

40137 Produce technical sketches of construction related shapes by hand

Kaupae Level	4
Whiwhinga Credit	5
Whāinga Purpose	<p>This skill standard recognises the skills required to produce 2D and 3D technical sketches of construction related shapes by hand.</p> <p>This skill standard aligns with the detailing pathway for the construction industry and may be relevant for steel, precast concrete, and timber structure detailing qualifications.</p>

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Produce sketches of basic construction shapes in 3D isometric views.	a. Construction shapes are sketched to demonstrate efficient application of sketching conventions.
	b. The sketched 3D objects represent isometric and oblique views of the basic construction shapes.
2. Produce 2D sketches of basic construction shapes in 3rd angle orthographic projections.	a. The sketched 2D views reflect 3D construction shapes efficiently.
	b. The sketched 3D objects are shown in 3 rd angle orthographic projection.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

Evidence should include a set of structural technical sketches produced by hand representing a range of basic construction shapes. A set includes a title page and index, plan, elevation and side elevation in 3rd angle projection, detail views and 3D view of the object.

A basic construction shape is one that represents a structure, its connections and components.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Sketching

- Intent, purpose, and conventions.
- Conversion – 2D views to 3D views, 3D views to 2D views.

Drawing techniques

- Isometric view and orthographic projection.
- 1st and 3rd angle orthographic view arrangements.
- Sketch view referencing symbology.
- Scales – types and application.
- Dimensions – dimensioning techniques to indicate the size and location of various elements.
- Title block – purpose and components.
- Drawing layout – planning layout and placement and arrangement of different views.
- Formatting – understanding industry and organisational standards for formatting.

Rauemi | Resources

Refer to the Structural Detailing Programme Guidance document available from qualifications@waihangaararau.nz.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Planning and Construction > Construction > Core Planning and Construction
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0048

Hātepe Process	Putanga Version	Rā whakaputa Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	26 September 2024	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2029		

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz to suggest changes to the content of this skill standard.