JOINT PUB 3-02.2

JOINT DOCTRINE FOR AMPHIBIOUS EMBARKATION

16 APRIL 1993

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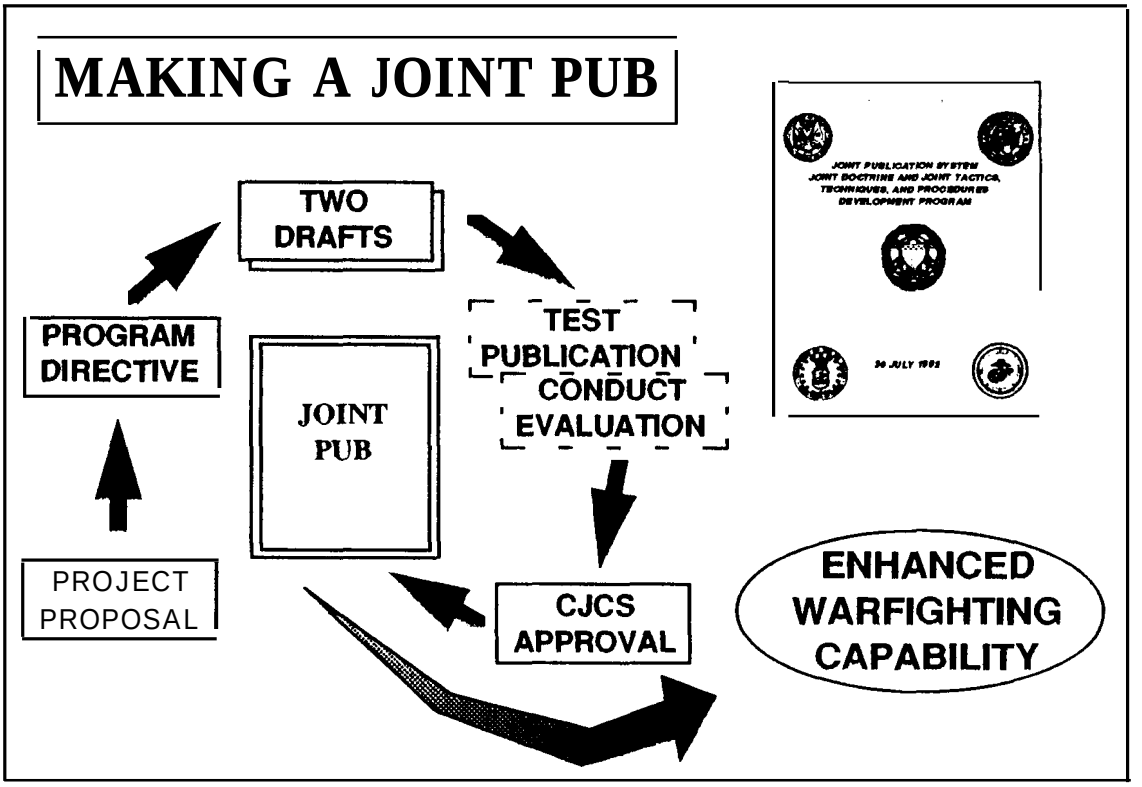

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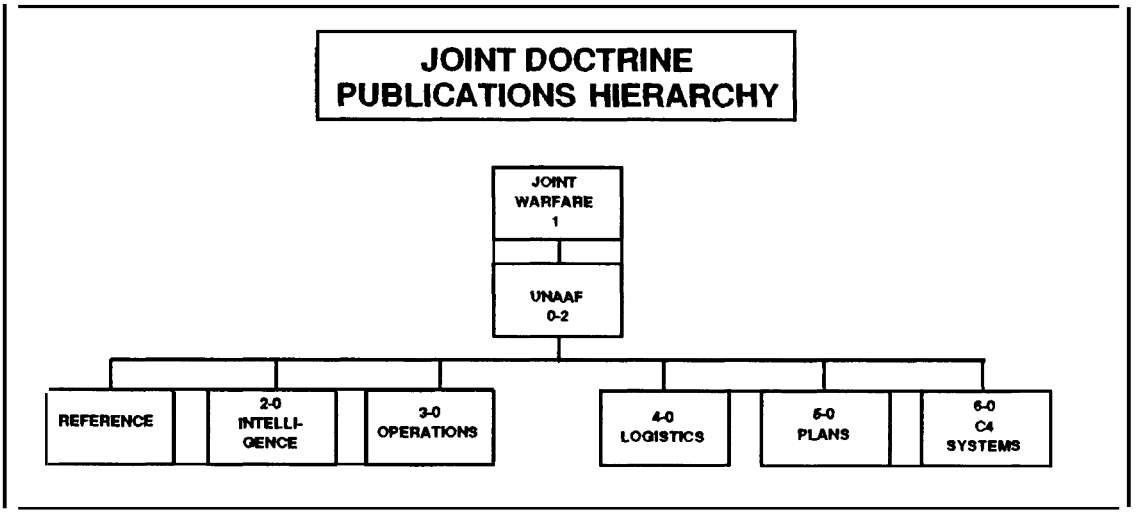

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Joint Pub 3-02.2
16 April 1993

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JOINT DOCTRINE FOR AMPHIBIOUS EMBARKATION

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CHAPTER I

INTRODUCTION

1. Purpose and Scope. This publication provides general guidance concerning amphibious embarkation and deployment planning for movement by sea from the perspective of the commander, amphibious task force (CATF), and commander, landing force (CLF). This publication considers the planning for the mounting, marshaling, and embarkation of the landing force (LF). Detailed guidance will be provided on the following:

a. Concept of deployment.

b. Organization for embarkation.

c. Amphibious embarkation planning.

d. Embarkation and combat cargo officers.

e. Loading and stowage.

f. Ship loading plans.

g. Ship loading plan preparation.

h. Personnel embarkation planning.

i. Execution of embarkation.

j. Life aboard ship.

k. Unloading.

l. Administrative movements.

m. Military Sealift Command (MSC) shipping.

2. General. This chapter provides an overview of embarkation during an amphibious operation (PHIBOP) and highlights the major aspects of planning and execution. It emphasizes accepted doctrinal principles, particularly those contained in the Joint Pub 3-02 series and Naval Warfare Publications (NWP 22 series). Joint Pub 3-02, "Joint Doctrine for Amphibious Operations," provides the doctrine and procedures for joint amphibious operations for use by joint force commanders in accordance with Joint Pub 0-2, "Unified Action Armed Forces (UNAAF)."

3. Overview. There are five phases in a PHIBOP: planning, embarkation, rehearsal, movement, and assault (PERMA). The embarkation phase is the period during which the forces, with their equipment and supplies, are embarked in the assigned shipping. A modern large-scale PHIBOP will involve deployment of the LF from various separate locations and require both sealift and airlift support. Thus, the CLF is concerned with the broader aspects of planning the deployment of the entire force into the theater of operations.

4. Embarkation Phase. The embarkation phase of a PHIBOP encompasses the orderly assembly of personnel and material and their subsequent loading aboard ships and/or aircraft in a sequence designed to meet the requirements of the LF concept of operations ashore.

5. Developments Affecting Embarkation Planning. Ongoing development and improvement techniques for projection of combat power ashore and the subsequent support of the LF through enhanced mobility systems require continued emphasis on flexible and responsive embarkation planning.

a. Effects of Improvements in Mobility. New developments, such as vertical takeoff and landing aircraft (VTOL), over-the-horizon (OTH) craft, and improved amphibious shipping have, and will continue to have, a pronounced effect on PHIBOPs. These new developments do not change fundamental embarkation doctrine, but in some instances, new techniques and procedures in planning, organizing, and executing embarkation must be employed.

(1) Use of VTOL Aircraft. PHIBOPs are employing increasing numbers of helicopters in ship-to-shore (STS) movement. Forces are more widely separated during all phases of the PHIBOP. Greater flexibility and speed in executing the STS movement of assault troops and subsequent unloading operations are needed. This additional flexibility largely depends on embarkation procedures.

(2) Over-the-Horizon Concept. OTH PHIBOPs are operational initiatives launched from beyond visual and radar range of the shoreline. The conduct of landings from OTH is a technique that employs maneuver warfare concepts such as surprise, operational speed, operational flexibility, and tactical mobility to achieve a tactical advantage over the enemy that can be decisively exploited while minimizing risk to assault shipping.

(3) Modernization of Amphibious Type Shipping. Modern amphibious ships, such as the LHD, LSD-41, LSD-41(CV), and LX, will greatly enhance amphibious forces' capability to project power ashore and provide a worldwide forward presence.

b. Maritime Prepositioning. Maritime prepositioning operations and PHIBOPs are complementary capabilities. PHIBOPs provide the means for forcible entry, while maritime prepositioning permits rapid deployment to areas where force introduction will be unopposed and is expected to remain unopposed through the arrival and assembly phase.

6. Greater Dispersion of Shipping

a. The vulnerability of the amphibious task force (ATF) to attack is decreased by emphasizing speed, surprise, mobility, and dispersion. LF units must be embarked so as to best accomplish the assault while minimizing the effects of possible loss of ships and their embarked units. The concentration of ships in major port areas is reduced by using several separated ports and open beaches for embarkation. Ships, personnel, supplies, and equipment are echeloned into embarkation areas to reduce congestion.

b. In the objective area, the sea echelon may be employed, which requires ships to disperse and phase into the unloading areas according to prearranged plans or as needed. The sea echelon concept of the STS amphibious landing is characterized by dispersion of the ATF to seaward of the landing beach from which assault shipping is phased into the transport area for selective or general offloading by landing craft and/or helicopters. The CATF prepares the sea echelon plan. However, the decision to use a sea echelon and the extent of its use is reached jointly by the CATF and the CLF. The decision must be reached early in the planning phase. Employment of a sea echelon concept will require phasing ships into the unloading areas in proper sequence to support the landing plan. If personnel, supplies, and equipment are not correctly assigned to ships, and if ships are not properly phased into the unloading area, disruption in the planned sequence of landing assault units, inadequate logistic support, and unacceptable concentration of shipping may result.

7. Embarkation Execution. Embarkation of the assault echelons (assault echelon (AE) and assault follow-on echelon

(AFOE)) will be in accordance with the approved operation and embarkation plan and is a mutual responsibility of the CATF, CLF, and external supporting agencies.

a. Mutual Effort. Embarkation is a joint undertaking by both LF and naval forces. Proper embarkation depends to a large extent on both mutual understanding of objectives and capabilities and full cooperation in planning and execution. Throughout the planning and execution of the PHIBOP, LF officers will be working with their Navy counterparts.

b. Degree of Flexibility. Ideally, units embarked for combat should be loaded to allow almost unlimited flexibility in landing at the objective area. This desired degree of flexibility can seldom be attained, however. The organization for embarkation of the landing force must be compatible with the plan for the STS movement which, in turn, must support the scheme of maneuver ashore. Insofar as possible, each ship of the amphibious task force must be loaded to provide maximum flexibility to meet possible changes in the tactical plan and to facilitate discharge of cargo to meet emergency calls for personnel, equipment, and supplies.

8. Importance of Proper Embarkation. A characteristic of successful PHIBOPs is the rapid and effective manner in which assault troops establish themselves ashore. The power and size of the LF must be expanded to the maximum extent necessary to carry out its mission in the shortest possible time. This expansion requires a rapid, yet orderly buildup of men and material, which depends in large measure on the manner in which the ships have been loaded. Proper loading increases the inherent flexibility of the ATF and is a key factor in ensuring success. Conversely, improper loading can seriously jeopardize an operation.

9. Use of Military Sealift Command Ships. MSC ships have been and will continue to be used to augment the ATF's shipping requirements.

10. Use of Combatant Ships. Throughout US Naval history, troops have been required to embark aboard combatant ships such as destroyers, cruisers, and carriers for rapid movement to an objective area. These situations developed under circumstances of great importance and urgency when time was a cardinal consideration. Accordingly, direct liaison between the embarking unit and the combatant ship should be authorized to ensure mutual understanding and expeditious embarkation.

11. NATO Movement and Transport Documents. The essential movements and transport documents used in conjunction with the movement and transport of personnel, supplies, and equipment by ship to and from NATO countries are discussed in ATP 39, "Amphibious Embarkation," and various NATO standardization agreements (STANAGs).

12. Embarkation Security. In developing amphibious embarkation and deployment planning, significant consideration must be given to detailed security and counterintelligence (CI) support requirements. CI as a separate and distinct discipline from intelligence can provide in-depth information on the enemy's intelligence collection effort and capability. CI, specifically the Counterintelligence Support Officers (CISOs) of the unified and specified commands and the component CI elements, affords commanders the ability to enhance their force protection efforts from inception of planning to execution of any OPLAN. The CISO, guided by command directives in consonance with the joint publication on CI, can provide commanders the advice and assistance necessary to develop detailed and coordinated CI actions in support of security, OPSEC, force protection, and operational planning.

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CHAPTER II

CONCEPT OF DEPLOYMENT

1. General. An ATF deploys by way of theater and strategic modes of transportation. It does so under the direction of the supported combatant commander and his direct representative, the CATF, with assistance from a variety of supporting unified commands, most notably Commander in Chief, US Transportation Command (USCINCTRANS), and various movement control agencies. The deployment of an ATF is unique in several ways, most specifically in that it may be required to land the landing force in a hostile (or potentially hostile) objective area. Additionally, it may be required to loiter indefinitely over the horizon pending a decision by the supported combatant commander to take specific action or it may be required to act as a sea-based platform to support emergency relief operations or to conduct a noncombatant evacuation operation. The combat landing requires intricate and detailed deployment planning to minimize losses and achieve maximum effectiveness. The deployment is developed by a "reverse planning" process wherein the anticipated combat requirements ashore drive the time-phasing and method of landing the LF, which in turn drives the timing and manner used to load and deploy the force. Generally, the PHIBOP is characterized by preparation of the objective area by a subordinate task force (the advance force) while assault of the objective area is conducted by an LF from naval amphibious ships followed by rapid reinforcement with forces deployed by strategic lift assets. All of these activities may be supported by forward-deployed forces or other combat forces already in theater. The concept of the deployment includes the consideration of options, selection of deployment modes, organization of forces, awareness of foreign intelligence activity, force protection measures, incorporation of mobility enhancements, and integration of the ATF deployment into the overall Joint Operation Planning and Execution System (JOPES) process.

2. Organization and Echelonment of Forces for Deployment

   a. General. Deployment for PHIBOPs is predicated on a reverse planning process wherein the tactical requirements for operations ashore drive development of an intricate and detailed landing plan. This landing plan, in turn, drives development of time-phased force requirements. Those requirements drive movement, embarkation, marshaling, and staging requirements and plans.

b. Landing Plan

(1) The LF must be capable of projecting power ashore in a manner that supports combat operations against an in-place or rapidly closing enemy force.

(2) Consequently, the LF prepares an intricate plan for projecting this power ashore. The CATF is responsible for the preparation of the overall STS movement and landing plan. That landing plan becomes the basis for organization and deployment of the entire ATF and leads to the determination of LF echelons.

(3) The landing plan is composed of:

(a) CI and intelligence assessment.

(b) Assault craft availability tables.

(c) Helicopter availability tables.

(d) Serial assignment.

(e) Assignment to shipping and airlift.

1. Assault Echelon.

2. Assault Follow-On Echelon.

(f) Assault and on-call schedule.

(g) Landing sequence table.

(4) The landing plan is executed through the STS movement. STS movement divides the unloading of the LF into two periods:

(a) The assault and initial unloading period is primarily tactical in character and must be instantly responsive to LF requirements ashore.

(b) The general unloading period is primarily logistic in character and emphasizes speed and volume of unloading operations.

(5) Other factors influencing the landing plan include:

(a) Priority of airlifted units.

(b) Liaison and supervision methods for monitoring deployment by all modes of transportation.

(c) Air movement tables for AMC airlift.

(d) Foreign Intelligence and Security Service activity.

c. Echelons of the Landing Force

(1) Assault Echelon. The AE includes:

(a) Those forces embarked in assault shipping that initiate the assault of the force beachhead. These forces are tailored units and equipment packages including the maximum amount of supplies (principally Class I, III, V and VIII) that can be loaded on assigned shipping, but not less than 15 days of supplies or days of ammunition (DOS/DOA).

(b) LF elements of the advance force deployed with sufficient supplies to accomplish their mission and sustain units until subsequent forces arrive.

(c) LF positioned by any mode at support bases and airfields in and adjacent to the objective area before the assault that provide initial combat capability to support the landing, e.g., advanced-based LF aviation. These forces will be deployed with sufficient supplies to sustain the force until arrival of the AFOE.

(2) Assault Follow-On Echelon. The AFOE consists of those assault troops, vehicles, aircraft equipment, and supplies that, although not needed to initiate an assault, are required to support and sustain the assault. In order to accomplish its purpose, it is normally required in the objective area no later than 5 days after commencement of the assault landing.

(a) The AFOE is organized for landing and embarkation based upon the anticipated requirements of operations ashore. The AFOE requires prioritized tactical loading, vice administrative loading, since access to its contents supports the concept of operations ashore. The ability to mass assault personnel

and materials and the flexibility to change time and place of landing dictate maximum use of sealift. As with the AE, elements of the AFOE may be deployed by airlift. The time required in-theater, lift availability, expected hostilities in the AOR, and availability of aerial ports of debarkation are but a few of the planning factors considered when contemplating deploying elements of the AFOE by airlift.

(b) Planned strategic sealift shipping support for an AFOE will be based on the number and capability of US Transportation Command (USTRANSCOM)-controlled, common-user ships, capable of offloading in-stream, which have coordinated between the supported combatant commander and USTRANSCOM for dedication to a mission. The supported combatant commander will list in the OPLAN the number, type, capability, SPOE, and required availability relative to C-day of formerly common-user ships coordinated with USTRANSCOM for planned support. The ships required to transport an AFOE will be deleted from the common-user sealift file used for evaluating the supported combatant commander's common-user sealift requirements.

(c) Coordinating, sourcing, and loading the AFOE are CATF and CLF responsibilities. Units with their equipment are marshaled at home stations and staged at points of embarkation (POE) in accordance with the time-phased deployment schedules. Materiel arriving from supply sources is aggregated at POEs under LF supervision.

(d) The AFOE requires prioritized combat loading because access to its contents supports the concept of operations ashore. Although there may be more use of commodity loading selective loading the loads must be integrated into the overall landing plan. The requirement to containerize AFOE material cannot be overemphasized. The capability of commands to containerize AFOE material will vary, depending on such factors as the source of accompanying supplies, the time-phased force requirement (more time would allow more containerization), ports of embarkation and debarkation container throughput capability, container handling and

transport equipment availability, container stuffing and unstuffing capability, logistics over the shore (LOTS) container handling capability, etc. Although CATF and CLF are responsible for planning and executing embarkation, more reliance may be given to civilian stevedores to perform the actual loading of commercial ships. In consultation with and with the approval of the CATF and CLF, the Military Traffic Management Command (MTMC) will provide stow plans, cargo documentation, and other port services in assisting the embarking command with the accomplishment of its planned load out.

(e) Ship unloading is directed by the normal STS control and support activities (PCO, HDC, TAC-LOG, LFSP, etc.). The size and organization of these agencies will change as the operation matures. Additional cargo handling battalion (CHB) and amphibious construction battalion (ACB) forces are required to support the offload of merchant ships. As they become accessible, developed seaports and aerial ports are used to supplement traditional beach operations, and the normal STS organization will be expanded to include them. CATF and CLF are responsible for debark and offload until termination of the PHIBOP. At that time, the responsibilities for debarking may be passed to another offload organization designated by higher authority. The PHIBOP would not normally be terminated until the entire AFOE is ashore. Continued offload under a Navy commander and/or transition of the offload to an Army commander is addressed in Joint Pub 4-01.6, "JTTP for Joint Logistics Over the Shore," and Joint Publication 4-01.5, "JTTP for Water Terminal Operations."

d. The Organization for Landing. This organization is the specific tactical grouping of forces for the amphibious assault. It is built around ground elements organized as battalion and regimental landing teams (BLT/RLT), CSS elements organized as parts of the LFSP, and aviation elements organized as assault support under overall integrated control of the Tactical Air Command Center (TACC). The BLT, a reinforced infantry battalion, is the basic task organization for movement from STS.

The BLT should be differentiated from the embarkation team or organization, which is an administrative group of forces for movement by sea or airlift.

e. The Organization for Embarkation. Organization for embarkation consists of a temporary task grouping of the LF, paralleling the special task grouping of naval forces established by CATF. These groups are formed to facilitate the planning and execution of embarkation at all levels of command.

f. Organization for Movement. Based on the landing plan and echelons of the LF, the ATF organizes its ships, self-deploying aircraft, and airlift for embarkation and deployment. This organization is based on the time-phased force requirements of the LF, naval task groups, and other units in the objective area.

(1) Transport Groups. Elements that directly deploy and support the landing of the LF are functionally designated as transport groups in the ATF task organization. Transport groups provide for the embarkation, movement to the objective, landing, and logistic support of the LF. They comprise all sealift and airlift in which the LF is embarked. Navy landing craft, and lighterage and cargo offloading and discharge systems to be employed in the STS movement, are organic or attached to the transport groups. Transport groups are categorized as follows:

(a) Airlifted groups.

(b) Navy amphibious ship transport groups.

(c) Strategic sealift shipping groups. These groups consist of ships from MSC's Nucleus Fleet, (including Maritime Prepositioning Ships (MPS)); US Flag shipping (ships in the Sealift Readiness Program (SRP); shipping provided to the Department of Defense through the Maritime Administration, to include effective US-controlled shipping (EUSC) and allied shipping; and Maritime Administration (MARAD)-controlled assets (National Defense Reserve Fleet (NDRF), to include the Ready Reserve Force (RRF)). These groups may include unique special-mission sealift assets such as hospital ships (T-AH), aviation logistics

support ships (T-AVB), auxiliary crane ships (T-ACS), and offshore petroleum discharge system (OPDS) tankers.

1. T-AVB. When Marine Air-Ground Task Forces (MAGTFs) are involved in PHIBOPs, a T-AVB will be included in any Marine Expeditionary Force (MEF) deployment. When activated and employed, the T-AVB provides dedicated sealift for movement of an intermediate maintenance activity (IMA) to support the deployment of USMC fixed- and rotary-wing aircraft units. The T-AVBs (one on each coast) are in Ready Reserve Force (RRF-5) status and would be available by N+5 (N-day is notification day) to sortie to the seaport/beach point of embarkation (SPOE).

2. T-AH. A T-AH may be employed in support of the ATF if the expected intensity or duration of the operation dictates. The T-AH is a floating surgical hospital with the capability to provide acute medical care to forward-deployed forces. The two T-AHs (one on each coast) are under the control of MSC in a Reduced Operational Status (ROS-5) condition.

(2) Movement Groups. Sealift, airlift, and self-deploying aircraft in the transport groups are organized for embarkation and deployment as movement groups. Movement groups are developed by dividing the ATF according to speed and characteristics of airlift or sealift and according to the time the forces are required in the objective area. Thus, there are pre-D-day Movement Groups that comprise advance force and are required to be in the objective area before D-day. There are D-day Movement Groups that comprise the Transport Groups of the main body of the ATF and appropriate screening and supporting groups. Post-D-day groups are the Transport Groups scheduled to arrive in the objective area with the AFOE no later than D+4, with their appropriate screening and supporting groups. Force modules are developed and entered into JOPES to track the movement of forces and equipment included in movement groups.

3. Modes of Transportation

a. Determinants of Transportation Modes. The time required in theater, suitability of materiel for sealift or airlift, availability of suitable aerial ports of debarkation, and lift availability are some of the major determinants for the mode of deployment.

b. Sealift. The ability to mass personnel and materiel, and the flexibility to change the time and place of loading, usually dictate a heavy reliance on sealift. The AE is embarked in amphibious ships equipped to conduct amphibious assault operations. The AFOE, on the other hand, is embarked primarily in strategic sealift shipping or aircraft.

c. Airlift. Strategic, theater, and self-deploying air assets may be used to move personnel and selected supplies and equipment.

d. Mode Integration. Movement via sealift and airlift assets must be fully integrated to optimize movement timeliness and minimize possible port throughput constraints. Both port loading considerations and modes of transportation must be fully integrated to ensure the smooth, coordinated flow of personnel and materiel into the AOA.

4. Integration of Deployment of Amphibious Forces in the Joint Deployment Process

a. Overview

(1) JOPES assists in developing and consolidating deployment data required for crisis action and execution planning, as well as monitoring of deployments on execution. The system can provide a comprehensive deployment picture to the National Command Authorities (NCA), Chairman of the Joint Chiefs of Staff, supported and supporting combatant commanders, and Services, as well as deploying commands, to allow timely decisions based on the evolving crisis situation and force flow. The deployment data base established in JOPES can be accessed and updated at all JOPES sites. (Access to specific plans and sites can be limited to the extent desired by using WWMCCS user identification permissions.)

(2) The deployment of the ATF is integrated into JOPES to provide a complete deployment picture for higher headquarters and generate or activate requests for all strategic lift (USCINCTRANS assets) that are essential parts of the ATF deployment. It is essential that accurate movement requirements be established in JOPES. The supported combatant commander, and those components and supporting commands providing forces, are responsible for providing specific requirements in JOPES. The JOPES publications provide detailed requirements and procedures. Refer to the Joint Training Manual, MCM 71-92, for required procedures during CINC-sponsored and CJCS-sponsored exercises. Because of the need to orchestrate the deployment of the ATF by all modes to meet the tactical requirements of the PHIBOP, CATF and CLF determine movement requirements and force arrival in the AOA.

b. Establishing and Updating Requirements. For USCINCTRANS components to provide strategic lift, transportation requirements must be identified.

(1) Based on guidance provided by the supported CINC, the CATF or CLF establish time-phased force deployment requirements and identify preferred modes of transport and ports of debarkation and destinations.

(2) Deploying units provide unit movement characteristics including time available and load data that are used to determine the number and types of strategic lift assets necessary to deploy the force.

(3) USCINCTRANS analyzes movement requirements and capabilities and makes recommendations to the supported CINC.

c. Scheduling and Tracking Strategic Airlift and SeaLift. When requirements are established in JOPES, USCINCTRANS will provide strategic lift for the deployment in accordance with the JOPES Procedures Manual. Strategic sealift and airlift are assigned by USCINCTRANS as directed by the supported CINC to meet the time-phased force deployment requirements of the ATF. Overall movement control procedures are contained in Joint Pub 4-01.3, "JTTP for Movement Control."

(1) Airlift. AMC develops and enters schedules in JOPES and executes the airlift in support of CATF and CLF. CLF, as the preponderant user of airlift in the ATF, may serve as the coordinating agent for ATF airlift requirements and scheduling. Using his movement control agencies, CLF plans and monitors the airlift to ensure integration with the sea movement. AMC airlift deploys in support of CATF, under control of USCINCTRANS, to meet required arrival times. Transport aircraft fall under control of CATF while in the AOA so that integration with the landing of sealifted forces is achieved and the unified air defense and airspace control of the AOA is maintained.

(2) Sealift. CATF plans, schedules, and executes ship movements. Normal USN MOVREP procedures are employed. From strategic sealift allocated by the NCA at execution, the theater combatant commander and USCINCTRANS will direct required fleet commanders and MSC to sail ships to their SPOE(s). At MTMC-controlled SPOE(s), MTMC assumes responsibility for reporting ship loading. The Naval Control of Shipping Organization (NCSORG) will file MOVREPS for ships on completion of loading and before sailing. The Navy component commander reports scheduled ship movements into JOPES in accordance with the JOPES procedures. At MTMC-controlled ports, strategic sealift ships are loaded under control of the CATF and CLF, in coordination with the MTMC, and deployed under the control of the Navy component commander. Strategic sealift ships convoy or deploy independently, depending on the threat and ship capability. Control during transit is vested in CATF or another fleet organization, but CATF is ultimately responsible for the ship's transit to arrive in the AOA as called for in the landing plan. While in the AOA, strategic sealift ships are under control of the same control organization that controlled the assault landing. Should a Maritime Prepositioning Force (MPF) reinforce the PHIBOP, the MPS are treated as "assault shipping," and the MPF arrival and assembly is integrated into the overall ATF STS control structure. If the MPF offload is separated by space or time from the main landing, a discrete MPF arrival and assembly organization would be used, treating the MPF as a separate force under CATF, but in essence conducting an independent offload. The conduct of MPF operations is addressed in Tactical Memorandum PZ 0022-1-87, Marine Corps Operational Handbook 7-6. Arrival of the AFOE in the AOA is governed by LF

requirements ashore contained in the landing plan, Although these requirements are situation-dependent, there would be no discernible division of the landing of the AE and AFOE--all the LF must be landed expeditiously. Generally, strategic sealift ships with the AFOE embarked would begin unloading no later than D+4, but may in fact be required to begin offloading sooner depending on the situation ashore. MEB and MEF personnel and unit equipment arrive ashore by D+9 and D+12, respectively. All Supplies should be ashore by D+15 for a MEB (30 DOS/DOA) and D+30 for a MEF (60 DOS/DOA). Organic aviation supply support requires 90 days of aviation spares and repair parts (computed at combat flying hours) for either a MEB or MEF. Such a timeline for the MEF provides the capability to build a stockpile of 30 DOS/DOA by D+30, thereby ensuring sustainment until the resupply pipeline can be established.

5. Overall Deployment Sequence, Options, and Integration of Strategic Mobility Enhancements.

a. Sequence of Events and Deployment of an ATF. The potential tactical employment requires planning, execution, and integration of the deployment regardless of mode of transportation to achieve a rapid buildup of combat power ashore. Preferably, forces will be organized, trained, marshaled, and deployed from the same geographical location. The ATF can be created in the objective area, using forward-deployed contingency forces and/or various strategic mobility enhancements, including maritime pre-positioning. This compositing method is mandated by the need for rapid deployment coupled with the reduced ability to mass amphibious ships and other forces because of normal peacetime dispositions.

b. Options for Deployment. Two deployment types must be considered before committing an ATF:

(1) Deliberate deployment from one geographical location.

(2) Composite deployment wherein:

(a) Forces from two or more geographical locations are deliberately deployed.

(b) Forward-deployed forces are integrated into the force.

(c) Strategic mobility enhancements (principally, maritime pre-positioning) are used to develop the force in-theater (vice in garrison) before deployment. This option is obviously more complex but is still governed by the same doctrinal precepts.

c. Intermediate Staging Bases. In some cases, it may be necessary or desirable to deploy forces through ISBs where the desired task organization for landing is developed from forces deployed administratively in strategic assets. This permits optimum tactical configuration of the forces to support the landing plan. ISBs play a large role when facilities in the AOA do not support the basing and/or terminal requirements of the strategic lift required to move the LF into the AOA. An ISB may serve as the site of the landing rehearsal. Further, once an ISB is established it may continue to serve as the operating base for the CSSE until termination of the assault. Forces deployed to an ISB remain under OPCON of CATF.

d. Deployment Using Strategic Mobility Enhancements. The deployment enhancements listed below improve the responsiveness of limited transportation resources and the effects of amphibious and strategic lift shortfalls.

(1) Forward-Deployed Forces. Forces deployed to forward areas can be used singly or in combination with other forces to comprise an assault force that can move rapidly to an objective area. In peacetime, forward-deployed forces possess limited forcible entry capability and sustainability when employed alone. The requirement for some strategic lift, both air and sea, will be reduced for the entire LF because the forward-deployed forces possess organic aircraft and lighterage for STS movement. An ISB may be required to enable the forward-deployed unit to be reconfigured to fit into the landing plan.

(2) Pre-positioning As an Enhancement

(a) Geographic Pre-positioning. The positioning of equipment in strategically important areas of the world provides the ability to deploy forces more rapidly by eliminating the need to move large amounts of materiel to the objective area. Theater mobility resources are needed to move the pre-positioned equipment.

(b) Maritime Pre-positioning. The pre-positioning of equipment and supplies on ships provides more flexibility than does geographic pre-positioning. The mobility of ships permits early movement toward a trouble area. The need for airlift and its underlying requirement for airfields, staging areas, security, and CI makes deployment of an MPF dependent on supporting strategic mobility resources. Two unique requirements of an MPF operation are (1) preparation of the ships and embarked watercraft and equipment before arrival in the operating area and (2) assessment of the port or beach and arrival airfield. To accomplish these requirements, planners must take into consideration the timing for deployment of the Offload Preparation Party (OPP) and the Surveillance-Liaison-Reconnaissance Party (SLRP). Positioning of the Maritime Pre-positioning Ships Squadron(s) (MPSRON) will dictate the timing of these deployments as will the necessity, if required, for augmentation from the Selected Reserves (SELRES) of the Navy Support Element (NSE), Amphibious Construction Battalion, and Navy Cargo Handling Force. The use of ISBs will be mandatory for reconstituting the prepositioned units and their fly-in elements, as well as configuring them to fit into the landing plan. Reconfiguration will be accomplished through compositing units into the task organization necessary to carry out the landing plan.

6. Command and Control. Because of the tactical employment inherent in PHIBOPS, CATF must have control of the strategic sealift, as well as the naval combatant ships as they enter the AOA. CATF does this under the delegated authority of the supported CINC. Additionally, CATF must orchestrate and direct the embarkation and movement of forces to the objective area through close coordination with supporting commands.

a. Strategic airlift is under the combatant command (command authority) (COCOM) of USCINCTRANS, a supporting commander.

b. Theater airlift is under COCOM of the supported CINC. OPCON may be passed by him to CATF. If strategic aircraft are used to support theater airlift operations

in the AOA, tactical control of these aircraft may be assigned to the supported CINC or CATF for the duration of the employment mission only.

c. When the LF executes an amphibious operation, Service components will monitor and perform deployments in accordance with and in support of ATF requirements. Movements of self-deploying aircraft are coordinated by the supporting CINC through the appropriate Service component. Forward-deployed ATF operations are coordinated by the supported CINC (USEUCOM, USSOUTHCOM, USCENTCOM).

d. Strategic sealift is under the COCOM of USCINCTRANS, a supporting commander. Sealift movements are controlled by the Navy component commander of the supported CINC through his NCSORG. This agency coordinates the movement of all merchant ships from SPOE to the objective area. Although CATF plans and monitors deployment of all movement groups, actual control may be vested in fleet task organizations in support of ATF requirements, with forces deployed by strategic lift assets. All of these activities may be supported by forward-deployed forces or other combat forces already in theater. The concept of the deployment includes the consideration of options, selection of deployment modes, organization of forces, incorporation of mobility enhancements, and integration of the ATF deployment into the overall joint deployment process.

CHAPTER III

ORGANIZATION FOR EMBARKATION

1. General. The organization for embarkation consists of temporary task organizations established by the CLF and a temporary organization of Navy forces established by the CATF. These task organizations are formed to simplify planning and facilitate execution of embarkation at all levels of command. No standard LF or Navy organization applies to all embarkation situations. For this reason, the task organizations conform to the circumstances of the embarkation and the requirements of the anticipated tactical situation. Once established, task organization titles of the various units are used exclusively throughout the embarkation phase. Parent unit designations are used for administrative purposes only. These temporary task organizations dissolve when directed by CATF and CLF or on termination of the PHIBOP.

2. Navy Organization

a. Administrative Organization. US Atlantic and Pacific Fleets are organized for administrative purposes into various type commands. A type commander has all the ships and forces of a particular type under his administrative command. Commander, Naval Surface Force, US Atlantic Fleet (COMNAVSURFLANT); Commander, US Marine Forces, Atlantic (COMMARFORLANT); and Commander, Submarine Force, US Atlantic Fleet (COMSUBLANT), are examples of type commands. The amphibious groups, squadrons, and ships of the Atlantic and Pacific Fleets come under the administrative control of the surface force commander with similar but not identical organizations. (See Figure III-1.)

b. The Fleet Commander has operational control but not administrative control of the Fleet Marine Force (FMF) Commander. The Commandant of the Marine Corps retains administrative control of the FMF commander. Yet, the FMF commander is still a fleet type commander.

(1) Amphibious Group (PHIBGRU). The commander of a PHIBGRU may serve as the CATF. The PHIBGRU will normally have amphibious squadrons (PHIBRONs) administratively assigned to it. In addition, the PHIBGRU is capable of simultaneous tactical control of assigned units in executing all phases of a PHIBOP, up to and including a MEF-size or equivalent organization, if required.

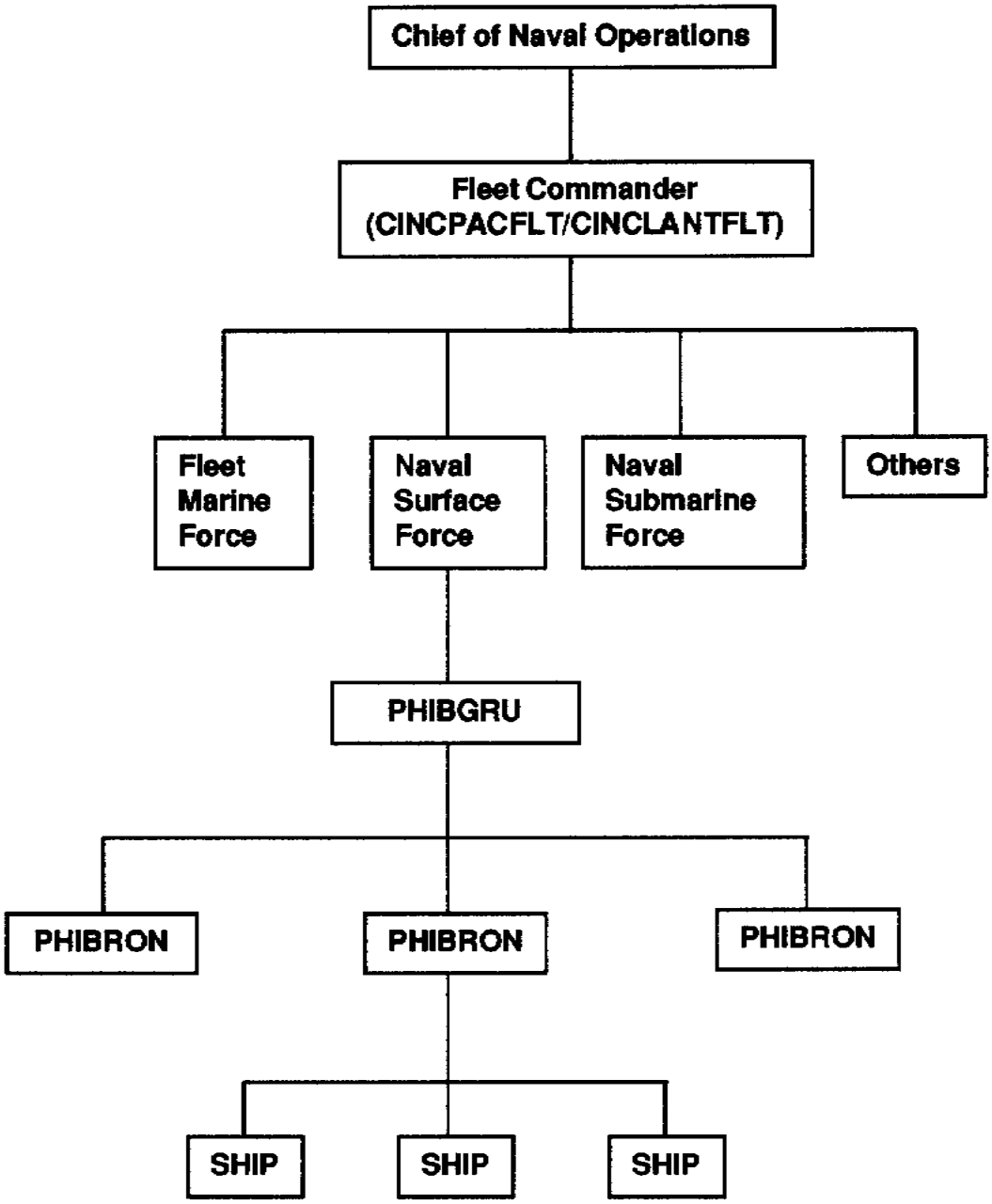

Figure III-1. Navy Organization Administration

Figure III-1. Navy Organization Administration

(2) Amphibious Squadron. There are both administrative and tactical PHIBRONs.

(a) Administrative PHIBRONS are administratively responsible for ships that are not assigned to tactical PHIBRONs (e.g., undergoing maintenance).

(b) Tactical PHIBRONs are administratively responsible for ships assigned either permanently or temporarily. The commander of a tactical PHIBRON may also serve as the CATF for forward-deployed Amphibious Ready Groups/Marine Expeditionary Units (ARGs/MEUs) and small-scale PHIBOPs. Additionally, the tactical PHIBRON commander and his staff are capable of:

1. Planning and conducting small-scale PHIBOPs.

2. Assisting the PHIBGRU in planning.

3. Serving as a subordinate command and staff with the ATF.

c. Task Organization. In forming the ATF, the task force commander may designate a subordinate commander(s) as the transport group commander(s). The transport group(s) provide for the embarkation, movement to the objective, landing, and logistic support of the LF. Initially, the transport group is a planning organization. As the scheme of maneuver and the landing plan are developed, shipping is allocated and organized into task units and elements as required to lift the LF. Meanwhile, the ships and various commanders of the transport group are in an administrative fleet organization. As operations begin, they change operational control (CHOP) through the various task organizations established to accomplish each phase of the naval mission. For example, under certain conditions, loading and movement control groups may be established to coordinate loading and move shipping to meet embarkation schedules. (See Chapter X, paragraph 3, and Figure III-2.)

d. Designator

(1) Task Designator. As the ATF organization develops, the commanders of transport groups, units, elements, and ships are identified by a task

designator. Corresponding LF elements will be assigned a task force designator, down through the BLT, squadron, marine service support group (MSSG)-level or equivalent unit and any subordinate unit physically separated from its parent command. Examples of task designation numbers are:

(a) Task force 12.
(b) Task group 12.1.
(c) Task unit 12.1.1.
(d) Task element 12.1.1.1.

(2) This system of identification is important to the ATF and LF and enhances coordination during planning. It also permits personnel to become familiar with the tactical organizations with which they will operate.

3. Landing Force Organization for Embarkation. The LF organization for embarkation is composed of embarkation groups, embarkation units, embarkation elements, and embarkation teams. Formation of the various embarkation echelons depends on the degree of decentralization of command and control (C2) essential to the successful accomplishment of the embarkation phase. The embarkation group and embarkation teams are always formed because these organizations represent the essential ingredients for embarkation; that is, the group as the major LF organization and the team as the smallest subordinate organization capable of planning and executing embarkation. The embarkation unit is usually formed to bridge the gap between the group and team organizations. The embarkation element is organized only when a complex situation requires additional organizations for control in planning and execution of embarkation. Joint Pub 3-02.1, "Joint Doctrine for Landing Force Operations," provides further details on LF organization.

a. Embarkation Group. The embarkation group has as its nucleus a major subdivision of the task organization of the LF, such as division, regiment, or other comparable LF organization. It is composed of two or more embarkation units (when formed), a combination of units and elements (when required), or two or more embarkation teams if elements and units are not formed. (See Figure III-3.) A transport group is the parallel naval organization.

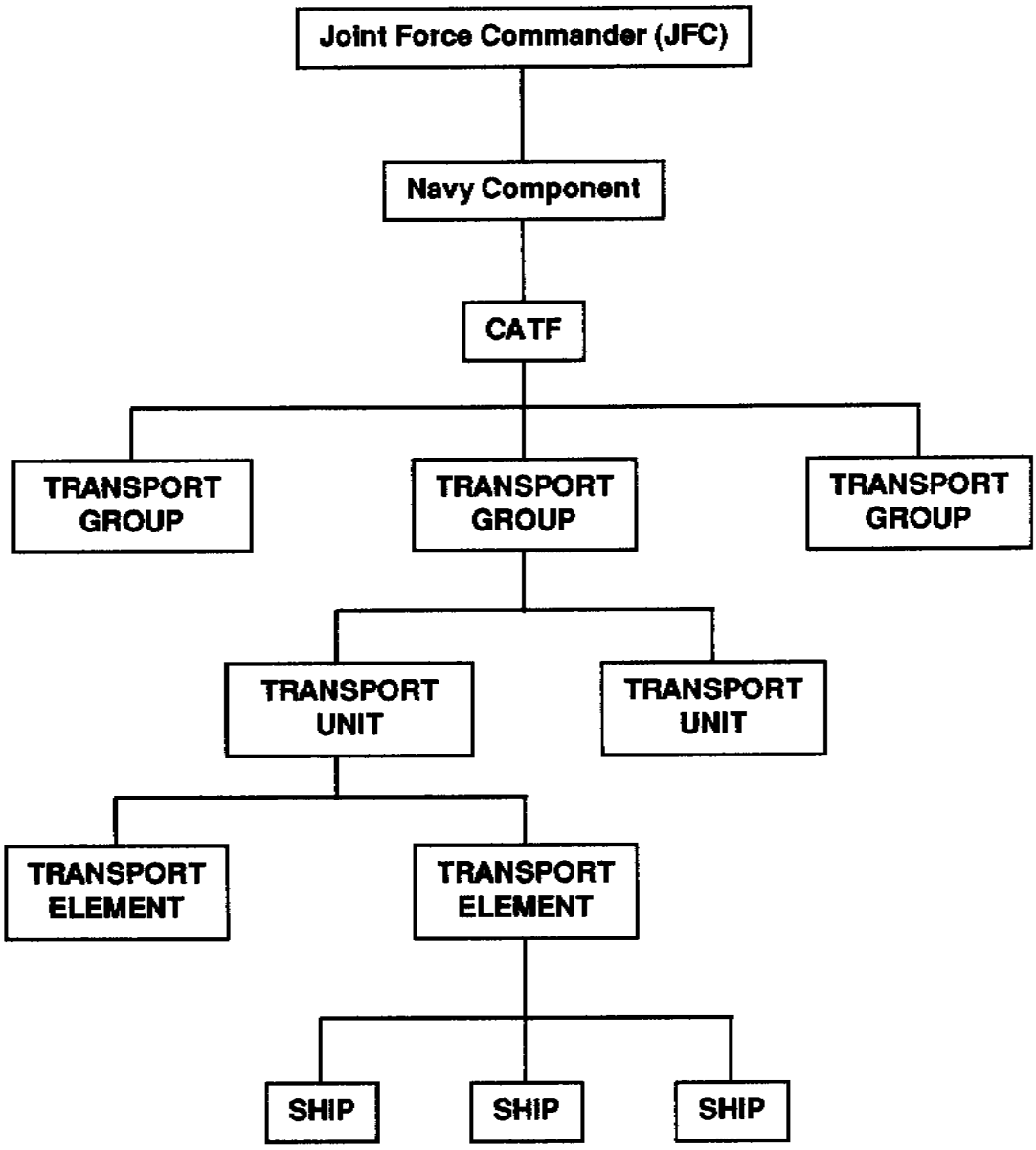

Figure III-2. Navy Task Organization

Figure III-2. Navy Task Organization

b. Embarkation Unit. The embarkation unit is the next subordinate organization below the embarkation group level. It consists of two or more embarkation elements (when formed) or two or more embarkation teams (when elements are not formed). The number of embarkation units formed will vary, depending primarily on the LF organization for landing, and geographical locations of both the embarkation areas and of the embarking units. It may be necessary to form embarkation units composed of embarking units performing special missions (e.g., advance force operations) in support of the main assault. A transport unit is the parallel naval organization.

c. Embarkation Element. The embarkation element (when formed) is the next subordinate organization below the embarkation unit level, except that its nucleus is normally the next lower organization in the chain of command. The embarkation element consists of two or more embarkation teams grouped to conform to the organization for landing. It may be necessary to form embarkation elements composed of organizations with special missions in support of the main assault. A transport element is the parallel naval organization.

d. Embarkation Team. The embarkation team is the basic organization for embarkation. It consists of the personnel, supplies, and equipment embarked in a single ship. An embarkation team may be comprised solely of, or be a grouping of, ground combat, combat support, combat service support, or aviation units. The single ship is the embarkation team's parallel naval echelon.

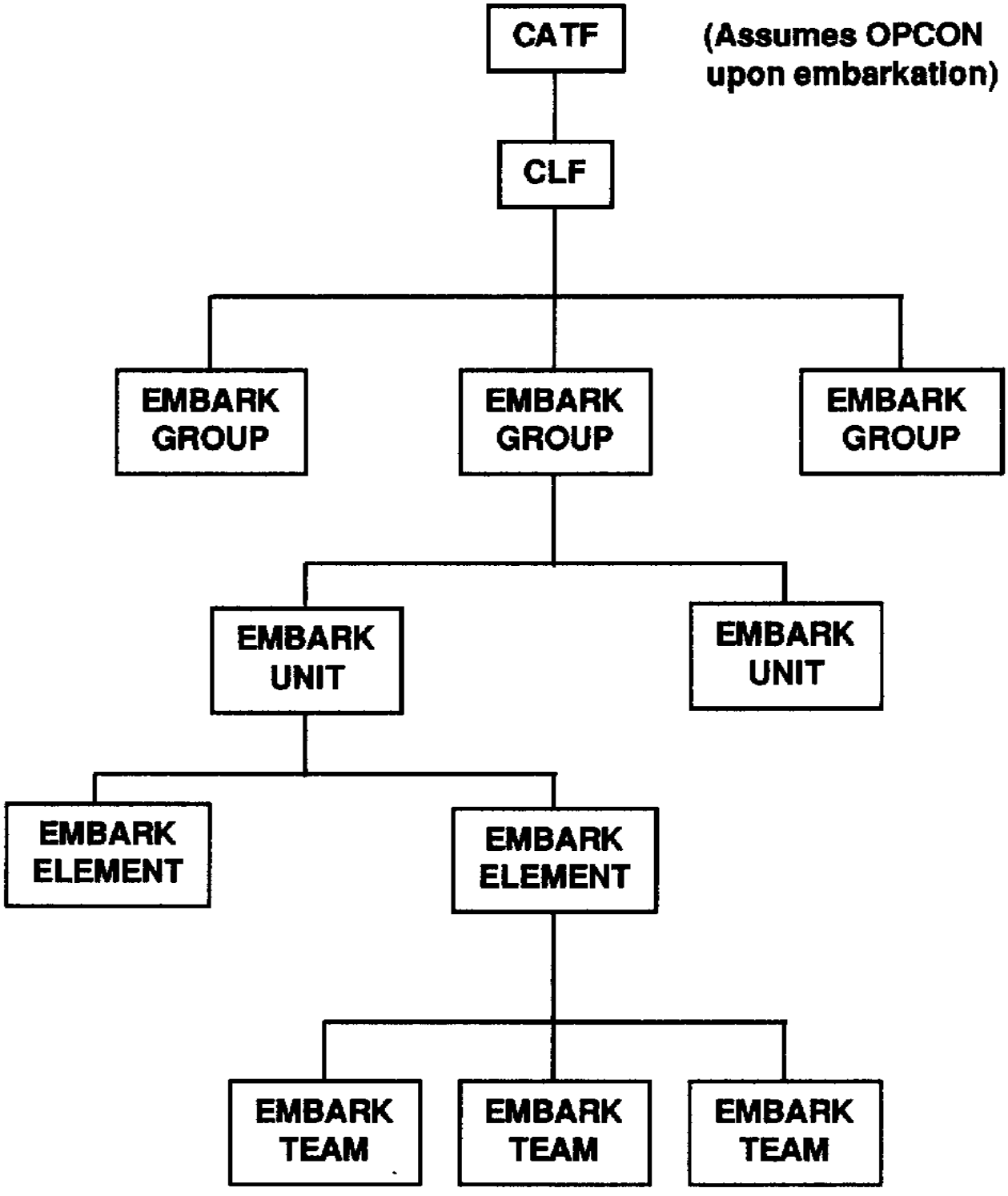

Figure III-3. Landing Force Organization for Embarkation

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CHAPTER IV

AMPHIBIOUS EMBARKATION PLANNING

1. General. Amphibious embarkation planning involves all measures necessary to ensure timely and effective outloading of the ATF. These measures range from a determination of overall shipping requirements and embarkation schedules at high levels to detailed loading plans for individual ships at the embarkation team level. Amphibious embarkation planning must begin early and proceed concurrently with all other planning. It requires constant coordination between all LF and naval command levels and a mutual understanding of the problems of each. It requires detailed knowledge of the characteristics, capabilities, and limitations of ships and their relationship to the personnel, supplies, and equipment to be embarked. When naval unit attachments such as Navy support elements and naval special warfare units augment the CATF staff, the CLF will normally be responsible for working their requirements into the embarkation plan.

2. Principles of Amphibious Embarkation Planning. The following three principles must be observed in planning embarkation of the LF for an amphibious assault.

a. Support the Tactical Plan. Loading plans must support the landing plan, scheme of maneuver ashore, and plan for landing supplies. Personnel, supplies, and equipment must be loaded in such a manner that they can be unloaded at the time and in the sequence required to support operations ashore. Therefore, the ship should be loaded in the reverse order specified in the landing plan and in the plan for landing supplies.

b. Provide for Unit Self-Sufficiency. Loading plans must provide for the highest possible degree of unit self-sufficiency.

(1) Personnel should not be separated from their combat equipment and supplies. Thus, weapon crews should be embarked in the same ship as their weapons, radio operators with their radios, drivers with their vehicles, and commanders and staff with their units.

(2) In addition, each unit should be embarked with sufficient combat supplies (prescribed and basic load) such as ammunition, POL, water, rations, medical supplies, and radio batteries to sustain its combat operations during the initial period ashore.

c. Provide for Dispersion. Loading plans must provide for dispersion of critical units and supplies. (See the definition of horizontal stowage in Chapter VI, subparagraph 6a.)

(1) At higher echelons, this can be achieved by dispersing critical units and supplies among several ships.

(2) At the individual ship level, this can be achieved by dispersing critical supplies among several stowage compartments that do not share the same debarkation route.

(3) The danger of not doing so is obvious. At higher echelons, if critical units and supplies are not dispersed, the loss of one ship or a relatively few ships could result in a loss of combat capability that might seriously jeopardize accomplishment of the overall ATF mission. At the individual ship level, the loss of one debarkation route (e.g. boom, elevator) might seriously endanger the ship's capability to provide timely debarkation of critical supplies.

3. Planning Considerations. Detailed planning for both the embarkation and the assault phase cannot be initiated by subordinate echelons until such time as the organization for embarkation, assignment to shipping, and initial draft of the landing plan have been promulgated. Embarkation is a result of the tactical plans, i.e., the scheme of maneuver ashore. Planning for embarkation is a reverse planning process; from objective, to beach or landing zone, to ship, to POE, etc. In planning for embarkation, consideration must be given to the following, which will affect both landing plans and embarkation plans:

a. Mission of the LF.

b. Limiting dates of the embarkation, rehearsal, movement, and assault phases. The timeframes for these phases establish dates against which embarkation planning and execution must proceed.

c. The organization for embarkation must support the mission of the LF. It is dependent on the earliest promulgation of those parts of the OPLAN impacting amphibious operations. This does not mean that

embarkation planners must wait for supporting plans to be completely developed. Embarkation planning must proceed concurrently with other planning.

d. Size and characteristics of the forces involved, both LF and naval, to include availability and characteristics of shipping and quantity and types of material to be embarked. Use of the minimum number of ships necessary to meet the requirements is an objective of embarkation planning. Units of the LF not required initially in the assault phases, or whose employment is deferred, should be loaded and dispatched so that arrival in the objective area is scheduled to coincide with their contemplated employment.

e. Availability of STS movement assets must be considered (e.g., landing craft and helicopters).

f. LF commanders and their staffs should be embarked in the same ships as corresponding naval commanders.

g. Embarkation areas and points must be selected. Selection is influenced by:

(1) Available space on docks, piers, and beach loading areas.

(2) Time available for loading.

(3) Availability of suitable storage facilities.

(4) Adequacy of road nets and space available for processing supplies and equipment brought into the embarkation areas.

(5) Availability of harbor services and other usable facilities.

(6) Availability of a suitably protected anchorage or roadstead.

(7) Suitability of beaches for the beaching of landing craft and ships and for the operation of amphibious vehicles.

(8) Availability of adequate airfield facilities adjacent to, or within a reasonable distance of, the embarkation area.

(9) Availability of landing craft to support embarkation aboard ships at anchor or not otherwise accessible to pierside loading facilities.

(10) Availability or suitability of embarkation point to support staging, movement, and loading of ammunition, fuel products, and/or other hazardous or dangerous material.

h. Marshaling areas may be required when bivouac or camp areas are so located that movement to embarkation areas cannot be accomplished without interruption. To facilitate final movement to embarkation areas, the CLF selects sites for embarking units close to the embarkation areas. A marshaling area must provide adequate space and facilities to accommodate designated units. Consideration must be given to the dispersion of marshaling areas to avoid vulnerable concentrations. To preserve combat readiness when marshaling areas are used, schedule deploying units to keep them in these areas for a minimum length of time consistent with transportation, security, and maintenance requirements. This may require the maintenance of a marshaling area organization after the principal elements of the force sail. A marshaling area organization will also facilitate the accommodation of those LF echelons that may proceed to the objective area in later increments. Embarkation task organization should be used during marshaling so that a final check of personnel and equipment may be made and deficiencies corrected.

i. The feasibility and desirability of embarking personnel and equipment using helicopters must consider the following factors:

(1) Suitable area ashore, either in base camp, marshaling area, or embarkation areas, to satisfy requirements for flight operations (takeoff, landing, fueling, maintenance), cargo operations (assembly in accordance with loading plans, movement to helicopter loading points, cargo hookup to helicopter), and personnel operations (assembly, forming heli-teams, movement to helicopter loading points).

(2) Time available for loading. This is influenced by the number and type of helicopters available for loading, their lift capability, the distance to be traversed, speed, and number of personnel and amount of cargo to be loaded. Further, the variables introduced by weather or

other factors that affect optimum flight operations may require more time than if embarkation is accomplished at dockside.

4. Sequence of Planning. Following receipt of the initiating directive for a PHIBOP, LF embarkation planning begins at all echelons and proceeds concurrently. Major steps will overlap but are usually accomplished in the following general sequence:

a. The CATF and CLF establish liaison between the corresponding Navy, LF, and other forces (if so organized).

b. The CATF obtains, from the Naval forces and other forces that will be embarked in LF spaces, lift requirements (e.g., personnel, supplies, and equipment) and provides these requirements, with recommended locations, to the CLF for inclusion in the LF assignment to shipping.

c. The CLF obtains lift requirements (e.g., personnel, supplies, and equipment) from subordinate units. These lift requirements are used to establish the LF shipping requirements.

d. The CLF determines his shipping requirements to support the force echelonment (AE and AFOE) and submits the shipping requirements to the CATF (see Chapter IV, paragraph 6).

e. The CATF allocates shipping to the LF and organizes this shipping to satisfy the LF's organization for embarkation. Then the CLF allocates the shipping to subordinate embarkation echelons. Allocation of shipping is published in the form of an organization for embarkation.

f. The CATF distributes ship's loading characteristics pamphlets (SLCPs) to the CLF.

g. The CLF establishes the LF organization (to include attached naval units) for embarkation.

h. The CATF establishes the Navy organization for embarkation.

i. The CLF allocates shipping to subordinate echelons of the LF in the form of an OE&AS and issues SLCPs.

j. The CATF and CLF select and prepare embarkation areas.

k. The CLF selects and prepares LF (to include attached naval units) marshaling areas.

l. The CATF and CLF, with consideration for CI activity, determine control, security, communications, facilities, and MHE requirements for the embarkation phase.

m. The CATF and CLF develop berthing and loading schedules.

n. The CLF develops movement schedules for LF (to include attached naval units) personnel, supplies, and equipment to the embarkation areas.

o. The CATF and CLF prepare, review, approve, and promulgate embarkation plans and detailed loading plans.

5. Echelonment of Forces

a. Under ideal conditions, the commander would reach the AOA with the preponderance of his force embarked aboard amphibious shipping. LF fixed-wing tactical aviation would deploy into bases within striking distance of the objective area. This ideal situation, however, is unlikely to exist except for relatively small-scale operations. In the majority of amphibious assaults, the forces that must be projected onto a hostile shore and sustained in battle for an extended duration will require significant strategic and theater airlift and sealift. Further, the ATF will, in many cases, be in competition for limited transportation resources with other forces during the deployment.

b. During deployment planning, decisions are reached to provide for a time-phased echelon of personnel and supplies into the objective area. Echeloning is required not only because of the limited availability of airlift and sealift but also for control purposes to ensure the orderly buildup of forces and sustainment. Normally, three separate transportation echelons are required for the amphibious assault: AE, AFOE, and follow-up.

c. Assault Echelon. The AE is the element of a force that is scheduled for initial assault on the objective area. The AE includes the elements that arrive in the AOA on, or in some cases, before D-day aboard amphibious assault shipping; air-transported units such as airborne

forces that are scheduled for the initial assault; self-deploying aircraft; and AMC air-transported support units required for the initial assault.

d. Assault Follow-On Echelon. In PHIBOPs, the AFOE is the echelon of the assault troops, vehicles, aircraft equipment, and supplies that, though not needed to initiate the assault, is required to support and sustain the assault. In order to accomplish its purpose, it is normally required in the objective area no later than 5 days after commencement of the assault landing. Shipping assigned to the CATF is called assault shipping. When sufficient amphibious assault shipping is not available, a portion or all of the AFOE may be transported in MSC-provided shipping. AFOE shipping may arrive on a time schedule, with some elements required as early as D-day, or remain in a specified operating area until called forward by the CATF as requested by CLF. Planning for the AFOE must be done concurrently with planning for the assault echelon and the follow-up.

(1) The portion that arrives by surface is carried in assault shipping. When sufficient amphibious assault shipping is not available, MSC-provided shipping may be assigned.

(2) The portion that arrives by air is delivered to an airfield for subsequent introduction into the operation. Because an airfield may not be available in the objective area, these units, vehicles, aircraft, equipment, and supplies may be required to fly in at any time, e.g. pre-D-day, D-day, or post-D-day.

e. Follow-Up. In amphibious operations, follow-up is the landing of reinforcements and stores after the assault and assault follow-on echelons have been landed. Follow-up provides the logistic pipeline to sustain the LF. In addition, the follow-up echelon may provide forces for base development and tactical forces for subsequent operations ashore. Follow-up forces and the sealift or airlift carrying these forces are not a part of the ATF.

6. Assault Shipping Requirements. Assault shipping carries the LF to the objective area. Assault shipping includes the ships that carry the AE and AFOE. Assault shipping requirements must be determined as early as possible in the planning phase so that all echelons of the LF may proceed with detailed planning. Initially, tentative requirements

are determined, and as planning proceeds and more specific information becomes available, requirements are refined and shipping requirements confirmed. A checklist giving the step-by-step procedure for determining assault shipping requirements is contained in Appendix A.

a. AE. The AE is transported in amphibious shipping.

b. AFOE. When sufficient amphibious shipping is not available, a portion or all of the AFOE may be transported in MSC-provided ships. Embarkation problems associated with the loading of MSC-provided ships are:

(1) Limited advance information concerning the ships' loading characteristics (deck diagrams, trim and stability tables, etc.).

(2) Problems associated with commercial charters (especially foreign-flagged charters).

(a) Ship masters and crews unfamiliar with military cargo (especially munitions).

(b) Ship owners, masters, and crews not willing to sail into a hostile area. The owners, masters, and crews of both US- and foreign-flagged ships may accept the charter but have second thoughts of sailing in harm's way into an amphibious objective area once hostilities commence.

(c) Ships not structurally designed to carry heavy outsized cargo like tanks, etc. (e.g., car carriers).

(d) Ships not having an instream offload capability. All MSC-provided ships should be capable of instream offload or the capability to augment their instream offload must be organic (e.g., auxiliary crane ship (T-ACS), roll-on/ roll-off (RO/RO) discharge facility (sea state sensitive)).

(e) Acceptability of commercial charters (Coast Guard inspections).

(f) The type of charter and its stipulations.

(3) Because of the problems associated with the use of commercial chartered ships as AFOE shipping, MSC-provided ships should be selected with the following priority from the following sources:

(a) Ships owned by the US Government (MSC nucleus fleet, RRF, etc.).

(b) US-flagged commercial ships.

(c) As a last resort, foreign-flagged commercial ships.

7. Allocation of Shipping

a. The CATF allocates shipping to the LF and organizes this shipping to satisfy the LF's organization for embarkation. Then the CLF allocates the shipping to subordinate embarkation echelons. The allocation is published in the form of an OE&AS (see paragraph 12, this chapter). This allocation of shipping can be done by two methods:

(1) Allocate the shipping to embarkation groups, which would, in turn, allocate the shipping to subordinate embarkation echelons and so on down to the embarkation team level.

(2) Allocate to all embarkation echelons down to and including the embarkation teams. When compositing a MAGTF or joint or combined LF, this detailed allocation of shipping may be necessary at the LF level because only the LF level has all the information concerning the composition of the entire LF.

b. Early publication of the OE&AS is mandatory. Detailed load planning cannot proceed until embarkation echelons have their shipping allocations. Because of the time sensitivity of the OE&AS, it is published by message and the date-time group (DTG) is referenced in the actual operation plan or order. Initial allocation of shipping may be made by type and number of ships only, to be followed as soon as practicable by specific ship allocation.

c. All echelons must be kept informed as to the exact composition of assigned shipping, date of arrival in the embarkation area, and time of availability for loading. As planning proceeds, subordinate units must also be kept

informed as to any changes in assigned shipping and, in turn, must state promptly any changes in requirements brought about by changes in the tactical data.

8. Transport Group and Embarkation Group Planning

a. Embarkation Group Commander. After receiving the allocation of shipping, the embarkation group commander proceeds to:

(1) Determine the number of embarkation units to be formed. This determination is based primarily on:

(a) The task organization for landing.

(b) Basic concepts of the landing plan, including the means of landing (landing craft, amphibious vehicles, and/or helicopters).

(c) Requirements for phasing units, supplies, and equipment to the objective area. This latter consideration, when coupled with shipping limitations and turnaround time to the objective area, may reveal a need for using assault shipping in a turnaround capacity.

(d) The geographic locations of the POEs and the LF units.

(2) Determine the personnel and materiel to be assigned to the respective embarkation units. This step requires close interstaff coordination and is based largely on the recommendations of principal subordinate commanders. The composition of the respective embarkation units and the shipping assigned to each is recorded on the OE&AS Table. Its preparation is discussed in paragraph 12 of this chapter.

b. Transport Group Commander. Based on the assignment of shipping and the embarkation group's requirements, the transport group commander, in his own order, specifies the composition of the transport organization to lift the embarkation group.

c. Limited Revisions. The actions outlined above (subparagraphs a and b) must be accomplished early in the planning phase. This is mandatory so that detailed planning involving shipping, including the many facets of

the landing plan, can be accomplished by lower echelons. As this planning proceeds, limited revisions to the initial draft of the OE&AS table will invariably occur.

9. Transport Unit (Element) and Embarkation Unit (Element) Planning (Organizing Into Elements and/or Teams)

a. Embarkation Unit (Element) Commander. The embarkation group's OE&AS provides an embarkation unit commander with information concerning the composition of his unit and the shipping assigned for its lift. Embarkation planning at the unit (element) level involves the breakdown of the embarkation unit (element) into teams. Staff procedures and considerations at the unit and element level parallel those at the embarkation group's except they are smaller in scope.

b. Transport Unit (Element) Commander. Like the staff procedures and considerations at the embarkation unit and element level, those of the transport unit and element parallel the transport group's except they are smaller in scope.

10. Embarkation Team Planning. Effective embarkation planning by the embarkation team is dependent on the early receipt of information from higher authority. Detailed planning begins with determination of team composition and ship assignment. The following is included in the embarkation planning of the team:

a. Designation of team embarkation officer (see Chapter V, paragraph 4).

b. Establishment and maintenance of close and continuous liaison with the ship through the appropriate ship representative (i.e., combat cargo officer (CCO) or first lieutenant) whenever possible.

c. Establishment and maintenance of close and continuous liaison with the group (unit or element) embarkation officer and the units or detachments assigned to the embarkation team.

d. Receipt of the necessary embarkation planning data (force lists) from the units assigned to the embarkation team. If the units assigned to the embarkation team have a different (especially larger) lift requirement than allocated in the group, unit, or element OE&AS, the embarkation team must seek resolution from the embarkation group, unit, or element.

e. Preparation of the detailed loading plan and approval by the ship's commanding officer.

f. Preparation of the embarkation plan in conjunction with the group (element or unit) embarkation officer.

g. Designation of ship's platoon, billeting, mess, and guard officers. (See Chapter IX, paragraph 4, and Chapter X, paragraph 7.)

h. Establishment of liaison with the embarkation control officer in the embarkation area. (See Chapter X, paragraph 5.)

i. Input to the embarkation group, unit, or element as to the schedule for movement of the embarkation team's personnel, supplies, and equipment to the ship's staging area. (See Chapter IX, paragraph 11.)

j. Coordination and preparation of plans with the embarkation control officer (in charge of the embarkation area) and the units assigned to the embarkation team for security for the embarkation team's cargo. (See Chapter X, paragraph 9.)

11. Loading Plans and Embarkation Plans

a. Loading Plan. A detailed ship loading plan is prepared by the embarkation team and approved by the ship's commanding officer. (See Chapter VII.)

b. Embarkation Plan. An embarkation plan is prepared by the embarkation group (unit or element). (See Appendix B.)

12. Organization for Embarkation and Assignment to Shipping. The OE&AS table is always published at the LF and/or embarkation group level, but it may also be published at the embarkation unit and/or element levels as appropriate. The OE&AS includes LFs and naval forces that are embarking on ships (AE and AFOE), self-deploying aircraft, and AMC airlift. The OE&AS is a part of the embarkation plan. Chapter III provides information on the organization for embarkation and Chapter IV, paragraph 7, provides information on the allocation (assignment) of shipping. The OE&AS is normally prepared in two mediums.

a. The first is in the form of a worksheet (spreadsheet). This facilitates allocation of units and supplies to assigned shipping. Because of the numerous

computer software spreadsheet programs available and to allow flexibility, no specific format for the OE&AS worksheet (spreadsheet) is specified at the joint doctrine level. In the future, standard computer software will be developed that will automate this process and electronically interface the OE&AS to other processes.

(1) Figure IV-1 provides an example of an OE&AS worksheet (spreadsheet) used by the LF level when there is more than one embarkation group (e.g., AE, AFOE, self-deploying aircraft, AMC airlift). The format of Figure IV-1 could also be applied by an embarkation group and unit when there is more than one embarkation unit or element (e.g., AE and/or AFOE embarking multiple seaports, AMC airlift embarking from multiple aerial ports).

(2) Figure IV-2 provides an example of an OE&AS worksheet (spreadsheet) used by the LF and/or embarkation group, unit, or element when there is only one embarkation group, unit, or element. It provides allocation directly to the embarkation team level.

(3) Except for the different embarkation organization (group, unit, element, or team) across the top, the format for the OE&AS is basically the same.

(a) Embarkation organizations (group, unit, element, or team) are listed across the top.

(b) The capacity of assigned shipping is listed under the embarkation organization. Each ship's capacity is obtained from the information contained in its SLCP. The format for an SLCP is published by the Surface Force Commanders, Pacific and Atlantic. Embarkation officers (LF, group, unit, element, and team) study the SLCP to determine berthing capacities, landing craft and aircraft (helicopters and VTOL fixed-wing) capacities, square and cubic feet capacities, hazardous material capacities (including ammunition), fuel, etc. Broken stowage factors are applied as appropriate.

(c) Embarking units with their lift requirements are listed down the side.

(d) The OE&AS worksheet (spreadsheet) totals at the bottom show the number of personnel, supplies, and equipment planned for lift in the embarkation organization (group, unit, element, or team). This total cannot exceed the transport group, element, unit, or ship capacity.

(e) The OE&AS worksheet (spreadsheet) totals at the side show the total amount of personnel, supplies, and equipment required to be lifted by the embarking unit. This total should equal the amounts allocated to each embarkation organization.

ORGANIZATION FOR EMBARKATION AND ASSIGNMENT

EMBARKATION GROUP	ALPHA	BRAVO	CHARLIE
EMBARKATION GROUP COMMANDER			
EMBARKATION GROUP OFFICER			

SHIP CAPACITIES

	TOTAL CAPACITY								
SHIP/NUMBER		LHA-4	LPD-12	LST-1197	LPH-9	LSD-41	LST-1179	F/A-18C (24)	EA-6B (6)
OFF/ENL	854/7841	172/1731	77/588	18/307	185/1342	27/376	18/307	F/A-18D (12)	KC-130 (6)
VEHICLE SQFT	205265	28930	13104	12521	4227	19067	12521	EA-6E (10)	OV-10D (6)
CARGO CUFT	563414	156323	32439	3122	51996	5002	3122		
BULK POL (GAL)	2364600	410000	355000	26000	400000	53000	26000		
		LCC-20	LKA-117	LST-1180	LKA-113	LPD-15	LHD-1	FLIGHT FERRY	
		56/153	16/211	18/307	6/211	77/588	174/1720	(IF APPLICABLE)	
		2746	33657	12521	33657	13104	19210		
		0	83569	3122	83569	32439	108711		
		120000	54800	26000	54800	355000	484000		
		TOTALS	357/3297			497/4544			
			103479			101786			
			278575			284839			
			991800			1372800			

UNIT LIFT REQUIREMENTS

ORGANIZATION	OFF-ENL VEHICLE SQFT-S/T BULK CARGO-S/T	ALPHA	BRAVO	CHARLIE
H&S CC (-), 4TH MEB	76-289 2776-22.7 1231-6.2	63-215 2118-17.3 950-4.8	13-74 658-5.4 281-1.4	
////////EXCERPTS////////				
VMFA-115	50-258 9118-72.3 11200-83.7			50-258 9118-72.3 11200-83.7
////////EXCERPTS////////				
TOTAL UNIT LIFT REQUIREMENTS	775-6922 183593-5888.1 391006-2044.7	303-2802 95899-3075.6 207810-1086.7	422-3862 87694-2812.5 183196-958.0	50/258 9118-72.3 11200-83.7

LANDING FORCE SUPPLIES

SUPPLY CLASS TYPE	CUFT - S/T (GAL)	ALPHA	BRAVO	CHARLIE
CLASS I				
RATIONS	6768-106.8	3511-55.4	3257-51.4	
LUBE OIL 50 WT	2256-36.4	1281-20.7	975-15.7	
LUBE OIL 90 WT	336-.04	168-0.2	168-0.2	
BULK POL				
JP-5	(2009910)	(1102500)	(907410)	
CLASS IV				
MULTIPACK	8648-37.6	5000-21.7	3648-15.9	
CLASS VIII				
AMAL	19488-139.2	11253-80.4	8235-58.8	
TOTAL SUPPLIES	9096-922.4 (2009910)	50313-462.8 (1102500)	48783-459.6 (907410)	
GRAND TOTAL	775-6922 183593-5888.1 90102-2957.1 (2009910)	303-2802 87957-2931.9 236789-1906.2 (1102500)	422-3862 86518-2883.9 242113-1949.7 (907410)	50-258 9118-72.3 11200-83.7

Figure IV-1. Embarkation Group Organization for Embarkation and Assignment to Shipping Table

Figure IV-1. Embarkation Group Organization for Embarkation and Assignment to Shipping Table

CLASSIFICATION

ORGANIZATION FOR EMBARKATION AND ASSIGNMENT TO SHIPPING
UNIT: EMB UNIT ALPHA

EMB TEAM		ALPHA 1	ALPHA 2	ALPHA 3
EMB TEAM CMDR		LTCOL_____	MAJ_____	MAJ_____
EMB OFFICER		CAPT_____	1STLT_____	1STLT_____
		SHIP CAPACITIES		
SHIP - NAME		USS_____	USS_____	USS_____
NUMBER		LHA-4	LPD-12	LST-1197
	TOTAL CAPACITY			
CAPACITY - OFF - ENL	267-2626	172-1731	77-588	18-307
VEHICLES - SQFT	54555	28930	13104	12521
BULK CARGO - CUFT	191684	156323	32439	3122
BULK POL - GAL	796971	415719	355000	26252
		UNIT LIFT REQUIREMENTS		
ORGANIZATION	LIFT REQUIREMENT OFF- ENL VEHICLE SQFT - S/T BULK CARGO CUFT - S/T			
CMD ELEMENT	17-147 1460-26.8 1202-12.5	15-132 401-8.2 1202-12.5	0-5 59-1.6 0	2-10 1000-17.0 0
DET RAD BN	2-17 433-10.4 905-4.5	1-10 321-7.8 725-3.6	1-7 112-2.6 180-0.9	
HMM-264 (REIN)	51-300 22000-188.2 5100-30.6	51-300 22000-188.2 5100-30.6		
"G" BTRY 3/10	9-136 4312-170.3 801-4.0	7-81 3732-160.5 676-3.4	2-55 580-9.8 125-0.6	
DET H&S, MSSG-26	22-50 856-21.0 4720-23.7	1-6 112-2.6 1567-7.8	21-42 550-13.2 3117-15.6	0-2 224-5.2 36-0.3
"F" CO., 2/8	6-165 0 550-2.8			6-165 0 550-2.8
DET AAV	2-45 3510-358.4 1300-7.8			2-45 3510-358.4 1300-7.8
TOTAL UNIT LIFT REQUIREMENTS	109-860 32801-775.1 14578-85.9	75-529 26566-367.3 9270-57.9	24-109 1301-27.2 3422-17.1	10-222 4734-380.6 1886-10.9
		LANDING FORCE SUPPLIES		
SUPPLY CLASS TYPE	CUFT - S/T			
CLASS I RATIONS	15400-150.5	4400-43.0	11000-107.5	660-6.5
CLASS III LUBE OIL 30 WT LUBE OIL 50 WT LUBE OIL 90 WT	1692-26.7 564-9.1 84-0.1		1692-26.7 564-9.1 84-0.1	
BULK POL JP-5 (GAL) 415500				
CLASS IV MULTIPACK	2162-9.4		2162-9.4	
CLASS VIII AMAL	4872-34.8	2436-17.4	2436-17.4	
TOTAL SUPPLIES 415500	24174-230.4	6836-60.4	17938-170.2	660-6.5
GRAND TOTAL 415500	109-860 32801-775.1 39352-316.5	75-529 26566-367.3 16106-118.3	24-109 1301-27.2 21360-187.3	10-222 4734-380.6 2546-17.4

Figure IV-2. Embarkation Unit Organization for Embarkation and Assignment to Shipping Table

Figure IV-2. Embarkation Unit Organization for Embarkation and Assignment to Shipping Table

b. The second medium is normally a message that promulgates this information in the embarkation plan. Early publishing of the OE&AS message is mandatory. See subparagraphs 7b and c for more information. The detailed format for the OE&AS is published by fleet type commands (Naval Surface Force and Fleet Marine Force).

c. In addition to the assignment of a task designator described in Chapter III, subparagraph 2d(1), an OE&AS designator will be assigned. Normally, task designators are not available when the OE&AS is published early in the planning phase and task designators tend to follow a tactical organization rather than an embarkation organization. The following applies to the assignment of an OE&AS designator (see Figure IV-3 for an example):

(1)	Group	Alphabetical Character
(2)	Unit	Numeric Character
(3)	Element	Alphabetical Character
(4)	Team	Numeric character *

* Team numbers will not be duplicated within the LF.

Group Examples:

Group: A, B, C, D, etc.

Unit Examples:

Units: A-1, A-2 or B-1, B-2, etc.

Element Examples:

Element: A-1-A, A-1-B OR B-1-A, B-1-B, etc.

Team Examples:

Embarkation team A-1 (No units/elements formed)*
Embarkation team A-1-1 (No elements formed)
Embarkation team A-1-A-1 (All echelons formed)

*** Most common**

Figure IV-3. Organization for Embarkation and Assignment to Shipping (OE&AS) Designators (Example)

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CHAPTER V

EMBARKATION AND COMBAT CARGO OFFICERS

1. General. Staff officers specially trained in the techniques of planning and supervising loading for a PHIBOP are assigned to LF organizations, major amphibious ships, and naval staffs within the amphibious forces. In the LF, such officers are called embarkation officers. They have the status of special staff officers in the headquarters in which they are assigned. In a naval organization, such officers are called ship (or staff) CCOs. The LF embarkation officers and CCOs advise and assist their respective commanders in planning the embarkation and supervising its execution. When the CATF delegates the CLF the responsibility to embark naval attachments, the embarkation officer and CCO will adjust the embarkation plan to accommodate these units. The embarkation officers and CCOs of related LF and naval organizations maintain continuous liaison.

2. Required Knowledge. Embarkation officers and CCOs must be familiar with the following in order to efficiently carry out their respective duties:

a. Naval customs and terminology.

b. Standard ship organization.

c. Applicable tables of organization, allowances, and equipment.

d. ATF organization.

e. LF organization.

f. LF tactical and logistic plans.

g. Classification of supplies and equipment.

h. Standing operating procedures (SOPs) for preparing supplies and equipment for loading, including packing, crating, marking, and waterproofing.

i. Characteristics of hazardous or dangerous cargo (e.g., ammunition, electrolyte, compressed gasses, lithium batteries, corrosives) for loading purposes, including packaging, handling, stowage, and security requirements. Some categories of ammunition (e.g.,

self-contained systems like missiles, grenades) have special security requirements when embarking them on commercial shipping (especially foreign-flagged ships).

j. Characteristics of classified cargo (e.g., cryptographic) and sensitive cargo like the M1A1 tank.

k. Format and proper use of the SLCP.

l. Loading and unloading time factors.

m. Characteristics of amphibious and strategic ships, strategic airlift, landing craft, other amphibious vehicles, and helicopters.

n. Current directives for LF operational reserve material (LFORM).

o. Foreign intelligence activity impacting on loading and unloading.

3. Embarkation Officers and Assistants and Combat Cargo Officers and Assistants in Garrison

a. Unit Embarkation Officers and Assistants. Every unit down to battalion or squadron size has an embarkation officer and assistant(s) assigned. The duties of this officer are covered in local SOPs.

b. Combat Cargo Officers and Assistants (Ship and Staff)

(1) Ship. All major amphibious ships (LHD, LHA, LPH, LKA, LPD, and LSD(CV)) have a Marine officer and Marine enlisted personnel assigned as a part of the ship's company as the CCO and combat cargo assistant (CCA).

(2) Staff. The Surface Force Commands (Atlantic and Pacific) and PHIBGRUs and PHIBRONs have a Marine officer and enlisted personnel assigned to the staff as the CCO and CCA.

4. Embarkation Officers and Assistants and Combat Cargo Officers and Assistants During an Amphibious Operation. Corresponding levels of embarkation officers and CCOs within the organization for embarkation area are shown in Figure V-1.

Landing Force Unit	Naval Unit
Landing Force Embarkation Officer.....	Amphibious Task Force Combat Cargo Officer
Group Embarkation Officer.....	Transport Group Combat Cargo Officer
Unit or Element Embarkation Officer.....	Transport Unit or Element Combat Cargo Officer
Team Embarkation Officer.....	Ship Combat Cargo Officer

Figure V-1. Landing Force or Naval Unit Embarkation and Combat Cargo Officers

a. Embarkation Officers and Assistants During an Amphibious Operation

(1) Landing Force Embarkation Officer. The duties of the LF embarkation officer include the following:

(a) Heads the embarkation section on the special staff of the CLF.

(b) Determines LF shipping requirements for submission to the CATF.

(c) Recommends allocation of assigned shipping.

(d) Recommends scheduling of assault shipping (AFOE) to meet the LF tactical and logistic requirements.

(e) Prepares the LF embarkation plan for approval by the CLF.

(f) Coordinates all loading activities of the LF.

(g) Maintains a complete and current file of SLCP for amphibious ships and loading characteristics data for other type ships that may be assigned for an operation.

(h) Maintains a complete and current file of Marine Corps LFORM loading plans for all ships assigned for an operation that have LFORM embarked.

(2) Group Embarkation Officer. The group embarkation officer:

(a) Heads the embarkation section on the special staff of the embarkation group commander.

(b) Obtains and maintains the embarkation data for the embarkation group.

(c) Obtains names and types of ships to be assigned for the operation.

(d) Obtains and maintains complete and current file of SLCPs for amphibious shipping and loading characteristics data for other type ships, such as aircraft carriers and MSC ships assigned for the operation. (See Chapter XIV.)

(e) Obtains and maintains copies of Marine Corps LFORM loading plans for all assigned ships with LFORM embarked and provides copies of applicable plans to pertinent embarkation unit, element, or team embarkation officers for use in shipload planning.

(f) In conjunction with principal staff officers of the embarkation group and subordinate commanders, prepares the Group OE&AS Table (see Figure IV-1). This table is based on the organization for landing, the basic concepts of the landing plan, and the shipping requirements submitted by embarkation echelon commanders.

(g) Advises and assists, whenever possible, the embarkation unit commanders in the preparation of their respective OE&AS Tables.

(h) Early in the planning phase, obtains data on stevedoring and MHE.

(i) Prepares a berthing and loading schedule in conjunction with the staff CCO of the transport group lifting the embarkation group. This schedule is then published as an annex to the embarkation plan.

(j) Schedules and assigns marshaling areas and embarkation areas to subordinate embarkation units.

(k) Prepares a complete group embarkation plan for approval by the embarkation group commander.

(l) Coordinates and supervises all loading activities within the embarkation group.

(m) During the STS movement, functions as a member of the TAC-LOG on the central control ship or other designated ship.

(3) Unit or Element Embarkation Officer. Duties of the unit embarkation officer include:

(a) Heads the embarkation section on the special staff of the embarkation unit commander.

(b) Prepares, in conjunction with the principal subordinate commanders and staff officers of the embarkation unit, the OE&AS table for approval by the embarkation unit commander.

(c) Assigns and schedules the use of cargo assembly areas, vehicle staging areas, and embarkation points to subordinate embarkation elements or teams. Assignments are based on marshaling area and embarkation area assignments made by the embarkation group.

(d) Prepares the complete unit embarkation plan for approval by the embarkation unit commander.

(e) Advises element or team embarkation officers in the preparation of loading plans.

(f) Coordinates all loading activities of subordinate embarkation echelons.

(g) During the STS movement, functions as a member of the TAC-LOG on a designated ship.

(4) Team Embarkation Officer

(a) Assignment. The team embarkation officer is a commissioned officer qualified in the field of embarkation. He is from the embarking organization forming the nucleus of the embarkation team. His assignment to such duty is temporary but, upon appointment, he should be relieved of other duties.

(b) Assistants. Qualified assistants should be assigned to the team embarkation officer early in the planning phase. Usually, one officer and several enlisted personnel are assigned.

(c) General Duties. General duties of the team embarkation officer include:

(1) Acts as direct representative of the embarkation team commander in matters pertaining to team embarkation and cargo loading.

(2) Effects and maintains liaison between the embarkation team commander and the commanding officer of the ship.

(3) Prepares detailed loading plans for the ship to which his embarkation team is assigned. In the preparation of loading plans, he is usually assisted by the ship CCO.

(4) Coordinates and supervises execution of the loading plan.

(5) Assists in planning for and executing unloading.

(d) Detailed Duties. A checklist of the duties of the team embarkation officer during each phase of the PHIBOP is provided in Appendix C.

b. Combat Cargo Officers and Assistants During an Amphibious Operation. Staff CCOs are assigned to naval staffs within the amphibious forces. These assignments

are to administrative organizations. With the transition from administrative to task organization, these officers assume the following duties:

(1) Amphibious Task Force Staff Combat Cargo Officer

(a) The duties of the ATF staff CCO include advising the CATF on the allocation of assault shipping and the staff supervision of loading and unloading the ships assigned to transport the LF units, supplies, and equipment. He also has a similar responsibility for AFOE shipping.

(b) The ATF CCO should have complete knowledge of the composition and schedules of the assault follow-on and follow-up echelons. He should know the type of cargo in each ship, as well as its unloading capability.

(c) The ATF CCO must be thoroughly familiar with the operations and capabilities of ports of embarkation (POEs) used by the ATF.

(2) Transport Group Combat Cargo Officer. Duties of the transport group CCO include:

(a) Advises and assists the transport group commander in matters concerning embarkation, cargo stowage, and unloading.

(b) Acts as liaison officer between the transport group commander and the embarkation group commander.

(c) Maintains a complete file of amphibious ship characteristics. This file should contain cargo handling and stowage characteristics and performance records obtained under all operating conditions.

(d) Coordinates activities of the transport unit or element CCOs.

(e) Collects the loading plans of the transport group.

(f) Maintains up-to-date records of embarkation and unloading progress and compiles periodic reports required by higher authority.

(3) Transport Unit Combat Cargo Officer. Duties of the transport unit CCO include:

(a) Advises and assists the commander on matters concerning embarkation, cargo stowage, and unloading of ships.

(b) Acts as liaison officer between the commander and the corresponding embarked unit commander.

(c) Maintains a file of SLCPs of all amphibious ships to advise on the capabilities of these ships.

(d) Advises and coordinates the activities of ship CCOs.

(e) Collects the loading plans for ships of the transport unit.

(f) Reviews loading and unloading plans.

(g) Maintains statistical records of ship cargo handling characteristics and performance to intelligently advise or recommend the allocation of units and cargo.

(h) During embarkation and unloading, compiles required periodic reports of progress for transmission to higher authority.

(4) Transport Element Combat Cargo Officer. The transport element, when formed under the transport unit, normally consists of so few ships that the staff CCO is not required. However, when the size and composition of this echelon generates a valid requirement for a staff CCO, his duties parallel those of a transport unit CCO.

(5) Ship Combat Cargo Officer

(a) Assignment. The ship CCO is a commissioned or warrant officer qualified in the field of embarkation. The CCO is a member of the ship's complement. Each major ship of the amphibious force normally has a trained Marine officer assigned to this duty. Ships with CCO billets include the assault cargo ship (LKA), amphibious assault ship, (LPH), general purpose amphibious

assault ship (LHA/LHD), amphibious transport dock (LPD), and LSD-41(CV). On amphibious ships, such as the tank landing ship (LST) and the landing ship dock (LSD) where no Marine CCO is provided, a Navy officer, normally the ship's first lieutenant, functions as the ship CCO.

(b) Assistants. Each Marine CCO is permanently assigned a CCA. The LHA/LHD CCO is assigned three CCAs; all other CCOs have one CCA assigned. The CCA is a Marine staff noncommissioned officer and, like the CCO, is a member of the ship's complement.

(c) General Duties. General duties of the CCO include:

1. Acts as direct representative of the ship's commanding officer.

2. Effects and maintains liaison with the team embarkation officer.

3. Assists the team embarkation officer in preparing detailed loading plans for the ship.

4. Coordinates and supervises execution of the loading plan.

5. Assists in planning for and executing unloading.

(d) Detailed Duties. A checklist of the duties of the CCO during each phase of the PHIBOP is provided in Appendix D.

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CHAPTER VI

LOADING AND STOWAGE

1. General. This section describes the types of ship loading and the various methods of stowing cargo in a ship. Also described is the preparation of supplies and equipment for embarkation. The manner in which a ship is loaded is based on the order in which forces are to be landed and the order in which equipment and supplies will be unloaded. Task forces are seldom alike, equipment and supplies differ, and the priority in which materiel is required ashore varies with the assigned mission. These factors require detailed study to determine the best manner of loading to support the operation.

2. Types of Loading. The general types of loading in PHIBOPs are as follows:

a. Administrative Loading. Administrative loading is defined as a loading method that gives primary consideration to achieving maximum use of billeting and cargo space without regard to tactical considerations. Equipment and supplies must be unloaded and sorted before they can be used. Administrative loading is not suitable for amphibious assault operations. (See Chapter XIII.)

b. Combat Loading. Combat loading is defined as a loading method that gives primary consideration to the facility with which troops, equipment, and supplies can be unloaded ready for combat rather than to economical use of ship space. Combat loading is the arrangement of personnel and the stowage of equipment and supplies in a manner designed to conform to the anticipated tactical operation of the organization embarked. Each individual item of equipment and supply must be stowed aboard the ship so it can be unloaded at the time and in the sequence that will most effectively support the planned scheme of maneuver ashore. Whenever possible, each ship must be loaded to provide maximum flexibility to meet changes in the tactical plan and facilitate discharge of cargo to meet emergency calls for equipment or supplies. Three ways of combat loading may be employed, depending on the mission, organization, types of equipment assigned to the force (including ships), and the planned tactical employment of the force. These ways are the following:

(1) Combat Unit Loading. Combat unit loading is the loading of an assault element of the LF, with its essential combat equipment and supplies, in a single

ship, in such a manner that it will be available to support the tactical plan on debarkation. Combat unit loading provides maximum flexibility to meet changes in the tactical plan and is the most common type of combat loading in embarkation load planning.

(2) Combat Organizational Loading. Combat organizational loading differs from combat unit loading in that it is without regard to tactical considerations on debarkation. It permits debarkation of complete units and equipment that will be available for tactical employment after assembly ashore. This method is more economical in ship space than combat unit loading.

(3) Combat Spread Loading. Combat spread loading is one method by which the desired dispersion of personnel, equipment, and supplies among various ships is achieved. An LF organization is loaded on two or more ships. This method is commonly used when loading organizations are equipped with numerous vehicles and/or large amounts of heavy equipment. Combat spread loading also permits maximum flexibility and a rapid buildup ashore.

3. Types of Cargo. Cargo to be loaded aboard ship is divided into four major groupings by physical configuration as follows:

a. Vehicles. Includes all wheeled or tracked vehicles (whether self-propelled or towed) and certain nonvehicular equipment, such as skid-mounted generators that require square foot stowage and cannot be stacked.

b. Standard Cargo. Includes individual items of equipment and cargo packaged in boxes, crates, etc., which can be carried, stacked, and otherwise handled without MHE. Size and weight of each individual package or item is normally limited to a two-man lift.

c. Unitized Cargo. Consists of items of equipment or supplies that have been grouped into larger packages to facilitate loading, unloading, and transporting using available MTE such as forklifts, pallet jacks, cranes, and container handlers. There are basically two methods of unitizing: palletizing and containerizing.

(1) Palletizing. The most common form of palletizing is banding similar items (e.g., rations,

ammunition) to a standard 40-inch by 48-inch or 32-inch by 40-inch pallet. Normally, supplies and equipment are palletized to permit stacking.

(2) Containerizing. Containerizing is the stuffing of containers such as pallet boxes, CONEX boxes, PALCONs, ISO containers, SIXCONs, and MILVANs with supplies and equipment. Larger containers (e.g., MILVANs, ISO containers) are often stuffed with palletized cargo (e.g., ammunition, rations). Because amphibious ships are not equipped to handle large containers, they are unsuitable for assault echelon operations and should not be embarked without prior coordination with the individual ship.

d. Bulk Petroleum, Oil, and Lubricants. Bulk POL includes gasoline and JP-5 stored in the ship's tanks to be pumped into LF vehicles aboard ship; into intermediate carriers (such as collapsible bladders in landing craft) for transportation ashore; or directly ashore (via bottom laid or floating pipeline) to the LF bulk fuel system. Gasoline may not be loaded without prior coordination with the ship.

4. Stowage Considerations. Based on specific load planning factors, cargo may be categorized as follows:

a. D-1 Cargo. D-1 cargo consists of those supplies and equipment issued to embarked forces before their going ashore. They may be loaded as standard or unitized cargo and may include weapons, rations, ammunition, or specialized equipment. The key consideration in planning the stowage of D-1 cargo is easy accessibility for issue before opening of hatches and commencement of unloading.

b. Critical Supplies. The CLF designates those supplies for which an immediate need ashore is anticipated. These supplies are usually grouped into packages containing various commodities (e.g., ammunition, medical supplies, and batteries). Critical supplies may be preloaded in landing craft or amphibious vehicles as floating dumps, prestaged aboard ships for immediate transport by helicopter, or prestaged for emergency transport by air or surface means aboard multipurpose ships.

c. Ammunition. When planning the stowage of ammunition, special planning and safety considerations apply. Ammunition, both air and ground, is normally packaged as unitized cargo and can only be stowed in compartments that have been specially designed for that purpose.

Special ammunition for units attached to the CATF should be considered when the CLF has the responsibility for Class V stowage. When planning the stowage of ammunition, consideration for the compatibility of stowage among various types of ammunition must be made in accordance with OP-4, OP-4550, CFR 46, and CFR 49.

d. Petroleum, Oils, and Lubricants. POL includes all petroleum products for which special stowage is required. Like ammunition, stowage of POL is normally restricted to specially configured compartments designed for that purpose. POL may be packaged (as either standard or unitized cargo) or may be handled as bulk POL and stowed in ship's tanks. The stowage must provide accessibility to ensure expedient transfer to the supported weapon system (i.e., tanks, artillery) before debarkation.

e. Other Hazardous Cargo. Hazardous cargo, other than ammunition or POL, also requires special stowage considerations. Other hazardous cargo includes, but is not limited to, compressed gas, trioxane, and lithium batteries. Stowage of all hazardous cargo must be coordinated with the ship and in accordance with CFR 46 and CFR 49 regulations.

f. Vehicles. The proper stowage of vehicles requires precise planning and exacting attention to detail to ensure that vehicles will be unloaded rapidly and in such a manner as to support the plan for landing.

g. Vital Supplies. Vital supplies are those supplies, designated by the CLF, that are vital to the success of the mission. These normally include, but are not limited to, water, ammunition, rations, and medical supplies. These supplies are normally horizontally stowed--split between two or more compartments that do not share the same debarkation route. Vital supplies are also normally stowed with constant accessibility to the debarkation means (accessible stowage).

h. General Cargo. General cargo consists of all LF cargo not otherwise categorized (i.e., other cargo). General cargo may be packaged either as standard cargo or unitized cargo. It includes organizational equipment, repair parts, field fortifications, and other items of cargo for which special stowage is not required. It is normally stowed in designated cargo holds but may be stowed in the same compartments with vehicles.

i. Troop Space Cargo. Troop space cargo includes all cargo planned for stowage in those spaces designated for billeting and working aboard the ship. It includes individual baggage, essential records, office equipment, manuals, tools, repair parts, and other items that must be accessible to the LF after embarkation and unloading in the objective area. Because of space limitations aboard ship, troop space cargo must be kept to a minimum. Because of MHE servicing and billeting spaces limitations aboard ship, the troop space cargo is packaged as standard cargo and must be hand-carried.

j. Mobile-Loaded Cargo. Mobile-loaded cargo consists of items that are preloaded in LF vehicles before embarkation. Planning stowage of mobile-loaded cargo is accomplished concurrently with planning the load of the vehicles concerned. However, embarkation planners must ensure that vehicle stowage makes adequate allowance for the increased weight and possible change to external configuration resulting from each vehicle's mobile load.

5. Factors to Consider in Combat Loading

a. Assault vehicles and critical supplies must be loaded in such a manner that no other cargo interferes with their accessibility and unloading priority.

b. In stowing cargo, a percentage of space is invariably lost between boxes, vehicles, around stanchions, and over cargo. Collectively, these losses are expressed in terms of percentages known as a broken stowage loss. The factor will fluctuate depending on the type and size of vehicles, type and size of general cargo, experience of loading personnel, type of loading, method of stowage, and configuration of the compartment.

c. All holds of a ship are loaded and unloaded simultaneously, if possible. This permits the most efficient use of ship facilities and reduces loading and unloading time. Loading and unloading time tables, maintained by ship's personnel and based on past experience, provide a basis for planning balanced hold loads. Unloading priorities and space limitations may result in one hold being loaded entirely with vehicles or heavy lifts. In this case, the fewer number of lifts would result in a shorter unloading time.

6. Methods of Stowage. Stowage is the method of placing cargo into a single hold or compartment of a ship to prevent damage or shifting. There are several methods by which

equipment, supplies, and materials required in a PHIBOP are stowed. These methods are designed to afford quick and immediate access to, and unloading of, cargo in order to make it available in the planned sequence in support of the LF. They also provide the necessary flexibility to meet contingencies as they arise. Normally, a combination of stowage methods could be used in combat loading of a single ship.

a. Horizontal Stowage

(1) When used in connection with the entire ship, the term horizontal stowage means the fore and aft distribution of unit equipment and types of supplies so that similar items can be simultaneously unloaded from two or more holds or compartments.

(2) When the term is applied to a single hold, it means the distribution of like items in horizontal layers throughout the hold or compartments. Horizontal stowage of a single hold permits the best discharge rate of like-items and normally results in better use of space. However, it limits selectivity of discharge and should be employed only after careful consideration of the requirements for items so loaded during the assault phase of a PHIBOP.

b. Vertical Stowage. Vertical stowage of unit equipment or a given class of supplies is a method of stowage within a single compartment by which the loaded items are continually accessible for unloading, and the unloading can be completed without corresponding changes or prior unloading of other cargo. Like items are loaded in vertical columns throughout the compartment so that items are available at any stage of the unloading.

c. Block Stowage Loading. A method of loading by which cargo for a specific destination is stowed together. The purpose is to facilitate rapid offload at the destination with the least possible disturbance of cargo intended for other points.

7. Landing Serials

a. Serial Assignment. Serial compositions and their sequence for landing must be considered in preparing loading plans. Serial numbers are used to identify all elements of the LF and are loaded to support the planned sequence for landing. Serial numbers (which are a means of identification, not a statement of priority) are

published in the serial assignment table that forms part of the landing plan. The planned order for landing serials is published in the landing sequence table, which also forms part of the landing plan. A single serial number is assigned to each unit or grouping, including its equipment (except floating dumps), which for tactical and logistic reasons is to be:

(1) Embarked entirely in one ship.

(2) Landed as a unit at one beach or helicopter landing zone.

(3) Landed at approximately the same time.

b. Simultaneous Unloading. To be effective, each serial number must be loaded in a way that permits its simultaneous unloading. This increases the difficulty of planning, loading, and stowage. To achieve simultaneous unloading of all elements of a serial, the embarkation officer must spread the serial throughout the various holds of the ship. Serials, therefore, must be realistically composed. The planners who organize the serials must avoid the following:

(1) Assigning too many items to one serial. This results in either the means of landing being held up until the entire serial is unloaded or in sending the serial ashore in increments. Either case results in inefficient use of the landing means. The first eventuality can cause serial delay in overall unloading time. The second defeats one of the major purposes of serialization control.

(2) Assigning too many items requiring the same offloading device (landing means). Because all these items must then be stowed in the same hold, unloading will be time consuming.

8. Preparation of Supplies and Equipment. The preparation of supplies and equipment for embarkation is an LF responsibility. Preparation includes packing, crating, unitizing, and marking supplies and equipment, and preparing vehicles for loading (including provision of special slings if required). Normally, the various Services or headquarters of higher echelons of the LF will publish SOPs or regulations that prescribe techniques for preparation of supplies and equipment for embarkation. Adherence to the following rules for packing and crating will save space and lessen damage to cargo:

a. To the maximum degree possible, maintain uniformity in crate, box, and other container sizes to facilitate stowage and handling and preparation of loading plans.

b. Pack types of supplies, such as ordnance, electronic or signal, motor transport, and general supply separately to facilitate identification and control. Only related items should be packed in the same box or crate.

c. Pad and reinforce containers when necessary to ensure protection of fragile items and prevent damage to the container and its contents.

d. Waterproof boxes or crates containing items subject to moisture damage or deterioration.

e. Apply corrosion-preventive materials or other appropriate preservatives to items requiring such protection.

9. Markings. A marking system indicates organizational ownership, contents, stowage location, size, and, when required, source and destination of containers. Marking will be in accordance with parent-Service directives.

a. NATO Markings. Marking instructions for movement of NATO military cargo for international movement by all international means of transport, except where the move is national in character and handled exclusively by US shipping, is covered in NATO STANAG 2023.

b. Stowage Designators

(1) Stowage designators indicate whether cargo is to be stowed in troop spaces or in hold stowage. Three different colored disks are painted on cargo and used as stowage designators:

(a) Yellow Disk. Cargo that must be accessible to unit personnel during the voyage; troop space cargo.

(b) White Disk. Unit equipment and supplies that must be on the same ship as the unit but need not be readily accessible during the voyage; hold stowage on the same ship as the owning unit.

(c) Red Disk. Unit equipment and supplies that must accompany a unit but need not necessarily

be on the same ship; an example of cargo with the red circle would be bulk supplies or spare parts for which there is no anticipated early need ashore.

(2) Each disk, regardless of color, will have a Unit Personnel and Tonnage Table (UP&TT) line number painted on it in a contrasting color (white on red, black on white, black on yellow). When the disks are painted on the cargo, they serve as an aid in warehousing procedures, because only that cargo painted with disks will be loaded.

c. Box Number. The box number enables each embarking unit to have some means of identifying and locating its boxes. The box number consists of the UP&TT line number and a unit-assigned four-digit consecutive number stenciled in the upper left-hand corner of each box. However, each Service may specify some other numbering system currently in use by the Service. Marine Corps units that are presently required to use the Marine Corps Field Warehousing numbering system may use the fifth through eighth digits of the warehouse number as the box number or add an assigned consecutive number as the box number. Whatever system is used within a unit, measures will be taken to ensure that box numbers are not duplicated.

d. Cubic Feet and Weight. The volume in cubic feet and weight in pounds are placed on each box, crate, and container.

e. Administrative Markings. Administrative markings may be required by unit SOPs. They supply amplifying data such as source, content, and destination of the container.

f. Security. Units may desire to cover tactical markings to preclude unauthorized personnel gaining knowledge of unit identification during movement. Normally, this will be accomplished when security of movement is a prime consideration.

10. Vehicle Preparation

a. General. Preparation of vehicles for loading includes inspections to ensure the presence and satisfactory condition of all required on vehicle equipment (OVE), spare tools, and lifting fixtures

(shackles). Instructions for preparation of vehicles for loading are normally prescribed in SOPs. Examples of these instructions are:

(1) Fuel tanks filled not to exceed three-fourths capacity, and a reserve supply of fuel and lubricants in 5-gallon cans secured to vehicles.

(2) Fuel, lubricating, cooling, and ignition systems checks, and tires inflated to the specified loading pressure.

(3) Vehicles to be landed across the beach should be waterproofed.

(4) When required, cargo compartment bows should be removed, secured together, and attached to the body of the vehicle. Canvas tops should be folded and placed in the vehicle.

(5) Cargo loaded in vehicles should be securely cross-lashed. Careful consideration must be given to overhead clearance when mobile-loading cargo.

b. Markings. Vehicles should be marked on each side of the bumpers, on each vehicle side (usually on doors), and on the hood top to indicate the ship's hull number, hold level in which the vehicle will be stowed, unloading priority number, and landing serial number.

11. Unitized Cargo. The principal devices used for unitizing cargo are pallets and containers. The following factors must be considered in determining the percentage of cargo to be unitized:

a. Beach and landing zone conditions, including surf, gradient, exits, and soil.

b. Type and quantity of mechanical loading and unloading equipment available to the ships and to troops ashore.

c. Availability of pallets and containers.

d. Difficulties imposed by transfer of cargo at transfer lines if they are employed.

e. Amount and types of supplies to be embarked.

12. Advantages and Disadvantages of Pallets and Containers

a. Advantages

(1) Provides faster unloading of ships, landing craft, and aircraft (but only when compatible MHE is available afloat and ashore).

(2) Permits compact packaging of items otherwise difficult to handle; for example, barbed wire.

(3) Eliminates extra handling and reduces the number of personnel required for cargo handling afloat and ashore.

(4) Pallets can be used for dunnage after supplies are removed.

(5) Containers reduce pilferage and protect supplies from weather.

b. Disadvantages

(1) Costly in construction, labor, time, and material.

(2) Requires special handling equipment, both aboard ship and ashore.

13. Vehicle Stowage Planning

a. Stowage Considerations. Many details must be considered in planning the stowage of vehicles including size, shape, weight, unload priority, and serial grouping. Since vehicles and cargo may be loaded in the same compartment, and vehicles normally have higher priority for unloading, space available for cargo cannot be accurately determined until vehicle stowage planning is complete. The following specific rules apply when planning vehicle stowage:

(1) Each vehicle occupies deck space of specific size and shape.

(2) Overhead hatches must be large enough and/or ramp clearances must be sufficient to allow passage of vehicles.

(3) Overhead clearances within assigned spaces must be sufficient to permit movement to and from the stowage location.

(4) If unloading is to be by boom, crane, or helicopter, accessible booms or cranes or available helicopters must have sufficient capacity to lift the vehicle with its load of cargo.

(5) Each vehicle must be stowed to ensure that it can be unloaded in accordance with its assigned priority number.

(6) A marriage; i.e., a towed vehicle and its prime mover, must be stowed in the same compartment to ensure that they will not be separated during debarkation.

(7) Stowage must be planned so that vehicles can be moved to the ramp, access doors, or the space under the overhead hatch square without excessive maneuvering.

(8) Vehicles must usually be stowed fore and aft to preclude loosening of lashing caused by the side-to-side movement (roll) of the ship. Individual SLCPs and/or the CCO can be consulted for exceptions to this general rule.

(9) Space permitting, vehicles in the same serial should not be stowed on different deck levels of the same hold. This would result in excessive unload times because of the requirement to open the between deck hatch.

b. Stowage Procedures

(1) The embarkation officer prepares a template for each vehicle to be stowed. Each template is prepared to the same scale as that used in the stowage diagrams. The embarkation officer places the following information on each template (see Figure VI-1):

(a) Vehicle priority number (in parentheses).

(b) Priority number of the other vehicle that constitutes a marriage (if applicable).

(c) Landing serial number.

(d) Vehicle description.

(e) Vehicle height (feet and inches).

(f) Gross weight of vehicle (pounds).

(g) Organization (company or battery, battalion, regiment).

Figure VI-1. Vehicle Template

14. Unitized Cargo Stowage Planning. Stowage of unitized cargo involves many of the same considerations as stowage of vehicles. This is particularly true in the case of MHE lifts (any single item of unitized cargo that exceeds 6,000 pounds) and outsized cargo (any single item of unitized cargo, except vehicles, that exceeds 72 inches in any direction). The size, shape, and construction of various items of unitized cargo, along with the availability of MHE (e.g., forklifts, pallet jacks, pallet transporters) are the primary considerations for proper stowage planning. Allocation of specific deck space (square feet) must be made. Some items can be stacked and others cannot because of their size, shape, strength, or weight. The stowage of pallets and other items of unitized cargo should be planned for under or near the overhead hatch square where they can be reached by the cargo hook. The following rules or guidelines apply:

a. Do not stow unitized cargo on top of standard cargo.

b. Do not stack pallets more than three high without specific approval of the ship and due consideration for the ability of the bottom pallets to handle the load.

c. When forklifts or pallet jacks are not available, plan to stack pallets no more than three high directly under the hatch square, two high adjacent to the hatch square, and one high elsewhere in the compartment.

d. Stowage location of pallets and other unitized cargo containing hazardous material (i.e., high explosives, pyrotechnics, POL, and sulfuric acid electrolyte solution) will be determined by the special shipboard stowage restrictions that apply.

e. Pallets and other items of unitized cargo may be used to restrain standard cargo stowed in the same compartment, thereby reducing shoring requirements.

CHAPTER VII

SHIP LOADING PLANS

1. General

a. A ship's loading plan is prepared for each ship embarkation by the ship's team embarkation officer. The team embarkation officer, when possible, is assisted by the ship's CCO or first lieutenant; in any event, close and continuous liaison between these individuals is desirable to ensure expeditious and successful embarkation planning. Inaccurate figures, if discovered, cause untimely delay; if undiscovered, they cause inefficient use of amphibious shipping or jeopardize the safety of personnel. All weights and measurements to be entered on the loading documents must be the actual weight or measurement of that item of cargo as it is to be loaded.

b. Each ship's loading plan must be approved by both the embarkation team commander and the ship's commanding officer (or master). The team commander ensures that the plan supports the tactical and logistic plans of the LF. The ship's commanding officer (or master) ensures that the plan does not exceed the capabilities of the ship and does not adversely affect the stability, trim, or safety of the ship.

2. Ship Loading Plan Documentation. The documents comprising the ship loading plan are prepared by the team embarkation officer to identify, in detail, the composition and berthing location of the personnel and the stowage location of supplies and equipment embarked aboard the ship. Either the manual system or automated system may be used.

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CHAPTER VIII

SHIP LOADING PLAN PREPARATION

1. General. Ship loading plan preparation using manual methods for documenting the embarkation decisions made by the team embarkation officers requires the preparation and submission of prescribed forms and tables by all units or detachments embarking personnel, supplies, or equipment aboard a ship. These units or detachments are identified in the OE&AS table (see Chapter IV, paragraph 12). The submitted documents are consolidated by team embarkation officers, detailed ship loading plans are prepared, and additional supporting documents are generated. The remaining paragraphs of this chapter will identify the documents required for a ship loading plan and the procedures and methods used in their preparation.

2. Unit Loading Documents, Manual. Each unit or detachment embarking personnel, equipment, or supplies aboard a ship prepares three loading documents: a cargo and loading analysis table (C&LAT), a vehicle summary and priority table (VS&PT), and a UP&TT. These documents are submitted to the embarkation team commander for consolidation during preparation of the detailed loading plan by the team embarkation officer. All documents are prepared and locally reproduced by units on 8-inch by 13-inch paper.

a. Cargo and Loading Analysis Table. The C&LAT is a detailed breakdown of cargo (less vehicles) by type. It shows which cargo is stowed as standard cargo, which is unitized, any heavy lifts, and which cargo is loaded in vehicles (mobile-loaded). Figure VIII-1 illustrates this table and explains entries.

CARGO AND LOADING ANALYSIS TABLE (C&LAT)					UNIT		SHIP									PAGE NO. of NO. OF PAGES
					STANDARD CARGO		HEAVY LIFTS & UNITIZED CARGO (Pallets, Containers, etc)							MOBILE LOADED		
UP&TT LINE NO	UNIT	DESCRIPTION	NO AND TYPE CONTAINERS	NO ROUNDS, GALLONS, RATIONS	CUBIC FEET	WEIGHT (Pounds)	NO LIFTS	LENGTH (Inches)	WIDTH (Inches)	HEIGHT (Inches)	SQUARE FEET (Totals)	CUBIC FEET (Totals)	WEIGHT (Pounds) (Totals)	CUBIC FEET	WEIGHT (Pounds)	WHERE STOWED
PAGE TOTALS									XXXX	XXXX	XXXX					XXXXXXXXX
GRAND TOTALS (Last Page Only)									XXXX	XXXX	XXXX					XXXXXXXXX
TOTAL CARGO SQ FT (Unitized & Heavy Lift Only)							CU FT		WEIGHT							XXXXXXXXX

Figure VIII-1. Cargo and Loading Analysis Table

Cargo and Loading Analysis Table Entries

UP&TT Line Number. Starting with line 1, UP&TT line numbers, as applicable, are listed in numerical sequence.

Unit. This column identifies the unit to which cargo belongs. A unit designation is always shown for cargo listed opposite UP&TT line numbers 3, 4, and 5 because these line numbers include only authorized unit allowances. Cargo listed opposite other UP&TT line numbers does not necessarily require that a unit designation be shown, depending on unit responsibility and/or requirement for the cargo. Cargo allocated to an embarkation organization for loading and transportation only and any cargo loaded aboard the ship for equal distribution to all embarked organizations is identified in the unit column as ALL. Cargo required on landing and cargo loaded in a vehicle are identified as belonging to the organization designated to receive the cargo.

Description. This column identifies the cargo. Items are listed individually within each UP&TT line number grouping.

Number and Type Containers. This column identifies the number and type of containers. When different types of containers are used to package the same item, each type of container is listed separately.

Number of Rounds, Gallons, Rations, etc. This column identifies the number of individual units, such as rounds, gallons, or rations. These are the individual units packed in the containers listed in the number and type container column.

Standard Cargo. This column identifies the volume (cubic feet) and weight (pounds) of standard cargo. Standard cargo, as used here, is defined in Chapter VI, subparagraph 3b.

Heavy Lifts and Unitized Cargo. This column identifies dimensions (length, width, and height in inches), total square feet, total cubic feet, and total weight (pounds) of unitized cargo and heavy lifts. Palletized, containerized, and heavy-lift cargo are listed separately within this column by unit.

Mobile Loaded. This column identifies the volume and weight of cargo preloaded in vehicles. Mobile-loaded cargo is listed separately from other cargo of the same UP&TT line number on this form and a separate entry for each type of cargo loaded in each vehicle is made.

Where Stowed. This column identifies the assigned stowage space for the cargo aboard ship. For standard, unitized, and heavy-lift cargo, the hold number and deck level assigned for stowage of the cargo are entered. Mobile-loaded cargo in this column is identified by the unloading priority number assigned in the consolidated VS&PT of the vehicle in which the cargo is stowed.

UP&TT Line Totals. As all items are listed for each UP&TT line number, a total is shown. The totals for the particular line item are enclosed in parentheses. If a line item consists of only one entry, there is no line total entry placed on the form. The line total is merely indicated by enclosing all figures of the entry in parentheses. A blank line is used to separate the various line numbers. Line-number totals must correspond to UP&TT line totals.

Page Totals. Each page is totaled by adding all line-number totals (figures in parentheses only) appearing on a single page. Entries for a particular line number started on one page and completed on the following page are reflected in the line-number total on the following page.

Grand Totals. Grand totals are entered on the last page for the cubic feet and weight of all cargo and the grand total of square feet of unitized and heavy-lift cargo. Grand totals are derived by adding page totals; they may be checked by adding all line-number totals appearing on the form. Grand totals will appear under the standard cargo, heavy-lift and unitized cargo, and mobile-loaded columns.

Total Cargo. Total cargo entries are placed on the last page below the grand totals. The total-cargo entries are square feet of heavy-lift and unitized cargo and total cubic feet and total weight of all cargo.

b. Vehicle Summary and Priority Table. The VS&PT lists all vehicles by priority for unloading, including dimensions and weight for each vehicle. The form includes the cube and weight of mobile-loaded cargo.

c. Unit Personnel and Tonnage Table. The UP&TT is a recapitulation of information shown in the C&LAT and VS&PT, plus the number of aircraft and a breakdown by number and grade of personnel to be embarked. Figure VIII-2 illustrates this table and provides an analysis of each line number. The UP&TT is subdivided to reflect the following categories of embarkation data:

(1) Personnel.

(2) Subsistence.

(3) General cargo.

(4) POL (Class III).

(5) Ammunition.

(6) Vehicles and aircraft.

UNIT PERSONNEL AND TONNAGE TABLE (UP&TT)

PERSONNEL

OFFICER:	0-10 thru 0-7 _____	0-6 _____	0-5 _____	0-4 _____	TOTAL OFF _____
	0-3 _____	0-2, 0-1 _____	W-4 thru W-1 _____		
ENLISTED:	E-9, E-8, E-7 _____	E-6 _____	E-5 thru E-1 _____		TOTAL ENL _____
					TOTAL PERSONNEL _____

SUPPLIES AND EQUIPMENT

UP&TT LINE #	DESCRIPTION	PALS/DRMS/ VEH	CUBIC FEET	WEIGHT (LBS)
1	RATIONS			
2	WATER			
**	TOTAL SUBSISTENCE	( )	(FP22)	( )
3	PERSONNEL BAGGAGE (TROOP STOWED)		XXXX	
4	ORGANIZATIONAL CARGO (TROOP STOWED)		XXXX	
5	ORGANIZATIONAL CARGO (HOLD STOWED)		XXXX	
6	CONSTRUCTION/FIELD FORTIFICATION			
7	NONMILITARY SUPPORT			
8	MEDICAL AND DENTAL			
9	PERSONAL DEMAND ITEMS			
**	TOTAL GENERAL CARGO	( )	( )	( )
10	BULK FUEL	XXX	XXXX	
11	PACKAGED FUEL			
12	CHEMICALS (NONFLAMMABLE)			
13	CHEMICALS (FLAMMABLE)			
14	COMPRESSED GAS			
15	OTHER POL (SPECIAL LUBES & GREASE)			
**	TOTAL PETROLEUM	( )	( )	( )
16	SMALL ARMS			
17	HIGH EXPLOSIVES			
18	PYROTECHNICS			
19	NUCLEAR			
20	MISSILES			
21	INERT			
**	TOTAL AMMUNITION	( )	( )	( )
22	VEHICLES, EQUIP, HEAVY LIFTS	( )	XXXX	( )
23	TOTAL SQUARE FEET ( )	XXX	XXXX	XXX
24	AIRCRAFT (OPERATIONAL)	XXX	XXXX	( )
25	NUMBER OF AIRCRAFT ( )	XXX	XXXX	XXX
**	TOTAL SUPPLIES AND EQUIPMENT (ADD NUMBERS IN PARENTHESES)			

UP&TT SUMMARY

MEASUREMENT TONS _____ SHORT TONS _____

UNIT NAME _____ CERTIFIED _____

SHIP NAME _____ DATE _____

Figure VIII-2. Unit Personnel and Tonnage Table (UP&TT)

Unit Personnel and Tonnage Table (UP&TT) Analysis

Personnel Section. A recapitulation of personnel by grade to assist in billeting. Entries are self-explanatory.

Supplies and Equipment Section. Identification of supplies and equipment by stowage requirements or handling category.

Line 1. Rations. The number of pallets, cubic feet, and weight of all type rations. Includes sundry packs.

Line 2. Water. The number of pallets, cubic feet, and weight embarked in cans or drums. Does not include water carried in tankers or trailers. The weight of water carried in tankers or trailers will be included in the gross weight of the vehicle.

Line 3. Personal Baggage. The weight of baggage.

Line 4. Organizational Cargo (Troop Stow). The weight of items to be stowed in offices or billeting spaces for use on board ship.

Line 5. Organizational Cargo (Hold Stow). The number of pallets, cubic feet, and weight of unit cargo for general stowage.

Line 6. Construction and Field Fortification. The number of pallets, cubic feet, and weight of items for construction and field fortifications. Includes cement, timber, barbed wire, posts, sandbags, etc.

Line 7. Nonmilitary Support. The number of pallets, cubic feet, and weight of items for redevelopment, disaster relief, civil affairs, etc.

Line 8. Medical and Dental. The number of pallets, cubic feet, and weight of all medical and dental equipment and supplies. Includes mount-out blocks. Does not include tents, cots, and related organizational cargo for establishment of aid stations or field hospitals.

Line 9. Personal Demand Items. The number of pallets, cubic feet, and weight of items for resale (exchange supplies).

Line 10. Bulk Fuel. The weight of all LF fuels carried in ship's tanks. Fuel carried in embarked fuel tankers or trailers will not be shown as line 10. The weight will be included in the vehicle gross weight.

Line 11. Packaged Fuel. The number of drums, cubic feet, and weight of all types of drummed or canned fuels that require stowage in authorized fuel stowage areas. Does not include fuels preloaded aboard cargo vehicles.

Line 12. Chemicals (Nonflammable). The number of pallets, cubic feet, and weight of packaged nonflammable chemicals. Includes water purification materials, water softening materials, fire extinguishing materials, etc.

Line 13. Chemicals (Flammable). The number of pallets, cubic feet, and weight of packaged flammable chemicals. Includes cleaning solvents, trioxane, etc.

Line 14. Compressed Gas. The number of pallets, cubic feet, and weight of compressed gas cylinders. Includes oxygen, acetylene, etc.

Line 15. Other POL (Special Lubes and Greases). The number of pallets, cubic feet, and weight of all special lubricants and greases. Includes graphite, gear oil, instrument grease, waxes, etc.

Line 16. Small Arms. The number of pallets, cubic feet, and weight of all small arms ammunition. Generally consists of ammunition of .50 caliber and less.

Line 17. High Explosives. The number of pallets, cubic feet, and weight of high-explosive items. Includes artillery ammunition, demolition materials, hand grenades, etc.

Line 18. Pyrotechnics. The number of pallets, cubic feet, and weight of items that require special handling or stowage because of their sensitivity. Flares, thermite, blasting caps, etc.

Line 19. Nuclear. The number of pallets, cubic feet, and weight of all nuclear ordnance that requires special handling and stowage.

Line 20. Missiles. The number of pallets, cubic feet, and weight of missiles requiring special handling and stowage.

Line 21. Inert. The number of pallets, cubic feet, and weight of inert munitions. Includes training devices.

Line 22. Vehicles, Equipment, Heavy Lifts. The number of lifts and gross weight of all items that require

square feet stowage. Includes vehicles, crated aircraft, items that preclude relocation when placed because of weight, and items because of configuration or characteristics prevent overstow.

Line 23. Total Square Feet. The total square feet of the items entered on line 22.

Line 24. Aircraft (Operational). The total weight of operational aircraft to be embarked. Only the weight entry is required as operational and maintenance space requirements are determined separately when computing LF requirements.

Line 25. Number of Aircraft. The quantity of operational aircraft from which the line 24 entry is derived.

UP&TT Summary Section. A summary of the preceding entries to provide rapid identification of overall lift requirements.

Measurement Tons. Enter result of dividing total cubic feet from the supplies and equipment section by 40.

Short Tons. Enter result of dividing total weight from the supplies and equipment section by 2,000.

Unit Name. Enter unit name or embarkation unit designation.

Certified. Signature of unit commander or embarkation unit commander.

Ship Name. Enter name of ship if UP&TT is for an embarkation team.

Date. Enter date UP&TT is certified as being correct.

3. Loading Plan Documents. Loading plans prepared by the team embarkation officer for each ship consist of the documents described in this paragraph. All documents are prepared by team embarkation officers and locally reproduced on 8-inch by 13-inch paper as shown in the appropriate figures. The format for the consolidated UP&TT, C&LAT, and VS&PT are identical to the unit documents with the word "CONSOLIDATED" added to the document titles.

a. Loading Plan Cover Page. The loading plan cover page gives the name of the ship and lists the embarking units. The embarkation team commander indicates approval of the tentative plan by signing the cover page. The complete plan is then delivered or forwarded to the commanding officer of the ship who, in turn, indicates approval. If the ship's commanding officer's approval is qualified and if the embarkation team commander does not concur with the qualifying remarks, the subject is referred to the next higher echelon for resolution. Reproduction and distribution of the approved plan by the embarkation team commander is in accordance with higher echelon SOP or other instructions. Figure VIII-3 illustrates the format for the loading plan cover page.

LOADING PLAN

Ship_____

Embarkation Team_____

Troop Units Embarked:

_____

_____

Prepared by:

_____

Team Embarkation Officer

APPROVED:

_____

Date Embarkation Team Commander

APPROVED:

Date Commanding Officer
USS _____

The loading plan cover page gives the name of the ship and lists the embarking troop units. Approval of the loading plan is denoted by the signatures of the embarkation team commander and the ship's commanding officer. All subsequent changes to the plan must also have their approval.

Figure VIII-3. Loading Plan Cover Page

b. Consolidated Embarkation and Tonnage Table. The consolidated embarkation and tonnage table lists all units embarked in a single ship together with the total personnel, total cubic feet, square feet, and short tons of cargo. It is prepared from information contained in the unit personnel and tonnage tables submitted by each embarking unit or detachment. Figure VIII-4 illustrates this table.

CONSOLIDATED EMBARKATION AND TONNAGE TABLE

Ship

Emb Team Emb Team Commander

ORGANIZATION	PERSONNEL			CARGO		
	OFF	ENL	TOTAL	SQ FT	CU FT	SHORT TONS
TOTALS						

This form is prepared from information contained in the UP&TTs submitted by each embarking troop unit or detachment.

At the top of the form, in the blocks provided, the ship designation, embarkation team designation, and name of embarkation team commander are entered.

Under the column "organization," the designation of each unit that has submitted a UP&TT is entered.

Across the page, under appropriate columns, personnel and cargo data pertaining to each unit are entered. Data to be entered are extracted from lines 3 through 9, and 22 through 24, of the UP&TT submitted by each organization.

After entries pertaining to personnel and cargo of the organizations have been entered, the words "Landing Force Supplies" are entered in the "organization" column. A one-line entry is made under the cargo columns for the cubic feet and short tons of all substance, ammunition, and POL. The entry is derived from combining the entries on the consolidated UP&TT.

The column totals entered must agree with the personnel and cargo totals appearing on line 34 of the consolidated UP&TT.

Figure VIII-4. Consolidated Embarkation and Tonnage Table

c. Consolidated Unit Personnel and Tonnage Table. The consolidated UP&TT is a consolidation of the individual UP&TTs submitted by each of the embarking units or detachments. The same format is used for the consolidation and individual UP&TTs. When completed, the consolidated UP&TT provides the embarkation team commander, ship's commanding officer, and higher echelon commanders with an accurate tabulation of personnel to be embarked and the amount and type of cargo to be loaded. The table is also of value to the embarkation unit (or element), group, and LF embarkation officers in the verification of tables that form part of the embarkation plan (see Chapter IV, paragraph 12).

d. Consolidated Cargo and Loading Analysis Table. The consolidated C&LAT is a consolidation of unit C&LAT. It provides the basis for stowage plans. In its final form, the consolidated C&LAT is a complete listing of detailed stowage information on all cargo except vehicles. It is of vital importance to logistic control personnel during the STS movement because it shows the stowage location of all cargo for each ship.

e. Consolidated Vehicle Summary and Priority Table. The consolidated VS&PT is a listing according to unloading priority of all vehicles to be embarked in the ship. Unloading priority is determined by the embarkation team commander after consideration and reconciliation of the unloading priorities desired by each embarking unit. He must also ensure that priorities are in accordance with the priorities established by the landing plan. The VS&PT is the basis for vehicle stowage plans. It is of value to persons concerned with loading, unloading, and logistic control during the STS movement.

f. Consolidated Vehicle Table. The consolidated vehicle table is a summary of all vehicles listed on the consolidated VS&PT by types and by the units to which they belong. Figure VIII-5 illustrates this table.

O O

CONSOLIDATED VEHICLE TABLE

UNIT:_____

TROOP UNIT	TYPE OF VEHICLES														TOT
TOTAL VEHICLES BY TYPE															

Instructions for preparation:

(1) Vertical spaces at the top of the form are used to indicate the type of vehicles.

(2) Each embarking unit listed under the troop unit column heading and vehicles of that unit entered by total number under the appropriate vehicle type.

(3) The total column on the right side gives the total number of vehicles of a particular unit.

(4) Totals at the bottom of the table give the total number of each type vehicle.

The consolidated vehicle table is a summary of all vehicles listed on the consolidated VS&PT by types and by units to which they belong.

Figure VIII-5. Consolidated Vehicle Table

g. Stowage Diagrams. Stowage diagrams show graphically the placement of cargo aboard ship. These diagrams give the exact location of vehicles and cargo within each cargo compartment. Cargo space diagrams found in the SLCP are used to prepare the individual stowage diagrams. Figure VIII-6 illustrates these stowage diagrams. These forms also show the following data as obtained from the SLCP:

(1) Dimensions of compartment.

(2) Location of obstructions.

(3) Dimensions of overhead (hatch) opening.

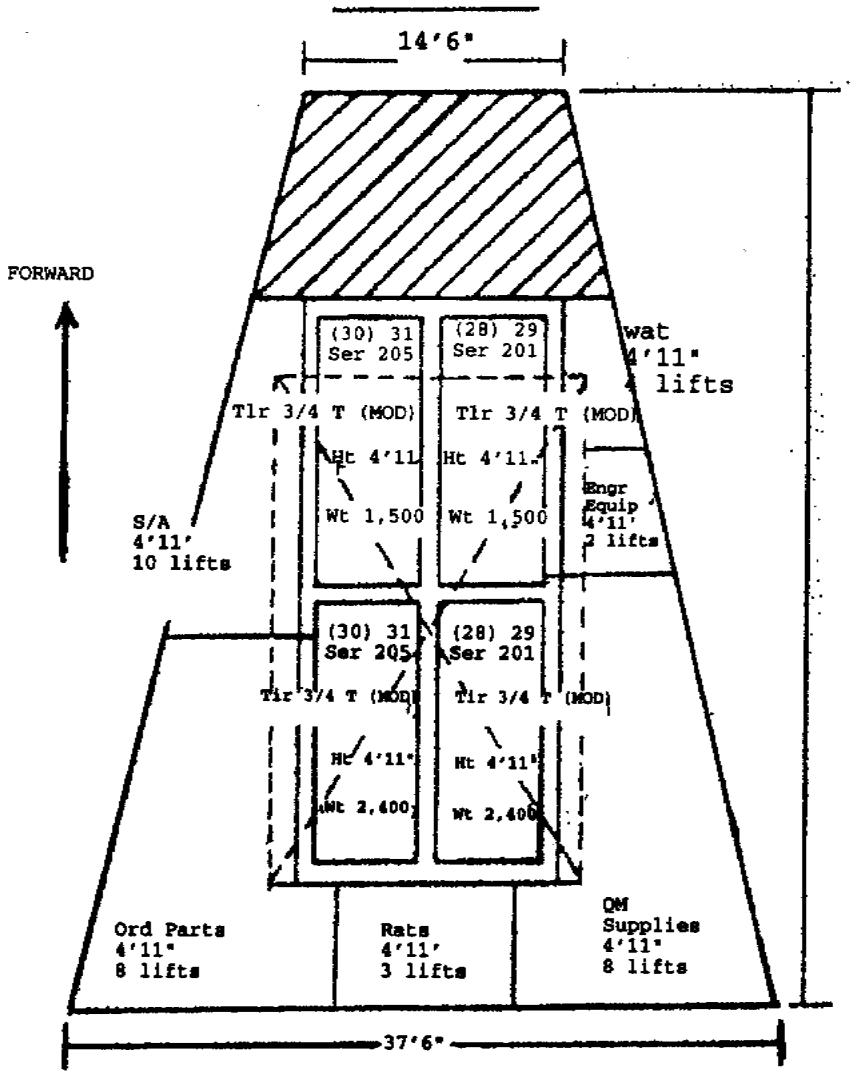
(4) Minimum overhead clearance.

(5) Bale cubic capacity.

(6) Square feet of deck area.

(7) Capacity of booms.

In addition to the graphic presentation on the diagram itself, the items contained in each cargo compartment are listed in manifest form, which is attached to the compartment stowage diagram.



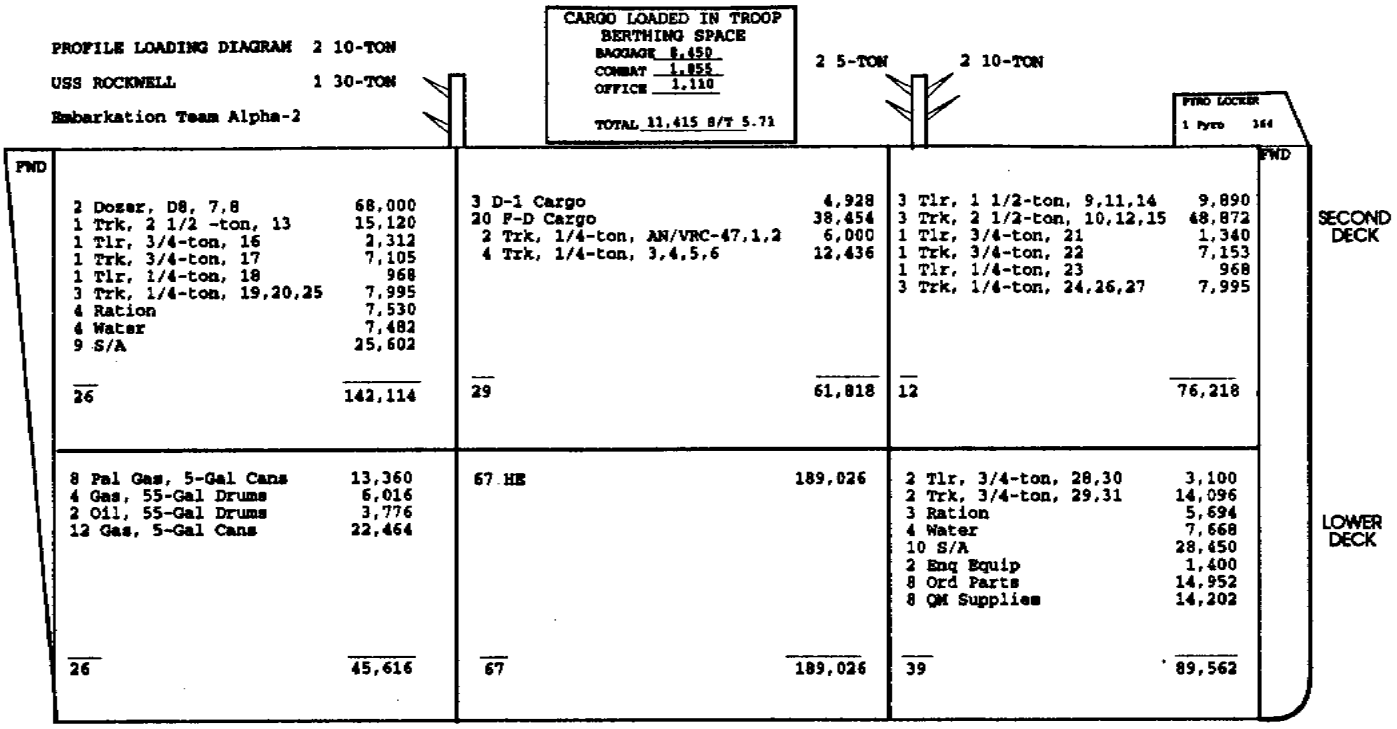
LOWER HOLD, NO. 1 HOLD

MINIMUM CLEARANCE:	12'2"	**OVERHEAD HATCH OPENING:**	17'0" x 25'6"
SQUARE FEET:	985	**SCALE:**	1/8 = 1'0"
CUBIC FEET:	12,017	**BOOMS:**	2 10-TON

Figure VIII-6. Stowage Diagram (Entries are Illustrative Only)

Figure VIII-6. Stowage Diagram (Entries are Illustrative Only)

h. Profile Loading Diagram. The profile loading diagram is a distorted profile view of the ship showing cargo compartments in which cargo and LFORM are stowed. It is included in the completed loading plan for cargo ships. The form includes an estimate of unloading time for each hold. Figure VIII-7 illustrates the profile loading diagram. Whenever possible, team embarkation officers should be assisted by the ship CCOs in preparing stowage diagrams and profile loading diagrams.



HOLD SECTION	NUMBER 3	NUMBER 2	NUMBER 1
SHORT TONS	93.87	125.42	83.07
NUMBER OF LIFTS	52	96	52
EST UNLOADING TIME	335	335	335
TOTAL SHORT TONS	308,07		

In each cargo space, the total, nomenclature, vehicle priority numbers, and gross weight in pounds of each type of vehicle are shown. Cargo of the same type in a compartment is combined, indicating the number of lifts, description, and total weight. Compartment weights are totaled. Bulk cargo averages 1 short ton per lift, except ammunition, which averages 1 ton per lift. Each vehicle, pallet, ISO container, or heavy lift is one lift. The lower portion of the profile loading plan shows the number of short tons and the estimated unloading time hold total of whichever hold is nearest the pyrotechnics stowage area.

Figure VIII-7. Profile Loading Diagram (Entries are Illustrative)

4. Steps in Preparing the Loading Plan. The detailed loading plan of a ship is the consolidation, under one cover, of all required loading forms. Figure VIII-8 illustrates the sequence of preparation and interrelationship of loading forms comprising the completed loading plan. In preparing the plan, the following steps are accomplished:

a. Consolidate UP&TTs.

b. Consolidate C&LATs.

c. Obtain unloading priorities and composition of tactical serials from the embarkation team commander.

d. Consolidate VS&PTs.

e. Cut vehicle, pallet, container, and heavy-lift templates. Mark each vehicle template with its unloading priority number, landing serial number, organization, height, gross weight, and type. Mark heavy-lift templates with organization, height, gross weight, and content or type. Mark pallet or container templates with height, gross weight, and content. Where it is considered essential to identify pallets by unit title, the organization to which they belong should be indicated on the template.

f. Lay out stowage diagrams in proper horizontal and vertical order.

g. Plan stowage of vehicles in accordance with priorities assigned and the tactical serial composition.

h. Plan stowage of priority cargo designated for early offloading.

i. Plan stowage of palletized or containerized cargo.

j. Plan stowage of heavy lifts.

k. Plan stowage of ammunition and rations to be issued troops before debarkation.

l. Prepare and maintain a time study in order to balance the unloading time of the holds as nearly as possible.

m. Plan the stowage of standard cargo.

n. Complete and manifest the stowage diagrams. Balance the cube and weight of manifest with the UP&TT.

o. Complete the where stowed column of the C&LAT and the VS&PT.

p. Complete and check the time study. Adjust the stowage plan as required.

q. Prepare the profile loading plan and balance it against the UP&TT.

r. Assemble the loading plan in the following order:

(1) Loading plan cover page.

(2) Consolidated embarkation and tonnage table.

(3) Consolidated UP&TT.

(4) Consolidated C&LAT.

(5) Consolidated VS&PT.

(6) Consolidated vehicle table.

(7) Stowage diagrams and stowage diagram manifests.

(8) Profile loading diagram (for cargo ships only).

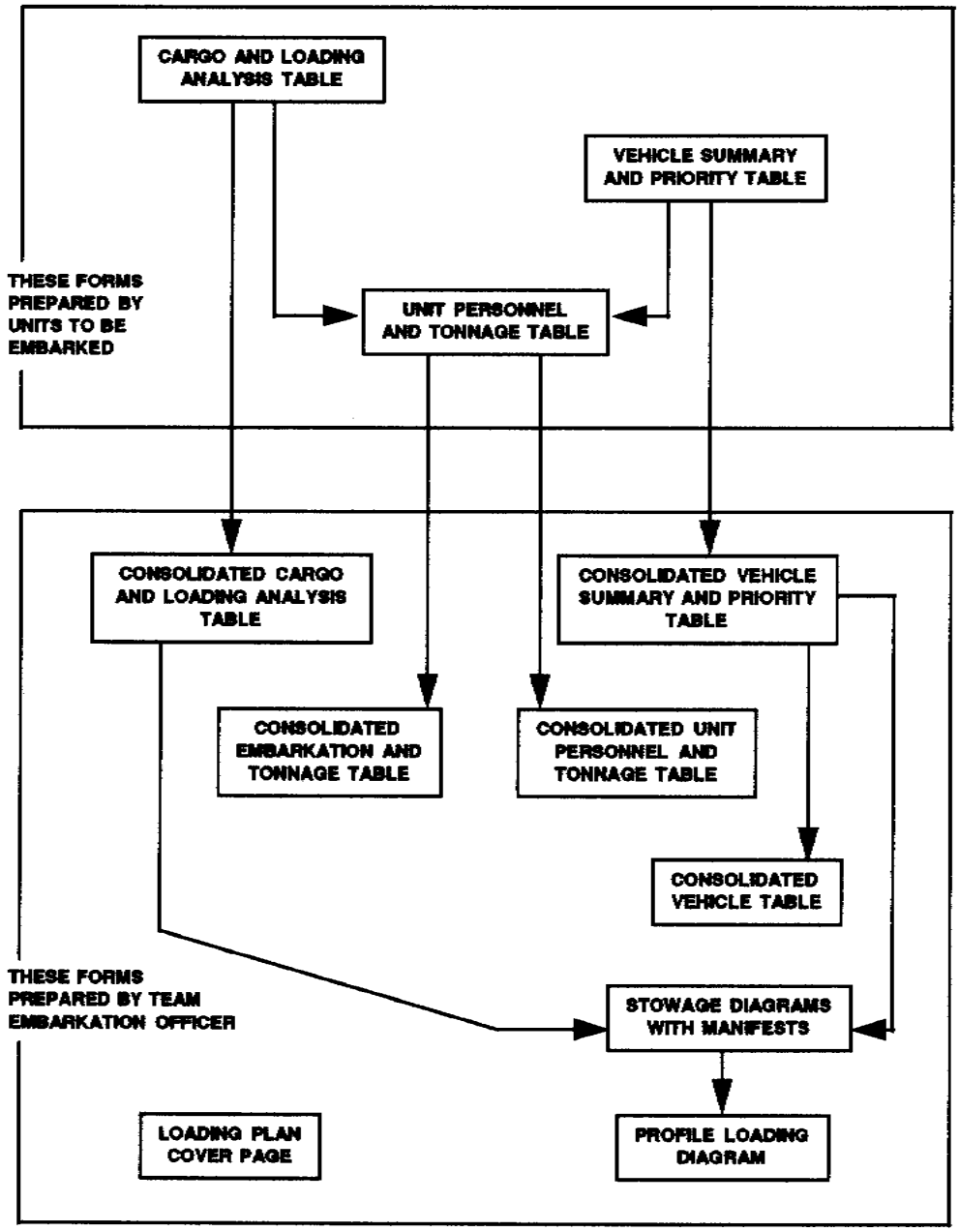


Figure VIII-8. Sequence of Preparation and Interrelationship of Loading Forms Comprising the Completed Loading Plan

Figure VIII-8. Sequence of Preparation and Interrelationship of Loading Forms Comprising the Completed Loading Plan

5. Message Load Plan. If making a physical reconnaissance of the ship is not feasible, an MLP message (see Appendix E) should be submitted to the ship no later than 14 days before the planned embarkation date. The ship will reply with an MLP approval or disapproval message no later than 7 days before embarkation. Upon arrival of the ship, the team embarkation officer must get the completed load plan approved by the ship's commanding officer.

6. Unit Loading Documents (Automatic Data Processing System). It is recognized that automated data processing systems (ADPSs) are not standard throughout the Department of Defense. Much of the data discussed in the preceding paragraphs could easily be incorporated into a computerized program; however, each Service or agency will be required to develop, should it be desired, programs that are adaptable to the ADPS resource available to them. The automated system should produce the following documents for the loading.

a. Personnel, supplies, and equipment report.

b. UP&TT.

c. Unit cargo manifest.

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CHAPTER IX

PERSONNEL EMBARKATION PLANNING

1. Planning Considerations. The personnel embarkation plan must give consideration to priority for debarkation and the tactical grouping of personnel as dictated by the plan for landing. Further, it must provide for control of personnel and permit accomplishment of required administrative and training functions during the voyage. A good personnel embarkation plan contributes to the comfort of personnel and prevents unnecessary administrative burdens. More importantly, it specifically provides for rapid and orderly debarkation of personnel for landing and entry into combat. Planning the embarkation of personnel must take into account the following:

   a. Liaison and coordination with the ship in which units are embarking.

   b. Organization of units for embarkation.

   c. Provision and arrangement of administrative requirements.

   d. Personnel accounting and reporting in accordance with established procedures for unit movements.

   e. Maintenance of the health and comfort needs of embarked personnel.

   f. Preparation of training and physical fitness programs for embarked personnel.

   g. Outside services and assistance required for embarkation, e.g. cranes; forklifts; public works support; trucks, busses, or trains at the port for cargo, equipment, and personnel; etc.

2. Responsibilities

   a. Commanding Officer of a Ship. The commanding officer of a ship is charged by US Navy regulations with the operating and fighting efficiency of his ship as well as the safety of all personnel aboard. The commanding officer must make troop spaces available for embarking units, as designated in the ship's plans and reflected in the SLCP, in acceptable condition for use. The commander issues ship's regulations relating to the conduct of

personnel while embarked and outlines the assistance necessary from embarked units to ensure their health and comfort.

b. Embarkation Team Commander. The embarkation team commander is responsible for the preparation and organization of the team for embarkation. He must plan for and provide personnel to accomplish certain tasks while embarked.

c. Commanding Officer of Troops. Because personnel of several different organizations may be embarked in the same ship, it is necessary for administrative purposes to designate an officer as commander of all embarked troops. Accordingly, a commanding officer of troops (COT) for each ship is designated during the planning phase by the next senior LF echelon. Usually, the senior commander of the organizations embarked is designated. Thus, in many instances, he is the same officer who is the embarkation team commander. While embarked, he is responsible for the administration, discipline, and training of all embarked personnel. He is not responsible for naval attachments that augment the CATF staff.

3. Embarkation Team Advance Party

a. Composition. The LF and subordinate echelon embarkation plans prescribe the composition, functions, movement, and other information concerning advance parties. The advance party of an embarkation team is a functional group, normally consisting of the following:

(1) COT or his representative.

(2) Billeting officer.

(3) Mess officer.

(4) Communications officer.

(5) Officer of the day (for first 24 hours).

(6) Ship's platoon.

(7) Cooks and messmen for mess and galley details.

(8) Ship's guard.

(9) Billeting guides.

(10) Personnel to assist in operation of tailor shop, laundry, barber shop, and ship's store.

b. Supervision and Coordination. The COT or his representative supervises the activities of the advance party. The COT coordinates and resolves embarkation problems with the ship's executive officer when such problems cannot be resolved by subordinates.

c. Functions. The advance party is usually embarked about 24 hours before arrival of the main body. The advance party completes all preparations for embarking the remainder of the embarkation team. Upon completion of embarkation, advance party personnel continue to function under the cognizance of the COT. Thus, before embarkation, advance party personnel are involved in planning; once aboard, planning ceases and supervision and activity within the sphere of operations begin.

4. Billeting. The LF commander determines whether embarking personnel will be billeted tactically or administratively. Based on this decision, the billeting officer prepares the billeting plan and assigns troop spaces according to diagrams contained in the SLCP. He coordinates his activities with the ship's CCO.

a. Tactical Billeting. When forces are billeted tactically, boat and helicopter teams are billeted near their debarkation stations. Those debarking last are billeted in the lower compartments farthest from the debarkation stations. This keeps boat and helicopter teams from moving through crowded compartments to get to their debarkation stations.

b. Administrative Billeting. LF units are kept intact in administrative billeting. Each unit is assigned a block of bunks or an entire billeting compartment. If personnel are to remain on board for a lengthy period, or if they are not making an assault landing, administrative billeting is desirable. In an assault landing, this system may make boat or helicopter team assembly and coordination difficult.

c. Combination of Tactical and Administrative Billeting. Various combinations or compromises between tactical and administrative billeting may be used to meet particular situations. Thus, administrative unity might be maintained at platoon level with platoons billeted so

that the majority of their boat or helicopter teams are nearest their debarkation stations. This would require designation of team assembly areas located in appropriate billeting compartments. Before commencement of debarkation, boat or helicopter team members must be ordered to report to their team assembly areas to be mustered by their team commanders.

d. Bunk Assignments. Bunks in each billeting compartment are counted before assignment. On some ships, bunks are numbered, making assignment easier. Where numbers are not available, locally prepared name tags greatly facilitate assignment to specific bunks. Bunks are either assigned to individuals by name or number, or groups of bunks may be assigned to squads or platoons. In the latter case, the squad or platoon leader makes specific bunk assignments.

e. Billeting Special Details. Each special detail, such as the ship's platoon, mess, or galley detail, is billeted in a separate compartment or in a specific area of one billeting compartment. This facilitates control and orderly relief of personnel.

f. Billeting Guides. The billeting plan provides for billeting guides. Some are designated to supervise compartment billeting; others guide personnel to assigned compartments.

5. Messing. The embarked forces mess officer plans and supervises the feeding of embarked personnel. He consults the ship's food service officer and CCO, as well as ship's regulations and the SLCP, for information. Information sought should include:

a. Capacity of galley.

b. Location of mess lines and their control.

c. Scheduled hours, control procedures, and rate of feeding.

d. Size and composition of embarked force details necessary to supplement the ship's mess and galley force.

e. Arrangements for messing facilities for enlisted pay grades commensurate with their ranks.

6. Police. The ship's platoon commander obtains information from the ship's first lieutenant, medical department,

master-at-arms, and CCO relating to police and sanitation details. He familiarizes himself with the spaces that the embarked units are responsible for cleaning, source of cleaning gear, and schedule of ship inspections. These spaces include but are not limited to billeting spaces, offices, vehicles, and cargo decks and compartments.

7. Ship's Guard. Planning for the ship's guard includes:

a. Determining the number of guards required to occupy sentry posts designated by the ship's captain.

b. Placing a guard detail within the advance party to serve until relieved by personnel from the main body. This includes the sergeant and corporals of the guard and the first officer of the day.

c. Providing the guard officer with copies of ship's regulations, the appropriate Service interior guard instructions (e.g., US Marine Corps Interior Guard Manual, NAVMC 2691A), and special orders.

d. Providing a copy of special orders at each sentry post. Copies of special orders are normally available from the ship's CCO.

8. Administrative Facilities. Ships normally provide the LF office space, but if none exists, office spaces may have to be located in hatch covers below the main deck or in staterooms. Besides an administrative office, space is needed for a guard office, message center, and for classified document handling and storage. In addition, space is needed for planning, staff work, and conferences. During embarkation planning, the team embarkation officer contacts the ship CCO for procurement of office space, desks, use of reproduction means, and other facilities.

9. Communications Facilities. The embarked LF communications officer, or his representative, plans, with the ship's communications officer, details relative to the following:

a. Assistance required for naval communications guard for embarked LF units during the movement to the objective area.

b. Requirement for repair and testing of LF communications equipment.

c. Use of the ship's internal telephone system and access to the ship's computer local area network (LAN).

d. Use of designated communications spaces and facilities.

e. Arrangements for cryptographic and authentication systems that must be used jointly.

f. Arrangements for the allocation of shipboard radio equipment for LF use.

g. Development of communications security and electronic counter-countermeasures (ECCM) to protect communications from enemy detection, interception, deception, and jamming.

h. Determination of a mutually acceptable allocation of antennas for LF use.

i. Augmentation of embarked LF personnel to naval communications assets during the movement to the objective area.

j. Restoration procedures and priority for Navy and Marine communications systems.

k. Arrangements for command, control, communications, and computer (C4) systems operational testing prior to rehearsal and embarkation.

10. Embarkation Schedule. An embarkation schedule is prepared to control both movement to the embarkation point and embarkation. When possible, the arrival of personnel of the first unit coincides with the completion of cargo loading or so as not to interfere with cargo loading. As units embark, they are met by guides and led to their compartment. To ease confusion and congestion, these personnel should remain in their assigned compartments until embarkation is completed and a muster taken.

11. Embarkation Rosters. The embarkation team commander is responsible for preparing and submitting an embarkation roster. This roster lists all persons from the various units that collectively comprise the embarkation team. Instructions concerning the format, number required, and addresses are contained in embarked unit or higher echelon directives. Embarkation rosters must be accurate;

consequently, an early conference of administrative personnel from embarking units aids in achieving uniform preparation and submission.

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CHAPTER X

EXECUTION OF EMBARKATION

1. General. Embarkation should be executed in accordance with approved embarkation plans and is a mutual responsibility of the naval forces, LF, and external supporting agencies. Several terms used in embarkation requiring familiarity are mounting, marshaling, embarkation, mounting area, and embarkation area. (See Figure X-1 for schematic diagram.)

2. Specific Responsibilities. Specific responsibilities for the execution of embarkation are as follows:

a. Commander, Amphibious Task Force

(1) Exercises overall control and general supervision of the execution of embarkation in accordance with the embarkation schedule and loading plans.

(2) Moves assault shipping to embarkation points in accordance with the embarkation schedule.

(3) Coordinates, with the CLF, control of embarkation and movement to embarkation points.

(4) Provides communication facilities required afloat, including adequate CI and security measures.

(5) Coordinates for provision of lighterage and/or landing craft from agencies external to the ATF and LF.

b. Commander, Landing Force

(1) Prepares the LF for embarkation.

(2) Requests any loading assistance required from forces afloat.

(3) Moves embarkation components to and within embarkation areas, and assembles cargo and personnel on shore in accordance with the embarkation schedule and loading plans.

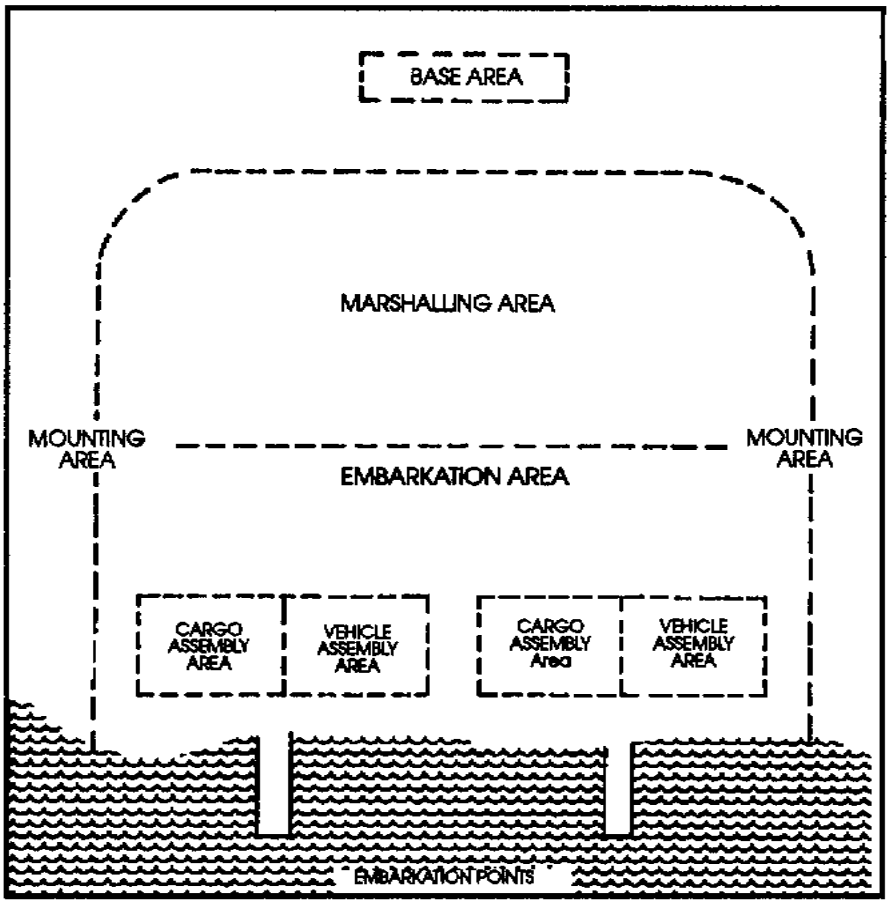

Figure X-1. Schematic Diagram of the Mounting Area, Marshaling Area, Embarkation Area, and Embarkation Points

(4) Provides for security of embarkation areas, or coordinates security and CI measures with external agencies as prescribed by higher authority.

(5) Provides an embarkation control officer ashore for coordination and control of embarkation evolutions with CATF, ship representatives, and/or outside agencies.

(6) Provides for communications ashore in the embarkation area, including adequate communications security measures. To conserve organic LF communications equipment to be embarked, additional equipment should be available for use in the embarkation area. Where possible, arrangements should be made with the commander of the area in which embarkation is to take place to provide for shore communications requirements.

c. External Agencies. Agencies external to the ATF and LF may be given responsibilities by higher authority. Such responsibilities may include:

(1) Specifying and making available required marshaling areas, embarkation areas, embarkation points, and developing and operating facilities therein.

(2) Providing authorized supplies and services to the ATF, including supplies to be loaded and communications facilities for use during embarkation.

(3) Coordination and control of administrative movements within the embarkation areas.

(4) Providing security and developing foreign CI information for embarkation areas.

(5) Providing at each embarkation point the loading equipment required on docks, dunnage, technical assistance, stevedores, and other loading aids.

d. Commanding Officers of Individual Ships

(1) Ensure that all troop spaces are ready for use and are configured in accordance with ship's general plans, ship's characteristics card, authorized ship's alterations, and the SLCP.

(2) Handle, secure, and stow cargo in their ships in accordance with approved loading plans. A commanding officer's responsibility for cargo commences with the actual lifting or transportation of each piece of cargo by personnel under his control. When transported, lifted, or loaded by personnel not under his control, his responsibility begins when the cargo is safely stowed on board and accepted by him.

(3) Make provisions for winchmen, hatch tenders, hatch officers, and other personnel for handling cargo, except for the ship's platoon, which is provided by the LF.

(4) Coordinate with CATF for provision of lighterage and landing craft requirements beyond the ship's organic or embarked craft.

(5) Provide cargo handling and lashing gear, to include slings, lowering lines, and guide lines, as

prescribed by ship's allowances and as contained in the SLCP.

(6) Billet and feed personnel of the advance party.

(7) Whenever feasible, provide a ship's representative to arrive at the POE 24 hours before embarkation to ensure equipment and material are staged to support the ship's loading plan.

e. Embarkation Team Commander

(1) Ensures that personnel, equipment, and supplies are ready for embarkation in accordance with the loading plan for the embarkation team. This includes preparation of equipment and supplies, such as filling fuel tanks three-fourths full, loading prescribed loads in trucks and tanks, waterproofing vehicles, marking supplies and equipment, crating, and packaging.

(2) Provides an advance party for the assigned ship to arrive at the embarkation point before the commencement of loading. (For typical composition of an advance party, see Chapter IX, paragraph 4.)

(3) Organizes and operates an embarkation team control office at the embarkation point.

(4) Provides shoring and dunnage material.

(5) Provides slings and lashing gear required in excess of that furnished by the ship.

(6) Ensures that work details required ashore for pier or beach working parties and for helicopter loading are provided.

3. Embarkation Scheduling and Navy Organization. Two distinct situations govern the execution of the embarkation by the naval echelons: all loading is done in the same port or port complex, and loading is scheduled for two or more ports or port complexes and movement of ships is necessary to meet embarkation schedules.

a. Loading at Same Port. In the first situation, a loading schedule would normally be prepared by the CATF or his designated representative. This schedule generally includes:

(1) Each ship's name and hull number.

(2) Pier or berth.

(3) Port facilities.

(4) Time of loading.

(5) Cargo or unit to be embarked.

(6) Postloading instructions; e.g., movement to rendezvous point, routes to be followed.

b. Loading at Different Ports. Under the second situation where ships are required to move to another port, a loading movement group (unit or element) will normally be organized. This task organization is formed to protect and control movement of shipping between ports and rendezvous points. The loading control group (unit or element) established at each port will control the berthing and anchorage assignments, provide lighterage as required, maintain loading schedules, provide protection, and release ships to their proper task organization at the scheduled time. Neither the loading movement group nor the loading control group relates directly to the LF embarkation organization, but, in general, it can be assumed that the embarkation group will parallel the loading control group.

4. Preparation of the Embarkation Point

a. General. Higher echelon directives designate embarkation areas to be used. Embarkation areas and embarkation points within the areas are subsequently assigned to various embarkation groups. An embarkation point is the place, pier, or beach where a ship is loaded. A point is assigned for use by an embarkation team. However, a single embarkation point may be used, at different times, by more than one embarkation team. In addition to the embarkation point, cargo assembly and vehicle staging areas are assigned for use by embarkation teams.

b. Improvements. The team embarkation officer makes a preliminary survey of the assigned embarkation point, cargo assembly area, and vehicle staging area assigned to his team. This survey determines if facilities are adequate or if improvements are necessary. The following improvements should be considered:

(1) Clearing and leveling cargo assembly and vehicle staging areas.

(2) Constructing earth finger ramps for loading of landing craft and landing ships, if loading from a beach embarkation point.

(3) Constructing embarkation control facilities.

(4) Perfecting communication facilities.

5. Embarkation Control Offices. Embarkation group, unit (element if formed), and team embarkation control offices should be established and functioning during both marshaling and embarkation (see Figure X-2). The embarkation team control office is usually located near the head of the pier or on the out-loading beach. The group control office and the unit control offices should be centrally located in the embarkation areas. Personnel in these offices furnish direction and information for orderly embarkation. The embarkation unit or embarkation team executive officer is usually the officer in charge of his organization's control office. A representative of the various embarkation officers should be at the organization's control office at all times to provide data on loading as required.

6. Embarkation Communications Facilities. Communications facilities are arranged for or provided by the LF for use:

a. Between embarkation areas and base camp, or intermediate staging area if employed.

b. Between the embarkation area and the forces afloat concerned with loading.

c. Within the embarkation area between control offices, cargo assembly areas, and vehicle staging areas.

7. Movement to Embarkation Area

a. Considerations. The time of arrival of cargo and personnel at the embarkation area is dependent on the following:

(1) Distances. Distances between base camp, marshaling areas if employed, and the embarkation area.

(2) Time. Time necessary to assemble cargo in the embarkation area for loading.

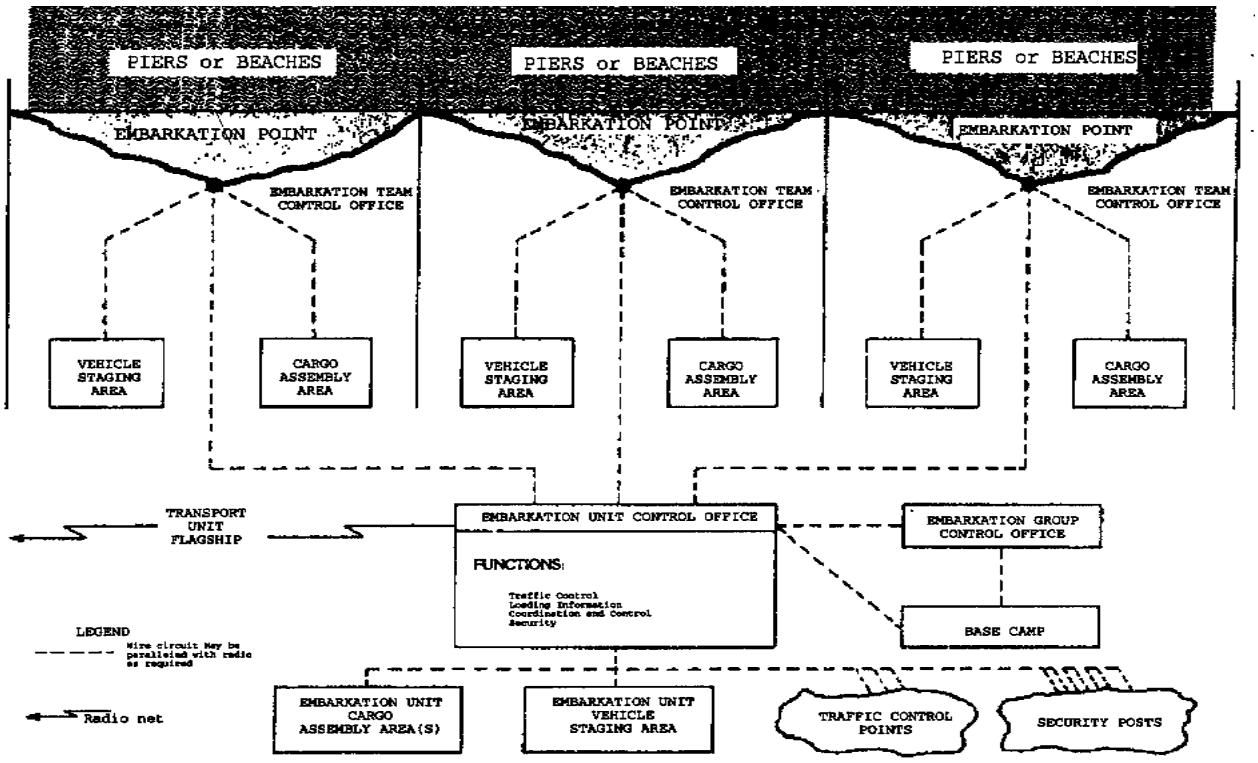

Figure X-2. Embarkation Control Offices and Communications Facilities

Figure X-2. Embarkation Control Offices and Communications Facilities

(3) Transportation. Transportation availability and the distance to the embarkation area determine the mode of transportation and the time required to execute movement. Truck movement is usually more economical for distances less than 50 miles, rail movement is faster and more economical for greater distances; however, highly motorized units, such as artillery, are a possible exception.

(4) Availability. Availability of the embarkation area, points, cargo assembly, and vehicle staging areas.

b. Cargo. Based on the above considerations, nonorganizational supplies and equipment are normally delivered to the embarkation area from 24 hours to several days before loading. Organizational supplies, equipment, and vehicles usually arrive at the embarkation area 24 to 48 hours before loading.

c. Personnel. Advance parties should arrive for embarkation at least 24 hours before commencement of any loading. Arrival of the main body of the embarkation team should be coordinated so as not to interfere with

completion of cargo loading. Otherwise, arrival of the first unit of the main body should coincide, whenever practical, with completion of loading so that personnel can immediately embark. As units embark, they should be met by guides who lead them to their assigned billeting compartments.

8. Assembly of Cargo in the Embarkation Area. Based on the approved loading plan, the team embarkation officer makes preparations for placing the team's cargo in assigned assembly and staging areas.

a. Cargo Assembly Area. The cargo assembly area is divided into sections corresponding to stowage location and compatibility of materials. As cargo arrives, it is grouped according to holds, deck level within each hold, and other designated cargo stowage areas. Appropriate allowances will be made for necessary separation among various types of cargo if required. The section of the assembly area closest to the shoreline, at the most accessible place on the pier or closest to helicopter loading points, contains that cargo to be loaded in lower holds. Cargo to be loaded last is placed in a section farthest from the shoreline, pier, or helicopter loading points. Normally, ammunition and POL will be staged in areas physically removed from each other and separated by general cargo or a safe distance.

b. Vehicle Assembly Area. Vehicles are parked in the assigned vehicle assembly area according to the holds and hold levels in which they are to be loaded. They are parked so that the vehicle with the lowest landing priority is first in line and thus the first vehicle loaded into the ship. The last vehicle to be loaded has the highest landing priority.

9. Security

a. Supplies and equipment stored in the embarkation area are subject to sabotage and pilferage. Sufficient sentry posts should be established to provide security. Responsibility for providing personnel for security duty may rest with an external agency or with the LF. In either case, published orders or regulations outline the duties of personnel assigned for security duty. Orders or regulations should also contain precautionary instructions, such as prohibiting open fires or smoking near supplies and equipment, particularly Class III and Class V items.

b. CI personnel should be consulted for specific guidance concerning operations security (OPSEC) issues affecting movement, countersabotage measures, foreign CI activity, and related security problems arising during embarkation.

10. Loading Details and Working Parties. Loading will be expedited if all persons concerned are well indoctrinated in cargo handling and stowage procedures. Complete familiarity with the loading plan by all supervisory personnel is essential.

a. Ship's Platoon. This platoon comprises the working detail to load and unload the ship and is part of the advance party described in Chapter IX, paragraph 4. The size of the platoon varies, depending upon the type of ship, the number of holds to be loaded, the type of cargo to be handled, the size and configuration of the holds, and the loading schedule. For example, approximately 1 officer and 60 men may be required for an LKA, whereas 1 officer and 40 men may be required for an LPD. Where loading is done by stevedores, members of the ship's platoon should be stationed in the holds to observe and check, because they will be required to unload the same cargo at the objective area.

b. Assistants to Team Embarkation Officer. A noncommissioned officer and other assistants should be assigned from each organization loading cargo. They assist the embarkation officer in identifying and locating cargo.

c. Work Details Ashore. The embarkation team moves its cargo from cargo assembly and vehicle staging areas to shipside when loading at a pier. When loading a ship at anchor, the team moves cargo to the embarkation point and into landing craft or landing ships. When employing helicopters for embarking aboard carrier-type ships, it moves cargo from cargo assembly areas to helicopter loading points. The embarkation team provides personnel ashore at the embarkation point to perform these tasks.

d. US Navy Cargo Handling and Port Group (NAVCHAPGRU). (See Appendix F.)

e. US Army Transportation Company (Terminal Service). (See Appendix G.)

11. Cargo Handling Gear. Various types of cargo handling gear are used in ship loading. Persons concerned with loading must be familiar with the types of equipment used. Some of the equipment is described below:

a. Forklift or Fingerlift. This is a wheeled or tracked vehicle with a two-prong lifting device fitted to the front end. It moves pallets, containers, or heavy boxes on a pier and aboard ship.

b. Tractors and Trailers. Warehouse trailers are small, low, four-wheeled trailers for moving cargo from storage areas to shipside. They are pulled, in tandem, by tractors.

c. Cargo Nets and Slings. These devices are used for lifting loose cargo and pallets into the ship.

d. Vehicle Lifting Slings and Spreader Bars. Standard lifting slings are provided by the ship to load and unload vehicles. Special slings, if required, are provided by the LF. Spreader bars are used in conjunction with the slings to minimize damage to vehicles. Slings must be properly attached to vehicle lifting points to ensure a smooth, even lift of the vehicle. Spreader bars are positioned on the slings to prevent their bearing against and damaging the vehicle sides and fenders. To determine sling availability, the embarking unit must refer to the SLCP.

CHAPTER XI

LIFE ABOARD SHIP

1. General

a. This section is intended to be a general overview of shipboard life and is not intended to supersede the provisions of US Navy Regulations (1979), ship organizational manuals, or individual ship's troop regulations.

b. The efficiency with which life aboard ship for LF personnel is organized and carried out will have a direct effect on the morale, physical fitness, training, and general well-being of troops when they disembark. Full advantage of time and facilities aboard ship must be taken to further prepare the LF to accomplish its mission. Preparations should include a physical conditioning program and a training program by which units will be oriented, briefed, and rehearsed in procedures to be carried out at the objective. A ship's troop regulations booklet provided by the ship should be referred to for a complete introduction to ship life. Listed below are some key elements that will help provide good relations between embarked units and naval personnel and assist in indoctrinating the LF to life aboard ship:

(1) Command relationships afloat.

(2) LF administration.

(3) Communications en route.

(4) Inspections.

(5) Health and sanitation.

(6) Water conservation.

(7) Care of equipment and troop spaces.

(8) Security and shipboard drills.

(9) Life preservers.

(10) Recreation and morale.

(11) Uniforms.

(12) Physical conditioning.

(13) Combat orientation.

(14) Training.

2. Command Relationships Afloat

a. Authority of Commanding Officer of Ship. The highest authority aboard ship is the commanding officer of the vessel. All personnel aboard ship, including embarked personnel, are subject to his orders. All orders from the commanding officer of the ship to embarked personnel, so far as practicable, will be transmitted through the COT. Regulations governing life aboard ship, as promulgated by the commanding officer of the ship, usually are contained in ship's regulations for embarked units. These regulations normally contain information on command relationships, discipline of embarked personnel, security, embarkation, debarkation, messing, berthing, uniform requirements, emergency drills, ship's platoon and other work details, ammunition and hazardous material handling, and general administration.

b. Commanding Officer of Troops. The senior commander of the organization embarked on each transport is usually designated by higher authority as the COT. He is responsible for the discipline and efficiency of the command. The COT will make necessary arrangements with the commanding officer of the ship relative to embarkation, including assignment of billeting space, space for embarked officers, messing, and other administrative matters. (See Chapter IX)

c. Liaison. Control and supervision of embarkation, life aboard ship, and debarkation of the LF is dependent on constant liaison and close cooperation between certain ship's officers and LF staff officers whose functional duties and responsibilities correspond.

(1) Executive Officer of Ship and Executive Officer of Troops

(a) Ship's Executive Officer. The ship's executive officer is the direct representative of the commanding officer of the ship in maintaining the military and general efficiency of the ship, and to this end, will be the line officer next in rank to the commanding officer. He is in general charge of the details of duty

in connection with the maintenance and operation of the ship in all departments and especially carries out all details of duty in connection with the organization, police, inspection, discipline, exercise, and efficient condition of the crew.

(b) Embarked Executive Officer. The embarked executive officer occupies a similar position of authority as a direct representative of the COT and as a coordinator of all staff effort pertaining to the management and control of embarked personnel.

(2) Officer of the Deck Underway, Command Duty Officer, and Officer of the Day

(a) Officer of the Deck Underway. The officer of the deck underway is the direct representative of the commanding officer of the ship and is responsible to the ship's commanding officer for the safe and proper operation of the ship.

(b) Command Duty Officer. The command duty officer (CDO) is the direct representative of the commanding officer in port and is responsible for security, safety, and the proper conduct of the ship's daily routine and other activities. Occasionally a CDO may be assigned while under way.

(c) Officer of the Day. The officer of the day is the direct representative of the COT and conducts duties in accordance with the provisions of the appropriate Service interior guard instruction (e.g., US Marine Corps Interior Guard Manual, NAVMC 2691A) and special orders relative to interior guard duty, the ship's regulations, and the special instructions and orders prescribed by the commanding officer of the ship or COT. In as much as the embarked units' and ship's guard will be coordinated, the officer of the day will maintain liaison with the officer of the deck. For instructions pertaining to the ship's guard, see Chapter IX, paragraph 8.

(3) Embarked Units Medical and Dental Officers

(a) Medical Officer. The embarked unit's medical officer must maintain close liaison with the ship's medical officer, provide maximum possible assistance to preserve the health of embarked personnel, and maintain high standards of hygiene and sanitation during the embarked period.

(b) Dental Officer. The embarked unit's dental officer is responsible to the COT for the dental health and hygiene of the embarked personnel. He must maintain close liaison with the ship's dental officer regarding dental facilities and treatment.

3. Landing Force Administration

a. Publishing Ship's Regulations. If the ship's regulations have not been published to all embarking personnel before embarkation, this must be accomplished as soon as possible after arrival aboard.

b. Morning Reports. Physical musters are held daily and reports are submitted to the COT.

c. Office Hours and Request Mast. Office hours and request mast are held at the time and place designated by the COT.

4. Communications En Route. Subject to emission control restrictions, number of circuits available, and approval of appropriate naval authority, LF radio communication circuits may be activated for communications among the LF echelons traveling in convoy. Activation of the LF nets serves two major purposes:

a. Tests the reliability of LF communications circuits.

b. Relieves the traffic burden carried by the naval communications circuits.

5. Inspections

a. Personnel. Inspections of individuals and their weapons and equipment should be conducted routinely as established by troop commanders.

b. Equipment and Clothing. Inspections should be carried out to include those items of equipment, weapons, and clothing not normally carried topside for routine inspections. This refers particularly to crated weapons, clothing in seabags and packs, radios, and other articles stowed in holds or in billeting compartments. These inspections are made necessary by the deteriorating action of salt air and dampness aboard ship, losses due to laundering, and shifting of cargo.

c. Vehicles. Frequent inspections of all embarked vehicles should be conducted to ensure their proper functioning when debarked at the objective. Permission must be obtained from the ship to enter the cargo holds for these inspections. The inspections should include:

(1) Inspection of vehicle waterproofing.

(2) Check for gas and oil leakages.

(3) Inspection of batteries.

(4) Inspection of lashing assemblies and/or shoring to ensure vehicles remain secured, normally a joint responsibility of ship's deck department and embarked personnel.

(5) Inspection for deterioration due to dampness and sea water.

(6) Inspection of tires.

d. Weapons. All weapons should be cleaned, properly oiled, and inspected each day. Rifles must be secured properly in rifle racks or a centralized storage area when not in use by personnel. Pistols and crew-served weapons will be stowed in the armory. An accountable system will be established for check-in/check-out of all weapons under armory personnel control.

e. Berthing Spaces. The berthing spaces of embarked personnel will be inspected for orderliness, hygiene, and sanitation on a regular basis by troop commanders. Medical personnel should accompany these inspections. Periodic joint inspections with ship's supervisory personnel will provide the opportunity for concerns to be identified or highlighted and the timely resolution of problems.

6. Health and Sanitation

a. Responsibility. Medical service for embarked personnel is the responsibility of the CATF. All medical supplies are furnished by US Navy components of the ATF. The senior medical officer of each ship is responsible to the ship's commanding officer for health, hygiene, and sanitization of embarked personnel. Normally, embarked LF medical personnel provide and assist in medical treatment for embarked LF personnel. This treatment is accomplished using the ship's medical facilities and supplies. If the ship has no medical officer, the embarked LF medical officer makes his services available to the ship's company.

b. Liaison. The embarked units' medical and dental officers will maintain constant liaison with the ship's medical and dental officers on all matters pertaining to the health of embarked personnel. The medical officer should accompany the ship's medical officer on all inspections of the ship's areas used or occupied by the embarked units.

7. Fresh Water

a. Restricted Use. Restrictions may be imposed on the use of fresh water because of limited production and storage facilities. Fresh water should be made available to embarked units and ship's company on an equal basis. The COT exercises strict supervision over the use of fresh water by embarked personnel in order to prevent waste.

b. Canteens. Personnel should fill their canteens during water hours and keep them at least half full at all times. The unused contents of canteens should not be wasted when refilling canteens.

c. Washing. Personnel should have fresh water available for washing, shaving, etc., during certain hours each day. Waste of fresh water should be avoided by turning on faucets, showers, etc., only when water actually is being used on the body.

8. Care of Equipment. Climatic conditions aboard ship require that extra precautions be taken in the care of weapons and equipment. Dampness and salt water cause corrosion and deterioration to an extent beyond that usually experienced ashore.

a. Equipment Stowed Topside. Equipment stowed topside must be properly secured so as not to damage the ship or equipment. Whenever possible, it should be protected from the weather by canvas and tarpaulins. Such equipment must be cleaned and oiled at regular intervals.

b. Equipment Stowed in Armories, Troop (Billeting) Spaces, and Holds. Machine guns, mortars, and similar equipment must be stowed so as not to damage ship fixtures. This gear must be kept clean, dry, and where applicable, oiled. Crated weapons must be stowed so that they may be frequently checked.

9. Vehicle Maintenance. Vehicles must be wiped down periodically and first echelon lubrication accomplished at regular intervals. Vehicles should also be started periodically, whether stowed on the main deck or in holds. When starting vehicles in holds, permission must first be obtained from the ship's commanding officer or his designated representative. The use of the ship's blower and other safety precautions to ensure adequate ventilation and protection against carbon monoxide poisoning are mandatory.

10. Care of Troop Spaces

a. Responsibility. The COT is responsible for the cleanliness, security, and police of all living compartments, washrooms, heads, holds, hatches, ladders, and deck spaces allotted to embarked units and of ladders leading thereto. Compartment commanders are assigned areas of responsibility for police purposes. The overall policing of areas occupied or used by embarked units is supervised and coordinated by the COT.

b. Cleaning Details

(1) Sufficient cleaning details should remain on board during final debarkation, except debarkation for combat or simulated combat, to give final cleaning to all areas for which embarked units were responsible.

(2) Embarked personnel will not perform duties that are normally the responsibility of the ship's company except under unusual conditions, and then approval of the COT is required.

11. Security and Shipboard Drills

a. Fire and Collision. During fire or collision drills, or in case of actual fire or collision, embarked personnel should remain quietly in their assigned places, except that they will immediately clear passageways and affected areas of the ship.

b. Smoking. Smoking is prohibited during drills or actual emergencies and as otherwise specified in ship's regulations or special orders.

c. General Quarters. With the exception of special details, such as guard and antiaircraft watches, embarked personnel must move to and remain in assigned compartments during general quarters, keeping passageways and ladders clear for personnel engaged in the drill or emergency. Officers either join their commands in their assigned compartments or remain in their own berthing spaces during general quarters.

d. Abandon Ship. Embarked personnel must be thoroughly instructed and exercised in the procedure for abandoning ship before embarking and as soon as practicable after arrival aboard. Assembly areas and their routes thereto should follow the debarkation plan as closely as practicable. Embarked personnel may assist in the launching of life rafts, if necessary, and should be instructed in the method of launching rafts. Individuals must be impressed with the desirability of using debarkation nets and lines in abandoning ship, rather than jumping over the side. However, should it become necessary to abandon ship by jumping over the side, each individual must carry out certain safety precautions to avoid injury:

(1) Remove helmet before jumping.

(2) Secure cork and kapok life jackets properly and hold with the arms and hands in such a manner that the force of hitting the water will not remove the life jacket or injure the wearer.

(3) Jump feet first with legs together.

(4) Inflate CO2-type life preservers only after reaching the water.

(5) Move away from the ship's side as quickly as possible on entering the water to prevent injury from falling objects and to clear the water for others to follow.

e. Man Overboard. All embarked personnel will go to berthing areas and a muster will be taken. All personnel will remain in berthing areas until the actual emergency or drill is secured.

12. Life Preservers

a. Types. Embarked personnel are will be instructed on the location and issue of issued life preservers immediately after arrival aboard ship. Embarked personnel will also and must be instructed on how and when life preservers will be used aboard ship. in their use. They retain the preservers until debarking on the beach. Two general types of life preservers may be issued:

(1) CO2 life preservers or other automatically inflated types made of rubber or other material and inflated by a small cylinder of gas. As a safety feature, all life preservers of this type can be orally inflated through a tube in case of a malfunction in the inflating mechanism.

(2) Cork or kapok type of life preserver or life jacket.

b. Care. Individuals must keep life preservers in proper working condition at all times. Inflatable-type life preservers should be tested for leaks by oral inflation and checked to ensure that for presence of unused CO2 cylinders have not been used from the life belts of that type. The CO2 should not be wasted by prematurely inflating the preservers. Individuals must be cautioned to wear life preservers high enough on the body to prevent the wearer from turning upside down once in the water.

c. When Worn

(1) Ship's regulations will direct the wearing and stowage of life preservers for embarked personnel.

(2) Individuals engaged in landing operations using any type of landing craft will wear life preservers ashore and discard them beyond the high water line. Provisions will be made by the beach party to return the preservers to the ship. If AAVs with overhead cover are employed, care must be exercised to ensure that the type life preserver worn will permit the exit of the wearer through escape hatches.

(3) On maneuvers or other training exercises, individuals will discard life preservers in the above manner and recover them on the beach before re-embarking in landing craft.

(4) Individuals leaving the ship on arrival at their final destination and disembarking down a gangway to a pier will leave their life preservers on their respective bunks or other designated places in a location as directed in the ship's regulations.

13. Recreation and Morale

a. Ship's Facilities. The COT, through his representative, arranges for the use of the ship's recreational facilities by the embarked personnel. The ship's library should be available for use. Additional books should be procured by the ship before the embarkation of the LF, if necessary. Movies are frequently shown over the shipwide entertainment system.

b. Athletic Equipment. The embarked unit's recreation and morale officer will provide ropes, medicine balls, weights, boxing gloves, and other athletic equipment suitable for use aboard ship.

c. Ship's Service Store. The supply of exchange items, such as cigarettes, toilet articles, and candy, in the ship's service store should be augmented by additional supplies provided by the embarked units. Special provisions should be made to provide exchange items for personnel embarking on small ships having no ship's service store available.

d. Daily News Service. Daily news sheets compiled from news items received by the ship's radio may be printed, copied, and issued. With the permission of the captain of the ship, daily news items may be read over the ship's loud speaker system.

e. Organized Entertainment. Under the direction of a designated embarked unit officer, musical shows, boxing matches, and other entertainment may be organized.

f. Church Services. Areas will be designated for the conduct of church services based on recommendations of the embarked unit and ship's chaplains.

14. Uniforms. The COT recommends to the commanding officer of the ship a suitable uniform of the day to be worn by embarked officers and enlisted men. The uniform prescribed should fit the activity in which the units will be engaged, such as liberty, recreation, or working parties.

15. Physical Conditioning. Personnel must exercise daily to ensure that they will be physically fit for combat operations. Aboard ship, this is best accomplished by organized calisthenics. The schedule of physical drill periods will be coordinated with the ship's routine. Ships should provide every practicable assistance and facility for exercising. Climbing ropes, cargo nets suspended from hatch coamings, and other such devices will aid materially in any program designed to preserve physical fitness.

16. Combat Orientation

a. Embarked Units. With the exception of organization commanders and certain staff members, OPSEC normally precludes personnel from being informed of their destination and mission until after embarkation is complete and the ship is under way. Once under way, the officers of embarked units are assembled and informed of their destination, mission, and plans for the employment of their units. Officers then disseminate this information to their respective organizations.

b. Ship's Officers. The COT makes the necessary arrangements with the ship's captain for the orientation of the ship's officers regarding the mission and general plan of employment of the embarked units.

c. Training Aids. Training aids particularly adaptable for use aboard ship are as follows:

(1) Aerial photographs, maps, and relief maps of suitable size and number are mounted in parts of the ship where they may be studied by all embarked personnel. Relief maps are of particular value because they present a three-dimensional view of the objective and are the most easily understood. All

such maps, photographs, and charts should show beaches, boundaries, zones of action, and the general scheme of maneuver.

(2) Public address systems or closed circuit television (CCTV) should be used because the noise aboard ship frequently makes it difficult for instructions to be heard. Commanders, in their prior planning for training aids, should either provide their own public address systems or make arrangements with the ship for use of the portable public address system usually carried aboard transports.

d. Briefings. All embarked personnel should be carefully briefed as to the pertinent details of the operation. This briefing is a continuous process as new information is received regarding the enemy and conditions at the objective. It should include a concise outline of the operation as a whole in addition to more detailed matters affecting the individual units. Upon completion of final plans for the assault, the COT, through his staff, will hold sufficient conferences to enable all LF personnel and ship's personnel concerned to be briefed in detail on the actual plan for landing at the objective.

17. Training While Under Way. Training conducted while the ship is under way will be limited to activities that do not interfere with the ship's operating procedures. Crowded conditions aboard ship require that shipboard routine be highly organized. Consequently, all training must be thoroughly planned and organized in order to avoid conflicting activities.

18. Firing of Weapons. The commanding officer of the ship may authorize the firing of weapons off the ship's deck. Such firing should be limited to familiarization and test firing and must be closely supervised to ensure observance of all safety precautions, particularly in regard to the direction of fire in relation to other ships of the convoy. The test firing of automatic weapons should be accomplished as close to the time of arrival in the landing area as possible to ensure proper functioning during the assault.

CHAPTER XII

UNLOADING

1. General. The CATF is responsible for expeditious unloading at the objective area in the planned order or priority, and to the proper beaches or landing zones. He may delegate control and coordination of unloading operations to subordinate commanders. Thus, the commander of each Navy echelon, including the commanding officer of each ship, is responsible for unloading personnel and cargo.

a. Types of Unloading. The types of unloading in PHIBOPs are:

(1) Selective Unloading. This method of unloading is primarily employed during the initial unloading period in the amphibious assault and supports the landing plan. Selective unloading is tactical in nature in that it allows the LF elements ashore to call for personnel, supplies, and equipment as needed.

(2) General Unloading. This method of unloading is primarily employed during the subsequent unloading period of the amphibious assault. General unloading is logistical in nature in that it allows for personnel, supplies, and equipment to be sent ashore without regard to tactical considerations.

2. Landing Force Debarkation Officer. The team embarkation officer or his assistant ordinarily becomes the LF debarkation officer for the ship on which embarked. Acting for the COT, he states the requirements for unloading to responsible ship officers and is the LF representative during the unloading operation. He assists and advises the ship debarkation officer as required. He stations a checker at each debarkation station to maintain a running record of cargo unloaded and the beaches or landing zones to which it is sent.

3. Ship Debarkation Officer. The ship's debarkation officer is normally the ship's executive officer. The CCO assists and advises the debarkation officer as required. Acting for the commanding officer, the debarkation officer is responsible for debarking personnel in accordance with the debarkation schedule and unloading cargo in accordance with the unloading plan. One of his primary functions is to have the proper landing craft at the designated debarkation station when needed. He maintains telephone communications with the after signal station, each debarkation station, and

each hatch. He keeps a checkoff list of landing craft and helicopters being loaded, their destination, what is loaded in each, and the time each departs the ship.

4. Hatch Unloading Personnel

a. Hatch officer. A hatch officer (Navy commissioned or petty officer) supervises the unloading of cargo from the hold into each landing craft. Besides these duties, he informs the ship's debarkation officer when:

(1) Ready to load a landing craft.

(2) Landing craft is nearly loaded.

(3) Landing craft clears the station.

(4) There is a delay in unloading.

b. Hatch Talker. A hatch talker from ship's personnel handles the telephone and relays all messages between the hatch officer and the ship's debarkation officer.

c. Winchmen, Hatch Tenders, and Boatswain's Mate. Winchmen, hatch tenders, and boatswain's mates are furnished by the ship for each hatch. Two complete details for each hatch are trained and available so that cargo unloading can continue uninterrupted.

d. Hatch Unloading Detail. A hatch unloading detail, part of the ship's platoon, unloads the hold. The officer in charge of the ship's platoon supervises the activities of all hatch unloading details. He divides the details into shifts, arranges for meals, and ensures that the unloading schedule is followed. A noncommissioned officer is in charge of each hatch detail, working under the direct supervision of the Navy hatch officer. He makes certain that the cargo unloading priority is followed, that the detail is ready for work when required, and that the hatch checker is recording supplies and equipment unloaded.

(1) The hatch unloading detail loads cargo nets, attaches vehicle slings, fastens steadying lines to vehicles, and signals the hatch tender when the load is ready for hoisting.

(2) The size of a hatch unloading detail varies according to the type of hold and cargo. The officer in charge of the ship's platoon and the debarkation officer determine its size.

5. Unloading Plan. Planning for unloading should be conducted concurrently with planning for loading. Obviously, to unload cargo in a certain sequence requires that it be loaded in reverse sequence; therefore, the embarkation team commander, in approving the loading plan, automatically determines the schedule of priorities for cargo unloading. The LF debarkation officer prepares the detailed unloading plan within the framework established by the embarkation team commander. He indoctrinates unloading personnel with its contents before reaching the objective. The unloading plan has no standard form, but should include the following:

a. Necessary information to ensure that cargo unloading priorities established by the embarkation team commander are followed.

b. A list of names, ranks, and duties of ship's platoon personnel.

c. Special instructions peculiar to unloading.

d. Types of cargo in each hold.

e. Specific lighterage required for unloading each hold and their reporting sequence.

6. Transporting Cargo Ashore. The means used to transport cargo ashore include landing craft, amphibious vehicles, pontoon barges, and helicopters.

a. Landing Craft. Vehicles and the majority of equipment and supplies from transport and cargo ships are usually transported ashore by landing craft. Landing craft that are organic to amphibious ships are normally transported in the ship's boat davits on the main deck. Landing craft that are not organic to the ship are carried on ships with well decks (e.g., LHD, LHA, LPD, and LSD).

(1) Displacement Landing Craft

(a) Landing Craft Mechanized (LCM). These craft are usually preloaded and lifted to the objective area in the wells of LHAs, LHDs, LSDs, or LPDs.

1. LCM-6. The LCM-6 has a capacity of 34 short tons or 80 personnel. The LCM-6 is organic to some amphibious ships.

2. LCM-8. The LCM-8 has a capacity of 60 short tons or 150 personnel. The LCM-8 (aluminum hull) is organic to the LKA. The LCM-8 (steel hull) is owned and operated by the assault craft unit (ACU).

(b) Landing Craft Utility (LCU). The LCU has a capacity of 150 to 200 short tons depending on the class of LCU. The LCU is owned and operated by the ACU and Army transportation units.

(2) Nondisplacement Landing Craft

(a) Landing Craft, Air Cushion (LCAC). The LCAC vehicle is a shipborne, high-speed (40 knots), over-the-horizon, STS amphibious landing vehicle capable of a 60-ton payload. It is designed to lift all equipment organic to the MAGTF in a PHIBOP.

(b) Lighter Air Cushioned Vehicle (LACV-30). The LACV-30 is a fully amphibious craft designed to meet US Army requirements for transporting military cargo in support of the logistics over the shore (LOTS) mission. It can carry a variety of cargo configurations up to 30 tons, including container vehicles and break-bulk pallets from shipside, through the surf, and onto the beach. The craft is capable of speeds approaching 30 knots.

b. Amphibious Vehicles. Amphibious vehicles are used to move cargo ashore when transfer of cargo at the beach is not desired or when surf conditions, reefs, or other hydrographic conditions prohibit beaching of landing craft.

(1) Assault Amphibious Vehicle. The AAV is primarily used as an assault vehicle. The AAV is also useful when transporting cargo directly to units or inland dumps. The AAV is also useful for carrying on-call supplies (critical supplies) to units ashore. The capacity of the AAV is 5 short tons. Amphibious vehicles are used to move cargo ashore when transfer

of cargo at the beach is not desired or when surf conditions, reefs, or other hydrographic conditions prohibit beaching of landing craft.

(2) Lighter Amphibious Resupply Cargo (LARC). LARCs are employed to transport cargo in over-the-beach operations from ships to inland transfer points. The LARCs come in various sizes and cargo-carrying capacities. Cargo capacities range from 10,000 to 120,000 pounds (5 to 60 short tons).

c. Pontoon Barges

(1) Pontoon barges are used either as a causeway pier or a barge ferry. Pontoon barge ferries enable vehicular cargo to be transferred to the beach. Floating causeway piers can be extended up to 1,080 feet from the shoreline providing for the discharge of LST rolling stock directly to the beach. A more permanent structure can be established by driving piles into the sea floor and elevating the causeway pier above the expected surf. An elevated causeway is equipped with a 140-ton crane for lifting containers out of lighters and a turntable for turnabout of container-hauling trucks.

(2) Pontoon barges, when used as barge ferries, can extend up to 360 feet in length and can be powered either by warping tugs, modified LCM tenderboats, or a water-jet-powered causeway section. Barge ferries are comprised of the same causeway sections as the causeway pier and can carry up to 105 tons of cargo if not subjected to seas greater than sea state 3.

(3) Pontoon barges are usually carried to the amphibious objective area side-loaded on an LST but can also be carried in the well deck of amphibious, MSC, and commercial ships.

d. Helicopters. The chief employment of helicopters is to unload personnel and cargo from the LHD, LHA, LPH, and LPD. When employed in unloading other amphibious ships, the helicopter supplements the landing craft by unloading limited amounts of emergency or selected cargo.

7. Transfer Line. When hydrographic conditions such as sandbars or reefs prevent landing craft from beaching, a transfer line is established. At this line, personnel, equipment, and supplies from incoming landing craft are transferred to amphibious vehicles for movement ashore. It

is also the line to which amphibious vehicles return for subsequent loads. Its location should be as close to the beach as possible but beyond the effective range of small arms fire. Pontoon barges provide stability and permit more flexibility in load rearrangement.

8. Debarkation. The debarkation of the LF is in accordance with the debarkation schedule prepared by the LF commander. To ensure that personnel debark in an orderly and safe manner, units are assigned to debarkation stations by boat or helicopter teams. Individuals should remain in their berthing compartments or assembly areas until their team number is called for by the ship's debarkation officer.

CHAPTER XIII

ADMINISTRATIVE MOVEMENTS

1. General. Normally, administrative movements are used when troops are transported overseas in peacetime or transported in nonassault shipping in combat operations. Billeting of personnel and stowing of cargo according to unloading priorities for selective discharge are not required. Instead, administrative or commercial loading is employed because it achieves maximum use of billeting and cargo space. (See Chapter VI, subparagraph 2a.) Techniques and procedures involved in administrative moves differ somewhat from those involved in tactical moves employing combat loading.

2. Planning. Planning for an administrative move follows the same pattern as planning for a tactical move, namely, maximum utilization of space available.

3. Determining Shipping Requirements. When determining shipping requirements for administrative movement, maximum use and economy of shipping space are the governing factors. Unit personnel and tonnage data are assembled as in combat loading and then translated into shipping requirements. The number of personnel, type of organization embarking, cubic feet and square feet of cargo space required, and type of supplies and equipment to be loaded influence the type and amount of shipping required.

4. Shipping Allocation. Allocation of amphibious shipping for administrative movements is accomplished in a manner similar to that for combat loading. Matters pertaining to allocation and use of MSC ships are discussed in Chapter XIV.

5. Organization for Embarkation. Generally, an embarking unit, its supplies, and equipment are loaded in the same ship without considering unloading priorities. Unit integrity is thus maintained. Several embarking organizations may embark in the same ship to permit maximum use of space. This same method of loading is also used when units within the convoy are scheduled to offload at different destinations. The embarkation organization establishes and centralizes the responsibility and control necessary for:

   a. Embarkation planning.

   b. Embarkation.

   c. Unit discipline.

   d. Unloading.

6. Embarkation and Debarkation Procedures

a. Preparation of Cargo for Loading. Methods of preparing cargo for an administrative movement are generally the same as those discussed in Chapter V. However, because entry into combat is not planned, such preparations as waterproofing vehicles and equipment are not normally required.

b. Embarkation. The same general requirements stated in Chapter XI for embarking units for a tactical move apply to an administrative move. The following requirements concern planning and execution:

(1) Activities of the advance party and special details.

(2) Billeting.

(3) Preparation of embarkation rosters.

(4) Embarkation.

c. Preparation of Loading Plans and Tables. For an administrative movement on Navy amphibious ships, the same documentation necessary for a tactical move, as indicated in Chapter VII, is needed for an administrative move. Responsibility for preparing these tables remains unchanged. In preparing the personnel, supplies, and equipment report for an administrative move, each vehicle should be listed individually to permit marriage of prime mover and towed item. This facilitates lighterage usage during unloading at anchorage and expedites departure from dock or beach areas. In rare instances, if certain vehicles or cargo must be unloaded early, a priority is indicated and stowage planned accordingly.

d. Debarkation Procedures. An unloading plan is prepared to coordinate unloading of personnel, supplies, and equipment with port and transportation facilities. Unloading procedures are usually dictated by the following:

(1) Requirement for unloading a maximum number of hatches simultaneously.

(2) Unloading facilities available at the anchorage or port of debarkation.

CHAPTER XIV

MILITARY SEALIFT COMMAND SHIPPING

1. Mission. The five-fold mission of MSC is to:

   a. Provide an immediate sealift capability in support of approved contingency plans, general war plans, or other emergencies.

   b. Plan for and be capable of expansion in time of emergency or war as necessary.

   c. Provide sea transportation for personnel and cargoes of the Department of Defense.

   d. Staff and operate ships in direct support of US Navy fleets.

   e. Meet all DOD requirements (except those met by fleet ships) for ocean shipping for purposes other than transportation.

2. General. MSC ships are US naval vessels and are included in the official List of Naval Vessels. There are two types: in commission (black stack) and in service (blue and gold stripes on stack) ships. In commission ships carry the prefix United States Ship (USS); in service ships carry the prefix United States Naval Ship (USNS). In addition, MSC can, whenever necessary, charter commercial ships for particular missions or periods of time. For additional information on MSC, reference should be made to NWP 22-8/FMFM 1-15, "MSC Support of Amphibious Operations," and Joint Pub 4-01.2, "JTTP for Sealift Support to Joint Operations."

3. Responsibilities

   a. General. Chapter XII of NWP 22-8 summarizes the responsibilities of amphibious forces, LFs, and MSC in the participation of MSC and MSC-provided ships in PHIBOPs and exercises.

   b. Responsibilities of the Master for Cargo. In MSC-provided ships, the master is the captain of the vessel. The master's responsibility for cargo does not begin until the cargo has been loaded aboard and accepted by him. However, he is responsible for ensuring proper stowage. This responsibility is discharged by approving loading plans before commencement of loading, ensuring that all loading is in accordance with the approved

loading plan, and that the cargo and its stowage do not adversely affect the stability or safety of the ship. Once he has accepted the load, the master is responsible for the cargo until the ship arrives at its destination and commencement of offloading begins.

4. Ship's Loading Characteristics Pamphlets

a. MSC Ships. SLCPs prepared for MSC ships are similar to the loading characteristics pamphlets for amphibious ships and serve the same purpose. The MSC ships that appear in NWP 22-8/FMFM 1-15, "MSC Support of Amphibious Operations," are part of the fleet of merchant marine vessels that will generally be available to augment the amphibious ships assigned to support specific plans.

b. Merchant Ships. SLCPs, in the form and detail familiar to troop commanders, are not available for all merchant ships. However, SLCPs for MSC ships (long-term charter, US Flag RO/RO, and RRF) and ship's capacity plans are available. The general capacities of major US Flag and US-controlled commercial passenger ships may be found in NWP 22-8/FMFM 1-15.

5. Commercial Cargo Ships

a. Embarkation Planning. Cargo ships procured from the MSC for any major troop lift will be obtained, to a great extent, from the merchant fleet. Ideally, ships from the merchant fleet will only be necessary for the movement of follow-up reinforcements and stores in support of an amphibious operation. This cargo is usually administratively loaded and does not normally require the detail included in the loading plans of amphibious ships. (See the embarkation officer checklist for MSC shipping in Appendix H.) SLCPs, in the form and detail familiar to unit commanders, are not available for all merchant ships. However, a ship's capacity plan will be available at a minimum. The difficulties in embarkation planning generated by the above-mentioned deficiency are compounded by the following:

(1) The period of time available for the development of embarkation plans, including the preparation of detailed individual ship's loading plans for large numbers of MSC-procured shipping, is all too frequently totally inadequate.

(2) The brief period of time between the procurement by MSC of a merchant vessel, its arrival on berth,

and the specified date of completion of loading normally demand that outloading be initiated almost simultaneously with the arrival of the ship on berth. This condition provides little time for embarkation officers to thoroughly familiarize themselves with the ship's capabilities and limitations.

b. Recommended Embarkation Planning Procedures

(1) Embarkation Group Level

(a) Determine the number of embarkation units to be formed.

(b) Assign personnel, supplies, and equipment to each embarkation unit.

(c) Prepare a consolidated vehicle list itemizing, by embarkation unit, those vehicles whose gross weight exceeds 5 tons. This 5-ton figure is critical because of the prevalence in the merchant fleet of booms with 5-ton limitations.

(d) Present a listing of personnel, supplies, and equipment by cube and weight along with a listing of all vehicles weighing in excess of 5 tons to the MSC area representative and, in coordination with him, ascertain the quantity and type of shipping (including hull types) necessary to meet the lift requirements of each embarkation unit. If neither the ship nor an MSC area representative is available for consultation, merchant shipping requirements are computed by the embarkation unit based on the information given for a hull type. It is emphasized that a wide divergence is to be expected between the general characteristics of a given hull type and the actual ones embodied in a specific ship of the same type hull.

(e) Request copies of the ship's plan and the cargo capacity of each type of hull.

(2) Embarkation Unit Level. In coordination with the embarkation group staff, together with recommendations of subordinate commanders, break the embarkation unit down into embarkation teams and assign each team to an individual ship. Strict

accountability must be maintained concerning the allocation to individual ships of vehicles whose gross weight is in excess of 5 tons.

(3) Embarkation Team Level

(a) Before the arrival of a previously designated ship (hull type is now known), time permitting, complete an initial loading plan.

(b) Board the assigned merchant ship at the earliest possible time. In company with the first mate, become familiar with the characteristics of the assigned ship. If differences exist between this ship and the details shown on the ship's plan and cargo capacity form for the type hull involved, make appropriate changes to the latter. Changes in capacities or configuration must be reflected in the previously prepared loading plan. If time permits, team embarkation officers, working from the ship's plan and cargo capacity form, may prepare individual cargo compartment stowage diagrams to the conventional scale of 1/8 inch equals 1 foot. If this is not done, it is recommended (for the benefit of the ship's platoon ultimately charged with the task of stowing cargo) that the following be indicated on the plan views of the respective cargo compartments diagrammed on the ship's plan and cargo capacity form:

1. The location within a cargo compartment of all bulk cargo to be stowed therein together with the class of supply and cube it represents. (See Figure XIV-1.)

2. The unloading priority numbers (e.g., 15, 16, 17, and 18) of vehicles to be stowed therein.

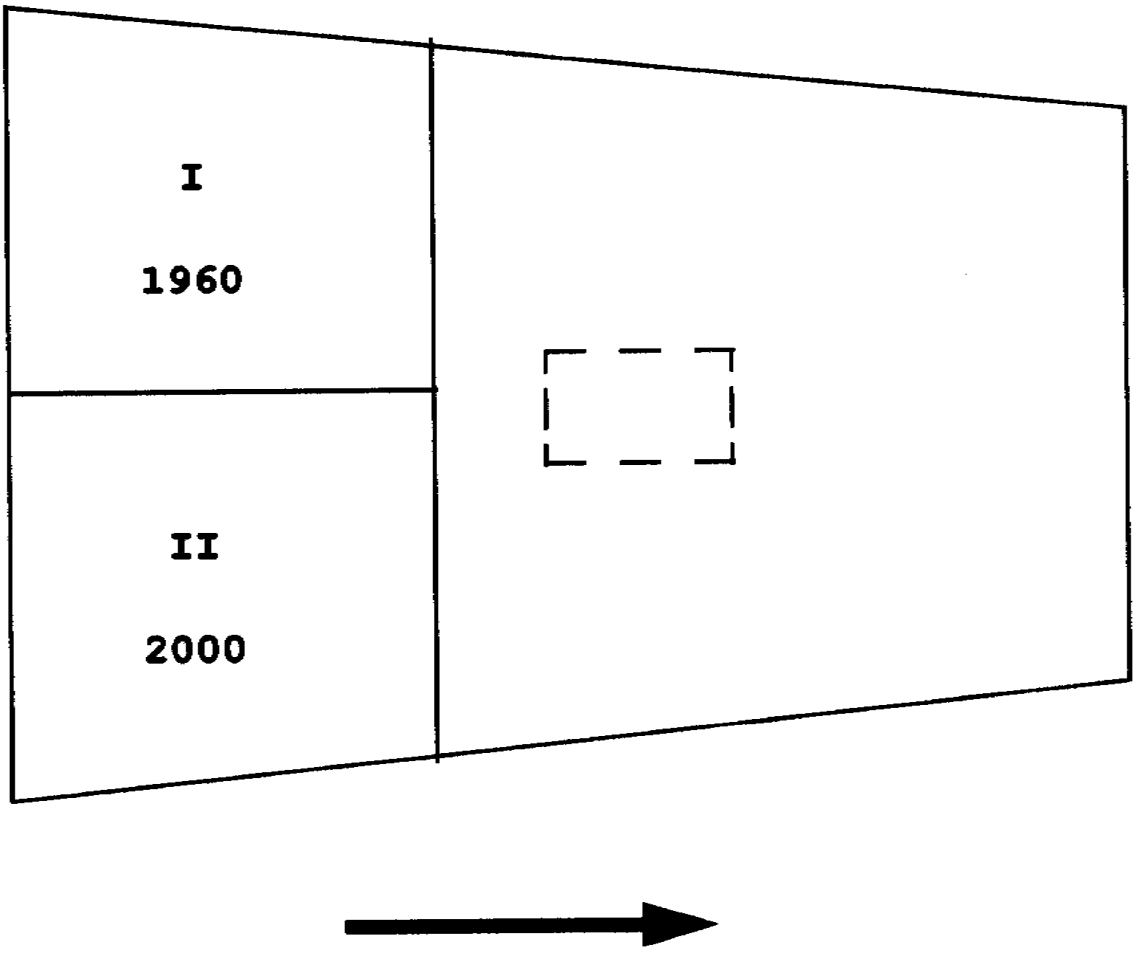

Figure XIV-1. Sample Hatch Sketch

Figure XIV-1. Sample Hatch Sketch

(c) Compute the combat load capacities of the various cargo compartments as follows:

1. Vehicles Stowed Adjacent to Bulk Cargo

a. Vehicle capacity: 75 percent of the square footage which is to be used for vehicle stowage.

b. Bulk cargo stowage: square footage of deck space allocated to bulk cargo stowage times the height of stow. The latter should not exceed the height of vehicles stowed adjacent thereto.

c. Cube capacity of cargo compartment: approximately 50 percent of the compartment's bale cube.

2. Vehicles Stowed Over Bulk Cargo in the Same Compartment

a. This technique in combat loads is restricted to lower holds. Head room of at least 2 feet should be provided for above the vehicles.

b. Cube capacity of cargo compartments: approximately 80 percent of the compartment's bale cube.

3. Bulk Cargo Stowed Alone in a Compartment

a. In combat loads this technique is restricted to lower hold and deep tanks.

b. Cube capacity of cargo compartment: approximately 80 percent of the compartment's bale cube.

(d) Initiate loading from previously staged vehicles and cargo and from the previously prepared loading plan. Since, in most cases, time will not have permitted the preparation of cargo or stowage diagrams to the scale of 1/8 inch equals 1 foot, the loading of the respective cargo compartments will be on a trial-and-error basis. The loading plan must be brought in line to reflect the final loads fitted into each compartment.

(e) Complete the profile loading plan.

6. Compatibility of Cargo Aboard Cargo Ships

a. The same compatibility regulations that apply to the amphibious ships apply to MSC ships. For training exercises, Class III of any type and Class V will not be embarked in cargo ships unless specifically authorized in the embarkation plan or order for the exercise concerned. The reason for this is that charter rates (cost) for MSC ships is considerably higher when hazardous cargo is embarked. For actual operations, all types of cargo may be embarked in MSC ships.

b. USNS ships (with a few exceptions) and general agency agreement (GAA) ships hold Coast Guard certificates of inspection. In the interest of national defense, a waiver of navigation and vessel inspection laws and regulations should be obtained to permit MSC-provided ships to carry out their assigned missions in support of military operations or exercises.

7. Loading MSC Ships. Because the ship's company on MSC ships is not responsible for or capable of loading the ship, the following action must be taken by the LF:

a. Establish early liaison with the ship to obtain a current SLCP, correct any SLCPs held by the command, and visually inspect the cargo holds and billeting facilities.

b. Because of the limited, or in most cases, complete lack of berthing, messing, and head facilities on MSC cargo ships, determine, on an individual ship basis, what services can be provided by the ship.

c. For all the above services that cannot be performed by the ship, make arrangements for them to be handled by other means, such as pierside facilities or by frequent rotation of working parties.

d. Establish, through close liaison with the ship, the size and composition of the ship's platoon (drivers, guards, and maintenance personnel) that will be embarked during the voyage. Determine at this time if cots, sleeping bags, combat rations, water, containers, and portable heads will be required.

e. Prepare loading plans and submit them to the ship's master for approval.

f. Employ Naval cargo handling battalions, US Army transportation terminal service company, commercial stevedores, or as a last resort, qualified naval personnel for operating the winches during the loading of the ship.

NOTE: Further detailed information on loading of MSC ships can be found in FM 55-17, "Terminal Operations Specialist's Handbook."

8. Cargo Receipt and Vessel Loading

a. Ordering Out Cargo. Efficient pier operation depends on continuous movement of cargo. The bottleneck created

by wharves filled to capacity, or badly congested with vehicles loaded with cargo, seriously retards the loading of vessels and greatly reduces the port efficiency.

(1) Cargo is delivered by railroad cars, lighters, trucks, etc. Heavy-lift cargo has to be delivered at a specified time in order to coordinate the use of heavy-lift equipment.

(2) The usual procedure, after the date and hour have been determined for the vessel to start loading, is to have the bottom cargo ordered out and made available before the vessel is ready to start loading. Filler cargo is also assembled on the pier to be used when needed.

b. Loading Time. Many factors must be considered before loading time can be estimated accurately.

(1) Port speed in handling cargo varies as much as 25 to 30 percent. Within ports themselves, one section may function as much as 20 percent more efficiently than another. It is necessary to be familiar with the labor in a locality before loading time can be estimated.

(2) If the cargo was distributed equally in each hold and the tons per hour on all commodities were constant, estimating the working time would be fairly easy and accurate. However, these ideal conditions do not exist.

(3) The following factors must also be considered:

(a) Time required for rigging and rerigging.

(b) Time required for handling dunnage.

(c) Time required for blocking and lashing.

(d) Time required for opening and closing hatches.

(e) Time required for any shifting of the vessel that might be necessary.

c. Final Stowage Plan. After the vessel has been loaded, a final stowage plan is prepared showing the

location of the cargo on the ship. Theoretically, the final stowage plan should agree with the prestowage plan, but this is seldom the case.

9. Unloading MSC Ships in the Objective Area. As set forth above in the loading instruction for MSC ships, the ship's company is not capable of, or responsible for, offloading the ship. Consequently, the following courses of action are required:

a. Naval cargo handling battalion personnel must be transferred to the MSC ships to operate the winches. If the size of the cargo handling battalion is insufficient to work the MSC ships assigned and maintain the unloading rate required by the landing plan, then additional winch operators and hatch captains must be requested from the CATF after completion of the offloading of amphibious ships in the amphibious objective area. (See Appendixes F and G.)

b. Amphibious landing craft and boat crews must be used for unloading cargo and debarking personnel until deep draft berths are uncovered or the arrival of Army boat companies.

c. If the amphibious ships leave the objective area, a recommendation should be made to the CATF to leave a ship for billeting and feeding of the Naval and Marine working parties on the MSC ships. In addition, an LSD should be retained for use as a boat haven and to perform refueling and minor repairs on the landing craft.

d. The naval beach group and LF support party organization must remain in operation throughout the unloading of the MSC ships until relieved by Marine Corps or US Army CSS units.

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APPENDIX A

PROCEDURE FOR THE DETERMINATION OF SHIPPING REQUIREMENTS

1. Development of Assault Shipping Requirements. Shipping requirements for the LF are normally developed by:

a. Receiving their shipping requirements from the major subordinate commands or elements of the LF.

b. Determining, at LF level, shipping requirements for the entire force, to include units not normally organic to the LF but to be embarked therewith, and all supplies and equipment to be embarked.

2. Basis for Assault Shipping Requirements. Assault shipping requirements are based on the following:

a. The landing plan (Appendix 1 to Annex R).

b. The scheme of maneuver ashore (concept of operations).

c. The plan for landing supplies.

d. Total number of personnel embarked:

(1) Officer.

(2) Senior enlisted (E-7 and above).

(3) Enlisted (E-6 and below).

e. Total square footage of vehicles and equipment to be embarked that require square foot stowage consideration (e.g., wheeled vehicles, tracked vehicles, skid-mounted equipment, MILVANs, ISO containers, and other items that can be stacked), less mobile-loaded items in landing craft and preloaded items in landing craft.

f. Total cubic footage of cargo that can be stacked (e.g., standard cargo (2-man lift), unitized cargo (pallets, etc.)) (less mobile loaded items).

g. Total cubic footage, by type, of hazardous cargo (ammunition (Classes V(A) and (W)), packaged POL (Classes III (A) and (W)), etc.).

h. Total gallons, by type, of bulk POL (Classes III (A) and (W)).

i. Total number of embarked aircraft (e.g., helicopters and fixed wing).

j. Total number of landing craft required to support the landing plan.

k. Total number of AAVs required to support the landing plan.

l. Requirement for special missions and equipment (e.g., minesweeping, special operations).

m. The CATF's initial estimate of the number and types of ships to be available.

3. Determination of Assault Shipping Requirements. The determination of assault shipping requirements cannot be undertaken until information is available as to the number of personnel, equipment, and supplies to be embarked in assault shipping, and LF means required to execute the landing plan.

a. It cannot be taken for granted that one or more factors, such as the square feet of vehicles or the number of personnel, are necessarily the controlling ones. The requirements of each of several operations may be so varied that no common denominator or rule of thumb can be deduced. For example, an operation may require such a short sea voyage that overloading the ships beyond their billeting capacity may be acceptable. Also, the employment of a considerable number of landing ships will drastically reduce the requirement for other ships to lift vehicles. These are but a few examples of the many variables that can affect the shipping requirements for each operation.

b. Only after shipping has been allocated to the LF can an accurate final determination of its adequacy be made.

4. Steps for Determining Assault Shipping Requirements. The following is a step-by-step procedure that may be used to determine assault shipping requirements:

a. Determine the special shipping requirements of the LF.

(1) Based on the helicopter and other vertical/short takeoff and landing (V/STOL) support requirements of the landing plan, determine the number of LPHs, LHAs, and/or LHDs required.

(a) Apply broken stowage factor to vehicle spaces (less well deck of LHA/LHD).

(b) Apply broken stowage factor to cargo spaces (including special stowage spaces).

(c) Deduct LPH, LHA, and LHD personnel, vehicle, and cargo capability from the total LF requirements.

(2) Determine LF requirements for special-purpose ships and craft such as an amphibious command ship (LCC) for LF staff and submarine(s) or other ships for reconnaissance inserts and/or recovery. Deduct their capabilities from the LF requirements.

(3) Determine the type and number of landing craft required to execute the landing plan.

(4) Determine the number of LPDs necessary to provide the LF with an alternate landing platform for helicopters and to provide the desired flexibility in landing means.

(a) Determine the number of landing craft that can be carried in the LHA, LHD, and/or LPDs as determined above. Deduct this figure from the total landing craft requirements determined in subparagraph 4a(3).

(b) Determine which vehicles will be preloaded in these landing craft and deduct them from LF totals.

(c) Using appropriate broken stowage factors, determine the amount of vehicles and other cargo that can be stowed on the LPDs required as determined above.

(d) Deduct the LPDs' personnel, vehicles, and other cargo capacities from the LF totals.

b. Determine the landing ships' requirements of the LF.

(1) Determine the number of LSTs required to lift AAVs and pontoon causeway sections into the objective area.

(a) Deduct AAVs to be loaded on LSTs from the LF totals and subtract the space required for their stowage from the vehicle stowage capacities of the LSTs concerned.

(b) Adjust vehicle and cargo capacities of the above LSTs by subtracting space required for AAVs and for tiedown of causeway sections, and by applying the appropriate broken stowage factors.

(c) Deduct personnel and adjusted vehicle and cargo capacities from the remaining LF totals.

(2) Determine the number of LSDs required to transport remaining landing craft into the objective area.

(a) Determine which vehicles will be preloaded in these landing craft and deduct them from the LF totals.

(b) Adjust vehicle and cargo capacities of the above LSDs by applying the appropriate broken stowage factors.

(c) Deduct personnel and adjust vehicle and cargo capacities from the remaining LF totals.

(3) Determine the number of additional LSTs required to lift LF vehicles into the objective area for landing directly ashore by beaching the LSTs or by using a pontoon causeway.

(a) Adjust vehicle and cargo capacities of the above LSTs by applying the appropriate broken stowage factors.

(b) Deduct personnel and adjusted cargo and vehicle capacities from the remaining LF totals.

c. Determine the cargo ship requirements for the remainder of the LF as shown below.

(1) Determine the number of LKAs required to lift the remainder of LF vehicles, equipment, and supplies.

(a) Adjust vehicle and cargo capacities of the above LKAs by applying the appropriate broken stowage factors.

(b) Deduct personnel and adjusted vehicle and cargo capacities from the remaining LF totals.

(c) Determine the number of landing craft that are carried by the LKAs required and compare that figure with the total landing craft required. Adjust LSD requirements computed in subparagraph 4b(2), accordingly.

(2) Determine the additional LPDs required based on the number of personnel remaining and the number and type of these ships that can be reasonably expected to be available.

(a) Adjust the vehicle and cargo capacities of the additional LPDs required by applying the appropriate broken stowage factors.

(b) Deduct personnel and adjusted vehicle and cargo capacities from the remaining LF totals.

(c) Review LSD requirements computed in subparagraph 4b(2) based on the landing craft lift capability of the additional LPD(s).

d. Confirm that the landing craft available on the LKAs and those to be embarked in LHAs, LHDs, LPDs, and LSDs are sufficient to support the landing plan.

e. Determine if amphibious shipping requirements as computed above contain sufficient special stowage capability to lift total LF requirements for ammunition (Classes V(W) and (A) and POL (Classes III(W) and (A) both bulk and packaged)).

f. If LF lift requirements exceed the capabilities of all available amphibious ships, the requirements for MSC or commercial ships of appropriate types (i.e. RO/RO, breakbulk, dry cargo, and container ships, transports, or tankers) must be determined.

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APPENDIX B

SAMPLE FORMAT FOR EMBARKATION PLAN

CLASSIFICATION

Copy no. of copies
Issuing headquarters
Place of issue
Date/time of issue

EMBARKATION PLAN

Ref: (a)
(b)
(c)

Time Zone:

1. ( ) ORGANIZATION FOR EMBARKATION

a. ( ) General. (The major organization of each embarkation echelon directly subordinate to the issuing headquarters is listed. Reference is made to the appropriate annex for the detailed list of units comprising each echelon. A statement concerning the plan for follow-up shipping may be made here if required.)

b. ( ) Assignment to Shipping. (Reference is made to Tab A or the DTG of the Organization for Embarkation and Assignment to Shipping message. Normally, this is the only entry appearing in this paragraph.)

2. ( ) MATERIEL TO BE EMBARKED

a. ( ) Organic Equipment. (The quantity of organic equipment to be embarked by the command. Reference may be made to Tab B.)

b. ( ) Types and Amount of Supplies. (The quantity of supplies to be embarked, by classes, to include water and medical supplies. Reference may be made to Tab B.)

c. ( ) Preparation. (Instructions relative to packing, crating, palletizing, marking, and waterproofing. Reference may be made to Tab B, logistics Standard Operating Procedures (SOP), embarkation SOP, or other appropriate order.)

d. ( ) Allocation of Supplies and Equipment. (Allocation of supplies and equipment, to be embarked by the command as a whole, to the various subordinate embarkation echelons. When this information is detailed, it is usually set forth in tabular form and appended as an annex.)

e. ( ) Movement. (Instructions concerning coordination and responsibility for movement of materiel, to include schedules and transportation to be used.)

3. ( ) PERSONNEL

a. ( ) Uniform, Equipment, and Baggage. (Uniform to be worn by embarking personnel, individual equipment to be carried, and baggage allowance for each person.)

b. ( ) Advance Details. (Instructions concerning working details and CI and security personnel required in the embarkation areas are set forth, in addition to information concerning the advance party for each assigned ship. Instructions should include information pertaining to provision, composition, functions, movement, billeting, messing, and administration of these advance details.)

c. ( ) Movement of the Main Body. (Dates and times of movement and transportation to be used.)

d. ( ) Embarkation Rosters. (This subparagraph is prepared by G-1/S-1. It includes instructions relative to format, content, and distribution of embarkation rosters.)

4. ( ) EMBARKATION AREAS

a. ( ) Assignment of Areas and Embarkation Points. (Instructions are usually set forth in tables, maps, or sketches and are appended as annexes. Instructions regarding liaison to be established with port authorities may also be included. Reference may be made to Tab C.)

b. ( ) Preparation. (Responsibility for improvement of assigned areas and for preparation of specific loading points are prescribed. Typical items covered are the construction or widening of roads, clearing of open storage areas, and the improvement of piers, ramps, and beaching slots.)

c. ( ) Materials Handling Equipment. (Instructions relative to the provision, allocation, operation, and maintenance of roller conveyers, forklift trucks, tractors, cranes, pallets, and other materials handling equipment are set forth.)

d. ( ) Security and Counterintelligence. (Instructions regarding responsibility for implementation of security measures for assigned embarkation areas and coordination to be effected between security and CI elements with local port authorities. Security measures normally include those required to protect against weather, fire, pilferage, sabotage, and espionage and those required to provide for force protection. Instructions should also reference Appendix 3 (Counterintelligence) to Annex B (Intelligence) and Annex L (Operations Security) to the operations plan).

5. ( ) EMBARKATION SCHEDULES

a. ( ) Limiting Dates. (The limiting dates with respect to commencement and completion of embarkation are indicated, or a statement is made indicating later announcement.)

b. ( ) Berthing and Loading Schedules. (The limiting dates with respect to commencement and completion of embarkation are indicated or a statement is made indicating later announcement. Reference may be made to Tab D.)

6. ( ) CONTROL

a. ( ) Traffic Circulation and Control. (Instructions regarding routes, direction of circulation, priorities, speeds, restrictions on lights, and location of traffic control posts within assigned embarkation areas. Availability of MPs may also be included.)

b. ( ) Embarkation Control Office. (Instructions relative to responsibility for establishment, locations, times of opening and closing, and functions. An embarkation office is normally established by each embarkation echelon before the arrival of the first supplies at the embarkation areas and it continues to function until embarkation is complete.)

c. ( ) Communications. (Instructions regarding communication circuits between embarkation points,

embarkation areas, base camps or barracks, naval agencies, embarkation control offices, security posts, and traffic control posts as appropriate.)

7. ( ) MISCELLANEOUS

a. ( ) Loading Plans. (Any specific instructions, not covered in unit SOPs or other publications, to be observed in the preparation of loading plans.)

b. ( ) Loading Reports. (Instructions concerning format, content, and frequency of submission of loading reports.)

c. ( ) Other Embarkation Instructions. (Included in this paragraph are any instructions not provided for elsewhere in the plan or order. Normally, the last entry under this subparagraph pertains to the effective date of the plan.)

BY COMMAND OF...Rank and Name

Signature

Name
Rank and Service
Chief of Staff

ACKNOWLEDGMENT INSTRUCTIONS. (This instruction is included if necessary and may be amplified to indicate the method by which receipt is to be acknowledged.)

TABS:

A--Organization for Embarkation and Assignment to Shipping (Omitted) (See Figs. IV-1 and IV-2)
B--Allocation of Supplies and Equipment
C--Assignment of Embarkation Areas
D--Berthing and Loading Schedule

Format For Allocation of Supplies and Equipment Annex

CLASSIFICATION

Copy no. of copies
Issuing headquarters
Place of issue
Date/time of issue

TAB B (ALLOCATION OF SUPPLIES AND EQUIPMENT) TO EMBARKATION PLAN

Ref: (a)
(b)
(c)

Time Zone:

EMBARKATION GROUP (UNIT, TEAM)

CLASS	QUANTITY	CU FT	WEIGHT (LBS)

EMBARKATION GROUP (UNIT, TEAM)

CLASS	QUANTITY	CU FT	WEIGHT (LBS)

EMBARKATION GROUP (UNIT, TEAM)

CLASS	QUANTITY	CU FT	WEIGHT (LBS)

BY COMMAND OF...Rank and Name

Signature

Name
Rank and Service
Chief of Staff

(Page number)

CLASSIFICATION

Format for Assignment to Embarkation Areas Annex

CLASSIFICATION

Copy no. of copies
Issuing headquarters
Place of issue
Date/time of issue

TAB C (ASSIGNMENT OF EMBARKATION AREAS) TO EMBARKATION PLAN

Ref: (a)
(b)
(c)

Time Zone:

EMBARKATION AREA	PORT OR BEACH	VEHICLE	CARGO	ORGANIZATION

BY COMMAND OF...Rank and Name

Signature

Name
Rank and Service
Chief of Staff

APPENDIXES: (Omitted)

1--Sketch of Embarkation Area
2--Sketch of Embarkation Area
3--Sketch of Embarkation Area

DISTRIBUTION:

(Page number)

CLASSIFICATION

Format for Berthing and Loading Schedule Annex

CLASSIFICATION

Copy no. of copies
Issuing headquarters
Place of issue
Date/time of issue

TAB D (BERTHING AND LOADING SCHEDULE) TO EMBARKATION PLAN

Ref: (a)
(b)
(c)

Time Zone:

FROM
TO

BY COMMAND OF...Rank and Name

Signature

Name
Rank and Service
Chief of Staff

DISTRIBUTION:

(Page number)

CLASSIFICATION

(INTENTIONALLY BLANK)

APPENDIX C

CHECKLIST: DUTIES OF THE TEAM EMBARKATION OFFICER

1. Duties During the Planning Phase

a. Becomes familiar with the operation order, landing plan, and appropriate standing operating procedures.

b. Obtains a ship's loading characteristics pamphlet from the unit or group embarkation officer; verifies the accuracy of the pamphlet with the ship's combat cargo officer.

c. Holds conferences with appropriate representatives of the units comprising the embarkation team regarding the preparation of loading documentation; checks the accuracy of the loading documentation submitted to the embarkation team commander by the several components of the team and consolidates them; and completes other required documentation.

d. Prepares the tentative loading plan, assisted by the ship's combat cargo officer.

e. Submits the completed loading plan to the embarkation team commander and ship's commanding officer for approval.

f. Coordinates with the commander of troops to ensure billeting spaces are adequate and inspects cargo spaces in the ship when it arrives in the embarkation area to determine that they are clean and available for use. (See Chapter IX, paragraph 5.)

g. Coordinates, with the responsible agency, preparation of the embarkation point, to include assembly area(s) and vehicle staging area(s).

h. Supervises and coordinates the scheduling and movement of equipment and supplies to the cargo assembly area(s) and vehicle staging area(s).

i. Directs the placement of supplies and equipment in the embarkation area to conform to plans for stowing the cargo in the ship.

j. Arranges with the ship's combat cargo officer the stowage of troop space cargo and any special stowage of equipment and supplies to be used in floating dumps and

for emergency delivery ashore by helicopter; ensures their immediate availability for unloading on arrival in the objective area.

k. Inspects landing force operational reserve material to determine condition and verifies the accuracy of inventory furnished by ship's combat cargo officer.

l. Arranges for adequate materials handling equipment at the beach or pier area.

m. Advises the embarkation team commander of security and CI requirements for protection of supplies and equipment at the embarkation area.

n. Ensures that the officer in charge of the ship's platoon and officer in charge of pier or beach details have copies and are familiar with approved loading plans.

o. Arranges for the advance party to embark, whenever possible, at least 24 hours before loading.

p. Makes periodic reports to the embarkation team commander of his actions and progress during the planning phase.

q. Advises the team commander of communications requirements between the base camp, marshaling areas, and embarkation areas, and for special equipment necessary for embarkation, such as lighting equipment for night loading.

r. Ensures that vehicles, equipment, and supplies are marked properly for stowage location, priority of discharge, and according to standing operating procedures.

s. Distributes copies of the approved loading plan to necessary personnel.

t. Ensures that labor and material for lashing, storing, and chocking are provided by embarking units.

u. Ensures that special cargo handling equipment such as special slings, not provided by the ship, are made available by embarking units.

2. Duties During Embarkation and Rehearsal Phases

a. Continues liaison activities.

b. Supervises closely the activities of working parties in the staging area and embarkation area.

c. Supervises activities of the ship's platoon to ensure that loading of the ship proceeds according to the approved plan.

d. Ensures, by frequent inspections, that shoring, chocking, and lashing of supplies and equipment are in accordance with existing instructions. This is coordinated with the ship's combat cargo officer and performed under the supervision of the ship's first lieutenant.

e. Maintains a record of all approved changes in loading and unloading plans. After completion of loading, changes in the plan will be incorporated in the corrected loading plan.

f. Distributes the corrected loading plan in accordance with fleet and unit distribution lists.

g. Checks functioning of his unloading plan and adequacy of communications during the rehearsal.

3. Duties During Movement to the Objective Phase

a. Continues liaison activities.

b. Completes and distributes corrected loading plan if time was not previously available.

c. Makes daily inspections of cargo with ship representatives for evidence of pilferage and condition of cargo and to ensure that lashing, shoring, and chocking remain intact; arranges with the ship's combat cargo officer for personnel to enter holds to check vehicles for waterproofing, gas and oil leaks, tire inflation, and condition of batteries.

d. Ensures that drivers and assistants are briefed on vehicle unloading procedures and that they inspect vehicles frequently for proper functioning.

e. Instructs unloading personnel in their duties and lessons learned during rehearsals; changes unloading plan to correct defects found during rehearsals.

f. Before unloading, directs responsible personnel to conduct final checks to determine that vehicles will start, that each is waterproofed correctly, and that their combat loads are secure.

g. Ensures that rations and ammunition (basic load) to be issued before debarking are available.

h. Ensures that the ship's platoon is on station when needed for preparation of the ship for unloading.

4. Duties During the Assault Phase

a. Together with the ship's combat cargo officer, supervises the debarkation of personnel and unloading of cargo.

b. Advises the commanding officer of troops, when required, of the percentage of unloading accomplished.

c. Assists the ship's combat cargo officer as necessary in locating and unloading cargo requested on a priority basis.

d. Upon completion of unloading, ensures, by personal inspection, that cargo and billeting compartments are clear of personnel, equipment, and supplies, and that these compartments are policed.

e. Ensures that he and the ship's platoon know to whom they are to report for further orders or instructions upon their arrival ashore.

APPENDIX D

CHECKLIST: DUTIES OF THE SHIP COMBAT CARGO OFFICER

1. Duties During the Planning Phase

   a. Advises the ship's commanding officer on plans for loading and unloading cargo; communications requirements; and plans for embarking, billeting, and messing.

   b. Prepares, corrects, maintains, and distributes the SLCP.

   c. Establishes and maintains liaison with the team embarkation officer.

   d. Advises and assists the team embarkation officer in preparing the detailed loading and unloading plans.

   e. Provides the embarkation team commander with a current inventory of Marine Corps landing force operational reserve material (LFORM) and mission load allowance (MLA) to include embarkation team inspections, dates Class I was loaded and must be rotated, and log numbers of LFORM and MLA munitions as appropriate.

2. Duties During the Embarkation and Rehearsal Phases

   a. Maintains continuous liaison with the embarkation team commander through the team embarkation officer.

   b. Ensures that the loading plan is being followed.

   c. Ensures that a hatch or compartment list is maintained at each hatch or compartment.

   d. Keeps the ship's commanding officer informed of the progress of loading and embarkation.

   e. Advises the ship's commanding officer and embarkation team commander of problem areas encountered during the rehearsal phase and recommends corrective action.

   f. Coordinates with the first lieutenant and weapons officer to ensure that Marine Corps LFORM and MLA is not inadvertently offloaded with other landing force material during training exercises or operations. (Release authority from higher headquarters is required before the issue of Marine Corps LFORM and MLA for any operation.)

g. The combat cargo officer's involvement in the management of Marine LFORM and MLA should be that of an inspector to ensure serviceability and accountability.

3. Duties During Unloading

a. Makes frequent inspections to ensure that unloading is proceeding according to plan.

b. Ensures that all items of cargo requested on a priority basis are expeditiously located and unloaded.

c. In cooperation with the team embarkation officer, maintains data from which periodic unloading progress reports are made.

d. Keeps a record of boat requirements, by number and type, necessary to complete unloading.

4. Handling Cargo. The ship combat cargo officer is NOT responsible for handling cargo, operating cargo handling equipment, or the cargo's safety and security in the cargo holds. The ship's first lieutenant, his assistants, and deck division officers are responsible to the commanding officer of the ship for these details.

APPENDIX E

MESSAGE LOADING PLAN FORMAT

UNCLASSIFIED

01 02 RR UUUU

ADMIN

(EMBARKING LF ORGANIZATION)
(LOADING SHIP)
UNCLAS //N04621//
MSGID/GENADMIN//
SUBJ/MESSAGE LOADING PLAN (MLP)//
REF/A/(REFERENCE)//
NARR/1. SUBMITTED IAW REF A.
2. THE FOLLOWING LOAD PLAN FOR EMBARKATION OF (ORGANIZATION) IS SUBMITTED:

A. SHIP NAME, TYPE, AND HULL NUMBER.
B. LIFT DESCRIPTION:
C. PROPOSED DATE, TIME, AND PORT(S) FOR EMBARKATION.
D. PROPOSED DATE, TIME, AND PORT(S) FOR DEBARKATION.
E. LOAD PLAN SUMMARY (GRAND TOTAL)

PERSONNEL: OFFICERS:
SNCO/CPO:
ENLISTED:
CIVILIAN:
TOTAL:

CARGO CATEGORY	SQFT	CUFT	S/T
AIRCRAFT:		XXXX	
VEHICLES:		XXXX	
OUTSIZED CARGO:			
LANDING CRAFT:			
ORGANIZATIONAL CARGO:	XXXX		
LFORM/MLA:	XXXX		
PRE-LOADED CARGO:	XXXX		

F. GRADE, NAME, AND ORGANIZATION OF COT, TEAM EMBARK OFFICER, AND UNIT COMMANDERS (BATTALION, SQUADRON AND HIGHER).
G. WEAPONS DENSITY

ORGANIZATION	TYPE	QUANTITY	LOCATION

H. VEHICLES (WHEELED AND TRACKED).
(1) STOWAGE LOCATION:

ORG	UNLOAD PRI	TYPE VEH	TAMCN	LXWXH	(POD)
TOTALS:		SQFT:		S/T:	

UNCLASSIFIED

UNCLASSIFIED

02 02 RR UUUU

I. AIRCRAFT:

ORG	TYPE	QTY	(POD)
TOTALS:	SQFT:		S/T:

J. CARGO

(1) STOWAGE LOCATION:

ORG	SUP	CUFT	NR	FUNC	(POD)
	CL		PAL		

CG CLASS (ES) OF CL V:

TOTALS:	SQFT:	CUFT:	S/T:

K. MATERIAL HANDLING EQUIPMENT/SUPPORT REQUIRED FOR LOADING (LESS SHIP'S EQUIPMENT LISTED IN SLCP).

L. REMARKS.

3. PREPARED BY://

BT#

UNCLASSIFIED

APPENDIX F

US NAVY CARGO HANDLING AND PORT GROUP (NAVCHAPGRU)

1. Mission. The mission of the NAVCHAPGRU is to provide immediate supervisory cargo handling and port control capabilities to fleet and area commanders in support of naval operations worldwide.

2. Description. The NAVCHAPGRU is a mobile logistic support unit capable of worldwide deployment in its entirety or in detachments. It is organized and trained primarily to provide a nucleus of skilled cargo handling personnel for use in loading and offloading Navy and Marine Corps cargo carried in ocean shipping and/or military-controlled aircraft, operating a limited air or ocean cargo terminal, and performing emergency port (ocean) control functions.

3. Organization. The NAVCHAPGRU is under command of the Commander in Chief, US Atlantic Fleet; is homeported at Cheatham Annex, Williamsburg, Virginia; and has an active duty strength of 9 officers and 157 enlisted, with personnel augmentation plans for expansion to 24 officers and 1,407 enlisted.

4. Capabilities. The NAVCHAPGRU has the following capabilities:

   a. When at full strength, either by emergency augmentation or mobilization, NAVCHAPGRU will have an expanded but limited combat terminal operations capability. This capability will include a port control coordination function, removal of freight from one carrier, segregation by destination, document processing, in-transit storage, load planning, and loading on board a second carrier for delivery to consignee. NAVCHAPGRU will be capable of performing its functions simultaneously on three eight-rig commercial cargo ships on a round-the-clock basis. Operations can be conducted over the shore (when supplemented by lighterage) or through established port facilities.

   b. The group will have the capability, including administrative and support personnel, for maintaining an established portable field facility in a forward area. The portable facility, though part of NAVCHAPGRU's TOA, requires assistance from a mobile or amphibious construction battalion for erection.

c. At the present peacetime cadre manning level, NAVCHAPGRU is limited to round-the-clock operations on the equivalent of one eight-rig commercial cargo ship. Air and ocean cargo terminal operations can be accomplished only with a commensurate reduction in cargo ship manning.

d. Because of stringent emphasis on maintaining peacetime manning at the minimum level of supervisory and technical skills, peacetime Navy cargo handling and port group detachments (NAVCHAPDETs) will normally not be staffed with extra personnel to perform messmen, compartment cleaning, personnel records maintenance, or other similar duties.

5. Supplemental Manning. Strong-back type labor may be required from sources external to the NAVCHAPGRU, particularly during actual operations when personnel augmentation is not authorized. In such situations, the following minimal needs occur:

a. Ship's Loading and Discharge. Five to 10 nonrated or indigenous personnel per rig per shift, as situation dictates.

b. Pier Operations. Sixteen rated storekeepers, or equivalent rates, plus 10 nonrated personnel per ship per shift.

c. Air Terminal Operations. As required by volume of cargo, types of aircraft, and available facilities.

6. Equipment and Material Support. Plans provide for NAVCHAPGRU to have organic resources, in pre-positioned war reserve stock, to outfit and support its active and augmentation personnel with:

a. Special clothing and essential personnel support items.

b. Cargo handling equipment and tools.

c. Administrative tactical and cargo handling vehicles.

d. Forward base camp support facilities.

APPENDIX G

US ARMY TRANSPORTATION COMPANY (TERMINAL SERVICE)

1. Mission. To discharge, backload, and transship breakbulk cargo at water terminals located at beaches or fixed ports.

2. Capabilities. At full strength, operating on a 24-hour basis with 75 percent operational availability of mission equipment, this unit is capable of:

a. Logistics over the shore (LOTS) operations.

b. Fixed port operations capable of performing:

(1) Discharging and backloading containers.

(2) Discharging and backloading breakbulk cargo.

(3) Sorting breakbulk and containers by designation, loading breakbulk cargo from the marshaling yards and land transportation, and performing limited stuffing and unstuffing of containers.

(4) Receiving and processing containers for retrograde.

(5) Providing limited intransit storage.

3. Personnel and Key Equipment. See Figure G-1.

	Breakbulk Company	Breakbulk and Container Company
Personnel		
Commissioned Officers	6	5
Warrant Officers	1	1
Enlisted	326	351
Key Equipment		
140 T Crane Wheeled		2
Cargo Nets (Various)	15	17
Vehicle Loading Ramp	2	2
Semitrailer Flat Bed		22
Rough Terrain Container Handler		10
Truck, Yard Type 4*2		20
Container Top Handler 20, 35, 40 ft		22
10 K RT Forklift	9	8
4K RT Forklift	11	
4K Forklift, Electric	7	11
4K Forklift, Gas		20

Figure G-1. Personnel and Key Equipment

Figure G-1. Personnel and Key Equipment

APPENDIX H

EMBARKATION OFFICER CHECKLIST FOR MILITARY SEALIFT COMMAND (MSC) SHIPPING

1. Establish early liaison with the ship to obtain a current ship's loading characteristics pamphlet or other planning data (obtained from ship or MSC representative). Check the following:

   a. Boom Capacity

#1____, #2____, #3____, #4____, #5____, #6____, #7____.

   b. Method of rigging

#1____, #2____, #3____, #4____, #5____, #6____, #7____.

   c. Check hatch measurements of all holds and levels with characteristics pamphlet or cargo data sheet; note discrepancies.

   d. Check cargo spaces, noting hold size, location of all obstructions, height of compartments, and any other pertinent data on characteristics pamphlet or other planning data.

   e. Berthing and messing facilities.

   f. Head and shower facilities.

   g. PX (Class VI), laundry, etc.

   h. Ship's regulations, fire, man overboard, and other emergency procedures.

2. Make arrangements for all services that cannot be performed by the ship to be handled by other means.

3. Establish through close liaison with the ship the size and composition of the ship's platoon (drivers, guards, maintenance personnel) that will be embarked during the voyage. Determine at this time if sleeping bags, combat rations, water, and portable heads will be required.

4. Naval cargo handling battalions, US Army Transportation Terminal Service Company, commercial stevedores, or as a last resort, qualified naval personnel will have to be employed for operating the winches during the loading of the ship.

5. Liaison must be maintained with higher headquarters.

6. Request from group embarkation officer:

   a. Time and date ship will be available to load.

   b. Staging area in camp showing date and time required.

   c. Staging area at port of embarkation (POE).

   d. Extra drivers.

   e. Dunnage, lashing, etc., by type.

   f. Date and time for convoys to use road net.

   g. Convoy control to include MPs, communications, refueler, wrecker, etc.

   h. Packaged operational rations as required, to include aboard ship phase.

   i. Cargo handling equipment (pallet jack, etc.).

   j. Ship's platoon.

   k. Recreational equipment.

   l. Mess equipment.

   m. Ration supplement and sundries pack (PX).

   n. Barber kits.

   o. Flashlights or electric lanterns.

   p. Fire extinguishers for each hold.

   q. Typewriter chest.

   r. Medical supplies as required.

   s. Portable head facilities, to include toilet paper. In the event shipboard head facilities are not available and portable facilities are required, they can be constructed from oil drums with salt water fed in one end through a fire hose for continuous flush with drain through a bulk line on other end and extended over side of ship to some depth below the waterline and secured.

7. Prepare loading plan and submit to embarkation team commander and ship's master for approval.

8. Prior to leaving camp for POE, instruct all personnel in duties; instruct all drivers in route, destination, loading priority, hold and level, staging area at POE, etc.

   a. Embarkation rosters.

   b. Ensure adequate life jackets are available.

9. Inspect staging area at POE (ensure that all vehicles and cargo are staged by priority and make liaison with officer in charge of the cargo handling battalion detachment (ensure all crews ready)).

10. Check POE for:

   a. Materials handling equipment.

   b. Dunnage.

   c. Lashing.

   d. Communications.

   e. Road net and control.

11. Establish embarkation team control point on pier alongside assigned ship's berthing space.

12. During the unloading phase in the objective area, cargo handling personnel must be transferred to their assigned MSC ship(s) to operate the winches and perform other cargo discharge functions.

13. Highest priority must be given to transferring vehicle drivers, maintenance teams, and ships' platoons to the TAKs before offloading. These personnel are in addition to the ship's platoon already embarked.

14. When using MSC ships, it is the responsibility of the landing force to provide adequate numbers of lashing, chocking, dunnage, special tools, and special slings (i.e., slings requiring special configuration or those required for heavy lifts in excess of 15 short tons).

15. The following guide may be used to estimate the quantity and type of material required for lashing vehicles aboard MSC ships:

a. Wire Rope, Steel, 1/2 Inch. Sixty feet per vehicle, minimum (four 15-foot lengths to permit cross lashing of vehicles at four points). For vehicles in excess of 17 short tons, double the rope.

b. Turnbuckles, 1/2 Inch. Four per vehicle (one turnbuckle for each length of wire rope used).

c. Thimbles, Rope, Split Oval. Eight per vehicle (two thimbles for each length of wire rope used).

d. Clips, Wire, Rope, U Bolt Type. Twenty-four per vehicle.

16. The Navy is responsible for furnishing cargo nets, pallet slings, vehicle slings, sea painters, debarkation nets and markers, chime hooks, life jackets, fenders, and spreaders.

APPENDIX J

USERS EVALUATION REPORT ON JOINT PUB 3-02.2

1. Users in the field are highly encouraged to submit comments on this pub. Please fill out the following: Users' POC, unit address, and phone (DSN) number. _____
_____

2. Content

a. Does the pub provide a conceptual framework for the topic?
_____
_____

b. Is the information provided accurate? What needs to be updated? _____
_____

c. Is the information provided useful? If not, how can it be improved? _____
_____

d. Is this pub consistent with other joint pubs?
_____
_____

e. Can this pub be better organized for the best understanding of the doctrine and/or JTTP? How? _____
_____

3. Writing and Appearance

a. Where does the pub need some revision to make the writing clear and concise? What words would you use?
_____
_____

b. Are the charts and figures clear and understandable? How would you revise them? _____
_____

4. Recommended urgent change(s) (if any).
_____
_____

5. Other _____
_____

6. Please fold and mail comments to the Joint Doctrine Center (additional pages may be attached if desired) or FAX to DSN 564-3990 or COMM (804) 444-3990.

(FOLD)

FROM:

JOINT DOCTRINE CENTER
BLDG R-52
1283 CV TOWWAY STE 100
NORFOLK VA 23511-2491

(FOLD)

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_____

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_____

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FROM:

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GLOSSARY

PART I--ABBREVIATIONS AND ACRONYMS

AAV	assault amphibious vehicle
ACB	amphibious construction battalion
ACU	assault craft unit
ADPS	automatic data processing system
AE	assault echelon
AFOE	assault follow-on echelon
AMC	Air Mobility Command
AOA	amphibious objective area
ARG	amphibious ready group
ATF	amphibious task force
BLT	battalion landing team
C2	command and control
C4	command, control, communications, and computer
CATF	commander, amphibious task force
C&LAT	cargo and loading analysis table
CCA	combat cargo assistant
CCO	combat cargo officer
CCS	central control ship
CCTV	closed circuit television
CDO	command duty officer
CFR 46	Title 46 Code of Federal Regulations
CFR 49	Title 49 Code of Federal Regulations
CHB	cargo handling battalion
CHOP	change of operational control
CI	counterintelligence
CIC	combat information center
CINC	commander in chief
CISO	counterintelligence support officer
CLF	commander, landing force
CO2	carbon dioxide
COCOM	Combatant Command (command authority)
COMMARFORLANT	Commander, US Marine Forces, Atlantic
COMNAVSURFLANT	Commander, Naval Surface Force, US Atlantic Fleet
COMSUBLANT	Commander, Submarine Force, US Atlantic Fleet
COT	commanding officer of troops
CSS	combat service support
CSSE	combat service support element
DOA	day(s) of ammunition
DOS	day(s) of supplies
DTG	date-time group

ECCM	electronic counter-countermeasures
ETA	estimated time of arrival
ETD	estimated time of departure
EUSC	effective US-controlled shipping
FMF	Fleet Marine Force
GAA	general agency agreement
HDC	helicopter direction center
HE	high explosive
IMA	intermediate maintenance activity
ISB	intermediate staging bases
JLOTS	joint logistics over the shore
JOPES	joint operation planning and execution system
JSCP	joint strategic capabilities plan
JTFC	joint task force commander
LACV	lighter, air cushioned vehicle
LAN	local area network
LARC	lighter, amphibious resupply cargo
LCAC	landing craft, air cushion
LCC	amphibious command ship
LCM	landing craft, mechanized
LCU	landing craft, utility
LCVP	landing craft, vehicle, personnel
LF	landing force
LFORM	landing force operational reserve material
LFSP	landing force support party
LHA	amphibious assault ship (general purpose)
LHD	amphibious assault ship (multipurpose)
LKA	amphibious cargo ship
LOTS	logistics over the shore
LPD	amphibious transport dock
LPH	amphibious assault ship, landing platform helicopter
LSD	landing ship, dock
LST	landing ship, tank
LX	amphibious assault ship (under development)
MAG	Marine Aircraft Group
MAGTF	Marine Air-Ground Task Force
MARAD	Maritime Administration
MEB	Marine Expeditionary Brigade

MEF	Marine Expeditionary Force
MEU	Marine Expeditionary Unit
MHE	materials handling equipment
MLA	mission load allowance
MLP	message loading plan
MOGAS	motor gasoline
MOVREP	movement report
MP	military police
MPF	maritime prepositioning force
MPS	maritime prepositioning ships
MPSRON	maritime prepositioning ships squadron
MRE	meal ready-to-eat
MSC	Military Sealift Command
MSSG	Marine Expeditionary Unit service support group
MTMC	Military Traffic Management Command
NATO	North Atlantic Treaty Organization
NAVCHAPDET	Navy Cargo Handling and Port Group Detachment
NAVCHAPGRU	Navy Cargo Handling and Port Group
NCA	National Command Authorities
NCSORG	naval control of shipping organization
NDRF	National Defense Reserve Fleet
NSE	Navy support element
NWP	Naval Warfare Publication
OE&AS	Organization for Embarkation and Assignment to Shipping
OPCON	operational control
OPDS	offshore petroleum discharge system
OPLAN	operation plan
OPP	offload preparation party
OPSEC	operations security
OTH	over-the-horizon
OVE	on vehicle equipment
PCO	primary control officer
PCS	primary control ship
PERMA	planning, embarkation, rehearsal, movement, and assault
PHIBGRU	amphibious group
PHIBOP	amphibious operation
PHIBRON	amphibious squadron
POD	port of debarkation
POE	port of embarkation
POL	petroleum, oils, and lubricants
PWR	prepositioned war reserve

RLT	regimental landing team
RO/RO	roll-on/roll-off
RRF	Ready Reserve Force
SELRES	selected reserves
SLCP	ship's loading characteristics pamphlet
SLRP	surveillance-liaison-reconnaissance party
SNCO	staff noncommissioned officer
SOP	standing operating procedure
SPOE	seaport/beach point of embarkation
SRP	Sealift Readiness Program
STANAG	NATO standardization agreement
STS	ship-to-shore
TACC	tactical air command center (USMC)
TAC-LOG	tactical-logistical group
T-ACS	auxiliary crane ships
T-AH	hospital ships
T-AVB	aviation logistics support ships
TAK	MSC cargo ship
TLR	trailer
TOA	table of allowance
TRK	truck
UNAAF	unified action armed forces
UP&TT	unit personnel and tonnage table
USCINCTRANS	Commander in Chief, US Transportation Command
USMC	US Marine Corps
USN	US Navy
USNS	United States naval ship
USS	US ship
VS&PT	vehicle summary and priority table
V/STOL	vertical/short takeoff and landing
VTOL	vertical takeoff and landing
WT	gross weight
WWMCCS	Worldwide Military Command and Control System

administrative loading. A loading system which gives primary consideration to achieving maximum utilization of troop and cargo space without regard to tactical considerations. Equipment and supplies must be unloaded and sorted before they can be used. (Joint Pub 1-02)

amphibious assault. The principal type of amphibious operation that involves establishing a force on a hostile or potentially hostile shore. (Joint Pub 1-02)

amphibious assault ship (general purpose). A naval ship designed to embark, deploy, and land elements of a landing force in an assault by helicopters, landing craft, amphibious vehicles, and by combinations of these methods. Designated LHA. (Joint Pub 1-02)

amphibious command ship. A naval ship from which a commander exercises control in amphibious operations. DOD designated as LCC. (Joint Pub 1-02)

amphibious group. A command within the amphibious force, consisting of the commander and his staff, designed to exercise operational control of assigned units in executing all phases of a division-size amphibious operation. (Approved for inclusion in the next edition of Joint Pub 1-02)

amphibious lift. The total capacity of assault shipping utilized in an amphibious operation, expressed in terms of personnel, vehicles, and measurement or weight tons of supplies. (Joint Pub 1-02)

amphibious objective area. A geographical area, delineated in the initiating directive, for purposes of command and control within which is located the objective(s) to be secured by the amphibious task force. This area must be of sufficient size to ensure accomplishment of the amphibious task force's mission and must provide sufficient area for conducting necessary sea, air, and land operations. (Joint Pub 1-02)

amphibious operation. An attack launched from the sea by naval and landing forces, embarked in ships or craft involving a landing on a hostile or potentially hostile shore. As an entity, the amphibious operation includes the following phases:

a. planning - The period extending from issuance of the initiating directive to embarkation.

b. embarkation - The period during which the forces, with their equipment and supplies, are embarked in the assigned shipping.

c. rehearsal - The period during which the prospective operation is rehearsed for the purpose of: (1) testing adequacy of plans, the timing of detailed operations, and the combat readiness of participating forces; (2) ensuring that all echelons are familiar with plans; and (3) testing communications.

d. movement - The period during which various components of the amphibious task force move from points of embarkation to the objective area.

e. assault - The period between the arrival of the major assault forces of the amphibious task force in the objective area and the accomplishment of the amphibious task force mission. (Joint Pub 1-02)

amphibious planning. The process of planning for an amphibious operation, distinguished by the necessity for concurrent, parallel, and detailed planning by all participating forces; and wherein the planning pattern is cyclical in nature, composed of a series of analyses and judgments of operational situations, each stemming from those that have preceded. (Approved for inclusion in the next edition of Joint Pub 1-02)

amphibious shipping. Organic Navy ships specifically designed to transport, land, and support landing forces in amphibious assault operations and capable of being loaded or unloaded by naval personnel without external assistance in the amphibious objective area. (Joint Pub 1-02)

amphibious squadron. A tactical and administrative organization composed of amphibious assault shipping to transport troops and their equipment for an amphibious assault operation. (Joint Pub 1-02)

amphibious task force. The task organization formed for the purpose of conducting an amphibious operation. The amphibious task force always includes Navy forces and a landing force, with their organic aviation, and may include Military Sealift Command-provided ships and Air Force forces when appropriate. (Joint Pub 1-02)

amphibious transport group. A subdivision of an amphibious task force, composed primarily of transport ships. The size of the transport group will depend upon the scope of the

operation. Ships of the transport group will be combat-loaded to support the landing force scheme of maneuver ashore. A transport unit will usually be formed to embark troops and equipment to be landed over a designated beach or to embark all helicopter-borne troops and equipment. (Approved for inclusion in the next edition of Joint Pub 1-02)

amphibious vehicle. A wheeled or tracked vehicle capable of operating on both land and water. (Joint Pub 1-02)

assault area. In amphibious operations, that area that includes the beach area, the boat lanes, the lines of departure, the landing ship areas, the transport areas, and the fire support areas in the immediate vicinity of the boat lanes. (Joint Pub 1-02)

assault craft unit. A permanently commissioned naval organization, subordinate to the commander, naval beach group, that contains landing craft and crews necessary to provide lighterage required in an amphibious operation. (Joint Pub 1-02)

assault echelon. The element of a force that is scheduled for initial assault on the objective area. (Joint Pub 1-02)

assault follow-on echelon. In amphibious operations, that echelon of the assault troops, vehicles, aircraft equipment, and supplies which, though not needed to initiate the assault, is required to support and sustain the assault. In order to accomplish its purpose, it is normally required in the objective area no later than five days after commencement of the assault landing. (Joint Pub 1-02)

assault phase

1. In an amphibious operation, the period of time between the arrival of the major assault forces of the amphibious task force in the objective area and the accomplishment of their mission.

2. In an airborne operation, a phase beginning with delivery by air of the assault echelon of the force into the objective area and extending through attack of assault objectives and consolidation of the initial airhead. (Joint Pub 1-02)

assault shipping. Shipping assigned to the amphibious task force and utilized for transporting assault troops, vehicles, equipment, and supplies to the objective area. (Joint Pub 1-02)

bale cubic capacity.* The space available for loading cargo measured in cubic feet to the inside of the cargo battens on the frames and to the underside of the beams. This measurement is used to compute the space available for general storage.

basic allowance.* A quantity of ammunition required to support a given number of weapons for a specified period of time. When used in relation to cargo offered for shipment (i.e., vehicles with basic allowance), it means that the vehicles are loaded with the ammunition necessary to support the unit involved.

battalion landing team. In an amphibious operation, an infantry battalion normally reinforced by necessary combat and service elements; the basic unit for planning an assault landing. Also called BLT. (Joint Pub 1-02)

broken stowage.* The space lost in the holds of a vessel because of the contour of the ship and the shape of the cargo. Dunnage, ladders, and stanchions are included in broken stowage.

broken stowage factor.* A factor applied to the available space for embarkation due to the loss between boxes, between vehicles, around stanchions, and over cargo. The factor will vary, depending on the type and size of vehicles, type and size of general cargo, training and experience of loading personnel, type of loading, method of stowage, and configuration of compartments.

central control officer. The officer designated by the amphibious task force commander for the overall coordination of the waterborne ship-to-shore movement. The central control officer is embarked in the central control ship. (Approved for inclusion in the next edition of Joint Pub 1-02)

change of operational control. The date and time (Coordinated Universal Time) at which the responsibility for operational control of a force or unit passes from one operational control authority to another. (Joint Pub 1-02)

colored beach. That portion of usable coastline sufficient for the assault landing of a regimental landing team or similar sized unit. In the event that the landing force consists of a single battalion landing team, a colored beach will be used and no further subdivision of the beach is required. See also numbered beach. (Joint Pub 1-02)

combat cargo officer. An embarkation officer assigned to major amphibious ships or naval staffs, functioning primarily as an adviser to and representative of the naval commander in matters pertaining to embarkation and debarkation of troops and their supplies and equipment. Also called CCO. (Joint Pub 1-02)

combat loading. The arrangement of personnel and the stowage of equipment and supplies in a manner designed to conform to the anticipated tactical operation of the organization embarked. Each individual item is stowed so that it can be unloaded at the required time. (Joint Pub 1-02)

combat organizational loading.* A method of loading by which a unit with its equipment and initial supplies is loaded into a single ship, together with other units, in such a manner as to be available for unloading in a predetermined order.

combat service support. The essential capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces in theater at all levels of war. Within the national and theater logistic systems, it includes but is not limited to that support rendered by service forces in ensuring the aspects of supply, maintenance, transportation, health services, and other services required by aviation and ground combat troops to permit those units to accomplish their missions in combat. Combat service support encompasses those activities at all levels of war that produce sustainment to all operating forces on the battlefield. (Joint Pub 1-02)

combat spread loading.* A method of combat loading by which some of the troops, equipment, and initial supplies of a unit are loaded in one ship and the remainder are loaded in one or more others. This method is commonly used for troop units with heavy equipment.

combat unit loading.* A method of loading by which all or a part of a combat unit, such as an assault battalion landing team, is completely loaded in a single ship, with essential combat equipment and supplies, in such a manner as to be immediately available to support the tactical plan upon debarkation, and to provide a maximum of flexibility to meet possible changes in the tactical plan.

commander, amphibious task force. The US Navy officer designated in the initiating directive as commander of the amphibious task force. Also called CATF. (Joint Pub 1-02)

commander, landing force. The officer designated in the initiating directive for an amphibious operation to command the landing force. Also called as CLF. (Joint Pub 1-02)

commanding officer of troops. On a ship that has embarked units, a designated officer, usually the senior embarking unit commander, who is responsible for the administration, discipline, and training of all embarked units. Also called COT. (Approved for inclusion in the next edition of Joint Pub 1-02)

common-user ocean terminals. A military installation, part of a military installation, or a commercial facility operated under contract or arrangement by the Military Traffic Management Command which regularly provides for two or more Services, terminal functions of receipt, transit storage or staging, processing, and loading and unloading of passengers or cargo aboard ships. (Joint Pub 1-02)

consecutive voyage charter. A contract by which a commercial ship is chartered by the Military Sealift Command for a series of specified voyages. (Approved for inclusion in the next edition of Joint Pub 1-02)

control group. Personnel, ships, and craft designated to control the waterborne ship-to-shore movement. (Joint Pub 1-02)

controlled shipping. Shipping that is controlled by the Military Sealift Command (MSC). Included in this category are MSC (USNS) ships, government-owned ships operated under a general agency agreement, and commercial ships under charter to MSC. (Approved for inclusion in the next edition of Joint Pub 1-02)

convoy

1. A number of merchant ships or naval auxiliaries, or both, usually escorted by warships and/or aircraft, or a single merchant ship or naval auxiliary under surface escort, assembled and organized for the purpose of passage together.

2. A group of vehicles organized for the purpose of control and orderly movement with or without escort protection. (Joint Pub 1-02)

convoy loading. The loading of troop units with their equipment and supplies in vessels of the same movement group, but not necessarily in the same vessel. (Joint Pub 1-02)

critical supplies and materials. Those supplies vital to the support of operations, which owing to various causes are in short supply or are expected to be in short supply. (Joint Pub 1-02)

D-day

1. The unnamed day on which a particular operation commences or is to commence. An operation may be the commencement of hostilities.

a. The date of a major military effort.

b. The execution date of an operation (as distinguished from the date the order to execute is issued); the date the operations phase is implemented, by land assault, air strike, naval bombardment, parachute assault, or amphibious assault. The highest command or headquarters responsible for coordinating the planning will specify the exact meaning of D-day within the aforementioned definition. If more than one such event is mentioned in a single plan, the secondary events will be keyed to the primary event by adding or subtracting days as necessary. The letter "D" will be the only one used to denote the above. The command or headquarters directly responsible for the execution of the operation, if other than the one coordinating the planning, will do so in light of the meanings specified by the highest planning headquarters.

2. Time in plans will be indicated by a letter that shows the unit of time employed and figures, with a minus or plus sign, to indicate the amount of time before or after the referenced event; e.g., "D" is for a particular day, "H" for an hour. Similarly, D+7 means 7 days after D-day, H+2 means 2 hours after H-hour. If the figure becomes unduly large, for example, D-day plus 90, the designation of D+3 months may be employed; i.e., if the figure following a letter plus a time unit (D-day, H-hour, etc.) is intended to refer to units of time other than that which follows the letter, then the unit of time employed with the figure must be spelled out. (Joint Pub 1-02).

debarkation. The unloading of troops, equipment, or supplies from a ship or aircraft. (Joint Pub 1-02)

debarkation schedule. A schedule which provides for the timely and orderly debarkation of troops and equipment and emergency supplies for the waterborne ship-to-shore movement. (Joint Pub 1-02)

dock landing ship. A naval ship designed to transport and launch loaded amphibious craft and vehicles with their crews and embarked personnel in amphibious assault, and to render limited docking and repair service to small ships and craft; and one that is capable of acting as a control ship in an amphibious assault. Designated LSD. (Joint Pub 1-02)

embarkation. The loading of troops with their supplies and equipment into ships and/or aircraft. (Joint Pub 1-02)

embarkation area. An area ashore, including a group of embarkation points, in which final preparations for embarkation are completed and through which assigned personnel and loads for craft and ships are called forward to embark. (Joint Pub 1-02)

embarkation element (unit) (group). A temporary administrative formation of personnel with supplies and equipment embarking or to be embarked (combat loaded) aboard the ships of one transport element (unit) (group). It is dissolved upon completion of the embarkation. An embarkation element normally consists of two or more embarkation teams; a unit, of two or more elements; and a group, of two or more units. (Joint Pub 1-02)

embarkation order. An order specifying dates, times, routes, loading diagrams and methods of movement to shipside or aircraft for troops and their equipment. (Joint Pub 1-02)

embarkation organization. A temporary administrative formation of personnel with supplies and equipment embarking or to be embarked (combat loaded) aboard amphibious shipping. (Joint Pub 1-02)

embarkation phase. In amphibious operations, the phase which encompasses the orderly assembly of personnel and materiel and their subsequent loading aboard ships and/or aircraft in a sequence designed to meet the requirements of the landing force concept of operations ashore. (Approved for inclusion in the next edition of Joint Pub 1-02)

embarkation plans. The plans prepared by the landing force and appropriate subordinate commanders containing instructions and information concerning the organization for embarkation, assignment to shipping, supplies and equipment

to be embarked, location and assignment of embarkation areas, control and communication arrangements, movement schedules and embarkation sequence, and additional pertinent instructions relating to the embarkation of the landing force. (Joint Pub 1-02)

embarkation team. A temporary administrative formation of all personnel with supplies and equipment embarking or to be embarked (combat load) aboard one ship. (Joint Pub 1-02)

fleet. An organization of ships, aircraft, marine forces, and shore-based fleet activities all under the command of a commander or commander in chief who may exercise operational as well as administrative control. (Joint Pub 1-02)

Fleet Marine Force. A balanced force of combined arms comprising land, air, and service elements of the US Marine Corps. A Fleet Marine Force is an integral part of a US Fleet and has the status of a type command. (Joint Pub 1-02)

floating dump. Emergency supplies preloaded in landing craft, amphibious vehicles, or in landing ships. Floating dumps are located in the vicinity of the appropriate control officer who directs their landing as requested by the troop commander concerned. (Joint Pub 1-02)

follow-up. In amphibious operations, the landing of reinforcements and stores after the assault and assault follow-on echelons have been landed. (Joint Pub 1-02)

follow-up shipping. Ships not originally a part of the amphibious task force but which deliver troops and supplies to the objective area after the assault phase has begun. (Approved for inclusion in the next edition of Joint Pub 1-02)

force protection. Security program designed to protect soldiers, civilian employees, family members, facilities, and equipment in all locations and situations, accomplished through planned and integrated application of combatting terrorism, physical security, operations security, personal protective services, and supported by intelligence, counterintelligence, and other security programs. (Approved for inclusion in the next edition of Joint Pub 1-02)

general agency agreement. A contract between the Maritime Administration and a steamship company which, as general agent, exercises administrative control over a government-owned ship for employment by the Military Sealift Command. (Approved for inclusion in the next edition of Joint Pub 1-02)

general unloading period. In amphibious operations, that part of the ship-to-shore movement in which unloading is primarily logistic in character, and emphasizes speed and volume of unloading operations. It encompasses the unloading of units and cargo from the ships as rapidly as facilities on the beach permit. It proceeds without regard to class, type, or priority of cargo, as permitted by cargo handling facilities ashore. (Joint Pub 1-02)

government-owned, contract-operated ships. Those ships to which the US Government holds title and which the Military Sealift Command operates under a contract (i.e., nongovernment-manned). These ships are designated US Navy ships and use the prefix "USNS" with the ship name and the letter "T" as a prefix to the ship classification (e.g., T-AKR). (Approved for inclusion in the next edition of Joint Pub 1-02)

government-owned, MSC-operated ships. Those ships to which the US Government holds title and which the Military Sealift Command operates with US Government (civil service) employees. These ships are designated US Navy ships and use the prefix "USNS" with the ship name and the letter "T" as a prefix to the ship classification (e.g., T-AKR). (Approved for inclusion in the next edition of Joint Pub 1-02)

H-hour. The specific hour on D-day at which a particular operation commences. The operation may be the commencement of hostilities; the hour at which an operation plan is executed or to be executed (as distinguished from the hour the order to execute is issued); the hour that the operations phase is implemented, either by land assault, parachute assault, amphibious assault, air or naval bombardment. The highest command or headquarters coordinating the planning will specify the exact meaning of H-hour within the aforementioned definition. Normally, the letter "H" will be the only one used to denote the above. However, when several operations or phases of an operation are being conducted in the same area on D-day, and confusion may arise through the use of the same hour designation for two or more of them, any letter of the alphabet may be used except A, C, D, E, J, M, or others that may be reserved for exclusive use. (Joint Pub 1-02)

horizontal stowage. The lateral distribution of unit equipment or categories of supplies so that they can be unloaded simultaneously from two or more holds. (Approved for inclusion in the next edition of Joint Pub 1-02)

initial unloading period. In amphibious operations, that part of the ship-to-shore movement in which unloading is primarily tactical in character and must be instantly responsive to landing force requirements. All elements intended to land during this period are serialized. (Joint Pub 1-02)

initiating directive. An order to the commander, amphibious task force, to conduct an amphibious operation. It is issued by the unified commander, subunified commander, Service component commander, or joint force commander delegated overall responsibility for the operation. (Joint Pub 1-02)

inner transport area. In amphibious operations, an area as close to the landing beach as depth of water, navigational hazards, boat traffic, and enemy action permit, to which transports may move to expedite unloading. (Joint Pub 1-02)

joint amphibious operation. An amphibious operation conducted by significant elements of two or more Services. (Joint Pub 1-02)

joint amphibious task force. A temporary grouping of units of two or more Services under a single commander, organized for the purpose of engaging in an amphibious landing for assault on hostile shores. (Joint Pub 1-02)

joint deployment community. Those headquarters, commands, and agencies involved in the training, preparation, movement, reception, employment, support, and sustainment of military forces assigned or committed to a theater of operations or objective area. The joint deployment community usually consists of the Joint Staff, Services, certain Service major commands, (including the Service wholesale logistic commands), unified and specified commands (and their Service component commands), transportation operating agencies, joint task forces (as applicable), Defense Logistics Agency, and other Defense agencies (e.g., Defense Intelligence Agency) as may be appropriate to a given scenario. Also called JDC. (Joint Pub 1-02)

joint force. A general term applied to a force which is composed of significant elements of the Army, the Navy or the Marine Corps, and the Air Force, or two or more of these Services, operating under a single commander authorized to exercise unified command or operational control over joint forces. (Joint Pub 1-02)

Joint Operation Planning and Execution System. A continuously evolving system that is being developed through the integration and enhancement of earlier planning and execution systems, specifically Joint Operation Planning System (JOPS) and Joint Deployment System (JDS). It provides the foundation for conventional command and control by national and theater-level commanders and their staffs. It is designed to satisfy their information needs in the conduct of joint planning and operations. JOPES includes joint operation planning policies, procedures, and reporting structures supported by communications and ADP systems. JOPES is used to monitor, plan, and execute mobilization, deployment, employment, and sustainment activities associated with joint operations. Also called JOPES. (This definition is provided for information and is proposed for inclusion in the next edition of Joint Pub 1-02 by Joint Pub 5-0.)

joint operations area. That portion of an area of conflict in which a joint force commander conducts military operations pursuant to an assigned mission and the administration incident to such military operations. Also called JOA. (Joint Pub 1-02)

landing craft. A craft employed in amphibious operations, specifically designed for carrying troops and equipment and for beaching, unloading, and retracting. Also used for logistic cargo resupply operations. (Joint Pub 1-02)

landing craft and amphibious vehicle assignment table. A table showing the assignment of personnel and materiel to each landing craft and amphibious vehicle and the assignment of the landing craft and amphibious vehicles to waves for the ship-to-shore movement. (Joint Pub 1-02)

landing craft availability table. A tabulation of the type and number of landing craft that will be available from each ship of the transport group. The table is the basis for the assignment of landing craft to the boat groups for the ship-to-shore movement. (Joint Pub 1-02)

landing diagram. A graphic means of illustrating the plan for the ship-to-shore movement. (Joint Pub 1-02)

landing force. A task organization of troop units, aviation and ground, assigned to an amphibious assault. It is the highest troop echelon in the amphibious operation. (Joint Pub 1-02)

landing force supplies. Those supplies remaining in assault shipping after initial combat supplies and floating dumps have been unloaded. They are landed selectively in accordance with the requirements of the landing force until the situation ashore permits the inception of general unloading. (Approved for inclusion in the next edition of Joint Pub 1-02)

landing group. In amphibious operations, a subordinate task organization of the landing force capable of conducting landing operations, under a single tactical command, against a position or group of positions. (Joint Pub 1-02)

landing schedule. In an amphibious operation, a schedule which shows the beach, hour, and priorities of landing of assault units, and which coordinates the movements of landing craft from the transports to the beach in order to execute the scheme of maneuver ashore. (Joint Pub 1-02)

landing sequence table. A document that incorporates the detailed plans for ship-to-shore movement of nonscheduled units. (Approved for inclusion in the next edition of Joint Pub 1-02)

landing ship. An assault ship which is designed for long sea voyages and for rapid unloading over and on to a beach. (Joint Pub 1-02)

landing ship dock. A ship designed to transport and launch loaded amphibious craft and/or amphibian vehicles with their crews and embarked personnel and/or equipment and to render limited docking and repair services to small ships and craft. (Approved for inclusion in the next edition of Joint Pub 1-02)

lighterage. A small craft designed to transport cargo or personnel from ship to shore. Lighterage includes amphibians, landing craft, discharge lighters, causeways, and barges. (Joint Pub 1-02)

lighterage control officer.* The Navy officer or chief petty officer responsible to the debarkation officer for controlling the lighterage assigned to that ship for offload.

line of departure. In amphibious warfare, a suitably marked offshore coordinating line to assist assault craft to land on designated beaches at scheduled times. (Definition 2 of 2 in Joint Pub 1-02)

list.* The inclination or tipping of a vessel to one side. List is usually caused by improper distribution of weight in the vessel.

loading plan. All of the individually prepared documents which, taken together, present in detail all instructions for the arrangement of personnel, and the loading of equipment for one or more units or other special grouping of personnel or material moving by highway, water, rail, or air transportation. (Joint Pub 1-02)

logistics over the shore operations. The loading and unloading of ships without the benefit of fixed port facilities, in friendly or nondefended territory, and, in time of war, during phases of theater development in which there is no opposition by the enemy. (Joint Pub 1-02)

Marine Air-Ground Task Force. A task organization of Marine forces (division, aircraft wing and service support groups) under a single command and structured to accomplish a specific mission. The Marine Air-Ground Task Force components will normally include command, aviation combat, ground combat, and combat service support elements (including Navy Support Elements). Three types of Marine Air-Ground Task Forces which can be task organized are the Marine Expeditionary Unit, Marine Expeditionary Brigade, and Marine Expeditionary Force. The four elements of a Marine Air-Ground Task Force are:

a. command element (CE). The MAGTF headquarters. The CE is a permanent organization composed of the commander, general or executive and special staff sections, headquarters section, and requisite communications and service support facilities. The CE provides command, control, and coordination essential for effective planning and execution of operations by the other three elements of the MAGTF. There is only one CE in a MAGTF.

b. aviation combat element (ACE). The MAGTF element that is task organized to provide all or a portion of the functions of Marine Corps aviation in varying degrees based on the tactical situation and the MAGTF mission and size. These functions are air reconnaissance, antiair warfare, assault support, offensive air support, electronic warfare, and control of aircraft and missiles. The ACE is organized around an aviation headquarters and varies in size from a reinforced helicopter squadron to one or more Marine aircraft wing(s). It includes those aviation command (including

air control agencies), combat, combat support, and combat service support units required by the situation. Normally, there is only one ACE in a MAGTF.

c. ground combat element (GCE). The MAGTF element that is task organized to conduct ground operations. The GCE is constructed around an infantry unit and varies in size from a reinforced infantry battalion to one or more reinforced Marine division(s). The GCE also includes appropriate combat support and combat service support units. Normally, there is only one GCE in a MAGTF.

d. combat service support element (CSSE). The MAGTF element that is task organized to provide the full range of combat service support necessary to accomplish the MAGTF mission. CSSE can provide supply, maintenance, transportation, deliberate engineer, health, postal, disbursing, prisoner of war, automated information systems, exchange, utilities, legal, and graves registration services. The CSSE varies in size from a Marine Expeditionary Unit (MEU) service support group (MSSG) to a force service support group (FSSG). Normally, there is only one combat service support element in a MAGTF. (Joint Pub 1-02)

Marine Expeditionary Brigade. A task organization which is normally built around a regimental landing team, a provisional Marine aircraft group, and a logistics support group. It is capable of conducting amphibious assault operations of a limited scope. During potential crisis situations, a Marine Expeditionary Brigade may be forward deployed afloat for an extended period in order to provide an immediate combat response. Also called MEB. (Joint Pub 1-02)

Marine Expeditionary Force. The Marine Expeditionary Force, the largest of the Marine air-ground task forces, is normally built around a division/wing team, but can include several divisions and aircraft wings, together with an appropriate combat service support organization. The Marine Expeditionary Force is capable of conducting a wide range of amphibious assault operations and sustained operations ashore. It can be tailored for a wide variety of combat missions in any geographic environment. Also called MEF. (Joint Pub 1-02)

Marine Expeditionary Unit. A task organization which is normally built around a battalion landing team, reinforced helicopter squadron, and logistic support unit. It fulfills routine forward afloat deployment requirements, provides an

immediate reaction capability for crisis situations, and is capable of relatively limited combat operations. Also called MEU. (Joint Pub 1-02)

marshaling

1. The process by which units participating in an amphibious or airborne operation, group together or assemble when feasible or move to temporary camps in the vicinity of embarkation points, complete preparations for combat or prepare for loading.

2. The process of assembling, holding, and organizing supplies and/or equipment, especially vehicles of transportation, for onward movement. (Joint Pub 1-02)

master. The commanding officer of a United States Naval Ship (USNS), a commercial ship, or a government-owned general agency agreement ship operated for the Military Sealift Command by a civilian company to transport DOD cargo. (Approved for inclusion in the next edition of Joint Pub 1-02)

Military Sealift Command. The single manager operating agency for designated sealift service. Also referred to as MSC. (Joint Pub 1-02).

mounting. 1. All preparations made in areas designated for the purpose, in anticipation of an operation. It includes the assembly in the mounting area, preparation and maintenance within the mounting area, movement to loading points, and subsequent embarkation into ships, craft, or aircraft if applicable. (Definition 1 of 2 in Joint Pub 1-02)

mounting area. A general locality where assigned forces of an amphibious or airborne operation, with their equipment, are assembled, prepared, and loaded in shipping and/or aircraft preparatory to an assault. (Joint Pub 1-02)

movement group. Those ships and embarked units that load out and proceed to rendezvous in the objective area. (Approved for inclusion in the next edition of Joint Pub 1-02)

movement phase. See amphibious operation.

movement plan. In amphibious operations, the naval plan providing for the movement of the amphibious task force to the objective area. It includes information and instructions concerning departure of ships from loading points, the passage at sea, and the approach to and arrival in assigned positions in the objective area. (Joint Pub 1-02)

movement report system. A system established to collect and make available to certain commands vital information on the status, location, and movement of flag commands, commissioned fleet units, and ships under operational control of the Navy. (Joint Pub 1-02)

MSC-controlled ships. Those ships assigned by the Military Sealift Command (MSC) for a specific operation. They may be MSC nucleus fleet ships, contract-operated MSC ships, MSC-controlled time or voyage-chartered commercial ships, or MSC-controlled ships allocated by the Maritime Administration to MSC to carry out DOD objectives. (Joint Pub 1-02)

National Defense Reserve Fleet

a. Including the Ready Reserve Force, the NDRF is composed of ships acquired and maintained by the Maritime Administration (MARAD) for use in mobilization or emergency.

b. The NDRF (less the Ready Reserve Force) is composed of the older dry cargo ships, tankers, troop transports, and other assets in the MARAD's custody that are maintained at a relatively low level of readiness. They are acquired by MARAD from commercial ship operators under the provisions of the Merchant Marine Act of 1936; they are available only on mobilization or congressional declaration of an emergency. Because the ships are maintained in a state of minimum preservation, activation requires 30 to 90 days and extensive shipyard work for many. (Approved for inclusion in the next edition of Joint Pub 1-02)

Navy Cargo Handling Battalion. A mobile logistics support unit capable of worldwide deployment in its entirety or in specialized detachments. It is organized, trained and equipped to load and off-load Navy and Marine Corps cargo carried in Maritime Prepositioning Ships (MPS), merchant breakbulk and/or container ships in all environments; and to operate an associated temporary ocean cargo terminal; load and off-load Navy and Marine Corps cargo carried in military-controlled aircraft; and to operate an associated expeditionary air cargo terminal. Also called CHB. Three sources of Navy Cargo Handling Battalions are:

a. Navy Cargo Handling and Port Group (NAVCHAPGRU). The active duty, cargo handling battalion-sized unit composed solely of active duty personnel.

b. Naval Reserve Cargo Handling Training Battalion (NRCHTB). The active duty, cargo handling training battalion composed of both active duty and reserve personnel.

c. Naval Reserve Cargo Handling Battalion (NRCHB). A reserve cargo handling battalion composed solely of selected reserve personnel. (Joint Pub 1-02)

Navy Cargo Handling Force. The combined cargo handling units of the Navy, including primarily the Navy Cargo Handling and Port Group, the Naval Reserve Cargo Handling Training Battalion and the Naval Reserve Cargo Handling Battalions. These units are part of the operating forces and represent the Navy's capability for open ocean cargo handling. (Joint Pub 1-02)

Navy support element. The Maritime Prepositioning Force element that is composed of naval beach group staff and subordinate unit personnel, a detachment of Navy cargo handling force personnel, and other Navy components, as required. It is tasked with conducting the off-load and ship-to-shore movement of maritime prepositioned equipment and supplies. (Approved for inclusion in the next edition of Joint Pub 1-02)

objective area. A defined geographical area within which is located an objective to be captured or reached by the military forces. This area is defined by competent authority for purposes of command and control. (Definition 1 of 2 in Joint Pub 1-02)

officer in tactical command. In maritime usage, the senior officer present eligible to assume command, or the officer to whom he has delegated tactical command. (Joint Pub 1-02)

organization for embarkation. In amphibious operations, the administrative grouping of the landing force for the overseas movement. It includes, in any vessel or embarkation group, the task organization that is established for landing as well as additional forces embarked for purposes of transport, labor, or for distribution to achieve a maximum of security. (Joint Pub 1-02)

outer landing ship areas. In amphibious operations, areas to which landing ships proceed initially after their arrival in the objective area. They are usually located on the flanks of the outer transport areas. (Joint Pub 1-02)

parallel chains of command. In amphibious operations, a parallel system of command, responding to the interrelationship of Navy, landing force, Air Force, and other major forces assigned, wherein corresponding commanders are established at each subordinate level of all components to facilitate coordinated planning for, and execution of, the amphibious operation. (Approved for inclusion in the next edition of Joint Pub 1-02)

plan for landing. In amphibious operations, a collective term referring to all individually prepared naval and landing force documents which, taken together, present in detail all instructions for execution of the ship-to-shore movement. (Approved for inclusion in the next edition of Joint Pub 1-02)

planning directive. In amphibious operations, the plan issued by the commander, amphibious task force, following receipt of the initiating directive, to ensure that the planning process and interdependent plans developed by the amphibious task force headquarters and assigned major forces will be coordinated, the plan completed in the time allowed, and important aspects not overlooked. (Joint Pub 1-02)

port. A place at which ships may discharge or receive their cargoes. It includes any port accessible to ships on the seacoast, navigable rivers or inland waterways. The term "ports" should not be used in conjunction with air facilities which are designated as aerial ports, airports, etc. (Joint Pub 1-02)

primary control officer. In amphibious operations, the officer embarked in a primary control ship assigned to control the movement of landing craft, amphibious vehicles, and landing ships to and from a colored beach. (Joint Pub 1-02)

primary control ship. In amphibious operations, a ship of the task force designated to provide support for the primary control officer and a combat information center (CIC) control team for a colored beach. (Joint Pub 1-02)

Ready Reserve Force. Composed of ships acquired by the Maritime Administration (MARAD) with Navy funding and newer ships acquired by MARAD for the National Defense Reserve Fleet (NDRF). Although part of the NDRF, RRF ships are maintained in a higher state of readiness and can be made available without mobilization or congressionally declared state of emergency. (Approved for inclusion in the next edition of Joint Pub 1-02)

reduced operational status. Applies to the Military Sealift Command ships withdrawn from full operational status because of decreased operational requirements. A ship in reduced operational status (ROS) is crewed in accordance with shipboard maintenance and possible future operational requirements with crew size predetermined contractually. The condition of readiness in terms of calendar days required to attain full operational status is designated by the numeral following the acronym ROS (i.e., ROS-5). Also called ROS. (Approved for inclusion in the next edition of Joint Pub 1-02)

regimental landing team. A task organization for landing, comprised of an infantry regiment reinforced by those elements which are required for initiation of its combat function ashore. (Joint Pub 1-02)

remain-behind equipment. Unit equipment left by deploying forces at their bases when they deploy. (Approved for inclusion in the next edition of Joint Pub 1-02)

screening group. In amphibious operations, a task organization of ships that furnishes protection to the task force en route to the objective area and during operations in the objective area. (Joint Pub 1-02)

sea echelon area. In amphibious operations, an area to seaward of a transport area from which assault shipping is phased into the transport area, and to which assault shipping withdraws from the transport area. (Joint Pub 1-02)

sea echelon plan. In amphibious operations, the plan for reduction of concentration of amphibious shipping in the transport area, to minimize losses due to enemy attack by mass destruction weapons and to reduce the area to be swept of mines. (Joint Pub 1-02)

Sealift Readiness Program. A formal agreement, pursuant to the Merchant Marine Act of 1936, as amended, between US-flag dry cargo carriers and the government for the acquisition of ships and related equipment under conditions of less than full mobilization. (This definition is provided for information and is proposed for inclusion in the next edition of Joint Pub 1-02 by Joint Pub 4-01.2)

selective unloading. In an amphibious operation, the controlled unloading from assault shipping, and movement ashore, of specific items of cargo at the request of the landing force commander. Normally, selective unloading

parallels the landing of nonscheduled units during the initial unloading period of the ship-to-shore movement. (Approved for inclusion in the next edition of Joint Pub 1-02)

serial. An element or a group of elements within a series which is given a numerical or alphabetical designation for convenience in planning, scheduling, and control. (Joint Pub 1-02)

serial assignment table. A table that is used in amphibious operations and shows the serial number, the title of the unit, the approximate number of personnel; the material, vehicles, or equipment in the serial; the number and type of landing craft and/or amphibious vehicles required to boat the serial; and the ship on which the serial is embarked. (Joint Pub 1-02)

ship-to-shore movement. That portion of the assault phase of an amphibious operation which includes the deployment of the landing force from the assault shipping to designated landing areas. (Joint Pub 1-02)

special unloading berth. Berths established in the vicinity of the approach lanes into which transports may move for unloading, thus reducing the running time for landing craft and assisting in the dispersion of transports. (Approved for inclusion in the next edition of Joint Pub 1-02)

stage. To process, in a specified area, troops which are in transit from one locality to another. (Definition 2 of 2 in Joint Pub 1-02)

staging area

1. amphibious or airborne - A general locality between the mounting area and the objective of an amphibious or airborne expedition, through which the expedition or parts thereof pass after mounting, for refueling, regrouping of ships, and/or exercise, inspection, and redistribution of troops.

2. other movements - A general locality established for the concentration of troop units and transient personnel between movements over the lines of communications. (Joint Pub 1-02)

stowage. The method of placing cargo into a single hold or compartment of a ship to prevent damage, shifting, etc. (Joint Pub 1-02)

tac-log group. Representatives designated by troop commanders to assist Navy control officers aboard control ships in the ship-to-shore movement of troops, equipment, and supplies. (Joint Pub 1-02)

task force

1. A temporary grouping of units, under one commander, formed for the purpose of carrying out a specific operation or mission.

2. Semi-permanent organization of units, under one commander, formed for the purpose of carrying out a continuing specific task.

3. A component of a fleet organized by the commander of a task fleet or higher authority for the accomplishment of a specific task or tasks. (Joint Pub 1-02)

time-phased force and deployment data. The JOPES (Joint Operation Planning and Execution System) data base portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan, including:

a. In-place units.

b. Units to be deployed to support the operation plan with a priority indicating the desired sequence for their arrival at the port of debarkation.

c. Routing of forces to be deployed.

d. Movement data associated with deploying forces.

e. Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces.

f. Estimate of transportation requirements that must be fulfilled by common-user lift resources as well as those requirements that can be fulfilled by assigned or attached transportation resources. Also called TPFDD. (This definition is provided for information and is proposed for inclusion in the next edition of Joint Pub 1-02 by Joint Pub 5-0)

time-phased force and deployment list. Appendix 1 to Annex A of the operation plan. It identifies types and/or actual units required to support the operation plan and indicates

origin and ports of debarkation or ocean area. It may also be generated as a computer listing from the time-phased force and deployment data. Also called TPFDL. (Joint Pub 1-02)

tons.*

1. Displacement ton/long ton: 2,240 pounds.
2. Short ton: 2,000 pounds.
3. Metric ton: 2,204.6 pounds.
4. Measurement ton: 40 cubic feet.

transport area. In amphibious operations, an area assigned to a transport organization for the purpose of debarking troops and equipment. (Joint Pub 1-02)

transportation operating agencies

1. military. These agencies are the Military Traffic Management Command, under the Department of the Army, the Military Sealift Command, under the Department of the Navy, and the Air Mobility Command, under the Department of the Air Force.

2. civil. Those Federal agencies having responsibilities under national emergency conditions for the operational direction of one or more forms of transportation; they are also referred to as Federal Modal Agencies or Federal Transport Agencies. (Joint Pub 1-02)

transport group. An element that directly deploys and supports the landing of the landing force (LF) is functionally designated as a transport group in the amphibious task force task organization. A transport group provides for the embarkation, movement to the objective, landing, and logistic support of the LF. Transport groups comprise all sealift and airlift in which the LF is embarked. They are categorized as follows:

a. Airlifted groups.

b. Navy amphibious ship transport groups.

c. Strategic sealift shipping groups. (Approved for inclusion in the next edition of Joint Pub 1-02)

type command. An administrative subdivision of a fleet or force into ships or units of the same type, as differentiated

from a tactical subdivision. Any type command may have a flagship, tender, and aircraft assigned to it. (Joint Pub 1-02)

United States Naval Ship. A public vessel of the United States in the custody of the Navy and is:

a. Operated by the Military Sealift Command (MSC) and manned by a civil service crew.

b. Operated by a commercial company under contract to the MSC and manned by a merchant marine crew. (Approved for inclusion in the next edition of Joint Pub 1-02)

vertical loading. A type of loading whereby items of like character are vertically tiered throughout the holds of a ship, so that selected items are available at any stage of the unloading. (Joint Pub 1-02)

vertical stowage.* A method of stowage in depth within a single compartment by which loaded items are continually accessible for unloading, and the unloading can be completed without corresponding changes or prior unloading of other cargo.

weight distribution factors*

a. Vertical Distribution. Too much weight in the upper decks makes a tender ship; too much in the lower holds makes a stiff ship. A ship that is excessively stiff will roll so violently that the ship can be damaged by heavy wracking stresses on the hull. Cargo tends to shift athwartship in a stiff ship.

b. Longitudinal Distribution. Excessive bogging or sagging as a result of improper longitudinal distribution of cargo or ballast can crack hulls and deck plating and break ships in two.

c. Transverse Distribution. When storing cargo, the weight must be equal on both sides of the ship's centerline. If possible, this equality may be accomplished by loading equal amounts in the wings and putting heavy lifts on the centerline.

* This term and definition are applicable only in the context of this pub and cannot be referenced outside of this publication.