Australian Government

Department of Education, Employment and Workplace Relations

CPCCBC4022A Supervise tilt-up work

Release: 1

CPCCBC4022A Supervise tilt-up work

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to organise, coordinate and supervise tilt-up work on site. The knowledge and skills required to apply licensing and other regulatory requirements to the process are addressed. The erection of tilt-up pre-cast concrete panels requires the application of highly structured processes and the application of safe work practices.

Application of the Unit

Application of the unit This unit of competency supports the needs of site supervisors and builders with a responsibility for supervising tilt-up work on site. It complies with the National Code of Practice for Precast, Tilt-up and Concrete Elements in Building Construction

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Provide effective administration.	1.1. ***Licences and approvals*** required for tilt-up work are checked or obtained, work plan is prepared, and relevant regulatory authorities are notified of work if necessary. 1.2. Copies of all structural and design documents, pre-cast panel shop drawings, layout plans and other documents are obtained, stored on site and accessed as required. 1.3. Details of persons assigned to perform tilt-up work are checked to ensure relevant competency licences are held and ***regulatory training requirements*** have been met.
2. Plan and set up site.	2.1. Site security, amenities, services and ***emergency***/***first aid*** facilities are provided and associated site procedures are prepared. 2.2. Requirements for footings, structural elements, concrete slabs and site access roads for the tilt-up work are reviewed and made available. 2.3. Concrete panel casting and delivery sequence are planned to support the work sequence and taking into account the required curing times for the concrete panels. 2.4. Traffic management and public safety plans and procedures are developed and exclusion zones planned for concrete panel delivery, casting and erection operations. 2.5. Ground conditions such as soakwells and drains likely to affect crane stability are identified, crane standing areas are checked for strength and compaction, crane suppliers are consulted and suitable crane operating locations are identified and recorded. 2.6. A site specific ***OHS management plan*** is prepared and implemented, work plan is implemented, and ***OHS risk control measures*** are applied.
3. Organise and coordinate tilt-up work.	3.1. Delivery sequence is coordinated for concrete panels cast off site, or a casting and curing schedule and distribution of panels on site are coordinated. 3.2. Process is put in place to ensure concrete panels are placed and stored in accordance with engineer's requirements. 3.3. Concrete panel inspection records are checked to

ELEMENT	PERFORMANCE CRITERIA
	confirm design specifications have been followed during panel fabrication and manufacture. 3.4. Process is put in place to ensure erection areas are cleared, exclusion zones set up, barriers erected and site personnel advised of restricted access areas prior to erection of concrete panels. 3.5. Process is put in place to ensure fixings and anchor bolts supplied for temporary bracing are checked for compliance with designer and engineer specifications. 3.6. Process is put in place to ensure correct type of braces are fixed to panels prior to lifting, and locating dowels and shims are correctly placed and components positioned and propped in accordance with shop drawings or as approved by the engineer. 3.7. Supervision of ***safe work method statements***, safe systems of work and safe work practices, drawings, specifications and engineering details is undertaken to ensure the required procedures are followed by workers and contractors during the erection of the concrete panels. 3.8. In the event of unanticipated circumstances, job safety analysis and other tools are used to identify hazards, assess risks and create safe systems
4. Confirm tilt-up stabilisation.	4.1. Erected concrete panels are checked for compliance with design and engineering specifications. 4.2. Structural steel elements being fixed to the temporarily braced panels are checked to ensure that they are in accordance with designed engineering specifications. 4.3. Process is put in place to ensure the erected structure is inspected by an engineer and certified as being sound prior to the removal of temporary bracing from concrete panels in line with the relevant state or territory regulatory requirements. 4.4. Process is put in place to ensure braces are removed methodically, with temporary bracing and other erection elements stacked and removed from site. 4.5. On completion of the erection work, processes are put in place to ensure the work areas are cleared before other trades are permitted to enter exclusion zones. 4.6. Work completion procedures are applied, relevant personnel are notified of work completion and site

ELEMENT	PERFORMANCE CRITERIA
	records are maintained to company requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - ensure safe systems of work and safe work practices are followed
  - facilitate discussion of workplace hazards and risks
  - read, interpret and apply information from:
    - design specifications
    - legislative requirements
    - plans
    - procedures
    - tilt-up guidance material
  - use and interpret non-verbal communication
  - use language and concepts appropriate to cultural differences
  - written skills to complete:
    - memos
    - safe work and OHS management plans
    - safe work method statements
    - schedules
    - site records
- numeracy skills to check and calculate dimensions and levels.

Required knowledge

Required knowledge for this unit is:

- National Standard for Construction Work and National Code of Practice for Induction for Construction Work
- capacity and limitations of plant, lifting gear and equipment used in tilt-up work, including associated safe systems of work

REQUIRED SKILLS AND KNOWLEDGE

- capacity and limitations of rigging and equipment, including use of load charts
- grouting, bracing, torquing, stabilisation and fixing work practices
- hazard identification and the formulation of safe work method statements and safe systems of work, which include those for safe work at height (fall arrest equipment and scaffolding and access equipment)
- interpretation of plans, drawings and specifications for tilt-up work
- National Code of Practice for Precast, Tilt-up and Concrete Elements in Building Construction, OHS regulations, and Australian standard 3850 Tilt-up concrete construction, as related to the supervision of tilt-up work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by demonstration of the successful supervision of a tilt-up construction project.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the relevant aspects supervising the erection of one multi point pre-cast tilt slab or one cast in situ tilt slab, each of at least 10 tonne.

Competence requires full compliance with the National Standard for Construction Work and National Code of Practice for Induction for Construction Work. Competence also needs to demonstrate a familiarity with and understanding of tilt-up construction codes of practice, standards, regulations and approval gaining processes, and their application.

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- access and apply legislative requirements
- identify OHS hazards and assess and control OHS risks associated with the tilt-up construction process
- prepare the site OHS management plan
- plan, prepare and carry out the tilt-up construction process and implement state or territory legislative requirements and guidance material
- identify potential hazards and interpret and apply information from plans, specifications, drawings and procedures.

EVIDENCE GUIDE

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- documentation that should normally be available in either a building or construction office
- relevant codes, standards and government regulations
- office equipment, including calculators, photocopiers and telephone systems
- computers with appropriate software to view 2-D CAD drawings, run costing programs and print copies
- a technical reference library with current publications on measurement, design, building construction and manufacturer's product literature
- a suitable work area appropriate to the construction process.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles

EVIDENCE GUIDE

- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

RANGE STATEMENT

Licences and approvals include:	• building licences • notification and approval, which may be required under OHS legislation for tilt-up work.
Regulatory training requirements refer to:	• induction and training, which may be required under state or territory OHS legislation for tilt-up work • induction and training in accordance with the National Standard for Construction Work and National Code of Practice for Induction for Construction Work.
Emergency/first aid includes:	• emergency shutdown and stopping • extinguishing fires • OHS first aid, emergency and evacuation requirements.
OHS management plan refers to:	• requirements of the National Standard for Construction Work.
OHS risk control measures refer to:	• control measures required by different site and soil conditions • control measures required by other site conditions, such as working with surrounding structures, restricted site access conditions, traffic control issues and working in proximity to others, including work site visitors and the public • those in accordance with OHS standards, regulations and codes of practice • trip hazards, noise, working with dangerous materials, manual handling, working in confined spaces, working at height, and electrical hazards such as overhead cables and conduits.
Safe work method statements refer to:	• requirements of the National Standard for Construction Work.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area