



Australian Government

Department of Education, Employment and Workplace Relations

TLIS2020A Install overhead wiring structure

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to install overhead wiring structures in accordance with safeworking and regulatory requirements and workplace procedures including planning and preparing for the installation, installing the required components to specification, and completing all required documentation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

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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 minimal supervision, generally within a team environment. It involves the application of routine operational principles and procedures to install overhead wiring structure 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 installation	1.1 Work requirements are determined to identify scope of work and resources required 1.2 Type of overhead wiring structure required for job is identified and organised
2 Prepare for installation	2.1 Footings are prepared and excavated in compliance with standard, following workplace procedures 2.2 Formwork is installed in compliance with standard, following workplace procedures 2.3 Concrete reinforcing is installed in compliance with standard, following workplace procedures 2.4 Concrete is mixed and placed in compliance with standard, following workplace procedures 2.5 Hold down plates/bolts are placed into concrete to correct dimensions to enable fitting of overhead wiring structure
3 Install components	3.1 Components are assembled onto bridge section as required in preparation for installation 3.2 Masts and other components are positioned and installed as required, following accepted workplace procedures 3.3 Fastening systems are installed in compliance with standard to ensure the integrity of the overhead wiring structure
4 Complete documentation	4.1 Documentation is completed in line with company requirements and workplace practice

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

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

Required knowledge:

- Applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines
- Relevant OH&S and environmental procedures and regulations
- Workplace procedures for the installation of overhead wiring structures
- Problems that may occur during the installation of overhead wiring structures and action that can be taken to report or resolve the problems
- Hazards that may exist during the installation of overhead wiring structures and ways of controlling the risks involved

REQUIRED KNOWLEDGE AND SKILLS

- Relevant earthmoving equipment and methods
- Characteristics and relevant information on overhead wiring structures
- Information in relevant workplace technical manuals and instructions
- Characteristics of plant and equipment, materials, transport, structures, hardware and components used in work activities
- Rail operations and train movement
- Hazardous situations and related personal protection measures
- Emergency procedures manuals
- Local authority procedures
- Relevant recording and documentation procedures

Required skills:

- Communicate effectively with others when installing overhead wiring structures
- Read and interpret technical data, drawings, instructions and manuals relevant to the installation of overhead wiring structures
- Interpret and follow operational instructions and prioritise work when installing overhead wiring structures
- Complete documentation related to the installation of overhead wiring structures
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when installing overhead wiring structures
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when installing overhead wiring structures in accordance with regulatory requirements and workplace procedures
- Plan own work including predicting consequences and identifying improvements
- Monitor work activities in terms of planned schedule
- Apply required surveying and measuring techniques
- Conduct compaction testing
- Use levelling equipment
- Check compliance between work and job specifications
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to equipment
- Select and use required personal protective equipment
- Select and use relevant equipment and tools

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

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:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - 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.

- | | |
|---|---|
| Operations may be conducted: | <ul style="list-style-type: none">• by day or night• in all possible weather conditions |
| Work may be conducted in: | <ul style="list-style-type: none">• restricted spaces• exposed conditions• controlled or open environments |
| Work may involve: | <ul style="list-style-type: none">• exposure to chemicals, and dangerous or hazardous substances• movements of equipment, goods and vehicles |
| Equipment may include: | <ul style="list-style-type: none">• graders, front end loaders, back hoes, cranes• manual tools• small power tools• angler borer and reinforcement cage and base bolts |
| Communications equipment may include: | <ul style="list-style-type: none">• two-way radios, and/or• telephones |
| Depending on work context, safety and protective equipment may include: | <ul style="list-style-type: none">• high visibility clothing• hearing protection• gloves• sunscreen• sunglasses• safety glasses• insect repellent• safety headwear• safety footwear• portable radios• hand lamps• flags• safety devices |
| Depending on the type of organisation concerned and the local terminology used, workplace procedures may include: | <ul style="list-style-type: none">• company procedures• enterprise procedures• organisational procedures• established procedures |
| Information/documents may include: | <ul style="list-style-type: none">• applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines• operational instructions, policies and workplace |

RANGE STATEMENT

- procedures
- relevant logs or record books
 - work orders
 - technical instructions
 - manufacturers or workplace equipment instructions and operation manuals
 - emergency procedure manuals
 - two-way radio 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:
- relevant state/territory regulations, codes of practice and safeworking system requirements
 - relevant Australian Standards and related requirements
 - 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