



Australian Government

Department of Education, Employment and Workplace Relations

RIICRC317 Finish concrete pavements

Release: 1

RIICRC317 Finish concrete pavements

Modification History

Not applicable.

Unit Descriptor

This unit covers finishing concrete pavements that have been placed and screeded in domestic, commercial and civil applications and to provide a finish for designated requirements.

The unit includes the conduct of manual and mechanical finishing. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in entry level operational roles, at worksites within: Civil Construction

Licensing/Regulatory Information

Not applicable.

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.
---	--

Elements and Performance Criteria

1. Plan and prepare for operations	1.1 Access, interpret and apply <i>compliance documentation</i> relevant to the work activity 1.2 Obtain and confirm <i>safety requirements</i> from the <i>site</i> safety plan and organisational policies and procedures, and apply to the allotted <i>task</i> 1.3 Identify, obtain and implement <i>signage</i> requirements from the project <i>traffic</i> management plan 1.4 Select <i>plant, tools and equipment</i> to carry out <i>tasks</i> consistent with the requirements of the job, check for serviceability and rectify or report any faults 1.5 Identify <i>environmental protection requirements</i> from the project environmental management plan, and confirm and apply to the allotted task 1.6 Identify <i>type of pavement</i> required
2. Finish concrete	2.1 Apply float and trowel after initial screeding to assist in maintaining a <i>level surface</i> and to remove screeding inaccuracies 2.2 Apply mechanical trowelling to consolidate and densify the setting concrete surface 2.3 Install <i>control joints</i>, edges finished and concrete trowelled to specifications 2.4 Apply texture according to client requirements 2.5 Apply final trowel/ <i>finish</i> to concrete surface to specifications
3. Clean up	3.1 Clear work area and dispose of, reuse or recycle material in accordance with legislation, regulations, codes of practice and job

	specification 3.2 Clean, check, maintain and store plant, tools and equipment in accordance with manufacturer recommendations and standard work practices
--	--

-
-

Required Skills and Knowledge

Required skills

Specific skill is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to conduct finished concrete pavement operations including:

- communication skills to:
- determine requirements
- enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
- follow instructions
- read and interpret:
- documentation from a variety of sources
- drawings and specifications
- report faults
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication, such as hand signals
- evaluating own actions and making judgments about performance and necessary improvements
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- organisational skills, including the ability to plan and set out work
- recognising procedures, following instructions, responding to change and contributing to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- teamwork skills to coordinate own work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
- use a range of mobile technology, such as two-way radio and mobile phones
- voice and hand signals to access and understand site-specific instructions

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes

knowledge of the following, as required to conduct finish concrete pavement operations:

- concrete finishing techniques
- concrete materials
- concrete placement
- curing times
- general construction terminology
- job safety analysis (JSA) and safe work method statements
- levelling techniques
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, drawings and specifications
- processes for the calculation of material requirements
- quality requirements
- types, characteristics, uses and limitations of plant, tools and equipment
- workplace and equipment safety requirements

Evidence Guide

Overview of assessment	This unit of competency could 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	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 finishing of concrete pavements • implementation of requirements, procedures and techniques for the safe, effective and efficient finishing of pavements • working with others to undertake the finishing of concrete that meets all of the required outcomes • consistent timely finishing of concrete that safely, effectively and efficiently meets the required outcomes • conduct finishing of concrete on: • 4x10 metre slab or equivalent

	• demonstrate the use of: • wood float • vibration screed • power screed • steel trowel • edging tool • demonstrate the removal; for form work over 10 metres
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: • an induction procedure and requirement • realistic tasks or simulated tasks covering the mandatory task requirements • relevant specifications and work instructions • tools and equipment appropriate to applying safe work practices • support materials appropriate to activity • workplace instructions relating to safe work practices and addressing hazards and emergencies • material safety data sheets • research resources, including industry related systems information. 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 Integrated Framework 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 - 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.
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues

Range Statement

Information includes:	- diagrams or sketches - instructions issued by authorised organisational or external personnel - manufacturer specifications and instructions, where specified - MSDS - memos - regulatory and legislative requirements pertaining to
------------------------------	---

	finishing concrete • relevant Australian standards • safe work procedures relating to finishing concrete • signage • verbal, written and graphical instructions • work bulletins • work schedules, plans and specifications
Planning and preparation include:	• assessment of conditions and hazards • determination of work requirements and safety plans and policies • equipment defect identification • work site inspection
Safety (OHS) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:	• emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation • handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor • hazard control • hazardous materials and substances • organisational first aid • PPE prescribed under legislation, regulations and workplace policies and practices • safe operating procedures, including the conduct of operational risk assessment and treatments associated with: • earth leakage boxes • lighting • power cables, including overhead service trays, cables and conduits • restricted access barriers • surrounding structures • traffic control • trip hazards • work site visitors and the public • working at heights • working in confined spaces • working in proximity to others • use of firefighting equipment • use of tools and equipment • workplace environmental requirements and safety
Tools and equipment:	• include: • bull floats

	• magnesium trowels • power trowels • steel trowels • wooden floats • may include: • brooms • channel trowels • edging tools • hoses • kerb • step readers • stipple plates
Quality requirements include:	• internal company quality policy and standards • manufacturer specifications where specified • relevant regulations, including Australian standards • workplace operations and procedures
Materials include:	• concrete • water • oxides • retarders • aliphatic alcohols
Environmental requirements include:	• clean-up management • dust and noise • stormwater management • vibration • waste management
Level surfaces include:	• a concrete surface that has been placed and screeded to the reduced level (RL) in accordance with drawings and specifications including: • bridge paving • road paving • hardstands • footpaths
Assistance in maintaining a level surface includes:	• assessing the curing process to allow manual and mechanical trowelling to be applied
Control joints :	• are included in the concrete surface to control cracking
Finishing techniques include:	• broom finished • brushed • bull float

	• hand float (wooden, magnesium or composition) • mechanical trowelling machine • slip resistance • spraying and brushing to expose aggregate • steel trowel • to engineer's drawings and specifications • wood float • using and removing pipe pins • reworking formwork • green cutting
Edge <i>finishing</i> types include:	• fine • rounded • straight edge

Unit Sector(s)

Road and Pavements Construction and Maintenance (General)

Custom Content Section

Not applicable.