



Australian Government

Department of Education, Employment and Workplace Relations

RIICWM502A Implement civil works maintenance program

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the implementation of civil works maintenance programs in Civil Construction. It includes the requirements to prepare for planning, as well as preparing detailed implementation plans and initiating the implementation, monitoring, adjusting, reporting and supporting the implementation of civil works maintenance programs.

Application of the Unit

The civil works maintenance and implementation plan may cover the execution of a specific part of an overall civil works maintenance program. It may cover a specific geographic section or a specific class of work (e.g. bridge maintenance) that forms part of a larger program. This unit is appropriate for those working in a management role or as a technical specialist, to implement of civil works maintenance programs within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the planning of the implementing of civil works maintenance programs	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Access, interpret and clarify the civil works maintenance program requirements for the implementation of civil works maintenance 1.3. Confirm the current condition of the assets scheduled for maintenance and if appropriate recommend reclassification of serviceability
2. Prepare the detailed plan for the implementation of civil works maintenance	2.1. Identify the viable available options for the implementation of the specific civil works maintenance tasks 2.2. Select the preferred option and draft the implementation program in consultation with relevant team members, which makes best use of the available resources and meets the specific civil works maintenance requirements 2.3. Identify contingency requirements to be allowed for in the implementation of the plan 2.4. Monitor and coordinate the progress of other team members involved in the planning process to ensure the effective and efficient completion of the plan 2.5. Identify and schedule the resources required for the execution of the implementation plan 2.6. Identify the key performance indicators to be used in the monitoring and assessment of the project performance 2.7. Identify and clarify the maintenance works milestones required in the works maintenance program 2.8. Prepare an accurate estimate of the cost of execution of the implementation plan in consultation with relevant team members 2.9. Gain approval of the implementation plan 2.10. Document the implementation plan in accordance with the works maintenance

	program requirements
3. Initiate civil works maintenance implementation plans	3.1. Acquire and make available the necessary resources for the safe, effective and efficient conduct of the plan 3.2. Issue clear and timely instructions to team members and others involved, for the safe, effective and efficient conduct of the plan
4. Monitor, adjust and report on the implementation of civil works maintenance programs	4.1. Monitor the civil works maintenance implementation plan performance to ensure it achieves the required outcomes 4.2. Provide ongoing clarification and advice to those applying the plan to ensure the successful completion of the project 4.3. Ensure reports are complete and submit as required by the works maintenance program 4.4. Participate in performance review the implementation plan 4.5. Recommend changes to improve the safety, efficiency and effectiveness of civil works maintenance implementation

Required Skills and Knowledge

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

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to implement civil works maintenance programs:

- apply legislative, organisation and site requirements and procedures
- interpret project plans and drawings
- interpret project specifications
- interpret project maintenance works briefs
- interpret project engineering survey information
- interpret project hydrological data
- interpret meteorological data
- interpret project geotechnical data
- schedule of inspection programs
- interpret of inspection data
- classify the levels of the serviceability of assets
- prioritise maintenance works
- provide team leadership and coordination
- apply innovative solutions and new technology
- apply consultative processes
- choose appropriate maintenance operational techniques
- develop and apply works maintenance programs
- apply project scheduling and resource management technology
- calculate of maintenance works resource quantities and project costs
- maintain maintenance works cost records
- provide clarification and advice
- apply negotiation techniques
- apply feedback techniques

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to implement civil works maintenance programs:

- risk management requirement and procedures
- statutory compliance requirements and procedures
- maintenance works implementation plan development and implementation requirements and procedures

- occupational health and safety requirements and procedures
- environmental requirements and procedures
- quality management requirements and procedures
- communication requirements and procedures
- Australian and other relevant standards
- inspection program scheduling requirements and procedures
- inspection data interpreting requirements and procedures
- asset condition classification requirements and procedures
- maintenance works prioritisation requirements and procedures
- industry and organisational maintenance works procedures and practice
- civil works maintenance options
- sources of information on innovation and new technology
- techniques for choosing preferred options
- team leadership techniques
- operational techniques required for the execution of civil works maintenance projects
- civil works maintenance plant and equipment capabilities
- cost estimation techniques
- maintenance program review principles and procedures
- maintenance program documentation requirements
- maintenance program reporting requirements and procedures
- maintenance program approval requirements and procedures
- maintenance program records filing requirements and procedures
- performance review requirements and procedures
- principles of road user behaviour

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	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for the implementation of civil works maintenance programs • implementation of procedures and techniques for the safe, effective and efficient the implementation of civil works maintenance programs • the identification of the relevant information and scope of the work required to meet the required outcomes • the identification of viable options and the selection of civil works maintenance programs that best meet the required outcomes • working with others to undertake and complete the implementation of civil works maintenance programs • consistent successful implementation of civil works maintenance programs
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Evidence for assessment is best gathered using the outcomes of products and processes of the workplace. • The assessment environment should not

	disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in a civil works environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge to apply in undertaking of the implementation of civil works maintenance programs • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate procedures and techniques for the safe, effective and efficient achievement of the required outcomes • identification of the relevant information and scope of the work required to meet the required outcomes • identification of viable options and the selection of civil works maintenance programs that best meet the required outcomes • consistently achieving the required

	outcomes • first hand testimonial and documentary evidence of the candidate's: • working with others to undertake and complete the implementation of civil works maintenance programs • provision of clear and timely required support and advice on the implementation of civil works maintenance programs
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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.

Relevant compliance documentation may include:	• legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Civil works maintenance may include:	• surface drainage works • water storage dams • tailings dams • rehabilitation works • pavements, including: • flexible pavements, including: • natural pavement materials • manufactured pavement materials • asphalt placement • spray seal application • stabilisation • rigid pavement • underground services • civil structures • tunnels • canals
Implementation of civil works maintenance may include:	• risk management requirements and procedures • statutory compliance requirements and procedures • occupational health and safety requirements and procedures • environmental management requirements and procedures • quality requirements and procedures • inspection and testing requirements and

	procedures • communication and consultation requirements and procedures • community relations requirements and procedures • traffic management requirements and procedures • training requirements and procedures • allocation of responsibilities • position descriptions • administration requirements and procedures, including records and reporting • operational techniques required for the execution of civil works maintenance projects • cost management requirements and procedures • client liaison requirements and procedures • maintenance program review requirements and procedures • maintenance program documentation requirements and procedures • maintenance program reporting requirements and procedures • implementation plan approval requirements and procedures • works maintenance program records filing requirements and procedures • performance review requirements and procedures • scheduling requirements and procedures • resource requirements and procedures • production rates requirements and procedures • coordination requirements and procedures • review requirements • communication and reporting requirements • drawings • ancillary documentation, which may include: • maintenance works notes • construction notes • supplementary drawings • specifications
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Monitor may include:	• engineering survey • sampling and testing • recording and observation of construction practice, • general supervision
Instructions may include:	• project plans • briefings • handovers • work orders • toolbox meetings • site meetings

Unit Sector(s)

Civil Works (Management and Supervision)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.