



**The United States Army  
Concept Capability Plan  
for**

**Army Base Camps  
in  
Full Spectrum Operation**

**for the  
Future Modular  
Force**

**2015-2024**

**07 December 2009**





## Foreword

*From the Director  
U.S. Army Capabilities Integration Center*

Recent ongoing transformation and increased operational tempo have resulted in cost prohibitive practices to address many aspects of base camps. The effects of these practices include safety, protection, and resource challenges that have been elevated to executive levels of the United States Army and Department of Defense. Resulting actions to these challenges included an Army Chief of Staff Initiative to address shortcomings in the planning, design, construction, operations, management, and transfer and closure of base camps. These are now integrated in the Army Campaign Plan to establish and provide base operations capabilities to support the operational Army in a contingency environment.

TRADOC Pamphlet (Pam) 525-7-7, The United States Army Concept Capability Plan for Army Base Camps in Full Spectrum Operations for the Future Modular Force 2015-2024, is the result of a collaborative effort involving subject matter experts from throughout the Army, and the product of a detailed study of strategic guidance, current doctrine, and lessons learned. It identifies the capabilities required to support the lifecycle management of base camps during the 2015-2024 timeframe. TRADOC Pam 525-7-7 serves as a reference guide for the analysis directed by the Army Campaign Plan and for future combat development efforts. The focus of this pamphlet is on the planning and design, construction and deconstruction, and operations and management of base camps.

This broad approach acknowledges the crosscutting nature of the many functional areas that have an impact on base camps. Army input to future studies should have a consistent starting point. It is not the intent of this document to be the enduring and final Army input on base camps, but is meant to provide a common starting point and context for input to future joint efforts in the lifecycle management of base camps.

  
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## Executive Summary

### Introduction

a. Since 1991, the United States (U.S.) has engaged in numerous military operations in the Middle East, Central Asia, Africa, Europe, the Pacific Basin, and the Caribbean. These recent operations conducted outside the U.S. and its territories have combined offensive, defensive, and stability operations simultaneously throughout the entire spectrum of conflict. U.S. ground forces are closely involved in such actions. Frequently, the activities associated with stability operations are as important to accomplishing the long term U.S. goals as the initial combat operations that may have preceded them. Stability operations help maintain or reestablish a safe and secure environment, provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief usually in coordination with other instruments of national power. In many instances, the need to conduct these extended operations over time has resulted in U.S. forces remaining in these areas far longer than initially anticipated. Often temporary locations (such as bivouac sites and assembly areas) evolve into enduring base camps.

b. Effort is typically expended planning base camp activities at the tactical and operational levels before a tactical situation is even set, and often focusing on particular base camps or base camp locations. The lack of a holistic system of systems approach results in an enormous effort but insufficient application of standards in planning and design, construction and deconstruction, and operations and management of base camps. No current systems or processes treat base camps as a complete deliberate integrated system or is applicable to all base camps and across all locations. Resource requirements at base camps today are typically higher than if appropriate macro-level master planning and design, as well as macro-level construction and deconstruction, and operations and management considerations are taken into account at the beginning stages of the task. There are inconsistent construction standards (for potentially supporting a joint and multinational force) and project scoping processes are ambiguous, that lead to higher costs, shorter life spans (for example, materials and systems), and increased maintenance requirements.

c. Acquisition and funding procedures for base camp development are cumbersome and not designed to keep pace with the tactical situation in a deployed environment. Military general engineering skills lack regard for system designs, environmental impacts, environmental health, and sanitation input, and focus only on the known task of building facilities. Designs are typically created for an initial standard without regard to the adaptability of design, while the base camp ends up becoming a temporary design used for the long term. Utility systems are consistently incorrectly sized and not adaptable, thus are significantly challenged during surge requirements or expansion of the mission.

d. The Army has approximately 200,000 (unclassified estimate) Soldiers deployed in support of international overseas contingency operations and other military commitments. To support these efforts, the Army is involved with joint and multinational operational contingency or expeditionary base camps.

## **Purpose**

a. The purpose of the TRADOC Pam 525-7-7 is to identify the U.S. Army's required capabilities during base and base support operations in contingencies. The goal is to develop a capability that provides the U.S. Army, in a joint, interagency, intergovernmental, and multinational (JIIM) environment at all levels, adequate base camps that can enable power projection throughout full spectrum operations. Base camps are the physical location and means used to enable power projection and the operational mission in the most effective, efficient, and sustainable manner to administer protection and minimize the burden of added administration and operational overhead for combatant commanders.

b. While aspects of future Modular Force land operations have undergone rigorous analysis, base camps have not been examined from the broad perspective of a "holistic" or systems framework. A systems perspective is necessary to facilitate transformation and support of the future Modular Force. Existing concepts and projected component efforts lack organized and cohesive input to the concept of base camps as systems for future planning. Multidiscipline development of a concept capability plan (CCP) and capabilities-based assessment (CBA) is needed to identify the future Modular Force base camp requirements as a system.

## **Scope**

a. The future Modular Force will be a campaign quality expeditionary force that supports full spectrum operations within the JIIM environment. Land forces may be deployed within the continental U.S. or outside the continental U.S. in environments ranging from austere to urban and from short to extended periods of time. Base camps represent the physical location in a deployed area from which operations are projected or supported. In essence, they are the physical location within the operational area that enables power projection for the future Modular Force in the theater of operations.

b. Thorough research conducted to give this term parameters has linked base camps to a large number of ongoing joint and Army strategies and concept development efforts. The Department of Defense Directive (DODD) 3000.05 establishes stability operations as a core U.S. military mission; this strongly supports the requirement for base camps to support power projection in these types of operations. Additionally, this CCP has links to all joint capability areas (JCAs), with the strongest links to logistics and protection; these arenas inherently shape and directly impact the future of base camps. TRADOC Pam 525-7-7 also supports the four broad types of military activities as outlined in the Capstone Concept for Joint Operations (CCJO): combat, security, engagement, and relief and reconstruction.

c. A well functioning base camp will lead to enhanced survivability of the force by minimizing, preventing, or mitigating threats to base camps as anticipated in the joint operational environment (JOE). See appendix B, for related base camp guidance, JCAs, and concepts.. There are three main functional components of base camp development: planning and design; construction and deconstruction; operations and management. These three key areas focus logical evolution of the future base camp concept and capabilities.

d. The scope of Army base camps is not limited to any specific echelon or limited to any size unit or activity during operations. Actions concerning base camp life cycle development are handled at every echelon from policy decisions at Department of the Army (DA) level, down to company sized camps. Leaders and policy makers from these echelons must be led by policy, doctrine, and education to choose designs that support not only conceived plans, but reasonably foreseeable branches and sequels. Special engineer capabilities are required for construction and deconstruction. Logistic units are required to provide logistical support as well as some base camp services; Logistics Civil Augmentation Program (LOGCAP) may be required to support all types of base camp functions. Command and control (C2) elements at each echelon, from theater through company levels, are required to manage and provide both reach and reachback for all base camp functions.

e. Army base camps will be developed in support of full spectrum operations, within the JOE. Army base camps will support JIIM partners, operating anywhere along the spectrum of conflict from peacetime military engagement in areas of stable peace, to major combat operations (MCO).

### **Military Problem**

a. The current national strategies and JOE predict the expectation of long term military commitments abroad to achieve national goals with respect to the overseas contingency operations. The U.S. Army does not currently have the capability to address base camp issues from a systems based approach. There is neither a coordinating organization at the DA level with assigned proponentcy nor an executive agency responsible for coordinating base camp establishment and systems development as a holistic base camp system or to assure base camp component systems have been designed to optimize interoperability (especially in a JIIM environment). Consequently base camps have no comprehensive policy or doctrine associated with planning and design, construction and deconstruction, nor operations and management.

b. Without cohesive policy and doctrine, there is no consistency, standards, or efficiencies for base camp training, security, environmental safety and occupational health (ESOH) concerns, leadership and education, personnel, or facilities to support base camps as a system. As a result, Soldiers are placed in positions of responsibility without proper training and without consistent guidelines and standards. Operators and planners have no overall understanding of the cascade effects of systems and facilities. Material solutions are addressed only on a program or process basis with little or no interaction with other systems and processes.

### **Solution Synopsis and Key Idea**

a. The key idea is to develop the capability to provide the U.S. Army operating in a JIIM environment at all levels, base camps that can enable power projection. These capabilities support the operational mission in the most effective, efficient, and sustainable manner to administer protection and minimize the burden of added administration and operational overhead.

b. To provide this physical location for power projection, the U.S. Army will require capabilities to plan and design, construct and deconstruct, and operate and manage base camps in the most effective and efficient manner. These capabilities must be approached in a manner that capitalizes on their interdependence in order to provide the combatant commander the following force multiplying effects:

- Reduce threat opportunities for attacks against friendly forces due to smaller logistics footprints while still supporting the same level of operational capabilities and readiness (that is, fuel and water shipments).
- Increase flexibility in base camp operations through improved standardized designs that are modular, scalable, and adaptable.
- Decrease construction/deconstruction requirements (time, material, equipment, personnel).
- Improve operations management (power, water, and waste) to require less Soldier, civilian, or contractor oversight and/or support.
- Improve design of major utility backbones that do not hinder operations nor compromise agility, because they are sized for maximum occupancy and duration. Improve ESOH elements such as fire protection for all aspects of base camp planning and design; construction and deconstruction; operations and management to prevent and minimize loss of Department of Defense lives and damage to property.

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Military Operations

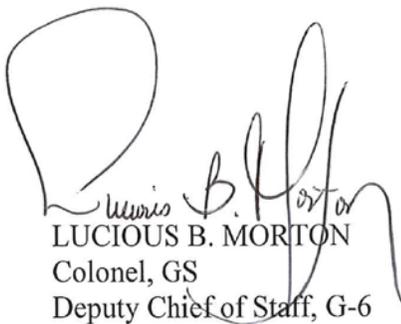
U.S. ARMY CONCEPT CAPABILITY PLAN FOR BASE CAMPS IN FULL SPECTRUM  
OPERATIONS FOR THE FUTURE MODULAR FORCE 2015-2024

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**History.** This publication is a new United States Army Training and Doctrine Command (TRADOC) concept capability plan (CCP) developed as part of the Army Concept Strategy for the future Modular Force and as part of the capabilities-based assessment (CBA) process.

**Summary.** TRADOC Pamphlet (Pam) 525-7-7, U.S. Army Concept Capability Plan for Base Camps in Full Spectrum Operations for the Future Modular Force 2015-2024 is the Army's visualization of how the Army will provide holistic planning and design, construction and deconstruction, and operations and management capabilities for base camps in contingency operations across full spectrum operations in a (potentially) joint, interagency, intergovernmental, and multinational environment. This CCP is the compilation of continuous research, war gaming, workshops, parallel CCPs, CBA efforts, and operational lessons learned by the Army, other Services, and the joint community. This CCP identifies desired future capabilities to overcome anticipated challenges in the joint operating environment. This environment is characterized by uncertainty and surprise in which there are multiple complex challenges across the globe. Operations are distributed and conducted rapidly and simultaneously across multiple joint operations areas within a single theater or across boundaries of more than one commander.

**Applicability.** TRADOC Pam 525-7-7 is the foundation for development of capabilities supporting base camp operations for the future Modular Force, and will serve as the baseline for follow-on CBA as a part of the Joint Capabilities Integration and Development System effort. As the basis for performing this assessment, TRADOC Pam 525-7-7 suggests a set of capabilities that guide how a future commander may utilize improved base camp operations across the domains of doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) to augment mission capabilities. It acknowledges the requirement to consider all the variables of the future operational environment: political, military, economic, social, informational, infrastructure, physical environment, and time. It also acknowledges the requirements for mission variables such as the mission, time, and civil considerations. This CCP applies to all Department of Army, TRADOC, and reserve component activities that develop DOTMLPF requirements.

**Proponent and exception authority.** The proponent of this pamphlet is the TRADOC Headquarters, Director, Army Capabilities Integration Center (ARCIC). The proponent has the authority to approve exceptions or waivers to this pamphlet that are consistent with controlling law and regulations. Do not supplement this pamphlet without prior approval from Director, TRADOC ARCIC (ATFC-ED), 33 Ingalls Road, Fort Monroe, VA 23651-1061.

**Suggested improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, TRADOC (ATFC-ED), 33 Ingalls Road, Fort Monroe, VA 23651-1046. Suggested improvements may also be submitted using DA Form 1045 (Army Ideas for Excellence Program Proposal).

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## **Chapter 1**

### **Purpose**

#### **1-1. Intent**

The intent of TRADOC Pamphlet (Pam) 525-7-7 is to provide the foundation to facilitate a capabilities-based assessment (CBA) with respect to the future Modular Force capabilities requirements associated with base camps. Specifically, TRADOC Pam 525-7-7 will address planning and design, construction and deconstruction, and operations and management of base camps across the spectrum of conflict. This pamphlet assumes these operations will be conducted across the full spectrum of military operations within a joint, interagency, intergovernmental, and multinational (JIIM) environment.

#### **1-2. Background**

a. A study prepared for the U.S. Army Environmental Policy Institute by Rand Corporation in 2008 states that, since 1991, U.S. has engaged in operations in the Middle East, Central Asia, Africa, Europe, the Pacific Basin, and others, including such activities as stability operations, reconstruction, and nation-building. In many instances, U.S. forces have remained in these areas far longer than was initially anticipated.

b. Since the onset of operations in Southwest Asia in 2002, theater command requests to address base camp issues have been ongoing. The Center for Army Lessons Learned survey teams and other site visits also confirm the need for corrective actions in the planning and design, construction and deconstruction, and operations and management of contingency base camps.

c. By 2005, base camp issues had reached the level of the Chief of Staff of the Army (CSA). The CSA response was to include base camp issues as one of the 25 key initiatives to be addressed as part of stability operations. CSA Task Force for Stability Operations Initiative 18, establish and provide base operations capabilities to support the operational Army in a contingency environment and city management expertise to support the host nation. Initiative 18 was incorporated in the 2007 Army Action Plan for Stability Operations for the Army Campaign Plan.

d. Collection and analysis team (CAAT) site visits to Southwest Asia in 2002, 2004, 2006, 2007, and the 2008 determined that base camps needed doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) solutions to address existing gaps. The cycle of having each base camp solving the same problems independently unnecessarily expends greater time and resources. There needs to be a coordinated systems approach to the operational analysis of base camps. Currently, there are too many organizations that have some aspect of a base camp life cycle development camp with no coordinated oversight or control and without intervention this condition is expected to continue in the future.

e. Studies for the Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health (ESOH) in 2007 and 2008 by the Rand Corporation and the Civil Engineering Research Laboratory found significant issues associated with base camp planning

and design, construction and deconstruction, and operations and management from an efficiency and effectiveness perspective as well as issues related to their sustainability.

f. Recent research and analysis determined that no joint or Army policy, doctrine, or concepts have sufficient information specifically related to the overall life cycle development of base camps.

### **1-3. Why This Concept Capability Plan (CCP) is Necessary**

a. The future Modular Force is a significant transformation that requires detailed analysis for implementation. Most aspects of future Modular Force operations have undergone the necessary analysis; however, base camps have been overlooked and must now undergo a similar analysis and the transformation necessary to support the future Modular Force. Existing concepts and projected efforts (such as integrated capabilities development teams (ICDTs), CCPs, and CBAs) lack input of the descriptive application of future Modular Force base camps required for capabilities-based planning. Multidiscipline development of a CCP and CBA is required to identify the future Modular Force base camp capability requirements.

b. Joint operating concepts (JOC), joint functional concepts, and joint integrating concepts (JIC) provide limited information and guidance for the development of base camps. Rather, emphasis is placed on rapid mobility and the flexibility to quickly achieve objectives.

c. The Major Combat Operation (MCO) JOC describes limited campaigns, single operations, and maturing long duration campaigns. Emphasis is placed on focused logistical support of these operations and joint seabasing to preposition resources for rapid response. The MCO JOC requires that the logistics footprint be minimal as forces are organically sustained and directly deploy to (and redeploy from) the objective.

d. The Seabasing JIC describes the ability to rapidly employ networked expeditionary joint forces; assuring access and entry; project, support and sustain distributed and dispersed offensive and defensive combat power from the sea; to significantly reduce reliance on base camps within the joint operating area (JOA).

(1) Seabasing is defined as the rapid deployment, assembly, command, projection, reconstitution, and re-employment of joint combat power from the sea, while providing continuous support, sustainment, and force protection to select expeditionary joint forces without reliance on base camps within the JOA. These capabilities expand operational maneuver options, and facilitate assured access and entry from the sea.

(2) Seabasing, if implemented, presents options to the joint force commander (JFC) that complements the use of base camps in the JOA, and maximizes advantages to exploit adversary weaknesses. Seabasing is a viable option for certain circumstances but is not feasible for all projected operations.

e. The joint forcible entry operations (JFEO) JIC defines forcible entry as “seizing and holding of a military lodgment in the face of armed opposition.” The concept includes using

future capabilities to establish a single lodgment for follow-on operations; establishing multiple lodgments for larger-scale, extensive campaigns; or performing forcible entry as a singular operation. The JFEO forces require the ability to rapidly deploy and be sustained anywhere they execute, for as long as necessary to enable campaign execution without the necessity of extensive force buildup or operational pauses. Providing for focused sustainment is one of eleven guiding principles of JFEO. This includes establishing the smallest logistical footprint, delivering all classes of supply with greater speed, accuracy, and efficiency.

f. The Focused Logistics Joint Functional Concept briefly discusses bases of operations under the Operational Engineering paragraphs, which states, “The Cold War construct of massive, established support bases is not necessarily the best approach for sustaining the global war on terrorism.” Emphasis is placed on leveraging the advances in construction technologies and capabilities to minimize the deployment profile. As an integral part of the evolving CBA process, the joint capability areas (JCAs) were recently revised. In February 2008, the Deputy Secretary of Defense Advisory Working Group (DAWG) approved a new JCA structure. These JCAs serve as a collection of capabilities grouped to support capability analysis, strategy development, investment decisionmaking, capability portfolio management, and capabilities-based force development and operational planning. Base camps and their related primary focus areas and functions draw from and incorporate multiple JCA tasks.

g. The Army capstone concept, operating concepts (TRADOC Pams 525-3-1 and 525-3-2), and six functional concepts, (TRADOC Pams 525-3-3, 525-2-1, 525-3-4, 525-3-5, 525-3-6, and 525-4) do not directly address base camps, rather they imply the need. Existing or proposed ICDT, CCP, and CBA work does not provide any descriptive application for the planning and design, construction and deconstruction, and operations and management of future Modular Force base camps required for capabilities-based planning; thus, the need for TRADOC Pam 525-7-7.

h. Regardless of the verbiage (contingency basing, base camps, or lodgments) the National Security Strategy, National Defense Strategy, National Military Strategy, Quadrennial Defense Review, and joint operational environment (JOE) for the Future Force (2015-2024) all project “boots on the ground” for extended periods of time in austere parts of the world having limited infrastructure. Furthermore, Department of Defense Directive (DODD) 3000.05 places equal weight between stability and combat operations. It recognizes that extended deployments will require base camps.

#### **1-4. Target Audience**

a. TRADOC Pam 525-7-7 applies to Army major commands, operational Army units (both active and reserve components), and the Department of the Army (DA). This CCP is designed to facilitate the completion of a CBA to address the issues associated with the primary focus areas of planning and design, construction and deconstruction, and operation and management of base camps in a JIIM environment during full spectrum operations (FSO).

b. The CCP should also be provided to other JIIM organizations interested in the base camps CBA and may encourage them to participate.

## 1-5. References

Required and related publications are listed in [appendix A](#).

## 1-6. Explanation of Abbreviations and Terms

Abbreviations and special terms used in this pamphlet are explained in the [glossary](#).

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## Chapter 2

### Scope

#### 2-1. Future Base Camps

a. The future Modular Force will be a campaign quality expeditionary force that supports the nation by conducting FSO in a JIIM environment within the context of the JOE. Land forces may be deployed in the continental U.S. (CONUS) or outside CONUS (OCONUS) in a range of environments from austere to urban and for short to extended periods of time. Base camps represent the physical standpoint in a deployed location from which operations are projected or supported. In essence, they are the physical locations supporting power projection for the operational force in the theater of operations. This requires that Army base camps support the JFCs ability to perform all four types of military activities as outlined in the Capstone Concept for Joint Operations (CCJO): combat, security, engagement, and relief and reconstruction.

b. The term power projection is used in this pamphlet to emphasize that a base camp is the physical location within the operational area that enables power projection and is intended to highlight the parallels between base camps and power projection platforms. Base camps sustain civil as well as the military components of U.S. national power to rapidly and effectively respond to crises, contribute to deterrence, and enhance regional stability. This fits the context of power projection as defined in Joint Publication (JP) 1-02 and Field Manual (FM) 1-02. The use in FM 3-0 acknowledges that force projection is the military component of power projection. As stated, base camps enable civil as well as military components of power projection.

#### 2-2. Links to Strategy, Joint Capabilities Areas (JCA), and Concepts

a. Thorough research conducted to establish parameters for the base camp concept capability plan linked the parameters to a number of ongoing Army and joint strategies and concept development efforts. DODD 3000.05 establishes stability operations as a core U.S. military mission; this strongly supports the requirement for base camps to support power projection in these types of operations.

b. This CCP also has linkages to all of the JCA, with its strongest links to the logistics and protection JCAs; these two areas inherently shape and directly impact the future of base camps. Engineering and logistics services (base camp services) are specified subordinate tasks of the logistics JCA.

c. TRADOC Pam 525-7-7 supports all four broad military activities as outlined in the CCJO: combat, security, engagement, and relief and reconstruction. This CCP also has strong links to

the Protection JFC and Joint Logistics Distribution JIC. A more detailed discussion of how this pamphlet links to strategic documents, JCAs, and concepts may be found in appendix B.

### **2-3. Definitions, Terms, and Key Ideas**

a. For the purposes of TRADOC Pam 525-7-7 the definition of a base camp, as defined in FM 3-34.400 is an evolving military facility that supports the military operations of a deployed unit and provides the necessary support and services for sustained operations. Base camps support the tenants and their equipment. While they are not permanent bases or installations, they develop many of the same functions and facilities the longer they exist. A base camp can contain one or multiple units from JIIM organizations. It has a defined perimeter and established access controls, and takes advantage of natural and manmade features.

b. A common standardized understanding for the term base camp is not incorporated into the lexicon of the current joint and Army doctrine, although the term is often used in military discussion. In this document, the term base camp includes any contingency or deployed operations location where support services and functions for Soldiers are established either on a temporary, intermediate, or long term and enduring basis. The future base camp concept incorporates some existing terms, such as base camp augmentation elements, base camp staff elements, basing categories, contingency main base, Department of Defense (DOD) installation, emergency medical care, emergency medical services, environmental cleanup, environmental conditions report, environmental health and safety assessment, environmental safety and health. Base camp also includes fire fighting operations, facility substitutes, field fortifications, fire suppression, force bed down, forward operations base, fratricide, hardstand, heliport, installation commander, joint facilities utilization board, land use planning, logistics assault base, patrol base, and personnel recovery. The definition also covers political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT), the protection warfighting function, relocatable building, repair and restoration, survivability operations, advanced operations base, forward operating base (FOB), main operations base, base of operations (specifically a designated facility), base, facility (where it applies to contingency support operations), base complex, force bed down, base development, forward logistics base, logistics base, intermediate staging base, staging area, staging base, lodgment area, combat outposts, special forces operations base, bare base, enemy prisoner of war facilities, and fire base.

c. The term base camp is also meant to represent the following terms (not doctrinally defined in JP 1-02 or FM 1-02) used by U.S. Central Command (CENTCOM) and others. The terms include contingency operations base, contingency operation site, contingency operation location, main operating base, forward operating site, cooperative security locations, and convoy support centers. The term base camp refers to any of these types of facilities supporting elements from the size of a company to the highest echelons.

d. The terms base camp mayor, or mayoral cell will be used to describe the individual or organizational staff and structure in charge of the internally focused operations and administration of a single base camp, including the related aspects of master planning, construction, operations and management, facilities maintenance, security, and sustainment. A

base camp mayor's focus is similar or parallel to the functions and duties typically assigned to a mayor, chief executive or nominal head of a city, town, or borough in civilian society.

e. The primary focus of TRADOC Pam 525-7-7 is the overall life cycle development of base camps. This may be summarized into three primary areas: planning and design; construction and deconstruction; and operations and management. This pamphlet uses these three areas to focus the logical evolution of the future base camp CCP and related capabilities. These focus areas can occur during any phase of a joint campaign.

(1) Planning and design. Base camp planning ensures the appropriate personnel, resources, and processes are integrated into the larger operational plan. This enables application of a base camp design that integrates functionality and protection aspects and applies it to any mission, regardless of the threat, environment, duration, size, and other considerations. Although proper planning and design is essential in all phases of operations, detailed predeployment planning is critical. Base camp design serves as the foundation for an efficient holistic systems engineering approach that addresses protection, reduces the logistics and manpower requirements as well as the overall operational costs.

(2) Construction and deconstruction. Base camp construction/deconstruction activities encompass the equipment, personnel, materials, processes, and procedures necessary to conduct construction or deconstruction missions. Base camp construction includes such activities as site assessment, retrofit of existing facilities, enacting master planning for construction, and general base camp lifecycle evolution. The construction of a base camp requires significant resources (such as time, personnel, equipment, and money). Base camp deconstruction entails, at a minimum, the ability to modify base camps for turnover (such as to the host nation or JIIM partners) and for dismantling portions of, or for the complete closure of facilities. Construction and deconstruction ensures rapid implementation, modification, and potential redeployment of the components of base camps as the mission dictates.

(3) Operations and management. Base camp operations entail services, utilities, protection, and logistical support required to sustain both the combat mission and the base camp. Base camp management links the administrative command and control (C2) function of all base camp activities and focus areas, (planning and design, construction and deconstruction, and operations and management), to the C2 and operations cell of combatant commands. The operations and management functions of base camps in the future will enable commanders to be flexible and agile in conducting their combat missions, while minimizing the burden of added administration or operational overhead. Base camp operations and management are very similar to installations in that they both have a garrison and a mission aspect. Doctrinal references that indicate whether or not these missions are combined under one command as they are at installations has yet to be developed. Doctrine has not been established regarding what organizations manage base camps.

#### **2-4. Critical Assumptions**

a. Despite advances in seabasing, minimizing logistical footprints, and the ability to conduct simultaneous, distributed operations, the Army will continue to require base camps to serve as

the physical location in the area of operations making power projection possible during the conduct of missions across the full spectrum of operations.

b. Specific protection requirements will be addressed in other joint and Army CBA efforts (such as, integrated unit, base, and installation protections (IUBIP)). The base camp ICDT will ensure all protection aspects of base camps are addressed without duplicating other efforts. This CCP uses a broad description of protection as it pertains to base camps to provide the framework needed to move into the CBA process. The base camp functional solutions analysis and functional needs analysis will determine the related tasks, conditions, and standards appropriate to base camps and any other efforts that has already analyzed them.

c. Specific intelligence, surveillance, and reconnaissance (ISR) requirements will be addressed in other joint and Army CBA efforts (see TRADOC Pams 525-7-1 and 525-7-9).

d. Other approved CCPs will provide potential solutions to specific aspects and areas of base camp operations and functions found (see TRADOC Pams 525-7-2 and 525-7-18).

## **2-5. Base Camps for Full Spectrum Operations (FSO)**

a. The scope of Army base camps is not limited to any specific echelon, unit size, or activity during the conduct of operations. Actions concerning base camp life cycle development are handled at every echelon from policy decisions at DA level, down to company sized units. Assets from these echelons (leaders and policy makers) are required for planning and designing. Special engineer capabilities are required for base camp construction and deconstruction. Logistics units are required to provide logistical support as well as some base camp services; Logistics Civil Augmentation Program (LOGCAP) may be required to support all types of base camp functions. C2 elements at each echelon, from theater through company levels, are required to manage and provide both reach and reachback for all base camp functions.

b. Army base camps will be developed in support of FSO in a JIIM environment within the context of the JOE. Army base camps will routinely support U.S. and multinational forces, as well as interagency (IA) partners operating anywhere along the spectrum of conflict from peacetime military engagement in areas of stable peace to MCO during the conduct of a general war.

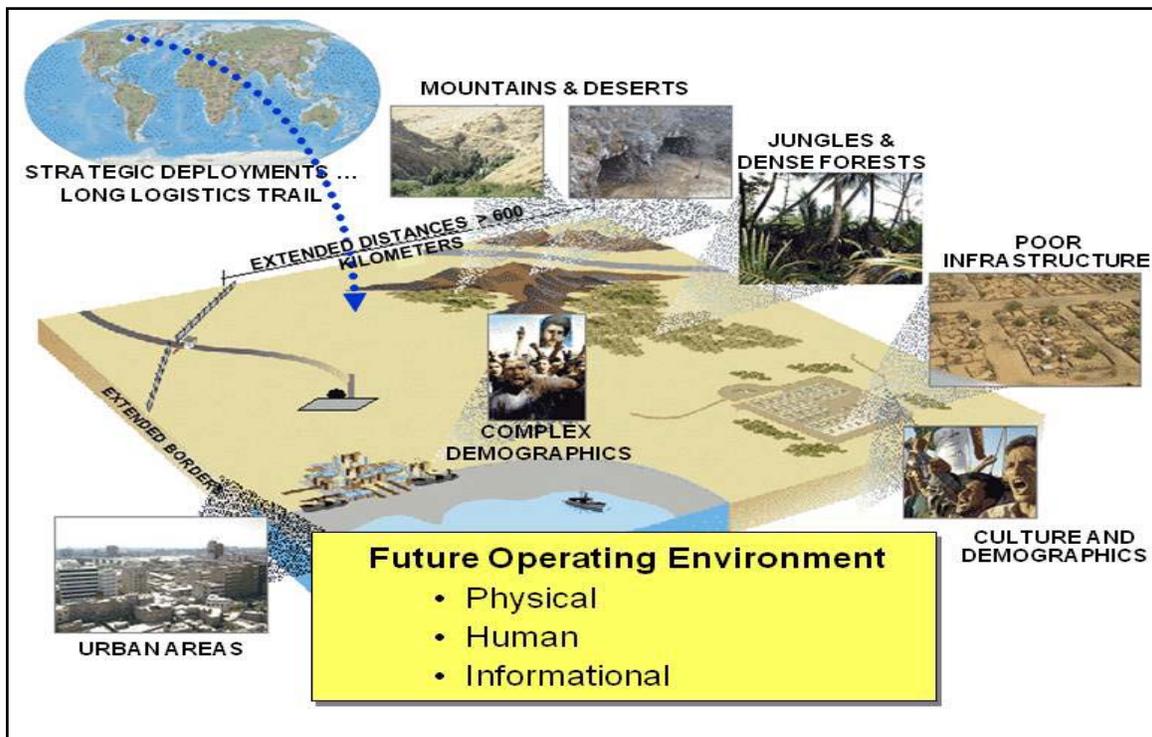
## **Chapter 3 The Military Problem**

### **3-1. The Joint Operational Environment**

a. General.

(1) Emerging cultural, religious, ethnic, political, and economic realities will greatly complicate the future geopolitical environment (see figure 3-1). The resulting mix of global strategic, operational, and tactical issues transcends borders and involves opponents with

worldwide connections that will present a demanding combination of challenges and dilemmas for the U.S. Security challenges will be more varied and unpredictable, and the range of operational settings within the spectrum of conflict will be considerably more complex, driving an expectation, that U.S. military assistance in civil support operations and stability operations will continue to rise. Execution of these operations will inevitably take place in increasingly urban environments. The future Modular Force will encounter unprecedented complexities in physical terrain (especially urban areas), demographics, and informational environments. The allegiances of many entities within the operational environment will be difficult to determine. While some may clearly be neutral, others may oppose certain U.S. efforts while supporting others. Strategic deployments to areas of conflict will involve increasingly long logistical lines of communication (LOC) and require our forces to operate in regions with poor or deteriorating infrastructures. These challenges will push the demands on U.S. resources to new levels as the number, complexity, and diversity of military operations in those regions continue to grow. U.S. resources could be extended beyond the historic bounds of the task.



**Figure 3-1. The Future Operational Environment**

(2) The National Security Strategy postulates four primary security challenges for the future: traditional, irregular, catastrophic, and disruptive. Traditional (conventional) operations conducted within a state-on-state framework will continue to be relevant in the future. Regional aggressors will continue to modernize conventional forces and invest in capabilities that will enable them to dominate their neighbors. Irregular (unconventional) warfare may be conducted as the principle choice of adversaries who are overmatched in size or military technologies. These kinds of operations may be combined with conventional capabilities to present an even more complex threat. Catastrophic challenges involve the acquisition, possession, and use of weapons of mass destruction (WMD). Adversaries seek such capabilities to dominate their regions, deter external intervention, or both. Disruptive challenges may occur through the

employment of breakthrough technologies to negate existing U.S. advantages in key operational domains.

(3) The most dangerous future adversaries will combine capabilities in all four primary security challenges in creative ways, adapting them before and during the course of a conflict to frustrate U.S. military action. Opponents will attempt to use these capabilities to exploit perceived vulnerabilities, especially the U.S. Army's dependence on networked command and ISR. Opponents will also attack America's relationships with host and supporting nations, the media, commercial interests, and multinational or IA partners. U.S. development of the intellectual capital that will power a culture of innovation and adaptability potentially represents the most effective response to combinations of these types of threats that cannot be predicted.

(4) Additionally, the future Modular Force will face increasing complexity in its own operations. Base camp operations should therefore be simplified. Given the expectations outlined above, strategic and joint guidance unequivocally establishes full spectrum dominance, the defeat of any adversary, or control of any situation across the full spectrum of operations as the overarching goal of joint transformation and joint force development. Thus, it is imperative that the future joint force and the Army are fully prepared to be effective across the spectrum of conflict and in the conduct of FSO throughout the course of a future campaign. The future Modular Force will fight as a part of a networked joint force, integrated at every level, and interdependent in the joint areas of battle command, force projection, air and missile defense, sustainment, and fires. Exploiting the full potential of tomorrow's technical capabilities will require an unprecedented breadth and depth of technical and tactical skill, individual and organizational flexibility, and personal initiative and creativity pitted against thinking, adapting adversaries.

(5) Speed, simultaneity, distribution, and the ability to conduct multidimensional, continuous operations over extended distances will be essential to gain and maintain the initiative necessary for ultimate success. As future adversaries gain additional capabilities to directly threaten U.S. territory, U.S. military forces will become increasingly involved in homeland security and civil support in addition to executing challenging missions abroad. The future Modular Force must also fully integrate its operations with its IA and multinational partners, exploiting the strengths that those partners provide while minimizing any of their limitations and vulnerabilities.

b. How challenges of the future Modular Force impact base camps.

(1) Traditional challenges posed by states employing recognized military capabilities and forces in well-understood forms of military competition and conflict will dictate that planning and design of base camps must meet the needs of the future Modular Force. Planning and design efforts must take into account the modular system requirements and functionalities of the mission and the operational force being employed. Due to the nature of traditional challenges, it is likely that more than one Service component, governmental agency, or nation will be involved, therefore the planning and design must account for JIIM requirements.

(a) Traditional challenges will seek to disrupt construction capabilities through restriction of material and elimination of requisite construction equipment and personnel. With the expectation that military, civilian, and contractor capabilities will be required to build and maintain base camps, the requirements for construction equipment and personnel must be determined and planned for to ascertain the necessary protection and security needs for those functions.

(b) The use of military, civilian, and contractor personnel will be used in the operations and management of base camps. Traditional challenges will seek to exploit the nontraditional roles that civilians and contractors are playing in support of base camp functions on the battlefield. Based on security issues, contractors may not go to all base camps in the operational area.

(2) Irregular challenges from those threats employing unconventional methods to counter the traditional advantages of stronger opponents will affect base camp planning and design in similar ways as those of traditional challenges; however, these adversaries will also seek to undermine base camps through indirect means as well. Irregular challenges will seek to disrupt operations through restricting critical resources (such as fuel or water). Planners and base camp designers must include sustainability as a primary consideration. The needs for the ability to reassign mission parameters, reallocate force distribution, and relocate base camps rapidly to respond to irregular challenges are weaknesses that could be exploited without properly planned and designed base camps.

(a) Irregular challenges will seek to disrupt construction capabilities through similar methods as those more traditional challenges. In addition, the use of host nation and third country national individuals as contract laborers provides a potential means of infiltration into the base camp.

(b) The use of civilian and contractor personnel in the operations and management of base camps provides a potential security issue. As a result of these threats, contractors might not enter high risk areas.

(c) Enemies will see base camps as large and lucrative targets and thus the base may require higher levels of force protection.

(3) Catastrophic threats require more robust planning and design for base camps to address potential challenges faced by the acquisition, possession, and use of WMD or methods producing WMD-like effects. These challenges may occur in either CONUS or OCONUS locations. Since the U.S. Army is one of the governmental organizations with existing capability and capacity to respond to such a challenge, planners and designers will need to address the expanded capabilities necessary to affect catastrophic events for deployed base camps. They will have to take into account the presence of large civilian and contractor populations as well.

(a) Current construction practices and methods are readily exploited by catastrophic challenges. New construction techniques, materials, and structures will all need to be developed to mitigate this challenge.

(b) Catastrophic challenges will affect operations and management through both the devastation and the terror they create. Operations and management staffs and organizations must be prepared to eliminate or mitigate the potential risks associated with this type of challenge. They must also be capable of responding and maintaining operational functionality in the event of a catastrophic challenge.

(4) Disruptive challenges that may come from adversaries who develop and use breakthrough technologies to negate current U.S. advantages in key operational domains must be considered in the modern and future base camp. This could be accomplished by providing systems with multiple redundancies similar to a utility distribution ring main. It uses more than the minimum amount of cable but prevents a hit by indirect fire from taking down the entire power grid on the base camp.

(a) Planning and design of base camps must include protection of critical infrastructure from attacks, sabotage and accidental destruction. Base camps should account for potential acts of terrorism (direct or indirect attacks using advanced technologies, such as precision guided munitions) and other methods that could affect the sustainability of the base camp.

(b) Disruptive challenges can affect construction through the denial of material, equipment, or qualified personnel through the manipulation of markets, manufacturing capability and capacity, labor organizations, and the political environment. Construction of base camps must be kept as simple as possible while simultaneously incorporating the highest degree of sustainability.

(c) Operations and management of base camps could be affected by disruptive challenges in the same ways as construction through the denial of resources.

(d) Operations and management could also be impacted by denial of services interruption through internet hacking, communications blocking, interruption of defense and security systems through electronic jamming, and other technologies that affect either systems or human functionality.

c. How base camp operations will differ in the future.

(1) The JOE indicates that adversaries will continue to perceive ground LOC and base camps as vulnerabilities to U.S. forces. Base camp designs will undergo radical transformation to ease the burden of resupply and mitigate risks to ground LOC. These new designs will promote sustainability by improving efficiencies of base camp systems and facilities and by harnessing energy, waste streams, and emissions to reduce the fuel demands and other resource requirements to support the force.

(2) Currently, sustainment, protection, and base camp services are assets of the commander that function independently. This concept proposes an integrated and holistic functions-based approach to base camp operations. Ideally, base camp functions will be

considered and integrated into the planning and execution of all operational phases (including integrating with tenant unit operations where appropriate); systems will be interoperable; and the commander will have a single focal point for management of basing operations.

(3) The JOE document projects commitment of U.S. forces to military campaigns more frequently. This increased pace of operations places demands beyond the organic capabilities of traditional forces requiring commanders to rely on contract support to accomplish certain aspects of the mission. Implementation of LOGCAP and other contracting sources will be integrated into all areas of base camp operations.

(4) The JOE and joint concepts recognize that unified action is needed to successfully accomplish missions. Many IA, intergovernmental, and domestic partners do not have the basing capabilities and capacities to support JIIM operations and will rely on the U.S. military to furnish their required support.

### **3-2. Problem Statement**

a. Regardless of the verbiage and terms used (such as contingency basing, base camp, or lodgments) in them; the National Security Strategy, National Defense Strategy, National Military Strategy, Quadrennial Defense Review, and JOE for the Future Force (2015-2024 timeframe) all project boots on the ground—the physical presence of U.S. Forces—for extended periods of time in austere parts of the world with limited infrastructure. DODD 3000.05 along with FM 3-0 places equal weight between stability and combat operations. FM 3-0 also recognizes that extended deployments will be required to support the conduct of operations and accomplish the mission.

b. While much more effort is expended for tactical and operational planning before the tactical situation is set, little effort is consistently applied toward base camp planning and design, construction and deconstruction, and operations and management once in the theater of operations. Resource requirements at base camps would be less if prior master planning, design, operations, and management considerations were incorporated into initial operational and tactical planning. Construction standards and project scoping processes are ambiguous which lead to higher costs, shorter lifespan, and increased maintenance requirements. Acquisition procedures are cumbersome and not designed for the fast pace of deployed operations. There is a lack of military engineers in deployed operations that possess the skill sets or tools concerning system designs, environmental impacts, energy management, environmental health, and sanitation input.

c. Current designs are typically for an initial standard, but this usually becomes a temporary standard used for much longer durations. Utility systems are consistently undersized, and meeting the requirements are challenging due to the likelihood that a camp's capacity requirements double during these types of deployments. Project scoping can be ambiguous (for example, like separating a fence, perimeter road, and perimeter lighting into three projects to get them below statutory fiscal limits).

d. Funding sources and processes can affect current operations. Funding base camps is complex and unpredictable. Due to funding issues, commanders are obliged to employ short

term sub-optimal solutions, many of which turn out to be more costly, time-consuming, and inefficient for the long term. During operations Enduring Freedom and Iraqi Freedom, containerized housing units were purchased, because better options, such as concrete masonry unit housing construction, would have taken too long to be funded through contract construction agent or would have given the appearance of permanence.

e. After the cold war era, the need for forward positioned CONUS installation-type facilities declined. By virtue of the JOE, the U.S. armed forces became more expeditionary in nature. U.S. military forces must be capable of deploying to any location on earth, establishing the capacity and means to conduct joint operations; conducting those operations successfully; and then retrograding back to home station locations. The U.S. Army is in the midst of a paradigm shift that is characterized by the ability to project the military power abroad from a CONUS based installation network in an expeditious manner. The changes from how cold war operations were conducted and how future (as well as current) operations and missions are to be conducted are significant. But there is one common thread between them: the need to encamp a military unit, at any location on the earth, with requisite operational support capabilities to enable the commanders to successfully prosecute their missions.

f. Over the past two decades, the U.S. forces' organic base camp capabilities have diminished. U.S. forces have evolved to heavily rely on individual stove-piped systems and cost prohibitive contract support. This trend has contributed to operational gaps that distract commanders from their primary mission and cause security, safety, environmental and health risks for the current forces.

g. CAAT and other site visits support the need for corrective actions in the base camp focus areas of planning and design, construction and deconstruction, and operations and management of base camps.

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## **Chapter 4**

### **Future Base Camp Operations**

#### **4-1. Introduction**

a. The current national strategies and JOE predict the expectation of long term military commitments abroad to achieve national goals with respect to the overseas contingency operations and the threats and trends anticipated in the future. Despite popular notions that technology allows a world of bloodless and humane warfare, the future battlefield will not be a sterile, nonlethal world of robotic systems and point-and-click warriors. Future operations will still require operational art that understands that integrated close combat will continue to be much more episodic, dynamic, lethal, and unpredictable. According to the Joint Operating Environment document, for the whole of the joint force, it will be more intense, with increased tempo, and wider in scope. U.S. military forces can expect military campaigns more frequently in multiple locations, more complex environments, for a broad range of purposes confronting multiple and changing threat combinations.

b. The future Modular Force, as envisioned in the Army capstone concept, will execute simultaneous, distributed operations throughout a noncontiguous battlefield. It will be capable of conducting sustained FSO, while controlling the operational tempo. The future Modular Force will be network-enabled to facilitate situational understanding of the entire operational area. Within this framework, distributed support and sustainment are keys to maintaining freedom of action, while using the smallest logistic footprint feasible. These ideas will challenge Army operational and tactical concepts that depend upon infrastructure and secure ground LOC for distribution and to sustain the force.

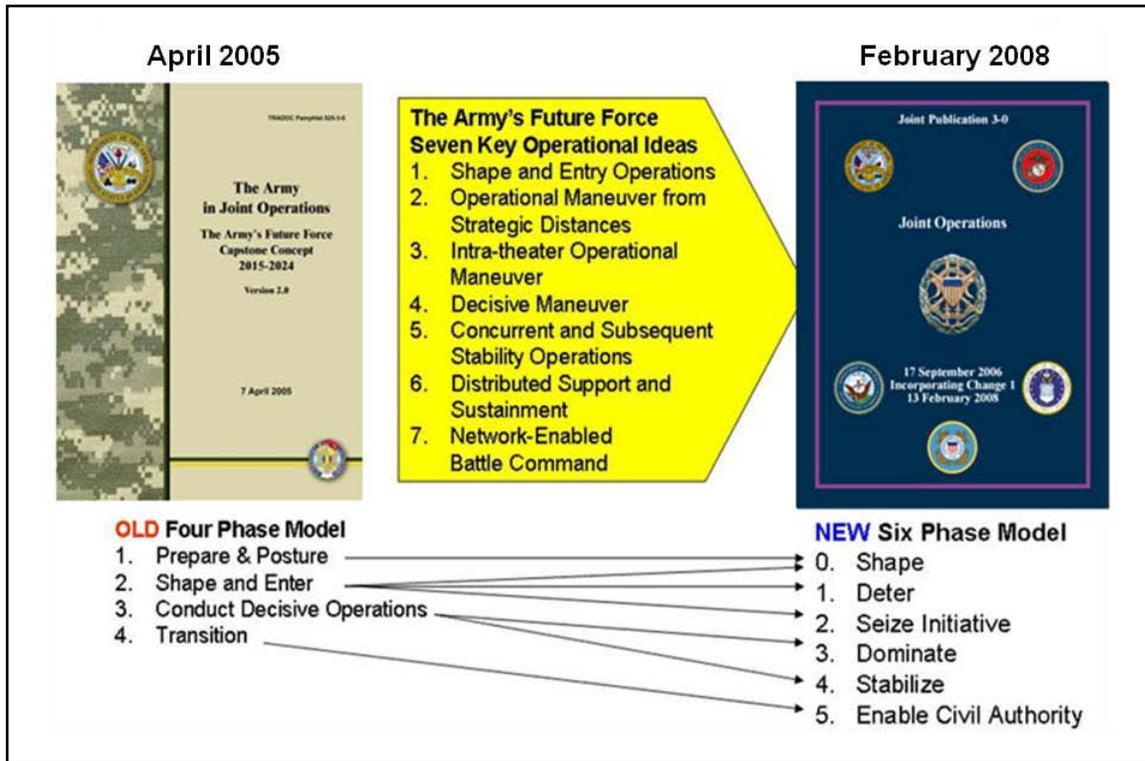
c. Base camps represent the physical point in a deployed location from which operations are projected or supported. In many cases the base camp makes power projection feasible for the operational force within the theater of operations. Base camps are both a position of strength and a point of balance from which force is applied.

d. The subsidiary elements of the application of force complementing maneuver and fires are the concepts of position and influence. Position is the arrangement of assets in an advantageous place. Influence is the use of assets at one's disposal (including intangible cognitive skills such as persuasion or discussion) to create effects against a target. Base camps directly affect position and influence of military operations and thus can have a significant impact on long term mission success.

e. Base camps must address fundamental operational requirements for expeditionary agility and responsiveness and the staying power, durability, adaptability, and sustainability to support a conflict to a victorious conclusion (no matter what form it eventually takes throughout its duration).

#### **4-2. The Plan (Joint Phasing: Six Phase Model)**

a. Army operations are conducted within a joint campaign framework. The joint force will conduct a phased campaign to achieve assigned objectives. These phases often overlap and are described as part of a new six phase model: shape, deter, seize the initiative, dominate, stabilize, and enable civil authority. JP 3-0 prescribes how this six phase model replaces the previous four phase model (see figure 4-1). Phasing assists commanders and staffs to visualize the entire operation or campaign and to define requirements in terms of forces, resources, time, space, and purpose.



**Figure 4-1. The New Six Phase Model**

b. Within the context of the joint campaign framework, the future Modular Force will apply adaptive combinations of seven key operational ideas: shaping and entry operations, operational maneuver from strategic distances, intratheater operational maneuver, decisive maneuver, concurrent and subsequent stability operations, distributed support and sustainment, and network-enabled battle command. To facilitate a scenario based description of base camp operations enabling the future Modular Force during the 2015-2024 timeframe, this CCP will address the Army's seven key operational ideas using the current six phase model outlined in JP 3-0.

c. The CCP's scenario addresses each phase of the operation from a base camp perspective with a specific focus on the combined joint forces land component command (CJFLCC) 10<sup>th</sup> Army. The scenario covers its deployment through a normal phase model into an immature theater in 2015.

Note: Not all immature theaters associated with military operations are austere environments; they may just be lacking the military sustainment structure necessary for the efficient conduct of operations.

d. The information relating to base camps is broken down by key focus areas and functions across each phase of operation and it incorporates deployment anecdotes from lessons learned, all woven into this depiction. While not covering every detail in each phase, the intent in this chapter is to identify some of the major operational capabilities by functional area.

e. Although this chapter uses the current six phase model outlined in JP 3-0 to describe the key base camp focus areas of planning and design, construction and deconstruction, and

operations and management; their related and subcomponent functions may occur simultaneously or sequentially, and may occur at any point in a base camp's lifecycle, as missions dictate. These focus areas can also occur during any phase of a joint operation.

f. Vignette operational setting (see figure 4-2). The operational setting for the vignette used in this CCP is built upon a notional multilevel scenario (MLS) developed by the TRADOC Analysis Center.



**Figure 4-2. Operational Setting**

g. Scenario task organization. The task organization for the CJFLCC 10<sup>th</sup> Army consists of three corps with ten divisions. The MLS for this CCP considers the actions of the 7<sup>th</sup> Division task organized with four U.S. Army modular BCT, a heavy BCT, two-Stryker BCTs, and an infantry BCT. It is augmented by a coalition (Australian) infantry brigade, fires brigade, maneuver enhancement brigade (MEB), combat aviation brigade (heavy), battlefield surveillance brigade, and a sustainment brigade.

h. 7<sup>th</sup> Division's mission. The 7<sup>th</sup> Division's mission is to restore the Elis border and return previously occupied areas of Elis back to Elis control. The key tasks associated with this mission are listed below.

(1) Defeat enemy forces within its operating area.

(2) Destroy enemy long range fires, chemical, biological, radiological, nuclear, and high-yield explosive capabilities in zone, and coordinate for joint fires destruction of those assets immediately adjacent to the division zone to deny future enemy interdiction.

(3) Secure bridge crossing sites in its area to deny enemy resupply and reinforcement, and enable operations in phases IV and V.

(4) Defeat enemy vicinity of major dams and return them to Elis control.

i. End state: Opposing forces defeated in 7<sup>th</sup> Division area of operations and are incapable or unwilling to conduct operations; international boundary (Elis-Attica) restored and secure; Elis controls previously occupied areas and stability operations ongoing to bring Elis back to pre-conflict status with assistance from international organizations; 7<sup>th</sup> Division postured and preparing for follow-on operations.

#### **4-3. The Six Phases**

##### **a. Phase 0: Shape**

###### **(1) Shape phase description.**

(a) Joint and multinational operations consist of normal and routine military activities and various IA activities that are performed to dissuade or deter potential adversaries and to assure or solidify relationships with friends and allies. They are executed continuously with the intent to enhance international legitimacy and gain multinational cooperation in support of defined military and national strategic objectives.

(b) Joint and multinational operations are designed to assure success by shaping perceptions to influencing the behavior of both adversaries and allies, developing allied and friendly military capabilities for self-defense and coalition operations, improving information exchange and intelligence sharing, and providing U.S. forces with peacetime and contingency access. Shape phase activities must adapt to each particular theater's environment and may be executed in one theater to create effects and achieve objectives in another.

(c) Commanders during this phase are focused on normal peacetime shaping operations. Expeditionary units (such as the CJFLCC 10<sup>th</sup> Army for this scenario) have been placed in the U.S. Army force generation model in the ready force pool. Execution of related critical tasks such as applied research, education, planning and training, rehearsal, configuration, and modeling and simulation include the expeditionary units, forward support from the operational base, and the generating forces.

(d) Organizations supporting and enabling contingency base camps also manage and integrate the installation infrastructure to support potential tactical requirements. They establish base camp processes for conducting day-to-day operations based on the "working and training as one would fight" concept that includes tactical units. Figure 4-3 summarizes some of the key areas and capabilities associated with base camp services and functions other than protection.

Supply (Direct and General Support Operations)	Field Services	Soldier Support Services	Other Services and Related Operations
<ul style="list-style-type: none"> <li>• Class I (subsistence)</li> <li>• Class II (clothing and individual equipment)</li> <li>• Class III (bulk and packed petroleum)</li> <li>• Class IV (construction materials)</li> <li>• Class V (ammunition)</li> <li>• Class VI (personal demand items)</li> <li>• Class VII (medical supplies)</li> <li>• Class IX (repair parts)</li> <li>• Miscellaneous</li> </ul>	<ul style="list-style-type: none"> <li>• Food service/preparation</li> <li>• Water/ice production and distribution</li> <li>• Shower</li> <li>• Sanitation</li> <li>• Clothing renovation</li> <li>• Light textile repair</li> <li>• Mortuary affairs</li> <li>• Aerial delivery</li> </ul>	<ul style="list-style-type: none"> <li>• Billeting</li> <li>• Personnel and administrative support</li> <li>• Legal services</li> <li>• Financial services</li> <li>• Medical services</li> <li>• Laundry</li> <li>• Clothing renovation</li> <li>• Quality of life</li> <li>• Morale, welfare, and recreation</li> </ul>	<ul style="list-style-type: none"> <li>• Engineering design and construction</li> <li>• Fire and emergency response</li> <li>• Facilities operations and maintenance</li> <li>• Airfield operations</li> <li>• Retrograde operations</li> <li>• Signal operations</li> <li>• Transportation operations</li> <li>• Maintenance and motor pool operations</li> <li>• Standard Army Management Information Systems operations</li> <li>• Convoy support operations</li> </ul>

**Figure 4-3. Typical Services and Functions Associated with Base Camps**

(2) Base camp planning and design contribution to phase 0.

(a) During this phase, base camp planners will be designated based on their experience and education (see figure 4-4). Contractors supporting future base camp operations will be trained jointly with military partners and held to the same standardized processes and procedures developed for base camp operations.

<b>Phase 0 Planner Duties</b>
<ul style="list-style-type: none"> <li>• During Phase 0, planners and designers are trained to rapidly develop and modify operational plans or designs for base camps to account for the fluid nature of full spectrum operations.</li> <li>• They will participate in planning exercises and simulations.</li> <li>• Using simulators and design criteria, designers and planners will be able to develop their skills under varying circumstances with different location requirements and multiple degrees of variance in potential operational requirements.</li> <li>• They will evaluate different designs and the flexibilities those designs have in adapting to situational changes in the mission and operation.</li> <li>• They will also address potential threats related to the designs and operational needs via these simulations.</li> </ul>

**Figure 4-4. Phase 0 Planner Duties**

(b) This phase includes the development of various base camp plans and designs based on multiple regional scenarios. These tested plans and designs will consider site location, materials energy management, and sustainability of building designs that are optimal to each particular region. The intent is to have holistic integrated systems designs on the shelf that are tailored and implemented to meet the needs of the JFC. Base camp planners will also begin the

necessary coordination with JIIM partners and nations to establish basing rights and support to land basing operations.

(c) Conflict termination requirements are a key aspect of planning and design processes. Emphasis should be placed on backward planning which begins with consideration of conflict termination, reconstitution, and redeployment and works backward to the prehostilities phase. The definition of the conditions of the stabilize and enable civil authority phases should be established as well as the military objectives that define the potential campaign's ultimate conflict termination process. These definitions will dictate the specific planning and design, construction and deconstruction, and operations and management areas and functional elements of this phase as well as for the subsequent phases.

(d) During this phase, all base camp solutions developed will take a holistic and integrated approach to ensure efficiency and sustainability are considered in a JIIM environment. Materiel solutions and design specifications will be evaluated with the intent of providing the most effective and efficient systems for deployed operations.

- Basic base camp planning and design will assume that all early entry forces will need to field some level of organic capability to be self-sustaining until such time that support modules for the operational force can arrive and take over base camp operations.
- Units will be trained to provide their own self-sufficient capability for base camps and equipment and materiel will be designed to augment that capability without providing additional overhead or burdens to the combatant force.
- A modular base camp includes capabilities like Force Provider (temporary life support area), protection systems, maintenance facilities, water production capabilities, sanitary waste management systems, solid waste management systems, hazardous waste management systems, medical waste management systems, modular and scalable construction capability, effective and efficient energy management systems, fuel and energy storage capabilities, secure paths for resupply, and anything else necessary to meet mission requirements.

(e) The base camp planning design considerations include the following.

- Be based on employing temporary capacity and capabilities until a transition to intermediate or enduring capabilities can occur.
- Include solutions that progress towards self-sustaining base camp capabilities, such as optimized power distribution and management.
- Include cube, weight, and transportability of projected class IV materials for planning and resource allocations.
- Assure resources coming into the camp are maximized while technology and best practices are leveraged to reduce waste streams and internally produce resources to sustain base camp operations.
- Plan to conserve, manage, and produce renewable energy, water, and other resources necessary to sustain base camps, while significantly reducing the logistics footprint and waste streams. Solar power, wind power, hydroelectricity

and micro hydro, biomass, passive solar techniques, power beaming, and bio-fuels are among the technologies being considered to support future Modular Force base camp operations.

- Take into consideration blending base camps into the local environment to the extent possible; doing so allows the base camp the flexibility to draw upon local material and local workforce/contractors and ensures sustainable designs.
- Utilize available standard designs and systems, whenever possible, to facilitate the forecasting of sustainment requirements more accurately.

(f) The primary functions of those key areas associated with base camp planning and design will address protection, combat operations requirements, communication and network infrastructure, energy management (generation, distribution, transformation, storage, load requirements), waste management (solid, waste water, hazardous, medical), resource conservation and management (such as water and air), and the construction and maintenance of specialized facilities. Specialized facilities include airfields and helipads; hospitals; maintenance facilities; and facilities to provide fire protection, fire prevention, and physical security of petroleum, oil and lubricants; arms; ammunitions; and explosives. These designs will fully support the key attributes of the joint force commander's ability to conduct all four types of military activities as outlined in the CCJO: combat, security, engagement, and relief and reconstruction. The designs will also incorporate the following characteristics.

- Will be knowledge empowered for maximum base camp efficiency. This means a greater emphasis on better decisions made faster throughout all levels of command. The fundamentals of this knowledge empowerment include experienced and empowered decisionmakers benefiting from an enhanced understanding of the environment, potential adversaries and cultures, as well as enhanced collaborative decisionmaking processes. A knowledge empowered force, capable of effective information sharing across all agencies and partners, will be able to make better decisions quicker, increasing joint force effectiveness.
- Networked to facilitate integrated and interdependent base camp operations across the global operational environment, with early emphasis on Internet, communication, and telecommunications capacity to include the necessary related training.
- Interoperable with JIIM partners.
- Expeditionary to provide rapid deployment, employment and sustainment of mission-tailored capabilities regardless of anti-access or area-denial environments, or regardless of austere conditions that are largely independent of existing infrastructure. Base camp planning and design, construction and deconstruction, and operations and management will also include mechanisms to enable global sourcing of equipment, materials, and contract support to enhance the expeditionary capabilities of base camps.
- Adaptable and tailorable to meet the needs of the JFC. The planning and design will be modular and scalable to adapt to the size of any operational element and have the agility and flexibility to adjust based on operations or conditions. The planners, managers, and engineers providing construction and deconstruction and

maintenance of base camps will be intellectually empowered by a background of experience and education.

- Enduring and persistent by possessing the depth and capacity to sustain operations over time, regardless of the situation or adversary.
- Precise in standards, processes, and organizational designs to generate the desired effects (while minimizing unintended effects) and contribute to the most effective use of resources.
- Fast in reacting to demands of the JFC and to intended or unintended circumstances.
- Resilient to sustain base camp capabilities from the effects of adversaries or adverse conditions.
- Agile in thinking, planning, communicating, and acting in a manner that meets the demands of the JFC or unfolding situations.
- Lethal and nonlethal capabilities integrated to destroy an adversary and/or his systems posing a threat to base camps.
- Flexible so as to reduce sustainment requirements, mitigating the effects of distance, time, and the complexity of operations.

(3) Base camp construction and deconstruction contribution to phase 0.

(a) Construction standards and techniques, tactics and procedures will be refined during this phase. Engineer units, contractors, and JIIM partners that support the construction, deconstruction, and maintenance of base camps will be trained jointly to ensure competence and proficiency in support of base camp operations.

(b) Required equipment for all possible scenarios and conditions will be identified. Equipment and repair parts that are not organic to military units or require long lead times to acquire or deploy may be prepositioned and maintained by the appropriate JIIM partners or contracting agencies (such as the Army Materiel Command).

(4) Base camp operations and management contribution to phase 0.

(a) Base camp operations will include the services and day to day functions required to sustain base camps. The equipment, processes, and procedures supporting base camp operations will comply with the standards established in base camp planning and design to ensure effectiveness, efficiency, and integration with JIIM operations. During this phase, the Army will coordinate and train with JIIM partners to ensure proficient base camp services during subsequent phases. This includes interaction with contract support that is comparable to that expected during FSO. See figure 4-5 for phase 0 shape.

### **Phase 0: Shape**

During Phase 0, BCT elements of the 7<sup>th</sup> Division participate in training exercises at the National Training Center (NTC) at Fort Irwin, CA. During the training cycle, they are linked with modular constructs who will act as their base camp staff. The organization's role is to perform all the tasks associated with running the brigade, battalion, or company size base camps. While the BCTs receive operations training, the base camp staff elements (BCSE) are given training and exercises associated with base camp operations including:

- Familiarization with specific base camp policies, doctrine, standing operating procedures (SOP), and design specifications.
- Prior to construction of base camps, BCT's must be self-sufficient and able to survive without these camps for a predetermined period of time.
- Establishing reachback links for operational issues.
- Site reconnaissance (engineering, infrastructure, environmental, health, and safety).
- Master plan writing and modification.
- Closure planning and coordination required.
- Construction management and oversight for initial construction, expansion, deconstruction.
- Design modifications.
- Contract management (contract statement of work writing, oversight, conflict resolution).
- Power and energy management.
- Waste management.
- Water management.
- Civil affairs training.
- Scaling of facilities to account for surges or downsizing for consolidation.
- Prioritization of critical resources (power, water, fuel, personnel).

**Figure 4-5. Shape**

Note: The combat training centers (CTC) and home stations must receive the funding and resources to replicate the operational environment before deployment to conduct realistic training. The CCP addresses DOTMLPF implications of any desired Army capability. The Army then must decide where it wants to accept risk and train this capability. In most instances, operational forces will require this capability at the CTC first. One of the major lessons learned from Operation Enduring Freedom and Operation Iraqi Freedom and CALL was the lack of realistic training prior to deployment. The CTC make good efforts to replicate these new environments, but in some instances, the threat changes more rapidly than does the CTC.

(b) Management provides the C2 of base camp operations and is the link to the JFC operations cell. This C2 element includes organizations that resource the mayor's cell of individual camp to brigade, division, corps, and theatre base camp operations cells and their requisite reachback. During this phase, personnel will be assigned to these organizations based on experience, education, and predeployment training. These organizations will include subject matter experts of each key area and function of base camp operations and all related organizations will be trained for collective proficiency in all aspects of base camp operations.

(5) Summary of phase 0.

(a) During phase 0, the preparatory work and actions to assure effective integration of base camps into the military mission will be performed. Units, organizations, and staffs will be trained to perform their tasks in a situational environment both actual and virtual.

(b) The base camp planning/design considerations will include protection systems that are integrated, layered, and modular and provide enhanced detection, identification, assessment, and response capabilities that are timely, accurate, and persistent than current force capabilities.

(c) The military, civilians, and contractors will work and train to similar capabilities and standards as those they will be required to provide during deployed operations. Preposition resources for base camp construction and operations as practical.

(d) Prepare contracts and plan lines of supply. Assign clear command responsibility for base camp operations.

(e) Prioritize critical safety considerations and ESOH concerns (like fire and emergency response and related force protection health issues).

(f) Theater security cooperation activities may require establishing temporary or enduring sites that can become the nucleus of larger contingency camps.

b. Phase 1: Deter.

(1) Deter phase description.

(a) The intent of this phase is to deter undesirable adversary action(s) by demonstrating the capabilities and resolve of the joint force. It differs from deterrence that occurs in the shape phase in that it is largely characterized by preparatory actions that specifically support or facilitate the execution of subsequent phases of the operation and/or campaign. Once the crisis is recognized and the mission defined, supporting actions may include mobilization, tailoring of forces, and other predeployment activities; initial overflight permission(s) and or deployment into a theater; employment of ISR assets; and development of mission-tailored C2, intelligence, protection, and logistic requirements to support the JFC's operational concept. Commanders continue to engage multinational partners, thereby providing the basis for further crisis response. Liaison teams and coordination with other governmental agencies (OGA), intergovernmental organizations (IGO), and nongovernmental organizations (NGO) assist in setting conditions for execution of subsequent phases of the campaign.

(b) Many actions in the deter phase build on activities initiated in Phase 0 and are conducted as part of security cooperation plans and activities. They can also be part of stand-alone operations. This is the phase in which modular complexities of the operational force are cross walked with the services and capabilities to be provided by the base camp.

(2) Base camp planning and design contribution to phase 1.

(a) At the onset of a crisis or other indication of the need for potential military action, the inclusion of base camp planning into overall mission planning will allow the JFC to coordinate the operational requirements associated with land use and basing requirements. Joint force planning and operations conducted prior to commencement of hostilities should establish a sound foundation and framework for operations in the stabilize and enable civil authority phases. Utilizing plans, designs, and standards established in Phase 0, the JFC can tailor the capabilities required in his power projection platform(s) in theater to meet mission requirements.

(b) Phase 1 also addresses specific planning criteria based on operational environments and mission objectives. This allows for modular implementation, planning for sustainable systems and practices, as well as allowing for scalable operations in follow on phases.

(c) This phase allows the JFC to ascertain the requisite organic capabilities needed to initiate the mission and at what point those organic capabilities will require augmentation by additional resources or replacement by capabilities designed for later phases.

(d) During phase 1, the initial assessments and agreements (infrastructure assessments, resource assessments, environmental baseline surveys (EBS), occupational and environmental health site assessments (OEHSA), and property use agreements) with the requisite organizations (such as host nation, Department of State, and OGA and NGO organizations). National Center for Medical Intelligence and Center for Health Promotion and Preventive Medicine can provide analysis to protect, "...Soldier health by reducing exposure to preexisting environmental hazards and ensuring that practices at base camps and other facilities do not increase health risks."

(e) Base camp design addresses issues during phase 1 by determining the specific modular components necessary to develop the required base camp(s) into the land based power projection platforms in the theater of operations. These features will include the specific systems and services to be incorporated in each base camp; utility requirements for energy, water, and waste management; and design standards to be employed. It is also during this phase where existing templates, standards, procedures, protocols, and component systems are reevaluated based on the characteristics of the area of operation and the mission requirements.

(f) Design will also identify the necessary equipment requirements and criteria to construct, operate, and manage the planned base camps. At this time planners should accurately estimate budget and other resource requirements for constructing the base camp and operating costs. The schedules for completion of the camps based on design parameters; equipment, material, and personnel availability, and support material will be completed during this phase and should be integrated into the overall mission planning.

(g) Design is the critical action required to ensure that the integration of a holistic approach to sustainability is integrated into the mission operations. This will allow greater self sustainment, thus reducing the logistics footprint and improving security and flexibility for the JFC.

(3) Base camp construction and deconstruction contributions to phase 1.

(a) Construction and deconstruction actions during this phase will be limited to assignment of designs for the camps and systems. Personnel and equipment assignments are a function of the management stage.

(b) Construction and deconstruction elements can assist the design process by proactive review of proposed designs by the construction and logistics elements to assure that desired designs can be implemented within the planned timeframes with the planned and assigned units, personnel, equipment, and material.

(c) Availability of specific construction materials will be assessed. Plans, designs, operations, and management processes will be modified, as necessary, based on this assessment. The use of existing facilities or readily available local construction material will be given the highest priority. Safe use of existing facilities will require evaluating host nation building codes and general workmanship for compliance with expeditionary standards (maybe for initial operational adequacy and then for longer-term occupation) then verifying each facility by inspection. Safety retrofits (ESOH concerns) may be required, making existing facilities less cost-effective than new ones for use throughout the planned duration of the operation.

(d) Equipment lists for construction, as well as for operations and maintenance of the camp will be established. Construction equipment that has dual (multiple) uses will be identified and allocated to the priority tasks.

(4) Base camp operations and management contribution to phase 1.

(a) Operations will determine the services to be provided and timetable when those services will be provided based on integrating the planning, design, and construction areas and components of this phase. It will identify the organic capabilities to be integrated into the more robust services as the phases develop.

(b) Determining the services that will be provided and when they are provided is also heavily dependent on the threat, existing security level and the personnel who will be supervising, operating, and maintaining those services.

(c) During Phase 1, management will determine the personnel and operational oversight parameters for the base camps. It will establish the roles of military, civilian, and contractors in the operations and management of base camps at the camp and theater levels and identify key technical advisory personnel such as in preventive medicine.

(d) Phase 0 should have previously established the requisite training and organizational working relationships between military, civilian, and contractors regarding base camp operations. The management part of the deter phase will validate the planning and design requirements by assuring there are the appropriate number of personnel and skill sets available to meet the base camp mission requirements. (See figure 4-6.)

### **Phase 1: Deter**

During Phase 1, as the BCT elements of the 7<sup>th</sup> Division prepare for initial entry deployment, the modular base camp staff elements (BCSEs) are attached to each of the division BCTs brigade special troops battalions (BSTB) as well as the division's MEB (or division special troops battalion if an MEB is not sourced). These BCSEs attached to the MEB and BSTB will provide the initial organic capability to run base camps for those units and the 7<sup>th</sup> Division. These attached BCSE will have the capability of combining (scaling up) or subdividing (scaling down) to provide flexibility and adaptability needed during the initial entry stages for the construction, operations, and management of base camps.

The BCSE will have appropriate mixes of officers and senior noncommissioned officer with the necessary skill sets to provide oversight of base camp operations, engineering, construction, master planning (waste management, water management, energy management), facilities management and maintenance, contract management and oversight, environmental issues, and others. The BCSE will provide basic C2 needed during early entry and will grow appropriately to the mission. Concurrently theater, corps, and division level modular base camp augmentation elements (BCAE) will begin to be assembled and assigned to 10<sup>th</sup> Army, IX Corps, and the 7<sup>th</sup> Division. The BCAE will contain sufficient, ranks, skill sets, and functionality to operate large base and base camps and/or coordinate and manage theater wide base and base camp operations.

### **Figure 4-6. Deter**

#### (5) Summary of phase 1.

(a) During phase 1, the preparatory work will be finalized into specific mission plans detailing allocation of resources. Designs and alternatives will be established and schedules will be developed. Plans should contain both those active and passive protection measures that deter enemy action and enable the protection of personnel, assets, and information.

(b) Work on specific contract scopes of work to support the mission will begin.

(c) Component systems will be assembled for deployment. Prepositioned equipment requirements will be identified as well as long lead time materials and equipment for base camp operations. Submit requests for material not available to start solicitation process, and requests expedite of contract award and delivery.

(d) Base camp operating and managing staffs and supporting units and organizations will be identified, resourced, and provided the proposed plans and designs for their assessment and organizational planning purposes.

#### c. Phase 2: Seize initiative.

##### (1) Seize initiative phase 2 description.

(a) JFC seeks to seize the initiative in combat and noncombat situations through the application of the appropriate joint force capabilities.

(b) In combat operations, this involves executing offensive operations at the earliest possible time, forcing the enemy to offensive culmination, and setting the conditions for decisive operations. Rapid application of joint combat power may be required to delay, impede, or halt the enemy's initial aggression and to deny their initial objectives. If an enemy has achieved its

initial objectives, the early and rapid application of offensive combat power can dislodge enemy forces from their position, which creates the conditions for the exploitation, pursuit, and ultimate destruction of both those forces and their will to fight during phase 3.

(c) During this phase, operations to gain access to theater infrastructure and to expand friendly freedom of action continue while the JFC seeks to degrade enemy capabilities with the intent of resolving the crisis at the earliest opportunity. In all operations, the JFC establishes conditions for stability by providing immediate assistance to relieve conditions that precipitated the crisis.

(d) During this phase, the JFC will leverage the modular base camp and units' organic capabilities to rapidly place, construct, and operate and manage base camps at mission critical locations. Predeployment plans and designs will be implemented with modifications where reconnaissance, site surveys, or mission dynamics deem it necessary.

(2) Base camp planning and design contribution to phase 2.

(a) Base camp planners will continue coordination with JIIM partners, contractors, and host nation support to ensure implementation of the base camp designs and standards that were directed to meet the needs of the JFC. As situations arise, modifications to the plans will be made and coordinated through the base camp management cells for implementation by engineer or base operations support.

(b) During this phase, modular base camp capabilities will temporarily support operations of initial entry forces. Processes will begin immediately to transform these initial capabilities into self sustaining base camps that provide sustained protection, resupply, refit, and reconstitution as well as morale, welfare, and recreation (MWR) service support to the joint force.

(3) Base camp construction and deconstruction contribution to phase 2.

(a) During this phase, construction elements and engineers will support establishment of the initial base camps based on premission plans and designs. Construction actions will account for future planning requirements such as power grid establishment, sanitary systems, solid waste management, and potential for surge capacity. Camps will be constructed with a modular and scalable framework in mind to integrate environmental considerations and to maximize adaptability and flexibility for the commander.

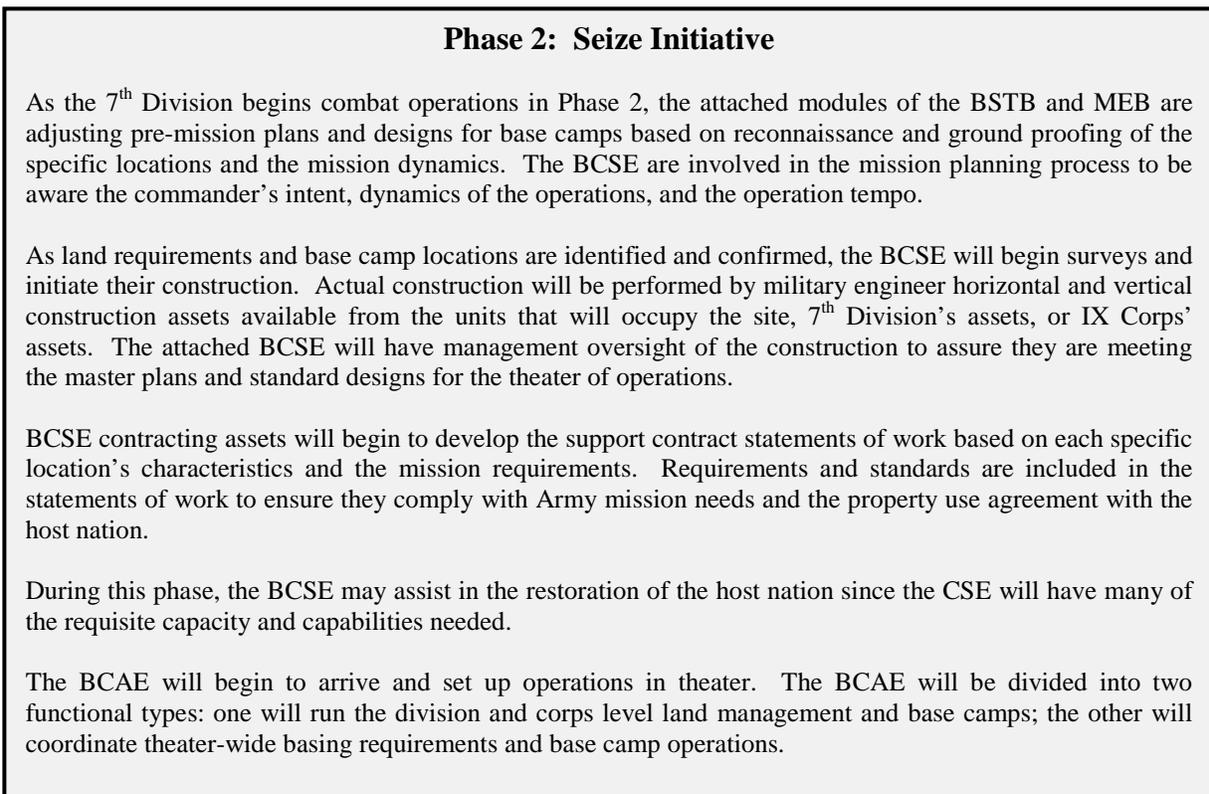
(b) Transformation from initial and temporary capabilities will begin as soon as the operational conditions allow (the intent is to consider the base camp as an asset to the commander). As soon as the situation dictates, optimization of the base camp functions and component systems should begin to further increase the flexibility of the commander.

(4) Base camp operations and management contribution to phase 2.

(a) Primary support during this phase will include the essential support organic to the JFC and basic base camp services to be provided for the initial entry capability.

(b) Facilities and services will expand and be enhanced for sustained operations as the base camp(s) mature. The use of LOGCAP or other contractor support will be dependent on the security situation and the JFC intent.

(c) Base camp operations cells will be activated at individual camps, brigades, division, corps, and theater levels to provide a networked system to oversee the operations and the transition from initial capabilities to fully functional base camps and services to support sustained operations. (See figure 4-7.)



**Figure 4-7. Seize Initiative**

(5) Summary of phase 2.

(a) Phase 2 will see the initial construction and occupation of the base camps. Construction should include both active and passive protection measures that deter enemy action and enable the protection of personnel, assets, and information.

(b) The services and functions that are provided will be based on the mission requirements and the commander's intent and guidance.

(c) This phase will set the parameters for when transition from initial capabilities to more fully supported operations will occur.

(d) During this phase the ability to react rapidly to situational conditions will be paramount.

d. Phase 3: Dominate.

(1) Dominate phase description.

(a) The dominate phase focuses on breaking the enemy's will for organized resistance or (in noncombat situations) maintaining control of the operational environment. Success in this phase depends upon overmatching joint force capability at the critical time and place.

(b) The dominate phase includes full employment of joint force capabilities and continues the appropriate sequencing of forces into the operational area as quickly as possible. When a campaign is focused on conventional enemy forces, the dominate phase normally concludes with decisive operations that drive an enemy to culmination and achieve the JFC's operational objectives.

(c) Against unconventional enemies, decisive operations are characterized by dominating and controlling the operational environment through a combination of conventional and unconventional information and stability operations. Stability operations are conducted as needed to ensure a smooth transition to the next phase and to relieve suffering. Military units, absent permissive-environment OGA and NGO, may be used to extend city management and infrastructure expertise to the host nation.

(d) In noncombat situations, the joint force's activities seek to control the situation or operational environment. Dominate phase activities may establish the conditions for an early favorable conclusion of operations or set the conditions for transition to the next phase of the campaign.

(2) Base camp planning and design contribution to phase 3.

(a) Base camp planners are coordinating with the management cell and JFC to expand or reduce capabilities commensurate to the size of the supported force. This includes meeting the needs of JIIM partners and contractors as well as the military forces. Plans are also refined to support concurrent stability operations. See figure 4-8 for the dominate phase.

### **Phase 3: Dominate**

As phase 3 begins, the BCAE and BCSE are still involved in the mission planning process and overall management of the established base camps.

As the operational tempo dictates, civilian and contract support will start to be provided to both the BCAE and BCSE. This support could be in the form of LOGCAP contactors providing service support, other contracted projects, DOD civilian augmentation, or a combination of the three.

The BCSE primary mission will evolve from that of organic support of initial entry operations to that of oversight/management of civilians and contractors.

At the same time, the BCSE will be responsible for assuring the component systems are functioning in the most effective and efficient manner for the land use requirements and base camp operations. In this way the BCAE and BCSE will provide the JFC with oversight of resource use to assure waste is kept to a minimum and only the necessary required resources are part of the logistics footprint.

The BCAE and BCSE will also be responsible for assuring the master plans are being implemented, modified, updated, and maintained to provide continuity for the BCAE or BCSE that rotates as a backfill into the operation at a future date.

During this phase, the BCAE and BCSE may/will continue to assist in the restoration actions of the host nation, supporting the lead of civil affairs units and preparing for handover of this effort to OGAs, such as the U.S. Agency for International Development, as the environment becomes once more permissive. Coordination and liaison will be essential to a successful whole-of-government effort.

### **Figure 4-8. Dominate**

(b) The physical construction and support operations of the base camp are reaching their optimal efficiency during this phase. Technologies are emplaced to optimize resources while minimizing waste, thus minimizing the base camp footprint and creating near self-sustainment of base camp operations. This will significantly enhance the JFC overall capabilities for sustained operations. These designs will also make available a surplus of resources giving the JFC capabilities to provide essential services to the host nation as appropriate to the tactical situation.

#### (3) Base camp construction and deconstruction contribution to phase 3.

(a) Military engineers and construction contractors will expand, reduce, and maintain the physical construct of the base camp as necessary. Engineering controls to address ESOH concerns and requirements (for example, reduce potential health impacts to personnel from toxic chemical and noise hazards) will be incorporated into the base camp.

(b) Component systems will be in place to address energy, water, wastewater, and solid and hazardous waste management.

(c) Modular and scalable design and construction have made the base camp into significant assets and force projection platforms for the JFC. Modularity and scalability will

ensure camps can be resized, moved, or missions redirected with minimal impact on their continuing functions and services.

(4) Base camp operations and management contribution to phase 3.

(a) Base camp services will have evolved from basic, to expanded, to enhanced and efficient facilities that meet the requirements for sustained operations.

(b) Key personnel are identified to engage in gathering and archiving survey reports of potentially enduring environmental issues into appropriate central archives. These archives facilitate a comprehensive information handoff during base closure.

(c) C2 elements for base camp operations are approaching their optimal efficiency during this phase. They are coordinating with the planners, engineers, and base camp services to ensure the agility and adaptability of base camp operations as well as the fast and precise reaction to any changes in the operational situation.

(5) Summary of phase 3.

(a) During phase 3, the operational tempo of the base camps has been established. They are now fully capable of supporting the mission with reduced oversight from the JFC.

(b) The base camps are now approaching the highest level of self-sustaining operations.

(c) During this phase, protection systems are in place. These systems deter, intercept, and defeat threats at a safe distance. They also assist in achieving mission assurance through crisis management and continuity of operations.

(d) Energy management is in place and power consumption is being optimized, thus fuel shipments to support power needs are at the lowest possible levels.

(e) Water management programs have reduced water demand. Water shipments have been minimized through the combination of onsite production, recycling, or improved distribution systems.

(f) Wastewater management has sanitary waste being managed internal to the base camp complex (thus minimizing contractor involvement). Grey wastewater (such as that used for laundry, showers, food preparation) may be collected separately from black wastewater (such as that used for latrines). Grey wastewater may be filtered, disinfected, and reused with minimal treatment. Water capture from the sanitary system is underway for nonpotable water requirements. Sanitary solids are used for energy conversion or disposed of as required.

(g) Solid, hazardous, and medical waste management is in place and all recoverable energy from waste is being captured and used. Biodegradable wastes (such as, food scraps, sewage sludge, vegetation, animal bedding,) can generate compost providing a safe, efficient

means for animal carcass disposal as well as forming an agricultural soil amendment which is important in developing countries. Metals, glass, plastics, cardboard, oil, and other nonconvertible solids are being minimized, recycled, reused, or disposed of in an acceptable manner.

e. Phase 4: Stabilize.

(1) Stabilize phase description.

(a) Operations in this phase ensure the national strategic end state continues to be pursued at the conclusion of sustained combat operations. These operations typically begin with significant military involvement to include some combat; then move increasingly toward enabling civil authority as the threat wanes and civil governance and infrastructures are re-established.

(b) This phase is required when there is limited or no functioning, legitimate civil governing entity present. The joint force may be required to perform limited local governance, integrating the efforts of other supporting and contributing multinational, OGA, IGO, or NGO participants, until legitimate local entities are functioning. This includes providing or assisting in the provision of basic services to the population. Phase 4 is typically characterized by a change from sustained combat operations to stability operations. Stability operations are necessary to ensure that the threat (military and/or political) is reduced to a manageable level that can be controlled by the potential civil authority, or in noncombat situations, to ensure that the situation leading to the original crisis does not reoccur or its effects are mitigated.

(c) Redeployment operations may begin during this phase and should be identified as early as possible. Throughout this segment, the JFC continuously assesses the impact of current operations on the ability to transfer overall regional authority to a legitimate civil entity, which marks the end of the phase.

(d) During stability operations in Phase 4, protection from virtually any person, element, or group hostile to U.S. and coalition interests must be continued. These could include activists, a group opposed to the operation, looters, and terrorists.

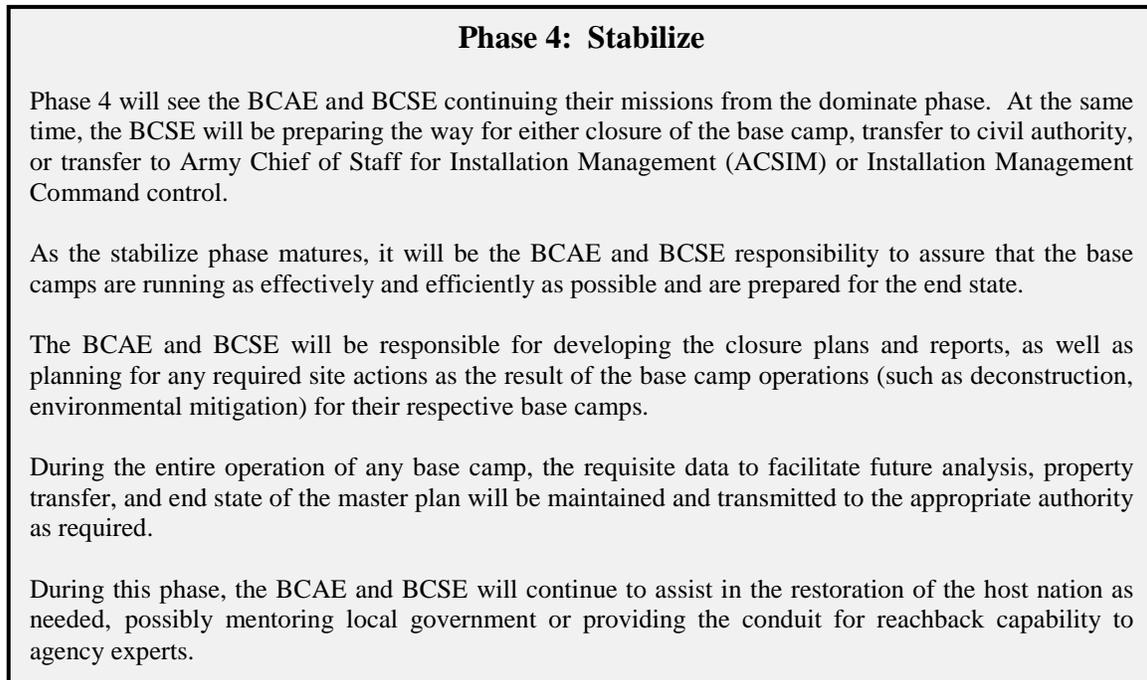
(2) Base camp planning and design contribution to phase 4.

(a) Some stabilizing phases may be short, while others may require years to transition to the enable civil authority phase. Therefore, the patient, resolute, and persistent pursuit of national strategic end state conditions for as long as necessary to achieve them often is the requirement for success. Consequently, the JFC may need to realign forces and capabilities or adjust force structure to begin stability operations in some portions of the operational area, even while sustained combat operations are ongoing in other areas.

(b) Joint force planning and operations conducted prior to commencement of hostilities will have established a sound foundation for operations in the stabilize and enable civil authority phases as well. Utilizing plans, designs, and standards established in phase 0, the JFC

can tailor the capabilities required of the power projection platform (base camps) based on the actions and results of the seize initiative and dominate phases.

(c) Phase 4 is where decisions are made in preparation for the transition to the enable civil authority phase. Planning should be directed to adjust, refine, and/or finalize force distribution (location and size) thus allowing for the downsizing, relocation, consolidation or elimination of base camps. Modular, scalable, and self-sustaining capabilities will allow this to occur rapidly with fewer resource requirements. See figure 4-9 for the stabilize phase.



**Figure 4-9. Stabilize**

(d) Planning will have to address the size, availability, and capability of the construction force. What equipment and trained personnel are available and what are their capabilities are the types of questions that will need to be answered. This phase could require as much, if not more, construction capability as the previous phases.

(e) Base camp design determines the specific modular components necessary to address the stability operations mission. These modular features will primarily focus on duration related optimization issues and the expected life cycle of the base camp. Design will account for the need for more robust facilities and the expected end-life use for the host nation, focusing on what the JFC will be leaving behind for use by the host nation.

(f) Design must address operational needs for the JFC and the benefits of the base camp to promote continued stability once the military mission has ended. Design must take into account the possibility of an extended duration mission to obtain the degree of stability desired.

(g) Expected life span of the camp (and possibility of extended life), stability mission focus (with ability to transition back to seize initiative and dominate phases), downsizing and surge capability, relocation, deconstruction, construction materials, operational costs, and maintenance costs must all continue to be considered in base camp designs during this phase. Robust utility capacity remains vital to agile transitions rather than the false economy of providing the minimal infrastructure necessary at the specific time of construction.

(h) The ability of the host nation to maximize the use of the structures and facilities at a base camp are important considerations. The JFC does not want to leave a legacy of poor construction, buildings with expensive or unavailable materials, inefficient buildings, or facilities with high operating or maintenance costs, or structures that have little value to the host nation.

(i) At the same time, if the JFC does not plan to leave any portion of the base camp to the host nation, then design must account for the removal of all systems and material as well as deconstruction of all facilities to the greatest extent possible. The intent is to return the location as close as possible to the condition prior to occupancy.

(j) A checklist, which covers the topics relevant for a given phase, is used by base camp managers and commanders. The appropriate use of the assessments, surveys, and agreements should be consistently applied. The contents of these documents should be detailed and defined.

(k) It is important in planning and design efforts to consider long-term sustainability requirements and natural biodiversity of the area's ecosystem. This is necessary for the population to have long-term capability to obtain food and water and an economic future. This promotes the good will of the host nation by not leaving behind facilities to be demolished or waste to clean-up. It is during this stage that processes initiated during the shape and deter phases such as infrastructure assessments, resource assessments, EBS, OEHS, and property use agreements become critical. These surveys and agreements will be used to determine the final disposition of closed sites.

(2) Base camp construction and deconstruction contribution to phase 4.

(a) Construction actions will begin to account for the end state. Whether or not the construction will be turned over to the host nation will impact scopes, designs, and materials used.

(b) This phase will see the use of more contractors to facilitate construction with engineers being used in an oversight and review role to manage construction projects.

(c) During phase 4, construction and deconstruction actions will require readily available construction equipment and personnel to allow for downsizing, consolidation, relocation, or deconstruction to meet the changing mission requirements.

(d) Construction and deconstruction methods will be based on the planning and designs for the final disposition of the base camp as well as the construction methods and materials used.

(e) Construction and deconstruction assets should be familiar with the type of systems, structures, and activities with which they will be dealing to facilitate optimum use of resources (personnel, material, land space, and time).

(f) Construction actions during phase 4 could be accomplished by any combination of military, expatriate contractors, or host nation contractors; however, construction actions will more likely be accomplished either by expatriate or host nation contractors, (which has both advantages and disadvantages). Using contractors provides a greater pool of construction resources (both personnel and equipment). It can also increase time and cost to accomplish the same construction actions. An advantage in using local contractors is employment of local nationals will encourage good will and introduce needed currency into the local economy, whereas unemployment can have numerous negative consequences. Local contractors are significantly less expensive than U.S. based contractors. The primary disadvantage of using local or third country nationals is the security risk from allowing non-U.S. personnel access into the base. It can also restrict, and to some extent, diminish the organic capabilities of the Army to provide its own construction capabilities.

(3) Base camp operation management contribution to phase 4.

(a) Base camp operations during the stabilize phase will take on more characteristics associated with home installations. The longer the planned life of a base camp, the more likely it will take on features of a home garrison. This includes the installation of a more commercial communications infrastructure replacing and freeing up tactical resources. This requires increased heating, ventilating, and air conditioning requirements; power generation; network redundancy; and increased procurement of telecommunications hardware, not to mention the establishment of cyber cafes (MWR services), installation of cable television to Soldier billets, and installation of mass notification systems for site warning.

(b) Base camp operations must also account for a greater degree of OGA, IGO, or NGO tenants. As phase 4 progresses, the mission and number of U.S. government authorized tenants may increase. Unique services or specialized requirements to support these tenants may be required, as will the development of appropriate memorandums of agreement and leases with the base camp mayoral cell and the tenant units.

(c) During the Stabilize phase, there is an increased likelihood of host nation personnel interacting with the base camp. This could be either as contract support for base camp operations, contract support to tenant organizations, or local civil authorities working with the JFC or other organizations located in the base camp.

(d) During phase 4, as in the other phases, management will determine the personnel and operational oversight parameters for base camps. It will determine the roles of military

personnel, DOD civilians, and contractors in the operations and management of base camps at the camp and theater levels.

(e) Phase 0 should have already established the requisite training and organizational working relationships between military, DA civilian, and contractors with regard to base camp operations. The management part of the phase 4 will implement the planning and design sections requirements.

(f) As the population and mission expand at the base camp, the requirements for operational personnel will also increase. The use of LOGCAP personnel for the base support operations will be critical to assure that trained personnel are available. Military command of the camp will be retained. This will require developing leaders to perform this mission with both garrison management skills as well as skills for coordination of the support to OGA, IGO, or NGO tenants and interactions with host nation entities.

(4) Summary of phase 4.

(a) During phase 4, the operational tempo of the base camp is basically an extension of the phase 3 operations. Increased self-sufficiency will be sought through the inclusion of more self-sustaining systems (such as renewable power, energy efficient equipment, water capture, recycling, and reuse of material).

(b) This phase will also include preparation for phase 5. As such, base camp size, distribution, location, and robustness of systems will all be dictated by the end state.

(c) Operations and management may begin to transition from the JFC to the Army Chief of Staff for Installation Management (ACSIM) and the Installation Management Command or some other organization depending on mission dynamics and predicted duration. During this phase, surplus resources (water, power, metal) generated at the base camp may be provided by the JFC to the host nation to promote the overall mission.

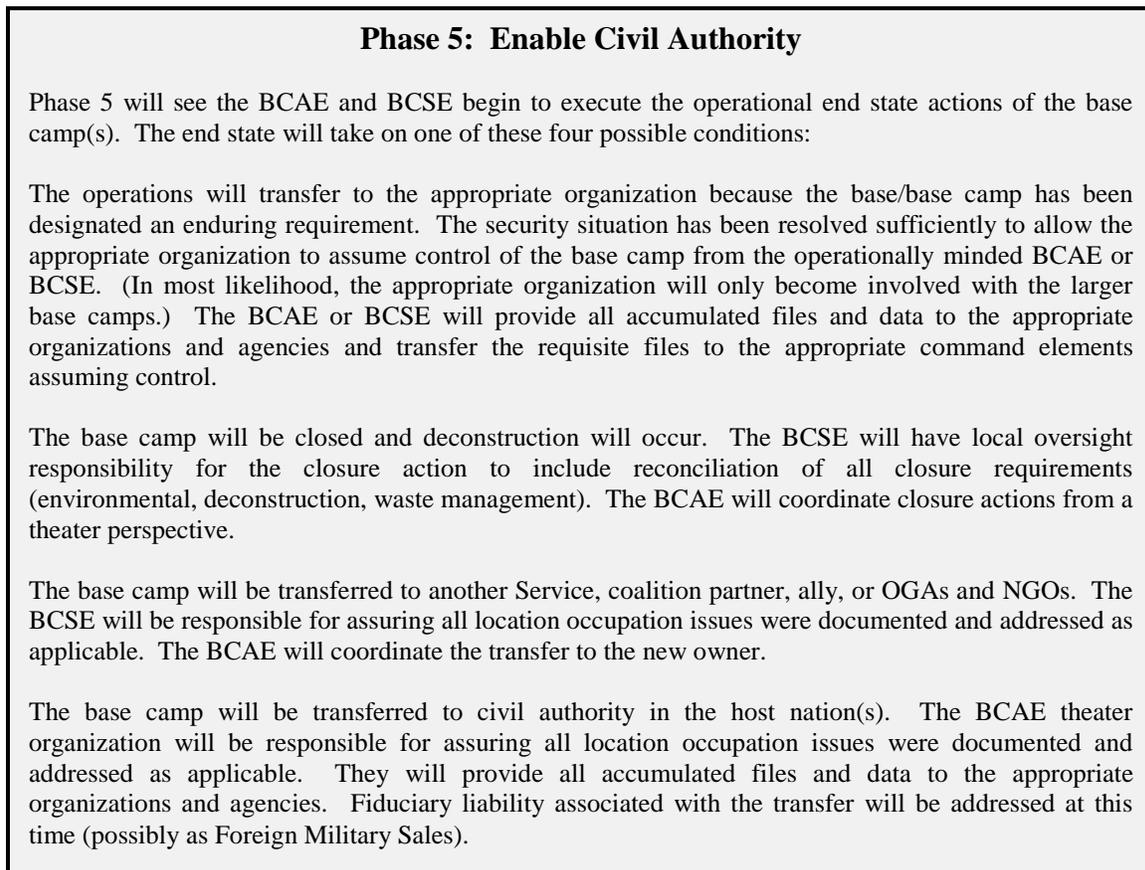
f. Phase 5: Enable civil authority.

(1) Enable civil authority phase description.

(a) Phase 5 is characterized by joint force support to legitimate civil governance. This support will be provided to the civil authority with its agreement (consent) at some level, and in some cases (especially for operations conducted within the U.S.) under its direction. The goal is for the joint force to enable the viability of the civil authority and its provision of essential services to the largest number of people in the region. This phase includes coordination of joint force actions with multinational, OGA, IGO, and NGO participants and favorably influencing the attitude of the population regarding the U.S. and local civil authority's objectives.

(b) The joint force will be in a supporting role to the legitimate civil authority in the region throughout phase 5. Redeployment operations, particularly for combat units, will often begin during this phase and should be identified as early as possible.

(c) The military end state is achieved during this phase, signaling the end of the joint operation. The joint operation is concluded when redeployment operations are complete. Combatant command involvement with other nations and OGA, beyond the termination of the joint operation, may be required to achieve the national strategic end state. In this phase, the joint operation is normally terminated when the stated military strategic and/or operational objectives have been met and redeployment of the joint force is accomplished. See figure 4-10 for the enable civil authority phase.



**Figure 4-10. Enable Civil Authority**

(2) Base camp planning and design contribution to phase 5.

(a) Planning during this phase will primarily focus on the assessment of mission objectives. When the mission objectives have been met, then redeployment operations will be initiated.

(b) In some cases, it may become apparent that the stated objectives fall short of properly enabling civil authority. This situation may require reevaluation of the operational plan and an associated redesign of the joint operation as a result of an extension of the required stability operations in support of U.S. diplomatic, host nation, IGO, and/or NGO efforts. In these instances, phase 5 has essentially reverted to phase 4 actions or could possibly transform into

phase 2 or 3 operations. Base camp planning will have to address those issues previously discussed in the earlier phases.

(c) Once mission objectives have been met, the primary concern for base camp planning during phase 5 is redeployment. Redeployment encompasses the movement of units, individuals, or supplies deployed in one area to another area, or to another location within the area for the purpose of further employment. Redeployment also includes the return of forces and resources to their original location and status. Redeployment is primarily the responsibility of supported commanders and their Service component commanders as cited in JP 5-0.

(d) Redeployment normally is conducted in stages. The entire joint force will most likely not redeploy in one relatively short period. It includes property transfer, deconstruction of facilities, waste management (including transport and disposal), closing of contracts and other financial obligations, disposition of contracting records and files, and ensuring that appropriate capabilities remain in place until their units have completed their missions associated with enabling the civil authority action as well as any redeployment associated with it.

(e) Decisions made concerning the termination of operations, separation of belligerents, withdrawal timetables, residual forces, and reserve stocks to remain in the host nation will shape the pace and nature of the redeployment as cited in JP 3-35. Base camp planners must take into consideration a multiple number of issues that will directly influence their redeployment planning impact on base camps such as intelligence preparation, protection, information operations, civil-military operations, infrastructure assessment, force health protection, personnel services support, and force tracking.

(f) Planning during this phase must consider transition into similar actions to those associated with the shape and deter phases if forces that are redeploying are doing so to another theater. Commanders and their staffs should consider how they will extricate their forces and at the same time ensure that the appropriate base camp and land use requirements are met for the new contingency.

(g) Base camp design during this phase will depend heavily on the actions and outcomes from the previous phases. Design will address modifications to the existing base camps necessary to facilitate closure or transfer to the host nation. These design decisions will be guided and constrained by prior phase planning, design, construction, operations, and management decisions.

(h) Other design considerations will address waste management issues through mitigation, remediation, transfer, or disposal. The approach selected will depend on host nation agreements and contractual requirements.

(i) Design will also address base camps redeployment operational needs for the JFC as redeployment actions begin. Along with closure and transfer actions, there may be further base consolidations and mission changes to facilitate the redeployment of the joint forces. As in Phase 5, design must take into account the possibility of extended duration of the mission to accomplish the redeployment in an orderly and efficient manner.

(j) New or temporary designs for base camps whose mission will be to solely facilitate redeployment should be designed with ease of construction and deconstruction in mind. Operational efficiencies and sustainability for these camps may be sacrificed in exchange for reduced construction costs, time efficiencies, and systems available to meet the short-term needs and improved operational effectiveness. (This decision must be consciously made-doing this may result in significantly higher operating and sustaining costs.)

(3) Base camp construction and deconstruction contribution to phase 5.

(a) During phase 5, construction and deconstruction actions will most likely be the last actions performed at any given base camp. Deconstruction actions not only include the removal or decommissioning of structures, systems, and facilities, but also the management of the associated waste due to those activities and any actions that have yet to be addressed associated with the former base camp operations. Deconstruction actions assure that the base camp is returned to a state agreeable to both the JFC and the host nation, whether that includes transfer of facilities or reduction to preoccupancy conditions.

(b) Like the prior phases of seize the initiative, dominate, and stabilize, construction and deconstruction will require readily available construction equipment and personnel. As the base camps are downsized, consolidated, relocated, built, or deconstructed, the ease of the redeployment operations will be dependent on the base camp's ability to meet the needs of the redeploying forces.

(c) Construction and deconstruction methods and materials should be based on the planning and designs for the final disposition of the base camp(s). Any new or temporary camps built for the expressed intent to ease redeployment should be constructed to facilitate easy deconstruction when their redeployment use has been met.

(d) Construction actions during this phase could be accomplished by any combination of military, expatriate contractors, or host nation contractors. It will most likely be more heavily weighted towards a combination of expatriate and host nation contractors.

(e) During this stage, the U.S. Army will address environmental issues associated with its utilization of the base camp. The critical documentation completed in earlier phases will facilitate a smooth transfer of the real property.

(4) Base camp operations and management contribution to phase 5.

(a) Base camp operations will see gradual reduction in services provided as the camp transitions from a force projection platform in the theater of operations to one associated with providing the intermediate requirements to support redeployment. Protection and life support actions will remain the same. Operations associated with refit, resupply, and reconstituting the forces will transition into those complementing the redeployment actions.

(b) During the base camp operations in Phase 5, transfer of operations may also occur between either JFC or the supporting commands with OGA, IGO, or NGO tenants. This could result in different services required and different operating processes.

(c) In all likelihood supporting combatant commands will take over operations of base camps from the JFC during Phase 5, as the JFC prepares for redeployment actions. The supporting combatant commands will be responsible for sponsorship of en route basing or in-transit staging areas, or providing sustainment from theater stocks.

(d) The assuming command elements for the base camps will require the same skill sets as the former commands, plus those requisite to facilitate the redeployment actions.

(e) As the last of the military forces are removed from theater, the military components of the base camp management will eventually all have been redeployed. In most instances, a skeleton crew of operational management staff will remain behind to facilitate any remaining closure or property transfer actions. In rare instances, the camps may be closed but remain in a warm shut down condition in anticipation of some future use. In these cases, the staffs may be a combination of military and civilians (DOD or contractors).

#### (5) Summary of phase 5.

(a) This phase is where the JFC transitions operations to civil authority. This can be a short duration action or could be prolonged, depending on the results of the phase 4. It is quite possible that operationally the base camp will fluctuate back and forth between operations in phase 4 and phase 5. It is also possible that bases in different geographical areas within a given theater of operations may be operating simultaneously in phase 4 and phase 5 as stability may be attained quicker in some geographic areas than in others.

(b) Planning actions will focus around projected end state actions. Planning will start to address the redeployment of the operational forces.

(c) Construction and deconstruction actions will focus on transfer of property issues, defining construction standards and specifications, as well as the deconstruction of the base camps.

(d) It is during this phase that the performance of all requisite surveys and archival information are the most critical. All of the EBS, OEHSA, engineering and infrastructure reconnaissance, master planning, and similar documentation will be important to final disposition of the real property.

(e) Facilities and structures that remain in place will reflect on the overall mission. The host nation may request to take ownership of structures or wish them demolished and the site returned to its pre-base camp state.

(f) Redeployment actions will necessitate that the last Soldiers, civilians, and contractors in the theater of operations will be associated with the operations, management, and

ultimate deconstruction and decommissioning of base camps. Any materials not being transferred will be disposed of properly.

(g) There is also the possibility that the property transfer will occur not with the host nation, but to another U.S. governmental agency, coalition partner, allied, or NGO. The necessary documentation authenticating prior and existing conditions as well as any changes made will need to be available to facilitate the property transfer.

(h) In any case, base camp operations will see a gradual reduction in services provided as the camp transitions from the force projection platform to one associated with providing the intermediate requirements to support redeployment. Protection and life support actions will remain the same but other support services could diminish or cease.

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## **Chapter 5**

### **Required Capabilities**

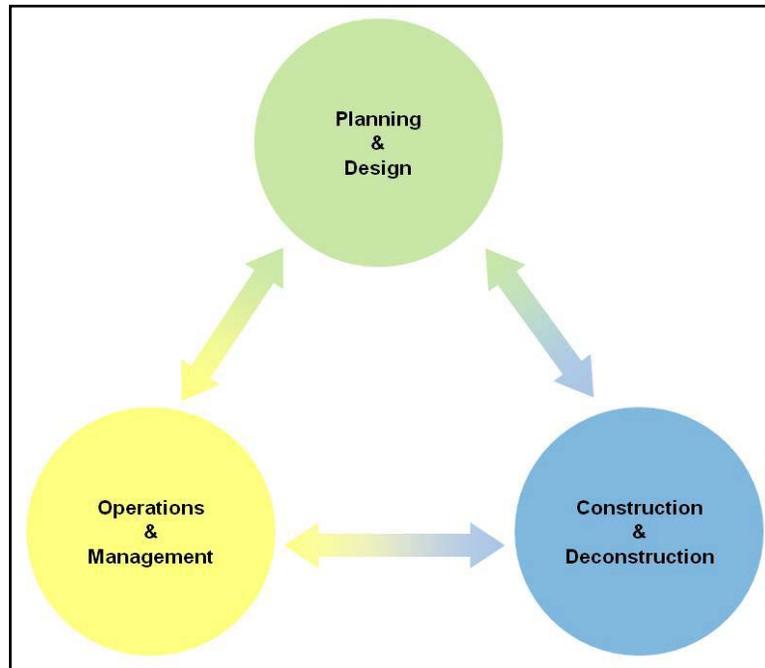
#### **5-1. Overarching Capability Statement**

a. Commanders at all levels of operations require the capability to establish base camps in a JIIM environment during FSO for power projection. Base camps allow the operational mission to develop fully in the most effective, efficient, and sustainable manner while enabling force projection and augmentation of the commander's mission assets.

(1) The overarching capability requires the ability for the planning and design, construction and deconstruction, and operations and management of base camps in the most effective and efficient manner.

(a) Planning, design, and construction requires specific, prioritized decision criteria for site selection and how the real estate and existing buildings are actually bought, leased, and acquired.

(b) These capabilities must be approached by recognizing their interdependence in order to provide the commander force multiplying effects. See figure 5-1 for the interdependence model.



**Figure 5-1. Interdependence Model**

(2) The force multiplying effects are apparent through the following.

(a) Reduced supply line susceptibility from threat forces by minimizing logistics requirements (such as less fuel, water shipments) while maintaining the same level of operational capabilities and readiness.

(b) Increased flexibility in base camp operations through modular, scalable, sustainable, and adaptable designs. This may include construction of infrastructure considered oversized by conventional wisdom to allow for expansion or more adaptability.

(c) Decreased construction and deconstruction requirements (time, material, equipment, personnel, and cost) through improved, standardized, adaptable designs and using existing facilities where possible.

(d) Improved operations (energy, water, and waste management) requiring less Soldier, civilian, or contractor oversight and support.

b. The future Modular Force requires the ability to establish base camps to allow power projection in a JIIM environment. The base camp is a safe haven for the deployed force. Measures to protect the force are maximized; the abilities to resupply, reconstitute, and refit the force are enabled; and MWR activities are provided with the intent of increasing the overall effectiveness of the deployed force.

c. Designation of a single Army proponent for base camps will facilitate coordination between command and staff elements and enable a cooperative approach across numerous organizations and programs. Without a recognized proponent, component systems will continue

to be developed independently, and the ad hoc nature of base camp planning and design will continue. Additionally, the force multiplying benefits of a coordinated planned, designed, constructed, operated and managed system for the commander will be lost.

## **5-2. Planning and Design Capability**

a. Commanders at all levels require the capability for rapid, adaptive, and continuous analysis and planning of the life cycle of base camp operations in a JIIM environment throughout FSO. Analysis and planning should incorporate designs that allow for rapid deployability, incorporate modularity, sustainability, and scalability. As appropriate, incorporate a technical review and analysis process by subject matter experts to validate the planning and design concept and identify technical issues and concerns. Many times the available footprint of camp facilities will not change throughout the life cycle of the camp. For example, the footprint of the initial housing (tent) is the same as the footprint for the temporary (such as containerized housing units, relocatable buildings, or concrete masonry unit) housing for the same number of people.

b. Using this holistic approach provides improved effectiveness of essential services and protection measures, while minimizing logistics requirements. This enables the commander to utilize his mission assets in the most effective, efficient, and sustainable manner.

c. Planning should maintain flexibility in designs, scalability, sustainability, and adaptability to support surges, emergency civil support operations, friendly transient populations or other unforeseen actions that could impact the mission of the base camp. Planners should always consider alternative courses of action and plan accordingly in order to maximize the adaptability and flexibility of base camp operations.

d. Those individuals planning base camps need to be linked with base camp operations and management leadership to ensure operational needs are being met by the base camps being planned, designed, and constructed. This optimizes planning as part of the operations, rather than waiting for post mission after action reports.

e. Planning should reflect the commander's need to accurately set expectations throughout the base camp lifecycle. Expectations must be set regarding quality of life, sustainment, relief in place, transfer of authority processes, coalition partner support, contractor utilization and logistics support, OGA support, NGO support, media, electromagnetic spectrum operations, electromagnetic environment considerations, host nation support and ownership, as well as ultimate disposition of the property upon mission completion. In the absence of detailed guidance for planning, generic scales and standards should be identified and developed for the Army.

f. The lack of codified DOD or DA guidance has caused organizations subordinate organizations, such as CENTCOM and U.S. Forces, Korea to develop their own guiding documents and principles. Examples are CENTCOM Regulation 415-1 and U.S. Forces, Korea Pamphlet 415-1.

g. Mission planning should incorporate base camp operations planning at the earliest possible opportunity, to include wargaming and operational training. This will allow and encourage the development of the capabilities to analyze second and third order effects to the three focus areas of planning and design, construction and deconstruction, and operations and management of base camps on the operational mission, which in turn, increases overall mission planning effectiveness.

h. Those planning (as well as operators and managers of) base camps should analyze, assess, and evaluate operational conditions in both real and virtual environments. An automated planning and design decision tool similar to a “SimCity-like” simulator. A modified Theater Construction Management System (TCMS) using adaptable designs of existing facilities, could allow the planner to develop and assess scenarios associated with base camp planning and design. The TCMS would utilize design requirements and incorporate costing parameters, construction and deconstruction, and operations and management by varying parameters associated with the operational environment, resource and sustainment requirements, resource consumption, component system relationships, energy management, and waste management.

i. Design of the decision modeling tool needs to be based upon data available. Data obtained from existing base camp operations should be thoroughly reviewed and analyzed. Conclusions drawn for model design need to be backed by mathematically rigorous analysis to ensure valid results are obtained from the model. With such a tool, planners, as well as designers, operators, and managers, could rapidly assess possible current and future situations to provide proactive operational control and timely alternative situational analysis while deployed, or simulate operational responses as part of their training programs.

j. Those planning base camps need the ability to over design modular base camps to ensure agile, effective, and efficient operations between facilities within the camp. The intent of proper design is to sufficiently address expansions, surges, and transitions. Done correctly most of the excavating for a utility expansion would not require redundant excavations for planned possible expansions, growth or transitions. The design capability should result in base camps that are modular, flexible, sustainable, scalable, and adaptable while providing the requisite levels of protection and mission support. Such designs will provide the means for accomplishing base camp operations while managing resources and minimizing resource consumption by leveraging current and future technologies, effective and efficient power management, waste management, and environmental management. These designs should identify, analyze, and mitigate any second and third order effects associated with the component systems or their combined effects on base camp operations, such as the false economies of under-sizing or right-sizing utility runs.

k. A holistic approach to base camps must be developed in a coordinated effort amongst numerous program managers and proponents. This requires the capability to perform the testing and analysis of component systems to understand the systems’ compatibilities as well as adverse effects they may have on one another or on other systems within base camps.

l. Development of standardized, yet adaptable designs should be based on maximizing the synergies of systems and not just the combination of component parts. This will require that

planners, designers, builders, operators, and managers communicate throughout the life span of the base camp.

m. The standardized designs should be available in both metric and English units. The design systems need to be able to design in either system or convert readily from one to the other (TCMS needs to do both). This will facilitate both reduced waste during construction phase as well as better coordination of related construction activities in a JIIM environment.

n. Base camp designers must be able to provide those involved in construction and deconstruction detailed, comprehensive plans and blueprint(s) to ensure effective and efficient construction and deconstruction. Plans and blueprints must include bills of materials, cost estimates, estimate of required resources (time, personnel, material, and equipment), generic construction schedules, as well as the inclusion of expected protection measures (as part of the standard design). The design of component systems (life support areas, MWR facilities, dining facilities (DFAC), storage areas, security systems, communications, utilities, and others) must take into account their impact on the other systems within the base camp. Power demands, water demands, waste generation, and personnel requirements (which all add additional resource and logistics requirements) need to be understood and taken into account as part of the planning and design processes to ensure optimized use of limited resources.

### **5-3. Construction and Deconstruction Capability**

a. Commanders at all levels require the capability to rapidly establish, maintain, modify, and close-out base camp operations in a JIIM environment throughout the full spectrum of operations. This will require specialized equipment, personnel, plans, designs, procedures, and materials.

b. The future base camp construction leadership requires personnel available and trained to construct and/or retrofit to the standards established for a JIIM environment. Qualifications for personnel conducting construction and deconstruction in this environment will need to be established to ensure that the right personnel are building the base camps. These individuals will require the capability to assess construction materials to assure they are useable and appropriate for proposed designs while meeting mission requirements and to perform quality assurance and quality control functions. Base camp constructors need the ability to assess existing facilities in order to facilitate building a camp to take advantage of existing infrastructure wherever possible. The constructors require the capability to construct and/or retrofit to established standards with existing equipment and tools.

(1) Universal construction standards that interface seamlessly into any possible construction environment are needed to facilitate the capability to provide appropriate material and/or services in the correct dimensions and specifications (for example, appropriate power requirements (110 versus 220 volt power)). This will be especially critical in a JIIM environment to facilitate logistics requirements during base camp construction and maximize utilization and optimization of facilities with sister services, coalition partners, allies, and the host nation.

(2) The base camp construction teams require the ability to utilize modular construction components to provide the necessary scalability, adaptability, and flexibility for operational support. Modular component system capabilities, such as or similar to the current force provider and expeditionary life support system, must be available for base camp utility systems (energy, water, waste), MWR, DFAC, maintenance facilities, warehousing, and administrative facilities.

(3) Construction capabilities and elements that promote sustainability include being modular (plug and play), scalable (function and footprint), interoperable. Capabilities also include the use of adaptable and flexible designs, use of energy efficient design and systems, and the use, whenever possible, of local building materials. Projects must be built according to a master plan with continued monitoring and oversight, identify environmental issues and address them early in the project, and ensure easy transfer and archiving of documents and actions.

c. Construction needs to reflect mission requirements, the operational environment, and availability of materials locally when related component systems, plans, designs and standard operating procedures (SOP) are being implemented. Equipment capabilities necessary for camp construction as well as operations need to reflect the modular component requirements and have the ability to adapt to alternative construction capabilities to reflect the operational situation. Construction equipment requirements and capabilities practical for urban base camps will vary significantly with those associated with rural base camp construction. Construction equipment requirements for urban or rural base camps will also vary depending on the geographic location, whether arctic to equatorial in nature, in a desert or rain forest, located at sea level or a high elevation, in flat or mountainous terrain, dry or wet climate, or any number of combinations.

d. Future modular base camp construction teams require the capability to reference JIIM developed policy guides on equitable standards of construction and deconstruction implementation. This provides a common baseline for construction of all base camps.

e. The capability to expand usage of multi-use construction materials (like multi-use and modular container systems), versatile materials (wood, stone, concrete masonry units, and concrete), regional materials, as well as organic structures (tents, clam shells) should be available for the construction elements. In a JIIM environment, this will provide economy of materials and enhance sustainability during operations. Whatever the material or combinations of materials that are used in a JIIM environment, the joint force requires the capability to remove or replace proprietary elements (demilitarize) as easily as possible to facilitate closure or transfer.

f. Base camp construction units must be capable of interoperability with construction units from other Services, host nations, coalition partners, and allies to gain and maximize efficiencies through interdependencies.

g. A centralized archive for all base camp documentation related to planning and design, construction and deconstruction, and operations and management is necessary to support follow-on actions such as design modifications; scaling actions (up or down); future reuse; or transfer to coalition partners, allies, and the host nation; and for lessons learned. This includes maintaining the appropriate pre-occupancy surveys (engineering and infrastructure reconnaissance, EBS, and environmental health site assessment). While the latter documents are provided as specific

deliverables on their own contracts or command surveys, edited and marked-up “as-built” plans must be specified also as deliverables in the construction contract, and tied to the contractor’s statement of work and payment.

h. Identification of environmental considerations applicable to a JIIM environment will be critical to provide acceptable construction of the base camp and facilitate its eventual closure or transfer as well as having the means to document and thus mitigate any environmental threats that are identified.

#### **5-4. Operations and Management Capability**

a. Base camp commanders in a JIIM environment supporting FSO require the capability and authority to C2 base camp operations, enabling the operational commander(s) and staff to focus on the operational mission with increased flexibility and less distractions.

(1) The future base camp operational staff (both personnel and staff structure) must be flexible, scalable, and tailorable to address changes in mission (such as type, surge, size, support to smaller outposts, and closure actions). To accomplish this, it will be necessary to outline the skill sets, rank structure, functions, and tasks associated with base camp operations and establish the resourcing requirements to provide the requisite personnel to do the mission.

(2) Trained personnel will be required to manage and operate base camps in a JIIM environment. The capability to provide both institutional and mobile onsite operations and management training will be essential to support the mission. Onsite training may be necessary should institutionally trained personnel be unavailable or if augmentation to base camp operations is required.

Note: Currently there are no dedicated or trained personnel to specifically operate and manage base camps. The commander is usually not trained to be a base camp commander; officers and noncommissioned officers are usually not trained to serve on a base camp staff. There is no institutional training program for base camp operations and management. The Installation Management Command’s Garrison Commander’s Course and the U.S. Army Corps of Engineers (USACE) Director of Public Works courses may be the closest to base camp training available. One potential solution to the lack of base camp operation and maintenance training may be to allow senior officers and noncommissioned officers on future assignment to expeditionary base camps to attend the 30 day Garrison Pre-command Course at Fort Belvoir, Virginia.

(a) These personnel could be Soldiers, civilians, or contractors. Base camp operations training should be both virtual and hands-on. Hands-on training should occur with operations mission training whenever possible to replicate actual deployed experience.

(b) Onsite training for tenant organizations and units (U.S. military, civilian, contractors, coalition partners, allies, host nation, OGA, and NGO) will be essential to ensure compliance with doctrine, base camp SOP, and regulations. An enforceable lease or memorandum of agreement may be a solution in holding tenants with their own construction budgets within the approved base camp master plan as outlined by the global defense posture.

(c) Training facilities to support base camp operations and management training will be required to train both tactical and tenant units.

(3) Clear lines of authority and chain of command for base camp operations and management must be established to effectively support base camp operations. This authority should be articulated in policy, doctrinal publications, and leader training.

(4) Standard protocols, doctrine, or guidance for base camp commander assignments and placement, as it pertains to career progression, are required.

(5) Master planning, real property planning, and related oversight actions and documentation are key components to base camp operations and management capability.

(6) To ensure proper base camp operations and management, C2 elements of base camp operations will require total asset and in-transit visibility of organizations, major end items, and supplies for the base camp.

(7) Quality assurance and quality control processes are in place to ensure operations and management standards.

(8) The base camp commander and staff will require administrative capabilities to do the actions outlined below.

(a) Self-evaluate base camp operations to determine those operations that are meeting standards and those that may need improvement.

(b) Identify, analyze, and mitigate any second and third order effects associated with base camp operations to ensure effective and efficient operations.

(c) Conduct reception, accountability, handling, storing, transference, delivery, and retrograde of all classes of supply to distributed locations within the base camp area of operations.

(d) Support field and sustainment maintenance during assembly, replenishment, recovery, repositioning, and reconstitution of forces.

(e) Manage contract support, including LOGCAP contracts and others as needed. Plan and execute contingency contracts and clauses for essential services required during wartime in area of responsibility under the authority of the Federal Acquisition Regulation, Defense Federal Acquisition Regulation, and the Army Federal Acquisition Regulation Supplement. In order to assure the appropriate level of support to base camps of all sizes, contracting language must use consistent and appropriate terminology. Likewise, operational actions that use theater support contracts must use common and appropriate terminology in the development of requisite statements of work or support request.

(f) Archive and retrieve data and information in a standardized fashion to provide lessons learned and continuity for relief in place, and transfer of authority. This capability should be as automated as possible to allow for ease of operation, standardization of data input, and interaction with existing systems that track requirements.

(g) The future Modular Force in a JIIM environment requires communications capabilities between operational commanders and base camp commanders, enabling cohesive operations. Cohesive operations and networked LOC from the individual base camps to theater level operations cells allow both reach and reachback to assure Soldier quality of life, essential services, and protection measures, while minimizing resource requirements.

(9) The base camp commander and staff require the ability to communicate (to include secure communications) with organizations outside of theater, operating forces, JIIM partners, contractors, OGA and NGO, and the host nation. This will allow the base camp commander and staff to update the common operating picture; be proactive in addressing mission changes that impact the base camp operations; better support forces within the base camp's area of interest; and through reachback, be kept aware of the most effective processes and systems associated with base camp operations. To assure the appropriate level of support to base camps of all sizes, contracting language must use consistent and appropriate terminology. Operational actions that use theater support contracts must use common appropriate terminology in the development of requisite statements of work or support requests. The base camp operations C2 elements should be aware and actively participant in the common operating picture to support operations in the area.

(10) The base camp leadership and staff require liaison capability, and authority for coordination with local populace and/or local government (emergency and routine services, host nation utilities, and information engagement to include public affairs and information operations) in a JIIM environment to maintain proper local and civil relationships and optimize sustainability with respect to consumable resources (energy and water) as well as addressing waste management issues that will be handled locally. This task supports providing city management and infrastructure expertise to the host nation under the Army Action Plan for Stability Operations.

b. The future Modular Force in a JIIM environment requires established standards for services and quality of life to ensure effective base camp operations support tactical mission accomplishment. These standards need to apply across the Services and be applicable to coalition partners and allies, as well as supported OGA and NGO. The capability to evaluate base camps with established standards needs to be developed to ensure compliance with policies, regulations, and command guidance.

#### **5-5. Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) Considerations**

a. Proponency in the Army for some of the designated DOTMLPF areas related to base camps is established by Army Regulation (AR) 5-22. The focus of AR 5-22 is on force modernization and it assigns DOTMLPF functional process responsibilities at Headquarters, DA

level and force modernization responsibilities to process owners by particular functions or branch. Base Camps as a specified function, have no overarching proponent (Joint or Army) designated for the oversight or synchronization of all areas related to base camps. Current designated areas related to base camps with force modernization proponenty and responsibilities assigned include C2, force management, military construction, protection, and sustainment.

b. Doctrine. There is no comprehensive joint or Army policy or doctrine for the overall life cycle development of base camps. There are many cases where base camps are addressed in doctrine, operating concepts, policies, and regulations. However, no single overarching doctrinal product exists that discusses base camp operations or that tries to link the many related areas together cohesively. Additionally, there are conflicts within joint and Service doctrinal products regarding basic and common terminology, synchronized standards, and C2. Existing doctrine for the various functional areas for base camps needs to be consolidated and better integrated.

(1) There are several disparate guidance documents (policies) that have been developed, but doctrine must be established to coordinate the numerous organizations currently addressing systems comprising base camps. Base camps should be viewed with a systems approach. This doctrine must complement institutionalized training that addresses base camp planning and design, construction and deconstruction, and operations and management. The doctrine should also reflect the relationship of the base camp to the overall mission.

(2) Joint, multinational, multi-Service, and Army doctrine should be developed for base camp planning and design, construction and deconstruction, and operations and management to reflect operational requirements. Joint operations, Service interdependence, ally, coalition, and OGA and NGO interoperability must also be considered as well as appropriate statutory, regulatory, and fiscal requirements.

(3) Doctrine associated with base camp operations should be developed based on a standardized model that has sufficient flexibility to apply to the widest range of potential deployment conditions. Nonstandard design issues should be anticipated and solutions provided as add-ons or modifications to the standard design. This includes development and dissemination of training, techniques, and procedures.

(4) Doctrine must also address collection, validation, archiving, and dissemination of lessons learned and plans (preconstruction and 'as built') associated with the planning and design, construction and deconstruction, and operations and management of base camps. The information must be organized in a readily available, retrievable, and useable manner.

c. Organization. There is no single established organization (proponent) to address DOTMLPF solutions associated with the overall life cycle development of base camps. Also, there is no readily deployable organization designed to operate and manage base camps.

(1) The establishment of a joint and Army base camp oversight proponent is needed.

(2) The need for a base camp operations and management organization, and its requisite requirements for contingency base camps during FSO, should be evaluated.

d. Training. There is no comprehensive TRADOC established training to address the overall life cycle development of base camps. Existing training has been developed in an ad hoc manner by organizations such as USACE, or other services. All aspects of mission and base camp administration capabilities need to be included in training Soldiers required to perform base camp related activities during deployment.

(1) Military occupational specialty (MOS) nonspecific institutionalized training for base camp operations and management should be developed and implemented. These personnel could be assigned to garrison slots for tours of varying lengths, from short developmental, to long utilization as a means to facilitate operational experiences in base camp management.

(2) Training for specific career paths MOSs, functional area, or additional skill identifier (focused as appropriate) to plan and design, construct and deconstruct, and potentially operate and manage base camps should be developed and implemented.

(3) Develop and/or reemphasize the general, technical, and professional engineer, planner, and managerial skills requisite for support of base camps and city management.

(4) Base operations and management training should be included as part of operational training at military training centers.

(5) Training simulations for base camp operations and management should be developed and implemented with contain the ability to be integrated into existing simulations.

e. Materiel. Materiel solutions need to be coordinated amongst the various organizations that control component systems of base camps, assuring development of optimal designs that will provide the most effective and efficient contingency base camp system.

(1) A means to coordinate the development and integration of individual base camp sub-systems into the holistic base camp system should be evaluated, developed, and implemented.

(2) Materiel solutions should be evaluated as a part of the whole base camp and not as a niche requirement of a standalone system.

(3) Inclusion of commercial off-the-shelf and government off-the-shelf solutions into the base camp system design and utilization should be expedited to take advantage of existing, proven technologies.

(4) The Army needs Armywide solutions and systems, rather than what it has today: materials that vary from camp to camp, theater to theater, and vendor to vendor.

f. Leadership and education. Army leaders require a baseline level of education on base camp planning and design, construction and deconstruction, and operations and management. This includes training leaders, at all levels, on the role of base camps in the operational mission.

(1) Simulations, as well as on-site, leadership training should be developed and implemented. Communities of practice such as the Battle Command Knowledge System which provides online knowledge to enhance battle command and professional education.

(2) Training on U.S. fiscal law that governs construction, contract writing, contract management, and deconstruction and closure should be developed and provided to leaders tasked with those missions during contingency operations.

g. Personnel. The Army needs to develop qualified personnel, Soldiers, and civilians that can support base camp planning and design, construction and deconstruction, and operations and management.

(1) The development of a base camp career progression program that incorporates planning and design, construction and deconstruction, and operations and management of base camps should be evaluated. This may be addressed as additional skill identifiers or MOS(s), and may include aspects of continued professional development. These personnel could potentially be seconded to the State Department to run consular facilities for foreign area experience, if actual garrison slots are limited or unavailable.

(2) The performance requirements for contractors (availability, functionality, oversight management) need to be developed and implemented. Soldiers and civilians must be trained in contract management (includes contractor oversight) in contingency operations as they relate to base camps.

h. Facilities. Development of fully functioning base camp instructional and testing facilities for personnel training and materiel testing will allow the Army to focus on the ability to “train as we fight.” All aspects of mission and base camp administration capabilities need to be included in training Soldiers required to perform base camp related activities during deployment.

(1) A facility should be established at a site where instruction, testing, and development can be continuously vetted, updated, and implemented.

(2) Facilities at operational training centers (such as the National Training Center, Fort Irwin, California) should be available for predeployment training of personnel designated to be responsible for the planning and design, construction and deconstruction, and operation and management of base camps.

(3) All training facility requirements should be coordinated with the ACSIM to ensure proper planning and resourcing.

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## **Chapter 6**

### **Implications and Questions for Experimentation**

#### **6-1. War Games, Studies, and Experiments**

a. It is difficult to find any war games that deal specifically with the planning and design, construction and deconstruction, or operations and management of base camps either individually or collectively as part of a larger exercise.

(1) The current MLS Module 1 identifies end states for the 10<sup>th</sup> Army, IX Corps, and 7<sup>th</sup> Division that include conducting stability operations and supporting international organizations to assist the host nation. The IX Corps end state also identifies securing the divisions area of operations to allow the host nation to assume civil control as well as provide secure LOC for the overall operations. The 7<sup>th</sup> Division has the requirements to establish and control the former international boundaries. All these operations, including the implied logistical support to the overall mission, will require some level of static base camps. In most war games, simulations, and exercises, the base camp aspect of the mission is generally not considered so there is time to focus on the actual war fighting piece of the mission. The number, disposition, size, and expected duration of these base camps have not been identified in the MLS Module 1. This is indicative of the gap that exists related to base camps regarding their incorporation in the planning process.

(2) USACE periodically conducts a computer assisted exercise titled Castle Quest. In 2006 the Castle Quest exercise scenario involved a response to the border between Ecuador and Peru to provide humanitarian assistance and stability operations in the wake of a major earthquake. The scenario called for the deployment of two brigades to affect both humanitarian assistance and to provide security for those forces and in support of the host nations due to some level of insurgent activity.

(a) As the operational planning progressed, it was assumed that both Ecuador and Peru would have a brigade within their affected areas. Operational planning assumed that all restoration and humanitarian assistance actions would be handled from these two brigade size base camps.

(b) During the process of placing the brigades, it became readily apparent that there was insufficient contiguous and continuous open space in the area of operations to establish a brigade size camp. Further analysis indicated that the largest camps that could be established were battalion size or smaller with less available space than needed. Also, no C2 had been established for running the base camps. LOGCAP was assumed to be available for operations, but no oversight elements had been established.

(c) The camps were dispersed, causing security, equipment, logistics support, and personnel requirements to increase. Additionally the TCMS designs did not account for the support requirements for the necessary DOD civilians and contractors that are required to support current deploying forces.

(3) The lack of inclusion of base camp considerations into war gaming and simulation exercises further indicates that the base camp planning and design, construction and deconstruction, and operations and management processes are not well established, understood, or maintained.

b. The Deputy Assistant Secretary of the Army for ESOH has initiated several studies to address environmental issues that also have identified issues associated with base camps.

(1) Site surveys have occurred in Iraq, Afghanistan, Kuwait, and the Balkans. A consistent theme of issues has been observed.

(a) Base camps need systems or processes that are ready for implementation now, while continuing to focus and develop future capabilities and requirements.

(b) There is a need to employ a systems approach to the operational analysis of base camps; at present there are too many organizations with varying interests in base camps with no coordinated oversight or control. The Army requires a single specifically designated proponent for base camps.

(c) The majority of military engineers no longer have the practical skill sets to act as construction engineers in the numbers required. The emphasis on combat engineering and mobility operations has left general engineering and construction skills lagging. Base camps need well trained construction managers and construction skilled engineers.

(d) Soldiers are not trained to manage base camps. There is no available base camp management training. (The Installation Management Command's Garrison Commander's Course, and the USACE Director of Public Works courses may be the closest thing if an initial template may be considered.)

(e) There appears to be no definitive policy or guidance as to what is required when a base camp evolves from temporary to enduring. Even the current terms are misleading when a temporary base camp can exist for three or more years. Once labeled as temporary, little funding is typically allocated to them for infrastructure improvements. This can be mitigated by planning and designing the infrastructure capacity for the end state and surges to allow for expansion of facilities when the utilities are extended. Base camps planning needs to be improved. In most deployment cases, master plans are not developed until several years after the base camp was initially established.

(f) Master planning must account for extended life use, standard design, employment of standard systems, SOP (that account for differing locations and missions); templates for expected contract services and requirements, and staffing requirements (including appropriate training for those staffs).

(g) Funding mechanisms for projects are not well understood. The fiscal law's accumulated complexity was designed to address possible abuse; but has succeeded to the point of hindering operational support, an unintended consequence. The current funding limits need to

be reevaluated based on program costs at contingency locations; \$750,000 (at the local commander level) does not provide enough for construction requirements in a contingency operation. Service Secretaries can approve up to \$1.5 million. To reduce costs the Army should scrutinize contract clauses and the type of contract. Lack of resources (funding, manpower, and equipment) impact the base camps ability to meet their mission.

(h) Standardized policies that are established for the Army or joint services should be developed that are applicable regardless of where a unit is deployed to. Having separate and different policies or operational orders regarding the operations and management of base camps is counter intuitive. Having to learn new rules of operations every time a unit deploys is not conducive to the continuity of operations. The policy should be the same everywhere, with flexibility to administer it as required by the operational mission or level of conflict. A commonly applied policy would allow commanders to train to the standard and realize that the standard will be applied regardless of where they are stationed or deployed. The present system in place allows for too much confusion and lack of accountability and enforcement.

(i) Currently, environmental requirements are not part of base camp funding, and separate environmental program funding does not exist for mission and operational environmental requirements. Funds to address environmental issues, such as spills of hazardous materials, or environmental requirements necessary for camp closures, must be funded with contingency and mission operational funds. Such mission operational funds are the same as those used to support normal base camp operations; thus, base camp operational funds are reduced whenever an environmental issue requires funding. However, environmental requirements associated with base camp operations are an integral part of the mission and must be planned for and funded similar to other requirements with mission operational funds.

(2) A USACE sustainable FSO gap analysis found that the Army base camp mission is being accomplished by numerous systems. Each system plays its own critical role as part of the mission or in support of the mission. These systems include protection, sensory, logistics, habitation, water, waste management, energy management, as well as combat, reconstruction, and other primary mission activities. Optimally, each of these systems should be managed as part of an integrated whole; a holistic system of systems. This holistic approach was identified as being critical to reaching an optimal outcome as each system is dependent on the other systems. Resources for one system usually come at the expense of resources for another system. System resources were identified to include three main areas: power and energy; water and wastewater; and operations and facilities.

(a) Site planning may be the most critical issue in maximizing base camp sustainability as it affects all subsequent options and decisions. Understanding the overall site planning requirements will help planners allocate scarce land and resources so that the base camp can grow and expand efficiently in the future.

(b) Detailed planning is critical since a base camp operates in an environment requiring frequent operational changes and high turnover of personnel.

(c) A complete record of the history of a base camp would provide for better informed decisions, improved operation, and better support to the mission.

(d) Base camp master plans should include consideration for expansion with the potential expansions planned, scoped, and ready to execute. For example, using oversized pipes with the most compact initial layout permitted by required force protection density, allowing for the expansion efforts to push to the ends of existing run, while minimizing the impact of excavating in occupied areas for the expansion. The utilities for the plan should also be designed to accommodate modular-incremental expansion and contraction all the way down to warm or cold base status near the end of the base camp life cycle. This should include leaving utility runs in place after any surge periods, capped and ready for the next use, until the camp is deconstructed.

(e) All training needs to be focused to support “train as we fight.” All aspects of mission and non-mission capabilities need to be included in the training of Soldiers who will be required to perform those activities during deployment. If Soldiers are going to be responsible for the planning and design, construction and deconstruction, or operations and management of base camps, to include contractor and/or civilian oversight, their training should include these tasks as well.

(f) It is essential that the Army consider the local conditions and the environment within the base camp construction process. Applying global decisions to local conditions is certain to result in a sub-optimal outcome for the mission and overall sustainability more generally.

## **6-2. Hypothesis**

a. Over the past two decades, the U.S. forces’ organic base camp capabilities have diminished. Army forces have evolved to rely heavily on cost prohibitive contract support, insufficient or nonexistent infrastructure, lack of trained or experienced personnel, and individual stove-piped systems. This trend has contributed to operational gaps that distract commanders from their primary mission; inefficient operations of base camps, as well as security, safety, environmental and health risks for the current forces.

b. To meet the needs of the future Modular Force, base camps must evolve to provide rapidly deployable, modular, scalable, and mission-tailored life support packages with a minimal logistical footprint (systems similar to Force Provider, which includes laundry, bath, billeting, kitchen, and water purification for up to 600 Soldiers and expeditionary life support systems). Base camp planning should be integrated into the mission planning at all levels. The designs should reduce operational cost and manpower requirements thus improving effectiveness while providing the future Modular Force a secure, safe, and healthy environment necessary to project and reconstitute during FSO. Operations and overall management of base camps should be performed in such a manner to allow commanders to focus on their primary mission.

## 6-2. Institutional Control Questions

- a. Which Army organization should be named proponent for base camps?
- b. Should the Army be named as the joint lead agency for base camps?
- c. What parameters and metrics (scales and standards) distinguish a base camp from an assembly area or bivouac? When does this transition occur? Is it based on time, level of construction, security, and/or services?
- d. What are the boundaries between a base camp and an associated and colocated airfield? What are the interactions between the base camp and airfield and how will the lead agency for base camps impact, coordinate, or synchronize with the lead agent for airfields? What coordination(s) are required for base camps with helicopter medical evacuation capability? Is it necessary to coordinate and synchronize medical evacuation operations with associated and colocated airfields as well?
- e. What types of information need to be archived regarding base camp construction and operations? What types of information, particularly in the focus areas of planning and design, construction and deconstruction, and operations and management needs to be retained for use in analytical evaluations to determine effectiveness. Who should be responsible for archiving and maintaining the archived files?
- f. What, if any, organic capability (equipment, personnel, training) should a corps or division have to plan and design, construct and deconstruct, and operate and manage its own base camps?
- g. What, if any, organic capability (equipment, personnel, training) should a BCT have to plan and design, construct and deconstruct, and operate and manage its own base camps?
- h. What, if any, organic capability (equipment, personnel, training) should the multifunctional support brigades have to plan and design, construct and deconstruct, and operate and manage their own base camps?
- i. What, if any, organic capability (equipment, personnel, training) should a battalion have to plan and design, construct and deconstruct, and operate and manage its own base camps?
- j. What, if any, organic capability (equipment, personnel, training) should a company-size organization have to plan and design, construct and deconstruct, and operate and manage its own base camps?
- k. Should the Army establish organizations with the primary mission to plan and design, construct and deconstruct, or operate and manage base camps?
- l. How can power management and power conservation be fully and efficiently integrated into future contingency operations for use in expanding missions, while reducing logistical

requirements, reducing Soldier risk, improving Soldier quality of life, enhancing the mission, and ultimately reducing host nation burden upon redeployment?

m. How can water management and conservation (to include supply, treatment, storage, waste and reuse) meet the requirements for use in expanding missions all the while reducing the overall logistical requirements, reducing Soldier risk, improving Soldier quality of life, enhancing the mission, and ultimately reducing host nation burden upon redeployment?

n. How can waste management, recycling, and conservation (to include waste disposal, storage, treatment, and reuse) meet the requirements for use in expanding missions all the while reducing the overall logistical requirements, reducing Soldier risk, improving Soldier quality of life, enhancing the mission, and ultimately reducing host nation burden upon redeployment?

o. How can resource management and resource conservation, especially in the areas of planning and design, construction and deconstruction, and operation and management (to include maintenance and de-commissioning of a site), reduce the logistical requirements, reduce Soldier risk, improve Soldier quality of life, enhance the mission, and ultimately reduce the host nation burden?

p. Should the Army establish a new MOS, functional area, or additional skill identifier to plan and design, construct and deconstruct, and operate and manage base camp operations or missions?

### **6-3. Planning and Design Questions**

a. At what echelon should operational base camp master planning and life cycle analysis occur?

b. What are the best joint and multinational planning and design standards for base camps?

c. What are the best procedures, protocols, and processes for the development, modification, archiving, and assurance of continuity for individual base camp master plans?

d. What are the common system components that must be included in the planning and design of a base camp (tactical operations center, protection measures and systems, fire prevention and protection systems, communications, life support areas, DFAC, solid waste management areas, sanitary waste management, hazardous waste management, administration, medical, MWR, Army and Air Force Exchange Service, OGA, and NGO)?

e. Who locates base camps?

f. Who assigns units to camps as new units enter into a theater?

g. What impact on the proposed base camps locations does the terrain and weather have (for example locating a base camp within a seasonal flood plain)?

h. What impact does the geographical area's environment (such as tropical, arctic) have on the proposed base camps locations?

i. If base camp locations are impacted by terrain and weather factors (or by specific geographical environment factors), who makes the final decision on location?

#### **6-4. Construction and Deconstruction Questions**

a. Who reviews the decisions relating to base camp(s) locations?

b. What are the best joint and multinational construction and deconstruction standards for base camps?

c. Who should develop the construction and deconstruction standards and assure they are reviewed, revised and maintained as required?

d. Who is responsible for quality assurance and quality control of construction?

#### **6-5. Operations and Management Questions**

a. What is the best way to man and equip those base camp functions and/or systems for which the Army has no established organization (such as, wastewater treatment facility, solid waste disposal, hazardous waste treatment and disposal) in contingency operations?

b. What is the best way to evaluate base camp operations/management and to achieve and maintain base camp optimal effectiveness?

c. What is the optimal organization or structure to operate and manage a base camp? What is the best staff structure? What MOS are best suited to perform the base camp mission? What additional skill identifier needs to be developed? What officer FAs need to be developed? Is the optimal organization or structure to operate/manage a base camp dependent upon the population of Soldiers, DA civilians, and contractors it is expected to serve? Should more than one size of organization be designed for the mission of base operation and management? Should one standard type of unit be designed specifically for modular augmentation based upon the size of the base to which it will be assigned?

d. What is the best command relationship (organic, attached, administrative control, or operational control) between the base camp commander and the tenant units and organizations?

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## **Chapter 7**

### **Risks and Mitigations**

#### **7-1. Identified Capabilities**

- a. Provide commanders the ability to project combat power from base camps in support of FSO in the most effective, efficient, and sustainable manner while enabling force protection.
- b. Provide commanders at all levels rapid, adaptive, and continuous analysis and planning of the life cycle of base camp operations in a JIIM environment throughout FSO which incorporate designs that allow rapid deployability, modularity, and scalability using a holistic approach to provide improved effectiveness of essential services and protection measures, while reducing the logistic footprint and operating in the most effective, efficient, and sustainable manner.
- c. Provide joint and Army commanders at all levels with equipment, personnel, plans, designs, procedures, and materials to rapidly establish, maintain, modify, and close out base camp operations in a JIIM environment throughout the full spectrum of operations.
- d. Provide joint and Army commanders, in a JIIM environment supporting FSO, C2 of base camp operations and networked LOC from the individual base camps to theater level while allowing reachback to CONUS support agencies to assure Soldier quality of life, essential services, and protection, at the same time minimizing resource requirements to allow the operation commander(s) and staff to focus on the operational mission with increased flexibility.

#### **7-2. Risk: Inability to Develop Applicable Policy, Doctrine, and Standards**

a. Since these capabilities are associated with a JIIM environment, the policy, doctrine, and standards that are developed must reflect the JIIM environment organizations. This presents several potential difficulties including inability to come to consensus, development time, establishing proponent responsibility, authority, and resources to maintain the doctrine and standards, and establishing too strict of a standard and being unable to execute due to lack of flexibility.

b. Mitigation.

(1) Establish and convene periodic JIIM standards review board. Each JIIM organization will provide its own doctrine and standards to implement the JIIM review board recommendations.

(2) Establish joint standards, if no intergovernmental and multinational consensus).

(3) Assign proponent within the U.S. Army to develop DA policy, doctrine, and standards. This will facilitate the development of policy, doctrine, and standards for use by the U.S. Army in participating in the development of joint or JIIM policy, doctrine, and standards. Alternatively, it will provide useful policy, doctrine, and standards for the Army if Service or JIIM consensus cannot be established.

### **7-3. Risk: .Multiuse Construction Material**

a. The ideal is a construction process that utilizes materials that are multifunctional, to allow greater diversity in construction design, application, reuse, and ease in deconstruction. This will require a significant effort to identify and develop these materials, establish a procurement process, develop and implement training, develop and procure new equipment if necessary, and encourage the interoperability of these systems with JIIM partner organizations. This could result in the building of new dependences that are not fully supplied or available. Multi-use materials may not be available for primary use if it has been tasked for some other use. For example, containers that can be disassembled to provide building material (frames, roofing or siding) once used as construction materials they are no longer available as shipping containers if still in use as building materials.

#### b. Mitigation.

(1) Build in redundancy to the system such that different materials can be used for the same thing. Second and third use capabilities should overlap with multiple systems to provide the greatest extent of adaptability and flexibility.

(2) Develop modular and scalable components so that when specific services are no longer required, they can be scaled down and removed to be used elsewhere.

(3) Plan for management of systems' components through the extended life of the camp. Develop an inventory system that tracks needs and uses of reusable materials and encourages creative recycling.

(4) Plan and design for waste management. Use waste material as recoverable energy if it cannot be used in a secondary application.

### **7-4. Risk. Mission Impacts and Additional Requirements**

a. New base camp capabilities must provide cost benefit to the commanders. Capabilities must not decrease or constrict safety and security. New capabilities will provide improvement over current ad hoc methods, augmenting commanders' mission capabilities while minimizing the burden of added administrative or operational overhead.

(1) The enemy has a vote and will seek to take advantage of new, unfamiliar systems.

(2) New proprietary systems provide security and intelligence challenges in contingency operations. If they are disposed of improperly, left behind, or captured, there is the potential for reverse-engineering to find weakness that might be exploited.

#### b. Mitigation.

(1) Leader training emphasis and enforcement of risk management and appropriate controls of equipment uses and disposal. Base camp planning should account for disposal and demilitarization of base camp component systems.

(2) Component systems designs need to function with minimal additional force requirements.

(3) Adaptability and flexibility must be inherent in component system design.

#### **7-5. Risk. Training versus Position**

a. As new base camp capabilities develop, the likelihood will increase that personnel untrained in the new capabilities will be assigned to tasks associated with base camp focus areas of planning and design, construction and deconstruction, and operations and management. In effect, current gaps and shortfalls will perpetuate into future operations. The risk arises in that the training standards will not match the pace of actual actively employed policies or operational practices, and that personnel will not be trained on the most current methods, thus creating a continuous on-the-job training cycle that must be completed before employing these personnel.

#### **b. Mitigation.**

(1) Establish a proponent for base camps whose responsibility is to keep abreast of the most current operational requirements as well as develop and implement DOTMLPF solutions to address them.

(a) Designate staff to keep abreast of current issues to facilitate rapid responses for new system requirements and associated training.

(b) Designate staff to continue to address future concepts to proactively address requirements and DOTMLPF implications.

(2) Designate specific base camp operational organizations, units, and staff responsible for planning and design, construction and deconstruction, and operations and management.

(a) Assure units and staff are trained and the training is maintained to keep them current and effective.

(b) Incorporate redundant training options; assure that operational organizations, units, and/or staff have cross trained and are trained on overlapping cycles.

(c) Identify requisite skills, functions, and ranks. Provide the necessary training and career development incentives to fill those positions and maintain a trained force.

## **Appendix A References**

Army regulations, DA pamphlets, FMs, and DA forms are available at <http://www.usapa.army.mil/>. TRADOC publications and forms are available at <http://www.tradoc.army.mil/publications.htm>. Joint publications available at <http://www.dtic.mil>

### **Section I Required References**

This section contains no entries.

### **Section II Related References**

AR 5-22  
The Army Force Modernization Proponent System.

AR 700-137  
Logistics Civil Augmentation Program.

Battlespace Awareness Joint Functional Concept.

CIO/G6 500 Day Plan. (Available at <http://www.army.mil/ciog6/>.)

Deterrence Operations Joint Operating Concept.

DODD 3000.05  
Military Support for Stability, Security, Transition, and Reconstruction Operations.

DODD 4715.1E  
Environment Safety and Occupational Health.

Department of Defense Instruction (DODI) 6055.06  
DOD Fire and Emergency Services Program.

FM 1  
The United States Army.

FM 1-02  
Operational Terms and Graphics.

FM 3-0  
Operations.

FM 3-34.400  
General Engineering.

FM 6-0

Mission Command: Command and Control of Army Forces.

FM 54-40

Area Support Group.

Focused Logistics Joint Functional Concept.

Force Management Joint Functional Concept.

Force Application Joint Functional Concept.

Homeland Defense and Civil Support Operations Joint Operating Concept.

Irregular Warfare Joint Operating Concept.

Joint Command and Control Joint Functional Concept.

JP 1-02

Department of Defense Dictionary of Military and Associated Terms.

JP 3-0

Joint Operations.

JP 5-0

Joint Operation Planning.

Joint Communications System.

Joint Training Joint Functional Concept.

Major Combat Operations Joint Operating Concept.

Military Support to Stabilization, Security, Transition, and Reconstruction Operations Joint Operating Concept.

National Security Strategy 2006. (Available at <http://www.whitehouse.gov/nsc/nss/2006/>)

National Security Strategy 2002. (Available at <http://www.whitehouse.gov/nsc/nss/2002/index.html>)

National Defense Strategy 2008. (Available at <http://www.defenselink.mil/news/2008%20National%20Defense%20Strategy.pdf>)

National Military Strategy 2004. (Available at <http://www.defenselink.mil/news/Mar2005/d20050318nms.pdf>)

Net-centric Environment Joint Functional Concept.

Net-centric Operational Environment Joint Integrating Concept.

Protection Joint Functional Concept.

The Army Plan. (Available at <http://www.army.mil/aps/07/armyPlan.html>)

The Army Game Plan. (Available at <http://www.army.mil/institution/leaders/gameplan/>)

The Army Strategic Planning Guidance. (Available at <http://www.army.mil/references/>)

TRADOC Pamphlet 525-2-1

The U.S. Army Functional Concept for See 2015-2024.

TRADOC Pamphlet 525-3-0

The U.S. Army in Joint Operations: The Army Future Force Capstone Concept.

TRADOC Pamphlet 525-3-1

The U.S. Army Operating Concept for Operational Maneuver 2015-2024.

TRADOC Pamphlet 525-3-2

The U.S. Army Concept for Tactical Maneuver 2015-2024.

TRADOC Pamphlet 525-3-3

The U.S. Army Functional Concept for Battle Command 2015-2024.

TRADOC Pamphlet 525-3-4

The U.S. Army Functional Concept for Strike 2015-2024.

TRADOC Pamphlet 525-3-5

The U.S. Army Functional Concept for Protect 2015-2024.

TRADOC Pamphlet 525-3-6

The U.S. Army Functional Concept for Move 2015-2024.

TRADOC Pamphlet 525-4-1

The U.S. Army Functional Concept for Sustain 2015-2024.

TRADOC Pamphlet 525-7-4

Concept Capability Plan for Space Operations 2015-2024.

## **Appendix B Related Guidance, Strategies, JCA, and Concepts**

### **B-1. Summary**

This appendix summarizes detailed research that links the base camp concepts to the documents that shape TRADOC Pam 525-7-7 purpose and scope.

### **B-2. Pertinent Strategic Guidance**

a. National Security Strategy. The National Security Strategy acknowledges that the unparalleled strength of the U.S. armed forces, and their forward presence, has maintained the peace in some of the world's most strategically vital regions. However, the threats and enemies confronted have changed, and so must our forces. The presence of American forces overseas is one of the most profound symbols of the U.S. commitments to allies and friends. Through a willingness to use force to defend the U.S. and allies, the U.S. demonstrates its resolve to maintain a balance of power that favors freedom. To contend with uncertainty and to meet the many security challenges, the U.S. will require bases and stations within and beyond Western Europe and Northeast Asia, as well as temporary access arrangements for the long-distance deployment of U.S. forces.

b. National Defense Strategy. As detailed in the National Defense Strategy, the U.S. Army must be prepared to support joint operations in the response to traditional, irregular, catastrophic, and disruptive challenges. The objects of the National Defense Strategy are to secure the U.S. from direct attack, secure strategic access and retain global freedom of action, strengthen alliances and partnerships, and establish favorable security conditions.

c. National Military Strategy. The NMS recognizes that the armed forces must have the capability to swiftly defeat adversaries in overlapping campaigns while preserving the option to expand operations in one of those campaigns to achieve more comprehensive objectives. The U.S. will conduct operations in widely diverse locations – from densely populated urban areas located in littoral regions to remote, inhospitable, and austere locations. Military operations in these complex environments may be dramatically different than the high intensity combat missions for which U.S. forces routinely train. While U.S. armed forces will continue to emphasize precision, speed, lethality, and distributed operations, commanders must expect and plan for the possibility that their operations will produce unintended second and third order effects. Commanders must prepare to operate in regions where pockets of resistance remain and there exists the potential for continued combat operations amidst a large number of noncombatants.

d. DODD 3000.05. This directive establishes stability operations as a core U.S. military mission that the DOD shall be prepared to conduct and support. Stability operations shall be given priority comparable to combat operations and be explicitly addressed and integrated across all DOD activities including DOTMLPF, and planning. Stability operations encompass a wide range of activities where the military instrument of national power is used for purposes other than the large-scale combat operations usually associated with war. Although these operations are often conducted outside the U.S., they also include military support to U.S. civil authorities.

**B-3. JCAs**

a. As an integral part of the evolving capabilities-based planning process, JCAs were recently revised. In February 2008, the DAWG approved new JCAs. These JCAs serve as a collection of capabilities grouped to support capability analysis, strategy development, investment decision making, capability portfolio management, and capabilities-based force development and operational planning. TRADOC Pam 525-7-7 has links to all JCAs, with the strongest links to the logistics and protection JCAs; these arenas inherently shape and directly affect the future of base camps. Specifically, engineering and logistics services (base camp services) are among the subordinate tasks of the logistics JCA.

b. Logistics JCA. This CCP is critical to integrating and improving the efficiencies of the capabilities that support the logistics JCA. Specifically, engineering (general engineering) and logistics services (base camp services) are among the subordinate tasks of the logistics JCA.

(1) The planning and design and operations and management functions of TRADOC Pam 525-7-7 will leverage, integrate, and expand on the deployment and distribution, supply, and maintenance concepts and CBA that support land usage and base camp requirements.

(2) TRADOC Pam 525-7-7 integrates and addresses capabilities of logistics services to ensure food service, water and ice, base camp services, and hygiene services sustain the force. It also integrates and addresses operational contract support and contract management to support all base camp functions.

(3) TRADOC Pam 525-7-7 fully leverages and integrates the engineering capabilities across all of the engineer functions (combat engineering, general engineering, and geospatial engineering). It expands geospatial and general engineering capabilities required to plan, design, construct, deconstruct, operate, and manage base camps as its related sub-function under the logistics JCA.

c. Protection JCA. The base camp is critical to the protection and sustainment of land forces. TRADOC Pam 525-7-7 supports the Army protection concept and leverages the IUBIP joint working group efforts for protection of expeditionary sites to prevent and mitigate effects from enemy attacks. The base camp CCP incorporates a multilayered (aerial, surface, and subsurface) 360° sphere of protection required for the critical assets within base camps. It also addresses efforts for protection from natural conditions of all operational environments.

d. Force application JCA. TRADOC Pam 525-7-7 supports the force application JCA by addressing capabilities that allow the tactical and operational maneuver of land forces. Base camps sustain land forces and enable commanders to position elements to ensure all aspects of maneuver to engage, insert, influence, and secure.

e. C2 JCA. TRADOC Pam 525-7-7 supports the C2 JCA through the functions of planning and design and operations and management. These functions ensure commanders the ability to organize, understand, plan, direct, and monitor base camp capabilities in support of JIIM FSO.

f. Battlespace awareness JCA. The planning, design, and management functions of base camps incorporated into TRADOC Pam 525-7-7 support the ability to understand dispositions and intentions as well as the characteristics and conditions of the operational environment that bear on national and military decisionmaking. The result incorporates the positioning, protection, and sustainment of forces required to achieve stated objectives.

g. Net-centric JCA. TRADOC Pam 525-7-7 will integrate and leverage existing efforts to support the net-centric JCA. It identifies and integrates the information transport, enterprise services, net management, and information assurance required for the planning, operation, and management of base camps.

h. Building partnerships JCA. The design, operations, and management functions of this CCP will support the positioning, protection, and sustainment of forces required for the communication to inform domestic and foreign audiences and agencies, persuade partner audiences, and influence adversary and competitor audiences. These base camp capabilities will allow our forces, domestic partners, and allies to shape the battlespace to achieve the desired outcome.

i. Force support JCA. TRADOC Pam 525-7-7 leverages and integrates efforts to address the organizational design and management capabilities of base camps to support force management. It addresses force preparation capabilities through the standardization of planning, design, and management functions of base camps that are absent in existing joint and Army doctrine and concepts. This pamphlet addresses experimentation critical to validating or negating this concept and subsequent solutions to the gaps identified. These solutions will address the training, exercises, education, and doctrine to support Army base camps. It will address real property lifecycle management and installation services required of base camp operations. TRADOC Pam 525-7-7 will also leverage and incorporate health readiness concepts to ensure force health protection and health service support is integrated with Army base camps.

j. Corporate management and support JCA. TRADOC Pam 525-7-7 will lay the foundation for the analysis required to determine the capability gaps of base camps and identify DOTMLPF solutions, directly supporting the strategy and assessments in this area. The results of the analysis will support and generate the requirements documents necessary for acquisition; program, budget, and finance; and research and development of these solutions.

#### **B-4. Relationship to Joint and Army Concepts**

##### a. The CCJO.

(1) The CCJO envisions how the joint force will operate during the 2016-2028 timeframe. Assuming a future that is uncertain, complex, and characterized by persistent conflict, the CCJO describes the capabilities required in four broad types of military activities: combat, security, engagement, and relief and reconstruction. Combat involves the defeat or destruction of an armed enemy force, whether that force is conventional, irregular, or some combination. Combat involves forcing an adversary to give up the fight by imposing our will upon him. Because future enemies may hide in urban areas and may possess catastrophic or

disruptive capabilities, future joint forces must be able to apply combat power in creative, highly discriminate ways.

(2) Security activities provide protection to local populations and areas threatened with unlawful violence. Security may be conducted after a successful combat mission, concurrently with combat activities, or as part of a disaster relief or humanitarian operation. Joint forces conduct security activities primarily to reassure the local population rather than to defeat some enemy force. Security operations end when the threat of civil violence is at a level that indigenous law enforcement authorities can manage.

(3) Engagement involves improving the capabilities of or cooperation with established allies and coalition partners. Engagement activities may be conducted at any time, from normal peacetime training and exercises through large-scale war. Each engagement activity is distinctive in that it is a unique combination of strategic goals and objectives for the U.S. and partner nation states. Therefore, the specific events, frequency, and intensity of engagement operations will vary widely. They may also be relatively short-term or involve long-term obligations.

(4) Relief and reconstruction activities are designed to restore basic civil services after a conflict or disaster. Restoration can occur after the conflict has ended, but will most likely be initiated before combat operations are complete. Relief and reconstruction almost always demands the cooperation of joint forces with other U.S. government agencies, international organizations, and private volunteer organizations. Joint relief and reconstruction activities end when indigenous government authorities are capable of meeting the basic civil services needs of the population.

(5) The CCJO states that these four primary categories of activity comprise virtually any joint force mission. TRADOC Pam 525-7-7 supports all four broad categories of military activity by proposing a comprehensive list of required capabilities that allow for base camps to serve effectively and efficiently enabling power projection for the JFC. From these base camps, the joint force and Army commander can project forces quickly to conduct combat, security, engagement, or relief and reconstruction activities as required.

b. JOCs.

(1) Irregular Warfare JOC. A whole government approach and persistent presence are key elements supporting this JOC. TRADOC Pam 525-7-7 supports these elements in a JIIM environment for the protection and efficient sustainment of land forces and IA partners for indefinite periods. The proposed strategy of TRADOC Pam 525-7-7 allows the IA partners to leverage base camp capabilities to support irregular warfare requirements for making IAs more rugged. This supports the whole government approach to operating in any location, including austere, hostile, and belligerent environments.

(2) Homeland Defense and Civil Support JOC. The central theme of the homeland defense and civil support JOC is a multilayered and unified approach to address external threats and respond to catastrophic incidents. TRADOC Pam 525-7-7 provides rapid and flexible

approaches to the sustainment and protection of land forces called upon to detect, deter, prevent, or, if necessary, defeat external threats; as well as respond to catastrophic incidents. The base camp functions allow the most efficient approach to sustained operations forward, at approaches, and in the homeland by leveraging existing facilities, self sustaining, or a combination of both. TRADOC Pam 525-7-7 also addresses operations in a JIIM environment allowing IA and multinational partners to leverage the military capabilities of efficient sustainment and protection for short and prolonged periods.

(3) MCO JOC. The central idea of the MCO JOC is a unified approach to employ the defeat mechanism with the end-state of rendering an adversary unable or unwilling to oppose militarily the achievement of strategic objectives. TRADOC Pam 525-7-7 considers a JIIM environment to support the defeat mechanism by providing the sustainment and protection capabilities necessary for land forces and IA partners to gain and maintain operational access. The base camp functions enhance the commander's ability to support the MCO ideas to coordinate, project, employ, and sustain global capabilities; employ interdependent joint capabilities; integrate multinational and IA actions; C2 distributed operations; control tempo of friendly action and enemy response; and act with speed, precision, discrimination, and lethality.

(4) Military Support to Stabilization, Security, Transition, and Reconstruction (SSTR) Operations JOC. The SSTR JOC states the joint force must be prepared to conduct counterinsurgency operations, unconventional warfare, and counterterrorist activities as well as limited conventional operations to impose a level of security that can eventually be enforced by civilian police forces. The base camp functions found in TRADOC Pam 525-7-7 aid the commander by increasing security and decreasing recovery time and actions, which will in turn facilitate improved freedom of maneuver.

(5) Deterrence Operations JOC. The central idea of this JOC is to decisively influence the adversary's decisionmaking calculus to prevent hostile actions against U.S. vital interests. The base camp functions provide the sustainment and protection to enable the forward presence and security cooperation and military integration and interoperability required to achieve deterrence operations objectives. The Deterrence Operations JOC also aims to reduce the vulnerabilities of our forces. The sustainment efficiencies proposed by the base camp CCP will significantly reduce the logistical footprint and mitigate the vulnerabilities of supply and distribution operations in an asymmetric environment.

c. The Army Concept Strategy.

(1) TRADOC Pam 525-3-0. TRADOC Pam 525-7-7 supports the seven key operational ideas presented in TRADOC Pamphlet 525-3-0. These are shaping and entry operations, operational maneuver from strategic distances, intratheater operational maneuver, decisive maneuver, concurrent and subsequent SSTR, distributed support and sustainment, and networked-enabled battle command. TRADOC Pam 525-7-7 proposes capabilities that will provide the protection and efficient sustainment to maximize operational resources that allow commanders to focus on their primary mission. As this concept supports the joint concept family, it subsequently supports the Army in joint operations; the application of the base camp

functions will enable the strategic distribution and sustainment capabilities compatible within a JIIM framework.

(2) TRADOC Pam 525-3-1. TRADOC Pam 525-7-7 supports operational maneuver by positioning, protecting, and sustaining large land forces tailored and employed for major combat and other operations. The efficiencies provided by the base camp capabilities maximize operational resources to support the commander in the three primary defeat mechanisms of destruction, dislocation, and disintegration and the seven key operational ideas. Protection and sustainment of forces throughout the execution of these mechanisms is vital to decisive operations.

(3) TRADOC Pam 525-3-2. Base camps optimized under TRADOC Pam 525-7-7 will support a commander's ability to execute precision maneuver, the dynamic combination of movement, effects, and information. Adversaries may challenge the ability to access, occupy, and sustain operations in key terrain critical to a commander's ability to see first, understand first, act first, finish decisively, and reengage at will. The combination of the base camp functions will reduce the demands of resupply and enhance the commanders' capabilities to provide sustainment and protection of their forces. This will enable a commander in the commitment of fighting forces to time critical tactical operations while they are provided battlefield freedom of movement.

(4) TRADOC Pam 525-3-3. TRADOC Pam 525-7-7 is tied to battle command via the planning and management functions. The management function in particular will provide the "city management" link to the integrated battle command system, providing commanders situational awareness and situational understanding; decision superiority; and aid knowledge of self, environment, and the enemy. The planning function will be continuous and integrated into the framing, planning, preparing, executing, assessing, and reframing operations.

(5) TRADOC Pam 525-2-1. The ability to finish decisively requires knowledge superiority. TRADOC Pam 525-7-7 recognizes the interrelationship between knowledge capabilities and the *Protect* and *Sustain* functional concepts. This data will enable predictive analysis and knowledge discrimination.

(6) TRADOC Pam 525-3-6. TRADOC Pam 525-7-7 provides sustainment and protection of land forces to enable movement. It proposes efficiencies in base camp systems that will reduce demands on operational resources, freeing assets that enhance movement capabilities.

(7) TRADOC Pam 525-3-4. TRADOC Pam 525-7-7 supports strike by implementing efficiencies of base sustainment and protection, reducing overall the asset requirements that allow continuous and seamless strike capabilities.

(8) TRADOC Pam 525-3-5. TRADOC Pam 525-7-7 fully incorporates the *Protect* functions to provide a multi-layered (aerial, surface, and subsurface) 360° sphere of protection required for the critical assets within base camps. It leverages the efforts of the IUBIP and WMD ICDT to determine and resolve any gaps in the protection of contingency base camps.

The forward highlights that environmental operations and health services support also have an important role in protecting the base camp personnel and function.

(9) TRADOC Pam 525-4-1. TRADOC Pam 525-7-7 proposes improved efficiencies to forward bases that will significantly reduce the logistical footprint and ease resupply and replenishment of stocks necessary to complete the mission. The goal of TRADOC Pam 525-7-7 is to provide the JFC with self sustaining facilities that efficiently support the force and reduce requirements for secure ground LOCs for distribution. It also leverages and integrates the efforts of the IUBIP and WMD ICDT to provide the necessary sanctuary for sustainment operations. Environmental operations and health services support also play an important role in sustaining base camps.

## Glossary

### Section I

#### Abbreviations and Acronyms

ACSIM	Army Chief of Staff for Installation Management
AR	Army regulation
BCT	brigade combat team
BCAE	base camp augmentation elements
BCSE	base camp staff elements
BSTB	brigade special troops battalion
C2	command and control
CAAT	collection and analysis team
CBA	capabilities-based assessment
CCP	concept capability plan
CCJO	Capstone Concept for Joint Operations
CENTCOM	U.S. Army Central Command
CJFLCC	Combined Joint Forces Land Component Command
CONUS	continental United States
CSA	Chief of Staff of the Army
CTC	Combat Training Center
DA	Department of the Army
DAWG	Deputy Secretary of Defense advisory working group
DFAC	dining facilities
DOD	Department of Defense
DODD	Department of Defense Directive
DODI	Department of Defense Instruction
DOTMLPF	doctrine, organization, training, materiel, leadership and education, personnel, and facilities
EBS	environmental baseline survey
ESOH	environment, safety, and occupational health
FM	field manual
FSO	full spectrum operations
FOB	forward operating base, forward operations base
IA	interagency
ICDT	integrated capabilities development team
IGO	intergovernmental organizations
ISR	intelligence, surveillance, and reconnaissance
IUBIP	integrated unit, base, and installation protection
JCA	joint capability areas
JFC	joint force commander
JFEO	joint forcible entry operations
JIC	joint integrating concepts
JIIM	joint, interagency, intergovernmental, multinational
JOA	joint operating area
JOC	joint operating concepts

JOE	joint operational environment
JP	joint publication
LOC	lines of communication
LOGCAP	Logistics Civil Augmentation Program
MCO	major combat operations
MEB	maneuver enhancement brigade
MLS	multilevel scenario
MNC-I	Multinational Corps-Iraq
MOS	military occupational specialty
MWR	morale, welfare, and recreation
NGO	nongovernmental organizations
NTC	National Training Center
OCONUS	outside the continental United States
OEHSA	occupational and environmental health site assessments
OGA	other governmental agencies
pam	pamphlet
PMESII-PT	political, military, economic, social, information, infrastructure, physical environment, time
SOP	standing operating procedures
SSTR	stabilization, security, transition, and reconstruction
TCMS	Theater Construction Management System
TRADOC	Training and Doctrine Command
U.S.	United States
USACE	United States Army Corps of Engineers
USAREUR	United States Army European Command
WMD	weapons of mass destruction

## **Section II**

### **Terms**

#### **advanced base**

A base located in or near an operational area whose primary mission is to support military operations. (JP 1-02).

#### **airfield**

An area prepared for the accommodation (including any buildings, installations, and equipment), landing, and takeoff of aircraft. (JP 1-02).

#### **air strip**

An unimproved surface which has been adapted for takeoff or landing of aircraft, usually having minimum facilities. (JP 1-02).

#### **antiterrorism**

Defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, to include limited response and containment by local military and civilian forces. (JP 3-07.2).

**Army base**

A base or group of installations for which a local commander is responsible, consisting of facilities necessary for support of Army activities including security, internal LOCs, utilities, plants and systems, and real property for which the Army has operating responsibility. (JP 1-02).

**assessment**

A judgment about something based on a technical understanding of the situation. Within the range of technical reconnaissance, an assessment takes less time and technical expertise to perform than a survey but provides less technical detail than a survey. Reconnaissance elements do not require specialized technical expertise to perform an assessment. They conduct assessments following the same basic formats a survey would use.

**bare base**

A base having minimum essential facilities to house, sustain, and support operations to include, if required, a stabilized runway, taxiways, and aircraft parking areas. It must have a source of water that can be made potable. Other requirements to operate under bare base conditions form a necessary part of the force package deployed to the bare base. (JP 1-02).

**base**

A locality from which operations are projected or supported. An area or locality containing installations which provide logistic or other support. (JP 1-02).

**base camp cleanup and closure**

Base camp cleanup and closure is the process of preparing and executing alternative courses of action to vacate a base camp after a U.S. military mission is completed. An archival record is prepared that includes the operational history of the base camp and the actions taken to clean up and close the base camp, as well as a description of any cleanup and closure tasks that could not be completed that may lead to land use, health, safety, and environmental problems in the future.

**base camp development planning**

A time-sensitive and mission-driven, cyclical planning process that determines and documents the physical layout of properly located, sized, and interrelated land areas, facilities, utilities, and other factors to achieve maximum mission effectiveness, maintainability, and expansion capability in theater. (EP 1105-1).

**base cluster**

In base defense operations, a collection of bases, geographically grouped for mutual protection and ease of C2. (JP 1-02).

**base cluster commander**

In base defense operations, a senior base commander designated by the joint force commander responsible for coordinating the defense of bases within the base cluster and for integrating defense plans of bases into a base cluster defense plan. (JP 1-02).

**base cluster operations center**

A C2 facility that serves as the base cluster commander's focal point for defense and security of the base cluster. (JP 1-02)

**base commander**

In base defense operations, the officer assigned to command a base. (JP 1-02).

**base defense**

The local military measures, both normal and emergency, required to nullify or reduce the effectiveness of enemy attacks on, or sabotage of, a base, to ensure that the maximum capacity of its facilities is available to US forces. (JP 1-02).

**base defense forces**

Troops assigned or attached to a base for the primary purpose of base defense and security as well as augmentees and selectively armed personnel available to the base commander for base defense from units performing primary missions other than base defense. (JP 1-02).

**base defense operations center**

A C2 facility, with responsibilities similar to a base cluster operations center, established by the base commander to serve as the focal point for base security and defense. It plans, directs, integrates, coordinates, and controls all base defense efforts. (JP 1-02).

**base defense reaction forces**

Forces comprised of personnel or elements of units assigned to a specific base with the responsibility to rapidly bolster base defenses or react to an unforeseen threat. (FM 1-02).

**base development (less force bed down)**

The acquisition, development, expansion, improvement, and construction and/or replacement of the facilities and resources of an area or location to support forces employed in military operations or deployed in accordance with strategic plans. (JP 1-02) The improvement or expansion of the resources and facilities of an area or a location to support military operations. (NATO).

**base development plan**

A plan for the facilities, installations, and bases required to support military operations. (JP 1-02).

**basing categories**

Basing falls into one of two categories: permanent or contingency. Permanent basing is associated with long term strategic force stationing; while contingency basing is associated with short-term contingency operations. Specific location and size of these bases are determined during the course of the contingency operation. CCR 415-1.

**billet**

Shelter for troops. To quarter troops. A personnel position or assignment that may be filled by one person. (JP 1-02)

**building systems**

Structures assembled from manufactured components designed to provide specific building configurations such as, large steel arch structures, large span.

**civil augmentation program**

Standing, long-term external support contacts designed to augment Service logistic capabilities with contracted support in both preplanned and short notice contingencies. Examples include LOGCAP, Air Force Contract Augmentation Program, and U.S. Navy Global Contingency Capabilities Contracts. (JP 1-02).

**coalition outpost**

A well prepared fortified outpost used to defend, observe, and conduct operations that allow the coalition forces commander to project forces into neighborhoods to protect civilians. It supports elements smaller than battalion in size, but larger than company in size. It is employed normally in restrictive or urban terrain to support and provide security, presence, and force projection into a security district. It can support 24/7 operations, but will be dependent on an FOB for support. Some satellite LOGCAP support may be provided, as may some direct contracting support. (MNC-I).

**combat engineering**

Those engineering capabilities and activities that support the maneuver of land combat forces and that require close support to those forces. Combat engineering consists of three types of capabilities and activities: mobility, counter-mobility, and survivability. (JP 1-02).

**combat outpost**

A reinforced observation post capable of conducting limited combat operations. (FM 3-90.) A security force established at the regimental level during defensive or stationary operations. ((Marine Corps) (FM 1-02)).

**contingency**

A situation requiring military operations in response to natural disasters, terrorists, subversives, or as otherwise directed by appropriate authority to protect US interests. (JP 1-02).

**contingency basing**

These are sites to support immediate contingency operations that are temporary in nature. Chapter 5 of this regulation defines the base camp construction standard to be used in conjunction with operations orders and fragmentary orders. Specific location and size of these bases are determined during the course of the contingency operation. The following is a description of the types of contingency bases. CCR 415-1.

**contingency contracting**

The process of obtaining goods, services, and construction via contracting means in support of contingency operations. (JP 1-02).

**contingency main base**

A contingency base is usually occupied by an element larger than a BCT from a single service or joint services. Its purpose is typically a C2 hub and/or regional logistics hub. It is characterized by advanced infrastructure for facilities and communications for the expected duration of the operation or exercise. It may include an airfield C-130 capable or larger. (CCR 415-1).

**contingency operation**

A military operation that is either designated by the Secretary of Defense as a contingency operation or becomes a contingency operation as a matter of law (. It is a military operation that is designated by the Secretary of Defense as an operation in which members of the armed forces are or may become involved in military actions, operations, or hostilities against an enemy of the U.S. or against an opposing force; or is created by operation of law. Under law, a contingency operations exists if a military operation results in the call-up to (or retention on) active duty of members of the uniformed Services under certain enumerated statutes; and the call-up to (or retention on) active duty of members of the uniformed Services under other (nonenumerated) statutes during war or national emergency declared by the President or Congress. (Title 10 United States Code).

**contingency operation location**

A contingency location is usually occupied by a battalion sized element capable of quick response to operations, security, civic assistance, or humanitarian assistance relief. It will be dependent upon contingency operating sites or contingency main bases for logistical support. It characterized by stark infrastructure primarily dependent on contracted services or field facilities. It consolidates to an operating site as the contingency matures. CCR 415-1.

**contingency operations site**

A contingency site usually occupied by a BCT-size element or smaller capable of providing local and regional operations, security, and/or humanitarian assistance relief. The site size and capabilities are scalable to support rotation of forces or prolonged contingency operations. Characterized by limited infrastructure and may be dependent on some contracted services. CCR 415-1.

**cooperative security location**

A facility located outside the U.S. and U.S. territories with little or no permanent U.S. presence, maintained with periodic Service, contractor, or host nation support. Cooperative security locations provide contingency access, logistic support, and rotational use by operating forces and are a focal point for security cooperation activities. (CJCS CM-0007-05, JP 1-02).

**Department of Defense installation**

A facility subject to the custody, jurisdiction, or administration of DOD component. This term includes, but is not limited to, military reservations, installations, bases, posts, camps, stations, arsenals, vessels, ships, or laboratories where a DOD component has operational responsibility for facility security and defense. (JP 3-26, JP 1-02).

**emergency medical care**

The provision of treatment to patients, including first aid, cardiopulmonary resuscitation, basic life support (emergency medical technician level), advanced life support (paramedic level), and other medical procedures that occur prior to arrival at a hospital or other health care facility. (DODI 6055.06).

**emergency medical services**

Services provided to patients facing immediate medical emergencies that occur outside of military treatment facilities. (DODI 6055.06).

**environment, safety, and occupational health**

Any part of an organization's mission activities that may impact installation assets or adjacent communities, but not including combat. (DODD 4715.1E).

**environmental baseline survey**

A multi-disciplinary site survey conducted prior to or in the initial stage of a joint operational deployment. The survey documents existing deployment area environmental conditions, determines the potential for present and past site contamination (such as, hazardous substances, petroleum products, and derivatives), and identified potential vulnerabilities (to include occupational and environmental health risks). Surveys accomplished in conjunction with joint operational deployments that do not involve training or exercises (such as, contingency operations) should be completed to the extent practicable consistent with operational requirements. This survey is performed in conjunction with the environmental health site assessment whenever possible. (JP 3-34, JP 1-02).

**environmental cleanup**

The process of removing solid, liquid, and hazardous wastes, except for unexploded ordnance, resulting from the joint operation of US forces to a condition that approaches the one existing prior to operation as determined by the environmental baseline survey, if one was conducted. The extent of this process will depend upon the operational situation at the time that cleanup is accomplished. (JP 1-02)

**environmental conditions report**

A concise summary of environmental conditions at a base camp site, based on the environmental base line survey, supported by maps and backup documents, prepared by base camp commanders for each base camp. The environmental conditions report documents conditions at the site if claims or other legal challenges arise against the government. (FM 3-100.4).

**environmental considerations**

The spectrum of environmental media, resources, or programs that may impact on, or are affected by, the planning and execution of military operations. Factors may include, but are not limited to, environmental compliance, pollution prevention, conservation, protection of historical and cultural sites, and protection of flora and fauna. (JP 3-34, JP 1-02).

**environmental health and safety assessment**

An assessment to determine past, present and future environmental , health, and safety risks associated with land use, disease vectors, and environmental contamination caused by hazardous materials, hazardous wastes, and other health and safety related condition. (EP 1105-1).

**expeditionary force**

An armed force organized to accomplish a specific objective in a foreign country. (JP 3-0, JP 1-02).

**facility**

A real property entity consisting of one or more of the following: a building, a structure, a utility system, pavement, and underlying land. (JP 1-02).

**facility substitutes**

Items such as tents and prepackaged structures requisitioned through the supply system that may be used to substitute for constructed facilities. (JP 3-34, JP 1-02).

**firefighting operations**

Operations including rescue, fire suppression, and property conservation in buildings, enclosed structures, aircraft interiors, vehicles, vessels, aircraft, or like properties that are involved in a fire or emergency situation. (DODI 6055.06).

**field fortifications**

An emplacement or shelter of a temporary nature which can be constructed with reasonable facility by units requiring no more than minor engineer supervisory and equipment participation. (JP 1-02).

**fire base**

An area used during air assault operations from which a unit is moved via helicopters and supports the air assault operation's main effort with direct or indirect fires. (FM 90-4, FM 1-02).

**fire prevention**

Measures such as, training, public education, plans reviews, surveys, inspections, engineering reviews, and life safety code enforcement directed toward avoiding the inception of fire and minimizing consequences if a fire occurs. (DODI 6055.06).

**fire suppression**

The activities involved in controlling and extinguishing fires. (DODI 6055.06).

**force bed down**

The provision of expedient facilities for troop support to provide a platform for the projection of force. These facilities may include modular or kit-type facility substitutes. (JP 3-34, JP 1-02).

**force health protection**

Measures to promote, improve, or conserve the mental and physical well-being of Service members. These measures enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards. (JP 4-02).

**force projection**

The ability to project the military instrument of national power from the U.S. or another theater, in response to requirements for military operations. (JP 5-0, JP 1-02).

**force protection**

Preventive measures taken to mitigate hostile actions against DOD personnel (to include family members), resources, facilities, and critical information. Force protection does not include actions to defeat the enemy or protect against accidents, weather, or disease. (JP 3-0, JP 1-02).

**forward logistics base**

The area occupied by multifunctional forward logistics elements of a support battalion, group, or command when it echelons its assets to provide critical support to combat forces. The base may be the first stage of the development of the support area. (FM 4-0, FM 1-02).

**forward operating base**

An airfield used to support tactical operations without establishing full support facilities. The base may be used for an extended time period. Support by a main operating base will be required to provide backup support for a forward operating base. (JP 3-09.3, JP 1-02).

**forward operations base**

In special operations, a base usually located in friendly territory or afloat that is established to extend command and control or communications or to provide support for training and tactical operations. Facilities may be established for temporary or longer duration operations and may include an airfield or an unimproved airstrip, an anchorage, or a pier. A forward operations base may be the location of special operations component headquarters or a smaller unit that is controlled and/or supported by a main operations base. (JP 3-05.1, JP 1-02).

**forward operating site**

A scalable location outside the U.S. intended for rotational use by operational forces. Locations may contain prepositioned equipment and may have a modest permanent support presence. Location is able to sustain security cooperation, training, deployment, and employment operations on short notice. CCR 415-1.

**fratricide**

The unintentional killing of friendly personnel by friendly firepower. (Draft FM 3-10).

**garrison force**

All units assigned to a base or area for defense, development, operation, and maintenance of facilities. (JP 1-02).

**general engineering**

Those engineering capabilities and activities, other than combat engineering, that modify, maintain, or protect the physical environment. Examples include the construction, repair, maintenance, and operation of infrastructure, facilities, lines of communication and bases; terrain modification and repair; and selected explosive hazard activities. (JP 3-34).

**general site planning**

Finding and plotting, to scale, a logical location for every aboveground area, facility, and infrastructure requirement, along with the portrayal of the various, often invisible, major utility corridors, safety clearance zones, and various boundaries that influence and support the base camp development plan. (EP 1105-1).

**hardstand**

A paved or stabilized area where vehicles are parked. Open ground area having a prepared surface and used for the storage of materiel. (JP 1-02).

**helipad**

A prepared area designated and used for takeoff and landing of helicopters. Includes touchdown or hover point. (JP 1-02).

**heliport**

A facility designated for operating, basing, servicing, and maintaining helicopters. (JP 1-02).

**installation**

A grouping of facilities, located in the same vicinity, which support particular functions. Installations may be elements of a base. (JP 1-02).

**installation commander**

The individual responsible for all operations performed by an installation. (JP 3-07.2, JP 1-02).

**intermediate staging base**

A temporary location used to stage forces prior to inserting the forces into the host nation. A secure staging base established near to, but not in, the area of operations. (JP 1-02, FM 3-0).

**joint base**

For purposes of base defense operations, a joint base is a locality from which operations of two or more of the Military Departments are projected or supported and which is manned by significant elements of two or more Military Departments or in which significant elements of two or more Military Departments are located. (JP 3-10, JP 1-02).

**Joint Facilities Utilization Board**

A joint board that evaluates and reconciles component requests for real estate, use of existing facilities, inter-Service support, and construction to ensure compliance with Joint Civil-Military Engineering Board priorities. (JP 3-34, JP 1-02).

**land forces**

Personnel, weapon systems, vehicles, and support elements operating on land to accomplish assigned missions and tasks. (JP 1-02).

**land use planning**

The process of calculating, mapping, and planning the allocation of land areas based on general use categories, mission analysis, functional requirements, functional interrelationships, standards, criteria, and guidelines. (EP 1105-1).

**life cycle**

The total phases through which an item passes from the time it is initially developed until the time it is either consumed in use or disposed of as being excess to all known materiel requirements. (JP 1-02).

**logistics assault base**

A temporary logistics support area transported across enemy lines via helicopter to support extended deep air assault and raids. If the logistics assault base is to become a permanent facility, the unit must develop it into a forward operations base. (FM 90-4, FM 1-02).

**Logistics Base**

A principal or supplementary base of support; a locality containing installations which provide logistics support. (FM 4-0, FM 1-02).

**main operating base**

A facility outside the U.S. and U.S. territories with permanently stationed operating forces and robust infrastructure. Main operating bases are characterized by C2 structures, enduring family support facilities, and strengthened force protection measures. In special operations, a base established by a joint force special operations component commander or a subordinate special operations component commander in friendly territory to provide sustained C2, administration, and logistical support to special operations activities in designated areas. (CJCS CM-0007-05, JP 1-02).

**master planning**

A continuous analytical process which involves evaluation of factors affecting the present and future development of an installation. (Technical Manual 5-803.1).

**military construction**

Any construction, alteration, development, conversion, or extension of any kind carried out with respect to a military installation. (JP 3-34, JP 1-02).

**occupational health**

The science of designing, implementing and evaluating comprehensive health and safety programs that maintain and enhance employee health, improve safety and increase productivity in the workplace. (Federal Occupational Health Division).

**operation and maintenance**

Maintenance and repair of real property, operation of utilities, and provision of other services such as refuse collection and disposal, entomology, snow removal, and ice alleviation. (JP 3-34, JP 1-02).

**organic**

Constituting an integral part of a whole; fundamental. (American Heritage dictionary 4<sup>th</sup> edition 2000). A military unit or formation or its elements, belonging to a permanent organization in contrast to being temporarily attached. (From Wiktionary open content dictionary online at //en.wiktionary.org).

**overdesign**

To design in a manner that exceeds usual standards (as of sturdiness or safety) for purposes of gaining efficiencies in either economies of scale or in minimizing work in future expansions. (Merriam Webster Online Dictionary).

**patrol base**

A well prepared fortified position that a patrol set(s) can occupy as required. The point of origin of a patrol where all equipment not required for the patrol is left. A limited amount of supplies necessary for resupplying the patrol and additional medical supplies and assistance are staged at this location. The patrol set can defend, observe, and conduct limited missions while supporting overall missions from a patrol base. It cannot receive LOGCAP services, but will receive LOGCAP from a parent unit FOB or coalition outpost. It is normally occupied by a company or smaller unit. It will have limited electrical service and black water removal. (MNC-I, FM 7-7, FM 1-02).

**permanent basing**

The basing of forces is dictated by the guidance published by the Secretary of Defense in the Global Defense Posture. Bases included are those locations where the U.S. is expected to have a long term presence or need to rapidly expand sites at key locations within the area of responsibility. CCR 415-1.

**personnel recovery**

The sum of military, diplomatic, and civil efforts to prepare for and execute the recovery and reintegration of isolated personnel. (JP 3-50).

**PMESII-PT**

A memory aid for the variables used to describe the operational environment: political, military, economic, social, information, infrastructure, physical environment, time (operational variables). (FM 3-0).

**power projection**

The ability of a nation to apply all or some of its elements of national power to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, to contribute to deterrence, and to enhance regional stability. (JP 3-35, JP 1-02).

**power projection platform**

As used in TRADOC Pam 525-7-7, the physical location within the operational area that enables power projection. Base camps sustain civil, as well as the military components of U.S. national power, to respond rapidly and effectively to crises, to contribute to deterrence, and to enhance regional stability. (FM 3-0).

**protection**

Preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area. Measures taken to keep nuclear, biological, and chemical hazards from having an adverse effect on personnel, equipment, or critical assets and facilities. Protection consists of five groups of activities: hardening of positions; protecting personnel; assuming mission-oriented protective posture; using physical defense measures, and reacting to attack. In space usage, active and passive defensive measures to ensure that U.S. and friendly space systems perform as designed by seeking to overcome an adversary's attempts to negate them and to minimize damage if negation is attempted. (JP 3-0).

**protection warfighting function**

The related tasks and systems that preserve the force so the commander can apply maximum combat power. Preserving the force includes protecting personnel (combatants and noncombatants), physical assets, and information of the U.S. and multinational military and civilian partners. (FM 3-0).

**quality assurance**

Techniques and systems ensuring that a high (or at least a predetermined) level of quality is maintained through various stages of a process at the owner, rather than at the provider, end of the business. (Web construction glossary).

**quality control**

Techniques and systems ensuring that a high (or at least a predetermined) level of quality is maintained through various stages of a process at the provider rather than at the owner end of the business. (Web construction glossary).

**quality of life**

Individual, personal satisfaction or dissatisfaction with the cultural or intellectual conditions under which the individual lives, (as distinct from material comfort). (WordNet 3.0 Vocabulary Helper and Web construction Glossary).

**reachback**

The process of obtaining products, services, and applications, or forces, or equipment, or material from organizations that are not forward deployed. (JP 3-30, JP 1-02).

**real property**

Lands, buildings, structures, utilities systems, improvements, and appurtenances. Includes equipment attached to and made part of buildings and structures (such as heating systems) but not movable equipment (such as plant equipment). (JP 1-02).

**relocatable building**

A building designed to be readily moved, erected, disassembled, stored, and reused. All types of buildings or building forms designed to provide relocatable capabilities are included in this definition. In classifying buildings as relocatable, the estimated funded and unfunded costs for average building disassembly, repackaging (including normal repair and refurbishment of components), and nonrecoverable building components, including typical foundations, may not exceed 20 percent of the building acquisition cost. Excluded from this definition are building types and forms that are provided as an integral part of a mobile equipment item and that are incidental portions of such equipment components, such as communications vans or trailers. (JP 3-34, JP 1-02).

**repair and restoration**

Repair, beyond emergency repair, of war-damaged facilities to restore operational capability in accordance with combatant command standards of construction, including repair and restoration of pavement surfaces. Normally, repairs to facilities will be made using materials similar to those of the original construction. For severely damaged facilities (essentially destroyed), restoration may require reconstruction. (JP 3-34, JP 1-02).

**safety**

Freedom from those conditions that can cause death, injury, occupational illness, or damage to, or loss of, equipment or property.

**special forces operations base**

A C2 and support base established and operated by a special forces group or battalion from organic and attached resources. The base commander and his staff coordinate and synchronize the activities of subordinate and forward-deployed forces. A special forces operations base is normally established for an extended period of time to support a series of operations. (JP 3-05, JP 1-02).

**stability operations**

An overarching term encompassing various military missions, tasks, and activities conducted outside the U.S. in coordination with other instruments of national power to maintain or reestablish a safe and secure environment and provide essential government services, emergency infrastructure reconstruction, and humanitarian relief. (JP 3-0, JP 1-02).

**staging base**

An advanced naval base for the anchoring, fueling, and refitting of transports and cargo ships as well as replenishment of mobile service squadrons. A landing and takeoff area with minimum servicing, supply, and shelter provided for the temporary occupancy of military aircraft during the course of movement from one location to another. (JP 1-02).

**standardization**

The process by which the DOD achieves the closest practicable cooperation among the Services and DOD agencies for the most efficient use of research, development, and production resources. Agrees to adopt on the broadest possible basis the use of common or compatible operational, administrative, and logistic procedures; common or compatible technical procedures and criteria;

common, compatible, or interchangeable supplies, components, weapons, or equipment; and common or compatible tactical doctrine with corresponding organizational compatibility. (JP 4-02, JP 1-02).

**survey**

Looks at or considers something closely, especially to form a technical opinion. Within the range of technical reconnaissance, a survey requires more time and technical expertise than an assessment to perform but subsequently provides the most technical detail. Specific technical expertise is required to conduct a survey. (FM 3-34.170).

**survivability**

Includes all aspects of protecting personnel, weapons, and supplies while simultaneously deceiving the enemy. Survivability tactics include building a good defense; employing frequent movement; using camouflage, concealment, and deception; and constructing fighting and protective positions for both individuals and equipment. (JP 3-34).

**survivability operations**

The development and construction of protective positions, such as earth berms, dug-in positions, overhead protection, and countersurveillance means, to reduce the effectiveness of enemy weapon systems. (FM 3-34).

**Section III**

**Special Abbreviations and Terms**

**base camp augmentation elements**

For purposes of TRADOC Pam 525-7-7, base camp augmentation elements represents the modular augmentation unit to the division or corps level units to provide the necessary ranks, skills, and functions to operate larger base camps (division to corps size) and provide theater-level management and coordination of base camp activities.

**base camp staff elements**

For purposes of TRADOC Pam 525-7-7, base camp staff elements represent the modular augmentation unit to the MEB or the brigade special troops battalion. This unit will provide the necessary ranks, skills, and functions to allow the unit to which they are assigned to have organic capability to facilitate land basing for contingency operations.

**Section III**

**Special abbreviations and terms**

This section contains no entries.

