United Nations Peacekeeping Missions Military Engineer Unit Manual

September 2015

Preface

We are delighted to introduce the United Nations Peacekeeping Missions Military Unit Manual on Engineers—an essential guide for commanders and staff deployed in peacekeeping operations, and an important reference for Member States and the staff at United Nations Headquarters.

For several decades, United Nations peacekeeping has evolved significantly in its complexity. The spectrum of multi-dimensional UN peacekeeping includes challenging tasks such as helping to restore state authority, protecting civilians and disarming, demobilizing and reintegrating ex-combatants. In today's context, peacekeeping Missions are deploying into environments where they can expect to confront asymmetric threats from armed groups over large swaths of territory. Consequently, the capabilities required for successful peacekeeping Missions demand ever-greater improvement.

UN peacekeeping operations are rarely limited to one type of activity. While deployed in the context of a political framework supporting a peace agreement, or in the context of creating the conditions for a return to stability, peacekeeping Missions may require military units to perform challenging tasks involving the judicious use of force, particularly in situations where the host state is unable to provide security and maintain public order. To meet these complex peacekeeping challenges, military components often play a pivotal role in providing and maintaining a secure environment. Under these circumstances, the deployment of UN Military Engineers can contribute decisively towards successful achievement of the Mission's goals by providing the physical wherewithal to exist, sustain and fulfill its mandate.

As the UN continues its efforts to broaden the base of Troop Contributing Countries, and in order to ensure the effective interoperability of all UN Military Engineer Units, there is a need to formalize capability standards. Together with the seminal work of military experts from numerous Member States, the Department of Peacekeeping Operations and the Department of Field Support have produced this Manual as a means of enhancing the preparation, operational readiness and performance of UN Military Engineers. In recognition of the work already done, and in anticipation of future improvements, we would like to express our sincere gratitude to the Member States who volunteered and devoted so much of their time, energy and expertise in the creation of this Manual. The result is a document that captures and consolidates the relevant dimensions of UN Military Engineering into a single, convenient reference.

The Department of Peacekeeping Operations and the Department of Field Support will continue to refine and update this Manual ensuring its relevance in the ever-changing operational environment. In the meantime we have every expectation that this document, especially with the concerted efforts of its intended readers, will contribute immensely to improving and enhancing our collective performance in the pursuit of peace.

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Military experts of the UN Peacekeeping Missions Military Engineers Unit Manual Working Group, Japan 2014.

Purpose and Scope

General Description

This Manual describes the United Nations (UN) Military Engineer Unit, focusing on Military Engineer support to a UN Mission[1] and Force Headquarters. Always scalable in size, modular in function and Mission-tailored, the UN Military Engineer Unit's size and composition depend on the size, composition and requirements of the UN Mission it supports and the physical characteristics of the Mission area.

Benefit to Troop Contributing Countries

Troop Contributing Countries (TCCs) and their deploying contingents will benefit from this document (as will their national military staffs, schools and units) as they become better able to support the reorientation of their Military Engineer Units from national tasks to more fully integrated UN operations. TCCs experienced in peacekeeping operations can use this Manual to supplement and complement their national manuals. TCCs that are new to UN peacekeeping or UN Military Engineer Units can use this Manual as a guide to build and field their own UN Military Engineer Units. Nonetheless, it is not the intent of this Manual to override the national military doctrine of individual Member States or Troop Contributing Countries, nor is it our intent to impose requirements on national training, operations or structures. This Manual does *not* address any military tactics, techniques and procedures that remain the prerogative of individual Member States. Nor is it the intent of this Manual to serve as an instrument for UN Military Engineer Unit selection. Indeed, UN Military Engineer Unit structures will be adapted, ultimately, in accordance with any Memorandum of Understanding (MOU) negotiated between the UN and Troop Contributing Country. Instead, this Manual serves as a complement to existing or emerging Troop Contributing Countries' military capability and preparation for the *enhanced performance achieved through interoperability* with other Troop Contributing Countries participating in the peacekeeping operation.

Benefit to Commanders

UN Military Engineer Unit Commanders and their subordinate leaders will find in this document the guidance they need for planning, preparing and executing their assigned tasks. Chapter 1 explains the concept of employing UN Military Engineer Units within the Mission and its military component. Chapter 2 provides greater detail on the capabilities and tasks expected of the UN Military Engineer Unit. UN Military Engineer Unit Commanders and staff can plan and manage their unit support requirements based on the information provided in Chapter 4, while Chapters 5 and 6 provide the training and evaluation guidance by which the UN Military Engineer Unit can achieve and maintain top operational performance.

[1] Throughout this document, a capital M in the word "Mission," as in, "the UN Mission," is used to distinguish the word as a UN peacekeeping *organization*; as opposed to a small "m," as in, "a military mission" indicating a *task or operation*.

Benefit to UN Planners

In addition to being a guide for TCCs and their contingents, this Manual provides standardized guidance and information to UN Headquarters and field Mission planners on the employment of UN Military Engineer Unit capabilities and functions. This Manual is designed for use as a reference and initial starting point for UN planners developing the Statement of Unit Requirement that, together with the UN-TCC MOU, will form the basis for a UN Military Engineer Unit deployment (see the previously-issued Statements of Unit Requirement at Annex A). UN planners will find most helpful the descriptions of capabilities, tasks and organization of a UN Military Engineer Unit as they tailor the unit according to Mission requirements and the generic standards described in Chapters 2 and 3.

Benefit to All

This Manual is primarily written at the operational and tactical levels. It is based on UN guidance reflecting lessons learned, feedback from field Missions and input from peacekeeping practitioners experienced in UN Military Engineer Unit peacekeeping operations. Workshops conducted by interested Member States and Troop Contributing Countries produced the original draft that was finalized after extensive coordination within DPKO and DFS. The result is a most comprehensive body of thought on UN Military Engineer Units designed to assist contingents in re-orienting their Military Engineer Units towards interoperability in UN peacekeeping. This Manual should be read in conjunction with relevant UN policies[2] and other Manuals, especially the UN Infantry Battalion Manual,[3] in order to gain a more comprehensive understanding of UN standards, policies and procedures related to peacekeeping operations. Moreover, every detail of the Mission framework can be more thoroughly studied in the UN Capstone Doctrine which, along with other important UN policy documents, is available at the following UN links:

> "Policy and Practice Database," accessible only to UN staff on the UN network (including field Missions) at:
> http://ppdb.un.org/Nav%20Pages/PolicyFramework_Default.aspx
> and,
> "Resource Hub," recently developed for Member States to access UN documents including the Military Unit Manuals (such as this one) at:
> http://research.un.org/en/peacekeeping-community.

[2] Especially the DPKO-DFS *Policy on Authority, Command and Control in United Nations Peacekeeping Operations* (Ref. 2008.4, dated February 2008).

[3] The Infantry Battalion Manual, Volumes I and II, can be found at:
http://www.un.org/en/peacekeeping/documents/unibammanualvol1.pdf and
http://www.un.org/en/peacekeeping/documents/unibammanualvol2.pdf.

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Chapter 1

Employment Concept for the UN Military Engineer Unit

1.1 **Role**

1.1.1 The primary role of the UN Military Engineer Unit is to enable the deployment of the UN Mission under conditions allowing the Mission to fulfil its mandate in an efficient and safe manner. UN Military Engineers enable Mission transition operations from peacekeeping to peacebuilding,[4] and from Mission support to host nation development. The UN Military Engineer Unit is part of the Mission's overall integrated effort to improve the operating environment by building facilities and providing engineer services throughout the Mission area of operations.

1.1.2 UN member states describe their national military engineer units (and core capabilities) in terms of "Combat Engineers" and "Construction Engineers." UN Military Engineer Units are similarly categorized as "Combat Engineers" and "Construction Engineers." Mission requirements can result in a UN Military Engineer Unit that is exclusively one type or the other, or, a UN Military Engineer Unit that is a combination or "composite" of both. "Combat Engineers" refers to military engineers in direct support of military operations, as distinct from those engineers focused on construction projects. The term "Combat Engineers" is used throughout UN publications including the DPKO-DFS *Mission Start-up Field Guide for Mission Managers of United Nations Peace Operations*,[5] and the *DPKO-DFS Policy on Authority, Command and Control in United Nations Peacekeeping Operations*[6] and Statements of Unit Requirement. The distinctions between the tasks performed by the Combat and Construction Engineers, and their organizations, are thoroughly described in Chapters 2 and 3.

1.2 **Command and Control**

UN Military Engineer Units are under the Operational Control of the Force Commander/Head of Military Component. In accordance with the DPKO/DFS Policy on Authority, Command and Control, UN Operational Control includes the authority to assign separate tasks to subordinate units of a contingent as required by the Mission's operational necessities, in consultation with the Contingent Commander, and as approved by the Under-Secretary-General, Department of Peacekeeping Operations. The Force Commander/Head of

[4] Engineers play a major role in building peace after conflict, in establishing the conditions for recovery, and development activities under peacebuilding tasks. See *A New Partnership Agenda: Charting a New Horizon for UN Peacekeeping.* 2009. DPKO and DFS, UN Headquarters, New York.

[5] See Chapter 8.5 of DPKO-DFS's *Mission Start-up Field Guide for Mission Managers of United Nations Peace Operations 2.0,* September 2010.

[6] See paragraph 74 of the *DPKO-DFS Policy on Authority, Command and Control in United Nations Peacekeeping Operations* (Ref. 2008.4, dated February 2008).

Military Component is authorized to assign military units under Tactical Control of a designated commander for specific purposes and periods. UN Tactical Control includes the detailed and local direction and control of movement or manoeuvers necessary to accomplish an assigned mission or specific tasks.

1.3 **Tasking Authority**

The following paragraphs describe the tasking authority for the three general types of UN Military Engineer Units typically found in field Missions: Combat Engineer Units, Construction Engineer Units, and Composite Engineer Units.

1.3.1 **Tasking Authority for UN Combat Engineer Units**

UN Combat Engineer Units are modular and scalable according to Force requirements but generally include explosive ordnance and improvised explosive device disposal, counter-mine support, obstacle crossing capability, the establishment of field defenses for Force and Sector Headquarters that are beyond the contingent's capability, force protection and ***limited*** road, airfield and landing zone repair. Under UN Command and Control policy, Combat Engineer Units are specifically categorized as "combat support units" under the direct tasking authority of the Force Commander/Head of Military Component.[7] UN Combat Engineer Unit daily tasking priorities are routinely determined by the Force Engineer, U-8. The Force Engineer is the focal point for preparing UN Combat Engineer Task Orders consistent with Force Commander priorities and Sector Commander requirements.

1.3.2 **Tasking Authority for UN Military Construction Engineer Units**

UN Military Construction Engineers provide the Mission a vertical and horizontal construction capability[8] and rapid repairs to critical infrastructure that create or improve Mission self-sufficiency, Force and Mission mobility, protection of civilians and support to humanitarian efforts. Military enabling resources[9] such as the UN Military Construction Engineers, fall under the direct tasking authority of the Director/Chief of Mission Support and his/her duly designated subordinates.[10] UN Military Construction Engineer daily tasking priorities are routinely determined by the Chief, Service Delivery under the delegated tasking authority of the Director/Chief of Mission Support. The Force Commander/Head of Military Component is responsible to support the military Construction Engineer tasking process through coordination between the Force Headquarters and the Office of the Director of Chief of Mission Support ensuring compliance with overall Mission engineer priorities. See Annex B

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[7] DPKO/DFS policy on *Authority, Command and Control in United Nations Peacekeeping Operations,* (Ref. 2008.4) (February 2008), paragraph 75.

[8] Vertical construction includes the construction and rehabilitation of permanent and transient camps and existing structures. Horizontal construction includes the construction and maintenance of roads, bridges, airfield and helipads.

[9] The term, "military enabling resources," is a Department of Field Support-preferred term specifically referring to military enabling assets (personnel and equipment) such as construction engineers, signals, aviation, logistics, transportation, medical and explosive ordnance disposal units or smaller elements that may be deployed in Mission-controlled tasks.

[10] This tasking authority is codified in sections E.5 and E.6, paragraphs 68 to 74 of DPKO/DFS's policy on *Authority, Command and Control in United Nations Peacekeeping Operations,* (Ref. 2008.4) (February 2008).

for a detailed description of this tasking mechanism. This tasking mechanism allows the Mission to allocate its Engineer resources with maximum effectiveness and efficiency.

1.3.3 **Tasking Authority for UN Military Composite Engineer Units**

The UN Military Composite Engineer Unit is modular and scalable according to Force and Mission requirements, and provides the capability advantages of both Combat and Construction Engineers. In keeping with the UN's Command and Control policy, the Combat Engineer Platoon within the UN Military Composite Engineer Unit remains under the direct tasking authority of the Force Commander. Military enabling resources,[11] such as the UN Military Construction Engineer Platoon within the Composite Military Engineer Unit, remain under the tasking authority of the Director/Chief of Mission Support and his/her duly designated subordinates.[12]

1.4 **Employment During the Various Mission Phases**

1.4.1 During the Mission start-up phase, UN Military Engineers face a variety of requirements involving planning, design, land development, base camp construction and the provision of basic infrastructure and facilities. These tasks may be performed under challenging security conditions including the continuing activities of asymmetric threats and the presence of mines, improvised explosive devices and other ordnance that require removal or destruction. Combat Engineers provide the Force a unique military capability to perform under these circumstances, complementing other Force and Mission requirements undertaken by the UN Military Engineer Unit's Construction Engineers. Together, both types of UN Military Engineers provide a vital means of achieving the Force and Mission's initial operating capability as quickly as possible.

1.4.2 During the mandate implementation phase, UN Military Engineers continue to provide the Force its Combat Engineer support in addition to general Construction Engineer work. The peacekeeping experience of many years points to increasing expectations that UN Military Components will continue to be targeted by negative elements and asymmetric threats requiring UN Military Combat Engineer capability either as a stand-alone Combat Engineer Unit, or as a robust element within a UN Military Composite Engineer Unit. See the Statements of Unit Requirement at Annex A.

1.4.3 Finally, during the Mission's transition/liquidation phase, UN Military Engineers (both Combat and Construction) facilitate peacebuilding support goals through the continuance or completion of engineering projects through handover and withdrawal from the Mission area. The capabilities and tasks of UN Combat and Construction Engineers in support of Mission partners and capacity building are discussed at length in Chapter 2.

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[11] The term, "military enabling resources," is a Department of Field Support-preferred term specifically referring to military enabling assets (personnel and equipment) such as construction engineers, signals, aviation, logistics, transportation, medical and explosive ordnance disposal units or smaller elements that may be deployed in Mission-controlled tasks.

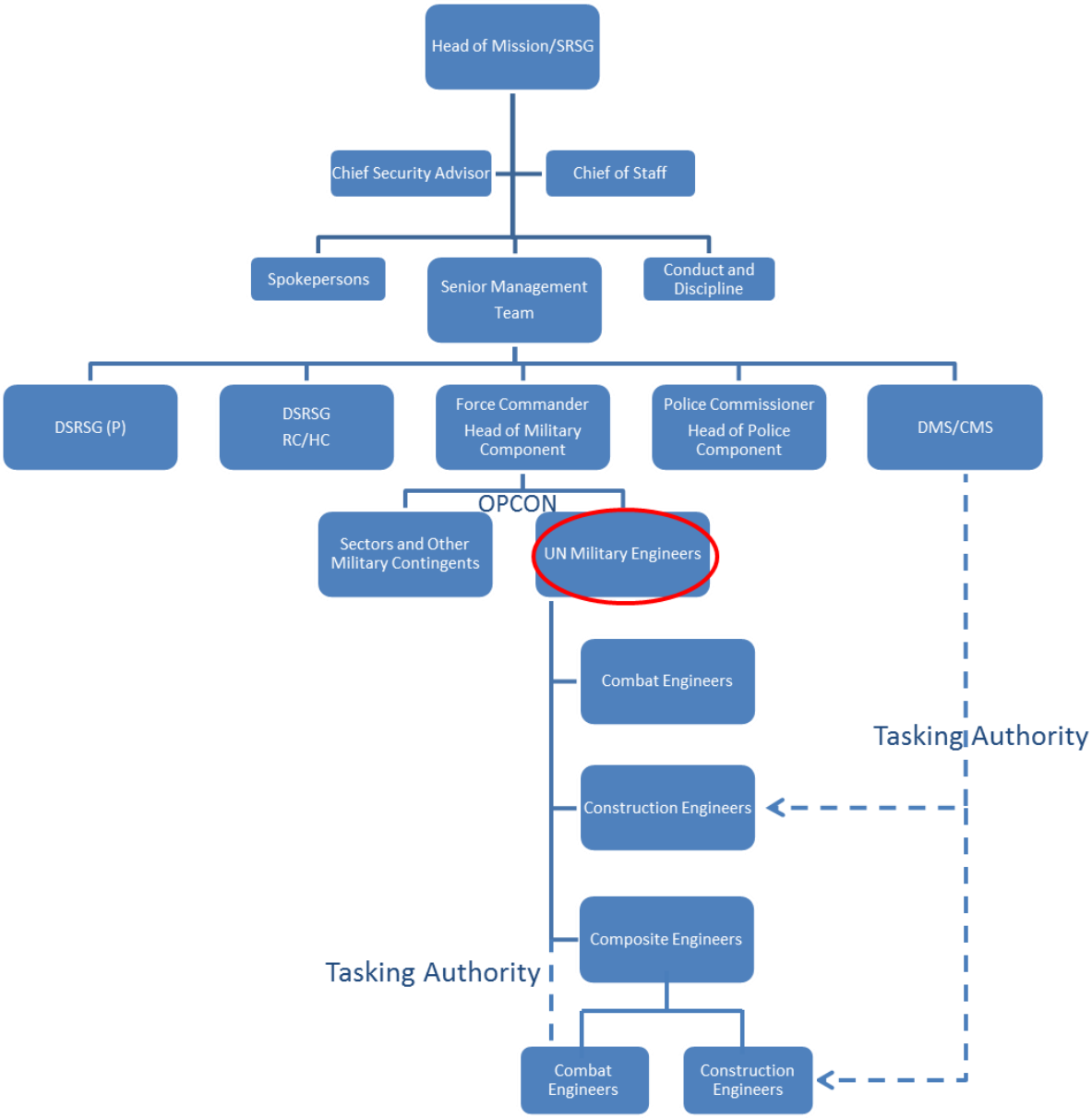
[12] This tasking authority is codified in sections E.5 and E.6, paragraphs 68 to 74 of DPKO/DFS's policy on *Authority, Command and Control in United Nations Peacekeeping Operations,* (Ref. 2008.4) (February 2008).

1.5 **Military Engineers in the UN Mission Structure**

The UN Military Engineer Unit (regardless of whether it comprises Combat, Construction or both types of engineer units) is OPCON to the Force Commander. A typical UN Mission Headquarters is depicted below showing the UN Military Engineers (in the red oval) within the overall Mission structure. As described in the preceding paragraphs, the Force Commander has OPCON over all members of the Military Component, and has direct tasking authority over the UN Military Engineer Unit's Combat Engineers; whereas Mission enabling assets, such as the UN Military Engineer Unit's Construction Engineers, while still OPCON to the Force Commander, are under the direct tasking authority of the Director/Chief of Mission Support and his/her designated representatives.

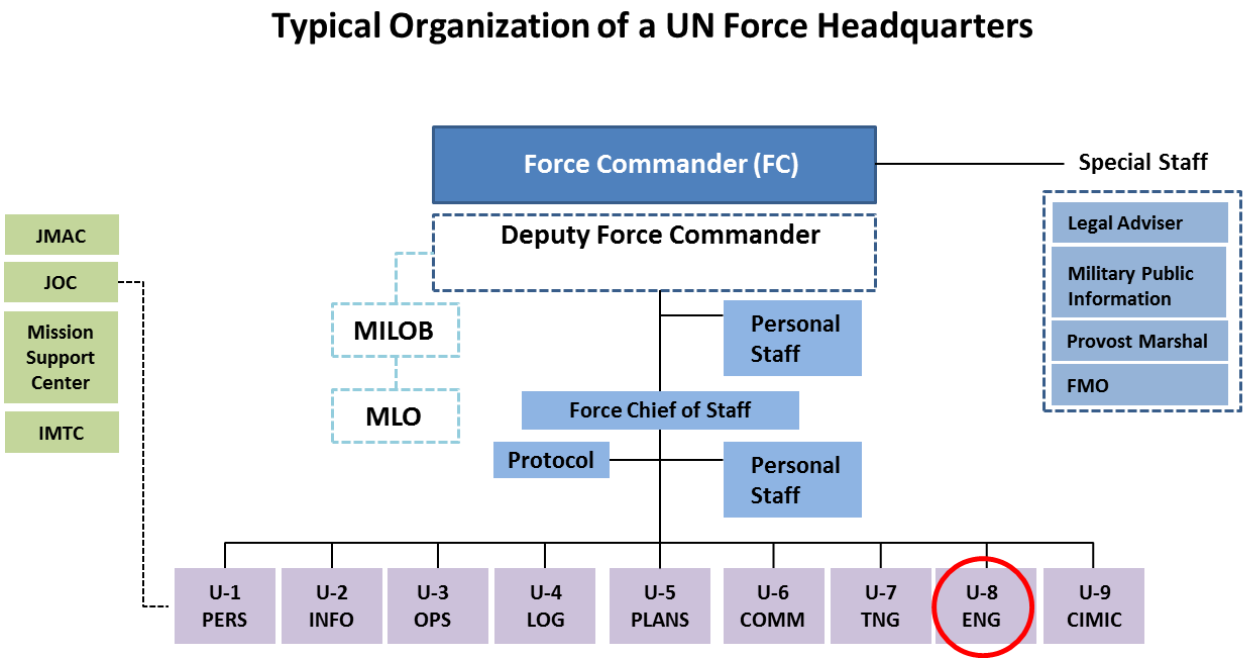
UN Military Engineers

in a Generic UN Mission Structure



1.6 UN Military Engineers in the Force Headquarters Structure[13]

The fundamental role of the Force Headquarters is the command and control of the Mission's military operations in support of the Mission's mandate implementation. Regardless of the nature of the Mission, every Force Headquarters has common functions executed by functional groups, including UN Military Engineers. A typical organization for the Force Headquarters is depicted below. The U-8 staff (shown in the red circle below) plan military engineer operations at Force and Sector level in coordination with overall Mission priorities.



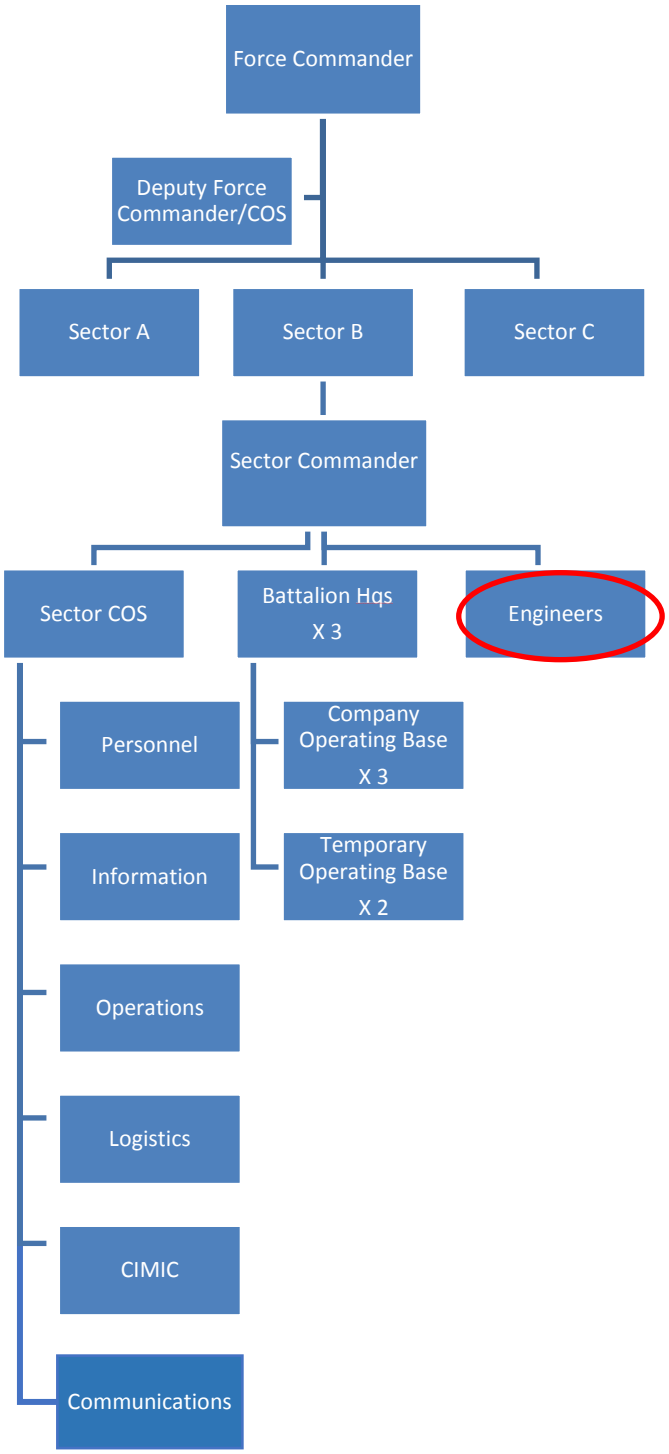
1.7 UN Military Engineers in the Sector Headquarters Structure

The Force Headquarters can be configured with a number of subordinate Sector and Battalion Headquarters. A typical organization of the Sector Headquarters is shown below. Again, note the red circle around "Engineers" indicating the UN Military Engineer Unit (if assigned to the Sector) within the overall Sector Headquarters structure.

[13] This brief description of the Force Headquarters is for illustrative purposes. It is presented here to provide perspective on how military engineer assets fit into the overall Force Headquarters structure. For more details on the Force Headquarters, see the UN Force Headquarters Handbook, available at: http://ppdb.un.org/SearchCenter/Results.aspx?s=PPDB%20Scope&k=2.%09SOP%20on%20Implementation%20of%20Amendments%20on%20Conduct%20and%20Discipline%20in%20the%20Model%20Memorandum%20of%20Understanding%20Between%20UN%20and%20TCCs.

UN Military Engineers in a

Generic UN Sector Headquarters Structure



Chapter 2

Capabilities and Tasks of the UN Military Engineer Unit

2.1 **Core Capabilities**

The core capabilities of the UN Military Engineer Unit include Combat Engineering, Construction Engineering and Support to Mission Partners.

2.2 **Combat Engineering[14] Capabilities**

Combat Engineers (whether deployed as a separate Combat Engineer Unit, or as an element within a composite Combat and Construction Military Engineer Unit) are in direct support of military operations and thus come under the direct tasking authority of the Force Commander/Head of Military Component. Combat Engineering requires the capability to deploy military engineer personnel and equipment on short notice into what may be hostile and dangerous environments. Combat Engineers must be capable of providing their own force protection, including the use of personal and crew-served weapons such as pistols, rifles and machine guns. For the Force's own safety, Combat Engineers must also be capable of explosive ordnance disposal and improvised explosive device disposal as well as counter-mine support. Combat Engineers are required to establish field defenses and enhance installation security and access control, perform observation activity during hours of darkness and pinpoint their own locations. Combat Engineers are also expected to provide obstacle crossing capability and provide limited capacity to repair roads, airfields and landing zones in direct support of military operations, potentially under hostile conditions. Combat Engineers must have the capability to communicate via VHF and HF communications, and have their own logistic support element capable of supporting themselves once deployed.

2.3 **Combat Engineering Tasks**

Combat Engineers of the UN Military Engineer Unit perform tasks required for the proper development of military action in accordance with the Force Concept of Operations and applicable military operations orders. Mobility Support is a principal Combat Engineer task that includes road reconnaissance, route preparation (such as removing or destroying obstacles, river crossing and road clean up), support to beach landings, improvements to installation access and security and the establishment of helipads. Another principal Combat Engineering task is Survivability Support, which includes preparation of installation terrain, and the establishment/improvement of force protection obstacles, earthworks, shelters and chicanes.[15] Survivability Support includes the creation of observation posts and check points, as well as technical reconnaissance and surveys of existing and prospective installations to include gathering information on water, power supplies, terrain and infrastructure. Combat Engineers

[14] See the Statement of Unit Requirement for the Combat Engineer Company in at Annex A.

[15] Chicanes are a series of tight turns in opposite directions designed to slow vehicular traffic for safety.

are also tasked with support to relocation and re-deployment of Temporary Operating Bases, and joint operations with other national military contingents, host country security forces and UN Formed Police Units. The following paragraphs provide greater detail on some of the key Combat Engineer tasks:

2.3.1 **Counter-Mine and Counter-Improvised Explosive Device Support Tasks**

Counter-Mine and Counter-Improvised Explosive Device (IED) Support Tasks are done under the authority of the Force Commander but in coordination with the UN Mine Action Coordination Center, if present in the Mission. The purpose of this coordination is to ensure information sharing and unity of effort. Key tasks conducted by the UN Military Engineer Unit include providing technical training and assistance to supported units by providing counter-mine and counter-IED support before and during search operations.

2.3.2 **Explosive Ordnance and Improvised Explosive Device Disposal Tasks**

Explosive Ordnance Disposal (EOD) is the location, detection, identification, field evaluation, rendering safe, recovery and final disposal/disposition of explosive remnants of war. EOD may also include the rendering safe and/or disposal of explosive ordnance that becomes hazardous by damage or deterioration. EOD operations may involve a single item of unexploded ordnance (UXO), or a number of UXO at a specified location, such as a mortar or artillery gun position. EOD may also involve the disposal of ammunition stockpiles left in a bunker, ammunition point or cache. Improvised Explosives Device Disposal (IEDD) is carried out by special technicians trained to search, render safe and dispose of *improvised* explosive devices. UN Military Engineer Unit technicians receive the IEDD qualification only after they have qualified as conventional munitions EOD technicians. EOD/IEDD tasks include:

- Holding, maintaining and operating Counter-Improvised Explosive Device Disposal (CIEDD) equipment.

- Carrying out reconnaissance, identification, field evaluation, neutralization, recovery and disposal of UXO, mines and cluster bomb units.

- Disposing of or neutralizing IEDs and booby traps, and supporting the collection of forensic evidence.

- Executing EOD/IEDD activity only as directed, orally or in writing, by the UN Military Engineer Unit's EOD Coordination Cell in the Combat Engineer Platoon during general duty (daylight) hours; or after general duty hours, upon the orders of the appropriate authority.

- Assigning only trained and International Mine Action Standards[16]-certified personnel for executing assigned tasks.

- Determining:

[16] These standards were endorsed by the UN Interagency Coordination Group on Mine Action on 26 September 2001. See minestandards.org.

- Whether the destruction and/or removal of the reported explosive device is warranted, or whether it can simply be marked if it does not pose a danger to UN personnel, installations and civilians.

- The best means and procedures to be applied.

- The hazard zones, application of passive safety measures, and requirements and procedures for evacuation.

- Providing immediate reports to the EOD Coordination Cell after a completed operation or task, and preparing a complete report including pictures/sketches and location with accurate grid coordinates. For reporting standards, it is mandatory to use the current Information Management System for Mine Action (IMSMA).[17]

- Requesting medical support and force protection,[18] if necessary, as part of every EOD operation.

- Conducting Mine Awareness education in support of the local population, if authorized by the Mission and Force leadership.

2.3.3 **Obstacle Crossing Tasks**

The Combat Engineer Unit is tasked (within its capabilities) to ensure the Force, its subordinate elements and activities can operate safely, unimpeded by obstacles (including water) along lines of communication in the Force area of operations. The UN military component's transportation, logistics, medical and first responders depend on the UN Combat Engineer Unit's ability to identify and overcome obstacles. Sub-tasks may include earthworks and bridging tasks.

[17] The Information Management System for Mine Action (IMSMA) was developed to help make mine action safer, faster, more effective and efficient after demands from the mine action community for computerized decision support tools able to support the coordination and management of their operational activities. IMSMA is currently in use in more than 80% of mine action programmes around the world and is the United Nations preferred information management system for mine action. Based on requirements submitted by users, the system has been continuously revised and upgraded since its initial release in the summer of 1999, in Kosovo, and has become a standard in mine action information management. In addition to a host of countries and international organizations, the IMSMA operates in partnership with the UN Development Programme (UNDP), UN Office for Project Services (UNOPS) and the UN Mine Action Service (UNMAS). See the Geneva International Center for Humanitarian Demining website at: gichd.org. In UN Missions, UNMAS has primary responsibility for Mission-wide deminining needs whereas the Combat Engineers are primarily focused on Force requirements. If UNMAS needs additional demining/EOD or C-IED/support, it may request that support from the Combat Engineers through the Military Component, subject to the availability of the necessary expertise and equipment in the Combat Engineer Unit.

[18] Under normal circumstances, force protection is a UN Military Engineer Unit responsibility. In the event of a deteriorating security situation that may overwhelm the unit's ability to defend itself, additional force protection should be pre-arranged with other UN Force Component units as part of every UN Military Engineer Unit mission planning process.

2.3.4 **Tasks Associated with the Establishment of Field Defenses Such as Observation Posts, Perimeter Defenses and Hardening of Key Points**

These tasks require pre-planning and coordination to obtain the appropriate resources and coordinate the layout and preparation of these defenses into the overall Force plan. Sub-tasks may include surveying, site preparation, earthworks and the preparation of defensive force protection positions for Force and Sector Headquarters that are beyond the contingent's capability.

2.3.5 **Expedient Repairs to Roads, Airfields and Landing Zones Tasks**

The Combat Engineer Unit is tasked to make field expedient repairs in order to maintain military operational momentum. These repairs are made with the best materials on hand and as quickly as possible to maintain the military operational tempo. Sub-tasks may include earthworks, site preparation and paving.

2.4 **Construction Engineering[19] Capabilities**

Construction Engineers are Mission military enabling assets and, while under the Operational Control of the Force Commander/Head of Military Component, are under the direct tasking authority of the Director/Chief of Mission Support and his/her designated subordinates such as the Chief of Service Delivery. Tasking authority, under DPKO/DFS policy, "includes the authority to deploy, redeploy and employ all or part of an enabling unit to achieve the Mission's mandate."[20] The Force Engineer (U-8) is responsible for identifying and assigning military Construction Engineer units to respond to DMS/CMS tasking. Construction Engineering requires the *enhanced* capability (primarily in terms of heavy equipment operator expertise) to provide rehabilitation and maintenance of access roads, runways and existing infrastructure (to include buildings, water supply and wastewater disposal). Construction Engineers provide enhanced capabilities in the construction of physical protection measures for UN installations, and must have the capability to provide their own force protection, including the use of personal and crew-served weapons such as pistols, rifles and machine guns. For the Force's own protection, UN Military Engineer Units comprised of Construction Engineers must be capable of counter-mine and counter-improvised explosive device support, explosive ordnance disposal and improvised explosive device disposal. The UN Military Engineer Unit must also have a logistic support element capable of supporting the Construction Engineers' platoon-size sub-elements simultaneously in different locations, and may be required to provide water treatment and purification capabilities in support of other Mission personnel/units including well drilling.

[19] See the Statement of Unit Requirement for the Combined Construction Engineer Company at Annex A.

[20] DPKO-DFS *Policy on Authority, Command and Control in United Nations Peacekeeping Operations* (Ref. 2008.4, dated February 2008), paragraph 13.

2.5 **Construction Engineering Tasks**

Construction Engineering is categorized into vertical and horizontal construction.

2.5.1 **Vertical Construction Tasks**

Vertical Construction capabilities include the building of rigid/semi-rigid and prefabricated structures, the rehabilitation and repair of existing structures, well drilling and surveying. Associated tasks include:

- **Construction of Rigid/Semi-Rigid or Prefabricated Structures Tasks**

  Rigid/semi-rigid or prefabricated structures (such as purpose-built container-type modular units) ensure the Mission infrastructure has adequate shelter for operational, administrative and accommodation purposes on a continuous and extended basis. Rigid/semi-rigid and prefabricated structures must have sufficient strength to provide protection from local weather conditions. Given the construction's enduring intent, sub-tasks may include site planning, building foundations, main frame construction work, internal finishing and utility work.

- **Rehabilitation and Repair of Existing Structures Tasks**

  Rehabilitating and repairing existing structures, if done early and using the right materials and tools, allows the structures to last longer and saves money, while prolonging the usable life of the structure. Rehabilitation and repair work priority is determined based on the structure's function within Mission requirements and degree of damage/deterioration. Associated sub-tasks include physical inspections, cleaning, maintenance and repair work. Repairs may include improvements to electrical networks and sanitation, such as the construction of ablutions and separate plumbing drains for "grey" (dirty) water and sewage.

- **Well Drilling Tasks**

  Fresh, drinkable water is often not readily available in many Mission areas. UN Military Engineers can make a dramatic and quick impact on the quality of life and sanitation for the Force, Mission and local communities by conducting water sourcing and well drilling projects.

- **Surveying Tasks**

  Surveying is critical to the precise design and execution of all engineer construction projects. Surveying sub-tasks involve the precise measurement of distance, elevation and angles associated with terrain features and any existing structures on the construction site. One type of survey is done for planning purposes and focuses on the terrain and on-site features. Another type of survey focuses on the structure under construction, and determines the detailed position and dimensions of that structure. Effective surveys require meticulous measurement, quantitative data recording and conscientious application of appropriate engineering standards.

2.5.2 **Horizontal Construction Tasks**

Horizontal Construction capabilities involve road, bridge and airfield/helipad construction, repair and maintenance. Associated tasks include:

- **Road Construction, Repair and Maintenance Tasks**

  Roads are vital for command and control, facilitating communications, maintaining security and providing for logistical resupply. Well-built and maintained roads benefit everyone and provide essential socio-economic benefits to the local community. The continuous movement of people and heavy vehicles, plus the damage done by severe weather, means road maintenance must be done as soon as deterioration is detected. Early maintenance and repair keep Mission operations flowing smoothly and without interruption. Sub-tasks include, but are not limited to, site surveys, earthworks and paving projects.

- **Bridge Installation, Repair and Maintenance Tasks**

  The installation, construction, repair and maintenance of bridges along lines of communication are critical to the Mission in every aspect of its operations. The benefits and importance of proper bridges equal or exceed those of roads. Sub-tasks include but are not limited to topographic surveys, earthworks, site preparation, drainage, foundation work, main frame construction or installation of prefabricated bridges and paving projects.

- **Airfield and Heliport Construction, Maintenance and Repair Tasks**

  In Mission areas with weak or non-existent road and rail networks, the construction, maintenance and repair of airfields and heliports provide a critical means of projecting Mission influence and are a logistics and medical lifeline. Sub-tasks include topographic surveys, site plans, site preparation, paving and drainage projects.

- **Paving Projects Tasks**

  Road paving projects include asphalt and concrete paving. Paving strengthens the road surface, prevents road damage from traffic, and reduces or eliminates road surface dust by preventing the scattering of road surface material.

- **Drainage Projects Tasks**

  Drainage problems have numerous negative effects including deterioration or destruction of property, ongoing projects and existing roadways and bridges. Transportation can come to a halt, threatening command and control, Mission operations, resupply and medical support. Persistent drainage problems can lead to diseases such as malaria and cholera. It is vitally important for engineers to design the correct size and type of drainage taking into consideration existing infrastructure and the typical amount of rainfall, river overflow and tides.

- **Earthworks and Site Preparation Tasks**

  Earthworks and site preparation are the reshaping of land by cutting, levelling, filling and compacting earth to the desired shape using earth moving equipment. Earthworks and site preparation are fundamental to other engineer projects as they provide the basis upon which roads and bridges are built or upgraded, foundations and drainage are created for new projects, and berms put into place for force protection.

- **Construction and Maintenance of Boat Ramps**

  When Mission requirements stipulate the need for Maritime or Riverine assets, the UN Military Engineer Unit may need to construct or maintain boat ramps and port facilities in support of maritime and/or riverine operations.

2.6 Support to Mission Partners

2.6.1 The purpose of this capability, under the Tasking Authority of the DMS/ CMS, includes support to the UN Country Team, local government, international aid agencies and non-governmental organizations to facilitate these partner activities and contribute to host nation stabilization and security. The contribution of the UN Military Engineer Unit to this commitment is largely in the tasks associated with Construction Support, Capacity Building and Training, the Protection of Civilians and Disaster Relief.

2.6.2 Construction Support Tasks

Construction Support involves the tasks of horizontal and vertical construction, such as assistance in land development through earthworks, site preparation, structure and facility construction and repair, as well as road and lines of communication construction and repair. These kinds of Military Engineer Unit projects have immediate impact, improving local socio-economic activities and fostering good-will towards the UN Mission.

2.6.3 Capacity Building and Training Tasks

Capacity building and training tasks are done under the authority and direction of the Head of Mission/Special Representative of the Secretary-General. These tasks involve enhancing local skills and capabilities using the UN Military Engineer Unit's own expertise and equipment. When a UN Military Engineer Unit conducts capacity building and training activities for local residents, it is important to keep in mind that the construction skills taught should be appropriate to local needs, and eventually self-sustainable without the UN's presence. Respect for the local culture and a partnering attitude will reap great rewards for all involved. Capacity building works hand-in-hand with construction support. For example, local nationals can be trained in some of the skills necessary for them to participate, in a meaningful way, in construction projects sponsored by the Mission. UN Military Engineer Unit projects will benefit the host nation's nation-building efforts before and after the Mission ends. Typical sub-tasks include training the host nation's engineers on skills, equipment, plant and machinery. Capacity building and training requires UN Military Engineer Unit commanders and staff who are capable of conducting liaison, coordination and integration with the Mission's various civilian elements, CIMIC Focal Point, UN funds, programs and agencies, international

organizations, non-governmental organizations, the host nation's civilian security forces and local organizations.

2.6.4 **Protection of Civilians Tasks**

While all elements of the Mission have a mandated responsibility to protect civilians in the local population, the UN Military Engineer Unit has special capabilities to provide physical security to the local population and prevent harmful action by negative forces. These capabilities include earthworks, drainage and construction projects to prevent flooding and remove sewage; well drilling to provide clean water; and, in coordination with the Mission's UN Mine Action Coordination Center, demining, unexploded ordnance disposal and counter-improvised explosive device tasks.

2.6.5 **Disaster Relief Tasks**

In those circumstances where the UN already has a Military Engineer Unit presence in a disaster-afflicted area, immediate disaster relief can take place, cementing the UN's image as a positive force in the lives of the local population. Together with other enabling capabilities such as communications, medical, logistics, aviation and transportation, the Mission has the capability to use heavy engineer equipment to clear and re-establish roads and other lines of communication, conduct survivor search and rescue and provide emergency food, water and shelter. Given its established organization and command and control structure, the UN Mission, during the aftermath of a disaster, can become a focal point and organizing framework around which relief efforts can be built. The UN Military Engineer Unit can play a central role in such efforts.

Chapter 3

Organization of the UN Military Engineer Unit

3.1 Organizing Principles

3.1.1 Companies and Battalions

Throughout this manual, the UN Military Engineer Unit is described in terms of a company-size organization. It is possible, however, to find Military Engineer *battalions* in UN Missions. In principle, the UN Military Engineer Unit includes specialized elements organized according to function and equipment. The size and functions of the Military Engineer Unit depend, of course, on Force and Mission requirements. Regardless of whether the Force or Mission requirement calls for a company or battalion-sized Military Engineer Unit, the organizing principles are the same.

3.1.2 Modular and Scalable

The nature of the UN Military Engineer Unit is modular and scalable. Modular means that different types of specialized engineer elements can be added to the overall Military Engineer Unit (during the force generation process at UN Headquarters) to meet the unique requirements of each Mission. Scalable means that the number of personnel and amount of equipment within a specialty can be increased or decreased according to need, such as when the geographic dispersal of supported units and headquarters requires a greater number of Military Engineers. Modular and scalable also means that, once deployed, the UN Military Engineer Unit can group and regroup its subordinate elements and equipment (such as bulldozers, excavators and graders) for tailored operational agility and cohesive employment on specific tasks. For those UN Military Engineer Units capable of deploying with significant high-technology and state-of-the-art engineering equipment, force generation and military planners should adjust their unit configuration to incorporate this equipment. All UN Military Engineer Units, regardless of access to advanced technology, should make continual efforts to include new, more effective and efficient engineering methods.

3.1.3 Independent, Versatile and Interoperable

In addition to its modular and scalable design, the UN Military Engineer Unit is inherently capable of independent operations and logistical sustainment giving it great versatility. Versatility also gives the UN Military Engineer Unit greater interoperability. It is capable of undertaking its engineer missions independently, or in collaboration with civil and other nations' Military Engineer assets. [21]

[21] Interoperability and pooling resources are discussed under *Expanding the Peacekeeping Partnership: A New Partnership Agenda: Charting a New Horizon for UN Peacekeeping*. 2009. DPKO and DFS. New York.

3.1.4 **Option to Embed in Infantry Units**

Depending on the specific circumstances of certain Missions, and as reflected in the UN Infantry Battalion Manual, the Statement of Unit Requirement may sometimes stress the need for UN Military Engineers to be directly embedded in infantry units. Such an organization may be further explored in the future, building on the lessons learned of current deployments.[22]

3.1.5 **Functional Groupings**

At the broadest level, UN Military Engineer Units are organized into functional groupings such as Combat Engineers and Construction Engineers (see Chapters 1 and 2). Within each type of UN Military Engineer Unit there can be further additional functional groupings such as Explosive Ordnance Disposal, Force Protection, Counter-Mine/Improvised Explosive Device, Establishment of Field Defenses, Vertical Construction, Horizontal Construction, Road and Airfield, Technology/Geology/Topography Survey, Well Drilling, etc. Each of these groupings must contain the various types of skills and equipment needed to complete the required tasks. Specialized skills and equipment are task organized for specific capabilities to make the most efficient use of the personnel and equipment available. Configuration of the UN Military Engineer Unit also depends on the number of concurrent tasks to be executed, the prevailing security situation, the peacekeeping capabilities sought, specialized skills and capacities required, operational environment (terrain, weather, surface soil and materials) and geographical spread/separation of deployment.

3.2 **Key Subordinate Elements Common to Combat, Construction and Composite Military Engineer Units**

The following subordinate element descriptions focus only on some of the key sections of UN Military Engineer Units whose functions have not already been well described in Chapters 1 and 2. The sections described below are represented in the organization charts below either as stand-alone organizations or as part of higher UN Military Engineer Unit elements such as staff sections or platoons.

3.2.1 **Headquarters: Command Group and Staff**

- The Commander is responsible for the unit's subordinate elements operating effectively and efficiently in an integrated manner with the unit's Combat and Construction Engineer Platoons and/or sections, other Force military components, or as part of a multi-agency operation. He or she is responsible for well-coordinated command, control and communications arrangements and interoperable communication systems. The Commander is assisted in his/her operational and administrative command responsibilities by the second-in-command/Executive Officer (2IC/XO), Senior Non-Commissioned Officer (NCO) or Junior Commissioned/Warrant Officer. The Military Engineer Unit Headquarters Staff functions under the 2IC/XO. The UN Military

[22] In accordance with the Statement of Unit Requirement, UN Military Engineer elements are currently embedded in infantry battalions in the United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA).

Engineer Unit Headquarters has unique responsibilities as a function of its command and control role:

- **Conduct 24/7 Command and Control of the Unit's Elements.**

- **Establish a Temporary Command Post.** Deploy and sustain a temporary command post, by road or by air, when the unit deploys subordinate elements independently to conduct a specific task for a specified period of time.

- **Establish a Temporary Operating Base (TOB).** Establishing a TOB with a company or platoon, including appropriate facilities for UN civilian and police personnel (as required) and separate facilities for female staff.

- **Re-Deployment.** Relocate and re-deploy operating bases according to Force and Mission priorities.

- **Reinforcement.** The Military Engineer Unit Headquarters should be capable of receiving, coordinating and operationally employing additional elements from other contingents. This includes the ability to incorporate the additional elements into the unit's overall command, control and communications network and interoperability architecture.

- **Headquarters: Personnel/Human Resources Staff Section**

  The Personnel Staff Section includes the administration and personnel officer and military police officer. This section is responsible for personnel administration, welfare, morale, motivation, and maintaining conduct and discipline in the unit.

- **Headquarters: Situational Awareness (SA) Staff Section**

  UN Military Engineer Units should be capable of pro-actively acquiring, processing, analyzing (including the use of early warning indicators) and communicating tactical information at the unit level; and maintaining 24/7 situational awareness with dedicated staff and multiple resources for planning and executing UN Military Engineer tasks and self-protection. The SA Staff Section includes one information officer and staff to coordinate tactical information acquisition, collation, corroboration and dissemination for effective situational awareness throughout the unit. They may be augmented with dedicated personnel, surveillance equipment and communication systems.

- **Headquarters: Operations Staff Section**

  The Operations Officer coordinates the functions of all staff sections that are responsible for planning, organizing, staffing, directing, controlling and sustaining all operations and administrative responsibilities of the unit in accordance with unit and Force standard operating procedures. The Operations Staff Section includes an Operations Officer, operations staff, a planning officer and interpreter(s). The section coordinates all operational activities and movements within the area of responsibility, carries out

liaison, maintains the UN Military Engineer Unit's 24/7 Operations Center (ideally with tracking and video tele-conferencing capability to the next higher headquarters for real time monitoring, control and coordination of operations). They coordinate employment of Quick Reaction Teams in accordance with the operational situation. It is their responsibility to ensure the overall safety and security of personnel, materiel and information in the unit. The section establishes and maintains liaison with neighboring contingents and the immediate higher headquarters and/or engineer section/Chief, Service Delivery for coordination and control of activities.

- **Headquarters: Outreach Staff Section**[23]

  The UN Military Engineer Unit must be capable of conducting outreach and engagement with the local population, including women's groups and other civil society actors, through well-coordinated and resourced Civil Military Cooperation (CIMIC), welfare activities, gender-sensitive Quick Impact Projects (QIP) and support to humanitarian operations (if requested by the Humanitarian Country Team through the Resident/Humanitarian Coordinator (RC/HC)). The Outreach Staff Section includes an outreach and engagement/public information officer and interpreters. It coordinates with other Mission components and undertakes appropriate outreach and engagement activities with the local population through confidence-building measures, community projects, civil-military cooperation/quick impact projects (CIMIC/QIP), welfare activities, public information, media management and key leader engagement. It employs its own interpreters in conjunction with local interpreters. It operates in close coordination with the Mission's civilian components, such as Civil Affairs and Human Rights, and establishes liaison with the various humanitarian actors and other local stakeholders, including host nation security forces.

- **Headquarters: Quick Reaction Team.**

  At all times, the UN Military Engineer Unit headquarters maintains a Quick Reaction Team capable of executing special tasks, such as first responder in the event of emergency due to natural and manmade disasters or hostile action. The strength and equipment of the Quick Reaction Team will depend on Force-specified requirements.

- **Headquarters: Logistics Staff Section**

  The Logistics Staff Section includes a Logistics Officer, logistics staff and a contingent-owned equipment/finance officer. The section coordinates all logistics support for the unit in accordance with MOU arrangements to plan, provision, stock and turnover inventory; replenish supplies and stores; and repair, replace and manage equipment. The section ensures proper maintenance, serviceability and inspection of both UN- and contingent-owned equipment in the unit's care. It also manages the unit's financial and accounting transactions. The Logistics Officer is in charge of the UN Military Engineer

[23] The Outreach Staff Section in the UN Military Engineer Unit is analogous to the eponymous section in the UN Infantry Battalion. See the UN Infantry Battalion Manual, Volume II, 2012, pages 16-17.

Unit's movement control for in-Mission movement as well as unit rotations, and acts as the environmental focal point.

3.2.2 **Headquarters Support Platoon**

The UN Military Engineer Unit Headquarters Support Platoon operates under the Logistics Staff Section. It includes a Catering Services Section, Facilities Management Team, Supply and Petroleum, Oil and Lubricants (POL) Section, Transportation Section, Engineer Section, Level I Medical Facility and Camp Guard. It provides sustainment and maintenance coverage for the unit and its subordinate elements.

- **Level I Medical Facility.** The UN Military Engineer Unit Level I Medical Facility is based on specifications in the UN's Contingent-Owned Equipment Manual with an ability to deploy two Forward Medical Teams if required. For Company Operating Bases that are deployed beyond the supported distance of the Military Engineer Unit's Level I Medical Facility, an additional two paramedics/nurses may be included in accordance with MOU and operational requirements. It provides immediate life-saving medical support at the unit level, ensures medical self-sufficiency and coordinates surface and air evacuation of casualties.

- **Camp Guard.** The Camp Guard is responsible for maintaining the Military Engineer Unit's camp security and protects its facilities and property. The Camp Guard is also responsible for firefighting and, if the Mission requires, provides hazardous materials (HAZMAT) response.

3.2.3 **Engineer Support Platoon**

The Engineer Support Platoon includes a headquarters element, a Technology/Geology/Topography Survey Section and a Maintenance and Workshop Section. When the Mission requires, a Well Drilling Section is attached to this platoon. In the UN Military Combat Engineer Unit, the Engineer Support Platoon will also include three Construction Sections to support the Combat Engineer Platoons in the execution of their Combat Engineer tasks.

3.2.4 **Combat Engineer Platoons**

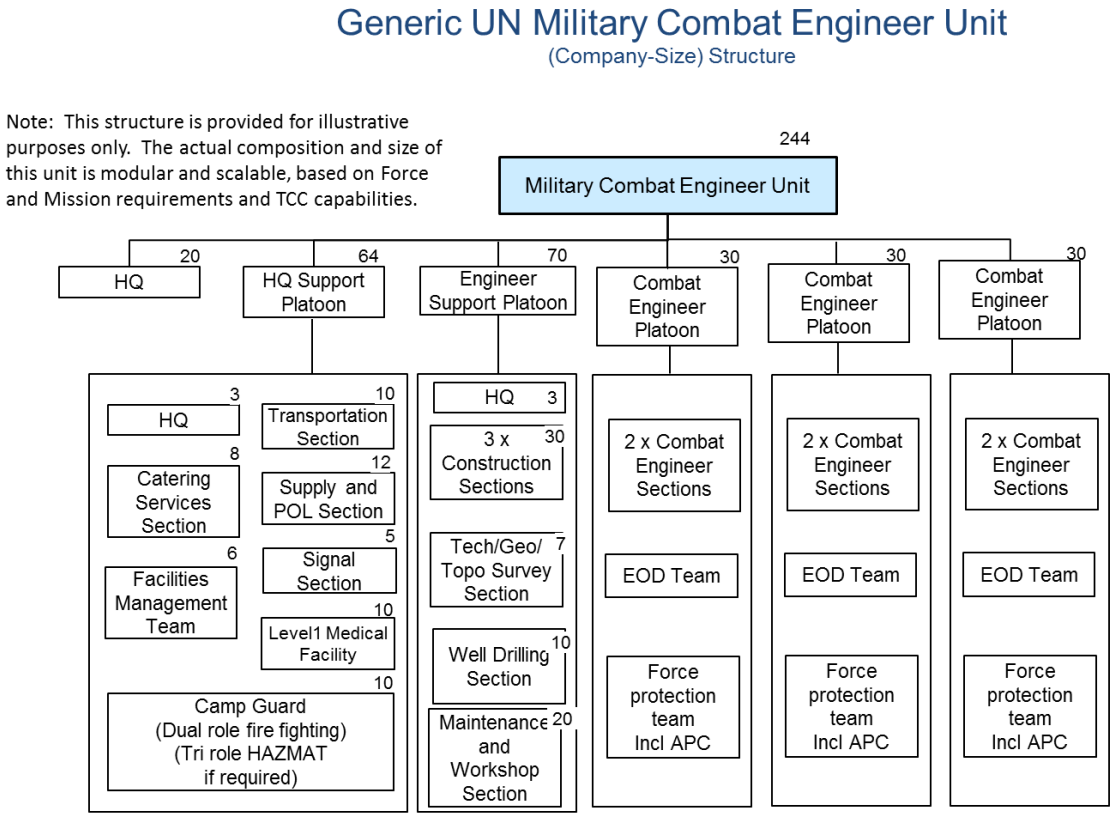
Each Combat Engineer Platoon includes a headquarters element, two Combat Engineer Sections, an EOD Team and a Force Protection Team that has an additional role as a Mine Clearing Team. These Combat Engineer Platoons are the nucleus of all Combat Engineer activities/tasks supported by other elements of the Combat Engineer Unit. The UN Military Combat Engineer Unit may have an EOD/IEDD Coordination Cell, if the Force requires. The EOD Coordination Cell serves as the principal authority directing, controlling and coordinating tasks to the UN Military Combat Engineer Unit's EOD/IEDD teams, particularly in the absence of any other unit or organization controlling and coordinating EOD/IEDD activities, and always in coordination with the Mission's UN Mine Action Service Office. The Chief, EOD/IEDD is also responsible for coordinating medical and force protection support for the UN Military Combat Engineer Unit's EOD/IEDD operations. Tasking may originate with other members of

the UN Force, the Mission's civilian component or local authorities who submit their requests for EOD assistance to the UN Mission. Requests for EOD assistance are typically approved when:

- There is a direct and imminent threat to the life of UN personnel, installations or civilians;
- The UXO may hinder the accomplishment of any present or future UN task, or limit the freedom of movement of UN personnel;
- Requests for EOD assistance have been coordinated by local authorities/host nation or UN Mine Action Coordination Center, and other EOD teams in the Mission area are not able to respond within a timely manner.
- Operations should be postponed if the medical and force protection support are unavailable or cannot be provided.

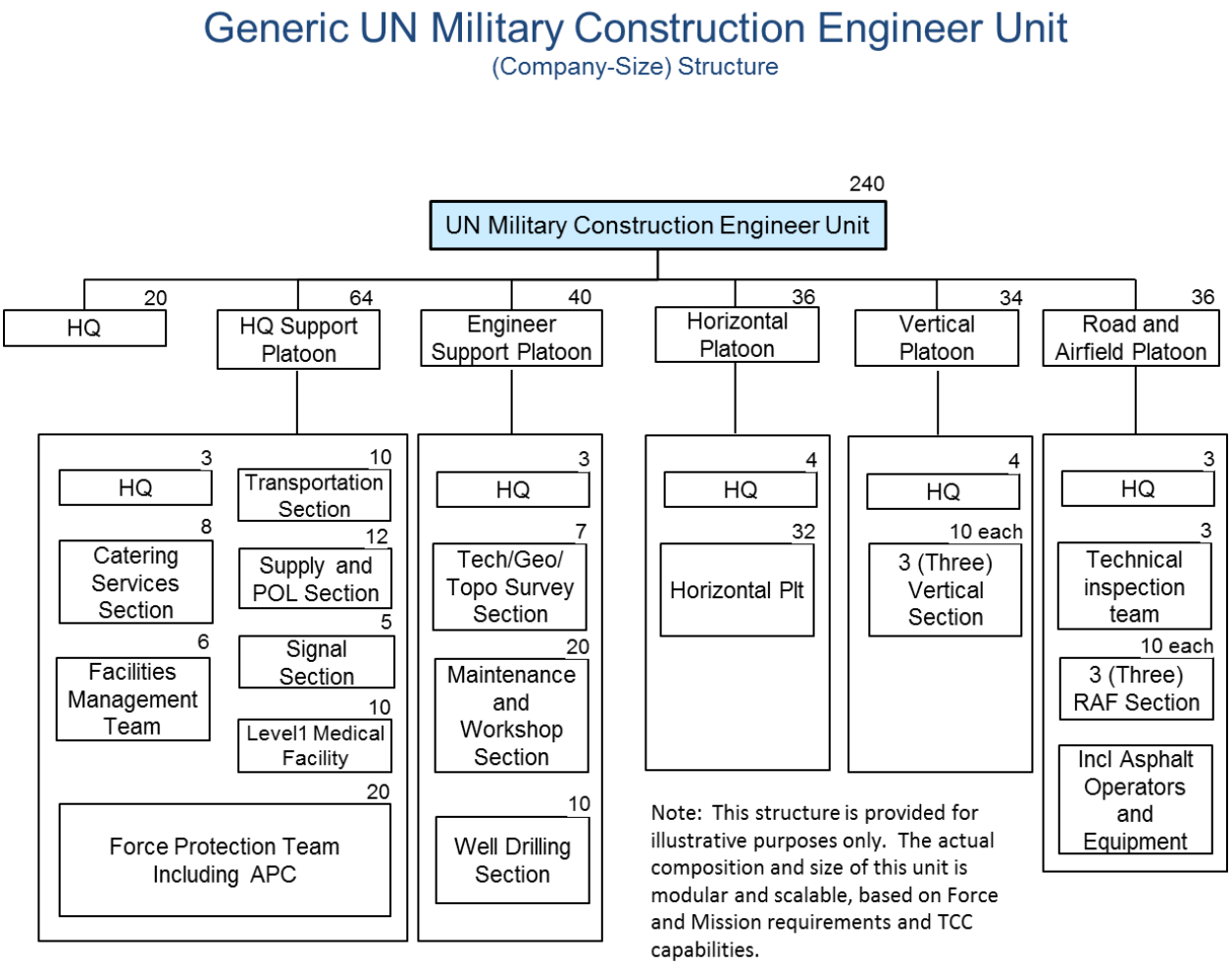
3.3 **Structure of the UN Military Combat Engineer Unit**

The following chart illustrates a generic, company-size UN Military Combat Engineer Unit of approximately 244 personnel. It contains a full range of Military Combat Engineer capabilities including a headquarters element, Headquarters Support Platoon, Engineer Support Platoon and three Combat Engineer Platoons. As this structure is generic, it portrays a possible UN Military Combat Engineer Unit structure, not necessarily any particular structure currently in a UN Mission. Actual structures deployed will depend on Force requirements and TCC capabilities.



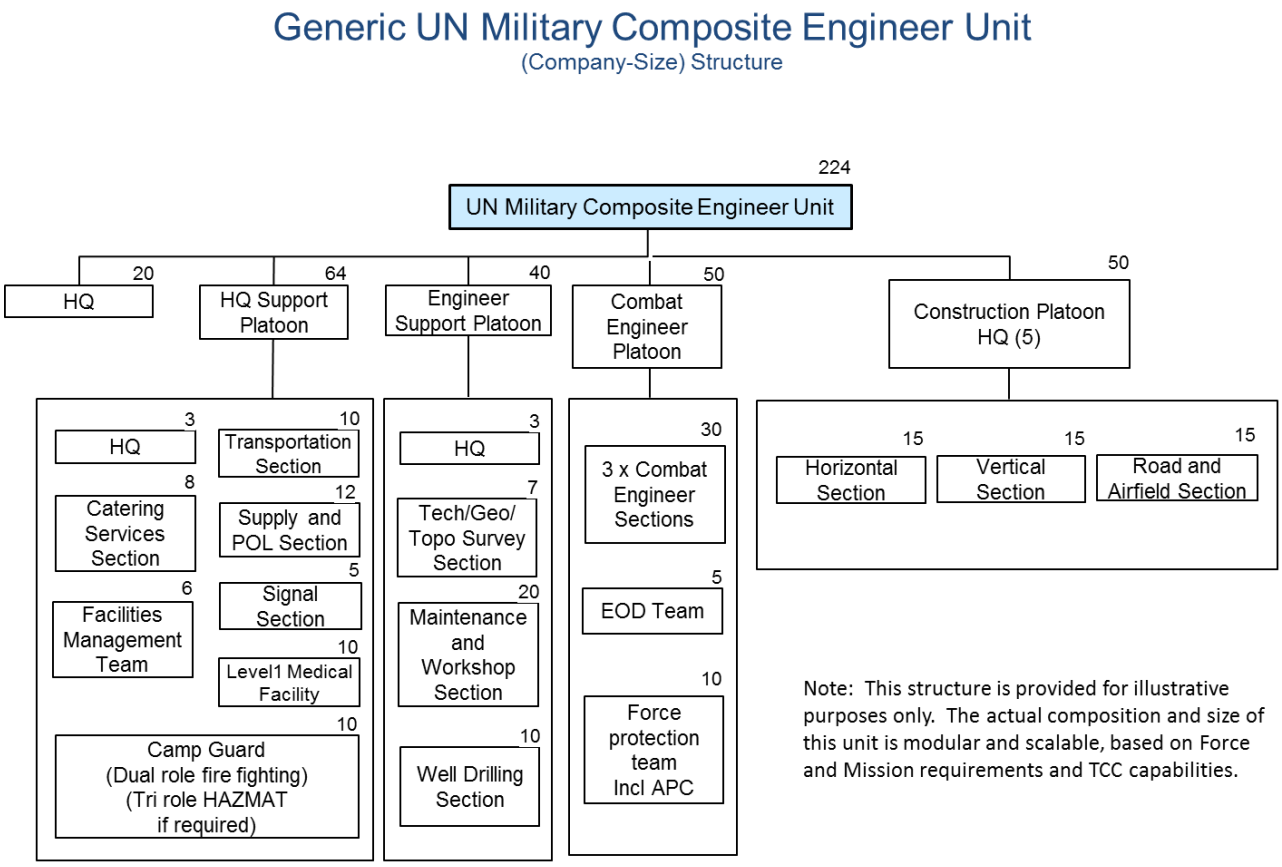
3.4 **Structure of the UN Military Construction Engineer Unit**

The following chart illustrates a generic, company-size UN Military Construction Engineer Unit of approximately 240 personnel. It contains a full range of UN Military Construction Engineer capabilities including a Headquarters element, a Headquarters Support Platoon, an Engineer Support Platoon and one each Horizontal, Vertical and Road and Airfield Platoons that can be task organized to reinforce one another according to Mission requirements. See Chapters 1 and 2 for further descriptions of the Horizontal, Vertical and Road and Airfield Platoons. As this structure is generic, it portrays a possible UN Military Construction Engineer Unit, not necessarily any particular structure currently in a UN Mission. Actual structures deployed will depend on Mission requirements and TCC capabilities.



3.5 **Structure of the UN Military Composite Engineer Unit**

The following chart illustrates a generic, company-size UN Military Composite Engineer Unit of approximately 224 personnel. As with the other variations of UN Military Engineer Unit structure, its composition and size are modular and scalable according to Force and Mission requirements and TCC capabilities. The UN Military Composite Engineer Unit contains a full range of UN Military Engineer capabilities including a Headquarters element, a Headquarters Support Platoon, an Engineer Support Platoon, a Combat Engineer Platoon *and* a Construction Platoon comprised of one each Horizontal, Vertical and Road and Airfield Sections that can be task organized to reinforce one another according to Force and Mission requirements. See Chapters 1 and 2 for further descriptions of the Horizontal, Vertical and Road and Airfield units. As this structure is generic, it portrays a possible UN Military Composite Engineer Unit, not necessarily any particular structure currently in a UN Mission.



3.6 **Personnel Requirements**

The UN Military Engineer Unit organizations described in this manual are a recommended baseline for planning and preparation purposes at UN, TCC and Combat Mission Headquarters. Actual personnel requirements and unit configurations will vary widely based on Mission requirements and UN-TCC MOU negotiations. When generating a UN Military Engineer Unit, a number of points should be considered:

- **Rank Structure.** TCCs have the flexibility to adjust the rank structure according to their national organizational norms. Nevertheless, TCCs must ensure that their personnel have the requisite ability and qualifications.

- **Female Participation.** TCCs should make every effort to include uniformed female military personnel in the unit as their presence is a significant advantage in situational awareness when coming into contact with the local population. Wherever possible, female personnel should be included amongst the command and staff, operations, logistics and interpreter personnel.

- **Special Skills.** Staff officers, technical and specialist personnel (such as engineers, surveyors, transportation specialists, workshop, interpreter and medical personnel) should be fully qualified in their respective areas of specialization.

- **Cross-Training.** For the sake of organizational versatility, the UN Military Engineer Unit should cross-train its personnel in related skills to the maximum extent practicable.

- **Communications.** All UN Military Engineer Unit personnel must be able to operate the unit's communications equipment.

3.7 **Equipment Requirements**

The tables of equipment requirements for the UN Military Combat and Construction Engineer Units are attached at Annex C. They were developed and updated with reference to the Contingent Owned Equipment Manual of 2011 and the generic organizations described herein. The recommended types and quantity of equipment were established based on typical Mission requirements, best practices and extensive field experience. The recommended types and quantities of equipment are for initial planning purposes only and do not replace authorizations given in a Statement of Unit Requirement after carefully studying Mission-specific requirements, the terms of an MOU, or as otherwise negotiated between the UN and TCC.

Chapter 4

Support for the UN Military Engineer Unit

4.1 **Support Expectations**

The UN Military Engineer Unit is expected to meet the standards of self-sustainment according to the terms of the Statement of Unit Requirement, UN-TCC Memorandum of Understanding (MOU) and Contingent-Owned Equipment (COE) Manual. The deploying UN Military Engineer Unit is also required to have and maintain the necessary resources and personnel to support itself administratively and logistically for the duration of the Mission (apart from where supplemented by the UN). To avoid having troops arrive unprepared to sustain themselves or their operations, TCCs and their contingents must be clear on what support will be provided by the UN, and what support they must provide for themselves. See Annex A to this manual for examples of typical and specific initial provisioning and self-sufficiency support requirements. The specifics of what to expect are provided in key documents such as the Statement of Unit Requirement and any UN-TCC MOU or Letter of Assist. It cannot be over-emphasized that special attention must be given to the detailed requirements for rations, water, shelter, medical support and supplies.

4.2 **The UN Military Engineer Unit Commander´s Role**

Before deploying to the UN Mission's operational theater, the UN Military Engineer Unit commander must ensure that he or she can deploy, sustain and regenerate his or her force. He should consider the implications of casualties, consumption, materiel losses and resupply lead time; and then plan, allocate and balance resources accordingly. A UN Military Engineer Unit commander should also evaluate the risks to, and security of, his or her sustainment equipment and capabilities, communication nodes and links; and adapt his or her plan to reduce the impact of unavoidable constraints on the resources readily available. The commander should carefully consider UN and TCC guidelines for determining further sustainment requirements.

4.3 **Major Engineering Support**

Before deployment, UN-TCC negotiations should include any UN Military Engineer Unit requirement for major Military Engineering such as antenna parks and physical barriers for force protection. Early identification of major engineering requirements is essential to reach full operational capability as soon as possible, especially when UN Military Engineer Units are establishing their facilities in new locations. Major Military Engineering tasks are a Mission responsibility and included in the Mission's master engineer plan.

4.4 **Self-Sustainment of the UN Military Engineer Unit**

When the UN Military Engineer Unit arrives in the Mission area it is responsible for meeting all its own needs for rations, water, petrol, oil, etc. for up to 90 days, depending on the terms of the MOU and Statement of Unit Requirement. Typically, equipment is deployed for the duration of the Mission while troop rotations occur every 12 months. Subject to MOU negotiations, the UN Military Engineer Unit may be required to self-sustain in the following areas:

- Catering
- Communications[24]
- Office
- Electrical
- Minor engineering
- Explosive Ordnance Disposal[25]
- Laundry and cleaning
- Tentage (see immediately below and the sample SURs at Annex A)
- Accommodation

    - **Initial Accommodation:** The UN Mission will prepare green field sites under austere conditions at the deployment location. The contingent will need to deploy with sufficient accommodation to provide for storage, offices, ablutions and workshops, etc. Water sources will be arranged by the UN Mission; the contingent will deploy sufficient water purification units to produce and consume its own purified water. The Mission will provide Field Defense Stores (FDS) and additional FDS kits for use in mobile operations.

    - **UN-Provided Accommodation:** The UN Mission will strive to provide rigid or semi-rigid accommodation after the initial six-month period in Contingent-Owned Equipment tentage; failing which the UN Mission will pay a penalty rate of

[24] All internal communications (including line and radio) within a contingent are a TCC responsibility. Contingents should come with suitable equipment for their internal communications establishing contact from their highest contingent headquarters to their respective countries and each of their subordinate Sections, Teams, Detachments, Companies and Battalions. TCCs are also responsible for providing email and Internet access for personal or welfare purposes. The UN provides only strategic communications support between the Mission, Force and Sector Headquarters; and subordinate units of the Sector that are not organic to that Sector Headquarters, such as Battalions provided by another TCC and independently deployed units. TCCs are also responsible for providing email and internet access for personal or welfare purposes.

[25] For the UN military unit camp's internal area only. Does not apply to mine clearance activities.

reimbursement until suitable accommodation can be provided in accordance with the COE Manual.

- **Deployable Accommodation:** The contingent must deploy with a sufficient quantity of tentage necessary for short-term operational and tactical deployments.

- **Tentage Structure:** Tentage must include flooring and the ability to heat and cool as appropriate; and netting at doors, windows and the inner/outer fly of tents. Double-layered tents with metal pipe frames are recommended due to conditions in the field. It is also recommended to mount the tents on cement or wooden foundations to ensure their stability. Deployable accommodations noted in the paragraph above are excluded from this requirement.

- Basic fire-fighting equipment
- Fire detection and alarms
- Medical: observation and treatment identification
- Defense against Chemical, Biological, Radiological and Nuclear Weapons[26]
- Field defense stores
- Miscellaneous general stores
- Internet access
- Unique equipment
- Welfare items

4.5 **Sustainment Support for the UN Military Engineer Unit**

4.5.1 Sustainment support for UN Military Engineer Units is coordinated through the Sector[27] and Force Headquarters. The UN Military Engineer Unit must therefore liaise with both the Sector and Force Headquarters logistics structure (DCOS Operations Support, U-4 LOG, U-1 PER), the Office of the Chief, Service Delivery and the Mission Support Center (formerly the Joint Logistics Operations Centre (JLOC)). Operations planning will determine the specific

[26]To date, UN peacekeepers have not been subjected to a nuclear or biological warfare environment. However, they have had to work in a chemical warfare environment. It is therefore important that some elements of the CBRN threat be covered in training to include the characteristics, symptoms, precautions and use of protective clothing and detection monitoring equipment for all types of CBRN threats. If time is constrained, military units should concentrate on detection of and protection from chemical weapons. –*United Nations Peacekeeping Training Manual, Training Guidelines for National or Regional Training Programmes*, undated, page 28, published by DPKO: http://ppdb.un.org/Policy%20%20Guidance%20Database/MAN_UN_PEACEKEEPING_TRAINING.pdf

[27] When deployed in support of the Sector.

logistics requirements and the associated logistics command and control structures for each operation when the UN Military Engineer Unit is committed. Following the initial period of self-sufficiency and in addition to TCC support obligations to their deployed contingent, all other UN Military Engineer Unit life support and operational requirements are satisfied by the Mission's Director or Chief of Mission Support through the Office of the Chief, Service Delivery.

4.5.2 The UN provides the following items and services:

- Food rations (storage, cooking and sometimes transportation are a contingent responsibility)
- Bulk raw water (or access to bulk raw water). (TCCs are responsible for transport, purification and storage.)
- Bulk fuel (TCCs may be responsible for transport and storage.)
- Strategic movement of Contingent-Owned Equipment and personnel from the home country to the Mission area of operations
- Main supply route, road/other infrastructure upkeep and mine clearing. Minor engineering and routine upkeep is a TCC responsibility. (Readers should consult the COE Manual and applicable MOU for further guidance.)
- Blood and blood products
- Interpreters. Based on operational need, military units use military and/or civilian interpreters provided by their TCCs, or locally-employed interpreters who are normally contracted and provided by the Mission's Director/Chief of Mission Support.[28]
- Casualty Evacuation/Medical Evacuation (CASEVAC/MEDEVAC)[29] transportation and support for movement of sick and wounded personnel to appropriate medical facilities.[30]

[28] UN Infantry Battalion Manual, DPKO-DFS, August 2012, Volume II, Annex G, pages 274-275.

[29] Casualty Evacuation (CASEVAC) entails the evacuation (by air or land) of a casualty from the site of injury to the closest medical facility. This category of patient transfer shall be conducted within 1 hour of injury. Medical Evacuation (MEDEVAC) entails the evacuation of a casualty between two medical facilities; either within the Mission area (in-theatre) or out of Mission area. MEDEVAC should be conducted depending on the medical urgency. See the newly-revised UN Medical Support Manual, 2015, Chapter 10, paragraphs 9.a. and b.

[30] For comprehensive guidance on medical operational, logistical and administrative guidelines for Member States, UN Headquarters and field Missions, consult the Medical Support Manual for United Nations Peacekeeping Operations, which will be available at: http://ppdb.un.org/Nav%20Pages/PolicyFramework_Default.aspx

4.6 **Medical and CASEVAC/MEDEVAC Support**

4.6.1 **Medical Capability**

UN Military Engineer Units typically deploy with their own integral Level 1 Medical Facility. Higher levels of medical support are a Mission responsibility provided through CASEVAC/MEDEVAC. Each UN Military Engineer Unit (company equivalent) may deploy elements within the Mission area with an attached medical element subject to availability, if required. The ability to evacuate UN Military Engineer Unit casualties to appropriate medical facilities must be pre-arranged and verified before each UN Military Engineer Unit mission.

4.6.2 **CASEVAC/MEDEVAC Planning and Training**

During the planning phase of each operation, special attention must be given to available CASEVAC/MEDEVAC capabilities, procedures[31] and timing with the appropriate staff officers at Sector or Force/Mission Headquarters. UN Force/Mission MEDEVAC/CASEVAC assets and Mission Medical Facilities will provide additional transportation/medical support and should train with the Mission's Military Engineer Unit. Each unit is responsible for the provision of a "10 minute" initial response/"buddy first aid" to their personnel. Training is to be conducted as part of pre-deployment preparations in the home country. CASEVAC/MEDEVAC training is aimed at interoperability with enablers, including medical, aviation, transportation and other Force elements such as the Quick Reaction Force. When aerial CASEVAC/MEDEVAC assets are not available or appropriate, alternate CASEVAC/MEDEVAC may be arranged using Force or Mission assets and procedures. UN Military Engineer Unit CASEVAC/MEDEVAC typically involves UN Military Engineer Units making use of all available Sector, Force and Mission capabilities.

4.7 **UN Headquarters Staff Support to the UN Military Engineer Unit**

4.7.1 The Department of Field Support (DFS) at UN Headquarters provides dedicated support to peacekeeping field Missions in the areas of financial reimbursements, logistical support services, communications and information technology, human resources and general administration to help field Missions. Support is delivered to field Missions and TCC contingents by DFS to the respective Mission through Mission Directors/Chiefs of Mission Support and their subordinate staff.

4.7.2 Equipment for communications between the Mission, Force or Sector Headquarters and the UN Military Engineer Unit is provided to the Engineer Unit by the UN as UN-Owned Equipment (UNOE). This ensures that the UN Military Engineer Unit has secure, standardized military-grade communications within the Force and Mission's communications network. The

[31] All planned aviation-related activities, such as transportation by air (including medical and casualty evacuation), reconnaissance, selection of temporary helicopter landing sites, etc., must be coordinated with the Mission Aviation and Movement Control elements in order to meet specific requirements stipulated in the respective Aviation, Movement Control and Aviation Safety policies, manuals and SOPs. See also the DPKO *Aviation Manual*, 2005 for specific requirements to transport weapons on board UN-chartered aircraft.

UN Military Engineer Unit's internal communications is a TCC responsibility. A contingent's internal communications and information systems include all line and radio communications from a contingent's highest headquarters down to its lowest subordinate element.

4.7.3 The determination of financial reimbursement to UN Member States for Contingent-Owned Equipment (COE) is established through the COE Working Group and UN legislative bodies. The details of this reimbursement at the contingent-specific level are included in the MOU, which is the primary financial reference for contingent logistics support (including support for the UN Military Engineer Unit) for each specific peacekeeping Mission. Major equipment (if not in the COE Manual) may be treated as a "special case" if the situation requires. Maintenance of this special case equipment is a TCC responsibility if the equipment is under wet lease. See paragraph 4.8 below for an explanation of wet and dry leases. In accordance with the COE Manual, any special minor equipment or consumables not covered by the standard self-sustainment rates may be categorized as "unique equipment." These items will be reimbursed according to bilateral special case arrangements between the troop/police contributor and the UN.

4.7.4 The DFS logistics plan is the basis for identifying resources that may be re-deployed from other locations (e.g., UN Global Service Center or other field Missions) to support Mission deployment. Additionally, the DFS logistics plan may provide a basis for negotiations with potential TCCs on provision of COE that each individual troop contributor is required to bring to the Mission along with associated, applicable self-sustainment services.

4.7.5 **Force Generation and Logistics Planning**

It is essential to coordinate the force generation process with logistics planning. This coordination currently occurs once troop contributors have been identified. At this point, any problems that troop contributors may face in equipping or supporting their contingents are identified and staffed for resolution at UN Headquarters. Problems are assessed based on a combination of the data given by the TCC and assessments carried out by DPKO and DFS personnel. The UN Department of Field Support recognizes that many Member States do not possess all of the equipment needed for a particular UN Mission and may therefore put in place mitigating logistical arrangements including the purchase of UNOE and/or "wet and dry leases" as necessary.

4.8 **Wet and Dry Lease**

In order to ensure that units being offered by Member States come with the required capability, there are a number of options for the provision of major equipment and its support. These options come under the headings of "wet and dry lease" and the option chosen is directly linked to the rate of reimbursement. Full details are available in the COE Manual.

4.8.1 **Wet Lease**

Under wet lease arrangements, a contingent deploys with its COE and is responsible for its maintenance and support. This arrangement can be achieved in one of two ways:

- The troop contributor provides the vehicles and equipment, related minor equipment, workshop support, spares, and maintenance personnel. The troop contributor is reimbursed at set rates.

- One troop contributor provides the major equipment and a second party, under a bilateral arrangement, provides the support. In this case, the troop contributor deployed to the Mission area and operating the equipment may be reimbursed by the UN. The second party is reimbursed, if at all, through a bilateral arrangement without any UN involvement or responsibility.

4.8.2 **Dry Lease**

Under dry lease arrangements, a contingent deploys with its COE but the UN arranges for its support. This arrangement can be achieved in a number of ways:

- Under the first, the troop contributor provides the equipment and the UN takes responsibility for the support, provision of spare parts and maintenance. The troop contributor receives reimbursement at the dry lease rate.

- The troop contributor provides the equipment and the UN arranges for another Member State to provide the support. The former receives reimbursement at the dry lease rate and the latter is reimbursed for maintenance and support.

- The troop contributor provides the equipment, receives reimbursement at the dry lease rate and the UN provides the support via commercial contractor.

- The UN provides the equipment and along with the support, provision of spare parts and maintenance.

4.9 **Letter of Assist**

Primary logistics support for a contingent comes from national military logistics sources under TCC control. Civilian contractors, arranged by the TCC, may also provide support. Major items of equipment may accompany deploying units, or the UN may provide them in the Mission area as mentioned above. The UN may also satisfy specific support requirements not already included under an MOU or available through commercial contract. These support requirements may be met by a contracting method known as a Letter of Assist (LOA), by which the UN acquires special supplies or services from a Member State. LOAs are used when:

- A TCC deploys, rotates or repatriates its personnel and equipment using its own capacities.

- A special need arises for essential equipment or services that are not available through normal sources of supply.

- The items or services required by the Mission are not covered by an MOU.

- A TCC contributes aircraft or vessels to a Mission.

4.10 **Pre-Deployment Visits**

In view of the financial and operational significance of ensuring that contingents are correctly equipped, DPKO arranges to conduct Pre-Deployment Visits (PDVs)/inspections before deployment. PDV's are usually conducted once the troop contributor and UN Headquarters reach an MOU agreement. This MOU covers personnel, major equipment, self-sustainment and Mission factors, and is a contractual statement of what each of the respective parties will provide in these areas.

4.11 **Status of Forces Agreement**

4.11.1 From a logistical perspective, the Status-of-Forces Agreement (SOFA) specifies the terms of support provided by the host state to the UN Mission, as well as the legal rights of the UN Mission's personnel and operations. DPKO, in coordination with DFS, is responsible for negotiating SOFAs with the host state.

4.11.2 SOFAs also codify relations between the UN Mission and host state describing "the rights, privileges and immunities of the Mission and its personnel and the Mission's obligations to the host government."[32] SOFAs govern the legal status of troops and civilian personnel deployed to the Mission in the host state, and specify the legal immunity for UN personnel with regard to the settlement of claims, the modalities for the exercise of civil and criminal jurisdiction over military and civilian Mission members, as well as provisions relating to freedom of movement, taxes, customs, immigration controls, radio frequencies, flight clearances and permission to wear uniforms and carry weapons. Under the typical terms of a SOFA, "military personnel are immune from criminal prosecution by the host state for crimes committed on its territory, but may still be subject to the criminal jurisdiction of their national authorities."[33]

4.12 **National Support Elements**

4.12.1 With prior UN approval, Member States providing military and/or police personnel to UN Missions may augment those personnel with a National Support Element. Member States may choose to organize National Support Elements to provide their deployed contingents administrative and logistical services with national standards of support that may exceed or differ from the stated UN requirement. A National Support Element includes personnel and equipment *in addition* to those agreed to by the UN and Member State under the terms of the applicable

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[32] *Handbook on United Nations Multidimensional Peacekeeping Operations*, published by DPKO Peacekeeping Best Practices Unit, December 2003, p.13, available at:
http://www.peacekeepingbestpractices.unlb.org/Pbps/library/Handbook%20on%20UN%20PKOs.pdf

[33] *Office for the Coordination of Humanitarian Affairs (OCHA) Glossary of Humanitarian Terms in Relation to the Protection of Civilians in Armed Conflict*, 2003, available at:
http://ppdb.un.org/Policy%20%20Guidance%20Database/Glossary2004.pdf

MOU, and/or as described in the Statement of Unit or Force Requirement for the specific field Mission.

4.12.2 As this augmentation is over and above UN requirements, the UN offers no reimbursement or financial liability for National Support Element costs, rotation or self-sustainment. Nonetheless, for purposes of legal status, National Support Element personnel are considered part of the Member State's military or police unit contingent. The total personnel strength of the National Support Element will be specified in the applicable MOU between the UN and Member State, and shall be reasonably proportionate to the strength of the contingent.

Chapter 5

Training for the UN Military Engineer Unit

5.1 **Intent**

This Chapter is intended to assist UN Military Engineer Unit commanders and leaders in their professional obligation to achieve the training and operational readiness of the personnel under their supervision. The following paragraphs contain brief explanations of UN training responsibilities and expectations, training requirements and professional military training recommended for emphasis. The UN fully recognizes TCC sovereignty and prerogatives when it comes to the military training of their personnel and units. TCC military training is the foundation upon which UN Military Engineer Units can then add and adapt to the UN peacekeeping context. The training requirements mentioned in this Chapter are task-oriented and not necessarily UN peacekeeping unique. The intent is to provide contingent commanders and subordinate leaders a consolidated list of important topics as they prepare their units for UN deployment and post-deployment. Commanders and subordinate leaders should develop these training topics in greater detail to suit the needs of their units. To meet the need for greater detail in UN Mission-specific training, specialized training materials (STMs) are being developed by the Department of Peacekeeping Operations to provide peacekeeping training goals for TCCs participating in UN operations.

5.2 **Training Responsibilities and Expectations**

Training, regardless of subject, is a command responsibility at every organizational level. Military commanders and supervisors have a professional, legal and moral obligation to ensure their personnel and units are properly trained to accomplish their missions. UN Military Engineer Units are normally composed of personnel from a single TCC, but may occasionally include elements from other TCCs. National military training is ideally within the parameters set by the UN as articulated in this Manual (to promote effectiveness and interoperability), and therefore may only require a deploying unit to undergo some additional training to gain greater familiarity with UN peacekeeping and the specific requirements of a particular Mission. DPKO's Integrated Training Service (ITS), part of the Policy, Evaluation and Training Division of DPKO at UN Headquarters, provides this type of UN Mission orientation training material. ITS has developed Mission-specific training modules that, when applied, help transform and re-align UN military units to the tasks and challenges of peacekeeping operations. ITS is responsible for providing peacekeeping training standards for all phases of training, based on departmental priorities and policies, lessons learned and best practices. ITS disseminates required standards to all peacekeeping training partners, including Member States and field

Missions. Planners should take into consideration training requirements as they develop timelines for deployment and troop rotation so that units can receive the necessary training before they deploy. Upon arrival in the Mission area, the Force Headquarters is responsible for producing training-of-trainers courses for induction training conducted under contingent arrangements. Individual and especially collective UN Military Engineer Unit training should also focus on interaction with different Mission elements, partners and other actors present in the area of operations.

5.3 **Training Requirements**

5.3.1 UN Military Engineer Unit training should be based on Mission requirements contained in the Statement of Unit Requirement. These requirements should include intensive system and technology-specific training on UN-provided equipment. The Information, Communications and Technology Division of the Department of Field Support sets the framework for this part of the required training and unit preparation.

5.3.2 The UN Infantry Battalion Manual (UNIBAM) discusses common UN military unit training at length and should be studied by all units deploying for peacekeeping Missions.[34] Key professional qualities worthy of TCC training emphasis include military planning, the ability to integrate and orchestrate diverse sources of specialist personnel and equipment, communications skills (both oral and written), the development of a versatile and flexible mind-set, cultural awareness and sensitivity, language skills, and knowledge of the UN communications and information technology system. Descriptions of generic UN peacekeeping training, including the various training phases such as Pre-Deployment Training, Induction Training, Ongoing or In-Mission Training (a command responsibility vital to ensuring the maintenance of operational effectiveness) and on-the-job training are covered in the UN Infantry Battalion Manual. The overarching principles of UN peacekeeping described therein are applicable to all military units regardless of specialty.

5.3.3 While military training may vary according to national goals and resources, there are fundamental training requirements that should be observed when preparing to deploy to a peacekeeping Mission. Training requirements of particular note for UN Military Engineer Units include:

- Mission Rules of Engagement.
- Protection of Civilians.
- Human Rights and Due Diligence Policy.
- Mission-specific geographic and environmental conditions whose unique physical and operational characteristics present certain challenges for effective operating.

[34]The Infantry Battalion Manual, Volumes I and II, can be found at: http://www.un.org/en/peacekeeping/documents/unibammanualvol1.pdf and http://www.un.org/en/peacekeeping/documents/unibammanualvol2.pdf.

- Mission-specific guidance obtained from documents issued by DPKO's Office of Military Affairs, such as the Statement of Unit Requirement and Guidelines to TCCs; the Integrated Training Service's Pre-Deployment Information Packages; and field Mission documents such as the Force Commander's Training Directive.

- Observations resulting from reconnaissance by the incoming UN Military Engineer Unit commander and staff to the Mission area.

- Lessons learned from the outgoing UN Military Engineer Unit.

- Awareness training on asymmetric threats, particularly the use of IEDs.

5.4 **Professional Military Training Recommended for Emphasis**

There are a number of professional military training subjects TCCs should emphasize as they prepare their personnel and units for UN peacekeeping operations. Knowledge of the UN command and control and logistics systems (particularly as explained in this Manual's 1st and 4th Chapters) is essential for contingents to operate effectively within the integrated UN field Mission. TCCs are encouraged to develop leaders who are capable of working within a civilian-managed Mission support structure while remaining responsive to supported military units and the Mission's military chain of command. Beyond mastering specific technical subjects, UN Military Engineer Unit leaders should be capable of orchestrating all military unit functions to achieve a coordinated application of unit assets. The ability to work with other nationalities is a fundamental requirement in UN operations. Language training and Mission-specific cultural familiarization could be incorporated into the TCC's long-term professional military curriculum, not just its pre-deployment training. Since English and French are the two languages most frequently required in UN Missions, it is highly desirable for UN Military Engineer Unit personnel to be proficient in English and/or French languages (written and oral). Preparing key contingent members to communicate in the English and/or French languages allows them to integrate their unit into the overall Mission. Moreover, it would be invaluable to assign at least two bi-lingual UN Military Engineer Unit persons to radio rooms. TCCs are encouraged to work with DPKO's Integrated Training Service to develop classroom instruction and command post exercises that will provide UN peacekeeping orientation that can then be added to TCC-specific military professional training.

Chapter 6

Evaluation of the UN Military Engineer Unit

6.1 **Evaluation Criteria**

6.1.1 Evaluations are extremely useful to TCCs, their contingent commanders and UN planners and Mission leadership to organize, train, equip, deploy and employ military personnel. TCCs conduct their evaluations (reinforced by Force and Sector Headquarters evaluations) to assess and monitor the state of individual and collective training, and to check the maintenance and performance of equipment. Above all, the purpose of formal evaluations is to assist TCCs and military contingents in meeting national and UN standards of performance and interoperability.

6.1.2 A military contingent's operational readiness is evaluated based on distinct criteria such as Mission requirements, organizational structure, operational standards, the capability to perform mission essential tasks, standards achieved in training, as well as administrative and logistics standards. This evaluation should analyse task-oriented activities at each level within the military contingent to include individuals, task-oriented groups and commanders. The evaluation checklists at Annex D include broad peacekeeping evaluation criteria, as well as those that are more UN Military Engineer Unit specific. For a comprehensive set of UN commander's evaluation checklists, see the Chapter on Peacekeeper Capability Standards in the UN Infantry Battalion Manual.

6.2 **Independent Evaluation Support**

TCCs can authoritatively determine how well their personnel, units and equipment are prepared for peacekeeping duties by conducting independent evaluations using special evaluation experts from national training centres and personnel with previous peacekeeping experience. Adequate resources in terms of training areas, ammunition for live firing, classrooms and equipment oriented to the Mission environment will all significantly improve preparation and evaluation exercises. Any gaps in capability can be corrected by TCC-appropriate action to make the necessary improvements. Additionally, the UN Force Headquarters conducts its own assessment of Force units when they deploy. In this way, multiple evaluations contribute to higher states of operational readiness and performance.

6.3 **Conducting Evaluations**

Formal evaluations during mission rehearsals and exercises are highly encouraged. Evaluation criteria should be based on measurable and quantifiable standards that are specific, achievable, realistic and time-bound in nature. Evaluations may be conducted in a graduated manner by level (from individual soldiers to commanders); activity (Crew, Section, Platoon, Company or Battalion); and in a task-oriented manner to systematically build expertise and

integrate capabilities for collective application. In addition to national training standards, further guidance on conducting evaluations is available in the sample evaluation checklists at Annex D, and the links and references provided throughout this manual regarding UN policies, directives, SOPs and guidelines.

6.4 **Pre-Deployment Evaluations**

6.4.1 A military contingent is expected to be well trained and qualified in basic military skills and conventional military tactics, techniques and procedures according to specific national military standards prior to concentration for peacekeeping training. DPKO-organized pre-deployment visits (PDV) offer a level of independent evaluation prior to a contingent's deployment to the Mission area. Pre-deployment evaluations by the TCC and DPKO/DFS may include validation of the contingent's ability to:

- Ensure timely assembly, grouping, and equipping of the UN Military Engineer Unit in accordance with the SUR and MOU.
- Conduct Mission-specific, task-oriented, individual and collective tasks/capabilities.
- Identify shortcomings and take corrective measures for capability enhancement.

6.4.2 Prior to UN DPKO's PDV, a well-prepared UN Military Engineer Unit may undertake the following activities:

- Raising and establishing a Military Engineer Unit in accordance with the Mission-specific UN Statement of Unit Requirement.
- Training in accordance with standard UN Military Engineer Unit tasks and operational demands. See Chapter 2 for a detailed discussion of UN Military Engineer Unit tasks.
- Developing *Mission-specific*, task-oriented, individual and collective expertise and capabilities.
- Identifying shortcomings and taking remedial action to improve capabilities.
- Making timely adjustments and mid-course corrections.
- Utilizing experienced trainers from other Military Engineer Units to train the new Military Engineer Unit awaiting deployment.
- Final pre-deployment inspection and rehearsal of the Military Engineer Unit by national peacekeeping experts under troop contributing country arrangements.

6.5 **In-Mission Evaluations**

In-Mission evaluations should include:

- Conducting the first in-Mission evaluation in the second month of deployment to validate and match the standards achieved prior to deployment. This can be followed by quarterly/half yearly evaluations in accordance with Mission norms.

- Continuously and simultaneously monitoring and reviewing performance in-Mission by the military contingent command element and Mission leadership.

- Identifying potential weak areas and instituting periodic selective evaluations to administer corrective actions.

- Reassessing capabilities and skills when the Mission's operational situation changes, or when there is a gap between requirements and performance.

- Taking note of clearly visible performance capability gaps during critical times and adverse situations, and addressing them expeditiously.

- Validating key appointments in command and staff channels to verify ability and responsibility, and providing guidance and support where required.

- Hosting visiting TCC teams of military officials and peacekeeping experts who monitor and validate unit performance.

6.6 **UN Assistance**

DPKO/DFS and the Mission leadership play a key role in guiding and facilitating TCC achievement of evaluation and operational readiness. In addition to this manual, numerous references offer guidelines and standards by which UN Military Engineer Units can evaluate their operational readiness. See Annex E. The nature of UN assistance is described below:

6.6.1 **DPKO/DFS Assistance**

DPKO/DFS promote evaluation, operational readiness and commitment to UN standards with a flexible and accommodative approach by:

- Guiding, assisting, facilitating or supplementing TCC efforts in evaluation.

- Providing training assistance through the Integrated Training Service.

- Providing the Mission and TCC strategic guidance and oversight by:

    - Conducting a pre-deployment visit (for initial deployments only) to verify that provisions of the SUR/MOU are met and the contingent is ready for deployment.

- Guiding and assisting emerging TCCs (and other TCCs on request), focussing on basic military training, output requirements and technology-related issues.

- Providing an Operational Advisory Team from DPKO/DFS to guide and assist emerging TCCs (assistance on request for other TCCs).

6.6.2 **Mission Leadership Assistance**

The Mission leadership supports evaluation by coordinating and providing the following assistance:

- Informs TCCs of performance goals for the Military Engineer Unit, pre-deployment preparation requirements and Mission-oriented task requirements.

- Coordinates pre-deployment reconnaissance, organizes in-Mission induction training through IMTCs, provides the train-the-trainer courses (a Force Headquarters responsibility), provides Mission Military Engineer support and defines unambiguous operational tasks, roles and responsibilities for the Military Engineer Unit that provide a basis for evaluation.

- Carries out in-Mission operational performance and capability evaluation of the contingent as and when required. Provides and coordinates the required resources and staff to conduct evaluations and centralized, technical on-the-job training to strengthen evaluated shortfalls.

- Guides and supports TCCs and Military Engineer Units to improve shortfalls, adopt midcourse corrections and take action with the Mission command and staff on evaluation findings. Develops a Mission-specific Military Engineer training plan and oversees the required training to improve the evaluated operational readiness.

- Performance Evaluation Forms (PEFs) for commanders.

6.7 **Collective Responsibilities**

TCCs are encouraged to modify and formalize the evaluation methodology, criteria and procedures presented herein to suit their needs in conducting their evaluations. For TCC contingents deploying to UN Missions, the development and use of detailed standards and checklists, focusing on peacekeeping and UN Military Engineer preparedness, will yield great benefits in terms of operational readiness and early identification of unit capabilities that need improvement. Early identification allows performance or equipment shortfalls to be addressed before they cause problems. TCCs that lack the financial or technical ability to support their deploying units with the resources needed to meet national or UN standards should immediately seek to discuss their needs with DPKO/DFS at UN Headquarters.

Annex A

Sample
Statements of Unit Requirement

Important Note:

The following extracts of previously issued Statements of Unit Requirement (SUR) are provided for illustrative purposes only.

Any references to unit composition and strength described in these SURs are unique to the Missions for which they were created. Specific planning strength figures, weapons, equipment and organizational structure for a UN Military Engineer Unit in other Missions should be based on Mission requirements and the guidance in this Manual, not necessarily the SURs in this annex.

In the event that the Force Commander is also the Head of Mission, the roles and responsibilities of the UN Military Engineer Unit are not altered.

United Nations Mission Multidimensional Integrated Stabilisation Mission in XXX
Statement of Unit Requirement for Combat Engineer Company

Department of Peacekeeping Operations
Office of Military Affairs
Military Planning Service

Approved by

XXX

May 2013

Review Date:	May 2014
Drafted by:	Military Planning
Service Contact:	Tel: 917-367-2030

This document enumerates details of capabilities that are required for optimizing the unit's efficiency in the conduct of operations as mandated for the Mission. The Concepts of Operations [CONOPS] and any future adjustments to the CONOPS may place additional and more specific requirements on the unit. This should be noted in relations to the MOUs that will be negotiated based on the capabilities provided in this document. The provisions in such MOUs shall by no means supersede the capabilities sought in this document.

The attached document herein, with its notes, Annex A, B and C constitutes the requirements for the (TYPE) Unit. If discrepancy or disagreement on interpretation of the document arises among concerned parties, the interpretation solely by the Office of Military Affairs (OMA), Department of Peacekeeping Operations (DPKO) is deemed valid, and any other interpretation is preempted.

References

A. Military Planning Process for Peacekeeping Operations, 2009

B. Generic guidelines for Troop Contributing Countries deploying military units to the United Nations peacekeeping missions, 2008

C. Stand-by Arrangements in the service of Peace-Tables of Organization and Equipment, 2009

D. Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual), 2009

E. Authority, Command and Control in UN Peacekeeping Operations dated 15 February 2008.

F. UN Security Council Resolution 2100 dated 25 April 2013.

G. Military Strategic Concept of Operations (CONOPS) dated XX XX XXXX.

H. Rules of Engagement (ROE) for the Military Component of XXXX dated XXXX.

Overview of Strength and Deployment Locations[35]

Unit Type	Strength	Deployment Locations and AO	Remarks
Multirole Combat Engineer Company	XXX	XXX	3 Combat Engineer platoons 1 Construction platoon 1 River crossing platoon 1 Combat Support Platoon

1. BACKGROUND.

Deleted

2. MISSION

The Combat Engineer Company is initially to deploy to XXX and provide mobility support for the XXX AOR. Being a Force assets, the unit is to be prepared to execute engineering tasks in the XXX AOR, depending on operational priorities and within its capabilities. HMECs must be self-sustaining and have the capability to deploy one (1) Platoon on independent tasks. This Platoon could be either deployed independently or in support of other engineering units within the AOR.

3. EXECUTION

a. Tasks:

(1) Operational and nonoperational Mission Essential Tasks (MET) in the designated AOR as per the mission Mandate, CONOPS and OPORD, within the organic resources.

(2) Mobility support which include road reconnaissance, preparations of routes (obstacle destruction, road cleaning up, river crossing), support beach landings, preparation to access to bases and construction of helipads.

(3) Survivability support which include preparation of base terrains, construction of force protection installations (obstacles, earthworks, chicanes, shelters), construction of observation posts and check points, bases technical reconnaissance and surveys, intelligence gathering (water and power supply assets, intelligence on the terrain and the infrastructure).

[35] Actual strength, composition, availability of military contingents and deployment locations are subject to Troop Contributing Country (TCC) negotiations with the DPKO. The deployment locations may be temporarily adjusted by the Force Commander (FC), in consultation with the Under Secretary General (USG) of the DPKO and Contingent Commanders to address particular emerging or prevailing operational needs.

(4) relocation and re-deployment of Temporary Operating Bases (TOB) where operational role has significantly reduced to potential threat areas within integral resources.

(5) undertaking joint operations with other national contingents, host country security forces and UN Formed Police Units.

b. Capabilities:

(1) Enhanced capabilities of securing and controlling access to installations.

(2) Deploy at short notice in hostile environment.

(3) Capacity to man two (2) machineguns (less than 10mm) for each Platoon.

(4) Capability to observe during night and to pinpoint own locations.

(5) EOD capacity for own safety.

(6) Capacity to provide high standard radio VHF and HF communications.

(7) Logistic support element capable of supporting the Company sub-units in up to three (3) different locations.

c. Organization.

The combat engineer company is to be articulated according to Annex A on:

(1) One (1) Multirole Combat Engineer Company Headquarters (HQ) (10); the Multirole Combat Engineer Company HQ must have appropriate number of tactical vehicles as required.

(2) Four (4) Combat Engineer platoons (20), each one including one (1) mine clearance team; each platoon must have an adequate number of tactical vehicles with military radio for tactical use, one ambulance vehicle (attached from the Support platoon), trucks and other support vehicles as required.

(3) One (1) Construction Engineer platoon (20) with one (1) excavator cum dumper, one (1) medium duty dozer and two (2) dump truck and an adequate number of tactical vehicles with military radio for tactical use, trucks and other support vehicles as required.

(4) One (1) River crossing Platoon (25).

(5) Logistic support Platoon (25).

d. Major Equipment Requirements.

Major equipment requirements are at Annex C. Additional requirements are as follows. The actual quantity, composition and deployment locations of the COE are subject to TCC negotiations with DPKO.

e. Area of Responsibility. The Multirole Combat Engineer Company HQs to be located in XXX. Initial deployment locations may be adjusted by the FC to address current operational requirements. Therefore, the Multirole Combat Engineer Company must be prepared to adapt to varied locations throughout the XXX.

4. ADMINISTRATIVE REQUIREMENTS

- Administration and discipline. Administration and discipline are a national responsibility.

- Language. The official language of XXX will be English. The official operational communications of the Company with the Sector HQ will be in English. The operational radio communications will be in English. The presence of French speakers in the troops is recommended to enable effective communications with the local population.

5. LOGISTICS

a. Accommodation:

(1) Initial Accommodation: The Mission support will prepare green field sites under austere conditions at the deployment location. Water sources will be arranged by the Mission. The Mission will provide Field Defence Stores (FDS), and additional FDS kits for use in mobile operations. Contingents will deploy with their own tentage and live therein for the first six months.

(2) Permanent Accommodation: Permanent structures will be built for these contingents. After the first six months, the Mission will provide UNOE tentage to replace the COE tentage.

(3) Deployable Accommodation: The contingent must deploy with sufficient quantity and quality of light tentage necessary for short term operational to tactical deployments.

(4) Tentage Structure: Tentage must include flooring and the ability to heat and cool as appropriate, netting at doors and windows and outer fly for tents. Double layered tents with metal pipe frames are recommended due to the conditions in the field. It is also recommended to mount the tents on cement or wooden bases to ensure their stability. (Deployable accommodation defined in paragraph 5.2 b. (iii) is excluded from this requirement.)

b. Ablution: Mission Support will strive to provide ready-to-use field ablutions with running water and waste management at the initial camp site. The Company must deploy with own field ablutions (field latrines and showers) to use for subsequent operational/tactical deployments.

c. Catering: The Company must be self-sustainable in catering. The Mission Support is <u>not</u> providing hard wall structure for the kitchen upon deployment and the contingent should deploy with fully mobile kitchen (e.g., kitchen trailers). The Company should also have clean and healthy kitchen facilities and equipment such as, but not limited to, deep freeze storage (fourteen (14) days), cold food storage (seven (7) days), dry food storage, hot dishwashing capabilities, cooks, mobile cold storage devices, dishes and cutlery. The Company must be able to support all its organic units and personnel,

including augmented personnel, operating in the field with deployable kitchen equipment.

d. **Communications**: The Company must provide mobile integral communications within the Company. The detachment the independent units will receive CITS services by Sectors' Signal Companies personnel manning UNOE to perform their duties.

(1) **HF:** High Frequency (HF) communications is mandatory and must have a range of up to two-hundred-fifty (250) km. The Contingent Command Post must install HF base stations and antennae with at least two (2) sets of HF radios (primary and backup) manned by its own qualified operators for effective radio communication with the Bde HQ, other contingents and its own elements operating outside of the Very High Frequency (VHF) and/or the Ultra High Frequency (UHF) coverage. The Contingent's element operating beyond the effective VHF communication range with its base must be equipped with at least two (2) sets of HF radios (primary and backup) manned by qualified operators for effective radio communication with respective HQs. [36]

(2) **VHF/UHF:** VHF communication is mandatory and must have a range of up to thirty (30) to thirty-five (35) kilometres (km). DELETE [VHF air-band (air to ground) communications is required for casualty evacuation (CASEVAC)]. There is no requirement for UHF communications.

(3) **Telephone:** The Company must provide, install and operate switchboard and telephone network down to the sections within its AOR.

e. **Office:**

(1) **Space:** The office working space must be inside the hard-wall structure or at least inside the tentage.

(2) **Furniture and Equipment:** The Company must be self-sustainable in terms of office furniture, equipment and supplies, including computers (electronic data processing and reproduction capability including necessary software) to all required Company and contingent personnel.

f. **Electrical:** The Company must be self-sustainable electrically, and must supply stable power supply to section level, including observation posts and/or other elements. Main generators should have capacity of generating minimum of three (3) Kilo Volt Ampere (KVA) per person including back-up capacity.

g. **Light Engineering**: The Company must have light utility and general engineering support capability in order to enhance the Battery's infrastructure. The Company must be self-sustainable and have the capacity to handle tasks as follows, but not exhaustive: Field-defensive construction for the Battery;

(1) Limited construction of light structure;

[36] The Contingent must maintain all times, twenty-four (24) hours and seven (7) days, its own radio operators capable of radio equipment operations in English.

(2) Minor electrical repairs and replacement;
(3) Minor repair to plumbing and water systems;
(4) Maintaining all necessary tools, supplies and workshop equipment; and
(5) Deliver above mentioned ((i) to (v)) mobile support to the AORs where the entire and/or part of the Company is operating.

h. **Laundry & Cleaning**: The Company must have sufficient laundry facilities for all military and personal clothing, including dry-cleaning of operationally-required specialist clothing and a cleaning unit. All laundry and cleaning equipment must be kept hygienic and serviced along with spare parts.

i. **Fire Detection and Alarm**: The Company must have the capacity for automatic fire detection and alarm.

j. **Basic Fire Fighting**: The Company must have the capability to undertake basic fire fighting in own accommodations and working areas.

k. **Field Defense Stores**: The UN will provide identification and field defense stores. There is No need for Nuclear, Biological and Chemical (NBC) protection**.**

l. **Observation**:

(1) **General Observation:** The Company must have the capacity to observe twenty-four (24) hours and seven (7) days with section-level handheld binoculars and magnifying night vision equipment.

(2) **Night Observation:** Night vision goggles/equipment must be capable of passive and/or active infrared (IR), thermal or image night-time line or sight observation. Night vision goggles/equipment must be capable of detecting human-size objects within a range of one-thousand (1,000m) meters (m). The Company must be capable of conducting fire missions in support of manoeuvre units' night-time patrols, using integrated and/or individual night vision devices.

(3) **Positioning:** The Company must have the capacity to acquire an accurate geographic fix on own locations with the Global Positioning System (GPS) equipment and laser range finders.

m. **Explosive Ordnance Disposal (EOD) Capabilities:** EOD capability for own safety must be provided to all deploying elements.

n. **Miscellaneous General Stores:** The V must be self-sustainable in terms of, but not limited to, bedding, furniture, welfare equipment and amenity requirements.

(1) **Bedding:** The Company must provide bed linen, blankets (and/or sleeping bags), mattress covers, pillows and towels to all personnel.

(2) **Furniture:** The Company must provide a bed, a mattress, a night stand, a table light and a locker to all personnel.

(3) **Welfare:** The Company must provide TVs, DVD players, stereos, satellite system, library, games, gym and internet-café(s) with five (5) to ten (10) personal computers (PCs) for the welfare of its personnel. [37]

o. Initial Provisioning and Self Sufficiency

(1) **Water:** The Company must provide drinking water for the first fourteen (14) days after deployment. After fourteen (14) days, the Company is to use its own water purification plant for UN-provided water source.

(2) **Rations:** The Company must deploy with rations for the first thirty (30) days using a combination of composite, de-hydrated and tinned foods, and also must maintain at least thirty (30) days stock levels of ration at any given time during its operations.

(3) **Supply:** The Company is required to deploy with fully self-sufficient stocks of supply items and spare parts for maintenance of its major and minor equipment. The Company is to be fully self-sufficient for all other supply categories, except fuel, for the first ninety (90) days after deployment, and must also maintain at least forty-five (45) days repair parts stock levels for all types of supplies at any given time during its operations. Resupply of consumables and spare parts is a contingent responsibility.

(4) **Petroleum, Oil and Lubricants (POL):** The Company must deploy only diesel fuelled vehicles, including guns (in case of self-propelled), equipment and machines as diesel is the only type of fuel available throughout the SECTOR BDE. The Company must deploy all vehicles with fuel fuel-tanks one-third (1/3) full. The UN will deliver fuel to the Company base location from the first day after the deployment of the Battery. Beyond the Company base location, it must provide self delivery. The Company must have the capacity of establishing bulk storage facilities for fourteen (14) supply days of diesel. The Company should also have the capacity of distributing diesel to vehicles and generators.

p. Medical. One Level 1+ Medical facilities to support the permanent base and two semi-permanent bases.

(1) The Mission's Level II resources provide Level I medical support to units/sub-units that do not have Level I hospitals. The following additional medical facilities are available:

(2) Level 3. Outside the Mission Area.

(3) Level 4. Outside the Mission Area.

[37] The internet for the purpose of welfare must be contracted to an internet service provider (ISP) by the Contingent. The usage of the UN provided network is solely for the purpose of the Mission, and can NOT be used for welfare.

6. COMMAND AND CONTROL

The Company will be under 'UN Operational Control' (OPCON) of the Force Commander. UN OPCON includes the authority to assign separate tasks to sub units of a contingent, as required by the operational necessities within the mission AOR, in consultation with the Contingent Commander and as approved by USG PKO. UN OPCON does not include responsibility for personnel administration. The FC is authorized to further assign units under UN Tactical Control (TACCON) of a designated Commander for specific purposes and periods. UN TACCON includes the detailed and local direction and control of movement or manoeuvres necessary to accomplish an assigned mission or specific tasks.

Annexes:
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United Nations Mission Multidimensional Integrated Stabilisation Mission in XXX
The Statement of Unit Requirement for
Combined Construction Engineer Company

Department of Peacekeeping Operations
Office of Military Affairs
Military Planning Service

Approved by

XXX
May 2013

Review Date: 31 April 2014
Drafted by: Military Planning Service
Contact: 917-367-2030

This document enumerates details of capabilities that are required for optimizing the unit's efficiency in the conduct of operations as mandated for the Mission. The Concepts of Operations [CONOPS] and any future adjustments to the CONOPS may place additional and more specific requirements on the unit. This should be noted in relations to the MOUs that will be negotiated based on the capabilities provided in this document. The provisions in such MOUs shall by no means supersede the capabilities sought in this document.

The attached document herein, with its notes, Annex A, B and C constitutes the requirements for the (TYPE) Unit. If discrepancy or disagreement on interpretation of the document arises among concerned parties, the interpretation solely by the Office of Military Affairs (OMA), Department of Peacekeeping Operations (DPKO) is deemed valid, and any other interpretation is pre-empted.

References

A. Military Planning Process for Peacekeeping Operations, 2009

B. Generic guidelines for Troop Contributing Countries deploying military units to the United Nations peacekeeping missions, 2008

C. Stand-by Arrangements in the service of Peace-Tables of Organization and Equipment, 2009

D. Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual), 2009

E. Authority, Command and Control in UN Peacekeeping Operations dated 15 February 2008.

F. UN Security Council Resolution 2100 dated 25 April 2013.

G. Military Strategic Concept of Operations (CONOPS) dated XX XX XXXX.

H. Rules of Engagement (ROE) for the Military Component of XXXX dated XXXX.

Overview of Strength and Deployment Locations[38]

Unit Type	Strength	Deployment Locations and AO	Remarks
Construction Engineer Company	XXX	XXX	1 Vertical constructions platoon 1 Horizontal construction platoon 1 Water production platoon 1 Logistic Support Platoon

1. BACKGROUND.

Deleted

2. MISSION.

The Combined Construction Engineer Company (CCEC) is initially to deploy to XXX and provide mobility support for the XXX AOR. Being a Force assets, the unit is to be prepared to execute construction tasks in the XXX AOR, depending on operational priorities and within its capabilities. CCEC must be self sustaining and have the capability to deploy assets (up to a Platoon level) on independent both vertical and horizontal construction tasks. This Platoon could be either deployed independently or in support of other engineering units within the XXX AOR.

3. EXECUTION

a. Organization.

The construction engineer company is to be articulated according to Annex A on:

(i) One (1) Combined Construction Combat Engineer Company Headquarters (HQ) (10); the Company HQ must have appropriate number of tactical vehicles as required.

(ii) One (1) Vertical construction platoon (45)**,** each platoon must have an adequate number of tactical vehicles with military radio for tactical use, one ambulance vehicle (attached from the Support platoon), trucks and other support vehicles as required.

[38] Actual strength, composition, availability of military contingents and deployment locations are subject to Troop Contributing Country (TCC) negotiations with the DPKO. The deployment locations may be temporarily adjusted by the Force Commander (FC), in consultation with the Under Secretary General (USG) of the DPKO and Contingent Commanders to address particular emerging or prevailing operational needs.

(iii) One (1) Horizontal construction Engineer platoon (45) with one (1) excavator cum dumper, one (1) medium duty dozer and two (2) dump truck and an adequate number of tactical vehicles with military radio for tactical use, trucks and other support vehicles as required.

(iv) One (1) water production Platoon (25).

(v) One (1) Logistic support platoon including a maintenance section, signal section, supply section ad transportation section (30 troops).

b. Tasks:

a. Horizontal construction including road and bridges constructions, airfield and helipad constructions.

b. Vertical constructions: base building, physical security protection for UN bases and offices.

c. Water production: well drilling, installation of water purification and treatment equipment.

e. Relocation and re-deployment of Temporary Operating Bases (TOB) where operational role has significantly reduced to potential threat areas within integral resources.

c. Capabilities:

a. Rehabilitation of access roads, maintenance and repairs of runways (Kidal, Gao, Timbuktu)

b. Rehabilitation of existing infrastructures (buildings, water and wastewater)

c. Enhanced capabilities in the construction of physical protection measures for UN bases.

d. Water treatment and purification capabilities, including well drilling.

e. Capacity of self-defence.

f. EOD capacity for own safety.

g. Logistic support element capable of supporting the Company sub-units in up to two (2) different locations.

d. **Major Equipment Requirements.** Major equipment requirements are at Annex C. Additional requirements are as follows. The actual quantity, composition and deployment locations of the COE are subject to TCC negotiations with DPKO.

e. Area of Responsibility.

The Combined Construction Engineer Company HQs to be located in XXX and may be required to deploy a detachment in a second location in the XXX AOR. Therefore, the Combined Construction Engineer Company must be prepared to adapt to varied locations throughout the XXX.

4. ADMINISTRATIVE REQUIREMENTS

- Administration and discipline. Administration and discipline are a national responsibility.

- Language The official language of XXX will be English. The official operational communications of the Battalion with the Sector HQ will be in English. The operational radio communications will be in English. The presence of French speakers in the troops is recommended to enable effective communications with the local population.

5. LOGISTICS

A full description of the requirements and standards for all self-sustainment categories are contained in Chapter 3, Annex C of the "COE Manual." The Company must be self-sustaining in the areas listed below, which is not an exhaustive list.

q. Accommodation:

(5) Initial Accommodation: The Company will be accommodated in the SHQs and major Battalion locations, according to their operational tasks. The unit is to be self-sufficient in term of accommodations (tentage, bedding).

(6) Permanent Accommodation: Permanent structures will be built and accommodate accordingly the unit. After the first six months, the Mission will provide UNOE tentage to replace the COE tentage.

(7) Deployable Accommodation: The contingent must deploy with sufficient quantity and quality of light tentage necessary for short term operational to tactical deployments.

(8) Tentage Structure: Tentage must include flooring and the ability to heat and cool as appropriate, netting at doors and windows and outer fly for tents. Double layered tents with metal pipe frames are recommended due to the conditions in the field. It is also recommended to mount the tents on cement or wooden bases to ensure their stability. (Deployable accommodation defined in paragraph 5. b. (3) is excluded from this requirement.)

r. Ablution: The Company must deploy with own field ablutions (field latrines and showers) for its permanent location and to use for subsequent operational/tactical deployments.

s. Catering: The Company will be self-sustained in catering. The Mission Support is <u>not</u> providing hard wall structure for the kitchen upon deployment.

t. Office:

(1) **Space:** The office working space must be inside the hard-wall structure or at least inside the tentage.

(2) **Furniture and Equipment:** The Company must be self-sustained in terms of office furniture, equipment and supplies, including computers (electronic data

processing and reproduction capability including necessary software) for its internal needs.

u. **Electrical:** The Company must be self-sustainable electrically, and must supply stable power supply to section level, including backup power for CITS. Main generators should have capacity of generating minimum of three (3) Kilo Volt Ampere (KVA) per person including back-up capacity.

v. **Laundry & Cleaning**: The Company will be self-sufficient.

w. **Basic Fire Fighting**: The Company must have the capability to undertake basic fire fighting in own accommodations and working areas.

x. **Field Defense Stores**: The UN will provide identification and field defense stores. There is No need for Nuclear, Biological and Chemical (NBC) protection**.**

y. **Observation**: Personnel of the Mobile Communications Platoon needs to have night observations and positioning individual capability.

z. **Explosive Ordnance Disposal (EOD) Capabilities:** EOD capability for own safety must be provided to all deploying elements.

6. COMMAND AND CONTROL

The Company will be under 'UN Operational Control' (OPCON) of the Force Commander. UN OPCON includes the authority to assign separate tasks to sub units of a contingent, as required by the operational necessities within the mission AOR, in consultation with the Contingent Commander and as approved by USG PKO. UN OPCON does not include responsibility for personnel administration. The FC is authorized to further assign units under UN Tactical Control (TACON) of a designated Commander for specific purposes and periods. UN TACCON includes the detailed and local direction and control of movement or manoeuvres necessary to accomplish an assigned mission or specific tasks.

Annexes:
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Annex B

Tasking Coordination Mechanism for the UN Military Construction Engineer Unit

Military Involvement in Construction Engineer Tasking

While UN Military Construction Engineer assets are under the direct tasking authority of the Director/Chief of Mission Support exercised through the Chief of Service Delivery, the Force Commander is responsible to ensure the performance of UN Military Engineer tasks. In doing so, the Force Commander and his subordinate leaders and staff still play a meaningful role in developing and executing military construction engineer tasks. As described below, UN Military Construction Engineer tasking priorities are based on Mission-level priorities determined by the Senior Management Team, of which the Force Commander and DMS/CMS are members. Furthermore, in keeping with DPKO-DFS guidance to exercise tasking authority in a "collaborative and cooperative spirit,"[39] UN Missions use a consultative coordination mechanism that includes all component input to the overall prioritization of Mission engineer projects.

Consultative Coordination Mechanism

UN Missions generally establish standard operating procedures for such consultative coordination mechanisms governing the use of enabling units, such as UN Military Construction Engineers, to "ensure the achievement of Mission operational priorities in support of the mission plan."[40] For example, some of the largest UN Missions hold regular (every two weeks) coordination meetings between the Force Commander and DMS/CMS to discuss and establish engineer priorities consistent with the Head of Mission's guidance for mandate implementation. The Force Commander and DMS/CMS are assisted in these bi-weekly coordination meetings by their respective principal staff officers including, but not limited to, the U-4 (Logistics), U-5 (Plans), U-8/Force Engineer, Chief of Service Delivery, Mission Chief Engineer, Chief of Mission Support Center, and, as appropriate, interested UN civilian and humanitarian agencies such as the UN Office for the Coordination of Humanitarian Affairs, Civil Affairs, UN Development Programme, UN High Commissioner for Refugees, etc.

[39] DPKO/DFS policy on *Authority, Command and Control in United Nations Peacekeeping Operations,* (Ref. 2008.4) (February 2008), paragraph 77.

[40] DPKO/DFS policy on *Authority, Command and Control in United Nations Peacekeeping Operations,* (Ref. 2008.4) (February 2008), paragraph 77.

Joint Budget Preparation

As another example of this consultative coordination mechanism, Mission civilian and military engineer staff confer on engineer budget preparation, developing budgets for scheduled *and* anticipated projects including possible emergency engineer requirements. In such cases, the Mission Chief Engineer [41] (as the individual responsible for overall engineering operations), will work with the Force Engineer (U-8[42] and Force U-5 (Plans) to identify the requirements and plan the necessary funding of their recommended projects as necessary.

Tasking Coordination Mechanism

The UN Military Construction Engineer Unit tasking coordination mechanism is similarly consultative, collaborative and cooperative. While ultimate prioritization and tasking authority rests with the Director or Chief of Mission Support (typically delegated to the Chief of Service Delivery), military engineers at every level may raise military engineer concerns and requests, as part of the overall Mission prioritization of Engineer projects. As the detailed tasking coordination mechanism in this Annex illustrates, close coordination between the military and civilian engineer components is required, particularly with respect to Task Order development, material provisioning and task execution. Moreover, UN Military Construction Engineer Unit projects are closely monitored throughout their life cycles by means of daily and weekly reports submitted by both military and civilian chains of authority, command and control.

With some minor variation from Mission to Mission, UN Military Construction Engineer Unit tasking generally proceeds according to the following process. UN Missions are strongly encouraged to adopt similar coordination mechanisms seeking input from both Military and Civilian Components to plan, budget and utilize scarce and highly valuable enabling resources such as Military Construction Engineers.

[41] The civilian Chief Engineer has delegated tasking authority for all overall engineering operations encompassing all of the Mission's civilian, commercial and military enablers for operations related to and including construction (horizontal and vertical) and maintenance of buildings and physical infrastructure, operation of utility services, minor engineering, etc. See Chapter 8.5 of the *Mission Start-up Field Guide for Mission Managers of United Nations Peace Operations 2.0,* United Nations Department of Peacekeeping Operations and Department of Field Support, September 2010.

[42] At Mission Headquarters, clear terms of reference are developed for the Mission's civilian Chief Engineer and military Force Engineer/U-8. The Mission senior management team determines the chain of command and line of reporting for both officers. The terms of reference, chain of command and reporting for the Mission's civilian Chief Engineer and military Force Engineer vary from Mission to Mission depending on decisions made by the Mission's senior management team. See Chapter 8.5 of the *Mission Start-up Field Guide for Mission Managers of United Nations Peace Operations 2.0,* United Nations Department of Peacekeeping Operations and Department of Field Support, September 2010. See also DPKO/DFS policy on *Authority, Command and Control in United Nations Peacekeeping Operations,* (Ref. 2008.4) (February 2008), paragraphs 68-74.

Tasking Coordination Mechanism

for Mission- and Force-Level

Military Construction Engineer Projects

(see also the following diagram)

Step 1. Mission Construction Engineer priorities are established by the Mission's senior management, through submission by the Force Commander and Director or Chief of Mission Support, consistent with the Head of Mission's guidance on mandate implementation.

Step 2. Based on these Mission-level priorities, construction engineer tasks are developed for specific engineer units by the Chief Engineer/Chief of Service Delivery.

Step 3. Construction engineer tasks developed for military engineer units are coordinated through the Force Engineer.

Step 4. The Force Engineer is the focal point for preparing UN Military Construction Engineer Unit Task Orders. Preliminary Task Orders are prepared consistent with Mission priorities, developed as described above, and include the details of the engineer work to be done, material requirements, administrative aspects and initial designs and drawings of the projects.

Step 5. The preliminary Task Orders are coordinated with the Mission's Chief Engineer for review and finalization of designs and drawings.

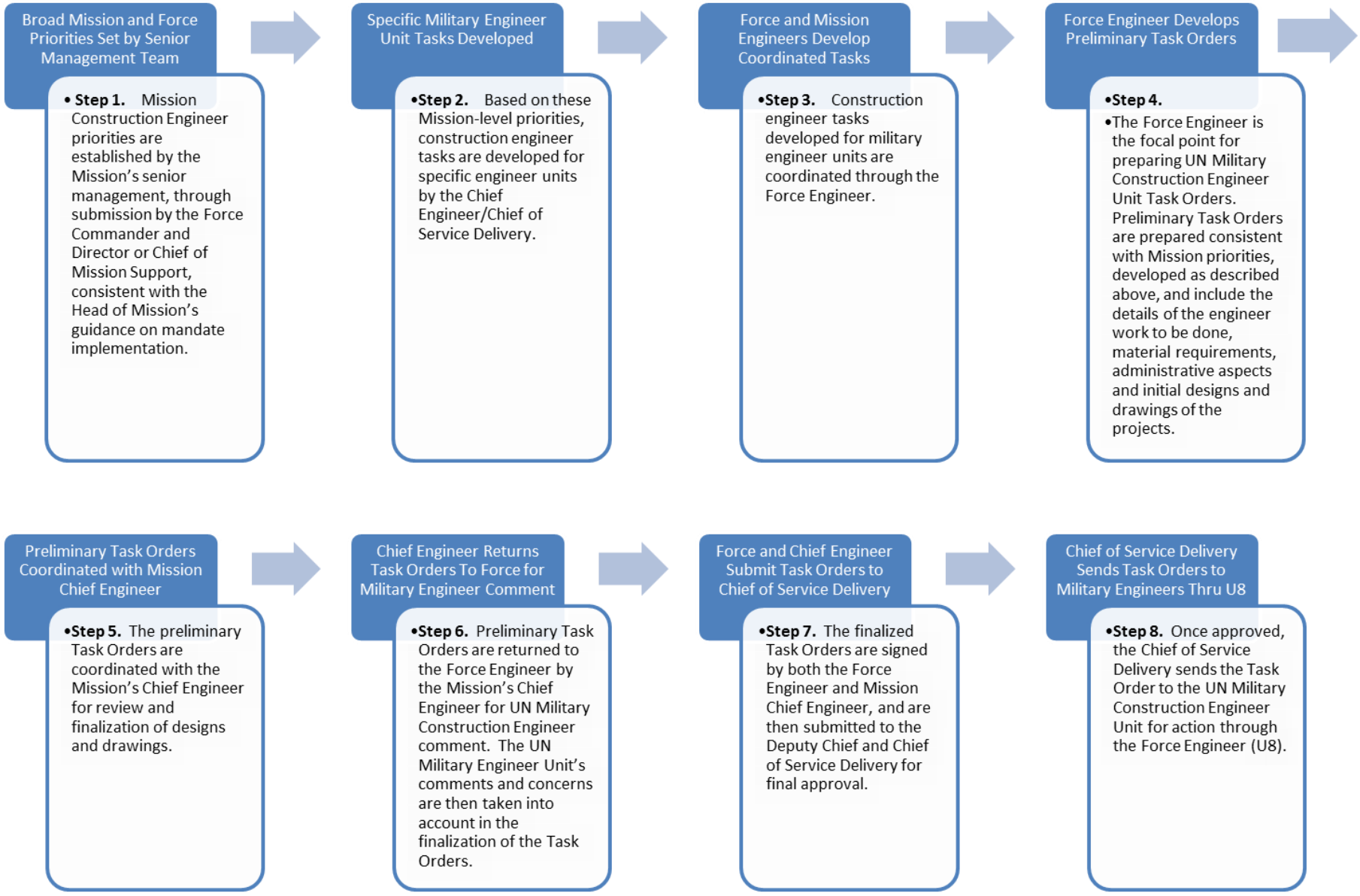
Step 6. Preliminary Task Orders are returned to the Force Engineer by the Mission's Chief Engineer for UN Military Engineer Unit comment. The UN Military Engineer Unit's comments and concerns are then taken into account in the finalization of the Task Orders.

Step 7. The finalized Task Orders are signed by both the Force Engineer and Mission Chief Engineer, and are then submitted to the Deputy Chief and Chief of Service Delivery for final approval.

Step 8. Once approved, the Chief of Service Delivery sends the Task Order to the UN Military Construction Engineer Unit for action through the Force Engineer.

Additional Note: In the case of some urgent, Mission-directed tasks to offset any shortfalls in civilian contracting and hasten Mission establishment (such as developing helicopter bases, Level II medical facilities, certain accommodation, logistics bases, etc.) tasking may come to the UN Military Engineer Unit directly from the Mission Chief Engineer. However, prior to the tasking, the Chief Engineer will have closely coordinated with the Force Engineer.

Generic UN Military Construction Engineer Tasking Process: Mission- and Force-Level Projects



Additional Note: In the case of some urgent, Mission-directed tasks to offset the deficiency of civilian contractors and hasten Mission establishment (such as developing helicopter bases, Level II Medical Facilities, certain accommodation, logistics bases, etc.) tasking may come to the UN Military Engineer Unit directly from the Mission Chief Engineer. However, prior to the tasking, the Chief Engineer will have closely coordinated with the Force Engineer.

Annex C

Equipment Requirements

of a Generic Combat Engineer Type of UN Military Engineer Unit

(Company-Size)

Major Equipment

Item	Quantity	Remarks
Personnel		
Strength Ceiling	XXX	
Combat Vehicles		
APC Wheeled Infantry carrier-unarmed (Class II)	**4**	
Container		
Other containers	**18**	
Workshop Container	**1**	
Support Vehicles (Commercial)		
Automobile/ Station Wagon	**-**	
Buses(greater than 24 Pax)	**-**	
Truck Water (10.000 ltrs and over)	**2**	
Support Vehicles (Military Pattern)		
Ambulance	**3**	
Jeep 4 x 4 with military radio	**11**	
Truck utility/cargo (1.5 to 2.4 tons)	**2**	
Truck utility/cargo (2.5 to 5 tons)	**10**	
Truck utility/cargo (over 10 Tons)	**-**	
Truck recovery (greater than 5 Tons)	**1**	
Engineering Vehicles		
Bulldozer medium (D6 & D7)	**3**	
Truck, crane heavy lift (up to 25 Tons)	**1**	
Truck, tractor	**3**	
Excavator up to 1 CU mtrs	**1**	
Excavator above 1 CU mtrs	**-**	
Fire Fighting truck	**1**	
Front end loader medium (1-2 cubic meters)	**3**	
Front end loader medium (2-4 cubic meters)	**-**	
Grader general purpose	**1**	
Roller, self propelled	**1**	
Truck, dump, large (up to 10 cu meters)	**-**	
Truck, dump, large (over 10 cu meters)	**3**	

Workshops, truck, heavy engineer equipment	-	
Material handling Equipment		
Forklift medium(up to 5 tons)	**2**	
Forklift container	**1**	
Trailers		
Compressor Trailer	**2**	
Fuel Trailer(2000 to 7000 ltrs)	-	
Light cargo single axle	-	
Lowbed 20-40 Tons	**6**	
Water Trailer (**up to 2000**) liters	**3**	
Medium cargo single axle	-	
Trailer, floodlight set with generators	**3**	
Armaments		
Crew served machine guns	**3**	
Forklift rough terrain(over 5 tons)	-	
Engineering Equipment		
Concrete Cutter (Special Case)	-	
Concrete mixer machine, below 1.5 cubic meter	**1**	
Engineering Tool Set (Special Case)	-	
Dewatering pumps, up to 5 HP	**1**	
Dewatering pumps –submersible, up to 5 HP (special case)	**1**	
Floodlight set with generators	**2**	
Fuel Pump	-	
Immersion vibrating Layer	-	
Soil laboratory equipment	-	
Survey equipment ,including total station	**1**	
Vibrator concrete	-	
Water Pumps	-	
Water treatment plant up to 2000 lph, storage up to 5,000	**1**	**TBD the best location**
Electrical Generators- Stationary and Mobile	-	
Generator 51KVA to 100 KVA	**8**	
Generator 201KVA to 500 KVA	**1**	
Logistics Equipment		
Water Storage (5000-7000 ltr)	**5**	
Demining Equipment		
Bomb Locator	**3**	
EOD Suit – Heavy	**6**	
Mine Detector Set (SC)	**14**	
Demining Protective Apron/Trouser	**25**	
Demining Protective vest/jacket	**25**	
Demining Protective helmet and visor	**25**	
Demining Protective shoes	**25**	
Demining Reinforced Gloves (pair)	**25**	
Remote controlled bomb disposal equipment (SC)	**1**	

Equipment Requirements

of a Generic Construction Engineer Type of UN Military Engineer Unit

SER	EQUIPMENT	Vertical Platoon	Horizontal Platoon	Force Protection Unit	Engineer Support Platoon	HQ Support Platoon
		QUANTITY				
ENGINEERING VEHICLES						
1	APC engineer — tracked			2		
2	Bulldozer, light (D4 and 5)		1			
3	Bulldozer, medium (D6 and 7)		1			
4	Bulldozer, heavy (D8A)		1			
5	Crane, mobile medium (11-24 tons)	1				
6	Crane, mobile heavy (25-30 tons)	1				
7	Front end loader/backhoe, medium (1 -2 cubic metres)		2			
8	Front end loader, heavy (2-4 cubic metres)		3			
9	Front end loader, tracked					
10	Grader, general purpose		3			
11	Roller, self-propelled		3			
12	Industrial tractor light/farm tractor with disc implement		2			
13	Truck, dump, up to 10 cubic metres (civilian pattern)					
14	Truck, dump, up to 10 cubic metres (military pattern)	3				
15	Truck, dump, large (over 10 cubic metres)		10			
16	Truck, drill rig				1	
17	Drill rig, self-propelled					
18	Truck, sewer cleaning					
19	Excavator (up to 1 cubic metre) Small size	1				1
20	Excavator (above 1 cubic metre)		2			
21	Workshops, truck, heavy engineering equipment	1			1	
22	Crusher Plant				1	
23	Air Compressor with pneumatic implement	1				
MATERIAL HANDLING EQUIPMENT						
24	Forklift, medium (over 1.5 tons and up to 5 tons)	1				
25	Forklift, heavy (over 5 tons)					
26	Forklift, container					1
27	Forklift, rough terrain (over 5 tons)	1				
TRAILERS						
28	Light cargo single axle					4
29	Medium cargo single axle					
30	Medium cargo multi-axle					
31	Heavy cargo (20 tons)					6
32	Water trailer (up to 2,000 litres)					
33	Water trailer (2,000-7,000 litres)					4
34	Fuel trailer (up to 2,000 litres)					
35	Fuel trailer (2,000-7,000 litres)					3
36	Compressor trailer				2	
37	Flatbed up to 20 tons					4
38	Flatbed over 20 tons					4
39	Lowbed up to 20 tons				2	
40	Lowbed 20-40 tons					5
41	Heavy equipment/tank transporter					
42	Trailer, floodlight set with generators (4 lights, 9 m pole,7 kw generator)					4

ENGINEERING EQUIPMENT						
43	Concrete mixer machine, below 1.5 m 3	6			1	
44	Concrete mixer machine, above 1.5 m 3	6				
45	Concrete vibrator	2				
46	Dewatering pumps, up to 5 HP		3		2	
47	Sewage treatment plant and equipment					
48	Survey equipment, including total station	1	1		1	
49	Survey equipment, Theodolite type	1	1		1	
50	Well drilling rig				1	
51	Water pump (sb)				2	
52	Water treatment plant (reverse osmosis					
53	purification unit (ROWPU) or equivalent),					
54	equipment, tanks and bladders, up to 2,000 litres					
55	per hour, storage up to 5,000 litres					
56	Water treatment plant (ROWPU or equivalent),					2
57	equipment, tanks and bladders, over 2,000 litres					
58	per hour, storage up to 20,000 litres					
Asphalt Works Equipment						
59	Asphalt Plant		1			
60	Asphalt Distributor		2			
61	Bitumen Distributor		2			
62	Pneumatic Roller		2			
63	Smooth Roller, tandem, small		1			
64	Smooth Roller, tandem, medium		2			
65	Road Sweeper Implement		2			
Water storage equipment						
66	Water storage, 5,000-7,000 litres				2	
67	Water storage, 7,001-10,000 litres					
68	Water storage, 10,001-12,000 litres					1
69	Water storage, 12,001-20,000 litres					2
Logistics equipment						
70	Fuel storage, 501- 5,000 litres					
71	Fuel storage, 5,001-10,000 litres					
Electrical						
	Generators — stationary and mobile					
72	20-30 k VA				2	
73	31-40 k VA					
74	41-50 k VA					
75	51-75 k VA				1	
76	76-100 k VA					
77	101-150 k VA					4
78	151-200 k VA					
79	201-500 k VA					4
Communications equipment						
	VHF/UHF- FM transceivers					
80	Air- ground base station transce ivers AM/FM					
81	Microwave links					
82	Mobile stations for trunking systems					
83	Paging equipment					
84	Portable MTSX for trunking					
85	Repeaters					
86	VHF alarm units					
87	VHF multiplex channels					
88	HF equipment					14
89	Antennas. log periodic — directional high power					1
90	Base receiver, HF high power					
91	Base station transmitter, HF high power					
92	Telephone equipment (Satelite system)					3
93	Telephone exchange large, 1 -1,100 lines					
94	Telephone exchange PABX 1 -100 lines					1
95	Cryptofax					
96	Antenna towers					
97	UPS 10 k VA and up					

Demining and EOD equipment						
98	Remote control bomb disposal equipment			1		
99	Metal detectors			2		
100	Mine detector			3		
101	Bomb locator			2		
102	EOD suit			4		
103	Demining protective helmet and visor			4		
104	Demining protective shoes			4		
105	Demining protective vest/jacket			4		
106	Demining protective apron/trousers			4		
107	Reinforced gloves (pair)			4		
108	Demining personal protection section					
109	Demining protective helmet and visor			2		
110	Demining protective shoes			2		
111	Demining protective vest/jacket or demining protective apron/trousers			2		
112	Reinforced gloves (pair)			2		
Support vehicles (commercial pattern)						
113	All-terrain vehicle					
114	Ambulance — truck					
115	Buses (greater than 24 passengers)					
116	Truck, utility/cargo (5-10 tons)					
117	Truck, utility/cargo (over 10 tons)					
118	Truck, maintenance light					
119	Truck, maintenance medium					
120	Truck, maintenance heavy					
121	Truck, water (up to 5,000 litres)					
122	Truck, water (over 5,000 litres and up to 10,000 litres)		2			
123	Truck, water (over 10,000 litres)				2	
124	Truck, crane (up to 10 tons)					
125	Truck, crane heavy lift (up to 25 tons)					
126	Truck, recovery (up to 5 tons)					
127	Truck, tanker (over 10,000 litres)					
128	Truck, tractor					
Support vehicles (military pattern)						
129	Motorcycles					
124	Ambulance					2
125	Jeep (4x4) with military ra dio	1	1	1	3	7
126	Truck, utility/cargo (2.5 to 5 tons)	4	2	2	4	6
127	Truck, maintenance medium				1	
128	Truck, maintenance heavy				1	
129	Truck, water (up to 5,000 litres) Water Sprinkler		3			
130	Truck, water (over 5,000 litres and up to 10,000 litres)				1	
131	Truck, water (over 10,000 litres)					4
132	Truck, crane (up to 10 tons)					
133	Truck, crane (10 to 24 tons)					
134	Truck, recovery (up to 5 tons)				1	
135	Truck, recovery (greater than 5 tons)				1	
136	Truck, refrigerator (under 20 feet)					3
137	Truck, refrigerator (20 feet and over)					
138	Truck, tanker (up to 5,000 litres)				1	
139	Truck, tanker (over 5,000 litres and up to 10,000 litres)					4
140	Truck, tanker (over 10,000 litres)					3
141	Truck, tractor (up to 40 tons tow)					

Notes:

a. Equipment for HQ is included in HQ Support Plt

b. Equipment for Road & Airfield Plt is the same as for the Horizontal Plt (depending on Mission requirements) and includes asphalt equipment.

Annex D

Sample Evaluation Checklists

Pre-Deployment Evaluation

Serial	Evaluation Criteria	Evaluation	Remarks
a	**Generic Peacekeeping Skills**. Are all personnel of the Military Engineer Unit trained on and sensitized to the generic UN policy guidelines and directives for conducting peacekeeping operations? Do they demonstrate a clear understanding of these guidelines and directives?		
b	**Mission-Specific Peacekeeping Skills.** Are all personnel of the Military Engineer Unit trained, equipped and organized to perform mission essential tasks as per peacekeeping norms? Is the unit capable of performing in line with Mission mandate(s)?		
c	**Basic/Conventional Skills**. Is the unit trained in basic infantry skills like firing personal weapons and minor tactics in accordance with national standards?		
d	**Physical and Mental Robustness.** Is the Military Engineer Unit physically and mentally robust enough to be deployed to the harsh conditions of the field Mission?		
e	**Core-Specific Capabilities**. Is the Military Engineer Unit able to perform core tasks based on unit organization, tasks assigned and type of Mission?		
e	**Mine- EO- and IED-Awareness.** Is the UN Military Engineer Unit aware of minefield, Explosive Ordnance and Improvised Explosive Device hazards? Are the basic protective measures known and trained?		
g	**Leadership**. Is the unit chain of command capable, responsive and accountable for delivering in a peacekeeping environment?		
h	**Command and Staff**. Is the unit command and staff integrated, trained and capable of planning, organizing, coordinating and directing the multifaceted operational and administrative tasks in the peacekeeping environment?		

i	**Training**. Has the Military Engineer Unit undertaken peacekeeping-oriented and Mission-specific training? Has it achieved the requisite standards?		
j	**Resources**. Is the unit carrying or in possession of the required number of personnel, arms, ammunition, equipment, accessories, spares, unit stores and expendables as per MOU and Mission requirements?		
k	**Equipment Maintenance/Management**. Does the unit maintain a minimum serviceability state of 90 percent and does it have the capability to organize preventive maintenance and repair/recovery in situ?		
l	**Weapons, Instruments and Vehicles.** Are all weapons zeroed, instruments calibrated, vehicles maintained and inspected and certified for correctness and functionality as per required standards.		
m	**Logistics**. In case of deployment at more than one location, are the forward deployed elements configured for independent and self-sustained logistics capability (food, water, accommodation, hygiene and sanitation, transport, and medical), or do they receive this support from the hosting headquarters?		
n	**Medical**. Do all personnel meet the requisite medical standards? Have they been inoculated as per Mission requirements and have they cleared the periodic medical examination? Does the unit have access to a fully operational medical facility (Medical Level 1) in accordance with the MOU?		
o	**Integrity**. Are all unit personnel aware of applicable UN rules, regulations and code of conduct, and have they demonstrated high standards of professionalism and integrity?		
p	**Morale and Motivation**. Are all unit personnel well motivated to operate in a complex, restrictive, multinational and multidimensional environment while maintaining high morale?		
q	**Welfare**. Does the unit maintain high standards of personnel welfare as per national standards and Mission requirements?		

r	**Legal**. Do unit personnel and commanders clearly understand the responsibility to adhere to, promote and protect the legal framework for UN peacekeeping operations with specific reference to SOFA/SOMA, ROE, Human Rights and Humanitarian Law, other relevant international legal statutes and the host nation law?		
s	**Evaluation**. Has the unit carried out a formal evaluation? Have shortcomings been rectified? Have TCC authorities certified the unit to be fit for deployment to the Mission on time?		

In-Mission Evaluation

Serial	Evaluation Criteria	Evaluation	Remarks
a	**Performance.** Does the unit plan and perform all Mission essential tasks effectively and safely as per Mission mandate(s), peacekeeping norms and Mission SOPs?		
b	**Shortcomings.** Has the unit taken corrective action on shortcomings in performance or resources observed by the unit, COE team or Mission leadership?		
c	**On-The-Job Training.** Does the chain of command institute measures for on-the-job training of all personnel (based on their basic job categories) to maintain qualification standards?		
d	**In-Mission Training.** Is the unit carrying out periodic in-Mission refresher, task-oriented and Mission-specific training as per IMTC guidelines?		
e	**Counter-Improvised Explosive Devices.** Is the unit trained in the current hazards of minefields, Explosive Ordnance and Improvised Explosive Devices?		
e	**Serviceability.** Is the unit carrying out periodic inspection, preventive maintenance and repairs on time and replacing items that are unserviceable?		
f	**Conduct and Discipline.** Does the unit continue to maintain high standards of conduct and discipline in all ranks?		
g	**Outreach and Engagement.** Has the unit been able to (where relevant) establish good rapport and effective interface with the local population through CIMIC, Quick Impact Projects and welfare activities?		

Annex E

References

General References

United Nations Peacekeeping Operations, Principles and Guidelines (UN Capstone Doctrine) (2008)
http://pbpu.unlb.org/pbps/Library/Capstone_Doctrine_ENG.pdf

United Nations Infantry Battalion Manual (August 2012)
http://www.un.org/en/peacekeeping/documents/UNIBAM.Vol.I.pdf
http://www.un.org/en/peacekeeping/documents/UNIBAM.Vol.II.pdf

United Nations Security Management System, Security Policy Manual (8 April 2011)
http://ppdb.un.org/Policy%20%20Guidance%20Database/Security_management_system_policies.pdf

UN Force Link
The Online Strategic Movements and Force Generation Knowledge Center
https://cc.unlb.org/default.aspx

Generic Guidelines for Troop Contributing Countries Deploying Military Units to the United Nations Peacekeeping Missions

https://cc.unlb.org/COE%20Documents/Generic%20Guidelines%20-%20Military%20(TCC)/Generic%20Guidelines%20for%20TCCs%20Deploying%20Military%20Units%20to%20the%20UN%20Peacekeeping%20Missions(Mar%2008).pdf

Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual)
http://www.un.org/en/peacekeeping/sites/coe/referencedocuments/COE_manual_2011.pdf?bcsi_scan_00259711a12fb51a=sOZRyx95Yi5OihONCU1qZkoP3AqaAAAAvo2FNA==&bcsi_scan_filename=COE_manual_2011.pdf

Mission Start-up Field Guide for Mission Managers of United Nations Peace Operations 2.0, United Nations Department of Peacekeeping Operations and Department of Field Support, September 2010
http://ppdb.un.org/Policy%20%20Guidance%20Database/2010.1MissionStartUpFieldGuide1Aug2010.pdf

Medical Support Manual for UN PKO
http://physiciansforhaiti.org/wp-content/uploads/2013/04/DPKO-MSM.pdf?bcsi_scan_00259711a12fb51a=hmWzNdn8DV+iawiew2GfNRDw0H+aAAAAvo+FNA==&bcsi_scan_filename=DPKO-MSM.pdf

UN Integrated Assessment and Planning Handbook
http://www.un.org/en/peacekeeping/publications/2014-IAP-HandBook.pdf

UN PKO: Principles and Guidelines
http://pbpu.unlb.org/pbps/library/capstone_doctrine_eng.pdf

UN PKO Planning Toolkit – 2012
http://www.un.org/en/peacekeeping/publications/Planning%20Toolkit_Web%20Version.pdf

Training References

The following list of training references will be of great value to UN military unit commanders and their staff. These documents provide better understanding of the peacekeeping training system, its participants' roles and responsibilities, and available resources. These and other important peacekeeping documents are available at:

http://ppdb.un.org/SearchCenter/Results.aspx?s=PPDB%20Scope&k=2.%09SOP%20on%20Implementation%20of%20Amendments%20on%20Conduct%20and%20Discipline%20in%20the%20Model%20Memorandum%20of%20Understanding%20Between%20UN%20and%20TCCs.

Policy on Training for all UN Peacekeeping Personnel (2010)

Policy on Support to Military and Police Pre-Deployment Training for UN Peacekeeping Operations (2009)

Guidelines on Roles and Training Standards for UN Military Staff Officers (2009)

SOP on Mobile Training Support Team (2009)

SOP on Training Recognition (2009)

SOP on Training-of-Trainers Courses (2009)

Pre-Deployment Information Packages (PIP)

UN Training Support to Member States
http://www.peacekeepingbestpractices.unlb.org/PBPS/Pages/Public/PeaceKeepingTraining.aspx?page=support&menukey=_12_4

Evaluation References

In addition to this manual, the following UN peacekeeping documents provide guidelines and standards by which UN military units can evaluate their operational readiness. The following documents are available on-line at:

http://ppdb.un.org/SearchCenter/Results.aspx?s=PPDB%20Scope&k=2.%09SOP%20on%20Implementation%20of%20Amendments%20on%20Conduct%20and%20Discipline%20in%20the%20Model%20Memorandum%20of%20Understanding%20Between%20UN%20and%20TCCs

or, through the Office of the Military Advisor, DPKO at UN Headquarters:

- TCC-specific UN peacekeeping operations manuals, guidelines and standard operating procedures.

- Mission mandate, memoranda of understanding, status of forces agreement and Rules of Engagement and TCC Guidelines.

- Statement of Unit Requirement issued by the UN Office of Military Affairs, DPKO.

- Mission Concept of Operations, operational directives and orders, Operational Plans, Standard Operating Procedures and Mission-specific case studies.

- Generic Guidelines for Troop-Contributing Countries Deploying Military Units (2012), the COE Manual 2011 and Guidelines on Peacekeeping Training (2011).

- Lessons learned and best practices of current and past peacekeeping Missions.

- Information obtained during the military unit's command group reconnaissance visit and feedback from the unit being relieved.

- After action reports and end of assignment reports of units and previous commanders.