



Australian Government

RIICRC310E Construct and maintain roads

Release: 1

RIICRC310E Construct and maintain roads

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to construct and maintain roads in civil construction, including constructing, monitoring and maintaining road surfaces, signage, drains and water crossing points.

It applies to those working in operational roles. They generally work under minimal supervision to undertake a broad range of tasks in varied work contexts, using some discretion and judgement in selecting equipment, services or contingency measures.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to construct and maintain roads	1.1 Obtain, interpret, clarify and confirm work requirements 1.2 Access, interpret and apply documentation required to construct and maintain roads and confirm work activity is compliant 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures 1.4 Select and wear personal protective equipment according to site requirements 1.5 Identify, obtain, confirm and implement signage requirements 1.6 Select and check for faults all tools and equipment required to carry out tasks

ELEMENT	PERFORMANCE CRITERIA
	1.7 Locate ancillary services and mark out services according to job and site requirements 1.8 Conduct equipment pre-start checks according to manufacturer specifications and site requirements
2. Construct roads	2.1 Assess specified road construction characteristics and location 2.2 Peg road detailing direction and shape according to job requirements 2.3 Prepare road sub-base for application of road material according to job requirements 2.4 Construct road surface according to job requirements 2.5 Erect and construct road signage and safety barriers according to job and site requirements 2.6 Construct drains and water crossing points according to job and site requirements
3. Maintain roads	3.1 Assess road conditions for compliance with road design characteristics 3.2 Maintain condition of roads according to current and forecast traffic volume requirements 3.3 Identify, repair and/or report damage to road to required authorities according to site requirements 3.4 Maintain drainage according to site requirements and check and confirm safe operating surface 3.5 Monitor, redesign and remake areas subject to excessive wear and tear according to design characteristics 3.6 Maintain road surface using approved dust suppressants
4. Conduct clean-up activities	4.1 Clear work area and recycle or dispose of materials according to site requirements 4.2 Clean, check, maintain and store plant, tools and equipment according to manufacturer specifications and site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	Calculates basic measurements including mass and dimensions
Self-management	Monitors and minimises own exposure to worksite risks and

SKILL	DESCRIPTION
	hazards during work activities

Unit Mapping Information

Supersedes and is equivalent to RIICRC310D Construct and maintain roads.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIICRC310E Construct and maintain roads

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- construct and maintain roads on at least two occasions, including:
 - constructing roads according to drawings and job specifications, including meeting required:
 - traction
 - manoeuvrability
 - stable haul surface
 - maintaining roads to required standards
 - clearing work area and disposing of, recycling or storing materials
 - cleaning, checking, maintaining and storing plant, tools and equipment.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures and confirm work activity is compliant
- implement the requirements, procedures and techniques to construct and maintain roads, including:
 - identifying and applying required specifications to all work activities
 - identifying, obtaining, confirming and implementing signage requirements
 - obtaining, interpreting and clarifying shift changeover details
 - selecting and checking for faults all plant, tools and equipment required to carry out tasks
 - locating ancillary services and marking out services
 - identifying, addressing and reporting potential hazards and risks
 - conducting equipment pre-start checks and confirming equipment is ready for operation
 - identifying, addressing and reporting environmental issues and ground conditions

- work with others to construct and maintain roads in a way that meets required outcomes, including:
 - preparing for and organising work activities to meet task requirements
 - communicating with others to receive and clarify work instructions
 - using communication techniques and aids to advise others of work activity and exclusion zones
 - monitoring movements and hazards and identifying and communicating changes to work environment.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation required to construct and maintain roads
- policies, procedures and documentation required to construct and maintain roads, including those relating to:
 - accessing, interpreting and applying the organisation and site requirements and procedures for:
 - site requirements
 - manufacturer specifications for required plant and equipment
 - relevant job specifications
 - hazard and risk management
 - environmental protection
 - work activity set up procedures
 - communication techniques and aids
 - site isolation, signage, erecting barriers and traffic control
 - work health and safety
 - waste management
 - workplace recording and reporting
- types, characteristics, technical capabilities and limitations of roads, including:
 - road surfaces
 - drainage
 - water crossing points
 - signage
 - impact of current and forecast traffic volumes
- types, characteristics, technical capabilities and limitations of plant and equipment required to construct and maintain roads
- principles and techniques for effective road construction and maintenance, including:
 - techniques for preparing sub-base for application of road materials
 - road surface construction and maintenance techniques
 - drain construction and maintenance techniques

- techniques for erecting and constructing road signage.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to construct and maintain roads
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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