Field Manual 55-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 8 December 1992

MOVEMENT CONTROL IN A THEATER OF OPERATIONS

CONTENTS

*This publication supersedes FM 55-10, 22 July 1986.

Page

Page

Page

PREFACE

This publication describes movement control processes and procedures at the strategic, operational, and tactical levels of war. It integrates movement control with mode and terminal operations to describe how movement control activities support reception and onward movement, theater distribution systems, intermodal operations, and contingency operations. The focus is planning the use of available modes of transport to move units, equipment, and supplies through sea and aerial ports of debarkation to their final destination. It also describes transportation request procedures and how transportation resources are managed and controlled.

It is a guide for commanders, staffs, and transportation movements control personnel at division, corps, and echelons above corps.

This manual supports Army operations doctrine and concepts and discusses the organization, mission, capabilities, and functions of movement control activities. Users acting within the scope of their authority may vary from this doctrine when such variation will result in improved operations. This manual also implements STANAGs 2023, 2025, 2026, 2154, 2155, 2156, 2158, 2159, 2165, 2166, 2171, 2173, 2174, 2175, 2176, 2832, 2890, 2943, and 3631.

The proponent of this publication is HQ TRADOC. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, US Army Transportation School, ATTN. ATSP-TDL, Fort Eustis, Virginia 23604-5399.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1

MOVEMENT CONTROL IN THE OPERATIONAL ENVIRONMENT

Section I. OVERVIEW

1-1. INTRODUCTION

a. The dynamics of combat power decide the outcome of campaigns, major operations, battles, and engagements. For combat forces to be successful, they must be delivered to the combat zone (CZ) and then sustained by combat service support (CSS) forces.

b. FMs 100-5 and 100-10 are the Army's capstone war fighting and sustainment manuals. They provide the foundation for developing doctrine, force design, materiel acquisition, professional education, and individual and unit training. They apply to Army forces worldwide and may be adapted to the unique requirements of each theater.

1-2. LEVELS OF WAR

a. FM 100-5 describes military strategy, operational art, and tactics as broad divisions of activity or levels in preparing for and conducting war. Movement control activities must support these levels of war. Figures 1-1 and 1-2 show the correlation between the levels of war and the transportation activities that support them.

b. Military strategy assigns forces, provides assets, and imposes conditions on the use of force. The process of moving and relocating forces in support of national strategy is strategic deployment. Strategic deployment is a joint undertaking that is planned and conducted within the framework of the Unified Command System. The Joint Chiefs of Staff (JCS), United States Transportation Command (USTRANSCOM), United States Army Forces Command (FORSCOM), and the theater combatant commander are among the key participants (see FM 55-65). Army transportation units and activities also play a significant role in planning, coordinating, supervising and executing the movement of forces and supplies by all available modes to ports of embarkation (POEs). They also help load ships and aircraft.

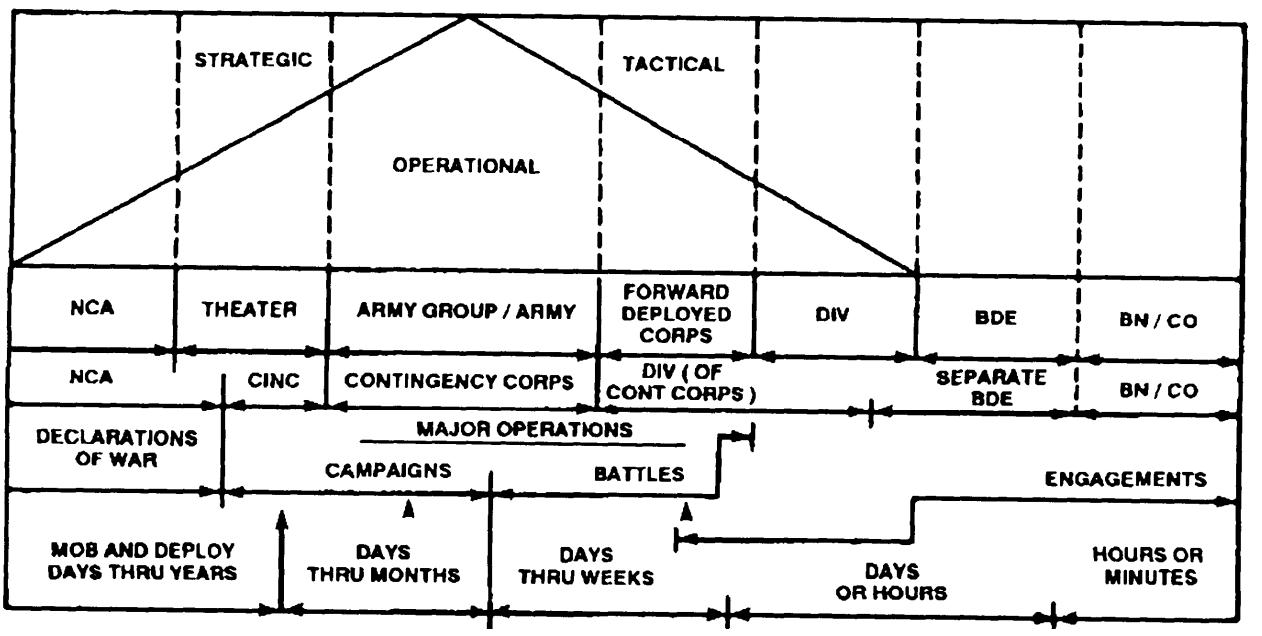


Figure 1-1. Levels of War.

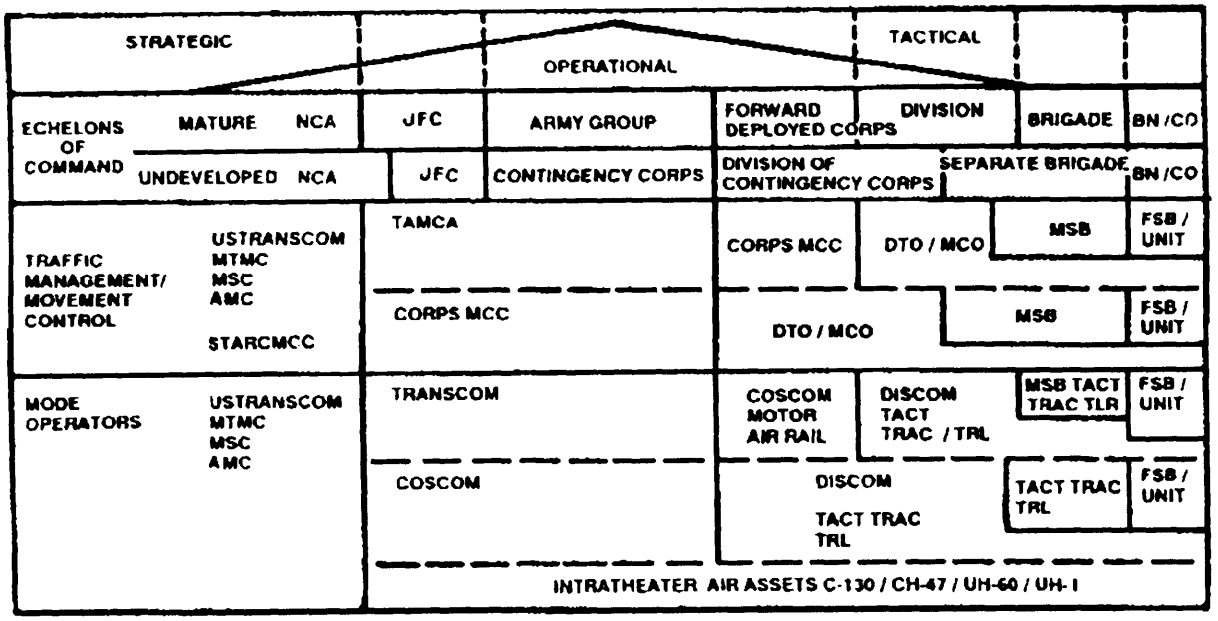


Figure 1-2. Levels of War with Transportation Overlay.

c. Operational art is the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations. It involves decisions about when and where to fight. The transition from the strategic to the operational level occurs at the aerial ports and seaports of debarkation (APODs/SPODs). Therefore, the operational level is concerned with reception and onward movement of forces and their sustainment from their arrival in a theater to their arrival in the area where they will be employed. Most of the army transportation and movement control force structure is focused at this level to unite the strategic and tactical levels. Transportation missions at the operational level include mode operations, terminal operations, movement control and highway regulation operations, and intratheater airlift operations. At the operational level, the number, location, and quality of lines of communication (LOC) may determine the very structure and tempo of a campaign. The complicating effects of terrain, weather, and enemy interdiction demand that movement planners and operators be very flexible and well trained to plan, control, and execute transportation missions.

d. At the tactical level, commanders are concerned with translating potential combat power into victorious battles and engagements. Tactics involve moving and maneuvering forces on the battlefield in relation to the enemy. It also involves the logistical support of forces before, during, and after engagements with the enemy. Transportation missions at this level are the same as at the operational level, but the focus is the sustainment of combat operations. The transition between the operational and tactical level is not as clear as that between the strategic and operational level but will probably occur in the corps rear (Figure 1-3).

Section II. MOVEMENT SYNCHRONIZATION COMPONENTS

1-3. INTRODUCTION

During the transition from the strategic level of war to the operational and tactical levels of war the distinction between movement and maneuver becomes less clear. It depends upon the perspective of the command directing the movement and the METT-T factors. Clearly, there will be both movement and maneuver at the operational and tactical levels. It is equally clear that the two must be well coordinated, integrated, and synchronized to fight and win. This section describes movement control, maneuver, and battlefield circulation control in concert with their approved definitions. It also discusses the principles of movement control and sustainment imperatives for AirLand Battle operations.

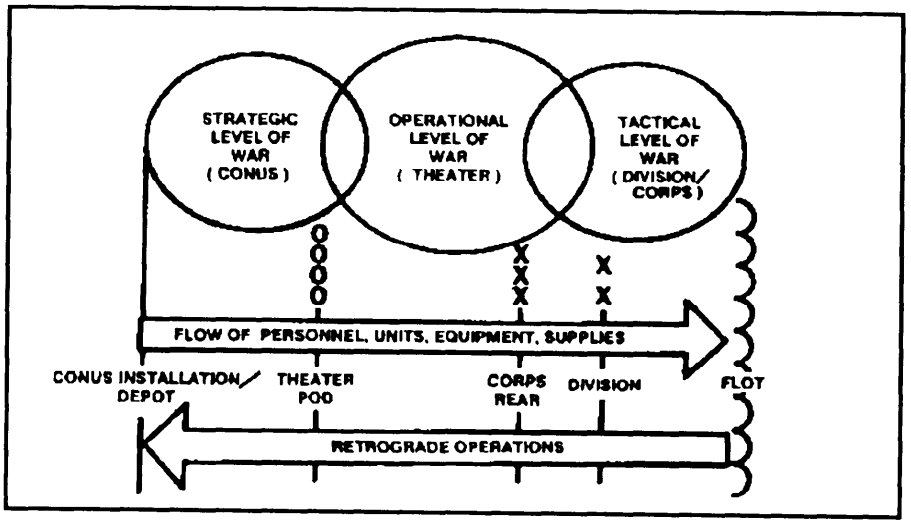


Figure 1-3. Movement Control Continuum.

1-4. MOVEMENT CONTROL

Movement control is the planning, routing, scheduling, controlling, coordination, and in-transit visibility of personnel, units, equipment, and supplies moving over LOC and the commitment of allocated transportation assets according to command planning directives. It is a continuum that involves synchronizing and integrating logistics, movement information, and programs that span the strategic, operational, and tactical levels of war. Movement control is guided by a system that balances requirements against capabilities and assigns resources based on the combat commander's priorities.

1-5. MOVEMENT CONTROL AND MANEUVER

a. Maneuver, according to FM 100-5, is the movement of forces supported by fire to achieve a position of advantage from which to destroy or threaten destruction of the enemy. At the operational level maneuver seeks a decisive impact on the conduct of a campaign. It attempts to gain advantage of position before battle and to exploit tactical success to achieve operational results. At the tactical level maneuver seeks to set the terms of combat in a battle or engagement. It is the means of gaining and sustaining the initiative, exploiting success, preserving freedom of action, and reducing the vulnerability of friendly forces.

b. Movement control is not intended to replace or infringe on the unit commander's responsibility to exercise organizational control of his unit's movement within the movement parameters defined by the area commander, whether that movement occurs as part of strategic deployment, onward movement from a port of debarkation (POD), or to an assembly area, Effective movement control is the linchpin that integrates logistics systems that sustain forces on the battlefield. As such, it becomes a combat multiplier.

c. To help determine whether a particular movement will be planned and controlled as movement or maneuver, planners should consider the following questions:

- What is moving units or sustainment?
- If it is a unit move, does the movement commit them to combat operations against an enemy force, regardless of their position on the battlefield?

d. Normally, maneuver control will be exercised by the G3 for movement of units committed to combat operations against an enemy force. This maybe at the tactical or operational level. It may include both combat and support units, especially tactical displacement of maneuver and fire support units. Normally, movement control will be exercised in moving personnel, supplies, and equipment to sustain forces and relocate combat or support units not directly committed to the battle. However, depending upon the adequacy of routes, the G3 may direct movement planners to assist in planning the movement of committed forces. The G3 must involve movement planners in maneuver planning to

synchronize and deconflict maneuver plans with existing movement plans. Movement planners must know both the commander's intent and operation plans (OPLANs), operation orders (OPORDs), and priorities to effectively execute the mission of movement control and support maneuver requirements.

1-6. BATTLEFIELD CIRCULATION CONTROL

a. Battlefield circulation control (BCC) is a major military police (MP) battlefield mission. Its purpose is to ensure that combat personnel, equipment, and supplies move smoothly, quickly, and with little interference on main supply routes (MSRs). BCC missions include route reconnaissance and surveillance, enforcement of highway regulation, straggler and refugee control, and information dissemination.

(1) As part of their BCC mission, MPs conduct route reconnaissance to obtain information on routes and on the nearby terrain from which the enemy can influence movement on those routes. They continually monitor the condition of MSRs and report these conditions to movement control organizations at all levels.

(2) MP units enforce the command's highway regulation plans to expedite movement on the MSRs. They use mobile teams, traffic control points, roadblocks, checkpoints, holding areas, and defiles at critical points.

b. BCC complements and enhances movement control. Movement planners must understand the capabilities of MP units and work closely with the MP to integrate and synchronize planning and execution. For more information, sec FM 19-1 and FM 19-4.

1-7. BASIC PRINCIPLES OF MOVEMENT CONTROL

The five basic principles of movement control provide a basis for all transportation operations. These principles arc discussed below.

a. Centralized Control/Decentralized Execution. Control of movements will be centralized at the highest level at which it can be adequately exercised by commanders charged with providing integrated logistical support and monitoring the transportation system and infrastructure. This requires a focal point for transportation movement planning and resource allocation at all levels. That focal point, whether it be an individual or a unit, must be constantly aware of requirements and capabilities. Decentralized execution enhances the flexibility to meet local requirements and to rapidly reprioritize support.

b. Regulated Movements. The need and capability for regulating movements have increased beyond that experienced in the past. This is the result of the requirement to support highly mobile forces, increased supply consumption rates, and the need to automate logistics operations. Regulation of transportation assets and LOC is required to prevent congestion and conflict of movements. This becomes even more critical if US forces must share available airfields, roads, rail lines, water terminals, and inland waterways with allied forces and the host nation. Movements must not be validated, approved, or initiated if any part of the transportation system cannot meet the requirement. Movements must be regulated according to command priorities.

c. Fluid and Flexible Movements. The transportation system must provide an uninterrupted flow of traffic. One of the biggest challenges of movement control is rapidly adjusting to changing battlefield conditions and priorities. Movement planners must anticipate the need for alternate modes and routes. Movement control cannot be successful unless traffic can be diverted or rerouted.

d. Maximum Use of Carrying Capacity. This principle involves more than just loading each transport vehicle to its maximum carrying capacity. Transport capability that is not used one day cannot be stored to provide an increase in capability for subsequent days. Similarly, fully loaded transport equipment sitting idle is as inefficient as moving partially loaded equipment. While allowing for adequate equipment maintenance and personnel rest, planners should keep transportation assets loaded and moving as much as the tactical situation permits. However, the commander may direct that vehicles or aircraft be held for special missions or movement of special weapons. Such use is considered an appropriate use of transportation assets.

e. Forward Support. Forward support is dependent on fast, reliable transportation to move supplies and personnel as far forward as required. Forward-oriented transportation support is a combat multiplier; it allows the commander to concentrate all his forces on the enemy. However, any requirement for forward support that relinquishes

centralized control must be balanced against the efficiency of the transportation system to provide time utility and to weight the battle at decisive times and places.

1-8. SUSTAINMENT IMPERATIVES

Just as the scale and complexity of warfare have increased, so has the importance of logistics to success in battle. An army's ability to marshal, transport, and distribute large quantities of materiel and personnel over the strategic, operational, and tactical levels of war can make the difference between victory or defeat. Maneuver and exploitation of tactical gains often depend on the adequacy of the forces' sustainment capability. Transportation support and highway regulation planning require that planners consider the five sustainment imperatives found in FM 100-10. These are anticipation, integration, continuity, responsiveness, and improvisation.

a. Anticipation. For movement planners, anticipation means being prepared to support combat operations at decisive times and places. It demands flexibility to accommodate change, the ability to see the battlefield, and a thorough understanding of the mission and concept of operations. Anticipation includes developing alternative plans to make up for closed rout es and fewer assets due to enemy action. Movement planners must also know the supply distribution system. This includes the location of supply activities, the frequency and magnitude of their transportation requirements, and their material and container-handling equipment capabilities. It also includes maintaining —

- Constant liaison with the DCSOPS/G3 and DCSLOG/G4 to evaluate current operations and conduct concurrent planning for future operations.
- Plans, procedures, and the capability to divert en route movements to meet changing priorities.
- Plans to rapidly support the transportation requirements or change in direction of the supported force.
- Plans to provide the movement support necessary for rapid exploitation of advantages on the battlefield.

b. Integration. Movement planning at all levels must be integrated into CSS and operation planning to ensure that movement plans support the concept of operation. Movement planners must determine both the specified and implied tasks in all orders. Transportation units must be located where they can provide responsive support.

c. Continuity. Sustainment cannot be interrupted for long without degrading the force's combat power. The frequent movement of combat forces and degradation to transportation capability will challenge the movement planner. He must constantly track these changes and be prepared to make adjustments. Transportation support cannot be interrupted even when relocating transportation units.

d. Responsiveness. Emergencies or unexpected opportunities require rapid response. Planning to meet such contingencies enhances responsiveness. This requires the movement planner to have current information on hand. He must know what assets can be diverted, the restrictions that may exist, and where backup support is available. All available resources must be balanced and matched against the immediate need. At the same time, the movement planner must recognize the impact of any interruption to the transportation system and act to restore continuous sustainment.

e. Improvisation. Enemy action, interrupted communication lines, and unexpected weather conditions disrupt plans and require improvisation. When this happens, normal procedures may sometimes be bypassed and unusual sources of transportation used. Improvisation is not without risk, but the risk of not improvising may be greater. The key to improvising is not to limit one's thinking.

Section III. AIRLAND BATTLE OPERATIONS

1-9. INTRODUCTION

This section describes fundamentals of AirLand Battle doctrine and its approach to fighting. Movement planners must integrate these fundamentals with movement control principles and sustainment imperatives and apply them to the METT-T components (Figure 1-4).

1-10. AIRLAND BATTLE DOCTRINE

AirLand Battle doctrine is based on securing or retaining the initiative and exercising it aggressively

	AGILITY	INITIATIVE	DEPTH	SYNCHRONIZATION
MOVEMENT CONTROL PRINCIPLES	• FLUID FLEXIBLE MOVEMENTS • FORWARD SUPPORT	• PROACTIVE • FORWARD SUPPORT	• CENTRALIZED CONTROL • FLUID FLEXIBLE MOVEMENTS	• REGULATED MOVEMENTS • MAXIMUM USE OF CARRYING CAPACITY • CENTRALIZED CONTROL/ DECENTRALIZED EXECUTION
SUSTAINMENT IMPERATIVES	• ANTICIPATION • RESPONSIVENESS • IMPROVISION	• IMPROVISATION • ANTICIPATION • RESPONSIVENESS	• INTEGRATION	• CONTINUITY

Figure 1-4. AirLand Battle Tenents.

to throw the enemy off balance. Rapid follow-up is essential to prevent the enemy's recovery. The movement planner must be prepared to support large scale movements on the battlefield and be able to maintain uninterrupted support despite unit relocations, depth of the battlefield, and enemy interdiction of logistics activities. Movement planners must be prepared for a war that will be fought with speed and intensity. The range and destructiveness of modern weapons systems, plus the high mobility of the combatants, generate a need for CSS that must be met with speed and flexibility. The movement planner must understand the mission of the supported force and know how the battle will be fought. He must know the commander's intent, objectives, and priorities. The movement planner must assess his capabilities, plan alternatives, and apply resources in the most responsive manner. He must be prepared to provide the support needed to allow the commander to exploit successes. Winning on the battlefield will depend on the Army's ability to fight and support according to four basic tenets: initiative, agility, depth, and synchronization.

a. Initiative. To achieve and maintain the initiative, the movement planner must understand the concept of operation and commander's intent. He must anticipate changes that will be required of the transportation system based on the conduct of operations and changing support priorities. He must be prepared to apply alternate modes and routes to compensate for the effects of weather, enemy action, and the movement of forces. To do this, the planner must be thoroughly familiar with the capabilities and limitations of various modes and plan for alternate routes.

b. Agility. Agility is the ability of friendly forces to act faster than the enemy. Movement planners at all levels must continuously see the battlefield, know the support priorities, and implement them. Junior leaders must be confident and able to act decisively within the scope of set priorities without guidance from a higher headquarters. Detailed planning of alternate courses of action enhances agility. Junior leaders will bear the brunt of the action required to provide uninterrupted support and allow CSS forces to sustain their agility.

c. Depth. To provide support in depth, the theater's transportation capability must be intensively managed. The long distances that must be covered to provide logistics support will require maximum use of transportation assets. During lull periods, every effort must be made to pre-position materiel. This must be done concurrently with moving division- and corps-size reinforcing units. No country has a system of improved roads that can support the volume of traffic that will occur as a reinforcing corps moves into contact, while at the same time maintaining logistics support to a corps on line. The capabilities of all available modes of transportation must be orchestrated. This will require an intensive effort in both movement and traffic control. The movement planner must know the transportation system. He must be aware that the

transportation network constantly changes as routes are blocked and bridges destroyed. He must keep current information on the status of all the capabilities and facilities within his area of responsibility and constantly inform the commander of asset use capacity and trends.

d. Synchronization. For the tactical commander, synchronization is the concentration of forces and fires at the point of decision. To help the tactical commander accomplish synchronization the movement plainer must effectively provide the required support. Reserve forces and supplies must be positioned at the point and time required. Movement planners must be involved with the tactical planners in the earliest stages of planning to ensure that the OPLAN is supportable and that the commander is aware of risks involved. Anticipation and planning result in synchronization — maximum economy of force and conservation of resources.

1-11. COMBAT OPERATIONS

a. Transportation units must be prepared to perform their mission in an environment where the enemy's capabilities vary widely. In high- or mid-intensity conflicts, these may be modern tank, motorized, or airborne forces. In low-intensity conflicts, less mechanized but otherwise well-equipped regular and irregular forces and terrorist groups can be expected to operate against US forces. Transportation units and infrastructure will be prime targets for all threat levels. Transportation units expect the use of NBC weapons on logistical facilities such as ports, airfields, supply points, and other areas where transporters must operate.

b. Close, deep, and rear operations occur at the same time and will require continuous synchronization. For commanders at division level and above, synchronization will require deliberate planning and staff coordination. At brigade level and below, the three operations are almost the same.

(1) Close operations at any level include the current activities of major committed combat forces and their combat support and CSS forces. At the operational level, close operations are the efforts of corps and divisions to win current battles. At the tactical level, close operations are the efforts of brigades, battalions, and companies to win current engagements. Highly mobile friendly and enemy forces and exposure to enemy fires will challenge logistical planning and operations.

(2) Deep operations at any level are activities directed at enemy forces not in contact and are designed to influence the course of future close operations. They deny the enemy resupply or reinforcement. Deep operations focus on enemy capabilities which most directly threaten the success of friendly operations. Providing logistical support to ground forces in deep operations will be an essential and hazardous task. When selecting modes and routes, the movement planner must consider enemy capabilities to disrupt operations and all possible obstacles. Then he must plan around them.

(3) Rear operations at any level are conducted behind friendly forces in contact with the enemy. They are critical to later operations. For logisticians, these operations focus on preparing for the next phase of the campaign. Rear operation activities with the greatest impact on the movement planner will be the assembly and movement of combat forces, materiel, and the relocation of CSS units. The movement planner must constantly keep informed of the location of supported units and activities. He must exercise highway regulation and synchronize highway regulation and traffic control with unit movement discipline.

c. Good intelligence is critical to any military operation. METT-T is a guide for intelligence preparation of the battlefield (IPB). METT-T components are–

(1) Mission. The first consideration in planning a CSS mission is to know and understand the mission of the supported combat commander. What is his objective? What is his intent? What is his scheme of maneuver? What is the time frame for achieving the objective?

(2) Enemy. Movement planners must anticipate enemy intentions and capabilities and how they can affect CSS operations. Many aspects of the enemy's makeup and actions should be considered in making and executing CSS plans. The enemy's air capability affects the location of critical ports, airfields, and transportation routes. It also influences the decision on conducting CSS activities at night.

(3) Terrain (weather). CSS commanders and staff officers must continuously assess terrain over which they will operate. The availability and condition of routes and facilities are of vital interest. The transporter must determine whether port facilities,

rail lines, road networks and airfields are available and usable. He must identify potential inhibitors to mission accomplishment such as choke points on supply routes. Weather also influences decisions. Areas with frequent heavy fog will slow ground movement of personnel and supplies and make aerial resupply almost impossible. Extremely hot weather will increase requirements for water transport and cause heat-related casualties to personnel and equip ment.

(4) Troops. The commander and staff must consider their personnel The morale and training of the troops will influence how the transportation mission is accomplished. Differences in training and leadership make some units more suitable for some missions than others. Relative strengths such as skill in night operations and map reading will influence all transport operations.

(5) Time. The amount of time available to plan and execute a transportation mission is measured by the clock and distance (miles/kilometers). Fifty miles on a first-class four-lane highway is shorter in time than 50 miles on an unimproved two-lane road. At the strategic and operational level, time for planning will probably be adequate. At the tactical level, time will be more critical due to rapidly changing tactical situations and requirements.

NOTE: See Appendix A through D for METT-T factors regarding SWA, Europe, Korea, and Central America.

Section IV. BASIC APPLICATIONS OF HOST-NATION SUPPORT

1-12. INTRODUCTION

The Army must be able to conduct successful combat operations on any battlefield. Identifying and using host- nation support (HNS) helps to accomplish missions and functions that support US forces and enhances the Army's capability to perform its wartime role. Reducing requirements for US personnel, materiel, and services in one theater allows flexibility in assigning forces to other missions or other theaters.

1-13. HOST-NATION SUPPORT

a. HNS is the manpower, equipment, and facilities an HN provides, mainly in administrative and logistic areas. HNS should be used to the limit of its assured availability. It can provide transportation support to US forces in a theater or area of operations when modes of transport and water terminals are available. Whenever possible, support agreements should be negotiated in advance between the US and potential host or third countries. However, not having HNS agreements does not rule out using or planning for HNS.

b. HNS is primarily obtained by international standardization agreements (ISAs), joint plans, and contingency contracting.

(1) ISAs are agreements among several nations to adopt the same or similar operational, logistical, and administrative procedures. The ISAs' main advantage is that the system and documentation requirements are the same in peace and war.

(2) Joint logistic plans are formal agreements negotiated with potential sources of HNS. Where possible, civilian transport is identified and earmarked for HNS, culminating in a dormant hire contract. The plans detail the working base from which to start in an emergency. The production and practice of such plans in exercises encourages liaison and joins the appropriate staffs and government agencies from all countries involved. This working relationship will help with ad hoc planning once hostilities begin.

(3) Contingency contracting arrangements cover all requirements that have not been planned for, including changes to plans and new requirements as they occur. Making this system work depends on knowing and practicing interface at the appropriate staff levels with the HN.

CHAPTER 2

STRATEGIC MOVEMENT CONTROL

Section I. STRATEGIC DEPLOYMENT

2-1. INTRODUCTION

a. Strategic movement will usually be conducted as a joint operation in support of force projection. As such, it is important for movement planners to understand the Army's role in joint planning and how movement control is planned and conducted for joint operations. This chapter provides an overview of strategic movement control. The first section describes strategic deployment. The second section describes movement control in a theater of operations, which addresses the conduct of the operational and tactical levels of war.

b. JCS Publication 4-01.3 outlines the procedures for conducting movement control in support of joint operations. It defines movement control to be the most critical of the three elements of a transportation system that includes movement control mode operations, and terminal operations. Movement control is the cornerstone because it coordinates integration of modes and terminals in executing strategic movement. FM 55-65 addresses unit level deployment planning and procedures for strategic deployment by surface transportation.

2-2. STRATEGIC DEPLOYMENT

a. As shown in Figure 2-1, deployment consists of five phases spanning the strategic operational and tactical levels of war.

b. The first three phases of deployment are in the realm of the strategic level of war. They include predeployment activities, movement to the POE, and strategic lift. Strategic deployment ends at the APOD or SPOD. USTRANSCOM, in coordination with the supporting and supported combatant commanders and the services, executes the mission of movement control for these phases of deployment.

c. The last two phases of deployment are reception at the POD and onward movement to the area where the forces will either assemble or be committed. These phases are normally in the realm of the operational level of war but maybe in the tactical level. The theater combatant commander is responsible for reception and onward movement.

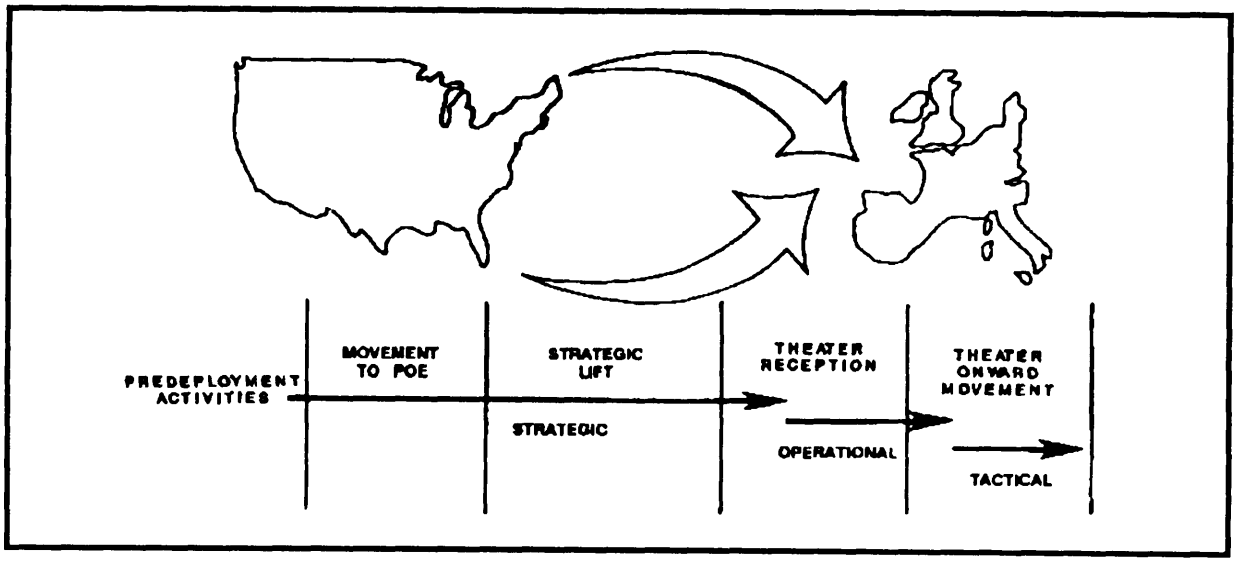


Figure 2-1. Deployment Phases.

d. The effective interface of the five phases of deployment into an integrated system is crucial to the successful deployment and sustainment of military forces committed to a theater of operations. It is the responsibility of USTRANSCOM and the supporting and supported combatant commanders to coordinate the flow of forces and sustainment through theater PODs and to provide the interface necessary to execute strategic movement control.

2-3. STRATEGIC DEPLOYMENT PLANNING

a. Strategic planning begins when the JCS directs the theater combatant commander to prepare plans to support military responses to specific events which may occur in their theater of operations. The theater combatant commander conducts both deliberate and crisis action planning. The fundamental difference between the two is the amount of time available to prepare and execute the plan.

(1) Deliberate planning is the process used when time permits the total participation of commanders and staffs of the supported and supporting commands. Procedures involve developing an OPLAN which consists of detailed planning for both the strategic movement of forces and for committing those forces upon their arrival in the theater. The planning cycle for deliberate planning is 18 to 24 months.

(2) Crisis action planning is conducted during emergencies. The procedures are similar to those used for deliberate planning but are more flexible to respond to changing events.

b. During OPLAN development, the theater combatant commander makes decisions regarding the employment of military forces. These decisions translate into time-phased movement requirements for forces and sustainment. In coordination with USTRANSCOM and supporting combatant commanders, the theater combatant commander balances force and sustainment movement requirements with strategic lift assets apportioned by the JCS. During this process, the theater combatant commander uses the Joint Operations Planning and Execution System (JOPES) to develop time-phased force deployment data (TPFDD).

c. The TPFDD is a transportation supportable movement plan for units and sustainment. It contains prioritized arrival, routing, and movement data associated with forces and sustainment. Sustainment is identified as nonunit requirements as they are not related to a specific deploying unit. During OPLAN execution, USTRANSCOM translates TPFDD data into unit and nonunit port calls, which become deployment schedules.

d. The objective of strategic deployment is the arrival of forces at the right place and time. The process must be responsive and flexible to changes due to loss or delay of strategic lift assets, weather problems, or changes directed by the theater combatant commander. Strategic movement control planners, mode operators, and deploying units must anticipate and be receptive to the theater combatant commander's directives which could require changing the CONUS movement to POE and strategic lift schedules.

2-4. STRATEGIC DEPLOYMENT PLANNING SYSTEMS

The following joint (J) and Army (A) systems help strategic level planners and mode operators in planning and executing strategic deployment.

a. (J) The Global Transportation Network (GTN) is an umbrella term used to describe the USTRANSCOM effort to integrate automatic data processing (ADP) systems used by the services, defense agencies, and transportation component commands to manage cargo and passenger movements in the defense transportation system (DTS) and provide in-transit visibility. GTN provides USTRANSCOM and its component commands automated support to plan, provide, and control common-user ground transportation, airlift, sealift, and terminal service to deploy, employ, and sustain US forces on a global basis during peace and war. GTN compiles movement requirements from various source systems and provides command and control (C2) information to allow USTRANSCOM to plan and direct movement operations and evaluate operational performance.

b. (J) JOPES is the DOD-directed, JCS implemented, integrated, conventional C2 system designed to satisfy the information needs of senior level decision makers in conducting joint planning and operations. JOPES is used to monitor, plan, and execute mobilization, deployment, employment, and sustainment activities. For strategic movement planning, JOPES also produces the TPFDD.

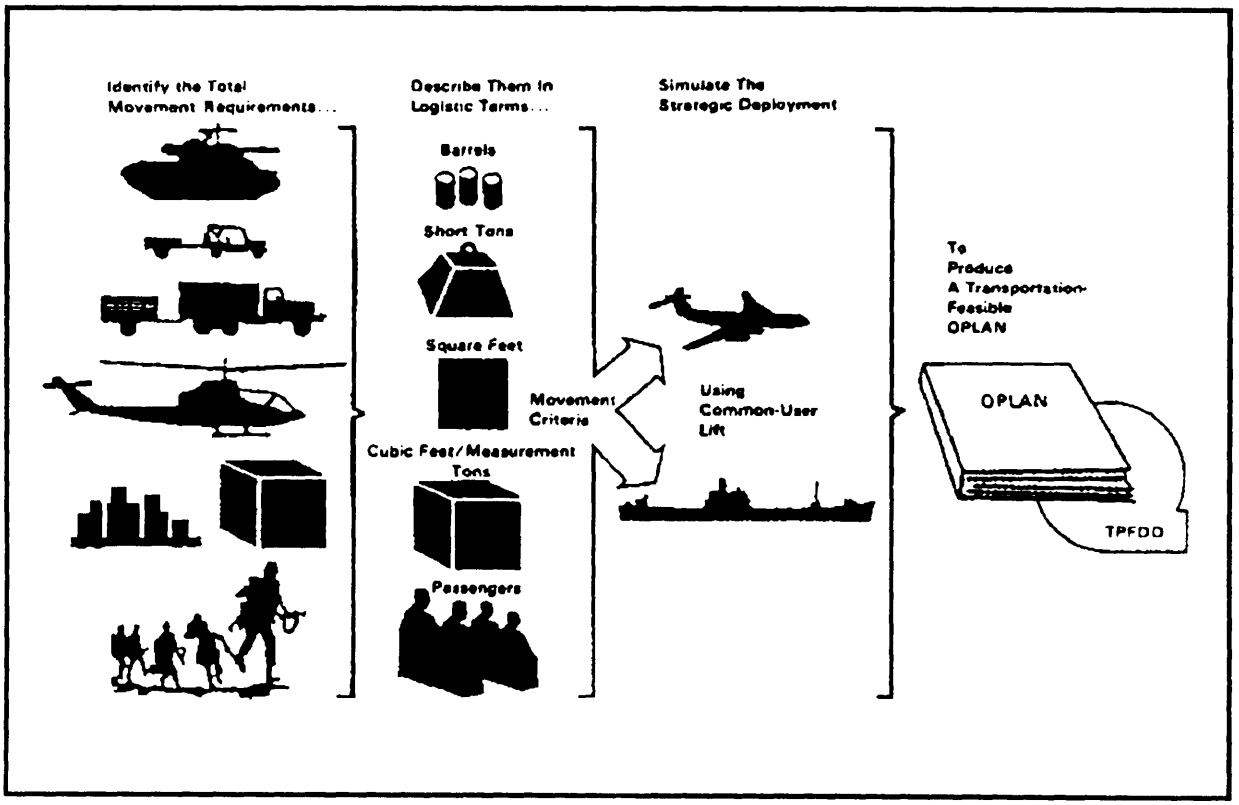


Figure 2-2. The Strategic Transportation Problem.

c. (J) The Transportation Coordinator-Automated Information Management System (TC-AIMS) is a joint service initiative to provide the installation and unit with an automated capability to generate and maintain movement data for peacetime, mobilization and deployment, and C2 reporting. The Army component system of TC-AIMS is the Transportation Coordinator-Automated Command and Control Information System (TC-ACCIS).

d. (J) The Automated System for Processing Unit Requirements (ASPUR) is a Military Traffic Management Command (MTMC) system that receives unit equipment list data from installation TC-AIMS or TC-ACCIS systems to produce ship loading plans that result in units receiving port calls for movement to the POE.

e. (A) TC-ACCIS is the Army's information management and data communications system that active and reserve component units and installations use to plan and execute movements during peacetime and crisis situations. TC-ACCIS maintains unit equipment lists, transmits the data to FORSCOM for joint planning and reporting, transmits the data to MTMC for routing, receives routing and port calls, and generates transportation documentation.

f. (A) The Computerized Movement Planning and Status System (COMPASS) is a FORSCOM system designed to support Army unit movement planning in support of joint operations planning and reporting requirements. It generates transportation requirements for active and reserve component units. This system, or TC-ACCIS, generates the automated unit equipment list (AUEL), which reflects the go-to-war equipment profile provided by deploying units.

g. (A) The Mobilization Shipments Configured for Operational Planning and Execution (MOBSCOPE) provides for planning and initiating Army reserve component mobilization movements (home station to mobilization station). MOBSCOPE uses COMPASS data to generate movement requirements and provide these requirements to MTMC.

h. (J) Mobilization Movement Control (MOBCON) schedules and deconflicts convoy movements from home station to mobilization station or POE. MOBCON is managed by defense movement coordinators (DMCs) in each National Guard State Area Command (STARC) state movement control center (SMCC). The DMC collects, analyzes, and combines all DOD-organic highway movements. The DMC approves military convoys which originate in their state. Generally, DMCS are responsible only for Army Reserve and National Guard convoys. Upon FORSCOM order, active component units will be integrated into MOBCON.

2-5. STRATEGIC DEPLOYMENT MOVEMENT CONTROL ORGANIZATIONS

a. The Department of Defense (DOD) deployment manager is the USTRANSCOM. USTRANSCOM provides global land sea, and air transportation in support of national security objectives. USTRANSCOM uses the GTN and JOPES to manage cargo and passenger movements through the DTS. The DTS consists of transportation policies, procedures, and methods used by DOD organizations, other federal agencies, and commercial activities to move DOD-sponsored personnel and equipment. While JOPES is used to plan the movement, DTS is used to execute the movement.

b. USTRANSCOM performs its mission by coordinating the efforts among its three component commands, the joint planning and execution community (JPEC), the supporting and supported combatant commanders, and commercial activities. The three component commands of USTRANSCOM as described in Figure 2-3 are the –

- Military Sealift Command (MSC).
- Air Mobility Command (AMC) formally the Military Airlift Command (MAC).
- MTMC.

MSC provides strategic sealift assets. AMC provides strategic airlift assets, airlift control elements, and operates selected aerial ports MTMC coordinates surface transportation for mobilization movements and movement to POEs. It procures and routes commercial transportation, operates common-user seaports, and provides deploying units with port call messages.

c. Supporting combatant commanders and the services provide forces to the supported combatant commanders and are responsible for ensuring their arrival at the POE according to port call messages This entails predeployment activities and the movement of active duty units from their installations and/or the movement of RC units from home stations to mobilization stations for logistic preparation and training before deployment. FM 100-17 will describe this process in detail. As the major supporting combatant commander that provides Army forces, FORSCOM has established procedures and systems to discharge this responsibility. These include the Forces Command Mobilization and Deployment Planning System (FORMDEPS) and FORSCOM Regulations 55-1 and 55-2. General responsibilities are to —

- Redistribute personnel and equipment.
- Coordinate requirements with USTRANSCOM.
- Coordinate TPFDD changes with the theater combatant commander.
- Direct deployment schedule changes to mobilization station.
- On order, relinquish command of deploying units to gaining commander.

d. The numbered Armies in the continental United States (CONUSAs) and STARCs play a key role in military convoy movements in CONUS depending upon the level of mobilization.

(1) CONUSAs may become Joint Regional Defense Commands (JRDCs). This is planned to occur upon order for full mobilization but may occur to selectively improve C2 for less-than-full mobilization. When this occurs, the JRDC's movement control responsibilities include monitoring military movements, providing liaison with POEs and installations, and providing liaison with Federal Emergency Management Agency (FEMA) regional offices. The JRDC will aIso prioritize and allocate movement related resources to include road space and marshaling areas.

(2) STARCs may become Joint State Area Commands (JSACs). DMCs in the SMCCs manage military highway movements. They assign road space for units based on port calls, monitor all DOD military movements, and coordinate with federal and state civil agencies for the units' mobilization and deployment needs.

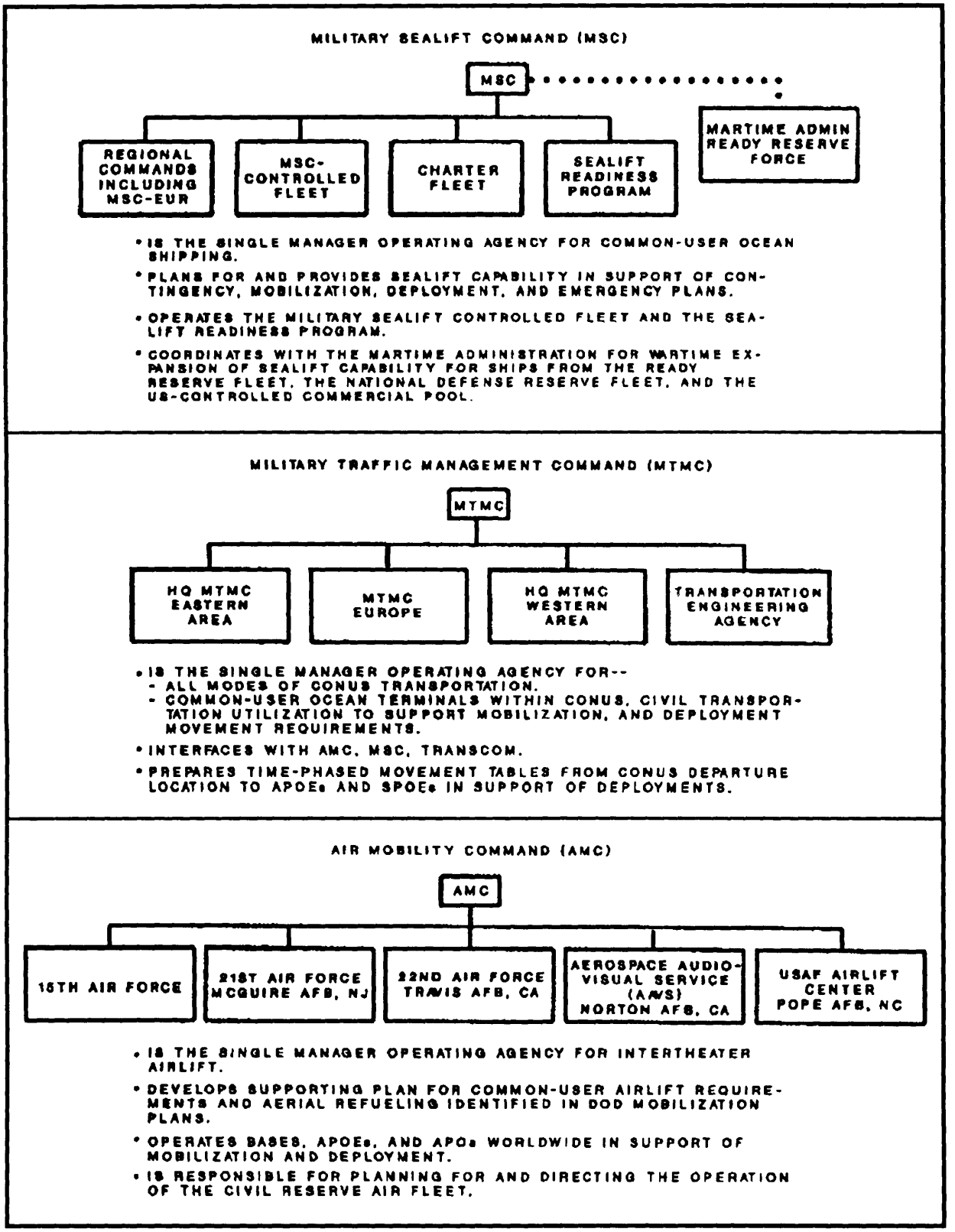


Figure 2-3. Transportation Component Commands.

e. Military installations play a key role in movement control. In their capacity as mobilization stations, coordinating installations, or supporting installations, they—

- Prepare units for deployment.
- Guide and assist assigned and supported units in preparing, maintaining, and executing unit movement plans and related documentation. They process unit movement data, convoy clearances, and permits. They also procure transportation for movement to the POE.
- Provide the arrival/departure airfield control groups (A/DACGs) to the APOE and port support activities (PSAs) to the SPOE.
- Provide selected logistic support to POEs or en route deploying units as outlined in coordinated plans, standing operating procedures (SOPs), or regulations.
- Control units until deployed from the POE.
- Provide marshaling and convoy holding areas.
- Serve as point of contact for updating unit movement data through AUEL refinement.

f. The unit movement coordinator (UMC) is the principal transportation point of contact for deploying units. UMCs are located at two levels: as a member of the installation transportation office (ITO) staff and in the reserve component forces. FORSCOM Regulation 55-1 outlines UMC duties for FORSCOM units and is a good guide for other commands. The UMC conducts movement preparation and planning and coordinates convoy routes. The UMC is the manager of unit movement data at the installation level.

g. The CONUS mobilization station UMC uses TC-ACCIS or COMPASS to provide real-time data to FORSCOM, the POEs, MTMC, or other installations. The UMC updates the unit's movement data so supporting installations can plan logistic support and POEs can plan for air loading and vessel stowage. Through logistics application of automated marking and reading symbols (LOGMARS), this data becomes a tool for in-transit visibility within CONUS.

h. Federal and state agencies also play an important role in movement control. When directed by the President, the FEMA coordinates and adjudicates issues involving priorities and allocation of nonindustrial facilities according to DOD Directive 3005.2 and AR 500-10. FEMA, as one of its many responsibilities, maintains a national system for emergency coordination of transportation activities to include resource mobilization policy guidance and procedures. The state DOTs or equivalent agencies for public highways, toll roads, bridges and tunnels administer traffic regulations in their states and agencies.

2-6. UNIT DEPLOYMENT

a. The deploying unit is responsible for moving its personnel and equipment to mobilization stations and/or POEs. FORSCOM Regulations 55-1 and 55-2 require units to develop unit movement plans and to submit unit movement data. This data is used by movement control and logistics planners to plan and determine requirements for strategic deployment.

b. The unit submits transportation requests and highway movement requests to its UMC or DMC. These requests become the basis of planning and deconflicting highway use in the MOBCON process and planning commercial transportation requirements by the ITO and MTMC.

c. Upon receipt of a MTMC or AMC port call, the installation/mobilization station UMC coordinates convoy movement and transportation support for movement of personnel and equipment to the POE.

d. Transportation options for unit equipment movement within CONUS are governed by MTMC Transportation Engineering Agency Pamphlet 710-2. Commercial transportation will be used for moving unit equipmemt except when units are located–

- Within a one-day road march to the mobilization station or POE.
- More than a one-day road march to the mobilization station or POE and commercial transportation is not available or cannot meet the required delivey date (RDD) (Figure 2-4).

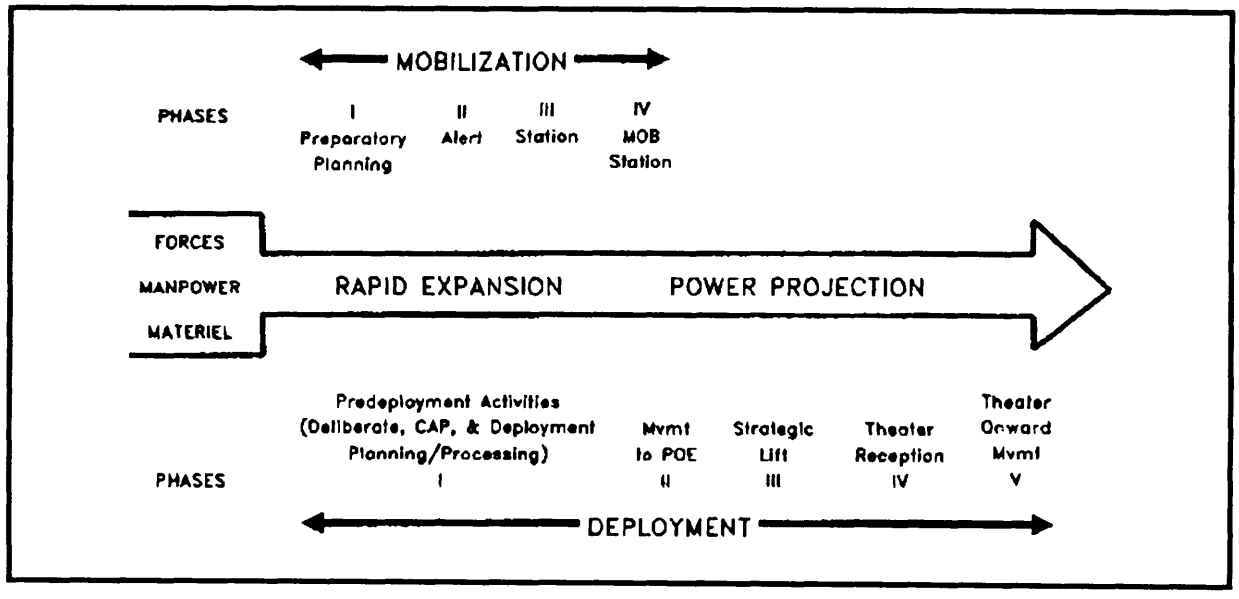


Figure 2-4. Conceptual Mobilization Deployment Sequence.

Section II. THEATER MOVEMENT CONTROL SYSTEM

2-7. INTRODUCTION

a. This section outlines movement control operations at the theater level. It explains command relationships, logistical responsibilities, and functions of joint movement control organizations.

b. The ability to monitor and coordinate common-user transportation is essential to the success of joint operations. The theater combatant commander normally integrates the transportation capabilities of his component commanders in establishing the theater movement control system. This results in a movement control system that relies on decemtralized execution but retains the capabilit y of the theater combatant commander to set policies and priorities.

c. This section serves only as a guide. Joint planners, acting within the limits of their authority, must adopt the organizational scheme and procedures applicable to their theater. Centralized control and decentralized execution is a basic transportation guideline that should be implemented to enhance operations.

2-8. COMMAND RELATIONSHIPS

a. Within a theater of operations, US Army forces are employed under a joint or combined command (Figure 2-5). The theater combatant commander organizes the command to meet the needs of the theater and exercises combatant command of all assigned forces. Normally, combatant command is exercised through component commanders (theater Army, Navy, Air Force, and Marines) or subordinate joint task force commanders.

b. For logistics within the theater of operations, the theater combatant commander exercises directive authority. Directive authority for logistics supports the theater combatant commander's responsibility to effectively execute operational plans, maintain effectiveness and economy of operation, and prevent duplication of facilities and resources.

(1) In exercising directive authority for transportation services, the theater combatant commander may delegate the operation of common-user transportation modes and terminals to a component while retaining the authority to set priorities, apportion resources, and monitor the entire operation.

(2) In exercising directive authority for movement control, the theater combatant commander may allow component commanders to plan for and perform their own movement control create fully integrated joint organizations such as a joint transportation board (JTB) or joint movement center (JMC), or assign responsibility to one of his staff elements. Figure 2-6 shows the relationship of Army EAC transportation organizations in a joint command.

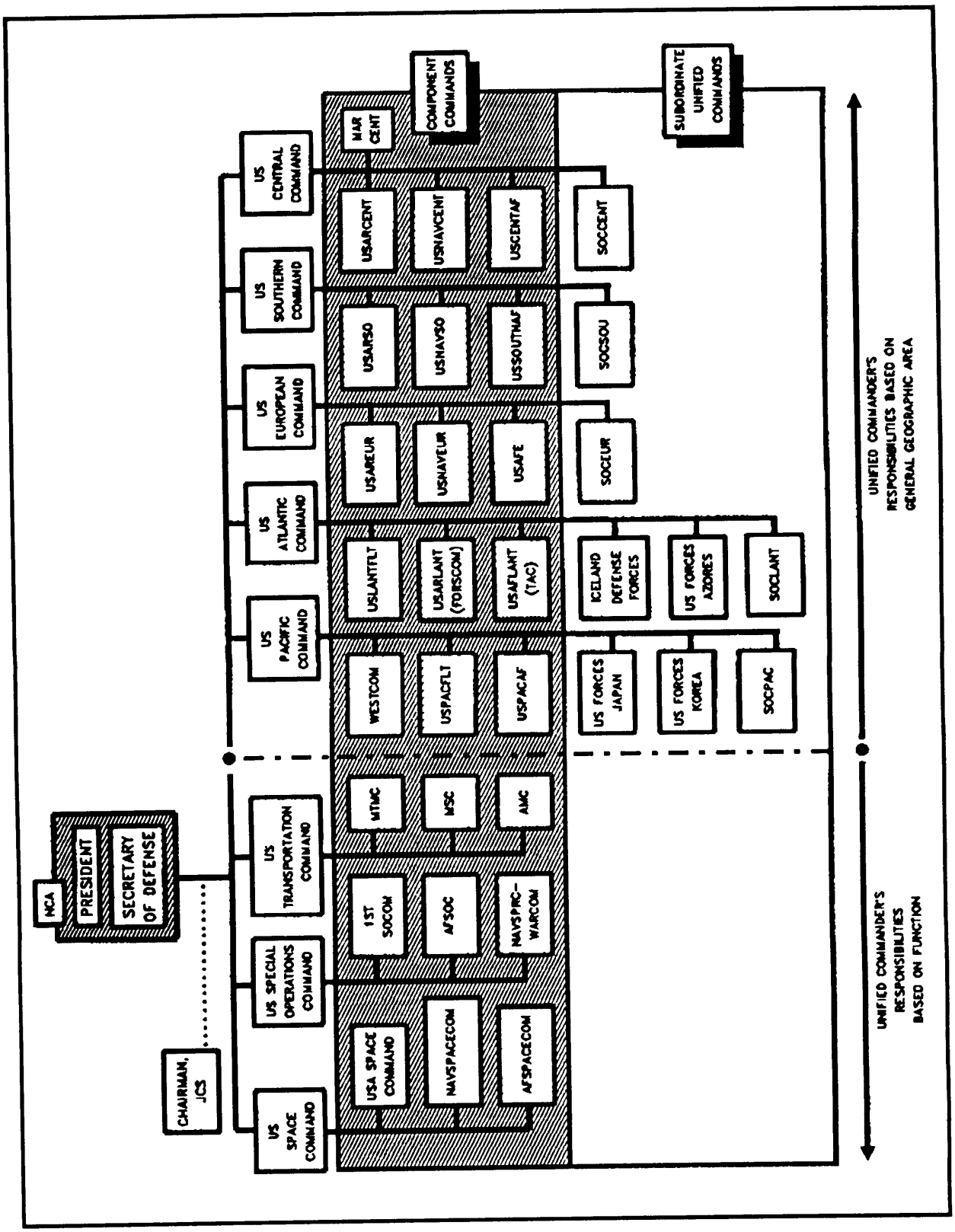


Figure 2-5. Unified Command Organization.

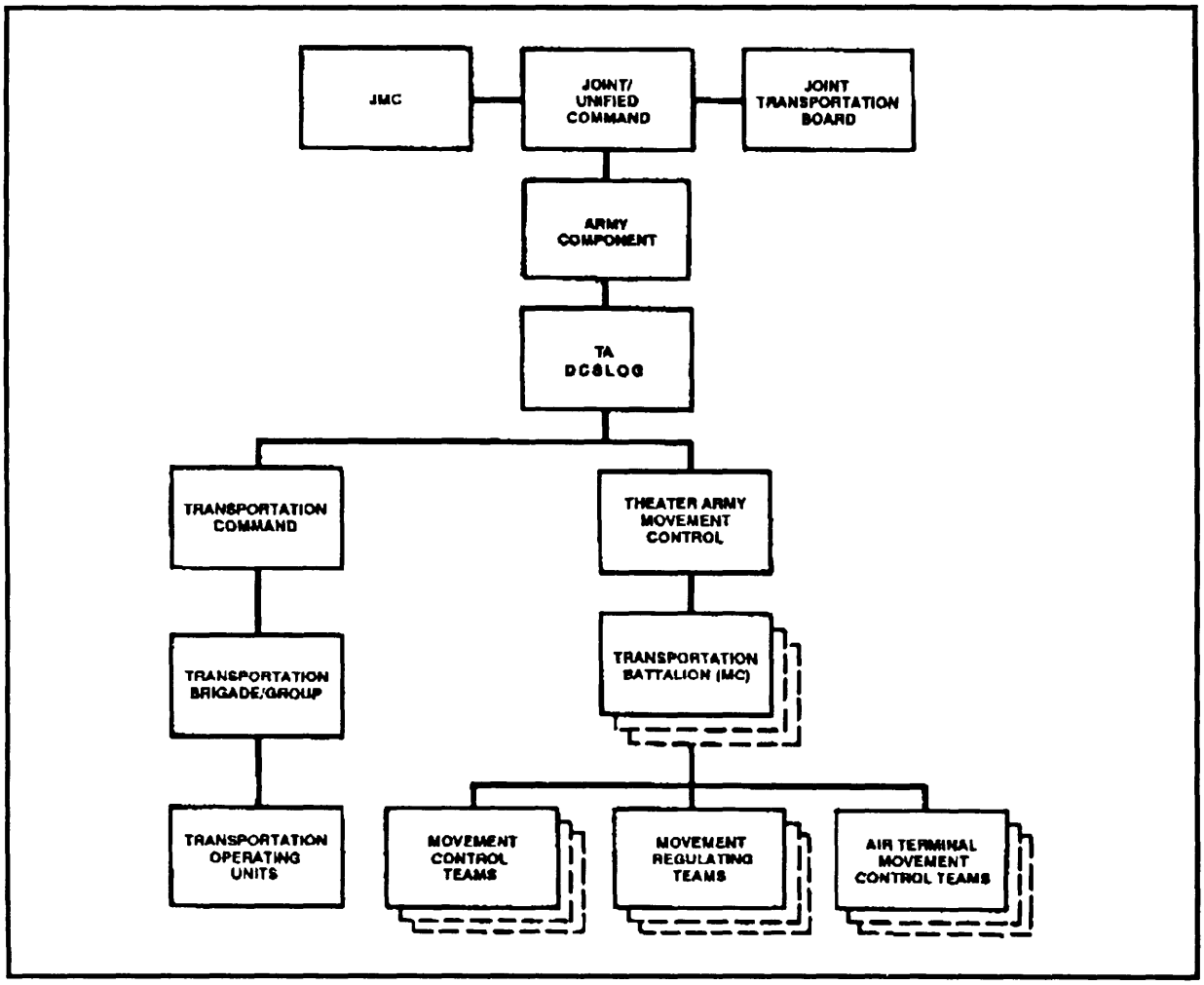


Figure 2-6. Transportation Organizations in a Joint/Unified Command.

c. A combined command differs from a joint command in that a combined command is established when US forces are working with allied and/or HN forces. The combined commander maybe a US officer or an allied officer depending upon qualifications, seniority, and international alliance. In a combined command, logistics is normally a national responsibility. However, the combined commander may exercise directive authority based on international agreements, resulting in some form of coalition logistics or international sharing of single nation logistical support.

2-9. TRANSPORTATION AND LOGISTICS ARRANGEMENTS IN A JOINT FORCE

a. It is established US policy that the services, however employed, will provide their own logistic support. However, the theater combatant commander exercises directive authority over logistics operations within his area of responsibility. This authority is given to the theater combatant commander to ensure the effective execution of OPLANs, to provide effectiveness and economy in operations, and to prevent or eliminate unnecessary duplication of facilities and overlapping of functions among the components.

b. The theater combatant commander may establish uni-service, cross-servicing, common-servicing, and joint-servicing support arrangements. He may also assign logistic responsibility, including transportation, using the dominant user or most capable service concepts. Under these concepts, the theater combatant commander may assign the component with the highest requirement or the

greatest capability to provide a particular service the responsibility for providing it to the other components. Therefore, Army component movement control organizations must be prepared to support the other components. The JMC will help in this task by providing the visibility of current and projected requirements and resolving routine questions concerning priorities.

(1) Within the theater, the Army component is the usual provider of common-user land and inland waterway transportation, and of water terminal operations. Additionally, the Army has the mission to conduct logistics over-the-shore (LOTS) operations. The Army movement control organizations in the theater may provide support to the other components on an area basis.

(2) The Air Force provides common-user airlift. The theater combatant commander exercises combatant command over all theater assigned common-user airlift assets. This authority is exercised through the Air Force component commander. The Air Force component commander exercises operational control over all assigned or attached common-user airlift assets through a C2 agency, formerly known as the commander of airlift forces (COMALF). The C2 agency executes validated, prioritized theater airlift requests for the theater combatant commander.

(3) The Navy, through MSC, provides common-user sealift for use within the theater. Through Navy cargo-handling battalions and Navy cargo-handling and port group organizations, the Navy can also conduct limited common-user port operations. The Navy performs its movement control operations through the Navy component commander, advanced logistics support site, forward logistics site, or a designated fleet port representative who coordinates Navy land transportation requirements with the sup porting Army movement control organizations.

(4) The Marine Corps has a capability for organic user port operations on a limited basis. To perform movement control missions and support the requirements of the Marine Air Ground Task Force (MAGTF), the Marine Corps has strategic mobility offices (SMOs) organic to the MAGTF. The SMO coordinates USMC movement requirements with the JFC, JMC, USTRANSOM, and the transportation component commands (TCCs). The deploying MAGTF will be supported by activation of a force movement control center (FMCC) to obtain and manage land transportation and to coordinate with supporting Army movement control organizations.

2-10. THEATER JOINT MOVEMENT CONTROL ORGANIZATIONS

a. JTB. The theater combatant commander may establish a JTB depending upon the size of the task. The JTB mission is to interpret policies and resolve overlapping transportation priorities for the JFC. It is routinely made up of representatives from the service components, movement control agencies, and the J3 and J4 of the combatant command. The JTB is not a day-to-day activity, it only meets when required to review priorities and policies and to resolve problems considered to be beyond the capabilities of a JMC. It may also meet to consider the apportionment recommendations prepared by a JMC for future operations.

b. JMC. The theater combatant commander may establish a JMC to coordinate strategic movements with USTRANSCOM and to oversee execution of theater transportation priorities.

(1) The JMC plans future operations and monitors overall theater transportation performance. It accomplishes its mission by conducting cyclic reviews of apportionment and by acting on emergency transportation requests. The JMC performs the planning task by continual monitoring of the balance between forecasted requirements and current capabilities of all modes. It expedites action and coordination for immediate movement requirements to ensure effective and efficient use of transportation resources. The JMC, normally through the J4, also acts as the primary advisor to the JFC in the apportionment of transportation capability when there is no JTB. When established, the JMC should act as the movements C2 cell for the JFC during the deployment phase of the operation.

(2) The JMC is usually organized along functional lines and is the nucleus of an organization that can be expanded in proportion to the size of the joint force during OPLAN execution. It maybe manned by service component personnel or be created from a service movement control agency (MCA), such as a theater Army movement control agency (TAMCA). The theater combatant commander will

choose the organization's structure based upon which service has the dominant forces in the command, has the largest requirements, or has the greatest capability to provide resources.

(3) The JMC's major responsibilities include–

(a) Planning common-user theater transportation by land, sea, and air (excluding bulk liquid fuel that moves by pipeline) by developing a movement plan which supports the priorities of the theater combatant commander.

(b) Apportioning common-user transportation capability available within the command among the projected transportation tasks. Apportionments are included in the JMC movement plan and are approved by the theater combatant commander. JMCs allocate apportioned common-user transportation to the components.

(c) Forecasting long-term movement requirements by analyzing requirements, capabilities, shortfalls alternatives and enhancements to the DTS and by developing options and recommending courses of action.

(d) Receiving and acting on airlift requests received from authorized component validators by monitoring airlift performance and operations of aerial ports, reviewing and validating airlift channels, monitoring air deployment of major forces and affecting changes to movement requirements and priorities in JOPES, and monitoring the use and return of containers and Air Force 463L pallets.

(e) Monitoring sea deployment of forces and recommending changes to movement requirements and priorities in JOPES by coordinating with the appropriate port commanders for all seaport operations, and reviewing and validating sea channels; and monitoring container control activities of all joint force components.

(f) Deconflicting transportation requirements that cannot be met at lower levels in the movement control system by monitoring movement of forces during deployments; monitoring port clearance, rail, highway, and waterway activities; maintaining and disseminating military route network information; and developing plans for repair of road networks and coordinating with engineers and HNS.

CHAPTER 3

MOVEMENT CONTROL AT ECHELONS ABOVE CORPS

Section I. THEATER ARMY ORGANIZATION

3-1. INTRODUCTION

a. Movement control in the theater Army (TA) is performed by movement control organizations and staffs at TA, corps, and division levels. This chapter describes movement control functions performed by the TA staff, the TAMCA and its subordinate transportation battalions (MC), and movement control teams (MCTs).

b. At theater level, centralized movement control is an imperative to accomplish the last two phases of strategic movement: reception and onward movement. It is also vital for sustaining the corps and divisions, along with supporting any joint service requirements assigned by the theater combatant commander to the TA commander.

3-2. TA HEADQUARTERS

a. The TA headquarters structure provides for centralized planning and coordinating. It manages support missions through a flexible combination of area-oriented and functional commands. The TA staff sets broad plans and policies to guide subordinate commands, controls and allocates critical material, and assigns missions to manage CSS to major subordinate commanders.

b. The general staff of TA headquarters is a coordinating staff. On technical matters, the general staff has direct liaison with staff counterparts of the subordinate commands. In some cases, the commanders of certain functional commands serve concurrently as TA headquarters staff officers. When this occurs, TA staff personnel are provided by their respective functional commands or by augmentation.

c. The general staff normally manages by exception, leaving day-to-day operations, implementation, and management to subordinate commands. The TAMCA, operating under the staff supervision of the TA Deputy Chief of Staff, Logistics (DCSLOG), is the day-to-day manager of transportation within the theater. Section II discusses the TAMCA in detail.

3-3. TA ORGANIZATION

Before and during the early stages of a war, the TA may approximate the organization shown in Figure 3-1. During buildup or as the war progresses, it may approximate the organization shown in Figure 3-2.

3-4. STAFF FUNCTIONS

a. FM 100-16 describes CSS operations at the TA level and assigns staff responsibility for transportation to the TA DCSLOG. Theater movement control structure is shown in Figure 3-3 (page 3-4). Figure 3-4 (page 3-4) shows movement control and mode operating units at EAC along with the relationship of the TA DCSLOG to these organizations.

b. The TA DCSLOG has a transportation staff to execute the responsibilities associated with staff supervision of transportation services. In addition to those above, this staff also –

- Advises the commanders and staff on all transportation matters.
- Provides technical assistance to the TAMCA.
- Acts as the transportation staff link between TA and the JTB.
- Develops plans or planning guidance to provide efficient transportation service for the command.

In carrying out his responsibilities to the TA commander, the TA DCSLOG –

(1) Prepares broad planning guides and policies for transportation and develops theater transportation plans.

(2) Provides technical assistance to the TAMCA and TRANSCOM. The TA general staff can access the TAMCA and TRANSCOM through normal communications. When an integrated

transportation computer system is developed for the TA, communications between the TA staff, TAMCA, and TRANSCOM will be enhanced.

(3) Prepares transportation planning guides for TA support, base development, troop bases for future operations, and transportation unit participation in rear battle operations.

(4) Recommends allocation and use of TA transportation resources.

(5) Coordinates with and provides liaison to US Air Force and Navy for the use of allocated transportation and for Army transportation support of the other services.

(6) Coordinates with the TA provost marshal on control of military traffic within the communications zone (COMMZ) and physical security of transportation facilities and surface LOCS (rail, highway, inland waterways).

(7) Prepares broad policies and guidance in close coordination with the TA deputy chief of staff for HN activities to acquire and use HN and allied-nation transportation resources.

(8) Develops long-range plans for transportation service, troop support, and use of both military and civilian resources.

(9) Establishes policy and procedures to operate and maintain administrative-use vehicles.

Section II. MOVEMENT CONTROL ORGANIZATIONS AT EAC

3-5. INTRODUCTION

At EAC, movement control functions are performed by the TAMCA, its subordinate transportation battalions (MC), and their subordinate MCTs. The TAMCA organization is flexible and designed to meet the specific transportation and movement control requirements of the theater. It uses a building block concept, which assigns the correct mix of battalions and teams to perform its mission based upon the geographical size of the theater, the number of forces, the transportation infrastructure, and the number and type of movement requirements.

3-6. THEATER ARMY MOVEMENT CONTROL AGENCY

a. The TAMCA is aligned to the DCSLOG, TA. The TAMCA serves as the executive agent and primary staff element to the TA commander for planning and controlling theater transportation operations. The TAMCA implements theater priorities established by the Deputy Chief of Staff, Operations (DCSOPS) in support of the commander's concept of operation. This requires close coordination with supply, maintenance, and transportation planners and operators.

b. The TAMCA plans and coordinates reception and onward movement so units, personnel, and materiel are received in the theater and delivered to destination with minimum delay.

c. The TAMCA coordinates and maintains the status of shipments into the theater and their delivery to destination. To accomplish this mission, the TAMCA requires automated systems to interface and communicate with activities worldwide that support the movement of forces and sustainment into the theater.

d. The TAMCA mission is to provide movement management services and highway traffic regulation and to coordinate for personnel and materiel movements into, within, and out of the theater. The TAMCA coordinates with allied-nation and HN MCAS and transportation component commands as required. The TAMCA–

- Supports US, allied-nation, and HN forces as required. It can be structured as a combined, unified, or US Army agency as determined by the theater commander.
- Prepares movement and port clearance plans and programs, including reception and onward movement.
- Conducts liaison with higher and lower movement control organizations, HN transportation agencies, transportation mode operators, and customers.
- Maintains status of movement capabilities.
- Commands and controls transportation battalions (MC) and MCTs.
- Provides technical assistance to corps movement control centers (MCC).

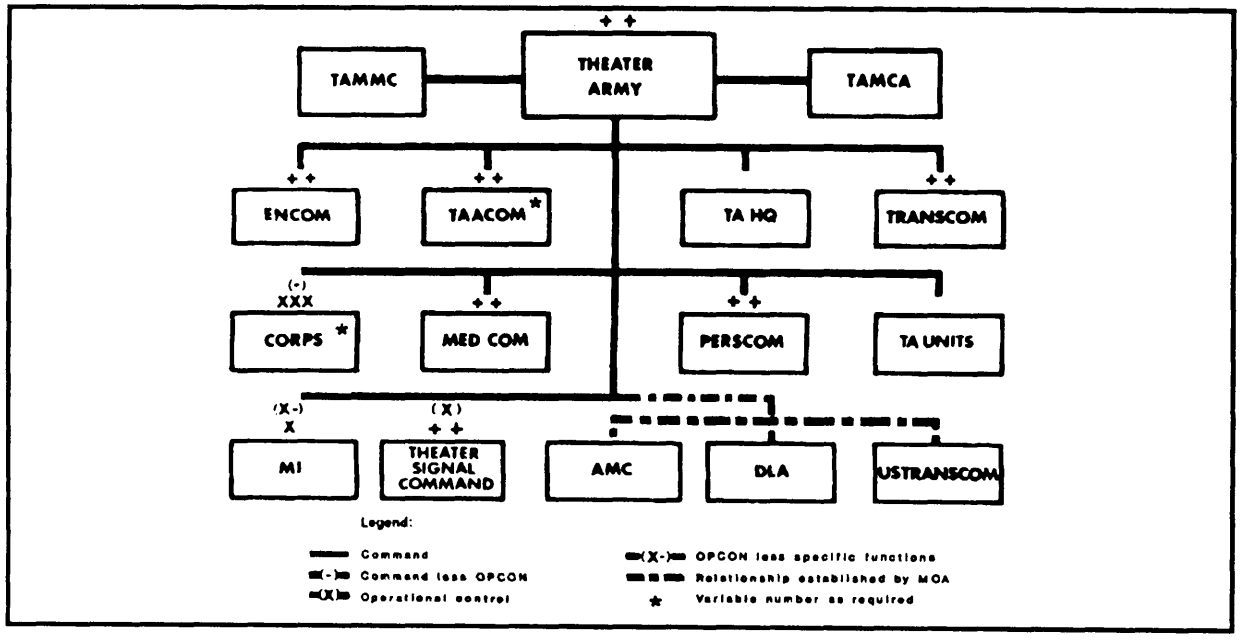


Figure 3-1. Theater ARMY Organization (Initial)

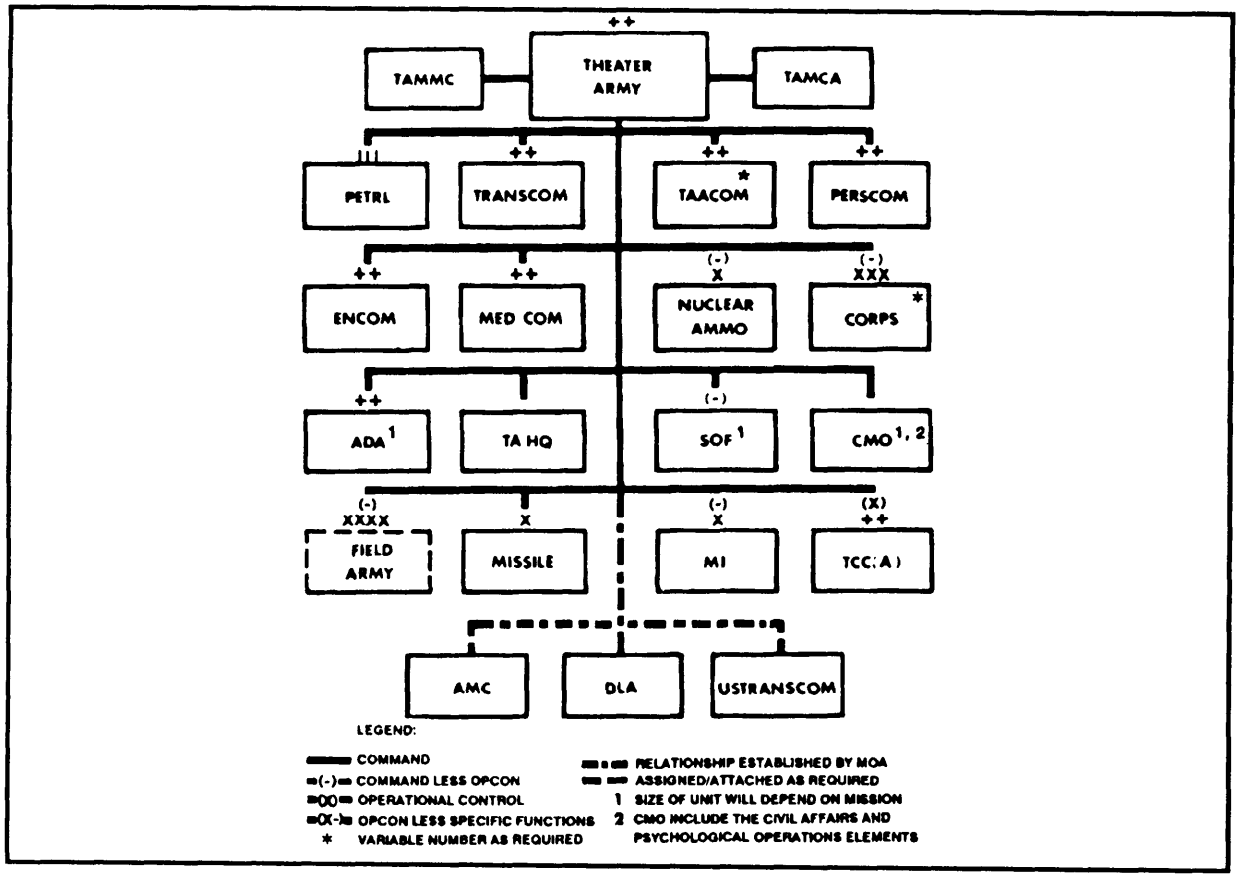


Figure 3-2. Theater Army Organization (Mature).

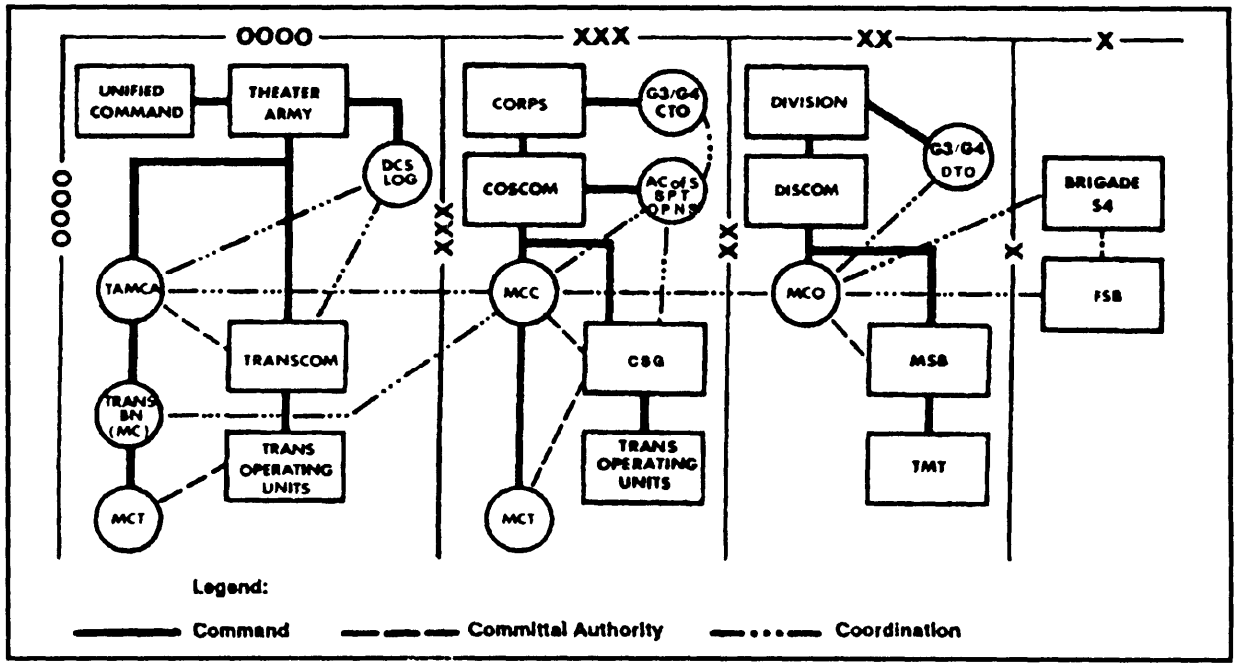


Figure 3-3. Theater Movement Control.

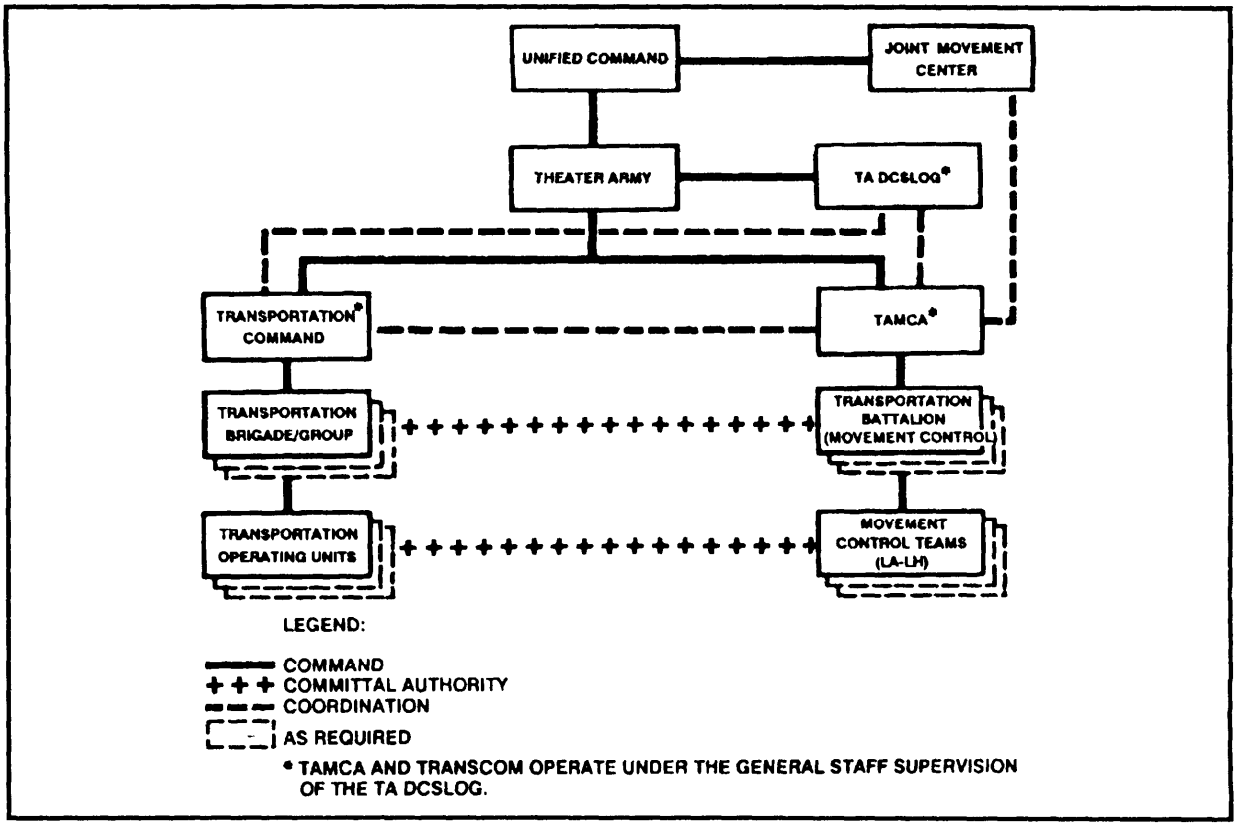


Figure 3-4. Transportation C2 Force Structure EAC.

- Supports the transportation requirements of its transportation battalions (MC) and the corps' MCCs.
- Develops theater movement control policies.
- Coordinates the movement of major units.
- Prepares and recommends policies to control, regulate, and expedite the movement of military-owned and leased containers within the theater.
- Recommends site selection for transportation activities (truck terminals, air terminals, railheads, pipeline take-off points, and inland waterway terminals).

e. The TAMCA is not completely self-sufficient and must rely on the local area support group or TA headquarters for administrative and other support. The TAMCA staff sections and subordinate units are located to facilitate coordination and communication with the TA headquarters, the TAMMC, TAACOM, transportation battalions (MC), corps MCC, and the TRANSCOM. As shown in Figure 3-5, the TAMCA is organized along functional lines.

(1) Agency headquarters. The command section provides administrative support for the unit and C2 for its subordinate units. The agency headquarters is a self-sustaining organization. It must coordinate for general administrative and logistical support for staff sections and subordinate units operating away from the headquarters.

(2) Plans and programs division (PPD). The PPD develops, coordinates, publishes, and distributes the command movement program and prepares transportation movement plans and annexes. This division reviews plans or directives issued by the JFC, TA, TRANSCOM, and logistical command to determine their effect on the movement system. The division recommends procedures to carry out these directives and prepares supplemental directives as required. This division–

(a) Provides required management, budget, and comptroller functions for the TAMCA.

(b) Maintains liaison with US and HN mode operating and transportation planning agencies to develop and synchronize movement plans and programs.

(c) Prepares, staffs, reviews, and issues operations and contingency plans for both internal and theaterwide operations.

(d) Receives movement requirements, calculates transportation requirements, collects physical distribution capability data, and compares requirements in relation to capabilities. It identifies shortfalls, develops alternative solutions, and recommends them to the TAMCA commander.

(e) Prepares, coordinates, and disseminates reception, staging, and onward movement plans that support movement requirements.

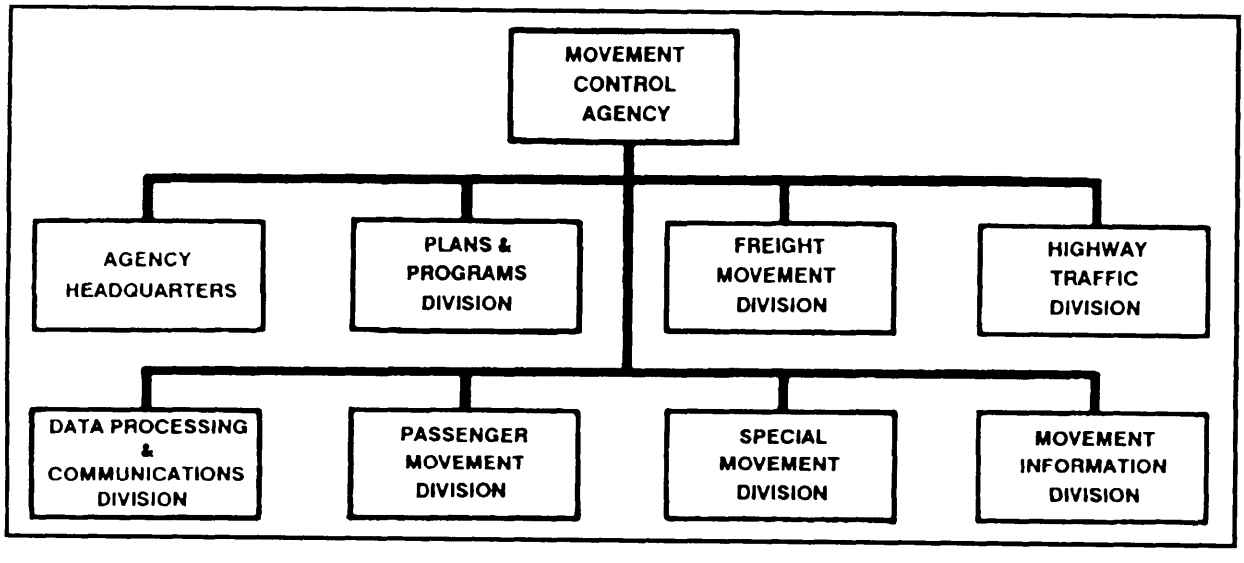


Figure 3-5. TAMCA Organization.

(e) Prepares, coordinates, and disseminates reception, staging, and onward movement plans that support movement requirements.

(f) Maintains manpower and equipment authorization documents for the TAMCA and subordinate units. Coordinates the assignment, attachment, reorganization, inactivation, and relocation of subordinate units.

(g) Develops and publishes mission statements for subordinate units.

(3) Freight movement division (FMD). The FMD monitors the freight movement program. Based on current and projected movement requirements, the FMD recommends changes in the freight movement program, assignment and location of MCTs, and location of transportation mode operating units. In coordination with the movement information division, materiel management activities, and CONUS wholesale logistics agencies, it operates a freight distribution system. This division–

(a) Coordinates cargo movements with other transportation agencies.

(b) Receives, validates, consolidates, and forwards requirements for cargo intertheater and intratheater airlift missions.

(c) Arranges for guard cars with HN railroads or military railway operating batt aliens for movement of sensitive and classified cargo by rail.

(d) Plans and coordinates military rail requirements with HN railroads.

(e) Develops, coordinates, and issues container and freight movement management and control procedures based on established container and freight movement management policies. Develops procedures to maintain visibility and control of containers, PLSSC, and 463L pallets.

(f) Develops requirements for leasing commercial carrier transportation and monitors use.

(g) Provides in-transit data on inbound cargo movement to CONUS wholesale logistics activities (Logistics Control Activity (LCA), Defense Personnel Support Center (DPSC), and MTMC) and to theater materiel management activities in coordination with the TAMCA's movement information division.

(h) Supervises and controls release of unit freight shipments.

(i) Performs periodic staff visits to movement control units, shippers and receivers, and mode and terminal operators. This ensures understanding of, and adherence to, movement management policies and procedures and resolves problems.

(j) Maintains the status of containers, PLSSC, and trailers used for transportation of material between CONUS and the theater. It also develops policies and procedures to control containers and PLSSCs allocated for intratheater use to ensure proper distribution according to command priorities. The FMD prepares, analyzes, and disseminates statistical data on the container management performance of consignees, commodity managers, ports, and carriers. It identifies operational trends and areas for improvement and recommends solutions. It ensures compliance by actively monitoring the inbound and outbound flow of containers and PLSSC and expediting this movement when required.

(4) Passenger movement division (PMD). The PMD monitors the passenger movement program. Based on current and projected movement requirements, the division recommends changes in the passenger movement program, assignment and location of MCTs, and location of transportation mode operating units. This division establishes, staffs, and controls the Army aerial port liaison office (APLO) at major aerial ports. The APLO programs, coordinates, and manages the movement of Army, DOD, and other service passengers.

(5) Special movement division (SMD). The SMD coordinates and monitors movements that require exceptional coordination, monitoring, or reporting. It schedules, documents, and maintains visibility over classified and sensitive movement requirements by all modes. In coordination with appropriate transportation agencies, it arranges with commercial rail carriers to establish permanent military train schedules and paths, including train paths for movement of out-of-gauge shipments. This division–

(a) Collects and analyzes passenger and freight data and statistics which are used to support policy formulation and changes.

(b) Prepares and documents passenger movements and submits reports to MTMC and AMC as required.

(c) Ensures economical, efficient, and effective movement of Army and Army-sponsored passengers and their family members.

(d) Coordinates transportation battalions (MC) and corps MCC support to deploying or redeploying units.

(e) Validates alI Army intratheater airlift requests, and forwards requests through the servicing ALCC to the supporting airlift division. Upon confirmation of the airlift request, notifies the requestor of the specifics of the confirmed airlift request.

(6) Highway traffic division (HTD). The HTD performs highway regulation functions in the COMMZ. It coordinates highway regulation functions for the theater, coordinating plans with the transportation battalions (MC) and the corps to ensure they are synchronized. The HTD develops highway regulation and traffic circulation plans in coordination with HN authorities and allied military headquarters. The HTD is staffed with movement control, engineer, and military police personnel. Other functions include–

(a) Changing routings and schedules based on changes in priorities. The HTD informs affected units and the provost marshal (PM) through command channels when possible. For immediate requirements, the HTD forwards changes directly to the movement regulation teams (MRTs) or traffic control points (TCPs) which can immediately affect diversions, holding, or rerouting.

(b) Evaluating, recording and disseminating information from other traffic headquarters on highway movements into the HTD area of jurisdiction.

(c) Coordinating movements which terminate outside COMMZ with appropriate movement control activities and the PM.

(d) Developing, in coordination with the engineer, long-range and short-range plans and priorities for repairing the road network.

(e) Coordinating with the HN for use of its road system.

(7) Movement information division (MID). The MID accommodates the additional functions that the agency can perform when DA Movement Management System-Redesign (DAMMS-R) is operational in the theater. The MID maintains the data base. It receives, processes, and corrects data received from MTMC systems. It also works with DA Standard Port System-Enhanced (DASPS-E) data concerning the receipt and onward movement of cargo. The MID passes commitment information to the transportation group or brigade and passes cargo forecast information to the MCTs. The MID also passes data to CONUS to update the logistics intelligence file (LIF). The Tactical Army Computer System (TACCS) will be the primary source of communications between the TAMCA headquarters and its subordinate transportation battalions (MC), corps MCCs, MCTs, and mode operators. It will pass required movement information to lateral commands for reception and onward movement of passengers and/or cargo within the theater of operations. The MID–

(a) Directs TAMCA efforts to systematically develop, implement, review, evaluate, and improve transportation related information processing systems. It identifies system requirements, interfaces, characteristics, and methods of information processing.

(b) Plans, directs, and supervises the functional operation of DAMMS-R.

(c) Coordinates all issues pertaining to transportation documentation and MILSTAMP.

(d) Maintains a central file of HN agreements, reviews and coordinates those under development, and issues provisions applicable to movement control activities.

(8) Data processing and communications division. This division serves as the TAMCA automation management office. Primarily, it coordinates automation and data communications actions for the TAMCA and its subordinate units. It manages automation and communications capability improvement projects. It provides technical advice on concepts and engineering for communications-related matters to the TAMCA, its subordinate units, and the corps MCC. This division–

(a) Evaluates technical feasibility and cost effectiveness of hardware, software, and communications interfaces required for new automated systems or for changes to existing data systems. It passes

approved documents to the ADP developer for technical design, programming, and documentation.

(b) Monitors system development and plans and conducts tests to ensure user requirements are satisfied. It evaluates program test results with report users to ensure that it satisfies all identified requirements.

(c) Initiates and monitors ADP contractual services. It provides the contracting officer's representative (COR) to ensure that contractual terms are met before payment.

(d) Issues regulations, policies, and procedures to govern relations between the division and TAMCA staff and units which use data processing services. It manages the ADP security program including communications security (COMSEC) physical security for the TAMCA.

(e) Develops, monitors, and executes an ADP training program. It provides on-site troubleshooting support to diagnose and remedy system and software problems and performs ADP maintenance as required. It maintains input/output controls and procedures for all assigned systems to ensure that production schedules are met, all data input is accounted for, and all established outputs are produced and released to the customer.

f. Functional Relationships.

(1) CONUS activities. The TAMCA maintains close functional relationships with CONUS transportation activities such as USTRANSCOM (AMC, MTMC, MSC) and containerization and consolidation points (CCPS). CONUS-based activities provide the TAMCA advance information on unit and nonunit personnel and resupply strategic movements. The computer systems of these organizations must interface to ensure that transportation data and information are rapidly available. The TAMCA can then make more timely decisions to facilitate reception and onward movement.

(2) Theater transport services.

(a) The TAMCA provides movement control services to all customers in the COMMZ and backup support to the corps and divisions. It selects the transportation mode suited for each movement and coordinates cargo transfer operations. To perform this mission, mode operating units and terminals must keep the TAMCA or its subordinate units advised of their current and projected capabilities and report the status of movements as directed.

(b) The TAMCA exchanges reports and plans with the TRANSCOM and MTMC. These include traffic and port analyses and reports on emergency situations that might curtail service over any portion of the transportation system.

(c) The TAMCA, or its subordinate units, commit mode operators to provide transportation services.

(3) Theater Army Material Management Command (TAMMC).

(a) The TAMMC provides movement requirements to the TAMCA for movement of material.

(b) Enhanced automation capabilities will improve coordination of intratheater movement services and advance reporting of incoming cargo shipments. It will preclude the need for collocating the TAMMC and the TAMCA.

(4) Theater Army Area Command (TAACOM).

(a) The TAACOM's supply and maintenance activities are heavy users of transportation services. These activities request transportation through their servicing MCT. The MCT will select the mode based on the priority and nature of the mission. The TAACOM's subordinate area support groups (ASGs) or other designated units provide life support and logistic support to the MCTs.

(b) The TAMCA has visibility over movements into, within, and out of the COMMZ. The TAACOM ACofS, Services is responsible for planning TAACOM transportation requirements. It monitors all transportation activities within the assigned area and coordinates within the TAACOM MMC and the TAMCA.

(5) Medical Command (MEDCOM). In addition to normal relationships with the MEDCOM as a transportation user, the TAMCA coordinates with the MEDCOM for its transport requirements in scheduling and routing the movement of patients.

(6) Military police.

(a) MP units engaged in traffic control activities support movement control by enforcing highway regulation plans. They ensure that only authorized traffic uses controlled MSRs. MPs use TCPs,

roadblocks, checkpoints, holding areas, and defiles at critical points.

(b) MP teams patrol between static posts to monitor traffic and road conditions. They gather information on friendly and enemy activity and assist stranded vehicles and crews. They report any road condition changes and enemy actions along the MSR to MRTs operating in their area.

(c) In coordination with movement control organizations, MPs will reroute oversized or overweight vehicles that cannot pass on their intended route. The TAMCA coordinates rerouting and diversion instructions through MP channels. The MP brigade and TAMCA must ensure that battlefield circulation control (BCC) information concerning MSRs is quickly passed to MRTs. The TAMCA and MPs must continuously coordinate BCC information.

(d) MPs submit enemy prisoner of war (EPW) movement requirements to its servicing MCT.

(e) MP liaison personnel arc included in the TAMCA table(s) of organization and equipment (TOE). Assigned to the HTD, they perform traffic functions and provide liaison to TA MP units.

(7) Air Force.

(a) As a user of the Army transportation system, the Air Force requests transportation support from its servicing MCT/ATMCT.

(b) As a mode operator, Air Force mobility forces provide strategic, theater, and special-mission airlift. The TAMCA provides an airlift coordinating office(r) to the air component commander's C2 agency to coordinate the use of airlift apportioned to the Army. The airlift coordinating office(r) is responsible for relaying and coordinating Army requirements for both channel and special-mission airlift and/or coordinating the diversion of airlifted personnel or material of Army interest.

(8) Corps MCC.

(a) A close working relationship between the TAMCA and MCC is required to coordinate the movement of units and materiel from the COMMZ to the corps and division areas. Movement programs and highway regulation plans must be coordinated and synchronized to provide for an uninterrupted flow of traffic within and between areas of responsibility.

(b) The corps MCC participates in TA movement planning activities. For example, plans for unit and materiel movements of interest to the corps that originate in areas not controlled by the corps commander require the corps MCC to furnish TAMCA with the corps commander's priorities for consideration.

(c) The corps MCC provides the transportation battalions (MC) and the TAMCA information on the capabilities of corps units to receive shipments and highway plans in the corps area.

(d) The TAMCA provides technical assistance to the corps MCC.

(9) Host nation. HN support may encompass all forms of transportation and terminal operations. Certain support will be planned to expedite movement during the transition to war. Other support will depend on contingency arrangements. Both rely on close coordination between the TAMCA and the appropriate level of HN command. Planners must recognize that the HN will have its own civil and military commitments, which may limit the support available or the time within which it can be provided.

(10) TRANSCOM. TRANSCOM is the principal Army transportation operating headquarters in the theater. Although located in the COMMZ, it is functionally organized to provide theaterwide transportation services. It may include transportation composite groups, motor battalions, railway operating battalions, and terminal battalions. These units will operate interzonal transportation services, supporting as far forward as required. For more information on the TRANSCOM, refer to FM 55-1.

(a) The TAMCA, through its transportation battalions (MC) and MCTs, commits the TRANSCOM's transportation assets.

(b) The TRANSCOM reports the location and status of its assets to the TAMCA.

3-7. TRANSPORTATION BATTALIONS (MC)

a. To decentralize execution of its transportation management and movement control functions, the TAMCA may divide the COMMZ into transportation movement regions. The number of customers served, number of modes and nodes, and the geographical size of the COMMZ determine the size of the regions. Regional boundaries mayor may not coincide with other military or political boundaries.

Transportation battalions (MC) provide C2 of the movement control functions in these regional areas.

b. Transportation battalions (MC) are responsible to the TAMCA for the control and management of movement matters in the interzonal transportation system which take place in their respective regions. The TAMCA will determine which specific functions the transportation battalions (MC) will perform. Transportation battalions (MC) provide command, control, and supervision of subordinate MCTs (Teams LA through LH). A transportation battalion (MC) will have as many subordinate MCTs as required to operate in their region based on factors such as number of customers, aerial and seaports, and MSRs. MCTs directly interface with the mode operators, shippers, and receivers. Other responsibilities will normally include the following

(1) Coordinate with corps MCCs, adjacent transportation battalions (MC), HN transportation agencies, transportation mode operators, and customers.

(2) Assist in planning and executing plans for the reception, onward movement, and retrograde of personnel and/or cargo. This includes actions associated with marshaling and staging areas. It requires coordination with area support group commanders to establish C2 and support relationships for rest halt support, convoy monitoring, clearance and manifesting procedures, and life support.

(3) Monitor, manage, and execute the TAMCA's movement and port clearance plans and programs.

(4) Monitor the use of containers and PLSSC Iocated in its area of responsibility. Coordinate with users to expedite their return to the transportation system.

(5) Apply and meet the priorities provided by the TAMCA. Perform highway regulation functions in its area of responsibility to prevent congestion. Balance transportation assets with requirements according to directed priorities. Advise TAMCA on the need for cross-leveling assets.

(6) Coordinate with HN authorities for cargo transfer locations and for transportation support.

c. The transportation battalion (MC) S2/S3 performs the functions of movement control, transportation intelligence, and highway regulation. The S2/S3's movement control responsibilities are to–

(1) Closely monitor the flow of DOD cargo and passengers moving into, within, or out of their area of responsibility to ensure timely delivery consistent with established priorities and RDDs.

(2) Perform customer liaison visits to ensure that all shippers (consignors) located within their area of operation are informed on the use of the transportation system and requirements for obtaining transportation. Obtain feedback on transportation services.

(3) Resolve planning, operational, and procedural problems and conflicts within their capability.

(4) Routinely coordinate movement control matters with the corps MCC behind which the transportation battalions (MC) are aligned.

(5) Schedule traffic on all controlled routes according to the commander's priorities and directives to avoid conflicts between tactical and nontactical movements. Issue clearances and movement credits to units within their area of operation. MCTS will forward all clearance requests to the S3. S3s coordinate the clearance from its origin to destination including clearance with corps MCCs and division transportation officers (DTOs). Coordinate issuing of clearances with HN authorities as required.

(6) Coordinate movement schedules with MPs to ensure they are aware of what should be moving. These schedules become part of the MP battlefield circulation plan.

(7) Commit Army air assets allocated to the transportation battalions (MC) for CSS air operations. Validate airlift requests when air assets are not allocated and forward the requests to the TAMCA.

(8) Provide operational and management reports to the TAMCA.

d. Communication between the transportation battalions' (MC) S3s and the corps MCC is critical to the success of the movement control system within the theater. When the corps MCC is unable to meet its transportation requirements with corps transportation assets, it will request TA transportation support from the transportation battalions (MC). If the transportation battalions (MC) are unable to fulfill the requirement, they

will request assistance from the TAMCA. The reception and onward movement of units in the theater will require close coordination between the transportation battalions (MC) and the corps MCC. Of particular concern will be the movement of large unit convoys from the COMMZ to the corps area. Continual communication is vital for this mission to succeed.

Section III. MOVEMENT CONTROL TEAMS

3-8. INTRODUCTION

a. Movement control teams (LA-LH) are assigned to the corps MCC, transportation battalions (MC), or TAMCA to decentralize execution of movement responsibilities on an area basis or at key transportation nodes. The various sizes and capabilities of MCTs provide flexibility in assignments based on anticipated work load. There are three types– MCTs, air terminal movement control teams (ATMCTs), and the movement regulating team (MRT) as shown in Figure 3-6. Refer to the most current TOE or modified table of organization and equipment (MTOE) for personnel, equipment, and theater-unique resourcing.

TEAM	TOE 5558L PERSONNEL
LA	3
LB	5
LC	7
LD	11
LE	8
LF	35
LG	20
LH	4

° TEAM LA-LE - Movement Control Teams
° Team LF, LG - Air Terminal Movement Control Teams
° Team LH - Movment Regulating Team

Figure 3-6. MCT Structure.

b. The mission of MCTS is movement control of personnel and materiel and the coordination of bulk fuel and water transportation at pipeline and production take-off points. To this end, the MCTs contribute to development of procedures, documents, and practices to facilitate local movement. MCTs are the common point of contact for mode operators and users of transportation. Their role is to expedite, coordinate, and monitor traffic moving through the transportation system. When requested or directed to, MCTs participate in shipment planning for the activities they serve. MCTs can also provide field assistance in MILSTAMP and container control. To carry out their responsibilities, the MCTs rely heavily on close coordination with mode operating units and users of transportation.

c. The MCTs' duties and functions will depend on the immediate situation. Some of the MCTs duties include—

(1) Processing movement requests and arranging transport for moving personnel and materiel.

(2) Selecting the mode (air, rail, inland waterway, or highway) for unprogrammed moves.

(3) Maintaining communication with the transport services, shippers, receivers, and if applicable, HN movement control agencies.

(4) Keeping a status of and advising the corps MCC, transportation battalions (MC), as applicable, on the location of units, installations, and pipeline take-off points; transportation requirements; availability of modes of transport; shipper/receiver capabilities to ship and receive; trends of asset use capacity and the general transportation movements situation in their areas.

(5) Assisting the unit commanders and service installations on transportation matters.

(6) Assisting in carrying out the movement program and directives from higher headquarters.

(7) Enforcing movement priorities.

(8) Investigating delays in moving personnel or materiel. Providing transportation reference data and intelligence.

(9) Assisting in highway regulation by forwarding movement bids and providing technical advice to units in movement planning.

(10) Coordinating movement from origin to final destination and inbound clearing movements when required.

(11) Monitoring and reporting on the use and disposition of controlled vehicles, 463L pallets, PLSSC, and containers for which the TAMCA is responsible.

(12) Maintaining surveillance of accountable containers and chassis for other services and assisting in keeping equipment in the appropriate transport system.

d. Transportation battalions (MC) or the corps MCC will select the sites where the MCTs will operate. Site selection will consider the number and types of MCTs available, location and types of customers requiring service, location of major shipper/receiver activities, and location of mode operators. Ideally, MCTs should be centrally located for close coordination with customers and mode operators. An additional consideration is that MCTs operating away from their headquarters will require logistical support from other units.

e. Communications equipment organic to MCTs in the field is based on the strength and mission of the unit. At present, it may include telephones landlines and radio teletypewriters mobile subscriber equipment (MSE), and TACCS. When an integrated computerized system is developed and established for transportation use in the field, it is anticipated that MCTs will have an input-output to their higher movement headquarters, TAMCA, transportation battalions (MC), or corps MCC, either directly or through the area communications net.

f. Team LA - Movement Control has two assigned movement specialists and one movement supervisor. This team can provide single-shift (12-hour) movement control functions at intermodal transfer points, small Army air terminals, specialized supply installations, or other activities whose small size or volume do not justify a larger team. Two teams LA will provide around-the-clock operations. Team LA is most often used to augment larger teams where the scope and volume of a particular operation warrants. Where employed separately, team LA reports to and is supervised by a team LC (MCT level), if established; otherwise, team LA reports directly to the transportation battalions (MC) or MCC. Personnel functions and duties are as follows:

(1) Movement specialists assist in coordinating and allocating transport capability to meet valid movement requirements. They gather statistical data for preparing movement reports; ensure that cargo shipments are properly marked and labeled; prepare entries on government bill of lading (GBL), freight warrants, government transportation requests (GTR), military transportation authorization (MTA), message forms, and routine office correspondence; and operate automated data terminal and word processing equipment to prepare movement documentation.

(2) Movement specialists function as above but are supervised by the senior traffic management coordinator. An additional duty is as a light vehicle operator to include duties normally associated with driver positions.

g. Team LB - Movement Control has one TC lieutenant, three movement specialists, and one telecommunications operator assigned. They can provide single-shift (12-hour) movement control functions at such activities as small supply complexes, one- or two-ship freed water terminals, a two-ship LOTS terminal, or an inland transfer point. Two teams LB will provide around-the-clock operations. Personnel functions and duties are as follows:

(1) The team commander is a qualified TC officer, who exercises command, direction, supervision, and control over team personnel and operations. When the team is employed independently, the team commander exercises UCMJ authority over assigned personnel.

(2) Movement specialists perform the same functions as those in team LA.

h. Team LC - Movement Control consists of one TC captain, one movement supervisor, and five movement specialists. This team can provide single-shift (12-hour) movement control functions in support of such activities as a general support (GS) supply and/or maintenance activities, a four-ship fixed water terminal or rail or motor terminals. Additionally, to reduce the control span of the transportation battalions (MC), the regional area may be divided into districts and LC teams established to supervise all movement management in the assigned district. It would then be responsible to the transportation battalions (MC)/MCC for supervising and controlling all movement matters for that portion of the interzonal transportation system which passes through its assigned territorial area. Personnel functions and duties areas follows:

(1) The team commander performs the same functions as those in team LB.

(2) The movement supervisor supervises the diversion, reconsignment, and transfer of personnel and cargo requests. He instructs and supervises subordinate personnel in transportation movement, work techniques, and procedures.

(3) Movement specialists perform the same functions as those in team LA.

i. Team LD - Movement Control consists of one TC major, three TC captains, one movement supervisor, four movement specialists, and four telecommunications operators. The team can operate on a two shift (24 hour) basis as a central movement control element supporting operational forces. Personnel functions and duties are as follows:

(1) The team commander exercises command, direction, supervision, and control over team personnel and operations.

(2) The freight movement officers and movement control officers assist the team commander in movement management responsibilities. During 24-hour operations, they may serve as team commander during 12-hour shift periods.

(3) The movement supervisor performs the same functions as those in team LC.

(4) The movement specialists performs the same functions as those in team LA.

(5) The telecommunications specialists install, operate, and maintain manual and automated telecommunications equipment.

j. Team LE - Movement Control consists of one TC major, two captains, one movement supervisor, and two movement specialists. Team LE is basically a smaller version of team LD designed to operate on a single-shift basis under less intense conditions or to augment team LD as the geographic area or work load increase. Personnel functions and duties are the same as team LD.

3-9. AIR TERMINAL MOVEMENT CONTROL TEAMS

a. The mission of the ATMCT is to arrange transport, coordinate loading, and expedite movement of personnel and materiel (inbound, intratheater, and retrograde) through Air Force and civilian air terminals. The ATMCT commander also acts as the Army liaison to the air terminal operator. The ATMCT supports reception and onward movement by providing information on billeting, messing, and transport services to transiting personnel. The team coordinates material clearance with the servicing terminal transfer company, supporting mode operators, and Air Force personnel and attached liaison personnel from other services.

b. ATMCTs have assigned transportation, medical, adjutant general, and quartermaster personnel. At smaller terminals, the ATMCT will probably operate from a central location. At larger terminals, the ATMCT may disperse into functional areas in and around the terminal.

c. As with the MCTs, the ATMCT is not organic to the transportation battalions (MC) or the corps MCCs. The number of ATMCTs and their locations within a theater is based on the number and location of major air terminals.

d. Team LF - ATMCT consists of 10 officers and 25 enlisted personnel. TC officers consist of one major, two captains, and two lieutenants. Other officers are from the medical service, adjutant general, and quartermaster corps. The 25 enlisted personnel have specialties similar to the officer branches with the addition of communications. One team is assigned to each Air Force terminal that requires coordination for movement of Army personnel and materiel. It works on a two-shift (24-hour) basis. Personnel functions and duties are as follows:

(1) The team commander performs the same functions as in team LD.

(2) The ATMCT movement control officer coordinates movement control functions required by the TAMCA or MCC movement program. When the ATMCT is apportioned airlift, the movement control officer commits assets to support movement requirements. He coordinates the clearance of cargo to be moved by supporting Army transportation units.

(3) The ATMCT transportation supervisor assists in coordinating and implementing operations, training, administrative matters, and communications functions. He consolidates, prepares, reviews, and processes reports of command transportation activities. He assists in providing staff supervision, policy guidance, and operational supervision relative to moving personnel and cargo.

(4) The ATMCT liaison officer serves as liaison with the airfield commander, Air Force port operator, and other organizations providing life

support and logistics to the ATMCT and transiting personnel and equipment.

(5) The ATMCT movement supervisor supervises diversion, reconsignment, and transfer of personnel and cargo.

e. Team LG consists of 6 officers and 13 enlisted personnel assigned with specialties as team LE TC officer personnel consist of one major, one captain, and four lieutenants. Team LG has the same functional capability of team LF, except that it operates on a single-shift (12-hour) basis at large terminals or sustained operations at small airfields.

f. See Chapter 8 for information on the employment of ATMCTs during reception and onward movement operations.

3-10. ATMCT OPERATIONS VERSUS A/DACG

a. ATMCTs are transportation movement control TOE organizations assigned to transportation battalions (MC) or corps MCCs. They operate primarily at Air Force or civilian terminals on a sustained basis to support all Army requirements irrespective of the units/cargo transiting the terminal.

b. A/DACGs are not structured TOE units. They are provisional organizations created from personnel in units or major Army commands (MACOMs) that have the mission to command and control the loading and unloading of their units and/or equipment for departure and arrival operations. A/DACGs normally operate only for specified periods of time or for specific missions.

c. Although the functions of both the ATMCT and the A/DACG are similar, depending on the theater and the mission, ATMCTs should transition as the primary control organization when–

- An airfield is designated an aerial port for the sustained air movement of personnel and material and to serve as an authorized APOE/APOD in the theater of operations.
- An airfield serves both unit movement and nonunit personnel and sustainment flow.
- The theater is joint or combined with multiple users of limited common-user transportation assets.

d. When the above conditions are expected, planners should include ATMCT early in the TPFDD deployment flow to perform the functions of sustained airfield clearance.

e. FM 55-12 provides additional information on A/DACG operations.

3-11. MOVEMENT REGULATING TEAM

a. Team LH consists of one TC lieutenant one operations sergeant one movement specialist and one administrative specialist. This team augments the MCTs, transportation battalions (MC), corps MCCs and TAMCAs as necessary. It is not intended to duplicate other activities but to supplement the above units and other teams. Specifically, they operate at locations such as critical highway points, APODs SPODs trailer transfer points (TTPs), terminal transfer locations, first destination reporting points (FDRPs), and railheads. Their express purpose is to divert cargo, troubleshoot movement problem and act as the commander's eyes and ears. This team provides the commander with the ability to extend his movement control capability into remote locations that may require a stand-alone operation. MRT's replace highway regulation point teams (HRPTs).

b. As required, the MRT will interface with HN, materiel managers, MPs, engineers, and other activities as directed by the commander. The transportation battalion (MC), corps MCC, or MCT, in whose area the MRT is operating commands the MRT.

c. Functions and duties of personnel consist of the following:

(1) The team commander exercises command direction, supevision, and control over team personnel and operations. He maintains communication with his command element and affected operating agencies.

(2) The operations sergeant supervises operations of the team. He controls movements of motor transport equipment and instructs and supervises subordinate personnel in transportation movement control procedures and work techniques.

(3) The clerk types messages, recurring and special reports, requisitions, and similar material.

3-12. ALLOCATION RULES

The number and type of movement control organizations within the theater of operations will be based on the supported Commanders in Chief (CINCs) concept of operations, number and type of combat forces to be employed, quality of

transportation infrastructure in the theater, and forecasted work load. See Table 3-1 for allocation rules used to determine the number and types of MCTs required in the force.

Table 3-1. Allocation Rules.

TEAM	AREA	RULES
MCA	ALL	1 per HHC Theater Army, SRC 5100H
MCC	NATO	1 per HHC COSCOM, SRC 63431L
	SWA	Same
	NEA	No existing rule
LA	NATO	2 per MCC, SRC 55604L 2 per MC team (LD), SRC 55580LD
	SWA	2 per MC team (LD), SRC 55580LD
	NEA	2 per MC team (LD), SRC 55580LD
LB	NATO	3 per MC team (LD), SRC 55580LD 2 per MCC, SRC 55604L
	SWA	3 per MC team (LD), 55580LD 3 per MCC, SRC 55604L
	NEA	3 per MC team (LD), 55580LD in corps 4 per MC team (LD), 55580LD in COMMZ
LC	NATO	4 per MCC, SRC 55604L 6 per MC team (LD), SRC 55580LD 1 per HHC, Division
	SWA	2 per MCC, SRC 55604L 2 per MC team (LD), SRC 55580LD 1 per HHC, Division
	NEA	2 per MC team (LD), SRC 55580LD in corps 1 per MC team (LD), SRC 55580LD in COMMZ 1 per HHC, Division
LD	NATO	3 per MCA, SRC 55603L
	SWA	1 per MCA, SRC 55603L
	NEA	1 per MCA, SRC 55603L
LF	NATO	1 per MCC, SRC 55604L 1 per MC team (LD), SRC 55580LD
	SWA	1 per MC team (LD), SRC 55580LD
	NEA	3 per MCA, SRC 55603L
LH	NATO	6 per MCC, SRC 55604L 4 per MC team (LD), SRC 55580LD
	SWA	4 per MCC, SRC 55604L 2 per MC team (LD), SRC 55580LD
	NEA	3 per MCA, SRC 55603L 2 per MC team (LD), SRC 55580LD

CHAPTER 4

MOVEMENT CONTROL IN THE CORPS

4-1. INTRODUCTION

a. The corps is the level of command that blends operational art with tactics. Within the corps area will be numerous types of movements; the principle types will be unit movements and sustainment. All movements, operating concurrently, must be synchronized and coordinated to ensure a continuous flow that maximizes the use of available transportation assets, infrastructure, and LOC.

b. Movement planning is conducted by the corps G3 and G4 staffs and by the corps support command (COSCOM) (Figure 4-1). On the corps coordinating staff, the G3 plans and directs maneuver and establishes corps priorities. The G4, with recommendations from the corps transportation officer (CTO), exercises staff supervision for movements and establishes logistics support priorities. The CTO coordinates with the MCC and COSCOM transportation support branch.

c. The COSCOM provides CSS to the corps and an integrated distribution system in the corps area. It does this through coordinated planning involving the COSCOM staff, subordinate corps support groups (CSGs), and functional centers. The corps MCC provides centralized movement control and highway regulation to support corps operations.

4-2. CORPS STAFF

a. The G3 plans and directs movement and maneuver of combat units through or within the corps area. This may require rapidly projecting these forces over extended distances on MSRs. The G3, coordinating with the G4, establishes priorities for using MSRs for both movement and maneuver. Maneuver will normally have priority over movements. However, maneuver must be well coordinated with movements to prevent route congestion, enforce movement priorities, and provide continuous logistical support. Movement planners may also assist the G3 in planning the movement of combat forces.

b. The G4 establishes logistical support plans. The G4, using the recommendations of the CTO, establishes plans and implements logistical support priorities for movement. These priorities become the basis of the corps movement program and highway regulation plan prepared by the MCC and the traffic control plan prepared by the provost marshal

c. The CTO is a special staff officer who will work for the Chief of Staff. The Chief of Staff has the option of placing the CTO under the staff supervision of the G3 or G4. He coordinates with the G3 during unit movement and maneuver planning. He assesses their impact for transportation requirements and their impact on highway regulation in the corps area. He advises the G4 of logistical and unit movement requirements. This may include support of reception and onward movement of forces, replacement operations, and regeneration. The CTO assesses the overall effectiveness of movement programs and recommends the types of transportation units and assets required to accomplish the corps' missions. Other duties are to –

(1) Plan transportation support, develop policies, provide guidance, and recommend movement priorities and procedures for movement control and highway regulation.

(2) Plan, coordinate, and oversee large or special movements in conjunction with the MCC.

(3) Prepare the transportation portion of corps plans and orders.

(4) Guide and assist major subordinate commands and units transiting the corps area.

(5) Coordinate and synchronize transportation planning with the TA and corps staffs.

(6) Coordinate transportation planning with the TAMCA, COSCOM, division and separate brigade transportation officers to determine requirements and establish procedures for movements that cross boundaries.

(7) Recommend road repair priorities and improvements for the road network in the corps area in coordination with the corps engineer.

(8) Coordinate with the G3, PM, and MCC to synchronize traffic control and highway regulation plans.

(9) Coordinate with the G5 to plan for the movement of displaced civilians.

(10) Assess and recommend requirements for HNS.

(11) Coordinate policy and procedures with the JMC when the corps is the Army component of a joint force.

4-3. CORPS SUPPORT COMMAND

Both the corps MCC and transportation mode operating units are assigned to the COSCOM. The COSCOM ACof S, Support Operations exercises staff supervision for transportation that was formerly vested in the ACof S, Transportation. The ACof S, Support Operations has a transportation branch to execute his responsibilities. The ACof S, Support Operations also exercises staff supervision over the corps MCC and MMC. His responsibilities for transportation include developing and coordinating plans, policies, and programs to support transportation requirements, movement control, highway regulation, and cargo transfer operations in the corps area.

a. ACof S, Support Operations. The ACof S, Support Operations integrates external logistics support to the corps. For transportation, this includes –

(1) Integrating supply and transportation requirements and capabilities to develop the corps distribution system.

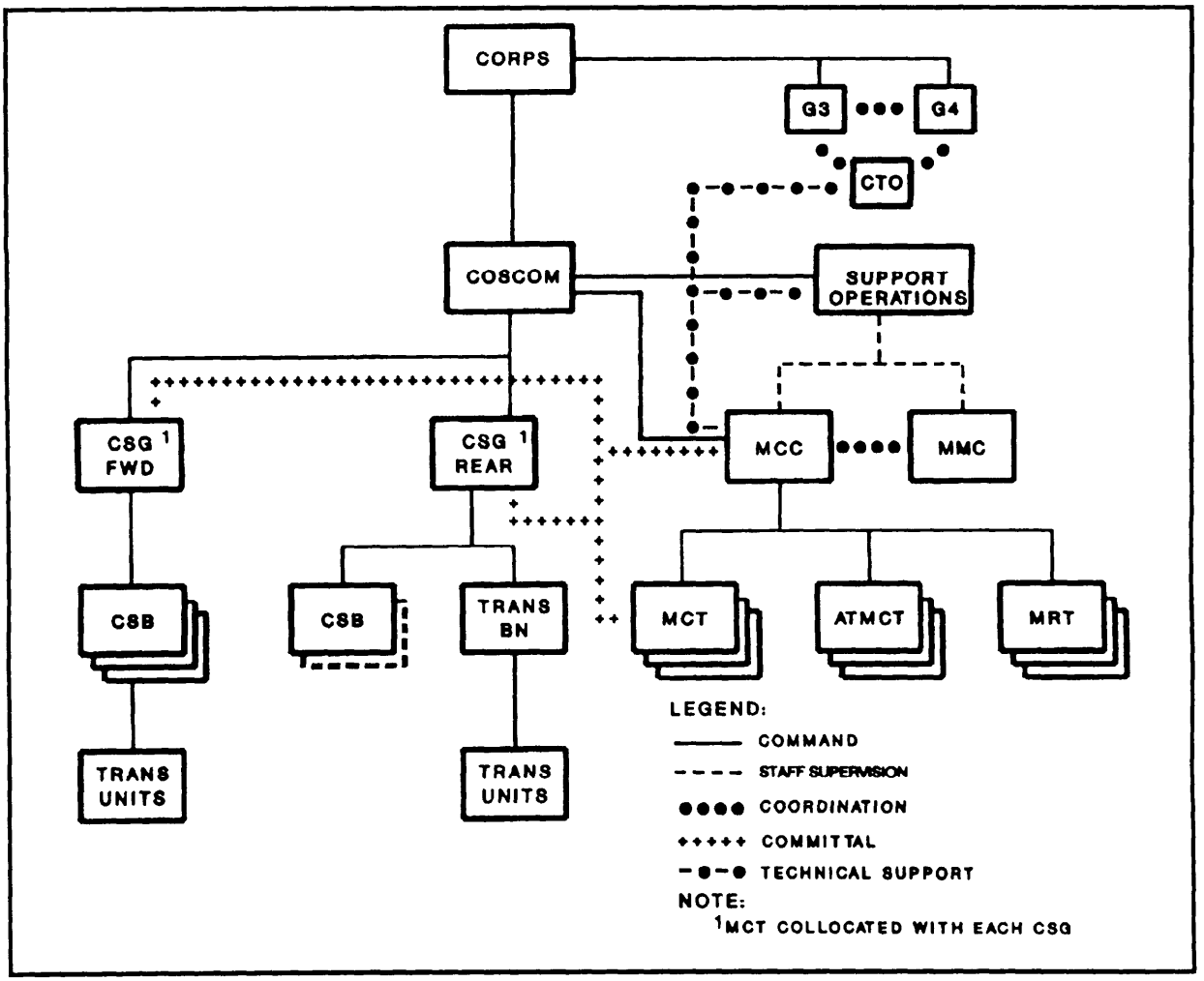


Figure 4-1. Corps Transportation C2.

(2) Developing support relationships that become the basis of the distribution system and corps movement program.

(3) Approving plans, policies, and programs to support transportation, movement control, highway regulation, and cargo transfer operations in the corps area.

(4) Recommending allocation and positioning of transportation units attached to subordinate units of the COSCOM, including cross-leveling of assets or units to weight the corps battle.

(5) Advising the COSCOM commander on the effective use and operation of transportation units and services.

(6) Synchronizing the work of the MCC and CMMC.

(7) Providing input to the CTO in developing corps movement annexes and transportation estimates.

(8) Planning continuity of support during operational movements for the COSCOM.

(9) Planning and recommending logistical sustainment of corps movement control and mode operating units and facilities.

b. Transportation Support Branch. The transportation support branch is a planning staff that integrates and synchronizes transportation planning with all other support provided by the COSCOM under the ACofS, Support Operations. As such, the transportation support branch executes those responsibilities vested in the ACofS, Support Operations for the move function. These include–

(1) Preparing movement management policies for the COSCOM.

(2) Preparing estimates, plans, and policies for movement control, mode operations, and terminal operations.

(3) Providing input to COSCOM orders.

(4) Developing input for corps movement annexes and transportation estimates. Review corps orders for transportation supportability and specified and implied tasks.

(5) Determining transportation requirements from all sources in the corps and defining required capabilities to develop the corps distribution system.

(6) Coordinating plans for throughput from TA, interzonal transportation, intermodal operations, and trailer transfer operations.

(7) Coordinating with the procurement support branch on the acquisition and use of commercially procured or leased transportation resources and with the G5 for HN support.

(8) Recommending locations of transportation nodes and units to support the distribution system and corps movement program.

(9) Recommending and coordinating plans, policies, and programs to support transportation, movement control, highway regulation, and cargo transfer operations in the corps area.

(10) Recommending changes in the allocation of transportation units based on changes in the distribution pattern or to weight the corps battle.

(11) Advising the ACofS, Support Operations, on the effective use and operation of transportation units and services.

(12) Reviewing material distribution plans to ensure they are transportation supportable.

(13) Developing contingency plans.

(14) Recommending requirements to construct, improve, or maintain transportation facilities.

(15) Determining support requirements for logistical sustainment of corps movement control and mode operating units and facilities.

c. Corps MCC.

(1) Mission. The MCC is the corps movement control organization. It provides centralized movement control and highway regulation for moving personnel and material into, within, or out of the corps area and ensures effective and efficient use of available transportation capability. The MCC commands and supervises attached teams engaged in movement control and highway regulation. It plans, programs, coordinates, manages, and analyzes transportation and movement requirements and implements corps priorities. It performs transportation planning highway regulation, in-transit visibility, asset visibility, and liaison with EAC movement control organizations.

(2) Corps MCC C2.

(a) The MCC is organized as shown in Figure 4-2. The MCC commands and controls its functional divisions and commands, allocates, and supervises the operations of attached or assigned MCTs, ATMCTs, and MRTs. The MCC and its attached teams require personnel, administrative, food service, and maintenance support from the COSCOM HHC or other designated units.

(b) The command section and headquarters detachment normally collocate with elements of the plans, programs, and operations (PP&O) division and the HTD. These two divisions may also provide personnel to other locations in the corps area based on mission requirements. Portions of the HTD may collocate with the corps rear command post to synchronize movement and maneuver with the rear CP operations cell.

(c) The MCC command post is its primary C2 facility. Figure 4-3 shows a sample corps MCC command post field layout.

(d) The command post must operate continuously. It normally operates in two 12-hour shifts. Personnel staffing per shift is based upon the anticipated work load.

(e) The command post is normally located near the corps MMC to allow close coordination between movement and material managers.

(3) Corps MCC organization.

(a) Detachment headquarters. The detachment headquarters provides or coordinates administrative and logistics support for the MCC and its attached teams. The MCC normally provides its organic light vehicle mechanic and cook to the unit supporting it.

(b) PP&O division. The PP&O division is responsible for surface, logistic air, rail, and barge movement and container management. If assigned, the AMC liaison officer will operate in this division. It coordinates transportation support and maintains the status of transportation activities throughout the corps. The division also –

- Develops and implements the corps movement program based on movement requirements submitted by corps' major subordinate commands and the COSCOM.
- Plans support for reception and onward movement.
- Ž Programs and commits transportation assets to meet movement requirements according to corps priorities. Selects the most effective mode to meet the requirement.
- Ž Maintains the current operational status of corps transportation assets and their availability. Provides reports to the MCC commander, COSCOM, and corps staff.
- Ž Validates requests for Army and USAF CSS air movement operations. Commits corps aviation assets allocated for logistical support.
- Provides information, priorities, guidance, and taskings to its subordinate MCTs and ATMCTs.
- Performs transportation planning according to priorities established by the corps G3/G4 in coordination with the COSCOM ACof S, Support Operations.
- Ž Receives reports from the DTOs, CSGs, and MCT's.
- Maintains liaison with theater, joint, combined and adjacent corps movement control activities. Coordinates and monitors the status of inbound and outbound movements from the corps area and provides reports as required.
- Reports the status and location of containers and PLSSC to maintain in-transit visibility.
- Plans support of contingency operations.
- Maintains in-transit visibility of shipments and diverts, reconsigns, or holds cargo in transit.
- Recommends reallocation or relocation of transportation units or assets to meet exceptional movement requirements.

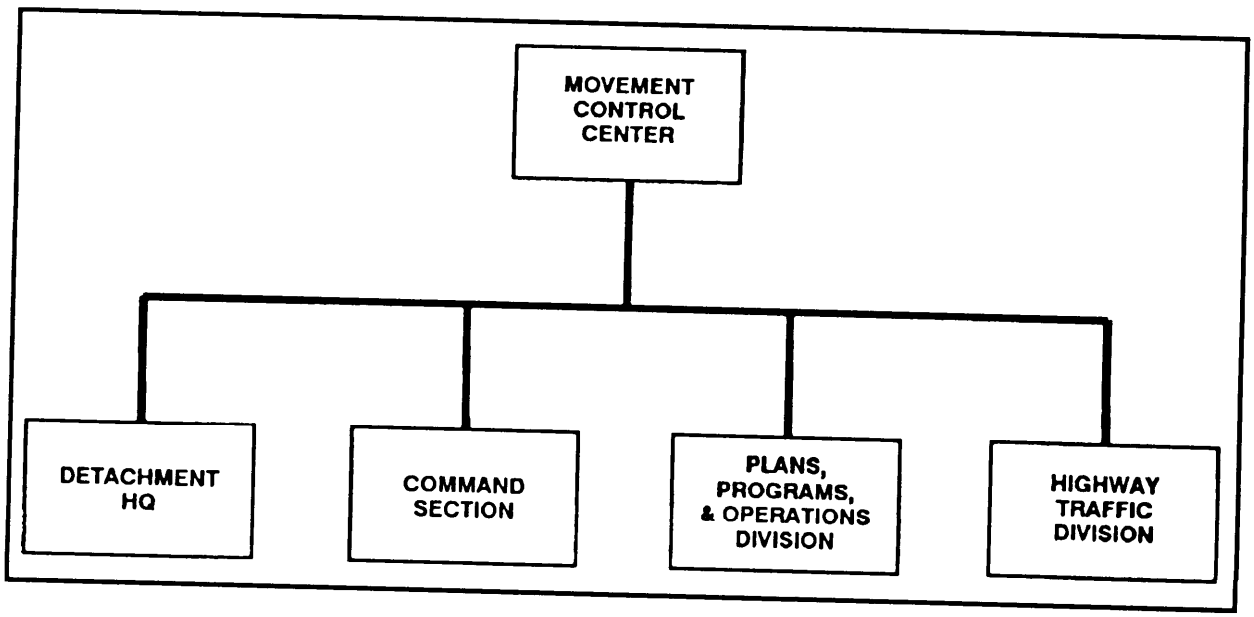


Figure 4-2. Movement Control Center

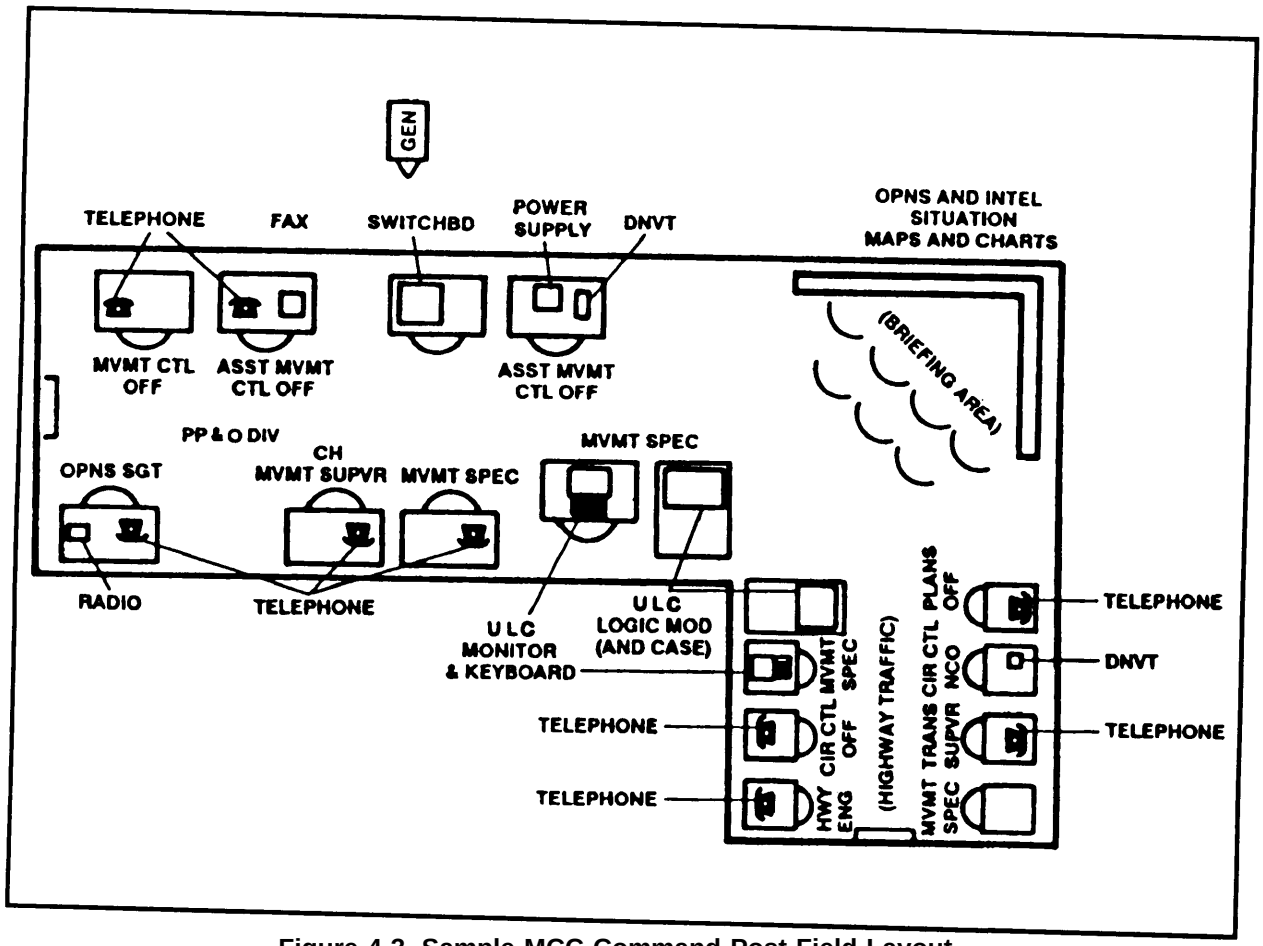


Figure 4-3. Sample MCC Command Post Field Layout.

(c) HTD. The functions of the MCC HTD closely parallel those of the TAMCA HTD. The HTD performs highway regulation in the corps rear area. In so doing it supports the commander's concept of operation by issuing clearances based upon priorities and deconflicting movement requests to prevent congestion on MSRs. The division also –

- Plans, routes, schedules, and deconflicts traffic according to command priorities and issues movement credits for approved movements.
- Provides assistance to the corps G4 and CTO during highway regulation planning to designate MSRs and establish control measures to support the concept of operations.
- Develops highway regulation plans.
- Coordinates with the corps G2, G3, engineer, PM, and MPs for route classification and selection.
- Coordinates unit movement requirements with the corps G3. Assists the G3 in monitoring the movement of units into, within, or out of the corps area. Deconflicts movements and maneuver.
- Ž Coordinates movements originating in the corps area which terminate outside the corps with the TAMCA, other MCC HTDs, DTOs, and/or HN.
- Ž Provides transportation route overlays and traffic circulation plans to support corps OPLANs.
- Ž Coordinates enforcement of highway regulation plans with the PM, MP brigade, and HN.
- Synchronizes large unit movement tables with other movements and maneuver.
- Maintains liaison with EAC movement agencies and coordinates routing for movements originating outside the corps area.
- Ž Collects, processes, and distributes information on MSR status and provides instructions for diversion or rerouting based upon the condition of MSRs, enemy activity, or congestion.
- Coordinates placement of MRTs.
- Maintains a situation map and the traffic circulation plan reflecting the current status of MSRs.
- Ž Coordinates with the rear tactical operations center (RTOC) for MSR maintenance and upgrade, repair and decontamination. It also coordinates with MP or MRT support for traffic rerouting, diversion, or holding caused by any type of traffic disruption.

(d) Teams. The corps MCC commander positions teams throughout the corps area to extend his control to critical transportation nodes, facilities, or operating units. Allocation of teams normally includes one MCT per CSG and each critical transportation node in the corps area, ATMCTs at aerial ports, and MRTs at key transportation nodes and other critical locations on MSRs to expedite surface movements. The MCTs, MRTs, and ATMCTs are explained below:

- MCTs are under the operational control of the PP&O division. MCTs assist in executing the corps movement program, select the mode for unprogrammed requirements, enforce movement priorities, and process movement requests for corps units. They are normally employed throughout the corps area at freed transportation nodes (railheads, terminals, ports, and depots) or on a geographic basis. MCTs are also collocated with each CSG HQ.
- MRTs are under the operational control of the HTD. They provide the commander with the ability to extend his movement control and highway regulation capability into remote locations that may require a standalone operation. They are positioned to assist the HTD in regulating movements into and out of critical transportation nodes or along MSRs.
- Ž ATMCTs are under the operational control of the PP&O division. They coordinate loading and expedite clearance of personnel and material through USAF air terminals or designated aerial ports.

NOTE: The units to which MCTs are collocated provide food service, supply, and administrative support (refer to Chapter 3).

4-4. FUNCTIONAL RELATIONSHIPS

The following are the functional relationships of the MCC to the TAMCA, CSG, and other staffs and headquarters.

a. TAMCA.

(1) The TAMCA provides guidance and technical assistance to the corps MCC. The TAMCA provides movement programs, policies, and procedures established by the TA commander. Because of the TAMCA's interzonal transportation responsibility and the presence of TA transportation assets in the corps area, a close working relationship and direct communication between the MCC and the TAMCA or its subordinate transportation battalions (MC) are required.

(2) The TAMCA coordinates theater plans with the MCC to ensure synchronization and unity of effort. Likewise, the MCC must coordinate corps personnel and materiel movements with the TAMCA and furnish the TAMCA the corps commander's priorities for consideration.

(3) The MCC provides the TAMCA corps reception and processing capability and in-transit visibility information.

(4) The TAMCA provides additional MCTs to the corps MCC when the MCC requires additional movement control or highway regulation capabilities to meet operational requirements of the TA.

b. The CSGs and/or transportation groups –

- Provide transportation support for personnel, supplies, and equipment. Capabilities may include rail, motor transport, and cargo transfer.
- Provide asset status and operational readiness information to the MCC/MCT on a routine basis.
- Provide transportation support based on commitments from MCTs. MCTs commit transportation companies by issuing transportation movement releases (TMRs) through the CSG/ transportation group or its subordinate battalion transportation branches depending on specified relationships in the COSCOM.
- Reallocate transportation units based upon directives from the COSCOM ACofS, Sup port Operations.

c. Corps provost marshal and MPs –

- Integrate movement control and highway regulation plans into the MP battlefield circulation control plan.
- Provide traffic control on MSRs and enforce highway regulation plans. Reroute and divert traffic as required by the tactical situation or as directed by the MCC.
- Provide reports to the MCC on the status of MSRs.

d. In the corps area, the petroleum supply battalion distributes bulk fuel with organic medium truck companies equipped with 5,000 - gallon tankers. The corps MCC may commit tractors in support of petroleum distribution requirements when the petroleum supply battalion has an insufficient number of tractors. The MCC may be granted authority by the COSCOM ACofS, Support Operations to commit available petroleum unit tractors to support other movement requirements (dry cargo operations).

e. The HN may provide transportation assets, facilities, movement control, or highway regulating capability in the corps area. These arrangements will normally be worked out between the COSCOM staff and HN authorities. The MCC will then implement these plans and interface with HN movement control authorities.

f. DTOs –

- Coordinate with the corps MCC to obtain transportation assets to meet division requirements beyond the division's organic capability.
- Provide input to the MCC to synchronize the corps' movement control and highway regulation plans.

4-5. MCC/CSG INTERFACE

a. CSGs. CSGs are subordinate commands of the COSCOM and provide responsive logistics support to corps units, whether those units are employed in the corps rear area, a division rear area, or in support of a separate brigade or armored cavalry regiment. The basic mission of the CSG will vary

depending on whether the CSG is employed as a forward CSG behind a division or as the rear CSG to support the corps rear area and to weight the battle (Figure 4-4). Transportation units are positioned in the CSGs to facilitate distribution to support the corps. The CSGs must be responsive to the direction of the MCC when committed to provide transportation support.

(1) Each forward CSG is task-organized to support nondivisional units on an area basis. It provides support through its subordinate multifunctional corps support battalions (CSBs). Each CSB in a forward CSG has truck companies assigned to support transportation requirements in its assigned geographic area. The CSG coordinates habitual support between transportation units and conventional ammunition and petroleum units and supports other movement requirements in its area on a mission basis. Normally, one CSB will be located in the division rear to support nondivisional units operating in the division sector and provide reinforcing support to the division. The truck companies assigned to the

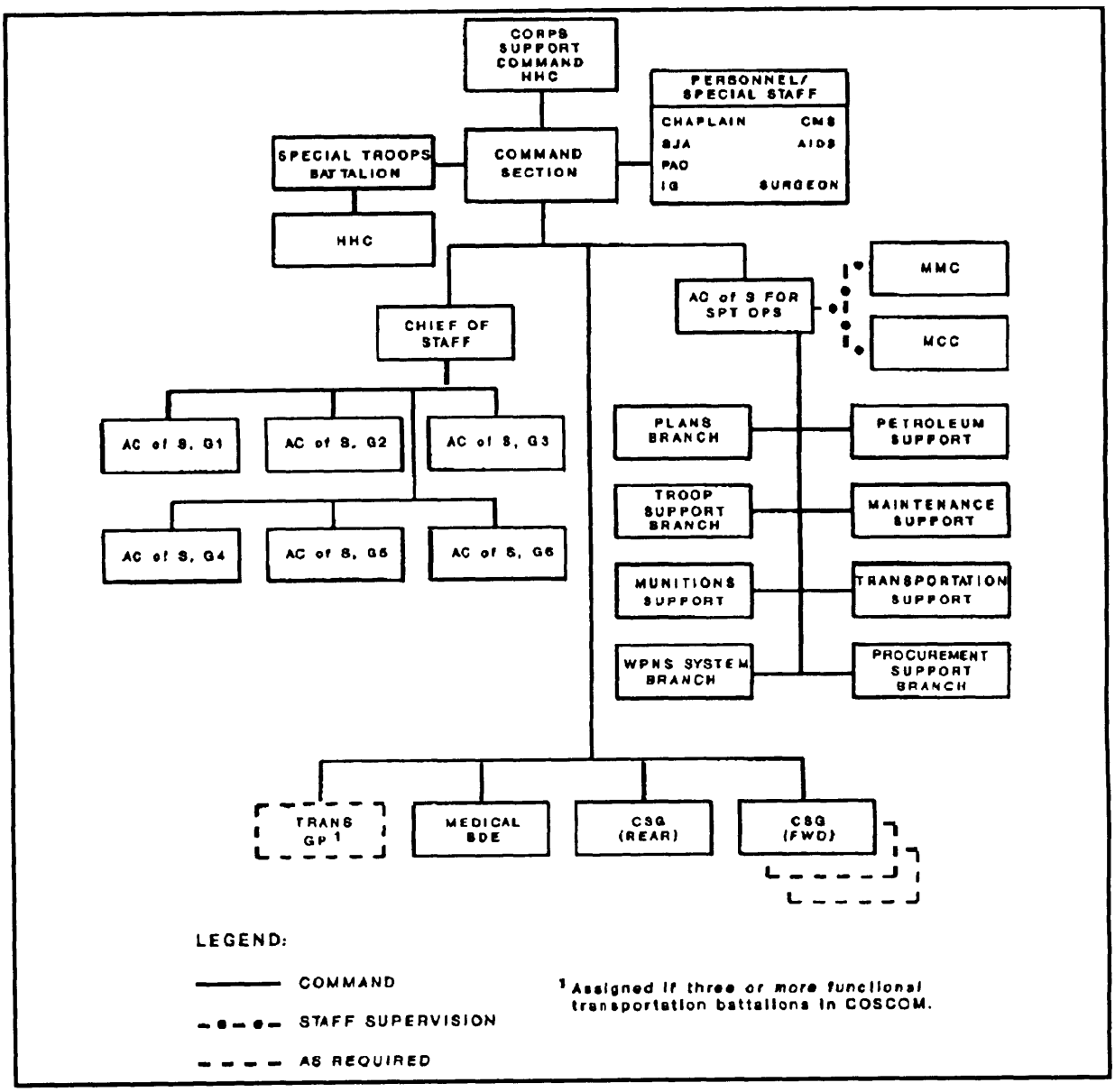


Figure 4-4. Corps Support Command.

CSBs in the division rear will normally be light/medium truck companies. The CSBs in the corps area provide logistic support to units in their area of responsibility and will normally have a mix of medium truck companies. The CSG commander may task force organize the CSBs to weight support (Figure 4-5).

(2) The rear CSG supports units in the corps rear and units passing through its area of operations and provides reinforcing support to forward CSGs. The rear CSG functional battalions provide corpswide support to corps forces and are used to weight the battle. The rear CSG may also form CSBs to provide direct support to nondivisional units in the corps rear area. The functional battalions also provide general support to the forward CSGs. The rear CSG will normally have a transportation battalion with a variety of motor transportation, cargo transfer, and trailer transfer capabilities (Figure 4-6).

(3) Both the forward and rear CSGs and their subordinate CSBs have support operations sections with transportation support branches. Within the rear CSG, the transportation support branch tasks transportation units of the transportation battalion based on commitments from the MCT colocated with the rear CSG headquarters. In the forward CSGs, the transportation support branch tasks the transportation units of its CSBs based on commitments from the MCT colocated with the CSG headquarters and may also reallocate transportation units among its subordinate CSBs. In the CSBs, the transportation support branch places truck companies in habitual support of ammunition and petroleum companies, matches requirements against capabilities, reports

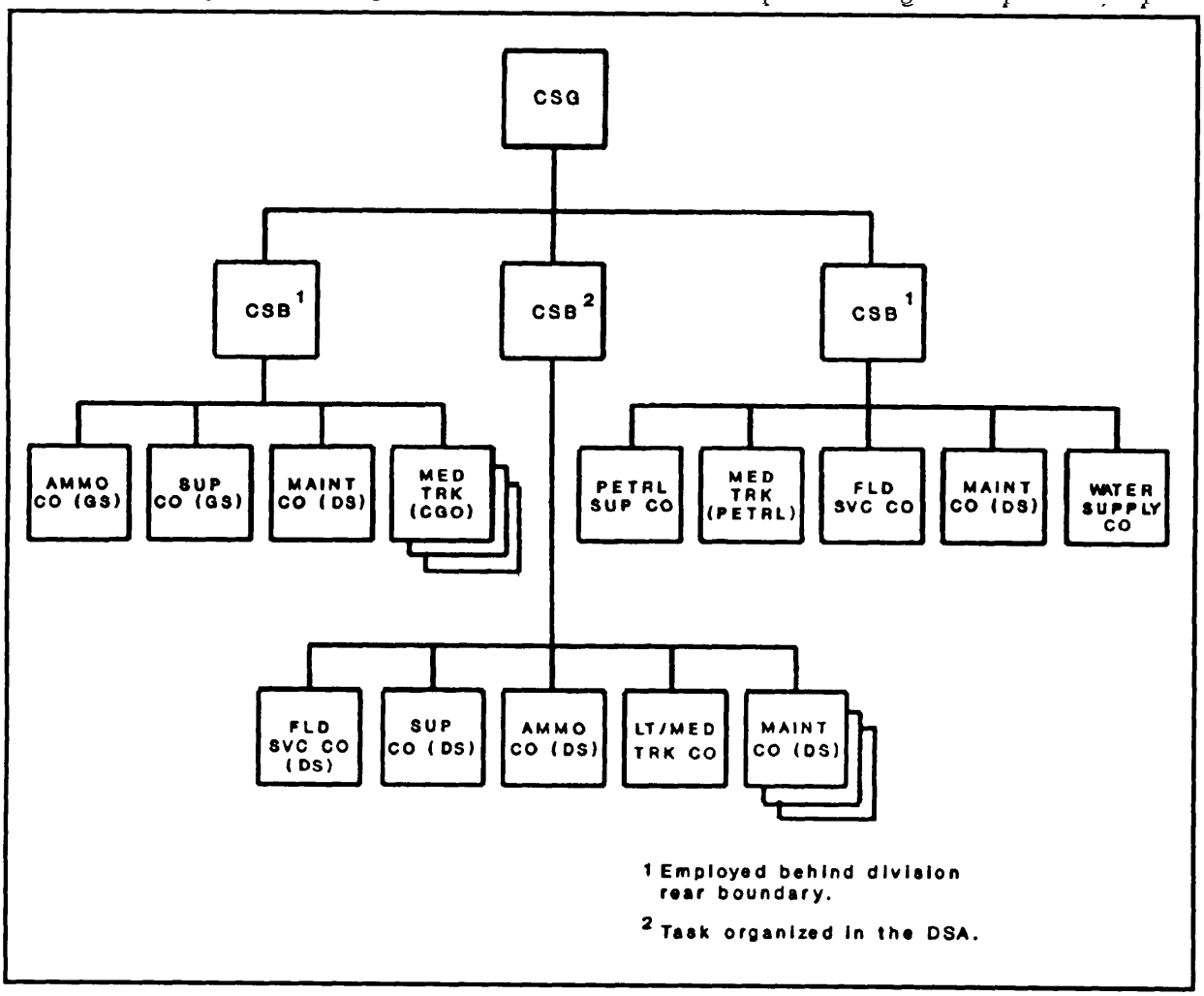


Figure 4-5. CSG (Forward).

assets availability to the MCT, and tasks subordinate truck companies for mission support.

b. Movement Control Interface.

(1) MCC. The corps MCC retains committal authority over transportation assets of the CSGs. This may include requirements for unit moves and contingency operations within the corps area. It monitors transportation use within each CSG through its MCTs and forecasts transportation requirements based on priorities. It requests additional transportation assets from EAC or the HN.

(2) MCT. The MCC collocates an MCT with each CSG HQ to commit CSG transportation assets to execute the movement program, fill validated requirements in the CSG area of operation by using TMR numbers (see Appendix F), and monitor asset use, availability, and readiness of CSG transportation assets. The MCT will also maintain asset visibility, including containers and trailers in their geographic area, through the CSG/CSB transportation support branches. The MCT will pass a match status to the MCC, which reflects its ability to balance requirements and capabilities in the CSG. It will request additional transportation support and coordinate backhaul from the corps MCC. The MCT assists in highway regulation within its area of operation by forwarding movement bids or requests for convoy block times to the HTD and providing route status to the HTD and CSG.

c. Transportation Request Process.

(1) Within the CSG.

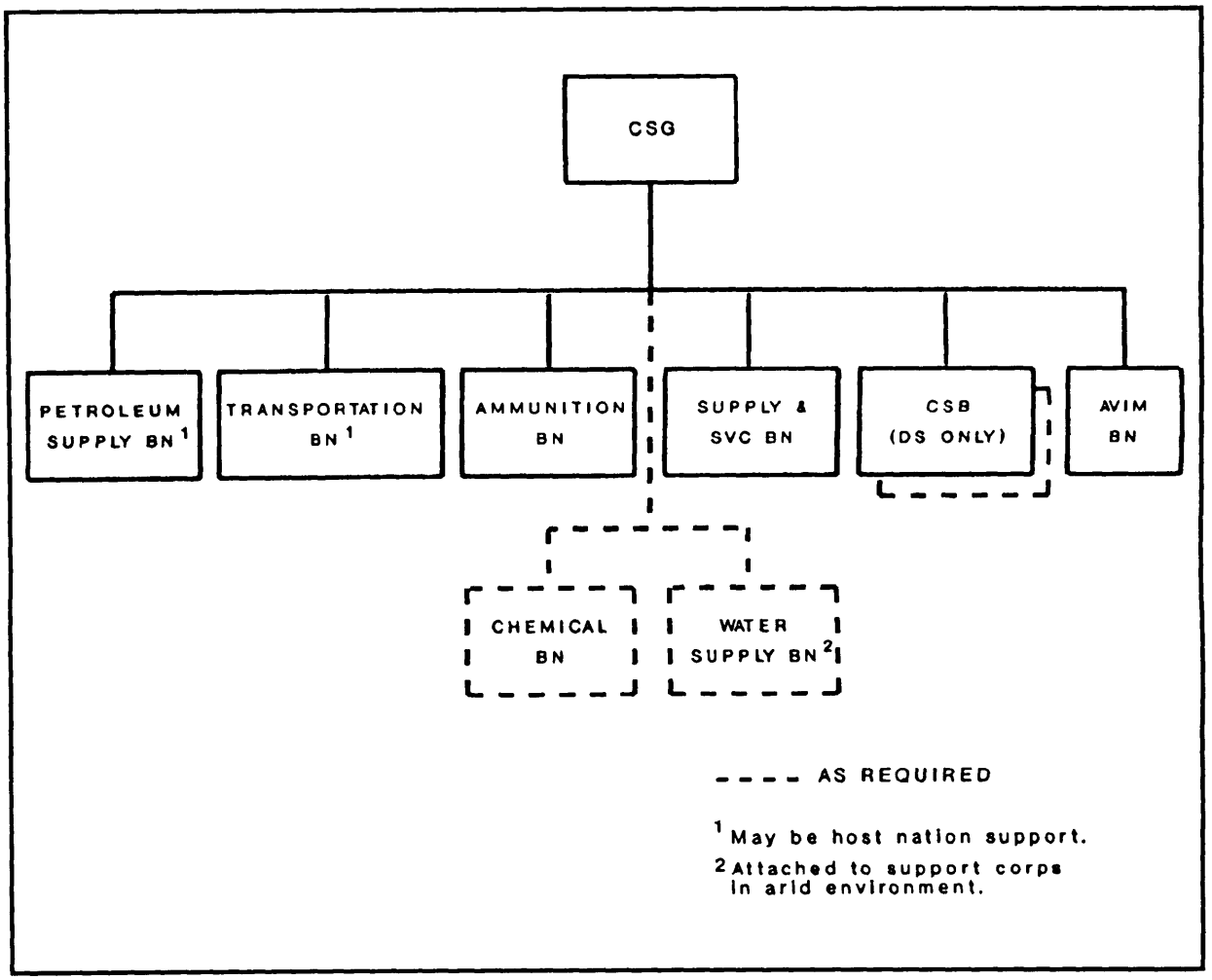


Figure 4-6. CSG (Rear).

(a) Subordinate companies in the CSB request transportation support from the CSB transportation support branch based on material movement requirements. The transportation support branch tasks its truck companies to fill these requirements based on habitual support relationships for Class III/V, recurring distribution requirements, and commitments passed from the MCT. When requirements exceed the organic capability of the CSB, the CSB transportation support branch requests additional support from the CSG. The CSG transportation support branch tasks available assets from other CSBs while coordinating with the MCT for TMR approval. If CSB requirements are projected to exceed available assets, the CSG cross-levels transportation assets between CSBs to meet all requirements within the CSG based on command priorities. If the CSG still requires additional capability, it will request additional assets from the MCT collocated with the CSG. The MCT will pass validated movement requirements to the MCC, which can commit another CSG to support the requirements. The MCC can also recommend to the COSCOM ACofS, Support Operations to reallocate corps transportation units between CSGs based on changes to the distribution pattern in the corps.

(b) The CSG transportation support branch will monitor the status of available assets within its CSBs and will, through the support operations section, cross-level assets among the CSBs to accomplish the mission. It will continue to pass requests for CSS air movement operations through the MCT to the MCC for committal of allocated Army assets and validation of requests for Air Force assets.

(2) In the division area. When the DTO or nondivisional units in the division rear need additional transportation assets, they will request them through the MCT collocated with the CSG providing support to that division. The MCT will first coordinate with the CSG transportation support branch to support the request. If the CSG can support the request, the MCT will issue a TMR. If the CSG cannot provide the support, the MCT will pass the requirement to the MCC. The MCC will assess the transportation capability within the other CSGs to support the requirement and commit the CSG that can best provide support.

NOTE: See Chapter 10 for more information on the transportation request process.

CHAPTER 5

MOVEMENT CONTROL IN THE DIVISION

5-1. INTRODUCTION

a. Movement control planning and execution in the division is a staff responsibility, rather than being vested in operational units found at EAC and corps. Movement control at division level also includes the movement of noncommitted combat units in the division area. This requires close coordination between the G3 and G4. The G3 plans and directs maneuver; the G4, through the DTO, plans movements. Unless the two are planned concurrently, the best battle plans can be thwarted by road congestion. FM 71-100 series and FM 55-2 have additional information on transportation operations in the division.

b. Movement and maneuver of combat forces is normally given priority over other movements, even though CSS traffic is essential to the success of battles and engagements. Planning and regulating movement requires close coordination among the division staff and the commanders and staffs of the brigades, separate battalions, and companies (Figure 5-1).

5-2. ORGANIZATION

a. All division headquarters have a transportation staff. Movement control planning and transportation management functions are the responsibility of the DTO. The DTO is a special staff officer who will work for the Chief of Staff. The Chief of Staff has the option of placing the DTO under the staff supervision of the G3 or G4. The composition of the division transportation office is based on the type of division. The DTO delegates responsibility for mode

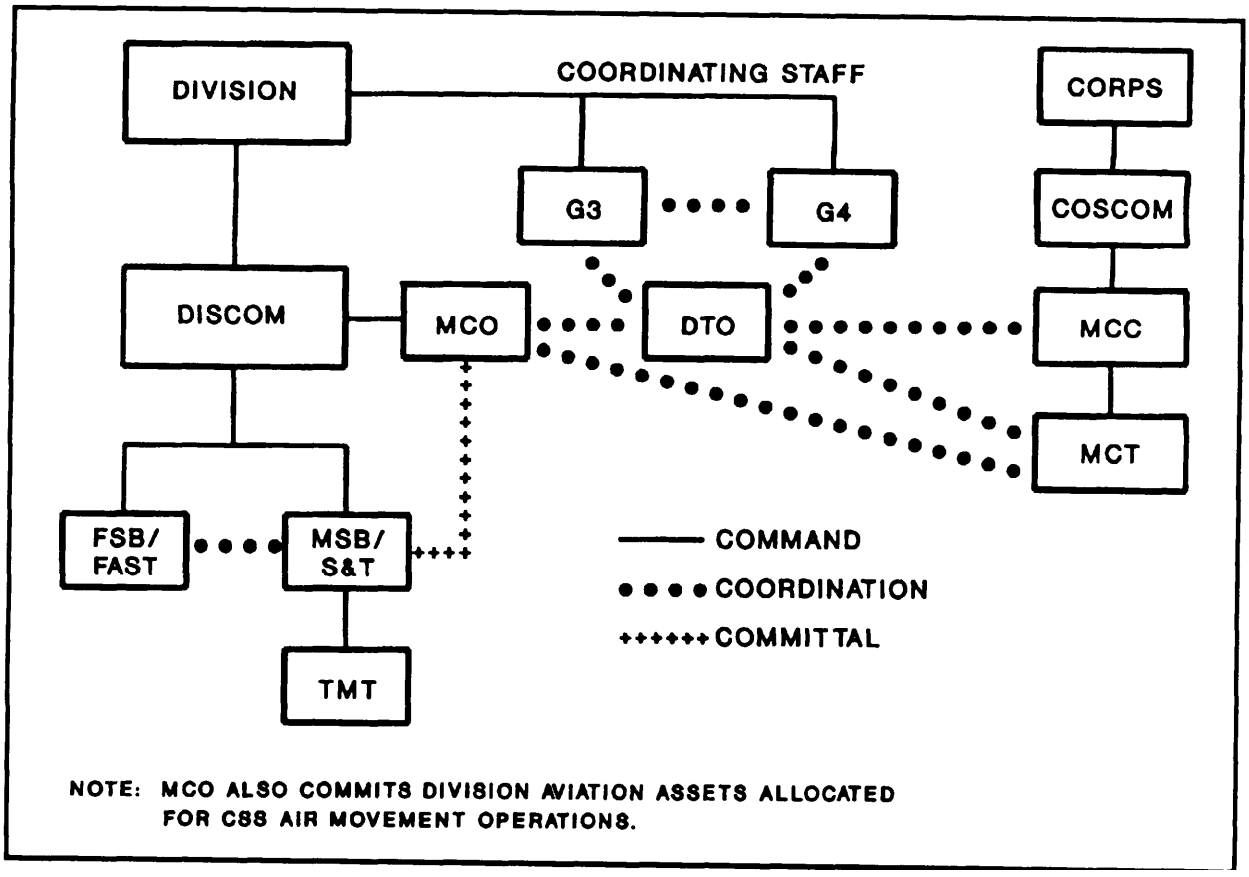


Figure 5-1. Division Transportation C2.

management, movement programming, and transportation management to the division support command (DISCOM) MCO. The MCO serves on the DISCOM commander's staff.

b. The brigade headquarters has no separate transportation staff and few organic transportation assets. The brigade S4 normally performs transportation functions with help from the forward support battalion (FSB) or forward area support coordinating officer (FASCO). The brigade S4 is also responsible for highway regulation in the brigade rear area and establishes MSRs in the brigade area in coordination with the DTO. The brigade S4 coordinates with the DTO for highway regulation and movements that cross the brigade rear boundary. He coordinates with the FSB to obtain transportation support when requirements exceed the capability of the brigade.

c. The division's maneuver and combat support battalions and squadrons do not have a separate transportation staff. The battalion S4 normally performs transportation functions with help from the support platoon leader. Their TOE provides load-carrying vehicles to support some of their movement requirements such as resupplying their companies from the brigade support area. The battalion S4 requests transportation support and movement clearance through their brigade S4.

d. Both the brigade and battalions depend on the DISCOM to provide transportation support when requirements exceed their organic capability. Each brigade, depending upon the type of division, receives logistical support from a FSB or forward area support team (FAST) in the brigade support area (BSA). The support operations officer of the FSB or the FASCO in the FAST is the brigade S4's point of contact for transportation support from the DISCOM. The FSB/FAST forwards requirements to the DISCOM MCO. The MCO has committal authority for truck assets assigned to the transportation motor transport (TMT) company assigned to the main support battalion, supply and transport (S&T) battalion, or supply and services (S&S) battalion in the division support area (DSA).

5-3. TRANSPORTATION REQUESTS

Transportation requests in the division are normally initiated by the battalion S4 or the FSB/MSB/FASCO and sent to the MCO. The MCO considers the justification, division priorities, and availability of assets. The MCO has committal authority for trucks in the TMT company. He may also have committal authority for aviation brigade assets if aircraft have been allocated by the G3 for CSS air movement operations. The MCO must determine that air is the best mode to accomplish the movement requirement. When division transportation requirements exceed organic assets, the MCO will request additional support from corps through the MCC or its servicing MCT based on DTO guidance.

5-4. DIVISION TRANSPORTATION OFFICER

The DTO has five primary functions. It also serves as the formal link between the division and the corps MCC. The DTO normally serves in the division rear command post but will operate from the main or tactical command post when required for planning future operations or coordinating movement. DTO staff functions are advisory, planning, coordination, technical assistance, and evaluation.

a. Advisory Functions. The DTO is the primary advisor to the division commander, the coordinating staff, and special staff on transportation matters. He recommends the allocation of division transportation assets and the establishment of MSRs. The DTO conducts concurrent planning with the staff to integrate movement and maneuver. This includes providing movement control expertise for planning tactical road marches and for preparing movement orders and movement tables. The DTO coordinates with the G4 on logistical transportation requirements. He provides the DISCOM MCO with policy guidance, plans and policies, priorities, and assistance in transportation and movement control matters.

b. Planning Functions. The DTO plans for movement of the division by all modes. He must know how the division will fight and must coordinate transportation and movement control planning with subordinate units. He obtains the division's priorities from the G3 and G4 and incorporates the priorities in all planning. He develops and coordinates movement control and highway regulation plans with the division staff, the CTO and MCC, and the MCO (paragraph 5-5). Due to the limited resources of the DTO and MCO, the division requires comprehensive SOPs to ensure efficient and effective use of transportation capabilities and road networks.

c. Coordinating Functions. Transportation and movement control operations require continuous coordination by the DTO and the DISCOM MCO. The DTO must coordinate plans and actions with division staff, provost marshal, division engineer, and others as required. Some functions that require coordination include selection of MSRs with the G3 and G4; priorities with the G3 and G4; highway regulation and traffic control with the provost marshal; route maintenance with the assistant division engineer; air defense coverage of MSRs and transportation nodes with the assistant division air defense officer; security of MSRs with the division rear command post; nuclear, biological, chemical (NBC) status with the division chemical officer; aviation support with the assistant division aviation officer and G3; and HN resources and plans to handle local nationals who may congest MSRs with the G5. The DTO may also coordinate with the G3 and G4 to cross-level nontask vehicles when required.

d. Technical Assistance Functions. The DTO is the focal point for transportation technical guidance and assistance to the division. As such, the DTO –

(1) Provides technical assistance to commanders and staffs for planning movements and preparing movement orders and tables. Since road space is usually limited in the division area, road use has to be carefully planned and controlled to prevent congestion.

(2) Develops the deployment, movement, and highway regulation portions of the division OPLANs and OPORDs.

(3) Provides assistance in planning for movement by all modes including strategic deployment. Orchestrates the entire movement to POE and deployment of division assets in coordination with the G3.

(4) Provides technical assistance to divisional units for unit movement training. This training should include preparing vehicles for transport, developing vehicle load plans, loading and securing vehicles on railcars and in Air Force aircraft, and reviewing convoy procedures.

(5) Provides technical assistance to the division G3 and G4 for selecting main and alternate supply routes. This requires close coordination between the division and corps transportation officers to integrate the traffic circulation plans of both headquarters.

e. Evaluation Functions. Almost all operational and logistical plans and orders will have some impact on division transportation resources. The DTO analyzes these plans to assess their impact on these resources and provides input to the G4's logistic estimate.

5-5. HIGHWAY REGULATION

a. To support the G4's staff responsibility for highway regulation in the division area, the DTO prepares a highway regulation plan and traffic circulation plan for the division road network. (See Chapter 7 for information on highway regulation.) The plan should be part of the service support annex or a separate annex to the division OPLAN/OPORD.

b. The DTO must consider distances, the capacities of the road network, the logistical situation, the mission, and the disposition of units when developing the plan. The DTO recommends naming and segmenting MSRs, control measures on each MSR, and coordination points where division MSRs link with those of the corps and brigades.

c. To implement highway regulation plans, the DTO maintains a system to control the use of those MSRs which require control and have been classified as dispatch, supervised, or reserved routes in the OPLAN/OPORD. This involves the capability to receive movement bids (clearance requests) from subordinate units or corps units operating in the division rear, deconflict movements, and pass movement credits (approved clearances). He must know what is moving and be capable of providing rerouting instructions and new control measures in a timely manner to prevent bottlenecks. This requires close coordination with the G3, provost marshal, and MCO.

d. To exercise highway regulation effectively, the DTO should maintain a situation map and overlay of the road network that reflects current information on traffic disruptions, obstructions, regulation and control measures, capacities, surface conditions, and classifications. He must coordinate frequently with the G3 for current information on enemy activity such as conventional or chemical strikes on MSRs, bridges, and tunnels that could interrupt movement. Close coordination with the G3 is also necessary to

support current operations, plan for future operations, and synchronize movement and maneuver.

e. The DTO, coordinating with the division engineer, recommends upgrade, maintenance, and repair priorities for the road network in the division area.

5-6. DISCOM MOVEMENT CONTROL OFFICER

a. The MCO supports movement control through planning and controlling the use of the division's task transportation assets. The MCO is normally located in the division rear with the DISCOM command post. The MCO is the link between division transportation mode operators and transportation users.

b. The MCO is responsible for ensuring that transportation assets are properly used and promptly released when missions are completed. The MCO coordinates with supported units to ensure delivery to the right location and integrates retrograde movement of equipment, personnel, EPWs, and deceased personnel. The goal is to provide responsive support and avoid congestion at loading or delivery sites.

c. The MCO commits the MSB or S&T battalion's TMT company assets. Based on DTO guidance, the MCO coordinates with the MCT to get transportation resources from corps units when requirements exceed capabilities. The MCO ensures the accountability and return of throughput assets, including containers and pallets. The MCO commits aviation assets to support logistical requirements when these assets have been allocated by the G3 for CSS air movement operations and the MCO determines that air is the best mode.

d. The MCO develops the division movement program. He coordinates with the division materiel management center (DMMC) to determine and plan for the transportation of material. The DMMC has Visibilty over material distribution requirements that will require either transportation assets or movement clearance. He coordinates with the G1 to determine personnel movement requirements. The MCO will also maintain close and continuous coordination with division units and the DTO to project transportation and movement requirements.

e. The MCO also –

- Serves as the principal advisor to the DISCOM commander and DISCOM staff on transportation matters.
- Maintains the status of transportation assets allocated to support movements requirements. Maintains the status of additional transportation assets placed in direct support, attached, or allocated for CSS operations.
- Enforces division priorities in committing transportation assets and seeks to resolve priority conflicts and competition by employing alternate modes and times or requesting support from corps.
- Recommends solutions to mitigate the effects of any transportation asset shortfalls within the division.
- Coordinates arrival of personnel replacements and resupply movements in the division rear with the FSB, MSB, FASCO, and other units as required. This will ensure that the receiving unit can handle the delivery and prevent congestion caused by transport equipment accumulating in the delivery area.
- Tracks and reports the status of containers in the division area. Coordinates arrival and unloading with receiving units. Reports availability for retrograde.
- Provides transportation intelligence data to DISCOM S2/S3 and to the DTO. This data is usually obtained through contact with truck drivers, dispatchers, and users of surface and air transportation.
- Coordinates with units to ensure adequate materials-handling equipment (MHE) and container-handling equipment (CHE) is available for loading and unloading.
- Coordinates with the DTO to integrate preplanned and immediate requirements into highway regulation operations.

CHAPTER 6

MOVEMENT PLANS, PROGRAMS, AND PROCEDURES

6-1. INTRODUCTION

This chapter is for movement managers at all command levels. It explains how to develop a movement program. Developing a movement program requires the direct coordination of coordinating staff officers, material managers, movement managers, and mode operators.

6-2. DEVELOPING THE MOVEMENT PROGRAM

a. A movement program is a command directive prepared by the TAMCA, MCC, and MCO. The TAMCA, MCC, and MCO must coordinate with the coordinating staff (DCSLOG/G4), the COSCOM support operations staff, the MMC, and mode operators to plan an integrated distribution system. The movement program is used to preplan both known and anticipated transportation requirements for reception and onward movement and sustainment. During the planning process, movement planners allocate available transportation resources to support requirements based on the commander's priorities.

b. Implementing the commander's priorities is a responsibility of logisticians at each command level. The movement program supports the commander's priorities by establishing what requirements can be resourced given available logistics assets, units, and infrastructure. In doing so, it effectively uses these assets and identifies competing requirements and shortages.

c. An effective movement program is vital for successful support of combat operations; therefore, supported units must provide accurate data when developing transportation requirements and inform movement planners of current and projected operating sites. Movement planners must be flexible because requirements will change frequently based on changes in priority, unit locations, asset availability, and conditions of the LOCs. Therefore, supporting movement plans should be fully developed alternatives based on likely courses of action. The TAMCA's transportation battalions (MC) and the corps' MCC must be resourced with sufficient MCTs and communications equipment to provide adequate movement control and operational flexibility.

d. The movement program serves as an authority to commit transportation assets. It authorizes the MCTs to issue TMRs (see Appendix F), directs the transportation mode operators to furnish assets, and alerts receiving units to accept programmed shipments so they can unload transportation assets promptly.

e. The seven basic steps used to develop the movement program are to —

- Assess the distribution pattern.
- Determine requirements.
- Determine transportation capabilities.
- Balance the requirements against the capabilities.
- Determine shortfalls, critical points, and recommended solutions for handling the shortfalls.
- Coordinate the program.
- Publish and distribute the program. The movement program may be issued in extract form.

6-3. ASSESSING THE DISTRIBUTION PATTERN

a. The distribution pattern is a complete logistic picture that shows the locations of supply, maintenance, and transportation activities. It is the tool by which planners know where support should normally flow and where it maybe diverted as operational needs dictate. The distribution pattern constantly evolves as the theater develops. Development of the distribution pattern is guided by the commander's concept of operation, number, types, and location of in-place and incoming units to be supported, and their time-phased arrival in

the theater. The distribution pattern will delineate throughput and interzonal transportation requirements which will directly affect the coordination and preparation of movement programs.

b. Movement planners use the distribution pattern to develop the transportation network, the complete system of routes pertaining to all modes of transportation available in the theater. Movement planners study intelligence and engineer information on the area of operations to determine the capabilities of transportation networks. They analyze the enemy situation to determine existing or potential threats to movement. Concurrently, they determine the suitability and feasibility of moving supplies and personnel over those transportation networks. Based on these studies, movement planners recommend locations for transportation units and nodes to optimize the transportation networks.

c. Movement planners in the TAMCA and MCC coordinate with the TRANSCOM/TAACOM and COSCOM regarding the positioning of transportation units and supply activities. These units should be positioned so that their capabilities can enhance the transportation network.

d. Movement planners also coordinate with shippers and receivers to determine their capability to receive, handle, and load by various transportation modes. This capability is based on factors such as availability of MHE, CHE, ramps, labor, storage capacity, and other factors that would affect transportation services. This information is necessary to efficiently schedule transportation and prevent congestion.

6-4. DETERMINING REQUIREMENTS

a. Having accurate requirements is the key to developing an effective movement program. Forecasts must be submitted far enough in advance for the transportation and supply systems to adjust their resources to carry out the program.

b. Movement planners use planning periods for forecasting requirements. The length of these periods is based upon the number and rapidity of changes experienced or anticipated. A 14-day planning period is desirable to allow a firm forecast of requirements for the current 7-day period and a tentative forecast for the succeeding 7-day period. This method provides a tool from which to operate during the current period and a basis for planning during the succeeding period. With a 14-day planning period, a new planning cycle is initiated every 7 days. The availability of an integrated ADP system which integrates movement and supply information will increase the accuracy of forecasts and allow for more accurate movement programming.

c. Materiel movement requirements are developed in terms of class of supply, estimated weight and cube, RDD, and planned origin and destination. The list should be grouped by RDD, priority, origin, and destination. Special handling requirements such as refrigerated cargo, hazardous cargo, and controlled/sensitive cargo must also be identified.

d. Personnel movement estimates are grouped by category such as troops, civilians, patients, or prisoners of war.

e. Major subordinate commands must provide their movement requirements that exceed organic transportation capability for inclusion in the movement program. Requirements should be identified as in paragraphs 6-4c/d.

6-5. DETERMINING CAPABILITIES

a. Movement planners at each command level must determine the capabilities of the transportation mode operators in their area of operation. They should obtain from mode operators the characteristics and capabilities of the following:

- The number of transportation units and their equipment available to support common-user movement requirements.
- The total number of HN transportation assets allocated to support common-user movement requirements. Include rail, inland waterways, and coastal shipping if available and feasible.
- The number of third country and US-contracted assets.
- Reception, material handling, and in-transit storage capabilities.

c. Intratheater US Air Force airlift and airdrop may be planned for if the JTB or JMC apportions assets for CSS air movement operations to the

theater Army. The theater Army commander will allocate apportioned airlift based on command priorities. Movement planners should realize that requirements normally exceed allocated airlift. They should also be prepared to take advantage of opportune lift.

d. Movement planners must also update capabilities with changes as they occur and adjust movement programs accordingly.

e. When developing transport capabilities, planners must use planning factors or experience based on the type of equipment, availability of MHE and CHE, weather, and terrain. Planners should obtain planning factors from mode operators or from FM 55-15. They may also use the following motor transport planning factors if actual data is not available:

(1) Average number of assigned task vehicles available for daily operations include —

- Operational short-range: 83 percent (maximum sustained effort for a period of less than 30 days).
- Long-range: 75 percent.

(2) Vehicle payload is the off-road payload factor.

(3) Daily round-trips (varies with running time and delays):

- Line-haul – two per day (one per shift).
- Local haul– four per day (two per shift).

(4) One-way distance used to calculate round-trips:

- Line-haul – 90 miles.
- Local haul – 20 miles.

(5) Average mih:

- Poor roads – 10 mih.
- Good roads-20 mih.

(6) Delays:

- Trucks – 2.5 hours loading and unloading time per round-trip.
- Semitrailers – 2.5 hours loading and unloading time per round-trip based on the MHE availability.
- Containers – 1.5 hours stuffing and unstuffing time per round-trip.
- Tractors in semitrailer relays – 1 hour per relay.
- Palletized load systems (PLSs) with trailer – 30 minutes.

6-6. BALANCING REQUIREMENTS AGAINST CAPABILITIES

a. Balancing requirements against capabilities determines whether the available mode assets will support movement requirements. As a result of this step, movement planners determine the work load for each mode and segment of the transportation network. See paragraph 6-8 for an example of how to balance using schematics.

b. The movement planner should not limit this process to simply programming the use of available transportation capability. The planner must also consider command relationships and geographic areas of responsibility.

c. The movement planner must assign requirements against all capabilities in a logical manner. He must consider not only capabilities but also the total transportation network, the tactical situation, the priority of movement, and the risk of failure. For example, if a critical shipment must move into an area that is accessible by multiple road routes, but only one rail route, it would be prudent to program the movement by motor transport. Less critical movements could be made by the rail segment.

d. Planners must consider all workload requirements such as —

- Direct shipments.
- Multistops.
- Retrograde.
- Intermodal shipments.

e. If the planner identifies transportation shortfalls, he will plan movement according to command priorities and the transportation priority of the shipment. The remainder will be adjusted and these adjustments will be coordinated with the shipper, receiver, material managers, and logistics staffs.

6-7. DETERMINING CRITICAL POINTS

a. Movement planners must identify critical points where restrictions could slow down or stop movement. Critical points are facilities, terminals, ports, railheads, and cargo transfer points that if congested will limit the efficiency and effectiveness of the entire transportation network.

b. After identifying the critical points, planners determine alternative plans or control measures that could reduce or eliminate the risk of congestion. The TAMCA and/or MCC should place movement teams on the ground where the problems are expected so they can respond before delays congest the system. They should also coordinate engineer, MP, and air defense artillery support where necessary.

6-8. PROGRAMMING BY SCHEMATICS

Schematics may be used to assist movement planners balance requirements and capabilities. Their purpose is to graphically portray total shipping requirements and available transportation capabilities as they relate to the distribution pattern. Planners use two types of schematics. The first is a requirements schematic (Figure 6-1) and the second is a mode schematic (Figure 6-2).

a. Requirements Schematic. First, prepare a supply distribution net diagram to show the relative position of all origin and destination points as obtained from movement requirement forecasts and connect them with lines and arrows showing direction. These areas are circled in Figure 6-1. Then list the daily shipping requirements for each origin-destination combination between the points. The requirements are listed as the class of supply, the tonnage, and the movement program line number. If forecasts are expressed as total program period tonnages, daily average requirements are obtained by dividing the total tonnage by the number of days in the program period.

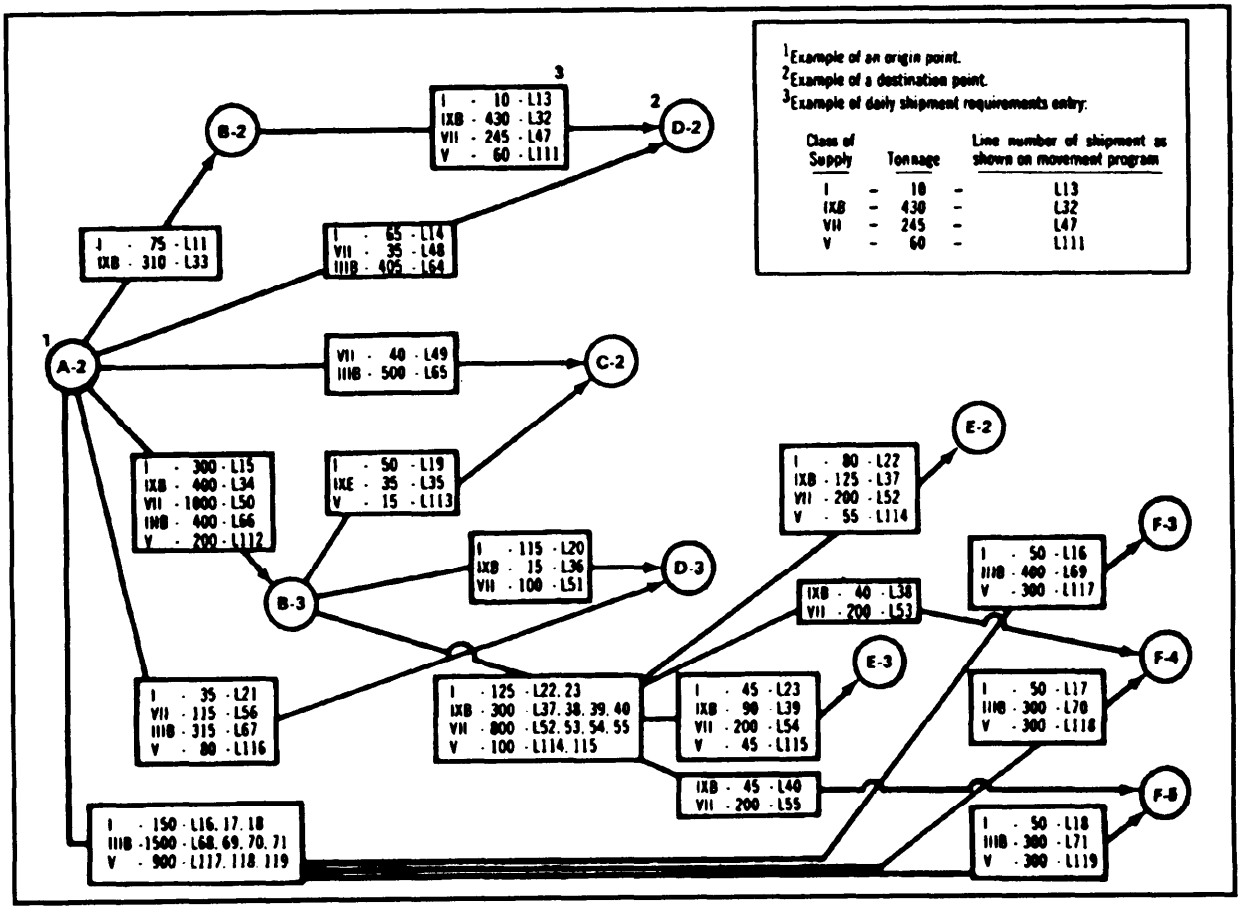


Figure 6-1. Requirements Schematic.

b. Mode Schematic.

(1) Prepare a mode schematic for each available mode. First, diagram mode origin and destination nodes as shown in Figure 6-2 and connect with lines. Do this regardless of whether or not the current program requires movement on a segment. On the outside of the lines, note the mode capacity. Mode capacity can be expressed in several forms: for

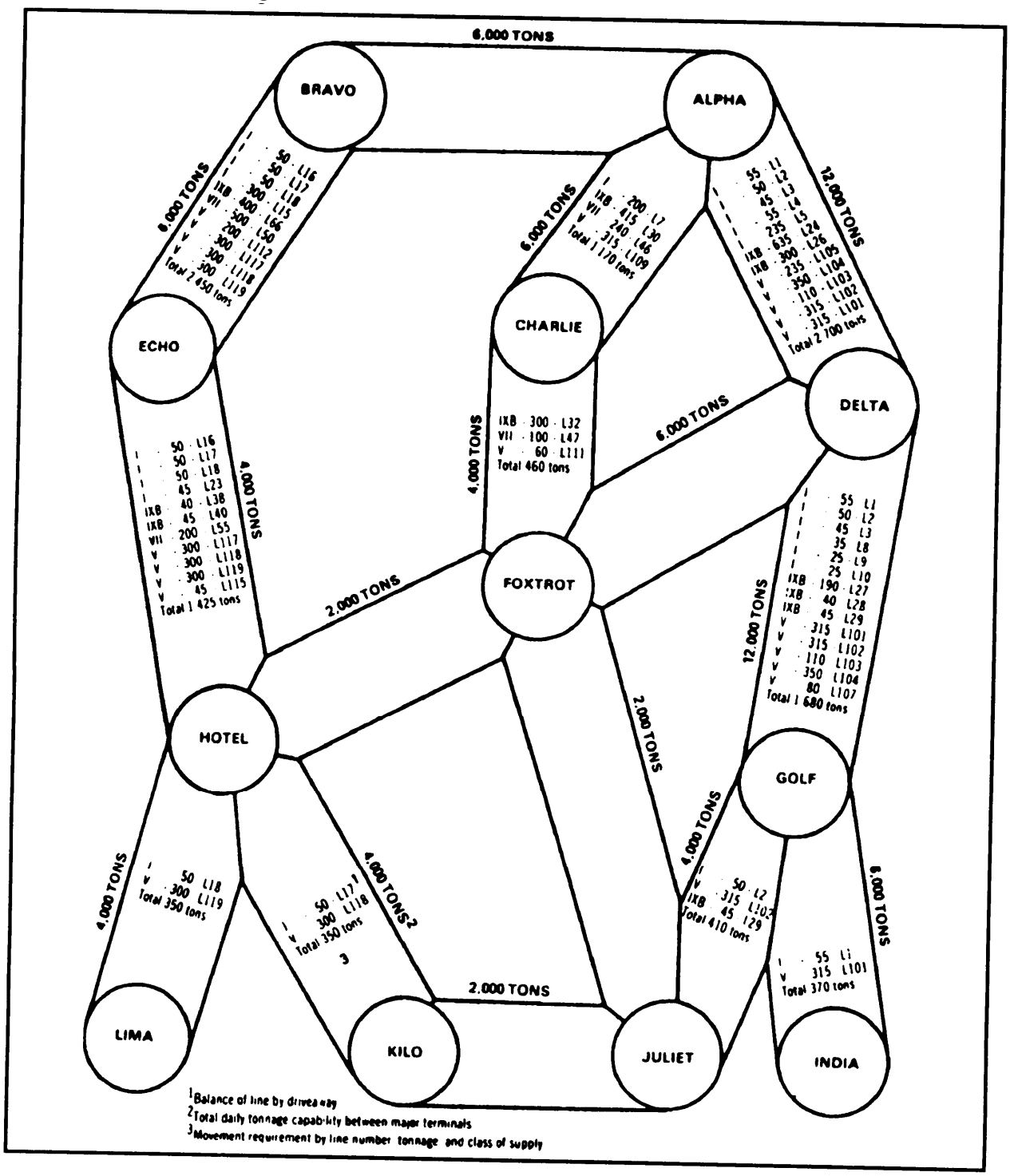


Figure 6-2. Mode Schematic - Rail.

rail and air, as total daily tonnage capacity between major terminals; for motor transport, as the daily ton-mile capacity in a particular area or as segments of a line-haul operation.

(2) The final step is to select and allocate a mode for each shipping requirement (program line item). Refer to paragraph 6-9 for mode selection guidance. First, consider allocating capability for the largest requirements moving the longest distance and evaluate movement priorities and shipment characteristics. Primary emphasis is placed on using the full capability of each mode in the relative order of economy. Then assign program line numbers to each mode and list them between the nodes as class of supply, tonnage, and the movement program line number. Figure 6-2 shows a rail schematic and how shipments might be allocated to rail.

(3) As requirements are added between nodes, deduct the tonnage from that segment's capacity. When all movement requirements have been assigned, transfer the mode allocation information to the movement program. (See Figure 6-3.) Retain the schematics and post them in a conspicuous place during the applicable program period. They provide a means to record changes and illustrate the effect of changes on the transportation system as a whole.

6-9. SELECTING A MODE

Movement planners use the following basic guidelines to allocate the mode of transport:

- Provide service according to command and transportation priority. Other factors such as shipment characteristics, security requirements, and political considerations are also evaluated.
- Whenever possible, minimize or eliminate cargo rehandling, avoid crosshauls, and plan for backhauls.
- Allocate all available transport equipment necessary to fulfill known requirements.
- Use the most efficient mode for the complete movement or as far forward as possible. See Table 6-1.

MCT: _____

MOVEMENT PROGRAM--CARGO

PLANNING PERIOD: 230-244
EFFECTIVE DATE: 230-237

MVMT LINE NO	PRG SUPPLY CLASS	ORIGIN	LOCATION	DESTN	LOCATION	DEST MCT	CNTNR TYPE	PIECES	STON	CUBE	T P	RDD	MODE
51000	1	JG2	FU330044	AK4SQC	FR282922	793rd	/	028905	000246	52029.0	2	232	H
51001	5	JG9	ET400000	AK4RJA	LC979250	793rd	20/40	006964	003995	161422.0	3	232	H
51002	5	JG6	ET770599	AK4RJB	LC914722	793rd	20/40	006292	003614	149284.8	3	232	H
51003	5	JH1	ES160875	AK4RKA	LC410321	27AD DTO	20/40	006292	003614	149284.8	3	232	A
51004	5	JG9	ET400000	AK4RKB	LC124262	27AD DTO	20/40	005964	003580	154822.0	3	232	H
51005	8	JG1	ET995488	WK4NEC	MC520537	536th	/	155696	000105	18621.0	2	232	R
51006	5	JG9	ET400000	WK4RCA	MC685976	536th	20/40	002119	001155	50533.7	3	232	R
51007	5	JG6	ET770599	WK4RCD	MC441610	429th	20/40	002156	001271	52855.0	3	232	R
51008	5	JG9	ET400000	WK4REA	MC812223	793rd	20/40	002195	001251	52428.7	3	232	R
51009	1	WK4SJC	MC736246	WK4SAY	NC078547	793rd	/	004983	000042	8989.4	3	232	H
51010	1	WK4SHD	MC708466	WK4SBY	NC018317	793rd	/	004986	000042	8974.8	3	232	A
51011	1	WK4SQC	MC785828	WK4SCY	NC056843	27AD DTO	/	005115	000043	9207.0	3	232	A
51012	1	WK4SQC	FR282922	WK4SGC	MC785828	27AD DTO	/	006544	000056	11779.2	2	232	H
51014	1	WK4SQC	FR282922	WK4SHD	MC708466	536th	/	006910	000059	12438.0	2	232	H
51015	1	WK4SQC	FR282922	WK4SJC	MC736246	536th	/	006909	000059	12436.2	2	232	H
51016	7	JH2	ES960720	9SQD22	LC654443	429th	/	000140	001022	186180.8	3	232	A
51017	7	JH2	ES960720	22AVBN	LC654443	793rd	/	000157	000765	224409.1	3	232	A
51019	8	JG2	FU330044	AK4NNF	FU230026	793rd	/	049440	000049	6635.2	2	232	H
51020	8	JG2	FU330044	AK4NNG	FS662988	793rd	/	049850	000050	6676.2	2	232	H
51021	1	AK4SQC	FR282922	AK4SWC	FT785045	27AD DTO	/	004566	000039	8218.8	2	232	R
51022	1	AK4SQC	FR282922	AK4STA	MC332884	27AD DTO	/	003976	000034	7156.8	2	232	R
61000	1	JG1	ET995488	WK4NEC	FR282922	536th	/	028905	000246	52029.0	2	233	H
61001	5	JG9	ET400000	AK4RJA	LC979250	536th	20/40	003679	003445	124335.5	3	233	H
61002	5	JG6	ET770599	AK4RJB	LC914722	429th	20/40	003402	003156	118608.0	3	233	H
61003	5	JH1	ES160875	AK4RKA	LC410321	793rd	20/40	003399	003154	118570.8	3	233	R
61004	5	JG9	ET400000	AK4RKB	LC124262	793rd	20/40	003679	003445	124335.5	3	233	H

Figure 6-3. Sample Movement Plan (Cargo).

6-10. COORDINATING

a. The movement program must be coordinated with movement planners at each command level during both its development and afterward to ensure integrated planning and synchronized execution. It also requires coordination with operations, supply, military police, engineer, and air force staffs so that each knows his responsibilities during execution.

b. Movement control organizations distribute the completed movement program to each command level for comment and concurrence. During this phase, the program is used to facilitate planning and to show the evolving distribution patterns and projected logistic activity but does not authorize shipments to take place. It becomes a directive once it is approved by the DCSLOG or G4.

Table 6-1. Mode Selection Guide.

ORDER OF ECONOMY	MOST EFFECTIVE USE	CAPABILITIES	LIMITATIONS
Pack animals and human bearers	Supplementary mode to extend surface transportation net over terrain impassable to other modes.	All tactical terrain, all weather conditions. Pack animals: can transport about 250 pounds with a cargo density of over 25 pounds per cubic foot. Human bearer: can transport about 80 pounds subject to pack configuration.	Most inefficient means when terrain is trafficable to other surface modes. Human bearers most wasteful of human resources.
Pipeline	Primary mode for bulk liquids and solids suspended in liquid.	All weather conditions; few terrain restrictions; most economical and reliable mode for bulk liquids; relatively few personnel required for operation and maintenance.	Flexibility limited by immobile facilities; vulnerable to sabotage and enemy action; large construction tonnages required.
Water	Primary over-ocean mode. Inland surface mode for moving large quantities of cargo.	All weather conditions; any commodity; most economical overall long-distance carrier; particularly useful for relieving other modes to more suitable employment.	Relatively slow; flexibility limited by adequacy of waterways, facilities, and channels; vulnerable to enemy action and difficult to restore. Also, inland waterways subject to flooding and freezing.
Rail	Primary inland mode for sustained flow of large quantities of traffic over long distances.	All weather conditions; any commodity; most economical continuous line-haul operations; greatest sustained ton-mile capability; variety of specialized equipment and services.	Flexibility limited by fixed routes; rail-line clearances restrict outsize movements; capability limited by availability of tractive power; rail line highly vulnerable to enemy action.
Motor transport	Supplementary mode for making possible an integrated transportation system. Effective in scheduled line-haul operations by the trailer-relay system; primary mode for distribution operations and logistical support operations in combat zone.	Most flexible mode over trafficable terrain; practically all weather conditions (terrain factor important); increases flexibility of other modes; can transport nearly any commodity with a variety of specialized equipment for both on- and off-road movement.	Over-the-road operations affected by route interferences and obstacles created by weather, terrain, or enemy action; sustained line-haul operations over long distances uneconomical in terms of ton-mile output versus expenditure of manpower and equipment.
Army Air (Helicopter)	The most costly Army mode for the movement of supplies. Becomes the primary mode of transport when all others are ineffective because of limitations or physical restrictions. Used to move only those high-priority items and critically needed supplies; i.e., class V, III, I, IX, or as selected by mode managers.	All terrain. Effective over short distances less than 40 km for external loads. Helicopter can use unimproved pickup zone (PZ) and landing zone (LZ) during external lift operations. CAPABLE OF LIFTING NEARLY ANY LOAD THAT CAN BE SAFELY RIGGED and that is WITHIN THE WEIGHT limitations of the helicopter. CH47 helicopters are capable of using Air Force 463L pallets and standard NATO warehouse pallets, when they are equipped with the helicopter internal cargo handling system (HICHS).	Operational capabilities limited by weather. Restricted flights in snow conditions and thunderstorms. Freezing levels above surface may limit capabilities. Aircraft capabilities limited by cargo load weight, cargo hook limits, or cargo door sizes. Aircraft availability may be affected by flying hour program or crew rest requirements. Internal cargo loading may require materials handling equipment (MHE).
Air: Army Air Force	Complementary mode for expediting movement of mission-essential traffic; primary or major supplementary mode when terrain reduces effectiveness of surface modes; scheduled operation is most economical method of employment and produces greatest sustained ton-mile capability.	Greatest potential speed of delivery; most flexible with respect to terrain obstacles; economically more favorable (when these factors are combined with substantial lift capability and air transport over long distances). Capabilities are: heavy drop, container delivery system (CDS), low altitude parachute extraction system (LAPES), air land, adverse weather aerial delivery system (AWAD), aerial bulk fuel delivery system (ABFDS).	Operational capabilities and effectiveness limited by climate and trafficability of takeoff and landing areas; high ton-mile operating costs.

6-11. FORMATTING A MOVEMENT PROGRAM

a. During the planning process, planners assign each movement requirement a movement program line number. This line number is used to identify the requirement and additional information throughout the development of the movement program. Figure 6-3 is an example of a movement program for cargo movement. Figure 6-4 is an example of a movement program for passenger movement. The movement program planning process can also be used to identify and plan for the expected arrival of units into the theater.

b. Information in the format includes the following.

- Program line number.
- Class of supply, subclass, and commodity code (MILSTAMP).
- Estimated weight (STONs) and cube.
- Nomenclature.
- Origin and destination by UIC/DODAAC and map coordinates.
- Transportation priority, selected mode, and RDD by Julian date. (Designate the type of container with the mode code if required.)

c. When programming personnel, list them as troops, patients, civilians, or EPWs.

d. The remarks column should be used to identify characteristics for items requiring special handling. For example, the remarks column could include the dimensions of outsize/overweight equipment. Other examples include items requiring special handling such as controlled temperature, controlled environment, hazardous cargo, or cargo security.

e. The TAMCA compiles activity address files for units in the theater. These files list in-the-clear unit locations and points of contact and must be safeguarded. The TAMCA provides a copy of the file to subordinate movement control units. These subordinate units also compile activity address files for units in their geographical area and update the

MCT:_____

MOVEMENT PROGRAM--PERSONNEL

PLANNING PERIOD: 225-23
EFFECTIVE DATE: 225-23

MVMT LINE NO	PRG	SUPPLY CLASS	ORIGIN	LOCATION	DESTN	LOCATION	DEST MCT	CNTNR TYPE	PIECES	STON	CUBE	T P	RDD	MODE
P0001		PATIENTS	AMS	FT230970	AK4PUC	FT220930	793RD	/	000400	000028	4000.0	2	226	A
P0002		PATIENTS	AMS	FT230970	AK4PUG	FT220930	793RD	/	000400	000028	4000.0	2	226	A
P0003		PATIENTS	AMS	FT230970	AK4PUL	FT220930	793RD	/	000400	000028	4000.0	2	226	A
P0004		TROOPS	BRU	FS043390	AK4PVJ	FS040340	27AD DTO	/	000400	000048	4000.0	2	226	H
P0005		TROOPS	BRU	FS043390	AK4PVN	FS040430	27AD DTO	/	000400	000048	4000.0	2	226	H
P0006		EPW	AK4PUC	FT220930	WK4PKU	MC782766	536TH	/	000300	000038	4000.0	2	227	H
P0007		EPW	AK4PUG	FT220930	WK4PRU	MC684510	536TH	/	000300	000038	4000.0	2	227	H
P0008		EPW	AK4PVJ	FS040340	WK4PJU	MC760336	429TH	/	000400	000048	4000.0	2	227	H
P0009		PATIENTS	AMS	FT230970	AK4PUC	FT220930	793RD	/	000400	000048	4000.0	2	227	R
P0010		PATIENTS	AMS	FT230970	AK4PUG	FT220930	793RD	/	000400	000048	4000.0	2	227	R
P0011		PATIENTS	AMS	FT230970	AK4PUL	FT220930	793RD	/	000400	000048	4000.0	2	227	H
P0012		TROOPS	BRU	FS043390	AK4PVJ	FS040340	27AD DTO	/	000400	000048	4000.0	2	227	H
P0013		TROOPS	BRU	FS043390	AK4PVN	FS040430	27AD DTO	/	000400	000048	4000.0	2	227	H
P0014		EPW	AK4PUC	FT220930	WK4PKU	MC782766	536TH	/	000300	000038	4000.0	2	228	A
P0015		EPW	AK4PUG	FT220930	WK4PRU	MC684510	536TH	/	000300	000038	4000.0	2	229	H
P0016		EPW	AK4PVJ	FS040340	WK4PJU	MC760336	429TH	/	000400	000048	4000.0	2	228	H
P0017		PATIENTS	AMS	FT230970	AK4PUC	FT220930	793RD	/	000400	000028	4000.0	2	229	R
P0018		PATIENTS	AMS	FT230970	AK4PUG	FT220930	793RD	/	000400	000028	4000.0	2	229	R
P0019		PATIENTS	AMS	FT230970	AK4PUL	FT220930	793RD	/	000400	000028	4000.0	2	229	H
P0020		TROOPS	BRU	FS043390	AK4PVJ	FS040340	27AD DTO	/	000400	000048	4000.0	2	229	H
P0021		TROOPS	BRU	FS043390	AK4PVN	FS040430	27AD DTO	/	000400	000048	4000.0	2	229	H
P0022		EPW	AK4PUC	FT220930	WK4PKU	MC782766	536TH	/	000300	000038	4000.0	2	230	H
P0023		EPW	AK4PUG	FT220930	WK4PRU	MC684510	536TH	/	000300	000038	4000.0	2	230	H
P0024		EPW	AK4PVJ	FS040340	WK4PJU	MC760336	429TH	/	000400	000048	4000.0	2	230	A
P0025		PATIENTS	AMS	FT230970	AK4PUC	FT220930	793RD	/	000400	000048	4000.0	2	230	A
P0026		PATIENTS	AMS	FT230970	AK4PUG	FT220930	793RD	/	000400	000048	4000.0	2	230	H
P0027		PATIENTS	AMS	FT230970	AK4PUL	FT220930	793RD	/	000400	000048	4000.0	2	230	H
P0028		TROOPS	BRU	FS043390	AK4PVJ	FS040340	27AD DTO	/	000400	000048	4000.0	2	230	H

Figure 6-4. Sample Movement Plan (Personnel).

TAMCA's master file (Figures 6-5 and 6-6). The MCTs and MCO will accept transportation requests from those units located in their geographic area of responsibility and listed on their customer list. MCTs must update their lists frequently due to the fluid nature of the battlefield.

f. Included in the movement program is an MSR checkpoint list. It provides ready reference data about the MSR network such as checkpoints, link numbers, feeder routes into the MSR, and distances. Movement control personnel and customers can use this information to identify the path to be used from origin to destination and to identify segment numbers for use in requesting movement bids and receiving movement credits (see Figures 6-7 and 6-8 and Chapter 7).

g. The movement program planning format may also be used to develop individual movement plans. Movement plans are initial developmental stages of a movement program that support specific OPLANs. As such, these movement programs are only plans until they are executed. Because they list unit locations, they should be classified documents.

6-12. EXECUTING THE MOVEMENT PROGRAM

a. To activate a movement program line number, the shipper contacts its servicing MCT or MCO and requests its line number be activated.

b. The MCT or MCO verifies that the program data is still valid by coordinating with the shipper. The MCT or MCO will coordinate with the receiver if positive inbound clearance is required.

c. If command priorities change during the current program cycle and these priority changes effect program execution, movement planners will coordinate with affected shippers and receivers.

d. If shippers or receivers have changes in requirements, capabilities, or locations, they should contact their servicing MCT or MCO as soon as the change occurs.

6-13. PREPARING THE PORT CLEARANCE PROGRAM

a. The port clearance program is part of the theater movement program. It may also be part of the corps movement program in an undeveloped

CUSTOMER LIST

(ALPHABETICAL LISTING)

AAC	NOMENCLATURE	GRID COORD	UIN	MCT
WK4CFC	C CO 704 SIG BN AREA	NV228645	WCFCAA	793RD MCT
WK4CFD	D CO 704 SIG BN AREA	NV086625	WCFDAA	793RD MCT
WK4CFE	HHC 704 SIG BN AREA	NV399791	WCFUAA	793RD MCT
WK4CGA	A CO 705 SIG BN AREA	NV279958	WCGAAA	792ND MCT
WK4CGB	B CO 705 SIG BN AREA	NV270869	WCGBAA	792ND MCT
WK4CGC	C CO 705 SIG BN AREA	MV997883	WCGCAA	792ND MCT
WK4CGD	D CO 705 SIG BN AREA	MV982803	WCGDAA	792ND MCT
WK4CGU	HHC 705 SIG BN AREA	NV270869	WCGUAA	792ND MCT
WK4CHA	A CO 706 SIG BN AREA	NA995238	WCHAAA	791ST MCT
WK4CHB	B CO 706 SIG BN AREA	NA007067	WCHBAA	791ST MCT
WK4CHC	C CO 706 SIG BN AREA	MA859181	WCHCAA	791ST MCT
WK4CHD	D CO 706 SIG BN AREA	MV863984	WCHDAA	791ST MCT
WK4CHU	HHC 706 SIG BN AREA	NA007067	WCHUAA	791ST MCT
WK4CIU	HHC 20 SIG BDE	NV211935	WCIUAA	792ND MCT
WK4CJA	A CO (CMD RDO) 712 S	NV237936	WCJAAA	792ND MCT
WK4CJB	B CO (FWD RDO) 712 S	NV237947	WCJBAA	792ND MCT
WK4CJC	C CO (SPT RDO) 712 S	MA879090	WCJCAA	791ST MCT
WK4CJD	757 CO CABLE & WIRE	NV264918	WCJDAA	792ND MCT
WK4CJE	761 CO CABLE & WIRE	NV264875	WCJEAA	792ND MCT
WK4CJU	HHC 712 SIG BN (RDO)	NV237947	WCJUAA	792ND MCT
WK4DBA	500 CIMIC DET	NV257928	MDMAAA	792ND MCT

Figure 6-5. Sample Transportation Customer Alphabetical List.

CUSTOMER LIST

793RD MCT

AREA OF OPERATION

AAC	NOMENCLATURE	GRID COORD	UIN
WK4MK3	903 MAINT CO DS	NV366725	WMK3AA
WK4MK4	904 MAINT CO DS I	NV479645	WMK4AA
WK4MK7	HHD 90 MMT BN IDSH	NV167504	WMK7AA
WK4MV3	713 ACFT MAINT CO	NV277643	WMV3AA
WK4MEG	8163 VET SVC TM	NV481638	WNEGAA
WK4MGB	8153 DEM SVC TM	NV481638	WNGBAA
WK4MGD	8155 DEM SVC TM	NV399704	WNGDAA
WK4MHA	8871 ENVIRON SANIT	NV481638	WNHEAA
WK4MKF	8893 MED TM ORTHO	NV481638	WNKFAA
WK4MKH	841 EVAC HOSP	NV187606	WNKHAA
WK4MKL	813 CBT SPT HOSP	NV416785	WNKLAA
WK4MKM	815 CBT SPT HOSP	NV462714	WNKMAA
WK4MKP	8094 MASH HOSP	NV399704	WNKPAA
WK4MKU	HHD 89 MED GP	NV481638	WNKUAA
WK4WLA	857 MED CO AMBL	NV399704	WNLAAA
WK4MLB	859 MED CO AMBL	NV416785	WNLBAA
WK4MLD	8121 MED CO AIR AM	NV481638	WNLDAA
WK4MLE	8122 MED CO AIR AM	NV399704	WNLEAA
WK4MLF	8124 MED CO AIR AM	NV462714	WNLFAA

Figure 6-6. Sample Transportation Customer List MCT Area of Operation.

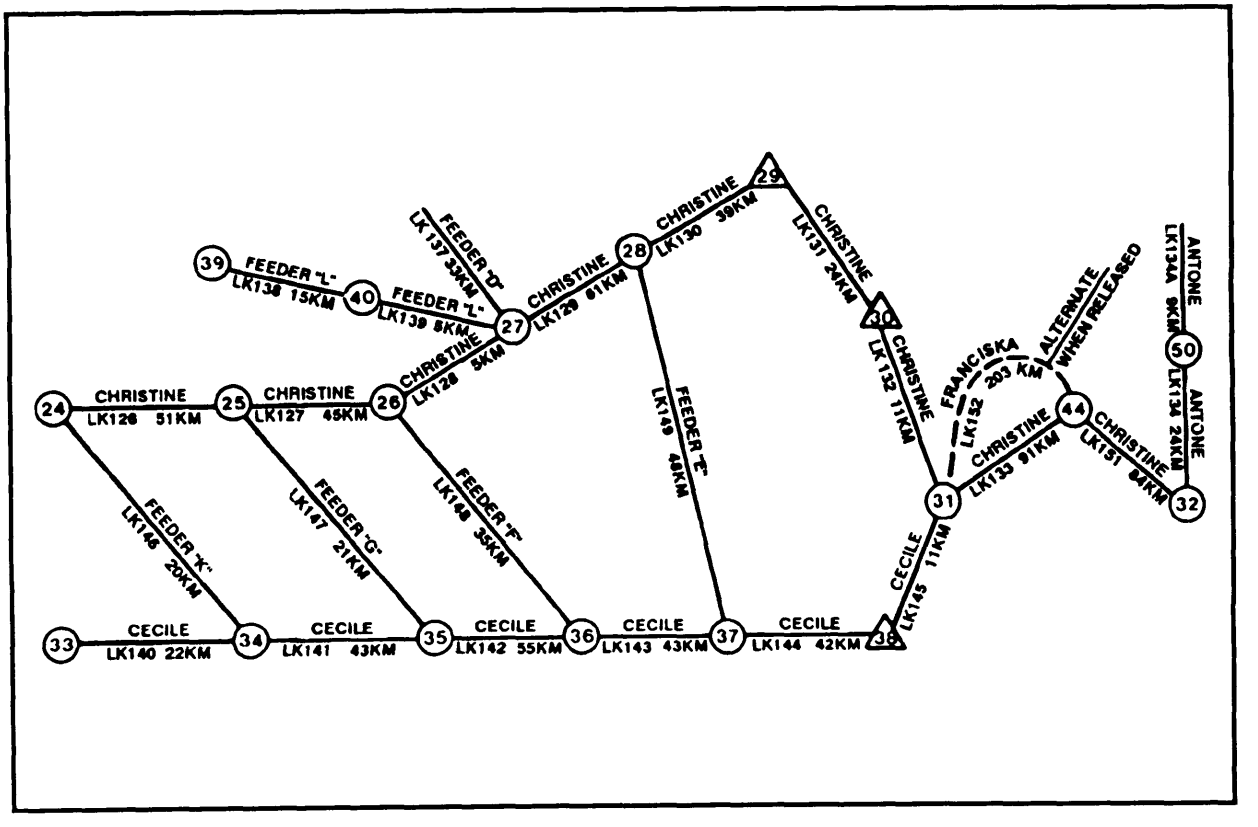


Figure 6-7. Schematic Road Network-COMMZ.

theater. The TAMCA should begin preparing the port clearance program as soon as it receives advance manifest data from the CONUS ports, terminal units, or other ports of origin. Once the vessel manifest (what is actually on the ship and where stowed) is available, the MCT at the terminal programs actual transportation assets to provide onward transportation based on anticipated arrival date and will activate line numbers and/or programs. The MCT coordinates through movement control channels the status of program execution.

MSR: CHRISTINE

FROM: ZEEBRUGGE TO: MSR ANTONE

CK PT	LK NO	FROM VIC CITY	GRID COORD	KM	TO VIC CITY	CK PT	GRID COORD
24	126	ZEEBRUGGE	ES130862	51	ZEIZATE	25	ES578716
25	127	ZEIZATE	ES578716	45	ANTWERPEN WEST	26	ES984722
26	128	ANTWERPEN WEST	ES984722	5	ANTWERPEN EAST	27	FS012744
27	129	ANTWERPEN EAST	FS012744	61	GENENBOS	28	FS560522
28	130	GENENBOS	FS560522	39	MEERS	29	FS944488
29	131	MEERS	FS944488	24	BOCHOLTZ	30	KB900346
30	132	BOCHOLTZ	KB900346	11	WURSELEN	31	LB006318
31	133	WURSELEN	LB006318	97	MUNSTER	44	MC010528
44	151	MUNSTER	MC010528	84	OSTERCAPPEN	32	MD490002

TOTAL KMS: 417 HOURS ORIGIN TO DEST: 8.3
RATE OF MARCH: 50KM/H

MSR: CECILE

FROM: MIDDELKERKE TO: MSR CHRISTINE

CK PT	LK NO	FROM VIC CITY	GRID COORD	KM	TO VIC CITY	CK PT	GRID COORD
33	140	MIDDELKERKE	DS946742	22	HEIDELBERG	34	ES146672
34	141	HEIDELBERG	ES146672	43	GENT	35	ES532508
35	142	GENT	ES532508	52	BRUSSELS	36	FS012404
36	143	BRUSSELS	FS012404	93	VOTTEM	37	FS850188
37	144	VOTTEM	FS850188	42	HAUSET	38	KB962220
38	145	HAUSET	KB962220	11	WURSELEN	31	LB006318

TOTAL KMS: 263 HOURS ORIGIN TO DEST: 5.3
RATE OF MARCH: 50KM/H

Figure 6-8. Sample Checkpoint List.

b. The TAMCA provides input to the terminal commander, if vessel diversion is required. These TAMCA's recommendations are based on cargo destinations; available port capacities, capabilities, and work loads; and capacities and projected work loads for the various modes and segments of the transportation network.

c. A close working relationship between the TAMCA and TAMMC is required to program and expedite moving nonunit equipment and supplies, especially those shipped in containers.

FEEDER: E

FROM: GENENBOS TO: VOTTEN

CK LK PT NO	FROM VIC CITY	GRID COORD	KM	TO VIC CITY	CK PT	GRID COORD
28 149	GENENBOS	FS560522	48	VOTTEN	37	FS850188

TOTAL KMS: 48 HOURS ORIGIN TO DEST: 1

RATE OF MARCH: 50KM/H

FEEDER F

FROM: ANTWERPEN-WEST TO: BRUSSELS

CK LK PT NO	FROM VIC CITY	GRID COORD	KM	TO VIC CITY	CK PT	GRID COORD
26 148	ANTWERPEN WEST	ES984722	35	BRUSSELS	36	FS012404

TOTAL KMS: 35 HOURS ORIGIN TO DEST: .7

RATE OF MARCH: 50KM/H

FEEDER: G

FROM: ZEIZATE TO: GENT

CK LK PT NO	FROM VIC CITY	GRID COORD	KM	TO VIC CITY	CK PT	GRID COORD
25 147	ZIEZATE	ES578716	21	GENT	35	ES532508

TOTAL KMS: 21 HOURS ORIGIN TO DEST: .4

RATE OF MARCH: 50KM/H

FEEDER K

FROM: ZEEBRUGGE TO: HEIDELBERG

CK LK PT NO	FROM VIC CITY	GRID COORD	KM	TO VIC CITY	CK PT	GRID COORD
24 146	ZEEBRUGGE	ES130862	20	HEIDELBERG	34	ES146672

TOTAL KMS: 20 HOURS ORIGIN TO DEST: .4

RATE OF MARCH: 50KM/H

Figure 6-8. Sample Checkpoint List (Continued).

CHAPTER 7

HIGHWAY REGULATION

Section I. PLANNING, ROUTING, AND SCHEDULING

7-1. INTRODUCTION

a. Highway regulation consists of planning, routing scheduling, and deconflicting the use of highways to facilitate movement control. It provides order, prevents congestion, and enforces movement priorities. The extent of regulation and control required depends upon the number of planned or anticipated movements and the capacity of the road networks. Highway regulation requires synchronization with unit movement and maneuver.

b. Highway regulation is the responsibility of commanders having area jurisdiction. The highway regulation mission is performed by the TAMCA and transportation battalions (MC) in the COMMZ, the MCC in the corps rear area, the DTO in the division rear area, and the brigade S4 in the brigade rear area. MCTs may also perform highway regulation when they are assigned a geographical area of responsibility within the COMMZ or corps rear area. The TAMCA, MCC, and DTO also monitor highway regulation in subordinate command areas and may regulate some of the routes based upon the tactical situation.

7-2. HIGHWAY REGULATION PLANNING

a. Highway regulation planning must incorporate planned movement requirements and be flexible enough to accommodate immediate requirements.

(1) Planned movement requirements are identified in advance. They are found in movement programs and operation plans and orders. They involve onward movement of forces from PODs, movement of supplies and equipment, and unit movement.

(2) Immediate requirements are unplanned and based on requirements generated during the conduct of operations. They include requirements such as unit displacement, unprogrammed resupply, and evacuation. Immediate requirements are normally of a higher priority than planned requirements and must be quickly acted upon.

b. The goal of highway regulation planning is to sustain movements according to the commander's priorities and make the most effective and efficient use of the road networks. Planning is done in a logical sequence and results in publication of the highway regulation plan and the traffic circulation plan. The first step is to assemble critical information. Information is found in operation plans and orders, engineering and intelligence plans and estimates, traffic information, and terminals and facility data.

(1) Operation plans, orders, and estimates contain essential information. Movement planners must read and understand the concept of operation to effectively support the commander's intent while executing highway regulation. Information such as geographic boundaries, task organization, priorities, and location of major supply activities are also contained in these plans.

(2) The engineer route reconnaissance or classification overlays provide detailed information on the characteristics of the road network such as road surface, width, restrictive features and bridge classifications. (See FM 5-36 for details.) This information is necessary to determine critical points and route capacity. The characteristics of the route are contained in the route classification formula. Current information is required and thorough route reconnaissance may not always be possible or feasible. Therefore, movement planners may also obtain information from aerial photographs, local authorities, intelligence reports, and MP hasty route reconnaissance to supplement information obtained from maps or intelligence studies.

(3) Traffic density information is the anticipated volume of trafic on route segments during specific periods. It comes from planned requirements contained in the movement program, the OPLAN or OPORD, or fragmentary orders (FRAGOs). Planners must extract specified and implied requirements for unit movements, sustainment movement, and retrograde movements. These documents may also require moving civilian

refugees, unit displacement, or shared use by allied or HN forces. Each type of movement must be prioritized, planned, and synchronized.

(4) Terminals and facilities data include the location of supply points, trailer transfer points, terminal transfer points, staging and assembly areas, aerial ports and seaports, airfields and drop zones, and refuel points. These are considered in terms of their total clearance and reception capabilities. Specific considerations include location, access from MSRs, and their capability to receive, load, unload, and stage. The location of reporting points such as FDRPs must also be identified.

c. When the data is assembled and studied, movement planners must identify the road networks that are capable of supporting the volume of traffic necessary to meet planned and anticipated movement requirements. These road networks will be recommended as main and alternate supply routes. Planners must also plan extensions of the MSRs to anticipate forward movement of maneuver forces. Alternate supply routes (ASRs) are used when the MSRs are disabled and should be planned for in the same manner as MSRs. At this point in planning, it is necessary to obtain approval of the G4 and G3. The G4 has staff supervision for movement planning. The G3 is responsible for terrain management. As such, the G3 must approve the selection of MSRs and ASRs before movement planners can conduct detailed highway regulation planning.

d. After the G3 approves the MSRs/ASRs, movement planners develop the highway regulation plan and traffic circulation plan. The highway regulation plan is a written plan that describes the MSR network and establishes control measures to promote effective regulation. The traffic circulation plan is a map overlay or graphic representation of the MSR network. Both are published as an appendix or annex to the OPLAN or OPORD. They are used by the PM to develop the traffic control plan. The process involves the following procedures:

(1) Name each MSR according to command directives. Avoid using colors to name MSRs because MSR status, along with other logistics status, is normally reported as green, amber, red, or black. Avoid using numbers to name MSRs because they may conflict with existing route numbers.

(2) Determine critical points. Critical points are areas of interest to movement planners. Plans do not list every critical point but only the most important ones that may affect traffic flow. These include —

- Roadway structures or features that limit road width, overhead clearance, or vehicle load class. These include washouts, overpasses, bridges, and degraded road surface conditions.
- Crossroads at grade level.
- Bridges, overpasses, underpasses, ferries, fords, constrictions, and sharp turns under a 30-meter (100-foot) radius.

(3) Establish checkpoints (CPs) on each MSR to segment the MSRs. Segmenting facilitates highway regulation and traffic control planning and execution. CPs —

- Are predetermined points on the MSR that are used as a means of regulating and controlling movement. Units use CPs when requesting movement clearance by using CPs to identify their start point (SP), release point (RP), and en route CPs.
- Are used when describing the MSR in the highway regulation plan, such as "MSR Spear supports the corps southern area. It is a paved all weather road from CP 22 to CP 34. From CP 34 to the 54th Division rear boundary, the MSR is an improved fair weather road. The MSR can accommodate two-way traffic. The route is classified as an open route from CP 22 to CP 34. It is a supervised route from CP 34 to CP 8 at the division rear boundary. Convoys of eight or more vehicles, tracked vehicles, or vehicles that cannot maintain a 30 kmih march rate require a movement credit on that segment. The most restrictive route feature is at CP 35, abridge with an MLC of 30. Vehicles with an MLC greater than 30 must use the ford at NJ334098. Signs for the ford are posted."
- Enable quick dissemination of information during execution such as a point where traffic will be rerouted.
- Should be established major crossroads, locations where road conditions change, at major supply or service areas, geographic boundaries, assembly areas, or other critical points.

Planners should identify sufficient CPs to adequately exercise control, but no more than they have the capability to manage when the plan is executed. This requires careful balancing so that excessive CPs do not impede execution.

(4) Establish control measures for each route. Control measures should be based on the engineer route classifications, planned and anticipated traffic volume, METT-T, and critical points. Planners must also consider the capabilities of movement control and traffic control units to enforce the control measures. Control measures may change based on the conduct of operations. Movement planners must ensure that changes are incorporated into FRAGOs or otherwise disseminated quickly. There are five control measures:

(a) Open route. This is the least restrictive control measure. Any unit may use the route without a movement credit. Minimum control is exercised.

(b) Supervised route. The movement control headquarters will specify the size of convoys, the type of traffic, or characteristics of vehicles that require a movement credit to use the route. Limited control is exercised.

(c) Dispatch route. A movement credit is required to use this route regardless of the number or type of vehicles. A dispatch route will normally be designated when traffic volume is expected to exceed capacity or when the route is critical to operations and priority of use must be strictly enforced. Full control is exercised.

(d) Reserved route. The route is reserved for the exclusive use of a particular unit(s) or type of traffic and no other units/traffic may use the route. Reserved routes may be identified for large unit movements. Examples are when a maneuver unit must pass another forward when reserve formations are committed, or when units are withdrawn for reconstitution.

(e) Prohibited route. The route is closed and no unit/traffic may use the route. A route may be prohibited due to washouts, destroyed bridges, maintenance, or construction work. It maybe prohibited for only short periods, such as the time necessary to do repairs.

(5) Make a traffic circulation plan (see Figure 7-l). The overlay will show all MSRs, checkpoints, and highway regulation points. It will also include route names, direction of travel, boundaries, and principal supply activities. It will reflect any restrictive route features, critical points, and rest and refuel areas. It may include traffic control points if provided by the PM before publication of the traffic circulation plan.

(6) Determine reporting requirements for units using the MSR if reporting is necessary to effectively execute the plan and if communications are available.

(7) Develop the highway regulation plan to be included in the operation plan or order. The written plan will describe the information contained on the overlay and specify the control measures that apply to each MSR or critical segments of MSRs. Control measures should be coordinated to phases of the operation if they can be determined in advance. These should be coordinated with the G3, especially requirements for reserved routes to support large unit movements.

(8) Staff and coordinate the plan. Recommend points where traffic control will be required. Recommend locations and priorities for engineer repair and upgrade efforts.

e. Planners must then assess the availability of communications equipment to support highway regulation. Communications will be a constraint. Its use must be carefully planned to ensure it is weighted to routes identified in the planning process as requiring the most control. Control is based on planned and anticipated traffic volume and the relative importance of preventing congestion on those routes.

7-3. FUNDAMENTALS AND PRINCIPLES OF ROUTING

a. Routing is the process of coordinating or directing movements on MSRs or ASRs.

b. When routing traffic, movement planners should consider the three fundamentals and four principles which govern routing. The fundamentals are balance, separation, and distribution.

(1) Balance is the process of matching vehicle characteristics with route characteristics. Balance ensures that traffic never routinely exceeds the most limiting feature of a route. It considers the military load classification (MLC) of the vehicles and bridges and the route. Balancing also identifies requirements for upgrading routes or ordering caution crossings for certain bridges. Planners should use TB 55-46-1 to obtain vehicle characteristics. Route characteristics are obtained during the planning process.

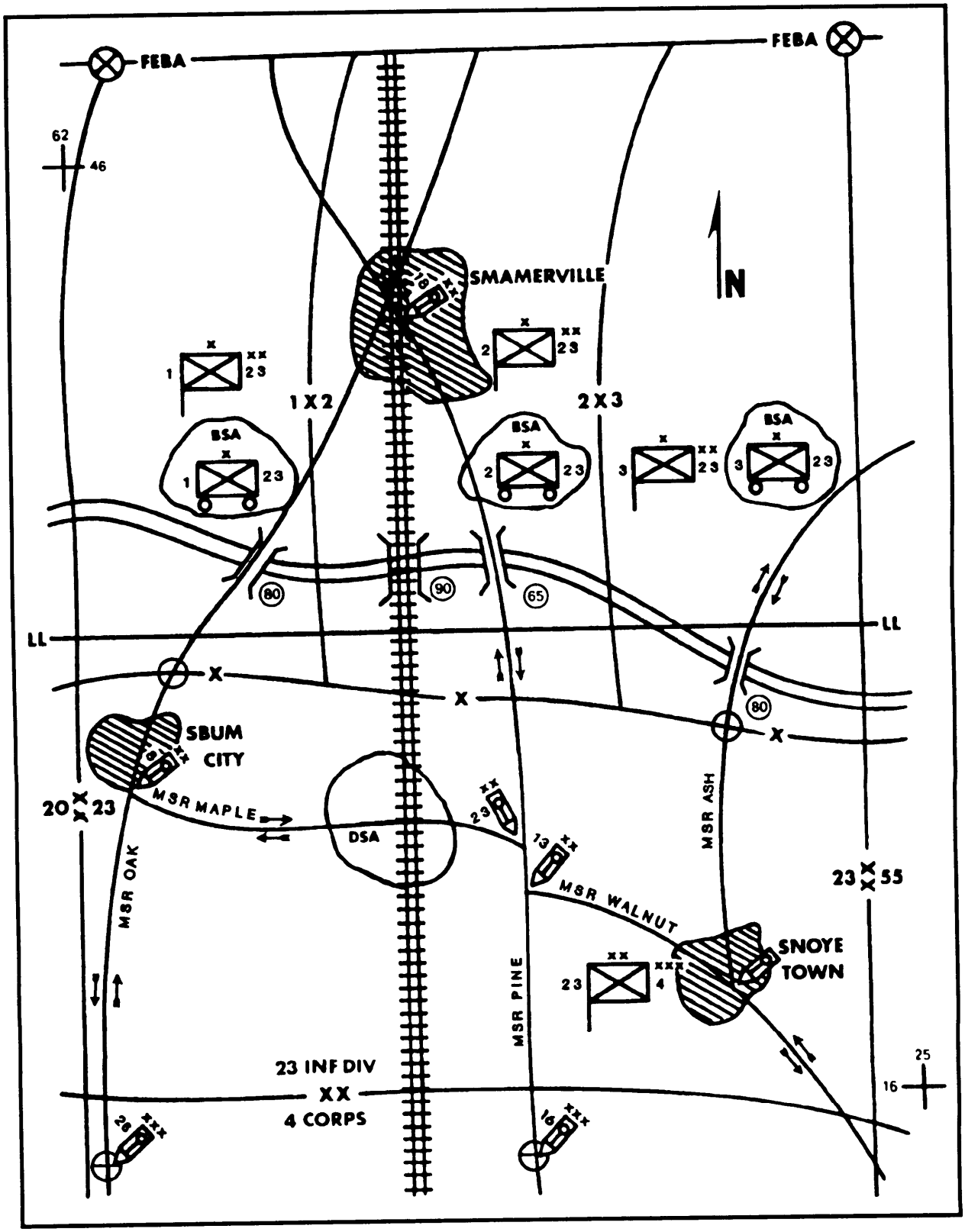


Figure 7-1. Sample Traffic Circulation Plan.

(2) Separation is the process of allocating road space for movements to ensure that movements do not conflict. The goal of separation is to prevent congestion on regulated routes. Planners must not allocate road space or time blocks to more than one movement requirement.

(3) Distribution is the process of allocating as many routes as possible to reduce the potential for congestion and prevent deterioration of road surfaces. Distribution also promotes passive defense by distributing and separating traffic.

c. The four principles which govern routing are —

- Assign highest priority traffic to routes that provide the minimum time-distance.
- Consider the sustained capabilities of roads and bridges when assigning movements.
- Separate motor movements from pedestrian movements.
- Separate civilian traffic (vehicular or pedestrian) from military movements.

7-4. FUNDAMENTALS AND METHODS OF SCHEDULING

a. Scheduling is the process of coordinating times for road movements. It involves receiving movement bids (requests), deconflicting requests, and issuing credits (clearances). Scheduling is necessary to —

- Apply command priorities.
- Apply the fundamentals of routing to minimize delays, conflicts, and congestion,
- Conduct detailed planning for large unit or high- priority movements.
- Reserve time for route maintenance.
- Reroute or hold movements based on changes in priority or the tactical situation.

b . The following guidelines apply in scheduling movements:

(1) Movements on routes requiring movement credit must be scheduled.

(2) Movements that cross movement control boundaries must be scheduled, coordinated, and inbound cleared by the movement control organization responsible for the area where the movement originates to the movement control organization where the movement terminates.

(3) Large unit movements should be scheduled (see Section III).

(4) Movements in one direction on routes that require a movement credit are treated as a single movement regardless of the distance or time involved. Each movement retains the same movement credit to destination.

(5) Schedules and changes to schedules due to immediate movement requirements are provided to the MRTs to execute highway regulation and the PM to provide traffic control.

c. The method of scheduling road movements will be based on the control measures specified for the route. There are four types of scheduling methods. From the least restrictive to the most restrictive, they are infiltration, route, location, and column.

(1) Infiltration schedule. An infiltration schedule is a rate of dispatch assigned to units for specific routes and time blocks to achieve an average traffic flow that is within the capacity of the route. By assigning rates of dispatch to different units that need to use the same route, average traffic flow can be held within desired limits. An infiltration schedule maybe used for open or supervised routes.

(2) Route schedule. The route schedule is a flexible scheduling method. It apportions blocks of time on MSRs to units, types of movements, phases of the operation, or for route maintenance. A route schedule may be used for supervised, dispatch, or reserved routes.

(3) Location schedule. A location schedule is more restrictive than an infiltration or route schedule. It assigns arrive and clear times to different units needing to use the same entry point onto MSRs. The location will normally be a checkpoint. For example, at a particular checkpoint, unit A may be scheduled to arrive at 1000 hours and to clear at 1015, unit B to arrive at 1020 and to clear at 1030, and so on. A location schedule may be used for supervised or dispatch routes.

(4) Column schedule. The column schedule is the most restrictive scheduling method. It specifies

arrive and clear times at CPs along an entire route. It maybe based on the requestor's movement bid or movement table or on movement tables issued by the movement control organization. Based upon the extent of control required, a column schedule can provide the most effective highway regulation because it provides in-transit times to reach CPs and helps the pacesetter maintain the prescribed rate of march. It may be used for supervised, dispatch, or reserved routes. It should be used when congestion is anticipated.

7-5. CLEARANCE REQUESTS

a. Units needing to move on controlled routes that require a movement credit must request and receive clearance before beginning movement. The request is submitted through the chain of command to the DTO or corps/EAC MCT within whose area the movement originates. In the corps, the MCT forwards requests to its servicing HTD. In the COMMZ, the MCT forwards the request to its transportation battalion (MC). The request may be transmitted in hard copy, electronically, or verbally based on procedures established in SOPs.

b. The DTO, HTD, or transportation battalion (MC) reviews requests and considers them based on command priorities for the type of movement and the unit requiring movement. Priorities for types of movements are normally specified in SOPs, OPLANs, or OPORDs. They include categories such as unit movement, movement of reserves, logistical movement, and movement of replacements. Unit or task force priorities are specified in OPLANs and OPORDs. Unit priorities are based on the commander's requirements to meet the tactical situation. These priorities frequently change. Movement planners must anticipate changes and frequently obtain planning guidance from the G3 and G4.

c. The DTO or HTD either schedules the movement as requested or notifies the unit if it cannot be granted. The DTO or MCT will coordinate with the lower priority requester to reschedule the move at a different time or on a different route. If conflicts arise during planning that cannot be resolved by the DTO or HTD, they must seek resolution of the priority conflict through the staff that approved the priorities.

d. Movement credits are returned to the requesting unit through the same channels used for the request. Information on all movement credits issued is provided to the provost marshal, MP units, and movement regulating teams for traffic control and movement regulating purposes.

e. The movement credit gives the requesting unit the authority to move on a controlled route. The credit is a control number. Policies for developing the codes used for movement credits are governed by STANAGs or command directives. Movement credits normally include a command identifier, Julian date, and sequence number. For example, a unit of the 54th Infantry Division will move on Julian date 043. The credit was the third issued for that date. The movement credit would be 54-043-003. Additional codes may be added after the sequence number to further identify the unit or type of movement. Command directives normally prescribe that moving units chalk the movement credit on the sides of their vehicles to identify that the movement is authorized.

Section II. PLANNING FACTORS

7-6. INTRODUCTION

Movements are measured by calculating how long it takes to move a given distance. The three methods of measurement are speed, pace, and rate of march. Movement planners normally use rate of march in performing movement calculations.

7-7. MOVEMENT MEASUREMENT

a. Speed is the actual rate at which a vehicle is moving at a given time as shown on the speedometer. It is expressed as kilometers or miles per hour (kph or mph).

b. Pace is the regulated speed of a convoy or an element as set by a lead vehicle, the pacesetter. It is constantly adjusted to suit road, terrain, and weather conditions. Pace is also expressed as kph or mph.

c. Rate of march is the average number of kilo-meters traveled in any specific time period. It includes short periodic halts and short delays, but it does not include long halts, such as those for

consuming meals or for overnight stops. It is expressed in kilometers or miles in the hour (kmih or mih) .

7-8. TIME AND DISTANCE FACTORS

Time and distance factors (Figure 7-2) are used to perform a wide range of calculations for planning highway movements. They can be used to conduct detailed planning to develop movement tables or road graphs as outlined in Appendix E. They can also be used to conduct expedient planning and calculating to deconflict movement requests as outlined in paragraphs 7-9 through 7-11.

a. Distance Factors. Distance factors are expressed in kilometers (km) or meters (m). The terms used to describe distance factors areas follows:

(1) Length of any column or element of a column is the length of roadway which it occupies. It is measured from the front bumper of the lead vehicle to the rear bumper of the trail vehicle and includes all gaps inside the column.

(2) Road space is the length of a column, plus any additional space (safety factor) added to the length to prevent conflict with preceding or succeeding traffic.

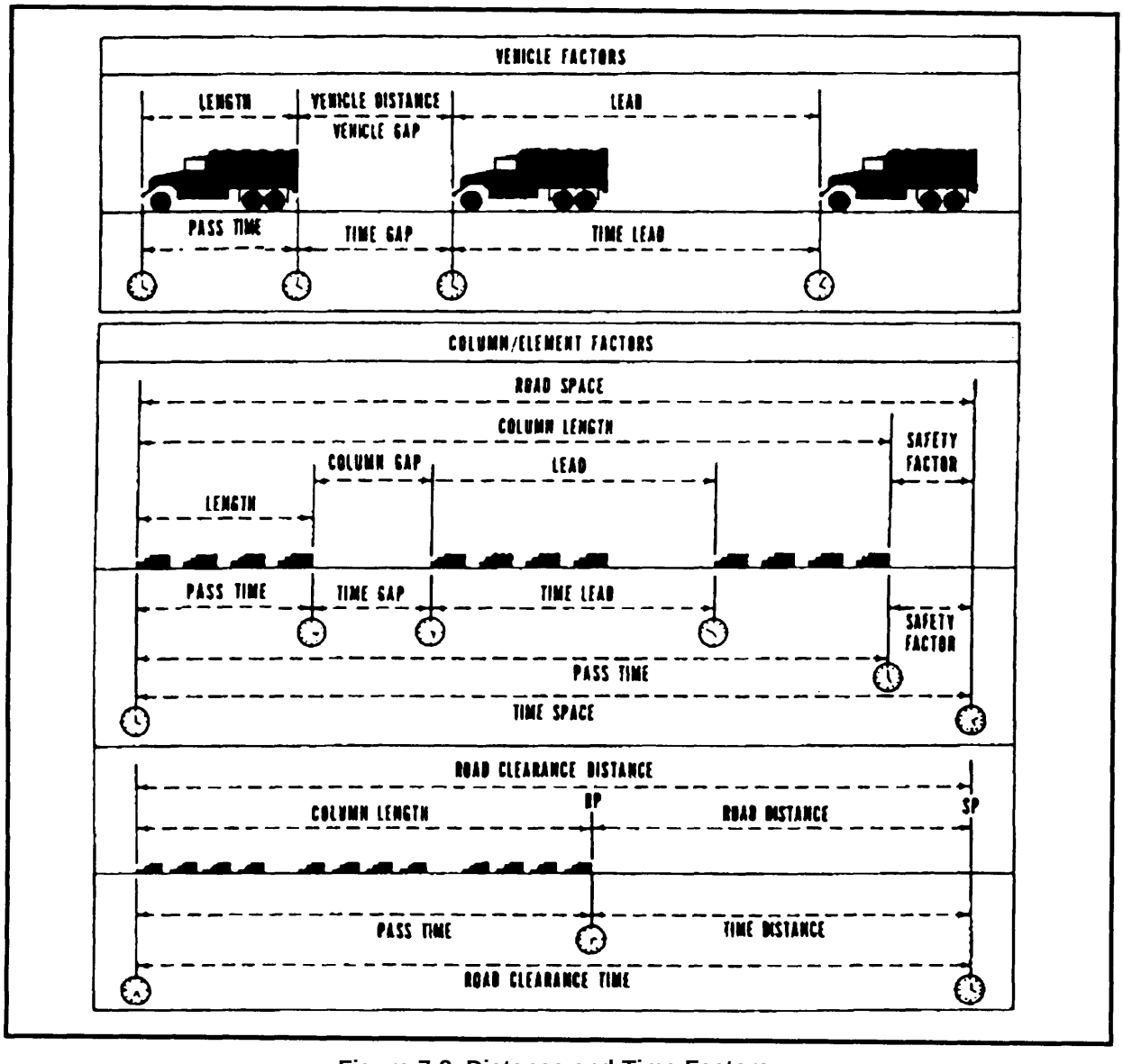


Figure 7-2. Distance and Time Factors.

(3) Gap is the space between vehicles, march units, serials, and columns. It is measured from the trail vehicle of one element to the lead vehicle of the following element. The gap between vehicles is normally expressed in meters. The gap between march elements is normally expressed in kilometers.

(4) Lead is the space between the heads of elements in a convoy or between heads of successive vehicles, march units, serials, or columns.

(5) Road distance is the distance from point to point on a route, normally expressed in kilometers.

(6) Road clearance distance is the distance that the head of a column must travel for the entire column to clear the RP or any point along the route. Road clearance distance equals the column's length or road space plus road distance.

b. Time Factors. Time is expressed in hours or minutes. The terms used to describe time factors are as follows:

(1) Pass time (or time length) is the time required for a column or its elements to pass a given point on a route.

(2) Time space is the time required for a column or its elements to pass any given point on a route plus any additional time (safety factor) added to the pass time.

(3) Time gap is the time measured between vehicles, march units, serials, or columns as they pass a given point. It is measured from the trail vehicle of one element to the lead vehicle of the following element.

(4) Time lead is the time measured between individual vehicles or elements of a column, measured from head to head, as they pass a given point.

(5) Time distance is the time required for the head of a column or any single vehicle of a column to move from one point to another at a given rate of march.

(6) Road clearance time is the total time a column or one of its elements requires to travel the road distance and clearance point along the route or the RP. Road clearance time equals the column's pass time or time space plus time distance.

7-9. TIME, DISTANCE, AND RATE CALCULATIONS

Time (T), distance (D), and rate (R) factors are used to make scheduling calculations for columns of any size. When two of the three factors are known, the third can be found by using one of the following equations as shown in Figure 7-3.

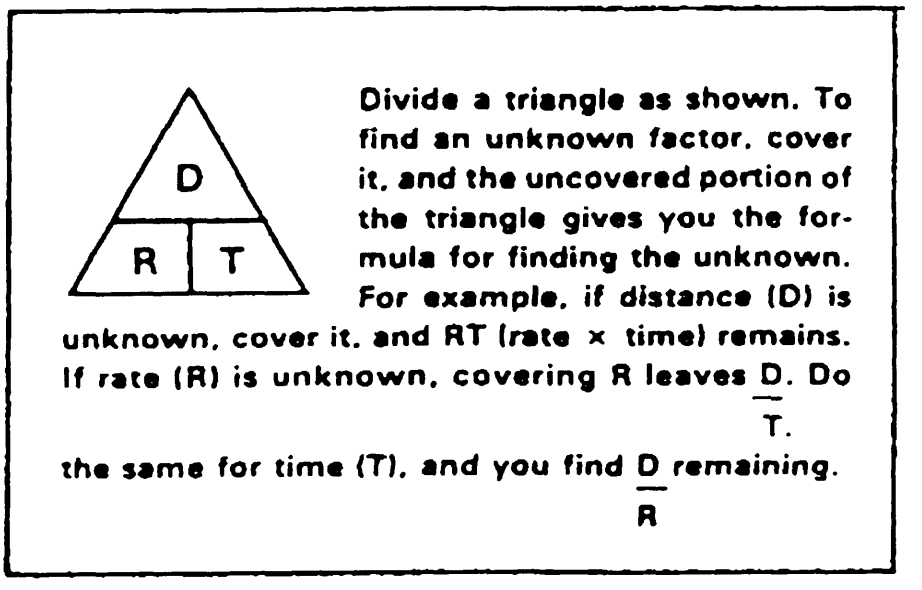


Figure 7-3. Finding an Unknown Factor of Distance, Rate, or Time.

a. Determining Time. Time equals distance divided by rate. If the distance is 210 kilometers and the rate of march is 42 kmih, the time is 5 hours: 210 ÷ 42 = 5.

b. Determining Distance. Distance equals rate multiplied by time. If the rate of march is 40 kmih and time is 4 hours, the distance is 160 kilometers: 40 x 4 = 160.

c. Determining Rate. Rate equals distance divided by time. If a convoy travels for 5 hours to complete a 190 kilometer trip, its rate of march is 38 kmih: 190 ÷ 5 = 38.

7-10. ARRIVE AND CLEAR TIME CALCULATIONS

a. To deconflict movements on supervised or dispatch MSRs by using location or column scheduling, movement control organizations can use a more expedient method of planning and calculating than required to develop road graphs as discussed in Appendix E. Both requesters and movement control organizations must understand and apply time and distance factors associated with the movement of convoys on MSRs. Moving units must make calculations as part of their movement planning and movement requests.

b. The minimum essential information needed is the arrive and clear times at SPs, intermediate CPs, and RPs. Therefore, TA, corps, and division SOPs should specify a clearance request format that requires requesting units to calculate these arrive and clear times (see Figure 7-4). The DTO, HTD, or transportation battalion (MC) may have to perform these calculations for large unit movements or special movements. They should check the accuracy of unit requests.

c. Use time, distance, and rate factors to calculate arrive and clear times. The arrive time is the time the first vehicle in the column will arrive at an SP, CP, or RP. The arrive time is derived from calculating the time distance. The clear time is the time the last vehicle in the column will clear that SP, CP, or RP. The clear time is derived from calculating the pass time.

d. Calculate arrive times as follows:

(1) To calculate the arrive time at the first CP, take the distance from the SP to the first CP, divide by the planned rate of march, and multiply by 60 (minutes).

EXAMPLE: Distance from SP to first CP: 8 km
March rate: 30 kmih

Solution: 8 ÷ 30 = .26 hours x 60 = 16 minutes

If the SP time is 0800, then the arrive time at the first CP will be 0816.

(2) To calculate the arrive time at the second CP, take the distance from the first CP to the second CP, divide by the rate of march, and multiply by 60.

EXAMPLE: Distance between CPs: 9 km
March rate: 30 kmih

Solution: 9 ÷ 30 = .30 hours x 60 = 18 minutes

If the arrive time at the first CP is 0816, then the arrive time at the second CP will be 0834.

(3) Continue this method to calculate the arrive time at succeeding CPs through the RP.

e. To calculate the clear times at each CP, planners must determine the pass time. Calculating pass time requires four calculations: density, time gaps, road space, and pass time.

(1) $\text{Density} = \dfrac{1{,}000 \text{ (meters)}}{\text{gap + avg length of vehicle}}$

EXAMPLE: If the gap is 50 meters and the average length of the vehicles in the column is 9 meters, then —

$$\text{Density} = \frac{1{,}000}{50+9} = \frac{1{,}000}{59} = 16.94$$

= 17 vehicles per km

(2) Time gaps = [(number of march units -1)x march unit time gap] + [(number of serials - 1) x (serial time gap - march unit time gap)].

EXAMPLE: If a column has two serials with three march units and the time gap between march unit is 5 minutes and the time gap between serials is 10 minutes, then –

Time gaps=[(6-1) x 5] + [(2-1) x 5] = [5 x 5]+[1 x 5] = 25 + 5 = 30 minutes

(3) Road space =

$$\frac{\text{number of vehicles}}{\text{density}} + \frac{\text{time gaps x rate}}{60 \text{ (minutes)}}$$

EXAMPLE: number of vehicles = 102
density = 17 per km
rate = 30 kmih
time gaps = 30 minutes

$$\text{Road space} = \frac{102}{17} + \frac{30 \times 30}{60} = 6 + 15 = 21\text{km}$$

TO: CDR 112th MCC ATTN: 1124th MCT THRU: CDR 34th CSG FROM: 32nd Corps Spt Bn ATTN: S-4 DATE: 26 Mar 19XX EXT # X6060

SECTION I MOVEMENT DATA

MOVING UNIT	CONVOY CDR	START POINT GRID:NX110300 LOC: CP 7	RELEASE PT GRID:NX410410 LOC: CP 2	TYPE OF MOVEMENT
128th S&S Co.	CPT SMITH			UNIT RELOCATION

MOVEMENT DATE: 29 Mar 19XX SP TIME: 0700

CONVOY ORGANIZATION	# SERIALS	SERIAL GAP	# MU	MU GAP	VEH GAP
	1	N/A	2	5 min	50M

CHECK POINTS	DISTANCE (KM) BETWEEN PTS	ARRIVE	CLEAR	ROUTE DESCRIPTION	CRITICAL PTS/ HALTS
SP CP 7	XXXXXXXXXXXX	0700	0709	MSG DODGE	
CP 4	15km	0723	0732	MSR DODGE	
CP 10	6km	0732	0741	MSR DODGE	
RP CP 2	14km	0753	0802	MSR DODGE	

SECTION II VEHICLE/LOAD DATA - CONVOY COMPOSITION

# OF TRACKS	# WHEELS	HEAVIEST VEH/WT/MLC
0	43	M932 TRACT W/M871 TRL/92,340/51

QTY	MODEL	DESCRIPTION	LOAD INFO	L	W	H	WT	OTHER/HAZ MAT
24	M871	TRL,22 1/2T		358	96	103	60,760	
27	M932	TRACT, 5T		280	115	113	31,580	
2	M1009	CUCV		192	95	75	6,720	
8	M1008	CUCV, P/U		185	89	76	8,400	
5	M925	TRK,5T,D/S		327	115	116	32,458	
6	M105A2	TRL, 1 1/2T		166	83	98	5,670	
6	M101A1	TRL, 3/4T		147	74	83	2,850	
1	M936	TRK,WRKR,5T		356	115	113	36,729	

REQUESTORS NAME, TITLE, PHONE: ROY, RAMOND, SSG, X6666

SIGNATURE

SECTION III

MOVEMENT CLEARED BY:_____ MOVEMENT CREDIT #:_____

AT DTG:_____

CLEARANCE PASSED TO:_____

AT DTG:_____

POSITIVE INBOUND CLEARANCE BY: _____ DTG:_____

Figure 7-4. Sample Movement Bid.

(4) Pass time = road space x 60
rate

EXAMPLE: Continuation from previous examples.

Pass time = $\frac{21 \times 60}{30} = \frac{1,260}{30}$ = 42 minutes

f. The pass time at the SP is 42 minutes after the first vehicle crosses the SP. If the arrive time at the SP is 0800, the clear time at the SP will be 0842. If the arrive time at the first CP is 0816, the clear time at the first CP will be 0858. Use this same method to calculate the arrive and clear times at succeeding CPs to the RP. Figure 7-5 graphically portrays this process.

g. The pass time will stay the same throughout the route as long as the march rate and density do not change. If the march rate or density changes, then recalculate the pass time to determine the new clear time. Calculations can be simplified by-

- Preparing and using conversion tables for changing US common distances to metric distances (Table 7-l), number of vehicles to pass time, and distance to time.
- Standardizing variables to reduce calculation time. When possible, use standard march rates and density.
- Using automated programs to calculate arrive and clear times such as the military application program package (MOVEPLAN).

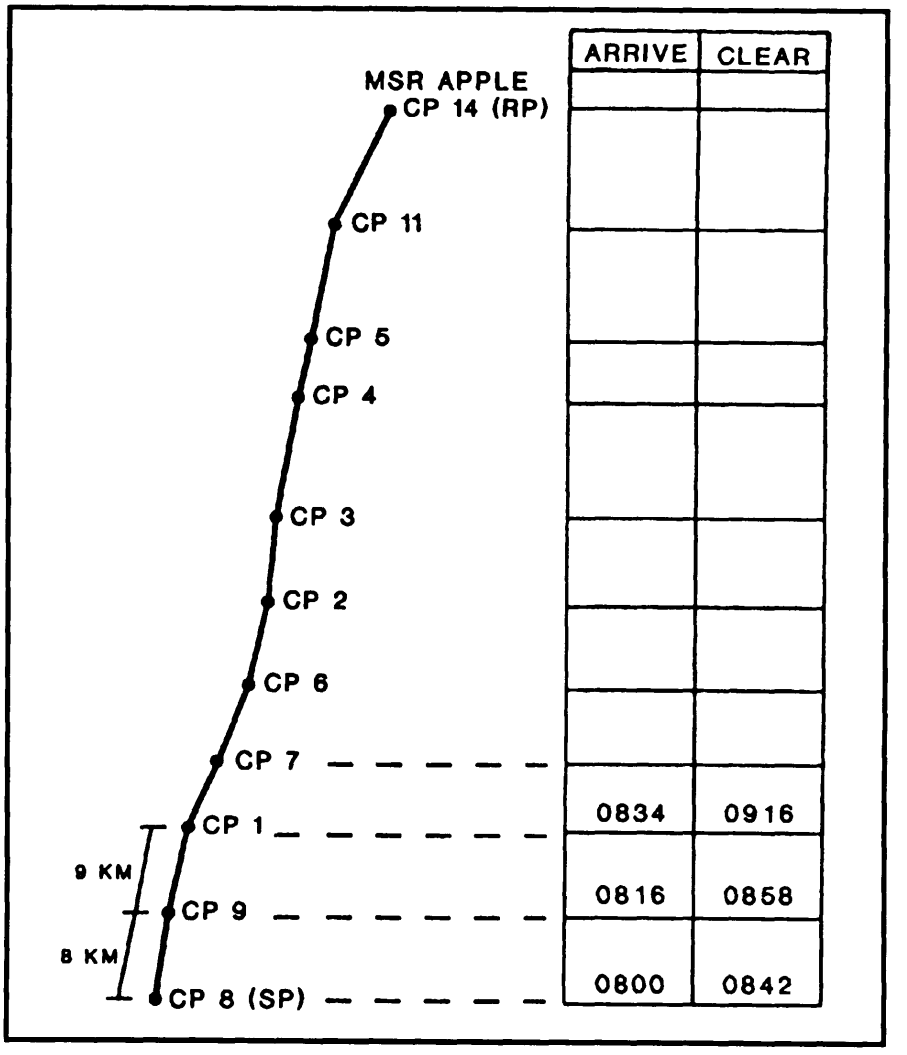


Figure 7-5. Arrive and Clear Time Graph.

Table 7-1. Conversion Table

Kilometers to miles (km x .62 = mi)			Miles to Kilometers (mi x 1.609 = km)		
1	=	.62	1	=	1.609
2	=	1.24	2	=	3.218
3	=	1.86	3	=	4.827
4	=	2.48	4	=	6.436
5	=	3.10	5	=	8.045
6	=	3.72	6	=	9.654
7	=	4.34	7	=	11.263
8	=	4.96	8	=	12.872
9	=	5.58	9	=	14.481
10	=	6.20	10	=	16.090
20	=	12.40	20	=	32.180
30	=	18.60	30	=	48.270
50	=	31.00	50	=	80.450
75	=	46.50	75	=	120.675

7-11. DECONFLICTING MOVEMENTS

a. Movement control organizations must deconflict the planned movement of convoys on controlled MSRs in order to issue movement credits, reroute, or divert. They must also monitor the in-transit status of some convoys on controlled routes to find out if movements are going according to scheduling. This does not require monitoring every convoy, but should include monitoring certain critical points or checkpoints. The function can be performed by either MRTs or MPs. Both require communications capability to relay information.

b. Without positive control measures and monitoring, the MSRs may become congested and movements will be delayed. To deconflict movement bids, planners must be able to visualize the location of convoys at any time and know when they should arrive and clear checkpoints. One method of deconflicting movements-is by using a grid as shown in Figure 7-6.

c. This section of a grid represents an MSR from CP 8 to CP 14, divided into one-hour blocks. A complete grid should be expanded vertically to cover the 24-hour military clock and horizontally to cover all MSR segments between checkpoints. A separate grid is prepared for each MSR. The grid squares are two-inch squares. As movement credits are issued, apply self- sticking note pad sheets to cover the route segment on the grid that the convoy will occupy during the hour. Annotate on the note pad sheet the unit, movement credit number, date, and arrive and clear times at the originating CP. Several convoys may occupy an MSR segment during any hour and several sheets can be applied to any grid square as long as the movements do not conflict.

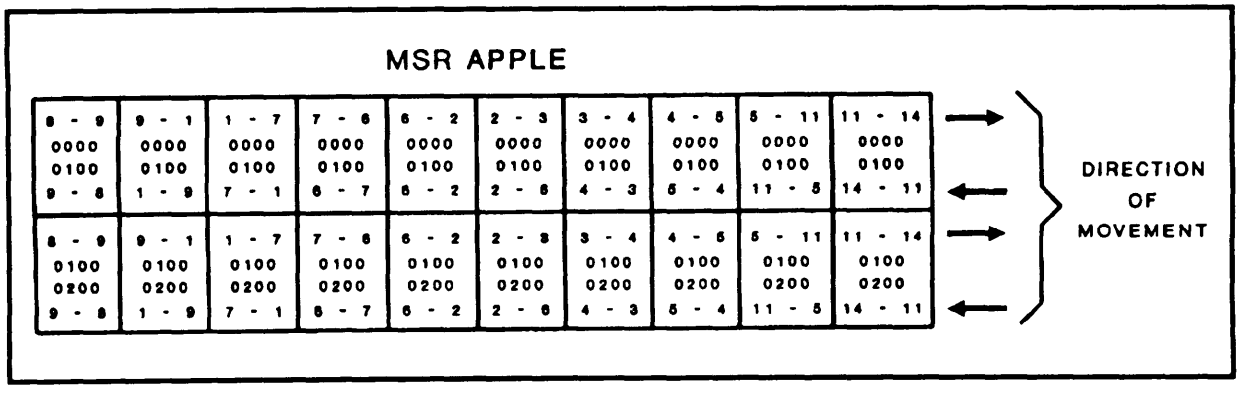


Figure 7-6. Convoy Deconflicting.

d. This method, or one similar, enables the movement planner to visualize and to quickly determine what is on a MSR segment or what is planned to be on a MSR segment at any time. (See Appendix E for critical time and point graph.) Knowing this information will enable the planner to quickly deconflict clearance requests or adjust to changing requirements.

7-12. DIVERTING AND REROUTING

a. Movement planners in the DTO, HTD, or transportation battalion (MC) must monitor the in-transit status of convoys to find out if movements are going according to scheduling. They are also the focal point for diverting and rerouting. They must be able to communicate with MRTs and MPs to enforce control measures on MSRs or to divert and reroute. SOPs must provide detailed guidance for coordinating and disseminating information.

b. Traffic disruptions maybe caused by enemy action that destroys bridges, damages MSRs, or contaminates MSRs. They may also be caused by refugees clogging an MSR. Movement planners must also anticipate traffic disruptions caused by congestion due to breakdowns, weather, and degradation of road surfaces. They request route repair, decontamination, and traffic control support and advise the G3 and G4 of any actions required to minimize the impact of disruptions.

c. Movement planners must continuously seek out information from other staff sections to make assessments. In addition to receiving reports from MCTs and MRTs, they must coordinate regularly with the G3 and the provost marshal to obtain current information as reported through command channels.

d. On receiving reports of problems on an MSR, the movement control organizations can progressively adjust traffic plans. They can issue instructions to the —

- Units to hold movements that have not begun or to issue new routing instructions.
- MPs or MRTs to hold movements at a staging area or CP if they have already begun.
- MPs or MRTs to reroute movements at a CP.

Section III. LARGE UNIT MOVEMENTS

7-13 INTRODUCTION

a. Large unit movements, made to exploit advantages gained on the battlefield or to form for an attack in a new direction or location, must be executed quickly. Synchronization is critical during planning to open routes for movement and to deconflict previously planned movements.

b. Maintaining logistical support and uninterrupted transportation to other supported units in conjunction with large unit moves requires synchronization and continuous coordination. Large unit movements will normally be planned by the moving units under parameters defined by the G3 and/or movement control headquarters. This depends upon their location and whether the movement commits the forces or moves them from one assembly area to another.

7-14. PLANNING

a. Planning for movement of large units consists of four concurrent steps:

- Determining the requirements for the move.
- Determining the time frame for the move.
- Analyzing organic and nonorganic movement capabilities.
- Establishing movement priorities.

b. Planners must have a thorough understanding of the mission the commander’s intent, the concept of the operation, and the priority of movement. The fundamental precepts of METT-T drive the planning for large unit movements as they form the base requirement for the time and space factors characterizing the movement. The following factors are considered:

- Task organization of units, current location, and concentration.
- Adequacy of routes to support vehicles and tonnages.
- Available assembly areas and transportation modes at origin.
- Control measures, coordination, and logistic support for the movement and at destination.
- Assembly areas at destination.

- Deception measures before and during the movement and at destination.
- Enemy situation, route and geographic conditions, and weather.

c. Preplanned movements must be reevaluated in terms of their priority in relation to the unit movement. Critical supplies may have to be pre-positioned or moved by alternate modes such as air, rail, or inland waterway if they are available. En route logistic support such as refuel on the move (ROM), maintenance, and life support must be pre-positioned. Traffic control and MRTs must also be pre-positioned.

d. Heavy-equipment transporters (HETs) may support the movement. Using HETs to move heavy forces increases the capability of the maneuver commander to quickly and efficiently move forces. They can assist in providing the maxi-mum amount of combat power at the decisive point and time to attain or keep the initiative and have forces arrive in a high state of readiness. Using HETs will be governed by the availability of HETs, the conditions of the road network, and the distance to be travelled.

e. Highway regulation planning must be extensive and thoroughly coordinated. Critical road junctions must be identified and deconflicted. Less critical movements must be rerouted, delayed, or shifted to alternate modes. Engineering maybe required to upgrade routes or to construct bypasses or bridges. Scheduling guidance must be provided to the moving units. This guidance allows the units to conduct their internal planning for the movement. The main factor will be the availability of routes. Movement planners can use the following scheduling techniques:

- Creating reserved routes for particular units.
- Using location or column scheduling to allocate time blocks for movement if units share routes.
- Developing movement tables if routes are limited and the requirement for control is greatest.

Detailed movement tables are necessary for smaller units to execute their portion of the plan. However, the moving unit can develop these plans based on the allocation of routes or time blocks. Movement control organizations will not normally develop detailed movement tables for large unit movements.

CHAPTER 8

RECEPTION AND ONWARD MOVEMENT OF UNITS

8-1. INTRODUCTION

a. This chapter provides an overview of the reception and onward movement process for units deploying to a theater of operations. Arrival at a POD represents the transition from the strategic to the operational and tactical levels of war. It is also the normal transfer point, unless otherwise designated, of command authority from the supporting command to supported theater combatant commander. The responsibility of moving the unit and maintaining in-transit visibility simultaneously shifts from USTRANSCOM to the theater's senior movements command, TAMCA or MCC. The senior movements command continues movement control of the unit to its final prescribed location in the theater.

b. Although the focus of this chapter is on a mature theater, the same functions must be performed during contingency operations. The Army component commander in this case may be a corps commander assigned to a joint task force. The MCC or MCT would perform the functions identified to the TAMCA and the COSCOM would perform the functions identified to the Theater Army Area Command (TAACOM) in the reception and onward movement process.

8-2. THEATER RECEPTION AND ONWARD MOVEMENT PROCESS

a. The reception and onward movement process is different depending on whether the unit deploys with its authorized equipment or deploys to draw pre-positioned material. The reception process for units deploying with their equipment is shown in Figure 8-1.

b. Units deploying to draw pre-positioned material take a specified amount of to-accompany-troops (TAT) equipment with them when they deploy. (See FM 55-65 for additional information.) The reception process for units deploying to pre-positioned material is shown in Figure 8-2.

c. In a mature theater, the TAACOM, or equivalent command, provides direct support (less movement control and line-haul transportation) to units located in or passing through its assigned area. This support includes providing most field services and classes of supply. The TAACOM executes support to the reception and onward movement process through its subordinate ASGs. ASGs are normally assigned a geographic area of responsibility in the COMMZ. They are normally located to take advantage of the transportation network and provide responsive logistical support during the reception and onward movement process.

d. The TAMCA, or equivalent organization, plans and coordinates onward movement from the POD through intermediate points to the staging area (SA). They include –

- Coordinating transportation and selecting modes for onward movement.
- Providing transportation services and highway regulation.
- Coordinating marshaling and holding area requirements with the TAACOM or equivalent headquarters. Marshaling areas are required when units prepare for movement or change from one mode to another. Holding areas are required for units to conduct inspections, prepare vehicles, or await onward movement in case of delays.
- Providing movement schedules to the TAACOM for the TAACOM to plan logistics support to moving units.

Figure 8-3 shows the primary transportation nodes in the reception and onward movement process that must be supported by movement control units.

e. The TAMCA and TAACOM provide in-transit visibility of units transiting transportation/logistics nodes or geographic areas of responsibility. This

information becomes input to the TA DCSOPS to assist in force tracking (Figure 8-4).

8-3. AERIAL PORT OF DEBARKATION

a. An APOD is an airfield designated by the theater combatant commander, in coordination with USTRANSCOM, for the sustained air movement of personnel and material or to serve as an authorized port for entrance into or departure from the theater of operations. In a mature theater, the TAMCA assigns ATMCTs to perform port clearance missions at designated APODs. The ATMCT controls and manages the processing of units and TAT equipment for onward movement concurrently with other port clearance missions as shown in Figure 8-5.

b. In an undeveloped theater, an arrival airfield control group (AACG) may initially support an arrival airfield. The AACG should move with the lead elements of the deploying force. As the theater develops or when the force structure and/or mission increases, an ATMCT should be phased in to replace the AACG to execute port clearance missions. Normally, this transition takes place when the airfield is designated an APOD for the theater of operations. However, operational requirements may require AACG operations for specific units concurrently with an ATMCT supporting port clearance missions at the same APOD. See Chapter 3 for more information on ATMCT capabilities. See FM 55-12 for more information on A/DACG operations.

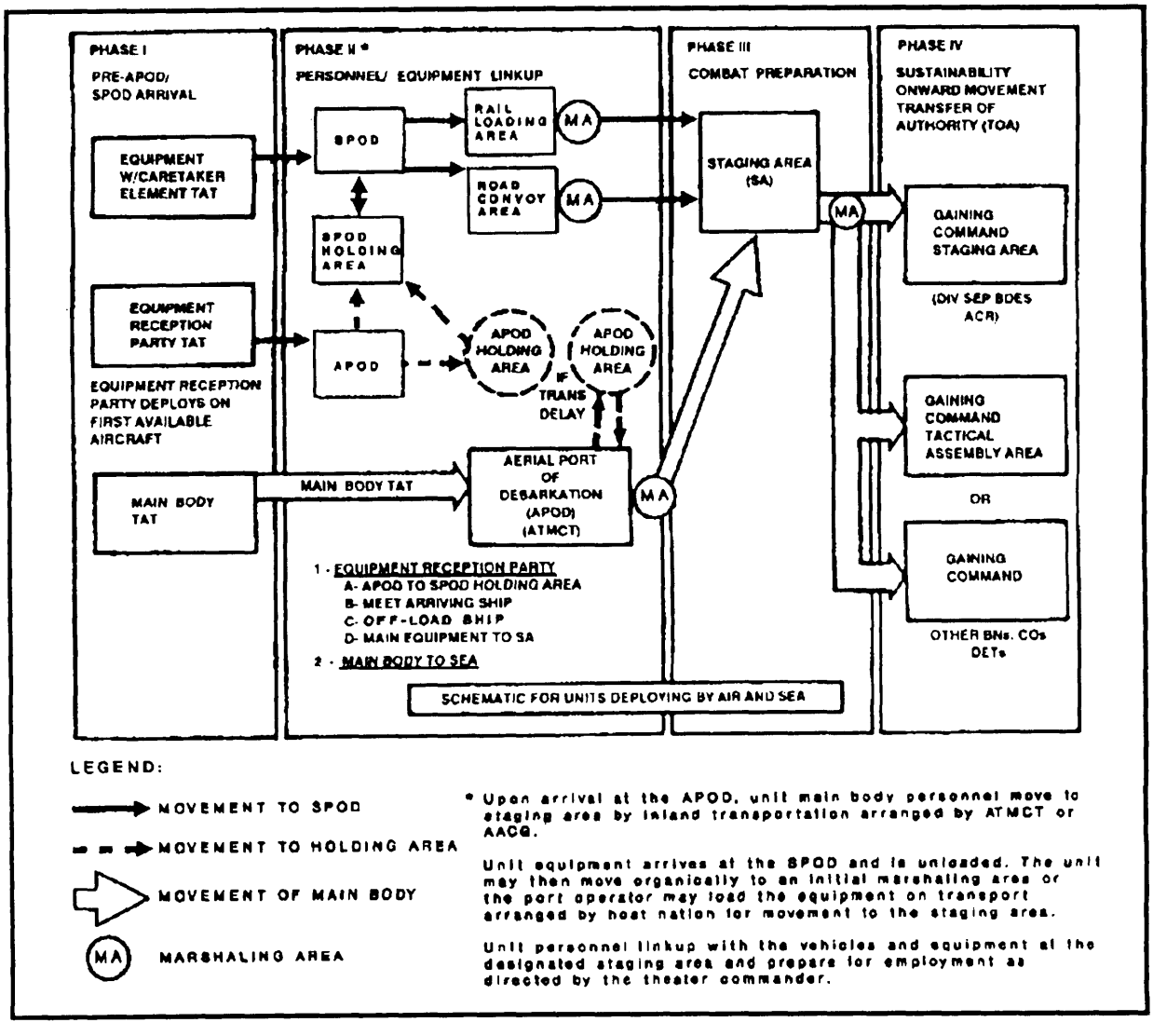


Figure 8-1. Units Deploying with Equipment.

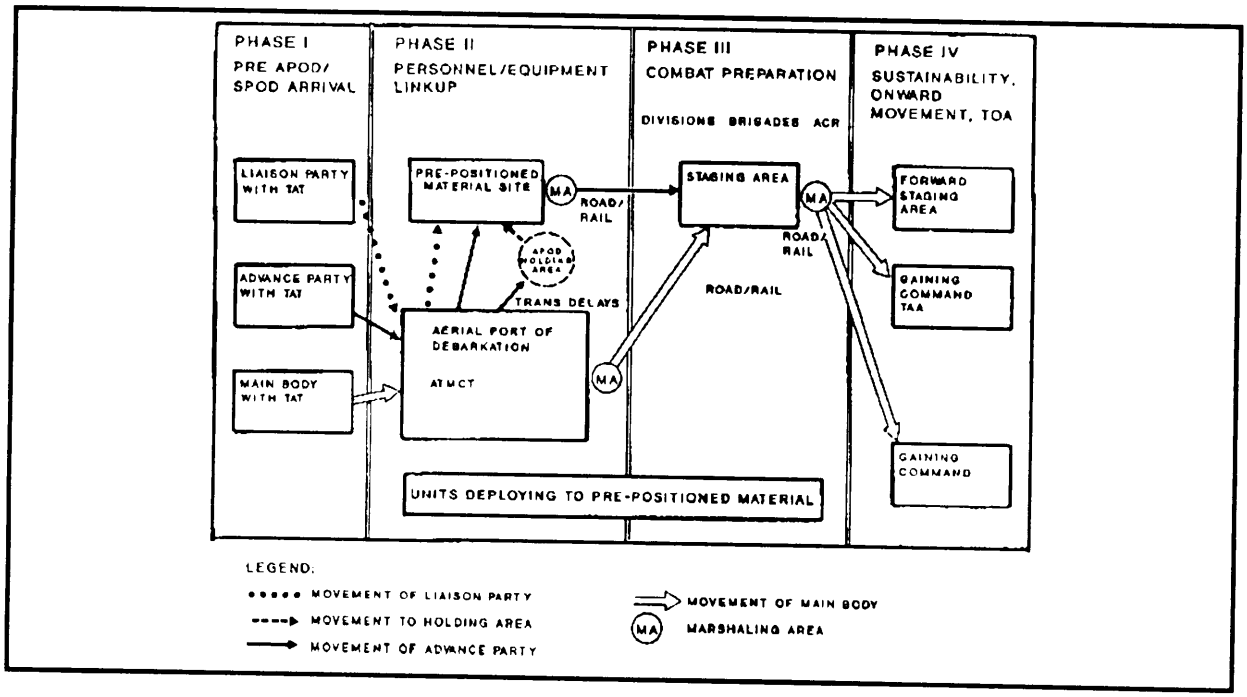


Figure 8-2. Units Deploying with Pre-Positioned Material.

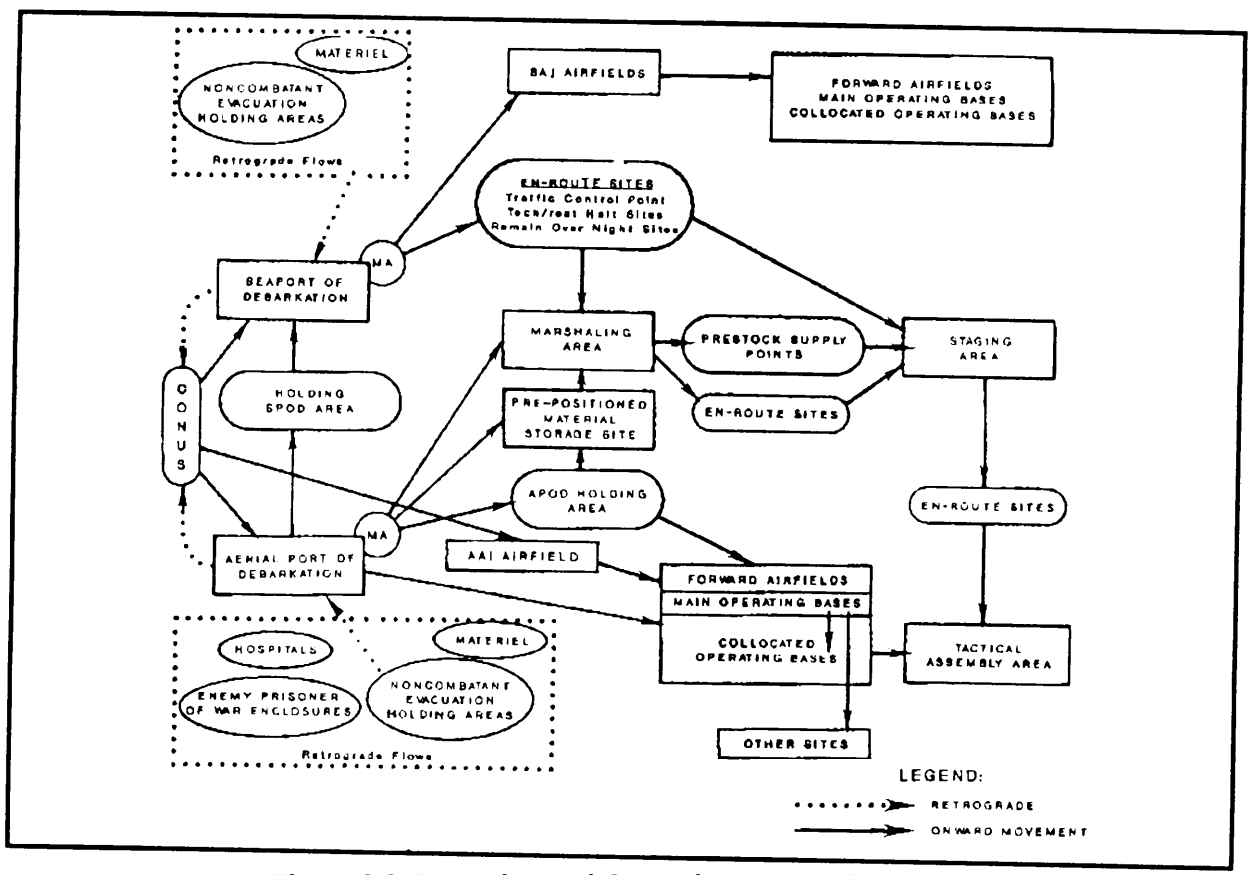


Figure 8-3. Reception and Onward Movement Process.

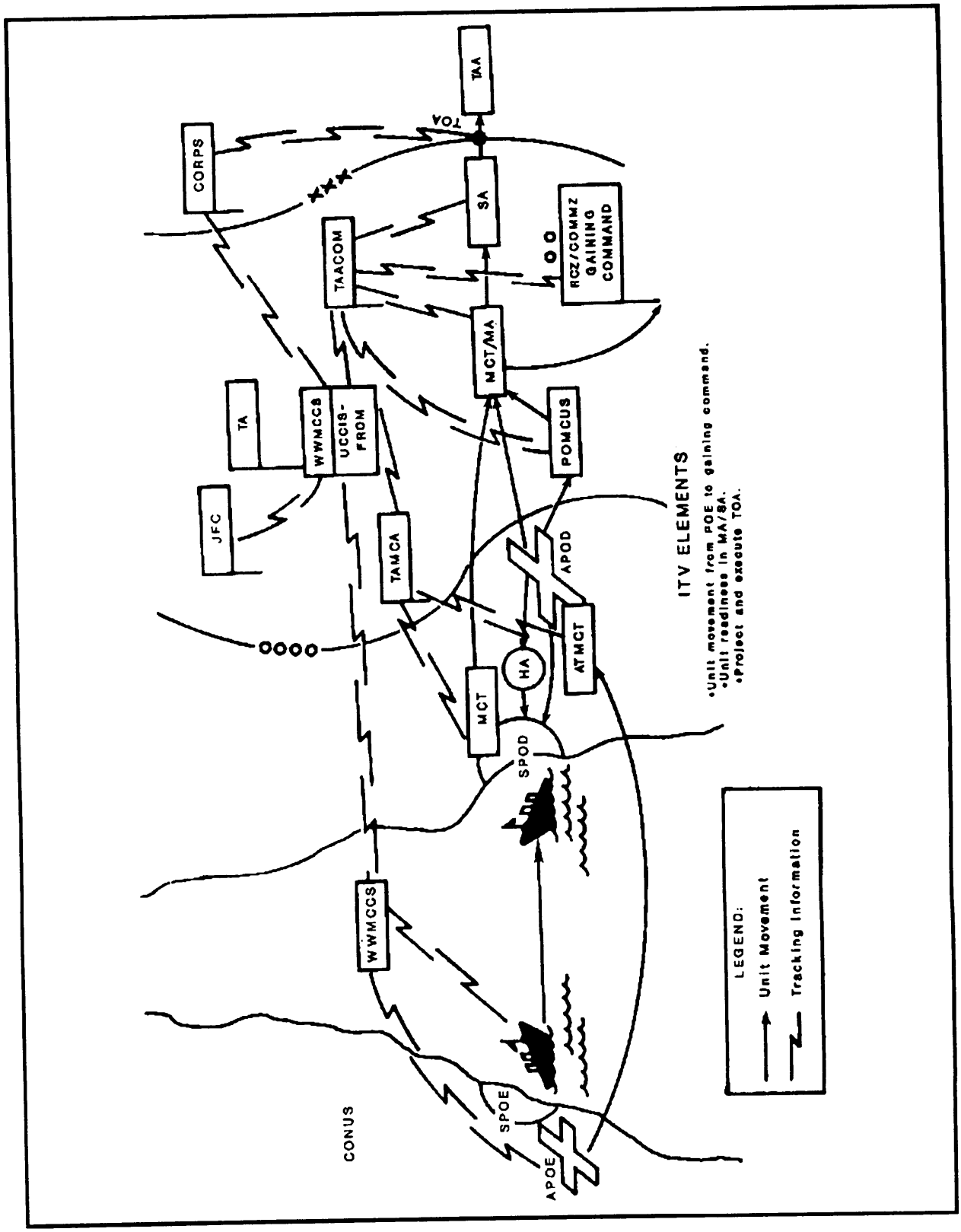


Figure 8-4. In-Transit Visibility.

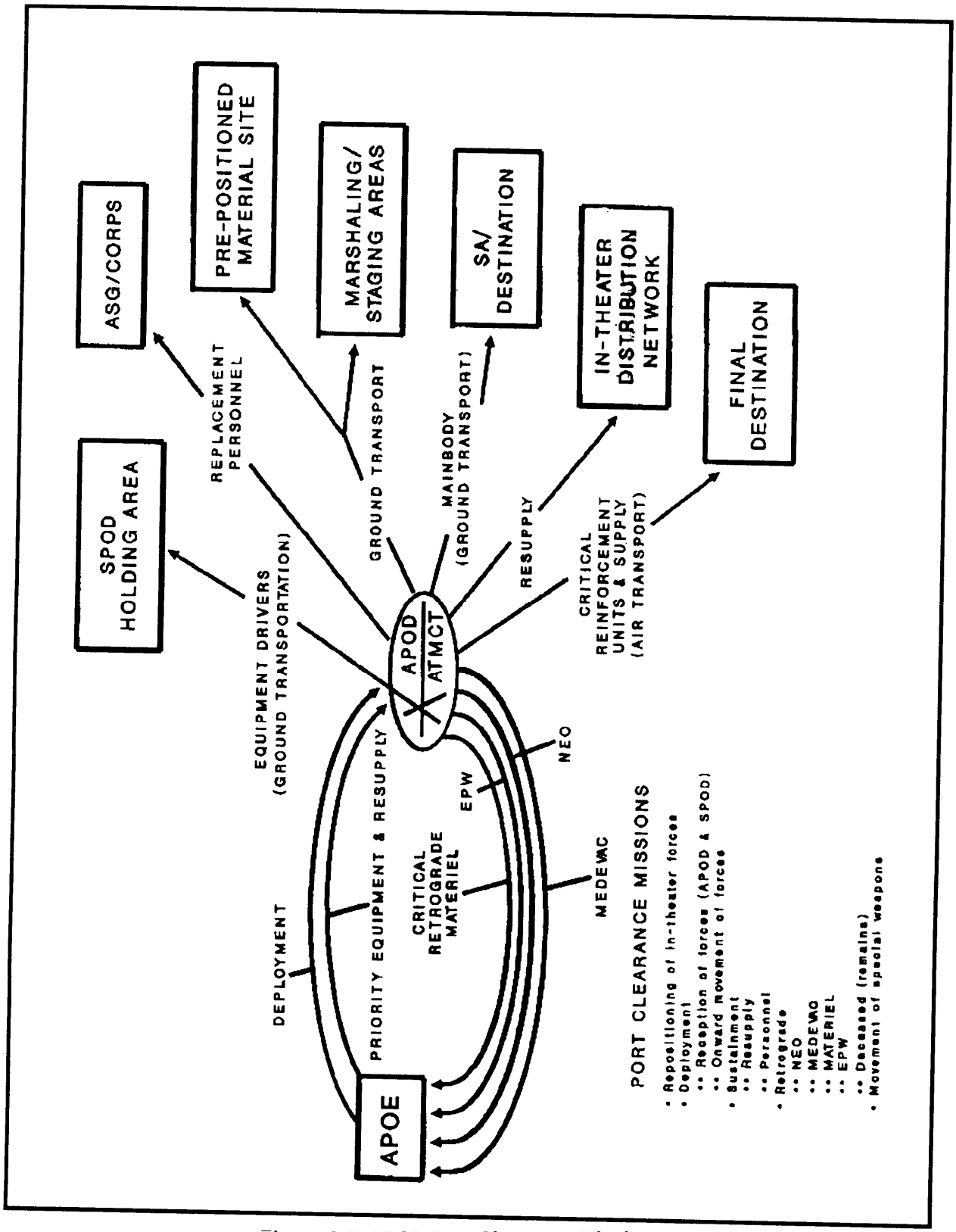


Figure 8-5. APOD Port Clearance Missions.

c. Army elements (ATMCT or AACG) at the APOD require external support to perform cargo transfer operations. This support may be provided by USAF aerial port squadrons (APS) at large airfields (established AM-C stations) and With AMC tanker, airlift control elements (TALCE) at civilian or smaller contingency airfields (see Figure 8-6). If these USAF units are not available or cannot support cargo transfer operations, the ATMCT or AACG must be augmented with Army or HN cargo transfer capability.

ARMY UNITS/RESPONSIBILITIES

TYPE ORGANIZATION	FUNCTIONAL RESPONSIBILITY	TYPICAL MANNING
ATMCT	Coordinate onward movement; clearance of Army cargo; in-transit visibility; receipt of retrograde material.	35
ASG LN TM	Life support services at APOD; coordination with ASG; operate holding areas. Report in-transit visibility.	4
ASG	Life support services at HA.	12
PRB	Supervise 4-5 RRDs.	45
RRD	Process and track nonunit personnel.	37
NEO LN TM	Coordinate NEO retro movement.	7
EOD	Ordnance disposal.	9

USAF UNITS/RESPONSIBILITIES

TYPE ORGANIZATION	FUNCTIONAL RESPONSIBILITY	TYPICAL MANNING
LGT	Coordinate onward and retrograde air transport; track Air Force cargo.	4
PERSCO	Provide contingency personnel support/ tracking for deployed USAF base and transient personnel.	2-50
COMM	Provide common-user communication.	66
POSTAL OPNS TEAM	Provide postal support to users in area.	5

AMC UNITS/RESPONSIBILITIES

TYPE ORGANIZATION	FUNCTIONAL RESPONSIBILITY	TYPICAL MANNING
TALCE	Aircraft scheduling and control.	30
MASF	Provide short-term support for medical evacuees.	23
AELT	Coordinate movement of medical evacuees.	3
AEC	Provide in-flight nursing care to medical evacuees.	60
AP	Unloading and loading aircraft.	123
AP	Loading onward movement transport.	
SP	Protection of AMC aircraft.	1-10

HOST-NATION RESPONSIBILITIES

- Air traffic control
- Transportation
- Communications
- Aircraft services
- Security
- Aircraft loading and unloading
- Office space
- Billeting
- Airfield damage repair

AMC will provide a TALCE at each APOD. A TALCE may have any of the following teams:

- AERIAL PORT SQUADRON
- SAFETY
- MAINTENANCE
- CREW CONTROL
- SECURITY POLICE
- WEATHER

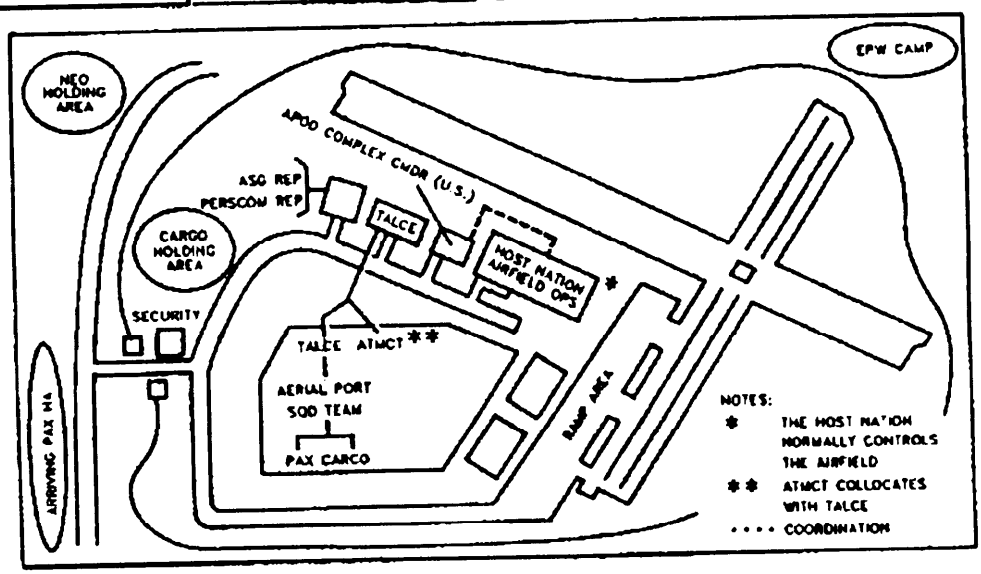


Figure 8-6. Notional APOD.

d. Efficient and timely airfield clearance is critical to prevent congestion and sustain the air flow into the APOD. APOD clearance, processing, and onward movement functions are executed sequentially (Figure 8-7) depending on whether units draw pre-positioned material or deploy with their equipment. ATMCTs coordinate transportation for the onward movement of passengers and baggage/TAT equipment. They also –

- Brief troop commanders and passengers on the current situation and procedures to clear the APOD.
- Task troop commanders to provide baggage off-load teams and assess the status of weapons and classified material.
- Call forward transportation to meet disembarking passengers and direct passengers to awaiting transportation. Ensure each vehicle is marked with unit and destination.
- Coordinate cargo transfer of accompanying cargo and TAT baggage pallets and reconfigure them by unit and/or destination for onward movement. Baggage vehicles should accompany troop transportation. If commercial or HN transportation is used, weapons and classified material should move on troop transportation rather than as baggage.
- Concurrently operate expeditious cargo clearance and retrograde cargo operations.

e. ATMCTs also plan and coordinate with the TAACOM ASG for support necessary to operate a passenger holding area (PHA) when expeditious clearance is not possible due to port congestion or transportation shortages. The PHA may also be used to give more detailed briefings to the moving unit on the current situation, port clearance procedures, or any other mission requirements.

f. Units may move from the APOD to their SA or TAA in the following ways:

- Move directly via surface transportation.
- Move via surface transportation after drawing pre-positioned material at storage sites.
- Move via intratheater air transportation. This involves trans-loading from strategic to tactical aircraft at an air-to-air interface.
- Move to a holding area to await the arrival of ships at an SPOD. The unit may assist in the ship off-loading.

8-4. AIR-TO-AIR INTERFACE OPERATIONS

a. At an air-to-air interface, soldiers and TAT equipment are trans-loaded from strategic aircraft to tactical aircraft for onward movement. This type of interface is used when units or reinforcements are critical or when the strategic aircraft is diverted from its original APOD due to the tactical situation, weather, or lack of clearance capability.

b. Air-to-air interfaces are normally short notice, short duration missions. ATMCTs must plan to quickly respond to air-to-air interface requirements at the APOD or contingency airfields. Clearance requirements include reconfiguring, inspecting, and weighing baggage and TAT equipment, and manifesting passengers for intratheater movement. The ATMCT must coordinate with the Air Force or HN port operator to arrange for MHE and the TAACOM ASG to establish a PHA.

8-5. SEAPORT OF DEBARKATION

a. An SPOD is a port designated by the theater combatant comander, in coordination with USTRANSCOM, for the sustained movement of equipment and material into and out of the theater of operations. It maybe operated by MTMC or an Army transportation terminal unit (TTU). The TAMCA or MCC assigns MCI's to coordinate port clearance missions. The MCTs control and manage the processing of units and equipment for onward movement. MCTs can be added incrementally to coordinate onward movement requirements based on the type of terminal and the terminal clearance capacity. Discharge time depends on the capacity of the ship and the rate at which it can be loaded or discharged. The MCT plans for onward movement based upon ship manifests and discharge rate. Figure 8-8 displays a notional SPOD.

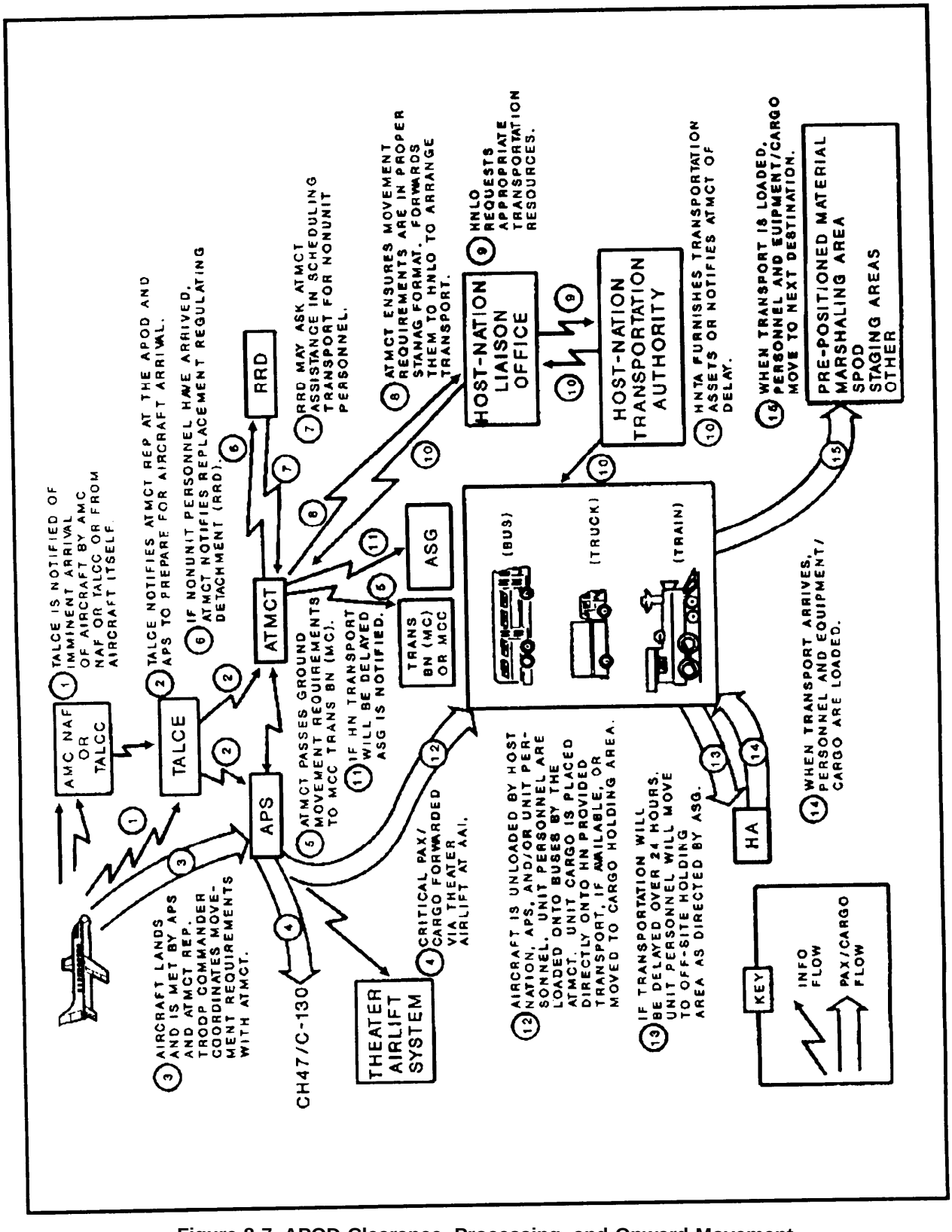
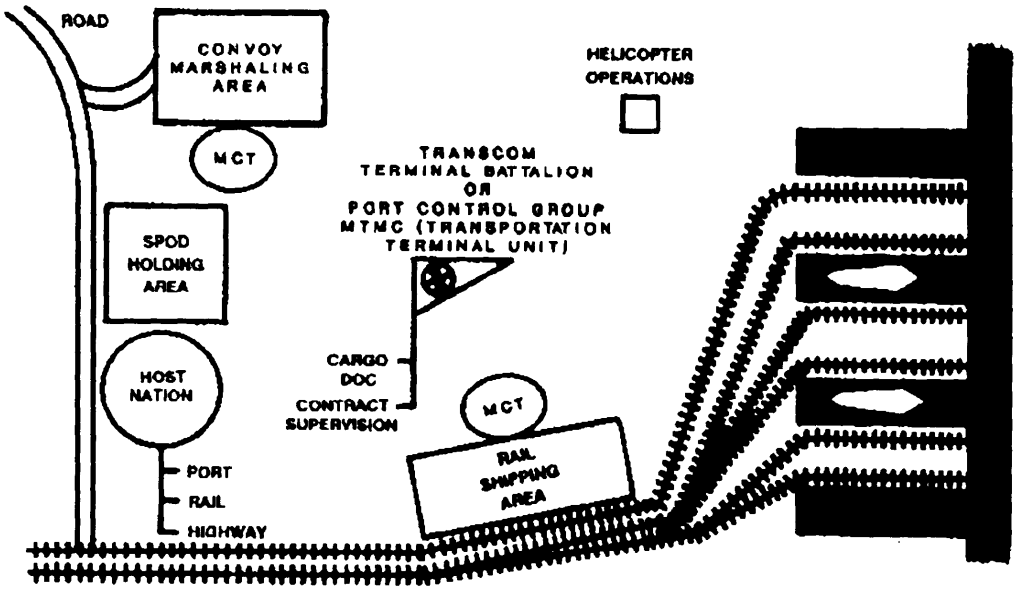


Figure 8-7. APOD Clearance, Processing, and Onward Movement.



PORT CONTROL GROUP CONTROLS ALL ACTIVITY FROM UNIT ARRIVAL IN PORT AREA THROUGH PORT CLEARANCE.

TYPE ORGANIZATION		FUNCTIONAL RESPONSIBILITY
MTMC	Terminal	Supervise Several SPODs
TTU	Port Det (PD)	Primary interface with HN regarding port clearance. Supervises ship off-loading. Documents cargo. Coordinates onward shipment with MCT.
TAACOM	ASG PLT	Provides DS/HS supply and maintenance to tenants and transients. Primary interface with HN regarding logistical support. Coordinates reception of equipment by deploying unit. Coordinates rear area security and area damage control with HN SPOD facilities manager.
TAMCA	MCT	Coordinates onward movement with HN. Arranges security for rail shipments. Coordinates use of US surface transport resources.
USAF	WPLO	Identifies USAF cargo for onward air shipment. Initiates cargo tracking, and coordinates ground movement of USAF cargo.
MSC	MSCO	Monitors and reports ship arrivals and departures. Coordinates berthing and security of ship in port. Arranges ship support.
ALL SERVICES	Deploying Unit	Provides cargo supervisors and ERP and assists in port clearance.

Figure 8-8. Notional SPOD.

b. The TAMCA or MCC must synchronize APOD and SPOD clearance operations. Units should be moved from the APOD or a holding area to the SPOD in the order in which the units are required at the port. The MCT tells the terminal or port operator how to sort the equipment when it is discharged based on priority and mode of onward movement. The MCT coordinates onward movement requirements and road movement bids, usually at the MA established for movement by that mode. The MCT receives requests for line-haul or special transportation requirements, such as HET, and commits TRANSCOM or COSCOM assets.

c. The MCT responsible for planning onward movement must coordinate with the PSA, which supports port clearance. Maintenance is a unit responsibility, but the MCT must provide guidance and movement instructions to units to ensure that vehicles that move by rail or air are not reconfigured or fueled. The MCT plans and orders railcars for unit rail movement requirements. The unit loads and ties down its equipment. The MCT provides technical assistance. Figure 8-9 shows onward movement from the SPOD.

d. The following additional organizations provide support at the SPOD:

- The Army headquarters responsible for geographic support responsibilities, such as the TAACOM or COSCOM, provides logistics and life support for units transiting the port.
- The PSA provides maintenance; configures equipment for onward movement; and provides security, fueling and other support requirements. The PSA is a tailored organization unique to each port. It is under the operational control of the terminal commander.

e. After clearing the terminal, equipment will be processed for onward movement by specific modes at MAs as follows:

- Rail for movement of outsize, oversize, and track vehicles to their staging area/tactical assembly area (SA/TAA).
- Intratheater (tactical) airlift from a sea-to-air interface of critically needed units or priority reinforcements to their SA/TAA.
- Surface movement by highway of wheeled vehicles to the SA/TAA, pre-positioned material site, or final destination.
- Inland waterway by lighterage, if available, depending on priority of movement and cargo transfer capability.

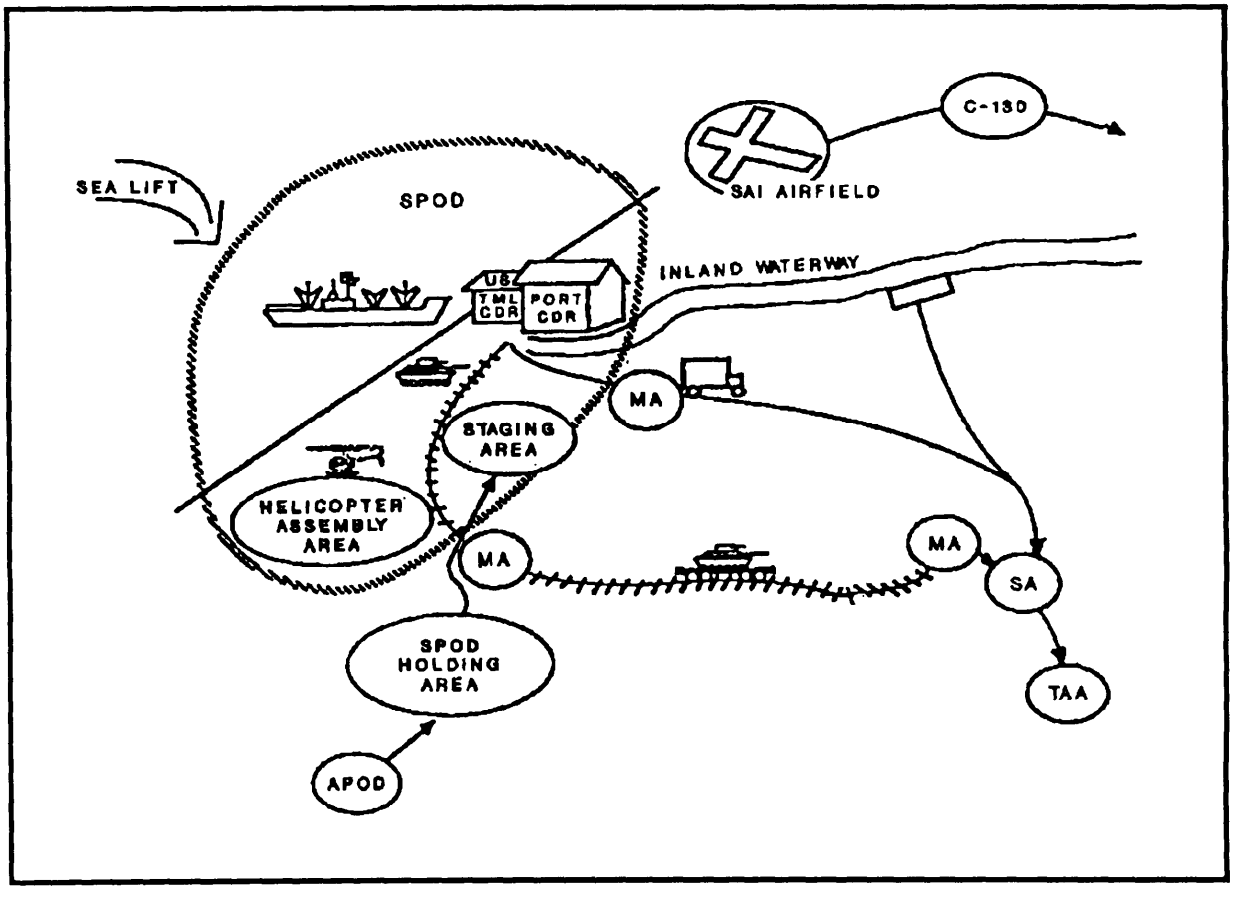


Figure 8-9. SPOD Onward Movement Operations.

8-6. SEA-TO-AIR INTERFACE OPERATIONS

a. An alternate method of onward movement from the SPOD for high priority units is the sea-to-air interface. Equipment is separated at the SPOD to begin preparation for air movement. At the sea-to-air interface, equipment, drivers, and a C2 party are processed for onward movement on intratheater (tactical) airlift. The TAMCA or MCC normally assigns an ATMCT to execute the sea-to-air interface. The ATMCT must coordinate with the MCT at the SPOD to ensure that units prepare vehicles and equipment to meet tactical airlift requirements.

b. The sea-to-air interface is organized similar to a departure airfield. The ATMCT requires augmentation to execute the operation as shown in Figure 8-10. This includes portable scales, MHE, dunnage, and shoring.

8-7. ONWARD MOVEMENT OF PRE-POSITIONED MATERIAL

a. Pre-positioned material, including combat systems, vehicles, and sustainment are normally organized under one of the following programs:

- Pre-positioning of material configured to unit sets (POMCUS).
- Pre-positioned ships.
- Theater war reserve stocks.

b. Pre-positioned material reduces the unit equipment and basic load requirement that must accompany units. The TAMCA and/or corps MCC must coordinate with the TAACOM and liaison party from the unit to plan for onward movement from the storage site to the staging area as shown in Figure 8-2. An MCT will directly coordinate with the moving

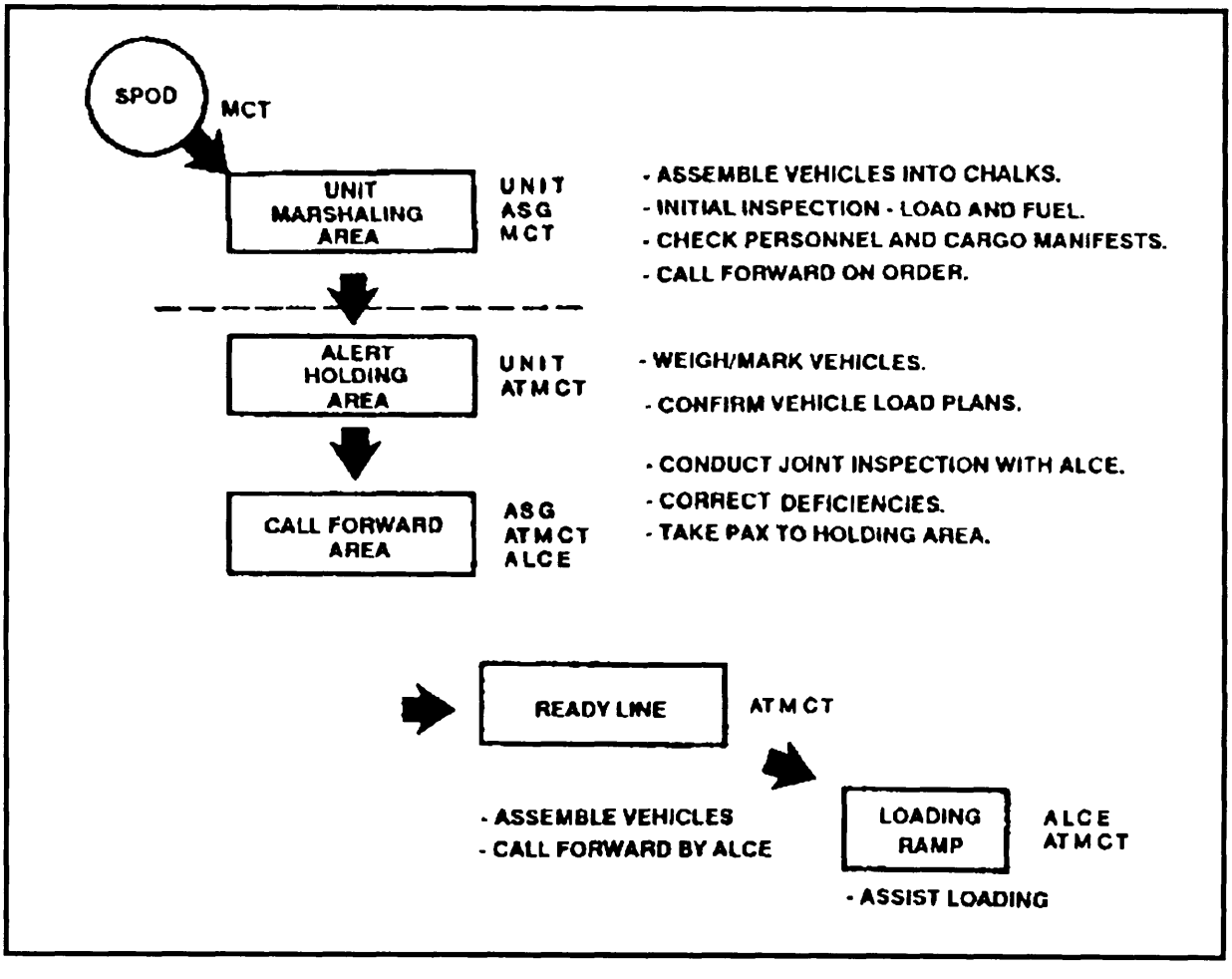


Figure 8-10. Sea-to-Air Operational Stages.

unit at an MA outside the storage site. The unit advance party will draw the material and linkup with the main body at the staging area to complete combat preparations. The MCT will select the plan for any special transportation requirements for unit onward movement from the storage site to the staging area.

8-8. MOVEMENT CONTROL DURING REPOSITIONING

a. The TAMCA or corps MCC maybe responsible for planning and executing movement control operations in support of unit repositioning when —

- Repositioning within the theater of operations.
- Deploying from an OCONUS theater of operations to another theater.
- Redeploying from a theater of operations back to home station.

b. Movement planners must schedule movements and transportation to support the movement as directed by the DCSOPS or G3. Units are called forward to POEs based on their priority of movement and the processing capacity of the port. Movement planners must make sure people, supplies, and equipment arrive at the transportation node simultaneously based on the estimated processing time at the POE. Units must be at the POE and prepared to load as strategic lift assets become available (Figure 8-11).

c. Units are called forward from a holding area to the POE based upon a schedule matching the moving units with specific aircraft or vessels. The service logistical commander responsible for integrating logistical support will provide life support to units while at the POE. The TAMCA/MCC or subordinate units plan, coordinate, and select the mode of transportation and issue or coordinate movement credits for units to move to the POE. Units must arrive in sufficient time to prepare vehicles and equipment for movement according to instructions provided by the terminal commander. See MTMC TEA Pamphlet 700-2 for sample loading times.

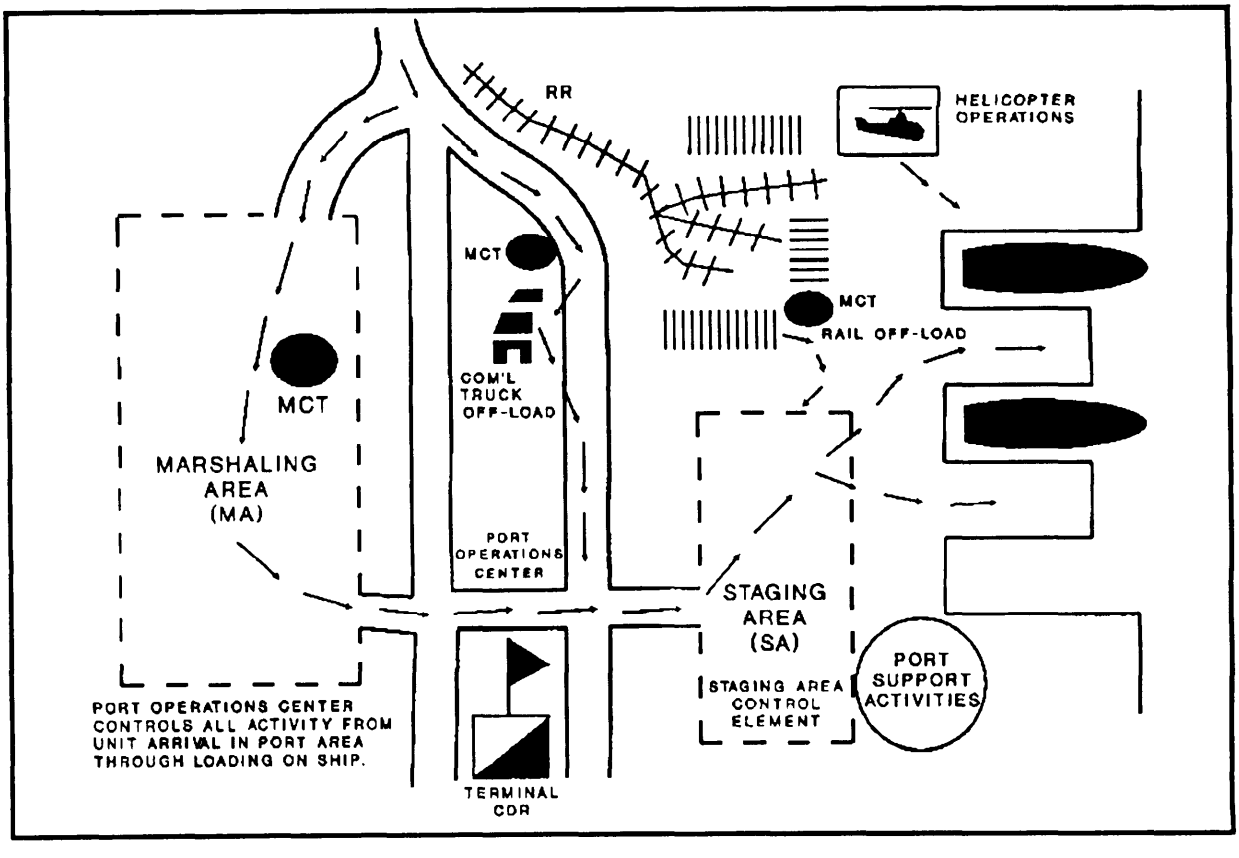


Figure 8-11. Operations at a Notional SPOE.

(1) At APOEs, ATMCTs ensure that TAT cargo and baggage meet the configuration of the scheduled aircraft and any other Air Force requirements. Moving units may also receive customs and agriculture inspections. The ATMCT is responsible for maintaining the sterility of the processing center at the call forward area and manifesting passengers. The ATMCT coordinates with MP customs and US Department of Agriculture representatives to ensure that operations at processing and holding areas meet their requirements.

(2) ATMCTs must also plan for retrograde of inoperable equipment, captured equipment, and sensitive equipment.

(3) As part of the manifesting procedure, the ATMCT should conduct required briefings, check for identification tags, and conduct a roll call. Figure 8-12 displays a notional call forward area processing center, including the flow of passengers from reception to manifesting.

8-9. PLANNING SEQUENCE FOR RECEPTION AND ONWARD MOVEMENT

a. A comprehensive plan for reception and onward movement requires adherence to a step-by-step process similar to that used to develop a movement program as described in Chapter 6. Planning must estimate the work load at specific transportation nodes to determine requirements for movement control, mode operating, and mode change units. Planning should be done for operational periods for each mode. It must also identify requirements for MHE, CHE, and HNS (Figure 8-13).

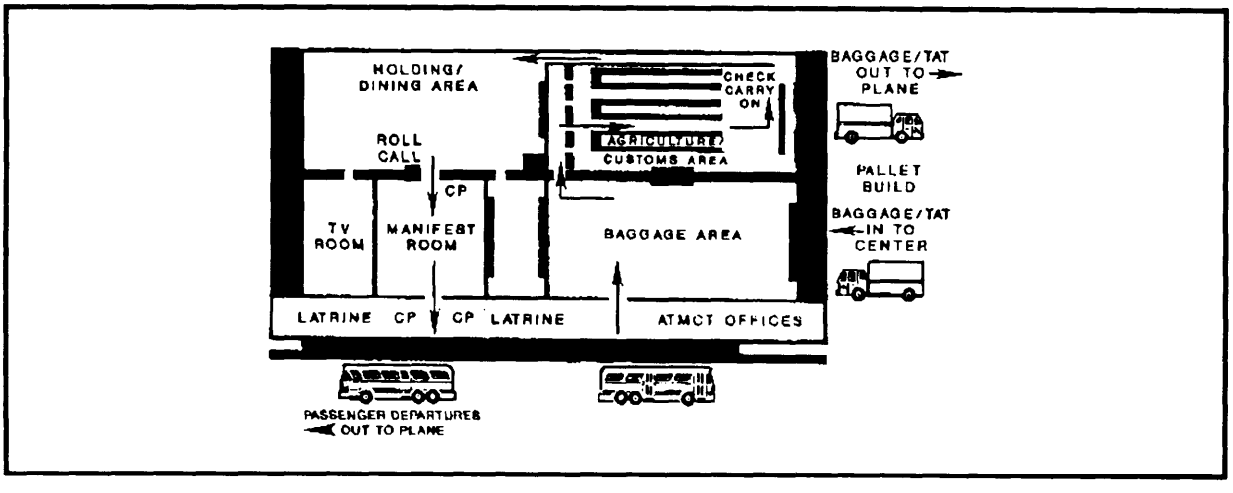


Figure 8-12. Notional APOE Processing Center.

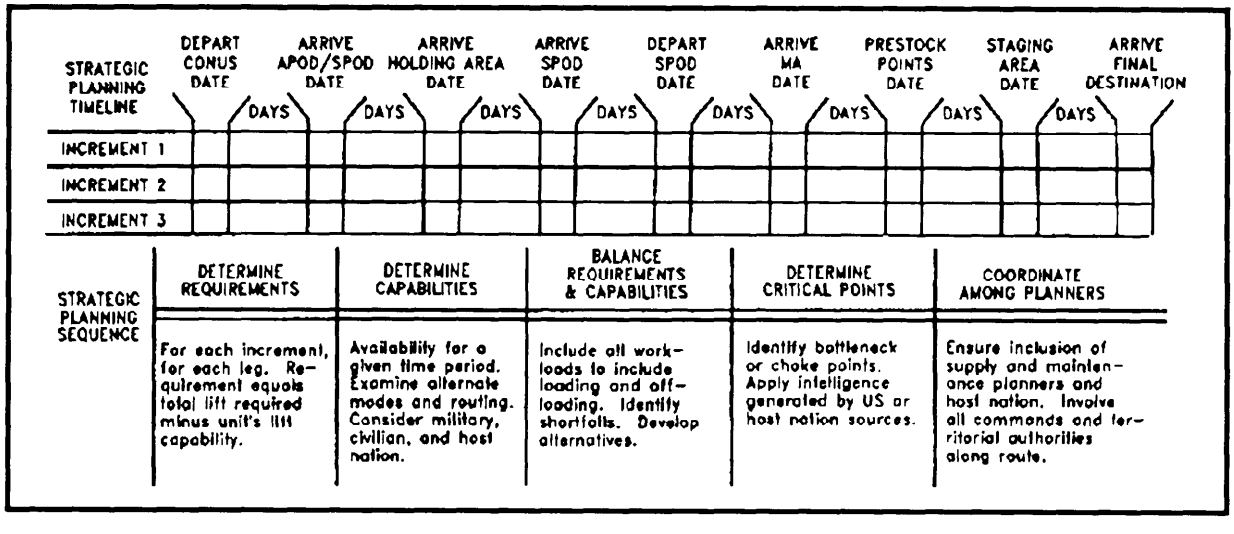


Figure 8-13. Reception and Onward Movement Planning.

b. During this process, movement planners at the senior movement headquarters –

(1) Obtain advance arrival information for intertheater sea and air movement from port operators and operational planners.

(2) Assess the movement requirements data such as RDD, priority of movement, equipment characteristics, and special requirements.

(3) Group the requirements for each POD by destination geographic location in RDD sequence.

(4) Obtain movement priority for requirements that have the same destination and RDD.

(5) Determine available modes for onward movement based upon planning requirements. Consider the requirement. equipment charactcristics, priorities and modes servicing the PODS and SAs/TAAs.

(6) Select mode for each requirement.

(7) Program the mode for each requirement for reporting to POD based upon estimated time for POD clearance. This is dependent on the type of strategic asset (airlift, sealift).

(8) Determine availability of equipment for follow-on missions at the POD. Estimate uploading and processing time for each mode at the POD. Apply time/distance factors to estimate transit time to other transportation nodes or arrival at the SA/TAA. Determine total transit time, maintenance and crew rest, and return time.

(9) Resolve conflicts by either routing, changing modes, or rescheduling or obtain guidance from operational planners. Reconfirm that the selected route can accommodate any oversize or overweight cargo/equipment being moved.

(10) Identify requirements for MHE and CHE at the POD for each mode, cargo and trailer transfer points, and at destination. Coordinate with the TAACOM or COSCOM to provide sufficient MHE and CHE to meet the needs at the points and times required.

(11) Coordinate for holding and storage areas outside of POD staging areas if ports become congested due to transportation shortages or scheduling problems.

(12) Identify en route support requirements for fuel, mess, maintenance, and billeting. Coordinate with the TAACOM and/or COSCOM for this support.

(13) Determine critical points where highway regulation or traffic control should be established to maintain the flow of traffic. Coordinate for en route communications.

c. Plan for retrograde missions for equipment returning from the SA/TAA in the same manner as above.

CHAPTER 9

INTERMODAL OPERATIONS

Section I. CONTAINERS AND SEAPORTS

9-1. INTRODUCTION

This section describes container management in an overseas theater. Containers are a permanent type of transport equipment designed to be transported by various modes of transportation. They facilitate and optimize carrying goods by one or more modes without intermediate handling of the contents. Containers are equipped with features permitting their ready handling and transfer from one mode to another. This section applies to all commercial and government-owned containers and PLSSCs which are part of the transportation system and not on unit property books. FM 38-725 provides further information on container operations.

9-2. CONTAINER CONTROL

a. Control of containers must be established at an echelon that permits surveillance of the overall container situation and centralized management of all containers in the theater. Centralized management is necessary to ensure visibility of containers and to ensure that the containers are used only for transport and not for other purposes such as permanent storage. Within the theater, that echelon is the TAMCA or senior movement control headquarters present. Operating within broad theater Army policy directives, the TAMCA develops detailed policies and procedures for container use and monitors compliance therewith.

b. Timely and accurate reporting of information is essential to the TAMCA as the theater container manager. The TAMCA maintains information on the location and status of all containers in the theater at all times. Each terminal, consignor, and consignee notifies its supporting MCT of the receipt, unloading reloading, and release of containers. The MCT relays this information through its headquarters, either the corps MCC or transportation battalions (MC) to the TAMCA. Each mode operator and each designated reporting point (such as trailer transfer point) submits in-transit reports.

c. The TAMCA, coordinating with the TAMMC, sets priorities for container shipment, diversion, or reconsignment.

9-3. OVERSEAS THEATER SUPPORT

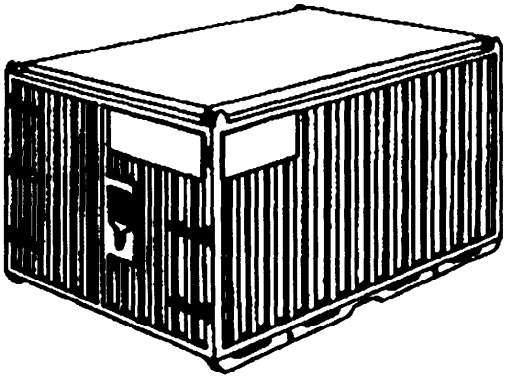
a. The composition of the commercial maritime fleet determines US military use of containers. National transportation policy requires the DOD to use existing commercial transportation equipment to the maximum extent possible. As such, much of the material that will arrive in a theater of operations will be in containers. Effective logistics support will require the efficient movement and handling of containers throughout the DTS and within supply support activities.

b. Military-owned containers such as military-owned remountable containers (MILVANs) are moved under the provisions of MILSTAMP. Commercial containers are moved under the provisions of the MSC Container Agreement and Rate Guide. The rate guide provides rates, terms, and conditions for worldwide intermodal movement of containerized cargo for the DOD.

9-4. CONTAINER DESTINATIONS

a. Within the theater, containers should be throughput as far forward as practicable. This will be based primarily on the capability of receiving units to off-load and unload containers and the availability of CHE and MHE.

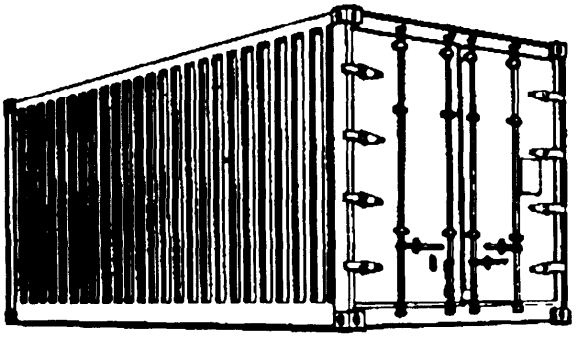
b. Normally, 40-foot commercial and military-owned containers (Figure 9-1) will be moved to GS supply echelons because DS supply echelons either do not have adequate CHE and MHE to unload containers or they do not require the volume of material at one time that containers provide.



	Type 1 (Half Size)*	Type 2 (Standard)
Inside		
Length	3' 10 5/8"	8' 1 5/8"
Width	5' 11 3/4"	5' 11 3/4"
Height	5' 3/8"	6' 3/8"
Outside		
Length	4' 3"	8' 6"
Width	6' 3"	6' 3"
Height	5' 10 1/2"	6' 10 1/2"
Cargo Capacity	9,000 lb	9,000 lb
Empty Weight	900 lb	1,500 lb

*For cargoes with overall density exceeding 46 pounds per cubic foot.

NOTE: CONEXs are reusable metal shipping boxes mounted on skids and fitted with recessed lifting eyes or lugs at the top four corners. They are produced in two styles: full-size and half-size.



Outside	
Length	20' 0"
Width	8' 0"
Height	8' 0"
Inside	
Length	19' 4"
Width	7' 6"
Height	7' 1"
Cargo Capacity	41,300 lb
Empty Weight	3,500 lb

NOTE: MILVANs are standard 8-foot high and wide by 20-foot long demountable containers that may be moved by all modes of transportation. They conform to US and international standards. For highway movement, the container is attached to a MILVAN chassis by coupling its lower four standard corner fittings to compatible mounting blocks on the chassis.

TYPE	LENGTH (FEET)	TYPE	LENGTH (FEET)
Dry-van	20, 24, 27, 30, 35, 40	Bulk-dry	24, 40
Reefer	20, 24, 27, 30, 35	Bulk-liquid	20, 35, 40
Refrigerated	20, 27, 40	Side door	20, 40
Ventilated	24, 27	Container	35, 40
Insulated	20, 24, 35, 40	Cattlecainer	35
Open-top	20, 35, 40	Garmenttainer	20, 40
Open-top (1/2 high)	40	Housing and office	40
Platform	20, 24, 27, 35, 40	Display	20, 40
Platform (1/2 high)	35, 40	Communications	40

20' × 8' × 8'
20' × 8' × 8'6"
24' × 8' × 8'6"
27' × 8' × 9'6"
30' × 8' × 8'6"
35' × 8' × 8'6"
40' × 8' × 8'
40' × 8' × 8'6"
40' × 8' × 9'
40' × 8' × 9'6"

NOTE: The commercial transportation industry uses many types of containers to transport different kinds of cargo. The *dry-van container* is most commonly used.

Figure 9-1. Container Types.

9-5. PORT OPERATIONS

a. The TA commander must ensure containers arriving in the theater are promptly discharged and rapidly moved forward to their destination (Figure 9-2). Seaports will be operated either by MTMC, the TRANSCOM, or the HN. Aerial ports will be operated by the Air Force. The TAMCA develops the movement program which allocates transportation for the movement of all cargo and personnel from PODs. The TAMCA also establishes container management policies and procedures. The TRANSCOM provides transportation for onward movement of containers. It may also provide trailer transfer, liaison, or mode operating units at the ports. The TAMCA will normally assign an MCT to manage the flow of cargo from PODs.

b. In combined operations being conducted from friendly soil, the HN may choose to exercise its territorial responsibilities and continue to operate ports in the theater. The responsibilities of US forces at these ports will be based upon agreements between the US and the HN governments.

9-6. CONTAINER DISCHARGE AT SEAPORTS

a. Fixed-port terminals normally provide suitable facilities to off-load containers and transfer them to inland transportation nodes. Fixed-port facilities will be used to the maximum extent possible because they can normally discharge a large volume of containers at a rapid pace, are equipped with CHE, and are located close to inland transportation hubs. Off-loading containers in the stream also can be used in conjunction with fixed-port operations if berthing space is limited. See FM 55-17 for additional information on terminal operations.

b. LOTS operations are another means of providing support when established ports are not available or are not adequate. LOTS operations involve discharging ships anchored offshore and bringing the cargo over the beach. LOTS operations are inherently less efficient than fixed-port operations because they do not have the specialized CHE found at freed ports. While LOTS operations will be avoided where possible, LOTS capabilities may be needed to supplement freed ports (Figure 9-3).

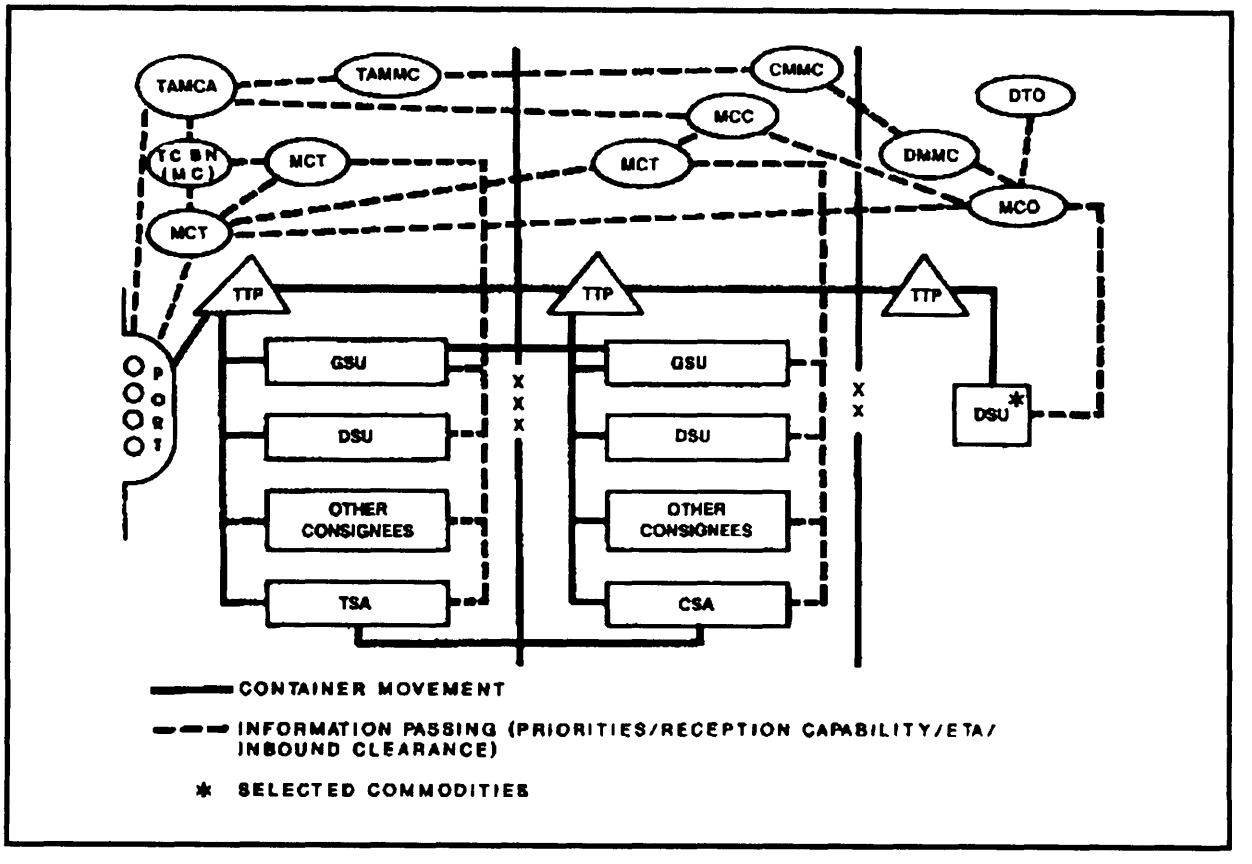


Figure 9-2. Container Distribution Flow.

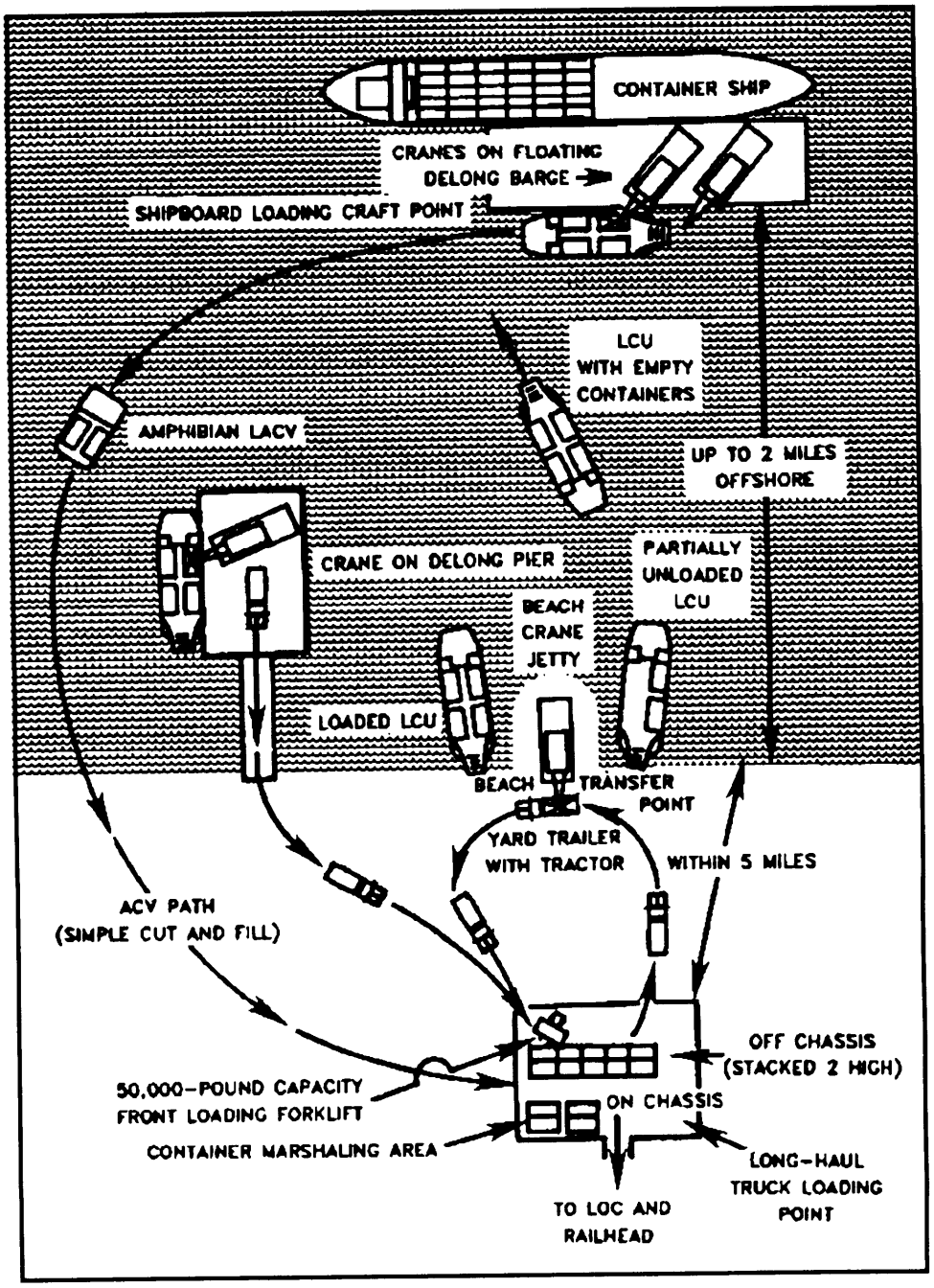


Figure 9-3. Typical LOTS Operation.

9-7. SEAPORT CLEARANCE

a. The theater first gains visibility of inbound containers from the ocean cargo manifest. The manifest is sent from the MTMC area command responsible for the POE. MILSTAMP requires the MTMC area command to transmit the manifest to SPOD within 72 hours after the vessel departs from the SPOE. The ocean cargo manifest is compiled from two primary sources: the advance transportation control and movement document (TCMD) from the shipper and lift data from the ocean carrier. Of the two sources of information, the lift data is the most critical because it provides container identification and vessel data.

b. The following actions occur upon receipt of the manifest:

(1) Port operators begin preparing documentation to clear the containers through the port. If the containers are shipped under the provisions of the MSC container agreement that requires the ocean carrier to provide inland transportation, it will be annotated on the manifest. If the manifest indicates delivery to the ocean carrier's terminal, inland transportation arrangements are made by the port MCT.

(2) The port MCT provides this data to the TAMCA, which maintains theater visibility of containers. The port MCT produces and transmits the estimated time of arrival (ETA) forecast to the consignee (if possible), the destination MCT, the TAMCA, MCC, and transportation battalions (MC).

(3) The TAMCA processes the manifest into its automat ed system. This produces an initial master record of every container expected to arrive in the theater.

c. Upon receiving the forecast, destination MCTs coordinate with the consignee to determine disposition instructions, delivery location, and capability to unload the containers. They provide instruction back to the port MCT as follows:

- **Ž**Free flow the container to the manifested consignee.
- **Ž**Expedite the container to the manifested consignee.
- **Ž**Divert the container to another consignee.
- **Ž**Stage the container at the port.

d. The MCT normally receives disposition instructions and plans onward movement before the ship arrives at the SPOD. The MCT must receive any instructions to divert or stage containers before arranging onward movement. If required, the MCT will coordinate movement clearance.

e. The advance ocean cargo manifest is only a planning document. Port operators perform 100 percent reconciliation during off-loading. Actual containers discharged will be matched against the advance ocean manifest and all discrepancies noted. If there are differences, the port MCT must notify the TAMCA and destination MCTs for disposition instructions. The port MCT and TAMCA will update their accounting system.

f. Port operators, the MCT, and TRANSCOM mode operators should strive to move containers from the ship directly to the mode of transportation for onward movement. This will prevent accumulation at the port. Immediate transportation may not always be possible or desirable and containers will be held in marshaling yards to await movement. The marshaling yard is a temporary holding area for containers awaiting transportation. It should be organized to promote rapid and continuous movement to and from the port and/or beach. The marshaling yard should be located as near the port operation as possible to minimize handling time.

(1) If there are shortages of line-haul assets, using a marshaling yard allows mode operators to program their assets and not have to have those assets sitting idle while the ship is being discharged.

(2) The tactical situation may not allow immediate movement due to higher priorities for use of transportation modes or MSRs.

g. Containers maybe transported by rail, highway, inland water, and HN carriers.

(1) Rail, when available, is the most efficient method of moving large quantities of containers from the ports. Rail should be used to move containers as far forward as feasible. It is less affected by adverse weather than other modes, but its flexibility is limited because it depends on a fixed roadbed which may be vulnerable to enemy action.

(2) Highway transport is the most flexible method of moving containers and will be employed in line-haul, local haul, terminal clearance, and transfer operations. This will be the primary mode to forward containers from rail terminals directly to the consignee. Highway transport will be required for multistop containers. Port clearance is a good use of HN transportation support and should be planned for if possible. The MCT may need to coordinate off-loading capability with consignee.

(3) Inland water transport can be used when there are sufficient assets, units, and facilities. This mode can help relieve pressure on rail and truck transportation modes. Inland water is the slowest mode and requires the most container rehandling. Due to variable tides and water depths during

seasons, this mode may not be available year round. The advantage is that large quantities can be moved.

(4) HN carriers may move containers. However, they will not normally move MILVANs used to ship ammunition. MILVANs will normally be moved by Army assets.

h. When containers are delivered to the consignee, the consignee must unstuff the container as quickly as possible and report its availability for pickup to the servicing MCT.

i. If on delivery of the container it is found that the container needs to be delivered to another consignee, the MCT has two options:

- Reconsign the container to the proper consignee with the same mode operator.
- Unstuff the container and deliver the cargo using other modes of transport.

9-8. CONTAINER OPERATIONS AT EAC

a. Throughput distribution of containers from ports or marshaling areas to corps or division areas will be accomplished when feasible and when containers are destined for a single consignee. This method of distribution will be based on priorities and requires coordination between the TAMCA and TAMMC.

b. Although the objective is to unstuff containers within three days and return them to the transportation system, this objective may not always be met. Planners must anticipate that units will want to use grounded containers for limited temporary storage purposes. The TAMCA must limit using containers for storage so sufficient containers remain available for transportation purposes. Containers authorized for temporary storage will be accounted for in the transportation system unless the TAMCA relinquishes control.

c. When containers are approved for limited temporary storage at TAACOM supply activities, they must be off-loaded from the trailer or chassis as quickly as possible. The chassis is even more critical to the transportation system in the theater than the containers. Therefore, the TAMCA must ensure that these activities have CHE to ground the containers. The containers then may be unstuffed over a period of time as supplies are issued or reconsigned.

d. When containers are available for intratheater movement, they may be used to consolidate shipments to supported units.

9-9. CONTAINER OPERATIONS AT CORPS AND DIVISION

a. The geographic location, requirements for increased mobility and dispersion, and lower stock levels differentiate TAACOM and corps supply activities. However, most of the container-handling concepts at EAC outlined above remain valid for corps.

b. The commodity orientation of GS supply units normally allow them to receive containers stuffed with one commodity

c. Fully stuffed containers will routinely be moved as far forward as the division rear area to support the divisions and nondivisional supply activities operating in the division rear. Generally, containers moved this far forward should not exceed 20 feet in length due to limited CHE.

d. Containers normally will not go into brigade areas. In exceptional cases, containers with MHE required for unstuffing could be forwarded to the brigade. An example would be the shipment of barrier materials needed to support a specific engineer effort.

e. Containers normally will not be grounded in the division area. Containers on chassis will be unstuffed as soon as possible and the chassis and container returned to the transportation system. Generally, empty containers on chassis will be picked up when loaded containers are delivered.

f. Another container configuration is the PLSSC (Figure 9-4). These containers are used to initially throughput Class V to the corps support areas (CSAs) and ammunition supply points (ASPs) in the corps area Once in the corps area, they are the transportation asset used to move Class V from the CSA forward. They Will be exchanged on a one-for-one basis at the Class V user location and returned to the CSA/ASP for repacking and reuse. They will be monitored like containers but will not be used for retrograde cargo. They remain a corps asset until redeployment.

9-10. INTERTHEATER AND INTRATHEATER CONTAINER MOVEMENTS

Concepts for the intertheater and intratheater movement of containers are shown in Figure 9-5.

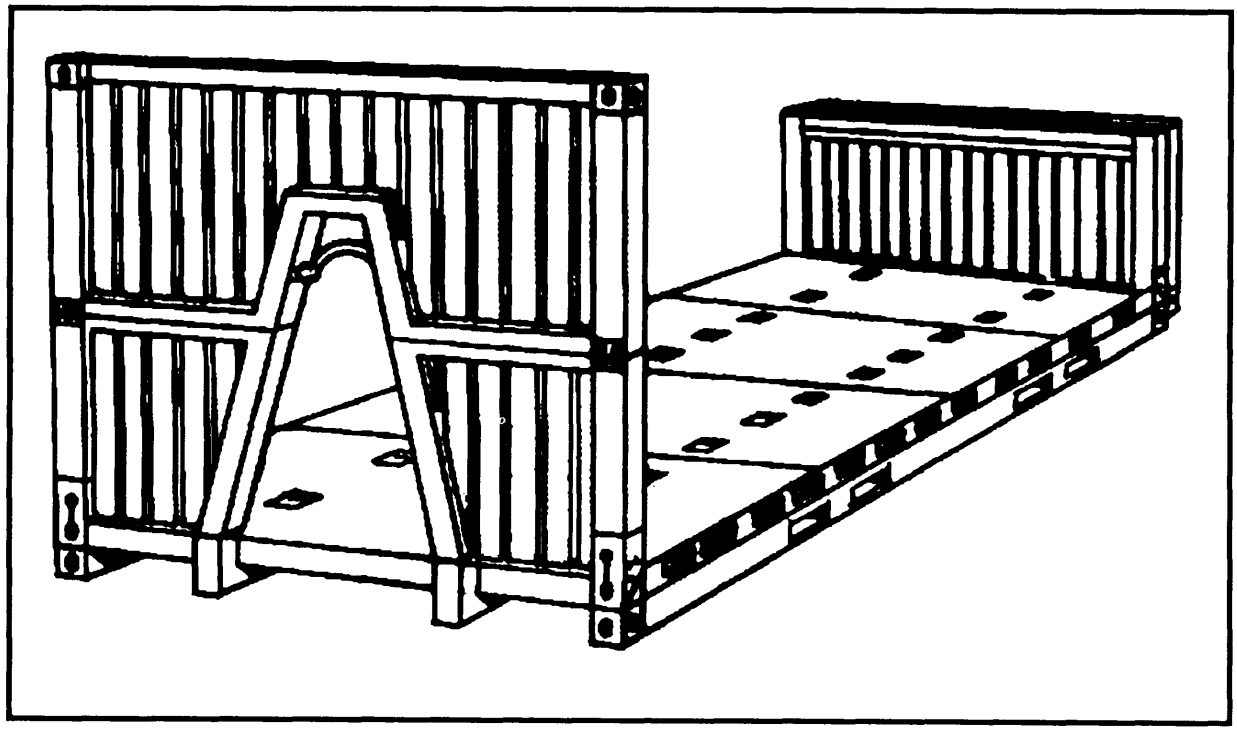


Figure 9-4. Palletized Load System Sideless Container.

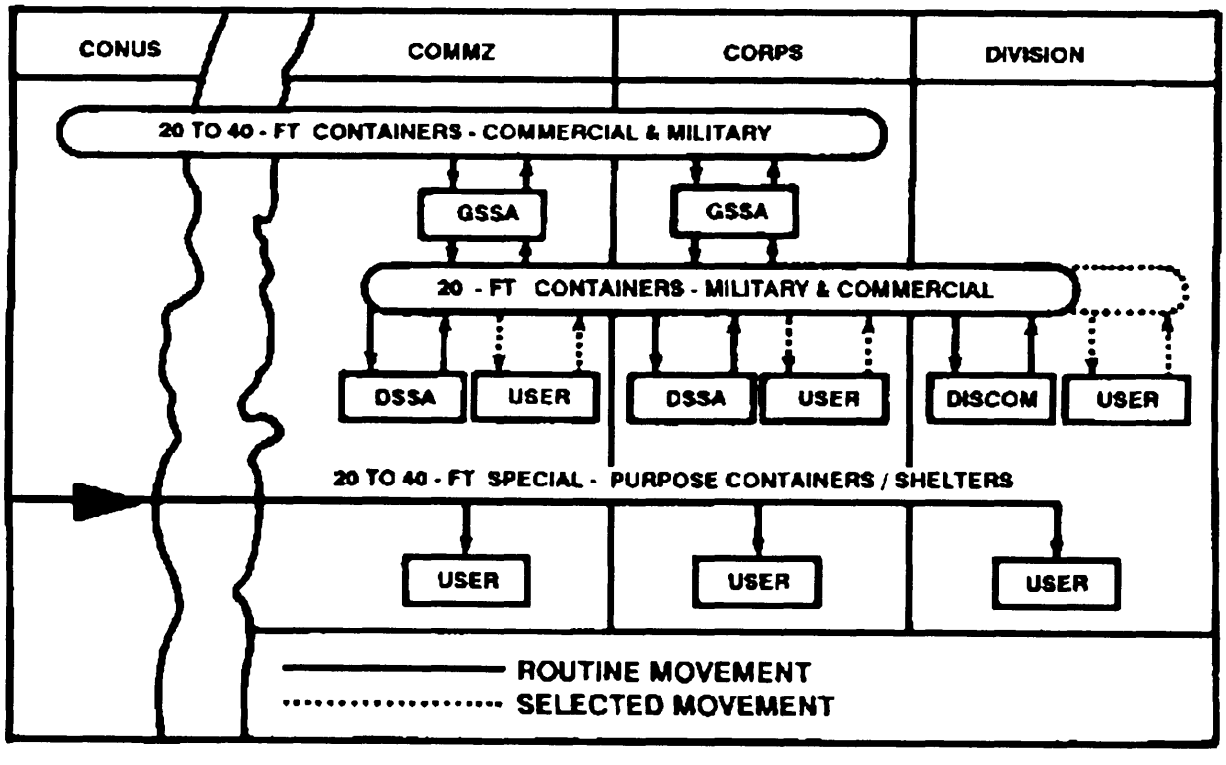


Figure 9-5. Container Movements.

9-11. DAILY CONTAINER MANAGEMENT ACTIVITIES

a. The TAMCA will develop, disseminate, and monitor policies and procedures for containerized shipments moving in the theater. These responsibilities include —

(1) Tracking the movement of containers and MILVANs consigned to activities within the theater.

(2) Coordinating and approving reconsignments with the origin and destination MCTs.

(3) Receiving diversion, staging, and release from staging requests from theater commodity managers and MCTs.

(4) Ensuring reconsignment, diversions, staging, and release from staging information is quickly submitted to the ports and MCTs.

(5) Assisting shippers in planning the proper stuffing of containers with multiple consignees.

b. The TAMCA movement information division's responsibilities are to –

(1) Receive all container movement information transactions and ensure it is quickly submitted for input into an automated system.

(2) Monitor automation-generated data and automatic digital network transmissions to the LCA.

(3) Ensure that automated cargo forecasts are promptly forwarded to the concerned organizations.

c. The transportation battalions (MC) and corps MCCs, through their subordinate MCTs, will –

(1) Provide inbound container and PLSSC information to MCTs to be passed to consignees.

(2) Provide disposition instructions to the TAMCA based on information received from the MCTs and customers.

(3) Ensure the MCT notifies consignees of the impending arrival of multistop containers and the need for priority discharge of these containers at intermediate stops.

(4) Monitor arrival, unstuffing, and pickup of containers within their area of responsibility.

(5) Maintain a container log that reflects all containers forecasted or received with their area of responsibility.

(6) Report the receipt of unforecasted containers to the TAMCA.

(7) Report all empty containers to applicable mode operator and coordinate pickup.

(8) Notify the TAMCA when a consignee reports receipt of an unserviceable or damaged container or cargo damage.

(9) Receive and process requests for reconsignment action from customers.

(10) Monitor retrograde operations.

(11) Ensure MCTs minimize retrograde backlog.

9-12. CONTAINER MANAGEMENT OBJECTIVES

The 12 objectives of container management that apply to all transportation managers are to —

- Consolidate shipments for single consignees versus multiple consignees or break-bulk points.
- Minimize the time for holding or consolidating cargo to fill up containers.
- Maximize container cube use to achieve economical movements.
- Expedite the movement of throughput and high-priority container shipments.
- Maintain 100 percent in-transit visibility of containers and contents.
- Ensure optimum use of container equipment.
- Not allow containers to become congested in yards. Keep them moving.
- Move containers as fast as mode operators can transport them and consignees can accept them.
- Ensure containers are unstuffed and released back to the transportation system as soon as possible.
- Integrate the military and commercial intermodal container management system.

- Ensure that mode operators are responsive to the needs of consignees as well as transportation managers.
- Try to use containers for retrograde movements as much as possible without slowing down the system.

9-13. RETROGRADE USE OF CONTAINERS

a. Containers should be used for retrograde cargo if the cargo can be containerized, if the cargo is on hand for movement, and if it does not interfere with the reception and onward movement of containers. The TAMCA must plan for the retrograde use of containers through its MCTs.

b. MCTs monitor retrograde operations. They –

(1) Query customers to find out if they have retrograde cargo that requires movement or receive transportation requests from customers. Determine if the cargo is container compatible and if it is at or near the final destination of the inbound container.

(2) Forward container retrograde requests through their headquarters to the port. The port will forward approved shipping dates and an export traffic release (ETR) to the origin MCT.

(3) Coordinate movement of empty containers to a consolidated container collection point if the approved method of retrograde is to line-haul retrograde cargo to consolidation points.

(4) Coordinate for CHE and MHE as needed.

(5) Supervise loading and stuffing of containers.

(6) Task the appropriate mode operator to transport containers.

9-14. CONTAINER DOCUMENTATION

Container documentation is carried out according to DOD Regulation 4500.32-R (MILSTAMP).

9-15. INTERFACE WITH CONUS

The TAMCA provides the link between the CONUS and theater for container control. It advises the joint container control office (JCCO) of the status of military-owned or -leased containers in the theater. The JCCO is the container control activity located at MTMC Eastern Area, Military Ocean Terminal, Bayonne, NJ.

Section II. AIR CARGO AND AERIAL PORTS

9-16. INTRODUCTION

This section describes management information and procedures for air cargo as it moves in a theater of operations. It clarifies the differences between shipments representing the air lines of communication (ALOC) portion of the Direct Support System (DSS) and another air cargo. FM 38-725, FM 90-25, AR 59-8, and FM 59-11 provide additional information on the ALOC system.

9-17. DIRECT SUPPORT SYSTEM

a. The DSS is the Army standard supply distribution system for supply Classes II, III(P), IV, V (missile components only), VII, VIII and IX. DSS provides for direct delivery of shipments from a CONUS wholesale depot to a supply support activity (SSA). ALOC is a subsystem of the basic DSS standard distribution system. A DSS unit must be an SSA that maintains an authorized stockage list and is authorized to requisition the classes of supply noted above. Examples of SSAs that meet this criteria are –

- Divisional or EAC maintenance battalion direct support unit (DSU).
- Division supply and transport battalion/main support battalion DSU.
- Supply and service battalion.
- Central issue facility.
- Clothing Sales Store.
- Installation maintenance or supply activities.
- Self-service supply centers (SSSC).
- Medical logistics (MEDLOG) battalion forward/rear.

b. DSS objectives are to –

- Improve supply responsiveness through reduced order ship times (OST).
- Reduce or eliminate intermediate level inventories thereby reducing costs.
- Meet DA objectives on visibility of requisitions and in-transit material.
- Meet DA material readiness objectives at lowest cost to the DOD.

- Operate in peacetime the same supply distribution system that will be used in wartime, requiring minimal transitional changes.

9-18. ALOC SUBSYSTEM OF DSS

Once a unit has been approved as a DSS unit, it can then apply for ALOC status. ALOC provides air delivery of routine priority (PD 09-15) air eligible Classes VIII, IX, and selected maintenance related Class II and IV items to selected OCONUS Army CSS units. Although ALOC units are DSS units as well, they are distinguished by their mission which is primarily repair parts support. The criteria is that it must be a DSS unit with a Class IX (repair parts) or medical supply support mission. Candidate units for ALOC must be in a location supportable by AMC. Examples of SSAs eligible for ALOC are —

- Medical support activities.
- Maintenance or supply battalions.
- Installation maintenance activities.

9-19. ORDER SHIP TIME OBJECTIVES

Tables 9-1 and 9-2 compare the OST objectives of DSS and ALOC for various theaters. Significant differences are in the CCP and POE processing times and the transit time between POEs and PODs. These objectives provide a guideline for ALOC port clearance and in-transit movement in a theater of operations.

9-20. PORT CLEARANCE AND INPUT TO THE LIF

a. ALOC is a peacetime and wartime system. However, the tremendous increase in air cargo volume during wartime mandates intensive management of the receipt and onward movement of ALOC DSS cargo. Otherwise, the distinction between ALOC and other air cargo within the theater will disappear.

b. Figure 9-6 is a sample of an OCONUS material flow using the European theater. It also shows how ALOC input interfaces with the LIF.

Table 9-1. DSS/OCONUS Order Ship Time Objectives.

(Surface Movement)

Cycle segment	Alaska DSS	Caribbean DSS	Europe DSS	Hawaii DSS	Japan DSS	Korea DSS
In-theater processing	5	5	5	7	7	5
NICP processing	3	3	3	3	3	3
Depot processing	5	5	5	5	5	5
In-transit to CCP	2	2	2	2	2	3
CCP processing in-transit to POE, POE processing	13	10	10	11	16	15
In-transit POE to POD	4	7	10	5	12	18
POD processing	2	2	2	1	1	2
In-transit to SSA	3	1	3	1	1	2
SSA processing	5	5	5	5	5	6
Total order ship time (calendar days)	42	40	45	40	52	59

*DA established DSS OST objectives for priority designators 09–15. Wartime activities may affect these objectives.

Table 9-2. ALOC Order Ship Time Objective.

(Air Movement)

Cycle segment	Alaska	Berlin	Caribbean	Europe	Hawaii	Japan	Korea	Turkey
In-theater processing	3	4	3	4	3	5	5	4
NICP processing	2	2	2	2	2	2	2	2
Depot processing	4	3	3	3	4	4	4	3
In-transit to CCP	4	2	2	2	4	4	4	2
CCP processing	2	2	4	2	2	2	2	2
In-transit to POE	2	1	2	1	1	2	1	1
POE processing	2	2	2	2	2	2	2	2
In-transit POE to POD	1	3	1	1	2	2	2	4
POD processing	1	1	1	1	1	1	1	1
In-transit to SSA	1	1	1	1	1	1	1	1
SSA processing	4	4	4	4	3	4	4	4
Total OST (Calendar days)	26	25	25	23	25	29	28	26

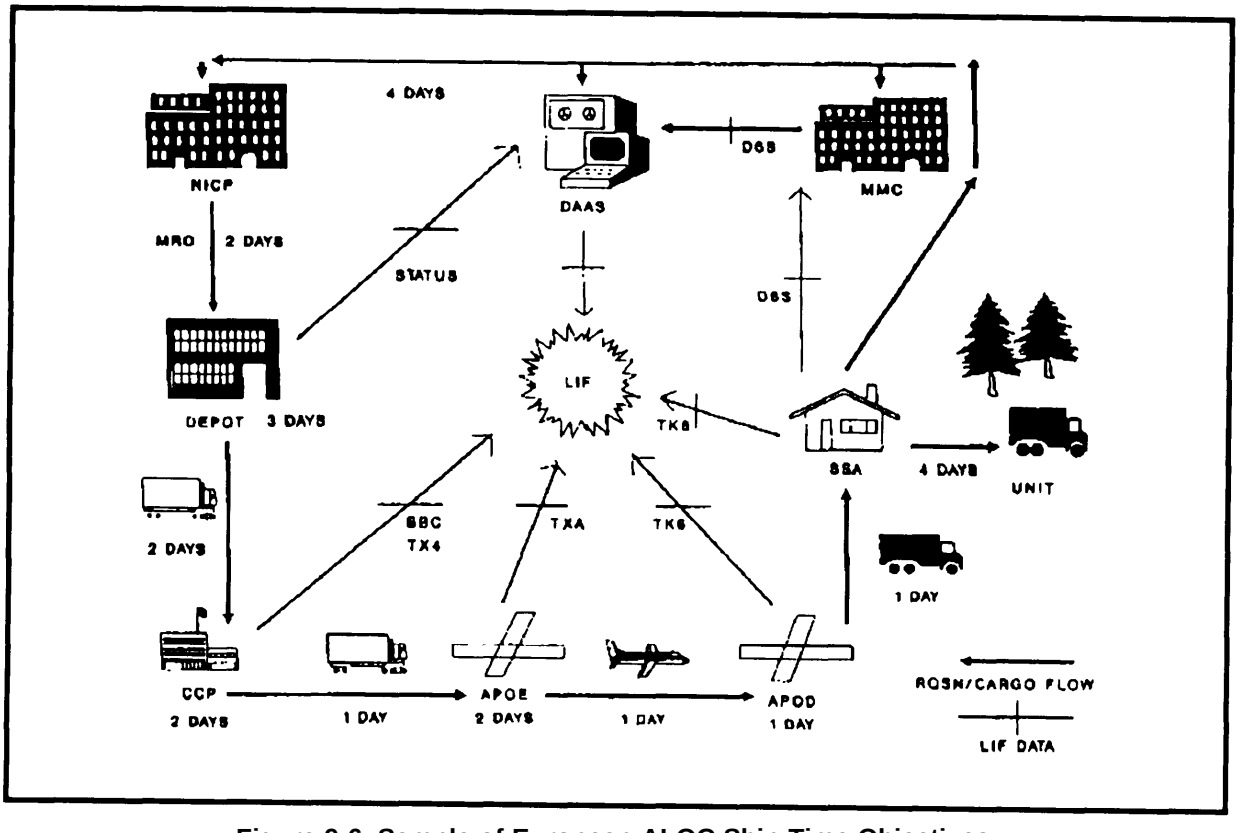


Figure 9-6. Sample of European ALOC Ship Time Objectives.

c. Figure 9-7 shows the flow of the air manifest. The CCP transmits TX4 data to the LIF. The LIF transmits a BDD document to the gaining TAMCA/TAMMC. The TAMCA/TAMMC then determines the priority of movement within the theater based on this advance arrival information. They also can hold, divert, or expedite the ALOC cargo based on changes to theater priorities. The TAMCA forwards these instructions to the ATMCT at the receiving APOD. Note that the BDD document is for planning only because it does not assign the cargo to a specific air mission.

d. The APOE will create an air manifest for cargo on each aircraft. If the APOD is tied into the AMC Consolidated Aerial Port Subsystem (CAPS), the APOE will forward the manifest to the gaining APOD within one hour of aircraft departure. If the APOD is not tied into CAPS, the APOD and ATMCT will not receive advance manifest data and must wait until aircraft arrival.

e. The ATMCT, having received the air manifest from the Air Force and cargo disposition instructions from the TAMCA, commits mode operators for onward movement of the cargo. This may include early spotting of trailers or preparations for an air-to-air interface (AAI) operation. The ATMCT will also –

- Update its customer address list to ensure cargo is sent to the right consignee.
- Coordinate with the APOD for staging to prepare for onward movement.
- Send advance notice of incoming cargo to destination MCTs (if required).
- Request any necessary road clearances for onward movement.

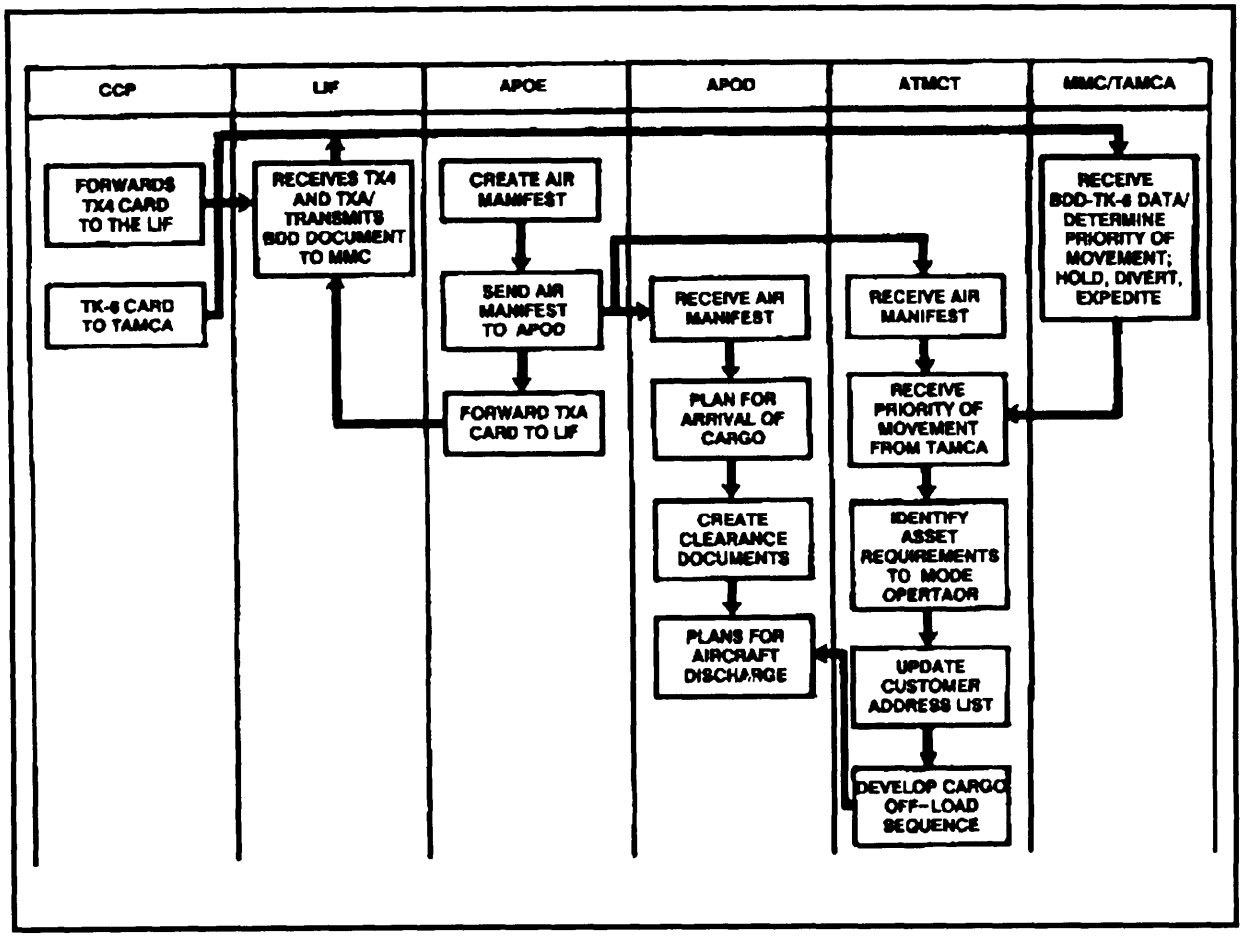


Figure 9-7. Air Manifest Flow.

9-21. ONWARD MOVEMENT AND INPUT TO THE LIF

a. Figure 9-8 shows the flow of air cargo once it enters a theater of operations. Concurrent with cargo off-load, the ATMCT uses the air manifest to reconcile cargo status against the advance air manifest data.

b. The ATMCT removes the TK6 card and annotates on it the arrival of the pallet and the departure from the terminal. This may also be done electronically by updating the advance manifest data

c. After determining the mode for onward movement of cargo from the APOD, assigning a TMR number, and requesting positive inbound clearance for controlled items, the ATMCT will prepare the sequence of pallet flow to be given to the APOD.

d. The APOD will load the pallets based on this sequence flow, prepare the cargo manifest, and release the cargo. A copy of the cargo manifest is given to the ATMCT.

e. This reconciliation is sent to the TAMCA data base for input to the LIF. LOG MARS bar codes should be used whenever possible to capture automated data.

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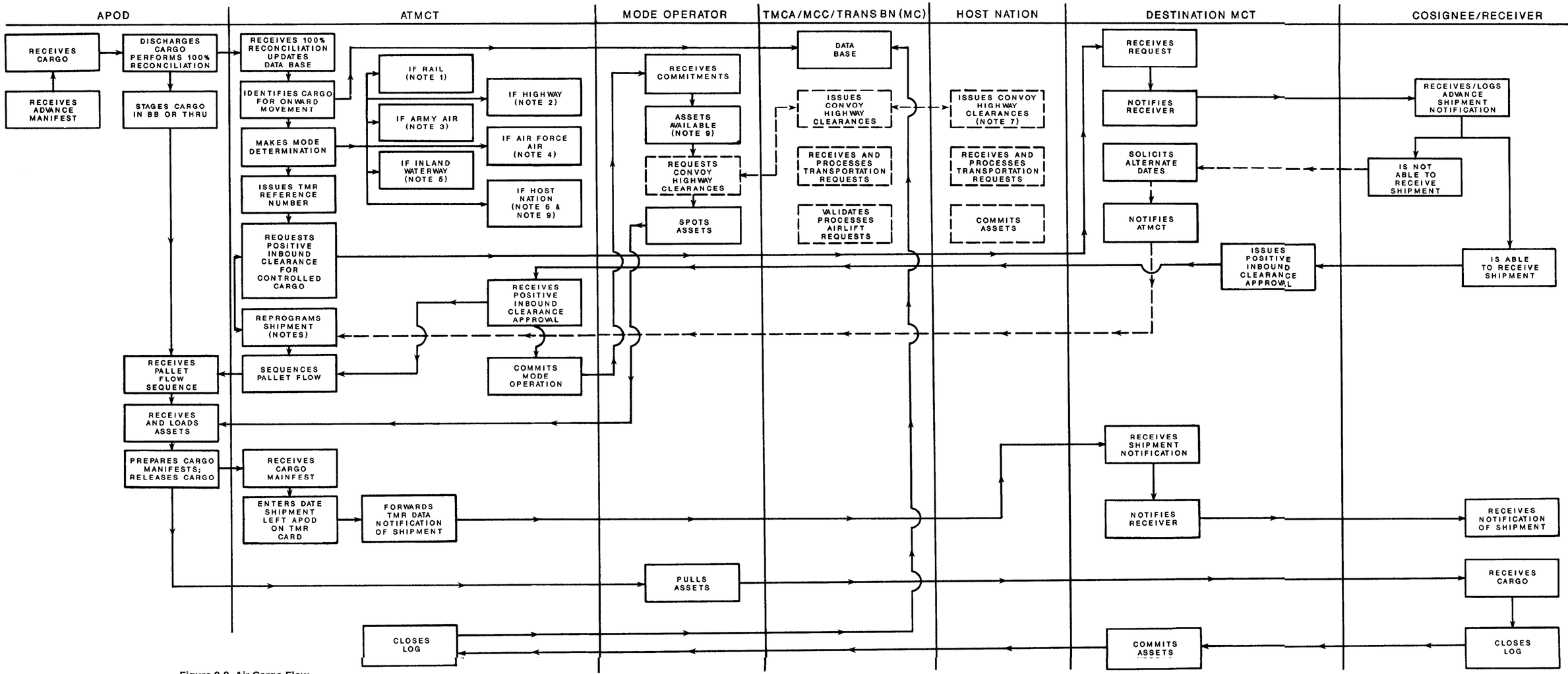

Figure 9-8. Air Cargo Flow.

CHAPTER 10

TRANSPORTATION REQUEST PROCESS

Section I. SUPPLY SYSTEM INTERFACE

10-1. INTRODUCTION

Movement control in a theater of operations is closely linked to the supply system. The supply system generates much of the transportation requirements that support combat forces. Movement planners at all echelons must understand that supply priorities and competing demands for logistics resources affect transportation priorities. Understanding the relationship of the supply system to the transportation system is essential to effectively plan and execute movement control. This section addresses how supply priorities are translated to transportation priorities for movement of material from CONUS depots to overseas theaters.

10-2. SUPPLY REQUISITIONS AND CONUS PROCEDURES

Transportation priorities are derived from the priority designator found on all material requisitions.

a. Priority Designator (PD). The PD is based upon a combination of factors that relate to the mission of the unit requesting material and the urgency of need for the material. The requesting unit puts a PD on all requests it submits to a supply support activity. The PD is determined according to the Uniform Materiel Movement and Issue Priority System (DOD Directive 4410.6, UMMIPS). Table 10-1 shows how the PD is determined.

(1) Force/activity designator (FAD). A Roman numeral (I to V) assigned by the JCS or Army MAOM to indicate the mission essentiality of a unit to meet national objectives.

(2) Urgency of need designator (UND). An alphabetic letter (A to C) assigned by the commander of the unit requesting the materiel. The UND is based on the importance of the requested materiel in accomplishing the unit's mission.

(3) Example. The 99th Aviation Company, an FAD I unit, requests a helicopter rotor blade. The commander determines that the unit cannot perform its mission without this item and assigns a UND of A. From Table 10-1, the PD of the requisition for an FAD I unit with a UND of A is 01.

(4) Exceptions. There are exceptions to this system of determining priorities. See AR 725-50 for more information.

b. Transportation Priority (TP). Before selecting the mode of transportation, the transportation officer converts the PD on the supply document to a transportation priority as follows:

PD	TP
01-03	1
04-08	2
09-15	3

c. Transportation and Mode Selection. Mode selection is governed by the TP, the standard delivery date (SDD) or RDD, the weight and cube of the shipment, the nature of the materiel, the cost of the transportation, the distance to be shipped, and the modes of transportation available between the depot and the POE.

(1) The following chart gives the preferred mode for each TP for movement between CONUS and an overseas theater:

TP	PREFERRED MODE
1	air
2	air
3	ordinary surface

(2) There are times when the transportation officer will select a mode other than the preferred mode. For example, TP 1 and 2 shipments that normally move by air might move by surface when –

- The items to be shipped are too heavy or too large to fit in an aircraft.
- Surface transportation is the only mode available between the POE and POD.
- Surface transportation is more advantageous or more expeditious due to the short distance.

Table 10-1. Priority Designators.

FORCE/ ACTIVITY DESIGNATOR		URGENCY OF NEED DESIGNATOR A UNABLE TO PERFORM MISSION	B IMPAIRING MISSION	C ROUTINE
I.	Top national priority	01	04	11
II.	Combat ready	02	05	12
III.	Ready to deploy within 30 days	03	06	13
IV.	Ready to deploy within 90 days	07	09	14
V.	Ready to deploy after 90 days	08	10	15

(3) On the other hand, TP 3 shipments which normally move by surface, might move by air when –

- Air transportation is the only mode available.
- The overall cost of shipping via surface is greater than shipping via air.
- The materiel being shipped is high value or a security risk and it would be in the best interests of the government to ship it by air.

(4) SDD. The SDD is the calendar date that materiel must be delivered to the requisitioner. It is based on UMMIPS criteria and includes the normal processing and shipping time the supply and transportation personnel use to process and move supplies from CONUS depots to overseas locations.

(5) RDD. When the SDD will not meet the requisitioner's requirements, the requisitioner may specify an RDD, which is the date the materiel is needed. The RDD is entered on the requisition as an adjustment from the SDD. The RDD does not change the priority of the shipment. This can only be done by adjusting the UND. An RDD signals the system to expedite the shipment.

(6) 999 shipments. Requisitioners may place a 999 in the RDD block of TP 1 shipments (PD 01, 02, and 03 requisitions) according to DA Pamphlet 710-2-1. The presence of the 999 indicates that the requisition will be filled and shipped ahead of all other TP 1 shipments.

d. Supply Systems and Organizations.

(1) Defense Automated Addressing System (DAAS). The DAAS routes requisitions and related information between supply units, material managers, national inventory control points (NICPs), and CONUS depots. The DAAS also provides the LCA with concurrent images of requisitions and related traffic for recording in the LIF.

(2) LIF. The LIF is an on-line computerized data base that centralizes the collection, correlation, and retreival of supply and transportation data on Army-sponsored requisitions maintained by the LCA. The LIF furnishes historical supply and transportation pipeline progress of a requisition from the time it is sent through the DAAS to the time materiel is received. It is used to measure DSS performance and focus management attention on specific pipeline segments needing improvement. The data base does not include Class III (bulk petroleum) and some Class I perishable items. See DA Pamphlet 700-30 or AR 725-50 for LIF procedures.

(3) NICP. The NICP directs the fill of requisitions from stocks on hand at a depot. It does this by issuing a materiel release order (MRO), which authorizes/directs the release of the materiel.

(4) Supply depot. Once the materiel has been released, the transportation officer selects a mode of transportation to ship the materiel to a consolidation and containerization point (CCP) or POE. Depot processing and shipping procedures are outlined in AR 725-50.

Section II. TRANSPORTATION REQUEST PROCEDURES

10-3. INTRODUCTION

This section discusses how transportation requirements are supported by movement managers through mode selection and transportation request procedures in a theater of operations (Figure 10-1).

10-4. MCT RESPONSIBILITIES

a. Origin MCT Procedures. On receipt of a transportation request, the origin MCT ensures that the request is complete and accurate. If the request activates a program line number, the MCT will check the program for predetermined mode selection and commit the mode operator. If there are any changes made to the movement requirement such as change of locations, quantity of material, or priority, the MCT will revalidate the programmed mode before committing a mode operator. For unprogrammed movements, the MCT will select the mode and commit a mode operator.

b. Mode Considerations. The MCT plans to commit all available transportation modes to fulfill known requirements. Assets should not be reserved in anticipation of unforeseen requirements. The MCT should meet requirements as they occur by committing transportation mode operators according to command priorities, selecting the most efficient and effective mode, and planning to meet the RDD.

c. Mode Selection. The MCT must also consider many other factors in selecting a mode. Figure 10-2 shows some of these considerations.

(1) Service considerations. Provide service according to need based on command priorities.

(2) Security considerations. Consider security requirements for shipments involving nuclear materials, hazardous or classified cargo, or ammunition.

(3) Political considerations. Coordinate with the G5 to determine if there are any political sensitivities to material being shipped. This may require movement at night, by air, or by any other means to safeguard sensitive/classified cargo.

(4) Tactical considerations. Coordinate with the requesting unit to determine potential changes in pickup or delivery locations.

(5) Highways. Rerouting may be required if there are changes to route classifications or the distribution pattern.

(6) Rail. Use is limited to lines that support supply activities or where trans-loading can be accomplished with MHE, personnel, and trucks.

(7) Air. Use is limited to aircraft allocated for CSS air movement operations or approved requests (Table 10-2). See Section III for airlift request procedures.

(8) Water. Use is limited to the availability of barges or boats, cargo transfer units and equipment, and channels capable of accommodating the types of craft available.

(9) HN assets. Use is limited to those modes and assets provided by the host country. HNS is coordinated by the G5 or unit having a HNS coordinating mission.

d. TMR Number. The TMR is a unique alphanumeric code that specifies and authorizes movement or represents use of a transportation asset as directed through movement control channels (see Appendix F).

e. Positive Inbound Clearance. The origin MCT requests positive inbound clearance for sensitive, classified, oversize and/or overweight, or other theater-directed shipments through the destination MCT before issuing a TMR. Requests are forwarded to the destination MCT who in turn contacts the consignee. The destination MCT confirms the consignee's location and ability to off-load the cargo.

(1) The destination MCT forwards this information back to the origin MCT. If the consignee is unable to receive a shipment, the origin MCT reprograms the shipment by coordinating for alternate delivery dates (hold), reconsigning the shipment to another consignee (divert), or canceling the original request.

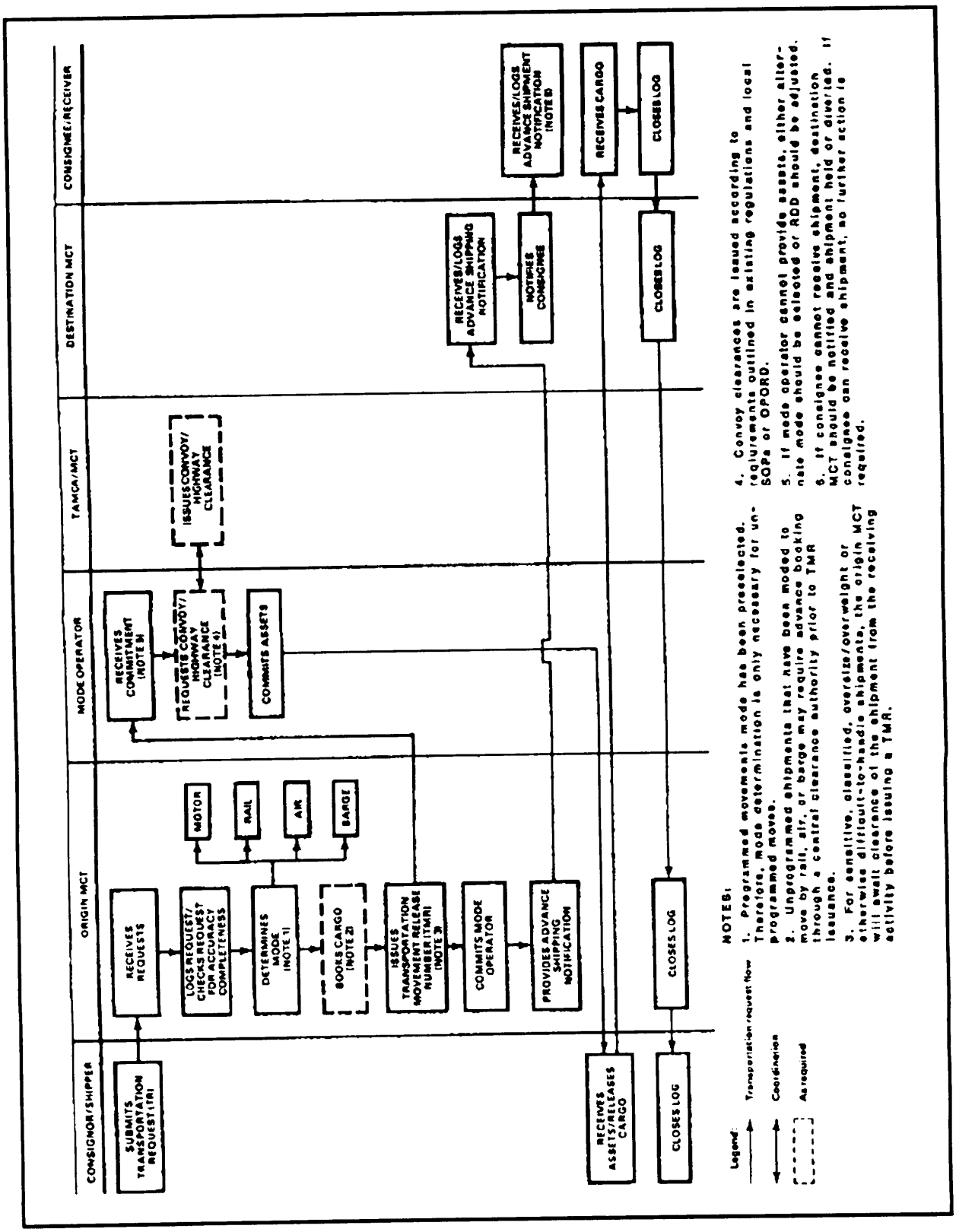

Figure 10-1. Transportation Request Procedures.

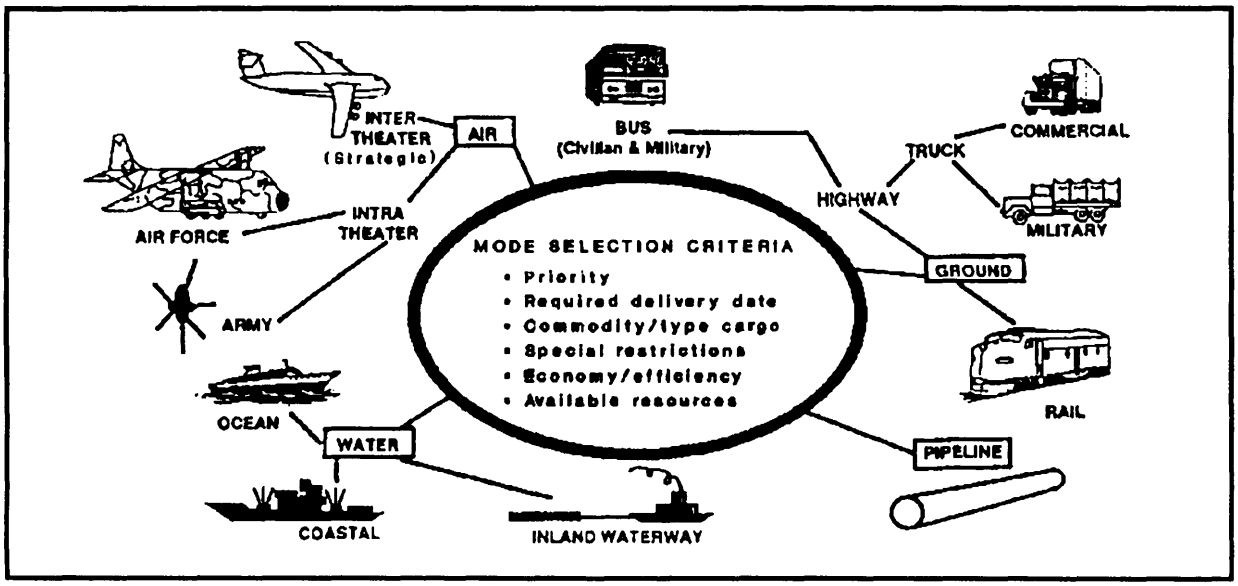

Figure 10-2. Modes of Transportation.

Table 10-2. Characteristics of Army Rotary-Wing Aircraft (Theater Level).

CAPABILITIES	UNIT	CH-47D	CH-54A	CH-54B
Passenger cap				
Troop seats	ea	33	1 (w/pod 45)	1 (w/pod 45)
Normal cap	ea	33	1	1
Total w/crew	ea	37	5	5
Litters/ambt	ea	24	0 (w/pod 24)	0 (w/pod 24)
Operational cap				
Max auth gross wt	lb	50,000	42,000	47,000
Basic wt	lb	22,499	20,800	21,200
Useful load	lb	27,501	21,200	25,800
Normal payload	lb	20,206	11,650	16,250
Normal cruise speed	knots	145	95	110
Endurance at cruise (+30 min reserve)	hrs + min	2+30	2+00	1 +30
Fuel grade	octane	JP4	JP4/5	JP4/5
External cargo				
Max auth load	lb	28,000	20,000	25,000
Rescue hoist cap	lb	600	NA	NA
Cgo winch cap	lb	3,000	15,000	25,000

(2) The origin MCT schedules routine shipments without an inbound clearance unless the receiving activity, through the destination MCT, notifies the origin MCT that it cannot receive the shipment and requests the origin MCT to hold or divert.

f. Mode Operator. The MCT commits a mode operator identified either in the movement program or one in the origin MCT's geographic area. Commitments will flow through predetermined channels developed between the movement

control headquarters (TAMCA/MCC) and the mode operating headquarters.

(1) If a movement credit is required, the mode operator will submit a movement bid (request for convoy/highway clearances) to its supporting MCT.

(2) If mode operators can no longer support the transportation request for any reason, they must notify the MCT immediately. The MCT will either attempt to establish an alternate delivery date that satisfies the consignee, select another mode, request HN assets, delay lower priority shipments, or request assistance from its headquarters.

g. Report of Shipment. The origin MCT normally notifies the destination MCT of the movement so the destination MCT can coordinate with the receiving activity or consignee.

h. Consignee Receives Cargo. The consignee notifies the destination servicing MCT when it receives the shipment. The MCT closes out the TMR. If the shipment required positive inbound clearance, the destination MCT will forward the receipt notification to the origin MCT for final reconciliation. Supply activities or consignees may or may not have reliable communications with their servicing MCT. If this is the case, the mode operator will report shipment delivery.

10-5. TRANSPORTATION REQUEST PROCESS

a. Division.

(1) Transportation requirements are either planned or immediate. Division units request transportation support from the DISCOM MCO. Depending upon the type of division, location of units on the battlefield, and defined support relationships, the request may flow from the brigade or separate battalion through its FSB/FAST or MSB/S&T battalion to the MCO.

(2) The MCO also coordinates with the DMMC and division units to plan and program transportation requirements. This includes movement of supplies and equipment between the division support area (DSA) and the BSA. The DMMC has visibility over the location and status of supply quantities in the division and directs repositioning. The MCO also coordinates with the G1 to forecast transportation requirements to move replacement personnel.

(3) To the extent practical, FSBs and FASTs should coordinate in advance with the MCO to use loaded trucks moving forward to the BSAs for retrograde (backhaul) of damaged and captured equipment, salvage, or EPWs.

(4) As the supply and maintenance companies in the DSA receive MROs from the DMMC, they request transportation support from their battalion support operations officer (SOO). The SOO consolidates the requests and submits its requirements to the MCO. The MCO selects and commits the mode based on division priorities. If the MCO commits the division truck company, the MCO will also coordinate to ensure that MHE will be available to off-load the supplies upon delivery. This prior coordination will reduce transportation delays and increase the availability of these trucks for other missions.

(5) Based upon requests and forecasts, if the division is unable to provide the required transportation support using organic assets, the MCO will forward a request (Figure 10-3) for transportation support to the DTO or the servicing MCT. Normally, the MCO will forward only requests of an exceptional nature through the DTO. The DTO requests support from the MCC.

b. Corps. The corps resupplies its assigned divisions and separate brigades. The corps may establish supply point or unit distribution depending upon the situation. The corps will predetermine these arrangements as part of the CSS planning process. Resupply requirements are based on supply requests from the DMMC to the corps materiel management center (CMMC) or by predetermined daily resupply. The CMMC issues MROs to corps GS units. The GS unit coordinates transportation through its servicing MCT to move the supplies forward. Corps transportation assets are also used to support units operating in the corps rear area. Units operating in the corps area request transportation support from their servicing MCT (Figure 10-4).

(1) The MCT commits the mode operator in its area of jurisdiction to provide transportation. This may be a corps support battalion or functional transportation battalion depending on the transportation alignment within the CSGs. For shipments requiring positive inbound clearance, the MCT will coordinate with the destination MCT or MCO to coordinate the details of delivery or to coordinate any retrograde movements.

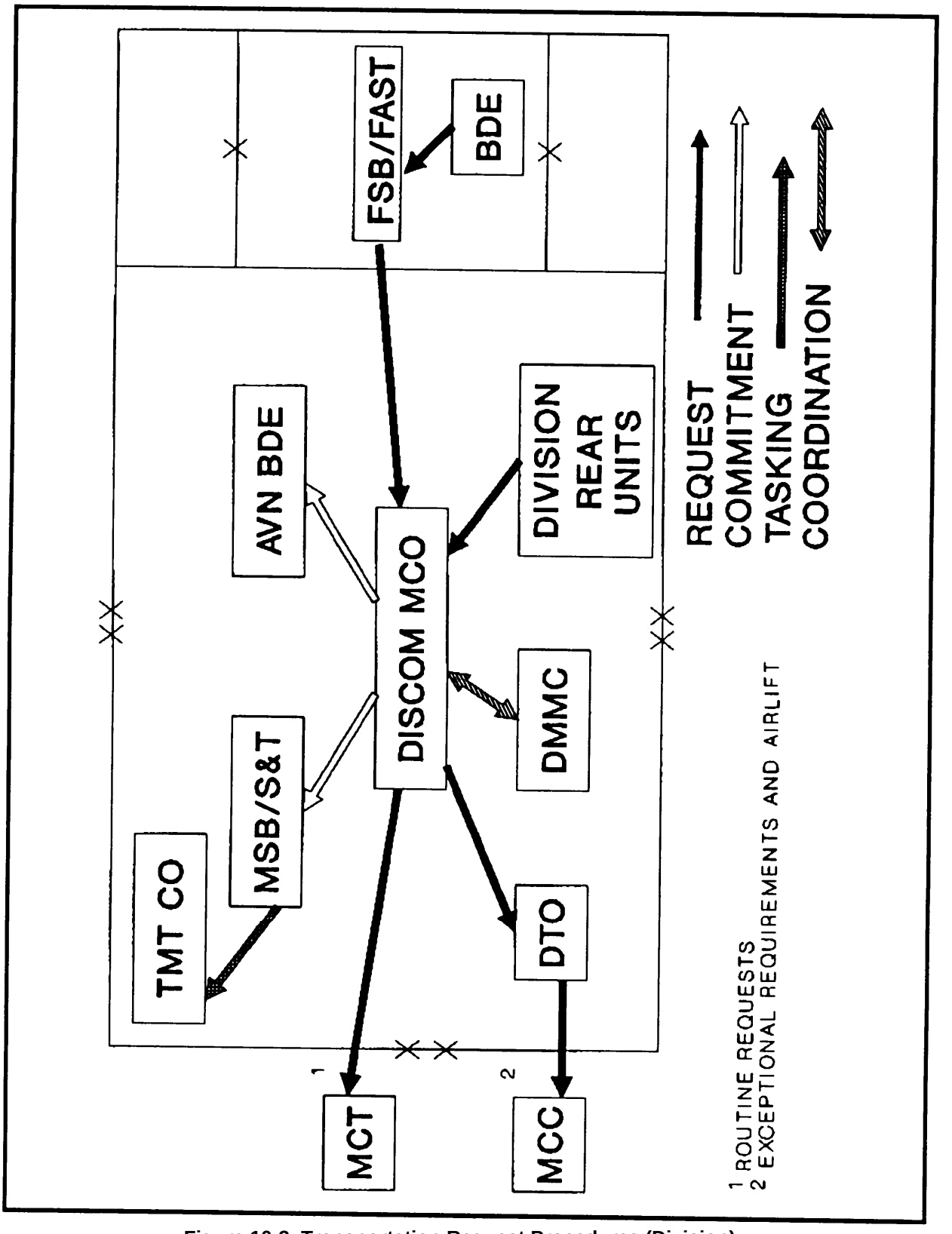

Figure 10-3. Transportation Request Procedures (Division).

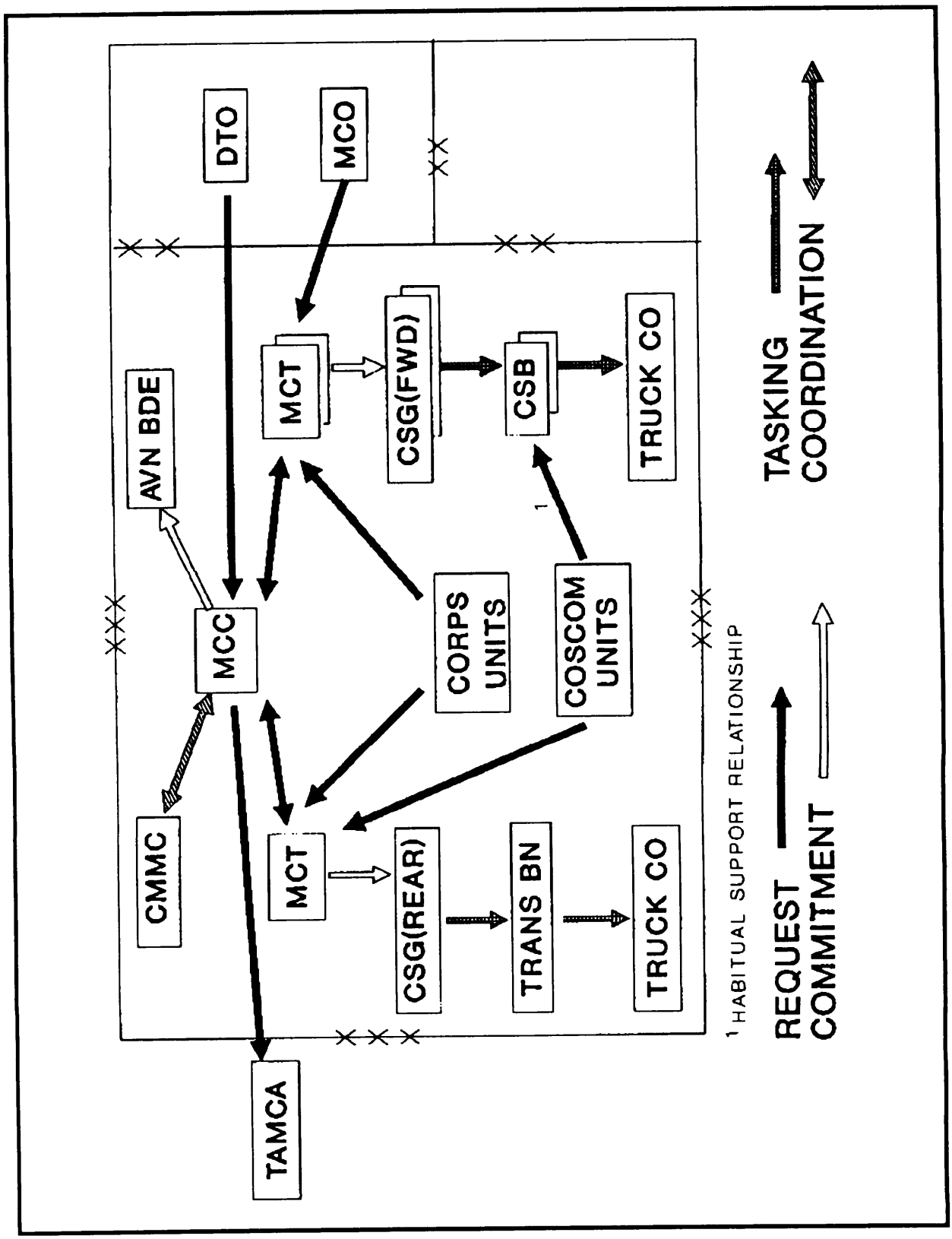

Figure 10-4. Transportation Request Process (Corps).

(2) If an MCT needs additional transportation support to satisfy requirements, it forwards requests to the corps MCC. The corps MCC will review the request against established priorities and will commit assets from the transportation battalion in the rear CSG or commit assets of another forward CSG.

(3) If there is no alternative means of transport within the corps, the corps MCC will forward the request to the TAMCA's transportation battalion (MC) supporting the corps. The MCC will coordinate directly with the TAMCA for requirements of an exceptional nature such as movement of large forces, contingency operations, and intratheater airlift.

c. EAC. The same relationship between the corps and division exists between the theater Army and its corps. If a supply request cannot be satisfied at the COSCOM level, then it is forwarded to the TAMMC. The TAMMC will direct supplies to be released from its general support units (GSUs). The GSUs coordinate with their servicing MCTs for the onward movement of the cargo. The MCT commits TRANSCOM mode operators to transport the cargo (Figure 10-5).

(1) If TRANSCOM mode operators in the MCT's area of responsibility cannot satisfy all transportation requests, the MCT will request assistance from its transportation battalion (MC). The battalion will coordinate for TRANSCOM assets in other geographic areas or coordinate for allocated HN/allied support. If still unable to obtain required support, the transportation battalion (MC) will pass the requirement to the TAMCA for resolution.

(2) The TAMCA will review established priorities. It will look at the possibility of cross-leveling TRANSCOM assets to meet the requirement. It will also look at using HN or other service transportation assets. If the TAMCA cannot find sufficient assets, it will go back to the requestor and see if the RDD can be changed. If not, it will go to G3 at corps or C3/J3 at theater for resolution.

Section III. REQUEST FOR INTRATHEATER AIRLIFT

10-6. INTRODUCTION

a. Airlift is a flexible and essential element of the transportation system. Wide ranging CSS needs within a theater will require Army and Air Force airlift assets to support forces. While motor transport will normally be the primary mode to sup port Army forces, airlift becomes an increasingly important mode as the intensity, depth, and duration of operations increase.

b. Airlift can provide rapid movement of cargo, passengers, and equipment without regard to terrain restrictions. It also makes possible resupply of critical items over extended distances. There are, however, limitations to the capabilities of airlift. These include weather conditions, control of airspace, weight and cube of material, and the requirement for specialized crews and equipment. This section discusses the process for obtaining Army and Air Force airlift to support CSS requirements.

10-7. ARMY AVIATION

Army aviation in CSS air movement operations includes support for intratheater airlift, LOTS operations, troop and personnel movements, aerial preplanned and immediate resupply, movement of critical high priority Class IX, retrograde of repairable, pre-positioning of fuel and ammunition, movement of maintenance support teams, and movement of low density/high-cost munitions when time, distance, situation, or the condition of roads inhibits ground transportation. Movement control units at EAC and corps and the MCO in the division will commit Army aircraft for CSS air movement operations if aircraft have been allocated for this purpose.

a. Army Aviation Units. The primary aviation unit is the aviation brigade. The aviation brigade is a versatile organization found at division, corps, and EAC. It may contain observation, attack, utility, and cargo helicopters and a limited number of fixed-wing command and control aircraft.

(1) Division. An aviation brigade is organic to each division. Each division aviation brigade is designed, configured, and tailored to meet the tactical requirements of the type of division to which it is assigned. The brigade can provide aircraft for CSS air movement operations to move troops, supplies, or equipment. The primary asset used by the brigade is the utility helicopter, either the UH-1 or UH-60.

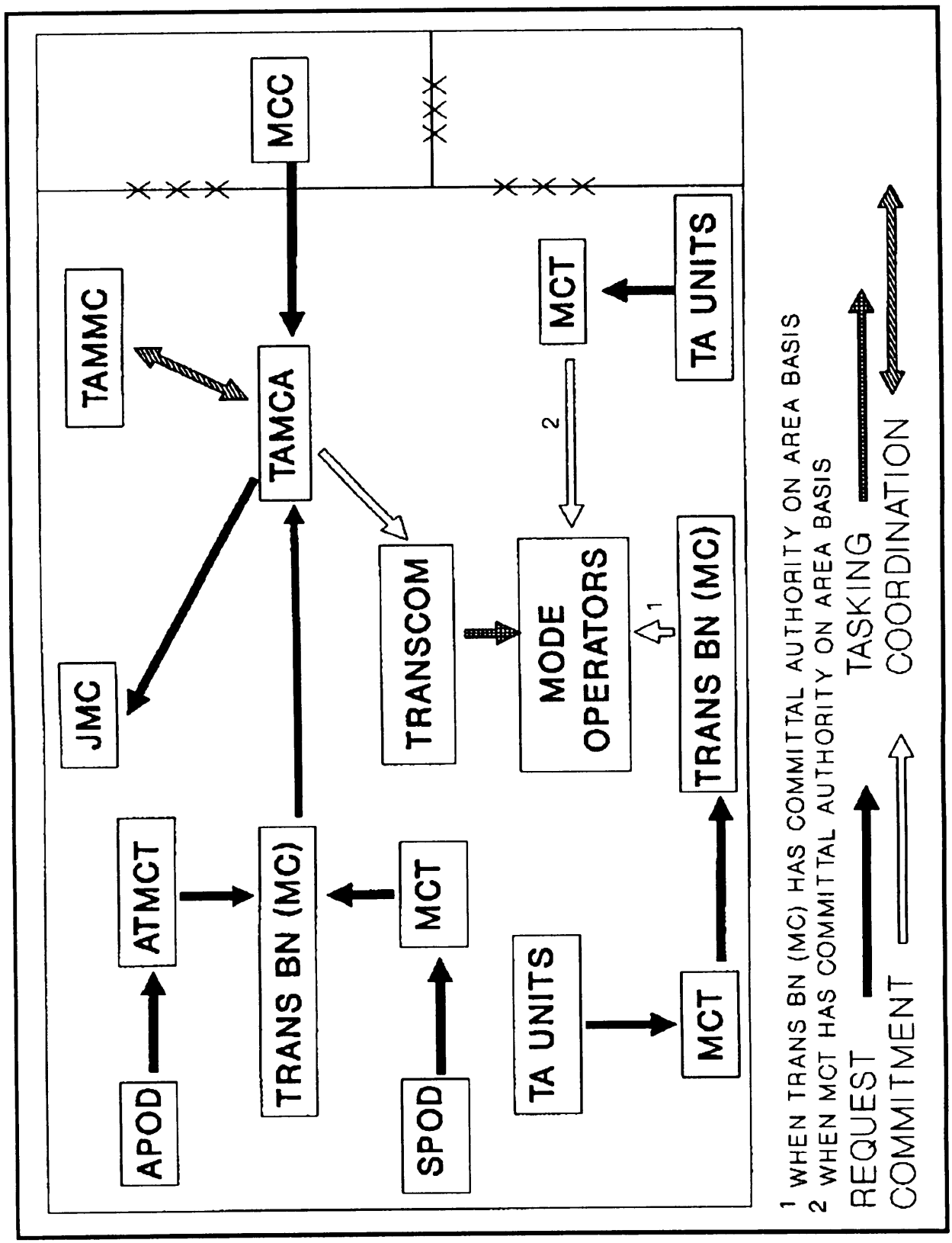

Figure 10-5. Transportation Request Process (EAC).

(2) Corps. An aviation brigade is organic to each Army corps. Each corps aviation brigade is tailored to meet the specific mission requirements of that particular corps. The corps aviation brigade's mission is to plan, coordinate, and execute aviation and combined arms operations in support of the corps scheme of maneuver. In its CSS role, corps aviation provides movement of critical forces, supplies, and equipment needed to support the battle. The corps commander should routinely allocate sufficient sorties for CSS air movement missions. The brigade uses a combination of UH-1, UH-60, and CH-47 helicopters.

(3) EAC. EAC aviation brigades are tailored and configured to meet the needs of the theater. They may be organized with attack, utility, and/or cargo aviation assets. The utility and medium helicopters of the EAC aviation brigades provide reinforcing support to the corps for CSS air movement requirements.

(4) Liaison officers. A liaison officer (LNO) is normally designated by the aviation brigade at each echelon to serve as a link between movement control organizations, aviation units, and airlift users. The LNO assists movement control organizations by passing advance information to the aviation units and by providing technical advice to movement planners.

b. Army Aircraft and CSS Missions.

(1) Observation. Observation helicopters perform visual observation. They can be employed by movement planners for route reconnaissance, observation of surface movements, and to assist in planning the use of facilities and infrastructure. They include the OH-6A and OH-58.

(2) Utility. Utility helicopters perform a variety of missions to support movement of supplies, equipment, and personnel. They include the UH-1H and UH-60A.

(3) Cargo. Cargo helicopters perform a variety of missions to support movement of forces, supplies, and equipment; LOTS operations; and air movement of munitions. They include the CH-47 and CH-54 series.

(4) For information on loading and rigging procedures, see FMs 55-450-2/3/4/5.

c. Army CSS Air Movement Request Procedures. Requirements for CSS air movement operations are characterized as either preplanned or immediate.

(1) Preplanned requests. Requirements for preplanned airlift are determined as part of movement programming as discussed in Chapter 6. Movement planners determine in advance that air is the best or most effective mode based on the urgency of the requirement and characteristics of the personnel supplies, or equipment to be moved (Figure 10-6).

(a) Division. Preplanned requests are forwarded to the MCO as part of the planning process to obtain airlift for future operations. The MCO will review the requests and either validate them or recommend an alternate mode. If the MCO validates the requests, he forwards the requests to the DTO. The DTO will coordinate the requirements with the assistant division aviation officer (ADAO), a member of the G3 battle staff, to get aircraft allocated by the G3. Once the G3 allocates assets for CSS air movement operations, the MCO will program the requirement and commit the aviation brigade through the aviation liaison officer in the rear command post. The MCO also commits truck assets to be used in moving cargo to an airfield sling point, or landing area. If division aircraft are not available for CSS air movement operations, the DTO will either work through the G3 and G4 to deconflict priorities or validate and pass the request to the corps MCC for corps aviation or USAF support.

(b) Corps. The MCC receives preplanned requests through the MCTs from corps units or validated division airlift requests during the planning process. For corps units, the MCT will review requests and either pass the request to the MCC or recommend another mode. The MCC will coordinate requirements with the CTO to obtain G3 allocation. If the G3 has allocated airlift assets to the MCC for CSS air movement operations, the MCC validates the request programs, and commits the allocated airlift assets through the aviation LNO to support the missions. The MCC informs the origin MCT of the validation and committal of air assets. The MCT concurrently commits highway assets to move the personnel or cargo to the onload site or airfield. The MCT will also inbound clear the movement with the destination MCT or DTO/MCO. For validated division requests, the MCC either commits allocated corps aviation assets or validates the request and passes it to the TAMCA.

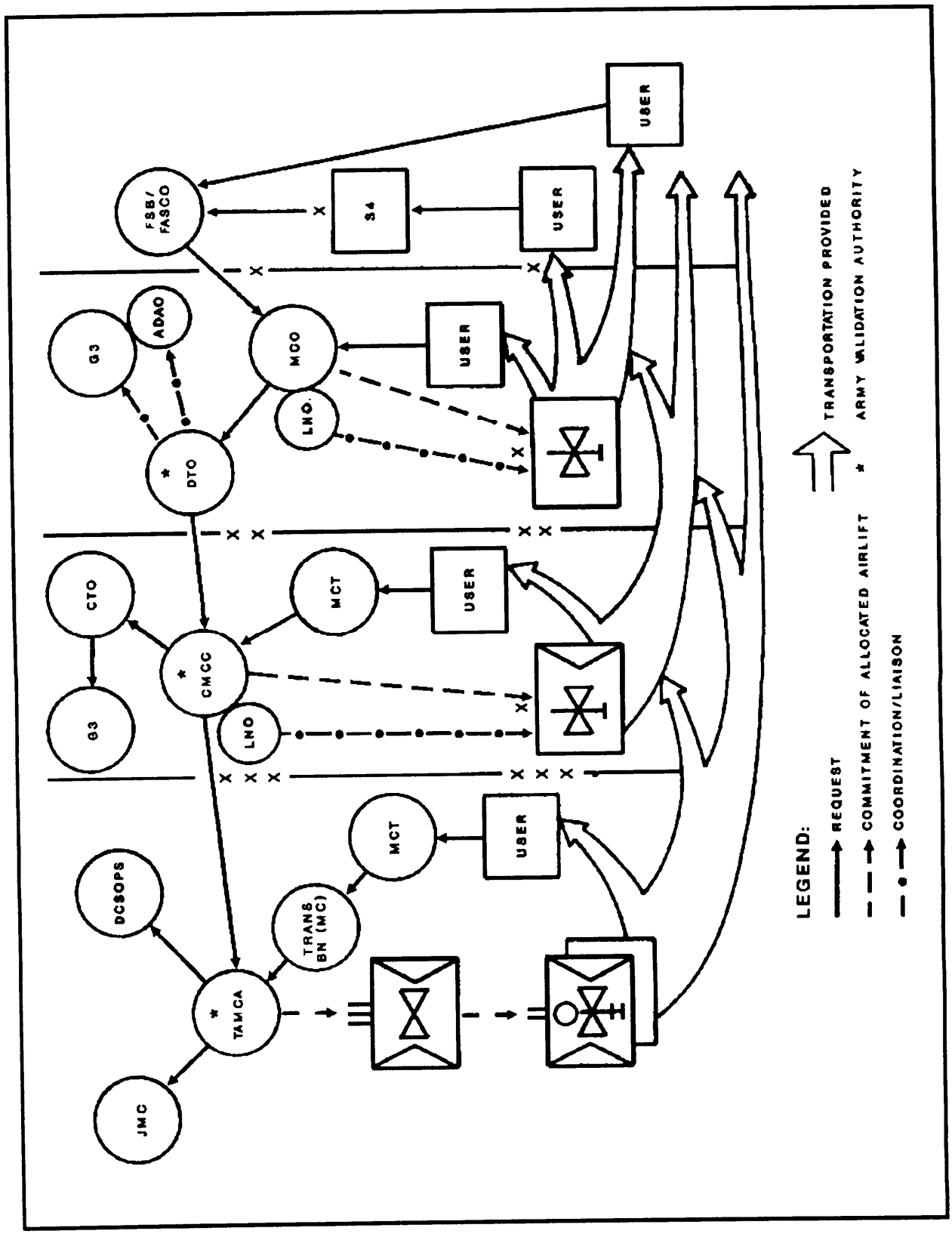

Figure 10-6. Preplanned Requests (Army Air).

(c) EAC. The TAMCA receives transportation requests from units in the COMMZ or validated corps/division airlift requests. The request process for EAC units is basically the same as for corps units MCTs forward airlift requests through their transportation battalions (MC) to the TAMCA. If airlift assets have been allocated for CSS, the TAMCA is the committal authority. If the TAMCA designates transportation battalions (MC) to commit Army airlift allocated for CSS air movement operations, then the battalion also becomes the validating authority for requirements it must pass to the TAMCA. If the aviation brigade cannot support the mission, the TAMCA forwards the request to the JMC. The JMC will either commit other service/HN aviation units or return the request to the TAMCA for mode change.

(2) Immediate requests. Immediate airlift missions result from unanticipated, urgent, or priority movement requirements. Movement planners must quickly determine if air is the best and most effective mode based on the urgency of the requirement and characteristics of the personnel, supplies, or equipment to be moved. Request procedures must be responsive and can be flexible to provide rapidly changing situations (Figure 10-7).

(a) Division. Immediate requests may be forwarded by unit S4s, the DISCOM, or through operational channels to the G3 to meet urgent requirements Concurrently, the information flow must also pass through movement/support operations channels to coordinate logistical aspects of the movement. The G3 is the tasking authority for division aviation assets and the validation authority for requests passed to corps. The DTO and ADAO coordinate to obtain G3 approval. The MCO and liaison officer coordinate the mission. These events occur simultaneously.

(b) Corps. If airlift assets have not been previously allocated for CSS missions, the MCC or requesting unit passes the request through command channels to the G3. The G3 is the tasking authority for immediate requests. If the corps cannot support CSS missions at that time, the G3 may validate and pass the airlift request to the TA. If the G3 does not validate the request, he will pass it to the MCC, which will select an alternate mode. Simultaneous coordination in logistical channels is required to support the mission.

(c) EAC. If airlift assets have not been previously allocated for CSS missions, the TAMCA or requesting unit passes the request through command channels to the DCSOPS. The DCSOPS is the tasking authority for immediate requests. If the TA cannot support CSS missions at that time, the DCSOPS may validate and pass the airlift request to the J3. If the DCSOPS does not validate the request, he will pass it back to the TAMCA, which will select an alternate mode. Simultaneous coordination in logistical channels is required to support the mission.

d. CSS Airlift Request Validation. Requests will be reviewed and validated at each level. Requests are considered valid if forwarded to the next echelon for subsequent validation or to the mode operator for execution The review considers —

- The priority and urgency of the movement requirement.
- The commander's priorities.
- The competing requirements and aircraft availability.
- The adequacy of other modes.
- METT-T factors.
- The availability of MHE at the destination if required.
- The location and adequacy of origin and destination landing zones.

10-8. AIR FORCE AIRLIFT

a. Air Force theater airlift and airdrop is generally designated as common-user airlift to support the air movement requirements of all service components assigned to the theater of operations. Air Force airlift and airdrop can be used to supplement Army transportation capabililty under certain circumstances. However, Air Force airlift and airdrop generally require much longer lead times to plan and coordinate than do Army CSS air movement operations because –

- Material and personnel must be moved to an airfield. This requires supplemental transportation and additional coordination.
- Material and other air cargo must be palletized or rigged. Personnel must be marshaled and manifested. Load planning and DACG is required.
- Request procedures inherently require longer lead times because the final validator is the theater combatant command agent, not the Army.

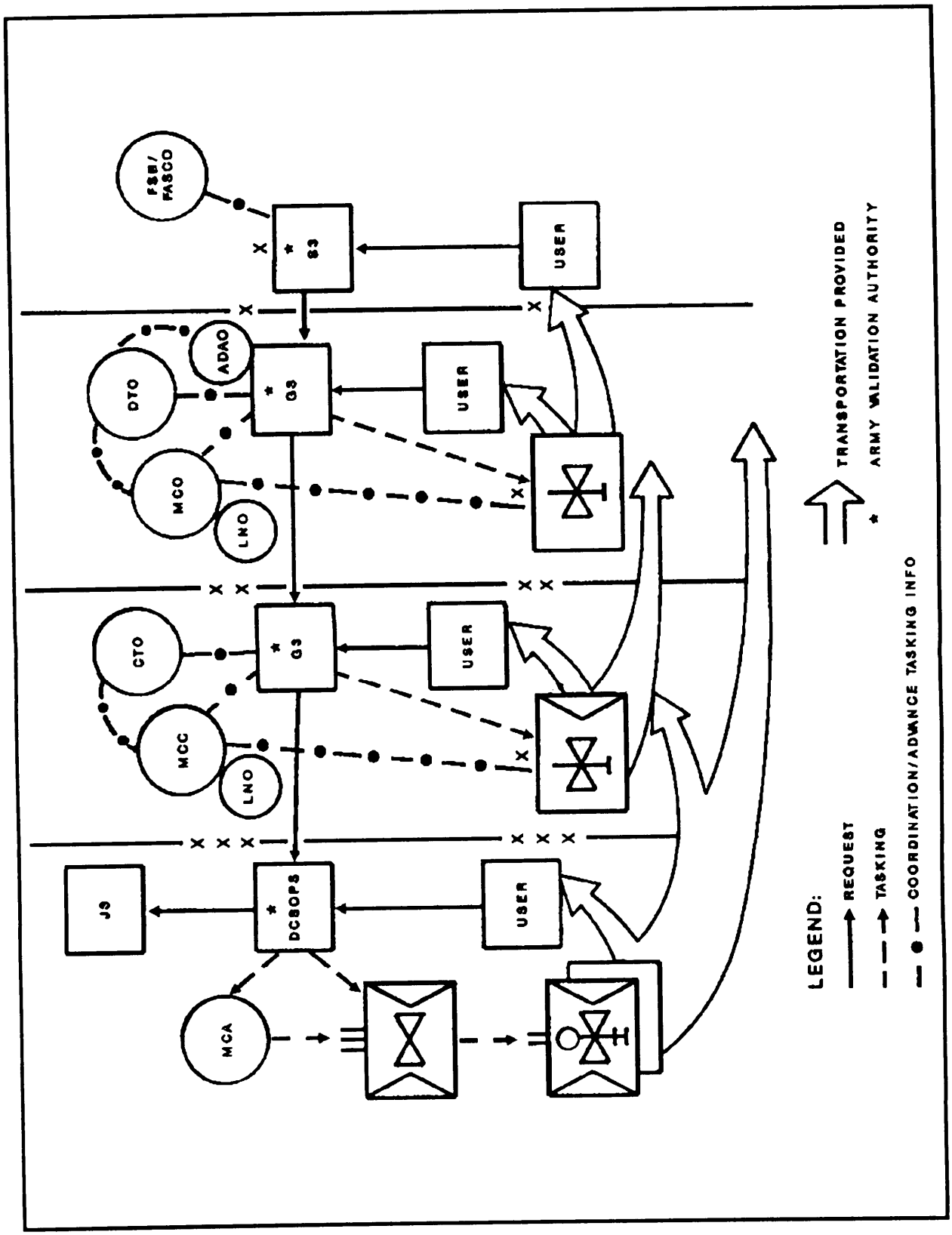

Figure 10-7. Immediate Airlift Requests (Army Air).

b. The Army component commander must validate and prioritize all Army airlift and airdrop requests. The Army component commander normally designates the TAMCA as the Army validator. The TAMCA passes validated Army airlift and airdrop requests to the theater combatant commander's agent (normally the JMC) to prioritize and validate all service component requests for common-user airlift within the theater. The agent aligns requests with theater priorities. If the agent validates a request, he designates it as an airlift/airdrop requirement.

c. The agent then tasks the Air Force component commander who in turn passes the tasking to the Air Force C2 agency to support the requirement, and, in turn, tasks an Air Force unit to execute the mission (Figure 10-8).

d. The theater combatant commander's agent is normally subordinate to the JMC, when established Airlift requests, or apportionment, are executed according to the theater combatant commander's priorities and are not normally changed below the component command level. The theater combatant commander may establish a JTB to resolve conflicts between the service components regarding airlift.

e. As with Army aviation requests, Air Force requests are either preplanned or immediate. Within the immediate category, requests can be noted as

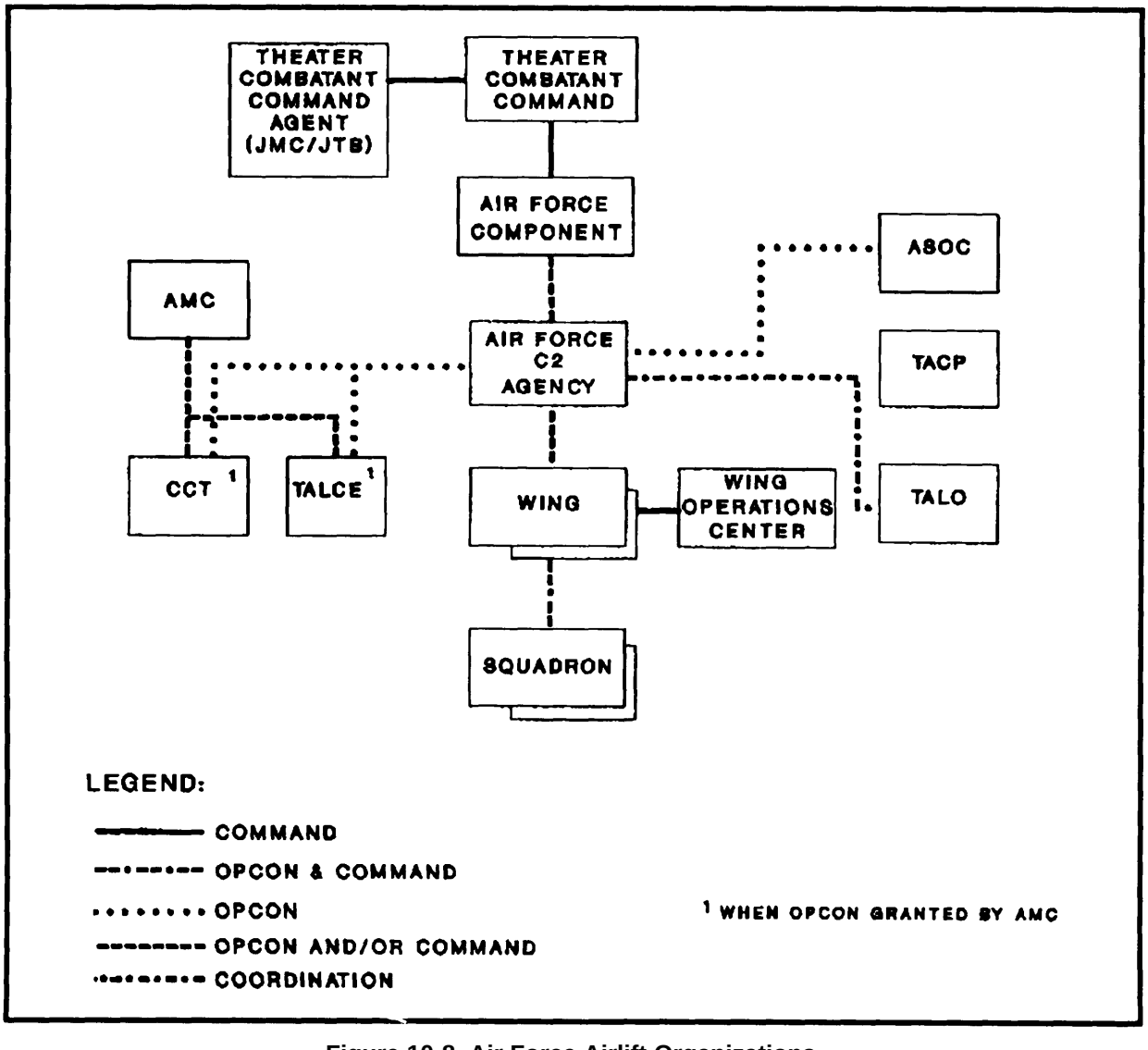

Figure 10-8. Air Force Airlift Organizations.

emergency requests. Air Force airlift/airdrop requirements can begin at any level either as a request for Air Force airlift or airdrop or as a request for transportation that movement managers determine can best be satisfied using airlift or airdrop.

(1) Preplanned requests. Preplanned airlift missions are based on known or projected requirements and are programmed in advance per command directives. They include requirements to provide airlift of personnel, cargo, mail, and courier material on a regular, routine basis or to meet one-time requirements. The amount of time required to coordinate preplanned airlift is established by the Air Force component based on operational requirements and the capability of the available airlift apportioned by the theater combatant commander. Preplanned airlift requests are validated through movement control channels (Figure 10-9).

(a) Division. The MCO receives transportation requests which are reviewed to determine the most effective mode. If the MCO decides that Air Force airlift or airdrop is the most effective mode, the MCO coordinates with the requestor and forwards the request to the DTO as an Air Force airlift request. The DTO coordinates details of the request with the theater airlift liaison officer (TALO), validates the request, and forwards the request to the corps MCC. The TALO acts as a coordinator and assists with the preparation of the request. The TALO also provides early notification and coordination through Air Force channels.

(b) Corps. The MCC receives transportation or airlift requests from corps units or validated airlift requests from DTOs and either validates the request or selects an alternate mode. If the MCC validates the request, it forwards the request to the TAMCA. If the MCC does not validate the request, it selects another mode. The CTO integrates airlift requirements for CSS and other intratheatcr movement to support priorities established by the G3.

(c) EAC. The TAMCA receives transportation or airlift requests from units located in the COMMZ or validated requests from MCCs. The TAMCA either validates the request or selects an alternate mode. If the TAMCA validates the request, it forwards the request to the theater combatant command agent. The agent validates the request for the theater combatant commander and passes the request as a requirement to the USAF C2 agency. TALOs are located at each echelon and provide early warning to USAF C2 agencies that an Army request for Air Force air is in the validation process. If the request is not validated at any level, it will be returned to the originator for alternate mode selection.

(2) Immediate requests. Unanticipated or urgent ground force requirements and priority transportation requests are validated and passed as immediate airlift requests. Immediate request validation is expedited through command channels.

(a) The TALO, attached to the lowest echelon, closest to the requesting command, notifies the USAF C2 agency of the impending request through an advance notification net. Coordination between the S3/G3 and S4/G4 ensures that movement control channels are kept current on airlift request status.

(b) The USAF C2 agency will execute validated immediate airlift requirements by directing an alert sortie to launch or, if the urgency of the situation warrants, by diverting a mission in progress. Immediate airlift requests will not be supported without validation by the Army and the theater combatant command agent.

(3) Emergency requests. These requests are special types of immediate requests for requirements that are critical to accomplish the tactical mission or for unit survival. These missions are the highest priority established by the JFC. The immediate airlift request validation procedure is required for emergency requests.

(4) Format. Airlift requests should be submitted using an approved message format as described in FM 100-27 or DD Form 1974, Joint Tactical Airlift Request. Command specific formats must include the minimum essential information listed in these formats.

f. Army units using Air Force airlift or airdrop (Figure 10-10) have specific requirements for drop zone or landing zone control and survey, consolidating the supplies or personnel and preparing them for movement, and preparing documentation. Refer to FM 100-27 and FM 55-12 for these requirements. For information on documentation and air movement planning refer to FM 55-9.

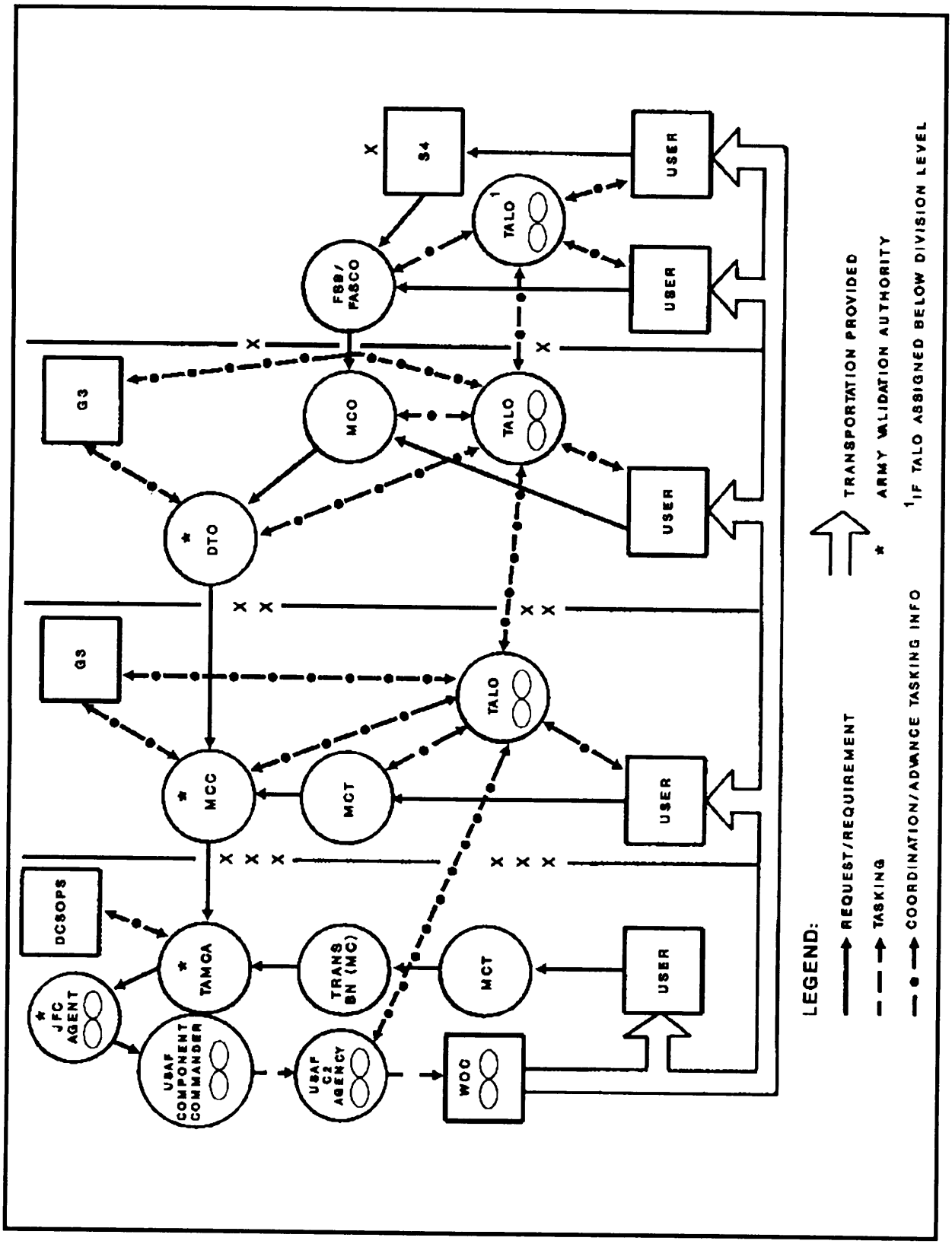

Figure 10-9. Preplanned Airlift Requests (Air Force).

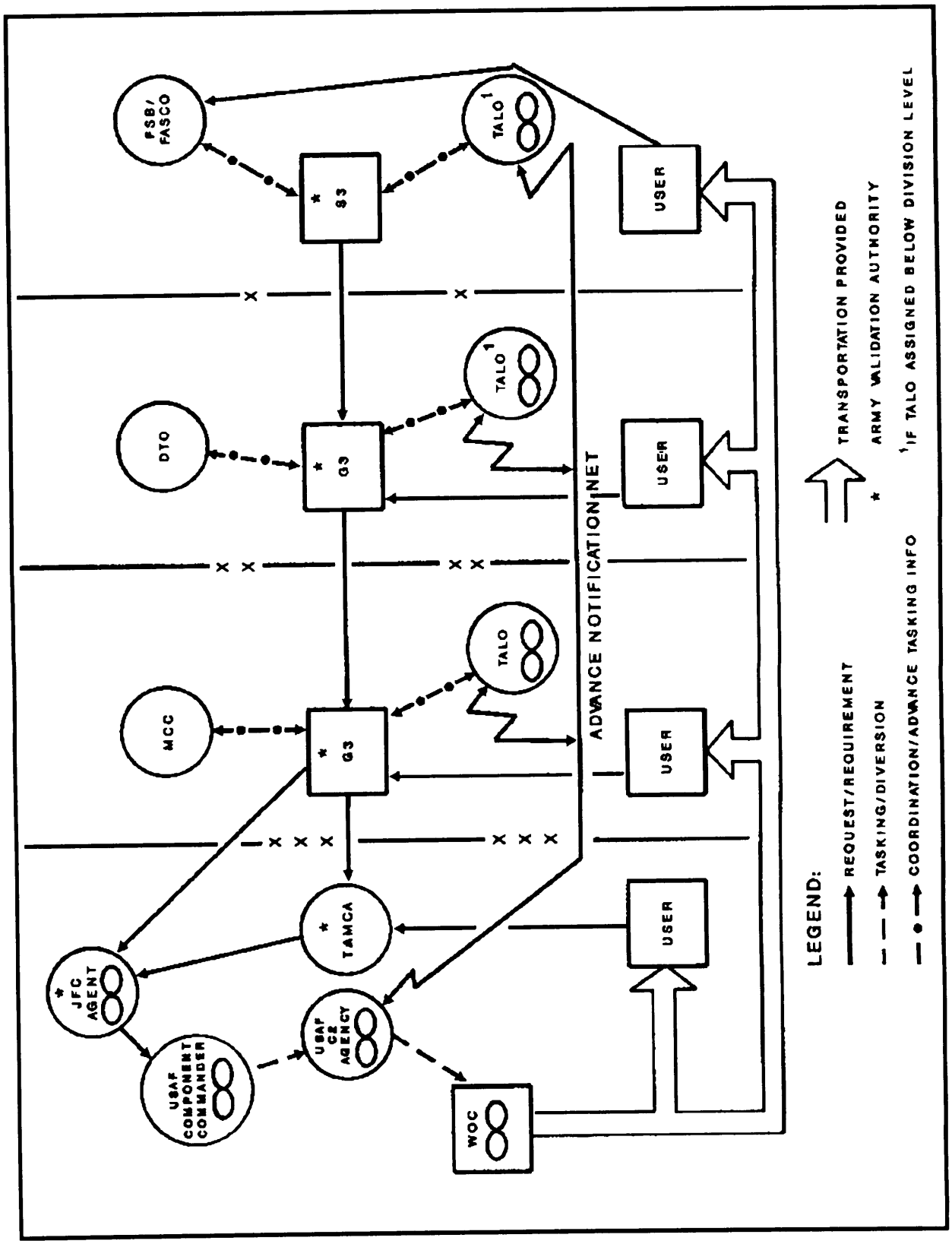

Figure 10-10. Immediate Airlift Request (Air Force).

Section IV. COMMUNICATIONS SUPPORT AND INFORMATION MANAGEMENT

10-9. INTRODUCTION

The transportation request process and effective movement control depend on reliable communications capabilities for both voice and data transmissions. DAMMS-R serves as an efficient management information system which will provide a reliable automated information processing capability for planning, programming, coordinating, and controlling movements and transportation resources in a theater of operations (TOPNS) during wartime. System functions will support the readiness mission in garrison and during training exercises to promote the rapid transition to war. DAMMS-R will be the standard Army theater transportation system, encompassing all levels of movement management and all modes of transport less pipeline at theater, corps, and division levels. When fully developed, DAMMS-R will be capable of providing each theater with the necessary go-to-war information processing capabilities.

10-10. COMMUNICATIONS SUPPORT

a. The operational concept for DAMMS-R emphasizes standardized integrated transportation application modules. These modules operate in a distributed mode on multiple hardware platforms over a variety of communications interfaces both to internal system users as well as to external information systems. DAMMS-R provides wartime functionality without additional training or substitution of software features. This concept will be implemented by operating DAMMS-R on standard military tactical computers or comparable nondevelopmental item (NDI) computers. The planned architecture for objective DAMMS-R in an open systems architecture environment is military computers or comparable NDI computers that meet Army tactical command and control system – common hardware software (ATCCS-CHS) requirements.

b. DAMMS-R will consist of portable microcomputer work stations tied into a local area network (LAN). Each LAN will consist of a file server, communication server, and work stations. Organizations without a LAN will have stand-alone workstations that will use modems to receive/pass information from/to a LAN. These LAN will in turn be tied into a wide area network (WAN) using a variety of communications interfaces to both internal users and external information systems. DAMMS-R is a distributed system which is communications intensive and dependent. DAMMS-R, as part of the CSS battlefield functional area control system (BFACS), is supported by existing peacetime local and long-haul communications systems and must have the capability to operate over varied communications nets including the defense data network (DDN); commercial dial-up; automatic digital network; automated teleprinter exchange service (TELEX); and the Army area tactical communications systems comprised of combat net radio (CNR), mobile subscriber equipment (MSE), and the tri-service tactical communications system (TRI-TAC). Field wire or cable will be used to connect terminal equipment to the signal nodes.

10-11. INFORMATION MANAGEMENT

a. DAMMS-R will support the operational and management functions of each echelon of the TOPNS transportation system, and it will be operated by organizational personnel in a garrison and/or field environment during peacetime, wartime, or national emergency. Because of the dynamic nature of the battlefield and the need of commanders and CSS activities to know the status of cargo and passengers that are being moved one of the most important missions of DAMMS-R is effective and efficient information management. DAMMS-R is comprised of seven subsystems (shipment management module [SMM] which includes the controlled move [CM] module, MCT operations [MCT op], transportation addressing subsystem [TAS], highway regulation [hwy reg], convoy planning, operational movement programming and mode operations [mode op] which interface with each other. In addition, DAMMS-R will interface with a wide variety of external supply and transportation management information systems (Figure 10-11).

b. The capabilities that are being designed to DAMMS-R and the applicable subsystem(s) that will be involved with the information produced are identified in Figure 10-12.

c. DAMMS-R will interface with the following external systems to pass or receive the information shown:

(1) Standard Army Ammunition System-Levels 1/3 and 4 (SAAS 1/3, SAAS l/4): movement requirements; reply to movement requirements; movement

event report; theater movement program; shipment forecast; addressing file update data; and trace, hold, divert, and expedite requests and responses.

(2) Standard Army Retail Supply System-Level 1: movement requirements; reply to movement event report; theater movement program; shipment forecast; addressing file update data; and trace, hold, divert, and expedite requests and responses.

(3) Medical supply (MEDSUP) module of the Theater Army Medical Management Information System (TAMMIS): movement requirements; reply to movement requirements; movement event report; theater movement program; shipment forecast; addressing file update data; and trace, hold, divert, and expedite requests and responses.

(4) Terminal Management System (TERMS)/ Department of the Army Standard Port System-Enhanced (DASPS-E)/Worldwide Port System (WPS): advance ocean cargo manifest; vessel and cargo discharge information; SPOD cargo to be moved, transportation support work sheet; addressing file update data; and trace, hold, divert, and expedite requests and responses.

(5) Logistics Intelligence File (LIF): advanced air shipment information.

(6) Global Transportation Network (GTN)/ In-Transit Visibility (ITV): ITV requests and responses related to movement information for command interest cargo and passengers.

(7) Cargo Movement Operations System (CMOS)/Consolidated Aerial Port Subsystems - Phase II (CAPS II): movement requirements; reply to movement requirements; movement event report; theater movement program; addressing file update data; convoy clearance requests and responses; air export clearance requests and responses; air manifest; passenger manifest; and trace, hold, divert, and expedite requests and responses.

(8) Combat Service Support Control System (CSSCS): ITV TCN query, addressing file update data, MSR problem report, controlled route data, MSR status report, unit move status report, nonunit move status report, theater movement program, transportation asset status report, critical cargo visibility report, traffic circulation plan, highway regulation plan, critical cargo transportation shortfall report, and US message text format (USMTF) D827/D828 messages relating to convoy clearances/highway regulation.

(9) Transportation Coordinator Automated Command and Control Information System (TC-ACCIS): unit equipment list data, movement requirements, reply to movement requirements, airlift request (intratheater), airlift mission schedule, addressing file update data, movement event report, air manifest, passenger manifest, and rail load plan data.

(10) Prisoner of War Information System (PWIS): movement requirement reply to movement requirements, movement event report, theater movement program, shipment forecast, airlift request (intertheater), airlift mission schedule, and addressing file update data.

(11) Unit Level Logistics System (ULLS) family of systems: vehicle maintenance/management data, vehicIe operator qualifications data, movement requirements, reply to movement requirements, and addressing file update data.

(12) Joint Operation Planning and Execution System (JOPES): deployment data for forces moving to the TOPNS.

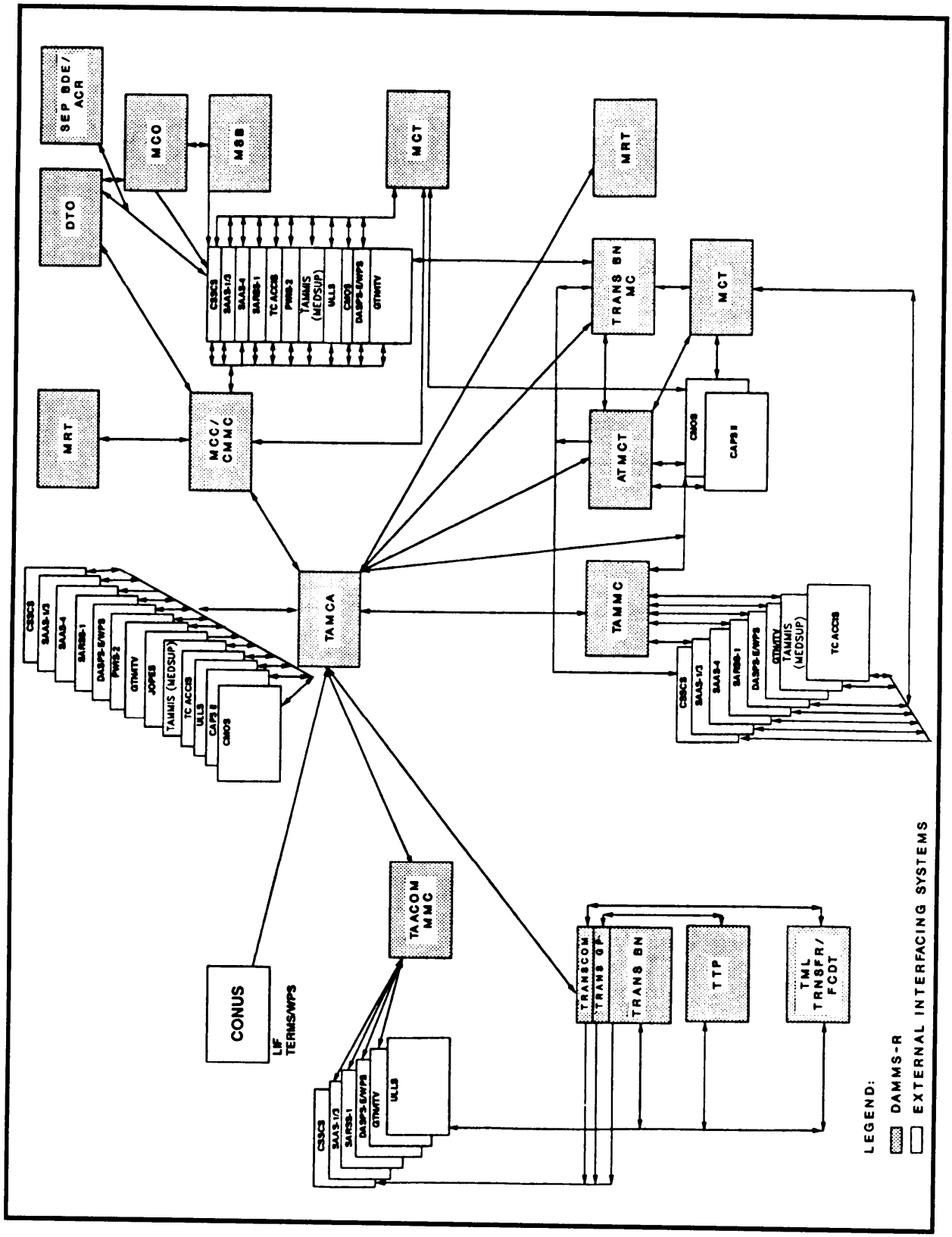

Figure 10-11. DAMMS-R Interfaces.

DAMMS-R Capabilities	TAS	SMM	MCT Op	Mode Op	HwyReg	CP	OMP
1. Maintain accurate addressing data for all theater locations and activities engaged in physical distribution.	X						
2. Support and manage intertheater, intratheater, and export movements of forces and cargo within an army-managed theater transportation system.		X	X				
3. Maintain visibility of all shipments (less pipeline, bulk petroleum, oil and lubricants, intertheater personnel, and nondivision transportation system household goods movements) from intratheater origin to destination.		X	X		X		
4. Accomplish cargo trace, hold, divert, or expedite actions at designated control points in the theater transportation network.		X	X				
5. Coordinate and provide transportation support in response to customer requirements.			X	X			
6. Support the time-sensitive allocation of army owned or controlled transportation resources in support of customer movement requirements.			X	X			X
7. Plan convoy and oversize/overweight vehicle movements, schedule and deconflict movements over US controlled routes, coordinate with host-nation activities responsible for deconflicting movements over their roads for highway movements, and perform convoy movement simulations in any theater of operations.			X	X	X	X	

Figure 10-12. DAMMS-R Capabilities and Subsystems.

DAMMS-R Capabilities	TAS	SMM	MCT Op	Mode Op	HwyReg	CP	OMP
8. Trace lost, frustrated, or misrouted cargo, and identify losses or discrepancies to assist in upating records and requisitions.		X	X				
9. Assist in controlling common-user rail rolling stock, motor transport semitrailers, and intermodal assets.			X				
10. Estimate commercial container detention.		X					
11. Provide data for performance evaluation of carriers, shipping activities, and receiving activities to identify opportunities for more effective use of transportation assets and more efficient traffic management.		X	X				
12. Allocate resources and set priorities when transportation requirements exceed capabilities.			X				X
13. Respond to a full range of contingencies from peacetime to wartime.	X	X	X	X	X	X	X
14. Provide visibility of all intertheater cargo which passes through a port and which has been designated as critical cargo or special interest cargo.		X	X				
15. Provide the capability to initiate a request for a shipment status at any point in the transportation pipeline.		X	X				
16. Provide 100 percent accountability for the movement of all commercial sea containers.		X					

Figure 10-12. DAMMS-R Capabilities and Subsystems (Continued).

DAMMS-R Capabilities	TAS	SMM	MCT Op	Mode Op	HwyReg	CP	OMP
17. Interface with external supply and transportation systems (CMOS, CAPS II, DASPS-E, LIF, MEDSUP, PWIS, SAAS, SARSS, TERMS, ULLS, and WPS) to efficiently pass movement management information.	X	X	X	X	X	X	X
18. Interface with external command and control systems (CSSCS, GTN/ITV, and TC ACCIS).	X	X	X	X	X	X	X

Figure 10-12. DAMMS-R Capabilities and Subsystems (Continued).

CHAPTER 11

MOVEMENT CONTROL IN OTHER OPERATIONAL ENVIRONMENTS

Section I. MILITARY OPERATIONS IN LOW-INTENSITY CONFLICT

11-1. INTRODUCTION

Military operations in low-intensity conflict (LIC) support political, economic, and informational actions. Planning for LIC is the same as planning for war and may involve direct military action, although the objectives are generally to support friendly governments short of direct action.

11-2. LOW-INTENSITY CONFLICT

a. Defined. LIC is a limited political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states. It frequently involves protracted struggles of competing principles and ideologies. LIC ranges from subversion to the use of armed force. It is waged by a combination of means employing political, economic, informational, and military instruments. LICs are often localized. For more information, see FM 100-20 and FM 63-6.

b. US Army Missions. Army support to military operations in LIC fall into four broad categories. These are support for insurgency and counterinsurgency, combatting terrorism, peacekeeping operations, and peacetime contingent operations.

(1) Support for insurgency and counterinsurgency includes support for either an incumbent government or with an insurgency.

(2) Combatting terrorism includes protecting installations, units, and individuals from the threat of terrorism.

(3) Peacekeeping operations include military operations and peacekeeping forces designed to maintain peace already obtained.

(4) Peacetime contingency operations are politically sensitive military activities normally characterized by short-term, rapid projection or employment of forces in conditions short of war. They include diverse actions such as noncombatant evacuation operations, disaster relief, and peacemaking. They frequently take place away from customary facilities, requiring deep penetration and temporary establishment of long LOCs in a hostile environment. Planning for contingency operations will normally take place at the unified command level using time-sensitive planning techniques and crisis-action procedures.

11-3. MOVEMENT CONTROL SUPPORT

a. Movement planners at all command levels must be involved in the planning process to determine the magnitude of transportation and movement requirements for the area of operations and recommend force structure to support the requirements during deployment, employment, and redeployment.

b. Movement planners must coordinate with intelligence personnel to obtain specific information regarding availability and capacities of aerial and seaports, inland surface routes, and transportation intelligence data.

c. Movement control requirements will vary based on the mission and number and type of units deployed. They may range from an MCT to an MCA. Whatever the requirement, these units must deploy early, establish communication with the rear support activity, plan for organic transportation, or have the capability for contingency contracting based on availability of HN assets.

d. Movement control functions in LIC are not materially different than those in other levels of conflict but they may be accomplished differently. Basic missions and tasks are still key requirements in LIC. Forces must be deployed, sustained, and redeployed. Movement planners must anticipate, be flexible, and be innovative. Without an effective movement control structure, the sustained synchronization of logistical support to the military forces could severely limit an operation’s success.

Section II. CONTINGENCY OPERATIONS

11-4. INTRODUCTION

Contingency operations are usually joint; they involve the projection of CONUS-based forces into a theater combatant commander's area of responsibility. The Army corps headquarters may form the nucleus of a joint task force, responsible for planning, integrating, and executing actions at the strategic, operational, and tactical levels of war. To achieve a rapid and decisive response, the closure of forces into the area must be carefully managed See FM 100-15 for more information on contingency operations.

11-5. CORPS CONTINGENCY OPERATIONS

a. Planning. Planning for corps contingency operations consists of planning for predeployment, deployment, buildup, employment, and redeployment phases of a low- or mid-intensity conflict. The corps must be able to quickly task organize a force for rapid deployment and quickly deploy the force. It must simultaneously plan for deployment and employment of the force, as hostilities may begin before the whole force arrives in the area of operations. Therefore, a requirement for potential force entry planning exists. Lastly, it must provide an operational headquarters capable of conducting rapid response, early deployment, and combat operations. These missions clearly dictate requirements for movement control units during each phase.

b. Predeployment Phase.

(1) During the predeployment phase, the CTO, MCC, DTOs, and COSCOM transportation staff will assist the corps in planning and preparing for strategic deployment. This will require movement planners to quickly determine requirements for strategic lift, plan the use of allocated strategic lift, and coordinate movement to POEs. It also requires them to assist units in preparing personnel and equipment for movement. Movement planners must closely coordinate with operational planners as they develop courses of action. The approved course of action and availability of strategic lift directly influences both the tailoring and echelonment of forces. Movement planners must also articulate requirements to echelon the MCC, MCTs, and transportation mode operating units early in the deployment process along with the combat and other support forces.

(2) For example, a C2 element such as an ATMCT should be an early deploying movement control unit to operate the aerial port. If equipment is moving by sea an MCT should deploy to the SPOD prior to arrival of the first ship. The MCC headquarters and its organic divisions should phase in as deployed units arrive yet maintain the capability to interface with and assist with elements managing the deployment of corps units through the POEs.

(3) To facilitate this planning, the MCC, DTO, and support operations staffs should collocate personnel to work with operational planners in defining requirements and developing movement plans to support strategic deployment.

c. Deployment Phase. Deployment during a contingency will most likely be chaotic because of the compressed planning cycle and frequent changes. Additionally, deploying unit commanders will make frequent changes to manifests. The corps MCC and its subordinate teams should anticipate changes and be flexible and responsive. They must provide assistance in preparing vehicles and equipment, controlling movements to and through APOEs and SPOEs, and coordinating with the deploying DTOs or equivalent subordinate movement planners. The DTOs are primary transportation planners for the divisions and are most knowledgeable about their units, personnel, and equipment. They can provide invaluable assistance to the CTO and MCC. Unit movement representatives must remain at the APOE throughout the deployment of their units' contingency operation to continue providing assistance where needed.

d. Force Buildup.

(1) A critical mission of the CTO is involvement in the planning sequences with the G3 and G4. The CTO and/or COSCOM may also provide personnel to a JMC if the theater combatant commander determines that one should be established. The corps MCC should collocate initially with the corps forward operating base. Clearance of the APOD will be a high-speed priority operation. The MCC must have an ATMCT in charge of the onward movement of the units and cargo. All cargo will most likely have the highest transportation priority. Therefore, the MCC must establish priority listing of the incoming cargo in conjunction with the G3 and G4. The unit commanders, G3, G4 and MCC must ensure that adequate MHE and CHE are included as early deploying equipment.

(2) The corps MCC and MCTs must be able to communicate with each other and with mode operators deployed to the area of operations. This is necessary to manage and control the use of transportation assets in concert with the commander's priorities. Communications requirements and resources must be identified in the planning process.

(3) If HN assets are available, they should be used to support onward movement and resupply. Contingency contracting and Class A agents maybe required. The movement control organization must articulate transportation requirements to contracting officers. The need for transportation of any type will be an urgent priority. If HN assets are not available, early arrival of organic transportation assets must be specified in the planning process.

(4) It is vital that the corps be sustained during the buildup and employment phases. This requires close coordination of movement and material managers to plan movement requirements. The MCC must develop a movement program and highway regulation plan. It must perform the coordination required to stay informed on the status of the road network. Military police will be required for BCC missions, including traffic control.

(5) Many areas of the world have poorly developed road networks or roads that will only marginally support convoy operations. Dense vegetation, jungles, mountains, and desert terrain with temporary forward operating bases and long distances between units and support activities dictate a heavy reliance on air movement operations. Movement planners must identify requirements for CSS air movement operations as part of the movement program and seek to have sufficient aircraft allocated to this mission.

e. Employment. The only difference between this phase and the buildup phase is the attainment of military objectives. Movement control missions in the area of operations remain the same.

f. Redeployment.

(1) During the redeployment phase, movement planners will prepare the corps for strategic redeployment. This will require the ability to quickly determine requirements for strategic lift, movement to POEs, and assisting units in preparing personnel and equipment for movement. It requires close coordination with operational planners as they develop plans to phase the withdrawal of units based on strategic lift apportioned to the task. It also requires that movement planners articulate requirements for the phased redeployment of movement control units and integrate their redeployment along with the combat and other support forces.

(2) Redeployment of certain units and equipment may begin as early as the deployment phase. Movement planners must identify and program the use of strategic lift for retrograde operations and coordinate transportation to move units and equipment to POEs.

(3) The major difference between deployment and redeployment from a movement control perspective is the phasing of redeployment of movement control units. Because the PODs are in CONUS, nondeployed units should be considered for reception activities, leaving movement control units in the area of operations to complete the redeployment mission.

Section III. NBC OPERATIONS

11-6. INTRODUCTION

The threats from using nuclear, biological, or chemical agents directed against US forces and the areas in which they operate will have a direct impact on movement control planning and execution.

11-7. NBC THREATS

a. The use of nuclear munitions will have immediate and long-term effects on the battlefield. The immediate effects are casualties, destruction of supplies and equipment, destruction of LOCs, and damage to communications equipment. Besides these immediate effects, nuclear munitions have longer lasting effects resulting from residual radiation and radioactive fallout based on the type of munition, method of delivery, and weather.

b. The use of biological and chemical agents may have immediate or long-term effects, depending upon the type of agents used. The immediate effects are casualties, contamination of supplies and equipment, and contamination of LOCs in the target area and downwind. Longer lasting effects will result depending upon the persistence of the agent, method of delivery, and weather.

c. The immediate and long-term effects of NBC attacks on movement control operations will be shortages of mode operating equipment, disruption of movement plans and programs, degradation of LOCs, disruption of communications capability, and degradation of personnel performance.

11-8. MOVEMENT CONTROL RESPONSIBILITIES

a. Movement planners at each echelon must be aware of the threat and anticipate the impact of using NBC agents in movement control planning. They must plan alternate modes and routes to compensate for the immediate and long-term effects of these agents in their area of responsibility.

b. Movement planners should establish checklists for coordination in the event of an NBC attack. Planners must receive accurate information quickly to make immediate adjustments to en route movements, to provide guidance to mode operators, to adjust movement programs, and to provide advice. Planning considerations include-

- Coordination measures to determine location of attack, time, type agent, and radius of contaminated area.
- Capability to assess the in-transit status of highway movements and whether any movements are immediately or potentially affected.
- Procedures to receive route information, assess routes, and determine which routes should receive priority for reconnaissance.
- Determination of which programmed movements should continue as scheduled, be cancelled, or rerouted.
- Coordination measures to provide en route diversions through traffic control points and/or MRTs.

c. After making an initial assessment and immediate adjustments, movement planners must consider the sustained capability to support based on changes of priorities, operating areas, support relationships, and distribution patterns. Follow-up actions may include –

- Reallocating areas of responsibility among movement control elements.
- Coordinating with material managers for disposition of contaminated material en route.
- Revising the movement program based on availability of routes and transportation modes.
- Obtaining updated priority requirements from the G3 and G4.
- Coordinating for decontamination and repair of routes and structures.
- Coordinating movement of large quantities of water for decontamination.

d. Coordination between movement managers and material managers and between movement managers and mode operators is essential in responding to changing logistical and support requirements that result from an NBC attack. Due to the potential damage to communications equipment or degraded communications capability, movement planners should use liaison personnel to gather information and present movement control considerations to key staff sections at each command echelon.

APPENDIX A

UNITED STATES CENTRAL COMMAND

A-1. INTRODUCTION

a. This appendix outlines movement control considerations within United States Central Command (USCENTCOM).

b. The CENTCOM mission is to prevent coercion of friendly states and deter attempts by hostile regional states to achieve gains by the threat or use of force. It is also to assist friendly states to provide for their own security and contribute to the collective defense.

c. Figure A-1 shows METT-T factors affecting movement control in the region. The southwest Asia (SWA) region is a large, diverse area. The population is 316(+) million with 17 different ethnic groups, 420 major tribal groupings, six major language groupings, hundreds of dialects, and three major religions. The command's area of responsibility begins in the east with Pakistan and includes Afghanistan, Iran, Iraq, and Jordan on the Asian continent, the entire Arabian peninsula, and Egypt, Sudan, Ethiopia, Djibouti, Somalia, and Kenya on the African continent. It includes the waters of the Red Sea and Persian Gulf (Figure A-2).

d. HNS potential ranges from good to nonexistent, depending on the specific country involved. LOCs also vary– from the few used regularly in support of pre-positioned supplies, equipment, and personnel; to those used periodically for exercises; to those identified but not used due to political considerations.

e. US forces apportioned to CENTCOM are unique; there are few permanently forward-deployed forces in the area. Those consist mainly of US Navy Central Command (NAVCENT) or US Marine Central Command (MARCENT) missions. The vast majority of forces are identified by OPLAN and TPFDD.

A-2. COMMAND RELATIONSHIPS

a. The Third United States Army (TUSA), located at Fort McPherson, is the Army component command (ARCENT) for CENTCOM. It provides planning guidance for army units that could be deployed in wartime.

b. The 318th TAMCA serves as executive agent for movement control into, within, and out of the ARCENT area of responsibility. It commands and supervises assigned and attached units in support of the ARCENT mission and coordinates with HN and allied forces (Figures A-3 and A-4). CENTCOM may also direct the use of the ARCENT movement control structure to support all ground movement in the CENTCOM area of responsibility to include support of all component commands.

c. MCTs provide command and control within the area of operations (AO) for which they are responsible. The number and types of MCTs will be based on the nature of the conflict, numbers of forces to be supported, the location of the deployed forces, APOEs, SPOEs, and other factors. MCTs will operate as needed to simultaneously ensure that the theater commander's guidance for movement priority is adhered to and to effect maximum use of all available transportation assets.

A-3. COMMUNICATIONS

Because of the vast distances involved, communications in the CENTCOM AO present unique challenges. The TAMCA has no transportation Standard Army Management Information System (STAMIS). It relies on its own manual system for obtaining transportation and those ADP systems which CENTCOM and ARCENT bring into the AO (Figure A-5).

REGION	MISSION	ENEMY	TERRAIN	TROOPS	TIME
SOUTHWEST ASIA	SUPPORT US COALITION OBJECTIVES/ FOREIGN POLICY	MID/HIGH INTENSITY CONVENTIONAL FORCES	LARGE REGION; MULTIPLE COUNTRIES MOUNTAINS, SEAS/DESERT LOWLANDS IMMATURE THEATER LIMITED RAIL DISPERSED PORTS MULTIPLE ALOC/BLOC	NO FORCES (PEACE) JOINT/ COMBINED OPN (WAR) HNS VARIES W/COUNTRY	STRATEGIC LOC DIST 10,000+ NM

Figure A-1. Movement Conrol and METT-T.

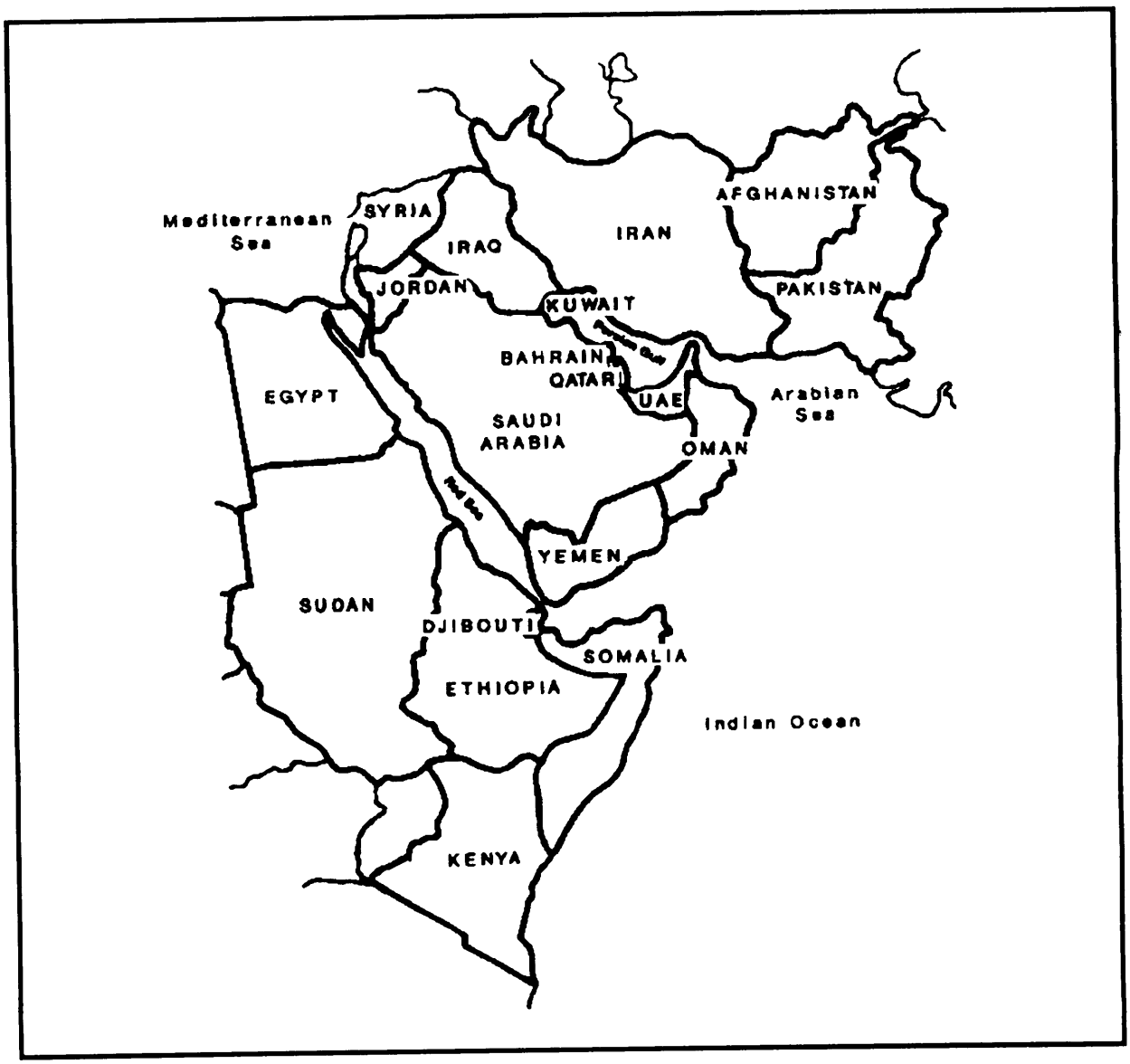

Figure A-2. CENTCOM Area of Operations.

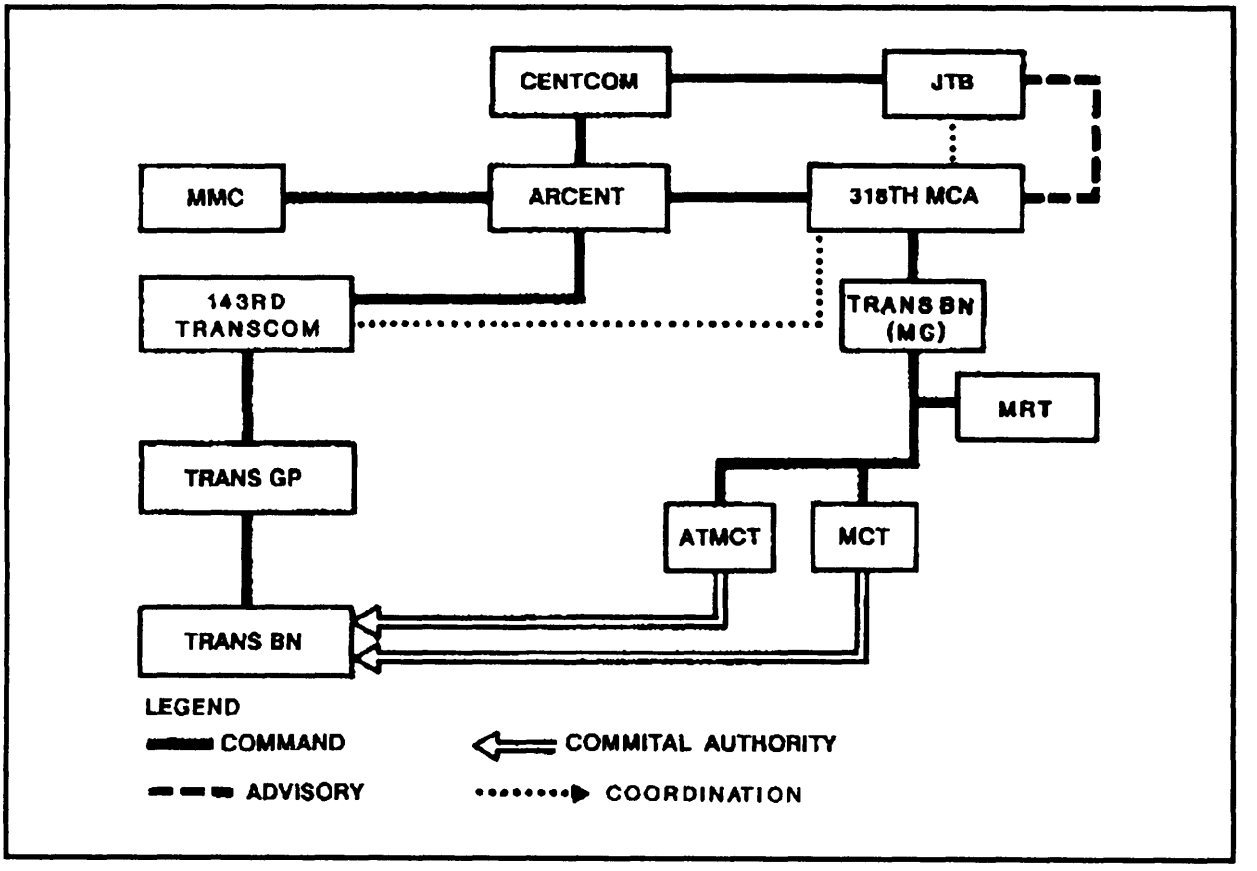

Figure A-3. Command Relationship.

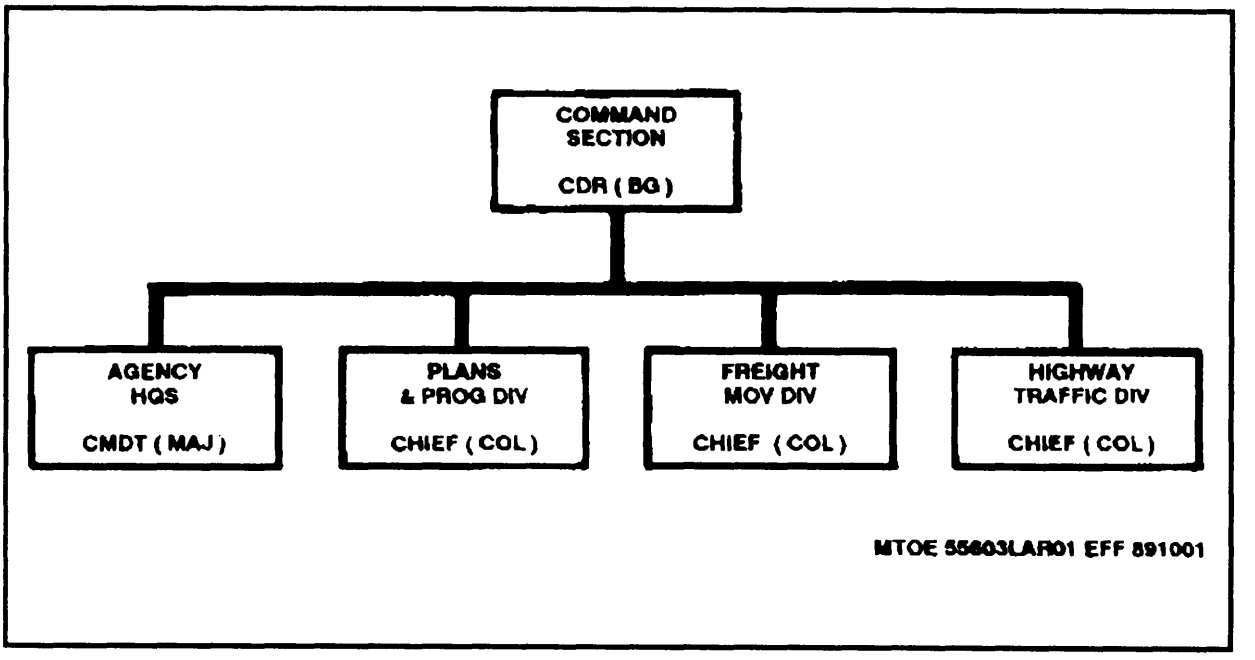

Figure A-4. 318th Organization.

FACTOR	CONDITIONS/RANGE	IMPACT
WEATHER	Hot desert summers through cold mountainous winters.	Range of temperature extremes for troops and equipment to be prepared to fight in is broad. Dust and high ambient temperatures affect use of engines and other equipment.
ROAD NETWORKS	MSRs range from four-lane divided highways in desert to poor secondary roads in desolate mountains with sharp bends, high gradients, poor surface, and few ASRs.	Throughput of road nets severely limited in many cases. Poor cover or concealment for daylight operations due to lack of widespread vegetation in the area.
LANGUAGE	Preponderance of Arabic (only) used on signposts.	Traffic signs often unreadable; local HN civilians cannot answer simple routing inquiries. Commercial communications systems not usable without interpreters.
LOCAL POPULATION	Not necessarily friendly or neutral.	May be hostile to US forces; sabotage of roads, equipment, and communications a problem.
HN SUPPORT	Range from excellent to very limited or non-existent.	May hamper operations severely. US forces must perform all tasks.
RANGE	Threats are numerous; numerous regional hostile forces and people.	Hampers planning; difficult to focus on one nation's territory for battle. War planning must be broadbased and flexible.

Figure A-5. Factors Affecting Movement and/or Movement Control in the AO.

APPENDIX B

UNITED STATES EUROPEAN COMMAND

This appendix implements STANAGs 2023, 2025, 2026, 2154, 2155, 2156, 2158, 2159, 2165, 2166, 2171, 2173, 2174, 2175, 2176, 2832, 2890, 2943, and 3631.

B-1. INTRODUCTION

a. This appendix outlines movement control organizations and procedures within the United States European Command (USEUCOM) area of responsibility, focusing on the North Atlantic Treaty Organization (NATO) countries in the central European region.

b. The USEUCOM mission is to support US interests throughout its area of responsibility, provide combat ready forces to NATO, and to support other CINCs as directed by the national command authority.

c. The USEUCOM area of responsibility is large and diverse. It encompasses 13 million square miles, extends from Norway to the south of Africa (less the area assigned to USCENTCOM), and includes 76 countries (Figure B-l). Within the central European region of NATO, the USEUCOM area of responsibility y includes Germany, Belgium, Luxembourg, Netherlands, Denmark, Italy, France, and the United Kingdom. Figure B-2 shows METT-T factors that impact on movement control operations in these countries.

B-2. COMMAND RELATIONSHIPS

a. The United States Army, Europe (USAREUR), located in Heidelberg, Germany, is the Army component command of USEUCOM. Most US Army forces stationed in the USEUCOM area of responsibility are assigned to USAREUR.

b. USAREUR's movement manager is the 1st TMCA headquartered in Oberusal, Germany. It operates under the staff supervision of the assistant DCSLOG, USAREUR. The 1st TMCA supports US forces in northern, central, and southern Europe. The 1st TMCA performs theater TAMCA functions.

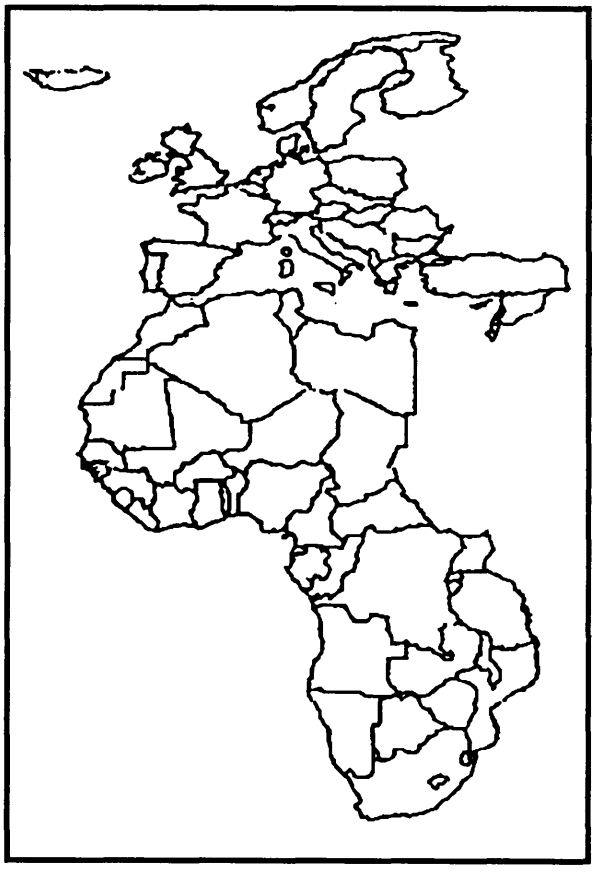

Figure B-1. USEUCOM Area of Responsibility.

c. USAREUR's mode operator is the 37th TRANSCOM headquartered at Kaiserslautern, Germany. The 37th TRANSCOM is assigned to the 21st TAACOM. The 1st TMCA exercises committal authority over transportation assets of the 37th TRANSCOM. The 37th TRANSCOM commands three subordinate transportation battalions and one civilian support center.

REGION	MISSION	ENEMY	TERRAIN	TROOPS	TIME (STRATEGIC LOC DISTANCE)
BELGIUM NOTHRWEST EUROPE AREA: 11,775 SQ MILES POPULATION: 9,200,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• SMALL REGION; SINGLE COUNTRY • SOUTHERN UPLANDS, CENTRAL PLATEAU, NORTHERN LOWLANDS • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK, NORTHERN SEAPORTS, AND DISPURSED AIR-PORTS • LOC RUNS N TO S. SMALL FRONT; LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4600 NM
DENMARK NORTHERN EUROPE AREA 16,576 SQ MILES POPULATION: 4,817,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• SMALL REGION, SINGLE COUNTRY • PENINSULA (COASTAL OPERATIONS) • ROLLING HILLS, 500 ISLANDS, LOWLANDS • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK, SEAPORTS AND AIRPORTS • LOC RUNS N TO S. SMALL FRONT; LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4700 NM
ENGLAND NORTHWESTERN EUROPE AREA 50,874 SQ MILES POPULATION: 46,102,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• LARGE REGION, SINGLE COUNTRY • MOUNTAINS, UPLANDS AND LOWLANDS • MATURE THEATER; COASTAL OPERATIONS, GOOD RAIL AND HIGHWAY NETWORK AND DISPERSED AIRPORTS AND SEAPORTS • LOC RUNS S TO N. LARGE FRONT; LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4100 NM
FRANCE WESTERN EUROPE AREA 212,600 SQ MILES POPULATION: 49, 157,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• LARGE REGION, SINGLE COUNTRY • MOUNTAINS, ROLLING HILLS, AND LOWLANDS • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK. DISPERSED SEAPORTS AND AIRPORTS • LOC RUNS W TO E. LARGE FRONT; LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4100 NM
GERMANY NORTH CENTRAL EUROPE AREA 96,512 SQ MILES POPULATION: 56,306,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• LARGE REGION, SINGLE COUNTRY • SOUTHERN MOUNTAINS, CENTRAL UPLANDS, AND NORTHERN LOWLANDS • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK, NORTHERN SEAPORTS AND DISPERSED AIRPORTS • LOC RUNS NW TO SE. LARGE FRONT: LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4600 NM

Figure B-2. Movement Control and METT-T.

REGION	MISSION	ENEMY	TERRAIN	TROOPS	TIME (STRATEGIC LOC DISTANCE)
ITALY SOUTHERN EUROPE AREA 116,224 SQ MILES POPULATION: 56,478,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• LARGE REGION, SINGLE COUNTRY • PENINSULA (COASTAL OPERATIONS) • MOUNTAINS, VALLEYS, ROLLING HILLS • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK, SEAPORTS AND AIRPORTS • LOC RUNS NW TO SE. LARGE FRONT: LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	5200 NM
LUXEMBOURG (WESTERN EUROPE) AREA 999 SQ MILES POPULATION: 339,999 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• SMALL REGION; SINGLE COUNTRY • PLATEAU • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK, AND AIRPORTS • LOC RUNS N TO S. SMALL FRONT; LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4400 NM
NETHERLANDS NOTHRWEST EUROPE AREA - 11,775 SQ MILES POPULATION: 12,000,000 (EST)	• NATO PEACEKEEPING FORCE • SUPPORT U S INTERESTS	• MID-LEVEL INTENSITY • CONVENTIONAL AND NUCLEAR	• SMALL REGION; SINGLE COUNTRY • EASTERN UPLANDS, ROLLING HILLS, AND NORTHERN LOWLANDS • MATURE THEATER; GOOD RAIL AND HIGHWAY NETWORK, NORTHERN SEAPORTS AND DISPERSED AIRPORTS • LOC RUNS NW TO SE. SMALL FRONT; LINEAR SUPPORT	• U S ARMY (PEACE) • STRONG HOST NATION SUPPORT	4500 NM

Figure B-2. Movement Control and METT-T (Continued).

(1) The 28th Transportation Battalion, headquartered in Mannheim, has three medium truck companies, one HET company, one POL truck company, and one TTP. The 53d Transportation Battalion, headquartered in Kaiserslautern, has four medium truck companies (one located in Pirmasens) and one TTP. The 106th Transportation Battalion, headquartered in Ruesselsheim, has four medium truck companies operating out of Fuerth, Giessen, Ruesselsheim, and Bremerhaven and four TTPs located at Fuerth, Bremerhaven, Giessen, and Rhein Main Air Base.

(2) The 6966th Civilian Support Center, headquartered in Kaiserslautern, has three medium truck companies operating out of Kaiserslautern and Idar-Oberstein; one HET in Mannheim, one refrigerated van company in Kaiserslautern, and two TTPs in Kaiserslautern.

d. MTMC Europe, a subordinate command of MTMC, operates common-user ocean terminals in direct support of USEUCOM. These terminals currently are located in Bremerhaven and Nordenham, Germany; Rotterdam, Netherlands; Leghorn, Italy; Izmir, Turkey; Cadiz, Spain; Lajes Field, Azores; Piraeus, Greece; and Felixstowe, UK. MTMC Europe can open military terminals at other locations based on operational requirements.

B-3. MOVEMENT CONTROL ORGANIZATIONS

Figure B-3 shows the organization of the 1st TMCA. It has three transportation battalions (MC) and two movement regions assigned. The 3d Movement Region is collocated with the headquarters.

a. The 4th Movement Region is located at Royal Air Force (RAF) Mildenhall, United Kingdom (UK). During peacetime, it is known as the 4th Movement Region Control Team. It coordinates all wartime US transportation and movement requirements within the UK.

b. The 14th Transportation Battalion (MC), headquartered in Vicenza, Italy, performs movement control functions within the southern region (Figure B-4). Peacetime rsponsibilities involve movement control services in Italy, and a planning cell in Turkey.

c. The 27th Transportation Battalion (MC), headquartered in Bremerhaven, performs movement control functions for the northern region. Its area of responsibility encompasses the northern sector of Germany as far south as Cologne, to Belgium, the Netherlands, and Denmark. The battalion's three MCTs are located at Rotterdam, Bremerhaven, and Moenchengladbach. The 27th Transportation Battalion serves as the primary interface with MTMC-Europe on cargo entering the theater through the ports of Bremerhaven, Nordenheim, and Rotterdam. Figure B-5 shows its area of responsibility.

d. The 39th Transportation Battalion (MC), headquartered in Kaiserslautern, performs movement control functions for the central region. Its area of responsibility encompasses the central and southwestern portion of Germany, joining the boundaries of the 27th Transportation Battalion to the north, and the 502d Corps MCC to the east, and the Swiss border to the south. The battalion's MCTs are located in Baumholder, Stuttgart, Kaiserslautern, and Mannheim. It also commands ATMCTs located at Ramstein and Rhine Main Air Base.

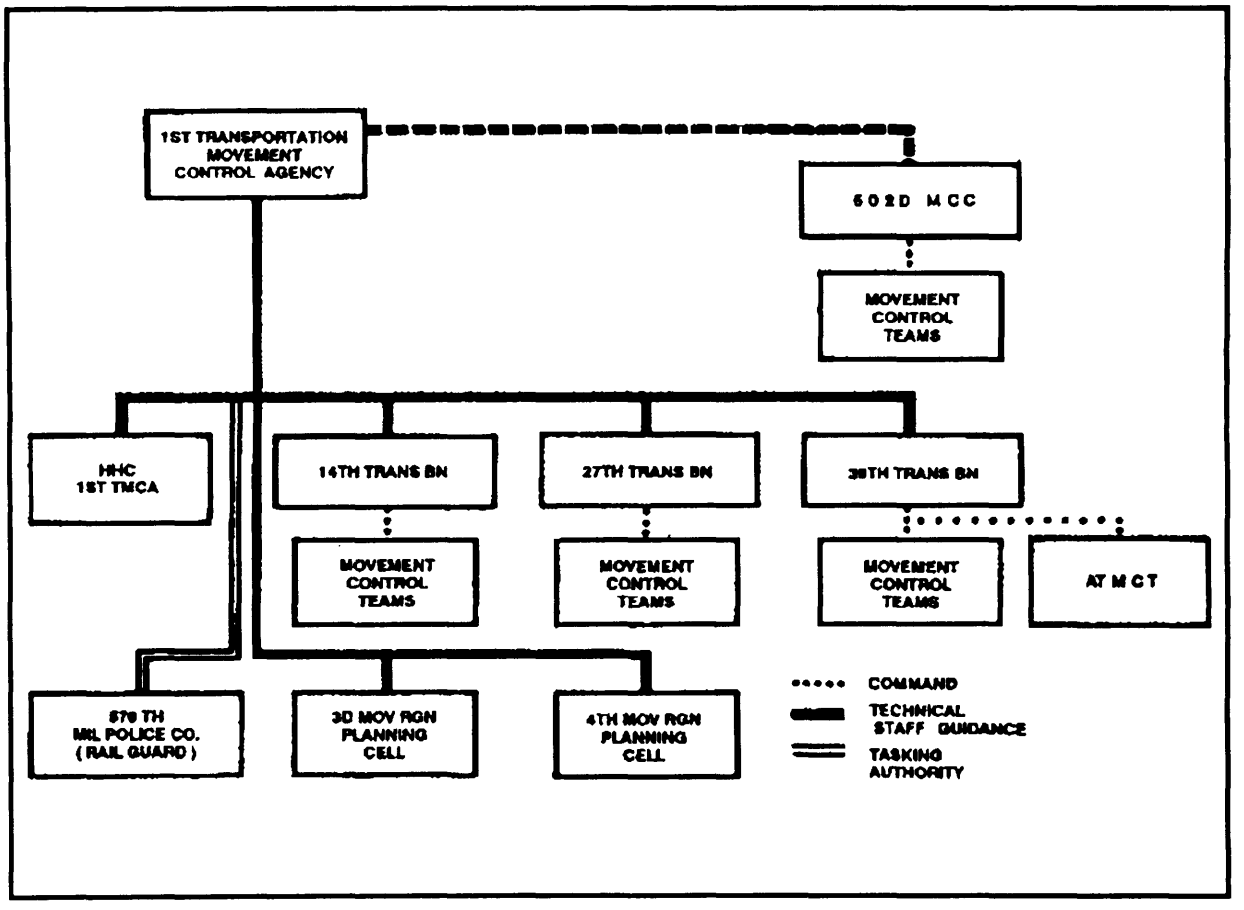

Figure B-3. 1st TMCA.

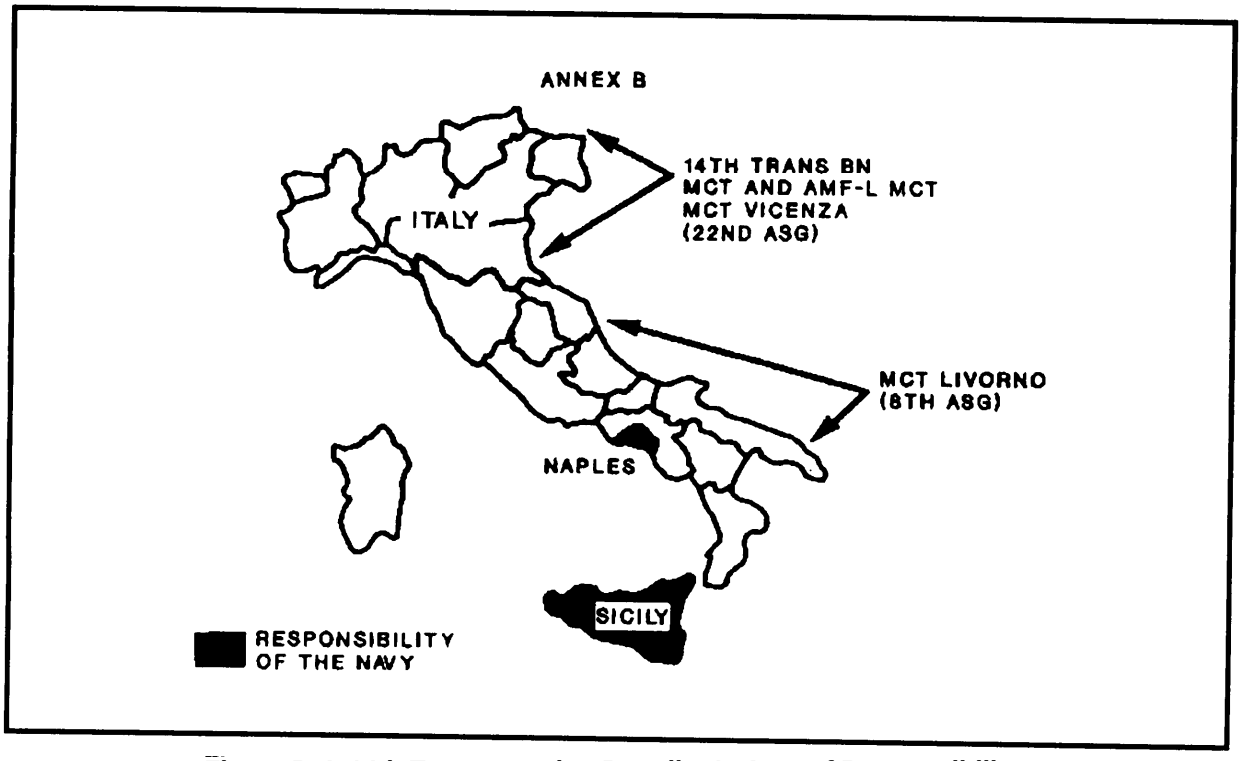

Figure B-4. 14th Transportation Battalion's Area of Responsibility.

e. The 502d MCC is assigned to V Corps. It performs movement control functions for the V Corps area of responsibility. The center's MCT's are located in Nuremberg and Frankfurt (Figure B-5).

f. Within the European theater, MCTs have theater-unique teams assigned to them. They include the –

(1) Branch movement control team (BMCT). BMCTs are the smallest movement control elements providing movement control on an area basis. BMCTs are assigned to specific location support, such as depots, TTPs, or trailer terminals. BMCTs provide interface with the consignor, consignee, and mode operator.

(2) Highway movement control team (HMCT). HMCTs are responsible for coordinating US forces' use of HN road networks. HMCTs are collocated with the German Verkerskommandtur (transportation commander's) office.

(3) Rail movement management team (RMMT). RMMTs are responsible for the control of US forces' cargo and passengers moving via the German federal railroad. Deutsche Bundesbahn (DB).

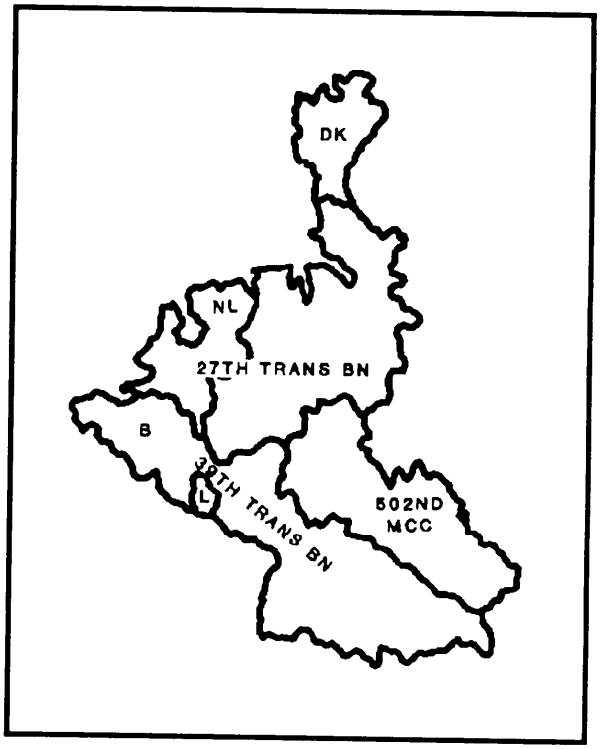

Figure B-5. Areas of Responsibility for 1st TMCA and V Corps.

B-4. COMMUNICATIONS

a. Daily business is accomplished through a series of communications systems that include the Defense Switched Network (DSN), European Telephone System (ETS), commercial telephone service, direct link with HN railway telephone system, Defense Data Network (DDN), telex, and the Standard Theater Army Command and Control System (STACCS).

b. Secure communications system includes secure telephone (STU III), radio telephone/ teletype (mobile) (RATT), Worldwide Military Command and Control System (WWMCCS), KL43, and FAX (secure).

B-5. FIRST DESTINATION REPORTING POINTS

a. The FDRPs support the Army's concept of the fluidity and lethality of the modern battlefield. The FDRP's primary purpose is to divert en route cargo to units as they displace on the battlefield.

b. FDRPs can be located wherever the command decides there is a need. Useful locations are at the corps and division rear boundaries along MSRs where vehicle drivers can check in to confirm the location of the consignee. If the consignee is no longer at the location first provided to the driver, the FDRP diverts the driver and cargo to an alternate consignee and/or destination. An FDRP is not a rest stop, although it could be collocated with one established by the TAACOM or COSCOM.

c. An FDRP can be comprised of an MRT, MCT, or personnel detailed from these or other movement control organizations. It may also include supply and MP personnel.

d. The ability to communicate with the corps and theater movement control headquarters is critical to any FDRP operation. Information flowing to the FDRP must be continuous and timely. As the tactical situation changes and combat units move around on the battlefield, the FDRP must be notified so it can redirect vehicles that have supplies destined for those locations or units.

B-6. RAPID DELIVERY SERVICE

a. The rapid delivery service (RDS) was developed to move high-priority items, including retrograde, among theater shippers and consignees. It provides dedicated pickup and delivery service of less-than-truckload (LTL) shipments.

b. An RDS system operates with a mixed fleet of general cargo vehicles making regular runs along predetermined routes. These commitments are on a daily basis regardless of the amount of cargo at the points of origin. It is envisioned that the service be operated as a hub and spoke system. Daily pickups and deliveries are made to and from consignees to operating centers or hubs. Sorting and movement among the operating centers occur overnight with delivery the following day.

c. Drivers stop at all designated pickup points along their particular spoke and deliver and/or receive cargo along the route. As directed by a distribution center, the hub will also support all special transportation requirements needed to transport critical high-priority supplies and/or equipment to a particular customer. Transportation requirements beyond the capability of the hub will be passed to corps or theater assets for support. RDS highlights include the following:

(1) The operating centers in the region are located so that ideally all customers can receive same day or next day delivery. Documentation would be the minimum required for accountability and data collection and need not be the same as for normal TMR system.

(2) The system should be limited to movement of the highest priority items identified by the TA commander. The remainder of the movements should take place within the TMR system. However, to minimize the waste of transportation assets, if the high- priority shipments are LTL, nonpriority shipments will be moved on the same vehicle.

(3) The service must operate on a schedule to minimize communications and documentation requirements. It must operate daily to all potential origins and destinations to meet established delivery standards.

(4) The time standard should be delivery the day after the shipments are available for movement.

B-7. CELLULAR LOGISTICS TEAM

a. Missions.

(1) The primary mission of the cellular logistics team (CLT) is to serve as liaison and interface between the US transportation system and the German

military transportation battalions which have subordinate terminal transfer units. CLTs maintain visibility of in-transit US shipments and supplies by perpetuating US documentation and reporting status back through US channels. Technical guidance to assist in the loading of US- unique equipment is also provided (Figures B-6 and B-7).

(2) CLTs have the authority to divert cargo when the US movement control system directs it. Additionally, CLTs can request transportation assets as a user for onward movement of this diverted cargo.

b. Capabilities.

(1) CLTs can perform simultaneous operations at six terminal transfer sites that maybe operated by the German military transportation battalion. Twenty-four hours per day capability is possible, requiring minimum manning (one per site) with authorized structure.

(2) Based on the mission of the German military terminal transfer units, CLTs will normally operate at one of the following: airhead railhead, SPOD (land side), inland waterway port, depot, or other locations dictated by mission need. CLT duties and responsibilities remain unchanged regardless of location.

(3) The CLT is employed in three groups. Detachment headquarters will collocate with the German military battalion headquarters. Each company team will collocate with a German terminal transfer company in the German battalion.

(4) All CLT members must possess basic German language skills to assist them in mission accomplishment.

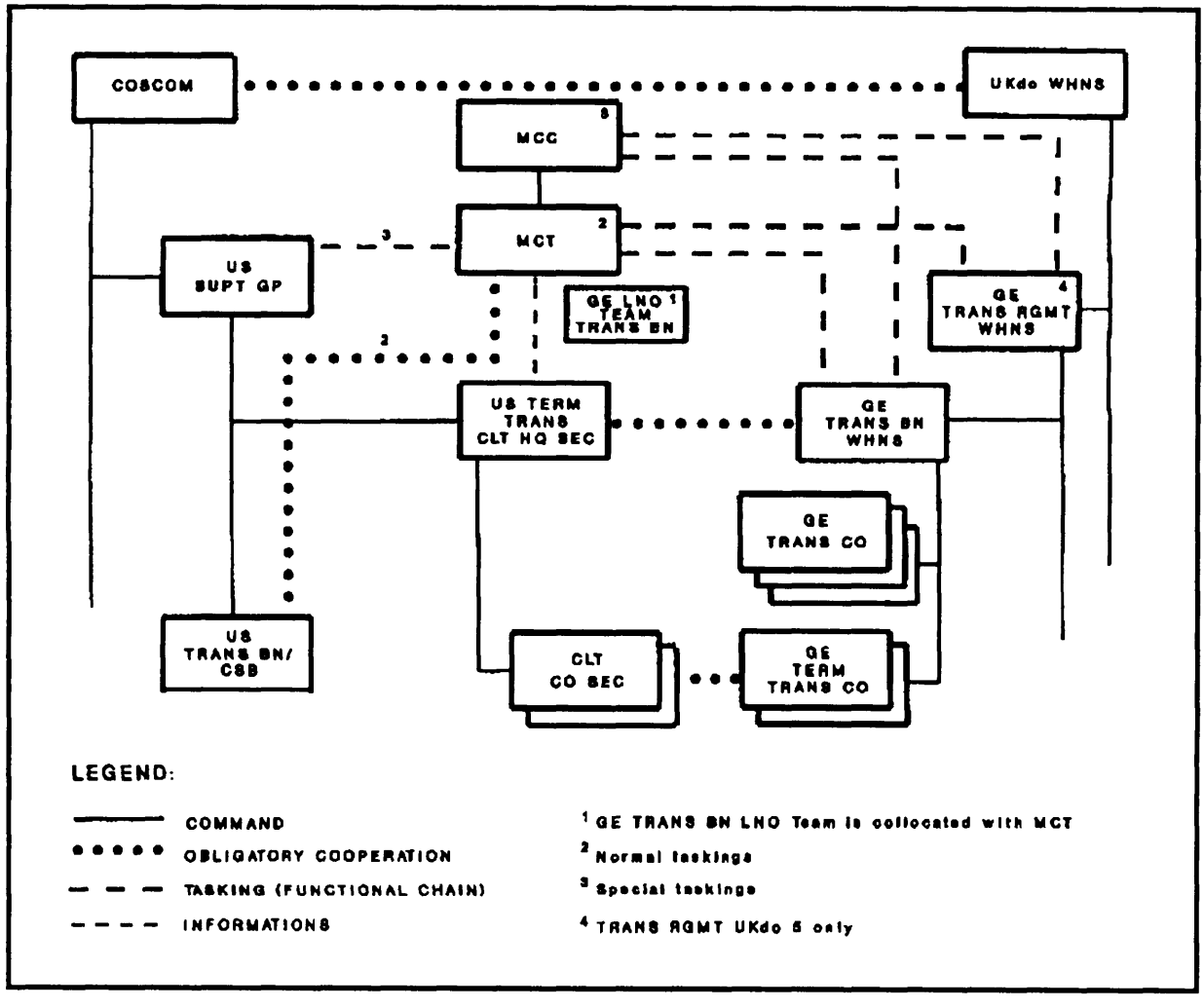

Figure B-6. Corps CLT Command Relationships.

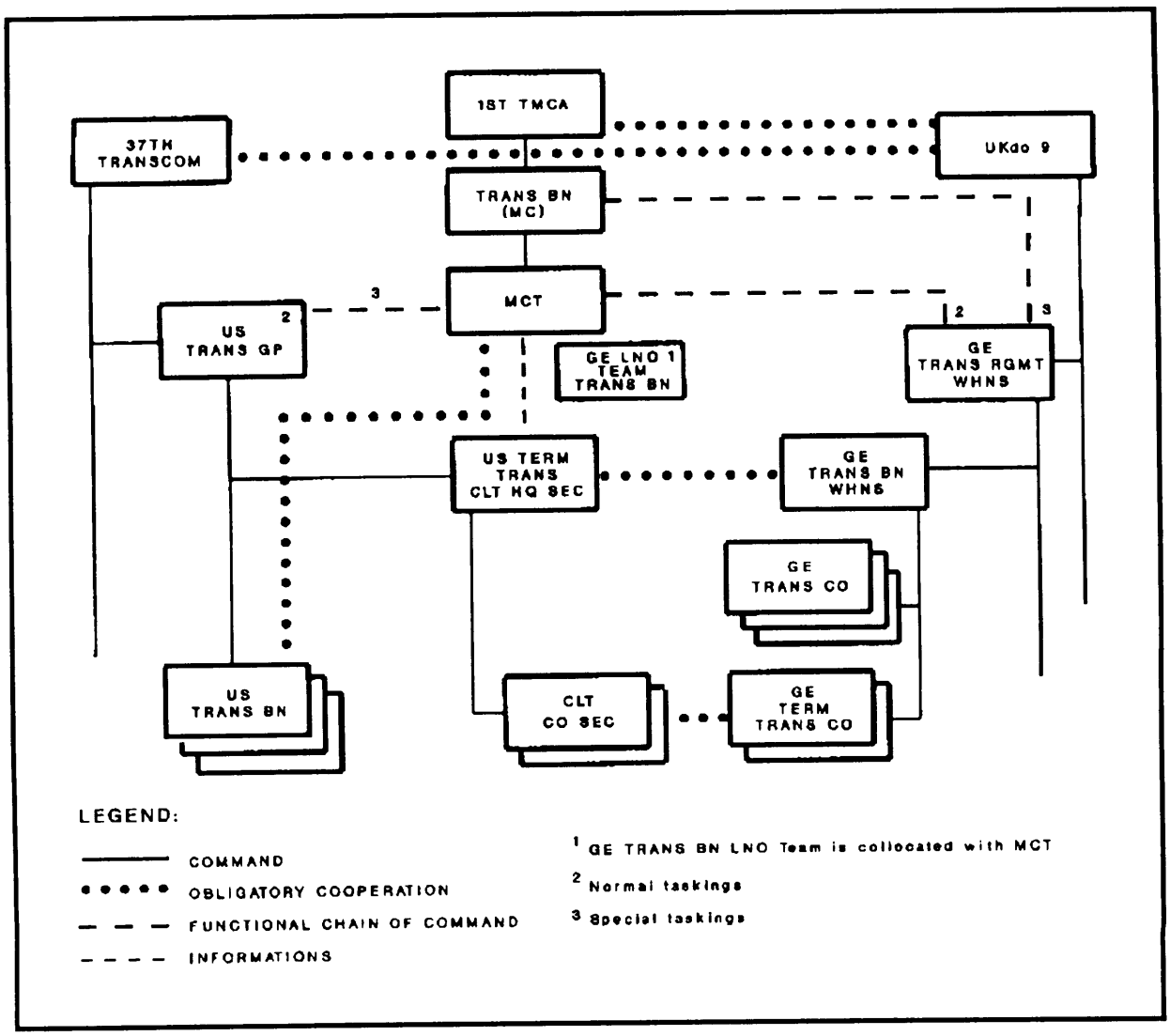

Figure B-7. Theater CLT Command Relationships.

c. Organization. The CLT consists of 19 soldiers:

(1) Detachment headquarters:

1 CPT, 88A, CLT OIC
1 SFC, 88N, NCOIC
1 SPC, 88N, Documentation Clerk/Driver

(2) Company team (soldiers equally divided into two teams):

2 SSG, 88N, Chief Documents Supervisor
2 SGT, 88N, Freight Movements NCO
6 SPC, 88N, Freight Movements Specialist
6 PFC, 88N, Freight Movements Specialist

d. Duties of CLT Members.

(1) The detachment OIC is responsible for the overall operation of the team. He directs detachment administration and establishes plans, policies, and procedures. He also serves as special staff officer (logistics operations officer for battalion S3) of a German transportation battalion.

(2) The detachment NCOIC is the principal enlisted assistant to the OIC. He supervises detachment personnel; plans directs, and controls subordinates; and instructs and supervises subordinates in transportation movement procedures and work techniques.

(3) The detachment clerk, vehicle driver, and administrative specialist consolidates and forwards management reports to higher headquarters. He operates communications equipment and automated data terminals as required. He also performs duties of a freight movements specialist when required.

(4) The chief document supervisor supervises cargo documentation, preparation, and collection. He reviews, consolidates, and prepares technical and administrative reports governing transportation movement operations. He plans, directs, and controls subordinates.

(5) The freight movements specialist ensures that cargo shipments are properly marked labeled, and recorded. He prepares cargo documentation as needed during terminal transfer operations. He also gathers statistical data for preparing movement reports and provides guidance to German personnel on proper loading of US-unique equipment.

B-8. STANDARDIZATION AGREEMENTS

a. USAREUR develops their own forms to implement the provisions and data/information of NATO STANAGs.

b. A list of NATO STANAGs (in use or under development) pertaining to movement control is listed in the preface.

EXTRACT OF STANAG 2023

NATO UNCLASSIFIED

Agreed English/French texts

STANAG 2023
(Edition 2)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

MARKING OF MILITARY CARGO FOR INTERNATIONAL MOVEMENT
BY ALL INTERNATIONAL MEANS OP TRANSPORT

Annexes : A. Location of marking on packages
B. Definitions

Related documents :
STANAG 1059 OP - National Distinguishing Letters for use by NATO Forces
STANAG 2019 OP - Military Symbols
STANAG 2175 VF - Classification and Designation of Flat Wagons suitable for Transporting Military Vehicles and Equipment
STANAG 2316 AMMO- Marking of Ammunition (and its Packaging) of a Calibre below 20 mm
STANAG 2322 AMMO- Minimum Markings for the Identification of Ammunition (and its Packaging)
STANAG 3150 MMS - Codification of Equipment - Uniform System of Supply Classification
STANAG 3151 MMS - Codification of Equipment - Uniform System of Item Identification
STANAG 3427 TN - Colours for Identification of Air-Dropped Supplies
STANAG 3854 TN - Policies and Procedures governing the Air Transportation of Dangerous Cargo
STANAG 4123 LOG - Methods to Determine and Classify the Hazards of Ammunition
International Convention for Rail Transport of Goods (CIM) (1)
International Regulation concerning the Carriage of Dangerous Goods by Rail (RID - Annexs I to CIM)
European Agreement on the Carriage of Dangerous Goods by Road ADR)
International Maritime Dangerous Goods (IMDG) of Intergovernmental Maritime Consultative Organization (IMCO)
European Agreement on the Carriage of Damgerous Goods by Inland Waterways (ADN)
United Nations Hazard Code

NOTE: (1) The C.I.M. is also used for road transport by Belgium, France, Italy and Netherlands

AIM

1. The aim of this agreement is to standardize, for the use of the NATO forces:

a. Marking of military cargo, and

b. Handling and storage instructions,

for consignments of military cargo for international movement by all international means of transport, except where the move is national in character and IS handled exclusively by that nation's means of transport.

AGREEMENT

2. Participating nations agree to standardize:

a. Marking of military cargo

b. Handling and storage instructions

for consignments of military cargo for international movement by all International means of transport, except where the move is national in character and is handled exclusively by that nation's means of transport.

GENERAL

3. The principles followed in this STANAG, and which will apply to subsequent amendments and supplements, are as follows:

a. Subject to over-riding security consideration, the system of markings should be the same in peace as in war.

b. The system must comply, insofar as practicable, with commercial requirements.

c. Existing International and NATO Standardization Agreements should be observed where obligatory, and made use of where practicable, in preference to devising new standards, symbols, etc.

d. The STANAG concerns those marks which are essential information to personnel handling cargo in transit. Other marks of distinct national interest are permitted insofar as they do not detract from the clarity of the essential markings.

e. All marks should be made in BLACK except where another colour will provide greater clarity or is specifically prescribed.

f. All marks should be simple so that they can be readily applied to a consignment and easily recognized for sorting purposes.

g. In the case of air-dropped supplies, the provisions of STANAG 3427 regarding the colour identification code will apply.

jg

h. Measurements are expressed in the metric system, and if these are not the normal units of the consignor or consignee, in feet and inches also. They are to be rounded up to the next centimetre or inch.

i. In the case of transport of vehicles, STANAGs 2175 and 2163 apply.

DETAILS OF THE AGREEMENT

4. Markings and labels. Subject to over-riding security considerations, the following movement marks and labels are to appear on packages as shown in Annex A. When a large number of packages containing the same type of material are dispatched by one consignor, to one destination, providing they form part of a single consignment, only 10% of the total number of packages need bear the markings specified. If the consignor so wishes, the unmarked packages may bear the identification number, followed by a serial number within the consignment:

a. Consigning Nation. The National Distinguishing Letters given in STANAG 1059 are to be placed OUTSIDE and to the LEFT of a rectangle containing the consignment Identification Number.

b. Identification Number. The consignment Identification Number. as laid down by the consigning nation, is to be contained in a rectangular frame.

c. Port of Discharge The sea port or airport of discharge is to be shown in clear.

d. Consignee Unit. The consignee's address is to be shown in clear.

e. Weights and Dimensions The following are to be marked on packages as appropriate and/or nercessary:

(1) Gross weight (See AAP-6).

(2) Cube.

(3) Outside dimensions: length, width height. The only outside dimensions to be shown are for packages having any single dimension of 1.8 metres (72 inches) or more.

f. Package Numbers. Consignments consisting of a number of related packages are to be marked by the use of two numbers separated by an oblique stroke. The first number will indicate the individual package, the second will indicate the total number of packages (e.g. 6/12).

g. Priority Marks. The degree of national priority allocated to a consignment and the priority marks applied will be in accord with an inernationally agreed system. In the absence of such an international priority system, the degree of priority desired will be indicated by the consignor, according to hls own national system.

jg

h. Commodity Identification. Commodity (item) identification will be by NATO Stock Number, Commodity Mark or nomenclature, in accord with the normal procedures of the consignor.

i. Special Cargo Labels. The labels specified in the International Conventions and STANAGs listed in the related documents are to be used for dangerous cargoes.

5. Handling and storage instructions:

a. With regard to the handling and storage of consignments, no symbols are given in this instruction, as appropriate symbols are being adopted by the International Standards Organization (IS0).

b. The point of balance shall be marked by a vertical line not less than 7.6 cm (3 inches) long, painted from the bottom edge of both sides of packages over 3 metres (10 feet) in length or those which are unbalanced. The letters "C.C." shall be stencilled or printed immediately above or alongside of this mark.

6. Location of markings on packages:

a. Commodity (item) identification is to be shown on one side and address markings are to be shown on the opposite side of packages with a volume equal to or less than 260 litres (10 cubic feet). Additionally, when the volume of the package is more than 280 litres (10 cubic feet), both commodity identification and address markings will be shown on the end of the package to the right when facing the side showing address markings. The opposite end and the top and bottom shall be used only for special cargo markings or labels required to be placed there by law, international agreement or regulation of the consignor, or required for safe handling. Other special cargo markings as required, to include handling and storage instructions not otherwise displayed, shall be shown on or attached to one side of the package, preferably the side showing commodity identification.

b. Packages which are non-parallel sided are to be marked in at least one location with commodity identification and address markings.

c. The position of markings or labels is shown in Annex A-1 to A-3. The detailed mandatory and optional composition of commodity identification and address markings is shown in Appendix 1 to Annex A.

d. Where there are no surfaces suitable for stencilling, weather-proof tags or .labels are to be used.

e. The position of the markings: gross weight (WT) and cubic capacity (CU) shown on the sketch attached to Annex A does not apply to ammunition packages. Details of ammunition markings are given in STANAGs 2316 and 2322.

7. Documents. Documents and detailed lists of contents are to be firmly to the outside of at least one package, of any consignment, if the nature of the package permits. Otherwise the documents and lists are to be placed inside the package or package.

IMPLEMENTATION OF THE AGREEMENT

8. This STANAG is implemented when the necessary orders/instructions to adopt the method described in this agreement have been issued to the forces concerned.

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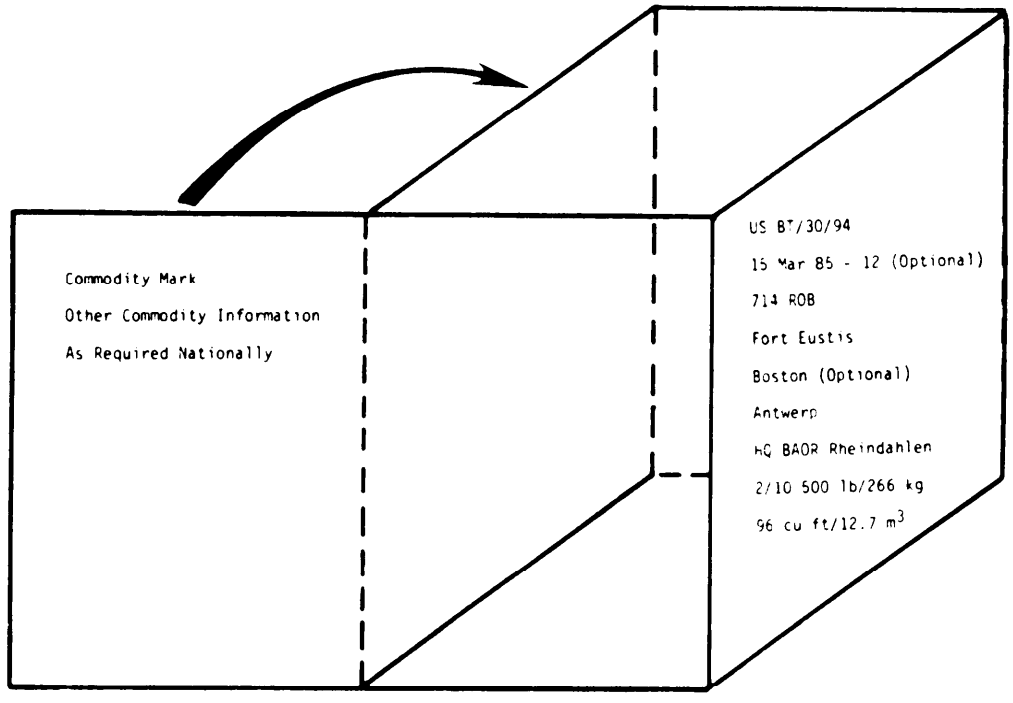
ANNEX A TO STANAG 2023
(Edition Nº 2)

LOCATION OF MARKINGS ON PACKAGES

Fig. A

Package with volume up to 280 litres (10 cu ft)



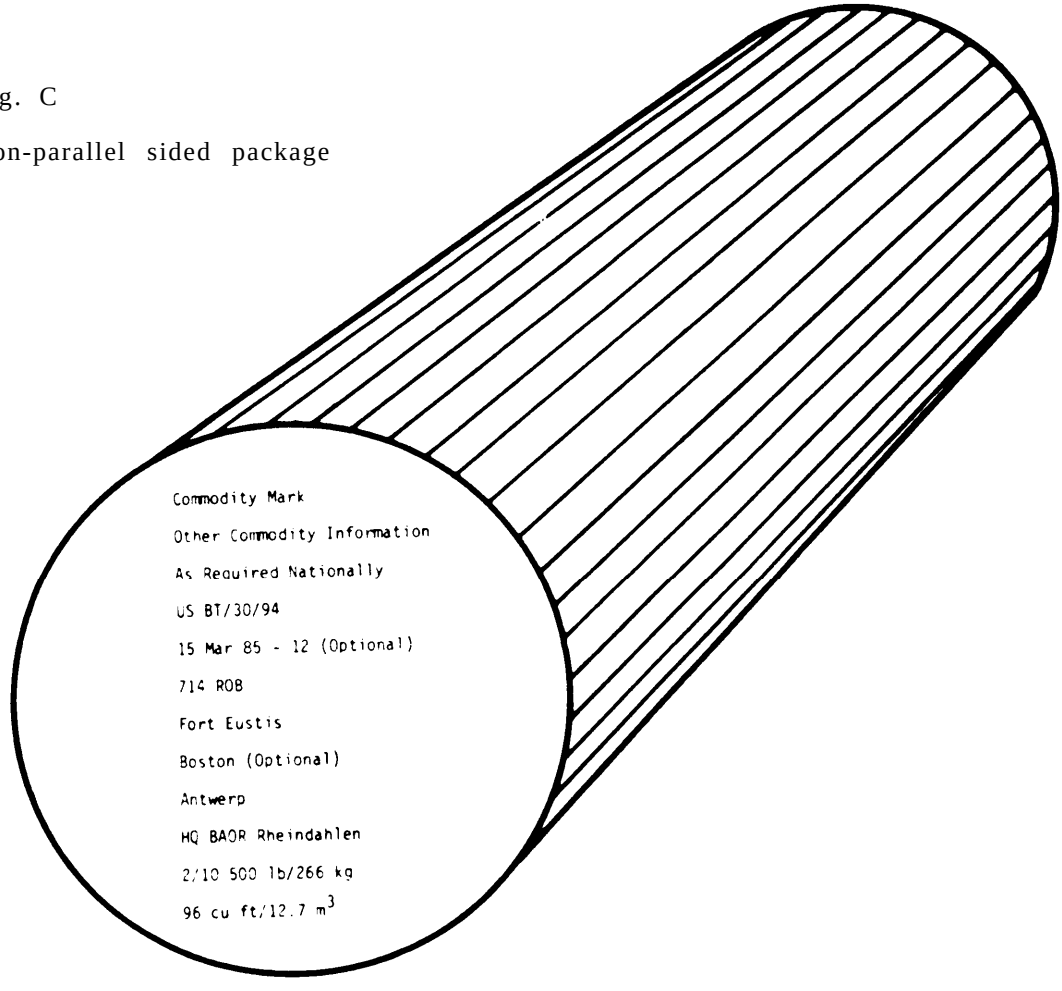
NATO UNCLASSIFIED

ANNEX A TO STANAG 2023
(Edition Nº2)

LOCATION OF MARKINGS ON. PACKAGES

Fig. C

Non-parallel sided package



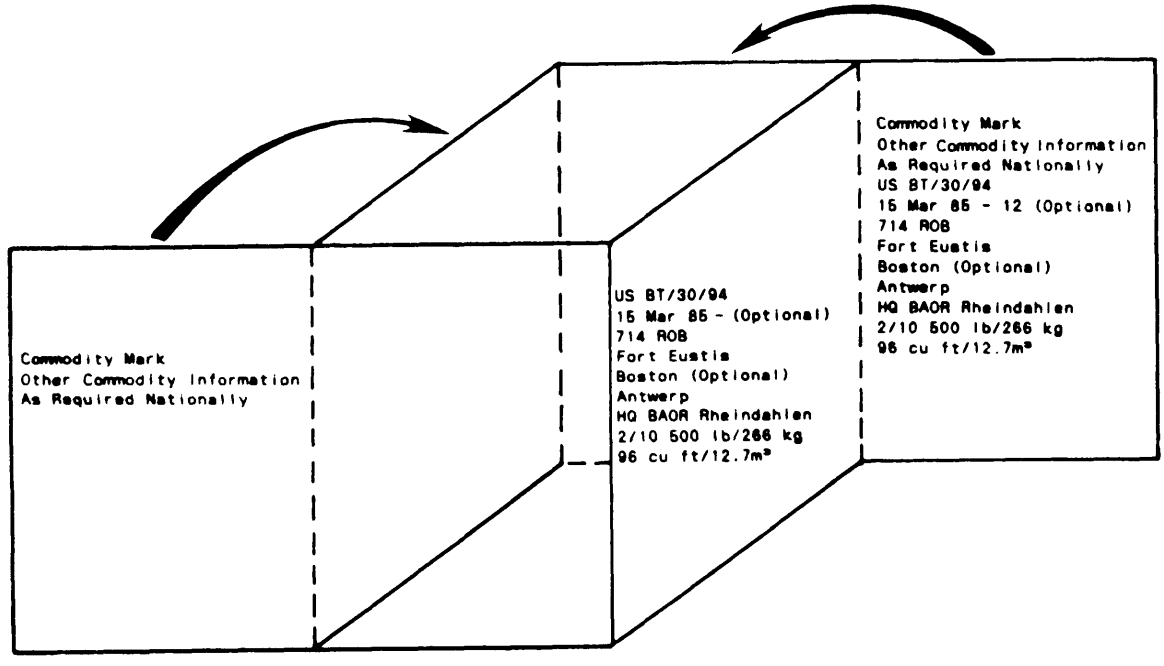
NATO UNCLASSIFIED

ANNEX A TO STANAG 2023
(Edition No. 2)

LOCATION OF MARKINGS ON PACKAGES

Fig. B

Package with volume over 280 liters (10 cu ft)



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APPENDIX 1 TO ANNEX A TO STANAG 2023
(Edition Nº 2)

"COMMODITY IDENTIFICATION" FORMAT

LINE 1	:	Commodity (item) Identification by nomenclature, NATO Stock Number, and/or Commodity Mark according to National System of consignor.
LINES 2, 3, etc.	:	Other Commodity information as required nationally.

"ADDRESS MARKING" FORMAT

LINE 1	:	Consignment (Shipment) Identification Number.
LINE 2	:	Required Delivery Date and Project Code (optional) and Priority Mark.
LINES 3 and 4	:	From Consignor.
LINE 5	:	From Port of Embarkation (optional).
LINE 6	:	Via Port of Discharge (if applicable).
LINE 7	:	To Consignee.
LINE 8	:	Unit Number, Total Units, WT of each Unit, Cube of each Unit.

EXTRACT OF STANAG2155

NATO UNCLASSIFIED

Agreed English/French Texts

STANAG 2155
(Edition 2)
NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

ROAD MOVEMENT BIO AND CREDIT

Annexes :
A. Road Movement Bid (Not for initial movements)
B. Road Movement Bid (For initial movements)
C. Road Movement Credit Granted

Related Documents :
STANAG 2026 M&T - NATO Travel Order
STANAG 2041 M&T - Operation Orders, Tables and Graphs for Road Movement
STANAG 2154 M&T - Regulations for Military Motor Vehicle Movement by Road
STANAG 2174 M&T - Milltary Routes and Route/Road Networks
STANAG 2176 M&T - Procedures for Military Road Movement Across National Frontiers

AIM

1. The aim of this agreement IS to provide participating nations with standardized documents (see paragraph 5 below) for road movement in a format suitable for automatic data processing (ADP) and/or manual handling, applicable in peace and in wartime in all NATO Forces.

AGREEMENT

2. Participating nations agree to comply with the instructing contained in this STANAG in respect of road movement Bio and Credits.

GENERAL

3. The printing of the documents is to be made in at least one of the two official NATO languages (English and French). In addition, the language of the country of origin, may be used (Annexes A and B only). (1)

4. When traveling from one NATO country to another the above mentioned documents are not a substitute for the NATO Travel Order (STANAG 2026).

DESCRIPTION

5. The documents to be used are as follows:

a. Road Movement Bid (Not for initial movements) - Annex A.
b. Explanatory notes to Road Movement Bid (Not for initial movements) - Appendix 1 to Annex A.
c. Road Movement Bid Teletype Message (Not for initial movements) - Appendix 2 to Annex A.
d. Road Movement Bid (For initial movements) - Annex B.

NOTE: (1) In the examples of Annexes A and B German is used as the language of country of origin.

e. Explanatory Notes to Road Movement Bid (For initial movements) — Appendix 1 to Annex B.
f. Road Movement Credit Granted - Annex C.
g. Road Movement Credit Granted Teletype Message - Appendix 1 to Annex C.

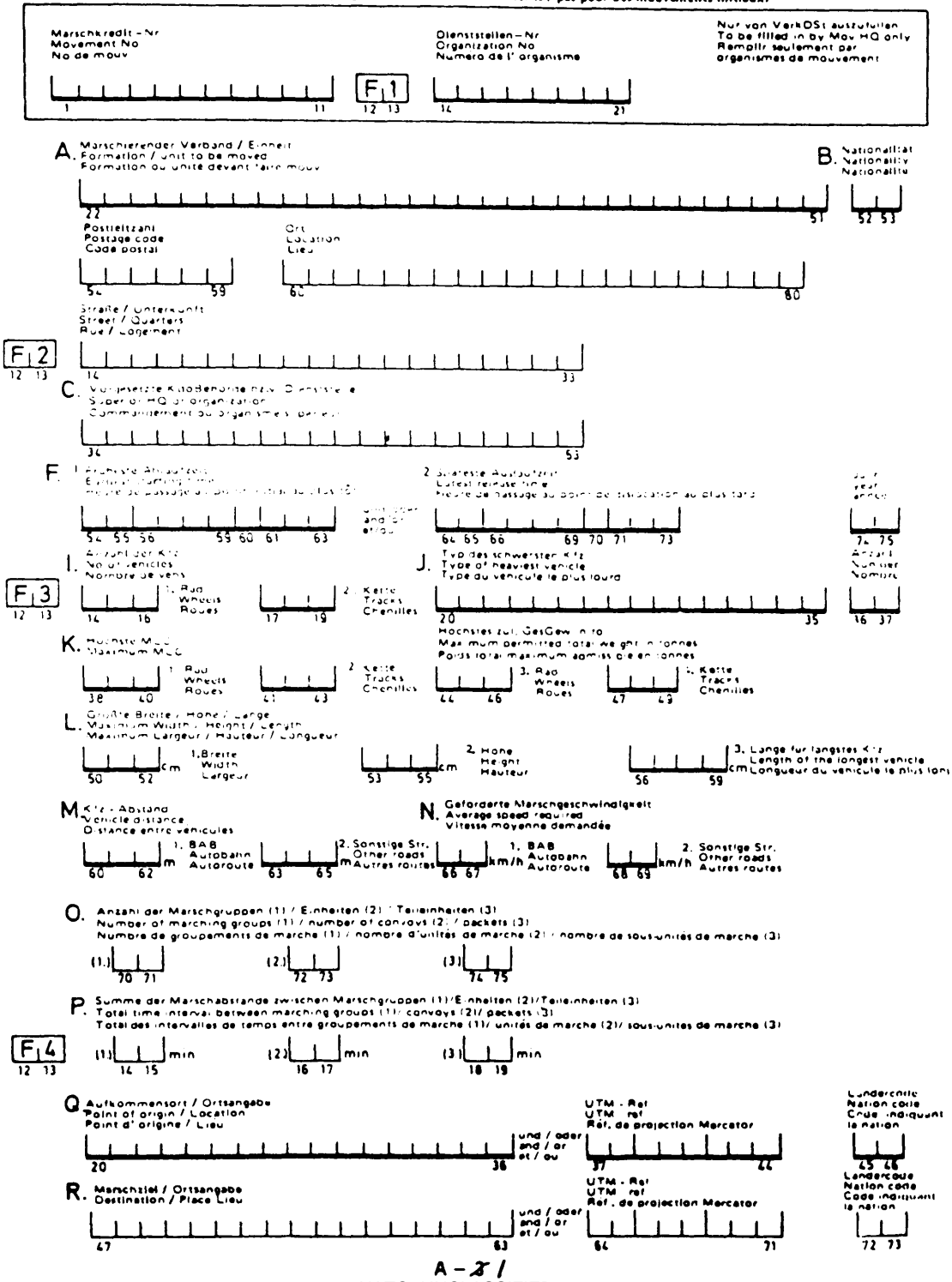
IMPLEMENTATION OF THE AGREEMENT

6. This STANAG is implemented when the necessary orders/instructions bringing into use the documents mentioned in the Agreement have been issued to the forces concerned.

jg

Marschanmeldung / Road Movement Bid / Demande de Mouvement par Route

(nicht fur Anfängsbewegungen / not for initial movements / pas pour des mouvements initiaux)



A - 21

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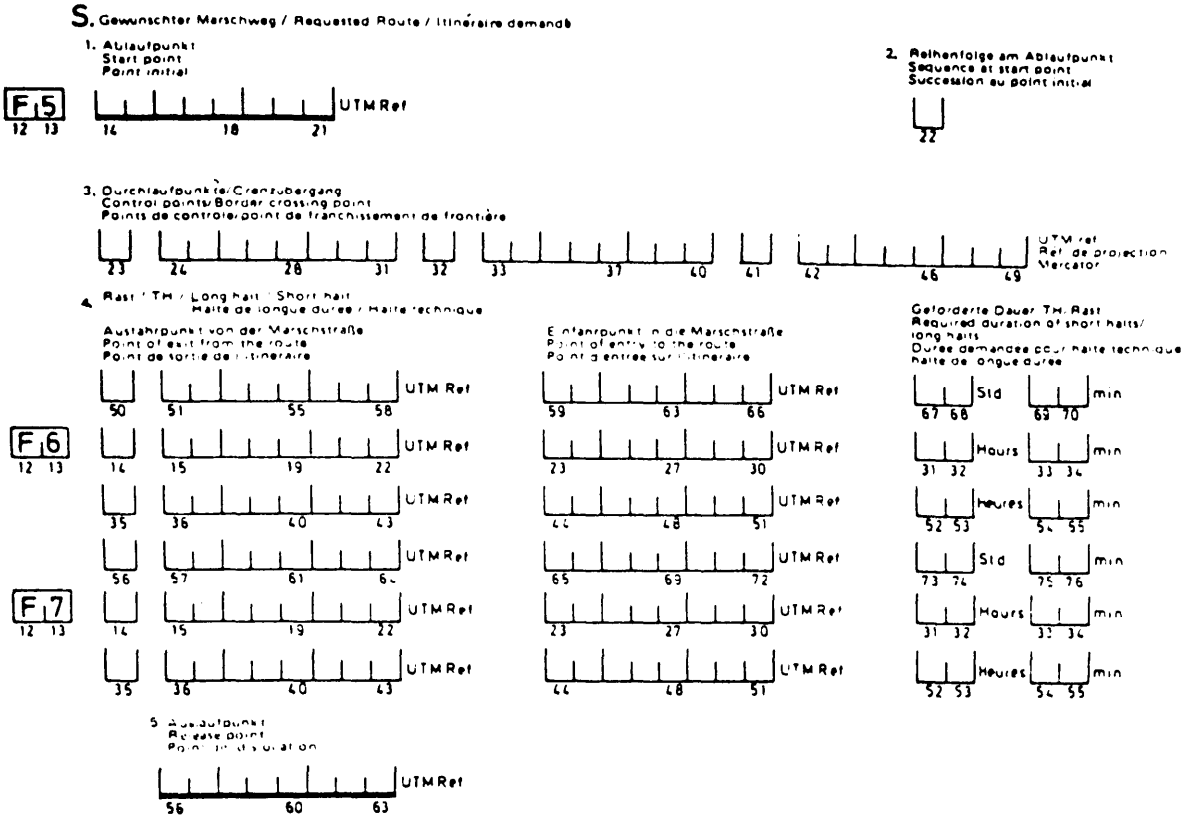
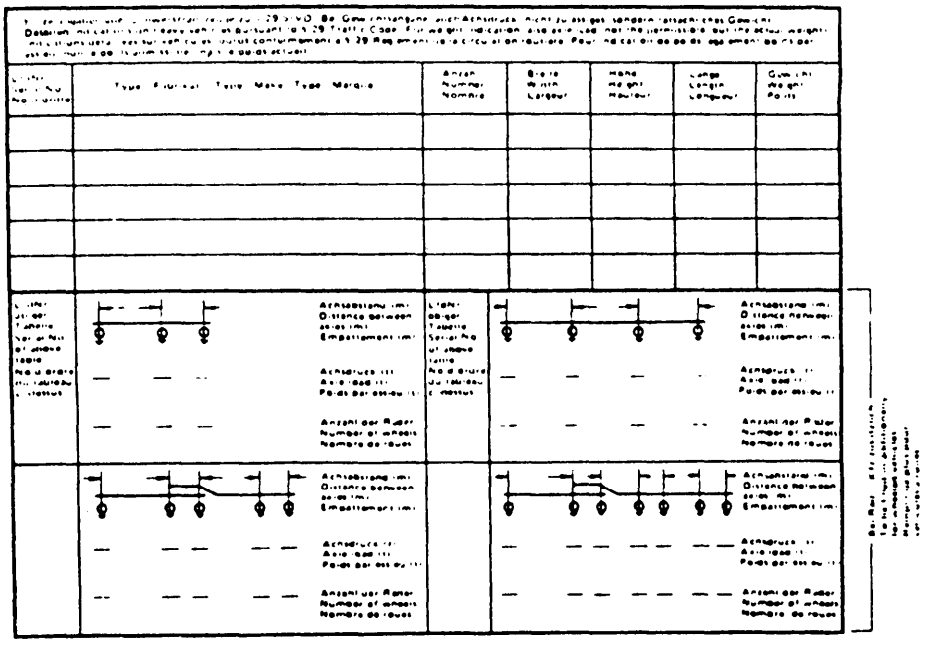




APPENDIX 1 TO ANNEX A
TO STANAG 2155
(Edition 2)

EXPLANATORY NOTES TO THE FORM
ROAD MOVEMENT BID
(not for initial movements)

1. General notes

a. The blocks marked by a bold underline must be filled in completely. When using a two-coloured form (Red and Black) the blocks marked in red must be filled in completely.

b. The completion of additional blocks is left at the discretion of the unit submitting the road movement bid (if no information IS given on short halts, long halts and vehicle distance the provisions laid down in the hosting countries regulations will be appl ied.

c. The prescribed blocks are to be filled in carefully by writing in block letters.

d. The forms are to be completed by using a single letter or numeral only for each block provided; lengthy Information should be abbreviated.

e. Zeros are to be crossed slantwise (Ø).

f. Enter words left-aligned and figures right-aligned.

g. Hyphens (-) and slants (/) and other symbols must not be used. Leave blanks instead.

2. Special notes (instruction) for the completion of the form lines specified below

a. Heading (marked) The movement number to be assigned and the activity identification number are to be entered in the headline by the movement headquarters responsible for the movement processing.

By way of exception, the entries are to be made left-aligned without spaces.

The visiting forces will make the following entries unless their movement is processed by a German movement agency:

BE 111 111
CA 666 666
DA 999 999
PR 555 555
LU 222 222
ML 333 333
UK 888 888
US 444 444

On the basis of these codes the addresses of the movement agencies will be transferred from the address file to the forms issued.

Ad F — Enter either the earliest starting time or the latest release time or both when required.

Ad I — Number of vehicles subdivided into wheeled and tracked vehicles.

Ad K — Enter the military load class and the maximum permitted total weight of the heaviest vehicle in tonnes so that also those bridges which have not been assigned a military load class, can be taken into consideration.

Ad L — Enter the maximum width of the widest vehicle the maximum height of the highest vehicle and the maximum length of the longest vehicle of the march column.

Ad C + P — If the march column is subdivided under 0, P is to be completed accordingly.

Ad C + R — If the point of origin and the destination of the movement are indicated the nation code must also be entered.
(e.g. BRUSSELS . . . . . BE - HANNOVER . . . . . GE)

Ad S — Conspicuous road crossings shall be scheduled as start points, control points and release points. For that purpose, the six digit UTM-reference plus group of letters (e.g. MD 634223) shall be precisely determined and entered in clearly legible way in the respective squares. For visiting forces the start point may be the border crossing point.

Ad S 2 — If two or more movements at the same start point with the same release time are planned by different services, the sequence at the start point should be fixed by the superior HQ organization.

Ad S 3 — Enter control points or border crossing points only if the movement is to follow a particular route for compelling reasons (such entries will limit the search for the optimal route by means of computation).

Ad S 3+4 — If necessary, indicate in the blocks "F5" 23, 32, 41, 50 as well as "F6" 14, 35, 56, and "F7" 14, 35, the sequence of control points and/or the exit points for long halts and short halts.

Ad S 4 — Indicate by UTM-reference, where the column is to leave the route for a desired long halt or short halt and where it will re-enter the route. In the field "Required duration of long halt/short halt" the duration is to be filled in by hours and minutes. (Example: Long halt 02 h 30 min
short halt 00 h 30 min

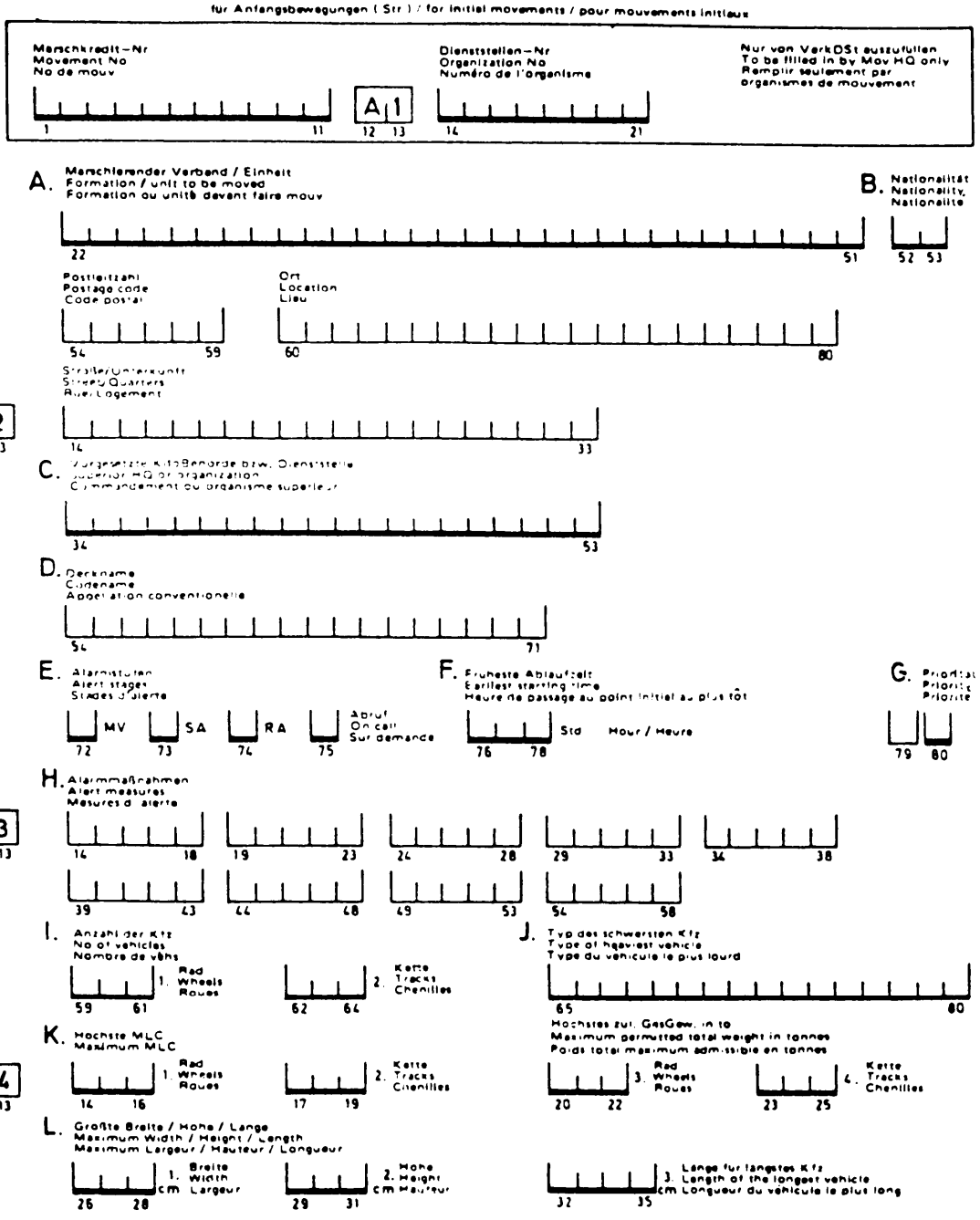
Additional data below the horizonal line is to be filled in by the German Mov HQ only when needed.

NATO UNCLASSIFIED
NATO SECRET
(wenn ausgefüllt)
(when filled in)
(après avoir été rempli)

ANNEX B TO STANAG 2155
(Edition No. 2)

Marschanmeldung / Road Movement Bid / Demande de Mouvement par Route

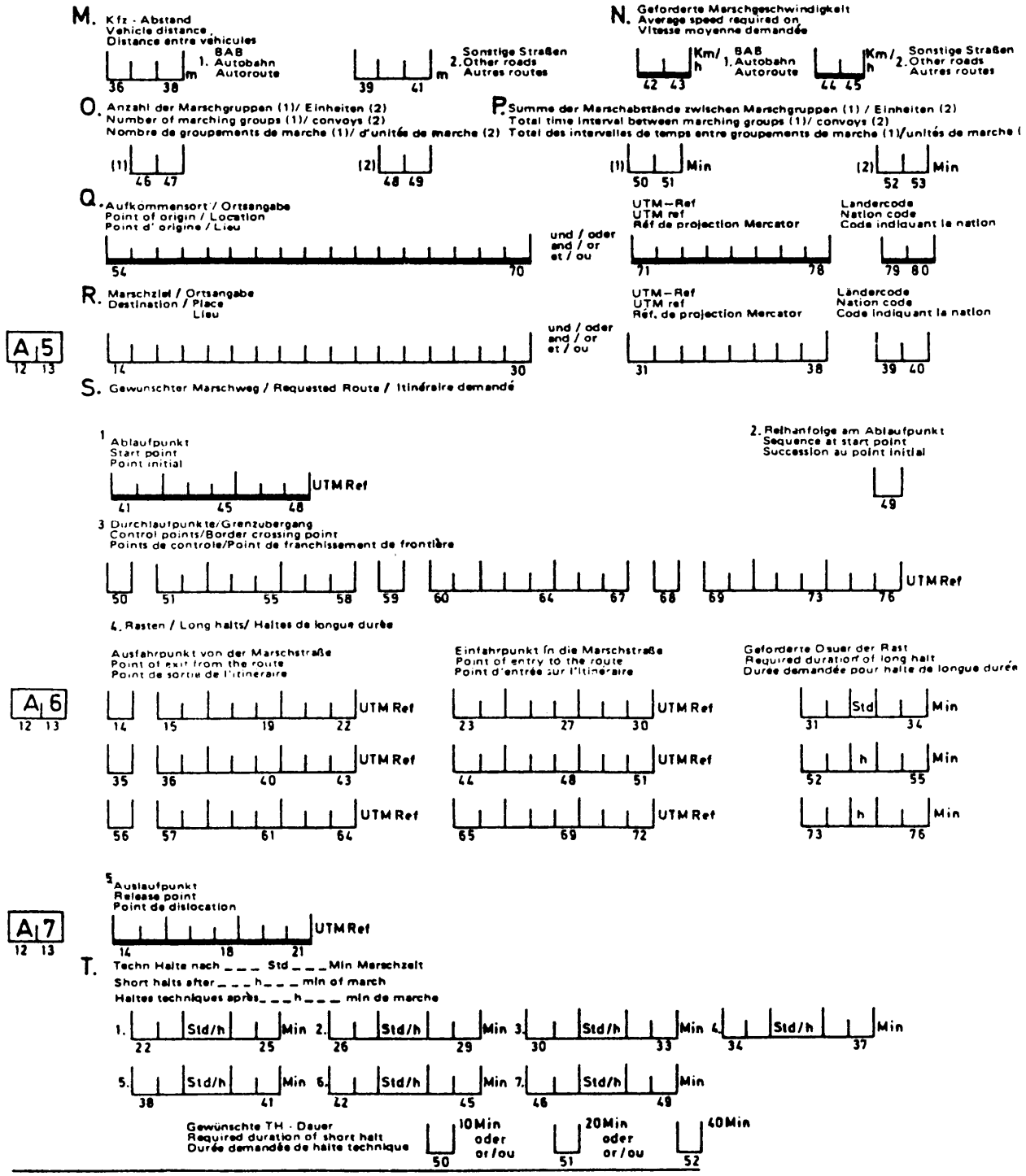
für Anfangsbewegungen (Str) / for initial movements / pour mouvements initiaux



NATO SECRET
B – 21
NATO UNCLASSIFIED

NATO SECRET

(wenn ausgefüllt)
(when filled in)
(après avoir été rempli)



*Besondere Erfordernisse
Special requirements
Exigences particulières

NATO SECRET
B-A 2
NATO UNCLASSIFIED

Dienstgrad, Name, Dienststelle, Telefon - Nr.
Rank, name, headquaters, telephone No
Grade, nom, organisme, No de téléphone

Form 1/83

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APPENDIX 2 TO ANNEX A
TO STANAG 2155
(Edition 2)

EXAMPLE OF A TELETYPE MESSAGE
ROAD MOVEMENT BID

(Not for initial movements)

From	:	EMRR 3	241Ø3Ø Z May 78
To	:	VerkK 731 KÖLN	
For information	:	WBK III - G 3/VerkFU	
Subject	:	Road Movement Bid No. 21/78 Road Movement Credit Granted 27-BEA-11	
		ALPHA:	7 ARTY ~~RBGT~~ BN
		BRAVO:	B E
		CHARLIE:	2 INF DIV
		FOXTROT: ONE:	27193Ø Z May 78
		INDIA: ONE :	40
		Two :	25
		JULIET:	MAN 7 t
			12
		KILO: ONE:	14
		TWO:	11
		THREE:	13
		FOUR:	11
		LIMA : ONE:	269 cm
		TWO:	310 cm
		THREE:	810 cm
		MIKE: ONE:	100 m
		TWO:	50 m
		NOVEMBER: ONE:	50 km/h
		TWO:	40 km/h

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OSCAR:	TWO:	3
QUEBEC:		HEVERLEE (PS 202352) BE
ROMEO:		BENSBERG (LB 710480) GE
SIERRA:	ONE:	(FS 210341)
	THREE:	KB 969220
		LB 486440
		LB 571392
		LB 664460
	FOUR:	LB 207351 - LB 334315
		01 h 00 min
	FIVE:	LB 686461

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APPENDIX 1 TO ANNEX B
TO STANAG 2155
(Edition 2)

EXPLANATORY NOTES TO THE FORM ROAD MOVEMENT BID

(For initial movements)

1. General notes

a. The blocks marked by a bold underline must be filled in completely. When using a two-coloured form (Red and Black) the blocks marked in red must be filled in completely.

b. The completion of additional blocks is left at the discretion of the unit submitting the road movement bid (if no information is given on short halts, long halts and vehicle distance the provisions laid down In the hosting countries regulations will be applied).

c. The prescribed blocks are to be filled in carefully by writing in block letters.

d. The form is to be completed by using a single letter or numeral only for each square of the blocks provided; lengthy information should be abbreviated.

e. Zeros are to be crossed slantwise (Ø).

f. Enter words left-aligned and figures right-aligned.

g. Hyphens (-) and slants (/) and other symbols must not be used. Leave blanks instead.

2. Special notes (instructions) for the completion of the form lines specified below

a. Heading (marked) The movement number to be assigned and the activity identification number are to be entered in the headline by the movement headquarters responsible for the movement processing. By way of exception, the entries are to be made left-aligned without spaces.
The visiting forces will make the following entries unless their movement is processed by a German movement agency:

BE 111 111
CA 666 666
DA 999 999
FR 555 555
LU 222 222
NL 333 333
UK 888 808
US 444 444

On the basis of these codes the addresses of the movement agencies will be transferred from the address file to the forms issued.

Ad C — Enter superior HQ or organization.

Ad E — Check off the applicable alert stage causing the movement. Check off the square "On call" if the movement is not to be included in the time schedule of the overall movement plan.

Ad F — Enter the earliest starting time at the start point or border crossing point.
The entry is determined by the situation given by the superior headquarter (Army Group/Corps), e.g. declaration of Reinforced Alert without prewarning.

Ad G — Enter in block 80 the assigned priority 1 - 7 which determine the priority of move on the march route.
As a basis for planning. in addition, there is the possibility to request a certain arrival sequence within a major formation by entering the letters A - J in block 79.
In this case "A" means highest priority.

Example: The march column of a corps with priority level "A" will arrive prior to any other march column with the priority levels "B", "C", etc. The time given in "F" is to be taken into account.

Ad H — Enter relevant alert measure(s) causing the movement. Up to nine alert measures may be entered.

Ad I — Number of vehicles, sub-divided into wheeled and tracked vehicles.

Ad K — Enter the military load class and the maximum permitted total weight of the heaviest vehicle in tonne so that also those bridges which have not been assigned a military load class, can be taken into consideration.

Ad L — Enter the maximum width of the widest vehicle, the maximum height of the highest vehicle and the maximum length of the longest vehicle of the march column.

Ad 0 + P — If tile march column is subdivided under 0, P is to be completed accordingly.

Ad Q + R — If the point of origin and the destination of the movement are indicated the nation code must be entered, too.
(e.g. BRUSSELS . . . . . BE-HANNOVER . . . . . .GE).

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Ad S	Conspicuous road crossings are to be scheduled as start points, control points and release points. For that purpose, the six digit UTM-reference plus group of letters (e.g. MD 634223) shall be precisely determined and entered in a clearly legible way in the respective squares.
Ad S 2	If several agencies plan two or more movements with the name priority and the same time of departure at the same star point, the priority of move from the start point will be determined by the next higher headquarters and entered subsequently by the movement agency processing the movement.
Ad S 3	Enter control points or border crossing points only if the movement is to follow a particular route for compelling reasons (such entries will limit the search for the optimal route by means of computation).
Ad S 3 + 4	If necessary, indicate in the blocks 50, 59, 68 as well as 14, 35, 56 the sequence of control points and/ or of exit points for long halts in which the movement is to touch these points.
Ad S 4	For desired long halts indicate at which junction the column is to leave the route. for the long halt and where it shall re-enter the route. In the block "Required duration of long halt" the duration must be entered in hours and munutes (e.g. Ø2 h 3Ø min).
Ad T	If the blocks "Short halts" are not filled in, a short halt for 30 minutes will automatically be produced after each two hours running-time by the system (only on German territory).

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ANNEX C TO STANAG 2155
(Edition 2)

ROAD MOVEMENT CREDIT GRANTED
CREDIT DE MOUVEMENT PAR ROUTE ACCORDE
(Example/Exemple)

Movement No
No de mouvement .....

A. Formation/Unit to be moved
Formation ou unité devant faire mouvement .....

B. Nationality
Nationalité .....

C. Superior HQ or organization
Commandement ou organisme supérieur .....

D. Code name
Appellation conventionnelle .....

E. Alert stages
Stades d'alerte .....

F. (1) Time for first vehicle to cross start point
(Date/time group)
Heure de passage du premier vehicule au point initial
(Groupe date/heure) .....

(2) Latest release time
Heure d'arrivée au plus tard au point de dislocation .....

G. Priority
Priorité .....

H. Alert measures
Mesures d' alerte .....

1. Number of vehicles
Nombre de vehicules .....

(1) Wheeled
A roues .....

(2) Tracked
A chenilles .....

jg

OTAN SAUS CLASSIFICATION

NATO UNCLASSIFIED

J. Type of heaviest vehicle
Type du véhicule le plus lourd . . . . . .

K. Max. military load classfication
Classement militaire max.

(1) Wheeled
A roues . . . . . .

(2) Tracked
A chenilles . . . . . .

Maximum admissible total weights, in tonnes
Poids total maximum admissible, en tonnes

(3) Wheeled
A rouee . . . . . .

(4) Tracked
A chenilles . . . . . .

L. Max. width, height and length (cm)
Largeur, hauteur et longueur max. (cm)

(1) Width
Largeur . . . . . .

(2) Height
Hauteur . . . . . .

(3) Length
Longueur . . . . . .

M. Vehicle distance
Distance entre vehicules

(;) Motorways
Autoroutes . . . . . .

(2) Other roads
Autres routes . . . . . .

N. (1) Average speed
Vitesse moyenne

(a) Motorways
Autoroutes . . . . . .

(b) Other roads
Autres routes . . . . . .

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(2) Length of column
Longueur du groupement de marche

(a) Motorways
Autoroutes . . . . . .

(b) Other roads
Autres routes . . . . . .

(3) Pass time
Durée d'écoulement

(a) Motorways
Autoroutes . . . . . .

(b) Other roads
Autres routes . . . . . .

O. Number of marching groups, convoys and/or packets
Nombre de groupements de marche, d'unité de marche et/ou de sous-unités de marche

(1) Marching groups
Groupements de marche . . . .

(2) Convoys
Unités de marche . . . . . .

(3) Packets
Sous-unités de marche . . . . . .

P. Total time intervals between marching groups, convoys and/or packets, in minutes
Total des intervalles de temps entre les groupements de marche, les unités de marche et/ou sous-unités de marche, en minutes

(1) Marching groups
Groupments de marche . . . . . .

(2) Convoys
Unités de marche . . . . . .

(3) Packets
Sous-unités de marche . . . . . .

Q. Point of origin and/or UTM-ref., nation code
Point d'origine et/ou coordonnées UTM, code de la nation . . . . . .

R. Desination and/or UTM-ref., nation code
Destination et/ou coordonnées UTM, code de la nation . . . . . .

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APPENDIX 1 TO ANNEX C
TO STANAG 2155
(edition 2)

EXAMPLE OF A TELETYPE MESSAGE
ROAD MOVEMENT BID
(Not for initial movements)

From	:EMRR 3		241030 Z May 78
TO	: VerkK 731 KOLN		
For information	: WBK III - G 3/VerkFU		
Subject	: Road Movement Bid No. 21/78 Road Movement Credit Granted 27-BEA-11		
	ALPHA:		7 ARTY BN
	BRAVO:		BE
	CHARLIE:		2 INF DIV
	FOXTROT:	ONE:	271930 Z May 78
	INDIA:	ONE:	40
		TWO:	25
	JULIE T:		Man 7 t
			12
	KILO:	ONE:	14
		TWO:	11
		THREE:	13
		FOUR:	11
	LIMA:	ONE :	269 cm
		TWO:	310 cm
		THREE:	810 cm
	MIKI: :	ONE:	100 m
		TWO:	50 m
	NOVEMBER:	ONE:	50 km/h
		TWO:	40 km/h
	OSCAR:	TWO:	3

C-1-1

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QUEBEC:		HEVERLEE (FS 202352) BE
ROMEO:		BENSBERG (LB 710480) GE
SIERRA:	ONE:	FS 210341
	THREE:	KB 969220
		LB 486440
		LB 664460
		LB 571392
		LB 664460
	FOUR:	LB 207351 - LB 334315
		01 h 00 min
	FIVE:	LB 686461

S. **Route ordered**
Itinéraire imposé

Military Route No.; No.d'itinéraire militaire	**Civilian Route No.; No.de route civile**	(1) Start point Point initial (2) Sequence at start point; Succession au point initial (3) Control points; Points de contrôle (4) Long halts/short halts; Haltes de longue durée/haltes techniques (Point of exit from the route/duration of the halt/point of entry to the route Point de sortie de l'itinéraire/durée de la halte/point d'entrée sur l'itinéraire **(5) Release point** **Point de dislocation**	UTM-ref.; Coordonnées UTM	**Pass time from - to;** **Durée d'écoulement de - à**

U. **Special instructions**
Instructions particulières

EXTRACT OF STANAG 2156

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English/French texts agreed

STANAG 2156
(Edition 4)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

SURFACE TRANSPORT REQUEST AND SURFACE TRANSPORT REPLY

Annexes : A. Surface Transport Request/Reply (Form)
B. General Instructions for Completion
C. Surface Transport Request (Format)
D. Surface Transport Reply (Format)

Related Documents :

STANAG 2021 ENGR	- Computation of Bridge, Raft and Vehicle Classifications
STANAG 2023 MMS	- Marking of Military Cargo for International Movement by All International Means of Transport
STANAG 2155 M&T	- Road Movement Bid and Credit
STANAG 2165 M&T	- Forecast Movement/Transport Requirements-Rail, Road and inland Waterways
STANAG 2166 M&T	- Movements and Transport Documents Used for Movements by Ship
STANAG 2174 M&T	- Military Routes and Route/Road Networks
STANAG 2175 VF	- Classification and Designation of Flat Wagons Suitable for Transporting Military Vehicles and Equipment
STANAG 3093 TN	- NATO Air Transport Request and Answer to Air Transport Request (NARAT and TRANSAR)

AIM

1. The aim of this agreement is to standardize:

   a. The data which forces must submit to the responsible agencies of another nation from which they request surface transport (Surface Transport Request).

   b. The data which is transmitted to the forces of another nation to meet submitted surface transport requirements (Surface Transport Reply).

AGREEMENT

2. Participating nations agree to comply with instructions set out below when preparing the information to be incorporated in the SURFACE TRANSPORT REQUEST and the SURFACE TRANSPORT REPLY.

3. It is further agreed that:

a. The forces of a nation request transport capacity from another nation only if they are not in a position to accomplish a required transport with their own means.

b. Transport Request and Reply may be transmitted by form or by electronic means.

c. The format for SURFACE TRANSPORT REQUEST and SURFACE TRANSPORT REPLY will be as shown in the relevant Annexes.

d. The printing of the documents is to be made in at least one of the two official NATO languages (English or French). In addition, the language or the country of origin may be used.

e. The data supplies will be submitted in one of the NATO languages (or in the language or the host nation if so agreed between the nations involved).

4. This STANAG applies to the following surface movement means:

a. road,

b. rail, without initial rail movements,

c. inland waterways,

d. sea.

DETAILS OF THE AGREEMENT

5. The Surface Transport Request

a. When a unit or formation plans a movement for which it does not posses. appropriate or adequate means of surface transport, it must submit a SURFACE TRANSPORT REQUEST to the headquarters concerned (Movements and Transport Agency) in accordance with national instructions and international agreements in force.

b. The SURFACE TRANSPORT REQUEST is designed so that the receiving headquarters (Movements and Transport Agency) has sufficient information to independently:

(1) Compare requirements against capabilities.

(2) Select suitable means of surface transport to meet tasks.

(3) Arrange for the necessary surface transport.

c The SURFACE TRANSPORT REQUEST may be used for transportation required to support port oeprations, but will not be used to request transport escorts or routing control. If handling services at origin or destination are required, they must be specifically indicated under paragraph 43 "Remarks" of the form.

d. The form SURFACE TRANSPORT REQUEST is at Annex A. INSTRUCTIONS FOR COMPLETION ara at Annexes B and C. Examples of SURFACE TRANSPORT REQUEST by form and by electronic means are at Appendices 1 and 2 to Annex C, respectively.

6. The Surface transport Reply

a. The headquarters concerned (Movements and Transport Agency), having considered the SURFACE TRANSPORT REQUEST, will send the unit or formation a reply in the form of a SURFACE TRANSPORT REPLY, which:

(1) Is used to give the requesting unit or formation a reply as soon as possible so that it may prepare for the surface transport movements requested.

(2) May be circualted as an integral part of (or as an annex or supplement to) the movement order/instruction issued by the responsible authorities.

b. The SURFACE TRANSPORT REPLY does not include a movement credit (in accordance with STANAG 2155) which may be required.

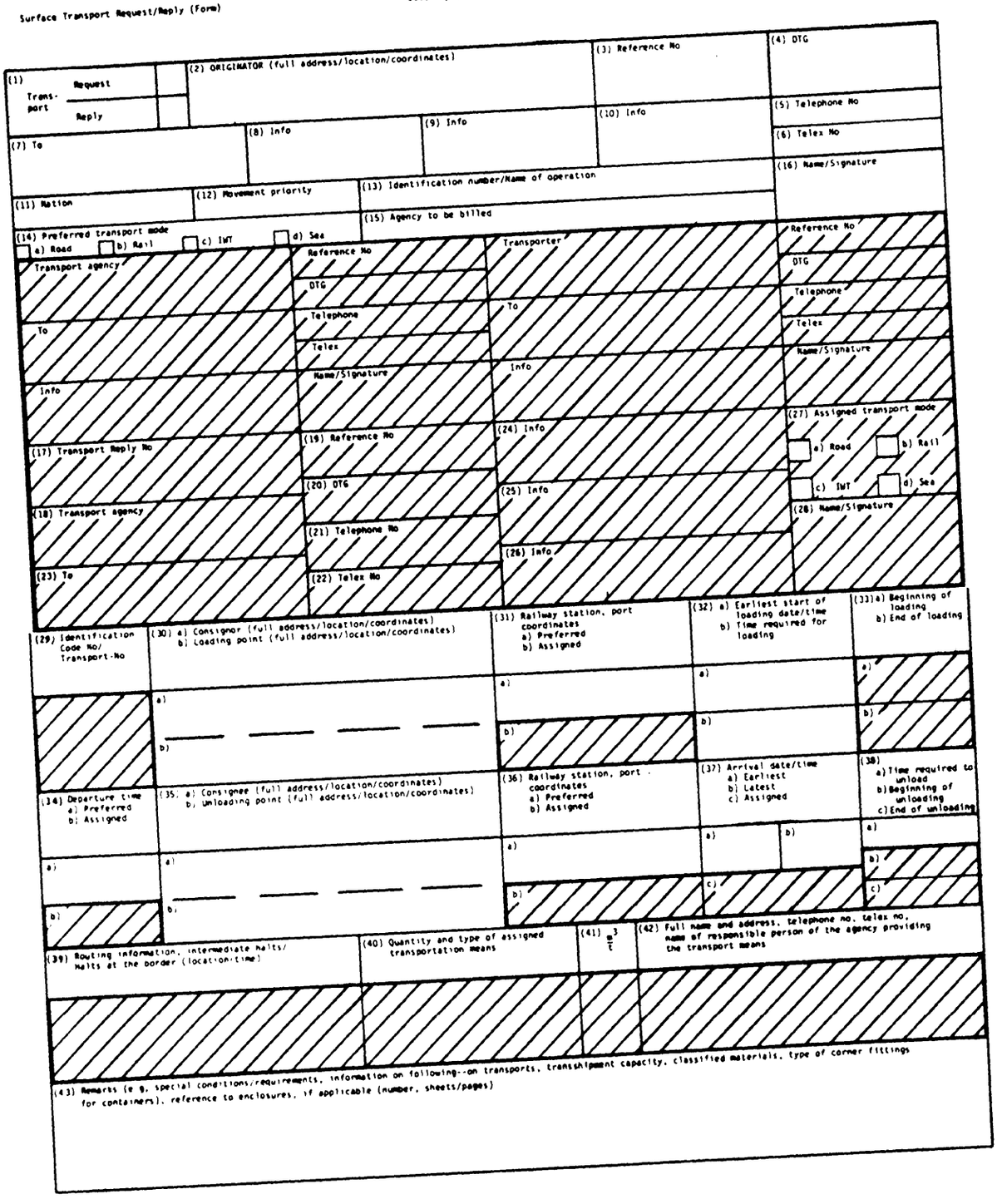
c. The form SURFACE TRANSPORT REPLY is at Annex A. INSTRUCTIONS FOR COMPLETION are at Annexes B and D. Examples of SURFACE TRANSPORT REPLY by form and by electronic means are at Appendices 1 and 2 to Annex D, respectively.

IMPLEMENTATION OF THE AGREEMENT

7. This STANAG is implemented when the necessary orders/instructions have been issued directing the forces concerned to put the content of this agreement into effect.

Security Classification

Surface Transport Request/Reply (Form)



Requesting Agency | Security Classification | Ref No/Az-DTG

	Load a) Quantity	b) Nature of Load	c) Content/Rail switch number	d) Transport Means	Load, continued Weight e) max per unit kg	f) Total kg	Dimensions g) Length m	h) Width m	j) Height m	k) m^3 l) RLC	Dangerous Goods m) ADNR	n) IMDG	p) RID	q) ADR
(44)		Personnel 1st class accommodation	Baggage per person (see e)											
(45)		Personnel 2nd class accommodation	Baggage per person (see e)											
(46)										k) — l)				
(47)										k) — l)				
(48)										k) — l)				
(49)										k) — l)				
(50)										k) — l)				
(51)										k) — l)				
(52)										k) — l)				
(53)										k) — l)				
(54)										k) — l)				
(55)										k) — l)				
(56)										k) — l)				
(57)										k) — l)				
(58)										k) — l)				
(59)										k) — l)				
(60)										k) — l)				
(61)										k) — l)				
(62)										k) — l)				
(63)										k) — l)				
(64)										k) — l)				

GENERAL INSTRUCTIONS FOR COMPLETION

A. This form serves as a combined "Surface Transport Request" and "Surface Transport Reply".
The Surface Transport Request may be forwarded by written or electronic means to the Movements and Transport Agency concerned; bids made by telephone must be confirmed in writing. It is to be filled in completely - irrespective of a preferred transport mode.
The hatched blocks surrounded by bold lines are reserved for the agencies processing the request. Only the boxes containing information transmitted from and to the requesting agency have been numbered.
The Surface Transport Reply will be issued by the agency which arranges the transport.

B. The full address contains: street, house number, postal code, place.

C. Coordinates are to be indicated by an UTM six-figured grid reference (e.g. NC 123456).

D. Times are to be indicated in date-time-groups (DTG) annotated with the time zone used or according to alert/states/stages/measures.

E. Dimensions are required in meters (m); 1 meter = 100 centimeters (cm) 1 cm = 0,39 inches; 1 inch = 2,54 cm
Weights are required in kilograms (kg); 1 kg = 2,20 lbs; 1 lb = 0,454 kg

F. Surface Transport Requests and Surface Transport Replies may be supplemented by enclosures if the space provided in the format is not sufficient.

G. Detailed instructions for completing both the form and electronic formats of the Surface Transport Request and Reply are at Annex C and D, respectively.

ANNEX C TO
STANAG 2156
(Edition 4)

SURFACE TRANSPORT REQUEST
FORMAT

Appendixes: 1. Surface Transport Request - Message Example
2. Form-Example

instructions for the completion of the Surface Transport Request format

Remarks:

Boxes for which no data are provided are to be omitted in teletype messages. Remarks which only apply to railway transports or troop transports by means of buses belonging to the railways ("bus transports") have been marked by putting an E before the respective remark.

The entries in the boxes marked by and are not transmitted to the users.

BOX/ PARAGRAPH	MEANING	REMARKS
a	b	c
1	Title: Transport Request	cross relevant box on form, state title in electronic transmission
2	Originator	full address, location, co-ordinates
3	Reference Number	for requesting unit's own use
4	DTG	time of completion of request
5	Telephone Number	of originator
6	Telex Number	of originator
7	Address of Mov HQ to which request is to be sent	may be omitted in teletype messages
8) 9) 10)	Info addressees	if any; may be omitted in teletype messages

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a	b	c
11	Originating nation	
12	Movement Priority	the agency which assigned the priority and the mode to which it refers is to be indicated. As long as no NATO wide priority system for movement exists, the nation receiving the transport request must ensure that the priority requirement of the nation requesting support is clearly understood
13	Identification number/ name of operation	originator to complete, if required
14	Preferred transport mode	cross relevant box on form, state preferred mode in electronic transmission. One preferred transport mode can be indicated per form/format. If only one transport mode is suitable this is to be justified under remarks. [E] When bus transports are requested cross box a) (road) and enter a corresponding remark in 43
15	Agency to be billed	[E] Insert appropriate data, if required
30 a	Consignor	unit which requires surface transport. If the transport is to report to a location different to 30 a or 31 that address is to be additionally indicated under 30 b.
30 b	Loading Point	[E] Not applicable for rail transports. For bus transports complete only if other than 30 a
31 a	Preferred railway station, port of embarkation	[E] Not applicable for bus transports; rail connection or loading point, respectively, as appropriate
32 a	Earliest start of loading date/time	This entry may be omitted if 37 is completed. [E] For rail/bus transports time data are to be requested in local time

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a	b	c
32 b	Time required for loading	[E] complete always
34 a	Departure time preferred	this entry may be omitted if 32 or 37 is completed. [E] Not applicable for rail transports
35 a	Consignee	full address, location, .co-ordinates of the recipient
35 b	Unloading point	complete only if location is other than specified in 35 a or 36 a. [E] Not applicable for rail transports. For bus transports complete only if location is other than specified in 35 a
36 a	Preferred railway station, or port of debarkation or unloading	location, coordinates. [E] Nonapplicable for bus transports; rail connection or loading point, respectively, if required
37		this entry may be omitted if 32 or 34 is completed
37 a	Earliest arrival date/ time	[E] This entry may be omitted if 32 a or 37 b is completed
37 b	Latest arrival date/ time	[E] This entry may be omitted if 32 or 37 a is completed
38 a	Time required for unloading	[E] Complete always
43	Remarks	e.g. special conditions/requirements, information on follow-on transport, transhipment capacity, classified materials, type of corner fittings, flight number on ship's name, reference to enclosures, If applicable (number, sheets/pages).
44 a	Personnel 1st class	indicate number of male (m) and number of female (f) personnel
44 e	Baggage per person	weight in kg

C-3

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a	b	c
44 f	Total of personal baggage	weight in kg
45 a	Personnel 2nd class	indicate number of male (m) and number of female (f) personnel
45 e	Baggage per person	weight in kg
45 f	Total of personal baggage	weight in kg
46 a b	Quantity Nature of load	Information should be given in the following sequence: either: tracked vehicles, wheeled vehicles, containers, break bulk cargo. Within the equipment catergories similar types should be entered in the same line, e.g. Leopard 2 combat tank, 5 t truck, 40 foot containers, box pallets, etc.; or: the equipment to be transported is entered in a summarized manner in accordance with tactical requirements
c	Content	provide general, summarized information, if appropriate: spare parts, food, etc. The loads of the trucks to be transported are to be indicated only when classified materials or hazardous goods are concerned
d	Maximum weight per unit	insert the maximum indivisible weight of the heaviest unit in kg
e	Total weight	total weight per aerial in kg
f g h	Length) Width) Height)	dimensions in meters. The dimensions of the largest single piece of cargo are to be indicated;
i	Volume	volume in m³
d through i		[E] This entry maybe omitted if during the transport of military equipment the rail code number or the loading class is indicated in column c. Re column e: Otherwise indicate the weight of the heaviest vehicle of the equipment type

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a	b	c
46 j.	MLC	Military Loading Class (MLC) of vehicles [E] Not applicable
46 k l m n	Dangerous goods following - ADNR system - IMDG system - RID system - ADR system	Hazardous goods are to be indicated in accordance with the desired mode of transport. The hazard class must be specified precisely. [E] A transport re m, n and q ist not applicable
47		continue as required

If additional space is required separate enclosures may be attached to the individual boxes.

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APPENDIX 1 TO
ANNEX C TO
STANAG 2156
(Edition 4)

SURFACE TRANSPORT REQUEST

Message Example

From: 1-1 Cav

To : Mov HQ 762

Info: HHC 1st Armored Division
Unclassified

1: Transport Request
2: 1-1 Cav, Obrien Elks, 8540 Schwabach (Pv 480 655)
3: NIL
4: 050900 Z may 86
5: 0 91 22/8 30
7: Mov HQ 762 - Dez Eb
8: HHC 1st Armored Division, Transportation Officer
11: US
12: 2
13: "Certain Sentinel"
14: Rail
15: NIL
16: Donnelly, Major
30 a): A + B trp, 1-1 Cav, Obrien Bks, 8540 Schwabach (Pv 480 655)
31 a): Schwabach Bf (Pv 479 658)
32 a): 1st Train: 121000 A may 86
2nd Train: 121730 A may 86
32 b): 3 hours
35 a): 1-1 Cav (from 12 - 23 may) Camp Algier, 8484 Grafenwöhr (QA 107 093)
36 a): Grafenwöhr - Lager (QA 107 108)
38 a): 2 hours
43: Redeployment 24 may 86
45: 1st Train: m/170
2nd Train: m/170

C-1-1

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46: a) 12; b) M 60 A 3 Tank; c) 12 x 3170
47: a) 1; b) M 88 Rec Veh; c) 1 x 3534.10
48: a) 12; b) M 113 Carr; c) III; e) 10.500; f) 126.000
49: a) 2; b) M 109 A 1 Trk Shop Van; C) 2 x 1433.02
50: a) 12; b) M 577 Carr; c) 12 x 3337.03
51: a) 12; b) M 901 Tow Veh; c) III; e) 11.700; f) 140.400
52: a) 2; b) M 106 A 1 Carr c) 2 x 3338.02
53: a) 3; b) M 151 Trl. Utility; C) V; e) 1.000; f) 3.000
54: a) 12; b) M 60 A 3 Tank; c) 12 x 3170
55: a) 1; b) M 88 Rec Veh; c) 1 x 3534.10
56: a) 18; b) M 113 Carr; c) III; e) 10.500; f) 189.000
57: a) 6; b) M 901 Tow Veh; c) III; e) 11.700; f) 70.200
58: a) 6; b) M 577 Carr; c) 6 x 3337.03
59: a) 3; b) M 106 Carr; c) 3 x 3336.03
60: a) 4; b) M 151 Trk with M 149 A 1 Trl; C) V; e) 2.200; f) 8.800
61: a) 1; b) M 135 Trk; c) II; e) 5.800; f) 5.800

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SURFACE TRANSPORT REPLY
FORMAT

Appendix 1: SURFACE TRANSPORT REPLY - Message Example
Appendix 2: FORM-EXAMPLE

BOX/ PARAGRAPH	MEANING	REMARKS
a	b	c
1 Title:	Transport Reply	cross relevant box on form, state title in electronic transmission
3	Reference No)	
4	DTG)	
13	Identification number / name of operation)	of the transport request, to which this reply relates
17	Transport reply number	assigned by replying agency
18	Transport agency	replying agency
19	Reference number	of replying agency
20	DTG	time of completion by replying agency
21	Telephone number	of replying agency
22	Telex number	of replying agency
23	Address of requester	may be omitted in electronic messages
24 - 26	Info addressees	if any; may be omitted in teletype messages
27	Assigned transport mode	cross relevant box on form; state assigned mode in electronic transmission
29	Identification Code No	assigned by replying agency
31 b	Assigned railway station, or port of embarkation or loading	location, co-ordinates
33 a	Beginning of loading	DTG (rail/bus transport in local time)
33 b	End of loading	DTG (rail/bus transport in local time)

a	b	c
34 b	Assigned departure time	DTG (rail/bus transport in local time)
36 b	Assigned railway station, or port of debarkation or unloading	location,
37 c	Assigned arrival date/ time	DTG (rail/bus transport in local time)
38 b	Beginning of unloading	DTG (rail/bus transport in local time)
3 8 c	End of unloading	DTG (rail/bus transport in local time)
39	Routing information	locations, intermediate halts, halts at the border etc, co-ordinates, times
40	Quantity and type of assigned transportation means	
41	Length (m) and weight (t) of trains	information given by railway authorities (if applicable)
42	Agency providing the transport means	full name and address, telephone No, telex No, name of responsible person (if available)
43	Remarks	flight number or ship's name
44 d	Transport means	for personnel 1st class accommodation
45 d	Transport means	for personnel 2nd class accommodation
46 d	Transport means	assigned for load of aerial 46 of request
47 d	Transport means	assigned for load of aerial 47 of request
48 d		continue as required

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APPENDIX 1 TO
ANNEX D TO
STANAG 2156
(Edition 4)

SURFACE TRANSPORT REPLY

Message Example

From:	Mov HQ 762
To:	1-1 Cav
Info:	HHC 1st Armored Division
	Unclassified
1:	Surface transport reply
3:	NIL
4:	050900 Z may 86
13:	CERTAIN SENTINEL
17:	648/86
18:	VerkK 762 - Dez Eb, Sandstraße 38 - 40, 8500 Nürnberg 70
19:	43-22-20
20:	091015 Z may 86
21:	09 11/6 50 01, App 2 31
22:	RGFKHD
23:	1-1 Cav - S 3, Obrien Bks, 8540 Schwabach über MCT Nürnberg
24,25,26:	TerrKdo Süd - VerkFü/3, Mannheim WBK VI - G 3/VerkFü, München HHC 1st Armored Division, Ansbach Cdr 2nd Supcom, Nellingen MCT - Rail section, Nürnberg
27:	Rail
28:	Kriegbaum, OLt u. VerkOffz
29:	1st train: 02-GE-12-140 163-GE 2nd train: 02-GE-12-140 164-GE
31 b):	Schwabach Bf (PV 479 658)
33 a):	1st train: 121000 A may 86 2nd train: 121430 A may 86
33 b):	1st train: 121300 A may 86 2nd train: 121730 A may 86

NATO UNCLASSIFIED

34 b): 1st train: 121355 A may 86
2nd train: 121845 A may 86

36 b): 1st train: Grafenwöhr-Lager (QA 107 108)
2nd train: Vilseck-Lager (QA 240 024)

37 c): 1st train: 121900 A may 86
2nd train: 122155 A may 86

38 b): 1st train: 121930 A may 86
2nd train: 122230 A may 86

38 c): 1st train: 122100 A may 86
2nd train: 122400 A may 86

39: 1st train: Nürnberg Rbf, 14.10/14.20
Weiden 17.00/17.25
2nd train: Nürnberg Rbf, 19.05/19.20
Neukirchen b. Sr, 21.12/21.13

40: 1st train: 3 Bm, 13 Samms, 12 Rs, 3 Kls
2nd train: 3 Bm, 13 Samms, 11 Rs, 3 Kls

41: 1st train: 565/1890
2nd train: 545/1752

42: Bundesbahndirektion Nürnberg, Pn 5105, Sandstraße 38 - 40, 8500 Nürnberg 70, Tel: 09 11/2 19 55 37

45 d) 1st train: 3 Bm
2nd train: 3 Bm

46 d): 12 Samms

47 d): 1 Samms

48 d): 4 Rs

49 d): 1 Kls

50 d): 4 Rs

51 d): 4 Rs

52 d): 1 Kls

53 d): 1 Kls

54 d): 12 Samms

55 d): 1 Samms

56 d): 6 Rs

57 d): 2 Rs

58 d): 2 Rs

59 d): 1 Rs

60 d): 2 Kls

61 d): 1 Kls

NATO - UNCLASSIFIED ANNEX C TO APPENDIX C A
OTAN SANS CLASSIFICATION STANAG 2156
(Edition 4)

Surface Transport Request/Reply
Demande de Transport de Surface/Réponse

EXAMPLE - FORMULAIRE

Security Classification
Classification de Sécurité

1 Transport-Request/Demande [X] Reply/Réponse [ ]	2 1-1 CAV, OBRIEN BKS, 8540 Schwabach (PV486655)	3 Az 43-15-20-10	4 0509002 may 86
7 MOV HQ 762 Daz EB	8 9 10 MNC 1st ARMORED DIVISION Transportation Officer		5 09122/8 30
11 US	12	13 "CERTAIN SENTINEL"	16 Donelly, Major
24 [X]	15		

17	19	24 25 26	27
18	20		28
23	21		
	22		

29	30 a) A + B TRP, 1-1 CAV, OBRIEN BKS, 8540 Schwabach (PV486655) Tel. 09122/8 30 b)	31 a) b)	32 a) 1.) 121000A may 86 2.) 121730A may 86 b) 3 hours	33 a) b)	
34 a)	35 a) 1-1 CAV (from 12-23 may) Camp ALGIER 8484 Grafenwöhr (QA107093) b)	36 a) Grafenwöhr-Lager (QA107100) b)	37 a) b) c)	38 a) b) c)	2 hours

39	40	41 a)	42
		b)	

43 Remarks (e.g. special conditions/requirements, information on follow-on transport, transhipment capacity, classified materials, type of corner fittings, flight number or ship's name), reference to enclosures, if applicable (number, sheets/pages).
Remarques (par exemple conditions/besoins spéciaux, renseignements sur les transports ultérieurs, capacité de transbordement, matériels classifiés, type des ferrures des conteneurs, numéro du vol ou nom du navire), référence aux pièces jointes, le cas échéant.
Redeployment 24 May 86

C-2-1

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Load/Charge

OTAN SANS CLASSIFICATION

Security Classification
Classification de Sécurité

*) See completing instructions/
Voir instructions

a) *Quantity/ Quantité	b) *Nature of load/ Nature du chargement	c) *Number/tail mark/ Numéro/Immatriculation de l'unité de remorque ou groupe unité	d) Transport means/ Moyens de transport	*) Load, continued weight/ Chargement (suite) e) *Per unit / *Par unité kg	f) Total/ Total kg	*) Dimensions/Dimensions g) Length/ Longueur m	h) Width/ Largeur m	i) Height/ Hauteur m	j) m³ l) *IMO	*) Dangerous goods/ Produits dangereux
44 m / t	Accompanying personnel 1st class/ Personnel en 1ère classe	Baggage per person see a) - g) / Bagages par personne voir a) - g)		Remarks to column a): (e.g. full combat equipment)/ Remarques concernant colonne a): (p.ex. tout l'équipement de combat est l'homme) 1st Train: m/170 2nd Train: m/170						
45 m / t	Accompanying personnel 2nd class/ Personnel en 2ème classe	Baggage per person see a) - g) / Bagages par personne voir a) - g)		Remarks to column a): (e.g. full combat equipment)/ Remarques concernant colonne a): (p.ex. tout l'équipement de combat est l'homme)						
46	12	M 60 A 3 TANK	12 x 3170						—	
47	1	M 88 REC VEH	2 x 3534.10						—	
48	12	M 113 CARR	III	10.500	126.000				—	
49	2	M 109 A 1 TRK SHOP VAN	2 x 1433.02						—	
50	12	M 577 CARR	12 x 3337.03						—	
51	12	M 901 TOW VEH	III	11.700	140.000				—	
52	2	M 106 A 1 CARR	2 x 3338.02						—	
53	3	M 151 TRK UTILITY	V	1.000	3.000				—	
54	12	M 60 AB TANK	12 x 3170						—	
55	1	M 88 REC VEH	1 x 3534.10						—	
56	18	M 133 CARR	III	10.599	189.000				—	
57	6	M 901 TOW VEH	III	11.700	70.200				—	
58	6	M 577 CARR	6 x 3337.03						—	
59	3	M 106 CARR	3 x 3336.03						—	
60	4	M 151 TRK with M 149 A 1 TRL	V	2.200	8.800				—	
61	1	M 135 TRK	II	5.800	5.800				—	
62									—	
63									—	
64									—	

C-3-2

NATO UNCLASSIFIED

NATO - UNCLASSIFIED
OTAN SANS CLASSIFICATION

ANNEX C TO/ANNEXE C A
STANAG 2156
(Edition 4)

Surface Transport Request/Reply
Demande de Transport de Surface/Reponse

EXAMPLE - FORMULAIRE

Security Classification
Classification de Sécurité

1 Transport- [X] Request/Demande [ ] Reply/Reponse

2 1-1 CAV, OBRIEN BKS, 8540 Schwabach (PV480655)

3 Az 43-15-20-10

4 050900Z may 86

7 MOV HQ 762
Dez Eb

8 9 10 NHC 1st ARMORED DIVISION
Transportation Officer

5 09122/8 30

11 US

13 "CERTAIN SENTINEL"

16 Donelly, Major

MCT HQ 762
Dez Eb
8500 Nürnberg

43-22-20

060830A may 86

Bundesbahndirektion
Nürnberg
Pn 5

Base 2724

ZP - Pn 44
6500 Mainz

Meier
OFw u. VerkFw

Bundesbahndirektion
Nürnberg Pn 5105

Tc 3326

09.05.1986

MOV HQ 762
Dez Eb
8500 Nürnberg 70

24 37

Wein
BAmtm

17 648/86

19 43-22-20

18 MOV HQ 762 - Dez Eb
Sandstraße 38 - 40
8500 Nürnberg 70

20 091015Z may 86

21 0911/6 50 01
Ext 2 31

23 1-1 CAV - S 3
OBRIEN BKS
8540 Schwabach über MCT Nürnberg

22 RG PK HD

24 25 26 TerrKdo Süd/VerkFü/3 - Mannheim
WBK VI - G 3/VerkFü - München
NHC 1st ARMORED DIVISION - Ansbach
Cdr 2nd SUPCOM - Wellingen
MCT - Rail Section - Nürnberg

27 [ ] a) Road/Route [x] b) Rail/Voie ferrée [ ] c) IWT/Voies navigables intérieures [ ] d) Air

28 Kriegbaum
OLt u. VerkOffz

29 1st Train
02-CE-12-140-162-GE
2nd Train
02-CE-12-140-164-GE

30 a) A + B TRP, 1-1 CAV, OBRIEN BKS,
8540 Schwabach (PV480655)
Tel. 09122/8 30

b) *)

31 a) *) Schwabach Bf (PV479658)

b) Schwabach Bf (PV479658)

32 a) *)
1.) 121000A may 86
2.) 121730A may 86

b) *) 3 hours

33 a)
1.) 121000A may 86
2.) 121730A may 86

b)

34 a) *)

b)
1.) 121355A m...
2.) 121805A m...

35 a) 1-1 CAV (from 12-23 may) Camp ALGIER
8484 Grafenwöhr (QA107093)

b) *)

36 a) *) Grafenwöhr-Lager (QA107108)

b) 1.) Grafenwöhr Lg (QA107108)
2.) Vilseck Lg (QA024024)

37 a) *) b) *)

c) 1.) 121900A may 86
2.) 122155A may 86

38 a) 2 hours

1.) 121715A may 86
2.) 122230A may 86

1.) 122100A may 86
2.) 122400A may 86

39

1st Train:	Nurnberg Rbf	14.10/14.20
	Weiden	17.00/17.05
2nd Train:	Nurnberg Rbf	19.05/19.20
	Neukirchen b. Sr	21.12./21.13

40

1st Train: 3 Bm, 13 Samms,
12 Res, 3 Kls
2nd Train: 3 Bm, 13 Samms,
11 Res, 3 Kls

41
1.) 545 1890
2.) 545 1752

42 Bundesbahndirektion Nürnberg
Pn 5105
Sandstraße 38 - 40
8500 Nürnberg 70
Tel. 0911/2 19 55 37

43 Remarks (e.g. special conditions/requirements, information on follow-on transport, transhipment capacity, classified materials, type of corner fittings, flight number or ship's name), reference to enclosures, if applicable (number, sheets/pages).
Remarques (par exemple conditions/besoins spéciaux, renseignements sur les transports ultérieurs, capacité de transbordement, matériels classifiés, type des ferrures des conteneurs, numéro du vol ou nom du navire), référence aux pièces jointes, le cas échéant.

Redeployment 24 May 86

D -2-1

NATO UNCLASSIFIED

Load/Charge

Security Classification
Classification de Sécurité

See completing instructions/
Voir instructions

a) Quantity/ Quantité	b) Nature of load/ Nature du chargement	c) Number/unit weight/ Nombre/masse unitaire	d) Transport means/ Moyens de transport	e) Load, additional weight/ Chargement (suite)		f) Dimensions				g) Dangerous goods/ Produits dangereux
				e) Per unit/ Par unité kg	f) Total/ Total kg	Length/ Longueur m	Width/ Largeur m	Height/ Hauteur m	g) or/ ou	
44	Accommodation personnel 1st class/ Personnel en 1ère classe	Baggage per person see c) - g) Bagage par personne voir c) - g)		Remarks to column e): (e.g. full combat equipment)/ Observations concernant colonne e): (p.ex. tout l'équipement de combat est à bord): 1st Train: m/170 2nd Train: m/170						
45	Accommodation personnel 2nd class/ Personnel en 2ème classe	Baggage per person see c) - g) Bagage par personne voir c) - g)		Remarks to column e): (e.g. full combat equipment)/ Observations concernant colonne e): (p.ex. tout l'équipement de combat est à bord)						
46	12	M.60 A 3 TANK	12 x 3170	12 Semaine						
47	1	M 88 REC VEH	2 x 3534.10	1 Semaine						
48	12	M 113 CARR	III	4 Re	10.500	126.000				
49	2	M-109 A 1 TRK SHOP VAN	2 x 1433.02	1 Kie						
50	12	M 577 CARR	12 x 3337.03	4 Re						
51	12	M 901 TOW VEH	III	4 Re	11.700	140.000				
52	2	M 106 A 1 CARR	2 x 3338.02	1 Kie						
53	3	M 151 TRK UTILITY	V	1 Kie	1.000	3.000				
54	12	M 60 A8 TANK	12 x 3170	12 Semaine						
55	1	M 88 REC VEH	1 x 3534.10	1 Semaine						
56	18	M 133 CARR	III	6 Re	10.599	189.000				
57	6	M 901 TOW VEH	III	2 Re	11.700	70.200				
58	6	M 577 CARR	6 x 3337.03	2 Re						
59	3	M 106 CARR	3 x 3336.03	1 Re						
60	4	M 151 TRK with M 149 A 1 TRL	V	1 Kie	2.200	8.800				
61	1	M 115 TRK	II	1 Kie	5.800	5.800				
62										
63										
64										

EXTRACT OF STANAG 2159

NATO UNCLASSIFIED

Agreed English/French texts

STANAG 2159
(Edition No. 4)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT (STANAG)

IDENTIFICATION OF MOVEMENT CONTROL AND TRAFFIC CONTROL PERSONNEL AND AGENCIES

Related Documents:
- STANAG 1059 - National Distinguishing Letters for Use by NATO Armed Forces.
- STANAG 2019 - Military Symbols
- STANAG 2025 - Basic Military Road Traffic Regulations.
- STANAG 2035 - Marking of Headquarters and Dumps.
- STANAG 2174 - Military Routes and Route/Road Networks.

AIM

1. The aim of this Agreement is to standardize, for the use of the NATO Forces, methods of identifying movement control and traffic control personnel and agencies.

AGREEMENT

2. Participating nations agree to adopt, for the use by NATO Forces, the Identification of Movement Control arid Traffic Control Personnel and Agencies described in the following paragraphs.

IDENTIFICATION OF MOVEMENT CONTROL PERSONNEL

3. Armbands will be used to identify all movement control personnel who come into personal contact with forces (individual members and/or units of the forces) being moved by water, rail, road or air transport modes .

4. The armband will be red, approximately 42 cm (16½ in.) long and 9 cm (3½ in.) wide width an eight-spoked yellow wheel 7.5 cm (3 in.) in diameter, centered on the band.

5. The armband will be worn by movement control personnel while on duty in accordance with the uniform regulations of the country concerned, and in a manner so that the wheel is clearly visible. Staff Officers may wear normal staff armbands if that is the usual practice of the countries concerned.

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IDENTIFICATION OF TRAFFIC CONTROL PERSONNEL

6. Personnel posted along routes and engaged in the physical direction of traffic control, will wear white cuffs. A general description (Including recommended dimensions) of these cuffs is contained in STANAG 2025.

IDENTIFICATION OF MOVEMENT CONTROL AND TRAFFIC CONTROL AGENCIES

7. Standard identification and guide signs shall b. used to identify and provide road directions to movement control and traffic control agencies.

8. For those agencies which are part of a superior headquarters, identification signs will conform with STANAG 2035.

9. For those agencies which are not an integral part of a superior headquarters identification sighn will conform to STANAG 2019, Annex I,

10. The guide signs for the agencies noted in paragraphs 8 and 9 will conform to STANAG 2174, and will display the following :

a. The symbols laid down in STANAG 2019, or if no appropriate symbol can be found in STANAG 2019, an eight-spoked wheel.

b. The national distinguishing letters in accordance with STANAG 1059.

c. The direction and/or distance to the agency concerned, if necessary.

IMPLEMENTATION OF THE AGREEMENT

11. This STANAG will be considered to be implemented when the necessary orders/instructions have been issued directing the forces concerned to put the content of this Agreement into effect.

EXTRACT OF STANAG 2165

NATO UNCLASSIFIED

Agreed English/French texts

STANAG 2165
(Edition No. 3)

NATO STANDARDIZATION AGREEMENT (STANAG)

NAVY/ARMY/AIR

FORECAST MOVEMENT/TRANSPORT REQUIREMENTS - RAIL, ROAD AND INLAND WATERWAYS

Annex : A. Table of Forecast Movement Requirements - Rail, Road and Inland Waterways.

Related documents : STANAG 2021 - Computation of Bridge, Raft and Vehicle Classification.
STANAG 2156 - Surface Transport Request and Reply to Surface Transport Request.
STANAG 1059 - National Distinguishing Letters for use by NATO Forces.

AIM

1. The aim of this agreement is to standardize for NATO Forces a document common to several means of transport for the purpose of submitting forecast movement requirements, including movement requirements based on approved contingency plans, to their own national authorities and/or to the nations concerned in such movements.

AGREEMENT

2. Participating nations agree to use the standard format found at Annex A for the "Table of Forecast Movement Requirements - Rail, Road and inland Waterways".

FORECAST MOVEMENT REQUIREMENTS

3. As soon as military authorities have knowledge of their movement (or transport) requirements, for a given period of time, they are to inform the military authority responsible for the organization of movements (or transport) in the originating nation (or in the originating zone in a nation) as soon as possible.

4. When forwarding the essential information the requesting authority must use the format of the "Table of Forecast Movement Requirements - Rail, Road and Inland Waterways" shown at Annex A as follows:

a. Action : To the military authority of the originating nation (or in the originating zone in a nation) in charge of the organization of movements.

b. Information : To the military authorities concerned of the transiting nation and nation of destination (or the transiting zone and zone of destination in a nation) .

5. Study of the "Table of Forecast Movement Requirements - Rail, Road and Inland Waterways" will allow the military authority in charge of the organization of movements in the originating nation (or in the originating zone in a nation):

a. To carry out a preliminary survey on the possibilities of granting the request.

b. To take the first steps with the military authorities of the transiting nation a nd nation of destination (or the transiting zone and zone of destination in a nation).

c. To select the type of transport to be used.

d. To inform the requesting authority:

(1) Of steps taken to satisfy his requests.

(2) Of the movements for which it will be necessary for the requesting authority to make out a "Transport Request" in accordance with the provisions of STANAG 2166.

e. To develop supporting transportation plans for forecast requirements resulting from approved contingency plans.

6. The Forecast Movement Requirements - Rail, Road and Inland Waterways must be forwarded, if possible, in writing in at least one of the two official NATO languages. It can also be forwarded by signal or by telephone by using the code identifying the different items and columns. A specimen of the "Forecast Movement Requirements - Rail, Road and inland Waterwyas" as transmitted by signal, is enclosed at Appendix 2 to Annex A.

IMPLEMENTATION OF THE AGREEMENT

7. This STANAG is considered to be implemented when the necessary orders/instructions have been issued directing the forces concerned to put the content of this agreement into effect.

TABLE OF FORECAST MOVEMENT REQUIREMENTS-RAIL, ROAD AND INLAND WATERWAYS (Suggested Format)

For the Period of Time from ..... (Date) ..... to ..... (2)

FROM ..... (3)
(Requesting Authority)

TO ..... (4)
(Competent Authority of the Originating Nation)

Serial or Line Item	Reference No or Nick Name	Consignor	AREA/POINT of departure + coordinates	Consignee	AREA/POINT of destination + coordinates	Nations/ National zones concerned	Type of transport preferred	LOADS										Rate of dispatch	Date movement to commence	Date movement preferred/ required for application	Priorities	Remarks
								PAX		CARGO			SPECIAL LOADS									
								Number	Type	Category or Type	Weight	Cube	Number	Weight of Each	Class 2021	Sketch No.						
	ALFA	BRAVO	CHARLIE	DELTA	ECHO	FOXTROT	GOLF	HOTEL	INDIA	JULIET	KILO	LIMA	MIKE	NOVEMBER	OSCAR	PAPA		QUEBEC	ROMEO	SIERRA	TANGO	UNIFORM
ONE																						
TWO																						
THREE																						
FOUR																						
FIVE																						
SIX																						
SEVEN																						
EIGHT																						
NINE																						
TEN																						

NOTES: For notes explanation see Appendix 1 to this Annex.

APPENDIX 1 TO
ANNEX A TO STANAG 2165
(Edition No. 3)

NOTES ON TABLE OF FORECAST MOVEMENT REQUIREMENTS - RAIL, ROAD AND INLAND WATERWAYS

HEADINGS	MEANING	REMARKS
(1)	Classification	Enter classification of report as determined by originating agency.
(2)	Period of Forecast	Enter period of forecast as announced by the appropriate national authority.
(3)	Requesting Authority	Enter unit designation for organization responsible for submitting, e.g. 97th Signal Group.
(4)	Competent Authority of the Originating Nation	Enter unit designation of organization directed to receive forecast within originating nation.
COLUMN	MEANING	REMARKS
	Serial or The Items	Use separate serial or line number for each shipment forecast
Alpha	Reference Number or Nickname	
Bravo	Cosignor	Enter specific dispatching agency
Charlie	Location and Coordinates	Enter exact location and coordinates (2 letters, 6 figures)
Delta	Consignee	Enter specific receiving agency
Echo	Location and coordinates	Enter exact location and coordinates (2 letters, 6 figures)
Foxtrot	Nation/National Zones Concerned	Enter National Distinguishing letters (see STANAG 1059)
Golf	Type of Transport Preferred	Enter preferred mode: Road IWT, Rail (see STANAG 2156)

COLUMN	MEANING	REMARKS
Hotel/India	Number and Type Passenger	Enter number of passengers and general description. Personnel are normally listed as troops, patients, civilians, POWs and such other categories as will assist the movements personnel in selecting the mode of transportation.
Juliet/Kilo/ Lima	Class of Supply and Tonnage	Enter class of supply, estimated tons and cube. Note: (State type of ton used e.g. Metric Ton (MT) Long Ton (LT), Short Ton (ST). The movement programmers are not normally concerned with an inventory of specific items within a class; however, items requiring special handling must be specified in the remarks column so that the outstanding characteristics can be readily identified. For example, heavy lifts other than vehicles should be expressed in units, dimensions and tons for each lift.
Mike/ November/ Oscar/Papa	Special Loads	Enter number of vehicles/ tanks to be moved weight in tons (see note at Juliet above) for each, military load classification in accordance with STANAG 2021 (Road) and sketch number of the unified contours booklet (Rail).
Quebec	Rate of Dispatch	Enter tons (see note at Juliet above) of cargo or number of vehicles/tanks which can be moved daily (the capacity of the shipping and receiving organization determines).
Romeo	Date Movement to commence	Enter earliest date that movement can commence.

COLUMN	MEANING	REMARKS
Sierra	Date Movement Preferred/ Required for Completion	Enter date movement preferred /required for completion followed by preferred or required as applicable.
Tango	Priorities	Enter assigned priority.
Uniform	Remarks	Enter any information which will assist in planning the move, e.g. heavy lifts, dangerous material, special handling data on wheeled vehicles and passenger requirements.

APPENDIX 2 TO
ANNEX A TO STANAG 2165
(Edition No. 3)

MESSAGE (Specimen)

FROM : HQ/ADVANCED BASE UK

TO EMG/CM TPT

SUBJECT : TABLE OF FORECAST MOVEMENT REQUIREMENTS - RAIL, ROAD AND INLAND WATERWAYS FOR PERIOD OF 10 JAN TO 16 JAN 1966

PRECEDENCE : ROUTINE

ONE	ALFA	P/ 156
	BRAVO	3 REPL BN
	CHARLIE	ZEEBRUGGE ES (6 figures)
	DELTA	9 REPL CO
	ECHO	MUNSTER MC (6 figures)
	FOXTROT	BE/NL/GE
	GOLF	RAIL
	HOTEL	200
	INDIA	TROOPS
	JULIET	BAGGAGE
	KILO	8 MT
	LIMA	400 CU FT
	MIKE	NIL
	NOVEMBER	NIL
	OSCAR	NIL
	PAPA	NIL
	QUEBEC	50 MT PER DAY
	ROMEO	12 JAN
	SIERRA	15 JAN REQUIRED
	TANGO	TWO
	UN I FORM	NIL

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TWO	ALFA	TF7723
	BRAVO	DEPOT 603
	CHARLIE	ZEEBRUGGE ES (6 figures)
	DELTA	ASP 503
	ECHO	MUNSTER MC (6 figures)
	FOXTROT	BE/NL/GE
	GOLF	RAIL
	HOTEL	NIL
	INDIA	NIL
	JULIET	AMMUNITION
	KILO	4000 MT
	LIMA	1500 CU METERS
	MIKE	NIL
	NOVEMBER	NIL
	OSCAR	NIL
	PAPA	NIL
	QUEBEC	1000 MT/PER DAY
	ROMEO	12 JAN
	SIERRA	16 JAN REQUIRED
	TANGO	TWO
	UNIFORM	NIL

A - 2 - 2

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THREE	ALFA	TP415
	BRAVO	DEPOT 605
	CHARLIE	GHEEL FS (6 figures)
	DELTA	ASP 505
	ECHO	GELEINDAHLEN LB (6 figures)
	FOXTROT	BE/NL/GE
	GOLF	RAIL
	HOTEL	NIL
	INDIA	NIL
	JULIET	NIL
	KILO	NIL
	LIMA	NIL
	MIKE	10
	NOVEMBER	40 MT
	OSCAR	40
	PAPA	345
	QUEBEC	2
	ROMEO	12 JAN
	SIERRA	17 JAN REQUIRED
	TANGO	TWO

HEAVY LIFT REQUIRED AT DESTINATION

A - 2 - 3

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EXTRACT OF STANAG 2166

NATO UNCLASSIFIED

Agreed English/French texts

STANAC 2166
(Edition 3)
NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT

STANAG

MOVEMENTS AND TRANSPORT DOCUMENTS USED FOR MOVEMENTS BY SHIP

Annexes : A. Cargo Traffic Message
B. Sailing Signal - Load Advice
C. Sea Movement Resource Signal
D. Cargo Stowage Plan

Related Documents : STANAG 2023 MMS - Marking of Military Cargo for International Movement by all International Means of Transport
STANAG 2155 M&T - Road Movement Bid and Credit
STANAG 2156 M&T - Surface Transport Request and Surface Transport Reply
STANAG 2165 M&T - Forecast Movement/Transport Requirements - Rail, Road and Inland Waterways

AIM

1. The aim or this agreement is to standardize the essential movements and transport documents used for the movement of materials by ship to and from NATO nations so that loading and discharge can be carried out efficiently. Cargo Is forwarded from ports and beaches to the final destination in accordance with STANAGS 2155, 2156 and 2165.

AGREEMENT

2. Participating nations agree to adopt the following documents for movement of material by ship between NATO nations.

a. Cargo Traffic Message : See Annex A

b. Sailing Signal - Load Advice : See Annex B

c. Sea Movement Resource Signal : See Annex C

d. Cargo Stowage Plan : See Annex D

DEFINITION

3. The following term and definition are used for the purpose of this agreement :

Net Explosives Quantity (NEQ)

The quantity in kilograms of the explosive substance present in a container, ammunition, building, etc.. It does not include such substances as white phosphorous, war gases or smoke and incendiary composition unless the substances contribute significantly to the dominant hazard of the Hazard Division concerned.

DETAILS OF THE AGREEMENT

4. When vessel sailing time from the Port of Embarkation to the Port of Debarkation is more than 72 hours, the Cargo Traffic Message, Annex A, is to be dispatched. When vessel sailing time is less than 72 hours, the Sailing Signal - Load Advice, Annex B, or Sea Movement Resource Signal, Annex C, is to be dispatched as deemed appropriate by the sender. Annex C is used to advise movement staffs and naval shipping control authorities of the allocation of shipping and its schedule following the activation of plans. It gives advance notice of arrival times and cargo details to enable reception planning to begin.

IMPLEMENTATION OF THE AGREEMENT

5. This STANAG is implemented when the necessary orders/instructions to use the documents mentioned in this agreement have been issued to the tortes concerned. Annexes A, B and C are not to be used as a substitute for a ships cargo manifest.

ANNEX A TO
STANAG 2166
(Edition 3)

Appendices : 1. Specimen Cargo Traffic Message
2. Vessel Stowage Location Codes
3. Abbreviations/Acronyms

CARGO TRAFFIC MESSAGE

1. Movements staffs at the port of loading will dispatch a Cargo Traffic Message (CTM) for each ship carrying military cargo as soon as loading is completed. The CTM will be dispatched to each port of discharge When any portion of the CTM is classified, the entire CTM will be classified appropriately.

2. Instructions for preparing the CTM are given below. A specimen CTM is shown at Appendix I.

a. Precedence. CTMs will be assigned a precedence in accordance with existing NATO procedures.

b. _____ The originator will insert the appropriate security classification.

c. Text

(1) Paragraph 1. Ship Identification

(a) Ship prefix, e.g., USS, USNS, USCG, SS, MS, MV, NS.

(b) Ship name or number.

(c) Voyage number.

(d) Vessel terms of carriage (status code (US only)).

(e) International Radio Call Sign (IRCS).

(f) Type commercial ship (vessel classification), e.g., C1, C2 C4, LASH, SEABEE, RORO.

(2) Paragraph 2. Movement Data

(a) Departure port.

(b) Departure hour/day (ZULU date time group).

(c) Next port of call.

(d) Estimated Time of Arrival (ETA) next port of call (date).

(e) Subsequent ports of call (for loading and discharge) where cargo-operations will be conducted.

(3) Paragraph 3. Operational Handling Information

(a) Ship characteristics (self-sustaining, non-self-curtaining, etc.).

(b) Special berthing requirements.

(c) Special information if required by theater or host nation port area commander, e.g., expected arrival draft, overall length, beam and capacity in metric tonnes (M.T.) and cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (X/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T)).

(d) "Manifest on Board" or "Manifest Forwarded Separately" by method, e.g., AUTODIN (US only), mail, etc..

(e) "Cargo for Trans-shipment at (port of discharge)", when applicable.

(4) Paragraph 4. Total cargo loaded in metric tonnes (M.T) and cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T).

(5) Paragraph 5. For each port of discharge, Include a separate paragraph with total cargo loaded for that part in metric tonnes (M.T.) and cubic metres (cu.m.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T) and a summary as follows (excluding cargo for trans-shipment).

(a) Deck load by military service (or consignee when appropriate) description (include number of wheeled and number of tracked vehicles), metric tonnes (M.T.) and cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., 40 L/T, 10 M/T), excluding ammunition/ explosives.*)

(b) Hatch load by military service (or consignee when appropriate) description (include number of wheeled and number of tracked vehicles), metric tonnes (M.T.) and cubic metres (cu.m.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T), excluding ammunition/ explosives.*)

---

*) Identified by the first three positions of the vessel stowage location code (Appendix 2) indicates stowage location for LASH/SEABEE vessels by the last tour positions of the barge number.

(c) Total number of refrigerated (REEFER) containers for each military service (or consignee when appropriate) metric tonnes (M.T.) and cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T).

(d) Total number of other containers (SEAVANs, MILVANs MSCVANs) for each military service (or consignee when appropriate) metric tonnes (M.T.) and cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T)) excluding those containing ammunition/explosives.*)

(e) Total number of containers (SEAVANs, MILVANs, MSCVANs) containing ammunition/explosives for each military service (or consignee when appropriate) metric tonnes (M.T.), cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbeviatlon, e.g., (40 L/T, 10 H/T) and Net Explosive Quantity (NEQ) by UN Code (International Maritime Dangerous Goods (IMDG) Code) UN Code to include decimal fraction sub-division, e.g., 1.1, 1.2, IMDG compatibility group code, and stow location.

(f) Description of bulk ammunition/explosives for each military service (or consignee when appropriate) metric tonnes (M.T.), cubic metres (cum.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T), Net Explosive Quantity (NEQ) by UN Code (International Maritime Dangerous Goods (IMDG) Code) UN Code to include decimal fraction sub-division, e.g., 1.1, 1.2, IMDC compatibility group code, and stow location.

(g) Heavy lift cargo exceeding the capacity of the ships booms, number of pieces, stow location, weight (metric tonnes (N.T.)) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T).

(h) Protected (sensitive) and/or classified cargo number of pieces stow location, identification number (for US, use Transportation Control Number).

(1) For LASH/SEABEE shipments, list all barges by number, by military service (or consignee when appropriate) and indicate cargo description (including summary of containers as indicated above, if applicable) in metric tonnes (M.T.) and cubic metres (cu.m.) (US only: include long tons (L/T) and measurement tons (M/T) in parentheses, followed by abbreviation, e.g., (40 L/T, 10 M/T).

---

*) Identified by the first three positions of the vessel stowage location code (Appendix 2) indicates stowage location for LASH/SEABEE vessels by the last four positions of the barge number.

(6) Final Paragraph. Trans-shipment Data (An required).

(a) Port of trans-shipment.

(b) Information specifying responsibility for trans-shipment of cargo.

(c) Name of on-carrying vessel (indicate vessel TBN (to be named) if unknown).

(d) Cargo data as required in Instruction 5 for each port of discharge.

(e) For LASH/SEABEE shipments, the port of trans-shipment is the port of discharge of the vessel. For movement of barge from vessel port of discharge to inland barge port of discharge, indicate 'TOWED" in lieu of name of on-carry vessel. Summarize cargo data by barge number and barge port of discharge.

NATO UNCLASSIFIED

APPENDIX 1 TO
ANNEX A TO
STANAG 2166
(Edition 3)

SPECIMENT CARGO TRAFFIC MESSAGE

A. BREAKBULK

FROM : Preparing Activity

TO : Receiving Activity (Other addressees as required)

UNCLASSIFIED

SUBJECT : Cargo Traffic Message

1. USNS Comet / A-1893 / 11 / KCMV / C4.

2. Departed Bayonne NJ 1609402 May for Antwerp ETA 24 May. Subsequent port Rotterdam.

3. Self-sustaining. Manifest forwarded separately via AUTODIN.

4. Total cargo loaded 1970 M.T., 7268 cu.m. (1940 L/T, 6418 H/T).

5. Total cargo loaded for Antwerp 1095 M.T., 4063 cu.m. (1078 L/T, 3588 M/T).

Location	Military Service/ Consignee	Number of Vehicles	M.T.	cu.m.
1LH	Army General		26	66 (26 L/T, 59 M/T)
1LT	Army General		14	36 (14 L/T, 32 M/T)
3LH	Army Wheeled Vehicles	14	85	428 (84 L/T, 378 M/T)
3UT	Army Wheeled Vehicles	11	111	573 (110 L/T, 506 M/T)
3LT	Army Wheeled Vehicles	36	365	1875 (360 L/T, 1656 II/T)
3UD	Army Wheeled Vehicles	11	491	1083 (484 L/T, 957 U/T)

6. Total cargo loaded for Rotterdam 875 M.T., 3205 cu.m. (862 L/T, 2830 M/T).

4LH	Army Wheeled Vehicles	12	73	366 (72 L/T, 324 M/T)
4 LT	Army Wheeled Vehicles	23	233	1198 (230 L/T, 1058 M/T)
4UT	Army Wheeled Vehicles	47	477	1437 (470 L/T, 1269 M/T)
4MD	Army Tracked Vehicles	2	89	197 (88 L/T, 174 M/T)
4MD	Army Hazardous, UN Class 1.2 D, NEQ 1851 kg		2	5 (2 L/T, 5 M/T)
4SL	TCN W253414031XXX Army General			5 pcs

NATO UNCLASSIFIED

SPECIMEN CARGO TRAFFIC MESSAGE
(Specimen/SEAVANs)

B. SEAVANS

FROM : Preparing Activity

TO : Receiving Activity (Other addresses as required)

UNCLASSIFIED

SUBJECT : Cargo Traffic Message

1. SS American Lancer / A-1899 / W2 / W2JB / C4.

2. Departed Charleston SC 2506302 May for Bremerhaven ETA 2 June.

3. Non-selt-sustaining. Manifest forwarded separately via AUTODIN. Cargo for trans-shipment at Bremerhaven.

4. Total cargo loaded 29 SEAVANs 257 M.T., 1566 cu.m. (253 L/T, 1382 M/T).

5. Total cargo loaded for Bremerhaven 240 M.T., 1526 cu.m. (237 L/T, 1348 M/T).

4 Reefer SEAVANs (30 L/T, 98 M/T)	Army General	39 M.T.	111 cu.m.
24 SEAVANS (198 L/T, 1250 M/T)	Army General	201 M.T.	1415 cu.m.

6. Cargo for trans-shipment at Bremerhaven to Esbjerg via TBN.

1 Reefer SEAVAN (16 L/T, 35 M/T)	Navy General	16 M.T.	39 cu.m.

A-1-2

2166.EA6/
14pt

NATO UNCLASSIFIED

NATO UNCLASSIFIED

SPECIMEN CARGO TRAFFIC MESSAGE

c. LASH/SEABEE

FROM : Preparing Activity

TO : Receiving Activity (Other addressees as required)

UNCLASSIFIED

SUBJECT : Cargo Traffic Message

1. SS Doctor Lykes / A-1897 / W / KHNB / SEABEE.

2. Departed Galveston TX 2016452 May for Rotterdam ETA 29 May.

3. Non-self-sustaining. Manifest forwarded separately via AUTODIN.

4. Total cargo loaded 91 M.T., 207 cum. (90 L/T, 183 M/T).

5. For Mannheim via Rotterdam (towed) 91 M.T., 207 cu.m. (90 L/T, 183 M/T).

Barge No. 0006 Amy Tracked Vehicles 89 M.T. 197 cu.m. (88 L/T, 174 M/T)

Barge No. 0006 Amy General 2 M.T. 10 cu.m.
(2 L/T, 9 M/T)

A-l-3

2166.EA7/
114pt

NATO UNCLASSIFIED

APPENDIX 2 TO
ANNEX A TO
STANAG 2166
(Edition 3)

VESSEL STOWAGE LOCATION CODES
(Breakbulk Cargo Only)

The vessel stowage location code is a three-position alpha-numeric code that identifies where breakbulk cargo is stowed on a vessel.

First position: Hatch Number. Will be identified by a numeric code 1 through 8, as appropriate.

Second and third positions: Hold or Deck.

Code	Description	Code	Description
1D*	First deck	ML	Mate Locker
2D*	Second deck	MK	Middle trunk
3d*	Third deck	OD	On deck
AL	Ammo Locker	RD	Orlop deck
CM	Care of mate	PL	Paint Locker
DT	Deep tank	RB	Reefer box (cargo)
FL	Flight deck	SL	Security locker
FD	Forecastle deck	SD	Shelter deck
FT	Forecastle tween deck	SR	Ship's refrigerator
FR	Freeze box or room	ST	Strong room
HD	Hanger deck	TA	Tank deck
LZ	Lanzarette	TD	Tween deck
LH	Lower hold	UD	Upper deck
LR	Lower reefer flat	UR	Upper reefer flat
LK	Lower trunk	UK	Upper trunk
LT	Lower tween deck	UT	Upper tween deck
LV	Lower van flat	UV	Upper van flat
MR	Mailroom	CH	Chill box or room
UD	Main deck	PD	Prom deck
MT	Main tween deck		
LM	Mast locker		

* It vessels have lettered decks, use deck letter in second position and letter "D" in third position.

APPENDIX 3 TO
ANNEX A TO
STANAG 2166
(Edition 3)

Abbreviations/Acronyms

AUTODIN	:	Automatic Digital Network
CTM	:	Cargo Traffic Message
cu.m.	:	Cubic Metre (1000 cubic decimetres)
e.g.	:	For Example
ETA	:	Estimated Time of Arrival
HL	:	Heavy Lift
IMDG	:	International Maritime Dangerous Good.
IRCS	:	International Radio Call Sign
LASH	:	Lighter Aboard Ship
L/T	:	Long Ton (2,240 pounds)
MILVAN	:	Military-owned remountable container
MS	:	Motor Ship
M.T.	:	Metric tonne (unit of 1000 kilograms)
M/T	:	Measurement Ton (40 cubic feet)
MV	:	Motor Vessel
NEQ	:	Net Explosive Quantity
NS	:	Nuclear Ship
REEFER	:	Refrigerated shipping container
RORO	:	Roll-on/Roll-off
SEABEE	:	Sea-Barge
SEAVAN	:	Commercial or Government-owned (leased) shipping container
SS	:	Steamship
TBN	:	To be Named
TCN	:	Transportation Control Number
USCG	:	United States Coast Guard
USNS	:	United States Naval Ship
USS	:	United States Ship

NATO UNCLASSIFIED

ANNEX B TO
STANAG 2166
(Edition 3)

SAILING SIGNAL - LOAD ADVICE

(Classification)

(SHORT FORMAT)

PRECEDENCE	For both action and information this must always be "IMMEDIATE" to ensure arrival in advance of the ship.
FROM	Originator (usually the movement authority at the port of loading).
TO	Sailing Signals have a wide distribution which varies according to the destination port of the particular movement. Sailing Signals should be sent to the same addressees as the corresponding SEAMOV signals. The following should always be included: HOD and Command HQ Naval HQ and shipping control authorities Dispatching authorities Movement authorities at origin and at destination ports International co-ordinating authorities
INFORMATION	As appropriate

TEXT:

SAILING SIGNAL - LOAD ADVICE NUMBER

ALPHA	Code name of plan or ad hoc movement
BRAVO	Ship's name and international number or nickname
CHARLIE	Departure port and actual time of departure
DELTA	Arrival port and estimated time of arrival
ECHO	Either : Plan serials plus or minus, or: Specific load details including personnel, numbers of ISO containers, tonnages and IMDC hazard classes for dangerous goods
FOXTROT	Remarks

(Classification)

NATO UNCLASSIFIED

ANNEX C TO
STANAG 2166
(Edition 3)

SEA MOVEMENT RESOURCE SIGNAL
(SEAMOV)

(Classification)

PRECEDENCE	In view of the short warning time this will almost invariably be "IMMEDIATE"
FROM	Originator
To	SEAMOV resource signals have a wide distribution which varies according to the destination ports or the particular planned or ad hoc movement. The following should always be included: HOD and Command HQ Naval HQ and shipping control authorities Movement authorities at origin and at destination ports International co-ordinating authorities
INFORMATION	As appropriate
TEXT:	
ALPHA	Plan code word or 'ad hoc' as appropriate
BRAVO	H hour (ETD of first ship in plan)
CHARLIE	SEALIFT
ONE	Serial
TWO	Ship's name, international number or nickname
THREE	Port of loading
FOUR	Time alongside
FIVE	Time of departure
SIX	Port of arrival
SEVEN	Expected time or arrival
EIGHT	Expected time to complete offload
NINE	Return port and expected time of arrival
DELTA	CARGO (Plan serials of details where known)

(Classification)

NATO UNCLASSIFIED

ANNEX D TO
STANAG 2166
(Edition 3)

CARGO STOWAGE PLAN

Appendix 1 - General Format

PURPOSE

1. The purpose of this document is to provide a diagram of a vessel's cargo space showing the location (both on and below decks) of all cargo. The format or this digram may be used as required for planning stows and for documenting actual stows.

GENERAL FORMAT

2. See Appendix 1.

INFORMATION SHOWN ON THE CARGO STOWAGE PLAN

3. The hatch location of all cargo will be indicated accurately and in addition the cargo stowage plan will show:

a. Items of the cargo to be discharged at each port.

b. The location of "Heavy Lift" items and awkward/outsize loads.

c. Capacity and location of ship's booms/derricks.

d. Special cargo, e.g. mail, attractive/high value items, etc..

e. Hazardous cargo.

PREPARATION

4. The preparation or the cargo stowage plan should be divided into the following three main parts:

a. A representation of cargo specifying, for each type, its weight, volume, location (both on and below decks) and destination.

b. A recapitulation, by hatches of total tonnage for each port of discharge.

c. Miscellaneous entries, e.g. summarries of heavy lifts, awkward/outside loads, boom/derrick capacities, etc..

5. Cargo stowed in the lower holds will be shown in profile (side view) while that on deck in between decks will be shown in plan (top view).

6. The location of cargo for each port of discharge will be shown by the following colour code:

1st Port of discharge : solid green
2nd Port of discharge : solid red
3rd Port of discharge : solid yellow
4th Port of discharge : horizontal green stripes
5th Port of discharge : vertical red stripes
6th Port of discharge : horizontal yellow stripes
7th Port of discharge : vertical green stripes
8th Port of discharge : horizontal red stripes
9th Port of discharge : vertical yellow stripe.

NOTE : If the use of a colour code is not practicable, the location of cargo for each port of discharae should be shown by shading, cross-checking or other suitable means.

7. The volume and weight of each item of cargo will be shown both in measurement tons (1 measurement ton - 40 cubic feet) and long tons (1 long ton - 2240 pounds), or in metric tonnes and cubic metres. In the stowage plan at Appendix 1 to this Annex these details are given in measurement tons and long tons.

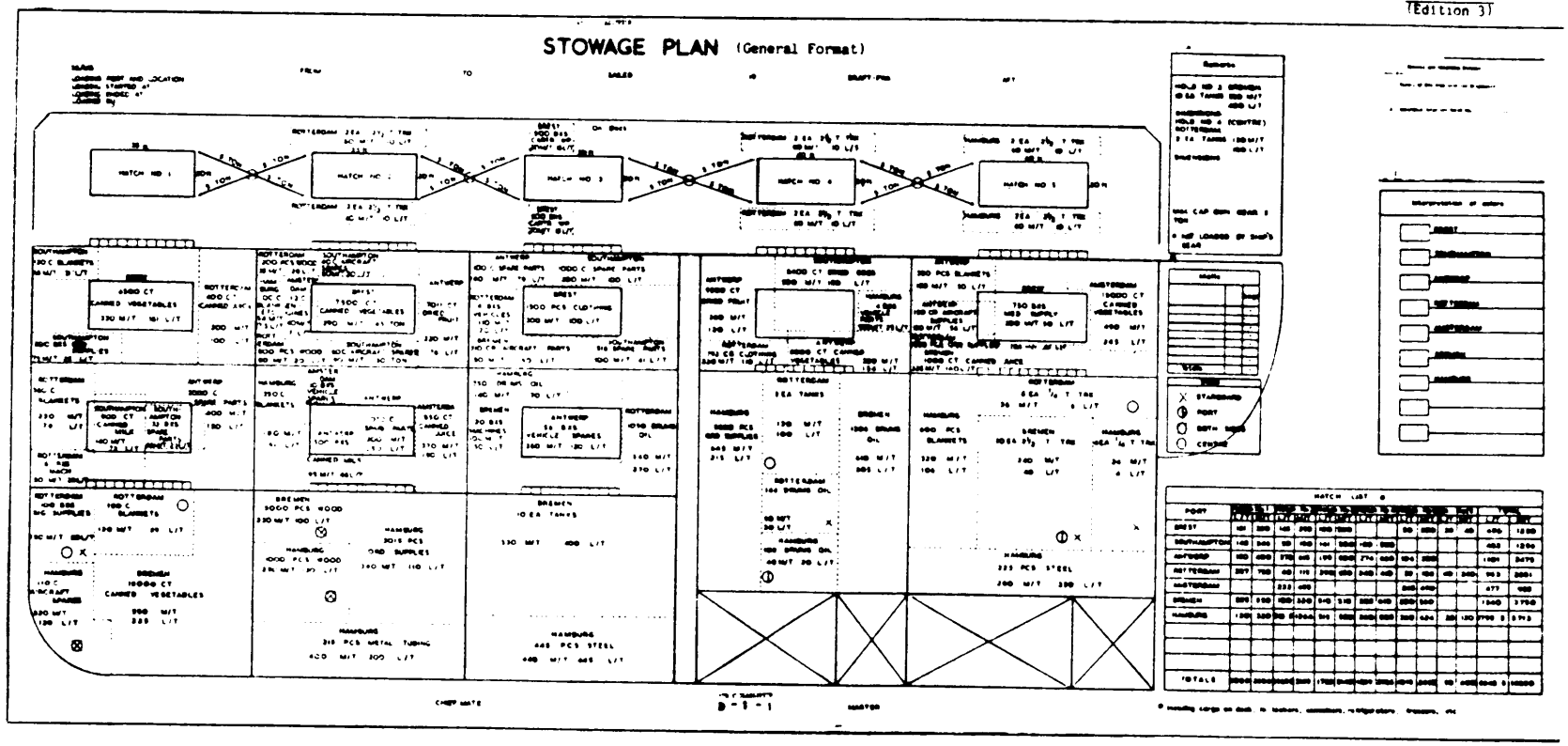
CONSOLIDATED STOWAGE PLAN

8. When a vessel is loaded at store than one terminal within a given port, or at more than one port, the shipping authority responsible for the documentation of each loading will forward copies of the cargo stowage plan to each successive loading terminal.

9. It will be the responsibility of the final loading terminal to prepare and distribute the final cargo stowage plan indicating total cargo loaded.

LEGEND of abbreviations used on Stowage Plan (see Appendix 1)

BXS - Boxes
c - Packages
CR - Crates
CT - Cartons
CU.M. - Cubic Metre (1000 Cubic Decimetres)
PCS - Pieces
TRK - Trucks
CC - Containers
PT - Palletized Unit Loads
M.T. Metric Tonne (Unit or 100 Kilograms)
M/T - Measurement Ton
L/T - Long Ton
TW - Total Weight
EA Each (e.g., 2 EA 21 T TRK = Two such 2~ too trucks


STOWAGE PLAN (General Format)
D-1-1

EXTRACT OF STANAG 3631

NATO UNCLASSIFIED

Agreed English/French texts

STANAG 3631
(Edition 2)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

WARTIME AIR MOVEMENT PRIORITY SYSTEM FOR NATO COUNTRIES

Related Documents: None

AIM

1. The aim of this agreement is to provide for a wartime air priority system to facilitate and assure the timely movement of military traffic between operational theatres.

AGREEMENT

2. Participating nations agree to comply with **the instructions herein for all air movement of military traffic.**

POLICY AND ORGANIZATION

3. a. All military traffic moved by or for the participating nations by military aircraft or under the control of the tack force commander must be identified and moved in accordance with its relative importance to the war effort. The general air priorities mission, therefore, is to assure that eligible traffic (passenger, cargo and mail) receives priorities for air movement in accordance with war effort urgency.

b. The Joint Task Force Commander or the appropriate higher authority will establish movement controls, policies or procedures and monitor airlift support operations to ensure the efficient and orderly movement of passengers, **cargo and mail and its clearance into or out of the aerial ports.**

CLASSES OF PRIORITIES

4. Subject to the approval of the **Joint Task Force Commander or other higher** authority, the following constitute(s) the standards for use in the evaluation and assignment of priorities for specific movements:

PRIORITY 1

a. ~~Class~~ (IMMEDIATE). The movement of traffic which is required by an emergency so acute that precedence should be given over all other traffic and which should under no circumstances be delayed **en** route for other traffic.

ks

PRIORITY 2

b. ~~Class 2 (URGENT).~~ The transportation of traffic which is of an urgent nature, to meet a deadline, for the accomplishment of an essential mission,

PRIORITY 3

c. ~~Class 3 (ROUTINE).~~ The transportation of traffic which is desirable but does not meet the requirements for movement as specified in Classes 1 or 2 above. This class of traffic comprises requirements which qualify for air movement but for which these is no deadline or immediate urgency.

EXEMPTION

5. The provisions apply only to logistic support operations provided with tactical airlift resources or those airlift resources assigned to and under control of the Joint Task Force Commander. However, nothing provided herein will preclude the Joint Task Force Commander or other appropriate higher authority from modifying or amending these instructions to meet the specific circumstances in which the operations are conducted.

IMPLEMENTATION OF THE AGREEMENT

6. This STANAG is implemented when a nation has issued the necessary orders/instructions to the forces concerned putting the procedures detailed in this agreement into effect.

APPENDIX C

UNITED STATES FORCES KOREA

C-1. INTRODUCTION

a. This appendix outlines movement control organizations and procedures within the Republic of Korea.

b. Figure C-1 shows METT-T factors that impact on movement control operations. Geographically, the Republic of Korea is a small region. In size and shape, the country can be compared to the state of Indiana. There is a relatively strong HN infrastructure. LOC has improved significantly during the 1980s. North Korean conventional forces remain the primary threat to the Republic of Korea.

C-2. COMMAND RELATIONSHIPS

a. United States Forces Korea (USFK) is a sub-unified command of the United States Pacific Command (USPACOM) located at Camp H.M. Smith in Hawaii. Most US Army forces in Korea are assigned to the Eighth United States Army (EUSA) located in Seoul, Korea, which is the Army component of USFK. US Army forces also support two combined commands within USPACOM — the United Nations Command and the Combined Forces Command.

b. The 25th TMCA operates under the staff supervision of the USFK/EUSA J4, Transportation. The 25th TMCA operates as a TAMCA and serves as EUSA's transportation manager.

c. MTMC Western Area operates the port of Pusan in direct support of USFK. The port of Pusan conducts all water terminal operations in the theater. During peacetime, the majority of all DOD cargo enters the Korean theater through the port of Pusan. During major exercises, cargo is also received at port facilities other than Pusan.

C-3. ORGANIZATION

Figures C-2 and C-3 show the organization of the 25th TMCA. The 25th is headquartered in Seoul, Korea. It has two regional MCTs (RMCT) and one ATMCT (Figure C-4).

a. The RMCT I is collocated with the 25th at Seoul. It provides movement control operations for the northern sector of the Korean peninsula. Its MCTs are located at Chunchon, Kumchon, Pyongtack, Seoul, Tongduchon, Uijongbu, and Bupyong. RMCT I covers the entire area from the DMZ south to RMCT II (Figure C-5).

b. RMCT II provides movement control for the southern sector of the Korean peninsula. It has four MCTs located at Taegu, Waegwan, Taejon, and Kunsan. RMCT II covers the entire area south of a straight line across the Republic of Korea (ROK) between grid coordinates BR8010 and ER4080 (Figure C-5).

REGION	MISSION	ENEMY	TERRAIN	TROOPS	TIME (STRATEGIC LOC DIST)
KOREA (NORTHWEST ASIA)	● UN PEACE KEEPING FORCE ● DETER COMMUNIST AGGRESSION	● NORTH KOREA ● MID/ HIGH INTENSITY ● CONVENTIONAL FORCES	● SMALL REGION;SINGLE COUNTRY ● PENINSULA (COASTAL OPERATIONS) ● MOUNTAINS;LOWLANDS ● MATURE THEATER; LIMITED RAIL, FEW DISPERSED PORTS ● LOC RUNS S TO N. SMALL FRONT; LINEAR SUPPORT	● MC ARMY (PEACE) ● JOINT/ COMBINED OPN (WAR) ● STRONG HNS	5200 NM

Figure C-1. Movement Control and METT-T.

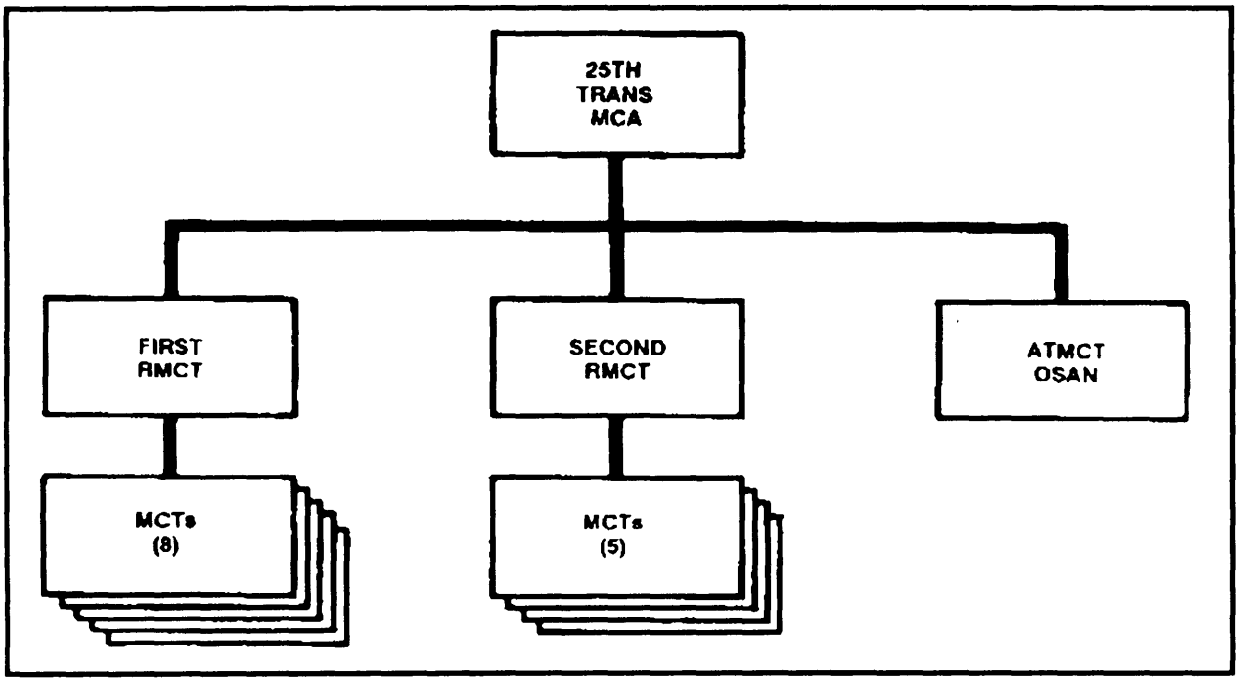


Figure C-2. Organization of the 25th TMCA.

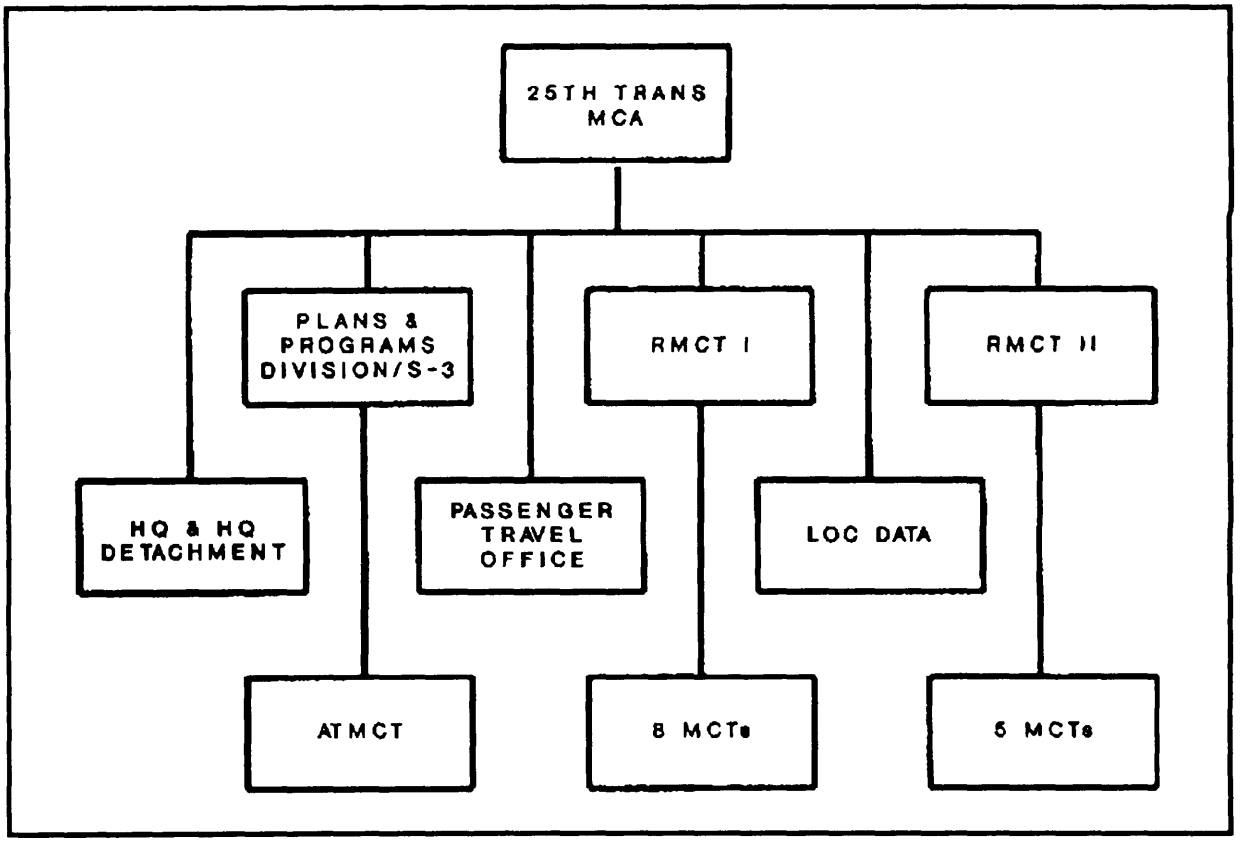


Figure C-3. 25th TMCA.

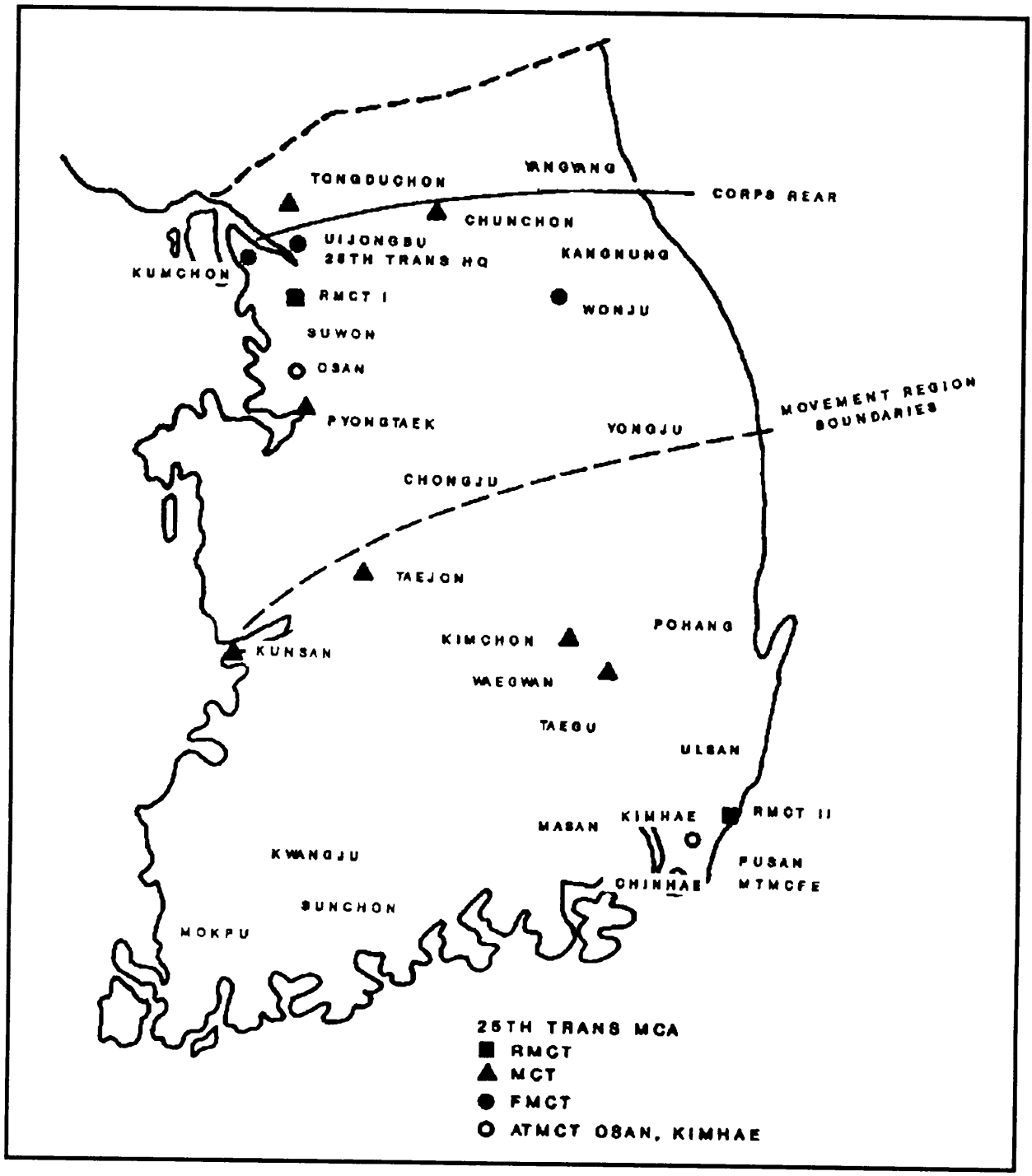


Figure C-4. Movement Regions.

c. The 25th TMCA performs port clearance functions at Osan, Kunsan, Kimhae, and Taegu air bases. There is an ATMCT at Osan. MCTs accomplish the ATMCT mission at Taegu, Kunsan, and Kimhae due to the low volume of traffic into and out of these bases. The 25th TMCA assistant S3 serves as the OIC of ATMCT Osan.

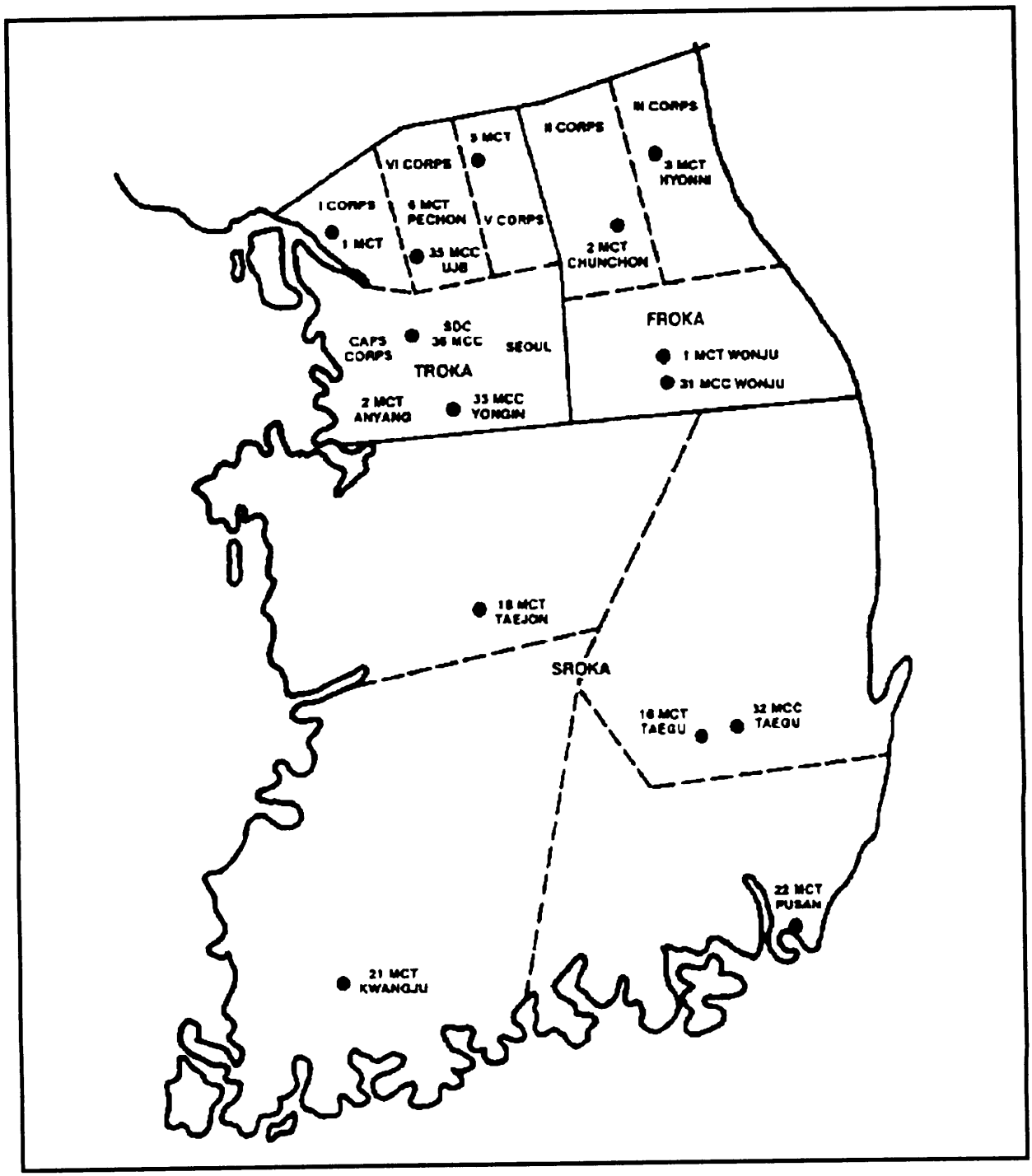


Figure C-5. Location of ROKA MCC/MCT.

C-4. COMMUNICATIONS

a. The 25th TMCA uses DAMMS-R to conduct daily operations. DAMMS-R in Korea consists of TACCS machines at the 25th TMCA P&P/S3, the ATMCT, RMCTs, and each MCT. They are all linked through both US Army Class A telephone lines and a data communications trunkline between Seoul and Pusan.

b. Telex provides a backup system at each TACCS location and a link to commercial contractors for committing transportation assets. Facsimile machines provide an alternate backup system for communicating within USFK and with commercial contractors.

c. Voice communications are maintained using US Army Class A and commercial telephone lines. Secure voice and data transmission is available using STU-III telephones. The voice communications network also may be coupled with KL-43 devices so secure data can be transmitted when STU-III telephones are not available.

d. Radio communications equipment is provided according to current MTOE. Additionally, motorola FM base stations and hand-held units are available for local use at each MCT.

C-5. COMBINED OPERATIONS

a. The combined transportation movement center (CTMC) is an ROK/US Combined Transportation Movement Control Agency activated during exercise and contingency operations. It is the single manager responsible for transportation movement management in support of military operations in the Korean theater of operations.

b. CTMC is a combined activity staffed with personnel from the J4 Transportation Division, 25th Transportation MCA, ROKA Transportation Support Command, and other USFK ROK, Military and Korean government offices as necessary (Figure C-6).

c. The CTMC commander is the Commander, ROK Transportation Support Command, and works under the staff supervision of the AC of S, C4 (Figure C-6).

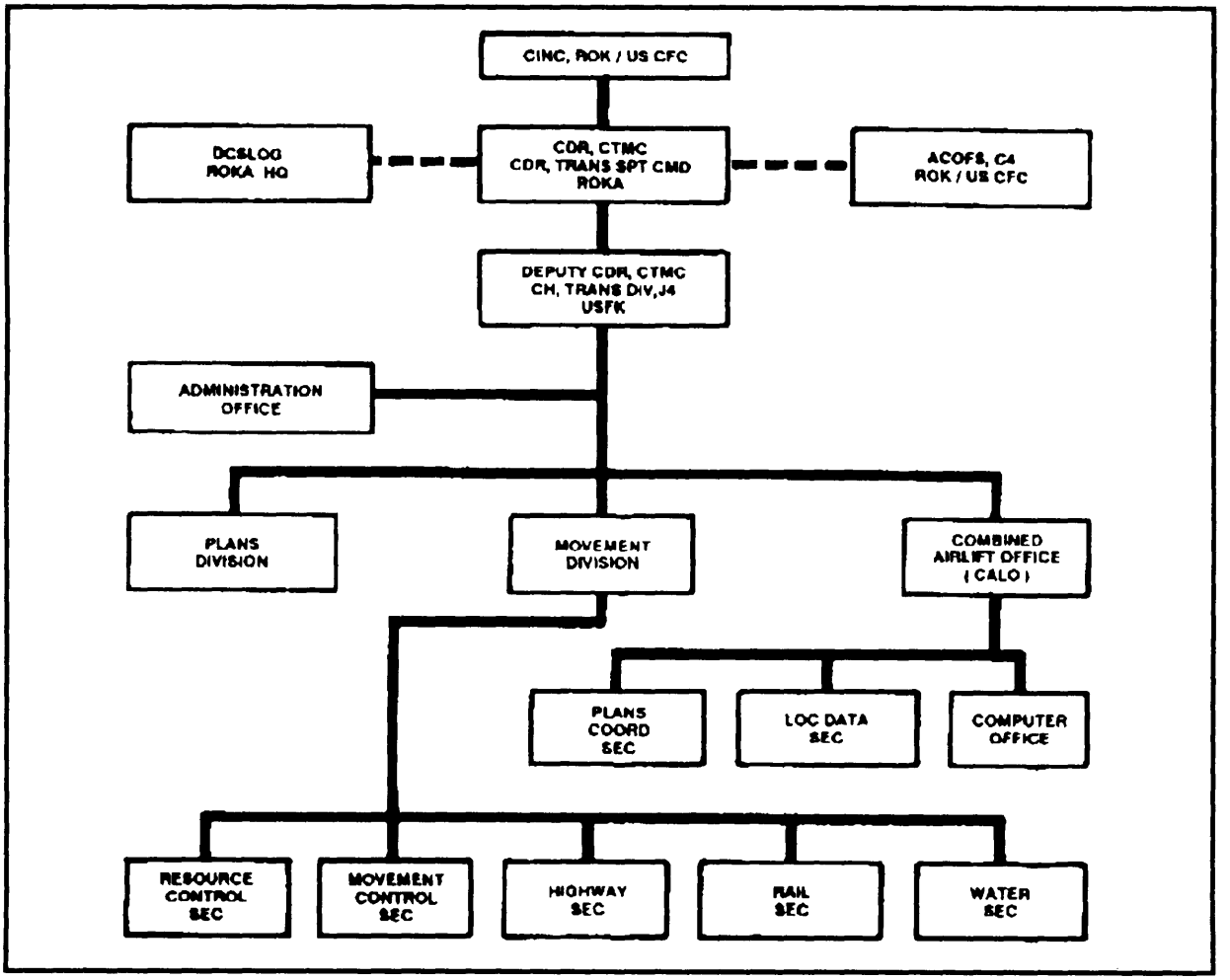


Figure C-6. Movement Control Structure.

APPENDIX D

UNITED STATES SOUTHERN COMMAND

D-1. INTRODUCTION

a. This appendix outlines movement control organizations within the United States Southern Command (USSOUTHCOM) area of responsibility.

b. The mission of USSOUTHCOM is to establish and implement plans, programs, and policies in peacetime, conflict, and war which will contribute to the defense of the United States and its allies, and which protect and promote US interests in Latin America. USSOUTHCOM has two JTFs, one in Panama and one in Honduras.

c. Figure D -1 shows METT-T factors that impact on movement control operations. Geographically, USSOUTHCOM's area of responsibility stretches 6,000 miles and comprises 19 countries from the southern border of Mexico to the southern tip of South America. US forces maintain a force presence only in Honduras and Panama (Figures D-2 and D-3). US forces conduct operations and exercises throughout the theater at the invitation of the HN.

d. Much of the area is undeveloped and has weak infrastructure. Ground LOC are generally poor, requiring greater reliances on sea and air LOC. Counterinsurgency and terrorists are the primary threats through the region.

REGION (LATHAM)	MISSION	ENEMY	TERRAIN	TROOPS	TIME STRATEGIC LOC DIST
PANAMA	• DEFENSE OF PANAMA CANAL • STABILITY OPERATIONS • NATION BUILDING • COUNTER NARCOTICS	• TERRORIST • INSURGENTS • LOW INTENSITY • UNCONVENTIONAL FORCES	• SMALL COUNTRY • COASTAL OPERATIONS • MOUNTAINS;LOWLANDS; JUNGLE • UNDEVELOPED INFRASTRUCTURE • LOC RUNS EAST TO WEST PAN AMERICAN HWY. SMALL FRONT;LINEAR SUPPORT	• THEATER DEFENSE BDE (PEACE) • JOINT/COMBINED OPS (WAR) • WEAK HNS	2500 NM
HONDURAS	• STABILITY OPERATION • INFRASTRUCTURE DEVELOPMENT • COUNTERINSURGENCY • COUNTERNARCOTICS	• TERRORIST • INSURGENTS • LOW INTENSITY • UNCONVENTIONAL FORCES	• SMALL COUNTRY • COASTAL OPERATION/ NORTH COAST • MOUNTAINS;LOWLANDS; JUNGLE • UNDEVELOPED INFRASTRUCTURE • LOC RUNS NORTH TO SOUTH SMALL FRONT; LINEAR SUPPORT	• JOINT TASK FORCE (PEACE) • JOINT/COMBINED OPS (WAR) • WEAK HNS	2000 NM
OTHER COUNTRIES	• STABILITY OPERATION • INFRASTRUCTURE • COUNTERINSURGENCY • COUNTER NARCOTICS	• TERRORIST • INSURGENTS • LOW INTENSITY • UNCONVENTIONAL FORCES	• SMALL COUNTRIES • COASTAL; RIVERINE OPERATIONS • HIGH MOUNTAINS; JUNGLE LOWLAND • LOC UNDEFINED	• SPECIAL OPERATIONS TASK FORCES • ENGINEER TASK FORCES • COUNTERNARCOTICS TASK FORCES	2000 TO 5000 NM

Figure D-1. Movement Control and METT-T.

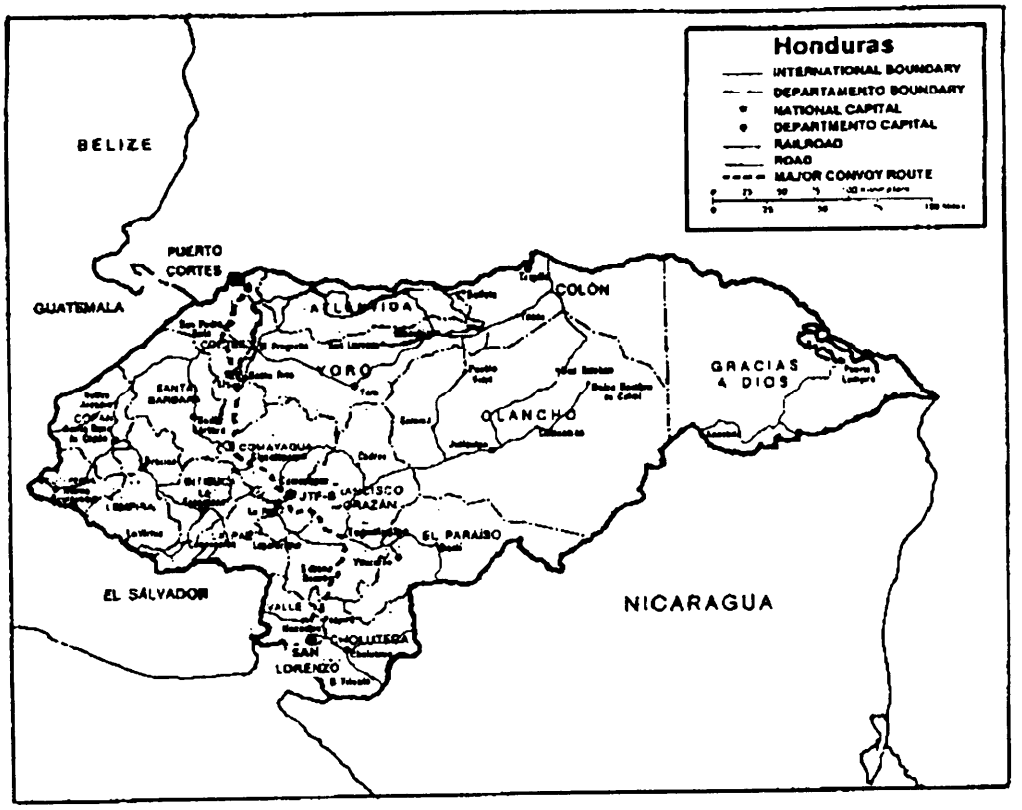


Figure D-2. Honduras.

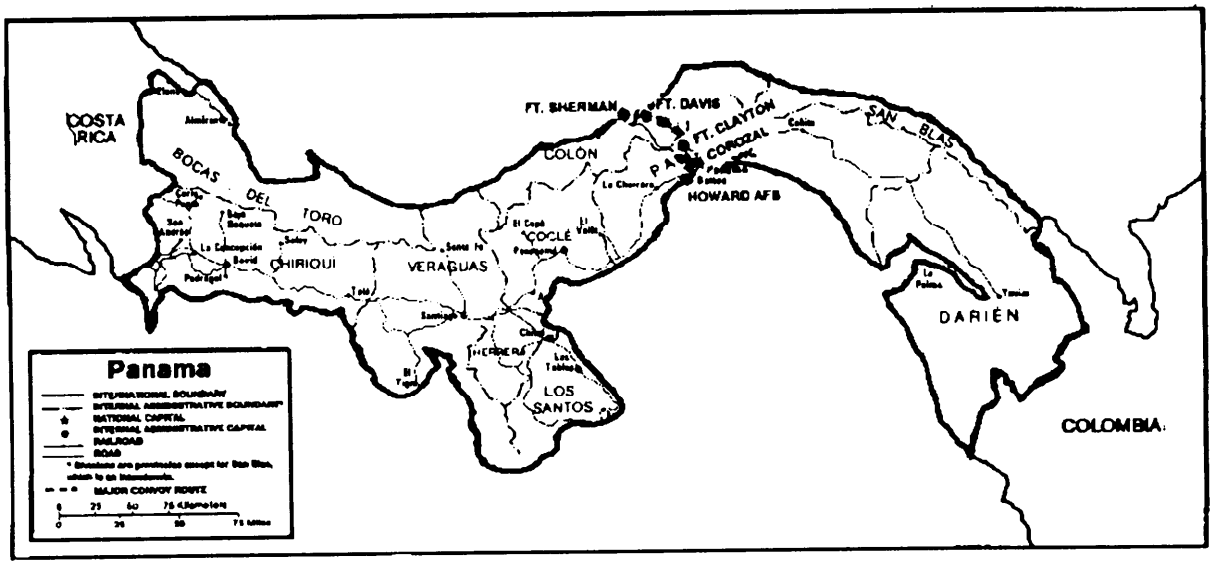


Figure D-3. Panama.

D-2. COMMAND RELATIONSHIPS

a. The US Army component of USSOUTHCOM is US Army South (USARSO) located in Panama. Its primary mission is ground defense of the Panama Canal but it also supports other regional missions, including security assistance, humanitarian assistance, and evacuation of noncombatants.

b. The 41st ASG operates under the staff supervision of the USARSO DCSLOG. The 41st ASG is the transportation manager in Panama. Its staff, along with an assigned MCT, exercises movement control responsibilities for USARSO.

c. The primary military mode operator in Panama is the 193d Support Battalion, headquartered at Fort Clayton. It has a supply and transport company (one medium truck platoon). The 41st ASG exercises committal authority over the 193d through its MCT.

d. The MTMC Eastern Area operates the MTMC terminal in Balboa, Panama, in direct support of USSOUTHCOM. The MTMC terminal in Balboa is the primary military terminal supporting the USSOUTHCOM area of responsibility.

e. JTF Bravo is the day-to-day manager of transportation within Honduras. JTF Bravo has limited organic transportation assets. Ground movement of cargo is through HNS through the JTF Bravo Army forces (ARFOR) S4 and the JTF Bravo contracting office.

D-3. ORGANIZATION

Figures D-4 and D-5 show the organization of the 41st ASG. The 41st ASG, the MCT, and the 490th TC Detachment are headquartered in Corozal, Panama. An air terminal manager and an A/DACG are located at Howard Air Force Base.

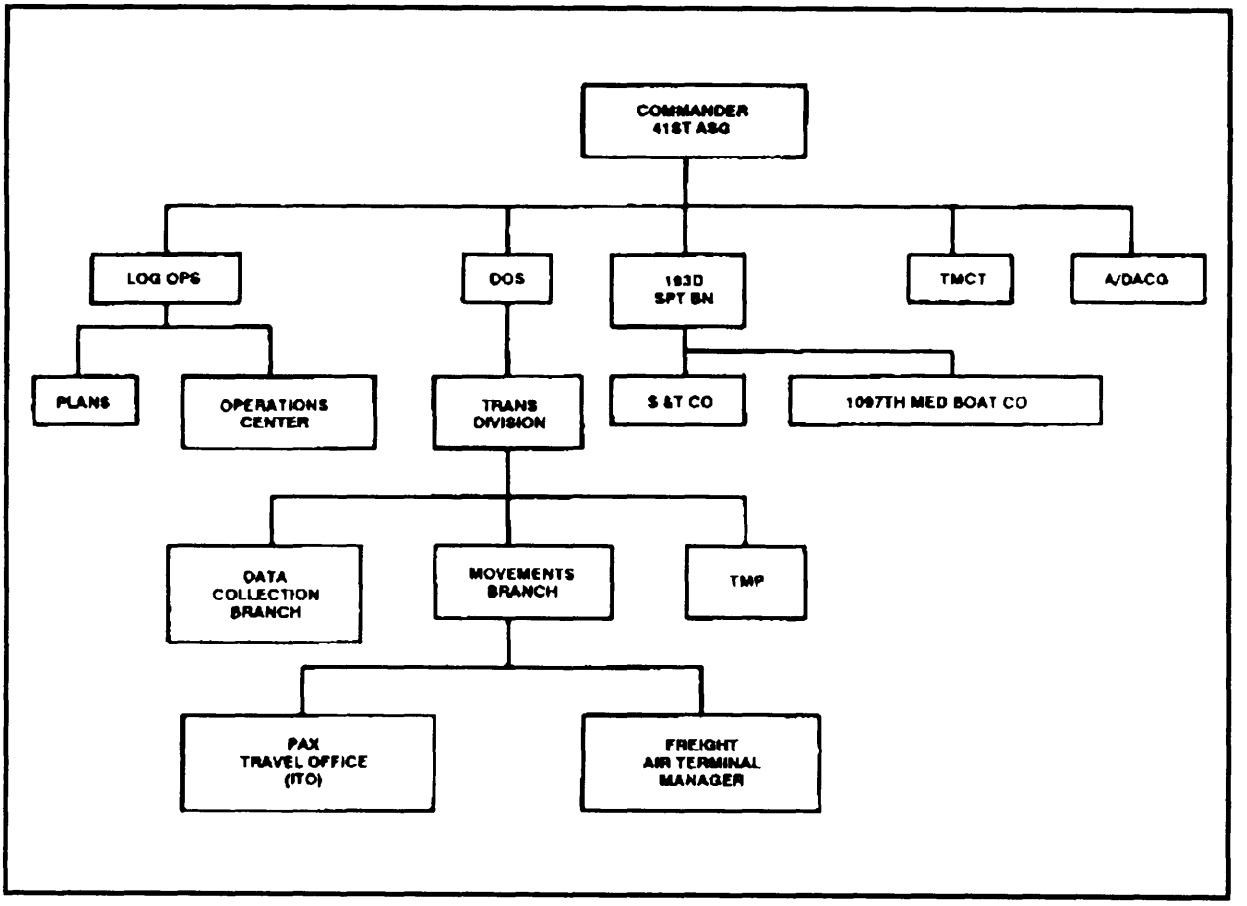


Figure D-4. Organization TOE.

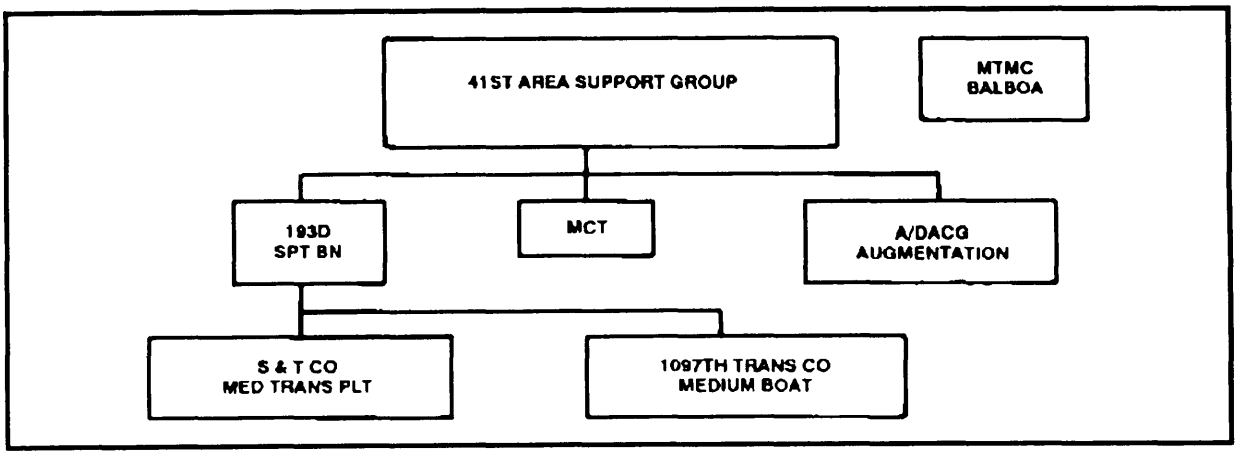


Figure D-5. 41st ASG.

D-4. COMMUNICATIONS

a. Communications between the 41st ASG and the TMCT are conducted on a direct, hand-carry basis.

b. Voice communications are maintained using Army Class A and commercial telephone lines. Secure voice and data transmission is available using STU-III telephones. Facsimile machines provide an alternate system for communicating with USARSO and with commercial contractors.

c. Radio communication equipment is provided according to the proper MTOEs. Additionally, motorola FM base stations and hand-held radios are available for local use at the TMCT.

APPENDIX E

ROAD MOVEMENT PLANNING

Section I. GRAPHING

E-1. INTRODUCTION

a. A movement graph is a method of graphically portraying movements along a single route. It shows the relationship between time and distance and highlights any conflicts between columns scheduled for movement on the route. Movement planners can use movement graphs during planning when conflicts are anticipated or when restrictions are applied to routes.

b. This appendix is divided into three sections. Section I outlines fundamentals of graphing, route restrictions, and movement tables. Section II outlines how to deconflict movements over multiple routes using a critical time and point graph. Section III is a complete example of graphing.

E-2. PREPARING A GRAPH

a. Movement graphs can be prepared on any type of graph paper. The vertical axis shows distance and the horizontal axis shows time. The lower left corner of the graph represents zero kilometers (or miles) and the earliest start time of the movement. The planner creating the graph must apply a scale to the vertical and horizontal axis as shown in Figure E-1.

(1) The scale of the vertical axis is a division of the total distance. The top number on the vertical axis is the greatest number of kilometers (or miles) to be traveled by any element on the route. In Figure E-1, the distance scale is 3 kilometers per block.

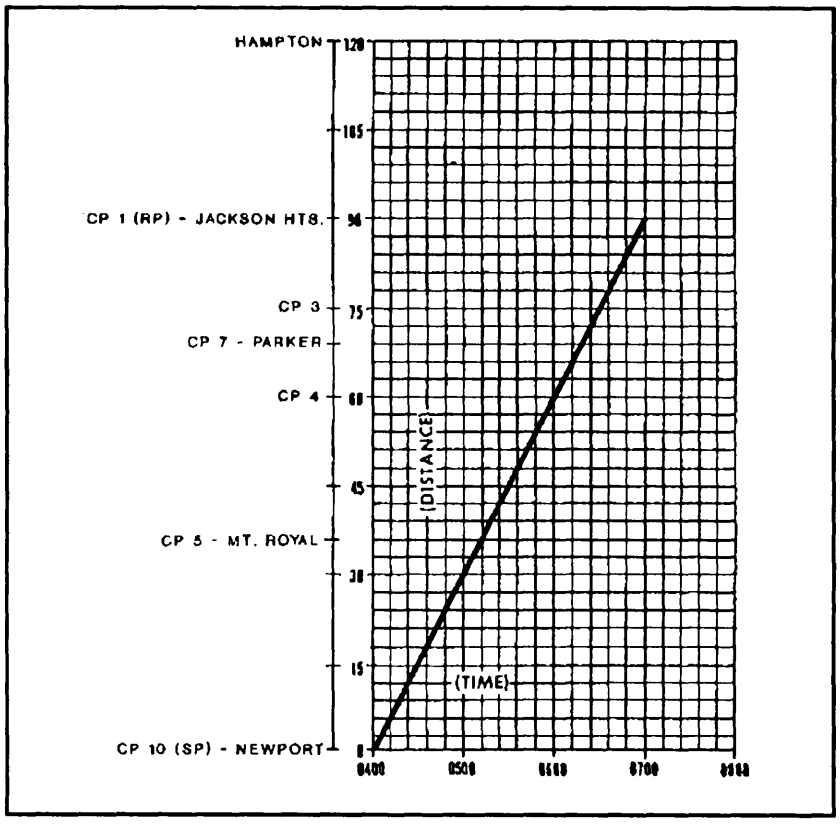


Figure E-1. Schedule of Head of Column.

(2) The scale of the horizontal axis is a division of the total time. The time at the end of the horizontal scale shows the latest planning time to complete all movements planned for the route. In Figure E-1, the time scale is 12 minutes per block.

b. Critical points along the route, such as built up areas, road junctions, and CPs are shown along the vertical axis on the same scale as that of the graph. The SP and RP can also be annotated alongside the CP if all movements begin and end at the same CP.

c. The graph in Figure E-1 shows the time and distance scales, critical points, CPs, and a plotted line representing the movement of one vehicle (or the first vehicle of a column) from the SP (Newport) to Jackson Heights. Based on the scale of each block representing 3 kilometers and 12 minutes, the head of the convoy will leave Newport at 0400 hours, travel 90 kilometers to Jackson Heights, and arrive at 0700 hours. Using the formula to determine march rate, R = D ÷ T, the march rate is 30 kih.

d. March columns, serials, and march units are represented on a graph by parallel diagonal lines like the one shown in Figure E-2. The vertical space between the diagonal lines is the length of roadway (length) occupied by the column. It is measured along the vertical scale. The horizontal space is the time it takes for the column to pass any given point (pass time or time length).

(1) The head of the column is plotted at the intersection of the SP on the vertical scale and start time on the horizontal scale. The clear time of the head of the column is plotted at the intersection of the RP on the vertical scale and the clear time on the horizontal scale.

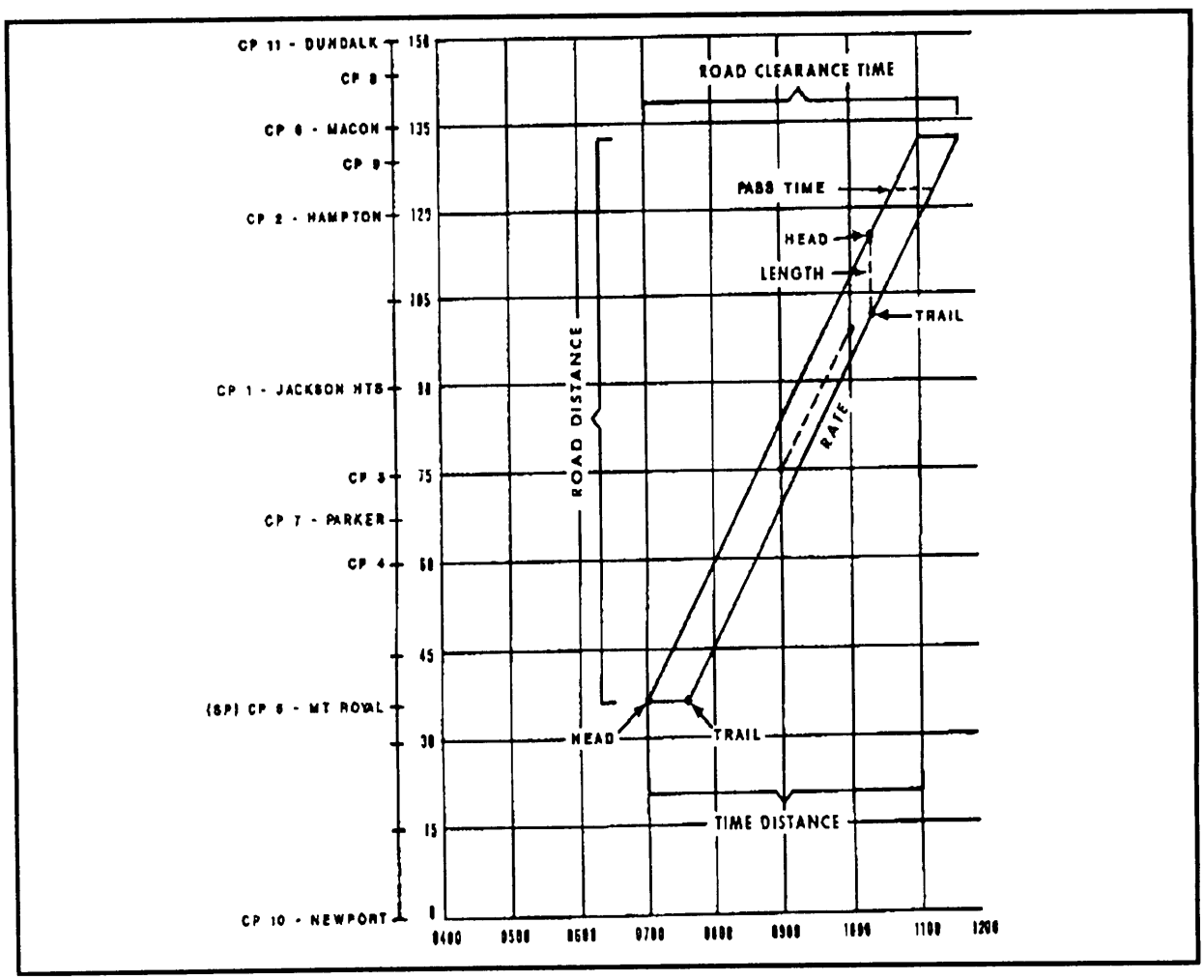


Figure E-2. March Graph Showing Movement of a Column.

(2) The trail of the column is plotted at the intersection of the same SP on the vertical scale and its start time on the horizontal scale. The trail vehicle's start time is calculated by adding pass time to the start time of the first vehicle. The clear time of the trail vehicle is plotted at the intersection of the RP on the vertical scale and its clear time on the horizontal scale. The trail vehicle's clear time is calculated by adding pass time to the clear time of the first vehicle.

e. The graph now completely pictures the movement of one column. The vertical and horizontal scales reveal the following information:

- The two parallel diagonal lines show the head and the tail movements.
- The column's length is about 14 kilometers.
- The pass time of the column is 36 minutes; that is, it will take 36 minutes for the column to clear any point along the route.
- The road distance from SP to RP is about 96 kilometers. The time distance is 4 hours (0700-1100); it will take 4 hours for the head of the column to clear the RP.
- Road clearance time, calculated by adding the pass time to the time distance, is 4 hours and 36 minutes.
- Road clearance distance, calculated by adding the length to road distance, is 110 kilometers.

f. March graphs are normally used to show multiple columns traveling over the same route as shown in Figure E-3. Each of these columns is explained below.

(1) Column A is scheduled to leave its SP, Newport, at 0400 and clear the SP at 0500, a pass time of 1 hour. Distance to the RP, Hampton, is 120 kilometers. The rate of march is 30 kmih. The time distance is 4 hours (120 km ÷ 30 kmih). The head will arrive at the RP at 0800 and the trail at 0900. Therefore, the road clearance time us 5 hours, which us the time distance plus the pass time.

(2) Column B makes a shorter move at a different time. It is scheduled to leave its SP, Mount Royal, at 0700 and clear the SP at 0730, a pass time of 30 minutes. Distance to the RP is 48 kilometers. The rate of march is 24 kmih. The time distance is 2 hours (48 km + 24 kmih). The head will arrive at the RP at 0900 and the trail at 0930. Therefore, the road clearance time is 2 1/2 hours. The graph shows that this move does not conflict with the first move.

(3) A crossroad lateral movement is scheduled to cross at CP 1 from 0906 until 1312 hours. The graph shows that the lateral movement will not interfere with any of the scheduled moves.

(4) Column C makes a longer and slower move than the other columns. The graph shows this because the diagonal lines representing time distance are not as steep as the lines of columns A and B and D. The steepness of a diagonal line on the graph indicates the rate of march. Column C is scheduled to leave its SP, Newport, at 0700 and clear the SP at 0750, a pass time of 50 minutes. Distance to the RP is 132 + kilometers. The rate of march is 18 kmih. Column C is also scheduled for a one hour rest halt on the road. Rest halt time is added to the time distance when calculating. Therefore, the time distance is 132 km ÷ 18 kmih + 1 hour, or 8 hours and 20 minutes. The road clearance time is 9 hours and 10 minutes.

(5) Columns D-1 and D-2 are two serials of one column. They are scheduled to travel at 28 kmih from the same SP to the same RP, one leaving 24 minutes after the other. The graph shows that the head of column D-1 is scheduled to leave the SP at 1400 hours and arrive at the RP at 1700 hours, a distance of 84 kilometers in 3 hours. The rate of march is 28 kmih (84 km ÷ 3 hr). Because both elements of the move are shown on the graph parallel to each other, the rate is the same for both.

(6) Column E is a foot march on the route. It is traveling slowly: 24 kilometers in 6 hours of walking time.

E-3. PLANNING FOR ROUTE RESTRICTIONS

a. Planners must consider route restrictions when graphing movements. These restrictions normally add greater control measures to a route. They may be imposed to allow for route maintenance, large unit movements, or maneuver. They should be specified in highway regulation plans, OPORDs, or FRAGOs.

b. Restrictions are marked on graphs by blocking out the time and space on the graph when traffic may not use a route or cross an intersection. To plan around restrictions, planners can calculate the earliest time a

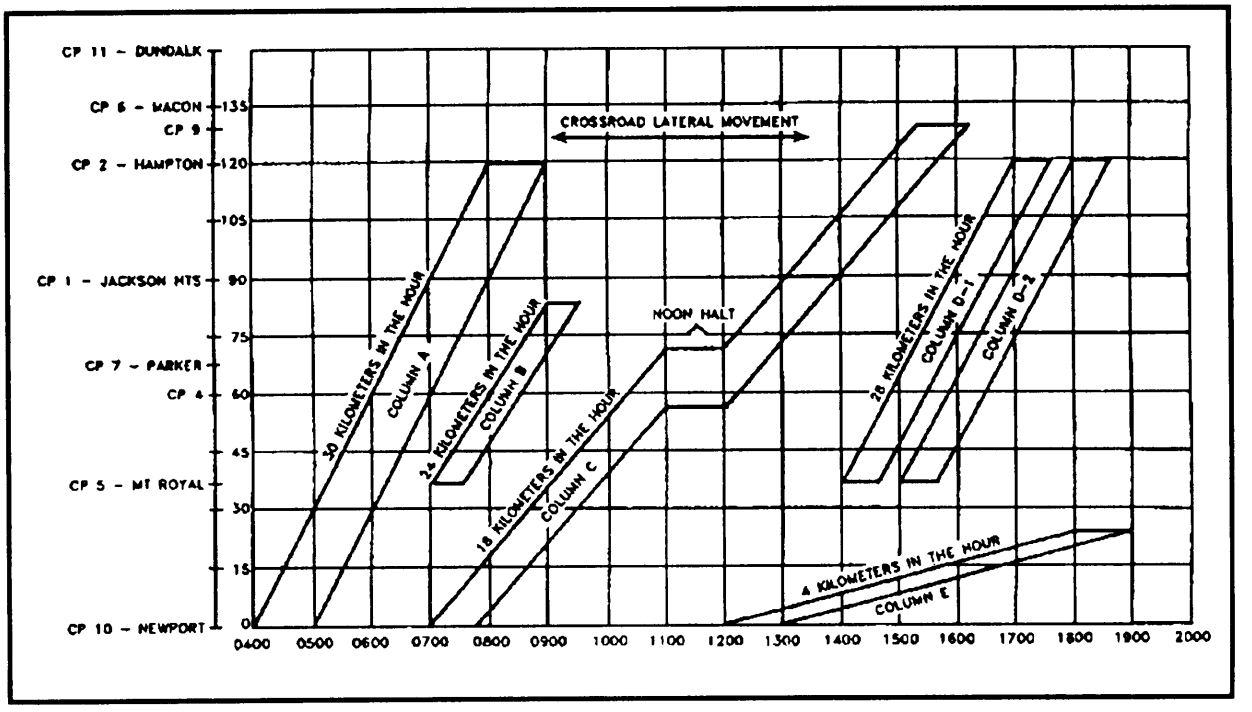


Figure E-3. Scheduling Moves.

column can leave the SP to miss the restriction or calculate the latest time a column can leave the SP to miss the restriction.

c. When passing after restriction ends, use the following formula. Compute the earliest time the head of the column can cross the SP to clear the ending time of a route restriction without halting at the restriction:

The earliest time the first vehicle can cross the SP = end of restriction time + safety factor - time distance from start point to restriction point.

EXAMPLE: A restriction is in effect from 1140 to 1240. The distance from the SP to the restriction is 32 kilometers. A safety factor of 15 minutes is in force before and after the restriction. This is a close column move executed at the rate of 16 kmih. Pass time is 12 minutes. Using the formula, calculate the earliest time the first vehicle can cross the SP.

$$1240 + 15 \text{ min} - \frac{32 \text{ km}}{16 \text{ kmih}} = 1255 - 2 \text{ hr} = 1055$$

The earliest time the column can leave the SP is 1055.

d. When passing before restriction begins, use the following formula. Compute the latest time the first vehicle of a column can cross the SP to have the last vehicle arrive at the 1140 to 1240 restriction before it begins.

The latest time the first vehicle of a column can cross the SP = beginning of restriction time - safety factor - time distance from SP to the restriction - time length. Using the data in the example above, calculate the time.

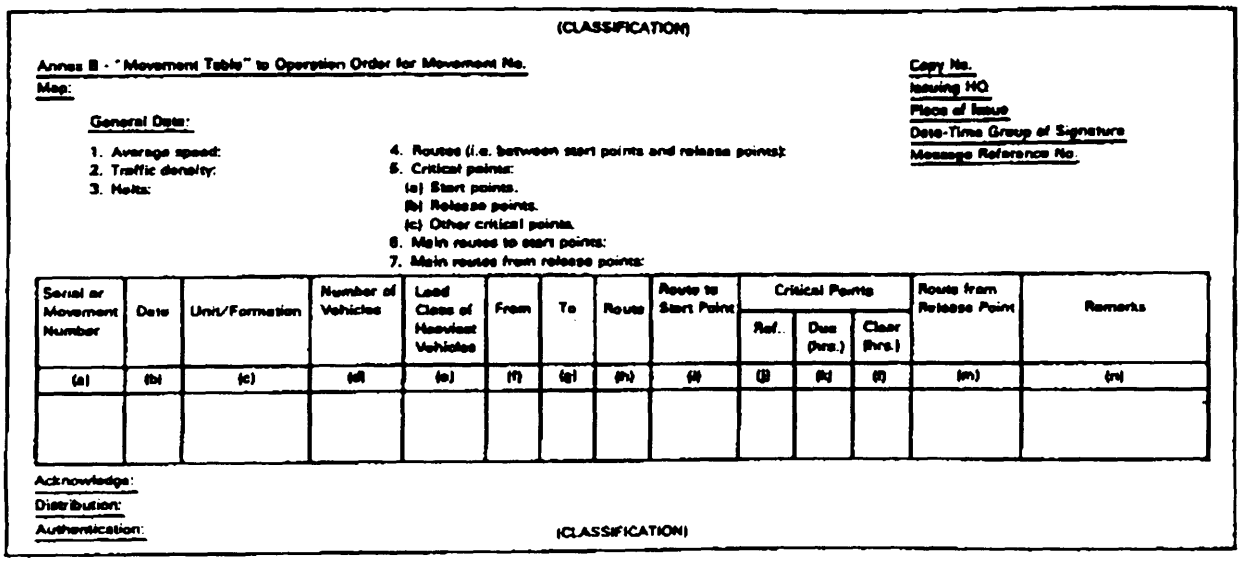
$$1140 - 15 \text{ min} - \frac{32 \text{ km}}{16 \text{ kmih}} - 12 \text{ min}$$

$$1140 - 15 \text{ min} - 2 \text{ hr} - 12 \text{ min} = 0913 \text{ hr}$$

The latest time the column can leave the SP is 0913.

E-4. PUBLISHING ROAD MOVEMENT TABLES

The road movement graph is a planning work sheet for movement planners. It is not normally disseminated to subordinate units or published in plans and orders. Instead, information obtained from the graph is published in road movement tables. Figure E-4 shows a sample road movement table.



(CLASSIFICATION)

Annex B - "Movement Table" to Operation Order for Movement No.

Map:

Copy No.
Issuing HQ
Place of Issue
Date-Time Group of Signature
Message Reference No.

General Data:

1. Average speed:
2. Traffic density:
3. Halts:
4. Routes (i.e. between start points and release points):
5. Critical points:
   (a) Start points.
   (b) Release points.
   (c) Other critical points.
6. Main routes to start points:
7. Main routes from release points:

Serial or Movement Number	Date	Unit/Formation	Number of Vehicles	Lead Class of Heaviest Vehicles	From	To	Route	Route to Start Point	Critical Points			Route from Release Point	Remarks
									Ref.	Due (hrs.)	Clear (hrs.)		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)

Acknowledge:

Distribution:

Authentication:

(CLASSIFICATION)

Figure E-4. Sample Road Movement Table.

Section II. DECONFLICTING

E-5. INTRODUCTION

As discussed in Chapter 7, movement planners must deconflict the planned movement of convoys on controlled MSRs in order to issue movement credits, reroute, or divert. A critical time and point graph is a tool that maybe used by movement planners to aid in preventing conflicts at critical points when planning and scheduling movements. It is an alternative method of deconflicting movements from the grid system described in Chapter 7. Both methods accomplish the same function of tracking the planned itineraries of convoys as they arrive and clear planned checkpoints along MSRs. This method is more detailed and may be useful for planning movements on road networks that have many MSRs crossing each other.

E-6. CRITICAL TIME AND POINT GRAPH

a. Data for developing a critical time and point graph is taken from highway regulation plans or traffic circulation plans. These plans identify the critical points or checkpoints that will be used to plan movements. Movement planners also receive movement information for preplanned or immediate requirements. Preplanned information is derived from movement graphs or tables used to support the movement program. Immediate requirements are generated on short notice from clearance requests (movement bids).

b. The movement planner posts the movement data for each movement requirement to the critical time and point graph for the day or days involved. The planner will either configm the availability of the road network for the requesting unit or makes changes to separate, balance, or distribute based upon command priorities.

c. An example of a critical time and point graph is shown in Figure E-5. Critical time and point graphs are composed of subgraphs, one for each critical point. The name or number of the critical point is marked along the left margin. Each critical point has four paths, one for each direction (north, south, east, and west). These paths are marked along the left side to show the predominant direction of movement or change of direction. Time is annotated along the top on the vertical divisions of the graph in short time blocks, normally 15 minutes or less. A graph may reflect any time period. However, graphs do not normally exceed 24 hours.

d. In Figure E-5, the critical time and point graph reflects a route with three critical points (25, 26, and 27). In this example, the vertical lines represent five-minute time blocks. Two convoys are planned.

(1) Convoy 225 traveling eastward on MSR Sparrow will arrive at critical point 25 at 0020 hours and will clear that point at 0040 hours. Thus, the block representing convoy 225 extends from the arrive time to the clear time.

(2) Convoy 225 then continues to travel eastward and will arrive at critical point 26 at 0130. At critical point 26, convoy 225 turns northward on MSR Hawk as shown by the flag extending from the eastbound to northbound paths. Changes in direct ion of travel at critical points are always indicated by a flag extending into the appropriate path on the graph opposite N, S, E, or W. Convoy 225 clears critical point 26 about 0145 hours.

(3) Convoy 226 traveling northward on MSR Hawk arrives at critical point 27 at 0230 and will clear that point at 0300 hours.

c. Critical time and point graphs should be prepared for each MSR in advance for a specified planning period to deconflict programmed moves over multiple routes. The data for arrive and clear times at critical points can be obtained from movement graphs, movement bids, or automated planning programs such as MOVEPLAN. The planning period will vary depending upon the level of command. Generally, the TAMCA and MCC work with longer planning periods than does the DTO because movements in the COMMZ and corps rear area can be programmed further in advance.

f. On the day of movement, movement planners receive the in-transit status of convoys as reported by MRTs, TCPs, or the moving unit. They check the progress of movement against the critical time and point graph for that day. When a convoy is reported off schedule, they check the graph for time and space separations from other convoys. If necessary, planners reroute, stop movement, or reschedule convoys to prevent conflicts. They provide these changes to the effected commands and the MPs.

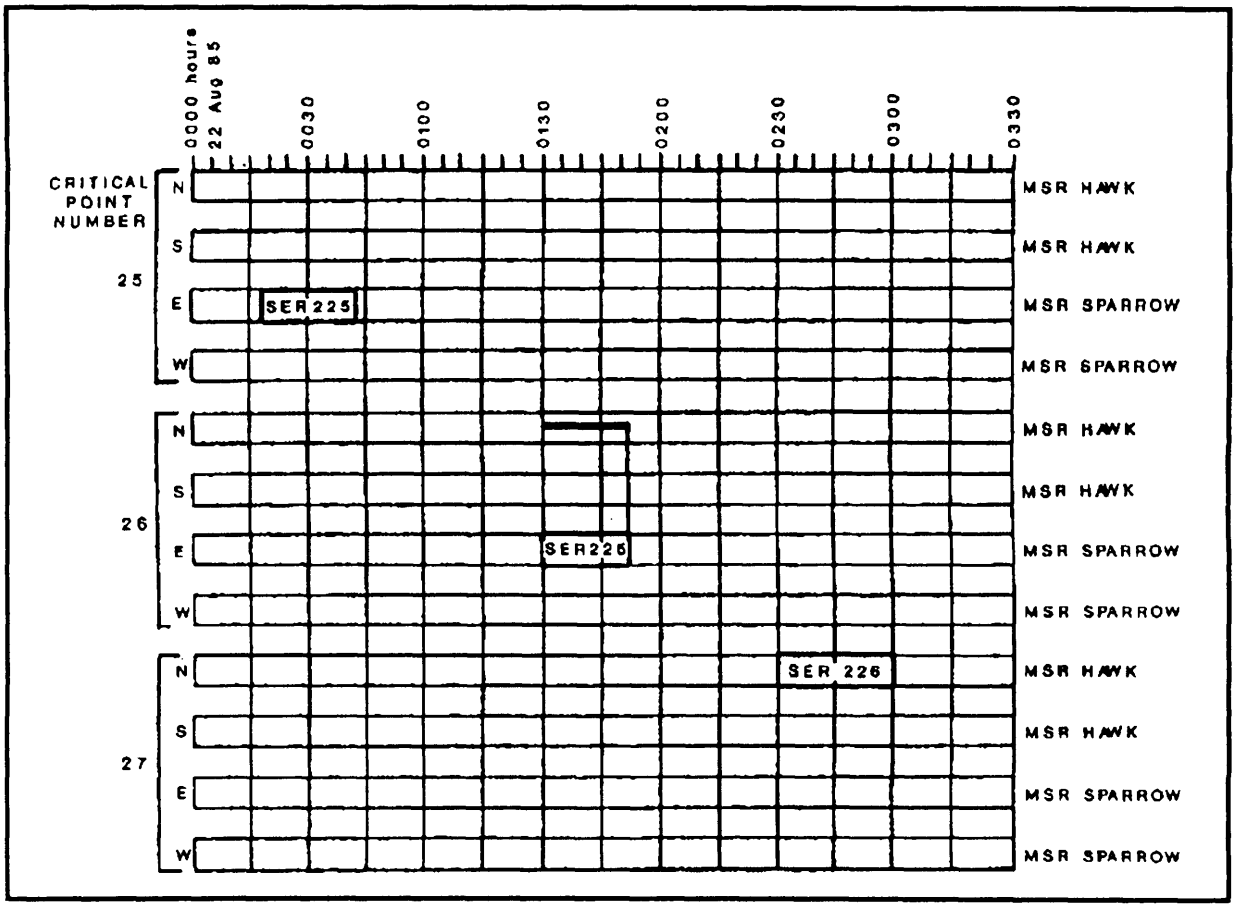


Figure E-5. Critical Time and Point Graph.

Section III. GRAPHING, DECONFLICTING, AND PREPARING MOVEMENT TABLES FOR A HIGHWAY MOVEMENT

E-7. INTRODUCTION

This section provides a step-by-step example of how to compute a highway movement, prepare a road movement graph, and prepare road m-ovement tables for a convoy consisting of five serials.

E-8. REVIEWING THE SITUATION

a. Convoy Data. On 23 February, elements of the 439th Transportation Battalion will move from the unit's present position to an area near CP 106. The movement will consist of five serials, organized as shown in Figure E-6. The frost and second serials have six march units each; the third and fourth serials have seven march units each; and the fifth has five march units. The SP is CP 97, and the RP is CP 106. The route of march is from CP 97 to CP 106 by way of CPs 99, 103, 104, and 105. The lead vehicle of the first serial will cross the SP at 0800 hours.

b. Movement Conditions. Extracts of the highway regulation plan specify the following conditions on the movement:

(1) The rate of march during daylight hours is 24 kmih and the density of vehicles during daylight hours is 12 per kilometer.

(2) The rate of march during hours of darkness (1835-0630) is 16 kmih and the density of vehicles during hours of darkness is 48 per kilometer.

(3) Gaps will be 10 minutes between serials and 2 minutes between march units.

(4) When an en route restriction is applied to the movement, a 15-minute safety factor will be allowed before and after the restriction.

c. Restrictions. The following restrictions are in effect on 23 February:

CP 99 to CP 103 from 1100 to 1200.
CP 105 from 1500 to 1530.
CP 104 from 1510 to 1630.
CP 105 from 1700 to 1830.

d. Additional Guidance.

(1) The fourth serial will halt in place at the 1500 to 1530 restriction at CP 105 and will continue as soon as possible after the restriction.

(2) The head of the fifth serial will depart the SP as soon as possible to clear the restriction at CP 104. The fifth serial will stop at the 1700 to 1830 restriction at CP 105 and disperse vehicles until the restriction is lifted.

Serials	Unit	Number of vehicles	Number of march units
First	2439th and 2440th Transportation Companies	126	6
Second	2441st and 2442d Transportation Companies	135	6
Third	2443d and 2444th Transportation Companies and Headquarters and Headquarters Detachment, 439th Transportation Battalion	150	7
Fourth	2445th and 2446th Transportation Companies	144	7
Fifth	2447th and 2448th Transportation Companies (attached)	124	5

Figure E-6. Organization of Serial March Units.

NOTE: All computations in minutes resulting in a fraction are raised to the next full minute; kilometers are rounded up to the nearest tenth. For example —

15.6 minutes = 16 minutes
15.3 minutes = 16 minutes
13.67 kilometers = 13.7 kilometers
13.43 kilometers = 13.5 kilometers

E-9. COMPUTING TIME DISTANCE OF THE ROUTE

The planner must first determine how long it will take each serial to travel from the SP to the RP, the time distance of the route.

a. Formula. Compute the time distance (TD) by dividing the distance (D) from the SP to the RP by the rate of march (R). Thus, TD = D ÷ R.

b. Data. The distances between CPs and total distance are shown below:

	Kilometers
CP 97 to CP 99	24
CP 99 to CP 103	6
CP 103 to CP 104	9
CP 104 to CP 105	18
CP 105 to CP 106	18
Total	75

c. Computation. The distance from SP to RP is 75 kilometers. The lead vehicle will cross the SP at 0800 and the rate of march during daytime is 24 kmih. Substituting in the formula TD = D ÷ R, TD = 75 ÷ 24, or 3.125 hours. Since .125 hours is 8 minutes (.125 x 60), the time distance is 3 hours 8 minutes.

E-10. COMPUTING ROAD SPACE OF THE FIRST SERIAL

a. Formula. Road space is the length of a column. The formula for computing road space is —

$$\text{Road space} = \frac{\text{number of vehicles} + \text{time gaps} \times \text{rate}}{\text{vehicle density} \qquad 60 \text{ min}}$$

b. Computation. Figure E-6 shows 126 vehicles in the first serial. The rate of march is 24 kmih; the density is 12 vehicles per kilometer. The time gap is 2 minutes between march units. Because six march units make up the serial, there are five gaps making a total time gap in the serial of 10 minutes. Computing the road space for the first serial -

$$\text{Road space} = \frac{126}{12} + \frac{10 \times 24}{60} = 10.5 + 4 = 14.5 \text{ km}$$

E-11. COMPUTING PASS TIME OF THE FIRST SERIAL

a. Formula. Pass time is the time required for a column to pass a point on the route. The formula for computing pass time is –

$$\text{Pass time} = \frac{\text{road space} \times 60 \text{ min}}{\text{rate}}$$

b. Computation. Use the road space computed in the preceding paragraph (14.5 kilometers).

$$\text{Pass time} = \frac{14.5 \text{ km} \times 60 \text{ min}}{24 \text{ kmih}} = 36.3 \text{ or } 37 \text{ min}$$

E-12. COMPUTING ROAD SPACE AND PASS TIME OF THE SECOND,THIRD, FOURTH, AND FIFTH SERIALS

Using the same formulas and methods of computation as for the first serial, compute the road space and pass time for the remaining serials.

a. Second Serial.

$$\text{Road space} = \frac{135}{12} + \frac{10 \times 24}{60} = 11.3 + 4 = 15.3 \text{ km}$$

$$\text{Pass time} = \frac{15.3 \times 60}{24} = 38.25 \text{ or } 39 \text{ min}$$

b. Third Serial.

$$\text{Road space} = \frac{150}{12} + \frac{12 \times 24}{60} = 12.5 + 4.8 = 17.3 \text{ km}$$

$$\text{Pass time} = \frac{17.3 \times 60}{24} = 43.2 \text{ or } 44 \text{ min}$$

c. Fourth Serial.

$$\text{Road space} = \frac{144}{12} + \frac{12 \times 24}{60} = 12 + 4.8 = 16.8 \text{ km}$$

$$\text{Pass time} = \frac{16.8 \times 60}{24} = 42 \text{ min}$$

d. Fifth Serial.

$$\text{Road space} = \frac{124}{12} + \frac{8 \times 24}{60} = 10.3 + 3.2 = 13.5 \text{ km}$$

$$\text{Pass time} = \frac{13.5 \times 60}{24} = 33.7 \text{ or } 34 \text{ min}$$

E-13. PREPARING A ROAD MOVEMENT GRAPH

a. Designating Hours. Designate, from the lower left corner across the bottom of the graph, the time needed for the movement. Since the first serial is to arrive at the SP at 0800, the timing of this graph should start at 0800 in the lower left corner. The computations performed in E-10 through E-12 show that more than 12 hours are required to complete the movement of the five serials. This is derived from adding the time distance, sum of pass times, restricted times, and gaps. Therefore, the time of this graph must extend to at least 2100.In this exam pie, each horizontal block represents 10 minutes and every six blocks represents one hour as shown in figure E-7.

b. Designating Kilometers. Indicate the distance to be moved in kilometers on the vertical axis. Begin at the SP in the lower left corner of the graph with O kilometers. Since this move is 75 kilometers, the top of the vertical axis should be marked as 75 kilometers. In this example, each vertical block between O and 75 kilometers represents 1.5 kilometers as shown in Figure E-7. It is important to show critical points, checkpoints, or other important points directly opposite the correct distance blocks of the graph. For example, CP 99 is 24 kilometers from the SP and is noted on the scale opposite the 24 kilometer line. CP 103 is noted on the scale opposite the 30 kilometer line.

c. Plotting the Restrictions. Mark within the graph route restrictions as shown.

(1) The first restriction is from CP 99 to CP 103 between 1100 and 1200 hours. CP 99 is 24 km (16 blocks) from the SP and CP 103 is 6 km (4 blocks) from CP 99. To show the restriction, the time from 1100 to 1200 between CP 99 and CP 103 is blocked out.

(2) The second restriction is at CP 105 between 1500 and 1530 hours. CP 105 is at the 57 kilometer point. In this example, the restriction is only at the Cl? To show the restriction, a horizontal line from 1500 to 1530 at the CP is marked. It extends horizontally from 1500 over three blocks (30 minutes).

(3) The third and fourth restrictions are also only at the CP. They are shown as above.

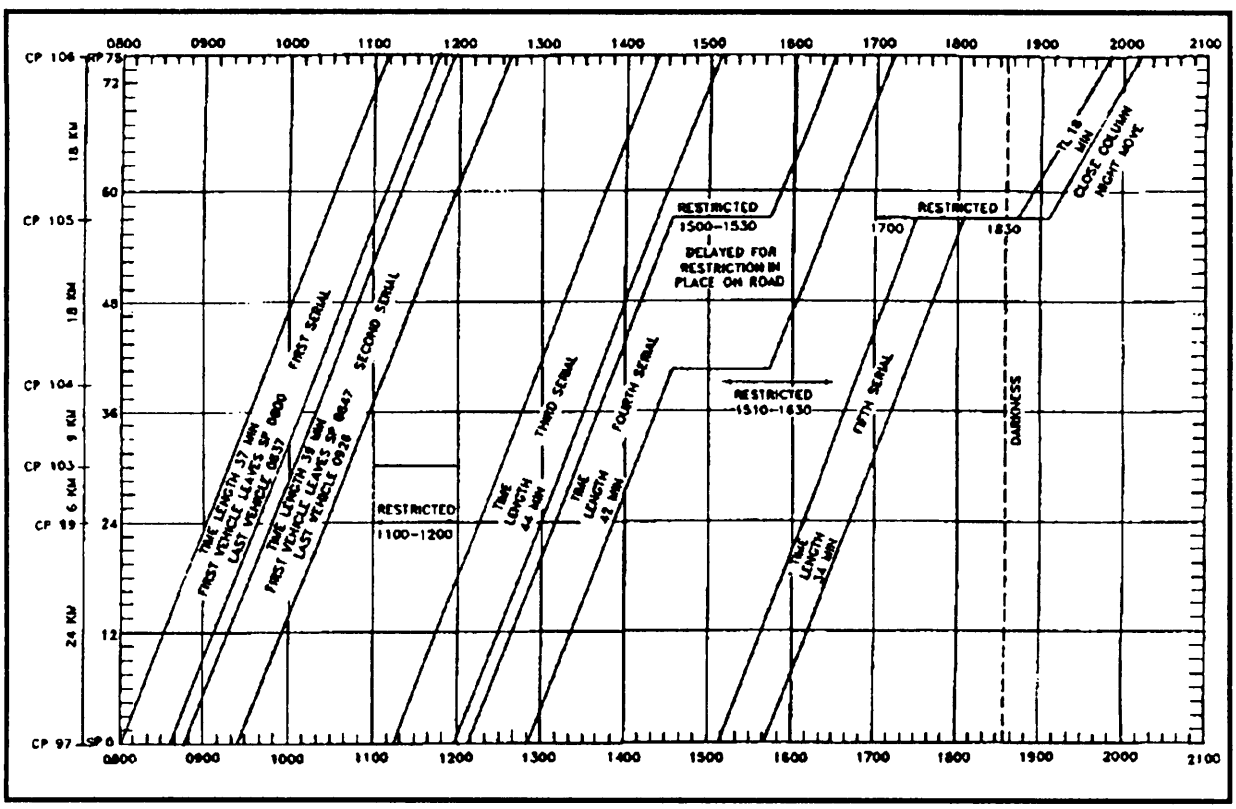


Figure E-7. Road Movement Graph for Five Serials.

E-14. GRAPHING THE FIRST SERIAL

a. Once the hours, kilometers, and restrictions are marked on the graph, plot the serials. The first vehicle of the frost serial is scheduled to leave the SP at 0800. Put a dot at the beginning of the 0800 line in the lower left comer of the graph. Computations from E-10 show the first vehicle is to arrive at the RP at 1108 hours. This was calculated by adding the time distance (3 hours 8 minutes) to the time the first vehicle crosses the SP. Locate the 1108 hour line at the top of the graph at the RP (75 kilometer line) and put a dot there. Connect the dots.

b. The next step is to plot the trail (last vehicle) of the first serial. To find the time the last vehicle crosses the SP, add the pass time to the time the first vehicle crosses the SF. As determined in E-10, the pass time of the first serial is 37 minutes. Therefore, adding 37 minutes to 0800 gives 0837 as the time the last vehicle of the first serial leaves the SP. Make a dot at 0837 on the bottom of the graph. Then add the time distance of 3 hours 8 minutes to 0837 start time to compute the time the last vehicle clears the RP. This is 0837 plus 3 hours and 8 minutes, or 1145 hours. Make another dot at the top of the graph at 1145 hours. Connect the dots. This second line parallels the first line drawn, which shows the movement of the first vehicle of the first serial. The horizontal space between the two lines represents the 37-minute pass time of the serial.

E-15. GRAPHING THE SECOND SERIAL

a. Because the last vehicle of the first serial is scheduled to clear the SP at 0837 and a 10-minute time gap is required between serials, the second serial cannot begin movement until 0847. To show the first vehicle of the second serial on the graph, place a dot at 0847 hours on the bottom of the graph. The time distance for the second serial is the same as that of the first serial. Therefore, the trail vehicle of the second serial will clear the RP at 1155 hours (0847 plus 3 hours 8 minutes). To show the last vehicle of the second serial on the graph, place a dot at 1155 hours at the top of the graph at the RP and connect the dots with a line.

b. Plot the trail vehicle of the second serial the same as the first serial. To find the time the last vehicle of the second serial crosses the SP, add the pass time of the second serial to the time the first vehicle of the second serial crosses the SP. From E-10, this was determined to be 39 minutes. Therefore, adding 39 minutes to the 0847 SP time gives 0926 as the time the trail vehicle of the second serial leaves the SP. Make a dot at 0926 on the bottom of the graph. Since the first vehicle clears the RP at 1155 and the pass time is 39 minutes, the trail vehicle will clear the RP at 1234 (1155 plus 39 minutes). Make another dot on the top of the graph at 1234 hours. Connect the two dots. The second serial is now complete.

E-16. GRAPHING THE THIRD SERIAL

a. Graphing the third serial is more complicated than the first two. The reason is that the third serial will not be able to clear the SP 10 minutes after the second serial clears the SP because this would cause it to run into the 1100 to 1200 restriction at CP 99. Therefore, compute for the earliest time the first vehicle can leave in order to pass the restriction after the restriction ends at 1200 (plus the 15-minute safety factor). As shown in paragraph E-2, the computation is 1200 hours (time the restriction ends) plus 15-minute safety factor minus 1 hour (time distance to the restriction (24 km at 24 kmih) equals 1115 hours. 1115 hours is the earliest time the first vehicle of the third serial can leave the SP. Place a dot at 1115 hours to show this SP time. Time distance is still 3 hours 8 minutes. Therefore, the first vehicle of this serial will clear the RP at 1423 hours. Put a dot at 1423 at the top of the graph and connect the two dots.

b. Since pass time for this serial is 44 minutes, the last vehicle will leave the SP at 1159. Time distance is still 3 hours 8 minutes. Adding this to the starting time of the trail of the serial gives the clear time for the trail at the RP of 1507 hours. Place dots at the times computed for the trail and connect them as with the two previous serials.

E-17. GRAPHING THE FOURTH SERIAL

a. Graphing the fourth serial is also more complicated than the others because it must halt at the 1500 to 1530 restriction at CP 105. The first step is to compute the time distance from the SP to the restriction. The distance is 57 kilometers and the rate is 24 kmih. Using the formula to calculate time distance, TD = D ÷ R, 57 ÷ 24 = 2 hours 23 minutes. Because the last vehicle of the third serial cleared the SP at 1159 hours and a 10-minute gap is required between serials, the fourth serial cannot begin movement until 1209 hours.

b. The first vehicle of this serial will arrive at the restriction (CP 105) 2 hours 23 minutes after it clears

the SP, or 1432 hours. Adding the pass time of this serial (42 minutes) to this gives 1514 as the time when the trail vehicle of the serial would clear CP 105 if it moved on without stopping. Since the restriction at this point is from 1500 to 1530, the column must halt at CP 105 and cannot move on until 15 minutes (safety factor) after the restriction ends. Thus the serial begins moving again at 1545.

c. The remaining distance of 18 kilometers will take 45 minutes (18 km + 24 kmih), so the lead vehicle clears the RP at 1630. The trail vehicle leaves CP 10542 minutes after the lead vehicle at 1627 hours and clears the RP 45 minutes later at 1712.

E-18. GRAPHING THE FIFTH SERIAL

a. For the fifth serial, as with the third serial, a 10-minute time gap will not work because the fourth serial will be halted on the road for the restriction at CP 104. If the fifth serial was to leave 10 minutes after the fourth serial cleared the SP, it would run into the fourth serial at its halt.

b. Therefore, compute the earliest time the lead vehicle can leave the SP in order to avoid running into the fourth serial at CP 104. As described in paragraph E-2, first find how long it takes the lead vehicle to travel the 39 kilometers to CP 104:39 km ÷ 24 kmih = 1 hour 38 minutes. The restriction at CP 104 is in effect from 1510 to 1630. Adding the 15-minute safety factor, 1645 is the earliest time at which the lead vehicle of the serial can clear the restriction. Subtracting 1 hour 38 minutes from 1645 gives 1507 as the earliest time the fifth serial can leave the SP. It will clear CP 104 at 1645 without halting.

c. Another problem arises at this point. If the fifth serial leaves at 1507, it will arrive at CP 105 at 1730,45 minutes after clearing CP 104. Since there is a 1700 to 1830 restriction at CP 105, the serial must halt and wait until 1845 to resume movement. Because this serial has been ordered to disperse off the road at CP 105, the halt is shown differently than with the fourth serial, which halted on the road and occupied road space.

d The pass time of this serial must also be recomputed from this point since the movement instructions specified that a slower march rate and larger density apply to movements during darkness after 1835. Accordingly, the rate of march becomes 16 kmih, and vehicle density becomes 48 vehicles per kilometer. To find the new pass time, first calculate the new road space:

$$\text{Road space} = \frac{\text{number of vehicles}}{\text{vehicle density}} + \frac{\text{time gaps x rate}}{60 \text{ min}}$$

$$= 124 + 8 \times 16 = 2.6 + 2.2 = 4.8 \text{ km}$$

Then recalculate the new pass time:

$$\text{Pass time} = \frac{\text{road space x 60 min}}{\text{rate}} = \frac{4.8 \times 60}{16} = 18 \text{ min}$$

Traveling at 16 kmih, it takes the lead vehicle 1 hour 8 minutes to travel the remaining 18 kilometers to the RP, It arrives there at 1953 (1845 + 1 hour 8 minutes). The trail vehicle leaves CP 10518 minutes later than the lead vehicle, or at 1903, and arrives at the RP at 2011.

E-19. USING A ROAD MOVEMENT TABLE

a. Data is taken from the graph and put into a road movement table, which can be issued as an annex to an OPORD for a road movement. Convoy commanders can use the information to track their progress during movement and ensure they arrive and clear each CP on schedule. MRTs, TCPs, and others can use the information for control purposes.

b. Figure E-8 is a sample road movement table. The data in this table is derived from the information found on the graph in Figure E-7.

Serial	Date	Unit/formation	No. of vehicles	Load class of heaviest vehicles	From	To	Route	Route to start point	Check points			Route from release point	Remarks
									Ref	Due (hrs)	Clear (hrs)		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(k)	(l)	(m)	(n)	(o)
1	23 Feb	2439 Trans Co (Lt Trk) 2448 Trans Co (Lt Trk)	126	21	CP 97	CP 106	A	N 28	CP 97 (SP) CP 99 CP 103 CP 104 CP 105 CP 106 (RP)	0800 0900 0915 0938 1023 1108	0837 0937 0952 1015 1100 1145	N 16	
2	23 Feb	2441 Trans Co (Lt Trk) 2442 Trans Co (Lt Trk)	135	21	CP 97	CP 106	A	N 45	CP 97 CP 99 CP 103 CP 104 CP 105 CP 106	0847 0947 1002 1025 1110 1155	0926 1026 1041 1104 1149 1234	N 16	
3	23 Feb	2443 Trans Co (Lt Trk) 2444 Trans Co (Lt Trk) Hq & Hq Det 439th T Bn (Trk)	150	21	CP 97	CP 106	A	N 280	CP 97 CP 99 CP 103 CP 104 CP 105 CP 106	1115 1215 1230 1253 1338 1423	1159 1259 1314 1337 1422 1507	N 16	
4	23 Feb	2445 Trans Co (Lt Trk) 2446 Trans Co (Lt Trk)	144	21	CP 97	CP 106	A	N 4	CP 97 CP 99 CP 103 CP 104 CP 105 CP 106	1209 1309 1324 1347 1432 1630	1251 1351 1406 1429 1627 1712	N 53	Halt in place at CP 105 from 1432-1545 until restriction ends.
5	23 Feb	2447 Trans Co (Lt Trk) (attached) 2448 Trans Co (Lt Trk) (attached)	124	21	CP 97	CP 106	A	N 16	CP 97 CP 99 CP 103 CP 104 CP 105 CP 106	1507 1607 1622 1645 1730 1953	1541 1641 1656 1719 1919 2011		Stop at CP 105 from 1730-1845 and disperse vehicles in woods until restriction ends. Resume march in close column at 1845.

Figure E-8. Road Movement Table (Front).

MAPS:

1. AVERAGE SPEED.
   Serials 1-4 - 24 km/h
   Serial 5 - 24 km/h; after 1845 hours - 16 km/h

2. AVERAGE DENSITY.
   Serials 1-5 - 12 vehicles per km
   Serial 5 - 47 vehicles per km after 1845 hours

3. HALTS.
   Fourth serial at CP 105 - 1432-1545 hours
   Fifth serial at CP 105 - 1730-1845 hours

4. ROUTES:
   Route A

5. CHECK POINTS.
   a. Start Points:
      CP 97
   b. Release Points:
      CP 106
   c. Other Critical Points:
      CP 99
      CP 103
      CP 104
      CP 105

6. MAIN ROUTES TO START POINTS:
   N 28
   N 45
   N 280
   N 4
   N 16

7. MAIN ROUTES FROM RELEASE POINTS:
   N 16
   N 53

Figure E-8. Road Movement Table (Back) (Continued).

APPENDIX F

TRANSPORTATION MOVEMENT RELEASE AND COMMITMENT WORK SHEET

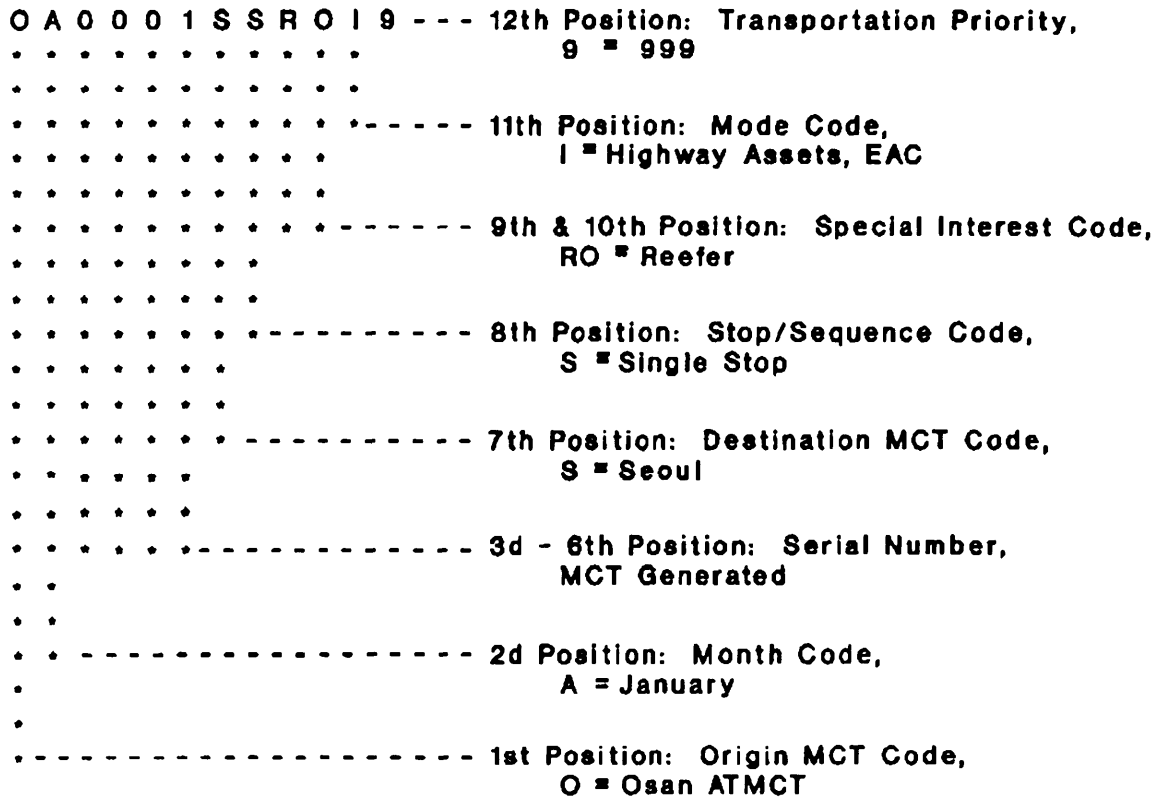
F-1. INTRODUCTION

Information in this appendix is to be used as a guide for developing the TMR and completing a commitment work sheet. The TMR and commitment work sheet are not standard Army formats. Rather, they are a flexible accounting system that can be adapted to any theater. Each theater should publish implementing procedures and codes.

F-2. TMR NUMBER

a. A TMR is the authority for movement of a shipment. It commits transportation assets, verifies the capability of the consignee to receive the shipment, and serves as the unique identifier of the movement requirement. The TMR is used to account for the transportation assets during movement much like the TCMD is used to account for the cargo during movement. The TMR number can be lengthened or shortened to meet the information needs of the theater. The codes for completing the TMR and commitment work sheet can be found in DOD Regulation 4500.32R (MILSTAMP) and theater regulations.

b. A sample 12 digit TMR number is explained below. This is the format used by US Army Europe and US Forces Korea. Codes listed are locally generated unless MILSTAMP is indicated as the source.



F-3. CODES

a. MCT/ATMCT Designator Codes. These are sample codes used in Europe and Korea.

EUROPE		KOREA	
Mannheim	M	Osan ATMCT	O
Rhein Main ATMCT	Z	Seoul	s
Frankfurt	E	Taegu	T
Bremerhaven	B		

b. Month Codes.

January	A	July	G
February	B	August	H
March	c	September	I
April	D	October	J
May	E	November	K
June	F	December	L

c. Stop/Sequence Codes. An alpha character will be used in the 8th position of the TMR to identify single and multistop shipments (multistop will show stop sequence).

(1) S - Indicates single stop.

(2) A through Y except I, O, and S indicate sequential stops; Z always indicates the last stop.

d. Special Interest Codes.

AB	ALOC Break-Bulk
AC	Mail Container (20 foot)
AF	Air Force MICAP
AI	DSS Break-Bulk
AK	Commercial Pick Up at APOD
AM	Medical ALOC
AN	Medical Supplies (other than ALOC)
AP	463L Pallet returns to APOD
AT	ALOC Throughput
AY	DSS Throughput
AZ	Other Air Cargo
BN	Brand Name Resupply
CA	Empty MILVAN
CI	Command Interest
CS	Military Traction of SEAVANs
DA	Driveaway
EA	USAF Ammunition
EB	Explosives Break-Bulk
EC	CADS (Containerized Ammunition)
EG	Explosives, Sensitive, CAT I Armed Surveillance Required
EH	Explosives, Sensitive, CAT II Rail Surveillance Service Required, Military
ET	Explosives, Rail Surveillance Service Required, Carrier Commercial
EX	Ammunition, Other (Nonsensitive)
EZ	Ammunition, Other
FG	REFORGER Cargo (General)
GA	AAFES
GC	General Classified
GG	Cargo Which Requires Guard Protection
GF	Cargo Subject to Freeze Damage
GS	Signature Service
HF	Heavy Lift (Special/Emergency Moves)
HL	Regular Heavy Lift
HM	Heavy Lift (MI)
HN	Heavy Lift (One-for-One Exchange)
HP	Heavy Lift (POMCUS)
MA-MZ	Mail STMRs
NA-NZ	Mail STMRs
RA-RJ	REEFER STMRs
RO	REEFER
RS	REEFER Static
SB	Surface Break-Bulk
TA	Towaway
XM	MI Moves (Other Than Heavy Lift)
XN	One-for-One Exchange (Other Than Heavy Lift)
XP	POMCUS (Other Than Heavy Lift)
ZZ	Not Otherwise Specified

e. Transportation Mode Codes (MILSTAMP and theater-generated).

Commercial Highway	A
Driveaway/Towaway	D
AMC	F
Water	w
Organic Air	o
Rail	K
Military Hwy (Theater)	I
Military Hwy (Corps)	M
Military Hwy (Div)	R

f. Transportation Priority Codes (MILSTAMP).

1	TP 1
2	TP 2
3	TP 3
9	999

g. Asset Codes.

(1) Military vehicles.

SP Stake and platform semitrailer M127 27-foot
FB Flatbed semitrailer M127 27-foot
SV Security van semitrailer
MV MILVAN on chassis
MC MILVAN chassis
MX MILVAN on 871
CD M871 setup to accept 20-foot containers
CX M872 setup to accept 20-foot containers
CZ M872 setup to accept 40-foot containers
RV Refrigerated van semitrailer (M349)
RS Refrigerated van SC209
TK 5000-gallon tanker semitrailer
LT 2 l/2-ton truck, cargo
LV Light van
T4 IHC 4070
T9 M915 12-ton tractor
TH HET tractor
HL HET
LB Low-bed semitrailer
DA Driver only - driveaway
MS M871 30-foot trailer with side boards (box trailer)
MB M871 30-foot trailer without side boards (flatbed)
ML M871 Dropside
XB M872 40-foot trailer with side boards (box trailer)
XL M872 Dropside
XS M872 40-foot trailer with side boards (box trailer)
x c Leased 40-foot chassis
XF Flat rack

(2) Railcars.

BX Boxcar
FC Flatcar
FS Flatcar, special purpose
FH Flatcar, heavy-duty
SC Military sedan car
TC Military passenger car
TX Tank car
1C 1 car, mobile command post
2C 2 car, mobile command post

(3) Others.

TA Towaway
BG Barge
CT Commercial highway
ET Rail, existing traffic
TN Rail, special train
UH Army Air, UH-1
CH Army Air, CH-47
FW Army Air, freed-wing

h. Serial Numbers (MCT Generated).

Military highway	0000-0999
Commercial/HN highway	1000-1999
Rail	2000-2999
Air-helicopter	3000-3999
Air-freed wing	4000-4999
Barge	5000-5999

F-4. COMMITMENT WORK SHEET

a. The commitment work sheet is a tool used by movement control personnel to capture and document essential data for a movement requirement and to pass the data to the mode operator in the form of a commitment. The commitment work sheet at Figure F-1 is an example of a nondivisional work sheet that maybe used as a guide when developing theater specific work sheets Use the back of the commitment worksheet to document the TCNs of the cargo being transported.

b. Complete the commitment work sheet as follows:

DATE: Enter today's calendar date.

PROGRAMMED/NONPROGRAMMED/LINE NUMBER: Determine if this is a programmed or non-programmed movemert If it is a programmedmovement, enter the line number from the movement program.

MCT: Enter origin MCT. The first eight items comprise the TMR.

ORG MCT (Origin MCT): Enter appropriate alpha character.

MO CD (Month Code): Enter appropriate alpha character.

SRL NO (Serial Number): Enter sequence number for the MCT-generated Julian date.

DEST (Destination): Enter appropriate alpha character (see Note 1).

STOPS (Stop/Sequence Code): Enter appropriate stop/sequence code (see Note 1).

SPEC INTER (Special Interest Code): Enter appropriate two-character code.

MODE: Enter appropriate one-character mode code.

(TP) Transportation Priority Enter appropriate one-character priority code.

TYPE ASSET: Enter two digits indicating the number of assets required and the alpha code indicating the type of asset required (see Note 2).

ORIGIN CITY: Enter five alpha characters for origin city code or area codes. This will be a theater-specific address file usually developed by the TAMCA, If a code is not assigned, use the first five letters of the location (see Note 3).

ORIGIN DODAAC: Enter six-character activity address code.

DEST CITY (Destination City): Enter five alpha characters for destination city code or area codes. This will be a theater-specific address file usually developed by the TAMCA. If a code is not assigned, use the first five letters of the location (see Note 3).

DEST DODAAC: Enter six-character activity address code.

SPOT: Enter required four-digit Julian asset spot date. (Last number of year plus the Julian date.)

LOAD: Enter four-digit Julian date (see Note 4).

PULL: Enter four-digit Julian date.

RDD (Required Delivery Date): Enter four-digit Julian date. Date entered will be the RDD (see Note 3).

CC (Commodity Code): Enter three-digit code shown in MILSTAMP, Volume I (see Note 3).

WT (Weight): Enter weight in STONs using six characters.

PCS (Pieces): Enter three digits for pieces. One piece is 001 (see Note 3).

CUBE: Enter cube of shipment to four positions (see Note 3).

LG (Length): Enter length in inches to three positions (see Note 3).

WD (Width): Enter width in inches to three positions (see Note 3).

HT (Height): Enter height in inches to three positions (see Note 3).

#of PACS (Number of Passengers): Enter the number of passengers to four positions (see Note 3).

TEL NO (Origin Telephone Number): Self-explanatory.

DEST TEL NO (Destination Telephone Number): Self-explanatory.

ORIGIN UNIT Enter name of shipper/consignor.

ORIGIN BD NO: Self-explanatory (if available).

ORIGIN GRID COORD: Enter ten-digit grid coordinates to include the two alphanumeric grid designator letters. (Grid coordinates might not be ten digits.)

ORIGIN POC: Enter POC at shipping location.

DEST UNIT: Enter name of receiving activity/consignee (see Note 3).

DEST BLDG NO: Self-explanatory (if available).

DEST GRID COORD: Enter ten-digit grid coordinates to include the two alphanumeric grid designator letters. (Grid coordinates might not be ten digits.)

DEST POC: Enter POC at receiving activity/consignee location.

CARGO DESC: Self-explanatory. (Include type packing if appropriate.)

CONVEYANCE ID NO: Enter the identification number of the asset transporting the cargo.

CONVOY CLEARANCE NUMBER: Self- explanatory.

TRAIN NUMBER: Self-explanatory.

LIGHTERAGE MISSION NUMBER: Self-explanatory.

SHIP VOYAGE NUMBER: Self-explanatory.

REMARKS: Includes any positive inbound clearance arrangements or other information as required

NOTES:

1. For multistops, the destination MCI' code will change as required. Stop sequence character must change with each stop.

2. For rail moves, the number and type of cars, train number, and destination station will be added in the remarks section.

3. For multistops, information will relate to sequence code.

4. Based upon the TP, the spot, load, and pull dates may be the same.

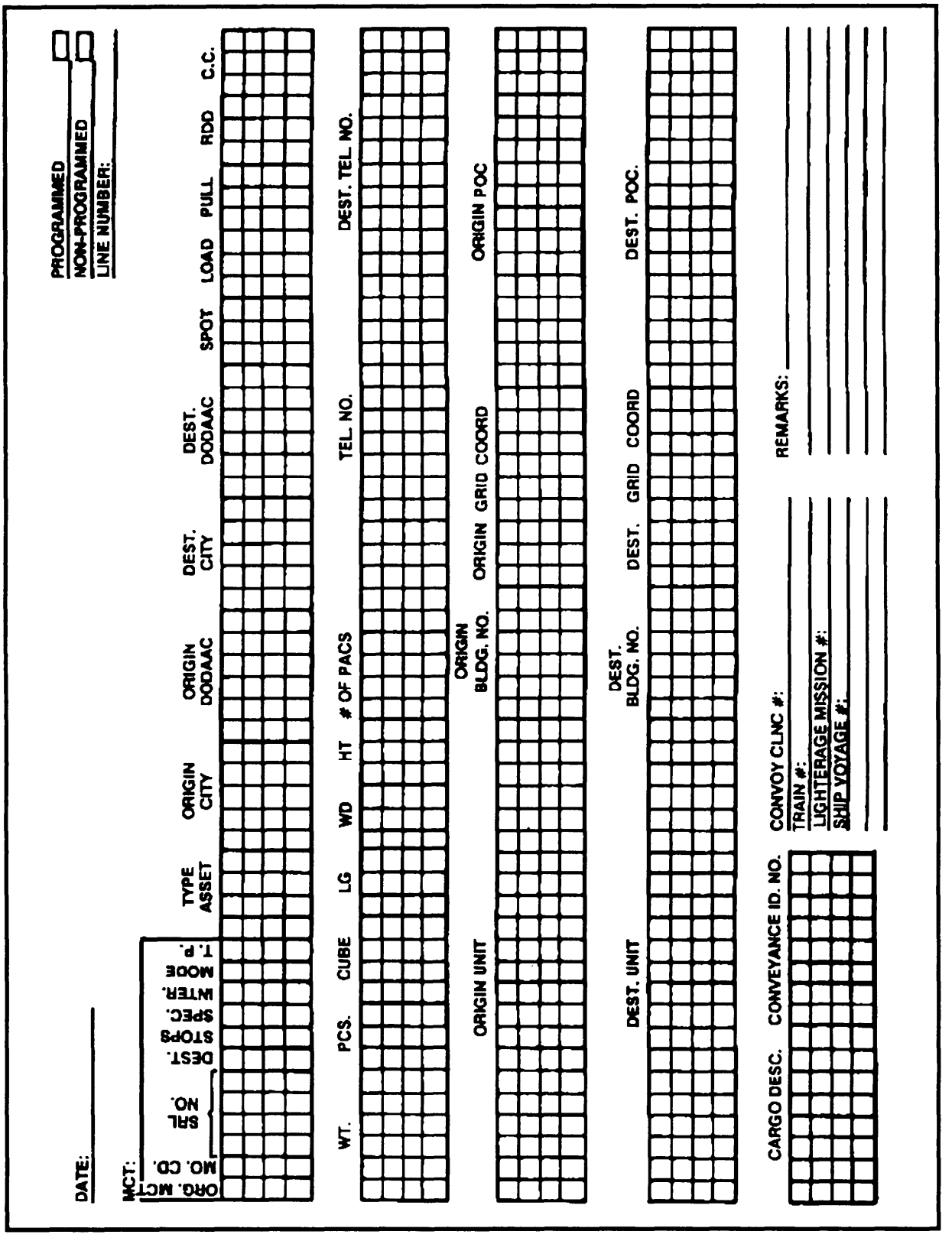


Figure F-1. Commitment Work Sheet.

GLOSSARY

ACRONYMS AND ABBREVIATIONS

A	Army
AACG	arrival airfield control group
AAI	air-to-air interface
ACofS	Assistant Chief of Staff
A/DACG	arrival/departure airfield control group
ADAO	assistant division aviation officer
ADP	automatic data processing
AEC	aeromedical evacuation crew
AELT	aeromedical evacuation liaison team
ALCE	airlift control element
ALOC	air lines of communication
AMC	Air Mobility Command
AMC NAP	Air Mobility Command Numbered Air Force
AO	area of operations
APLO	aerial port liaison office
APOD	aerial port of debarkation
APOE	aerial port of embarkation
APS	aerial port squadron
ARCENT	Army component command, CENTCOM
ASG	area support group
ASP	ammunition supply point
ASPUR	Automated System for Processing Unit Requirements
ASR	alternate supply route
ATMCT	air terminal movement control team
AUEL	automated unit equipment list
BCC	battlefield circulation control
BDE	brigade
BFACS	battlefield functional area control system
BMCT	branch movement control team
BSA	brigade support area
C^2	command and control
C^3	operations directorate, combined staff
CAPS	consolidated aerial port subsystem
CAPS-II	consolidated aerial port subsystem - phase II
CCP	consolidate ion and cent ainerization point
CDS	container delivery system
CENTCOM	United States Central Command
CHE	container-handling equipment
CINC	Commander in Chief
CLT	cellular logistics team
CM	controlled move
CMMC	corps materiel management center
CMOS	Cargo Movements Operations System
CNR	combat net radio
COMALF	commander, airlift forces
COMMZ	communications zone
COMPASS	Computerized Movement Planning and Status System
COMSEC	communications security
CONEX	container express
CONUSA	the numbered armies in the Continental United States Army
COR	contracting officer's representative
COSCOM	corps support command
CP	checkpoint
CSA	corps support area
CSB	corps support battalion
CSG	corps support group
CSS	combat service support
CSSCS	combat service support control system
CTMC	combined transportation movement center
CTO	corps transportation officer
CZ	combat zone
DAAS	Defense Automatic Addressing System
DACG	departure airfield control group
DAMMS-R	DA Movement Management System-Redesign
DASPS-E	DA Standard Port System-Enhanced
DCSLOG	Deputy Chief of Staff for Logistics

DCSOPS	Deputy Chief of Staff for Operations and Plans
DDN	Defense Data Network
DISCOM	division support command
DMC	defense movement coordinator
DMMC	division materiel management center
DODAAC	DOD activity address code
DPSC	Defense Personnel Support Center
DS	direct support
DSA	division support area
DSN	Defense Switched Network
DSS	Direct Support System
DSU	direct support unit
DTO	division transportation officer
DTS	Defense Transportation System
EAC	echelons above corps
ENCOM	engineer command
EPW	enemy prisoner of war
ETA	estimated time of arrival
ETR	export traffic release
ETS	European Telephone System
EUSA	Eighth United States Army
FAD	force/activity designator
FASCO	forward area support coordination officer
FAST	forward area support team
FDRP	first destination reporting point
FEMA	Federal Emergency Management Agency
FMD	freight movement division
FORMDEPS	Forces Command Mobilization and DeploymentPlanning System
FORSCOM	United States Army Forces Command
FRAGO	fragmentary order
FSB	forward support battalion
C l	Assistant Chief of Staff, G1 (Personnel)
G2	Assistant Chief of Staff, G2 (Intelligence)
G3	Assistant Chief of Staff, G3 (Operations and Plans)
G4	Assistant Chief of Staff, G4 (Logistics)
G5	Assistant Chief of Staff, G5 (Civil Affairs)
GBL	government bill of lading
GS	general support
GSU	general support unit
GTN	Global Transportation Network
GTR	government transportation request
HA	holding area
HET	heavy-equipment transporter
HHC	headquarters and headquarters company
HMCT	highway movement control team
HN	host nation
HNS	host-nation support
HRPT	highway regulation point team
HTD	highway traffic division
hwy reg	highway regulation
IPB	intelligent preparation of the battlefield
ISA	international standardization agreement
ITO	installation transportation office(r)
J	joint
J3	Operations Directorate, Joint Staff
J4	Logistics Directorate, Joint Staff
JCCO	joint container control office
JCS	Joint Chiefs of Staff
JMC	joint movement center
JOPES	Joint Operations Planning and Execution System
JPEC	joint planning and execution Community
JRDC	Joint Regional Defense Command
JSAC	Joint State Area Command
JTB	Joint Transportation Board
JTF	joint task force
km	kilometer
kmih	kilometers in the hour
kph	kilometers per hour
LAN	local area network
LCA	Logistic Control Activity
LGT	logistic group, transportation
LIC	low-intensity conflict
LIF	logistics intelligence file
LNO	liaison officer
LOC	lines of communication
LOGMARS	logistic application of automated marking and reading symbols
LOTS	logistics over-the-shore
LTL	less than truckload

MA	marshaling area
MAC	Military Airlift Command
MACOM	major Army command
MAGTF	Marine Air Ground Task Force
MARCENT	Marine Component Command, CENTCOM
MASF	mobile aeromedical staging facility
MC	movement control
MCA	Movement Control Agency
MCC	movement control center (corps)
MCO	movement control officer
MCT	movement control t earn
MCT Op	movement control team operations
MEDCOM	Medical Command
MEDLOG	medical logistics
MEDSUP	medical supply
METT-T	mission, enemy, terrain, troops and time available
MHE	materials-handling equipment
MID	movement information division
MILSTAMP	Military Standard Transportation and Movement Procedures
MILVANS	military-owned remountable container
MLC	military load class
MMC	materiel management center
MOBCON	mobilization movement control
MOBSCOPE	mobilization shipments configured for operational planning and execution
MP	military police
MRO	materiel release order
MRT	movement regulating team
MSB	main support battalion
MSC	Military Sealift Command
MSE	mobile subscriber equipment
MSR	main supply route
MTA	military transportation authorization
MTMC	Military Traffic Management Command
mih	miles in the hour
mph	miles per hour
mode op	mode operations
NATO	North Atlantic Treaty Organization
NAVCENT	Navy Component Command, CENTCOM
NBC	nuclear, biological, chemical
NCA	national command authority
NDI	nondevelopmental item
NEA	Northeast Asia
NEO	noncombatant evacuation operations
NICP	national inventory control point
NM	nautical miles
OPLAN	operation plan
OPORD	operation order
OST	order ship time
PD	priority designator
PERSCO	Personnel Support for Contingency Operations
PHA	passenger holding area
PLS	palletized load system
PLSSC	palletized load system sideless container
PM	provost marshal
PMD	passenger movement division
POD	port of debarkation
POE	port of embarkation
POL	petroleum, oils, and lubricants
POM	preparation for overseas movement
POMCUS	pre-positioning of materiel configured to unit sets
PP&O	plans, programs, and operations
PPD	plans and programs division
PSA	port support activity
PWIS	Prisoner of War Information System
RAF	Royal Air Force
RATT	radio telephone/teletype (mobile)
RDD	required delivery date
RDS	rapid delivery service
RMCT	regional movement control team
RMMT	rail movement management team
ROKA	Republic of Korea, Army
ROM	refuel on the move
RP	release point
RTOC	rear tactical operations center
S&S	supply and service
S&T	supply and transport
S2	Intelligence Officer (US Army)
S3	Operations and Training Officer (US Army)
54	Supply Officer (US Army)
SA	staging area

SAAS	Standard Army Ammunition System
SAI	sea-to-air interface
SDD	standard delivery date
SLOC	sea lines of communication
SMCC	state movement control center
SMD	special movement division
SMM	shipment management module
SMO	strategic mobility office
SOO	support operations officer
SP	start point
SPOD	seaport of debarkation
SPOE	seaport of embarkation
spt	support
SSSC	self-service supply centers
STACCS	Standard Theater Army Command and Control System
STAMIS	Standard Army Management Information System
STANAG	standardization agreement
STARC	State Area Command
STON	short ton
SWA	southwest Asia
TA	theater Army
TAA	tactical assembly area
TAACOM	Theater Army Area Command
TACCS	Tactical Combat Service Support Computer System
tact	tactical
TALCC	tanker, airlift control center
TALCE	tanker, airlift control element
TALO	tactical airlift liaison officer
TAMCA	Theater Army Movement Control Agency
TAMMC	Theater Army Materiel Management Center
TAMMIS	Theater Army Medical Management Information System
TAS	transportation addressing subsystem
TAT	to-accompany-troops
TC	transportation corps
TC-ACCIS	Transportation Coordinator-Automated Command and Control Information System
TC-AIMS	Transportation Coordinator-Automated Information Management System
TCC	transportation component command
TCMD	transportation control and movement document
TCN	transportation controlnumber
TCP	traffic control point
TERMS	Terminal Management System
TMR	transportation movement release
TMT	transportation motor transport
TOE	table(s) of organization and equip ment
TOPNS	theater of operations
TP	transportation priority
TPFDD	time-phased force deployment data
trac tlr	tractor trailer
TRI-TAC	Tri-Service Tactical Communications System
TTP	trailer transfer point
TTU	transportation terminal unit
TRANSCOM	Transportation Command (TA)
TUSA	Third United States Army
UCMJ	Uniform Code of Military Justice
UIC	unit identification code
UK	United Kingdom
ULLS	Unit Level Logistics System
UMC	unit movement coordinator
UMMIPS	uniform materiel movement and issue priority system
UND	urgency of need designator
USAREUR	United States Army, Europe
USARSO	United States Army, South
USCENTCOM	United States Central Command
USEUCOM	United States European Command
USFK	United States Forces, Korea
USMTF	US message text format
USPACOM	United States Pacific Command
USSOUTHCOM	United States Southern Comand
USTRANSCOM	United States Transportation Command
WAN	wide area network
WOC	wing operation center
WPS	Worldwide Port System

REFERENCES

SOURCES USED

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TABLES OF ORGANIZATION AND EQUIPMENT (TOE)

55002H	HHC, TRANSCOM
55722L	HHD, MOTOR TRANS GP
55716L	HHD, MOTOR TRANS BN
55718L	LIGHT TRUCK CO
55717L	COMMAND TRANSPORT CO
55052H	HHC, TRANS COMPOSITE GP
55822L	HHC, TRANS TERMINAL GP
55816L	HHC, TRANS TERMINAL BN
55817L	CARGO TRANSFER CO
55833L	MDM LIGHTER CO (ACV)
55613L	FLT CFT GS MAINT CO
55916L	HHC, TRANS RAILWAY BN
55918L	RAILWAY ENGINEERING CO
55919L	RAIL EQUIPMENT MAINT CO
55927L	TRAIN OPERATING CO
55500LA00	PLATOON HQ (COMP)
55500LB00	PLATOON HQ (SEP)
55500LC00	COMPANY HQ
55500LD00	BATTALION HQ
55510LA00	HOST NATION SPT DET
55530LH00	LARC LX DET
55530LJ00	LOGISTICS SPT VESSEL DET
55540LE00	TRAILER TRANSFER PT DET
55560LA00	CARGO DOCUMENTATION DET
55560LB00	FREIGHT CONS & DIST DET
55560LC00	CONTRACT SUPV DET
55560LD00	AUTOMATED CARGO DOC DET
55560LE00	HEAVY CRANE PLT
55580LA00	MOVEMENT CONTROL DET (LA)
55580LB00	MOVEMENT CONTROL DET (LB)
55580LC00	MOVEMENT CONTROL DET (LC)
55580LD00	MOVEMENT CONTROL DET (REGION)
55580LE00	MOVEMENT CONTROL DET (REGION)
55580LF00	MOVEMENT CONTROL DET (AIR TERM)
55580LG00	MOVEMENT CONTROL DET (AIR TERM)

55580LH00	MOVEMENT CONTROL DET (MVMT REG)
55603L	THEATER ARMY MOVEMENT CONTROL AGENCY
55604L	CORPS MOVEMENT CONTROL CENTER
55719L	LT-MDM TRUCK CO
55727L100	MDM TRK CO (CNTNR/CGO) (COMMZ)
55727L200	MDM TRK CO (POL) (COMMZ)
55728L100	MDM TRK CO (CNTNR/CGO) (CORPS)
55728L200	MDM TRK CO (POL) (CORPS)
55728L300	MDM TRK CO (PLS) (CORPS)
55729L	HEAVY TRUCK CO
55739L	COMBAT HET CO
55818L	TERM SVC CO (BREAKBULK)
55827L	TERM SVC CO (BB/CNTNR)
55828L	MEDIUM BOAT CO
55829L	HEAVY BOAT CO
55839L	COMPOSITE BOAT CO
55138L	TMT CO, S&T BN, INF DIV
55158L	TMT CO, S&T BN, ABN DIV
55168L	TMT CO, S&T BN, AASLT DIV
55178L	TMT CO, S&T BN, LID
55188L	TMT CO, MSB, HVY DIV

INDEX

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02906

DISTRIBUTION:

Active Army, ARNG, and USAR: To be distributed in accordance with DA Form 12-11E, Requirements for FM 55-10, Movement Control in a Theater of Operations (Qty rqr block no. 1185).

*U.S. Government Printing Office: 1994 — 300-421/82873