



Australian Government

DEFMIL085 Construct equipment bridging

Release: 1

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Modification History

Release	Comments
1	This unit was released in DEF Defence Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to DECA312B Construct equipment bridging. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • PC 1.10 removed

Application

This unit describes the skills required to facilitate the movement of personnel, vehicles, cargo and equipment through bridging. Equipment bridging is constructed from designed and certified bridge modules and parts to provide a temporary or permanent bridge over a gap.

Bridges will normally be constructed on a temporary basis under field conditions to meet the operational need to provide a crossing point over a gap for personnel and equipment. When the crossing is no longer required the bridge is either recovered to storage or redeployed to another crossing.

This unit applies to combat engineer personnel who are required to construct and recover gap crossing bridging equipment in a deployed operational environment.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently and lead a team. They use discretion and judgement, and take responsibility for the quality of their outputs. They would perform routine tasks in a broad range of unpredictable contexts.

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

Competency Field

Military Skills

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Prepare and plan for gap crossing	1.1 Receive and process requirement and confirm with higher authority as necessary. 1.2 Identify resource availability and serviceability and determine constraints. 1.3 Conduct site survey, risk and environmental assessment. 1.4 Select suitable bridge design based on site survey and available resources. 1.5 Develop construction/dismantle plan in accordance with design, resources, risks and environmental considerations. 1.6 Refer problems that cannot be resolved locally to higher authority for resolution. 1.7 Confirm and monitor competence of team members. 1.8 Brief construction team. 1.9 Liaise with outside agencies.
2. Construct gap crossing	2.1 Direct and supervise construction team. 2.2 Recognise and respond to unexpected situations that require a quick and decisive response. 2.3 Check security, alignment and stability. 2.4 Organise and direct support from outside agencies. 2.5 Provide technical advice to higher authority or support agencies. 2.6 Maintain gap crossing site and gap crossing.
3. Dismantle gap crossing and refurbish site and equipment	3.1 Direct and supervise construction team in accordance with dismantle plan. 3.2 Recover, clean and maintain gap crossing equipment, tools and materials. 3.3 Store or redeploy gap crossing equipment, tools and materials. 3.4 Refurbish site in accordance with environmental requirements. 3.5 Complete documentation. 3.6 Conduct post activity analysis and make recommendations.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to DEFCA312B Construct equipment bridging.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Companion Volume implementation guides are found in VETNet -

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Assessment Requirements for DEFMIL085 Construct equipment bridging

Modification History

Release	Comments
1	These Assessment Requirements were released in DEF Defence Training Package release 1.0 and meet the Standards for Training Packages. Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- commanding and controlling situations and people
- managing resources
- operating optical levelling and surveying devices
- producing design/plans
- producing written and verbal reports
- recording and processing data and information
- taking and recording accurate measurements
- leading a team to construct, maintain and dismantle a multi span bridging of not less than thirty metres made from modularised or improvised means

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- anchorages
- booming procedures and centre of gravity
- equipment bridge design features/requirements:
 - site requirements (reconnaissance):
 - location
 - gap width, depth, obstacles, etc.
 - current and direction

- angle of repose
- abutment design or enhancement
- soils testing and compaction methods
- routes in/out
- parts
- specifications
- user manual,
- material handling equipment requirements and support
- construction sequence
- designed traffic/load (MLC/tonnage)
- above ground or surface (stepped abutment)
- equipment bridge types:
 - medium girder bridge (MGB)
 - air portable bridge (APB)
 - rapid emplacement bridge (REB)
 - line of communication bridge (LOC)
 - bailey bridge, acrow bridge (FMB)
- jacking system
- mathematics to a level necessary to meet all design and construction requirements
- types of bridge category:
 - single span, multi span,
 - simply supported or continuous
- variations in construction sequences:
 - restricted sites
 - floating piers
 - multiple piers

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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