



Australian Government

RIISTD201E Read and interpret maps

Release: 1

RIISTD201E Read and interpret maps

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 read and interpret maps in the resources and infrastructure industries. This includes reviewing map routes using symbols, navigation data, landmarks and scale, and identifying obstacles to navigate alternative routes.

It applies to those working in operational roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures and take some responsibility for the quality of work outcomes.

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

Coal mining

Drilling

Extractive industries

Metalliferous mining

Mineral exploration

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 read and interpret maps	1.1 Obtain, interpret, clarify and confirm navigation information, travel details and work instructions 1.2 Access, interpret and apply documentation required to read and interpret maps 1.3 Select maps, equipment and navigation aids, and confirm accuracy,

ELEMENT	PERFORMANCE CRITERIA
	currency and operation 1.4 Identify faults in maps and equipment, and record, report and address issues according to job requirements 1.5 Establish and maintain communication plan according to job requirements
2. Plan route	2.1 Assess and select route to destination, using information from maps, plan, field observations, and job requirements 2.2 Examine maps, and identify symbols, information and navigation data according to job requirements 2.3 Identify and locate current position on map using landmarks and key geographical features 2.4 Review map route, plan, field observations, and local knowledge according to job requirements 2.5 Identify potential hazards and plan risk control measures 2.6 Measure and estimate distance to destination using map scale for selected route 2.7 Document planned route according to job requirements
3. Conduct navigation	3.1 Navigate planned route and schedule according to job requirements 3.2 Orientate map to surroundings and planned route 3.3 Use and interpret navigation aids according to job requirements 3.4 Navigate alternative routes to bypass obstacles or improve efficiency of route

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
Oral communication	- Identifies and interprets information from verbal instructions - Conveys information and instructions to others verbally
Self-management	Monitors and minimises own exposure to worksite risks and hazards during work activities
Writing	Communicates and documents information in written form

Unit Mapping Information

Supersedes and is equivalent to RIISTD201D Read and interpret maps.

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 RIISTD201E Read and interpret maps

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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:

- read and interpret maps on at least two occasions, including:
 - reviewing the map route and plan by identifying and using:
 - symbols
 - navigation data
 - landmarks
 - geographical features
 - scale
 - identifying obstacles and navigating alternative routes
 - undertaking a minimum 2km navigation following established route
 - traversing a 2km route to specified destination
 - documenting the navigation route and details on the navigational data sheet.

During the above, the candidate must:

- locate and apply relevant legislation, documentation, policies and procedures
- identify, report and record hazards and risks
- implement requirements, procedures and techniques for reading and interpreting maps, including:
 - applying problem solving skills to resolve navigation route issues
 - applying mathematical skills, including basic angles and geometry for compass bearings, estimation and measurement
- work with others to read and interpret maps to meet required outcomes, including:
 - using communication techniques and equipment to convey information to others, including communicating the planned navigation route
 - completing written records and reporting systems.

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 read and interpret maps
- policies, procedures and documentation required to read and interpret maps, including those relating to:
 - hazard and risk management
 - work health and safety
 - emergency response
 - site and equipment safety
 - environmental protection
 - requirements of a communications plan
 - communication techniques and equipment
 - operational, maintenance and basic diagnostic procedures
 - project quality requirements
 - job plans and specifications
 - workplace recording and reporting
- principles and techniques required to read and interpret maps, including those relating to:
 - symbols and information
 - fatigue management
 - map reading and road navigation
 - common charts and scales
 - types and characteristics of maps, including:
 - cadastral and topographic maps
 - charts
 - guidebooks
 - aerial photographs
 - sketches and cave maps
 - diagrams
 - topographic features
 - sources of map and chart error
 - distance travelled
 - navigation aids
 - navigation data
 - surroundings and obstacles
- types, characteristics, technical capabilities and limitations of plant and equipment required to read and interpret maps, including:
 - compasses
 - track and survey markers
 - beacons

- personal protective equipment and clothing
- GPS units
- materials safety data sheet (SDS) compliance processes
- components of job safety analyses (JSAs), job safety environmental analyses (JSEAs), and safe work method statements (SWMs)
- civil construction terminology related to reading and interpreting maps.

Assessment Conditions

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

- include access to:
 - personal protective equipment
 - equipment required to read and interpret maps
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with required 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 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 RII 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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