



ACT
Government

MUNICIPAL INFRASTRUCTURE STANDARDS

Part 17 Shopping Centres and Commercial Areas

TCCS
Transport Canberra City Services

September 2021

Publication Number:	MIS 17 Edition 1 Revision 0
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Date of Effect:	APRIL 2019
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Supersedes: Design Standard for Shopping Centres and Other Public Civic Spaces Section 17 Edition 1 Revision 0 September 2002

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Document Information

Document	Key Information
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Document Title: Municipal Infrastructure Standards - 17 Shopping Centres and Commercial Areas

Next review date	
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Key words

AUS-SPEC Base Document	Nil
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Revision Register

Edition/ Revision Number	Clause Number	Description of Revision	Authorised By	Date
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1/0

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1 SHOPPING CENTRES AND COMMERCIAL AREAS

1.1 General

Canberra's City Centre and the satellite towns provide a range of shopping, administrative, cultural, community, entertainment, religious and recreational facilities and are major employment nodes.

Landscape facilities in a town centre include:

- > A town park or other open spaces within or adjacent to the town centre buildings;
- > Hard paved pedestrian areas such as malls, courtyards and colonnades near the shops, offices and other businesses;
- > Car parks, roads and road verges. The group and local centres are smaller than the town centres and generally include shopping, administration, community, cultural, religious, entertainment and recreation facilities.

Group and local centres are key meeting places and places of cultural and community expression. The centres can offer an alternative living environment to town centres and suburbs.

Increased densification of urban infill is generating urban renewal pressure to upgrade these centres and provide appropriate infrastructure needs and improve the quality of the public realm.

Other public urban spaces may include public unleased land within commercial and industrial precincts.

This Municipal Infrastructure Standard (MIS) provides goals and objectives for the design and construction of shopping centres and other public urban spaces, including the shopping precincts improvements program, and outlines how these can be achieved through planning considerations and the implementation of design specifications and standards.

1.1.1 Responsibilities

1.1.1.1 Objectives

General: Design of Shopping Centre and Commercial Area public realm to provide high quality, accessible, and maintainable spaces which promote a high level of use, adaptability and economic function associated with shopping, commercial and mixed uses.

Scope: This Design Standard applies to Municipal open space and road verges within a shopping centre or commercial area in the ACT and does not apply to privately owned and managed land (on private lease blocks).

The planning and design of shopping centre and other public urban spaces will:

- > Provide a guiding framework for new developments as well as upgrades;
- > Provide a means for TCCS to continue implementing its core accountabilities for maintaining shopping centre public assets to current Standards for safety, access and function;
- > Incorporate and address community issues and expectations;
- > Promote the / establishment a cultural and community identity that is representative of, and appropriate to, the place;
- > Encourage inclusive recreational and social interaction, contributing to a strong sense of community and an enhanced lifestyle for community members;

- > Provide increased residential and environmental amenity for users and increased activity;
- > Provide linkage and appropriate facilities for and with nearby areas and neighbourhoods, refer *MIS 05 Active travel facilities design* and *ATRA*;
- > Provide a safe, functional accessible and attractive environment;
- > Contribute to the economic vitality of Canberra and its environs by encouraging opportunities for ecologically sustainable development and tourism, including events and attractions in public urban spaces;
- > Minimise social problems by applying principals of CPTED;
- > Provide spaces that respond to local context, accounting for nearby facilities and complimentary spaces;
- > Minimise energy consumption, waste and greenhouse gas production during construction and across the life of the asset; and
- > Improve stormwater quality through the application of WSUD principles; and
- > Mitigate and adapt to climate change and the UHI

1.1.1.2 Designer's qualifications

Requirement: The design of all urban open space areas shall be by an Australian Institute of Landscape Architects (AILA) Registered Landscape Architect. The designer shall submit evidence of designer's AILA Registration to TCCS.

1.1.1.3 Precedence

Where any document, except legislation or the *Territory Plan*, issued referenced in this Municipal Infrastructure Standard (MIS) includes technical requirements that conflict with this MIS, consult with the service authority and TCCS for clarification.

1.1.2 Cross references

1.1.2.1 Commonwealth Legislation

The following Commonwealth Legislation is relevant to this Standard:

Aboriginal and Torres Strait Islander Heritage Protection Amendment Act

Australian Capital Territory (Planning and Land Management) Act

Specifies areas of national significance to be managed under the National Capital Plan, in accordance with Section 10

Disability Discrimination Act

Environment Protection and Biodiversity Conservation Act

National Environment Protection Act

1.1.2.2 ACT Legislation

The following ACT Legislation is relevant to this Standard:

Building ACT

Charitable Collection Act

Clinical Waste Act

Climate Change and Greenhouse Gas Reduction Act

Dangerous Substances Act

Discrimination Act

Emergencies Act

Environment Protection Act

> Environment Protection Regulation

Heritage Act

Human Rights Commission Act

Lakes Act

Legislation Act

Litter Act

Major Events Act

Nature Conservation Act

Pest Plants and Animals Act

Planning and Development Act

> Provides for the preparation of the Territory Plan, including Suburb Precinct Codes, Precinct Codes, Development Codes, General Codes and Additional Codes relevant to commercial areas, such as:

- Access and Mobility General Code
- Bicycle Parking General Code
- Communications Facilities and Associated Infrastructure General Code
- Crime Prevention Through Environmental Design (CPTED) General Code
- Home Business General Code
- Lease Variation General Code
- Parking and Vehicular Access General Code
- Planning for Bushfire Risk Mitigation General Code
- Residential Boundary Fences General Code
- Signs General code
- Water Ways: Water Sensitive Urban Design General Code

> Planning and Development Regulation

Public Roads Act

Public Unleased Land Act

Tree Protection Act

Utility Networks (Public Safety) Regulation

Water Resources Act

Water Resources Regulation

Waste Minimisation Act

Work Health and Safety Act

1.1.2.3 ACT Government Strategic Documents

The following strategic documents prepared by various Directorates of the ACT Government are relevant to this Standard:

City Action Plan Government Actions and Investment in the City

Canberra: A Statement of Ambition

ACT Government Infrastructure Plan 2011-2021

Transport for Canberra: Transport for a Sustainable City 2012-2031

Building an Integrated Transport Network Active Travel

Living Infrastructure Strategy

The ACT Planning Strategy – Planning for a Sustainable City

Statement of Planning Intent

The City Plan

The Canberra Spatial Plan

Canberra Plan: Towards Our Second Century

Towards Zero Growth – Healthy Weight Action Plan

ACT Climate Change Adaption Strategy

ACT Waste Management Strategy 2011-2025

ACT Government Strategic Plan – Contaminated Sites Management

Heritage Assessment Policy

ACT Heritage Strategy 2016-2021 (draft)

ACT Water Strategy 2014-44: Striking the Balance

Environment protection policies (ACT Government), including:

- > General Environment Protection Policy
- > Air Environment Protection Policy
- > Contaminated Sites Environment Protection Policy
- > Outdoor Concert Noise Environment Protection Policy
- > Water Quality Environment Protection Policy
- > Wastewater Reuse for Irrigation Environment Protection Policy

1.1.2.4 Design Standards

This Design Standard references the following component standards:

MIS 01	Street planning and design
MIS 03	Pavement design
MIS 05	Active travel facilities design
MIS 06	Verges
MIS 11	Off street parking
MIS 13	Traffic control devices
MIS 14	Public lighting
MIS 18	Irrigation
MIS 20	Street and park furniture
MIS 22	Signage for urban parks and open space
MIS 23	Public toilets
MIS 24	Soft landscape design
MIS 25	Plant species for urban landscape projects

1.1.2.5 Specifications

The following Specifications are related to this standard:

MITS 09	Landscape
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1.1.2.6 TCCS Reference Documents

The following TCCS reference documents are related to this standard:

Reference document 6	Design Acceptance submissions
Reference document 7	Operational acceptance submissions
Reference document 8	WAE quality records
Reference document 9	Final acceptance submissions

1.1.2.7 Design guides

The following design guides are related to this standard:

Development Control Code for Best Practice Waste Management in the ACT (ACT No Waste)

TCCS codes and design guides for designing and constructing assets

ACT Crime Prevention and Urban Design Resource Manual, ACT Government

1.1.2.8 Further reading

Advisory Notes on Access to Premises, Human Rights and Equal Opportunity Commission

Sharps Policy, ACT Government

Active Travel Infrastructure Practitioner Tool

Building an Integrated Transport Network – Parking

Infrastructure Sustainability Council of Australia

1.1.3 Referenced documents

The following documents are incorporated into this Design Standard by reference:

1.1.3.1 Standards

AS/NZS 1158	Lighting for roads and public spaces
AS 4282	Control of the obtrusive effects of outdoor lighting
AS 1428	Design for access and mobility set (Parts 1-5)
AS 1742	Manual of uniform traffic control devices set (Parts 1-15), particularly:
AS 1742.9	Bicycle facilities
AS 1742.10	Pedestrian control protection
AS/NZS 2890	Parking facilities set (Parts 1-5), including:
AS/NZS 2890.3	Parking facilities – Bicycle parking
AS/NZS 4455	Masonry units, pavers, flags and segmental retaining wall units
AS/NZS 4455.2	Pavers and flags
AS 4586	Slip resistance classification of new pedestrian surface materials
AS 4663	Slip resistance measurement of existing pedestrian surfaces

1.1.3.2 Other publications

National Construction Code (Australian Building Codes Board)

ACT EPA Environmental Protection Guidelines for construction and land development in the Act

Active Living Impact Checklist – A tool for developments in the Australian Capital Territory (National Heart Foundation of Australia)

ACT Arts Policy

ACT Government Public Art Guidelines

Waste and Recycle Management Code for the ACT

A Guide for: Using Public land for Outdoor Dining Purposes

A Guide for: Outdoor bars

ACT Heritage Assessment Policy

ACT Heritage Register

ACT Sustainable Energy policy, Energy for a Sustainable City 2011-2020

ACT Public Unleased land (Movable Signs) Code of Practice 2013 (No 1)

National Fire Protection Association NFPA130 guidelines

Planning for Active Travel in the ACT; Active Travel Infrastructure – Interim Planning Guideline

ACT Water Sensitive Urban Design General Code

Canberra Central Design Manual

ACT Estate Development Code

Proprietary products: To *TCCS Products previously considered for use list*

Austrroads

AP-G88	Cycling aspects of Austrroads guides
AGRDR	Austrroads Guide to Road Design
AGRDR 06A	Part 6A: Paths for Walking and Cycling

1.1.4 Interpretations

1.1.4.1 Abbreviations

General: For the purposes of this Municipal Infrastructure Standard the following abbreviations apply:

AILA:	Australian Institute of Landscape Architects
AUSTROADS:	Association of Australasian Road Transport and Traffic Agencies
ATRA:	Active Travel Route Alignments
CPTED:	Crime Prevention Through Environmental Design
DA:	Development Application
EPA:	Environment Protection Authority, ACT Government and its successors
EPBC Act:	Environment Protection and Biodiversity Conservation Act
EPSDD:	Environment, Planning and Sustainable Development Directorate, ACT Government and its successors
IPCC:	Intergovernmental Panel on Climate Change
SLA:	Suburban Land Agency, ACT Government and its successors
NCA:	National Capital Authority, ACT Government and its successors
TCCS:	Transport Canberra and City Services, ACT Government and its successors
UHI:	Urban Heat Island
WSUD:	Water Sensitive Urban Design

1.1.4.2 Definitions

General: For the purpose of this Municipal Infrastructure Standard, the definitions of terms used to define the components of the road reserve are in conformance with *AS 1348, Glossary of Austrroads Terms* and *AGRDR03*.

Active living: A way of life that integrates physical activity into daily routines.

Active Travel Route Alignments (ATRA): The spatial alignments of the five ATN route types as detailed in this Design Standard. Routes include both planned future routes where the alignment remains unfixed and existing routes where the alignment is defined.

Biodiversity: The variety of life on earth, comprising countless species living in different but inter-dependent ecosystems. Variability among living organisms in terrestrial, marine and other aquatic environments (and the ecological systems of which they are part) includes:

- > Diversity within species and between species; and
- > Diversity of ecosystems.

Climate change: The Intergovernmental Panel on Climate Change defines climate change as “a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity.”

Climate Change Adaptation: Actions by individuals or systems to avoid, withstand or benefit from current and projected climate changes and their impacts. Adaptation reduces a system’s vulnerability or increases its resilience to the effects of climate change. Various types of adaptation can be distinguished, including anticipatory (proactive), autonomous (spontaneous) and planned (deliberate) adaptation (IPCC).

Crime Prevention through Environmental Design (CPTED): Aims to prevent crime by designing spaces and buildings that foster human activity and interaction using four key principles: natural surveillance to limit the opportunity for crime; natural access to encourage the movement of people into spaces that are open and inviting; territorial reinforcement to maintain a sense of ownership by the local community; and target hardening to make it difficult to steal or vandalise property.

Path: A paved off-road facility of varying width and surfacing for shared use by pedestrians and cyclists. All paths, including paths adjacent to streets, are shared by pedestrians and cyclists in the ACT, differing from NSW and Victoria where cyclists over 12 years of age are not permitted to ride on paths unless appropriately designated.

Playground or Play Space: An area designed for children’s play, including the site, natural features, built landscape, and any manufactured equipment and surfacing.

Potable Water: Water suitable on the basis of both health and aesthetic considerations for drinking and culinary purposes.

Public Urban Space: Unleased Territory Land within the urban area set aside for public use.

Street and park furniture: A term used to describe all of the peripheral objects that help create functional and appealing outdoor spaces for public use.

Urban Open Space: Unleased Territory Land within the urban area set aside for public and recreational use.

Urban heat island (UHI) effect: Localised warming in urban areas due to energy created by people, transport, buildings and activities, and by the storage and emission of heat from large amounts of paved and darker coloured surfaces.

Water Sensitive Urban Design (WSUD): An approach to urban planning and design that aims to integrate the management of the urban water cycle into the urban development process.

Wayfinding: The National Heart Foundation Australia refers to wayfinding as the manner in which people orientate themselves in their physical environment and navigate from one place to another. It incorporates the processes of knowing where you are, where you are going, the best way to get there, recognising when you have arrived at your destination and knowing how to leave the area. It can also include indications of where people should not go.

1.2 Planning and design

1.2.1 TCCS planning policy

TCCS encourage contemporary interpretation of the Municipal Infrastructure Standards and Standard Drawing details where appropriate and in accordance with requirements for safety, low maintenance and high durability of materials and function.

Requirement: Liaison with the relevant TCCS approval section (Roads and Transport, Capital Works, Asset Acceptance, etc) during the design phase to seek support for deviations from standards in the design or materials is required.

Tree preservation: Consult with TCCS to identify requirements relating to tree protection and clearing of the site.

1.2.2 Consultation

General: TCCS are committed to a full and thorough collaborative design process involving a participatory form of community consultation to ensure that the best outcomes are achieved for the people involved. Consultation should be undertaken prior to any design work and the information collected should guide the development of the project and design options. Public and Government Stakeholders and Community aspirations, desires and concerns are identified through the consultation process and then design proposals are developed to respond to these.

Requirement: Liaise with stakeholders prior to, and during, the preparation of urban open space design, including but not limited to the following:

- > EPSDD;
- > TCCS;
- > NCA, as required;
- > Project planning, civil and landscape consultants;
- > Public and Private sector stakeholders including local businesses and interest groups;
- > Public infrastructure asset owners;
- > Service utility organisations; and
- > Other relevant authorities, as required.

Responsibility: Consult with the TCCS and other relevant authorities during the preparation of design. In addition to the requirements of this Design Standard, identify the specific design requirements of these authorities. Comply with *Requirements for Design Acceptance Submissions* (if applicable).

1.2.3 Public consultation

Consultation: Engage the community in the planning and design of both new public space facilities and the upgrade or alteration to existing public space facilities. Seek advice from the client (e.g. EPSDD, City Renewal Authority, Suburban Land Agency or TCCS), as to the representative groups to be consulted in an area.

1.2.4 Utilities services plans

Requirement: Obtain service plans from all relevant public utility authorities and other organisations whose services, trees, important ecological habitats or other assets exist within the area of the proposed development. Plot this information on the relevant drawings including the plan and cross-sectional views. As a minimum, designs should refer to 'Dial-before-you-dig' information that is readily available in most areas.

Responsibility: Confirm service plans accuracy with onsite inspection and also potholing/tracing if deemed necessary.

Requirement: An accurate survey shall be obtained when planning for the development/ upgrade of play spaces (contour and feature plan) including full site investigation for underground and overhead services.

Proposed new services: Provide details of any new or relocated services proposed as part of the planned works.

1.2.5 Heritage considerations

Requirement: If required by the Development Application (DA), provide a plan for management of heritage assets in accordance with the DA.

1.2.6 Safety in design

Requirement: Implement safety in design processes in accordance with the *Work Health and Safety Act*.

1.3 General design criteria

1.3.1 Planning for shopping centres (civic, town, group and local) and commercial areas

General: The ACT Government provides a variety of landscape facilities in shopping centre and other public urban spaces within commercial and industrial precincts. These types of public urban space are unleased Territory land, administered by TCCS and consist of:

- > Park or other green spaces within or adjacent to the centre buildings;
- > Hard paved areas such as malls, courtyards and colonnades near the shops, office and other businesses;
- > Car park, roads and road verges;
- > Public toilets.
- > Demonstrate that all facilities have an appropriate minimum area allotted.

1.3.2 Strategic planning and design framework

Requirement: Consideration should be given to other studies or proposals for works in or near the study area. The proposed redevelopment of the surrounding lands, the potential change of use and predictions of how these will affect this space may have immediate or future influence on the outcome of the refurbishment project.

Some recent master plans, neighbourhood plans, concept plans and estate development plans and other studies for various precincts have been undertaken. Discussions should be held with ACT Environment Planning and Sustainable Development – Strategic Planning Division, the City Renewal Authority and Suburban Land Agency to identify relevant documents or current proposals in the specified area.

Where there are large increases in residential development in the vicinity, there is usually a greater demand for shopping and other facilities and an increase in users of the urban spaces.

1.3.3 Urban design

General: The design of the public realm shall deliver accessible, functional, safe and attractive spaces. Facilities should also include provisions for people who live in the town and group centres.

A positive precinct image should be developed around the particular heritage values of a place, or by the character of the existing urban landscape context. The 'sense of place' of the public urban space may be influenced by aesthetic style, iconic features, or existing character themes.

Each of the town centres shall have a distinct landscape character. The external areas and main community routes should have a style and character that identify the particular town centre. Materials and detailing such as paving, furniture, lighting styles, tree species and other landscape elements should be related throughout to unify these spaces. Refer to relevant guidelines including:

- > Canberra Streetscape Design Guideline
- > Canberra Central Design Manual
- > Gungahlin Town Centre Landscape Guideline

Each group or neighbourhood centre shall have its own landscape style and character that identifies the particular centre. Landscape elements such as paving, tree species, furniture and lighting styles shall be related throughout the centre to unify these spaces and should relate well to the character of the surrounding area.

Wind tunnelling can affect comfort and safety of people. Advice in the form of a wind assessment report from a wind study specialist may be required. This may include wind tunnel modelling to ensure that the unpleasant effects of wind are minimised in the public realm. New building works, tree planting at corners of buildings and mass plantings in high wind prone areas may be used to create shelter from wind but taking into account safety (not to create hiding places), desired routes of travel and accessibility.

1.3.3.1 Design principles

Aims for design and refurbishment of shopping centres and other public urban spaces include:

- > Providing amenities to meet the requirement of the users
- > Consider CPTED principles
- > Developing a landscape theme for the centre or precinct
- > Ensuring connectivity with other key destinations
- > Improving the functioning and access of public space
- > Improving or developing entry or arrival image for the centre
- > Providing opportunities for development of more vitality in the space
- > Providing cost effective adaptable materials and assets that are robust and easily maintained

1.3.3.2 Design considerations

Provide amenity through provision of:

- > Personable spaces, human scale and comfort.
- > Quality facilities, materials and design excellence.
- > Comfortable street furniture and other facilities.
- > Effective and efficient waste bins locations.
- > Legibility and ease for people to navigate.
- > Easily identifiable facilities.
- > Consistent materials, finishes and street furniture.
- > Safe spaces and facilities.
- > Vitality, colour and interest.
- > Landscaping scale and type that relates well to the built environment (road reserve width, building bulk and streetscape) and is accessible.
- > Design that facilitates effective management and maintenance of soil, vegetation, furniture and fixtures, pavements and facilities and other assets through maintenance and management plans.
- > Artwork providing vitality, colour and interest and cultural enhancement.
- > Architectural features and design elements that enhance the spaces.
- > Valued heritage including natural, social and built heritage.
- > Landscape design that is flexible to cater for changes in commercial and community uses.
- > Landscape integration with parks, reserves and public transport corridors.
- > Landscaping that does not obscure or obstruct building entries, paths and driveways to reduce the actual or perceived personal safety and security.
- > Tree planting in and around car parks provides shade and softens the visual impact of parking areas.

Ensure good access by provision of:

- > Full compliance with access codes and standards as a minimum.
- > Effective transport facilities, (particularly at town centres) safe, functional and attractive bus interchanges, taxi rank areas and set down and drop off areas.
- > Improved path links with easy access from road and cycle networks and bus stops.
- > Access to and throughout the centre(s) without barriers, for all people regardless of their abilities (see *Disability Discrimination Act*).
- > Streetscapes provide sufficient capacity where movement networks converge, such as at Group Centre activation nodes, public transport links and road crossings, including: generally a minimum 5m total verge set back from street kerb to future building frontages; and a minimum 3m clear width of travel along shared paths.
- > The design, function and development of dense urban areas such as Group Centres, and their associated precinct activities that facilitate the efficient movement of pedestrians and cyclists. Refer to *MIS 05 Active travel facilities design*.
- > Streetscape precincts should provide sufficient space to accommodate emergency movements as required in the *National Fire Protection Association NFPA130 guidelines* and *Building Code of Australia (BCA) requirements for fire and safety*.
- > Active travel facilities that consider active travel route alignments and are designed to meet user requirements along any accessible routes through the area.
- > Path widths for various active travel route types, which are clear of all items (seating, trees and barriers) with allowance for buffer zones and consideration of soft landscape encroachments and maintenance.

Provide best practice environmental sustainable development by:

- > Reinforcing the garden city status with strong links to green spaces
- > Balancing the requirements of culture, society, the environment and the economy.
- > Conservation of the natural environment (see tree protection Act and *MIS 11 Off street parking and MIS 24 Soft landscape design*)
- > Considering solar access and providing shade (trees or shade structure) in summer and sun penetration in winter
- > Incorporating water sensitive design systems to collect, distribute and reuse storm water from large areas of paving and roofs utilising swales and bioretention, pavements, open spaces and water efficient irrigation (refer to *ACT water sensitive urban design general code*)
- > Designing to reduce use of resources and production of waste (refer to the *Waste and recycle management code for the ACT*).
- > The maximum biodiversity values of a project being pursued through landscape species selection, planting density and layout, and integrated into the urban fabric wherever appropriate.

Encourage pride and community ownership of the facilities by:

- > Engaging in thorough and meaningful community consultation and participation
- > Encouraging consultation and participation from landlords and traders
- > Incorporating community thoughts and desires into design outcomes
- > Providing spaces for formal and informal community gathering or events.

Provide facilities that encourage community activity by:

- > Including facilities for festivals and cultural activities where applicable
- > Including sheltered spaces for busking which adds spontaneous activity to everyday life
- > Including power connections such as smart poles or power bollards.
- > Considering use of facilities by hawkers and collectors (refer to the *Charitable collection Act* for the regulations for these activities).

1.3.4 Artistic features, community public art and architectural features

General: Artistic features such as public art, community public art and architectural features can contribute to a sense of place and enrich user experience.

Requirement: The community and stakeholder consultation process will contribute to identifying cultural and community values. The consultation process should also be informed by research, as relevant, of history and social/community values to develop a cultural profile integral to the character of the public open space and surrounding areas. The profile may aid and inform the development of design themes and specific design proposals.

Artistic features may be incorporated into the environment in a variety of ways. It is important to ensure that they are safe, durable and easy to maintain. They should be placed in locations with frequent pedestrian traffic, be visible from roadways and buildings that have the potential to act as deterrents to vandalism and graffiti. Placement in well lit areas should be considered as a deterrent to vandalism. Engineering and construction techniques along with durable surface treatments can provide a resistance to damage to ensure that artistic features are easily repairable, replaceable or removable if remedial works are warranted.

Community public art and other architectural features may be non-functional or can be incorporated into the design of functional objects such as furniture, manhole covers, walls, paving and lighting.

Stand alone commissioned or acquired public art is not generally a requirement of shopping centre design, however its inclusion is encouraged. If public art is under consideration, TCCS and Arts ACT must be consulted. Refer *ACT Government Public Art Guidelines* and *ACT Arts Policy*.

1.3.5 Accessibility

General: *The Disability Discrimination Act* makes it unlawful to discriminate on the grounds of disability in providing access to or use of premises that the public can enter or use. Public facilities must be designed to be accessible to people with disabilities. Designs for public urban spaces are expected to comply with Australian Standards *AS 1428.1*, *AS 1428.2* and *AS 1428.4*. Compliance with these Australian Standards does not ensure compliance with the *Disability Discrimination Act*.

Requirement: An accessibility audit of the area shall be undertaken by a suitably qualified access consultant, to identify and document the existing provisions and inadequacies within the study area and the linkages of the site to adjacent areas and Active Travel networks. The design team shall ensure that the proposals for the site are accessible in accordance with the relevant legislation and Australian Standards. Consideration should be given to recommendations in *Advisory Notes on Access to Premises and Accessible Travel*.

A disability access consultant shall be included where appropriate as part of the design team to ensure that the needs of people with disabilities are included early in the development of the project and to identify the priorities for work to be undertaken and to advise where deviations may be acceptable. Such deviations may include refurbishment projects to shop front access where handrails, stairs and tactile pavers may overcomplicate or confuse the area, any such deviations shall be discussed with TCCS during the design process and not only raised on submission.

To ensure movement and facilities are accessible, inclusive and interactive, and to encourage people of all abilities to use the area, it is necessary to take a holistic view. The objectives are to:

- > Provide a continuous accessible path of travel throughout the area and to facilities.
- > Ensure the design integrates access concepts in a way that is useful for all users of the area (including maintenance and emergency access) whilst maintaining an aesthetically pleasing design.
- > Ensure signage and tactile warnings and other methods used to assist people are logically applied and consistent.
- > Ensure appropriate facilities are provided along the route of any identified Accessible Pedestrian Route.

Attention needs to be given to the following:

- > Movement linkages – consider accessible path of travel (refer *MIS 05 Active travel facilities design*)
- > Signage that is legibility and appropriately located and does not obscure line of sight
- > Transport – consider connectivity to bus stops, parking and active travel routes
- > Surfaces – consider texture, colour and glare
- > Shade density - minimise contrast between sun and shade on paving
- > Tactile pavers – to stairs, ramps, and other obstacles, directional tactile pavers may also be appropriate
- > Car parking – consider accessible bays and path of travel
- > Location and design of objects in the space that allows for shoreline and reduces obstacles
- > Lighting that creates a safe and accessible environment
- > Furniture – consider location, comfort (arm rests, backrests) and accessibility (drink fountains and tables)
- > Elimination of hazards – consider how obstacles and hazards can be designed out of a space
- > Kerb ramp locations – consider links across roads or car parks for maximised connectivity and safety
- > Traffic lights – consider paths of travel and accessible parking bays
- > Trip hazards – remove trip hazards and design out future issues
- > Stormwater and drainage – consider flow paths and drainage both in the pedestrian environment and within the car parks
- > Building footprints and facades that provide for shoreline.

1.3.6 Safety and lighting

Requirement: The required lighting level and coverage area to be included in the lighting upgrade should be determined by a qualified lighting consultant. The light is to be white light, preferably LED. Fittings are to be cut off (aero screen), vandal resistant and low maintenance.

For the lighting of paved areas, car parks and roads, light fittings shall be selected from the list of approved fittings available from TCCS. Placement should ensure safety and limit pools of light and dark areas. Poles located in areas where they are prone to damage should have rag bolt fittings for ease of replacement. Lighting design shall consider the mature spread of trees and the impact of overhead elements such as awnings. For further information regarding lighting of public areas see *MIS 14 Public lighting*.

A qualified lighting designer is required to prepare lighting design documents to ensure conformance to the relevant Australian Standards and ordinances. The designer is required to submit a lighting plan to a TCCS nominated lighting consultant for certification that it complies with current standards.

The designer shall confirm lighting complies with any relevant design guidelines covering the locality (*Canberra Central design manual, Gungahlin Town Centre Landscape Guidelines* etc.).

The designer shall confirm in writing proposed light pole and fitting types with TCCS. A review of existing light fittings in the precinct or vicinity should inform selection.

The designer should also liaise with ActewAGL to ensure that the power supply has the capacity to meet the requirements.

The ACT Crime Prevention and Urban Design Resource Manual outlines issues and recommendations relating to safety that the designer needs to be aware of when designing public spaces.

Standards: *AS/NZS 1158 Lighting for roads and public spaces* and *AS 4282 Control of the obtrusive effects of outdoor lighting*

1.3.7 Services and waste management

1.3.7.1 Underground Services

General: Established landscapes may have problems with blocked drains from a build up of deleterious materials or tree roots. These and any other problems should be identified and City Services Directorate will work with the relevant department or authority to rectify the problem. Where the problems can only be rectified by works beyond the project scope, defects should be reported to the relevant asset owner for an opportunity to consider upgrading their works as an extension to the project.

Requirement: Designs must ensure that any new trees or structures are suitably located to maintain acceptable clearances from services as well as adjacent building facades and awnings, as required by service provider. Refer to *MIS 24 Soft Landscape design* for further details on trees and underground services.

Sumps should be located away from the main pedestrian routes of travel. Any meter pits must be located in an approved location and made safe to prevent trip and falls by the general public. The pit and lid must be strong enough to carry expected traffic and must be maintained for the life of the connection.

Where possible, provide a clear and unobstructed passage for maintenance vehicles to service underground and building infrastructure.

1.3.7.2 Goods deliveries and emergency access

Requirements: Provision for back-of-house goods deliveries to the various premises needs are to be addressed.

Loading zones need to be identified and appropriate areas marked and sign posted. These sites should be free of obstruction and have adequate entry points for movement of delivery and service vehicles. The delivery vehicle size and type is to be appropriate and defined in the design.

Provide a clear and unobstructed access for emergency service vehicles as determined by the building structure.

1.3.7.3 Waste

General: The ACT Government is committed to a policy of minimising waste as described in *ACT Waste Management Strategy 2011-2025*. The methods of waste minimisation and storage used on private premises have significant effect on public areas and consideration must be given to how this is currently addressed and what changes are expected in the next decade.

These standards cover the requirements and considerations for public waste and do not cover commercial waste.

Requirements: *The ACT Waste and Recycle Management Code* for the ACT outlines solutions and requirements for the treatment of waste. In shopping centres it is current policy to provide 240 litre mobile garbage bins (MGB's) concealed within an attractive outer covering (see *MIS 20 Street and park furniture*). Where there is space and it is appropriate, the provision of multi MGB's to sort waste is encouraged.

For existing shopping centre upgrades, service vehicle access to business waste storage areas on private lease to be maintained. Design proposals to improve management, access and overall amenity of a centre may be considered.

Consider: The use of recycled materials in the construction stage and the recycling of materials removed from the site should be considered during design. The designer should identify the type of recycled material, its extent and location of use. The construction team may wish to investigate using the online Australian Reusable Resources Network to list or purchase demolition or construction materials. Refer to *ACTsmart waste and recycling* for further information.

Consideration should be given to addressing progressive innovative technologies that deliver alternative solutions to waste management. Solar compaction systems can significantly increase the storage spaces and efficiency of collection resulting in a more amenable environment and a reduction in emissions.

1.3.8 Traffic and parking

General: In the refurbishment of a public area consideration often needs to be given to traffic flow, bus/ car/ motor bike/ bicycle parking on approach and service roads, especially their relationship to pathways, lighting, disability access, planting, shelter and structure requirements to ensure adequate vehicle and pedestrian circulation.

Requirements: Use of public transport, and active travel should be promoted and routes and services should provide easy access to and from shopping centres and other public urban spaces.

Site investigations shall include traffic flow and parking studies.

Any changes to roads, car park entries and car park configuration shall include turning templates that demonstrate they provide appropriate clearances for the vehicles that will use them.

Consider: Links between park and ride facilities and the shopping centre should be considered.

The speed limit shall be 40km/h or less depending on the situation.

For further information and requirements regarding traffic and parking see *MIS 01 Street planning and design*, *MIS 06 Verges*, *MIS 03 Pavement design*, *MIS 13 Traffic control devices*, *MIS 11 Off street parking*, *MIS 05 Active travel facilities design* and *Building an Integrated Transport Network - Parking*.

1.3.9 Active travel movements

General: Active travel movements need to be studied and a hierarchy of entry points established to provide defined ease of access plus an identifiable character for the centre. Attention should be given to logical and well laid out integration and connection with the adjacent spaces and a continuous path of travel.

Requirements: For safety reasons avoid hidden doorways or alley type access points to collect people from the surrounding uses and routes.

Designs shall make provision for Main or Local community routes traversing the area and consider the design of bicycle access and bicycle parking. Refer to the bicycle parking code, *AS 1742.9* and *AS/NZS 2890.3*.

An active travel movement study shall be undertaken including pedestrian counts, to inform shopping centre upgrades. Interventions and proposed pavements shall respond to the results of the study including rational on how movements are improved or facilitated.

Consideration should be given to the location of existing, proposed or possible future provision of outdoor cafes. These are required to be sited in accordance with the *Guide for: Using Public land for Outdoor Dining Purposes* and shall not impede Active Travel routes.

Soft landscaping can be used to direct pedestrians and cyclists, and should not obstruct desire lines. Careful design of soft landscape areas is needed to avoid pedestrians taking shortcuts across the soft landscape areas. See *MIS 24 Soft landscape design*.

For more information about designing for pedestrian movement see *MIS 05 Active travel facilities design*, *ACT Crime Prevention* and *Urban Design Resource Manual*, *ACT Public Unleased land (Movable Signs) Code*

of Practice 2013 (No 1), Austroads AGRD 06A and Australian Standards AS 1428.1, AS 1428.2, AS 1428.3 and AS 1428.4.

1.3.10 Pavements

General: Pavement may be used to direct people along pathways, to define or highlight areas, to unify spaces and to provide interest and amenity. Artwork may be incorporated into the paving.

Requirements: It is desirable to provide pavement materials and facilities that are easy to clean and maintain, designed to resist vandalism and that resist damage from skateboarding (see MIS 05 Active travel facilities design). Selection of the paving material should consider the porosity and colour of the surface. Porous surfaces are difficult to clean if dirt such as spilt drinks and chewing gum imbeds in the surface. Dark coloured pavements tend to show less staining from spilt drinks, chewing gum and foods.

The designer should also consider glare when selecting pavement materials and avoid light and highly reflective tones. Surfaces of paving/artwork are to be slip resistant as described in Australian/New Zealand Standard AS/NZS 4586 and AS 4663, durable and easily maintained. The use of permeable pavements and structural soils is supported to reduce storm water runoff and to provide an increase in natural watering of trees in pavement.

In most shopping centres and civic spaces, vehicular access is required to varying degrees and design loads. In the design of pavement structure attention must be given to the vehicular use and loads. All areas require adequate emergency vehicular access that can be either independent or combined with delivery or maintenance access across pedestrian pavement areas, refer to *MIS03 Pavement design*, AS/NZS 4455 and AS/NZS 4455.2. Depending on the approach, it may be desirable to clearly define the vehicular route using trees, bollards, walls, rails, seats or by marking the pavement accordingly. Some areas require delivery or maintenance vehicular access across pedestrian pavement areas and it may be desirable to clearly define the vehicular route using trees, bollards, walls, seats or by marking the pavement, refer to *MIS 13 Traffic control devices* and AS 1742.10. Where the route is permanent the pavement marking should also be permanent such as by using a different colour or tone for the pavement material. Tactile pavers are to be provided as required by Australian Standard AS 1428.4 and if suitable may be used to mark the route.

Gradients across pavements in areas where outdoor cafes are to be located should ideally be between 1:100 and 1:40 and not exceed 1:40. The pavement should fall away from access points to ensure sewerage spills and surcharges have minimum impact on the public.

Good surface drainage is important to all pavement areas. For further information on pavement gradients and drainage refer to *MIS 05 Active travel facilities design*. Grated sumps within paved areas should be located so as to avoid the pedestrian movement areas.

Refurbishment and repairs to areas where there are specific pavement treatments prescribed should be in keeping with the treatments prescribed to unify the particular precinct.

1.3.11 Retaining walls and freestanding walls

Requirements: Retaining or freestanding walls in shopping centres and other civic spaces should be designed to be easy to clean and maintain, resist vandalism and discourage damage from skateboarding.

Where a wall is located adjacent grass ensure a mowing strip is provided.

Walls shall consider drainage and impacts on adjacent surfaces/paths, such as overland flow paths, ponding and stormwater sumps. Refer to *MIS 08 Stormwater*.

For information on the structural requirements for walls see *MIS 09 Bridges and related structures*.

Skateboard riders are attracted to using sections of smooth surfaced walls, and the action of the skateboard along the wall can cause discolouration and damage. To discourage the activity, the walls should be a broken surface such as pointed brickwork, or interrupting continuous runs of walling by installing metal lugs, or set recesses, into the top edge.

Graffiti protection can be achieved by designing to mitigate graffiti through surface texture and locating walls in places with natural surveillance. The application of a sacrificial coat to the surface, and painting the wall so that repainting will cover any graffiti or murals can also be effective methods to deal with unwanted graffiti. At handover stage, the designer should inform the maintenance authority of any relevant information regarding the finishes and treatment required.

1.3.12 Planting

General: In determining the landscape proposal and planting scheme, the designer must be assured of the appropriate choice of species and suitability of the selected plants taking into consideration the geometry and size of the space, the micro-climate, and use of the site.

Planting trees, shrubs and ground covers is integral to balancing sun with shade and mitigating the urban heat island effect by limiting the rise in temperature in urban spaces as a result of solar heat absorbed by large areas of pavement. By providing ample shade in the spring and summer, trees and planted areas help to keep pavement cool and minimise the negative impact of the streetscape on climatic conditions.

Planting regimes must also consider water sensitive urban design (WSUD) approaches as part of the urban planning and design cycles that aims to integrate the management of the urban water cycle into the urban development process. WSUD requirements along with measures to reduce heat can to a certain extent mitigate urban warming however the cooling effect of plants varies with space, time and plant-specific properties. Cooling effects of green spaces are mainly dependent on species, canopy cover, shade, size and shape of the space.

Key principles of WSUD should be addressed and integrated within design outcomes including:

- > Reduce the demand for potable (fit for drinking) water by using alternative sources of water such as rainwater and treated wastewater.
- > Minimise the generation of wastewater and to treat wastewater to a suitable standard for re-use and/or release to receiving waters.
- > Use stormwater in the urban landscape for passive watering of trees and soft landscape.

See *MIS 24 Soft landscape design* and *MIS 25 Plant species for urban landscape projects*, for specific requirements.

1.3.13 Irrigation

Irrigation shall only be considered in Town Centres and Group Centres. Landscape design should minimise the need to irrigate and irrigation only used in special circumstances where they will have maximum benefit to the community and that meet the following criteria:

- > Any individual grassed area to be a minimum of 30m² with any single dimension being not less than 5m.
- > Any shrub bed(s) to be a minimum area of 12m².
- > Demonstrate community benefit.
- > Where non-irrigated soft landscape cannot achieve adequate outcomes.
- > Conform to *MIS 18 Irrigation*.
- > Raised irrigated grass areas are not accepted.

1.3.14 Street furniture

Requirements: Street furniture should be chosen to suit its location, function, comfort requirements and users. Consider whole of life cost including materials and designs that are easy to clean and maintain, resist vandalism and discourage damage by skateboards are other considerations. Street furniture should not encroach upon the continuous accessible path of travel.

When locating seats the designer needs to consider shade, sun and where people are likely to need to sit (such as near entry or exit points, supermarkets and chemist shops). Seats should not be located within outdoor cafe lease areas where they will be in conflict with the cafe seating (see *ACT Guide for: Using Public land for Outdoor Dining Purposes*). It is recommended that armrests be provided on seats.

Siting of bins should be targeted to locations with highest potential for litter, for example, takeaway food and drink outlets. Location is to be convenient for efficient collection, in/adjacent areas easily accessible by service vehicles.

Private bins by the centre management may be desirable. Lessees are to provide for their own waste generation as they are prohibited from public bin use.

Trolley stands should be located to minimise dumping of trolleys in landscape areas. Shopping trolley stands are to be considered in the forward planning/design of Town centre and group centre carparks so as not to reduce parking provision in the future. All local centres with super markets shall have trolley stands outside of the carpark only.

See *MIS 20 Street and park furniture* for more information.

1.3.15 Signage

Requirements: The aim of signage design for shopping centres and other public urban spaces is to improve name recognition and direction. It is necessary to provide materials that are easy to clean and maintain and resist vandalism. Tactile signs are preferred for people who have disabilities.

The documents *MIS 12 Guide signs*, *MIS 22 Signage for urban parks and open space* and *AS1428.1* should be referred to.

For community routes, directional signage and focal point names refer to MIS 05 Active travel facilities design.

See the *ACT Public Unleased land (Movable Signs) Code of Practice (No 1)* for information about temporary advertising in shopping centres.

See *MIS 20 Street and park furniture* for more information about signs.

1.3.16 Public toilets

Requirements: Public toilet facilities in shopping centres need to be analysed in terms of their adequacy in lighting, accessibility, suitability of location, safety and security factors. The decision to replace or refurbish existing toilets at a shopping centre is generally dependent on the available budget, the condition of the existing toilets, community consultation outcomes and the availability of a suitable site. See *MIS 23 Public toilets*.

The reduction of public toilets and the inclusion of toilet facilities within a private development should be considered with ACT Environment Planning and Sustainable Development – Planning playing an important role in the decision making process. Issues such as the viability of shopping centres and business diversity will provide the necessary background information in determining public toilet needs.

1.3.17 Approvals

Agencies that may require approvals for work in shopping centres and other public urban spaces include, but are not limited to ACT Environment Planning and Sustainable Development Directorate – Planning, ActewAGL, TCCS Roads ACT, TCCS Development Review and Coordination [gifted assets], TCCS Capital Works Urban, the ACT Heritage Council, Land Development Authority, National Capital Authority, Environment Protection Authority.

1.4 Documentation

Requirements: Comply with *Reference document 6 Design Acceptance submissions*.



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September 2021