

CHAPTER 4

REFERENCE MATERIAL

4-1. General (Resident Students)

The bulk of the material contained in this chapter will be covered during the second and third periods of *Amphibious Operations*. It is recommended that the student briefly review the entire contents of this chapter, prior to the first period, for overall comprehension of the lesson.

4-2. Instructions

a. This chapter consists of 11 sections. In-class discussion or supplemental material will provide clarification and expansion of the material contained in each section.

b. Specific instructions are as follows:

(1) Resident students:

(a) Prior to period one, review sections I through III.

(b) Prior to period two, review sections V through XI. In particular, read each summary paragraph provided.

(c) Prior to period three, read section IV. Review sections V and VII through XI once again.

(2) Correspondence course students:

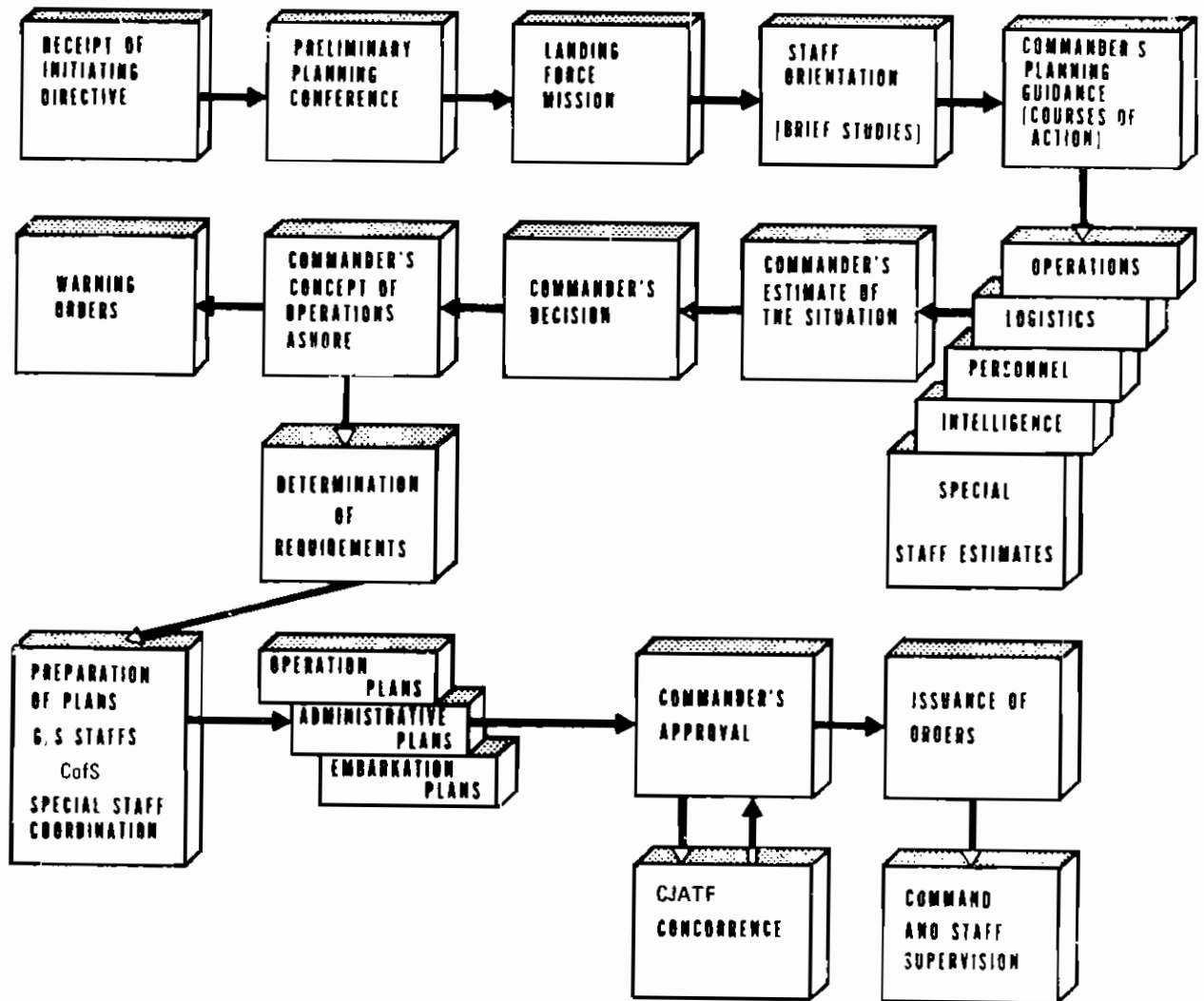
(a) Review the entire contents of this chapter for overall comprehension of the subcourse.

(b) Read each lesson cover sheet for specific text assignments. Study or review each text assignment as necessary to learn the major principles and to know where to find detailed information.

Section I. COMMAND AND STAFF SEQUENCE

4-3. General

The command and staff planning sequence is much the same as that employed by the Army for normal land combat operations. However, the amphibious operation requires much more detail in planning and this necessitates some change in the normal sequence, as is noted below. Remember that an augmented Navy staff is organized and employed by the joint amphibious task force commander (CJATF) to plan for the joint amphibious task force (JATF) as a whole. The commander of the landing force (CLF) uses his own staff to plan for the landing force operations ashore. Both staffs must closely coordinate their efforts throughout the operation.



Section II. SAMPLE INITIATING DIRECTIVE
(Published For Instructional Purposes Only.)

(Classification)

3 Dec 1975

From: Commander, US Seventh Fleet

To: Commander, Amphibious Group ONE (CTF 71)

Subj: Letter of Instruction (LOI), Operation CRUSHER

Ref: (a) CINCPAC Msg 020600Z Jan 7X
(b) CINCPACFLT Msg 021300Z Jan 7X
(c) CINCPACFLT Instr 003120.1
(d) NWP 22 (A)
(e) COMSEVENTHFLT Op Plan 1--7X

Encl: (1) Assignment of Forces

Purpose: This directive establishes Joint Task Force 71 (Amphibious Task Force) and Task Force 72 (Landing Force) effective this date and initiates planning for Operation CRUSHER.

1. SITUATION.

a. General.

(1) X-RAY forces, composed primarily of one infantry regiment and support units, have infiltrated and gained control of the island of ALPHA, Republic of BRAVO.

(2) The BRAVO Government has requested US assistance to eject the enemy forces and to assist in the restoration of their government on ALPHA.

(3) The President of the United States has directed that US naval forces initiate action against the aggressors on ALPHA.

(4) Reference (a) assigned COMSEVENTHFLT the responsibility for the operation and directed COMSEVENTHFLT to conduct an independent US amphibious operation on ALPHA in order to return control of the island to the lawful government.

b. Enemy Forces. To be furnished.

c. Friendly Forces.

(1) The government of the Philippines and BRAVO provide assistance, staging bases, and overflight rights for US forces in the Western Pacific (WESPAC).

(2) CINPAC Commands.

(a) Commander, United States Military Assistance Command, BRAVO (COMUSMACB) defends BRAVO in conjunction with BRAVO Armed Forces and associated Free World forces; maintains air superiority over his area of responsibility throughout Southeast Asia; provides air facilities as directed to support offensive operations in the Gulf of DELTA; provides assault support

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helicopter company to landing force by D-1 day for duration of the operation; extends in-country administrative/logistic systems to provide emergency aerial delivery and routine administrative support as required.

(b) Commander, Seventh Air Force, in conjunction with COMSEVENTHFLT and COMUSMACB gains and maintains air superiority over the Gulf of DELTA and isolates and assists in preparation of the objective area.

(c) COMSEVENTHFLT maintains naval supremacy in WESPAC; isolates and assists in preparation of the objective area; and supports the landing force with tactical air support.

(d) Commander, US Naval Forces, Japan, and Commander, US Naval Forces, Philippines, provide logistic support as requested by CTF 71 and CTF 72.

(e) COMCRUDESPAC provides TF 71 with one division (2 DD) from forces currently employed in Pacific. Chops to CTF 71 NLT 041200Z January 197X.

(f) COMASWPAC provides TF 71 with one escort squadron (CORTRON) (4 FF). Chops to CTF 71 041200Z January and closes NLT 7 January 197X.

(g) COMCARDIVPAC SEVEN provides one attack carrier (CV) for air operations in accordance with reference (b).

(h) COMSERVPAC provides logistic support and underway replenishment to TF 71 as requested. DIRLAUTH.

(2) MISSION. JATF 71 will conduct an amphibious operation of the island of ALPHA for the purpose of ejecting or destroying the enemy forces thereon, restore order, and assist in the reestablishment of control of the island by the lawful government.

3. OPERATIONS.

a. Phases.

(1) Phase I (D-10 to commencement of advance force operations, if conducted, or to 0001 D-day, whichever is earlier). COMSEVENTHFLT maintains naval supremacy in the Gulf of DELTA area; in conjunction with USAF components, gains and maintains air superiority in the Gulf of DELTA area and conducts supporting operations to isolate and prepare the amphibious objective area (AOA).

(2) Phase II (commencement of advance force operations, if conducted, or 0001 D-day, whichever date is earlier, to about D+30). CTF 71 conducts amphibious assault, seizes ALPHA, destroys and/or ejects enemy, and restores order to area.

b. Coordinating Instructions.

(1) Code name. CRUSHER.

(2) Amphibious objective area (AOA). That area within a 50 NM radius from center of ALPHA excluding portions of neutral country and the mainland of BRAVO therein.

(3) Command relationships.

(a) Phase I as prescribed in reference (c). (Omitted)

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(b) During amphibious planning and phase II as prescribed in reference (d). (Omitted)

(c) CJATF will exercise operational control of all forces in the AOA commencing with advance force operations, if conducted, or 0001 hours, D-day, whichever is earlier, until termination of the amphibious operation.

(4) Limiting dates for amphibious assault.

25 January to 5 February 197___, both dates inclusive.

(5) Assignment of forces. See enclosure 1.

(a) Amphibious forces. Amphibious Ready Group Pacific (PHIBGRU ONE) to include mine forces currently attached as further reinforced/augmented by Surface Forces Pacific (SURFPAC). By reference (b), additional forces can be requested from COMSURFPAC on a priority basis.

(6) Termination of amphibious operation.

(a) When the landing force is firmly established ashore and on recommendation of CTF 71, the amphibious operation (Phase II--Operation CRUSHER) will be terminated by COMSEVENTHFLT.

(b) On order, subsequent to the termination of phase II:

1. Amphibious task force dissolved. Naval units of TF 71 revert to organization specified in 7th FLT OPO 7 69.

2. Landing force dissolved. 112th Sep Inf Bde (Rein) units embark in designated shipping for return to Okinawa.

(7) Nuclear and chemical guidance.

(a) Nuc and cml weapons other than nonlethal chemical munitions will not be employed.

(b) Nonlethal chemical weapons may be employed against civilian communities where valid military targets are located only with landing force commander (CTF 72) approval.

(8) This directive is effective on receipt.

4. LOGISTICS.

a. Logistics in accordance with reference (e). (omitted)

b. Submit emergency air requests to COMSEVENTHFLT with copies to CTF 71 or CTF 72 as appropriate.

c. Cross-servicing for US items of supply authorized in accordance with CINCPAC Order 201--69.

5. COMMAND AND COMMUNICATIONS.

a. RADM R. E. STACKS, USN (COMPHIBGRU ONE) designated joint amphibious task force commander (CJATF 71).

b. BG B. B. BACKER, USA (CG 112th Sep Inf Bde) designated landing force commander (CTF 72).

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c. COMUSMACB is senior US authority for all operations in area. Direct liaison authorized between CJATF 71 and COMUSMACB. CJATF 71 will keep COMUSMACB informed of operations within AOA that may impinge on operations on periphery of or external to AOA. COMSEVENTHFLT will be kept advised on all related matters.

d. Communications as prescribed in reference (e). (omitted)

U. R. SWIFT
Admiral, US Navy
Commander, US 7th Fleet

Enclosure 1--Assignment of Forces

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ASSIGNMENT OF FORCES

1. NAVY FORCES.

a. Combatant Ships.

(1) Cruiser.

1 CG	USS OKLAHOMA CITY	CG-5 (6"-47)
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(2) Destroyers.

(a) Destroyer.

6 DD	USS GURKE	DD-783
	USS ROWAN	DD-782
	USS EDSON	DD-946
	USS GEORGE K. MACKENZIE	DD-836
	USS AGERNON	DD-826
	USS BAUSELL	DD-845

(b) Guided Missile Destroyer.

1 DDG	USS HOEL	DDG-13
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(3) Ocean Escort.

4 FF	USS SAMPLE	FF-1048
	USS DOWNES	FF-1070
	USS LANG	FF-1060
	USS MYERKORD	FF-1058

b. Mine Warfare Ships.

(1) Ocean Minesweeper.

5 MSO	USS PLEDGE	MSO-492
	USS PLUCK	MSO-464
	USS CONSTANT	MSO-427
	USS ESTEEM	MSO-438
	USS CONQUEST	MSO-488

c. Auxiliary Ship.

(1) Oiler/Replenishment

1 AOR	USS WICHITA	AOR-1
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d. Support Carrier Group.

(1) Attack Aircraft Carrier.

1 CV	USS RANGER	CV-61
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(2) Guided Missile Light Cruiser.

1 CG	USS CHICAGO	CG-11
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(3) Destroyers.

(a) Guided Missile Destroyer.

1 DDG	USS LYNDE B. McCORMICK	DDG-8
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(b) Destroyer.

2 DD	USS HULL	DD-945
	USS RICHARD J. EDWARDS	DD-950

e. Amphibious Warfare Ships.

(1) Amphibious Command Ship.

1 LCC	USS BLUE RIDGE	LCC-19
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(2) Amphibious Assault Ship.

2 LPH	USS NEW ORLEANS	LPH-11
	USS OKINAWA	LPH-3
1 LHA	USS TARAWA	LHA-1

(3) Amphibious Transport.

1 LPA	USS FRANCIS MARION	LPA-249
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(4) Amphibious Cargo Ship.

3 LKA	USS DURHAM	LKA-114
	USS TULARE	LKA-112
	USS MOBILE	LKA-115

(5) Amphibious Transport Dock.

2 LPD	USS VANCOUVER	LPD-2
	USS ODGEN	LPD-5

(6) Dock Landing Ship.

5 LSD	USS THOMASTON	LSD-28
	USS MONTICELLO	LSD-35
	USS ANCHORAGE	LSD-36
	USS MOUNT VERNON	LSD-39
	USS ALAMO	LSD-33

(7) Tank Landing Ship.

5 LST	USS FREDERICK	LST-1184
	USS PEORIA	LST-1183
	USS SAN BERNADINO	LST-1189
	USS RACINE	LST-1191
	USS TUSCALOOSA	LST-1187

f. Recapitulation Assigned Forces.

<u>Type</u>	<u>Number</u>	<u>Type</u>	<u>Number</u>
AOR	1	DD	8
CG	2	DDG	2
CV	1	FF	4

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Type	Number	Type	Number
LCC	1	LPH	2
LKA	3	LSD	5
LHA	1	LST	5
LPD	2	MSO	5

2. US ARMY FORCES

112th Sep Inf Bde (Reinf)
HHC
Trp B, 42d Armd Cav Sqdn, 2d Cav
112th Engr Co
112th Spt Bn
133d Avn Co (Corps)
2d Bn (105, Towed), 67th FA
2d Bn, 120th Inf
2d Bn, 121st Inf
2d Bn, 122d Inf
2d Bn (Mech), 123d Inf
201st Aslt Spt Hel Co
2d Bn (155, SP), 631st FA
Co A (Reinf), 1st Bn, 4th Armor
Co B, 1st Bn, 4th Armor
Det, HHC, 1st Bn, 4th Armor
Det, Cbt Spt Co, 1st Bn, 4th Armor
1st Sep Bde Plt, ANGLICO, FMF
Det, 112th CEWI Co
1st Plt, 514th CA Co
550th Engr Amph Bn
HHC, 550th Engr Amph Bn
Co A (AMPH ASLT), 550th Engr Amph Bn
Co B (AMPH ASLT), 550th Engr Amph Bn
Co C (AMPH), 550th Engr Amph Bn
Co A, 501st Engr Cbt Bn (Corps)
1st Plt, 5005th Engr LE Co (Abn)
1st Plt, 865th Med Clr Co
1st Plt, 270th MP Co
Det, 1st Plt 330th MP ESCRG Co
Det, 500th Ord Convl Ammo Co
Det, 298th QM Svc Org (Cem Det)
Det, 257th Petr1 Sup Co
Det, 238th Gen Sup Co (GS)
733d Trans Lt/Mdm Trk Co (-)
1st Plt, 705th Trans Lt Trk Co (5-Ton)
Det, 721st Trans Mdm Trk Co (Petr1)
1st Plt, 765th Trans Mdm Amph Co
Det, 924th LE Maint Co (GS)
765th Trans Mdm Amph Co
757th Trans TS Co (-)
Beach Party Group B, Naval Beach Group 3 (-)

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Section III. AMPHIBIOUS OPERATION ORDER/PLAN FORMAT

4-4. Operation Plan (Order)—follows standard five-paragraph format.

Annex A – Task Organization (G3)

Annex B – Intelligence (G2)

Appendix 1 – Estimate

Appendix 2 – Counterintelligence

Appendix 3 – Air Photography

Appendix 4 – Maps and Charts

Appendix 5 – Target Information

Appendix 6 – Ground Reconnaissance

Appendix 7 – Evasion and Escape

Annex C – Concept of Operation (G3)

Annex D – Operation Overlay (G3)

Annex E – Fire Support (G3)

Appendix 1 – Air Fire Support

Appendix 2 – Naval Gunfire Support

Appendix 3 – Artillery Fire Support

Appendix 4 – Fire Support Coordination

Annex F – Air Defense (G3)

Annex G – Engineer (G3)

Appendix 1 – Roads and Bridges

Appendix 2 – Beach Exit Routes

Annex H – Shore Party (G3)

Appendix 1 – Task Organization

Appendix 2 – Shore Party Beach Study

Appendix 3 – Beach Development

Appendix 4 – Beach Support Area Security

Appendix 5 – Beach Support Area Damage Control

Annex I – Phased Task Organization (G3)

Annex J – Tentative Shipping Allocations (G4)

Annex K – Landing Plan (G3)

Appendix 1 – Assault Schedule

Appendix 2 – Serial Assignment Table

Appendix 3 – Landing Sequence Table

Appendix 4 – Amphibious Vehicle Availability Table

Appendix 5 – Amphibious Vehicle Employment Plan

Appendix 6 – Landing Craft Availability Table

Appendix 7 – Helicopter Availability Table

Appendix 8 – Helicopter Employment and Assault Landing Table

Annex L – Alternate Plans (G3)

Annex M – Embarkation (G4)

Appendix 1 – Organization for Embarkation and Assignment to Shipping

Appendix 2 – Allocation of Supplies and Equipment

Appendix 3 – Berthing and Loading Schedule

Appendix 4 – Assignment of Embarkation Areas

Appendix 5 – Embarkation Roster Procedures

Annex N – Communications—Electronics (G3)

Annex O – Deception (G3)

Annex P – Electronic Warfare (G3)

Annex Q – Unconventional Warfare (G3)

Annex R – Counterguerrilla (G3)

Annex S – Reports (G3)

Annex T – Rehearsals (G3)

Annex U – Airspace Coordination (G3)

Annex X – Distribution (G3)

4-5. Administrative/Logistics Order (G4)—standard format, provides for nine paragraphs.

Annex A – Administrative/Logistics Overlay

Annex B – Traffic Circulation

Annex C – Engineer Construction, Rehabilitation, and Maintenance

Annex D – Fuel Allocations

Annex E – Special Ammunition Load

Annex F – Allocation for Storage

Annex G – Plan for Landing Supplies

Annex H – Air Delivery

Annex I – Area Damage Control

Section IV. SPECIALIZED UNITS AND OPERATIONS

4-6. General

Army unit organization and equipment are not based on the special requirements of amphibious operations. However, the Army meets these special requirements through temporary internal reorganization of assault units and grouping of units as task organizations, to include certain units that by design provide specialized support needed in the assault of a hostile shore. Though the units discussed herein are referred to as specialized units, the purpose of such reference is only to emphasize the need for planning for their inclusion in an Army force that is to conduct an amphibious attack.

4-7. Shore Party (FM 5-144, chap 5, para 5-1)

a. The success of an amphibious operation is dependent in great part on the ability of the landing force to establish its assault elements ashore rapidly and effectively. To assist these elements in their movement across the beach and inland, a *task organization* called a shore party (SP) is formed. The need for SP's results from two conditions—

(1) Landing beaches are basically an obstacle to be crossed by assault elements of the landing force. Specialized support elements are required to clear obstacles and develop the beach area.

(2) When executing an amphibious assault, the landing force elements are separated from the normal combat service support systems. SP's provide *interim* combat service support and initiate the staged or progressive development of the combat service support system in the objective area.

b. The SP assists in landing and moving troops, equipment, and supplies across the beaches; evacuates patients and prisoners of war from the beaches; and assists in beaching, retracting, and salvaging landing ships, craft, and amphibious vehicles. It consists of elements of both the naval and landing forces.

c. SP's are usually provided as follows:

(1) Battalion landing team shore party (BLTSP). A BLTSP is required for each battalion landing team (BLT) that lands over a landing beach in the initial assault.

(2) Brigade landing team shore party (BDELTSP). When a brigade landing team (BDELT) is employed as a subordinate echelon of the landing force with responsibility for establishment or operation of a beach support area, a BDELTSP is required.

(3) Division shore party. One division SP is required for each assault division.

(4) Corps shore party. One corps SP is required for each assault corps.

d. Functions of the SP are as follows:

(1) In the accomplishment of its mission, the landing force element of the SP (Army) performs tasks inland from the water's edge while those to seaward are performed by the naval element of the SP.

(2) All SP tasks are performed under the command of the SP commander (Army).

e. The functions of the SP are divided into two categories; those performed by the landing force elements and those performed by the naval elements.

(1) *Functions of the landing force element.* The SP's functions vary in emphasis and size

depending upon the echelon and phase of development. For example, combat engineering tasks, designed to speed up the landing team's moving across the beach, may be the primary duty during the assault; or the landing team SP may begin working to improve the beach area as early as the combat situation permits. When general unloading begins, during the division phase, the shore party normally devotes its main efforts to logistic support tasks. The following subparagraphs list the principal functions of the landing force element of the SP. These tasks and their priority will be explained during class when the organization of the beach support area is discussed. *The landing force element—*

- (a) Removes obstacles and removes or marks minefields.
- (b) Reconnoiters and marks beach areas, approaches to the beach from seaward, and exits inland from them.
- (c) Constructs or improves exit and lateral roads, hardstands, storage areas, pipelines, utilities, and storage facilities within the beach support area.
- (d) Provides initial emergency maintenance service to the forces ashore.
- (e) Furnishes medical treatment; evacuates patients, prisoners of war, and other personnel; and maintains records of the personnel evacuated.
- (f) Establishes communications toward the sea within the beach support area and inland to tactical units.
- (g) Furnishes transportation support during unloading and for moving troops, equipment, and supplies inland.
- (h) Operates beach dumps.
- (i) Makes emergency repairs of vehicles damaged in landing.
- (j) Furnishes local security for the beach support area, including an air-ground warning system.
- (k) Controls the movement of amphibians loaded with supplies and aids in unloading supplies from landing ships and craft.
- (l) Establishes and operates dumps and supply points.

(2) *Functions of the naval element.* In an amphibious operation, a naval element known as the *beach party team* is included in the SP. While the landing force performs tasks inland from the water's edge, the naval element performs those to seaward. Usually, this element consists of a beachmaster unit or portions of it, a Navy construction unit, and a boat unit. The beach party team commander is the beachmaster. He is a naval line officer who lands with BLTSP commander and is under his operational control.

Some of the functions of the beach party team are to provide navigational aids, direct the landing of landing craft and ships, remove underwater obstacles, install pontoon causeways, make emergency repairs on landing craft, and assist in the evacuation of casualties and prisoners. In general, the beach party assists and advises the SP commander of Navy activities in the vicinity of the beaches. It may be composed of 10 sections as follows:

- (a) *The headquarters section* contains the beach party team commander, communications personnel, and administrative assistants. A part of this section lands with the SP reconnaissance party.
- (b) *The visual communications section* maintains communications with Navy forces afloat and with adjacent Navy beach parties.
- (c) *The broadcast section*, equipped with a public address and broadcasting set, uses voice communications to direct personnel and craft in the vicinity of the beach area.
- (d) *The radio communications section* uses both portable and mobile radio equipment to furnish communications with forces afloat and with adjacent beaches.
- (e) *The salvage section* assists landing craft and ships to beach and retract, makes minor beach improvements, and salvages landing craft and amphibious vehicles when required.

(f) *The boat repair section*, equipped with damage control, electrical, and engine repair kits, makes emergency repairs on landing craft on the beach. Craft needing extensive repairs are towed to their parent ships or to designated repair ships.

(g) *The traffic control section* (seaward) directs beaching and retracting of craft.

(h) *The hydrographic section* marks and removes obstacles in the beach approaches up to the high water mark. It makes hydrographic surveys and marks navigational hazards in the vicinity of beaches. The underwater demolition teams furnish personnel for the hydrographic section. Underwater demolition teams also perform tasks before H-hour.

(i) *The pontoon causeway section*, attached to the beach party team when needed, furnishes, installs, operates, and maintains barges and causeways to land equipment and supplies over the beach.

(j) *The bulk fuel element* of the naval beach party furnishes, installs, operates, and maintains ship-to-shore fuel lines.

f. Shore party support organizations include several types of units. With engineer amphibious units forming the SP nucleus, *other combat support and combat service support units are structured* to the amphibious force and *attached* to the SP task organization. Army units attached include engineer, signal, and chemical combat support units, along with ordnance, medical, transportation, quartermaster, civil affairs, and military police units of the corps and/or theater. Among transportation units are staff elements of terminal groups and battalions and transportation terminal service, truck, boat, and amphibian (operating) companies. Operating units transport troops, equipment, and supplies from ship to shore and equipment and supplies to beach dumps. Duties and capabilities of each of these units are discussed in the next four paragraphs.

(1) *Transportation terminal service company*. This company consists of a company headquarters, a stevedore gear and equipment maintenance platoon, two ship and shore platoons, and a document platoon. The transportation terminal service company handles cargo aboard ships and on the beach, develops cargo dumps ashore, and tranships cargo inland to the tactical forces. The company also maintains cargo records, makes unloading reports, and assists in collecting life jackets and cargo nets and returns them to assigned ships.

(2) *Transportation light truck company*. The transportation light truck company furnishes vehicles to help other SP units move cargo. It can operate on poor roadways or across country if necessary. When there are two drivers per vehicle for a 20-hour operation, the company can support one terminal service company in transporting general cargo to local dumps. It has 2½-ton cargo trucks and 1½-ton cargo trailers, which are often preloaded aboard landing ships to insure rapid discharge.

(3) *Transportation boat companies*. Transportation boat companies, classed as medium or heavy, furnish and operate landing craft to support amphibious operations and are normally attached to the SP. The capabilities of each boat company are explained below.

(a) *The medium boat company*, equipped with task landing craft, mechanized (LCM(8)) to support amphibious operations, can transport an average of 720 short tons of general cargo per day. This is based on an average load of 30 short tons in each of 12 landing craft making two trips daily. These figures are planning capabilities for a prolonged operation. It can also transport, in a one-time maximum lift, 960 short tons of general cargo based on 16 landing craft, or it can transport 3,200 combat-equipped troops based on 16 landing craft.

(b) *The heavy boat company* can transport an average of 16,000 troops with individual equipment, 2,160 short tons of vehicles, or 6,000 short tons of tanks using 10 landing craft making 4 trips daily. It can transport an average of 1,440 short tons of general cargo using 10 landing craft making one trip daily; or it can transport, in a one-time maximum lift, 1,800 short tons of cargo or 4,800 combat-equipped troops using 12 landing craft. The heavy boat company operates landing craft, utility (LCU) to transport personnel and heavy cargo in amphibious operations.

(4) *Transportation amphibian companies.* Transportation amphibian companies play an important part in moving cargo and personnel from ships during the general unloading phase in an amphibious operation. Usually, light or medium amphibian companies and heavy platoons are attached to the SP. The task vehicle of the light amphibian company is the lighter, amphibious, resupply cargo, 5-ton (LARC-V). The medium amphibian company uses the 15-ton LARC (LARC-XV), and the heavy amphibian platoon the 60-ton LARC-LX

The LARC-V can carry 20 troops and a maximum of 5 short tons of cargo. The LARC-XV, equipped with a hydraulically operated bow ramp, is primarily intended to transport general cargo and light vehicles; however, if required, it can transport 50 men. The LARC-LX can normally carry 125 passengers and 200 in emergencies. It carries 60 tons of cargo normally but can, in an emergency, carry 100 tons. When the assault missions are completed, the SP controls the LARC's and uses them for additional ship-to-shore movement or as floating dumps.

g. An airmobile support party is a task organization formed for employment in a landing zone (LZ) to facilitate landing and interim logistic support of elements in the LZ. Its composition, organization, and equipment are influenced by the scope of the contemplated operations.

(1) *Functions.* The support functions to be performed in the LZ are generally comparable to the functions performed by the SP in a beach area.

(2) *Organization.* Support party task organization is structured to meet requirements in a particular LZ, and with consideration to the composition and mission of the associated assault elements. *The support party is comprised of personnel of the assault landing team, transport aircraft unit, division combat service support units, or other division units as required.* A typical support party for an LZ will include—

(a) A small support party headquarters consisting of a command section and military police, security, and communications sections, as required.

(b) A terminal air traffic regulation element consisting of pathfinder personnel and selected personnel of the helicopter unit(s) involved.

(c) A logistic support element.

(3) *Employment.* Support party personnel are phased into the LZ according to the functions to be performed.

(a) An advance party precedes the first wave of helicopters to perform necessary reconnaissance, select exact sites of landing, and establish necessary communications and navigation aids.

(b) Combat support and combat service support personnel to perform tasks such as preparing, maintaining, and marking landing sites; unloading and loading helicopters; establishment of supply installations and casualty evacuation stations; and helicopters emergency maintenance and refueling are phased into the LZ's as the situation permits.

h. Beginning with the initiating directive, a number of documents must be prepared to conduct an amphibious operation. Two of these are the plans and orders for SP's. While the landing force commander is responsible for seeing that these documents are prepared, the operations officer of each of his subordinate tactical commands, in coordination with the logistics officer, usually prepares them. The order is the authority to activate the SP; the plan gives instructions for the SP to carry out its functions.

The Army's SP plan is published as an annex to the operation order of the supported unit. It contains the mission, plan of operation, and necessary details for clarifying subordinate echelon

shore party duties. It also contains the attachment of Army and Navy elements to form the task organization, the time of attachments, and allocations of equipment. In addition, it includes guidance controls and priorities for landing elements and equipment.

The amphibious task force commander, a naval officer, is responsible for naval support plans; however, his subordinate task groups do the planning. Transport groups, for example, provide for landing and logistic support of the landing force. They plan concurrently with landing force elements and form parallel organizations to lift the landing force elements and to supply the landing means.

i. The SP commander coordinates and controls the operations through his subordinates, attached communications units, and the tactical-logistical group (TACLOG). A TACLOG group is *organized from personnel within the landing force* and advises Navy control officers of landing force requirements during an amphibious operation. They are established aboard designated vessels as needed. Normally, the TACLOG group is composed of representatives from the unit G3/S3 and G4/S4 sections, including those of the engineer amphibious units and the embarkation officer and various assistants. Representatives from other coordinating and special sections and of artillery, air, medical, and amphibious vehicle units may be included also.

j. In determining the composition and organization of any SP, the commander carefully analyzes its tasks for each particular operation. Plans, directives, and the commander's decisions also determine its organization. In addition, the commander studies the duties, priority, and the timing and sequence in which SP elements must be introduced ashore. Because of the variety of tasks that may be accomplished, the SP can be organized in many forms. Its composition is geared to the organization of the landing force it supports. Regardless of the size of the SP, or the variety of attachments needed to organize it, it always contains certain elements. They are command, liaison, communications, reconnaissance, labor, administration, engineer support, medical support, and transportation units. Included also are cargo-handling equipment, traffic control, and security units. It must be remembered, however, that no standard organization applies to all SP's.

k. The landing force commander, who works through the engineer amphibious unit commander, conducts the shore party's operations. The engineer amphibious units form the nucleus of the SP elements and control all of its support elements.

l. The command and control elements and specialized engineer, medical, and signal units needed by an Army division commander for shore parties are organic to the engineer amphibious brigade. This brigade is a product of experience and has developed through evolution. During World War II, the engineer special brigade was employed for the conduct of amphibious operations. The engineer special brigade (ESB) included three boat and shore regiments and various support units. The 2d ESB furnished shore party support in the amphibious operations during the Korean war. At about the same time as the truce in Korea, the ESB was redesignated the amphibious support brigade (ASB) and was made a branch immaterial unit. The 2d ASB was inactivated in June 1955. These units were forerunners of the engineer amphibious support command (EASC) (discussed in FM 31-12), which was reactivated in 1958 and deactivated in 1965, and the latest organizational proposal—the engineer amphibious brigade (EAB).

4-8. Engineer Amphibious Units

a. *General.* The Army landing force and each of its subordinate echelons must be balanced forces capable of independent operations for the execution of an amphibious attack. An amphibious attack, by its very nature, requires reinforcement of the basic tactical element at each echelon of the landing force to provide combat support and interim combat service support capability pending establishment of normal support systems in the objective area. Engineer amphibious units are Army units designed to provide specially qualified personnel and units for performance of combat support and interim combat service support functions as part of the Army force executing assault landings.

b. Duties of the Engineer. The engineer plans and supervises engineer operations pertaining to amphibious operations to provide combat support and combat service support in offensive and defensive actions on the beach or in shore areas, to include assistance in lifting tactical units in landing on hostile shores and SP support.

c. Responsibilities of the Engineer Assault Units.

(1) The engineer amphibious unit commander and commanders of its component units serve as special staff assistants to the Army landing force commander and commanders of subordinate echelons during planning for the amphibious attack.

(2) The engineer amphibious units provide qualified command and control nuclei for Army landing force SP's. The tables of organization and equipment (TOE) engineer amphibious units provide command and control personnel and elements specifically trained and equipped for the BLT, BDELT, assault division, and corps SP's.

(3) The engineer amphibian assault companies provide a means of amphibious mobility to assault landing teams ashore until such time as organic tactical carriers and vehicles are available in the beachhead. The use of amphibians that provide both armor protection and mobility makes possible a rapid, continuous movement from ships to relatively deep initial objectives without delay on the landing beaches. The amphibians are also useful as a means of effecting delivery of critical supplies from ships directly to users inland from the beach.

d. Army Combat Support and Service Troops Required. Because the engineer amphibious TOE units provide only the basic nuclei for SP's, the SP task organization at each echelon must also include the required Army combat support and combat service support units. If the amphibious operation requires the establishment of an Army base, it is desirable to attach service units that will eventually be assigned to the Army base for this mission.

e. Organizational Concept. Figure 4-1 is an example of a type EAB.

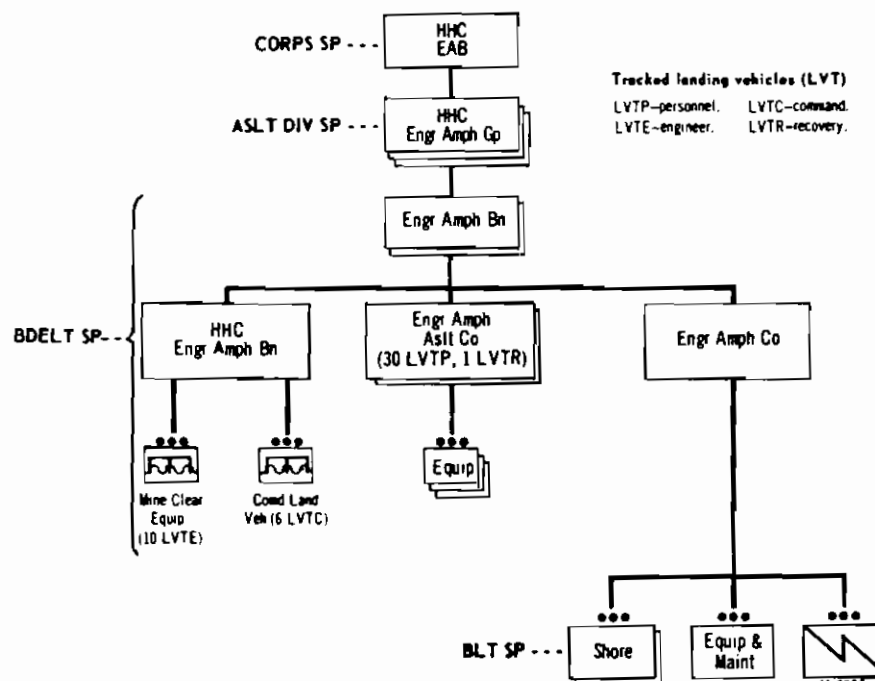


Figure 4-1. A type EAB.

(1) The EAB and the engineer amphibious group constitute control headquarters for SP operations. These control headquarters are attached to the supported corps and division(s), respectively. They remain attached until they are no longer needed in a support role.

(2) Engineer amphibious battalions provide command and control personnel and operating elements for SP operations on the beach. In addition, the battalions provide lightly armored amphibious vehicles for ship-to-shore and inland mobility for the landing force's initial assault waves. The engineer amphibious battalions are attached to BDELT's. Elements of the headquarters and headquarters company and engineer amphibious company are further attached to BLT's to serve as the nuclei for BLT SP's. The engineer amphibian assault company, equipped with the landing vehicle, tracked, personnel (LVTP), is usually attached to a single BLT, or elements may be attached to several BLT.

(3) The engineer amphibious units that form the basic nucleus for the various landing team SP's are released from attachment to the respective landing teams when the SP operations are consolidated at the next higher level. As soon as the amphibious assault portion of the operation is completed and the landing force is firmly established ashore (with normal combat support and combat service support elements), the SP should be dissolved and the engineer amphibious units relieved to support further operations or to start planning for the next amphibious operation. The engineer amphibian assault company normally remains attached to the BLT until inland objectives are secured or until relieved by the landing team commander. The company then reverts to control of the SP.

f. Shore Party Command and Control. Officers assigned to engineer amphibious units are trained to advise and assist landing force commanders in amphibious planning and preparatory activities and are specially qualified to command SP's. They prepare beach development plans for tactical commanders and coordinate the beach development plans of subordinate tactical elements.

g. Headquarters and Headquarters Company, EAB. Organized under TOE 5-401, the EAB consists of a headquarters and headquarters company capable of controlling from one to four amphibious groups. Figure 4-2 shows the organization of the headquarters and headquarters company, EAB.

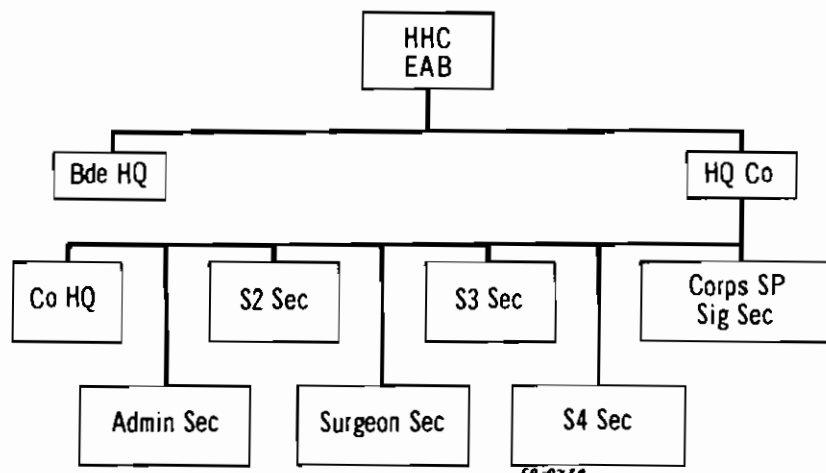


Figure 4-2. Headquarters and headquarters company, EAB.

(1) *Missions.* The brigade's missions are to—

- (a) Command, control, and administer the EAB and attached units.
- (b) Provide SP headquarters at corps.
- (c) Provide assistance in planning and executing amphibious and shore-to-shore operations, including landing on a hostile shore and crossing of major rivers and other water barriers.

(2) *Assignment.* The brigade is assigned to corps as required for special operations.

(3) *Employment.* The brigade coordinates and controls beach support area development initiated by multiple divisions engaged in the amphibious operation or assumes control of, and substantially expands, the beach support area development accomplished by a single assaulting division.

h. Headquarters and Headquarters Company, Engineer Amphibious Group (EAG). Organized under TOE 5-402, this group consists of a headquarters company that controls engineer amphibious battalions (with engineer amphibious and engineer amphibian assault companies) in any combination depending on operational requirements. Figure 4-3 shows organization of headquarters and headquarters company, EAG.

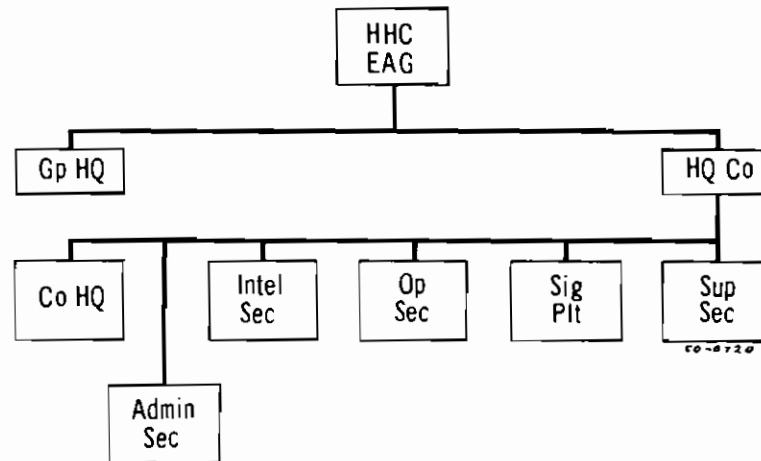


Figure 4-3. Headquarters and headquarters company, EAG.

(1) *Missions.* The group's missions are—

- (a) To command and control an assault division SP.
- (b) To perform engineer combat support and combat service support functions in support of tactical units engaged in amphibious, shore-to-shore, and major river-crossing operations.
- (c) To provide special skills and equipment needed to train other units assigned to amphibious, shore-to-shore, river-crossing, or similar missions.

(2) *Assignment.* The EAG is assigned to corps as required for special operations.

(3) *Employment.* The EAG provides command and control elements as the basic nucleus for an assault division SP and coordinates and controls beach support area development for an assault division.

i. Engineer Amphibious Battalion. Organized under TOE 5-405, this battalion includes a

headquarters and headquarters company, one engineer amphibious company, and two engineer amphibian assault companies. It provides the command and control nucleus and the operational (engineer, signal, and medical) elements for a BDELT SP. The control and operational elements provided in this SP are capable of supporting a BDELT with two BLT abreast over separated beaches. The battalion furnishes light armor-protected amphibious vehicles for minefield breaching and obstacle clearing; machinegun fire support; and tactical waterborne and land mobility for landing force assault elements, equipment, and supplies. Figure 4-4 shows the composition of the engineer amphibious battalion.

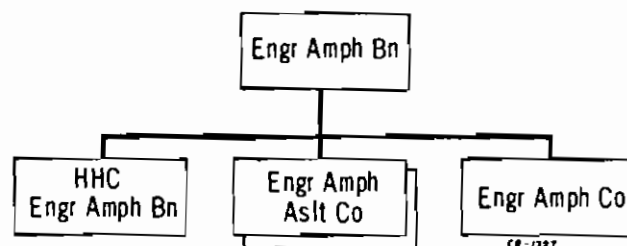


Figure 4-4. Engineer amphibious battalion.

(1) *Headquarters and headquarters company, engineer amphibious battalion.* Organized under TOE 5-406, this company provides normal command, staff, and administrative services. The battalion headquarters provides the SP command and control elements for one brigade (colored) beach. It will be normal to divide the maintenance section, the command landing vehicle section, the medical section, and the mine-clearing equipment platoon for employment on two beaches when the brigade is landing over separated beaches. The mine-clearing equipment platoon has 10 landing vehicles tracked, engineer (LVTE) for hasty removal of mines and reduction of natural and manmade obstacles. Elements of the mine-clearing equipment platoon are distributed among the landing teams that they support until inland objectives are reached, until they are no longer needed, or until other mine-clearing equipment has been landed. The BDELTSP assumes responsibility for the entire brigade beach support area when consolidated. Figure 4-5 shows organization of the headquarters and headquarters company, engineer amphibious battalion.

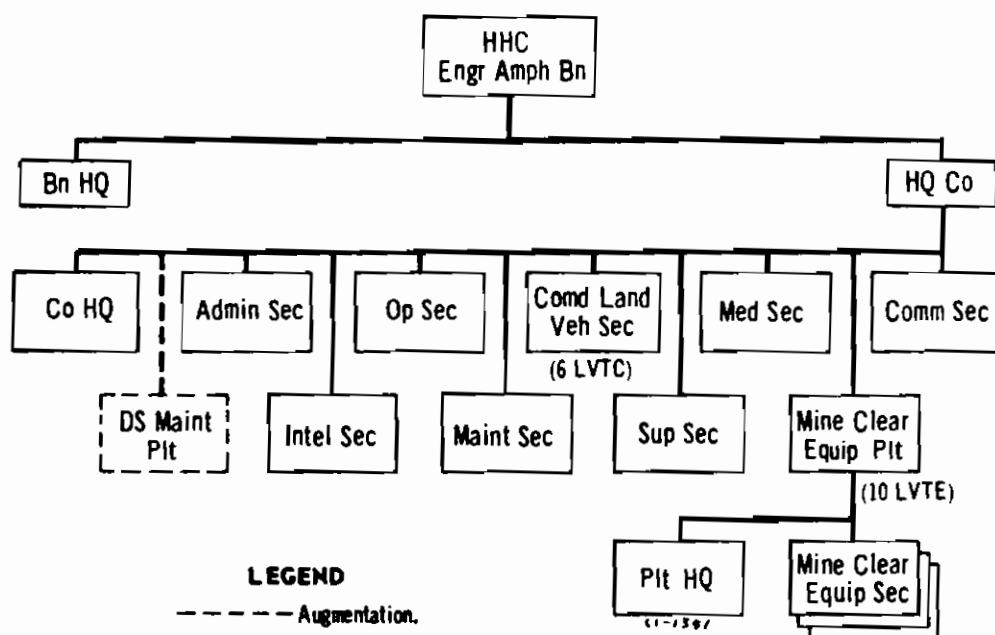


Figure 4-5. Headquarters and headquarters company, engineer amphibious battalion.

(2) *Engineer amphibious company*. Organized under TOE 5-408, this unit consists of a company headquarters, a signal platoon, an equipment and maintenance platoon, and two shore platoons. The company headquarters performs normal functions and, with the battalion headquarters and headquarters company, provides liaison elements with suitable communications equipment and personnel located at—

(a) Each assault BLT/BDELT headquarters.

(b) Tactical-logistical groups (TACLOG's) afloat. (Composed of designated landing force personnel, the TACLOG is a temporary liaison agency to advise Navy control officers aboard control ships of landing force requirements during the ship-to-shore movement.) The company will normally provide personnel (shore platoons) and equipment (shore platoons plus elements of the equipment section, equipment and maintenance platoon) for two battalion landing team (numbered) beaches. Each shore platoon, with a platoon headquarters and three pioneer and demolitions squads, is the nucleus for one BLT SP. Figure 4-6 shows organization of the engineer amphibious company.

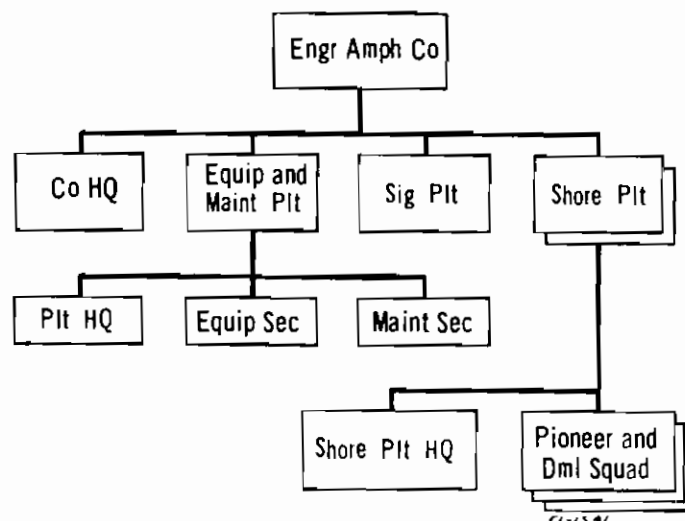


Figure 4-6. Engineer amphibious company.

(3) *Engineer amphibian assault company*. Organized under TOE 5-407, this company includes a company headquarters, three equipment platoons, and a maintenance section. Figure 4-7 shows organization of the engineer amphibian assault company.

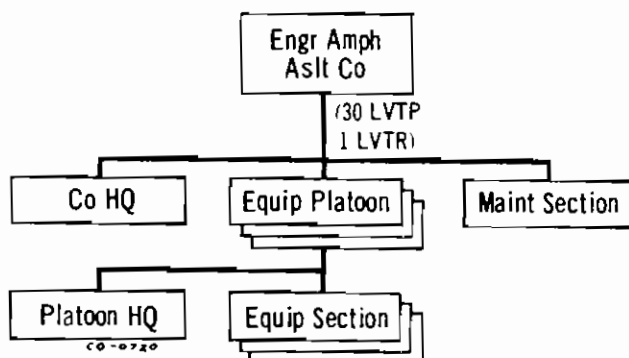


Figure 4-7. Engineer amphibian assault company.

(a) *Missions.* This company's missions are to provide—

1. Tactical waterborne and land mobility for dismounted combat units landing on hostile shores or crossing water barriers.

2. Special skills and equipment for training other units assigned to amphibious, shore-to-shore, or river-crossing operations.

(b) *Employment.* This company may be attached to a single BLT, or elements may be attached to several BLT. The organic amphibious vehicles LVTP and LVTE from headquarters and headquarters company normally carry the initial assault waves and continue inland until no longer needed.

(c) *Role.* In the normal situation, the amphibian assault company initially is not part of the SP. Its equipment platoons are attached to the assault landing teams for which they provide waterborne and land transportation with machinegun fire support. They remain with the supported tactical units until inland objectives are reached or until relieved by the landing team commander. On relief by the landing team commanders, amphibian assault company elements return to their respective beach support areas where they come under control of the SP commanders. Their SP tasks include providing beach area security or furnishing additional ship-to-shore transportation as needed.

(d) *Capabilities.* The engineer amphibian assault company provides:

1. Light armor-protected amphibious mobility for 1,020 dismounted assault troops.

2. Machinegun fire support in the assault phase of an amphibious action and in security operations ashore.

3. Local security and assistance in beach support area defense.

4. Organizational maintenance for its organic equipment.

4-9. Armored Amphibian Units

Armored amphibian units, when activated, are designed to provide continuous close fire support by delivering direct fire on landing beaches and approaches to the beaches. Armored amphibians (LVTH) mount a 105-mm howitzer and are normally employed in the first assault wave. They provide close fire support during the landing after the lifting of naval gunfire from landing beaches. After landing and until tanks and artillery are ashore, they provide mobile direct or indirect firepower in support of the attacking force. Presently there are no armored amphibian units in the US Army.

4-10. Army Aviation Units

Army aviation units equipped with helicopters that can operate from naval ships are employed for ship-to-shore movement of assault landing teams in the initial assault. The helicopters are also employed in the continuation of the attack ashore, in the movement of critical supplies, in the evacuation of wounded to medical facilities afloat, in the landing of reserves, and for miscellaneous administrative support purposes. The availability of helicopters usable as ship-to-shore movement means is an important factor to be considered early in the development of Army landing force plans.

4-11. Summary

The SP includes naval and landing force elements. It also includes combat support and combat service support units of the corps and/or theater. Engineer combat battalions and groups and transportation, signal, medical, military police, supply, civil affairs, and chemical units are among the Army's elements normally attached to the SP. The landing force elements perform tasks inland from the water's edge while the naval element performs those to seaward.

The naval element of the SP, known as the beach party team, furnishes navigational aids and marks hazards to navigation; determines suitable points for beaching landing ships, craft, and amphibians; and furnishes, installs, operates, and maintains pontoon causeways and ship-to-shore

fuel lines. It also salvages and makes emergency repairs on landing craft, controls waterborne traffic near beaches, and advises SP commanders of Navy activities in the beach vicinity.

Transportation units play a major role in the shore party's functions. They transport troops, equipment, and supplies from the transport area across the beach to beach dumps. Included in the transportation units are the terminal service company, light truck company, medium and heavy boat companies, and amphibian companies.

The airmobile support party is an Army task organization formed for employment in an LZ to facilitate the helicopter assault landing and interim logistic support of landing force elements in the LZ.

Support coordination with commanders of landing teams is achieved through their TACLOG. Each Army landing force echelon, down to and including the BLT, provides a TACLOG. TACLOG's are stationed aboard appropriate control vessels for the purpose of advising naval control officers of landing force requirements during the ship-to-shore movement phase.

The SP plan outlines its mission and plan of operation, and explains the duties of subordinate echelon SP's. It also designates the Army and Navy attachments, time of attachment, allocations of equipment, and priorities for landing elements and equipment.

The SP commander coordinates and controls his operations through his subordinates, organic and attached communication units, and the TACLOG group.

The engineer amphibious brigade, group, and battalion furnish the nucleus or basic elements of SP's and perform combat support and temporary combat service support functions as part of the Army elements. The engineer amphibious brigade furnishes a SP headquarters at corps level; the engineer amphibious group furnishes the SP headquarters for a division landing force; and the engineer amphibious battalion furnishes command, control, and the nucleus for a BDELTSP. The engineer amphibian assault company, organic to the engineer amphibious battalion, furnishes amphibian transportation for moving dismounted combat units landing on hostile shores or crossing water barriers. When equipped with the LVTP (5), this unit furnishes lightly armored amphibian transportation for 1,020 assault troops. It also furnishes skills for training other units assigned to the amphibious operation. The engineer amphibious company, also organic to the engineer amphibious battalion, commands, plans, and supervises the operations of two BLT SP's and carries out combat missions of an infantry unit when required. Each of the company's two shore platoons provides the nucleus for the SP of one BLT with the platoon commander commanding the SP. The two BLT eventually consolidate to form a BDELT; commanding the SP for the consolidated landing team becomes the responsibility of the engineer amphibious battalion commander.

Armored amphibian units, when activated, are designed to provide continuous close fire support by delivering direct fire on landing beaches and approaches to the beaches. Armored amphibians (LVTH) mount a 105-mm howitzer and are normally employed in the first assault wave. They provide close fire support during the landing after the lifting of naval gunfire from landing beaches. After landing and until tanks and artillery are ashore, they provide mobile direct or indirect firepower in support of the landing force.

The US Marine Corps maintains units for the express purpose of providing the Army or Allied division with the expertise in employing, requesting, and controlling air and naval gunfire in amphibious operations. This unit is the air and naval gunfire liaison company (ANGLICO). It may be made available to the landing phase of the amphibious operation. (See RB 110-2 for detailed information on the ANGLICO.)

Army aviation units equipped with helicopters that can operate from naval ships are employed during all phases of an amphibious operation.

Section V. EMBARKATION

4-12. General

This part of the programed text concerns embarkation of the Army landing force in naval assault shipping as a part of the amphibious operation.

4-13. Definition (FMFM-11, Sec 1)

Embarkation phase is the period during which the landing forces assigned to the JATF, together with their equipment and supplies, are embarked in assigned shipping. This phase includes:

- a. The orderly assembly of men and material.
- b. Their loading in a sequence designed to support the landing plan and the scheme of maneuver ashore.

4-14. Importance of Proper Embarkation (FMFM-11, Sec 1)

A characteristic of successful amphibious operations is the rapid and effective manner in which assault troops establish themselves ashore. The power and size of the landing force must be expanded to the maximum in the shortest possible time. This requires a rapid yet orderly buildup of men and material. The extent to which this can be done depends in large measure on the manner in which the ships have been loaded. Proper loading increases the inherent flexibility of the amphibious task force and is a key factor in assuring success. Conversely, improper loading can seriously jeopardize an operation.

4-15. Mutual Effort (FMFM-11, Sec 1)

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

4-16. Degrees of Flexibility (FMFM-11, Sec 1)

Ideally, troop units embarked for combat should be loaded to allow almost unlimited flexibility in unloading at the objective area. This degree of flexibility can seldom be attained. The embarkation plan, however, can usually support at least one alternate plan in addition to the primary plan of attack.

4-17. General Characteristics (FM 31-12, chap 8)

a. Embarkation is encompassed by the more inclusive term, mounting. However, the other activities of mounting, i.e., training, movement, and marshaling, are a prelude to embarkation and *are not* within the scope of the amphibious operation.

b. An embarkation area is an area ashore, including a group of embarkation points, in which final preparations for embarkation are completed and through which assigned loads for craft and ships are called forward to embark.

c. Landing plan documents must be essentially completed before detailed embarkation planning can be started; i.e., inverse planning must be utilized.

d. Embarkation may be conducted at any number of widely dispersed locations. Depending upon factors such as location and ship speed, embarkation of the various elements of an Army landing force may not be initiated simultaneously.

4-18. Organization for Embarkation (FM 31-12, chap 8)

a. *General.* The organization of embarkation consists of a temporary administrative task

organization by the landing force commander and a specific task organization of Navy forces established by the CJATF. The task organizations are formed to simplify the planning and execution of embarkation at all levels of command.

b. Naval organization for embarkation. Assault shipping assigned to transport the landing force to the objective area is formed into tactical groupings. The number and type of ships assigned to each of these groupings is determined by the size and composition of the landing force organization for embarkation.

c. Landing force organization for embarkation. Assault elements of the landing force are organized into administrative groups called embarkation teams, embarkation elements, embarkation units, and embarkation groups.

d. Naval and landing force parallel organizations.

(1) *The embarkation team* consists of the landing force units, supplies, and equipment embarked in a single ship. A ship is the parallel naval element.

(2) *The embarkation element* consists of two or more embarkation teams grouped together to conform to the organization for landing. A transport (or landing ship) element is the parallel naval echelon. An assault reinforcing battalion embarking in more than one ship is a typical embarkation element.

(3) *The embarkation unit* consists of two or more embarkation teams or two or more embarkation elements grouped together to conform to the organization for landing. A transport (or landing ship) unit is the parallel naval echelon. The number of embarkation units formed by a reinforced division will vary with the mission assigned and the task organization. Generally, there will be about seven embarkation units for a reinforced infantry division.

(4) *Embarkation Group.*—The embarkation group has as its nucleus a major subdivision of the task organization of the landing force, such as division, aircraft wing, corps troops, brigade, or other comparable troop echelon. It is composed of two or more embarkation units (when formed), a combination of units and elements (when required), or it may consist of two or more embarkation teams, if elements and units are not formed. A transport group is the parallel naval organization. It has the ships which provide for the embarkation, movement to the objective area, landing, and logistic support of the landing force ashore.

(a) One of the required ships is the amphibious command ship (LCC). It has the facilities for command and control.

(b) Another is the amphibious assault ship (LPH), primarily used for transporting helicopters.

(c) A third is the amphibious transport, dock (LPD), used in support of combined waterborne and helicopter operations because it has a flight deck. It can transport preloaded landing craft in its well deck.

(d) The landing ship, dock (LSD), is used primarily for transporting preloaded landing craft.

(e) A fifth type is the landing ship, tank (LST), which transports wheeled and tracked vehicles.

(f) The primary personnel carrier is the amphibious transport (LPA). The primary cargo carrier is the amphibious cargo ship (LKA).

e. Types of ships. Embarkation planners must have a detailed knowledge of the types of ships that transport a landing force's personnel, equipment, and supplies in an amphibious operation. The

required information is contained in the *Ship's Loading Characteristics Pamphlet* for each ship and, where there are classes within the type, for the class. The pamphlet has a detailed list of compartments for officer and troop berthing and for unit administration. It gives the cargo capacity, both in cubic and in square feet. It identifies areas restricted for ammunition, gasoline, pyrotechnics, and general cargo. It also contains information on such general characteristics as cargo landing gear and hatch sizes. It has scale drawings of cargo compartments. If a ship has organic landing craft, the pamphlet gives the number and type.

f. Ships required. A determination of the tentative shipping required is based on the total number of personnel to be embarked, the total cargo to be loaded, the tactical plan, and the requirements for special missions or special equipment, as well as ship availability.

g. Loading. Embarkation officers are specially trained in the technique of planning and supervision of loading for an amphibious operation and are assigned to landing force organizations, to major amphibious ships, and to naval staffs involved in amphibious operations.

(1) In the landing force organization, such officers are called embarkation officers. They have the status of special staff officers in the headquarters to which they are assigned. This assignment is normally a secondary MOS position for organic officers of the landing force organizations.

(2) In the naval organization, such officers are combat cargo officers. These are Marine Corps officers permanently assigned as part of the ship's crew and do not belong to the landing force organization.

(3) Both advise and assist their respective commanders in planning the embarkation and supervising its operation.

(4) The embarkation officers and combat cargo officers of related landing force and naval organizations maintain continuous liaison during the planning and execution of embarkation.

4-19. Procedures for Determining Shipping Required

a. It is essential that assault shipping requirements be determined at the earliest possible time in the planning phase so that all echelons of the landing force 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 firmed.

(1) Shipping requirements for the landing force are normally developed by—

(*a*) Receiving their shipping requirements from the major ground and air echelons of the landing force.

(*b*) Determining, at landing force level, shipping requirements for the entire force, including units not normally organic to the landing force but to be embarked with it and all supplies and equipment to be embarked.

(2) Shipping requirements are based on the following:

(*a*) Total personnel to be embarked.

(*b*) Total supplies and equipment to be loaded, including items requiring special stowage, such as drummed and bulk fuels, high explosive (HE) munitions, and nuclear weapons.

(*c*) The scheme of maneuver, task organization for landing, and landing plan, including planned or anticipated nuclear weapons employment by friendly or enemy forces.

(*d*) Requirements for special missions or special equipment.

(3) After the total requirements for shipping are computed, plans are then examined and corrected, as necessary, to meet the following criteria:

(a) Organization of troops and shipping must provide for accomplishing the various tasks required under preferred and alternate plans.

(b) Troops and materiel must be distributed among embarkation echelons so that the loss of any ship will not deprive the remainder of the force of an appreciable amount of any one arm or type of materiel.

b. The commander, amphibious task force allocates shipping to the landing force and organizes this shipping to satisfy the landing force's organization for embarkation. Thus, initial allocation of shipping is made to the major landing force embarkation organization—the embarkation group or groups. From this point, subsequent allocations are made to subordinate embarkation echelons. This allocation is based on personnel, equipment, and supplies to be loaded by each echelon and the shipping and means for landing required to support the landing plan.

c. Early allocations may of necessity be made by number and types of ships only, to be followed as soon as practicable by specific ship allocations. Subordinate units are 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 change in assigned shipping and, in turn, must state promptly any changes in requirements brought about by changes in the tactical plan.

4-20. Embarkation Plans (FM 31-12, chap 8, para 219)

a. The CJATF and subordinate Navy commanders are responsible for the preparation of certain loading plans. These naval plans are issued as a part of the operation plan and prescribe—

(1) The organization of the Navy forces for loading.

(2) Availability of shipping for the embarkation of the landing force, including schedules of arrival and departure from embarkation points.

(3) Availability of special handling equipment.

b. Within the landing force, three basic embarkation plans are normally prepared. These are the Army landing force plan, the embarkation group plan, and the embarkation unit plan.

c. Each embarkation team commander prepares a detailed ship loading plan, which is reviewed and approved by the commanding officer of the ship from the viewpoint of his ability to implement and in terms of the safety of his ship.

4-21. Loading and Storage (FMFM-11, sec 8)

a. *General.* The manner in which a ship is loaded determines the order and speed in which the equipment and supplies can be unloaded. Loading methods used in embarkation for an amphibious assault are of vital importance to successful execution of the ship-to-shore movement. The principal aim in loading is to provide for optimum use of available shipping to satisfy requirements of the landing force plan of operations.

b. *Types of Loading.* There are two general types of ship loading—administrative and combat.

(1) *Administrative loading.* Administrative loading gives primary consideration to the maximum use of troop and cargo space without regard for tactical considerations. Subsequent to unloading, equipment and supplies normally must be sorted before they can be used. Administrative

loading is similar to commercial loading and is employed only for nontactical troop movements and some resupply shipments. It is not suitable for amphibious assault operations.

(2) *Combat loading.* Combat loading gives primary consideration to the facility with which troops, equipment, and supplies can be unloaded ready for combat, rather than to economical utilization of ship space. It is with this type loading that embarkation planners are primarily concerned in amphibious operations. Combat loading is the arrangement of personnel and the storage of equipment and supplies aboard ship in a manner that will support the anticipated tactical operations of the embarked organizations. Each individual item of equipment and supply must be stowed aboard the ship so that it can be unloaded at the time and in the sequence that will most effectively support the planned scheme of maneuver ashore. Insofar as possible, each ship 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 equipment or supplies.

c. *Methods of Combat Loading.* There are five methods of combat loading. They differ mainly as to the order in which troops are landed and to the tactical integrity of the units.

(1) *Combat unit loading* is the method by which all or a part of a combat unit, such as an assault BLT, 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.

(2) *Combat organizational loading* is the method 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.

(3) *Combat spread loading* is the method by which some of the troops, equipment, and initial supplies of a unit are loaded on one ship and the remainder are loaded in other ships. This method is commonly used for troop units with heavy equipment such as artillery and tanks.

(4) *Commodity loading* is the method in which various types of cargo are loaded together, such as rations, ammunition, or boxed vehicles, in order that each commodity can be discharged without disturbing the others.

(4) *Selective loading* is the arrangement and stowage of equipment aboard a ship in a manner designed to facilitate issue to units.

NOTE: Unit, spread, and organizational loading are best suited to the assault, whereas commodity and selective loading are best suited to resupply.

d. *Methods of Stowage.* Stowage is the arrangement of materiel in a compact manner so as to prevent damage by shifting within a single hold or compartment of a ship. There are two methods that can be utilized in an amphibious operation—horizontal stowage and vertical stowage. These methods are designed to afford immediate access to cargo in order to make it available in the planned sequence to support the landing force and at the same time provide for maximum discharge rate of a particular type as well as providing for flexibility in discharge sequence. Normally a combination of stowage methods should be used.

(1) *Horizontal stowage:*

(a) When used in connection with the entire ship, the term horizontal stowage means the lateral distribution of unit equipment or categories of supplies so that the ship can be unloaded simultaneously from two or more holds.

(b) When the term is applied to a single hold it means the lateral distribution of like items in horizontal layers throughout the hold. Horizontal stowage of a single hold offers the best discharge rate for a particular class or type of material and normally results in better use of space. However, it limits selectivity of items.

(c) In other than combat loading, when the primary consideration is best use of ship's space, individual cargo compartments may be horizontally stowed. The cargo is divided into classes and each class is stowed in horizontal layers, one on top of the other, over the entire area of the compartment.

(2) *Vertical stowage:*

Vertical stowage is a method of stowage whereby like items are loaded in vertical layers throughout the hold or holds of a ship, so that selected items are available at any stage of the unloading. The term is applied usually to a single hold. Vertical stowage of a hold is accomplished by dividing the supplies into classes and stowing each class in vertical blocks extending from the square of the hatch outboard and to the forward and after bulkheads (walls) in such a manner as to allow accessibility of each class from the square of the hatch. Vertical stowage is emphasized in combat loading. This provides for maximum selectivity and discharge rate of any given type of supply or material.

4-22. Execution of Embarkation (FM 31-12, chap 8, para 222)

a. The embarkation is executed in accordance with the approved embarkation plans and is a mutual responsibility of the naval forces, landing forces, and external supporting agencies as designated.

b. Responsibilities of the JATF commands are:

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

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

(3) Coordination with external agencies for control of the embarkation and movements to embarkation points.

(4) Provision of communication facilities, including adequate security measures, required afloat.

c. Responsibilities of the landing force commander are:

(1) Preparation of the landing force for embarkation.

(2) Making known the assistance that will be required from forces afloat in loading.

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

(4) Coordination of security measures with external agencies as prescribed by higher authority.

(5) Supervision of troop activities during loading.

(6) Provision of an embarkation control office ashore.

(7) Provision of communications ashore in the embarkation area, including adequate security measures.

4-23. Summary

The embarkation phase is the period during which the landing forces assigned to the JATF, together with their equipment and supplies, are loaded aboard their assigned shipping.

To be successful the amphibious operation requires a rapid and effective buildup of men and material ashore in the shortest possible time. The extent to which this can be done depends in large measure on the manner in which the assault shipping has been loaded during the embarkation phase.

Embarkation is a joint undertaking by both troops and naval echelons and requires mutual understanding of objectives and capabilities and full cooperation in planning and execution.

Unlimited flexibility in amphibious operations can seldom be attained; however, the embarkation plan should support at least one alternate plan in addition to the primary plan of attack.

Embarkation does not include other mounting activities, such as training, movement, or marshaling.

Detailed embarkation plans are developed to support the landing force concept of operation ashore; therefore, inverse planning is required during amphibious operations. Both naval and landing forces are task organized for the planning and execution of embarkation at all levels of command.

Detailed information concerning each type or class of ship required for embarkation is contained in the ship's loading characteristic pamphlet.

Officers specially trained in the techniques of planning and supervision of loading for an amphibious operation are assigned to landing force organizations, to major amphibious ships, and to naval staffs involved in an embarkation. In the landing force organization, such officers are called embarkation officers. In the naval organization, such officers are called combat cargo officers.

Naval and landing force commanders are responsible for the preparation of certain loading plans. Within the landing force, three basic embarkation plans are normally prepared. These are the Army landing force plan, the embarkation group plan, and the embarkation unit plan. Detailed ship loading plans are prepared by each landing force embarkation team commander and are reviewed and approved by the commanding officer of the ship concerned.

The manner in which a ship is loaded determines the order and speed with which the equipment and supplies can be unloaded. There are two general types of loading:

a. Administrative loading that gives primary consideration to maximum utilization of troop and cargo space without regard to tactical considerations. It is normally employed only for nontactical troop movements and some resupply missions.

b. Combat loading that gives primary consideration to the rapid and orderly unloading of troops, equipment, and supplies ready for combat. This is the type loading that embarkation planners are primarily concerned with in amphibious operations. Combat loading does not include economical utilization of ship space.

There are two methods of stowage, or arrangement of material, that can be used in an amphibious operation—horizontal stowage and vertical stowage. These two methods are designed to afford immediate access to cargo in order to make it available in the planned sequence to support the concept of operations ashore.

Embarkation is executed in accordance with the approved embarkation plans and is a mutual responsibility of the naval forces, landing forces, and external supporting agencies as designated.

Section VI. CHARACTERISTICS OF NAVAL GUNFIRE WEAPONS

4-24. General

a. The CLF is responsible for the determination of troop requirements for naval gunfire support, including the selection of targets to be destroyed in the preassault operations, those to be fired on in support of troops, and the timing of these latter fires in relation to troop operations. After determining his requirements for naval gunfire, air and artillery support, fire support means, and priority of targets, the CLF presents them to the CJTAF.

b. For proper planning, the CLF and his staff must know the capabilities and limitations of available fire support means.

c. Below is general information concerning naval gunfire weapons. During your course of instruction in *Amphibious Operations* these characteristics will be used for the planning of all naval gunfire.

Gun	Max rg (yards)	Eff rg (yards)	Eff rg (meters)	Rate of fire		Ammunition
				Rd per gun per min	Maximum Sustained	
*16-in/50	42,000	32,000	29,200	2	2	AP, HC
8-in/55	29,800	26,000	23,800	4	3	AP, HC
6-in/47	23,100	21,000	17,200	10	10	AP, HC, illum
5-in/54	25,900	22,500	20,600	35	20	C, HC, illum, AAC, WP
5-in/38	18,000	15,000	13,700	15	8	C, HC, illum, WP, AAC
5-in SSR	10,000	10,000	9,100	30 (401 class)		HC
				48 (1 class)		

*16-in is diameter of bore, 50 is length of tube in calibers.

SHIPS' AMMUNITION CAPACITIES

Battleship (BB)**	16-in/50--1,000 rounds; 5-in/38--10,000 rounds.
*Cruiser (CA)**	8-in/55--1,350 rounds; 5-in/38--5,100 rounds.
*Cruiser, light (CL)	6-in/47--3,000 rounds.
*Destroyer (DD)	5-in/54--2,000 rounds.
*Destroyer (DD)	5-in/38--2,100 rounds.
Rocket ship (LFR) (401 class)	5-in SSR--4,100 rockets.
Rocket ship (LFR) (1 class)	5-in SSR--6,000 rockets.

*The ammunition capacity will have to be confirmed prior to firm planning because of different configuration and changes in armament; i. e., the use of missiles in place of after turrets.

**No longer in active fleet.

AMMUNITION

Armor piercing (AP)--The AP projectile is available in calibers ranging from 6 to 16 inches, inclusive. It is a thick-walled projectile with a relatively small bursting charge that can penetrate armor plate of a thickness approximately equal to the projectile diameter. It is assembled with a delay base fuze. The use of the AP projectile in shore bombardment is limited to destructive fire on fixed enemy defenses, such as concrete pillboxes and fortifications. In the call for fire, use ARMOR PIERCING.

High capacity (HC)--The HC projectile is available in calibers from 5 to 16 inches. It is a thin-walled projectile with a relatively large bursting charge and is usually employed for neutralization missions, even though a major caliber HC projectile has considerable destructive

Characteristics of Naval Gunfire Weapons--Continued

effect. It is normally assembled with a nondelay base fuze, auxiliary detonating fuze, and steel nose plug. The nose plug may be removed and a point-detonating, time, or proximity fuze may be substituted. In the call for fire, use HE vice HC. The bursting radius of the 5-inch gun is 40 yards; the 6-inch gun, 60 yards; the 8-inch gun, 90 yards; and the 16-inch gun, 200 yards.

Antiaircraft common (AAC)--The AAC projectile is available in calibers from 5 to 16 inches. It is similar to HC in that it has thin walls and a relatively large bursting charge. It is normally assembled with a base detonating fuze, a nose time fuze, and an auxiliary detonating fuze. The nose time fuze may be removed, and a point detonating fuze may be substituted. In the call for fire, use HE vice AAC. The AAC is used for neutralization and light destructive fires. Its effective bursting radius of 35 to 50 yards makes it highly effective for close support of troops.

Common (C)--The C projectile is available only in the 5-inch caliber. It has an explosive filler of 3 percent of total projectile weight and is the only penetrating projectile in the 5-inch size. In the call for fire, use AP vice C. It has only a base detonating fuze.

White phosphorus (WP)--WP is available only in the 5-inch caliber. It is used for smoke or incendiary missions and for antipersonnel fires. Its primary function is smoke screening, and it emits a dense white smoke that lasts from 1 to 2 minutes. WP is issued to ships in small quantities. In the call for fire, use SMOKE vice WP.

Illuminating (illum)--The illuminating projectile is available only in 5- and 6-inch calibers; it is most readily available in the 5-inch caliber. It gives off good to fair light in a 400- to 600-yard diameter area and burns from 45 to 52 seconds. If the 5-inch is fired at ranges of less than 7,000 yards, a large percentage of duds will be caused by ripped chutes. In the call for fire, use ILLUMINATING.

Rocket--The 5-inch spin-stabilized rocket is used in the rocket launchers of the inshore fire support ship (LFR). It is a thin-walled rocket with a relatively large explosive charge and is employed for area neutralization fire. It is fuze with a VT, BDF, or PD fuze; the VT fuze is never fired over the heads of friendly troops, but the PD or BDF fuze rocket may be fired over the heads of friendly troops when authorized by the landing force commander. It has fixed ranges of 2,500, 5,000, and 10,000 yards.

POWDER CHARGES

a. Service charges are designed for use with AP, C, or HC projectiles to produce the maximum muzzle velocities required for either maximum penetration or extreme range.

b. Reduced charges are designed to reduce gun erosion, thus prolonging the life of the tube and at the same time producing a desirable high angle of fall.

c. The selection of the type of charge is always left up to the ship.

FUZES

Base detonating fuze (BDF)--The fuze is incorporated in all AP, C, and HE projectiles. In the call for fire, use FUZE DELAY. A steel nose plug will be utilized when using base detonating fuze.

Point detonating (PD) fuze (fuze quick)--Used on HE and WP projectiles. These fuzes have ON and OFF settings that permit the use of fuze delay if set on the OFF position. In the call for fire, use FUZE QUICK.

Mechanical time fuze (MTF)--Used to obtain airbursts with HE, illuminating, and smoke projectiles. This fuze may be set on SAFE or from 6 to 45 seconds. Steel nose plugs are provided for use in lieu of MTF fuzes when the delay feature of a base fuze in HE projectiles is desired. In the call for fire, use FUZE TIME.

Proximity fuze (VT)--Used with HE projectiles. This fuze arms 500 to 1,500 yards from the muzzle; it will function when it is within 15 to 45 feet of a reflecting surface and must clear intervening land masses by 500 feet to prevent possible premature detonation before it reaches the vicinity of the target. In the call for fire, use FUZE VT.

Section VII. SHIP-TO-SHORE MOVEMENT ORGANIZATION

A type organization for the ship-to-shore movement of a battalion landing team to include time of landing or arrival at line of departure; type of landing craft or vehicle; and general composition of landing wave or element with respect to personnel, units, and equipment is as follows:

ABBREVIATIONS

LCM	Landing craft, mechanized
LCVP	Landing craft, vehicle, personnel
LST	Landing ship, tank
LVTC	Landing vehicle, tracked, command
LVTE	Landing vehicle, tracked, engineer
LVTH	Landing vehicle, tracked, howitzer (105-mm)
LVTP	Landing vehicle, tracked, personnel
LVTR	Landing vehicle, tracked, recovery

SCHEDULED WAVES

1st wave—H-hour—LVTH	— Assault fire support. Attached from armored amphibian battalion.
2d wave—H+2 min—LVTE, LVTP	— Assault engineers (attached) and assault elements of rifle companies.
3d wave—H+7 min—LVTP	— Remainder of assault rifle companies; elements of combat support company.
4th wave—H+10 min—LCVP	— Mortar platoons of assault rifle companies.
5th wave—H+15 min—LVTP	— Reserve company (—).
6th wave—H+20 min—LCVP	— Elements of battalion shore party; remaining elements of reserve company.

FREE BOATS

At LD from	LVTC	— battalion command group
H-15 min	LCVP	— battalion alternate command group
	LCM	— shore party (1 angle dozer)
	LVTR	— shore party

FLOATING DUMPS

LCVP	selected class III and V supplies
LVTP	

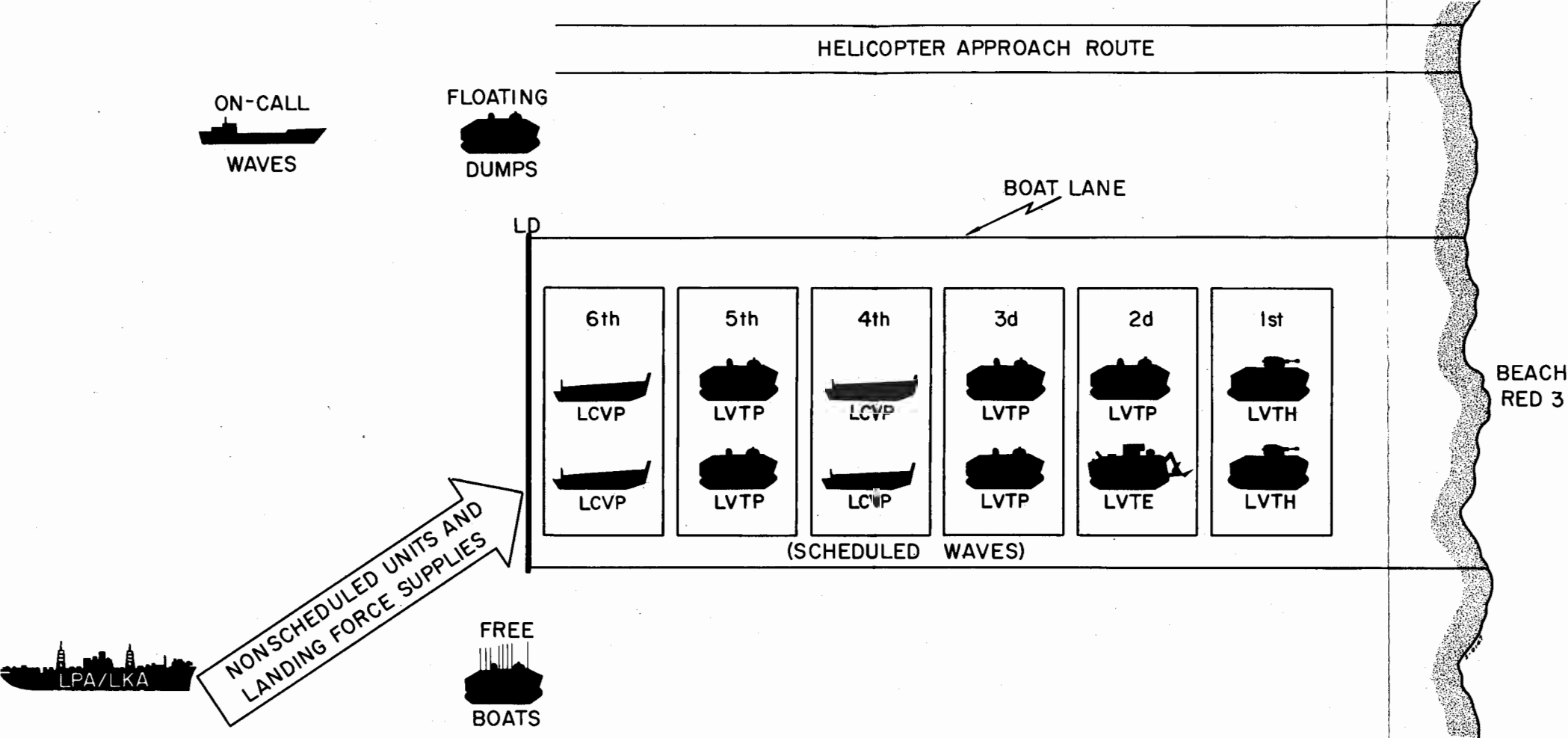
ON-CALL WAVES

At LD from	LCM	Organic battalion reconnaissance platoon and trains; shore party;
H+20 min	LST	attached armor, engineer, medical, and military police elements;
		and air defense artillery.

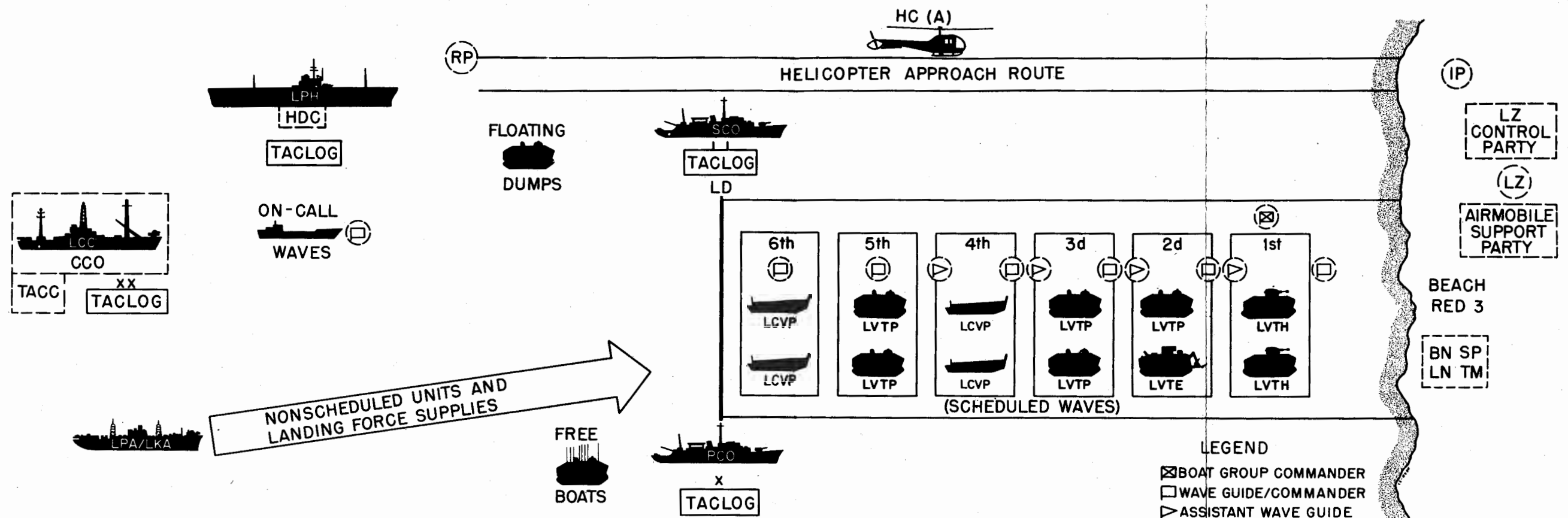
NONSCHEDULED UNITS AND SUPPLIES

Heavy engineer units, aviation ground support units, division headquarters. Transported by landing craft or available vehicles.

SHIP-TO-SHORE MOVEMENT SCHEMATIC



SHIP-TO-SHORE MOVEMENT CONTROL FEATURES



ABBREVIATIONS

LCC	Amphibious command ship	IP	Initial point
LKA	Amphibious cargo ship	LPH	Amphibious assault ship (helicopter carrier)
LPA	Amphibious transport (personnel)	PCO	Primary control officer
CCO	Central control officer	RP	Rendezvous point
HC(A)	Helicopter coordinator (airborne)	SCO	Secondary control officer
HDC	Helicopter direction center	TACC	Tactical air control center
		TACLOG	Tactical-logistical group ¹

¹The CLF's staff liaison representatives located aboard Navy control ships for the principal purpose of advising corresponding Navy control officers of landing force requirements while the ship-to-shore movement is being executed.

ANNEX H (LANDING DIAGRAM) to OPLAN 7-2-66 Inf

Wave	Time	Serial number	Units	Formations
SCHEDULED	1 H-hr	175	1st Plt, 2d Armd Co (Amph)	1-1 1-2 1-3 1-4
	2 H + 2 min	115 120	Co A (-); Bt Tm 2-1, 3, 4, 5 (Engr tms from 1st Plt, Co A, 19th Engr Bn atch to each co) Co B (-); Bt Tm 2-6, 7, 8, 10	2-1 2-2 ^E 2-3 2-4 2-5 2-6 2-7 2-8 2-9 ^E 2-10
	3 H + 7 min	116 121 117 122	3d Plt, Co A; Bt Tm 3-1, 2; TACP, Bt Tm 3-2 3d Plt, Co B; Bt Tm 3-8, 9; SFCP; Bt Tm 3-8 AT sqds, cbt spt co, atch Co A; Bt Tm 3-3, 4 AT sqds, cbt spt co, atch Co B; Bt Tm 3-6, 7	3-1 3-2 3-3 3-4 3-5 ^E 3-6 3-7 3-8 3-9
	4 H + 10 min	119 124	Mort plt, Co A; Bt Tm 4-2, 4, 6, 8, 10 Mort plt, Co B; Bt Tm 4-1, 3, 5, 7, 9	4-10 4-8 4-6 4-4 4-2 4-1 4-3 4-5 4-7 4-9
	5 H + 15 min	125	Co C (-)	5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9
	6 H + 20 min	126 130	Mort plt, Co C; Bt Tm 6-1, 2, 3 Det, BLT SP; Bt Tm 6-4, 5, 6	6-6 6-4 6-2 6-1 6-3 6-5
	7 H + 25 min	108 109 110	Hv mort plt (-), Cbt Spt Co; Bt Tm 7-1, 3, 5 AT plt (-), Cbt Spt Co, Bt Tm 7-4, 6 Det, bn comm plt and bn HQ sec; Bt Tm 7-2	7-6 7-4 7-2 7-1 7-3 7-5
	8 H + 35 min	135 107	BLT SP (-); Bt Tm 8-1, 2, 3, 4, 5, 6, 8 Bn med sec (-); Bt Tm 8-7, 9	8-8 8-6 8-4 8-2 8-1 8-3 8-5 8-7 8-9
	9 H + 40 min	127 131	Mort plt, Co C; Bt Tm 9-1, 2 Det, BLT SP; Bt Tm 9-3, 4, 5, 6	9-6 9-4 9-2 9-1 9-3 9-5
	10 H + 45 min	105	Bn comm plt (-)	10-10 10-8 10-6 10-4 10-2 10-1 10-3 10-5 10-7 10-9 10-11
NA	Free bts	100 101 132 138	BLT comd gp BLT altn comd gp SP retriever SP dozer	001 002 003 004
		136	Floating dump	005-13
		137	Salvage boat	014
ON-CALL	At LD H + 20 min	104 140	Recon plt, cbt spt co; Bt Tm 11-3, 5, 7 1st Plt, Co A, 2d Bn, 1st Armor; Bt Tm 11-1, 2, 4, 6, 8	11-8 11-6 11-4 11-2 11-1 11-3 11-5 11-7
	At LD H + 35 min	155	1st Plt (-) Co A, 19th Engr Bn; Bt Tm 12-1, 2, 3, 4, 5, 6	12-6 12-4 12-2 12-1 12-3 12-5
	At LD H + 45 min	145	Btry A, 2d Bn (105, Towed), 45th FA	13-10 13-8 13-6 13-4 13-2 13-1 13-3 13-5 13-7 13-9 13-11
	At LD H + 55 min	102 180 185 165	Det, Bn HHC; Bt Tm 14-1, 2, 3, 4 Det, Co B, 19th Med Bn; Bt Tm 14-5 Det, 1st Plt, 19th MP Co; Bt Tm 14-7 1st Plt, Btry A, 2d Bn (Vulc), 439th ADA; Bt Tm 14-6, 8	14-8 14-6 14-4 14-2 14-1 14-3 14-5 14-7
	At LD H + 70 min	103 170 195	Det, Bn HHC and Co A, B, and C Det, Co B (Fwd Spt), 19th Maint Bn Det, other attached units	LST 1181

LEGEND

⊗	- LVTH.	⊗ ^C	- LVTC.	⊖	- LCVF.	⊗	- LCM-8.
⊗	- LVTP.	⊗ ^R	- LVTR.	⊗ ^E	- LVTE-1.	⊗	- LCM-6.

Section XI. SAMPLE LISTING OF LANDING SITE INFORMATION

(Published For Instructional Purposes Only.)

CLASSIFICATION

Date

TAB X (LANDING SITES) TO APPENDIX X (INTELLIGENCE)—Operation (Name)

Reference: Map, series XXX XX, (Country), sheet no. (Name), edition 197_, scale.

1. LANDING SITE NO. 1

Location: Eastern coast of JATF objective area. Centered approximately 10 kilometers NE of port city.

Length: Approximately 4,000 meters, usable.

Width: Varies 50 to 100 meters.

Beach Gradients: Mild, 1:60 (est).

Materials and Trafficability: Fine to medium sand, with scattered patches of coarse sand; good for tracked vehicles, fair for wheeled vehicles.

Terrain Immediately Behind Beach: Sand dunes on back shore of entire sector. Steep slopes on each end of site and approximately 1 kilometer inland, in center. Slope backed by narrow ridge running northeast. Large stream and gully located at the center contains large rocks and brush.

Exits and Communications Inland: No roads or major trails leading into or out of this site. Large streambed provides route for foot traffic. Poor for tracked vehicles, unsuitable for wheeled vehicles.

Nearshore Approach: Clear.

Nearshore Gradients: Moderate, 1:30.

2. LANDING SITE NO. 2

Location: Directly northeast of port city extending to SILVER BAY.

Length: Approximately 5,100 meters, usable.

Width: Varies 20 to 100 meters.

Beach Gradient: Gentle, 1:46 (est).

Materials and Trafficability: Sand and shells, firm in wetted areas, very soft where dry. Matting is required for all wheeled vehicles. Generally fair throughout for tracked vehicles.

Terrain Immediately Behind Beach: Backed by sand dunes 5 to 10 meters high, in turn backed by steep slopes, 75 to 100 meters high, extending approximately 1,000 meters inland along entire site.

Exits and Communications Inland: Several exits across sand dunes to tracks and trails leading up slopes. Hard-surfaced, all-weather road (northeast to southwest) located approximately 5 kilometers from center of site. The beach area is extremely difficult for tracked vehicles and unsuitable for wheeled vehicles throughout.

Nearshore Approaches: Clear, except for one small island approximately 1,000 meters off southern half of beach.

Nearshore Gradients: Steep, 1:10.

3. LANDING SITE NO. 3

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20. LANDING SITE NO. 20

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APPENDIX A

GLOSSARY

A-1. General

Advance force (amphibious)—A temporary organization within the amphibious task force that precedes the main body to the objective area. Its function is to participate in preparing the objective for the main assault by conducting such operations as reconnaissance, seizure of supporting positions, minesweeping, preliminary bombardment, underwater demolitions, and air support.

Amphibious assault—Amphibious operation conducted primarily to establish a landing force on a hostile shore.

Amphibious demonstration—A lesser included type of amphibious operation conducted for the purpose of deceiving the enemy by a show of force with the expectation of deluding the enemy into a course of action unfavorable to him.

Amphibious force—A naval force and a landing force together with supporting forces that are trained, organized, and equipped for amphibious operations.

Amphibious operation—An attack launched from the sea by naval and landing forces embarked in ships or craft involving a landing on a 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) insuring 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.

Amphibious raid—A lesser included type of amphibious operation: a landing from the sea on a hostile shore involving swift incursion into or a temporary occupancy of an objective followed by a planned withdrawal.

Amphibious task force (ATF)—Amphibious force consisting of Naval and Marine Corps elements.

Amphibious withdrawal—A lesser included type of amphibious operation involving the withdrawal of forces by sea in naval ships or craft from a hostile shore.

Battalion landing team (BLT)—In an amphibious operation, an infantry battalion normally reinforced by necessary combat and service elements. The basic unit for planning an assault landing.

Brigade landing team (BDELT)—An assault landing team. A balanced task organization composed of a brigade and the reinforcing combat and service elements required for combat and interim logistic support during the period it conducts independent tactical operations.

Combat cargo officer—A Marine or Army 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.

Coordinating authority—A commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more Services or two or more forces of the same Service. He has the authority to require consultation between the agencies involved but does not have the authority to compel agreement. In the event he is unable to obtain essential agreement he shall refer the matter to the appointing authority.

Joint amphibious task force (JATF)—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.

Landing beach—That portion of a shoreline usually required for a landing of a BLT. However, it may also be that portion of a shoreline constituting a tactical locality (such as the shore of a bay) over which a force larger or smaller than a battalion landing team may be landed.

Landing force (LF)—A task organization of troop units, aviation and ground, assigned to an amphibious assault. It is the highest troop echelon in the amphibious operation.

Marshaling—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, and prepare for loading.

Mounting—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.

Staging area—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.

Supporting arms coordination center (SACC)—A single location on board an amphibious command ship in which all communication facilities incident to the coordination of fire support of the artillery, air, and naval gunfire are centralized. This is the naval counterpart of the fire support coordination center utilized by the landing force.

A-2. Ship-to-Shore Movement

Approach lanes—Extensions of the boat lane from the line of departure toward the transport area. They may be terminated by marker ships, boats, or buoys.

Approach schedule—The schedule that indicates for each scheduled wave the time of departure from the rendezvous area, from the line of departure, and from other control points and the time of arrival at the beach.

Assault area diagram—A graphic means of showing for amphibious operations the beach designations, boat lanes, organization of the line of departure, scheduled waves, landing ship areas, transport areas, and the fire support areas in the immediate vicinity of the boat lanes.

Boat diagram—In the assault phase of an amphibious operation, a diagram showing the positions of individuals and equipment in each boat.

Boat group—The basic organization of landing craft or amphibious vehicles. One boat group is organized for each battalion landing team (or equivalent) to be landed in the first trip of landing craft or amphibious vehicles.

Boat lanes—Lanes for amphibious assault landing craft that extend seaward from the landing beaches to the line of departure. The width of the boat lane is determined by the length of the corresponding beach.

Landing diagram—A graphic means of illustrating the plan for the ship-to-shore movement.

Nonscheduled units—Units of the landing force held in readiness for landing during the initial unloading period, but not included in either scheduled or on-call waves. This category usually includes certain of the combat support units and most of the combat service support units with higher echelon (division and above) reserve units of the landing force. Their landing is directed when the need ashore can be predicted with a reasonable degree of accuracy.

Rendezvous area—In an amphibious operation, the area in which the landing craft and amphibious vehicles rendezvous to form waves after being loaded and prior to movement to the line of departure.

Sea echelon—A portion of the assault shipping that withdraws from or remains out of the transport area during an amphibious landing and operates in designated areas to seaward of the landing beaches in an on-call or unscheduled status.

Ship-to-shore movement—That portion of the assault phase of an amphibious operation that includes the deployment of the landing force from the assault shipping to designated landing areas.

Transport area—A sea area in the proximity of the landing beaches of an amphibious assault for transport unloading operations.

Wave—A formation of forces, landing ships, craft, amphibious vehicles, or aircraft required to beach or land about the same time. Can be classified as to type, function, or order as shown:

- a. Assault wave.
- b. Boat wave.
- c. Helicopter wave.
- d. Numbered wave.
- e. On-call wave.
- f. Scheduled wave.

A-3. Shore Party

Airmobile support party (ASPTy)—An Army task organization formed for employment in a landing zone to facilitate the assault landing and interim logistic support of elements in the landing zone.

Beach party—The naval component of the shore party.

Beach support area (BSA)—The area to the rear of a landing force or elements thereof established and operated by shore party units, which contain the facilities for the unloading of troops and materiel and the support of the forces ashore. It includes facilities for the evacuation of wounded, prisoners of war, and captured materiel.

Beachmaster—The naval officer in command of the beachmaster unit of the naval beach group.

Beachmaster unit—A commissioned naval unit of the naval beach group designed to provide to the shore party a naval component known as a beach party which is capable of supporting the amphibious landing of one division (reinforced).

Shore party (SP)—A task organization of the landing force formed for the purpose of facilitating the landing and movement off the beaches of troops, equipment, and supplies; for the evacuation from the beaches of casualties and prisoners of war; and for facilitating the beaching, retraction, and salvaging of landing ships and craft. It comprises elements of both the naval and landing forces.

APPENDIX B

ABBREVIATIONS (AMPHIBIOUS OPERATIONS)

The following list of abbreviations, drawn variously from Army, Navy, and Marine Corps sources, should prove useful in understanding the reference material relating to amphibious operations.

ACB	Amphibious construction battalion
ACU	Assault craft unit
ALO	Air liaison officer
ANGLICO	Air and naval gunfire liaison company
AOA	Amphibious objective area (see OA)
AOS	Amphibious objective study
AOTU	Amphibious operations training unit
APC	Armored personnel carrier
ASpty	Airmobile support party (Army) (see HST)
ASRT	Air support radar team
ASW	Antisubmarine warfare
ATF	Amphibious task force (see JATF)
AW	All weather
BARC	Barge, amphibious, resupply, cargo (see LARC)
BB	Battleship
BDELT	Brigade landing team
BDL	Beach discharge lighter
BJU	Beach jumper unit
BLT	Battalion landing team
BLT(A)	BLT (airmobile landed)
BLT(S)	BLT (surface landed)
BMU	Beachmaster unit
BP	Beach party
BSA	Beach support area
CAOC	Counter air operations center
CATF	Commander, amphibious task force (see CJATF)
CCO	Central control officer
CCO	(also) combat cargo officer
CG	Guided missile cruiser
CGH	Nuclear guided missile cruiser
CHB	Cargo handling battalion
CIC	Combat information center
CJATF	Commander, joint amphibious task force
CLF	Commander, landing force
CLFA	Commander, landing force aviation
COMMZ	Communications zone
COMPHIBRON	Commander amphibious squadron
COSCOM	Corps support command
CV	Attack carrier (for fixed wing)
CVS	Antisubmarine support carrier
DASC	Direct air support center
DD	Destroyer
DDG	Guided missile destroyer
DUKW	2½-ton amphibious truck

EAB	Engineer amphibious brigade
EAG	Engineer amphibious group
ECM	Electronic countermeasures
FAC	Forward air controller
FAW	Fleet air wing
FBH	Force beachhead
FF	Frigate
FDC	Fire direction center
FLC	Fleet loading coordinator
FMF	Fleet Marine Force
FOS	Full operational status
FSA	Fire support area
FSC	Fire support coordinator
FSCC	Fire support coordination center
FSCL	Fire support coordination line
FSE	Fire support element (of the TOC)
FSR	Force Service Regiment
FSS	Fire support station
GFS	Gunfire support
HAF	Helicopter assault force
HAMS	Marine Aircraft Maintenance Squadron
HC(A)	Helicopter coordinator (airborne)
HDC	Helicopter direction center
HELO	Helicopter
HMA	Marine helicopter squadron (attack) (AH-1J)
HMH	Marine helicopter squadron (heavy) (CH-53)
HMM	Marine helicopter squadron (medium) (CH-46)
HML	Marine helicopter squadron (light) (UH-1N)
HST	Helicopter support team (Marine Corps) (see ASPty)
IFS	Inshore fire support ship
IP	Initial point
JATF	Joint amphibious task force
LARC	Lighter, amphibious, resupply, cargo
LCA	Landing craft, assault
LCC	Amphibious command ship
LCM	Landing craft, mechanized
LCPI	Landing craft, personnel (guiding)
LCU	Landing craft, utility
LCVP	Landing craft, vehicle, personnel
LD	Line of departure (Army)
LF	Landing force
LFM	Landing force manual
LFTC	Landing force training command
LFTU	Landing force training unit
LHA	Amphibious assault ship
LKA	Amphibious cargo ship
LOD	Line of departure (Navy)
LPA	Amphibious transport
LPD	Amphibious transport, dock

LPH	Amphibious assault ship (helicopter carrier)
LSA	Logistic support area
LSD	Dock landing ship
LSM	Landing ship, medium
LSM(R)	Medium landing ship (rocket)
LST	Landing ship, tank
LVH	Landing vehicle, hydrofoil
LVT	Amphibian tractor (landing vehicle, tracked)
LVTC	Landing vehicle tracked, command
LVTE	Amphibian tractor for engineer work
LVTH	Landing vehicle tracked, howitzer
LVTR	Landing vehicle tracked, recovery
LVTP	Landing vehicle tracked, personnel
MAB	Marine amphibious brigade
MABS	Marine air base squadron
MACS	Marine are control squadron
MAF	Marine amphibious force
MAG	Marine aircraft group
MARDIV	Marine division
MASS	Marine air support squadron
MAU	Marine amphibious unit
MAW	Marine aircraft wing
MCB	Mobile construction battalion
MCS	Mine countermeasures ship
MSTS	Military Sea Transportation Service
NBC	Nuclear, biological, and chemical
NGF	Naval gunfire
NGFO	Naval gunfire officer
NGLO	Naval gunfire liaison officer
OA	Objective area
PCO	Primary control officer
PCS	Primary control ship
PHIB	Amphibious
PHIBCB	Amphibious construction battalion (see ACB)
PHIBGRU	Amphibious group
PHIBRON	Amphibious squadron
RLT	Regimental landing team
REP	Representative
ROS	Reduced operational status
RP	Rendezvous point
SAC	Supporting arms coordinator
SACC	Supporting arms coordination center
SATS	Short airfield for tactical support
SCO	Secondary control officer
SEAL	Sea, air, and land
SEAWEA	Sea weather report
SFCP	Shore fire control party
SP	Shore party
SQD	Marine aircraft squadron
SS	Submarine

SSBN	U.S. nuclear missile submarine
SSG	Guided missile submarine
STAMP	Standard amphibious plan
SUROB	Surf observation report
TAC	Tactical air controller
TAC(A)	Tactical air coordinator, airborne
TACC	Tactical air control center—TACC (Marine) tactical air command center
TACG	Tactical air control group
TACGRU	Tactical air control group
TACLOG	Tactical-logistical group
TACP	Tactical air control party
TACRON	Tactical air control squadron (Navy)
TAD	Tactical air direction
TADC	Tactical air direction center
TAO	Tactical air observer also tactical air officer
TAOC	Tactical air operations center
TAOR	Tactical area of responsibility
TOC	Tactical operations center
UDT	Underwater demolition team
UDU	Underwater demolition unit
UP&T	Unit personnel and tonnage tables
VA	Attack squadron (Navy)
VAH	Heavy attack squadron (Navy)
VF	Fighter squadron (Navy)
VMA	Attack squadron (Marine)
VMCJ	Composite reconnaissance squadron (Marine)
VMF	Fighter squadron (Marine)
VMFA	Fighter/attack squadron (Marine)
VMGR	Aerial refueling squadron (Marine)
VMO	Observation squadron (Marine)
ZR	Zone of responsibility