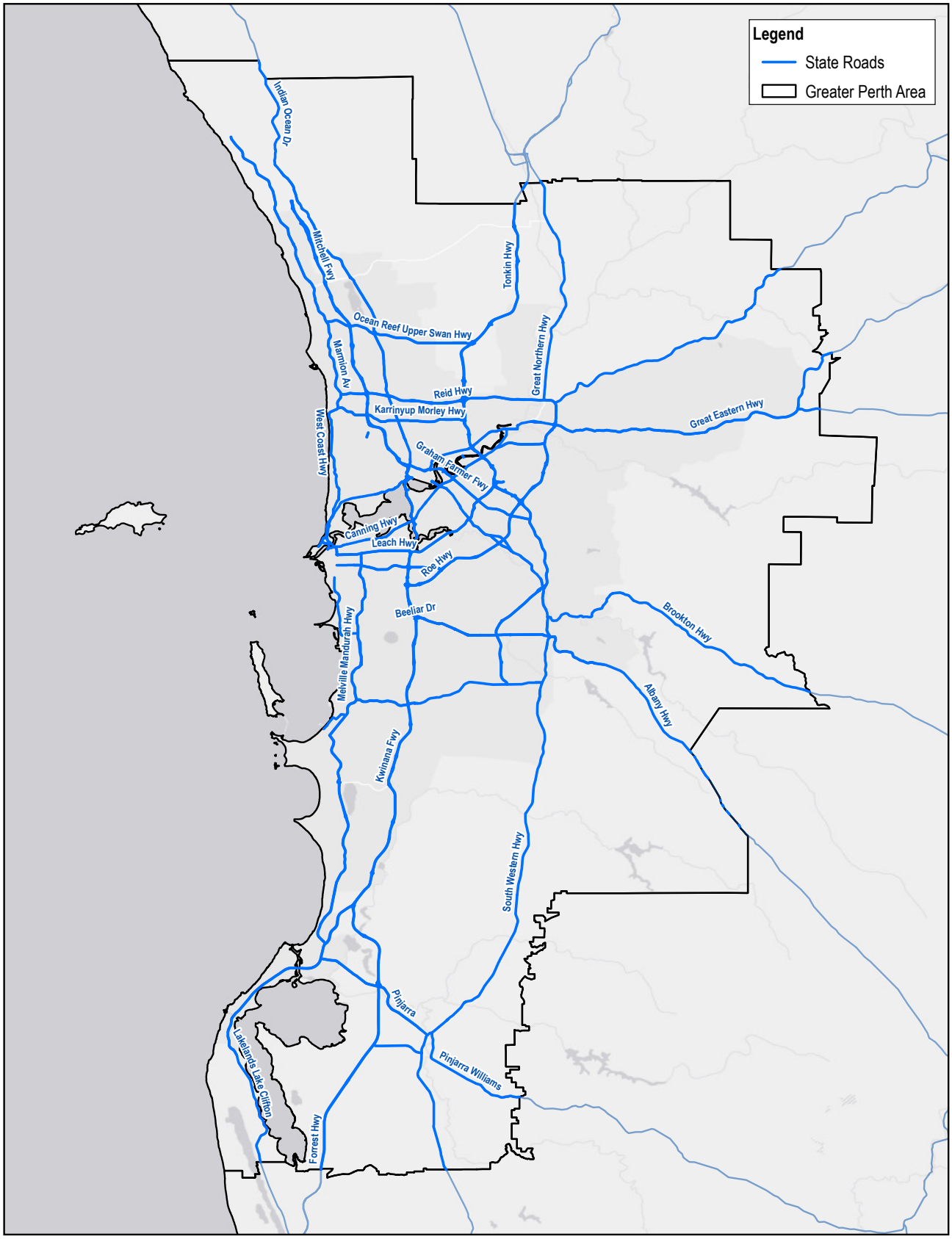



*Figure 1: Map showing the state roads and highways in the metropolitan region used to calculate benchmarks*

## 3.1 Allocating crash level categories to intersections

Allocating an intersection to a crash level category is a two-stage process. This process is based on the intersection's long-term casualty crash record, and its category.

### 3.1.1 Long-term casualty crash record

**Metropolitan intersections**

Table 1 shows the casualty crash thresholds used to determine the level for each metropolitan intersection. These thresholds have been chosen so that only intersections with a substantially higher casualty crash record than the benchmark are allocated to level 3 or level 4.

*Table 1: Intersection thresholds*

| Level | Casualty crashes threshold | Benchmark multiplier | Percentage and number of metropolitan intersections for each level |
|---|---|---|---|
| Level 1 | - | | 97.91% (33837 intersections) |
| Level 2 | more than 1 per year | 1.6 | 1.37% (472 intersections) |
| Level 3 | more than 2 per year | 3.2 | 0.46% (158 intersections) |
| Level 4 | more than 3 per year | 4.8 | 0.27% (92 intersections - 33 local roads and 59 state roads) |

*For example:*

An intersection is allocated to **level 2** if there is more than 1 casualty crash per year. This means the intersection had at least 1.6 times the benchmark number of casualty crashes.

$$1.6 = \frac{1 \text{ (crashes per year)}}{0.622 \text{ (intersection benchmark)}}$$

An intersection is allocated to **level 3** if there are more than 2 casualty crashes per year. This means the intersection had at least 3.2 times the benchmark number of casualty crashes.

$$3.2 = \frac{2 \text{ (crashes per year)}}{0.622 \text{ (intersection benchmark)}}$$

An intersection is allocated to **level 4** if there are more than 3 casualty crashes per year. This means the intersection had at least 4.8 times the benchmark number of casualty crashes.

$$4.8 = \frac{3 \text{ (crashes per year)}}{0.622 \text{ (intersection benchmark)}}$$

### 3.1.2 Intersection categories

As shown in Table 2 below, two intersection categories have been identified where most of its members have a long-term casualty crash record greater than the level 2 threshold.

*Table 2: Intersection categories where most of its members have a long-term casualty crash record above the level 2 threshold*

| State road intersections in the metropolitan region | Number of intersections | Number above level 2 'threshold' | Percentage above level 2 'threshold' |
|---|---|---|---|
| Signalised crossroads | 204 | 170 | 83% |
| Complex signalised t-junction medium speed limit | 50 | 39 | 78% |

If an intersection has been initially allocated to level 1 (under the long-term casualty crash record) but it is within one of the two intersection categories above, it is reallocated to level 2.

However, if an intersection has been initially allocated to levels 2, 3 or 4 (under the long-term casualty crash record) but it is within one of the two intersection categories above, it remains the same level.

## 3.2 Allocating crash level categories to road sections

Allocating road sections to each crash level category is a single stage process based on the long-term casualty crash record as shown in Table 3.

The category step is not included for road sections, as none of the road section categories have been identified where most of its members have a long-term casualty crash record greater than the level 2 threshold.

### State road metropolitan sections

*Table 3: Road section thresholds*

| Level | Casualty crashes 'threshold' | Percentage of road sections on metropolitan state roads for each level |
|---|---|---|
| Level 1 | | 86.7% |
| Level 2 | 2 | 7.2% |
| Level 3 | 4 | 2.5% |
| Level 4 | 5 | 3.6% |

*For example:*

- a road section is allocated to **level 2** if there are more than 2 casualty crashes per year.
- a road section is allocated to **level 3** if there are more than 4 casualty crashes per year.
- a road section is allocated to **level 4** if there are more than 5 casualty crashes per year.

Table 3 shows that for the state road metropolitan road sections, 86.7% would initially be allocated to level 1 and a further 7.2% to level 2 (93.9% in total).

### Non-state road metropolitan sections

The above thresholds have also been applied to the non-state road metropolitan road sections. The percentage of these sections allocated to each level is shown in Table 4.

*Table 4: Non-state road metropolitan road sections*

| Level | Casualty crashes 'threshold' | Percentage of road sections on metropolitan non-state roads for each level |
|---|---|---|
| Level 1 | | 96% |
| Level 2 | 2 | 2% |
| Level 3 | 4 | 1% |
| Level 4 | 5 | 1% |

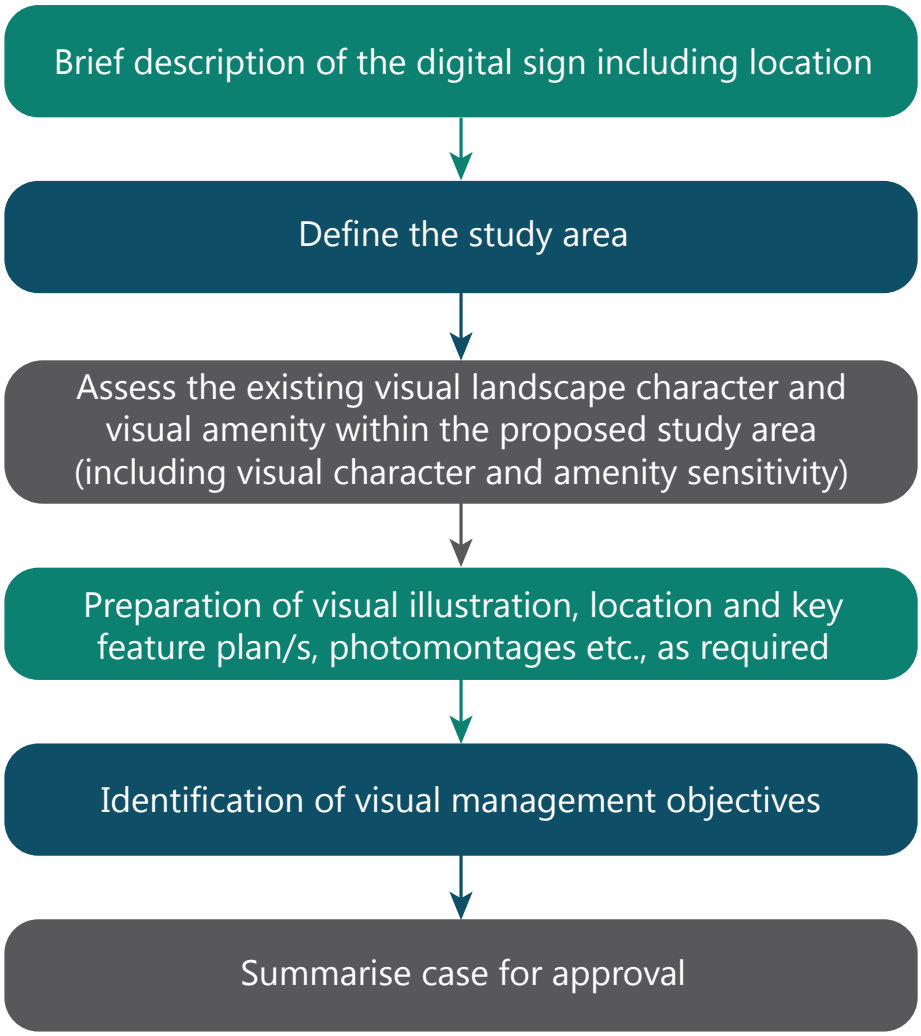
**Note: The Crash Risk Category Map is due for review in FY2027/28 and will be updated based on crash data from the preceding 10 years, i.e., 2018 to 2027.**

# Appendix 2: LaVA Assessment Requirements

## 1. Overview

When a proposed digital advertising sign (digital sign) does not comply with the aesthetic and placement requirements, as set out in Section 7.4 of the Policy and Assessment Guidelines for Digital Advertising Signs (the policy), a landscape and visual assessment (LaVA) is required.

This document has been provided to assist applicants in the preparation of a LaVA assessment/ report and sets out the inclusions for this report based on the summarised LaVA methodology flow diagram (see below).



# 2. LaVa contents

## Brief overview

A brief description of the digital sign to be proposed, its location, and context.

## Define the study area

Define the assessment study area as the possible extent of visual catchment of the proposed digital sign when viewed from the road and surrounding area.

**Note: A study area with 2 km radius is advised. However, this should be reviewed as part of the LaVA process based on the location of the digital sign within the surrounding landscape and topography.**

## Assess the existing visual landscape character and conditions

**Note: Requirements should align with the Policy and Assessment Guidelines for Digital Advertising Signs.**

Undertake both a desktop and field assessment to identify and describe the existing visual landscape character and visual amenity conditions within the study area, including visual landscape character and amenity sensitivity. This will include the following outputs:

1. **Description of visual landscape character**
    - a description of visual landscape character, including topography, vegetation, built form, and hydrology characteristics (where relevant)
    - features of visual significance within the landscape
    - important vantage points/viewpoints within the landscape, and
    - a sensitivity value for the visual landscape character of the study area.

2. **Description of visual amenity**
    - a description of the key visual elements within the study area
    - key viewpoint locations (vistas) as seen from the roadway
    - identification of sensitive viewpoints
    - a description of the viewpoints chosen for the assessment, and
    - a sensitivity value for each viewpoint.

### 3. Supporting illustration/visuals

The report requires an artistic impression/illustration showing the proposed sign on installation, highlighting all relevant features identified within the study area, including (but not limited to):

- Sign location.
- Land use zones, with named residential areas.
- Conservation areas, and landscapes that are valued by the community.
- Location of any visually prominent landforms, including elevated features such as ridges, hills, and escarpments.
- Location of any scenic, city, rural, or elevated views, long-or-wide views, or with water bodies.
- Location of any views of national significance or importance to the State of WA.
- Areas of significant native vegetation including areas subject to active rehabilitation or landscaping treatment.
- Cultural and Aboriginal heritage sites, including features or designations of local, regional or state-wide significance.
- Locations of road sections and structures offering significant visual amenity value including e.g., designated tourist, scenic, or flora routes, as well as featured urban design treatments, structures, public art, or landscaping.
- Viewpoints chosen for the assessment. (Viewshed mapping should be included where appropriate.)

## Preparing photomontages and artistic impressions/illustrations

In locations where it may be unsafe to undertake site photography for photomontage, e.g., along a roadway, an artistic impression may be prepared.

Photomontages/illustrations should show the proposed signage from locations identified as having the highest visual impact.

All photomontages/illustrations should be prepared in accordance with accepted industry technical standards for visual representation.

Photographic images should be captured using a high resolution 360-degree camera attached to a moving vehicle.

Artistic impressions should represent an appropriate field of view, and location chosen should demonstrate the highest visual impact from the road.

Photomontages/illustrations should be in a format suitable to be printed at large scale for community and stakeholder engagement purposes, if required.

## Proposed sign design and location details

A concise description of the proposed sign's design and location is required, including:

- A description and design drawings illustrating the proposed signage location, dimensions, maximum height from ground level, and mounting design or structural support.
- A description of the proposed materiality and finishes, lighting design, the proposed duration of the signage in the location, and landscape treatment (where relevant).
- A description and illustration of the proposed advertising content.
- Shadow diagrams (where requested by Main Roads).

**Note: where the applicant has already completed a LaVA for planning approvals, they should include any relevant background information, including any design changes that were required for this planning report.**

**Note: Where appropriate, consider including a photomontage or artistic impression to illustrate visual impacts at night. Where the signage content is variable or unknown, the photomontage or artistic impression should represent a worse-case scenario.**

## Identification of the visual management objectives and measures

The report should define objectives for managing the visual quality of the existing landscape/ views by:

1. Undertaking a concise legislation and policy review identifying any relevant visual landscape character and visual values within the study area.
2. Using the above information and analysis from Section 1.3 of the policy to define objectives for managing the existing visual landscape character and visual quality of the study area.

The applicant should also identify and describe the measures proposed to reduce any negative impacts.

These measures can be addressed using the best practice location, placement and design principles as outlined in the policy.

**Applicants are also advised to identify high constraints early in the design process.**

## Summarise/state the case for sign approval

The report should conclude with the key reasons why the applicant believes the digital sign is not aesthetically objectional and should therefore be approved.

## LaVA Assessment - Inclusions Checklist

- [ ] 1. A written report/assessment following the methodology and inclusions, as shown in the LaVa methodology flow chart.
- [ ] 2. Photographic images/illustrations (where photographic images cannot be captured) showing the existing visual landscape character and visual amenity of the study area, including photographs from locations (viewpoints) within the digital sign's viewshed expected to be the most impacted by the proposed signage.
- [ ] 3. A digital sign location plan/drawings.
- [ ] 4. Minimum of one photomontage/artistic impression, illustrating the proposed digital sign following installation.