



Australian Government

Department of Education, Employment and Workplace Relations

RIICFW303A Install primary ground support

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the installation of primary ground support in the civil construction industry. It includes planning and preparing, setting out and preparing for primary ground support, installing primary ground support, maintaining primary ground support, and cleaning up. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the work activity</p> <p>1.2. Obtain, confirm and apply work instructions, including plans, specifications, quality requirements and operational details to the allotted task</p> <p>1.3. Obtain and confirm <i>safety requirements</i> from the <i>site</i> safety plan and organisational policies and procedures, and apply to the allotted task</p> <p>1.4. Identify, obtain and implement <i>signage</i> requirements from the project <i>traffic</i> management plan</p> <p>1.5. Select <i>tools and equipment</i> to carry out tasks consistent with the requirements of the job, check for serviceability and rectify or report any faults</p> <p>1.6. Identify <i>environmental protection requirements</i> from the project environmental management plan, and confirm and apply to the allotted task</p>
2. Set out and prepare for primary ground support	<p>2.1. Determine the requirements for ground support construction from ground conditions and engineer's directions</p> <p>2.2. Identify and implement method of ground support installation in accordance with the excavation process</p> <p>2.3. Obtain material requirements for <i>primary ground support</i></p> <p>2.4. <i>Install</i> primary ground support in accordance with the progressive development of the excavation process</p> <p>2.5. Set out position of sets/rings and points of support to engineer's specifications</p> <p>2.6. Prepare component parts of ground support to designed requirements</p>
3. Install primary ground support	<p>3.1. Select relevant primary ground support system</p> <p>3.2. Install primary ground support system in accordance with job specifications</p>
4. Maintain primary ground	<p>4.1. Carry out daily inspection of primary</p>

support	<p>ground support to ensure system is secure in accordance with specifications, particularly where explosives are in use</p> <p>4.2. Identify faults and make adjustments to ensure ground support is maintained</p> <p>4.3. Identify ground faults and determine and carry out support rectifications to engineer's design and specifications</p>
5. Clean up	<p>5.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>5.2. Clean, check, maintain and store plant, tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following, as required to install primary ground support:

- apply legislative, organisation and site requirements and procedures for installing primary ground support
- organise work activities
- select and use relevant tools and equipment safely
- identify and report on hazards related to the worksite and work activity
- communicate effectively to receive and clarify work instructions

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to install primary ground support:

- site and equipment safety requirements
- foundation work
- primary ground support systems and their installation techniques
- scaffolding and work platform installation
- construction principles
- processes for interpreting engineering drawings
- soil, sand, rock, clay, shale, gravel and silt types and characteristics
- water erosion
- equipment types, characteristics, technical capabilities and limitations
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- civil construction terminology
- JSAs/safe work method statements

Evidence Guide

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

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for installing primary ground support • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of primary ground support installation • working with others to undertake and complete the installation of primary ground support that meets all of the required outcomes • consistent timely completion of primary ground support installation that safely, effectively and efficiently meets the required outcomes • installation of at least one of the following primary ground support systems to specifications: <ul style="list-style-type: none"> • sets and rings for two projects • sheet piling for one project • panel and box sets for two projects
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and

	<p>infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances.</p> <ul style="list-style-type: none"> • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the installation of primary ground support
Guidance information for assessment	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

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. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant compliance documentation may include:	<ul style="list-style-type: none"> • legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Safety requirements may include:	<ul style="list-style-type: none"> • OHS requirements are to be in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead and underground services, other machines, personnel, traffic control, working in proximity to others, worksite visitors and the public • hazards and risks may include but not be limited to uneven/unstable terrain, fires, overhead and underground services, excavations, traffic, embankments, cuttings, structures and hazardous materials • emergency procedures are to include but may not be limited to extinguishing fires, organisational First Aid requirements and evacuation
Site may include:	<ul style="list-style-type: none"> • cuttings • tunnels • embankments

Signage may include:	<ul style="list-style-type: none"> • escort vehicle • highway traffic signs • site safety signage • temporary signage for the benefit of motorists and pedestrians • barricades • traffic conditions signage
Traffic may include:	<ul style="list-style-type: none"> • congested urban environments • low traffic rural areas • off-road un-trafficked areas • buildings • parking sites • pedestrian areas
Tools and equipment may include:	<ul style="list-style-type: none"> • shovels • crow bars • spanners • measuring tapes • picks • mattocks • sledge hammers • spirit levels • angle grinders • kanga hammers • tampers • oxy-acetylene equipment
Environmental requirements may include:	<ul style="list-style-type: none"> • organisational/project environmental management plan • waste management • water quality protection • noise • vibration • dust and clean-up management
Primary ground support may include:	<ul style="list-style-type: none"> • steel sets/rings • timber sets • pre-cast concrete segmental sections • timber lagging sections • steel spilings • steel sheeting • dry mix concrete pads • reinforced concrete beams
Install may include:	<ul style="list-style-type: none"> • ground stabilisation to access shafts and

	<ul style="list-style-type: none">tunnelsembankment stabilisation
Materials may include:	<ul style="list-style-type: none">sets and ringssole platesposts/legsheaders/crownsliner blocks and prefabricated lattice girderssheet pilingslaggingsheetingpile capswailerspanelbox setslongitudinal tiessetsbraces

Unit Sector(s)

Foundation Works

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.