

Title	Install basic sanitary plumbing systems		
Level	3	Credits	5

Purpose	<p>This unit standard is for people who work in the plumbing industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – complete a drawing of a sanitary plumbing system; – record dimensions, mark, cut, join, and test pipework for foul water; – complete a drawing of a water supply pipework system; – record dimensions, mark, cut, join, and test water supply pipework; and – install sanitary fixtures in accordance with job requirements.
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Classification	Plumbing, Gasfitting and Drainlaying > Plumbing
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Available grade	Achieved
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Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:
- Building Act 2004;
 - Health and Safety at Work Act 2015;
 - Plumbers, Gasfitters, and Drainlayers Act 2006;
 - Plumbers, Gasfitters, and Drainlayers Regulations 2010.

The following standards, which are available at <https://www.standards.govt.nz>:

- AS/NZS 3500.1:2021 *Plumbing and drainage, Part 1 Water services*,
- AS/NZS 3500.2:2021 *Plumbing and drainage, Part 2 Sanitary plumbing and drainage*,
- AS/NZS 3500.4:2021 *Plumbing and drainage, Part 2 Heated water services*.

The following Building Code clauses, and any related Acceptable Solution and Verification Method documents, which are available at <https://www.building.govt.nz>:

- New Zealand Building Code Clause B2 Durability,
- New Zealand Building Code Clause G1 Personal hygiene
- New Zealand Building Code Clause G10 Piped services,
- New Zealand Building Code Clause G12 Water supplies,
- New Zealand Building Code Clause G13 Foul water.

Any new, amended or replacement referenced standards, codes of practice, guidelines, Building Code Acceptable Solutions and Verification Methods, or authority requirements affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definitions

Job requirements refer to specific requirements of the job at hand not covered by job specifications.

Job specifications refer to instructions (oral, written, graphic) and may include any of the following – manufacturer instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements.

- 3 Candidates must hold a current limited certificate trainee authorisation or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

Outcomes and performance criteria

Outcome 1

Complete a drawing of a sanitary plumbing system.

Range may include but is not limited to – pipe, water traps, vents, rodding point, vent cowl, bend, gully trap.

Performance criteria

- 1.1 Prepare a layout drawing of a sanitary plumbing system.
- 1.2 Identify components' functions within a sanitary plumbing system.
- 1.3 Identify the correct position of components within a sanitary plumbing system.
- 1.4 Create a schedule of quantities for materials to be used for installation of the sanitary plumbing system.

Outcome 2

Record dimensions, mark, cut, joint, and test pipework for foul water.

Range for a series of pipes making up a foul water system; foul water system pipework includes – uPVC, associated fittings; jointing methods may include but are not limited to – solvent cement, rubber ring.

Performance criteria

- 2.1 Determine pipework dimensions in accordance with job requirements.
- Range determined from plans or measured from the job, and includes application of relevant allowances for fitting, jointing, and bracket support.
- 2.2 Record pipework dimension information in accordance with job requirements.
- 2.3 Accurately mark and cut pipes in accordance with required dimensions.
- 2.4 Joint pipes in accordance with job requirements and manufacturer instructions.
- 2.5 Carry out soundness tests in accordance with standards and codes.

Outcome 3

Complete a drawing of a water supply pipework system.

Range may include but is not limited to – pipe, isolation valves, wingbacks, elbows, tees, couplers, insulation, and pipework supports.

Performance criteria

- 3.1 Prepare a layout drawing of a water supply pipework system.
- 3.2 Identify the functions of components within a water supply pipework system.
- 3.3 Identify the correct position of components within a water supply pipework system.
- 3.4 Create a schedule of quantities for materials to be used for installation of the water supply pipework system.

Outcome 4

Record dimensions, mark, cut, joint, and test water supply pipework.

Range for a series of pipes making up a system;
pipework may include but is not limited to – copper, polybutylene, cross linked polyethylene, associated fittings;
jointing methods may include but are not limited to – brazing, compression, crimp, crox, push fit, screwed thread, sliding sleeve.

Performance criteria

- 4.1 Determine pipework dimensions in accordance with job requirements.
- Range determined from plans or measured from the job, and includes application of relevant allowances for fitting, jointing, and bracket support.

- 4.2 Record pipework dimension information in accordance with job requirements.
- 4.3 Accurately mark and cut pipes in accordance with required dimensions.
- 4.4 Check, fit and joint pipes in accordance with job requirements.
- 4.5 Carry out soundness tests in accordance with standards and codes.

Outcome 5

Install sanitary fixtures.

Range must include but is not limited to – wash hand basin, WC pan and cistern.

Performance criteria

- 5.1 Determine position of fixture in accordance with job requirements.
- Range determined from plans or measured from the job, and includes allowance for positioning of associated pipework.
- 5.2 Record fixture positions within the room on an as-built drawing.
- 5.3 Secure fixtures to structural elements as appropriate.
- 5.4 Connect fixtures to water supply connections and foul water discharge points in accordance with job requirements.
- 5.5 Carry out installation and commissioning tests.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 October 2017	31 December 2028
Review	2	30 May 2024	N/A

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihangara Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaraarau.nz if you wish to suggest changes to the content of this unit standard.