Charles Sturt University

Revision 1.0

Infrastructure Design Standards

Module S02: Active Transport

Division of Finance (Strategic Infrastructure)
Charles Sturt University

Document Control

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Contents

1. Introduction

1.1. Overview

The Charles Sturt University Infrastructure Design Standards (the Standards) outline the University's expectations for its built forms to achieve consistency in the quality of the design and construction of those built forms.

The Standards have been developed to provide guidance to the design team and to assist Facilities Management to drive a consistent approach to the design, construction, commissioning, handover, and operation of new capital projects to ensure the new asset is fully integrated into campus life and conforms to the University's standards and policies.

The successful integration of any new project into the day-to-day operation of campus life cannot be underestimated and is vital to ensuring the new asset provides a fully functional platform for Facilities Management clients and the University. The Standards will ensure Facilities Management is successful in supporting the University's strategic objectives now and into the future. The pitfall of viewing any new project as a standalone entity must be avoided as any new project is an extension of the existing campus.

The Standards are aligned with Charles Sturt's requisites for aesthetic appeal, life cycle maintenance and environmental sustainability, while ensuring that there is sufficient scope for innovation and technological advancements to be explored within each project.

1.2. The University

The history of Charles Sturt University dates to 1895, with the establishment of the Bathurst Experiment Farm. Formed progressively through the merge of regional institutions in south-western and western NSW, Charles Sturt was formally incorporated on 19 July 1989 under the Charles Sturt University Act 1989. As one of Australia's newer universities, Charles Sturt has been built on a tradition of excellence in teaching and research spanning more than 100 years.

With over 40,000 current students studying both on-campus and online, Charles Sturt University is the largest tertiary education institution in regional Australia. The University operates six main campuses across New South Wales in Albury-Wodonga, Bathurst, Dubbo, Orange, Port Macquarie, and Wagga Wagga, alongside specialist campuses in Canberra, Parramatta, and Goulburn. Charles Sturt University is structured around three Faculties: Arts and Education; Business, Justice and Behavioural Sciences; and Science and Health.

1.3. University Vision and Values

Charles Sturt University is committed to building skills and knowledge in its regions by offering choice and flexibility to students, while collaborating closely with industries and communities in teaching, research, and engagement. As a significant regional export industry, the University brings both strength and learning back to

its regions, positioning itself as a market-oriented institution. Its goals are to remain the dominant provider of higher education in its regions and a sector leader in flexible learning.

Charles Sturt University believes that wisdom has the power to transform communities. With perseverance and dedication, the University contributes to shaping resilient and sustainable regions for the future. Acknowledging the deep culture and insight of First Nations Australians, the University's ethos is encapsulated by the Wiradjuri phrase *yindyamarra winhanganha,* which translates to "the wisdom of respectfully knowing how to live well in a world worth living in." Through its values, Charles Sturt University fosters a welcoming community and learning environment that supports innovation, drives societal advancement, and gives back to the regions it serves.

1.4. Using the Infrastructure Design Standards

The Infrastructure Design Standards are written to advise Charles Sturt University performance requirements and expectations that exist above and beyond existing industry codes and standards.

The Infrastructure Design Standards do not repeat codes and standards.

Performance to Codes and Standards are a non-negotiable regulatory minimum of any design solution, to be determined for each project by the design team.

The Standards are to be used by all parties who are engaged in the planning, design, and construction of Charles Sturt's facilities. This includes external consultants and contractors, Charles Sturt's planners, designers, and project managers as well as faculty and office staff who may be involved in the planning, design, maintenance, or refurbishment of facilities. All projects must comply with all relevant Australian Standards, NCC, EEO as well as Local Government and Crown Land Legislation.

1.5. Modules

The Standards are divided into the following modules for ease of use, but must be considered in its entirety, regardless of specific discipline or responsibilities:

- S01 Overview and Universal Requirements
- **S02 Active Transport**
- S03 Acoustics
- S04 Building Management System
- S05 Electrical and Lighting
- S06 Energy Management
- S07 Ergonomics
- S08 Fire and Safety Systems
- S09 Floor and Window Coverings
- S10 Furniture
- S11 Heritage and Culture
- S12 Hydraulic

- S13 Information Technology
- S14 Irrigation
- S15 Mechanical Services
- S16 Roof Access
- S17 Termite Protection, Vermin Proofing and Pest Management
- S18 Security Systems
- S19 Signage
- S20 Sustainable Building Guidelines
- S21 Waste Management
- S22 Project Digital Asset and Data Requirements
- S23 Commissioning, Handover and Training

1.6. Related Documents

1.6.1. University Documents

The Standards are to be read in conjunction with the following relevant University documents, including but not limited to:

- Facilities and Premises Policy along with supporting procedures and guidelines
- Charles Sturt University Accessibility Action Plan 2020 - 2023
- Relevant operational and maintenance manuals
- Charles Sturt University Asbestos Management Plan
- Charles Sturt University Signage Guidelines
- Charles Sturt University Modern Slavery Statement
- Charles Sturt University Sustainability Statement
- Charles Sturt University Work Health and Safety Policy
- Charles Sturt University Risk Management Policy
- Charles Sturt University Resilience Policy
- Charles Sturt University Health, Safety and Wellbeing Policy

1.6.2. Federal Legislation

The planning, design and construction of each Charles Sturt University facility must fully comply with current relevant Federal legislation, including but not limited to:

- National Construction Code (NCC)
- Disability Discrimination Act 1992 (DDA)
- Environment Protection and Biodiversity Conservation Act 1999 (EPBC)
- Work Health and Safety Act 2011

1.6.3. NSW State Legislation

The planning, design and construction of each Charles Sturt University facility must fully comply with current relevant Federal legislation, including but not limited to:

- Work Health and Safety Act 2011
- Environmental Planning and Assessment Act 1979 (EP&A Act)
- Building and Development Certifiers Act 2018
- Heritage Act 1977
- Protection of the Environment Operations Act 1997 (POEO Act)
- Design and Building Practitioners Act 2020
- State Environmental Planning Policies (SEPPs)
- Local Government Act 1993

1.6.4. Federal Regulations and Standards

- Relevant Australian or Australian/New Zealand Standards (AS/NZS)
- Safe Work Australia Model Codes of Practice
- Work Health and Safety Regulations 2011
- Disability (Access to Premises – Buildings) Standards 2010
- National Environment Protection Measures (NEPMs)

1.6.5. NSW State Regulations and Standards

- SafeWork NSW Codes of Practice
- Disability (Access to Premises – Buildings) Standards 2010
- Building and Development Certifiers Regulation 2020
- NSW Work Health and Safety Regulation 2017
- Protection of the Environment Operations (General) Regulation 2022
- NSW State Environmental Planning Policies (SEPPs)
- Fire and Rescue NSW Fire Safety Guidelines
- NSW Local Council Development Control Plans (DCPs)

1.6.6. Manufacturer Specifications and Data Sheets

All installation must be carried out in accordance with manufacturer specifications and data sheets to ensure product performance over its intended life and so as not to invalidate any warranties.

1.6.7. Project-Specific Documents

Requirements specific to a particular project, campus, or other variable, will be covered by project specific documentation, such as client briefs, specifications, and drawings. These Standards will supplement any such

project specific documentation. The Standards do not take precedence over any contract document, although they will typically be cross-referenced in such documentation.

Extracts from the Standards may be incorporated in specifications; however, it must remain the consultant's and contractor's responsibility to fully investigate the needs of the University and produce designs and documents that are entirely 'fit for purpose' and which meet the 'intent' of the project brief.

1.7. Discrepancies

The Standards outline the University's generic requirements above and beyond the above-mentioned legislation. Where the Standards outline a higher standard than within the relevant legislation, the Standards will take precedence. If any discrepancies are found between any relevant legislation, the Standards and project specific documentation, these discrepancies should be highlighted in writing to the Manager, Capital Works.

1.8. Departures

The intent of the Standards is to achieve consistency in the quality of the design and construction of the University's built forms. However, consultants and contractors are expected to propose 'best practice / state of the art' construction techniques, and introduce technological changes that support pragmatic, innovative design. In recognition of this, any departures from relevant legislation, or the Standards, if allowed, must be confirmed in writing by the Manager, Capital Works. Any departures made without such written confirmation shall be rectified at no cost to the University.

1.9. Professional Services

All projects at Charles Sturt University require the involvement of adequately skilled and experienced professionals to interpret and implement the Standards. Consultants or contractors lacking proper qualifications and licenses are not permitted to conduct any work.

1.10. Structure of Document

This document is structured into 4 sections:

Section 1 Introduction (this Section).

Section 2 General Requirements – outlines the general requirements or design philosophies adopted at Charles Sturt University.

Section 3 Supporting Documentation – Legislation, Standards, Codes of Practice, University Policies, and other applicable technical references.

Section 4 Specifications (if applicable) – materials specifications and/or preferred lists for materials, processes or equipment used by Charles Sturt University.

2. General Requirements

2.1. Active Transport Overview

Active transport, a cornerstone within the vibrant ecosystem of a university campus, embodies a spectrum of non-motorised travel avenues reliant on physical exertion, prominently featuring walking and cycling. These modalities not only bolster individual health and well-being but also resonate with the university's commitment to sustainability. Expanding beyond individual initiatives, active transport integrates with public transit systems to meet long-distance travel demands, with campus transit serving as a crucial nexus, fostering connectivity and accessibility while often incorporating walking or cycling segments into journeys. Embracing and nurturing a culture of active transportation not only cultivates a healthier campus lifestyle but also advances our broader sustainability objectives, forging a more dynamic and eco-conscious university community.

As pivotal nodes of activity, Charles Sturt University exerts considerable influence on transportation dynamics, acting as both a generator and consumer of travel services. The university administers extensive parking infrastructure, manages campus road networks, orchestrates people and vehicular movements, and cultivates relationships with public transit providers and neighbouring communities. Additionally, it maintains vehicle fleets, navigates supply chain intricacies related to transport costs, and formulates travel policies encompassing local commutes and international air travel. Improving access to campus amenities and services emerges as a fundamental obligation, propelled by social, economic, and environmental imperatives.

Overreliance on motor vehicles for accessibility poses multifaceted challenges, encompassing personal expenses, social disparities, operational complexities, and externalities like congestion, noise, and emissions. Consequently, diversifying transportation options for students, faculty, and visitors becomes imperative, aligning with our commitment to sustainability and fostering a more inclusive and sustainable university environment.

2.2. Bus Stop Standards

Bus stop placements should align with the functional dynamics of the street, considering the movement and place function of the street. The selection and spacing of bus stops should aim to harmonise pedestrian accessibility with onboard customer travel times, factoring in variables such as terrain, land usage, demand, and Disability Discrimination Act (DDA) standards. The positioning and design of bus stops should be evaluated within the framework of pedestrian safety and traffic flow found in the Transport for NSW Safe System Assessment for Movement and Place Practitioners Report. It is also recommended to consult with local bus service providers regarding placement.

Key placement and design elements:

- Bus Stops – kerbside, kerb outstand, or indented bay should be provided in accordance with the Transport for New South Wales (TfNSW) Guidelines.
- Shelters are to be integrated into bus stop design and should be placed to maximise available footpath width.

- Seating is to be integrated into the bus stop design and should be consistent with Australian Standards.
- Service Information can be integrated into bus stop design. Consider QR codes.
- Rubbish bins should be provided at higher frequency bus stops.
- Accessible boarding areas should be provided in accordance with standards. Refer to Australian Human Rights Commission Guideline for promoting compliance of bus stops with the Disability Standards for Accessible Public Transport (Section 4.3)
- Bus stop signage shall be based on the Charles Sturt University Signage Guidelines along with TfNSW standards. (Section 4.4)
- Bus Stop Shelter graphic language shall be aligned with the University brand guidelines and approved by the Division of Customer Experience
- Lighting shall be provided within the shelter along with surrounding pedestrian approaches.
- Pedestrian crossings will be constructed based on needs assessment.
- Security phone and CCTV will be installed based on risk assessment.
- Depending on current coverage and endorsement from DIT, University WiFi services may be installed.
- Appropriate and linking pathways from the bus stop should meet internal thoroughfares and meet the path design standards (see Table 1).

Charles Sturt has undertaken numerous projects to design and construct bus shelters. Designs for single and twin shelters are outlined below along with example of graphic language applied are located in Section 4.8 (Figures1 to 7).

2.3. Path Design Standards

Based on the AustRoads standard Guide to Road Design Part 6A: Paths for Walking and Cycling, the types of paths are:

- Pedestrian path
- Bicycle path or cycle track
- Shared path
- Separated path

A **pedestrian path** is designated for use by pedestrians, wheelchair users, mobility scooters, and personal mobility devices like walking frames. These paths are a crucial part of the transport network, serving as either a complete route for walking trips or as the beginning or end of journeys that involve other modes of transport.

A **bicycle path**, whether one-way or two-way, is specifically designed for cyclists and is most appropriate in situations where there is a high volume of cycling traffic or a preference for an exclusive path for cyclists, with a separate path provided for pedestrians. It is also suitable when motor vehicle access across the path is limited, and when the path's alignment permits uninterrupted and safe travel for cyclists at a relatively consistent speed.

A **shared path** is designed for both pedestrians and cyclists to use the same space. It is suitable in situations where there is demand for both pedestrian and bicycle paths, but the number of users is low enough that

separate facilities are not necessary. Shared paths serve various purposes, such as recreation, local access, and connecting high-capacity paths. However, if used for such connections, they may need to be designed to control cyclist speeds to ensure pedestrian safety.

A **separated path** features distinct sections, one dedicated exclusively to cyclists and the other to pedestrians. This type of path is suitable in situations where safety or conflict issues arise due to high volumes of pedestrians and/or cyclists or where a shared path fails to meet the desired level of service. Such needs typically occur in areas with high pedestrian and cyclist traffic and are not generally required on University campuses.

Pathway design must adhere to Charles Sturt University's path design standards, as outlined in Table 1, ensuring accessibility for pedestrians and cyclists of all abilities. Key recommendations for path design encompass accommodating multi-purpose use through appropriate width and ensuring a gradient conducive to all-ability accessibility. To ensure a pedestrian and cycling network offers a convenient, safe, and enjoyable experience, designers should focus on creating paths that are direct, minimise travel time, and address key characteristics: safety, connectivity, legibility, comfort, convenience, universal access, and pleasantness.

Safe:

- Provide surfaces with good grip, free from tripping hazards, and well-maintained.
- Design landscaping to avoid obstructing sightlines or paths.
- Ensure adequate lighting for night safety.
- Minimise user conflicts by considering path widths or separating paths.
- Include signs to guide appropriate user behaviour.

Connected:

- Ensure routes are continuous and as short as possible.
- Integrate paths with public transport and provide suitable crossings for varying traffic conditions.
- Offer good access to key destinations and consider traffic signal prioritisation in high-volume areas.

Legible:

- Use clear signage and pavement markings for directions and distances.
- Ensure visibility of street and place names.
- Include features that help users orient themselves and provide accessible path network information.

Comfortable:

- Maintain adequate path widths and physical separation from traffic.
- Include amenities like resting places and drinking fountains.
- Ensure paths are clean, well-maintained, and prevent water ponding.
- Provide shelter and adequate lighting for safety.

Convenient:

- Ensure paths are continuous and facilitate easy street crossings.
- Minimise delays at crossings and provide dedicated signals for pedestrians and cyclists.

Universal:

- Design paths with gradients and features accommodating all users, including those with mobility impairments.
- Use contrasting pavement surfaces and tactile features for wayfinding.

Pleasant:

- Include high-quality facilities such as seating and interpretative information.
- Ensure scenic views are accessible from the path.

Paths must be designed to support the loads from heavy vehicles and machinery, ensuring durability and minimising costly repairs. They should feature a robust, weather-resistant surface, either as flexible pavement with crushed rock and asphalt or as rigid concrete. Surface stormwater draining must be considered in pathway routing and design. Proper compaction of the sub-grades is essential, and any soft areas must be treated. In some cases, evaluating sub-grade conditions along the path may be necessary to maintain the path's structural integrity and service level throughout its lifespan.

Incorporating clear signage and wayfinding elements will assist users in navigating the path efficiently. Regular maintenance schedules should be established to address wear and tear, ensuring that the path remains in optimal condition over time. The design should also incorporate elements that enhance the aesthetic appeal and environmental integration, such as landscaping that complements the surrounding area.

Compliance with these standards not only promotes inclusivity but also contributes to the university's commitment to sustainability and community well-being.

Charles Sturt University Path Design Standard
Minimum standard for path width – 2.5 metres Standard for maximum longitudinal grade – 1 in 14 (7.2%) Cross fall – minimum -1% / maximum -3% Path material: • Primary – concrete. • Secondary – asphalt or hard-stand. • Decomposed granite where suitable.

Table 1: Charles Sturt University Path Design Standard

Ensuring connectivity remains paramount for promoting active transport across University campuses, emphasising the importance of integrating pathways with main thoroughfares. When introducing new pathways, careful consideration should be given to establishing linkages with both on-campus and off-campus networks that enhance accessibility and convenience for users. This approach not only fosters a cohesive network of routes but also encourages increased utilisation of active transportation methods.

Safety considerations take precedence for the University, underscoring our commitment to the well-being of students, staff, and the community. Effective vegetation management along pathways is necessary for upholding safety standards, preserving unobstructed routes while maintaining clear sightlines for path users. To this end, Charles Sturt University advocates adhering to the guidelines outlined in Table 2 when selecting and planting vegetation along pathways, thereby fostering a harmonious balance between greenery and path usability.

Charles Sturt University Planting and Vegetation Management Along Pathways Guidelines
Consideration to the ground covers, shrubs, and tree species to be planted along pathways should be given with the following in mind: • Shrubs will be kept pruned to 1 metre. • Trees will be uplifted to 1.8 – 2.4 metres.

Table 2: Charles Sturt University Planting and Vegetation Management Along Pathways Guidelines

Structural Root Zones (SRZs) should be considered and avoided whenever possible to prevent root damage, maintain tree stability, and avoid disrupting pathways due to expanding roots. To determine SRZs, consult arborist reports or the tree plotter dataset (available only in Bathurst). If these resources are unavailable, a basic SRZ calculator can be accessed here: TPZ and SRZ Calculator | Arborlogix. This consideration is also outlined in Australian Standard AS 4970:2009 and should be applied to any ground-disturbing activities within SRZs. Additionally, Tree Protection Zones (TPZs) and, when relevant, SRZs should be considered for any new construction, extensions, or renovations near existing trees, as detailed in AS 4970:2009.

Illumination along primary pathways is essential for enhancing safety and security during non-daylight hours. The Australian Standard AS/NZS 1158.3.1.2005 Lighting for roads and public spaces, Part 3.1: Pedestrian area (Category P) lighting provides guidelines for the performance and design requirements of lighting in pedestrian areas and will be used as part of lighting design. Sustainability at Charles Sturt will be consulted for details relating to energy efficient lighting standards as part of the design brief.

Safety phones may be required along pathways to bolster security during non-daylight hours. However, the necessity for their installation should be determined through a case-by-case risk assessment, considering factors such as campus location, usage patterns, and existing security infrastructure. Risk assessment will be coordinated through Campus Facilities Managers with involvement of the Division of Security, Safety and Wellbeing and relevant University stakeholders.

2.4. Bike Parking and End of Trip Facilities

Bike parking and end-of-trip facilities play a crucial role in promoting sustainable transportation options and supporting the active lifestyles of students and staff at Charles Sturt University. Like many other institutions across the country, Charles Sturt recognises the importance of providing adequate infrastructure to accommodate cyclists and encourage cycling as a mode of transportation. Bicycle parking should be carefully considered for inclusion at every new campus location. The criteria should encompass:

- **Australian Standards for Bicycle Parking**: Follow the guidelines provided by Australian Standards AS 2890.3:2015 - Parking facilities, Part 3: Bicycle parking facilities. This standard outlines requirements for bicycle parking infrastructure, including spacing, dimensions, security, and accessibility.
- **Robust Bike Parking Infrastructure**: securely anchored to the ground, facilitating the use of chain locks by cyclists. Utilizing materials like stainless steel or galvanized steel rings and semi-hoops, as previously successful at the University. Additionally, adding bunting to the bike parking area to minimize scratches on bike paint is desirable. Dedicated secure bike storage for student residences to encourage bike usage and minimise instances of theft should be considered as part of strategic residential precinct planning.
- **Sheltered Parking:** Provide sheltered bike parking facilities to protect bicycles from weather elements, including sun and rain. Design shelters that complement the campus architecture and provide adequate coverage for parked bicycles.
- **Accessibility and Visibility:** Locate bike parking areas in easily accessible and highly visible locations across the campus. Ensure adequate lighting and signage to enhance visibility and promote user safety.
- **Convenient Location**: Place bike parking facilities within close proximity (ideally within 30 meters) to key campus destinations, such as academic buildings, libraries, and recreational facilities. Consider installing additional facilities, such as lockers or secure sheds, for users willing to travel slightly further distances (up to 70 meters).
- **Integration with End-of-Trip Facilities:** Integrate bike parking with end-of-trip facilities, including showers, changing rooms, and bike repair stations. Ensure that these facilities are easily accessible to cyclists and comply with relevant accessibility standards.
- **Wayfinding Signage**: Install clear and visible sirgnage to guide cyclists to bike parking facilities and end-of-trip amenities.
- **Maintenance and Monitoring**: Implement a regular maintenance schedule to ensure that bike parking facilities remain in good condition. Monitor usage patterns and gather feedback from users to make necessary improvements and adjustments.

3. Supporting Documentation

These below lists are not all-inclusive and those associated with the project are responsible for identifying and complying with all standards relevant to the scope of works.

3.1. Supporting Legislation

Disability Discrimination Act (DDA) 1992 (Cth)

Disability Standards for Accessible Public Transport 2002 (Cth)

National Construction Code of Australia (NCC) 2022

Public Premises (Accessibility) Act 2000 (NSW)

Disability Inclusion Act 2014 (NSW)

Anti-Discrimination Act 1977 (NSW)

3.2. Supporting Standards

Standard Number	Standard Title
AS/NZS 1158.3.1:2020	Lighting for roads and public spaces, Part 3.1: Pedestrian area (Category P) lighting - Performance and design requirements
AS/NZS 1158.4:2015	Lighting for roads and public spaces, Part 4: Lighting of pedestrian crossings
AS 1428.1:2021	Design for access and mobility, Part 1: General requirements for access - New building work
AS 1428.4:2003	Design for access and mobility, Part 4: Tactile indicators
AS 1657:2018	Fixed platforms, walkways, stairways and ladders - Design, construction and installation
AS 2890.3:2015	Parking facilities, Part 3: Bicycle parking
AS/NZS 2890.6:2009	Parking facilities, Part 6: Off-street parking for people with disabilities

3.3. Industry Codes of Practice

Higher Education Standards Framework (Threshold Standards) 2021

https://www.teqsa.gov.au/how-we-regulate/higher-education-standards-framework-2021

Austroads Guide to Road Design Part 4: Intersections and Crossings – General (Account Required)

https://austroads.com.au/publications/road-design/agrd04/media/AGRD04-23_Guide_to_Road_Design_Part_4_Intersections_and_Crossings_General_Ed2.2.pdf

Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling (Account Required)

https://austroads.com.au/publications/road-design/agrd06a/media/AGRD06A-17_Guide_to_Road_Design_Part6A_Paths_for_Walking_and_Cycling_Ed2.1.pdf

Austroads Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management

https://austroads.com.au/publications/active-travel/ap-r528-16/media/AP-R528-16-Bicycle_Parking_Facilities_Updating_Austroads_Guide_to_Traffi....pdf

NSW Government Design elements for public transport

https://www.movementandplace.nsw.gov.au/design-principles/design-road-and-streets-guide/road-and-street-design-parameters-and-elements/design-elements-public-transport

Transport for NSW Guidelines for Public Transport Capable Infrastructure in Greenfield Sites

https://www.transport.nsw.gov.au/system/files/media/documents/2018/Guidelines-for-Bus-Capable-Infrastructure-in-Greenfield-Sites.pdf

Transport for NSW Safe System Assessment for Movement and Place Practitioners

https://www.transport.nsw.gov.au/system/files/media/documents/2023/Safe%20System%20Assessment%20Framework%20For%20Movement%20and%20Place%20Practitioners.pdf

Transport for NSW Cycleway Design Toolbox

https://www.transport.nsw.gov.au/system/files?file=media/documents/2022/Cycleway-Design-Toolbox-Web_0.pdf

Australian Human Rights Commission Guideline for promoting compliance of bus stops with the Disability Standards for Accessible Public Transport

https://humanrights.gov.au/our-work/disability-rights/publications/guideline-promoting-compliance-bus-stops-disability

Bicycle NSW Summary of Design Principles for Good Bicycle Infrastructure

https://bicyclensw.org.au/wp-content/uploads/2020/05/966-0320-Summary-of-Principles-for-Good-Bike-Infrastructure-070520.pdf

3.4. University Documents

Charles Sturt University Signage Guidelines

https://cdn.csu.edu.au/__data/assets/pdf_file/0005/3799274/201211-22488-CSU_SIGNAGE_GUIDELINES-03.pdf

Charles Sturt University Student safety: keeping your kidult safe and supported on campus

https://insight.study.csu.edu.au/student-safety/

Charles Sturt University Albury-Wodonga Transport Access Guide (TAG)

https://cdn.csu.edu.au/__data/assets/pdf_file/0010/2171566/Albury-TAG-Web-2017.pdf

Charles Sturt University Getting Bathurst Transport Access Guide (TAG)

https://cdn.csu.edu.au/__data/assets/pdf_file/0011/2171567/R2-Bathurst-TAG-Web-2017.pdf

Charles Sturt University Getting Dubbo Transport Access Guide (TAG)

https://cdn.csu.edu.au/__data/assets/pdf_file/0010/2171584/R2-Dubbo-TAG-Web-2017.pdf

Charles Sturt University Getting Orange Transport Access Guide (TAG)
https://cdn.csu.edu.au/__data/assets/pdf_file/0003/2171568/R2-Orange-TAG-Web-2017.pdf

Charles Sturt University Port Macquarie Transport Access Guide (TAG)
https://cdn.csu.edu.au/__data/assets/pdf_file/0004/3123067/181025-DFM-TAG-Port-Macquarie-.pdf

Charles Sturt University Wagga Wagga Transport Access Guide (TAG)
https://cdn.csu.edu.au/__data/assets/pdf_file/0004/2171587/Wagga-Wagga-TAG-Web-2017.pdf

3.5. Other Resources

Transport for NSW Active Transport Strategy
https://www.future.transport.nsw.gov.au/future-transport-plans/active-transport-strategy

4. Specifications

4.1. Bus Stop Specifications

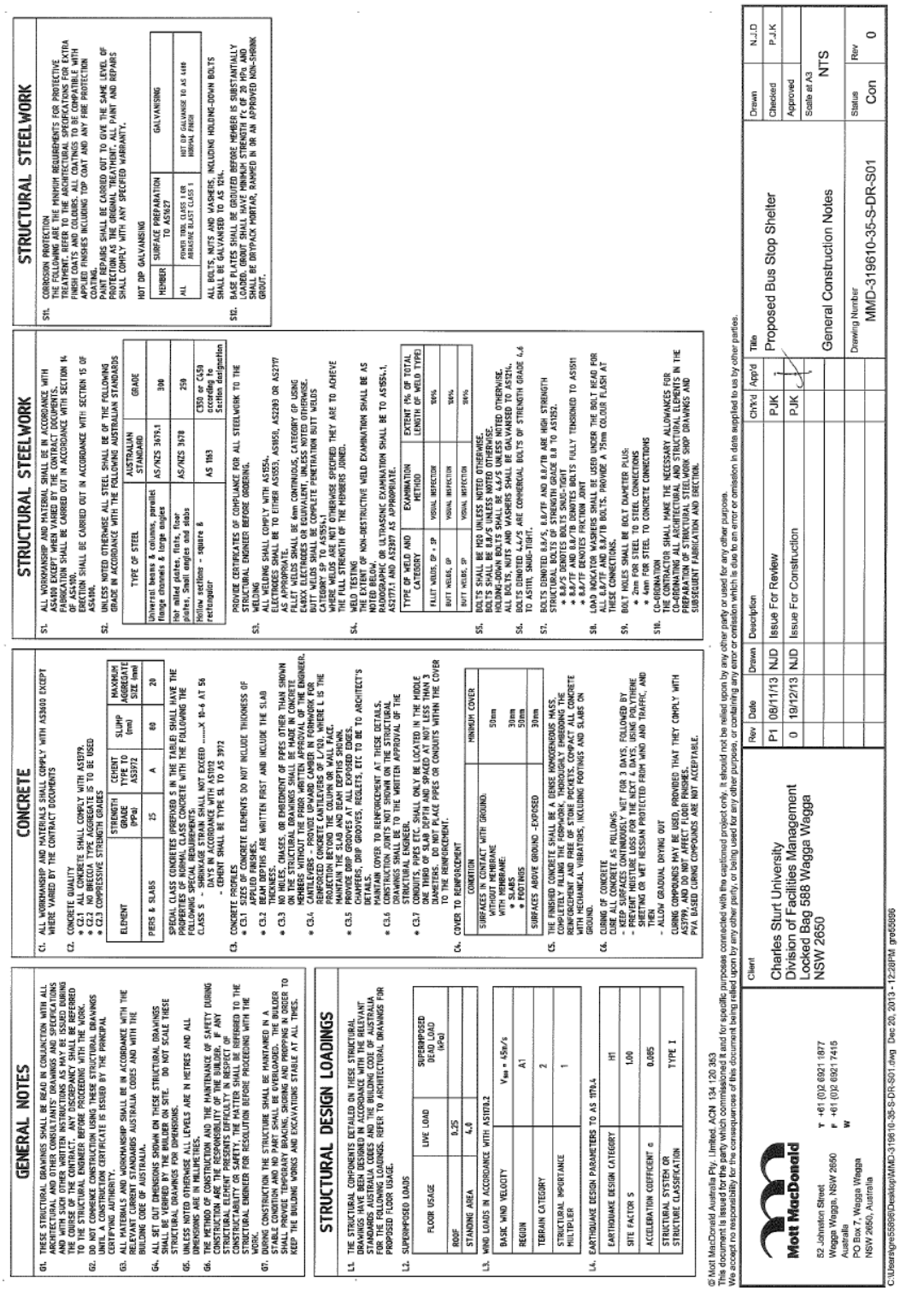


Figure 1: Bus Shelter General Construction Notes

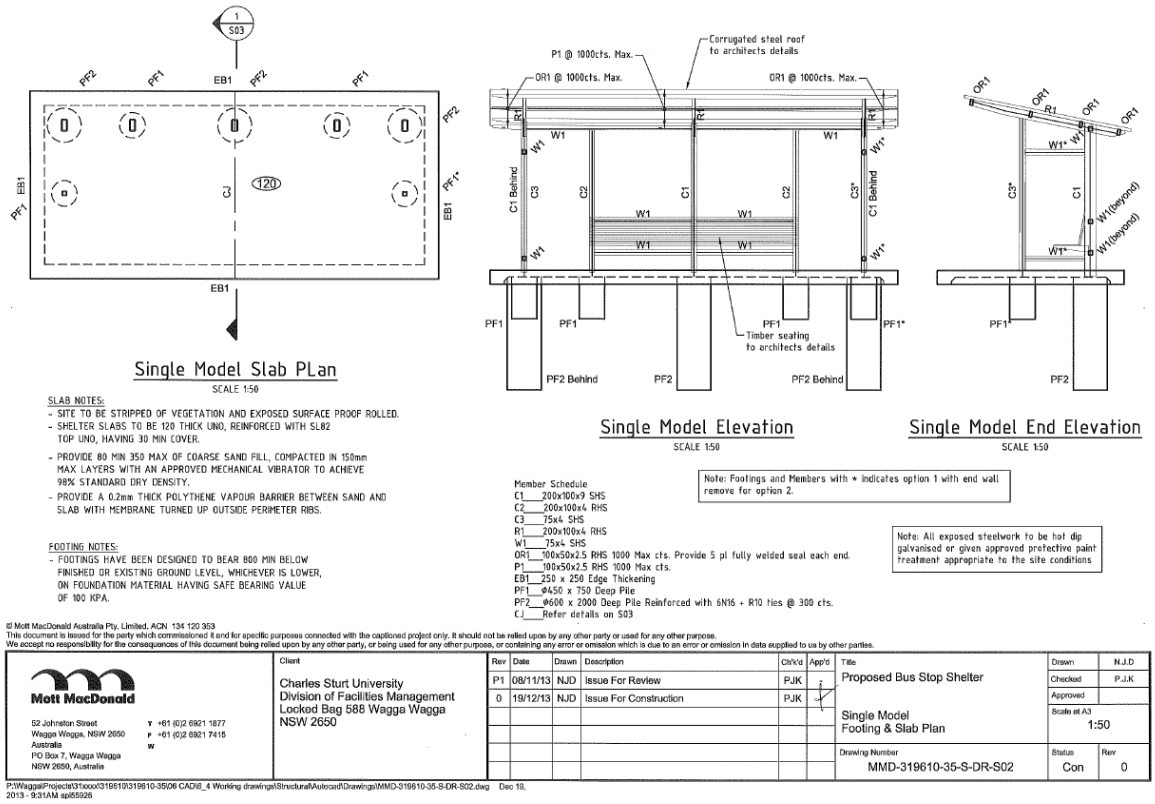


Figure 2: Bus Shelter Single Model Footing and Slab Plan

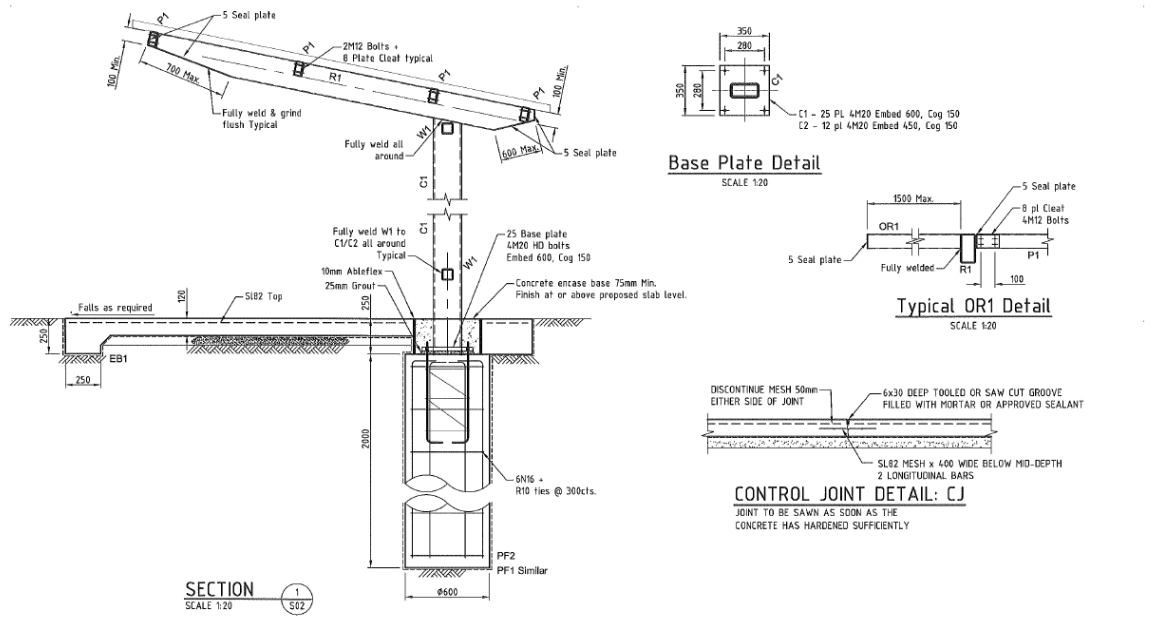


Figure 3: Bus Shelter Single Model Footing and Slab Details

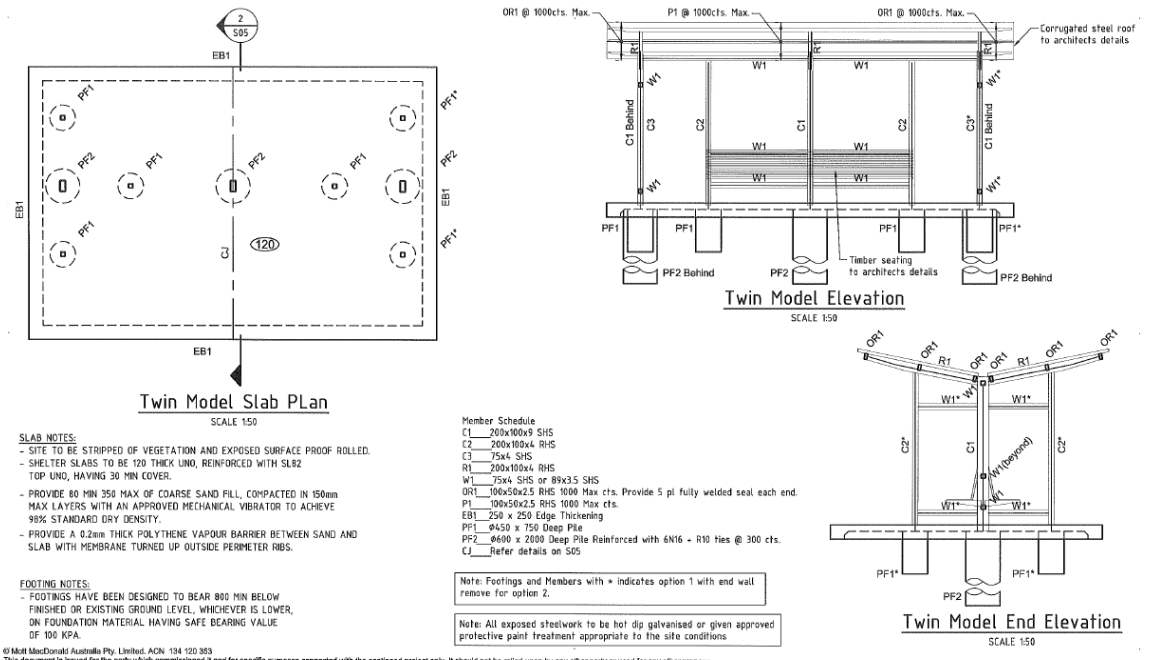


Figure 4: Bus Shelter Twin Model Footing and Slab Plan

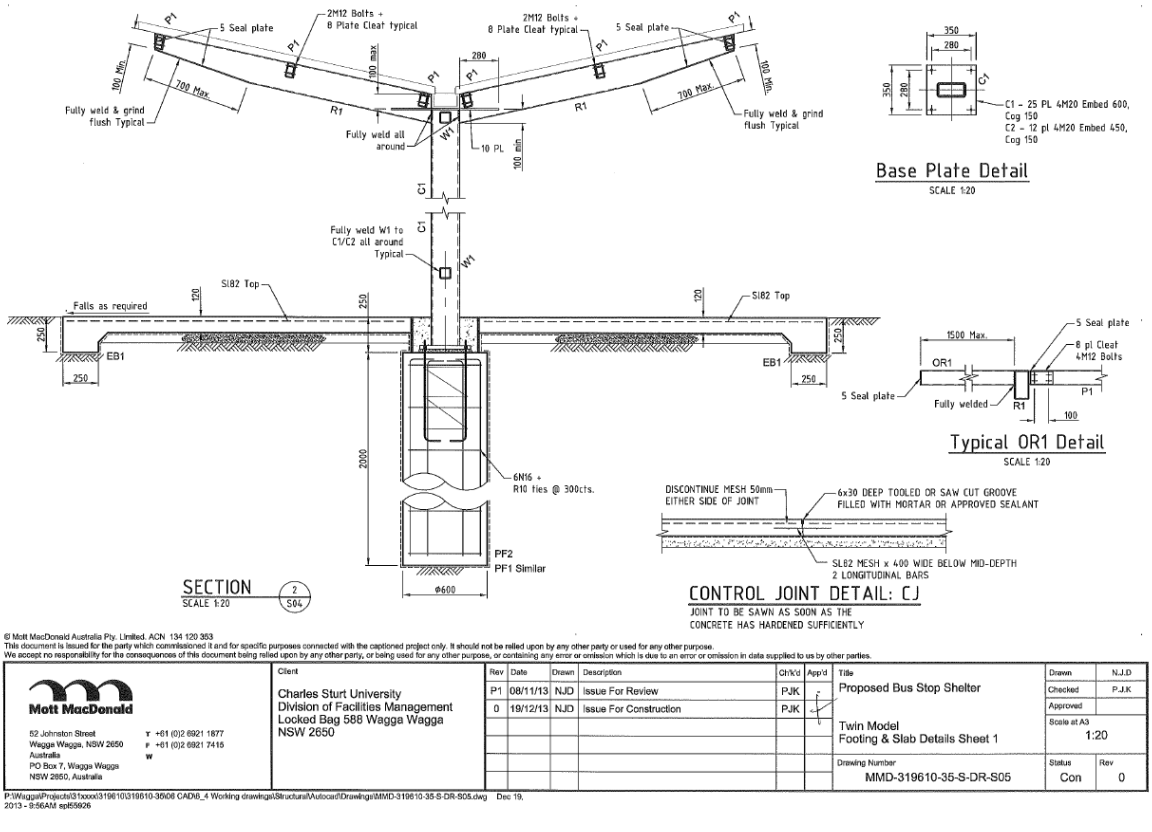
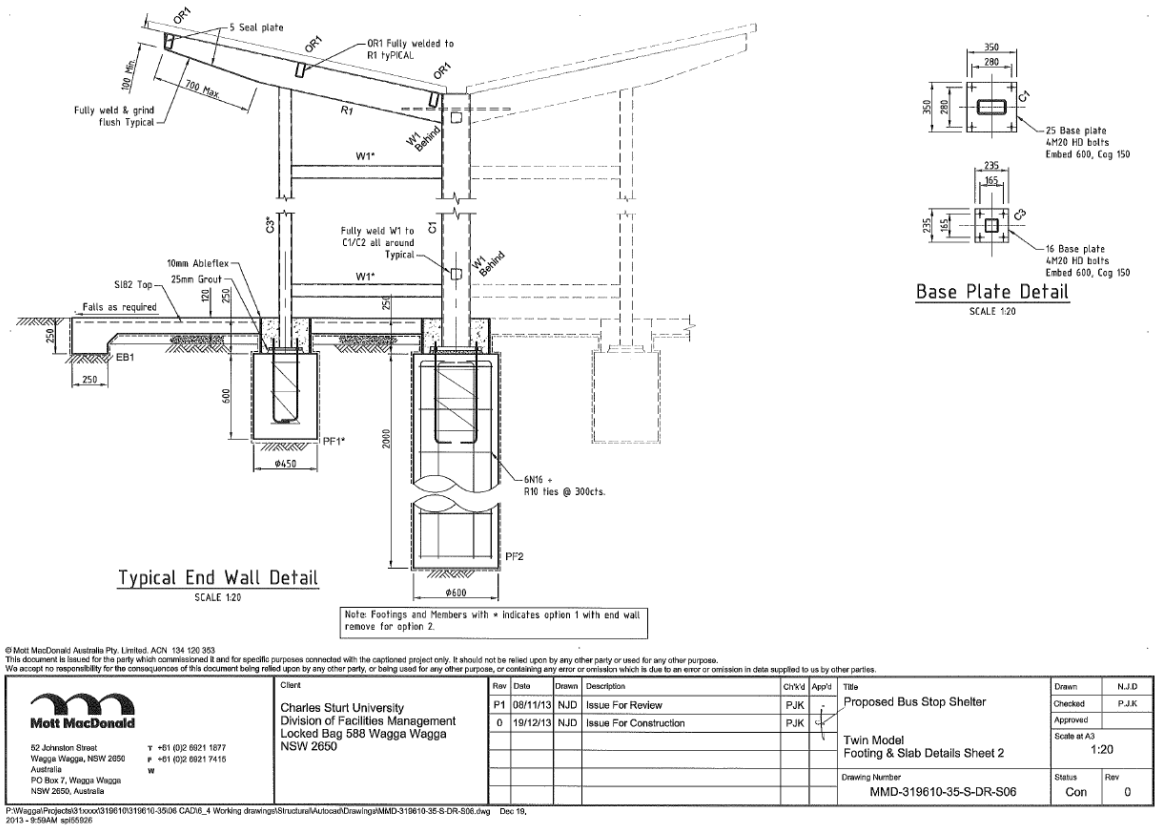


Figure 5: Bus Shelter Twin Model Footing and Slab Details Sheet 1



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Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	08/11/13	NJD	Issue For Review	PJK	
0	19/12/13	NJD	Issue For Construction	PJK	

Title: Proposed Bus Stop Shelter
Twin Model
Footing & Slab Details Sheet 2

Drawn	NJD
Checked	PJK
Approved	
Scale at A3	1:20
Drawing Number	MMD-319610-35-S-DR-S06
Status	Con
Rev	0

P:\Wagga\Projects\319xxx\319610\319610-3506 CAD\6_4 Working drawings\Structural\Autocad\Drawings\MMD-319610-35-S-DR-S06.dwg Dec 19, 2013 - 9:59AM apl65826

Figure 6: Bus Shelter Twin Model Footing and Slab Details Sheet 2

Figure 7: Bus Shelter Twin Model with Example Graphic Language. Note legacy logo and graphic standard.