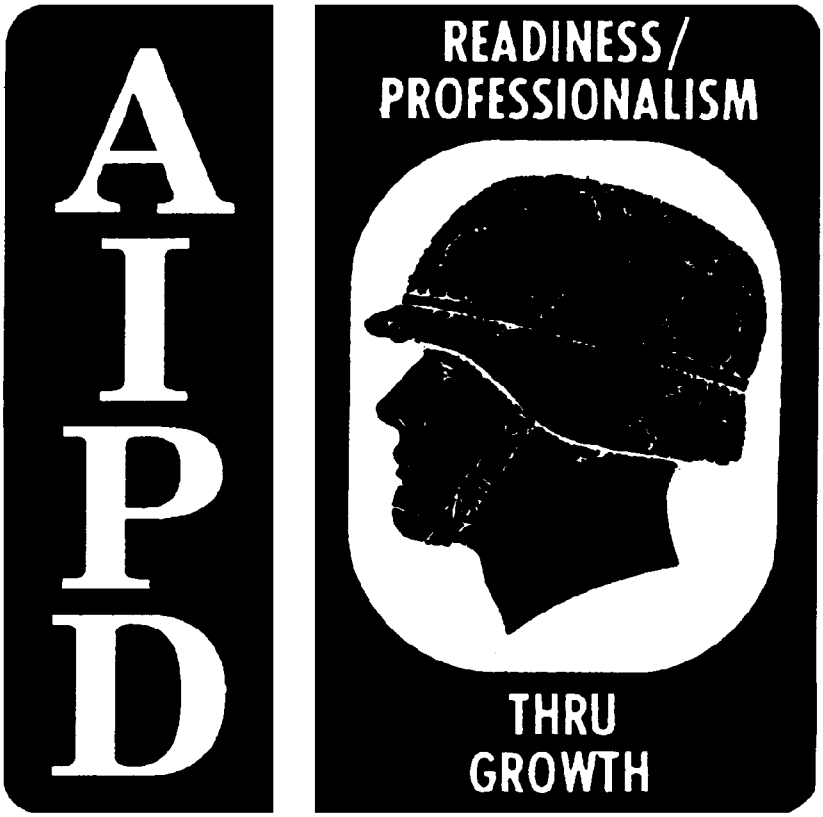
SUBCOURSE
TR2013

EDITION
A

MANAGE MATERIEL MOVEMENT REQUIREMENTS



THE ARMY INSTITUTE FOR PROFESSIONAL DEVELOPMENT

ARMY CORRESPONDENCE COURSE PROGRAM

MANAGE MATERIEL MOVEMENT REQUIREMENTS

TR2013

Edition A

Training Directorate
United States Army Combined Arms Support Command
Fort Lee, Virginia 23801-6000

9 Credit Hours

Edition date: January 1996

Subcourse Overview

Description

This subcourse is designed to teach the student skills and knowledges necessary to perform manage materiel movement requirements. The student will learn the duties and responsibilities of a movement control officer (MCO). The student will also learn the coordination requirements for effective materiel movement. Meeting these requirements enables materiel to be transported quickly and efficiently with little or no delays.

Prerequisites

There are no prerequisites for this subcourse.

Doctrine disclaimer

This subcourse reflects doctrine that was current at the time it was prepared. The student should always refer to the latest official publications.

Gender disclaimer

Unless otherwise stated, the masculine gender of singular pronouns is used to refer to both men and women.

Continued on next page

TLO

The TLO for this subcourse is:

Action: Identify the procedures for managing materiel movement requirements.

Condition: In a self study environment, using the material provided in this subcourse text.

Standards: The student must complete the final examination with a minimum score of 70 percent.

Subcourse content

This subcourse contains the following:

Subcourse objective

This subcourse will serve to familiarize the student with the procedures for identifying and managing materiel movement requirements. The material covered includes coordination requirements for shipment with the consignor and receipt with the consignee.

TABLE OF CONTENTS

THIS PAGE INTENTIONALLY LEFT BLANK

Grading and certification

This subcourse contains a multiple-choice questions examination covering the material in the four lessons. The student must score a minimum of 75 percent on this examination to meet the objectives of the subcourse. The procedures for grading and certifying are provided in the table below:

Step	Action
1	Study each lesson in the subcourse.
2	Work through the practical exercise.
3	Complete the exam by marking answers in the subcourse booklet.
4	Check the answers when transfering them to the Examination Response Sheet.
5	Use the preaddressed envelope received with this subcourse to forward the completed Examination Response Sheet. **Note:** The student will receive the examination score in the mail.

LESSON 1

MOVEMENT CONTROL

Critical Tasks: 01-7340.70-0120
01-7340.70-0130
01-7340.70-0140
01-7340.70-0150
01-7340.70-0160
01-7340.70-0180
01-7340.70-0260
01-7340.70-0290
01-7340.70-0310

1-1. Lesson I Overview

Lesson description

In this lesson, the student will learn the principles and functions of movement operations and movement control at all levels of war and through the complete range of military operations.

Enabling learning objective

This is the enabling learning objective for this lesson:

Action: Identify the procedures for coordinating materiel movement requirements with the consignor.

Condition: In a self-study environment using the materials within this subcourse.

Standards: Identify the principles and functions of Army movement control operations at all levels of war and through the range of military operations including the strategic, operational, and tactical levels of movement control.

Continued on next page

References

These are the references used in compiling this lesson:

- FM 55-1, *Army Transportation Services in a Theater of Operations*, 30 November 1984.
- FM 55-1, *Transportation Operations*, Initial Draft, 8 April 1994.
- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- FM 100-10, *Combat Service Support*, Revised Final Draft, 22 February 1995.

Lesson content

This lesson contains the following parts:

Lesson 1

Part A

Theory of Movement Control

1A-1. Part A Overview

Introduction

Part A of this lesson discusses these theories of movement control

- Principles of movement control.
- Movement control considerations.
- Factors of movement control.

Part content

Part A contains these topics:

Enabling learning objective

This is the enabling learning objective for this part:

Action: Describe the theories of movement control.

Condition: In a self-study environment using the materials provided in this subcourse.

Standards: In accordance with the materials provided in this subcourse and/or the references cited below.

Continued on next page

Regulated movements

Regulated movements are imperative in today's Army emphasizing rapid force projection. The regulation of transportation assets prevents congestion and movement conflicts. During joint and combined operations, movement regulations are even more critical when coordinating the use of airfields, roads, rail lines, water terminals, and inland waterways with the host nation (HN). If any part of the transportation system cannot meet these specific movement requirements, than that movement should not be validated, approved, or initiated. Movements are regulated according to command priorities.

Fluid and flexible movements

The transportation system must remain fluid by providing an uninterrupted flow of traffic. Movement control must also be flexible. To ensure success, movement control should be diverted or rerouted around problem areas. To accomplish this principle, the transportation system must remain in tune with the intelligence network and strive to adjust transportation operations according to the ever changing battlefield conditions and priorities.

Maximum use of carrying capacity

Maximizing the use of the carrying capacity refers to more than loading each transport vehicle to its maximum load weight. It also refers to the maintenance of transportation assets loaded and moving as much as the tactical situation permits while still allowing for equipment maintenance and personnel rest. Fully loaded transport equipment sitting idle is as inefficient as moving partially loaded equipment. These are some guidelines for maintaining the maximum use of carrying capacities of transportation assets:

- Transport travels empty only during unavoidable scenarios.
- Only those carriers necessary to haul projected loads are assigned to a mission.
- Shipments to a single consignee or are consolidated by vehicle and convoy.
- Movement controllers and regulators ensure maximum effective use of existing road networks.
- Road interdiction is promptly reported.

Continued on next page

References

These are the references for Part A:

- FM 55-1, *Army Transportation Services in a Theater of Operations*, 30 November 1984.
- FM 55-1, *Transportation Operations*, Initial Draft, 8 April 1994.
- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.

1A-2. Principles of Movement Control

Introduction

Movement control is the planning, routing, scheduling, controlling, coordination, and in-transit visibility (ITV) of personnel, units equipment, and supplies over lines of communication (LOC). There are five basic principles of movement control:

- Centralized Control/Decentralized Execution.
- Regulated Movements.
- Fluid and Flexible Movements.
- Maximum Use of Carrying Capacity.
- Forward Support.

Centralized control/ decentralized execution

The concept of the centralized control of movements requires movements to be centralized at the highest level which can adequately exercise and decentralize transportation operators for execution. Usually, centralization occurs at the echelons providing integrated logistical support. These echelons range from brigade to elements deployed at echelons above corps (EAC). The principle of centralization requires a transportation movement planning and resource allocation at each level. This focal point, whether it is an individual or a unit, must be aware of current and future requirements of the Army force and the capabilities available to meet these requirements. These responsibilities may be controlled by one of the following:

- MCO.
- Corps Movement Control Center (MCC).
- Theater Movement Control Agency (TMCA).

Continued on next page

Forward support

Forward support is dependent upon fast, reliable transportation to move supplies and personnel as far forward as possible. Forward support is a combat multiplier allowing the commander to concentrate all his forces on the enemy. The key to forward support is the reception and clearance capabilities at the destination units. These capabilities may include professional organizations to enhance the organic capabilities of tactical units. This may require the attachment of operational level transportation assets to tactical level units. However, any forward support relinquishing centralized control for extended periods of time must be balanced against the transportation system's requirements for the provision of time utility and to weight the battle at decisive times and places. These are examples of forward-oriented transportation support:

- The delivery of ammunition forward to brigade support areas (BSAs) so the fighting elements have sufficient quantities required by high firing rates.
- The delivery of ammunition and fuel allows the maneuver commander to seize tactical opportunities and retain the initiative.
- The evacuation of disabled equipment from forward sites to rear maintenance locations so it can be rapidly returned to the fight.
- The delivery of critical supplies such as rations, water, fuel, and ammunition to units operating at and even forward of the forward line of own troops (FLOT).

These examples demonstrate how transporters may assist the commander by allowing him to remain relatively free of his combat support requirements.

Continued on next page

Movement control organizations

These movement management principles are performed by movement control organizations and staffs at theater army (TA), corps, and division levels. Movement control at each level is imperative for the accomplishment for the goals of mobilization, deployment, redeployment, and demobilization (MDRD). This chart shows the objective of each movement control organization:

Organization	Objective
TA	At this level, centralized movement control is an imperative to accomplish all phases of MDRD. It is also vital for sustaining the corps and division along with providing support for joint service requirements.
Corps	This level blends operational art with tactics focusing primarily on unit movements and sustainment operations. At this level all movements are synchronized and coordinated to ensure a continuous flow that maximizes the use of available transportation assets, infrastructure, and LOC.

1A-3. Functions of Movement Control

Introduction

The movement control functions are common to all movement control organizations regardless of the level of war at which they operate.

Functions of the movement program

The movement program supports the commander's priorities by establishing what requirements can be resourced given available logistics assets, units, and infrastructure. An effective movement program is vital for the successful support of combat operations. Movement planners must be flexible because these requirements will change frequently based on shifts in priorities, unit locations, asset availability and conditions of the LOCs. These are the six functions of movement control:

- Planning.
- Apportioning.
- Allocating.
- Coordinating.
- Deconflicting requirements.
- ITV.

Planning

Transportation planning is crucial to the success of the military operation at all levels of command.

Strategic level. At the strategic level the Joint Operations Planning and Execution System (JOPES) prescribes precise methods to assure the requirements and assets match the commander's concept of the operation. The Army Service Component Commanders (ASCC) must contribute to the strategic transportation plan as well as to the operational level.

Operational level. At the operational level the ASCC must develop the transportation plan. The ASCC provides input into the plan for the selection of terminals, determination of required transportation units, and the modules required to establish the theater transportation system.

Continued on next page

Planning, continued

Tactical level. On the tactical level commanders must consider the linkage to the the transportation system when selecting the location of their units. The tactical commander must also establish daily transport requirements and assure that sufficient organic or support assets are available to meet their requirements.

Apportioning

Apportioning is the division of the total common-user transportation capability among the transport tasks according to the commander's priorities. Apportionment decisions consider the mission, available resources, threat, and geography of the area of operations (AO). Theater level apportionments, usually expressed in percentages and developed in cycles, support the Commander in Chiefs (CINC's) campaign and Operation Plans (OPLANs). Once the ASCC receives his share from the Joint Force Commander (JFC), he apportions and allocates the resources in support of the organic force. At the operational and tactical levels of war, apportionment may sometimes mean dedicating a transportation capability such as heavy-equipment transporters (HETs) to a unit until its mission is complete.

Allocating

Allocation is the assignment of specific transportation resources against specific movement missions. Normally the JFC delegates the allocation process through its Joint Movement Center (JMC) to the Service components. The Service components normally express locations as sorties by type of aircraft, gross tonnages, number of vehicles, and so on. Allocations are published in the movement program.

Continued on next page

Coordinating

Coordination is the process of matching cargo and personnel with transportation modes and terminals. The coordination function uses levy commitments to the transportation nodes for deliveries to terminals. Reliable communications are crucial to this process for an enhanced response time.

Deconflicting requirements

Deconflicting requirements occur when the transportation assets are insufficient. In these cases, transportation assets must be acquired or rescheduled to match the commanders priorities. Movement control elements have established a transportation request process designed to deconflict transportation requirements. The transportation request process includes a commitment validation system.

ITV

ITV provides commanders with a means to optimize their use of transportation assets. ITV shows available transportation assets through its linkage to the total transportation system.

1A-4. Other Movement Control Considerations

Introduction

In addition to the five principles governing the planning and execution of movement control operations there are five other important considerations. These are the other considerations of which Army movement control personnel must be aware:

- Peace to war transitions.
- Origin to destination throughput.
- Split-based operations.
- Total asset visibility (TAV).
- ITV.

Peace to war transitions

The same basic principles and operations must apply during the transition from peace to war. A war-time shift using a completely new set of procedures and systems would not allow the development of adequate training nor would it permit an orderly transition of resources during an emergency. This requires continental United States (CONUS)-based transportation elements to coordinate strategic deployments while simultaneously planning the establishment of an operational level transportation system to support the operation. The most crucial element to the operations' success is the identification and sequencing of transportation elements during the deployment. These elements must arrive in the AO at the right time with the right equipment to get the operation level system up and running.

Origin to destination throughput

The goal of the Army transportation system is the movement of passengers and cargo from origin to final destination. Throughput and intermodiability are the two key elements for achieving this goal. Throughput is the easiest way to achieve this goal.

- Throughput is the method of transportation using minimal handling of in-transit cargo and personnel.
- Intermodiability is the capabilities to handle the cargo of Army units during transit.

Continued on next page

Split-based operations

Split-based operations are an offspring of the Army's transition from a forward deployed force to one of force projection. This concept establishes processing centers at theater, corps, and division levels which are tethered to the operational area. Using split-based operations theater requirements are--

- identified and prioritized by the combatant commander,
- recorded through data entry, and
- sent electronically to information processing centers at power projection platforms.

Then, these power projection platforms are located at intermediate support bases (ISBs) or CONUS. The ISBs issue orders and instructions for the movement of sustaining materiel as identified by the combatant commander.

TAV

TAV provides systems and communications technologies for operators and logisticians for the essential visibility of Department of Defense (DOD) materiel assets. This concept uses software to track the location, quantity, and condition of major end items, reparable, ammunition, and other support items. The goal of TAV is to effectively integrate and focus management and resource on those key visibility requirements having the greatest potential to improve operation support and reduce inventory levels.

ITV

ITV is a subset of TAV. It allows the capability of identifying and tracking the movement of defense cargo, passengers, medical patients, and personal property from the point of origin. ITV provides effective logistics support in wartime, contingencies, and peacetime and allows the management of logistical information on specific commodities from the cradle to the grave. ITV is a force multiplier and resource saver crucial to the success of military operations. ITV uses automated processes to gather and maintain timely and accurate standard source movement data.

Lesson 1

Part B

Strategic Level of Movement Control

1B-1. Part B Overview

Part description

The strategic level of movement control is directed primarily by DOD. The focus of strategic level movement control is on--

- Sustaining the forward deployed force.
- Strategic mobility.
- Force projection.

Part B content

Part B contains these topics:

Enabling learning objective

This is the enabling learning objective for this part:

Action: Describe the strategic level of movement control.

Condition: In a self-study environment using the materials provided in this subcourse.

Standards: In accordance with the materials provided in this subcourse and/or the references cited below.

Continued on next page

References

These are the references used in Part B:

- FM 55-1, *Transportation Operations*, Initial Draft, 8 April 1994.
- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- FM 100-10, *Combat Service Support*, Revised Final Draft, 22 February 1995.

1B-2. Strategic Movement Control

Introduction

Movement control at the strategic level focuses on sustaining the forward deployed force, strategic mobility, and force projection. It is executed through the creation and participation of the MCC established throughout the defense transportation system (DTS). There are two types of strategic movement control operations:

- Strategic movement control in peacetime.
- Strategic movement control in support of military operations.

Strategic movement control in peacetime

Strategic movement control in peacetime is executed in support of the combatant commands and the Services by the DTS. The DTS places their movement requirements with the United States Transportation Command (USTRANSCOM) and its component commands. Then USTRANSCOM schedules the movements based on the priorities from shipments. These are the stages of movement control during peacetime operations:

Stage	Description
1	The installation transportation officer (ITO) receives movement requirements and acts on those for which they have authority. The remaining movement requirements are passed from the DTS to USTRANSCOM through Military Traffic Management Command (MTMC).
2	The movement requirements are prioritized and scheduled by USTRANSCOM.
3	USTRANSCOM notifies the ITO where and when the shipment is to be made. If the shipment requires clearances from other agencies, the ITO is responsible for acquiring them.

Strategic movement control in support of military operations

Strategic movement control in support of military operations hinges on the decision to deploy United States military forces from CONUS or from one overseas AO to another. Force projection requires that strategic deployments be conducted as a joint operation. The Army's role is to support the deployment in accordance with the requirements of the supported CINC. To accomplish their role the Army uses their peacetime network of movement control organization, terminals, and modes as a building block in the development of a movement control organization capable of supporting the deployment.

1B-3. Planning for Strategic Movement Control

Introduction

When planning strategic movement control, the US employs several planning methodologies, key documents, and planning systems.

Planning methods

There are three concepts the DOD uses for conducting strategic planning:

Planning Method	Description
Deliberate planning	The Joint Planning and Execution Community (JPEC) uses deliberate planning when time elements permit the total participation of commands and staffs. The JPEC consists of the commands and agencies involved in the training, preparation, movement, employment, support, and sustainment of forces within an AO. Figure 1-1 shows the JPEC. The JPEC deliberate planning cycle may be as long as two years. During peacetime, combatant commanders and their Service components use the deliberate planning process to develop concept plans (CONPLANS) and detailed OPLANs for contingencies identified in the Joint Strategic Capabilities Plan (JSCP).
Crisis action planning (CAP)	CAP is the planning method for responding to emergency conditions where US interests are threatened and a military response is being considered. CAP occurs only in response to specific situations which tend to develop very rapidly.
Adaptive planning	The method of adaptive planning recognizes that the US faces many diversified threats and regional conflicts and that the assumptions, warnings, and political decisions used in the deliberate planning process may not be completely accurate should the actual event occur. Adaptive planning provides a cause and effect menu of response options which are gauged to a range of crisis conditions. For example, if A occurs the United States will respond by doing B.

Continued on next page

Planning methods, continued

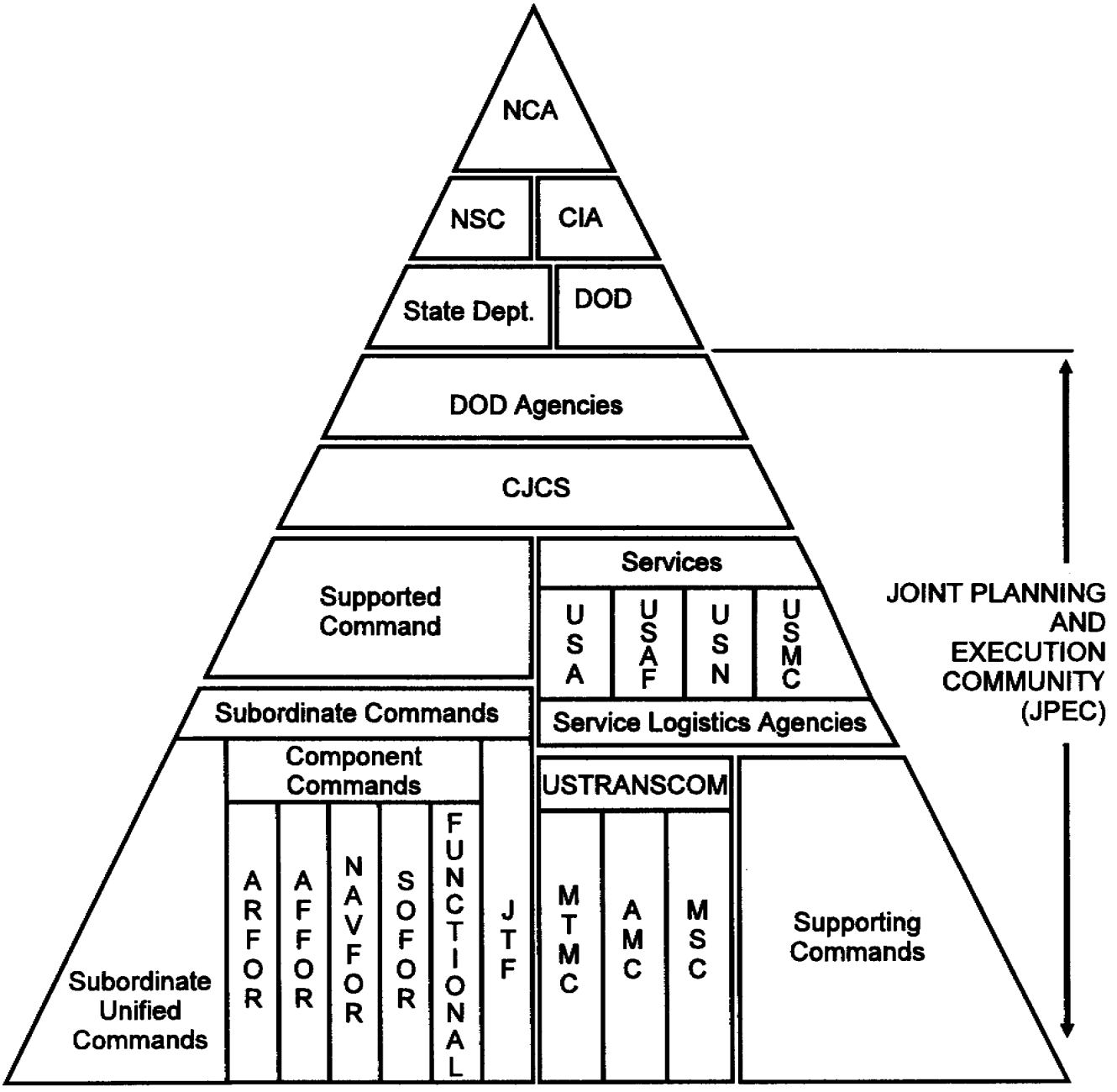


Figure 1-1. JPEC.

Continued on next page

Input to planning These documents contribute to, and assist in, the planning effort of the national strategic mobility including strategic movement control:

Document	Description
National Military Strategy (NMS)	The NMS furnishes advice from the Chairman, Joint Chiefs of Staff (JCS) to the President, National Security Council, and the Secretary of Defense (SECDEF). The NMS assists the SECDEF in preparing the Defense Planning Guidance (DPG).
DPG	The SECDEF issues the DPG to the military departments for the development of the Program Objective Memorandums (POMs) for the defense planning period. The DPG includes: • Major planning issues and decisions. • Strategic elements. • Strategy and policy. • SECDEF's program planning objectives. • Defense Planning Estimate. • Illustrative Planning Scenarios. • Series of studies.
Chairman's Guidance	The Chairman's Guidance conveys guidance to the Joint Staff and information to the SECDEF and combatant commanders regarding the framework for building the NMS and for setting priorities in the Joint Planning Document (JPD).
JPD	The JPD supports the NMS by furnishing concise programming priorities, requirements, or advisement to the SECDEF for consideration during the preparation of the DPG.
JSCP	The JSCP contains guidance to the CINCs and Service Chiefs for accomplishing military tasks and missions based upon the current military capabilities. The JSCP directs the development of contingency plans in support of the national security objectives.

Continued on next page

Input to planning, continued

Document	Description
Logistics Sustainability Analysis (LSA)	The LSA represents the quantitative assessment of the CINCs overall sustainment posture based on the logistics capabilities and specific limiting factors associated with each OPLAN.

JOPES

The JOPES is the DOD-directed, JCS-specified system for planning and executing global and regional joint military operations. JOPES consists of a myriad of planning systems including:

- Personnel procedures, directives, and communication systems.
- Electronic data processing systems to directly support deliberate and time-sensitive planning.

Figure 1-2 shows the JOPES transportation planning process that matches forces and supplies to transportation assets for establishing and refining OPLANs or OPORD time-phased force and deployment data (TPFDD). When deployment of forces is imminent, TPFDD is translated into a time-phased force deployment list (TPFDL). The TPFDL is a list identifying the types and/or actual units required to support the OPLAN. It indicates origin and ports of debarkation or ocean area. The TPFDL is used to deploy the force.

Continued on next page

JOPES, continued

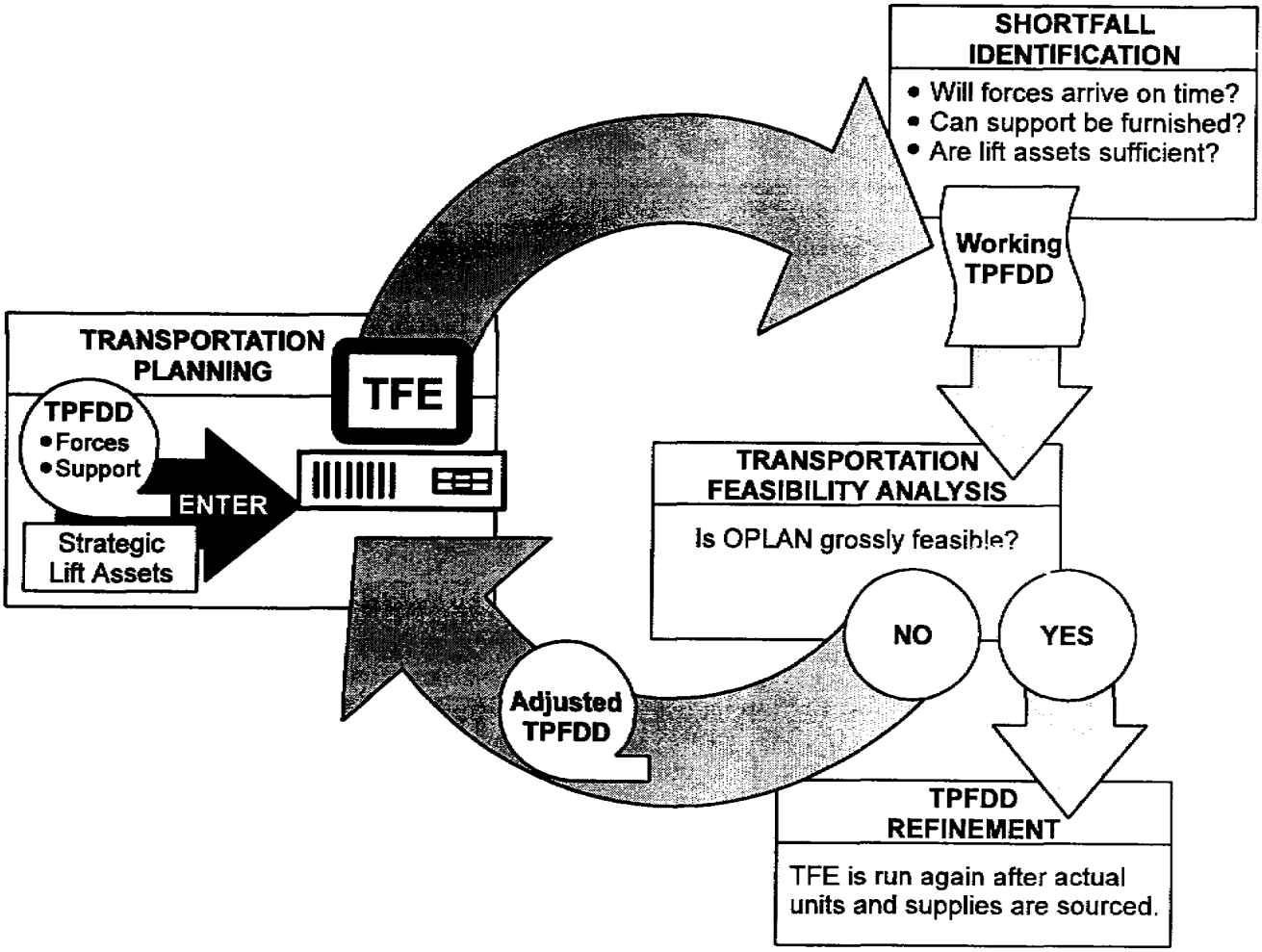


Figure 1-2. JOPES Transportation Planning.

1B-4. Phases of Strategic Deployment

Introduction

Strategic deployment consists of three phases. These phases rely on movement control to play a key role in their success. These are the three phases of strategic deployment:

- Phase I - Predeployment Activities.
- Phase II - Movement to the Port of Embarkation (POE).
- Phase III - Strategic Lift.

Phase I - predeployment activities

During this phase the transportation movement control elements support OPLANs that perform two functions. They must train to support the deployment of the force while simultaneously preparing to deploy. To be prepared to conduct an emergency deployment, commanders must--

- Develop and revise their movement plans to reflect the exact personnel and equipment to be deployed.
- Prepare and exercise the movement of prepackaged supplies for elements responsible for the provision of sustainment.
- Update the automated unit equipment list (AUEL) and be prepared to provide deployment equipment lists (DELs).

Additionally, installations must exercise and have in place individual manpower and forces to deploy and sustain units as designated by the operation order (OPORD).

Phase II - movement to the POE

This phase requires Army elements to move to water or air terminals for embarkation to a force projection destination. To accomplish this movement the CINC coordinates with the ASCC, USTRANSCOM, supporting CINCs, subordinate headquarters and the ITOs. USTRANSCOM provides movement guidance to the POE based on the CINC's priorities.

Phase II - strategic lift

This phase begins with the departure from the POE and ends with arrival in the theater of operations. USTRANSCOM executes this movement by supervising the operations of Air Mobility Command (AMC) and Military Sealift Command (MSC).

LESSON 1

Part C

Operational Level of Movement Control

1C-1. Part C Overview

Part C description

Part C discusses movement control at the operational level of war. This level links the strategic and tactical levels of the war movement control elements.

Part C content

Part C contains these topics:

Enabling learning objective

This is the enabling learning objective for this part:

Action: Describe the operational level of movement control.

Condition: In a self-study environment using the materials provided in this subcourse.

Standards: In accordance with the materials provided in this subcourse and/or the references cited below.

Continued on next page

References

These are the references used in developing Part C:

- FM 55-1, *Army Transportation Services in a Theater of Operations*, 30 November 1984.
- FM 55-1, *Transportation Operations*, Initial Draft, 8 April 1994.
- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- FM 100-10, *Combat Service Support*, Revised Final Draft, 22 February 1995.

1C-2. Operational Level Movement Control Organizations

Introduction

Operational movements require the transportation elements to focus on the reception and onward movement of troops in the theater of operations. This portion of the lesson describes the movement control organizations at the operational level and their functions.

Joint Transportation Board (JTB)

The CINC establishes a JTB to review and deconflict policies, priorities, and apportionment's of transportation assets. The JTB is organized based upon perceived transportation requirements. It normally consists of representatives from the Service components, movement control agencies, and the Joint Force Operations Directorate (J3), and Logistics Directorate (J4).

JMC

The CINC uses the JMC to control the movement of forces and their sustainment. It is organized with a peacetime nucleus. The JMC--

- Coordinates strategic movements with USTRANSCOM.
- Oversees the execution of theater transportation priorities.
- Conducts cyclic reviews of apportionment decisions.
- Acts on emergency transportation requests.

In the absence of a JTB, the JMC is the primary advisor to the theater Combatant Commander in the apportionment process.

USTRANSCOM

USTRANSCOM supports the Army's MDRD program by managing the DOD's transportation requirements to meet national objectives. USTRANSCOM orchestrates all transportation aspects of the deliberate planning process and coordinates with the joint staff in the development of JOPES. The three USTRANSCOM transportation component commands are:

- MTMC.
- AMC.
- MSC.

Continued on next page

MTMC

MTMC is a USTRANSCOM component command and a major Army command (MACOM). MTMC provides--

- Traffic management.
- CONUS-based surface transportation.
- Strategic seaports or common-user ocean terminals.
- Intermodal moves.
- Transportation engineering.

AMC

The AMC is the USTRANSCOM Air Force component command providing worldwide airlift and aerial refueling support to DOD component. The AMC selects CONUS and outside continental United States (OCONUS) aerial ports of embarkation/debarkation (APOE/APOD) for airlift in conjunction with other unified commands.

MSC

The MSC, as the USTRANSCOM naval component command, provides sealift transportation assets in support of DOD component. MSC negotiates contracts with operators of commercially-scheduled container liner services providing port-to-port delivery of military and/or containerized cargo. Strategic sealift is divided into two categories--

- Surge shipping to deploy warfighting units.
- Resupply or sustainment shipping to move support and follow-on units, and supplies.

1C-3. Theater Army Movement Control Agency

Introduction

The TA Movement Control Agency (TAMCA) serves as the executive agency and primary staff element to the TA commander for planning and controlling theater transportation operations. Operational movement control in the TA is performed by movement control organizations and staffs at the ASCC level. The Army uses a TAMCA to execute movements control at the operational level.

TAMCA organization

The TAMCA is the day-to-day manager of transportation within the theater of operations. TAMCA serves as the ASCC primary element for the planning and controlling of transportation operations at the operational level of war. Figure 1-3 shows the TAMCA organization. TAMCA's success hinges on its organizational flexibility. The TAMCA organization uses a building block concept which assigns the correct mix of battalions and teams to perform its mission based upon the--

- Size of the theater.
- Number of forces.
- Transportation infrastructures.
- Number and type of movement requirements.

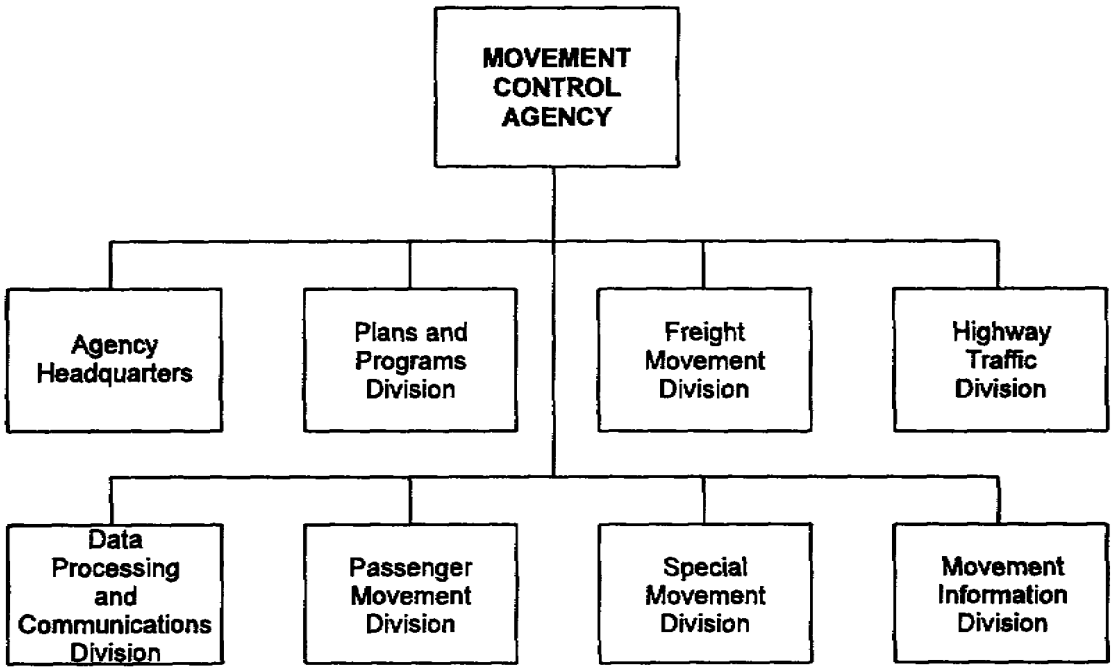


Figure 1-3. TAMCA organization.

Continued on next page

TAMCA mission

The TAMCA mission is to provide movement management services and highway traffic regulation to assist in their coordination of personnel and material traffic into, within, and out of the theater. This mission frequently requires the coordination of TAMCA resources with allied, HN, and transportation component commands. Additionally, TAMCA--

- Supports US, allied-nation, and HN forces as required.
- Prepares movement and port clearance plans and programs, including reception and onward movement.
- Conducts liaison with movement control organizations at higher and lower levels, HN transportation agencies, transportation mode operations, and customers.
- Commands and controls (C^2) and supports the transportation battalions movement control (MC) and MCTs.
- Provides technical assistance to corps MCC.
- Develops theater movement control policies.
- Coordinates the movement of major units.
- Prepares and recommends policies to control, regulate, and expedite the movement of containers within the theater.
- Recommends site selection for transportation activities.

Continued on next page

TAMCA organization

TAMCA relies on the local area support using staff sections and subordinate units which are located to facilitate coordination and communication with the TA headquarters, the Theater Army Material Management Center (TAMMC), Theater Army Area Command (TAACOM), transportation battalions (MC), corps MCC, and the USTRANSCOM. The following table identifies and describes the functions of TAMCA's staff sections and subordinate units:

Staff Section or Subordinate Unit	Function
Agency Headquarters	The command section provides administrative support for the unit and C^2 for its subordinate units.
Plans and programs division (PPD)	The PPD-- • Develops, coordinates, publishes, and distributes the command movement program. • Prepares transportation movement plans and annexes. • Reviews plans or directives issued by the JFC, TA USTRANSCOM, and logistical command to determine their effect on the movement system.

Continued on next page

TAMCA organization, continued

Staff Section or Subordinate Unit	Function
Freight movement division (FMD)	The FMD monitors the freight movement program. by managing the -- • Movement information division. • Materiel management activities. • CONUS wholesale logistics agencies. • Freight distribution system.
Passenger movement division (PMD)	The PMD monitors the passenger movement program and establishes staffs and controls the aerial port liaison office (APLO) at major aerial ports.
Special movement division (SMD)	The SMD coordinates and monitors movements requiring exeption, coordination, monitoring, or reporting (such as the movement of classified and/or sensitive items). Additionally this division arranges commercial rail carriers to establish permanent military train schedules and paths, including train paths for movement of "out-of-gauge" shipments.
Highway traffic division (HTD)	The HTDperforms highway regulation functions in the communications zone (COMMZ).
MC	Movement control transportation battalions operate in assigned movement regions within the COMMZ. Transporation battalions control and manage movements within their regions. Movement control teams (MCTs) are assigned to the battalions to decentralize the execution of movement matters on an area basis or at key transportation nodes.

Continued on next page

TAMCA organization, continued

Staff Section or Subordinate Unit	Function
Freight movement division (FMD)	The FMD monitors the freight movement program. by managing the -- • Movement information division. • Materiel management activities. • CONUS wholesale logistics agencies. • Freight distribution system.
Passenger movement division (PMD)	The PMD monitors the passenger movement program and establishes staffs and controls the aerial port liaison office (APLO) at major aerial ports.
Special movement division (SMD)	The SMD coordinates and monitors movements requiring exeption, coordination, monitoring, or reporting (such as the movement of classified and/or *sensitive items*). *Additionally this division arranges* commercial rail carriers to establish permanent military train schedules and paths, including train paths for movement of "out-of-gauge" shipments.
Highway traffic division (HTD)	The HTDperforms highway regulation functions in the communications zone (COMMZ).
MC	Movement control transportation battalions operate in assigned movement regions within the COMMZ. Transporation battalions control and manage movements within their regions. Movement control teams (MCTs) are assigned to the battalions to decentralize the execution of movement matters on an area basis or at key transportation nodes.

1C-4. Operational Phases of Deployment

Introduction

The mission of the operational level transportation system, regardless of the threat, is the reception and onward movement of personnel and materiel. At the operational level of deployment, the Army transportation forces focus on these two phases:

- Phase I - Theater Reception.
- Phase II - Theater Onward Movement.

Phase I - theater reception

This phase begins with the rival of forces and sustainment at the port of debarkation (POD) in the AO and ends when the forces depart towards their assigned location. This phase is executed at the terminals and is orchestrated by the movement control elements. The supported CINC is responsible for operating the terminals within the AO. The ASCC executes the transportation missions assigned to the Army components. Terminal operations may be assisted by the USTRANSCOM or they may be operated by contracted personnel or HN support agreements.

Phase II - theater onward movement

This phase begins with the linkup of personnel and equipment, reconfiguration of forces, and the positioning of sustainment and the receipt of Prepositioned War Reserves Stocks (PWRS) at the marshalling areas. During this phase, ITV and force tracking are crucial.

1C-5. Theater Movement Program

Introduction

The ASCC uses the movement program to plan and execute the receipt and onward movement of personnel and equipment. The movement program is a directive plan developed in coordination with the TAMCA, MCC, and MCO. The movement program is a tool for preplanning known and anticipated transportation requirements for the reception and onward movement and sustainment of US forces within a theater of operations. During the development of the movement program, planners attempt to efficiently and effectively link transportation resources with the transportation support requirements directed according to the commander's priorities.

Movement planning development

The movement program serves as an authority to commit transportation assets using these eight concurrent basic steps:

Step	Action
1	Assessing the distribution pattern.
2	Determining requirements.
3	Determining transportation capabilities.
4	Balancing the requirements against the capabilities.
5	Determining critical points.
6	Programming by schematics.
7	Selecting a mode.
8	Coordinating the movement program.

Step 1: Assessing the distribution pattern

The distribution pattern contains the envisioned complete logistics picture within the AO. The distribution pattern enables transportation planners to identify the normal flow of transportation support and alternate routes according to operational needs. This pattern is constantly evolving and changing as the operations within the theater mature. When developing the distribution pattern, planners must first identify the nodes necessary within the transportation system and then determine locations for--

- The PODs.
- Transitions through the staging areas, including supply and maintenance sites.
- Terminals within the tactical AO.

Continued on next page

Step 2: Determining requirements

Transportation planners determine their support requirements by forecasting the quantities and types of supplies and personnel moving in the support theater operations. Planners obtain these requirements from potential users of the transportation system. These are the movement classes planners use for determining transportation requirements:

- Classes of supply.
  - Estimated weight and cube.
  - Forecasted priorities.
  - Planned origins and destinations.
  - Special handling considerations such as water, refrigerated, hazardous, sensitive cargo, and so on.
- Personnel.
  - Troops.
  - Civilians.
  - Patients.
  - Prisoners of war.

Step 3: Determining transportation capabilities

When determining transportation capabilities, you must evaluate these two

- Operability of terminal physical structures.
- Capabilities of the available operating units, contractor personnel, or HN support

These factors must not only assess the capabilities within the AO but also those deploying with the Army forces. The final tally should show the carrying capacity of the mode operations and the reception and clearance capability of the terminals.

Continued on next page

Step 4: Balancing the requirements against the capabilities

By balancing the requirements transporting against the capabilities of the transportation facilities, the planner can determine if the available modes and terminals are sufficient to support the commander's concept of the operation. If the requirements exceed the capabilities, then the planner must seek to change transportation operator work load, the commander's priorities, or additional capabilities. These are factors which the transportation planner must consider when balancing commander relationships:

- Command relationships.
- Geographical areas of responsibilities.
- Risk of failure due to the tactical situation.

Step 5: Determining critical points

Planners determine critical points by determining if existing restrictions could slow down or stop movement. This determination is made by analyzing the physical structures within the nodes and links by computing the capability to man the nodes and the terminals. Transportation planners must also develop alternative plans and control measures to overcome congestion at critical points. They must anticipate congestion and place movement teams on the ground to respond to delays. When necessary, the actions of the movement teams are coordinated with the fire and maneuver scheme of the commander to assure the acquisition of artillery support where necessary.

Step 6: Programming by schematics

Time permitting, transportation planners should program their transportation requirements using schematics. Schematics are graphic portrayals depicting shipping requirements versus shipping capabilities. Schematics are superimposed over maps and provide a visual representation of the transportation system structure. Planners use these two types of schematics:

- Requirements schematics. Requirements schematics list the daily shipping requirements for each origin-destination combination between points. These requirements include the listing of class of supply, tonnage, and movement program line number.

Continued on next page

Step 6: Programming by schematics, continued

- Mode schematics. Mode schematics are prepared for each available mode of transportation. The schematic lists the mode capacity in terms of daily tonnage capacity between major terminals for air and rail modes, or daily ton-mile capacity for motor transport.

Step 7: Selecting a mode

When selecting or allocating modes of transportation, planners must consider the priority of the requirement. Planners strive to eliminate the rehandling of cargo and facilitate its transition to the final destination. These are the primary mode selection criteria:

Selection Criteria	Description
Priority	Priority is the first and most important consideration in the selection of a mode of transportation. A shipment's priority is dictated by the user; however, it must match the commander's concept. Whenever the priority is in question, authorities in the transportation request process system should ask for validation of the shipment.
Required Delivery Date	The required delivery date should be consistent with the shipment's level of priority. This allows the mode operator to select the best mode of transportation for an on-schedule delivery.
Type of Cargo	The commodity or type of the cargo may dictate the mode of transportation. For example, the delivery of water and fuel are special commodities which dictate the packaging requirements. These requirements greatly influence their mode of transport.
Special Restrictions	Special restrictions play an important role not only in the selection of a mode of transportation, but also in the routing of the movement. Mode operations and movement control personnel must be fully aware of restrictions existing along routes for rail lines and highways. Some restrictions may include low clearance bridges and tunnels which may limit the size of equipment this mode is capable of handling.

Continued on next page

Step 7: Selecting a mode, continued

Selection Criteria	Description
Economy and Efficiency	The cost of transporting the force and its sustainment is expensive. Economy and efficiency provides assurance that resources are being used judiciously. The best methods of assuring the sound application of these criteria is advance warning for priority shipments. Advance warning allows movement control personnel to schedule equipment to match priorities using the most economical mode of transportation available.
Available Resources	All transportation operations must use the modes available within the theater. All transportation modes may not be available; however, mode operators and movement control personnel should maintain a record of movements that could have been scheduled differently and more effectively if that particular transportation asset had been available.

Step 8: Coordinating the movement program

Complete coordination of the movement plan among all planners, both strategic and tactical, is mandatory to ensure integrated support. Coordination ensures integrated planning and the synchronization of movement execution. Movement planners at each level must coordinate the movement program with these military elements to assure each knows their responsibilities during movements:

- Supply.
- Military police.
- Engineer and airlift staffs.

Coordination also allows planners a sounding board to ensure their program meets the needs and requirements for the commander's concept for the operation. Proper coordination assures the movement program will remain viable even as changes and adjustments to the document become apparent.

Continued on next page

Other planning aspects

Planners must also consider these two major aspects when developing a transportation system:

- Development of a POD clearance program. The POD clearance program is a subset of the operational level movement program. However, PODs are nodes that are easily congested.

- Establishment of a highway regulation system. Highway regulation consists of planning, routing, scheduling, and deconflicting the use of highways to facilitate movement control.

Lesson 1

Part D

Tactical Level of Movement Control

1D-1. Part D Overview

Part D description

The operational level movement control organization provides guidance and technical assistance to the movement control elements at the tactical level. Part D of this lesson discusses this relationship and the movement control elements at the tactical level. At the tactical level of operations, the primary movement control requirements are transporting troops and equipment in support of-

- Corps supply and maintenance activities.
- Corps combat and combat support units.
- Division operations.

Part D content

Part D contains these topics:

Enabling learning objective

This is the enabling learning objective for this part:

Action: Describe the tactical level of movement control.

Condition: In a self-study environment using the materials provided in this subcourse.

Standards: In accordance with the materials provided in this subcourse and/or the references cited below.

Continued on next page

References

These a the references for Part D:

- FM 55-1, *Army Transportation Services in a Theater of Operations*, 30 November 1984.
- FM 55-1, *Transportation Operations*, Initial Draft, 8 April 1994.
- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- FM 100-10, *Combat Service Support*, Revised Final Draft, 22 February 1995.

1D-2. Corps Movement Control

Introduction

The corps is the level of command blending operation art with tactics. Within the corps there are many types of movements, primarily unit movements and sustenance movements. However, all must be synchronized and coordinated to ensure a continuous flow that maximizes the user of transportation assets, infrastructure, and LOC.

Corps movement planning the corps:

Corps movement planning is conducted by the corps Operations and Plans (G3) and Logistics (G4) staffs in conjunction with the corps support command (COSCOM). These are the stages of movement planning within

Stage	Description
1	The G3 plans and directs maneuver and establishes corps priorities.
2	The G4, with recommendations for the corps transportation officer (CTO), exercises staff supervison for movements and establishes logistics support priorities.
3	The CTO coordinates with the MCC and COSCOM transportation support branch.

Corps staff

This table provides an overview of the corps staff duties and responsibilities:

Position	Duties and Responsibilities
G3	The G3 plans and directs movement and maneuver of combat units through or within the corps area.
G4	The G4 establishes logistical support plans. The G4, using recommendations from 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.

Continued on next page

Corps staff, continued

Position	Duties and Responsibilities
CTO	The CTO works for the Chief of Staff (CofS). The CTO-- • Coordinates with the G3 during unit movement and maneuver planning. • Assesses the impact for transportation requirements and their impact on highway regulation within the corps area. • Advises the G4 of logistical and unit movement requirements including support reception and onward movement of forces, replacement operations, and regeneration.

COSCOM

COSCOM controls the corps MCC and transportation mode operating units. COSCOM has these operating units:

- COSCOM Assistant Chief of Staff (ACofS), Support Operation.
- Transportation Support Branch.
- Corps MCC.

COSCOM ACofS, support operations

The COSCOM ACofS, Support Operations, exercises staff supervision for transportation and staff supervision over the corps MCC and MMC. His transportation responsibilities include developing and coordinating plans, policies, and programs to support--

- Transportation requirements.
- Movement control.
- Highway regulation.
- Cargo transfer operations in the corps area.

Continued on next page

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 ACofS, Support Operations. This branch executes the responsibilities vested in the ACofS, Support Operations for the movement function.

Corps MCC mission

The MCC is the corps movement control organization. The MCC provides--

- Centralized movement control and highway regulation for moving personnel and material into, within, or out of the corps area.
- Ensures effective and efficient use of available transportation capability.

The MCC also performs transportation planning for the corps, ITV, and asset visibility. The MCC has committal authority over transportation assets assigned to the corps support groups (CSGs). The MCC also--

- Monitors transportation use within each CSG through its MCTs.
- Forecasts transportation requirements based on the commander's priorities.
- Requests additional transportation assets from EAC if deployed in the AO.
- Assists in the negotiation of additional transportation capabilities through HN support agreements if the MCC is the senior movement control element within the AO.

1D-3. Corps Mode Operations

Introduction

Corps mode operations at the tactical level of war are executed by the transportation and rotary-wing aircraft organizations assigned to the Corps Support Command and the transportation elements assigned to the division. Tactical level transportation operations normally deal with the final distribution of personnel, equipment, and supplies using two modes of transportation--

- Air mode.
- Surface mode.

Air mode

Airlift is a flexible and essential element of the transportation system. 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. These are the two sources of airlift in support of combat service support (CSS) missions:

Source of Airlift Support	Description
Army Airlift	The primary aviation unit is the aviation brigade. The aviation brigade is organic to each Army corps and tailored to meet the specific mission requirements of the particular corps. Corps aviation in support of CSS provides movement of critical forces, supplies, and equipment to support the battle.
Air Force Airlift	Air Force airlift is obtained by entering the airlift request system. The Corps contains three elements participating in the airlift request system: • Corps G3. • Corps G4. • Corps MCC. The Corps elements must also coordinate with an Air Force liaision officer. Joint Pub 4-01.1, *Airlift Support to Joint Operations,* describes the airlift request process in detail.

Continued on next page

Surface mode

The primary surface mode operation at the corps level is highway transportation. Motor transport assets usually are made up of long- and short-haul trucks, and the palletized load system (PLS) which is specifically designed for use at this level of war. Other surface modes of transportation include rail and inland waterways.

Highway transportation

Within the Corps, transportation battalions are the primary operators of the motor transport capability. These battalions operate under the command and control of the Corps Support Group but respond to the tasking of the MCC. The battalions may be organized with light-medium truck companies, medium truck companies, and HETs. Other truck assets may be obtained from the HN or contracted assets. There are three types of highway movements:

Type movement	Description
Habitual support relationships	The concept of habitual support places motor transport units in direct support of commodity-oriented supply companies such as ammunition or general supply companies. This relationship enables the drivers to become familiar with their commodity cargoes and the locations of the supported elements. Habitual support allows continuous and responsive support, freeing the commander to use logistics to weigh the battle. It also allows the MCC to focus on major corps redeployments, changes in distribution patterns, and exception requirements.
Manuever unit relocation	When the commander requests the relocation of units during an operation, motor transport assets in direct support of a maneuver commander may be required.
Task force support	The commander at the operational level may form a task force to execute a special mission. If the commander requires motor transportation, then motor transport elements will be detached in direct support of the task force. During the operation these elements must maintain contact with the MCC to assure the maintenance of LOC.

Continued on next page

Other surface modes of transportation	The MCC coordinates the flow of other surface modes of transportation such as inland waterways and rail. The coordination process must include the Corps G3 and other maneuver and fire support units to assure no interference with on-going military operations.

1D-4. Division Movement Control

Introduction

Tactical movement control planning and execution in the division involves the planning for the reception of cargo and personnel coming from the operational level area of responsibility. It also includes planning for the movement of units not committed to combat within the division area. The division develops a system identifying the nodes within the division and area, and procedures to assure that the modes are available to deliver the required supplies where and when they are needed.

Division transportation organization

Figure 1-4 shows the division organization for planning and regulating movement. The division transportation organization requires close coordination among the division staff and the commanders and staffs of the brigades, separate battalions, and companies.

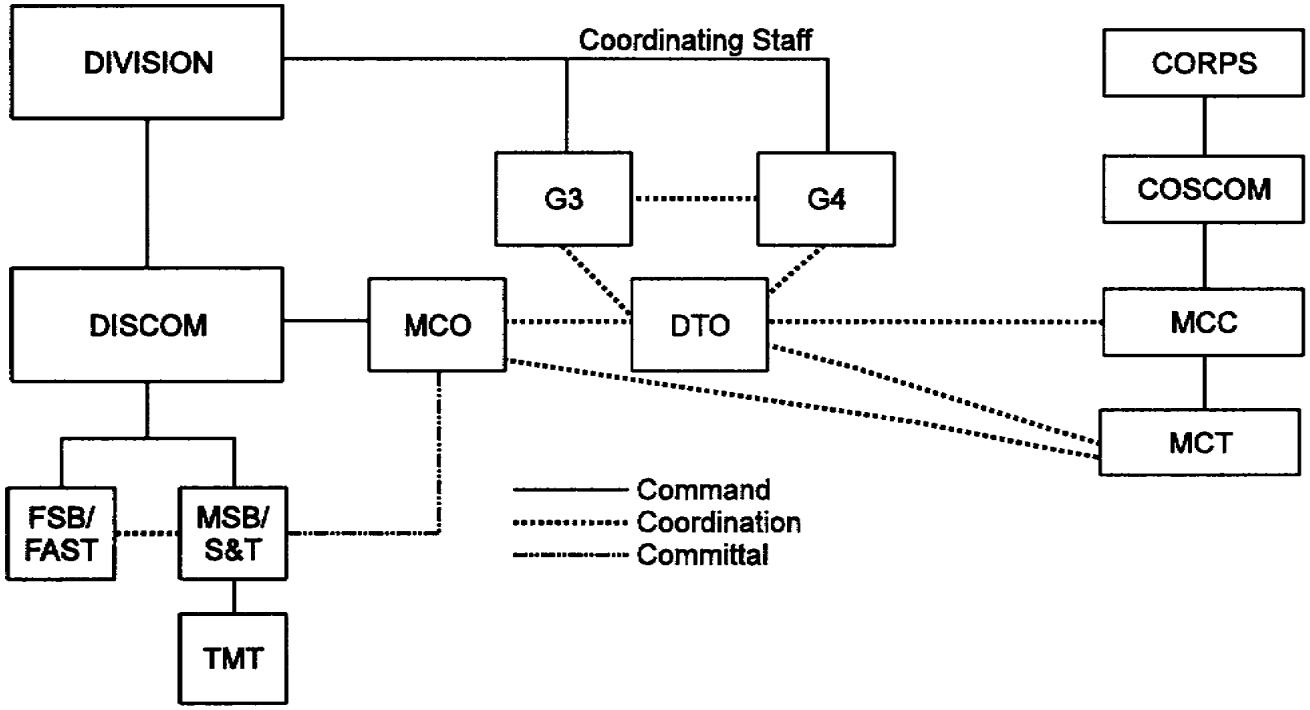


Figure 1-4. Division Transportation Organization.

Continued on next page

DTO

The division transportation officer (DTO) is a special staff officer on the division G4 general staff. The DTO provides guidance on transportation matters to all other staff sections and commanders of the division, and division support command (DISCOM). He also provides the formal link between the division and the corps MCC. These are the five primary staff functions of the DTO:

DTO Primary Staff Functions	
1. Advising commander and staff	The DTO advises the commander and staff on transportation matters. He must-- • Recognize potential problems and act to prevent them. • Recommend the use of division transportation capabilities. • Coordinate with the division G3 on tactical troop movements and operations. • Coordinate logistical operations with the G4. • Provide DISCOM MCO with policy guidance, basic plans and policies, priorities, staff guidance, and assistance in transportation matters.

Continued on next page

DTO, continued

DTO Primary Staff Functions, continued	
2. Maintaining continuous coordination	The DTO maintains continuous coordination with the-- • General staff. • Brigades. • Combat support (CS) units. • DISCOM elements.
3. Providing technical assistance	The DTO is the focal point for transportation technical guidance and assistance to the division. The DTO provides technical assistance to the-- • G3 in planning tactical motor marches and preparing movement orders and march tables used for motor marches. • Division staff by helping to plan for the strategic deployment of the division. • Divisional units in the transportation portion of unit movement training. • Division G3 and G4 in selecting main and alternate supply routes in the division area.
4. Analyzing plans and orders	The DTO analyzes all operational and logistical plans and orders and assesses their impact on division transportation resources.
5. Planning	The DTO plans for movement of the division by all modes. The DTO-- • Coordinates transportation and movement control planning with subordinate units. • Incorporates the G3 and G4 into the division's priorities. • Develops and coordinates movement control and highway regulation plans with the division staff, CTO, MCC and MCO; and with the corps CTO and MCC.

Continued on next page

DISCOM MCO

The DISCOM MCO serves on the DISCOM commander's staff. The MCO provides movement management support by controlling the employment of the division's transportation assets allotted to DISCOM to perform CSS transport operations. The MCO is the link between division transportation mode operators and transportation users. Additionally the MCO--

- Ensures the proper use and prompt release of transportation assets.
- Coordinates with the DTO to procure transportation resources from corps MCT when transportation requirements exceed transportation capabilities.
- Develops the division movement program by coordinating with the division materiel management center (DMMC).

1D-5. Division Mode Operations

Introduction

As in the Corps, the Division mode operations uses two modes of transportation--

- Air mode.
- Surface mode.

Air mode

These are two types of airlift support a division may use:.

Type of Airlift Support	Description
Air Force airlift	The division must request Air Force airlift support using the airlift request system which involves three key elements, the Division-- • G3. • G4. • DTO. There are two types of request processes: planned and immediate. Planned requests are handled routinely between the requesting unit and the DTO with the assistance of an Air Force liaison officer. Immediate requests require coordination with the G3 and G4 to assure the validation of the requirements. MCC coordinates the method of delivery.
Army airlift	The Division Aviation Brigade provides Army airlift support to the divisions. The brigade responds to commitments and missions received from the G3. The DTO can obtain medium rotary-wing airlift support by contacting the supporting Corps Materiel Movement Center (CMMC).

Continued on next page

Highway surface mode

The Division Motor Transport Company in the DISCOM provides common-user motor transport within the division. These are the main requirements for highway transportation:

- Distribution of Class I, II, III(P), IV, and VII and topographic maps.
- Evacuation of tanks and similar pieces of equipment to maintenance collection points.
- Transportation of division reserve supplies for which the unit is responsible.
- Provision of transportation support to displace divisional units less than 100 percent mobile.
- Supplementation of transportation capabilities of other divisional elements.

Other modes of surface transportation

Other surface modes of transportation such as rail or inland waterways should be used where they are available to increase the division's organic motor and air transportation capabilities. These modes of transportation are best used to move large quantities of bulk cargo such as ammunition, fuel, and major end items.

1-2. Lesson 1 Practice Exercise

Instructions The following items will test your knowledge of the material covered in this lesson. There is only one correct or best answer for each item. When you complete the exercise, check your answers with the answer key that follows. If you answer any item incorrectly, study again that part of the lesson which contains the portion involved.

1. Which of the following principles of movement control addresses diverting or rerouting around problem areas?

   A. Regulated Movements.
   B. Fluid and Flexible Movements.
   C. Maximum Use of Carrying Capacity.
   D. Forward Support.

2. Which level of movement management blends operational art with tactics focusing primarily on unit moves?

   A. Joint.
   B. TA.
   C. Corps.
   D. Division.

3. Which of the following functions of the movement program matches cargo and personnel with transportation modes and terminals?

   A. Planning.
   B. Apportioning.
   C. Allocating.
   D. Coordinating.

4. Which of the following other movement control considerations makes use of power projection platforms?

   A. Peace to war transitions.
   B. Split-based operations.
   C. TAV.
   D. ITV.

Continued on next page

5. Which of the following inputs to planning contains guidance to the CINCs and Service Chiefs for accomplishing military tasks and missions?

   A. NMS.
   B. DPG.
   C. JPD.
   D. JSCP.

6. Which of the following phases of strategic deployment requires Army elements to move to water or air terminals for embarkation?

   A. Phase I.
   B. Phase II.
   C. Phase III.
   D. Phase IV.

7. Who establishes a Joint Transportation Board?

   A. The President.
   B. J3.
   C. JMC.
   D. CINC.

8. Which of the following is not a USTRANSCOM transportation component command?

   A. MDRD.
   B. MTMC.
   C. AMC.
   D. MSC.

9. Which USTRANSCOM transportation component command provides strategic seaports or common-user ocean terminals?

   A. MDRD.
   B. MTMC.
   C. AMC.
   D. MSC.

Continued on next page

10. Which staff section or subordinate unit of the TAMCA organization coordinates and monitors movement of "out-of-gauge" shipments?

    A. PPD.
    B. FMD.
    C. PMD.
    D. SMD.

11. Which of the following statements about operational phases of deployment is true?

    A. Theater reception begins with the arrival of forces and sustainment at the POD in the AO and ends when the forces depart towards their assigned location.
    B. Theater onward movement begins with the arrival of forces and sustainment at the POD in the AO and ends when the forces depart towards their assigned location.
    C. Theater reception begins with the arrival of forces and sustainment at the POE in the AO and ends when the forces depart towards their assigned location.
    D. Theater onward movement begins with the linkup of personnel and equipment at the POE in the AO and ends when the forces depart towards their assigned location.

12. The theater movement program in assessing the distribution pattern within the AO identifies the nodes within the transportation system and determines the locations for all of the following except.

    A. PODs.
    B. Transitions through the staging areas, including supply and maintenance sites.
    C. Terminals within the tactical AO.
    D. The POEs.

13. Changing transportation operator work load, the commander's priorities, or adding capabilities are examples of which of the following theater movement program steps?

    A. Balancing the requirements against the capabilities.
    B. Determining critical points.
    C. Programming by schematics.
    D. Determining transportation capabilities.

Continued on next page

14. When selecting a mode of transportation are economy and efficiency the most important consideration?

    A. True.
    B. False.

15. Which of the following is not part of the Corps MCC mission?

    A. Ensures effective and efficient use of available transportation capability.
    B. Monitors transportation use within each CSG through its MCTs.
    C. Requests additional transportation assets from EAC if deployed in the AO.
    D. Assure administrative support command structure is provided for each CSG.

16. Which of the following statements is true of the corps mode operations?

    A. Corps mode operations always include air, surface, and sea modes.
    B. Air Force airlift is obtained by entering the airlift request system.
    C. Transportation battalions provide motor transport capability and operate under the command of the MCC.
    D. Habitual support assigns army aviation brigades to ammunition or general supply companies.

17. Which of the following is true for the DTO planning functions?

    A. Coordinates transportation and movement control planning with subordinate units.
    B. Incorporates the G3 and G4 into the division's priorities.
    C. Develops and coordinates movement control and highway regulation plans with the division staff, CTO, MCC and MCO; and with the corps CTO and MCC.
    D. All of the above.

Continued on next page

18. Which of the following is true for the DISCOM MCO?

A. Ensures the proper use and prompt release of corps transportation assets.
B. Coordinates with the CTO to procure transportation resources from corps MCT when transportation requirements exceed transportation capabilities.
C. Develops the division movement program by coordinating with the division materiel management center (DMMC).
D. All of the above.

1-3. Lesson 1 Practice Exercise Answer Key and Feedback

Item	Correct Answer and Feedback
1.	B. The transportation system must remain fluid and flexible, diverting or rerouting traffic around problem areas to provide an uninterrupted flow of traffic. Page 1-5.
2.	C. The Corps synchronizes all movements to maximize the use of available transportation assets, infrastructure, and LOC. Page 1-8.
3.	D. Coordination is the process of matching cargo and personnel with transportation modes and terminals. Page 1-10.
4.	B. Split-based operations are an offspring of the Army's transition from a forward deployed force to one of force projection where processing centers at theater, corps, and division levels tethered to the operational area are linked to power projection platforms at ISBs or CONUS. Page 1-1-12.
5.	D. The JSCP contains guidance for accomplishing military tasks and missions based upon the current military capabilities and directs the development of contingency plans in support of the national security objectives. Page 1-19.
6.	B. Phase I is predeployment, Phase II is movement to the POE, and Phase III is strategic lift. Page 1-20.
7.	D. The CINC establishes a Joint Transportation Board (JTB) to review and deconflict policies, priorities, and apportionment's of transportation assets. Page 1-22.
8.	A. The three USTRANSCOM transportation component commands are MTMC, AMC and MSC. Page 1-22.
9.	B. MTMC provides strategic seaports or common-user ocean terminals for use by MSC assets. Page 1-23.

Continued on next page

10.	D.	The special movement division coordinates and monitors movements requiring exception, including train paths involving changes in rail gauge. Page 1-27.
11.	A.	Operational level of deployment Phase I, theater reception, begins with the arrival of forces and sustainment at the POD in the AO and ends when the forces depart towards their assigned location. Page 1-32.
12.	D.	The POE is not within the AO. All others are locations determined by assessing the distribution pattern within the AO. Page 1-30.
13.	A.	If the requirements exceed the capabilities, the planner must seek a balance by increasing the transportation capability, reducing the requirement, or a combination of the two. Page 1-32.
14.	B.	Priority is the first and most important consideration in the selection of a mode of transportation. Page 1-33.
15.	D.	The Corps MCC mission includes ensuring effective and efficient use of available transportation capability, monitoring transportation use within each CSG through its MCTs, and requesting additional transportation assets from EAC if deployed in the AO. Page 1-39.
16.	B.	Corps Air Force airlift is obtained by entering the airlift request system. G3, G4, and the MCC participate in the request process. Normally, corps mode operations do not include a sea mode. Transportation battalions are under the command of the CSG and tasked by the MCC. Habitual support places motor transport units in direct support of commodity-oriented supply companies. Pages 1-44.
17.	D.	The DTO plans for movement of the division by all modes. Page 1-45.
18.	C.	The DISCOM MCO controls the employment of the division's transportation assets allocated to DISCOM. The DISCOM MCO coordinates with the DTO to procure additional resources from corps when transportation requirements exceed transportation capabilities. Page 1-46.

THIS PAGE INTENTIONALLY LEFT BLANK

LESSON 2

THE TRANSPORTATION REQUEST PROCESS

Critical Tasks: 01-7340.70-0120
01-7340.70-0130
01-7340.70-0140
01-7340.70-0150
01-7340.70-0160
01-7340.70-0180
01-7340.70-0260
01-7340.70-0290
01-7340.70-0310

2-1. Lesson 2 Overview

Lesson description

In this lesson the student will learn the procedures for requesting transportation from supporting movement manages using mode selection and transportation request procedures within a theater of operations.

Enabling learning objective

This is the enabling learning objective for this lesson:

Action: Identify the procedures for requesting transportation assets from movement managers.

Condition: In a self-study environment using the materials provided in this subcourse.

Standards: In accordance with the materials provided in this subcourse and/or the references cited below.

Continued on next page

References

These are the references used in compiling this lesson:

- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- DOD 4500.32R, *Military Standard Transportation and Movement Procedures*, 15 March 1987.

Lesson content

This lesson contains the following topics:

2-2. Receiving Requests for Transportation

Introduction

At origin, authorized consignors request transportation and submit materiel movement requirements to a movement manager within an MCT. This request enables the movement manager to determine the most efficient means of transport. The transportation request (TR) contains the following information:

- Consignor.
- Consignee.
- Required delivery date.
- Cargo description including number of pieces, weight, and cube measurements.
- Special cargo precautions or requirements for special handling.

TR submission requirements

These are the requirements a consignor must adhere to when submitting a TR. The consignor must--

- Submit the TR in as far advance of the shipping date as possible to enable planners adequate opportunity to coordinate the shipment.
- Submit the TR in the approved TR format.
- Submit materiel movement requirements as class of supply or item and provide the estimated weight in either pounds, short tons (STONs), or measurement tons.
- Identify special handling requirements for cargo, such as hazardous or classified materials.
- Provide origin and destination information including the locations and map coordinates of the shipping and receiving activity.

NOTE: If the TR is submitted for personnel, it must be documented by category (such as troops, refugees, patients, or prisoners of war).

Types of movement requests

These are the four types of movement requests:

Continued on next page

Types of movement requests, continued

Type of Request	Description
1. Convoy clearance TR	When a CONUS road movement occurs over a route which requires a movement credit, the moving unit, or truck company must submit a Department of Defense (DD) Form 1265, Request for Convoy Clearance. DD Form 1265 is a dual-purpose document which serves as either a request or an authorization for movement, or both. The unit submits this request through the appropriate movement channels to the ITO in the area where the convoy is originating. The ITO uses DD Form 1265 to grant clearance and to issue instructions for the road movement. DD Form 1265, depending on the urgency of the request, may be transmitted orally, electronically, or in writing.
2. Surface transportation request	Standardization Agreement (STANAG) 1256 governs the TR format for North Atlantic Treaty Organization (NATO) units. The consignor operating in a NATO country prepares this request and delivers it to the supporting MCO. The consignor uses this request for surface transportation only when unit or direct support assets are insufficient or unavailable. The consignor must submit this request at least 48-hours before the cargo or passenger availability date to coordinate US general support of HN assets. If the movement requires specialized HN equipment, this request must be submitted 72 hours in advance. Shorter notice periods are acceptable only in the event of operational necessities. Upon receipt of this request, the MCT will send the consignor the time, place, and source of equipment used to fill the request.

Continued on next page

Types of movement requests, continued

Type of Request	Description
3. Road movement bid/road movement credit	Road movement bid/road movement credit (STANAG 2155) also governs NATO countries granting movement credits. The truck company or moving unit operating in a NATO country submits this request to the area MCT. A road movement bid is submitted to obtain clearance for oversize or overweight vehicles on HN controlled roads. This request must be submitted at least 48 hours prior to the convoy start time. The MCT reply to the truck company or moving unit indicates the start time and any applicable route restrictions or programmed delays.
4. Air transportation request	In the US, Army users must submit these forms to their servicing MCT to request air transport-- • DD Form 1974, Joint Tactical Airlift Request, for USAF airlift support. • Transportation Control and Movement Document (TCMD) for Army helicopter support. Following approval by the MCT, the requests are forwarded to the MCC where they are validated and prioritized. The MCC then passes these requests to the corps G3 air support staff providing air transportation assets.

Continued on next page

Coordinating the TR

Once the TR is received by the origin MCT the movement manager must begin coordinating the request. These are the procedures for coordinating a TR:

Step	Action
1	Review the consignor TR for accuracy and completeness.
2	Determine the mode of transport and notify the destination MCT of the shipment.
3	Assign a transportation movement release (TMR) number.
4	Notify the consignor and mode operator that the TMR has been received.

2-3. Reviewing a TR

Introduction

The movement manager must review the TR for accuracy and completeness against the movement program to determine if enough transportation equipment is available to meet both the programmed requirements and this request.

Reviewing the TR for accuracy

When reviewing the TR for accuracy ensure--

- Non-NATO TRs contain the appropriate information concerning the size, weight, and type of cargo.
- NATO TRs are prepared in accordance with STANAG 2156.

TR reviewing checklist

Use this as a checklist for ensuring a TR has adequate information:

Does the TR...	Yes	No
identify the transportation modes to be used?		
identify the required delivery date (RDD)? **NOTE:** If YES, can the shipment be made by the RDD?		
identify when the shipment can be loaded on the transport equipment?		
identify if the consignee can unload the shipment upon arrival?		
adhere to the movement program? • is there enough transport equipment available to meet programmed requirements and the TR?		
contain enough data to effect a successful movement, such as-- • shipment origin and destination? • cargo description? • special handling requirements? • RDD?		

2-4. The TMR Number

Introduction

The TMR is an alphanumeric code identifying a specific cargo movement or usage of transportation assets directed through movement control channels. The TMR--

- Authorizes the shipment of materiel and the dispatch of transport equipment.
- Confirms receiver capabilities.
- Identifies cargo during movement.

TMR number

The TMR number accounts for the transportation assets during movement. This number can be lengthened or shortened to meet the information needs of the theater. DOD Regulation 4500.32-R and FM 55-10 are the source for codes for the completion of the TMR number and commitment worksheet. Figure 2-1 contains a sample 12-digit TMR number. The explanation of the codes forming the TMR number follows in Section 2-7.

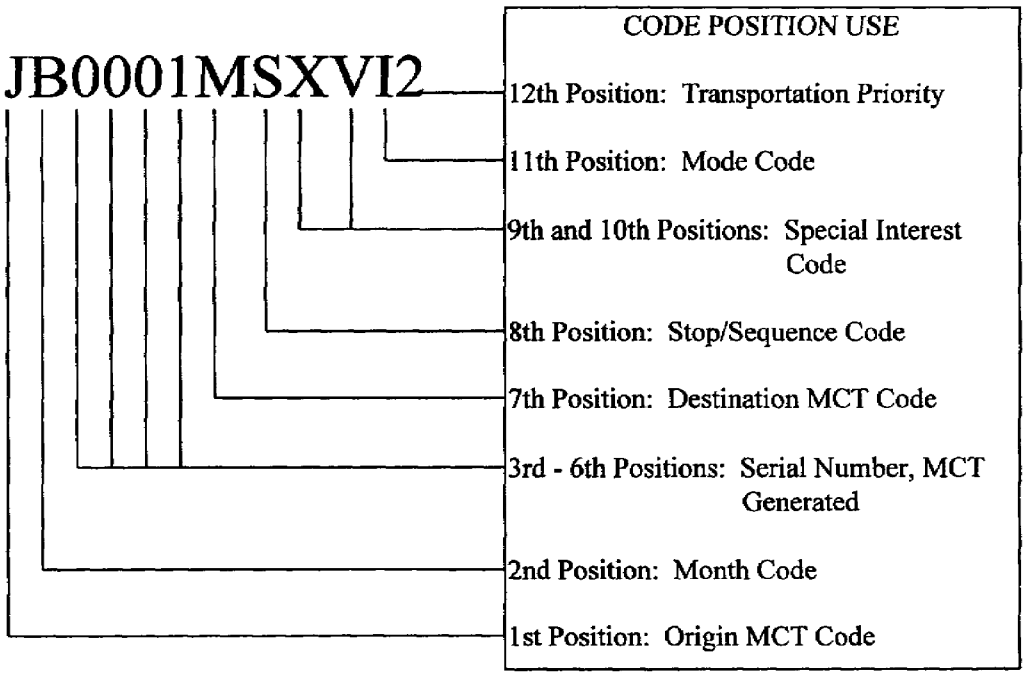


Figure 2-1. TMR Number.

Continued on next page

Standing transportation movement release (STMR)

A STMR is a series of TMRs issued to provide for recurring moves. All requests for STMRs must include a letter of justification supported by historical cargo role or movement frequency data from the customer. The TAMCA is the approving authority for all STMRs. Upon approval, the TAMCA assigns a special interest code and control number for each STMR. The necessities of STMRs are evaluated on a monthly basis. MCTs must keep copies of STMRs and review them monthly with the customer. Upon determination of validity, a written recommendation is sent to TAMCA, for continuation, cancellation or modification.

Single stop TMRs

For a single stop movement consisting of one or more vehicles, the movement manager assigns one TMR number. If the vehicle will be used more than once for the same commitment, such as a shuttle service, a separate TMR is required for each day the asset is employed. For multi-stops, the movement manager must assign one TMR number per commitment for each stop.

Issue of TMR

The issuance of TMRs has been decentralized to local MCTs. MCTs issue TMRs to the extent of their locally allocated capability. If there is a lack of transport, they refer the request to the MCC or regional movement control team (RMCT) for resolution. Shipments requiring special equipment or special service are usually referenced directly to the MCC/RMCT.

Release-unit (RU) quantity transportation requests

The MCT issues a TMR for all RU quantity transportation requests. Less-than-release-unit (LRU) shipments may be consolidated by the shipper, thus becoming eligible for a TMR. LRUs may be forwarded by the shipper to the nearest consolidation distribution (C&D) point for consolidation; held by the shipper for pickup service provided in connection with a less-than-truckload scheduled express operation; or forwarded by the fastest means possible unless otherwise restricted.

Continued on next page

Nonprogrammed movement requirements

The MCT will also receive nonprogrammed movement requirements submitted on TMR/TRs from authorized units. The MCT will add these requirements to forecast (programmed) requirements according to priority. Urgency of priority requirement determines the need to change ongoing commitments. These are the procedures an MCT uses for handling nonprogrammed movement requirements:

Step	Action
1	MCT verifies that the TR was submitted by an authorized unit.
2	MCT selects the mode of transportation.
3	The MCT assigns an appropriate TMR number and forwards all commitment information to the selected mode operator identified in the movement program for selection from those supporting the shipper's areas.
4	The mode operator designates a specific truck company to carry out the movement.
5	The battalion notifies the MCT of the-- • Number/type trucks tasked. • Date/time trucks will be positioned for loading.
6	The MCT notifies the destination MCT of the movement for subsequent coordination with the receiving activity. If the cargo is sensitive, classified, oversize/overweight, or difficult-to-handle, then the MCT waits for the receiving activity to clear the shipment through the MCT before issuing a TMR number.

Converting the priority designator

The last digit of the TR number is the transportation priority. Before a transportation officer can select the mode of transportation or prepare and assign the TMR number, he must convert the priority designator (PD) on the supply document to a transportation priority (TP). There are 15 PDs indicating the relative priority attached to a class of supplies. However, only three TPs indicate priority as related to transportation assets. This is the relationship between PDs and TPs:

PD	TP
01-03	1
04-08	2
09-15	3

2-5. Selecting the Mode of Transportation

Introduction

The selection of a transportation mode is dependent upon the transportation priority, RDD, cargo specifics, and the cost of transportation.

Selecting the mode of transportation

Selecting the mode of transportation for a specific supply shipment to a consignee is governed by the --

- TP.
- RDD.
- Weight and size of the materiel.
- Cost of transportation.
- Shipping distance.
- Available modes of transportation between the consignor and the consignee.

The following table provides the preferred mode of transportation for each transportation priority:

TP	Preferred Mode of Transportation
1	Air
2	Air
3	Ordinary Surface

Using other transportation modes

Although the above table indicates the preferred mode of transportation for each priority, there are times when other modes must be used.

- TP 1 and 2 shipments travel by surface when--
  - The shipping items are too heavy or large for aircraft transport.
  - It is the only available mode of transportation between the consignor and the consignee.
  - It is more advantageous or more expeditious due to the short distance.

Continued on next page

Using other transportation mode, continued

- TP 3 shipments which normally move by surface transportation might move by air when--
  - Air transportation is the only mode available between the consignor and the consignee.
  - The overall cost of shipping via surface is greater than shipping via air.
  - The cargo is of high value or a security risk and it would be in the best interest of the government to ship it via air.

2-6. Determining Delivery Options

Introduction

To effectively implement movement control the movement manager must not only determine the urgency of the cargo but also coordinate the method of delivery.

Assigning a local delivery to cargo shipments

When assigning a local delivery to cargo shipments, use these a standard delivery times:

- 999, highest priority of cargo/on-mission capable supply (NMCS), air lines of communication (ALOC)-- 24-hour delivery standard to include weekends.
- TP 1-- 3-day delivery time standard, normal duty days.
- TP 2-- 4-day delivery time standard, normal duty days.
- TP 3--11-day delivery time standard, includes weekends and holidays.

Assigning a local delivery time

When assigning a local delivery time remember that delivery time standards equate to the RDD. To assign a local delivery to cargo shipments, add the delivery time standard (based on the TP) to the Julian date and processing time. For example, a commitment based on TP 1 to be received before 0900 hours on a Monday, is assigned three days (delivery time standard) plus one day for processing. Therefore, the local delivery date for the shipment is the Julian date plus four days.

TAMCA military highway support priorities

The TAMCA has also established military highway support priorities to assist the MCT in determining which cargo should be shipped first. For example, class V, ammo, will go before ALOC cargo. This is the priority listing according to TAMCA's military high support priorities:

1. Ordnance.
2. Mail.
3. NMCS/999.
4. ALOC.
5. Refrigerated.
6. Classified.
7. Export air.
8. Depot.
9. Bulk petroleum, oils, and lubricants (POL).

Continued on next page

Effects of priority abuse

Priorities must be observed during movement control to avoid priority abuse. If priorities are not properly observed, priority abuse results in:

- Overload of priority 1 cargo.
- Failure of transportation assets to support the RDD.
- Development of a crisis management atmosphere.

Avoiding priority abuse

These are some guidelines for avoiding priority abuse:

- Establish a percentage limitation on TP 1 requests.
- Challenge the customer at both origin and destination to determine the importance of the cargo.
- Ensure that the MCT develops and maintains customer information programs and customer liaison programs.

2-7. Preparing a TMR Number

Introduction

When preparing a TMR number for assignment, the movement manager composes a 12-digit alphanumeric number from the applicable codes. DOD Regulation 4500.32-R and FM 55-10 are the source of the applicable TMR/STMR codes.

TMR code: 1st position

Use the first position to identify the origin MCT/ATMCT designator code. These are examples of the MCT/ATMCT designator codes.

Bremerhaven	-	B	Osan ATMCT	-	O
Frankfurt	-	F	Rotterdam	-	R
Idar-Oberstein	-	H	Stuttgart	-	T
Kaiserslautern	-	J	Rhein Main ATMCT	-	Z
Mannheim	-	M	Ramstein ATMCT	-	P
Moenchengladbach	-	G	Seoul	-	S
Nuernberg	-	N	Taegu	-	T

TMR code: 2d position

Use the 2nd position to identify the month using the following 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

TMR code: 3d position.

Positions three through six are machine generated. They are reference number.

TMR code: 7th position

The seventh position is the destination MCT/ATMCT code and uses the same MCT/ATMCT designator codes used for the TMR code first position.

Continued on next page

TMR code: 8th position

The eighth position is the stop/sequence code. This alpha character identifies single and multiple stop shipments. If the shipment requests multiple stops, then this number will show the stop sequence. These codes in this position indicate the following:

- S - indicates single stop.
- A through Y, except I, O, and S - indicate sequential stops.
- Z - always indicates last stop.

TMR code: 9th and 10th positions

The ninth and tenth positions indicate special interest codes as indicated below.

Code	Description	Code	Description
AB	ALOC Breakbulk	EZ	Ammunition, Other
AC	Mail Container (20ft)	FG	REFORGER Cargo (General)
AF	Air Force MICAP	GA	AAFES
AI	DSS Breakbulk	GC	General Classified
AJ	DB Express	GG	Cargo Which Requires Guard Protection
AK	Commercial Pick-Up at APOD	GF	Cargo Subject to Freeze Damage
AM	Medical ALOC	GS	Signature Service
AN	Medical Supplies	HF	Heavy Lift (Special/Emergency Moves)
AP	463L Pallet returns to APOD	HL	Regular Heavy Lift
AT	ALOC Throughput	HM	Heavy Lift (MI)
AY	DSS Throughput	HN	Heavy Lift (One-for-One Exchange)
AZ	Other Air Cargo	HP	Heavy Lift (POMCUS)
BN	Brand Name Resupply	HR	Heavy Lift (REFORGER)
BR	REFORGER Baggage	MA thru MZ	Mail STMRs

Continued on next page

TMR code: 9th and 10th positions, continued

Code	Description	Code	Description
CA	Empty MILVAN	**NA thru NZ**	Mail STMRs
CI	Command Interest	**RA thru RJ**	REEFER STMRs
CS	Military Traction of SEAVANs	**RO**	REEFER
DA	Driveaway	**RS**	REEFER Static
EA	USAF Ammunition	**SB**	Surface Break-Bulk
EB	Explosives Break-Bulk	**TA**	Towaway
EC	CADS (Containerized Ammunition)	**XM**	MI Moves (Other Than Heavy Lift)
EG	Explosives, Sensitive, CAT I Armed Surveillance Required	**XN**	One-For-One Exchange (Other Than Heavy Lift)
EH	Explosives, Sensitive, CAT II Rail Surveillance Service Required, Military	**XP**	POMCUS (Other Than Heavy Lift)
EJ	Explosives, Rail Surveillance Service Required, Carrier Commercial	**XV**	Outsize Cargo (Other Than Heavy Lift)
ER	REFORGER Ammo	**ZZ**	Not otherwise specified
EX	Ammunition, Other (non-sensitive)		

Continued on next page

TMR code: 11th position

The 11th position of the TMR number represents the mode code. These are examples of the transportation mode codes:

Code	Definition	Code	Definition
A	Commercial Highway	K	Rail
B	Motor, less than truckload	M	Mil Highway (Corps)
D	Driveaway/Towaway	O	Organic Air
F	AMC	R	Mil Highway (Div)
I	Mil Highway (Theater)	W	Water

TMR code: 12th position

The 12th position of the TMR code represents the transportation priority. These are the transportation priority codes:

- TP 1 = 1.
- TP 2 = 2.
- TP 3 = 3.
- 999 = 9.

2-8. Mode Selection Considerations

Introduction

The next task is the selection of the appropriate transportation mode and the assigning of the task to the mode operator to perform the materiel movement. This section covers the considerations the movement manager must identify when determining the appropriate transportation mode.

LRU and RU shipments

These are the transportation coordination requirements for LRU shipments and RU shipments:

IF the shipment is ...	THEN ...
a LRU shipment, weighing less than 10,000 pounds	Branch Movement Control Teams (BMCTs), ITOs, and Air Force Transportation Movement Officers (AFTMOs) make mode determinations for these shipments.
a RU shipment, weighing more than 10,000 pounds	the RU shipment is forwarded to the support MCT for mode determination.

Determining need

The movement manager determines need based on the priorities established by the theater commander and the nature of the shipment. The movement manager must evaluate the effects of the shipment characteristics on the provision of transportation service.

Security requirements

When selecting the appropriate mode of transportation, the movement manager must also consider the requirements for security and special handling procedures for hazardous/classified shipments and class V, ammo shipments.

Political requirements

The movement manager must consider the political requirements of the shipping cargo. For example, the shipment cargo may be viewed as objectionable by political factions within certain areas, or the shipment may pass through areas inhabited by anti-US factions.

Continued on next page

Tactical requirements

Tactical requirements are extremely variable. For example, in a wartime environment, the destination unit may have had to change its location, been destroyed, or changed its unit designation. These are some other tactical requirements to be considered when selecting an appropriate mode of transportation:

- The use of nuclear, biological, chemical (NBC) warfare may cause the rerouting of cargo, transloading of cargo, and other protective measures.
- Small, fast convoys may be used to reduce the potential havoc to depots and supply bases.
- The status of road networks, highways, and bridges must be intact, passable, and able to accommodate loadweights.
- Rail lines must be intact and off-load facilities available.
- Airfields must be operational with the appropriate aircraft available.
- Waterways must have adequate depth in both low and high water seasons and tides must be observed. Barges or boats must be available for transport.

Cargo containerization

Containerize cargo where practicable to minimize handling and damage. Containers minimize or possibly eliminate cargo rehandling during transport and assist in the avoidance of backhauls.

Equipment allocation

Adequate transportation equipment allocations must be available to fulfill all known requirements. Do not place transport equipment in reserve in the anticipation of unforeseen requirements. These requirements are met as they occur by allocation of transportation according to the commander's priorities. These are some additional considerations:

- Use the most economical transport mode for the complete movement, or as far forward as possible. Use commercial assets when military assets are unavailable or when using military assets is impractical.
- Ensure that movements are not delayed beyond the RDD while waiting for military assets to become available.
- Do not cancel previously confirmed transportation assets.

Continued on next page

Mode selection matrix

The following matrix lists the types of available transportation, their most effective use, capabilities, and limitations:

Type of Transportation	Most Effective Use	Capabilities	Limitations
Pack animals and human bearers	Extends surface transportation over terrain otherwise impassable to other modes.	• All tactical terrain and weather conditions. • Pack animals can transport 250 pounds with a cargo density of over 25 pounds per cubit foot. • Human bearers can transport about 80 pounds subject to pack configuration.	If the terrain is passable by other modes, then this is the most inefficient means of transport. Human bearers are the most wasteful of human resources.
Pipeline	Primary mode for bulk liquids and solids suspended in liquid.	• All weather conditions; few terrain restrictions. • Most reliable and economical mode for bulk liquids. • Requires few operating personnel.	Flexibility is limited by-- • Immobility of facilities. • Vulnerability of facilities to sabotage and enemy action. • Requires large construction tonnages.
Water	• Primary over-ocean mode. • Inland surface mode of large quantities of cargo.	• All weather conditions. • All commodities. • Most economical over long-distance carrier. • Particularly useful for relieving other modes to more suitable employment.	• Relatively slow; flexibility limited by number of waterways, facilities, and channels. • Vulnerable to enemy action and difficult to restore. • 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 economic 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. • Rail line highly vulnerable to enemy action.

Continued on next page

Mode selection matrix, continued

Type of Transportation	Most Effective Use	Capabilities	Limitations
Motor Transport	• Supplemental mode for integrating transportation system. • Effective in scheduled line-haul operations by the trailer relay system. • Primary mode for distribution operations and logistical support operations in the combat zone.	• Most flexible mode over trafficable terrain. • Practically all weather conditions. • Increase flexibility of other modes. • Transports most commodities with a variety of specialized equipment for both on- and off-road movements.	• Over-the-road operation affected by route interferences and obstacles created by weather, terrain, or enemy action. • Sustained line-haul operations over long distance. Uneconomical in terms of ton-mile output versus expenditure of manpower and equipment.
Army Air, Helicopter	• Most costly mode for supply movement. • Primary mode of transport when all others are ineffective. • Useful for high-priority items and critical needed supplies, such as classes V, III, I, IX or as selected.	• All terrain. • Effective over short distances for external loads. • Can use unimproved pickup and landing zones. • Capable of lifting nearly any safely rigged load within the weight limitations of the helicopter.	• Operational capabilities limited by weather, cargo weight, cargo hook limits, and cargo door sizes. • Availability may affect flying hour program or crew rest requirements. • May require materials handling equipment (MHE).
Air: • Army. • Air Force.	• Complementary mode for expediting movement of mission essential traffic. • Primary or major supplementary mode due to terrain limitations for surface modes. • Scheduled operation is most economical method of employment.	• Greatest potential speed of delivery. • Most flexible mode of transportation in regard to terrain limitations. • Heavy drop, container delivery system. • Low-altitude parachute extraction system. • Air land, adverse weather aerial delivery system. • Aerial bulk fuel delivery system.	• Operational capabilities and effectiveness limited by climate and trafficability of takeoff and landing areas. High ton-mile operating costs.

2-9. Challenging 999 Shipment Requests

Introduction

In addition to the factors affecting the mode of transportation selection process, the movement manager must also be familiar with the procedures for challenging 999 shipment requests.

Challenge coordination

The movement manager must challenge and positively inbound clear all TP 1 commitment requests with an RDD of 999. The origin or destination MCT must contact the consignee. If the origin MCT contacts the consignee directly, then the origin MCT must provide positive inbound clearance to the destination MCT. The movement manager must coordinate any changes in pull or delivery times with the MCT, mode operators, and shipper/consignor. Program delivery of valid 999 commitments is during or after normal duty hours, to include weekends and holidays. The movement manager must ensure that 999 commitments are closed out with a positive delivery confirmation.

Downgrade 999 shipments

Upon the downgrade of a 999 shipment, the movement manager must record these items in the commitment's remarks section --

- This statement, *"This is a downgraded 999 commitment."*
- Reference the names of the individuals downgrading the 999 delivery.

Contact the consignee

Contact the consignee for 999 shipments and obtain a positive inbound clearance. If the MCT cannot establish consignee contact, then the commitment will not be honored. Good traffic management dictates that the MCT contact the consignee's parent organization/MACOM to coordinate delivery if the consignee cannot be contacted directly. For action, positive inbound clearances bypass the ITO/transportation officer (TO)/BMCT/AFTMO; however, inform these agencies of the action to help them develop accurate status reporting and to assist them in maintaining traffic visibility in their area.

Continued on next page

Positive inbound clearance of cargo

These are the types of cargo movements requiring positive inbound clearance:

- Classified cargo.
- Protected cargo/ammunition.
- Oversize/overweight cargo.
- Perishable cargo when delivery is made on weekends, holidays, or between the hours of 1630 and 0730.
- Rail shipments when delivery is made after the normal hours of operation.
- US Army flat racks.

This is the procedure for accomplishing the positive inbound clearance and close out:

Step	Action
1	The BMCT, TO, ITO, or AFTMO submits the TR to the origin MCT.
2	The destination MCT contacts the consignee to ascertain receipt capability and suitable delivery time. **NOTE:** The MCT also challenges 999 shipments during this step.
3	The destination MCT passes the clearance to the origin MCT who processes the request with the military mode operator.
4	The military mode operator provides the origin MCT with the trailer number or aircraft tail number. Also, the shipment's status must be provided on an exception basis to ensure customer personnel are available with proper material handling equipment (MHE) to receive and off-load the cargo.
5	Transmit the commitment data to the destination MCT in accordance with (IAW) theater procedures. The destination MCT verifies the arrival of the cargo through contact with the consignee or ITO/BMCT/TO/AFTMO. The MCT also ensures that trailers are reported.
6	Close out the commitment with the origin MCT on the first formal work day following the delivery.

2-10. Origin MCT Procedures

Origin MCT procedure

This is the procedure performed by the origin MCT once the report data is received at the BMCT, TO, AFTMO level:

Step	Action
1	Ensure that all TR information listed as mandatory in their theater specific regulations is, in fact, provided. In addition, the BMCT must validate the accuracy of the data.
2	If the shipment is a LRU, the BMCT, TO, or AFTMO has routing authority unless theater specific regulations stipulate otherwise. The RU shipment requests must be forwarded to the appropriate MCT. Priority 1 and 2 requests must reach the MCT IAW established guidelines.
3	The MCT must make transportation mode directions for all RU shipments. When the MCT TO authorizes RU shipment requests for commercial movements, the designated transportation agent at the BMCT is responsible for completing military freight warrants to document the shipment.

Movement management at an origin MCT

This is the procedure for accomplishing movement management at an origin MCT:

Step	Action
1	Receive TR data from BMCT, TO, AFTMO, and major depot customers who report directly to the MCT.
2	Record TR data on the Movement Worksheet.
3	Screen the TR to ensure that sound traffic management procedures are applied and the information is complete and accurate.
4	Review all requests to ensure TP abuse does not occur. Challenge all TP 1 requests with an RDD of 999 IAW established theater procedures.
5	Evaluate each request and select a transportation mode. Base "first selection" criteria on theater guidance.
6	Do not delay movements beyond the RDD while waiting for military assets to become available.
7	Do not cancel previously confirmed TP 2 or 3 movement requests to satisfy a TP 1 request.

Continued on next page

Movement management at an origin MCT, continued

Step	Action
8	Establish the TMR for both military and commercial movements.
9	Establish the Transportation Movement Information Control System (TMICS) commitment file.
10	Alert destination of inbound shipments.
11	Forward approved requests to the appropriate mode manager.
12	Once a commercial mode is selected, return the request to the BMCT, TO, TMO, or AFTMO. The MCT provides the commercial fund cite authority.
13	Confirm each shipment's departure from the shipping activity. The source for pull data is the Daily Installation Situation Report (DISR).

Submitting changes The MCT must submit changes or cancellations to the appropriate mode manager IAW established TMICS procedures. If timeliness dictates, use telephonic requests for change and follow up the verbal calculation with hard copy. The destination MCT will be notified via TMICS. Review the TMR number to ensure its applicability when a commitment is changed but not canceled. If the origin MCT wishes to change spot date/time, load date, and pull date, it can initiate these changes only in coordination with the customer.

2-11. Forward Commitment Data to the Destination MCT

Introduction

For the last phase of the coordination, the movement manager must transmit a TR reply to the consignor. Include this information:

- Designation of the transportation unit.
- Number and type of vehicles.
- Reporting time and place.
- The TMR number.

Transportation mode operator

Once the movement manager confirms with the consignor that this shipment is available for pick up, contact the transportation mode operator. The mode operator determines the appropriate route between the consignor and the consignee. Before beginning a road movement over a route requiring a movement credit, the mode operator must prepare a request for clearance. The request is submitted to the MCC. The request is for movement on controlled routes and authorization of movement by granting clearance and issuing instructions for the road movement. Depending on the request's urgency, it can be transmitted by telephone or electronically.

Final MCC coordination steps

These are the final coordination steps in the MCC:

Step	Action
1	After receiving the request, the MCC schedules the movement at the time and over the route requested by the mode operator.
2	If the movement cannot be scheduled at the requested time or over the requested route, the MCC immediately notifies the mode operator and arranges for an alternate time and/or route.
3	Upon final coordination and approval of time and route, the MCC issues a movement credit (the time allowed to one or more dispatch vehicles to move over a supervised route). The MCC then returns this authorization to the mode operator.

2-12. Report of Shipment

Introduction

The report of shipment (REPSHIP) is an advance notice of shipment. It lets the consignee know as far in advance as possible about that shipment--

- that it is being sent,
- its arrival date,
- what it includes,
- its size,
- and by what mode it is coming.

Sending the REPSHIP

As soon as the shipment gets underway, the ITO transportation agency serving the consignor sends the REPSHIP to the consignee, the TAMCA, the MCC, and the origin and destination MCTs. The CONUS terminals use the REPSHIP to notify overseas terminals and transship points of interest. Since the MCT is on the receiving end, it uses the information in the REPSHIP to inform consignees in the team's area or the destination MCT of shipments. Usually the MCT waits until the shipment arrives at the overseas terminal because the transport mode carrying the shipment might be diverted or delayed.

REPSHIP s content

For freight a REPSHIP contains the following information:

- Authority and/or consignment or movement number.
- Place of departure.
- Time and date of departure.
- Consignor or code designation.
- Consignee or code designation.
- Mode(s) of transport, including route.
- Identification of carrier number, as applicable.
- Consignor's number(s).
- Number of cases, weight, and cube of freight per truck, railcar, watercraft, or aircraft.
- Description of commodity in general terms.
- Destination and estimated time of arrival.
- Additional information and instructions, as necessary.

2-13. Destination MCT Procedures

Introduction

The final part of the coordination involves the destination MCT. The destination MCT receives an inbound commitment notice via TMICS for the origin MCT.

Destination MCT procedures

This is the procedure the destination MCT follows:

Step	Action
1	Add the inbound notice to the active freight log.
2	Alert the TO, BMCT, and AFTMO of inbound shipments and advise them of the delivery date, TMR, and mode.
3	Coordinate backload approval in accordance with theater regulations.
4	Contact the consignee to challenge the validity of the priority for 999/high priority cargo movements.
5	Close out all TMRs through TMICS to the origin MCT. Use data received from the consigned BMCT, TO, ITO, or AFTMO and record on the DISR to complete TMICS files.
6	Activity track TMRs when the shipment exceeds the delivery time standard.

2-14. Maintaining Movement Records

Introduction

Normally, the TA commander prescribes the records to be maintained at different echelons in the TA. However, this discussion is limited to records common to moving operations.

Purpose of maintaining movement records

The purpose of maintaining movement records is two fold--

- To provide a means of accounting for the use of transportation resources.
- To serve as a basis for determining how and where movement operations can be improved.

Movement control officer's journal

As a MCO, you have a special need for maintaining and using a journal for your day-to-day activities. This journal will serve as a reference in case any questions arise concerning any phase of the operation. Also, this journal can be used in organizing and training new personnel by providing an audit trail of the actions and procedures involved in various phases of the daily operations. Entries in your journal should include--

- A record of every action taken on a movement including contacts and follow-up actions.
- All telephone calls, wires, incoming and outgoing messages, and other events having a bearing on the operations of the MCO.

TCMD

The TCMD register is a day-to-day record of all TCMDs/TRs originating within the responsibility of the MCTs. You keep this record by dividing a ledger book into vertical columns for data entries. Headings for these columns should include as a minimum--

- Date/Time.
- Control number.
- Consignor/Consignee.
- Mode and vehicle identification.
- Cargo cube and weight.
- Number of pieces in the shipment.
- TMR number.

Continued on next page

TMR	Maintain a copy of the TMR for reference purposes. Be sure to enter the TMR with the corresponding TCMD/TR. One method of accomplishing this is to leave a vacant line on the TCMD/TR register and when the shipment is released for movement, enter the TMR number in this vacant line.

THIS PAGE INTENTIONALLY LEFT BLANK

2-15. Lesson 2 Practice Exercise

Instructions The following items will test your knowledge of the material covered in this lesson. There is only one correct or best answer for each item. When you complete the exercise, check your answers with the answer key that follows. If you answer any item incorrectly, study again that part of the lesson which contains the portion involved.

1. Which of the following statements is a correct requirement a consignor must adhere to when submitting a TR?

   A. Submit the TR on the shipping date to enable planners to coordinate the shipment.
   B. Submit the TR in the approved TR format.
   C. Identify special handling requirements for cargo, such as hazardous or classified materials to the MCC specifically established to support special cargo.
   D. Provide origin and destination information including the locations and map coordinates of the shipping and receiving activity to the destination STON.

2. Which of the following types of movement requests is submitted only when unit or direct support road assets are insufficient or unavailable?

   A. Convoy clearance TR.
   B. Surface transportation request.
   C. Road movement bid/road movement credit
   D. Air transportation request.

3. Which of the following is most correct list of steps for the origin MCT movement manager to use in coordinating a TR?

   A. Review the consignor TR for accuracy and completeness, determine the mode of transport, assign a TMR number, and notify the consignor of TMR receipt.
   B. Review the consignor TR for accuracy and completeness, determine the mode of transport and notify the destination MCT of the shipment, assign a TMR number, and notify the consignor and mode operator that the TMR has been received.
   C. Determine the mode of transport and notify the destination MCT of the shipment, assign a TMR number, and notify the consignor and mode operator that the TMR has been received.
   D. Review the consignor TR for accuracy and completeness, determine the mode of transport, and assign a TMR number.

Continued on next page

4. When reviewing a TR which of the following information should be included in the TR?

   A. Identify the transportation mode to be used.
   B. Identify when the shipment can be loaded on the transport equipment.
   C. That the consignee can or can not unload the shipment upon arrival.
   D. All of the above.

5. What is the purpose of the seventh position in the TMR number?

   A. Destination MCT Code.
   B. Mode Code.
   C. Origin MCT Code.
   D. Transportation Priority.

6. Which of the following has been decentralized to local MCTs?

   A. STMR.
   B. Single stop TMR.
   C. Issue of TMR.
   D. RU quantity transportation request.

7. What is the preferred mode of transportation for a shipment with a priority designator of 05 and transportation priority two?

   A. Air.
   B. Rail.
   C. Truck.
   D. Ship.

Continued on next page

8. When might TP 3 shipments move by air?

   A. The shipping items are heavy or large.
   B. When the cargo is low value and poses no security risk.
   C. When air transportation is the only mode available.
   D. It is more advantageous or more expeditious due to the short distance.

9. Which of the following is an effect of priority abuse?

   A. Establishing a percentage limitation on TP 1 requests.
   B. Challenging the customer a both origin and destination to determine the importance of the cargo.
   C. Failure of transportation assets to support the RDD.
   D. Ensuring that the MCT develops and maintains customer information programs and customer liaison programs.

10. Which of the following is not a transportation tactical requirement?

    A. Rail lines must be intact and off-load facilities available.
    B. Placing transportation equipment in reserve in the anticipation of unforeseen requirements.
    C. The status of road networks, highways, and bridges must be intact, passable, and able t accommodate loadweights.
    D. Small, fast convoys may be used to reduce the potential havoc to depots and supply bases.

11. Which of the following requires positive inbound cargo clearance?

    A. Vehicles.
    B. Perishable cargo.
    C. Classified cargo.
    D. Rail shipments.

Continued on next page

12. Which of the following challenges all TP 1 requests with an RDD of 999?

    A. AFTMO.
    B. Origin MCT.
    C. Destination MCT.
    D. TO.

13. Which of the following is an advance notice of shipment?

    A. REPSHIP.
    B. TCMD.
    C. BMCT.
    D. TMICS.

14. Which of the following is not a minimum data requirement for the Transportation Control and Movement Document?

    A. Date/time.
    B. Control number.
    C. TMR number.
    D. TO name.

2-16. Lesson 2 Practice Exercise Answer Key and Feedback

Item	Correct Answer and Feedback
1.	B. The TR should be submitted as far in advance of the shipping date as possible, an MCC is not normally established just to support special cargo, there is no such thing as a destination STON, and the TR should be submitted in the approved format. Page 2-3.
2.	B. The consignor submits a surface transportation request when unit or direct support assets are not available, a convoy clearance or road movement bid/credits are requested when assets e available, and air transportation requests are not for road assets. Page 2-4.
3.	B. Once the TR is received by the origin MCT the movement manager must coordinate the request by reviewing the consignor TR for accuracy and completeness, determining the mode of transport and notifying the destination MCT of the shipment, assigning a TMR number, and notifying the consignor and mode operator that the TMR has been received. Page 2-6.
4.	D. The movement manager must review the TR to ensure it has adequate information to determine if enough transportation equipment is available to meet both the programmed requirements and this request. Page 2-7.
5.	A. The TMR number accounts for the transportation assets during movement. Page 2-8.
6.	C. The issuance of TMRs has been decentralized to local MCTs. Page 2-9.
7.	A. The preferred mode of transportation is air for transportation priority 1 and 2. Page 2-10 and 2-11.
8.	C. TP 3 shipments which normally move by surface transportation might move by air when air transportation is the only mode available between the consignor and the consignee. Page 2-12.

Continued on next page

9.	C.	Priority abuse results in failure of transportation assets to support the RDD. The other responses are guidelines for avoiding priority abuse. Page 2-14.
10.	B.	Placing transportation equipment in reserve in the anticipation of unforeseen requirements is an equipment allocation that should not be followed. All other responses are transportation tactical requirements. Page 2-20.
11.	C.	Classified cargo requires positive inbound clearance. Perishable cargo and rail shipments require positive inbound clearance when delivery is made after normal hours of operation. Page 2-24.
12.	B.	The origin MCT challenges all TP 1 requests with a RDD of 999. The destination MCT contacts the consignee to challenge the validity of the priority for 999/high priority cargo movements. Page 2-25 and 2-29.
13.	A.	The report of shipment (REPSHIP) is an advanced notice of shipment. Page 2-28.
14.	D.	All are minimum data requirements for the Transportation Control and Movement except the TO name. Page 2-30.

LESSON 3

COORDINATING THE RECEIPT OF SHIPMENTS

Critical Tasks: 01-3740.70-0120
01-3740.70-0130
01-3740.70-0140
01-3740.70-0160
01-3740.70-0180
01-3740.70-0260
01-3740.70-0290
01-3740.70-0310

3-1. Lesson 3 Overview

Lesson description

This lesson describes the procedures for coordinating the receipt of shipments with consignees. This lesson will discuss these three topics:

- Determining the consignee reception capabilities.
- Interpreting the daily installation situation report.
- Ensuring cargo reception capability of terminals.

Enabling learning objective

This is the enabling learning objective for this lesson:

Action: Identify the procedures for coordinating the reception capability of a consignee and the receipt of shipment.

Condition: In a self-study environment using the materials within this subcourse.

Standards: In accordance with he materials provided in this subcourse and/or the references cited below.

Continued on next page

References

These are the references used in compiling this lesson:

- FM 55-1, *Transportation Operations*, 3 October 1995.
- FM 55-2, *Division Transportation Operations*, 31 January 1985.
- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- FM 55-17, *Terminal Operations Coordinator 's Handbook*, 9 September 1990.
- DOD 4500.32R, *Military Standard Transportation and Movement Procedures*, 15 March 1987.

Lesson content

This lesson contains the following topics:

3-2. Procedures for Determining Consignee Reception Capabilities

Introduction

As a destination MCT member you must review the movement program to determine the commodity and volume of cargo to be transported to each consignee so that you can effectively plan. You may be required to make special provision for the cargo's movement. You must also determine the specific nature of the cargo and whether any special handling is required. This part describes the procedures for determining the reception capabilities of the consignee.

Verify consignee capabilities

Verify that the consignee has the personnel and equipment capabilities to receive the shipment. You must coordinate the requirements and ensure the movement is not in excess of the installation's capability to unload and clear cargo or personnel from the loading area. These factors influence an activity's cargo handling capabilities:

- Available labor.
- Quantity and type of shipment.
- Quantity and variety of MHE.
- Installation facilities.

Determine the installation's capacity

There are two publications designed to give you information to determine an installation’s capacity. These publications are the--

- Facilities and Services Guide.
- Installation Capacity Report.

Facilities and services guide

The Facilities and Services Guide, Figure 3-1, is published by TAMCA. The purpose of this guide is to provide information to all shippers and local MCTs. This guide is maintained as current through prompt updates by ITOs and MCTs through TAMCA or MCC channels.

Continued on next page

Facilities and services guide, continued

NAME - HOHENFELS TRAINING AREA.
LOCATION - 2 Km West of Hohenfels, Germany, on Route 170.
POST OFFICE - APO 09252, Hohenfels Training Area.
TELEGRAPH OFFICE - Post Signal Office, Hohenfels Training Area.
TELETYPE OFFICE - Post Signal Office, Hohenfels Training Area.
RADIO OFFICE - Post Signal Office, Hohenfels Training Area.
SERVICING BRANCH MCT - Regensburg, TP No. Reg. Mil 411, TT Address - BTRMOV, NO RADIO.

1. General. Railhead located at Parsberg, Germany, 12 kilometers East of Hohenfels Training Area on route 170. Leased trackage from railhead to traininng area can handle up to three cars or tonnage up to 150 short tons. Two airfields are available, one to accommodate helicopter and light plane traffic, the other for heavy traffic up to and including four engine craft.

2. FREIGHT. Destination shown on freight waybills will be as follows:

a. RAIL.

(1) CARLOAD: Hohenfels Training Area, Germany.

(2) LESS-THAN-CARLOAD: Parsberg, Germany (railhead).

b. TRUCK. Less-than-truckload and truckload, no exceptions, all to Hohenfels Training Area, Germany (Ordnance V, Ammunition, and heavy weapons to north dump).

c. AIR. Hohenfels Training Area.

3. PASSENGERS. Destination shown on general railway warrant will be as follows:

a. RAIL.

(1) Individuals and parties (up to 22) traveling in regular train service: Parsberg, Germany (origin MCT will notify Hohenfels Training Area MCT as to train number and estimated time of arrival).

(2) One or more cars and special trains up to 15 cars: Hohenfels Training Area (spur siding may be used for detraining; no platform).

b. BUS. Military traffic only--Hohenfels Training Area.

c. AIR. Military traffic only--Hohenfels Training Area.

4. CONEX SERVICE. This installation has equipment and facilities to handle CONEX transportation.

5. All documentation will be addressed to: Transportation Officer, MCT, Hohenfels Training Area, APO 09252, US Army (for telephone contact call Hohenfels operator, then Hohenfels military extension 672 or 673).

Figure 3-1. Sample Page of Facilities and Services Guide.

Continued on next page

Facilities and services guide, continued

The guide lists the following information for each facility--

- Facility location.
- Type of supplies handled, listed by service and class.
- The MCT serving the installation, its location code designator, telephone number, and teletype and radio address.
- Modes available and the services they perform.
- Appropriate special notes.

Installation capacity report

The installation capacity report is used at higher echelons to determine the flow of supplies that can be shipped into and out of an installation to prevent overloading the installation and to adjust tonnages among the various modes of transport. This report is prepared by the installation upon its activation. When a major permanent change occurs, the MCT submits a new report to TAMCA. This report assists in the compilation of the facilities and services guide. The installation capacity report includes this type of information--

- Installation information including--
  - Name and consignee code.
  - Location by map coordinates and reference to name of numbered streets; state and national routes; main supply routes; or the distances between readily identifiable locations.
  - Telephone number, teletypewriter exchange (TWX), call sign, and Army or Air Force Post Office address.
  - Type of installation.
- Service and class.
- Summary of shipping and receiving facilities for cargo and passengers.
- Installation storage areas, covered and open.
- Heavy lift capabilities.
- Class A and B explosives handling capabilities.
- Average personnel available for load handling.
- Availability of facilities for the receipt of cargo containers.

Continued on next page

Installation capacity report, continued

- Remarks, any information concerning the capabilities or limitation influencing the receipt of a shipment.
- Enclosures such as installation maps and vicinity showing roadnets, rail lines, sidings, piers, docks, loading platforms, warehouses, and air terminal facilities.

Determining an installation's limitations

When determining the reception capabilities of an installation you must consider its weakest link in the cargo-handling operation. Examine these aspects of an installation to determine is reception capability weaknesses:

- Rail location and capacity.
  - Location of railhead and distance to installation.
  - Railcar capacity of team tracks, warehouse tracks, and railcar capacity.
  - Railcar storage tracks.
  - Total railcar capacity.

- Terminal track capacity.
  - Railcar capacity.
  - Team tracks.
  - Railcar capacity, freight house tracks.
  - Railcar capacity, classification tracks.
  - Railcar capacity, storage trans.
  - Total track capacity.

- Highway location and facilities.
  - Location of truck head.
  - Installation road conditions.
  - Types of roads installation.
  - Loading and unloading platforms-- how many, construction, condition, height, and truck or trailer capacity.

Continued on next page

Determining an installation's limitations, continued

- Airfield locations and capacities.
  - Location by map coordinates and distance direction from installation.
  - Number, capacity, and direction of runways.
  - Area in square feet, surface, and condition of ramp areas.
  - Servicing facilities for refueling and maintenance.
  - Terminal facilities for billeting, feeding, and processing passengers.
  - Roadnet within the installation.
  - Storage area, in square feet, open and covered.
  - Types and capabilities of cargo-handling equipment.

- Water facilities and locations.
  - Location of water terminal and distance to installation.
  - Number of piers and their length, width, and condition.
  - Depth of water.
  - Types and capabilities of cargo handling equipment.
  - Storage areas and warehouses.

3-3. The DISR

Introduction

Theater regulations require shipping and receiving installations to furnish daily reports concerning current status of all modes of transport to their servicing MCT. The DISR is a generic name applied to reports covering all modes of transport.

MCT DISR uses

The MCT members will be most concerned with the DISR used to record military trailer status data. The MCT uses DISRs to monitor the spotting, loading, pulling of transport assets, and the delivery of cargo.

DISR procedures

When the DISR is completed, the MCT forwards a consolidated report to its servicing transport mode operations section. The mode operations section uses the report to determine the state of the MHE and to gauge how their pulling units are doing. The TAMCA develops reporting time frames for the shipping and receiving installations. Failure of the installations to prepare the DISR IAW TAMCA time frames may give false impressions of what is happening at their location. Also, ensure that TAMCA time frames are coordinated with your mode operators.

3-4. Ensuring the Cargo Reception Capability of Terminals

Introduction

A terminal is any facility, regardless of size or complexity, at which cargo or personnel are loaded, unloaded, and handled in-transit between elements of any of the various modes of transportation. Terminals are established at the origin and destination for the cargo being carried and at the intermodal transfer points. The overall effectiveness of a consignee depends, in part, on the efficiency of the supporting terminal facilities. As connecting links in the transport net terminals are natural bottlenecks.

Army terminals

The Army classifies terminal operations using two broad categories--

- Water terminals are conducted at established ports, beach sites, or unimproved facilities.
- Inland terminals are located inland from the waters edge. They include facilities such as air and truck terminals, trailer transfer points (TTPs), railyards, and inland water terminals. These terminals provide for the expeditious transshipment of cargo and personnel.

Fixed facility port terminals

Fixed facility port terminals are the preferred terminal for water transport because they normally have a higher cargo throughput capability. These terminals are existing and developed shoreside installations of varying size. They may contain deep water complexes and come equipped with several wharves, anchorage areas, shore-based cranes, dry-docking facilities, cargo sheds, sorting and storage areas, rail sidings, and so on. From these terminals, cargo is normally stored to await terminal clearance or loaded directly onto surface transport for onward movement.

Unimproved water terminals

An unimproved water terminal is a site not specifically designed for cargo discharge. These terminals are normally established when fixed-port water terminals are unavailable or to increase throughput to meet increased requirements. These are characteristics of unimproved water terminals:

- Insufficient water depth.
- Lack of MHE.
- Insufficient berthing space to accommodate deep-draft cargo vessels.

Continued on next page

Bare beach terminals

Bare beach terminal operations are used to supplement or in place of port terminal operations when existing port capacities are insufficient to support theater tonnage requirements or existing ports are destroyed by the enemy to prevent their use. The basic type of bare beach terminal operation is the logistics over the shore (LOTS) operation. LOTS operations are a transshipment of troops, supplies, and equipment over the beach to inland transportation modes. LOTS operations must be conducted from ship-to-shore or from shore-to-shore. LOTS operations are normally instituted to--

- Establish terminal support where port facilities are non-existent.
- Replace the tonnage capacity of a terminal made untenable by enemy actions.
- Supplement or increase tonnage capabilities of an existing terminal.
- Relieve congested LOC.
- Reduce the land transportation required to support combat forces.
- Support a landed force following an amphibious operation or a shore-to-shore operation.

Air terminals

Allocated Air Force support and Army aviation units principally provide air transportation within a theater. Army air transport extends ALOC. Allied and HN air forces may designate a portion of the airlift capability of intratheater movement of US personnel and cargo in support of the theater mission.

Intratheater airlift forces

Intratheater airlift forces may be a division, wing, or squadron, depending upon--

- Joint force objectives.
- The assigned mission.
- Threat.
- Geographical AO.

Continued on next page

Intratheater airlift forces, continued

The unified command JTB recommends the allocation of the available CSS airlift assets among the services to best support the theater mission. The military airlift force performs logistical missions, such as support of airborne operations, aerial resupply, military operations resupply, and evacuation for the sick and wounded. Airlift requirements are included in the movement program's long-range planning process, thereby allowing transporters and airlift forces to plan ahead.

Air Force terminals

If you are assigned to an Army air terminal MCT/ATMCT, you are usually located in the Air Force terminal and are under the direct control of the Movement Control Agency (MCA)/MCC. Your mission is to eliminate the delay in onward movement of Army personnel and materiel. You also serve as the liaison with the Air Force at the terminal. You may be required to coordinate with HN in performing reception and onward movement functions at APODs operated by HN agencies.

Motor transport terminals

Motor transport terminals are normally located at both ends of the motor transport line-haul operation. They form the connecting link between local hauls and the line-hauls. They can also be located at intermediate points along the line-haul route where terrain conditions necessitate a change in the type of carrier. Transportation terminal transfer elements provide the cargo handling service at motor transport terminals. They also function under the operational control of the senior motor transport commander. Division support command personnel are responsible for cargo transferred to forward motor transport terminals in the division area.

Continued on next page

Rail terminals

Rail terminals include yard tracks, repair and servicing facilities, accommodations for train crews, and railheads. A railhead is a small yard or terminal on or at the forward end of a military railway where troops, supplies, and equipment are transferred to other transportation modes for further forward movement. They are located at originating and terminating points of train operations and at sites marking the limits the rail operating divisions. With one exception, the senior railway commander controls the transportation terminal transfer elements performing the transshipment operation at theater rail terminals. The exception is when the transportation command controls terminal transfer terminating railheads in the TA.

Transportation terminal brigade (TTB)

The TTB headquarters provides control when circumstances prevent adequate supervision and coordination of theater terminal operations by one or two terminal groups. The TTB is not normally activated unless the size and complexity of terminal operations makes it necessary. The TTB provides units used in water terminal operations with--

- Command.
- Supervision.
- Staff planning.

3-5. Lesson 3 Practice Exercise

Instructions The following items will test your knowledge of the material covered in this lesson. There is only one correct or best answer for each item. When you complete the exercise, check your answers with the answer key that follows. If you answer any item incorrectly, study again that part of the lesson which contains the portion involved.

1. Which of the following publications will provide the best information to determine an installation's capacity to accept cargo?

   A. Available Labor Report.
   B. Facilities and Services Guide.
   C. Facility Financial Summary Report.
   D. Facilities Capacity Report.

2. Which of the following would not be included in the Installation Capacity Report?

   A. Maps of the installation.
   B. Class A and B explosives handling capabilities.
   C. Storage areas.
   D. Number and type of railcars available for use.

3. When determining an installations limitations which of the following will determine its reception capability weakness?

   A. Total railcar capacity.
   B. Roadnet within the installation.
   C. Team tracks.
   D. All of the above.

4. Which of the following uses DISRs to monitor the spotting, loading, pulling of transport assets, and the delivery of cargo?

   A. TAMCA.
   B. MCT.
   C. MCC.
   D. MHE.

Continued on next page

THIS PAGE INTENTIONALLY LEFT BLANK

5. Which of the following water terminals should have the greatest cargo through capability?

   A. Fixed facility port terminal.
   B. Unimproved water terminal.
   C. Bare beach terminal.
   D. Air terminal.

6. An Army air terminal activity is normally under the direct control of which of the following?

   A. MCT.
   B. ATMCT.
   C. MCA/MCC.
   D. APOD.

7. What is a railhead?

   A. The end of the road.
   B. A terminal at the near end of a railway.
   C. A terminal at the forward end of a railway.
   D. The device preventing the end of the track from moving.

3-6. Lesson 3 Practice Exercise Answer Key and Feedback

Item	Correct Answer and Feedback
1.	B. The Facilities and Services Guide provides the best information to determine an installation's capacity to accept cargo. Page 3-3.
2.	D. The Installation Capacity Report is used to determine the flow of supplies that can be shipped through an installation to prevent overloading the installation. The report is updated when major permanent changes occur. The number of available railcars will change frequently. Page 3-6.
3.	D. When determining the reception capabilities of an installation you must consider its weakest link. Rail location and capacity, terminal track capacity, highway location and facilities, airfield location and capabilities, and water facilities and locations all have common and unique potential limitations that can affect cargo throughput. Page 3-7 through 3-8.
4.	B. The MCT uses DISRs to monitor the spotting, loading, pulling of transport assets, and the delivery of cargo. Page 3-9.
5.	A. Fixed facility port terminals a the preferred terminal for water transport because they normally have the greatest cargo through capability. Page 3-10 through 3-11.
6.	C. An Army air terminal activity is usually located in the Air Force terminal and under the direct control of the MCA/MCC. Page 3-12.
7.	C. A railhead is a small yard or terminal on or at the forward end of a military railway where troops, supplies, and equipment are transferred to other transportation modes for further forward movement. Page 3-13.

LESSON 4

HIGHWAY USE SCHEDULING AND REGULATION

Critical Tasks: 01-7340.70-0120
01-7340.70-0130
01-7340.70-0140

4-1. Lesson 4 Overview

Lesson description

During wartime, available roads in the AO will be overburdened with US military vehicles and allied and HN vehicles and refugees. Therefore, one of the vital missions of the transportation officer is the scheduling and regulating of highway use. This lesson will train the student in the procedures necessary for highway scheduling and regulation.

Enabling learning objective

This is the enabling learning objective for this lesson:

Action: Identify the procedures for preparing traffic circulation and highway regulation plans and requesting transportation assets from movement managers.

Condition: In a self-study environment using the materials within this subcourse.

Standards: In accordance with the materials provided in this subcourse and/or the references cited below.

Continued on next page

References

These are the references used in compiling this lesson:

- FM 55-10, *Movement Control in a Theater of Operations*, 8 December 1992.
- DOD 4500.32R, *Military Standard Transportation and Movement Procedures*, 15 March 1987.

Lesson content

This lesson contains the following topics:

4-2. Highway Planning and Regulation Organizations

Introduction

TAMCA or the MCC commander uses the HTD and its subordinate highway regulating port teams (HRPTs) to accomplish highway regulation and scheduling. The HTD bases the amount of regulation required on the amount of movement executed and the capacity of the road network. The HTD is also responsible for scheduling movements involving convoys, oversize or overweight vehicles, vehicle movement by infiltration, and troop movements on foot.

HTD

The HTD performs highway regulation functions in the COMMZ. It is staffed with movement control, engineer, and military police (MP) personnel. The HTD--

- Coordinates highway regulation functions for the theater.
- Coordinates plans with the transportation battalions and the corps.
- Develops highway regulation and traffic circulation plans in coordination with HN authorities and allied military headquarters.
- Changes transportation routing and schedules based on changes in priorities.
- Evaluates, records, and disseminates information from other traffic headquarters on highway movements into the HTD area of jurisdiction.
- Coordinates movements terminating outside the COMMZ.
- Develops long- and short-range plans and priorities for repairing the road network.
- Coordinates with the HN for use of its road system.

HRPT

HRPT operates under the control of the TAMCA/MCC HTD. They are placed at critical points along the main supply route (MSR) to carry out the traffic regulation plan, and to report road and convoy status. HRPTs operate a highway regulating port (HRP), coordinate the movement of authorized traffic, and make changes to truck or convoy routings.

Highway regulation plan

The highway regulation plan is a written plan describing the MSR network and establishing control measures to promote effective regulation. This plan identifies the capabilities of the existing roadnet. It conforms to the situation as well as to the mission, composition, and disposition of the tactical units. It also includes the traffic circulation plan.

Continued on next page

Traffic circulation plan

The traffic circulation plan is a map overlay or graphic representation of the MSR network. It provides guidance for using and maintaining the existing roadnet.

MCO responsibilities

MCOs assigned to the HTD will assist the division chief in regulating traffic on all controlled highways and roads within the HTD area of responsibility. To ensure that highway use requirements have been properly regulated, the MCO will--

- Interpret route reconnaissance information.
- Develop a traffic circulation plan/overlay.
- Prepare a highway regulation plan.
- Plan and schedule highway movements.

4-3. Developing a Traffic Circulation Plan

Introduction

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 the publication of the highway regulation plan and the traffic circulation plan.

Route reconnaissance overlays

The level of the route reconnaissance overlay is directly dependent upon the time and situation. Using maps, aerial photographs, local traffic authorities, intelligence reports, and transportation studies, the engineers develop route reconnaissance overlays. The route reconnaissance overlays provide detailed information on the characteristics of the road network. This information includes road surface, width, restrictive features, and bridge classifications. As the MCO of the HTD, you must use this data to develop the traffic circulation plan by identifying the--

- best routes,
- number of traffic lanes,
- classification of bridges, and
- sharp curves.

Traffic circulation plan

The traffic circulation plan, Figure 4-1, graphically displays the direction of the traffic flow. Normally this plan is prepared as an overlay and provides traffic flow information to the highway users. To develop the traffic circulation plan, you must determine-

- The traffic pattern providing the best access to origin and destination maintenance/supply activities.
- Direction of movements.
- Location of boundaries, units, highway regulation points, traffic control posts, and principal supply points and depots.
- Major geographic features and light lines, if applicable.

Continued on next page

Traffic circulation plan, continued

Additionally, the traffic circulation plan provides current data on the--

- Direction of traffic flow.
- Traffic control measures such as speed limits, blackout areas, traffic control posts, and so on.
- One-way, two-way, and alternate routes of traffic flow.

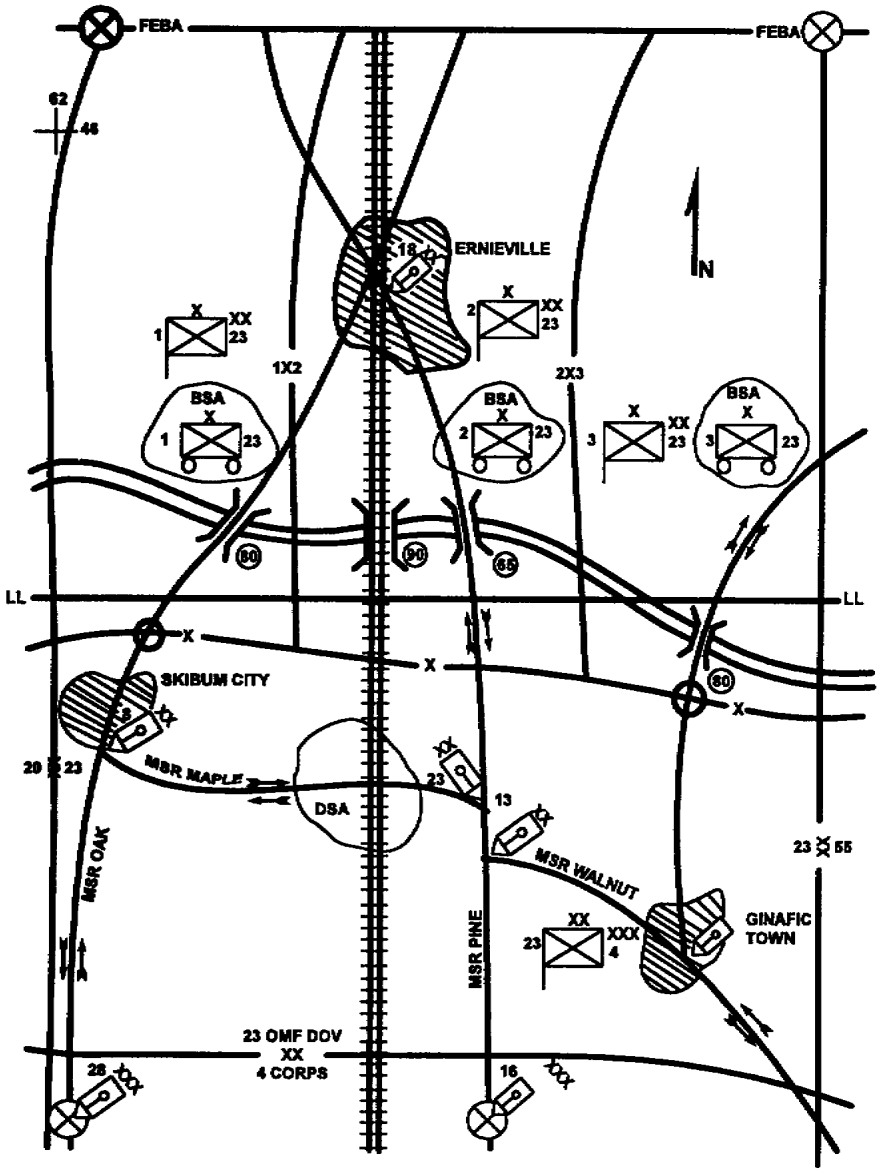


Figure 4-1. Traffic Circulation Plan.

Continued on next page

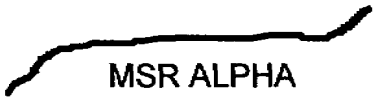
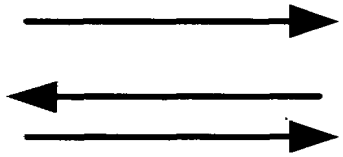
Interpreting military symbols

The first step in preparing a traffic circulation plan is identifying and interpreting military symbols. Military symbols are graphic aids accurately identifying items of operational interest. These symbols make maps and other data easy to read by condensing a log of information into small spaces. These symbols also simplify the process of collecting and disseminating highway information.

Symbology for the traffic circulation plan

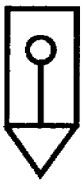
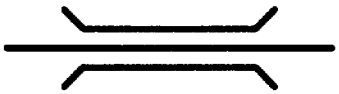
When preparing a traffic circulation plan you must be familiar with its symbology. These are typical symbols on a traffic circulation plan and their description:

NOTE: A complete list of symbols and explanations can be found in FM 101-5-1, Operational Terms and Symbols.

Symbol	Description
	MSR. An MSR is a controlled route, designated by the G3 of a theater, corps, or division command within an AO. This route carries the bulk of the traffic in support of military operations. In the example, the route is designated "Alpha."
	Direction of travel. The high traffic circulation plan also shows the direction of travel on one-way roads using a single arrow and on two-way roads using double arrows.

Continued on next page

Symbology for the traffic circulation plan, continued

Symbol	Description
LL ——— LL	Light lines are those areas requiring black out driving operations. When this symbol appears on the map, the tops of the letter "L" indicate the blackout zone.
	The plan also shows military installations serving or served by military highway transportation.
• **TRAFFIC CONTROL POINT** 	The plan also shows railroads, terminals, and highway regulation points under the supervision of the provost marshal. The MPs are responsible for traffic control; however, you as MCO can use the HRPs for scheduling and commitments and to advise a convoy that it is going too fast, too slowly, and so forth.
• **CLASS III POL**  • **CLASS V AMMUNITION** 	Classes of supply are also depicted using various types of supplies.
	Bridges are classified in terms of the bridge and vehicle military load classification system. The class of each bridge indicates its carrying capacity and is posted to avoid overloading which may hamper future operations.

4-4. Developing a Highway Regulation Plan

Introduction

The development of a highway regulation plan hinges on the use of route reconnaissance overlays and traffic circulation plans and overlays for planning. These plans must be interpreted correctly or you may plan a convoy to move over a route that--

- Has time restrictions.
- Is closed to regulator traffic.
- Cannot handle the weigh of the convoy.
- Handles one-way traffic which normally flows in the opposite direction.

Your goal as an MCO in an HTD is to develop a highway regulation plan which eliminates congestion on MSRs and expedites the movement of units and critically needed supplies. When you receive a units movement plan, you must review the vehicle information and compare it to route and bridge classifications of the road network.

MCO responsibilities

As an MCO within an MCA your primary responsibility is the scheduling of movements over controlled highways to--

- Obtain their fullest use.
- Prevent conflicts.
- Meet established priorities.
- Ensure regulations are carried out effectively.

Use of the highway regulation plan

The highway regulation plan is a valuable tool to the transportation planner. It will show you how to--

- Plan and control MSRs.
- Schedule vehicle movements.
- Effectively place HRPT.
- Coordinate with MPs, engineers, and customers.

Continued on next page

Preparing the highway regulation plan

The highway regulation plan is prepared by theater, corps, and division levels. To prepare this plan you must--

- Obtain situational information from Intelligence (G2) and operational plans from the G3.
- Ask G3 for controlled MSRs.
- Ask engineers for the route reconnaissance report.
- Ask MPs for the traffic circulation plan.
- Determine the best location for the HRPT.
- Write the plan.

Obtaining situational information and operational plans

Highway regulation plans obtain situation information and operational plans, general route and traffic information, availability of terminals and other facilities, and the availability of communications equipment. When determining the best possible routes and when writing a highway regulation plan, you can expect to coordinate data with each of these areas:

- Operational plans contain information for the operational plans of the command. They also contain policies, priorities, and restrictions imposed by higher headquarters, and plans for logistics support of the command.
- The engineer route reconnaissance overlay provides general route information. Route reconnaissance data is consolidated and a traffic circulation overlay developed. The route reconnaissance overlay identifies alternate routes and critical points along all routes where ambush or enemy action may be encountered.
- The traffic circulation overlay identifies the anticipated volume of traffic by vehicle type and various changes in the traffic flow over sections of the routes during specific periods.
- Highway regulation planners need to know the locations and road characteristics of supply points, depots, trailer transport points, terminal transfer points, off-road parking areas, bivouac areas, and evacuation or hospital facilities. Planners must identify access to these facilities from major routes, and in their capabilities and services for motor transport.
- Planners also consider the availability of communications equipment.

Continued on next page

Reviewing the highway regulation plan

You must review the highway regulation plan for accuracy and content. The plan must contain the MSRs, traffic schedules, convoy clearance requirements, and unit priorities. Once you have developed the highway regulation plan, you should further review it to ensure that--

- Heavy, cumbersome, or outsized equipment is routed over an MSR with grades and curves within the capabilities of the equipment and bridges of adequate capacity and width.
- Nonconflicted routes are allocated to concurrent movements. For example, the plan may provide separate lanes for fat or slow traffic, or one road may be provided for forward traffic and another for return.
- The maximum number of MSRs are allocated as possible. This reduces traffic conflicts and prevents deterioration of road surfaces from the concentration of heavy traffic. Adequate MSRs also allow dispersion of vehicles and decrease the time requirements for completing a movement.

4-5. Placing HRPT

Introduction

Once the plan is written, the HTD manages its implementation through its field offices--the HRTP. The HRPT ensues that--

- Convoys/vehicles abide by the traffic circulation plan.
- Rules of the road are implemented.
- Convoys move as scheduled.
- Diversions are coordinated, as required.

Purpose of HRPT

The purpose of the HRPT is to implement the highway regulation plan. The HRPT monitors and reports the progress of convoys and MSR conditions to the TAMCA HTD. The HRPT is placed at critical points along the MSR such as--

- Where two or more streams of traffic converge.
- MSR intersections.
- Entrance/exit ramps.

HRPT as liaisons

The HRPT also acts as liaison between the convoy commanders and the MCO. The HRPT relays instructions from the convoy commanders concerning route changes, halts or diversions. These teams also perform traffic control measures when MPs are unavailable. In cases where a HN exercises highway regulation you may use the HRPT in a liaison role with the regulating HN agency.

4-6. Scheduling Traffic

Introduction

Scheduling traffic is part of the highway regulation plan. It is the process of coordinating terms for road movements. Traffic scheduling is the selection of road space and time for various unit vehicle movements along routes. It involves--

- receiving movement bids,
- deconflicting requests, and
- issuing credits.

Scheduling rationale

The scheduling of traffic is necessary to--

- Assign priority to units according to the commander's directives.
- Avoid delays, conflicts, and congestion by ensuring the traffic flow never exceeds the capacity of the route's most limiting feature and by spreading out the flow of peak traffic.
- Promote security and passive defense when air support is unavailable by scheduling movements during hours of darkness.
- Restrict traffic-to-road capabilities and permit necessary highway maintenance.
- Track convoy progress so they may be rerouted, diverted, used to meet emergencies, or held to permit passage of priority movements.

Continued on next page

Scheduling guidelines

These are the guidelines for scheduling traffic movements:

- Movements on routes requiring movement credit must be scheduled.
- Movements crowding movement control boundaries must be scheduled, coordinated, and inbound cleared by the MCO responsible for the area where the movement originates to the MCO where the movement ends.
- Large unit movements should be scheduled.
- Movements in one direction on routes requiring 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.
- Schedules and changes to schedule due to immediate movement requirements are provided to the MRTs to execute highway regulation and to the MP to provide traffic control.

Planning large-scale road movements

When planning large-scale road movements, scheduling computations become complicated and repetitious. Simplify this process by--

- Using conversion tables which change US common distance to metric distances, number of vehicles to time length, and distance to time.
- Standardizing as many variables as possible. For example, if all wheeled vehicles not overweight or oversized can be diverted to use the same route of march on a certain class of road, the movement is simplified and the route used more efficiently.

Scheduling methods

The scheduling of road movements is based upon the control measures specified for the route. These are the four methods of scheduling movements listed from the least restrictive to the most restrictive:

- Infiltration schedule.
- Route schedule.
- Location schedule
- Column schedule.

Continued on next page

Infiltration schedule

An infiltration schedule is a rate of dispatch assigned to units for specific routes and time blocks for the purpose of achieving a traffic flow within the capacity of the route. Using this method, dispatched vehicles or small groups of vehicles proceed independently to their destinations over a prescribed route. By assigning appropriate rates of dispatch to different units using the same route, you can hold average traffic flow within desired limits. For example, dispatch two vehicles every five minutes the first hour and every 10 minutes the second hour. An infiltration schedule may be used for open or supervised routes.

Route schedule

The route schedule is a flexible method of scheduling. It apportions blocks of time on MSRs to units, types of movements, phases of the operation, or route maintenance. A route schedule may be used for supervised, dispatch, or reserved routes. It provides no control over movements to and from the dispatch route.

Location schedule

A location schedule assigns arrival and clearance times to different units needing to use the same entry point onto MSRs. This schedule should prevent clogging of the traffic stream. For example, at a particular checkpoint, unit A may be scheduled to arrive at 1000 hours and clear at 1015, while unit B may be scheduled to arrive at 1020 and clear at 1030. A location schedule may be used for supervised or dispatch routes.

Column schedule

The column schedule is the most restrictive method of scheduling. It indicates arrival and clearance times at specific points along a prescribed route of march. A column schedule may provide the most effective highway regulation because it provides in-transit times to reach checkpoints 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.

Continued on next page

Scheduling considerations

When scheduling traffic movements you must apply these considerations:

- Schedule intra-area movements and assign movement numbers to the units.
- Coordinate inter-area movements between the areas concerned. The traffic division in the area where the movement originates assigns the movement number. When inter-area movements conflict and are unresolvable, the MCO having overall jurisdiction determines movement priorities.
- Treat a round trip schedule for completion within 24 hours as a single movement. When more than 24 hours is required to complete a round trip, treat the return trip as a separate movement requiring a new movement number.
- Treat a one-way movement, regardless of the number of days involved, as a single movement using one movement number throughout its movement.
- Identify march units within a column by adding a letter suffix behind the movement number.
- Furnish approved schedules and assigned movement numbers to the HRPT and to the provost marshal so that traffic control can be provided.

4-7. Implementing the Movement

Introduction

Implementing the movement requires coordination and communication between the requesting unit and the HTD.

Obtaining convoy clearance

These are the procedures for requesting convoy clearance and obtaining actual movement approval for CONUS movements:

Step	Action
1	Moving unit submits Request for Convoy Clearance, DD Form 1265, through appropriate channels.
2	Movement control officer schedules the movement and provides the requesting agency with approval using DD Form 1265.
3	Issue the movement credit and movement number for the convoy and provide any additional information.

Request for convoy clearance, DD Form 1265

The Request for Convoy Clearance, DD Form 1265, Figure 4-2 and 4-3, is a dual-purpose document serving as either a request for movement, authorization for movement, or both. When an organization desires to initiate a highway movement, it must submit a DD Form 1265 to the movement control officer. The movement control officer uses this form to grant convoy clearance and issue any special instructions for conducting the road movement. Depending upon the urgency of the request, DD Form 1265 may be transmitted orally, electronically, or in writing.

Scheduling the road movement

Once the movement officer receives the DD Form 1265, he strives to schedule the movement according to the time and route considerations supplied by the requesting unit. If this is not possible, the movement control officer notifies the requester and arranges for alternate times, routes, or both.

Issuing the movement credit

Once the movement is scheduled and routed, the movement control officer issues the movement credit and movement number for the convoy as well as any additional information required. He then returns this authorization to the requesting agency through the same channels it was transmitted through.

Continued on next page

REQUEST FOR CONVOY CLEARANCE

DATE: 12 Mar 95

SECTION I - GENERAL

1. ORGANIZATION	2. STATION	3. CONVOY COMMANDER
870th Trans Co (11)	Fort Eustis, VA	James Baker SFC, USA

4. PERSONNEL STRENGTH		5. POINT OF ORIGIN	6. DESTINATION
a. OFFICER	b. ENLISTED		
0	25	Fort Eustis, VA	Fort Bragg, NC

7. DATE AND TIME	7a. DEPARTURE	7b. ARRIVAL	8. RATE OF MARCH
	3 Apr 95/0900	3 Apr 95/1645	45 MPH

SECTION II - CONVOY COMPOSITION

9. NUMBER OF EACH TYPE OF VEHICLE AND DESCRIPTION *(Include towed equipment)*

1 1/4-ton jeep, M161A1, with trailer M416
1 1/4-ton jeep, M151A2, with trailer M416
1 5-ton tractor, M52A2, with 40 ft trailer, M872
1 5-ton wrecker, M246A2
1 5-ton bobtail, M818
1 45 pax bus, 1853FC
1 5-ton tractor, M818, with 25-ton lowboy with 10,

10. TOTAL NUMBER OF VEHICLES	11. NUMBER OF OVERSIZED/ OVERWEIGHT VEHICLES	12a. NO. OF SERIALS	12b. TIME INTERVAL	13a. NO. OF MARCH UNITS	13b. TIME INTERVAL
9	1	1	NA	NA	NA

SECTION III - ROUTE DATA

14. PROPOSED ROUTING *(Include US Route, State Route, etc)*

VA SR 105, I-64, US 258, US 58, I-95

15. ETA AND ETD AT STATE LINES, MAJOR ROAD JUNCTIONS, MAJOR BRIDGES AND TUNNELS, METROPOLITAN AREAS AND OVERNIGHT HALT SITES *(Continue on a separate sheet if additional space is required)*

LOCATION	ETA	DATE	ETD	DATE
VA SR 105			0900	3 APR 95
I-64	0906	3 APR 95	0930	3 APR 95
US 258	0930	3 AP		

SECTION IV - LOGISTICAL DATA

16. BRIEF GENERAL DESCRIPTION OF CARGO *(Brief general description; i.e., organizational impediments, etc.) (Within security limitations)*

ORGANIZATIONAL IMPEDIMENTS AND PASSENGERS

DD FORM 1 JAN 90 1265

Figure 4-2. DD Form 1265.

Continued on next page

17. ARE EMPLOSIVES TO BE TRANSPORTED? ☐ YES ☐ NO *(If YES, describe below)*

CLASS	AMOUNT	DESCRIPTION	VEHICLES TO BE USED	
			NO.	TYPE
		NA		

18. STATEMENT WHY EXPLOSIVES CANNOT BE TRANSPORTED COMMERCIALLY *(Movements involving explosives and/or other dangerous articles are required to comply with all applicable regulations or directives)*

NA

19. LOGISTICAL SUPPORT REQUIRED AT OVERNIGHT HALT SITES? ☐ YES ☐ NO *(If YES, complete the following) (Use separate sheet if additional space is required)*

DATE	INSTALLATION	GAS *(gals)*	OIL *(gals)*	RATIONS	BILLETS	OTHER
	NA					

20. REMARKS

ETA IS THE TIME THE FIRST VEHICLE CLEARS THE REFERENCED POINT.

ETD IS THE TIME THE LAST VEHICLE CLEARS THE REFERENCED POINT.

21. REQUESTING AGENCY	22. APPROVING AGENCY
100TH TRANS CO (Lt Mdm Trk)	
23. REQUESTED BY *(Typed name, grade,and title)*	**24. APPROVED BY** *(Typed name, grade,and title)*
CHARLES C. CHESTNUT, CTP, commander	

25. DATE	26. SIGNATURE	27. DATE	28. SIGNATURE
1 Jan 95			

INSTRUCTIONS: In cases where bona-fide emergencies exist, the information contained on DD Form 1265 and DD Form 1266 may be transmitted to the appropriate headquarters by telephone or electric transmission. In this event, reference will be made to item numbers in the sequence in which they appear on the form. (Items which do not apply will be so indicated.

Figure 4-3. DD Form 1265, Reverse Side.

4-8. Movement Measurements

Introduction

These are the three methods of measuring movements:

- Speed.
- Pace.
- Rate of march.

Speed

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

Pace

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.

Rate of march

Rate of march is the average number of kilometers traveled in any specific period. When computing this average you must incorporate the time allotted for short halts and rest periods; however, longer delays for reasons such as meals or overnight stops are not included. Rate of march is also expressed in kph or mph.

4-9. Calculating Time and Distance

Introduction

When planning road movements the calculations of time and distance factors are valuable tools for the movement planner.

Distance factors

Distance factors express the length of a movement and are expressed in either kilometers (km) or meters (m). These are frequently-used terms which may describe distance factors:

Term	Definition
Column length or element	These terms describe the length of roadway a column of vehicles occupies. Column length is measured from the front bumper of the lead vehicle to the rear bumper of the trail vehicle. This measurement includes all gaps within the column.
Road space	Road space is the length of a column plus any additional space added to the length as a safety factor. Road space usually provides a safety cushion which prevents convoy conflict with preceding or succeeding traffic.
Gap	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. Gap is normally expressed in- • Meters when describing distance between vehicles. • Kilometers when describing distance between march elements.
Lead	Lead is the space between the heads of elements in a convoy or between heads of successive vehicles, march units, serials, or columns.
Road distance	Road distance is the.distance from point to point on a route, normally expressed in kilometers.
Road clearance	The distance that the head of a column must travel for the entire column to clear the release point (RP) or any point along the route. Road clearance distance equals the column's length or road space plus road distance.

Continued on next page

Time factors

Time factors are described in terms of hours or minutes. These are the terms used to describe time factors:

Term	Defintion
Pass time or time length	The time required for a column or its elements to pass a given point on a route.
Time space	The time required for a column or its elements to pass any given point on a route plus any additional time added to the pass time.
Time gap	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.
Time lead	The time measured between individual vehicles or elements of a column measured from head to head as they pass a given point.
Time distance	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 or march.
Road clearance time	This 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.

Calculating time, distance, and rate

Time, distance, and rate are factors used for determining scheduling calculations for columns of all sizes. When two of the three factors are known, the third can easily be found by dividing a triangle as shown in Figure 4-4 and covering up the unknown factor. The uncovered portion of the triangle provides you with the formula for computing the unknown. For example, if distance (D) is unknown, cover it, and rate (R) x time (T) remains. If rate is unknown, covering R leaves D/T. If time (T) is the unknown, covering it leaves D/R as the formula.

Continued on next page

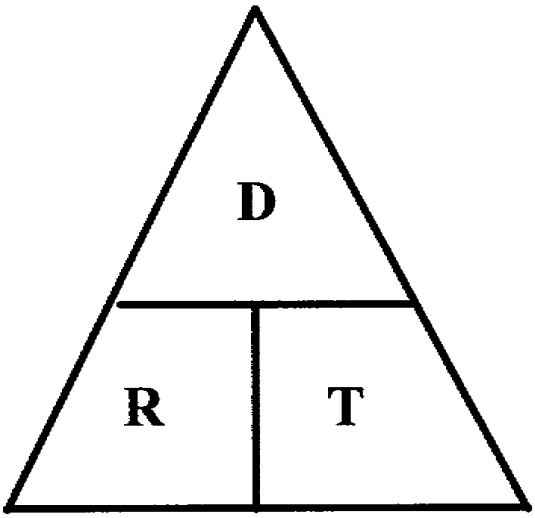


Figure 4-4. Finding an Unknown Factor of Distance, Rate, or Time.

4-10. Lesson 4 Practice Exercise

Instructions The following items will test your knowledge of the material covered in this lesson. There is only one correct or best answer for each item. When you complete the exercise, check your answers with the answer key that follows. If you answer any item incorrectly, study again that part of the lesson which contains the portion involved.

1. Which of the following is placed at critical points along the main supply route to carry out the traffic regulation plan?

   A. TAMCA.
   B. MCC.
   C. HRPT.
   D. HTD.

2. Which of the following would not be included in the HTD MCO responsibilities?

   A. Develop a traffic circulation plan/overlay.
   B. Prepare a highway regulation plan.
   C. Allocate all transportation resources.
   D. Plan and schedule highway movements.

3. Which of the following best describes the application of route reconnaissance overlays to development of the traffic circulation plan?

   A. Identify the best routes, number of traffic lanes, classification of bridges, and sharp curves.
   B. Identify the hostile tire zones, free fire zones, and other combat areas that would pose a threat to safe convoy movement.
   C. Identify potential hostile fire areas, number of traffic lanes, classification of bridges, and sharp curves.
   D. Identify the best routes, number of vehicles, classification of bridges, and sharp curves.

Continued on next page

4. Which of the following best describes the traffic circulation plan?

   A. The traffic pattern providing the best access to origin and destination maintenance/supply activities.
   B. The graphical display of the direction of traffic flow.
   C. Location of boundaries, units, highway regulation points, traffic control posts, and principal supply points and depots.
   D. Traffic control measures such as speed limits, blackout areas, traffic control posts, and so on.

5. Which of the following best describes the MCO primary responsibility within an MCA?

   A. Obtain the fullest use of controlled highways.
   B. Prevent conflicts in the scheduling of movements over controlled highway
   C. Ensure regulations are carried out effectively.
   D. The scheduling of movements over controlled highways.

6. Which answer best identifies who prepares the highway regulation plan?

   A. Corps and division levels.
   B. Theater, corps and division levels.
   C. Theater and corps levels.
   D. G2 and G3.

7. Which of the following best describes the purpose of the HRPT?

   A. Ensures diversions are coordinated, as required.
   B. Implements rules of the road.
   C. Ensures convoys/vehicles abide by the traffic circulation plan.
   D. Implement the traffic regulation plan.

Continued on next page

8. Which of the following is not a scheduling rationale?

   A. Avoid delays, conflicts, and congestion by ensuring the traffic flow never exceeds the capacity of the route's most limiting feature and by spreading out the flow of peak traffic.
   B. Promote security and passive defense when air support is unavailable by scheduling movements during hours of darkness.
   C. Prioritize units according to arrival time at the APOD.
   D. Restrict traffic-to-road capabilities and permit necessary highway maintenance.

9. Which of the following assigns arrival and clearance times to different units needing to use the same entry point onto MSRs?

   A. Route schedule.
   B. Location schedule.
   C. Column schedule.
   D. Infiltration schedule.

10. Which of the following is the average number of kilometers traveled in any specific period?

   A. Speed.
   B. Pace.
   C. Rate of march.
   D. Road distance.

11. Which of the following is the time measured between individual vehicles or elements of a column measured from head to head as they pass a given point?

   A. Time space.
   B. Time gap.
   C. Time lead.
   D. Time distance.

Continued on next page

12. What is the formula for determining rate if distance and time are known?

A. R = D/T.
B. R = T/D.
C. T = R/D.
D. Insufficient information is provided to determine the rate.

4-11. Lesson 4 Practice Exercise Answer Key and Feedback

Item	Correct Answer and Feedback
1.	D. The HRPT operates under control of the TAMCA/MCC HTD and is placed at critical points along the main supply route to carry out the traffic regulation plan, and to report road and convoy status. Page 4-3.
2.	C. The MCO assigned to the HTD will assist the division chief in regulating traffic. Vehicle allocation is a TAMCA/MCC responsibility. Page 4-4.
3.	A. Route reconnaissance overlays are used to develop the traffic circulation plan by identifying the best routes, number of traffic lanes, classification of bridges, and sharp curves. Page 4-5.
4.	B. The traffic circulation plan graphically displays the direction of the traffic flow. All other responses are things that must be determined to develop the traffic circulation plan. Page 4-5 through 4-6.
5.	D. The MCO primary responsibility within an MCA is the scheduling of movements over controlled highways. All other responses are things that are the desired results of scheduling of movements. Page 4-9.
6.	B. The highway regulation plan is prepared by theater, corps and division levels. Page 4-10.
7.	D. The purpose of the HRPT is to implement the traffic regulation plan. All other responses are things the HRPT must ensure occur. Page 4-11.
8.	C. Assign priority to units according to the commander's directives. Page 4-13.
9.	B. Location schedule assigns arrival and clearance times to different units needing to use the same entry point onto MSRs. Page 4-15.
10.	C. Rate of march is the average number of kilometers traveled in any specific period. Page 4-19.

Continued on next page

11.	C.	The time measured between individual vehicles or elements of a column measured from head to head as they pass a given point. All other responses are other time factors. Page 4-21.
12.	A.	If rate is unknown, covering R in Figure 4-3 leaves D/T. Therefore, R = D/T. Page 4-21 through 4-22.

THIS PAGE INTENTIONALLY LEFT BLANK