

<b>Title</b>	<b>Demonstrate knowledge of materials and construction for concrete roads and floors</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to describe the materials and construction methods required for concrete roads and floors.
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<b>Classification</b>	Concrete > Concrete Technology
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<b>Available grade</b>	Achieved
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### Guidance Information

Legislation and publications relevant to this unit standard include:

Health and Safety in Employment Act 1992;

NZS 3109:1997 *Concrete construction*, available from Standards New Zealand

(<http://www.standards.co.nz>);

Austrroads (2010) *Guide to Pavement Technology Part 2: Pavement Structural Design*.

Austrroads Publications Online

(<https://www.onlinepublications.austrroads.com.au/items/AGPT02-10>);

NZ Transport Agency (2007) *NZ Supplement to the 2004 Austrroads Pavement Design*

*Guide*. NZTA (<http://www.nzta.govt.nz/resources/nz-supplement-2004-austrroads-pavement-design/index.html>).

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### Outcomes and performance criteria

#### Outcome 1

Describe the materials and construction methods required for concrete roads.

#### Performance criteria

- 1.1 The materials used for sub-base and road construction are described in terms of lean concrete, cement bound granular material and soil cement.
- 1.2 Acceptance tests for lean and pavement quality concrete are described in terms of industry requirements.
- 1.3 The methods of construction for concrete roads are described in terms of construction sequence and plant used.
- 1.4 The methods of construction for concrete pavements are described in terms of pavement elements and curing methods.

- 1.5 Joints and joint assemblies for concrete roadwork are explained in terms of industry requirements.

## Outcome 2

Describe the materials and construction methods required for concrete floors.

### Performance criteria

- 2.1 The methods used for the construction and finishing of concrete floor slabs are described in terms of flatness and levelness.
- 2.2 Joints used in ground floor slabs are explained in terms of industry requirements.
- 2.3 Methods of designing, finishing and curing floor slabs are described in terms of design for loading and life, durability, surface regularity, and joint design and bag layout.
- 2.4 Granolithic and high strength toppings are described in terms of their uses, possible causes of failures and precautions taken to minimise failures.
- 2.5 Application of surface treatments are described in terms of resistance to abrasion and dusting, and non-slip features.
- 2.6 Screeds are described in terms of their uses.
- 2.7 Methods of construction and finishing of screeds are described in terms of their mix proportions, possible causes of failure and precautions which can be taken to reduce them.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 May 2001	31 December 2023
Revision	2	16 July 2004	31 December 2023
Rollover and Revision	3	25 January 2008	31 December 2023
Rollover and Revision	4	17 November 2011	31 December 2023
Review	5	27 January 2022	31 December 2023

### Consent and Moderation Requirements (CMR) reference

0048

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.