



# Austrroads Guide to Road Design Part 5A Supplement

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## **Roads and Maritime Services supplement to Austrroads Guide to Road Design Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface (2013) Version 1.0**

Austrroads has released the Guide to Road Design, Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface (2013) and all road agencies across Australasia have agreed to adopt the Austrroads guides to provide a level of consistency and harmonisation across all jurisdictions. This agreement means that the new Austrroads guides and the Australian Standards, which are referenced in them, will become the primary technical references for use within the Agency.

This supplement is issued to clarify, add to, or modify the Austrroads Guide to Road Design, Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface.

Roads and Maritime Services (Roads and Maritime) accept the principles in the Austrroads Guide to Road Design, Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface with variations documented in this supplement under the following categories:

- Roads and Maritime enhanced practice: Roads and Maritime practice that enhances the Austrroads Guides
- Roads and Maritime complementary material: Roads and Maritime reference material that complements the Austrroads Guides. These documents include Roads and Maritime Manuals, Technical Directions and/or other reference material and are to be read in conjunction with the Austrroads Guides
- Roads and Maritime departures: Roads and Maritime practice that departs from the Austrroads Guides.

## Document information

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## Document history

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1.0	07/04/2017	First issue.	All	Road Policy, Specifications and Technology

## Roads and Maritime complementary material

The following documents provide additional detail of Roads and Maritime best practice. It is necessary to comply with complimentary material.

- NSW Bicycle Guidelines
- Roads and Maritime Supplements to Austroads Guides
- Roads and Maritime Australian Standards Traffic Supplements
- Roads and Maritime Traffic Signal Design Guide
- Roads and Maritime Delineation Manual
- Roads and Maritime Technical Direction
- Roads and Maritime Standard Drawings
- Roads and Maritime Standard Pavement Subsurface Drainage Details Volume 1-6
- Roads and Maritime Technical Guide - Standard Pavement Subsurface Drainage Details
- Roads and Maritime Water Sensitive Urban Design Guidelines
- Roads and Maritime Culvert Risk Assessment Guideline
- New South Wales State of the Environment (NSW Environmental Protection Authority).

The documents are published and can be found on the Roads and Maritime website (unless otherwise noted).

## Roads and Maritime departures

### 4 Aquaplaning

#### 4.9.3 Texture depth

For aquaplaning calculations, Roads and Maritime uses 0.5 millimetres texture depth for all wearing course surfaces, except for spray seal surfaces.

### 5 Kerbed drainage

#### 5.4.2 Pavement spread and gutter flow limits

In addition to the widths shown in Table 5.1: Allowable spread widths and gutter flows, Roads and Maritime has the following restrictions:

- The total width of flow shall not be greater than 3.0 metres, regardless of width of shoulder
- Where a kerbside traffic lane is less than 3.5 metres, the additional width (ie 3.5 metres minus actual width of the kerbside lane) shall be subtracted from the allowable spreads shown in the first section of Table 5.1.

### 6 Underground piped networks

#### 6.5.2 Size

Roads and Maritime uses a minimum pipe size of 375 millimetres diameter for longitudinal drainage and 450 millimetres diameter for transverse drainage.

#### 6.5.4 Pipe Velocities and Grades

In NSW, the minimum pipe grade is 0.5 per cent regardless of pipe size.

## 7 Basins

In NSW, basins may be defined as “prescribed” dams and need to be listed with the NSW Dam Safety Committee.