



Australian Government

**CPCCCA3031 Erect and dismantle
formwork to suspended slabs, columns,
beams and walls**

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Modification History

Release	Comments
1	This unit of competency was first released in CPC Construction, Plumbing and Services Training Package Release 11.0.

Application

This unit of competency specifies the skills and knowledge required to erect and dismantle formwork to suspended slabs, columns, beams and walls to contain concrete in above-ground construction in accordance with building standards described in Commonwealth and state or territory legislation, codes and Australian Standards.

The unit includes:

- setting out, assembling and bracing formwork
- sorting and segregating formwork materials.

Licensing/Regulatory Information

Completion of the general construction induction training required by applicable work health and safety (WHS) legislation is mandatory for any person carrying out construction work. Achievement of the current unit of competency that covers general construction induction training meets this requirement.

Pre-requisite unit(s)

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Competency field(s)

N/A

Unit sector(s)

Carpentry and Joinery

Elements and Performance Criteria

Elements	Performance criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Required knowledge, skills and application should be considered and clearly articulated.</i>
1. Plan and prepare	1.1 Obtain relevant safe working procedures (safe work method statement [SWMS] or job safety analyses [JSA] or their equivalent) 1.2 Confirm work requirements, sequence of activities and interfaces with other trades with relevant site personnel in accordance with site procedures 1.3 Identify hazards and assess risks associated with the task and implement or escalate control measures within the scope of own authority in accordance with site requirements 1.4 Wear personal protective equipment (PPE) prescribed in site signage and SWMS/JSA after checking its serviceability in accordance with site procedures 1.5 Select tools and equipment for the task and check serviceability in accordance with manufacturer and site requirements 1.6 Determine required quantities of materials and fasteners and position materials safely and accessibly to support planned work operations in accordance with site requirements 1.7 Verify services have been identified and confirm that controls are in place when operating near services
2. Erect formwork for suspended slabs and beams	2.1 Prepare the base or support surface to allow safe erection of formwork for suspended slabs and beams in accordance with work health and safety (WHS) and site requirements 2.2 Assemble and brace formwork and its support system in accordance with drawings and specifications, and set formwork to the required height, level and line 2.3 Fabricate and erect formwork shutters and edge boxing to the designed formwork requirements and specified dimensions 2.4 Erect and install beam sides and edge boards as required in accordance with drawings or site requirements 2.5 Erect block-outs and install cast-in services in accordance with plans or work instructions 2.6 Remove debris, sawdust and other waste materials from completed formwork in preparation for concrete placement, in accordance with site requirements

3. Erect formwork for columns and wall sides	3.1 Prepare the base or support surface for safe erection of formwork for columns and walls in accordance with WHS and site requirements 3.2 Assemble and brace formwork and its support system in accordance with drawings and specifications, ensuring correct height, plumb and alignment 3.3 Fabricate and erect formwork shutters and support systems in accordance with designed form requirements and specification dimensions 3.4 Erect and secure column and wall shutters in accordance with drawings or site requirements 3.5 Erect block-outs and install cast-in services in accordance with plans or site instructions 3.6 Remove debris, sawdust and other waste materials from completed formwork in preparation for concrete placement, in accordance with site requirements
4. Strip formwork	4.1 Strip/dismantle formwork and bracing sequentially and safely 4.2 Check formwork for reusability and dispose of damaged components in accordance with site requirements
5. Clean up	5.1 Store and stack reusable formwork materials safely in accordance with site requirements 5.2 Check serviceability of tools and equipment and store serviceable items in accordance with site requirements 5.3 Tag out defective tools and equipment and arrange repair or disposal in accordance with site requirements

Range of conditions

N/A

Assessment Requirements for CPCCCA3031 Erect and dismantle formwork to suspended slabs, columns, beams and walls

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by setting-out and erecting suspended slab formwork for a slab size of a minimum of 10 square metres.

The formwork must include:

- one beam, and
- one wall of a minimum of 1.8 metres high by 1.0 metre long, and
- block-outs and cast-in services, and
- two columns with a specified formwork system at a minimum height of 1.8 metres, being:
 - one round column, and
 - one square column.

Formwork must:

- be rigid and able to withstand the mass of wet concrete and actions imposed during placement
- comply with regulations and specifications for height, level and loadings.

In the course of the above, the candidate must also:

- interpret site plans, drawings and specifications relating to suspended slab, beam, column and wall formwork
- prepare for work by confirming work requirements, reviewing SWMS/JSA, identifying hazards and implementing required controls
- select, check and correctly use personal protective equipment (PPE) in accordance with site requirements
- select, check and use tools and equipment required to erect and dismantle formwork
- set out and erect formwork for suspended slabs, beams, columns and walls to achieve required height, level, plumb and alignment
- assemble, fix and brace formwork and support systems to maintain stability during erection
- remove debris, sawdust and loose materials from completed formwork in preparation for subsequent work activities
- inspect stripped formwork components for damage and reusability and segregate damaged components

- tag out and/or dispose of damaged components, defective tools and equipment and store serviceable tools and equipment in accordance with site requirements.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- legislation, building standards and codes applicable to formwork for suspended slabs, columns, beams and walls
- work health and safety (WHS) regulations, codes of practice and compliance requirements relevant to formwork activities, including hazard identification and risk controls
- different types of formwork systems relevant to suspended slabs, columns, beams and walls
- tools and equipment used for erecting and dismantling formwork
- formwork components
- formwork techniques, including:
 - measuring and setting out for horizontal and vertical elements
 - erecting, aligning and bracing formwork to maintain correct height, plumb, level and line
 - fixing and fastening methods for stability and alignment
 - installing block-outs, rebates, chamfers and cast-in items
 - maintaining interfaces with reinforcement, vapour barriers and inserts
 - checking tolerances, surface finish and inspection requirements prior to pour and prior to strip
 - safe stripping, cleaning and preparation of formwork for reuse
- common formwork faults and problems, including:
 - incorrect set-up or alignment out-of-plumb
 - out-of-level or twisted formwork
 - inadequate bracing
 - insufficient tightness at joints or gaps
 - incorrect or uneven soffit levels
 - improper positioning of reinforcement or cast-in items
 - suitable methods to re-align, re-brace, reseal, replace or adjust prior to pour
- emergency procedures relevant to formwork operations, including response to:
 - formwork collapse or instability
 - entrapment or injury during pours and stripping
 - contact with underground or overhead services.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment (PPE)
 - equipment required to erect and dismantle formwork for suspended slabs, columns, beams and walls
- be conducted in a safe environment; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
CPCCCA3019 Erect and dismantle formwork to suspended slabs, columns, beams and walls	Equivalent	Clarification provided to text and workflow without changing the job outcome or competency requirements.

Links

Companion volumes, including implementation guides, are found on the national training register - <https://training.gov.au/training/details/CPC>.