
Construction Qualification Tables

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Headquarters, Department of the Army

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Construction Qualification Tables

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Preface

TC 3-34.500 provides a training strategy for squads and platoons to attain engineer task proficiency by executing tasks to standard. This enables engineers to gain proficiency in providing support through execution of general engineering, mobility, countermobility, and survivability tasks efficiently in any operational environment.

The principal audience for TC 3-34.500 are the commanders and trainers of engineer construction units. TC 3-34.500 is written using a plan, prepare, execute, and assess methodology. This publication applies to all construction engineer units. TC 3-34.500 includes the planning and preparation required for a successful engineer qualification-training program for engineer construction organizations.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure that their Soldiers operate in accordance with the law of war and the rules of engagement. (See FM 6-27).

TC 3-34.500 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which TC 3-34.500 is the proponent (the authority) are italicized in the text and are marked with an asterisk (*) in the glossary. Terms and definitions for which TC 3-34.500 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

TC 3-34.500 applies to the Active Army, Army National Guard/Army National Guard of the United States and United States Army Reserve unless otherwise stated.

The proponent of TC 3-34.500 is the United States Army Training and Doctrine Command (TRADOC). The preparing agency is the Collective Training Division, Directorate of Training and Leader Development, United States Army Engineer School. Send comments and recommendations on a DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to the Department of the Army, United States Army Engineer School, United States Army Maneuver Support Center of Excellence, Directorate of Training and Leader Development, ATTN: ATSE-D, 14010 MSCoE Loop, Building 3201, Suite LH2617, Fort Leonard Wood, MO 65473-8300; by e-mail to <usarmy.leonardwood.mscoe.mbx.engdoc@mail.mil>; or submit an electronic DA Form 2028.

Introduction

TC 3-34.500 is designed to focus on mission-essential task (MET) proficiency. It is the Engineer Regiment's responsibility to provide commanders with the tools to qualify their engineer squads and platoons, to provide quality training oversight, and to validate engineer training. The construction qualification table (CQT) plays an important role in this process. Commanders can use the CQTs to determine which tasks to train, qualify, and certify based on their assessment of the unit's task proficiency and the unit's mission-essential task list (METL) or assigned MET. Time, resources, and command emphasis must all focus on training tasks that support the METL. Unit leaders should use the appropriate individual tasks, collective tasks, and drills which support their training objectives using the following references:

- Standardized METL.
- Combined Arms Training Strategy.
- Central Army Registry.
- Digital Training Management System.
- Individual critical task list and individual task.

This proponent publication provides trainers and commanders with the minimal CQT requirements and is a guide to reach published goals and sustain unit and individual proficiency. Training will replicate real world situations, conditions, and potential future operations. Evaluations must not be a routine drill that has no real world theme, but must use scenarios that exercise the leader's ability to lead and make decisions, which enables Soldiers to perform at all levels.

TC 3-34.500 is divided into three chapters and one appendix:

- **Chapter 1** defines training frequencies, training goals, and training horizons.
- **Chapter 2** defines squad and platoon training strategies, collective training, proficiencies, proficiency gate ratings, talent management, and turbulence.
- **Chapter 3** defines the conduct of CQTs Tables I-VI.
- **Appendix A** refers to engineer qualifications tables listed by the unit type.

This publication is approved for Foreign Disclosure 1 (FD1) and is releasable to students from all requesting foreign countries without restrictions.

Unless this publication states otherwise, masculine nouns and pronouns refer to both men and women.

Chapter 1

Concept

Chapter 1 is organized in a manner parallel to the combat engineer qualification tables. This organization provides a common-sense approach to training by echelon. Individual tasks are trained and tested first, followed by squad and platoon tasks. This chapter includes introductory information about the CQT concept. Commanders are encouraged to develop a local scenario that is tactically sound for the range layout available and that directly reflects the units' capabilities and missions. The training strategy provides the actual tables and the tasks that create a foundation for the commander's training scenario. As units select tasks, their methodology should follow. A platoon collective task drives a squad collective task drives an individual task.

STRATEGY

- 1-1. The CQTs are designed to establish MET proficiency first and foremost. These qualification tables add structure to unit training plans, articulate combat readiness, and help units compete for installation ranges and resources. The tables also assist the unit by outlining a strategy for evaluating training readiness for individuals, squads, and platoons. Establishing these training and evaluation standards allows commanders to make efficient use of training resources, to articulate readiness and, most importantly, to ensure consistent battlefield results regardless of which engineer unit is in support.
- 1-2. Each engineer squad or team must have a qualified squad leader who can exercise sound judgment based on his ability to perform the leader or individual tasks that support the unit's METL.

TRAINING FREQUENCY

- 1-3. Tables I through VI are designed to be conducted annually. The unit commander synchronizes the unit training plans with the unit they provide engineer support to, ensuring that engineers are trained and ready to provide engineer construction support. A company commander may increase the frequency based on his own assessment of unit proficiency and training requirements.

TRAINING GOALS

- 1-4. Training goals vary according to the local training conditions. Commanders must design training to the available training environments and to specifically address unit proficiency assessments. The goal is to create a training environment that is as realistic and demanding as possible with the resources available. As a norm, the goals listed below should be set to ensure successful training.
 - **Set and enforce tough, but achievable standards.** Tough standards generate effective training; loose standards produce weak units. Soldiers must know when they have done well and when they need additional training and repetition to achieve mastery.
 - **Start early.** All aspects of a training program must be thoroughly coordinated. Forecast and request resources and maintenance assistance long before they are needed.
 - **Be thorough.** Leave nothing to chance.
 - **Avoid wasting resources and training opportunities.** Give leaders the guidance and assets needed to train their units effectively and efficiently.

- **Be flexible and continually update the training program to the unit's changing needs.** If assessment and planning stop, the training program stagnates.
- **Train continually.** Train at every opportunity, not just during an intensified period, to get ready for qualification tables at all levels. Intensified programs should be used only to bring a unit to a desired proficiency level; then train continually to maintain and sustain that level.

1-5. Contingency plans and alternate methods of training should be identified when the primary plan cannot be executed. Training time is valuable and should not be lost due to unforeseen factors. Units should consider planning for increased fire danger hazards, firing hour constraints, environmental factors, digging requirements, and other impacts to their plans.

TRAINING HORIZON

1-6. The training horizon is used to synchronize dedicated training time for organizations and units to train on METL tasks. Units preparing for deployment develop training plans that focus on established readiness aim points such as manning, equipping, and training levels. The training horizon covers the period leading up to at least one readiness aim point. Command training guidance is published to provide detailed information on the unit's training objective.

1-7. Using this concept helps forecast future resources and allocates time for the unit to be successful. It is recommended that commanders and staff use in-progress reviews to ensure that each member of the unit understands which phase of training they are in and what is expected of them.

1-8. Chapter 2 provides a general breakdown of major "T-week" activities to use as a guide. It follows the T-week concept structure found in *The Leader's Guide to Unit Training Management (UTM)* located on the Army Training Network. It assists in the development of the unit training plan. This list is not all-inclusive. Units must consider installation requirements, directives, and guidance from higher headquarters when planning training. The T-week concept for the CQT was designed based off the Army training models and recommended completion of the CQT is by T-26 (beginning of the 4th quarter of the fiscal year). Reserve Component construction engineer organizations will have to refer to current Reserve Component training models for when to execute the CQT.

1-9. During the planning process for any training event, there are a series of tasks that are executed, reviewed, or updated periodically to ensure the unit's success. Unit leaders should review all tasks that will be trained during the training event. There are several critical planning steps that involve verifying the Class V requirements and ensuring that they are forecasted well in advance and locking in training ranges and land.

EVALUATION GUIDANCE

1-10. TC 3-34.500 provides the information needed to train to standard for drills and collective tasks (task/drill numbers). Collective tasks, drill training, and evaluation outlines that are required for evaluation purposes can be found in the Central Army Registry.

Chapter 2

Training Strategy

Commanders must resource qualification training which includes coordination and evaluation of engineer training. Engineer unit commanders must have the flexibility to identify particular tasks to qualify their Soldiers based on the unit's mission and future deployments. CQTs are designed to focus on MET proficiency by unit type and permit preliminary training, proficiency training, and qualification of engineer units. They are designed to develop and test the proficiency of individual, squad, and platoon techniques at the basic, intermediate, and advanced levels for both Active and Reserve Components. The series of construction engineer tasks in each table is intended to duplicate typical battlefield tasks under realistic conditions. The tables are to be accomplished sequentially. The CQTs enable commanders to determine squad and platoon training readiness ratings. Leaders and Soldiers must qualify in their career management field (CMF) 12 series tasks that are assigned to construction units with slight variances. All construction CMF 12 series assigned to construction engineer units will conduct CQT certification according to the company commander's unit training plan.

SQUAD TRAINING

2-1. This chapter describes how a unit builds its unit training plan for engineer squads. The unit follows the progressive and gated structure of the Integrated Weapons Training Strategy to describe a general overview of the training events found within the respective squad's training strategy. It provides basic information to understand the mechanics of the strategy, but relies upon the unit referencing the appropriate training circular to apply the specific task events for the training element. The focus is to train and qualify Soldiers as a member of their element and build cohesive squads.

TRAINING TABLES

2-2. Each element has six training iterations within their strategy that culminate in their demonstration of proficiency. Squad training consists of all the training events along the critical path to proficiency.

ENGINEER SQUAD/PLATOON

2-3. Table 2-1, page 2-2, illustrates the squad's training strategy structure. . As it includes collective small teams and squads, not all table names are standardized. They are tailored to the element's function and purpose as part of the larger section or platoon formation. Of note, the training strategy culminates with two externally evaluated proficiency assessments—Table IV and Table VI. Both are discussed within the squad section of this chapter. All small-unit squads follow the six-table event structure.

Table 2-1. Squad/platoon training strategy structure example

	<i>Prerequisites (L)</i>		<i>Live (L)</i>			
	<i>Table I</i>	<i>Table II</i>	<i>Table III</i>	<i>Table IV</i>	<i>Table V</i>	<i>Table VI</i>
Squads and Platoons	Leader Task Certification	Individual Soldier Task Certification	Mobility Reconnaissance React to Contact Sergeants Time Training (STT), Situational Training Exercise (STX), Live (L)	Countermobility Survivability STT, STX (L)	Squad Certification STX (L)	Platoon Qualification Field Training Exercise
Recommended Days Required to Train	5	10	5	5	3.0	3.0 (31 Total Days to Train)
Training Days Remaining on the Critical Training Path to Collective Task Proficiency	26.0 (31 days – 5 = 26)	16.0	11.0	6.0	3.0	Collective Task Proficiency

2-4. A table of organization and equipment (TOE) or a modified table of organization and equipment (MTOE) engineer squad is typically led by a staff sergeant and typically with nine Soldiers.

2-5. Commanders may elect to include additional subordinate teams to the squad formation based on the mission requirements. If small teams are added to the squad formation after the squad has achieved proficiency, the commander may elect to incorporate proficient small teams to the squad after completing an assessment. The commander may also include the small team to the squad formation for section training.

SQUAD PROFICIENCY

2-6. Overall squad proficiency contains two separate externally evaluated assessments. These externally evaluated training events provide the commander the primary assessment tool to evaluate the unit's proficiency against an established standard as defined within the respective training publication(s), task training and evaluation outlines, and the unit's standard operating procedures. Squad proficiency is derived from the external evaluations from Table V and Table VI.

SQUAD COLLECTIVE TASK PROFICIENCY

2-7. Collective task proficiency (see table 2-2) is a gate used to assess the overall proficiency of a squad through external evaluation of their execution of all the squad's supporting collective tasks. This gate is not used to progress to higher echelon training, but indicates if the unit has the proficiency required to support higher headquarters during tactical operations effectively.

Table 2-2. Collective task proficiency external evaluation requirements

Small Unit	External Evaluation Events	Evaluated Externally To—	Evaluation Commander
Squad	Table V, Squad Certification Situational Training Exercise (STX)	Platoon	Company Commander

Note. Units are not authorized to self-evaluate Table IV unless they meet the parameters found within their training publication's validation events for certifying proficiency in austere environments.

2-8. When Soldiers assigned are not present for the evaluation, the evaluation commander must authorize their participation in future events.

SQUAD PROFICIENCY RATINGS

2-9. The proficiency rating metrics (see table 2-3) that may be certified by the evaluation commander are identified within the respective training publication. Generally, commanders certify the proficiency rating metrics based on the squad's performance during the collective task proficiency gate.

Table 2-3. Squad task proficiency gate ratings

Lowest Task Assessment	Task Proficiency Rating	Remarks
Trained (T)	≥90%	Squads must meet the training and evaluation outline criteria.
Trained minus (T-)	≥80% and <90%	
Partially minus (P)	≥70% and <80%	
Partially (P-)	≥60% and <70%	
Untrained (U)	<60%	

SQUAD VALIDATION

2-10. Validation is a commander's option to execute the Army standard proficiency assessment to the minimum threshold requirements to achieve a passing result. Where validation events are authorized, the threshold requirements are defined in the squad's training publication.

2-11. The validation event is used in extreme circumstances where the commander requires confirmation of proficiency or certification. These circumstances may arise in garrison and operational environments.

GARRISON REQUIREMENT

2-12. The brigade commander may authorize the validation event when one of the following conditions exist:

- The unit is directed to deploy within 90 days without prior notice.
- The installation range restrictions prohibit standard qualification due to range closures, ammunition restrictions, or unforeseen circumstances beyond the control of the unit.

Note. Failing to request or secure appropriate training facilities, ammunition, or other resources does not justify the use of any validation procedure at the home station.

OPERATIONAL REQUIREMENT

2-13. The battalion commander may authorize subordinate units to exercise the validation event when deployed to austere environments when any of the following conditions exist:

- Available range facilities do not support the standard Army proficiency assessment requirements.
- Local range regulations prohibit firing the ammunition type, standard engagement techniques, or do not support the surface danger area.
- The training area available does not meet the most stringent range safety regulations of the Army or host nation.

2-14. The validation event is described in the respective training publication in detail, with various options to enable the best training in less than ideal circumstances. Commanders will ultimately assume additional risk by utilizing the validation event as part of their sustainment training program while deployed.

2-15. The following rules apply to validation events:

- The brigade or equivalent commander authorizes the use of the validation event.
- May only be executed 90 days after the mission start through 30 days before mission completion.
- Successful completion of the validation event extends the existing qualification duration (proficiency assessment) by six months.
- Only one validation is authorized within a 24-month period for any type of squad.
- Failure to successfully complete a validation event after two attempts condemns the small unit's proficiency assessment immediately.
- Failure to validate requires the small unit to complete the full training strategy to regain their proficiency rating.
- External evaluation criteria are stated within the respective training publication. These requirements will prescribe procedures when standard external evaluator requirements cannot be achieved due to mission constraints sustaining squad proficiency.

2-16. Once the element has successfully completed its squad collective task proficiency, the unit must consider how the criteria impacts their subordinate's proficiency. The following paragraphs describe how squads maintain their proficiency, how to identify when a proficiency rating has triggered one or more criteria, and any options the commander has to mitigate those impacts.

2-17. The element training publication will describe in greater detail the methods to sustain proficiency. The information below is in general terms and provides an example of when an element sustains their proficiency and an example of when the proficiency is condemned.

SQUAD PROFICIENCY REQUIREMENTS

2-18. Refer to figure 2-1. Once the element achieves squad proficiency, the element loses its proficiency rating if one or more of the following triggers exist:

- **Time.** Twelve months have elapsed since the date the squad collective task proficiency gate was achieved.
- **Key leader turnover.** Minimum identified key leaders at echelon are no longer assigned to the positions within the small unit.
- **Commander assessment.** Any commander within the chain of command determines the subordinate unit's proficiency is no longer at a trained (T) or trained minus (T-) level.
- **Subordinate element proficiency.** When the unit fails to maintain the minimum required proficient subordinate elements (one level down).

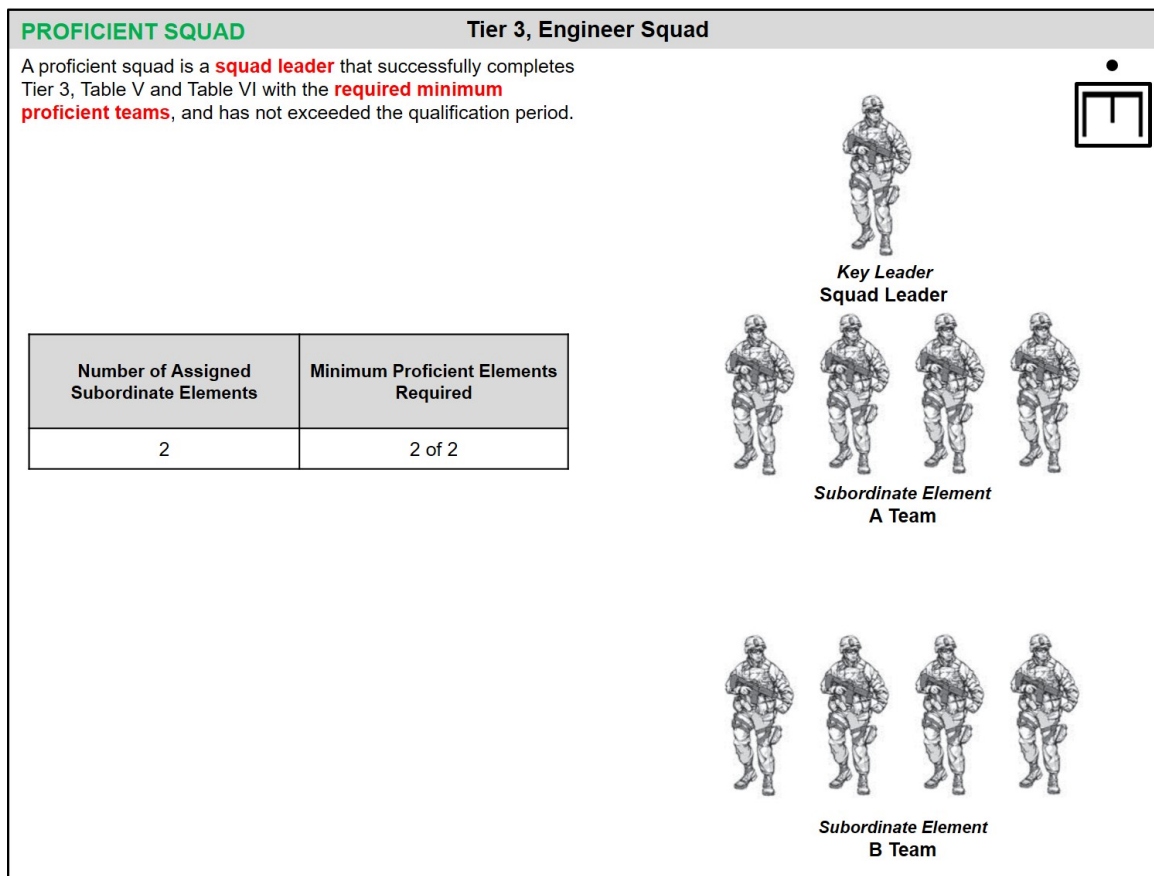


Figure 2-1. Proficient squad with key and subordinate leader example

2-19. Units may not alter, change, or modify the criteria. Evaluation commanders have the option, based on their assessment of the element, to condemn any proficiency rating they are authorized to assign.

Note. For squad proficiency, the commander two-levels higher is typically the company commander. The battalion or brigade commander can condemn any proficiency assessment or qualification for any small team or squad within their organization.

SQUAD TALENT MANAGEMENT

2-20. Commanders can mitigate the impacts to their unit's proficiency in a variety of methods. Talent management skills before, during, and after conducting the squad training strategy is required by leaders to ensure that maximum proficiency is maintained and sustained within the larger organization. Squad proficiency has a direct impact on the unit's overall readiness, and contributes to the unit's level of proficiency.

2-21. To best manage squad turbulence, the commander should consider the following:

- **Select key leaders together.** This maximizes the key leader's longevity and keeps future proficiency ratings more stable.
- **Position by potential.** Identify those young leaders that have solid promotion potential. Place those leaders in the next higher position (for example, a team leader as a squad leader), and have them achieve proficiency in advance of their pending or expected promotion.
- **Transfer trained key leaders together.** Promotions may initiate internal battalion transfers. Commanders should consider moving the newly promoted key leader and key leader combination

together, where the gaining unit within the battalion will benefit from maintaining proficient key leaders. This may not be possible or feasible for all units, particularly for squad formations.

SQUAD TRAINING

2-22. Commanders should cross-train potential replacements. Cross training young leaders in key leader positions helps to prepare them to in the event a key leader leaves. In doing so, commanders can mitigate key leader turnover with trained and proficient leaders in stride with key leader turbulence.

2-23. Proficient new arrivals should be assessed. Commanders that receive new leaders who achieved proficiency within the last qualification period have assessment options to maintain squad proficiency. Commanders can assess two previously qualified key leaders from different elements to determine their proficiency status if they are assigned together in an element. This is the least preferred method of talent management and requires the commander to make assessments using previous crew records, sustainment training in simulations, and other assessments to determine their proficiency status.

SQUAD TURBULENCE

2-24. The commander may consider a turbulent squad proficient when the squad leader and the minimum required subordinate leaders have previously achieved proficiency in their assigned position in a different organization during the previous qualification period.

2-25. The squad has demonstrated proficiency during a squad training exercise or similar training event outside the squad training density.

2-26. If commanders are not completely confident in the squad cohesion, capability, experience, and performance, they must rate them as unqualified or not proficient through the next training density.

SQUAD PROFICIENCY REQUIREMENTS

2-27. Units manage squads by squad leaders (key leader) and proficient subordinate team leaders (subordinate leader) to maintain and sustain the greatest amount of experience within their formation. The management of these two components provide the unit with a metric to assist in determining the overall unit proficiency. Refer to table 2-4 for squad proficiency and reporting requirements.

Table 2-4. Squad task proficiency gate ratings

<i>Element</i>	<i>Proficiency Requirement</i>	
Squad	A proficient engineer squad has a squad leader that successfully completes Tables I through VI and 2 out of 2 subordinate elements have successfully completed Tables I through VI.	
	Number of Subordinate Teams Assigned or Attached to the Squad	Minimum Number of Proficient Subordinate Teams Required
	2	2 of 2
	1	1 of 1

2-28. Talent management within the squad structure requires the commander to balance experience and demonstrated proficiencies of the team leaders and the squad leader to sustain proficiency throughout the fiscal year. Commanders will utilize various proficiency assessment tools to manage risks during key leader and subordinate leader movements or assignment changes.

2-29. Criteria Rule Number 2, *Key Leader Turn Over*, is triggered when the squad leader is no longer assigned to the squad. Once the squad leader departs, assigning the A-Team leader as the squad leader is a sound decision to keep cohesion of the unit intact. Although this decision best maintains the squad's proficiency, it triggers Criteria Rule Number 4, *Subordinate Element Proficiency*.

Note. For example, key leader promotions occur where the squad leader is promoted to sergeant first class and is reassigned to another platoon. A subordinate squad leader (A Team) is promoted to staff sergeant and is assigned as the new squad leader. Although the squad leader was a team leader during squad training and completion of the collective task proficiency and live-fire proficiency gate, the squad meets two separate criteria. In doing so, the squad loses its proficiency rating (see figure 2-2).

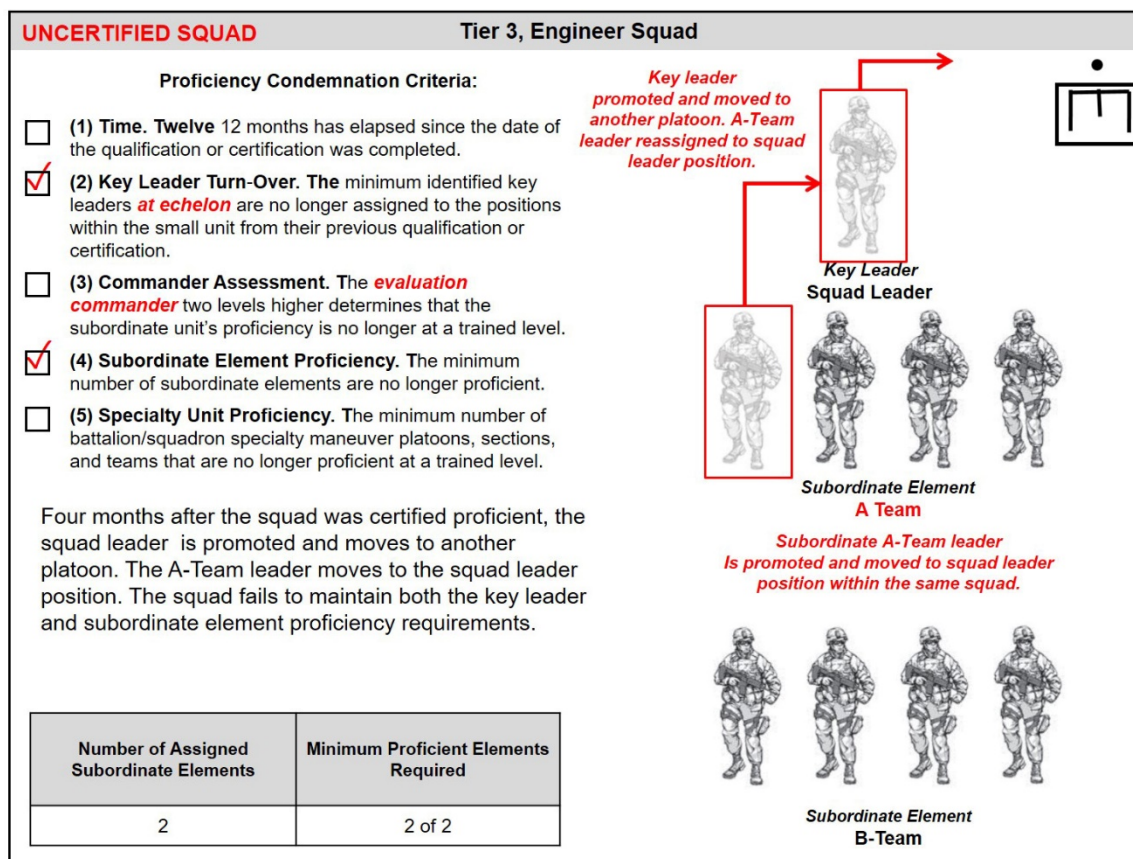


Figure 2-2. Uncertified squad example

2-30. The commander does have options available to him to build the squad's proficiency rapidly. For example, the commander may train and certify a team with a new A-Team leader. Once complete, the commander can conduct off-cycle training through collective task proficiency and the live-fire proficiency gate for the squad.

Note. Using the same example, the commander may execute his talent management options if a newly arrived staff sergeant who achieved squad proficiency during his last assignment, and within the gaining unit's qualification period.

In the continuation of the example in figure 2-3, page 2-8, the commander assesses the staff sergeant's previous performance and evaluations, and assigns the staff sergeant to the squad leader position. The commander continues assessing with Leaders Table I, and a squad training exercise event, day and night. Once complete, the commander assumes limited risk and continues to carry the squad as proficient through the next training density.

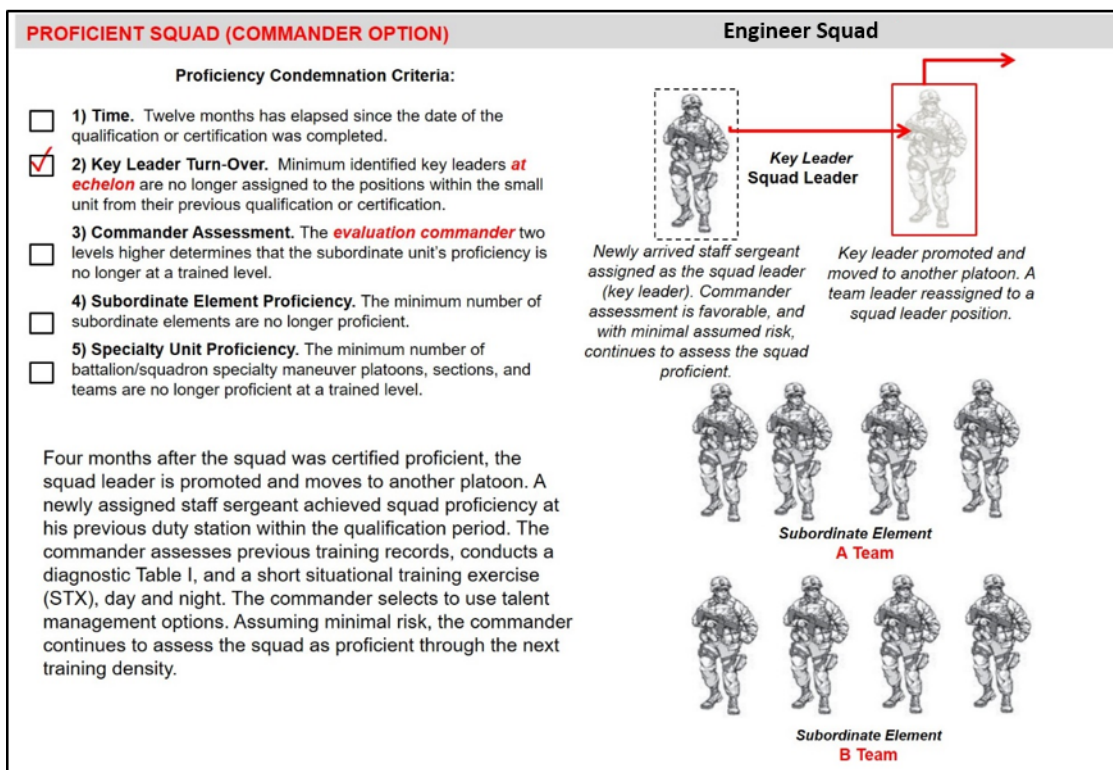


Figure 2-3. Commander accepting risk option sustains proficiency assessment example

Chapter 3

Construction Qualification Tables

The design of these tables are intended to facilitate training progression utilizing the crawl, walk, and run methodology to build unit readiness in support of MET proficiency.

CONDUCT OF TABLE I—LEADER CERTIFICATION

3-1. All leaders in the construction engineer platoon certify on their military occupational specialty (MOS) construction leader tasks within 90 days of assignment. All leaders will recertify annually. Leaders are certified in MOS construction tasks by demonstrating their ability to perform estimating calculations and display basic knowledge of construction. Periodically throughout the year, new leaders will arrive and the commander must ensure that these noncommissioned officers are certified. Companies determine which tasks to train and certify based on their training assessment and MET proficiency. This training should be conducted using Class IV and training aids. At a minimum, leaders will certify on the following as shown in table 3-1 and table 3-2, page 3-2.

Table 3-1. Table I leader certification

TABLE I, Leader Certification						
EVENT NAME	Leader Certification		Environment		Live	5
ELEMENT	Leaders		Conditions		Hands-On	
TIER CATEGORY	Foundation		Primary Facility		Class	Days Required
TRAINING PUBLICATION	Construction Qualification Tables (CQTs)		Alternate Facility		Class	
REQUIRED	Yes		Component	Active Component	Reserve Component	Leaders
EXTERNAL EVALUATION	Optional		Frequency	1x	1x	
VALID FOR	12 Months		Fiscal Year/Training Year	5	5	Throughput
TIER	Table					
	I	II	III	IV	V	VI
3	Leader Certification	Soldier Certification	Sergeants Time Training	Sergeants Time Training	Situational Training Exercise	Field Training Exercise
	5	10	3	3	5	5 (31 Days)
WHEN EXECUTED:	T-50 through T-48		—	—	—	—
TIER	Prerequisites					
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Table 3-1. Table I leader certification (continued)

TABLE I, Leader Certification (continued)						
CRITERIA (CC)	CC Rule 1	CC Rule 2	CC Rule 3	CC Rule 4	CC Rule 5	CC Rule 6
	Time	Key Leader Turnover	Commander Assessment	Subordinate Element Proficiency	Squad Proficiency	Platoon Proficiency
Remarks: Each assigned leader of the squads/platoons must successfully complete Table I, <i>Leader Certification</i> , between T-50 and T-48, prior to moving on to the next table.						

Table 3-2. Table I leader certification tasks

Skill Level 2 Tasks	
Task Number	Task Title
052-12N-2001	Excavate a Sidehill Bench With a Crawler Tractor
052-12N-2003	Perform Advanced Grading Operations With a Motorized Grader
052-12N-2004	Construct a Berm With a Wheeled Tractor-Scraper
052-12N-2005	Transport Construction Equipment
052-12N-2006	Excavate a Vehicle Fighting Position
052-254-2042	Make a Sidehill Excavation With a Crawler Tractor
052-254-2043	Finish Side Slopes With the Crawler Tractor
052-254-2044	Final-Grade an Area With a Motorized Grader
052-254-2045	Finish Slopes With a Motorized Grader
052-254-2046	Mix Materials With a Motorized Grader
052-12W-2109	Install Doors
052-12W-2118	Install Windows
052-195-2000	Direct Construction of Fighting Positions in the Field
052-195-2010	Direct the Construction of Fighting Positions in Urban Terrain
052-195-2101	Direct Construction of Wire Entanglements
052-196-2103	Determine Gap Width
Skill Level 3 Tasks	
Task Number	Task Title
052-195-3067	Determine Logistical Requirements for Wire Obstacles
052-196-3007	Conduct a Ford Reconnaissance
052-196-3008	Conduct a Bridge Reconnaissance
052-196-3010	Conduct an Engineer Resource Assessment
052-196-3065	Prepare a Route Reconnaissance Overlay
052-227-3120	Direct the Construction of a Vehicle Fighting Position
052-256-3020	Interpret a Construction Print
052-256-3033	Direct Construction of Protective Earth Walls and Berms
052-256-3036	Direct Equipment in Obstacle Removal

Table 3-2. Table I leader certification tasks (continued)

Skill Level 3 Tasks (Continued)	
Task Number	Task Title
052-256-3037	Supervise Construction of an Antitank Ditch
052-256-3041	Direct Soils Stabilization Operations
052-256-3042	Direct Drainage Operations
052-256-3043	Direct Crawler Tractor Operations
052-256-3044	Direct Motorized Scraper Operations
052-256-3045	Direct Motor Grader Operations
052-256-3046	Direct Compaction Operations
052-256-3047	Direct Scoop Loader Operations
052-256-3048	Direct Utility Tractor Operations
052-256-3049	Direct Crane Operations
052-256-3052	Interpret a Critical Path Method (CPM)
052-256-3054	Direct Runway/Bomb Crater Repairs
052-256-3055	Direct the Construction of a Helipad
052-256-3057	Calculate a Crawler Tractor Production Estimate
052-256-3058	Calculate a Motorized Scraper Production Estimate
052-256-3059	Calculate a Motorized Grader Production Estimate
052-256-3060	Calculate a Scoop Loader Production Estimate
052-256-3063	Calculate a Soil Compaction Equipment Production Estimate
052-256-3064	Calculate a Surface Treatment Production Estimate
052-256-3065	Direct Equipment Operations Using the Laserplane Leveling System
052-256-3067	Supervise Placement of Single Surface Treatment Materials
052-239-3001	Prepare a Bill of Materials
052-239-3004	Supervise the Construction of Forms
052-239-3029	Schedule Work
052-239-3030	Read Construction Prints
052-239-3031	Annotate Construction Print Indicating "As-Built"
052-239-3033	Supervise a Building Layout
052-239-3035	Supervise the Construction of Wood Frame Structures
052-239-3039	Supervise the Construction of Concrete Forms and Structures
052-239-3038	Supervise the Installation of a Plumbing System (House)
052-239-3040	Supervise the Construction of Masonry Structures

Table 3-2. Table I leader certification tasks (continued)

<i>Skill Level 3 Tasks (continued)</i>	
<i>Task Number</i>	<i>Task Title</i>
052-239-3107	Supervise the Erection of Pre-Engineered Buildings
052-239-3120	Utilize a Framing Square
052-239-3123	Supervise the Installation of Suspended Ceilings
<i>Skill Level 4 Tasks</i>	
<i>Task Number</i>	<i>Task Title</i>
052-12N-4001	Manage a Construction Project
052-12T-4155	Prepare a Design Specification Proposal for a Horizontal-Construction Project
052-194-4010	Manage Engineer Support to Engagement Area Development
052-195-4009	Determine Logistical Requirements for Nonexplosive Antivehicular Obstacles
052-195-4203	Manage Construction of Bunkers/Shelters
052-196-4022	Determine the Rapid Field Classification of a Fixed Bridge
052-12H-4007	Design a Plumbing Utilities Job Plan
052-12H-4106	Design an Electrical Utilities Job Plan
052-256-4161	Develop a Project Management Schedule Using the Critical Path Method (CPM)
052-256-4162	Resource-Constrain a Project

SQUAD CONDUCT OF TABLE II—INDIVIDUAL MILITARY OCCUPATIONAL SPECIALTY CERTIFICATION

3-2. Table II is individual MOS training. This involves the squad leaders training their Soldiers during sergeant's time training. The squad leader teaches the Soldiers to use the basic construction skills required of Skill Level 10 engineer Soldiers to execute construction missions in a theater of operations. This training should be conducted using Class IV. Squad leaders conduct individual training of their squads. This is a hands-on, performance-oriented table that requires the Soldier to demonstrate proficiency in their MOS. All leaders in the platoon are responsible for ensuring that they and their subordinate leaders are qualified in Table II before executing Table III or IV tasks. The platoon certifies squad members on construction focused tasks. Refer to table 3-3 and table 3-4, page 3-6.

Table 3-3. Table II individual Soldier certification

TABLE II, Individual Soldier Certification						
EVENT NAME	Soldier Certification		Environment		Live	10
ELEMENT	Soldier		Conditions		Hands-On	
TIER CATEGORY	Foundation		Primary Facility		Class	Days Required
TRAINING PUBLICATION	Construction Qualification Tables (CQTs)		Alternate Facility		Class	
REQUIRED	Yes		Component	Active Component	Reserve Component	Soldiers
EXTERNAL EVALUATION	Optional		Frequency	1x	1x	
VALID FOR	12 Months		Fiscal Year/Training Year Days Total	10	10	Throughput
TIER	Table					
	I	II	III	IV	V	VI
3	Leader Certification	Soldier Certification	Sergeants Time Training	Sergeants Time Training	Situational Training Exercise	Field Training Exercise
	5	10	3	3	5	5 (31 Days)
WHEN EXECUTED	T-48 through T-44		—	—	—	—
TIER	Prerequisites					
	CQT 1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
CRITERIA (CC)	CC Rule 1	CC Rule 2	CC Rule 3	CC Rule 4	CC Rule 5	CC Rule 6
	Time	Key Leader Turnover	Commander Assessment	Subordinate Element Proficiency	Squad Proficiency	Platoon Proficiency
Remarks: Each assigned soldier of the squads/platoons must successfully complete Table II, <i>Soldier Certification</i> , between T-48 and T-44, prior to moving on to the next table.						

Table 3-4. Table II individual Soldier certification tasks

Task Number	Task Title
052-12N-1006	Perform Operators Preventive Maintenance Checks and Services (PMCS)
052-12N-1007	Clear Land With a Crawler Tractor
052-12N-1008	Excavate With a Crawler Tractor
052-12N-1009	Push Load a Wheel Tractor-Scraper With a Crawler Tractor
052-12N-1010	Construct a Berm With a Crawler Tractor
052-12N-1012	Drive a Dump Truck (TDC Drive)
052-12N-1013	Dump Material With a Dump Truck
052-12N-1014	Spread Material With a Dump Truck
052-12N-1015	Load a Haul Unit With a Wheel Loader
052-12N-1016	Excavate With a Wheel Loader
052-12N-1017	Replace Attachments on a Wheel Loader
052-12N-1018	Load a Haul Unit With a Backhoe Loader
052-12N-1019	Excavate With a Backhoe Loader
052-12N-1020	Replace Attachments on a Backhoe Loader (BHL)
052-12N-1021	Load a Haul Unit With a Skid Steer Loader (SSL)
052-12N-1022	Excavate With a Skid Steer Loader
052-12N-1023	Replace Attachments on a Skid Steer
052-12N-1027	Compact Material With a High-Speed Tamping Foot Roller
052-12N-1028	Compact Material With a Self-Propelled Vibratory Roller
052-12N-1029	Compact Material With a Steel Wheel Roller
052-12N-1203	Perform Leveling Operations With a Motorized Grader
052-12N-1204	Construct a Ditch With a Motorized Grader
052-253-1059	Pressure Fill a Water Distributor
052-253-1060	Spray an Area Using a Water Distributor
052-253-1255	Perform Truck Tractor/Semitrailer Coupling Operations
052-253-1256	Drive a Truck Tractor/Semitrailer With a Semiautomatic Transmission
052-254-1041	Backfill Material Around a Below-Ground Structure Using a Crawler Tractor
052-254-1055	Spread Piles of Loose Material With a Motorized Grader
052-254-1057	Backfill With a Scoop Loader
052-254-1058	Construct a Stockpile With a Scoop Loader
052-254-1061	Move a Load With a Scoop Loader Clamshell
052-254-1069	Excavate Material From an Area With a Motorized Scraper

Table 3-4. Table II individual Soldier certification tasks (continued)

Task Number	Task Title
052-254-1070	Spread Fill Material With a Motorized Scraper
052-254-1074	Excavate a Hull Defilade Position With a Deployable Universal Combat Earthmover (DEUCE)
052-254-1075	Construct a Stockpile With a Deployable Universal Combat Earthmover (DEUCE)
052-254-1076	Spread a Stockpile With a Deployable Universal Combat Earthmover (DEUCE)
052-255-1166	Perform Ditching Operations With a Hydraulic Excavator
052-255-1167	Perform Haul Unit Loading Operations With a Hydraulic Excavator
052-255-1168	Perform Lifting Operations With a Hydraulic Excavator
052-12T-1538	Perform a Slump Test
052-12K-1000	Test Water System
052-12K-1003	Install Copper Pipe
052-12K-1004	Install Plastic Pipe
052-12K-1005	Install Steel Pipe
052-12K-1006	Install Cross-Linked Polyethylene (PEX) Tubing
052-12K-1012	Clear Waste System Stoppages
052-12K-1022	Install a Hot Water Heater
052-12K-1023	Install a Prefabricated Shower
052-12K-1024	Install a Drinking Fountain
052-12K-1025	Insulate a Water System
052-12K-1033	Install a Check Valve
052-12K-1050	Install a Lavatory
052-12K-1055	Install a Urinal
052-12K-1061	Maintain Plumbing Tools
052-12K-1062	Rough in a Gravity Flow Waste System
052-12K-1064	Install a Water Closet With Tank
052-12K-1070	Rebuild a Pressure Reducing Valve
052-12K-1071	Rebuild a Gate Valve
052-12K-1072	Rebuild Flushometer Valve
052-12K-1073	Repair Cast Iron Pipe
052-12K-1074	Rebuild a Compression Faucet
052-12K-1075	Rebuild a Check Valve
052-12K-1076	Rebuild a Ball Faucet Valve
052-12R-1100	Rescue an Electrical Shock Victim
052-12R-1102	Install a Service Entrance System

Table 3-4. Table II individual Soldier certification tasks (continued)

Task Number	Task Title
052-12R-1111	Install Electrical Boxes
052-12R-1115	Install a Rigid Metal Conduit (RMC) System
052-12R-1119	Install an Electrical Cable System
052-12R-1124	Install an Electrical Switch
052-12R-1125	Install an Electrical Receptacle
052-12R-1126	Install an Electrical Luminaire Fixture
052-12R-1127	Install Service Panel
052-12R-1132	Maintain Electrician Tools
052-12R-1163	Troubleshoot Malfunctions in an Electrical Circuit
052-12R-1165	Operate a Generator
052-12R-1169	Install Grounding System
052-12W-1141	Construct a Floor
052-12W-1143	Construct Wooden Stairs
052-12W-1144	Layout Common Rafters
052-12W-1146	Construct a Masonry Wall
052-12W-1162	Install Batter Boards for Building Layout
052-12W-1163	Construct a Concrete Wall Form
052-12W-1166	Construct a Concrete Slab Form
052-12W-1168	Place Concrete
052-12W-1172	Apply Roof Covering with Shingles
052-12W-1174	Apply Interior Trim
052-12W-1183	Prepare a Materials Take-Off List
052-12W-1189	Install a Suspended Ceiling
052-12W-1201	Install Exterior Finish
052-12W-1203	Construct a Framed Wall
052-12W-1204	Install Sheathing
052-12W-1205	Install Floor or Wall Tile
052-12W-1206	Maintain Carpentry/Masonry Tools
052-236-1165	Construct an Overhead Form
052-236-1173	Fabricate Joints and Splices
052-236-1202	Interpret Construction Drawings and Prints
052-246-1164	Interpret Electrical Prints and Drawings

SQUAD, CONDUCT OF TABLE III—RECONNAISSANCE

3-3. Table 3-5 is designed to train all members of the construction engineer squad reconnaissance tasks. Squads train under locally developed scenarios that are tactically sound and supported by the existing range layout using the tasks shown in table 3-5.

Table 3-5. Table III reconnaissance table

TABLE III, Reconnaissance						
EVENT NAME	Reconnaissance Table		Environment		Live	5
ELEMENT	Squad		Conditions		Hands-On	
TIER CATEGORY	Intermediate		Primary Facility		Training Area	Days Required
TRAINING PUBLICATION	Construction Qualification Tables (CQTs)		Alternate Facility		Class	
REQUIRED	Yes		Component	Active Component	Reserve Component	Squads
EXTERNAL EVALUATION	Optional		Frequency	1x	1x	
VALID FOR	12 Months		Fiscal Year/Training Year Days Total	5	5	Throughput
TIER	Table					
	I	II	III	IV	V	VI
3	Leader Certification	Soldier Certification	Sergeants Time Training	Sergeants Time Training	Situational Training Exercise	Field Training Exercise
	5	10	3	3	5	5 (31 Days)
WHEN EXECUTED	—		T-43 through T-38	—	—	—
TIER	Prerequisites					
	CQT 1	CQT II	Not Applicable	Not Applicable	Not Applicable	Not Applicable
CRITERIA (CC)	CC Rule 1	CC Rule 2	CC Rule 3	CC Rule 4	CC Rule 5	CC Rule 6
	Time	Key Leader Turnover	Commander Assessment	Subordinate Element Proficiency	Squad Proficiency	Platoon Proficiency
Remarks: Each assigned leader/Soldier of the squads/platoons must successfully complete Table III, <i>Squad Mobility/Reconnaissance/React</i> , between T-43 and T-38, prior to moving on to the next table.						

3-4. Squads train on the following tasks shown in table 3-6.

Table 3-6. Table III reconnaissance tasks

Platoon Reconnaissance Task	
05-PLT-1004	Perform an Obstacle and Restriction Reconnaissance
05-PLT-1016	Perform a Route Classification
05-PLT-1018	Perform an Engineer Reconnaissance
05-PLT-1020	Perform a Technical Reconnaissance
05-PLT-1021	Conduct a River Reconnaissance
Legend:	
PLT	platoon

SQUAD, CONDUCT OF TABLE IV—MOBILITY/COUNTERMOBILITY AND SURVIVABILITY TASKS

3-5. Table IV is a mobility, countermobility, and survivability construction support operation, squad/platoon level training. The engineer squad/platoon conducts survivability construction within the means and capabilities of their unit type. The equipment sections typically provide earthmoving support for engagement area development, and battle positions. The commander can conduct multiechelon training to employ both the vertical and horizontal construction engineers. This involves the platoon sergeant and squad leaders training their Soldiers during sergeant's time training and situational training exercise (STX). The squad leader teaches the Soldiers the basic survivability construction tasks identified for engagement areas, protective, and defensive positions. This table is designed to train all members of the construction engineer squad on mobility, countermobility, and survivability tasks. Squads train under locally developed scenarios that are tactically sound and supported by the existing range layout using the tasks shown in table 3-7.

Table 3-7. Table IV mobility/countermobility and survivability table

TABLE IV, Mobility/Countermobility/Survivability					
EVENT NAME	Countermobility/Survivability	Environment		Live	5
ELEMENT	Squad	Conditions		Hands-On	
TIER CATEGORY	Intermediate	Primary Facility		Training Area	Days Required
TRAINING PUBLICATION	Construction Qualification Tables (CQTs)	Alternate Facility		Class	
REQUIRED	Yes	Component:	Active Component	Reserve Component	Squads
EXTERNAL EVALUATION	Optional	Frequency	1x	1x	
VALID FOR	12 Months	Fiscal Year/Training Year Days Total	3	3	Throughput

Table 3-7. Table IV mobility/countermobility and survivability table (continued)

TABLE IV, Mobility/CounterMobility/Survivability (continued)						
TIER	Table					
	I	II	III	IV	V	VI
3	Leader Certification	Soldier Certification	Sergeants Time Training	Sergeants Time Training	Situational Training Exercise	Field Training Exercise
	5	10	3	3	5	5 (31 Days)
WHEN EXECUTED	—		—	T-37 through T-34	—	—
TIER	Prerequisites					
	CQT I	CQT II	CQT III	Not Applicable	Not Applicable	Not Applicable
CRITERIA (CC)	CC Rule 1	CC Rule 2	CC Rule 3	CC Rule 4	CC Rule 5	CC Rule 6
	Time	Key Leader Turnover	Commander Assessment	Subordinate Element Proficiency	Squad Proficiency	Platoon Proficiency
Remarks: Each assigned leader/Soldier of the squads/platoons must successfully complete Table IV, <i>CounterMobility/Survivability</i> , between T-37 and T-34, prior to moving on to the next table.						

3-6. Squads/platoons train on the tasks shown in table 3-8.

Table 3-8. Table IV mobility/countermobility/survivability tasks

Mobility Tasks	
05-PLT-5101	Construct Combat Roads/Trails
05-PLT-5109	Clear Obstacles Using Engineer Equipment
05-PLT-5101	Construct Combat Roads/Trails
05-CO-5142	Construct a Tactical Airstrip
CounterMobility Tasks	
05-SQD-2101	Construct a Triple-Standard Concertina Obstacle
05-SQD-2102	Construct an 11-Row Antivehicular Wire Obstacle
05-SQD-2103	Construct a Tangle Foot Wire Obstacle
05-SQD-2104	Construct a Knife Rest
05-PLT-2001	Emplace Situational Obstacles
05-PLT-2002	Disable Lines of Communication (LOC)
05-PLT-2015	Construct a Tank Ditch
05-PLT-2017	Create a Crater Obstacle Using Explosives
05-PLT-2018	Prepare Preconstructed Obstacles
05-PLT-2019	Construct a Wire Obstacle
05-PLT-2020	Construct a Log Obstacle
05-PLT-2022	Construct a Protective Obstacle

Table 3-8. Table IV mobility/countermobility/survivability tasks (continued)

Survivability Tasks	
05-PLT-0313	Construct Revetments
05-PLT-3000	Construct Bunkers and Shelters
05-PLT-3002	Construct Protective Earthen Walls and Berms
05-PLT-3013	Construct Vehicle Fighting Positions
05-PLT-3014	Construct Vehicle Protective Positions
05-CW-3009	Prepare Crew-Served Weapons Fighting Positions
Legend: CO company CW crew PLT platoon SQD squad	

SQUAD, CONDUCT OF TABLE V—SQUAD CERTIFICATION

3-7. Table V is level certification focused at the squad level training, but is scalable to platoon level training depending on the project. The engineer squad/platoon conducts construction within the means and capabilities of their unit type. The commander can conduct multiechelon training to employ both the vertical and horizontal construction engineers. This involves the platoon sergeant and squad leaders training their Soldiers during sergeant's time training and STX. The squad leader teaches the Soldiers the basic construction tasks identified and conducted using Class IV and required equipment. The commander plans for Class IV according to the Army Facilities Component System/Joint Construction Management System design requirements. Refer to table 3-9 and table 3-10.

Table 3-9. Table V squad certification table

TABLE V, Squad Certification Perform Construction Operations						
EVENT NAME	Squad Certification		Environment		Live	3
ELEMENT	Squad		Conditions		Hands-On	
TIER CATEGORY	Advanced		Primary Facility		Training Area	Days Required
TRAINING PUBLICATION	Construction Qualification Tables (CQTs)		Alternate Facility		Training Area	
REQUIRED	Yes		Component	Active Component	Reserve Component	Squads
EXTERNAL EVALUATION	Optional		Frequency	1x	1x	
VALID FOR	12 Months		Fiscal Year/Training Year Days Total	5	5	Throughput
TIER	Table					
	I	II	III	IV	V	VI
3	Leader Certification	Soldier Certification	Sergeants Time Training	Sergeants Time Training	Situational Training Exercise	Field Training Exercise
	5	10	3	3	5	5 (31 Days)
WHEN EXECUTED				T-33 through T-30		

Table 3-9. Table V squad certification table (continued)

TABLE V, Squad Certification Perform Construction Operations (continued)						
TIER	Prerequisites					
	CQT I	CQT II	CQT III	CQT IV	Not Applicable	Not Applicable
CRITERIA (CC)	CC Rule 1	CC Rule 2	CC Rule 3	CC Rule 4	CC Rule 5	CC Rule 6
	Time	Key Leader Turnover	Commander Assessment	Subordinate Element Proficiency	Squad Proficiency	Platoon Proficiency
Remarks: Each assigned leader/Soldier of the squads/platoons must successfully complete Table V, <i>Squad Certification</i> , between T-33 and T-30, prior to moving on to the next table.						

Table 3-10. Table V squad certification tasks

TABLE V, Squad Certification Tasks, Perform Construction Operations	
05-PLT-5110	Perform Lifting and Loading Operations
05-PLT-5111	Provide Construction Site Compaction Support
05-PLT-5112	Perform Soil Stabilization
05-PLT-5113	Provide Construction Site Cut/Fill Support
05-PLT-5116	Provide Excavation Support
05-PLT-5117	Provide Grading Support
05-PLT-5143	Construct a Helipad
05-PLT-5144	Perform Dump Truck-Hauling Operations
05-SQD-5210	Construct a Sewerage System
05-SQD-5211	Construct a Water Distribution System
05-SQD-5212	Construct Electrical Utilities
05-PLT-5215	Install a Coupled Pipeline
05-SQD-5220	Construct a Wood Frame Structure
05-PLT-5221	Construct a Headwall
05-PLT-5222	Construct a Steel-Frame Pre-engineered Structure
05-SQD-5223	Construct a Concrete Structure
Legend:	
PLT	platoon
SQD	squad

CONDUCT OF TABLE VI–PLATOON CERTIFICATION TASKS

3-8. Table VI is level certification focused at the platoon level training. This is integrated into the culminating training event for the engineer company. The intent is that the engineer company conducts a construction support focused field training exercise (FTX). Tables I through V must have been completed prior to this table. The engineer platoons must be proficient in performing the collective tasks that support their company METL. Ultimately, the unit must be proficient at performing their engineer METs and supporting collective tasks (SCTs) in support of theater development and support to maneuver elements. Engineer commanders should work closely with their supported elements to design scenarios that will ensure that they exercise their engineer units. The commander plans for Class IV according to the Army Facilities Component System/Joint Construction Management System design requirements. Refer to table 3-11 and table 3-12, pages 3-14 and 3-15.

Table 3-11. Table VI platoon qualification table

TABLE VI, Platoon Qualification - Provide Engineer Construction Support						
EVENT NAME	Platoon Qualification		Environment		Live	3
ELEMENT	Platoon		Conditions		Hands-On	
TIER CATEGORY	Advanced		Primary Facility		Field Training Area	Days Required
TRAINING PUBLICATION	Construction Qualification Tables (CQTs)		Alternate Facility		Training Area	
REQUIRED	Yes		Component:	Active Component	Reserve Component	Platoon
EXTERNAL EVALUATION	Optional		Frequency	1x	1x	
VALID FOR	12 Months		Fiscal Year/Training Year Days Total	5	5	Throughput
TIER	Table					
	I	II	III	IV	V	VI
3	Leader Certification	Soldier Certification	Sergeants Time Training	Sergeants Time Training	Situational Training Exercise	Field Training Exercise
	5	10	3	3	5	5 (31 Days)
WHEN EXECUTED	—		—	—	—	T-29 through T-26
TIER	Prerequisites					
	CQT I	CQT II	CQT III	CQT IV	CQT V	Not Applicable
CRITERIA (CC)	CC Rule 1	CC Rule 2	CC Rule 3	CC Rule 4	CC Rule 5	CC Rule 6
	Time	Key Leader Turn-Over	Commander Assessment	Subordinate Element Proficiency	Squad Proficiency	Platoon Proficiency
Remarks: Each assigned leader/Soldier of the squads/platoons must successfully complete Table VI, <i>Platoon Qualification</i> , between T-29 and T-26, prior to moving on to the next table.						

Table 3-12. Table VI platoon qualification tasks

Conduct Reconnaissance Missions	
05-PLT-1004	Perform an Obstacle and Restriction Reconnaissance
05-PLT-1016	Perform a Route Classification
05-PLT-1018	Perform an Engineer Reconnaissance
05-PLT-1020	Perform a Technical Reconnaissance
05-PLT-1021	Conduct a River Reconnaissance
Mobility/Counter mobility and Survivability Tasks	
05-PLT-0313	Construct Revetments
05-PLT-2015	Construct Tank Ditch
05-PLT-3000	Construct Bunkers and Shelters
05-PLT-3002	Construct Protective Earthen Walls and Berms
05-PLT-3013	Construct Vehicle Fighting Positions
05-PLT-3014	Construct Vehicle Protective Positions
05-PLT-5101	Construct Combat Roads/Trails
05-PLT-5109	Clear Obstacles Using Engineer Equipment
05-CO-1023	Provide General Engineer Support for Mobility Operations
05-CO-5142	Construct a Tactical Airstrip
Conduct Construction Operations	
05-PLT-5110	Perform Lifting and Loading Operations
05-PLT-5111	Provide Construction Site Compaction Support
05-PLT-5112	Perform Soil Stabilization
05-PLT-5113	Provide Construction Site Cut/Fill Support
05-PLT-5116	Provide Excavation Support
05-PLT-5117	Provide Grading Support
05-PLT-5143	Construct a Helipad
05-PLT-5144	Perform Dump Truck-Hauling Operations
05-CO-5001	Perform Project Management
05-CO-5250	Perform Construction Operations
05-PLT-5200	Construct a Nonstandard Fixed Bridge
05-PLT-5201	Construct a Bridge Abutment
05-PLT-5210	Construct a Sewerage System
05-PLT-5211	Construct a Water Distribution System
05-PLT-5212	Construct Electrical Utilities
05-PLT-5215	Install a Coupled Pipeline
05-PLT-5220	Construct a Wood Frame Structure
05-PLT-5221	Construct a Headwall

Table 3-12. Table VI platoon qualification tasks (continued)

<i>Conduct Construction Operations (Continued)</i>	
05-PLT-5222	Construct a Steel-Frame Pre-engineered Structure
05-PLT-5223	Construct a Concrete Structure
05-CO-5001	Perform Project Management
05-CO-5002	Repair Airfields
05-CO-5250	Perform Construction Operations
05-CO-3000	Coordinate Survivability Operations
05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations
Legend:	
CO	company
PLT	platoon

Appendix A

Engineer Qualification Tables Listed By Unit Type

ENGINEER CONSTRUCTION COMPANY 05340K000

A-1. Table A-1 identifies the collective tasks that units are designed and equipped to accomplish in support of their standardized METL.

Table A-1. Engineer construction company (ECC) CQT tasks

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>ECC 05340K000</i>
05-PLT-0313	Construct Revetments	X
05-PLT-1018	Perform an Engineer Reconnaissance	X
05-PLT-1020	Perform a Technical Reconnaissance	X
05-PLT-1021	Conduct a River Reconnaissance	X
05-PLT-2001	Emplace Situational Obstacles	X
05-PLT-2002	Disable Lines of Communication (LOC)	X
05-PLT-2015	Construct a Tank Ditch	X
05-PLT-3000	Construct Bunkers and Shelters	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X
05-PLT-3011	Establish a Hasty Position	X
05-PLT-3013	Construct Vehicle Fighting Positions	X
05-PLT-3014	Construct Vehicle Protective Positions	X
05-PLT-5100	Place Airfield Matting on Prepared Surfaces	X
05-PLT-5101	Construct Combat Roads/Trails	X
05-PLT-5102	Construct Roads	X
05-PLT-5106	Install a Culvert	X
05-PLT-5107	Clear Airfields	X
05-PLT-5108	Perform Clearing, Grubbing, and Stripping Operations	X
05-PLT-5109	Clear Obstacles Using Engineer Equipment	X
05-PLT-5110	Perform Lifting and Loading Operations	X
05-PLT-5111	Provide Construction Site Compaction Support	X
05-PLT-5112	Perform Soil Stabilization	X
05-PLT-5113	Provide Construction Site Cut/Fill Support	X
05-PLT-5114	Provide Construction Site Drainage	X
05-PLT-5115	Provide Dust Control Measures	X
05-PLT-5118	Maintain Existing Roads	X
05-PLT-5116	Provide Excavation Support	X
05-PLT-5117	Provide Grading Support	X
05-PLT-5137	Provide Borrow Pit Support	X
05-PLT-5140	Construct Airfield Surfaces	X

Table A-1. ECC CQT tasks (continued)

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>ECC 05340K000</i>
05-PLT-5141	Perform Runway/Taxiway Crater Repair	X
05-PLT-5142	Perform Roadway Crater Repair	X
05-PLT-5143	Construct a Helipad	X
05-PLT-5144	Perform Dump Truck-Hauling Operations	X
05-PLT-5200	Construct a Nonstandard Fixed Bridge	X
05-PLT-5201	Construct a Bridge Abutment	X
05-PLT-5210	Construct a Sewerage System	X
05-PLT-5211	Construct a Water Distribution System	X
05-PLT-5212	Construct Electrical Utilities	X
05-PLT-5215	Install a Coupled Pipeline	X
05-PLT-5220	Construct a Wood Frame Structure	X
05-PLT-5221	Construct a Headwall	X
05-PLT-5222	Construct a Steel-Frame Pre-engineered Structure	X
05-PLT-5223	Construct a Concrete Structure	X
05-SEC-5001	Perform Construction Survey	X
05-CO-1023	Provide General Engineer Support for Mobility Operations	X
05-CO-3000	Coordinate Survivability Operations	X
05-CO-5002	Repair Airfields	X
05-CO-5142	Construct a Tactical Airstrip	X
05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	X
05-CO-5001	Perform Project Management	X
05-CO-5250	Perform Construction Operations	X
Legend: CO company ECC engineer construction company PLT platoon		

ENGINEER VERTICAL CONSTRUCTION COMPANY 05420K000

A-2. Table A-2 identifies the collective tasks that units are designed and equipped to accomplish in support of their standardized METL.

Table A-2. Engineer vertical construction company (EVCC) CQT tasks

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>EVCC 05420K000</i>
05-PLT-0313	Construct Revetments	X
05-PLT-1018	Perform an Engineer Reconnaissance	X
05-PLT-1020	Perform a Technical Reconnaissance	X
05-PLT-1021	Conduct a River Reconnaissance	X
05-PLT-2001	Emplace Situational Obstacles	X
05-PLT-2002	Disable Lines of Communication (LOC)	X
05-PLT-2015	Construct a Tank Ditch	X
05-PLT-3000	Construct Bunkers and Shelters	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X

Table A-2. EVCC CQT tasks (continued)

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>EVCC 05420K000</i>
05-PLT-3011	Establish a Hasty Position	X
05-PLT-3013	Construct Vehicle Fighting Positions	X
05-PLT-3014	Construct Vehicle Protective Positions	X
05-PLT-5100	Place Airfield Matting on Prepared Surfaces	X
05-PLT-5101	Construct Combat Roads/Trails	X
05-PLT-5102	Construct Roads	X
05-PLT-5106	Install a Culvert	X
05-PLT-5107	Clear Airfields	X
05-PLT-5109	Clear Obstacles Using Engineer Equipment	X
05-PLT-5110	Perform Lifting and Loading Operations	X
05-PLT-5111	Provide Construction Site Compaction Support	X
05-PLT-5112	Perform Soil Stabilization	X
05-PLT-5113	Provide Construction Site Cut/Fill Support	X
05-PLT-5114	Provide Construction Site Drainage	X
05-PLT-5115	Provide Dust Control Measures	X
05-PLT-5116	Provide Excavation Support	X
05-PLT-5117	Provide Grading Support	X
05-PLT-5137	Provide Borrow Pit Support	X
05-PLT-5140	Construct Airfield Surfaces	X
05-PLT-5141	Perform Runway/Taxiway Crater Repair	X
05-PLT-5142	Perform Roadway Crater Repair	X
05-PLT-5143	Construct a Helipad	X
05-PLT-5144	Perform Dump Truck-Hauling Operations	X
05-PLT-5210	Construct a Sewerage System	X
05-PLT-5211	Construct a Water Distribution System	X
05-PLT-5212	Construct Electrical Utilities	X
05-PLT-5215	Install a Coupled Pipeline	X
05-PLT-5220	Construct a Wood Frame Structure	X
05-PLT-5221	Construct a Headwall	X
05-PLT-5222	Construct a Steel-Frame Pre-engineered Structure	X
05-PLT-5223	Construct a Concrete Structure	X
05-SEC-5001	Perform Construction Survey	X
05-CO-5001	Perform Project Management	X
05-CO-5250	Perform Construction Operations	X
05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	X
05-PLT-3000	Construct Bunkers and Shelters	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X
05-PLT-5200	Construct a Nonstandard Fixed Bridge	X
05-PLT-5201	Construct a Bridge Abutment	X
05-PLT-5210	Construct a Sewerage System	X
05-PLT-5211	Construct a Water Distribution System	X
05-PLT-5230	Perform Preventive Maintenance on Building Systems	X

Table A-2. EVCC CQT tasks (continued)

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>EVCC 05420K000</i>
05-SEC-5001	Perform Construction Survey	X
05-CO-1023	Provide General Engineer Support for Mobility Operations	X
05-CO-3000	Coordinate Survivability Operations	X
05-CO-5002	Repair Airfields	X
05-CO-5142	Construct a Tactical Airstrip	X
05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	X
05-CO-5001	Perform Project Management	X
05-CO-5250	Perform Construction Operations	X
Legend: CO company EVCC engineer vertical construction company PLT platoon SEC section		

ENGINEER SUPPORT COMPANY 05430K000

A-3. Table A-3 identifies the collective tasks that units are designed and equipped to accomplish in support of their standardized METL.

Table A-3. Engineer support company (ESC) CQT tasks

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>ESC 05430K000</i>
05-PLT-0313	Construct Revetments	X
05-PLT-1018	Perform an Engineer Reconnaissance	X
05-PLT-1020	Perform a Technical Reconnaissance	X
05-PLT-1021	Conduct a River Reconnaissance	X
05-PLT-2001	Emplace Situational Obstacles	X
05-PLT-2002	Disable Lines of Communication (LOC)	X
05-PLT-2015	Construct a Tank Ditch	X
05-PLT-3000	Construct Bunkers and Shelters	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X
05-PLT-3011	Establish a Hasty Position	X
05-PLT-3013	Construct Vehicle Fighting Positions	X
05-PLT-3014	Construct Vehicle Protective Positions	X
05-PLT-5100	Place Airfield Matting on Prepared Surfaces	X
05-PLT-5101	Construct Combat Roads/Trails	X
05-PLT-5102	Construct Roads	X
05-PLT-5106	Install a Culvert	X
05-PLT-5107	Clear Airfields	X
05-PLT-5109	Clear Obstacles Using Engineer Equipment	X
05-PLT-5110	Perform Lifting and Loading Operations	X
05-PLT-5111	Provide Construction Site Compaction Support	X
05-PLT-5112	Perform Soil Stabilization	X

Table A-3. ESC CQT tasks (continued)

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>ESC 05430K000</i>
05-PLT-5113	Provide Construction Site Cut/Fill Support	X
05-PLT-5115	Provide Dust Control Measures	X
05-PLT-5116	Provide Excavation Support	X
05-PLT-5117	Provide Grading Support	X
05-PLT-5118	Maintain Existing Roads	X
05-PLT-5137	Provide Borrow Pit Support	X
05-PLT-5140	Construct Airfield Surfaces	X
05-PLT-5141	Perform Runway/Taxiway Crater Repair	X
05-PLT-5142	Perform Roadway Crater Repair	X
05-PLT-5143	Construct a Helipad	X
05-PLT-5144	Perform Dump Truck-Hauling Operations	X
05-PLT-3000	Construct Bunkers and Shelters	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X
05-PLT-5200	Construct a Nonstandard Fixed Bridge	X
05-PLT-5201	Construct a Bridge Abutment	X
05-PLT-5210	Construct a Sewerage System	X
05-PLT-5211	Construct a Water Distribution System	X
05-PLT-5212	Construct Electrical Utilities	X
05-PLT-5215	Install a Coupled Pipeline	X
05-PLT-5220	Construct a Wood Frame Structure	X
05-PLT-5221	Construct a Headwall	X
05-PLT-5222	Construct a Steel-Frame Pre-engineered Structure	X
05-PLT-5223	Construct a Concrete Structure	X
05-PLT-5230	Perform Preventive Maintenance on Building Systems	X
05-SEC-5001	Perform Construction Survey	X
05-CO-1023	Provide General Engineer Support for Mobility Operations	X
05-CO-3000	Coordinate Survivability Operations	X
05-CO-5002	Repair Airfields	X
05-CO-5142	Construct a Tactical Airstrip	X
05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	X
05-CO-5001	Perform Project Management	X
05-CO-5250	Perform Construction Operations	X
Legend: CO company ESC engineer support company PLT platoon SEC section		

ENGINEER SUPPORT COMPANY AIRBORNE 05440K000

A-4. Table A-4, page A-6, identifies the collective tasks that units are designed and equipped to accomplish in support of their standardized METL.

Table A-4. ESC (airborne) CQT tasks

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>ESC 05440K000</i>
05-PLT-1018	Perform an Engineer Reconnaissance	X
05-PLT-1020	Perform a Technical Reconnaissance	X
05-PLT-1021	Conduct a River Reconnaissance	X
05-PLT-2001	Emplace Situational Obstacles	X
05-PLT-2002	Disable Lines of Communication (LOC)	X
05-PLT-2015	Construct a Tank Ditch	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X
05-PLT-3011	Establish a Hasty Position	X
05-PLT-3013	Construct Vehicle Fighting Positions	X
05-PLT-3014	Construct Vehicle Protective Positions	X
05-PLT-5100	Place Airfield Matting on Prepared Surfaces	X
05-PLT-5101	Construct Combat Roads/Trails	X
05-PLT-5102	Construct Roads	X
05-PLT-5107	Clear Airfields	X
05-PLT-5109	Clear Obstacles Using Engineer Equipment	X
05-PLT-5110	Perform Lifting and Loading Operations	X
05-PLT-5111	Provide Construction Site Compaction Support	X
05-PLT-5112	Perform Soil Stabilization	X
05-PLT-5113	Provide Construction Site Cut/Fill Support	X
05-PLT-5114	Provide Construction Site Drainage	X
05-PLT-5115	Provide Dust Control Measures	X
05-PLT-5116	Provide Excavation Support	X
05-PLT-5117	Provide Grading Support	X
05-PLT-5118	Maintain Existing Roads	X
05-PLT-5137	Provide Borrow Pit Support	X
05-PLT-5140	Construct Airfield Surfaces	X
05-PLT-5141	Perform Runway/Taxiway Crater Repair	X
05-PLT-5142	Perform Roadway Crater Repair	X
05-PLT-5143	Construct a Helipad	X
05-PLT-5144	Perform Dump Truck-Hauling Operations	X
05-SEC-5001	Perform Construction Survey	X
05-CO-1023	Provide General Engineer Support for Mobility Operations	X
05-CO-3000	Coordinate Survivability Operations	X
05-CO-5001	Perform Project Management	X
05-CO-5250	Perform Construction Operations	X
05-CO-5142	Construct a Tactical Airstrip	X
Legend: CO company ESC engineer support company PLT platoon SEC section		

UTILITIES DETACHMENT 05413K000

A-5. Table A-5 identifies the collective tasks that units are designed and equipped to accomplish in support of their standardized METL.

Table A-5. Utilities detachment CQT tasks

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>Utilities Detachment 05413K000</i>
05-PLT-0313	Construct Revetments	X
05-PLT-1018	Perform an Engineer Reconnaissance	X
05-PLT-1020	Perform a Technical Reconnaissance	X
05-PLT-1021	Conduct a River Reconnaissance	X
05-PLT-2001	Emplace Situational Obstacles	X
05-PLT-3000	Construct Bunkers and Shelters	X
05-PLT-3002	Construct Protective Earthen Walls and Berms	X
05-PLT-5106	Install a Culvert	X
05-PLT-5108	Perform Clearing, Grubbing, and Stripping Operations	X
05-PLT-5109	Clear Obstacles Using Engineer Equipment	X
05-PLT-5110	Perform Lifting and Loading Operations	X
05-PLT-5111	Provide Construction Site Compaction Support	X
05-PLT-5112	Perform Soil Stabilization	X
05-PLT-5113	Provide Construction Site Cut/Fill Support	X
05-PLT-5114	Provide Construction Site Drainage	X
05-PLT-5118	Maintain Existing Roads	X
05-PLT-5116	Provide Excavation Support	X
05-PLT-5117	Provide Grading Support	X
05-PLT-5137	Provide Borrow Pit Support	X
05-PLT-5141	Perform Runway/Taxiway Crater Repair	X
05-PLT-5142	Perform Roadway Crater Repair	X
05-PLT-5143	Construct a Helipad	X
05-PLT-5144	Perform Dump Truck-Hauling Operations	X
05-PLT-5200	Construct a Nonstandard Fixed Bridge	X
05-PLT-5201	Construct a Bridge Abutment	X
05-PLT-5210	Construct a Sewerage System	X
05-PLT-5211	Construct a Water Distribution System	X
05-PLT-5212	Construct Electrical Utilities	X
05-PLT-5220	Construct a Wood Frame Structure	X
05-PLT-5221	Construct a Headwall	X
05-PLT-5222	Construct a Steel-Frame Pre-engineered Structure	X
05-PLT-5223	Construct a Concrete Structure	X
05-SEC-5001	Perform Construction Survey	X
05-CO-1023	Provide General Engineer Support for Mobility Operations	X
05-CO-3000	Coordinate Survivability Operations	X
05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	X

Table A-5. Utilities detachment CQT tasks (continued)

<i>Task or Drill Number</i>	<i>Task or Drill Title</i>	<i>Utilities Detachment 05413K000</i>
05-CO-5001	Perform Project Management	X
05-CO-5250	Perform Construction Operations	X
Legend: CO company PLT platoon SEC section		

Glossary

The glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) precedes the definition. The Army proponent publication for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

Acronym	Definition
ADP	Army Doctrine Publication
AR	Army regulation
ATN	Army Training Network
ATP	Army techniques publications
attn	attention
DA	Department of the Army
DOD	Department of Defense
CMF	career management field
CQT	construction qualification tables
ECC	engineer construction company
ESC	engineer support company
EVCC	engineer vertical construction company
FD1	Foreign Disclosure 1
FM	field manual
FTX	field training exercise
MCTP	Marine Corps tactical publication
MCWP	Marine Corps warfighting publication
MET	mission-essential task
METL	mission-essential task list
MO	Missouri
MOS	military occupational specialty
MSCoE	Maneuver Support Center of Excellence
MTOE	modified table of organization and equipment
SCT	supporting collective task
STX	situational training exercise
T	trained
T-	trained minus
TC	training circular
TM	technical manual
TOE	table of organization and equipment

TRADOC	United States Training and Doctrine Command
UTM	unit training management

SECTION II – TERMS

squad proficiency

Overall squad proficiency contains two separate externally evaluated assessments. These externally evaluated training events provide the commander the primary assessment tool to evaluate the unit's proficiency against an established standard as defined within the respective training publication(s), task training and evaluation outlines, and the unit's standard operating procedures. Squad proficiency is derived from the external evaluations from Table V, *Situational Training Exercise (Live)* (the squad's collective task proficiency assessment), and Table VI, *Field Training Exercise*, platoon qualification table.

squad training

Cross train potential replacements. Cross training young leaders in key leader positions helps to prepare them to in the event a key leader leaves. In doing so, commanders can mitigate key leader turnover with trained and proficient leaders in stride with key leader turbulence.

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All URLs were access 4 August 2020.

REQUIRED PUBLICATIONS

These documents must be available to the intended users of this publication.

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02 September 2020

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