City of Melville
Path
Guidelines and Specifications

Latest Revision Details (Earlier Revision History is listed at end of document)

Date amended	**Description of Change** (Provide sufficient detail so that staff familiar with the earlier work instruction can update themselves on the changes easily)	**Revised by** (Document Owner)	**Approved by** (Document Owner's Supervisor)	**Date approved**
8/2/2024	Review - Drawings added to Appendices - Wording adjustment to Section 2.8	J Smith	K Brosztl	16/2/2024

Authorisation
Owner – Asset Management Coordinator
Document Approver – Manager Engineering
Directorate of Document Owner – Environment and Infrastructure

Contents

Glossary

Name	Definition / Commentary
Alignment of Path	The location of the path within the verge area
Battle-axe lots	A block of land behind another, with access from the street via a separate crossover
Block pavement structure	Block patterns which are generally used in the construction of driveways
Clearance	The space required between the path and an obstruction
Concrete Apron	The transition between the road surface and the crossover
Crossfall	Grade across the path width; necessary for adequate drainage
Crossover	The extension of a driveway from the edge of the property boundary to the edge of the road
Crossover wings	The flared edges of a driveway
Culvert	A tunnel carrying an open drain under a road
Edge Restraint	A support constructed at the edge of a driveway to improve longevity
Gates	Vertical elements to control access to the path
Grade	The slope of a path or driveway
Gutter	Edge of road where it meets the kerb
Hazards	Any object or situation that constitutes a risk to users
Kerb	Roadway edge treatment
Narrow lots	Describes lots with a frontage width of <12m
Obstructions	An object that constitutes an obstacle to crossover/path users
Paired crossovers	Combined crossovers which service more than one property and located adjacent to one another
Shared Path	A pathway that is specifically intended to be used by both pedestrians and bike riders. Note that all paths may be used by bike riders and pedestrians.
Side-entry pits	A stormwater pit located adjacent to the kerb and designed to collect stormwater from the road surface
Sightlines	The visual envelope of vehicles and path users
Standards and Policies	Applicable guidelines for use in Western Australia
Stopping sight distance	The distance a vehicle driver needs to be able to see in order have room to stop before colliding with something in the roadway
Streetlights	A light which illuminates surrounding roads and footpaths, usually mounted on a tall post
Street Trees	Trees located within the verge area
Utility boxes	An enclosure which houses utility services for electrical, communications, etc.
Vegetation	Soft landscaping elements

1 Introduction

This document provides guidelines and specifications for the construction or renewal of paths in the City.

It follows from the City's Path Policy (CP-033) and refers to other documents and standards as appropriate.

1.1 Objective

To provide detailed guidelines for the construction of paths in the City of Melville that meet the City's policy and strategies.

The Path types covered are:

- Footpath
- Shared Path
- Separated Footpath
- Paths for the exclusive use of bike riders.

It does NOT include guidelines for deciding the path construction program.

1.2 Purpose

This document forms guidelines for planning and design of paths. It supplies a consistent framework to enable the city and its contractors to understand and meet the requirements of the City of Melville.

This Guideline supports path design that references statutory and best-practice guidance documentation which includes information from the documents listed in Appendix 6.1.

1.3 Path Asset Management Plan

Information on the proposed order for path construction and renewal, the future costs of path construction, renewal and maintenance etc. is covered in the current Path Asset Management plan.

1.4 Complaints

All complaints and requests for review are to be handled through the City's normal processes as outlined in the Council Policy CP-101 Complaints Management Policy.

1.5 Variations from the path standards

Paths are long life assets and over time the City's guidelines and specifications for their construction and inspection have evolved to meet community and compliance needs. The result is that there exists in the City many path assets that no longer meet the current guidelines and specifications.

The City will not generally require changes to path assets that met the guidelines and specifications at the time when they were constructed. Reasons for change may include:

- Compliance with current legislative or similar requirements
- Changes required for the installation of other assets.

This document reflects the City's current standards. Requests for variations to meet an earlier standard for construction or inspection will be denied.

2 Path Design

The path design shall

- Meet the City's Path Policy
- Meet the City's Duty of Care
- Provide for safe, connected, and accessible paths

2.1 General Requirements

In general, paths will be designed according to this document and the documentation in Appendix 6.1 References.

A general requirement for paths is specifically requested in the community aspirations for *Sustainable and Connected Transport* and *Healthy Lifestyles*, as identified in the City's Strategic Community Plan.

2.2 Path Position

The path position may be varied according to the type of path, safety, accessibility, or other considerations. The table below shows the preferred alignment options for the various road types.

Type	Kerb Line	Kerb Line with Offset	Middle of Verge	Property Boundary
Access (Up to 3,000 VPD)	●	●	●	●
Local Distributor (Up to 6,000 VPD)		●	●	●
District Distributor B (Up to 15,000 VPD)		●	●	●
District Distributor A (Above 15,000 VPD)		●	●	●
Arterial Roads		●	●	●
Shared Paths		●	●	

The path position will vary to avoid obstructions (e.g., streetlights, bus shelters, mature trees and established gardens, verge parking, permeability of fences, gradients and the location of water, gas, and electricity services) in the road verge to keep the required width. See Section 2.4.

Where a path connects to other paths along a road, by default, the new path position will be on the same side of the road as the existing path unless there is a safety, accessibility, or feasibility issue.

See Austroads Guide to Road Design Part 6A – Table 4.1 for a list of the factors to be considered when considering path alignment.

2.3 Verge impacts and Crossover cut throughs

Where required to prevent the need for retaining walls/drops along the edge of the path, the City shall re-grade a verge to the extent that is required to prevent the wall/drop. The City will cover the costs of re-grading the verge and any affected irrigation systems to the extent that it would cost the City to perform the works. Where it is not practical, the City may construct a retaining wall.

In areas of steep grades, the ***IPWEA Subdivision Guidelines Section 3.3.4: Verge and property grades*** states that the verge on the high side may be graded at 2.0% for three metres and then battered to suit the finished contours at a maximum of 16%.

Where the construction of a path through a crossover requires additional works to enable the level of the crossovers and path to match, the City will cover the costs of the works to the extent that it would cost the City to perform the works. In these cases, the City must approve the design before works commence.

All reinstatement will be in grey concrete except as agreed by the City. The City may replace existing brick paving and aggregate style crossings (other than the path) with brick paving or aggregate however no guarantee is made for colour matching or style.

Embedded reinforcements (e.g., reo bar) are not allowed on residential crossings as they prevent easy access by service utilities.

See also the IPWEA Subdivision Guidelines Section 3.3.4: Verge and property grades

2.4 Path Widths

Path widths are considered and selected as part of the design process, in general widths are in accordance with the following table:

Type Path Type	Location Access Roads	Distributor Roads	Activity centres	Parks	Other
Footpath	1.8m	2.1m	Full verge width	As designed	As designed
Shared Path	3 to 4m	3 to 4m	As designed	3 to 4m	As designed
Separated Footpath	2.5 to 4m	2.5 to 4m	As designed	2.5 to 4m	As designed
Paths for the exclusive use of bike riders.	As designed	As designed	As designed	As designed	As designed

Where a path is located on a wider verge area or there are multiple verge users (e.g., al fresco dining) then the path width (as defined above) will need to be designated (e.g., linear paver patterns, marker tags).

2.5 Path Clearance - Vertical

Paths shall be designed to allow for a minimum vertical clearance of 2.5m above the path.

See AS 1428.1 – 2021 (Clause 3.2, General Requirements for Access – New Building Work). See Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling – 5.5.1

2.6 Path Clearance – Horizontal

Paths should have a horizontal clearance between the edge of the path and any obstacle. Obstacles include retaining walls, light poles, trees. The design of the path will need to consider the obstacles (e.g. light poles) and determine the correct clearance and associated changes.

2.6.1 Pedestrian Paths

A 0.3m horizontal clearance is desirable to be left between the edges of a path and any obstacle.

The City's standards for path width will be kept unless there are exceptional circumstances as approved by the City.

2.6.2 Bike Paths

A minimum of 0.3m horizontal clearance should be left between the edges of a path and any obstacle. 0.5m is desirable.

Shared paths should have a minimum 0.5m clearance with obstacles.

See Austroads Guide to Road Design Part 6A - 5.5.1 See Utility Providers Code of Practice for Western Australia

2.7 Path Material

The path material will be fit for use regarding colour, texture, and surface finish, and meet accessibility requirements:

Type	Material
Footpath	Concrete
Shared Path	As specified, generally asphalt
Separated Footpath	As specified
Paths for the exclusive use of bike riders.	As specified, generally asphalt
Paths in Parks	As specified
Areas covered by Activity Centre Plans	As specified

The City will determine the appropriate material for all paths.

Alternative materials may be considered (e.g., permeable pavements adjacent to trees) where appropriate.

Path design (including materials) may, at the discretion of the City, require strengthening materials where the path is likely to be driven on regularly. This includes schools, industrial zones, along arterial roads, and activity centres.

2.8 Path/Verge Gradient and Cross fall

The City will construct and renew all paths with the recommended gradient and cross fall standards where practicable. Where this is not practicable, the City may construct a path to an alternate standard (e.g., non-DAIP compliant). Where this occurs, the City will document its reasons in the design documentation.

It is desirable that cross fall is, 2.0 – 2.5% with a maximum of 2.5% to cater for people who have a disability.

In most cases, path longitudinal gradients are dictated by the contours of the road. However, it is desirable that the longitudinal gradient be as flat as possible with a maximum of 1:14.

See Austroads Guide to Road Design 6A, – 5.4 & 5.6.1

2.9 Paths in Public Access Ways (PAWs)

The area between the fence line and path should be stabilised where practical and resources allow. For example, the use of, bitumen stabilised limestone, liquid limestone, pebbles, grass, etc.

2.10 Kerbing

The City will choose a kerb type on a case-by-case basis considering safety, accessibility for all users, environment, and economic factors.

Kerbing should be 120mm height at a minimum.

Any precast kerbing adjacent to paths will be replaced as part of the design. Suburbs built with mountable kerbs are to have the same design retained unless otherwise required.

See Main Roads WA, Austroads and WALGA design guidelines See AS1428.1 (2021) Design for Access and Mobility See also City of Melville Standard Kerb Type drawing – 5706A1-10E Amendment 3 for examples.

3 Grab Rails

An upside-down U-shaped rail used to provide support for bike riders and pedestrians. It is primarily used at kerb ramps and cut throughs. Grab rails also act as an additional warning cue to motorists, about the potential presence of pedestrian and bike riders crossing the roadway.

3.1 General

Grab Rails may be installed on paths adjacent to roads and on paths that cross medians as follows:

Type	Grab Rails recommended
Access (Up to 3,000 VPD)	No
Local Distributor (Up to 8,000 VPD)	Yes
District Distributor B (Up to 15,000 VPD)	Yes
District Distributor A (Above 15,000 VPD)	Yes
Arterial Roads	Yes

The rails must be placed within easy reach of cyclists, on the left-hand side of the path.

MRWA Standard Drawing 9831-5649-3 or later provides the following recommendations for the placement of grab rails in medians:

- A median <1.2 m wide – no grab rail
- A median 1.2 m to 2.0 m wide – 0.6 m long grab rail
- A median >2.0 m – 0.9 m long grab rail

At signalised intersections grab rails should be omitted if they encroach on the circulation space directly in front of the push button assembly.

The inclusion of a grab rail in all crossings within medians wider than 1.2 m is not always necessary.

Consideration should be given to the volume of pedestrians and bike riders crossing and whether the grab rail would provide a safety benefit by highlighting the crossing location to motorists. They shall be of metal construction and 0.9m above ground level.

See MRWA Standard Drawing 9831-5649-3 or later for details on paint and reflective tape.
See Austroads Guide to Road Design 6A,7.4.2

3.2 PAW Barriers

If any barriers are installed at the end of PAWs to prevent access or control speeds they must:

- Not restrict mobility devices such as wheelchairs
- Be removable by operations staff

If barriers are required at the end of a PAW, then consider Austroads Guide to Road Design 6A 7.5.3 where reflective signage and lighting should be used.

See Austroads Guide to Road Design 6A, Clause 7.5.3

4 Tactile Indicators

4.1 Tactile Ground Surface Indicators (TGSI)

These will be installed on all pedestrian ramps and other nominated locations.

They shall:

- Comply with AS/NZS1428.4.1 – 2010 or later
- Have a suitable profile – e.g., 50mm centres and at least 5mm height above the surface
- Be colour contrasted against surrounding pavement. The table below lists the default colours, however if necessary other colours from MRWA 606 – 606A can be used.
- PVC based TGSI are not acceptable. The current standard is for Stickcrete™ 300 or 400mm tiles. Similar products as approved are acceptable.

Back Material	Colour
Red Asphalt	Ivory
Grey Concrete	Terracotta
Bespoke	As per Landscape design
Black Asphalt	Ivory

See Main Roads Western Australia Specification 606 – Tactile Ground Surface Indicators

5 Pedestrian Ramps

5.1 Pedestrian Ramps

All ramps will meet the relevant Australian Standard, currently AS/NZS1428.4.1 – 2021.

Where practicable ramps are to be located perpendicular to the direction of travel.

Finishes are to be in broom finished concrete. This provides the most suitable surface for a pedestrian ramp as it provides a firm, even, stable and slip resistant surface.

Pedestrian Ramps shall match the width of the path except as required by the needs of the location. A minimum width of 1.5m should be provided at the back of the ramp.

See City of Melville drawing 485A1-05E.

5.2 Redundant Pedestrian Ramps

Redundant pedestrian ramps shall be removed, and the verge, kerbing and footpath reinstated to match existing works and be in accordance with the City of Melville Verge Treatment Policy.

5.3 Designated Vehicle Crossing Points in Parks (Across a path)

Where access is required across a path for vehicles or similar then the crossing point shall, at the discretion of the City:

- Be suitably reinforced and/or thickened
- Be highlighted e.g., hatching

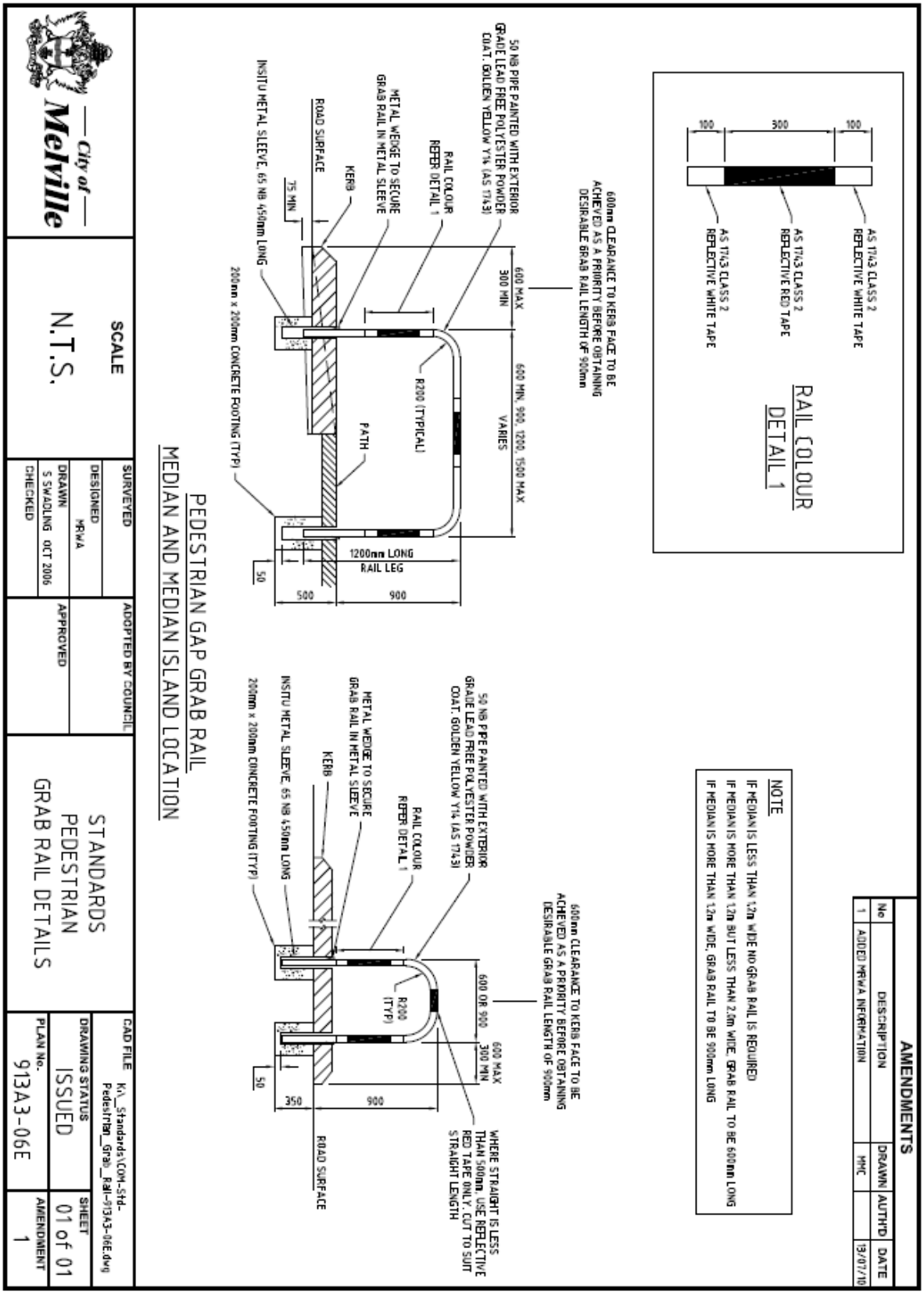
6 Appendices

6.1 References

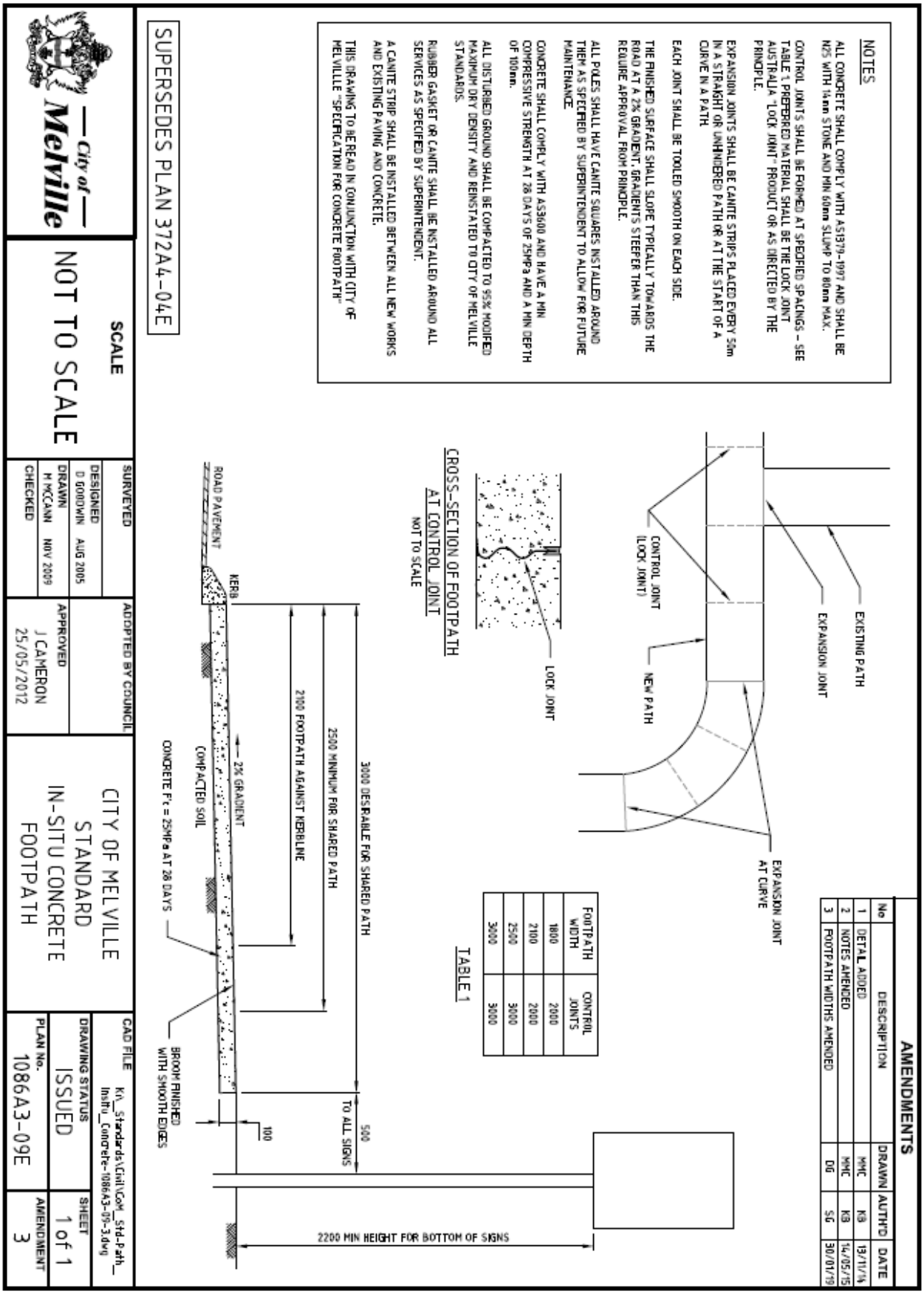
- *Australian Standard 1428 - Design for access and mobility*
- *Australian Standard AS1428.1: Design for access and mobility*
- *Australian Standard AS2890.1: Off-street parking (2004)*
- *Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling (AGRD06A-17)*
- *Austroads Guide to Road Design*
- *Austroads Guide to Road Design - Part 3: Geometric Design*
- *City of Melville Policy CP-084 - Disability Access and Inclusion Policy*
- *City of Melville Bike Plan*
- *Crossover Guidelines and Specifications*
- *Guidelines for Placement of Power Poles within Road Reserves in Built-Up Areas (Western Power, 2006)*
- *IPWEA Local Government Guidelines for Subdivisional Development*
- *Local Government (Uniform Local Provisions) Regulations 1996*
- *City of Melville Local Laws*
- *Path Asset Management Plan*
- *Planning and Designing for Pedestrians: Guidelines November 2011 from the WA Department of Transport.*
- *Road Traffic Code 2000 (WA)*
- *State Planning Policy 3.1 - Residential Design Codes (R-Codes)*
- *WALGA Shared Path Design- Technical Guidelines*
- *WAPC Liveable Neighbourhoods*

6.2 Drawings

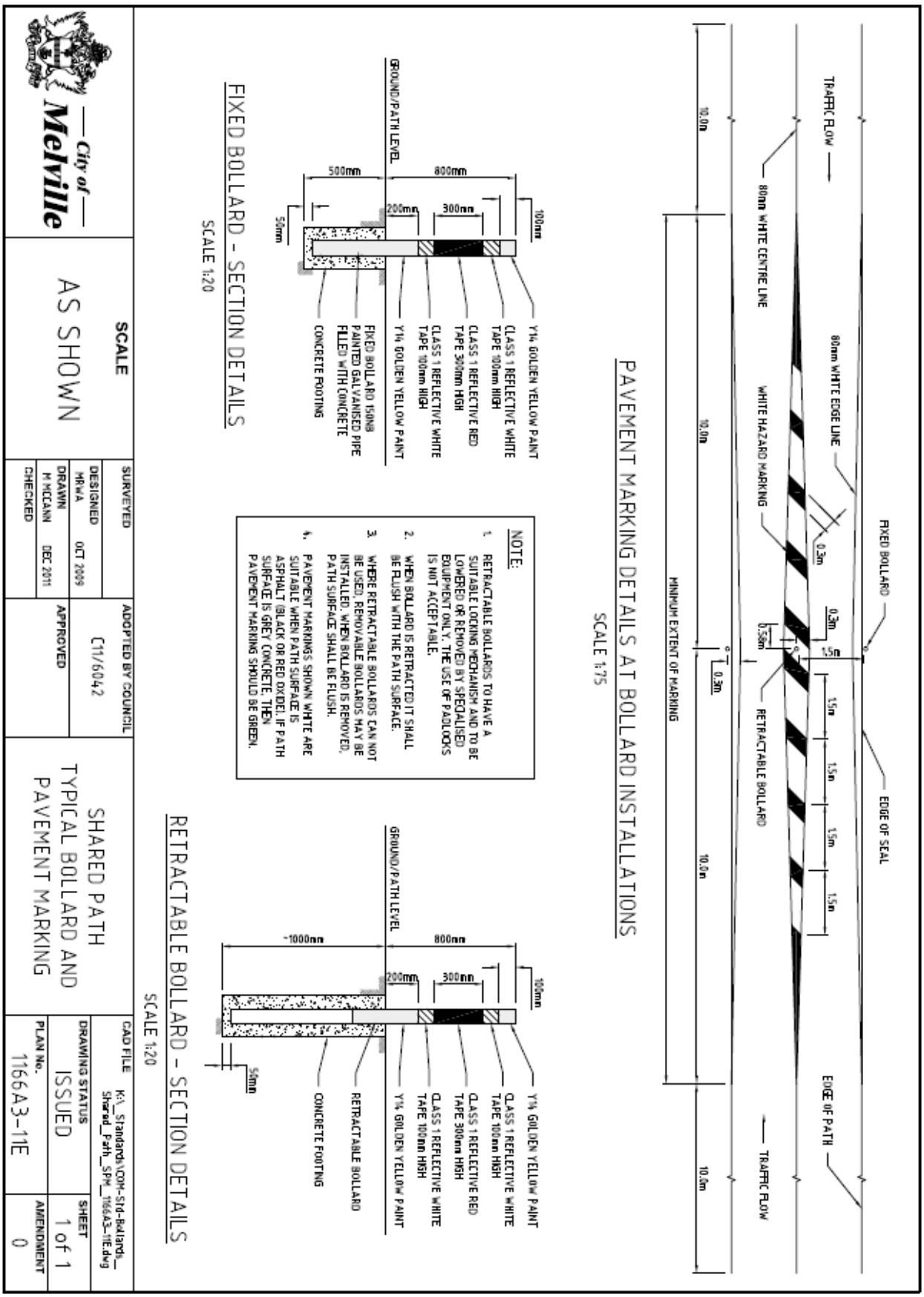
6.2.1 DWG 913A3-06E Standard pedestrian grab rail details



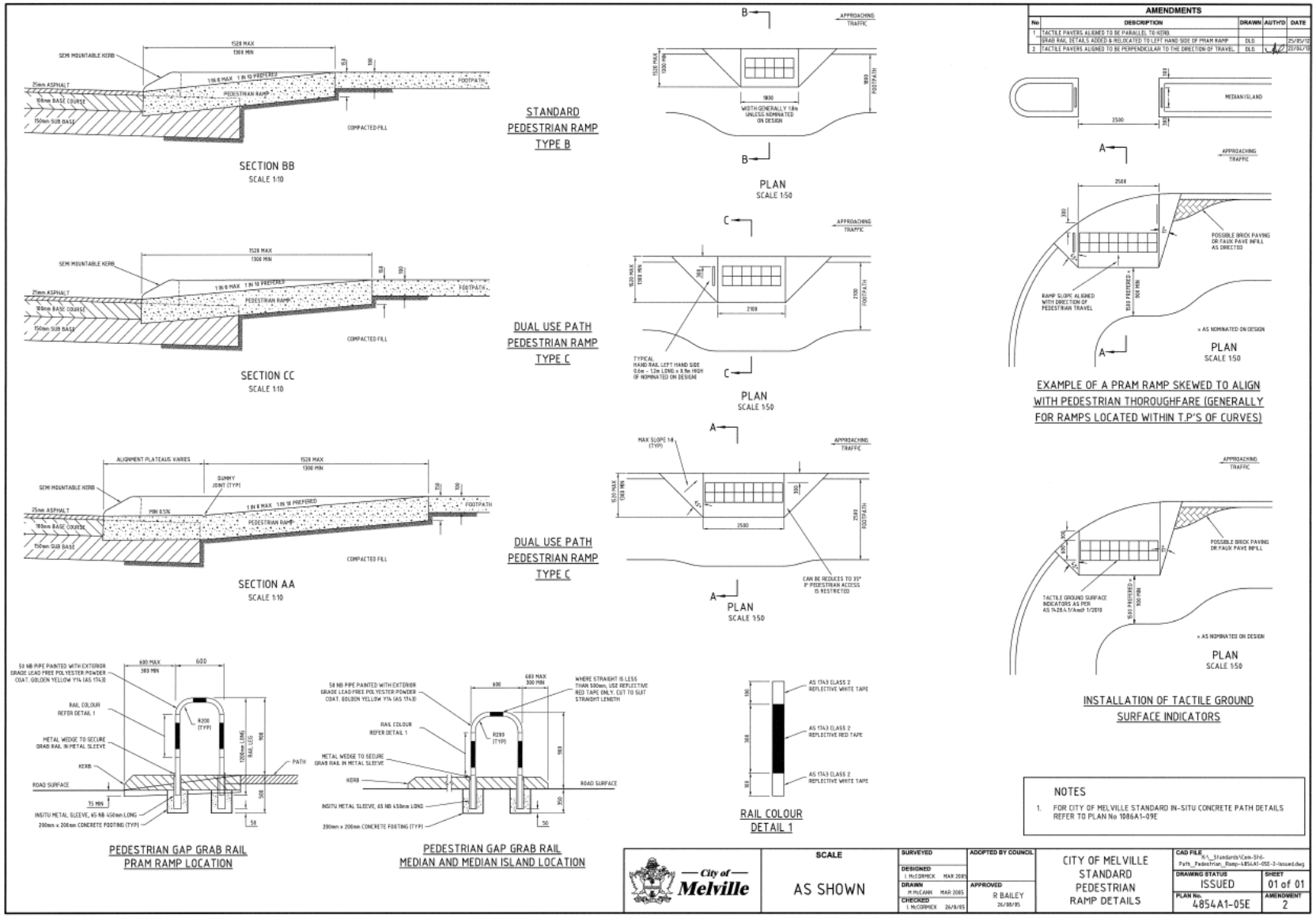
6.2.2 DWG1086A3-09E Standard in-situ concrete footpath



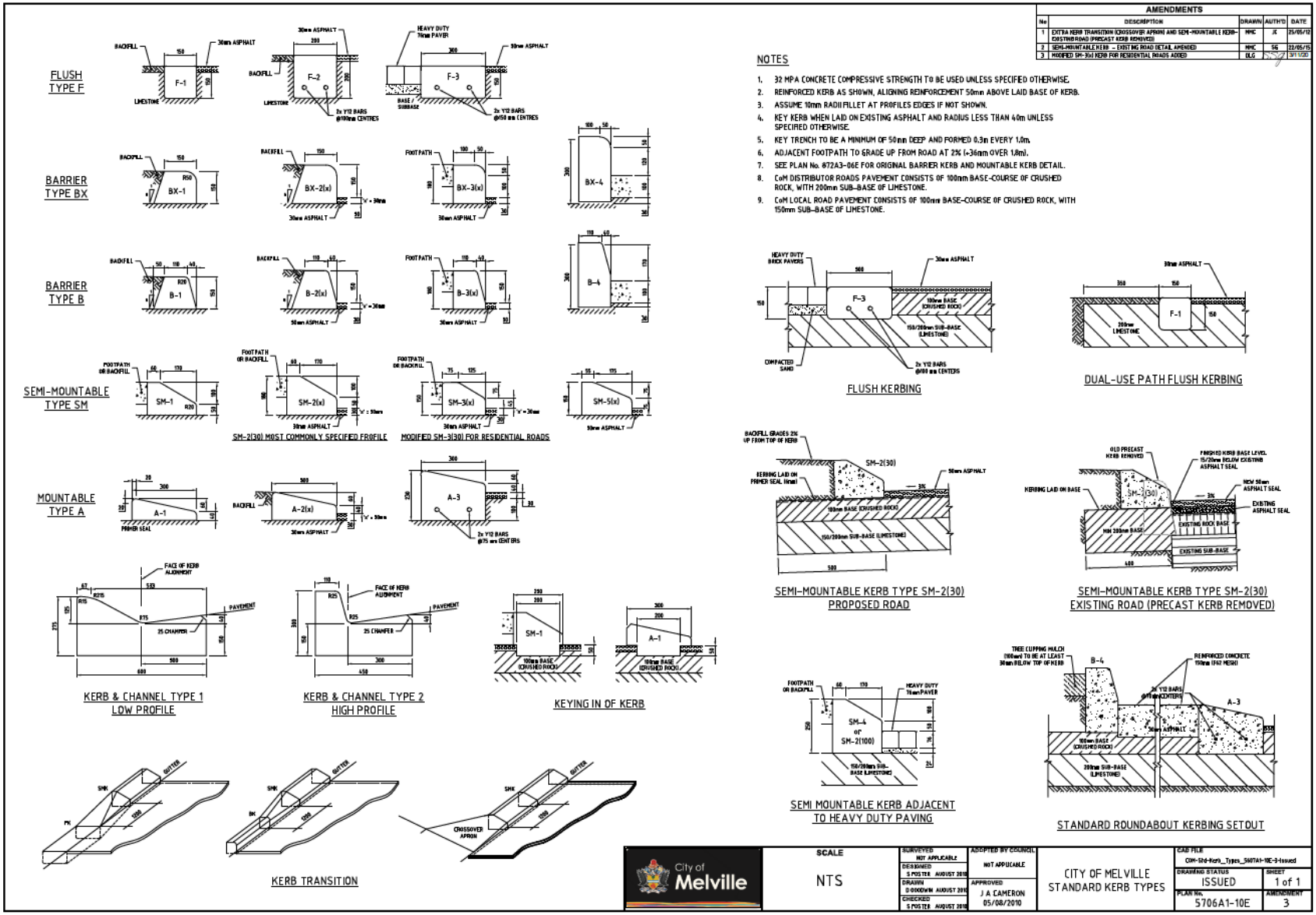
6.2.3 DWG1166A3-11E Shared path typical bollard and pavement marking



6.2.4 DWG4585A1-05E Standard pedestrian ramp details



6.2.5 DWG5706A1-10E Standard kerb types



Revision History

Date procedure amended	Description of Change	Revised by (Process Owner)	Approved by (Process Owner supervisor)	Date approved
1/11/2019	Document Creation	Paul Handcock	Kimberly Brosztl	1/11/2019
27/6/2020	Review - Added words on complaint handling - Formatting changes including Revision History	P Handcock	K Brosztl	27/6/2020
3/6/2021	Review - Added words on complaint handling - Formatting changes including Revision History - Update Grab Rail Design in PAWs - Update pole offset wording	P Handcock	K Brosztl	3/6/2021
3/6/2021	Review - updated references to latest versions - Formatting changes including Revision History - Update Path Alignment and Width sections - Wording adjustments in most sections.	P Handcock	K Brosztl	7/04/2022
4/12/2023	Review - updated references to latest versions - Formatting changes including Revision History - Update Path Alignment and Width sections - Updated Kerbing references.	P Handcock	K Brosztl	9/1/2024