

CPCCE4006 Demolish stressed panel structure and pre-cast panel structure

Application

This unit of competency specifies the skills and knowledge required to plan and carry out the demolition of stressed and pre-cast structures in accordance with specifications.

It includes planning and preparation for the work, inspecting bars, components and defining the work area.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of unit *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, legislative, regulatory or certification requirements apply to demolition work in different states and territories. Candidates are advised to consult with the relevant regulatory authorities.

Prerequisite Unit

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

Elements	Performance Criteria
1. Plan and prepare for work.	<p>1.1 Obtain, confirm and apply work instructions, including plans, specifications, quality requirements and operational details from relevant information to the scope of work performed.</p> <p>1.2 Plan all work tasks according to manufacturer specifications and regulatory, legislative and workplace policies and requirements.</p> <p>1.3 Obtain and interpret building, construction and structural drawings of original buildings to be demolished, where possible.</p> <p>1.4 Engage structural engineer to complete an assessment of the structure, including suspended slabs or beams for the preparation of a demolition work plan.</p> <p>1.5 Follow safety requirements in accordance with safety plans and policies.</p> <p>1.6 Complete safe work method statement (SWMS) where structural elements are to be demolished.</p> <p>1.7 Select tools and equipment to carry out tasks which are consistent with engineer advice and the requirements of the job, check for serviceability and rectify and report any faults prior to commencement.</p> <p>1.8 Calculate materials quantity requirements in accordance with engineer advice, plans, specifications and quality requirements.</p> <p>1.9 Identify, prepare and safely handle materials and position ready for use.</p> <p>1.10 Identify environmental requirements for the project.</p> <p>1.11 Identify and explain the key elements, hazards and differences between pre- and post-tensioning to relevant personnel.</p>

Elements	Performance Criteria
2. Define the work area.	2.1 Define safe working area. 2.2 Erect barricades and signage where required to isolate safe work areas.
3. Examine stressed panel elements.	3.1 Drill holes or cut and hammer out small sections of slabs or beams throughout the structure for inspection by engineer and project manager for existing tensioning members within the structure. 3.2 Seek advice from engineer regarding the demolition work plan sequence and procedure for demolition of the structure. 3.3 Identify loads carried, anchorage points and number of tendons using relevant plans, photographs and workplace documentation, under the direct supervision of a structural engineer. 3.4 Conduct visual inspection to confirm loads and deviations from original plans and specifications, under the direct supervision of a structural engineer.
4. Examine pre-cast elements.	4.1 Review structural engineer's assessment of the structure, including connections to slabs or beams, for the preparation of a demolition work plan. 4.2 Confirm how pre-cast elements are connected to the main building structure and the methods that were used to install them.
5. Demolish structure.	5.1 Conduct visual inspection to confirm loads and connections from original plans and specifications, under the direct supervision of a structural engineer and communicate with demolition team. 5.2 Erect public protection outside buildings above one story in height, as required. 5.3 Cut or break out sections of concrete panel to substantiate how the connections to the structure were made. 5.4 Prepare the work area for removal of panels. 5.5 Install temporary propping to panels adjacent to those planned for removal, as required by engineer instructions. 5.6 Use required tools and equipment to cut through the joints between panels and separate panels. 5.7 Break out concrete at the top and bottom of the panel or cut connections in preparation for removal. 5.8 Lift and remove panel using a crane or machine with the appropriate connections or mechanically demolish using a hydraulic attachment. 5.9 Pull panel into site and remove connections to structure. 5.10 Repeat process to remove remaining panels.
6. Clean up work area.	6.1 Clear work area and dispose, reuse or recycle materials. 6.2 Clean, check, maintain and store plant, tools and equipment.

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit.

Links

Companion Volumes to this Training Package are available at the VETNet website –

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCE4006 Demolish stressed panel structure and pre-cast panel structure

Performance Evidence

To demonstrate competency in this unit the candidate must demolish one stressed panel structure and one pre-cast panel structure.

After identifying and controlling hazards, the candidate, working as a part of a team, must demolish one stressed panel structure of not less than four metres high, not less than three metres wide and not less than two tonnes in weight and one pre-cast panel structure of not less than four metres high, not less than three metres wide and not less than two tonnes in weight.

In doing this, the candidate must meet the performance criteria for this unit.

Knowledge Evidence

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

- the compliance requirements of the relevant Australian Standards, Building Code of Australia (BCA), model codes of practice, environmental and work health and safety (WHS) legislation
- basic theory related to cable stressing as a reinforcement technology
- calibration procedures related to stressing techniques and equipment
- construction and steelfixing tensioning terminology
- factors affecting concrete bonding, curing and strength
- grouting equipment and procedures
- job safety analysis (JSA)
- safe work method statements (SWMS)
- safety data sheets (SDS)
- materials storage and environmentally friendly waste management
- plans, drawings and specifications
- processes for the calculation of material requirements
- quality requirements
- requirements and processes for recording stressing operations
- plans containing position of cables, height of chairs, cable specifications, number of strands per cable and the stressing loads
- types of structural elements, including slabs, beams, columns and ground anchors
- types of structures, including buildings, bridges, towers, tanks, silos, stayed structures, offshore platforms, and underground and submerged structures
- safe de-tensioning procedures and techniques
- workplace and equipment safety requirements

- public protection:
 - demolition rated scaffolding.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment of performance must be undertaken in the workplace or in a simulated workplace environment.

Assessors are responsible for ensuring that the candidate demonstrating competency has access to:

- demolition worksite/s specifications for demolishing stressed panel and pre-cast panel structures
- appropriate documents, materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- requirements of workplace policies, procedures and demolition plans.

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