



Australian Government

Department of Education, Employment and Workplace Relations

TLIS2013A Install minor structures

Release: 1

TLIS2013A Install minor structures

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to install minor non-track bearing structures and assemblies in rail industry contexts in accordance with safeworking and regulatory requirements and workplace procedures. This includes planning and preparing for the installation, installing the structure in accordance with workplace requirements, and cleaning up the site after installation. Licensing or certification requirements may be applicable to this unit.

Application of the Unit

Application of the Unit

Persons achieving competence in this unit will need to fulfil the applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines.

Work is performed under some supervision, generally within a team environment. It involves the application of routine operational principles and procedures to install minor structures as part of workplace activities across a variety of operational contexts within the Australian rail system.

Operators of mechanised equipment must have undertaken training and, where appropriate, hold the relevant licence, permit or certificate and be recognised as competent for the class of machinery being used.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills 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 required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------|---|
| 1 Plan and prepare | 1.1 Type of structure to be installed is identified and appropriate methods are planned in accordance with workplace procedures and specifications
1.2 Structure and/or materials for installation are identified, obtained and prepared in accordance with plans and specification |
| 2 Install structure | 2.1 Where required, excavation is conducted to standards in accordance with workplace procedures and regulatory requirements
2.2 Where required, foundations are installed in accordance with workplace procedures and specifications
2.3 Components are assembled and installed in accordance with specifications and/or plans using appropriate methods
2.4 Level/position of structure is adjusted to required standard to maintain correct track geometry/clearances
2.5 Fasteners are installed and tightened in position using correct fastening method to ensure structural integrity
2.6 Installed structure is checked against specified requirements/plans and all required adjustments are made |
| 3 Maintain structures | 3.1 Components requiring replacement are checked against standards and are measured for preparation of replacement component
3.2 Materials required for job are identified and organised as required to enable appropriate replacement of components
3.3 Replacement components are cut and shaped to the required standard in accordance with workplace procedures
3.4 Surfaces of components are treated using appropriate methods and materials as required |
| 4 Clean up site | 4.1 Site is cleaned up to remove unnecessary materials and restore site to environmentally sound and safe condition |
| 5 Complete documentation | 5.1 Work as executed documentation is completed as required in accordance with workplace procedures |

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

REQUIRED KNOWLEDGE AND SKILLS

Required knowledge:

- Relevant safety, OH&S and environmental procedures and regulations
- Workplace procedures for the installation of minor structures
- Problems that may occur during the installation of minor structures, and action that can be taken to report or resolve the problems
- Hazards that may exist during the installation of minor structures, and ways of controlling the risks involved
- Functions of different types of minor structures
- Basic structures construction methods and techniques
- Information on the use of epoxy and grouts for mortar pads
- Relevant recording and documentation procedures

Required skills:

- Communicate effectively with others when installing minor structures
- Read and interpret plans, specifications, instructions and manuals relevant to the installation of minor structures
- Follow operational instructions and work sequences when installing minor structures
- Check compliance between work and job specifications
- Complete documentation related to the installation of minor structures
- Operate communication equipment to required protocol
- Work collaboratively with others when installing minor structures
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when installing minor structures in accordance with regulatory requirements and workplace procedures
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Select and use relevant equipment and tools
- Adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

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 and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement
- Assessment must include exercises which demonstrate competent performance of the following in a range of situations:
 - planning work requirements
 - installing a range of minor structures
 - maintaining a range of minor structures

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - in an appropriate range of situations in the workplace

Range Statement

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.

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|---|---|
| Operations may be conducted: | <ul style="list-style-type: none">• by day or night• in all weather conditions |
| Minor structures to be installed include: | <ul style="list-style-type: none">• pipes and culverts• OHWS (single mast)• retaining walls• level crossings• buffer stops• ballast retention walls• ballast logs• intermediate rail support on ballast walls• earthworks protection structures |
| Work may be conducted in: | <ul style="list-style-type: none">• restricted spaces• exposed conditions• controlled or open environments |
| Work may involve exposure to: | <ul style="list-style-type: none">• chemicals• dangerous or hazardous substances• movements of equipment, goods and vehicles |
| Equipment may include: | <ul style="list-style-type: none">• cranes• hand tools• small power tools• crane and lifting gear• rollers and wacker packer for compaction• welding, oxy and cutting equipment• scaffolding• ladders• elevated work platform (EWP) |
| Materials may include: | <ul style="list-style-type: none">• steel• concrete• timber• concrete products• rubber products• bolts and fasteners• epoxy grouts• cement grouts• paint (protective treatment) |

RANGE STATEMENT

Liaison may include:	• internal/external personnel from other work areas (e.g. train controller) • road authorities • local councils • landowners
Communications equipment/systems may include:	• two-way radios • telephones/mobile phones • agreed audible or hand signals
Depending on work context, safety and personal protective equipment may include:	• high visibility clothing • hearing protection • gloves • sunscreen • sunglasses • safety glasses • insect repellent • safety headwear • safety footwear • portable radios/mobile phones • hand lamps • flags • safety devices
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	• company procedures • enterprise procedures • organisational procedures • established procedures
Information/documents may include:	• operational instructions, policies and workplace procedures • local authority regulations and procedures • work orders • technical instructions • manufacturers or workplace equipment instructions and operation manuals • emergency procedure manuals • two-way radio/mobile phone operation procedures • QA plans, data and document control • conditions of service, legislation and industrial agreements including workplace agreements and awards
Applicable procedures and codes may include:	• legislated rail safety requirements including acts and regulations from each applicable state and territory together with any nationally approved compliance codes

RANGE STATEMENT

and/or guidelines

- relevant state/territory regulations, codes of practice and safeworking system requirements
- relevant Australian Standards and related requirements including AS 4292
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

S - Construction and Installation