



Australian Government

**Assessment Requirements for
RIICWD533D Prepare detailed design of
civil concrete structures**

Release: 1

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Modification History

Not applicable.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant legislation, documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of the detailed design of civil concrete structures including:
 - accessing and interpreting plans, drawings, specifications and design briefs
 - accessing and interpreting engineering survey and geotechnical information
 - accessing and interpreting hydrological, meteorological, cultural and heritage data
- works effectively with others to undertake and complete the detailed design and documentation of civil concrete structures that meets all of the required outcomes including:
 - using a range of communication techniques and equipment to convey information to others
 - maintaining written and verbal reporting requirements
 - organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - identifying team leadership techniques
- demonstrates consistent and timely completion of the detailed design and documentation of civil concrete structures that safely, effectively and efficiently meet all of the required outcomes on a minimum of one (1) occasion including:
 - interpret and apply civil concrete structures components selection data
 - calculate loads, shear forces, bending moments, stresses, areas, volumes and mass
 - size civil concrete structures components
 - select appropriate construction techniques
 - develop and apply design plans
 - interpret and analyse data
 - complete a detailed design
 - prepare a cost estimate
 - participate in a design review
 - obtain design approval
 - complete and submit design cost
 - support the application of the detailed design.
 - review application of design and recommending changes
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Knowledge Evidence

The candidate must demonstrate knowledge of detailed design of civil concrete structures through:

- applying legislative, organisation and site requirements and procedures for:
 - risk assessment and management

- statutory compliance
- work health and safety
- applying equipment safety requirements
- complying with emergency issues
- complying environmental issues
- complying with WHS
- quality management
- verbal and written communication
- Australian and other relevant standards
- Industry and organisational design procedures and practice
- current Industry best practice
- civil concrete structures geometric requirements
- design review
- design approval
- documentation and reporting
- record keeping
- performance review
- systems close out
- concrete structures design principles
- civil concrete structures options
- techniques for choosing preferred options
- team leadership techniques
- operational techniques required for the execution of civil concrete structures construction tasks
- civil concrete structures materials characteristics
- civil concrete structures construction plant and equipment capabilities
- cost estimation techniques
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Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed using Resources and Infrastructure Industry sector specific policies, procedures, processes and operational manuals; and,
- an assessor must demonstrate the skills and knowledge of this unit through five (5) years' work experience in the Industry sector; and,
- where the assessor does not have current experience a co-assessment or partnership arrangement needs to exist between the qualified assessor and an Industry technical expert/ subject matter expert. The Industry technical expert/subject matter expert must hold the unit being assessed and be currently working in the sector with a minimum of two (2) years' of current work experience.
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Links

SkillsDMC RII Companion Volumes - <http://www.skillsdmc.com.au/>

