



**Australian Government**

# **RIICCM202E Identify, locate and protect underground services**

**Release: 1**

# RIICCM202E Identify, locate and protect underground services

## Modification History

This unit replaces RIICCM202D Identify, locate and protect underground services. Significant endorseable amendments have been made to Elements, Performance Criteria, Foundation Skills, Performance Evidence and Knowledge Evidence to better reflect current industry practices and clarify training outcomes.

## Application

This unit describes the skills and knowledge required to identify, locate and protect underground services in civil construction.

It applies to those working in operational roles and overseeing construction work. They generally work under supervision and hold some responsibility for identifying, locating and protecting underground services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## 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. Prepare to identify, locate and protect underground services | <ul style="list-style-type: none"><li>1.1 Obtain, interpret and confirm work requirements</li><li>1.2 Access, interpret and apply Australian standards and documentation required for identifying, locating and protecting underground services and confirm work activity is compliant</li><li>1.3 Identify hazards and environmental issues, assess the risks and implement control measures in line with workplace policies</li><li>1.4 Identify and adhere to traffic signage requirements</li><li>1.5 Select equipment and tools required for service locating works and check for faults and report or rectify within scope of own role</li><li>1.6 Identify and apply environmental protection requirements for task</li><li>1.7 Obtain and prepare information for search requirements</li></ul> |

| ELEMENT                                            | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | <p>from national referral service prior to making contact with the service provider</p> <p>1.8 Contact, obtain service and utility location details from and identify specific requirements of service and utility owners</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>2. Identify and locate underground services</p> | <p>2.1 Identify hazards and environmental issues, assess risks, implement control measures and confirm safe working environment</p> <p>2.2 Determine location, alignment direction, level and grade of services and utilities from plans and location details</p> <p>2.3 Comply with specific requirements of service and utility owners</p> <p>2.4 Use visual and physical means to inspect site for services and utilities prior to commencing construction</p> <p>2.5 Use required service locating equipment to detect and determine position of underground services and, in consultation with operator undertaking construction work, which assets are affected by planned works</p> <p>2.6 Mark out positions of underground services and utilities as required</p> <p>2.7 Generate reports of underground service location</p>                                             |
| <p>3. Protect underground services</p>             | <p>3.1 Advise operators undertaking construction of requirements for asset and utility protection according to service and utility owners requirements</p> <p>3.2 Establish clearance distances and isolate work as required according to safety requirements</p> <p>3.3 Move, relocate as necessary, protect and support services and utilities from construction process according to safety requirements and in conjunction with service and utility owners as required</p> <p>3.4 Advise non-destructive and manual excavation as required</p> <p>3.5 Confirm restoration of infrastructure assets and backfilling according to safety, and service and utility owners' requirements, and advise road authority once work is completed as required</p> <p>3.6 Record and report to asset owners and supervisory staff any damage to services and utilities during activity</p> |
| <p>4. Conduct housekeeping activities</p>          | <p>4.1 Clear work area and dispose of and recycle materials as required</p> <p>4.2 Clean, check and maintain condition of equipment, and report issues as required or address within scope of own</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| ELEMENT | PERFORMANCE CRITERIA                                                                                                                        |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------|
|         | role<br>4.3 Manage and report hazards as required<br>4.4 Finalise and process written records as required according to workplace procedures |

## 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           | <ul style="list-style-type: none"><li>Adjusts activities given tolerances of plan details and equipment</li></ul>                                                            |
| Oral communication | <ul style="list-style-type: none"><li>Verbally acquires details from and reports problems and/or hazards to a supervisor or service and/or utility owner</li></ul>           |
| Reading            | <ul style="list-style-type: none"><li>Identifies and interprets information from at times complex workplace procedures, documentation, legislation and regulations</li></ul> |
| Self-management    | <ul style="list-style-type: none"><li>Monitors and minimises self-exposure to worksite risks during activities</li></ul>                                                     |
| Writing            | <ul style="list-style-type: none"><li>Records simple and routine information relating to work activities</li></ul>                                                           |

## Unit Mapping Information

Supersedes and is equivalent to RIICCM202D Identify, locate and protect underground services.

## Links

Companion Volume implementation guides are found in VETNet -

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

# Assessment Requirements for RIICCM202E Identify, locate and protect underground services

## Modification History

This unit replaces RIICCM202D Identify, locate and protect underground services. Significant endorseable amendments have been made to Elements, Performance Criteria, Foundation Skills, Performance Evidence and Knowledge Evidence to better reflect current industry practices and clarify training outcomes.

## 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:

- identify, locate and protect underground services on at least two occasions, including:
  - use electromagnetic locating equipment on at least one occasion to detect conductive underground services.

During the above, the candidate must:

- locate, apply and retain on site access to documentation, policies and procedures required to identify, locate and protect underground services
- implement the requirements, procedures and techniques for completing the identification, location and protection of underground services, including:
  - selecting and using required tools and equipment
  - communicating to clarify instructions and information
  - completing housekeeping activities
- work with others to identify, locate and protect underground services that meets required outcomes, including:
  - using a range of communication techniques and equipment
  - complying with written and verbal reporting requirements and procedures
- employ required techniques, plant and equipment to search for services and utilities
- identify services and owners of services and utilities.

## 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:

- key indicators of work quality and accuracy
- processes for planning and organising work activities
- safety data sheets and materials handling methods
- electromagnetic locating and radar based technologies
- job safety analyses (JSAs), job safety environmental analyses (JSEAs), and safe work method statements (SWMSs)

- key risks relating to identifying, locating and protecting underground services, including those associated with:
  - traffic
  - live electrical services
  - confined spaces
  - falls
  - locating near other works in progress
  - manual handling
  - gas
- key policies and procedures, legislation and established requirements for identifying, locating and protecting underground services, including those for:
  - workplace health and safety
  - environmental protection
  - operating and maintaining equipment
  - fault checking and calibrating locating equipment
  - marking underground asset locations
  - waste disposal and recycling
  - site isolation and traffic control
  - excavation and finished surfaces reinstatement
  - obtaining emergency numbers and contact details of service and utility owners
  - obtaining and preparing search requirement information from Dial Before You Dig (DBYD)
  - damage to services and utilities
- key factors affecting work activities described in performance evidence above, including:
  - types of services, utilities and providers
  - working in a road reserve
  - equipment types, characteristics, technical capabilities and limitations
  - asset specific clearance distances
  - non-destructive excavation methods for exposing underground services.

## Assessment Conditions

- Mandatory conditions for assessment of this unit are stipulated below. The assessment must:
- include access to:
  - underground service locating equipment
  - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,

- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals 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 competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF 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 a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as 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 hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also 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** Level | Required assessor or Industry subject matter expert experience |
|-------------------------|-------------|----------------------------------------------------------------|
| Drilling, Metalliferous | 1           | 1 Year                                                         |

|                                                                    |                                                                                                                                                                                                                                                                                                                                |         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Mining, Coal Mining, Extractive (Quarrying) and Civil Construction | 2                                                                                                                                                                                                                                                                                                                              | 2 Years |
| Drilling, Coal Mining and Extractive (Quarrying)                   | 3-6                                                                                                                                                                                                                                                                                                                            | 3 Years |
| Metalliferous Mining and Civil Construction                        | 3-6                                                                                                                                                                                                                                                                                                                            | 5 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 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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