

TIER TWO - CMI URBAN DESIGN GUIDELINES



SCOPE AND STRUCTURE OF THE GUIDELINES

At the outset, common design elements are established under the following main headings:

- **SECTION A - BUILT ELEMENTS**
- **SECTION B - NATURAL ELEMENTS**
- **SECTION C - DEVELOPMENT OPPORTUNITIES**

The guidelines are structured as follows:

- firstly, the primary aim of each common design element is established
- secondly, key considerations are then discussed for each of the common design elements
- finally, guidelines are provided for each of the common design elements.

Graphic examples are provided for some of the elements listed. Note that these drawings and photographs are not intended to be used as prescriptive concepts or specifications. They are merely examples of what could be achieved. The creative abilities of the separate project urban designers and engineering designers are respected.

Note:

The design guidelines reflect the multicultural nature of Auckland. The use, where appropriate, of approved Tikanga Maori and / or other appropriate narratives in the artistic design of various elements is desirable. The use of such narratives may not be appropriate for all precincts of the CMI.



URBAN DESIGN GUIDELINES

Guidelines for each of the following key (common) design elements are provided.

SECTION A - BUILT ELEMENTS

- bridges
- retaining walls and abutments
- bus, pedestrian and cycle facilities
- acoustic walls
- road safety barriers
- gantries, sign support structures and poles
- road lighting
- signage
- feature lighting

SECTION B - NATURAL ELEMENTS

- embankments and cuttings
- landscaping

SECTION C - DEVELOPMENT OPPORTUNITIES

- buildings
- open space



SECTION A - BUILT ELEMENTS



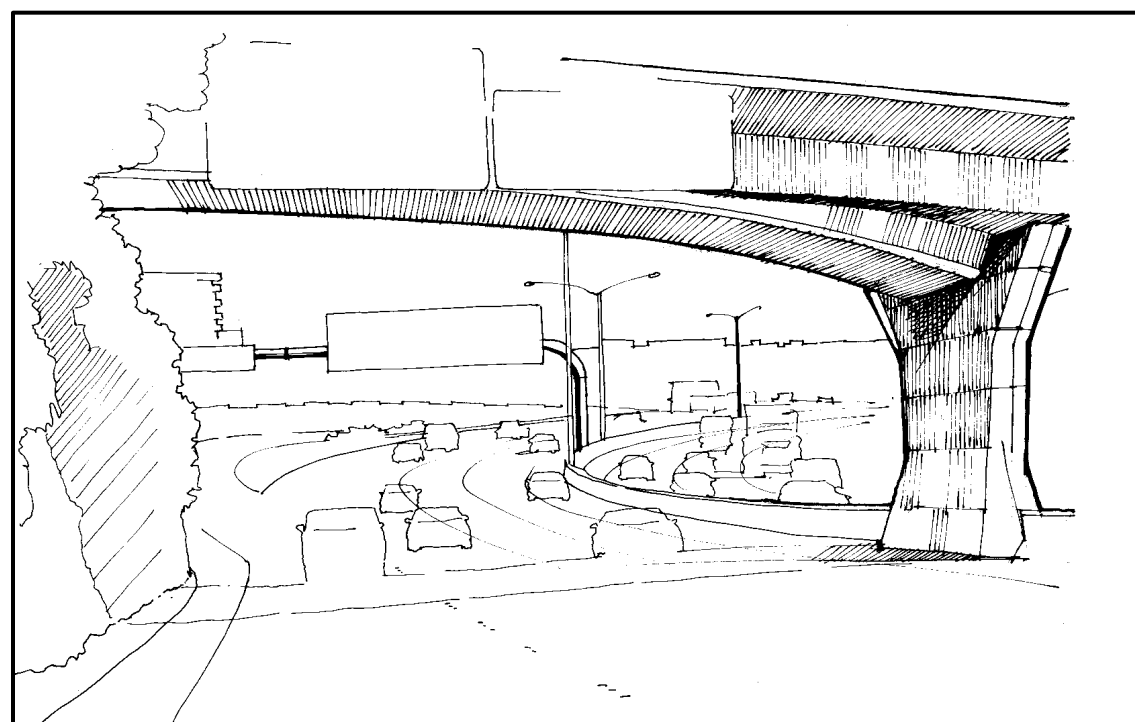
BRIDGES

AIM:

Design bridges that achieve their functional requirements, contribute to a consistent and coherent design theme within the CMI, and offer a high degree of visual amenity.

KEY CONSIDERATIONS:

- bridges have perhaps the greatest visual impact on the CMI and as such can contribute positively towards a consistent design theme
- there are many existing bridges that will be retained by the CMI; one, Grafton Bridge, is an heritage item
- the appearance of existing CMI bridges ranges from purely utilitarian through to elegant and sculptural
- Grafton Bridge was designed to celebrate the function of the structures with bold, sculptural forms
- bridges must achieve high visual amenity from all viewpoints, especially underneath
- consideration should be given to the appropriate use of colour and lighting to strengthen the elegance and sculptural forms envisaged by the designers
- secondary elements such as railings should appear as part of the structures and not add-ons
- ensure that significant views and vistas are retained
- structures and materials that resonate, or amplify, noise are not acceptable
- multi-purpose parapets should be considered. Containment of debris will be required where bridges have traffic and/or people underneath



GUIDELINES:

- design new bridges in the same spirit as that used for Grafton Bridge so that their function is celebrated with strong sculptural form
- ensure that the design of the bridge responds to urban design objectives (i.e. enhances gateways)
- bridges within a particular precinct must be in harmony with one another
- distinctions can be made with regard to designs for each of the nine precincts in the CMI
- design bridges so that they achieve high visual amenity from all viewpoints, including underneath
- utility ducting must not be readily visible
- avoid noise from expansion joints near residential areas
- consider provisions for planting along the edges of the deck
- where appropriate, provide for secondary elements such as lighting and signage, in an integrated manner
- design secondary elements (such as railings) so as not to detract from the bridges themselves or the consistent design theme
- ensure that significant views and vistas are not blocked by secondary elements

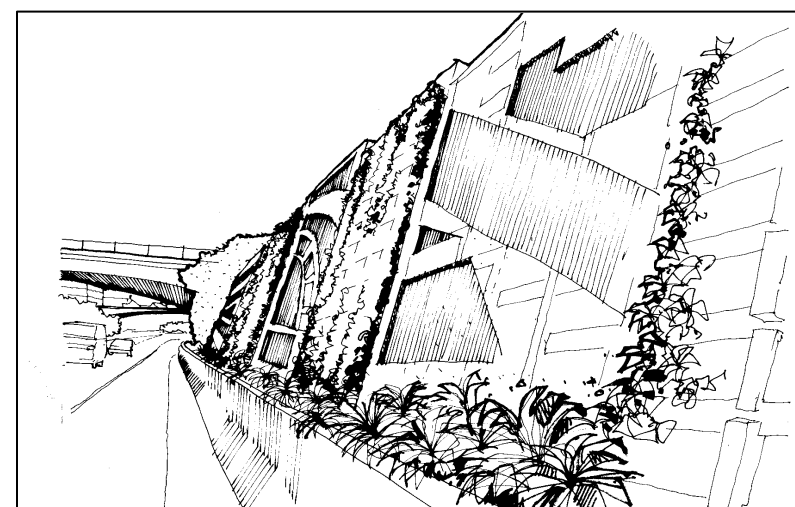
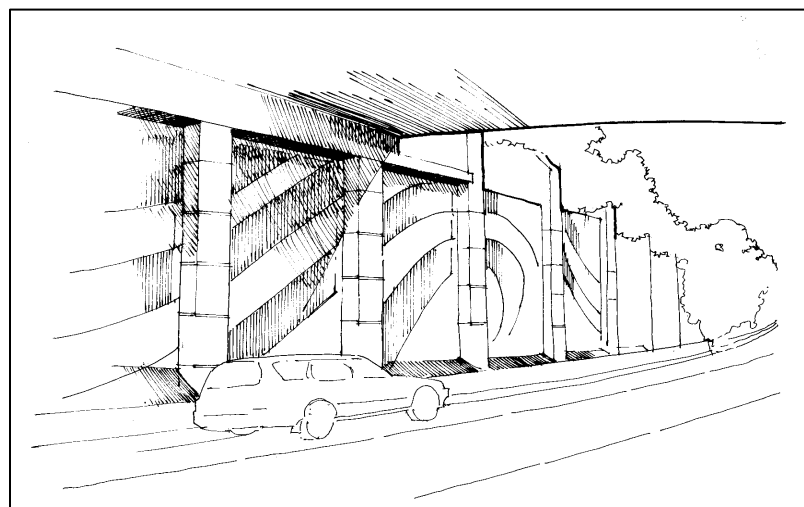
RETAINING WALLS AND ABUTMENTS

AIM:

Design retaining walls and abutments which, whilst achieving their functional requirements, also contribute positively towards a consistent and coherent design theme and the strengthening of sense of place within the CMI overall

KEY CONSIDERATIONS:

- retaining walls and abutments can contribute significantly towards a consistent and coherent design theme and sense of place
- where necessary, incorporate road safety barriers into the structure
- retaining walls and abutments present significant opportunities for the use of local materials such as local stone
- art in the form of carved relief can be used. Tikanga Maori or other narratives could be incorporated into the finishes or artwork utilised
- integrate the design where possible with other built elements
- integrate these elements with the surrounding natural topography



GUIDELINES:

- the use of 'shotcrete' finishes must be avoided unless they form part of a specific visual urban design objective
- retaining is generally preferred to the use of batters for cuttings (especially where there are land development opportunities)
- encourage the use of local materials such as local stone, in the finishes of these elements
- consider using Tikanga Maori or other narratives in the finishes or artwork to be utilised on these elements
- design these elements so that they achieve high visual amenity from all view points
- encourage the provision for planting
- incorporate the design of possible referencing symbols/systems as an integral part of these elements
- avoid reflected noise
- where appropriate, consider terraced walls with spill-over planting. Tiers should not exceed 3 metres

BUS, PEDESTRIAN AND CYCLE FACILITIES

AIM:

Encourage the design of pedestrian, pedal cycle and public transport facilities within and adjacent to the corridor to contribute positively towards a coherent CMI theme

KEY CONSIDERATIONS:

- neither pedestrians nor pedal cyclists are permitted to use the motorway corridor; however, both are essential to the daily operation of Auckland City
- adjustments planned for CMI present an opportunity to reconsider the 'desire lines' of bus passengers, pedestrians and pedal cyclists needing to cross, or travel alongside the CMI corridor (consult with Auckland City Council)
- opportunities may arise to improve existing bus, pedestrian and cycle facilities across or along the corridor boundary and/or the construction of new pedestrian and pedal cycle bridges by others
- the safety and appropriate levels of lighting for pedestrians and cyclists needs to be considered
- consideration could be given to providing covered bus, pedestrian and pedal cycle facilities (such as particularly busy or well used crossing points)
- these elements should be designed so that they achieve high visual amenity from all

LESS DESIRABLE



MORE DESIRABLE



viewpoints, including underneath

GUIDELINES:

- where appropriate, make allowance for bus, pedestrian and pedal cycle facilities within and between each precinct
- provide pedestrians and pedal cyclists with appropriate levels of lighting
- design bus facilities, pedestrian paths and pedal cycleways so that they provide a consistent design theme and contribute towards the formation of a sense of place
- detail pedestrian and cycle crossings so that they achieve high visual amenity from all viewpoints, including underneath
- where appropriate, integrate the design and finish of these elements with that of surrounding elements

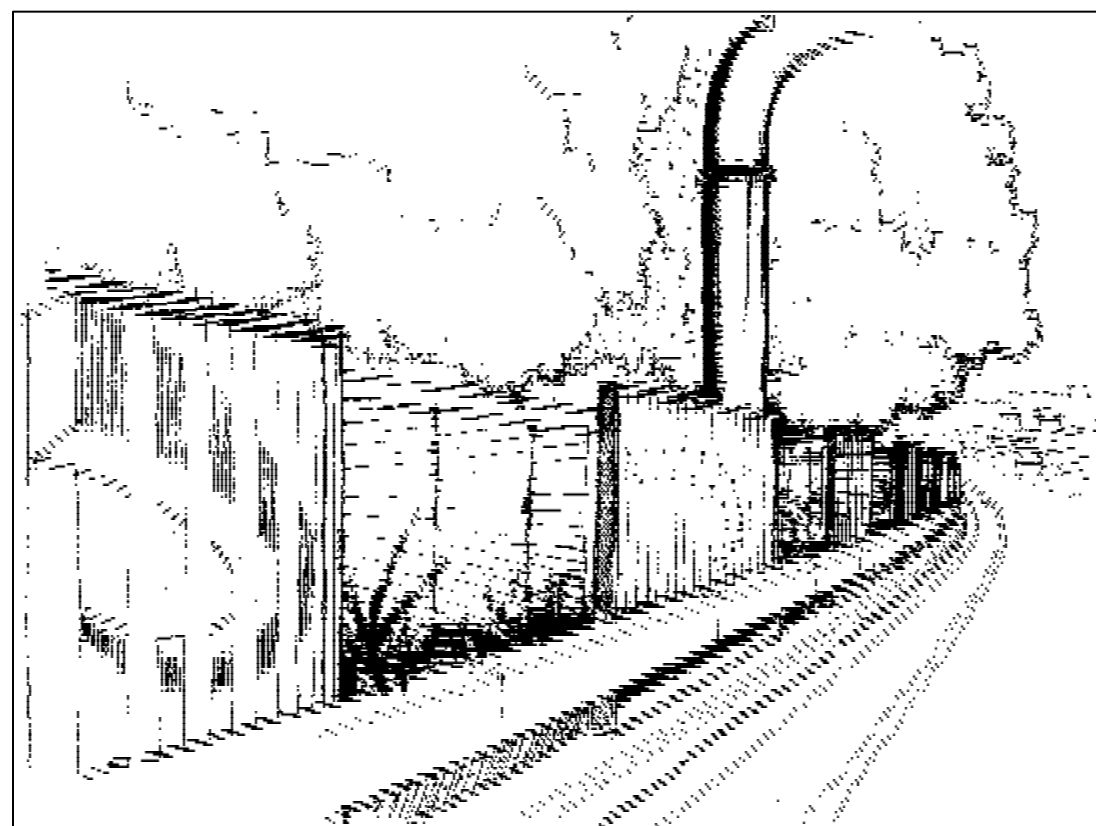
ACOUSTIC WALLS

AIM:

Design acoustic barriers which, besides achieving their functional requirements, also contribute positively towards a consistent and coherent CMI design theme and sense of place

KEY CONSIDERATIONS:

- Transit New Zealand does not make allowance for the provision of acoustic barriers within an existing designation
- acoustic barriers can contribute significantly towards the formation of a consistent CMI design theme and sense of place within each of the nine precincts
- these elements present significant opportunities for the use of art in the form of carved relief etc. Tikanga Maori or other narratives could be incorporated into the finishes or artwork for these elements
- large, smooth surfaces (such as natural timber fences, plain flat concrete) are prone to graffiti
- avoid use of acoustic barriers where they would interrupt key views



GUIDELINES:

- design acoustic barriers so that they contribute positively towards a consistent and coherent design theme and sense of place
- encourage the use of acoustic barriers that incorporate the use of local art
- consider the use of Tikanga Maori or other appropriate narratives to be incorporated into the finishes or artwork
- avoid large smooth light-coloured surfaces such as natural timber fences and flat concrete
- use timber walls only where these can be located back from the carriageway and screened with planting
- avoid the use of acoustic barriers where they would interrupt key views listed in the CMI objectives document
- incorporate curves at staggered alignments to reduce visual monotony
- where appropriate, integrate acoustic walls with adjacent built and natural elements

ROAD SAFETY BARRIERS

AIM:

Design vehicle and road safety barriers (RSB) which not only achieve their functional requirements, but also contribute positively towards a consistent and coherent CMI design theme, thus ensuring a high level of visual amenity.

KEY CONSIDERATIONS:

- whilst the clear and overriding purpose of RSB is that of safety, the systems currently used impart a purely utilitarian character to the CMI. This should be improved
- RSB can contribute to a consistent design theme and sense of place for the overall CMI and the nine precincts
- where possible, RSB should not be provided and a "clear zone" is preferred. RSB can be a hazard when hit and can block sight distance for motorists
- RSB present significant opportunities for the use of art, Tikanga Maori or other narratives could be incorporated into the finishes or artwork to be utilised
- the type of RSB will vary (especially height). There are opportunities for some "see through" systems to be provided
- ease of repairs following impact is essential at locations that are vulnerable



Example of a AS/NZS 3845 crash tested safety barrier (see-through type)

GUIDELINES:

- use planting to hide RSB where this is feasible
- use colour and texture to reduce visual impact and facilitate maintenance
- barriers must be sited so that sight distances are not reduced below the minimum allowed
- off-the-form finishes are restricted to concrete
- design barriers so that they appear integral to the road or structure
- avoid use of "W" section railings
- consider the use of purpose-made see-through barriers and wire cable barriers where views or natural settings are considered important



Typical barrier along the motorway at present



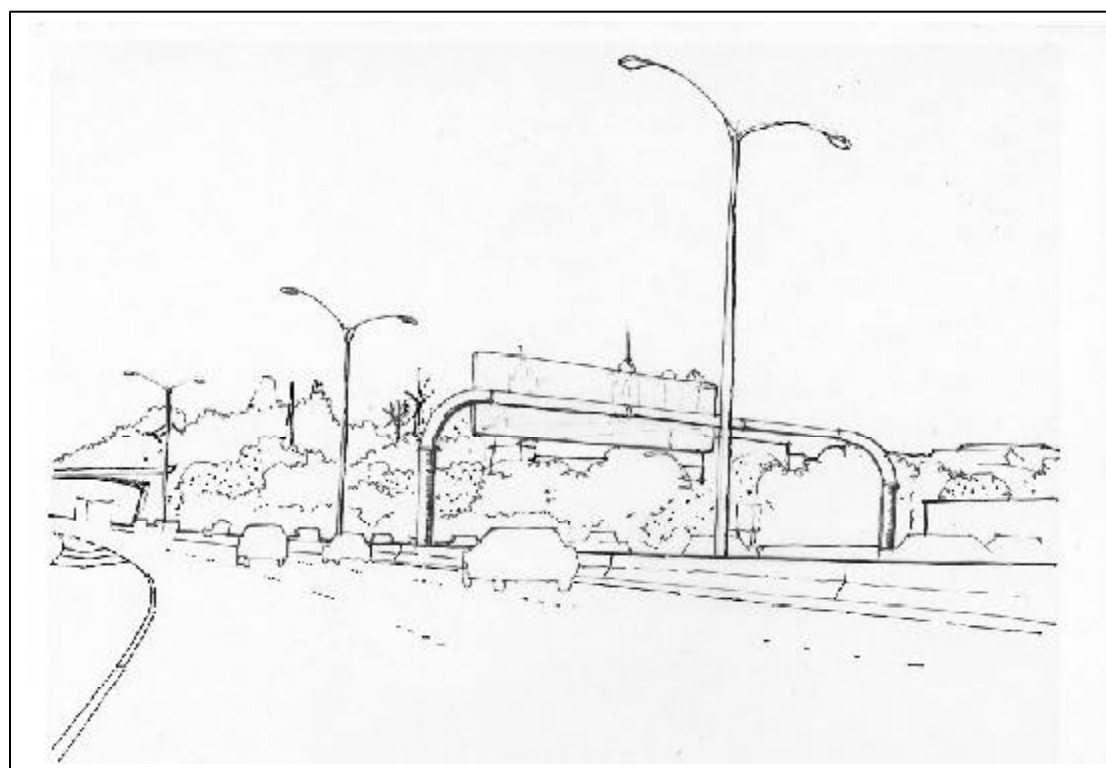
GANTRIES, SIGN SUPPORT STRUCTURES AND POLES

AIM:

Whilst meeting their functional requirements, design these elements so that they maximise their multi-functionality, contribute towards a coherent and consistent CMI design theme, and are fixed in locations that minimise visual impact

KEY CONSIDERATIONS:

- whilst acknowledged as being a necessary component of the CMI's function, currently these elements are often visually obtrusive, out of harmony and detract from the overall urban design environment
- there appears to be an excess of these elements within the current CMI. A rationalisation of the number of gantries may be achievable particularly in light of consideration being given to better positioning of gantries required
- the positioning of gantries and support structures appears to have paid little heed to key views for road users or people outside the CMI corridor
- access to VMS sign faces and lighting installations for maintenance is required
- painting of these structures is a problem
- harmony in treatment along the motorway is essential. Integration with support systems used by Auckland City is desirable
- integration of RSB and poles must be addressed to reduce the amount of clutter and reduce risk to road users
- consider the key views of the road users and those outside the CMI corridor



GUIDELINES:

- utilise tube gantries in preference to latticework gantries
- ensure that designs reduce the need for barbed wire as a measure to restrict access
- position gantries and support structures where they might best be utilised to serve a number of requirements as opposed to constructing several gantries in close proximity to serve only one or two tasks
- galvanising is a preferred surface treatment
- any cabling is to be concealed

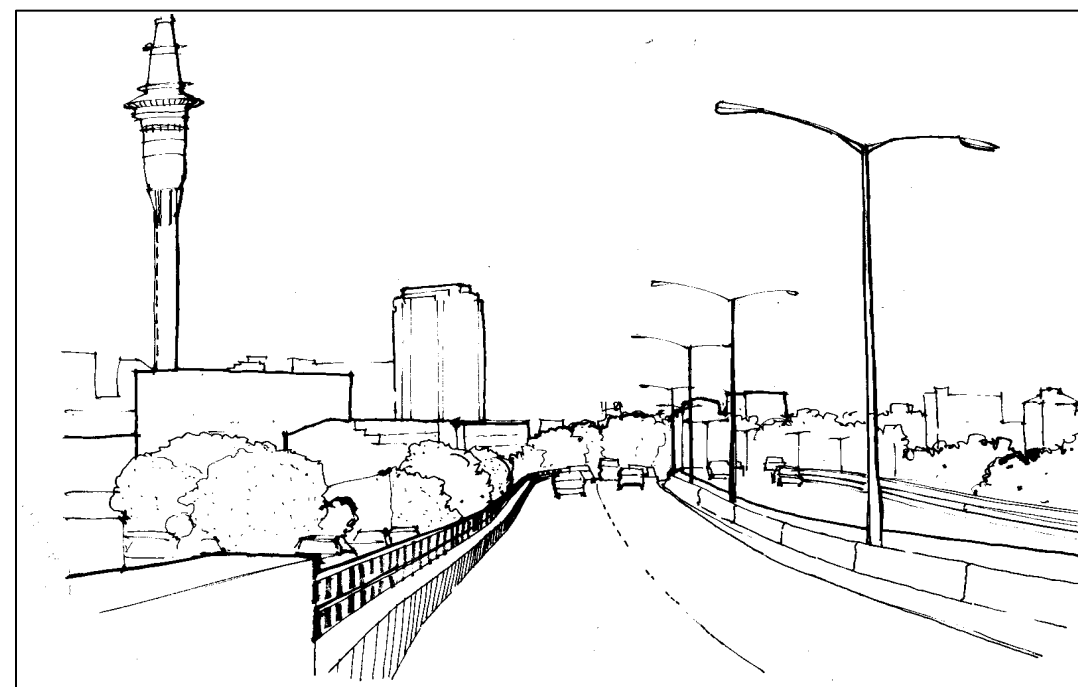
ROAD LIGHTING

AIM:

Design road lighting which, whilst achieving functional requirements, also contributes to a consistent and coherent design theme and enhances a sense of place within the CMI

KEY CONSIDERATIONS:

- the whole of CMI will be lit. Transit New Zealand illuminance standards must be followed for road lighting, especially under bridges
- roads under the control of Auckland City have different lighting requirements to those on the motorway. Changes in lighting can be used to highlight the different environments
- road lighting can contribute towards a consistent design theme and sense of place for both the overall CMI and nine precincts
- competition with adjacent advertising signs in the Auckland City areas must be recognised
- the effect of lighting on neighbours must be taken into account



GUIDELINES:

- design a coherent and consistent suite of lights and poles for the CMI overall
- high mast lighting is preferred
- avoid lighting that casts shadows onto traffic lanes
- where appropriate, consider the location of lighting within the centre of the motorway network. This will reduce the amount of infrastructure required and assist towards a reduction in the amount of visual clutter along the side of the motorway corridor, ultimately improving views from the motorway
- where appropriate, integrate lighting with other elements i.e. bridges and walls etc.

SIGNAGE

AIM:

Design signage which, whilst achieving functional requirements, also contributes to a consistent and coherent design theme and sense of place for the CMI overall

KEY CONSIDERATIONS:

- while Transit New Zealand communications standards must presumably be followed for road signage, a more finished, refined and coherent appearance could be created by designing a coherent suite of signage for the CMI
- signage can contribute to a consistent and coherent design theme and sense of place for the overall CMI
- signage can contribute to a design theme and sense of place within the nine precincts
- 'backs' to signage should be appropriately designed or screened

GUIDELINES:

- design a coherent suite of signage for the overall CMI
- where possible, consider the amalgamation of signage with other elements i.e. lighting, in order to reduce visual clutter within the CMI corridor



FEATURE LIGHTING

AIM:

Where appropriate, utilise feature lighting to highlight particular structures or landmarks. This will contribute to a consistent and coherent design theme and sense of place within the overall CMI

KEY CONSIDERATIONS:

- feature lighting could be utilised to highlight structures, features, artwork, trees, planted areas and landmarks within or adjacent to the CMI corridor
- feature lighting can convey civic pride in the CMI
- feature lighting can contribute to a consistent and coherent design theme and sense of place, either within the nine precincts, or the CMI overall



GUIDELINES:

- use a coherent and consistent approach to feature lighting within the CMI overall
- where possible, integrate feature lighting systems into the design of the structural elements
- use a variety of colour for feature lighting
- avoid casting shadows onto traffic lanes