PROMOTIONS

July 28, 1942

TO COLONEL

Roland C. Brown

Oliver W. van den Berg

Timothy L. Mulligan

Donald C. Hawkins

TO LT. COLONEL

Richard R. Arnold

Robert J. Kasper

Section Eight — Personnel Procurement

A. Officers
B. Enlisted Men - Sources of Troops

Section Nine — Development of Boat Handling Doctrine

Sections are to be added on --

TABLES OF ORGANIZATION

TABLES OF BASIC ALLOWANCES

PROCUREMENT OF SUPPLIES

and

Appendices

SECTION ONE

Activation of Headquarters of the Engineer Amphibian Command

Authority for activation of the Engineer Amphibian Command was contained in Letter, The Adjutant General's Office, Washington, D. C., dated June 6, 1942, File AG 320.2 (6-5-42) MR-M-GN, Subject: "Constitution and Activation of Headquarters and Headquarters Company, Engineer Amphibian Command," which required the Chief of Engineers to activate at the earliest practical date the Headquarters and Headquarters Company of the Engineer Amphibian Command at Camp Edwards, Massachusetts, by transfer of necessary personnel from certain units under the control of the Chief of Engineers at Camp Edwards.[1]

In compliance with this Letter and 1st Indorsement, on June 10, 1942,[2] the Engineer Amphibian Command was officially activated by General Order No. 1, set forth below. Headquarters were opened at Camp Edwards, Massachusetts, and command was assumed by Colonel Daniel Noce, CE.

"HEADQUARTERS, ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASSACHUSETTS

June 10, 1942

GENERAL ORDERS
No. 1

I--Activation of Engineer Amphibian Command.--In compliance with letter, The Adjutant General's Office, Washington, D. C., dated June 6,

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1. See Appendix No. 1 for copy of Adjutant General's Office Letter, File AG 320.2 (6-5-42) MR-M-GN.

2. See Appendix No. 1 for copy of AG Letter and 1st Indorsement, Chief of Engineers, Washington, D. C. (6-9-42).

SECTION ONE

Activation of Headquarters of the Engineer Amphibian Command

Authority for actiga

1942, File AG 320.2 (6-5-42) MR-M-GN, Subject: 'Constitution and Activation of Headquarters and Headquarters Company, Engineer Amphibian Command,' and 1st Indorsement, Chief of Engineers, Washington, D. C., dated June 9, 1942, Headquarters and Headquarters Company, Engineer Amphibian Command are activated this date at Camp Edwards, Massachusetts.

II.--Opening of Headquarters Engineer Amphibian Command,-Headquarters, Engineer Amphibian Command is open at Camp Edwards, Massachusetts, at 12:01 A.M. this date.

III.--Assumption of Command,--Under the provisions of Paragraph 4, AR 600-20, the undersigned hereby assumes command of the Engineer Amphibian Command.

Signed --
Daniel Noce,
Colonel, Corps of Engineers,
Commanding."

Staff Memorandum, dated June 10, 1942, directed all personnel of Headquarters, Engineer Amphibian Command, to be present at 1:00 P.M. of that date at Logan Field, Camp Edwards, to attend a review of the troops of units absorbed into Headquarters, Engineer Amphibian Command by the activation. The Commanding Officer, Colonel Daniel Noce, attended by the Chief of Staff, Colonel Arthur G. Trudeau, and by Colonel Mark M. Boatner, Commanding Officer of the 37th Engineer Regiment, read the order of activation to and reviewed the troops.

All personnel, officers and enlisted men, were ordered to report to the Connery Avenue Theatre, Camp Edwards, to permit the Commanding Officer to deliver his initial orientation lecture setting forth the training and combat mission of the Engineer Amphibian Command.[3]

The mission, the tactical organization, and the duties of the Engineer Amphibian Command are officially stated in the Training Memorandum No. 1 (Revised), dated July 27, 1942.[4]

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3. See Appendix No. 2, copy of Circular No. 10, 7-3-42, summarizing lecture.

4. Sections quoted from Training Memorandum No. 1 (Revised), 7-27-42, include only those applying to Engineer Amphibian Command as a whole.

SECTION ONE

Activation of Headquarters a

SECTION TWO

Appointments and Changes in General Staff

Commanding General

Daniel Noce
Brig. Gen., CE — Assumed command by General Order No. 1, June 10, 1942, then Colonel. Appointed Brigadier General, CE, by WD S/O 221, Par. 1, August 17, 1942.

Chief of Staff

Arthur G. Trudeau
Col., GSC — Appointed by General Order No. 10, July 3, 1942, effective as of June 20, 1942.

Timothy L. Mulligan
Col., CE — Appointed Acting Chief of Staff in the absence of Col. Trudeau as additional duty by General Order No. 67, November 5, 1942.

G-1 - Director of Personnel and Administration

Timothy L. Mulligan
Col., CE — Appointed by General Order No. 6, June 16, 1942, then Lieutenant Colonel, CE. Appointed Colonel, CE, by WD S/O 201, Par. 1, July 28, 1942.

G-2 - Coordinator of Services

Henry S. McDonald
Major, CE, (Inf) — Appointed by General Order No. 32, August 3, 1942, then Captain, CE. Appointed Major, CE, by WD S/O 232, Par. 1, August 28, 1942.

G-3 - Director of Plans and Training

Henry C. Wolfe
Brig. Gen., CE — Appointed by General Order No. 2, June 10, 1942, then Colonel, CE. Relieved by General Order No. 12, July 7, 1942, and assigned as Commanding Officer, First Engineer Amphibian Brigade. Appointed Brigadier General by WD S/O 258, Par. 1, September 23, 1942, effective as of September 18, 1942.

Arthur G. Trudeau
Col., GSC — Assigned additional duty by General Order No. 12, July 7, 1942. Relieved by General Order No. 19, July 20, 1942.

Gerald E. Galloway
Col., CE — Appointed by General Order No. 19, July 20, 1942. Relieved and assigned to Third Engineer Amphibian Brigade by General Order No. 63, October 28, 1942.

Harry Henry
Col., CE, (Inf) — Appointed by General Order No. 63, October 28, 1942.

G-4 - Director of Procurement and Supply

Oliver W. Van den Berg
Col., F. A. — Appointed by General Order No. 6, June 16, 1942, then Lieutenant Colonel. Appointed Colonel by WD S/O 201, Par. 1, July 28, 1942. Relieved by General Order No. 41, August 22, 1942.

Francis H. Falkner
Col., CE — Appointed by General Order No. 41, August 22, 1942, then Lieutenant Colonel, CE. Appointed Colonel, CE, by WD S/O 270, Par. 11, October 5, 1942.

Adjutant General

Adnell O. Acers
Lt. Col., AGD — Appointed by Special Order No. 1, June 10, 1942. Relieved by transfer from Command by WD S/O 274, Par. 10, October 9, 1942.

Floyd Cooley
1st Lt., AGD — Appointed by Daily Memorandum No. 98, October 10, 1942.

Inspector General

John W. Nicholson
Col., IGD — Assigned to Engineer Amphibian Command as Inspector General by WD S/O 161, Par. 10, June 18, 1942, then Lieutenant Colonel. Appointed Colonel, IGD, by WD S/O 219, Par. 1, August 15, 1942.

Command Surgeon

Llewellyn L. Barrow
Lt. Col., MC — Appointed by Special Order No. 5, June 15, 1942, then Major. Appointed Lieutenant Colonel, MC, by WD S/O 191, Par. 8, July 18, 1942.

Command Chaplain

Joseph P. McNamara
Lt. Col., Chap. — Appointed by WD S/O 154, Par. 10, June 11, 1942, then Major. Appointed to Lieutenant Colonel, Chap., by WD S/O 219, Par. 21, August 15, 1942.

Director of Specialists Schools

Wilmer De Witt
Col., CE — Appointed by General Order No 34, August 12, 1942.

Liaison Officer

Richard R. Arnold
Lt. Col., CE — Appointed by General Order No. 6, June 16, 1942. Relieved of this assignment and appointed Assistant Chief of Staff and Commanding Officer, Advance Echelon, E. T. O., Engineer Amphibian Command by General Order No. 29, July 29, 1942.

Temporary Commanding Officers

William F. Heavey
Brig. Gen. — Commanding during temporary absence of General Noce by General Order No. 50, September 15 to October 3, 1942, then Colonel, CE. Appointed Brigadier General and assigned to Second Brigade by WD S/O 212, Par. 10, August 8, 1942, and EAC S/O 64, Par. 53, August 17, 1942.

David A. D. Ogden
Brig. Gen. — Commanding during temporary absence of General Noce by General Order No. 60, October 19, 1942, to October 24, 1942.

SECTION THREE

Absorption of Units

The Adjutant General's Office Letter of June 6, authorizing the activation of the Engineer Amphibian Command,[1] required the Chief of Engineers to absorb into the Command the units listed below, the total strength of which was forty-two officers and 2183 enlisted men:

87th Engineer Battalion (Heavy Ponton)
37th Engineer Combat Regiment
Company A, 201st Quartermaster Battalion (Gas Supply)
74th Quartermaster Battalion (Light Maintenance)
Hq and Hq Det, Companies A, B, C, and D
1st Platoon, 122d Quartermaster Company (Car)
1st Platoon, 450th Engineer Company (Depot)
100th Ordnance Company (Heavy Maintenance) (Field Army)
Company B (less 1st Platoon) of the 262d Quartermaster Battalion (Service) (Colored)

A brief history of each unit is herewith set forth.

The 87th Engineer Battalion (Hv Pon), comprising upon absorption ten officers and 396 enlisted men, commanded by Major Roland C. Brown, was last stationed before its transfer to Camp Edwards at Plattsburg Barracks, New York, a unit of the VI Army Corps. It was ordered to Camp Edwards[2] and upon arrival passed to the control of the Chief of Engineers. Upon the organization of the First Engineer Amphibian Brigade personnel and equipment of the 87th Engineer Battalion was officially inactivated and transferred, less personnel and equipment, to control of the Commanding General, Army Ground Forces, on August 15, 1942,[4] thence

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1. Letter of authorization - WD, Letter AGO, File AG 320.2 (6-5-42) MR-M-GN.
2. Letter from Headquarters, Army Ground Forces, Army War College, Washington, D.C., 370.5-16 (Engr) (R)-GNOPN (5-13-42).
3. Letter AGO, Washington, D. C., File AG 320.2 (6-11-42) MR-M-GN.
4. By authority of WD, Letter AGF, 1 tr. 320.2/60 (R) GNGTC (8-14-42).

it was reassigned to the Third Army, Camp Claiborne, Louisiana.

The 37th Engineer Combat Regiment, comprising upon absorption forty-four officer and 1109 enlisted men, commanded by Colonel Mark M. Boatner, Jr., was last stationed before its transfer to Camp Edwards at Camp Bowie, Texas, a unit of the Third Army. It was ordered to Camp Edwards by Letter, Hqs, AGF,[5] on May 13, 1942, and upon arrival thereat passed to the control of the Chief of Engineers. Upon the organization of the First Engineer Amphibian Brigade, its personnel and equipment were transferred to the 591st Engineer Boat Regiment of that Brigade on June 15, 1942.[6] The 37th Engineer Regiment was then officially inactivated and returned to the control of the Commanding General, Army Ground Forces, and on August 15, 1942,[7] was reassigned to VII Army Corps, Marysville, California.

Company A, 201st Quartermaster Battalion (Gas Supply), comprising upon absorption 2 officers and 106 enlisted men, commanded by Captain Keith G. Hooker, CMC, before its transfer to Camp Edwards was stationed at Fort Devens, Massachusetts, a unit of the VI Army Corps. On May 15, it was ordered to Camp Edwards by Letter, Hqs, AGF,[8] and upon its arrival passed to the control of the Chief of Engineers. On activation of the First Engineer Amphibian Brigade on June 15, 1942, its personnel and equipment, together with the 74th QM Bn, formed the 361st Quartermaster Battalion of that Brigade. Thereafter, Company A,

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5. Letter Hqs, AGF, Army War College, Washington, D. C., 370.5/16 (Engr) (R)-GNOPN (5-13-42).

6. WD Letter AGO, File AG 320.2 (6-11-42).

7. WD Letter, 1 tr. 320.2/60 (R) GNGTC (8-14-42).

8. Letter Hqs, AGF, 370.5/43 (R)-GNOPN (5-15-42).

201st QM Bn, was officially inactivated and returned to the control of the Commanding General of the Army Ground Forces on August 15, 1942.[9]

Units of the 74th Quartermaster Battalion (Light Maintenance) were ordered transferred from several stations to Camp Edwards prior to the formation of the Engineer Amphibian Command.[10] Prior to their transfer, Headquarters and Headquarters detachment of the Battalion was stationed at Holabird Quartermaster Depot, Maryland; Company A, at A.P. Hill Military Reservation, Fredericksburg, Virginia; Companies B and C, at Camp Gordon, Georgia; and Company D, at Fort Storey, Virginia. Companies B and C, units of the Second Army, were moved to Camp Edwards, on May 19, 1942.[11] The balance of the Battalion, from the VI Army Corps, were transferred on or about May 17, 1942.[12] On arrival at Camp Edwards these units passed to the control of the Chief of Engineers. Upon the organization of the First Engineer Amphibian Brigade personnel and equipment of the 74th QM Bn, together with Company A, 201st QM Bn, were transferred to the 361st Quartermaster Battalion, First Engineer Amphibian Brigade.[13] Thereafter, the 74th QM Bn was inactivated and its respective units returned to the control of the Commanding General, Army Ground Forces, on August 15, 1942, and were assigned to the IX Army Corps, Fort Lewis, Washington.[14]

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9. By authority of WD, Letter AGF, ltr. 320.2/60 (R) GNGTC (8-14-42).

10. Letter of Headquarters, AGF, Army War College, Washington, D.C., 370.5/43 (R) - GNOPN (5-15-42).

11. Letter of Hqs, Second Army CG, Memphis Tenn. AG 370.5/135 (G-4) (5-19-42).

12. Letter of Hqs, VI Army Corps, Providence, R.I., AG 370.5/16 (5-17-42).

13. Letter WD, AGO File AG 320.2 (6-11-42).

14. Letter WD, AGO ltr. 320.2/60 (R) GNGTC (8-14-42).

The 1st Platoon, 122d Quartermaster Company (Car), comprising upon its absorption by the Command one officer and 28 enlisted men, was stationed before its transfer to Camp Edwards at Camp Shelby, Mississippi, a unit of the Third Army. By Letter Hqs, AGF, it was ordered to Camp Edwards and on arrival thereat passed to the control of the Chief of Engineers.[15] Special Order No. 12 Paragraph 29, June 22, attached the platoon to Headquarters of the Command. Letter of Hqs, AGF, November 5, 1942, released the 1st Platoon, less personnel and equipment, from the control of the Chief of Engineers and reverted it to the control of the Commanding General, Army Ground Forces, as of November 3, 1942.[16] General Order No. 68, Engineer Amphibian Command, November 7, 1942, transferred personnel and equipment to Headquarters Company, Engineer Amphibian Command, effective November 10, 1942.

The 1st Platoon, 450th Engineer Company (Depot), comprising upon its absopption one officer and 40 enlisted men, was last stationed before its transfer to Camp Edwards at Camp Blanding, Florida, a unit of the II Army Corps. Letter of Hqs, AGF, May 15, 1942,[17] ordered the unit to Camp Edwards and upon its arrival there passed it to the control of the Chief of Engineers. The Office of Chief of Engineers on June 8, 1942, substituted for the 1st Platoon, 450th Engineer Co (Depot) the 1st Platoon, 449th Engineer Co (Depot).[18] Special

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15. Letter Hqs, AGF, Army War College, Washington, D. C., 370/5/43 (R) -GNOPN (5-15-42)

16. Letter Hqs, AGF, Washington, D.C., 320.2/105 (QM) (R)-GNGCT (11-5-42).

17. Letter Hqs, AGF, Washington, D.C., 370.5/43 (R)-GNOPN (5-15-42).

18. Letter WD, AG 320.2 (6-5-42).

Order No. 7, Paragraph 6, June 16, 1942, attached the Platoon to Headquarters, Engineer Amphibian Command. On July 20, 1942, General Order No. 20, Section 2, transferred personnel and equipment to the Depot Company, 411th Base Shop Battalion, recently activated.[19]

The 100th Ordnance Company (Heavy Maintenance), comprising upon absorption one officer and 42 enlisted men, commanded by Captain Joe Hunter, Ord. Dept., was last stationed before its transfer to Camp Edwards at Camp Blanding, Florida, a unit of the Second Army. Its movement to Camp Edwards was authorized by Hqs, AGF Letter of May 15, 1942.[20] Upon arrival there it passed to the control of the Chief of Engineers, and by Special Order No. 6, Paragraph 10, June 15, 1942, was attached to Headquarters, Engineer Amphibian Command. General Order No. 39, dated July 24, 1942, transferred personnel and equipment of 100th Ordnance Company to Power Plant Repair Company, 411th Base Shop Battalion.[21]

Along with the other units described in this section, Hqs, AGF Letter[22] authorized the removal of Company B (less 1st Platoon), 262d Quartermaster Battalion (Service), Colored, comprising two officers and 102 enlisted men, from its station at Camp Shelby, Mississippi, a unit of the Third Army, to Camp Edwards to pass to the control of the Chief of Engineers for training and administration. By Paragraph 11, Special Order No. 6, June 15, 1942, this unit was attached to Headquarters, Engineer Amphibian Command. Company B, 262d QM Bn was transferred with personnel and equipment to the control of the Commanding General, Army Ground Forces on November 5, 1942, and was attached to the VI Army Corps, effective November 3, 1942.[23]

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20. Letter Hqs, AGF, Army War College, Washington, D.C., 370.5/43 (R)-GNOPN (5-15-42)

21. Letter WD AGO, File AG 320.2 (7-22-42) MR-M-GN.

22. Letter Hqs, AGF, Army War College, Washington, D.C., 370.5/43 (R)-GNOPN (5-15-42)

23. Letter Hqs, AGF, 320.2/105 (QM) (R) GNGTC (11-5-42)

SECTION FOUR

Development of Command Headquarters

A. Enlisted Cadre.

Prior to activation of the Command the Chief of Engineers directed the Commanding Officer of the 37th Engineer Regiment, in collaboration with the other units to be absorbed, to provide an initial housekeeping cadre of thirty-nine men for the Engineer Amphibian Command. These were furnished as follows:

74th Quartermaster Battalion	5
37th Engineers	21
100th Ordnance Company	1
87th Engineer Battalion	10
201st Quartermaster Battalion Company A	2

Additional cadre, especially trained in the handling and the processing of troops, was obtained on Detached Service to process troop arrivals, three from I. R. T. C., Camp Wheeler, Georgia, and six from Aberdeen Proving Grounds, Maryland. Fifteen additional key enlisted personnel were ordered into the Command as cadre through the Adjutant General's office from the Second and Third Armies. The total number of enlisted cadre provided for the Engineer Amphibian Command from the sources set forth above was fifty-three. The balance of Headquarters and Headquarters Company personnel was drawn from troops ordered into the Engineer Amphibian Command after its activation.

In addition to the enlisted cadre set forth above, 110 United States Coast Guardsmen were ordered in on U. S. Coast Orders prior to activation to handle marine equipment arriving for the Command through arrangements made by Office of Chief of Engineers and Commandant of U. S. Coast Guard.[1]

B. Officer Cadre.

Initial officer cadre for Command Headquarters numbering forty-eight was obtained prior to activation from the following sources:

1. Transfer from other organizations 14

2. Officer Reserve Corps ordered to active duty 3

3. Officer Candidate School Graduates 24

4. Appointment from civilian life of men who were specialists in motor and sail boat operation, navigating, repairing and maintenance. Most of these officers were contacted through the U. S. Power Squadrons and Power Boats Associations 7.

The balance of officer personnel was procured after activation.[2]

C. Location of Command Headquarters.

Command Headquarters were initially located at Camp Edwards in Block 35, normally an area occupied by a battalion, pending the departure of the 26th Division from Camp Edwards.

The 26th Division having departed this station by July 4, 1942, their headquarters, Block 1, was occupied by the Engineer Amphibian Command under Circular 14, which allotted to various Headquarters sections their respective building spaces. Circular 14 further distributed the various units of the Command within the areas vacated by the 26th Division.

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1. Memorandum WD OCE, May 29, 1942, to Commanding General S. O. S.
2. See Section on Procurement of Personnel for figures.

5. Establishment of Essential Services

Listed below are essential Command Services as they were established by General Orders and Circulars of the Command:

Fire Protection: General Order No. 5, June 16, 1942; General Order No. 43, August 14, 1942; General Order No. 68, November 4, 1942.

Air Raid Protection: General Order No. 7, June 16, 1942; General Order No. 26, July 25, 1942; General Order No. 58, October 9, 1942.

Preparation for Alerts: Circular No. 53, September 12, 1942.

Guard Order: General Order No. 22, July 23, 1942; General Order No. 23, July 24, 1942; General Order No. 35, August 17, 1942.

Mail and Laundry: Circular No. 1, June 29, 1942; Circular No. 23, July 20, 1942; Circular No. 32, August 4, 1942; Circular No. 49, September 7, 1942.

Medical, Dental and Sanitary Regulations: Circular No. 5, June 30, 1942; Circular No. 6, June 30, 1942; Circular No. 15, July 8, 1942; Circular No. 34, August 3, 1942.

Administrative Instructions: Circular No. 2, June 29, 1942.

Officers' Register: Circular No. 12, July 3, 1942; Circular No. 44, August 24, 1942.

Personnel Reports: Circular No. 13, July 3, 1942.

Unit Funds Instructions: Circular No. 29, August 3, 1942.

E. Establishment of the Officers' Mess.

When Command Headquarters were established in Block 1, shortly after activation, a bare officers' mess building, completely unfurnished and unequipped, was turned over to the Command. By the first of August, 26 days later, the building had been completely redecorated, equipped, and furnished, through the efforts of Command personnel and with the assistance of the Post Engineer. A provisional officers' mess organization was set up, followed by a regular constitution adopted on August 31, 1942.[3] The Officers' Mess was officially opened by General Noce at a reception for all officers of the Command on August 8, 1942. Official receptions have been held in the club on the occasion of the departure of the First, Second, and Third Brigades, upon the appointment of General Noce, and on Thanksgiving Day. Ordinarily the Officers' Mess holds three informal dances each month and one formal dance with the music provided by the Command band or the Special Service Orchestra. The Officers' Mess is supported by the officers of the Command and by associate memberships which are extended to units on the post not served by an officers' club of their own, chiefly the 36th Division.[4]

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3. The Officers' Mess is organized in accordance with authority provided in AR 210-60.

4. See Appendix for copy of constitution adopted for the Officers' Mess.

SECTION FOUR

Development of Command Headquarters

A. Enlisted Cadre.

Prior to activation the Chief of Engineers directed the Commanding Officer of the 37th Engineer Regiment, in collaboration with the other units to be absorbed, to provide an initial housekeeping cadre of thirty-nine men for the Engineer Amphibian Command. These were furnished as follows:

74th Quartermaster Battalion	5
37th Engineers	21
100th Ordnance Company	1
87th Engineer Battalion	10
201st Quartermaster Battalion Company A	2

Additional cadre, especially trained in the handling and processing of troops, was obtained on Detached Service to process troop arrivals, three from I. R. T. C., Camp Wheeler, Georgia, and six from Aberdeen Proving Grounds, Maryland. Fifteen additional key enlisted personnel were ordered into the Command as cadre through the Adjutant General's Office from the Second and Third Armies. The total number of cadre provided for the Engineer Amphibian Command from the sources set forth above was fifty-three. The balance of Headquarters and Headquarters Company personnel was drawn from troops ordered into the Engineer Amphibian Command after activation.

In addition to the enlisted cadre set forth above, 110 United States Coast Guardsmen were ordered in on U. S. Coast Guard Orders prior to activation to handle marine equipment arriving for the command through arrangements made by Office of Chief of Engineers and Commandant of U. S. Coast Guard.[1]

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1. Memprandum WD OCE dated May 29, 1942, to Commanding General S. O. S.

7. Adoption of Flag, Insignia, and Motto

The official Engineer Amphibian Command flag was adopted by the Heraldic Division, Office of the Quartermaster General, Service of Supply, on June 24, 1942, and was first raised over the Command Headquarters on October 21, 1942. The official description of the flag is as follows:

> "In the form of a white oval, within a blue field a red sea horse naiant, with a motto 'Put them across' in white letters in the blue field."

The flag is reported to have been designed by a civilian employee of the Heraldic Division, Mr. Leonard DuBois. The Motto, "Put them across," is attributed to General Noce, who used the expression in the final words of his orientation lecture to the Command, "No matter what happens, let's put them across." Command Memorandum dated October 20, 1942, charged the Provost Marshall with the responsibility for the display from Reveille until after Retreat and the custody of the customary three flags, the standard, the storm, and the post flag.

Engineer Amphibian Shoulder Sleeve Insignia.

The official Engineer Amphibian Shoulder Sleeve Insignia was authorized by Memorandum SPOPP 473.816—WD SOS, dated October 15, 1942, "to be used by the Engineer Amphibian Command and the amphibious forces." It was released to the personnel of the Command on October 17, 1942. Circular No. 63, Engineer Amphibian Command, of that date sets forth the official description of the insignia, given below, and the regulations for its use.

"SHOULDER SLEEVE INSIGNIA

"For the information and guidance of all concerned, a shoulder sleeve insignia has been approved, for the Engineer Amphibian Command. The sleeve insignia, as approved, is distinctive in design and originality, with a few adaptations from the British Commando insignia. The component parts of the sleeve insignia represent the activities of the combined operations and is symbolic of the close coordination between the land, air, and sea arms. The eagle signifies the air arm, the tommy-gun, the land arm, and the anchor, the sea arm. The design and color of this sleeve insignia was worked out by the Heraldic Division, Office of the Quartermaster General, Washington, D. C., and is to be known as the shoulder sleeve insignia of the Engineer Amphibian Command."

Engineer Amphibian Patch Insignia

Adjutant General's Letter 421.7 of June 24, 1942, (PD-C,) authorizes a distinctive patch insignia for the Engineer Amphibian Command to be worn by all personnel of the same in addition to any battalion or regimental insignia authorized. This patch insignia, although not as yet officially released to the personnel, is described as follows:

"Distinctive Trimming: In the form of a white oval, within a blue field a red sea horse naiant, to be approximately 2¼ inches in height.

"To be Worn: In the center of the left shirt or coat pocket, whichever garment is worn as the outside garment. "

G. Organization of Command Headquarters.

The Headquarters and Headquarters Company of the Command were organized on activation. The basis of organization was contained in a tentative Table of Organization prepared by the Office of the Chief of Engineers and an Allotment of Grades and Ratings set forth in the Adjutant General's Letter authorizing activation. General Order No. 16, dated July 17, 1942, distributed the allotment of enlisted grades in Headquarters following the lines of this tentative Table of Organization. This distribution was altered by General Order No. 40, dated August 20, 1942, and by subsequent staff directives. A newly proposed Table of Organization is at present in the process of formation for Headquarters and Headquarters Company.

As the Command organized it became necessary, for administrative and supply purposes, to organize certain sections of Headquarters into separate detachments to permit them to function more efficiently. The Boat Unit Section of Headquarters was accordingly organized by General Order No. 13, dated July 9, 1942, into the Boat Unit Detachment, for the purpose of handling and instructing in the use of landing boats and other marine equipment. The Detachment was first located at the Waquoit Bay camp, but on July 15, 1942, it was removed to Cotuit Base.

The Maintenance Section of Headquarters was organized by General Order No. 14, dated July 13, 1942, into the Maintenance Detachment for the purpose of handling maintenance instruction and operation for the Command. This detachment was finally located at Osterville.

The Weapons Section of Headquarters was organized into the Weapons

Detachment by General Order No. 15, dated July 16, 1942, for the purpose of instructing in and operating the anti-aircraft firing range at Poponnessett Beach.

The Casual Platoon of Headquarters Company and the Classification and Assignment Office of Headquarters were organized by General Order No. 31, dated August 3, 1942, and altered by General Order No. 51, into the Casual Detachment for the purpose of receiving, housing, rationing, and administering enlisted men joining the Command pending their classification and assignment to permanent units within the Command.

The problem of training the increasing number of enlisted men joining the Command without basic military training forced the creation of a Training Battalion on August 19, 1942, by General Order No. 38. Prior to the organization of the Training Battalion, it was necessary when men who had not received basic military training joined the Command to charge the commanding officer of the assigned organization with the duty of providing them the necessary basic training. Such unit basic training was extended to 335 men before the organization of the Training Battalion. The Training Battalion, organized along the lines of a Replacement Training Center, operated from August 6 to October 17, 1942, and afforded a month's basic training to 3781 enlisted men who had joined the Command from Reception Centers. The Commanding Officer of the Training Battalion was Colonel J. J. Steiner, CE, who was succeeded by Major Axel Jensen, CE, on September 22, 1942.[5] To assist in the organization of the Training Battalion, a cadre of 31 enlisted men and 6 officers was received from the Engineering Replacement Training Centers at Fort Leonard

5. EAC S/O 98, Par. 54, September 22, 1942.

Wood, Missouri, and from Fort Belvoir, Virginia, on detached service for six weeks. Upon completion of their work letters of commendation for their services to the Command in organizing and administering this basic training were forwarded to their respective commanding officers. Further cadre was supplied by assignment of trained personnel joining the Command and by a cadre furnished by the Third Brigade.

The Marine Maintenance Depot was set up at Falmouth Shipyard, Falmouth, Massachusetts, by Circular No. 41, August 19, 1942, to provide supplies and materials required for the Maintenance of all Engineer Amphibian Command boats and for warehousing spare parts and supplies delivered with new boats. Brigade and Regimental Companies and the Maintenance School requisition on the Depot for all parts, supplies, and materials for current use, for this reason they were issued a small stock of parts and supplies frequently used for stock purposes.

To provide immediate and proper assistance to persons in charge of stranded or damaged boats in order to start salvage operations at once, since speed is the most essential element in all rescue and salvage operations, a Salvage Office of the Engineer Amphibian Command was established at Cotuit in connection with the Boat Unit Detachment. When the Salvage Officer or his designated representative has reached the scene of the boat in distress, he will take charge of and direct the salvage operations.

To insure some control over waterfront activities at Cotuit Bay, a Port Captain's Office was established as a part of the Boat Unit Detachment. The Port Captain was given supervision over the dispatch of all boats, control of docking activities, operation of the marine fire boat for waterfront fire protection, control of the police boat to maintain a harbor patrol to check speeding near docks and govern civilian boat traffic, to remove floating obstacles, to maintain and protect piers from ice and fire, to maintain communications and dockside utilities, and to administer safety regulations and inspections.

In order to permit the Motor Pool of Headquarters to function more efficiently, Headquarters Company was designated a Limited Third Echelon Maintenance Shop, under the provisions of AR 850-15, by General Order No. 45, dated August 24, 1942.

A Band for the Command was activated September 2, 1942, by General Order No. 46, and personnel consisting of one warrant officer and 28 enlisted men was obtained from Fort Devens Reception Center, Fort Devens, Massadhusetts.[6]

With the approach of winter curtailing amphibian operations after the departure of the Second and Third Brigades and the 411th Base Shop Battalion, Circular No. 78, November 21, 1942, provided a plan for Winter Operations. In order to carry on this program and to provide necessary guards and maintenance personnel for outlying installations which were closed for winter operations, General Order No. 69, dated November 10, 1942, organized a Provisional Guard and Service Company for the Command. This company opened up company headquarters in Camp Edwards and operated detachments at Falmouth Marine Docks and at Waquoit and Washburn Island Camps.

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6. WD Auth: AG Letter 322.94 8-26-42, Subject: "Transfer of Bands."

GENERAL OUTLINE

of

Historical Development of Engineer Amphibian Command

To December 1, 1942

Section One — Activation of Headquarters of the Engineer Amphibian Command

Section Two — Appointments and Changes in General Staff

Section Three — Absorption of Units upon Activation

Section Four — Development of Command Headquarters

- A. Enlisted Cadre
- B. Officer Cadre
- C. Location of Command Headquarters
- D. Establishment of Essential Services
- E. Establishment of Officers' Mess
- F. Adoption of Flag, Insignia, and Motto
- G. Organization of Command Headquarters

Section Five — Construction and Acquisition of Physical Facilities

Section Six — Specialized Training of the Command

- A. Officers' Specialist Schools
- B. Specialized Training by Outside Agencies for Officers
- C. Specialized Training by Command Agencies for Enlisted Men
- D. Specialized Training for Enlisted Men by Outside Agencies
- E. Officer Candidate Selection
- F. Development of Amphibian Operations Doctrine

Section Seven — Operations

- I. First Engineer Amphibian Brigade
- II. Second Engineer Amphibian Brigade
- III. Third Engineer Amphibian Brigade
- IV. The 411th Base Shop Battation
- V. The 540th Engineer Shore Regiment

SECTION FIVE

Construction and Acquisition of Physical Facilities

The location of Command Headquarters in Block 1, Camp Edwards, has already been described. In addition to Block 1, the Command was allotted within Camp Edwards itself Blocks 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and Block 35, roughly two battalion and eight regimental areas. There were actually no facilities in Camp Edwards itself for amphibious training. Therefore, it was necessary for the amphibious training and operations for the Command and its subordinate units to acquire or reconstruct additional facilities to permit amphibious operations to be carried forward.

The Command, therefore, prior to its activation, acquired Washburn Island on Waquoit Bay in cooperation with the Amphibian Training Command. The lease on Washburn Island was perfected on May 28, 1942. Ponton bridges were constructed in two places to connect the island with the mainland and a contract was let for the construction of the piers on June 17. By June 28, a system of docks and piers had been constructed, roads laid down, water piped in, other utilities constructed, to permit the 591st Boat Regiment to occupy the island as their regimental area. This Regiment organized therein a tent camp to carry on their amphibious training and operations.

At the same time the lack of facilities for marine maintenance was solved by the lease (on June 1, 1942) of the Falmouth Marine Railroad at Falmouth, Massachusetts. The Tower House Hotel at Falmouth Heights was leased on June 3 to provide suitable shelter for the personnel to carry on the work of maintenance at the Marine Railroad. The newly organized 561st Engr Boat Maintenance

Company moved into their new quarters in the hotel and took over their marine maintenance activities for the Command at the Marine Railroad and Docks.

The growth of the Command together with the wide scope of the amphibious training currently carried on with the 45th Division made it apparent that other seacoast facilities had to be acquired. In conjunction with the Amphibian Training Command, an area along Cotuit Bay was acquired on July 28, into which area the 592d Boat Regiment moved and established a tent camp. Piers and necessary dock equipment was constructed by contract and were completed for use in amphibious operations by that regiment.

The range facilities at Camp Edwards were similarly found to be inadequate with the growth of the Command and the increasing scope of the combined amphibious training with the 45th and later the 36th Divisions. To solve the need for an anti-aircraft firing point suitable for mass instruction in anti-aircraft protection an area on Popponessett Bay was acquired by lease on July 13, 1942. The Weapons Detachment of the Engineer Amphibian Command occupied this area about that date and constructed firing points therein. Here it carried on instruction for the units of the 1st and 2d Engineer Amphibian Brigades.

The maintenance facilities of the Falmouth Marine Railroad proved insufficient to handle the increased volume of maintenance work. In order to develop maintenance instruction schools and to expand these facilities, the Crosby Yacht Building and Storage Company at Osterville together with the various other local buildings for quarters and school purposes was acquired on or about July 15, 1942. Into this area the Maintenance Detachment moved during July.

Further need appeared for seacoast areas for certain testing and experimental purposes conducted by the Development Section of the Command. For this

purpose the area in and around Sandy Neck in Barnstable Harbor on the northern side of Cape Cod was acquired on September 22, 1942, as a testing ground. The Boat Unit Detachment set up a camp at Sandy Neck and provided the necessary personnel. Further testing operations in Provincetown Bay necessitated the temporary acquisition of quarters in the Town House Hotel in Provincetown. The Weapons Detachment moved a portion of its personnel out to Provincetown to carry on these operations.

It became necessary for the G-4 Section of the Command Headquarters to operate a receiving warehouse for special issue of property for the Command. At the request of the Command, the Post Engineer at Camp Edwards constructed in the warehouse district of the camp and turned over to the Procurement and Supply Section of the Command Headquarters on July 10 two standard warehouse buildings, one of which was so constructed as to permit it to be used as a motor school for the Command.

SECTION SIX

Specialized Training of the Command

A. Officers' Specialist Schools.

1. Basic Training Course.

The arrival in the Command of officers newly commissioned from civilian life necessitated the organization of a basic military training course for officers.[1] This Basic Training Course administered by the Officers' Specialist School extended for a month in duration and covered such basic military subjects as administration, supply, map reading, engineer tactics, close and extended order drill, camouflage, and chemical warfare protection. At its peak 83 officers attended the classes and the course included the range firing of the U. S. (Garand) Rifle, Calibre .30, M-1, and the Browning Machine Gun, Calibre .30, HB. Between June 12, the opening date of the school, and October 15, when it was abandoned, 453 officers appointed from civilian life received basic military training in the course.[2]

2. Refresher Course.

The arrival in the Command of reserve officers newly ordered to active duty necessitated the organization of a refresher course which was administered by the Officers' Specialist School concurrently with the Basic

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1. General Order No. 2, June 10, 1942, appointed Major Robert J. Kasper, CE, Director of Specialist Schools, to conduct such a course. He was succeeded by Major Merle E. Smith, CE, appointed by Special Order No. 23, Par. 23, July 4, 1942. Major Smith was relieved by Captain Edward A. Greer, CE, on Special Order No. 39, Par. 24, who continued as head of the school until its dissolution in November 1942.

2. See Appendix for schedule of this school.

Military Training Course by the same staff with as many as twelve instructors at a time. The Refresher Course lasted a week and covered approximately the same subjects as the Basic Military Training Course. Between June 12 and August 1, 360 officers from the nat guard + reserve corps received their basic training review in this course.

3. Course in the Administration of Military Justice.

To acquaint company grade officers of the Command and particularly newly commissioned officers and reserve officers newly ordered to active duty with the principles of correct administration of military justice, the Judge Advocate ~~General~~ of the Command conducted a week's course instructing such officers in the principles of Military Justice and the Articles of War.

4. Company Administration Course.

To refresh company grade officers with the basic principles of company administration, a Company Administration Course of a week's duration was held which such officers attended.

5. Mess Administration.

Training Memorandum No. 17, September 12, 1942, establishing a School for Bakers and Cooks for the Command, required one officer from each company or detachment operating a mess to attend this school. Forty-five officers of organizations operating messes at Camp Edwards, Falmouth, Waquoit, Cotuit, and Osterville attended daily sessions of this school for its duration of one month.

6. Piloting and Navigation.

To teach basic principles of piloting and navigation, about June 15 a school was established consisting of lectures and practical work with the

boats. All officers assigned to boat or shore regiments, before being put on any other duty with their unit, were sent to the basic school in piloting. Under the direction of Lieutenant Commander L. C. Wilder, U. S. Coast and Geodetic Survey, and Captain B. A. Lentz, U. S. A., and their staff of fifteen officers acting as instructors, 729 officers finished the basic course in piloting and navigation while appriximately 150 others participated in part in the course. Average classes consisted of about 70 officers using six boats. A special night class in piloting was conducted for 35 officers of the Headquarters of the Command who could not attend regular classes because of their other duties. Approximately 146 of the officers who finished the basic course subsequently were detailed to advanced study in Piloting and Navigation.

SECTION SI

7. Instruction in Camouflage.

While not officially organized as a separate school, a course in camouflage had operated as a part of and in conjunction with the Officers' Specialist Schools. Since its origin on June 29, 1942, over one thousand officers have taken this course and demonstrations consisting of an hour and a half's lecture followed by an hour and a half of demonstrating have been given to approximately 7000 enlisted men. These demonstrations embodied the general basic purposes of the camouflage course as applied to the camouflaging of semi-permanent and permanent installations, individual concealment of enlisted men, and camouflage discipline.

SECTION SIX

Specialized Training of the Command

A. Officers' Specailist Schools.

8. Training by Office of Fleet Captain.

The Fleet Captain's Office is responsible for the training of enlisted personnel in the proper use of and safe operation of landing craft, amphibious vehicles, and staff boats, to form a nucleus of trained personnel in the various boat regiments of the brigades. Before beginning their instruction of brigade personnel, it was necessary for the Fleet Captain's Office to train its own officer and enlisted personnel as instructors and to assign instructional personnel to the various types of craft used in training. The schedule of training administered by the Office of Fleet Captain to each of the successive boat battalions in amphibian regiments includes the following: Nomenclature; knots, splicing, and proper use of lines; 1st echelon maintenance; safe operation of boats; handling and maneuvering of boats; beaching and retracting; formation running; boat signals; elementary piloting. Actural training operations to prepare its personnel to be instructors for brigade personnel began June 22, 1942. Approximately two weeks was devoted to preliminary training in operation of boats for each battalion of the various Engineer Amphibian Regiments. Two instructors, one coxswain and one engine man, trained sixteen men in each landing boat. Each Master Instructor, an officer, supervised and was responsible for the training of from 12 to 15 landing boat crews. Informative records of each man's ability in operation of landing craft were compiled daily, with note to any special qualifications, and turned in to company commander of the brigade. These records were kept for the purpose of checking the ability of the personnel for the type of duty involved.

4. Amphibian Company Officers School.

Training Memorandum No. 27, dated November 21, 1942, set up the Amphibian Company Officers School under the direction of the Director of Training and Operations, Headquarters, Engineer Amphibian Command, to begin about December 5, 1942, each class to be given instruction for a period of four weeks, for the purpose of instructing officers of company grades in subjects applicable to the operations of engineer amphibian units, to acquaint them with the operations of infantry divisions and other tactical units with which amphibian units may operate, to instruct them in the subjects of staff functioning and planning, and to develop technique in the preparation and issuance of combat orders. The school is conducted similarly to the basic officers' courses at the Engineer School, giving lectures, practical work and guided tests, requiring the officers attending to mess and quarter in one unit under strict discipline. The first class included 78 officers who were detailed to take this four-week course.[3(a)]

B. Specialized Training by Outside Agencies for Officers.

One hundred eighty officers of this Command were detailed to twenty specialist schools outside the Command for various specialized training. Three such schools were exclusively for officers; seventeen for both officers and enlisted men. Specialized instruction was thus furnished in navigation, chemical warfare, assault boat operation, ordnance small arms repair, weather observation, and all echelons of hull, propellor, and power plant repair, maintenance, and construction.[3]

3(a) See appendix for schedule of instruction for Amphibian Co. Officers School.

3. See Appendix for itemized description of these schools and number of men attending.

7. Training by Office of Fleet Captain.

The Fleet Captain's Office is responsible for the trainings of enlisted personnel in the proper use of and safe operation of landing craft of amphibious vehicles and staff boats to form a nucleus of training per

C. Specialized Training by Command Agencies for Enlisted Men.

1. Basic Military Training.

Reference has already been made to the existence of the Training Battalion from August 20 to October 17, 1942, during which time basic military training was administered to 3781 enlisted men. Prior to the activation of the Training Battalion, soldiers joining this Command who had not received basic military training were required to be given basic military training by the Commanding Officers of their respective units. Three hundred thirty-five enlisted men received their basic training through unit basic military training programs. The Training Battalion Program extended for one month and covered the basic military subjects.[4] The course included range firing of the U. S. (Springfield) Rifle, Caliber .30, M1903, the U. S. (Garand) Rifle, Caliber .30, M-1, and the Browning Machine Gun, Caliber .30, HB.

2. School for Bakers and Cooks.

Training Memorandum No. 17, September 12, 1942, establishing the School for Bakers and Cooks at Camp Edwards, provided two schools for enlisted men, a school for Mess Sergeants, and a school for Cooks. The sergeant of each mess in the Engineer Amphibian Command was required to attend the Mess Sergeants School for one month. The Cooks School provided a full-time course of one month's duration. One rated cook per organization or mess and one student cook from each were detailed to this school. Proposed students were checked to determine their suitability. This school functioned as an independent unit quartering students in its own area and operating its own mess.

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4. See Appendix for Training Battalion Schedule.

3. The Radio Code School.

The Radio Code School which opened on July 6, 1942, offered a course for training enlisted men in Morse Code and in radio-telephone and radio-telegraphic procedure. The normal course lasting from four to six weeks is divided into Code and Procedure, the preliminary phase terminating in twenty hours' work on table nets simulating field nets in which the men work on returning to their companies. Upon completion of the training, a student is able to receive and transmit approximately fifteen words per minute. The operators are then monitored from the school to operate the company sets. In all, 883 men have received their training in this school.

4. Supervised Instruction in Swimming.

Training Memorandum No. 3, July 15, 1942, which set up the first training program for brigades, specified twelve hours of swimming and life saving for all officers and men. During the summer months the Command organized a supervised swimming instruction program by which life guards and instructors were provided for all units to supervise and institute swimming classes and practice. The purpose was primarily to teach the 40% of the enlisted men who could not swim and also, as realistically as possible, to remain afloat fully clothed in fatigues, shoes, packs, and guns. Their objective was to swim so equipped for a distance of fifty yards. One officer and two non-commissioned officers were trained to act as instructors to give this training. Training Memorandum No. 25, dated November 5, 1942, amplified this program, calling for the appointment of a Regimental Swimming Officer and a Battalion Swimming Officer for each such unit, and setting up a detailed schedule of classes for beginners and advanced swimmers.

5. The Maintenance School.

The Maintenance School was started as a part of the training for the maintenance companies during the period the First Engineer Amphibian Brigade was being organized. The first course in June was composed of the personnel of the 561st Maintenance Company. Due to lack of tools and equipment this course consisted of supervised maintenance of the boats in operation. This course was given at the Falmouth Marine Railway in Falmouth, Massachusetts, under the direct supervision of Lieutenant Colonel W. W. Dewitt assisted by Major F. D. Williams, Major W. F. Atchison, Major H. H. Yokes, Captain J. A. Bender, and Second Lieutenant H. W. Meylink. On July 15 the school was moved to the Crosby Yacht Building Company boat yard at Osterville. On July 25 the second course of one month's duration was started for selected enlisted men of the Second Brigade. 48 men took the motor maintenance course, 48 men the hull course, 24 men the machinists course, and 12 men the welder's and wheel repair course. The third course started on September 10 and was attended by the same number of personnel from the Third Brigade. Lieutenant Colonel Bullivant became director of this school on August 10, 1942. It is the mission of this school to train enlisted men in Third and Fourth Echelon Maintenance in motor and hull repair and to train machinist, welder, and propellor repair specialists. Approximately 132 men from the First Brigade attended the informal school; 264 enlisted men from the Second and Third Brigades received formal instruction in the second and third courses offered by the Maintenance School.

D. Specialized Training for Enlisted Men by Outside Agencies.

Number of Enlisted Men who have attended these Specialist schools:

Headquarters and Headquarters Co.	638
First Engineer Amphibian Brigade	50
Second Engineer Amphibian Brigade	411
Third Engineer Amphibian Brigade	950
Total for the Command	2049

This 2049 enlisted men were detailed to 28 specialist schools outside of the Command for specialized training. The special schools for the Command opened up on May 20, 1942. The school giving the greatest number instruction was the Higgins Industries School, New Orleans, Louisiana, to which 883 men were detailed for their basic course covering one month and approximately one half of that number was retained for additional three weeks of advanced training in the operation and maintenance of assault landing boats. Upon the return of the enlisted men from detached service to the specialists schools they were assigned to organizations requiring such specialists and each organization receiving such specialists were required to conduct company schools so that the training received could be imparted to the other men in that organization.

These 28 schools offered specialized instruction in the operating, assembling, tearing down, repairing of the various types of motors and engines, technical and mechanical courses of training and instruction in all phases of work required in the operation of the Engineer Amphibian Command.

It was necessary in order to handle the large numbers of personnel sent to the various schools from the Command to establish local detachments or to provide supervisory personnel and in some cases instructors. Thus 38 cadre operate the Boat School Detachment to house, mess, and supply students attending the Higgins Landing Boat School. Supervisory units were also established

in many of the other localities wherein these enlisted men attended the specialist schools, as in New Bedford for the Tent and Awning School, at Flint, Michigan, to handle personnel at the General Motors School, at Detroit, Michigan, for the Gray Marine Motor Company School, at Berkeley, California, for the Hall-Scott Motor Car Company School. In addition to this specialized instructional schooling was arranged so as to provide each company in the brigade with a trained barber and a trained cobbler.[5]

E. Officer Candidate Selection.

To comply with AR 625-5, "Officer Candidates", and to furnish enlisted men of the Engineer Amphibian Command with the opportunities granted them in this AR to apply for Officer Candidate Schools, Special Order No. 61, Paragraph 40, established on August 14, 1942, an Officer Candidate School Board for the Command, authorized to pass on applicants for Engineer Officer Candidate School, Fort Belvoir, Virginia. The Chief of Engineers' Office allotted to the Engineer Amphibian Command a quota of twenty-five candidates each two weeks. The Board is also authorized to approve for indorsement and forward applications for schools for which there is no quota allotted to the Command. The Board employs a Rating Scale covering prior service, education, background, character, and general fitness.[6] This form is made out during the personal interview of each applicant. The first officer candidates for Engineer Officer Candidate School at Fort Belvoir were dispatched August 29, 1942. Since that time the Command has selected 130 enlisted men to fulfill these quotas. Of the 130 men dispatched, only 12 have been returned to the Command as rejected officer candidates, a percentage of failure of 9%. In addition to filling the Engineer Officer Candidate School quota, the board has reviewed the applications of more than one thousand enlisted men for other schools and approved for forwarding 405. Of this 405 forwarded, have been eventually selected for Officer Candidate Schools other than the Engineers' School. The following officers have served as President of the Board since its inception: Colonel Timothy L. Mulligan, Major Charles Billion, Colonel Charles Tench, Colonel Francis H. Falkner.[7]

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6. See Appendix for copy of Officer Candidate School Rating Sheets.

7. The present membership of the Officer Candidate School Board will be found listed in the appendix.

F. Development of Amphibian Operations Doctrine

The Command was immediately faced with the problem of developing its own tactical doctrine for the conduct of its particular amphibian shore to shore operations. The development of this doctrine is herewith traced through the Training Memorandums issued by Command Headquarters in which this doctrine in its various aspects was laid down.

Training Memorandum No. 1, (Revised) dated July 27, 1942, set forth the basic doctrine of the Engineer Amphibian Command and the Engineer Amphibian Brigades, describing the mission, the tactical organization, and duties of both the Command and the Brigades.

Training Memorandum No. 2, dated July 7, 1942, set forth general instructions for shore operations, outlining in Section 1 the agencies operating ashore with tactical organizations, that is--the Shore Regiment, the Shore Party, the Boat Control Section, and the Near Shore Company; and in Section 2 setting up regulations for beach and hydrographic markers.

Training Memorandum No. 4, dated July 17, 1942, set forth the doctrine on Evacuation of Casualties by outlining the Medical Amphibian Service on the near shore, at sea, and on the far shore, and the responsibilities and duties of the Brigade Surgeon, the Medical Amphibian Battalion, and attached medical personnel.

Training Memorandum No. 6, dated July 23, 1942, elaborated the functions, operations, and training of the Medical Battalion to meet the duties imposed by Training Memorandum No. 4 on the Medical Battalion.

Training Memorandum No. 8, dated August 4, 1942, set forth instructions in handling of landing craft used by Engineer Amphibian Units, particularly in beaching, landing, retracting from the beach, towing, lowering and hoisting

the ramp where used, and further appended a glossary of nautical terms and definitions to insure uniformity in commands.

Training Memorandum No. 9, dated August 8, 1942, set forth "The Doctrines and Principles for the Tactical Employment of Weapons" laying down in Section 1 characteristics of the Weapons of the Engineer Amphibian Command units and in Section 2 the tactical use covering boat-mounted weapons on the approach to the far shore, the return to the near shore, the protection of near shore concentrations, and the employment of weapons on the far shore.

Training Memorandum No. 10, dated August 15, 1942, set forth the doctrines and principles for boat operations within the Regiment, describing the types of boats, organization, formation, shore to shore operations, chain of command, standard definitions, combat team, and combat unit landing.

Training Memorandum No. 11, dated August 18, 1942, set forth the doctrine and principles for control of boat traffic and boats at the beach by establishing a boat control section--its duties, its personnel and equipment, as well as its employment in landing operations, salvaging of stranded boats, and evacuation.

Training Memorandum No. 18, dated September 18, 1942, set forth the doctrine and principles for maintenance and operation of Signal Communications.

Training Memorandum No. 26, dated November 11, 1942, set forth a program for training the Engineer Amphibian Command Band from November 16, 1942, to May 15, 1943.

The Director of Plans and Training is at present engaged in developing a Training Manual for general use covering amphibian operations.

SECTION SEVEN

Operations.

A. Activation and Organization of Subordinate Engineer Amphibian Units.

Training Memorandum No. 1 (Revised), dated July 27, 1942, stated in Section III - Duties:

> "1. Engineer Amphibian Command. The duties of the Command Headquarters and such base units as are needed to insure the efficient operation of amphibian brigades may be defined as follows:
>
> > "B. The organization, training, equipping and administration of Engineer Amphibian Units."

In pursuance of this statement of policy the outstanding operation of the Engineer Amphibian Command has been the activation, organization, administration, training and equipping of the First Engineer Amphibian Brigade, the Second Engineer Amphibian Brigade, the Third Engineer Amphibian Brigade, the 411th Base Shop Battalion, and the 540th Shore Regiment. From personnel assigned to it and with equipment and supplies procured, the Engineer Amphibian Command has completely organized and dispatched from its home station at Camp Edwards, in some cases directly to a port of embarkation, the organizations set forth above, all within 140 days after its activation.

I. First Engineer Amphibian Brigade.

The First Engineer Amphibian Brigade was activated on June 15, 1942, five days after the activation of the Command, by General Order No. 4.[1] Colonel Daniel Noce assumed command of the Brigade, in addition to his duty as Commanding Officer of the Command.[2] He was succeeded by Colonel Henry C. Wolfe,[3] who,

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1. Authority for activation contained in AGO Letter 320.2 (6-11-42) MR-M-GN.
2. Also, by General Order No. 4, June 15, 1942.
3. By General Order No. 12, July 7, 1942.

on July 7, 1942, was relieved as Director of Training and Operations and assigned Commanding Officer of the First Amphibian Brigade. Colonel Wolfe was appointed Brigadier General after the departure of the Brigade from Camp Edwards.[4]

The order of activation not only activated the Brigade but also the component parts of the Brigade listed herein:

"First Engineer Amphibian Brigade

Headquarters
Headquarters Company
591st Engineer Boat Regiment
561st Engineer Company (Maintenance)
261st Medical Battalion
161st Ordnance Platoon
361st Quartermaster Battalion
531st Engineer Shore Regiment
Attached Medical"

To these units, General Order No. 17 added the 286th Signal Company.[5] As already noted, the personnel and equipment of the 37th Engr Regt was assigned to the newly activated 591st Boat Regiment.[6] The personnel and equipment of the 87th Engr Regt was assigned to the 531st Engineer Shore Regiment.[7] The personnel and equipment of Company A, 201st Quartermaster Bn was joined to the units of the 74th Quartermaster Bn (Hqs and Hqs Det, Companies A, B, C, D) and both were transferred to the 361st Quartermaster Bn.[8]

The total strength thus absorbed was approximately 49 officers and 2084 enlisted men. By assignment of filler replacements the Engineer Amphibian Command brought the Brigade to complete strength within forty-nine days after

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4. WD, S/O 258, Par 1, September 23, 1942, announced this appointment, effective September 18, 1942.

5. WD Letter, AGO, 7-11-42, File AG 320.2 (7-9-42) MR-M-GN.

6. WD Letter 320.2 (6-11-42)

7. Idem.

8. Idem.

it activation. By the end of July the First Brigade had reached its maximum strength, which at the time of its departure from Camp Edwards reached 363 officers and 7065 enlisted men.

Immediately upon activation training was instituted within the Brigade under the direction of the Command Headquarters. Training Memorandum No. 1, dated June 27, 1942, laid down the mission and directions for training of all the units within the Brigade--339 officers, 21 warrant officers, and 6839 enlisted men.

The Boat Unit Detachment of Command Headquarters supervised the initial boat training of the 591st Boat Regiment which began as early as June 22, 1942, 12 days after activation, at the Waquoit Island Base. At this early date a lack of equipment forced this unit to divide its activities between boat training and shore training supervised by the Weapons Section at Camp Edwards and later at Popnnesset Beach range. Under the Weapons Section's direction a full week's range training for anti-aircraft defense was given the entire boat regiment covering preparatory instruction in markmanship, and two days' range firing of 30 and 50 calibre machine guns. Upon the arrival of sufficient boat equipment and after approximately three weeks of instruction from Fleet Captain's Office the Regiment began to conduct its own maneuvers. The regiment conducted regimental basic schools for all officers in piloting and navigation. Additional training for 42 regimental officers was given in advanced navigation.

The 561st Boat Maintenance Company and 591st Boat Regiment Maintenance Companies carried on their maintenance training at the Falmouth Marine Railways, Falmouth, Massachusetts. Third and Fourth Echelon Maintenance Training was succeeded by actual operations in boat repair when boat operations of the Boat Regiment produced a need therefor.

The 531st Engineer Shore Regiment commenced its training at Camp Edwards

on June 22. Guided by the provisions of Training Memorandum No. 2,Headquarters, Engineer Amphibian Command, dated July 3, 1942, "General Instructions for Shore Operations," Officers' Schools were established for training in tactical operations and a Non-Commissioned Officer Schools for training in general Engineering Subjects necessary in shore operations. In addition the regiment received its week of weapons training on the range for anti-aircraft defense under the Weapons section's control. The training instruction, and particularly the use of the Sand Table to teach general engineering shore tactics, brought forth commendation from the Commanding Officer of the Engineer Amphibian Command.

The 361st Quartermaster Battalion organized its basic training under directions of Training Memorandum No. 1, giving company instructions in truck operation, maintenance, and gas supply. The 261st Medical Battalion carried on its training under the training doctrine set forth in Training Memorandum No. 6, "The Medical Battalion--Engineer Amphibian," July 23, 1942. The 286th Signal Company placed its radio operators in the Command Code School.

Brigade Headquarters instituted and directed special training for all enlisted personnel in the Brigade in the weekly schedule in swimming and life saving, first aid, and signaling. These training programs were all instituted and carried on despite the recent activation, the lack of trained non-commissioned officers due to the absence of cadre for many units, the novelty of the boat operations, and the difficulties of procurement and supply.

Liaison was maintained with the Amphibious Training Command, and at such time as the Boat Regiment had sufficiently completed its initial training combined training operations were begun with the 45th Division, (former Oklahoma National Guard) which had been moved to Camp Edwards under the control of the Amphibious Training Command to receive this amphibious training. These combined operations were supervised by both the Engineer Amphibian Command and

Amphibious Training Command assisted by United Nations, Naval, Marine and Coast Guard visiting officers.

On July 25, 1942, 45 days after activation these training programs were interrupted when the First Brigade was alerted for overseas movement and between the first and fifth days of August 1942, the First Amphibian Brigade, under the command of Colonel Wolfe, departed Camp Edwards for New York Port of Embarkation and subsequent movement to the United Kingdom, Base No. 2, European Theater of Operations, one month and 20 days following its activation.[9]

At the time of its departure from Camp Edwards for the Port of Embarkation, the Brigade was commanded by Colonel Henry C. Wolfe. Its constituent elements comprised the units set forth below under the command of the officers indicated:

Headquarters.....
Headquarters Company.....
591st Engineer Boat Regiment.....
561st Engineer Company (Maintenance)..
261st Medical Battalion.....
161st Ordnance Platoon.....
361st Quartermaster Battalion.....
531st Engineer Shore Regiment.....
286th Signal Company.....

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9. WD Auth: WD Letter July 25, 1942.

C.

Brig. Gen. Henry C. Wolfe
1st Lt. Harry E. Jacobsen
Lt. Col. Thomas L. Allen
Major Earl P. Houston
Major Merle E. Smith
2d Lt. Sidney Berger
Capt. Frederick G. H. Smith
Colonel Roland C. Brown
Capt. Robert P. Zebley

A cadre of 200 men was furnished by the First Brigade. By daily assignment of filler replacements joining the Engineer Amphibian Command, the Second Brigade had, on June 30, 18 days after activation, reached a strength of 212 officers and 2507 enlisted men. It was brought to full strength of 367 officers and 7018 enlisted men some sixty days after its activation. War Department directives, however, required on September 1, 1942 the shipment of one battalion of the 532d to Fort Bragg, North Carolina and again the shipment of the 2nd Battalion to the same post, although one Battalion was replaced by the transfer of a Battalion of 133rd Engineers from Fort Lewis, Washington. The other Battalion had to be refilled with filler replacements. At the time of its departure from Camp Edwards, October 1, 1942, the total strength of the Second Brigade reached 361 officers and 6906 enlisted men.

The Second Brigade began its training period on June 22 when the 532d Engineer Shore Regiment and Brigade troops commenced anti-aircraft defense training under the Weapons Detachment at the Popnnessett Bay range as well as camp training programs as directed by Training Memorandum No. 3, July 15, 1942, prescribing a training program for the Second Engineer Amphibian Brigade.

The 592d Engineer Boat Regiment, commanded by Colonel Donald Hawkins, was ordered to the new base at Cotuit, where, with the assistance of the 532d, before training began, a new regimental camp was completely constructed on Cotuit Bay, named by the regiment Camp Candoit. Upon completion of the organization of the camp, the 592d commenced its own boat training under the direction of the Boat Unit Detachment, which itself moved from Waquoit Base to Cotuit. The Brigade inaugurated, in compliance with Circular No. 35, August 10, 1942, a week's basic school for piloting for all boat officers. The regimental boat training was succeeded by Regimental operations at Dead Neck Beach, Cotuit, Martha's Vineyard, and Waquoit Bay and later by night landing problems.

II. Second Engineer Amphibian Brigade.

The Second Engineer Amphibian Brigade was activated on June 20, 1942, at Camp Edwards, by General Order No. 8, in compliance with AGO Letter, dated June 12, 1942.[10] Colonel Daniel Noce, CE, assumed command of the Second Brigade upon its activation. He was succeeded by Colonel William J. Heavey, CE, who assumed command of the Brigade on August 24, 1942. Colonel Heavey was appointed Brigadier General on September 10, 1942.[11]

The Brigade consisted of the following units, each of which was itself activated on June 20 at Camp Edwards by General Order No. 8:[12]

"2nd Engineer Amphibian Brigade

Headquarters
Headquarters Company
592d Engineer Boat Regiment
562d Engineer Company (Maintenance)
262d Medical Battalion
162d Ordnance Platoon
362d Quartermaster Battalion
532d Engineer Shore Regiment
Attached Medical Units."

General Order No. 17, July 17, 1942, added the 287th Signal Company. General Order No. 47, September 7, 1942, "Redesignation of Unit" withdrew Company B, 362d Quartermaster Battalion and Company B, 363d Quartermaster Battalion from their present battalions and redesignated Company B, 362d Ordnance Battalion (Q) and Company B, 363d Ordnance Battalion (Q) with all personnel, property and equipment transferred to the Ordnance Department.[13]

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10. Letter AGO, Washington, D.C., File 302.2 (6-11-42) MR-M-GN.

11. WD, S/O September 10, 1942, announced this appointment.

12. General Order No. 8, WD Auth: Ltr. 320.2 (6-11-42)

13. WD Auth: WD Cir. 274 C.S.

The general training of the Second Brigade progressed much along the lines of the First Brigade. After a basic boat training period of about three weeks duration, although the Second Brigade had only reached two thirds of its authorized strength, the Boat Regiment and one battalion of the Shore Regiment began coordinated amphibious training on July 31, 1942.

After about two weeks of amphibious training, the units of the Second Brigade were forced to take over the combined training work with the 45th Division, upon the receipt of overseas movement orders for the First Brigade. The Second Brigade finished the combined training schedule withthe 45th Division and then proceeded with combined training with the 36th Division, all at Camp Edwards, which training was completed about October 1, 1942.

On August 16 the first maneuvers of the Engineer Amphibian Command took place with an "attack" on Martha's Vineyard Island in combined operation with the 45th Division, which furnished the amphibious trained troops, along with ranger troops furnished by the Amphibious Training Command. Ranger troops were landed on Martha's Vineyard to seize an airport at "Green Beach". Main landing assaults established beach heads on the island at two other points on "Red" and "Yellow" Beaches at which the division was disembarked. Distinguished guests observing the operations were:

War Department:
Colonel William A. Bessell, Office of Chief of Engineers,
Colonel F. J. Wilson
Lt. Colonel R. H. Chard, Command and General Staff School,
Lt. Colonel J. S. Keller, Army Ground Forces
Lt. Colonel E. B. Gallant, General Staff (OPD)
Lt. Colonel V. D. Whatley
Major C. E. Hoz
Major H. G. Simonite

Other:
Vice Admiral L. O. Colbert, Coast Guard and Geodatic Survey
Colonel Robert Montague, USMC
Commander R. B. Daggett, USN, and
Lt. Commander J. R. Leeds, USN, both on the Staff of
Admiral Hewitt, USN

Early in September reorganization of the Brigade was projected to insure closer coordination between the Boat and Shore Regiments by organizing a regiment with Boat and Shore Battalions under one regimental headquarters. These projected new Tables of Organization called for three Engineer Amphibian Regiments within the Brigade built around an organization containing one Boat Battalion and one Shore Battalion thus providing a regimental combat team of a Boat Battalion supported by its own Shore Battalion. The Command in a letter to the Commanding General, Services ~~and~~ of Supply, outlined a proposed Table of Organization, which reorganization was approved by the War Department on September 23, 1942.

The reorganization, one approved, compelled the activation within the Brigade of a new Regiment the 542d Engineer Amphibian Regiment. This Regiment was activated on September 28, 1942 by General Order 54. The Brigade itself was reorganized by General Order 54 requiring the 592d Boat Regiment to transfer one Boat Battalion to the 542d and one to the 532d and requiring the 532d Shore Regiment to transfer one Shore Battalion to the new 542d and one to the 592d. Thereafter regiments were ~~denominated~~ designated as "Engineer Amphibian Regiments". The regimental headquarters of the 542d was provided cadre from ~~sister~~ other regiments within the 3rd Brigade and by the assignment of filler replacements. Training was further impeded by War Department directives removing the two battalions of the 532d to Fort Bragg and the consequent need for replacing these battalions by assignment of filler replacements building up new battalions.

Under date of September 29, 1942, the Second Brigade, commanded by Gen. William F. Heavey, was ordered to the Amphibious Training Center at Camp Carrabelle, Florida.[14]

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14. Services of Supply SPX 370.2 (9-28-42)OB-S-SPOTP-M.

Early in September reorganization of the Brigade was projected to insure closer coordination between the Boat and Shore Regiments by organizing a regiment with Boat and Shore Battalions under one regimental headquarters. These projected new Tables of Organization called for three Engineer Amphibian Regiments within the Brigade built around an organization containing one Boat Battalion and one Shore Battalion thus providing a regimental combat team of a Boat Battalion supported by its own Shore Battalion. The Command in a letter to the Commanding General, Services ~~and~~ of Supply, outlined a proposed Table of Organization, which reorganization was approved by the War Department on September 23, 1942.

The reorganization, one approved, compelled the activation within the Brigade of a new Regiment the 542d Engineer Amphibian Regiment. This Regiment was activated on September 28, 1942 by General Order 54. The Brigade itself was reorganized by General Order 54 requiring the 592d Boat Regiment to transfer one Boat Battalion to the 542d and one to the 532d and requiring the 532d Shore Regiment to transfer one Shore Battalion to the new 542d and one to the 592d. Thereafter regiments were ~~denominated~~ designated as "Engineer Amphibian Regiments". The regimental headquarters of the 542d was provided cadre from ~~sister~~ other regiments within the 3rd Brigade and by the assignment of filler replacements. Training was further impeded by War Department directives removing the two battalions of the 532d to Fort Bragg and the consequent need for replacing these battalions by assignment of filler replacements building up new battalions.

Under date of September 29, 1942, the Second Brigade, commanded by Gen. William F. Heavey, was ordered to the Amphibious Training Center at Camp Carrabelle, Florida.[14]

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14. Services of Supply SPX 370.2 (9-28-42)OB-S-SPOTP-M.

The movement was by rail and all units with the exception of the 542d Engineer Amphibian Regiment departed this station between September 28 and October 5, 1942. This Brigade then received orders on November 1, 1942[15] to move to a staging area at Fort Ord, California, preparatory to movement overseas. This movement took place simultaneously from Camp Carrabelle, Florida, and, in the case of the 542d Engineer Amphibian Regiment, from Camp Edwards, Massachusetts, during the period November 2, to November10, 1942. The entire Brigade was concentrated at Fort Ord ~~staging area~~ California by November 18, 1942, about two months and 20 days after the Brigade was brought to approximate full strength.

At the time of its departure from Camp Edwards, the Brigade numbered 361 officers and 6906 enlisted men and was commanded by Brigadier General William J. Heavey. Its units comprised the following commanded by the officers listed below:

Headquarters.....
Headquarters Company.....
592d Engineer Amphibian Regiment.....
562d Engineer Company (Maintenance)..
262d Medical Battalion.....
162d Ordnance Platoon.....
362d Quartermaster Battalion.....
532d Engineer Amphibian Regiment.....
542d Engineer Amphibian Regiment.....
287th Signal Company.....
362nd Ordnance Bn (Q) - - - - - - - -

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15. Directive AG 370.2 (11-1-42) OB-S-SPOPT-M.

Brig. Gen. William J. Heavey
1st Lt. Charles E. Stevenson
Col. Donald C. Hawkins
Capt. John A. Wells
Lt. Col. Fielding M. Pope
1st Lt. Seymour G. Fiddler
Capt. Keith G. Hooker
Lt. Col. John F. Steiner
Lt. Col. Robert J. Kasper
Capt. Raymond Kelley
362d Ordnance Bn (Q).....1st Lt. Seymour G. Lederer

III. Third Engineer Amphibian Brigade.

The Third Engineer Amphibian Brigade was activated at Camp Edwards by General Order No. 33, on August 8, 1942. The order of activation listed and activated the following units within the Brigade:[16]

Third Engineer Amphibian Brigade

Headquarters
Headquarters Company
593d Engineer Boat Regiment
533d Engineer Shore Regiment
563d Engineer Boat Maintenance Co.
263d Medical Bn
163d Ordnance Platoon
363d Quartermaster Bn
288th Signal Co., Amphibian
Attached Medical

General Order No. 47, September 7, 1942, "Redesignation of Unit" withdrew Company B, 363d Quartermaster Battalion from its present battalion and redesignated Company B, 363d Ordnance Battalion (Q) with all personnel, property and equipment transferred to the Ordnance Department.

On August 10, 1942, Colonel David A. D. Ogden, CE, assumed command of the Third Engineer Amphibian Brigade.[17] Colonel Ogden was appointed Brigadier General on September 18, 1942.[18]

The Third Brigade had an approximate strength upon activation of 38 officers and 808 enlisted men. The 808 enlisted men constituted a cadre furnished by Army Ground Forces. By daily assignment of filler replacements

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16. General Order No. 33 (8-8-42) as amended by General Orders No. 34 and 42, WD Auth: Ltr. CE 320.2, 1st Ind.

17. Auth: WD, AGO Ltr. 8-2-42; Engineer Amphibian Command SO 60, Par. 26 (8-13-42)

18. WD SO 258, Par 1 (9-23-42) effective September 18, 1942, announced this appointment.

WAR DEPARTMENT
Office of The Adjutant General
Washington 25, D. C.

AG 210.31
(27 Mar 44)PO-A

BDC/1b1/2416
Br. 77167 Mun.

RESTRICTED

Subject: Movement Orders. AIRMAIL 30 March 1944.

Thru : Commanding Officers Concerned. RESTRICTED

To : Officers Involved.

Classification changed to A.S.F.
By Authority of ~~the Chief of Engineers~~
H. G. King Lt. Col.
(Initials) jch
(Date)

SECRET
Auth: T. A. G.
Initials: [illegible]
Date: 30 Mar 44

1. Each of the following-named officers is relieved from assignment and duty with station indicated and assigned to the European Theater of Operations, London, England, effective 15 April 1944. He will proceed from present station to Washington, D. C., reporting upon arrival to The Adjutant General, Room 1050, Munitions Building, for temporary duty. Upon completion of this temporary duty, he will proceed from Washington, D. C., and/or New York, N. Y., to London, England, reporting upon arrival to the Commanding General, European Theater, for duty as specified below his name.

Major Herbert M. Payne, 0252819, SC (Signal Officer)	Hq. 4466 SCU, Camp Gordon Johnston, Florida
Captain Frank H. Walk, 0431995, CE (S-3)	Hq. 4469 SU, Engineer Amphibian Command, Cp Gordon Johnston, Fla.
First Lieutenant Leonard O. Erickson, 0497866, CE- (Hq. Commandant)	4th EAUTC, Geiger Field, Washington
First Lieutenant Saul Simon, 01101660, CE (Assistant S-2)	Camp Gordon Johnston, Florida

2. Permanent change of station. Travel directed is necessary in the military service. 1-5000 P 431-01, 02, 03, 07, 08 A 0425-24; 1-5000 P 432-02, 03 A 0425-24. Travel by military, naval or commercial aircraft, Army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air (APR-3-181179-AGF) from Washington, D. C., and/or New York, N. Y., to London, England, is necessary for the accomplishment of an emergency war mission. Baggage allowance of fifty-five (55) pounds, to include all personal effects, is authorized while traveling by military, naval or commercial aircraft. In lieu of subsistence, a flat per diem of $7.00 is authorized while traveling and for the period of temporary duty payable in accordance with existing law and regulations.

3. SPECIAL INSTRUCTIONS: Temporary APO 4377, c/o Postmaster, New York, N.Y. Ship baggage, limited to one hundred twenty (120) pounds, through the New York Port of Embarkation, Brooklyn, New York. Provisions of POR apply. Clothing, winter only, will be taken.

By order of the Secretary of War:

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

[signature]
Adjutant General

3 Incls:
AG ltr 22 Mar 44
Travel Book
AG Form #43

Distribution: Each Officer (4)
Offrs Br, Rec Sec, AGO, 1528, Munitions
Chief of Engineers, Rm 1110A, New War Dept.
Chief Signal Officer, Rm 3C333, Pentagon
Major Roach, Rm 1C915, Pentagon
CG, 4th SC, Atlanta, Georgia
OIC, Embarkation APO, 464 Lexington Ave., New York, NY (2)
Army Postal Service, Rm 4A514, Pentagon (2)
Port Trans Offr, NYPE, Brooklyn, NY
Miss Donovan, Rm 2416, Munitions

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WAR DEPARTMENT
The Adjutant General's Office
Washington, D. C.

AG 210.31
(25 Sep 43)PO-A

Classification changed to RESTRICTED
By Authority of the Chief of Engineers
7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jcb

BDC/1b1/1gp/1515 Mun.
Br. 77167

Subject: Movement Orders.

28 September 1943.

SECRET

Thru: Commanding Officer,
Camp Reynolds,
Transfer, Pennsylvania.

Auth: T. A. G.
Initials: W. L. D.
Date: 28 Sep 43

To: Captain James C. Williams, O-418623, MC.

1. The Secretary of War revokes so much of the unexecuted portion of Classified Letter Orders, AG 210.31 (16 Aug 43)PO-A, 19 August 1943, subject: Movement Orders, Shipment RS-870, as pertains to Captain James C. Williams, O-418623, MC.

2. The Secretary of War relieves Captain James C. Williams, O-418623, MC, now at Camp Reynolds, Transfer, Pennsylvania, from assignment to station outside the continental limits of the United States, and assigns him to the European Theater of Operations, London, England, effective upon departure in compliance with this order. He will proceed from Transfer, Pennsylvania to Washington, D.C. reporting upon arrival to The Adjutant General, Room 1048, Munitions Building, for temporary duty, and upon completion of this temporary duty, he will proceed from Washington, D. C. and/or New York, New York to London, England, reporting upon arrival to the Commanding General for duty with the Assault Training Center.

3. TDN 1-5000 P 431-01, 02, 03, 07, 08 A 0425-24; 1-5000 P 432-02, 03 A 0425-24. Travel by military, naval or commercial aircraft, Army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air (APR-2-105792) from Washington, D. C, and/or New York, New York to London, England, is necessary for the accomplishment of an emergency war mission.

4. A baggage allowance of fifty-five (55) pounds, to include all personal effects, and an excess baggage allowance of one hundred (100) pounds (motion sickness preventive) is authorized while traveling by military, naval or commercial aircraft. Excess baggage to be shipped will be limited to three hundred seventy (370) pounds, (120 pounds authorized and 250 pounds (official equipment), and will be marked with the officer's full name, rank and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York.

5. In lieu of subsistence a flat per diem of $7.00 is authorized while traveling on official business and while absent from permanent station, in accordance with existing law and regulations.

6. Prior to departure from present station, officer will have in his possession WD MD Form 81, showing inoculations and immunizations, including typhus, required before leaving the continental limits of the United States, and will comply with the provisions of Circular 85, WD, 26 March 1943, reference medical requirements. Necessary field equipment will be obtained at destination.

SECRET RESTRICTED

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SECRET RESTRICTED

AG 210.31
(25 Sep 43)PO-A

- 2-

BDC/lbl/lgp/1515

28 September 1943.

6. Officer should advise his correspnndents that mail will be addressed to him at APO 4300, c/o Postmaster, New York, New York. Immediately upon arrival at destination and assignment to unit or organization, the officer will complete and mail V-mail change of address forms (WD, AGO Form No. 971) to advise friends and relatives of his permanent APO and cable address. He will also send a completed WD AGO Form No. 204 to the theater postal officer.

/s/ W. L. Day
Adjutant General

Distribution:

Officer (4)
Officers' Branch, Record Section, AGO, Rm 2429, Munitions Bldg.
Surgeon General, Rm 1010, Maritime Bldg.
Surgeon General, Attn: Capt. Stewart, Rm 614, Maritime Bldg.
Army Postal Service, Rm 3E 561, Pentagon (2)
OIC, Embarkation APO, 464 Lexington Ave., NY, NY (2)
CG, NYPE, Brooklyn, NY
Ch/Transportation, Movement Div., Rm 4D 689, Pentagon
Chief of Transportation, Traffic Control, Passenger Br., Rm 1D 733, Pentagon
Class. & Repl. Br., AGO, Rm 1E 917, Pentagon
Class. & Repl. Br., Attn: Major Hedahl, Rm 1C 915, Pentagon
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Port Transportation Officer, NYPE, Brooklyn, NY
CO, Cp Edwards, Mass.

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~~ification changed~~ ~~RESTRICTED~~
By Authority of ~~the Chief of Engineers~~ WAR DEPARTMENT
7 Aug 45 The Adjutant General's Office
(Date) (Initials) Washington 25, D. C.

In reply
refer to: AG 201 Wood, Thomas W.
(18 Nov 43)PO-A

22 November 1943.
~~S E C R E T~~
Auth: T. A. G.
Initials: TWCM.
Date: 22 Nov 1943.

Subject: Orders.

Thru: Commanding General,
Engineer Amphibian Command,
Camp Edwards, Massachusetts.

To: Captain Thomas W. Wood, Corps of Engineers.

1. Captain Thomas W. Wood, 0244671, Corps of Engineers, is relieved from assignment and duty with Headquarters, Engineer Amphibian Command, Camp Edwards, Massachusetts, is assigned to Force Headquarters Section (Army), Amphibious Training Command, Atlantic Fleet, Norfolk, Virginia for duty with the Joint Army-Navy Experimental and Testing Board with station at Fort Pierce, Florida. Captain Wood will proceed to Fort Pierce, Florida and report to the senior Army Officer present whether such officer is either assigned or detailed to temporary additional duty with the Joint Army-Navy Experimental and Testing Board.

2. Travel directed is necessary in the military service. 1-5000 P 431-01, 02, 03, 07, 08 A 0425-24. Travel by officer or his dependents by privately owned automobile is authorized. Detached service for officer's travel authorized, par. 1 e, AR 605-160, changes No. 1.

By order of the Secretary of War:

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

W. C. McWilliam
Adjutant General.

Distribution:
Chief of Engineers, Rm 3001, New War Dept.
CO, Force Hq Sec (A), Amph Tng Comd, Atlantic Fleet, Norfolk, Va.
CO, Fort Pierce, Fla.
Officers' Br Record Section, Rm 2414, Munitions Bldg.
Room 1516, Munitions Bldg.

37

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Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ G.S.F.
7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch

SECRET
Auth: T.A.G.
Initials:
Date:

AG 201-Speir, Frank W. 1st Ind. BDC/sbs/rsg/1515-MU
(21 Oct 43)PO-A. Br. 77167

War Department, A. G. O., Washington 25, D. C., 23 November 1943.

To: Commanding Officer, Engineer Amphibian Command, Camp Edwards, Massachusetts.

Captain Speir was relieved from assignment to the Engineer Amphibian Command, Camp Edwards, Massachusetts and assigned to Headquarters, NATOUSA, Algiers, Algeria for duty with Ordnance Section, 14 November 1943 per paragraph 3, Special Order 282 Headquarters NATOUSA current series.

By order of the Secretary of War:

Incl.
n/c

A. L. Day
Adjutant General.

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Classification changed to RESTRICTED
By Authority of the Chief of Engineers AG 210.31 (25 Sept 43) PO-A
(Date) (Initials)

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The Adjutant General's Office
Washington, D. C.

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Classified

BDC/lbl/lgp/1515 Mun.
Br. 77167

Subject: Movement Orders.

28 September 1943.

SECRET
Auth: T. A. G.
Initials:
Date: 28 Sep 43

Thru : Commanding Officer,
Camp Reynolds,
Transfer, Pennsylvania.

To : Captain James C. Williams, O-418623, MC.

1 copy mailed

1. The Secretary of War revokes so much of the unexecuted portion of Classified Letter Orders, AG 210.31 (16 Aug 43)PO-A, 19 August 1943, Subject: Movement Orders, Shipment PS-870, as pertains to Captain James C. Williams, O-418623, MC.

2. The Secretary of War relieves Captain James C. Williams, O-418623, MC, now at Camp Reynolds, Transfer, Pennsylvania, from assignment to station outside the continental limits of the United States, and assigns him to the European Theater of Operations, London, England, effective upon departure in compliance with this order. He will proceed from Transfer, Pennsylvania to Washington, D. C. reporting upon arrival to The Adjutant General, Room 1048, Munitions Building, for temporary duty, and upon completion of this temporary duty, he will proceed from Washington, D. C. and/or New York, New York to London, England, reporting upon arrival to the Commanding General for duty with the Assault Training Center.

210.31 (25 Sept 43)

3. TDN 1-5000 P 431-01, 02, 03, 07, 08 A 0425-24; 1-5000 P 432-02, 03 A 0425-24. Travel by military, naval or commercial aircraft, Army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air (APR-2-105792) from Washington, D. C. and/or New York, New York to London, England, is necessary for the accomplishment of an emergency war mission.

4. A baggage allowance of fifty-five (55) pounds, to include all personal effects, and an excess baggage allowance of one hundred (100) pounds (motion sickness preventive) is authorized while traveling by military, naval or commercial aircraft. Excess baggage to be shipped will be limited to three hundred seventy (370) pounds, (120 pounds authorized and 250 pounds (official equipment), and will be marked with the officer's full name, rank and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York.

5. In lieu of subsistence a flat per diem of $7.00 is authorized while traveling on official business and while absent from permanent station, in accordance with existing law and regulations.

6. Prior to departure from present station, officer will have in his possession WD MD Form 81, showing inoculations and immunizations, including typhus, required before leaving the continental limits of the United States, and will comply with the provisions of Circular 85, WD, 26 March 1943, reference medical requirements. Necessary field equipment will be obtained at destination.

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~~RESTRICTED~~ ~~SECRET~~

Classification changed to ~~RESTRICTED~~ By Authority of ~~the Chief of Engineers~~ 9-5-F
7 Aug 45 (Date) H. G. King, Jr. Col (Initials)

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WAR DEPARTMENT
The Adjutant General's Office
Washington 25, D. C.

AG 210.31
(27 Sep 43)PO-A

BDC/lgp/1515 Mun.
Br. 77167

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1 October 1943.

~~S E C R E T~~
Auth: T. A. G.
Initials: [illegible]
Date: 1 Oct 43

Subject: Movement Orders.

Thru : Commanding Officers Concerned.

To : Officers Involved.

1. The Secretary of of War revokes so much of Classified Letter Orders, AG 210.31 (23 Aug 43)PO-A, 27 August 1943, Subject: Movement Orders, Shipment OM-727, as pertains to each of the following-named officers. Shipment, OM-727-KK.

Major Hugo Van Kuyck, O-912046, CE	Hq. Engr. Amp. Comd., Camp Edwards, Massachusetts.
Major Francis Duquet, O-199251, QMC	Hq. 1212th Service Unit, Fort Ontario, New York.

2. The Secretary of War relieves each of the above-named officers from assignment and duty as indicated, and assigns him to the European Theater of Operations, London, England, effective upon departure in compliance with this order. He will proceed from his present station to Washington, D. C. reporting upon arrival to The Adjutant General, Room 1048, Munitions Building, for temporary duty, and upon completion of this temporary duty, he will proceed from Washington, D. C. and/or New York, New York to London, England, reporting upon arrival to the Commanding General for duty.

3. TDN 1-5000 P 431-01, 02, 03, 07, 08 A 0425-24; 1-5000 P 432-02, 03 A 0425-24. Travel by military, naval or commercial aircraft, Army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air (APR-2-100956-WDP) from Washington, D. C. and/or New York, New York to destination, is necessary for the accomplishment of an emergency war mission.

4. A baggage allowance of fifty-five (55) pounds to include all personal effects, is authorized while traveling by military, naval or commercial aircraft. Baggage to be shipped will be limited to one hundred twenty (120) pounds, and will be marked with the officer's full name, rank and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York.

5. In lieu of subsistence a flat per diem of $7.00 is authorized in accordance with existing law and regulations while traveling and for a period of not to exceed thirty (30) days while at any one station within the continental limits of the United States.

6. Prior to departure from present station, each officer will be equipped with appropriate side arms, have in his possession WD MD Form 81, showing inoculations and immunizations, including typhus, required before leaving the continental limits of the United States, and will comply with the provisions of Circular 85, WD, 26 March 1943, reference medical [illegible] All necessary field equipment will be obtained at destination.

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7. Each officer should advise his correspondents that mail will be addressed to him at APO 4300, c/o Postmaster, New York, New York. Immediately upon arrival at destination, and assignment to unit or organization, each officer will complete and mail V-mail change of address forms (WD, AGO Form No. 971) to advise friends and relatives of his permanent APO and cable address. He will also send a completed WD AGO Form No. 204 to the theater postal officer.

THE ADJUTANT GENERAL'S OFFICE — OFFICIAL — WAR DEPARTMENT

Ben D. Fullerton

Adjutant General.

Distribution:

Each Officer (4)
Officers' Branch, Record Section, AGO, Rm 2429, Munitions Bldg.
Chief of Engineers, 1110-A, New War Dept
Quartermaster General, Rm 2087, Temp B.
Army Postal Service, Rm 3E 561, Pentagon (2)
OIC, Embarkation APO, 464 Lexington Ave., NY, NY (2)
MissDonovan, Rm 1515, Munitions
Ch/Transportation, Movements Div., Rm 4D 689, Pentagon
Ch/Transportation, Traffic Control, Passenger Br., Rm 1D 733, Pentagon
Port Transportation Officer, NYPE, Brooklyn, NY
CG, NYPE, Brooklyn, NY
Class. & Repl. Br., Attn: Major Hedahl, Rm 1C 915, Pentagon

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WAR DEPARTMENT

The Adjutant General's Office
Washington, D. C.

AG 210.31 (12 Aug 43) PO-A — Classification changed to ~~RESTRICTED~~ By Authority of ~~the Chief of Engineers~~ 9.S.F. ..7 Aug 45.. (Date) H. 9 Tuttle Lt. Col. (Initials) gjh

BDC/1b1/fcs/1515 Mun.
Br. 77167

25 August 1943.

~~S E C R E T~~
Auth: T A G
Initials: JBC
Date: 25 Aug 43.

Subject: Movement Orders

Thru : Commanding Officers Concerned

To : Officers Involved

1. The Secretary of War relieves each of the following-named officers from assignment and duty, present station, and assigns him to the European Theatre of Operations, London, England, effective date as specified. He will proceed from present station to Washington, D. C., reporting upon arrival to The Adjutant General, Room 1048, Munitions Building, for temporary duty, and upon completion of this temporary duty, he will proceed from Washington, D. C., and/or New York, New York, to London, England, reporting upon arrival to the Commanding General, European Theatre for duty as indicated.

Effective on completion present course on or about 28 August 1943.
APR-3-89519

Lt. Col. William B. Kunzig, 016825, Inf. (Overseas duty-Chief Inf. Sub-Section, Assault Trng. Center) — C & GS School, Fort Leavenworth, Kansas

Effective at the earliest practicable date
APh-3-89519

Major Edwin J. Wolf, 0910396, CE (Overseas duty-Chief Engr. Sub-Section, Assault Trng. Center) — 3d. Amphibian Brigade, Ft. Ord, Calif.

Effective not later than 1 September 1943
APR-3-89520

Col. William H. Spiedel, 011074, Inf. (Overseas duty-Deputy chief, to handle the planning for other types of operations-inter-allied) — Hq. DTC, Banning, Calif.

Lt. Col. Arthur Bliss, 016134, FA (Overseas duty-Troop branch-analysis in use of SOS troops and preparation and control of troop requirements.) — Hq. Sta. Cp. (Mail to leave address: 2341 Ridgeway Avenue, Evanston, Ill., c/o Van Ness)

Lt. Col. George S. Speidel, Jr. 018406, Inf. (Asst. planner in supply and administration.) — FA School, Ft. Sill, Okla. with T/D at C&GSS, Ft. Leavenworth, Kan.

Lt. Col. William Whipple, 018024, CE (Chief of installations division of the Office Coordination of the OI construction program.) — Hq. 2nd Army, Memphis, Tenn.

~~SECRET~~
~~RESTRICTED~~

Lt. Col. Harold L. Fuller, 0234318, Inf.
(Overseas duty-Chief of Administration.)

Staff Officers Pool, ASF, Banning, Cal & T/D, C&GSS, Ft. Leavenworth, Kan.

Effective not later than 1 September 1943
APR-3-89521

Lt. Col. Sidney Negrotto, 06711, GSC
(Overseas duty-Hq. ETO., G-2)

9th Armored Div., Ft. Riley, Kan.

Maj. Kenneth P. Burns, 0282719, FA
(Overseas duty-Hq. ETO., G-2)

79th Inf. Div., Yuma, Ariz.

Lt. Col. Clio A. Harper, 0232778, MI
(Overseas duty-Hq. ETO., G-2)

81st Inf. Div. Cp. Young, DTC, Cal.

Maj. Edward E. Williamson, 0360356, CAC
(Overseas duty-Hq. ETO., G-3)

Hq. Eng. Amphibian Command, Cp. Edwards, Mass.

Col. William P. Hayes, 011655, SC
(Overseas duty-Hq. ETO., G-3)

Hq. Eng. Amphibian Command, Cp. Edwards, Mass.

2. Travel by military, naval or commercial aircraft, army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air, APR number cited above, from Washington, D. C., and/or New York, New York, to London, England, is necessary for the accomplishment of an emergency war mission. TDN 1-5000 P 431-01,02,03,07,08 A 0425-24; 1-5000 P 432-02,03 A 0425-24

3. In lieu of subsistence, a flat per diem of $6.00 is authorized while traveling by military, naval or commercial aircraft, in accordance with existing law and regulations. A baggage allowance of fifty-five (55) pounds, to include all personal effects, clothing, medical kit, canteen and emergency rations, is authorized while traveling by military, naval or commercial aircraft. All necessary field equipment will be obtained at destination.

4. Personal baggage to be shipped will be limited to one hundred twenty (120) pounds, and will be marked with the officer's full name, rank and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York.

5. Prior to departure from his present station, he will be equipped with appropriate side arms, will have in his possession WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States, and will comply with the provisions of Circular 85, WD, March 26, 1943, reference medical requirements.

6. Officer should advise his correspondents that mail will be addressed to him at APO 4145, c/o Postmaster, New York, N. Y. Immediately upon arrival at destination and assignment to unit or organization, the officer will complete and mail WD AGO Form No. 204, Change of Address Card, to advise friends and relatives of his permanent APO address. He will also send a completed WD AGO Form No. 204 to the theater postal officer.

Ben D. Fulleton
Adjutant General

AG 210.31
(12 Aug 43)PO-A

RESTRICTED

BDC/lhl/fcs/1515
25 August 1943.

Lt. Col. Harold L. Fuller, 0234318, Inf.
(Overseas duty-Chief of Administration.)
Staff Officers Pool, ASF, Banning, Cal. & T/D, C&GSS, Ft. Leavenworth, Kan.

Effective not later than 1 September 1943
APR-3-89521

Lt. Col. Sidney Negrotto, 06711, GSC
(Overseas duty-Hq. ETO., G-2)
9th Armored Div., Ft. Riley, Kan.

Maj. Kenneth P. Burns, 0282719, FA
(Overseas duty-Hq. ETO., G-2)
79th Inf. Div., Yuma, Ariz.

Lt. Col Clio A. Harper, 0232778, MI
(Overseas duty-Hq. ETO., G-2)
81st Inf. Div. Cp. Young, DTC, Cal.

Maj. Edward A. Williamson, 0360356, CAC
(Overseas duty-Hq. ETO., G-3)
Hq. Eng. Amphibian Command, Cp. Edwards, Mass.

Col. William P. Hayes, 011655, SC
(Overseas duty-Hq. ETO., G-3)
Hq. Eng. Amphibian Command, Cp. Edwards, Mass.

2. Travel by military, naval or commercial aircraft, army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air, APR number cited above, from Washington, D. C., and/or New York, New York, to London, England, is necessary for the accomplishment of an emergency war mission. TDN 1-5000 P 431-01,02,03,07,08 A 0425-24; 1-5000 P 432-02,03 A 0425-24

3. In lieu of subsistence, a flat per diem of $6.00 is authorized while traveling by military, naval or commercial aircraft, in accordance with existing law and regulations. A baggage allowance of fifty-five (55) pounds, to include all personal effects, clothing, medical kit, canteen and emergency rations, is authorized while traveling by military, naval or commercial aircraft. All necessary field equipment will be obtained at destination

4. Personal baggage to be shipped will be limited to one hundred twenty (120) pounds, and will be marked with the officer's full name, rank and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York.

5. Prior to departure from his present station, he will be equipped with appropriate side arms, will have in his possession WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States, and will comply with the provisions of Circular 85, WD, March 26, 1943, reference medical requirements.

6. Officer should advise his correspondents that mail will be addressed to him at APO 445, c/o Postmaster, New York, N. Y. Immediately upon arrival at destination and assignment to unit or organization, the officer will complete and mail WD AGO Form No. 704, Change of Address Card, to advise friends and relatives of his permanent APO address. He will also send a completed WD AGO Form No. 704 to the theater postal officer.

ASSISTANT GENERAL'S OFFICE

By direction of the Adjutant General

Ben D. Gullion
Adjutant General

RESTRICTED

Incls.

Distribution:
Officer (4)
Officers' Branch, Record Section, AGO, Rm 2429, Munitions
Army Postal Service, Rm 3E 561, Pentagon
OIC, Embarkation APO, 464 Lexington Ave., NY, NY (2)
Port Transportation Officer, NYPE, Brooklyn, NY
CG, APO 887, c/o Postmaster, NY, NY (Airmail)
Miss Donovan, Rm 1515, Munitions
CG, Army Ground Forces, Rm. 4, Army War College (Inf.) (FA) (CAC)
Miss Wright, 3C 913, Pentagon
Postal Officer, APO 887, c/o Postmaster, NY, NY (Airmail)
Chief of Engineers, Rm 1110-A, New War Dept.
Personnel Officer, Foreign Br., MIS Att: Maj. Scott, Rm. 2B 743, Pentagon
Chief, MIS 2E 770, Pentagon
Chief Signal Officer, 4C-349, Pentagon

RESTRICTED
~~SECRET~~

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45 (Date)
H. G. Knight Col (Initials) jch

WAR DEPARTMENT
The Adjutant General's Office
Washington

JFR/sbs/bh/1515

J. T. Desmond

AG 210.482
(6-29-42)OA

June 29, 1942.

AIR MAIL SPECIAL DELIVERY

~~SECRET~~
Auth: T. A. G.
Initials: JR
Date: 6-29-42

Subject: Orders.

Thru : Commanding Officer,
Fort Monmouth, New Jersey.

To : Second Lieutenant John T. Desmond 0435614, SC.

201

1. The Secretary of War relieves Second Lieutenant John T. Desmond 0435614, SC, from his present assignment and duty at Fort Monmouth, New Jersey, and assigns him to the Engineers Amphibian Command, Camp Edwards, Mass. He will proceed immediately from Fort Monmouth, New Jersey, to Washington, D. C., reporting upon arrival to the Chief of Engineers, for temporary duty, and upon completion of this temporary duty, will proceed from Washington, D. C., and/or New York, N. Y., to London, England, reporting not later than July 10, 1942, to the Commanding General, European Theatre, for temporary duty for the purpose of attending a British course in Amphibian training, and upon completion of this temporary duty will return to his proper station, Camp Edwards, Mass. TDN FD 31, 34 P-02 A 0425-23; QM 100 P-01, 03, 07, 08 A 0500-23.

2. Travel by military or commercial aircraft (Sec IV Cir 12 WD 1942), outside the continental limits of the United States, Army transport, commercial steamship, b elligerent vessel or aircraft and rail is directed. TD by air from Washington, D. C., and/or New York, N. Y., to London, England is necessary in the accomplishment of an emergency war mission. A baggage allowance of 77 pounds is authorized for travel by military or commercial aircraft.

210.3
x 210.482
x 201

3. In lieu of subsistence a flat per diem of $6.00 is authorized while traveling on official business and while absent from permanent station (except during the period of temporary duty in the British Isles) (Public Law 528, 77th Congress, approved April 28, 1942). During the period of duty in the British Isles, the Commanding General, European Theatre, will furnish suitable billet and determine the amount of per diem payment.

4. Attention is invited to Sec II Cir 220 WD 1941, regarding the preparation and distribution of extract copies.

J. F. Ruth
Adjutant General.

1 Incl Pay Guide.

Distribution:
Officer (4)
Officers Record Section, AGO
Chief of Engineers, SOS
Chief Signal Officer
CG, APO 887, c/o Postmaster, New York, NY
CO, Camp Edwards, Mass.

SECRET
RESTRICTED

Classification changed to
By Authority ~~of the Chief of Engineers~~ G.S.F
.....7 Aug 45.....
(Date)

RESTRICTED SECRET

SECRET

H.G. King Lt Col
(Initials)

WAR DEPARTMENT
THE ADJUTANT GENERAL'S OFFICE
WASHINGTON

AG 210.482
(6-26-42)OA

JHD/ed/1515

June 26, 1942.

AIR MAIL SPECIAL DELIVERY

~~SECRET~~
Auth: T.A.G.
Initials: JHD
Date: 6-26-42

Subject: Orders

Thru : Commanding Officer,
Ft. Monmouth, N. J.

To : Officers Involved.

1. The Secretary of War relieves each of the following-named officers, CE, from his present assignment and duty at Ft. Monmouth, N.J., and assigns him to the Engineers Amphibian Command, Camp Edwards, Mass. He will proceed immediately from Ft. Monmouth, N. J., to Washington, D. C., reporting upon arrival to the Chief of Engineers, for temporary duty, and upon completion of this temporary duty, will proceed from Washington, D. C., and/or New York, N.Y. to London, England, reporting not later than July 10, 1942, to the Commanding General, European Theatre, for temporary duty for the purpose of attending a British course in Amphibian training, and upon completion of this temporary duty will return to his proper station, Camp Edwards, Mass.

1st Lt. John G. Bernard	0377547	2d Lt. Clarence C. Feightner	0419427
1st Lt. Williams C. Cooper	0294184	2d Lt. Thomas C. Jacobsen	01633305
1st Lt. Theodore B. Emerson	0355675	2d Lt. Philip J. Pollard	01633457
1st Lt. William R. Rushing	0320168	2d Lt. Robert H. Reighter	01633481
1st Lt. Casimir J. Swan	0349500	2d Lt. Lawrence K. Roos	01633500
2d Lt. John T. Byrnes	01633100	2d Lt. Robert B. Selders	01633533
2d Lt. Charles J. Dominique	01633166	2d Lt. Wallace O. Torgerson	01633599
2d Lt. Joseph F. Doyle	0376726	2d Lt. Ralph W. Ward	0423595
201 2d Lt. Robert B. Dunbar	01633181	2d Lt. George M. Watson	01633625

210.3
210.482
x 201

2. The travel directed is necessary in the military service. FD 31, 34 P-02 A 0425-23; QM 100 P-01,03,07,08 A0500-23. Travel by military or commercial aircraft (Sec IV, Cir 12, WD 1942), outside the continental limits of the United States, Army transport, commercial steamship, belligerent vessel or aircraft, and rail is directed. TD by air from Washington, D.C., and/or New York, N.Y., to London, England is necessary in the accomplishment of an emergency war mission. A baggage allowance of seventy-seven (77) pounds is authorized for travel by military or commercial aircraft.

3. In lieu of subsistence a flat per diem of $6.00 is authorized while traveling on official business and while absent from permanent station (except during the period of temporary duty in the British Isles) (Public Law 528, 77th Congress, approved April 28, 1942.) During the period of duty in the British Isles, the Commanding General, European Theatre will furnish suitable billets and determine the amount of per diem payment.

3

4. Attention is invited to Sec II, Cir 220, WD 1941, regarding the preparation and distribution of extract copies.

J. H. Bailey
Adjutant General.

1 Incl-Pay Guide.
Distribution: (4) each officer.
Officers' Record Section
Chief of Engineers
CG, APO 887, C/o Postmaster, New York, N.Y.(airmail)
CO, Camp Edwards, Mass.

RESTRICTED SECRET

IMMEDIATE ACTION

~~SECRET~~ ~~RESTRICTED~~

assification changed RESTRICTED

Authority of ~~the Chief of Engineers~~ A.G.O.

7 Aug 45 H. G. King Lt Col.

(Date) (Initials)

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASSACHUSETTS

ATS:er

24 June 1943

Subject: Request for Orders.

To: The Adjutant General, Washington, D. C.

Through: Commanding General, First Service Command, Boston 15, Mass.

1. It is requested that orders be issued transferring the following named personnel from this station to the 411th Engineer Base Shop Battalion, SWPA:

1st Lt. Chester A. Halnan, 0276140 (now at New Orleans, La.)
2nd Lt. William R. Glazier, 0923715
2nd Lt. Roland C. Higgins, 01115254(now at New Orleans, La.)
1st/Sgt. John T. Leers, 20248623, 189, Rigger
T/3 Reuben A. McAnney, 32267097, 189, Rigger
T/4 Anthony B. Carcione 31095614, 189, Rigger
T/5 Daniel D. Ferrelli, 31113711, 063, Crane Opr.(now at New Orleans, La.)
Pvt. Albert V. Huckabee, 38527852, 256, Welder, Comb.
Pvt. Stephen J. Keller, 13098436, 256, Welder, Comb.(now at New Orleans, LA.)

2. Of the above listed personnel, it is desired that Lt. Halnan and Lt. Glazier travel by air to destination, leaving the port of embarkation on or about 15 July 1943. The remainder of the personnel listed are to be ordered to arrive at the San Francisco Port of Embarkation on or about 15 July 1943 in order to accompany a shipment of boats leaving the San Francisco Port of Embarkation for the same destination as the personnel.

3. Personnel whose names are followed with "now at New Orleans, La." should be ordered from that place as it is contemplated that this personnel will continue their present duty until ordered to depart for overseas service.

For the Commanding Officer:

~~SECRET~~ ~~RESTRICTED~~

A. T. STAFFORD
Captain, A.G.D.
Adjutant General

2018

IMMEDIATE ACTION

~~SECRET~~ RESTRICTED

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

Classification changed ~~to~~ RESTRICTED 19 June 1943
By Authority of ~~the Chief of Engineers~~
7 Aug 45 H. G. King Lt Col.
(Date) (Initials) jch

SPECIAL ORDERS)
NUMBER 154)

E X T R A C T

17.PAC Ltr, WD, AGO dtd 10 June 1943 File AG 210.31 (31 May 43) PO-A, Subj: Orders as amended by Secret Telegram Charleston Port of Embarkation, dtd 19 June 1943 No 18, the following named officers, asgd to Hq EAC (ORP) are reld fr said asgmt and are asgd to Shipment OM-927-AA upon call of appropriate Port Commander for transshipment to a permanent station, Temperate Climate, outside the continental limits of the United States.

CHAPLAIN (CAPT) JAMES G JONES 0402626, CC
CHAPLAIN (1ST LT) CHARLES J WEBB 0476834, CC
CHAPLAIN (1ST LT) LAWRENCE A DICKSON 0504733, CC

Officers will advise their correspondents that mail will be addressed to them at APO #4061, c/o Postmaster, New York, N Y until arrival at final destination. Upon arrival at destination, permanent APO number will be used.

Prior to departure frm this sta, officers will be equipped for field service as outlined in T/BA 21, 7 Jan 1943, including steel helmet, gas mask. They will have possession of WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States and will comply with the provisions of Cir, 85, WD, 26 Mar 1943, reference medical requirements.

The above named officers WP on or about 19 June 1943 by rail to Fort Hamilton, N Y, New York Port of Embarkation reporting upon arrival thereat to the CO. This constitues a permanent change of station. TDN QMT 1-5010 P 431-01, 02, 03, 07, 08 A 0425-24.

Officers will refrain fr discussing the overseas destination of this movement, even by shipment number, as the meaning thereof may later become known by correspondents and the security provided be violated.

By Order of Colonel HUTCHINGS:

T L MULLIGAN,
Colonel, C E
Acting Chief of Staff

OFFICIAL:

NORMAN D COULTER,
1st Lt, C.E.
Acting Asst Adj General

2103

29

~~SECRET~~

Authority: CO Eac
Initials : ASB
Date: 6/16/43

SECRET RESTRICTED

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

ATS:1st

In reply refer to
245

15 June 1943.

Classification changed RESTRICTED
~~to~~
By Authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch

Subject: Travel of Officer.

To: Commandant, Command and General Staff School, Fort Leavenworth, Kansas.

HEADQUARTERS FT. LEAVENWORTH, KANSAS JUN 18 3 26 PM '43

1. Reference is made to telephone conversation of recent date between the undersigned and Colonel Schmahl, Secretary of the Command and General Staff School. It is requested that your headquarters issue the necessary orders to provide for the travel by air of Major William C. Jacobs, 0353484, C.E., from Fort Leavenworth, Kansas, to Camp Shanks, New York. Officer to arrive at Camp Shanks, New York not later than 1600 21 June 1943.

2. The authority to be cited in the orders issued in this case is, "Movement Order No. 21, Headquarters, First Service Command, file SPKVT 370.5, dated 14 June 1943". The pro-designation for this movement is, "Shipment No. 1182-S".

3. Equipment not now in the possession of this officer is being drawn for him by the Commanding Officer of the detachment of which Major Jacobs is a part, and will be turned over to him at the port of embarkation. Travel costs should be charged to the proper procurement authorities as outlined in WD Circular #262, series 1942, as amended by WD Circular #129, series 1943.

4. It is further requested that this headquarters be furnished by air mail ten copies of the orders issued in this case.

For the Commanding Officer:

A. T. Stafford
A. T. STAFFORD
Captain, A.G.D.
Adjutant General

3 Incls.
#1 - Ltr Hq, C.E. dated 15 June 1943
#2 - Secret Movement Order No. 21
#3 - Receipt form for Secret and confidential papers

SECRET RESTRICTED

SECRET RESTRICTED

201-Jacobs, William C. (SO) 1st Ind. EMC:mp

Hq Ft Leavenworth, Kans, 19 June 1943.

To: Commanding Officer, Engineer Amphibian Command, Camp Edwards, Mass.

1. Basic communication complied with.

2. Attention invited to inclosed extracted copies of Par. 14 SO 145, this headquarters, dated 16 June 1943.

For the Commanding General:

Earl M. Clarke

EARLE M. CLARKE,
2nd Lt., AGD,
Chief, Military Personnel Branch.

2 Incls:
1 & 2 - W/drawn
3 - Receipt form for Secret and confidential papers
4 - Extract copies (10) Par 14 SO 145, this hqs

28

SECRET RESTRICTED

RESTRICTED

[illegible] Adjutant General's Office
Washington, D. C.

BDC/bh/gvp-1515 Mu
Br: 77167

AG 201-Hartley, David
(8 Jun 43)PO-A

16 June 1943

Classification changed to RESTRICTED
By Authority ~~of the Chief of Engineers~~ G.S.F.
.....7 Aug 45.....
(Date)
H. G. King Lt. Col.
(Initials)

Subject: Orders.

~~SECRET~~
Auth: T. A. G.
Init: BDC
Date: 16 June 43

Thru : Commanding Officer,
Camp Edwards, Massachusetts.

To : Captain David (NMI) Hartley, O-1100137, CE.

1. The Secretary of War relieves Captain David (NMI) Hartley, O-1100137, CE., from assignment and duty with Headquarters, Engineer Amphibian Command. Camp Edwards, Massachusetts, and assigns him to duty with United States Army Forces in the Far East (Australia). He will proceed from his present station to Hamilton Field, California, reporting not later than 25 June 1943, to the Officer-in-Charge, Transient Personnel Section, Pacific Wing, Air Transport Command, for transportation to destination. Upon arrival at destination, he will report to the Commander-in-Chief, SWPA, for further assignment.

2. TDN 1-5000 P 431-01, 02, 03, 07, 08 A 0425-24. Travel by military, naval or commercial aircraft, Army or naval transport, commercial steamship, belligerent vessel or aircraft, and rail is directed. TD by air from Hamilton Field, California, to destination is necessary for the accomplishment of an emergency war mission. APR-2-58680.

3. In lieu of subsistence, a flat per diem of $6.00 is authorized while traveling by military, naval or commercial aircraft, in accordance with existing law and regulations. A baggage allowance of fifty-five (55) pounds, to include all personal effects, clothing, medical kit, canteen and emergency rations is authorized while traveling by military, naval or commercial aircraft.

4. Personal baggage will be limited to 175 pounds and will be marked with the officer's full name, rank and serial number, and addressed to the Port Transportation Officer, San Francisco Port of Embarkation, Fort Mason, California.

6. No field equipment or flying clothing and equipment will be carried by aircraft, except pistol, when authorized, sun glasses and hunting knife. Officer will have in his possession WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States, and will comply with the provisions of Cir. 85, WD, 26 March 1943, reference medical requirements.

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7. Officer should advise his correspondents that mail will be addressed to him at APO 4162, c/o Postmaster, San Francisco, California. Upon arrival at destination, permanent APO number will be used.

Ben D. Sullivan

Adjutant General.

1 ncls.

Distribution:

Officer (4)
Officers Record Section, AGO.
Chief of Engineers
CG., SFPE, Ft. Mason, Calif. Attn: Port Transp. Officer. AIR MAIL
OIC, Transient Personnel Section, ATC. Hamilton Field, Calif. AIR MAIL
Postal Officer, SFPE, Ft. Mason, Calif.
Army Postal Service, 3E-561, Pentagon
Mrs. Rogers, 1515
CG., USAF, APO 500, c/o PM, San Francisco, Calif. AIR MAIL



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RESTRICTED
SECRET

Classification changed
to
By Authority of the Chief of Engineers
7 Aug 45
(Date)
H. G. King Lt Col.
(Initials)
jch

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

June 2, 1943

SPECIAL ORDERS)

NUMBER 139)

EXTRACT

1. Pursuant to authority in WD Letter, AG 210.31 (4-21-34) OC-B-SPGAR, Subj; "Movement Orders, Shipment RA-878-zz; AG Transfer Order #5-1327," the following named officers are reld fr assignment Hq EAC (EORP) and are assigned to Shipment RA-878-ZZ, effective on or about May 20, 1943, upon call of appropriate Port Commander for transshipment to a permanent station, temperate climate, outside the contiental limits of the U.S.A.

1ST LT JAMES DERVAS	01101809, CE
1ST LT CHARLES E BOYLE	01101748, CE
1ST LT SALVATORE LA IACONA	0357935, CE
2ND LT ALEX HACKER	01108709, CE
2ND LT ALBERT J ELIAS	01106114, CE
2ND LT DONALD H GILMORE	0480323, CE
2ND LT JOHN R RICHARDS	01111862, CE
2ND LT WILLIAM J MOORE	01106971, CE
2ND LT FRANK A ELLIOTT	01101822, CE
2ND LT JOSEPH A LEWIS	01108107, CE

Officers will advise correspondents that mail should be addressed to them, until arrival at final destination, to APO#8966 c/o Postmaster, New York, N Y. Personnel will advise Central Director section of their theater of permanent APO address immediately upon assignment to unit or organization.

Officers will Proceed on or about June 2, 1943 by rail to New York, N Y, reporting upon arrival to Commanding General, New York Port of Embarkation, New York. This constitutes a permanent change of station. TND QMT FD 31 P 431-01, 02, 03, 07, 08, A 0425-23.

By Order of Colonel HUTCHINGS:

T L MULLIGAN,
Colonel, C E
Acting Chief of Staff

OFFICIAL:
Jerome F Lieblich
JEROME F LIEBLICH
Captain, A G D
Asst Adjutant General

RESTRICTED
SECRET

Classification changed to RESTRICTED
By Authority of ~~the Chief of Eng~~ G.S.F.
7 Aug 45 A.G. Knight Col
(Date) (Initials)

RESTRICTED
SECRET

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

May 26, 1943

SUBJECT: Movement Orders, Shipment No R A-878-ZZ

TO : Officers Concerned

1. You are herewith ordered to comply with Letter Orders, this Hqs., dated May 20, 1943, so as to report to the Commanding Officer, Fort Hamilton, New York, on June 3, 1943, not later than 1600 hours.

2. You will make necessary clearance arrangements on June 1, 1943.

3. You will appear for physical examination on June 2, 1943, at 0900 hours, at Williams Hospital.

4. You will have your checkable baggage (bedding roll and barrack bag) at Building 312 at 1900 hours on June 2, 1943.

5. You will be present with your portable baggage (musette bag and hand bag) at building 312 at 0545 hours on June 3, 1943.

6. You are advised that a trunk locker will not be taken but in lieu thereof one barrack bag per individual is authorized.

7. You are enjoined to comply with the provisions of Section VIII, AR 380-5, subject: "Safeguarding Military Information." This movement falls within the provisions of the regulation cited above. The dangers involved in the leakage of information concerning an overseas movement will be borne constantly in mind. You are personally responsible that information concerning the route, shipping destination, port of embarkation, sailing date, which may come to your attention in connection with this movement, is not permitted to reach personnel whose official duties do not concern the movement.

a. Prior to Movement to the Port of Embarkation:—When it is necessary to advise relatives or other civilians of the approaching departure, you will not convey to them any information in regard to the probable time and date of departure from, or arrival at, any station, port of embarkation, or organization.

b. Participating in the Movement to the Port:— While participating in the movement to the port from this station, you will not communicate by telephone, mail, radio, or telegraph with anyone, or notify anyone of the time of arrival at any station along the route, except as may be necessary for the successful completion of the movement. This prohibits all personal communication, oral or written. Upon arrival at the staging area or port, personal communications will be delivered to the postal service thereat.

c. At the Port of Embarkation:—No arrangement will be made for farewells at the piers, or while at the Port. Families, relatives or friends of those sailing are not permitted within the Port area. Officers, with whom civilian dependents or friends attempt to communicate at the Port area, are subject to disciplinary action.

d. Obtaining Foreign Exchange:—You will refrain, while awaiting overseas movement, from obtaining foreign exchange for any supposed destination. You will similarly refrain from visiting commercial facilities for the purchase of special clothing or equipment which you believe necessary for any supposed destination.

By Order of Colonel HUTCHINGS:

Jerome F. Lieblich

JEROME F. LIEBLICH
Captain, A. G. D.
Asst. Adjutant General

RESTRICTED
SECRET

~~SECRET~~

WAR DEPARTMENT
The Adjutant General's Office
Washington, D. C.

Stafford

OK

AG 210.31
(5-17-43)PO-A

Classification changed to
By Authority of ~~the Chief of Engineers~~ G.S.F.
RESTRICTED

WLD/lbl/lgp/1515
Br. 77167

Subject: Orders. 7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch

May 17, 1943.

~~SECRET~~
AUTH: T. A. G.
INITIALS: JFR
DATE: 5-17-43.

Thru : Chief, Operations Division, WDGS,
Washington, D. C.

To : Officers Involved.

1. The Secretary of War relieves each of the following-named officers, now on temporary duty in Washington, D. C., from assignment and duty with the Amphibian Command, Camp Edwards, Massachusetts, and assigns him to Headquarters, European Theatre of Operations, London, England. Upon completion of his present temporary duty, he will proceed from Washington, D. C. and/or New York, New York to London, England, reporting upon arrival to the Commanding General, European Theatre for duty.

Major James P. Smith, 0-915301, CE.
Captain Ralph M. Ingersoll, 0-105464, CE.

2. TDN FD 31 P 431-01, 02, 03, 07, 08 A 0425-23. Travel by military, naval or commercial aircraft, Army or naval transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air (Priority #1) from Washington, D. C. and/or New York, New York to London, England, is necessary for the accomplishment of an emergency war mission. In lieu of subsistence a flat per diem of $6.00 is authorized while traveling by military, naval or commercial aircraft, in accordance with existing law and regulations.

3. A baggage allowance of fifty-five (55) pounds, to include all personal effects, clothing, medical kit, canteen and emergency rations, is authorized while traveling by military, naval or commercial aircraft. All necessary field equipment will be obtained at destination.

4. Prior to departure from present station, he will have in his possession WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States, and will require physical inspection as prescribed by par. 14, AR 40-100, as amended by Sec. III, Cir. 31, WD, 1942.

5. Officer should advise his correspondents that mail will be addressed to him at APO 4016, c/o Postmaster, New York, New York. Upon arrival at destination, permanent APO number will be used. Excess baggage will be marked with the officer's full name, rank and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York.

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL

F. Ruth
Adjutant General.

Incls.
Distribution:
Each Officer (4) Mrs. Rogers Rm 3E 561, Pentagon
Officers Record Section, AGO Army Postal Service
Chief of Engineers CG, APO 887, c/o PM, NY, NY
Port Transportation Officer, NYPE, Brooklyn, NY CO, Miami Emb.APO, Miami, Fla.
OIC, Emb. APO, 464 Lexington AVE., NY, NY CO, Cp Edwards, Mass.
Postal Officer, Morrison Fld, W. Palm Beach, Fla.

~~SECRET~~
RESTRICTED

S. C. Form No. 7

Signal Corps, United States Army

Received at CODE ROOM HQ FIRST SERVICE COMMAND BOSTON MASS

3—9501

BRISBANE AUSTRALIA MAY 060936z 19

COMMANDING GENERAL
ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS MASS

T FISHER DEPARTED TWO MAY BY AIR MESSAGE BEGINS ASSIGNMENT LT ROLLAND HIGGINS TO RPT TO FOUR ONE ONE BASE GHOP BN DESIRED YOUR SVC ONE NAUGHT EIGHT ONE AND MY XC TWO NAUGHT TWO FIVE PD REQUEST OFFICER PROCEED BY AIR PD PAREN FROM CINY SWPA SIGNED MACARTHUR XC TWO ONE THREE THREE PAREN LT FRANK

2413

NOTE: THIS MSG WAS ADDRESSED TO CO FORT DEVENS, WITH INSTRUCTIONS THAT IT BE PASSED TO CG ENG AMPH CMD CAMP EDWARDS. DEVENS HAS RECEIVED A COPY OF THIS MESSAGE.

Received in CONFIDENTIAL Code

There will be but one copy of this message on file in the addressee's office. If information copies are made, they will be serially numbered and have noted thereon "Making an exact copy of this message is forbidden. Extracts therefrom will be marked CONFIDENTIAL. This copy will be safeguarded with greatest care and returned to addressee without delay." On return to originator, information copies will be destroyed by burning.

J. H. MCCORMICK
CRYPTOGRAPHER # 102

~~SECRET~~ RESTRICTED

WAR DEPARTMENT

WLD/bh/1515-MU
Br. 77167

AG 210.31
(5-11-43)PO-A

Classification changed to RESTRICTED
The Adjutant General's Office
By Authority of ~~the Chief of Engineers~~ U.S. Washington
7 Aug 45 H. G. Knight Lt. Col.
(Date) (Initials) jch

May 11, 1943.

~~SECRET~~

Subject: Orders

Thru : Commanding Officers Concerned.

To : Officers Involved.

Auth: T.A.G.
Initials: [illegible]
Date: 5-11-43

1. The Secretary of War relieves each of the following-named officers from assignment and duty as indicated and assigns him to station outside the continental limits of the United States. He will proceed without delay from his present station to Fort George G. Meade, Maryland, and report not later than May 17, 1943, to the Commanding Officer for duty with the PMG Detachment, ASF, pending overseas movement. TDN FD 31 P 431-01, 02, 03, 07, 08 A 0425-23.

Captain Charles P. Benatti 0451076, QMC - QMRTC, Camp Lee, Va.
Captain Fred A. Borak 0370291, CMP, 300th MP Co., Fort Myer, Va, and t/d PMG Sch, Fort Custer, Mich.
Captain Thomas G. Brennan 0166421, CMP - 352 MP, EG Co., Camp Upton, N. Y.
Captain Ben H. Brown, Jr., 0327862, CMP - MP #1 Unit Personnel Sec., Camp Croft, S. C.
Captain Donald C. Foster 0150964, CMP - 730th MP Bn, Jersey City, N. J.
Captain Frank L. Peyton 0501432, CMP - 1215th MP Co (Avn), Miami Beach, Fla.
Captain Robert I. Simpson 0502049, CMP - Special Service Replacement Pool, Washington & Lee University, Lexington, Va.
1st Lt. Anthony Ciliberti 0915142, CE, - Hq, Amphibian Command, Camp Edwards, Mass.
1st Lt. Edmund H. Emry 0440748, CMP - 729th MP Bn, Fort Benjamin Harrison, Indiana.
1st Lt. William R. Ferguson 0247919, CMP - 729th MP Bn, Fort Benjamin Harrison, Ind., and t/d PMG Sch., Fort Custer, Mich.
1st Lt. Thomas D. Roberts 0221051, CMP - 1219th MP Co (Avn) Miami Beach, Fla.
1st Lt. Jess C. Spitznogle 0313342, CMP - PMGTC, Fort Custer, Mich.
2nd Lt. John W. Atkinson 01797588, CMP - PMGTC, Fort Custer, Mich.
2nd Lt. Richard Hall 01797639, CMP - PMGTC, Fort Custer, Mich.
2nd Lt. William A. Lessa 01797669, CMP - PMGTC, Fort Custer, Mich.
2nd Lt. George M. Marinkor 01797681, CMP - PMGTC, Fort Custer, Mich.
2nd Lt. Edward O'Connor 01894699, AUS - 1874th SU, Tonkawa, Okla., and t/d PMG Sch., Fort Custer, Mich.
2nd Lt. Frederick T. Sillett 01797729, CMP - PMGTC, Fort Custer, Mich.
2nd Lt. Edward A. Suben 01797743, CMP - PMGTC, Fort Custer, Mich.

2. Officer will arrange his affairs so as to be prepared for early departure to overseas station. Inoculations will be taken immediately if possible.

~~SECRET~~ RESTRICTED

RESTRICTED

Authority: OGEAC
Initials: ATB
Date: 4/24/43

Classification changed
By authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45
(Date)
H. G. Knight Col.
(Initials)

RESTRICTED

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

HAS/hmf

April 21, 1943

SUBJECT: Officer Replacements, 531st Engineer Shore Regiment.

TO : The Chief of Engineers,
Military Personnel Branch,
War Department,
Washington, D. C.

1. This Headquarters has received an informal request from the Commanding Officer, 531st Engineer Shore Regiment which is now in Africa that 10 Lieutenants who have had training in Engineer amphibian operations be shipped to his organization. This request was made verbally to a representative of this Command.

2. In view of the fact that the 5th Engineer Amphibian Brigade is not to be activated and that many officers were sent to this Command prior to its proposed activation date in order to receive amphibian training and have received such training, it is possible for this Command to fill a requisition for three (3) 1st Lieutenants and seven (7) 2nd Lieutenants, which number can be shipped without delay.

3. It is requested that the necessary clearance be obtained from OPD and that this Headquarters be requisitioned for the number of officers and grades indicated in Paragraph 2 above.

For the Commanding General:

T. L. MULLIGAN
Colonel, Corps of Engineers
Act'g Chief of Staff

21013

20

RESTRICTED

C O P Y

WAR DEPARTMENT
The Adjutant General's Office
Washington

JHD/bh/1515-MU
Br. 77167

AG 201-Speir, Frank W.
(3-27-43)PO-A

March 27, 1943

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~
7 Aug 45 (Date) H. G. King, Lt. Col. (Initials) jth

Subject: Orders S. F.

~~SECRET~~

~~S E C R E T~~
Auth: T.A.G.
Initials: W.L.D.
Date: 3-27-43

To : Captain Frank W. Speir, 0296780, CE.

1. The Secretary of War Directs that Captain Frank W. Speir 0296780, CE, now on temporary duty in Washington, D. C., proceed from Washington, D. C., and/or Miami, Florida, to Algiers, Algeria, on further temporary duty for the purpose of observing and coordinating the training of personnel in the use of two-and-a half ton amphibious vehicles (DUKWS) in that area. Upon completion of this temporary duty he will return to his proper station Camp Edwards, Massachusetts.

2. TDN FD 34 P 434-02, 03 A 0425-23. Travel by military, naval or commercial aircraft, Army transport, naval vessel, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air (Class 1 air priority) from Washington, D. C., and/or Miami, Florida to Algiers, Algeria and return is necessary for the accomplishment of an emergency war mission. A baggage allowance of seventy-seven (77) pounds and an excess baggage allowance of fifteen (15) pounds (Official papers, 16 MM movie camera and film) is authorized while traveling by military, naval or commercial aircraft.

3. In lieu of subsistence a flat per diem of $6.00 is authorized while traveling on official business and while absent from permanent station in accordance with existing law and regulations. When Government quarters or billets are furnished and messing facilities are available, per diem allowance is suspended.

4. Authority is granted to make such changes in the above itinerary and to proceed to such other places as may be necessary for the performance of this mission. The duties to be performed being exceptional, may require more than seventy-two (72) hours at different places for their performance, therefore, an unlimited delay at any place where necessary is authorized.

5. Officer should advise his correspondents that mail will be addressed to him at APO 4076, C/o Postmaster, New York, N. Y. Upon arrival at destination permanent APO will be used and the Central Directory Section will be advised.

Inclosures.
Distribution:
Officer (4) Mrs. Rogers.
Officers Record Section, AGO
Chief of Engineers
CG, USAF, APO 512, c/o Postmaster, New York, N.Y.
Co, Camp Edwards, Mass.

/s/ W. L. Day
Adjutant General.

Army Postal Service, Room 3E590 Pentagon
CIO, Embarkation, APO, 464 Lexington Ave., New York, N. Y. (2)

19

SECRET RESTRICTED

~~SECRET~~

WAR DEPARTMENT
The Adjutant General's Office
Washington, D. C.

AG 210.31
(3-24-43)PO-A

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F.

WLD/lbl/lgp/1515
Br. 77167

Subject: Orders. 7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch March 27, 1943.

~~SECRET~~
Auth: T. A. G.
Initials: [illegible]
Date: 3-27-43

Thru : Commanding Officers Concerned.

To : Officers' Involved.

1. The Secretary of War relieves each of the following-named officers, from assignment and duty at station indicated, and assigns him to European Theater of Operations, London, England. He will proceed from present station to Washington, D. C., reporting upon arrival to The Adjutant General, Room 1048, Munitions Building, for temporary duty. Upon completion of this temporary duty, he will proceed from Washington, D. C. and/or New York, New York, to destination, reporting upon arrival to the Commanding General for duty. TDN FD 31 P 431-01, 02, 03, 07, 08 A 0425-23; FD 34 P 434-02, 03 A 0425-23.

Major Allen G. Pixton,	0-24137, FA,	Hqs. Engr. Amphibian Command, Camp Edwards, Massachusetts.
Major William A. Boesman,	0-357528, Inf,	Hqs Company 3rd Bn, 110th Inf. Camp Gordon Johnston, Florida.
Captain Frederick J. Goodwin,	0-919363, CE,	EORP, Camp Claiborne, Louisiana

2. Travel by military or commercial aircraft, belligerent vessel or aircraft, commercial steamship, Army transport and rail is directed. TD by air (Priority No. 3) from Washington, D. C. and/or New York, New York, to destination is necessary for the accomplishment of an emergency war mission. A baggage allowance of fifty-five (55) pounds is authorized while traveling by military or commercial aircraft. In lieu of subsistence, a flat per diem of $6.00 is authorized while traveling on official business and while absent from permanent station, in accordance with existing law and regulations.

3. Prior to departure from present station, he will be equipped for extended field service and will have in his possession WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States and will require physical inspection as prescribed by par. 14, AR 40-100, as amended by Sec. III, Cir. 31, WD 1942.

4. Officer should advise his correspondents that mail will be addressed to him at APO 4016, c/o Postmaster, New York, New York. Upon arrival at destination, permanent APO number will be used. Excess baggage will be marked with the officer's full name, rank, and serial number, c/o Port Transportation Officer, New York Port of Embarkation, Brooklyn, New York

2013

18

ADJUTANT GENERAL'S OFFICE OFFICIAL DEPARTMENT

W. L. Day
Adjutant General.

~~SECRET~~
RESTRICTED

UNCLASSIFIED

Incls.

Distribution:

Each Officer (4)
Officers' Record Section, AGO
CG, Army Ground Forces (Inf, FA)
Chief of Engineers
CG, USAF, APO 887, c/o Pm, N.Y., N.Y.
Mrs. Rogers
MPD, ASF, (Col. Wilkinson)
CG, NYPE, Brooklyn, N.Y.
OIC, Embarkation APO 464 Lexington Ave., N.Y., N.Y. (2)
Army Postal Service, Rm 3E 590, Pentagon Bldg.

WAR DEPARTMENT
The Adjutant General's Office
Washington, D. C.

AG 210.31
(3-24-43)PO-A

WLD/lbl/lgp/1515
Br. 77167

March 27, 1943.

E X T R A C T

Letter Orders for:

Major Allen G. Pixton, O-24137, FA, Camp Edwards, Massachusetts.
Major William A. Boesman, O-357528, Inf, Camp Gordon Johnston, Fla.
Captain Frederick J. Goodwin, O-919363,CE, Camp Claiborne, Louisiana.

1. The following is an extract of Classified Letter Orders issued this date to each of the above-named officers.

2. Relieved from assignment and duty with station indicated, and assigned to station outside the continental limits of the United States. He will proceed from present station to Washington, D. C., reporting upon arrival to The Adjutant General, Room 1048, Munitions Building, for temporary duty. Upon completion of this temporary duty, he will proceed from Washington, D. C. and/or New York, New York to destination, reporting upon arrival to the Commanding General for duty. TDN FD 31 P 431-01, 02, 03, 07, 08 A 0425-23; FD 34 P 434-02, 03 A 0425-23.

3. Travel by military or commercial aircraft, belligerent vessel or aircraft, commercial steamship, Army transport and rail is directed. TD by air from Washington, D. C. and/or New York, New York, to destination is necessary for the accomplishment of an emergency war mission. A baggage allowance of fifty-five (55) pounds is authorized while traveling by military or commercial aircraft. In lieu of subsistence, a flat per diem of $6.00 is authorized while traveling on official business and while absent from permanent station, in accordance with existing law and regulations.

4. Prior to departure from present station, he will be equipped for extended field service and will have in his possession WD MD Form 81, showing inoculations and immunizations required before leaving the continental limits of the United States, and will require physical inspection as prescribed by par. 14, AR 40-100, as amended by Sec. III, Cir, WD 1942.

By order of the Secretary of War:

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

J. A. Ulio
Adjutant General.

18

~~SECRET~~

Authority: CO Eoc
Initials: ad
Date: 3/17/43

~~SECRET~~

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45 H. King Lt. Col. Jch
(Date)

~~HEADQUARTERS~~
ENGINEER AMPHIBIAN COMMAND
~~CAMP~~ EDWARDS MASSACHUSETTS TLM/elz

OFFICE CHIEF OF ENGINEERS
MAR 18 1943
320.2/Engr Amphibian Comd

35011

March 17, 1943

SUBJECT: Officer Overstrength for Engineer Amphibian Brigades

TO : Chief of Engineers, War Department, Washington, D. C.

1. It is requested that an overstrength in officer personnel of 30 per cent be authorized for the 4th Engineer Amphibian Brigade, and that the presently authorized overstrength of 25 per cent for the 2nd and 3rd Engineer Amphibian Brigades be increased to 30 per cent. It is further requested that the overseas movement orders for the 3rd and 4th Brigades, when written, provide definitely for the above requested overstrength.

2. The purpose of the above request is to provide for loss replacements for each of the brigades now scheduled for overseas movement to the Southwest Pacific Theatre, and to establish therein an Officers' Replacement Pool composed of qualified officers who have had special training and extensive experience in engineer amphibian operations. It is not anticipated that officer replacements of the types needed would be otherwise available in the theatre. Consequently, the above method of transporting officer replacements of the type needed to the theatre is suggested as a means of establishing a replacement pool in the theatre.

3. If authorized, it is planned to send the 3rd and 4th Brigades at 30 per cent overstrength. The 2nd Brigade has already departed for the theatre at 25 per cent overstrength; and in this case it will be necessary to dispatch the extra 5 per cent with either the 3rd or 4th Brigade, or separately, as determined by higher authority. A sufficient number of officers who are considered qualified for this type of operation is or will be available to this Command to accomplish the above purpose.

For the Commanding Officer:

T. L. MULLIGAN
Colonel, Corps of Engineers
Dir. of Adm. and Pers.

RECEIVED
MAR 18 1943
OPERATIONS AND TRAINING BRANCH
skh

17

RESTRICTED

RESTRICTED
SECRET

CE 320.2(Engr Amphb Cmd) SPETO

Subject: Officer Overstrength for Engineer Amphibian Brigades.

1st Ind.

War Department, Office, Chief of Engineers, Washington, D.C., March 19, 1943.

To: Commanding General, Army Service Forces.
Attention: Plans Division.

1. Reference is made to memorandum Assistant Chief of Staff, G-3, dated March 16, 1943, to Commanding Generals, Army Ground Forces and Services of Supply, WDGCT 353 Amph (3-16-43), subject, "Army Amphibious Training (Shore to Shore)", which limits the objectives and responsibilities of the Commanding General, Army Service Forces, with reference to shore to shore amphibious training to the completion of the training of the 3d and 4th Engineer Amphibian Brigades.

2. After departure of the 3d and 4th Engineer Amphibian Brigades for overseas duty, there will be no army facilities available for the training of overseas replacements for the Engineer Amphibian Brigades. It will therefore be expedient to train such replacements in advance concurrent with the training of the 3d and 4th Brigades and to attach these replacements to these Brigades when they are moved overseas.

3. In consideration of the foregoing, approval of the request and recommendations contained in the basic letter is recommended.

4. With reference to the overstrength requested for the 2d Engineer Amphibian Brigade, it is recommended that the concurrence be obtained from the Operations Division, War Department General Staff, and from the Theater Commander before such overstrength is authorized.

For the Chief of Engineers:

AGO
20 1943
Received

R. H. Burrage

Robert H. Burrage,
Colonel, Corps of Engineers,
Assistant; Operations and Training Branch,
Troops Division.

MAR 21 '43

17

WAR DEPARTMENT
DIVISION OF SUPPLY
OPERATIONS DIVISION

SECRET

~~RESTRICTED~~
~~SECRET~~

CRS/mr
5545

SPOPP 320.2 (3-17-43) 2d Ind.
Headquarters, Army Service Forces, Washington, D. C., March 24, 1943.

To: Assistant Chief of Staff, Operations Division, War Department General Staff.

It is recommended that approval be given to the request contained in basic communication.

For the Commanding General:

MAR 25 A.M.
3.25/2078

IN
OPD. WDGS.

LeR. LUTES,
Major General, G. S. C.,
Assistant Chief of Staff for
Operations, A. S. F.

A. V. WINTON
Colonel, General Staff Corps
Executive For Operations, A. S. F.

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~~RESTRICTED~~
~~SECRET~~

RESTRICTED SECRET

AG 320.2(4-24-43)PO-M-A 3rd. Ind. ACK/wyp/1618.

War Department, Army Service Forces, A. G. O., May 3, 1943.

To: Commanding Officer, Engineer Amphibian Command, Camp Edwards, Massachusetts.

THRU: Chief of Engineers, Army Service Forces.

The 25% officer overstrength authorized the 3rd and 4th Engineer Amphibian Brigades will be in the grades of second and first lieutenant. Any vacancies thus created in the grade of first lieutenant will be filled only by transfer of first lieutenants to the Brigade from outside sources.

By order of the Secretary of War:



Adjutant General.

17

RESTRICTED SECRET

The ~~over~~ total overstrength of ~~number~~ of officers can be in either of the grades of first or second lieutenant. No promotions to the grade of 1st lieutenant can be made ~~unless~~ until the number of the total assigned first lieutenants (including overstrength first lieutenants) is less than 118 plus the number of vacancies in the grades of capt & above. ~~in the case of assigned units and 3 plus the number of existing capt vacancies in the case of attached units.~~ The above figures apply to assigned units as do the figures given in the examples below

~~For~~ Example I assigned first lts - 125
assigned second lts - 95

promotion vacancies in grade of Capt & above 8
No of second lts that can be promoted 1

Example II.

assigned 1st lts	115
assigned 2nd lts	200
promotion vacancies in grade of Capt & above	10
Number of 2nd lts that can be promoted	13

SECRET

HEADQUARTERS CAMP EDWARDS
Office of the Commanding Officer

Camp Edwards, Mass.

March 7, 1943

TELEGRAM

TO: COMD GEN, ENGR AMPH COMD

FROM

CONTENTS

#60 COMMUNICATIONS CENTER MAR 070324Z

FROM: FT MASON CALIF MAR 062247Z

TO: COMMANDING OFFICER CAMP EDWARDS MASS

INSTRUCT SAM HOUSTON CAPTAIN REPORT CG SFPE FT MASON CALIF NOT LATER MARCH TWENTY PAREN CITE TW REPEAT TW SEVEN TWO NINE PAREN SHIPMENT OGD FIVE TWELVE DASH ERP TEN SY

GILBREATH

2015

8/0 issued 3/8/43 ast

SECRET

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COPY RECEIVED BY Herbert M Payne Capt SC Staff Duty Officer DATE Mch 7, 1943 TIME 1405

SECRET

WAR DEPARTMENT
Office of The Adjutant General
Washington, D.C.

AG 334.8
(2-18-43)PO-A

JFR/aa/lbl/1515
Br. 79065-76321

Classification changed RESTRICTED
in
By Authority of ~~the Chief of Engineers~~ A.S.F.
.....7 Aug 45.... ..H. G. King Lt. Col. jch
(Date) (Initials)

Subject: Orders. March 1, 1943.

~~SECRET~~
Auth: T. A. G.
Initials: YF
Date: 2/27/43

To : Officers Involved.

1. The Secretary of War directs that each of the following-named officers, now on temporary duty in Washington, D. C. in compliance with radio orders February 26, 1943, will proceed from Washington, D. C. and/or New York, N. Y. to London, England, reporting upon arrival to the Commanding General, European Theatre of Operations, for temporary duty of approximately thirty (30) days with the Royal Navy (Captain M. Hodges) for discussions on air amphibian signal communications. Upon completion of this temporary duty, he will return to Washington, D. C., reporting upon arrival to the Combined Air Amphibian Committee for further temporary duty of approximately three (3) days, and upon completion thereof, return to proper station as indicated. TDN FD 34 P 434-02, 03 A 0425-23.

Col. William P. Hays, 011655, SC	Hq. Eng. Amphibian Command, Camp Edwards, Massachusetts
Col. Josiah T. Dalby, 012440, GSC	Hq. Airborne Command, Fort Bragg, N.C.
Lt.Col. Haskell H. Cleaves, 016253, SC	Amphibious Force, Atlantic Fleet, Norfolk, Virginia
Lt.Col. Harry N. Burkhalter, Jr., 019106, AC	Hq. 3d Air Support Command, Birmingham, Alabama
Lt.Col. Alfred G. Texley, 0214177, Inf	Staff and Faculty, Amphibious Training Center, Camp Gordon Johnston, Fla.

2013

2. Travel by military or commercial aircraft, Army transport, commercial steamship, belligerent vessel or aircraft and rail is directed. TD by air(Priority No. 1) from Washington, D. C. and/or New York, N. Y. to London, England and return, is necessary for the accomplishment of an emergency war mission. A baggage allowance of fifty-five (55) pounds while traveling by military or commercial aircraft is authorized.

3. In lieu of subsistence, a flat per diem of $6.00 is authorized while traveling on official business and while absent from permanent station, in accordance with existing law and regulations. During the period of temporary duty in the European Theatre of Operations, the Commanding General, European Theatre may furnish suitable billet and messing facilities or determine the amount of per diem not to exceed $6.00 payable.

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

Incls.
Distribution: Each Officer (4)
Officers Record Section, AGO
CG, APO 887, c/o PM, New York, N.Y.
Military Personnel Div., SOS(Col. Wilkinson)
Combined Subjects Section, Operations Div., WDGS,
(Lt.Col. J. K. Woolnough)(2)
Mrs. Rogers, Room 1515

J. F. Ruth
Adjutant General.

15

RESTRICTED
~~SECRET~~

~~SECRET~~ RESTRICTED

[illegible]-gvvp-paw-1505
Officers Br-WCM-ph 78270

WAR DEPARTMENT
The Adjutant General's Office
Washington

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ 9.S.F.
7 Aug 45 (Date) H. L. King Lt. Col. (Initials)

AG 210.31
(2-16-43) PO-A

February 17, 1943.

Subject: Temporary Duty Orders.

~~SECRET~~
Auth: T. A. G.
Initials WCM.
Date 2-17-43

Thru : Commanding General,
Camp Edwards, Mass.

To : Each Officer Mentioned.

1. Each of the following-named officers will proceed on or about February 25, 1943, from Camp Edwards, Mass. to Washington, D.C. on temporary duty to report to The Adjutant General, Room 1048, Munitions Building, and upon completion of this temporary duty will proceed on or about February 28, 1943, from Washington, D. C. to Miami, Florida; thence by South Atlantic Route to Casablanca, French Morocco, Africa, and to such other places as may be necessary to carry out the instructions of the Chief of Staff, and upon completion of this temporary duty will return to proper station.

Brigadier General Daniel Noce, 05226, United States Army.
Colonel Francis H. Falkner, 017192, Corps of Engineers.
1st Lieutenant Ralph M. Ingersoll, 0105464, Corps of Engineers.

2. Travel directed is necessary in the military service. FD 34 P 434-02 A 0425-23. Travel by military, naval, or commercial aircraft, belligerent vessel or aircraft, army transport, commercial steamship, naval transport and rail is directed. TD by air from Miami, Florida to Casablanca, French Morroco, Africa, and such other places as may be necessary and return to Miami, Florida is necessary for the accomplishment of an emergency War Mission. In lieu of subsistence a flat per diem of $6.00 is authorized while traveling by military, naval, or commercial aircraft, and for the period of temporary duty while outside the continental limits of the United States, in accordance with existing law and regulations. At such times as he is billeted and subsisted as outlined in W-35-2-42 dated September 30, 1942, his per diem allowance will be suspended. A baggage allowance of seventy-seven (77) pounds is authorized while traveling by military, naval, or commercial aircraft.

3. Authority is granted to make such changes in the above itinerary and to proceed to such additional places as may be necessary for the performance of this mission. The duties being exceptional may require more than seventy-two (72) hours for their performance, therefore a delay of not to exceed thirty (30) days at any place where necessary, is authorized.

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~~SECRET~~ RESTRICTED

joining the Engineer Amphibian Command, the Brigade was by the end of September brought to a T/O strength of 360 officers and 6595 enlisted men 58 days after activation. The strength at the time of its departure from Camp Edwards about November 1 included 358 officers and 6775 enlisted men.

Training Memorandum No. 7, July 24, 1942, set up a definite Training Program for Initial Training of Filler Replacements, of which the Third Brigade was being built. The Brigade began its training under this directive receiving anti-aircraft defense training from the Weapons Detachment and boat training from the Fleet Captains office of the Boat Unit Detachment. A special Training Memorandum (No. 13) applying doctrine of Training Memorandums No. 8, 9 and 10, to the Third Brigade was published on August 25, providing a fixed program for the Brigade until October 3, 1942. Training Memorandum No. 19, dated October 3, 1942, set up a training schedule for the Brigade during the month of October. Training Memorandum No. 24, dated November 3, 1942, provided a training directive for the Third Brigade and extended the program from November 8 to April 30, 1943.

The second large scale maneuver of the Engineer Amphibian Command units took place on Martha's Vineyard on October 2 to 5, 1942, in conjunction with the 36th Division and the Amphibious Training Command. The problem was conducted under the direction of the commanding officers of the Engineer Amphibian Command, the Amphibious Command, and the 36th Division. It was staged before Lieutenant General Leslie J. McNair, Major General Walker, 36th Division, Brigadier Generals Daniel Noce, Commanding General, Engineer Amphibian Command, Frank Keating, Commanding General, Amphibious Training Command, Clarence Sturdivant and Clarence Huebner, both of the Office of the Chief of Engineers, and Raymond Moses, of the War Department, Services of Supply.

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The mission of the amphibian and amphibious troops was to capture the Island, Martha's Vineyard, and to initiate preparations for the defense of the Island. The Island was supposedly in the hands of the enemy which was supported by air and naval forces. The main landing of our troops was to be on the northwest side of the Island by two combat teams, with other landings to be made at two other shore points so as to draw the enemy from the main sector. The problem was noted by Lieutenant General McNair as being completely satisfactory.

In the case of the Shore Regiments of the 2nd and 3rd Brigades, the organization and training of these regiments were seriously affected by War Department directive requiring:

(1) The shipment of the 3rd Battalion, 532d Engineer Shore Regiment to Fort Bragg, North Carolina, to become part of the 36th Engineers. This battalion had just been brought to strength when this movement took place, September 1, 1942. The battalion had to be refilled by withdrawing personnel from elements of the 3rd Brigade.

(2) The shipment of the remaining elements of the 532d Engineer Shore Regiment to Fort Bragg, North Carolina, September 11, 15 and 28, as the 540th Engineer Shore Regiment. One battalion was replaced by a battalion of the 133d Engineers sent here from the West Coast. The other battalion was replaced by transfer of a battalion from the Shore Regiment of the 3rd Brigade.

The reorganization of the Third Brigade, along the lines of the reorganization of the Second Brigade, was accomplished by General Order No. 66, effective November 9, 1942. The 593d Engineer Boat Regiment was redesignated the 593d Engineer Amphibian Regiment, the 533d Engineer Shore Regiment was redesignated the 533d Engineer Amphibian Regiment, and the 543d Engineer Regiment was activated and stationed at Camp Edwards, effective November 9, 1942.

The reassignment of units as of November 9 included:

Unit	Transferred from	Asgd to
2d Battalion 533d Inc Med Bn Sec.	533d ESR	593d EAR
2d Battalion 593d " " " "	593d EBR	533d EAR
3d Battalion 593d " " " "	593d EBR	543d EAR
3d Battalion 533d " " " "	533d ESR	543d EAR
533d Band	533d ESR	Hqs Third Brigade

The personnel and equipment of the 593d Boat Maintenance Company and the 593d Tank Lighter Company were transferred within the Brigade as directed by the Commanding General.[19]

Simultaneously with the movement of the Second Brigade to Fort Ord, California, came orders for movement of the Third Brigade, commanded by Brigadier General D. A. D. Ogden, to Camp Carrabelle, Florida.[20] The movement began on October 30 with the movement of one amphibian regiment, plus attachments. The second echelon, consisting of all remaining elements of the Brigade, began its movement south to Camp Carrabelle November 10, 1942. The entire Brigade consisted of approximately 450 officers and 7000 enlisted men. The transfer from Camp Edwards to the new station was made partially by rail and partially by water. The water movement was to be by Tank Lighter craft from Cotuit (Camp Candoit) to Camp Carrabelle. The authorized strength of this unit was not to exceed 400 enlisted men and 40 officers. This rear echelon was to have cleared this station by November 17, 1942. Upon its arrival at Camp Carrabelle, this Brigade was attached to the Army Ground Forces.

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19. General Order 66, Par. 4.

20. PAC Ltr. WD 11-1-42 AG 370.5 OB-S-SPOPT-M.

At the time of its departure from Camp Edwards, the Third Brigade numbered 358 officers and 6775 enlisted men under the command of Brigadier General David A. D. Ogden. Its units comprised the following commanded by the officers listed below:

Headquarters	Brig. Gen. David A. D. Ogden
Headquarters Company	1st Lt. Walter R. Lehmberg
593d Engineer Amphibian Regt	Col. Oliver van den Berg
533d Engineer Amphibian Regt	Col. Charles T. Tench
543d Engineer Amphibian Regt	Col. Gerald E. Galloway
563d Engineer Boat Maint. Co.	2nd Lt. Brian P. Emerson
263d Med Battation	Lt. Col. Andrew W. Para
163d Ordnance Platoon	1st Lt. Cullum B. Watson
363d Quartermaster Battalion	Major Oscar C. Amos
363d Ordnance Battalion (Q)	Captain Howell X. Russ
288th Signal Company	Capt. Casimir J. Swan

IV. The 411th Base Shop Battalion.

The 411th Base Shop Battalion began its existence at Camp Edwards on July 20, 1942, pursuant to ~~oral~~ verbal orders of the War Department.[21] General Order No. 20, that date, activated the Depot Company of the 411th Base Shop and transferred thereto personnel and equipment of the 1st Platoon, 449th Engineer Company (Depot). The approximate strength of this unit upon activation was two officers and forty enlisted men.

General Order No. 28, on July 28, 1942,[22] the Power Plant Repair Company, 411th Base Shop Battalion, personnel was supplied by the 100th Ordnance Company upon its simultaneous inactivation.[23]

On August 17, 1942, by General Order No. 36, the balance of the units of the 411th Base Shop Battalion were inactivated; i. e., Headquarters, Headquarters Company, the Hull Repair Company, the Salvage and Dockage Company--Company B and C, respectively.[24] To these units this General Order added the Power Plant Repair Company and the Depot Company, previously activated, and designated them Company A and D, respectively.

Cadre personnel for Companies B and C was secured from Army Ground Forces and Service of Supply units, particularly the VI Army Corps. Fillers were transferred to this unit, which required an unusually high percentage of skilled men, only after careful selection from the sources indicated above.

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21. General Order No. 20, Engr. Amphibian Command, July 20, 1942.

22. WD Auth: Letter AG 320.2 (7-22-42).

23. General Order No. 39, Engr. Amphibian Command, August 19, 1942.

24. WD Auth: Letter AG 320.2 (8-11-42).

For that reason this unit was slow in building up to strength. The approximate strength of these units upon activation was 12 officers and 171 enlisted men. Strength report at the end of August showed 25 officers and 662 enlisted men in the 411th Base Shop Battalion. The unit reached full strength by the end of September, 1942, 50 officers and 1037 enlisted men.

The 411th Base Shop Battalion began its training program under Training Memorandum No. 14, dated August 29, 1942, which established it to carry on the Fourth Echelon Maintenance work of the Engineer Amphibian Command. This training program prepared this unit to function as a cohesive unit in the salvage, in the warehousing and issue of boat parts and equipment for such engineer amphibian units as are operating in the area of the battalion, to complete the technical training of the units of the battalion for duties required of them as members of the battalion team, and to train personnel to be used to form cadres for units to be activated on subsequent dates. A portion of the unit joined the Maintenance Detachment at Osterville for the training in Salvage and Hull Repair operations. Another portion of the unit was attached to the Boat Unit Detachment for the training in Power Plant Overhauling and Repair. Other portions of the battalion took over the repair operations of the Falmouth Marine Railway in conjunction with the Brigade Boat Maintenance Companies.

A composite platoon of the Depot Company, 411th Base Shop Battalion, accompanied the First Brigade overseas. The Battalion, then refilled and after an organizational and basic training period at Camp Edwards, engaged in depot and shop operations to the extent possible considering the limited facilities and equipment available to it. One provisional company of 7 officers and 216 men accompanied the Second Brigade to Camp Carrabelle, Florida,

in early October. A detachment of about 15 officers and 450 enlisted men was sent, about November 1, 1942, to the Higgins Industries, New Orleans, Louisiana, to learn assembly line operations of a small landing craft. All elements of this battalion were in the process of being assembled at Fort Ord, California, by November 26, 1942, preparatory to overseas movement. The battalion, less the elements at Camp Carrabelle, Florida, and at New Orleans, Louisiana, cleared this station on November 16, 1942.

V. The 540th Engineer Shore Regiment.

On September 11, 1942, General Order No. 48 activated the 540th Engineer Shore Regiment with station at Camp Edwards for the purpose of providing combat engineers with training similar to that of Engineer Amphibian Command units.[25] The personnel of the 532d Engineer Shore Regiment, less certain designated cadre, and all equipment except motor vehicles, was transferred to the 540th Engineer Shore Regiment. The approximate strength of the new unit upon activation was 65 officers and 1296 enlisted men.

General Order No. 49, September 11, 1942, attached the 540th Engineer Shore Regiment to the Second Engineer Amphibian Brigade for administration and training. The First Battalion of the 540th Engineer Shore Regiment was dispatched to Fort Bragg, North Carolina, on September 11, 1942; the Second Battalion departed for Fort Bragg on September 15, 1942. Upon their arrival at the new station these two units were ~~activated into~~ attached to the 36th Engineer Regiment (Combat).

The personnel and equipment of the Third Battalion, 540th Engineer

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25. WD Auth^l Letter AG 320.2 (9-8-42).

Shore Regiment was assigned to the 533d Engineer Shore Regiment, a unit of the Third Engineer Amphibian Brigade, on September 28, 1942, by General Order No. 56. The 540th was then inactivated and its personnel on October 3, 1942, became the Second Battalion, 533d Engineer Shore Regiment.[26]

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26. General Order No. 57, October 3, 1942. WD Auth: AG 320.2 (9-28-42).

SECTION EIGHT

Personnel Procurement

A. Officers.

1830 officers have joined the Engineer Amphibian Command since its activation.

57 were absorbed from units on activation of the Command.
1773 were procured for the Command.
1830 Total Officers

These officers have been assigned as follows:

Unit	No. of Officers
First Brigade	400
Second Brigade	455
Third Brigade	455
411th Base Shop Bn	50
HQs, E. A. C.	370
	1730
Transferred out -	100
Total Procured	1830

The rate of procurement was very rapid. By June 26, 1942, 16 days after activation, 846 officers had been procured; by July 3, 23 days after activation, 1000; by July 10, 30 days after activation, 1034. By July 27 procurement of 1141 officers had been obtained, sufficient to fill two Brigades, the Base Shop Battalion, and Command Headquarters.

The sources from which these 1141 officers were drawn are listed:

Transferred from absorbed organizations	57	57
Transferred from other organizations	106	535
Ordered to Engineer Amphibian Command from Reserve Status	793	825
Commissioned from Civilian Life	158	417
		1023
		2657

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The procurement of the 1000 officers directly from civilian life was authorized on June 4, 1942, subject to certain restrictions, by the War Department,[1] in order to obtain specialists not found elsewhere in the army for amphibian operations. The allotment of grades was set forth as follows:

Lt. Col.	Major	Captain	1st Lieutenant	2d Lieutenant	Total
40	60	250	350	300	1000

Under this authority 410 officers were obtained from civilian life to meet this procurement objective. Resort was made to the rolls of the United States Power Squadrons and similar motorboat and yachting organizations for recommendations. Ten thousand names were thus submitted. From these ten thousand, five thousand applications were sent out. Of the five thousand, only 410 officers were finally selected, commissioned, and ordered to duty with the Engineer Amphibian Command. Of this 410, 229 had been procured on or before July 27, 1942. In order to permit this particular procurement

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1. WD Auth: AG 320.2 (5-28-42) RE-SPGAO/16455-46--under provisions of AR 605-10.
"(1) All appointments in the grade of lieutenant Colonel and at least one-half of the appointments in the grade of major shall be made from men with prior service in the Army, Navy, Marine Corps or Coast Guard. Provided, further, that not more than one-third of the total appointments authorized shall be made prior to July 15, 1942, and not more than two-thirds prior to September 1, 1942.

"(2) Appointments will conform to the provisions of AR 605-10 except that appointment of 300 second lieutenants may be made from individuals who have not reached their 30th birthday, provided such individuals have had not less than four years' experience in the specialty for which their appointment is recommended

" (3) All individuals appointed under this authority shall be assigned to the Engineer Amphibian Command and shall be given a suitable course in basic military subjects prior to assignment to a headquarters or troop unit."

to operate more effectively, the Command maintained a Liaison Office in the Office of Chief of Engineers in Washington, D. C., headed by Captain James W. Orme, Jr. This office was disbanded upon the completion of this drive.

B. Enlisted Men - Sources of Troops.

26,208 enlisted men have joined the Engineer Amphibian Command since its activation.

2,183	enlisted men were absorbed by the Command on activation.
24,025	enlisted men have joined the Command since its activation.
26,208	Total Enlisted Men

The sources of the 24,025 enlisted men who have joined since the activation are listed below:

Source		No. of Enlisted Men
Replacement Training Centers		14,798
Officer Candidate School Rejects		250
Cadre for Third Brigade and 411th Base Shop Battalion		977
Reception Centers:-		
Enlisted	1818	
Specially Recruited	69	
Inducted	2229	4,116
Machine Records Transfers		938
Transfers by Adjutant General's Office		62
Transfers by individual request		179
Transfers by War Department Orders from other units		2,422
Miscellaneous		283
Total enlisted men who have joined the Command since its activation		24,025

1. Replacement Training Centers.

The principal Replacement Training Centers to dispatch men to the Command were:

Training Center	No. of Enlisted Men
Fort McClellan, Alabama, BIRTC	3627
Camp Robinson, Arkansas, BIRTC	2335
Fort Bragg, North Carolina, FARTC	1917
Camp Lee, Virginia, QMRTC	1242
Camp Grant, Illinois, MRTC	778
Camp Pickett, Virginia, MRTC	672
Camp Roberts, California, IRTC	642
Camp Croft, South Carolina, IRTC	539
Camp Wheeler, Georgia, IRTC	479
Fort Leonard Wood, Missouri, ERTC	466
Fort Sill, Oklahoma, FARTC	377

B. Enlisted Men - Sources of Troops.

26,208 enlisted men have joined the Engineer Amphibian Command since its activation.

2,183 enlisted men were absorbed into the Command upon activation

24,025

2. Officer Candidate School Rejects.

The principal Officer Candidate Schools to dispatch rejected Officer Candidates were as follows:

Engineer Officer Candidate School, Fort Belvoir, Virginia	238
Infantry Officer Candidate School, Fort Benning, Georgia	12

3. Cadre for Third Brigade and 411th Base Shop Battalion.

Cadre for the Third Engineer Amphibian Brigade and the 411th Base Shop Battalion came principally from the sources listed below:

187th Field Artillery, Pine Camp, New York
186th Field Artillery, Pine Camp, New York
258th Field Artillery, Pine Camp, New York
212th Field Artillery Bn, Camp Edwards, Massachusetts
106th Engineer Bn, Leesville, Louisiana
401st Engineer Bn, Plattsburg Barracks, New York
180th Engineer Bn, Plattsburg Barracks, New York
Ordnance Replacement Training Center, Aberdeen Proving Grounds, Maryland

4. Reception Centers.

The principal reception centers to dispatch men to the Command were:

Fort Devens, Massachusetts	170
Fort Hayes, Ohio	181
Fort Benjamin Harrison, Indiana	373
Camp Lee, Virginia	270
Fort Meade, Maryland	382
New Cumberland, Pennsylvania	427
Camp Perry, Ohio	253
Fort Thomas, Kentucky	297

5. Machine Records Transfers.

Machine Records transfers brought men from 125 different posts. The Machine Records transfers were made under the authority of twenty-five separate AG Letters, Subject: "Enlisted Specialists for Engineer Amphibian

Command", which ordered the respective Commanding Officers to transfer named enlisted men to the Engineer Amphibian Command subject to certain contingencies.[2]

6. Transfers by Adjutant General's Office.

In an attempt to gain enlisted specialists who already had had basic military training for the Command, resort was made to Machine Records to locate such specialists already in the army. The Machine Records Branch, Adjutant General's Department, furnished approximately 1000 names which were the basis of the letters of transfer. These specialists, thus located, fell into the following categories: - able seamen, riggers, motorboat operators, welders, Diesel mechanics, automobile mechanics, blacksmiths, Chief Marine Engineers, operating enginemen, First Mate--Steamship, ship carpenters, storage battery electricians, combination welders, and hoist operators.

7. Transfers by Individual Requests.

One hundred seventy-nine enlisted men transferred from ~~seventy-two~~ 50 2 different stations at their own initiative by ~~putting through~~ submitting applications channels and ~~securing of~~ having their individual requests for transfers approved.[3]

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2. WD Letter, AG 220.31 Engineers (5-31-42) EA. "Three categories of enlisted men were not to be included in the transfer of these men, namely: -

a. Enlisted men who are assigned to units scheduled for departure from the United States prior to September 30, 1942.

b. Enlisted instructors in special service schools and officer candidate schools; men attending officer candidate schools or who have been designated to attend such schools in future classes.

c. Men classified by local boards as 'conscientious objectors.'"

3. See Appendix.

6. Transfers by Adjutant General's Office.

In an attempt to gain enlisted specialists who already had had basic military

8 Transfer by War Department Orders from Existing Units.

In order to secure filler replacements with basic training to augment fillers from replacement training centers the War Department ordered the transfer of certain large groups to the Engineer Amphibian Command.

On August 1, 1942, 1818 men were drawn from the 33d Division, Camp Forrest, Tennessee;[3] and on September 10, 1942, the personnel of one battalion of 133d Engineers, 4 officers and 589 enlisted men, was transferred from Fort Lewis, Washington, to the Command.[4]

9 Recruiting Authority for Engineer Amphibian Command.

In an effort to secure certain specialists from civilian life the Command procured a recruiting authority to permit recruiting officers throughout the country to enlist directly for the Engineer Amphibian Command.

This recruiting authority operated between July 4 and August 15, 1942, and as a result of the enlistment drive 1280 men were enlisted in the Army directly for and joined the Engineer Amphibian Command. These men brought from civilian life the following skills:

Motorboat operators, Master mechanics, Welders--Arc and Combination, Diesel mechanics, Boatswains, Able seamen, sheet metal workers, Marine engineers, Riggers, and Automobile mechanics.

In addition to the recruiting drive carried on by the recruiting service, the Command commissioned Lt. Colonel R. E. Salzmann to seek out particularly desirable specialists from civilian life and secure their enlistment

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3. Auth. Telegram, Commanding General, Second Army, dated August 1, 1942.
4. Auth. WD Ltr AGO: File AG 370.5 (9-1-42) MS-GN-M.

for the Engineering Amphibian Command in certain grades. Through his efforts 69 specialists were thus secured, such as, - Diesel mechanics, able seamen, boatswains, motorboat operators, automobile mechanics, master mechanics, welders, carpenters, sheet metal workers, riggers, and marine firemen.

Characteristics of Enlisted Men.

1. Age:

The average age of enlisted men forming the Engineer Amphibian Command is 27.701 years.

The age of 70.4% of the men range between 18 and 30 years.

The age of 15.5% of the men range between 31 and 35 years.

The age of 6.7% of the men range between 36 and 40 years.

The age of 7.3% of the men range 41 years and over.

2. Length of Service:

The average length of service is 9.5 months.

The average length of service of regular army personnel was 4.41 years.

89.8% of the Command is composed of men inducted or enlisted in 1942, the average of whom has had 4.5 months of service.

3. A. G. C. T. Intelligence Distribution.

Distribution of A. G. C. T. Grades of all men received by the Command in shipments of 100 or more from June 14, 1942, to September 23, 1942 -

A. G. Group	% Obtained	% Normal	% Nationwide
I	3.0	7.0	8.8
II	18.5	24.0	31.8
III	33.9	38.0	31.4
IV	30.1	24.0	19.5
V	14.5	7.0	8.5

SECTION NINE

Development of Boat Handling Doctrine

The Mission of the Engineer Amphibian Command and subordinate units, as set forth in Training Memorandum No. 1 (Revised), July 27, 1942, necessitates that the landing craft play a vital and essential part in amphibian operations. It was therefore the task of the Engineer Amphibian Command to develop regulations governing the handling and maintenance of various types of landing craft.

Training Memorandum No. 1 (Revised), under Tactical Organization, specifies Engineer Boat Regiments for the Brigades. The basis for organization of the Boat Regiment is the boat company which will be organized normally to carry all the combat elements of a battalion landing team simultaneously. Three such companies, plus certain command, communications and other personnel, will be grouped into a boat battalion capable of moving one regimental combat team. The number of boat battalions grouped together as a regiment will depend on tactical and technical considerations for the simultaneous movement of all the combat elements of an infantry division. The three-battalion organization was indicated.

The principal duties of such regiments as originally outlined are:

"a. Adjust the organization of subordinate units to conform to the tactical plan when necessary.

b. Make careful preparation and hold rehearsals as outlined. Loading tables for all craft will be accurately prepared by tactical commanders, and all concerned must be informed in advance as to the details involved.

c. Maintain control of and communication between all amphibian elements.

d. Effect the initial crossing and continue the operation in accordance with prescribed plans. This includes salvaging, servicing, and 1st and 2nd echelon repairs to landing craft."

The Brigade Maintenance Company is further charged with the repair (3d echelon) and maintenance of hulls and engines, (landing craft), the inspection, salvage, dockage and fire prevention, the supply of parts and accessories for the boats used.

Training Memorandum No. 3, July 15, 1942, set forth a program for training in seamanship, listing certain requirements as to the amount of time Boat Companies and Lighter Companies put into technical and tactical training each week. The Technical schedule included: Seamanship and boat crew training--48 hours; Engine operation and 1st echelon maintenance--16 hours; Basic piloting--8 hours; Signalling--8 hours; Anit-aircraft firing (Cal. 30 and 50 M6) --32; a total of 112 hours. The Tactical training schedule: Unit operations, day and night--40 hours. This program was augmented and revised by Training Memorandum No. 13, August 25, 1942.

Training Memorandum No. 5, July 20, 1942, established Boat Maintenance Echelons. First Echelon Maintenance is designated to be the responsibility of the immediate unit commander and consists of the daily servicing and inspection under the supervision of officers and non-commissioned officers of the organization performed by the operating crew assigned the boat. It consists of the following: - Before operation inspection, proper procedure in starting motor, inspection after starting motor, proper procedure in operating boat, inspections during operation, inspection and servicing after each operation, and minor adjustments of motors during operation. The Second Echelon Maintenance is normally performed by the Maintenance and Salvage Platoon of the Boat and Tank Lighter Companies. During combat, they will perform the far shore Second Echelon Maintenance operation, and the near shore Second Echelon Maintenance willbbe taken over by the Boat Regiment Maintenance Company. The scope of the Second Echelon

Maintenance includes the minor adjustment and replacement, major adjustments, 50 hour mechanical inspection, and periodic servicing. This operation contemplates replacement of parts which do not require the disassembly of the motor and clutch, engine and clutch adjustments and tune up, minor hull repairs not requiring removal of the boat from the water and not requiring replacement of hull parts.

The Third Echelon Maintenance is performed by the Boat Regiment Maintenance Company and the Brigade Maintenance Company and includes in its scope major adjustments, major replacements, limited top engine overhaul, minor hull repairs that can be made on the beach or in the water, supervision of Second Echelon Maintenance, salvage, and 100 hour maintenance inspection.

Fourth Echelon Maintenance will be done by units of the base shop battalion. It will consist of remanufacture of motors, to include reboring cylingers, re-aligning and balancing crank shafts, re-aligning and bushing propeller shafts and similar work, remanufacture of hulls to include repair of hulls that require complete rebuilding, canabalizing of boats destroyed, salvage and dockage, procurement, storage and issue of parts and accessories.

Traihing Memorandum No. 8, August 4, 1942, gave instructions in operations, landing, retracting, steering, raising and lowering the ramp, of all the landing boats and tank lighters and appended a glossary of nautical terms and definitions for uniformity in use by personnel operating the boats.

Before the organization of the Engineer Amphibian Command certain tests were conducted by the Navy Department which lead to the adoption of the Higgins Tank Lighter for use in boat operations of the EngineernAmphibian Brigades. These boats are purchased by the Navy Department. They were in production before the formation of the Command and it is not known just what tests the Navy used in making their adoption, nor is it known what tests the Navy used

in determining their own Bureau Tank Lighter. On May 25, 1942, in compliance with orders from the Office, Chief of Engineers, officers of the Engineer Amphibian Command conducted tests of one Bureau Tank Lighter and one Higgins Tank Lighter at Norfolk, Virginia. The results of this test were submitted to the Chief of Engineers and lead to the adoption of the Higgins Tank Lighter for Command units. The boats now assigned to the Engineer Amphibian Command are:

	(Symbol)
36 foot personnel landing boat without ramp	LCP (L)
36 foot personnel landing boat with ramp	LCP (R)
36 foot vehicle landing boat with ramp	LCV
45 foot Bureau type tank lighters with ramp	LCM (2)
45 foot Higgins type tank lighters with ramp	LCM (2)
50 foot Bureau type tank lighters with ramp	LCM (3)
50 foot Higgins type tank lighters with ramp	LCM (3)
36 foot command and communication boats	None
42 foot control boat	None

Training Memorandum No. 10, August 15, 1942, developed general instructions for all tactical Boat Operations in the Boat Regiment, i. e., Types of Boats to be used, Organization, Formations, Illustrative Shore to Shore Operations, Command, and Definitions.

Training Memorandum No. 11, August 18, 1942, organized the Boat Control Section for the control of boat traffic. The Boat Control Section, normally attached to a shore company supporting a battalion landing team, consists of the maintenance and salvage section of one boat company of the boat regiment, augmented by attached medical personnel. This training memorandum revised the doctrine for boat operations as to duties, personnel, Boat Control Officer, landing operations, salvaging of stranded boats, evacuation, equipment, and the Salvage and Maintenance Boat.

Training Memorandum No. 13, August 25, 1942, set up a training program in seamanship for the Third Brigade in which the time allotment for training in

Boat and Lighter Companies was revised as follows:

> Technical Training: Seamanship and boat crew training, 50 hours; Engine operation and 1st Echelon Maintenance, 16 hours; Basic Piloting, 8 hours; Signalling, 8 hours; Anti-aircraft firing (Cal. 30 and 50 M.G.), 33 hours; a total of 115 hours.
>
> Tactical Training: Unit operations, 28 hours; Combined Operations, 28 hours; a total of 56 hours.

Training Memorandum No. 18, September 18, 1942, set forth the doctrine for boat control by radio, giving specific instructions for signal agencies within the Brigade operated and maintained by personnel of the Signal Company and the Boat and Shore Regiments.

Training Memorandum No. 20, October 10, 1942, provided instructions for combatting the hazards of freezing weather to all internal combustion engines and charging commanders with the care of all such equipment.

Training Memorandums 23 and 24, October 16 and November 3, 1942, set forth Training Directives for both the Second and Third Engineer Amphibian Brigades, respectively, for the periods—November 8, 1942, to April 30, 1943, emphasizing and requiring the following points in the basic training of all Boat Battalions:

1. Machine gun firing from floating craft against air and surface targets.
2. First and second echelon marine maintenance.
3. Boat control functions, with emphasis on control of traffic arriving on the far shore.
4. Continual practice in the control of mass boat movements from the near to the far shore.
5. Navigation for all officers.

Circular No. 11, July 3, 1942, made boats available during off-duty hours in so far as practicable because it was desirable that all members of

the Command become thoroughly accustomed to riding in the standard types of landing boats, permitting personnel not normally engaged in operation of these boats to have an opportunity to become accustomed to the sea. This Circular set up regulations governing the use of these boats by placing them under the control of a Chief Dispatcher for the purpose of safeguarding all passengers riding in the boats.

Circular No. 31, August 4, 1942, set up safety regulations for boats passing in front of the anti-aircraft firing range while sailing in and out to Waquoit and Cotuit.

Circular No. 55, September 12, 1942, set the policies and detailed measures for the safety of boats in view of the fact that two boats were destroyed by fire. Safety is a responsibility of commanding officers; this responsibility cannot be delegated. All personnel of this Command connected with the operation, care, and maintenance of boats were required to comply with Safety Regulations for the prevention of explosions and fires.

The Adjutant General's Office
Washington

AG 320.2 (6-5-42)
MR-M-GN

June 6, 1942

SUBJECT: Constitution and Activation of Headquarters and Headquarters Company, Engineer Amphibian Command.

TO: Commanding General, Services of Supply
Chief of Engineers.

1. The Headquarters and Headquarters Company, Engineer Amphibian Command, is constituted and will be activated at the earliest practicable date by the Chief of Engineers, at Camp Edwards, Massachusetts, by the transfer of necessary personnel from the units listed below under his control now at Camp Edwards.

37th Engr Combat Regt
87th Engr Bn (Hv Pon)
74th QM Bn (L Maint)
100th Ord Co (Hv Maint)
1st Plat, 450th Engr Co (Dep)
Co A, 201st QM Bn (Gas Sup)
1st Plat, 122d QM Co (Car)
Co B, less 1st Plat, 262d QM Bn (Serv)(Cld)

2. The Headquarters and Headquarters Company, Engineer Amphibian Command, will be organized under Tentative Tables of Organization prepared by the Chief of Engineers.

3. Officers and enlisted grades are authorized as follows:

a. Headquarters, Engineer Amphibian Command

(1) Officers

	Col	Lt Col	Maj	Capt	1st Lt	2d Lt	Total
BI	6	14	24	32	18	6	100
FD		1	1	2			4
CH C		1					1
JAGD			1		1		2
MC	1		1				2
DC			1				1
SN C				1			1
VC				1			1
MAC					2		2
TOTAL	7	16	28	36	21	6	114 (a)

(a) General officers and authorized aides are not included.

(2) Enlisted Men

1	2	3	4	5	6	7	
Mstr	1st Tech	Staff Tech	Sgt Tech	Corp Tech	Pfc	Pvt	Total
64	- 81	28 30	- 55	- 70	80	-	408

b. Headquarters Company, Engineer Amphibian Command

(1) Officers

	Maj	Capts	1st Lt	2d Lt	Total
BI	1	1	5	3	10
MC			2		2
TOTAL	1	1	7	3	12

(2) Enlisted Men

1	2	3	4	5	6	7	
Mstr	1st Tech	Staff Tech	Sgt Tech	Corp Tech	Pfc	Pvt	Total
3	1 3	10 7	9 27	8 56	67	84	275

4. Housing for the Headquarters and Headquarters Company, Engineer Amphibian Command, will be made available from that now allotted to the units listed in paragraph 1 above.

5. Priority for controlled items of equipment: A-8-3, as prescribed by letter, this office, AG 400 (4-8-42)MC-E-M, April 23, 1942, subject, "Distribution of Controlled Items of Equipment".

6. Date of activation will be reported to the Commanding Generals, Army Ground Forces and Services of Supply and this office without delay.

By order of the Secretary of War

Otto Johnson /s/
Adjutant General

Copies furnished:

Commanding Generals,
Army Ground Forces,
Eastern Defense Command,
First Corps Area.
Divisions of the War Department
General Staff.
Publication Division, A. G. O.
Chief, Statistics Branch, General Staff.

CERTIFIED A TRUE COPY:

W. B. HURD,
1st Lt CE,
Acting Personnel Officer.

RESTRICTED

Classification changed to RESTRICTED
By Authority of ~~the Chief of Eng~~
7 Aug 45 (Date)
H. G. King (Initials) Lt. Col.

WAR DEPARTMENT
HEADQUARTERS, SERVICES OF SUPPLY
WASHINGTON, D.C.

~~SECRET~~
By authority of C.G., S.O.S.
1-27-43 Date
JMA Initials

29655

SPOPP 353.02 (1/20/43) January 27, 1943

MEMORANDUM FOR THE CHIEF OF ENGINEERS:

Subject: Instructors for Engineer Amphibian Command.

1. Reference is made to memorandum SPOPP 353.02, dated January 20, 1943, subject as above.

2. Request to send six officers to North Africa for temporary duty and subsequent return to the United States as instructors, has been approved with the provision that the officers sent come from personnel at present under control of the Engineer Amphibian Command.

3. Theater commander is being advised and requested to call for this personnel when Amphibious Training Center at Arzew Bay is in operation.

By command of Lieutenant General SOMERVELL:

LeR. LUTES,
Major General, G.S.C.,
Assistant Chief of Staff for
Operations, S.O.S.

A. V. WINTON
Colonel, General Staff Corps
Executive For Operations, S.O.S.

OFFICE CHIEF OF ENGINEERS
JAN 30 1943
353.02 (Engr. Amph. Amphibian Command)

83 AGO
JAN 29 1943
Received
Engineers — 4

210.31
210.3 (1-27-43)

13

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

RESTRICTED
~~SECRET~~

AG 243. (11 Nov 43)OB-S-SPTEM-M (Continued) 16 November 1943.

8. It is desired that the Commanding General of each Service Command furnish a copy of this communication to the Commanding Officer of each Class I, II, III, and IV installation within the territorial limits of his Service Command.

By order of the Secretary of War:

J. A. ULIO,
Major General,
The Adjutant General.

2 Incls:
#1- List of Chinese Consular Districts
#2- WD, ODB Form No. 652.

COPIES FURNISHED:
Divisions of the War Department General Staff
Deputy Chief of Staff for Service Commands, ASF
Director of Personnel, ASF
Fiscal Director, ASF
The Provost Marshal General
The Judge Advocate General
The Inspector General

Distribution II.

96

2/8
approved by
TLM & Col Trudeau
HOS — ok Col Henry)

(1)
Captain Denman Scott Chapman 0324542 Inf (Res)
C+GS 11/30/42 - S-3

1st Lieut. Fredrick L. Marshall 0361158 CE (Res)
ACOS 1/29/43 S-4

1st Lieut. Raymond Lee Smith ✓ 0368745 Inf (Res)
ACOS 1/29/43 543 EAR (ORP S.O. 6 #51)

(6)
2nd Lieut. Ralston H. Robertson 0504341 CE (Res)
ACOS 1/29/43 Hq EAC (ORP) T/D Flint on 1/30/43

(5)
2nd Lieut. Julian Burks 01100897 CE (OCS)
ACOS 1/29/43
Hq EAC (ORP) T/D New Orleans

(7)
2nd Lieut. Roger R. Foeley 01107954 C.E. (OCS)
ACOS 1/29/43
Hq EAC (ORP) T/D Flint 1/30/43

2nd Lieut. Frank J. Glenn ✓ 01104681 CE (OCS)
ACOS 1/29/43
593 EAR

1st Lt (4)
Samuel N Hagerman 0315274 CE (Inf)
to Dev. Sec. ok (Col Pothier)

13

(2)
1st Lt Paul B Rodgers Jr. 01101637 CE (AUS)
543 EAR Camp - Carrabelle Fla

(3)
2nd Lt William B Campbell 0912667 CE (AUS)
533 EAR - Camp Carrabelle Fla

HEADQUARTERS ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASSACHUSETTS

June 10, 1942

GENERAL ORDERS
No. 1

I--Activation of Engineer Amphibian Command.--In compliance with letter, The Adjutant General's Office, Washington, D. C., dated June 6, 1942, file AG 320.2 (6-5-42) MR-M-GN, Subject: "Constitution and Activation of Headquarters and Headquarters Company, Engineer Amphibian Command", and First Indorsement, Chief of Engineers, Washington, D. C., dated June 9, 1942, Headquarters and Headquarters Company, Engineer Amphibian Command are activated this date at Camp Edwards, Massachusetts.

II--Opening of Headquarters Engineer Amphibian Command,-Headquarters, Engineer Amphibian Command is open at Camp Edwards, Massachusetts at 12:01 AM this date.

III--Assumption of Command.--Under the provisions of paragraph 4, AR 600-20, the undersigned hereby assumes command of the Engineer Amphibian Command.

Daniel Noce /s/
DANIEL NOCE /t/
Colonel, Corps of Engineers,
Commanding.

Distribution:
1 The Adjutant General, Washington, D.C.
1 Chief of Engineers
1 CG Army Ground Forces
1 CG Eastern Defense Command
1 CG First Corps Area
1 General Staff
1 Publication Division, A.G.O.
1 Chief, Statistics Branch, General Staff
1 Post Commander, Camp Edwards, Mass.
1 Chief of Staff
1 CO
10 File

CERTIFIED A TRUE COPY:

W. B. HURD,
1st Lt CE,
Acting Personnel Officer.

~~SECRET~~
RESTRICTED
29655

CE 353.02 (Engr Amphibian Comd) SPEAM 1st Ind.

War Department, Office, Chief of Engineers, Washington, D. C., February 2, 1943.

To: Commanding General, Engineer Amphibian Command, Camp Edwards, Mass.

It is desired that you furnish this office the names of the six (6) officers selected for this detail so that the necessary orders can be arranged for upon receipt of further information from the theater commander.

By order of the Chief of Engineers:

E. A. Brown, Jr.,
Lt. Col., Corps of Engineers,
Chief, Military Personnel Branch,
Administrative Division.

13

RESTRICTED
~~SECRET~~

SECRET
Classification changed to RESTRICTED SECRET
By Authority of the Chief of Engineers 9.S.F.
7 Aug 45 H. G. King Lt. Col. (Initials)
(Date)

WAR DEPARTMENT
The Adjutant General's Office
Washington

LJH-hbl-mih-1F-924

AG 210.31 (1-16-43)OC-B

~~SECRET~~

Subject: Transfer Orders.

Auth: TAG
Initials: [illegible]
Date: 1-20-43

To : Commanding Officer,
Provost Marshal General Training Center,
Fort Custer, Michigan.

January 20, 1943.

1. Issue the necessary orders assigning Corps of Military Police officers in numbers indicated, to organizations and Service Command Headquarters shown, from among those now on duty at the Replacement Pool, Provost Marshal General Training Center, Fort Custer, Michigan. Officers being assigned to Headquarters Service Commands, Services of Supply, are for reassignment by Commanding Generals of the Service Commands, Services of Supply, to Military Police units under their control:

AG Trans. Order No.	No. of Offcrs.	Unit and Station
1-1305	three (3)	First Service Command, Services of Supply, Boston, Massachusetts
1-1306	five (5)	Second Service Command, Services of Supply, Governors Island, New York
1-1307	four (4)	Third Service Command, Services of Supply, Baltimore, Maryland
1-376	ten (10)	Fourth Service Command, Services of Supply, Atlanta, Georgia
1-1308	three (3)	Fifth Service Command, Services of Supply, Fort Hayes, Ohio
1-1309	three (3)	Sixth Service Command, Services of Supply, Chicago, Illinois
1-238	six (6)	Seventh Service Command, Services of Supply, Omaha, Nebraska
1-1310	five (5)	Eighth Service Command, Services of Supply, Dallas, Texas
1-1311	four (4)	Ninth Service Command, Services of Supply, Fort Douglas, Utah

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~~SECRET~~ SECRET

AG 210.31 (1-16-43)OC-B LJH-hbl-mih-1F-924

AG Trans. Order No.	No. of Offcrs.	Unit and Station
1-138	two (2)	85th Infantry Division, Camp Shelby, Mississippi
1-199	one (1)	Engineer Amphibian Command, Camp Edwards, Massachusetts
1-110	seven (7)	741st Military Police Battalion (ZI), Fort Dix, New Jersey
1-560	five (5)	213th Military Police Company, Camp Blanding, Florida
1-1312	one (1)	1108th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1313	one (1)	1109th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1314	two (2)	1110th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1315	three (3)	1114th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1316	three (3)	1115th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1317	three (3)	1116th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1318	three (3)	1117th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1319	three (3)	1118th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1320	three (3)	1119th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1321	three (3)	1120th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1322	three (3)	1121st Military Police Company, Aviation, Ten Mile Station, Charleston, South Carolina
1-1323	three (3)	1122nd Military Police Company, Aviation, Ten Mile Station, Charleston, South Carolina

AG Trans. Order No.	No. of Offers.	Unit and Station
1-1324	three (3)	1123rd Military Police Company, Aviation, Ten Mile Station, Charleston, South Carolina
1-1325	three (3)	1124th Military Police Company, Aviation, Ten Mile Station, Charleston, South Carolina
1-1326	three (3)	1125th Military Police Company, Aviation, Brookley Field, Alabama
1-1327	three (3)	1126th Military Police Company, Aviation, Brookley Field, Alabama
1-1328	three (3)	1127th Military Police Company, Aviation, Brookley Field, Alabama
1-1329	three (3)	1128th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1330	three (3)	1129th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1331	three (3)	1130th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1332	three (3)	1131st Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1333	three (3)	1139th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1334	three (3)	1140th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1335	three (3)	1141st Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1336	three (3)	1142nd Military Police Company, Aviation Warner Robins Air Depot, Warner Robins, Georgia
1-1337	three (3)	1143rd Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1338	three (3)	1144th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia
1-1339	three (3)	1145th Military Police Company, Aviation, Warner Robins Air Depot, Warner Robins, Georgia

12

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG EAC
Initials: WDA
Date: NOV 24 1942

Historical Diary for the Month of June 1942

Prepared by: (11/30/42)
W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:
T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

1. Organizational Structure. (list organizations assigned or attached during the month. Cite date and nature of, and authority for, all changes therein)

Headquarters
Headquarters Company

Activated June 10, 1942 at Camp Edwards, Mass., per General Order No. 1. Headquarters opened at 12:01 a.m. and Colonel Daniel Noce, Corps of Engineers, assumed command. War Department authority: Letter, AG 320.2 (6/5/42).

Source of troops:

See listing below of organizations assigned to Engineer Amphibian Command upon activation.

Additional officers and enlisted men were secured from the following sources:

Transfer from other organizations
Officers Reserve Corps
Officers Candidate Schools
Appointment from civilian life of men who were specialists in motor and sail boat operation, navigation, maintenance, and repair. Most of these officers were contacted through the U.S. Power Squadrons and Power Boat Associations.
Enlistment
Replacement Training Centers
Officers Candidate School rejects

Approximate strength on date of activation:

50 Officers; 1 Warrant Officer; 0 Enlisted men.

37th Engineer Combat Regiment)
87th Engineer Bn. (Heavy Pontoon))
74th Quartermaster B. (Lt. Maint))
100th Ordnance Co. (Heavy Maint)) Organizations assigned to the
1st Plat., 449th Engineer Co. (Depot)) Engineer Amphibian Command
Co. A, 201st Quartermaster Bn. (Gas supply)) upon activation per WD Ltr.
1st Plat., 122nd Quartermaster Co. (Car)) AG 320.2 (6/5/42).
Co. B, less 1st plat., 262nd Quartermaster)
Bn. (Service)(Colored))

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

SECRET

1. Organizational Structure (continued).

1st Engineer Amphibian Brigade	Activated 6/15/42 at Camp Edwards, Mass, per GO#4. Col. Daniel Noce, CE, assumed command. WD auth: Ltr. 320.2(6/11/42)
Headquarters Headquarters Company 591st Engineer Boat Regt. 561st Engineer Co. (Maint) 261st Medical Bn. 161st Ordnance Plat. 361st Quartermaster Bn. 531st Engineer Shore Regt. Attached medical.	Source of troops: same as Hq. and Hq. Co., EAC Approximate strength upon activation: 49 Officers, 0 WO; 2084 Enlisted men
2nd Engineer Amphibian Brigade	Activated 6/20/42 at Camp Edwards, Mass per GO#8. Col. Daniel Noce, CE, assumed command. WD auth: Ltr. 320.2(6/11/42)
Headquarters Headquarters Company 592nd Engineer Boat Regt. 562nd Engineer Co. (Maint) 262nd Medical Bn. 162nd Ordnance Plat. 362nd Quartermaster Bn. 532nd Engineer Shore Regt. Attached medical.	Source of troops: same as Hq. and Hq. Co., EAC Approximate strength upon activation: 43 Officers; 0 WO; 1589 Enlisted men

Note: Although WD Ltr. AG 320.2 (6/5/42) specifies that the 1st Platoon, 450th Engineer Co. (Depot) will be assigned to the Engineer Amphibian Command upon activation, 1st indorsement, Office Chief of Engineers, 6/8/42, calls attention to the fact that the 1st Platoon, 450th Engineer Co. (Depot) has been transferred, less personnel and equipment, to Camp Blanding and directs that the personnel thereof form the 1st Platoon, 449th Engineer Co. (Depot).

DECLASSIFIED
DOD Directive 5200.9
27 Sept 1958

SECRET
RESTRICTED

AG 210.31 (1-16-43) OC-B (Continued) LJH-hbl-mih-1E-924

AG Trans. Order No.	No. of Offcrs.	Unit and Station
1-1340	twenty (20)	Military Police Replacement Training Center Pool, Fort Riley, Kansas
TOTAL	157	

2. It is desired that the Commanding Officer, Provost Marshal General Training Center, Fort Custer, Michigan, notify The Adjutant General. of any requisitions not filled, with special reference made to requisition numbers.

3. Return one (1) copy of this letter order to The Adjutant General without delay, attaching thereto three (3) copies of orders issued.

By order of the Secretary of War:

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

J. M. Kedahl
Adjutant General.

Distribution:
The Provost Marshal General, Rm. 1711, Munitions Bldg.
One (1) copy to each unit concerned.
Commanding General, Engineer Amphibian Command, Camp Edwards, Mass.

12

RESTRICTED
SECRET

1. Organizational Structure (continued).

1st Engineer Amphibian Brigade	Activated 6/15/42 at Camp Edwards, Mass, per GO#4. Col. Daniel Noce, CE, assumed command. WD auth: Ltr. 320.2(6/11/42)
Headquarters Headquarters Company 591st Engineer Boat Regt. 561st Engineer Co. (Maint) 261st Medical Bn. 161st Ordnance Plat. 361st Quartermaster Bn. 531st Engineer Shore Regt. Attached medical.	Source of troops: same as Hq. and Hq. Co., EAC Approximate strength upon activation: 49 Officers, 0 WO; 2084 Enlisted men
2nd Engineer Amphibian Brigade	Activated 6/20/42 at Camp Edwards, Mass per GO#8. Col. Daniel Noce, CE, assumed command. WD auth: Ltr. 320.2(6/11/42)
Headquarters Headquarters Company 592nd Engineer Boat Regt. 562nd Engineer Co. (Maint) 262nd Medical Bn. 162nd Ordnance Plat. 362nd Quartermaster Bn. 532nd Engineer Shore Regt. Attached medical.	Source of troops: same as Hq. and Hq. Co., EAC Approximate strength upon activation: 43 Officers; 0 WO; 1589 Enlisted men

Note: Although WD Ltr. AG 320.2 (6/5/42) specifies that the 1st Platoon, 450th Engineer Co. (Depot) will be assigned to the Engineer Amphibian Command upon activation, 1st indorsement, Office Chief of Engineers, 6/8/42, calls attention to the fact that the 1st Platoon, 450th Engineer Co. (Depot) has been transferred, less personnel and equipment, to Camp Blanding and directs that the personnel thereof form the 1st Platoon, 449th Engineer Co. (Depot).

DECLASSIFIED
DOD Directive 5200.9
27 Sept 1958

2. Strength.

	Hq.			Hq Co.			Attached								
	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
6/10/42 ~~First day~~	50	1					99	0	2374						
Increase	28		171	20		242									
Decrease							90		2124						
Last day	78	1	171	20	0	242	9	0	250						

	1st Brigade			2nd Brigade			Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
6/10/42 ~~First day~~									
Increase	263		6266	212		2507			
Decrease									
Last day	263	0	6266	212	0	2507			

	Aggregate Strength			
	O	WO	EM	Civilians
6/10/42 ~~First day~~	149	1	2374	0
Increase	433		7062	17
Decrease				
Last day	582	1	9436	17

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

RESTRICTED
SECRET

WAR DEPARTMENT
THE ADJUTANT GENERAL'S OFFICE
WASHINGTON, DC.

JHD/egw/1515-MU

AG 210.31 (11-15-42)PO-A. Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F. January 13, 1943.
7 Aug 45 (Date)
H. G. King, Lt. Col. (Initials) ~~SECRET~~
Auth: T.A.G.
Initials: [illegible]
Date: January 13, 1943.

Subject: Amendment of Orders.

Thru : Commanding Officer,
Camp Edwards, Mass.

To : Officers involved.

1. The Secretary of War amends so much of classified radio orders of November 17, 1942, pertaining to each of the following-named Corps of Engineer officers to assign him, by direction of the President, to duty with the Quartermaster Corps, and upon arrival at destination each officer will report to the Commanding General for duty with the Air Corps.

1st Lt. Francis M. Johnson,	0491502
1st Lt. Bernard A. Kruzensk,	0910575
1st Lt. Orris L. Lamb,	0909165
2nd Lt. Harvey T. Culp, Jr.	0914160
2nd Lt. Harold I, Eaton, Jr.	0912498
2nd Lt. Frederick E. Ill,	0912445
1st Lt. Earl A. Lapidus,	0472214
1st Lt. William H. Potter,	0912639

W. L. Day
Adjutant General.

Distribution:
Each officer (4)
Officers' Record Section, AGO.
Chief of Engineers.
CG., New York Port of Embarkation, Brooklyn, N.Y.
CO., Hampton Roads Port of Embarkation, Newport News, Va.

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

Forwarded to CO NYPE Brooklyn 1/16/43

11

RESTRICTED
~~SECRET~~

RESTRICTED SECRET

Classification changed to RESTRICTED
By Authority of the Chief of Engineers 9.S.F.
7 Aug 45 (Date) H. L. King Lt. Col. (Initials)
jcb

WAR DEPARTMENT
Office of the Chief of Engineers
Washington

CE SPEAM
CE 210.3 (Engrs., Corps of)

January 1, 1943.

Classification changed to RESTRICTED
By Authority of the Chief of Engineers 9.S.F.
7 Aug 45 (Date) H. L. King Lt. Col. (Initials)
jcb

Subject: Amendment of orders.

To: The Commanding General,
Engineer Amphibian Command,
Camp Edwards, Massachusetts.

1. The attached correspondence is referred for remark and recommendation so that appropriate reply can be made to The Adjutant General.

2. It is requested that all copies of the correspondence be returned to this office.

By order of the Chief of Engineers:

Victor L. Billings,
Captain, Corps of Engineers,
Assistant; Military Personnel Branch,
Administrative Division.

2103

3 Incls:
Incl. 1 - AG clsfd. ltr order, 11/6/42.
Incl. 2 - (added) AG IAS, 12/28/42. to OCE.
Incl. 3 - (added) Ltr (clsfd) fr SFP/E, 12/21/42, to TAB

10

RESTRICTED SECRET

277

3. Station Record.

ENGINEER AMPHIBIAN COMMAND

Station on ~~first day of Month:~~ date of activation Camp Edwards, Mass.

Date	Departed	Arrived	Nature of movement	Authority
		none		

ASSIGNED OR ATTACHED ORGANIZATIONS

Date	Organization and Commanding Officer	From	To	Nature of move and authority	Strength: O	WO	EM
		none					

DOD Dir... 5200.9
27 Sept 1958

7. Record of Events.

Date	Event
6/10/42	Hq and Hq Co, Engineer Amphibian Command activated at Camp Edwards, Massachusetts, Colonel Daniel Noce, Corps of Engineers, commanding.
6/15/42	1st Engineer Amphibian Brigade activated at Camp Edwards.
6/20/42	2nd Engineer Amphibian Brigade activated at Camp Edwards.
6/17/42	Command assumes control of Falmouth Marine Railway Yard, Falmouth, Mass.

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

~~SECRET~~

~~SECRET~~

~~WAR DEPARTMENT~~

THE ADJUTANT GENERAL'S OFFICE
WASHINGTON, DC.

JHD/egw/1515-MU

AG 210.31 (11-15-42)PO-A.

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45 (Date)
H.G. King Lt Col (Initials) jh

January 13, 1943.

~~SECRET~~

Subject: Amendment of Orders.

Auth: T.A.G.
Initials: [illegible]
Date: January 13, 1943.

Thru : Commanding Officer,
Camp Edwards, Mass.

To : Officers involved.

1. The Secretary of War amends so much of classified radio orders of November 18, 1942, pertaining to each of the following-named Corps of Engineer officers to assign him, by direction of the President, to duty with the Quartermaster Corps, and upon arrival at destination each officer will report to the Commanding General for duty with the Air Corps.

1st Lt. Lawrence T. Coffee,	0916051
1st Lt. Albert H. Collier,	0916458
2nd Lt. Frederick A. Meiser,	0482282

W. L. Day
Adjutant General.

Distribution:
Each officer (4)
Officers' Record Section, AGO.
Chief of Engineers.
CG., New York Port of Embarkation, Brooklyn, N.Y.
CO., Hampton Roads Port of Embarkation, Newport News, Va.

THE ADJUTANT GENERAL'S OFFICE
OFFICIAL
WAR DEPARTMENT

Forwarded to Co NYPE Brooklyn 1/16/43

SECRET

782

RESTRICTED
~~SECRET~~

~~SECRET~~

HEADQUARTERS ENGINEER AMPHIBIAN COMMAND
TRAINING AND OPERATIONS SECTION
Camp Edwards, Massachusetts

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ G.S.P.
7 Aug 45
(Date)
H. G. King Lt. Col.
(Initials)

December 9, 1942

MEMORANDUM:

TO : Chief of Staff, Engineer Amphibian Command.

1. Blue prints and records of the Boat Units Section, Headquarters, Engineer Amphibian Command show the following inside measurements of ramp boats capable of transporting AA Automatic cannon:

LCT (105')
Length of hold to bow taper 71'6"
Length of hold to ramp edge 89'7"
Width at beam from bulwark to bulwark 25'10"
Height of bulwarks from deck 4'6"

LCM 3 (50') - Higgins
Length of hold 32 '
Width of hold 9'7"

LCM 3 (50') - Bureau
Length of hold 44'
Width of hold 14'9"

LCV
Length of hold 18'5"
Width of hold 6'3"

E. E. WILLIAMSON
Major, CAC

9

RESTRICTED
~~SECRET~~

2602

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG EAC
Initials: WDH
Date NOV 24 1942

Historical Diary for the Month of July 1942

Prepared by: (11/30/42)

W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:

T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

1. Organizational Structure. (list organizations assigned or attached during the month. Cite date and nature of, and authority for, all changes therein)

Headquarters	
Headquarters Company	
Hq EAC Boat Unit Detachment	Constituted 7/9/42 per GO#13. Placed on DS at Waquoit Bay; thence to Cotuit on 7/15/42.
Hq EAC Boat Maintenance Detachment	Constituted 7/13/42 per GO#14. Placed on DS at Cotuit.
Hq EAC Weapons Detachment	Constituted 7/16/42 per GO#15.
3rd Bn., 533rd Engineer Shore Regt.	Constituted 7/22/42 per GO#21, as amended by GO#30, "for the purpose of conducting basic training for personnel who have not received such training prior to assignment to this Command."
Depot Co., 411th Base Shop Bn.	Activated 7/24/42 at Camp Edwards, Mass., per GO#20 (7/20/42). WD Auth: Ltr. AG 320.2 (7/22/42) Source of troops: 1st Plat., 449th Engineer Co. (Depot) Approximate strength upon activation: 2 Officers; 0 WO; 40 Enlisted men
Power Plant Repair Co., 411th Base Shop Bn.	Activated 7/24/42 at Camp Edwards, Mass., per GO#28 (7/28/42) WD Auth: Ltr. AG 320.2 (7/22/42) Source of troops: None assigned upon activation. Troops later assigned from 100th Ordnance Co. Approximate strength upon activation: 1 Officer; 0 WO; 0 Enlisted men

449th Eng.

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

SECRET

SECRET

246 COMMUNICATION CENTER CAMP EDWARDS MASS 112241Z

FROM: FTORD CALIF DEC 111802Z

TO : COMMANDING GENERAL ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS MASS

COL JOHNSON SFPE VERIFIES RECEIPT AUTHORITY FROM SOS TO ALLOW OVERAGE OFFICERS TO REMAIN WITH US

FITCH

SECRET

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG EAC
Initials: WDH
Date NOV 24 1942

Historical Diary for the Month of July 1942

Prepared by: (11/30/42)

W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:

T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

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Hq EAC Boat Maintenance Detachment	Constituted 7/13/42 per GO#14. Placed on DS at Cotuit.
Hq EAC Weapons Detachment	Constituted 7/16/42 per GO#15.
3rd Bn., 533rd Engineer Shore Regt.	Constituted 7/22/42 per GO#21, as amended by GO#30, "for the purpose of conducting basic training for personnel who have not received such training prior to assignment to this Command."
Depot Co., 411th Base Shop Bn.	Activated 7/24/42 at Camp Edwards, Mass., per GO#20 (7/20/42). WD Auth: Ltr. AG 320.2 (7/22/42) Source of troops: 1st Plat., 449th Engineer Co. (Depot) Approximate strength upon activation: 2 Officers; 0 WO; 40 Enlisted men
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449th Eng.

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

SECRET

1. Organizational Structure (continued).

100th Ordnance Co. (Heavy Maint)
1st Plat., 122nd Quartermaster Bn. (Car)
Co. B, less 1st Plat., 262nd Quartermaster Bn. (Service)(Cld)
*37th Engineer Combat Regiment
*87th Engineer Bn. (Heavy Pon)
*74th Quartermaster Bn. (Lt. Maint)
*1st Plat., 449th Engineer Co. (Depot)
*Co. A, 201st Quartermaster Bn. (Gas Supply)

* Held without personnel or equipment pending reassignment of unit.

1st Engineer Amphibian Brigade

Headquarters
Headquarters Company
591st Engineer Boat Regiment
561st Engineer Co. (Maint)
361st Medical Bn.
161st Ordnance Plat.
361st Quartermaster Bn.
531st Engineer Shore Regt.

286th Signal Co. — Activated 7/13/42 at Camp Edwards, Mass., and assigned 1st Brigade per GO#17. WD auth: Ltr. 320.2 (7/9/42)

2nd Engineer Amphibian Brigade

Headquarters
Headquarters Company
592nd Engineer Boat Regiment
562nd Engineer Co. (Maint)
362nd Medical Bn.
162nd Ordnance Plat.
362nd Quartermaster Bn.
532nd Engineer Shore Regt.

287th Signal Co. — Activated 7/13/42 at Camp Edwards, Mass., and assigned 2nd Brigade per GO#17. WD auth: Ltr. 320.2 (7/9/42)

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

2. Strength.

	Hq.			Hq Co.			Attached			411th Base Shop			3d Bn 533dSR		
	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
First day	78	1	171	20	0	242	9	0	250						
Increase	239		401			302	5		46	9		115	35		479
Decrease				7											
Last day	317	1	572	13	0	544	14	0	296	9	0	115	35	0	479

	1st Brigade			2nd Brigade			Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
First day	263	0	6266	212	0	2507			
Increase	100		799	214		2005			
Decrease									
Last day	363	0	7065	426	0	4512			

	Aggregate Strength			
	O	WO	EM	Civilians
First day	582	1	9436	17
Increase	595		4147	37
Decrease				
Last day	1177	1	13583	54

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

2. Strength.

	Hq.			Hq Co.			Attached			411th Base Shop			3d Bn 533dSR		
	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
First day	78	1	171	20	0	242	9	0	250						
Increase	239		401			302	5		46	9		115	35		479
Decrease				7											
Last day	317	1	572	13	0	544	14	0	296	9	0	115	35	0	479

	1st Brigade			2nd Brigade			Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
First day	263	0	6266	212	0	2507			
Increase	100		799	214		2005			
Decrease									
Last day	363	0	7065	426	0	4512			

	Aggregate Strength			
	O	WO	EM	Civilians
First day	582	1	9436	17
Increase	595		4147	37
Decrease				
Last day	1177	1	13583	54

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

3. Station Record.

ENGINEER AMPHIBIAN COMMAND

Station on first day of Month: Camp Edwards, Mass.

Date	Departed	Arrived	Nature of movement	Authority
		none		

ASSIGNED OR ATTACHED ORGANIZATIONS

Date	Organization and Commanding Officer	From	To	Nature of move and authority	Strength: O	WO	EM
		none					

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

7. Record of Events.

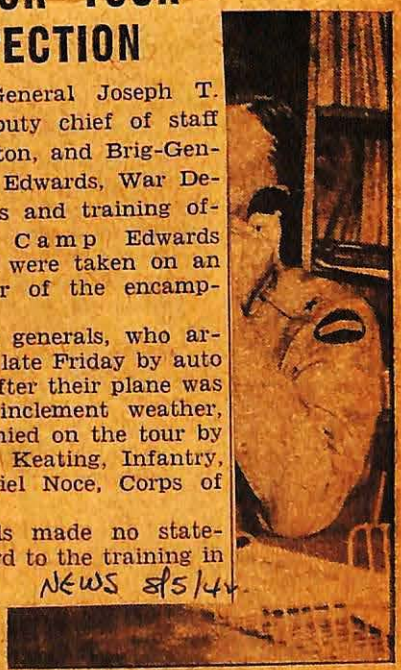
Date	Event
7/7/42	Col. Henry C. Wolfe, CE, assumes command of 1st Engr Amphibian Brigade, vice Col. Noce.
7/17/42	Command assumes control of Crosby Yacht Building Co., Yard at Osterville, Mass.
7/24/42	Lt. Gen. Somerville, CG SOS, inspected Waquoit, Cotuit, Falmouth, and the practice beaches.
7/25/42	Inauguration of Special Amphibian Courses at Fort Belvoir OCS announced.
7/27/42	Col. Daniel Noce, CE, Commanding, promoted Brigadier General, USArmy.
7/30/42	Lt. Gen. Joseph T. McNarney, Deputy Chief of Staff, War Dept., and Brig. Gen. Odwal H. Edwards, War Dept., visited command.

MP EDWARDS NEWS

ust 26, 1942







GENERALS VISIT CAMP FOR TOUR OF INSPECTION

Lieutenant-General Joseph T. McNarney, deputy chief of staff from Washington, and Brig-General Idwal H. Edwards, War Department plans and training officer, visited Camp Edwards Thursday and were taken on an inspection tour of the encampment.

The visiting generals, who arrived in camp late Friday by auto from Boston after their plane was grounded by inclement weather, were accompanied on the tour by Col. Frank A. Keating, Infantry, and Col. Daniel Noce, Corps of Engineers.

The generals made no statements in regard to the training in progress here. NEWS 8/5/42

THREE CAMP EDWARDS COLONELS were notified last week of their promotion to brigadier-generals. Shown above seated at their desks they are, left to right: Brig-General Daniel Noce, commander of the Engineer Amphibian Command; Frank A. Keating, commanding general of the Amphibious Training Command; and Morris C. Handwerk, commanding officer of the Anti-aircraft Training Center.

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

7. Record of Events.

Date	Event
7/7/42	Col. Henry C. Wolfe, CE, assumes command of 1st Engr Amphibian Brigade, vice Col. Noce.
7/17/42	Command assumes control of [illegible] at Osterville, Mass.
7/24/42	Lt. Gen. Somerville, CG SOS, [illegible] mouth, and the practice beaches.
7/25/42	Inauguration of Special Ampl[illegible] OCS announced.
7/27/42	Col. Daniel Noce, CE, Comma[illegible] al, USArmy.
7/30/42	Lt. Gen. Joseph T. McNarney, [illegible] pt., and Brig. Gen. Odwal H. Edwards, [illegible]

Red Tape Snipped During Sneak Attack

Regulations were regulations to a certain supply sergeant, for a short time only, during the bombing of Hickam Field, Hawaii, on December 7.

So reports the Miami Area Air Forces Technical Training Command's camp newspaper, "To Keep 'Em Flying." The incident is described in a quote from Officer Candidate John H. Boyle, 23, of Brooklyn, who in recounting what he saw during the sneak attack, said in part . . . "I ran to the supply sergeant and asked him for some rifles, but he asked me for a receipt. 'Hell man.

MP EDWARDS NEWS [illegible]ust 26, 1942







THREE CAMP EDWARDS COLONELS were notified last week of their promotion to brigadier-generals. Shown above seated at their desks they are, left to right: Brig-General Daniel Noce, commander of the Engineer Amphibian Command; Frank A. Keating, commanding general of the Amphibious Training Command; and Morris C. Handwerk, commanding officer of the Anti-aircraft Training Center.

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG, EAC
Initials: WDH
Date: NOV 24 1942

Historical Diary for the Month of August 1942

Prepared by: (11/30/42)
W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:
T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

1. Organizational Structure. (list organizations assigned or attached during the month. Cite date and nature of, and authority for, all changes therein)

Headquarters	
Headquarters Company	Designated limited third echelon shop per AR 850-15, 8/27/42, GO#45.
Hq EAC, Boat Unit Detachment	
Hq EAC, Boat Maintenance Detachment	
Hq EAC, Weapons Detachment	
Hq EAC, Casual Detachment	Constituted 8/3/42 per GO#31, as amended by GO#51.
3rd Bn., 533rd Engineer Shore Regt.	Transferred to 3rd Engineer Amphibian Brigade upon activation (see below)
Depot Co., 411th Base Shop Bn.	Transferred to 411th Base Shop Bn. upon activation (see below)
Power Plant Repair Co. 411th Base Shop Bn.	Transferred to 411th Base Shop Bn. upon activation (see below)
411th Base Shop Bn.	Activated 8/17/42 at Camp Edwards, Mass., per GO#36. WD Auth: Ltr. AG320.2 (8/11/42).
Hq. and Hq. Co. Co. A, Power Plant Repair Co. Co. B, Hull Repair Co. Co. C, Salvage and Dockage Co. Co. D, Depot Co.	Source of troops: Co. A - Power Plant Repair Co (see above) Co. D - Depot Co. (see above) Cadre for Co. B and C - Army Ground Forces Approximate strength upon activation: 12 Officers; 0 WO; 171 Enlisted men
1st Plat., 122nd Quartermaster Co. (Car) Co. B, less 1st Plat., 262nd Quartermaster Bn. (Service)(Cld)	
*100th Ordnance Co. (Hv. Maint)	Personnel and equipment transferred to Power Plant Repair Co., 411th Base Shop Bn.
*37th Engineer Combat Regt. *87th Engineer Bn (Hv Pon) *74th Quartermaster Bn (Lt Maint)	Transferred, less personnel and equipment, to control CG, Army Ground Forces, 8/15/42, per WD, AGF, ltr. 320.2/60(R) GNGTC (8/14/42)
*1st Plat., 449th Engineer Co.(Depot) *Co. A, 201st Quartermaster Bn (Gas Supply)	

*Held without personnel or equipment pending reassignment of unit.

DECLASSIFIED
Directive No. 5200.9
27 Sept 1958

SECRET

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG, EAC
Initials: WDH
Date: NOV 24 1942

Historical Diary for the Month of August 1942

Prepared by: (11/30/42)
W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:
T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

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Hq EAC, Boat Unit Detachment	
Hq EAC, Boat Maintenance Detachment	
Hq EAC, Weapons Detachment	
Hq EAC, Casual Detachment	Constituted 8/3/42 per GO#31, as amended by GO#51.
3rd Bn., 533rd Engineer Shore Regt.	Transferred to 3rd Engineer Amphibian Brigade upon activation (see below)
Depot Co., 411th Base Shop Bn.	Transferred to 411th Base Shop Bn. upon activation (see below)
Power Plant Repair Co. 411th Base Shop Bn.	Transferred to 411th Base Shop Bn. upon activation (see below)
411th Base Shop Bn.	Activated 8/17/42 at Camp Edwards, Mass., per GO#36. WD Auth: Ltr. AG320.2 (8/11/42).
Hq. and Hq. Co. Co. A, Power Plant Repair Co. Co. B, Hull Repair Co. Co. C, Salvage and Dockage Co. Co. D, Depot Co.	Source of troops: Co. A - Power Plant Repair Co (see above) Co. D - Depot Co. (see above) Cadre for Co. B and C - Army Ground Forces Approximate strength upon activation: 12 Officers; 0 WO; 171 Enlisted men
1st Plat., 122nd Quartermaster Co. (Car) Co. B, less 1st Plat., 262nd Quartermaster Bn. (Service)(Cld)	
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*1st Plat., 449th Engineer Co.(Depot) *Co. A, 201st Quartermaster Bn (Gas Supply)	

*Held without personnel or equipment pending reassignment of unit.

DECLASSIFIED
Directive No. 5200.9
27 Sept 1958

SECRET

1. Organizational Structure (continued).

Note: 37th Engrs asgd to VII Army Corps, Marysville, Calif.
87th Engrs asgd to Third Army, Camp Claiborne, La.
74th QM MM atchd to IX Army Corps, Ft. Lewis, Wash.

1st Engineer Amphibian Brigade — Departed station 8/4-5/42 (see movement record below)

Headquarters	161st Ordnance Plat.
Headquarters Co.	361st Quartermaster Bn.
591st Engr Boat Regt	531st Engineer Shore Regt
561st Engr Co (Maint)	286th Signal Co.
361st Medical Bn	Attached medical.

2nd Engineer Amphibian Brigade

Headquarters	162nd Ordnance Plat.
Headquarters Co.	362nd Quartermaster Bn.
592nd Engr. Boat Regt	532nd Engr. Shore Regt.
562nd Engr. Co (Maint)	287th Signal Co.
362nd Medical Bn.	Attached medical.

3rd Engineer Amphibian Brigade

Headquarters
Headquarters Co.
593rd Engineer Boat Regt.
533rd Engineer Shore Regt.
563rd Engr Boat Maintenance Co.
263rd Medical Bn.
163rd Ordnance Plat.
363rd Quartermaster Bn.
288th Signal Co.
Attached medical.

Activated 8/6/42 at Camp Edwards, Mass, per GO#33 (8/8/42) as amended by GO's #34 and 42. Col. Daniel Noce, CE, assumed command. WD auth: Ltr. CE 320.2, 1st ind.

Source of troops:

Engineer Amphibian Command

Approximate strength upon activation:

38 Officers; 0 WO; 808 Enlisted men

DECLASSIFIED
DOD Directive No. 5200.
27 Sept 1958

2. Strength.

	Hq.			Hq Co.			Attached			411th Base Shop			3Bn-533d. ESR.		
	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
First day	317	1	572	13	0	544	14	0	296	9	0	115	35	0	479
Increase	225		400					5		16		547			
Decrease				1		34	5		48				35	0	479
Last day	542	1	972	12	0	510	9	5	248	25	0	662			

	1st Brigade			2nd Brigade			3rd Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
First day	363	0	7065	426	0	4512			
Increase						2506	318	1	5241
Decrease	363	0	7065	59					
Last day				367	0	7018	318	1	5241

	Aggregate Strength			
	O	WO	EM	Civilians
First day	1177	1	13583	54
Increase	96	6	1068	
Decrease				3
Last day	1273	7	14651	51

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

3. Station Record.

ENGINEER AMPHIBIAN COMMAND

Station on first day of Month: Camp Edwards, Mass.

Date	Departed	Arrived	Nature of movement	Authority
		none		

ASSIGNED OR ATTACHED ORGANIZATIONS

Date	Organization and Commanding Officer	From	To	Nature of move and authority	Strength: O	WO	EM
8/5/42	1st Brigade Col. Wolfe	Camp Edwards	NY Port of Embarkation	Perm chg sta. Ltr WD 7/25/42	353	0	6794

7. Record of Events.

Date	Event
8/4/42	1st Engineer Amphibian Brigade departed station for New York Port of Embarkation and subsequent movement to the United Kingdom, Base No. 2, European Theatre of Operations.
8/6/42	3rd Engineer Amphibian Brigade activated at Camp Edwards, Mass.
8/10/42	Col. David A. D. Ogden, CE, assumed command, 3rd Engr Amphibian Brigade.
8/16/42	2nd Engineer Amphibian Brigade and 45th Division (Oklahoma National Guard) in joint maneuver involving land, air, and sea attack on Matha's Vineyard. Guests: War Department: Col. William A. Bessell, Office Chief of Engrs. Col. F. J. Wilson Lt. Col. R. H. Chard, Command and General Staff School. Lt. Col. J. S. Keller, Army Ground Forces Lt. Col. E. B. Gallant, General Staff (OPD) Lt. Col. V. D. Whatley Major C. E. Hoz Major H. G. Simonite Other: Vice Admiral L. O. Colbert, Coast and Geodetic S. Col. Robert Montague, USMC Commander R. B. Daggett, USN) On staff of Lt. Commdr J. R. Leeds, USN) Adm. Hewitt, USN
8/17/42	411th Base Shop Bn. activated at Camp Edwards, Mass.
8/24/42	Col. William J. Heavey, CE, assumed command 2nd Engr Amphibian Brigade, Vice Col. Noce.
8/26/42	Broadcast of MutualBroadcasting System's "Pass in Review" from Camp Edwards participated in by Command.

7. Record of Events (continued)

Date	Event

ANNEXES

Annex	Description	Annex	Description

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

August 8, 1942.

GENERAL ORDERS)
NUMBER 32)

ACTIVATION OF THE 3RD ENGINEER AMPHIBIAN BRIGADE

1. Pursuant to instructions contained in 1st Ind., Office of Chief of Engineers, dated August 6, 1942, file CE 320.2 (3rd Engr Amph Brig), the following organizations are activated at Camp Edwards, Mass., effective August 6, 1942.

THIRD ENGINEER AMPHIBIAN BRIGADE

Headquarters
Headquarters Company
593rd Engineer Boat Regiment
533rd Engineer Shore Regiment (less 3rd Battalion)
563rd Engineer Boat Maintenance Co.
263rd Medical Bn.
163rd Ordnance Platoon
363rd Quartermaster Bn.
288th Signal Co., Amphibian
Attached Medical

2. The 3rd Bn., 533rd Engineer Shore Regiment (Training Battalion) is activated at Camp Edwards, Mass., effective August 6, 1942, and is assigned to Headquarters, Engineer Amphibian Command.

3. Initial rosters of the above organizations will be prepared and submitted to the Personnel Officer, this Headquarters, immediately.

By order of Colonel NOCE:

Arthur G. Trudeau /s/
ARTHUR G. TRUDEAU, /t/
Colonel, General Staff Corps
Chief of Staff

OFFICIAL:

A. O. Acers /s/
A. O. ACERS /t/
Lt. Colonel, A.G.D.,
Adjutant General

Distribution "A"

CERTIFIED A TRUE COPY:

W. B. HUBD,
1st Lt CE,
Actg Personnel Officer.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASSACHUSETTS

GENERAL ORDERS)
NO. 34)

August 12, 1942

I Amendment of General Orders
II Appointment of Staff Officers

I. General Orders No. 32, this Headquarters, August 8, 1942, pertaining to activation of 3d Engineer Amphibian Brigade is renumbered General Orders No. 33.

II. Colonel Harry Henry 012589 CE 010171 is appointed Director of Services, Engineer Amphibian Command

Colonel Wilmar W. Dewitt 014814 CE is appointed Director of Specialist Schools, Engineer Amphibian Command vice Captain Greer relieved.

By command of Brigadier General NOCE:

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
CHIEF OF STAFF

OFFICIAL:

A. O. Acers /s/
A. O. ACERS /t/
Lt. Col., A. G. D.
Adjutant General

Distribution "A"

CERTIFIED A TRUE COPY:

W. B. HURD,
1st Lt CE,
Acting Personnel Officer.

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG EAC
Initials: WBH
Date: NOV 24 1942

Historical Diary for the Month of September 1942

Prepared by: (11/30/42)
W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:
T. L. MULLIGAN
Colonel, C. E.
Acting Chief of Staff

1. Organizational Structure. (list organizations assigned or attached during the month. Cite date and nature of, and authority for, all changes therein)

Headquarters
Headquarters Company
Hq EAC, Boat Unit Detachment
Hq EAC, Boat Maintenance Detachment
Hq EAC, Weapons Detachment
Hq EAC, Casual Detachment

EAC Band — Activated 9/2/42 at Camp Edwards, Mass., per GO#46. WD Auth: Ltr AG322.94(8/25/42)
Source of troops: Ft. Devens, Mass.
Approximate strength upon activation: 0 Officers; 1 WO; 28 Enlisted men

411th Base Shop Bn.
1st Plat, 122nd QM Co. (Car)
Co B, less 1st Plat, 262nd QM Bn (Serv)
*100th Ordnance Co. (Hv Maint) — Transferred less personnel and equipment to CG AGF and inactivated 9/17/42. WD Auth: Ltr AG 320.2(9/16/42)

*1st Plat, 449th Engr Co (Depot) — Transferred less personnel and equipment to Engr Organization Center, Cp Claiborne, La. 9/30/42. WD Auth: Ltr AG320.2 (9/25/42)

*Co A, 201st QM Bn (Gas supply)
*Organizations held without personnel or equipment pending reassignment

540th Engineer Shore Regiment — Activated 9/11/42 at Camp Edwards, Mass., per GO#48 WD Auth: Ltr AG320.2 (9/8/42)
Purpose: Provide combat engineers with training similar to that of EAC units.
Source of troops: 532nd Engr. Shore Regt.
Approximate strength upon activation: 65 Officers; 0 WO; 1296 Enlisted men

Attached to 2nd Brigade for administration and duty per GO#49, 9/11/42.

1st Bn departed 9/11/42) To form part of
2nd Bn departed 9/15/28/42) 36th Engrs. at
) Ft Bragg, NoC.

3rd Bn relieved from attachment to 2nd Brig. and attached to 533rd Engr Shore Regt per GO#56, 9/28/42.

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1. Organizational Structure (continued).

2nd Engineer Amphibian Brigade

Headquarters	
Headquarters Company	
532nd Engineer Shore Regt.	
592nd Engineer Boat Regt.	
262nd Medical Bn.	
562nd Engineer Boat Maint. Co.	
287th Signal Co.	
162nd Ordnance Plat.	
362nd Quartermaster Bn.	
Co. B, 362nd Ordnance Bn (Q)	Co B withdrawn from 362nd QM Bn and redesignated per GO#47 9/7/42 WD Auth: Circ. 274, 1942

3rd Engineer Amphibian Brigade

Headquarters	
Headquarters Company	
533rd Engineer Shore Regt.	
593rd Engineer Boat Regt.	
263rd Medical Bn.	
563rd Engineer Boat Maint Co.	
288th Signal Co.	
163rd Ordnance Plat.	
363rd Quartermaster Bn.	
Co B, 363rd Ordnance Bn (Q)	Co B withdrawn from 363 QM Bn and redesignated per GO#47 9/7/42 WD Auth: Circ. 274, 1942

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2. Strength.

	Hq.			Hq Co.			Attached			411th Base Shop.					
	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
First day	54	1	972	12	0	510	9	5	248	25	0	662			
Increase	24		58				7	2	171	16		328			
Decrease				1		3									
Last day	566	1	1030	11	0	507	16	7	419	41	0	990			

	2nd Brigade			5th Brigade			Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
First day	367	0	7018	318	1	5241			
Increase				42		1354			
Decrease	6		112						
Last day	361	0	6906	360	1	6595			

	Aggregate Strength			
	O	WO	EM	Civilians
First day	1239	7	14651	51
Increase	82	2	1796	13
Decrease				
Last day	1355	9	16447	64

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3. Station Record.

ENGINEER AMPHIBIAN COMMAND

Station on first day of Month: Camp Edwards, Mass.

Date	Departed	Arrived	Nature of movement	Authority
		none		

ASSIGNED OR ATTACHED ORGANIZATIONS

Date	Organization and Commanding Officer	From	To	Nature of move and authority	Strength: O	WO	EM
9/1/42	3d Bn 532ndESR	CpEdwards	FrBraggNC	Perm chg sta Radio Hq 2ndArmy 8/31/42	17	0	590
9/11/42	1stBn 540thESR	do	do	Perm chg sta Ltrd WD 9/16/42	28	0	513
9/15/42	2ndBn 540thESR	do	do	do	28	0	607
9/28/42	562nd Boat Maint Co and atchd pers. fr 411th Base Shop Bn	do	CpCarrabelle Fla.	Perm chg sta Ltr HqEAC 9/26/42	12	0	335
9/28/42	540thESR, less 3 Bns	do	FtBraggNC	Perm chg sta Ltr WD 9/16/42	12	0	117
9/30/42	Advance Det,2ndBrigade	do	CpCarra-belle,Fla	Perm chg sta Ltr SOS, 9/29/42	25	0	217

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7. Record of Events.

Date	Event
9/8/42	Officers' Mess, EAC, opens with formal dance.
9/10/42	Col. William J. Heavey, CE, commanding 2nd EABrigade, promoted Brig. General.
9/18/42	Col. Henry C. Wolfe, CE, commanding 1st EABrigade (overseas) and Col. David A.D. Ogden, CE, commanding 3rd EABrigade, promoted Brig. General.
9/15/42	EAC 12-piece dance orchestra broadcasts over WCOP, West Yarmouth.
9/23/42	Column "Amphibianotes" appears in Camp Edwards News.

E.A.C. AMPHIBIANOTES

"Amphibianotes", a weekly column of the doings and personalities of EAC soldiers, makes its bow in THE CAMP EDWARDS NEWS today. A good job must be done and to accomplish it we need your help. If you know any interesting soldiers or have anecdotes about yourself or your friends contact your company, regimental or battalion reporter, and he'll write them for this pillar. We're off!

One of the Amphibs wants to compete with Bob Burns in a bazooka contest. He's Pvt. George Coons of the Casual Detachment who, like Burns, hails from Arkansas. He believes he's better than Bazooka Bob. However it wasn't the bazooka that landed him on Major Bowes' program last week. It was the bird imitations he's been giving for years. Coons is still saving the $1 tip that Burns gave him when he was a cabbie back in Arkansas.

Pvt. Edward O'Gorman of Headquarters has a Boston-Camp Edwards round-trip railroad ticket that has made a round-trip around overseas. It came in a letter from a friend who wrote, "I won't be able to use it now, but I'm sure you can."

When a classification interviewer asked a recruit if he were born in "this country" the recruit replied:

"Hell no, I was born in Nebraska."

SECOND BRIGADE

Examination of all coxswains in the 592 Engineer unit will be followed by the issuing of licenses to those who qualify. The job of the Coxswain is one of great responsibility. As helmsman and commander of a boat, he will have the lives of hundreds of military passengers in his charge.

The two-fold exam, written and functional, is tough, and an EAC coxswain who wants to "follow the sea" after the war should have little trouble obtaining a berth as a skipper of a small craft.

The highlight of the past week is the reorganizations summed up briefly, three regiments will result. Each will have one of the present boat battalions and shore battalions as follows: 2nd Bn, 592nd with 1st Bn, 532nd; 1st Bn, 592nd, with 2nd Bn., 532nd, and 3rd Bn., 592nd, with 3rd Bn., 532nd.

The performances of Pat O'Brien and the Gae Foster girls were most enthusiastically received by the boys on the island. The applause, cheers and whistles of the 3,000 men nearly shook loose the pontoons in the ponton bridge. Pat and the "pretties" had mess with men of the 2nd Battalion.

Company B, 592nd, proudly displays an official commendation of Pvt. Gustave Preuss "for giving needed assistance to two privates pulled beneath a broached tank lighter," August 31. The commendation is signed by the regimental comman

THIRD BRIGADE

The "Surf Riders' Revue," staged by the 533rd, first in a weekly series of shows by the men, came off with a great success. Lt. Charles Thomas, emcee, is an actor with six years' experience on Broadway.

Pvt. James F. Hemphill of 263rd Medical, claims to have a lower serial number than that of the soldier mentioned in last week's NEWS. It is 48,548.

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ENGINEER AMPHIBIAN COMMAND

Authority: CG EAC
Initials: WBH
Date: NOV 24 1942

Historical Diary for the Month of October 1942

Prepared by: (11/30/42)
W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:
T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

1. Organizational Structure. (list organizations assigned or attached during the month. Cite date and nature of, and authority for, all changes therein)

Headquarters
Headquarters Company
Hq EAC, Boat Unit Detachment
Hq EAC, Boat Maintenance Detachment
Hq EAC, Weapons Detachment
Hq EAC, Casual Detachment
EAC Band

411th Base Shop Bn

1st Plat., 122nd QM Co. (Car)
Co. B, less 1st Plat., 262nd QM Bn. (Serv)

*Co. A, 201st Quartermaster Bn (Gas supply) — Transferred less personnel and equipment to control CG AGF, to Third Army, Cp Barkley, Texas, 10/26/42. WD Auth: AGF Ltr 320.2/96 (QM)(R)(11/2/42)

*Held without personnel or equipment pending reassignment of unit.

3rd Bn., 540th Engr Shore Regt. — Inactivated 10/3/42 at Camp Edwards, Mass., per GO#57. WD Auth: AG320.2 (9/28/42). Personnel transferred to 2nd Bn, 533rd Engr Shore Regt.

2nd Engineer Amphibian Brigade (see page 2)

3rd Engineer Amphibian Brigade

Headquarters
Headquarters Co.
593rd Engr Boat Regt.
533rd Engr Shore Regt
263rd Medical Bn
363rd Quartermaster Bn
563rd Engr Boat Maint Co.
288th Signal Co.
163rd Ordnance Plat.
Co. B, 363rd Ordnance Bn (Q)
Attached medical.

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1. Organizational Structure (continued).

2nd Engineer Amphibian Brigade

Reorganized 10/1/42 per GO#54 (9/28/42) WD Auth: 2nd ind, SOS SPOPU 320.2(9/5/42)

Prior to reorganization

Headquarters
Headquarters Co.
592nd Engr Boat Regt.
532nd Engr Shore Regt.
262nd Medical Bn.
362nd Quartermaster Bn.
562nd Engr. Boat Maint Co.
287th Signal Co.
Co. B, 362nd Ordnance Bn (Q)
162nd Ordnance Plat.
Attached medical

Subsequent to reorganization

Headquarters
Headquarters Co.
532nd Engr Amphibian Regt.
542nd Engr Amphibian Regt.
592nd Engr Amphibian Regt.
262nd Medical Bn
362nd Quartermaster Bn.
562nd Engr Boat Maint Co.
287th Signal Co.
Co. B, 362nd Ordnance Bn (Q)
162nd Ordnance Plat.
Attached medical.

592nd Engr Boat Regt redesignated 592nd Engineer Amphibian Regt.
532nd Engr Shore Regt redesignated 532nd Engineer Amphibian Regt.
542nd Engineer Amphibian Regt activated.
Boat Maintenance Co. and Tank Lighter Co., 592nd Engr Amphibian Regt inactivated, personnel and equipment reassigned within regiment.

Reassignments:

Unit	From	To
1st Bn, 532ndEAR	532ndEAR	592ndEAR
1st Bn, 592ndEAR	592ndEAR	532ndEAR
3rd Bn, 592ndEAR	592ndEAR	542ndEAR
3rd Bn, 532ndEAR	532ndEAR	542ndEAR
Band, 532ndEAR	532ndEAR	Hq 2dBrig.

Hq, Hq Co, Medical Det., and Chaplain, 542nd EAR from inactivated units and from Hq, HqCo, and Medical Det (less 3 Bn sections) of 532nd and 592nd EAR.

Departed station 10/4-15/42 for Camp Carrabelle, Florida, less 542nd EAR.

542nd Engr Amphibian Regt attached to Engineer Amphibian Command for administration and training, 10/14/42, per GO#59.

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2. Strength.

	Hq.			Hq Co.			Attached			411 Bde Shop			54th Med Ed Regt		
	O.	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
First day	566	1	1030	11	0	507	16	7	419	41	0	990			
Increase		1	711							9		47	108	0	1767
Decrease	71			1		38		1					~~108~~	~~0~~	~~1767~~
Last day	495	2	1741	10	0	469	16	6	419	50	0	1037	108	0	1767

	2nd Brigade			3rd. Brigade			Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
First day	361	0	6906	360	1	6595			
Increase						180			
Decrease	361	0	6906	2	1				
Last day				358	0	6775			

	Aggregate Strength			
	O	WO	EM	Civilians
First day	1355	9	16447	64
Increase				
Decrease	318	1	4739	1
Last day	1037	8	11708	63

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3. Station Record.

ENGINEER AMPHIBIAN COMMAND

Station on first day of Month: Camp Edwards, Mass.

Date	Departed	Arrived	Nature of movement	Authority
		none		

ASSIGNED OR ATTACHED ORGANIZATIONS

Date	Organization and Commanding Officer	From	To	Nature of move and authority	Strength: O	WO	EM
10/4/42	Co C,362ndQM Bn	CpEdwards	Cp Carra-belle Fla	Perm chg sta Ltr WD SOS 9/29/42	3	0	103
10/5/42	Co A,362ndQM Bn	do	do	do	3	0	111
10/6/42	262nd Medical Bn	do	do	do	18	0	358
10/7/42	287thSigCo &atchdpers	do	do	do	10	0	377
10/12/42	592ndEARegt (part)	do	do	do	46	0	1025
10/13/42	Hq 2ndBrigade General Heavey,CG	do	do	do	16	0	337
10/14/42	592ndEARegt (part)	do	do	do	19	0	330
	532ndEARegt (part)	do	do	do	37	0	635
10/15/42	532ndEARegt (part)	do	do	do	46	0	1066
	HqDet, 2ndBrigade	do	do	do	5	0	130
10/30/42	Co A, 593rdEARegt HqCo, 593rdEARegt 1stBn and HqCo, 2ndBn 533rdEARegt	do	do	Perm chg sta Ltr WD 11/1/42	26	0	468
10/31/42	Det, 593rdEARegt 363rdQMBn,228thSigCo	do	do	do	15	0	432
	HqCo 593rdEARegt, CoE&F,533rdEARegt	do	do	do	27	0	311
	Co.B,593rdEARegt, Co.A,B,&C, 363rdQMBn Det. 288thSig Co.	do	do	do	15	0	432
	Co.C,593rdEARegt, Det Co A 263rdMedBn, Det 163rdOrd Plat,Co D 533rdEARegt, DetHq 593rdEARegt, DetHq 533rdEARegt	do	do	do	24	0	454

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7. Record of Events.

Date	Event
10/1/42	2nd Engineer Amphibian Regiment reorganized as a result of discussions begun in September as to the desirability of closer coordination between boat and shore units. Under the old organization, each Brigade included a Boat Regiment and a Shore Regiment, The new organization has in lieu thereof three Amphibian Regiments, each including a boat and a shore battalion. (See page 2 for further details)
10/1/42	M/Sgt Clayton Mitchell commences series of noonday organ recitals over WOCB, West Yarmouth, Mass., from the Command Chapel organ.
10/2-5/42	Lt. General McNair, CG AGF, and others witness joint manuevers of 2nd Brigade and 36th Division (Texas National Guard) in attack on Matha's Vineyard. (see clipping in annex)
	2nd Engineer Amphibian Brigade departed station for Camp Carrabelle, [illegible] officers' Mess hold party in their honor on 10/6/42
	[illegible] shoulder patch distributed. The insignia [illegible] ined operations and is a [illegible] British Commandos.

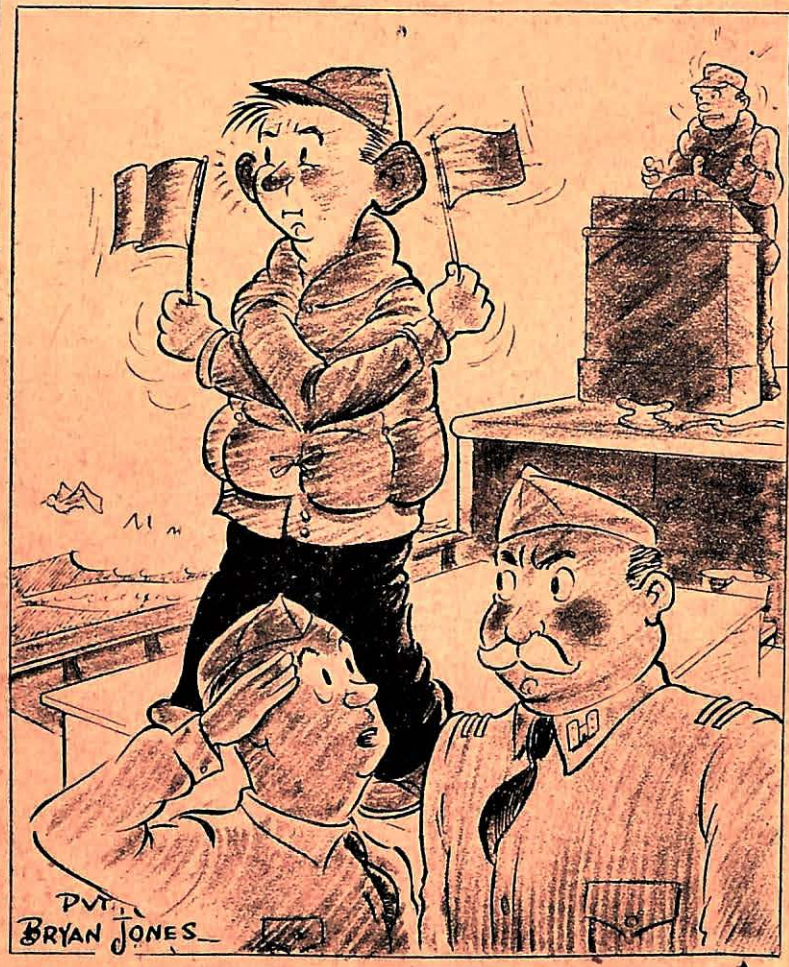
The Engineer Amphibian Command flag was also raised on the pole in front of Command Hq. The design is that of a red sea-horse in a white oval upon a blue field. The motto "Put Em Across" appears in white at the bottom of the field. The Sea Horse design was (over)

7. Record of Events (continued)

Date	Event
	suggested by Mr. DuBois, a civilian employee of the Heraldic Div., Office of the QM General, War Dept. The motto is not attributed to any single source.
10/31/42	Halloween Party at the Officers' Mess.

MP EDWARDS NEWS 10/7/42

PRIVATE PEEP .... By Pvt. Jones



"They can't understand his signals, sir. They're mistaking his ears for the flags."

ANNEXES

Annex	ion

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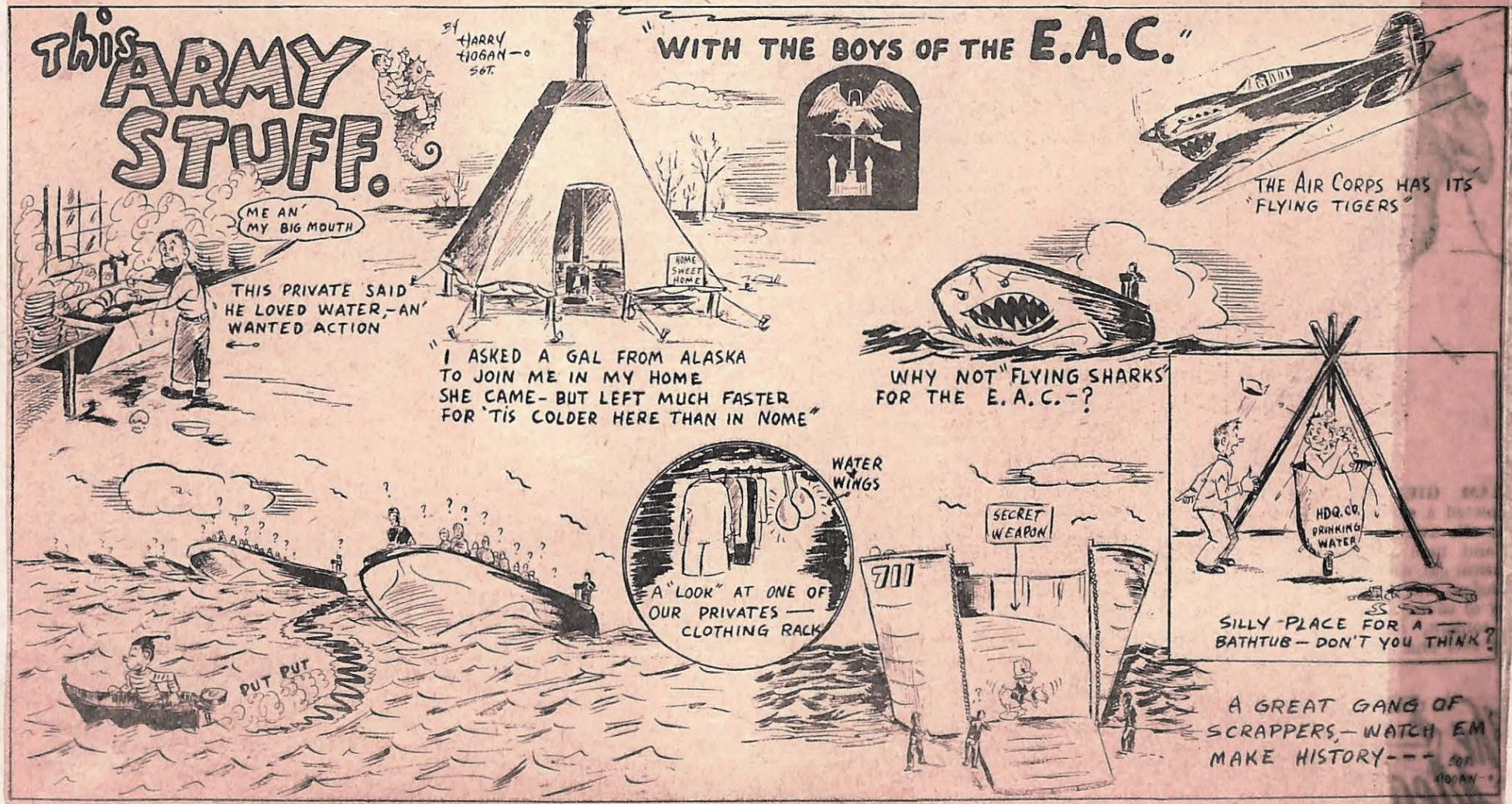
THIS ARMY STUFF.
BY HARRY HOGAN — SGT.
"WITH THE BOYS OF THE E.A.C."
ME AN' MY BIG MOUTH
THIS PRIVATE SAID HE LOVED WATER, — AN' WANTED ACTION
HOME SWEET HOME
"I ASKED A GAL FROM ALASKA TO JOIN ME IN MY HOME SHE CAME — BUT LEFT MUCH FASTER FOR 'TIS COLDER HERE THAN IN NOME"
THE AIR CORPS HAS ITS "FLYING TIGERS"
WHY NOT "FLYING SHARKS" FOR THE E. A. C. — ?
WATER WINGS
A "LOOK" AT ONE OF OUR PRIVATES — CLOTHING RACK
SECRET WEAPON
711
PUT PUT
HDQ. CO. DRINKING WATER
SILLY PLACE FOR A BATHTUB — DON'T YOU THINK?
A GREAT GANG OF SCRAPPERS, — WATCH EM MAKE HISTORY — — —
SGT. HOGAN

E.A.C.

E.A.C. NEWS 11/25/42

E.A.C. NEWS 11/11/42

E.A.C. NEWS 11/4/42

AMPHIBIANOTES



The men of Company A, 263rd Medical Battalion, were so happy over the arrival of an 8-pound girl to S/Sgt. Thomas M. Wilder less than a fortnight ago that they chipped in enough small change to buy a War Bond for the youngster.

As Sgt. Wilder was on furlough at his Elenton, N. C., home when this was written, the baby's name wasn't learned, but company gossip had it that pre-birth bets were running high as to whether the baby would be a boy or a girl. The expectant father was said to have lost weight and jumped every time he heard a phone ring.

—::—::—

At the Officers Specialist School a recent exam asked for the definition of a field report, or report written in a theater of operations.

"A field report is written in a field," was one answer.

"No foolin'!" was the comment noted on the paper by instructor Lt. Charles J. McKernan, who corrected the test.

—::—::—

Non-coms of Company C, 263rd Medical Battalion, formed a honeymoon club this summer. They hired a ten-room house in Falmouth and moved in with their brides.

Charter members were Sgts. Harold Warren of Rockymount, N. C., and Claude Durham of Atlanta who were quickly followed into the club by 1st Sgt. Milton Griffin of Rockingham County, N. C., and Sgt. Robert Slinkard of Chicago.

—::—::—

Brief Biography: Sgt. Harry H. Reinisch, 33-year-old reporter for 263rd Medical Battalion, has been a wrestler, swimming and riding instructor, teacher, psychologist, lawyer, social worker, personnel consultant, labor referee, employment interviewer, hotel manager, vocational guidance adviser, and seaman in merchant marine; home-town—New York City; married five months.

—::—::—

Escorting celebrities is somewhat of a habit to Wilmot E. Abbott, Marshallton (Del.) resident, now a sergeant in Hq. Co., 3rd Bn. of the 533rd Engineer Shore Regiment. While at Fort Jackson, S. C., he served as an escort on guards of honor on visits of Winston Churchill, Secretary of War Stimson, Secretary of the Navy Knox, Chief of Staff Marshall and Major Jimmy Doolittle. Sgt. Abbott's picture appeared in a newsreel concerning Churchill's visit and the sergeant admits he went to see the newsreel "at least three times." His main ambition now is to escort Hirohito or Hitler down any main street or dark alley.

—::—::—

Hopes of Pvt. George S. Jenkins to join the band were rudely shattered by his company first sergeant recently. Just before chow the topkick of Hq. Co., 3rd Bn., 533rd, entered the mess hall and inquired, "Is there a guy here who says he plays a saxophone and wants to be in a band?" Pvt. Jenkins, who took his music lessons in the Conyngham-Minersville-Hazelton section in the coal regions of Pennsylvania, tossed his arm in the air wildly and shouted excitedly, "Here, sir!" "O. K.," the first sergeant replied, "you're our bugler; you'll start to school next week."

—::—::—

Pvt. Guy E. Timmons, of the 3rd Bn., 533rd, made a quick jump from basic trainee to potential officer in a little more than a month when he was accepted for the Engineer Officer Candidate School at Ft. Belvoir, Va. The 30-year-old Saxton (Pa.) school teacher entered the Army on September 15, began his basic training on September 21, was interviewed for O.C.S. on October 26 and was ordered to leave for school on the 28th. Two years of R.O.T.C. in college and seven years of experience as an instructor is credited with speeding up his advancement.

AMPHIBIANOTES

Technical Sergeant George H. Piercy must be the fastest worker in the Amphibian Command. When he appeared before the O.C.S. interview board Piercy apparently knew all the answers. On the morning after his interview this soldier got an order to leave for Fort Belvoir Officer Candidate School. This order was later amended to take effect two weeks later. Piercy will use this time to collect his thoughts and his laundry. He says he has very little trouble collecting his thoughts.

—::—::—

Corporal Paul V. Guischard knows the life of a mess sergeant. Guischard of the Casual Detachment, supervised a chain of restaurants in Philadelphia where 100,000 people were fed daily. This organization had 3200 people looking after the K.P. duties and never bothered to ask anybody for a week-end pass. Among other things, the Corporal took in his stride was the chore of feeding Philadelphia draftees in batches of 700 hourly. Now if some one will tell Paul about the Service Club breakfast line-up, do you think he could do us some good, or do you?

—::—::—

When the EAC's QM Company decides to heat up a place, it does a right fair country job of it. This outfit had occasion to move to new quarters recently and the new barracks were up to specification in every way but one. The stoves for the new building were on the way and some field expedient appeared necessary. Lt. Joseph K. Peterson solved this heating problem in a hurry. Remembering his experience with Sibley tent stoves, the lieutenant requisitioned some of these units to serve for a few days while the barracks stoves were being delivered.

—::—::—

Everything was lovely till the boys connected the stove pipes. One of the lads started a fire in his stove and stood back while the Sibley did its stuff. Clouds of smoke poured out, filled the eyes of the Pfcs. and combustion engineers were recruited from the ranks. One genius suggested that the grease was probably burning off the new equipment. This theory was later discredited. Reluctantly the boys gave up on the idea and decided on a strategic withdrawal since an American Army never retreats. Just at this darkest hour, when all seemed lost, Lts. Hicks and Peterson rushed up on the left flank, reversed the stove pipe, it draws much better that way, opened the windows, and immediately called a meeting of the staff.

Last minute reports from the front indicate that the Sibleys are conquered, the atmosphere is clear, the situation well in hand.

—::—::—

When it comes to officer material one QM Company seems to be doing all right. This unit has sent over ten per cent of its men to O.C.S., including Corporals Durbin Woodson, Fred L. Graham, and James Bacon.

—::—::—

Men of the Amphibian Command are advised that truck convoys run from building T-205 Saturday at 2 p.m. and return from local towns, Falmouth, Buzzards Bay and Hyannis at 6 p.m. and 7:30 p.m. Saturday night. The same service is provided on Sundays with the exception that the trucks leave camp at 9 a.m. and 2 p.m. and return from these towns at 1 p.m., 6 p.m. or 7:30 p.m. Sunday night. This auxiliary bus service originated in the Special Service Office for the use of soldiers in the Amphibian Command.

J.W.D.



AMPHIBIANOTES

In keeping with a policy of providing a varied program of recreation activities, the Special Service Office has organized bowling leagues for EAC personnel. In the Officers' League, eight teams involving more than 60 officers have been trying to strike up a good score. Playing on the Coonamessett Alleys on Tuesday and Thursday of each week, the officers have had their splits and spares, strikes and misses, with one team consistently leading the league. These men have won 12 games and lost three to date. This team, led by Lt. Louys, is made up of Capt. Jacobs and Lts. Olszewski, Bloxom, Sargent and Hunt.

In the Enlisted Men's Bowling League, the team composed of Russel Gambino, team captain, and Arthur, Schmolze, Guiliano, Wilderman, Lepping and Davitt is leading the league.

Personalities in the Enlisted Men's League include Earl Clark from Millersburg, Ohio. Keglers who went in for bowling back home know about the American Bowling Congress and will be interested to know that Clark took part in this event at Columbus, Ohio, last year and averaged 199. That sort of firing, when the chips are down, is what it takes to win bowling tourneys.

Another leading bowler in the Amphibian Command League is Sgt. Alfred C. Heidenfeldt of North Tonawanda, N. Y. Heidenfeldt tells of having bowled in several leagues in his home town and after watching him perform, we are willing to agree that he knows his stuff. In a most exceptional display of control, Sgt. Heidenfeldt converted the very difficult 4-7-10 split twice in consecutive frames. Most bowlers date time by any single frame when they can knock over this tough one. Al makes it look almost too easy. Perhaps he can make the 7-10 splitters.

Lt. John W. Dalton of the Special Service Office reports that a contest is being arranged pitting the best talent of the Enlisted Men's League against the five best in the Officers' League.

At 2000 (8:00) on Thursday evening, Nov. 1, a large task force of feminine pulchritude was sighted approaching Camp Edwards from the direction of Fall River. Troops from Hq. Co., assisted by a heavy barrage of high caliber music, contacted the force in the vicinity of the recreation hall in the Hq. Co. area and took the situation in hand. Observers report that from that time until 2230 (10:30) closed in cheek to cheek action with the men from Hq. and Hq. Co. holding their own, took place. However, the curly-locked forces were to abundant and Lt. Shoenfeld, who was in command of the Hq. and Hq. Co. troops, finally had to put out an urgent call for reinforcements.

At 2130 Commander Van Scherpenzell attacked from the flank armed with sandwiches, salad and doughnuts and this correspondent is here to say that at this point the heaviest action of the evening took place.

At 2230 the beautiful foe who had made the evening so interesting withdrew and the action ceased with everyone saying that this was the best campaign they had experienced yet. It is suggested that the men who missed the fun should watch for the date of the next Hq. and Hq. Co. dance.

—R.J.

NEWS 4/8/42



EGG CRATE INTO A CASTLE was the transformation accomplished by Pvts. Raymond L. Fournier (left) of Northhampton and Henry J. Carufel of Pawtucket, R. I., when they turned out the above replica of the Army Engineers' insignia. Members of an Engineer Amphibian Command weapons detachment, the two soldiers have also undergone a transformation since they entered the service. Fournier was a barber, while Carufel used to drive a taxicab. (Photo by U. S. Army Signal Corps).

THREE NEW TYPES OF FOOTWEAR MAY BE WORN HERE

No doubt Engineer Amphibian Command troops here soon will be wearing some of the three new types of footwear developed by the Quartermaster Corps. The first of these is the "non-skid" low shoe, which has a canvas top and rubber sole which has a tread like a non-skid tire. It is for use of boatmen. A companion number is the boatman's overshoe, which slips over the boatman's shoe or regular service shoe.

The third item is a wader boot which slips over regular service shoes. It has an extended top that reaches to the armpits. It was designed for Engineers working in or about water and it also offers protection to men working near water in colder climates.

NEWS Webster

7. Record of Events.

Date	Event
10/30 to 11/17/42	3rd Engineer Amphibian Brigade transferred to Camp Carrabelle, Florida
11/9/42	3rd Engineer Amphibian Brigade reorganized (see page 2.)
11/10/42	Provisional Guard and Service Co. constituted to provide winter guard at Osterville, Falmouth, Waquoit, and Cotuit, and to replace service lost by transfer of 262nd QM troops.
11/16/42	411th Base Shop Bn. transferred to Ft. Ord, California.
	In movement during month, 2nd Engineer Amphibian Brigade transferred from Camp Carrabelle, Florida, to Ft. Ord, California.
11/17/42	2nd Engineer Amphibian Brigade and 411th Base Shop Bn. ordered from Ft. Ord to San Francisco Port of Embarkation.
11/26/42	Thanksgiving Day - regular work schedule. Thanksgiving dinner and dance at the Officers' Mess.

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27 Sept 1958

2. Strength.

	Hq.			Hq Co.			Attached			411th Base Shop			542d EA Regt.		
	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM	O	WO	EM
First day	495	2	1241	10	0	469	16	6	419	50	0	1037	108	0	1767
Increase															
Decrease															
Last day															

	3rd Brigade			Brigade			Brigade		
	O	WO	EM	O	WO	EM	O	WO	EM
First day	358	0	6775						
Increase									
Decrease									
Last day									

	Aggregate Strength			
	O	WO	EM	Civilians
First day	1037	8	11708	63
Increase				
Decrease				
Last day				

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3. Station Record.

ENGINEER AMPHIBIAN COMMAND

Station on first day of Month: Camp Edwards, Mass.

Date	Departed	Arrived	Nature of movement	Authority

ASSIGNED OR ATTACHED ORGANIZATIONS

Date	Organization and Commanding Officer	From	To	Nature of move and authority	Strength: O	WO	EM
11/1/42	563rdBMaintCo, 263rd MedBn, 363rdQMBn, 363rd OrdBn-Q, BrigHq and HqDet, 3rdBrigade. Brig.General Ogden CG	CpEdwards	Cp Carra-belle Fla	Perm chg sta WD Ltr 11/1/42	22	0	474
11/9/42	Det, 542ndEARegt	do	Ft Ord Calif	Perm Chg Sta MO #41, FSC, 11/4/42	19	0	551
11/10/42	do	do	do	do	26	0	548
11/10/42	HqCo, 2ndBn, 593rdEAR Co D, E, MedDet, 593rd	do	CpCarra-belle Fla	Perm Chg sta Ltr WD 11/1/42	26	0	472
11/10/42	Det, 542ndEARegt	do	FtOrd Calif	Perm chg sta MO #41 FSC 11/4/42	21	0	528
11/11/42	Det, 593rdEARegt and 263rdMedBn	do	CpCarra-belle Fla	Perm chg sta Ltr WD 11/1/42	19	0	399
11/12/42	3rdBrig Hq Det; HqCo, and Co D&E, 533rdEAR	do	do	do	18	0	434
11/13/42	Hq, HqCo, Co C, 533rd 288thSigCo, 163rdOrd Plat, MaintCo593rdEAR	do	do	do	15	0	390
11/14/42	Det593rdEAR, 363rdQMBn, 263rdMedBn	do	do	do	11	0	419
11/16/42	411thBaseShop Bn less prov Co. and det. Major Bender, CO	do	do	do	17	0	335
11/16/42	HqCo, CoA, 543rdEAR Det 593&533EAR, MedDet	do	FortOrd Calif	Perm Chg Sta MO #52 FSC 11/14/42	40	0	760
11/17/42	Hq, HqCo, CoD 543rdEAR	do	CpCarra-belle Fla	Perm chg sta Ltr WD 11/1/42	15	0	238
	HqCo, Co B&C, 543rdEAR	do	do	do	18	0	328
	Co E&F, 543rdEAR	do	do	do	19	0	405
11/20/42	RearEchelon, 542rdEAR	do	FortOrd Calif	Perm chg sta MO #41 FSC 11/4/42	12	0	293
					0	0	17

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1. Organizational Structure (continued).

3rd Engineer Amphibian Brigade

Prior to reorganization

Headquarters
Headquarters Co.
593rd Engr Boat Regt.
533rd Engr Shore Regt.
263rd Medical Bn.
363rd Quartermaster Bn.
563rd Engr Boat Maint Co.
288th Signal Co.
163rd Ordnance Plat.
Co. B, 363rd Ordnance Bn (Q)
Attached medical

Subsequent to reorganization

Headquarters
Headquarters Co.
533rd Engr Amphibian Regt.
543rd Engr Amphibian Regt.
593rd Engr.Amphibian Regt.
263rd Medical Bn.
363rd Quartermaster Bn.
563rd Engr Boat Maint Co.
288th Signal Co.
163rd Ordnance Plat.
Co. B, 363rd Ordnance Bn (Q)
Attached medical

Shore Bn., 543rd Engineer Amphibian Regt attached to Hq EAC and duty 11/9/42 per GO#65 (11/5/42)

Reorganized 11/9/42 per GO#66(11/5/42)

593rd Engr Boat Regt redesignated 593rd Engineer Amphibian Regt.
533rd Engr Shore Regt redesignated 533d Engineer Amphibian Regt.
543rd Engineer Amphibian Regt activated.
Boat Maintenance Co. and Tank Lighter Co., 593rd Engineer Amphibian Regt inactivated, personnel and equipment reassigned within regiment.

Reassignments:

Unit	From	To
2nd Bn, 533rdEAR	533rdEAR	593rdEAR
2nd Bn, 593rdEAR	593rdEAR	533rdEAR
3rd Bn, 593rdEAR	593rd EAR	543rdEAR
3rd Bn, 533rdEAR	533rd EAR	543rdEAR
Band, 533rdEAR	533rdEAR	Hq 3rdBr

Co. B, 363rd Ordnance Bn (Q) redesignated 3499th Ordnance Medium Maintenance Co(Q) per GO#70, 9/11/42. WD Auth: Ltr 2ind, AG [redacted] 461 (9/29/42.

Shore Bn, 543rd Engr Amphibian Regt relieved of attachment to Hq EAC per GO#71 effective 11/12/42

10/30 to 11/7/42
3rd Brigade departed station ~~11/1-17/42~~ [redacted]

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DOD Directive No. 5200.9
27 Sept 1958

SECRET

ENGINEER AMPHIBIAN COMMAND

Authority: CG EAC
Initials: WBH.
Date: NOV 24 1942

Historical Diary for the Month of November 1942

Prepared by:

W. B. HURD
1st Lt., C.E.
Acting Personnel Officer

Approved by:

T. L. MULLIGAN
Colonel, C.E.
Acting Chief of Staff

1. Organizational Structure. (list organizations assigned or attached during the month. Cite date and nature of, and authority for, all changes therein)

Headquarters
Headquarters Company
Hq EAC, Boat Unit Detachment
Hq EAC, Boat Maintenance Detachment
Hq EAC, Weapons Detachment
Hq EAC, Casual Detachment
EAC Band

Guard and Service Company (provisional)	Constituted 11/10/42 per GO#69
411th Base Shop Bn.	Departed station 11/16/42
1st Plat., 122nd QM Co. (Car)	Transferred less personnel and equipment 11/5/42 to control CG AGF and assigned VI Army Corps, Camp Edwards, Mass., per Ltr. Hq AGF 320.2/105 (QM) (R) GNGTC(11/5/42). Personnel to Hq Co.
Co. B, less 1st Plat., 262nd QM Bn. (Service)(Colored)	Transferred with personnel and equipment 11/5/42 to control CG AGF and attached VI Army Corps, Camp Edwards, Mass., per Ltr. Hq AGF 320.2/105 (QM) (R) GNGTC (11/5/42).

3rd Engineer Amphibian Brigade (see page 2)

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27 Sept 1958

E. A. C. Officer Gets Soldier's Medal For Role in Rescue of 25 Men

NEWS 11/4/44

Brought Blazing Boat Under Control After Soldiers Were Saved

First Lieutenant Ernest B. Heuter, 22, of San Francisco, attached to an Engineer Amphibian Regiment, has been awarded the Soldier's Medal for his courageous act in directing the rescue of 25 men and preventing loss of life and property when a landing boat caught fire in Vineyard Sound near here on October 2nd.

SLEEPLESS 30 HOURS

The brave and skillful work of Lt. Heuter took place after he had been in an open boat for 18 hours and he had no sleep for thirty hours. The act took place during the recent maneuvers in which troops "attacked" Martha's Vineyard.

One of the landing boats carrying 22 soldiers and three members suddenly burst into flames and all of the men had to leap into the water. The landing boat, out of control and running at high speed became a menace to other boats in the vicinity. To complicate matters smoke pots aboard the burning craft caught fire and sent up dense clouds of smoke.

THE RECOMMENDATION

The recommendation for the citation describes Lt. Heuter's actions as follows:

"All men were forced overboard by the intensity of the smoke and flame, and the boat, running at full speed and out of control presented an extremely dangerous hazard to other boats engaged in the mission.

Lt. E. B. Heuter, the mission leader, quickly directed the picking up of all men overboard, and with complete disregard for his own personal safety, managed to catch up to, and board the burning boat. Working under extreme difficulty, due to flames and smoke, Lt. Heuter brought the fire under control, using fire extinguishers and buckets of water and cut the throttle, thus bringing the boat to a stop.

LOSS OF LIFE AVERTED

In performing this act of bravery Lt. Heuter displayed no hesitation and placed the safety of his men before his own. Much valuable government property was saved from total loss, and injury to, or loss of life of his men was averted by his action.

"Mention should be made that his deed was performed after he had been on the waters of Vineyard Sound in an open landing boat for 18 hours and had been without sleep for a period of thirty hours."

Lt. Heuter before being commissioned in 1941 was a reporter on the Kansas City Star. He is a graduate of the New Mexico Military Academy and he did post graduate work at the Missouri School of Journalism.



1st LT. ERNEST B. HEUTER

CAMP EDWARDS News

A Newspaper By and For The Soldiers

Vol. 1 Camp Edwards (Cape Cod) Mass., Wednesday, October 7, 1942 No. 17

Lt. Gen. McNair Observes Record War Games Here



LIEUTENANT-GENERAL LESLEY J. McNAIR, commanding general of the Army Ground Forces, is shown above, second from left, as he observed the wide-scale war games conducted in the vicinity of Camp Edwards last week. General McNair, who came to Camp Edwards with his staff, expressed complete satisfaction with the progress of the maneuvers. Shown with the Army Ground Forces commander are, left to right, Brigadier-General D.A.D. Ogden, commander of the 3rd Amphibian Brigade; Brigadier-General Frank Keating; Brigadier-General Floyd Parks; Brigadier-General Clarence Sturdevant, and Brigadier-General Raymond Moses.

Intensive Training of Land and Sea Forces Told for First Time

Thousands of Amphibious and Amphibian Troops Stage Sensational Invasion of Martha's Vineyard

Now it can be told.

The long-awaited inside story of the training of the amphibious infantrymen and the amphibian engineers at Camp Edwards is released by THE CAMP EDWARDS NEWS today for the first time. Strict censorship has been maintained on the land and sea war games being conducted in this vicinity. Today, however, Washington gave Captain George R. Macdonald, Camp Public Relations Officer, the green light on the story of the most extensive land and sea operations in this section of the country. The following story was written by a member of the CAMP EDWARDS NEWS staff who was an eyewitness to the invasion.

With Lieutenant-General Lesley J. McNair, commanding general of the Army Ground Forces, at the ringside, thousands of Camp Edwards amphibious and amphibian troops stormed across Vineyard Sound in assault boats, invaded the historic island of Martha's Vineyard, smashed enemy installations, disrupted enemy communications and forced the foe back into the sea in the most extensive land and sea maneuvers ever staged in this section of the country.

PARACHUTISTS SEIZE AIRPORT

While wave after wave of the amphibious infantrymen stormed the island at three different points, parachute troops swooped down, seized the vital enemy-held airport at Edgartown and assisted the invaders in establishing a grip on the island.

Once the invasion got underway there was no halting of the terrific onrush of the infantrymen, who, after debarking from their craft, charged forward to contact the enemy in face of withering machine-gun fire and ceaseless bombing from enemy aircraft.

Hour after hour, wave after wave, came the heavily-clad

Continued on Page 2

OVER

Sign Bob Tufts As Head Coach Of Basketball

Camp Edwards became a definite threat in the military basketball picture today with the announcement that Robert Tufts of Salem has been signed as basketball coach here.

HAS IMPRESSIVE RECORD

Tufts, who has been active in the sport for the past 12 years as a player, coach and official, has

Here's Chance to Pick Grid Scores, Win Prize

So you think you're a football prognosticator. You think the sports writers are all wet. You think it's a cinch to predict grid scores. Well, here's your chance to show your ability and win two weeks free admission to any camp theater. Starting today the CAMP EDWARDS NEWS will sponsor a football guessing contest every week through the football season. A ballot will be found on Page 9. Read all the rules carefully.

Camp to Hyannis Bus Line Opens On Hourly Basis

For the first time s[illegible]nce last Fall a bus line is in opera[illegible]n between Camp Edwards and H[illegible]nnis, and is running on an hourly schedule from 5 a.m. to 1 a.m.

Operating the new [illegible]e with three 33-passenger buses [illegible] Francis [illegible] Lynn, owner [illegible] char-

Fire Prevention Week Being Observed in Camp

This week has been designated by the President of the United States as Fire Prevention Week.

areas for possible fire hazards and thus prevent fire losses. Common fire hazards noticed recently are:

Gen. McNair Observes Record War Games Here

Continued from Page One

sea-going troops and when the final wave of assault boats had debarked its men the first-landed already had penetrated deep into the Vineyard woods, repelled the foe at every point and set up their installations and communication lines.

HIGH OFFICERS PRESENT

Observing the war games along with General McNair, were Brigadier-Generals Frank Keating, commander of the Amphibious Training Center; Daniel Noce, commander of the Engineer Amphibian Command; Clarence Sturdevant, assistant chief engineer; D. A. D. Ogden, commander of the 3rd EAC Brigade; Clarence Huebner, Services of Supply; Raymond Moses, War Department supply officer; Col. Arthur G. Trudeau, EAC chief of staff; Maj.-Gen. Sherman Miles, commanding general of 1st Service Command; Col. Roy W. Smith, camp commander, and others.

Commenting on the conduct of the sea-borne troops, the efficient and precise manner in which the invasion was executed, General McNair, who has observed other such maneuvers elsewhere in this country, said that the Martha's Vineyard war games were the most impressive he had ever witnessed. He added that he was completely satisfied with the results.

The mission of the invasion troops as outlined in the maneuver problem was to capture Martha's Vineyard island and initiate preparations for the defense of the island. As designed in the problem, the island is in the hands of the enemy which has small air support and a limited naval force for support and which has defended the beaches by stringing miles of barbed wire and digging of trenches. The main landing was to be effected in the northwest side of the island by two combat teams with the other landings to be made at two other points so as to draw the enemy away from the main invasion sector.

PRE-DAWN ATTACK

It was approximately an hour and a half before daybreak on the cool, brisk morning of October 2 that the main invasion started to move. Across the choppy and chilly waters of Vineyard Sound moved the first wave of amphibious infantrymen being ferried by the amphibian engineers. Two preliminary landings already had been completed at other points on the island. They, however, were feints. The main invading force was on its way. Closer and closer bounced the boats carrying the cool, alert and hardened Amphibious soldiers.

The first boat struck shore exactly on schedule. Down planked the jaw-like door and onto the mushy, white sand leaped the infantrymen. As they started their advance, they were met by thunderous explosions which shattered the mysterious stillness of the early, dreary morning. The

ed to the din. An orange flash pierced the inky black sky. Another explosion. More boats landing. The incessant chatter of machine guns. More boats landing. And still more.

Out rushed determined infantrymen slinking up and around the embankments, ripping down barriers under the face of heavy enemy fire. Swooping down on the landing forces, enemy aircraft dropped "bombs" in an attempt to disrupt the proceedings. Another wave stormed the beach, and farther up the coast another wave dashed up to the shore. More flashes filled the sky as invaders moved into the blackness of the inland.

RAIDS COMPLETED

At long last the clatter of the machine guns was silenced. Raiding parties had completed their missions. And quite effectively. The infantrymen were charging inland now, engineers were demolishing all enemy barriers and repairing and establishing roads for the equipment which soon was to roll off the approaching barges.

Dawn was breaking. The assault boats were now visible in a long, endless line as they plowed through the choppy water of the sound. More troops landed. Soon larger barges could be seen through the early morning haze. They roared up to the beach, unloaded their cargo and disappeared into the morning gray. Still more troops came. They all came with one purpose in mind—to find the enemy and destroy him. This they did in an effective manner, too.

Altogether the amphibious infantrymen ferried by the engineer emphibians had made landings and seized high ground south of Norton Beach, southeast of Lambert's Cove, Sachem Spring and Chappaquonsett Pond, south of Paul's Point, north of Cape Higgins and North Tisbury.

ALL UNITS COOPERATE

Much credit for the success of the maneuvers must be given to the hard-workng, tireless soldiers of the medical, quartermaster, chemical warfare and signal units which worked with amazing speed in the performance of their hazardous tasks.

After the first infantrymen had landed and contacted the enemy the medical units swarmed onto the shore. They immediately set up collecting and clearing stations on three attacking points and proceeded to evacuate casualties under a heavy barrage of enemy fire to empty landing craft for return to friendly shores.

Landing of vital supplies on the



CAMOUFLAGED BY MOTHER NATURE, these Camp Edwards soldiers are shown studying a map of the "theater of operations" during the extensive maneuvers held in this vicinity last week and observed by Lieutenant-General Lesley J. McNair, commanding general of the Army Ground Forces.

job of the quartermaster unit. As their barges loaded with equipment and supplies stormed out of the sea the men lost no time in "feeding" the supplies to the attacking forces.

Covering the landings of the infantrymen and assisting them to take vantage spots for further advances and attacks were the chemical warfare troops who laid down effective smoke screens to shield their comrades from the enemy. They delivered smoke on all the designated targets.

Establishing of communications, disruping enemy communication lines, setting up a signal system for the amphibious shore-to-shore operations, establishing of message centers, conducting radio intelligence and signal security operations, determining enemy radio stations, intercepting of enemy transmissions eminating from the island were some of the jobs performed by the all-important signal units.

Definitely the highlight of the strenuous maneuver was the manner in which the troops performed their tasks. No job was to difficult. Each man knew his job and knew it well. The exhibition displayed in the men the many months of intensive and thorough training they had undergone. They proved they were real soldiers at every point. This was obvious to the experienced observers that these men were executing the results of the exercise exhibition they had received, more can be asked.

Gen. Nothing New Here
Col.
Gen. McNair with the

expressed by Lieutenant-General Lesley J. McNair, commanding general of the Army Ground Forces, who made a two-day inspection tour to Camp Edwards last Thursday and Friday. As part of the general program a boat battalion of the Engineer Amphibian Regiment presented one of the most colorful reviews ever witnessed here.

HIGH OFFICERS PRESENT

The review was staged Friday afternoon on the main parade ground of the Engineer Amphibian Command under the scrutiny of five Brigadier Generals and a large number of other Army and Coast Guard officers.

Brigadier-Generals Clarence L Sturdevant, office of the Chief of Engineers; Raymond F. Fowler, Office of Chief of Supply, Washington; Clarence R. Heubner, Services of Supply; Daniel Noce, Commanding General of the Engineer Amphibian Command, and David O. D. Ogden, commander of the 3rd Engineer Amphibian Brigade, were the high ranking officers who viewed the parade from the reviewing stand.

The soldiers marched in waterproof uniforms. No item was overlooked and even the regiment's cooks took part in their white uniforms.

Other officers who witnessed the review included: Lt. Com. W. J. Austerman and Lt. Com. Robert of the Coast Guard; Maj. Shelby A. McMillion, Public Relations Office of the Chief of Engineer; Col. Noble H. Col, Col. P. A. Thompson, Col. J. A. Hamilton and Col. J. S. Steiner, all of the office of Chief of Engineers of the Amphibian battalion.

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DPC/vjf 5E-325 Pentagon

AG 201 Hueter, Ernest B.
(10-14-42) PD-B 0-427262

Soldier's Medal.

October 17, 1942

First Lieutenant Ernest B. Hueter, 0-427262

1. The heroism displayed by you on Vineyard Sound, near Flamouth, Massachusetts, on October 2, 1942, has been brought to the attention of the Secretary of War, and by direction of the President, under the provisions of the Act of Congress, approved July 2, 1926, (Bul. No. 8, W. D., 1926), you have been awarded the Soldier's Medal.

2. The Soldier's Medal is being forwarded to the Commanding General, 2d Amphibian Brigade, P.O. Box #111, Tallahassee, Florida, for presentation to you with suitable ceremony.

3. You will be furnished at a later date, with an engraved certificate pertaining to this award.

By order of the Secretary of War:

Adjutant General.

A certified true copy:

W. B. HURD
1st Lt., CE
Actg. Personnel Officer

A

1st Ind.

HEADQUARTERS, ENGINEER AMPHIBIAN COMMAND, Camp Edwards, Massachusetts, October 7, 1942. TO: The Adjutant General, Washington, D. C. (Thru Channels).

1. I have had this act investigated by a general officer and as a result of this investigation, I recommend the prompt award of the Soldiers Medal to 1st Lt. Ernest B. Heuter, 0427262, for heroism at the risk of his own life. With disregard for his personal safety and the possibilty of being caught in an explosion, Lt. Heuter maneuvered his boat near the runaway craft, leaped to the burning boat, extinguished the fire, brought the boat under control and directed the rescue of the men in the water, thereby preventing possible loss of life, insuring the success of his mission and saving valuable government property. The heroism of 1st Lt. Heuter displayed on this occasion reflects great credit upon himself and the military service.

DANIEL NOCE
Brigadier General, U. S. A.
Commanding

CERTIFIED A TRUE COPY:

W. B. HURD,
1st Lt CE,
Acting Personnel Officer.

B

3. The entire service of 1st Lt. E.B. Heuter has, since the rendition of the service upon which this recommendation is based, been honorable.

D. C. Hawkins /s/
D. C. HAWKINS /t/
Col. - C. E.
Commanding

3 Incls:
1. Certificate of 1st Lt. D.N. Black
2. Affidavit of Staff Sgt. L.E. McDaniels.
3. Suggested citation.

1st Ind. WFH/rrd

Headquarters, 2d Engineer Amphibian Brigade, Camp Edwards, Mass., Oct 6, 1942
TO: Commanding General, Engineer Amphibian Command, Camp Edwards, Mass.

I strongly recommend approval.

W. F. Heavey /s/
W. F. HEAVEY /t/
Brigadier General-A.U.S.
Commanding

Incls.: n/c

(2)

CERTIFIED A TRUE COPY:

W. B. HURD,
1st Lt CE,
Acting Personnel Officer.

D

HEADQUARTERS 592d ENGINEER AMPHIBIAN REGIMENT
OFFICE OF THE COMMANDING OFFICER

Camp Edwards, Mass.
October 5, 1942

SUBJECT: Recommendation for the award of the Soldier's Medal.

TO : The Adjutant General, Washington, D. C. (Through Channels)

1. In accordance with paragraph 16, AR 600-45, I recommend that 1st Lt. Ernest B. Heuter, O-427262, 592d Engineer Amphibian Regiment, be awarded the Soldier's Medal for the act of heroism performed by him as described below:

On Friday, October 2, 1942, a large group of landing boats under the command of 1st Lt. Ernest B. Heuter, 592d Engineer Amphibian Regiment, was making the return trip from Martha's Vineyard Island in connection with the 36th Inf. Division Landing Exercise.

At about 11.30 AM, on that date, one of the personnel landing boats, the LCP(R)51, with a crew of three and carrying twenty-two passengers from the 78th Chemical Company, Camp Edwards, Mass; suddenly burst into flame. Dense smoke enveloped the craft due to the igniting of a large number of smoke pots which had been placed in the forward turret, immediately in front of the coxswain.

All men were forced overboard by the intensity of the smoke and flame, and the boat, running at full speed and out of control presented an extremely dangerous hazard to other boats engaged in the mission.

Lt. E.B. Heuter, the mission leader, quickly directed the picking up of all men overboard, and with complete disregard for his own personal safety, managed to catch up to, and board the burning boat. Working under extreme difficulty, due to the flames and smoke, Lt. Heuter brought the fire under control using fire extinguishers and buckets of water and cut the throttle, thus bringing the boat to a stop. In performing this act of bravery Lt. Heuter displayed no hesitation and placed the safety of his men before his own. Much valuable government property was saved from total loss, and injury to, or loss of life of his men was averted by his action.

Mention should be made that his deed was performed after he had been on the waters of Vineyard Sound in an open 36 foot landing boat for eighteen hours, and had been without sleep for a period of thirty hours.

2. 1st Lt. Ernest B. Heuter is and was at the time of his act of bravery, the company commander, company C (Boat), 592d Engineer Amphibian Regiment, Camp Edwards, Massachusetts.

C

HEADQUARTERS
2d ENGINEER AMPHIBIAN BRIGADE
Camp Edwards, Massachusetts

October 5, 1942

C O M M E N D A T I O N

1st Lt. Ernest B. Heuter, 0427262, Co "C", 592d Engineer Amphibian Regiment, is commended for his courageous and prompt action in rescuing soldiers from the Sound and in extinguishing a fire in LCP(R) 51 about 1100 October 2.

When a number of men jumped from their boat due to smoke, Lt. Heuter took prompt action to have them rescued.

When he discovered that LCP(R) 51 was running wild at full speed ahead after its crew had abandoned it because of ignition of smoke pots, Lt. Heuter (Mission Leader of Red #2), without regard to his own safety, had his boat grought alongside. After several buckets of water had been thrown on the fire, Lt. Heuter succeeded in reaching the engine control and stopping the boat. He then took prompt steps to extinguish the fire.

1st Lt. Donald E. Black, CE, 0909569, Co "C", 592d Engineer Amphibian Regiment, and the crew of his boat

S/Sgt.	Lewis E. McDaniels	19096362	Co "C", 592d E A Regt
T/4	Ignatius J. Piskor	32251562	Co "C", 592d E A Regt
T/5	George M. Magee	33018639	Co "C", 592d E A Regt
PFC	Henry K. Elder	14702235	Co "C", 592d E A Regt

are also commended for effective assistance to Lt. Heuter in extinguishing the fire and salvaging the LCP(R) 51, which will soon be in operation again.

W. F. Heavey /s/
W. F. HEAVEY /t/
Brigadier General - A.U.S.
Commanding

DISTRIBUTION: "A"
Plus special copy to C.G., E A C;
and copies to individuals concerned

CERTIFIED A TRUE COPY:

W. B. HURD,
1st Lt CE,
Acting Personnel Officer.

Appendix--1.

RESTRICTED

WAR DEPARTMENT
THE ADJUTANT GENERAL'S OFFICE
WASHINGTON

AG 320.2 (6-5-42)
MR-M-GN

June 6, 1942.

SUBJECT: Constitution and Activation of Headquarters and Headquarters Company, Engineer Amphibian Command.

TO : Commanding General, Services of Supply.
Chief of Engineers.

1. The Headquarters and Headquarters Company, Engineer Amphibian Command, is constituted and will be activated at the earliest practicable date by the Chief of Engineers, at Camp Edwards, Massachusetts, by the transfer of necessary personnel from the units listed below under his control now at Camp Edwards.

37th Engr Combat Regt
87th Engr Bn (Hv Pon)
74th QM Bn (L Maint)
100th Ord Co (Hv Maint)
1st Plat, 450th Engr Co (Dep)
Co A, 201st QM Bn (Gas Sup)
1st Plat, 122d QM Co (Car)
Co B, less 1st Plat, 262d QM Bn (Serv) (Cld)

2. The Headquarters and Headquarters Company, Engineer Amphibian Command, will be organized under Tentative Tables of Organization prepared by the Chief of Engineers.

3. Officers and enlisted grades are authorized as follows:

a. Headquarters, Engineer Amphibian Command.

(1) Officers

	Col	Lt Col	Maj	Capt	1st Lt	2nd Lt	Total	
BI	6	14	24	32	18	6	100	
FD		1	1	2			4	
CH C		1					1	
JAGD			1		1		2	
MC	1		1				2	
DC			1				1	
SN C				1			1	
VC				1			1	
MAC					2		2	
TOTAL	7	16	28	36	21	6	114	(a)

(a) General officers and authorized aides are not included.

RESTRICTED

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JAGD			1		1		2	
MC	1		1				2	
DC			1				1	
SN C				1			1	
VC				1			1	
MAC					2		2	
TOTAL	7	16	28	36	21	6	114	(a)

(a) General officers and authorized aides are not included.

RESTRICTED

(2) Enlisted Men

1 Mstr	2 1st Tech	3 Staff Tech	4 Sgt Tech	5 Corp Tech	6 Pfc	7 Pvt	Total 408

b. Headquarters Company, Engineer Amphibian Command

(1) Officers

	Maj	Capts	1st Lt	2nd Lt	Total
BI	1	1	5	3	10
MC	___	___	2	___	2
TOTAL	1	1	7	3	12

(2) Enlisted Men

1 Mstr	2 1st Tech	3 Staff Tech	4 Sgt Tech	5 Corp Tech	6 Pfc	7 Pvt	Total 208

4. Housing for the Headquarters and Headquarters Company, Engineer Amphibian Command, will be made available from that now allotted

5. Priority for controlled items of equipment: A-8-3, as prescribed by letter, this office, AG 400 (4-8-42) MC-E-M, April 23, 1942, subject, "Distribution of Controlled Items of Equipment".

6. Date of activation will be reported to the Commanding Generals, Army Ground Forces and Services of Supply and this office without delay.

By order of the Secretary of War:

/s/ Otto Johnson
Adjutant General.

Copies furnished:

Commanding Generals,
Army Ground Forces,
Eastern Defense Command,
First Corps Area
Divisions of the War Department
General Staff.
Publication Division, A. G. O.
Chief, Statistics Branch, General Staff.

RESTRICTED

RESTRICTED

Subject: Constitution and Activation of Headquarters and Headquarters Company, Engineer Amphibian Command.

CE-320.2 (Engr. Amphibian Command)-SPETO 1st Ind.

War Departement, Office, Chief of Engineers, Washington, D. C., June 8, 1942.
To; The Commanding Officer, Engineer Amphibian Command, Camp Edwards, Massachusetts.

1. Forwarded for action by your office.

2. Attention is directed to the fact that the 1st Platoon of the 450th Engineer Depot Company has been transferred less personnel and equipment to Camp Blanding, Florida, and the personnel and equipment of this Platoon will be utilized to organize a platoon of the 449th Engineer Depot Company at Camp Edwards in accordance with AG letter, June 4, 1942, AG 320.2 (6-1-42) MR-M-GN, subject: "Constitution and activation of 449th Engineer Depot Company."

For the Chief of Engineers:

Joseph S. Gorlinski,
Colonel, Corps of Engineers,
Assistant; Operations and Training Bran
Troops Division.

APPENDIX No. 2

RESTRICTED

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

CIRCULAR)
NUMBER 10) July 3, 1942.

1. To assure the full and complete cooperation of all the officers and enlisted men of your command, it is essential that a brief orientation lecture be given if this has not already been done. Certain conversations have been overheard from time to time, in which officers and men have complained of lack of knowledge of their immediate goal, or of relative inefficiency in the work they were engaged in. While some of this may be charged off against usual Army "growsing", it is an undesirable condition and is likely to be misunderstood when overheard. This is particularly unfortunate when subordinates gain the feeling that their superior officers are poorly informed or dissatisfied with their work, even though such an opinion is erroneous.

2. It is believed that all units of your command should be called together and that an explanation along the following lines should be given:

That the Engineer Amphibian Command has been organized with certain definite objectives in view, involving the crossing of waterways of limited width. Such crossings might be across the mouths of wide estuaries, canals, channels, between islands (such as in the Japanese or various Polonesian and Aleutian groups) or in out-flanking operations, such as the Japanese conducted on the Kra Isthmus.

That the work we are engaged in is of the utmost importance and has a direct bearing on certain definite operations being planned.

That each Engineer Amphibian Brigade has been organized with a view to supporting the crossing operations of one division.

That these brigades contain boat units for actually transporting combat troops, equipment, and supplies; shore units for assisting in loading and unloading operations on both shores and for the movement of supplies inland and special units for supply, maintenance and evacuation.

That certain supply and repair units are essential and play an important part in this operation, if the efforts of boat and shore units are to be successful.

That the matter of signal communications is a difficult and vital one, and that a comprehensive but simple system of communication between craft of all types must be developed for use by day or by night.

That the problem of navigation are extremely difficult where large numbers of small craft are used, under difficult sea and weather conditions, and under cover of darkness.

That the question of protection by the use of smoke and by fire from anti-aircraft and other weapons requires training and coordination.

That the supply of suel, ammunition, and rations, and medical problems are difficult and extensive, and must be solved.

That the entire project was merely expressed in a few paragraphs as an idea, and an incomplete one at that, only six weeks ago, and that within that time, Tables of Organization, equipment, men, and installations have been set up and training is progressing at a rapid rate.

That the accomplishments to date are something that all parties concerned with have reason to feel proud of, and that subornidates, seeing only a very limited or worm's-eye-view of this picture, must not jedge the accomplishments from a narrow viewpoint, but must cooperate to the fullest in the further development of this program.

The future difficulties in organization and operation will certainly occur but must be met unflinchingly and overcome promptly.

That the soldierly qualities of discipline, loyalty, initiative and courage must be developed to the highest degree.

That ideas are solicited as to improvement in organization, equipment, tactics, and technique of these operations. Such ideas should be submitted promptly to commanding officers and given full consideration.

That stress must be laid on the fact that such operations are offensive to the highest degree, and that the principles of leadership must be stressed in every commander from the top, down to the coxswain commanding the individual craft.

That the mission of all of these leaders, down to the lowest, and of every assistant and maintenance man who, by his efforts, contributes to the success of the operation, must be based on putting the combat units who are dependent on our operations at the place needed, at the proper time, and in the best possible condition to carry the flight to the enemy.

3. The context of the above paragraph will be disseminated to all organizations and subordinate to units not later than July 7, 1942 and report of compliance made to this Headquarters. If considered desirable, the contents of aragraph 2, above, may be read and expanded on.

(Hq. Eng'r Amphibian Com'md., Circular # 10, July 3, 1942 par 4)

4. Care should be taken to avoid the spread of misinformation or of information not intended for distribution. All concerned should be cautioned against discussing organization, operation or characteristics of units and equipment either in public places or in the presence of strangers.

By direction of Colonel NOCE:

/s/ ARTHUR G TRUDEAU
Colonel, General Staff Corps
Chief of Staff

/s/ A.O.ACERS
Lt. Col., AGD
Adjutant General

Distribution "A"

Reproduced: Headquarters, Engineer Amphibian Command August 28, 1942.

Appendix--

SPECIALIZED TRAINING BY OUTSIDE AGENCIES FOR OFFICERS

Name of School	Number Attended
Gray Marine Motor Company, Detroit, Michigan	6
Hall-Scott Motor Car Company, Berkeley, California	4
Higgins Boat School, New Orleans, La.	36
Manitowac Shipbuilding Company, Manitowac, Wisconsin Tank Lighter Construction	12
General Motors Institute, Flint, Michigan	2
First Echelon	
Third and Fourth Echelons	12
Gar-Wood Motor School, Algonac, Michigan	9
Chris Craft Industries, Algonac, Michigan	8
Michigan Wheel Company, Grand Rapids, Michigan	9
Delco-Remy Inc., Anderson, Indiana	6
Small Arms Ordnance School, Aberdeen Proving Grounds, Md.	3
Depot and Supply Ordnance, Aberdeen Proving Grounds, Md.	1
U. S. M. C. Amphibian Tractor School, Dunnedin, Florida	3
Exide Battery Company, Boston, Mass.	1
Thompson Propeller Company, Fairhaven, Mass.	3
Weather Observers School, East Boston Airport, Boston, Mass.	1
Navigation School, Harvard University, Cambridge, Mass.	60
Chrysler Corporation, Detroit, Michigan	2
Metallizing Engineer Corporation, Long Island City, N. Y.	1
Chemical Warfare School, Edgewood Arsenal, Maryland	1

Three of these schools were exclusively for officers:

1. The Navigation School at Harvard University offered a course of instruction in Celestial Navigation, Coastwise and Seaboard Piloting. Four classes were held; fifteen officers in each class. The school lasted for three weeks.

2. The Metallizing Engineer Corporation School, Long Island City, New York, offered a course in the metallizing of equipment to which one officer of the Command was detailed. This course lasted two weeks.

3. Chemical Warfare School, Edgewood Arsenal, Maryland, offered a two-week course of instruction in Chemical Warfare Protection, to which one officer of the Command was detailed.

The other schools offered various courses of instruction to which both officers and enlisted men were detailed.

Appendix--
Apprn

SPECIALIST SCHOOLS FOR ENLISTED MEN OUTSIDE THE COMMAND

School	Location	Number Attended
American Bosch Corporation	Springfield, Mass.	48
Chrysler Corporation	Detroit, Michigan	39
Chris Craft Industries	Algonac, Michigan	52
Cobblers School	New Bedford, Mass.	87
Delco-Remy Inc.	Anderson, Indiana	52
Exide Battery Company	Boston, Mass.	35
Gar-Wood Motor School	Algonac, Michigan	33
General Motors Institute	Flint, Michigan	248
Gray Marine Motor Company	Detroit, Michigan	106
Hall-Scott Motor Car Co.	Berkeley, California	77
Michigan Wheel Company	Grand Rapids, Michigan	35
Q. M. Auto Mechanics	Fort Devens, Mass.	24
Storekeepers School	Toledo, Ohio	55
Thompson Propeller Company	Fairhaven, Mass.	18
Tent and Awning Repair Co.	New Bedford, Mass.	31
U. S. M. C. Amphibian Tractor School	Dunnedin, Florida	69
Weather Observers School	East Boston Airport Boston, Mass.	12
Evinrude Motor School	Milwaukee, Wisconsin	10
Electric Storage Battery School	Q.M.R.T.C., Camp Lee, Va.	12
Blacksmith Ordnance School	Aberdeen Proving Grounds, Md.	34
Body Finishers School QM Motor Transport	Holabird, Maryland	10
Manitowac Shipbuilding Co.	Manitowac, Wisconsin	6
Automotive Machinists Ordnance Motor Transport	Holabird, Maryland	10
Oxyacetylene Welding Ordnance School	Aberdeen, Maryland	12
Electric Arc Welding School Ordnance School	Aberdeen Proving Ground, Md.	12
Small Arms Ordnance School	Aberdeen Proving Ground, Md.	12
Radiator Repair School Ordnance School	Aberdeen Priving Ground, Md.	27
Higgins Boat School	New Orleans, La.	883
	TOTAL	2049 E.M.

Number of Enlisted Men who attended Specialist Schools

Hq. and Hq. Co., E. A. C.	638
First Brigade	50
Second Brigade	411
Third Brigade	950

Appendix—

OFFICER CANDIDATE SCHOOL BOARD

Special Order No. 149, Paragraph 70, November 14, 1942.

Under auth of Par 5a, WD Cir 126, and 1st Ind Ltr, OCE, dated July 29, 1942, a Board of Officers consisting of:

Colonel Francis H. Falkner, 017092, CE
Major Henry S. Mc Donald, 021305, CE (Inf)
Captain Benjamin A. Lentz, 0907723, CE
1st Lt Frederick J. Mc Claren, 01101946, CE
1st Lt Lincoln A. Thomas, 0482390, CE

is appointed to meet at the call of the President thereof for the purpose of examining applicants for the Engineer Officer Candidate School.

Special Order No. 168, Paragraph 55, December 4, 1942.

1st Lt Jerome F. Lieblich, 0453000, AGD, is detailed as a member of Board of Officers aptd by Par 70, SO 149, this Hq, cs, for examination of Applicants for Adjutant Generals Officers Candidate School only. (Sec II, Cir 190, WD 1942)

NEWS RELEASE
HEADQUARTERS FIRST SERVICE COMMAND
Public Relations Branch

Release No. 331 Biographical Sketch

BRIGADIER GENERAL DANIEL NOCE

Brig. Gen. Daniel Noce was born in Colorado on Nov. 3, 1894. He was graduated from the United States Military Academy at West Point and commissioned a Second Lieutenant in the Corps of Engineers on April 20, 1917.

PROMOTIONS

General Noce was promoted to First Lieutenant on May 15, 1917, and to Captain on the same date; to Major (temporary) on Aug. 23, 1918; and reverted to his permanent rank of captain on June 30, 1920. He was promoted to Major on June 1, 1932; to Lieutenant Colonel on May 1, 1940; to Colonel (temporary) on Dec. 11, 1941; and to Brigadier General (temporary) on July 27, 1942.

SERVICE

After graduation from the United States Military Academy at West Point, New York, General Noce was assigned to the 4th Engineers at Vancouver Barracks, Washington, and in March, 1918, was transferred to the 602nd Engineers at Fort Humphreys, Virginia. He went to France with that regiment in July, 1918, and served as regimental commander from August until November, 1918, during which time the regiment took part in the St. Mihiel and Meuse-Argonne engagements.

He served with the 602nd Engineers in France and in Germany until June, 1919, when he was ordered to return to the United States, and was assigned to the 2nd New York Engineer District. In September, 1919, he went to Camp

-MORE-

Gordon, Georgia, for duty with the 7th Engineers and in June, 1920, he entered the Massachusetts Institute of Technology in Boston, Massachusetts. He received the degree of Bachelor of Science in Civil Engineering in June, 1921.

General Noce was then assigned to Fort Humphreys, Virginia, as an instructor in the Engineer School, and in June, 1923, he was ordered to Washington, D. C., for duty in the Operations and Training Section of the Office, Chief of Engineers. He went to Detroit, Michigan, in July, 1926, and was assigned to the United States Engineer's Office there.

In October, 1928, General Noce was ordered to foreign duty and assigned to Fort Mills, Philippine Islands, where he was in charge of the construction and maintenance of fortifications of Manila and Subic Bays. He returned to the United States in August, 1930, and was assigned to Fort Logan, Colorado, as Plans and Training Officer for the 2nd Engineers. In August, 1931, he entered the Command and General Staff School at Fort Leavenworth, Kansas, and completed the two-year course there in June, 1933. He assisted Col. George R. Spalding in the preliminary organization work for the Works Progress Administration during June, 1933. He returned to the Engineer School at Fort Belvoir, Virginia, as an instructor from July, 1933, to September, 1935.

At the inception of the Federal Work Program in 1935, his services were loaned to the National Emergency Council where he assisted in the early organization and operation of that agency. In September, 1935, he was assigned to duty with the Works Progress Administration in Washington, D. C., and served as Director of the Project Control Division. In January, 1936, he was assigned to Eastport, Maine, as Executive Officer in the Office of the District Engineer. He entered the Army War College in Washington, D. C., in

in August, 1936, and was graduated in June, 1937.

General Noce then went to Memphis, Tennessee, as District Engineer handling many of the large flood control projects of the Mississippi River area. In December, 1940, he was ordered to Fort Belvoir, Virginia, as Executive Officer of the Seventh Corps Area Engineer Replacement Training Center, and in April, 1941, he went to Fort Leonard Wood, Missouri, as Executive Officer of the Engineer Replacement Training Center there.

In January, 1942, General Noce was assigned to Headquarters of the Armored Force at Fort Knox, Kentucky, and in May, 1942, he was ordered to Washington, D. C., for assignment to the office, Chief of Engineers. In June, 1942, he was named Commanding Officer of the Engineer Amphibian Command and took station at Camp Edwards, Mass. The organization and training of the Engineer Amphibian Command has been under his direction since that date.

Walter A. Brown

WALTER A. BROWN
Major, A. U. S.
Chief, Public Relations Branch

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Public Relations Office
Camp Edwards, Massachusetts

February 24, 1943.

FOR RELEASE TO MORNING PAPERS, THURSDAY, FEBRUARY 25.

Landing Craft

Military landing craft have already played an important part in allied operations--and will play an increasingly important part in the future. Wherever we turn, we face an enemy either separated from us by water or with the flank of his line anchored on the seashore.

Just as the prime problem of German strategists in the 30's was the circumvention of the Maginot Line, the problem of striking across water has concerned allied strategists ever since Hitler's armies reached the west coast of Europe and the Japanese demonstrated their amphibian abilities in the southwest Pacific. With fortified harbors denied them, allied strategists recognized that their attacks would have to be delivered over the bars and shoals that mariners normally avoid. The battle field would be the beaches and dunes that were formerly thought of as playgrounds for vacationists.

Assault troops can be landed on enemy held beaches from any kind of vessel or vehicle that floats. The Germans have put outboard motors on rubber boats and crossed rivers too broad to bridge. The Japanese have often provided water borne transportation for their troops by commandeering local craft--small fishing vessels, barges, even row boats. Ferry boats helped tow their landing forces across to Corregidor. Sea-going transports have been run aground on enemy coasts so that assault troops might reach the beach simply by jumping overboard or climbing down nets into the surf.

But early in this war, the need for a more effective way to assist combat troops in establishing beachheads on hostile shores made itself felt. It is probable that the frustrated plans of the Germans to cross the English Channel in 1940 gave the first impetus to the creation of specialized craft for transporting landing troops. Our desire to get back on the Continent made the designing and building of boats that could do the job a problem to be tackled at once.

The shallow-draft, ramp-loading boat solved the problem with a single stroke of design. With its development, the landing craft as we know it today became a fact--a soon-to-be established standard piece of fighting equipment the world over.

Because the Channel crossing was already a pressing problem to them, the British were first to push through a succession of experimental landing craft designs and models. Later, here in America, we tapped an unlikely source of research. Bootleggers operating in the Gulf of Mexico during prohibition had been faced with the problem of putting heavy cargoes ashore on out of the way beaches. Builders in that part of the world evolved a special type of high speed, spoon bowed, shallow draft barge for them. Its bottom was designed to stand up to successive groundings on sand bars. Once equipped with a ramp gate in the bow, it was a ready-made landing craft.

Successful use of amphibian troops by the Japanese during the Singapore campaign gave the final impetus to a development which had begun on the other side of the globe on the shores of the English Channel.

By the time America had been at war for six months there were scores of experimental types of landing craft afloat, and several had even gone into mass production. Standardization soon followed, and now every American moviegoer is familiar with the silhouette of the high ramped, armored landing barge. The ramp is the essential feature of this craft, for speed in unloading its cargo is a prime requisite. Moreover, it had to land not merely infantrymen with light packs, but also tanks, trucks and artillery--in fact, all the mobile equipment of a modern mechanized striking force.

The fleets of landing craft which are now used by engineer amphibian troops of the U. S. Army contain several different types of ramp loading craft, each with its special purpose. They are shepherded by Command and Navigation boats and their crews are being trained in maneuvers as precise and exacting as infantry drill.

The handling of landing craft in surf requires a special skill, for these boats must plunge in through high breakers, heavily laden and at full speed--and yet be so ingeniously handled that their propellers may suck them

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HEADQUARTERS
FIRST SERVICE COMMAND
Boston, Massachusetts

February 24, 1943.

For release to morning papers, Thursday, February 25,

"WATER BETWEEN US AND THE ENEMY IS AN AVENUE, NOT AN OBSTACLE" SAYS AMPHIBIAN GENERAL.

Brigadier General Daniel Noce, who commands the Engineer Amphibian Command at Camp Edwards on Cape Cod, explained to newsmen yesterday some of the changes in military strategy that the organization of landing craft into military units has brought about. The Army's Engineer Amphibian Command maintains large fleets of the latest types of invasion landing craft. General Noce said, that formerly, a commander whose flank was protected by water could consider himself reasonably secure from attack. But when threatened by an amphibian attack, he pointed out that that flank may prove to be the weakest instead of the strongest point in the line. Infantry, artillery, an armored force--the combat units of whole divisions can now be transported scores of miles by water between sunset and dawn.

Brigadier General Noce, who commanded a regiment in France in World War I, was awarded the Distinguished Service Medal last week for his work in organizing the United States Army's first self-contained amphibian transportation units. The training of these units was begun at Camp Edwards, Mass., early last summer. Since that date, units trained under General Noce's direction have gone into theaters of operation, including the African theater.

General Noce explained that engineer amphibian troops received basic training similar to all combat engineers before being organized in specialized amphibian transportation and supply units. Their mission is not the attack itself, but getting the combat units to the right place at the right time, putting them safely ashore, organizing the beach for them and resupplying them as the action progresses.

The motto of the command is "Put 'Em Across."

General Noce described an amphibian attack as a kind of "water blitz." Embarking our combat units on a friendly shore - or behind friendly lines - the engineer amphibian unit puts them ashore wherever the task force commander wishes an attack delivered. The operation is normally

conducted at night, and the enemy may wake to find our forces where he least expected them - on his flank, or in his rear cutting off his lines of retreat, or ashore on that part of his coast line which he thought was invulnerable.

The existence of trained amphibian transportation units in the United States Army was long a military secret although the Army's intention of creating these units was announced late last Spring. It was not until October, however, that the first news of maneuvers was released. Now, with units in the field and others still in training, General Noce said the enemy was welcome to try to guess where the next amphibian attack would be delivered--for engineer amphibian troops are trained to be ready for operations in any theater in the world.

General Noce explained the background of the command and sketched the history of specialized landing craft as it has been developed in this war (see attached releases).

Engineer amphibian troops in this country are now training with the ground forces in Florida, as well as in Massachusetts. The basic combat engineer training which precedes boat work is at present being conducted at Fort Devens, while the headquarters of the command, with its training fleet and maintenance shops, remains on Cape Cod.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Public Relations Office
Camp Edwards, Massachusetts

February 24, 1943.

FOR RELEASE TO MORNING PAPERS, THURSDAY, FEBRUARY 25.

ENGINEER AMPHIBIAN TROOPS

Engineer amphibian troops are the soldiers who man the Army's landing craft. Theirs is a four-fold military mission.

First, it is their job to transport combat units over water from friendly "near shore" to enemy-held "far shore". To accomplish this, the amphibian engineers operate and maintain large fleets of specially constructed shallow-draft landing craft--armored and armed,

Less publicized, but equally as important, is the second part of their mission--the organization of the captured enemy beaches to facilitate the movement inland of combat troops and equipment. In the sense that they are responsible for smoothing the path, engineer amphibian units "transport" the equipment and supplies of the landing force from the water edge to good solid dependable ground. Working often in pitch blackness and under enemy fire, they must push through the obstacles which the enemy has set up to defend the beach. They lay the beach roads which carry the heavy wheeled equipment of modern mechanized war.

Highly trained, almost every man in the Engineer Amphibian Shore Company has an individual mission which he must coordinate with the missions of others as smoothly as the movements of a football backfield are coordinated.

But when he has brought his combat troops safely to the nearest available cover beyond the beach, the engineer amphibian soldier's work is not more than well begun--for his third function is the evacuation of wounded, salvageable equipment and prisoners back to the friendly shore, and his fourth and final task is the re-supply of combat units over water routes. This operation normally continues until adequate port and dockage facilities are available on the enemy's shore--weeks and even months may elapse.

The military organization that was created to accomplish these missions is one of the youngest in the army. Conceived early last Spring at a conference which foresaw the amphibian attacks which have since been delivered, the Engineer Amphibian Command has been a secret activity

during most of its career. Its assignment was to activate, train and command engineer amphibian units--something new under the military sun. With only the lessons learned by the British Commandos and intelligence reports of Japanese amphibian operations to go on, the command was organized almost overnight to meet an urgent need.

Engineer amphibian personnel were originally recruited from yachtsmen, speed boat racers, fishermen--and farm boys who had grown up with gasoline and diesel engines. The Navy supplied the Command's equipment and Marine, Coast Guard, and Coast and Geodetic Survey officers helped in the training. Officers from all branches of the army worked harmoniously together.

Under Brigadier General--then Colonel--Daniel Noce's command, headquarters were established at Camp Edwards, on Cape Cod, where a wide variety of beach and surf conditions were available. Although its fleets of grim, high-ramped landing craft were soon a familiar sight to Cape Cod's Summer visitors, the command's secrets were well kept. The first news of the amphibian maneuvers, which had been continuing all Summer on Marha's Vineyard, was released last October.

Meanwhile, thousands of specialists--marine maintenance men, pilots, navigators, experts in demolition, ship's carpenters, ex-longshoremen and the masters of scores of other trades--had been brought together and trained, first as basic combat engineers ashore, then as amphibian units. One by one, these now practiced units went forth to combined training with infantry units in other camps--and into the theaters of war. It is no longer a secret that amphibian troops who were on Cape Cod last Summer are now in the North African theater. Engineer amphibian boatmen had no part in the North African landings, which was a naval operation, but engineer amphibian shore troops were among the first to land.

For his work in organizing the Engineer Amphibian Command, Brigadier General Noce was last week awarded the Distinguished Service Medal.

Soldiers of the Command wear a blue and gold shoulder patch bearing the eagle, machine gun and anchor which signify combined operations--air, land and sea. The British Commandos wear the same design in red

and black. On his left breast, the engineer amphibian soldier wears the insignia of his command: a red sea horse on a background of white--in an ellipse of blue. This same design is the basis of the command's standard--with the command's motto "Put 'Em Across" spelled out below the sea horse.

Even the everyday dress of the engineer amphibian is picturesque, for his uniform includes paratroopers boots--for work on beaches and dunes which are treacherous underfoot--and the long peaked caps of ski troops to shade his eyes from the sun while on the water. But the working costume, which the soldier calls his "zoot suit", is even more unorthodox. This is the heavy waterproof coverall with cape which sailors in the Navy wear on watch in the North Atlantic. Over this are buckled the soldier's life belt and gas mask.

Thus, even the uniform worn by engineer amphibian troops bears witness to the cooperative nature of amphibian operations, with air force, ground force and navy all represented.

The military science of amphibian operations was in its infancy when the command was activated. Only the Japanese had then mastered the technique of going to sea to envelop an enemy's flank. To these tactics, more than any others, are credited the Japanese success in marching down the Kra Isthmus to the conquest of Singapore. Again and again Japanese amphibian units outflanked well-placed British defense lines by going to sea at night in landing craft and appearing the next morning many miles to the rear of the defending forces. Just as motorized infantry made sweeping envelopments possible on land, the employment of fast moving, hard hitting amphibian attacks can threaten an enemy's rear wherever a waterway leads to it--either across an open body of water or down a flank thought to be secured by the sea. By means of trained engineer amphibian units, mass attacks can be delivered scores of miles away between sunset and sunrise.

The similarity to mechanized warfare on land is striking, for just as the recovery and repair of damaged vehicles is one of the most important operations of armored warfare ashore, so the engineer amphibian mobile shops which are trained to recover stranded boats and repair and

rebuild them in the field under fire are vital units in amphibian operations. The maintenance problem can be imagined when it is realized that in every landing on hostile shore, hundreds of craft must be driven onto the beach at full throttle and, when their loads are safely ashore, retracted through the surf and run out of range of enemy fire to bring other loads ashore. A civilian boatman's job is to keep from running aground; an engineer amphibian boatman's job is to run aground--hard--and be able to get off again.

Both the Army's Engineer Amphibian Command and the Navy's Amphibious Force--the latter's speciality is landing from transports--share the same design and production facilities. They pool the knowledge they acquire in training and action. The harmonious relations of combined operations--in which Army, Navy and Air forces all share--are symbolic of the new unity in American armed forces, wherein the arm or branch are unimportant and only the job and victory count.


US











Officers and men are needed to command and handle the rapidly growing fleet of troop and tank carrying barges, landing boats and other small craft used by the Army

ENGINEER AMPHIBIAN COMMAND

A Crack Army Unit Whose Officers Will Be Yachtsmen

▶ The quiet chuckle of the water as it slips astern fades to a derisive whisper. Minutes pass, abruptly the bottom grates on a beach, there are sudden rustlings, a splash, a whisper, and silence returns. More minutes pass. Then shouts and shots can be heard which, paradoxically, seem to float lazily down to the beach preceding the now returning men. Somewhere on the shore a red glow turns to flames stretching higher and the Commandos are gone.

Had you been there and feeling nonchalant enough to have been looking at the boats which provided the "means" of this assault, you might have noticed something interesting, at least to anyone acquainted with British yachtsmen. Take this guy waiting intently by the engine of the boat you're in. Isn't he old Bill Capcott who owned that little 35-foot power boat *Flame* back in "the days"? Sure he is. And over there — Johnny Lloyd, he used to churn his old *Pamela* up and down the Thames every week-end. And in every other of those boats was a Tom — member of the British Motor Yacht Club, a Dick — remember, he was the feller in Plymouth who finally fixed the bum motor, and a Harry — all of them small power boat operators or repairers before the war. Today, right now, they're driving the landing boats and keeping the motors running. On shore, the boys who ran the boat yards and the machine shops are running the maintenance shops for the assault boats. The same idea that made Dunkirk remarkable is the everyday occurrence here — small boat owners and operators are helping to win the war in their own way.

\+ + +

A month or so ago, that same idea crystallized into something in the United States — the Engineer Amphibian Command, organized by the Army for small boat, shallow draft, and offshore operation. Successfully to carry out sea-borne troop operations, officers and men are being recruited to command and handle the rapidly growing army flotilla of troop and tank carrying barges, landing boats, and the many small craft that will be needed. These vessels at present range from 35 to 210 feet in length.

This is an outfit which will call for sea experience and which, when the U. S. takes the offensive for once and for all, will be likely to see action as heavy as any other single unit of the armed forces.

The E.A.C. has been ordered to train men in the fine points of boat handling and the military uses of small craft. The instructors will be Army men who have been skilled in this sort of action abroad, who have had at least ten years' experience in small boat operation and maintenance. Training has already started at Fort "Unowhere" and, during the next two months, a limited number of qualified civilians will be sent to this training school and commissioned. These men, handpicked by a personnel officer in conformance with the usual War Department standards, should be able to meet the requirements of one of the four groups briefly outlined below. It is obvious that in all four groups one of the primary essentials is experience in handling men, either in sailing a boat, building a boat, or maintaining a boat.

1. Motor and sail boat operators. Men who have been in command and can pilot or navigate small power or sail boats.
2. Marine engineers — inboard and outboard. Men who have run a shop employing at least five marine mechanics.
3. Boatbuilders. Yard superintendents who have run a yard employing over six men.
4. Marine and Diesel enginemen. Superintendents of shops employing better than ten marine, gasoline or Diesel, enginemen.

The men with the above qualifications, who must, in addition, have approximately four years' experience in one of the fields enumerated, must be able to assume command and administrative responsibilities. The age requirements are as follows:

2nd Lieut. (Army), 24 to 30; 1st Lieut., 31 to 34; Captain, 35 to 41. A few field officers, with previous military experience, between the ages of 42 and 52 and possessing unusually high ability, will also be commissioned.

Those with the experience to qualify who are interested in a commission in the Engineer Amphibian Command should supply the following information to: Engineer Amphibian Command, Office of Chief Engineers, Captain James W. Orme, Jr., Room 3112, War Department Building, 21st and Virginia Ave., Washington, D. C.

Name:
Age:
Education: Years: Degree: Major Field:
Civilian Occupation: Salary:
Civilian Hobbies:
Motor Boat Experience (Sail):
Lowest Rank Acceptable:
Limitation on Availability:

So look, Mr. Boat Owner, here's your chance. We know it's tough getting paid to do what previously you've done only for pleasure, but there'll be things to make up for it. But hold on a minute — one more thing. Just make sure you've "got what it takes" because, as far as the enemy is concerned, it's the E.A.C.'s business to "take what they've got." And, brother, that ain't cruisin'!

WORTH LOOMIS

Reprinted from Yachting July, 1942

Burrelle's
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125 Barclay Street - New York
CHICAGO, ILL.
SUN
JAN - 2 1943



JEEPS READY TO ROLL off the landing boat at Fedala Harbor during the landing operations there. This official U.S. Army Signal Corps photo shows the Yanks "raring to go" as amphibian tanks move the little cars toward land. ACME PHOTO

New York Times - 11/19/42.



In full-battle array, United States troops leap from barges and quickly move across the strand at Surcouf. The flag (left) leads the charge that was one of a series of steps in the surprise campaign.

Associated Press Radiophoto, passed yesterday by British censor

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BArclay 7-5371
PRESS CLIPPING BUREAU
165 Church Street - New York
CLEVELAND, OHIO
PLAIN DEALER
Cir. D. 227,657 — S. 391,062
DEC 7 1942



YANKS IN AFRICA. American soldiers as they landed in Algeria. They are shown charging across the beach at Surcouf with the Stars and Stripes out in front.

amphibian Warfare



ALL ASHORE--AND HOW!—These heavy trucks and field piece rolled right off these big landing barges under their own power during recent maneuvers of the Engineer Amphibian Command at Camp Carrabelle, Fla. Picture is one of first of this command, among the Army's newest. It carries brunt of transport of men and materi to invasion beaches—life Africa's.

Burrelle's
ESTABLISHED 1888
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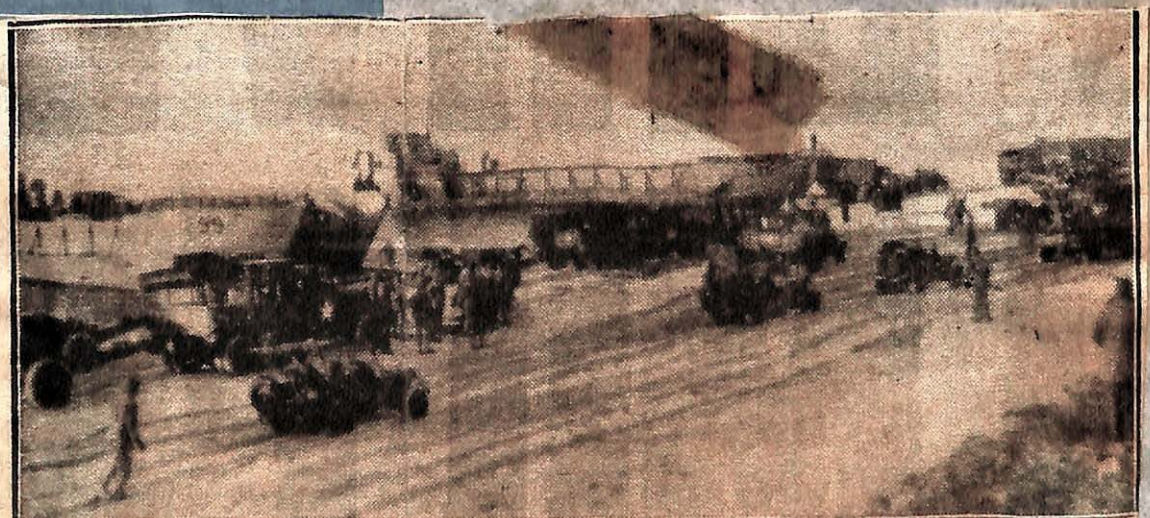
PRESS CLIPPING BUREAU
165 Church Street - New York
BOSTON, MASS.
RECORD
Cir. D. 329,376
DEC 23 1942

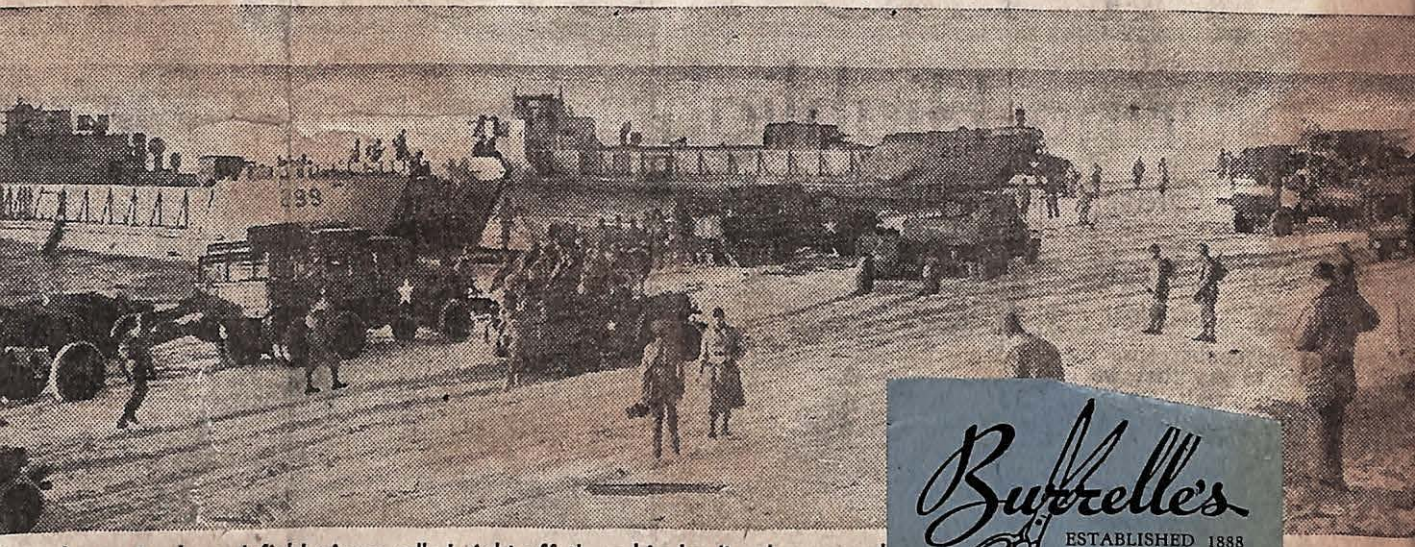


BEACH HEADS IS THEIR BUSINESS. This array of U. S. fighting equipment was brought from transport by landing barges of the U. S. Army Engineer Amphibian Command near Camp Carrabelle, Fla., in maneuvers simulating actual invasion conditions.

These U. S. In Wartime



All Ashore — on Florida Beach



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NEA Photo.

Cir. D. 226,829 — Sat. 169,879
DEC 22 1942

Burrelle's
ESTABLISHED 1888
BArclay 7-5371
PRESS CLIPPING BUREAU
165 Church Street - New York
NEW YORK, N. Y.
MIRROR
Cir. D. 768,946 — S. 1,429,005
DEC 22 1942



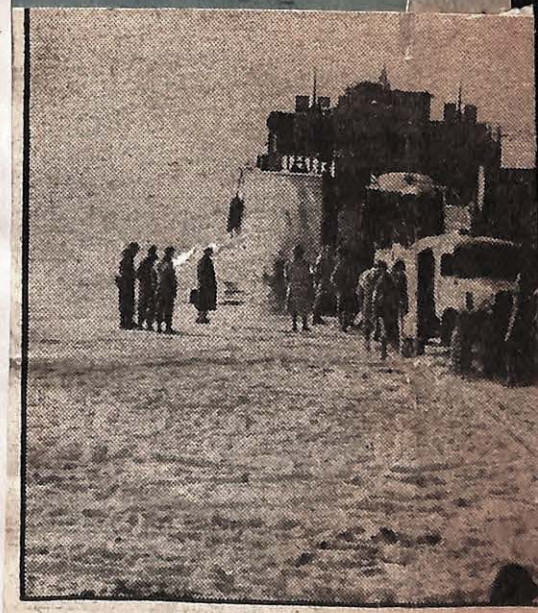
Associated Press Photo

OLLING ASHORE on the Florida beach near Camp Carrabelle, his ten-wheeled Army truck is ready for action during large-scale maneuvers simulating invasion. Operation was witnessed by Lieut. Gen. McNair, chief of ground forces.



Associated Press Photo

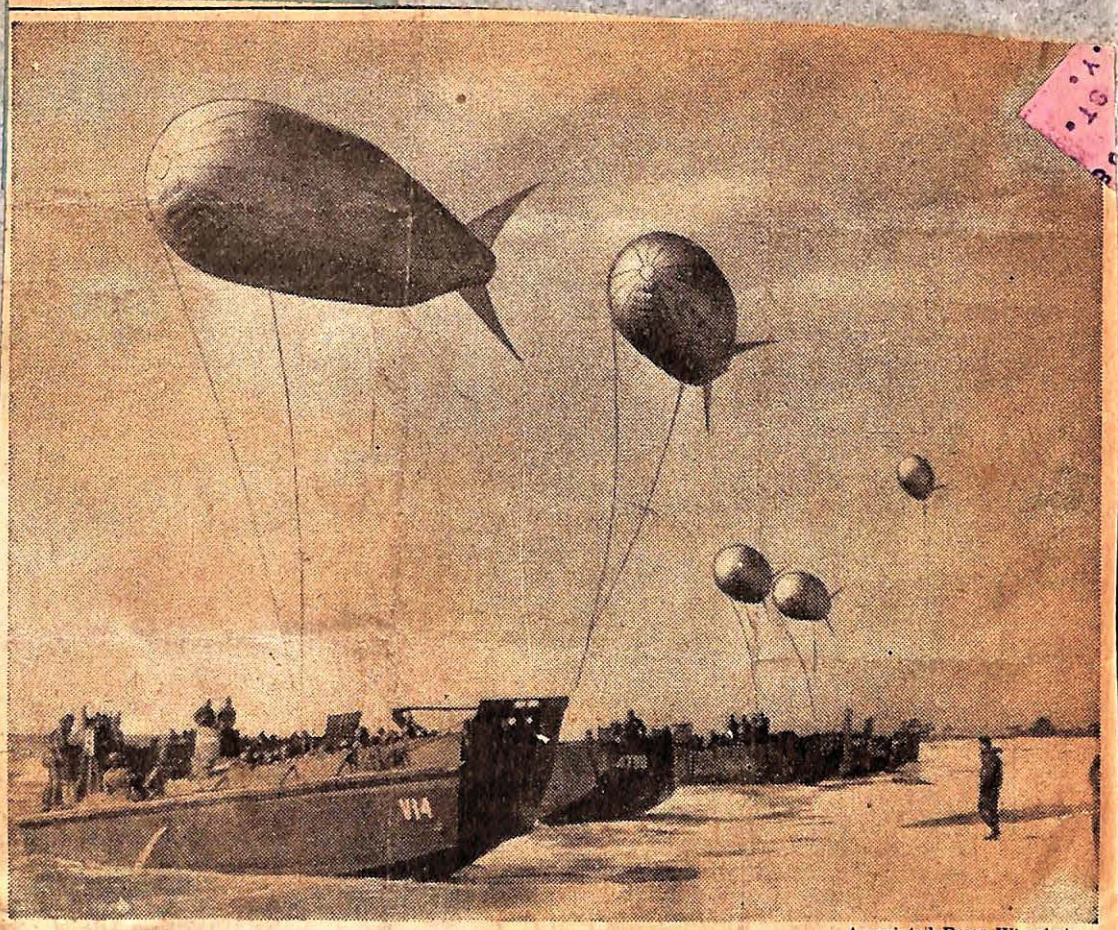
RACTICE MAKES PERFECT—and the Army Engineer Amphibian Command leaves nothing to chance in this full-scale invasion maneuver along 35 miles of the Florida coast. Thousands of troops with full equipment were transported and landed under simulated British officers witnessed the action.



New Front Coming?

Heavy equipment rolls from landing barge during invasion maneuvers staged by Army engineers amphibious command at Tallahassie, Fla. With establishment of beachhead, men captured make-believe village.

CLEVELAND, OHIO
PLAIN DEALER
Cir. D. 227,657 — S. 391,062
MAR 17 1943

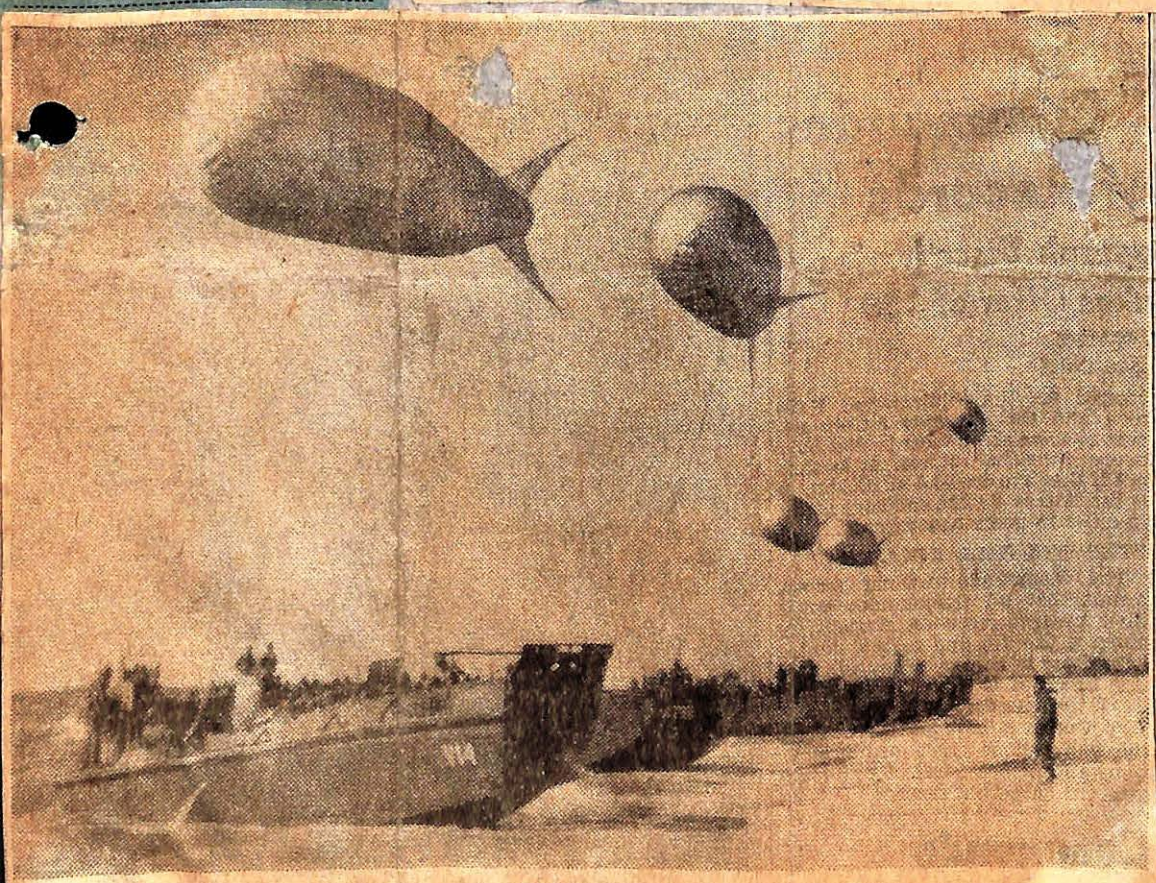


Associated Press Wirephoto

BALLOONS PROTECT LANDING BOATS. Barrage balloons attached to landing craft protect soldiers from planes in this practice landing operation at the Amphibious Training Center at Camp Gordon Johnston.

Burrelle's
ESTABLISHED 1888
BArclay 7-5371
PRESS CLIPPING BUREAU
165 Church Street - New York

BOSTON, MASS.
TRAVELER
Cir. D. 217,819
MAR 17 1943



(AP Wirephoto)

BARRAGE BALLOON AND BOATS operate together in amphibious training at Camp Gordon Johnston in Florida. The captive balolons are intended to help protect landing parties from dive bombers.

Burrelle's
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165 Church Street - New York
NEW YORK, N. Y.
MIRROR
Cir. D. 768,946 — S. 1,429,005
MAR 30 1943

Amphibious Jeep on Africa Mercy Mission

A jeep that is equally at home on land or water takes on two American soldiers wounded by enemy bombers while on Tunisia patrol. The men, who suffered head and leg wounds, will be transported to field dressing station.

(AP Photo; passed by U. S. Army)





BOAT BUILDERS OF THE AMPHIBIAN COMMAND—Here are the boys of the Amphibian Command of the United States Army assigned to Higgins Industries to supervise the overseas shipments of Higgins "Eureka" boats. They are from left to right (standing) Pvt. George Robb, Cpl. William Talley, PFC C. Shafer, Cpl. Robert Wright, Cpl. David Tack, Pvt. Wilson Teal, Pvt. George Simon and Pvt. George Hock. From left to right (kneeling) they are Pvt. Frank McConkey, S/Sgt. Norton Snyder, S/Sgt. Joseph Sylva and Pvt. Raymond Mouch. (One member of the detail, Pvt. Leonard Smith, is not in the picture.)

The center of attraction is "Skipper Dugan," the Editor's wire-haired fox terrier, and mascot

ure further important decreases
accident frequency and in man
ours lost will become more ap-
parent and that Higgins Industries
Plants will be among the safest
to work in throughout the entire
country. **This needs your help and you must play a vital part in** making it possible.

March '43.



THE OFFICERS MESS
ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASS.

August 1, 1942

PROPOSED:

P R E A M B L E

To provide more adequate opportunities for their professional and technical improvement, to enhance harmony and esprit de corps, to furnish facilities for suitable relaxation and recreation for themselves and their families, and to strengthen the bonds of mutual friendship, the officers of the Engineer Amphibian Command at Camp Edwards, Massachusetts, hereby join in forming an Officers Mess and adopt the following Constitution.

C O N S T I T U T I O N

ARTICLE I

NAME: The name of the Club to which this Constitution applies shall be the "OFFICERS MESS, ENGINEER AMPHIBIAN COMMAND," Camp Edwards, Massachusetts.

ARTICLE II

1. MEMBERSHIP: There will be three (3) classes of membership: Honorary, Active, and Associate.

2. HONORARY MEMBERSHIPS: Distinguished persons recommended by the council because of their service in the army or on behalf of the National Defense; or because of their special interest in the welfare of the Club or Post, may be elected to honorary membership by a three-fourths (3/4) vote of the members present at a regularly scheduled meeting. Honorary members will not be required to pay any initiation fee, dues, or assessments, and will have no vote at club meetings.

3. ACTIVE MEMBERS: All commissioned officers of the military services of the United States, attached to, or assigned for duty at Engineer Amphibian Command, Camp Edwards, Massachusetts, automatically become active members by reason of such duty, with the privileges of voting and holding office, unless they indicate in writing, within ten (10) days of date of reporting for duty, their desire not to accept membership.

4. ASSOCIATE MEMBERS: Other officers of the armed forces of the United States, officers of friendly nations on duty with the E.A.C., and federal employees engaged in a supervisory or educational capacity are eligible for membership as associate members. The privileges of such membership shall be extended to them after their proposal by two members, at least one of whom shall be an active member, and on their election by the council. The council may, from time to time, fix a limit to the number of associate members permitted.

5. ASSOCIATE MEMBERS may not hold office nor vote at general meetings of the club, but otherwise they will enjoy the same privileges as active members including service on committees and voting in connection therewith.

6. DUES, ASSESSMENTS, ETC.: (a) All members, except Honorary Members, shall pay an initiation fee of two dollars ($2.00) and upon being relieved from duty at this post within six months of joining, while in good standing as a dues-paying member, one-half of such initiation fee shall be refunded on demand. (b) All members, except Honorary Members, shall pay monthly dues as fixed by the Council. The privileges of the Club are extended at such times as the Council may direct to the wives and adult children of members without payment of additional dues.

ARTICLE III

1. CESSATION AND SUSPENSION OF MEMBERSHIP: (a) Voluntary separation from the Club may be by written resignation addressed to the Secretary, and shall be effective upon its acceptance by the Council. A Resignation will not be accepted until all indebtedness and obligations to the Club have been paid. (b) Members ordered permanently to other stations will be considered as having resigned upon notification to the Secretary and settlement of their accounts just previous to departure. (c) Members will be denied credit at the Club on failure to pay their indebtedness by the end of the calendar month within which it fell due. Failure to pay any bill within two months will entail suspension unless otherwise ordered by the Council. (d) Members may be suspended or their membership rescinded by the Council, subject to an appeal to the membership.

2. REINSTATEMENT: Members suspended or expelled for non-payment of bills or dues may not be lifted from suspension or reinstated, unless all bills due have been paid including dues during the period of suspension, and in addition their reelection is concurred in by a 3/4 vote of the Council. Members expelled for any other cause may be reinstated only after investigation and report by the Council, by a majority vote of those present at a general meeting of the Club.

ARTICLE IV

1. CLUB PROPERTY: The funds and equipment of the Club are the joint property of all members and no such member can claim a portion of either as his individual property. In case of liquidation of the Club, net assets thereof shall be distributed in accordance with such plan as may be decided upon at the time by the Council.

ARTICLE V

1. OFFICERS OF THE CLUB: The Commanding Officer of the Engineer Amphibian Command, Camp Edwards, Massachusetts, shall be the President of the Club. The Chief of Staff shall be first Vice President. A Secretary and a Treasurer shall be selected by the Council; these two offices may be held by one individual.

2. CLUB COUNCIL: (a) The governing body of the Club shall be a Club Council, consisting of the Club Officers, of three representatives elected for one year from each Brigade and two representatives from the Headquarters' Officers of the Engineer Amphibian Command. (b) The senior councillor shall be Second Vice President and an ex-officio member of all committees. (c) The Council shall meet at least once in each calendar month and at such other times as a meeting may be called by the President or by request of three members.

3. VACANCIES: The club Council may select a successor to fill any cavancy among the officers or councillors of the Club, until such time as a successor is elected.

4. DUTIES OF THE SECRETARY AND TREASURER: (a) The Secretary shall keep a complete list of members arranged in separate categories, maintain the constitution and By-Laws and keep them posted to date, a record of the meetings of the Club and of the Council (including those present, the matters considered and the action taken) and of the election of officers and councillors. He shall sign guest cards and shall be responsible for correspondence not strictly pertaining to finances. (b) The Treasurer shall be the executive officer of the Club. He shall keep in proper form all the accounts of the Club; he shall receive and disburse all monies for the Club; he shall see that the property, grounds, furnishings, facilities, and services of the Club are maintained in satisfactory condition. He shall see that the members using the Club observe its By-Laws and established customs, and shall report to the Council any flagrant or repeated breaches thereof. He shall see that unauthorized persons do not make use of the facilities of the Club. He shall post in the Club, on or before the fifteenth of each month, a financial statement of the Club for the preceding month. The Treasurer shall control, under the direction of the Council, the employees of the Club, and shall see that they perform their duties satisfactorily.

5. DUTIES OF THE CLUB COUNCIL: The Council shall have general charge of the affairs, funds, and property of the Club; it shall administer the funds and establish policies as to expenditures and employees as may be necessary; it shall authorize purchases and provide for the control and preservation of the Club properties. The council shall prescribe the monthly dues, regulate the charges made for services and supplies, and authorize such standing committees as may be required. The Council shall interpret the Constitution and By-Laws, and make such regulations as it may deem necessary for the government of the Club, consistent therewith, including the regulation of prices. As soon after the first of each month as may be practicable, the Council shall have an audit made of each account of the club for the preceding month. At this time, the financial statement shall be presented to the Council by the Treasurer for its consideration and approval.

ARTICLE VI

1. GUESTS accompanied by a member will be admitted for short periods, but without credit privileges.

2. THE PRIVILEGES OF AN ASSOCIATE MEMBER may be extended to non-members for a period of ten days or less on request of a member in good standing to the Secretary. In each case written application will be made by the member introducing the guest, showing the latter's full name, local and home address, and occupation. On receipt of such a request, the Secretary will issue the guest card and transmit to the Treasurer the request with action taken indorsed thereon.

3. An extension of guest privileges beyond ten days will be permitted only with the approval of the Council and upon payment of dues for the entire period.

ARTICLE VII

1. MEETINGS: There shall be at least one general meeting of the Club annually at the close of the fiscal year, for the rendering of the reports of officers and standing committees, and the transaction of any other business, including comments and suggestions as to the operation and improvement of the club.

2. Intermediate general or special meetings may be called by the President, a majority vote of the Council, or written request of not less than five members. The membership shall be notified of the purpose of the meeting ten days in advance for a general meeting, and at least 48 hours in advance for a special meeting.

ARTICLE VIII

1. AMENDMENTS AND BY-LAWS: Amendments to this Constitution may be proposed by the Council or by at least five active members. In either case, proposed amendments will be given to the Secretary in writing, who will post a copy on the bulletin board and send a copy to each Active Member at least ten days before it is to be voted on.

2. Adoption of an amendment to the Constitution shall require an affirmative vote of two-thirds (2/3) of the active members present at a general meeting of the Club.

3. A majority of the members at a meeting of the Club shall have the right to make such by-laws as may be deemed necessary and proper, provided they do not contravene these articles.

4. In addition, the Council shall establish By-Laws for the Club with a view to improving its benefits to the membership at large and regulating its operation in accordance with its Constitution. Such By-Laws shall be posted immediately or otherwise notified to the membership and shall become effective only after having been so published for ten days, except when otherwise ordered by a two-thirds (2/3) vote of the Council.

THE OFFICERS MESS
ENGINEER AMPHIBIAN COMMAND,
Camp Edwards, Mass.

August 1, 1942

BY-LAWS

1. HONORARY MEMBERS: The Commanding General and Chief of Staff, First Service Command, and the Commanding Officer, Camp Edwards, Mass., shall be ex-officio honorary members.

2. GUESTS: Members will be responsible for the indebtedness and conduct of their guests, whether introduced under paragraphs 1 or 2 or 3, ARTICLE VI.

3. CLUB PROPERTY: (a) Removal from the Club of any newspaper, magazine, book or other item of property is prohibited. (b) Any member losing, breaking or impairing any article of Club property shall sign a chit for the same and pay for it as the Council may assess its value.

4. EMPLOYEES: (a) Regular employees of the Club are not permitted to accept any tip or gratuity from members or guests. (b) Complaints against the employees will be made to the Treasurer or to any member for the House Committee. Employees will not be scolded or abused by individual members, but cases of misconduct or bad service will be reported to and dealt with by proper club officers.

5. HOUSE COMMITTEE: (a) The President is authorized to appoint a House Committee of not less than three members. (b) This committee is charged with the improvement of facilities, the employment of personal services, the purchase and maintenance of furniture and equipment, within limits of cost fixed by the Council; and in general with the care and maintenance of the Club house and facilities. (c) The Treasurer shall be a member of this committee ex-officio.

6. Fiscal Year: (a) The Club's fiscal year will be from August 1st to July 31st. (b) The annual meeting will be held on August 10th, or as soon thereafter as may be practicable, the date to be fixed by the Council with regard to the completion of the Treasurer's annual report. (c) The officers will carry on their duties of the previous year until relieved by their successors at the annual meeting or immediately thereafter.

7. DUES: The dues for both active and associate members shall be two ($2.00) dollars for each calendar month or major portion threeof, payable by the 10th day of the following month.

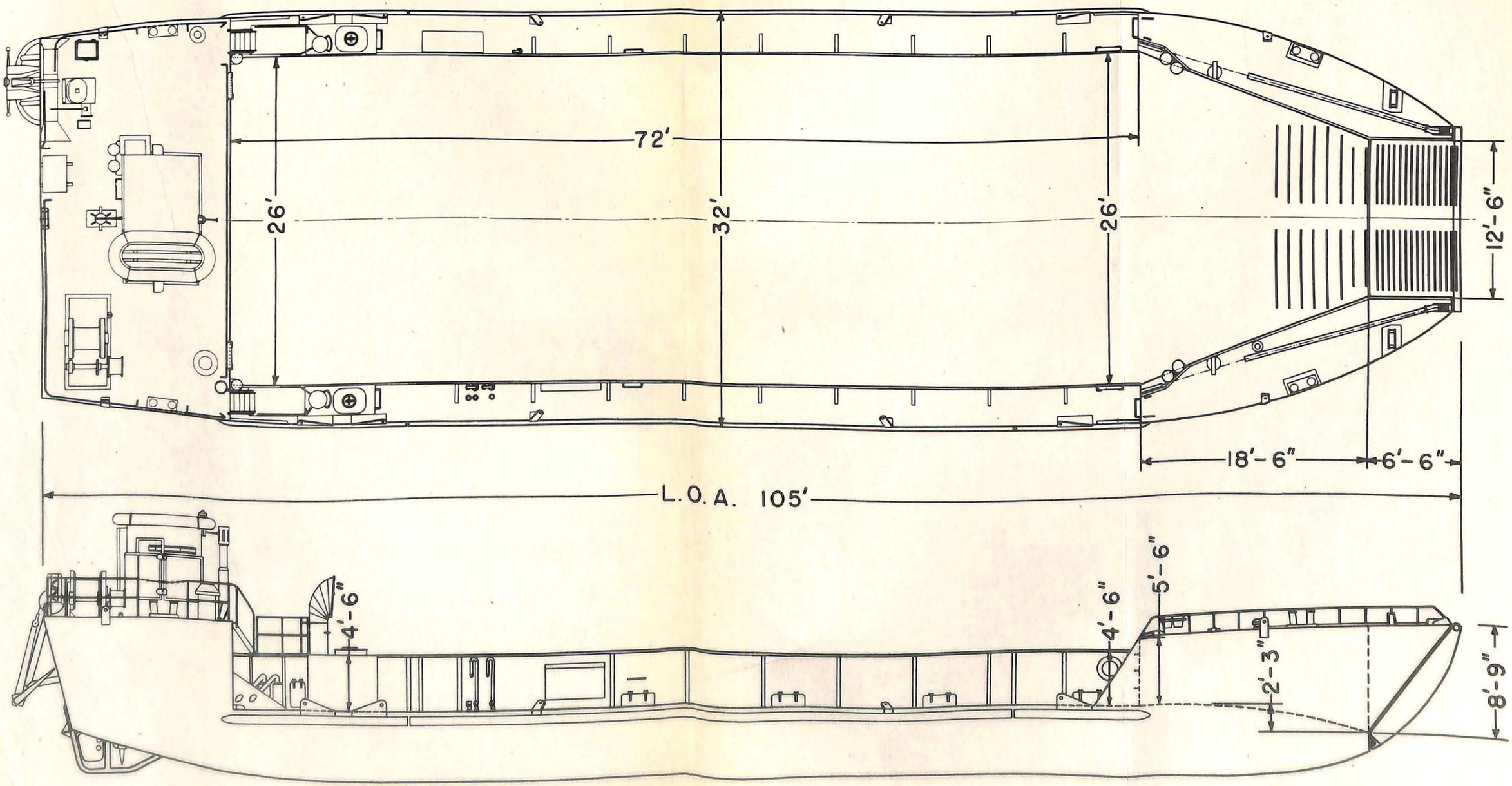

Fig. 19.--Plan and Profile of LCT(5).

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

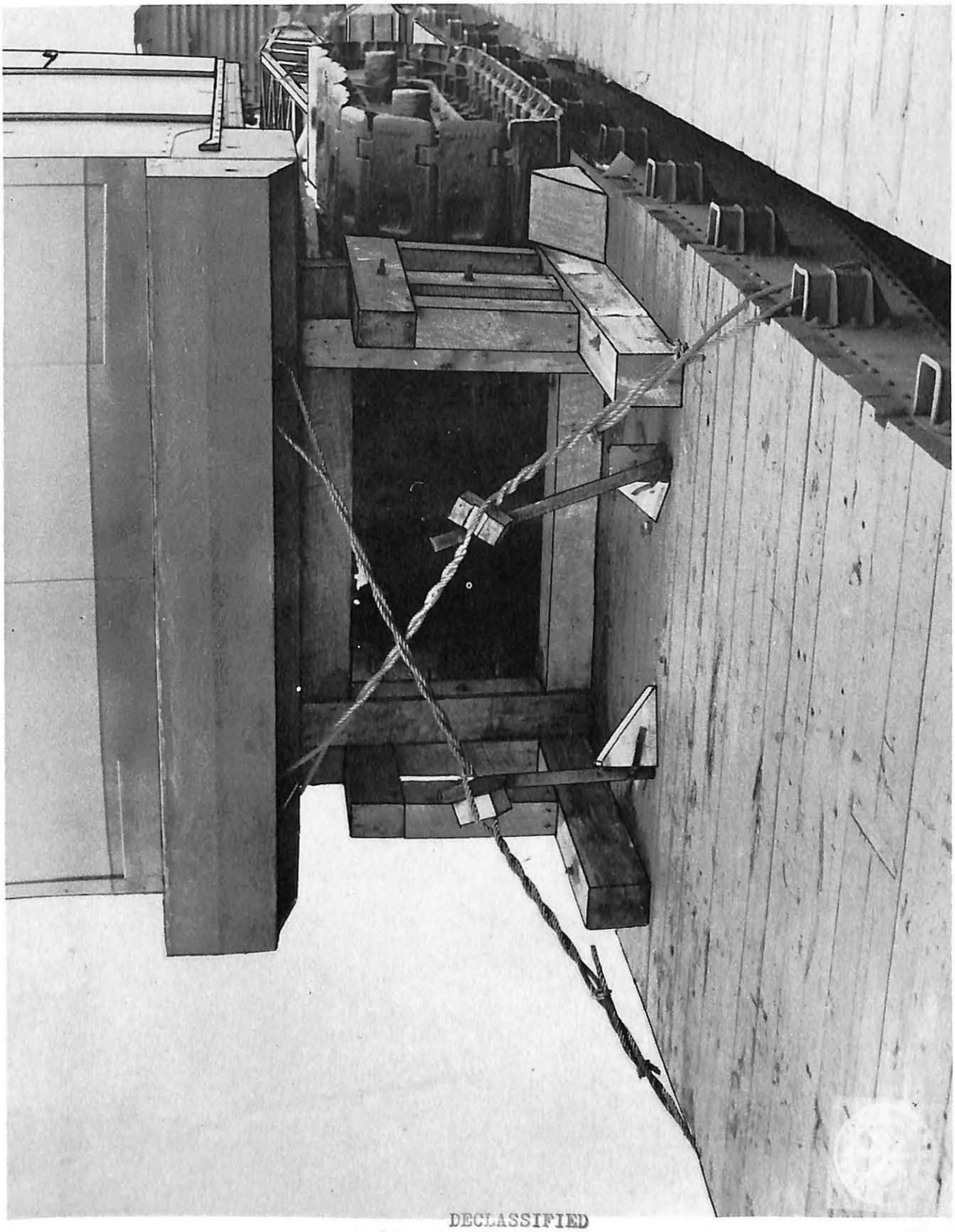

Fig. 15.—Method of Securing Rear of Bucyrus Erie Crane to Flat Car. Recommended (although not shown) are 4" x 6" random length timbers. Approximately 50' will be needed. Bolts 5/8"; cable 5/8".

DECLASSIFIED
DOD Directive No. 5200.9
27 Sept 1958

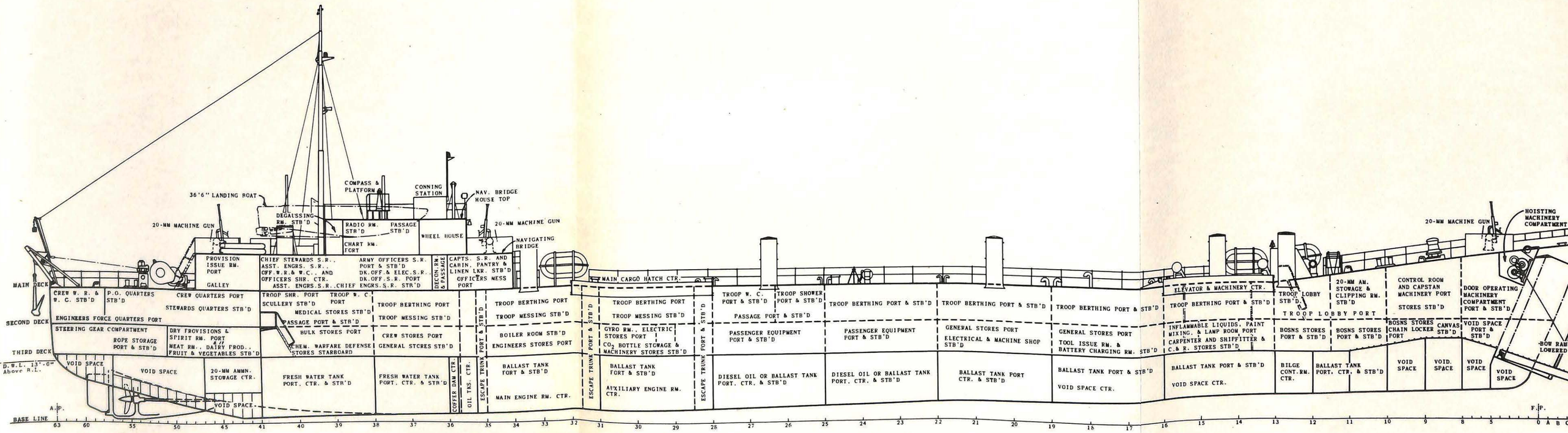

Fig. 21a.--Profile of LST

DECLASSIFIED
DOD Directive No. 5200.9
27 Sep 31 1958

EQUIPMENT ITEM	ENGINEER SPECIAL BRIGADE																				CONSUMPTION													
	Brig Hq & Hq Co	Brig Med Det & Band	Engineer Boat and Shore Regiment									Boat Maint Bn			Medical Bn			Ord. Maint Co	QM Hq & Hq Co	Signal Co	Brig Total	Gals Fuel Cons Per Hr	Estimated Fuel Consumption in Training-Each Item				Estimated Fuel Consumption Engineer Special Brigade (Training Period In Field)									
			Hq & Hq Co	Med Det	Boat Battalion			Shore Battalion			Regtl Total	Hq & Hq Det	Boat Maint Co (3)	Bn Total	Hq & Hq Co	Med Co (3)	Bn Total						Avg Hrs Opn Per Day	Avg Gals Cons Per Day	Avg Hrs Opn Per Mo	Avg Gals Cons Per Mo	Regular Gasoline		White Gasoline		Diesel Fuel		Kerosene	
					Hq & Hq Co	Boat Co (3)	Bn Total	Hq & Hq Co	Shore Co (3)	Bn Total																	Gals Per Day	Gals Per Mo	Gals Per Day	Gals Per Mo	Gals Per Day	Gals Per Mo	Gals Per Day	Gals Per Mo
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Boat, power, utility (E)			1		1	1	4				5		2	6							21	5.0	5	25.0	150	750	525	15750						
Charger, Battery, 12 V., 2000 W., gasoline-driven, portable (O-M)						1	3				3		2	6							15	.375	20	7.5	600	225	113	3375						
Charging Set, SCR 169 (S)																				1	1	.625	16	10.0	480	300	10	300						
Compressor, air, motorized (E)								1		1	1										3	3.0	5	15.0	150	450	45	1350						
Compressor, air, 60 C.F.M., portable, skid-mounted, gasoline-driven (1)(E)													2	6							6	1.5	8	16.0	240	480	96	2880						
Crane, truck-mounted (2)(E)									1	3	3										9	4.0	5	20.0	150	600	180	5400						
Generator Set, portable, 5 KW (3)(E)			1		1		1				2		5	15							21	1.0	5	5.00	150	150	105	3150						
Generator Set, portable, 1250 W., 115 V, D.C., 10.7 amps, powered by 4 cycle, 1 cylinder gasoline engine (4) (E)													2	6							6	1.0	5	5.00	150	150	30	900						
Lantern, gasoline, 2-mantle, commercial (Q)	9		4		4	4	16	4	2	10	30	2	4	14	3	3	12		4	5	134	.008	8	.063	240	1.89			9	253				
Lantern, kerosene, army (8)(Q)													8	24	18	28	102	2		2	130			.063		1.89							8	245
Lubricator, trailer-mounted(5)(E)													2	6							6	.5	5	2.5	150	75	15	450						
Outfit, cooking, 1-burner (Q)	8		8		8	8	32	8	8	32	72		8	24					1	6	255	.02	2	.04	60	1.20			10	306				
Power Unit, PE 95 or PE 92 (S)																				1	1	2.5	8	20.0	240	600	20	600						
Power Unit, PE 49C (10)(S)			1					2		2	3									2	11			10.0		300	110	3300						
Pump, centrifugal, 2" discharge, etc. (6)(E)			3								3										9	0.5	4	2.0	120	60	18	540						
Range, field, M-1937(1 to 4 unit) (Q)	1		1		1	1	4	1	1	4	9		1	3	1	2	7	1	1	1	41			10.0		300			410	12300				
Tractor, crawler, type, Diesel, w/angledozer, 35 DBHP (E)									2	6	6										18	2.8	6	16.8	180	504					302	19072		
Tractor, crawler type, Diesel, w/angledozer, 80 DBHP (E)									1	3	3		2	6							15	4.0	6	24.0	180	720					360	10800		
Water Purification Unit, portable (7)(E)			1								1										3	.5	8	4.0	240	120	12	360						
Welder, electric arc, 300 amp., gasoline-driven, w/3kw, 110 V., D.C. auxiliary generator set, complete (9)(E)													4	12							12	1.5	5	7.5	150	225	90	2700						
Total Fuel Requirements																											1369	41055	429	12859	662	19872	8	245
Engine Oil Requirements	(Estimated as 3% of Fuel Consumption)																										41	1231			20	596		
Grease	(Pounds) Estimated at 2 lbs per 100 gallons of fuel consumed																										37	821			13	397		
Gear Transmission Lubricant	(Gallons) Estimated on basis of percentage of periodic change for using equipment																														2	57		

NOTES: Equipment quantities shown are in accordance with tables of allowances dated 21 April 1943 for respective units.

(E) Indicates issue by Corps of Engineers. (O-M) indicates motor vehicle equipment issued by Ordnance Dept.

(Q) Indicates issue by Quartermaster Corps. (S) indicates issue by Signal Corps.

(1) Included in equipment of "Shop, motorized, small tool repair."
(2) Consumption shown is for operation of crane. For fuel required to move, see chart "Motor Vehicle Requirements"
(3) Included in sets "Electric Lighting Equipment, Portable, 5 KW" (1 each) and "Power Plant, Trailer Mounted" (1 each).
(4) Included in Equipment "Shop, motorized, emergency repair".
(5) Included in set "Supplementary Equipment, Maintenance Company" (2 per set).
(6) Included in set "Water Supply Equipment, Engineer " (3 per set).
(7) Included in set "Water Supply Equipment, Engineer" (1 per set).
(8) Including following components of sets:
2 per " Shop, motorized, machine shop, heavy."
3 per "Shop, motorized, tool and bench".
(9) Included in set "Shop, motorized, welding" (1 per shop).
(10) Included in set " Radio Set, SCR 177-B."

References: "Standard Makes and Models of Corps of Engineers Engine-Powered Equipment" by The Engineer Board, Fort Belvoir, Va. Statistics compiled by supply officers, 4th Engineer Special Brigade.

Fig. 10.--Fuel and lubricant requirements, miscellaneous motorized and fuel-consuming equipment, Engineer Special Brigade.

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ESTIMATED FUEL AND LUBRICANT REQUIREMENTS, ENGINEER SPECIAL BRIGADE, 30-DAY TRAINING PERIOD IN FIELD, EQUIPPED WITH DIESEL-POWERED LANDING CRAFT

Equipment Strength In Accordance With Tables Of Equipment Approved 21 April 1943

UNIT	Fuel Consuming Equipment	FUEL				LUBRICANTS						NOTES
		Regular Gasoline (gallons)	Diesel Fuel (gallons)	Marine or White Gasoline (gallons)	Kerosene (gallons)	Gear Lube (marine) (gallons)	Engine Oil (marine) (gallons)	Gear Lube (automotive) (pounds)	Engine Oil (automotive) (gallons)	Transmission oil-tractor (gallons)	Grease, Misc. (pounds)	
1	2	3	4	5	6	7	8	9	10	11	12	13
Brigade Hq & Hq Co	Vehicles Landing Craft Miscellaneous	841	5200	327		2.4	127.00	46	25		11 26	LANDING CRAFT: 1. Consumption based upon operation of all craft 100 hrs., all craft assumed to be in good condition, and operating in favorable waters 2. For basis of computation and other assumptions, see Fig. 5, page 9, this chapter. VEHICLES: 1. Assumed to operate 1000 miles each per month. 2. For basis of computation and other assumptions see Fig. 9, page 14, this chapter. MISCELLANEOUS EQUIPMENT: 1. Includes major fuel consuming equipment not classified as "Vehicles" or "Landing Craft". 2. For List of Equipment, assumptions, and basis of computations, see Fig. 10, page 16, this chapter. TRANSMISSION OIL, TRACTOR: Represents pro-rata of normal change at 900 hours for diesel-powered tractors. GEAR LUBE, MARINE: Represents pro-rata of normal 6 quart per engine change at 250 hours for Gray Marine Diesel Engines. ENGINE OIL (Marine): Consumption figure includes change after each 50 hours of operation plus make-up of .1875 gals. per engine hour. GENERAL: All consumption based on normal operating conditions. For abnormal conditions safety factors must be added.
Brigade Med Det & Band	Vehicles Landing Craft Miscellaneous	358						20	11		5	
Hq & Hq Co E. B. & S Regiment	Vehicles Landing Craft Miscellaneous	1276 1500	6040	318		3.0	158.75	70	38 45		16 31 30	
Med Det E.B. & S.R.	Vehicles Landing Craft Miscellaneous	516						28	15		6	
Hq & Hq Co Boat Battalion	Vehicles Landing Craft Miscellaneous	854 900	9400	317		5.4	285.75	47	26 27		11 47 18	
Boat Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	477 975	77080	317		58.8	3111.50	26	14 29		6 385 20	
Total Boat Battalion	Vehicles Landing Craft Miscellaneous	2285 3825	240640	1268		181.8	9620.25	126	69 114		29 1203 77	
Hq & Hq Co Shore Battalion	Vehicles Landing Craft Miscellaneous	2006 1050		318				110	60 31		25 21	
Shore Company (3 per Bn)	Vehicles Landing Craft Miscellaneous	1212 600	1728	313				67	36 70	5	15 46	
Total Shore Battalion	Vehicles Landing Craft Miscellaneous	5642 2850	5184	1257				310	169 241	15	71 159	
E. B. & S. Regiment	Vehicles Landing Craft Miscellaneous	9719 8175	246680 5184	2843		184.8	9779.00	535	291 400	15	121 1233 267	
	TOTAL	17894	251864	2843		184.8	9779.00	535	691	15	1621	
Hq & Hq Det Boat Maint Bn	Vehicles Landing Craft Miscellaneous	1104		4				61	33		14	
Boat Maint Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	2595 5010	2400 1440	317	15	2.4	127.00	143	78 194		32 12 129	
Total Boat Maint Battalion	Vehicles Landing Craft Miscellaneous	8889 15030	7200 4320	955	45	7.2	381.00	489	267 582	12	111 36 387	
Hq & Hq Det Medical Bn	Vehicles Landing Craft Miscellaneous	1198		305	34			66	36		15	
Medical Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	1143		606	53			63	34		14	
Total Medical Bn	Vehicles Landing Craft Miscellaneous	4627		2123	193			254	139		58	
Ordnance Maintenance Company	Vehicles Landing Craft Miscellaneous	1447		300	4			79	43		18	
Quartermaster Hq & Hq Co	Vehicles Landing Craft Miscellaneous	183		309				10	5		2	
Signal Company	Vehicles Landing Craft Miscellaneous	1176 1500		316	3			64	35 45		15 30	
TOTAL BRIGADE	Vehicles Landing Craft Miscellaneous	46678 41055	752440 19872	12859	245	561.6	29845.00	2567	140 1827	57	583 3762 1218	
	TOTAL	87733	772312	12859	245	561.6	29845.00	2567	1967	57	5563	

Fig. 11.—Fuel and lubricant requirements, Engineer Special Brigade, 30-day training period in field (brigade craft Diesel-powered).

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UNIT	Fuel Consuming Equipment	FUEL				LUBRICANTS						NOTES
		Regular Gasoline (Gallons)	Diesel Fuel (Gallons)	Marine or White Gasoline (Gallons)	Kerosene (Gallons)	Gear Lube (Marine) (Gallons)	Engine Oil (Marine) (Gallons)	Gear Lube (Automotive) (Pounds)	Engine Oil (Automotive) (Gallons)	Transmission Oil -Tractor (Gallons)	Grease, Misc. (Pounds)	
1	2	3	4	5	6	7	8	9	10	11	12	13
Brigade Hq and Hq Co	Vehicles Landing Craft Miscellaneous	841		9984 327			107.00	46	25		11 50	LANDING CRAFT: 1. Consumption based upon operation of all craft 100 hours, all craft assumed to be in good condition and operating in favorable waters 2. All 36 ft. craft assumed to be powered by gasoline engines; 50 ft. craft by Diesel engines. 3. For other assumptions and basis of computations, see Fig. 7, page 11, this chapter. VEHICLES: 1. Assumed to operate 1000 miles each per month. 2. For basis of computations and other assumptions, see Fig. 9, page 14, this chapter. MISCELLANEOUS EQUIPMENT: Includes major fuel-consuming equipment not classified as "Landing Craft" or "Vehicles". For list and assumptions, see Fig. 10, page 16, this chapter. TRANSMISSION OIL, TRACTOR: Represents pro-rata of normal change at 900 hours for Diesel-powered tractors. GEAR LUBE, MARINE: Represents pro-rata of normal change of 6 qt. per engine at 250 hours for Gray Marine Diesel engines. ENGINE OIL, MARINE: Includes normal change at 50 hrs of operation plus make up of .1875 gals. per engine hour. GENERAL: All consumption based on normal operating conditions. For abnormal conditions, safety factors must be added.
Brigade Med Det & Band	Vehicles Landing Craft Miscellaneous	358						20	11		5	
Hq & Hq Co E. B. & S. Regiment	Vehicles Landing Craft Miscellaneous	1276 1500		11611 318			133.75	70	38 45		16 58 30	
Med Det E. B. & S. Regiment	Vehicles Landing Craft Miscellaneous	516						28	15		6	
Hq & Hq Co Boat Bn	Vehicles Landing Craft Miscellaneous	854 900		18119 317			240.75	47	26 27		11 91 18	
Boat Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	477 975	37200	76238 317		37.2	2824.50	26	14 29		6 567 20	
Total Boat Bn	Vehicles Landing Craft Miscellaneous	2285 3825	111600	246833 1268		111.6	8714.25	126	69 114		29 1792 77	
Hq & Hq Co Shore Bn	Vehicles Landing Craft Miscellaneous	2006 1050		318				110	60 31		25 21	
Shore Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	1212 600	1728	313				67	36 70	5	15 46	
Total Shore Bn	Vehicles Landing Craft Miscellaneous	5642 2850	5184	1257				310	169 241	15	71 159	
E.B.&S. Regiment	Vehicles Landing Craft Miscellaneous	9719 8175	111600 5184	258444 2843		111.6	8848.00	535	291 400	15	121 1850 267	
	TOTAL	17894	116784	261287		111.6	8848.00	535	691	15	2238	
Hq & Hq Det Boat Maint Bn	Vehicles Landing Craft Miscellaneous	1104		4				61	33		14	
Boat Maint Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	2595 5010	2400 1440	317	15	2.4	127.00	143	78 194		32 12 129	
Total Boat Maint Bn	Vehicles Landing Craft Miscellaneous	8889 15030	7200 4320	955	45	7.2	381.00	489	267 582	12	111 36 387	
Hq & Hq Det Medical Bn	Vehicles Landing Craft Miscellaneous	1198		305	34			66	36		15	
Medical Co (3 per Bn)	Vehicles Landing Craft Miscellaneous	1143		606	53			63	34		14	
Total Medical Bn	Vehicles Landing Craft Miscellaneous	4627		2123	193			254	139		58	
Ordnance Maintenance Co	Vehicles Landing Craft Miscellaneous	1447		300	4			79	43		18	
Quartermaster Hq & Hq Co	Vehicles Landing Craft Miscellaneous	183		309				10	5		2	
Signal Co	Vehicles Landing Craft Miscellaneous	1176 1500		316	3			64	35 45		15 30	
TOTAL BRIGADE	Vehicles Landing Craft Miscellaneous	46678 41055	342000 19872	785316 12859	245	342	27032.00	2567	140 1827	57	583 5636 1218	
	TOTAL	87733	361872	798175	245	342	27032.00	2567	1967	57	7437	

Fig. 12.—Fuel and lubricant requirements, Engineer Special Brigade, 30-day training period in field (50 ft. craft assumed to be Diesel-powered; all others gasoline-consuming).

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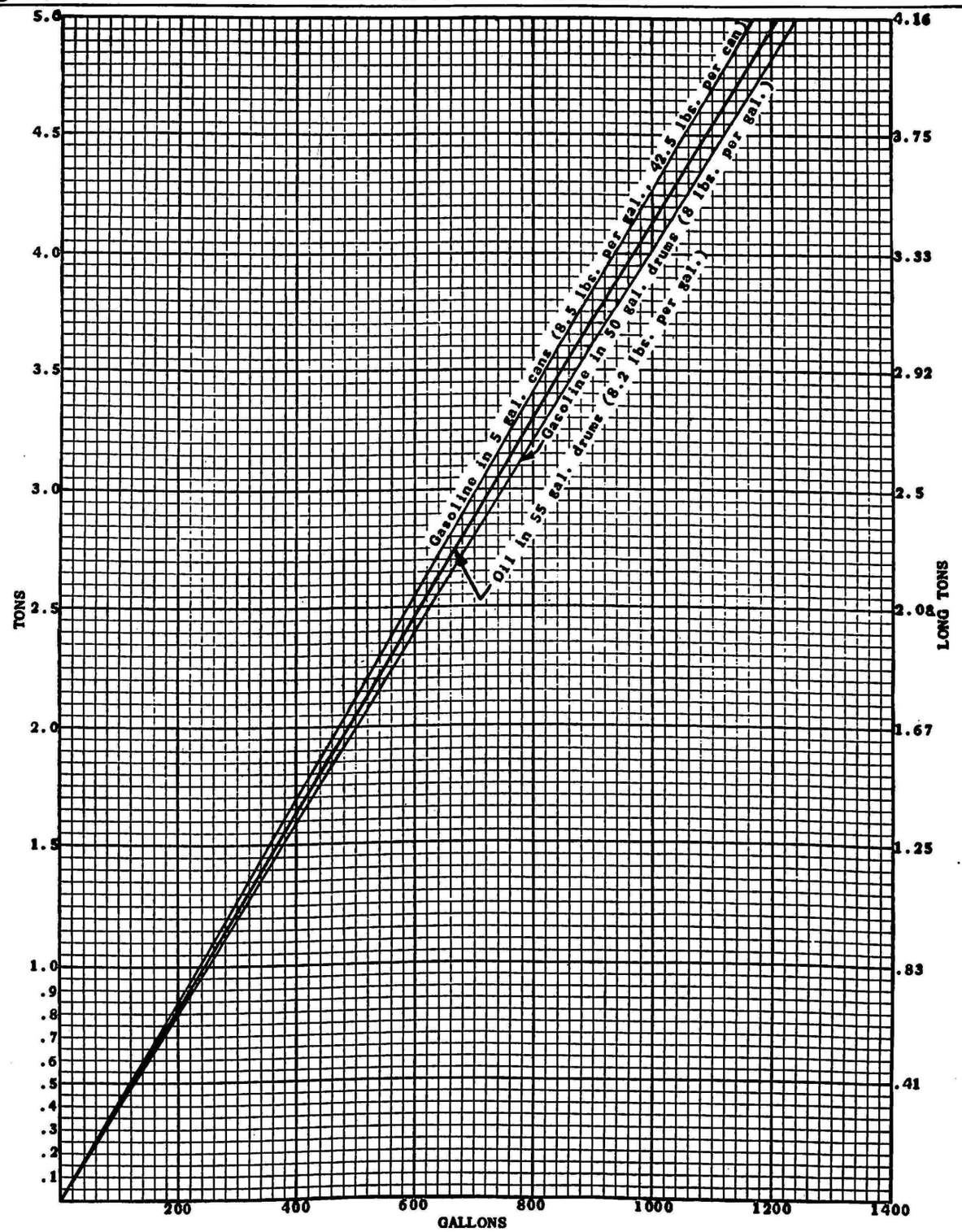

Fig. 13.--Conversion, gallons of fuel and lubricants to tons.

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Fig. 1 REFERENCE DATA AND LOGISTICS

Prescribed Load. Engineer Demolition, Construction, and Miscellaneous Equipment for Shore Company, Engineer Special Brigade.

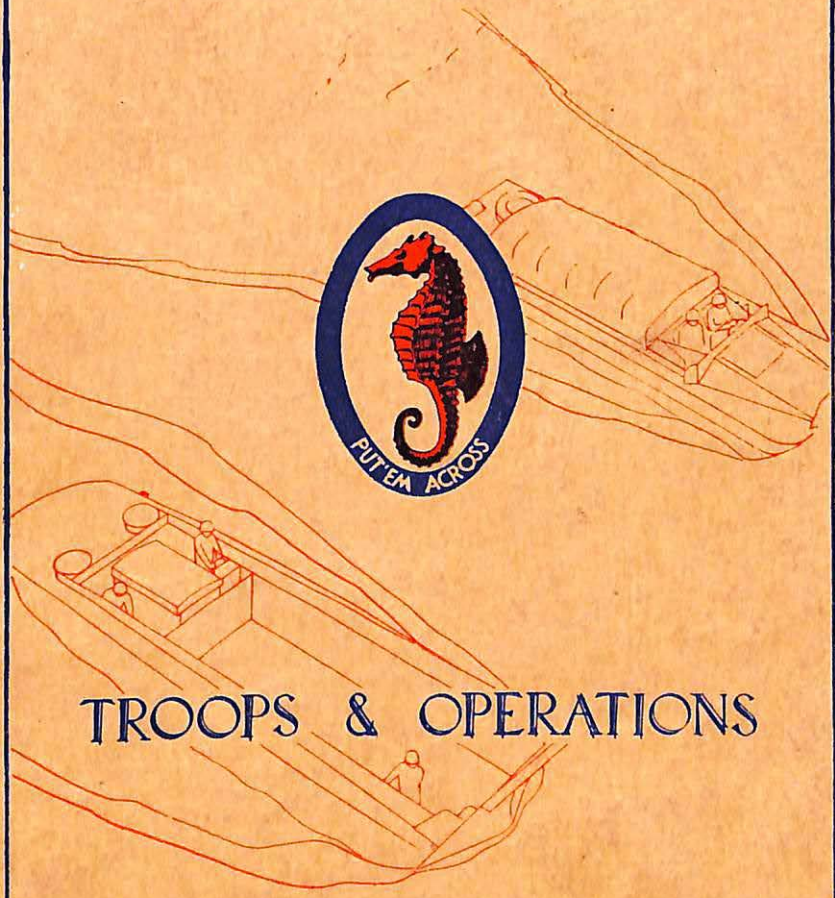
This table is based on one day's operations in an assault on a well-defended hostile shore.

Construction Supplies	No.	Unit Wt. Lbs.	Unit Cu. Ft.	Total Wt. Lbs.	Total Cu. Ft.
Bags, Sand	200	.33	.04	66	8
Nails, Wire, Common, Kegs 8D	2	107	2	214	4
" " " " 10D	2	107	2	214	4
" " " " 20D	1	107	2	107	2
" " " " 40D	1	107	2	107	2
" " " " 60D	1	107	2	107	2
Demolition Supplies*					
Caps, Blasting, Tetryol Non-Electric #8	100	(Bx 50) 1	.021	2	.042
Caps, Blasting, Tetryol Electric #8 W 8" lead	50	(Bx 50) 5	.15	5	.15
Caps, Dummy, Non-Electric	25	.5		.5	
Cord, Prima	500 ft.	12	.2	60	1
Charge, pre-shaped, 8 lb.	10	8	.2	80	2
Grease, Hard (To waterproof charges), lb.	1/4	.25	--	.25	--
Kits, Tetryol (9-2 1/2 lb. charges in belt)	10	22.5	.68	225	7
Lighter Fuses (packed box 10) (Pull Type)	50	.25	.002	1.25	.01
T.N.T. (1/2 lb. blocks 50 lb. cases)	250 lbs. (5 cases)	50	1.5	250	7.5
Miscellaneous Engineer Equipment**					
Ropes for DUKW (500 ft. 9/16", 5/8", 3/4", 13/16", 60 ft. 1/4")	8240 ft.	.6	approx. 40 lbs. cu. ft.	495	12.3
Shackles, 4"	6	.5		3	
Sleds, Beach	4	250	30	1000	80
Total one (1) Shore Co.				2937	132
Total one (1) Shore Bn.				8811	396
Total three (3) Shore Bn.				26433	1188

* Torpedoes included in Class V basic loads.
** Cyclone Fencing included in Special Equipment.

RESTRICTED

ENGINEER AMPHIBIAN TROOPS



TROOPS & OPERATIONS

ENGINEER AMPHIBIAN COMMAND
TENTATIVE TRAINING GUIDE No. 4

Chapter 1

AMPHIBIOUS OPERATIONS

		Paragraphs
Section I.	Fundamentals	1-6
II.	Phases of Shore-to-Shore Operation	7-13

Section I
FUNDAMENTALS

1. Objectives.—In joint operations against hostile shores, every effort will be made to avoid attacking beaches that are extensively organized and fortified for defense. Beaches less favorable from a technical standpoint will usually be chosen in preference to those known to be strongly defended.

2. Surprise.—The element of surprise is of first importance. Every effort will be made to achieve surprise, if not as to the point or points of attack, then at least as to the strength and time of the main effort.

3. Support.—Some or all of the following supporting means should be present in any successful amphibious operation:

a. Naval gunfire to protect flanks and support the landing itself.

b. Local air superiority including dive-bombing and low level bombing and strafing of enemy troops and organized positions and a protective umbrella of fighter planes.

c. Parachute troop landings to seize important or essential localities or structures.

4. Fundamental Concepts.—Fundamental concepts of the employment of amphibian units are:

a. Engineer amphibian troops form part of forces assembled to conduct shore-to-shore operations. They may be used in whole or in part with forces assembled to conduct ship-to-shore operations.

b. In either of these types of operations, the largest engineer amphibian unit present normally is attached to the largest combat unit taking part.

c. Elements of this attached engineer amphibian unit normally are given missions to support corresponding elements of the combat unit.

d. When elements of the combat unit are operating at great distances from the main part of such combat unit, or acting independently, elements of the engineer amphibian unit normally will be attached to the elements of the combat unit with which they operate.

e. After initial landings of combat elements have been completed, the principle duties of engineer amphibian units will be to assist in carrying out the administrative plans of the unit supported or to which attached.

f. Engineer amphibian units must not be regarded as pools of laborers and specialists to be allotted as individuals to various operations, but as organizations made up into working units, each capable of executing a definite type of work.

g. Elements of one Engineer Special Brigade may be attached to another. When such an attachment is made, tactical disposition of the attached troops should preserve the chain of command within the attached unit. When a unit is broken up into its elements for several attachments, the largest element should include the unit commander and his headquarters.

5. Allocation.—Engineer amphibian units are organized and equipped for shore-to-shore operations with units of the combined arms and services as shown in Table I.

This type assignment will be varied as necessary to conform to the plans of the field force commander.

TABLE I

ENGINEER AMPHIBIAN UNIT	Combat unit to which attached or in support
Boat Company and Shore Company with Maintenance and Salvage (Boat control) Section attached	Infantry Battalion Landing Team
Regiment plus Medical Company	Combat elements of regimental combat team (3 battalion landing teams and regimental command group)
As above PLUS naval auxiliary craft	Infantry Regimental Combat Team complete
Brigade	Combat elements of 3 Regimental Combat Teams
Brigade with normal Quartermaster Troop attachment PLUS auxiliary naval craft	Reinforced Infantry Division complete
Two (2) or more brigades, plus special engineer headquarters, PLUS naval auxiliary craft	Corps of two (2) or more divisions.

6. Examples of Employment.—Figures 1, 2, and 3, are schematic diagrams showing how an Engineer Special Brigade might be employed in successive phases of a shore-to-shore operation.

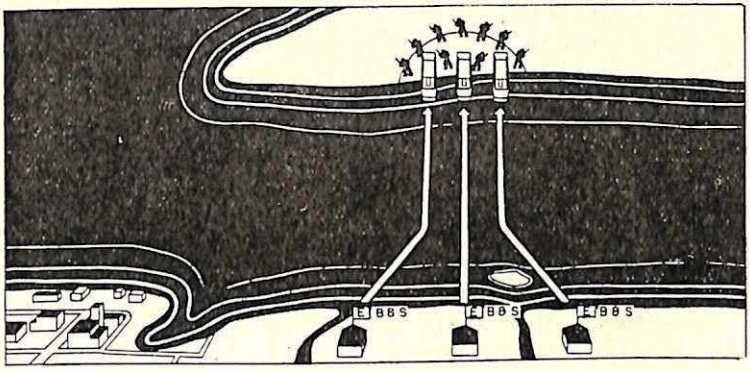


Fig. 1.—First Phase. Three Engineer Boat and Shore Regiments Transport Combat Units to the Enemy Held Shore.

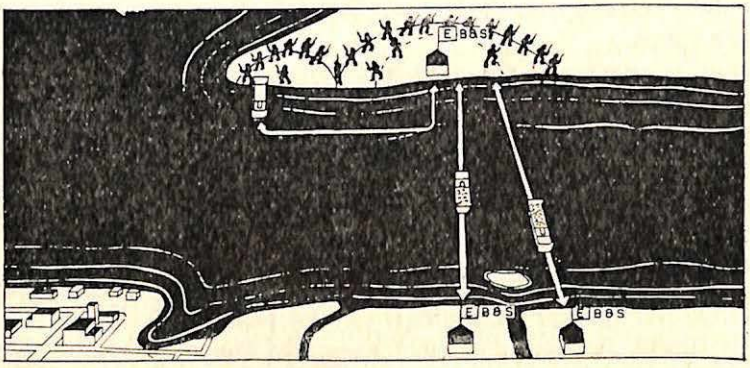


Fig. 2.—Second Phase. One Engineer Boat and Shore Regiment Now Supports One Regimental Combat Team in a Flank Attack to Enlarge the Beachhead. Two Engineer Boat and Shore Regiments Resupply from Near Shore to Far Shore.



Fig. 3.—Third Phase. One Engineer Boat and Shore Regiment Then Transports One Regimental Combat Team by Water to Attack Enemy in Rear. The other Two Engineer Boat and Shore Regiments Have Begun Bringing up Supplies from the Nearest Usable Port, and are Returning Prisoners and Wounded. They have Organized and are Defending the Harbor.

Section II
PHASES OF SHORE-TO-SHORE OPERATION

7. General.—A shore-to-shore (or ship-to-shore) operation includes the following phases:

a. Embarkation including the gathering and loading of landing craft.

b. Crossing to area just beyond effective range of enemy's guns.

c. Landing or the attack in successive waves of landing craft.

d. Beach organization to facilitate its crossing and use in support of the operation.

e. Retraction, re-grouping, and resupply until port facilities are established.

8. Area of Responsibility (Fig. 4).—The Area of Responsibility of engineer amphibian troops extends from the rearmost limits of their dispersal areas on the near shore to include the line of dumps on the far shore. This line of dumps will normally be in the first available cover when supplies must be manhandled, or skidded on sleds across the beach. When adequate truck and/or amphibian truck transportation is available on the far shore, the line of dumps may be established well inland to support the tactical situation. In this case, there is a dual responsibility between the combat and engineer troops for the area between the beach and the dumps.

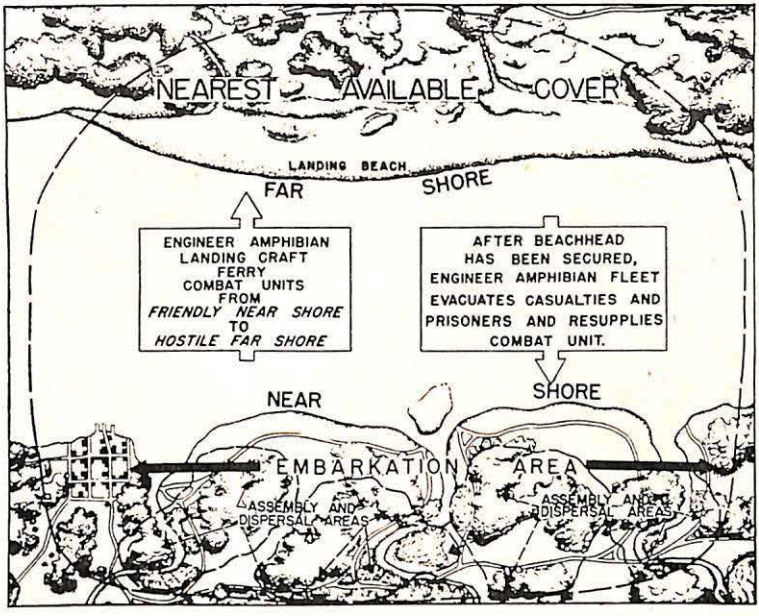


Fig. 4.—Area of Responsibility.

9. Embarkation (Fig. 5).—Within the Embarkation Area engineer amphibian troops and their landing craft are dispersed and concealed; the craft in Dispersal Areas and the troops in Assembly Areas convenient to Embarkation Points. The troops and their equipment to be transported are also concealed in nearby Assembly Areas and dumps.

Landing craft, troops, and supplies move from these areas to the Embarkation Points on a synchronized time schedule designed to begin at the latest possible time in order to deliver the first wave on the enemy beach at H-hour on D-day. There may be one Embarkation Point or several for any particular landing team or combat team. An Embarkation Point may be a beach or dock(s) (existing or improvised) either on the near shore or on a stream or inlet leading thereto. As the landing craft file in to the Embarkation Point, they are loaded quickly, loads are checked, and the laden craft move out.

Since it takes approximately 600 landing craft to transport the combat elements of an infantry division, this embarkation phase will take several hours.

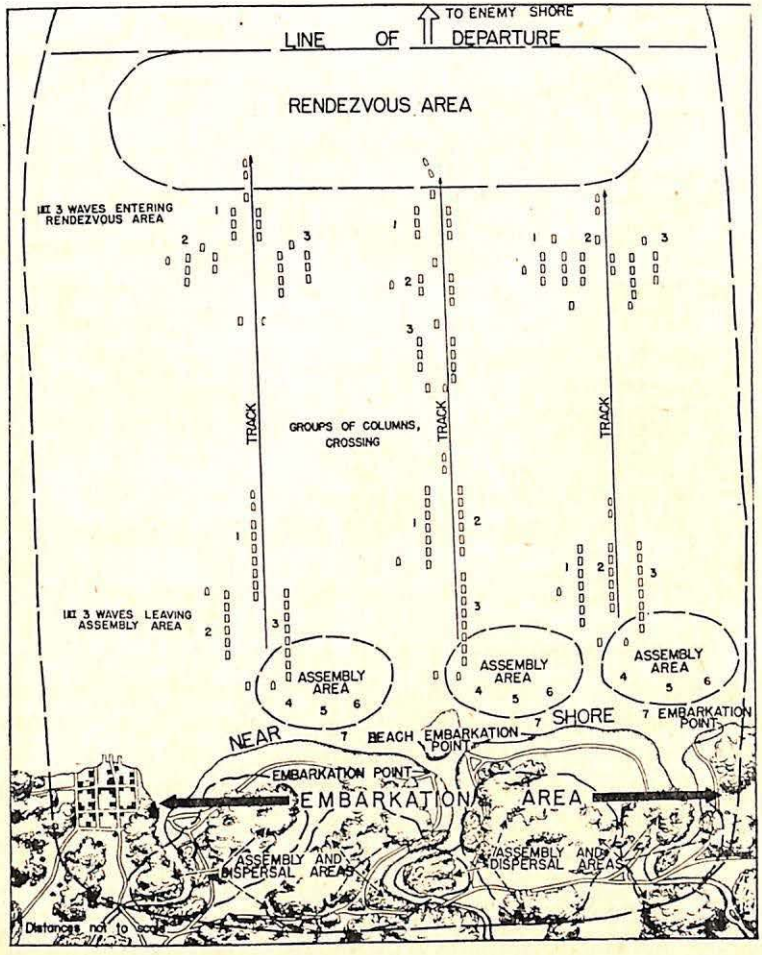


Fig. 6.—The Crossing.

11. Landing (Fig. 7).—The attack is made in waves of landing craft, the composition and loading of which has been prescribed by the battalion landing team commander. For the final run each wave is normally deployed in an open "V" formation (see Chapter XII, Tentative Training Guide No. 2). The craft in each wave are staggered at varying intervals depending on visibility.

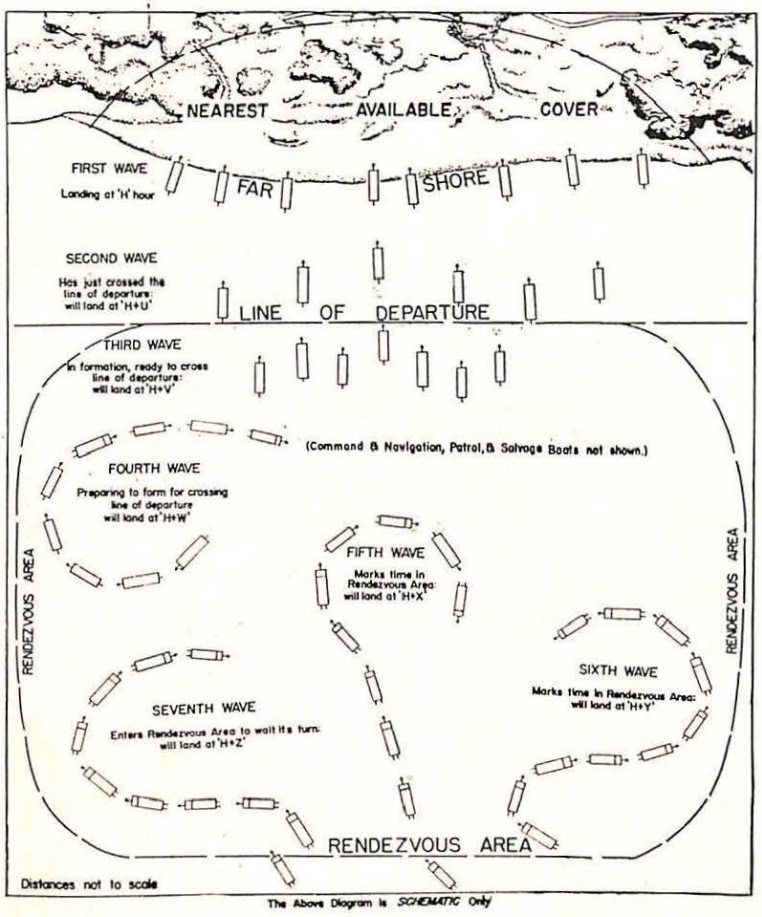


Fig. 7.—The Attack.

12. Beach Organization.—*a. General.*—The landing of engineer shore troops is synchronized with the attack for the purpose of organizing and improving the beach and transporting equipment and supplies inland to the dumps. The Boat Control Section (made up of the Boat Maintenance and Salvage Section) of the Boat Company is usually attached to the Shore Company. Its functions are the control of boats and boat traffic at the beach and salvage operations for boats.

b. First Stage (Fig. 8).—Two men from the Boat Control Section land with the first wave. They immediately set up range markers on the center line of the beach and signal subsequent waves in. Normally, all other troops of the first and second waves are assault troops who clear the enemy beach defenses and proceed inland.

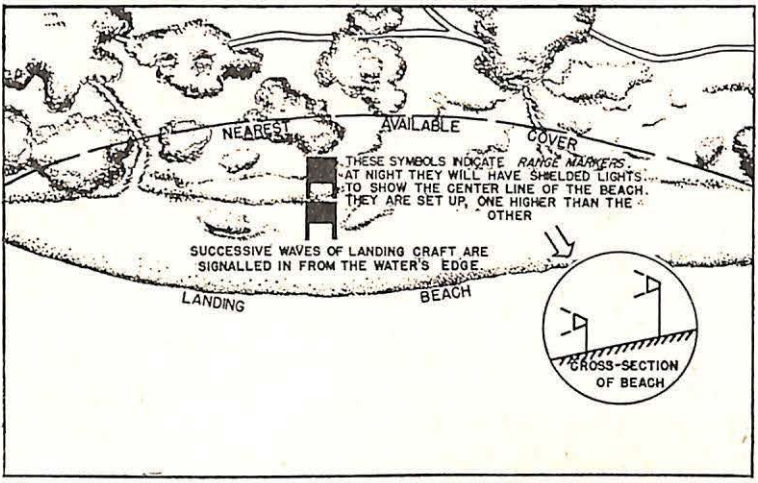


Fig. 8.—First Stage. The First Assault Wave Has Landed.

c. Second Stage (Fig. 9).—(1) The Forward Echelon of Headquarters Platoon of the Shore Company, with attached communications personnel from the Shore Battalion Headquarters Company and with its attached Boat Control Section, lands normally in the third wave.

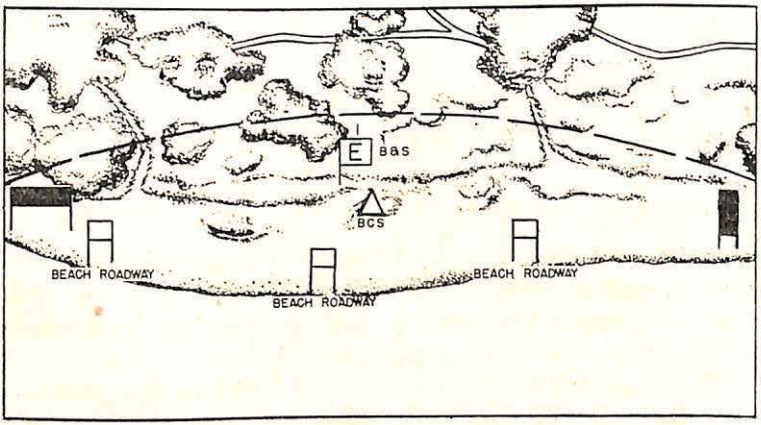


Fig. 9.—Second Stage. The Third Wave Has Landed at H Plus V.

(2) This group performs the following duties:

(a) Marks limits of beach.

(b) Establishes command posts of Shore Company and Boat Control Section.

(c) Sets up message center and establishes and maintains communications and liaison with advancing assault troops initially.

(d) Reconnoiters for and marks sites for beach roads, vehicle unloading points, dumps for supplies, and defensive weapons.

(e) Records units and supplies landed.

(f) Keeps situation map.

d. Third Stage (Fig. 10).—Obstacle removal and gas decontamination teams and road building teams (elements of the Pioneer Platoon), land normally in the fourth and fifth waves and begin work immediately. By the time heavy vehicles arrive, at least two beach exit roads should be ready for use.

The Forward Echelon continues with its duties enumerated in "*c*", above, and in addition selects and marks sites for clearing station, motor pool, and for collecting points for stragglers, prisoners of war, and salvage.

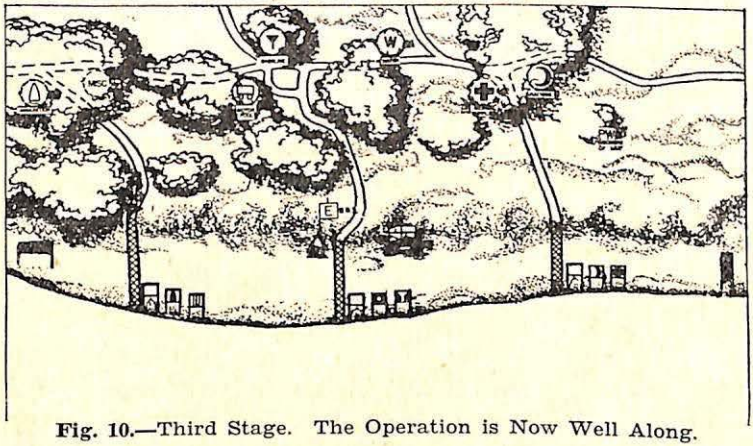


Fig. 10.—Third Stage. The Operation is Now Well Along.

e. Fourth Stage.—The Utility Platoon lands normally in the sixth and seventh waves. Assisted by the shore personnel not otherwise engaged, it unloads supplies from landing craft and places them in appropriate dumps.

The remainder of the Shore Company personnel are landed in subsequent trips as soon as their services can be utilized.

f. Recapitulation (Fig. 11).—The order of landing of the shore personnel for beach organization as set forth above is shown schematically in Fig. 11. It must be remembered that the shore troops for beach organization will cross as directed by the task force commander. For any particular operation, a wholly different order of landing may be expedient.

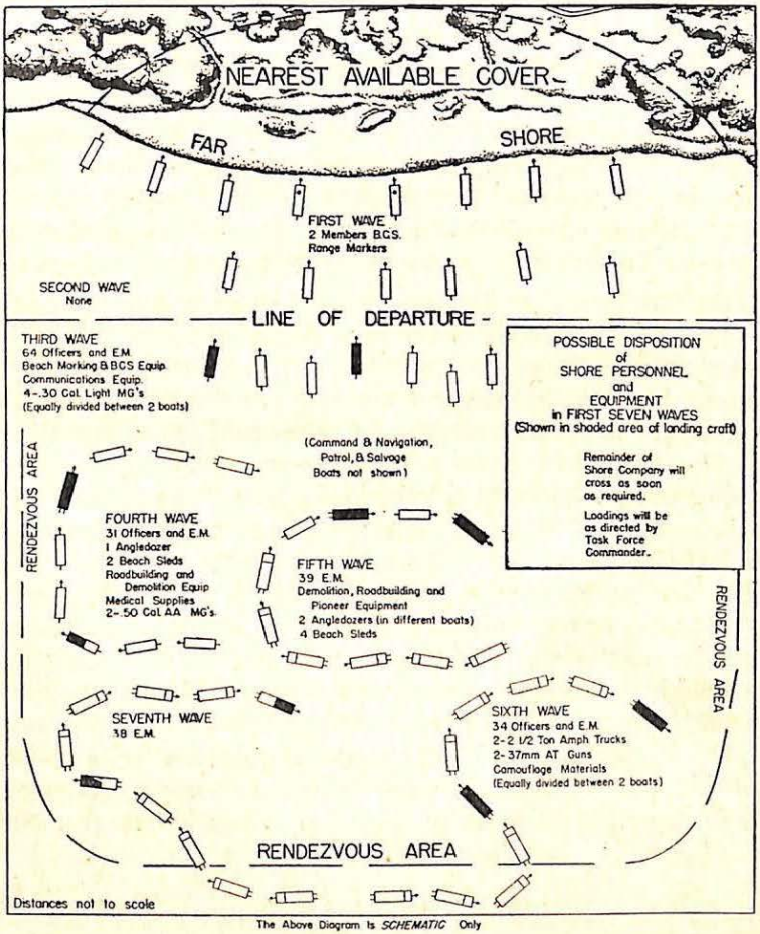


Fig. 11.—The Battalion Landing Team Shore Engineer Personnel Afloat.

13. Retraction, Regrouping, and Resupply.—*a.* Immediately upon landing, all boats must be unloaded and retracted to make room for incoming waves. They must be regrouped for successive trips evacuating wounded and prisoners and returning with reinforcements and supplies.

b. Broached boats must be given immediate attention by boat crews, wave leaders, the Boat Control Section, and shore personnel. Prompt and proper use of landing craft or salvage boat with towlines, use of anchors, and use of angledozers will retract nearly all broached boats.

c. The responsibility of engineer amphibian troops for the beach will continue until adequate port and dockage facilities have been established and the engineer amphibian troops relieved by port operating and other service units brought in for that purpose. This may include the resupply or continued supply over water routes and the operation of water transport and near and far shore facilities for extended periods. However, the early relief of engineer amphibian troops to make them available again for new landings is recommended whenever their further use in their specialty is foreseen.

d. Troops of an Engineer Special Brigade engaged in the resupply phase utilizing beaches or docks on the near and far shores and naval lighters, coasters, or other craft, must be reinforced by Quartermaster truck and service companies and may, as the situation dictates, be reinforced by engineer construction, general service or other types of special units and by combat units from higher headquarters. The duties of the Engineer Special Brigade thus reinforced might include any or all of the following:— operation of existing utilities, water distillation units, trucks, railroads, water transport, ferries, docks, and cargo handling equipment; construction and repair of roads, railroads, docks, piers, warehouses, and other structures. Although not the primary mission of engineer amphibian troops, the probability of having these duties to perform must not be overlooked. Advantage must be taken of any time available, after training for performance of the primary mission is complete, to train in the performance of these duties.

Chapter 2
ENGINEER SPECIAL BRIGADE

		Paragraphs
Section I.	Mission and Employment	14-15
II.	Organization and Functions	16-19
III.	Staff Planning	20-24

Section I
MISSION AND EMPLOYMENT

14. Mission.—*a. General.*—The mission of the Engineer Special Brigade is to embark and transport a reinforced infantry division with its supplies and equipment from a friendly near shore to a hostile far shore; to provide shore facilities and assistance; to evacuate prisoners, wounded, and salvage material from far to near shore; and to continue the operation of water transport and near and far shore facilities for resupply of the division until relieved by higher authority.

b. Near Shore.—On the near shore the brigade supervises the preparation of facilities in the Embarkation Area, furnishes landing craft for the division, and supervises the loading, stowing, and recording of troops, supplies, and equipment into landing craft and vessels.

c. Far Shore.—On the far shore the brigade organizes, controls, and improves the landing area; establishes dumps; facilitates the debarkation and movement inland of troops and of supplies and equipment to these dumps beyond the beach proper; controls landing craft; and evacuates wounded and prisoners. It provides local security of beach areas against observation and attack by hostile air, sea, and ground forces, employing both active and passive measures. (See also Par. 13)

15. Employment.—*a. General.*—Employment of the Engineer Special Brigade will be dictated by the tactical situation. The utmost flexibility is possible and will be practiced in meeting the tactical needs of each operation. These needs will vary so greatly with different situations that an enumeration of the various ways of employing the brigade is impractical. The following examples will suffice to illustrate this flexibility.

b. Concentration of Boat Strength.—An operation may make it advisable to concentrate the entire boat strength of the brigade in one regiment and under the regimental commander. Thus the regiment, reinforced by attached boat units from all other regiments, will be in a position to carry through a landing operation far beyond the capacities of any single regiment.

c. Concentration of Shore Units.—Likewise it may sometimes be advisable to concentrate all shore units of the brigade under the command of one regimental commander for some specific operation beyond the capacities of the regiment acting without such attached units.

d. Combinations of Boat and Shore Strength.—Any variety of combinations of the two examples cited above may be necessary, such as concentration of all of the brigade's boat strength and part of the brigade's shore strength under one regiment and one regimental commander for a specific operation. Or it may be advisable to concentrate all of the shore strength of the brigade and part of the boat strength under one regiment by attaching these units for a specific operation.

e. Attached Units Outside the Brigade.—Again the situation may require reinforcing the brigade by attaching units from outside the brigade to meet the tactical needs of an operation. These may be units from other Engineer Special Brigades, combat troops, engineer construction, special, or general service units, or other units attached by higher headquarters. The brigade in such a situation employs such units as the situation dictates. (See Par. 13)

f. Flexibility of Command.—The command of units or of an entire operation is likewise subject to the same flexibility as the disposition of units. In one case it may be advisable to place the entire operation, including near shore operations afloat, and far shore, under one centralized command. In other circumstances it may be advisable to split responsibility, placing the near shore operations under one commander, the operations afloat under another, and the far shore operations under still a third commander. Again any number of variations of this are possible and will be decided by the tactical problems involved.

Section II
ORGANIZATION AND FUNCTIONS

16. General.—*a.* (Fig. 12)—The Engineer Special Brigade is organized to provide the necessary transportation and shore services for the shore-to-shore movement of a reinforced infantry division, when reinforced by quartermaster service units and by Naval lighter and other cargo carrying craft, its basic operating elements being Boat and Shore engineer Regiments, each of which is organized to furnish shore-to-shore services for one Regimental Combat Team to which it may be attached, or of which it may be in direct support, for a

given operation. One or more of each of the following units are normal attachments during training in the continental United States and where required in theaters of operation:

Quartermaster Truck Company
Quartermaster Service Company
Quartermaster Gasoline Supply Company

b. Normally the Engineer Special Brigade is attached to the division, but it may be placed in direct support. In either case its functions are not materially different.

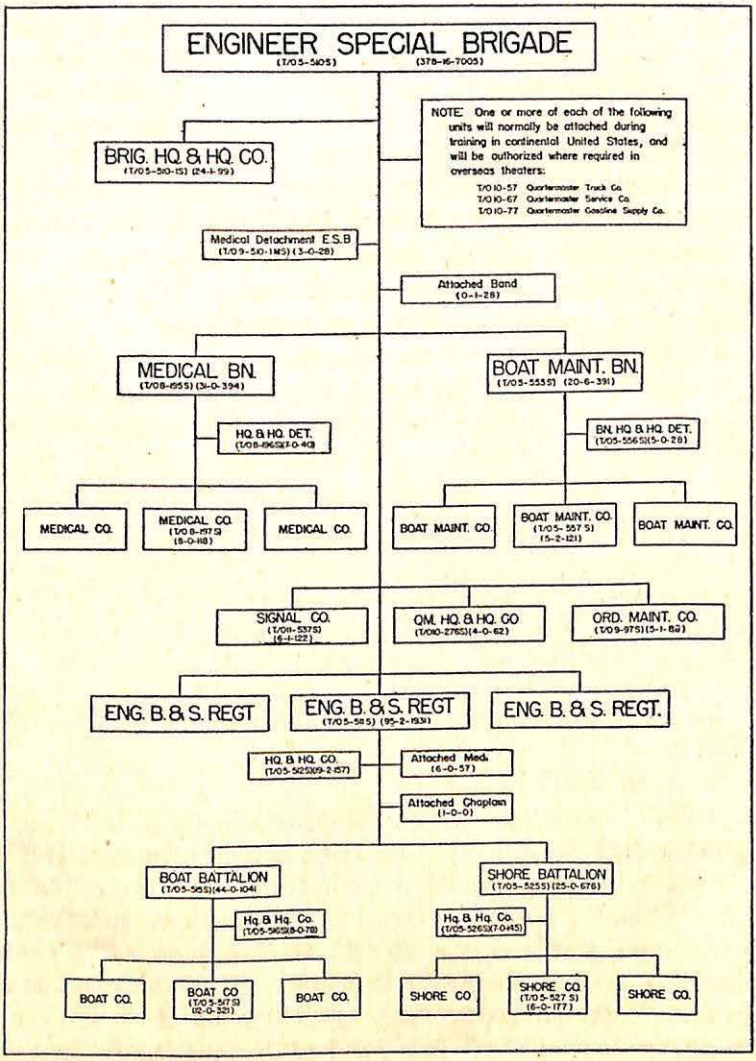


Fig. 12.—Engineer Special Brigade.

17. Brigade Commander.—*a.* The brigade commander is a brigadier general. He must have expert knowledge of the capabilities and technical and tactical employment of the Engineer Special Brigade, and be well versed in the tactics and technique of the combined arms.

b. When the brigade is acting alone, he is responsible for all normal command duties, operations, training, efficiency, discipline, and administration of the brigade in order that it may be prepared for combined operations at all times.

c. When the brigade is attached to the infantry division for amphibious operations, the brigade commander is responsible to the division commander for the functioning and employment of the Special Brigade, and becomes a member of the division commander's staff. As such he acts in an advisory capacity to the division commander, furnishing information and making recommendations for employment of the Engineer Special Brigade for any and all phases of the operation. He must maintain close liaison with the division commander and his staff at all times.

d. When, in exceptional cases, the brigade is placed in direct support of the division, the brigade commander cooperates and advises with the division commander, and complies with all requests for support which are consistent with the mission of the Engineer Special Brigade.

e. The brigade commander must insure full and complete liaison between his brigade and other units that may be operating with, or supporting, the operation. These units, particularly supporting Naval units, must be kept informed as to the movements and plans of the Engineer Special Brigade to insure maximum control, coordination, and cooperation.

18. Brigade Headquarters.—(Fig. 13) For staff functioning see FM 101-5.

a. Unit Staff.

(1) *Executive.*—The executive, a colonel, is the principal assistant to the brigade commander. In general, he performs those duties outlined for the chief of staff in FM 101-5. When the brigade commander goes afloat, an advanced brigade command post is moved to the far shore. The executive will normally remain on the near shore in command of the near shore command post. Through this near shore command post will be issued all orders for the dispatching of supplies and equipment to the far shore.

(2) *Personnel* (S-1)—S-1, a major, supervises the work of the administrative section. He is assisted by a captain (adjutant), a first lieutenant (personnel officer), and a warrant officer (general clerical work). The section normally operates in two groups—the adjutant's group, and the personnel group at the near shore command post.

(3) *Intelligence (S-2).*—S-2, a major, supervises the work of the intelligence section. He is assisted by a first lieutenant, who is reconnaissance and camouflage officer. This section is responsible for the collection, collation, and dissemination of intelligence information for the operations of the Engineer Special Brigade and for the supported division, or higher echelons, as requested. Much information will be received from higher echelons but much more must be obtained by amphibious reconnaissance. There must be close cooperation between this section and the G-2 section of the division. (For discussion of engineer amphibian intelligence see par. 21, and Tentative Training Guide No. 5).

(4) *Operations (S-3).*—S-3, a lieutenant colonel, supervises the work of the operations section. He is assisted by a major and a captain, liaison officer and assistant S-3 respectively. In general the duties of the S-3 are as outlined in FM 101-5. However, his duties are altered somewhat by the fact that the brigade is a logistical agency which necessitates close cooperation and coordination by the S-3 of the brigade with the G-4 section as well as the G-3 section of the division. The assistant S-3 remains at the command post on the near shore and assists the brigade executive in maintaining close liaison with the G-3 and G-4 representatives of the division staff.

The brigade navigation officer works in close coordination with S-3 on all matters of navigation.

The two brigade command and navigation boats with two second lieutenants as boat commanders and the necessary crews are assigned to this section.

(5) *Supply (S-4).*—S-4, a lieutenant colonel, supervises the work of the supply section. He is assisted by a captain who is automotive officer. This section is responsible for the supply of the brigade only—not for the division. During an amphibious operation, it should remain on the near shore. Duties of this section include planning for and supervision of the following:

Procurement, storage, transportation, and distribution of all classes of supplies and equipment for the special brigade.

Location of supply, evacuation, and maintenance facilities for the brigade in coordination with S-3.

Traffic control on the near shore in coordination with S-3.

Maintenance of equipment of the brigade.

Construction, operation, and maintenance of utilities and other facilities relating to supply, shelter, transportation, and hospitalization on the near shore, in coordination with S-1 and S-3.

Evacuation and hospitalization on the near shore, in coordination with S-3.

Near Shore salvage operation.

b. Special Staff.—The following special staff officers have dual functions as unit commanders and as advisors to the brigade commander and his staff on their specialty:

(1) Lieutenant Colonel, Medical Battalion commander, is brigade surgeon.

(2) Lieutenant Colonel, Boat Maintenance Battalion commander, is brigade boat maintenance officer.

(3) Lieutenant Colonel, Signal Company commander, is brigade signal officer.

(4) Lieutenant Colonel, Quartermaster Headquarters and Headquarters Company commander, is brigade quartermaster.

(5) Major, Ordnance Company commander, is brigade ordnance officer.

(a) The following special staff officers are advisors and directors of their services:

(i) Lieutenant Commander, U.S.C. & G.S., brigade navigation officer (in Brigade Headquarters). He makes detailed plans for and advises the brigade commander and S-3 on all matters of navigation. He works in close coordination with S-3 and S-2 on combat and navigational intelligence.

(ii) Major, brigade finance officer.

(iii) Major, brigade inspector general.

(iv) Major, brigade chemical warfare officer.

(v) Major, headquarters commandant and provost marshal (in Brigade Headquarters).

(vi) Major, brigade chaplain.

19. Brigade Headquarters Company (Fig. 13).—This company furnishes quarters, mess, orderly service, and transportation for brigade headquarters personnel.

The brigade special service officer and his enlisted assistants are included in company headquarters.

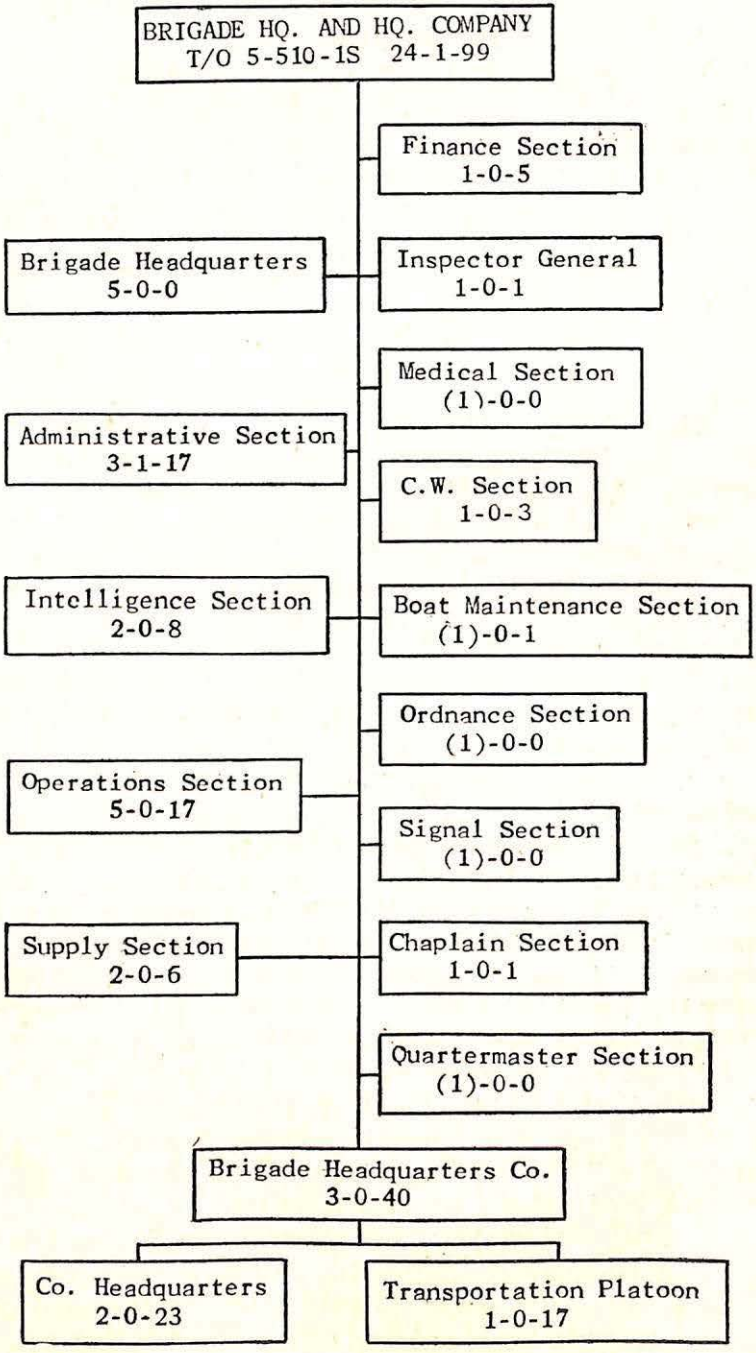


Fig. 13.—Brigade Hq. & Hq. Company.

Section III
STAFF PLANNING

20. General.—After the Engineer Special Brigade is attached to the division for an operation, and the general plan of the division commander for the employment of the division is known to the brigade commander, he assembles and directs each section of his staff to make the requisite plans for the conduct of the operation. Every staff section must cooperate with the appropriate sections of the division staff. These plans include the necessary detail for participation in combined preliminary exercises, for moving the brigade into Embarkation Areas, and for all phases of the actual operation.

21. Intelligence Planning.—*a. General.*—In most operations, general intelligence is developed for the general plan; detailed intelligence is developed for the detailed plans. This procedure cannot be followed in amphibious operations, as there is neither the means, time, nor opportunity for subordinate units to develop their own intelligence. Furthermore, since the general plan may depend to a great extent upon detailed intelligence, it is necessary that detailed intelligence for the entire operation be developed in advance and furnished to all participating units. The greater the opposition expected, the more important it becomes to obtain dependable information. The responsibility for the development of both general and detailed intelligence for an amphibious operation rests with the intelligence agencies of higher command (division, corps, army), who, depending upon the extent of the operation, may call upon any or all of the following agencies for assistance: Military Intelligence Service, Office of Naval Intelligence, A-2 (Army Air Forces), Navy Bureau of Aeronautics, Navy Bureau of Ships, Navy Hydrographic Office, Coast and Geodetic Survey, Army Map Service, Office of Strategic Services, Director of Weather (Army Air Forces), Navy Weather Research Center, and the Beach Erosion Board (Corps of Engineers). In addition these intelligence agencies of higher command gather much valuable information through the use of small boat patrols, patrol demonstrations, air reconnaissance, aerial photography, amphibious scouts, ranger or commando raids, friendly agents, and existing maps, charts, and photographs. (See Pars. 123-132 FM 31-5)

b. Brigade Responsibility.—The brigade must be prepared at all times to secure or assist in securing intelligence, both for itself, and for the division and higher units. The bri-

gade may be called upon to furnish facilities including boats and crews for boat patrols, for patrol demonstrations, or for placing scouts, rangers, or agents ashore. It may be given a mission of securing specific information on the far shore, in which case it must furnish all necessary boats, crews, and reconnaissance personnel. The brigade must be prepared to secure by actual reconnaissance its essential hydrographic information, information regarding landing beaches, and information regarding Embarkation Areas. For details of organization for, and methods of, securing this information see Tentative Training Guide No. 5.

22. Operation Planning.—Plans for operations must include recommendations for organization and development of Embarkation Areas and embarkation facilities within those areas, and also recommendations for the use of shore units, if not otherwise engaged, in the development of these areas. Recommendations are also made for the use of combat engineers and service troops, if needed, in the development of embarkation areas. General plans are made for loading and stowing of supplies and equipment on the near shore, and recommendations are made as to the number of service or other troops necessary to assist in this work. Navigational plans are worked out and submitted by the navigation officer for the S-3's approval. General plans are prepared and recommendations made for the allotment of personnel and boats and other types of equipment. General plans are prepared for operation on the far shore, the organization and control of beaches and landing areas, the unloading and handling of supplies and equipment, evacuation, beach defense, and the reorganization of shore elements of the brigade when the resupply phase of the operation is reached.

23. Administrative Plan for Brigade Only.—The S-4 section of the staff prepares administrative plans for the brigade proper, to include all classes of supply for elements on the near shore, for elements afloat, and for elements on the far shore. Such administrative plans are concerned with problems of procurement and transportation to Embarkation Areas for near shore elements of the brigade, and to the far shore for far shore elements. In coordination with S-3, plans are made for the location of supply, evacuation, and maintenance facilities, and for the construction, operation, and maintenance of utilities and other supply facilities on the near shore. Plans for evacuation and hospitalization on the near shore are pre-

by the Engineer Special Brigade in the operation, and it informs the major tactical units and the arms and services of those features of the engineer plan necessary for the teamplay of the whole command. It is prepared by the Engineer Special Brigade commander and his staff.

(2) The brigade order must be complete. It must include within itself and the annexes thereto, all information and instructions to the elements of the brigade. It will be prepared in the same five paragraph form that all field orders follow. (FM 101-5) Some details of specific interest to engineer special units that are included in the brigade order are:

(a) Paragraph 1, *(a)* will give the enemy situation only in so much detail as is of interest to elements of the brigade, such as enemy strength, enemy installations on shore, and location of air and naval units that may menace the landing. Paragraph 1, *(b)* gives information of friendly troops that are of interest to elements of the brigade.

(b) Paragraph 2 will contain the general plan of operation of the brigade in accordance with the mission that has been assigned in the division order, together with certain details of general application. For example, "6th Engineer Special Brigade, reinforced, supported by naval units, will transport and supply the 36th Infantry Division, reinforced, from the Boston—Cape Cod Area to Martha's Vineyard Island, until adequate port facilities are secured." In addition, details of general application must also be included in this paragraph. These are, first a Boat Allotment Table, second a Track Chart, third a Boat Movement Table, and fourth an announcement of D-day and H-hour. The first three of these are referred to in paragraph 2 as annexes. (See Appendix II)

(c) Paragraph 3 contains detailed instructions for each element of the brigade and units under its control. The major elements of the brigade, the three Boat and Shore Regiments, normally are placed in direct support of regimental combat teams. This support is directed in this paragraph of the brigade field order. Since the mission of the Engineer Special Brigade embraces the three-fold duties of water transportation, supply, and evacuation for a division, many administrative instructions of the division become operational instructions for the brigade, so certain of these will be included in paragraph 3 of the brigade order. In order not to make this paragraph too verbose, however, the administrative annex to the division field order will be referred to when applicable;

therefore, the division administrative order must be distributed with the brigade order to the elements of the brigade.

(d) Paragraph 4 follows the form of an administrative order and contains instructions for the supply and evacuation of the brigade only. It is based on the instructions contained in the division administrative order that apply to the brigade. These instructions may be issued as an administrative annex to the brigade order.

(e) For example of the contents of paragraph 5 of the brigade field order see Appendix II.

f. Operational Orders and Annexes.—Field orders for amphibious operations include several annexes in the form of charts, tables, diagrams, and schedules to supply the necessary detailed and coordinating data. Some of these may be prepared by the combat unit or by the combat unit in conjunction with the engineer unit, but most of them will be prepared by the various echelons of the Engineer Special Brigade (see pars. 42 and 43, T.T.G. No. 1). In any case the following are generally necessary for amphibian operations:

(1) *Boat Allotment Table:* Number and type of boats to be alloted to the units to be transported, and, if applicable, when boats are to be assembled.

(2) *Boat Assignment Table:* Loading (men and equipment) for each boat.

(3) *Embarkation and Debarkation Table:* Schedule of loading and unloading: giving unit to be transported, boat unit transporting, Embarkation Point and time of loading, and debarkation beach and time of unloading.

(4) *Assembly Chart and Table:* Designation of *(a)* Dispersal Areas, *(b)* Embarkation Points, and *(c)* Assembly Areas, and track and schedule of boat movements from one to the other.

(5) *Track Chart:* Plotted course from Assembly Area to far shore and return.

(6) *Boat Movement Table:* Complete time table of whole crossing from Assembly Area to far shore.

(7) *Landing Diagram and Schedule:* Formation into waves, time between waves, and spacing between boats in waves.

(8) *Approach Chart:* Track through hazards to navigation from Line of Departure to beach—issued only when required.

Assembly Chart and Table may be combined with the Track Chart and Boat Movement Table when desirable.

FOREWORD

This guide is published as an aid to training engineer amphibian units. It has been rapidly compiled to meet an urgent need for such a document and unit commanders are invited to criticize and to suggest additions, deletions, changes in emphasis, etc., for incorporation in later editions.

It amplifies the mission, functions, organization, employment and training of engineer amphibian troops as contained in Tentative Training Guide No. 1 with which the student of this guide should be familiar. For reference and logistical data, see Tentative Training Guide No. 6; for Intelligence, Navigation and Communications details see Tentative Training Guide No. 5; and for details of Operation on the Far Shore see Tentative Training Guide No. 7—all to be published.

Changes in personnel and equipment may be made by Tables of Organization and Tables of Equipment published subsequent to this guide. These changes should not be construed as altering the tactical doctrine contained herein if the unit retains its fundamental composition and equipment as shown.

Daniel Noce

DANIEL NOCE
Brigadier General, U. S. A.
Commanding.

Engineer Amphibian Command,
Camp Edwards, Massachusetts,
May, 1943.

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SYMBOLS USED IN THIS GUIDE

Ammunition Landing Point, Day Marker --------

Beach Center Marker (from seaward) ----------

Beach Center Marker (from seaward) when beach number is duplicated ----------

Beach Limit, Day Marker, Left Flank (from seaward) ----------

Beach Limit, Day Marker, Right Flank (from seaward) ----------

Beach Limit, Day Marker, Left Flank (from seaward) when beach number is duplicated ------

Beach Limit, Day Marker, Right Flank (from seaward) when beach number is duplicated ------

Beach Roadway, Day Marker (placed to right of the right edge of roadway) ----------

Gasoline and Water Landing Point, Day Marker ---

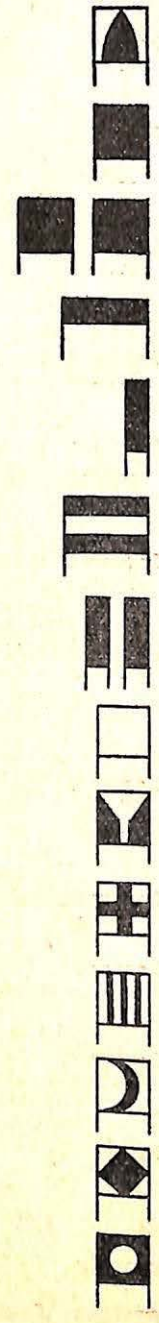
Medical Supplies (landed) or casualties (evacuated), Day Marker ----------

Miscellaneous Supplies Landing Point, Day Marker

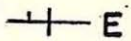
Rations Landing Point, Day Marker ----------

Tracked Vehicles Landing Point, Day Marker ----

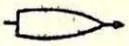
Water Landing Point, Day Marker ----------

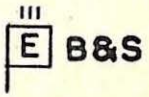


SYMBOLS USED IN THIS GUIDE

Aid (Clearing) Station (Company) ---------- 

Boat Control Section ---------- 

Command & Navigation, or Patrol, Boat ---------- 

Command Post (E.B.&S.Regt) ---------- 

Distributing Points:

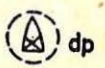
Artillery Ammunition ---------- 

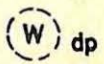
Gas and Oil ---------- 

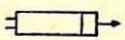
Medical Supplies ---------- 

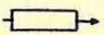
Miscellaneous Supplies ---------- 

Rations ---------- 

Small Arms Ammunition ---------- 

Water ---------- 

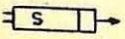
LCM(3) 50′ ---------- 

LCVP 36′ ---------- 

Motor Pool ---------- 

Observation Post, Engineer ---------- 

Prisoners of War ---------- PW

Salvage Boat, LCM(3) ---------- 

Visual Signal Post ---------- 

The highest unit preparing an annex which will be included in orders of lower units should prepare sufficient copies of such annexes and distribute them to the lower units for inclusion in their orders. These may include any or all of the tables and charts above but will always include the Boat Allotment Table, Track Chart, Assembly Chart, and Boat Movement Table.

Chapter 3

ENGINEER BOAT AND SHORE REGIMENT

		Paragraphs
Section I.	Mission and Employment	25-26
II.	Organization and Functions	27-32
III.	Employment	33-39

Section I

MISSION AND EMPLOYMENT

25. Mission.—The mission of the Engineer Boat and Shore Regiment in support of or attached to a regimental combat team is to embark and transport the regimental combat team with its supplies and equipment from a friendly near shore to a hostile far shore; to establish dumps; to facilitate the movement inland of the combat elements of the regimental combat team with their equipment; to evacuate prisoners, wounded and salvage material from the far shore; and to continue the operation of water transport and near and far shore facilities for resupply of the regimental combat team until relieved by higher authority. Its mission is identical with that of the brigade as given in paragraph 14 except that the regiment operates with the regimental combat team while the brigade operates with the reinforced division.

26. Employment.—As with the Engineer Special Brigade, the employment of the regiment will be dictated by the tactical situation. (See Par. 15). Here also the utmost flexibility is necessary and will be utilized in meeting the needs of each operation. The same principles will govern the regimental commander in the employment of his regiment as governs the brigade commander in the employment of his brigade, the main difference being that the regimental commander is concerned with the employment of battalions and companies, while the brigade commander may be concerned with the employment of larger units. The same basic principles of flexibility both of units and command hold true and will be utilized to the utmost in solving tactical problems.

The regimental commander may find himself in command of all operations afloat, on the near shore, or on the far shore, with or without attachments or detachments.

Section III
ORGANIZATION AND FUNCTIONS

27. General.—(Fig. 14). The Engineer Boat and Shore Regiment is one of the three operating elements of the Engineer Special Brigade. It is the smallest unit of the brigade which is complete in itself, for it combines elements for both boat and shore functions. It is organized, when reinforced by the Medical Company and by Quartermaster service units and auxiliary naval craft, to provide the necessary transportation and shore services for an infantry regimental combat team.

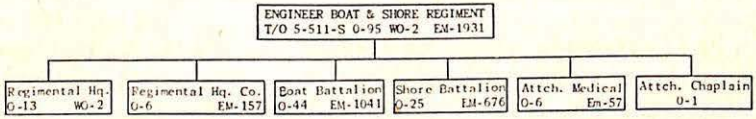


Fig. 14.—Engineer Boat & Shore Regiment.

28. Regimental Commander.—*a.* The commander of the Engineer Boat and Shore Regiment is a colonel. When the regiment is not operating with a tactical organization, he is responsible for all normal command duties, training, efficiency, discipline, and administration of his organization. He must insure that his organization is prepared for amphibious operations at all times. For qualities of leadership, see FM 101-5.

b. When the Boat and Shore Regiment is in direct support of a regimental combat team, the regimental commander cooperates with the infantry regimental commander, and complies with all requests for support which are consistent with orders which he has received from the Special Brigade commander. In addition, he acts in an advisory capacity to the regimental combat team commander regarding technical matters concerning the employment of the Boat and Shore Regiment in the operation.

c. When the Boat and Shore Regiment is attached to the regimental combat team, the regimental commander becomes a member of the regimental combat team commander's staff, advising him on technical matters regarding the employment of the Boat and Shore Regiment and taking his orders direct from the regimental combat team commander.

29. Regimental Headquarters (Fig. 15)—*a.* Regimental Headquarters consists of the regimental commander, his executive, and his staff. For staff functioning see FM 101-5.

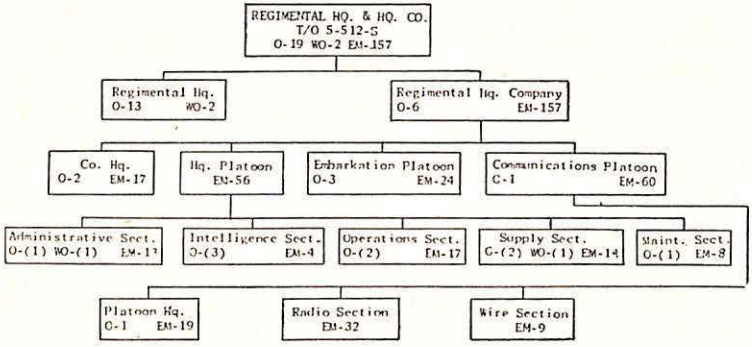


Fig. 15.—Regimental Hq. & Hq. Company.

b. Executive. The regimental executive, a lieutenant colonel, is the principal assistant to the regimental commander. In general he performs those duties outlined for the chief of staff in FM 101-5. When the regimental commander is afloat or on the far shore, the executive remains in charge of the near shore command post, and through this rear command post will be issued all orders for the dispatching of supplies and equipment to the far shore.

c. Adjutant (S-1).—S-1, a captain, supervises the work of the administrative section. His assistant adjutant is a warrant officer. The administrative section normally operates in two groups—the adjutant's group and the personnel group at the near shore command post.

d. Intelligence (S-2).—S-2, a captain, supervises the work of the intelligence section. He is assisted by one first lieutenant, camouflage officer. This section is concerned with the collection, collation, and dissemination of intelligence information for the operations of the Engineer Boat and Shore Regiment, and for higher echelons as requested. Much of this information will be received from higher echelons but much more must be secured by amphibious reconnaissance. There must be close cooperation between this section and the S-2 section of the regimental combat team.

e. Operations (S-3).—S-3, a major, supervises the work of the operations section. He is assisted by a first lieutenant, assistant operations officer, and a second lieutenant, boat commander. In general, the duties of the S-3 are as outlined in FM 101-5. Since the Boat and Shore Regiment, however, is a logistical agency, it is necessary that close cooperation and coordination be maintained by the S-3 with the S-4 section of the regimental combat team as well as the S-3 section of that

organization. The assistant operations officer remains at the near shore command post and assists the regimental executive in maintaining close liaison with the S-3 and S-4 representatives of the infantry regimental staff. There are assigned to this section two command and navigation boats with the necessary crews.

f. Supply (S-4).—S-4, a major, supervises the work of the supply section. He is assisted by one second lieutenant, who is assistant supply officer and transportation officer, and one warrant officer, who is assistant supply officer. This section is responsible for the supply of the Boat and Shore Regiment itself. During an amphibious operation it should remain on the near shore in close liaison with the near shore command post. In general the duties of this section parallel those of the S-4 section of the Engineer Special Brigade (See par 18*a*).

g. Navigation Officer.—The regimental navigation officer, a lieutenant, senior grade, U.S.C. & G.S., makes detailed plans for, and advises the S-3 and the regimental commander on, all matters of navigation. He must work closely with both S-2 and S-3, inasmuch as their activities are closely related and interdependent. The navigation officer, for example, will often engage in reconnaissance work to get information vital to him in planning his navigation. This information may also be valuable to the S-3 section in planning the entire operation, or to S-2 in piecing together as complete and accurate a picture of the situation as possible. The services of the regimental navigation officer will be utilized to the greatest extent in conducting amphibious reconnaissance.

h. Special Services Officer.—The special services officer is a captain.

30. Regimental Headquarters Company (Fig. 15).—*a.* In general this company performs the duties usually performed by headquarters companies, thus providing the means for carrying out by the Regimental Headquarters its functions of command, control, and administration. It furnishes quarters, mess, and transportation services for regimental headquarters.

b. Headquarters Platoon is divided into Administrative, Intelligence, Operations, Supply, and Maintenance Sections. The first four sections supply enlisted assistants, including chauffeurs and boat operators, to appropriate sections of regimental headquarters. The Maintenance Section performs second echelon maintenance for the motor vehicles of the regiment.

c. Communications Platoon is composed of a platoon headquarters, a radio section, and a wire section. It furnishes the facilities for establishing and maintaining radio and wire communication by the Regimental Headquarters in accordance with the signal plan (see par 98, and Tentative Training Guide No. 5).

d. Embarkation Platoon is responsible for the control of embarkation on the near shore in accordance with the prepared plans of the regimental combat team. The platoon may be divided into three groups, each group with a captain, embarkation control officer, and each group charged with supervising loading and stowing of personnel, supplies, and equipment onto landing craft or other vessels at a given Embarkation Point. Thus the Embarkation Platoon is capable of supervising initial and resupply embarkation from three separate Embarkation Points. The actual loading is performed by service or other troops.

31. Attached Medicals (Fig. 14).—The Regimental Headquarters Section of the Medical Detachment operates with the Regimental Headquarters and in addition furnishes replacements for the remaining sections. The Shore Battalion is so organized that it can attach one officer and nine enlisted men to each of the two shore companies which support assault battalion landing teams. They will establish an aid station on the far shore in the Shore Company area. If three assault battalion landing teams are landed simultaneously, a third shore Medical Detachment must be formed by taking men from the Regimental Headquarters and Shore Battalion Sections. The Boat Battalion Section is divided among the boats of the three Boat Companies to perform first aid services for personnel injured in the boats. (See par 105*c*.).

32. Attached Chaplain (Fig. 14).—The regimental chaplain is a captain.

Section III
EMPLOYMENT

33. General.—Normally, the Engineer Boat and Shore Regiment is in direct support of a regimental combat team, although when the regimental combat team is assigned an independent mission or a mission widely separated from other elements of the division of which it is a part, the Boat and Shore Regiment may be attached to the regimental combat team.

34. Regimental Commander.—Whether the Boat and Shore Regiment is attached to or in support of a regimental combat team, the regimental commander must act as technical adviser to the regimental combat team commander concerning the employment of elements of the Boat and Shore Regiment. Some of the matters regarding which he must be prepared to give technical advice are as follows:

a. The number and type of landing craft and other vessels available for transporting the regimental combat team, and the capabilities of these craft, including boat space available, speed, and other matters.

b. The selection of Embarkation Areas and the steps which must be taken for preparation of Embarkation Areas, including assistance which will be required from service or other troops.

c. Navigational matters including selection of proper landing beaches.

d. Loading, stowing, and unloading troops, supplies, and equipment.

e. Selection of sites for conducting combined training.

35. Near Shore Activities of Boat and Shore Regiment.—*a. Combined Preparatory Exercises.*—Prior to the actual operation, the regiment must be prepared to engage in combined preparatory exercises with its regimental combat team. Sites must be selected for this training which present conditions similar to those anticipated for the actual operation. During this preparatory training many mutual problems of the Boat and Shore Regiment and the regimental combat team may be worked out.

b. Preparation of Embarkation Areas.—The Boat and Shore Regiment is responsible for supervising the preparation of Embarkation Areas. Much of the actual labor involved in this activity will be done by shore units of the Boat and Shore Regiment. However, they will usually be assisted by general engineer units, particularly where construction and repair of piers, wharfs, bridges, and other facilities are necessary, and large labor details are needed. Suitable preparation of Embarkation Areas may include building and improvement of roads, bridges, piers, and wharfs; selection and camouflaging of dump sites; improvement of channels and other water approaches; and selection and preparation of beach roadways. This entire work must not be left to shore engineers, who for the most part will be engaged at such times in combined preparatory exercises.

c. Loading.—Loading of troops, equipment, and supplies on the near shore will be supervised, but not actually performed, by the Boat and Shore Regimental Embarkation Platoon. Loading during the initial embarkation phase, that period when all craft are combat unit loaded, is performed by the troops being embarked. Loading during the resupply phase is performed by service troops under the supervision of the Boat and Shore Regimental Embarkation Platoon and its three embarkation control officers. The personnel of the Embarkation Platoon should be highly trained in the loading, stowing, and checking of supplies and equipment into large landing craft and the larger commercial type vessels, which will be employed during the resupply phase of the operation.

36. Activity of Boat Elements.—The boat elements of regiment are responsible for effecting the water transportation of the regimental combat team and the materials and equipment to resupply that organization until adequate port facilities have been secured or until relieved by higher authority.

37. Far Shore Activities.—*a.* On the far shore the Boat and Shore Regiment is charged with:

(1) Organization and preparation of landing beaches, including the marking of beaches, building of roads, selection and preparation of supply dumps, removal of obstacles, and decontamination of gassed areas.

(2) Unloading of supplies and equipment.

(3) Safeguarding and evacuation of prisoners and evacuation of wounded.

(4) Defense of landing areas.

(5) Providing for communication in accordance with the signal plan.

b. Normally, shore units of the Boat and Shore Regiment are charged with the responsibility of unloading and handling supplies and equipment only until adequate port facilities have been seized and prepared on the far shore, at which time specially trained port units should take over port operation. They may be called upon, however, to prepare facilities and to perform all or a part of port operating functions. Such duties should not be assigned if the services of these units are needed for other primary amphibian duties. (See par. 13).

38. General.—Staff planning for the Engineer Boat and Shore Regiment, operating with a regimental combat team, parallels that for the Engineer Special Brigade operating with

the reinforced infantry division. When the Boat and Shore Regiment is attached to the regimental combat team for an operation, the general plan of the regimental combat team commander for the employment of the regiment will be known to the Boat and Shore Regimental commander. As with the Special Brigade, every staff section of the Boat and Shore Regiment must cooperate with the appropriate sections of the infantry regimental staff. These plans must include the necessary detail for participation in combined preliminary exercises, plans for moving the regiment into the Embarkation Area, and preparation for all phases of the operation. Inasmuch as there is no basic difference in staff planning for the Boat and Shore Regiment and for the brigade as covered in paragraphs 20-23, these instructions will not be repeated here.

39. Combat Orders.—*a.* For preparation of combat orders generally see FM 101-5; for preparation of Engineer Special Brigade order see paragraph 24; and for sample Engineer Boat and Shore Regimental order, see Appendix II.

b. General.—The preparation of combat orders for the Engineer Boat and Shore Regiment parallels the preparation of orders for the brigade. The following are prepared:— (1) the sub-paragraph of paragraph 3 of the regimental combat team order (see par. 24, *c.*), (2) those sub-paragraphs of the administrative order of the regimental combat team that include instructions for the regiment (see par. 24, *d.*), and (3) the Boat and Shore Regimental annex to the regimental combat team field order (explained below).

c. Boat and Shore Regimental Order.—(1) See paragraph 24 for general considerations and contents of paragraph 1 of the regimental order.

(2) Paragraph 2 will contain the general plan of operation of the regiment in accordance with the mission that has been assigned it in the brigade order, together with certain details of general application. These details of general application which must be included are Boat Allotment Table, Assembly Chart and Table, Track Chart, Boat Movement Table, Embarkation and Debarkation Table, and announcement of D-day and H-hour. The first five of these are referred to in separate sub-paragraphs of paragraph 2 as annexes. (See Appendix, and also paragraphs 42 and 43, Tentative Training Guide No. 1).

(3) Paragraph 3 contains detailed instructions for each element of the regiment and elements under its control. Since the Boat and Shore Regiment and its two major ele-

ments, the Boat and Shore Battalion, are of the same echelon, this paragraph may include detailed instructions to the companies of the Boat and Shore Battalions as well as instructions for the battalions as a whole. On the other hand, the regimental order may give, in this paragraph, instructions to the battalions as a whole, and leave the matter of detailed instructions for the companies to their respective battalion orders. If detailed instructions are given to the companies, these would include orders placing the various Boat and Shore Companies in support of or attached to respective battalion landing teams. Since the mission of the Engineer Boat and Shore Regiment embraces the three-fold duties of water transportation, supply, and evacuation for a regimental combat team, many administrative instructions of the regimental combat team become operational instructions for the Boat and Shore Regiment, so certain of these will be included in paragraph 3 of the Boat and Shore Regimental order. In order not to make this paragraph too cumbersome, however, the administrative annex to the regimental combat team field order will, to avoid repetition, be referred to when applicable; therefore the regimental combat team administrative order must be distributed with the Boat and Shore Regimental order to the elements of the Boat and Shore regiment.

(4) Paragraph 4.—See par. 24, *e* (2) *(d)*.

(5) For example of the contents of paragraph 5 of the Boat and Shore Regimental field order see Appendix II.

Chapter 4

ENGINEER BOAT BATTALION

		Paragraphs
Section I.	Mission	40
II.	Organization and Functions	41-44
III.	Employment	45-47
IV.	Staff Planning	48-49

Section I

MISSION

40. Mission.—The mission of the Engineer Boat Battalion of the Engineer Boat and Shore Regiment is to transport a regimental combat team with its supplies and equipment from a friendly near shore to a hostile far shore and to continue the operation of water transport for resupply of the regimental combat team until relieved.

Section II

ORGANIZATION AND FUNCTIONS

41. General.—*a.* (Fig. 16) The Engineer Boat Battalion is organized and equipped to provide the necessary boat services for the shore to shore movement of the combat elements (3 battalion landing teams and regimental command group) of a regimental combat team. To transport a complete regimental combat team, and for resupply, the Boat Battalion must be reinforced with Naval lighter and other cargo carrying craft.

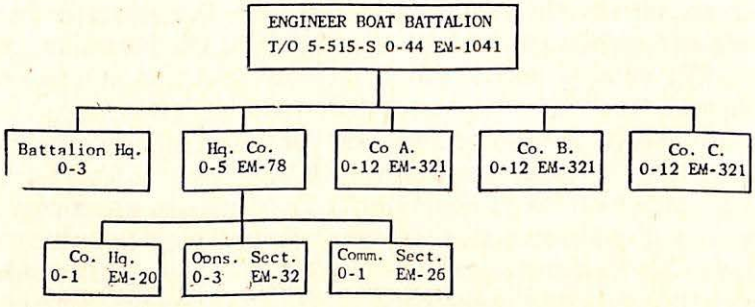


Fig. 16.—Engineer Boat Battalion.

42. Battalion Commander.—*a.* The Boat Battalion commander is a lieutenant colonel. He must have a thorough knowledge of amphibious tactics and sufficient navigational and boat operating experience to direct the battalion under combat conditions.

b. The Boat Battalion being part of the Boat and Shore Regiment, the battalion commander is responsible for the employment of his battalion to the regimental commander. He is also technical adviser to the regimental commander concerning the employment and capabilities of his battalion. He may expect to be called on for recommendations in all situations.

43. Battalion Headquarters. (Fig. 16).—*a.* Battalion Headquarters consists of the battalion commander and his staff, composed of an executive officer who is also S-3, a marine motor maintenance officer, and an adjutant, who also commands the Headquarters Company.

b. Executive and S-3.—A major on the battalion commander's staff performs the combined functions of executive and S-3. In general, he performs those duties outlined for chiefs of staffs in FM 101-5. As S-3, he is responsible for those functions of the battalion staff which relate to organization, training, and combat operations. The specific duties of the operations officer are similar to those outlined for G-3 in FM 101-5. Like the battalion commander he should be well trained in amphibious tactics and must be thoroughly familiar with boat operations and navigation.

When the battalion goes afloat the executive officer normally remains on the near shore to coordinate boat activities there. If he goes afloat with the formation, he should occupy a patrol or other boat and stay near the rear of the formation where he can control it and assist in salvage operations.

c. Boat and Motor Maintenance Officer.—A captain is boat and motor maintenance officer on the battalion staff. As such he advises the battalion commander on all matters pertaining to maintenance of craft assigned to the battalion. He generally supervises and coordinates all first and second echelon maintenance work performed within the battalion, and makes plans and recommendations for third and fourth echelon work to be performed on the battalion boats by maintenance units outside the battalion. He works in close coordination and cooperation with the brigade boat maintenance officer. He cooperates with S-3 in devising plans for training the battalion in first and second echelon boat and motor maintenance.

d. Adjutant (S-1).—A captain supervises the work of the administrative section. In addition to his duty as adjutant, he commands the Battalion Headquarters Company. For specific duties of the adjutant see FM 101-5.

e. Navigation Officer.—The battalion navigation officer, also assistant S-3, is a first lieutenant. He makes detailed plans for and advises the S-3 and the battalion commander on all matters of navigation. He is responsible for coordinating and disseminating navigational data to elements of the battalion, and in cooperation with the S-3 he prepares plans for the navigational training of the battalion. Under normal conditions, when the battalion is afloat, the navigation officer leads the battalion formations.

f. Intelligence Officer.—The first lieutenant, assistant S-3 and navigation officer, is the battalion intelligence officer, and as such reports directly to the battalion executive. Most intelligence functions will be handled by the regimental S-2. The battalion intelligence officer will be responsible for such work as may remain.

g. S-4 Functions.—The Boat Battalion staff has no supply officer as such. Since the Boat Battalion is of the same echelon as the Boat and Shore Regiment, normally S-4 functions will be handled by the regiment except during operations. During operations, such of these functions as cannot be handled by the regiment must be the responsibility of the battalion executive, assisted by any other officer(s) of the battalion staff and Headquarters Company.

44. Battalion Headquarters Company (Fig. 16).—*a.* This company has the normal functions of a headquarters company, thus providing the means for carrying out by the Battalion Headquarters its functions of command, control, and administration.

b. Company Headquarters is composed of the usual company administrative personnel. It furnishes quarters, mess, clerical, and transportation services for Battalion Headquarters.

c. The Operations Section is composed of three officers and 32 enlisted men. One first lieutenant is intelligence, operations, and navigation officer, and two second lieutenants are commanders of two of the five patrol boats assigned to this section. In addition, there are in this section two command and navigation boats. For disposition and employment of this personnel and boats for navigation see Tentative Training Guide No. 5.

d. The Communications Section of Battalion Headquarters Company is composed of one officer and 26 enlisted personnel. It has sufficient radio operators to operate the two radios aboard each of the two command and navigation boats and the one radio aboard each of the patrol boats. In addition, there are sufficient message center and code clerks for the receipt, transmittal, encoding, and decoding of messages aboard the battalion commander's boat and the navigator's boat when the Battalion Headquarters is afloat. For detailed discussion of this section see Tentative Training Guide No. 5.

Section III
EMPLOYMENT

45. General.—Normally, the Boat Battalion is employed as part of its Boat and Shore Regiment with or without attachments or detachments but combining both boat and shore units. At the beginning of an operation, each of the three Boat Companies will normally be placed in support of each of the three battalion landing teams, but may be attached to battalion landing teams, particularly where a battalion landing team is assigned a mission widely separated from the rest of the regimental combat team.

46. Boat Battalion Commander.—The Boat Battalion Commander is technical adviser to the Boat and Shore Regimental commander, and through him to the regimental combat team commander concerning the following matters:

a. Employment of the Boat Battalion and elements thereof in combined preparatory exercises and the actual operation.

b. The number and type of landing craft available for transporting the regimental combat team and the capabilities of these craft, including boat space availability, speed, and other matters.

c. Selection of Embarkation Areas and Points of improvements necessary to facilitate boat operations.

d. Selection of D-day and H-hour, when that decision rests with the regimental combat team.

e. Navigational matters including selection of proper landing beaches.

f. Loading, stowing, and unloading troops, supplies, and equipment from the standpoint of boat operations.

g. Selection of sites for conduct of combined preparatory training.

47. The Boat Battalion Afloat.—*a.* The Boat Battalion commander coordinates the activity of the elements of his command, and when the battalion goes afloat carrying the elements of the regimental combat team, the battalion commander, when the situation permits, controls the movement of the battalion from the near shore to the far shore. The personnel at the disposal of the Boat Battalion commander or navigation and control are the navigation officer; two second lieutenants and two technical sergeants (boatswains) from the Operations Section, boat commanders; and the necessary enlisted personnel including coxswains, enginemen, seamen, and communications and special equipment personnel. The boats at the disposal of this group are the battalion's two command and navigation boats and five patrol boats. The battalion commander and the navigator each occupy one of the command and navigation boats, and the two lieutenants and two technical sergeants from the operations section occupy and command four of the five patrol boats. The other patrol boat has no commander other than the coxswain.

b. The navigation officer leads the formations, and the battalion commander supervises and controls the operation through radio and visual communication and by liaison through the five patrol boats. Otherwise the patrol boats are engaged patrolling the fleet, preventing straggling, aiding troubled boats, marking the Rendezvous Area, establishing the Line of Departure and performing other services to aid in navigational control and accuracy. If a company or companies are acting alone, or if one or more companies are making landings on more than one beach, the battalion patrol boats may be assigned to the companies in any manner. See Tentative Training Guide No. 5.

Section IV
STAFF PLANNING

48. General.—The Engineer Boat Battalion is of the same echelon as the Boat and Shore Regiment of which it is an organic part. Therefore formal plans for employment of elements of the Boat and Shore Regiment will be largely the work of the regimental staff cooperating with respective staff sections of the regimental combat team, and the functions of the battalion commander and his staff will be largely those of execution of the plans formulated. The battalion commander and his staff will nevertheless be called upon to submit informal plans and recommendations to Boat and Shore Regimental Headquarters and to regimental combat team.

49. Combat Orders.—*a.* For preparation of combat orders generally, see FM 101-5; for preparation of the Engineer Special Brigade order, see par. 24; and for preparation of the Engineer Boat and Shore Regimental order see par. 39.

b. The Boat and Shore Regimental order and its annexes (see Tentative Training Guide No. 1) may contain detailed instructions for the employment of elements of the Boat Battalion thereby eliminating the necessity for the preparation of a written battalion field order. In this case the battalion commander or his subordinate units issue instructions, usually orally, for the execution of those portions of the regimental order which apply to the Boat Battalion. If the Boat and Shore Regimental order does not include detailed instructions for the employment of the Boat Battalion, the boat commander will issue a written field order including annexes covering these matters.

Chapter 5

ENGINEER BOAT COMPANY

		Paragraphs
Section I.	Mission	50
II.	Organization and Functions	51-57
III.	Employment	58-59

Section I

MISSION

50. General.—The mission of the Engineer Boat Company is to transport a battalion landing team with its supplies and equipment from a friendly near shore to a hostile far shore and to continue the operation of water transport for resupply until relieved.

Section II

ORGANIZATION AND FUNCTIONS

51. General (Fig. 17).—The Boat Company is organized and equipped to provide the necessary boat services for the shore-to-shore movement of a battalion landing team. It has 65 boats assigned to it. The Operations Section has four (2 command and navigation boats and 2 patrol boats). The Boat Maintenance and Salvage Section has one (an LCM(3) which is used as a salvage boat). Each of the 3 Boat Platoons, has twenty (10 LCVP's and 10 LCM(3)'s).

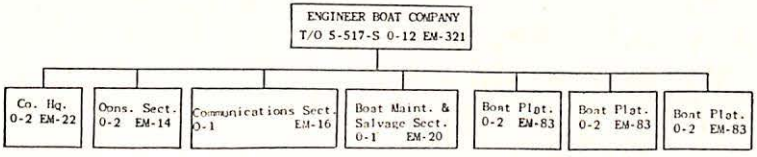


Fig. 17.—Engineer Boat Company.

52. Company Commander.—*a.* The company commander, a captain, must be thoroughly familiar with the capabilities and limitations of his landing craft, have a thorough knowledge of the care and maintenance of these boats, be able to control the mass operation of his landing craft, and be a qualified navigator and pilot.

b. The Boat Company, being normally in support of a battalion landing team, the Boat Company commander is normally responsible to the Boat Battalion commander for the employment of his company and receives his orders from the Boat Battalion commander. The Boat Company commander will be used in a staff capacity by the Boat Battalion com-

mander for advice and assistance in securing information on suitable Embarkation Points, Dispersal Areas, Training Areas, and for recommendations for the employment of his company.

c. The Boat Company commander with the Shore Company commander whether in support or attached to the battalion landing team works in close coordination with the battalion landing team commander, conferring with him, rendering expert technical advice and assistance, and making recommendations for the preparation of the Boat Assignment Table and Landing Diagram and Schedule (see Tentative Training Guide No. 1, Appendix, and par. 39*c*(2).

d. The plan of operations may call for the battalion landing team to land on a remote beach or to perform an independent mission. In this case the company commander must be able to handle his company independently, attached to the battalion landing team.

e. The company commander will normally be near the head of the company boat formation (see Tentative Training Guide No. 5).

53. Company Headquarters (Fig. 17).—*a.* The company headquarters includes the company commander, his second in command, a first lieutenant, and the necessary administrative enlisted personnel.

b. Executives.—The executive officer of the Boat Company, carries out the policies of the company commander, directs the housekeeping functions, coordinates the work of subordinate officers, and is prepared to take over the company commander's duties at any time. Afloat, the executive officer should be towards the rear of the wave formations during the early part of the mission in order to keep the company commander posted on progress there, although his responsibilties in the combat plan will be as directed by the company commander. He may be used as a wave leader, or he may be assigned to patrol, and check departure times at the Rendezvous Area, Embarkation Points, and any other points.

54. Operations Section (Fig. 17).—This section is composed of two first lieutenants, patrol boat commanders; 1 staff sergeant, boatswain; and crews for the section's 2 command and navigation boats and 2 patrol boats. This section is responsible for navigation and control of the company boat formations. The officers and the staff sergeant should have a thorough working knowledge of navigation to include basic piloting, dead reckoning, and small boat handling.

One of the first lieutenants, the navigator, leads the company boat formation in a command and navigation boat. The company commander occupies the other command and navigation boat, and usually follows closely behind the navigator although he is free to go where needed. The two patrol boats are occupied by the other first lieutenant and the staff sergeant. They are used in numerous ways, such as marking Rendezvous Areas and Lines of Departure, or as extra command navigation boats, as well as for their designated function of patrol (see Tentative Training Guide No. 5).

55. Communications Section (Fig. 17).—This section consists of a second lieutenant, company communications officer; 1 sergeant, communications chief; 1 clerk, message center; and 12 radio operators.

The section is responsible for all communications of the company, including radio, blinker, and semaphore. It is also responsible for first and second echelon maintenance of all of the company's communications equipment and supplies.

The officer in charge is responsible for training adequate personnel in the various types of communication employed by the company. He sets up the communications net(s) as directed by the company commander (see par. 101, Tentative Training Guide No. 5).

56. Boat Platoon (Fig. 17).—A boat platoon consists of two officers, a first lieutenant and a second lieutenant, and 83 enlisted men. Its boat strength consists of 10 boats of the LCVP type and 10 of the LCM(3) type. The enlisted personnel of the platoon includes one technical sergeant, platoon boatswain; four staff sergeants, section boatswains; and the necessary boat crews.

The platoon leader has the very important duty of training his boat crews and of keeping the boats and other equipment of the platoon in first class operating condition by the enforcement of efficient 1st echelon maintenance. He will usually be a wave leader for the water movement.

The assistant platoon commanders are second lieutenants. They assist the commander of the platoon in the administration and training of the platoon and serve as wave leaders for the water movement. The assistant platoon commander must be ready at any time to assume command of the platoon if it should become necessary.

Since there usually are not enough officers in the three platoons to act as wave leaders for all waves, some waves will be lead by the technical sergeant, boatswain.

The Boat Control Section (less the Maintenance Squad) is normally attached to the Shore Company supporting the battalion landing team of which its Boat Company is in support. For equipment and operations of the salvage boat see Tentative Training Guides Nos. 2, 3, and 5. For operations of the Boat Control Section on the far shore see Tentative Training Guide No. 7.

Section III

EMPLOYMENT

58. General.—While the Boat Company is normally in support of a battalion landing team, its employment in all cases is determined by the tactical situation. It may be attached to the landing team or it may be employed in any other way which best meets the tactical needs of the situation.

The company normally operates as part of the Boat Battalion and is under the command and supervision of the battalion commander, but this is not always true. The mission for a regimental combat team may necessitate the landing of battalion landing teams on widely separated beaches. In this case the Boat Company may function quite independently, and it is imperative that the organization and training of the Boat Company be such that it can function efficiently alone.

59. Wave Components and Formations.—Different types of boats and lighters may be in the various waves according to the tactical plan. A platoon commander in charge of a wave may often have boats under his control which are not part of his platoon.

The basic formations of the waves are COLUMN, CLOSED VEE, OPEN VEE, and LINE ABREAST. Various formations are necessary because of different situations, beaches, frontage, danger of enemy fire, missions, and obstacles to navigation. Formations of boat companies and battalions are combinations of these simple formations. For wave formations and control see Tentative Traning Guide No. 2.

d. Adjutant (S-1).—S-1, a first lieutenant, supervises the administrative functions of the battalion staff. For specific duties of the adjutant, see FM 101-5.

e. S-2 Functions.—The battalion staff has no intelligence officer. Since in operation the Shore Battalion is of the same echelon as the Boat and Shore Regiment, most S-2 functions will be handled by the regimental S-2. Such of these functions as cannot be handled by the regiment, however, must be the responsibility of the battalion executive.

66. Battalion Headquarters Company (Fig. 19).—*a.* This company has the normal functions of a Headquarters Company, thus providing the means for carrying out by the Battalion Headquarters its functions of command, control, and administration. It also contains the Battalion Combat and Communications Platoons.

b. Company Headquarters is composed of the usual company administrative personnel.

c. Headquarters Platoon is composed of five enlisted men, and is divided into an Administrative Section and an Operations Section. It furnishes the enlisted assistants for the battalion commander and his staff.

d. Combat Platoon is composed of three .50 cal. (AA) air cooled machine gun sections (two guns each) and three 37-millimeter gun sections (two guns each). These sections may be attached to any, or divided equally between all of the shore companies of the battalion during an operation. They provide anti-aircraft and anti-mechanized defense of the beach areas. This platoon has one first and one second lieutenant, each of whom is normally attached to one of the shore companies supporting assault battalion landing teams. They will supervise the employment of the attached 50's and 37's under the direction of the Shore Company Commander. Later in the operation the beaches occupied by the Shore Companies of the battalion may be consolidated into one battalion beach, in which case the Battalion Commander should coordinate all defensive weapons of the Battalion Headquarters Company for the defense of the consolidated beach area, with each of the officers of the Combat Platoon given responsibility for the employment of one of the two types of weapons. See Chapter 13, Weapons.

e. The Communication Platoon is composed of a Platoon Headquarters, Radio Section, and Wire Section. It furnishes communications materiel and personnel to carry out the

communications functions of the battalion headquarters, and furnishes personnel and equipment to augment the Message Center Sections of the shore companies. (See par. 97 and Tentative Training Guide No. 7).

Section III
EMPLOYMENT

67. General.—Normally, the Shore Battalion operates as part of the Boat and Shore Regiment with or without attachments or detachments but containing both boat and shore units. At the beginning of an operation, each of the three Shore Companies normally will be placed in support of each of the three battalion landing teams, but may be attached thereto, particularly where a battalion landing team is assigned a mission widely separated from the rest of the regimental combat team.

68. Shore Battalion Commander—*a.* The Engineer Shore Battalion commanding officer is technical adviser to the Boat and Shore Regimental Commander.

b. When the Shore Companies are supporting respective battalion landing teams, the Shore Battalion Commander maintains complete control over his companies and coordinates all Shore Company activity.

c. When the Shore Companies are attached to respective battalion landing teams, the Shore Battalion commander loses control of his companies to the battalion landing team commanders. However, when the Shore Battalion commander reaches the far shore, which is usually with the Regimental Combat Team reserve, such of his companies as are not so widely separated as to make control by the Shore Battalion commander impracticable, should revert to his control, and he will coordinate their activity. Later in the operation, beaches occupied by Shore Companies of the battalion normally will be consolidated and reorganized under the direction of the Shore Battalion commander as a Regimental combat team rather than a battalion landing team.

69. Employment on the Near Shore.—While the duties of the Shore Battalion are essentially far shore duties, it is responsible on the near shore for supervising and assisting in the development of Embarkation Areas (see paragraph 35*b*). It is also responsible for loading such shore engineer equipment and supplies as are loaded during the initial embarkation phase (see paragraph 35*c*).

70. Employment on the Far Shore.—On the far shore the battalion is responsible for the following duties:

a. Furnishing facilities for unloading and moving inland the troops, vehicles, equipment, and supplies of the regimental landing force.

b. Assisting in the evacuation of wounded and prisoners.

c. Providing for security of beach areas assigned to the Shore Battalion.

d. Providing signal communication personnel and materiel necessary for communications in the beach areas.

e. See also paragraphs 13 and 37 and Tentative Training Guide No. 7.

Section IV
STAFF PLANNING

71. General.—For an amphibious operation the Engineer Shore Battalion is of the same echelon as the Engineer Boat and Shore Regiment of which it is an organic part. Therefore formal plans for employment of elements of the regiment will be largely the work of the regimental staff in cooperation and coordination with respective staff sections of the regimental combat team. The functions of the battalion commander and his staff will be largely those of execution of the plans formulated. The battalion commander and his staff will nevertheless be called upon to submit informal plans and recommendations to the Boat and Shore Regimental Headquarters for the employment of elements of the battalion on both the near and far shore.

72. Combat Orders.—*a.* For preparation of combat orders generally see FM 101-5; for preparation of Engineer Speial Brigade orders see par. 24; and for preparations of Engineer Boat and Shore Regimental orders see par. 39.

b. The Engineer Boat and Shore Regimental order may contain detailed instructions for the employment of elements of the Shore Battalion, thereby eliminating the necessity for the preparation of a written battalion field order. In this case the battalion commander will at the appropriate time assemble his staff and the commanders of his subordinate units and issue instructions, usually oral, for the execution of those portions of the regimental order which apply to the Shore Battalion. If the regimental order does not include detailed instructions for employment of elements of the Shore Battalion, including attachment of Shore Companies to battalion landing teams, the Shore Battalion commander must issue a written field order covering these matters.

Chapter 7

ENGINEER SHORE COMPANY

		Paragraphs
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Section I

MISSION

73. Mission.—*a. General.*—The mission of the Engineer Shore Company in an amphibious operation is to facilitate the landing and movement inland of a battalion landing team, its equipment and supplies, and to assist in resupply and in the evacuation of its prisoners and wounded.

b. Near Shore.—On the near shore the Shore Company assists general engineers and other service troops in the preparation of Embarkation Areas when not engaged in other duties.

c. Far Shore.—On the far shore the Shore Company organizes, controls, and improves the landing area assigned to the battalion landing team; facilitates the debarkation and movement inland of the troops and equipment of the battalion landing group; moves the supplies of the battalion landing group to dumps beyond the beach; and assists in the evacuation of prisoners and wounded. For detailed operations on the far shore see Tentative Training Guide No. 7.

Section II

ORGANIZATION AND FUNCTIONS

74. Organization (Fig. 20).—The Shore Company is composed of a Headquarters Platoon for command, control, administration, communications, and defense functions; a Pioneer Platoon for general shore engineer functions; and a Utility Platoon for general longshoreman functions.

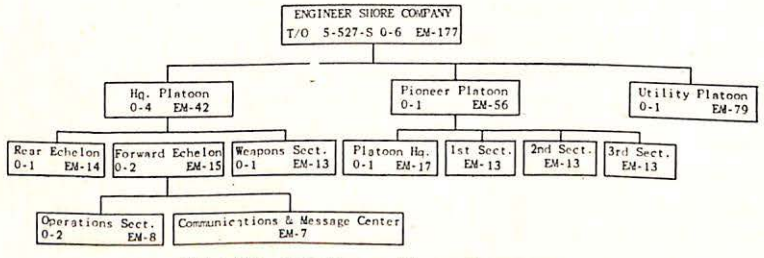

Fig. 20.—Engineer Shore Company.

75. Functions.—*a. General.*—The Shore Company is generally in support of, but may be attached to, a battalion landing team. The far shore activities of the company in supporting a battalion landing team are divided into two phases, namely, the beach organization phase and the resupply phase.

(1) *Beach Organization Phase.*—During the beach organization phase, which begins with the landing of the Forward Echelon of the Shore Company and should be concluded about the time the first boats carrying resupply arrive on the far shore, the Shore Company's activities include the following:

(a) Marking the beach and the landing area.

(b) Establishing communications.

(c) Reconnoitering for roads and dump sites.

(d) Building roads and performing other general engineer duties.

(e) Locating defensive weapons.

(f) Recording supplies and units landed.

(g) Keeping a situation map.

(h) Keeping the beach clear and otherwise enforcing beach discipline.

(i) Assisting in the evacuation of wounded.

(j) Guarding and assisting in evacuation of prisoners.

(2) *Resupply Phase.*—During the resupply phase, which begins at the conclusion of the beach organization phase, the Shore Company is primarily responsible for unloading supplies from craft, and placing them in dumps beyond the beach. See also paragraphs 12 and 37.

76. Headquarters Platoon (Fig. 20).—*a.* The Headquarters Platoon of the Shore Company is composed of a Forward Echelon, which is sub-divided into an Operations Section and a Communications and Message Center Section; a Rear Echelon; and a Weapons Section.

b. Forward Echelon (Fig. 20).—The Forward Echelon together with the attached Boat Control Section (the Maintenance and Salvage Section of the Boat Company) must land early in the operation, usually in the third wave, for the purpose of establishing and maintaining command, control, and communications in the landing area.

(1) *Operations Section* (Fig. 20).—The Operations Section of the Forward Echelon performs the following duties:

(a) Marks the beach with appropriate beach limit markers (see Tentative Training Guide No. 2).

(b) Selects and marks unloading points for vehicles.

(c) Establishes the Shore Company command post and message center.

(d) Makes reconnaissance for beach roads and for dump sites for all types of supplies.

(e) Records supplies and units landed on the beach.

(f) Keeps the Shore Company situation map.

(g) Furnishes guides for units landing, if necessary.

(h) Marks mines and gas contaminated areas.

For detailed duties of the personnel of the operations section, (the company commander, second in command, 1st Sergeant, and others) see Tentative Training Guide No. 7.

(2) *Communication and Message Center Section* (Fig. 20).—The Shore Company Message Center Section has inadequate personnel for carrying out the Shore Company's communications functions. Furthermore, the Shore Company is allotted no signal equipment. There must be attached, therefore, from the Communications Platoon of the Shore Battalion Headquarters Company additional personnel and equipment to enable the Message Center to perform its communications functions. These functions, which may, or may not, be taken over later by the battalion echelon when it lands, are:

(a) Establishing and maintaining contact by wire, radio, or runner with adjacent Shore Companies,—contact from left to right.

(b) Establishing and maintaining contact with the battalion landing team command post. This is normally done by extending a wire from its switchboard to the wire left on the beach by the battalion landing team headquarters as it moves inland. In any case this Shore Company commander must insure that this contact is established and maintained.

(c) Establishing and maintaining contact with the Shore Battalion Headquarters by radio when the latter arrives on the far shore.

(d) Maintaining, if necessary, contact already established with the two infantry assault companies while they are still in close proximity to the beach area. See Chap. 8 and Tentative Training Guide Nos. 5 and 7.

(3) *Beach Organization Teams.*—There are no beach organization teams as such in the tables of organization; however, two such teams to function with the Operations Section, must be provided from personnel within the company. The Op-

erations Section provides two T/5's, reconnaissance, who form the nucleus for these teams. Six additional men for each team, must be provided by the Utility Platoon and revert to that platoon when beach organization activity is completed. These teams perform the following duties:

(a) Set up appropriate beach markers, showing limits of the beach and unloading points.

(b) Mark Shore Company installations, including dumps and command post, and set up directional signs leading thereto.

(c) Mark gas contaminated and mined areas.

c. Rear Echelon (Fig. 20).—The Rear Echelon of the Headquarters Platoon is composed of company administrative personnel. It will be brought to the far shore as needed and as boat space is available from H + 12 hours to H + 48 hours.

d. Weapons Section (Fig. 20).—The Weapons Section of the Headquarters Platoon consists of four .30 caliber air cooled machine guns and necessary crews. They are brought to the far shore as needed and as boat space is available—usually in the third wave. They are employed as anti-personnel weapons for defense of the beach area. For discussion of Shore Company and attached weapons see Chapter 13.

77. Pioneer Platoon (Fig. 20).—*a.* Among the Platoon Headquarters personnel are included demolitions men for the removal of obstacles and decontaminating equipment operators for the decontamination of gassed areas. This group should be brought to the far shore in the fourth wave prior to the landing of the Pioneer Sections in the fifth wave with their road building equipment.

b. Three Pioneer Sections.—The primary duty of the Pioneer Sections is to construct beach roadways. The equipment of each section includes a bulldozer, one or two beach sleds (or a one-ton trailer), wire road matting, one demolition set, pioneer tools, and miscellaneous equipment. Two or all three of these sections should arrive on the far shore in the fifth wave, the number depending upon the number of beach roadways to be constructed. In addition to building roads, the Pioneer Sections will perform the following duties:

(1) Assist in the removal of underwater and beach obstacles.

(2) Construct bridges, docks, piers, and wharves.

(3) Perform other general shore engineer duties.

(4) Assist the Utility Platoon in the handling of supplies and equipment.

78. Utility Platoon (Fig. 20).—*a.* It is the duty of the Utility Platoon to unload from craft and to move beyond the beach to dumps the large quantity of supplies which are landed on the beach during the resupply phase of the operation. The platoon is assisted in this work by a large portion of the remainder of the company.

For this purpose the platoon may be divided into a maximum of seven longshoremen teams, each composed of a sergeant or corporal and about eight privates. In addition there are in this platoon six operators (four operators and two alternate operators) for the four 2½ ton amphibian trucks (DUKW) allotted to the platoon. Tables of organization provide no enginemen as members of the necessary two-man DUKW crews. Therefore, four privates must be withdrawn from the remaining longshoremen within the platoon, trained as enginemen, and permanently assigned to that duty.

b. Movement of Supplies to Dumps.—Supplies may be moved across the beach to dumps in the first available cover by use of amphibian truck, bulldozer and beach sled, or "bucket brigade" method. Furthermore, if the tactical situation demands it and additional transportation is furnished the Shore Company, dumps may be established a mile or more inland from the beach, in which case the Shore Company will move supplies to dumps by truck.

79. Attached Medical Personnel.—There will normally be attached to each Shore Company supporting an assault battalion landing team, one medical officer and nine or less medical enlisted personnel from the Boat and Shore Regiment's Medical Detachment. The attached medical personnel will be brought to the far shore normally in the fourth wave, where they will set up an aid station in the Shore Company area. It will be their responsibility to care for all wounded in the beach area until they can be evacuated, and the aid station established will serve as a clearing station for the evacuation of wounded until elements of the Medical Battalion arrive on the far shore later in the operation, normally with the regimental combat team command group. See Chap. 9.

80. Reorganization of Shore Company for Resupply.—*a. General.*—As the beach organization phase of the operation is completed, the Shore Company must undergo a general reorganization for resupply activities. During this time most of the Shore Company will have completed their initial duties, and their services must be utilized in assisting the Utility Platoon in unloading craft and moving supplies and equipment

to dumps. No rigid method of reorganization is prescribed, and the method adopted must necessarily depend upon existing conditions. This reorganization must provide a command post and weapons group and two or more handling groups.

b. The Command Post and Weapons Group.—This group must consist of those personnel whose services are required in and near the command post and message center and a minimum number of personnel necessary to man Shore Company weapons to protect the beach area from attack. (See Chapter 13).

c. Handling Groups.—The remainder of the company will be divided into handling groups, the number of which will depend upon the following conditions: the number of unloading points assigned on the beach; the number of beach roadways; the number of dumps established; the number of docks, piers, and wharves, if any; the amount of supplies and equipment to be handled, the facilities available for its handling, and the means by which it is transported.

In forming these handling groups, the autonomy of existing teams must be respected, in that teams must not be broken up but must work under their own leaders. Furthermore, the longshoremen teams of the Utility Platoon, who are specially trained in the handling of supplies and equipment, should be assigned by teams to the groups established. Each handling group so formed should be under the command of an officer responsible directly to the company commander for a given portion of the beach (organized in depth), for the unloading of supplies landed in that portion of the beach, and for the maintenance and control of dumps established in that area.

Section III
EMPLOYMENT

81. General.—Normally, the Shore Company is in direct support of a battalion landing team, although when the battalion landing team is assigned an independent mission or a mission widely separated from other elements of the regimental combat team of which it is a part, the Shore Company may be attached to the battalion landing team.

82. Shore Company Commander.—*a.* Whether the Shore Company is attached to or in support of a battalion landing team, the Shore Company commander is technical adviser to the battalion landing team commander concerning the employment of the Shore Company. He must be prepared at

all times to make recommendations concerning assignment to craft of elements of the Shore Company and their equipment, and to submit plans to the battalion landing team commander for the organization and defense of the beach area.

b. When the Shore Company is supporting a battalion landing team, the Shore Company commander is responsible to his Shore Battalion commander. He cooperates with the battalion landing team commander and complies with all requests for support which are consistent with the orders to the Shore Battalion commander.

c. When the Shore Company is attached to a battalion landing team, the Shore Company commander is responsible to the battalion landing team commander and becomes a member of the special staff of that officer.

Chapter 8

BRIGADE SIGNAL COMMUNICATION

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Section I

GENERAL

83. References.—Field Manuals 7-25, 11-5, and 24-5 describe more fully the organizations, methods, and procedure treated in this chapter, which is intended merely to indicate operations in the Engineer Special Brigade. The original manuals should be consulted as a background for the interpretation of this material. Tentative Training Guide No. 5 gives details of the equipment and communications setup for the brigade.

84. Responsibility for Signal Communication.—*a. Responsibility of commanders.*

(1) In general, the establishment and maintenance of communication between higher and subordinate units is the responsibility of the higher commander. Communication between adjacent units is established without orders from *left to right* unless a common superior directs otherwise.

(2) The brigade commander is responsible for the installation, operation, and maintenance of the brigade signal system and for the supervision of the systems of his regiments and battalions. The commander of each subordinate unit is responsible for the signal communication system of his unit and for its functioning as a part of the brigade system. Contact is essential; if it is lost, its reestablishment is immediately sought by both the subordinate unit and the higher unit.

(3) The orders of commanders for the tactical employment of their organizations include provision for signal communication. The signal or communication officer is informed at the earliest practicable moment of the general plan of the operation and of any of the contemplated moves of command posts. If practicable, the commander has his signal or communication officer present when the field order of the higher commander is received so that reconnaissance and recommendations for the communication system can be made early.

(4) Each commander is responsible that the next higher headquarters is kept informed of the location of his command post. The unit signal or communication officer is responsible to his commander that higher headquarters and subordinate, supporting, and attached units are kept informed of the location of the command post and of contemplated changes in its location. Company commanders keep their immediate superiors informed of their locations by means of messengers, radio, or any other agencies at their disposal.

b. Specific responsibilities of components.—(1) In the brigade, the Signal Company installs, operates, and maintains communication between elements of brigade headquarters and between the brigade and the regimental command posts.

(2) The Engineer Boat and Shore Regiment installs, operates, and maintains all agencies of signal communication within its own unit. In addition, it establishes communication with adjacent near and far shore units. Communications personnel and means are made an organic part of the regiment and its component units in order that they may be self-sufficient in establishing their essential communications. Attachments to regiments from the Brigade Signal Company will be the exception rather than the rule.

85. Brigade Signal Officer and Signal Company Commander.—For duties of a unit signal officer see FM 101-5. The brigade signal officer, a lieutenant colonel, commands the Signal Company for training and operations only. The Signal Company commander administers the company, conducts its training and operations in accordance with orders of the brigade signal officer, and serves as assistant to the brigade signal officer. Successful conduct of signal operations requires that the brigade signal officer and the Signal Company commander work together as a team. Each should be capable of acting for the other and must not hesitate to do so when the situation indicates this need, informing the other of the action taken as soon as feasible. However, responsibility for the conduct of signal operations cannot be delegated by the brigade signal officer to any assistant, although he will use any necessary personnel of the brigade signal officer's section or of the Signal Company to assist him in the performance of his duties.

When the Engineer Special Brigade is attached to an infantry division for an operation the brigade signal officer will immediately consult with the division signal officer, and together they will work out the signal plan for the operation.

86. Training.—*a.* The training of signal communication personnel is treated in TM 11-450. As a commander of troops, the brigade signal officer is solely responsible for the proper training of the Brigade Signal Company. In his capacity as a staff officer, he recommends and supervises, and may conduct a program of training for all signal and communication units within the brigade. He utilizes personnel of the Signal Company and the communication personnel within the regiment as necessary for the conduct of technical training delegated to him by the brigade commander.

b. Visual Communication.—Personnel of Message Center and Radio Sections are trained in the use of display panels and pyrotechnics. (See FM 24-5 for details of operation). All signal and communication personnel and boat crews are trained in semaphore and in International Morse Code, the latter enabling them to communicate by means of signal lamps.

Section II
SIGNAL COMPANY

87. General.—The Signal Company (Fig. 21), Engineer Special Brigade, performs all signal communications and signal supply functions of the Signal Corps within the brigade.

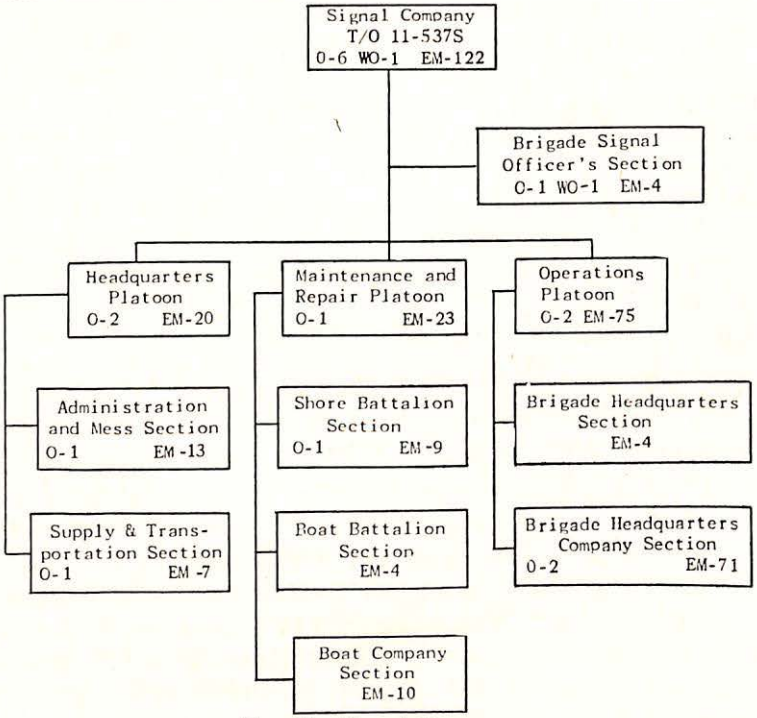

Fig. 21.—Signal Company.

88. **Functions.**—The duties of the Signal Company include:

a. Installation, operation, and maintenance of signal communication at Brigade Headquarters, including all echelons thereof; from Brigade Headquarters to each major subordinate unit; to other subordinate, auxiliary, and attached units or establishments; and to adjacent units when required, including communications required by liaison officers.

b. Supply and minor repair of signal equipment for all units of the brigade, organic or attached.

c. Collection, charging, and distribution of storage batteries issued by the Signal Corps to units of the brigade which are not equipped with charging sets. The charging and maintenance of storage batteries installed in a vehicle or boat, and used jointly in the operation of the vehicle or boat and of signal equipment installed therein, is the responsibility of the arm or service charged with the maintenance of the vehicle or boat.

d. Surveillance of all signal communication channels within the brigade as is prescribed by the brigade commander to assure that signal security measures are being taken in conformity with his orders.

89. **Organization** (Fig. 21).—*a.* Tables of Organization do not prescribe a detailed organization of the Signal Company. The company commander is allowed great freedom of action in organizing the company into working teams so that it may perform its duties most efficiently. The platoon seldom functions as a unit, but this organization into platoons favors both administration and training. The section or team is the working unit. Teams of radio, message center, and wire personnel are made up according to the signal means required in a particular situation. When a team is required to operate on a continuous 24-hour-day basis, it is divided into reliefs.

90. **Brigade Signal Officer's Section.**—This section consists of the brigade signal officer and necessary enlisted assistance for the operation of his office.

91. **Headquarters Platoon** (Fig. 21).—The Administration and Mess Section, under the company commander and the Supply and Transportation Section under a first lieutenant perform the duties for the company as indicated by their names. The first lieutenant usually serves as an assistant to the brigade signal officer on matters of signal supply, and his section handles signal supply for all units of the brigade, including attached units.

92. Operations Platoon (Fig. 21).—The Brigade Headquarters Section consists of radio operators that may be assigned to any of the sets SCR 177 and 193 either at Brigade Headquarters, or in the brigade command and navigation boats. The Brigade Headquarters Company Section is normally divided into three groups: message center group, radio group, and wire group. These groups operate all agencies of signal communication, except signal supply, at all echelons of Brigade Headquarters.

a. The Message Center Group, with a technical sergeant, message center chief in charge, provides continuous message center service for all echelons of Brigade Headquarters. Teams organized within this group are flexible, since each member of the group is trained to perform all duties incident to message center operation. The exact composition of any team depends upon the number of message centers in operation and the traffic load on each. Message center procedure and the selection of a suitable site for a message center are discussed in FM 24-5. This section shares with radio personnel the responsibility for setting up an area near the command post on the near shore for message dropping and panel display grounds. A similar area is set up on the far shore by the communications personnel of the Shore Battalion Headquarters.

b. Radio Group.—The radio group with a first lieutenant, radio officer, in charge, installs, operates, and maintains radio communication facilities for Brigade Headquarters and charges storage batteries issued by the Signal Corps for all units of the brigade not provided with facilities of their own. Subdivision of the radio group into operating teams is based on the number and type of radio sets which are to be employed. Operators are given permanent assignments to a team operating a particular radio set and in normal operations work with that team. However, each member of the group is trained to operate all of the sets with which the section is equipped so that any member of the group may operate in any team.

c. Wire Group.—The wire group with a second lieutenant, wire officer, in charge, installs, operates, and maintains wire systems at Brigade Headquarters. This includes installing and maintaining local and trunk circuits. In order that the group may perform its duties efficiently and rapidly, all members of the group are trained to install and operate wire equipment. Operators and repairmen are used as in-

to insure tactical and technical control of the signal communication system of his unit. Distribution of such orders and signal operation instructions throughout his unit.

95. Regimental Communications (Fig. 15).—*a. Platoon Headquarters.*—This headquarters provides the personnel to operate the message center at the command post proper. The section is large enough to permit the men to work in shifts or to man message centers at both a forward echelon on the far shore and a rear echelon on the near shore.

b. Radio Section.—The radio operators in this section operate the stationary and vehicular sets at all echelons of Regimental Headquarters, afloat and on both near and far shores.

c. Wire Section.—The linemen in this section install and maintain wire communication for Regimental Headquarters on the near shore and may in addition be required to act as relief operators on the telephone and telegraph equipment.

Section IV

SHORE BATTALION COMMUNICATIONS

96. Battalion Communications Officer.—*a.* The first lieutenant, commander of the Communications Platoon of Shore Battalion Headquarters Company is the battalion communications officer. He is responsible for the technical training and proficiency of his own platoon and for supervision of the technical training of communications personnel throughout the battalion; and for the planning, installation, operation, and maintenance of the battalion communications system on the far shore. His duties include recommending (usually to S-3) initial and subsequent locations of command posts, if not previously designated by the regiment. He details and supervises the operations of the battalion and Shore Company communication teams.

Since the Communications and Message Center Sections of the Shore Companies contain only the minimum personnel necessary for operation of a message center, it will be the duty of the battalion communications officer to make up teams from his platoon to supplement these sections.

For detailed treatment of duties of the battalion communications officer see FM 7-25.

97. Battalion Communications Platoon (Fig. 19).—*a. Platoon Headquarters.*—The personnel of Platoon Headquarters set up and operate the message center in the Shore Battalion command post on the far shore and provide messenger service to higher, lower, and adjacent units.

b. Wire Section.—This section installs and maintains wire communication between shore battalion and company command posts.

One of its most important responsibilities is that of tying in to the switchboards at company and battalion command posts on the far shore the wire for which the infantry battalions and regiment, respectively, lay behind them as they advance inland. The responsibility for the establishment and maintenance of such communication rests with the infantry unit headquarters but in any case the shore unit commander must insure that such communication is maintained. As the combat situation develops and the wire communication between the infantry regiment and its battalions is set up, the wire between the infantry battalions and shore companies may be eliminated as it is no longer necessary for the infantry regiment to go through the shore engineer communication system for contact with its battalions.

c. Radio Section.—The operators in this section provide radio communication between Shore Companies and Shore Battalion Headquarters on the far shore, between the same elements when required on the near shore and with the boat and shore regimental command post afloat, on the near shore, and on the far shore.

98. Shore Company Communications and Message Center Section (7 EM).—This section contains only the minimum of message center clerks and messengers. It must be augmented by communications teams from the Shore Battalion Communications Platoon.

Section V
BOAT BATTALION COMMUNICATIONS

99. Battalion Communications Officer.—*a.* The first lieutenant, commander of the Communications Section of the Boat Battalion Headquarters Company, is battalion communications officer. His duties parallel those outlined in the preceding paragraph for the Shore Battalion communication officer.

100. Battalion Communications Section (1 officer, 26 EM).—*a.* The communications personnel in this section comprise sufficient message center personnel for simple message center functions aboard the battalion's command and navigation boats. The bulk of the platoon is made up of high speed radio operators employed aboard command and navigation and patrol boats.

b. All communication personnel in the Boat Battalion must be skilled in visual signalling, since this will find wide use in communication between boats.

101. Boat Company Communications Section (One second lieutenant, 16-EM).—This section is made up mainly of operators for the voice radio sets in the company. As in the Boat Battalion Section all personnel must be trained for rapid and accurate visual signalling.

The communications officer and communications chief are normally in the company commander's and navigator's boats respectively. There are insufficient radio operators to operate the 2 SCR 284 and 21 SCR 300, 510, or 610 voice sets assigned to the company; consequently, some wave leaders and boat crews must operate the voice sets assigned to their boat. For details see Tentative Training Guide No. 5.

Salt air and spray will play havoc with much of the equipment assigned to this section unless it is given the best of care. This constant care and watchfulness is an ever present duty of all men of this section.

Chapter 9

MEDICAL SERVICE OF THE ENGINEER SPECIAL BRIGADE

		Paragraphs
Section I.	Mission	102
II.	Organization and Functions	103-107
III.	Employment	108-112

Section I

MISSION

102. Mission.—The mission of the medical service of the Engineer Special Brigade is to provide for medical supply, and collection, treatment, holding and evacuation of casualties. It serves both the Engineer Special Brigade and the division to which the brigade is attached.

Section II

ORGANIZATION AND FUNCTIONS

103. General.—The medical service of the Engineer Special Brigade comprises the brigade surgeon, a Medical Detachment for each Engineer Boat and Shore Regiment, a Medical Detachment for the brigade less the three regiments, and a Medical Battalion.

104. Brigade Surgeon.—The brigade surgeon, a lieutenant colonel, functions in the dual capacity of commanding officer of the Medical Battalion and special staff officer (see FM 101-5 and FM 8-55). He must keep himself informed of the tactical situation and of the plans of both the brigade and division commanders in order that he can make recommendations and formulate plans for the efficient employment of the medical service.

When the Engineer Special Brigade is attached to an Infantry Division for operations the brigade surgeon should contact the division surgeon immediately and together they should work out the medical plan for the operation.

105. Regimental Medical Detachment (Fig. 22).—*a. Regimental Surgeon.*—The regimental surgeon also functions in a dual capacity as commander of the Medical Detachment and special staff officer. He must keep abreast of the situation and future plans and maintain close liaison with the brigade surgeon and the surgeon of the regimental combat team to which the Boat and Shore Regiment is attached or in support.

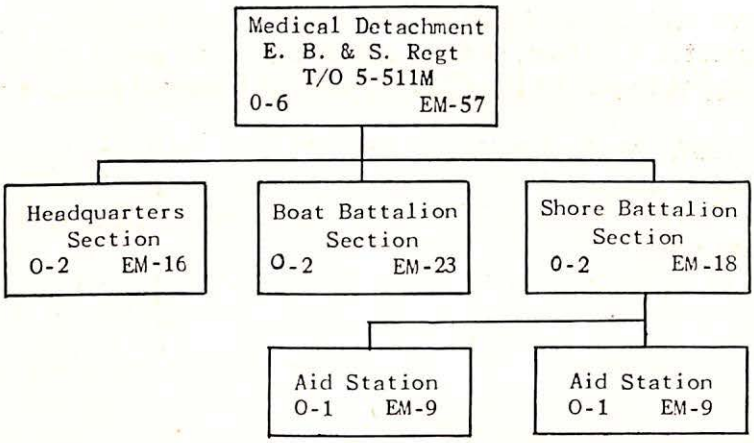

Fig. 22.—Medical Detachment, Engr. Boat and Shore Regt.

b. Headquarters Section.—This section furnishes the overhead for the administration of the detachment, provides first echelon medical service for the regiment less the Boat and Shore Battalions and serves as a small reserve with which the regimental surgeon may influence and assist the medical service of the battalion sections. The dental officer is in this section.

c. Boat Battalion Section.—This section provides first echelon medical service for the Boat Battalion at such times as it is impracticable to operate the medical service for the regiment as a unit. One Medical Detachment man is in every fourth or fifth boat during the trip to the far shore, and returns to the near shore with transportable casualties. Aid stations are not established by this section during combat.

d. Shore Battalion Section.—This section is organized and equipped to furnish first echelon medical service by establishing two aid stations on the far shore, one with each Shore Company which is supporting an assault battalion landing team. If three assault battalion landing teams are landed simultaneously, a third Shore Medical Section must be formed by taking personnel from the Headquarters Section and the Shore Battalion Section. For functions of an aid station see par. 33, FM 8-5.

The Shore Battalion Sections are attached to the Shore Companies and land with them, preferably in the fourth wave.

106. Brigade Headquarters Medical Detachment.—*a.* This detachment, consisting of 3 officers and 28 enlisted men, furnishes first echelon medical service to the brigade less the

three regiments. Since the troops it serves will be widely separated in their various functions, it is organized and equipped to permit the establishment of three aid stations.

107. Medical Battalion (Fig. 23).—*a.* The Medical Battalion is composed of a Battalion Headquarters, a Headquarters and Headquarters Detachment, and three identical Medical Companies.

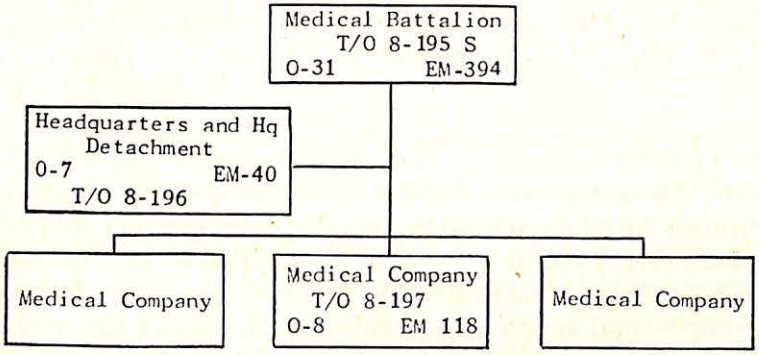

Fig. 23.—Medical Battalion.

b. Battalion Headquarters and Headquarters Detachment (Fig. 24).—Battalion Headquarters proper consists of the battalion commander (brigade surgeon); a major, executive and plans and training officer; a captain, assistant plans and training and liaison officer; and a first lieutenant, personnel officer. For staff functioning see FM 101-5. One of these officers, normally the captain must perform the duties of adjutant. In addition a first lieutenant (S-4) supervises the functioning of the general and medical Supply Section and is both battalion supply officer and brigade medical supply officer. The battalion commander will use all these officers of his battalion staff as necessary in the proper performance of his duties as brigade surgeon.

c. The Headquarters Detachment (Fig. 24) furnishes the personnel for the operation of battalion headquarters and the administration of the battalion.

d. Medical Company (Fig. 25).—Each of the three Medical Companies in the Medical Battalion, is designed to support an Engineer Boat and Shore Regiment and its regimental combat team. The company combines both collecting and

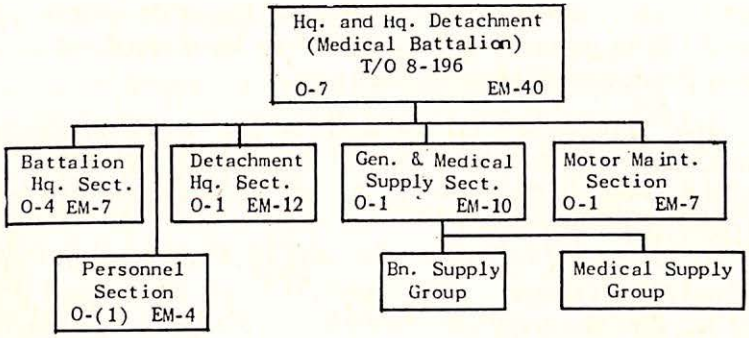

Fig. 24.—Headquarters and Headquarters Detachment, Medical Battalion.

clearing elements. It provides second echelon medical service and so much of third echelon medical service as is involved in the definitive care and treatment of short duration cases and those which cannot be evacuated due to their serious condition.

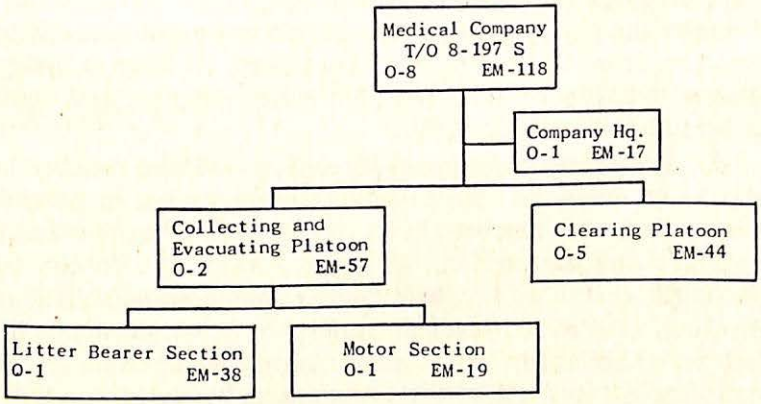

Fig. 25.—Medical Company.

Section III
EMPLOYMENT

108. General.—The medical service must be adapted to the combat characteristics of the unit it is serving. It is necessary, therefore, that special emphasis be placed on the adequate treatment of wounded who must remain in boats over varying lengths of time. It is apparent that shore-to-shore and shore-to-ship evacuation must be contemplated. The brigade medical service must remain partially mobile and in a position to receive new casualties on the far shore. This necessitates sup-

port by army surgical and evacuation hospitals on the near shore. It is paramount that flexibility be maintained at all times to meet situations as they arise.

109. For a medical estimate of the situation, medical plans, and combat orders, see FM 8-55, 100-5, and 101-5. In addition, in amphibian operations, the following factors must be especially considered:

a. The Need for and Avaliability of Army Medical Units.—The brigade surgeon will request, through the brigade commander, that the army establish medical dumps and ambulance loading points at specified places on the near shore and that army medical units be available to receive an estimated number of casualties evacuated from the far shore. These medical supply dumps and ambulance loading points must be near points where craft will land.

b. Distance Between the Near and Far Shores.—In general, the self-sufficiency of medical units must vary directly with the increasing distances of operations. It is evident that with increasing distances there will be greater difficulty in receiving medical supplies from the near shore and in evacuating casualties from the far shore. Therefore, on long crossings, a larger quantity of all types of medical supplies and equipment must be carried initially.

c. Proximity and Types of Beaches.—Where beaches are not widely separated and lateral communication is possible, all casualties may be brought to a central clearing station for treatment and evacuation. However, when due to the terrain or the distances involved this is not possible, subsidiary collecting, treatment, medical supply, and evacuation points must be established. On a sandy beach, evacuation can be mostly by ¼ ton 4 x 4, truck ambulances, whereas on a rocky beach it may be necessary to rely on litters.

d. Estimated Number of Expected Casualties and Areas of Greatest Casualty Density.—As in all types of operations, more medical service must be furnished to the areas where the greatest number of casualties are expected to occur.

e. Shore-to-Shore and Shore-to-Ship Evacuation.—When the distance between the near shore and the far shore is not great, evacuation of the clearing stations will be shore-to-shore by landing craft. If the distance is relatively great and it is possible for hospital ships to approach the far shore, evacuation will be greatly simplified by shore-to-ship evacuation, utilizing landing craft to carry patients from the beach

to the ship. When this is visualized, previous arrangements should be made with the Navy to have hospital ships on call.

f. Cooperation with Divisional Medical Units.—Although the regimental and battalion aid stations of the division are initially estabilshed at about the same time as aid stations of the engineer special units, the divisional collecting and clearing companies are held in reserve to follow the division in its progress inland. However, it must be remembered that they may be called on at any time to supplement the second echelon medical service of the Medical Battalion.

110. Regimental Medical Detachment.—For functions of the Regimental Medical Detachment see Par. 105.

One half of the Shore Battalion Section, reinforced by litter-bearers from the Band or Medical Battalion, is attached to the Shore Company and lands normally in the fourth (or fifth) wave. It immediately sets up an aid station in the beach area. It is the responsibility of this aid station to care for all wounded in the beach area until they can be evacuated. It will also serve as a clearing station for evacuation of wounded until elements of the Medical Battalion arrive on the far shore.

The physical features of the site of an aid station on a beach will vary from a comfortable building to a place on the open beach without shelter from the elements of enemy fire. Although it will rarely be possible to find a site that satisfies all requirements, the following are desirable in an aid station site: natural cover and concealment, protection from enemy fire, convenience to the troops served, economy in litter carry, accessibility to supporting medical troops, proximity to natural lines of drift of wounded, lateral communications to other beaches, proximity to water, and protection from the elements. Locations in proximity to terrain features or other military establishments that invite enemy fire or air action should be avoided:—Examples are prominent landmarks, important road intersections, weapons positions, and ammunition and other dumps.

111. Medical Company.—A Medical Company will normally be attached to an Engineer Boat and Shore Regiment in support of a regimental combat team. It should be landed on the far shore as soon as possible after the assault battalions have landed and cleared the beach of enemy small arms fire. The Medical Company may be assigned to boats in the formation transporting the reserve battalion or the regimental com-

mand group. In either case they may land with the formation or may be pulled out to land independently.

If the regimental combat team has landed on contiguous beaches the Medical Company normally will establish its clearing station near the shore and as near as possible to the center of gravity of the operation. If the landing has been on non-contiguous beaches or if the reserve battalion is landed on a non-contiguous beach, the Medical Company should probably be split to set up two clearing stations. Boats should be assigned for the transportation of the company exclusively, and the company should be divided among the boats in such a manner as to permit the split. Immediately after landing, liaison agents will contact the various aid stations (engineer and others) to determine their location. If possible, evacuation of casualties from the aid station to the clearing station will be by ¼ ton, 4 x 4, truck ambulances of the Collecting Platoon. If this is not possible, evacuation of casualties must necessarily be done by litter. Both ambulances and jeeps may be utilized also to collect casualties directly from the beach, transporting them to the clearing station. All casualties will be collected, treated, and evacuated, whether they are members of the Engineer Special Brigade or not. All second echelon medical service is done initially by the Medical Battalion, the division medical battalion being held in readiness to follow the regimental combat teams in their advance inland.

Casualties, able to withstand the rigors of the return trip, will be taken from the clearing station to the beach at points designated by the shore commander. One or more such locations may be designated for each beach. These casualties, in turn, will be evacuated by returning landing craft to the near shore or to hospital ships under cover of darkness.

112. Battalion Headquarters and Headquarters Detachment.—During the initial phases the various elements of Headquarters Detachment will remain on the near shore. Here medical supply points will be established at or near the Embarkation Points. The battalion commander will be with or in close liaison with the brigade commander. The detachment will be held in readiness to embark for the far shore. On reaching the far shore, it will take up its normal functions (see par. 106). It should be established near the clearing station nearest the center of gravity of operations. Lateral communications will then be established with the other clearing stations for the purpose of replenishing medical supplies.

Chapter 10
ORDNANCE MAINTENANCE COMPANY

		Paragraphs
Section I.	Mission	113-121
II.	Employment	122-123

Section I
MISSION

113. The mission of the Ordnance Maintenance Company is to perform 3rd echelon maintenance for all ordnance equipment and material of the brigade and to keep the brigade adequately supplied with items of ordnance issue at all times. Its goal is to keep all ordnance equipment, material, and supplies at full strength and in first class operating condition at all times.

114 Brigade Ordnance Officer.—The brigade ordnance officer, a major, functions in the dual capacity of special staff officer and company commander of the ordnance Maintenance Company. For staff functioning see FM 101-5.

115. Brigade Ordnance Officer's Section (Fig. 26).—This section consists of the brigade ordnance officer, a first lieutenant, ammunition officer, and the necessary enlisted assistants to enable the section to carry on its functions. These functions are covered fully in FM 100-10, FM 9-5, and FM 9-10. Briefly they include formulation of ordnance studies, plans, and policies for the benefit of the brigade. Planning and supervision of ammunition requirements, requests, and reports are of particular importance.

The ammunition officer will utilize personnel of this section to set up and operate the brigade ammunition office and ammunition dump(s).

When necessary troops from the army ammunition battalion or from the brigade, and quartermaster transportation, must be requested for attachment to the brigade ordnance officer for ammunition supply for the brigade.

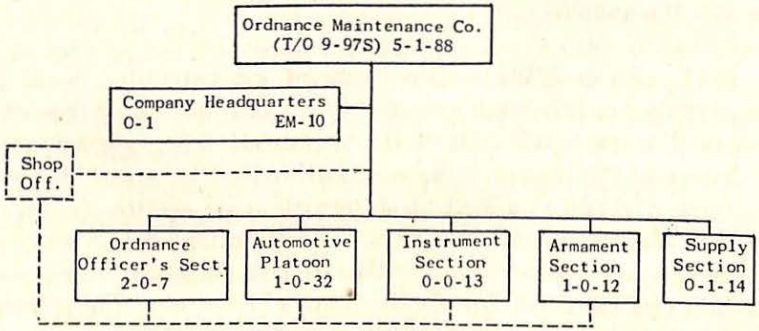

Fig. 26.—Ordnance Maintenance Company.

116. Company Headquarters (Fig. 26)—The Company Headquarters under the direction of a captain, the assistant company commander, is responsible for the normal administrative functions of the company.

117. Supply Section (Fig. 26).—The supply section, under a warrant officer, functions as the supply agency for the brigade and for the maintenance units of the ordnance company, for ordnance equipment and materials. The section is charged with the requisition, receipt, storage, care, and issue of all ordnance equipment and materials required for the brigade and for ordnance maintenance. For details see FM 9-10 and FM 9-5.

118. Armament Section (Fig. 26).—The armament section commanded by a second lieutenant is charged with the inspection, maintenance, and repair of the brigade ordnance weapons. (FM 9-10). Its enlisted personnel include artillery, rifle and pistol, and machine gun mechanics. It has a small arms repair truck.

119. Instrument Section (Fig. 26).—The instrument section under the direction of a staff sergeant is charged with the inspection, maintenance, and repair of all brigade fire control, and optical instruments together with their equipment and appurtenances. (FM 9-10). Its personnel include instrument and watch repairmen.

120. Automotive Section (Fig. 26).—The automotive platoon commanded by a first lieutenant is charged with the inspection, maintenance, and repair of all brigade ordnance and engineer automotive vehicles and equipment (FM 9-10). Its enlisted personnel includes all types of repairmen for automotive equipment.

121. Shop Office.—The table of organization does not specifically provide such an office, but the function of the office makes it imperative that it be organized from personnel of the three maintenance units and authorized to serve all three maintenance units or that an administrative section (shop office) be selected from each unit. The function of the shop office is to coordinate the activities of the shop and keep such records and perform the clerical work necessary for the efficient operation of the maintenance units (FM 9-10).

Section II

EMPLOYMENT

122. Near Shore.—The three maintenance units are normally set up on the near shore at or near the point of embarkation and return of the landing craft in order that they may serve the boats and receive items returned from the far shore for repair immediately. The rest of the company is normally located farther to the rear.

123. Far Shore.—The movement of the maintenance units to the far shore is normally piece-meal as the situation dictates and so that the necessary maintenance may be continuous. The entire unit may move to the far shore any time after the beachhead has been established.

Chapter 11

QUARTERMASTER SERVICE

		Paragraphs
Section I.	Mission	124
II.	Organization and Functions	125-128
III.	Employment	129-131

Section I

MISSION

124. Mission.—The mission of the Quartermaster Headquarters and Headquarters Company with necessary attached quartermaster units, is to provide, efficiently and economically, the requisite quartermaster service for the Engineer Special Brigade.

Section II

ORGANIZATION AND FUNCTIONS

125. Quartermaster Service.—*a.* The organic Quartermaster Headquarters and Headquarters Company supervises and administers all quartermaster units attached to the Engineer Special Brigade and together with these units performs all quartermaster services. One or more of the following units will normally be attached to the brigade during training in the continental United States and will be authorized where required in theaters of operation:

(1) Quartermaster Gasoline Supply Company (TO 10-77) which has transporting capacity of 16,000 gallons in five gallon cans carried on twenty 2 ½ ton trucks with one ton trailers, and has 4 portable gasoline dispensing pumps.

(2) Quartermaster Truck Company (TO 10-57), which has forty-eight 2 ½ ton trucks with one ton trailers for work.

(3) Quartermaster Service Company (TO 10-67), which has a labor pool of 160 laborers.

When the tactical situation warrants, any of the following may be attached:

Quartermaster Salvage Collecting Section (TO 10-187)
187)

Quartermaster Sterilization and Bath Platoon (TO 10-177)

Quartermaster Laundry Platoon (TO 10-167)

Quartermaster Bakery Company (TO 10-147)

Quartermaster Graves Registration Platoon (TO 10-297)

assist in gasoline and oil supply, or may be transferred to the far shore or released from attachment early after embarkation has begun. This all depends on the situation.

d. The Quartermaster Gasoline Supply Company transports gasoline and oil and operates distributing points for refueling boats and vehicles. Part or all of the 9 tank trucks (3 to each Boat Battalion) may be attached to this company for this purpose.

e. The Quartermaster Service Company (labor unit) is employed in the preparation of Embarkation Areas, stocking of dumps for the brigade on the near shore, and loading supplies for the brigade for the initial crossing. For the resupply phase this unit may be transferred to the far shore. Loading of these craft on the near shore is a function of service troops organic or attached to the division.

f. Other units mentioned in par. 130 perform the services, when required, indicated by their name.

131. Far Shore.—If the situation on the far shore requires it, the truck and service companies, in whole or in part, may be transferred to the far shore and attached to the shore engineers there to assist in the resupply phase. Such a situation would exist where dumps are located a considerable distance inland and supplies are unloaded from naval craft on to trucks for transportation several miles to the dumps. Again, depending on the situation, the Service Company may be assigned as part of the crews of naval craft to assist both in loading and unloading.

Chapter 12
MARINE MAINTENANCE

		Paragraphs
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II.	The Boat Maintenance Battalion	133-139
III.	Base Shop Battalion	140-141

Section I
RESPONSIBILITY

132. Echelons of Maintenance.—Units responsible for performance of the four echelons of marine maintenance are:

1st Echelon	Boat Company
2nd Echelon	Boat Company
3rd Echelon	Boat Maintenance Battalion
4th Echelon	Base Shop Battalion

For details of the proper performance of these functions, and the organizations to carry them out see Tentative Training Guides Nos. 2 and 3.

Section II
THE BOAT MAINTENANCE BATTALION

133. Mission.—The mission of the Boat Maintenance Battalion is to perform 3rd echelon and limited 4th echelon maintenance for all marine equipment of the Engineer Special Brigade. Its goal is to keep all boats in operating condition and ready for action at all times.

134. Boat Maintenance Battalion (Fig. 28).—The battalion is organized to provide inspection service to assure that boats are properly maintained and serviced by the using unit, and to effect repairs beyond the capacity of the using units' repair facilities and personnel.

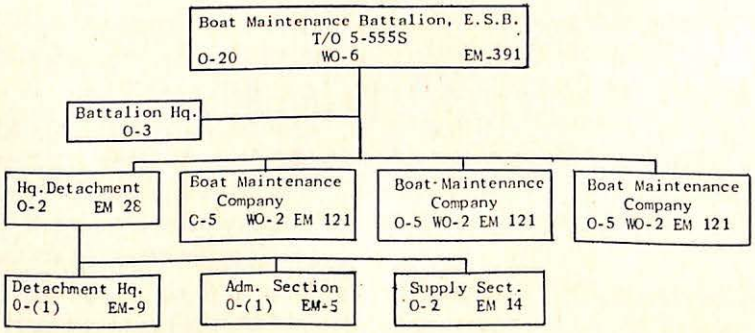


Fig. 28.—Boat Maintenance Battalion.

135. Battalion Headquarters (Fig. 28).—*a.* This Headquarters consists of the battalion commander (lieutenant colonel), executive (major), and adjutant (first lieutenant).

b. Battalion Commander.—The battalion commander is also brigade boat maintenance officer on the special staff of the brigade commander. As such he keeps the brigade commander advised at all times of the condition of boats and status of maintenance, and will recommend remedial measures when required. He issues necessary instructions concerning first and second echelon maintenance, and inspects to see that these instructions are carried out. He works in close cooperation with the marine maintenance officers of the Boat Battalions.

c. The executive and adjutant perform their normal duties (see FM 101-5).

136. Headquarters Detachment (Fig. 28).—*a. Detachment Headquarters* under supervision of the adjutant provides for the administration of the detachment.

b. The Administrative Section under supervision of the adjutant provides the necessary clerical personnel for the operation of Battalion Headquarters.

c. The Supply Section is under the supervision of a captain, who has a second lieutenant as his assistant. It has the necessary enlisted supply personnel, including stock clerks, and necessary truck transportation.

Adequate supply of marine parts is essential. If no Base Shop Battalion is operating in the theater, the highest element for marine maintenance is the Boat Maintenance Battalion. All boat maintenance supplies must then be issued from the marine parts depots or general depots direct to the Boat Maintenance Battalion, and the battalion must stock a sufficient supply for current needs. This requires a small depot which the Supply Section operates in addition to its normal supply functions for the battalion and brigade.

137. Boat Maintenance Company (Fig. 29).—*a. Company Headquarters* includes the captain, company commander, and the necessary supervisory enlisted assistants and administrative personnel.

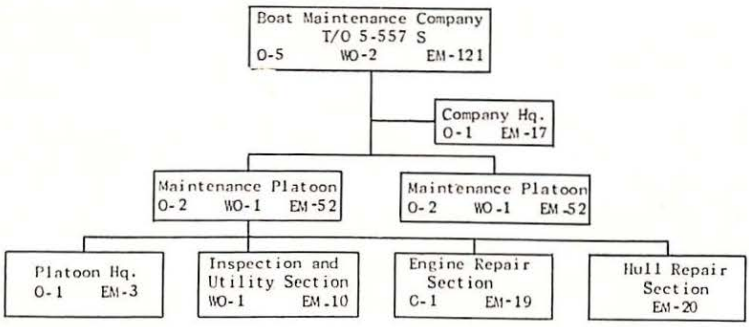


Fig. 29.—Boat Maintenance Company.

b. The Maintenance Platoon, commanded by a first lieutenant, with a second lieutenant in charge of the Engine Repair Section, has the personnel and equipment to make any repairs necessary on any type of boat issued the brigade except such repairs as require extensive re-manufacture of hulls or engines, or such as are so extensive that time will not permit their being handled in the field.

c. Equipment.—The company is not completely mobile in that it does not have sufficient organic land or water transportation to move all its tools, equipment, and men. However, its shops are mobile. All shop equipment is mounted in trucks and generally can be operated from the trucks. Special transportation must be furnished to move individual tools, spare parts boxes, and other organization equipment of the company.

The following are the principal items of equipment:

5 Power Plant, Trailer Mounted
2 Shops, motorized, emergency repair
2 Shops, motorized, machine shop, light
1 Shop, motorized, machine shop, heavy
2 Shops, motorized, small tool repair
2 Shops, motorized, tool and bench
4 Shops, motorized, welding
2 Boats, salvage, LCM(3)
2 Cranes, tractor, 20 ton, 20 ft. boom
2 Tractors, crawler, Diesel w/angledozer, 80 H.P.

This equipment is divided equally between the two platoons of the company, except that the heavy machine shop, and the one power plant, trailer mounted, to run it, are assigned to the company and may be operated by either platoon as required.

138. Employment.—The battalion may be employed tactically in three general ways.—*a. As a battalion* in one location operating three shops. The battalion commander controls the shops and allocates the work irrespective of its origin.

b. Companies in support of Boat and Shore Regiments with their shops located either centrally or in close support near the regiments. The battalion commander still exercises control, but the work done by the company shops is that of the regiment supported.

c. Companies attached to Boat and Shore Regiments with their shops located with the regiments. The battalion commander exercises supervision as brigade boat maintenance officer, but control is by the regimental commanders and repairs are made as directed by them. This method is used where the regiments are operating at a distance from the brigade.

139. Movement to Far Shore.—A time will arise when a maintenance unit can be used on the far shore. This time will usually occur when a sufficient beachhead has been established to permit the landing of heavy equipment and supplies. The question of how the battalion is to be employed will depend on the situation as it exists when the decision is to be made. The battalion commander has several choices in the matter.

a. He may send one or two companies to the far shore, leaving the balance to clean up the near shore. This would be the normal set-up if the battalion had been operating under battalion control, and the set-up on the far shore was to be under battalion control.

b. He may send one platoon of each company to the far shore to support the regiment the company had been supporting. This would be used when companies had been supporting Boat and Shore Regiments or where the situation on the far shore demanded such a set-up.

c. If a company were already attached to a Boat and Shore Regiment, he would either leave the matter up to the Regimental and Boat Maintenance Company commanders, or make recommendation to the brigade commander for relief of the company from attachment to the regiment.

d. Rarely, he may send his entire unit to the far shore at one time. This is unusual, as there will always be work to be completed on the near shore, and the operation of supply boats to and from the far shore will keep some work going on.

Section III

BASE SHOP BATTALION

140. Assignment.—The assignment of a Base Shop Battalion for fourth echelon boat maintenance will be essential in any theater of operation where one or more Engineer Special Brigades are engaged. It may be assigned under corps or army control, or may be attached to an Engineer Special Brigade depending on the situation.

141. Reference.—The organization, functions, and employment of this unit are covered in Tentative Training Guide No. 3, and hence are not repeated here.

Chapter 13
WEAPONS AND EMPLOYMENT

		Paragraphs
Section I.	Allocation	142-144
II.	Defense of Boat Movements	145-148
III.	Defense of Far Shore	149-153
IV.	Security on Near Shore	154

Section I
ALLOCATION

142. General.—All units of the Engineer Special Brigade are armed with individual or crew served weapons or both, except the medical units and the chaplains who are unarmed. For characteristics of these weapons see appropriate field and technical manuals.

143. Individual Weapons.—Individual weapons are issued on the following basis:

a. Pistols, automatic, cal. .45.—1 per officer of grade of major and above.

b. Rifle, cal. .30, M-1.—53 to the Combat Platoon of Headquarters Company of the Shore Battalion.

c. Rifle, cal. .30, M1903.—1 per 4 enlisted men grades 4 to 7 inclusive except the Combat Platoon of Headquarters Company of the Shore Battalion as noted above.

d. Carbine, cal. .30.—All officers, warrant officers, and enlisted men not armed with pistol or rifle as noted above.

e. Launcher, grenade, M-7.—1 per rifle, cal. .30, M-1.

f. Launcher, grenade, M-1.—1 per rifle, cal. .30, M1903 except for Brigade Headquarters Company in which the basis of issue is 1 per 2 rifles, cal. .30, M1903, and for the Quartermaster Company which has no launchers.

144. Crew Served Weapons.—Crew served weapons are issued as follows:

a. Machine Gun, cal. .30 M1919A4.—2 per command and navigation boat, patrol boat, and 36′ landing craft (LCVP) on scarf ring mount (NOTE: 20% of those in the Boat Battalion are provided with additional ground mounts M2). 4 in Weapons Section of the Shore Company on tripod ground mounts, M2.

b. Machine Gun, cal. .50, AC, air cooled M-2, Flexible.—2 per 50′ tank lighter (LCM(3)), and salvage boat on pedestal mount, M39. (NOTE: 20% of those in the Boat Battalion are provided with additional ground mounts, M3).

2 in Brigade Headquarters Company on AA ground mounts.

2 in Ordnance Company on truck mounts, M32.

2 in Signal Company on AA ground mounts, M3.

6 in Combat Platoon, Headquarters Company, Shore Battalion on AA ground mounts, M3.

2 in Boat Maintenance Company (1 per Engine Repair Section) on AA ground mounts, M3.

c. Launcher, rocket, AT, 2.36" M-1.—1 per 3 boats in the Boat Company.

6 in the Machine Gun section of the Combat Platoon, Headquarters Company, Shore Battalion.

4 in Weapons Section of the Shore Company.

4 in Boat Maintenance Company (2 each Maintenance Platoon).

5 in Quartermaster Company.

d. Gun, 37mm. AT, M3A1.—6 in Combat Platoon Headquarters Company, Shore Battalion.

Section II
DEFENSE OF BOAT MOVEMENTS

145. General.—The .30 caliber and .50 caliber machine guns mounted on the boats are provided primarily for the defense of boat movements against air attack. They also provide some protection against attack of the boat movement by small surface craft and are used for defense on both the near and far shore.

146. Boat Machine Guns.—*a.* During all boat movements, guns should be kept at 'half load' except when in action. To facilitate the control of landing craft in a wave under varying conditions, several formations will be used. They include the Column, the Closed V, the Open V, and the Line Abreast (see Tentative Training Guide No. 2). Each formation must be considered separately to determine the proper procedure in anti-aircraft gunnery.

b. Column.—Boats will normally move in Column during a shore-to-shore movement prior to arrival at the Line of Departure. Boats in Column present a long axial target to attacking planes. Aerial attack by strafing or light demolition and fragmentation bombs will usually be effected by planes flying courses roughly parallel to or at a slight angle to the axis of the wave, passing from bow to stern or from stern to bow of each boat. Thus the plane or planes present an incoming target for the guns of each boat in succession (See Figure 30).

c. Closed V.—Boats moving in Closed V formation may expect aerial attack from any direction or from several direc-

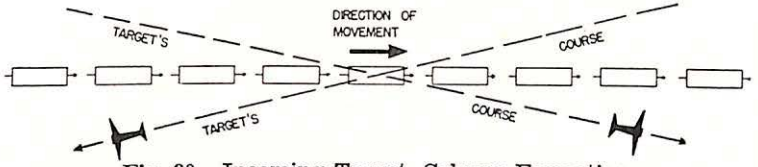


Fig. 30.—Incoming Target, Column Formation.

tions simultaneously. When boats are moving in this formation sectors should be assigned each boat depending upon the boat's position in the wave. The sector boundaries will be observed by airguards in spotting approaching aircraft to narrow down the area which must be watched by the individual. In the event of simultaneous attack from several directions, gunners will limit themselves to targets appearing in their particular sectors (See Figures 31a and 31b).

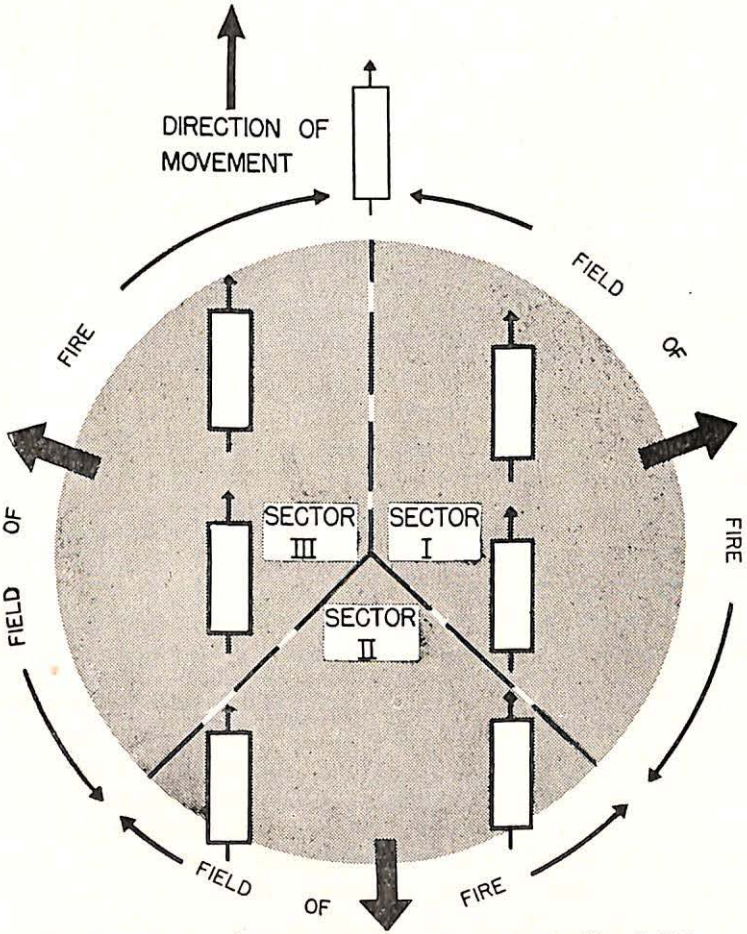


Fig. 31a.—Sector Assignment for a Seven-Boat, Closed "V" Formation.

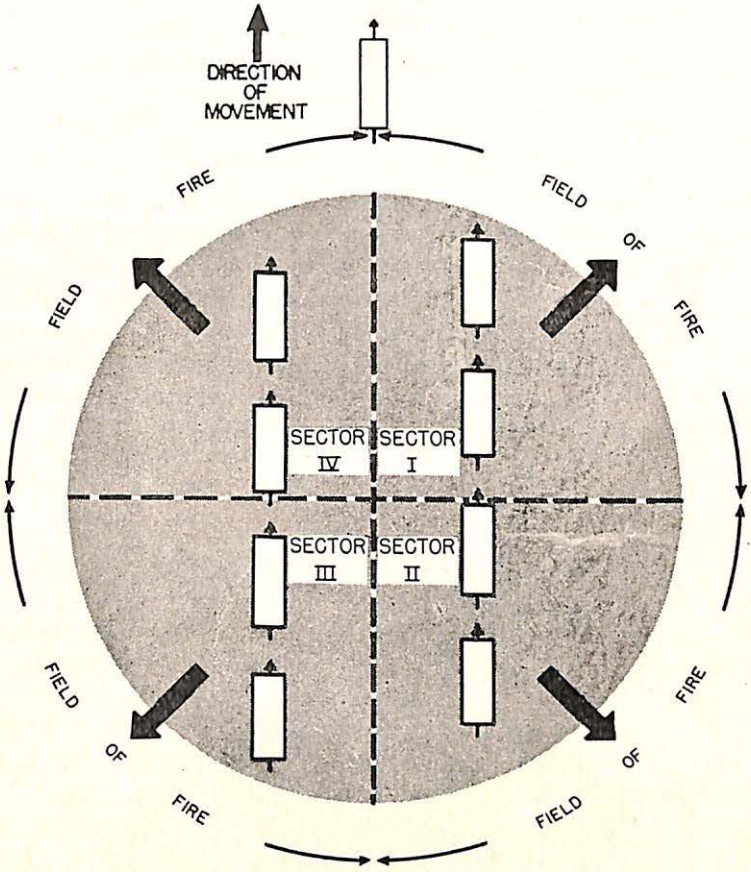


Fig. 31b.—Sector Assignment for a Nine-Boat, Closed "V" Formation.

d. Open "V".—Where time allows, boats moving in Closed "V" formation will form an Open "V" if attack is expected but not yet sustained. In such case, boats will normally be too widely spaced to permit the observation of sectors, and the action of the gunners will be independent.

e. Line Abreast.—The gunnery problem of boats landing on the far shore is very similar to that of boats moving in column. When landing, the wave will normally strike the beach in Line Abreast formation. Here the wave has a transverse axis, and the attacking planes may be expected to attack as shown in *Figure 32,* raking the boats from port to starboard or vice-versa. The gunners of each succeeding boat under the target's line of flight will fire on the attacking plane as soon as possible.

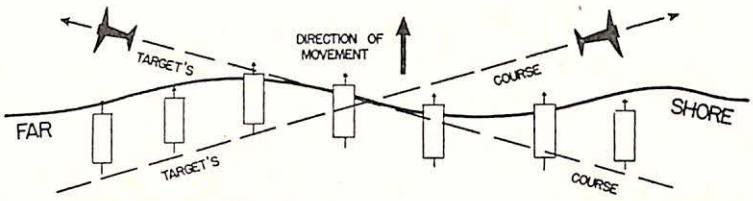


Fig. 32.—Transverse Target; Line Abreast Formation.

147. Other Weapons.—*a. The rocket launcher* is intended primarily as an anti-tank and anti-vehicular weapon for defense against mechanized attack directed at the boats landed on the far shore. It may be fired from the boat or from shore. It has a secondary use against small surface craft attacking the boat formation during the movement or when beached.

b. The grenade launcher is employed similarly to the rocket launcher.

c. The carbine and 1903 rifle is carried by all boat crews for fire against enemy personnel, in surface craft, or ashore, directing an attack against the boats.

148. Use of Boat Weapons at Far Shore.—Fire against targets on the shore, if not prohibited by considerations of secrecy and surprise, normally will be delivered by boats of the first wave only, unless other boats or waves are directly attacked. The location of friendly units during the initial phase of operations on the far shore is often ill-defined, and the danger of succeeding waves firing into friendly troops is too great to be risked.

Immediately upon arrival at the far shore, ground mounts carried for boat-mounted machine guns should be sent ashore and placed at the disposal of the Boat Control Section. Where possible, guns from damaged boats should be removed and turned in to the Boat Control Section for use as replacements on undamaged boats whose guns have been put out of commission, or for use on the ground mounts to supplement the Shore Battalion defenses (see par. 149 below).

After retraction, machine guns and ammunition should be checked at the first possible moment. Stoppages should be cleared, and partially used or empty ammunition chests should be replaced.

Section III
DEFENSE OF FAR SHORE

149. General.—*a.* Upon the arrival of shore engineers on the far shore, the responsibility of the shore commanders for beach defense begins.

b. As stated in par. 148 some boat-mounted weapons may pass to the command of the shore units. In some cases damaged landing craft on the beach may be in position to deliver fire with the guns mounted on the decks. In this event no change of mounts need be made. Regardless of whether the guns are fired from ground mounts or the boats, all fire on the far shore should be coordinated by the engineer shore unit commander.

c. The Shore Battalion has the following crew-served weapons for the defense of the beach:

Combat Platoon, Headquarters Company:
6 — 37-mm Antitank Guns, M3.
6 — .50 caliber Machine Guns, M2 (Aircraft Flexible) on AA mounts.

Weapons Section, each Shore Company:
4 — .30 caliber Machine Guns (M1919A4) on ground mounts.

150. Emplacement and Employment of Crew-Served Weapons.—*a. 37-mm Anti-tank Gun.*—The primary function of the 37-mm antitank gun is defense against moving vehicular targets. The first consideration in selecting the firing position to fulfill this primary mission is the probable avenues of approach of hostile vehicles. In covering an avenue of approach, the gun should be placed to fire where the movement of the target is restricted laterally by defiles such as ditches, banks, flanking swamps, woods, or like obstructions. Obstacles, including road blocks, covered by fire must be used to fullest extent practicable. If there are no approaches which have been channelized by natural or man-made obstructions, positions on ground where wide fields of fire are afforded should be selected. When effective concealment in firing position is impracticable, the gun squad will occupy a cover position while one of the members observes; on the orders of the squad leader, the squad will move the gun into firing position.

Alternate and supplementary positions must be selected and prepared in advance. An alternate position is one from which the primary fire mission can be executed and to which

the gun can be moved quickly if its primary position is discovered and becomes untenable due to enemy fire. Disposition of anti-tank guns in depth is prohibited by the small number available, so that the use of supplementary positions is essential. Obviously, secondary positions should be located in rear of those occupied initially, so as to provide for continuous and all round defense.

b. Anti-aircraft machine guns should be emplaced in such a way as to permit 360° field of fire laterally, and a clear field of fire overhead. These requirements preclude the use of overhead concealment such as trees or camouflage nets which cannot be quickly removed. Guns should not under normal circumstances be emplaced singly; at least two guns should be emplaced to provide adequate protection for a single point objective. Due to the fact that guns overheat rapidly, and because ammunition will be limited, only planes flying incoming courses, or courses directed against the objective protected by the respective guns, should be fired on, and fire should be opened at slant ranges of less than five hundred yards. To assure the greatest possible hit expectancy, guns should be located within about fifty yards of the point objective to which they are assigned. As is the case of anti-tank guns, the number of anti-aircraft guns provided for the Shore Battalion is very small. Consequently the Combat Platoon commander on the far shore should provide fire protection only for those installations which can be defended against hostile air action by no other method. Anti-aircraft machine guns landed in the initial phases of the attack should be assigned the mission of protecting points on the beach where unavoidable congestion will occur in unloading the boats. As the movement ashore develops, dumps, road junctions, and truckheads should be given anti-aircraft defense. Personnel boats, or vehicles which can be defended passively by dispersion or concealment will receive only incidental protection from anti-aircraft machine guns. The reconnaissance for and preparation of alternate and supplementary positions should be made standing operating procedure for every Combat Platoon. As a rule, the machine gun target will remain in the field of fire no longer than five or six seconds and the gunner must be in the saddle, ready to fire, as soon as the target appears.

c. The light machine gun, caliber .30 on ground mount, is a direct fire weapon designed to deliver automatic fire at close and mid-ranges against personnel and unarmored ve-

hicles. It is primarily designed as an offensive weapon, but its properties of high mobility and low relief adapt it to the execution of missions of defense of the front and flanks of far shore operations against infiltration or flanking maneuvers.

The characteristics of the mount and the normal location of the weapon well removed from far shore elements vulnerable to aerial attack make the use of light machine guns for anti-aircraft fire exceptional. Light machine guns also provide local defense for antitank guns. The light machine gun opens fire on foot troops and unarmored vehicles accompanying or following hostile armored vehicles or attempting to remove obstacles.

Whenever practicable the Weapons Section leader will control the fire of the guns in his section. He locates the approximate gun positions as directed by the Shore Battalion commander, assigns targets, fixes ammunition expenditures, and instructs or signals as to when fire will be opened. He exercises the functions of fire direction by assignment of target areas or fire sectors to the squad leaders who then exercise fire control functions. The delegation of fire-control functions to the squad leaders will usually be necessary until the beach has been well developed.

d. Employment.—No definite rules can be laid down for the employment of weapons on the far shore which will fit every situation; assume however a shore company operating as part of a battalion landing team:

(1) In the initial stage of the operation (see Fig. 33), weapons which have arrived at the far shore for beach defense may be the four .30 caliber machine guns of the Shore Company's Weapons Section, with two 37-mm antitank guns and two .50 caliber anti-aircraft machine guns from the Combat Platoon of the Headquarters Company. Immediately upon landing, the following procedure would be followed:

(a) Two .30 caliber infantry machine guns move forward to the nearest cover and to the left and right flanks of the beach to guard against infiltration.

(b) The antitank guns with the remaining two .30 caliber machine guns for local defense move farther out on the flanks to intercept hostile mechanized targets.

(c) The 2 anti-aircraft machine guns are set up as a pair on the beach where attack by strafing aircraft may be expected to converge, due either to the central location of the point chosen or to concentration of activity.

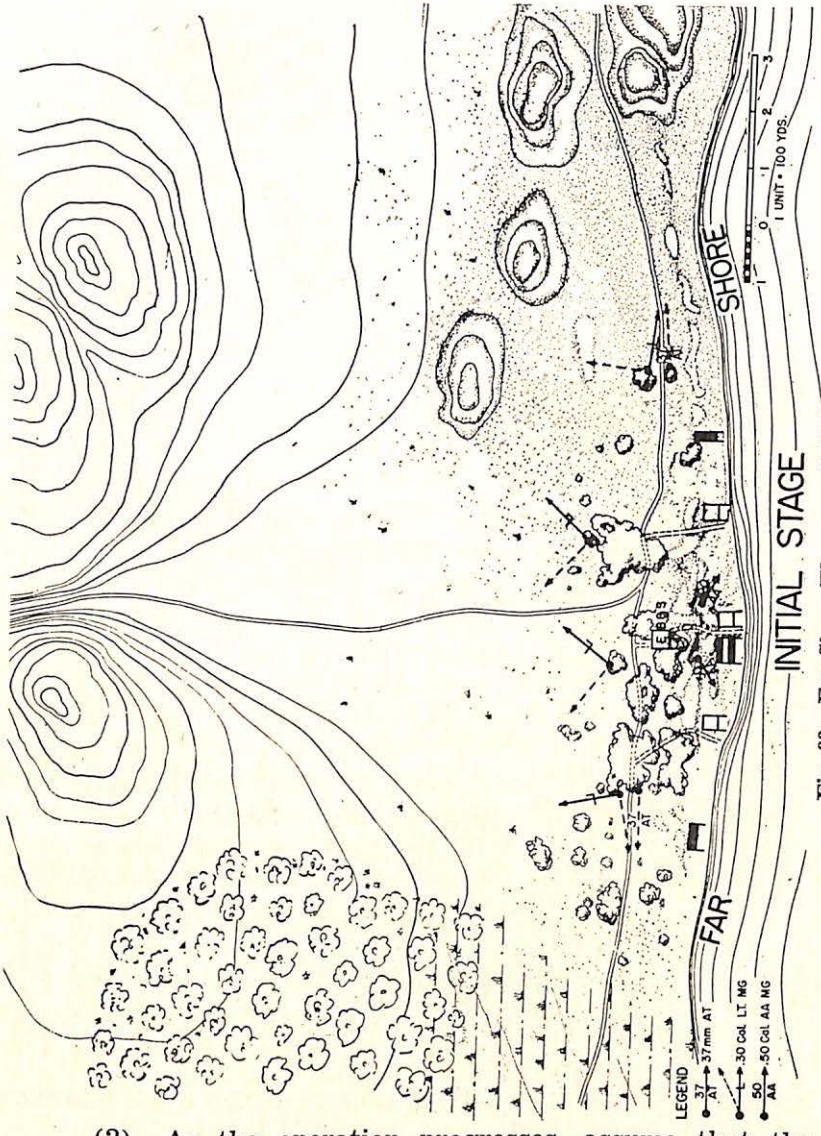


Fig. 33.—Far Shore Weapons; Initial Stage.

(2) As the operation progresses, assume that the Shore Battalion armament at the far shore will be augmented by guns taken from landing craft and set up on ground mounts. Dumps will have been established and traffic regulated so as to eliminate concentrations of personnel and material on the beach itself. The following developments in the disposition of weapons may then be expected to take place (See Fig. 34):

(a) The caliber .30 machine guns of the Weapons Section, with additional guns taken from 36′ craft, move to

positions in pairs, within about fifty yards of selected point objectives.

(d) In this phase of the operation, a thorough reconnaissance will have been made to insure that the guns are emplaced so as to take full advantage of concealment, cover, and terrain, and to provide the most effective fields of fire.

151. Support of Crew-Served Weapons.—*a.* All crew-served weapons should be supported by rifle fire and the 37 mm antitank gun should be furnished additional supporting fire by caliber .30 machine guns. This rifle and caliber .30 machine gun fire is designed for protection of the crew-served weapon against infiltrating or direct attack by personnel. The caliber .30 and caliber .50 machine guns should be furnished anti-mechanized protection.

b. The weapons crews are equipped to provide this support for themselves since the remainder of the shore units are normally engaged in other shore duties. Thus the Combat Platoon of Headquarters Company of the Shore Battalion is armed with M-1 rifles for anti-personnel protection of their caliber .50 machine guns and 37 mm antitank guns, and with rocket and grenade launchers for anti-mechanized defense of their caliber .50 machine guns. Likewise the Weapons Section of the Shore Company is equipped with rocket and grenade launchers for anti-mechanized defense of their caliber .30 machine guns, and with 1903 rifles and carbines for anti-personnel defense. In addition selected men and equipment, other than the weapons crews, will be assigned missions and positions for anti-personnel and anti-mechanized defense of crew-served weapons; these positions to be taken up in case of attack.

152. Defense of Beach.—A defense area must be organized and prepared coordinating the use of all shore personnel and weapons for all-around defense of the beach. This defense area will be occupied and defended to repulse a determined attack by land, or sea, or both. See Field Manuals 7-10, 7-15, 7-20, and 5-15.

153. Warning System.—An essential part of any defense is adequate warning systems against mechanized, air, and gas attack. These systems must be established using personnel and all available communication facilities (wire, radio, visual, sound, and messenger). See FM 100-5.

Section IV
SECURITY ON NEAR SHORE

154. *a.* All units, except medical and the chaplains, are adequately armed for defense of their assembly areas, dispersal areas, dumps, equipment, and operations on the near shore as outlined in paragraph 142. Full use will be made of all weapons and personnel required to provide the nesssary defense and warning systems in accordance with the principles ennunciated in FM 100-5.

b. Note that Brigade Headquarters Company is provided with 2 caliber .50 anti-aircraft machine guns for defense of the brigade command post.

Appendix I

TABLES OF ORGANIZATION AND EQUIPMENT

T/O's are shown complete on the following charts. Only principal items of equipment have been included. For all items, see T/E's as follows:

Hq. & Hq. Co., ESB	T/E	5-510-1S
Medical Detachment, ESB	T/E	5-510-1MS
Hq. & Hq. Co., EB & SR	T/E	5-512S
Medical Detachment, EB & SR	T/E	5-511MS
Hq. & Hq. Co., Boat Bn., EB & SR	T/E	5-516S
Engineer Boat Company	T/E	5-517S
Hq. & Hq., Shore Bn., EB & SR	T/E	5-526S
Engineer Shore Company	T/E	5-527S
Bn. Hq. & Hq. Det., Boat Maintenance Bn.	T/E	5-556S
Engineer Boat Maintenance Company	T/E	5-557S
Ordnance Special Maintenance Company	T/E	9-97S
Q. M. Hq. & Hq. Co., ESB	T/E	10-276S
Signal Company, ESB	T/E	11-517S
Hq. & Hq. Det., Medical Bn., ESB	T/E	8-196S
Medical Company, Bn., ESB	T/E	8-197S

1. BRIGADE HEADQUARTERS

a. Brig. Hq. Section

1–Brig. General, Brigade Commander
1–Colonel, Executive Officer
2–Majors, 1 Hq. Commandant and Provost Marshal; 1 Lt. Commander, USC&GS, Brigade navigation officer
1–1st Lieut., Aid-de-camp
1–Carbine, Cal. .30 M1 A2
4–Pistol, automatic, Cal. .45

b. Adm. Section

1–Major, S-1
1–Captain, Adjutant
1–1st Lieut., Personnel Officer
1–Warrant Officer, Clerical
1–M/Sgt., Sergeant Major (502)
1–Tech. Sgt., Personnel (816)
1–S/Sgt., Classification (275)
2–Sgts., Personnel (816)
1–T/5, Classification (275)
2–T/4, Clerk, General (055)
1–T/4, Clerk, Typist (405)
2–T/5s, Clerks, General (055)
2–Pvts., Clerk, General (055)
1–Pvt., Clerk, Typist (405)
2–Pvts., Duplicating machine Oper. (128)
1–T/4, Stenographer (213)
14–Carbine Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45
5–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Duplicating equipment, gelatin, 22"x33" (E)

c. Intelligence Section

1–Major, S-2
1–1st Lieut., Reconnaissance
1–Tech. Sgt., Intelligence (631)
1–Sgt., Intelligence (631)
1–Sgt., Clerk, General (055) Navigation NCO
1–T/5, Cartographer (387)
1–T/4, Draftsman (070)
1–T/5, Stenographer (213)
1–T/5, Clerk, Typist (405)
1–Pvt., Clerk, General (055)
5–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45
5–Rifles, U. S. Cal. .30 M1903 A3
3–Launchers, grenade, M1

d. Operations Section

1–Lieut. Colonel, S-3
1–Major, Liaison Officer
1–Captain, Asst. S-3
2–2nd Lieuts., Boat Commanders
1–M/Sgt., Section Leader (652)
1–Tech. Sgt., Operations (814)
2–S/Sgts.—
Draftsman (070)
Operations (814)
2–T/5s, Clerk, Typist (405)
1–T/4, Clerk, Typist (405)
1–T/4, Draftsman (070)
2–T/5s, Enginemen (081)
2–T/4s, Motorboat Oper. (Coxswain) (314)

2–T/5s, Seamen (065)
1–Pvt., Clerk, General (055)
2–Pvts., Seamen (065)
2–Boats, Command and Navigation
20–Carbines, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45
4–Guns, machine, Cal. .30 M1919 A4
1–Sketching equipment (E)

e. Supply Section

1–Lieut. Colonel, S-4
1–Captain, Automotive Officer
2–M/Sgts.
Motor (813)
Supply (821)
1–S/Sgt., Mech., auto (909)
1–T/5, Clerk, General (055)
1–Pvt., Clerk, General (055)
1–Pvt., Clerk, Typist (405)
4–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45
3–Rifles, U. S. Cal. .30 M1903 A3
1–Drafting equipment, regimental (E)
1–Launcher, grenade, M1

f. Inspector General

1–Major, Inspector General
1–Tech. Sgt., Chief Clerk (052)
1–Carbine, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45

g. Quartermaster Section

1–Lieut. Colonel, Brigade Q. M. and Q. M. Company Commander
1–Pistol, automatic, Cal. .45

h. Boat Maintenance Section

1–Lieut. Colonel, Brigade Boat Maintenance Officer and Boat Maintenance Battalion Commander
1–Pvt., Clerk, Typist (405)
1–Carbine, Cal. .30 M1 A2
1–Pistol, Cal. .45

i. Ordnance Section

1–Major, Brigade Ordnance Officer and Ordnance Company Commander
1–Pistol, Cal. .45

j. Signal Section

1–Lieut. Colonel, Brigade Signal Officer and Signal Company Commander
1–Pistol, Cal. .45

k. Finance Section

1–Major, Brigade Finance Officer
1–M/Sgt., Sergeant Major (502)
1–S/Sgt., Clerk, Typist (405)
1–T/4, Clerk, Typist (405)
1–T/4, Clerk, General (055)
1–Pvt., Clerk, Typist (405)
5–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45

l. C. W. S. Section

1–Major, Brigade Chemical Officer
1–S/Sgt., Supply (821)
1–Sgt., Chemical (870)
1–Pvt., Clerk, Typist (405)
3–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45

m. Medical Section

1–Lieut. Colonel, Brigade Surgeon and Medical Battalion Commander
1–Pistol, automatic, Cal. 45

n. Chaplain's Section

1–Major, Brigade Chaplain
1–T/5, Chaplain's Asst. (534)
1–Carbine, Cal. .30 M1 A2

2. BRIGADE HEADQUARTERS COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–1st Lieut., Special Service Officer
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Cpl., Clerk, Company (405)
1–T/5, Carpenter, construction (050)
2–T/4s, Cooks (060)
2–T/5s, Cooks (060)
1–T/5, Athletic Instructor (283)
1–T/5, Entertainment Director (442)
2–Pvts., Cook's helper (521)
1–Pvt., Electrician (078)
1–Pvt., Ln. Agent (bugler) (503)
5–Pvts., Orderly (695)
1–Pvt., Supply (821)
2–Pvts., Basic (521)
21–Carbines, Cal. .30 M1 A2
2–Guns, machine, Cal. .50 M2 HB flexible
4–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Truck, ¼ T, 4 x 4
2–Trucks, 2½ T, 6 x 6, cargo, w/winch
1–Camouflage Set "A" (E)

b. Transportation Platoon

1–1st Lieut., Transportation Officer
1–Sgt., Motor (813)
1–Cpl., Dispatcher (410)
1–T/4, Mech. auto (014)

1–T/5, Mech. auto (014)
4–T/5s, Truck drivers, light (345)
7–Pvts., Truck drivers, light (345)
2–Pvt., Basic (521)
14–Carbines, Cal. .30 M1 A2
4–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Trailer, 1 T, 2-wheeled, tank 250 gals.
1–Trailer, 1 T, 2-wheld, cargo
9–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, command
2–Trucks, 2½ T, 6 x 6, cargo, w/winch

3. MEDICAL DETACHMENT—E. S. B.

3–Captain or 1st Lieut., 1 Dental
1–Tech. Sgt., Med. NCO (673)
1–S/Sgt., Med. NCO (673)
1–Sgt., Med. Supply NCO (673)
1–Cpl., Clerk, Company (405)
1–T/5, Ambulance driver (699)
1–T/5, Clerk, General (055)
1–T-5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
1–T/5, Technician, Sanitary (196)
1–T/4, Technician, Surgical (861)
2–T/5s, Technicians, Surgical (861)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (659)
2–Pvts., Technician, Medical (409)
5–Pvts., Technician, Surgical (861)
3–Pvts., Truck drivers, light (345)
3–Pvts., Basic (521)
1–Ambulance, ¾ T, 4 x 4
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Chest, M. D. #4
1–Chest, M. D. #60
1–Regt. Hq. M. D. equipment
1–Tent, squad, M 1942

4. REGIMENTAL HEADQUARTERS

a. Regimental Headquarters

1–Colonel, Regimental Commander
1–Lieut. Colonel, Executive Officer
2–Majors, 1 S-3; 1 S-4
5–Captains, 1 adjutant; 1 coast and geodetic survey officer; 1 intelligence officer; 1 special service officer; 1 motor maintenance officer
2–1st Lieuts., 1 asst. intelligence officer; 1 asst. operations officer
2–2nd Lieuts., 1 boat commander; 1 transportation officer and asst. supply officer
2–Warrant Officer, 1 asst. adjutant; 1 asst. supply officer
11–Carbines, Cal. .30 M1 A2
4–Pistols, automatic, Cal. .45

5. REGIMENTAL HEADQUARTERS COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–2nd Lieut., Co. administrative officer
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
2–T/4s, Cook (060)
2–T/5s, Cook (060)
1–T/5, Truck driver, light (345)
1–T/5, Entertainment Director (442)
1–T/5, Athletic Instructor (283)
2–Pvts., Cook's helpers (521)
2–Pvts., Truck drivers, light (345)
1–Pvt., Ln. Agent (bugler) (drives truck) (503)
16–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, ¾ T, 4 x 4, C. & R.
1–Truck, 2½ T, 6 x 6, cargo, w/winch

b. Headquarters Platoon

(1) Administrative Section
(1)–Captain, adjutant from Regt. Hq.
(1)–Warrant Officer, asst. adjutant from Regt. Hq.
1–M/Sgt., Sgt. Major (502)
1–Tech. Sgt., personnel (816)
1–T/5, Chaplain's Asst. (534)
1–T/4, Clerk, General (405)
1–T/5, Clerk, General (405)
1–T/4, Clerk, Postal (056)
1–T/5, Clerk, Postal (056)
2–Pvts., Clerks, General (055)
1–Pvt., Duplicating machine oper. (128)
3–Pvts., orderlies (695)
10–Carbines, Cal. .30 M1 A2
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
1–Duplicating equipment, gelatin, 22″ x 33″ (E)

(2) Operations Section
1–Major, S-3 from Regt. Hq.
1–1st Lieut., asst. S-3 from Regt. Hq.
1–M/Sgt., Operations (814)
1–Sgt., Chemical (870)
1–T/4, Clerk, General (405)
1–T/4, Draftsman (070)
3–T/5s, Enginemen (081)
1–Pvt., Clerk, General (055)
3–T/4s., Motorboat Opers. (Coxswain) (314)
3–Pvts., Seamen (065)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
1–Boat, Patrol
1–Boat, Power, Utility
14–Carbines, Cal. .30 M1 A2
6–Guns, machine, Cal. .30
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
2–Trucks, ¼ T, 4 x 4
1–Drafting and duplicating equipment (E)

(3) Intelligence Section
(2)–Captains, 1 S-2 and 1 navigator from Regt. Hq.
(1)–1st Lieut., asst. S-2 from Regt. Hq.
1–S/Sgt., Camoufleur (800)
1–T/5, Clerk, General (405)
1–T/5, Draftsman (070)
1–Pvt., Truck driver, light (345)
3–Carbines, Cal. .30 M1 A2
1–Launcher, grenade M1
1–Rifle, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4

(4) Supply Section
1–Major, S-4 from Regt. Hq.
1–2nd Lieut., asst. S-2 from Regt. Hq.
1–M/Sgt., Supply (821)
1–Tech. Sgt., subsistence (820)
1–S/Sgt., Supply (821)
1–S/Sgt., Water supply (253)
1–T/5, Clerk, General (405)
1–T4, Water supply engineer (253)
1–T/5, Water filter operator (083)
1–T/4, Water supply engineer (253)
1–Pvt., Clerk, General (055)
3–Pvts., Truck drivers, light (345)
2–Pvts., Water filter operators (083)
1–Pvt., Basic (521)
10–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
3–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Electric light equipment, portable, 5 kw
1–Water supply equipment (E)
1–Pipe-fitting equipment (E)
1–Sign painting equipment (E)
1–Tinsmith equipment (E)

(5) Maintenance Section
1–Captain, Motor Maintenance Officer from Regt. Hq.
1–Tech. Sgt., Motor (813)
1–T/5, Carpenter, Construction (050)
2–T/4s, Mechanics, automobile (014)
3–T/5s, Mechanics, automobile (014)
1–Pvt., Basic (521)
6–Carbines, Cal. .30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Welding and cutting set (E)
1–Carpenter and Wheelwright Set (Q)

c. Communications Platoon

(1) Platoon Headquarter
1–1st Lieut., Regt. Communications Officer
1–M/Sgt., Communications Chief (542)
1–S/Sgt., Message Center Chief (674)
3–T/5s, Clerks, Code (806)
3–T/5s, Clerks, message center (667)
1–T/4, Switchboard Operator (650)
2–T/5s, Switchboard Operators (650)
5–Pvts., Switchboard Operators (650)
3–Pvts., Messengers (675)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Panel set

(2) Radio Section
1–S/Sgt., Radio Operator (776)
9–T/4s, Radio Operators (766)
10–T/5s, Radio Operators (766)
1–T/4, Radio repairman (174)
9–Pvts., Radio Operators (766)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
24–Carbines, Cal. .30 M1 A2
8–Launchers, grenade M1
8–Rifles, Cal. .30 M1903 A3
1–Truck, 2½ T, 6 x 6, cargo w/winch
1–Trailer, cargo, 1 T, 2-wheel
2–SCR 193
4–SCR 284

1–SCR 177 B
1–BC 312
(3) Wire Section
1–S/Sgt., Chief field lineman (644)
2–T/5s, linesmen, field (641)
4–Pvts., Linesmen, field (641)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
7–Carbines, Cal. 30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Truck, 1½ T, 6 x 6, cargo w/winch
3–SB BD 71
1–SB BD 72
5–TG set, TG 5
20–Tel EE 8
20–Miles, wire W-110

d. Embarkation Platoon

3–Captains, embarkation control officers
3–S/Sgts., Section Leaders (652)
3–Sgts., Ordnance (825)
15–T/5s, Receiving and Shipping Checkers (186)
3–Pvts., Basic (521)
23–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3

6. MEDICAL DETACHMENT—EB & SR

a. Headquarters Section

1–Major, Regt. Surgeon
1–Captain or 1st Lieut., Dental
1–Tech. Sgt., Med. NCO (673)
1–Sgt., Med. NCO (673)
2–T/5s, Clerks, General (055)
1–T/5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
1–Pvt., Technician, Sanitary (196)
1–Pvt., Truck driver, light (345)
1–Truck, ¼ T, 4 x 4
1–Chest, M. D. #60
1–Chest, M. D. #4
1–Tent, Squad, M1942
1–Regt. Hq. M. D. equipment

b. Boat Battalion Section

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
2–T/5s, Technicians, Medical (409)
1–T/5, Truck driver, light (345)
6–T/5s, Technicians, Surgical (409)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
4–Pvts., Technicians, Medical (409)
2–Pvts., Basic (521)
2–Pvts., Truck drivers, light (345)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

c. Shore Battalion

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
1–T/5, Truck driver, light (345)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
2–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

7. BOAT BN. HQ.

a. Battalion Headquarters

1–Lieut. Colonel, Boat Bn. Commander
1–Major, Executive Officer and S-3
1–Captain, Marine Maintenance
1–Carbine, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45

8. BOAT BN. HQ. CO.

a. Company Headquarters

1–Captain, Co. Commander and Bn. Adj.
1–1st Sgt., (585)
1–S/Sgt., mess (824)
1–S/Sgt., supply (821)
1–Cpl., truckmaster (668)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Typist (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Mechanic, automobile (014)
2–T/5s, Truck drivers, light (345)
1–Pvt., Cook's helper (521)
1–Pvt., Ln. Agent, bugler and truck driver (503)
2–Pvts., Orderlies (695)
3–Pvts., Truck drivers, light (345)

2–Pvts., Basic (521)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–Trucks, 2½ T, 6 x 6, Tank 750 gals.
1–Truck, 1½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Canvas worker set (E)
1–Electric lighting equipment, portable 5 kw (E)
1–Sign painting equipment
1–Sketching equipment

b. Communications Section

1–1st Lieut., Bn. Communications Officer
1–S/Sgt., Communication Chief (542)
1–T/5, Clerk, Code (806)
1–T/5, Clerk, Message Center (667)
6–T/4s, Radio Operators (766)
6–T/5s, Radio Operators (766)
1–T/4, Radio Repairman (174)
1–T/5, Truck driver, light (345)
1–Pvt., Truck driver, light (345)
1–Pvt., Clerk, Message Center (667)
6–Pvts., Radio Operators (766)
1–Pvt., Clerk, Code (806)
22–Carbines, Cal. .30 M1 A2
6–Launchers, grenade M1
6–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/winch
9–SCR 284

c. Operations Section

1–1st Lieut., Intelligence and Operations (navigation)
2–2nd Lieuts., Boat Commanders
2/Tech. Sgts., boatswains (065)
1–S/Sgt., Intelligence & Operations (631)
7–T/4s, Motorboat Operators, Coxswains (314)
1–T/3, Radar, Technician (872)
1–T/4, Radar, Technician (872)
1–T/5, Radar, Technician (872)
7–T/5s, Enginmen (081)
7–Pvts., Seamen (065)
5–Pvts., Basic (521)
2–Boats, Command and Navigation
5–Boats, Patrol
28–Carbines, Cal. .30 M1 A2
14–Machine Guns, Cal. .30
7–Launchers, grenade M1
7–Rifles, Cal. .30 M1903 A3
1–Boat, Power, Utility
1–Drafting and duplicating equipment (E)

9. BOAT COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–1st Lieut., 2nd in command
1–1st Sgt. (585)
2–S/Sgts.
1–mess (824)
1–supply (821)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Supply (835)
3–T/4s, Cook (060)
4–T/5s, Cook (060)
1–Pvt., Clerk, General (055)
5–Pvts., Cook's helpers (521)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
20–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Boat, Power, Utility
1–Camouflage Set "A" (E)
1–Canvas worker set (E)

b. Operations Section

2–1st Lieuts., Patrol Boat Commanders
1–S/Sgt., Boatswain (065)
4–T/5s, Enginemen (081)
4–T/4s, M. B. Oper. coxswain (314)
4–Pvts., Seamen (065)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
2–Boats, Patrol
12–Carbines, Cal. .30 M1 A2
8–Guns, machine, Cal. .30 M1919 A4
4–Launchers, grenade M1
4–Launchers, rocket AT, 2.36 in. M1
4–Rifles, Cal. .30 M1903 A3

c. Communications Section

1–2nd Lieut., Communications Officer
1–Sgt., Communications Chief (542)
1–T/4, Clerk, M. C. (667)
4–T/4s, Radio Oper. (766)
4–T/5s, Radio Oper. (766)
4–Pvts., Radio Oper. (776)
2–Pvts., Basic (521)

1–T/5, Mech. auto (014)
4–T/5s, Truck drivers, light (345)
7–Pvts., Truck drivers, light (345)
2–Pvt., Basic (521)
14–Carbines, Cal. .30 M1 A2
4–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Trailer, 1 T, 2-wheeled, tank 250 gals.
1–Trailer, 1 T, 2-wheld, cargo
9–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, command
2–Trucks, 2½ T, 6 x 6, cargo, w/winch

3. MEDICAL DETACHMENT — E. S. B.

3–Captain or 1st Lieut., 1 Dental
1–Tech. Sgt., Med. NCO (673)
1–S/Sgt., Med. NCO (673)
1–Sgt., Med. Supply NCO (673)
1–Cpl., Clerk, Company (405)
1–T/5, Ambulance driver (699)
1–T/5, Clerk, General (055)
1–T-5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
1–T/5, Technician, Sanitary (196)
1–T/4, Technician, Surgical (861)
2–T/5s, Technicians, Surgical (861)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (659)
2–Pvts., Technician, Medical (409)
5–Pvts., Technician, Surgical (861)
3–Pvts., Truck drivers, light (345)
3–Pvts., Basic (521)
1–Ambulance, ¾ T, 4 x 4
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Chest, M. D. #4
1–Chest, M. D. #60
1–Regt. Hq. M. D. equipment
1–Tent, squad, M 1942

4. REGIMENTAL HEADQUARTERS

a. Regimental Headquarters

1–Colonel, Regimental Commander
1–Lieut. Colonel, Executive Officer
2–Majors, 1 S-3; 1 S-4
5–Captains, 1 adjutant; 1 coast and geodetic survey officer; 1 intelligence officer; 1 special service officer; 1 motor maintenance officer
2–1st Lieuts., 1 asst. intelligence officer; 1 asst. operations officer
2–2nd Lieuts., 1 boat commander; 1 transportation officer and asst. supply officer
2–Warrant Officer, 1 asst. adjutant; 1 asst. supply officer
11–Carbines, Cal. .30 M1 A2
4–Pistols, automatic, Cal. .45

5. REGIMENTAL HEADQUARTERS COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–2nd Lieut., Co. administrative officer
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
2–T/4s, Cook (060)
2–T/5s, Cook (060)
1–T/5, Truck driver, light (345)
1–T/5, Entertainment Director (442)
1–T/5, Athletic Instructor (283)
2–Pvts., Cook's helpers (521)
2–Pvts., Truck drivers, light (345)
1–Pvt., Ln. Agent (bugler) (drives truck) (503)
16–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, ¾ T, 4 x 4, C. & R.
1–Truck, 2½ T, 6 x 6, cargo, w/winch

b. Headquarters Platoon

(1) Administrative Section
(1)–Captain, adjutant from Regt. Hq.
(1)–Warrant Officer, asst. adjutant from Regt. Hq.
1–M/Sgt., Sgt. Major (502)
1–Tech. Sgt., personnel (816)
1–T/5, Chaplain's Asst. (534)
1–T/4, Clerk, General (405)
1–T/5, Clerk, General (405)
1–T/4, Clerk, Postal (056)
1–T/5, Clerk, Postal (056)
2–Pvts., Clerks, General (055)
1–Pvt., Duplicating machine oper. (128)
3–Pvts., orderlies (695)
10–Carbines, Cal. .30 M1 A2
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
1–Duplicating equipment, gelatin, 22″ x 33″ (E)

(2) Operations Section
1–Major, S-3 from Regt. Hq.
1–1st Lieut., asst. S-3 from Regt. Hq.
1–M/Sgt., Operations (814)
1–Sgt., Chemical (870)
1–T/4, Clerk, General (405)
1–T/4, Draftsman (070)
3–T/5s, Enginemen (081)
1–Pvt., Clerk, General (055)
3–T/4s., Motorboat Opers. (Coxswain) (314)
3–Pvts., Seamen (065)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
1–Boat, Patrol
1–Boat, Power, Utility
14–Carbines, Cal. .30 M1 A2
6–Guns, machine, Cal. .30
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
2–Trucks, ¼ T, 4 x 4
1–Drafting and duplicating equipment (E)

(3) Intelligence Section
(2)–Captains, 1 S-2 and 1 navigator from Regt. Hq.
(1)–1st Lieut., asst. S-2 from Regt. Hq.
1–S/Sgt., Camoufleur (800)
1–T/5, Clerk, General (405)
1–T/5, Draftsman (070)
1–Pvt., Truck driver, light (345)
3–Carbines, Cal. .30 M1 A2
1–Launcher, grenade M1
1–Rifle, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4

(4) Supply Section
1–Major, S-4 from Regt. Hq.
1–2nd Lieut., asst. S-2 from Regt. Hq.
1–M/Sgt., Supply (821)
1–Tech. Sgt., subsistence (820)
1–S/Sgt., Supply (821)
1–S/Sgt., Water supply (253)
1–T/5, Clerk, General (405)
1–T4, Water supply engineer (253)
1–T/5, Water filter operator (083)
1–T/4, Water supply engineer (253)
1–Pvt., Clerk, General (055)
3–Pvts., Truck drivers, light (345)
2–Pvts., Water filter operators (083)
1–Pvt., Basic (521)
10–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
3–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Electric light equipment, portable, 5 kw
1–Water supply equipment (E)
1–Pipe-fitting equipment (E)
1–Sign painting equipment (E)
1–Tinsmith equipment (E)

(5) Maintenance Section
1–Captain, Motor Maintenance Officer from Regt. Hq.
1–Tech. Sgt., Motor (813)
1–T/5, Carpenter, Construction (050)
2–T/4s, Mechanics, automobile (014)
3–T/5s, Mechanics, automobile (014)
1–Pvt., Basic (521)
6–Carbines, Cal. .30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Welding and cutting set (E)
1–Carpenter and Wheelwright Set (Q)

c. Communications Platoon

(1) Platoon Headquarter
1–1st Lieut., Regt. Communications Officer
1–M/Sgt., Communications Chief (542)
1–S/Sgt., Message Center Chief (674)
3–T/5s, Clerks, Code (806)
3–T/5s, Clerks, message center (667)
1–T/4, Switchboard Operator (650)
2–T/5s, Switchboard Operators (650)
5–Pvts., Switchboard Operators (650)
3–Pvts., Messengers (675)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Panel set

(2) Radio Section
1–S/Sgt., Radio Operator (776)
9–T/4s, Radio Operators (766)
10–T/5s, Radio Operators (766)
1–T/4, Radio repairman (174)
9–Pvts., Radio Operators (766)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
24–Carbines, Cal. .30 M1 A2
8–Launchers, grenade M1
8–Rifles, Cal. .30 M1903 A3
1–Truck, 2½ T, 6 x 6, cargo w/winch
1–Trailer, cargo, 1 T, 2-wheel
2–SCR 193
4–SCR 284

1–SCR 177 B
1–BC 312
(3) Wire Section
1–S/Sgt., Chief field lineman (644)
2–T/5s, linesmen, field (641)
4–Pvts., Linesmen, field (641)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
7–Carbines, Cal. 30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Truck, 1½ T, 6 x 6, cargo w/winch
3–SB BD 71
1–SB BD 72
5–TG set, TG 5
20–Tel EE 8
20–Miles, wire W-110

d. Embarkation Platoon

3–Captains, embarkation control officers
3–S/Sgts., Section Leaders (652)
3–Sgts., Ordnance (825)
15–T/5s, Receiving and Shipping Checkers (186)
3–Pvts., Basic (521)
23–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3

6. MEDICAL DETACHMENT—EB & SR

a. Headquarters Section

1–Major, Regt. Surgeon
1–Captain or 1st Lieut., Dental
1–Tech. Sgt., Med. NCO (673)
1–Sgt., Med. NCO (673)
2–T/5s, Clerks, General (055)
1–T/5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
1–Pvt., Technician, Sanitary (196)
1–Pvt., Truck driver, light (345)
1–Truck, ¼ T, 4 x 4
1–Chest, M. D. #60
1–Chest, M. D. #4
1–Tent, Squad, M1942
1–Regt. Hq. M. D. equipment

b. Boat Battalion Section

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
2–T/5s, Technicians, Medical (409)
1–T/5, Truck driver, light (345)
6–T/5s, Technicians, Surgical (409)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
4–Pvts., Technicians, Medical (409)
2–Pvts., Basic (521)
2–Pvts., Truck drivers, light (345)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

c. Shore Battalion

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
1–T/5, Truck driver, light (345)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
2–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

7. BOAT BN. HQ.

a. Battalion Headquarters

1–Lieut. Colonel, Boat Bn. Commander
1–Major, Executive Officer and S-3
1–Captain, Marine Maintenance
1–Carbine, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45

8. BOAT BN. HQ. CO.

a. Company Headquarters

1–Captain, Co. Commander and Bn. Adj.
1–1st Sgt., (585)
1–S/Sgt., mess (824)
1–S/Sgt., supply (821)
1–Cpl., truckmaster (668)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Typist (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Mechanic, automobile (014)
2–T/5s, Truck drivers, light (345)
1–Pvt., Cook's helper (521)
1–Pvt., Ln. Agent, bugler and truck driver (503)
2–Pvts., Orderlies (695)
3–Pvts., Truck drivers, light (345)

2–Pvts., Basic (521)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–Trucks, 2½ T, 6 x 6, Tank 750 gals.
1–Truck, 1½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Canvas worker set (E)
1–Electric lighting equipment, portable 5 kw (E)
1–Sign painting equipment
1–Sketching equipment

b. Communications Section

1–1st Lieut., Bn. Communications Officer
1–S/Sgt., Communication Chief (542)
1–T/5, Clerk, Code (806)
1–T/5, Clerk, Message Center (667)
6–T/4s, Radio Operators (766)
6–T/5s, Radio Operators (766)
1–T/4, Radio Repairman (174)
1–T/5, Truck driver, light (345)
1–Pvt., Truck driver, light (345)
1–Pvt., Clerk, Message Center (667)
6–Pvts., Radio Operators (766)
1–Pvt., Clerk, Code (806)
22–Carbines, Cal. .30 M1 A2
6–Launchers, grenade M1
6–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/winch
9–SCR 284

c. Operations Section

1–1st Lieut., Intelligence and Operations (navigation)
2–2nd Lieuts., Boat Commanders
2/Tech. Sgts., boatswains (065)
1–S/Sgt., Intelligence & Operations (631)
7–T/4s, Motorboat Operators, Coxswains (314)
1–T/3, Radar, Technician (872)
1–T/4, Radar, Technician (872)
1–T/5, Radar, Technician (872)
7–T/5s, Enginmen (081)
7–Pvts., Seamen (065)
5–Pvts., Basic (521)
2–Boats, Command and Navigation
5–Boats, Patrol
28–Carbines, Cal. .30 M1 A2
14–Machine Guns, Cal. .30
7–Launchers, grenade M1
7–Rifles, Cal. .30 M1903 A3
1–Boat, Power, Utility
1–Drafting and duplicating equipment (E)

9. BOAT COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–1st Lieut., 2nd in command
1–1st Sgt. (585)
2–S/Sgts.
1–mess (824)
1–supply (821)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Supply (835)
3–T/4s, Cook (060)
4–T/5s, Cook (060)
1–Pvt., Clerk, General (055)
5–Pvts., Cook's helpers (521)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
20–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Boat, Power, Utility
1–Camouflage Set "A" (E)
1–Canvas worker set (E)

b. Operations Section

2–1st Lieuts., Patrol Boat Commanders
1–S/Sgt., Boatswain (065)
4–T/5s, Enginemen (081)
4–T/4s, M. B. Oper. coxswain (314)
4–Pvts., Seamen (065)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
2–Boats, Patrol
12–Carbines, Cal. .30 M1 A2
8–Guns, machine, Cal. .30 M1919 A4
4–Launchers, grenade M1
4–Launchers, rocket AT, 2.36 in. M1
4–Rifles, Cal. .30 M1903 A3

c. Communications Section

1–2nd Lieut., Communications Officer
1–Sgt., Communications Chief (542)
1–T/4, Clerk, M. C. (667)
4–T/4s, Radio Oper. (766)
4–T/5s, Radio Oper. (766)
4–Pvts., Radio Oper. (776)
2–Pvts., Basic (521)

13–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–PA System, portable 1000-yard range
2–SCR 284
21–SCR 300

d. Boat Maint. & Salvage Section
1–2nd Lieut., Boat Maint. Officer
1–Tech. Sgt., Master Mech. (342)
1–S/Sgt., boatswain (065)
1–Sgt., Foreman, carpenter, ship (202)
1–T/5, Blacksmith (024)
1–T/4, Carpenter, ship (202)
1–T/5, Carpenter, ship (202)
1–T/5, Electrician (078)
2–T/4s, Mech., automobile (014)
2–T/5s, Mech., automobile (014)
1–T/4, M. B. Oper., coxswain (314)
1–Pvt., Carpenter, construction (050)
1–Pvt., Clerk, General (055)
1–Pvt., Rigger (189)
1–Pvt., Toolroom keeper (242)
2–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
1–Boat, Salvage and Maintenance
15–Carbines, Cal. .30 M1 A2
2–Guns, machine, Cal. .50 M2 H. B. flexible
6–Launchers, grenade M1
6–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/winch
1–Charger, battery, 12v, 2000w
1–Blacksmith equipment (E)
1–Blacksmith set (Q)
1–Carpenter and wheelwright set (Q)

e. 3 Boat Platoons (each)
1–1st Lieut., Platoon Commander
1–2nd Lieut., Asst. Platoon Commander
1–Tech. Sgt., Boatswain (065)
4–S/Sgts., Boatswains (065)
30–T/5s, Enginemen (081)
20–T/4s, M. B. Oper., Coxswain (314)
20–Pvts., Seamen (065)
8–Pvts., Basic (521)
10–Boat, surf landing 36′ LCVP
10–Boats, Lighter, tank 50′ LCM (3)
66–Carbines, Cal. .30 M1 A2
20–Guns, machine, Cal. .30 M1919 A4
20–Guns, machine, Cal. .50, M2 H. B., flexible
19–Launchers, grenade M1
6–Launchers, rocket AT 2.36 in. M1
19–Rifles, U. S. Cal. .30, M1903 A3

10. SHORE BATTALION HEADQUARTERS

a. Battalion Headquarters
1–Lieut. Colonel, Bn. Commander
1–Major, Executive Officer and S-3
1–1st Lieut., Adjutant
1–Carbine, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45

11. SHORE BN. HQ. COMPANY

a. Company Headquarters
1–Captain, Co. Comdr., Bn. Supply and Motor Officer
1–1st Sgt. (585)
1–Tech. Sgt., construction foreman (059)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
2–T/4s, Cooks (060)
1–T/5, Cook (060)
1–T/5, Air compressor operator and driver (467)
1–T/4, Mechanic, automobile (014)
1–T/5, Truck driver, light (345)
1–T/5, Truck driver, heavy (245)
1–T/5, Wrecker Oper. (529)
2–Pvts., Cook's helpers (521)
1–Pvt., Draftsman (070)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
1–Pvt., Orderly (drives truck) (695)
2–Pvts., Basic (521)
4–Rifles, Cal. .30 M1903 A3
4–Launchers, grenade M1
1–Compressor, air, motorized
18–Carbines, Cal. .30 M1 A2
1–Trailer, 1 T, 2-wheel cargo
1–Trailer, full flat bed, 16 T
2–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, 4 x 4, command
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Truck, 4 T, 6 x 6, wrecker, w/winch
1–Truck, 6 T, 6 x 6, P. M. w/winch
1–Camouflage Set "A" (E)
1–Canvas worker set (E)
1–Sign painting equipment (E)

b. Adm. Section
(1)–Captain, adjutant from Co. Hq.

1–S/Sgt., Sgt. Major (502)
1–T/5, Clerk, Typist (405)
2–Carbines, Cal. .30 M1 A2

c. Opns. Section

(1)–Major, S-3 from Bn. Hq.
1–S/Sgt., Opns. (814)
1–Pvt., Clerk, Typist (405)
3–Carbines, Cal. .30 M1 A2
1–Pvt., Truck driver, light (345)
1–Truck, ¼ T, 4 x 4
1–Drafting and duplicating equipment (E)
1–Sketching equipment (E)

d. Combat Platoon

(1) Platoon Headquarters
1–1st Lieut., Platoon Commander
1–2nd Lieut., Asst. Platoon Commander
1–S/Sgt., Platoon Sgt., (651)
1–T/5, Armorer (511)
4–Carbines, Cal. .30 M1 A2
(2) Anti-Tank Section
3–Sgts., Section Leaders (652)
6–Cpls., AT gunners (610)
2–T/5s, Truck drivers, light (345)
12–Pvts., Amm. carriers (504)
6–Pvts., AT gunners (610)
4–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
6–Carbines, Cal. .30 M1 A2
6–Guns, 37 mm, AT
29–Launchers, grenade, M7
29–Rifles, Cal. .30 M1
6–Trucks, 1½ T, 6 x 6, cargo, w/winch
(3) Machine Gun Section
3–Sgts., Section Leaders (652)
6–Cpls., gunners, M. G., heavy (605)
12–Pvts., Amm. carrier (504)
6–Pvts., Gunners, M. G. heavy (605)
2–Pvts., Basic (521)
5–Carbines, Cal. .30 M1 A2
6–Guns, machine, Cal. .50 M2 flexible
24–Launchers, grenade, M7
6–Launchers, rocket, AT 2.36 in., M1
24–Rifles, Cal. .30 M1

e. Communications Platoon

(1) Platoon Headquarters
1–1st Lieut., Commanding Officer
1–Tech. Sgt., Comm. chief (542)
1–S/Sgt., Message Center chief (674)
1–T/5, Clerk, Code (806)
1–T/5, Clerk, Message Center (667)
2–Pvts., Clerks, Code (806)
2–Pvts., Clerks, Message Center (667)
3–Pvts., Messengers (675)
9–Carbines, Cal. .30 M1 A2
3–Rifles, Cal. .30, M1903 A3
3–Launchers, grenade M1
8–Panel Sets
(2) Radio Section
1–S/Sgt., Radio Oper. (766)
1–T/3, Radio Oper. (766)
1–T/4, Radio Oper. (766)
1–T/5, Radio Oper. (766)
5–T/4s, Radio Oper. (776)
5–T/5s, Radio Oper. (776)
6–Pvts., Radio Oper. (776)
2–Pvts., Basic (521)
17–Carbines, Cal. .30 M1 A2
5–Rifles, Cal. .30 M1903 A3
5–Launchers, grenade M1
4–SCR 284
2–SCR 177 B
1–BC–312
(3) Wire Section
1–S/Sgt., Chief lineman, field (644)
2–T/5s, Linemen, field (641)
1–T/4, S. B. Oper. (650)
2–T/5s, S. B. Oper. (650)
1–T/5, Truck driver, light (345)
6–Pvts., Linemen, field (641)
5–Pvts., S. B. Oper. (650)
2–Pvts., Basic (521)
15–Carbines, Cal. .30, M1 A2
5–Rifles, Cal. .30 M1903 A3
5–Launchers, grenade M1
1–Trailer, 1 T, 2-wheel cargo
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–SB BD 71
1–SB BD 72
20–Telephone EE 8
20–Miles wire

12. SHORE COMPANY

a. Headquarters Platoon

(1) Fwd. Echelon Operating Section
1–Captain, Company Commander
1–1st Lieut., 2nd in command and reconnaissance officer
1–1st Sgt. (585)
1–T/5, Clerk, General (055)
2–T/5s, Reconnaissance (744)
1–Pvt., Clerk, General (055)
1–Pvt., Messenger (675) (drives truck)
2–Pvts., Basic (521)
8–Carbines, Cal. .30 M1 A2
2–Rifles, Cal. .30 M1903 A3
2–Launchers, grenade M1
1–Truck, ¼ T, 4 x 4
(2) Fwd. Echelon Comm. & Message Center

1–S/Sgt., Comm. Chief (542)
1–T/5, Clerk, Message Center (667)
4–Pvts., Messengers (675)
1–Pvt., Clerk, Message Center (667)
5–Carbines, Cal. .30 M1 A2
2–Rifles, Cal. .30 M1903 A3
2–Launchers, grenade, M1
(3) Rear Echelon
1–2nd Lieut., Mess, Supply & Motor Officer
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
1–T/5, Blacksmith (024)
2–T/4s, Cook (060)
1–T/5, Cook (060)
1–T/4, Mechanic, automobile (014)
1–T/5, Toolroom Keeper (242)
2–Pvts., Cook's helpers (521)
1–Pvt., Ln. Agt. (bugler) (drives truck) (503)
1–Pvt., Basic (521)
12–Carbines, Cal. .30 M1 A2
3–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–Launchers, grenade M1
1–Camouflage Set "A" (E)
1–Canvas worker set (E)
1–Sketching equipment (E)
(4) Weapons Section
1–2nd Lieut., Weapons Officer
1–Sgt., Weapons (804)
2–Cpls. Gunner, LMG (604)
1–T/5, Truck driver, light (345)
8–Pvts., Gunners, LMG (604)
1–Pvt., Truck driver, light (345)
10–Carbines, Cal. .30 M1 A2
4–Guns, machine, Cal. .30 M1919 A4
4–Launchers, rocket, AT 2.36 in. M1
4–Rifles, Cal. .30 M1919 A3
4–Launchers, grenade M1
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo

b. Pioneer Platoon

(1) Platoon Headquarters
1–1st Lieut., Platoon Commander
1–Tech. Sgt., Construction foreman (059)
1–S/Sgt., Demolition Foreman (533)
1–T/4, Crane Operator (063)
1–T/5, Decontaminating Equipment Oper. (809)
1–T/5, Demolition (027)
3–T/5s, Driver, Tractor, Bulldozer (359)
2–Pvts., Decontaminating equipment Oper. (809)
2–Pvts., Demolition (027)
6–Pvts., Laborer (590)
2–Pvts., Basic (521)
1–Crane, Truck, Mtd.
1–Tractor, Crawler Type, Diesel, w/angledozer 80 DBHP
2–Tractors, Crawler Type, Diesel, w/angledozer 35 DBHP
14–Carbines, Cal. .30 M1 A2
4–Rifles, Cal. .30 M1 A2
4–Launchers, grenade M1
20–Net, Camouflage Twine, 36′ x 44′
3–Detector Sets, S C R 625
(2) 3 Sections (each)
1–Sgt., Construction Foreman (059)
1–Cpl., Construction Foreman (059)
1–Pvt. or T/5, Carpenter, Bridge (035)
1–Pvt. or T/5, Carpenter, Construction (035)
2–Pvts., Demolition (027)
3–Pvts., Laborer (590)
3–Pvts., Rigger (189)
1–Pvt., Basic (521)
9–Carbines, Cal. .30 M1 A2
1–Demolition equipment (E)
1–Carpenter equipment (E)
1–Pioneer equipment (E)
4–Rifles Cal. .30 M1903 A3
4–Launchers, grenade M1

c. Utility Platoon

1–2nd Lieut., Platoon Commander
1–S/Sgt., Platoon Sgt (651)
2–Sgts., Construction Foremen (059)
5–Cpls., Construction Foremen (059)
6–T/5s, Truck driver, heavy (245)
60–Pvts., Longshoremen (270)
5–Pvts., Basic (521)
4–Trucks, 2½ T, 6 x 6, amph.
65–Carbines, Cal. .30 M1 A2
15–Launchers, grenade M1
15–Rifles, Cal. .30 M1903 A3

13. BOAT MAINT. BN. HEADQUARTERS
1–Lieut. Colonel, Bn. Commander and Brigade Boat Maintenance Officer
1–Major, Executive Officer
1–1st Lieut., Adjutant
1–Carbine, Cal. .30, M1 A2
2–Pistols, automatic, Cal. .45

14. BOAT MAINT. BN. HQ. DET.

a. Detachment Headquarters

1–S/Sgt., Mess and supply (824)

1–Cpl., Clerk, Company (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–Pvt., Cook's helper (521)
1–Pvt., Orderly (drives truck) (695)
2–Pvts., Basic (521)
1–Pvt., Truck driver, light (345)
7–Carbines, Cal. .30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, cargo, w/winch, 6 x 6

b. Administrative Section

(1)–1st Lieut., adjutant from Bn. Hq.
1–M/Sgt., Sgt. Major (502)
1–Tech. Sgt., Personnel (816)
1–T/4, Clerk, Typist (405)
1–T/5, Clerk, General (055)
1–Pvt., Truck driver, light (345)
4–Carbines, Cal. .30 M1 A2
1–Rifle, Cal. .30 M1903 A3
1–Launcher, grenade M1
1–Truck, ¼ T, 4 x 4

c. Supply Section

1–Captain, Bn. Supply Officer
1–2nd Lieut., Asst. Bn. Supply Officer
1–Tech. Sgt., Supply (821)
1–S/Sgt., Supply (821)
1–T/4, Clerk, stock (324)
1–T/4, Wrecker Oper. (529)
2–T/5s, Clerk, stock (324)
2–T/5s, Truck driver, light (345)
3–Pvts., Clerk, stock (324)
3–Pvts., Truck driver, light (345)
13–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel, cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, 1½ T, 6 x 6, cargo
1–Truck, 4 T, 6 x 6 wrecker, w/winch
2–2½ T, 6 x 6, cargo, w/winch

15. BOAT MAINT. COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–M/Sgt., Master Mechanic (342)
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
2–Cpls.
1–Clerk, Company (405)
1–Truckmaster (668)
1–T/5, Clerk, General (055)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Truck driver, heavy (245)
1–T/5, Truck driver, light (345)
2–Pvts., Cook's helper (521)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
3–Pvts., Basic (521)
1–Camouflage Set "A" (E)
1–Power plant, trailer mounted
1–Shop, motorized, machine shop, heavy
1–Trailer, pull, flat-bed, 16 T
1–Trailer, 1 T, 2-wheel cargo
4–Carbines, Cal. .30 M2 A2
4–Rifles, Cal. .30 M1903 A3
4–Launchers, grenade, M1
1–Sign painting equipment
1–Supplementary equipment, Maint. Co.
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Truck, 6 T, 6 x 6, P.M. w/ winch

b. 2 Maintenance Platoons (each)

(1) Platoon Headquarters
1–1st Lieut., Platoon Commander
1–T/5, Driver, tractor, bulldozer (359)
2–Pvts., Truck Driver, light (345)
1–Crane, tractor, 20 T, 20 Ft. boom
1–Tractor, Crawler Type, Diesel w/angledozer, 80 DBHP
3–Carbines, Cal. .30 M1 A2
1–Rifle, Cal. .30, M1903
1–Launcher, grenade, M1
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/ winch
1–Trailer, 1 T, 2-wheel
2–Power plant, trailer mounted
1–Charger, battery, 12v, 2000w, gasoline engine driven, portable
1–Boat, Power, Utility
1–Pioneer equipment

(2) Inspection & Utility Section
1–Warrant Officer, in charge
1–S/Sgt., Section Leader (652)
2–Sgts., carpenter, ship, inspector (202)
1–T/5, engineman (081)
1–T/4, Motorboat Oper., Coxswain (314)
1–T/4, Rigger (189)
1–T/5, Rigger (189)
2–Pvts., Rigger (189)
1–Pvt., Seaman (065)
1–Boat, salvage

2–Pvts., Basic (521)
29–Carbines, Cal. .30 M1 A2
10–Rifles, Cal. .30, M1903 A3

18. BRIGADE SIGNAL COMPANY

a. Brigade Signal Officers Section

1–Lieut. Colonel, Brigade signal officer, commands company for operations
1–Warrant Officer, signal, communications
1–Tech. Sgt., Chief clerk (052)
1–T/5, Clerk, General (055)
1–T/5, draftsman (075)
1–Pvt., orderly (bugler) (drives truck) (695)
5–Carbines, Cal. .30, M1 A2
1–Pistol, automatic, Cal. .45
1–Truck, ¼ T, 4 x 4
1–Drafting equipment

b. Headquarters Platoon

(1) Administrative & Mess Section
1–Captain, commands company for administration
1–1st Sgt. (585)
1–S/Sgt., mess (824)
1–Cpl., Clerk, company (405)
2–T/4s, Cook (060)
1–T/5, Cook (060)
1–Pvt., Clerk, General (055)
2–Pvts., Cook's helper (521)
2–Pvts., Truck driver, light (345)
2–Pvts., Basic (521)
11–Carbines, Cal. .30, M1 A2
3–Rifles, U.S. Cal. .30, M1903 A3
3–Launchers, grenade, M1
2–Guns, machine, Cal. .50, Browning M2 HB, flexible
1–Trailer, 1 T, 2-wheel, cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo

(2) Supply and Transportation Section
1–1st Lieut., Supply and Motor Officer
1–S/Sgt., supply (821)
1–S/Sgt., motor (813)
1–T/5, armorer, artificiers (drives truck) (511)
1–T/4, auto mech. (drives truck) (014)
1–T/5, Clerk, supply (835)
1–Pvt., Clerk, stock (324)
1–Pvt., Basic (521)
6–Carbines, Cal. .30, M1 A2
2–Launchers, grenade, M1
2–Rifles, U.S. Cal. .30, M1903 A3
1–Truck, 1½ T, cargo, w/winch
1–Truck, 2½ T, 6 x 6, cargo

c. Maintenance Repair Platoon

(1) Shore Battalion Section
1–2nd Lieut., Radio Officer
1–Tech. Sgt., Section Chief, radio repairman (174)
2–T/3s, radio repairmen (174)
2–T/4s, radio repairmen (174)
3–T/5s, radio repairmen (174) drives truck)
1–Pvt., Basic (521)
8–Carbines, Cal. .30, M1 A2
2–Launchers, grenade, M1
2–Rifles, U.S. Cal. .30, M1903 A3
1–Trailer, 1 T, 2-wheel cargo (carries power unit)
1–Truck, 1½ T, 6 x 6, cargo w/ winch
1–Truck, 2½ T, 6 x 6, cargo spare parts)
1–Truck, Small arms, Repair, M2

(2) Boat Battalion Section
1–Tech. Sgt., Section Chief, radio repairman (174)
1–T/3, radio repairman (174)
1–T/4, radio repairman (174)
1–T/5, radio repairman (174)
3–Carbines, Cal. .30, M1 A2
1–Launcher, grenade, M1
1–Rifle, U.S. Cal. .30, M1903 A3

(3) Boat Company Section
3–T/3s, radio repairmen (174)
3–T/4s, radio repairmen (174)
3–T/5s, radio repairmen (174)
1–Pvt., Basic (521)
7–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, U.S. Cal. .30, M1903 A3

d. Operations Platoon

(1) Brigade Headquarters Section
1–Tech. Sgt., Chief radio oper. (766)
1–T/3, radio operator (766)
1–T/4, radio operator (766)
1–T/5, radio operator (766)
3–Carbines, Cal. .30 M1 A2
1–Launcher, grenade, M1
1–Rifle, U.S. Cal. .30, M1903 A3

(2) Brigade Headquarters Company Section
1–1st Lieut., Radio Officer
1–2nd Lieut., Wire Officer
1–M/Sgt., Chief Lineman, field (644)
1–M/Sgt., Radio operator (766)
1–Tech. Sgt., M.C. chief (674)
2/Sgts., Asst. M.C. chief (674)
1–Sgt., Chief S.B. operator (537)
1–Sgt., Chief teletypewriter and telegraph operator (237) (236)
3–Sgts., Section Chiefs (652)
1–T/4, Clerk, Code (806)
2–T/5s, Clerk, Code (806)
1–T/4, Clerk, M.C. (667)
2–T/5s, Clerk, M.C. (drives truck) (667)

1–T/4, Installer repairman, telephone (638)
1–T/5, Installer repairman, telephone (drives truck) (638)
5–T/5s, Linemen, field (drives truck) (641)
2–T/3s, Radio operator (766)
2–T/4s, Radio operator (766)
3–T/5s, Radio operator (766)
1–T/4, Radio repairman (174)
1–T/5, S.B. operator (650)
1–T/5, Teletypewriter, operator (237)
1–T/4, Teletypewriter mechanic (239)
1–T/3, Telegraph operator (236)
1–T/4, Telegraph operator (236)
2–T/5s, Telegraph operator (236)
3–Pvts., Clerk, Code (806)
3–Pvts., Clerk, M.C. (667)
2–Pvts., Installer, repairmen, telephone (638)
16–Pvts., Linemen, field (641)
2–Pvts., S.B. operator (650)
1–Pvt., Teletypewriter operator (237)
6–Pvt., Basic (521)

(3) Brigade Headquarters Section
54–Carbines, Cal. .30, M1 A2
19–Launchers, grenade, M1
19–Rifles, U.S. Cal. .30, M1903 A3
2–Trucks, ¼ T, 4 x 4
2–Trucks, 1½ T, cargo, 6 x 6
8–Cable Strips, C C 344
2–Converters, M209
21–Lineman's equipment—TE 21
2–Panel Sets
2–Radio receivers, BC 312
2–Radio sets, SCR 193
2–Radio sets, SCR 284
2–Radio sets, SCR 177 B
1–Telegraph printer E-97
5–Telegraph sets, TG-50
40–Telephones, EE-8-A
1–Switchboard, BD-14
70–Miles of wire

19. MEDICAL BATTALION HEADQUARTERS

1–Lieut. Colonel, Bn. Commander
1–Major, Executive Off. & S-3
1–Captain, Asst. S-3 & Ln. Officer
1–1st Lieut., M.A.C., personnel officer
1–M/Sgt., Sgt. Major (502)
1–T/5, Clerk, Typist (405)
1–T/5, Stenographer (213)
3–Pvts., Light, truck drivers (345)
1–Pvt., orderly (695)
2–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, C. & R.

20. MEDICAL BN. HQ. DET.

a. Detachment Headquarters Section

1–Captain, M.A.C., detachment Comdr.
1–1st Sgt. (585)
1–S/Sgt., mess & supplies (824)
1–Sgt., motor (813)
1–Cpl., Clerk, Typist (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Truck driver, light (345)
1–T/5, Mechanic, automobile (014)
1–Pvt., bugler (803)
1–Pvt., Cook's helper (521)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
1–Trailer, 1 T, 2-wheel water tank, 250 gals.
2–Trucks, 2½ T, 6 x 6

b. Personnel Section

(1)–1st Lieut., M.A.C. from Bn. Hq.
1–Tech. Sgt., personnel (816)
1–T/4, Clerk, General (055)
1–T/5, Clerk, General (055)
1–Pvt., Clerk, General (055)

c. General and Medical Supply Section

1–1st Lieut., M.A.C., Supply Officer
1–Tech. Sgt., supply (821)
1–S/Sgt., supply medical (825)
1–Sgt., supply (821)
1–T/5, Truck driver, light (345)
1–Pvt., checker, receiving and shipping (186)
1–Pvt., Clerk, General (055)
2–Pvts., Truck driver, light (345)
2–Pvts., Basic (521)
3–Trucks, 2½ T, 6 x 6, cargo

d. Motor Maintenance Section

1–2nd Lieut., M.A.C., Motor Officer
1–Tech. Sgt., motor (813)
2–T/4s, mechanic, automobile (014)
1–T/5, mechanic, automobile (drives truck) (014)
2–Pvts., Truck driver, light (345)
1–Pvt., Basic (521)
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/ winch
1–Truck, 2½ T, 6 x 6, wrecker w/winch

21. MEDICAL COMPANY

a. Company Headquarters

1–Major, Company Commander

1–1st Sgt., (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., liaison agent (503)
1–Sgt., motor (813)
1–Cpl., Clerk, Typist (405)
2–T/4s, Cook (060)
2–T/5s, Cook, (060)
1–T/5, Truck driver, light (345)
1–T/5, mechanic automobile (drives truck) (014)
1–Pvt., bugler (803)
2–Pvts., cook's helper (521)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
1–Trailer, 1 T, 2-wheel, water tank, 250 gals.
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/ winch
1–Truck, 2½ T, 6 x 6, cargo
1–Truck, 2½ T, 6 x 6, cargo w/ winch
10–Tents, squad M 1942
1–Unit, equip., med. Dept. components only

b. Collecting and Evacuating Platoon

(1) Litter Section
1–1st Lieut., M.A.C., Platoon Comdr.
1–Sgt., Section Leader (652)
1–Cpl., Asst. Section Leader (652)
36–Pvts., Litter bearer (657)

(2) Motor Section
1–2nd Lieut., M.A.C., Section Cmdr.
1–S/Sgt., platoon (651)
1–Sgt., Section Leader (652)
1–Cpl., Asst. Section Leader (652)
2–T/5s, Truck driver, light (345)
6–Pvts., Orderly, ambulance (696)
1–Pvt., Basic (521)
9–Trucks, ¼ T, 4 x 4 (used as ambulance)
7–Pvts., Truck driver, light (345)

(3) Clearing Platoon
5–Captain or 1st Lieut., 1 dental
1–S/Sgt., Platoon (651)
2–Sgts., Medical NCO (673)
1–Cpl., Clerk, admission (055)
1–T/4, Pharmacist (149)
1–T/5, Technician, Dental (855)
2–T/5s, Technician, Medical (409)
1–T/4, Technician, surgical (861)
2–T/5s, Technician, surgical (861)
2–Pvts., Truck driver, light (345)
4–Pvts., Technician, medical (409)
1–Pvt., Technician, sanitary (196)
5–Pvts., Technician, surgical (861)
16–Pvts., orderly, hospital (303)
5–Pvts., Basic (521)
1–Trailer, 1 T, 2-wheel, water tank, 250 gals.
2–Trucks, 2½ T, cargo, 6 x 6

Appendix II

SAMPLE ORDERS AND ANNEXES

1. Explanatory Note.—*a. General.*—This appendix is intended only as an example and guide of annexes and orders that might be prepared by the Engineer Special Brigade and its elements for a shore to shore operation.

b. Map.—A portion of the strategic map is furnished to facilitate study of the orders and annexes.

c. Division Plan.—The following information and details of the division commander's plan are furnished for a better understanding of the orders and annexes in the absence of the division order.

(1) At time of preparation of the brigade order the division and brigade have been assembled at NEW BEDFORD but beaches on which landings are to be made have not been finally selected.

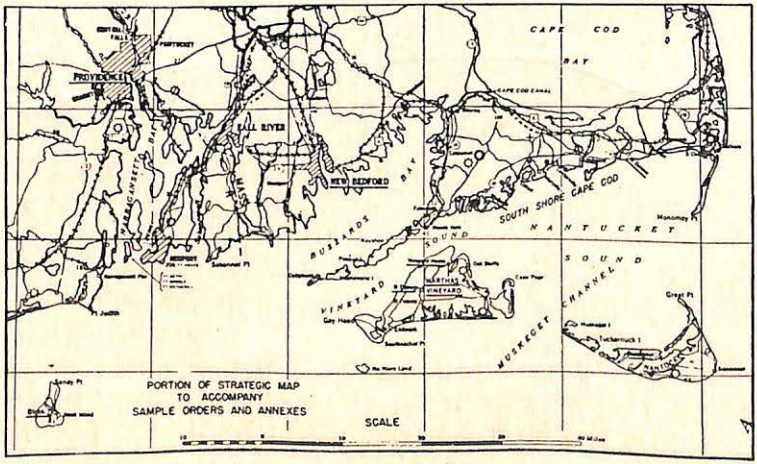
(2) RCT 141 will embark from the WAQUOIT area and capture MARTHA'S VINEYARD.

(3) RCT 142 will embark from W. DENNIS area and capture NANTUCKET ISLAND.

(4) RCT 143 will embark from NEW BEDFORD in floating reserve to land on either island as directed.

(5) Division (less RCT 141 and RCT 142) and resupply operates from NEW BEDFORD.

d. Movement to Embarkation Areas. 535th and 595th Engineer Boat and Shore Regiments will move to Embarkation Areas under orders of their respective Regimental Combat Teams.



e. RCT Plan. At time of preparation of boat and shore regimental order RCT 141 has moved to WAQUOIT area and landing beaches have been selected.

2. Par 3 of Div Fo 14 Referring to 5th Engr Sp Brig.

3. i. 5th Engr Sp Brig (reinforced) supervise Embarkation Point installations, embark, transport, supply and resupply division, and furnish shore services on the hostile beaches until relieved. (Annex 4, Engr Sp Brig Opn).

3. Annex I to Fo 14—Intelligence

3. *Reconnaissance and Observation Missions.*

c. 5th Engr Sp Brig determine changes in tides, currents, weather, and surf conditions and other navigational intelligence in areas about MARTHA'S VINEYARD, NEW BEDFORD, and SOUTH SHORE CAPE COD—NANTUCKET ISLAND, reports daily to Div CP beginning August 13 for subsequent 10 day period; furnish craft for reconnaissance as directed.

4. Brigade Order.

Annex 4 to FO 14
36th Inf Div

Hq 5th Engr Sp Brig
NEW BEDFORD, MASS.
1100 20 July 1943.

FO 8

Maps: U. S. Geological Survey, MASSACHUSETTS, 1:62,500, FALMOUTH, GAYHEAD, NANTUCKET, MARTHA'S VINEYARD, PROVIDENCE Quadrangles or portions thereof; Mosaic SOUTH SHORE CAPE COD, 1:31,680; Mosaic NANTUCKET, 1:20,000 Strategic Map, MASSACHUSETTS, 1:500,000 BOSTON Sheet; U. S. C. and G. S. Charts, 1:80,000, NANTUCKET SOUND and APPROACHES #1209, MARTHA'S VINEYARD to BLOCK ISLAND #1210, and BLOCK ISLAND and APPROACHES #1211.

1. a. BLOCK ISLAND, NANTUCKET, and MARTHA'S VINEYARD recently seized by German forces based on NOVA SCOTIA, are now held by a force estimated as a reinforced regimental combat team consisting of 1 regiment infantry, 2 battalions 88-mm howitzers, 1 battalion 75mm beach guns, 1 battalion 3-inch anti-aircraft guns, 1 company light tanks, 1 light bombardment squadron, and 2 fighter squadrons. Naval elements in these islands consist of 5 cargo vessels of about 5,000 tons, armed with

.50 caliber anti-aircraft machine guns, and 6 motor torpedo boats. Of these forces 1 reinforced battalion landing team, 1 fighter squadron, and 1 light bombardment squadron is estimated to garrison MARTHA'S VINEYARD. The artillery of this landing team is estimated as 2 batteries of 88-mm howitzers. On MARTHA'S VINEYARD, an airfield in the elementary stages of development, but usable, is located north of NORTH TISBURY. NANTUCKET ISLAND is an enemy submarine and air base, garrisoned by the bulk of the remainder of the reinforced regimental combat team. BLOCK ISLAND is lightly garrisoned by riflemen an machine guns protected by wire on beaches. See Intelligence Annex #4.

b. 36th Division (reinforced), supported by naval and air forces, makes a coordinated land, air, and sea attack on MARTHA'S VINEYARD and NANTUCKET, and captures and holds these islands until relieved.

2. a. This brigade:

Attached:

1st Flotilla LCT(5), U. S. N.
5th Flotilla LCT(5), U. S. N.
205th Q M Bn (S)
475th Gasoline Supply Bn (less 2 Cos)
905th Q. M. Bn (Trk) (less 2 Cos)

Supported by:

1st Flotilla, Coasters, U. S. N., supervises Embarkation Point installations, embarks, transports, supplies, and resupplies 36th Inf Div (reinforced) from NEW BEDFORD and SOUTH SHORE CAPE COD to NANTUCKET ISLAND and MARTHA'S VINEYARD, and furnishes far shore services until relieved.

b. Boat Allotment Table—Annex 1.

c. Adm Order No___ to FO No 14, 36th Div, Annex 2.

d. Track Chart — NEW BEDFORD — BEACHES MARTHA'S VINEYARD and NANTUCKET ISLAND, Annex 3—to be furnished.

e. Boat Movement Table for elements under brigade control—Annex 6—to be furnished.

f. D-day and H-hour on dispatch.

3. a. 535th B&S Regt:

Attached:

3 Divs 5th Flotilla LCT (5)

1 Co 205th QM Bn (S)
1 Plat, 475th Gas Sup Bn
1 Co., 265th Bed Bn
1 Co, 365th Boat Maint Bn
Det, 3505th Ord Maint Co
1 Plat, 905th Q M Bn (Trk)

Supported by:

10 Coasters, 1st Flotilla, Coasters, U. S. N. attached to RCT 141 at 0800 July 25, at NEW BEDFORD, MASS.

b. 595th B&S Regt:

Attached:

5th Flotilla LCT(5) (Less 3 Divs)
1 Co, 205th Q M Bn (S)
1 Co (less 1 Plat), 475th Gas Sup Bn
1 Co, 265th Med Bn
1 Co, 365th Boat Maint Bn
1 Co (less 1 Plat), 905th Q M Bn (Trk)
Det, 3505th Ord Maint Co

Supported by:

10 Coasters, 1st Flotilla, Coasters, U. S. N. attached to RCT 142 at 0800 July 25, 1943 at NEW BEDFORD, MASS.

c. 545th B&S Regt (less 4 LCVP's and 2 LCM(3)'s)

Attached:

2 Div (less 3 craft) 1st Flotilla LCT(5)
475th Gas Sup Bn (less 3 Cos)
905th Q M Trk Bn (less 3 Cos)
1 Co 265th Med Bn

(1) Support RCT in floating reserve, embarking from Piers 7 and 8 at NEW BEDFORD, and furnish shore services until relieved.

(2) Release 4 LCVP's and 2 LCM(3)'s to Brigade Control at 0800, July 25, at PIER 8, NEW BEDFORD.

(3) Provide inshore patrol to cover embarkation areas in NEW BEDFORD, and reconnaissance patrols in accordance with S-2 plan.

d. 365th Boat Maint Bn (less 2 Cos attached to 535th and 595th B&S Regts respectively) provide boat maintenance for the 5th Brig (less 535th and 595th B&S Regts) initially at PIER 5, NEW BEDFORD, MASS.

e. 265th Med Bn (less 3 Cos attached to 535th, 545th, and 595th B&S Regts respectively) initially at PIER 4, NEW BEDFORD, prepared to carry out Div Med plan.

f. Q M Hq & Hq Co, vicinity PIER 6, NEW BEDFORD, provide services for Brig in NEW BEDFORD Area as directed.

g. 3505th Ord Maint Co (less dets atchd 535th and 595th B&S Regts respectively) locate mobile repair crews at PIER 5, NEW BEDFORD.

h. Provisional Boat Plat of 4 LCVP's and 2 LCM's, with commander from 545th B&S Regt, released to Brigade control at 0800, July 25 at PIER 8, NEW BEDFORD. Transport Div command group as directed. Upon completion, revert to 545th B&S Regt.

i. 1st Flotilla LCT(5) (less 2 Divs (less 3 craft) atchd to 545th B&S Regt), Commander _____, USN, commanding, transport Div Support Group and be prepared to land any element on any beach or beaches at MARTHA'S VINEYARD or NANTUCKET ISLAND as directed. Upon completion, transport resupply as directed.

j. 5th Flotilla LCT(5) (less 3 Divs) atchd to 595th B&S Regt, and 3 Divs atchd to 535th B&S Regt, at NEW BEDFORD at 0800 July 25, 1943.

k. 205th Q M Bn (S) attach 1 company to each of the 535th and 595th B&S Regts, at 0800 July 25, 1943, at NEW BEDFORD. 205th Q M Bn (S) (less 2 Cos) support Brig by furnishing loading details at NEW BEDFORD, MASS, under the control of Brig Q M (Annex 2, Adm O No.____ to FO 14, 36th Div).

l. 475th Gas Sup Bn (less 2 Cos) attach 1 Plat and 1 Co (less 1 Plat) each to 535th and 595th B&S Regts respectively at 0800 July 25, 1943, at NEW BEDFORD. 475th Gas Sup Bn (less 3 Cos) atchd to 545th B&S Regt at 0800 July 25, 1943 at NEW BEDFORD.

m. 905th Q M Bn (Trk) (less 2 Cos), attach 1 Plat and 1 Co (less 1 Plat) each to 535th and 595th B&S Regts respectively at 0800 July 25, 1943 at NEW BEDFORD. 905th Q M Bn (Trk) (less 3 Cos) atchd to 545th B&S Regt at 0800 July 25, 1943 at NEW BEDFORD.

x. (1) Aircraft warning system—no change.

(2) Observe all precautions to eliminate noise.

(3) Lights prohibited except those essential for navigation and interior illumination.

(4) Daylight movements limited to those essential and to small groups of men and vehicles.

(5) Reconnaissance to be conducted at night and by single craft. Missions coordinated by Brig S-2.

(6) Boat machine guns fire on air or surface craft only when actually attacked.

(7) Radio silence, except for stations now operating until H-hour, or until movement to far shore is discovered.

(8) Civilians, afloat or ashore, found in or near Embarkation Areas to be detained until after H-hour.

(9) Straggler line and coll pts—Beach line on far shore. Established and controlled by shore engineers.

(10) Salvage

(a) Salvage Coll Pts established by shore engrs on far shores.

(b) Unserviceable but salvable vehicles, weapons and equipment to be returned to near shore in empty landing craft.

(c) Salvage Coll Pt at NEW BEDFORD, PIER 9; SOUTH SHORE CAPE COD as directed by RTC 141 and RCT 142.

(11) PW Coll Pts

(a) Far shore—established by shore engrs.

(b) Near shore—CAPE COD AREA—as designated by RCT 141 and 142; NEW BEDFORD—PIER 12.

(12) Traffic control far shore from water's edge to shore dumps by shore engrs.

(13) Watches to be synchronized Naval Observatory time signals 1800 daily.

(14) 75th Meridian Time used.

(15) Coordinating instructions to be prepared for each time beginning Aug. 13 for the subsequent 10 day period.

4. **a. Supply**

(1) Class I (a) Rations

(i) Troops transported to the far shore carry two K-rations on person.

(ii) Kitchens of shore and medical companies to be transported to far shore after H plus 18 hrs to feed shore companies, boat control sections, wounded, prisoners, and attached personnel.

(iii) Personnel of the boat units (less boat control sections) carry 2 K-rations on the person, but mess on near shore as they return thereto.

(b) Water

(i) All personnel carry one full canteen on the person.

(ii) Shore Cos and attached personnel draw water from dumps on the far shore.

(iii) In emergency, boat unit personnel replenish canteen from water breakers in boats. Use of this water for other purposes prohibited. Replenish on each return to the near shore.

(2) Class II

(a) No distribution until after PORTS of NANTUCKET and VINEYARD HAVEN are taken.

(3) Class III (Gasoline and Oil)

(a) All vehicles embark with full tanks and carry 2 full 5 gallon cans, marked for content.

(b) Refill from near and far shore dumps.

(c) Refueling points for boats as designated by respective B&S Regts. Brigade craft refuel at PIER 10, NEW BEDFORD, MASS.

(4) Class IV

(a) Medical resupply on far shore from far shore dumps.

(b) Engineer supplies—as designated by B&S Regts.

(5) Class V

(a) Resupply for far shore units from far shore dumps.

(b) Resupply for boat units under brigade control, PIER 10, NEW BEDFORD, and as designated by 535th and 595th B&S Regts, SOUTH SHORE, CAPE COD.

b. **Evacuation**

(1) Casualties

(a) Collecting-Clearing stations as directed by respective RCT medical plans.

(b) Evacuation.

(i) Initially ambulatory cases only from Aid Sta to Boat Control Section.

(ii) After establishment of Engr Clr Sta from Aid Sta to Engr Clr Sta, to beach, then to near shore.

(2) *Burial*

(a) Far Shore—by organizations.

(b) Near Shore—NEW BEDFORD CEMETERY; SOUTH SHORE CAPE COD—as directed by RCT.

c. **Traffic Control Near Shore**—As directed by tactical commander.

d. **Personnel**

(1) Surplus baggage.

(a) To remain in Embarkation Area under guard, to be moved forward as directed.

(b) Individual equipment—combat packs, gas masks. Tagged rolls to be left in Embarkation Area until after D plus 1 day.

(2) Mail

(a) Final delivery Aug 1—then suspended until further notice.

(3) Strength Reports—to S-1 by 0900 daily as of 2400 previous day.

(4) Replacements—Suspended until further notice.

(5) Furloughs, Passes—Suspended until further notice.

(6) Civilian Population—As directed by Div Comdr.

(7) Miscellaneous.

(a) Near Shore, Div. Hq, PIER 8, NEW BEDFORD, MASS.

(b) Near Shore, Brig Hq, PIER 8, NEW BEDFORD, MASS.

(c) Near Shore, 545th B&S Regt., PIER 7, NEW BEDFORD, MASS.

(d) See Annex 2, Adm O No___ to FO No 14, 36th Div.

5. a. See Index #11 SOI, 36th Div., and Annex 5 Signal.

b. CP's

36th Inf Div: PIER 8, NEW BEDFORD, MASS; afloat, when announced, S-544. (Staff Boat 544).

5th Engr Sp Brig: Same as 36th Inf Div.

545th B&S Regt: PIER 7, NEW BEDFORD, MASS., until D minus one day; afloat when announced, S-122.

535th B&S REGT: PIER 5, NEW BEDFORD, until 0800, July 25, 1943; thereafter to be reported.

595th B&S REGT: PIER 9, NEW BEDFORD, until 0800, July 25, 1943; thereafter to be reported.

By command of Brig. Gen. X.

R
Ex. O

OFFICIAL
Y

S-3

ANNEXES

#1—Boat Allotment Table

#2—Adm O No___ to FO No 14, 36th Div (Omitted)

#3—Track Chart—NEW BEDFORD—BEACHES MARTHA'S VINEYARD and NANTUCKET ISLAND—to be furnished.

#4—Intelligence (Omitted)

#5—Signal (Omitted)

#6—Boat Movement Table for elements under brigade control—to be furnished.

DISTRIBUTION
A

(NOTE: Many details contained in par 4 of Engr Sp Brig order could well be omitted, as a reference to the adm order of the div would cover them. They are included here to show some of the necessary items to be observed. Likewise, many of the items in paragraph 3x usually would be covered in Standing Operating Procedures).

Annex No. 1 to FO 8

BOAT ALLOTMENT TABLE

5th Engr. Sp. Brigade
New Bedford, Mass.
1100 20 July, 1943

Unit to be Moved	Boat & Shore Unit	Craft and Ships				Place to be Made Available	Time to be Assembled	Remarks
		LCVP	LCM(3)	LCT(5)	200 Ton Coasters			
RCT 141	535th B. & S. Regt.	30	30	18	10	Coasters—Providence	Aug. 5, 1943	Supporting coasters to be routed and dispatched by 535th Boat & Shore Controls
						LCT(5) New Bedford	July 25, 1943	Attached
						LCM(3)—Organic	Organic	
						LCVP—Same	Same	
RCT 142	595th B. & S. Regt.	30	30	18	10	Coasters—Providence	Aug. 5, 1943	Supporting coasters to be routed and dispatched by 595th B. & S. Control
						LCT(5)—New Bedford	July 25, 1943	Attached
						LCM(3)—Organic	Organic	
						LCVP—Same	Same	
RCT 143	545th B. & S. Regt.	26	28	9		LCT(5)—New Bedford	July 25, 1943	Attached
						LCM(3) Organic	Organic	
							Same	
Div. Command Group	Prov. Boat Platoon	4	2			Pier 8—New Bedford	July 25, 1943	Brigade Control
Div. Support Group	1st Flot. LCT (5)			27		New Bedford	July 25, 1943	Released to Brig. Control for resupply upon completion landing
Supply Echelon					16	As directed	As directed	Continue resupply until relieved

5. Boat and Shore Regimental Order

ANNEX #6 to FO #12
RCT 141

535th B&S Regt
PIER 4, WAQUOIT BAY, MASS.
0630 5 Aug, 1943.

FO 15
Maps: U. S. Geological Survey, MASSACHUSETTS, 1:62,500, FALMOUTH, GAY HEAD, NANTUCKET, MARTHA'S VINEYARD, PROVIDENCE Quadrangles or portions thereof; Mosaic FALMOUTH, MASSACHUSETTS, 1:31,680; Strategic Map, MASSACHUSETTS, 1:500,000 BOSTON Sheet; U. S. C. & G. S. Chart, 1:80,000, NANTUCKET SOUND and APPROACHES, #1209, and MARTHA'S VINEYARD to BLOCK ISLAND, #1210. Overlays 1 and 2, FO 15, RCT 141.

1. a. BLOCK ISLAND, MARTHA'S VINEYARD and NANTUCKET have recently been seized by a German force estimated as a reinforced regimental combat team, with some air support. Hostile naval elements in these islands consist of 5 cargo vessels of about 5,000 tons, armed with .50 caliber anti-aircraft machine guns and 6 motor torpedo boats. It is estimated that MARTHA'S VINEYARD is garrisoned by 1 reinforced battalion landing team, 1 pursuit squadron, and 1 light bombardment squadron. The artillery of the landing team is estimated as 2 batteries of 88-mm howitzers. An airfield in elementary stages of development but usable is located in the area north of NORTH TISBURY (See Annex #1).

b. (1) The 36th Division (reinf), supported by naval and air forces, makes a coordinated land, sea, and air attack on MARTHA'S VINEYARD and NANTUCKET, capturing and holding these islands until relieved. RCT 141 captures MARTHA'S VINEYARD. RCT 142 captures NANTUCKET. The 36th Division (less RCT 141 and RCT 142) moves to either of the 2 islands.

(2) Air and naval forces execute a preliminary bombardment commencing at H minus 45 minutes and lifting at H minus 5 minutes, naval fires available on call until H plus 60 minutes. Light and dive bombardment aviation in support.

2. a. 535th B&S Regt (atchd to RCT 141):

Attached:

1st, 2nd, and 3rd Divs, 5th Flotilla LCT(5)'s, (18 craft)

Co. A, 205th Q M Bn (S)
1st Plat, Co A, 475th Gas Sup Bn
Co A, 265th Med Bn
Co A, 365th Boat Maint Bn
Det, 3505th Ord Maint Co
1st Plat, Co A, 905th QM Bn (Trk)

Supported by:

10 Coasters, 1st Flotilla, Coasters, U. S. N., supervises Embarkation Point installations, embarks, and transports RCT 141 from WAQUOIT BAY AREA to BEACH BLUE and BEACH GREEN, and furnishes shore services on those beaches until relieved.

b. Boat Allotment Table—Annex #2
c. Embarkation and Debarkation Table—Annex #3
d. Track Charts—Annexes #5 and #6
e. Boat Movement Table—Annex #7
f. Assembly Chart—Annex #8
g. Assembly Table—Annex #9
h. D-day and H-hour on dispatch.

3. a. (1) 1st Bn (3 craft of 1st Div LCT(5) and Co A, 365th Boat Maint Bn, atchd) support RCT 141 by transporting personnel and equipment from PIERS #1, #2, #3 and 4, WAQUOIT BAY AREA to BEACH BLUE and BEACH GREEN.

(2) 12 LCVP's to be made available at BEACH BLUE and at BEACH GREEN at H plus 6 hours as lighters. Upon completion of such duties, revert to 1st Bn. (See Adm. O #12, RCT 141—Annex #4).

(3) Release provisional boat platoon of 3 LCVP and 7 LCM(3) with appropriate commander to regt'l control at 0800 Aug 10 at PIER 4.

b. (1) 2nd Bn support RCT 141 by furnishing shore services on BEACH BLUE and BEACH GREEN.

(2) Supplies to be handled on far shore according to Adm O #12, RCT 141—Annex #4.

(3) Cal. .50 AA guns to be emplaced to furnish AA protection for Embarkation Points until embarked for transportation to far shore.

c. (1) Embarkation Platoon, with 1st Plat, Co A, 905th Q M Bn (Trk) and Co A, 205th Q M Bn (S) atchd, under direction of Ex Officer this Regt, supervise embarkation installations in WAQUOIT BAY and NEW BEDFORD AREAS to include initial and resupply embarkation in accordance with Adm O #12, RCT 141—See Annex #4.

d. (1) 1st Div LCT(5) (less 3 boats atchd 1st Bn), and 2nd Div LCT(5), supported by 10 coasters, 1st Flotilla, Coasters, U. S. N., transport supplies to BEACH BLUE and BEACH GREEN in accordance with Adm O #12, RCT 141—Annex #4. Track Charts (see Annexes #5 and #6).

(2) 3rd Div LCT(5) atchd to Provisional Boat Platoon at 0800, Aug 10 at PIER 4.

e. Provisional Boat Platoon of 3 LCVP's and 7 LCM(3)'s with 3rd Div LCT(5) atchd, transport support echelon RCT 141 as directed.

f. 1st Plat, Co A, 475th Gas Sup Bn, establish DP vicinity PIER #1 WAQUOIT BAY.

g. Co A, 265th Med Bn, see Adm O #12, RCT 141 —Annex #4.

h. Co A, 365th Boat Maint Bn, atchd to 1st Bn at PIER #2, WAQUOIT BAY AREA. 1200 Aug 6.

i. Det, 3505th Ord Maint Co locate repair crew at PIER #4, WAQUOIT BAY AREA.

j. 1st Plat, Co A, 905th Q M Bn (Trk), atchd to Embarkation Plat, vicinity PIER 3 at 1200 Aug 6.

k. Co. A, 205th Q M Bn (S) atchd to Embarkation Platoon vicinity PIER 3 at 1200 Aug 6.

x. (1) Embarkation Plat; 1st, 2nd and 3rd Divs LCT(5); and representatives of CO, 10 supporting coasters coordinate operations with S-4, RCT 141.

(2) Requests for air support to CP RCT 141.

(3) Watches synchronized at 1800 daily, 75th Meridian time.

(4) Other details—SOP and see Adm O #12, RCT 141—Annex #4.

4. Supply

a. Gasoline and Oil—Boats refuel at PIER #1, WAQUOIT BAY AREA.

b. Ammunition: Far Shore dumps and PIER 2, WAQUOIT BAY.

c. OTHER ADMINISTRATIVE DETAILS—SOP and see Adm O #12, RCT 141—Annex #4.

5. a. Index #11 to SOI 36th Div.

b. C.P.'s:

(1) RCT 141 vicinity PIER #4, WAQUOIT BAY AREA, opens 1200 Aug 6, 1943, until closed by direction, thereafter afloat, S-476.

(2) 535th Engr B&S Regt—Same as RCT 141.

(3) 1st and 2nd Bns to be reported.

By order of Colonel A:

B
Lieut. Col., C. E.
Ex

OFFICIAL

C
Major, C. E.
S-3

ANNEXES—

#1—Intelligence (Overlay) (Omitted)
#2—Boat Allotment Table
#3—Embarkation and Debarkation Table
#4—Adm O #12, RCT 141 (Omitted)
#5—Track Charts WAQUOIT—BEACHES BLUE and GREEN
#6—Track Chart—NEW BEDFORD—BEACHES BLUE and GREEN (Omitted)
#7—Boat Movement Table
#8—Assembly Chart
#9—Assembly Table

DISTRIBUTION
"A"

(NOTE: Pars 3x and 4 of this order have been reduced to a minimum by reference to Rct Adm O and by assumed use of SOP. Coordinating details concerning times for a range of ten (10) days from August 14 based on a possible H-hour for each day are omitted).

Annex No. 2 to FO 15

BOAT ALLOTMENT TABLE

535th B&S Regt.
PIER 4, WAQUOIT BAY, MASS.
0630 5 Aug. 1943

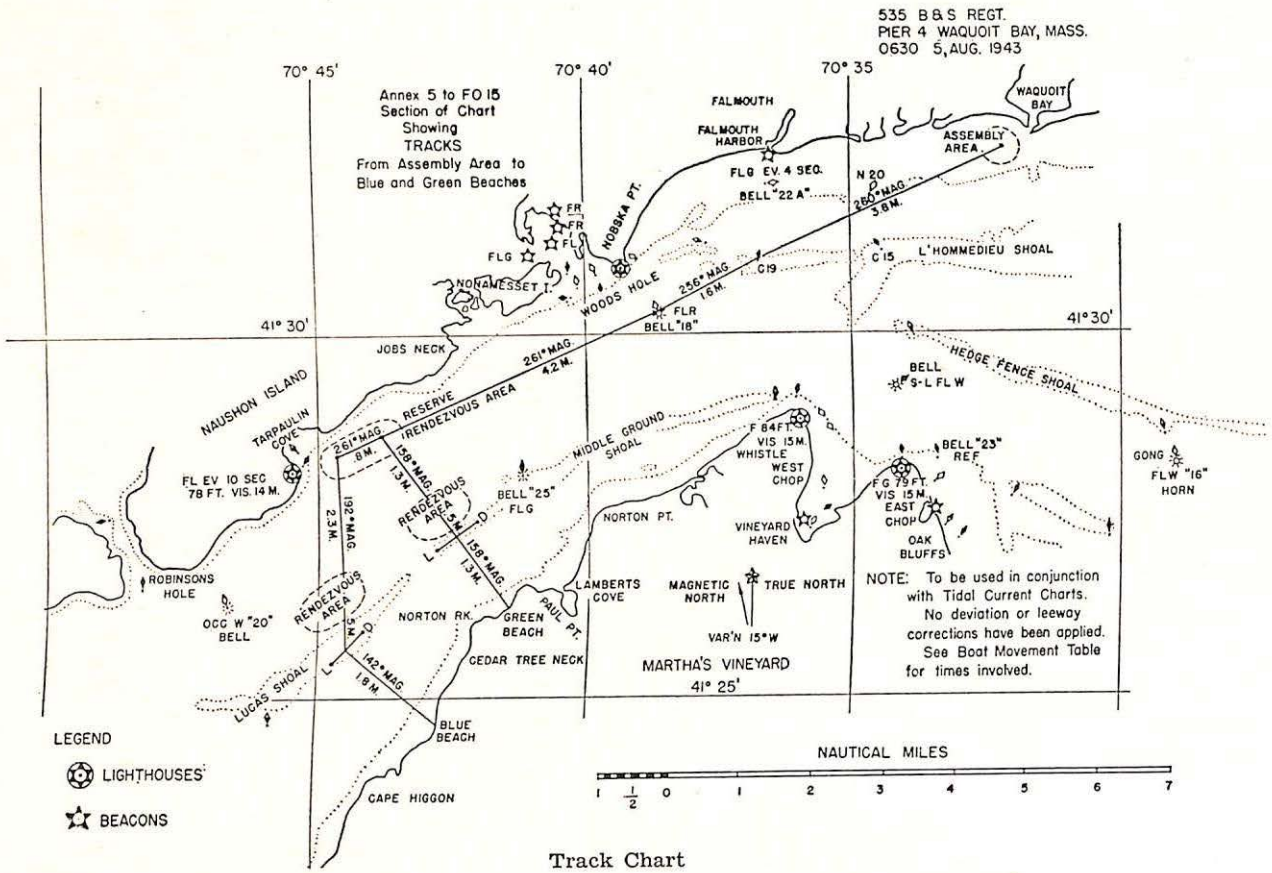
Unit to be moved	Boat Unit	Craft and Ships				Remarks
		LCVP	LCM(3)	LCT(5)	Coaster	
1st BLT 141st RCT	Co. A 535th	28	26	1		Released from support upon completion of landing. 12 LCVP's to be made available as lighters at H plus 6 hrs.
2nd BLT 141st RCT	Co. B 535th	28	26	1		Same as 1st BLT
3rd BLT 141st RCT	Co. C 535th	28	26	1		Released from support upon completion of landing.
Command Group 141st RCT	Co. C 535th	3	5			Same as 3rd BLT
Support Echelon 141st RCT	535th	3	7	6		Same as 3rd BLT
Supply Echelon				9	10	Continue resupply until relieved.

Annex No. 3 to FO 15

EMBARKATION AND DEBARKATION TABLE

535th B&S Regt.
PIER 4, WAQUOIT BAY,
MASS., 0630 5 Aug 43

Combat Unit	Boat Unit	EMBARKATION			DEBARKATION		
		Time	Place	Remarks	Time	Place	Remarks
BLT 1	Co. A 535th B&S REGT	See Appropriate Assembly Table	Pier 1 Waquoit Bay	1. Boat waves will load as designated by instructions of BLT Comdr. 2. Final boat assignment tables and cargo lists will be prepared by BLT Comdr at least eight hours prior to time of loading.	D-day H-hour	Beach Blue	1. Landing diagrams will be prepared by BLT commander in accordance with his tactical plan
BLT 2	Co. B 535th B&S REGT	See Appropriate Assembly Table	Pier 2 Waquoit Bay	As above	D-day H-hour	Beach Green	As above
BLT 3	Co. C 535th B&S REGT	See Appropriate Assembly Table	Pier 4 Waquoit Bay	As above	See Remarks	See Remarks	In floating reserve. Land on orders C. O., RCT 141
Reg'tl Command Group	Co. C 535th B&S REGT	See Appropriate Assembly Table	Pier 3 Waquoit Bay	None	See Remarks	See Remarks	Land on orders C. O., RCT 141
Reg'tl Support Group	535th B&S REGT	See Appropriate Assembly Table	Pier 4 Waquoit Bay		See Remarks	See Remarks	Land on orders C. O., RCT 141
Supply Echelon		D minus five days to D plus five days	New Bedford	None	H plus 6 hours See Remarks	See Remarks	1. One coaster per BLT at H plus 6 hours. 2. Places and times as ordered


535 B&S REGT.
PIER 4 WAQUOIT BAY, MASS.
0630 5, AUG. 1943
Annex 5 to FO 15
Section of Chart
Showing
TRACKS
From Assembly Area to
Blue and Green Beaches
70° 45'
70° 40'
70° 35'
41° 30'
41° 25'
FALMOUTH
FALMOUTH HARBOR
WAQUOIT BAY
ASSEMBLY AREA
FLG EV. 4 SEC.
BELL "22 A"
N 20
260° MAG
3.8 M.
NOBSKA PT.
FR
FR
FL
FLG
C 15
L'HOMMEDIEU SHOAL
NONAMESSET I.
WOODS HOLE
256° MAG
1.6 M.
C 19
FLR
BELL "18"
JOBS NECK
261° MAG.
4.2 M.
NAUSHON ISLAND
RESERVE
RENDEZVOUS AREA
HEDGE FENCE SHOAL
BELL
FS-L FL W
TARPAULIN COVE
261° MAG.
.8 M.
158° MAG.
1.3 M.
MIDDLE GROUND SHOAL
F 84 FT.
VIS 15 M.
WHISTLE
WEST CHOP
BELL "23"
REF
GONG
FLW "16"
HORN
FL EV 10 SEC
78 FT. VIS. 14 M.
RENDEZVOUS AREA
BELL "25"
FLG
192° MAG
2.3 M.
NORTON PT.
VINEYARD HAVEN
FG 79 FT.
VIS 15 M.
EAST CHOP
OAK BLUFFS
ROBINSONS HOLE
OCC W "20"
BELL
RENDEZVOUS AREA
NORTON RK.
GREEN BEACH
PAUL PT.
LAMBERTS COVE
MAGNETIC NORTH
TRUE NORTH
VAR'N 15° W
142° MAG
1.9 M.
CEDAR TREE NECK
MARTHA'S VINEYARD
LUCAS SHOAL
BLUE BEACH
CAPE HIGGON
NOTE: To be used in conjunction with Tidal Current Charts. No deviation or leeway corrections have been applied. See Boat Movement Table for times involved.
LEGEND
LIGHTHOUSES
BEACONS
NAUTICAL MILES
1 1/2 0 1 2 3 4 5 6 7

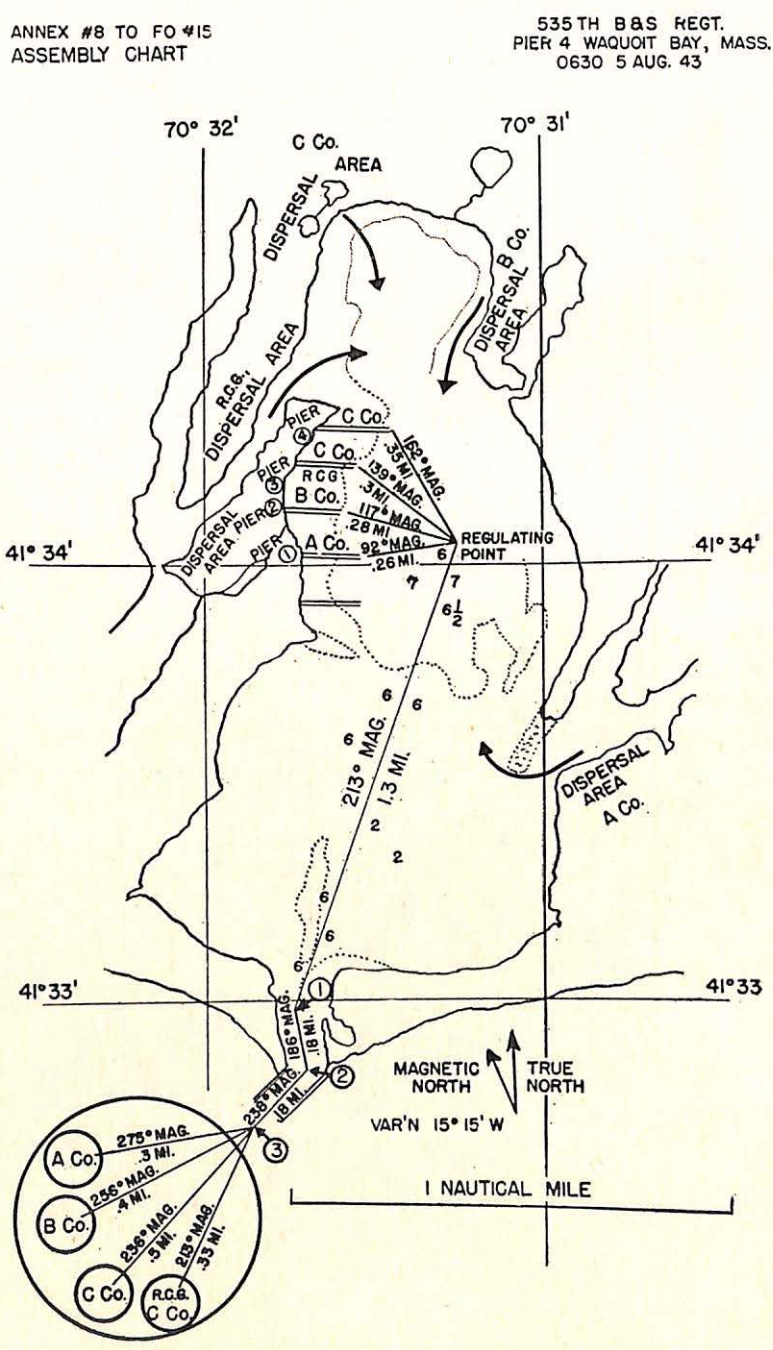
Track Chart

Annex No. 7 to FO No. 15

BOAT MOVEMENT TABLE
for
August 19-20, 1943

535th B & S Regt.
PIER 4 WAQUOIT BAY, MASS.
0630 5 Aug. 1943

Combat Unit	Boat Unit	Departure		Speed	Assembly Area		Speed	R/A Arrive	Cross L/D	Speed	Beach	First Wave Lands
		Area	Time		Arrive	Leave						
BLT 1	Co "A" 535 B&S	Pier 1 Waquoit Bay	0007 D-Day	5 Kn.	0034 D-Day	0039	6 Kn.	0245	0305	6 Kn.	BLUE	0323
BLT 2	Co "B" 535 B&S	Pier 2 Waquoit Bay	0010 D-Day	5 Kn.	0057	0102	6 Kn.	0250	0310	6 Kn.	GREEN	0323
BLT 3	Co "C" 535 B&S	Pier 4 Waquoit Bay	0052 D-Day	5 Kn.	0129	0134	6 Kn.	0310			On Order	On Order
Regt'l Command Group	Co "C" 535 B&S	Pier 3 Waquoit Bay	On Order								On Order	On Order
Regt'l Support Group	535 B&SR	Pier 4 Waquoit Bay	On Order								On Order	On Order
Supply Echelon		New Bedford	D minus 5 days to D plus 5 days									



Assembly Chart

Annex No. 9 to FO No.15

535th B&S Regt.
PIER 4 WAQUOIT BAY, MASS.
0630 5 Aug. 1943

ASSEMBLY TABLE

BLT-1	Speed	Course	1st Wave	2nd Wave	3rd Wave	4th Wave	5th Wave	6th Wave	7th Wave
Lv. E/P	5 kn.	92°	0007 D Day	0013	0019	0025	0031	0037	0043
Lv. R/P	5 kn.	213°	0010	0016	0022	0028	0034	0040	0046
Ar. #1	5 kn.	186°	0026	0032	0038	0044	0050	0056	0102
Ar. #2	5 kn.	238°	0028	0034	0040	0046	0052	0058	0104
Ar. #3	5 kn.	275°	0030	0036	0042	0048	0054	0100	0106
Ar. A/A			0034	0040	0046	0052	0058	0104	0110
BLT-2									
Lv. E/P	5 kn.	117°	0030 D Day	0035	0041	0047	0053	0059	0105
Lv. R/P	5 kn.	213°	0033	0038	0044	0050	0056	0102	0108
Ar. #1	5 kn.	186°	0049	0054	0100	0106	0112	0118	0124
Ar. #2	5 kn.	238°	0051	0056	0102	0108	0114	0120	0126
Ar. #3	5 kn.	256°	0053	0058	0104	0110	0116	0122	0128
Ar. A/A			0057	0102	0108	0114	0120	0126	0130
BLT-3									
Lv. E/P	5 kn.	139°	0059 D Day	0105	0111	0117	0123	0129	0135
Lv. R/P	5 kn.	213°	0103	0109	0115	0121	0127	0133	0139
Ar. #1	5 kn.	186°	0119	0125	0131	0137	0143	0149	0155
Ar. #2	5 kn.	238°	0121	0127	0133	0139	0145	0151	0157
Ar. #3	5 kn.	236°	0123	0129	0135	0141	0147	0153	0159
Ar A/A			0129	0135	0141	0147	0153	0159	0206

REGT'L COMMAND GROUP

Lv. E/P	5 kn.	162°	*X hour
Lv. R/P	5 kn.	213°	X + 4 minutes
Ar. #1	5 kn.	186°	X + 20 minutes
Ar. #2	5 kn.	238°	X + 22 minutes
Ar. #3	5 kn.	213°	X + 24 minutes
Ar. A/A			X + 28 minutes

REGT'L SUPPORT GROUP

Lv. E/P	5 kn.	162°	*X hour
Lv. R/P	5 kn.	213°	X + 4 minutes
Ar. #1	5 kn.	186°	X + 20 minutes
Ar. #2	5 kn.	238°	X + 22 minutes
Ar. #3	5 kn.	213°	X + 24 minutes
Ar. A/A			X + 28 minutes

* (X) by later order.

6. Boat Bn Order 1st Bn, 535th B&S Regt
PIER 2 WAQUOIT BAY, Mass
0800 6 Aug 43

FO 18

Maps: U. S. Geological Survey, MASSACHUSETTS 1:62,500, FALMOUTH, GAY HEAD, NANTUCKET, MARTHA'S VINEYARD, PROVIDENCE, Quadrangles or portions thereof; Mosaics, 1:31,680. FALMOUTH MASS; Strategic Map, MASSACHUSETTS, 1:500,000 BOSTON SHEET; U.S.C. and G.S. Chart 1:80,000, NANTUCKET SOUND and APPROACHES, #1209, and MARTHA'S VINEYARD TO BLOCK ISLAND, #1210; Overlays 1 and 2, FO 15, RCT 141.

1. a. MARTHA'S VINEYARD is garrisoned by a German force estimated as 1 reinforced battalion landing team, 1 pursuit squadron, and 1 light bombardment squadron. The artillery of the landing team is estimated as 2 batteries of 88-mm howitzers. An airfield in elementary stages of development but usable is located in the area north of NORTH TISBURY. (See Overlay No. 2). Hostile naval elements in the vicinity consist of 5 cargo vessels of about 5,000 tons, each armed with .50 caliber antiaircraft machine guns and six motor torpedo boats.

b. 535th B&S Regt (reinf) (atchd to RCT 141) embarks, transports, disembarks, supplies, and resupplies RCT 141 on BEACHES BLUE and GREEN, MARTHA'S VINEYARD. (See Opn Map RCT 141—Annex 6).

2. a. This battalion (3 craft, 1st Div 5th Flotilla LCT (5), and Co A, 365th Boat Maint Bn, atchd) supports RCT 141 by embarking, transporting, and debarking it with supporting elements on BEACHES BLUE and GREEN and by transporting and lightering its resupply.

b. Boat Allotment Table—Annex 1.
c. Embarkation and Debarkation Table—Annex 2.
d. Boat Movement Table—Annex 3.
e. Assembly Chart and Table—Annex 4.
f. Track Chart—Annex 5.
g. Opn Map, RCT 141, Annex 6.
h. D-day and H-hour on dispatch.

3. a. (1) Co A (less Boat Control Section) with 1 LCT(5) attached, supports BLT 1, embarking it from

PIER 1, WAQUOIT BAY at 0007 D-day and disembarking it at BLUE BEACH at D-day, H-hour. (See Annex 2).

(2) Release 1 LCVP and 4 LCM(3)'s to battalion control at PIER 2 at 1200—Aug 9; and make 12 LCVP's available at BEACH BLUE at H plus 6 hrs, as lighters.

b. (1) Co B (less Boat Control Section) with 1 LCT(5) attached, supports BLT 2, embarking it from PIER 2, WAQUOIT BAY, at 0300 D-day, and disembarking it at BEACH GREEN at D-day, H-hour (See Annex 2).

(2) Release 2 LCVP's and 3 LCM(3)'s to battalion control at PIER 2 at 1200 Aug 9; and make 12 LCVP's available at BEACH GREEN at H plus 6 hrs as lighters.

c. (1) Co C (less boat control section) with 1 LCT(5) attached, supports BLT 3, embarking it at PIER 4, WAQUOIT BAY, at 0059 D-day and disembarking it as directed by RCT Commander (See Annex 2).

(2) Embark the Regimental Command Group RCT 141 from PIER 3, WAQUOIT BAY, and disembark it as ordered. (See Annex 2).

d. Co A, 365th Boat Maint Bn, operate a repair point initially at PIER 4, WAQUOIT BAY, and be prepared to furnish maintenance on both near and far shore.

x. (1) Boat Control Sections, Cos A, B and C atchd to Cos D, E, and F respectively at 1200 Aug. 7.

(2) Boats fire on hostile boats and aircraft only if fired upon.

(3) Counter-intelligence. No change.

(4) Radio silence except for stations now operating until H-hour or until movement is discovered.

(5) Aircraft and boat warning systems—no change.

(6) Boat assignment tables of BLT commanders will be followed.

(7) Evacuation

(a) Casualties

(i) Near shore clearing station, PIER 3, WAQUOIT BAY.

(ii) Far shore clearing stations, BEACHES BLUE and GREEN.

(iii) One Medical Corpsman to each fourth boat. This boat to be used in evacuation of wounded to near shore.

(b) Burial—Near Shore, PIER 3.

(c) Salvage—Boats and vehicles to PIER 4, WAQUOIT BAY.

(d) Prisoners of War to PIER 3, WAQUOIT BAY.

(8) Watches to be synchronized at Bn Hq at 2000 D minus one day—75th Meridian Time.

4. a. Supply

(1) Rations—2 K on person.

(2) 1 full canteen water on person. In emergency, water will be replenished from breakers in the boats under supervision of coxswain; use of this water for other purposes prohibited and will be replenished on each return to the near shore.

(3) Boats refuel at PIER 1, WAQUOIT BAY. Fuel tanks will be replenished on each return.

(4) Ammunition: PIER 2, WAQUOIT BAY, all types. Boats carry 1 U F.

b. Traffic

(1) Near Shore — by Battalion Patrol Boat Officers.

(2) BEACHES BLUE and GREEN—Respective Boat Control Officers.

c. Personnel

(1) Individual equipment — combat packs and gas masks. Tagged rolls under guard on near shores.

(2) Strength reports; to S-1 daily by 0600 as of 2400 previous day.

5. a. Signal Instructions—SOI, RCT 141.

b. CPs:

(1) 535th B&S Regt opens vicinity PIER 4, WAQUOIT BAY 1200 Aug 6; Afloat S-476.

(2) Bn CP opens vicinity PIER 3, WAQUOIT BAY, 1200 Aug 6; Afloat S-9.

(3) Co A, Near Shore, foot PIER 1, WAQUOIT BAY; Afloat, S-224.

(4) Co B, Near Shore, foot PIER 2, WAQUOIT BAY; Afloat, S-77.

(5) Co C, Near Shore, foot PIER 4, WAQUOIT BAY; Afloat, S-123.

R
Commanding

Official
M
Executive

Annexes—

Annex 1—Boat Allotment Table (Same as Annex 2 to Regt'l Order—not repeated)

Annex 2—Embarkation and Debarkation Table (Same as Annex 3 to Regt'l Order—not repeated)

Annex 3—Boat Movement Table (Same as Annex 7 to Regt'l Order—not repeated)

Annex 4—Assembly Chart and Table (Same as Annexes 8 and 9 to Regt'l Order—not repeated)

Annex 5—Track Chart (Same as Annex 5 to Regt'l Order—not repeated)

Annex 6—Opn Map, RCT 141 (Omitted)

DISTRIBUTION
"A"

7. Shore Bn. Order.

2nd Bn., 535th B & S Regt.
PIER 3, WAQUOIT BAY, MASS.
0800 6 Aug 1943

FO 18

Maps: U. S. Geological Survey, MASSACHUSETTS, 1:62,500: FALMOUTH, GAYHEAD, MARTHA'S VINEYARD Quadrangles or portions thereof; Mosaic of FALMOUTH, MASSACHUSETTS, 1:31,680; Overlays 1 and 2, FO 15, RCT 141.

1. a. MARTHA'S VINEYARD is garrisoned by 1 reinforced BLT and light air support; the combat team artillery is estimated as 2 batteries of 88-mm howitzers. An airfield is located north of NORTH TISBURY (see overlay 2). Hostile naval elements consist of 5 cargo vessels of about 5,000 tons armed with .50 caliber machine guns and six motor torpedo boats. Beaches are defended by wires and mines.

b. (1) 535th B & S Regt. (reinforced) (attached to RCT 141) embarks, transports, disembarks, supplies, and resupplies RCT 141 on BEACHES BLUE AND GREEN, MARTHA'S VINEYARD, until relieved (see Operations Map, RCT 141-Annex 3).

(2) 1st BLT embarks at PIER 1, WAQUOIT BAY, and lands on BEACH BLUE at H-hour, D-day.

(3) 2nd BLT embarks at PIER 2, WAQUOIT BAY, and lands on BEACH GREEN at H-hour, D-day.

(4) 3rd BLT embarks at PIER 4, WAQUOIT BAY, and lands at times and places as ordered.

(5) Other elements of RCT 141 embark and land as ordered.

(6) See Annex 1.

2. a. This battalion supports RCT 141 by performing far shore services on BEACHES BLUE AND GREEN.

b. D-day and H-hour on dispatch.

c. Embarkation and Debarkation Table—Annex 1.

d. Assembly Table—Annex 2.

e. Operations Map, RCT 141—Annex 3.

f. Boat Control Sections—As attached by Boat Battalion order.

3. a. D Co. with attachments—attached to 1st BLT at 2000 Aug. 6, 1943, in the vicinity of PIER 1, WAQUOIT BAY.

b. E Co. with attachments—attached to 2nd BLT at 2000 Aug. 6, 1943, in the vicinity of PIER 2, WAQUOIT BAY.

c. F Co. with attachments—attached to 3rd BLT at 2000 Aug. 6, 1943, in the vicinity of PIER 4, WAQUOIT BAY. It will augment the company previously on the beach at which BLT 3 lands.

d. 2nd Battalion (less Cos. D, E, and F) supports RCT 141 Command Group, joining it at PIER 4 at 1200 August 6.

e. Combat Platoon attach 2 squads, 37-mm AT guns and 2 squads .50 caliber AA m.g. each to Cos. D, E, F.

f. Communications Platoon attach 2 radio operators, 2 linemen, and 2 switchboard operators and equipment to each shore company.

x. (1) Companies revert to battalion control when Bn. CP is opened on far shore.

(2) Counter-intelligence. No change.

(3) Radio silence except for stations now operating until H-hour or until movement is discovered.

(4) Aircraft and boat warning systems. No change.

(5) Strict beach discipline on boat far and near shore to be enforced.

(6) Boat Assignment Tables of respective BLT commanders will be followed.

(7) Salvage Collecting Points established by companies on BEACHES BLUE and GREEN. RETURN unserviceable but salvage vehicles and equipment to near shore in returning landing craft as directed.

(8) PW Collecting Points established by companies on BEACHES BLUE and GREEN until relieved by RCT MP's. Evacuate PW Collecting Points to PIER 3, WAQUOIT BAY by returning landing craft.

(9) Traffic—Companies control from water's edge to shore dumps.

(10) Straggler line and Collection Points established by companies at beach line.

(11) Watches to be synchronized at Bn. Hq. at 2000 D minus one day.—75th Meridian Time.

4. a. **Supply.**

(1) Rations

(a) 2 K on person.

(b) Company kitchens transported to the far shore after H plus 18 hrs.

(2) Water

(a) 1 full canteen on person.

(b) Companies and attached personnel draw water from the dumps on the far shore.

(3) Fuel

(a) Vehicles embark with full tanks and 2 full five-gallon cans of gasoline, plainly marked for content.

(b) Tractors with angledozers carry four full five-gallon cans of gasoline, plainly marked for content.

(c) Resupply from dumps.

(4) Ammunition

(a) Each man armed with rifle carry two bandoleers of ammunition.

(b) M.G.s and 37-mm — 2 U.F.

(c) Resupply from far shore dumps.

b. (1) *Casualties.*—To shore engineer clearing station on BEACHES BLUE and GREEN.

(2) Burial by companies.

c. Personnel.

(1) Individual equipment: Combat packs, gas masks. Tagged rolls to be transported when situation permits, after H plus 6 hours.

(2) Surplus baggage — to remain in near shore area.

(3) Strength reports: to S-1 daily by 0600 as of 2400 previous day.

5. a. Signal Instructions—SOI, RCT 141.

b. C.P.'s.

(1) 535th B&S Regt. opens vicinity PIER 4, WAQUOIT BAY, 1200 Aug. 6; Afloat S-476.

(2) Bn. same; afloat with RCT command group.

(3) D Co.—Foot PIER 1, WAQUOIT BAY until 2330 D minus one day—thereafter BEACH BLUE.

(4) E Co.—Foot PIER 2, WAQUOIT BAY until 2400 D minus one day—thereafter BEACH GREEN.

(5) F Co.—Foot of PIER 4, WAQUOIT BAY until 0030 D minus one day—thereafter to be reported.

R
Commanding

OFFICIAL
S
Exec.

ANNEXES

#1—Embarkation and Debarkation Table (same as Annex 3 to Regimental Order—not repeated).

#2—Assembly Table (Same as Annex 9 to Regimental Order—not repeated).

#3—Operations Map RCT 141 (omitted).

DISTRIBUTION
"A"

8. Actions and Orders of Boat Company Commander.

a. The Boat Company commander confers with the BLT commander and the Shore Company commander with whom

he is to work, and with them works out a *Boat Assignment Table,* a *Landing Diagram and Schedule, Cargo Lists,* and such other details as are necessary.

b. He calls his officers together and issues the following orders and instructions:

(1) He calls to their attention the maps, charts, and photographs to be used in the operation, and furnishes them with the latest obliques and vertical photographs available in sufficient numbers so that every coxswain can have an oblique for beach recognition purposes.

(2) He goes over the Boat Battalion order and instructions with his officers, as well as the details he has marked out with the BLT commander to include the *Boat Allotment Table,* the *Track Chart,* the *Assembly Chart* and *Table,* the *Approach Chart* (when necessary), the *Boat Movement Table,* the *Embarkation and Debarkation Table,* the *Landing Diagram,* the *Cargo Lists,* and *Boat Assignment Table.*

(3) He specifies the formation for each phase of the boat movement, if necessary.

(4) He assigns officers as Wave Leaders.

(5) He assigns specific boats and crews to waves and positions according to the BLT Boat Assignment Table, and Landing Diagram.

(6) He assigns specific missions to commanders of command and navigation and patrol boats for the conduct and control of the operation.

(7) He informs them concerning re-fueling, rationing, care of wounded and salvage.

(8) He assigns the second-in-command to control the boat traffic in the Embarkation Area.

(9) He instructs in the use of special navigational aids and signals if any, and if there are none, he so informs his subordinates.

(10) He informs his officers concerning the location of his command post, which after embarkation will be afloat in a command and navigation boat in order to supervise and control the formation.

9. Actions and Orders of Shore Company Commander.

a. The Shore Company commander confers with the BLT commander and the Boat Company commander, and

with them works out a *Boat Assignment Table, Cargo Lists,* and a *Landing Diagram,* insofar as they affect the Shore Company.

b. He makes a preliminary map reconnaissance, based on the plans of operation and tentative dispositions of elements of the battalion landing team. From this he makes tentative selections of shore installations to fit the battalion landing team plan.

c. He calls his officers together, including the attached Boat Control Officer, and issues the following orders and instructions:

(1) He issues the latest information available on the condition of the beach area and furnishes them with the most recent vertical and oblique aerial photographs and information.

(2) He informs them of the general plan of the BLT commander and of his tentative selections for shore installations.

(3) He assigns the Shore Company teams with equipment to craft in accordance with the *Boat Assignment Table.*

(4) He goes over the *Landing Diagram* and *Cargo Lists* with his officers.

(5) He informs his officers of departures from standing operating procedure, if any, including reorganization for resupply.

(6) He gives instructions concerning rations, water, fuel for motor vehicles and tractors, evacuation of casualties, general plan as to prisoners, general plan as to salvage.

(7) He gives information concerning any special signals or signal devices, and changes in signal operating procedure, if any.

(8) He informs them as to his near shore command post and tentative far shore command post, the latter subject to change.

10. Sample Boat Assignment Table and Landing Diagram as prepared by BLT, Boat Company, and Shore Company commanders.

SUGGESTED BOAT ASSIGNMENT TABLE

(Based on Tables of Organization for Infantry Division dated May 1, 1943).

Table is based on Battalion Landing Team consisting of:

1 Battalion, Infantry

1 Battery, Field Artillery, 105 mm Howitzer

1 Platoon, Combat Engineers (from Divisional Combat Engr. Bn.)

1 Platoon, Antitank Company (from Inf. Regt. Antitank Co.)

1 Cannon Platoon, 105 mm (from Hq. Co. Inf. Regt.)

1 Shore Fire Control Party (Navy liaison officer and fire control personnel from F.A. Bn.)

1 Detachment Antiaircraft Automatic Weapons

1 Engineer Boat Company

1 Engineer Shore Company

NOTE: The boat assignment table ordinarily contains less detail as to classification of personnel than is shown here; however, it contains sufficient detail for subordinate commanders to arrange the "boat teams" effectively. Here minute detail is included for instructional and illustrative purposes).

Basics are not shown. Basics available will be distributed in appropriate boats.

WAVE I - ASSAULT

H

BOAT 14 LCVP

COMPANY A
2nd Plat.

Plat. Ldr.	1
Guide	1
Msgr.	1
2 Rifle Squads	24
ENGR. BOAT CO.	
Boat Control Sec.	1
Total	28

BOAT 13 LCVP

COMPANY A
Co. Hq.

Co. Comdr.	1
Msgrs.	2
Armorer Artificer	1
2nd Plat.	
Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
LMG Squad	5
COMBAT ENGR. CO.	
Operating Unit	6
Total	29

BOAT 12 LCVP

COMPANY A
1st Plat.

Plat. Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
Sec. Ldr., LMG	1
1 LMG Squad	5
Msgr., LMG	1
Co. Hq.	
Msgr.	1
Comm Sgt.	1
COMBAT ENGR. CO.	
Operating Unit	6
Total	29

BOAT 11 LCVP

COMPANY A
1st Plat.

Plat. Ldr.	1
Guide	1
2 Rifle Squads	24
Msgr.	1
Total	27

BOAT 18 LCVP

COMPANY B
1st Plat.

Plat. Ldr.	1
Plat. Guide	1
2 Rifle Squads	24
Msgr.	1
Total	27

BOAT 17 LCVP

COMPANY B
1st Plat.

Plat. Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
Sec. Ldr., LMG	1
1 LMG Squad	5
Msgr., LMG	1
Co. Hq.	
Msgr.	1
Comm. Sgt.	1
COMBAT ENGR. CO.	
Operating Unit	6
Total	29

BOAT 16 LCVP

COMPANY B
Co. Hq.

Co. Comdr.	1
Msgrs.	2
Armorer Artificer	1
2nd Plat.	
Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
1 LMG Squad	5
COMBAT ENGR. CO.	
Operating Unit	6
	29

BOAT 15 LCVP

COMPANY B
2nd Plat.

Plat. Ldr.	1
Guide	1
Msgr.	1
2 Rifle Squads	24
ENGR. BOAT CO.	
Boat Control Sec.	1
Total	28

WAVE II - SUPPORT
H plus 5

BOAT 23 LCVP

COMPANY D
1st Plat.
- Plat. Ldr. 1
- Msgr. 1
- Inst. Sgt. 1
- Sec. Ldr. 1
- 2 HMG Squads 14

COMPANY A
Hq.
- 1st Sgt. 1

3rd Plat.
- Plat. Sgt. 1
- Msgr. 1
- 1 Rifle Squad 12
- Total 33

BOAT 22 LCVP

COMPANY A
- 2nd in Comd. 1
- Bugler 1

3rd Plat.
- Plat. Ldr. 1
- Msgr. 1
- Guide 1
- 1 Rifle Squad 12

Weapons Plat.
- Plat. Sgt. 1
- Msgr. 1
- 60-mm Squad 5

COMPANY D (HW CO.)
2nd Plat.
- Plat. Sgt. 1
- Sec. Ldr. 1
- 1 HMG Squad 7
- Total 33

BOAT 21 LCVP

COMPANY A
Weapons Plat.
- Plat. Ldr. 1
- Msgr. 1

60-mm Mortar Sec.
- Sec. Ldr. 1
- Msgr. 60-mm 1
- 2 60-mm Squads 10

3rd Plat.
- 1 Rifle Squad 12

COMPANY D
2nd Plat.
- 1 Squad HMG 7
- Total 33

BOAT 26 LCVP

COMPANY B
Weapons Plat.
- Plat. Ldr. 1
- Msgr. 1
- Sec.Ldr. 60-mm 1
- Msgr. 60-mm 1
- 2 60-mm Squads 10

3rd Plat.
- 1 Rifle Squad 12

COMPANY D
1st Plat.
- 1 Squad HMG 7
- Total 33

BOAT 25 LCVP

COMPANY B
- 2nd in Comd. 1
- Bugler 1

3rd Plat.
- Plat. Ldr. 1
- Msgr. 1
- Guide 1
- 1 Rifle Squad 12

Weapons Plat.
- Plat. Sgt. 1
- Msgr. 1
- 60-mm Squad 5

COMPANY D (HW CO.)
1st Plat.
- Plat. Sgt. 1
- Sec. Ldr. 1
- 1 HMG Squad 7
- Total 33

BOAT 24 LCVP

COMPANY D
2nd Plat.
- Plat. Ldr. 1
- Msgr. 1
- Inst. Sgt. 1
- Sec. Ldr. 1
- 2 HMG Squads 14

COMPANY B
Hq.
- 1st Sgt. 1

3rd Plat.
- Plat. Sgt. 1
- Msgr. 1
- 1 Rifle Squad 12
- Total 33

WAVE III - HEAVY WEAPONS
H plus 15

BOAT 34 LCVP

ENGR. SHORE CO.
Hq. Plat.

Capt., CO	1
1st Sgt.	1
T/5 Rec.	1
T/5 Clerk	1
Beach Marking Team (Utility Plat.)	3
M C Men	3
.30 MG Crews	6

SHORE BN HQ CO.
Comm. Plat.

EM	2

Boat Control Sec.

BCO	1
B. C. Sec.	13
Total	32

BOAT 33 LCVP

INF BN HQ & HQ CO
Hq.

Bn Exec O	1

Co. Hq.

Bn S-1 (Co Comdr)	1

Bn Hq Sec

Sgt. Major	1
Scouts	2

Comm. Plat.

Comm. Chief	1
Wire Chief	1
Radio Chief	1
M. C. Chief	1
Clerk, record	1
T & T Lineman	2
Swbd. Oprs.	2
Msgr.	2

Amm. & Pioneer Plat.

Plat. Sgt.	1
Squad Ldr.	1
Amm. Bearers	7
Total	25

BOAT 32 LCVP

COMPANY D
81-mm Mortar Plat.

Plat. Sgt.	1
Sec. Ldr.	1
81-mm Sec.	14
Msgr.	1

Co. Hq.

Recon. & Sig. Sgt	1
Trans. Sgt.	1
Bugler	1
Mech	1

FA BATTERY
Battery Detail

Recon. Off.	1
Radio Opr.	1

COMBAT ENGR. CO.

Plat Ldr.	1
Plat. Sgt.	1
Weapons Sgt.	1
Total	26

BOAT 31 LCVP

COMPANY D
81-mm Mortar Plat.

Sec. Ldr.	1
81-mm Section	14

BN MED SEC

Corp. Med.	1
Aid Men	3

INF BN HQ & HQ CO.
Amm. & Pioneer Plat.

Squad Ldr.	1
Amm. Bearers	7

Shore Fire Control Party

Naval Officer	1
Radio Opr.	1
Telephone Opr.	1
Msgr.	1
Total	31

BOAT 37 LCVP

ENGR. SHORE CO.
Hq. Plat.

Recon. Officer	1
Weapons Officer	1
T/5 Recon.	1
Clerk	1
Beach Marking Team (Utility Plat)	3
M. C. Men	4
.30 MG Crews	5

SHORE BN HQ CO
Comm. Plat.

EM	3
Boat Control Sec	13
Total	32

BOAT 36 LCVP

SHORE FIRE CONTROL PARTY

FA Bn Ln Off	1
Liaison Corp	1
Radio Oprs.	2
Telephone Oprs.	2

Bn Med Sec

Bn Surgeon	1
Staff Sgt., Med.	1
Aid Men	12

INF BN HQ & HQ CO
Amm. & Pioneer Plat.

Amm. Officer	1
Squad Ldr.	1
Amm. Bearers	7
Total	29

BOAT 35 LCVP

COMPANY D
81-mm Mortar Plat.

Plat. Ldr.	1
Sec. Ldr.	1
Instr. Sgt.	1
81-mm Mortar Sec	14

INF BN HQ & HQ CO
Comm. Plat.

Bn Comm Officer	1
T & T Lineman	2
Radio Oprs.	2
Clerk, Record	1

Bn. Med. Sec.

Aid Men	4
Total	27

WAVE IV - RESERVE AND COMMAND

H plus 40

BOAT 44 LCM(3)

ENGR. SHORE CO.
Pioneer Plat.
- 1st Lt. 1
- Bulldozer Opr. 1
- Decon. Eq. Opr. 1
- Demolition Man 1
- Laborers 2

SHORE BN HQ CO
Combat Plat (.50 MG)
- Sgt. 1
- Corp. 1
- Pvts. 3

Med. Det.
- Officers 1
- Aid Men 4

Total 16

Tractor with Angledozer
Road Bldg Material & Equip

BOAT 43 LCVP

COMPANY C
Rifle Plat.
- Plat. Ldr. 1
- 2 Rifle Squads 24
- Msgr. 1

INF BN MED SEC
- 1st Lt. Med. O. 1
- Aid Men 5

Total 32

BOAT 42 LCVP

COMPANY C
Rifle Plat.
- Plat. Ldr. 1
- Msgr. 1
- 2 Rifle Squads 24

Weapons Plat.
- Sec Ldr (60-mm) 1
- 1 60-mm Squad 5
- Msgr. 1

Total 33

BOAT 41 LCVP

COMPANY C
Weapons Plat.
- Plat. Ldr. 1
- Sec. Ldr. (LMG) 1
- 1 LMG Squad 5
- 1 60-mm Squad 5
- Msgrs. 2

Rifle Plat.
- Plat. Sgt. 1
- Plat. Guide 1
- 1 Rifle Squad 12
- Msgr. 1

Total 29

BOAT 48 LCVP

COMPANY C
Rifle Plat.
- Plat. Sgt. 1
- 2 Rifle Squads 24
- Msgr. 1
- 2nd in Command 1
- Armorer Artificer 1

COMPANY D
Co. Hq.
- Co. Comdr. 1
- Msgr. 1
- Armorer Artificer 1

Total 31

BOAT 47 LCVP

COMPANY C
Rifle Plat.
- Plat. Ldr. 1
- Plat. Guide 1
- 1 Rifle Squad 12
- Msgr. 1

Weapons Plat.
- Plat. Sgt. 1
- 1 60-mm Squad 5
- 1 LMG Squad 5
- Msgr. 1

FA BATTERY
Battery Hq.
- Battery Comdr. 1

Battery Detail
- Detail Chief 1
- Scouts 2
- Radio Opr. 1

Total 32

BOAT 46 LCVP

COMPANY C
Co. Hq.
- Company Comdr. 1
- 1st Sgt. 1
- Comm. Sgt. 1
- Msgrs. 3
- Bugler 1

Rifle Plat.
- Plat. Sgt. 1
- Plat. Guide 1
- 1 Rifle Squad 12
- Msgr. 1

INF BN HQ & HQ CO
- Bn. S-3 1
- Bn. S-2 1
- Opns. Sgt. 1
- Intell. Sgt. 1
- Scouts 2
- Trans. Officer 1
- Armorer Artificer 1

Total 30

BOAT 45 LCVP

ENGR. SHORE CO.
Pioneer Plat.
- Dem. Foreman 1
- Decon. Equip. O. 2
- Dem. Men 2
- Laborer 1

SHORE BN, HQ, CO.
Combat Plat (.50 MG)
- Corp. 1
- Pvts. 3

Med. Det.
- Aid Men 5

INF BN HQ & HQ CO
- Bn. Comdr. 1

Co. Hq.
- 1st Sgt. 1
- Bugler 1
- Orderly 1

Comm Plat.
- Radio Oprs. 2
- Msgrs. 2

Bn Hq Sec.
- Scouts 2

Total 25

WAVE V - ANTITANK
H plus 50

BOAT 54 LCM(3)

ANTITANK COMPANY
Antitank Plat.
Plat. Ldr. 1
37-mm Squad 6
COMBAT ENGR. CO.
Operating Unit 6
COMPANY D
81-mm Mortar Plat.
Msgr. (driver) 1
Total 14

1-37mm AT gun
1-3/4 ton truck WC
1-1/4 ton truck

BOAT 53 LCM(3)

ENGR. SHORE CO.
Pioneer Plat.
1 Pioneer Sec. 12
½ Pioneer Sec. 6
Bulldozer Opr. 1
Total 19

Tractor, with angledozer
Road Building Tools and
Equipment

BOAT 52 LCM(3)

ANTITANK COMPANY
Antitank Plat.
Plat. Sgt. 1
Msgr. 1
1 37-mm AT Squad 6
COMPANY D
Co. Hq.
2nd in Command 1
1st Sgt. 1
1st Plat.
Msgr. (driver) 1
Total 11

1-37-mm AT gun
1-3/4 ton truck
1-1/4 ton truck

BOAT 51 LCM(3)

ENGR. SHORE CO.
Pioneer Plat.
Plat. Sgt. 1
Pioneer Sec. 12
½ Pioneer Sec. 6
Bulldozer Opr. 1
Total 20

Tractor, with Angledozer
Road Building Equipment
and Tools

BOAT 59 LCM(3)

ANTITANK COMPANY
Antitank Plat.
37-mm AT Squad 6
Driver 1
Total 7

1-37-mm AT gun
1-3/4 ton truck
1-1/4 ton truck

BOAT 58 LCM(3)

INF BN HQ & HQ CO.
Antitank Plat.
Plat Ldr. 1
37-mm AT Squad 6
Bn Hq Section
Clerk 1
Truckdriver 1
COMBAT ENGR CO.
Operating Unit 6
Total 15

1-37-mm AT gun
1-3/4 ton W/C
1-1/4 ton truck

BOAT 57 LCM(3)

REGT. HQ. CO.
Cannon Plat.
Plat. Ldr. 1
Sec. Ldr. 1
Cannon Squad 7
Instr. Opr. 1
Msgr. 1
Total 11

1-105-mm Howitzer
1-1½ ton truck

BOAT 56 LCM(3)

INF BN HQ & HQ CO.
Antitank Plat.
Plat. Sgt. 1
Msgr. 1
37-mm AT Squad 6
Truckdriver 1
Total 9

1-37-mm gun
1-3/4 ton W/C
1-1/4 ton truck

BOAT 55 LCT(5)

ANTI-AIRCRAFT PLAT.
(40-mm) (AW)
Plat. Ldr. 1
2nd in Command 1
Plat. Sgt. 1
Observer & Spotter 2
Swbd. Oprs. 2
Basics 2
Chauffeurs 2
4 Firing Units 60
INF BN HQ & HQ CO.
Antitank Plat.
1-37-mm AT Squad 6
Total 77

4-40-mm AA Guns
4-2½ ton Prime Movers
2-2½ ton Cargo Trucks
1-37-mm AT Gun
1-3/4 ton Truck

WAVE VI - FIELD ARTILLERY
H plus 70

BOAT 65 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

Battery Detail
- Agent Corp. 1
- Wire Corp. 1
- Radio Opr. 1
- T & T Opr. 3
- Total 16

1-105-mm Howitzer
1-2½ ton truck

BOAT 64 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

Battery Detail
- Swbd. Opr. 1
- T & T Oprs. 2

Headquarters
- Exec. Officer 1
- Instr. Opr. 1
- Total 15

1-105-mm Howitzer
1-2½ ton truck

BOAT 63 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

5th Section
- Sec. Chief 1
- M. G. Corp. 1
- M. Gunner 1
- Asst. M. Gunners 2
- Amm. Handlers 2
- Total 17

1-105-mm Howitzer
2-.50 Cal M. G's.
1-2½ ton Truck

BOAT 62 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

Maintenance Sec.
- Motor Officer 1
- Motor Sgt. 1

FA HQ & SERV BY
- Survey & Instr. Men 3
- Survey & Instr. Sgt. 1
- Total 16

1-105-mm Howitzer
1-2½ ton truck

BOAT 61 LCM(3)

SHORE COMPANY
Utility Plat.
- Plat. Ldr. 1
- EM 10
- DUKW Opr. 1
- Engineman 1

SHORE BN HQ COMPANY
Combat Plat.
- 1 37-mm Crew 5
- Total 18

1-2½ ton Amphibian Truck
1-37-mm gun in Truck

BOAT 69 LCM(3)

FA BN HQ & SERV BTRY
Amm. Train
- Sec. Chief 1
- Amm. Handler 1
- Truck Driver 1
- Total 3

1-2½ ton Truck (Amm)
1-1/4 ton Trailer (Amm)

BOAT 68 LCM(3)

INF REGT HQ CO.
Cannon Plat.
- Plat. Sgt. 1
- Sec. Ldr. 1
- Cannon Squad 7
- Agent Corp. 1
- Total 10

1-105-mm Howitzer
1-1½ ton Truck

BOAT 67 LCM(3)

FA BATTERY
Battery Hq.
- 1st Sgt. 1

Battery Detail
- Bugler (drives truck) 1
- Truck driver 1
- Total 3

1-3/4 ton truck, Com.
1-3/4 ton truck, W C (amm)

BOAT 66 LCM(3)

ENGR. SHORE COMPANY
Utility Plat.
- EM 10
- DUKW Opr. 1
- Engineman 1

SHORE BN HQ. CO.
Combat Plat.
- 1 37-mm Crew 4
- Total 16

1-2½ ton Amphibian Truck
1-37-mm AT Gun in Truck

WAVE VII - AMMUNITION AND SUPPLY
H plus 90

BOAT 74 LCM(3)

COMPANY A
Weapons Plat.
Truckdriver 1
FA BATTERY
Firing Battery
Mech., artillery (driver) 1
ENGR. SHORE COMPANY
Utility Plat.
EM 9
Total 11

1-1½ ton Truck (Amm)
1-1/4 ton Truck

BOAT 73 LCM(3)

FA BATTERY
Battery Detail
Instr. Corp.(Driver) 1
COMPANY D
81-mm Mortar Plat.
Truckdriver 1
Total 2

1-1/4 ton Truck
1-1½ ton Truck

BOAT 72 LCM(3)

FA BATTERY
5th Section
Truckdriver 1
ENGR. SHORE COMPANY
Utility Plat.
EM 9
Total 10

1-2½ ton Truck
1-Trailer (Amn.)

BOAT 71 LCM(3)

ENGR. SHORE COMPANY
Utility Plat.
EM 10
ENGR. COMBAT COMPANY
Plat. Hq.
Toolroom Keeper 1
Oper. Unit
Truck driver 1
Total 12

1-2½ ton Truck, dump
1-1 ton Trailer

BOAT 78 LCM(3)

COMPANY C
Weapons Plat.
Truckdriver 1
COMPANY D
Co. Hq.
Msgr. (driver) 1
Total 2

1-1½ ton Truck (Amm.)
1-1/4 ton Truck

BOAT 77 LCM(3)

FA BATTERY
Battery Detail
T & T Opr (driver) 1
COMPANY B
Weapons Plat.
Truck driver 1
Total 2

1-1/4 ton Truck
1-1½ ton Truck (Amm.)

BOAT 76 LCM(3)

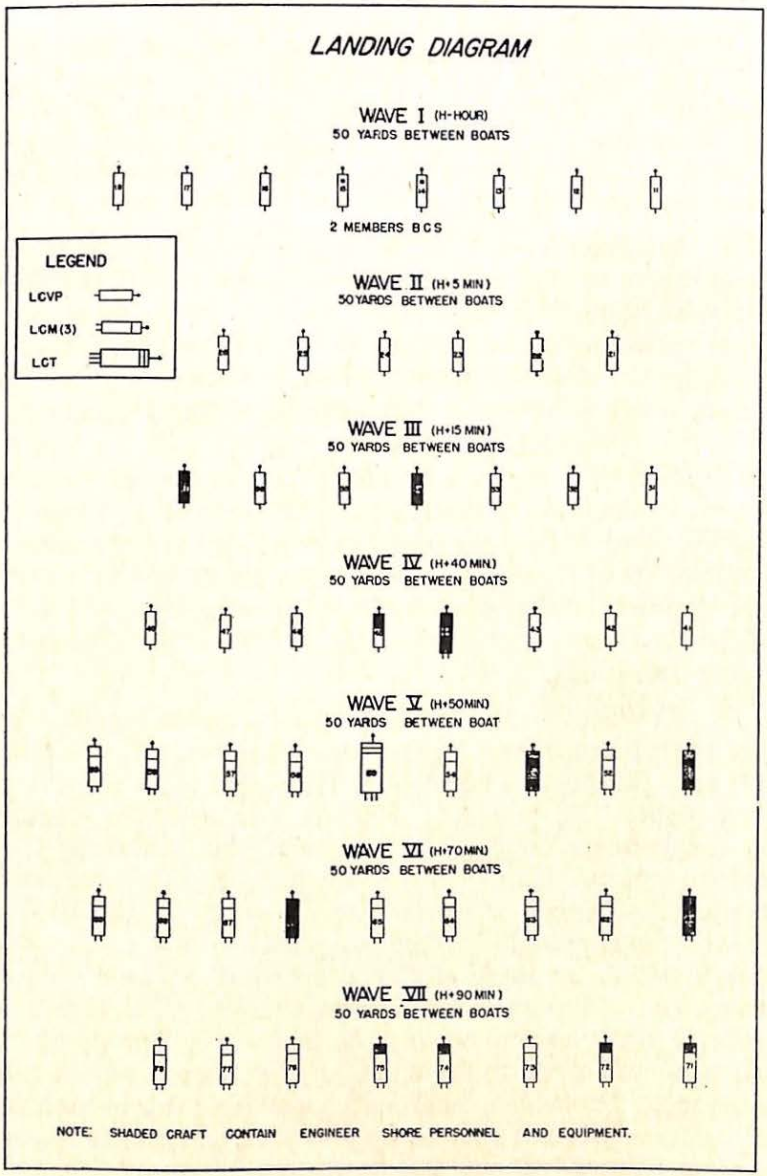
FA BATTERY
Maintenance Sec.
Auto Mech (driver) 1
Total 1

1-2½ ton Truck
1-1 ton Trailer

BOAT 75 LCM(3)

FA BATTERY
5th Section
Truck driver 1
ENGR. SHORE COMPANY
Utility Plat.
EM 10
Total 11

1-2½ ton Truck
1-Trailer (Amm.)


LANDING DIAGRAM
WAVE I (H-HOUR)
50 YARDS BETWEEN BOATS
2 MEMBERS BCS
LEGEND
LCVP
LCM(3)
LCT
WAVE II (H+5 MIN)
50 YARDS BETWEEN BOATS
WAVE III (H+15 MIN)
50 YARDS BETWEEN BOATS
WAVE IV (H+40 MIN)
50 YARDS BETWEEN BOATS
WAVE V (H+50 MIN)
50 YARDS BETWEEN BOAT
WAVE VI (H+70 MIN)
50 YARDS BETWEEN BOATS
WAVE VII (H+90 MIN)
50 YARDS BETWEEN BOATS
NOTE: SHADED CRAFT CONTAIN ENGINEER SHORE PERSONNEL AND EQUIPMENT.

Appendix III

LESSONS LEARNED IN COMBAT

Important lessons have emerged from the amphibian operations conducted by the United Nations in the Solomon Islands and in Africa. Some of these lessons from official reports are included here because they represent experience from the incomparable school of actual combat. They deserve the closest scrutiny.

a. Intelligence.—(1) The importance of weather and hydrographic conditions cannot be overestimated in the planning of an amphibian operation. Using all available aerological information, including synoptic reports and pilot balloon soundings, the Aerological Officer with the expedition was able to issue weather forecasts that were exceedingly accurate.

(2) If conditions are favorable, the use of a submarine or airplane to obtain a profile of the coastline of the landing area weeks prior to the attack is recommended. From the resulting pictures the operating personnel can study an accurate silhouette of the coastline as it will actually appear directly from seaward. Such photographs, properly identified as to beaches and prominent landmarks, will be invaluable aid in landing operations.

b. Training.—(1) The African operation proved that more proficiency in the identification and control of landing craft at night must be developed. Training should stress this. Often under the complete blackout enforced in combat, waves experience difficulty in identifying and following their assigned control boat. Particular difficulty is experienced when small changes of course are necessary as the Line of Departure is approached. One suggestion is that a signalman be stationed in the stern of the control vessel with a dimmed blinker gun. He can signal course changes to a signalman stationed in the leading boat of the first wave. The signal can then be passed on down the line to successive waves in a similar manner. Proficiency in any such device as this in both fair and foul weather requires extensive training, but its importance is such that it should not be neglected.

c. Staff Planning.—(1) There must be the closest possible cooperation between the Engineer Special Brigade and the infantry division staffs. It is equally essential that the same close cooperation exist between the army and navy staffs

when there is naval participation. The great value of having a naval and military staff that knew each other and have worked together as ONE staff was demonstrated. As always, the problem of when to put subordinate commanders and services 'in the picture' arose. On the whole, it is believed better to accept the possibility of leakage by doing it too soon, in order that essential information may be disseminated, than to risk the inevitable confusion which results if insufficient time is available for troops to absorb the order.

d. Operations.—(1) The large scale landings conducted so far by the United Nations definitely prove that our basic concepts and general technique are sound.

(2) The work of the shore party requires highly specialized training. Personnel trained and assigned to such duties should be withdrawn from the landing area at the completion of the operation and held for use in future actions. This is considered to be the only way in which experienced and "battlewise" shore and beach units can be developed.

(3) More attention should be paid to boat salvage. At one beach in Africa a number of landing craft were not salvaged because there was not available a bulldozer or tractor when weather and tidal conditions made salvage operations possible. A tractor (or an alligator tractor) and a bulldozer should be placed at the disposal of the salvage group and should be used exclusively for salvage work, except in emergencies.

(4) Adequate personnel and material must be available for clearing beach and dock areas of supplies. Once on the beach, material and supplies must be quickly unloaded and carried out of the tidal area to prevent loss of cargo and stranding of boats. Items such as gasoline and ammunition must be removed quickly to less exposed places so that they do not become a menace to further operations in the event of enemy bombing attacks.

3008—FORT BELVOIR, VA.—6-7-43—6500

Q. M. C. Form 353 (Old No. 490)
Revised July 26, 1918

LIST OF PAPERS

File under No. 311.5 (Confidential & Secret Communications, Methods of)

E. A. C. FILE

RESTRICTED
~~SECRET~~

3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	WD Adj Gen Office Washington, D.C.	11/29/42	All Concerned	Qualifications of personnel engaged duties cryptographic systems
2	Signal Officer, Cp Edwards, Mass.	3/2/43	EAC	Stereotype Phraseology
3	WD Adj Gen Office Washington, D. C.	3/28/43	All Concerned	Codes and Ciphers for Combined Air-Amphibian Operations
4	WD Office of CE Washington DC	12/21/43	Adj Gen EAC, Cp Edwards, Mass	Semi-annual Report of Registered Documents.
5	SECNAV	2/29/44	ALNAV # 44	Transmission By dispatch mail for Navy Department

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

Top Secret
Secret
Confidential
Restricted

MF/XM

TELEPHONE EXT. NO. 4515

FROM: SECNAV TO: ALNAV # 44

RELEASED BY: FRANK KNOX AIRMAIL - BASEGRAM

DATE: 29 FEBRUARY 1944

D - QNL - A - SNOW 292213/44 RAFT - QIR - QWM - GR 1937 BT

COMBINED CHIEFS OF STAFF HAVE AGREED UPON IDENTICAL DEFINITIONS AND POLICY CONCERNING CLASSIFIED MATTER TO BE EFFECTIVE IN ARMED FORCES U S AND BRITISH EMPIRE X THIS AGREEMENT HEREINAFTER QUOTED HEREBY ISSUED FOR COMPLIANCE BY ALL MEMBERS NAVAL ESTABLISHMENT WHERESOEVER LOCATED X ACCORDINGLY THOSE PORTIONS OF NAVY REGULATIONS COMMA GENERAL ORDERS COMMA LETTERS AND INSTRUCTIONS INCONSISTENT WITH THE PROVISIONS OF THE AGREEMENT QUOTED HEREIN ARE SUSPENDED PENDING FORMAL CHANGES IN REGULATIONS AND INSTRUCTIONS TO BE ISSUED IN DETAIL NEAR FUTURE X PERSONNEL ARE NOT TO PRESUME THAT ADOPTION OF ADDITIONAL CLASSIFICATION QUOTE TOP SECRE UNQUOTE REDUCES PRESENT INTEGRITY OF EXISTING CLASSIFICATIONS X

DISTRIBUTION

(BASEGRAM DELIVERY AUTHORITIES) (AIRMAIL)
APPENDIX 1V, COMINST.
LISTS 4, 5, 6 (FOR 8, 9, 10,) 7, 11, 13, 14 (ORDINARY MAIL)

ATTENTION
THIS IS THE ACTION COPY OF AN
ORIGINAL TRANSMISSION BY DISPATCH
MAIL. DELIVER TO RADIO ROOM.
AUTHENTICATED BY YK FOR NAVY DEPARTMENT
COMMUNICATION WATCH OFFICER, DATE 1 MARCH 1944
TIME 0530

(5)

MATERIAL MUST BE CLASSIFIED IN STRICT ACCORDANCE WITH DEFINITIONS AND SAFEGUARDED AS DIRECTED BY EXISTING REGULATIONS AND MODIFICATIONS CONTAINED IN AGREEMENT QUOTED X ALL HANDS ARE ENJOINED TO GRADE AND CLASSIFY MATTER WITH EXACTING CARE IN ORDER TO AVOID OVER-CLASSIFICATION X THIS ORDER EFFECTIVE ØØØ1 ZED 15 MARCH 1944 X CLASSIFIED MATTER ORIGINATED PRIOR EFFECTIVE DATE NEED NOT BE RECLASSIFIED TO ACCORD WITH THIS ORDER, EXCEPT WHEN SUCH MATTER IS STILL CURRENT OR PERPETUATED BY ADDITIONS OR ACCESSIONS ISSUED AFTER EFFECTIVE DATE X COMBINED SECURITY CLASSIFICATIONS AGREEMENT IS QUOTED AS FOLLOWS COLON COMBINED SECURITY CLASSIFICATIONS AGREEMENT NEED FOR CLASSIFICATION PARAGRAPH 1 TO SAFEGUARD OFFICIAL MATTER COMMA IT MUST BE EXAMINED AND GRADED INTO CATEGORIES SO THAT IT MAY BE RECOGNIZED AND ACCORDED PROPER HANDLING X TO GRADE MATTER ACCURATELY AND UNIFORMLY THE FOLLOWING GENERAL POLICY AND DEFINITIONS HAVE BEEN AGREED UPON BY THE COMBINED CHIEFS OF STAFF TO BECOME EFFECTIVE 15 MARCH 1944 X THE DETAILED INSTRUCTIONS BASED THEREON WILL BE ISSUED BY THE SEVERAL SERVICES CONCERNED NOT LATER THAN 1 APRIL 1944 DEFINITIONS PARAGRAPH 2 FOR THE PURPOSE OF THIS AGREEMENT COMMA THE FOLLOWING DEFINITIONS APPLY COLON SUB-PARAGRAPH A DOCUMENTS COLON ANY FORM OF RECORDED INFORMATION SUB-PARAGRAPH B MATERIEL COLON ANY ARTICLE COMMA SUBSTANCE COMMA OR APPARATUS SUB-PARAGRAPH C HANDLING COLON CARE IN TRANSMISSION AND CUSTODY SUB-PARAGRAPH D DISTRIBUTION COLON EXTENT OF ACTUAL OR AUTHORIZED ISSUE OF SPECIFIC MATTER SUB-PARAGRAPH E CRYPTOGRAPHIC SYSTEM COLON CODE AND SLANT OR CIPHER AND INSTRUCTIONS THEREFOR SUB-PARAGRAPH F REGISTERED MATTER PAREN DOCUMENT PAREN COLON ANY CLASSIFIED DOCUMENT OR DEVICE REGISTERED

USUALLY BY NUMBER AND PERIODICALLY ACCOUNTED FOR SUB-PARAGRAPH G ORDER OF BATTLE COLON IMPORTANT DISPOSITIONS OF OUR FORCES WITH THE IDENTITIES OF THE UNITS AND FORMATIONS COMPOSING THOSE FORCES IN OR ADJACENT TO OPERATIONAL THEATERS SUB-PARAGRAPH H MUNITIONS OF WAR COLON ANY ITEM USED FOR WAR CATEGORIES PARAGRAPH 3 OFFICIAL MATTER REQUIRING CLASSIFICATION SHALL BE EXAMINED AND GRADED UNDER ONE OF THE FOLLOWING CATEGORIES COLON TOP SECRET PAREN SIGNAL ABBREVIATION COMMA TOPSEC PAREN COMMA SECRET COMMA CONFIDENTIAL COMMA RESTRICTED PARAGRAPH 4 THE UNITED STATES REGARDS TOP SECRET AS A SUBDIVISION OF SECRET X ON THE OTHER HAND COMMA THE BRITISH REGARD TOP SECRET AS A DISTINCT CATEGORY X ALTHOUGH THIS DIFFERENCE OF VIEW IS RECOGNIZED IT IS IMMATERIAL TO THIS AGREEMENT UNDER WHICH COMPLETE WORKING UNIFORMITY IS OBTAINED BY THE ADOPTION OF AGREED DEFINITIONS EXAMPLES AND RULES OF TREATMENT FOR THE HANDLING OF ALL CLASSIFIED MATTER PARAGRAPH 5 PROVIDING THE FOLLOWING DEFINITIONS AND RULES FOR HANDLING ARE MUTUALLY ACCEPTED AND RIGOROUSLY IMPLEMENTED COMMA THE DIFFICULTIES CAN BE OVERCOME TOP SECRET PARAGRAPH 6 CERTAIN SECRET DOCUMENTS INFORMATION AND MATERIEL THE SECURITY ASPECT OF WHICH IS PARAMOUNT AND WHOSE UNAUTHORIZED DISCLOSURE WOULD CAUSE EXCEPTIONALLY GRAVE DAMAGE TO THE NATION SHALL BE CLASSIFIED TOP SECRET PARAGRAPH 7 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED TOP SECRET COLON SUB-PARAGRAPH A PLANS OR PARTICULARS OF FUTURE MAJOR OR SPECIAL OPERATIONS SUB-PARAGRAPH B PARTICULARS OF IMPORTANT DISPOSITIONS OR IMPENDING MOVES OF OUR FORCES OR CONVOYS IN CONNECTION WITH A ABOVE SUB-PARAGRAPH C VERY IMPORTANT POLITICAL DOCUMENTS DEALING WITH SUCH MATTERS AS NEGOTIATIONS FOR ALLIANCES

AND THE LIKE SUB-PARAGRAPH D INFORMATION OF THE METHODS USED OR SUCCESS OBTAINED BY OUR INTELLIGENCE SERVICES AND COUNTER-INTELLIGENCE SERVICES OR WHICH WOULD IMPERIL SECRET AGENTS SUB-PARAGRAPH E CRITICAL INFORMATION OF NEW AND IMPORTANT MUNITIONS OF WAR COMMA INCLUDING APPROVED SCIENTIFIC AND TECHNICAL DEVELOPMENTS SUB-PARAGRAPH F IMPORTANT PARTICULARS OF CRYPTOGRAPHY AND CRYPTANALYSIS SECRET PARAGRAPH 8 DOCUMENTS COMMA INFORMATION COMMA OR MATERIEL COMMA THE UNAUTHORIZED DISCLOSURE OF WHICH WOULD ENDANGER NATIONAL SECURITY COMMA CAUSE SERIOUS INJURY TO THE INTERESTS OR PRESTIGE OF THE NATION COMMA OR ANY GOVERNMENTAL ACTIVITY THEREOF COMMA OR WOULD BE OF GREAT ADVANTAGE TO A FOREIGN NATION SHALL BE CLASSIFIED SECRET PARAGRAPH 9 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED SECRET COLON SUB-PARAGRAPH A PARTICULARS OF OPERATIONS IN PROGRESS SUB-PARAGRAPH B PLANS OR PARTICULARS OF OPERATIONS NOT INCLUDED UNDER TOP SECRET SUB-PARAGRAPH C INSTRUCTIONS REGARDING THE EMPLOYMENT OF IMPORTANT NEW MUNITIONS OF WAR SUB-PARAGRAPH D ORDER OF BATTLE INFORMATION AND LOCATIONS AND MOVES AFFECTING THE ORDER OF BATTLE SUB-PARAGRAPH E KNOWLEDGE OF ENEMY MATERIEL AND PROCEDURE COMMA THE VALUE OF WHICH DEPENDS UPON THE ENEMY NOT KNOWING THAT WE POSSESS IT SUB-PARAGRAPH F VITAL MILITARY INFORMATION ON IMPORTANT DEFENSES SUB-PARAGRAPH G CERTAIN REPORTS OF OPERATIONS CONTAINING INFORMATION OF VITAL INTEREST TO THE ENEMY SUB-PARAGRAPH H ADVERSE REPORTS ON GENERAL MORALE AFFECTING MAJOR OPERATIONS SUB-PARAGRAPH I IMPORTANT IMPROVEMENTS TO EXISTING MUNITIONS OF WAR UNTIL ACCEPTED FOR SERVICE USE SUB-PARAGRAPH J PHOTOGRAPHS OF VULNERABLE POINTS OR VITAL INSTALLATIONS UNDER OUR CONTROL SUB-PARAGRAPH K CERTAIN DEVELOPMENT

PROJECTS SUB-PARAGRAPH L IMPORTANT CRYPTOGRAPHIC DEVICES UNLESS ASSIGNED TO A LOWER CATEGORY CONFIDENTIAL PARAGRAPH 10 DOCUMENTS COMMA INFORMATION COMMA OR MATERIEL COMMA THE UNAUTHORIZED DISCLOSURE OF WHICH COMMA WHILE NOT ENDANGERING THE NATIONAL SECURITY COMMA WOULD BE PREJUDICIAL TO THE INTERESTS OR PRESTIGE OF THE NATION COMMA ANY GOVERNMENTAL ACTIVITY COMMA AN INDIVIDUAL COMMA OR WOULD CAUSE ADMINISTRATIVE EMBARRASSMENT COMMA OR DIFFICULTY COMMA OR BE OF ADVANTAGE TO A FOREIGN NATION SHALL BE CLASSIFIED CONFIDENTIAL PARAGRAPH 11 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED CONFIDENTIAL SUB-PARAGRAPH A MATTERS COMMA INVESTIGATIONS COMMA AND DOCUMENTS OF A PERSONAL AND DISCIPLINARY NATURE COMMA THE KNOWLEDGE OF WHICH IT IS DESIRABLE TO SAFEGUARD FOR ADMINISTRATIVE REASONS SUB-PARAGRAPH B ROUTINE OPERATIONAL AND BATTLE REPORTS WHICH DO NOT CONTAIN INFORMATION OF VITAL INTEREST TO THE ENEMY SUB-PARAGRAPH C ROUTINE INTELLIGENCE REPORTS SUB-PARAGRAPH D GENERAL MILITARY RADIO FREQUENCY ALLOCATIONS SUB-PARAGRAPH E MILITARY CALL SIGNS COMMA UNLESS SO COLLECTED TOGETHER THAT THEY REVEAL THE ORDER OF BATTLE SUB-PARAGRAPH F METEOROLOGICAL INFORMATION OF DESIGNATED AREAS SUB-PARAGRAPH G UNIT MOVEMENTS OF NON-OPERATIONAL SIGNIFICANCE IN AREAS WITHIN OR ADJACENT TO OPERATIONAL THEATERS SUB-PARAGRAPH H CERTAIN TECHNICAL DOCUMENTS AND MANUALS USED FOR TRAINING COMMA MAINTENANCE AND INSPECTION OF IMPORTANT NEW MUNITIONS OF WAR SUB-PARAGRAPH I GENERAL TACTICAL LESSONS LEARNED AS A RESULT OF OPERATIONS SUB-PARAGRAPH J AERIAL PHOTOGRAPHS OF TERRITORIES UNDER OUR CONTROL IN OR

ADJACENT TO OPERATIONAL THEATERS RESTRICTED PARAGRAPH 12 DOCUMENTS COMMA INFORMATION OR MATERIEL PAREN OTHER THAN TOP SECRET COMMA SECRET COMMA OR CONFIDENTIAL PAREN WHICH SHOULD NOT BE PUBLISHED OR COMMUNICATED TO ANYONE EXCEPT FOR OFFICIAL PURPOSES SHALL BE CLASSIFIED RESTRICTED PARAGRAPH 13 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED RESTRICTED COLON SUB-PARAGRAPH A INFORMATION OF MOVES OF NON-OPERATIONAL SIGNIFICANCE IN AREAS REMOTE FROM THEATERS OF WAR SUB-PARAGRAPH B TRAINING AND TECHNICAL DOCUMENTS FOR OFFICIAL USE ONLY OR NOT INTENDED FOR RELEASE TO THE PUBLIC SUB-PARAGRAPH C CERTAIN ROUTINE DOCUMENTS RELATING TO SUPPLY AND PROCUREMENT SUB-PARAGRAPH D AERIAL PHOTOGRAPHS OF TERRITORIES UNDER OUR CONTROL REMOTE FROM OPERATIONAL THEATERS SUB-PARAGRAPH E PHOTOGRAPHS OF ENEMY COMMA ENEMY OCCUPIED OR DOMINATED AREAS EXCEPT THOSE WHICH REVEAL SECRET SOURCES SUB-PARAGRAPH F STRENGTH RETURNS OF UNITS REMOTE FROM OPERATIONAL THEATERS GENERAL PRINCIPLES GRADING PARAGRAPH 14 THE DESIGNATION OF PERSONS RESPONSIBLE FOR GRADING AND REGRADING WILL BE A FUNCTION OF THE APPROPRIATE AUTHORITIES PARAGRAPH 15 EACH DOCUMENT SHOULD BE GRADED ACCORDING TO ITS OWN CONTENT AND NOT NECESSARILY ACCORDING TO ITS RELATIONSHIP TO ANOTHER DOCUMENT X THIS ALSO APPLIES TO EXTRACTS FROM GRADED DOCUMENTS PARAGRAPH 16 THE GRADING OF A FILE OR GROUP OF PHYSICALLY CONNECTED DOCUMENTS SHALL BE THAT OF THE HIGHEST GRADED DOCUMENT THEREIN RE-GRADING PARAGRAPH 17 IT IS THE OBLIGATION OF ALL AUTHORITIES TO KEEP CLASSIFIED MATTER CONSTANTLY UNDER REVIEW AND TO DOWNGRADE IT AS SOON AS CONDITIONS

PERMIT TRANSMISSION OF CERTAIN MESSAGES BY ELECTRICAL MEANS PARAGRAPH 18 MESSAGES WHICH HAVE BEEN TRANSMITTED OR ARE TO BE TRANSMITTED IN A HIGH-GRADE CRYPTOGRAPHIC SYSTEM OF ONE NATION WILL NOT BE RELAYED OR TRANSMITTED BY THE OTHER NATION BETWEEN POINT OF ORIGIN AND DESTINATION BY ELECTRICAL MEANS IN CLEAR LANGUAGE OR UNAPPROVED QUOTE SCRAMBLER UNQUOTE SYSTEM OR LOW-GRADE CRYPTOGRAPHIC SYSTEM HANDLING PAREN TREATMENT PAREN PARAGRAPH 19 NO PERSON IS ENTITLED SOLELY BY VIRTUE OF HIS RANK OR POSITION TO KNOWLEDGE OR POSSESSION OF CLASSIFIED MATTER X SUCH MATTER IS ENTRUSTED ONLY TO THOSE INDIVIDUALS WHOSE OFFICIAL DUTIES REQUIRE SUCH KNOWLEDGE OR POSSESSION X SECRET PARAGRAPH 2Ø SECRET MATTER WILL BE HANDLED IN ACCORDANCE WITH THE FOLLOWING RULES COLON SUB-PARAGRAPH A THE HIGHEST GRADE CRYPTOGRAPHIC SYSTEMS AVAILABLE WILL BE USED FOR THE TRANSMISSION OF SECRET MESSAGES SUB-PARAGRAPH B SECRET DOCUMENTS WILL BE TRANSMITTED ONLY BY OFFICIALLY DESIGNATED COURIER IN DOUBLE SEALED ENVELOPES COMMA THE INNER ONE BEING MARKED SECRET COMMA AND WILL BE OPENED ONLY BY THE ADDRESSEE OR HIS AUTHORIZED REPRESENTATIVE X WHERE OFFICIALLY DESIGNATED COURIER SERVICE IS NOT AVAILABLE COMMA SECRET DOCUMENTS MAY BE TRANSMITTED BY REGISTERED MAIL SERVICE OR MAIL SERVICE SUPERIOR TO REGISTERED MAIL SERVICE COMMA IF THE SERVICE IS COMPLETELY WITHIN NATIONAL CONTROL SUB-PARAGRAPH C TRANSMISSION AND CUSTODY OF THESE DOCUMENTS AND MATERIEL WILL NORMALLY BE COVERED BY A RECEIPT SYSTEM AND REGISTERED DOCUMENTS OR MATERIEL PERIODICALLY ACCOUNTED FOR X IT IS MANDATORY THAT REGISTERED DOCUMENTS BE COVERED BY A RECEIPT SYSTEM SUB-PARAGRAPH

D SECRET MESSAGES WILL NOT BE TRANSMITTED BY ELECTRICAL MEANS IN THE CLEAR COMMA EXCEPT FOR APPROVED CIRCUITS AND PROVIDING THE RULE IN PARAGRAPH 18 IS NOT VIOLATED X NOTES PAREN ONE PAREN AN APPROVED CIRCUIT IS COLON A CIRCUIT APPROVED BY THE THEATER COMMANDER X THE BRITISH SERVICES QUOTE DEFENCE TELEPRINTER NET-WORK UNQUOTE IN THE UNITED KINGDOM PAREN TWO PAREN THIS ITEM WILL NOT APPEAR IN U S REGULATIONS ON CRYPTOGRAPHIC SECURITY X IT WILL BE RELEASED IMMEDIATELY TO RESPONSIBLE COMMANDERS IN SPECIAL LETTERS OF INSTRUCTIONS SUB-PARAGRAPH E IT IS THE RESPONSIBILITY OF THE COMMISSIONED OFFICER OR EQUIVALENT CIVILIAN HOLDING CUSTODY OF SECRET DOCUMENTS TO ENSURE THAT ALL SECURITY PRECAUTIONS ARE TAKEN TO GUARD SUCH DOCUMENTS AT ALL TIMES X

TOP SECRET PARAGRAPH 21 TOP SECRET MATTER WILL BE HANDLED IN ACCORDANCE WITH THE ABOVE RULES COMMA WITH ADDITIONAL SAFEGUARDS AS FOLLOW COLON SUB-PARAGRAPH A UNDER NO CIRCUMSTANCES WILL SUCH MATTER BE TRANSMITTED BY REGISTERED MAIL SUB-PARAGRAPH B UNDER NO CIRCUMSTANCES WILL MESSAGES SO GRADED BE TRANSMITTED BY ELECTRICAL MEANS IN THE CLEAR SUB-PARAGRAPH C IT IS MANDATORY THAT TRANSMISSION AND CUSTODY OF SUCH MATTER BE COVERED BY A RECEIPT SYSTEM SUB-PARAGRAPH D TOP SECRET DOCUMENTS WILL BE HANDLED ONLY BY PERSONS SPECIFICALLY DESIGNATED AND MAY NOT BE DISCLOSED TO ANY PERSON SOLELY BY VIRTUE OF HIS RANK OR OFFICE

CONFIDENTIAL PARAGRAPH 22 CONFIDENTIAL MATTER WILL BE HANDLED IN ACCORDANCE WITH THE FOLLOWING RULES COLON SUB-PARAGRAPH A CONFIDENTIAL DOCUMENTS COMMA EXCEPT REGISTERED COMMA WILL BE TRANSMITTED BY APPROVED OFFICIAL MEANS X REGISTERED CONFIDENTIAL

DOCUMENTS WILL BE HANDLED IN THE SAME MANNER AS REGISTERED SECRET DOCUMENTS SUB-PARAGRAPH B IT IS THE RESPONSIBILITY OF THE COMMISSIONED OFFICER OR EQUIVALENT OFFICIAL HOLDING CUSTODY OF CONFIDENTIAL DOCUMENTS TO INSURE THAT APPROPRIATE SECURITY PRECAUTIONS ARE TAKEN AT ALL TIMES RESTRICTED PARAGRAPH 23 RESTRICTED MATTER WILL BE HANDLED IN ACCORDANCE WITH THE FOLLOWING RULES COLON SUB-PARAGRAPH A RESTRICTED DOCUMENTS WILL BE TRANSMITTED BY SUCH APPROVED CHANNELS AS WILL PROVIDE A REASONABLE DEGREE OF SECURITY SUB-PARAGRAPH B REGISTERED RESTRICTED DOCUMENTS WILL BE TRANSMITTED TO AND FROM FOREIGN COUNTRIES IN THE SAME MANNER AS REGISTERED SECRET DOCUMENTS BT 292213/44

(5)

COPY/er

SECRET

WAR DEPARTMENT
Office of the Chief of Engineers
Washington

Refer to File No. SPEHS

21 December 1943.

Subject: Semi-annual Report of Registered Documents.

To: The Adjutant General,
Engineer Amphibian Command,
CAMP EDWARDS, MASSACHUSETTS.
Att: Captain A. T. Stafford.

1. Inclosed herewith is Form 34, in duplicate.

2. Please accomplish, date and return original so as to be in this office on 1 January 1944.

For the Chief of Engineers:

/s/ Earl D. Davis
/t/ Earl D. Davis,
1st Lt., Corps of Engineers,
Custodian of Registered Documents.

Inclosure:
Form 34, in dupl.

311.5

1st Ind. DWA/pgf

HEADQUARTERS, ENGINEER AMPHIBIAN COMMAND, Camp Edwards, Massachusetts, 24 December 1943.

TO: Commanding Officer, Army Service Forces Training Center, Camp Cordon Johnston, Florida. (Attn: Capt. John S. Tyler)

Forwarded as a matter pertaining to you command.

For the Commanding Officer:

/s/ Dale W. Ankeney
/t/ DALE W. ANKENEY
2nd Lt., CE
Adjutant

(4)

SECRET

COPY/er

SECRET

2nd Ind. JST:1st

HEADQUARTERS, MOBILIZATION TRAINING COMMAND, ARMY SERVICE FORCES TRAINING CENTER, Camp Gordon Johnston, Florida, 30 December 1943.

TO: The Chief of Engineers, War Department, Washington 25, D. C.

1. Basic communication complied with.

2. There is no further need of subject document and permission is requested to return it to your headquarters.

For the Commanding Officer:

/s/ John S. Tyler
/t/ JOHN S. TYLER
Captain, AGD
Adjutant

1 Incl.
n/c

CE SPEHS 3rd Ind.

Office, Chief of Engineers, Washington, D. C., 14 January 1944.

To: Headquarters, Mobilization Training Command, Army Service Forces Training Center, CAMP GORDON JOHNSTON, FLORIDA.

Permission granted.

For the Chief of Engineers:

/s/ Earl D. Davis
/t/ Earl D. Davis,
1st Lt., Corps of Engineers,
Custodian of Registered Documents.

Inclosure:
w/d

SECRET

(4)

COPY/er

SECRET

2nd Ind. JST:1st

HEADQUARTERS, MOBILIZATION TRAINING COMMAND, ARMY SERVICE FORCES TRAINING CENTER, Camp Gordon Johnston, Florida, 30 December 1943.

TO: The Chief of Engineers, War Department, Washington 25, D. C.

1. Basic communication complied with.

2. There is no further need of subject document and permission is requested to return it to your headquarters.

For the Commanding Officer:

/s/ John S. Tyler
/t/ JOHN S. TYLER
Captain, AGD
Adjutant

1 Incl.
n/c

CE SPEHS 3rd Ind.

Office, Chief of Engineers, Washington, D. C., 14 January 1944.

To: Headquarters, Mobilization Training Command, Army Service Forces Training Center, CAMP GORDON JOHNSTON, FLORIDA.

Permission granted.

For the Chief of Engineers:

/s/ Earl D. Davis
/t/ Earl D. Davis,
1st Lt., Corps of Engineers,
Custodian of Registered Documents.

Inclosure:
w/d

SECRET

(4)

4th Ind. DWA/er

HEADQUARTERS, MOBILIZATION TRAINING COMMAND, ARMY SERVICE FORCES TRAINING CENTER, Camp Gordon Johnston, Florida, 24 January 1944.

TO: Chief of Engineers, War Department, Washington 25, D. C.
Attention: Custodian of Registered Documents

Subject registered document is returned in compliance with 2nd and 3rd Indorsements.

For the Commanding Officer:

JOHN S. TYLER
Captain, AGD
Adjutant

1 Incl. added
Copy No. 19 "The Dieppe Raid"
(Combined Report) 1942

Note for file: Receipt of Acknowledgement for subject document in files of MTC Headquarters.

(4)

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COPY NO. 87

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 311.5 (3-24-43)OB-S-SPSIS-M

BJS/reh-2B-939 Pentagon

March 28, 1943

~~SECRET~~
Auth: T. A. G.
Initials: LEJ
Date: 3-28-43

SUBJECT: Codes and Ciphers for Combined Air-Amphibian Operations.

TO: The Commanding Generals,
Army Ground Forces;
Army Air Forces;
Army Service Forces.
Commander-in-Chief, Southwest Pacific Area.
The Commanding Generals,
Theaters of Operations;
Defense Commands;
Departments;
Service Commands;
Base Commands;
Military District of Washington.
The Commanding Officers,
Base Commands.

~~G3~~
~~JEAB~~

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45 (Date)
H. G. King Lt. Col. (Initials) jrb

1. The Combined Communications Board, on February 17, 1943, approved the inclosed tabulation of cryptographic systems suitable for use in various stages of combined air-amphibian operations.

2. In the case of each combined air-amphibian operation, it should be the duty of the senior officer appointed for that operation to select the cryptographic systems to be used.

3. The systems set forth in column three of the tabulation should be used if available; if not available, the selection by the senior officer appointed for the operation of any systems in columns one and two is approved.

4. A statement of these cryptographic systems should be included in the Combined Communication Plan for each operation which, after approval by the Commanders, will form the basis for the detailed communication orders of all services concerned.

5. It is desired that necessary steps be taken to disseminate this information in your Command.

By order of the Secretary of War:

One copy Received

J. A. ULIO,
Major General,
The Adjutant General.

1 Incl.
List of Cryptographic Systems.

(3)

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SECRET

For Copies Furnished, see page 2

SECRET

AG 311.5 (3-24-43)OB-S-SPSIS-M (Cont'd) March 28, 1943.

Copies Furnished:
Divisions of the War Department General Staff.
Combined Chief of Staff.
Chief Signal Officer. (3 cys).
Distribution II.

U. S. SECRET
BRITISH MOST SECRET

SECRET
RESTRICTED

ENCLOSURE A

List of Cryptographic Systems suitable for Combined Air-Amphibian Operations

BRITISH	UNITED STATES	COMBINED
1. During Voyage	1. During Voyage	1. During Voyage
Normal naval ciphers* and codes are used for purely Naval traffic and for any essential Army and R.A.F. traffic which has to be passed to the force while at sea. Distribution:-	Normal naval ciphers (ECM* and/or Strip), are used for purely Naval traffic. Joint ECM* and/or Strips for Joint traffic which has to be passed to the force while at sea. Distribution:-	Normal combined ciphers (Combined Cipher Machine C.C.B.P. -and Naval Cipher No. 3) are used for purely Naval traffic and for any essential Army and Air Force traffic which has to be passed to the force while at sea. Distribution:-
Normal	Normal	Normal
*Where the CCM is not available, and machines of either service are required to be employed for combined use, liaison groups must accompany this equipment. In some instances where the British Type X machine is selected to be used, the Senior British Signal Officer may authorize its employment by U.S.Forces without a liaison group.	*Where the CCM is not available, and machines of either service are required to be employed for combined use, liaison groups must accompany this equipment. In some instances where the British Type X machine is selected to be used, the Senior British Signal Officer may authorize its employment by U. S. Forces without a liaison group.	
2. During Final Approach and Assault.	2. During Final Approach and Assault.	2. During Final Approach and Assault.
(a) Naval code with a special edition of a subtractor table is set aside as main "high-grade" means of communication at this stage. Distribution:-	(a) Hazardous duty strip ciphers, Navy only, plus Joint Army-Navy Strip Ciphers. Distribution:-	(a) Normal combined cipher as in 1 above except special hazardous duty keys will be employed. Distribution:-
Commander-in-Chief, Flag officers, and Major War Vessels.	Commander-in-Chief, Flag officers, and Major War Vessels.	Commander-in-Chief, Flag officers, and Major War Vessels.

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SECRET

(3)

~~SECRET~~
RESTRICTED

	BRITISH	UNITED STATES	COMBINED
2.	(b) For more rapid communication requiring reasonable security for a limited period a 3 letter hatted code is used, unenciphered, known as Combined Operations Code Part I. Distribution:-	(b) For more rapid communication requiring reasonable security for a limited period the Joint Operations Code either unenciphered or enciphered by 4 random mixed alphabets changed at least daily. The Hagelin Machine. Distribution:-	(b) For more rapid communication requiring reasonable security for a limited period, either Combined Operations Code Part I unenciphered or Joint Operations Code, (enciphered by means of 4 random mixed alphabets changed at least daily), is suitable. Distribution:-
	All ships, Main and sub-beach signal stations, Headquarters down to battalions, R.A.F. formation Headquarters and Stations. (point-to-point).	Down to minor war vessels, All Marine activities down to battalions, Army Headquarters down to battalions, Down to Army Air Force Squadrons.	Down to minor war vessels, Main and sub-beach signal stations, Marine Headquarters down to battalions, Army Headquarters down to battalions, Down to Air Force Squadrons.
	(c) It is the intention to use plain language considerably in the assault in the interests of speed temporary cover being obtained by the use of code words for important places, names, and references. These code words are included in operational order.	(c) It is the intention to use plain language considerably in the assault in the interests of speed, temporary cover being obtained by the use of code words for important places, names and references. These code words are included in operation orders.	(c) It is the intention to use plain language considerably in the assault in the interests of speed, temporary covering being obtained by the use of code words for important places, names, and references. These code words are included in operational order.
	(d) For reconnaissance and air support during the assault stage a non-confidential code is used unenciphered for brevity and standardization, and is known as Combined Operations Code Part II. Distribution:-	(d) For reconnaissance and air support during the assault stage the Joint Operations Code unenciphered and/or the Hagelin Machine is used. Distribution:-	(d) For reconnaissance and air support during the assault stage either Combined Operations Code, Part II or Joint Operations Code unenciphered. Distribution:-

RESTRICTED
~~SECRET~~

BRITISH	UNITED STATES	COMBINED
2. All ships, Main and sub-beach signal stations, Headquarters down to Company F.O.O.'s, R.A.F. Formation Headquarters and Stations Aircraft.	2. Down to minor war vessels, Army down to battalions headquarters, Naval gunfire liaison parties, Army Air Force down to Squadrons, Aircraft.	2. Down to minor war vessels, Down to main and sub-beach signal stations, Down to battalion headquarters, Naval gunfire liaison parties, Down to Company F.O.O.'s, R.A.F. Formation Headquarters and Stations, A.A.F. down to Squadrons, Aircraft.
3. <u>After Establishment of Army Ashore</u>. Normal Joint interservice communications. (a) Type X with interservice settings. Standby: Interservice Cipher (4 figure book with subtractor tables). Distribution:- Navy shore authorities only, Army down to Divisions, R.A.F. down to established R.A.F. Stations. (b) Interservice Code (3 figure book with subtractor tables). Distribution:-	3. <u>After Establishment of Army Ashore</u>. Normal Joint interservice communications. (a) Joint ECM. Standby: Joint Strips. Distribution:- Flag officers and above (afloat and ashore), Army down to Divisions, Army Air Force down to Commands. (b) Joint Operations Code (enciphered by 4 random mixed alphabets changed at least daily.) Joint Hagelin Machine. Distribution:-	3. <u>After Establishment of Army Ashore</u>. Normal Combined interservice communications. (a) Combined Cipher Machine (C.C.B.P.-). Standby: Combined Strip Cipher System (C.C.B.P.-). Distribution. Flag officers and above (afloat and ashore), Army down to Divisions, R.A.F. down to established R.A.F. Stations, Army Air Force down to Commands. (b) <u>Either</u> Interservice Code with subtractor tables, <u>or</u> Joint Operations Code (enciphered by means of 4 random mixed alphabets changed daily). Distribution:-

SECRET
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BRITISH	UNITED STATES	COMBINED
3. Navy down to Destroyers, Corvettes and any other craft which may require to communicate with Army or R.A.F., Army down to Brigades, R.A.F. down to R.A.F. Stations and detached squadrons (for point-to-point use.)	3. Down to minor war vessels, Army down to Battalion, Army Air Force down to Squadrons (for point-to-point use.)	3. Down to minor war vessels, Army down to Battalion (US or Brigade (Br) Air Force down to Squadrons (for point-to-point use.)
(c) Air-to-Ground and Air-to-Sea:	(c) Air-to-Ground and Air-to-Sea:	(c) Air-to-Ground and Air-to-Sea: Any of the following may be used:
Syko or REKOH for interservice use, which is expected to be small, Normal R.A.F. codes for communication with R.A.F. ground stations, e.g. Bomber Code Book.	Hagelin Machine,	Bomber Code Book, Joint Operations Code (unenciphered), Air-Ground Liaison Code, or REKOH for interservice use.

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SECRET

RESTRICTED

OFFICE OF THE SIGNAL OFFICER

Camp Edwards, Mass.

Date MARCH 2, 1943

TO: E A C

FROM: CRYPTOGRAPHIC SECURITY OFFICER, CAMP HEADQUARTERS.

FOLLOWING INFORMATION IS FORWARDED YOU FOR FUTURE REFERENCE.

The ~~attached message is being returned to the originator to be re-written~~.

The rules of safeguarding cryptographic security, which are checked below, are being violated:

* 1. Not Classified as to, SECRET, CONFIDENTIAL, RESTRICTED. (Reference AR 380-5 Par. 36)

* 2. Using stereotype phraseology at the beginning or ending of the message. (Reference AR 380-5 Par. 37 B)

* 3. Using unnecessary conjunctions, prepositions and articles, or other unnecessary words. (Reference AR 380-5 Par. 37 C)

* 4. Punctuation not spelled out and not kept to minimum. (Reference AR 380-5 Par. 37 E and Ltr. AG 311.5 (9-1-42) MS-B-M Par. 4 E)

* 5. Numbers not written as Cardinal numbers. (Reference Ltr. AG 311.5 (9-1-42) MS-B-M Par. 4 G)

6. IT IS RESPECTFULLY REQUESTED THAT CLASSIFIED MESSAGES BE WRITTEN AS BRIEFLY AS POSSIBLE WHENEVER PRACTICABLE.

* DENOTES OCCURENCE IN YOUR MESSAGE.

WILLIAM W. SMITH
Captain, Signal Corps
Cryptographic Security Officer

311.5

(2)

RESTRICTED

RESTRICTED

OFFICE OF THE SIGNAL OFFICER

Camp Edwards, Mass.

SUBJECT: STEREOTYPE PHRASEOLOGY.

Stereotyped phraseology will be avoided at all times. It must be kept in mind that any standardized phraseology tends to become stereotyped and the habitual use of any particular words as beginnings and endings must be avoided. The following is a list of words and phrases which, through use, have become stereotyped, and must not be used at the beginning or ending of classified messages:

ACKNOWLEDGE
ADVANCE
ADVISE
ATTENTION
CITE
CONFIRM
DEPART
* END
END OF MESSAGE
ENEMY
FOLLOWING
FOR
FROM
IN REPLY
NUMBERS "ONE", "TWO", "THREE", ETC.
OUR
PARAPHRASE
PERIOD
PLEASE
RECEIPT
RECEIVED
RECOMMEND
REFER
* REFERENCE
REPORT
REPLY
REQUEST
REQUESTED
RERAD
REURAD, ETC.
SIGNED (INCLUDING NAME)
STOP
TITLES
TRAIN
YOURS

THE EXAMPLES WITH A CHECK MARK ALONGSIDE ARE BEING USED BY YOU IN THE ATTACHED MESSAGE.

RESTRICTED

(2)

Classification changed to RESTRICTED
By Authority of the Chief of Engineers
7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch

IMMEDIATE ACTION
RESTRICTED

SECRET

COPY NO._____

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 311.5 (11-26-42)OB-S-B-M

November 29, 1942.

SUBJECT: Policy with respect to qualifications of personnel engaged in duties connected with the prescribed cryptographic systems.

SECRET
Auth: T. A. G.
Initials
Date: 11-29-42

TO: The Commanding Generals,
Army Ground Forces;
Army Air Forces;
Services of Supply;
Departments
Armies
Service Commands; Posts; Camps; Stations;
The Chief of the Armored Force

Letter, AG 311.5(3-28-42)M-B-M, April 3, 1941, and amendment thereto, AG 311.5(8-24-42)MS-B-M, August 30, 1942, subject: Policy with Respect to Qualifications of Personnel Engaged in Duties Connected-with the Prescribed Cryptographic Systems, is rescinded.

By order of the Secretary of War:

/s/ J. A. ULIO
Major General
The Adjutant General

COPIES FURNISHED:
The Chief Signal Officer
The Divisions of the War Department
General Staff.

(1)

SECRET

RESTRICTED
IMMEDIATE ACTION

255

Eng. Amf. Com

RESTRICTED

SPKAO 311.5 1st Ind. /al

Headquarters First Service Command, Office of the Commanding General, 808 Commonwealth Avenue, Boston, Massachusetts, December 5, 1942. TO: Commanding Officers, All Posts, Camps, and Stations.

For your information and guidance.

By Command of Major General MILES:

/s/ ALEXANDER S. EDMONSTON
Lt. Colonel, Signal Corps
Asst Chief, Communications Maintenance Sec.

DISTRIBUTION
G
Copies also sent to
Exempted Stations.

311.5 2nd Ind. ECE/hps/lf

Hq. Camp Edwards, Mass., December 8, 1942. TO: All Units, Camp Edwards, Mass.

For your information and guidance.

By order of Colonel SMITH:

Edgar C. Eibel

EDGAR C. EIBEL
2nd Lieut., CAC
Asst. Adjutant

DISTRIBUTION
E plus Personnel and Sig. Off.

RESTRICTED

(1)

Q. M. C. Form 853 (Old No. 490)
Revised July 26, 1918

LIST OF PAPERS

File under No. 311.3 Telephone Converstions ~~(SECRET)~~ ~~SECRET~~ RESTRICTED

3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	Hq EAC Cp Edwards	3/17/43	EAC, Chief of Staff Cp Edwards	Reports on various calls made by M. V. Pothier, Lt Col.
2	Hq FSC	11/24/43	All Concerned	Telephone Conversation of Capt. Facey, FSC and Major Freeman

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

RESTRICTED

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~ COPY

Classification changed to RESTRICTED by Authority of ~~the Chief of Engineers~~ A.S.F.

~~419~~

370.3

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASSACHUSETTS 7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jrb

March 17, 1943

To: The Chief of Staff, Engineer Amphibian Command, Camp Edwards, Mass.

1. The following report on results of various calls made by me on this date in Washington is submitted for your information.

2. Office of the Chief of Engineers:

a. Lt. Col. Hamilton reports that T/O's for Amphibian Brigade should be out next week, but that T/E's can not possibly be published in time to help the 3rd Brigade. He offers as a solution and I concur with him, that we take necessary steps to include in the movement order of the 3rd Brigade a special list of equipment which will be in effect the present tentative T/E's plus all other special equipment which we determine that should have and less the equipment which General Ogden considers excess. In this connection, you will recall that Col. McGinley will require us to report when the 3rd Brigade is ready for movement.

b. No information in the Chief of Engineers Office on priority of 3rd Brigade. I will try to trace down at Carrabelle.

c. Reference dry dock and 30 ton crane to SWPA, these can be included in the special list referred to in 1a above.

d. Major Hanger has just informed me that seahorse insigna are set up to be distributed as follows:

April 30th and May 31st - 55,000
Overseas shipment (This means 1st and 2nd Brigades)
110,000, June 30th to us.

If you desire to reverse this distribution, advise Major Hanger who will arrange the details with OQMG.

3. Bureau of Ships:

a. Commander Dreisonstok has just received Carrabelle requisition No. 1036, 19 pages for gray parts. Obviously, these should not go to Carrabelle but perhaps all or some of it should go to Edwards and/or Lathrop. Dreisonstok is holding it pending further advice.

3/3 3 tel Con.

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~~CONFIDENTIAL~~
RESTRICTED

b. Major Shiell states that Distribution, SOS (Col. Bell) having seen the shipping directive for the overseas shipment of mobile shops from Lathrop, is concerned as to source of procurement. The correct answer is that we request them from the Navy on the basis of exchange of funds. I have so advised Colonel Bell.

c. Both Bureau of Ships (Commander Dreisonstok) and Transportation Corps (Commander Taylor) state that no LCT's can be made available to Edwards because both in the New York Area and in the Gulf area are ready for immediate shipment overseas.

d. I have obtained authority from Commander Dreisonstok to ship such Scripps engines and parts as we desire from Carrabelle to Pontchartrain. I will handle this from Carrabelle.

e. No Higgins LCV's available in New York. I will try to extract two (2) from Carrabelle and ship them to Pontchartrain.

f. Commander Dreisonstok could give no help on Huckins PT boats. He suggested contacting Admiral Badger, Planning.

4. Transportation, SOS:

a. Our original request for training landing craft for 1943 (included 150 for Edwards) has been returned to the Chief of Engineers without action, On the basis that they can be more quickly procured for Edwards from Carrabelle and that the joint Board is set up for that purpose.

b. The question of LCM's and 36 ft. craft for our overseas units needs, in my opinion, immediate attention. I have secured from Commander Taylor the promise to make available for us about 800 LCM's on the West Coast for overseas shipment. He states however, that the bottleneck lies in the securing of shipping priorities for them from the theatre. If they can be given adequate priority, and will be shipped adequate LCM's for all of our units in that theatre. Major Shiell is planning to write a letter to SOS requesting that our overseas requirement of all type craft be provided for without delay.

S/ M. V. Pothier,
M. V. POTHIER,
Lt. Col., Corps of Engineers

~~CONFIDENTIAL~~

~~C O N F I D E N T I A L~~
RESTRICTED

(1)

~~SECRET~~

COPY/er

RESTRICTED

Classification changed to
By Authority of ~~the Chief of Engineers~~ G.S.F
7 Aug 45 (Date)
H.G. King Lt. Col. (Initials) jch

Telephone Conversation:
Captain Facey, FSC
Major Freeman, Washington, DC
24 November 1943 /ac

Maj F: This is Major Freeman, Movements Branch, Washington. On this 692d Engineer Special Shop Battalion. We're giving a readiness date on it of 29th, five days later than the other.

Capt F: I see.

Maj F: And that will have a new port. if they've marked, they'll have to remark. Will you need to know the port on that now? I wonder if they have marked their equipment.

Capt F: I can't say right now, Major. Why don't you give me the new one and ---

Maj F: Well, all organizational equipment that is at the home station will go out of this new port, N.O., and the readiness date on call of the Port Commander, the 29th.

Capt F: Okay, Sir.

Maj F: So if you'll let them know that, I think they'll be doing a little changing in marking.

Capt F: All right, Major.

311.3 El Convo.

CC: Camp Supply Officer
Camp Edwards, Mass.
27 Nov 43

RESTRICTED

~~SECRET~~ 2

103

C O R R E S P O N D E N C E G U I D E

E N G I N E E R A M P H I B I A N C O M M A N D

Preparation of Letters, Letters of Transmittal,
Indorsements, Wrapper Indorsements, Bulletins,
Circulars and Memoranda.

Prepared by:
Planning Section, EAC, G-4

IN GENERAL

The term "communication" as used includes official letters, memoranda, reports, indorsements, telegrams, radiograms and cablegrams.

An official communication other than a cablegram, will in general, refer to one subject only.

Letters of transmittal when used will refer only to the matter transmitted.

In referring to Army Regulations, general orders, bulletins, circulars, etc., the reference will include the paragraph number, section number, title and number (such as "AR 170-10" or "Circular No. 12"), and date.

References to letters or indorsements will include as much of the following as is necessary to insure easy identification: symbol, file number, subject, and date of the communication.

Maximum use will be made of authorized abbreviations, See AR 850-150 and FM 21-30.

For all letters, for indorsements generally, and for all reports with reference to individuals, except reports made on prescribed blank forms, the paper used will be 8 by 10½ inches.

Salutations and complimentary closes will not be used in official communications.

Carbon copies of communications will not ordinarily be signed, but the signature placed on an original will be typed, stamped, or otherwise reproduced on each copy thereof.

Letter paper will ordinarily be folded in three equal folds, parallel with the bottom, the lower fold over the face of the letter and the top fold toward the back of the letter.

When several communications are to be mailed at the same time to one address, they will, so far as practicable, be mailed together, unfolded, in one envelope marked "Letter Mail".

An indorsement is the particular form of reply used for military correspondence. The recipient of a military letter requiring an answer does not ordinarily keep the letter and reply to it with another; instead, a reply is appended to the original letter and both are returned to sender.

All inclosures to a communication, including those pertaining to an indorsement thereon, will be arranged in proper sequence, will be numbered in a single series, and will be maintained in that sequence. Once listed as prescribed they will not again be listed on the same communication. The serial number of an inclosure which has been withdrawn from a communication will not be given to any other inclosure to the communication.

Exhibits to reports of boards, etc., will be lettered in alphabetical order. If not an integral part of the report, they will also be numbered, listed, and treated as inclosures thereto.

1"

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

In reply refer to:
012.3

FHF/CKL/mfs

13 October 1942

4 spaces

SUBJECT: Special Equipment for Training
(double space)
TO : The Chief of Engineers, New War Department Building, 21st and Virginia, Washington, D. C.

4 spaces

1. The first paragraph of the letter properly identified by paragraph number, indented five spaces, if the letter contains only one paragraph, it is not necessary to number it.

a. Subparagraph lettered and underscored, also indented five spaces.

(2) Subdivisions of subdivision is further indented five spaces.

(a) Further subdivisions.

1½" 3/4"

1. Further subdivisions.

2. Further subdivisions.

b. ----------
(double space)
~~By command of~~ Brigadier General NOCE:

For

4 spaces

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
CHIEF OF STAFF

NOTE--Double spaces between numbered paragraphs.

Continue letter to within one inch from bottom of sheet in cases when second or third sheets required.

1"

- INDORSEMENTS -

File No. of Letter | 1st Ind. | Identifying initials of persons dictating and typing.

HQ. ENG. AMP. COMD., Camp Edwards,Mass., Oct. 12, 1942. TO: Comdg. Gen., 3rd Brig., Eng. Amp. Comd., Camp Edwards,Mass.

For immediate compliance and return to this office.

By Command of Brigadier General NOCE:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

NOTE:

That abbreviations are used wherever possible in an indorsement.

The indorsement is started immediately following the signature of the letter, leaving a one-half inch margin. Further indorsements follow in order.

The signature, if any, on routine indorsements referring, transmitting, forwarding, and returning papers will consist of the initials only.

- INCLOSURES -

All inclosures are to be numbered and described. The identification of inclosures appears immediately below and to the left of the closing signature.

EXAMPLE:

By Order of the Commanding Officer:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

4 Incls.
Incl. 1. Ser. Record.
Incl. 2. Ind. C/R.
Incl. 3. W. D., A. G. O. Form No. 44.
Incl. 4. Extract of Morning Report.

IMMEDIATE ACTION LETTERS:

The principal purpose of an immediate action letter is to require the recipient to give priority in disposing of the subject matter to the extent consistent with the disposition of other pending matters of equal or greater importance. When an immediate action letter is received, all action necessary will be initiated immediately and completed without unnecessary delay. The first and last sheets of the original of an immediate action letter and of the original of each indorsement thereon will ordinarily have a 1/4 inch wide red border, the outer edges of the border coinciding with the edges of the paper. In the absence of printed immediate action paper, the border will be omitted. The words "immediate action" in capital letters at the top and bottom, spaces being left in the border for these words. The intermediate sheets of the original and all carbon copy sheets of immediate action letters will be ordinary letter paper without the border or caption. The first and last sheets of each copy of the letter and of each indorsement thereon will be conspicuously stamped or otherwise marked at both top and bottom with the words, "Immediate Action". Immediate action letters will be mailed in immediate action envelopes which have a 3/16 inch wide red border with the caption "Immediate Action" in capital letters in spaces in the border on the top and bottom of the envelope.

- PROPER HEADINGS -

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts CKL/FHF/ame

In Reply
Refer To:
062.12 October 13, 1942

SUBJECT: Special Equipment for Training.

TO: The Chief of Engineers,
Washington, D. C.

****

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts CKL/ame

In Reply
Refer To:
106W October 14, 1942

SUBJECT: Company Funds.

TO: Commanding Officer,
17th Infantry,
Fort Crook, Nebraska.

- PROPER SIGNATURES TO SUBORDINATES -

By Command of Brigadier General NOCE:

A. O. ACERS
Lieutenant Colonel, A.G.D.
ADJUTANT GENERAL

* *

By Command of Brigadier General NOCE:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

* *

By Command of Brigadier General NOCE:

M. V. POTHIER
Major, Corps of Engineers
Acting Director
PROCUREMENT AND SUPPLY

* *

By Command of Brigadier General NOCE:

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
CHIEF OF STAFF

- PROPER SIGNATURES TO SUPERIORS -

For Brigadier General NOCE:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

* *

For the Commanding Officer:

M. V. POTHIER
Major, Corps of Engineers
Acting Director
PROCUREMENT AND SUPPLY

NOTE:

"For the Commanding Officer" would be used if the letter were written to a superior by a company, battalion, or regimental commanding officer.

NOTE:

The signature of an enlisted man will always consist of his first name, middle initial, and last name, followed by his Army serial number.

AR 310-50

CIRCULARS

Circulars will usually contain matter that is directive in nature, general in application, but temporary in duration; circulars are used as a medium for the expeditious publication of matter that is important and wherein time elements involved will not permit the incorporation in established forms of regulations, but will permit the immediate initiation of procedure desired pending the incorporation in established regulations. Circulars usually are numbered serially within the calendar year.

AR 350-10 Par 5

BULLETINS

Bulletins will usually contain matter that is informative or advisory in nature and of permanent duration. Most commands issue a daily bulletin. The information section usually contains information not directive in nature, but which publication of is desired, such as various post, camp or station theater attractions, announcements of officer arrivals, list of apartments or houses for rent in the vicinity, articles lost, found, or for sale, etc. It bears the same heading and authentication as orders with the exception that the information section appears after, or follows the authentication of the bulletin.

AR 310-50

MEMORANDA

In certain commands, memoranda are issued in lieu of bulletins and circulars. They may contain matter that is directive, advisory, or informative in nature, and may be either temporary or permanent in duration. Memoranda are usually numbered in calendar year series. Numbered memoranda to the command are most generally employed to convey directives, repeat instructions received from higher headquarters, or to call for special reports.

Unnumbered memoranda are usually informal in nature to an individual or unit and convey general information. The use of memoranda should be kept at a minimum, as much of the matter published in memoranda may be properly included in general orders, bulletins, or circulars, thus obviating the maintenance of files of memoranda.

MANNER OF PROMULGATION

All orders, bulletins, circulars and memoranda should be read and approved, before issue, by the Commanding Officer who issues them. All such publications will state the source from which they emanate, with number, date, place of issue and the authority under which issued.

All orders, bulletins, circulars and memoranda will be authenticated as follows, using the expression "By order of ----------" if the Commander is below the rank of Brigadier General, and "By command of ----------" if the Commander is a general officer.

IN THE ENGINEER AMPHIBIAN COMMAND THE FOLLOWING COPIES WILL BE MADE

For Letters and Indorsements	1 Original 4 White tissue 1 Green tissue 1 Yellow tissue
Memoranda, Circulars and Bulletins	1 Original 3 white tissue

An additional white tissue copy may be made if the writer wishes to retain a copy for his file.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

October 13, 1942

CIRCULAR)
NUMBER 58)

ENLISTED MEN AWOL

1. Attention is directed to the provisions of AR 615-300, dated July 20, 1942; and more particularly to Changes, No. 2, dated August 28, 1942 to AR 615-300.

2. Paragraph 2b, AR 615-300 as amended by Changes 2 thereto is repeated here for all concerned:

> 2b-"Upon the occasion of an enlisted man absenting himself without leave, the company commander or similar unit commander will notify his nearest relative by telegraph or mail that he is absent without leave; that if he does not return he will be dropped as a deserter; and that, under the provisions of Federal law, all persons who desert the service in time of war are deemed to have voluntarily relinquished and forfeited their rights of citizenship, as well as their rights to become citizens; and that such deserters are forever incapable of holding any office of trust or profit under the United States or exercising any rights of citizens thereof."

3. Reports on EM in AWOL status will be submitted by unit commanders (through UPO) direct to the Camp Provost Marshall to comply with the requirements of paragraph 5, Daily Bulletin, Headquarters, Camp Edwards, Massachusetts, dated September 18, 1942 which states:

> 5-"All organizations at this Station will report to the Provost Marshall, Camp Edwards, the names, home address, nearest relative and description of all members of their organization who are being carried A.W.O.L."

By command of Brigadier General HEAVEY:

Arth. G. Trudeau

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
Chief of Staff

OFFICIAL:

A. O. Aers

A. O. ACERS
1st Lt., AGD
Adjutant General

Distribution B

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

October 7, 1942

BULLETIN)
:
NUMBER 1)

SUBJECT: Crating and Packing for shipment.

1. The following information is to assist in assuring protection of items shipped, in conservation of space on carriers, and in conservation of packing time, handling time, and material.

2. No crate, box or package should exceed 200 pounds unless one packaged unit exceeds that weight. One hundred and fifty (150) pounds is a preferred weight.

3. Omit unit designations on overseas shipments. If placed on local shipments, use gasoline soluble paint or other easily removed marking media so crate or container may be reused for possible overseas shipments.

4. Do not crate heavy, strong chests or boxes; or items which may be shipped safely without crating, such as G.I. cans, gasoline or water cans, shovels, mosquito bars, etc. Wire bound bundles are frequently more desirable than crates.

5. Do not completely box if a skeleton crate will insure safe delivery.

M. V. POTHIER
Major, Corps of Engineers
Ass't. Dir., Procurement & Supply

DISTRIBUTION "B"

HEADQUARTERS ENGINEER AMPHIBIAN COMMAND
OFFICE OF DIRECTOR OF PROCUREMENT AND SUPPLY
Camp Edwards, Massachusetts

September 29, 1942.

MEMORANDUM TO: All Officers, G-4 Section.

1. For the conduct of official business, and the fulfillment of the war effort, it is essential that this office have a representative available during normal working hours on Sundays and holidays, as well as on all other days of the week. Consequently, in accordance with the foregoing, there will be detailed, each Sunday or holiday, one officer from this section, who will be present in the office during the normal working hours.

2. Said Director's representative will be detailed weekly from a roster of officers on duty with the G-4 Section. His term of duty will be from 0800 to 1700 of the day detailed.

3. During normal duty hours the Director's representative will remain in Building T-101, or its immediate vicinity, at all times.

4. The primary duty of said officer so detailed is to supervise and handle routine business of the section as may arise.

By Order of Lieutenant Colonel FALKNER:

HERBERT A. MONROE
First Lieutenant, CE
ADJUTANT

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

October 13, 1942

MEMORANDUM

MEMORANDUM)
NUMBER 99)

I MOTOR VEHICLES

All motor vehicles within this command will be winterized for 20° below zero. Vehicles will be thoroughly checked to insure against water leaks, leaky radiators, bad hose connections, freeze plugs, etc., prior to the introduction of anti-freeze solutions into cooling systems.

The procedure prescribed above will be initiated in sufficient time to preclude deadlining or damage to vehicles and/or loss of anti-freeze solution.

II ITEMS AVAILABLE AT THE CAMP QUARTERMASTER

The following items are available at the Camp Quartermaster, and may be obtained upon submission of requisitions. Requisitions should be based on the following allowances:

Dubbin (4 ounce cans)	Allowance, 2 ounces per individual per year.
Ink, laundry-marking	Allowance, one bottle per 100 men per six months

III SIGNATURE OF THE ADJUTANT GENERAL

Effective immediately all papers for the signature of the Adjutant General will be prepared as follows: FLOYD COOLEY, 1st Lt., A.G.D., Adjutant General.

By command of Brigadier General NOCE:

Floyd Cooley

FLOYD COOLEY
1st Lt., A.G.D.
Adjutant General

Distribution "A"

SAFEGUARDING MILITARY INFORMATION

THREE TYPES OF CLASSIFIED MILITARY CORRESPONDENCE.

1. SECRET
2. CONFIDENTIAL
3. RESTRICTED

RESPONSIBILITY:

The safeguarding of classified military information is the responsibility of all military personnel, or civilian employees of the War Department.

Classified military information will only be entrusted to those who need it in the performance of their official duties.

Documents may be classified as "Secret" only by or by the authority of the Secretary of War; the Under Secretary of War; an Assistant Secretary of War, the Chief of Staff, or an Assistant Chief of Staff of the War Department General Staff; a Chief of Arm, or Service, or the National Guard Bureau; a General Officer, the Commanding Officer of a Depot, Post, Camp, or Station; the Commandant of a General or Special School, or a military attache.

The dissemination of secret matter will be held to the absolute minimum.

Documents may be classified as "Confidential" by any commissioned officer, but will be handled and disseminated with the same care as secret matter.

Restricted documents are for official use only and may be marked as "Restricted" by any commissioned officer.

All classified communications will be marked or stamped with the appropriate classification at the top and bottom of each page.

All secret documents will show the authority for the classification and the date affixed.

All secret communications will be transmitted by officer-messenger or courier, or by registered mail, except when personally delivered. Secret communications will be inclosed in an inner and outer cover.

The typewritten matter will be protected by a cover sheet. The inner cover will be a sealed wrapper or envelope addressed in the usual way and plainly marked "Secret". The outer cover will not be so marked.

"Confidential" documents will be transmitted by an authorized messenger, insured express or registered mail.

"Confidential" documents will be prepared in the same manner as secret matter except that the inner cover will contain a receipt form when the sender deems it necessary, and may be opened by any responsible person so authorized.

"Restricted" documents may be transmitted by any authorized messenger or by ordinary mail.

TELEGRAMS, RADIOGRAMS, CABLEGRAMS AND TELETYPE MESSAGES

In preparing messages for wire or machine transmission, legibility and conciseness are imperative. Double space all messages, type them if possible and capitalize all words.

Write the words "can not" as two separate words and in any cases where the negative meaning is not clearly suggested by the contents of the message, the word "not" should be followed by the words "repeat not", example:

"SECTION ONE WAR DEPARTMENT CIRCULAR TWENTY EIGHT DOES

NOT REPEAT NOT RESCIND PARAGRAPH SIX A R SIX HUNDRED PERIOD"

Write all numbers as words, punctuation marks as words (--dash) (. period) (& and). Decimal points used within a group of numbers will be written as point. Where figures are used to express money values, use the words dollars and cents after the appropriate group of figures (particularly in cases where the figures are not spelled out as words).

Close all messages with the word "END" and where replies to messages are necessary, incorporate the words "REPLY REQUESTED".

Wire or machine messages close with the last name only of the Commander or Chief of the agency from whose office the message emanates. War Department wire messages usually include an identifying symbol of five letters, the first two of which identify the sending agency and the last three of which identify the subdivision of the sending agency as follows:

War Dept. General Staff	- W.D.
Army Ground Forces	- G.N.
Army Air Forces	- A.F.
Services of Supply	- S.P.

Keep wire or machine messages short yet understandable and in references to correspondence, include only such parts of the file reference and subject required to identify the sending office and correspondence.

- TELEGRAMS -

EXAMPLE:

(Date and time placed by operator)

G DASH FOUR
ENGINEER AMPHIBIAN COMMAND CAMP EDWARDS MASS.

RE SIXTY FOUR NINETY FIVE DASH KK COLON ONE GUN THIRTY SEVEN MM CAN NOT REPEAT NOT BE LOCATED PERIOD SHIP DIRECT TWO THOUSAND FIVE BAYONETS COMMA TWELVE PORTABLE FLAME THROWERS COMMA NINETEEN SLINGS GUN M NINETEEN TWENTY THREE COMMA ONE HYDROGEN CONTAINER NUMBER NAUGHT NAUGHT THREE THREE END

JONES

* *

- TELETYPES -

EXAMPLE:

ADDRESS (Usually in code determined by Teletype operator)

DATE (In code determined by Teletype operator)

THIS IS HDQRS E A C COLON FOLLOWING ON HAND JJ SEVEN FOUR SIX COMMA ONE HOIST CHAIN FIVE TONS TWENTY TWO FRAMES THIRTY FOUR SHEARS PERIOD

FOLLOWING FOR K K THREE THREE NAUGHT NAUGHT COLON ONE BOX CONTAINING EIGHT CABLE STUBS TEN FOOT LENGTHS AND ONE POCKET WATCH SEVEN JEWEL END

HUNT

DEWEY DECIMAL SYSTEM OF FILING

The War Department correspondence file is based on the Dewey Decimal System of Library Classification. In brief, this system divides the correspondence file into nine general classes: They are

Class 000 - General subjects (Correspondence so general in its nature that it cannot be properly classified into one of the eight other classes)

Class 100 - Finance and Accounting

Class 200 - Personnel

Class 300 - Administration

Class 400 - Supplies and Equipment

Class 500 - Transportation

Class 600 - Buildings and Grounds

Class 700 - Medicine, Hygiene and Sanitation

Class 800 - Rivers and Harbors

These General Classifications are further broken down through a decimal point system; in other words, the 400 file on Supplies and Equipment runs from 400.1 (Selection, adoption and acquisition) thru 463.7 (Supply of gasoline) to 479 (Miscellaneous Supplies). An alphabetical index and numerical index is provided so that any particular subject in a classification may be easily located. A good file clerk will memorize the nine general classes of subjects and the numbers pertaining to them. Having accomplished this, he can easily spot any correspondence requested.

Experienced file clerks use a simple cross-reference system in cases where there is a question as to what general classification a subject might fall into.

NON-MILITARY LETTERS

Official correspondence with offices or individuals not in or under the War or Navy Departments will be in the general forms in use in proper civilian practice.

A letter heading may contain "In reply, please address official designation or title of office of writer and not his name:" at the upper left.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

HAM/mps

In reply, please address official designation or title of office of writer and not his name.

October 22, 1942

James Bliss Company, Inc.
220 State Street
Boston, Massachusetts

Attention: Mr. John W. Doe

Dear Sir:

***

The body of the letter will be introduced by an appropriate salutation, such as My dear Sir, Dear Sir, My dear Madam, Dear Madam, (Madam will ordinarily be used in addressing unmarried as well as married women); Dear Senator, My dear Senator, Dear Mr. ------, etc.

The letter will ordinarily contain no paragraph numbers, will when typewritten be double spaced, unless if so written it would cover more than one page, in which event it may be single spaced.

A complimentary close, such as Respectfully yours, Very respectfully yours, Truly yours, Very truly yours, Sincerely yours, will be used, and will be indented five spaces from the paragraph indentation.

One copy only will ordinarily be made, in cases in which the communication is of such character as to warrant retaining a record thereof, or furnishing to someone concerned. A letter to a member of Congress or to one in public life will be sent in duplicate.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

JWR/jws

October 21, 1942

James Bliss Company, Inc.
220 State Street
Boston, Massachusetts

Gentlemen:

With reference to Purchase Order No. EAC 43-111, dated October 16, 1942, pertaining to the purchase and delivery of sisal rope, it is desired that the following correction be made on the Purchase Order herein mentioned.

586 lb. Sisal Rope 1-5/16" Diameter .18 105.48

In addition, it is further desired that the receipt of this letter be acknowledged.

Very truly yours,

/s/ Edward L. Goodwin

/t/ EDWARD L. GOODWIN
Captain, Corps of Engineers
Assistant Director of
PROCUREMENT AND SUPPLY

cc: P & I file
Fiscal
Captain Wood
Boat Unit Detachment
Walworth

Q. M. C. Form 353 (Old No. 490)
Revised July 26, 1918

~~SECRET~~

LIST OF PAPERS

X RESTRICTED

E. A. C. FILE

File under No. 312.6 (Irregularities of Correspondence)

3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	Hq The Engr School	10/6/43	CO, EAC, CpEdwards	Return of document receipt

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

Doc 79

SECRET
By Auth: Commandant, Engr Sch
Ft. Belvoir, Va.
Initials: C.L.T.
Date 6 Oct 43

HEADQUARTERS THE ENGINEER SCHOOL

OFFICE OF THE COMMANDANT

RESTRICTED

In reply refer to:

Fort Belvoir, Virginia

6 October 1943

Subject: Return of document receipt.

Classification changed RESTRICTED
By Authority of ~~the Chief of Engineers~~ G.S.F
7 Aug 45 (Date) A.G. King Lt. Col. (Initials) jrb

To: Commanding Officer,
Engineer Amphibian Command,
Camp Edwards, Mass.

1. Receipt has not been received in this office for the following SECRET correspondence: letter dated 4 September 1943, subject: Transmittal of Document, with 2 inclosures, Inclosure 1, Conference on Landing Assaults, and Inclosure 2, receipt form, addressed to Commanding Officer, Engineer Amphibian Command, Camp Edwards, Massachusetts.

2. A duplicate receipt is inclosed in the event that the original receipt has been lost.

3. Request return of original or duplicate receipt.

For the Commandant:

X 337 312.6

JAMES M. PARRISH,
Captain, Corps of Engineers,
Secretary.

1 Incl.
Receipt form

FOR VICTORY
BUY UNITED STATES WAR BONDS AND STAMPS

RESTRICTED

45a

~~SECRET~~

Doc 71

RESTRICTED

312.6 1st Ind. JST/er
HEADQUARTERS, ENGINEER AMPHIBIAN COMMAND, Camp Edwards, Massachusetts,
16 October 1943.

TO: The Commandant, The Engineer School, Fort Belvoir, Virginia.

Request this Headquarters be furhished the Post Office Registry Number of letter referred to.

For the Commanding Officer:

JOHN S. TYLER
Captain, A.G.D.
Adjutant General

1 Incl.
n/c

2nd Ind.

Headquarters The Engineer School, Fort Belvoir, Virginia, 18 October 1943.

To: Commanding Officer, Engineer Amphibian Command, Camp Edwards, Mass.

The Post Office Registry Number of letter referred to was ES #97.

For the Commandant:

JAMES M. PARRISH,
Captain, Corps of Engineers,
Secretary.

1 Incl. - n/c

RESTRICTED

~~SECRET~~

45a

The Engineer School
Fort Belvoir, Va.

18 October 1943

Receipt acknowledged of Secret ~~Confidential~~ XXXXXXXXXX

Ltr. The Engr School, 6 Oct 43, No File, SUBJECT: Return of Document

Receipt w/1 Ind.

Copies numbered:

Chas L Tenney

W.O. (jg) U.S.A.

Assistant Adjutant

Please complete and return to:
Commanding General, Engr. Amph.
Comd., Camp Edwards, Mass.
312.6

Q. M. C. Form 353 (Old No. 490)
Revised July 26, 1918

LIST OF PAPERS

File under No. 313.6 (Destroying Records, Methods of) & Disposition of

~~SECRET~~
RESTRICTED

E. A. C.
FILE

3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	Harbor Entrance Control Post, Ft Rodman, Mass.	10/2/43	All Concerned	destroyed burning of secret boat operatins shedules, codes and charts.

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

RESTRICTED

~~SECRET~~

E. A. C.

FILE

HARBOR ENTRANCE CONTROL POST
Harbor Defenses of New Bedford
Fort Rodman, Mass.

2 October 1943

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ G.S.F.
7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch

I certify that I have this day destroyed by burning the following described boat operations schedules, signal codes, and charts marked SECRET, after telephone conference with Capt. Taylor, EAC.
Tyler

(2)	June	22,	1943	Operations	of	Week	June 27,	to	July 3
	"	29,	"	"	"	"	July 4,	"	" 10
(2)	July	6,	"	"	"	"	" 11,	"	" 17
	"	13,	"	"	"	"	" 18,	"	" 24
(2)	"	20,	"	"	"	"	" 25	"	" 31
	"	23,	"	"	"	"	" "	"	" "
	"	27,	"	"	"	"	August 1,	"	August 7
	August	3,	"	"	"	"	" 8,	"	" 14
	"	4,	"	"	"	"	" "	"	" "
	"	10,	"	"	"	"	" 15	"	" 21
	"	12,	"	"	"	"	" "	"	" "
	"	17,	"	"	"	"	" 22	"	" 28
	"	24,	"	"	"	"	" 29	"	Sept 4
	"	27,	"	"	"	"	" "	"	" "
	"	31,	"	"	"	"	Sept 5	"	" 11
	Sept	2,	"	"	"	"	" "	"	" "
	"	7,	"	"	"	"	" 12	"	" 18
	"	14,	"	"	"	"	" 19	"	" 25
	"	15,	"	"	"	"	" "	"	" "

~~565.1~~
313.6
x 565.1

(Less one copy Special Chart retained for posting)

Richard H Lee
Richard H. Lee
Lt. Col. 23rd C. A.

Witness:

RESTRICTED

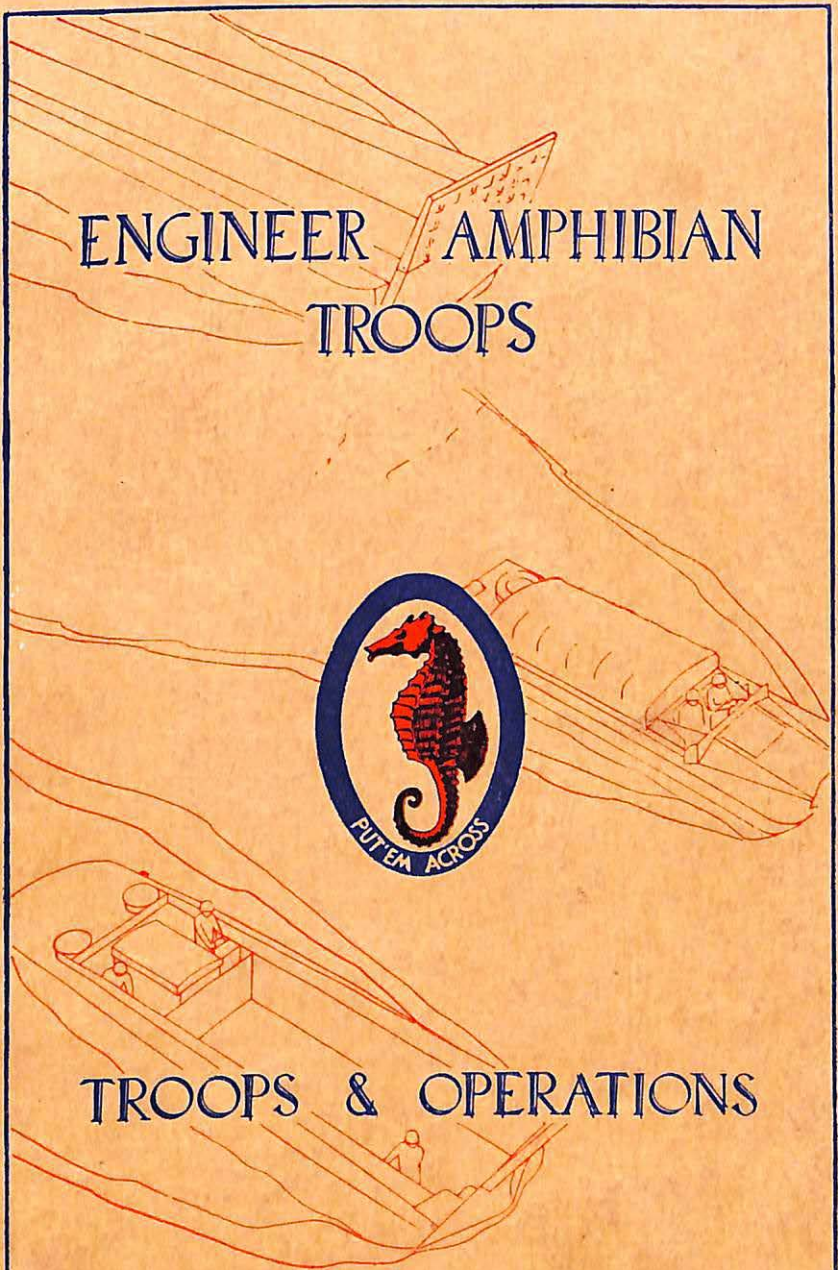
Casmer Joseph Mezias

~~SECRET~~

1

RESTRICTED

ENGINEER AMPHIBIAN TROOPS



TROOPS & OPERATIONS

ENGINEER AMPHIBIAN COMMAND
TENTATIVE TRAINING GUIDE No. 4

Chapter 1

AMPHIBIOUS OPERATIONS

		Paragraphs
Section I.	Fundamentals	1-6
II.	Phases of Shore-to-Shore Operation	7-13

Section I
FUNDAMENTALS

1. Objectives.—In joint operations against hostile shores, every effort will be made to avoid attacking beaches that are extensively organized and fortified for defense. Beaches less favorable from a technical standpoint will usually be chosen in preference to those known to be strongly defended.

2. Surprise.—The element of surprise is of first importance. Every effort will be made to achieve surprise, if not as to the point or points of attack, then at least as to the strength and time of the main effort.

3. Support.—Some or all of the following supporting means should be present in any successful amphibious operation:

a. Naval gunfire to protect flanks and support the landing itself.

b. Local air superiority including dive-bombing and low level bombing and strafing of enemy troops and organized positions and a protective umbrella of fighter planes.

c. Parachute troop landings to seize important or essential localities or structures.

4. Fundamental Concepts.—Fundamental concepts of the employment of amphibian units are:

a. Engineer amphibian troops form part of forces assembled to conduct shore-to-shore operations. They may be used in whole or in part with forces assembled to conduct ship-to-shore operations.

b. In either of these types of operations, the largest engineer amphibian unit present normally is attached to the largest combat unit taking part.

c. Elements of this attached engineer amphibian unit normally are given missions to support corresponding elements of the combat unit.

d. When elements of the combat unit are operating at great distances from the main part of such combat unit, or acting independently, elements of the engineer amphibian unit normally will be attached to the elements of the combat unit with which they operate.

e. After initial landings of combat elements have been completed, the principle duties of engineer amphibian units will be to assist in carrying out the administrative plans of the unit supported or to which attached.

f. Engineer amphibian units must not be regarded as pools of laborers and specialists to be allotted as individuals to various operations, but as organizations made up into working units, each capable of executing a definite type of work.

g. Elements of one Engineer Special Brigade may be attached to another. When such an attachment is made, tactical disposition of the attached troops should preserve the chain of command within the attached unit. When a unit is broken up into its elements for several attachments, the largest element should include the unit commander and his headquarters.

5. Allocation.—Engineer amphibian units are organized and equipped for shore-to-shore operations with units of the combined arms and services as shown in Table I.

This type assignment will be varied as necessary to conform to the plans of the field force commander.

TABLE I

ENGINEER AMPHIBIAN UNIT	Combat unit to which attached or in support
Boat Company and Shore Company with Maintenance and Salvage (Boat control) Section attached	Infantry Battalion Landing Team
Regiment plus Medical Company	Combat elements of regimental combat team (3 battalion landing teams and regimental command group)
As above PLUS naval auxiliary craft	Infantry Regimental Combat Team complete
Brigade	Combat elements of 3 Regimental Combat Teams
Brigade with normal Quartermaster Troop attachment PLUS auxiliary naval craft	Reinforced Infantry Division complete
Two (2) or more brigades, plus special engineer headquarters, PLUS naval auxiliary craft	Corps of two (2) or more divisions.

6. Examples of Employment.—Figures 1, 2, and 3, are schematic diagrams showing how an Engineer Special Brigade might be employed in successive phases of a shore-to-shore operation.

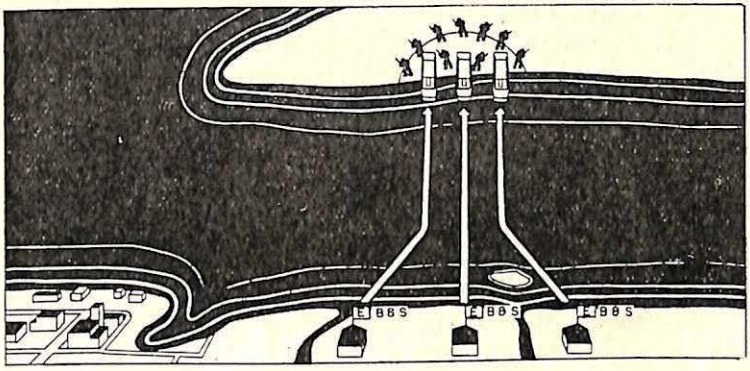


Fig. 1.—First Phase. Three Engineer Boat and Shore Regiments Transport Combat Units to the Enemy Held Shore.

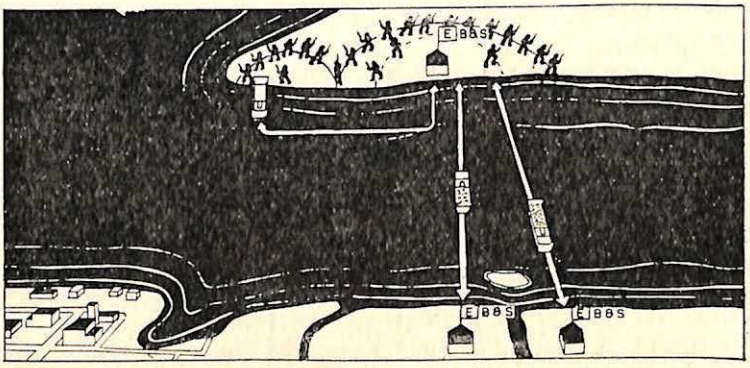


Fig. 2.—Second Phase. One Engineer Boat and Shore Regiment Now Supports One Regimental Combat Team in a Flank Attack to Enlarge the Beachhead. Two Engineer Boat and Shore Regiments Resupply from Near Shore to Far Shore.



Fig. 3.—Third Phase. One Engineer Boat and Shore Regiment Then Transports One Regimental Combat Team by Water to Attack Enemy in Rear. The other Two Engineer Boat and Shore Regiments Have Begun Bringing up Supplies from the Nearest Usable Port, and are Returning Prisoners and Wounded. They have Organized and are Defending the Harbor.

Section II
PHASES OF SHORE-TO-SHORE OPERATION

7. General.—A shore-to-shore (or ship-to-shore) operation includes the following phases:

a. Embarkation including the gathering and loading of landing craft.

b. Crossing to area just beyond effective range of enemy's guns.

c. Landing or the attack in successive waves of landing craft.

d. Beach organization to facilitate its crossing and use in support of the operation.

e. Retraction, re-grouping, and resupply until port facilities are established.

8. Area of Responsibility (Fig. 4).—The Area of Responsibility of engineer amphibian troops extends from the rearmost limits of their dispersal areas on the near shore to include the line of dumps on the far shore. This line of dumps will normally be in the first available cover when supplies must be manhandled, or skidded on sleds across the beach. When adequate truck and/or amphibian truck transportation is available on the far shore, the line of dumps may be established well inland to support the tactical situation. In this case, there is a dual responsibility between the combat and engineer troops for the area between the beach and the dumps.

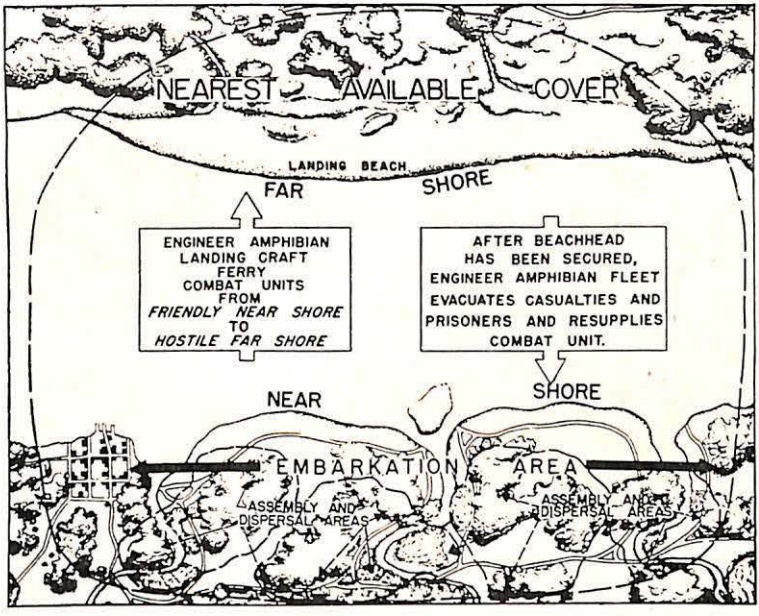


Fig. 4.—Area of Responsibility.

9. Embarkation (Fig. 5).—Within the Embarkation Area engineer amphibian troops and their landing craft are dispersed and concealed; the craft in Dispersal Areas and the troops in Assembly Areas convenient to Embarkation Points. The troops and their equipment to be transported are also concealed in nearby Assembly Areas and dumps.

Landing craft, troops, and supplies move from these areas to the Embarkation Points on a synchronized time schedule designed to begin at the latest possible time in order to deliver the first wave on the enemy beach at H-hour on D-day. There may be one Embarkation Point or several for any particular landing team or combat team. An Embarkation Point may be a beach or dock(s) (existing or improvised) either on the near shore or on a stream or inlet leading thereto. As the landing craft file in to the Embarkation Point, they are loaded quickly, loads are checked, and the laden craft move out.

Since it takes approximately 600 landing craft to transport the combat elements of an infantry division, this embarkation phase will take several hours.

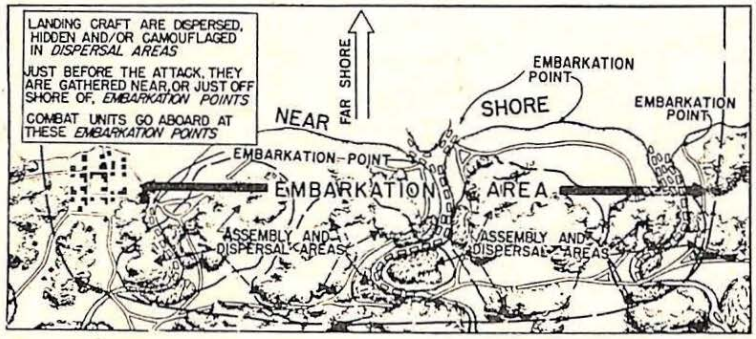


Fig. 5.—The Embarkation.

10. Crossing (Fig. 6).—*a.* The crossing is accomplished in three steps:

(1) The laden craft move out to definitely marked Assembly Areas off the near shore where they are assembled into wave formations. Normally, Assembly Areas will not be assigned to units smaller than a Boat Company.

(2) The landing craft move out from the Assembly Areas on schedule in column or closed "V" wave formation (see Chapter XII, Tentative Training Guide No. 2) led by competent navigators in command and navigation boats and shepherded by patrol boats. The courses from the Assembly Areas to the far shore are prescribed by means of Track Charts (see Tentative Training Guide No. 5).

(3) Having arrived off the enemy coast, the waves are led in to a definitely located Rendezvous Area which is just beyond the effective range of the enemy's guns. Here the attack formation (see Chapter XII, Tentative Training Guide No. 2) is taken up and at the proper times successive waves cross the Line of Departure (the far boundary of the Rendezvous Area) and begin the final run to the beach. If the Rendezvous Area is definitely located and the timing is properly synchronized there need be no delay in this area for the first two or three waves. Subsequent waves must lose time in the Rendezvous Area to get proper spacing since in moving from the Assembly Area to the Rendezvous Area waves are closed up for purposes of control.

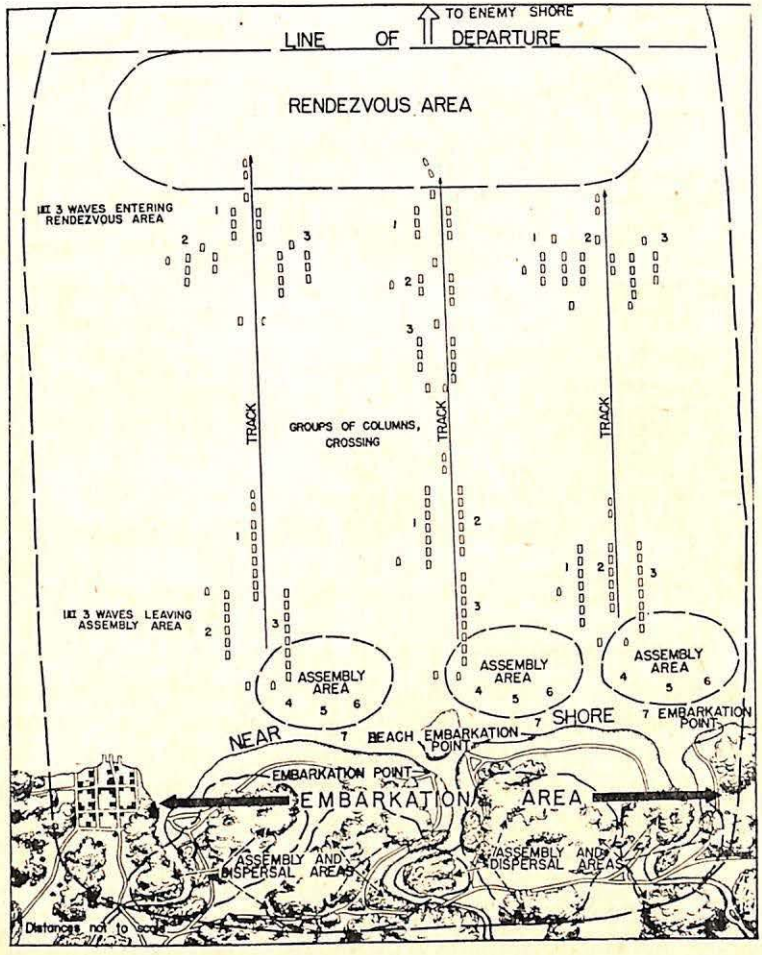


Fig. 6.—The Crossing.

11. Landing (Fig. 7).—The attack is made in waves of landing craft, the composition and loading of which has been prescribed by the battalion landing team commander. For the final run each wave is normally deployed in an open "V" formation (see Chapter XII, Tentative Training Guide No. 2). The craft in each wave are staggered at varying intervals depending on visibility.

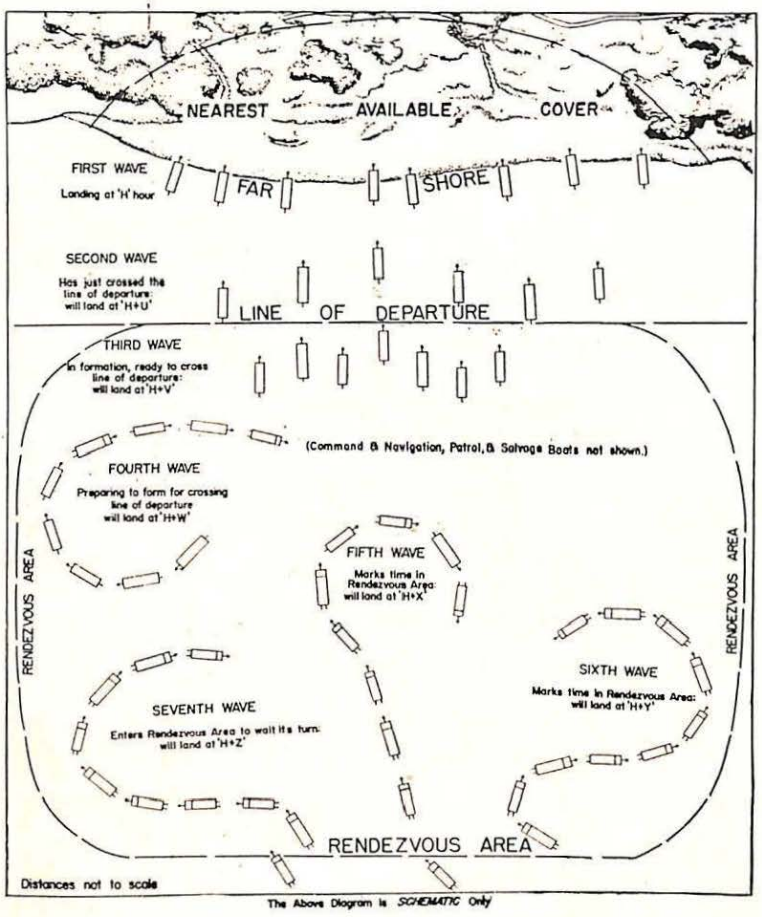


Fig. 7.—The Attack.

12. Beach Organization.—*a. General.*—The landing of engineer shore troops is synchronized with the attack for the purpose of organizing and improving the beach and transporting equipment and supplies inland to the dumps. The Boat Control Section (made up of the Boat Maintenance and Salvage Section) of the Boat Company is usually attached to the Shore Company. Its functions are the control of boats and boat traffic at the beach and salvage operations for boats.

b. First Stage (Fig. 8).—Two men from the Boat Control Section land with the first wave. They immediately set up range markers on the center line of the beach and signal subsequent waves in. Normally, all other troops of the first and second waves are assault troops who clear the enemy beach defenses and proceed inland.

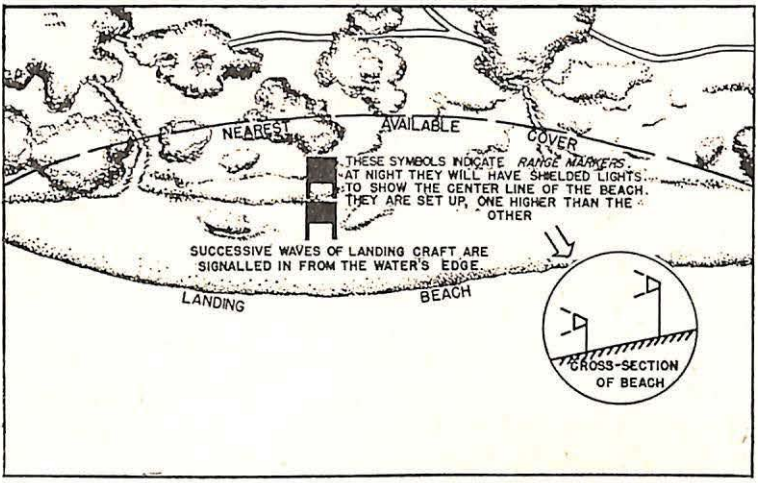


Fig. 8.—First Stage. The First Assault Wave Has Landed.

c. Second Stage (Fig. 9).—(1) The Forward Echelon of Headquarters Platoon of the Shore Company, with attached communications personnel from the Shore Battalion Headquarters Company and with its attached Boat Control Section, lands normally in the third wave.

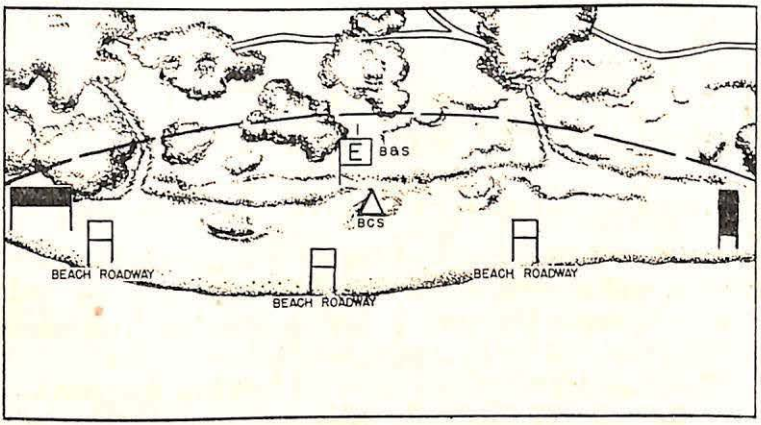


Fig. 9.—Second Stage. The Third Wave Has Landed at H Plus V.

(2) This group performs the following duties:

(a) Marks limits of beach.

(b) Establishes command posts of Shore Company and Boat Control Section.

(c) Sets up message center and establishes and maintains communications and liaison with advancing assault troops initially.

(d) Reconnoiters for and marks sites for beach roads, vehicle unloading points, dumps for supplies, and defensive weapons.

(e) Records units and supplies landed.

(f) Keeps situation map.

d. Third Stage (Fig. 10).—Obstacle removal and gas decontamination teams and road building teams (elements of the Pioneer Platoon), land normally in the fourth and fifth waves and begin work immediately. By the time heavy vehicles arrive, at least two beach exit roads should be ready for use.

The Forward Echelon continues with its duties enumerated in "*c*", above, and in addition selects and marks sites for clearing station, motor pool, and for collecting points for stragglers, prisoners of war, and salvage.

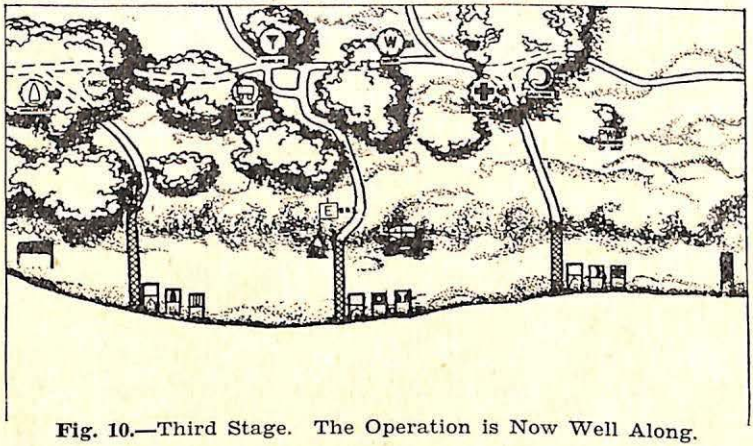


Fig. 10.—Third Stage. The Operation is Now Well Along.

e. Fourth Stage.—The Utility Platoon lands normally in the sixth and seventh waves. Assisted by the shore personnel not otherwise engaged, it unloads supplies from landing craft and places them in appropriate dumps.

The remainder of the Shore Company personnel are landed in subsequent trips as soon as their services can be utilized.

f. Recapitulation (Fig. 11).—The order of landing of the shore personnel for beach organization as set forth above is shown schematically in Fig. 11. It must be remembered that the shore troops for beach organization will cross as directed by the task force commander. For any particular operation, a wholly different order of landing may be expedient.

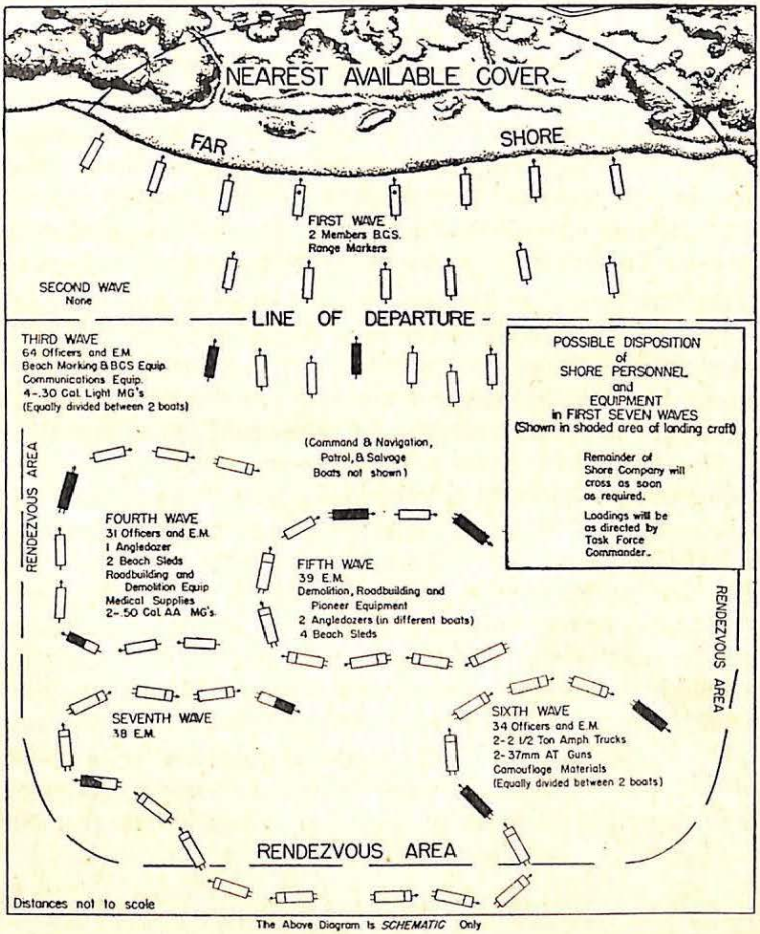


Fig. 11.—The Battalion Landing Team Shore Engineer Personnel Afloat.

13. Retraction, Regrouping, and Resupply.—*a.* Immediately upon landing, all boats must be unloaded and retracted to make room for incoming waves. They must be regrouped for successive trips evacuating wounded and prisoners and returning with reinforcements and supplies.

b. Broached boats must be given immediate attention by boat crews, wave leaders, the Boat Control Section, and shore personnel. Prompt and proper use of landing craft or salvage boat with towlines, use of anchors, and use of angledozers will retract nearly all broached boats.

c. The responsibility of engineer amphibian troops for the beach will continue until adequate port and dockage facilities have been established and the engineer amphibian troops relieved by port operating and other service units brought in for that purpose. This may include the resupply or continued supply over water routes and the operation of water transport and near and far shore facilities for extended periods. However, the early relief of engineer amphibian troops to make them available again for new landings is recommended whenever their further use in their specialty is foreseen.

d. Troops of an Engineer Special Brigade engaged in the resupply phase utilizing beaches or docks on the near and far shores and naval lighters, coasters, or other craft, must be reinforced by Quartermaster truck and service companies and may, as the situation dictates, be reinforced by engineer construction, general service or other types of special units and by combat units from higher headquarters. The duties of the Engineer Special Brigade thus reinforced might include any or all of the following:— operation of existing utilities, water distillation units, trucks, railroads, water transport, ferries, docks, and cargo handling equipment; construction and repair of roads, railroads, docks, piers, warehouses, and other structures. Although not the primary mission of engineer amphibian troops, the probability of having these duties to perform must not be overlooked. Advantage must be taken of any time available, after training for performance of the primary mission is complete, to train in the performance of these duties.

Chapter 2
ENGINEER SPECIAL BRIGADE

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II.	Organization and Functions	16-19
III.	Staff Planning	20-24

Section I
MISSION AND EMPLOYMENT

14. Mission.—*a. General.*—The mission of the Engineer Special Brigade is to embark and transport a reinforced infantry division with its supplies and equipment from a friendly near shore to a hostile far shore; to provide shore facilities and assistance; to evacuate prisoners, wounded, and salvage material from far to near shore; and to continue the operation of water transport and near and far shore facilities for resupply of the division until relieved by higher authority.

b. Near Shore.—On the near shore the brigade supervises the preparation of facilities in the Embarkation Area, furnishes landing craft for the division, and supervises the loading, stowing, and recording of troops, supplies, and equipment into landing craft and vessels.

c. Far Shore.—On the far shore the brigade organizes, controls, and improves the landing area; establishes dumps; facilitates the debarkation and movement inland of troops and of supplies and equipment to these dumps beyond the beach proper; controls landing craft; and evacuates wounded and prisoners. It provides local security of beach areas against observation and attack by hostile air, sea, and ground forces, employing both active and passive measures. (See also Par. 13)

15. Employment.—*a. General.*—Employment of the Engineer Special Brigade will be dictated by the tactical situation. The utmost flexibility is possible and will be practiced in meeting the tactical needs of each operation. These needs will vary so greatly with different situations that an enumeration of the various ways of employing the brigade is impractical. The following examples will suffice to illustrate this flexibility.

b. Concentration of Boat Strength.—An operation may make it advisable to concentrate the entire boat strength of the brigade in one regiment and under the regimental commander. Thus the regiment, reinforced by attached boat units from all other regiments, will be in a position to carry through a landing operation far beyond the capacities of any single regiment.

c. Concentration of Shore Units.—Likewise it may sometimes be advisable to concentrate all shore units of the brigade under the command of one regimental commander for some specific operation beyond the capacities of the regiment acting without such attached units.

d. Combinations of Boat and Shore Strength.—Any variety of combinations of the two examples cited above may be necessary, such as concentration of all of the brigade's boat strength and part of the brigade's shore strength under one regiment and one regimental commander for a specific operation. Or it may be advisable to concentrate all of the shore strength of the brigade and part of the boat strength under one regiment by attaching these units for a specific operation.

e. Attached Units Outside the Brigade.—Again the situation may require reinforcing the brigade by attaching units from outside the brigade to meet the tactical needs of an operation. These may be units from other Engineer Special Brigades, combat troops, engineer construction, special, or general service units, or other units attached by higher headquarters. The brigade in such a situation employs such units as the situation dictates. (See Par. 13)

f. Flexibility of Command.—The command of units or of an entire operation is likewise subject to the same flexibility as the disposition of units. In one case it may be advisable to place the entire operation, including near shore operations afloat, and far shore, under one centralized command. In other circumstances it may be advisable to split responsibility, placing the near shore operations under one commander, the operations afloat under another, and the far shore operations under still a third commander. Again any number of variations of this are possible and will be decided by the tactical problems involved.

Section II
ORGANIZATION AND FUNCTIONS

16. General.—*a.* (Fig. 12)—The Engineer Special Brigade is organized to provide the necessary transportation and shore services for the shore-to-shore movement of a reinforced infantry division, when reinforced by quartermaster service units and by Naval lighter and other cargo carrying craft, its basic operating elements being Boat and Shore engineer Regiments, each of which is organized to furnish shore-to-shore services for one Regimental Combat Team to which it may be attached, or of which it may be in direct support, for a

given operation. One or more of each of the following units are normal attachments during training in the continental United States and where required in theaters of operation:

Quartermaster Truck Company
Quartermaster Service Company
Quartermaster Gasoline Supply Company

b. Normally the Engineer Special Brigade is attached to the division, but it may be placed in direct support. In either case its functions are not materially different.

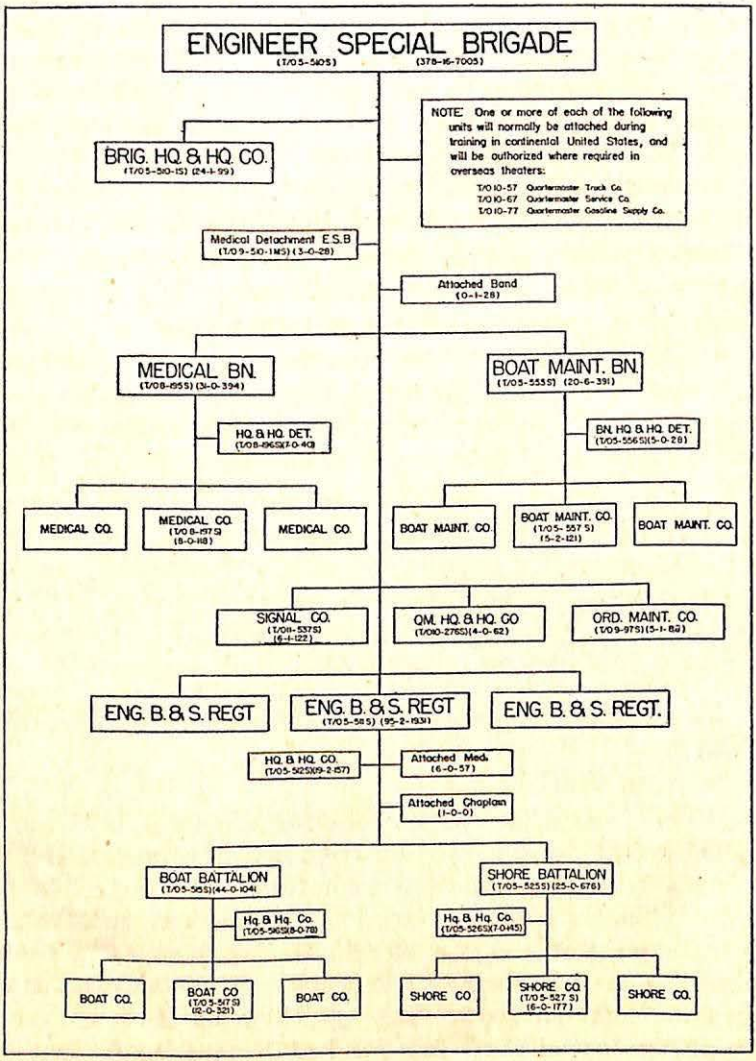

Fig. 12.—Engineer Special Brigade.

17. Brigade Commander.—*a.* The brigade commander is a brigadier general. He must have expert knowledge of the capabilities and technical and tactical employment of the Engineer Special Brigade, and be well versed in the tactics and technique of the combined arms.

b. When the brigade is acting alone, he is responsible for all normal command duties, operations, training, efficiency, discipline, and administration of the brigade in order that it may be prepared for combined operations at all times.

c. When the brigade is attached to the infantry division for amphibious operations, the brigade commander is responsible to the division commander for the functioning and employment of the Special Brigade, and becomes a member of the division commander's staff. As such he acts in an advisory capacity to the division commander, furnishing information and making recommendations for employment of the Engineer Special Brigade for any and all phases of the operation. He must maintain close liaison with the division commander and his staff at all times.

d. When, in exceptional cases, the brigade is placed in direct support of the division, the brigade commander cooperates and advises with the division commander, and complies with all requests for support which are consistent with the mission of the Engineer Special Brigade.

e. The brigade commander must insure full and complete liaison between his brigade and other units that may be operating with, or supporting, the operation. These units, particularly supporting Naval units, must be kept informed as to the movements and plans of the Engineer Special Brigade to insure maximum control, coordination, and cooperation.

18. Brigade Headquarters.—(Fig. 13) For staff functioning see FM 101-5.

a. Unit Staff.

(1) *Executive.*—The executive, a colonel, is the principal assistant to the brigade commander. In general, he performs those duties outlined for the chief of staff in FM 101-5. When the brigade commander goes afloat, an advanced brigade command post is moved to the far shore. The executive will normally remain on the near shore in command of the near shore command post. Through this near shore command post will be issued all orders for the dispatching of supplies and equipment to the far shore.

(2) *Personnel* (S-1)—S-1, a major, supervises the work of the administrative section. He is assisted by a captain (adjutant), a first lieutenant (personnel officer), and a warrant officer (general clerical work). The section normally operates in two groups—the adjutant's group, and the personnel group at the near shore command post.

(3) *Intelligence (S-2).*—S-2, a major, supervises the work of the intelligence section. He is assisted by a first lieutenant, who is reconnaissance and camouflage officer. This section is responsible for the collection, collation, and dissemination of intelligence information for the operations of the Engineer Special Brigade and for the supported division, or higher echelons, as requested. Much information will be received from higher echelons but much more must be obtained by amphibious reconnaissance. There must be close cooperation between this section and the G-2 section of the division. (For discussion of engineer amphibian intelligence see par. 21, and Tentative Training Guide No. 5).

(4) *Operations (S-3).*—S-3, a lieutenant colonel, supervises the work of the operations section. He is assisted by a major and a captain, liaison officer and assistant S-3 respectively. In general the duties of the S-3 are as outlined in FM 101-5. However, his duties are altered somewhat by the fact that the brigade is a logistical agency which necessitates close cooperation and coordination by the S-3 of the brigade with the G-4 section as well as the G-3 section of the division. The assistant S-3 remains at the command post on the near shore and assists the brigade executive in maintaining close liaison with the G-3 and G-4 representatives of the division staff.

The brigade navigation officer works in close coordination with S-3 on all matters of navigation.

The two brigade command and navigation boats with two second lieutenants as boat commanders and the necessary crews are assigned to this section.

(5) *Supply (S-4).*—S-4, a lieutenant colonel, supervises the work of the supply section. He is assisted by a captain who is automotive officer. This section is responsible for the supply of the brigade only—not for the division. During an amphibious operation, it should remain on the near shore. Duties of this section include planning for and supervision of the following:

Procurement, storage, transportation, and distribution of all classes of supplies and equipment for the special brigade.

Location of supply, evacuation, and maintenance facilities for the brigade in coordination with S-3.

Traffic control on the near shore in coordination with S-3.

Maintenance of equipment of the brigade.

Construction, operation, and maintenance of utilities and other facilities relating to supply, shelter, transportation, and hospitalization on the near shore, in coordination with S-1 and S-3.

Evacuation and hospitalization on the near shore, in coordination with S-3.

Near Shore salvage operation.

b. Special Staff.—The following special staff officers have dual functions as unit commanders and as advisors to the brigade commander and his staff on their specialty:

(1) Lieutenant Colonel, Medical Battalion commander, is brigade surgeon.

(2) Lieutenant Colonel, Boat Maintenance Battalion commander, is brigade boat maintenance officer.

(3) Lieutenant Colonel, Signal Company commander, is brigade signal officer.

(4) Lieutenant Colonel, Quartermaster Headquarters and Headquarters Company commander, is brigade quartermaster.

(5) Major, Ordnance Company commander, is brigade ordnance officer.

(a) The following special staff officers are advisors and directors of their services:

(i) Lieutenant Commander, U.S.C. & G.S., brigade navigation officer (in Brigade Headquarters). He makes detailed plans for and advises the brigade commander and S-3 on all matters of navigation. He works in close coordination with S-3 and S-2 on combat and navigational intelligence.

(ii) Major, brigade finance officer.

(iii) Major, brigade inspector general.

(iv) Major, brigade chemical warfare officer.

(v) Major, headquarters commandant and provost marshal (in Brigade Headquarters).

(vi) Major, brigade chaplain.

19. Brigade Headquarters Company (Fig. 13).—This company furnishes quarters, mess, orderly service, and transportation for brigade headquarters personnel.

The brigade special service officer and his enlisted assistants are included in company headquarters.

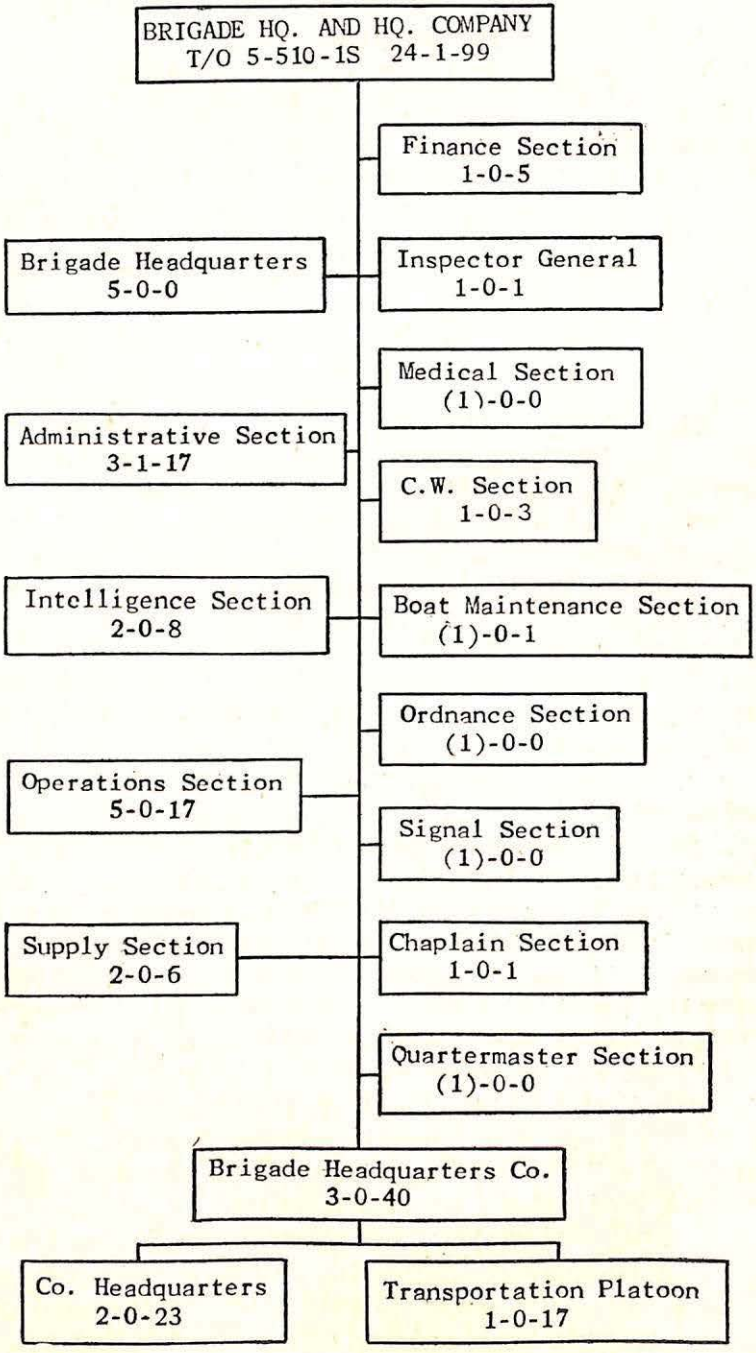

Fig. 13.—Brigade Hq. & Hq. Company.

Section III
STAFF PLANNING

20. General.—After the Engineer Special Brigade is attached to the division for an operation, and the general plan of the division commander for the employment of the division is known to the brigade commander, he assembles and directs each section of his staff to make the requisite plans for the conduct of the operation. Every staff section must cooperate with the appropriate sections of the division staff. These plans include the necessary detail for participation in combined preliminary exercises, for moving the brigade into Embarkation Areas, and for all phases of the actual operation.

21. Intelligence Planning.—*a. General.*—In most operations, general intelligence is developed for the general plan; detailed intelligence is developed for the detailed plans. This procedure cannot be followed in amphibious operations, as there is neither the means, time, nor opportunity for subordinate units to develop their own intelligence. Furthermore, since the general plan may depend to a great extent upon detailed intelligence, it is necessary that detailed intelligence for the entire operation be developed in advance and furnished to all participating units. The greater the opposition expected, the more important it becomes to obtain dependable information. The responsibility for the development of both general and detailed intelligence for an amphibious operation rests with the intelligence agencies of higher command (division, corps, army), who, depending upon the extent of the operation, may call upon any or all of the following agencies for assistance: Military Intelligence Service, Office of Naval Intelligence, A-2 (Army Air Forces), Navy Bureau of Aeronautics, Navy Bureau of Ships, Navy Hydrographic Office, Coast and Geodetic Survey, Army Map Service, Office of Strategic Services, Director of Weather (Army Air Forces), Navy Weather Research Center, and the Beach Erosion Board (Corps of Engineers). In addition these intelligence agencies of higher command gather much valuable information through the use of small boat patrols, patrol demonstrations, air reconnaissance, aerial photography, amphibious scouts, ranger or commando raids, friendly agents, and existing maps, charts, and photographs. (See Pars. 123-132 FM 31-5)

b. Brigade Responsibility.—The brigade must be prepared at all times to secure or assist in securing intelligence, both for itself, and for the division and higher units. The bri-

gade may be called upon to furnish facilities including boats and crews for boat patrols, for patrol demonstrations, or for placing scouts, rangers, or agents ashore. It may be given a mission of securing specific information on the far shore, in which case it must furnish all necessary boats, crews, and reconnaissance personnel. The brigade must be prepared to secure by actual reconnaissance its essential hydrographic information, information regarding landing beaches, and information regarding Embarkation Areas. For details of organization for, and methods of, securing this information see Tentative Training Guide No. 5.

22. Operation Planning.—Plans for operations must include recommendations for organization and development of Embarkation Areas and embarkation facilities within those areas, and also recommendations for the use of shore units, if not otherwise engaged, in the development of these areas. Recommendations are also made for the use of combat engineers and service troops, if needed, in the development of embarkation areas. General plans are made for loading and stowing of supplies and equipment on the near shore, and recommendations are made as to the number of service or other troops necessary to assist in this work. Navigational plans are worked out and submitted by the navigation officer for the S-3's approval. General plans are prepared and recommendations made for the allotment of personnel and boats and other types of equipment. General plans are prepared for operation on the far shore, the organization and control of beaches and landing areas, the unloading and handling of supplies and equipment, evacuation, beach defense, and the reorganization of shore elements of the brigade when the resupply phase of the operation is reached.

23. Administrative Plan for Brigade Only.—The S-4 section of the staff prepares administrative plans for the brigade proper, to include all classes of supply for elements on the near shore, for elements afloat, and for elements on the far shore. Such administrative plans are concerned with problems of procurement and transportation to Embarkation Areas for near shore elements of the brigade, and to the far shore for far shore elements. In coordination with S-3, plans are made for the location of supply, evacuation, and maintenance facilities, and for the construction, operation, and maintenance of utilities and other supply facilities on the near shore. Plans for evacuation and hospitalization on the near shore are pre-

by the Engineer Special Brigade in the operation, and it informs the major tactical units and the arms and services of those features of the engineer plan necessary for the teamplay of the whole command. It is prepared by the Engineer Special Brigade commander and his staff.

(2) The brigade order must be complete. It must include within itself and the annexes thereto, all information and instructions to the elements of the brigade. It will be prepared in the same five paragraph form that all field orders follow. (FM 101-5) Some details of specific interest to engineer special units that are included in the brigade order are:

(a) Paragraph 1, *(a)* will give the enemy situation only in so much detail as is of interest to elements of the brigade, such as enemy strength, enemy installations on shore, and location of air and naval units that may menace the landing. Paragraph 1, *(b)* gives information of friendly troops that are of interest to elements of the brigade.

(b) Paragraph 2 will contain the general plan of operation of the brigade in accordance with the mission that has been assigned in the division order, together with certain details of general application. For example, "6th Engineer Special Brigade, reinforced, supported by naval units, will transport and supply the 36th Infantry Division, reinforced, from the Boston—Cape Cod Area to Martha's Vineyard Island, until adequate port facilities are secured." In addition, details of general application must also be included in this paragraph. These are, first a Boat Allotment Table, second a Track Chart, third a Boat Movement Table, and fourth an announcement of D-day and H-hour. The first three of these are referred to in paragraph 2 as annexes. (See Appendix II)

(c) Paragraph 3 contains detailed instructions for each element of the brigade and units under its control. The major elements of the brigade, the three Boat and Shore Regiments, normally are placed in direct support of regimental combat teams. This support is directed in this paragraph of the brigade field order. Since the mission of the Engineer Special Brigade embraces the three-fold duties of water transportation, supply, and evacuation for a division, many administrative instructions of the division become operational instructions for the brigade, so certain of these will be included in paragraph 3 of the brigade order. In order not to make this paragraph too verbose, however, the administrative annex to the division field order will be referred to when applicable;

therefore, the division administrative order must be distributed with the brigade order to the elements of the brigade.

(d) Paragraph 4 follows the form of an administrative order and contains instructions for the supply and evacuation of the brigade only. It is based on the instructions contained in the division administrative order that apply to the brigade. These instructions may be issued as an administrative annex to the brigade order.

(e) For example of the contents of paragraph 5 of the brigade field order see Appendix II.

f. Operational Orders and Annexes.—Field orders for amphibious operations include several annexes in the form of charts, tables, diagrams, and schedules to supply the necessary detailed and coordinating data. Some of these may be prepared by the combat unit or by the combat unit in conjunction with the engineer unit, but most of them will be prepared by the various echelons of the Engineer Special Brigade (see pars. 42 and 43, T.T.G. No. 1). In any case the following are generally necessary for amphibian operations:

(1) *Boat Allotment Table:* Number and type of boats to be alloted to the units to be transported, and, if applicable, when boats are to be assembled.

(2) *Boat Assignment Table:* Loading (men and equipment) for each boat.

(3) *Embarkation and Debarkation Table:* Schedule of loading and unloading: giving unit to be transported, boat unit transporting, Embarkation Point and time of loading, and debarkation beach and time of unloading.

(4) *Assembly Chart and Table:* Designation of *(a)* Dispersal Areas, *(b)* Embarkation Points, and *(c)* Assembly Areas, and track and schedule of boat movements from one to the other.

(5) *Track Chart:* Plotted course from Assembly Area to far shore and return.

(6) *Boat Movement Table:* Complete time table of whole crossing from Assembly Area to far shore.

(7) *Landing Diagram and Schedule:* Formation into waves, time between waves, and spacing between boats in waves.

(8) *Approach Chart:* Track through hazards to navigation from Line of Departure to beach—issued only when required.

Assembly Chart and Table may be combined with the Track Chart and Boat Movement Table when desirable.

FOREWORD

This guide is published as an aid to training engineer amphibian units. It has been rapidly compiled to meet an urgent need for such a document and unit commanders are invited to criticize and to suggest additions, deletions, changes in emphasis, etc., for incorporation in later editions.

It amplifies the mission, functions, organization, employment and training of engineer amphibian troops as contained in Tentative Training Guide No. 1 with which the student of this guide should be familiar. For reference and logistical data, see Tentative Training Guide No. 6; for Intelligence, Navigation and Communications details see Tentative Training Guide No. 5; and for details of Operation on the Far Shore see Tentative Training Guide No. 7—all to be published.

Changes in personnel and equipment may be made by Tables of Organization and Tables of Equipment published subsequent to this guide. These changes should not be construed as altering the tactical doctrine contained herein if the unit retains its fundamental composition and equipment as shown.

Daniel Noce

DANIEL NOCE
Brigadier General, U. S. A.
Commanding.

Engineer Amphibian Command,
Camp Edwards, Massachusetts,
May, 1943.

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SYMBOLS USED IN THIS GUIDE

Ammunition Landing Point, Day Marker --------

Beach Center Marker (from seaward) ----------

Beach Center Marker (from seaward) when beach number is duplicated ----------

Beach Limit, Day Marker, Left Flank (from seaward) ----------

Beach Limit, Day Marker, Right Flank (from seaward) ----------

Beach Limit, Day Marker, Left Flank (from seaward) when beach number is duplicated ------

Beach Limit, Day Marker, Right Flank (from seaward) when beach number is duplicated ------

Beach Roadway, Day Marker (placed to right of the right edge of roadway) ----------

Gasoline and Water Landing Point, Day Marker ---

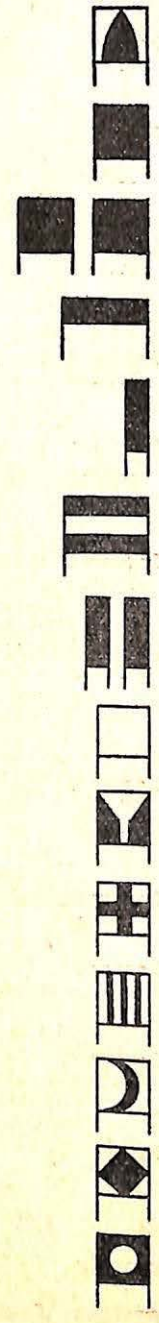
Medical Supplies (landed) or casualties (evacuated), Day Marker ----------

Miscellaneous Supplies Landing Point, Day Marker

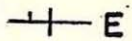
Rations Landing Point, Day Marker ----------

Tracked Vehicles Landing Point, Day Marker ----

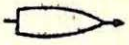
Water Landing Point, Day Marker ----------

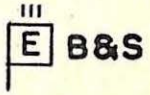


SYMBOLS USED IN THIS GUIDE

Aid (Clearing) Station (Company) ---------- 

Boat Control Section ---------- 

Command & Navigation, or Patrol, Boat ---------- 

Command Post (E.B.&S.Regt) ---------- 

Distributing Points:

Artillery Ammunition ---------- 

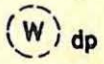
Gas and Oil ---------- 

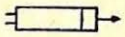
Medical Supplies ---------- 

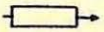
Miscellaneous Supplies ---------- 

Rations ---------- 

Small Arms Ammunition ---------- 

Water ---------- 

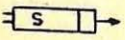
LCM(3) 50′ ---------- 

LCVP 36′ ---------- 

Motor Pool ---------- 

Observation Post, Engineer ---------- 

Prisoners of War ---------- PW

Salvage Boat, LCM(3) ---------- 

Visual Signal Post ---------- 

The highest unit preparing an annex which will be included in orders of lower units should prepare sufficient copies of such annexes and distribute them to the lower units for inclusion in their orders. These may include any or all of the tables and charts above but will always include the Boat Allotment Table, Track Chart, Assembly Chart, and Boat Movement Table.

Chapter 3

ENGINEER BOAT AND SHORE REGIMENT

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Section I

MISSION AND EMPLOYMENT

25. Mission.—The mission of the Engineer Boat and Shore Regiment in support of or attached to a regimental combat team is to embark and transport the regimental combat team with its supplies and equipment from a friendly near shore to a hostile far shore; to establish dumps; to facilitate the movement inland of the combat elements of the regimental combat team with their equipment; to evacuate prisoners, wounded and salvage material from the far shore; and to continue the operation of water transport and near and far shore facilities for resupply of the regimental combat team until relieved by higher authority. Its mission is identical with that of the brigade as given in paragraph 14 except that the regiment operates with the regimental combat team while the brigade operates with the reinforced division.

26. Employment.—As with the Engineer Special Brigade, the employment of the regiment will be dictated by the tactical situation. (See Par. 15). Here also the utmost flexibility is necessary and will be utilized in meeting the needs of each operation. The same principles will govern the regimental commander in the employment of his regiment as governs the brigade commander in the employment of his brigade, the main difference being that the regimental commander is concerned with the employment of battalions and companies, while the brigade commander may be concerned with the employment of larger units. The same basic principles of flexibility both of units and command hold true and will be utilized to the utmost in solving tactical problems.

The regimental commander may find himself in command of all operations afloat, on the near shore, or on the far shore, with or without attachments or detachments.

Section III
ORGANIZATION AND FUNCTIONS

27. General.—(Fig. 14). The Engineer Boat and Shore Regiment is one of the three operating elements of the Engineer Special Brigade. It is the smallest unit of the brigade which is complete in itself, for it combines elements for both boat and shore functions. It is organized, when reinforced by the Medical Company and by Quartermaster service units and auxiliary naval craft, to provide the necessary transportation and shore services for an infantry regimental combat team.

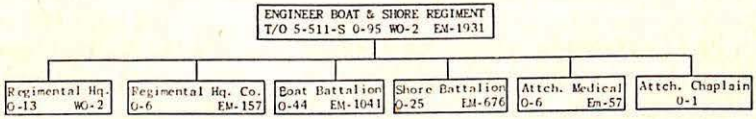

Fig. 14.—Engineer Boat & Shore Regiment.

28. Regimental Commander.—*a.* The commander of the Engineer Boat and Shore Regiment is a colonel. When the regiment is not operating with a tactical organization, he is responsible for all normal command duties, training, efficiency, discipline, and administration of his organization. He must insure that his organization is prepared for amphibious operations at all times. For qualities of leadership, see FM 101-5.

b. When the Boat and Shore Regiment is in direct support of a regimental combat team, the regimental commander cooperates with the infantry regimental commander, and complies with all requests for support which are consistent with orders which he has received from the Special Brigade commander. In addition, he acts in an advisory capacity to the regimental combat team commander regarding technical matters concerning the employment of the Boat and Shore Regiment in the operation.

c. When the Boat and Shore Regiment is attached to the regimental combat team, the regimental commander becomes a member of the regimental combat team commander's staff, advising him on technical matters regarding the employment of the Boat and Shore Regiment and taking his orders direct from the regimental combat team commander.

29. Regimental Headquarters (Fig. 15)—*a.* Regimental Headquarters consists of the regimental commander, his executive, and his staff. For staff functioning see FM 101-5.

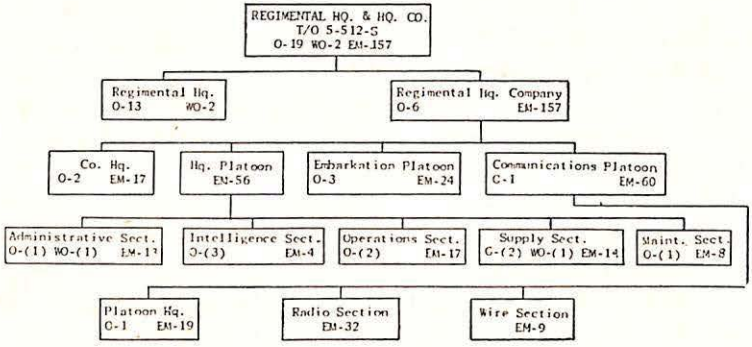

Fig. 15.—Regimental Hq. & Hq. Company.

b. Executive. The regimental executive, a lieutenant colonel, is the principal assistant to the regimental commander. In general he performs those duties outlined for the chief of staff in FM 101-5. When the regimental commander is afloat or on the far shore, the executive remains in charge of the near shore command post, and through this rear command post will be issued all orders for the dispatching of supplies and equipment to the far shore.

c. Adjutant (S-1).—S-1, a captain, supervises the work of the administrative section. His assistant adjutant is a warrant officer. The administrative section normally operates in two groups—the adjutant's group and the personnel group at the near shore command post.

d. Intelligence (S-2).—S-2, a captain, supervises the work of the intelligence section. He is assisted by one first lieutenant, camouflage officer. This section is concerned with the collection, collation, and dissemination of intelligence information for the operations of the Engineer Boat and Shore Regiment, and for higher echelons as requested. Much of this information will be received from higher echelons but much more must be secured by amphibious reconnaissance. There must be close cooperation between this section and the S-2 section of the regimental combat team.

e. Operations (S-3).—S-3, a major, supervises the work of the operations section. He is assisted by a first lieutenant, assistant operations officer, and a second lieutenant, boat commander. In general, the duties of the S-3 are as outlined in FM 101-5. Since the Boat and Shore Regiment, however, is a logistical agency, it is necessary that close cooperation and coordination be maintained by the S-3 with the S-4 section of the regimental combat team as well as the S-3 section of that

organization. The assistant operations officer remains at the near shore command post and assists the regimental executive in maintaining close liaison with the S-3 and S-4 representatives of the infantry regimental staff. There are assigned to this section two command and navigation boats with the necessary crews.

f. Supply (S-4).—S-4, a major, supervises the work of the supply section. He is assisted by one second lieutenant, who is assistant supply officer and transportation officer, and one warrant officer, who is assistant supply officer. This section is responsible for the supply of the Boat and Shore Regiment itself. During an amphibious operation it should remain on the near shore in close liaison with the near shore command post. In general the duties of this section parallel those of the S-4 section of the Engineer Special Brigade (See par 18*a*).

g. Navigation Officer.—The regimental navigation officer, a lieutenant, senior grade, U.S.C. & G.S., makes detailed plans for, and advises the S-3 and the regimental commander on, all matters of navigation. He must work closely with both S-2 and S-3, inasmuch as their activities are closely related and interdependent. The navigation officer, for example, will often engage in reconnaissance work to get information vital to him in planning his navigation. This information may also be valuable to the S-3 section in planning the entire operation, or to S-2 in piecing together as complete and accurate a picture of the situation as possible. The services of the regimental navigation officer will be utilized to the greatest extent in conducting amphibious reconnaissance.

h. Special Services Officer.—The special services officer is a captain.

30. Regimental Headquarters Company (Fig. 15).—*a.* In general this company performs the duties usually performed by headquarters companies, thus providing the means for carrying out by the Regimental Headquarters its functions of command, control, and administration. It furnishes quarters, mess, and transportation services for regimental headquarters.

b. Headquarters Platoon is divided into Administrative, Intelligence, Operations, Supply, and Maintenance Sections. The first four sections supply enlisted assistants, including chauffeurs and boat operators, to appropriate sections of regimental headquarters. The Maintenance Section performs second echelon maintenance for the motor vehicles of the regiment.

c. Communications Platoon is composed of a platoon headquarters, a radio section, and a wire section. It furnishes the facilities for establishing and maintaining radio and wire communication by the Regimental Headquarters in accordance with the signal plan (see par 98, and Tentative Training Guide No. 5).

d. Embarkation Platoon is responsible for the control of embarkation on the near shore in accordance with the prepared plans of the regimental combat team. The platoon may be divided into three groups, each group with a captain, embarkation control officer, and each group charged with supervising loading and stowing of personnel, supplies, and equipment onto landing craft or other vessels at a given Embarkation Point. Thus the Embarkation Platoon is capable of supervising initial and resupply embarkation from three separate Embarkation Points. The actual loading is performed by service or other troops.

31. Attached Medicals (Fig. 14).—The Regimental Headquarters Section of the Medical Detachment operates with the Regimental Headquarters and in addition furnishes replacements for the remaining sections. The Shore Battalion is so organized that it can attach one officer and nine enlisted men to each of the two shore companies which support assault battalion landing teams. They will establish an aid station on the far shore in the Shore Company area. If three assault battalion landing teams are landed simultaneously, a third shore Medical Detachment must be formed by taking men from the Regimental Headquarters and Shore Battalion Sections. The Boat Battalion Section is divided among the boats of the three Boat Companies to perform first aid services for personnel injured in the boats. (See par 105*c*.).

32. Attached Chaplain (Fig. 14).—The regimental chaplain is a captain.

Section III
EMPLOYMENT

33. General.—Normally, the Engineer Boat and Shore Regiment is in direct support of a regimental combat team, although when the regimental combat team is assigned an independent mission or a mission widely separated from other elements of the division of which it is a part, the Boat and Shore Regiment may be attached to the regimental combat team.

34. Regimental Commander.—Whether the Boat and Shore Regiment is attached to or in support of a regimental combat team, the regimental commander must act as technical adviser to the regimental combat team commander concerning the employment of elements of the Boat and Shore Regiment. Some of the matters regarding which he must be prepared to give technical advice are as follows:

a. The number and type of landing craft and other vessels available for transporting the regimental combat team, and the capabilities of these craft, including boat space available, speed, and other matters.

b. The selection of Embarkation Areas and the steps which must be taken for preparation of Embarkation Areas, including assistance which will be required from service or other troops.

c. Navigational matters including selection of proper landing beaches.

d. Loading, stowing, and unloading troops, supplies, and equipment.

e. Selection of sites for conducting combined training.

35. Near Shore Activities of Boat and Shore Regiment.—*a. Combined Preparatory Exercises.*—Prior to the actual operation, the regiment must be prepared to engage in combined preparatory exercises with its regimental combat team. Sites must be selected for this training which present conditions similar to those anticipated for the actual operation. During this preparatory training many mutual problems of the Boat and Shore Regiment and the regimental combat team may be worked out.

b. Preparation of Embarkation Areas.—The Boat and Shore Regiment is responsible for supervising the preparation of Embarkation Areas. Much of the actual labor involved in this activity will be done by shore units of the Boat and Shore Regiment. However, they will usually be assisted by general engineer units, particularly where construction and repair of piers, wharfs, bridges, and other facilities are necessary, and large labor details are needed. Suitable preparation of Embarkation Areas may include building and improvement of roads, bridges, piers, and wharfs; selection and camouflaging of dump sites; improvement of channels and other water approaches; and selection and preparation of beach roadways. This entire work must not be left to shore engineers, who for the most part will be engaged at such times in combined preparatory exercises.

c. Loading.—Loading of troops, equipment, and supplies on the near shore will be supervised, but not actually performed, by the Boat and Shore Regimental Embarkation Platoon. Loading during the initial embarkation phase, that period when all craft are combat unit loaded, is performed by the troops being embarked. Loading during the resupply phase is performed by service troops under the supervision of the Boat and Shore Regimental Embarkation Platoon and its three embarkation control officers. The personnel of the Embarkation Platoon should be highly trained in the loading, stowing, and checking of supplies and equipment into large landing craft and the larger commercial type vessels, which will be employed during the resupply phase of the operation.

36. Activity of Boat Elements.—The boat elements of regiment are responsible for effecting the water transportation of the regimental combat team and the materials and equipment to resupply that organization until adequate port facilities have been secured or until relieved by higher authority.

37. Far Shore Activities.—*a.* On the far shore the Boat and Shore Regiment is charged with:

(1) Organization and preparation of landing beaches, including the marking of beaches, building of roads, selection and preparation of supply dumps, removal of obstacles, and decontamination of gassed areas.

(2) Unloading of supplies and equipment.

(3) Safeguarding and evacuation of prisoners and evacuation of wounded.

(4) Defense of landing areas.

(5) Providing for communication in accordance with the signal plan.

b. Normally, shore units of the Boat and Shore Regiment are charged with the responsibility of unloading and handling supplies and equipment only until adequate port facilities have been seized and prepared on the far shore, at which time specially trained port units should take over port operation. They may be called upon, however, to prepare facilities and to perform all or a part of port operating functions. Such duties should not be assigned if the services of these units are needed for other primary amphibian duties. (See par. 13).

38. General.—Staff planning for the Engineer Boat and Shore Regiment, operating with a regimental combat team, parallels that for the Engineer Special Brigade operating with

the reinforced infantry division. When the Boat and Shore Regiment is attached to the regimental combat team for an operation, the general plan of the regimental combat team commander for the employment of the regiment will be known to the Boat and Shore Regimental commander. As with the Special Brigade, every staff section of the Boat and Shore Regiment must cooperate with the appropriate sections of the infantry regimental staff. These plans must include the necessary detail for participation in combined preliminary exercises, plans for moving the regiment into the Embarkation Area, and preparation for all phases of the operation. Inasmuch as there is no basic difference in staff planning for the Boat and Shore Regiment and for the brigade as covered in paragraphs 20-23, these instructions will not be repeated here.

39. Combat Orders.—*a.* For preparation of combat orders generally see FM 101-5; for preparation of Engineer Special Brigade order see paragraph 24; and for sample Engineer Boat and Shore Regimental order, see Appendix II.

b. General.—The preparation of combat orders for the Engineer Boat and Shore Regiment parallels the preparation of orders for the brigade. The following are prepared:— (1) the sub-paragraph of paragraph 3 of the regimental combat team order (see par. 24, *c.*), (2) those sub-paragraphs of the administrative order of the regimental combat team that include instructions for the regiment (see par. 24, *d.*), and (3) the Boat and Shore Regimental annex to the regimental combat team field order (explained below).

c. Boat and Shore Regimental Order.—(1) See paragraph 24 for general considerations and contents of paragraph 1 of the regimental order.

(2) Paragraph 2 will contain the general plan of operation of the regiment in accordance with the mission that has been assigned it in the brigade order, together with certain details of general application. These details of general application which must be included are Boat Allotment Table, Assembly Chart and Table, Track Chart, Boat Movement Table, Embarkation and Debarkation Table, and announcement of D-day and H-hour. The first five of these are referred to in separate sub-paragraphs of paragraph 2 as annexes. (See Appendix, and also paragraphs 42 and 43, Tentative Training Guide No. 1).

(3) Paragraph 3 contains detailed instructions for each element of the regiment and elements under its control. Since the Boat and Shore Regiment and its two major ele-

ments, the Boat and Shore Battalion, are of the same echelon, this paragraph may include detailed instructions to the companies of the Boat and Shore Battalions as well as instructions for the battalions as a whole. On the other hand, the regimental order may give, in this paragraph, instructions to the battalions as a whole, and leave the matter of detailed instructions for the companies to their respective battalion orders. If detailed instructions are given to the companies, these would include orders placing the various Boat and Shore Companies in support of or attached to respective battalion landing teams. Since the mission of the Engineer Boat and Shore Regiment embraces the three-fold duties of water transportation, supply, and evacuation for a regimental combat team, many administrative instructions of the regimental combat team become operational instructions for the Boat and Shore Regiment, so certain of these will be included in paragraph 3 of the Boat and Shore Regimental order. In order not to make this paragraph too cumbersome, however, the administrative annex to the regimental combat team field order will, to avoid repetition, be referred to when applicable; therefore the regimental combat team administrative order must be distributed with the Boat and Shore Regimental order to the elements of the Boat and Shore regiment.

(4) Paragraph 4.—See par. 24, *e* (2) *(d)*.

(5) For example of the contents of paragraph 5 of the Boat and Shore Regimental field order see Appendix II.

Chapter 4

ENGINEER BOAT BATTALION

		Paragraphs
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Section I

MISSION

40. Mission.—The mission of the Engineer Boat Battalion of the Engineer Boat and Shore Regiment is to transport a regimental combat team with its supplies and equipment from a friendly near shore to a hostile far shore and to continue the operation of water transport for resupply of the regimental combat team until relieved.

Section II

ORGANIZATION AND FUNCTIONS

41. General.—*a.* (Fig. 16) The Engineer Boat Battalion is organized and equipped to provide the necessary boat services for the shore to shore movement of the combat elements (3 battalion landing teams and regimental command group) of a regimental combat team. To transport a complete regimental combat team, and for resupply, the Boat Battalion must be reinforced with Naval lighter and other cargo carrying craft.

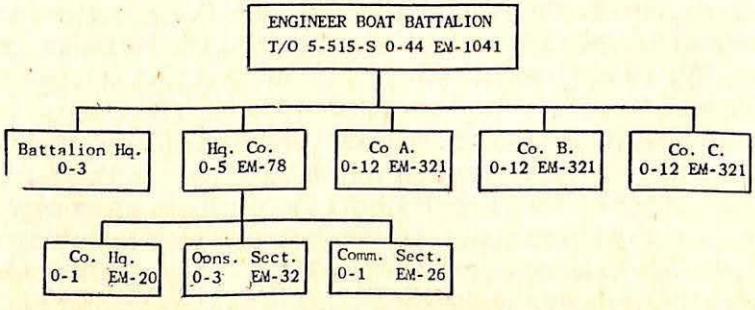

Fig. 16.—Engineer Boat Battalion.

42. Battalion Commander.—*a.* The Boat Battalion commander is a lieutenant colonel. He must have a thorough knowledge of amphibious tactics and sufficient navigational and boat operating experience to direct the battalion under combat conditions.

b. The Boat Battalion being part of the Boat and Shore Regiment, the battalion commander is responsible for the employment of his battalion to the regimental commander. He is also technical adviser to the regimental commander concerning the employment and capabilities of his battalion. He may expect to be called on for recommendations in all situations.

43. Battalion Headquarters. (Fig. 16).—*a.* Battalion Headquarters consists of the battalion commander and his staff, composed of an executive officer who is also S-3, a marine motor maintenance officer, and an adjutant, who also commands the Headquarters Company.

b. Executive and S-3.—A major on the battalion commander's staff performs the combined functions of executive and S-3. In general, he performs those duties outlined for chiefs of staffs in FM 101-5. As S-3, he is responsible for those functions of the battalion staff which relate to organization, training, and combat operations. The specific duties of the operations officer are similar to those outlined for G-3 in FM 101-5. Like the battalion commander he should be well trained in amphibious tactics and must be thoroughly familiar with boat operations and navigation.

When the battalion goes afloat the executive officer normally remains on the near shore to coordinate boat activities there. If he goes afloat with the formation, he should occupy a patrol or other boat and stay near the rear of the formation where he can control it and assist in salvage operations.

c. Boat and Motor Maintenance Officer.—A captain is boat and motor maintenance officer on the battalion staff. As such he advises the battalion commander on all matters pertaining to maintenance of craft assigned to the battalion. He generally supervises and coordinates all first and second echelon maintenance work performed within the battalion, and makes plans and recommendations for third and fourth echelon work to be performed on the battalion boats by maintenance units outside the battalion. He works in close coordination and cooperation with the brigade boat maintenance officer. He cooperates with S-3 in devising plans for training the battalion in first and second echelon boat and motor maintenance.

d. Adjutant (S-1).—A captain supervises the work of the administrative section. In addition to his duty as adjutant, he commands the Battalion Headquarters Company. For specific duties of the adjutant see FM 101-5.

e. Navigation Officer.—The battalion navigation officer, also assistant S-3, is a first lieutenant. He makes detailed plans for and advises the S-3 and the battalion commander on all matters of navigation. He is responsible for coordinating and disseminating navigational data to elements of the battalion, and in cooperation with the S-3 he prepares plans for the navigational training of the battalion. Under normal conditions, when the battalion is afloat, the navigation officer leads the battalion formations.

f. Intelligence Officer.—The first lieutenant, assistant S-3 and navigation officer, is the battalion intelligence officer, and as such reports directly to the battalion executive. Most intelligence functions will be handled by the regimental S-2. The battalion intelligence officer will be responsible for such work as may remain.

g. S-4 Functions.—The Boat Battalion staff has no supply officer as such. Since the Boat Battalion is of the same echelon as the Boat and Shore Regiment, normally S-4 functions will be handled by the regiment except during operations. During operations, such of these functions as cannot be handled by the regiment must be the responsibility of the battalion executive, assisted by any other officer(s) of the battalion staff and Headquarters Company.

44. Battalion Headquarters Company (Fig. 16).—*a.* This company has the normal functions of a headquarters company, thus providing the means for carrying out by the Battalion Headquarters its functions of command, control, and administration.

b. Company Headquarters is composed of the usual company administrative personnel. It furnishes quarters, mess, clerical, and transportation services for Battalion Headquarters.

c. The Operations Section is composed of three officers and 32 enlisted men. One first lieutenant is intelligence, operations, and navigation officer, and two second lieutenants are commanders of two of the five patrol boats assigned to this section. In addition, there are in this section two command and navigation boats. For disposition and employment of this personnel and boats for navigation see Tentative Training Guide No. 5.

d. The Communications Section of Battalion Headquarters Company is composed of one officer and 26 enlisted personnel. It has sufficient radio operators to operate the two radios aboard each of the two command and navigation boats and the one radio aboard each of the patrol boats. In addition, there are sufficient message center and code clerks for the receipt, transmittal, encoding, and decoding of messages aboard the battalion commander's boat and the navigator's boat when the Battalion Headquarters is afloat. For detailed discussion of this section see Tentative Training Guide No. 5.

Section III
EMPLOYMENT

45. General.—Normally, the Boat Battalion is employed as part of its Boat and Shore Regiment with or without attachments or detachments but combining both boat and shore units. At the beginning of an operation, each of the three Boat Companies will normally be placed in support of each of the three battalion landing teams, but may be attached to battalion landing teams, particularly where a battalion landing team is assigned a mission widely separated from the rest of the regimental combat team.

46. Boat Battalion Commander.—The Boat Battalion Commander is technical adviser to the Boat and Shore Regimental commander, and through him to the regimental combat team commander concerning the following matters:

a. Employment of the Boat Battalion and elements thereof in combined preparatory exercises and the actual operation.

b. The number and type of landing craft available for transporting the regimental combat team and the capabilities of these craft, including boat space availability, speed, and other matters.

c. Selection of Embarkation Areas and Points of improvements necessary to facilitate boat operations.

d. Selection of D-day and H-hour, when that decision rests with the regimental combat team.

e. Navigational matters including selection of proper landing beaches.

f. Loading, stowing, and unloading troops, supplies, and equipment from the standpoint of boat operations.

g. Selection of sites for conduct of combined preparatory training.

47. The Boat Battalion Afloat.—*a.* The Boat Battalion commander coordinates the activity of the elements of his command, and when the battalion goes afloat carrying the elements of the regimental combat team, the battalion commander, when the situation permits, controls the movement of the battalion from the near shore to the far shore. The personnel at the disposal of the Boat Battalion commander or navigation and control are the navigation officer; two second lieutenants and two technical sergeants (boatswains) from the Operations Section, boat commanders; and the necessary enlisted personnel including coxswains, enginemen, seamen, and communications and special equipment personnel. The boats at the disposal of this group are the battalion's two command and navigation boats and five patrol boats. The battalion commander and the navigator each occupy one of the command and navigation boats, and the two lieutenants and two technical sergeants from the operations section occupy and command four of the five patrol boats. The other patrol boat has no commander other than the coxswain.

b. The navigation officer leads the formations, and the battalion commander supervises and controls the operation through radio and visual communication and by liaison through the five patrol boats. Otherwise the patrol boats are engaged patrolling the fleet, preventing straggling, aiding troubled boats, marking the Rendezvous Area, establishing the Line of Departure and performing other services to aid in navigational control and accuracy. If a company or companies are acting alone, or if one or more companies are making landings on more than one beach, the battalion patrol boats may be assigned to the companies in any manner. See Tentative Training Guide No. 5.

Section IV
STAFF PLANNING

48. General.—The Engineer Boat Battalion is of the same echelon as the Boat and Shore Regiment of which it is an organic part. Therefore formal plans for employment of elements of the Boat and Shore Regiment will be largely the work of the regimental staff cooperating with respective staff sections of the regimental combat team, and the functions of the battalion commander and his staff will be largely those of execution of the plans formulated. The battalion commander and his staff will nevertheless be called upon to submit informal plans and recommendations to Boat and Shore Regimental Headquarters and to regimental combat team.

49. Combat Orders.—*a.* For preparation of combat orders generally, see FM 101-5; for preparation of the Engineer Special Brigade order, see par. 24; and for preparation of the Engineer Boat and Shore Regimental order see par. 39.

b. The Boat and Shore Regimental order and its annexes (see Tentative Training Guide No. 1) may contain detailed instructions for the employment of elements of the Boat Battalion thereby eliminating the necessity for the preparation of a written battalion field order. In this case the battalion commander or his subordinate units issue instructions, usually orally, for the execution of those portions of the regimental order which apply to the Boat Battalion. If the Boat and Shore Regimental order does not include detailed instructions for the employment of the Boat Battalion, the boat commander will issue a written field order including annexes covering these matters.

Chapter 5

ENGINEER BOAT COMPANY

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III.	Employment	58-59

Section I

MISSION

50. General.—The mission of the Engineer Boat Company is to transport a battalion landing team with its supplies and equipment from a friendly near shore to a hostile far shore and to continue the operation of water transport for resupply until relieved.

Section II

ORGANIZATION AND FUNCTIONS

51. General (Fig. 17).—The Boat Company is organized and equipped to provide the necessary boat services for the shore-to-shore movement of a battalion landing team. It has 65 boats assigned to it. The Operations Section has four (2 command and navigation boats and 2 patrol boats). The Boat Maintenance and Salvage Section has one (an LCM(3) which is used as a salvage boat). Each of the 3 Boat Platoons, has twenty (10 LCVP's and 10 LCM(3)'s).

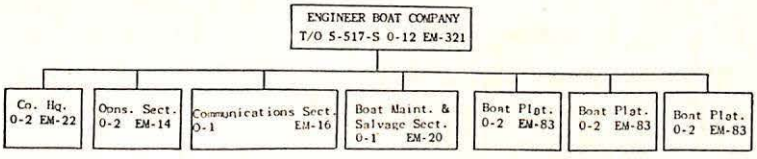

Fig. 17.—Engineer Boat Company.

52. Company Commander.—*a.* The company commander, a captain, must be thoroughly familiar with the capabilities and limitations of his landing craft, have a thorough knowledge of the care and maintenance of these boats, be able to control the mass operation of his landing craft, and be a qualified navigator and pilot.

b. The Boat Company, being normally in support of a battalion landing team, the Boat Company commander is normally responsible to the Boat Battalion commander for the employment of his company and receives his orders from the Boat Battalion commander. The Boat Company commander will be used in a staff capacity by the Boat Battalion com-

mander for advice and assistance in securing information on suitable Embarkation Points, Dispersal Areas, Training Areas, and for recommendations for the employment of his company.

c. The Boat Company commander with the Shore Company commander whether in support or attached to the battalion landing team works in close coordination with the battalion landing team commander, conferring with him, rendering expert technical advice and assistance, and making recommendations for the preparation of the Boat Assignment Table and Landing Diagram and Schedule (see Tentative Training Guide No. 1, Appendix, and par. 39*c*(2).

d. The plan of operations may call for the battalion landing team to land on a remote beach or to perform an independent mission. In this case the company commander must be able to handle his company independently, attached to the battalion landing team.

e. The company commander will normally be near the head of the company boat formation (see Tentative Training Guide No. 5).

53. Company Headquarters (Fig. 17).—*a.* The company headquarters includes the company commander, his second in command, a first lieutenant, and the necessary administrative enlisted personnel.

b. Executives.—The executive officer of the Boat Company, carries out the policies of the company commander, directs the housekeeping functions, coordinates the work of subordinate officers, and is prepared to take over the company commander's duties at any time. Afloat, the executive officer should be towards the rear of the wave formations during the early part of the mission in order to keep the company commander posted on progress there, although his responsibilties in the combat plan will be as directed by the company commander. He may be used as a wave leader, or he may be assigned to patrol, and check departure times at the Rendezvous Area, Embarkation Points, and any other points.

54. Operations Section (Fig. 17).—This section is composed of two first lieutenants, patrol boat commanders; 1 staff sergeant, boatswain; and crews for the section's 2 command and navigation boats and 2 patrol boats. This section is responsible for navigation and control of the company boat formations. The officers and the staff sergeant should have a thorough working knowledge of navigation to include basic piloting, dead reckoning, and small boat handling.

One of the first lieutenants, the navigator, leads the company boat formation in a command and navigation boat. The company commander occupies the other command and navigation boat, and usually follows closely behind the navigator although he is free to go where needed. The two patrol boats are occupied by the other first lieutenant and the staff sergeant. They are used in numerous ways, such as marking Rendezvous Areas and Lines of Departure, or as extra command navigation boats, as well as for their designated function of patrol (see Tentative Training Guide No. 5).

55. Communications Section (Fig. 17).—This section consists of a second lieutenant, company communications officer; 1 sergeant, communications chief; 1 clerk, message center; and 12 radio operators.

The section is responsible for all communications of the company, including radio, blinker, and semaphore. It is also responsible for first and second echelon maintenance of all of the company's communications equipment and supplies.

The officer in charge is responsible for training adequate personnel in the various types of communication employed by the company. He sets up the communications net(s) as directed by the company commander (see par. 101, Tentative Training Guide No. 5).

56. Boat Platoon (Fig. 17).—A boat platoon consists of two officers, a first lieutenant and a second lieutenant, and 83 enlisted men. Its boat strength consists of 10 boats of the LCVP type and 10 of the LCM(3) type. The enlisted personnel of the platoon includes one technical sergeant, platoon boatswain; four staff sergeants, section boatswains; and the necessary boat crews.

The platoon leader has the very important duty of training his boat crews and of keeping the boats and other equipment of the platoon in first class operating condition by the enforcement of efficient 1st echelon maintenance. He will usually be a wave leader for the water movement.

The assistant platoon commanders are second lieutenants. They assist the commander of the platoon in the administration and training of the platoon and serve as wave leaders for the water movement. The assistant platoon commander must be ready at any time to assume command of the platoon if it should become necessary.

Since there usually are not enough officers in the three platoons to act as wave leaders for all waves, some waves will be lead by the technical sergeant, boatswain.

The Boat Control Section (less the Maintenance Squad) is normally attached to the Shore Company supporting the battalion landing team of which its Boat Company is in support. For equipment and operations of the salvage boat see Tentative Training Guides Nos. 2, 3, and 5. For operations of the Boat Control Section on the far shore see Tentative Training Guide No. 7.

Section III

EMPLOYMENT

58. General.—While the Boat Company is normally in support of a battalion landing team, its employment in all cases is determined by the tactical situation. It may be attached to the landing team or it may be employed in any other way which best meets the tactical needs of the situation.

The company normally operates as part of the Boat Battalion and is under the command and supervision of the battalion commander, but this is not always true. The mission for a regimental combat team may necessitate the landing of battalion landing teams on widely separated beaches. In this case the Boat Company may function quite independently, and it is imperative that the organization and training of the Boat Company be such that it can function efficiently alone.

59. Wave Components and Formations.—Different types of boats and lighters may be in the various waves according to the tactical plan. A platoon commander in charge of a wave may often have boats under his control which are not part of his platoon.

The basic formations of the waves are COLUMN, CLOSED VEE, OPEN VEE, and LINE ABREAST. Various formations are necessary because of different situations, beaches, frontage, danger of enemy fire, missions, and obstacles to navigation. Formations of boat companies and battalions are combinations of these simple formations. For wave formations and control see Tentative Traning Guide No. 2.

d. Adjutant (S-1).—S-1, a first lieutenant, supervises the administrative functions of the battalion staff. For specific duties of the adjutant, see FM 101-5.

e. S-2 Functions.—The battalion staff has no intelligence officer. Since in operation the Shore Battalion is of the same echelon as the Boat and Shore Regiment, most S-2 functions will be handled by the regimental S-2. Such of these functions as cannot be handled by the regiment, however, must be the responsibility of the battalion executive.

66. Battalion Headquarters Company (Fig. 19).—*a.* This company has the normal functions of a Headquarters Company, thus providing the means for carrying out by the Battalion Headquarters its functions of command, control, and administration. It also contains the Battalion Combat and Communications Platoons.

b. Company Headquarters is composed of the usual company administrative personnel.

c. Headquarters Platoon is composed of five enlisted men, and is divided into an Administrative Section and an Operations Section. It furnishes the enlisted assistants for the battalion commander and his staff.

d. Combat Platoon is composed of three .50 cal. (AA) air cooled machine gun sections (two guns each) and three 37-millimeter gun sections (two guns each). These sections may be attached to any, or divided equally between all of the shore companies of the battalion during an operation. They provide anti-aircraft and anti-mechanized defense of the beach areas. This platoon has one first and one second lieutenant, each of whom is normally attached to one of the shore companies supporting assault battalion landing teams. They will supervise the employment of the attached 50's and 37's under the direction of the Shore Company Commander. Later in the operation the beaches occupied by the Shore Companies of the battalion may be consolidated into one battalion beach, in which case the Battalion Commander should coordinate all defensive weapons of the Battalion Headquarters Company for the defense of the consolidated beach area, with each of the officers of the Combat Platoon given responsibility for the employment of one of the two types of weapons. See Chapter 13, Weapons.

e. The Communication Platoon is composed of a Platoon Headquarters, Radio Section, and Wire Section. It furnishes communications materiel and personnel to carry out the

communications functions of the battalion headquarters, and furnishes personnel and equipment to augment the Message Center Sections of the shore companies. (See par. 97 and Tentative Training Guide No. 7).

Section III
EMPLOYMENT

67. General.—Normally, the Shore Battalion operates as part of the Boat and Shore Regiment with or without attachments or detachments but containing both boat and shore units. At the beginning of an operation, each of the three Shore Companies normally will be placed in support of each of the three battalion landing teams, but may be attached thereto, particularly where a battalion landing team is assigned a mission widely separated from the rest of the regimental combat team.

68. Shore Battalion Commander—*a.* The Engineer Shore Battalion commanding officer is technical adviser to the Boat and Shore Regimental Commander.

b. When the Shore Companies are supporting respective battalion landing teams, the Shore Battalion Commander maintains complete control over his companies and coordinates all Shore Company activity.

c. When the Shore Companies are attached to respective battalion landing teams, the Shore Battalion commander loses control of his companies to the battalion landing team commanders. However, when the Shore Battalion commander reaches the far shore, which is usually with the Regimental Combat Team reserve, such of his companies as are not so widely separated as to make control by the Shore Battalion commander impracticable, should revert to his control, and he will coordinate their activity. Later in the operation, beaches occupied by Shore Companies of the battalion normally will be consolidated and reorganized under the direction of the Shore Battalion commander as a Regimental combat team rather than a battalion landing team.

69. Employment on the Near Shore.—While the duties of the Shore Battalion are essentially far shore duties, it is responsible on the near shore for supervising and assisting in the development of Embarkation Areas (see paragraph 35*b*). It is also responsible for loading such shore engineer equipment and supplies as are loaded during the initial embarkation phase (see paragraph 35*c*).

70. Employment on the Far Shore.—On the far shore the battalion is responsible for the following duties:

a. Furnishing facilities for unloading and moving inland the troops, vehicles, equipment, and supplies of the regimental landing force.

b. Assisting in the evacuation of wounded and prisoners.

c. Providing for security of beach areas assigned to the Shore Battalion.

d. Providing signal communication personnel and materiel necessary for communications in the beach areas.

e. See also paragraphs 13 and 37 and Tentative Training Guide No. 7.

Section IV
STAFF PLANNING

71. General.—For an amphibious operation the Engineer Shore Battalion is of the same echelon as the Engineer Boat and Shore Regiment of which it is an organic part. Therefore formal plans for employment of elements of the regiment will be largely the work of the regimental staff in cooperation and coordination with respective staff sections of the regimental combat team. The functions of the battalion commander and his staff will be largely those of execution of the plans formulated. The battalion commander and his staff will nevertheless be called upon to submit informal plans and recommendations to the Boat and Shore Regimental Headquarters for the employment of elements of the battalion on both the near and far shore.

72. Combat Orders.—*a.* For preparation of combat orders generally see FM 101-5; for preparation of Engineer Speial Brigade orders see par. 24; and for preparations of Engineer Boat and Shore Regimental orders see par. 39.

b. The Engineer Boat and Shore Regimental order may contain detailed instructions for the employment of elements of the Shore Battalion, thereby eliminating the necessity for the preparation of a written battalion field order. In this case the battalion commander will at the appropriate time assemble his staff and the commanders of his subordinate units and issue instructions, usually oral, for the execution of those portions of the regimental order which apply to the Shore Battalion. If the regimental order does not include detailed instructions for employment of elements of the Shore Battalion, including attachment of Shore Companies to battalion landing teams, the Shore Battalion commander must issue a written field order covering these matters.

Chapter 7

ENGINEER SHORE COMPANY

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Section I

MISSION

73. Mission.—*a. General.*—The mission of the Engineer Shore Company in an amphibious operation is to facilitate the landing and movement inland of a battalion landing team, its equipment and supplies, and to assist in resupply and in the evacuation of its prisoners and wounded.

b. Near Shore.—On the near shore the Shore Company assists general engineers and other service troops in the preparation of Embarkation Areas when not engaged in other duties.

c. Far Shore.—On the far shore the Shore Company organizes, controls, and improves the landing area assigned to the battalion landing team; facilitates the debarkation and movement inland of the troops and equipment of the battalion landing group; moves the supplies of the battalion landing group to dumps beyond the beach; and assists in the evacuation of prisoners and wounded. For detailed operations on the far shore see Tentative Training Guide No. 7.

Section II

ORGANIZATION AND FUNCTIONS

74. Organization (Fig. 20).—The Shore Company is composed of a Headquarters Platoon for command, control, administration, communications, and defense functions; a Pioneer Platoon for general shore engineer functions; and a Utility Platoon for general longshoreman functions.

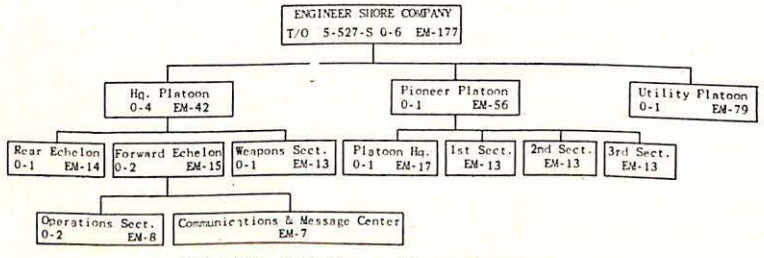

Fig. 20.—Engineer Shore Company.

75. Functions.—*a. General.*—The Shore Company is generally in support of, but may be attached to, a battalion landing team. The far shore activities of the company in supporting a battalion landing team are divided into two phases, namely, the beach organization phase and the resupply phase.

(1) *Beach Organization Phase.*—During the beach organization phase, which begins with the landing of the Forward Echelon of the Shore Company and should be concluded about the time the first boats carrying resupply arrive on the far shore, the Shore Company's activities include the following:

(a) Marking the beach and the landing area.

(b) Establishing communications.

(c) Reconnoitering for roads and dump sites.

(d) Building roads and performing other general engineer duties.

(e) Locating defensive weapons.

(f) Recording supplies and units landed.

(g) Keeping a situation map.

(h) Keeping the beach clear and otherwise enforcing beach discipline.

(i) Assisting in the evacuation of wounded.

(j) Guarding and assisting in evacuation of prisoners.

(2) *Resupply Phase.*—During the resupply phase, which begins at the conclusion of the beach organization phase, the Shore Company is primarily responsible for unloading supplies from craft, and placing them in dumps beyond the beach. See also paragraphs 12 and 37.

76. Headquarters Platoon (Fig. 20).—*a.* The Headquarters Platoon of the Shore Company is composed of a Forward Echelon, which is sub-divided into an Operations Section and a Communications and Message Center Section; a Rear Echelon; and a Weapons Section.

b. Forward Echelon (Fig. 20).—The Forward Echelon together with the attached Boat Control Section (the Maintenance and Salvage Section of the Boat Company) must land early in the operation, usually in the third wave, for the purpose of establishing and maintaining command, control, and communications in the landing area.

(1) *Operations Section* (Fig. 20).—The Operations Section of the Forward Echelon performs the following duties:

(a) Marks the beach with appropriate beach limit markers (see Tentative Training Guide No. 2).

(b) Selects and marks unloading points for vehicles.

(c) Establishes the Shore Company command post and message center.

(d) Makes reconnaissance for beach roads and for dump sites for all types of supplies.

(e) Records supplies and units landed on the beach.

(f) Keeps the Shore Company situation map.

(g) Furnishes guides for units landing, if necessary.

(h) Marks mines and gas contaminated areas.

For detailed duties of the personnel of the operations section, (the company commander, second in command, 1st Sergeant, and others) see Tentative Training Guide No. 7.

(2) *Communication and Message Center Section* (Fig. 20).—The Shore Company Message Center Section has inadequate personnel for carrying out the Shore Company's communications functions. Furthermore, the Shore Company is allotted no signal equipment. There must be attached, therefore, from the Communications Platoon of the Shore Battalion Headquarters Company additional personnel and equipment to enable the Message Center to perform its communications functions. These functions, which may, or may not, be taken over later by the battalion echelon when it lands, are:

(a) Establishing and maintaining contact by wire, radio, or runner with adjacent Shore Companies,—contact from left to right.

(b) Establishing and maintaining contact with the battalion landing team command post. This is normally done by extending a wire from its switchboard to the wire left on the beach by the battalion landing team headquarters as it moves inland. In any case this Shore Company commander must insure that this contact is established and maintained.

(c) Establishing and maintaining contact with the Shore Battalion Headquarters by radio when the latter arrives on the far shore.

(d) Maintaining, if necessary, contact already established with the two infantry assault companies while they are still in close proximity to the beach area. See Chap. 8 and Tentative Training Guide Nos. 5 and 7.

(3) *Beach Organization Teams.*—There are no beach organization teams as such in the tables of organization; however, two such teams to function with the Operations Section, must be provided from personnel within the company. The Op-

erations Section provides two T/5's, reconnaissance, who form the nucleus for these teams. Six additional men for each team, must be provided by the Utility Platoon and revert to that platoon when beach organization activity is completed. These teams perform the following duties:

(a) Set up appropriate beach markers, showing limits of the beach and unloading points.

(b) Mark Shore Company installations, including dumps and command post, and set up directional signs leading thereto.

(c) Mark gas contaminated and mined areas.

c. Rear Echelon (Fig. 20).—The Rear Echelon of the Headquarters Platoon is composed of company administrative personnel. It will be brought to the far shore as needed and as boat space is available from H + 12 hours to H + 48 hours.

d. Weapons Section (Fig. 20).—The Weapons Section of the Headquarters Platoon consists of four .30 caliber air cooled machine guns and necessary crews. They are brought to the far shore as needed and as boat space is available—usually in the third wave. They are employed as anti-personnel weapons for defense of the beach area. For discussion of Shore Company and attached weapons see Chapter 13.

77. Pioneer Platoon (Fig. 20).—*a.* Among the Platoon Headquarters personnel are included demolitions men for the removal of obstacles and decontaminating equipment operators for the decontamination of gassed areas. This group should be brought to the far shore in the fourth wave prior to the landing of the Pioneer Sections in the fifth wave with their road building equipment.

b. Three Pioneer Sections.—The primary duty of the Pioneer Sections is to construct beach roadways. The equipment of each section includes a bulldozer, one or two beach sleds (or a one-ton trailer), wire road matting, one demolition set, pioneer tools, and miscellaneous equipment. Two or all three of these sections should arrive on the far shore in the fifth wave, the number depending upon the number of beach roadways to be constructed. In addition to building roads, the Pioneer Sections will perform the following duties:

(1) Assist in the removal of underwater and beach obstacles.

(2) Construct bridges, docks, piers, and wharves.

(3) Perform other general shore engineer duties.

(4) Assist the Utility Platoon in the handling of supplies and equipment.

78. Utility Platoon (Fig. 20).—*a.* It is the duty of the Utility Platoon to unload from craft and to move beyond the beach to dumps the large quantity of supplies which are landed on the beach during the resupply phase of the operation. The platoon is assisted in this work by a large portion of the remainder of the company.

For this purpose the platoon may be divided into a maximum of seven longshoremen teams, each composed of a sergeant or corporal and about eight privates. In addition there are in this platoon six operators (four operators and two alternate operators) for the four 2½ ton amphibian trucks (DUKW) allotted to the platoon. Tables of organization provide no enginemen as members of the necessary two-man DUKW crews. Therefore, four privates must be withdrawn from the remaining longshoremen within the platoon, trained as enginemen, and permanently assigned to that duty.

b. Movement of Supplies to Dumps.—Supplies may be moved across the beach to dumps in the first available cover by use of amphibian truck, bulldozer and beach sled, or "bucket brigade" method. Furthermore, if the tactical situation demands it and additional transportation is furnished the Shore Company, dumps may be established a mile or more inland from the beach, in which case the Shore Company will move supplies to dumps by truck.

79. Attached Medical Personnel.—There will normally be attached to each Shore Company supporting an assault battalion landing team, one medical officer and nine or less medical enlisted personnel from the Boat and Shore Regiment's Medical Detachment. The attached medical personnel will be brought to the far shore normally in the fourth wave, where they will set up an aid station in the Shore Company area. It will be their responsibility to care for all wounded in the beach area until they can be evacuated, and the aid station established will serve as a clearing station for the evacuation of wounded until elements of the Medical Battalion arrive on the far shore later in the operation, normally with the regimental combat team command group. See Chap. 9.

80. Reorganization of Shore Company for Resupply.—*a. General.*—As the beach organization phase of the operation is completed, the Shore Company must undergo a general reorganization for resupply activities. During this time most of the Shore Company will have completed their initial duties, and their services must be utilized in assisting the Utility Platoon in unloading craft and moving supplies and equipment

to dumps. No rigid method of reorganization is prescribed, and the method adopted must necessarily depend upon existing conditions. This reorganization must provide a command post and weapons group and two or more handling groups.

b. The Command Post and Weapons Group.—This group must consist of those personnel whose services are required in and near the command post and message center and a minimum number of personnel necessary to man Shore Company weapons to protect the beach area from attack. (See Chapter 13).

c. Handling Groups.—The remainder of the company will be divided into handling groups, the number of which will depend upon the following conditions: the number of unloading points assigned on the beach; the number of beach roadways; the number of dumps established; the number of docks, piers, and wharves, if any; the amount of supplies and equipment to be handled, the facilities available for its handling, and the means by which it is transported.

In forming these handling groups, the autonomy of existing teams must be respected, in that teams must not be broken up but must work under their own leaders. Furthermore, the longshoremen teams of the Utility Platoon, who are specially trained in the handling of supplies and equipment, should be assigned by teams to the groups established. Each handling group so formed should be under the command of an officer responsible directly to the company commander for a given portion of the beach (organized in depth), for the unloading of supplies landed in that portion of the beach, and for the maintenance and control of dumps established in that area.

Section III
EMPLOYMENT

81. General.—Normally, the Shore Company is in direct support of a battalion landing team, although when the battalion landing team is assigned an independent mission or a mission widely separated from other elements of the regimental combat team of which it is a part, the Shore Company may be attached to the battalion landing team.

82. Shore Company Commander.—*a.* Whether the Shore Company is attached to or in support of a battalion landing team, the Shore Company commander is technical adviser to the battalion landing team commander concerning the employment of the Shore Company. He must be prepared at

all times to make recommendations concerning assignment to craft of elements of the Shore Company and their equipment, and to submit plans to the battalion landing team commander for the organization and defense of the beach area.

b. When the Shore Company is supporting a battalion landing team, the Shore Company commander is responsible to his Shore Battalion commander. He cooperates with the battalion landing team commander and complies with all requests for support which are consistent with the orders to the Shore Battalion commander.

c. When the Shore Company is attached to a battalion landing team, the Shore Company commander is responsible to the battalion landing team commander and becomes a member of the special staff of that officer.

Chapter 8

BRIGADE SIGNAL COMMUNICATION

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Section I

GENERAL

83. References.—Field Manuals 7-25, 11-5, and 24-5 describe more fully the organizations, methods, and procedure treated in this chapter, which is intended merely to indicate operations in the Engineer Special Brigade. The original manuals should be consulted as a background for the interpretation of this material. Tentative Training Guide No. 5 gives details of the equipment and communications setup for the brigade.

84. Responsibility for Signal Communication.—*a. Responsibility of commanders.*

(1) In general, the establishment and maintenance of communication between higher and subordinate units is the responsibility of the higher commander. Communication between adjacent units is established without orders from *left to right* unless a common superior directs otherwise.

(2) The brigade commander is responsible for the installation, operation, and maintenance of the brigade signal system and for the supervision of the systems of his regiments and battalions. The commander of each subordinate unit is responsible for the signal communication system of his unit and for its functioning as a part of the brigade system. Contact is essential; if it is lost, its reestablishment is immediately sought by both the subordinate unit and the higher unit.

(3) The orders of commanders for the tactical employment of their organizations include provision for signal communication. The signal or communication officer is informed at the earliest practicable moment of the general plan of the operation and of any of the contemplated moves of command posts. If practicable, the commander has his signal or communication officer present when the field order of the higher commander is received so that reconnaissance and recommendations for the communication system can be made early.

(4) Each commander is responsible that the next higher headquarters is kept informed of the location of his command post. The unit signal or communication officer is responsible to his commander that higher headquarters and subordinate, supporting, and attached units are kept informed of the location of the command post and of contemplated changes in its location. Company commanders keep their immediate superiors informed of their locations by means of messengers, radio, or any other agencies at their disposal.

b. Specific responsibilities of components.—(1) In the brigade, the Signal Company installs, operates, and maintains communication between elements of brigade headquarters and between the brigade and the regimental command posts.

(2) The Engineer Boat and Shore Regiment installs, operates, and maintains all agencies of signal communication within its own unit. In addition, it establishes communication with adjacent near and far shore units. Communications personnel and means are made an organic part of the regiment and its component units in order that they may be self-sufficient in establishing their essential communications. Attachments to regiments from the Brigade Signal Company will be the exception rather than the rule.

85. Brigade Signal Officer and Signal Company Commander.—For duties of a unit signal officer see FM 101-5. The brigade signal officer, a lieutenant colonel, commands the Signal Company for training and operations only. The Signal Company commander administers the company, conducts its training and operations in accordance with orders of the brigade signal officer, and serves as assistant to the brigade signal officer. Successful conduct of signal operations requires that the brigade signal officer and the Signal Company commander work together as a team. Each should be capable of acting for the other and must not hesitate to do so when the situation indicates this need, informing the other of the action taken as soon as feasible. However, responsibility for the conduct of signal operations cannot be delegated by the brigade signal officer to any assistant, although he will use any necessary personnel of the brigade signal officer's section or of the Signal Company to assist him in the performance of his duties.

When the Engineer Special Brigade is attached to an infantry division for an operation the brigade signal officer will immediately consult with the division signal officer, and together they will work out the signal plan for the operation.

86. Training.—*a.* The training of signal communication personnel is treated in TM 11-450. As a commander of troops, the brigade signal officer is solely responsible for the proper training of the Brigade Signal Company. In his capacity as a staff officer, he recommends and supervises, and may conduct a program of training for all signal and communication units within the brigade. He utilizes personnel of the Signal Company and the communication personnel within the regiment as necessary for the conduct of technical training delegated to him by the brigade commander.

b. Visual Communication.—Personnel of Message Center and Radio Sections are trained in the use of display panels and pyrotechnics. (See FM 24-5 for details of operation). All signal and communication personnel and boat crews are trained in semaphore and in International Morse Code, the latter enabling them to communicate by means of signal lamps.

Section II
SIGNAL COMPANY

87. General.—The Signal Company (Fig. 21), Engineer Special Brigade, performs all signal communications and signal supply functions of the Signal Corps within the brigade.

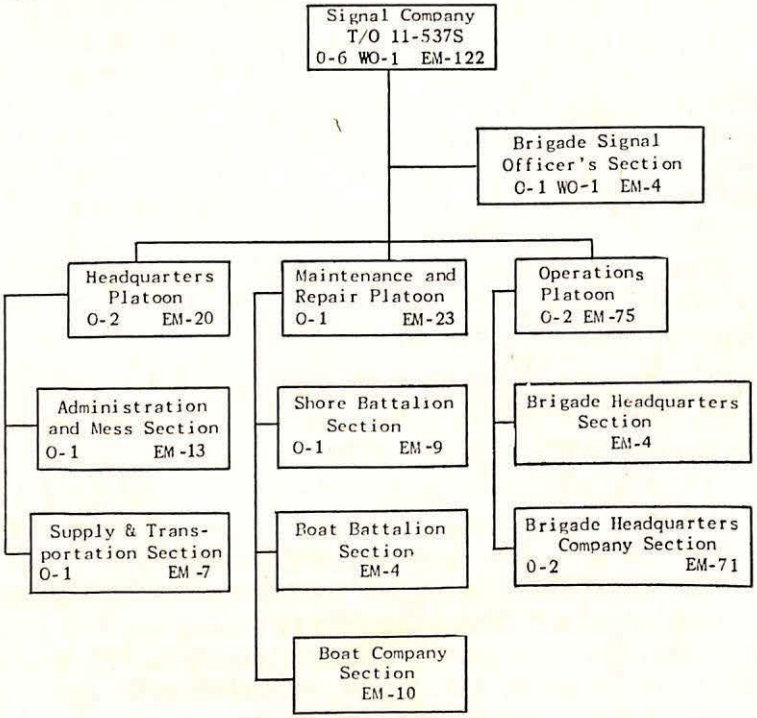

Fig. 21.—Signal Company.

88. **Functions.**—The duties of the Signal Company include:

a. Installation, operation, and maintenance of signal communication at Brigade Headquarters, including all echelons thereof; from Brigade Headquarters to each major subordinate unit; to other subordinate, auxiliary, and attached units or establishments; and to adjacent units when required, including communications required by liaison officers.

b. Supply and minor repair of signal equipment for all units of the brigade, organic or attached.

c. Collection, charging, and distribution of storage batteries issued by the Signal Corps to units of the brigade which are not equipped with charging sets. The charging and maintenance of storage batteries installed in a vehicle or boat, and used jointly in the operation of the vehicle or boat and of signal equipment installed therein, is the responsibility of the arm or service charged with the maintenance of the vehicle or boat.

d. Surveillance of all signal communication channels within the brigade as is prescribed by the brigade commander to assure that signal security measures are being taken in conformity with his orders.

89. **Organization** (Fig. 21).—*a.* Tables of Organization do not prescribe a detailed organization of the Signal Company. The company commander is allowed great freedom of action in organizing the company into working teams so that it may perform its duties most efficiently. The platoon seldom functions as a unit, but this organization into platoons favors both administration and training. The section or team is the working unit. Teams of radio, message center, and wire personnel are made up according to the signal means required in a particular situation. When a team is required to operate on a continuous 24-hour-day basis, it is divided into reliefs.

90. **Brigade Signal Officer's Section.**—This section consists of the brigade signal officer and necessary enlisted assistance for the operation of his office.

91. **Headquarters Platoon** (Fig. 21).—The Administration and Mess Section, under the company commander and the Supply and Transportation Section under a first lieutenant perform the duties for the company as indicated by their names. The first lieutenant usually serves as an assistant to the brigade signal officer on matters of signal supply, and his section handles signal supply for all units of the brigade, including attached units.

92. Operations Platoon (Fig. 21).—The Brigade Headquarters Section consists of radio operators that may be assigned to any of the sets SCR 177 and 193 either at Brigade Headquarters, or in the brigade command and navigation boats. The Brigade Headquarters Company Section is normally divided into three groups: message center group, radio group, and wire group. These groups operate all agencies of signal communication, except signal supply, at all echelons of Brigade Headquarters.

a. The Message Center Group, with a technical sergeant, message center chief in charge, provides continuous message center service for all echelons of Brigade Headquarters. Teams organized within this group are flexible, since each member of the group is trained to perform all duties incident to message center operation. The exact composition of any team depends upon the number of message centers in operation and the traffic load on each. Message center procedure and the selection of a suitable site for a message center are discussed in FM 24-5. This section shares with radio personnel the responsibility for setting up an area near the command post on the near shore for message dropping and panel display grounds. A similar area is set up on the far shore by the communications personnel of the Shore Battalion Headquarters.

b. Radio Group.—The radio group with a first lieutenant, radio officer, in charge, installs, operates, and maintains radio communication facilities for Brigade Headquarters and charges storage batteries issued by the Signal Corps for all units of the brigade not provided with facilities of their own. Subdivision of the radio group into operating teams is based on the number and type of radio sets which are to be employed. Operators are given permanent assignments to a team operating a particular radio set and in normal operations work with that team. However, each member of the group is trained to operate all of the sets with which the section is equipped so that any member of the group may operate in any team.

c. Wire Group.—The wire group with a second lieutenant, wire officer, in charge, installs, operates, and maintains wire systems at Brigade Headquarters. This includes installing and maintaining local and trunk circuits. In order that the group may perform its duties efficiently and rapidly, all members of the group are trained to install and operate wire equipment. Operators and repairmen are used as in-

to insure tactical and technical control of the signal communication system of his unit. Distribution of such orders and signal operation instructions throughout his unit.

95. Regimental Communications (Fig. 15).—*a. Platoon Headquarters.*—This headquarters provides the personnel to operate the message center at the command post proper. The section is large enough to permit the men to work in shifts or to man message centers at both a forward echelon on the far shore and a rear echelon on the near shore.

b. Radio Section.—The radio operators in this section operate the stationary and vehicular sets at all echelons of Regimental Headquarters, afloat and on both near and far shores.

c. Wire Section.—The linemen in this section install and maintain wire communication for Regimental Headquarters on the near shore and may in addition be required to act as relief operators on the telephone and telegraph equipment.

Section IV

SHORE BATTALION COMMUNICATIONS

96. Battalion Communications Officer.—*a.* The first lieutenant, commander of the Communications Platoon of Shore Battalion Headquarters Company is the battalion communications officer. He is responsible for the technical training and proficiency of his own platoon and for supervision of the technical training of communications personnel throughout the battalion; and for the planning, installation, operation, and maintenance of the battalion communications system on the far shore. His duties include recommending (usually to S-3) initial and subsequent locations of command posts, if not previously designated by the regiment. He details and supervises the operations of the battalion and Shore Company communication teams.

Since the Communications and Message Center Sections of the Shore Companies contain only the minimum personnel necessary for operation of a message center, it will be the duty of the battalion communications officer to make up teams from his platoon to supplement these sections.

For detailed treatment of duties of the battalion communications officer see FM 7-25.

97. Battalion Communications Platoon (Fig. 19).—*a. Platoon Headquarters.*—The personnel of Platoon Headquarters set up and operate the message center in the Shore Battalion command post on the far shore and provide messenger service to higher, lower, and adjacent units.

b. Wire Section.—This section installs and maintains wire communication between shore battalion and company command posts.

One of its most important responsibilities is that of tying in to the switchboards at company and battalion command posts on the far shore the wire for which the infantry battalions and regiment, respectively, lay behind them as they advance inland. The responsibility for the establishment and maintenance of such communication rests with the infantry unit headquarters but in any case the shore unit commander must insure that such communication is maintained. As the combat situation develops and the wire communication between the infantry regiment and its battalions is set up, the wire between the infantry battalions and shore companies may be eliminated as it is no longer necessary for the infantry regiment to go through the shore engineer communication system for contact with its battalions.

c. Radio Section.—The operators in this section provide radio communication between Shore Companies and Shore Battalion Headquarters on the far shore, between the same elements when required on the near shore and with the boat and shore regimental command post afloat, on the near shore, and on the far shore.

98. Shore Company Communications and Message Center Section (7 EM).—This section contains only the minimum of message center clerks and messengers. It must be augmented by communications teams from the Shore Battalion Communications Platoon.

Section V
BOAT BATTALION COMMUNICATIONS

99. Battalion Communications Officer.—*a.* The first lieutenant, commander of the Communications Section of the Boat Battalion Headquarters Company, is battalion communications officer. His duties parallel those outlined in the preceding paragraph for the Shore Battalion communication officer.

100. Battalion Communications Section (1 officer, 26 EM).—*a.* The communications personnel in this section comprise sufficient message center personnel for simple message center functions aboard the battalion's command and navigation boats. The bulk of the platoon is made up of high speed radio operators employed aboard command and navigation and patrol boats.

b. All communication personnel in the Boat Battalion must be skilled in visual signalling, since this will find wide use in communication between boats.

101. Boat Company Communications Section (One second lieutenant, 16-EM).—This section is made up mainly of operators for the voice radio sets in the company. As in the Boat Battalion Section all personnel must be trained for rapid and accurate visual signalling.

The communications officer and communications chief are normally in the company commander's and navigator's boats respectively. There are insufficient radio operators to operate the 2 SCR 284 and 21 SCR 300, 510, or 610 voice sets assigned to the company; consequently, some wave leaders and boat crews must operate the voice sets assigned to their boat. For details see Tentative Training Guide No. 5.

Salt air and spray will play havoc with much of the equipment assigned to this section unless it is given the best of care. This constant care and watchfulness is an ever present duty of all men of this section.

Chapter 9

MEDICAL SERVICE OF THE ENGINEER SPECIAL BRIGADE

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Section I

MISSION

102. Mission.—The mission of the medical service of the Engineer Special Brigade is to provide for medical supply, and collection, treatment, holding and evacuation of casualties. It serves both the Engineer Special Brigade and the division to which the brigade is attached.

Section II

ORGANIZATION AND FUNCTIONS

103. General.—The medical service of the Engineer Special Brigade comprises the brigade surgeon, a Medical Detachment for each Engineer Boat and Shore Regiment, a Medical Detachment for the brigade less the three regiments, and a Medical Battalion.

104. Brigade Surgeon.—The brigade surgeon, a lieutenant colonel, functions in the dual capacity of commanding officer of the Medical Battalion and special staff officer (see FM 101-5 and FM 8-55). He must keep himself informed of the tactical situation and of the plans of both the brigade and division commanders in order that he can make recommendations and formulate plans for the efficient employment of the medical service.

When the Engineer Special Brigade is attached to an Infantry Division for operations the brigade surgeon should contact the division surgeon immediately and together they should work out the medical plan for the operation.

105. Regimental Medical Detachment (Fig. 22).—*a. Regimental Surgeon.*—The regimental surgeon also functions in a dual capacity as commander of the Medical Detachment and special staff officer. He must keep abreast of the situation and future plans and maintain close liaison with the brigade surgeon and the surgeon of the regimental combat team to which the Boat and Shore Regiment is attached or in support.

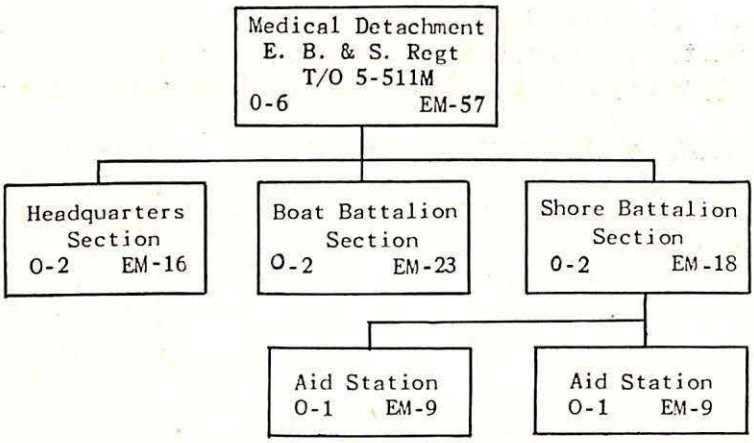


Fig. 22.—Medical Detachment, Engr. Boat and Shore Regt.

b. Headquarters Section.—This section furnishes the overhead for the administration of the detachment, provides first echelon medical service for the regiment less the Boat and Shore Battalions and serves as a small reserve with which the regimental surgeon may influence and assist the medical service of the battalion sections. The dental officer is in this section.

c. Boat Battalion Section.—This section provides first echelon medical service for the Boat Battalion at such times as it is impracticable to operate the medical service for the regiment as a unit. One Medical Detachment man is in every fourth or fifth boat during the trip to the far shore, and returns to the near shore with transportable casualties. Aid stations are not established by this section during combat.

d. Shore Battalion Section.—This section is organized and equipped to furnish first echelon medical service by establishing two aid stations on the far shore, one with each Shore Company which is supporting an assault battalion landing team. If three assault battalion landing teams are landed simultaneously, a third Shore Medical Section must be formed by taking personnel from the Headquarters Section and the Shore Battalion Section. For functions of an aid station see par. 33, FM 8-5.

The Shore Battalion Sections are attached to the Shore Companies and land with them, preferably in the fourth wave.

106. Brigade Headquarters Medical Detachment.—*a.* This detachment, consisting of 3 officers and 28 enlisted men, furnishes first echelon medical service to the brigade less the

three regiments. Since the troops it serves will be widely separated in their various functions, it is organized and equipped to permit the establishment of three aid stations.

107. Medical Battalion (Fig. 23).—*a.* The Medical Battalion is composed of a Battalion Headquarters, a Headquarters and Headquarters Detachment, and three identical Medical Companies.

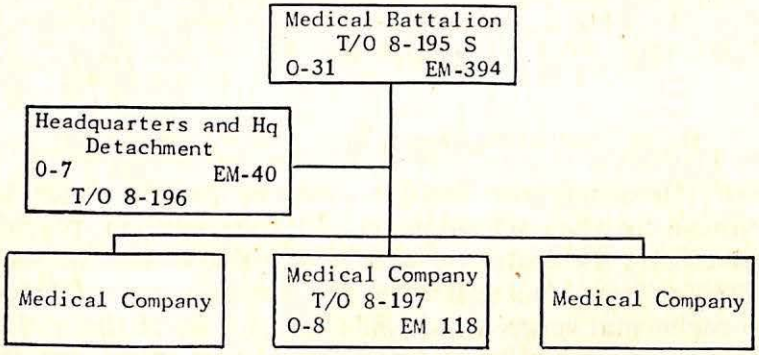


Fig. 23.—Medical Battalion.

b. Battalion Headquarters and Headquarters Detachment (Fig. 24).—Battalion Headquarters proper consists of the battalion commander (brigade surgeon); a major, executive and plans and training officer; a captain, assistant plans and training and liaison officer; and a first lieutenant, personnel officer. For staff functioning see FM 101-5. One of these officers, normally the captain must perform the duties of adjutant. In addition a first lieutenant (S-4) supervises the functioning of the general and medical Supply Section and is both battalion supply officer and brigade medical supply officer. The battalion commander will use all these officers of his battalion staff as necessary in the proper performance of his duties as brigade surgeon.

c. The Headquarters Detachment (Fig. 24) furnishes the personnel for the operation of battalion headquarters and the administration of the battalion.

d. Medical Company (Fig. 25).—Each of the three Medical Companies in the Medical Battalion, is designed to support an Engineer Boat and Shore Regiment and its regimental combat team. The company combines both collecting and

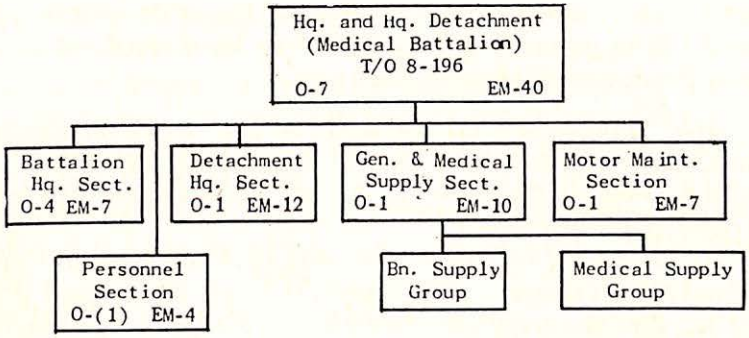


Fig. 24.—Headquarters and Headquarters Detachment, Medical Battalion.

clearing elements. It provides second echelon medical service and so much of third echelon medical service as is involved in the definitive care and treatment of short duration cases and those which cannot be evacuated due to their serious condition.

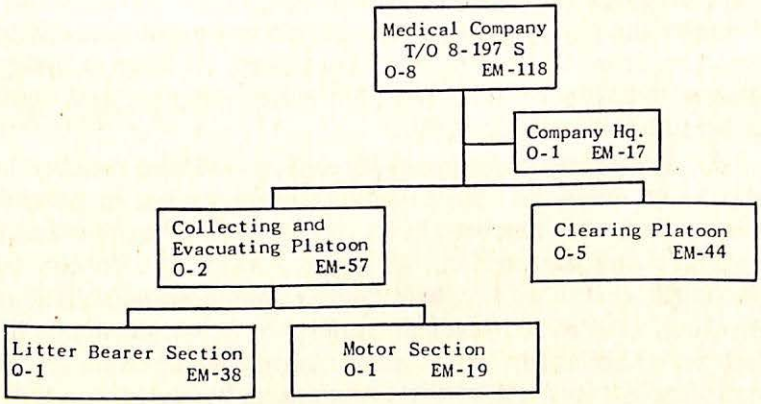


Fig. 25.—Medical Company.

Section III
EMPLOYMENT

108. General.—The medical service must be adapted to the combat characteristics of the unit it is serving. It is necessary, therefore, that special emphasis be placed on the adequate treatment of wounded who must remain in boats over varying lengths of time. It is apparent that shore-to-shore and shore-to-ship evacuation must be contemplated. The brigade medical service must remain partially mobile and in a position to receive new casualties on the far shore. This necessitates sup-

port by army surgical and evacuation hospitals on the near shore. It is paramount that flexibility be maintained at all times to meet situations as they arise.

109. For a medical estimate of the situation, medical plans, and combat orders, see FM 8-55, 100-5, and 101-5. In addition, in amphibian operations, the following factors must be especially considered:

a. The Need for and Avaliability of Army Medical Units.—The brigade surgeon will request, through the brigade commander, that the army establish medical dumps and ambulance loading points at specified places on the near shore and that army medical units be available to receive an estimated number of casualties evacuated from the far shore. These medical supply dumps and ambulance loading points must be near points where craft will land.

b. Distance Between the Near and Far Shores.—In general, the self-sufficiency of medical units must vary directly with the increasing distances of operations. It is evident that with increasing distances there will be greater difficulty in receiving medical supplies from the near shore and in evacuating casualties from the far shore. Therefore, on long crossings, a larger quantity of all types of medical supplies and equipment must be carried initially.

c. Proximity and Types of Beaches.—Where beaches are not widely separated and lateral communication is possible, all casualties may be brought to a central clearing station for treatment and evacuation. However, when due to the terrain or the distances involved this is not possible, subsidiary collecting, treatment, medical supply, and evacuation points must be established. On a sandy beach, evacuation can be mostly by ¼ ton 4 x 4, truck ambulances, whereas on a rocky beach it may be necessary to rely on litters.

d. Estimated Number of Expected Casualties and Areas of Greatest Casualty Density.—As in all types of operations, more medical service must be furnished to the areas where the greatest number of casualties are expected to occur.

e. Shore-to-Shore and Shore-to-Ship Evacuation.—When the distance between the near shore and the far shore is not great, evacuation of the clearing stations will be shore-to-shore by landing craft. If the distance is relatively great and it is possible for hospital ships to approach the far shore, evacuation will be greatly simplified by shore-to-ship evacuation, utilizing landing craft to carry patients from the beach

to the ship. When this is visualized, previous arrangements should be made with the Navy to have hospital ships on call.

f. Cooperation with Divisional Medical Units.—Although the regimental and battalion aid stations of the division are initially estabilshed at about the same time as aid stations of the engineer special units, the divisional collecting and clearing companies are held in reserve to follow the division in its progress inland. However, it must be remembered that they may be called on at any time to supplement the second echelon medical service of the Medical Battalion.

110. Regimental Medical Detachment.—For functions of the Regimental Medical Detachment see Par. 105.

One half of the Shore Battalion Section, reinforced by litter-bearers from the Band or Medical Battalion, is attached to the Shore Company and lands normally in the fourth (or fifth) wave. It immediately sets up an aid station in the beach area. It is the responsibility of this aid station to care for all wounded in the beach area until they can be evacuated. It will also serve as a clearing station for evacuation of wounded until elements of the Medical Battalion arrive on the far shore.

The physical features of the site of an aid station on a beach will vary from a comfortable building to a place on the open beach without shelter from the elements of enemy fire. Although it will rarely be possible to find a site that satisfies all requirements, the following are desirable in an aid station site: natural cover and concealment, protection from enemy fire, convenience to the troops served, economy in litter carry, accessibility to supporting medical troops, proximity to natural lines of drift of wounded, lateral communications to other beaches, proximity to water, and protection from the elements. Locations in proximity to terrain features or other military establishments that invite enemy fire or air action should be avoided:—Examples are prominent landmarks, important road intersections, weapons positions, and ammunition and other dumps.

111. Medical Company.—A Medical Company will normally be attached to an Engineer Boat and Shore Regiment in support of a regimental combat team. It should be landed on the far shore as soon as possible after the assault battalions have landed and cleared the beach of enemy small arms fire. The Medical Company may be assigned to boats in the formation transporting the reserve battalion or the regimental com-

mand group. In either case they may land with the formation or may be pulled out to land independently.

If the regimental combat team has landed on contiguous beaches the Medical Company normally will establish its clearing station near the shore and as near as possible to the center of gravity of the operation. If the landing has been on non-contiguous beaches or if the reserve battalion is landed on a non-contiguous beach, the Medical Company should probably be split to set up two clearing stations. Boats should be assigned for the transportation of the company exclusively, and the company should be divided among the boats in such a manner as to permit the split. Immediately after landing, liaison agents will contact the various aid stations (engineer and others) to determine their location. If possible, evacuation of casualties from the aid station to the clearing station will be by ¼ ton, 4 x 4, truck ambulances of the Collecting Platoon. If this is not possible, evacuation of casualties must necessarily be done by litter. Both ambulances and jeeps may be utilized also to collect casualties directly from the beach, transporting them to the clearing station. All casualties will be collected, treated, and evacuated, whether they are members of the Engineer Special Brigade or not. All second echelon medical service is done initially by the Medical Battalion, the division medical battalion being held in readiness to follow the regimental combat teams in their advance inland.

Casualties, able to withstand the rigors of the return trip, will be taken from the clearing station to the beach at points designated by the shore commander. One or more such locations may be designated for each beach. These casualties, in turn, will be evacuated by returning landing craft to the near shore or to hospital ships under cover of darkness.

112. Battalion Headquarters and Headquarters Detachment.—During the initial phases the various elements of Headquarters Detachment will remain on the near shore. Here medical supply points will be established at or near the Embarkation Points. The battalion commander will be with or in close liaison with the brigade commander. The detachment will be held in readiness to embark for the far shore. On reaching the far shore, it will take up its normal functions (see par. 106). It should be established near the clearing station nearest the center of gravity of operations. Lateral communications will then be established with the other clearing stations for the purpose of replenishing medical supplies.

Chapter 10
ORDNANCE MAINTENANCE COMPANY

		Paragraphs
Section I.	Mission	113-121
II.	Employment	122-123

Section I
MISSION

113. The mission of the Ordnance Maintenance Company is to perform 3rd echelon maintenance for all ordnance equipment and material of the brigade and to keep the brigade adequately supplied with items of ordnance issue at all times. Its goal is to keep all ordnance equipment, material, and supplies at full strength and in first class operating condition at all times.

114 Brigade Ordnance Officer.—The brigade ordnance officer, a major, functions in the dual capacity of special staff officer and company commander of the ordnance Maintenance Company. For staff functioning see FM 101-5.

115. Brigade Ordnance Officer's Section (Fig. 26).—This section consists of the brigade ordnance officer, a first lieutenant, ammunition officer, and the necessary enlisted assistants to enable the section to carry on its functions. These functions are covered fully in FM 100-10, FM 9-5, and FM 9-10. Briefly they include formulation of ordnance studies, plans, and policies for the benefit of the brigade. Planning and supervision of ammunition requirements, requests, and reports are of particular importance.

The ammunition officer will utilize personnel of this section to set up and operate the brigade ammunition office and ammunition dump(s).

When necessary troops from the army ammunition battalion or from the brigade, and quartermaster transportation, must be requested for attachment to the brigade ordnance officer for ammunition supply for the brigade.

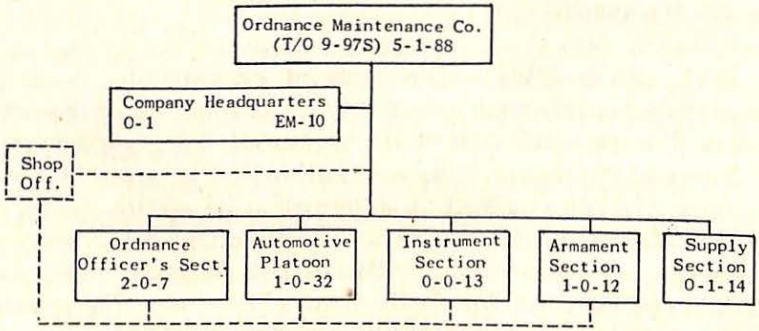


Fig. 26.—Ordnance Maintenance Company.

116. Company Headquarters (Fig. 26)—The Company Headquarters under the direction of a captain, the assistant company commander, is responsible for the normal administrative functions of the company.

117. Supply Section (Fig. 26).—The supply section, under a warrant officer, functions as the supply agency for the brigade and for the maintenance units of the ordnance company, for ordnance equipment and materials. The section is charged with the requisition, receipt, storage, care, and issue of all ordnance equipment and materials required for the brigade and for ordnance maintenance. For details see FM 9-10 and FM 9-5.

118. Armament Section (Fig. 26).—The armament section commanded by a second lieutenant is charged with the inspection, maintenance, and repair of the brigade ordnance weapons. (FM 9-10). Its enlisted personnel include artillery, rifle and pistol, and machine gun mechanics. It has a small arms repair truck.

119. Instrument Section (Fig. 26).—The instrument section under the direction of a staff sergeant is charged with the inspection, maintenance, and repair of all brigade fire control, and optical instruments together with their equipment and appurtenances. (FM 9-10). Its personnel include instrument and watch repairmen.

120. Automotive Section (Fig. 26).—The automotive platoon commanded by a first lieutenant is charged with the inspection, maintenance, and repair of all brigade ordnance and engineer automotive vehicles and equipment (FM 9-10). Its enlisted personnel includes all types of repairmen for automotive equipment.

121. Shop Office.—The table of organization does not specifically provide such an office, but the function of the office makes it imperative that it be organized from personnel of the three maintenance units and authorized to serve all three maintenance units or that an administrative section (shop office) be selected from each unit. The function of the shop office is to coordinate the activities of the shop and keep such records and perform the clerical work necessary for the efficient operation of the maintenance units (FM 9-10).

Section II

EMPLOYMENT

122. Near Shore.—The three maintenance units are normally set up on the near shore at or near the point of embarkation and return of the landing craft in order that they may serve the boats and receive items returned from the far shore for repair immediately. The rest of the company is normally located farther to the rear.

123. Far Shore.—The movement of the maintenance units to the far shore is normally piece-meal as the situation dictates and so that the necessary maintenance may be continuous. The entire unit may move to the far shore any time after the beachhead has been established.

Chapter 11

QUARTERMASTER SERVICE

		Paragraphs
Section I.	Mission	124
II.	Organization and Functions	125-128
III.	Employment	129-131

Section I

MISSION

124. Mission.—The mission of the Quartermaster Headquarters and Headquarters Company with necessary attached quartermaster units, is to provide, efficiently and economically, the requisite quartermaster service for the Engineer Special Brigade.

Section II

ORGANIZATION AND FUNCTIONS

125. Quartermaster Service.—*a.* The organic Quartermaster Headquarters and Headquarters Company supervises and administers all quartermaster units attached to the Engineer Special Brigade and together with these units performs all quartermaster services. One or more of the following units will normally be attached to the brigade during training in the continental United States and will be authorized where required in theaters of operation:

(1) Quartermaster Gasoline Supply Company (TO 10-77) which has transporting capacity of 16,000 gallons in five gallon cans carried on twenty 2 ½ ton trucks with one ton trailers, and has 4 portable gasoline dispensing pumps.

(2) Quartermaster Truck Company (TO 10-57), which has forty-eight 2 ½ ton trucks with one ton trailers for work.

(3) Quartermaster Service Company (TO 10-67), which has a labor pool of 160 laborers.

When the tactical situation warrants, any of the following may be attached:

Quartermaster Salvage Collecting Section (TO 10-187)
187)

Quartermaster Sterilization and Bath Platoon (TO 10-177)

Quartermaster Laundry Platoon (TO 10-167)

Quartermaster Bakery Company (TO 10-147)

Quartermaster Graves Registration Platoon (TO 10-297)

assist in gasoline and oil supply, or may be transferred to the far shore or released from attachment early after embarkation has begun. This all depends on the situation.

d. The Quartermaster Gasoline Supply Company transports gasoline and oil and operates distributing points for refueling boats and vehicles. Part or all of the 9 tank trucks (3 to each Boat Battalion) may be attached to this company for this purpose.

e. The Quartermaster Service Company (labor unit) is employed in the preparation of Embarkation Areas, stocking of dumps for the brigade on the near shore, and loading supplies for the brigade for the initial crossing. For the resupply phase this unit may be transferred to the far shore. Loading of these craft on the near shore is a function of service troops organic or attached to the division.

f. Other units mentioned in par. 130 perform the services, when required, indicated by their name.

131. Far Shore.—If the situation on the far shore requires it, the truck and service companies, in whole or in part, may be transferred to the far shore and attached to the shore engineers there to assist in the resupply phase. Such a situation would exist where dumps are located a considerable distance inland and supplies are unloaded from naval craft on to trucks for transportation several miles to the dumps. Again, depending on the situation, the Service Company may be assigned as part of the crews of naval craft to assist both in loading and unloading.

Chapter 12
MARINE MAINTENANCE

		Paragraphs
Section I.	Responsibility	132
II.	The Boat Maintenance Battalion	133-139
III.	Base Shop Battalion	140-141

Section I
RESPONSIBILITY

132. Echelons of Maintenance.—Units responsible for performance of the four echelons of marine maintenance are:

1st Echelon	Boat Company
2nd Echelon	Boat Company
3rd Echelon	Boat Maintenance Battalion
4th Echelon	Base Shop Battalion

For details of the proper performance of these functions, and the organizations to carry them out see Tentative Training Guides Nos. 2 and 3.

Section II
THE BOAT MAINTENANCE BATTALION

133. Mission.—The mission of the Boat Maintenance Battalion is to perform 3rd echelon and limited 4th echelon maintenance for all marine equipment of the Engineer Special Brigade. Its goal is to keep all boats in operating condition and ready for action at all times.

134. Boat Maintenance Battalion (Fig. 28).—The battalion is organized to provide inspection service to assure that boats are properly maintained and serviced by the using unit, and to effect repairs beyond the capacity of the using units' repair facilities and personnel.

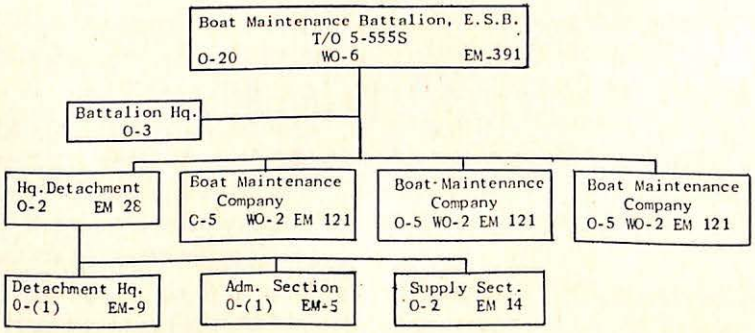


Fig. 28.—Boat Maintenance Battalion.

135. Battalion Headquarters (Fig. 28).—*a.* This Headquarters consists of the battalion commander (lieutenant colonel), executive (major), and adjutant (first lieutenant).

b. Battalion Commander.—The battalion commander is also brigade boat maintenance officer on the special staff of the brigade commander. As such he keeps the brigade commander advised at all times of the condition of boats and status of maintenance, and will recommend remedial measures when required. He issues necessary instructions concerning first and second echelon maintenance, and inspects to see that these instructions are carried out. He works in close cooperation with the marine maintenance officers of the Boat Battalions.

c. The executive and adjutant perform their normal duties (see FM 101-5).

136. Headquarters Detachment (Fig. 28).—*a. Detachment Headquarters* under supervision of the adjutant provides for the administration of the detachment.

b. The Administrative Section under supervision of the adjutant provides the necessary clerical personnel for the operation of Battalion Headquarters.

c. The Supply Section is under the supervision of a captain, who has a second lieutenant as his assistant. It has the necessary enlisted supply personnel, including stock clerks, and necessary truck transportation.

Adequate supply of marine parts is essential. If no Base Shop Battalion is operating in the theater, the highest element for marine maintenance is the Boat Maintenance Battalion. All boat maintenance supplies must then be issued from the marine parts depots or general depots direct to the Boat Maintenance Battalion, and the battalion must stock a sufficient supply for current needs. This requires a small depot which the Supply Section operates in addition to its normal supply functions for the battalion and brigade.

137. Boat Maintenance Company (Fig. 29).—*a. Company Headquarters* includes the captain, company commander, and the necessary supervisory enlisted assistants and administrative personnel.

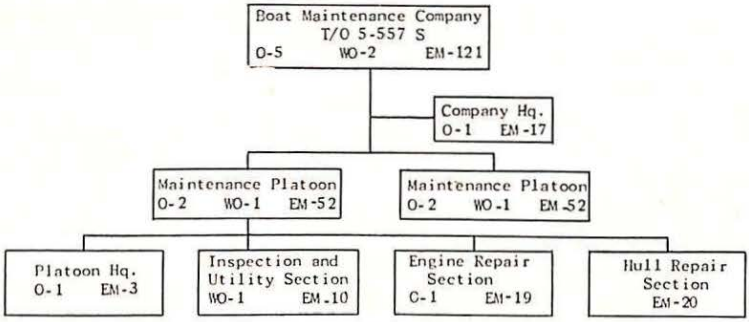


Fig. 29.—Boat Maintenance Company.

b. The Maintenance Platoon, commanded by a first lieutenant, with a second lieutenant in charge of the Engine Repair Section, has the personnel and equipment to make any repairs necessary on any type of boat issued the brigade except such repairs as require extensive re-manufacture of hulls or engines, or such as are so extensive that time will not permit their being handled in the field.

c. Equipment.—The company is not completely mobile in that it does not have sufficient organic land or water transportation to move all its tools, equipment, and men. However, its shops are mobile. All shop equipment is mounted in trucks and generally can be operated from the trucks. Special transportation must be furnished to move individual tools, spare parts boxes, and other organization equipment of the company.

The following are the principal items of equipment:

5 Power Plant, Trailer Mounted
2 Shops, motorized, emergency repair
2 Shops, motorized, machine shop, light
1 Shop, motorized, machine shop, heavy
2 Shops, motorized, small tool repair
2 Shops, motorized, tool and bench
4 Shops, motorized, welding
2 Boats, salvage, LCM(3)
2 Cranes, tractor, 20 ton, 20 ft. boom
2 Tractors, crawler, Diesel w/angledozer, 80 H.P.

This equipment is divided equally between the two platoons of the company, except that the heavy machine shop, and the one power plant, trailer mounted, to run it, are assigned to the company and may be operated by either platoon as required.

138. Employment.—The battalion may be employed tactically in three general ways.—*a. As a battalion* in one location operating three shops. The battalion commander controls the shops and allocates the work irrespective of its origin.

b. Companies in support of Boat and Shore Regiments with their shops located either centrally or in close support near the regiments. The battalion commander still exercises control, but the work done by the company shops is that of the regiment supported.

c. Companies attached to Boat and Shore Regiments with their shops located with the regiments. The battalion commander exercises supervision as brigade boat maintenance officer, but control is by the regimental commanders and repairs are made as directed by them. This method is used where the regiments are operating at a distance from the brigade.

139. Movement to Far Shore.—A time will arise when a maintenance unit can be used on the far shore. This time will usually occur when a sufficient beachhead has been established to permit the landing of heavy equipment and supplies. The question of how the battalion is to be employed will depend on the situation as it exists when the decision is to be made. The battalion commander has several choices in the matter.

a. He may send one or two companies to the far shore, leaving the balance to clean up the near shore. This would be the normal set-up if the battalion had been operating under battalion control, and the set-up on the far shore was to be under battalion control.

b. He may send one platoon of each company to the far shore to support the regiment the company had been supporting. This would be used when companies had been supporting Boat and Shore Regiments or where the situation on the far shore demanded such a set-up.

c. If a company were already attached to a Boat and Shore Regiment, he would either leave the matter up to the Regimental and Boat Maintenance Company commanders, or make recommendation to the brigade commander for relief of the company from attachment to the regiment.

d. Rarely, he may send his entire unit to the far shore at one time. This is unusual, as there will always be work to be completed on the near shore, and the operation of supply boats to and from the far shore will keep some work going on.

Section III

BASE SHOP BATTALION

140. Assignment.—The assignment of a Base Shop Battalion for fourth echelon boat maintenance will be essential in any theater of operation where one or more Engineer Special Brigades are engaged. It may be assigned under corps or army control, or may be attached to an Engineer Special Brigade depending on the situation.

141. Reference.—The organization, functions, and employment of this unit are covered in Tentative Training Guide No. 3, and hence are not repeated here.

Chapter 13
WEAPONS AND EMPLOYMENT

		Paragraphs
Section I.	Allocation	142-144
II.	Defense of Boat Movements	145-148
III.	Defense of Far Shore	149-153
IV.	Security on Near Shore	154

Section I
ALLOCATION

142. General.—All units of the Engineer Special Brigade are armed with individual or crew served weapons or both, except the medical units and the chaplains who are unarmed. For characteristics of these weapons see appropriate field and technical manuals.

143. Individual Weapons.—Individual weapons are issued on the following basis:

a. Pistols, automatic, cal. .45.—1 per officer of grade of major and above.

b. Rifle, cal. .30, M-1.—53 to the Combat Platoon of Headquarters Company of the Shore Battalion.

c. Rifle, cal. .30, M1903.—1 per 4 enlisted men grades 4 to 7 inclusive except the Combat Platoon of Headquarters Company of the Shore Battalion as noted above.

d. Carbine, cal. .30.—All officers, warrant officers, and enlisted men not armed with pistol or rifle as noted above.

e. Launcher, grenade, M-7.—1 per rifle, cal. .30, M-1.

f. Launcher, grenade, M-1.—1 per rifle, cal. .30, M1903 except for Brigade Headquarters Company in which the basis of issue is 1 per 2 rifles, cal. .30, M1903, and for the Quartermaster Company which has no launchers.

144. Crew Served Weapons.—Crew served weapons are issued as follows:

a. Machine Gun, cal. .30 M1919A4.—2 per command and navigation boat, patrol boat, and 36′ landing craft (LCVP) on scarf ring mount (NOTE: 20% of those in the Boat Battalion are provided with additional ground mounts M2). 4 in Weapons Section of the Shore Company on tripod ground mounts, M2.

b. Machine Gun, cal. .50, AC, air cooled M-2, Flexible.—2 per 50′ tank lighter (LCM(3)), and salvage boat on pedestal mount, M39. (NOTE: 20% of those in the Boat Battalion are provided with additional ground mounts, M3).

2 in Brigade Headquarters Company on AA ground mounts.

2 in Ordnance Company on truck mounts, M32.

2 in Signal Company on AA ground mounts, M3.

6 in Combat Platoon, Headquarters Company, Shore Battalion on AA ground mounts, M3.

2 in Boat Maintenance Company (1 per Engine Repair Section) on AA ground mounts, M3.

c. Launcher, rocket, AT, 2.36" M-1.—1 per 3 boats in the Boat Company.

6 in the Machine Gun section of the Combat Platoon, Headquarters Company, Shore Battalion.

4 in Weapons Section of the Shore Company.

4 in Boat Maintenance Company (2 each Maintenance Platoon).

5 in Quartermaster Company.

d. Gun, 37mm. AT, M3A1.—6 in Combat Platoon Headquarters Company, Shore Battalion.

Section II
DEFENSE OF BOAT MOVEMENTS

145. General.—The .30 caliber and .50 caliber machine guns mounted on the boats are provided primarily for the defense of boat movements against air attack. They also provide some protection against attack of the boat movement by small surface craft and are used for defense on both the near and far shore.

146. Boat Machine Guns.—*a.* During all boat movements, guns should be kept at 'half load' except when in action. To facilitate the control of landing craft in a wave under varying conditions, several formations will be used. They include the Column, the Closed V, the Open V, and the Line Abreast (see Tentative Training Guide No. 2). Each formation must be considered separately to determine the proper procedure in anti-aircraft gunnery.

b. Column.—Boats will normally move in Column during a shore-to-shore movement prior to arrival at the Line of Departure. Boats in Column present a long axial target to attacking planes. Aerial attack by strafing or light demolition and fragmentation bombs will usually be effected by planes flying courses roughly parallel to or at a slight angle to the axis of the wave, passing from bow to stern or from stern to bow of each boat. Thus the plane or planes present an incoming target for the guns of each boat in succession (See Figure 30).

c. Closed V.—Boats moving in Closed V formation may expect aerial attack from any direction or from several direc-

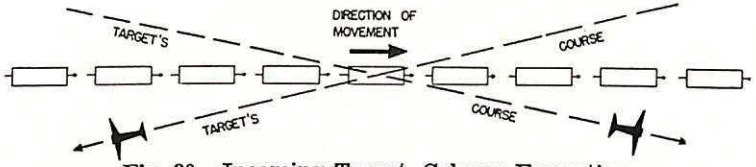


Fig. 30.—Incoming Target, Column Formation.

tions simultaneously. When boats are moving in this formation sectors should be assigned each boat depending upon the boat's position in the wave. The sector boundaries will be observed by airguards in spotting approaching aircraft to narrow down the area which must be watched by the individual. In the event of simultaneous attack from several directions, gunners will limit themselves to targets appearing in their particular sectors (See Figures 31a and 31b).

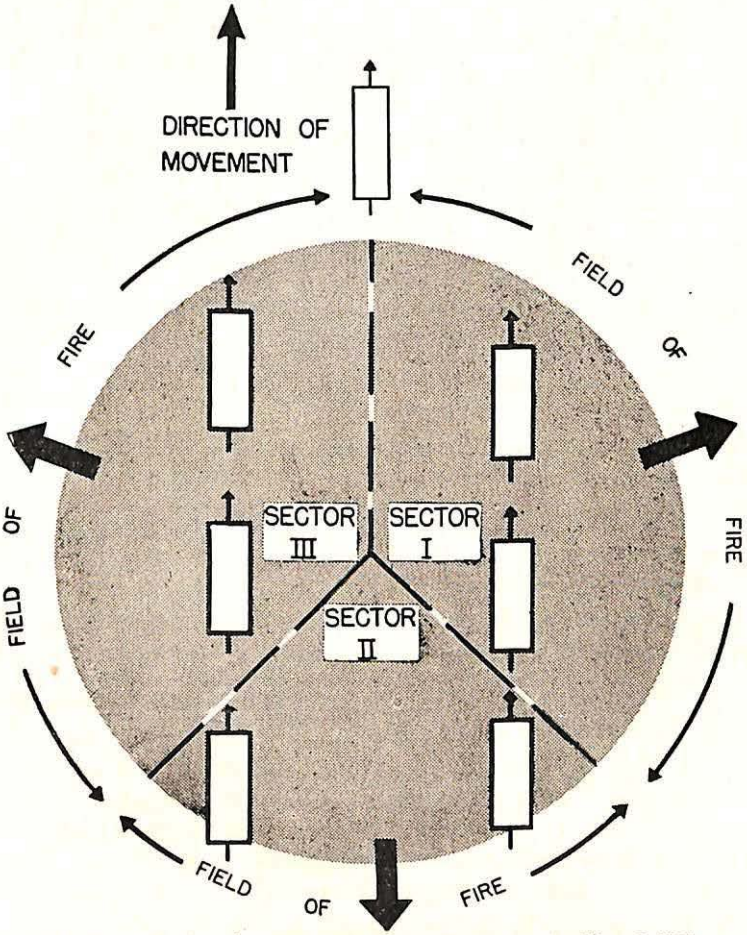


Fig. 31a.—Sector Assignment for a Seven-Boat, Closed "V" Formation.

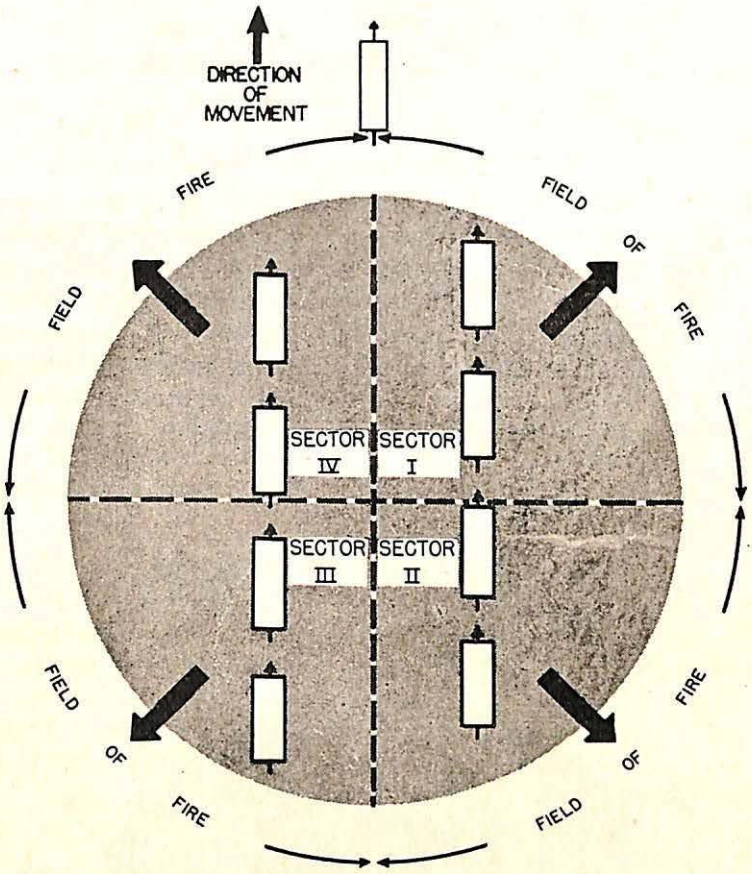


Fig. 31b.—Sector Assignment for a Nine-Boat, Closed "V" Formation.

d. Open "V".—Where time allows, boats moving in Closed "V" formation will form an Open "V" if attack is expected but not yet sustained. In such case, boats will normally be too widely spaced to permit the observation of sectors, and the action of the gunners will be independent.

e. Line Abreast.—The gunnery problem of boats landing on the far shore is very similar to that of boats moving in column. When landing, the wave will normally strike the beach in Line Abreast formation. Here the wave has a transverse axis, and the attacking planes may be expected to attack as shown in *Figure 32,* raking the boats from port to starboard or vice-versa. The gunners of each succeeding boat under the target's line of flight will fire on the attacking plane as soon as possible.

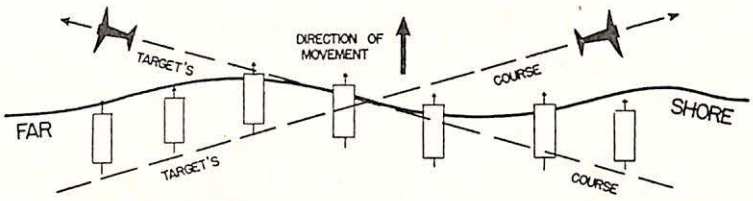


Fig. 32.—Transverse Target; Line Abreast Formation.

147. Other Weapons.—*a. The rocket launcher* is intended primarily as an anti-tank and anti-vehicular weapon for defense against mechanized attack directed at the boats landed on the far shore. It may be fired from the boat or from shore. It has a secondary use against small surface craft attacking the boat formation during the movement or when beached.

b. The grenade launcher is employed similarly to the rocket launcher.

c. The carbine and 1903 rifle is carried by all boat crews for fire against enemy personnel, in surface craft, or ashore, directing an attack against the boats.

148. Use of Boat Weapons at Far Shore.—Fire against targets on the shore, if not prohibited by considerations of secrecy and surprise, normally will be delivered by boats of the first wave only, unless other boats or waves are directly attacked. The location of friendly units during the initial phase of operations on the far shore is often ill-defined, and the danger of succeeding waves firing into friendly troops is too great to be risked.

Immediately upon arrival at the far shore, ground mounts carried for boat-mounted machine guns should be sent ashore and placed at the disposal of the Boat Control Section. Where possible, guns from damaged boats should be removed and turned in to the Boat Control Section for use as replacements on undamaged boats whose guns have been put out of commission, or for use on the ground mounts to supplement the Shore Battalion defenses (see par. 149 below).

After retraction, machine guns and ammunition should be checked at the first possible moment. Stoppages should be cleared, and partially used or empty ammunition chests should be replaced.

Section III
DEFENSE OF FAR SHORE

149. General.—*a.* Upon the arrival of shore engineers on the far shore, the responsibility of the shore commanders for beach defense begins.

b. As stated in par. 148 some boat-mounted weapons may pass to the command of the shore units. In some cases damaged landing craft on the beach may be in position to deliver fire with the guns mounted on the decks. In this event no change of mounts need be made. Regardless of whether the guns are fired from ground mounts or the boats, all fire on the far shore should be coordinated by the engineer shore unit commander.

c. The Shore Battalion has the following crew-served weapons for the defense of the beach:

Combat Platoon, Headquarters Company:
6 — 37-mm Antitank Guns, M3.
6 — .50 caliber Machine Guns, M2 (Aircraft Flexible) on AA mounts.

Weapons Section, each Shore Company:
4 — .30 caliber Machine Guns (M1919A4) on ground mounts.

150. Emplacement and Employment of Crew-Served Weapons.—*a. 37-mm Anti-tank Gun.*—The primary function of the 37-mm antitank gun is defense against moving vehicular targets. The first consideration in selecting the firing position to fulfill this primary mission is the probable avenues of approach of hostile vehicles. In covering an avenue of approach, the gun should be placed to fire where the movement of the target is restricted laterally by defiles such as ditches, banks, flanking swamps, woods, or like obstructions. Obstacles, including road blocks, covered by fire must be used to fullest extent practicable. If there are no approaches which have been channelized by natural or man-made obstructions, positions on ground where wide fields of fire are afforded should be selected. When effective concealment in firing position is impracticable, the gun squad will occupy a cover position while one of the members observes; on the orders of the squad leader, the squad will move the gun into firing position.

Alternate and supplementary positions must be selected and prepared in advance. An alternate position is one from which the primary fire mission can be executed and to which

the gun can be moved quickly if its primary position is discovered and becomes untenable due to enemy fire. Disposition of anti-tank guns in depth is prohibited by the small number available, so that the use of supplementary positions is essential. Obviously, secondary positions should be located in rear of those occupied initially, so as to provide for continuous and all round defense.

b. Anti-aircraft machine guns should be emplaced in such a way as to permit 360° field of fire laterally, and a clear field of fire overhead. These requirements preclude the use of overhead concealment such as trees or camouflage nets which cannot be quickly removed. Guns should not under normal circumstances be emplaced singly; at least two guns should be emplaced to provide adequate protection for a single point objective. Due to the fact that guns overheat rapidly, and because ammunition will be limited, only planes flying incoming courses, or courses directed against the objective protected by the respective guns, should be fired on, and fire should be opened at slant ranges of less than five hundred yards. To assure the greatest possible hit expectancy, guns should be located within about fifty yards of the point objective to which they are assigned. As is the case of anti-tank guns, the number of anti-aircraft guns provided for the Shore Battalion is very small. Consequently the Combat Platoon commander on the far shore should provide fire protection only for those installations which can be defended against hostile air action by no other method. Anti-aircraft machine guns landed in the initial phases of the attack should be assigned the mission of protecting points on the beach where unavoidable congestion will occur in unloading the boats. As the movement ashore develops, dumps, road junctions, and truckheads should be given anti-aircraft defense. Personnel boats, or vehicles which can be defended passively by dispersion or concealment will receive only incidental protection from anti-aircraft machine guns. The reconnaissance for and preparation of alternate and supplementary positions should be made standing operating procedure for every Combat Platoon. As a rule, the machine gun target will remain in the field of fire no longer than five or six seconds and the gunner must be in the saddle, ready to fire, as soon as the target appears.

c. The light machine gun, caliber .30 on ground mount, is a direct fire weapon designed to deliver automatic fire at close and mid-ranges against personnel and unarmored ve-

hicles. It is primarily designed as an offensive weapon, but its properties of high mobility and low relief adapt it to the execution of missions of defense of the front and flanks of far shore operations against infiltration or flanking maneuvers.

The characteristics of the mount and the normal location of the weapon well removed from far shore elements vulnerable to aerial attack make the use of light machine guns for anti-aircraft fire exceptional. Light machine guns also provide local defense for antitank guns. The light machine gun opens fire on foot troops and unarmored vehicles accompanying or following hostile armored vehicles or attempting to remove obstacles.

Whenever practicable the Weapons Section leader will control the fire of the guns in his section. He locates the approximate gun positions as directed by the Shore Battalion commander, assigns targets, fixes ammunition expenditures, and instructs or signals as to when fire will be opened. He exercises the functions of fire direction by assignment of target areas or fire sectors to the squad leaders who then exercise fire control functions. The delegation of fire-control functions to the squad leaders will usually be necessary until the beach has been well developed.

d. Employment.—No definite rules can be laid down for the employment of weapons on the far shore which will fit every situation; assume however a shore company operating as part of a battalion landing team:

(1) In the initial stage of the operation (see Fig. 33), weapons which have arrived at the far shore for beach defense may be the four .30 caliber machine guns of the Shore Company's Weapons Section, with two 37-mm antitank guns and two .50 caliber anti-aircraft machine guns from the Combat Platoon of the Headquarters Company. Immediately upon landing, the following procedure would be followed:

(a) Two .30 caliber infantry machine guns move forward to the nearest cover and to the left and right flanks of the beach to guard against infiltration.

(b) The antitank guns with the remaining two .30 caliber machine guns for local defense move farther out on the flanks to intercept hostile mechanized targets.

(c) The 2 anti-aircraft machine guns are set up as a pair on the beach where attack by strafing aircraft may be expected to converge, due either to the central location of the point chosen or to concentration of activity.

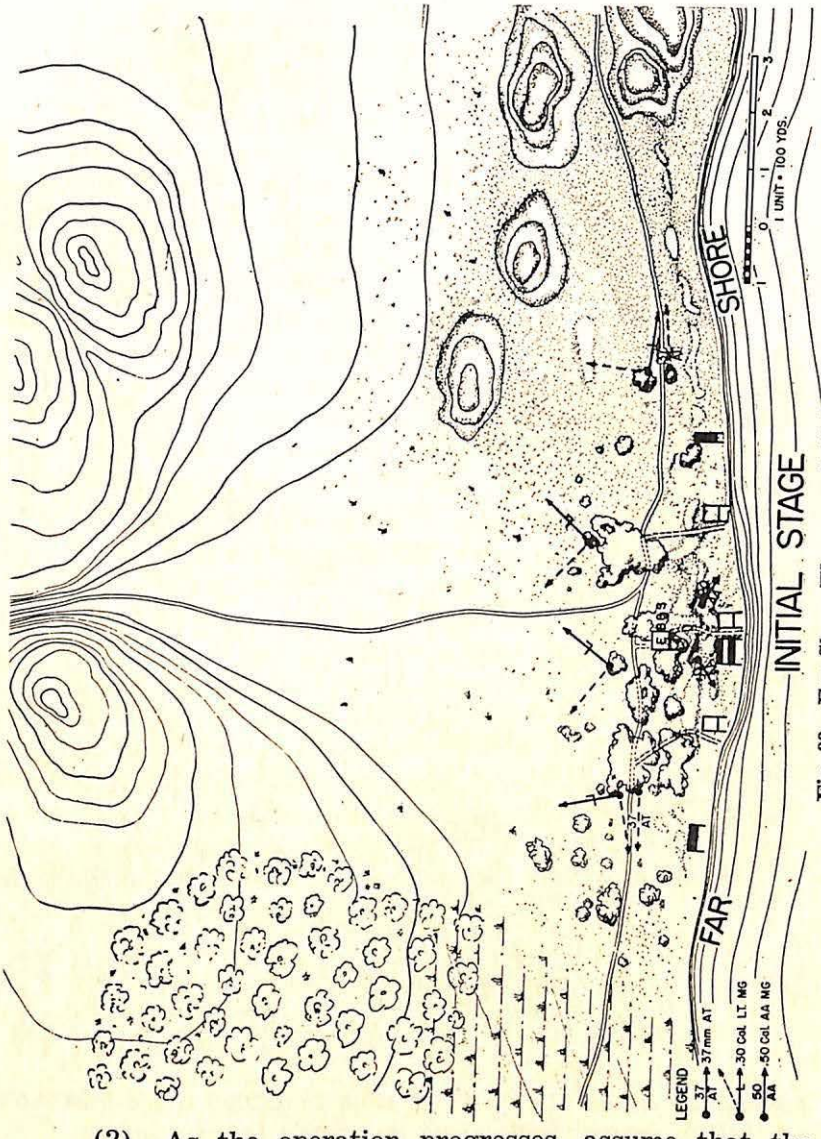


Fig. 33.—Far Shore Weapons; Initial Stage.

(2) As the operation progresses, assume that the Shore Battalion armament at the far shore will be augmented by guns taken from landing craft and set up on ground mounts. Dumps will have been established and traffic regulated so as to eliminate concentrations of personnel and material on the beach itself. The following developments in the disposition of weapons may then be expected to take place (See Fig. 34):

(a) The caliber .30 machine guns of the Weapons Section, with additional guns taken from 36′ craft, move to

positions in pairs, within about fifty yards of selected point objectives.

(d) In this phase of the operation, a thorough reconnaissance will have been made to insure that the guns are emplaced so as to take full advantage of concealment, cover, and terrain, and to provide the most effective fields of fire.

151. Support of Crew-Served Weapons.—*a.* All crew-served weapons should be supported by rifle fire and the 37 mm antitank gun should be furnished additional supporting fire by caliber .30 machine guns. This rifle and caliber .30 machine gun fire is designed for protection of the crew-served weapon against infiltrating or direct attack by personnel. The caliber .30 and caliber .50 machine guns should be furnished anti-mechanized protection.

b. The weapons crews are equipped to provide this support for themselves since the remainder of the shore units are normally engaged in other shore duties. Thus the Combat Platoon of Headquarters Company of the Shore Battalion is armed with M-1 rifles for anti-personnel protection of their caliber .50 machine guns and 37 mm antitank guns, and with rocket and grenade launchers for anti-mechanized defense of their caliber .50 machine guns. Likewise the Weapons Section of the Shore Company is equipped with rocket and grenade launchers for anti-mechanized defense of their caliber .30 machine guns, and with 1903 rifles and carbines for anti-personnel defense. In addition selected men and equipment, other than the weapons crews, will be assigned missions and positions for anti-personnel and anti-mechanized defense of crew-served weapons; these positions to be taken up in case of attack.

152. Defense of Beach.—A defense area must be organized and prepared coordinating the use of all shore personnel and weapons for all-around defense of the beach. This defense area will be occupied and defended to repulse a determined attack by land, or sea, or both. See Field Manuals 7-10, 7-15, 7-20, and 5-15.

153. Warning System.—An essential part of any defense is adequate warning systems against mechanized, air, and gas attack. These systems must be established using personnel and all available communication facilities (wire, radio, visual, sound, and messenger). See FM 100-5.

Section IV
SECURITY ON NEAR SHORE

154. *a.* All units, except medical and the chaplains, are adequately armed for defense of their assembly areas, dispersal areas, dumps, equipment, and operations on the near shore as outlined in paragraph 142. Full use will be made of all weapons and personnel required to provide the nesssary defense and warning systems in accordance with the principles ennunciated in FM 100-5.

b. Note that Brigade Headquarters Company is provided with 2 caliber .50 anti-aircraft machine guns for defense of the brigade command post.

Appendix I

TABLES OF ORGANIZATION AND EQUIPMENT

T/O's are shown complete on the following charts. Only principal items of equipment have been included. For all items, see T/E's as follows:

Hq. & Hq. Co., ESB	T/E	5-510-1S
Medical Detachment, ESB	T/E	5-510-1MS
Hq. & Hq. Co., EB & SR	T/E	5-512S
Medical Detachment, EB & SR	T/E	5-511MS
Hq. & Hq. Co., Boat Bn., EB & SR	T/E	5-516S
Engineer Boat Company	T/E	5-517S
Hq. & Hq., Shore Bn., EB & SR	T/E	5-526S
Engineer Shore Company	T/E	5-527S
Bn. Hq. & Hq. Det., Boat Maintenance Bn.	T/E	5-556S
Engineer Boat Maintenance Company	T/E	5-557S
Ordnance Special Maintenance Company	T/E	9-97S
Q. M. Hq. & Hq. Co., ESB	T/E	10-276S
Signal Company, ESB	T/E	11-517S
Hq. & Hq. Det., Medical Bn., ESB	T/E	8-196S
Medical Company, Bn., ESB	T/E	8-197S

1. BRIGADE HEADQUARTERS

a. Brig. Hq. Section

1–Brig. General, Brigade Commander
1–Colonel, Executive Officer
2–Majors, 1 Hq. Commandant and Provost Marshal; 1 Lt. Commander, USC&GS, Brigade navigation officer
1–1st Lieut., Aid-de-camp
1–Carbine, Cal. .30 M1 A2
4–Pistol, automatic, Cal. .45

b. Adm. Section

1–Major, S-1
1–Captain, Adjutant
1–1st Lieut., Personnel Officer
1–Warrant Officer, Clerical
1–M/Sgt., Sergeant Major (502)
1–Tech. Sgt., Personnel (816)
1–S/Sgt., Classification (275)
2–Sgts., Personnel (816)
1–T/5, Classification (275)
2–T/4, Clerk, General (055)
1–T/4, Clerk, Typist (405)
2–T/5s, Clerks, General (055)
2–Pvts., Clerk, General (055)
1–Pvt., Clerk, Typist (405)
2–Pvts., Duplicating machine Oper. (128)
1–T/4, Stenographer (213)
14–Carbine Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45
5–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Duplicating equipment, gelatin, 22"x33" (E)

c. Intelligence Section

1–Major, S-2
1–1st Lieut., Reconnaissance
1–Tech. Sgt., Intelligence (631)
1–Sgt., Intelligence (631)
1–Sgt., Clerk, General (055) Navigation NCO
1–T/5, Cartographer (387)
1–T/4, Draftsman (070)
1–T/5, Stenographer (213)
1–T/5, Clerk, Typist (405)
1–Pvt., Clerk, General (055)
5–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45
5–Rifles, U. S. Cal. .30 M1903 A3
3–Launchers, grenade, M1

d. Operations Section

1–Lieut. Colonel, S-3
1–Major, Liaison Officer
1–Captain, Asst. S-3
2–2nd Lieuts., Boat Commanders
1–M/Sgt., Section Leader (652)
1–Tech. Sgt., Operations (814)
2–S/Sgts.—
Draftsman (070)
Operations (814)
2–T/5s, Clerk, Typist (405)
1–T/4, Clerk, Typist (405)
1–T/4, Draftsman (070)
2–T/5s, Enginemen (081)
2–T/4s, Motorboat Oper. (Coxswain) (314)

2–T/5s, Seamen (065)
1–Pvt., Clerk, General (055)
2–Pvts., Seamen (065)
2–Boats, Command and Navigation
20–Carbines, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45
4–Guns, machine, Cal. .30 M1919 A4
1–Sketching equipment (E)

e. Supply Section

1–Lieut. Colonel, S-4
1–Captain, Automotive Officer
2–M/Sgts.
Motor (813)
Supply (821)
1–S/Sgt., Mech., auto (909)
1–T/5, Clerk, General (055)
1–Pvt., Clerk, General (055)
1–Pvt., Clerk, Typist (405)
4–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45
3–Rifles, U. S. Cal. .30 M1903 A3
1–Drafting equipment, regimental (E)
1–Launcher, grenade, M1

f. Inspector General

1–Major, Inspector General
1–Tech. Sgt., Chief Clerk (052)
1–Carbine, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45

g. Quartermaster Section

1–Lieut. Colonel, Brigade Q. M. and Q. M. Company Commander
1–Pistol, automatic, Cal. .45

h. Boat Maintenance Section

1–Lieut. Colonel, Brigade Boat Maintenance Officer and Boat Maintenance Battalion Commander
1–Pvt., Clerk, Typist (405)
1–Carbine, Cal. .30 M1 A2
1–Pistol, Cal. .45

i. Ordnance Section

1–Major, Brigade Ordnance Officer and Ordnance Company Commander
1–Pistol, Cal. .45

j. Signal Section

1–Lieut. Colonel, Brigade Signal Officer and Signal Company Commander
1–Pistol, Cal. .45

k. Finance Section

1–Major, Brigade Finance Officer
1–M/Sgt., Sergeant Major (502)
1–S/Sgt., Clerk, Typist (405)
1–T/4, Clerk, Typist (405)
1–T/4, Clerk, General (055)
1–Pvt., Clerk, Typist (405)
5–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45

l. C. W. S. Section

1–Major, Brigade Chemical Officer
1–S/Sgt., Supply (821)
1–Sgt., Chemical (870)
1–Pvt., Clerk, Typist (405)
3–Carbines, Cal. .30 M1 A2
1–Pistol, automatic, Cal. .45

m. Medical Section

1–Lieut. Colonel, Brigade Surgeon and Medical Battalion Commander
1–Pistol, automatic, Cal. 45

n. Chaplain's Section

1–Major, Brigade Chaplain
1–T/5, Chaplain's Asst. (534)
1–Carbine, Cal. .30 M1 A2

2. BRIGADE HEADQUARTERS COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–1st Lieut., Special Service Officer
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Cpl., Clerk, Company (405)
1–T/5, Carpenter, construction (050)
2–T/4s, Cooks (060)
2–T/5s, Cooks (060)
1–T/5, Athletic Instructor (283)
1–T/5, Entertainment Director (442)
2–Pvts., Cook's helper (521)
1–Pvt., Electrician (078)
1–Pvt., Ln. Agent (bugler) (503)
5–Pvts., Orderly (695)
1–Pvt., Supply (821)
2–Pvts., Basic (521)
21–Carbines, Cal. .30 M1 A2
2–Guns, machine, Cal. .50 M2 HB flexible
4–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Truck, ¼ T, 4 x 4
2–Trucks, 2½ T, 6 x 6, cargo, w/winch
1–Camouflage Set "A" (E)

b. Transportation Platoon

1–1st Lieut., Transportation Officer
1–Sgt., Motor (813)
1–Cpl., Dispatcher (410)
1–T/4, Mech. auto (014)

1–T/5, Mech. auto (014)
4–T/5s, Truck drivers, light (345)
7–Pvts., Truck drivers, light (345)
2–Pvt., Basic (521)
14–Carbines, Cal. .30 M1 A2
4–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Trailer, 1 T, 2-wheeled, tank 250 gals.
1–Trailer, 1 T, 2-wheld, cargo
9–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, command
2–Trucks, 2½ T, 6 x 6, cargo, w/winch

3. MEDICAL DETACHMENT—E. S. B.

3–Captain or 1st Lieut., 1 Dental
1–Tech. Sgt., Med. NCO (673)
1–S/Sgt., Med. NCO (673)
1–Sgt., Med. Supply NCO (673)
1–Cpl., Clerk, Company (405)
1–T/5, Ambulance driver (699)
1–T/5, Clerk, General (055)
1–T-5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
1–T/5, Technician, Sanitary (196)
1–T/4, Technician, Surgical (861)
2–T/5s, Technicians, Surgical (861)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (659)
2–Pvts., Technician, Medical (409)
5–Pvts., Technician, Surgical (861)
3–Pvts., Truck drivers, light (345)
3–Pvts., Basic (521)
1–Ambulance, ¾ T, 4 x 4
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Chest, M. D. #4
1–Chest, M. D. #60
1–Regt. Hq. M. D. equipment
1–Tent, squad, M 1942

4. REGIMENTAL HEADQUARTERS

a. Regimental Headquarters

1–Colonel, Regimental Commander
1–Lieut. Colonel, Executive Officer
2–Majors, 1 S-3; 1 S-4
5–Captains, 1 adjutant; 1 coast and geodetic survey officer; 1 intelligence officer; 1 special service officer; 1 motor maintenance officer
2–1st Lieuts., 1 asst. intelligence officer; 1 asst. operations officer
2–2nd Lieuts., 1 boat commander; 1 transportation officer and asst. supply officer
2–Warrant Officer, 1 asst. adjutant; 1 asst. supply officer
11–Carbines, Cal. .30 M1 A2
4–Pistols, automatic, Cal. .45

5. REGIMENTAL HEADQUARTERS COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–2nd Lieut., Co. administrative officer
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
2–T/4s, Cook (060)
2–T/5s, Cook (060)
1–T/5, Truck driver, light (345)
1–T/5, Entertainment Director (442)
1–T/5, Athletic Instructor (283)
2–Pvts., Cook's helpers (521)
2–Pvts., Truck drivers, light (345)
1–Pvt., Ln. Agent (bugler) (drives truck) (503)
16–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, ¾ T, 4 x 4, C. & R.
1–Truck, 2½ T, 6 x 6, cargo, w/winch

b. Headquarters Platoon

(1) Administrative Section
(1)–Captain, adjutant from Regt. Hq.
(1)–Warrant Officer, asst. adjutant from Regt. Hq.
1–M/Sgt., Sgt. Major (502)
1–Tech. Sgt., personnel (816)
1–T/5, Chaplain's Asst. (534)
1–T/4, Clerk, General (405)
1–T/5, Clerk, General (405)
1–T/4, Clerk, Postal (056)
1–T/5, Clerk, Postal (056)
2–Pvts., Clerks, General (055)
1–Pvt., Duplicating machine oper. (128)
3–Pvts., orderlies (695)
10–Carbines, Cal. .30 M1 A2
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
1–Duplicating equipment, gelatin, 22″ x 33″ (E)

(2) Operations Section
1–Major, S-3 from Regt. Hq.
1–1st Lieut., asst. S-3 from Regt. Hq.
1–M/Sgt., Operations (814)
1–Sgt., Chemical (870)
1–T/4, Clerk, General (405)
1–T/4, Draftsman (070)
3–T/5s, Enginemen (081)
1–Pvt., Clerk, General (055)
3–T/4s., Motorboat Opers. (Coxswain) (314)
3–Pvts., Seamen (065)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
1–Boat, Patrol
1–Boat, Power, Utility
14–Carbines, Cal. .30 M1 A2
6–Guns, machine, Cal. .30
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
2–Trucks, ¼ T, 4 x 4
1–Drafting and duplicating equipment (E)

(3) Intelligence Section
(2)–Captains, 1 S-2 and 1 navigator from Regt. Hq.
(1)–1st Lieut., asst. S-2 from Regt. Hq.
1–S/Sgt., Camoufleur (800)
1–T/5, Clerk, General (405)
1–T/5, Draftsman (070)
1–Pvt., Truck driver, light (345)
3–Carbines, Cal. .30 M1 A2
1–Launcher, grenade M1
1–Rifle, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4

(4) Supply Section
1–Major, S-4 from Regt. Hq.
1–2nd Lieut., asst. S-2 from Regt. Hq.
1–M/Sgt., Supply (821)
1–Tech. Sgt., subsistence (820)
1–S/Sgt., Supply (821)
1–S/Sgt., Water supply (253)
1–T/5, Clerk, General (405)
1–T4, Water supply engineer (253)
1–T/5, Water filter operator (083)
1–T/4, Water supply engineer (253)
1–Pvt., Clerk, General (055)
3–Pvts., Truck drivers, light (345)
2–Pvts., Water filter operators (083)
1–Pvt., Basic (521)
10–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
3–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Electric light equipment, portable, 5 kw
1–Water supply equipment (E)
1–Pipe-fitting equipment (E)
1–Sign painting equipment (E)
1–Tinsmith equipment (E)

(5) Maintenance Section
1–Captain, Motor Maintenance Officer from Regt. Hq.
1–Tech. Sgt., Motor (813)
1–T/5, Carpenter, Construction (050)
2–T/4s, Mechanics, automobile (014)
3–T/5s, Mechanics, automobile (014)
1–Pvt., Basic (521)
6–Carbines, Cal. .30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Welding and cutting set (E)
1–Carpenter and Wheelwright Set (Q)

c. Communications Platoon

(1) Platoon Headquarter
1–1st Lieut., Regt. Communications Officer
1–M/Sgt., Communications Chief (542)
1–S/Sgt., Message Center Chief (674)
3–T/5s, Clerks, Code (806)
3–T/5s, Clerks, message center (667)
1–T/4, Switchboard Operator (650)
2–T/5s, Switchboard Operators (650)
5–Pvts., Switchboard Operators (650)
3–Pvts., Messengers (675)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Panel set

(2) Radio Section
1–S/Sgt., Radio Operator (776)
9–T/4s, Radio Operators (766)
10–T/5s, Radio Operators (766)
1–T/4, Radio repairman (174)
9–Pvts., Radio Operators (766)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
24–Carbines, Cal. .30 M1 A2
8–Launchers, grenade M1
8–Rifles, Cal. .30 M1903 A3
1–Truck, 2½ T, 6 x 6, cargo w/winch
1–Trailer, cargo, 1 T, 2-wheel
2–SCR 193
4–SCR 284

1–SCR 177 B
1–BC 312
(3) Wire Section
1–S/Sgt., Chief field lineman (644)
2–T/5s, linesmen, field (641)
4–Pvts., Linesmen, field (641)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
7–Carbines, Cal. 30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Truck, 1½ T, 6 x 6, cargo w/winch
3–SB BD 71
1–SB BD 72
5–TG set, TG 5
20–Tel EE 8
20–Miles, wire W-110

d. Embarkation Platoon

3–Captains, embarkation control officers
3–S/Sgts., Section Leaders (652)
3–Sgts., Ordnance (825)
15–T/5s, Receiving and Shipping Checkers (186)
3–Pvts., Basic (521)
23–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3

6. MEDICAL DETACHMENT—EB & SR

a. Headquarters Section

1–Major, Regt. Surgeon
1–Captain or 1st Lieut., Dental
1–Tech. Sgt., Med. NCO (673)
1–Sgt., Med. NCO (673)
2–T/5s, Clerks, General (055)
1–T/5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
1–Pvt., Technician, Sanitary (196)
1–Pvt., Truck driver, light (345)
1–Truck, ¼ T, 4 x 4
1–Chest, M. D. #60
1–Chest, M. D. #4
1–Tent, Squad, M1942
1–Regt. Hq. M. D. equipment

b. Boat Battalion Section

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
2–T/5s, Technicians, Medical (409)
1–T/5, Truck driver, light (345)
6–T/5s, Technicians, Surgical (409)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
4–Pvts., Technicians, Medical (409)
2–Pvts., Basic (521)
2–Pvts., Truck drivers, light (345)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

c. Shore Battalion

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
1–T/5, Truck driver, light (345)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
2–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

7. BOAT BN. HQ.

a. Battalion Headquarters

1–Lieut. Colonel, Boat Bn. Commander
1–Major, Executive Officer and S-3
1–Captain, Marine Maintenance
1–Carbine, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45

8. BOAT BN. HQ. CO.

a. Company Headquarters

1–Captain, Co. Commander and Bn. Adj.
1–1st Sgt., (585)
1–S/Sgt., mess (824)
1–S/Sgt., supply (821)
1–Cpl., truckmaster (668)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Typist (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Mechanic, automobile (014)
2–T/5s, Truck drivers, light (345)
1–Pvt., Cook's helper (521)
1–Pvt., Ln. Agent, bugler and truck driver (503)
2–Pvts., Orderlies (695)
3–Pvts., Truck drivers, light (345)

2–Pvts., Basic (521)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–Trucks, 2½ T, 6 x 6, Tank 750 gals.
1–Truck, 1½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Canvas worker set (E)
1–Electric lighting equipment, portable 5 kw (E)
1–Sign painting equipment
1–Sketching equipment

b. Communications Section

1–1st Lieut., Bn. Communications Officer
1–S/Sgt., Communication Chief (542)
1–T/5, Clerk, Code (806)
1–T/5, Clerk, Message Center (667)
6–T/4s, Radio Operators (766)
6–T/5s, Radio Operators (766)
1–T/4, Radio Repairman (174)
1–T/5, Truck driver, light (345)
1–Pvt., Truck driver, light (345)
1–Pvt., Clerk, Message Center (667)
6–Pvts., Radio Operators (766)
1–Pvt., Clerk, Code (806)
22–Carbines, Cal. .30 M1 A2
6–Launchers, grenade M1
6–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/winch
9–SCR 284

c. Operations Section

1–1st Lieut., Intelligence and Operations (navigation)
2–2nd Lieuts., Boat Commanders
2/Tech. Sgts., boatswains (065)
1–S/Sgt., Intelligence & Operations (631)
7–T/4s, Motorboat Operators, Coxswains (314)
1–T/3, Radar, Technician (872)
1–T/4, Radar, Technician (872)
1–T/5, Radar, Technician (872)
7–T/5s, Enginmen (081)
7–Pvts., Seamen (065)
5–Pvts., Basic (521)
2–Boats, Command and Navigation
5–Boats, Patrol
28–Carbines, Cal. .30 M1 A2
14–Machine Guns, Cal. .30
7–Launchers, grenade M1
7–Rifles, Cal. .30 M1903 A3
1–Boat, Power, Utility
1–Drafting and duplicating equipment (E)

9. BOAT COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–1st Lieut., 2nd in command
1–1st Sgt. (585)
2–S/Sgts.
1–mess (824)
1–supply (821)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Supply (835)
3–T/4s, Cook (060)
4–T/5s, Cook (060)
1–Pvt., Clerk, General (055)
5–Pvts., Cook's helpers (521)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
20–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Boat, Power, Utility
1–Camouflage Set "A" (E)
1–Canvas worker set (E)

b. Operations Section

2–1st Lieuts., Patrol Boat Commanders
1–S/Sgt., Boatswain (065)
4–T/5s, Enginemen (081)
4–T/4s, M. B. Oper. coxswain (314)
4–Pvts., Seamen (065)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
2–Boats, Patrol
12–Carbines, Cal. .30 M1 A2
8–Guns, machine, Cal. .30 M1919 A4
4–Launchers, grenade M1
4–Launchers, rocket AT, 2.36 in. M1
4–Rifles, Cal. .30 M1903 A3

c. Communications Section

1–2nd Lieut., Communications Officer
1–Sgt., Communications Chief (542)
1–T/4, Clerk, M. C. (667)
4–T/4s, Radio Oper. (766)
4–T/5s, Radio Oper. (766)
4–Pvts., Radio Oper. (776)
2–Pvts., Basic (521)

1–T/5, Mech. auto (014)
4–T/5s, Truck drivers, light (345)
7–Pvts., Truck drivers, light (345)
2–Pvt., Basic (521)
14–Carbines, Cal. .30 M1 A2
4–Rifles, U. S. Cal. .30 M1903 A3
2–Launchers, grenade, M1
1–Trailer, 1 T, 2-wheeled, tank 250 gals.
1–Trailer, 1 T, 2-wheld, cargo
9–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, command
2–Trucks, 2½ T, 6 x 6, cargo, w/winch

3. MEDICAL DETACHMENT — E. S. B.

3–Captain or 1st Lieut., 1 Dental
1–Tech. Sgt., Med. NCO (673)
1–S/Sgt., Med. NCO (673)
1–Sgt., Med. Supply NCO (673)
1–Cpl., Clerk, Company (405)
1–T/5, Ambulance driver (699)
1–T/5, Clerk, General (055)
1–T-5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
1–T/5, Technician, Sanitary (196)
1–T/4, Technician, Surgical (861)
2–T/5s, Technicians, Surgical (861)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (659)
2–Pvts., Technician, Medical (409)
5–Pvts., Technician, Surgical (861)
3–Pvts., Truck drivers, light (345)
3–Pvts., Basic (521)
1–Ambulance, ¾ T, 4 x 4
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Chest, M. D. #4
1–Chest, M. D. #60
1–Regt. Hq. M. D. equipment
1–Tent, squad, M 1942

4. REGIMENTAL HEADQUARTERS

a. Regimental Headquarters

1–Colonel, Regimental Commander
1–Lieut. Colonel, Executive Officer
2–Majors, 1 S-3; 1 S-4
5–Captains, 1 adjutant; 1 coast and geodetic survey officer; 1 intelligence officer; 1 special service officer; 1 motor maintenance officer
2–1st Lieuts., 1 asst. intelligence officer; 1 asst. operations officer
2–2nd Lieuts., 1 boat commander; 1 transportation officer and asst. supply officer
2–Warrant Officer, 1 asst. adjutant; 1 asst. supply officer
11–Carbines, Cal. .30 M1 A2
4–Pistols, automatic, Cal. .45

5. REGIMENTAL HEADQUARTERS COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–2nd Lieut., Co. administrative officer
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
2–T/4s, Cook (060)
2–T/5s, Cook (060)
1–T/5, Truck driver, light (345)
1–T/5, Entertainment Director (442)
1–T/5, Athletic Instructor (283)
2–Pvts., Cook's helpers (521)
2–Pvts., Truck drivers, light (345)
1–Pvt., Ln. Agent (bugler) (drives truck) (503)
16–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, ¾ T, 4 x 4, C. & R.
1–Truck, 2½ T, 6 x 6, cargo, w/winch

b. Headquarters Platoon

(1) Administrative Section
(1)–Captain, adjutant from Regt. Hq.
(1)–Warrant Officer, asst. adjutant from Regt. Hq.
1–M/Sgt., Sgt. Major (502)
1–Tech. Sgt., personnel (816)
1–T/5, Chaplain's Asst. (534)
1–T/4, Clerk, General (405)
1–T/5, Clerk, General (405)
1–T/4, Clerk, Postal (056)
1–T/5, Clerk, Postal (056)
2–Pvts., Clerks, General (055)
1–Pvt., Duplicating machine oper. (128)
3–Pvts., orderlies (695)
10–Carbines, Cal. .30 M1 A2
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
1–Duplicating equipment, gelatin, 22″ x 33″ (E)

(2) Operations Section
1–Major, S-3 from Regt. Hq.
1–1st Lieut., asst. S-3 from Regt. Hq.
1–M/Sgt., Operations (814)
1–Sgt., Chemical (870)
1–T/4, Clerk, General (405)
1–T/4, Draftsman (070)
3–T/5s, Enginemen (081)
1–Pvt., Clerk, General (055)
3–T/4s., Motorboat Opers. (Coxswain) (314)
3–Pvts., Seamen (065)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
1–Boat, Patrol
1–Boat, Power, Utility
14–Carbines, Cal. .30 M1 A2
6–Guns, machine, Cal. .30
3–Launchers, grenade M1
3–Rifles, Cal. .30 M1903 A3
2–Trucks, ¼ T, 4 x 4
1–Drafting and duplicating equipment (E)

(3) Intelligence Section
(2)–Captains, 1 S-2 and 1 navigator from Regt. Hq.
(1)–1st Lieut., asst. S-2 from Regt. Hq.
1–S/Sgt., Camoufleur (800)
1–T/5, Clerk, General (405)
1–T/5, Draftsman (070)
1–Pvt., Truck driver, light (345)
3–Carbines, Cal. .30 M1 A2
1–Launcher, grenade M1
1–Rifle, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4

(4) Supply Section
1–Major, S-4 from Regt. Hq.
1–2nd Lieut., asst. S-2 from Regt. Hq.
1–M/Sgt., Supply (821)
1–Tech. Sgt., subsistence (820)
1–S/Sgt., Supply (821)
1–S/Sgt., Water supply (253)
1–T/5, Clerk, General (405)
1–T4, Water supply engineer (253)
1–T/5, Water filter operator (083)
1–T/4, Water supply engineer (253)
1–Pvt., Clerk, General (055)
3–Pvts., Truck drivers, light (345)
2–Pvts., Water filter operators (083)
1–Pvt., Basic (521)
10–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
3–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Electric light equipment, portable, 5 kw
1–Water supply equipment (E)
1–Pipe-fitting equipment (E)
1–Sign painting equipment (E)
1–Tinsmith equipment (E)

(5) Maintenance Section
1–Captain, Motor Maintenance Officer from Regt. Hq.
1–Tech. Sgt., Motor (813)
1–T/5, Carpenter, Construction (050)
2–T/4s, Mechanics, automobile (014)
3–T/5s, Mechanics, automobile (014)
1–Pvt., Basic (521)
6–Carbines, Cal. .30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Welding and cutting set (E)
1–Carpenter and Wheelwright Set (Q)

c. Communications Platoon

(1) Platoon Headquarter
1–1st Lieut., Regt. Communications Officer
1–M/Sgt., Communications Chief (542)
1–S/Sgt., Message Center Chief (674)
3–T/5s, Clerks, Code (806)
3–T/5s, Clerks, message center (667)
1–T/4, Switchboard Operator (650)
2–T/5s, Switchboard Operators (650)
5–Pvts., Switchboard Operators (650)
3–Pvts., Messengers (675)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Panel set

(2) Radio Section
1–S/Sgt., Radio Operator (776)
9–T/4s, Radio Operators (766)
10–T/5s, Radio Operators (766)
1–T/4, Radio repairman (174)
9–Pvts., Radio Operators (766)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
24–Carbines, Cal. .30 M1 A2
8–Launchers, grenade M1
8–Rifles, Cal. .30 M1903 A3
1–Truck, 2½ T, 6 x 6, cargo w/winch
1–Trailer, cargo, 1 T, 2-wheel
2–SCR 193
4–SCR 284

1–SCR 177 B
1–BC 312
(3) Wire Section
1–S/Sgt., Chief field lineman (644)
2–T/5s, linesmen, field (641)
4–Pvts., Linesmen, field (641)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
7–Carbines, Cal. 30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Truck, 1½ T, 6 x 6, cargo w/winch
3–SB BD 71
1–SB BD 72
5–TG set, TG 5
20–Tel EE 8
20–Miles, wire W-110

d. Embarkation Platoon

3–Captains, embarkation control officers
3–S/Sgts., Section Leaders (652)
3–Sgts., Ordnance (825)
15–T/5s, Receiving and Shipping Checkers (186)
3–Pvts., Basic (521)
23–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3

6. MEDICAL DETACHMENT—EB & SR

a. Headquarters Section

1–Major, Regt. Surgeon
1–Captain or 1st Lieut., Dental
1–Tech. Sgt., Med. NCO (673)
1–Sgt., Med. NCO (673)
2–T/5s, Clerks, General (055)
1–T/5, Technician, Dental (855)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
1–Pvt., Technician, Sanitary (196)
1–Pvt., Truck driver, light (345)
1–Truck, ¼ T, 4 x 4
1–Chest, M. D. #60
1–Chest, M. D. #4
1–Tent, Squad, M1942
1–Regt. Hq. M. D. equipment

b. Boat Battalion Section

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
2–T/5s, Technicians, Medical (409)
1–T/5, Truck driver, light (345)
6–T/5s, Technicians, Surgical (409)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
4–Pvts., Technicians, Medical (409)
2–Pvts., Basic (521)
2–Pvts., Truck drivers, light (345)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

c. Shore Battalion

2–Captain or 1st Lieut.
1–S/Sgt., Med., NCO (673)
1–Sgt., Med., NCO (673)
1–Cpl., Med., NCO (673)
1–T/5, Technician, Medical (409)
4–T/5s, Technicians, Surgical (861)
1–T/5, Truck driver, light (345)
1–Pvt., Ambulance orderly (696)
2–Pvts., Litter Bearers (657)
2–Pvts., Technicians, Medical (409)
2–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
2–Trucks, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch

7. BOAT BN. HQ.

a. Battalion Headquarters

1–Lieut. Colonel, Boat Bn. Commander
1–Major, Executive Officer and S-3
1–Captain, Marine Maintenance
1–Carbine, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45

8. BOAT BN. HQ. CO.

a. Company Headquarters

1–Captain, Co. Commander and Bn. Adj.
1–1st Sgt., (585)
1–S/Sgt., mess (824)
1–S/Sgt., supply (821)
1–Cpl., truckmaster (668)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Typist (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Mechanic, automobile (014)
2–T/5s, Truck drivers, light (345)
1–Pvt., Cook's helper (521)
1–Pvt., Ln. Agent, bugler and truck driver (503)
2–Pvts., Orderlies (695)
3–Pvts., Truck drivers, light (345)

2–Pvts., Basic (521)
16–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–Trucks, 2½ T, 6 x 6, Tank 750 gals.
1–Truck, 1½ T, 6 x 6, cargo w/winch
1–Camouflage Set "A"
1–Canvas worker set (E)
1–Electric lighting equipment, portable 5 kw (E)
1–Sign painting equipment
1–Sketching equipment

b. Communications Section

1–1st Lieut., Bn. Communications Officer
1–S/Sgt., Communication Chief (542)
1–T/5, Clerk, Code (806)
1–T/5, Clerk, Message Center (667)
6–T/4s, Radio Operators (766)
6–T/5s, Radio Operators (766)
1–T/4, Radio Repairman (174)
1–T/5, Truck driver, light (345)
1–Pvt., Truck driver, light (345)
1–Pvt., Clerk, Message Center (667)
6–Pvts., Radio Operators (766)
1–Pvt., Clerk, Code (806)
22–Carbines, Cal. .30 M1 A2
6–Launchers, grenade M1
6–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/winch
9–SCR 284

c. Operations Section

1–1st Lieut., Intelligence and Operations (navigation)
2–2nd Lieuts., Boat Commanders
2/Tech. Sgts., boatswains (065)
1–S/Sgt., Intelligence & Operations (631)
7–T/4s, Motorboat Operators, Coxswains (314)
1–T/3, Radar, Technician (872)
1–T/4, Radar, Technician (872)
1–T/5, Radar, Technician (872)
7–T/5s, Enginmen (081)
7–Pvts., Seamen (065)
5–Pvts., Basic (521)
2–Boats, Command and Navigation
5–Boats, Patrol
28–Carbines, Cal. .30 M1 A2
14–Machine Guns, Cal. .30
7–Launchers, grenade M1
7–Rifles, Cal. .30 M1903 A3
1–Boat, Power, Utility
1–Drafting and duplicating equipment (E)

9. BOAT COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–1st Lieut., 2nd in command
1–1st Sgt. (585)
2–S/Sgts.
1–mess (824)
1–supply (821)
1–Cpl., Clerk, Company (405)
1–T/5, Clerk, Supply (835)
3–T/4s, Cook (060)
4–T/5s, Cook (060)
1–Pvt., Clerk, General (055)
5–Pvts., Cook's helpers (521)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
20–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, 2½ T, 6 x 6, cargo w/winch
1–Boat, Power, Utility
1–Camouflage Set "A" (E)
1–Canvas worker set (E)

b. Operations Section

2–1st Lieuts., Patrol Boat Commanders
1–S/Sgt., Boatswain (065)
4–T/5s, Enginemen (081)
4–T/4s, M. B. Oper. coxswain (314)
4–Pvts., Seamen (065)
1–Pvt., Basic (521)
2–Boats, Command and Navigation
2–Boats, Patrol
12–Carbines, Cal. .30 M1 A2
8–Guns, machine, Cal. .30 M1919 A4
4–Launchers, grenade M1
4–Launchers, rocket AT, 2.36 in. M1
4–Rifles, Cal. .30 M1903 A3

c. Communications Section

1–2nd Lieut., Communications Officer
1–Sgt., Communications Chief (542)
1–T/4, Clerk, M. C. (667)
4–T/4s, Radio Oper. (766)
4–T/5s, Radio Oper. (766)
4–Pvts., Radio Oper. (776)
2–Pvts., Basic (521)

13–Carbines, Cal. .30 M1 A2
4–Launchers, grenade M1
4–Rifles, Cal. .30 M1903 A3
1–PA System, portable 1000-yard range
2–SCR 284
21–SCR 300

d. Boat Maint. & Salvage Section
1–2nd Lieut., Boat Maint. Officer
1–Tech. Sgt., Master Mech. (342)
1–S/Sgt., boatswain (065)
1–Sgt., Foreman, carpenter, ship (202)
1–T/5, Blacksmith (024)
1–T/4, Carpenter, ship (202)
1–T/5, Carpenter, ship (202)
1–T/5, Electrician (078)
2–T/4s, Mech., automobile (014)
2–T/5s, Mech., automobile (014)
1–T/4, M. B. Oper., coxswain (314)
1–Pvt., Carpenter, construction (050)
1–Pvt., Clerk, General (055)
1–Pvt., Rigger (189)
1–Pvt., Toolroom keeper (242)
2–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
1–Boat, Salvage and Maintenance
15–Carbines, Cal. .30 M1 A2
2–Guns, machine, Cal. .50 M2 H. B. flexible
6–Launchers, grenade M1
6–Rifles, Cal. .30 M1903 A3
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/winch
1–Charger, battery, 12v, 2000w
1–Blacksmith equipment (E)
1–Blacksmith set (Q)
1–Carpenter and wheelwright set (Q)

e. 3 Boat Platoons (each)
1–1st Lieut., Platoon Commander
1–2nd Lieut., Asst. Platoon Commander
1–Tech. Sgt., Boatswain (065)
4–S/Sgts., Boatswains (065)
30–T/5s, Enginemen (081)
20–T/4s, M. B. Oper., Coxswain (314)
20–Pvts., Seamen (065)
8–Pvts., Basic (521)
10–Boat, surf landing 36′ LCVP
10–Boats, Lighter, tank 50′ LCM (3)
66–Carbines, Cal. .30 M1 A2
20–Guns, machine, Cal. .30 M1919 A4
20–Guns, machine, Cal. .50, M2 H. B., flexible
19–Launchers, grenade M1
6–Launchers, rocket AT 2.36 in. M1
19–Rifles, U. S. Cal. .30, M1903 A3

10. SHORE BATTALION HEADQUARTERS

a. Battalion Headquarters
1–Lieut. Colonel, Bn. Commander
1–Major, Executive Officer and S-3
1–1st Lieut., Adjutant
1–Carbine, Cal. .30 M1 A2
2–Pistols, automatic, Cal. .45

11. SHORE BN. HQ. COMPANY

a. Company Headquarters
1–Captain, Co. Comdr., Bn. Supply and Motor Officer
1–1st Sgt. (585)
1–Tech. Sgt., construction foreman (059)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., Motor (813)
1–Cpl., Clerk, Company (405)
2–T/4s, Cooks (060)
1–T/5, Cook (060)
1–T/5, Air compressor operator and driver (467)
1–T/4, Mechanic, automobile (014)
1–T/5, Truck driver, light (345)
1–T/5, Truck driver, heavy (245)
1–T/5, Wrecker Oper. (529)
2–Pvts., Cook's helpers (521)
1–Pvt., Draftsman (070)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
1–Pvt., Orderly (drives truck) (695)
2–Pvts., Basic (521)
4–Rifles, Cal. .30 M1903 A3
4–Launchers, grenade M1
1–Compressor, air, motorized
18–Carbines, Cal. .30 M1 A2
1–Trailer, 1 T, 2-wheel cargo
1–Trailer, full flat bed, 16 T
2–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, 4 x 4, command
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Truck, 4 T, 6 x 6, wrecker, w/winch
1–Truck, 6 T, 6 x 6, P. M. w/winch
1–Camouflage Set "A" (E)
1–Canvas worker set (E)
1–Sign painting equipment (E)

b. Adm. Section
(1)–Captain, adjutant from Co. Hq.

1–S/Sgt., Sgt. Major (502)
1–T/5, Clerk, Typist (405)
2–Carbines, Cal. .30 M1 A2

c. Opns. Section

(1)–Major, S-3 from Bn. Hq.
1–S/Sgt., Opns. (814)
1–Pvt., Clerk, Typist (405)
3–Carbines, Cal. .30 M1 A2
1–Pvt., Truck driver, light (345)
1–Truck, ¼ T, 4 x 4
1–Drafting and duplicating equipment (E)
1–Sketching equipment (E)

d. Combat Platoon

(1) Platoon Headquarters
1–1st Lieut., Platoon Commander
1–2nd Lieut., Asst. Platoon Commander
1–S/Sgt., Platoon Sgt., (651)
1–T/5, Armorer (511)
4–Carbines, Cal. .30 M1 A2
(2) Anti-Tank Section
3–Sgts., Section Leaders (652)
6–Cpls., AT gunners (610)
2–T/5s, Truck drivers, light (345)
12–Pvts., Amm. carriers (504)
6–Pvts., AT gunners (610)
4–Pvts., Truck drivers, light (345)
2–Pvts., Basic (521)
6–Carbines, Cal. .30 M1 A2
6–Guns, 37 mm, AT
29–Launchers, grenade, M7
29–Rifles, Cal. .30 M1
6–Trucks, 1½ T, 6 x 6, cargo, w/winch
(3) Machine Gun Section
3–Sgts., Section Leaders (652)
6–Cpls., gunners, M. G., heavy (605)
12–Pvts., Amm. carrier (504)
6–Pvts., Gunners, M. G. heavy (605)
2–Pvts., Basic (521)
5–Carbines, Cal. .30 M1 A2
6–Guns, machine, Cal. .50 M2 flexible
24–Launchers, grenade, M7
6–Launchers, rocket, AT 2.36 in., M1
24–Rifles, Cal. .30 M1

e. Communications Platoon

(1) Platoon Headquarters
1–1st Lieut., Commanding Officer
1–Tech. Sgt., Comm. chief (542)
1–S/Sgt., Message Center chief (674)
1–T/5, Clerk, Code (806)
1–T/5, Clerk, Message Center (667)
2–Pvts., Clerks, Code (806)
2–Pvts., Clerks, Message Center (667)
3–Pvts., Messengers (675)
9–Carbines, Cal. .30 M1 A2
3–Rifles, Cal. .30, M1903 A3
3–Launchers, grenade M1
8–Panel Sets
(2) Radio Section
1–S/Sgt., Radio Oper. (766)
1–T/3, Radio Oper. (766)
1–T/4, Radio Oper. (766)
1–T/5, Radio Oper. (766)
5–T/4s, Radio Oper. (776)
5–T/5s, Radio Oper. (776)
6–Pvts., Radio Oper. (776)
2–Pvts., Basic (521)
17–Carbines, Cal. .30 M1 A2
5–Rifles, Cal. .30 M1903 A3
5–Launchers, grenade M1
4–SCR 284
2–SCR 177 B
1–BC–312
(3) Wire Section
1–S/Sgt., Chief lineman, field (644)
2–T/5s, Linemen, field (641)
1–T/4, S. B. Oper. (650)
2–T/5s, S. B. Oper. (650)
1–T/5, Truck driver, light (345)
6–Pvts., Linemen, field (641)
5–Pvts., S. B. Oper. (650)
2–Pvts., Basic (521)
15–Carbines, Cal. .30, M1 A2
5–Rifles, Cal. .30 M1903 A3
5–Launchers, grenade M1
1–Trailer, 1 T, 2-wheel cargo
1–Truck, 2½ T, 6 x 6, cargo w/winch
3–SB BD 71
1–SB BD 72
20–Telephone EE 8
20–Miles wire

12. SHORE COMPANY

a. Headquarters Platoon

(1) Fwd. Echelon Operating Section
1–Captain, Company Commander
1–1st Lieut., 2nd in command and reconnaissance officer
1–1st Sgt. (585)
1–T/5, Clerk, General (055)
2–T/5s, Reconnaissance (744)
1–Pvt., Clerk, General (055)
1–Pvt., Messenger (675) (drives truck)
2–Pvts., Basic (521)
8–Carbines, Cal. .30 M1 A2
2–Rifles, Cal. .30 M1903 A3
2–Launchers, grenade M1
1–Truck, ¼ T, 4 x 4
(2) Fwd. Echelon Comm. & Message Center

1-S/Sgt., Comm. Chief (542)
1-T/5, Clerk, Message Center (667)
4-Pvts., Messengers (675)
1-Pvt., Clerk, Message Center (667)
5-Carbines, Cal. .30 M1 A2
2-Rifles, Cal. .30 M1903 A3
2-Launchers, grenade, M1
(3) Rear Echelon
1-2nd Lieut., Mess, Supply & Motor Officer
2-S/Sgts.
1-Mess (824)
1-Supply (821)
1-Sgt., Motor (813)
1-Cpl., Clerk, Company (405)
1-T/5, Blacksmith (024)
2-T/4s, Cook (060)
1-T/5, Cook (060)
1-T/4, Mechanic, automobile (014)
1-T/5, Toolroom Keeper (242)
2-Pvts., Cook's helpers (521)
1-Pvt., Ln. Agt. (bugler) (drives truck) (503)
1-Pvt., Basic (521)
12-Carbines, Cal. .30 M1 A2
3-Rifles, Cal. .30 M1903 A3
1-Trailer, 1 T, 2-wheel cargo
1-Truck, 2½ T, 6 x 6, cargo w/winch
3-Launchers, grenade M1
1-Camouflage Set "A" (E)
1-Canvas worker set (E)
1-Sketching equipment (E)
(4) Weapons Section
1-2nd Lieut., Weapons Officer
1-Sgt., Weapons (804)
2-Cpls. Gunner, LMG (604)
1-T/5, Truck driver, light (345)
8-Pvts., Gunners, LMG (604)
1-Pvt., Truck driver, light (345)
10-Carbines, Cal. .30 M1 A2
4-Guns, machine, Cal. .30 M1919 A4
4-Launchers, rocket, AT 2.36 in. M1
4-Rifles, Cal. .30 M1919 A3
4-Launchers, grenade M1
1-Truck, ¼ T, 4 x 4
1-Truck, 1½ T, 6 x 6, cargo

b. Pioneer Platoon

(1) Platoon Headquarters
1-1st Lieut., Platoon Commander
1-Tech. Sgt., Construction foreman (059)
1-S/Sgt., Demolition Foreman (533)
1-T/4, Crane Operator (063)
1-T/5, Decontaminating Equipment Oper. (809)
1-T/5, Demolition (027)
3-T/5s, Driver, Tractor, Bulldozer (359)
2-Pvts., Decontaminating equipment Oper. (809)
2-Pvts., Demolition (027)
6-Pvts., Laborer (590)
2-Pvts., Basic (521)
1-Crane, Truck, Mtd.
1-Tractor, Crawler Type, Diesel, w/angledozer 80 DBHP
2-Tractors, Crawler Type, Diesel, w/angledozer 35 DBHP
14-Carbines, Cal. .30 M1 A2
4-Rifles, Cal. .30 M1 A2
4-Launchers, grenade M1
20-Net, Camouflage Twine, 36' x 44'
3-Detector Sets, S C R 625
(2) 3 Sections (each)
1-Sgt., Construction Foreman (059)
1-Cpl., Construction Foreman (059)
1-Pvt. or T/5, Carpenter, Bridge (035)
1-Pvt. or T/5, Carpenter, Construction (035)
2-Pvts., Demolition (027)
3-Pvts., Laborer (590)
3-Pvts., Rigger (189)
1-Pvt., Basic (521)
9-Carbines, Cal. .30 M1 A2
1-Demolition equipment (E)
1-Carpenter equipment (E)
1-Pioneer equipment (E)
4-Rifles Cal. .30 M1903 A3
4-Launchers, grenade M1

c. Utility Platoon

1-2nd Lieut., Platoon Commander
1-S/Sgt., Platoon Sgt (651)
2-Sgts., Construction Foremen (059)
5-Cpls., Construction Foremen (059)
6-T/5s, Truck driver, heavy (245)
60-Pvts., Longshoremen (270)
5-Pvts., Basic (521)
4-Trucks, 2½ T, 6 x 6, amph.
65-Carbines, Cal. .30 M1 A2
15-Launchers, grenade M1
15-Rifles, Cal. .30 M1903 A3

13. BOAT MAINT. BN. HEADQUARTERS
1-Lieut. Colonel, Bn. Commander and Brigade Boat Maintenance Officer
1-Major, Executive Officer
1-1st Lieut., Adjutant
1-Carbine, Cal. .30, M1 A2
2-Pistols, automatic, Cal. .45

14. BOAT MAINT. BN. HQ. DET.

a. Detachment Headquarters

1-S/Sgt., Mess and supply (824)

1–Cpl., Clerk, Company (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–Pvt., Cook's helper (521)
1–Pvt., Orderly (drives truck) (695)
2–Pvts., Basic (521)
1–Pvt., Truck driver, light (345)
7–Carbines, Cal. .30 M1 A2
2–Launchers, grenade M1
2–Rifles, Cal. .30 M1903 A3
1–Trailer, 1 T, 2-wheel cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, cargo, w/winch, 6 x 6

b. Administrative Section

(1)–1st Lieut., adjutant from Bn. Hq.
1–M/Sgt., Sgt. Major (502)
1–Tech. Sgt., Personnel (816)
1–T/4, Clerk, Typist (405)
1–T/5, Clerk, General (055)
1–Pvt., Truck driver, light (345)
4–Carbines, Cal. .30 M1 A2
1–Rifle, Cal. .30 M1903 A3
1–Launcher, grenade M1
1–Truck, ¼ T, 4 x 4

c. Supply Section

1–Captain, Bn. Supply Officer
1–2nd Lieut., Asst. Bn. Supply Officer
1–Tech. Sgt., Supply (821)
1–S/Sgt., Supply (821)
1–T/4, Clerk, stock (324)
1–T/4, Wrecker Oper. (529)
2–T/5s, Clerk, stock (324)
2–T/5s, Truck driver, light (345)
3–Pvts., Clerk, stock (324)
3–Pvts., Truck driver, light (345)
13–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, Cal. .30 M1903 A3
2–Trailers, 1 T, 2-wheel, cargo
1–Truck, ¼ T, 4 x 4
2–Trucks, 1½ T, 6 x 6, cargo
1–Truck, 4 T, 6 x 6 wrecker, w/winch
2–2½ T, 6 x 6, cargo, w/winch

15. BOAT MAINT. COMPANY

a. Company Headquarters

1–Captain, Company Commander
1–M/Sgt., Master Mechanic (342)
1–1st Sgt. (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
2–Cpls.
1–Clerk, Company (405)
1–Truckmaster (668)
1–T/5, Clerk, General (055)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Truck driver, heavy (245)
1–T/5, Truck driver, light (345)
2–Pvts., Cook's helper (521)
1–Pvt., Ln. Agt. (drives truck) (bugler) (503)
3–Pvts., Basic (521)
1–Camouflage Set "A" (E)
1–Power plant, trailer mounted
1–Shop, motorized, machine shop, heavy
1–Trailer, pull, flat-bed, 16 T
1–Trailer, 1 T, 2-wheel cargo
4–Carbines, Cal. .30 M2 A2
4–Rifles, Cal. .30 M1903 A3
4–Launchers, grenade, M1
1–Sign painting equipment
1–Supplementary equipment, Maint. Co.
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo, w/winch
1–Truck, 6 T, 6 x 6, P.M. w/ winch

b. 2 Maintenance Platoons (each)

(1) Platoon Headquarters
1–1st Lieut., Platoon Commander
1–T/5, Driver, tractor, bulldozer (359)
2–Pvts., Truck Driver, light (345)
1–Crane, tractor, 20 T, 20 Ft. boom
1–Tractor, Crawler Type, Diesel w/angledozer, 80 DBHP
3–Carbines, Cal. .30 M1 A2
1–Rifle, Cal. .30, M1903
1–Launcher, grenade, M1
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo w/ winch
1–Trailer, 1 T, 2-wheel
2–Power plant, trailer mounted
1–Charger, battery, 12v, 2000w, gasoline engine driven, portable
1–Boat, Power, Utility
1–Pioneer equipment

(2) Inspection & Utility Section
1–Warrant Officer, in charge
1–S/Sgt., Section Leader (652)
2–Sgts., carpenter, ship, inspector (202)
1–T/5, engineman (081)
1–T/4, Motorboat Oper., Coxswain (314)
1–T/4, Rigger (189)
1–T/5, Rigger (189)
2–Pvts., Rigger (189)
1–Pvt., Seaman (065)
1–Boat, salvage

2–Pvts., Basic (521)
29–Carbines, Cal. .30 M1 A2
10–Rifles, Cal. .30, M1903 A3

18. BRIGADE SIGNAL COMPANY

a. Brigade Signal Officers Section

1–Lieut. Colonel, Brigade signal officer, commands company for operations
1–Warrant Officer, signal, communications
1–Tech. Sgt., Chief clerk (052)
1–T/5, Clerk, General (055)
1–T/5, draftsman (075)
1–Pvt., orderly (bugler) (drives truck) (695)
5–Carbines, Cal. .30, M1 A2
1–Pistol, automatic, Cal. .45
1–Truck, ¼ T, 4 x 4
1–Drafting equipment

b. Headquarters Platoon

(1) Administrative & Mess Section
1–Captain, commands company for administration
1–1st Sgt. (585)
1–S/Sgt., mess (824)
1–Cpl., Clerk, company (405)
2–T/4s, Cook (060)
1–T/5, Cook (060)
1–Pvt., Clerk, General (055)
2–Pvts., Cook's helper (521)
2–Pvts., Truck driver, light (345)
2–Pvts., Basic (521)
11–Carbines, Cal. .30, M1 A2
3–Rifles, U.S. Cal. .30, M1903 A3
3–Launchers, grenade, M1
2–Guns, machine, Cal. .50, Browning M2 HB, flexible
1–Trailer, 1 T, 2-wheel, cargo
1–Truck, ¼ T, 4 x 4
1–Truck, 2½ T, 6 x 6, cargo

(2) Supply and Transportation Section
1–1st Lieut., Supply and Motor Officer
1–S/Sgt., supply (821)
1–S/Sgt., motor (813)
1–T/5, armorer, artificiers (drives truck) (511)
1–T/4, auto mech. (drives truck) (014)
1–T/5, Clerk, supply (835)
1–Pvt., Clerk, stock (324)
1–Pvt., Basic (521)
6–Carbines, Cal. .30, M1 A2
2–Launchers, grenade, M1
2–Rifles, U.S. Cal. .30, M1903 A3
1–Truck, 1½ T, cargo, w/winch
1–Truck, 2½ T, 6 x 6, cargo

c. Maintenance Repair Platoon

(1) Shore Battalion Section
1–2nd Lieut., Radio Officer
1–Tech. Sgt., Section Chief, radio repairman (174)
2–T/3s, radio repairmen (174)
2–T/4s, radio repairmen (174)
3–T/5s, radio repairmen (174) drives truck)
1–Pvt., Basic (521)
8–Carbines, Cal. .30, M1 A2
2–Launchers, grenade, M1
2–Rifles, U.S. Cal. .30, M1903 A3
1–Trailer, 1 T, 2-wheel cargo (carries power unit)
1–Truck, 1½ T, 6 x 6, cargo w/ winch
1–Truck, 2½ T, 6 x 6, cargo spare parts)
1–Truck, Small arms, Repair, M2

(2) Boat Battalion Section
1–Tech. Sgt., Section Chief, radio repairman (174)
1–T/3, radio repairman (174)
1–T/4, radio repairman (174)
1–T/5, radio repairman (174)
3–Carbines, Cal. .30, M1 A2
1–Launcher, grenade, M1
1–Rifle, U.S. Cal. .30, M1903 A3

(3) Boat Company Section
3–T/3s, radio repairmen (174)
3–T/4s, radio repairmen (174)
3–T/5s, radio repairmen (174)
1–Pvt., Basic (521)
7–Carbines, Cal. .30 M1 A2
3–Launchers, grenade, M1
3–Rifles, U.S. Cal. .30, M1903 A3

d. Operations Platoon

(1) Brigade Headquarters Section
1–Tech. Sgt., Chief radio oper. (766)
1–T/3, radio operator (766)
1–T/4, radio operator (766)
1–T/5, radio operator (766)
3–Carbines, Cal. .30 M1 A2
1–Launcher, grenade, M1
1–Rifle, U.S. Cal. .30, M1903 A3

(2) Brigade Headquarters Company Section
1–1st Lieut., Radio Officer
1–2nd Lieut., Wire Officer
1–M/Sgt., Chief Lineman, field (644)
1–M/Sgt., Radio operator (766)
1–Tech. Sgt., M.C. chief (674)
2/Sgts., Asst. M.C. chief (674)
1–Sgt., Chief S.B. operator (537)
1–Sgt., Chief teletypewriter and telegraph operator (237) (236)
3–Sgts., Section Chiefs (652)
1–T/4, Clerk, Code (806)
2–T/5s, Clerk, Code (806)
1–T/4, Clerk, M.C. (667)
2–T/5s, Clerk, M.C. (drives truck) (667)

1–T/4, Installer repairman, telephone (638)
1–T/5, Installer repairman, telephone (drives truck) (638)
5–T/5s, Linemen, field (drives truck) (641)
2–T/3s, Radio operator (766)
2–T/4s, Radio operator (766)
3–T/5s, Radio operator (766)
1–T/4, Radio repairman (174)
1–T/5, S.B. operator (650)
1–T/5, Teletypewriter, operator (237)
1–T/4, Teletypewriter mechanic (239)
1–T/3, Telegraph operator (236)
1–T/4, Telegraph operator (236)
2–T/5s, Telegraph operator (236)
3–Pvts., Clerk, Code (806)
3–Pvts., Clerk, M.C. (667)
2–Pvts., Installer, repairmen, telephone (638)
16–Pvts., Linemen, field (641)
2–Pvts., S.B. operator (650)
1–Pvt., Teletypewriter operator (237)
6–Pvt., Basic (521)

(3) Brigade Headquarters Section
54–Carbines, Cal. .30, M1 A2
19–Launchers, grenade, M1
19–Rifles, U.S. Cal. .30, M1903 A3
2–Trucks, ¼ T, 4 x 4
2–Trucks, 1½ T, cargo, 6 x 6
8–Cable Strips, C C 344
2–Converters, M209
21–Lineman's equipment—TE 21
2–Panel Sets
2–Radio receivers, BC 312
2–Radio sets, SCR 193
2–Radio sets, SCR 284
2–Radio sets, SCR 177 B
1–Telegraph printer E-97
5–Telegraph sets, TG-50
40–Telephones, EE-8-A
1–Switchboard, BD-14
70–Miles of wire

19. MEDICAL BATTALION HEADQUARTERS

1–Lieut. Colonel, Bn. Commander
1–Major, Executive Off. & S-3
1–Captain, Asst. S-3 & Ln. Officer
1–1st Lieut., M.A.C., personnel officer
1–M/Sgt., Sgt. Major (502)
1–T/5, Clerk, Typist (405)
1–T/5, Stenographer (213)
3–Pvts., Light, truck drivers (345)
1–Pvt., orderly (695)
2–Trucks, ¼ T, 4 x 4
1–Truck, ¾ T, C. & R.

20. MEDICAL BN. HQ. DET.

a. Detachment Headquarters Section

1–Captain, M.A.C., detachment Comdr.
1–1st Sgt. (585)
1–S/Sgt., mess & supplies (824)
1–Sgt., motor (813)
1–Cpl., Clerk, Typist (405)
1–T/4, Cook (060)
1–T/5, Cook (060)
1–T/5, Truck driver, light (345)
1–T/5, Mechanic, automobile (014)
1–Pvt., bugler (803)
1–Pvt., Cook's helper (521)
1–Pvt., Truck driver, light (345)
1–Pvt., Basic (521)
1–Trailer, 1 T, 2-wheel water tank, 250 gals.
2–Trucks, 2½ T, 6 x 6

b. Personnel Section

(1)–1st Lieut., M.A.C. from Bn. Hq.
1–Tech. Sgt., personnel (816)
1–T/4, Clerk, General (055)
1–T/5, Clerk, General (055)
1–Pvt., Clerk, General (055)

c. General and Medical Supply Section

1–1st Lieut., M.A.C., Supply Officer
1–Tech. Sgt., supply (821)
1–S/Sgt., supply medical (825)
1–Sgt., supply (821)
1–T/5, Truck driver, light (345)
1–Pvt., checker, receiving and shipping (186)
1–Pvt., Clerk, General (055)
2–Pvts., Truck driver, light (345)
2–Pvts., Basic (521)
3–Trucks, 2½ T, 6 x 6, cargo

d. Motor Maintenance Section

1–2nd Lieut., M.A.C., Motor Officer
1–Tech. Sgt., motor (813)
2–T/4s, mechanic, automobile (014)
1–T/5, mechanic, automobile (drives truck) (014)
2–Pvts., Truck driver, light (345)
1–Pvt., Basic (521)
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/ winch
1–Truck, 2½ T, 6 x 6, wrecker w/winch

21. MEDICAL COMPANY

a. Company Headquarters

1–Major, Company Commander

1–1st Sgt., (585)
2–S/Sgts.
1–Mess (824)
1–Supply (821)
1–Sgt., liaison agent (503)
1–Sgt., motor (813)
1–Cpl., Clerk, Typist (405)
2–T/4s, Cook (060)
2–T/5s, Cook, (060)
1–T/5, Truck driver, light (345)
1–T/5, mechanic automobile (drives truck) (014)
1–Pvt., bugler (803)
2–Pvts., cook's helper (521)
2–Pvts., Truck drivers, light (345)
1–Pvt., Basic (521)
1–Trailer, 1 T, 2-wheel, water tank, 250 gals.
1–Truck, ¼ T, 4 x 4
1–Truck, 1½ T, 6 x 6, cargo, w/ winch
1–Truck, 2½ T, 6 x 6, cargo
1–Truck, 2½ T, 6 x 6, cargo w/ winch
10–Tents, squad M 1942
1–Unit, equip., med. Dept. components only

b. Collecting and Evacuating Platoon

(1) Litter Section
1–1st Lieut., M.A.C., Platoon Comdr.
1–Sgt., Section Leader (652)
1–Cpl., Asst. Section Leader (652)
36–Pvts., Litter bearer (657)

(2) Motor Section
1–2nd Lieut., M.A.C., Section Cmdr.
1–S/Sgt., platoon (651)
1–Sgt., Section Leader (652)
1–Cpl., Asst. Section Leader (652)
2–T/5s, Truck driver, light (345)
6–Pvts., Orderly, ambulance (696)
1–Pvt., Basic (521)
9–Trucks, ¼ T, 4 x 4 (used as ambulance)
7–Pvts., Truck driver, light (345)

(3) Clearing Platoon
5–Captain or 1st Lieut., 1 dental
1–S/Sgt., Platoon (651)
2–Sgts., Medical NCO (673)
1–Cpl., Clerk, admission (055)
1–T/4, Pharmacist (149)
1–T/5, Technician, Dental (855)
2–T/5s, Technician, Medical (409)
1–T/4, Technician, surgical (861)
2–T/5s, Technician, surgical (861)
2–Pvts., Truck driver, light (345)
4–Pvts., Technician, medical (409)
1–Pvt., Technician, sanitary (196)
5–Pvts., Technician, surgical (861)
16–Pvts., orderly, hospital (303)
5–Pvts., Basic (521)
1–Trailer, 1 T, 2-wheel, water tank, 250 gals.
2–Trucks, 2½ T, cargo, 6 x 6

Appendix II

SAMPLE ORDERS AND ANNEXES

1. Explanatory Note.—*a. General.*—This appendix is intended only as an example and guide of annexes and orders that might be prepared by the Engineer Special Brigade and its elements for a shore to shore operation.

b. Map.—A portion of the strategic map is furnished to facilitate study of the orders and annexes.

c. Division Plan.—The following information and details of the division commander's plan are furnished for a better understanding of the orders and annexes in the absence of the division order.

(1) At time of preparation of the brigade order the division and brigade have been assembled at NEW BEDFORD but beaches on which landings are to be made have not been finally selected.

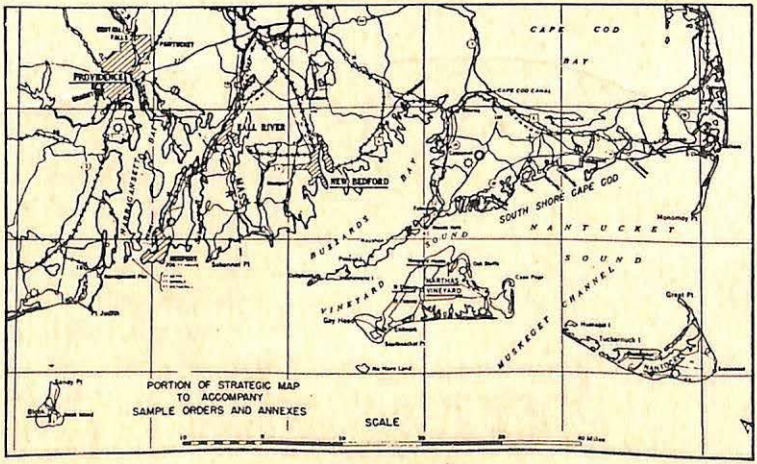
(2) RCT 141 will embark from the WAQUOIT area and capture MARTHA'S VINEYARD.

(3) RCT 142 will embark from W. DENNIS area and capture NANTUCKET ISLAND.

(4) RCT 143 will embark from NEW BEDFORD in floating reserve to land on either island as directed.

(5) Division (less RCT 141 and RCT 142) and resupply operates from NEW BEDFORD.

d. Movement to Embarkation Areas. 535th and 595th Engineer Boat and Shore Regiments will move to Embarkation Areas under orders of their respective Regimental Combat Teams.



e. RCT Plan. At time of preparation of boat and shore regimental order RCT 141 has moved to WAQUOIT area and landing beaches have been selected.

2. Par 3 of Div Fo 14 Referring to 5th Engr Sp Brig.

3. i. 5th Engr Sp Brig (reinforced) supervise Embarkation Point installations, embark, transport, supply and resupply division, and furnish shore services on the hostile beaches until relieved. (Annex 4, Engr Sp Brig Opn).

3. Annex I to Fo 14—Intelligence

3. *Reconnaissance and Observation Missions.*

c. 5th Engr Sp Brig determine changes in tides, currents, weather, and surf conditions and other navigational intelligence in areas about MARTHA'S VINEYARD, NEW BEDFORD, and SOUTH SHORE CAPE COD—NANTUCKET ISLAND, reports daily to Div CP beginning August 13 for subsequent 10 day period; furnish craft for reconnaissance as directed.

4. Brigade Order.

Annex 4 to FO 14
36th Inf Div

Hq 5th Engr Sp Brig
NEW BEDFORD, MASS.
1100 20 July 1943.

FO 8

Maps: U. S. Geological Survey, MASSACHUSETTS, 1:62,500, FALMOUTH, GAYHEAD, NANTUCKET, MARTHA'S VINEYARD, PROVIDENCE Quadrangles or portions thereof; Mosaic SOUTH SHORE CAPE COD, 1:31,680; Mosaic NANTUCKET, 1:20,000 Strategic Map, MASSACHUSETTS, 1:500,000 BOSTON Sheet; U. S. C. and G. S. Charts, 1:80,000, NANTUCKET SOUND and APPROACHES #1209, MARTHA'S VINEYARD to BLOCK ISLAND #1210, and BLOCK ISLAND and APPROACHES #1211.

1. a. BLOCK ISLAND, NANTUCKET, and MARTHA'S VINEYARD recently seized by German forces based on NOVA SCOTIA, are now held by a force estimated as a reinforced regimental combat team consisting of 1 regiment infantry, 2 battalions 88-mm howitzers, 1 battalion 75mm beach guns, 1 battalion 3-inch anti-aircraft guns, 1 company light tanks, 1 light bombardment squadron, and 2 fighter squadrons. Naval elements in these islands consist of 5 cargo vessels of about 5,000 tons, armed with

.50 caliber anti-aircraft machine guns, and 6 motor torpedo boats. Of these forces 1 reinforced battalion landing team, 1 fighter squadron, and 1 light bombardment squadron is estimated to garrison MARTHA'S VINEYARD. The artillery of this landing team is estimated as 2 batteries of 88-mm howitzers. On MARTHA'S VINEYARD, an airfield in the elementary stages of development, but usable, is located north of NORTH TISBURY. NANTUCKET ISLAND is an enemy submarine and air base, garrisoned by the bulk of the remainder of the reinforced regimental combat team. BLOCK ISLAND is lightly garrisoned by riflemen an machine guns protected by wire on beaches. See Intelligence Annex #4.

b. 36th Division (reinforced), supported by naval and air forces, makes a coordinated land, air, and sea attack on MARTHA'S VINEYARD and NANTUCKET, and captures and holds these islands until relieved.

2. a. This brigade:

Attached:

1st Flotilla LCT(5), U. S. N.
5th Flotilla LCT(5), U. S. N.
205th Q M Bn (S)
475th Gasoline Supply Bn (less 2 Cos)
905th Q. M. Bn (Trk) (less 2 Cos)

Supported by:

1st Flotilla, Coasters, U. S. N., supervises Embarkation Point installations, embarks, transports, supplies, and resupplies 36th Inf Div (reinforced) from NEW BEDFORD and SOUTH SHORE CAPE COD to NANTUCKET ISLAND and MARTHA'S VINEYARD, and furnishes far shore services until relieved.

b. Boat Allotment Table—Annex 1.

c. Adm Order No___ to FO No 14, 36th Div, Annex 2.

d. Track Chart — NEW BEDFORD — BEACHES MARTHA'S VINEYARD and NANTUCKET ISLAND, Annex 3—to be furnished.

e. Boat Movement Table for elements under brigade control—Annex 6—to be furnished.

f. D-day and H-hour on dispatch.

3. a. 535th B&S Regt:

Attached:

3 Divs 5th Flotilla LCT (5)

1 Co 205th QM Bn (S)
1 Plat, 475th Gas Sup Bn
1 Co., 265th Bed Bn
1 Co, 365th Boat Maint Bn
Det, 3505th Ord Maint Co
1 Plat, 905th Q M Bn (Trk)

Supported by:

10 Coasters, 1st Flotilla, Coasters, U. S. N. attached to RCT 141 at 0800 July 25, at NEW BEDFORD, MASS.

b. 595th B&S Regt:

Attached:

5th Flotilla LCT(5) (Less 3 Divs)
1 Co, 205th Q M Bn (S)
1 Co (less 1 Plat), 475th Gas Sup Bn
1 Co, 265th Med Bn
1 Co, 365th Boat Maint Bn
1 Co (less 1 Plat), 905th Q M Bn (Trk)
Det, 3505th Ord Maint Co

Supported by:

10 Coasters, 1st Flotilla, Coasters, U. S. N. attached to RCT 142 at 0800 July 25, 1943 at NEW BEDFORD, MASS.

c. 545th B&S Regt (less 4 LCVP's and 2 LCM(3)'s)

Attached:

2 Div (less 3 craft) 1st Flotilla LCT(5)
475th Gas Sup Bn (less 3 Cos)
905th Q M Trk Bn (less 3 Cos)
1 Co 265th Med Bn

(1) Support RCT in floating reserve, embarking from Piers 7 and 8 at NEW BEDFORD, and furnish shore services until relieved.

(2) Release 4 LCVP's and 2 LCM(3)'s to Brigade Control at 0800, July 25, at PIER 8, NEW BEDFORD.

(3) Provide inshore patrol to cover embarkation areas in NEW BEDFORD, and reconnaissance patrols in accordance with S-2 plan.

d. 365th Boat Maint Bn (less 2 Cos attached to 535th and 595th B&S Regts respectively) provide boat maintenance for the 5th Brig (less 535th and 595th B&S Regts) initially at PIER 5, NEW BEDFORD, MASS.

e. 265th Med Bn (less 3 Cos attached to 535th, 545th, and 595th B&S Regts respectively) initially at PIER 4, NEW BEDFORD, prepared to carry out Div Med plan.

f. Q M Hq & Hq Co, vicinity PIER 6, NEW BEDFORD, provide services for Brig in NEW BEDFORD Area as directed.

g. 3505th Ord Maint Co (less dets atchd 535th and 595th B&S Regts respectively) locate mobile repair crews at PIER 5, NEW BEDFORD.

h. Provisional Boat Plat of 4 LCVP's and 2 LCM's, with commander from 545th B&S Regt, released to Brigade control at 0800, July 25 at PIER 8, NEW BEDFORD. Transport Div command group as directed. Upon completion, revert to 545th B&S Regt.

i. 1st Flotilla LCT(5) (less 2 Divs (less 3 craft) atchd to 545th B&S Regt), Commander _____, USN, commanding, transport Div Support Group and be prepared to land any element on any beach or beaches at MARTHA'S VINEYARD or NANTUCKET ISLAND as directed. Upon completion, transport resupply as directed.

j. 5th Flotilla LCT(5) (less 3 Divs) atchd to 595th B&S Regt, and 3 Divs atchd to 535th B&S Regt, at NEW BEDFORD at 0800 July 25, 1943.

k. 205th Q M Bn (S) attach 1 company to each of the 535th and 595th B&S Regts, at 0800 July 25, 1943, at NEW BEDFORD. 205th Q M Bn (S) (less 2 Cos) support Brig by furnishing loading details at NEW BEDFORD, MASS, under the control of Brig Q M (Annex 2, Adm O No.____ to FO 14, 36th Div).

l. 475th Gas Sup Bn (less 2 Cos) attach 1 Plat and 1 Co (less 1 Plat) each to 535th and 595th B&S Regts respectively at 0800 July 25, 1943, at NEW BEDFORD. 475th Gas Sup Bn (less 3 Cos) atchd to 545th B&S Regt at 0800 July 25, 1943 at NEW BEDFORD.

m. 905th Q M Bn (Trk) (less 2 Cos), attach 1 Plat and 1 Co (less 1 Plat) each to 535th and 595th B&S Regts respectively at 0800 July 25, 1943 at NEW BEDFORD. 905th Q M Bn (Trk) (less 3 Cos) atchd to 545th B&S Regt at 0800 July 25, 1943 at NEW BEDFORD.

x. (1) Aircraft warning system—no change.

(2) Observe all precautions to eliminate noise.

(3) Lights prohibited except those essential for navigation and interior illumination.

(4) Daylight movements limited to those essential and to small groups of men and vehicles.

(5) Reconnaissance to be conducted at night and by single craft. Missions coordinated by Brig S-2.

(6) Boat machine guns fire on air or surface craft only when actually attacked.

(7) Radio silence, except for stations now operating until H-hour, or until movement to far shore is discovered.

(8) Civilians, afloat or ashore, found in or near Embarkation Areas to be detained until after H-hour.

(9) Straggler line and coll pts—Beach line on far shore. Established and controlled by shore engineers.

(10) Salvage

(a) Salvage Coll Pts established by shore engrs on far shores.

(b) Unserviceable but salvable vehicles, weapons and equipment to be returned to near shore in empty landing craft.

(c) Salvage Coll Pt at NEW BEDFORD, PIER 9; SOUTH SHORE CAPE COD as directed by RTC 141 and RCT 142.

(11) PW Coll Pts

(a) Far shore—established by shore engrs.

(b) Near shore—CAPE COD AREA—as designated by RCT 141 and 142; NEW BEDFORD—PIER 12.

(12) Traffic control far shore from water's edge to shore dumps by shore engrs.

(13) Watches to be synchronized Naval Observatory time signals 1800 daily.

(14) 75th Meridian Time used.

(15) Coordinating instructions to be prepared for each time beginning Aug. 13 for the subsequent 10 day period.

4. **a. Supply**

(1) Class I (a) Rations

(i) Troops transported to the far shore carry two K-rations on person.

(ii) Kitchens of shore and medical companies to be transported to far shore after H plus 18 hrs to feed shore companies, boat control sections, wounded, prisoners, and attached personnel.

(iii) Personnel of the boat units (less boat control sections) carry 2 K-rations on the person, but mess on near shore as they return thereto.

(b) Water

(i) All personnel carry one full canteen on the person.

(ii) Shore Cos and attached personnel draw water from dumps on the far shore.

(iii) In emergency, boat unit personnel replenish canteen from water breakers in boats. Use of this water for other purposes prohibited. Replenish on each return to the near shore.

(2) Class II

(a) No distribution until after PORTS of NANTUCKET and VINEYARD HAVEN are taken.

(3) Class III (Gasoline and Oil)

(a) All vehicles embark with full tanks and carry 2 full 5 gallon cans, marked for content.

(b) Refill from near and far shore dumps.

(c) Refueling points for boats as designated by respective B&S Regts. Brigade craft refuel at PIER 10, NEW BEDFORD, MASS.

(4) Class IV

(a) Medical resupply on far shore from far shore dumps.

(b) Engineer supplies—as designated by B&S Regts.

(5) Class V

(a) Resupply for far shore units from far shore dumps.

(b) Resupply for boat units under brigade control, PIER 10, NEW BEDFORD, and as designated by 535th and 595th B&S Regts, SOUTH SHORE, CAPE COD.

b. **Evacuation**

(1) Casualties

(a) Collecting-Clearing stations as directed by respective RCT medical plans.

(b) Evacuation.

(i) Initially ambulatory cases only from Aid Sta to Boat Control Section.

(ii) After establishment of Engr Clr Sta from Aid Sta to Engr Clr Sta, to beach, then to near shore.

(2) *Burial*

(a) Far Shore—by organizations.

(b) Near Shore—NEW BEDFORD CEMETERY; SOUTH SHORE CAPE COD—as directed by RCT.

c. **Traffic Control Near Shore**—As directed by tactical commander.

d. **Personnel**

(1) Surplus baggage.

(a) To remain in Embarkation Area under guard, to be moved forward as directed.

(b) Individual equipment—combat packs, gas masks. Tagged rolls to be left in Embarkation Area until after D plus 1 day.

(2) Mail

(a) Final delivery Aug 1—then suspended until further notice.

(3) Strength Reports—to S-1 by 0900 daily as of 2400 previous day.

(4) Replacements—Suspended until further notice.

(5) Furloughs, Passes—Suspended until further notice.

(6) Civilian Population—As directed by Div Comdr.

(7) Miscellaneous.

(a) Near Shore, Div. Hq, PIER 8, NEW BEDFORD, MASS.

(b) Near Shore, Brig Hq, PIER 8, NEW BEDFORD, MASS.

(c) Near Shore, 545th B&S Regt., PIER 7, NEW BEDFORD, MASS.

(d) See Annex 2, Adm O No___ to FO No 14, 36th Div.

5. a. See Index #11 SOI, 36th Div., and Annex 5 Signal.

b. CP's

36th Inf Div: PIER 8, NEW BEDFORD, MASS; afloat, when announced, S-544. (Staff Boat 544).

5th Engr Sp Brig: Same as 36th Inf Div.

545th B&S Regt: PIER 7, NEW BEDFORD, MASS., until D minus one day; afloat when announced, S-122.

535th B&S REGT: PIER 5, NEW BEDFORD, until 0800, July 25, 1943; thereafter to be reported.

595th B&S REGT: PIER 9, NEW BEDFORD, until 0800, July 25, 1943; thereafter to be reported.

By command of Brig. Gen. X.

R
Ex. O

OFFICIAL
Y

S-3

ANNEXES

#1—Boat Allotment Table

#2—Adm O No___ to FO No 14, 36th Div (Omitted)

#3—Track Chart—NEW BEDFORD—BEACHES MARTHA'S VINEYARD and NANTUCKET ISLAND—to be furnished.

#4—Intelligence (Omitted)

#5—Signal (Omitted)

#6—Boat Movement Table for elements under brigade control—to be furnished.

DISTRIBUTION
A

(NOTE: Many details contained in par 4 of Engr Sp Brig order could well be omitted, as a reference to the adm order of the div would cover them. They are included here to show some of the necessary items to be observed. Likewise, many of the items in paragraph 3x usually would be covered in Standing Operating Procedures).

Annex No. 1 to FO 8

BOAT ALLOTMENT TABLE

5th Engr. Sp. Brigade
New Bedford, Mass.
1100 20 July, 1943

Unit to be Moved	Boat & Shore Unit	Craft and Ships				Place to be Made Available	Time to be Assembled	Remarks
		LCVP	LCM(3)	LCT(5)	200 Ton Coasters			
RCT 141	535th B. & S. Regt.	30	30	18	10	Coasters—Providence	Aug. 5, 1943	Supporting coasters to be routed and dispatched by 535th Boat & Shore Controls
						LCT(5) New Bedford	July 25, 1943	Attached
						LCM(3)—Organic	Organic	
						LCVP—Same	Same	
RCT 142	595th B. & S. Regt.	30	30	18	10	Coasters—Providence	Aug. 5, 1943	Supporting coasters to be routed and dispatched by 595th B. & S. Control
						LCT(5)—New Bedford	July 25, 1943	Attached
						LCM(3)—Organic	Organic	
						LCVP—Same	Same	
RCT 143	545th B. & S. Regt.	26	28	9		LCT(5)—New Bedford	July 25, 1943	Attached
						LCM(3) Organic	Organic	
							Same	
Div. Command Group	Prov. Boat Platoon	4	2			Pier 8—New Bedford	July 25, 1943	Brigade Control
Div. Support Group	1st Flot. LCT (5)			27		New Bedford	July 25, 1943	Released to Brig. Control for resupply upon completion landing
Supply Echelon					16	As directed	As directed	Continue resupply until relieved

5. Boat and Shore Regimental Order

ANNEX #6 to FO #12
RCT 141

535th B&S Regt
PIER 4, WAQUOIT BAY, MASS.
0630 5 Aug, 1943.

FO 15
Maps: U. S. Geological Survey, MASSACHUSETTS, 1:62,500, FALMOUTH, GAY HEAD, NANTUCKET, MARTHA'S VINEYARD, PROVIDENCE Quadrangles or portions thereof; Mosaic FALMOUTH, MASSACHUSETTS, 1:31,680; Strategic Map, MASSACHUSETTS, 1:500,000 BOSTON Sheet; U. S. C. & G. S. Chart, 1:80,000, NANTUCKET SOUND and APPROACHES, #1209, and MARTHA'S VINEYARD to BLOCK ISLAND, #1210. Overlays 1 and 2, FO 15, RCT 141.

1. a. BLOCK ISLAND, MARTHA'S VINEYARD and NANTUCKET have recently been seized by a German force estimated as a reinforced regimental combat team, with some air support. Hostile naval elements in these islands consist of 5 cargo vessels of about 5,000 tons, armed with .50 caliber anti-aircraft machine guns and 6 motor torpedo boats. It is estimated that MARTHA'S VINEYARD is garrisoned by 1 reinforced battalion landing team, 1 pursuit squadron, and 1 light bombardment squadron. The artillery of the landing team is estimated as 2 batteries of 88-mm howitzers. An airfield in elementary stages of development but usable is located in the area north of NORTH TISBURY (See Annex #1).

b. (1) The 36th Division (reinf), supported by naval and air forces, makes a coordinated land, sea, and air attack on MARTHA'S VINEYARD and NANTUCKET, capturing and holding these islands until relieved. RCT 141 captures MARTHA'S VINEYARD. RCT 142 captures NANTUCKET. The 36th Division (less RCT 141 and RCT 142) moves to either of the 2 islands.

(2) Air and naval forces execute a preliminary bombardment commencing at H minus 45 minutes and lifting at H minus 5 minutes, naval fires available on call until H plus 60 minutes. Light and dive bombardment aviation in support.

2. a. 535th B&S Regt (atchd to RCT 141):

Attached:

1st, 2nd, and 3rd Divs, 5th Flotilla LCT(5)'s, (18 craft)

Co. A, 205th Q M Bn (S)
1st Plat, Co A, 475th Gas Sup Bn
Co A, 265th Med Bn
Co A, 365th Boat Maint Bn
Det, 3505th Ord Maint Co
1st Plat, Co A, 905th QM Bn (Trk)

Supported by:

10 Coasters, 1st Flotilla, Coasters, U. S. N., supervises Embarkation Point installations, embarks, and transports RCT 141 from WAQUOIT BAY AREA to BEACH BLUE and BEACH GREEN, and furnishes shore services on those beaches until relieved.

b. Boat Allotment Table—Annex #2
c. Embarkation and Debarkation Table—Annex #3
d. Track Charts—Annexes #5 and #6
e. Boat Movement Table—Annex #7
f. Assembly Chart—Annex #8
g. Assembly Table—Annex #9
h. D-day and H-hour on dispatch.

3. a. (1) 1st Bn (3 craft of 1st Div LCT(5) and Co A, 365th Boat Maint Bn, atchd) support RCT 141 by transporting personnel and equipment from PIERS #1, #2, #3 and 4, WAQUOIT BAY AREA to BEACH BLUE and BEACH GREEN.

(2) 12 LCVP's to be made available at BEACH BLUE and at BEACH GREEN at H plus 6 hours as lighters. Upon completion of such duties, revert to 1st Bn. (See Adm. O #12, RCT 141—Annex #4).

(3) Release provisional boat platoon of 3 LCVP and 7 LCM(3) with appropriate commander to regt'l control at 0800 Aug 10 at PIER 4.

b. (1) 2nd Bn support RCT 141 by furnishing shore services on BEACH BLUE and BEACH GREEN.

(2) Supplies to be handled on far shore according to Adm O #12, RCT 141—Annex #4.

(3) Cal. .50 AA guns to be emplaced to furnish AA protection for Embarkation Points until embarked for transportation to far shore.

c. (1) Embarkation Platoon, with 1st Plat, Co A, 905th Q M Bn (Trk) and Co A, 205th Q M Bn (S) atchd, under direction of Ex Officer this Regt, supervise embarkation installations in WAQUOIT BAY and NEW BEDFORD AREAS to include initial and resupply embarkation in accordance with Adm O #12, RCT 141—See Annex #4.

d. (1) 1st Div LCT(5) (less 3 boats atchd 1st Bn), and 2nd Div LCT(5), supported by 10 coasters, 1st Flotilla, Coasters, U. S. N., transport supplies to BEACH BLUE and BEACH GREEN in accordance with Adm O #12, RCT 141—Annex #4. Track Charts (see Annexes #5 and #6).

(2) 3rd Div LCT(5) atchd to Provisional Boat Platoon at 0800, Aug 10 at PIER 4.

e. Provisional Boat Platoon of 3 LCVP's and 7 LCM(3)'s with 3rd Div LCT(5) atchd, transport support echelon RCT 141 as directed.

f. 1st Plat, Co A, 475th Gas Sup Bn, establish DP vicinity PIER #1 WAQUOIT BAY.

g. Co A, 265th Med Bn, see Adm O #12, RCT 141 —Annex #4.

h. Co A, 365th Boat Maint Bn, atchd to 1st Bn at PIER #2, WAQUOIT BAY AREA. 1200 Aug 6.

i. Det, 3505th Ord Maint Co locate repair crew at PIER #4, WAQUOIT BAY AREA.

j. 1st Plat, Co A, 905th Q M Bn (Trk), atchd to Embarkation Plat, vicinity PIER 3 at 1200 Aug 6.

k. Co. A, 205th Q M Bn (S) atchd to Embarkation Platoon vicinity PIER 3 at 1200 Aug 6.

x. (1) Embarkation Plat; 1st, 2nd and 3rd Divs LCT(5); and representatives of CO, 10 supporting coasters coordinate operations with S-4, RCT 141.

(2) Requests for air support to CP RCT 141.

(3) Watches synchronized at 1800 daily, 75th Meridian time.

(4) Other details—SOP and see Adm O #12, RCT 141—Annex #4.

4. Supply

a. Gasoline and Oil—Boats refuel at PIER #1, WAQUOIT BAY AREA.

b. Ammunition: Far Shore dumps and PIER 2, WAQUOIT BAY.

c. OTHER ADMINISTRATIVE DETAILS—SOP and see Adm O #12, RCT 141—Annex #4.

5. a. Index #11 to SOI 36th Div.

b. C.P.'s:

(1) RCT 141 vicinity PIER #4, WAQUOIT BAY AREA, opens 1200 Aug 6, 1943, until closed by direction, thereafter afloat, S-476.

(2) 535th Engr B&S Regt—Same as RCT 141.

(3) 1st and 2nd Bns to be reported.

By order of Colonel A:

B
Lieut. Col., C. E.
Ex

OFFICIAL

C
Major, C. E.
S-3

ANNEXES—

#1—Intelligence (Overlay) (Omitted)
#2—Boat Allotment Table
#3—Embarkation and Debarkation Table
#4—Adm O #12, RCT 141 (Omitted)
#5—Track Charts WAQUOIT—BEACHES BLUE and GREEN
#6—Track Chart—NEW BEDFORD—BEACHES BLUE and GREEN (Omitted)
#7—Boat Movement Table
#8—Assembly Chart
#9—Assembly Table

DISTRIBUTION
"A"

(NOTE: Pars 3x and 4 of this order have been reduced to a minimum by reference to Rct Adm O and by assumed use of SOP. Coordinating details concerning times for a range of ten (10) days from August 14 based on a possible H-hour for each day are omitted).

Annex No. 2 to FO 15

BOAT ALLOTMENT TABLE

535th B&S Regt.
PIER 4, WAQUOIT BAY, MASS.
0630 5 Aug. 1943

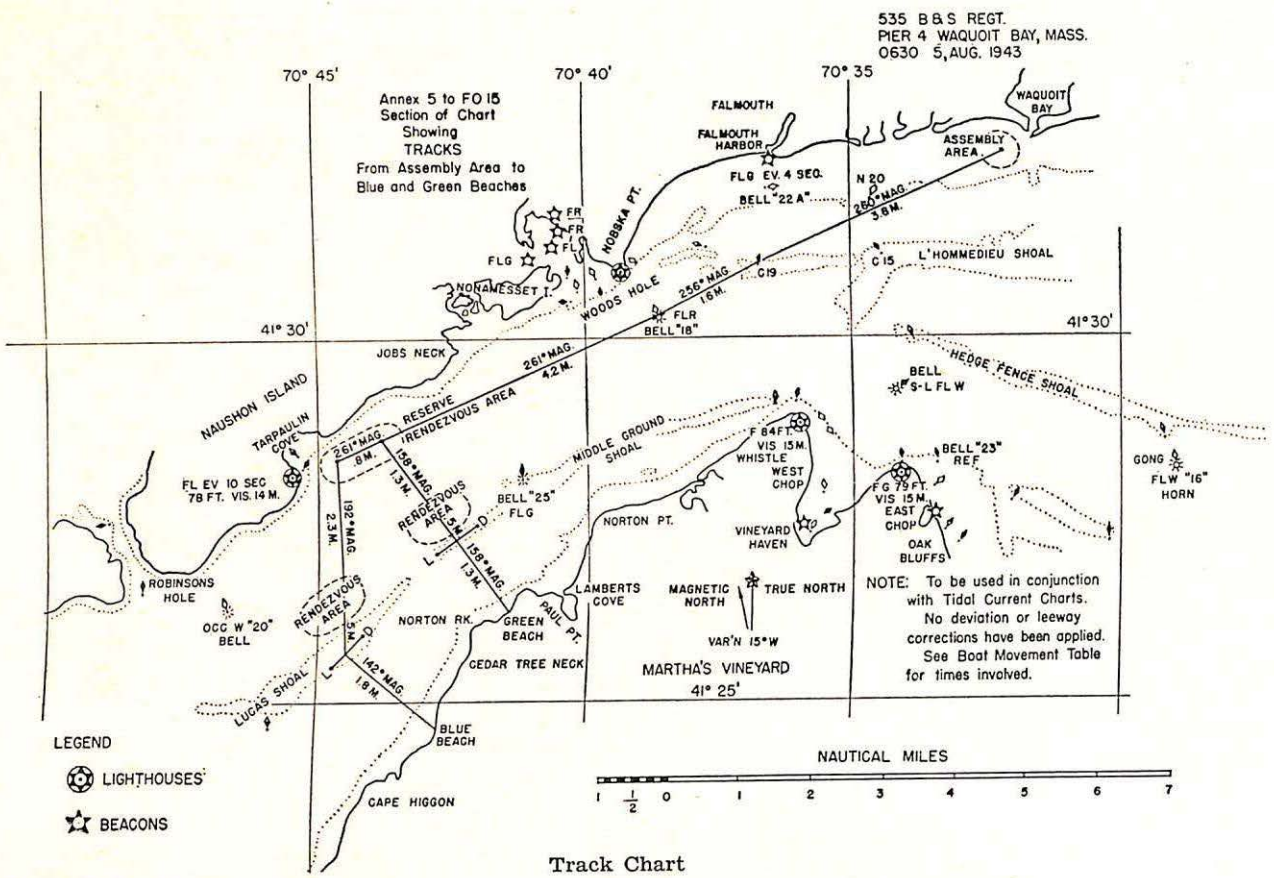
Unit to be moved	Boat Unit	Craft and Ships				Remarks
		LCVP	LCM(3)	LCT(5)	Coaster	
1st BLT 141st RCT	Co. A 535th	28	26	1		Released from support upon completion of landing. 12 LCVP's to be made available as lighters at H plus 6 hrs.
2nd BLT 141st RCT	Co. B 535th	28	26	1		Same as 1st BLT
3rd BLT 141st RCT	Co. C 535th	28	26	1		Released from support upon completion of landing.
Command Group 141st RCT	Co. C 535th	3	5			Same as 3rd BLT
Support Echelon 141st RCT	535th	3	7	6		Same as 3rd BLT
Supply Echelon				9	10	Continue resupply until relieved.

Annex No. 3 to FO 15

EMBARKATION AND DEBARKATION TABLE

535th B&S Regt.
PIER 4, WAQUOIT BAY,
MASS., 0630 5 Aug 43

Combat Unit	Boat Unit	EMBARKATION			DEBARKATION		
		Time	Place	Remarks	Time	Place	Remarks
BLT 1	Co. A 535th B&S REGT	See Appropriate Assembly Table	Pier 1 Waquoit Bay	1. Boat waves will load as designated by instructions of BLT Comdr. 2. Final boat assignment tables and cargo lists will be prepared by BLT Comdr at least eight hours prior to time of loading.	D-day H-hour	Beach Blue	1. Landing diagrams will be prepared by BLT commander in accordance with his tactical plan
BLT 2	Co. B 535th B&S REGT	See Appropriate Assembly Table	Pier 2 Waquoit Bay	As above	D-day H-hour	Beach Green	As above
BLT 3	Co. C 535th B&S REGT	See Appropriate Assembly Table	Pier 4 Waquoit Bay	As above	See Remarks	See Remarks	In floating reserve. Land on orders C. O., RCT 141
Reg'tl Command Group	Co. C 535th B&S REGT	See Appropriate Assembly Table	Pier 3 Waquoit Bay	None	See Remarks	See Remarks	Land on orders C. O., RCT 141
Reg'tl Support Group	535th B&S REGT	See Appropriate Assembly Table	Pier 4 Waquoit Bay		See Remarks	See Remarks	Land on orders C. O., RCT 141
Supply Echelon		D minus five days to D plus five days	New Bedford	None	H plus 6 hours See Remarks	See Remarks	1. One coaster per BLT at H plus 6 hours. 2. Places and times as ordered


535 B&S REGT.
PIER 4 WAQUOIT BAY, MASS.
0630 5, AUG. 1943
Annex 5 to FO 15
Section of Chart
Showing
TRACKS
From Assembly Area to
Blue and Green Beaches
70° 45'
70° 40'
70° 35'
41° 30'
41° 25'
FALMOUTH
FALMOUTH HARBOR
WAQUOIT BAY
ASSEMBLY AREA
FLG EV. 4 SEC.
BELL "22 A"
N 20
260° MAG.
3.6 M.
NOBSKA PT.
FR
FR
FL
FLG
NONAMESSET I.
WOODS HOLE
256° MAG.
1.6 M.
C 19
C 15
L'HOMMEDIEU SHOAL
FLR
BELL "18"
JOBS NECK
261° MAG.
4.2 M.
HEDGE FENCE SHOAL
BELL
FS-L FL W
NAUSHON ISLAND
TARPAULIN COVE
RESERVE
RENDEZVOUS AREA
261° MAG.
.8 M.
159° MAG.
1.3 M.
MIDDLE GROUND SHOAL
F 84 FT.
VIS 15 M.
WHISTLE
WEST CHOP
BELL "23"
REF
GONG
FLW "16"
HORN
FL EV 10 SEC
78 FT. VIS. 14 M.
192° MAG.
2.3 M.
RENDEZVOUS AREA
BELL "25"
FLG
NORTON PT.
VINEYARD HAVEN
F G 79 FT.
VIS 15 M.
EAST CHOP
OAK BLUFFS
ROBINSONS HOLE
OCC W "20"
BELL
RENDEZVOUS AREA
NORTON RK.
GREEN BEACH
LAMBERTS COVE
MAGNETIC NORTH
TRUE NORTH
VAR'N 15°W
PAUL PT.
CEDAR TREE NECK
142° MAG.
1.9 M.
LUCAS SHOAL
MARTHA'S VINEYARD
BLUE BEACH
CAPE HIGGON
NOTE: To be used in conjunction with Tidal Current Charts. No deviation or leeway corrections have been applied. See Boat Movement Table for times involved.
LEGEND
LIGHTHOUSES
BEACONS
NAUTICAL MILES
1 1/2 0 1 2 3 4 5 6 7

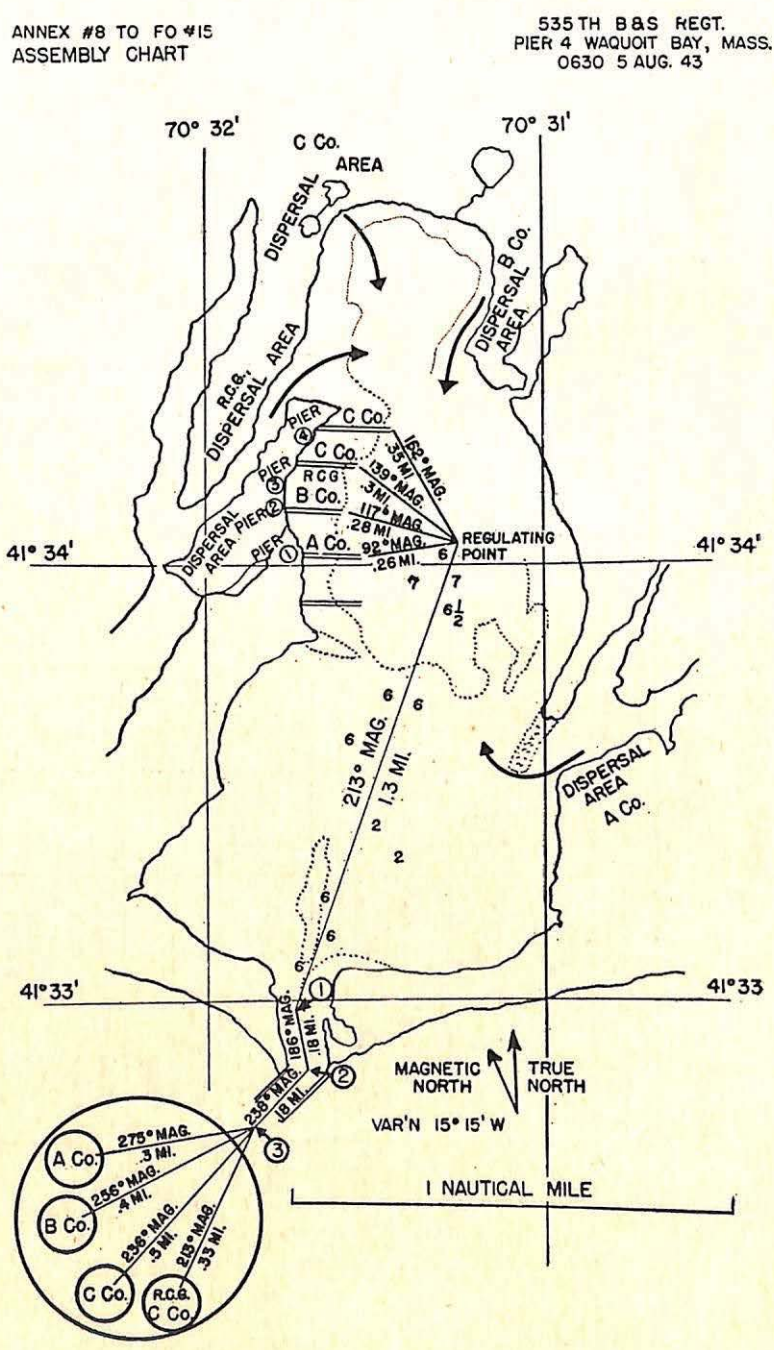
Track Chart

Annex No. 7 to FO No. 15

BOAT MOVEMENT TABLE
for
August 19-20, 1943

535th B & S Regt.
PIER 4 WAQUOIT BAY, MASS.
0630 5 Aug. 1943

Combat Unit	Boat Unit	Departure		Speed	Assembly Area		Speed	R/A Arrive	Cross L/D	Speed	Beach	First Wave Lands
		Area	Time		Arrive	Leave						
BLT 1	Co "A" 535 B&S	Pier 1 Waquoit Bay	0007 D-Day	5 Kn.	0034 D-Day	0039	6 Kn.	0245	0305	6 Kn.	BLUE	0323
BLT 2	Co "B" 535 B&S	Pier 2 Waquoit Bay	0010 D-Day	5 Kn.	0057	0102	6 Kn.	0250	0310	6 Kn.	GREEN	0323
BLT 3	Co "C" 535 B&S	Pier 4 Waquoit Bay	0052 D-Day	5 Kn.	0129	0134	6 Kn.	0310			On Order	On Order
Regt'l Command Group	Co "C" 535 B&S	Pier 3 Waquoit Bay	On Order								On Order	On Order
Regt'l Support Group	535 B&SR	Pier 4 Waquoit Bay	On Order								On Order	On Order
Supply Echelon		New Bedford	D minus 5 days to D plus 5 days									



Assembly Chart

Annex No. 9 to FO No.15

535th B&S Regt.
PIER 4 WAQUOIT BAY, MASS.
0630 5 Aug. 1943

ASSEMBLY TABLE

BLT-1	Speed	Course	1st Wave	2nd Wave	3rd Wave	4th Wave	5th Wave	6th Wave	7th Wave
Lv. E/P	5 kn.	92°	0007 D Day	0013	0019	0025	0031	0037	0043
Lv. R/P	5 kn.	213°	0010	0016	0022	0028	0034	0040	0046
Ar. #1	5 kn.	186°	0026	0032	0038	0044	0050	0056	0102
Ar. #2	5 kn.	238°	0028	0034	0040	0046	0052	0058	0104
Ar. #3	5 kn.	275°	0030	0036	0042	0048	0054	0100	0106
Ar. A/A			0034	0040	0046	0052	0058	0104	0110
BLT-2									
Lv. E/P	5 kn.	117°	0030 D Day	0035	0041	0047	0053	0059	0105
Lv. R/P	5 kn.	213°	0033	0038	0044	0050	0056	0102	0108
Ar. #1	5 kn.	186°	0049	0054	0100	0106	0112	0118	0124
Ar. #2	5 kn.	238°	0051	0056	0102	0108	0114	0120	0126
Ar. #3	5 kn.	256°	0053	0058	0104	0110	0116	0122	0128
Ar. A/A			0057	0102	0108	0114	0120	0126	0130
BLT-3									
Lv. E/P	5 kn.	139°	0059 D Day	0105	0111	0117	0123	0129	0135
Lv. R/P	5 kn.	213°	0103	0109	0115	0121	0127	0133	0139
Ar. #1	5 kn.	186°	0119	0125	0131	0137	0143	0149	0155
Ar. #2	5 kn.	238°	0121	0127	0133	0139	0145	0151	0157
Ar. #3	5 kn.	236°	0123	0129	0135	0141	0147	0153	0159
Ar A/A			0129	0135	0141	0147	0153	0159	0206

REGT'L COMMAND GROUP			
Lv. E/P	5 kn.	162°	*X hour
Lv. R/P	5 kn.	213°	X + 4 minutes
Ar. #1	5 kn.	186°	X + 20 minutes
Ar. #2	5 kn.	238°	X + 22 minutes
Ar. #3	5 kn.	213°	X + 24 minutes
Ar. A/A			X + 28 minutes

REGT'L SUPPORT GROUP			
Lv. E/P	5 kn.	162°	*X hour
Lv. R/P	5 kn.	213°	X + 4 minutes
Ar. #1	5 kn.	186°	X + 20 minutes
Ar. #2	5 kn.	238°	X + 22 minutes
Ar. #3	5 kn.	213°	X + 24 minutes
Ar. A/A			X + 28 minutes

* (X) by later order.

6. Boat Bn Order 1st Bn, 535th B&S Regt
PIER 2 WAQUOIT BAY, Mass
0800 6 Aug 43

FO 18

Maps: U. S. Geological Survey, MASSACHUSETTS 1:62,500, FALMOUTH, GAY HEAD, NANTUCKET, MARTHA'S VINEYARD, PROVIDENCE, Quadrangles or portions thereof; Mosaics, 1:31,680. FALMOUTH MASS; Strategic Map, MASSACHUSETTS, 1:500,000 BOSTON SHEET; U.S.C. and G.S. Chart 1:80,000, NANTUCKET SOUND and APPROACHES, #1209, and MARTHA'S VINEYARD TO BLOCK ISLAND, #1210; Overlays 1 and 2, FO 15, RCT 141.

1. a. MARTHA'S VINEYARD is garrisoned by a German force estimated as 1 reinforced battalion landing team, 1 pursuit squadron, and 1 light bombardment squadron. The artillery of the landing team is estimated as 2 batteries of 88-mm howitzers. An airfield in elementary stages of development but usable is located in the area north of NORTH TISBURY. (See Overlay No. 2). Hostile naval elements in the vicinity consist of 5 cargo vessels of about 5,000 tons, each armed with .50 caliber antiaircraft machine guns and six motor torpedo boats.

b. 535th B&S Regt (reinf) (atchd to RCT 141) embarks, transports, disembarks, supplies, and resupplies RCT 141 on BEACHES BLUE and GREEN, MARTHA'S VINEYARD. (See Opn Map RCT 141—Annex 6).

2. a. This battalion (3 craft, 1st Div 5th Flotilla LCT (5), and Co A, 365th Boat Maint Bn, atchd) supports RCT 141 by embarking, transporting, and debarking it with supporting elements on BEACHES BLUE and GREEN and by transporting and lightering its resupply.

b. Boat Allotment Table—Annex 1.
c. Embarkation and Debarkation Table—Annex 2.
d. Boat Movement Table—Annex 3.
e. Assembly Chart and Table—Annex 4.
f. Track Chart—Annex 5.
g. Opn Map, RCT 141, Annex 6.
h. D-day and H-hour on dispatch.

3. a. (1) Co A (less Boat Control Section) with 1 LCT(5) attached, supports BLT 1, embarking it from

PIER 1, WAQUOIT BAY at 0007 D-day and disembarking it at BLUE BEACH at D-day, H-hour. (See Annex 2).

(2) Release 1 LCVP and 4 LCM(3)'s to battalion control at PIER 2 at 1200—Aug 9; and make 12 LCVP's available at BEACH BLUE at H plus 6 hrs, as lighters.

b. (1) Co B (less Boat Control Section) with 1 LCT(5) attached, supports BLT 2, embarking it from PIER 2, WAQUOIT BAY, at 0300 D-day, and disembarking it at BEACH GREEN at D-day, H-hour (See Annex 2).

(2) Release 2 LCVP's and 3 LCM(3)'s to battalion control at PIER 2 at 1200 Aug 9; and make 12 LCVP's available at BEACH GREEN at H plus 6 hrs as lighters.

c. (1) Co C (less boat control section) with 1 LCT(5) attached, supports BLT 3, embarking it at PIER 4, WAQUOIT BAY, at 0059 D-day and disembarking it as directed by RCT Commander (See Annex 2).

(2) Embark the Regimental Command Group RCT 141 from PIER 3, WAQUOIT BAY, and disembark it as ordered. (See Annex 2).

d. Co A, 365th Boat Maint Bn, operate a repair point initially at PIER 4, WAQUOIT BAY, and be prepared to furnish maintenance on both near and far shore.

x. (1) Boat Control Sections, Cos A, B and C atchd to Cos D, E, and F respectively at 1200 Aug. 7.

(2) Boats fire on hostile boats and aircraft only if fired upon.

(3) Counter-intelligence. No change.

(4) Radio silence except for stations now operating until H-hour or until movement is discovered.

(5) Aircraft and boat warning systems—no change.

(6) Boat assignment tables of BLT commanders will be followed.

(7) Evacuation

(a) Casualties

(i) Near shore clearing station, PIER 3, WAQUOIT BAY.

(ii) Far shore clearing stations, BEACHES BLUE and GREEN.

(iii) One Medical Corpsman to each fourth boat. This boat to be used in evacuation of wounded to near shore.

(b) Burial—Near Shore, PIER 3.

(c) Salvage—Boats and vehicles to PIER 4, WAQUOIT BAY.

(d) Prisoners of War to PIER 3, WAQUOIT BAY.

(8) Watches to be synchronized at Bn Hq at 2000 D minus one day—75th Meridian Time.

4. a. Supply

(1) Rations—2 K on person.

(2) 1 full canteen water on person. In emergency, water will be replenished from breakers in the boats under supervision of coxswain; use of this water for other purposes prohibited and will be replenished on each return to the near shore.

(3) Boats refuel at PIER 1, WAQUOIT BAY. Fuel tanks will be replenished on each return.

(4) Ammunition: PIER 2, WAQUOIT BAY, all types. Boats carry 1 U F.

b. Traffic

(1) Near Shore — by Battalion Patrol Boat Officers.

(2) BEACHES BLUE and GREEN—Respective Boat Control Officers.

c. Personnel

(1) Individual equipment — combat packs and gas masks. Tagged rolls under guard on near shores.

(2) Strength reports; to S-1 daily by 0600 as of 2400 previous day.

5. a. Signal Instructions—SOI, RCT 141.

b. CPs:

(1) 535th B&S Regt opens vicinity PIER 4, WAQUOIT BAY 1200 Aug 6; Afloat S-476.

(2) Bn CP opens vicinity PIER 3, WAQUOIT BAY, 1200 Aug 6; Afloat S-9.

(3) Co A, Near Shore, foot PIER 1, WAQUOIT BAY; Afloat, S-224.

(4) Co B, Near Shore, foot PIER 2, WAQUOIT BAY; Afloat, S-77.

(5) Co C, Near Shore, foot PIER 4, WAQUOIT BAY; Afloat, S-123.

R
Commanding

Official
M
Executive

Annexes—

Annex 1—Boat Allotment Table (Same as Annex 2 to Regt'l Order—not repeated)

Annex 2—Embarkation and Debarkation Table (Same as Annex 3 to Regt'l Order—not repeated)

Annex 3—Boat Movement Table (Same as Annex 7 to Regt'l Order—not repeated)

Annex 4—Assembly Chart and Table (Same as Annexes 8 and 9 to Regt'l Order—not repeated)

Annex 5—Track Chart (Same as Annex 5 to Regt'l Order—not repeated)

Annex 6—Opn Map, RCT 141 (Omitted)

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7. Shore Bn. Order.

2nd Bn., 535th B & S Regt.
PIER 3, WAQUOIT BAY, MASS.
0800 6 Aug 1943

FO 18

Maps: U. S. Geological Survey, MASSACHUSETTS, 1:62,500: FALMOUTH, GAYHEAD, MARTHA'S VINEYARD Quadrangles or portions thereof; Mosaic of FALMOUTH, MASSACHUSETTS, 1:31,680; Overlays 1 and 2, FO 15, RCT 141.

1. a. MARTHA'S VINEYARD is garrisoned by 1 reinforced BLT and light air support; the combat team artillery is estimated as 2 batteries of 88-mm howitzers. An airfield is located north of NORTH TISBURY (see overlay 2). Hostile naval elements consist of 5 cargo vessels of about 5,000 tons armed with .50 caliber machine guns and six motor torpedo boats. Beaches are defended by wires and mines.

b. (1) 535th B & S Regt. (reinforced) (attached to RCT 141) embarks, transports, disembarks, supplies, and resupplies RCT 141 on BEACHES BLUE AND GREEN, MARTHA'S VINEYARD, until relieved (see Operations Map, RCT 141-Annex 3).

(2) 1st BLT embarks at PIER 1, WAQUOIT BAY, and lands on BEACH BLUE at H-hour, D-day.

(3) 2nd BLT embarks at PIER 2, WAQUOIT BAY, and lands on BEACH GREEN at H-hour, D-day.

(4) 3rd BLT embarks at PIER 4, WAQUOIT BAY, and lands at times and places as ordered.

(5) Other elements of RCT 141 embark and land as ordered.

(6) See Annex 1.

2. a. This battalion supports RCT 141 by performing far shore services on BEACHES BLUE AND GREEN.

b. D-day and H-hour on dispatch.

c. Embarkation and Debarkation Table—Annex 1.

d. Assembly Table—Annex 2.

e. Operations Map, RCT 141—Annex 3.

f. Boat Control Sections—As attached by Boat Battalion order.

3. a. D Co. with attachments—attached to 1st BLT at 2000 Aug. 6, 1943, in the vicinity of PIER 1, WAQUOIT BAY.

b. E Co. with attachments—attached to 2nd BLT at 2000 Aug. 6, 1943, in the vicinity of PIER 2, WAQUOIT BAY.

c. F Co. with attachments—attached to 3rd BLT at 2000 Aug. 6, 1943, in the vicinity of PIER 4, WAQUOIT BAY. It will augment the company previously on the beach at which BLT 3 lands.

d. 2nd Battalion (less Cos. D, E, and F) supports RCT 141 Command Group, joining it at PIER 4 at 1200 August 6.

e. Combat Platoon attach 2 squads, 37-mm AT guns and 2 squads .50 caliber AA m.g. each to Cos. D, E, F.

f. Communications Platoon attach 2 radio operators, 2 linemen, and 2 switchboard operators and equipment to each shore company.

x. (1) Companies revert to battalion control when Bn. CP is opened on far shore.

(2) Counter-intelligence. No change.

(3) Radio silence except for stations now operating until H-hour or until movement is discovered.

(4) Aircraft and boat warning systems. No change.

(5) Strict beach discipline on boat far and near shore to be enforced.

(6) Boat Assignment Tables of respective BLT commanders will be followed.

(7) Salvage Collecting Points established by companies on BEACHES BLUE and GREEN. RETURN unserviceable but salvage vehicles and equipment to near shore in returning landing craft as directed.

(8) PW Collecting Points established by companies on BEACHES BLUE and GREEN until relieved by RCT MP's. Evacuate PW Collecting Points to PIER 3, WAQUOIT BAY by returning landing craft.

(9) Traffic—Companies control from water's edge to shore dumps.

(10) Straggler line and Collection Points established by companies at beach line.

(11) Watches to be synchronized at Bn. Hq. at 2000 D minus one day.—75th Meridian Time.

4. a. **Supply.**

(1) Rations

(a) 2 K on person.

(b) Company kitchens transported to the far shore after H plus 18 hrs.

(2) Water

(a) 1 full canteen on person.

(b) Companies and attached personnel draw water from the dumps on the far shore.

(3) Fuel

(a) Vehicles embark with full tanks and 2 full five-gallon cans of gasoline, plainly marked for content.

(b) Tractors with angledozers carry four full five-gallon cans of gasoline, plainly marked for content.

(c) Resupply from dumps.

(4) Ammunition

(a) Each man armed with rifle carry two bandoleers of ammunition.

(b) M.G.s and 37-mm — 2 U.F.

(c) Resupply from far shore dumps.

b. (1) *Casualties.*—To shore engineer clearing station on BEACHES BLUE and GREEN.

(2) Burial by companies.

c. Personnel.

(1) Individual equipment: Combat packs, gas masks. Tagged rolls to be transported when situation permits, after H plus 6 hours.

(2) Surplus baggage — to remain in near shore area.

(3) Strength reports: to S-1 daily by 0600 as of 2400 previous day.

5. a. Signal Instructions—SOI, RCT 141.

b. C.P.'s.

(1) 535th B&S Regt. opens vicinity PIER 4, WAQUOIT BAY, 1200 Aug. 6; Afloat S-476.

(2) Bn. same; afloat with RCT command group.

(3) D Co.—Foot PIER 1, WAQUOIT BAY until 2330 D minus one day—thereafter BEACH BLUE.

(4) E Co.—Foot PIER 2, WAQUOIT BAY until 2400 D minus one day—thereafter BEACH GREEN.

(5) F Co.—Foot of PIER 4, WAQUOIT BAY until 0030 D minus one day—thereafter to be reported.

R
Commanding

OFFICIAL
S
Exec.

ANNEXES

#1—Embarkation and Debarkation Table (same as Annex 3 to Regimental Order—not repeated).

#2—Assembly Table (Same as Annex 9 to Regimental Order—not repeated).

#3—Operations Map RCT 141 (omitted).

DISTRIBUTION
"A"

8. Actions and Orders of Boat Company Commander.

a. The Boat Company commander confers with the BLT commander and the Shore Company commander with whom

he is to work, and with them works out a *Boat Assignment Table,* a *Landing Diagram and Schedule, Cargo Lists,* and such other details as are necessary.

b. He calls his officers together and issues the following orders and instructions:

(1) He calls to their attention the maps, charts, and photographs to be used in the operation, and furnishes them with the latest obliques and vertical photographs available in sufficient numbers so that every coxswain can have an oblique for beach recognition purposes.

(2) He goes over the Boat Battalion order and instructions with his officers, as well as the details he has marked out with the BLT commander to include the *Boat Allotment Table,* the *Track Chart,* the *Assembly Chart* and *Table,* the *Approach Chart* (when necessary), the *Boat Movement Table,* the *Embarkation and Debarkation Table,* the *Landing Diagram,* the *Cargo Lists,* and *Boat Assignment Table.*

(3) He specifies the formation for each phase of the boat movement, if necessary.

(4) He assigns officers as Wave Leaders.

(5) He assigns specific boats and crews to waves and positions according to the BLT Boat Assignment Table, and Landing Diagram.

(6) He assigns specific missions to commanders of command and navigation and patrol boats for the conduct and control of the operation.

(7) He informs them concerning re-fueling, rationing, care of wounded and salvage.

(8) He assigns the second-in-command to control the boat traffic in the Embarkation Area.

(9) He instructs in the use of special navigational aids and signals if any, and if there are none, he so informs his subordinates.

(10) He informs his officers concerning the location of his command post, which after embarkation will be afloat in a command and navigation boat in order to supervise and control the formation.

9. Actions and Orders of Shore Company Commander.

a. The Shore Company commander confers with the BLT commander and the Boat Company commander, and

with them works out a *Boat Assignment Table, Cargo Lists,* and a *Landing Diagram,* insofar as they affect the Shore Company.

b. He makes a preliminary map reconnaissance, based on the plans of operation and tentative dispositions of elements of the battalion landing team. From this he makes tentative selections of shore installations to fit the battalion landing team plan.

c. He calls his officers together, including the attached Boat Control Officer, and issues the following orders and instructions:

(1) He issues the latest information available on the condition of the beach area and furnishes them with the most recent vertical and oblique aerial photographs and information.

(2) He informs them of the general plan of the BLT commander and of his tentative selections for shore installations.

(3) He assigns the Shore Company teams with equipment to craft in accordance with the *Boat Assignment Table.*

(4) He goes over the *Landing Diagram* and *Cargo Lists* with his officers.

(5) He informs his officers of departures from standing operating procedure, if any, including reorganization for resupply.

(6) He gives instructions concerning rations, water, fuel for motor vehicles and tractors, evacuation of casualties, general plan as to prisoners, general plan as to salvage.

(7) He gives information concerning any special signals or signal devices, and changes in signal operating procedure, if any.

(8) He informs them as to his near shore command post and tentative far shore command post, the latter subject to change.

10. Sample Boat Assignment Table and Landing Diagram as prepared by BLT, Boat Company, and Shore Company commanders.

SUGGESTED BOAT ASSIGNMENT TABLE

(Based on Tables of Organization for Infantry Division dated May 1, 1943).

Table is based on Battalion Landing Team consisting of:

1 Battalion, Infantry

1 Battery, Field Artillery, 105 mm Howitzer

1 Platoon, Combat Engineers (from Divisional Combat Engr. Bn.)

1 Platoon, Antitank Company (from Inf. Regt. Antitank Co.)

1 Cannon Platoon, 105 mm (from Hq. Co. Inf. Regt.)

1 Shore Fire Control Party (Navy liaison officer and fire control personnel from F.A. Bn.)

1 Detachment Antiaircraft Automatic Weapons

1 Engineer Boat Company

1 Engineer Shore Company

NOTE: The boat assignment table ordinarily contains less detail as to classification of personnel than is shown here; however, it contains sufficient detail for subordinate commanders to arrange the "boat teams" effectively. Here minute detail is included for instructional and illustrative purposes).

Basics are not shown. Basics available will be distributed in appropriate boats.

WAVE I - ASSAULT

H

BOAT 14 LCVP

COMPANY A
2nd Plat.

Plat. Ldr.	1
Guide	1
Msgr.	1
2 Rifle Squads	24
ENGR. BOAT CO.	
Boat Control Sec.	1
Total	28

BOAT 13 LCVP

COMPANY A
Co. Hq.

Co. Comdr.	1
Msgrs.	2
Armorer Artificer	1
2nd Plat.	
Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
LMG Squad	5
COMBAT ENGR. CO.	
Operating Unit	6
Total	29

BOAT 12 LCVP

COMPANY A
1st Plat.

Plat. Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
Sec. Ldr., LMG	1
1 LMG Squad	5
Msgr., LMG	1
Co. Hq.	
Msgr.	1
Comm Sgt.	1
COMBAT ENGR. CO.	
Operating Unit	6
Total	29

BOAT 11 LCVP

COMPANY A
1st Plat.

Plat. Ldr.	1
Guide	1
2 Rifle Squads	24
Msgr.	1
Total	27

BOAT 18 LCVP

COMPANY B
1st Plat.

Plat. Ldr.	1
Plat. Guide	1
2 Rifle Squads	24
Msgr.	1
Total	27

BOAT 17 LCVP

COMPANY B
1st Plat.

Plat. Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
Sec. Ldr., LMG	1
1 LMG Squad	5
Msgr., LMG	1
Co. Hq.	
Msgr.	1
Comm. Sgt.	1
COMBAT ENGR. CO.	
Operating Unit	6
Total	29

BOAT 16 LCVP

COMPANY B
Co. Hq.

Co. Comdr.	1
Msgrs.	2
Armorer Artificer	1
2nd Plat.	
Sgt.	1
Msgr.	1
1 Rifle Squad	12
Weapons Plat.	
1 LMG Squad	5
COMBAT ENGR. CO.	
Operating Unit	6
	29

BOAT 15 LCVP

COMPANY B
2nd Plat.

Plat. Ldr.	1
Guide	1
Msgr.	1
2 Rifle Squads	24
ENGR. BOAT CO.	
Boat Control Sec.	1
Total	28

WAVE II - SUPPORT
H plus 5

BOAT 23 LCVP

COMPANY D
1st Plat.
- Plat. Ldr. 1
- Msgr. 1
- Inst. Sgt. 1
- Sec. Ldr. 1
- 2 HMG Squads 14

COMPANY A
Hq.
- 1st Sgt. 1

3rd Plat.
- Plat. Sgt. 1
- Msgr. 1
- 1 Rifle Squad 12
- Total 33

BOAT 22 LCVP

COMPANY A
- 2nd in Comd. 1
- Bugler 1

3rd Plat.
- Plat. Ldr. 1
- Msgr. 1
- Guide 1
- 1 Rifle Squad 12

Weapons Plat.
- Plat. Sgt. 1
- Msgr. 1
- 60-mm Squad 5

COMPANY D (HW CO.)
2nd Plat.
- Plat. Sgt. 1
- Sec. Ldr. 1
- 1 HMG Squad 7
- Total 33

BOAT 21 LCVP

COMPANY A
Weapons Plat.
- Plat. Ldr. 1
- Msgr. 1

60-mm Mortar Sec.
- Sec. Ldr. 1
- Msgr. 60-mm 1
- 2 60-mm Squads 10

3rd Plat.
- 1 Rifle Squad 12

COMPANY D
2nd Plat.
- 1 Squad HMG 7
- Total 33

BOAT 26 LCVP

COMPANY B
Weapons Plat.
- Plat. Ldr. 1
- Msgr. 1
- Sec.Ldr. 60-mm 1
- Msgr. 60-mm 1
- 2 60-mm Squads 10

3rd Plat.
- 1 Rifle Squad 12

COMPANY D
1st Plat.
- 1 Squad HMG 7
- Total 33

BOAT 25 LCVP

COMPANY B
- 2nd in Comd. 1
- Bugler 1

3rd Plat.
- Plat. Ldr. 1
- Msgr. 1
- Guide 1
- 1 Rifle Squad 12

Weapons Plat.
- Plat. Sgt. 1
- Msgr. 1
- 60-mm Squad 5

COMPANY D (HW CO.)
1st Plat.
- Plat. Sgt. 1
- Sec. Ldr. 1
- 1 HMG Squad 7
- Total 33

BOAT 24 LCVP

COMPANY D
2nd Plat.
- Plat. Ldr. 1
- Msgr. 1
- Inst. Sgt. 1
- Sec. Ldr. 1
- 2 HMG Squads 14

COMPANY B
Hq.
- 1st Sgt. 1

3rd Plat.
- Plat. Sgt. 1
- Msgr. 1
- 1 Rifle Squad 12
- Total 33

WAVE III - HEAVY WEAPONS
H plus 15

BOAT 34 LCVP

ENGR. SHORE CO.
Hq. Plat.

Capt., CO	1
1st Sgt.	1
T/5 Rec.	1
T/5 Clerk	1
Beach Marking Team (Utility Plat.)	3
M C Men	3
.30 MG Crews	6

SHORE BN HQ CO.
Comm. Plat.

EM	2

Boat Control Sec.

BCO	1
B. C. Sec.	13
Total	32

BOAT 33 LCVP

INF BN HQ & HQ CO
Hq.

Bn Exec O	1

Co. Hq.

Bn S-1 (Co Comdr)	1

Bn Hq Sec

Sgt. Major	1
Scouts	2

Comm. Plat.

Comm. Chief	1
Wire Chief	1
Radio Chief	1
M. C. Chief	1
Clerk, record	1
T & T Lineman	2
Swbd. Oprs.	2
Msgr.	2

Amm. & Pioneer Plat.

Plat. Sgt.	1
Squad Ldr.	1
Amm. Bearers	7
Total	25

BOAT 32 LCVP

COMPANY D
81-mm Mortar Plat.

Plat. Sgt.	1
Sec. Ldr.	1
81-mm Sec.	14
Msgr.	1

Co. Hq.

Recon. & Sig. Sgt	1
Trans. Sgt.	1
Bugler	1
Mech	1

FA BATTERY
Battery Detail

Recon. Off.	1
Radio Opr.	1

COMBAT ENGR. CO.

Plat Ldr.	1
Plat. Sgt.	1
Weapons Sgt.	1
Total	26

BOAT 31 LCVP

COMPANY D
81-mm Mortar Plat.

Sec. Ldr.	1
81-mm Section	14

BN MED SEC

Corp. Med.	1
Aid Men	3

INF BN HQ & HQ CO.
Amm. & Pioneer Plat.

Squad Ldr.	1
Amm. Bearers	7

Shore Fire Control Party

Naval Officer	1
Radio Opr.	1
Telephone Opr.	1
Msgr.	1
Total	31

BOAT 37 LCVP

ENGR. SHORE CO.
Hq. Plat.

Recon. Officer	1
Weapons Officer	1
T/5 Recon.	1
Clerk	1
Beach Marking Team (Utility Plat)	3
M. C. Men	4
.30 MG Crews	5

SHORE BN HQ CO
Comm. Plat.

EM	3
Boat Control Sec	13
Total	32

BOAT 36 LCVP

SHORE FIRE CONTROL PARTY

FA Bn Ln Off	1
Liaison Corp	1
Radio Oprs.	2
Telephone Oprs.	2

Bn Med Sec

Bn Surgeon	1
Staff Sgt., Med.	1
Aid Men	12

INF BN HQ & HQ CO
Amm. & Pioneer Plat.

Amm. Officer	1
Squad Ldr.	1
Amm. Bearers	7
Total	29

BOAT 35 LCVP

COMPANY D
81-mm Mortar Plat.

Plat. Ldr.	1
Sec. Ldr.	1
Instr. Sgt.	1
81-mm Mortar Sec	14

INF BN HQ & HQ CO
Comm. Plat.

Bn Comm Officer	1
T & T Lineman	2
Radio Oprs.	2
Clerk, Record	1

Bn. Med. Sec.

Aid Men	4
Total	27

WAVE IV - RESERVE AND COMMAND

H plus 40

BOAT 44 LCM(3)

ENGR. SHORE CO.
Pioneer Plat.
- 1st Lt. 1
- Bulldozer Opr. 1
- Decon. Eq. Opr. 1
- Demolition Man 1
- Laborers 2

SHORE BN HQ CO
Combat Plat (.50 MG)
- Sgt. 1
- Corp. 1
- Pvts. 3

Med. Det.
- Officers 1
- Aid Men 4

Total 16

Tractor with Angledozer
Road Bldg Material & Equip

BOAT 43 LCVP

COMPANY C
Rifle Plat.
- Plat. Ldr. 1
- 2 Rifle Squads 24
- Msgr. 1

INF BN MED SEC
- 1st Lt. Med. O. 1
- Aid Men 5

Total 32

BOAT 42 LCVP

COMPANY C
Rifle Plat.
- Plat. Ldr. 1
- Msgr. 1
- 2 Rifle Squads 24

Weapons Plat.
- Sec Ldr (60-mm) 1
- 1 60-mm Squad 5
- Msgr. 1

Total 33

BOAT 41 LCVP

COMPANY C
Weapons Plat.
- Plat. Ldr. 1
- Sec. Ldr. (LMG) 1
- 1 LMG Squad 5
- 1 60-mm Squad 5
- Msgrs. 2

Rifle Plat.
- Plat. Sgt. 1
- Plat. Guide 1
- 1 Rifle Squad 12
- Msgr. 1

Total 29

BOAT 48 LCVP

COMPANY C
Rifle Plat.
- Plat. Sgt. 1
- 2 Rifle Squads 24
- Msgr. 1
- 2nd in Command 1
- Armorer Artificer 1

COMPANY D
Co. Hq.
- Co. Comdr. 1
- Msgr. 1
- Armorer Artificer 1

Total 31

BOAT 47 LCVP

COMPANY C
Rifle Plat.
- Plat. Ldr. 1
- Plat. Guide 1
- 1 Rifle Squad 12
- Msgr. 1

Weapons Plat.
- Plat. Sgt. 1
- 1 60-mm Squad 5
- 1 LMG Squad 5
- Msgr. 1

FA BATTERY
Battery Hq.
- Battery Comdr. 1

Battery Detail
- Detail Chief 1
- Scouts 2
- Radio Opr. 1

Total 32

BOAT 46 LCVP

COMPANY C
Co. Hq.
- Company Comdr. 1
- 1st Sgt. 1
- Comm. Sgt. 1
- Msgrs. 3
- Bugler 1

Rifle Plat.
- Plat. Sgt. 1
- Plat. Guide 1
- 1 Rifle Squad 12
- Msgr. 1

INF BN HQ & HQ CO
- Bn. S-3 1
- Bn. S-2 1
- Opns. Sgt. 1
- Intell. Sgt. 1
- Scouts 2
- Trans. Officer 1
- Armorer Artificer 1

Total 30

BOAT 45 LCVP

ENGR. SHORE CO.
Pioneer Plat.
- Dem. Foreman 1
- Decon. Equip. O. 2
- Dem. Men 2
- Laborer 1

SHORE BN, HQ, CO.
Combat Plat (.50 MG)
- Corp. 1
- Pvts. 3

Med. Det.
- Aid Men 5

INF BN HQ & HQ CO
- Bn. Comdr. 1

Co. Hq.
- 1st Sgt. 1
- Bugler 1
- Orderly 1

Comm Plat.
- Radio Oprs. 2
- Msgrs. 2

Bn Hq Sec.
- Scouts 2

Total 25

WAVE V - ANTITANK
H plus 50

BOAT 54 LCM(3)

ANTITANK COMPANY
Antitank Plat.
Plat. Ldr. 1
37-mm Squad 6
COMBAT ENGR. CO.
Operating Unit 6
COMPANY D
81-mm Mortar Plat.
Msgr. (driver) 1
Total 14

1-37mm AT gun
1-3/4 ton truck WC
1-1/4 ton truck

BOAT 53 LCM(3)

ENGR. SHORE CO.
Pioneer Plat.
1 Pioneer Sec. 12
½ Pioneer Sec. 6
Bulldozer Opr. 1
Total 19

Tractor, with angledozer
Road Building Tools and
Equipment

BOAT 52 LCM(3)

ANTITANK COMPANY
Antitank Plat.
Plat. Sgt. 1
Msgr. 1
1 37-mm AT Squad 6
COMPANY D
Co. Hq.
2nd in Command 1
1st Sgt. 1
1st Plat.
Msgr. (driver) 1
Total 11

1-37-mm AT gun
1-3/4 ton truck
1-1/4 ton truck

BOAT 51 LCM(3)

ENGR. SHORE CO.
Pioneer Plat.
Plat. Sgt. 1
Pioneer Sec. 12
½ Pioneer Sec. 6
Bulldozer Opr. 1
Total 20

Tractor, with Angledozer
Road Building Equipment
and Tools

BOAT 59 LCM(3)

ANTITANK COMPANY
Antitank Plat.
37-mm AT Squad 6
Driver 1
Total 7

1-37-mm AT gun
1-3/4 ton truck
1-1/4 ton truck

BOAT 58 LCM(3)

INF BN HQ & HQ CO.
Antitank Plat.
Plat Ldr. 1
37-mm AT Squad 6
Bn Hq Section
Clerk 1
Truckdriver 1
COMBAT ENGR CO.
Operating Unit 6
Total 15

1-37-mm AT gun
1-3/4 ton W/C
1-1/4 ton truck

BOAT 57 LCM(3)

REGT. HQ. CO.
Cannon Plat.
Plat. Ldr. 1
Sec. Ldr. 1
Cannon Squad 7
Instr. Opr. 1
Msgr. 1
Total 11

1-105-mm Howitzer
1-1½ ton truck

BOAT 56 LCM(3)

INF BN HQ & HQ CO.
Antitank Plat.
Plat. Sgt. 1
Msgr. 1
37-mm AT Squad 6
Truckdriver 1
Total 9

1-37-mm gun
1-3/4 ton W/C
1-1/4 ton truck

BOAT 55 LCT(5)

ANTI-AIRCRAFT PLAT.
(40-mm) (AW)
Plat. Ldr. 1
2nd in Command 1
Plat. Sgt. 1
Observer & Spotter 2
Swbd. Oprs. 2
Basics 2
Chauffeurs 2
4 Firing Units 60
INF BN HQ & HQ CO.
Antitank Plat.
1-37-mm AT Squad 6
Total 77

4-40-mm AA Guns
4-2½ ton Prime Movers
2-2½ ton Cargo Trucks
1-37-mm AT Gun
1-3/4 ton Truck

WAVE VI - FIELD ARTILLERY
H plus 70

BOAT 65 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

Battery Detail
- Agent Corp. 1
- Wire Corp. 1
- Radio Opr. 1
- T & T Opr. 3
- Total 16

1-105-mm Howitzer
1-2½ ton truck

BOAT 64 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

Battery Detail
- Swbd. Opr. 1
- T & T Oprs. 2

Headquarters
- Exec. Officer 1
- Instr. Opr. 1
- Total 15

1-105-mm Howitzer
1-2½ ton truck

BOAT 63 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

5th Section
- Sec. Chief 1
- M. G. Corp. 1
- M. Gunner 1
- Asst. M. Gunners 2
- Amm. Handlers 2
- Total 17

1-105-mm Howitzer
2-.50 Cal M. G's.
1-2½ ton Truck

BOAT 62 LCM(3)

FA BATTERY
Firing Battery
- Howitzer Sec. 10

Maintenance Sec.
- Motor Officer 1
- Motor Sgt. 1

FA HQ & SERV BY
- Survey & Instr. Men 3
- Survey & Instr. Sgt. 1
- Total 16

1-105-mm Howitzer
1-2½ ton truck

BOAT 61 LCM(3)

SHORE COMPANY
Utility Plat.
- Plat. Ldr. 1
- EM 10
- DUKW Opr. 1
- Engineman 1

SHORE BN HQ COMPANY
Combat Plat.
- 1 37-mm Crew 5
- Total 18

1-2½ ton Amphibian Truck
1-37-mm gun in Truck

BOAT 69 LCM(3)

FA BN HQ & SERV BTRY
Amm. Train
- Sec. Chief 1
- Amm. Handler 1
- Truck Driver 1
- Total 3

1-2½ ton Truck (Amm)
1-1/4 ton Trailer (Amm)

BOAT 68 LCM(3)

INF REGT HQ CO.
Cannon Plat.
- Plat. Sgt. 1
- Sec. Ldr. 1
- Cannon Squad 7
- Agent Corp. 1
- Total 10

1-105-mm Howitzer
1-1½ ton Truck

BOAT 67 LCM(3)

FA BATTERY
Battery Hq.
- 1st Sgt. 1

Battery Detail
- Bugler (drives truck) 1
- Truck driver 1
- Total 3

1-3/4 ton truck, Com.
1-3/4 ton truck, W C (amm)

BOAT 66 LCM(3)

ENGR. SHORE COMPANY
Utility Plat.
- EM 10
- DUKW Opr. 1
- Engineman 1

SHORE BN HQ. CO.
Combat Plat.
- 1 37-mm Crew 4
- Total 16

1-2½ ton Amphibian Truck
1-37-mm AT Gun in Truck

WAVE VII - AMMUNITION AND SUPPLY
H plus 90

BOAT 74 LCM(3)

COMPANY A
Weapons Plat.
Truckdriver 1
FA BATTERY
Firing Battery
Mech., artillery (driver) 1
ENGR. SHORE COMPANY
Utility Plat.
EM 9
Total 11

1-1½ ton Truck (Amm)
1-1/4 ton Truck

BOAT 73 LCM(3)

FA BATTERY
Battery Detail
Instr. Corp.(Driver) 1
COMPANY D
81-mm Mortar Plat.
Truckdriver 1
Total 2

1-1/4 ton Truck
1-1½ ton Truck

BOAT 72 LCM(3)

FA BATTERY
5th Section
Truckdriver 1
ENGR. SHORE COMPANY
Utility Plat.
EM 9
Total 10

1-2½ ton Truck
1-Trailer (Amm.)

BOAT 71 LCM(3)

ENGR. SHORE COMPANY
Utility Plat.
EM 10
ENGR. COMBAT COMPANY
Plat. Hq.
Toolroom Keeper 1
Oper. Unit
Truck driver 1
Total 12

1-2½ ton Truck, dump
1-1 ton Trailer

BOAT 78 LCM(3)

COMPANY C
Weapons Plat.
Truckdriver 1
COMPANY D
Co. Hq.
Msgr. (driver) 1
Total 2

1-1½ ton Truck (Amm.)
1-1/4 ton Truck

BOAT 77 LCM(3)

FA BATTERY
Battery Detail
T & T Opr (driver) 1
COMPANY B
Weapons Plat.
Truck driver 1
Total 2

1-1/4 ton Truck
1-1½ ton Truck (Amm.)

BOAT 76 LCM(3)

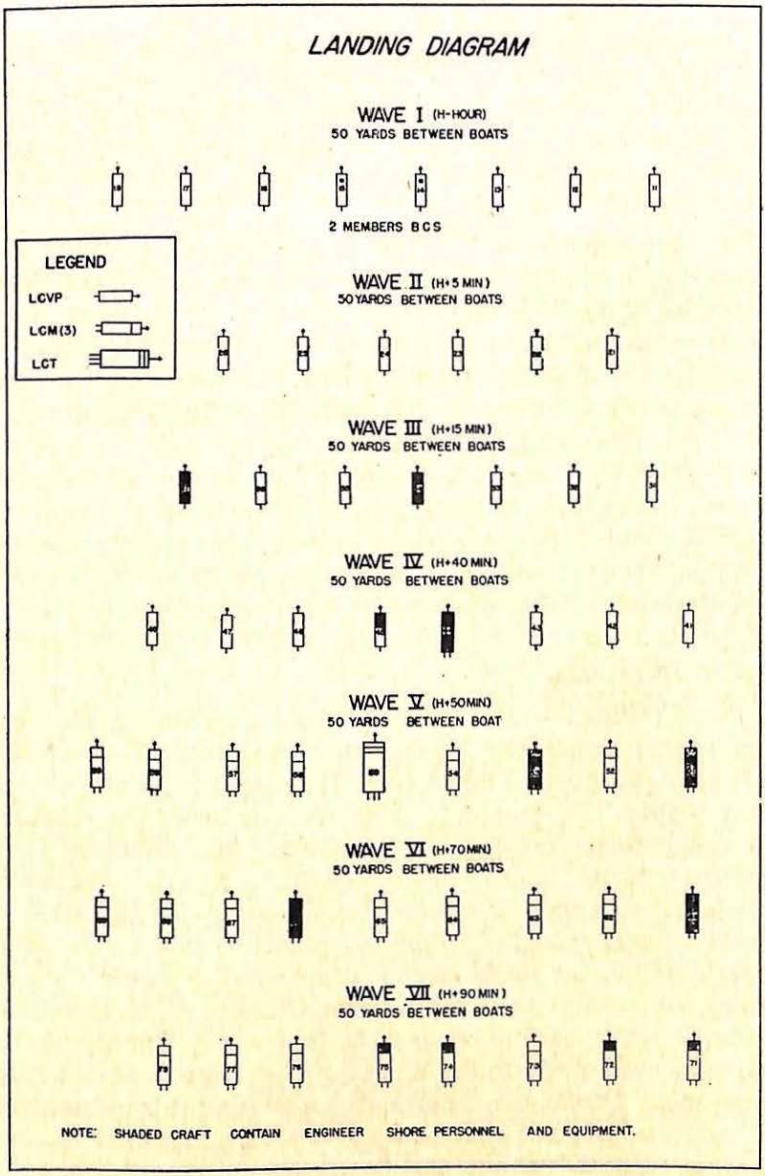
FA BATTERY
Maintenance Sec.
Auto Mech (driver) 1
Total 1

1-2½ ton Truck
1-1 ton Trailer

BOAT 75 LCM(3)

FA BATTERY
5th Section
Truck driver 1
ENGR. SHORE COMPANY
Utility Plat.
EM 10
Total 11

1-2½ ton Truck
1-Trailer (Amm.)


LANDING DIAGRAM
WAVE I (H-HOUR)
50 YARDS BETWEEN BOATS
2 MEMBERS BCS
LEGEND
LCVP
LCM(3)
LCT
WAVE II (H+5 MIN)
50 YARDS BETWEEN BOATS
WAVE III (H+15 MIN)
50 YARDS BETWEEN BOATS
WAVE IV (H+40 MIN)
50 YARDS BETWEEN BOATS
WAVE V (H+50 MIN)
50 YARDS BETWEEN BOAT
WAVE VI (H+70 MIN)
50 YARDS BETWEEN BOATS
WAVE VII (H+90 MIN)
50 YARDS BETWEEN BOATS
NOTE: SHADED CRAFT CONTAIN ENGINEER SHORE PERSONNEL AND EQUIPMENT.

Appendix III

LESSONS LEARNED IN COMBAT

Important lessons have emerged from the amphibian operations conducted by the United Nations in the Solomon Islands and in Africa. Some of these lessons from official reports are included here because they represent experience from the incomparable school of actual combat. They deserve the closest scrutiny.

a. Intelligence.—(1) The importance of weather and hydrographic conditions cannot be overestimated in the planning of an amphibian operation. Using all available aerological information, including synoptic reports and pilot balloon soundings, the Aerological Officer with the expedition was able to issue weather forecasts that were exceedingly accurate.

(2) If conditions are favorable, the use of a submarine or airplane to obtain a profile of the coastline of the landing area weeks prior to the attack is recommended. From the resulting pictures the operating personnel can study an accurate silhouette of the coastline as it will actually appear directly from seaward. Such photographs, properly identified as to beaches and prominent landmarks, will be invaluable aid in landing operations.

b. Training.—(1) The African operation proved that more proficiency in the identification and control of landing craft at night must be developed. Training should stress this. Often under the complete blackout enforced in combat, waves experience difficulty in identifying and following their assigned control boat. Particular difficulty is experienced when small changes of course are necessary as the Line of Departure is approached. One suggestion is that a signalman be stationed in the stern of the control vessel with a dimmed blinker gun. He can signal course changes to a signalman stationed in the leading boat of the first wave. The signal can then be passed on down the line to successive waves in a similar manner. Proficiency in any such device as this in both fair and foul weather requires extensive training, but its importance is such that it should not be neglected.

c. Staff Planning.—(1) There must be the closest possible cooperation between the Engineer Special Brigade and the infantry division staffs. It is equally essential that the same close cooperation exist between the army and navy staffs

when there is naval participation. The great value of having a naval and military staff that knew each other and have worked together as ONE staff was demonstrated. As always, the problem of when to put subordinate commanders and services 'in the picture' arose. On the whole, it is believed better to accept the possibility of leakage by doing it too soon, in order that essential information may be disseminated, than to risk the inevitable confusion which results if insufficient time is available for troops to absorb the order.

d. Operations.—(1) The large scale landings conducted so far by the United Nations definitely prove that our basic concepts and general technique are sound.

(2) The work of the shore party requires highly specialized training. Personnel trained and assigned to such duties should be withdrawn from the landing area at the completion of the operation and held for use in future actions. This is considered to be the only way in which experienced and "battlewise" shore and beach units can be developed.

(3) More attention should be paid to boat salvage. At one beach in Africa a number of landing craft were not salvaged because there was not available a bulldozer or tractor when weather and tidal conditions made salvage operations possible. A tractor (or an alligator tractor) and a bulldozer should be placed at the disposal of the salvage group and should be used exclusively for salvage work, except in emergencies.

(4) Adequate personnel and material must be available for clearing beach and dock areas of supplies. Once on the beach, material and supplies must be quickly unloaded and carried out of the tidal area to prevent loss of cargo and stranding of boats. Items such as gasoline and ammunition must be removed quickly to less exposed places so that they do not become a menace to further operations in the event of enemy bombing attacks.

3008—FORT BELVOIR, VA.—6-7-43—6500

Q. M. C. Form 353 (Old No. 490)
Revised July 26, 1918

LIST OF PAPERS

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3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	WD Adj Gen Office Washington, D.C.	11/29/42	All Concerned	Qualifications of personnel engaged duties cryptographic systems
2	Signal Officer, Cp Edwards, Mass.	3/2/43	EAC	Stereotype Phraseology
3	WD Adj Gen Office Washington, D. C.	3/28/43	All Concerned	Codes and Ciphers for Combined Air-Amphibian Operations
4	WD Office of CE Washington DC	12/21/43	Adj Gen EAC, Cp Edwards, Mass	Semi-annual Report of Registered Documents.
5	SECNAV	2/29/44	ALNAV # 44	Transmission By dispatch mail for Navy Department

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FROM: SECNAV TO: ALNAV # 44

RELEASED BY: FRANK KNOX AIRMAIL - BASEGRAM

DATE: 29 FEBRUARY 1944

D - QNL - A - SNOW 292213/44 RAFT - QIR - QWM - GR 1937 BT

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TIME 0530

(5)

MATERIAL MUST BE CLASSIFIED IN STRICT ACCORDANCE WITH DEFINITIONS AND SAFEGUARDED AS DIRECTED BY EXISTING REGULATIONS AND MODIFICATIONS CONTAINED IN AGREEMENT QUOTED X ALL HANDS ARE ENJOINED TO GRADE AND CLASSIFY MATTER WITH EXACTING CARE IN ORDER TO AVOID OVER-CLASSIFICATION X THIS ORDER EFFECTIVE ØØØ1 ZED 15 MARCH 1944 X CLASSIFIED MATTER ORIGINATED PRIOR EFFECTIVE DATE NEED NOT BE RECLASSIFIED TO ACCORD WITH THIS ORDER, EXCEPT WHEN SUCH MATTER IS STILL CURRENT OR PERPETUATED BY ADDITIONS OR ACCESSIONS ISSUED AFTER EFFECTIVE DATE X COMBINED SECURITY CLASSIFICATIONS AGREEMENT IS QUOTED AS FOLLOWS COLON COMBINED SECURITY CLASSIFICATIONS AGREEMENT NEED FOR CLASSIFICATION PARAGRAPH 1 TO SAFEGUARD OFFICIAL MATTER COMMA IT MUST BE EXAMINED AND GRADED INTO CATEGORIES SO THAT IT MAY BE RECOGNIZED AND ACCORDED PROPER HANDLING X TO GRADE MATTER ACCURATELY AND UNIFORMLY THE FOLLOWING GENERAL POLICY AND DEFINITIONS HAVE BEEN AGREED UPON BY THE COMBINED CHIEFS OF STAFF TO BECOME EFFECTIVE 15 MARCH 1944 X THE DETAILED INSTRUCTIONS BASED THEREON WILL BE ISSUED BY THE SEVERAL SERVICES CONCERNED NOT LATER THAN 1 APRIL 1944 DEFINITIONS PARAGRAPH 2 FOR THE PURPOSE OF THIS AGREEMENT COMMA THE FOLLOWING DEFINITIONS APPLY COLON SUB-PARAGRAPH A DOCUMENTS COLON ANY FORM OF RECORDED INFORMATION SUB-PARAGRAPH B MATERIEL COLON ANY ARTICLE COMMA SUBSTANCE COMMA OR APPARATUS SUB-PARAGRAPH C HANDLING COLON CARE IN TRANSMISSION AND CUSTODY SUB-PARAGRAPH D DISTRIBUTION COLON EXTENT OF ACTUAL OR AUTHORIZED ISSUE OF SPECIFIC MATTER SUB-PARAGRAPH E CRYPTOGRAPHIC SYSTEM COLON CODE AND SLANT OR CIPHER AND INSTRUCTIONS THEREFOR SUB-PARAGRAPH F REGISTERED MATTER PAREN DOCUMENT PAREN COLON ANY CLASSIFIED DOCUMENT OR DEVICE REGISTERED

USUALLY BY NUMBER AND PERIODICALLY ACCOUNTED FOR SUB-PARAGRAPH G ORDER OF BATTLE COLON IMPORTANT DISPOSITIONS OF OUR FORCES WITH THE IDENTITIES OF THE UNITS AND FORMATIONS COMPOSING THOSE FORCES IN OR ADJACENT TO OPERATIONAL THEATERS SUB-PARAGRAPH H MUNITIONS OF WAR COLON ANY ITEM USED FOR WAR CATEGORIES PARAGRAPH 3 OFFICIAL MATTER REQUIRING CLASSIFICATION SHALL BE EXAMINED AND GRADED UNDER ONE OF THE FOLLOWING CATEGORIES COLON TOP SECRET PAREN SIGNAL ABBREVIATION COMMA TOPSEC PAREN COMMA SECRET COMMA CONFIDENTIAL COMMA RESTRICTED PARAGRAPH 4 THE UNITED STATES REGARDS TOP SECRET AS A SUBDIVISION OF SECRET X ON THE OTHER HAND COMMA THE BRITISH REGARD TOP SECRET AS A DISTINCT CATEGORY X ALTHOUGH THIS DIFFERENCE OF VIEW IS RECOGNIZED IT IS IMMATERIAL TO THIS AGREEMENT UNDER WHICH COMPLETE WORKING UNIFORMITY IS OBTAINED BY THE ADOPTION OF AGREED DEFINITIONS EXAMPLES AND RULES OF TREATMENT FOR THE HANDLING OF ALL CLASSIFIED MATTER PARAGRAPH 5 PROVIDING THE FOLLOWING DEFINITIONS AND RULES FOR HANDLING ARE MUTUALLY ACCEPTED AND RIGOROUSLY IMPLEMENTED COMMA THE DIFFICULTIES CAN BE OVERCOME TOP SECRET PARAGRAPH 6 CERTAIN SECRET DOCUMENTS INFORMATION AND MATERIEL THE SECURITY ASPECT OF WHICH IS PARAMOUNT AND WHOSE UNAUTHORIZED DISCLOSURE WOULD CAUSE EXCEPTIONALLY GRAVE DAMAGE TO THE NATION SHALL BE CLASSIFIED TOP SECRET PARAGRAPH 7 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED TOP SECRET COLON SUB-PARAGRAPH A PLANS OR PARTICULARS OF FUTURE MAJOR OR SPECIAL OPERATIONS SUB-PARAGRAPH B PARTICULARS OF IMPORTANT DISPOSITIONS OR IMPENDING MOVES OF OUR FORCES OR CONVOYS IN CONNECTION WITH A ABOVE SUB-PARAGRAPH C VERY IMPORTANT POLITICAL DOCUMENTS DEALING WITH SUCH MATTERS AS NEGOTIATIONS FOR ALLIANCES

AND THE LIKE SUB-PARAGRAPH D INFORMATION OF THE METHODS USED OR SUCCESS OBTAINED BY OUR INTELLIGENCE SERVICES AND COUNTER-INTELLIGENCE SERVICES OR WHICH WOULD IMPERIL SECRET AGENTS SUB-PARAGRAPH E CRITICAL INFORMATION OF NEW AND IMPORTANT MUNITIONS OF WAR COMMA INCLUDING APPROVED SCIENTIFIC AND TECHNICAL DEVELOPMENTS SUB-PARAGRAPH F IMPORTANT PARTICULARS OF CRYPTOGRAPHY AND CRYPTANALYSIS SECRET PARAGRAPH 8 DOCUMENTS COMMA INFORMATION COMMA OR MATERIEL COMMA THE UNAUTHORIZED DISCLOSURE OF WHICH WOULD ENDANGER NATIONAL SECURITY COMMA CAUSE SERIOUS INJURY TO THE INTERESTS OR PRESTIGE OF THE NATION COMMA OR ANY GOVERNMENTAL ACTIVITY THEREOF COMMA OR WOULD BE OF GREAT ADVANTAGE TO A FOREIGN NATION SHALL BE CLASSIFIED SECRET PARAGRAPH 9 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED SECRET COLON SUB-PARAGRAPH A PARTICULARS OF OPERATIONS IN PROGRESS SUB-PARAGRAPH B PLANS OR PARTICULARS OF OPERATIONS NOT INCLUDED UNDER TOP SECRET SUB-PARAGRAPH C INSTRUCTIONS REGARDING THE EMPLOYMENT OF IMPORTANT NEW MUNITIONS OF WAR SUB-PARAGRAPH D ORDER OF BATTLE INFORMATION AND LOCATIONS AND MOVES AFFECTING THE ORDER OF BATTLE SUB-PARAGRAPH E KNOWLEDGE OF ENEMY MATERIEL AND PROCEDURE COMMA THE VALUE OF WHICH DEPENDS UPON THE ENEMY NOT KNOWING THAT WE POSSESS IT SUB-PARAGRAPH F VITAL MILITARY INFORMATION ON IMPORTANT DEFENSES SUB-PARAGRAPH G CERTAIN REPORTS OF OPERATIONS CONTAINING INFORMATION OF VITAL INTEREST TO THE ENEMY SUB-PARAGRAPH H ADVERSE REPORTS ON GENERAL MORALE AFFECTING MAJOR OPERATIONS SUB-PARAGRAPH I IMPORTANT IMPROVEMENTS TO EXISTING MUNITIONS OF WAR UNTIL ACCEPTED FOR SERVICE USE SUB-PARAGRAPH J PHOTOGRAPHS OF VULNERABLE POINTS OR VITAL INSTALLATIONS UNDER OUR CONTROL SUB-PARAGRAPH K CERTAIN DEVELOPMENT

PROJECTS SUB-PARAGRAPH L IMPORTANT CRYPTOGRAPHIC DEVICES UNLESS ASSIGNED TO A LOWER CATEGORY CONFIDENTIAL PARAGRAPH 10 DOCUMENTS COMMA INFORMATION COMMA OR MATERIEL COMMA THE UNAUTHORIZED DISCLOSURE OF WHICH COMMA WHILE NOT ENDANGERING THE NATIONAL SECURITY COMMA WOULD BE PREJUDICIAL TO THE INTERESTS OR PRESTIGE OF THE NATION COMMA ANY GOVERNMENTAL ACTIVITY COMMA AN INDIVIDUAL COMMA OR WOULD CAUSE ADMINISTRATIVE EMBARRASSMENT COMMA OR DIFFICULTY COMMA OR BE OF ADVANTAGE TO A FOREIGN NATION SHALL BE CLASSIFIED CONFIDENTIAL PARAGRAPH 11 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED CONFIDENTIAL SUB-PARAGRAPH A MATTERS COMMA INVESTIGATIONS COMMA AND DOCUMENTS OF A PERSONAL AND DISCIPLINARY NATURE COMMA THE KNOWLEDGE OF WHICH IT IS DESIRABLE TO SAFEGUARD FOR ADMINISTRATIVE REASONS SUB-PARAGRAPH B ROUTINE OPERATIONAL AND BATTLE REPORTS WHICH DO NOT CONTAIN INFORMATION OF VITAL INTEREST TO THE ENEMY SUB-PARAGRAPH C ROUTINE INTELLIGENCE REPORTS SUB-PARAGRAPH D GENERAL MILITARY RADIO FREQUENCY ALLOCATIONS SUB-PARAGRAPH E MILITARY CALL SIGNS COMMA UNLESS SO COLLECTED TOGETHER THAT THEY REVEAL THE ORDER OF BATTLE SUB-PARAGRAPH F METEOROLOGICAL INFORMATION OF DESIGNATED AREAS SUB-PARAGRAPH G UNIT MOVEMENTS OF NON-OPERATIONAL SIGNIFICANCE IN AREAS WITHIN OR ADJACENT TO OPERATIONAL THEATERS SUB-PARAGRAPH H CERTAIN TECHNICAL DOCUMENTS AND MANUALS USED FOR TRAINING COMMA MAINTENANCE AND INSPECTION OF IMPORTANT NEW MUNITIONS OF WAR SUB-PARAGRAPH I GENERAL TACTICAL LESSONS LEARNED AS A RESULT OF OPERATIONS SUB-PARAGRAPH J AERIAL PHOTOGRAPHS OF TERRITORIES UNDER OUR CONTROL IN OR

ADJACENT TO OPERATIONAL THEATERS RESTRICTED PARAGRAPH 12 DOCUMENTS COMMA INFORMATION OR MATERIEL PAREN OTHER THAN TOP SECRET COMMA SECRET COMMA OR CONFIDENTIAL PAREN WHICH SHOULD NOT BE PUBLISHED OR COMMUNICATED TO ANYONE EXCEPT FOR OFFICIAL PURPOSES SHALL BE CLASSIFIED RESTRICTED PARAGRAPH 13 THE FOLLOWING ARE SOME EXAMPLES OF MATTER WHICH NORMALLY WILL BE GRADED RESTRICTED COLON SUB-PARAGRAPH A INFORMATION OF MOVES OF NON-OPERATIONAL SIGNIFICANCE IN AREAS REMOTE FROM THEATERS OF WAR SUB-PARAGRAPH B TRAINING AND TECHNICAL DOCUMENTS FOR OFFICIAL USE ONLY OR NOT INTENDED FOR RELEASE TO THE PUBLIC SUB-PARAGRAPH C CERTAIN ROUTINE DOCUMENTS RELATING TO SUPPLY AND PROCUREMENT SUB-PARAGRAPH D AERIAL PHOTOGRAPHS OF TERRITORIES UNDER OUR CONTROL REMOTE FROM OPERATIONAL THEATERS SUB-PARAGRAPH E PHOTOGRAPHS OF ENEMY COMMA ENEMY OCCUPIED OR DOMINATED AREAS EXCEPT THOSE WHICH REVEAL SECRET SOURCES SUB-PARAGRAPH F STRENGTH RETURNS OF UNITS REMOTE FROM OPERATIONAL THEATERS GENERAL PRINCIPLES GRADING PARAGRAPH 14 THE DESIGNATION OF PERSONS RESPONSIBLE FOR GRADING AND REGRADING WILL BE A FUNCTION OF THE APPROPRIATE AUTHORITIES PARAGRAPH 15 EACH DOCUMENT SHOULD BE GRADED ACCORDING TO ITS OWN CONTENT AND NOT NECESSARILY ACCORDING TO ITS RELATIONSHIP TO ANOTHER DOCUMENT X THIS ALSO APPLIES TO EXTRACTS FROM GRADED DOCUMENTS PARAGRAPH 16 THE GRADING OF A FILE OR GROUP OF PHYSICALLY CONNECTED DOCUMENTS SHALL BE THAT OF THE HIGHEST GRADED DOCUMENT THEREIN RE-GRADING PARAGRAPH 17 IT IS THE OBLIGATION OF ALL AUTHORITIES TO KEEP CLASSIFIED MATTER CONSTANTLY UNDER REVIEW AND TO DOWNGRADE IT AS SOON AS CONDITIONS

PERMIT TRANSMISSION OF CERTAIN MESSAGES BY ELECTRICAL MEANS PARAGRAPH 18 MESSAGES WHICH HAVE BEEN TRANSMITTED OR ARE TO BE TRANSMITTED IN A HIGH-GRADE CRYPTOGRAPHIC SYSTEM OF ONE NATION WILL NOT BE RELAYED OR TRANSMITTED BY THE OTHER NATION BETWEEN POINT OF ORIGIN AND DESTINATION BY ELECTRICAL MEANS IN CLEAR LANGUAGE OR UNAPPROVED QUOTE SCRAMBLER UNQUOTE SYSTEM OR LOW-GRADE CRYPTOGRAPHIC SYSTEM HANDLING PAREN TREATMENT PAREN PARAGRAPH 19 NO PERSON IS ENTITLED SOLELY BY VIRTUE OF HIS RANK OR POSITION TO KNOWLEDGE OR POSSESSION OF CLASSIFIED MATTER X SUCH MATTER IS ENTRUSTED ONLY TO THOSE INDIVIDUALS WHOSE OFFICIAL DUTIES REQUIRE SUCH KNOWLEDGE OR POSSESSION X SECRET PARAGRAPH 2Ø SECRET MATTER WILL BE HANDLED IN ACCORDANCE WITH THE FOLLOWING RULES COLON SUB-PARAGRAPH A THE HIGHEST GRADE CRYPTOGRAPHIC SYSTEMS AVAILABLE WILL BE USED FOR THE TRANSMISSION OF SECRET MESSAGES SUB-PARAGRAPH B SECRET DOCUMENTS WILL BE TRANSMITTED ONLY BY OFFICIALLY DESIGNATED COURIER IN DOUBLE SEALED ENVELOPES COMMA THE INNER ONE BEING MARKED SECRET COMMA AND WILL BE OPENED ONLY BY THE ADDRESSEE OR HIS AUTHORIZED REPRESENTATIVE X WHERE OFFICIALLY DESIGNATED COURIER SERVICE IS NOT AVAILABLE COMMA SECRET DOCUMENTS MAY BE TRANSMITTED BY REGISTERED MAIL SERVICE OR MAIL SERVICE SUPERIOR TO REGISTERED MAIL SERVICE COMMA IF THE SERVICE IS COMPLETELY WITHIN NATIONAL CONTROL SUB-PARAGRAPH C TRANSMISSION AND CUSTODY OF THESE DOCUMENTS AND MATERIEL WILL NORMALLY BE COVERED BY A RECEIPT SYSTEM AND REGISTERED DOCUMENTS OR MATERIEL PERIODICALLY ACCOUNTED FOR X IT IS MANDATORY THAT REGISTERED DOCUMENTS BE COVERED BY A RECEIPT SYSTEM SUB-PARAGRAPH

D SECRET MESSAGES WILL NOT BE TRANSMITTED BY ELECTRICAL MEANS IN THE CLEAR COMMA EXCEPT FOR APPROVED CIRCUITS AND PROVIDING THE RULE IN PARAGRAPH 18 IS NOT VIOLATED X NOTES PAREN ONE PAREN AN APPROVED CIRCUIT IS COLON A CIRCUIT APPROVED BY THE THEATER COMMANDER X THE BRITISH SERVICES QUOTE DEFENCE TELEPRINTER NET-WORK UNQUOTE IN THE UNITED KINGDOM PAREN TWO PAREN THIS ITEM WILL NOT APPEAR IN U S REGULATIONS ON CRYPTOGRAPHIC SECURITY X IT WILL BE RELEASED IMMEDIATELY TO RESPONSIBLE COMMANDERS IN SPECIAL LETTERS OF INSTRUCTIONS SUB-PARAGRAPH E IT IS THE RESPONSIBILITY OF THE COMMISSIONED OFFICER OR EQUIVALENT CIVILIAN HOLDING CUSTODY OF SECRET DOCUMENTS TO ENSURE THAT ALL SECURITY PRECAUTIONS ARE TAKEN TO GUARD SUCH DOCUMENTS AT ALL TIMES X

TOP SECRET PARAGRAPH 21 TOP SECRET MATTER WILL BE HANDLED IN ACCORDANCE WITH THE ABOVE RULES COMMA WITH ADDITIONAL SAFEGUARDS AS FOLLOW COLON SUB-PARAGRAPH A UNDER NO CIRCUMSTANCES WILL SUCH MATTER BE TRANSMITTED BY REGISTERED MAIL SUB-PARAGRAPH B UNDER NO CIRCUMSTANCES WILL MESSAGES SO GRADED BE TRANSMITTED BY ELECTRICAL MEANS IN THE CLEAR SUB-PARAGRAPH C IT IS MANDATORY THAT TRANSMISSION AND CUSTODY OF SUCH MATTER BE COVERED BY A RECEIPT SYSTEM SUB-PARAGRAPH D TOP SECRET DOCUMENTS WILL BE HANDLED ONLY BY PERSONS SPECIFICALLY DESIGNATED AND MAY NOT BE DISCLOSED TO ANY PERSON SOLELY BY VIRTUE OF HIS RANK OR OFFICE

CONFIDENTIAL PARAGRAPH 22 CONFIDENTIAL MATTER WILL BE HANDLED IN ACCORDANCE WITH THE FOLLOWING RULES COLON SUB-PARAGRAPH A CONFIDENTIAL DOCUMENTS COMMA EXCEPT REGISTERED COMMA WILL BE TRANSMITTED BY APPROVED OFFICIAL MEANS X REGISTERED CONFIDENTIAL

DOCUMENTS WILL BE HANDLED IN THE SAME MANNER AS REGISTERED SECRET DOCUMENTS SUB-PARAGRAPH B IT IS THE RESPONSIBILITY OF THE COMMISSIONED OFFICER OR EQUIVALENT OFFICIAL HOLDING CUSTODY OF CONFIDENTIAL DOCUMENTS TO INSURE THAT APPROPRIATE SECURITY PRECAUTIONS ARE TAKEN AT ALL TIMES RESTRICTED PARAGRAPH 23 RESTRICTED MATTER WILL BE HANDLED IN ACCORDANCE WITH THE FOLLOWING RULES COLON SUB-PARAGRAPH A RESTRICTED DOCUMENTS WILL BE TRANSMITTED BY SUCH APPROVED CHANNELS AS WILL PROVIDE A REASONABLE DEGREE OF SECURITY SUB-PARAGRAPH B REGISTERED RESTRICTED DOCUMENTS WILL BE TRANSMITTED TO AND FROM FOREIGN COUNTRIES IN THE SAME MANNER AS REGISTERED SECRET DOCUMENTS BT 292213/44

(5)

COPY/er

SECRET

WAR DEPARTMENT
Office of the Chief of Engineers
Washington

Refer to File No. SPEHS

21 December 1943.

Subject: Semi-annual Report of Registered Documents.

To: The Adjutant General,
Engineer Amphibian Command,
CAMP EDWARDS, MASSACHUSETTS.
Att: Captain A. T. Stafford.

1. Inclosed herewith is Form 34, in duplicate.

2. Please accomplish, date and return original so as to be in this office on 1 January 1944.

For the Chief of Engineers:

/s/ Earl D. Davis
/t/ Earl D. Davis,
1st Lt., Corps of Engineers,
Custodian of Registered Documents.

Inclosure:
Form 34, in dupl.

311.5

1st Ind. DWA/pgf

HEADQUARTERS, ENGINEER AMPHIBIAN COMMAND, Camp Edwards, Massachusetts, 24 December 1943.

TO: Commanding Officer, Army Service Forces Training Center, Camp Cordon Johnston, Florida. (Attn: Capt. John S. Tyler)

Forwarded as a matter pertaining to you command.

For the Commanding Officer:

/s/ Dale W. Ankeney
/t/ DALE W. ANKENEY
2nd Lt., CE
Adjutant

(4)

SECRET

COPY/er

SECRET

2nd Ind. JST:1st

HEADQUARTERS, MOBILIZATION TRAINING COMMAND, ARMY SERVICE FORCES TRAINING CENTER, Camp Gordon Johnston, Florida, 30 December 1943.

TO: The Chief of Engineers, War Department, Washington 25, D. C.

1. Basic communication complied with.

2. There is no further need of subject document and permission is requested to return it to your headquarters.

For the Commanding Officer:

/s/ John S. Tyler
/t/ JOHN S. TYLER
Captain, AGD
Adjutant

1 Incl.
n/c

CE SPEHS 3rd Ind.

Office, Chief of Engineers, Washington, D. C., 14 January 1944.

To: Headquarters, Mobilization Training Command, Army Service Forces Training Center, CAMP GORDON JOHNSTON, FLORIDA.

Permission granted.

For the Chief of Engineers:

/s/ Earl D. Davis
/t/ Earl D. Davis,
1st Lt., Corps of Engineers,
Custodian of Registered Documents.

Inclosure:
w/d

SECRET

(4)

COPY/er

SECRET

2nd Ind. JST:1st

HEADQUARTERS, MOBILIZATION TRAINING COMMAND, ARMY SERVICE FORCES TRAINING CENTER, Camp Gordon Johnston, Florida, 30 December 1943.

TO: The Chief of Engineers, War Department, Washington 25, D. C.

1. Basic communication complied with.

2. There is no further need of subject document and permission is requested to return it to your headquarters.

For the Commanding Officer:

/s/ John S. Tyler
/t/ JOHN S. TYLER
Captain, AGD
Adjutant

1 Incl.
n/c

CE SPEHS 3rd Ind.

Office, Chief of Engineers, Washington, D. C., 14 January 1944.

To: Headquarters, Mobilization Training Command, Army Service Forces Training Center, CAMP GORDON JOHNSTON, FLORIDA.

Permission granted.

For the Chief of Engineers:

/s/ Earl D. Davis
/t/ Earl D. Davis,
1st Lt., Corps of Engineers,
Custodian of Registered Documents.

Inclosure:
w/d

SECRET

(4)

SECRET

4th Ind. DWA/er

HEADQUARTERS, MOBILIZATION TRAINING COMMAND, ARMY SERVICE FORCES TRAINING CENTER, Camp Gordon Johnston, Florida, 24 January 1944.

TO: Chief of Engineers, War Department, Washington 25, D. C.
Attention: Custodian of Registered Documents

Subject registered document is returned in compliance with 2nd and 3rd Indorsements.

For the Commanding Officer:

JOHN S. TYLER
Captain, AGD
Adjutant

1 Incl. added
Copy No. 19 "The Dieppe Raid"
(Combined Report) 1942

Note for file: Receipt of Acknowledgement for subject document in files of MTC Headquarters.

(4)

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RESTRICTED ~~SECRET~~

COPY NO. 87

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 311.5 (3-24-43)OB-S-SPSIS-M

BJS/reh-2B-939 Pentagon

March 28, 1943

~~SECRET~~
Auth: T. A. G.
Initials: LEJ
Date: 3-28-43

SUBJECT: Codes and Ciphers for Combined Air-Amphibian Operations.

TO: The Commanding Generals,
Army Ground Forces;
Army Air Forces;
Army Service Forces.
Commander-in-Chief, Southwest Pacific Area.
The Commanding Generals,
Theaters of Operations;
Defense Commands;
Departments;
Service Commands;
Base Commands;
Military District of Washington.
The Commanding Officers,
Base Commands.

~~G3~~
~~JEAB~~

Classification changed to RESTRICTED
By Authority of ~~the Chief of Engineers~~ A.S.F.
7 Aug 45 (Date)
H. G. King Lt. Col. (Initials) jrb

1. The Combined Communications Board, on February 17, 1943, approved the inclosed tabulation of cryptographic systems suitable for use in various stages of combined air-amphibian operations.

2. In the case of each combined air-amphibian operation, it should be the duty of the senior officer appointed for that operation to select the cryptographic systems to be used.

3. The systems set forth in column three of the tabulation should be used if available; if not available, the selection by the senior officer appointed for the operation of any systems in columns one and two is approved.

4. A statement of these cryptographic systems should be included in the Combined Communication Plan for each operation which, after approval by the Commanders, will form the basis for the detailed communication orders of all services concerned.

5. It is desired that necessary steps be taken to disseminate this information in your Command.

By order of the Secretary of War:

One copy Received

J. A. ULIO,
Major General,
The Adjutant General.

1 Incl.
List of Cryptographic Systems.

(3)

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SECRET

For Copies Furnished, see page 2

SECRET

AG 311.5 (3-24-43)OB-S-SPSIS-M (Cont'd) March 28, 1943.

Copies Furnished:
Divisions of the War Department General Staff.
Combined Chief of Staff.
Chief Signal Officer. (3 cys).
Distribution II.

U. S. SECRET
BRITISH MOST SECRET

SECRET
RESTRICTED

ENCLOSURE A

List of Cryptographic Systems suitable for Combined Air-Amphibian Operations

BRITISH	UNITED STATES	COMBINED
1. During Voyage	1. During Voyage	1. During Voyage
Normal naval ciphers* and codes are used for purely Naval traffic and for any essential Army and R.A.F. traffic which has to be passed to the force while at sea. Distribution:-	Normal naval ciphers (ECM* and/or Strip), are used for purely Naval traffic. Joint ECM* and/or Strips for Joint traffic which has to be passed to the force while at sea. Distribution:-	Normal combined ciphers (Combined Cipher Machine C.C.B.P. -and Naval Cipher No. 3) are used for purely Naval traffic and for any essential Army and Air Force traffic which has to be passed to the force while at sea. Distribution:-
Normal	Normal	Normal
*Where the CCM is not available, and machines of either service are required to be employed for combined use, liaison groups must accompany this equipment. In some instances where the British Type X machine is selected to be used, the Senior British Signal Officer may authorize its employment by U.S.Forces without a liaison group.	*Where the CCM is not available, and machines of either service are required to be employed for combined use, liaison groups must accompany this equipment. In some instances where the British Type X machine is selected to be used, the Senior British Signal Officer may authorize its employment by U. S. Forces without a liaison group.	
2. During Final Approach and Assault.	2. During Final Approach and Assault.	2. During Final Approach and Assault.
(a) Naval code with a special edition of a subtractor table is set aside as main "high-grade" means of communication at this stage. Distribution:-	(a) Hazardous duty strip ciphers, Navy only, plus Joint Army-Navy Strip Ciphers. Distribution:-	(a) Normal combined cipher as in 1 above except special hazardous duty keys will be employed. Distribution:-
Commander-in-Chief, Flag officers, and Major War Vessels.	Commander-in-Chief, Flag officers, and Major War Vessels.	Commander-in-Chief, Flag officers, and Major War Vessels.

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	BRITISH	UNITED STATES	COMBINED
2.	(b) For more rapid communication requiring reasonable security for a limited period a 3 letter hatted code is used, unenciphered, known as Combined Operations Code Part I. Distribution:-	(b) For more rapid communication requiring reasonable security for a limited period the Joint Operations Code either unenciphered or enciphered by 4 random mixed alphabets changed at least daily. The Hagelin Machine. Distribution:-	(b) For more rapid communication requiring reasonable security for a limited period, either Combined Operations Code Part I unenciphered or Joint Operations Code, (enciphered by means of 4 random mixed alphabets changed at least daily), is suitable. Distribution:-
	All ships, Main and sub-beach signal stations, Headquarters down to battalions, R.A.F. formation Headquarters and Stations. (point-to-point).	Down to minor war vessels, All Marine activities down to battalions, Army Headquarters down to battalions, Down to Army Air Force Squadrons.	Down to minor war vessels, Main and sub-beach signal stations, Marine Headquarters down to battalions, Army Headquarters down to battalions, Down to Air Force Squadrons.
	(c) It is the intention to use plain language considerably in the assault in the interests of speed temporary cover being obtained by the use of code words for important places, names, and references. These code words are included in operational order.	(c) It is the intention to use plain language considerably in the assault in the interests of speed, temporary cover being obtained by the use of code words for important places, names and references. These code words are included in operation orders.	(c) It is the intention to use plain language considerably in the assault in the interests of speed, temporary covering being obtained by the use of code words for important places, names, and references. These code words are included in operational order.
	(d) For reconnaissance and air support during the assault stage a non-confidential code is used unenciphered for brevity and standardization, and is known as Combined Operations Code Part II. Distribution:-	(d) For reconnaissance and air support during the assault stage the Joint Operations Code unenciphered and/or the Hagelin Machine is used. Distribution:-	(d) For reconnaissance and air support during the assault stage either Combined Operations Code, Part II or Joint Operations Code unenciphered. Distribution:-

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BRITISH	UNITED STATES	COMBINED
2. All ships, Main and sub-beach signal stations, Headquarters down to Company F.O.O.'s, R.A.F. Formation Headquarters and Stations Aircraft.	2. Down to minor war vessels, Army down to battalions headquarters, Naval gunfire liaison parties, Army Air Force down to Squadrons, Aircraft.	2. Down to minor war vessels, Down to main and sub-beach signal stations, Down to battalion headquarters, Naval gunfire liaison parties, Down to Company F.O.O.'s, R.A.F. Formation Headquarters and Stations, A.A.F. down to Squadrons, Aircraft.
3. <u>After Establishment of Army Ashore</u>. Normal Joint interservice communications. (a) Type X with interservice settings. Standby: Interservice Cipher (4 figure book with subtractor tables). Distribution:- Navy shore authorities only, Army down to Divisions, R.A.F. down to established R.A.F. Stations. (b) Interservice Code (3 figure book with subtractor tables). Distribution:-	3. <u>After Establishment of Army Ashore</u>. Normal Joint interservice communications. (a) Joint ECM. Standby: Joint Strips. Distribution:- Flag officers and above (afloat and ashore), Army down to Divisions, Army Air Force down to Commands. (b) Joint Operations Code (enciphered by 4 random mixed alphabets changed at least daily.) Joint Hagelin Machine. Distribution:-	3. <u>After Establishment of Army Ashore</u>. Normal Combined interservice communications. (a) Combined Cipher Machine (C.C.B.P.-). Standby: Combined Strip Cipher System (C.C.B.P.-). Distribution. Flag officers and above (afloat and ashore), Army down to Divisions, R.A.F. down to established R.A.F. Stations, Army Air Force down to Commands. (b) <u>Either</u> Interservice Code with subtractor tables, <u>or</u> Joint Operations Code (enciphered by means of 4 random mixed alphabets changed daily). Distribution:-

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BRITISH	UNITED STATES	COMBINED
3. Navy down to Destroyers, Corvettes and any other craft which may require to communicate with Army or R.A.F., Army down to Brigades, R.A.F. down to R.A.F. Stations and detached squadrons (for point-to-point use.)	3. Down to minor war vessels, Army down to Battalion, Army Air Force down to Squadrons (for point-to-point use.)	3. Down to minor war vessels, Army down to Battalion (US or Brigade (Br) Air Force down to Squadrons (for point-to-point use.)
(c) Air-to-Ground and Air-to-Sea:	(c) Air-to-Ground and Air-to-Sea:	(c) Air-to-Ground and Air-to-Sea: Any of the following may be used:
Syko or REKOH for interservice use, which is expected to be small, Normal R.A.F. codes for communication with R.A.F. ground stations, e.g. Bomber Code Book.	Hagelin Machine,	Bomber Code Book, Joint Operations Code (unenciphered), Air-Ground Liaison Code, or REKOH for interservice use.

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OFFICE OF THE SIGNAL OFFICER

Camp Edwards, Mass.

Date MARCH 2, 1943

TO: E A C

FROM: CRYPTOGRAPHIC SECURITY OFFICER, CAMP HEADQUARTERS.

FOLLOWING INFORMATION IS FORWARDED YOU FOR FUTURE REFERENCE.

The ~~attached message is being returned to the originator to be re-written~~.

The rules of safeguarding cryptographic security, which are checked below, are being violated:

* 1. Not Classified as to, SECRET, CONFIDENTIAL, RESTRICTED. (Reference AR 380-5 Par. 36)

* 2. Using stereotype phraseology at the beginning or ending of the message. (Reference AR 380-5 Par. 37 B)

* 3. Using unnecessary conjunctions, prepositions and articles, or other unnecessary words. (Reference AR 380-5 Par. 37 C)

* 4. Punctuation not spelled out and not kept to minimum. (Reference AR 380-5 Par. 37 E and Ltr. AG 311.5 (9-1-42) MS-B-M Par. 4 E)

* 5. Numbers not written as Cardinal numbers. (Reference Ltr. AG 311.5 (9-1-42) MS-B-M Par. 4 G)

6. IT IS RESPECTFULLY REQUESTED THAT CLASSIFIED MESSAGES BE WRITTEN AS BRIEFLY AS POSSIBLE WHENEVER PRACTICABLE.

* DENOTES OCCURENCE IN YOUR MESSAGE.

WILLIAM W. SMITH
Captain, Signal Corps
Cryptographic Security Officer

311.5

(2)

RESTRICTED

RESTRICTED

OFFICE OF THE SIGNAL OFFICER

Camp Edwards, Mass.

SUBJECT: STEREOTYPE PHRASEOLOGY.

Stereotyped phraseology will be avoided at all times. It must be kept in mind that any standardized phraseology tends to become stereotyped and the habitual use of any particular words as beginnings and endings must be avoided. The following is a list of words and phrases which, through use, have become stereotyped, and must not be used at the beginning or ending of classified messages:

ACKNOWLEDGE
ADVANCE
ADVISE
ATTENTION
CITE
CONFIRM
DEPART
* END
END OF MESSAGE
ENEMY
FOLLOWING
FOR
FROM
IN REPLY
NUMBERS "ONE", "TWO", "THREE", ETC.
OUR
PARAPHRASE
PERIOD
PLEASE
RECEIPT
RECEIVED
RECOMMEND
REFER
* REFERENCE
REPORT
REPLY
REQUEST
REQUESTED
RERAD
REURAD, ETC.
SIGNED (INCLUDING NAME)
STOP
TITLES
TRAIN
YOURS

THE EXAMPLES WITH A CHECK MARK ALONGSIDE ARE BEING USED BY YOU IN THE ATTACHED MESSAGE.

RESTRICTED

(2)

Classification changed to RESTRICTED
By Authority of the Chief of Engineers
7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jch

IMMEDIATE ACTION
RESTRICTED

SECRET

COPY NO._____

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 311.5 (11-26-42)OB-S-B-M

November 29, 1942.

SUBJECT: Policy with respect to qualifications of personnel engaged in duties connected with the prescribed cryptographic systems.

SECRET
Auth: T. A. G.
Initials
Date: 11-29-42

TO: The Commanding Generals,
Army Ground Forces;
Army Air Forces;
Services of Supply;
Departments
Armies
Service Commands; Posts; Camps; Stations;
The Chief of the Armored Force

Letter, AG 311.5(3-28-42)M-B-M, April 3, 1941, and amendment thereto, AG 311.5(8-24-42)MS-B-M, August 30, 1942, subject: Policy with Respect to Qualifications of Personnel Engaged in Duties Connected-with the Prescribed Cryptographic Systems, is rescinded.

By order of the Secretary of War:

/s/ J. A. ULIO
Major General
The Adjutant General

COPIES FURNISHED:
The Chief Signal Officer
The Divisions of the War Department
General Staff.

(1)

SECRET

RESTRICTED
IMMEDIATE ACTION

255

Engr. Amf. Com

RESTRICTED

SECRET

SPKAO 311.5 1st Ind. /a1

Headquarters First Service Command, Office of the Commanding General, 808 Commonwealth Avenue, Boston, Massachusetts, December 5, 1942. TO: Commanding Officers, All Posts, Camps, and Stations.

For your information and guidance.

By Command of Major General MILES:

/s/ ALEXANDER S. EDMONSTON
Lt. Colonel, Signal Corps
Asst Chief, Communications Maintenance Sec.

DISTRIBUTION
G
Copies also sent to
Exempted Stations.

311.5 2nd Ind. ECE/hps/lf

Hq. Camp Edwards, Mass., December 8, 1942. TO: All Units, Camp Edwards, Mass.

For your information and guidance.

By order of Colonel SMITH:

Edgar C Eibel

EDGAR C. EIBEL
2nd Lieut., CAC
Asst. Adjutant

DISTRIBUTION
E plus Personnel and Sig. Off.

RESTRICTED

SECRET

(1)

Q. M. C. Form 853 (Old No. 490)
Revised July 26, 1918

LIST OF PAPERS

File under No. 311.3 Telephone Converstions ~~(SECRET)~~ ~~SECRET~~

RESTRICTED

3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	Hq EAC Cp Edwards	3/17/43	EAC, Chief of Staff Cp Edwards	Reports on various calls made by M. V. Pothier, Lt Col.
2	Hq FSC	11/24/43	All Concerned	Telephone Conversation of Capt. Facey, FSC and Major Freeman

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

RESTRICTED

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~ COPY

Classification changed to RESTRICTED by Authority of ~~the Chief of Engineers~~ A.S.F.

~~419~~

370.3

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
CAMP EDWARDS, MASSACHUSETTS 7 Aug 45 (Date) H. G. King Lt. Col. (Initials) jrb

March 17, 1943

To: The Chief of Staff, Engineer Amphibian Command, Camp Edwards, Mass.

1. The following report on results of various calls made by me on this date in Washington is submitted for your information.

2. Office of the Chief of Engineers:

a. Lt. Col. Hamilton reports that T/O's for Amphibian Brigade should be out next week, but that T/E's can not possibly be published in time to help the 3rd Brigade. He offers as a solution and I concur with him, that we take necessary steps to include in the movement order of the 3rd Brigade a special list of equipment which will be in effect the present tentative T/E's plus all other special equipment which we determine that should have and less the equipment which General Ogden considers excess. In this connection, you will recall that Col. McGinley will require us to report when the 3rd Brigade is ready for movement.

b. No information in the Chief of Engineers Office on priority of 3rd Brigade. I will try to trace down at Carrabelle.

c. Reference dry dock and 30 ton crane to SWPA, these can be included in the special list referred to in 1a above.

d. Major Hanger has just informed me that seahorse insigna are set up to be distributed as follows:

April 30th and May 31st - 55,000
Overseas shipment (This means 1st and 2nd Brigades)
110,000, June 30th to us.

If you desire to reverse this distribution, advise Major Hanger who will arrange the details with OQMG.

3. Bureau of Ships:

a. Commander Dreisonstok has just received Carrabelle requisition No. 1036, 19 pages for gray parts. Obviously, these should not go to Carrabelle but perhaps all or some of it should go to Edwards and/or Lathrop. Dreisonstok is holding it pending further advice.

3/3 3 tel Con.

~~CONFIDENTIAL~~

RESTRICTED

(1)

~~CONFIDENTIAL~~
RESTRICTED

b. Major Shiell states that Distribution, SOS (Col. Bell) having seen the shipping directive for the overseas shipment of mobile shops from Lathrop, is concerned as to source of procurement. The correct answer is that we request them from the Navy on the basis of exchange of funds. I have so advised Colonel Bell.

c. Both Bureau of Ships (Commander Dreisonstok) and Transportation Corps (Commander Taylor) state that no LCT's can be made available to Edwards because both in the New York Area and in the Gulf area are ready for immediate shipment overseas.

d. I have obtained authority from Commander Dreisonstok to ship such Scripps engines and parts as we desire from Carrabelle to Pontchartrain. I will handle this from Carrabelle.

e. No Higgins LCV's available in New York. I will try to extract two (2) from Carrabelle and ship them to Pontchartrain.

f. Commander Dreisonstok could give no help on Huckins PT boats. He suggested contacting Admiral Badger, Planning.

4. Transportation, SOS:

a. Our original request for training landing craft for 1943 (included 150 for Edwards) has been returned to the Chief of Engineers without action, On the basis that they can be more quickly procured for Edwards from Carrabelle and that the joint Board is set up for that purpose.

b. The question of LCM's and 36 ft. craft for our overseas units needs, in my opinion, immediate attention. I have secured from Commander Taylor the promise to make available for us about 800 LCM's on the West Coast for overseas shipment. He states however, that the bottleneck lies in the securing of shipping priorities for them from the theatre. If they can be given adequate priority, and will be shipped adequate LCM's for all of our units in that theatre. Major Shiell is planning to write a letter to SOS requesting that our overseas requirement of all type craft be provided for without delay.

S/ M. V. Pothier,
M. V. POTHIER,
Lt. Col., Corps of Engineers

~~CONFIDENTIAL~~

~~C O N F I D E N T I A L~~
RESTRICTED

(1)

~~SECRET~~

COPY/er

Classification changed to RESTRICTED
By Authority of ~~the Chief of Eng. and~~ G.S.F
7 Aug 45 (Date)
H.G. King Lt. Col. (Initials) jch

Telephone Conversation:
Captain Facey, FSC
Major Freeman, Washington, DC
24 November 1943 /ac

Maj F: This is Major Freeman, Movements Branch, Washington. On this 692d Engineer Special Shop Battalion. We're giving a readiness date on it of 29th, five days later than the other.

Capt F: I see.

Maj F: And that will have a new port. if they've marked, they'll have to remark. Will you need to know the port on that now? I wonder if they have marked their equipment.

Capt F: I can't say right now, Major. Why don't you give me the new one and ---

Maj F: Well, all organizational equipment that is at the home station will go out of this new port, N.O., and the readiness date on call of the Port Commander, the 29th.

Capt F: Okay, Sir.

Maj F: So if you'll let them know that, I think they'll be doing a little changing in marking.

Capt F: All right, Major.

311.3 El Convers.

CC: Camp Supply Officer
Camp Edwards, Mass.
27 Nov 43

RESTRICTED

~~SECRET~~ 2

C O R R E S P O N D E N C E G U I D E

E N G I N E E R A M P H I B I A N C O M M A N D

Preparation of Letters, Letters of Transmittal,
Indorsements, Wrapper Indorsements, Bulletins,
Circulars and Memoranda.

Prepared by:
Planning Section, EAC, G-4

IN GENERAL

The term "communication" as used includes official letters, memoranda, reports, indorsements, telegrams, radiograms and cablegrams.

An official communication other than a cablegram, will in general, refer to one subject only.

Letters of transmittal when used will refer only to the matter transmitted.

In referring to Army Regulations, general orders, bulletins, circulars, etc., the reference will include the paragraph number, section number, title and number (such as "AR 170-10" or "Circular No. 12"), and date.

References to letters or indorsements will include as much of the following as is necessary to insure easy identification: symbol, file number, subject, and date of the communication.

Maximum use will be made of authorized abbreviations, See AR 850-150 and FM 21-30.

For all letters, for indorsements generally, and for all reports with reference to individuals, except reports made on prescribed blank forms, the paper used will be 8 by 10½ inches.

Salutations and complimentary closes will not be used in official communications.

Carbon copies of communications will not ordinarily be signed, but the signature placed on an original will be typed, stamped, or otherwise reproduced on each copy thereof.

Letter paper will ordinarily be folded in three equal folds, parallel with the bottom, the lower fold over the face of the letter and the top fold toward the back of the letter.

When several communications are to be mailed at the same time to one address, they will, so far as practicable, be mailed together, unfolded, in one envelope marked "Letter Mail".

An indorsement is the particular form of reply used for military correspondence. The recipient of a military letter requiring an answer does not ordinarily keep the letter and reply to it with another; instead, a reply is appended to the original letter and both are returned to sender.

All inclosures to a communication, including those pertaining to an indorsement thereon, will be arranged in proper sequence, will be numbered in a single series, and will be maintained in that sequence. Once listed as prescribed they will not again be listed on the same communication. The serial number of an inclosure which has been withdrawn from a communication will not be given to any other inclosure to the communication.

Exhibits to reports of boards, etc., will be lettered in alphabetical order. If not an integral part of the report, they will also be numbered, listed, and treated as inclosures thereto.

1"

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

In reply refer to:
012.3

FHF/CKL/mfs

13 October 1942

4 spaces

SUBJECT: Special Equipment for Training
(double space)
TO : The Chief of Engineers, New War Department Building, 21st and Virginia, Washington, D. C.

4 spaces

1. The first paragraph of the letter properly identified by paragraph number, indented five spaces, if the letter contains only one paragraph, it is not necessary to number it.

a. Subparagraph lettered and underscored, also indented five spaces.

(2) Subdivisions of subdivision is further indented five spaces.

(a) Further subdivisions.

1½" 3/4"

1. Further subdivisions.

2. Further subdivisions.

b. ----------
(double space)
~~By command of~~ Brigadier General NOCE:

For

4 spaces

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
CHIEF OF STAFF

NOTE--Double spaces between numbered paragraphs.

Continue letter to within one inch from bottom of sheet in cases when second or third sheets required.

1"

- INDORSEMENTS -

File No. of Letter | 1st Ind. | Identifying initials of persons dictating and typing.

HQ. ENG. AMP. COMD., Camp Edwards,Mass., Oct. 12, 1942. TO: Comdg. Gen., 3rd Brig., Eng. Amp. Comd., Camp Edwards,Mass.

For immediate compliance and return to this office.

By Command of Brigadier General NOCE:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

NOTE:

That abbreviations are used wherever possible in an indorsement.

The indorsement is started immediately following the signature of the letter, leaving a one-half inch margin. Further indorsements follow in order.

The signature, if any, on routine indorsements referring, transmitting, forwarding, and returning papers will consist of the initials only.

- INCLOSURES -

All inclosures are to be numbered and described. The identification of inclosures appears immediately below and to the left of the closing signature.

EXAMPLE:

By Order of the Commanding Officer:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

4 Incls.
Incl. 1. Ser. Record.
Incl. 2. Ind. C/R.
Incl. 3. W. D., A. G. O. Form No. 44.
Incl. 4. Extract of Morning Report.

IMMEDIATE ACTION LETTERS:

The principal purpose of an immediate action letter is to require the recipient to give priority in disposing of the subject matter to the extent consistent with the disposition of other pending matters of equal or greater importance. When an immediate action letter is received, all action necessary will be initiated immediately and completed without unnecessary delay. The first and last sheets of the original of an immediate action letter and of the original of each indorsement thereon will ordinarily have a 1/4 inch wide red border, the outer edges of the border coinciding with the edges of the paper. In the absence of printed immediate action paper, the border will be omitted. The words "immediate action" in capital letters at the top and bottom, spaces being left in the border for these words. The intermediate sheets of the original and all carbon copy sheets of immediate action letters will be ordinary letter paper without the border or caption. The first and last sheets of each copy of the letter and of each indorsement thereon will be conspicuously stamped or otherwise marked at both top and bottom with the words, "Immediate Action". Immediate action letters will be mailed in immediate action envelopes which have a 3/16 inch wide red border with the caption "Immediate Action" in capital letters in spaces in the border on the top and bottom of the envelope.

- PROPER HEADINGS -

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts CKL/FHF/ame

In Reply
Refer To:
062.12 October 13, 1942

SUBJECT: Special Equipment for Training.

TO: The Chief of Engineers,
Washington, D. C.

****

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts CKL/ame

In Reply
Refer To:
106W October 14, 1942

SUBJECT: Company Funds.

TO: Commanding Officer,
17th Infantry,
Fort Crook, Nebraska.

- PROPER SIGNATURES TO SUBORDINATES -

By Command of Brigadier General NOCE:

A. O. ACERS
Lieutenant Colonel, A.G.D.
ADJUTANT GENERAL

* *

By Command of Brigadier General NOCE:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

* *

By Command of Brigadier General NOCE:

M. V. POTHIER
Major, Corps of Engineers
Acting Director
PROCUREMENT AND SUPPLY

* *

By Command of Brigadier General NOCE:

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
CHIEF OF STAFF

- PROPER SIGNATURES TO SUPERIORS -

For Brigadier General NOCE:

F. H. FALKNER
Colonel, Corps of Engineers
DIRECTOR PROCUREMENT AND SUPPLY

* *

For the Commanding Officer:

M. V. POTHIER
Major, Corps of Engineers
Acting Director
PROCUREMENT AND SUPPLY

NOTE:

"For the Commanding Officer" would be used if the letter were written to a superior by a company, battalion, or regimental commanding officer.

NOTE:

The signature of an enlisted man will always consist of his first name, middle initial, and last name, followed by his Army serial number.

AR 310-50

CIRCULARS

Circulars will usually contain matter that is directive in nature, general in application, but temporary in duration; circulars are used as a medium for the expeditious publication of matter that is important and wherein time elements involved will not permit the incorporation in established forms of regulations, but will permit the immediate initiation of procedure desired pending the incorporation in established regulations. Circulars usually are numbered serially within the calendar year.

AR 350-10 Par 5

BULLETINS

Bulletins will usually contain matter that is informative or advisory in nature and of permanent duration. Most commands issue a daily bulletin. The information section usually contains information not directive in nature, but which publication of is desired, such as various post, camp or station theater attractions, announcements of officer arrivals, list of apartments or houses for rent in the vicinity, articles lost, found, or for sale, etc. It bears the same heading and authentication as orders with the exception that the information section appears after, or follows the authentication of the bulletin.

AR 310-50

MEMORANDA

In certain commands, memoranda are issued in lieu of bulletins and circulars. They may contain matter that is directive, advisory, or informative in nature, and may be either temporary or permanent in duration. Memoranda are usually numbered in calendar year series. Numbered memoranda to the command are most generally employed to convey directives, repeat instructions received from higher headquarters, or to call for special reports.

Unnumbered memoranda are usually informal in nature to an individual or unit and convey general information. The use of memoranda should be kept at a minimum, as much of the matter published in memoranda may be properly included in general orders, bulletins, or circulars, thus obviating the maintenance of files of memoranda.

MANNER OF PROMULGATION

All orders, bulletins, circulars and memoranda should be read and approved, before issue, by the Commanding Officer who issues them. All such publications will state the source from which they emanate, with number, date, place of issue and the authority under which issued.

All orders, bulletins, circulars and memoranda will be authenticated as follows, using the expression "By order of ----------" if the Commander is below the rank of Brigadier General, and "By command of ----------" if the Commander is a general officer.

IN THE ENGINEER AMPHIBIAN COMMAND THE FOLLOWING COPIES WILL BE MADE

For Letters and Indorsements	1 Original 4 White tissue 1 Green tissue 1 Yellow tissue
Memoranda, Circulars and Bulletins	1 Original 3 white tissue

An additional white tissue copy may be made if the writer wishes to retain a copy for his file.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

October 13, 1942

CIRCULAR)
NUMBER 58)

ENLISTED MEN AWOL

1. Attention is directed to the provisions of AR 615-300, dated July 20, 1942; and more particularly to Changes, No. 2, dated August 28, 1942 to AR 615-300.

2. Paragraph 2b, AR 615-300 as amended by Changes 2 thereto is repeated here for all concerned:

> 2b-"Upon the occasion of an enlisted man absenting himself without leave, the company commander or similar unit commander will notify his nearest relative by telegraph or mail that he is absent without leave; that if he does not return he will be dropped as a deserter; and that, under the provisions of Federal law, all persons who desert the service in time of war are deemed to have voluntarily relinquished and forfeited their rights of citizenship, as well as their rights to become citizens; and that such deserters are forever incapable of holding any office of trust or profit under the United States or exercising any rights of citizens thereof."

3. Reports on EM in AWOL status will be submitted by unit commanders (through UPO) direct to the Camp Provost Marshall to comply with the requirements of paragraph 5, Daily Bulletin, Headquarters, Camp Edwards, Massachusetts, dated September 18, 1942 which states:

> 5-"All organizations at this Station will report to the Provost Marshall, Camp Edwards, the names, home address, nearest relative and description of all members of their organization who are being carried A.W.O.L."

By command of Brigadier General HEAVEY:

Arth. G. Trudeau

ARTHUR G. TRUDEAU
Colonel, General Staff Corps
Chief of Staff

OFFICIAL:

A. O. Aers

A. O. ACERS
1st Lt., AGD
Adjutant General

Distribution B

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

October 7, 1942

BULLETIN)
:
NUMBER 1)

SUBJECT: Crating and Packing for shipment.

1. The following information is to assist in assuring protection of items shipped, in conservation of space on carriers, and in conservation of packing time, handling time, and material.

2. No crate, box or package should exceed 200 pounds unless one packaged unit exceeds that weight. One hundred and fifty (150) pounds is a preferred weight.

3. Omit unit designations on overseas shipments. If placed on local shipments, use gasoline soluble paint or other easily removed marking media so crate or container may be reused for possible overseas shipments.

4. Do not crate heavy, strong chests or boxes; or items which may be shipped safely without crating, such as G.I. cans, gasoline or water cans, shovels, mosquito bars, etc. Wire bound bundles are frequently more desirable than crates.

5. Do not completely box if a skeleton crate will insure safe delivery.

M. V. POTHIER
Major, Corps of Engineers
Ass't. Dir., Procurement & Supply

DISTRIBUTION "B"

HEADQUARTERS ENGINEER AMPHIBIAN COMMAND
OFFICE OF DIRECTOR OF PROCUREMENT AND SUPPLY
Camp Edwards, Massachusetts

September 29, 1942.

MEMORANDUM TO: All Officers, G-4 Section.

1. For the conduct of official business, and the fulfillment of the war effort, it is essential that this office have a representative available during normal working hours on Sundays and holidays, as well as on all other days of the week. Consequently, in accordance with the foregoing, there will be detailed, each Sunday or holiday, one officer from this section, who will be present in the office during the normal working hours.

2. Said Director's representative will be detailed weekly from a roster of officers on duty with the G-4 Section. His term of duty will be from 0800 to 1700 of the day detailed.

3. During normal duty hours the Director's representative will remain in Building T-101, or its immediate vicinity, at all times.

4. The primary duty of said officer so detailed is to supervise and handle routine business of the section as may arise.

By Order of Lieutenant Colonel FALKNER:

HERBERT A. MONROE
First Lieutenant, CE
ADJUTANT

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

October 13, 1942

MEMORANDUM

MEMORANDUM)
NUMBER 99)

I MOTOR VEHICLES

All motor vehicles within this command will be winterized for 20° below zero. Vehicles will be thoroughly checked to insure against water leaks, leaky radiators, bad hose connections, freeze plugs, etc., prior to the introduction of anti-freeze solutions into cooling systems.

The procedure prescribed above will be initiated in sufficient time to preclude deadlining or damage to vehicles and/or loss of anti-freeze solution.

II ITEMS AVAILABLE AT THE CAMP QUARTERMASTER

The following items are available at the Camp Quartermaster, and may be obtained upon submission of requisitions. Requisitions should be based on the following allowances:

Dubbin (4 ounce cans)	Allowance, 2 ounces per individual per year.
Ink, laundry-marking	Allowance, one bottle per 100 men per six months

III SIGNATURE OF THE ADJUTANT GENERAL

Effective immediately all papers for the signature of the Adjutant General will be prepared as follows: FLOYD COOLEY, 1st Lt., A.G.D., Adjutant General.

By command of Brigadier General NOCE:

Floyd Cooley

FLOYD COOLEY
1st Lt., A.G.D.
Adjutant General

Distribution "A"

SAFEGUARDING MILITARY INFORMATION

THREE TYPES OF CLASSIFIED MILITARY CORRESPONDENCE.

1. SECRET
2. CONFIDENTIAL
3. RESTRICTED

RESPONSIBILITY:

The safeguarding of classified military information is the responsibility of all military personnel, or civilian employees of the War Department.

Classified military information will only be entrusted to those who need it in the performance of their official duties.

Documents may be classified as "Secret" only by or by the authority of the Secretary of War; the Under Secretary of War; an Assistant Secretary of War, the Chief of Staff, or an Assistant Chief of Staff of the War Department General Staff; a Chief of Arm, or Service, or the National Guard Bureau; a General Officer, the Commanding Officer of a Depot, Post, Camp, or Station; the Commandant of a General or Special School, or a military attache.

The dissemination of secret matter will be held to the absolute minimum.

Documents may be classified as "Confidential" by any commissioned officer, but will be handled and disseminated with the same care as secret matter.

Restricted documents are for official use only and may be marked as "Restricted" by any commissioned officer.

All classified communications will be marked or stamped with the appropriate classification at the top and bottom of each page.

All secret documents will show the authority for the classification and the date affixed.

All secret communications will be transmitted by officer-messenger or courier, or by registered mail, except when personally delivered. Secret communications will be inclosed in an inner and outer cover.

The typewritten matter will be protected by a cover sheet. The inner cover will be a sealed wrapper or envelope addressed in the usual way and plainly marked "Secret". The outer cover will not be so marked.

"Confidential" documents will be transmitted by an authorized messenger, insured express or registered mail.

"Confidential" documents will be prepared in the same manner as secret matter except that the inner cover will contain a receipt form when the sender deems it necessary, and may be opened by any responsible person so authorized.

"Restricted" documents may be transmitted by any authorized messenger or by ordinary mail.

TELEGRAMS, RADIOGRAMS, CABLEGRAMS AND TELETYPE MESSAGES

In preparing messages for wire or machine transmission, legibility and conciseness are imperative. Double space all messages, type them if possible and capitalize all words.

Write the words "can not" as two separate words and in any cases where the negative meaning is not clearly suggested by the contents of the message, the word "not" should be followed by the words "repeat not", example:

"SECTION ONE WAR DEPARTMENT CIRCULAR TWENTY EIGHT DOES

NOT REPEAT NOT RESCIND PARAGRAPH SIX A R SIX HUNDRED PERIOD"

Write all numbers as words, punctuation marks as words (--dash) (. period) (& and). Decimal points used within a group of numbers will be written as point. Where figures are used to express money values, use the words dollars and cents after the appropriate group of figures (particularly in cases where the figures are not spelled out as words).

Close all messages with the word "END" and where replies to messages are necessary, incorporate the words "REPLY REQUESTED".

Wire or machine messages close with the last name only of the Commander or Chief of the agency from whose office the message emanates. War Department wire messages usually include an identifying symbol of five letters, the first two of which identify the sending agency and the last three of which identify the subdivision of the sending agency as follows:

War Dept. General Staff	- W.D.
Army Ground Forces	- G.N.
Army Air Forces	- A.F.
Services of Supply	- S.P.

Keep wire or machine messages short yet understandable and in references to correspondence, include only such parts of the file reference and subject required to identify the sending office and correspondence.

- TELEGRAMS -

EXAMPLE:

(Date and time placed by operator)

G DASH FOUR
ENGINEER AMPHIBIAN COMMAND CAMP EDWARDS MASS.

RE SIXTY FOUR NINETY FIVE DASH KK COLON ONE GUN THIRTY SEVEN MM CAN NOT REPEAT NOT BE LOCATED PERIOD SHIP DIRECT TWO THOUSAND FIVE BAYONETS COMMA TWELVE PORTABLE FLAME THROWERS COMMA NINETEEN SLINGS GUN M NINETEEN TWENTY THREE COMMA ONE HYDROGEN CONTAINER NUMBER NAUGHT NAUGHT THREE THREE END

JONES

* *

- TELETYPES -

EXAMPLE:

ADDRESS (Usually in code determined by Teletype operator)

DATE (In code determined by Teletype operator)

THIS IS HDQRS E A C COLON FOLLOWING ON HAND JJ SEVEN FOUR SIX COMMA ONE HOIST CHAIN FIVE TONS TWENTY TWO FRAMES THIRTY FOUR SHEARS PERIOD

FOLLOWING FOR K K THREE THREE NAUGHT NAUGHT COLON ONE BOX CONTAINING EIGHT CABLE STUBS TEN FOOT LENGTHS AND ONE POCKET WATCH SEVEN JEWEL END

HUNT

DEWEY DECIMAL SYSTEM OF FILING

The War Department correspondence file is based on the Dewey Decimal System of Library Classification. In brief, this system divides the correspondence file into nine general classes: They are

Class 000 - General subjects (Correspondence so general in its nature that it cannot be properly classified into one of the eight other classes)

Class 100 - Finance and Accounting

Class 200 - Personnel

Class 300 - Administration

Class 400 - Supplies and Equipment

Class 500 - Transportation

Class 600 - Buildings and Grounds

Class 700 - Medicine, Hygiene and Sanitation

Class 800 - Rivers and Harbors

These General Classifications are further broken down through a decimal point system; in other words, the 400 file on Supplies and Equipment runs from 400.1 (Selection, adoption and acquisition) thru 463.7 (Supply of gasoline) to 479 (Miscellaneous Supplies). An alphabetical index and numerical index is provided so that any particular subject in a classification may be easily located. A good file clerk will memorize the nine general classes of subjects and the numbers pertaining to them. Having accomplished this, he can easily spot any correspondence requested.

Experienced file clerks use a simple cross-reference system in cases where there is a question as to what general classification a subject might fall into.

NON-MILITARY LETTERS

Official correspondence with offices or individuals not in or under the War or Navy Departments will be in the general forms in use in proper civilian practice.

A letter heading may contain "In reply, please address official designation or title of office of writer and not his name:" at the upper left.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

HAM/mps

In reply, please address
official designation or
title of office of writer
and not his name.

October 22, 1942

James Bliss Company, Inc.
220 State Street
Boston, Massachusetts

Attention: Mr. John W. Doe

Dear Sir:

***

The body of the letter will be introduced by an appropriate salutation, such as My dear Sir, Dear Sir, My dear Madam, Dear Madam, (Madam will ordinarily be used in addressing unmarried as well as married women); Dear Senator, My dear Senator, Dear Mr. ------, etc.

The letter will ordinarily contain no paragraph numbers, will when typewritten be double spaced, unless if so written it would cover more than one page, in which event it may be single spaced.

A complimentary close, such as Respectfully yours, Very respectfully yours, Truly yours, Very truly yours, Sincerely yours, will be used, and will be indented five spaces from the paragraph indentation.

One copy only will ordinarily be made, in cases in which the communication is of such character as to warrant retaining a record thereof, or furnishing to someone concerned. A letter to a member of Congress or to one in public life will be sent in duplicate.

HEADQUARTERS
ENGINEER AMPHIBIAN COMMAND
Camp Edwards, Massachusetts

JWR/jws

October 21, 1942

James Bliss Company, Inc.
220 State Street
Boston, Massachusetts

Gentlemen:

With reference to Purchase Order No. EAC 43-111, dated October 16, 1942, pertaining to the purchase and delivery of sisal rope, it is desired that the following correction be made on the Purchase Order herein mentioned.

586 lb. Sisal Rope 1-5/16" Diameter .18 105.48

In addition, it is further desired that the receipt of this letter be acknowledged.

Very truly yours,

/s/ Edward L. Goodwin

/t/ EDWARD L. GOODWIN
Captain, Corps of Engineers
Assistant Director of
PROCUREMENT AND SUPPLY

cc: P & I file
Fiscal
Captain Wood
Boat Unit Detachment
Walworth

Q. M. C. Form 353 (Old No. 490)
Revised July 26, 1918

~~SECRET~~

X RESTRICTED

E. A. C. FILE

LIST OF PAPERS

File under No. 312.6 (Irregularities of Correspondence)

3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	Hq The Engr School	10/6/43	CO, EAC, CpEdwards	Return of document receipt

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

Doc 79

SECRET
By Auth: Commandant, Engr Sch
Ft. Belvoir, Va.
Initials: C.L.T.
Date 6 Oct 43

HEADQUARTERS THE ENGINEER SCHOOL

OFFICE OF THE COMMANDANT

RESTRICTED

In reply refer to:

Fort Belvoir, Virginia

6 October 1943

Classification changed RESTRICTED
By Authority of ~~the Chief of Engineers~~ G.S.F
7 Aug 45 (Date) A. G. King Lt. Col. (Initials) jrb

Subject: Return of document receipt.

To: Commanding Officer,
Engineer Amphibian Command,
Camp Edwards, Mass.

1. Receipt has not been received in this office for the following SECRET correspondence: letter dated 4 September 1943, subject: Transmittal of Document, with 2 inclosures, Inclosure 1, Conference on Landing Assaults, and Inclosure 2, receipt form, addressed to Commanding Officer, Engineer Amphibian Command, Camp Edwards, Massachusetts.

2. A duplicate receipt is inclosed in the event that the original receipt has been lost.

3. Request return of original or duplicate receipt.

For the Commandant:

JAMES M. PARRISH,
Captain, Corps of Engineers,
Secretary.

1 Incl.
Receipt form

X 337 312 6

FOR VICTORY
BUY UNITED STATES WAR BONDS AND STAMPS



RESTRICTED

~~SECRET~~

Doc 71

RESTRICTED

312.6 1st Ind. JST/er
HEADQUARTERS, ENGINEER AMPHIBIAN COMMAND, Camp Edwards, Massachusetts,
16 October 1943.

TO: The Commandant, The Engineer School, Fort Belvoir, Virginia.

Request this Headquarters be furhished the Post Office Registry Number of letter referred to.

For the Commanding Officer:

JOHN S. TYLER
Captain, A.G.D.
Adjutant General

1 Incl.
n/c

2nd Ind.

Headquarters The Engineer School, Fort Belvoir, Virginia, 18 October 1943.

To: Commanding Officer, Engineer Amphibian Command, Camp Edwards, Mass.

The Post Office Registry Number of letter referred to was ES #97.

312 X 337

For the Commandant:

JAMES M. PARRISH,
Captain, Corps of Engineers,
Secretary.

1 Incl. - n/c

RESTRICTED

~~SECRET~~

45a

The Engineer School
Fort Belvoir, Va.

18 October 1943

Receipt acknowledged of Secret ~~Confidential~~ XXXXXXXXX

Ltr. The Engr School, 6 Oct 43, No File, SUBJECT: Return of Document.

Receipt w/1 Ind.

Copies numbered:

Chas L Tamplin

W.O. (jg) U.S.A.

Assistant Adjutant

Please complete and return to:
Commanding General, Engr. Amph.
Comd., Camp Edwards, Mass.
312.6

1

Q. M. C. Form 353 (Old No. 490)
Revised July 26, 1918

LIST OF PAPERS

File under No. 313.6 (Destroying Records, Methods of) & Disposition of

~~SECRET~~
RESTRICTED

E. A. C.
FILE
3—6788

SERIAL NUMBER	FROM—	DATE	TO—	SYNOPSIS
1	Harbor Entrance Control Post, Ft Rodman, Mass.	10/2/43	All Concerned	destroyed burning of secret boat operatins shedules, codes and charts.

INSTRUCTIONS.—When papers on a subject become numerous they will be numbered serially and brief entries made on this form.

~~SECRET~~ RESTRICTED

HARBOR ENTRANCE CONTROL POST
Harbor Defenses of New Bedford
Fort Rodman, Mass.

2 October 1943

~~Classification changed to~~ RESTRICTED
By Authority of ~~the Chief of Engineers~~ G.S.C.
7 Aug 45
Date
N. G. King Lt. Col.
(Initials)

I certify that I have this day destroyed by burning the following described boat operations schedules, signal codes, and charts marked SECRET, after telephone conference with Capt. Taylor, EAC.

(2)	June	22,	1943	Operations	of	Week	June 27,	to	July	3
	"	29,	"	"	"	"	July 4,	"	"	10
(2)	July	6,	"	"	"	"	" 11,	"	"	17
	"	13,	"	"	"	"	" 18,	"	"	24
(2)	"	20,	"	"	"	"	" 25	"	"	31
	"	23	"	"	"	"	" "	"	"	"
	"	27,	"	"	"	"	August 1,	"	August	7
	August	3,	"	"	"	"	" 8,	"	"	14
	"	4,	"	"	"	"	" "	"	"	"
	"	10,	"	"	"	"	" 15	"	"	21
	"	12,	"	"	"	"	" "	"	"	"
	"	17,	"	"	"	"	" 22	"	"	28
	"	24,	"	"	"	"	" 29	"	Sept	4
	"	27,	"	"	"	"	" "	"	"	"
	"	31,	"	"	"	"	Sept 5	"	"	11
	Sept	2,	"	"	"	"	" "	"	"	"
	"	7,	"	"	"	"	" 12	"	"	18
	"	14,	"	"	"	"	" 19	"	"	25
	"	15,	"	"	"	"	" "	"	"	"

(Less one copy Special Chart retained for posting)

Richard H Lee
Richard H. Lee
Lt. Col. 23rd C. A.

Witness:
Casmer Joseph Mezias

RESTRICTED
~~SECRET~~

(1)

313.6
X 565.1

Restricted

CONFIDENTIAL

ENGINEER AMPHIBIAN TROOPS

Capt. Fred M. Seymour, C.E.
Chief, Design & Testing Sect.
Hq. E.A.C.



INTELLIGENCE, NAVIGATION, & COMMUNICATION

ENGINEER AMPHIBIAN COMMAND
TENTATIVE TRAINING GUIDE No. 5

CONFIDENTIAL

FOREWORD

This guide assumes a basic knowledge of intelligence, navigation, and communication methods and techniques. It is concerned only with those aspects of these problems which are peculiar to an amphibious operation. Although intended primarily for those officers assigned to intelligence, navigation, and communication duties, it is written for all officers of the Engineer Special Brigade. For example, although certain officers are designated as navigators, they alone are not charged with navigation and control of boat formations.

Tables of Organization and Tables of Equipment are subject to change in units whose functions and doctrines are under constant development. For this reason, and because this guide, like others in the same series, has been hastily compiled to meet an urgent need, unit commanders are invited to criticise and to suggest additions, deletions, changes in emphasis, etc., for incorporation in later editions.

Daniel Noce

DANIEL NOCE
Brigadier General, U.S.A.
Commanding.

Engineer Amphibian Command,
Camp Edwards, Massachusetts,
May, 1943.

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PART I

INTELLIGENCE

Chapter 1

GENERAL

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1. REFERENCES.--Reference is made to FM 100-5, FM 30-5, FM 30-25, and FM 31-5 for further treatment of the problems of combat intelligence as they relate to operations in general and to combined operations in particular. In this guide, the problem is discussed for the Engineer Special Brigade.

2. GENERAL.--The purpose of combat intelligence for the Engineer Special Brigade is identical with that for any other unit: to reduce to a minimum the unknown factors about the enemy and the land, sea, and air areas under his control. The special problem of the brigade concerns these land and, particularly, sea areas. The bulk of combat intelligence for the brigade is navigational and includes as a major interest information of the beaches and their approaches.

3. DIFFICULTIES.--There is no cover or concealment on the water, and, since all measures to obtain information are predicated on the necessity for preserving secrecy, crossings to and reconnaissance on the enemy held shore must be made during the hours of darkness. This is an extremely limiting factor. Standard methods of surveying and gathering hydrographic information are impossible of execution in areas defended by an alert and well armed enemy. But because maps, charts, tide and current tables, and aerial photographs giving the required information often are not available or complete, reconnaissance is essential. Thus amphibian scouts and aerial photography will be the principal sources of up-to-the-minute information.

Moreover, in land operations combat intelligence is a continuing process, built up in advance and carried on as the action progresses. In an amphibious operation, the information required must be collected, collated, and disseminated in great detail in advance. It must be complete before the attack can begin.

4. COORDINATION IN COMBINED OPERATIONS.--a. General. There must be complete cooperation and coordination between the commanders and intelligence agencies of the infantry division and the Engineer Special Brigade.

b. Areas of Greatest Interest. The infantry division commander is responsible for intelligence in all proposed areas of operation. The brigade commander is especially interested in the water area and the immediate beach area on the far shore. Hence so called areas of greatest interest are proposed as shown in Fig. 1. This is intended merely as a proposed division of responsibility for the collection and dissemination of all information. The approval of the infantry division commander must be obtained for this or any other division of responsibility. In all cases, the infantry division G-2 will control and coordinate the intelligence operations of both units.

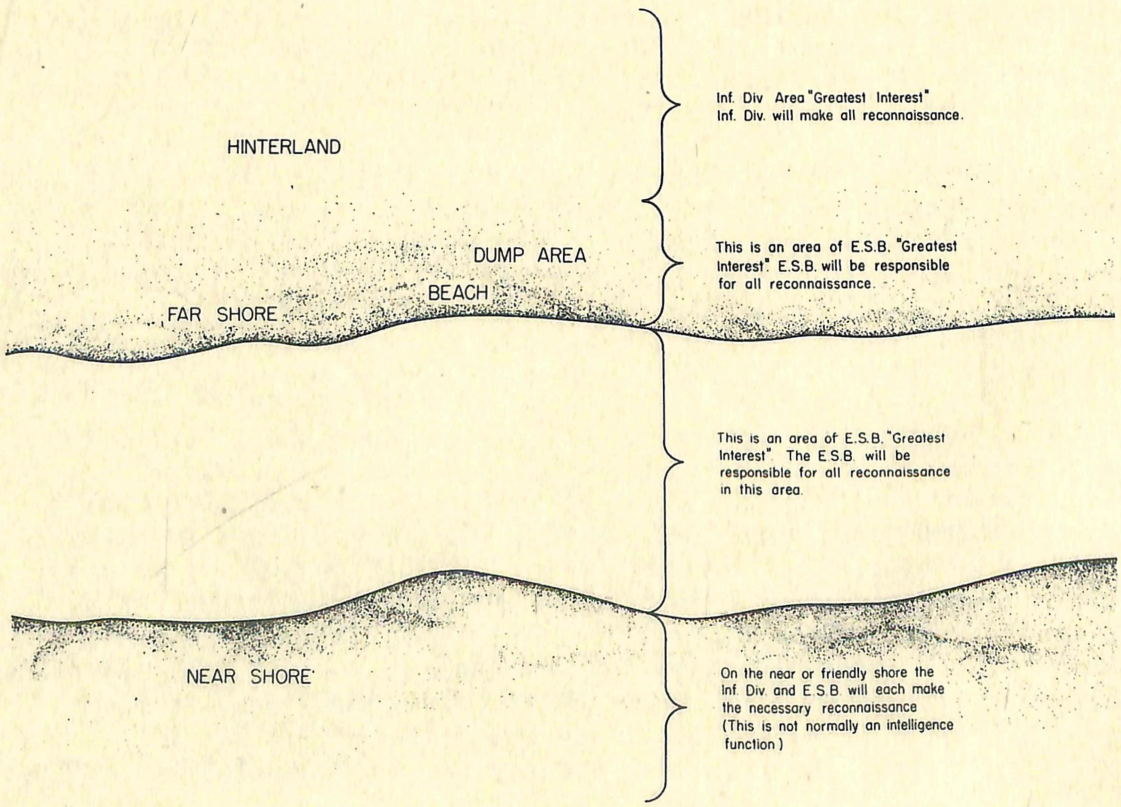

Fig. 1.--Areas of Greatest Interest.

The immediate beach area, to include the line of dumps in the nearest available cover, is shown as an area of responsibility for the brigade. The infantry division commander, however, due to the suspected presence of strong enemy defenses, or for other reasons,

may wish to retain this area as his greatest interest. It is probable that both commanders will desire to send their own scouts into this area, which is really one of mutual interest, and that reconnaissance parties to this area will consist of scouts from both units regardless of how the greatest interest is assigned.

c. Provision for Boats. The brigade will normally furnish necessary craft to put the scouts from the infantry division ashore and to take them off again. However, submarines, other naval craft, or airplanes can be used for placing scouts of both the infantry division and the brigade on the far shore.

PART I

INTELLIGENCE

Chapter 2

INTELLIGENCE PERSONNEL - ENGINEER SPECIAL BRIGADE

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5. ORGANIZATION.--a. Personnel Provided. The personnel of the intelligence sections (S-2) of the Engineer Special Brigade are shown in Fig. 2. The functioning of intelligence personnel is covered in FM 101-5, FM 30-5, and FM 30-25. In addition to this personnel, all navigators, boat operators, and communication personnel; the personnel of the Shore Battalion Operations Section; and any other personnel of the various staff sections of the brigade, regiments, and battalions will be employed as necessary for intelligence functions.

b. Scout Teams. No personnel is specifically provided in Tables of Organization for field reconnaissance. It is recommended that teams of 1 officer and 7 enlisted men each be formed and trained at the minimum rate of 3 per regiment (2 from Boat Battalion, 1 from Shore Battalion), and 1 from Brigade Headquarters Company, and that additional officers from Brigade Headquarters and from each regiment be selected and trained. These teams may function as a platoon under brigade control or remain with their parent units as required.

c. Special Equipment. Some of the items of special equipment required for scouts are rubber boots, field glasses, compasses, watches, sneakers, waterproof bags, radios, flashlights, and trench knives. Many other small items will be required, the need for which will develop as training and experience progresses.

6. OPERATIONS OF SCOUTS.--The scouts will be used to obtain information about the enemy and the area under his control that cannot be obtained from other sources. This includes:

a. Marking and some destruction of obstacles on the beach--probably just before the first wave lands.

b. Marking underwater obstacles or guiding the craft around them.

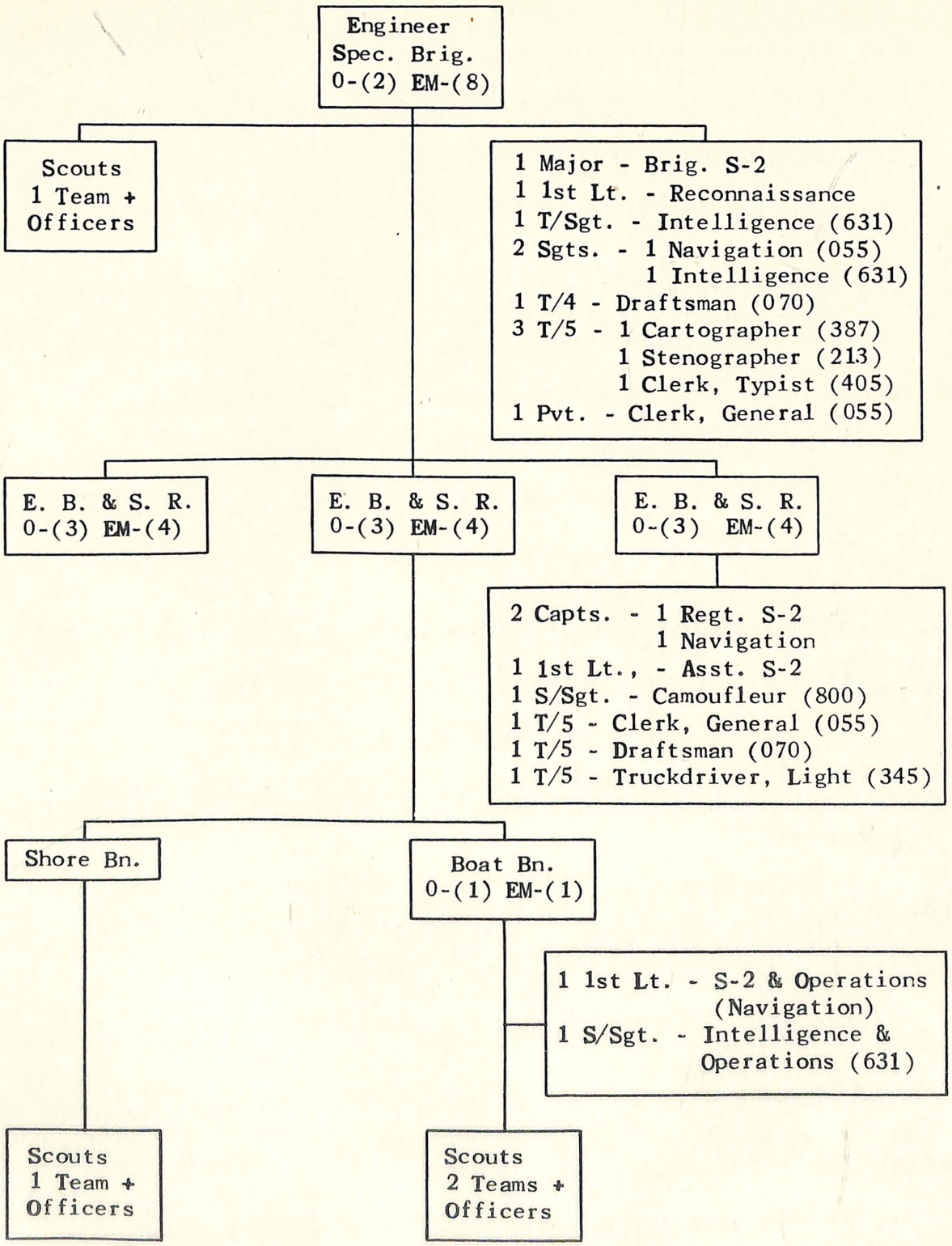

Fig. 2.--Organization of Intelligence Section, Engineer Special Brigade.

c. Signaling, or placing signals to help guide, the first wave in to the beach.

d. Marking paths through or around obstacles on the far shore.

e. Placing navigational aids.

f. Acting as guides to important installations on the far shore.

7. TRAINING OF SCOUTS.--a. Night Training. Scouts must work at night. This requires many hours of night training. After the first 2 weeks of basic scout training at least 75% of their training should be in night work. Red goggles will be worn when lights are used at night. This is to prevent the loss of night vision.

b. Scope of Training. Their training includes:

(1) Judo and how to 'eliminate' a guard silently. (FM 21-150).

(2) Working in pairs. This gives a leader and 3 pairs in each 7 man team.

(3) Making hydrographic reconnaissance at night. (See par. 51).

(4) Locating underwater obstacles. (See par. 51).

(5) Current estimations. (See par. 35).

(6) Determining amount of explosives necessary and method of placement to remove or blast paths through obstacles on the beach and underwater.

(7) Sketching both from day and night observations. They must be able to tell the configuration and slope of the beach from night observation. In this they can be greatly aided by a study of maps and aerial photographs before going on reconnaissance.

(8) Identifying sounds at night and estimating distance from them.

(9) Using voice radio. The set SCR 300 is standard equipment for them. They also use hooded lights at night and semaphore signals during daylight. Prearranged codes are usually used to cut down time.

(10) Swimming. They may have to swim ashore to the hostile beach or swim out to be picked up by a boat off shore. When this is

necessary, various types of watertight bags are used to keep their equipment dry.

(11) Handling rubber boats in all types of seas. The higher the surf they can get through the less chance of the enemy watching for them. By coming in when and where the enemy thinks it impossible, they increase their chances of not being discovered.

(12) Interpreting aerial photographs and some training in aerial observation. (See pars. 55-58).

PART I

INTELLIGENCE

Chapter 3

INFORMATION

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8. GENERAL.--The S-2 sections of the brigade and regiment are directly responsible for the collection, collation, and dissemination of information. They will be assisted by such technical experts as are available. Much information will be received from higher echelons, but more must be obtained by actual reconnaissance of the water areas and the far shore.

9. SCOPE.--Navigational intelligence and reconnaissance should obtain:

a. General coast line information regarding an entire coast line, within certain selected limits, for the purpose of selecting suitable beaches over a wide area.

b. Detailed information of specific beaches considering the following features in their relation to landing operations:

(1) Characteristics of the shore line at the high water line and between the high water line and the low water line. Mud, quicksand, and seaweed-covered rocks or boulders may present a serious impediment to the movement of personnel and vehicles up the beaches.

(2) The location and nature of close-in or off-lying natural obstacles, obstructions, reefs, and other dangers to navigation, and of artificial obstacles such as mined areas, booms, nets, piling, steel rods, steel 'fences', concrete blocks, and barbed wire. Personnel for removal or demolition will ordinarily be placed in an early wave. Booms, nets, and mines may be expected off river, harbor, and bay entrances.

Hydrographic dangers, such as reefs, coral heads, detached rocks, breakers, and sunken rocks may be of such character as to render an approach impassable, particularly for night or heavy-weather landings. Provided these dangers are not too numerous, the sea is smooth, and visibility is satisfactory, movement around these

obstructions can be accomplished in small craft. The stage of tide and amount of water over dangers, of course, enters the picture.

Fringing reefs of sand, rock, or coral, which may or may not be continuous, are common to many shores, generally with deeper water shoreward.

(3) The nature of the approach areas from the standpoint of operation of coasters, large vessels, transports, and naval craft.

(4) The nature of the beaches above the water line, to include detailed data on their slope, silhouette, terrain conformation, and the nature of the area directly inshore.

c. Weather. Weather data is essential, because the success of the entire operation is predicated on accurate timing to take advantage of weather conditions. (See pars. 15-18).

d. Information on tides and currents. (1) Tidal data is essential for determination of depths of water in areas of operation. (See pars. 19-27).

(2) Current data is essential for determination of proper allowances to be made for set and drift in navigating the water areas. (See pars. 28-41).

e. Information of Enemy Defensive Installations. The existence, nature, and extent of enemy defenses on the far shore to include all types of obstacles both on the beach and underwater must be determined accurately. Knowledge of the location and caliber of coastal defense artillery is necessary to the plotting of approximate danger areas off shore. These danger areas will, in turn, determine areas to be avoided-- insofar as possible-- by boat formations, and track charts will be drawn accordingly.

10. SOURCES.--a. Sources of information are:

(1) Reconnaissance of the area involved by intelligence personnel (including amphibian scouts), from the air, or water, or ashore.

(2) Vertical and oblique aerial photographs, color transparencies, stereo pairs, tourist pictures, postcards. (See pars. 55-58)

(3) Information from local inhabitants.

(4) Nautical charts, topographic maps, and copies of original surveys.

(5) Publications, such as 'Coast Pilots' and 'Sailing Directions'.

(6) Use of secret agents placed ashore.

(7) Raids by Commandos or Rangers.

b. Selection of the above sources and methods of gaining the necessary information will depend upon such factors as scope of enemy defense and patrol of the shores and adjacent water areas, distance to these areas, and availability of adequate recent surveys. All possible sources and methods will be utilized and checked, one against the other, to obtain complete information.

PART I

INTELLIGENCE

Chapter 4

BEACHES AND APPROACHES

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11. **INFLUENCING FACTORS.**--a. The relative importance of the factors influencing beach selection is:

(1) Tactical considerations, including extent of beach defense and character of country inland from the beach.

(2) Forecast weather and surf conditions.

(3) Obstacles, obstructions, and dangers to navigation.

(4) Characteristics of the beach between high and low water.

(5) Tides and currents.

(6) Alternate beaches, or alternate landing areas.

12. **BEACH SELECTION.**--a. Although the selection of the landing beaches is a function of the tactical commander and will be made principally in accord with the tactical demands, consideration must be given to the suitability of beaches and their approaches from the standpoint of the operation of landing craft, transports, and naval support craft.

b. The tactical commander will indicate his tentative plan of operations which will show the general area in which landings are to be made. The S-2 sections of the amphibian units will then make careful studies of all approaches, possible landing beaches, and shore lines within these areas. The amphibian commander will present all the information gathered to the tactical commander in conference and will make his recommendations at that time. This recommendation will be based on physical considerations only. In particular, the amphibian commander will give his advice on those matters affecting the operation of floating craft.

The tactical commander will weigh the advantages and disadvantages of each beach as it affects his tactical plan and will make the decision as to which beaches are to be selected for landings. He will choose also the alternate beaches to be used in the event that the selected beaches cannot be reached because of unexpected obstacles or unforeseen defensive strength.

c. The information to be compiled must cover beaches and alternate beaches as to:

(1) Width.
(2) Slope and characteristics between high and low water.
(3) Obstacles, obstructions, reefs and other dangers, close-in or off-lying.
(4) The approaches to the beaches as to suitability for landing craft, transports, and naval support craft.

The above must be considered in their relation to prevailing and forecast weather, tides and currents, state of the sea, and visibility.

d. Tabulation of Data. This information can best be presented for the consideration of the tactical commander in the form of:

(1) Small and large scale charts of the area showing beaches, alternate beaches, and their approaches. (Figs. 3a and 3b).

(2) A tabular description of the beaches (Fig. 4). With the prevailing weather information, this would serve to establish a tentative choice of beaches for landing, subject to long range weather forecasts.

(3) A tabulation of first light, tides, weather, and moonlight (Fig. 5) for a period of days before and after the possible selected day for the operation. With this information 'D' day and 'H' hour may be selected.

The selection of a beach is, of course, dependent upon prevailing weather and forecast weather, particularly in an area where landings are possible on different sides of an island or peninsula. First light is generally chosen for surprise landings, and this time should be determined by actual observations for several mornings in advance of a tentative 'D' day. This presupposes a visibility limited to 100-200 yards. As affecting visibility, times of moon rise and set and its phases are tabulated. Times of predicted high and low tides are tabulated for each day. Consideration will also be given to wind directions and velocity as directly affecting the use of smoke and the audibility of sound.

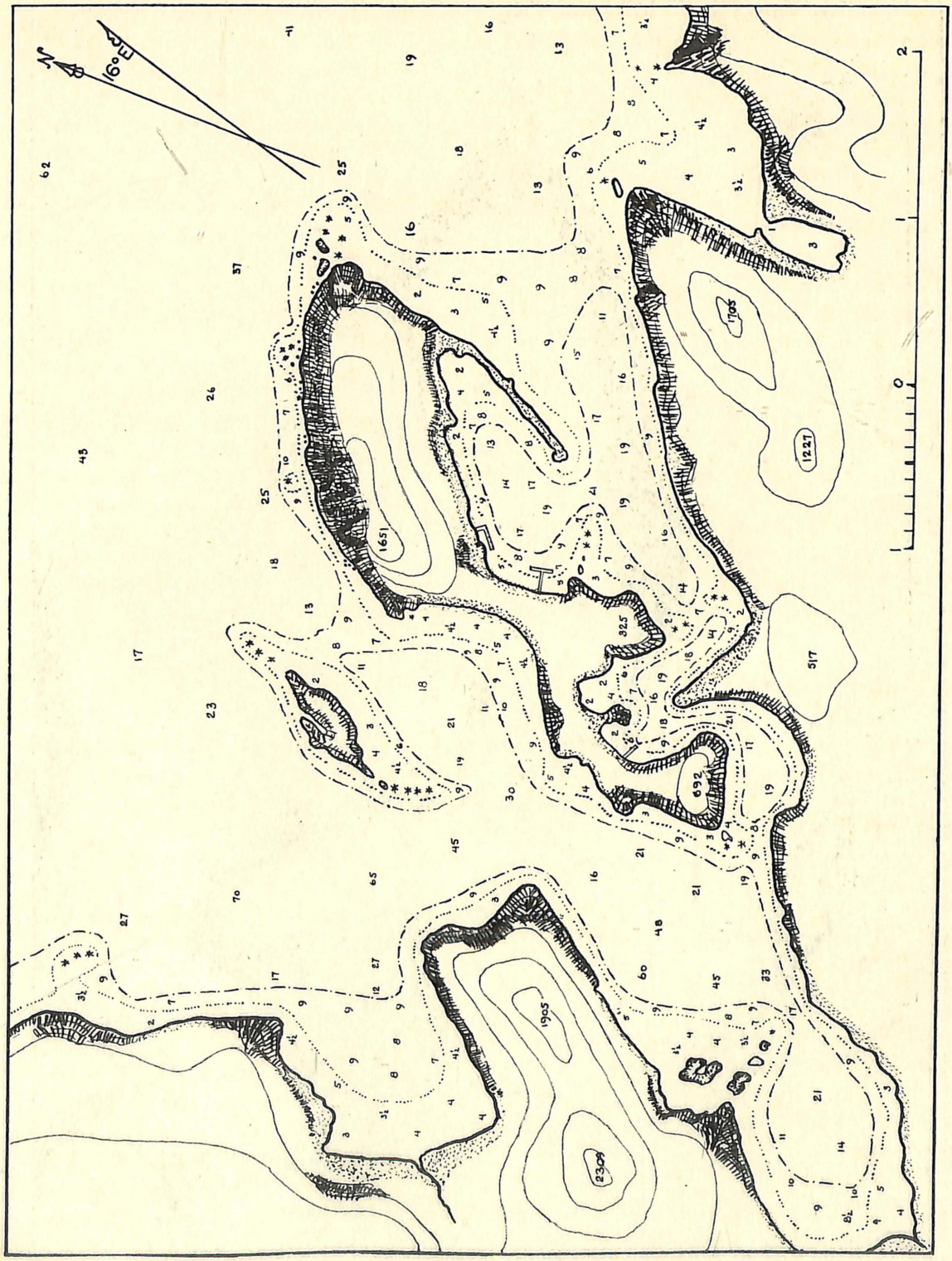

Fig. 3a.--Section of Small Scale Chart. Soundings in Fathoms.

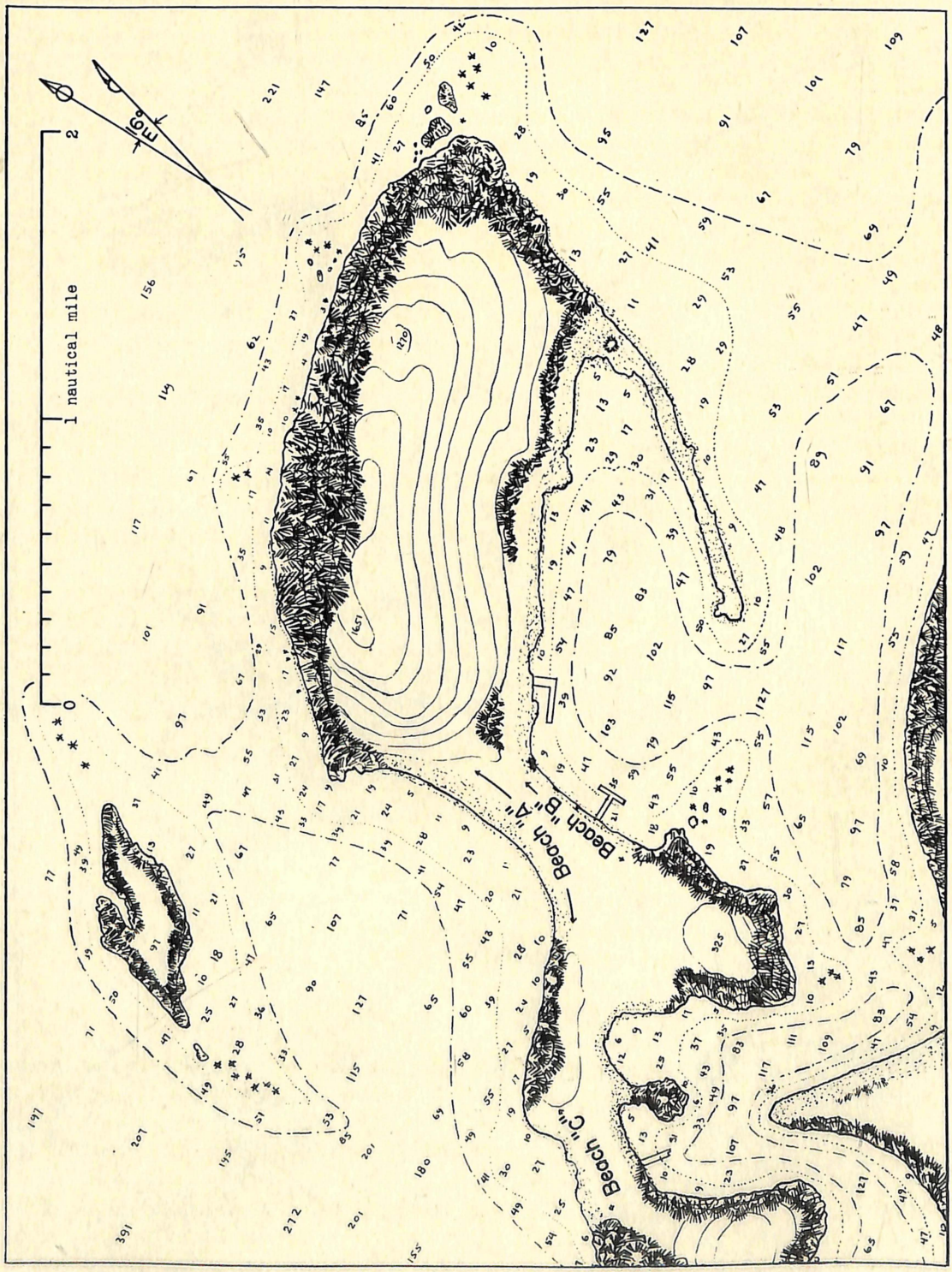

Fig. 3b.--Section of Large Scale Chart Showing Beaches. Soundings in Feet.

BEACH DESCRIPTIONS

BEACH 'A'	
At High Water Line	*Coarse sand.*
At Half Tide Line	*Sand and gravel.*
At Low Water Line	*Coarse sand and some small boulders.*
Length of Beach	*1300 yards.*
Approaches	*Clear from North (between island and islet).* *Clear from West avoiding reef South of islet.*
Other Data	*Moderately steep-to beach 1' in 10'.* *Moderate short breakers from N.W. at all times.*
BEACH 'B'	
At High Water Line	*Coarse sand N. of pier-- shingle S. of pier.*
At Half Tide Line	*Sand and gravel, some shingle S. of pier.*
At Low Water Line	*Coarse sand and small boulders.*
Length of Beach	*500 yards.*
Approaches	*Clear ½ mile off beach; submerged reef extending to eastward from South end of beach.*
Other Data	*Pier about 450 ft. long about in center of beach. Moderately steep-to beach 1' in 8'. Good landing.*
BEACH 'C'	
At High Water Line	*Shingle and small boulders.*
At Half Tide Line	*Shingle and some boulders.*
At Low Water Line	*Shingle.*
Length of Beach	*350 yards.*
Approaches	*Clear 2 miles from the Northwest.*
Other Data	*Steep-to beach 1' in 4'.* *Moderate seas from N.W. weather.*

PREVAILING WEATHER DATA:

WINDS:	*Generally NW'ly during months of September and October 20 mph. Gales occasionally from SE-- short duration.*
SURF:	*Light to moderate (not exceeding 4') in N.W. weather.*
VISIBILITY:	*Early a.m. fogs burning off by about 0800. If not by that time may continue all day.*

Fig. 4.--Tabular Description of Beaches.

TIDE AND WEATHER DATA

DATE	FIRST LIGHT	HIGH WATER Time	HIGH WATER Height	LOW WATER Time	LOW WATER Height	WEATHER FORECAST	MOONRISE MOONSET	PHASE
Oct. 1	0646	0550	7.5	1150	3.5	Rain	2229	Last
		1730	8.6	....	...	SE Storm	1305	Qrtr
Oct. 2	0647	0648	7.3	0034	1.3	Rain	2318	Last
		1827	8.3	1249	3.9	SE Storm	1352	Qrtr
Oct. 3	0649	0751	7.3	0124	1.5	Fair	....	Last
		1932	8.1	1355	4.0	NW 20 mph	1434	Qrtr
Oct. 4	0652	0850	7.5	0236	1.5	Fair	0013	Last
		2036	8.2	1501	3.7	NW 10 mph	1512	Qrtr
Oct. 5	0655	0949	8.0	0333	1.3	Fair	0112	Last
		2140	8.4	1559	3.1	Calm	1547	Qrtr
Oct. 6		Additional weather data				Cloudy NW 10-15 mph to N 25 mph		
Oct. 7						Rain or heavy fog NW 15 mph		
Oct. 8						Rain NW 15-18 mph		

CONDITIONS FOR SMOKE:		
BEACH 'A'	Oct. 1 and 2	Offshore breeze
	Oct. 3 to 8	Onshore breeze
BEACH 'B'	Oct. 1 and 2	Onshore breeze
	Oct. 3 to 8	Offshore breeze
BEACH 'C'	Oct. 1 and 2	Offshore breeze
	Oct. 3 to 8	Onshore breeze (generally)

Fig. 5.--Tabulation of First Light, Tides, Weather, and Moonlight.

13. APPROACH AREAS FOR NAVAL CRAFT.--An operation supported by any large naval craft will require advance reconnaissance, unless adequate and reliable hydrographic charts are available. Any reconnaissance required by naval forces would be accomplished by their own personnel or, possibly, in conjunction with other reconnaissance groups.

For such craft the approach areas must be free of dangers or shoal water or otherwise definitely marked by aids to navigation or by anchored surface craft.

Fire support areas and transport areas will be defined and, if possible, buoyed in advance to facilitate vessels taking proper stations and carrying out their proper tasks efficiently and effectively.

14. RECONNAISSANCE.--a. Reconnaissance close in or off the approaches to an enemy shore is hazardous, and unless conducted at night and with utmost caution may result in loss of secrecy. Floating craft are vulnerable, and can be used near the enemy beaches only if the beaches and their approaches are poorly defended and patrolled. Normally other means of securing information must be exploited.

b. Actual observations from plane, by landing personnel (amphibian scouts) on the beach, and by photographs are the only suitable means of determining the characteristics of the beaches between the high and low water lines and the existence of obstacles, rocks, and reefs at the approaches. If accomplished by actual examination, with no photographs available, sketches must be made.

c. Reconnaissance for a landing at a river mouth, or in a harbor, may offer unusual difficulties. Defenses are probably well established, with booms and nets, and frequently a winding channel with little clearance between shoals exists. Details in regard to docks and other harbor installations must be obtained.

d. Fast, well armed surface craft, or submarines, can approach the enemy shore at night and obtain considerable data. From such craft, amphibian scouts may swim or row ashore, and may then operate on the enemy beaches or in the waters adjacent to them.

e. The establishment of secret aids to navigation may be combined with any reconnaissance patrols or flights that may be undertaken.

f. Built-up models or sand tables will facilitate study of the shoreline and approaches. Tentative Training Guide No. 7 contains a

discussion and photographs of sand tables designed for the particular study and use of shore engineers. They are equally adaptable to the study of the approaches to, and landing areas on, the beaches.

Working from maps and aerial photographs, sand tables giving information regarding beaches and their approaches may be built. They do not require an expert interpreter and may be studied and understood by all coxswains and other vitally interested personnel.

PART I

INTELLIGENCE

Chapter 5

WEATHER

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General	15
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15. GENERAL.--There is probably no influencing factor of more importance to the tactical and amphibian commanders in shore-to-shore operations than weather conditions.

16. FORECASTS.--a. For operations over even short distances, good weather forecasts are of primary importance. Should severe weather be encountered, an operation may have to be postponed in the likelihood that the fleet may get scattered and entirely out of hand. It is the function of the meteorologist of the higher command to provide such weather data and forecasts that 'D' day can be selected with fair certainty as regards weather conditions. The state of the sea, visibility, and any wind or atmospheric conditions affecting the possible use of smoke or the carry of sound are important elements of the forecasts.

b. Meteorology is a science-- a profession in itself-- and no attempt will be made here to define its many complex principles.

c. So-called 'long range' forecasts, arrived at from a study of synoptic weather maps plotted daily or oftener from observation at adjacent and distant stations, are the means of arriving with reasonable certainty as to possible weather changes. Full consideration, however, must be given to prevailing or seasonal weather conditions, daily variations in local conditions, and local weather signs which give short advance notice of changes.

17. PREVAILING WEATHER.-- By seasonal or prevailing weather conditions is meant seasonal snow, or rain, prevalence of fog, and such strong winds as the monsoons of the Indian Ocean and China Sea, with their accompanying heavy surf. Storms cross or approach the Aleutian Islands about 3 to 4 days apart during most of the year, except from April to July. This is prevailing weather. Daily

changes in the weather, such as morning fogs, afternoon onshore breezes, and night offshore breezes, which are local characteristics, also fall in this category.

There are parts of the globe where the prevailing weather is mild and temperate during most of the year. A good knowledge of local conditions and signs as to weather, preferably tempered by considerable experience in that locality, is of especial value in such mild climates. In localities where bad weather predominates, 'long range' forecasts from synoptic weather maps are good for only a few hours in advance.

18. WINDS AND VISIBILITY.--a. The direction and strength of winds is particularly important from many standpoints. Winds carry sound, and an onshore breeze may make a surprise attack very difficult. The successful use of smoke screens is dependent on accurate judgment of both wind direction and velocity. Winds are a large factor in determining expected surf conditions; changes in selection of landing beaches may be necessary. Except in areas where conditions are very stable, the wind is difficult to forecast with the required accuracy, particularly as to velocity.

b. Visibility has conflicting advantages and disadvantages. Poor visibility favors surprise, but detracts from the effectiveness of supporting naval fire and aerial bombardment, ability to locate landmarks and beach markers, and control of boat formations. Good visibility makes daylight landings virtually impossible as it gives the enemy the opportunity to observe and fire on approaching boats.

It follows that first light is usually chosen for 'H' hour to take advantage of the poor visibility for surprise and concealment of the landing of the first few waves and of the better visibility for landing of subsequent waves and for naval and air support.

PART I

INTELLIGENCE

Chapter 6

RECONNAISSANCE TIDAL SURVEYS

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19. PURPOSE.--The primary purpose of a tidal survey is to provide data for the determination of the depths of water which may be expected to be encountered at any time in any area. The times of high and low water on bars offshore from beaches, at the entrance to harbors and rivers, in bays, or, in fact, anywhere boats may have to go, must be known. It is equally essential that reasonably accurate figures be prepared on actual depth of water at high and at low tide. In many instances, a boat will be able to cross a bar if she waits for the right time and the deeper water of a high tide. It is clear, therefore, that no operation can be planned until this information is available.

20. TYPES OF TIDES (Figs. 6-8).--The type of tide varies considerably over the face of the earth. It usually appears in the semi-diurnal form-- that is, two high and two low waters a day. In some places there is only one high and one low per day (diurnal), and in others there is a combination of the two, part of the time there being two highs and two lows, and part of the time only one high and one low. More places have tides of the semi-diurnal type than any other; the Atlantic and Pacific seaboards have this type. The Gulf of Mexico is affected by a single high and low per day-- the diurnal type. In some places, like the Aleutian Islands, there is a mixture of the two types, so part of the month there are two highs and two lows per day, and the rest of the time only one of each. This is because of the combined effects of the two types of tide-- semi-diurnal in the Pacific, and diurnal in the Bering Sea.

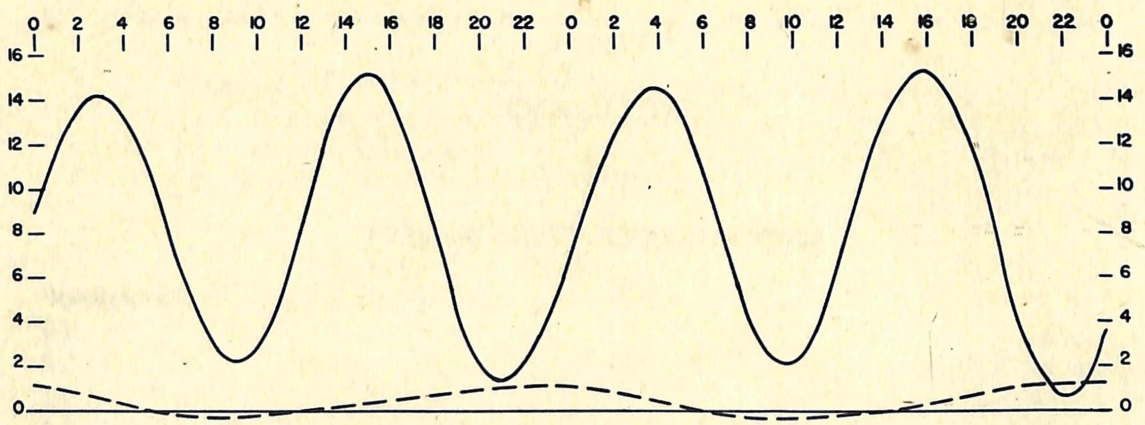

Fig. 6.-- Graphic Representation of Tidal Cycle at the Panama Canal. Full line-- Balboa, Canal Zone; Range about 14' (Typical Pacific Ocean). Dotted line-- Cristobal, Canal Zone; Range about 1 1/2' (Typical Caribbean Sea and Gulf of Mexico). Same days as Dover and Dieppe tide curves, Fig. 7.

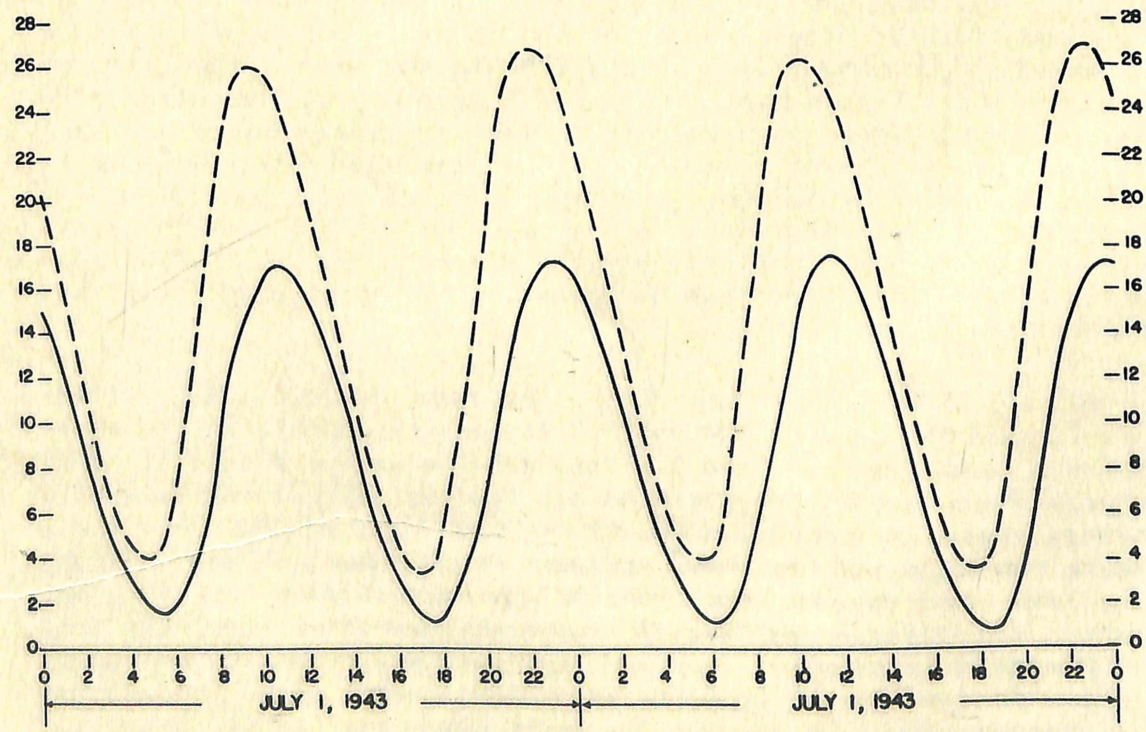

Fig. 7.-- Graphic Representation of Tidal Cycle in English Channel. Full line-- Dover, England; Range about 18' (Typical Atlantic Ocean). Dotted line-- Dieppe, France; Range about 27' (Distance to Dover, 88 miles).

d. The discussion which follows on reconnaissance tidal surveys applies to those surveys conducted on the near shore, in the waters to the far shore, and in those areas near the far shore where enemy defenses permit and the surveys can be conducted without sacrificing secrecy.

23. METHODS.--The first requisite for a tide survey is to set up some means of measuring the heights of the water at frequent, regular intervals, and of recording the information gathered. This can be done by means of: (1) a tide staff, (2) a float well, (3) an automatic recorder, or (4) a combination of these, together with an accurate time piece.

24. TIDE STAFF (Fig. 9a).--a. This is the simplest method. The staff is made up of a piece of lumber about 1" x 6" x 16' graduated in feet and tenths of a foot throughout its length. The '0' (zero) should be at or near the bottom. This staff is installed in a vertical position, secured to a convenient piling, to a rock with a nearly vertical face, or in a cribbing loaded with rock to make it stable. It should be in a place protected to as great an extent as possible from the sea and weather. A site near the shore so that the staff can be read from land is preferable. To make certain that there is no shift in the position of the staff, the 'zero' mark should be related to some permanent mark on the beach by level readings so that any vertical shift can be determined. Close observation of the appearance of nearby rocks, piling, or the shore itself, will indicate the approximate lowest and highest waters and will determine the length of the staff needed. It is essential to have the 'zero' covered at all low waters as the determination of the datum plane depends on these lowest readings.

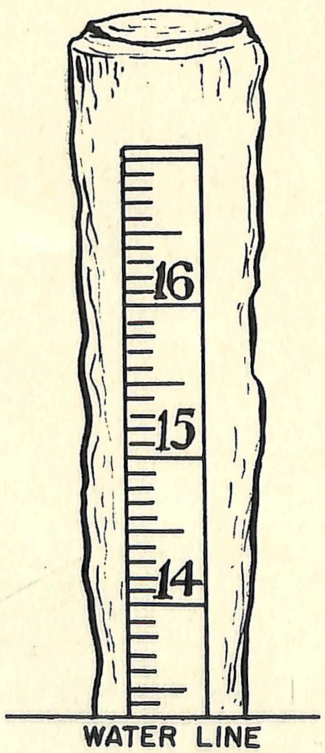

Fig. 9a.--Tide Staff.

b. When the staff has been properly secured in position, the readings of the staff may be started. They should be taken at each hour interval and recorded in a neat, legible manner, in a permanent book. If high and low water do not come on an even hour-- as they seldom do-- these times and heights should be noted as accurately as possible. Comments, such as the state of the weather, wind, and sea-- as smooth, rough, heavy swells-- all help to make a better record.

c. An ordinary tide staff is sketched in Fig. 9a. There is often a great deal of rapid vertical movement to the water which makes it difficult to spot a height at any particular instant for record. The usual type of boiler gage glass (Fig. 9b) about 1/2" to 3/4" bore secured to the staff makes reading easier. Or several sections of glass tube can be used, connected together by short sections of rubber tube or hose, and the whole secured to the staff. The lower end should be partially closed to let in little water, so that the water will move relatively slowly in the tube and indicate the water height at any time quite accurately. A small cork 'pea' in the tube will float on the water and make reading much easier.

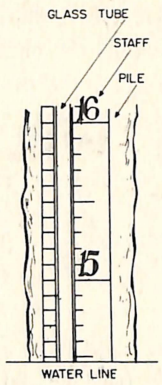

Fig. 9b.

25. **FLOAT WELL** (Fig. 10).--Another simple measuring device is a small float well which may be of 3" or 4" pipe or made up of 1" x 4" lumber to form a square well. A float of metal or cork or other light material rests on the water surface inside the well. Attached to this float is a long, light batten on which are scribed foot and tenth-foot marks as on the regular staff. In this case, the 'zero' is at the top, and all readings would be scaled at the top of the well. To dampen the effect of the surge of the water, the float well should rest on the bottom and have one or two small holes to let water into it. Such a gage should be as carefully set as is the ordinary staff.

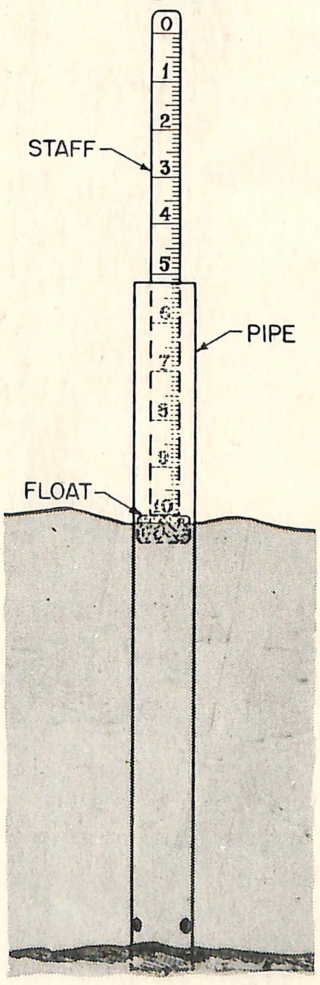

Fig. 10.--Float Well.

26. **AUTOMATIC RECORDERS.**--a. An automatic recording gage is much more satisfactory than either the staff or float well gage. It gives a continuous and permanent record of what has happened. It will function equally well in good or bad weather, during day or night, and needs to be observed but once or twice a day.

b. Automatic gages vary considerably in their make-up. The simplest is a portable automatic tide gage; a printing automatic gage is more complicated. The simpler they are, the better they are for field work. Nearly all the automatic gages use clocks for timing the record and moving the paper, and have a method for reducing the vertical motion of the water

to a suitable scale and drawing it on the paper. The movement of the water is communicated to the gage by means of a wire (or cord) attached to a float in a well. By means of gears, the motion is reduced in amplitude, and by a long, helical screw, a cam is moved back and forth to correspond to the water's rise and fall. A pencil (or stylus) is secured to this cam, and is made to draw out the height of the water as the paper is moved along by the timing clock. Figs. 11a and 11b show a simple automatic gage installation.

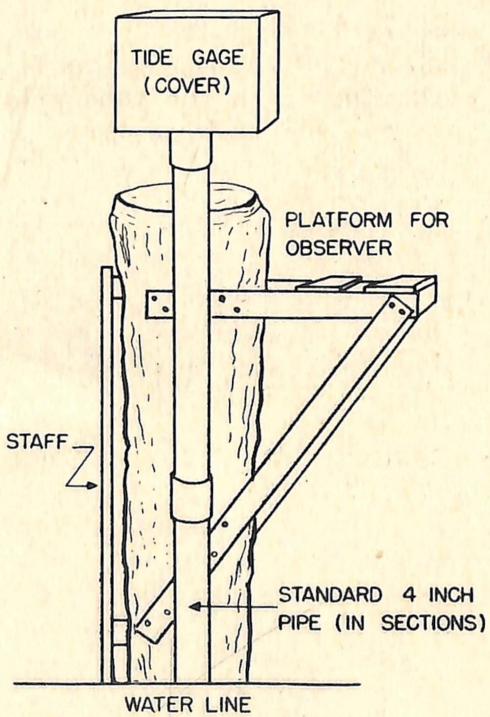

Fig. 11a.--Automatic Gage Installation.

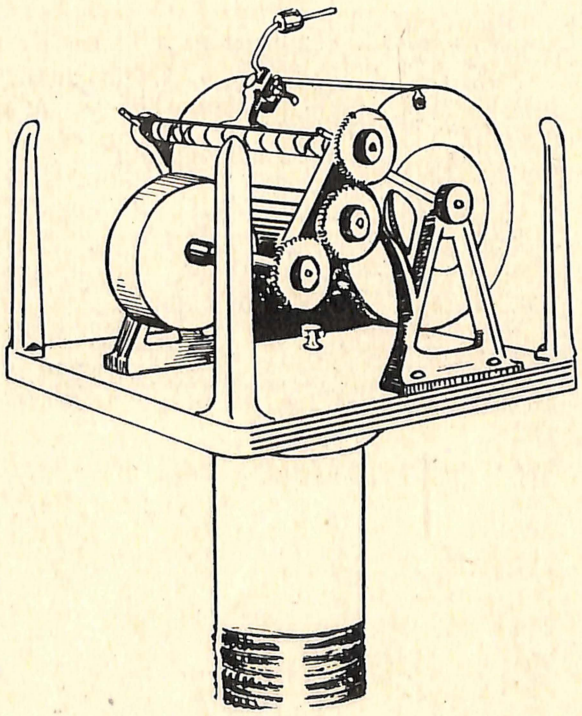

Fig. 11b.--Automatic Gage.

c. A tide staff should always be installed in conjunction with any automatic gage. This is necessary to correlate the curve on the paper representing the water heights (the marigram). The staff should be read once or twice daily, and the corresponding point on the marigram indicated and marked with these observations. These readings serve the purpose of checking the operation of the gage, determining the rate of the clock (timing) as well as any slippage in the gearing or any other functioning of the gage.

d. In some gages, the paper (Fig. 12a) is scaled in time (lengthwise) and in height (crosswise) and just fits around the outside of a drum which makes one turn each 48 hours. It is practical to run this gage without a change of paper for about 6 days. After that time the record will become confused by the overlap of graphs.

Less than six days is to be preferred. In a larger gage, the paper is blank and runs through the timing device in a continuous roll, long enough to last a little over two months (Fig. 12b shows a gage good for one month). This paper travels at the rate of about 1" per hour and the time (hours) is marked automatically by a clock. Daily comparisons with the tide staff must be made and recorded on the marigram when this type gage is used.

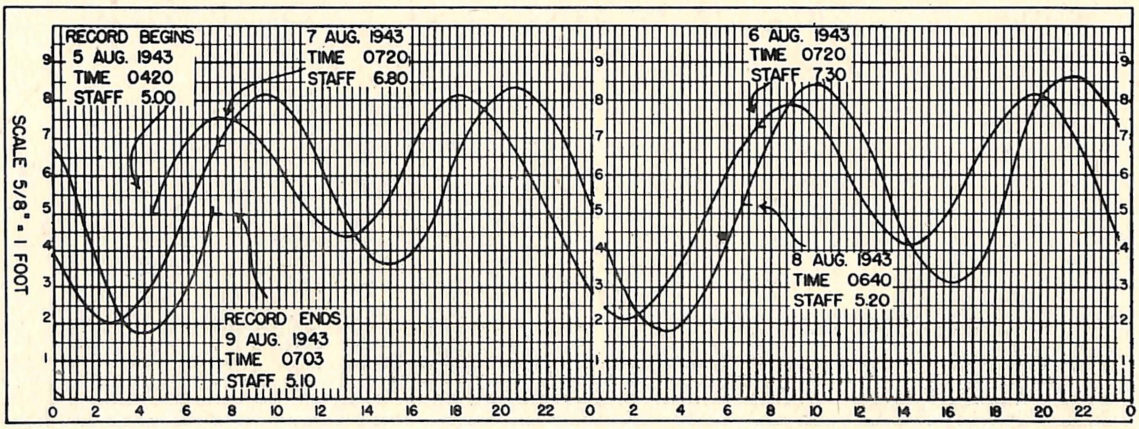

Fig. 12a.--Marigram from Portable Gage; Scale: 5/8" = 1". (Paper 7" x 24"; good for about 4 days).

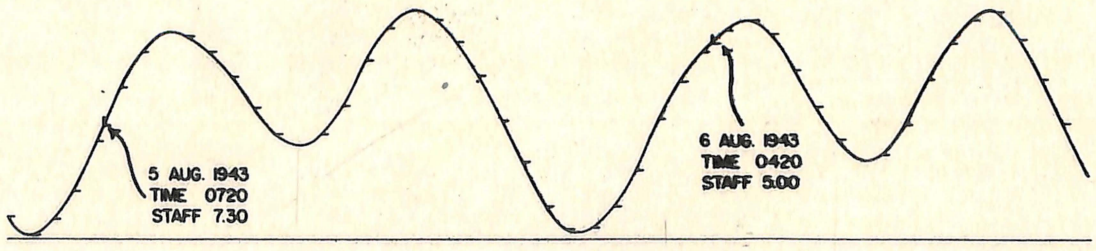

Fig. 12b.--Marigram from Standard Tide Gage; Scale: 1" = 1'. (Paper 13" wide x 66' long; good for 1 month's record.)

e. In general, the portable automatic gages are used where a relatively short period of observations is wanted, from two weeks up to several months. A standard gage - the larger and more accurate one - is used where a long period of record is desired, and many of this type have been in place at permanent (or standard) stations for many years.

27. LAYOUT OF GAGES.--a. The type and number of gages used in any survey are determined largely by the nature of the area to be surveyed. An open coast requires few, while a large bay with several arms and a restricted entrance requires many.

b. On the open coast, the portable automatic gages are preferred. At least one should be in a well protected site, and set up with care and accuracy with a view to semi-permanence. This gage is kept in operation throughout the entire period of the survey, and is designated as the reference gage (or station). Subordinate gages are installed and placed in operation in the actual localities where hydrographic surveys are being made. These gages may be as far as 100 miles from the reference gage. If possible, a subordinate gage should operate as long as the surveys are being made. Fifteen days is a minimum. In any case, a 'Comparison of Simultaneous Observations' of the various subordinate gages is made with the corresponding data from the reference gage, and factors may be evolved from which the tide at any one of the subordinate stations can be computed from the corresponding tide at the reference station. Such a comparison gives average values only, however, so at points where accuracy is required, the installation of a gage is desirable.

c. (1) In a large bay with entrance more or less restricted either by a bar or by the land formation, and especially in one with several arms, the time as well as the height of the water will vary considerably from place to place. The time and height of the tide near the entrance will correspond closely to that on the open coast. As the distance from the entrance is increased the variation will increase. The extent of the difference will depend largely upon the shape of the bay. In such places it is necessary to have several gages in operation. There should be one on the open coast near the entrance, one just inside the entrance, and at least one (placed about midway) in each arm of the bay. Each should have its individual staff connected to the beach by suitable level observations. If possible connect all gages by a level loop to correlate accurately the recordings. Where the number of automatic tide gages is limited, the simple staff gage is satisfactory in the more remote and less important areas, provided readings are recorded each hour for a period long enough to get a good comparison with an automatic gage in operation at the same time. Four days of such readings would probably be sufficient, since the tide throughout the bay conforms fairly well to one pattern, and the variations in time and height will be constant between specified points.

(2) Fig. 13 shows a plan for making a preliminary tidal survey. The bay has an entrance width of about one mile, the southern arm is roughly 30 miles long, and the northern arm is about 20 miles long and is connected by a narrow, deep channel to a basin some

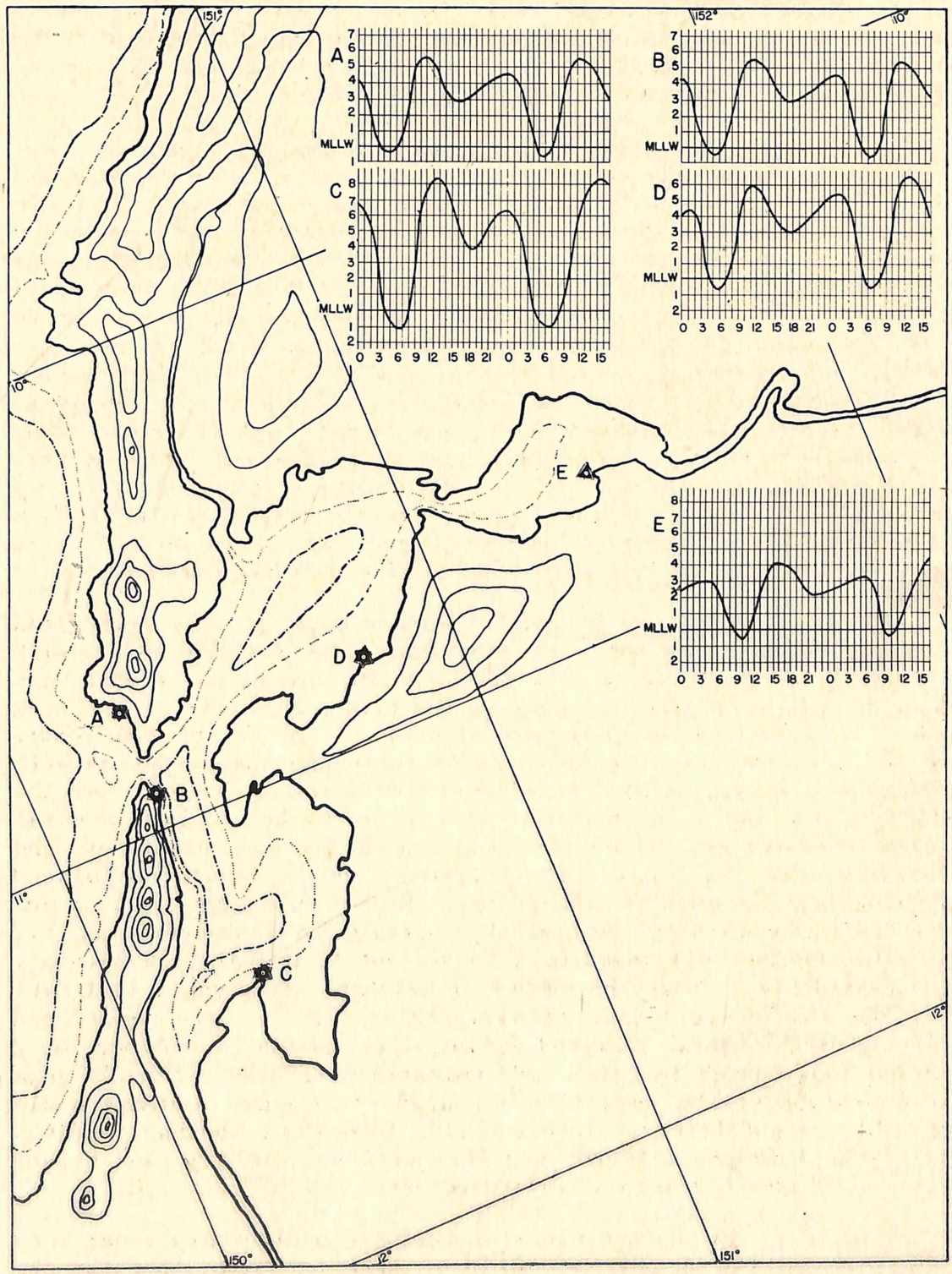

Fig. 13.--Preliminary Tidal Survey. (Explanation on Opposite Page).

FIGURE 13. EXPLANATION OF SKETCH FOR RECONNAISSANCE TIDE SURVEY.

STATION 'A' is established on the outer coast about 5 miles northward of the entrance to the Bay. This will serve as the primary station and is expected to give close approximations to the tides amongst the Islands to the Westward. This is a PORTABLE TIDE GAGE.

Portable Tide Gages are also established at points designated by the STARS: 'B', 'C', 'D'. A Tide Staff only is established at the position indicated by the TRIANGLE 'E'.

Tide gages at 'B', 'C', and 'D' are operated for about 2 weeks, which will give a satisfactory determination of the values desired. The Tide Staff is read for only 3 days. The gage at 'A' will then serve to give data for any place as long as it is operated, or until sufficient time permits predictions.

With the GAGE at 'A' the PRIMARY STATION, and all the others referred to it to determine the TIME differences and the HEIGHT or RANGE differences, the following values may be tabulated:

STATION	TIME DIFFERENCE	RANGE RATIO
'A'	0 hr 0 min	1.0
'B'	0 hr 30 min	1.0
'C'	1 hr 30 min	1.5
'D'	0 hr 50 min	1.1
'E'	4 hr 10 min	0.7

Certain portions of the tide curves are plotted to show graphically the differences in the tide within a large bay as well as how they differ from the tide in the open sea.

M.L.L.W. at Station 'E' is found to be 2.2' on the Staff. Recorded readings are reduced by 2.2 to indicate the actual height of the tide, as follows:

11 JULY 1942			12 JULY 1942		
TIME	RECORDED HEIGHT	REDUCED HEIGHT	TIME	RECORDED HEIGHT	REDUCED HEIGHT
0000	4.6	2.4	0000	4.6	2.4
0100	4.8	2.6	0100	4.7	2.5
0200	5.0	2.8	0200	4.9	2.7
0300	5.1	2.9	0300	5.1	2.9
0400	5.2	3.0	0400	5.3	3.1
0500	5.2	3.0	0500	5.4	3.2
0600	4.8	2.6	0600	5.5	3.3
0700	3.8	1.6	0700	5.1	2.9
0800	2.7	0.5	0800	4.2	2.0
0900	2.0	-0.2	0900	2.2	0.0
1000	1.4	-0.6	1000	1.8	-0.4
1100	2.1	-0.1	1100	2.4	0.2
1200	3.0	1.0	1200	3.5	1.3
1300	4.4	2.2	1300	4.7	2.5
1400	5.6	3.4	1400	5.5	3.3
1500	6.2	4.0	1500	6.2	4.0
1600	6.3	4.1	1600	6.7	4.5
1700	6.2	4.0			
1800	6.0	3.8			
1900	5.6	3.4			
2000	5.0	2.8			
2100	4.6	2.4			
2200	4.4	2.2			
2300	2.3	2.3			

The reduced heights are plotted on Graph E on the opposite page for comparison with the curves of the other stations on this sketch.

15 miles across. Locations for the tide gages are indicated by *. There will be only 4 automatic portable gages available for the survey, but as many staffs as desired may be made up. The gages on the outer coast and just inside the entrance will be maintained in operation during the entire period of the survey. A rough preliminary survey shows that the southern arm is probably the better of the two as a port and an anchorage, as the water is deeper and this bay is more accessible to the surrounding country. A gage should be set up about as shown. At the same time that this work is going on, a site ('D') may be selected for a gage in the northern arm, and if, after some examination, it seems desirable, two or three staffs may be set up, one in the narrow channel leading to the eastward, and one in the large basin about as shown by 'E'. All the gages should be operated simultaneously. Following this plan, the time required for this survey is about 2 weeks. See explanation on page 31 for further details.

PART I

INTELLIGENCE

Chapter 7

RECONNAISSANCE CURRENT SURVEYS

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28. PURPOSE.--The purpose of a current survey is to determine the strength and direction of currents in the water areas to be traversed so that proper allowance may be made when navigating these waters.

29. CAUSES OF CURRENTS.--Currents in the oceans are caused in several ways or combinations of ways: by differences in the times and heights of the tide; by differences in the temperature of nearby bodies of water (convection); and by the force of the winds and storms blowing over the surface.

30. TIDAL CURRENTS.--a. Currents are generally strongest where the range of tide is greatest and the rise and fall of the tide is restricted by the configuration of the shore and the bottom. Thus, tidal currents are found along the shore, and are of especial importance in the restricted waters between islands and the mainland, or between islands themselves. In these areas, the velocity of the water may become very great, so that navigation in straits and sounds becomes difficult and even dangerous. The fact that the times and heights of the tide vary from place to place is well

known: these differences cause the flow of water from one place to another; and, in general, the greater these differences, either in time or in height, and sometimes both, the greater the currents. The velocity of the water is somewhat dependent upon the shape and size (width and depth) of the channel or pass as well as the size of the bodies of water which it connects.

b. The Pacific Ocean and the Bering Sea, both large bodies of water, are separated from each other by the Aleutian Islands, a chain of islands which extends about 1,000 miles to the westward of the Alaskan Peninsula. There are many passes between these islands varying in width from a few miles to more than 50 miles and in depth from 15 fathoms to almost 200 fathoms. The heights of the tides in the Bering Sea are much smaller than the corresponding tides in the Pacific Ocean, even as measured on the two opposite sides of the chain of islands. Even considering the extent of some of the passes, the currents often attain a velocity of more than 5 knots in the largest of the passes.

c. The tide at Queen Charlotte Sound has almost the same range as the tide near Victoria, B. C., (Georgia Strait), but the time is about 3 1/2 hours earlier. Seymour Narrows, connecting the two bodies of water, is relatively narrow and shallow, but due to the time difference in the tides, the current here often attains a strength of 10 knots.

d. We have strong currents in artificial waterways: a 5-knot current is often experienced in Cape Cod Canal. In this case, we have a tidal height difference of some 5' (10' in Cape Cod Bay and 5' in Buzzards Bay) and a time difference of about 4 hours earlier in Buzzards Bay. This effect is further reflected in the currents around and between the shoals and islands to the southward of the Cape, though to a much less marked extent.

e. Coastal currents, generally, will have periods of strength and periods of slack, alternating at fairly regular intervals. With a rising tide, the current will flow in one direction-- the FLOOD-- and with a falling tide, it will sometimes reverse its direction and flow with an almost equal strength - the EBB. In a REVERSING current, there are actually periods of no current, however short they may be - the SLACK. Of course, the direction of the current is determined by the influence of the nearby land, and will, in general, coincide with the axis of the deepest water (channel). These might be called 'rectilinear currents', since the direction is practically constant for either phase - Ebb or Flood. If the velocities are measured at uniform intervals, and these values plotted against time, considering Flood as plus and Ebb as negative, we will have a curve somewhat like those in Figs. 14-16.

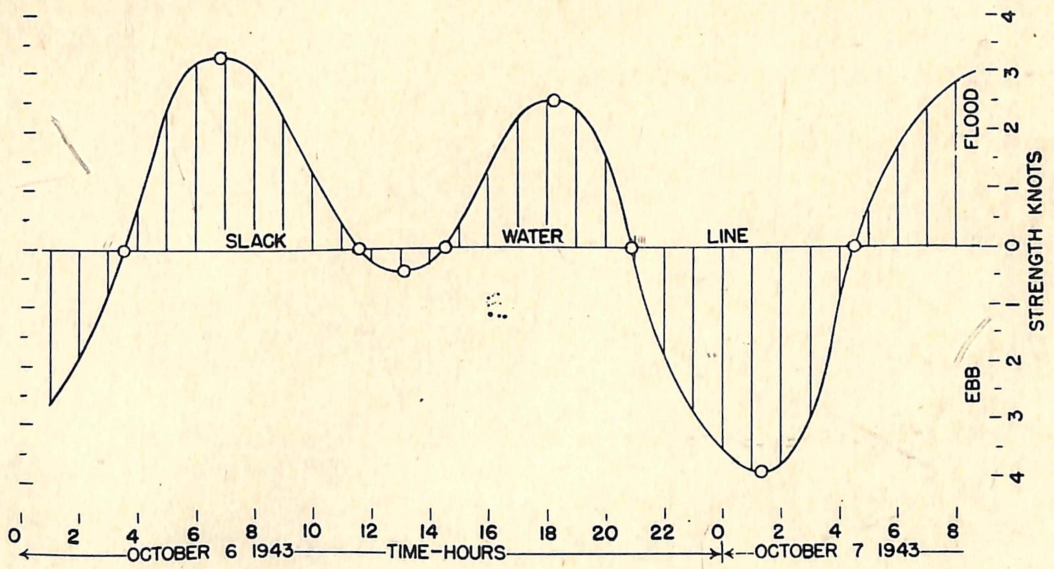


Fig. 14.--Graphic Representation of Current Cycle on October 6-7, Unimak Pass, Alaska. This is typical of an area in which there is a relatively great difference between the ranges of the two tides during the day. This pass connects the Pacific Ocean and the Bering Sea. It will be noticed that the two flood maximums are about equal, while there is a great difference between the two ebb maximums. In these diagrams, only the strength of the current is indicated (against time). The direction of the current must be obtained elsewhere. In this case the Flood direction is 285° true, while the Ebb direction is about 125° true. These directions follow the channel fairly well, not the general land configuration.

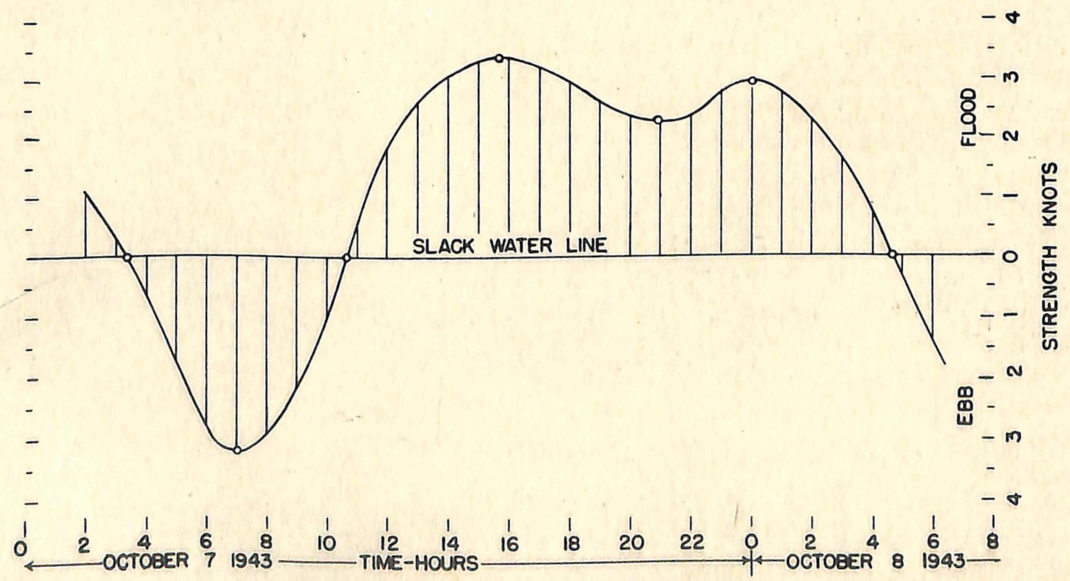


Fig. 15.--Graphic Representation of Current Cycle on October 7-8, San Bernardino Strait, P.I. This curve is representative of an area in which there is a large difference between the two tides of the day as in Fig. 19. This is shown here as the two types of cycles are very closely related, both in time and range, there being a fairly definite ratio between velocities, and a definite time difference between the various phases. This station was once used to predict the currents at Unimak Pass. The current floods about 3/4 of the day, direction about 225° true.

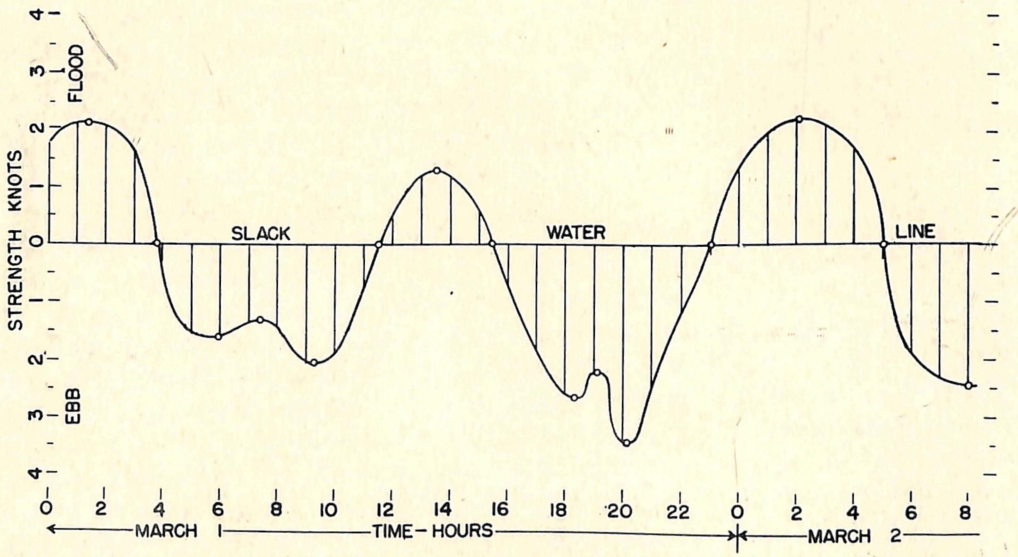


Fig. 16.--Graphic Representation of Current Cycle March 1-2, 1942, Puget Sound, Washington. This current cycle is typical of a more or less confined body of water, with only one entrance or outlet. The dips in the Ebb current portions of the curve are often met with, sometimes even more pronounced than here shown. Where the Ebb is small, there may even be a momentary reversal of the current. Flood direction is about 170°, the Ebb direction about 350° true. The current is nearly parallel with the axis of the channel.

f. In the open sea, where currents are not apt to be confined to channels, we find a different type of current, the ROTARY (Figs. 17a - 17d). In general, these currents follow a clockwise rotation in the northern hemisphere, and a counter-clockwise rotation in the southern hemisphere. In the currents of this type, there are no real slack periods between the flood and the ebb, although there is usually a marked diminution in the strength of the current at this time. The actual direction of the maximum flood and ebb currents remains fairly constant at all times, but since it is not confined to any channel, it swings continually so that in a single tidal cycle it has set in all directions of the compass. A plot of this type of current with velocities as vectors radiating from a point on a time-direction change, the times being given for 13 hours of the complete cycle, is shown in Fig. 17a.

In Figs. 17a, 17b, 17c, and 17d, illustrating tidal current curves, the vectors, or straight lines radiating out from a central point indicate the direction of the current, while the length of these lines indicate the strength of the current. The curved lines connecting the ends of these vectors are drawn in merely as a convenience to show the type of cycle and an aid to reading the diagram. ⇨

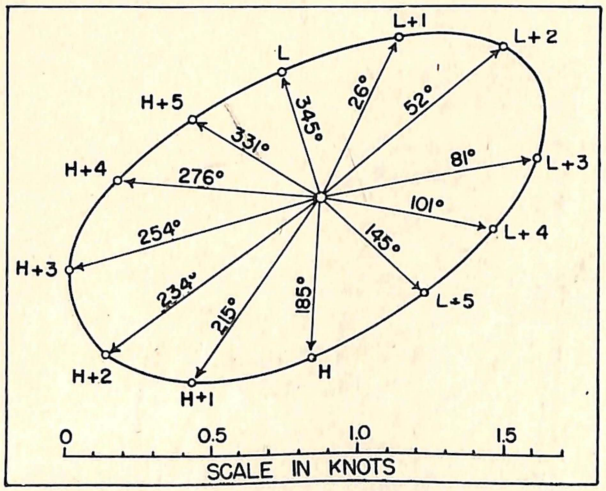


Fig. 17a.--Graphic Representation of Current-- Georges Bank & East to South of Cape Cod & Islands. The simplest form where the difference between successive High and Low waters is nearly constant as found along the Atlantic Seaboard. This shows complete reversal of direction with no 'slack' period, although there is a small diminution in strength. The current makes a 360° cycle corresponding to each tidal cycle, not quite two per day.

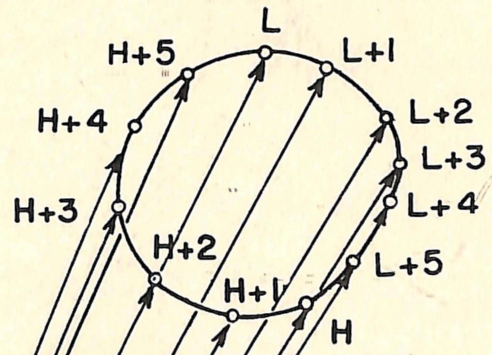


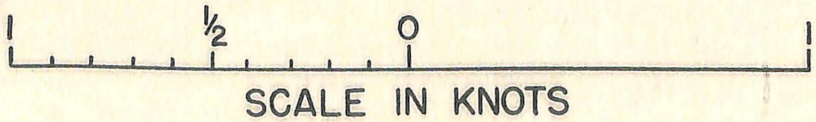
Fig. 17b.--Graphic Representation of Current Cycle Gulf Stream near Florida Straits. A similar form to that in 'a', but here there is no reversal in direction, merely a gradual decrease in strength, and then an increase in maximum, with a small change in direction during the cycle (11½° from 23½° to 34½° true).

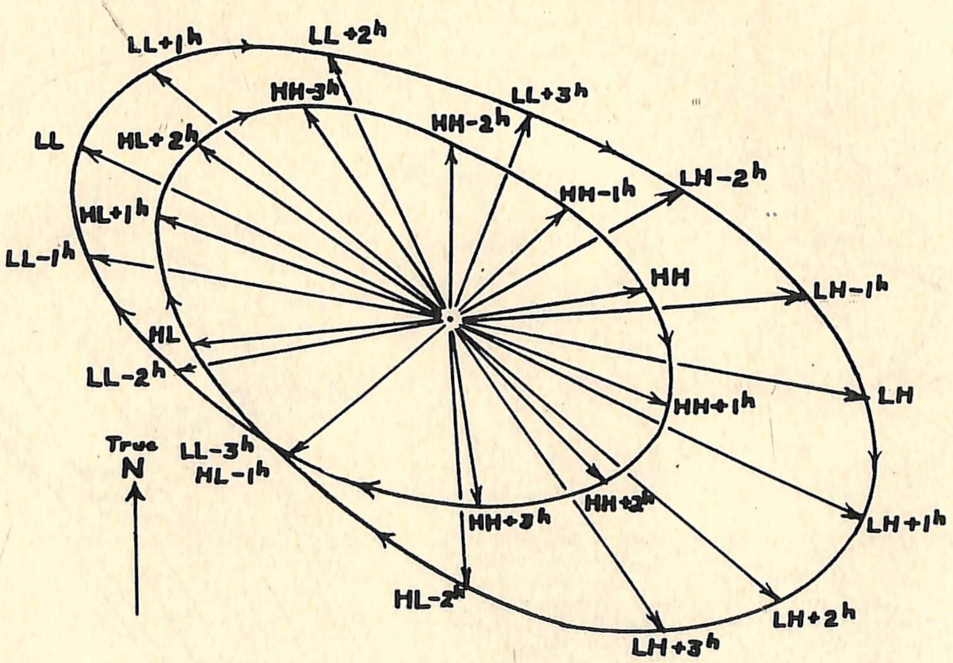
CURRENT DIRECTIONS

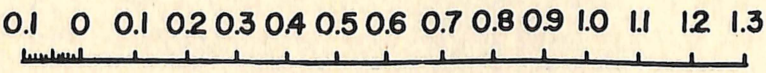
L	27° T
L+1	29½°
L+2	32½°
L+3	33°
L+4	34½°
L+5	34½°
H	33°
H+1	31°
H+2	27°
H+3	24°
H+4	23½°
H+5	25°

Abbreviations in diagrams explained below:

H	*High Water*	*H + 1*	*1 hr after H*
HH	*Higher High Water*	*H − 1*	*1 hr before H*
LH	*Lower High Water*	*L + 1*	*1 hr after L*
L	*Low Water*	*L − 1*	*1 hr before L*
LL	*Lower Low Water*		
HL	*Higher Low Water*		



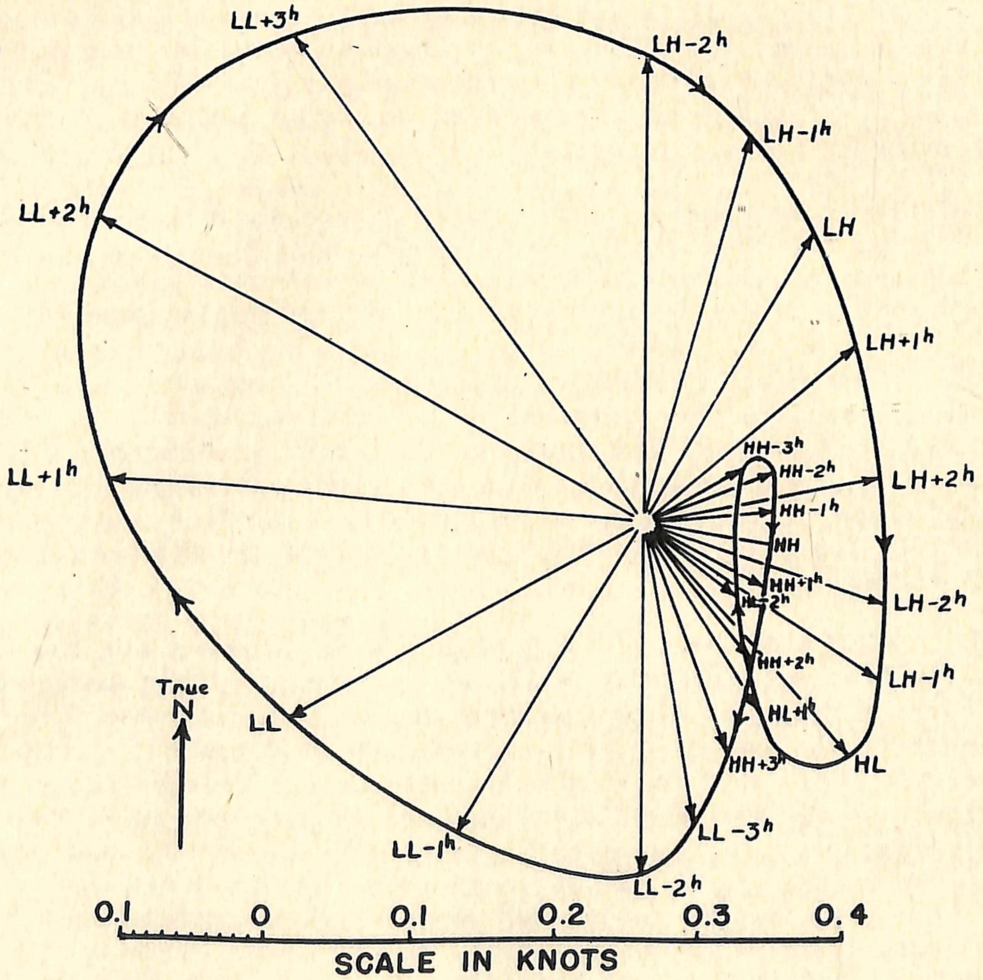




Scale in Knots

Time	Velocity	Direction	Time	Velocity	Direction
Tide Hrs	Knot	True	Tide Hrs	Knot	True
HH-3	0.5	325°	LL-3	0.4	230°
HH-2	0.4	0°	LL-2	0.6	260°
HH-1	0.3	45°	LL-1	0.7	280°
HH	0.4	80°	LL	0.8	295°
HH+1	0.5	110°	LL+1	0.8	310°
HH+2	0.4	135°	LL+2	0.6	335°
HH+3	0.4	170°	LL+3	0.4	20°
LH-2	0.5	60°	HL-2	0.5	175°
LH-1	0.7	85°	HL-1	0.4	225°
LH	0.8	100°	HL	0.5	265°
LH+1	0.9	115°	HL+1	0.6	290°
LH+2	0.8	130°	HL+2	0.6	305°

Fig. 17c.--Tidal Current Curve, Swiftsure Bank Lightship. Referred to predicted time of tide at Astoria, Oregon. A more complex form of current cycle illustrative of areas where the range difference between the successive High and Low waters of the day differs materially as is typical of the Pacific Coast. This diagram shows a complete cycle wherein there is a change of direction through 360° twice during the tidal day, the two branches of the curve being very similar in shape though somewhat differently centered.



Time	Velocity	Direction	Time	Velocity	Direction
Tide Hrs	Knot	True	Tide Hrs	Knot	True
HH-3	0.1	60°	LL-3	0.2	170°
HH-2	0.1	70°	LL-2	0.3	180°
HH-1	0.1	85°	LL-1	0.3	210°
HH	0.1	100°	LL	0.3	240°
HH+1	0.1	120°	LL+1	0.3	275°
HH+2	0.1	145°	LL+2	0.4	300°
HH+3	0.2	160°	LL+3	0.4	325°
LH-2	0.3	0°	HL-2	0.2	110°
LH-1	0.3	15°	HL-1	0.2	125°
LH	0.2	30°	HL	0.2	140°
LH+1	0.2	50°	HL+1	0.2	150°
LH+2	0.2	80°	HL+2	0.1	130°

Fig. 17d.--Tidal Current Curve, San Francisco Lightship. Referred to predicted time of tide at San Francisco (Golden Gate), California. Another complex cycle, where there is even greater difference between the two tidal ranges of the day. It is seen that the current flows in directions between 0° and 180° (true) for 3/4 of the current cycle. The velocities of the current in this portion are much less than in the other half (between 180° and 0° true) where the strength is almost two times as great.

g. A slightly different type current, though its effect is much the same as a rotary, is one which flows in much the same direction but has a cyclic variation covering nearly a semi-circle. There is no slack, but there are periods of stronger and weaker currents conforming to a definite pattern.

h. Two more complex rotary currents are shown in Figs. 17c and 17d. These make clear the fact that Engineer Special Brigade navigation and intelligence officers must be informed thoroughly as to the current problems in any particular area of operations.

31. TEMPERATURE CURRENTS.--Difference in temperatures of nearby waters may cause either vertical or horizontal motion. In the open sea, the Gulf Stream, the Japanese Current, the Labrador Current, and many others are examples. The directions are largely determined by the shape of the oceans through which they flow, and, to some extent, by the rotational effect of the earth. In places these currents exceed 3 knots.

32. WIND CURRENTS.--a. A strong wind blowing for many days steadily from one direction will set up an appreciable current, but the current does not always assume the same direction as the wind. In general, the velocity will approach about 2 percent of the wind velocity. The direction in the Atlantic Ocean averages about 20° to the right of the wind, while in the Pacific Ocean there is considerable variation. In the north Pacific, the current is about 20° to the right of the wind. In the southern parts, a N.E., S.E., or N.W. wind produces a current about 20° to the right, a S.W. wind will set up a current about 20° to the left, and S. or W. winds will set up currents almost in the same directions.

b. Exact information can be had only by close observation. While directions can be fairly closely approximated, velocities are not so easy to determine. The current set up by a 25-mile wind is almost negligible unless the wind blows long and steadily and, in any case, the effect of the wind may be easier to determine than that of the current set up by it.

c. The effect of strong currents upon the state of the sea when the currents are running opposite to the wind or sea swell is important. In certain localities currents have built up a 10' sea, on a calm day, when opposed to a sea swell. Add a strong wind to this condition and small boats could not operate.

33. CURRENTS AND TIDES.--In the open sea where reversing or rotary currents exist, the periods of slack or nearly slack water correspond very closely to the times of high or low water; the periods of maximum current correspond to the periods of mean sea level.

In the more obstructed channels, there is a considerable difference between the times of these corresponding phases. Nevertheless, a definite relationship can be found between these phases and the times of Slack Water, and the times of Maximum Flood and Maximum Ebb can be computed with considerable accuracy from the corresponding times of the tide phases. Thus, a current survey is always accompanied by a tidal survey, and the exact relationship of the current to the tide must be known even for a short period.

34. **AVAILABILITY OF CURRENT DATA.**--Accurate current data is available for relatively few places on the earth and will usually have to be determined for the water areas of operation.

35. **METHODS.**--a. The kind of survey to be conducted will be governed in each case by the proximity of the enemy shore, the alertness of the enemy defenses, and the configuration of the shore. Along the open coast sufficient data may be acquired from observations at widely separated stations from 5 to 15 miles off shore. Currents are apt to be irregular in the vicinities of capes and peninsulas. There we need more observations if the current strength requires more detail. In narrow channels, and in areas of strong currents, the number of observations must increase many times to obtain sufficient data for safe navigation.

b. On the enemy shore current observations will be limited to those that can be made by scouts placed ashore and operating at night. They can find the approximate direction and velocity of the current by momentarily anchoring a rubber boat, and letting a piece of wood fastened to a measured length of string be carried by the current until the string is tight. By keeping track of the time, the current velocity is computed; the direction is told by observing the direction in which the wood drifts. This might have to be repeated many times at different places along the shore to get a true picture of the velocity and direction of currents.

The use of secret aids to navigation off the far shore renders less necessary the need for accurate current data.

c. In the open sea and well off the enemy coast current surveys may be made by (1) observations from a vessel at anchor in a fixed position; (2) comparison of the position of a vessel underway as given by observation and as determined by dead reckoning; and (3) by observation of the drift of objects afloat on the water as seen from time to time and in different places.

The first named method, from a vessel at anchor at sea, is the only accurate and reliable method. However, it must be used

during the hours of darkness, and the alertness of the enemy patrols will determine how close the observing vessel can approach the hostile shore without discovery by the enemy. The accuracy will depend upon the instruments or apparatus used and the care taken in making observations. Some of the methods used to measure currents are: (1) chip log; (2) current pole and line; and (3) current meters, including electric and pressure logs.

The second method, comparison of observed and dead reckoning positions, has given the greatest amount of information on the open sea, but this method includes errors of observation combined with differences between observed and dead reckoning positions that often lead to erroneous results.

A considerable knowledge of ocean currents has been obtained by the third method, observing the drift of objects cast into the ocean, such as sealed bottles containing messages, derelict vessels, and so on, noting the time and place when seen.

Current buoys which automatically radio the velocity and direction of currents periodically are available, but their value is questionable because they can be easily detected by the enemy.

36. CHIP LOG (Figs. 18a and 18b).--The chip log is a small segmental (quarter circle) shaped piece of thin wood weighted on the curved side to float vertically. It is secured by a suitable bridle

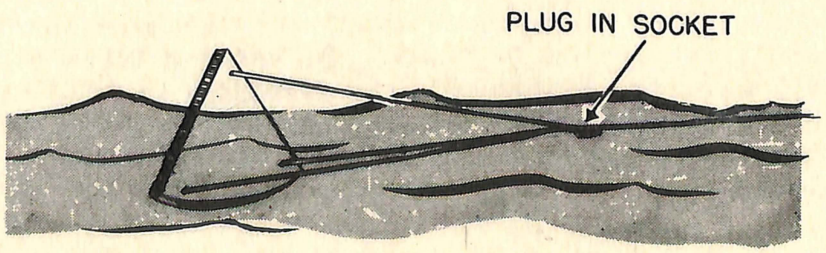


Fig. 18a.--Chip Log, with Chip Upright.

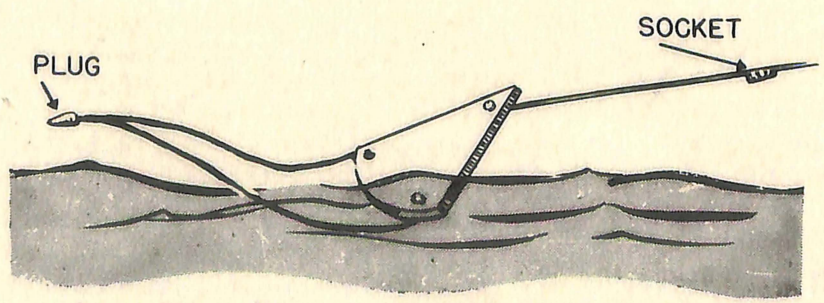


Fig. 18b.--Plug Jerked out for Hauling In.

to a length of light, strong cotton line of considerable length, called the log line. The first 50' to 100' is used as a stray line. A knot or marker is placed at this point, and then at 47¼' intervals, for a length of about 500' or more. This is reeled on a spindle which can be handled easily. It is used in conjunction with a log glass (like an hour glass), which runs for just under 30 seconds (27.4 seconds). The log is thrown over the stern, and the line paid out; as the first knot passes through the hand, the glass is turned over. When the glass is empty the line is stopped and the number of knots counted, thus giving the velocity of the current in nautical miles per hour.

37. CURRENT POLE.--a. The current pole is a modification, in effect, of the chip log. It is usually made up from a light, strong wood pole about 4" in diameter and about 12' to 14' long. The lower end is weighted with sheet lead so that the pole will float vertically, and with only about 1' to 2' above the surface. The pole is painted white (and sometimes a small white flag is attached) to make it more visible, especially at night. A light, strong, 21-thread line is secured to the pole about 3' below the top, the length varying up to about 100'. To this line is attached the current line. Beginning at a point about 100' from the junction of these two, there is a knot or marker secured to the line, and additional ones at intervals of 101-1/3' for at least ten spaces, marking a length of 1,013-1/3' (a nautical mile = 6 x 1,013-1/3' 6,080' approximately). There should be about 200' in excess of this length. The end should be secured to the drum of a small hand-operated reel which is large enough to take all the line. As this pole offers a considerable resistance when being pulled through the water, the current line will have to be of good material, at least 1/4" in diameter. It must be well stretched and soaked (shrunk before marking).

b. A good stop watch is the best method of timing the run of the line. The pole is let go over the stern of the boat and allowed to run freely with the current pulling the line off the reel so as to require as little pull from the pole as possible. When the first knot passes through the hand, the watch is started and as the last knot leaves the hand, the watch is stopped. The measured time interval will indicate the time required for the running out of ten divisions. In this way, the velocity in knots (nautical miles per hour) is 10/t, or ten divided by the number of minutes required for the run, or 600/t. ('t' being in seconds). If the unit of time for the run is constant, say each run is one minute, then V (velocity) equals the number of knots passed during that time. However, it is generally easier to let the entire amount run by, and determine total time, than it is to estimate fractions of sections of the line. It is more accurate to use the entire line, as the time covered is longer, and greater values are concerned in each computation.

38. **CURRENT METERS** (Fig. 19).--a. Current meters are mechanical devices for measuring the velocity of currents. They are usually made up of a rotating element something like the propeller of a ship or a turbine or made up of cone-shaped pieces like the anemometer (wind-gage). The rotation of the propeller determines the velocity of the water. The number of revolutions of the propeller are measured by a counter, usually electrically operated through small contacts on the propeller shaft, or on some gear of a reduction train. Each meter has been calibrated and a table is furnished which shows

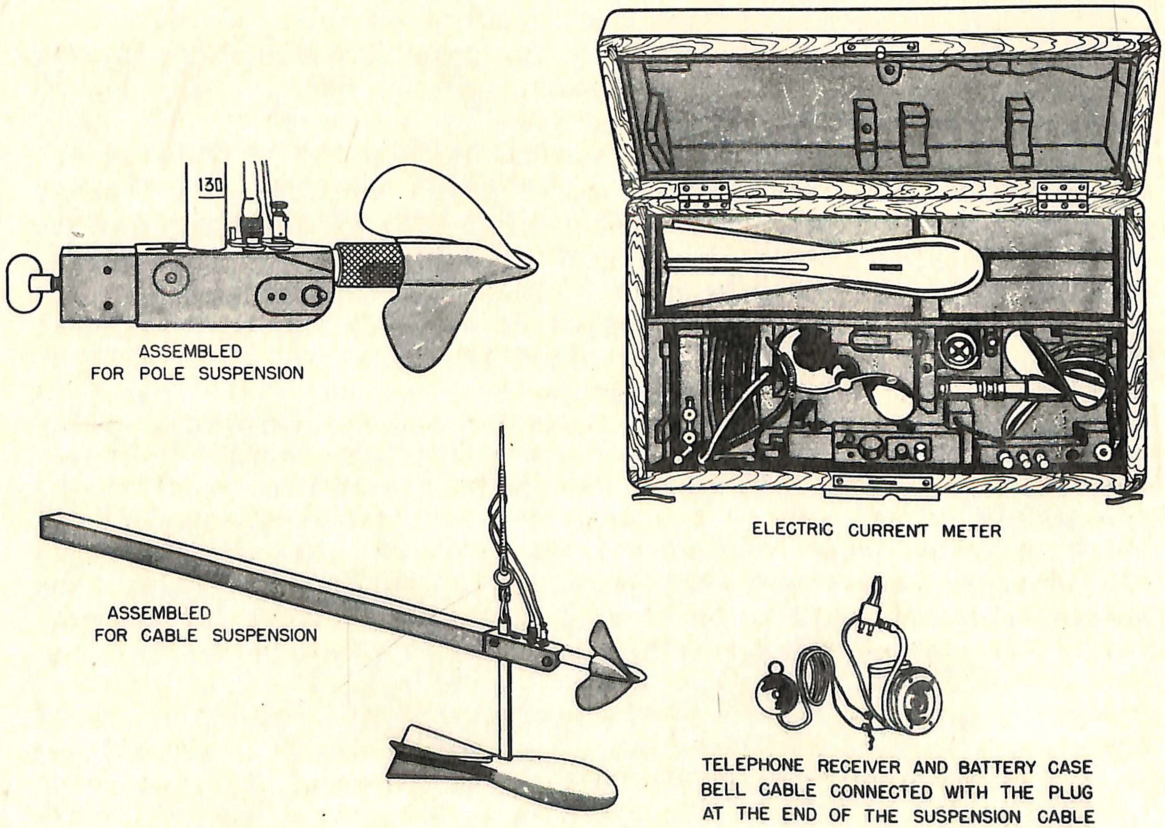


Fig. 19.--Typical Electric Current Meter.

the relation between the number of revolutions and knots of current. The meter has a heavy weight attached to insure it sinking below the surface in strong currents. It is usually submerged to a depth of about two fathoms, and has the advantage over other methods in giving current velocities at considerable depths. It is usually supported by a steel wire in order to relieve the electric cable of any strain. The meter is operated for a period of one, two, or three minutes (or any desired interval to insure accuracy of count), and the value thus obtained converted to knots by use of the tables

furnished. Readings at various depths may be taken in quick succession, but ordinarily just the one depth is considered.

b. Various types of submerged ship's logs (see par. 65) have been used to measure currents when the ship is at anchor. They are of similar construction to the meter in many ways, with the counting device on the bridge already calibrated. If the log is left 'streamed' when anchored in a current, it will continue to indicate distance as though the ship were underway. The difference of each hourly reading will give the average velocity for that period; the differences at shorter intervals, properly converted, will show more nearly the instantaneous current; for example, the reading in a five-minute interval multiplied by 12 will give the average velocity for that five-minute period.

c. Some logs, like the Pitometer, will give the instantaneous velocity in a manner similar to an automobile speedometer. These logs do not function well at low speeds, however, so they are not very useful.

d. When using any of the mechanical devices, there should be occasional checks made with the current pole.

39. CURRENT DIRECTION.--a. When a boat lays at anchor, it will trail generally with the current, but this tendency is greatly affected by the wind and weather and cannot be relied upon. To obtain the correct direction of the current at the time of observation, a dummy compass is used. This is merely a compass card secured to the rail in such a way as to orient it properly with the head of the boat (like a pelorus, Fig. 51). Then the direction of the current pole can easily be determined by sighting on the pole, or by laying the line across the card and reading off the direction. This value added to the boat's head will be the magnetic direction of the current, which should be reduced to true direction in all cases. A plot of the hourly results should be kept drawn up at all times, as this will show whether there have been any faulty readings made. If there is any doubt, readings should be repeated or verified at once.

40. LAYOUT OF STATIONS.--a. In selecting stations for current observations, remember that the strength of the current varies widely when crossing a restricted channel and even in a wide channel. The strongest current is usually in the middle, but this is not always the case. The stations should be as near as possible to tracks to be used. A comprehensive survey (see Fig. 20 and caption) would require several stations across the channel to give sufficient data for a thorough knowledge of the area. For the reconnaissance survey fewer stations and often one station near the middle of the channel will be sufficient.

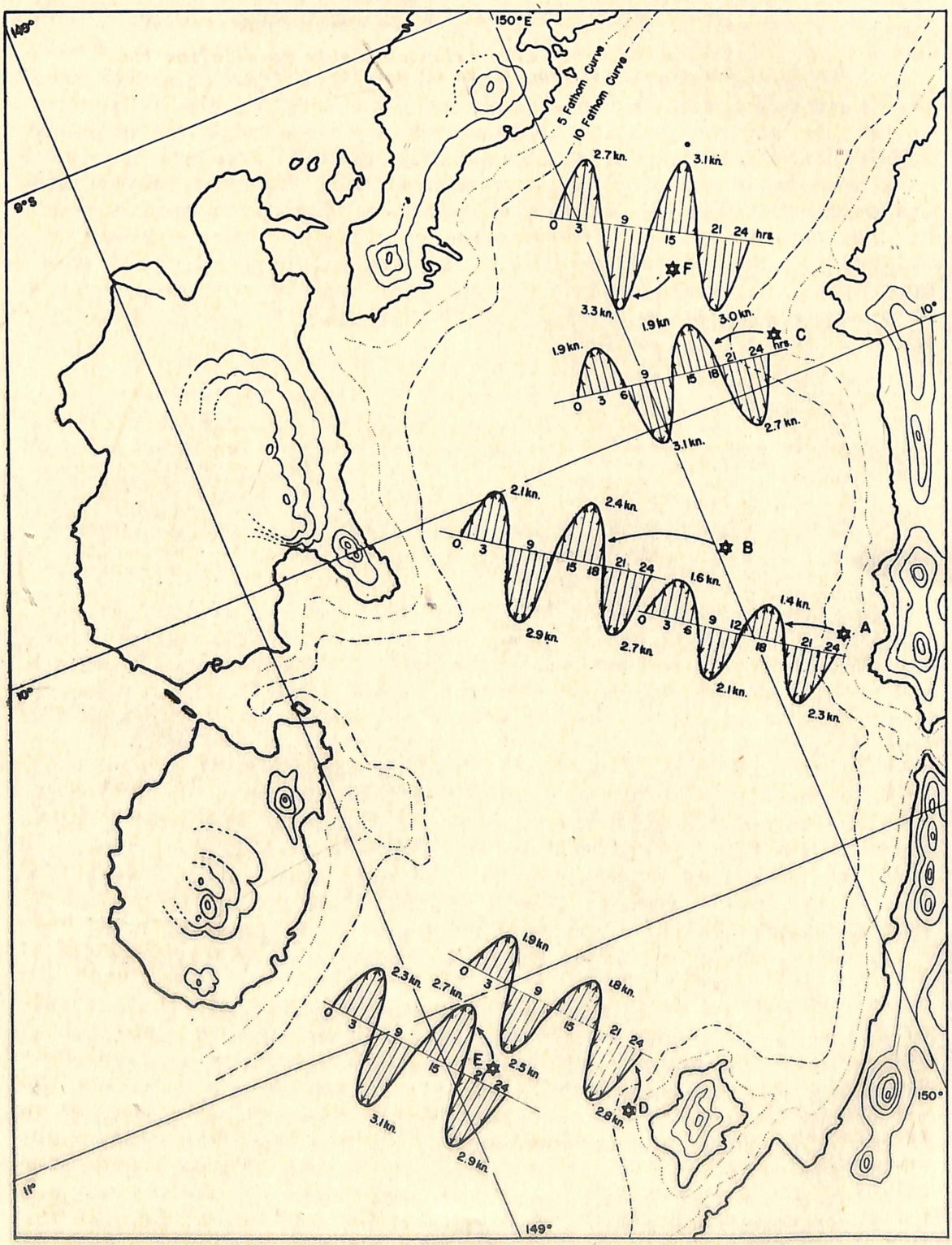


Fig. 20.--Comprehensive Reconnaissance Current Survey. (Explained on opposite page).

EXPLANATION OF SKETCH FOR RECONNAISSANCE CURRENT SURVEY, FIG. 20.

FIG. 20 shows a chain of large islands roughly paralleling the trend of the coast and from 40 to 60 nautical miles offshore. Accurate navigation of the passage between the mainland and the islands is essential; therefore, the following stations are established to obtain data on the direction and velocity of the current:

Station 'A', designated the primary station, about 15 miles north of the entrance to the Bay, and some 5 miles offshore;
Station 'B', established about 15 miles offshore from 'A';
Stations 'D' and 'E' are established about 60 miles southwest from the entrance to the bay, about 3 and 20 miles respectively westward from the island;
Stations 'C' and 'F' are established about 35 miles northward from Station 'A', and about 3 miles and 20 miles respectively offshore.

A minimum of one complete current cycle is desired (25 hours); time available: 48 hours.

Six small boats are available. Station 'A' is established and observations are begun as soon as possible. Other boats take station as soon as possible. With the exception of Station 'A', which observes for 42 hours, the other stations are occupied only long enough to get in the 25 hours of observations. Boats return to port as soon as the data is complete.

Current velocities and directions are shown directly on the sketch, the length of the arrow indicating the velocity, the way the arrows fly, the direction. The time relationship of the current between the various stations, referred to 'A' are tabulated as follows:

0 hours at Station 'A'	*-3 hr 15 min at Station 'E',*
corresponds to	*+2 hr 25 min at Station 'C',*
0 hours at Station 'B',	*and*
-3 hr 15 min at Station 'D',	*+2 hr 30 min at Station 'F'.*

b. Fig. 21 shows a plan for current stations in a bay. This uses the same sketch as for the tidal survey (Fig. 13), and shows the same gage in operation near the entrance to the bay, and three inside stations. This layout applies to a near shore bay only. It would rarely, if ever, be possible in an enemy held bay. In general for such a survey, only one offshore station is necessary, and that should be somewhere off the entrance. After the tide gage has been established, the offshore and the inside surveys may be conducted at the same time. The larger boat, with its heavier anchor gear and better weathering qualities should take the outside station. Smaller craft may be used for the inside stations. The complete set of observations can be made in little over two weeks. The current pole would probably be the most satisfactory method for measuring the current, and each party should be supplied with at least two, so as to minimize loss of time should a pole go astray. A few days of observations in other parts of the bay, taken simultaneously with some other station, may be useful, as, for instance, in the channel between the Basin and the North Bay. See the caption of Fig. 21 for further details.

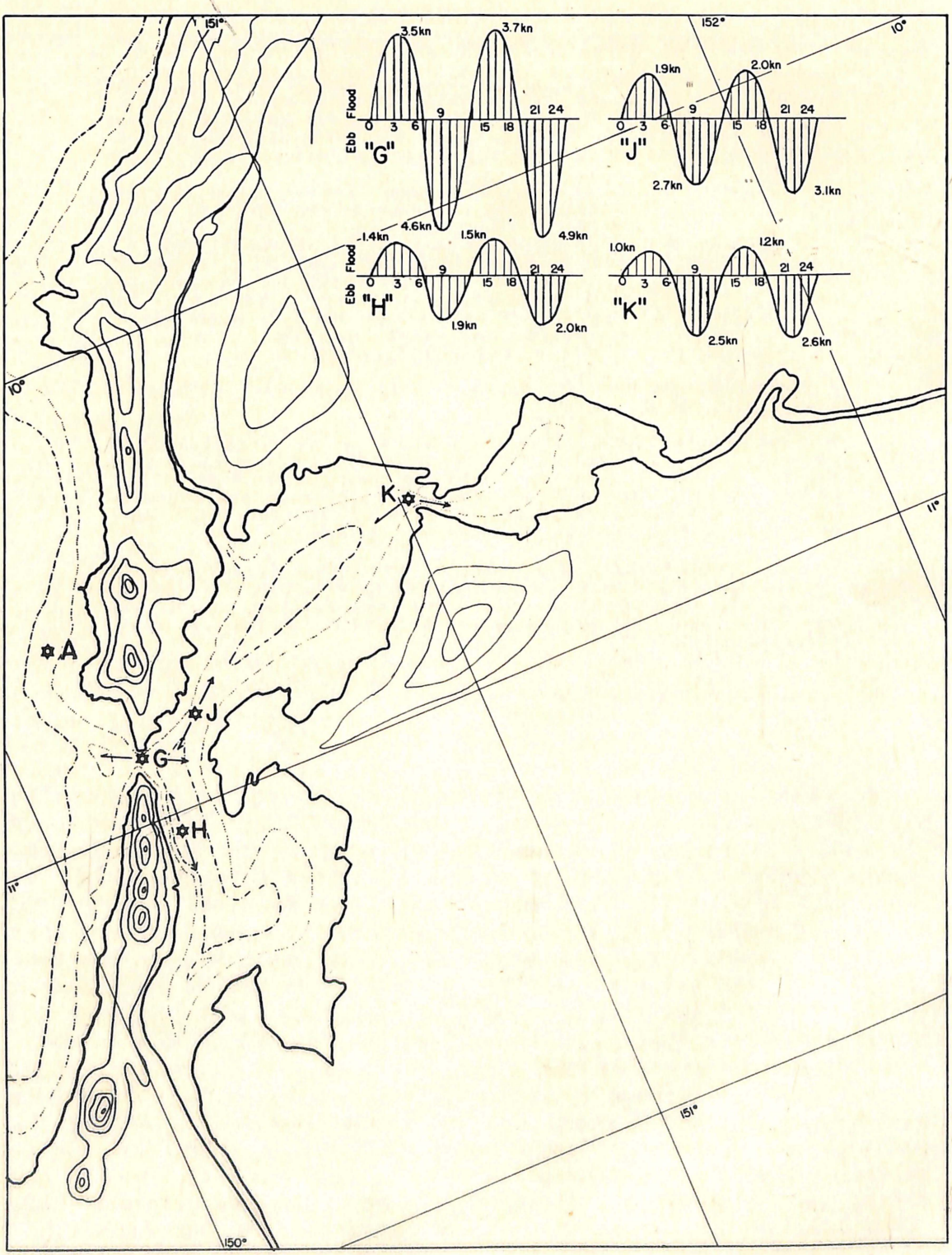


Fig. 21.--Plan for Current Stations in a Bay. (Explained on opposite page).

EXPLANATION FOR CURRENT STATIONS IN BAY, FIG. 21.

FIG. 21 shows the large irregular bay in which the main bases are established. Since it will be used for a long time, with units well scattered over the bay, the velocities and strengths of the tidal currents (including the effects of the several large rivers) must be known. The minimum number of stations will be established.

Station 'G' in the entrance (the primary station unless Station 'A' is in operation);
Stations 'H' and 'J' about 12 miles south and 10 miles northeast respectively;
Station 'K' near the strait connecting the northern basin to the eastern basin.

A minimum of one current cycle is required (25 hours) with either 'G' or 'A' occupied long enough for all to get the required period of observations. The current diagrams are shown at the top of the sketch. the velocity indicated by the length of the vertical line under the curves. The directions of Flood and Ebb are indicated at each station by arrows, the one with the double barb indicating Flood, and the one with the single barb, the Ebb. The time relation between the various stations is shown in the following table:

0 hours at Station 'G' corresponds to
+0 hr 30 min at Station 'H',
+0 hr 30 min at Station 'J',
+1 hr 15 min at Station 'K',
and
-0 hr 15 min at Station 'A'.

c. If, due to weather, it is impossible to stay on a current station, positions should be determined as accurately as possible so that the party may return to the immediate vicinity at a later date. Where only short periods can be spent at a station, they should be selected, whenever possible, at each of the following periods: (1) Full Moon, (2) New Moon, (3) First or last quarter, (4) Moon at most northerly declination, and (5) Moon at most southerly declination. At least three days should be spent at each station. This will give the required 15 days minimum observations, and will distribute them over the periods of maximum and minimum effects of the moon. Intermediate periods may easily be interpolated, especially if the tidal data is at hand.

41. RECORDING OBSERVATIONS.--All observations should be neatly recorded in some permanent record book, and should give the following information:

a. Date.
b. Time of observation.
c. Length of observation period.
d. Current line run out.
e. Computed velocity.
f. Direction of current by pelorus.
g. Ship's head by compass.
h. Variation and deviation.
i. Computed true direction of current.
j. Direction and force of wind.
k. General state of weather and sea.

PART I

INTELLIGENCE

Chapter 8

RECONNAISSANCE HYDROGRAPHIC SURVEYS

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42. HYDROGRAPHY.--a. Hydrography is defined as 'that branch of science which deals with the measurement and description of the physical features of that portion of the earth's surface which includes the oceans, seas, lakes, rivers, and other waters, together with their adjoining coastal areas, with special reference to their use for purposes of navigation.'

b. The operations and equipment used for marine surveys, conducted without the use of aerial photographs, are tabulated below. These operations are all interrelated and interdependent:

OPERATION	EQUIPMENT REQUIRED
(1) Triangulation	Transits, theodolites, levels (Wye), tapes (base), stadia rods.
(2) Magnetic Measurements	Magnetometers and declinatoires to determine the magnetic meridians; compass, 7 inch, Navy.
(3) Topography	Plane tables, alidades, special rods, special paper.
(4) Sounding	Sextants; 3-arm protractors; regular small instruments such as dividers of all kinds, and parallel rules; sound-

		ing equipment (lead lines - including wire lines, sounding poles, and echo sounding machines, either sonic or supersonic, including recording types); beam compasses; special paper for the plotting of the work (boat sheets).
(5)	Tidal Observations	Tide gages, tide staffs.
(6)	Current Surveys	Current meters, current poles.
(7)	Compiling data into Nautical Charts, Sailing Directions, Tide and Current Tables, Light Lists, Radio Signal Lists, Notices to Mariners.	Office equipment; reproduction equipment which might include only black and white printers and mimeographs for speedy reproduction or an elaborate set-up for fine reproduction.

c. The discussion which follows in paragraphs 43 to 49 applies to surveys conducted on or off our friendly shore and not under observation by the enemy. The obtaining of hydrographic information of the enemy shore is discussed in pars. 51-52 and especially in pars. 55 to 58 on the use of aerial photographs.

43. **TRIANGULATION.**--The subject of triangulation in surveying is treated in TM 5-230, 5-235, and 5-236. Its usefulness in reconnaissance is limited to near shore work.

44. **MAGNETIC MEASUREMENTS.**--These measurements are necessary to determine the variation (par. 62) at the particular place. Lacking special equipment for a precise magnetic survey, the standard Navy 7-inch compass is a very suitable instrument for this purpose. The observations are usually made over several lines of the triangulation net. As a limited time will usually be available for this work, it is most desirable to make magnetic observations at about 1100 local time when the change in the daily declination is the minimum. But the best plan is to make the observations between 0700 and 0900, and between 1300 and 1400, the times of greatest eastern and western elongation, respectively. These observations should cover several days if possible. An azimuth circle is useful for these observations. The circle, which fits the compass accurately, is used as an alidade through which both the station pointed on and the compass reading can be seen at the same time through prisms. The compass is set over a triangulation station, and numerous pointings made on the several stations to which points were taken in the triangulation. The means of the various pointings on each station will give an average for the magnetic direction of

that line. These values compared with the azimuths as computed for the same lines will give the variation for the place.

45. TOPOGRAPHY.--Topography for hydrographic surveys refers to the visible configuration of the earth's surface along the shore lines, including its relief and the positions of landmarks, sand dunes, hills, streams, rocks, mountains, railroads, roads, houses, etc. The survey may be accomplished with a plane table by taking three-point fixes at frequent intervals, or by running a traverse and sketching in the shore and other features between the points thus determined. The triangulation forms the control for these surveys. For simple shore-line topography, including areas only a short distance back from the coast, the plane table is much faster than the more detailed surveys. Usually both the low and high water lines are located in the survey as they are of considerable importance to the mariner. For complete treatment of topography by these methods, see FM 21-35, and TM 5-230 and 5-235.

46. SOUNDING.--a. Ordinarily, the survey is necessary only between the shore and about 10 fathoms; and, unless the beach is very flat and the tide lands extensive, the lines will be relatively short. The actual distance away from the beach will be governed by local conditions. Some examples of inshore depths to be expected from the appearance of the land are:

(1) Short, steep beaches-- relatively deep water close inshore.

(2) Flat, marshy beaches-- shallow water extending a long distance offshore.

(3) Sand dunes and low lands-- shallow water with sand bars and runnels.

(4) Coral islands-- offshore reefs, with shallows inshore toward the island, and very deep water close in offshore of the reefs.

(5) Rocky and rugged shores-- steep beaches, deep water, and often dangerous rocks and pinnacles under water.

(6) Sand spits, points of land-- these extend out underwater in same general line.

(7) Steep, mountainous interior-- steep beaches and deep water close in. In general, the visible land is a picture of the underwater areas nearby and should be used as a guide for all operations.

b. When the approximate extent of the survey is known, a master sheet is laid out on an appropriate scale and a grid drawn, either

on a rectangular coordinates system, or on a polyconic projection system. Usually for the reconnaissance survey, the grid on rectangular coordinates is the best, since it permits the immediate computation and plotting of data on the sheet; whereas for the use of the polyconic projection, the geographic positions must be known, and the data for this might not be available until the work is nearly completed. The polyconic projection may later be applied as an overlay to the grid system first drawn.

c. Boat Sheets are made for the detailed surveys of relatively small areas. A grid similar to that on the master sheet is drawn, and the various control stations plotted (both triangulation and topographic). The shore line is accurately transferred to this sheet from the topographic sheets, and this data all inked in with India ink to prevent smearing when wet.

d. Sounding (depth measurement) lines are usually run according to some special system conforming to the conditions to be met. The best system is a set of parallel lines normal to the shore line. The next best system is a set of parallel lines parallel to the trend of the coast. This latter system is usually used when there is a considerable alongshore current which would make it difficult to run lines normal to the shore. In any event, the system should be lightly penciled in on the boat sheet, having due regard to the depths expected, which will determine the spacing between the lines, and these lines should be followed as closely as possible when making the survey. As the survey progresses, additional lines which will better develop channels, shoals, and obstructions may be drawn in and the work accomplished. It is a good plan to ink in the soundings and to pencil in the tentative depth curves so that the picture of the bottom will be developed during the work. Erroneous soundings may often be detected in this way. Occasionally, it will be found desirable to run a few lines across the first set, so as to give a check set of lines-- called cross-lines. These afford a check on the work as well as on the signals and topography. Sounding is the most important part of these surveys, and must be carefully performed even when the scope of the project is of the sketchiest nature.

e. Control of Sounding Lines.--(1) The sextant is the most commonly used instrument for the control of sounding lines; its use is briefly discussed in par. 66. Three objects of known position on shore are used for sextant readings (Fig. 22). The angles between each of two adjacent objects are read simultaneously by each of two sextant observers at each sounding, the right and left angles being uniformly read by the same observer. The position is then located by the three-point problem, that is, plotted with the three-arm protractor. This method has its greatest advantages in that all

positions may be speedily plotted as taken, and the party in the surveying boat are directly in control of the survey. The positions are taken at definite intervals, varying from a minimum time of 60 seconds to over 5 minutes, depending on the character of the survey. The interval used will be dictated by the ease of controlling the sounding lines.

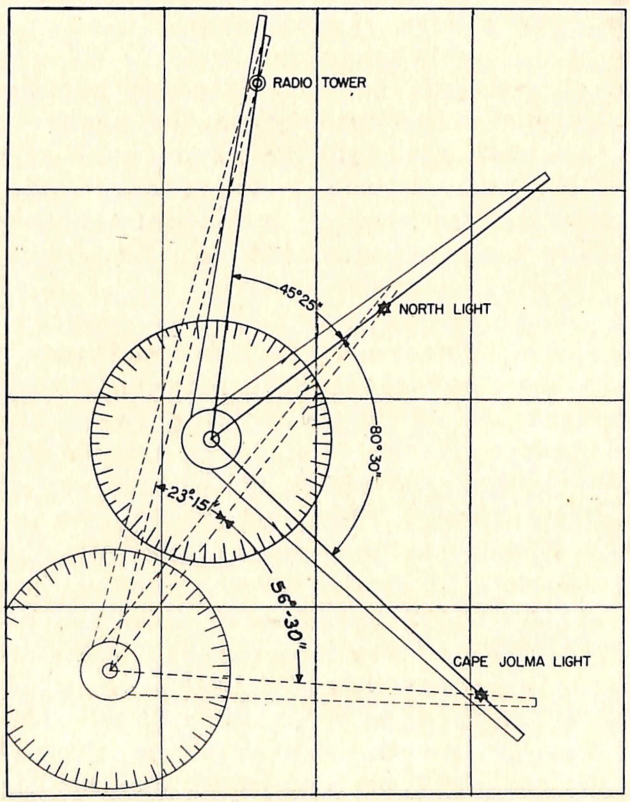

FIG. 22 PLOTTING THE "THREE POINT FIX"

A ship proceeding southward observes the angles between the following objects which have been identified on the chart: the angles were observed by SEXTANT and recorded as shown:

TIME 0945	*CAPE JOLMA LIGHT HOUSE*	*80° 30"*
COURSE 209° (TRUE)	*NORTH LIGHT HOUSE*	
	RADIO TOWER	*45° 25"*

The angle between CAPE JOLMA LIGHT HOUSE and NORTH LIGHT HOUSE is known as the RIGHT ANGLE. Set it on 3-ARM PROTRACTOR to right of center or FIXED ARM.

The angle between NORTH LIGHT HOUSE and RADIO TOWER is known as the LEFT ANGLE. It is set on the protractor to the LEFT of the FIXED ARM.

The protractor is then moved around on the chart until each arm passes directly through the center of its particular station. The center of the protractor is then the position of the ship.

A second set of	*TIME 1025*	*CAPE JOLMA LIGHT HOUSE*	*56° 30"*
angles is observed	*COURSE 209° (TRUE)*	*NORTH LIGHT HOUSE*	
		RADIO TOWER	*23° 15"*

The plot is done as above. This position is shown in lighter lines.

INFORMATION GAINED FROM THE PLOTTING OF THE TWO POSITIONS:

SPEED over the ground: 10 knots (Scaled 6 miles in 40 min.)

COURSE MADE GOOD: 204° (TRUE) There is a Eastward SET which must be corrected for to make the desired course good. CURRENT is about 1 knot.

(2) Another method of controlling the sounding lines is to station two transits on known points ashore. At certain instants, the two observers will measure the angles subtended between the boat and the other instrument or other known point. The intersection of the two lines is the position of the boat. The disadvantage here is that the plotting of the positions cannot keep up with the work as it progresses. As the lines are run, soundings are made at regular intervals, the intervals here also depending upon the nature of the survey. Ordinarily, as many soundings are taken as possible to give a good profile of the bottom for each sounding line. When using the hand lead, or wire, the depth of the water largely determines the intervals between soundings. It is usually possible for a good leadsman to sound continuously in from one to ten fathoms for several hours at 30-second intervals. However, it is advantageous to have at least two leadsmen so that they may 'spell' each other. See TM 5-235 for additional methods of controlling soundings.

f. The use of echo sounding equipment (see par. 69) is recommended. There are several excellent recording types of supersonic echo sounding apparatus available. With this type of instrument, the speed of the boat can be at its best cruising R.P.M., there is a continuous profile of the bottom shown all the time, and there is very little chance of a permanent error being made, as all soundings may be checked against the fathogram at a later date. These instruments are made so as to record the depth in either feet or fathoms, and the choice will be governed by the type of survey. Where the depths vary greatly, it is usually preferable to set and keep the instrument set for fathoms to avoid loss of record during the shifting interval.

g. (1) It is sometimes more expedient to wire-drag or sweep an area than to sound it out completely. This does not establish the maximum depth in an area necessarily, but it shows the minimum depths throughout the area. It is usually resorted to in areas where rock pinnacles and coral formations exist.

(2) The drag or sweep (Fig. 23) consists of a horizontal member - the ground wire - supported at 300 to 500 foot intervals by vertical wires called uprights, all connected together by various shackles and swivels. The uprights are marked off in feet, and are secured to a reel on top of a small buoy-- which makes the drag adjustable to the desired depth. The wire is held down by weights at the lower ends of the uprights, usually about 50 pounds, or heavier. To keep the ground wire as straight as possible, there are attached a number of small floats called toggles, at 100' intervals, which buoy it up. The drag is secured to the two towing launches by means of bridles. The effective depth of the drag is tested at frequent intervals by the drag master.

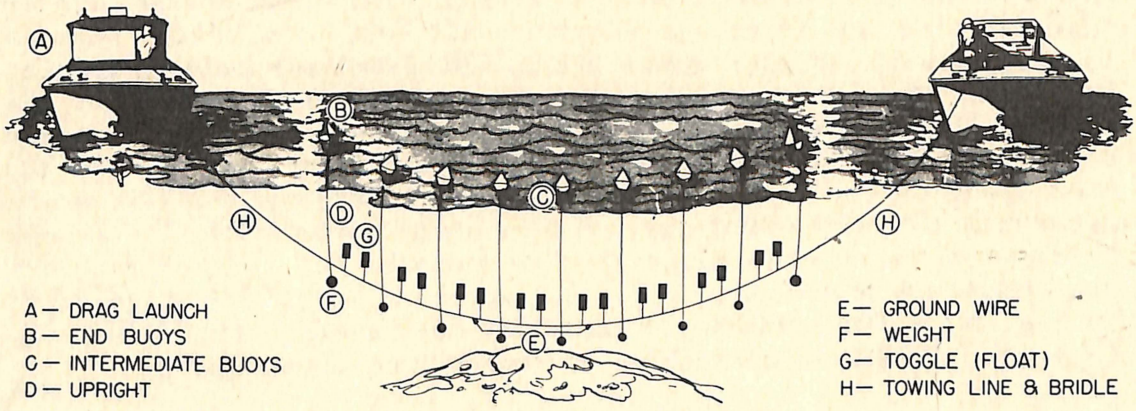

Fig. 23.--Sketch of Wire Drag.

The drag assumes a parabolic shape when pulled through the water, as can be seen by the positions assumed by the various small buoys. If the drag hangs up on anything, it takes the form of a 'V', with the obstruction at the vertex. The depth of the drag is then decreased so that after successive trials it passes over the obstacle, giving clear depth. The position of the drag is determined from angles taken by each of the two launches, the end launch signaling its values to the guide launch which does the plotting.

47. **TIDE OBSERVATIONS** (pars. 19-27) are necessary for the vertical control of the hydrographic surveys. The various datum planes must be determined to which the soundings are reduced. Ordinarily, the mean of all the low waters furnishes the datum plane, but where there is a difference between the two lows of each day the mean of the lower low waters is taken. Other datum planes are determined, such as mean sea level, high water interval (the time between two successive high waters), the lunitidal interval (the time interval between the transit of the moon and the next succeeding high water). All these values are useful in correcting soundings, and making predictions of future times and heights of the tide.

48. **CURRENT SURVEYS** (pars. 28-41) are necessary to determine the strength and direction of currents in channels, sounds, and the open ocean. The data obtained in these surveys is treated in a similar fashion to the tide data, and similar values obtained, such as: Time of Slack-- Flood begins; Maximum Flood; Time of Slack-- Ebb begins; Maximum Ebb. The time as well as the strength of the currents at the flood and ebb are shown.

49. RUNNING SURVEY.--a. Where time does not permit a more elaborate survey, it is often in the interests of navigation to make a running survey. In this case, the shore positions are determined and soundings taken as the boat passes along the coast. Stops are made at frequent intervals to more definitely tie in the line to the shore by bearings and angles. If only one additional boat is available, it runs parallel to the other and somewhat inshore from it, its position being determined by bearings and depression angles taken from the offshore boat. Careful compass courses must be steered, and sextant angles taken to all points of prominence along the course. Angles are taken on the various objects until they are fairly well located. Bearings supplementing the angles will help orient the angles and define the positions of the objects.

b. As the soundings are taken at frequent regular intervals, they may be plotted on the dead reckoning line as it is adjusted. If sufficient positions are taken, some knowledge of the currents may also be determined. Where the coast is entirely unsurveyed, however, there will be little to be gained along this line unless currents are actually observed in order to make proper adjustments to the dead reckoning.

50. USE OF AERIAL PHOTOGRAPHS.--a. Since any hydrographic survey which is made in connection with a proposed landing operation will almost certainly be made under considerable disadvantage, it probably will be necessary to rely very largely on aerial photography and aerial phototopography for information of the enemy waters. In this case, there will be no opportunity to establish a control system on or near the enemy shore, and the control must be 'bridged', from existing control or that which can be established on or near the friendly shore, by photo mapping methods. The topographic sheet is compiled from stereoscopic pairs of aerial photographs by photogrametry using stereoscopic plotting instruments such as the multiplex projector or the stereocomparagraph giving an accurate map of the enemy shore. For details of these methods, see TM's 5-240 and 5-230 and FM 36-21. Engineer topographic battalions are specially trained and equipped to perform this work.

b. A study of vertical, oblique, and stereoscopic pairs of aerial photographs will often give all data required on depths of water, shoals, dangers, tides, and currents along the enemy shore. In addition they give accurate information on the terrain, installations, and defenses of the enemy held land area. See pars. 55-58, and TM 5-246.

51. USE OF SCOUTS.--a. Details of the waters close to the hostile beach that are not clear from aerial photographs alone, or which are suspected from a study of aerial photographs to indicate

dangers, and must be checked, may be obtained by amphibian scouts, working at night. They wade, swim, and use rubber boats and lead line or a measuring pole to measure depths of water and find bars or reefs. They locate underwater obstacles in the same way or by two men each grasping the end of a 50 to 150 foot length of weighted wire and dragging it back and forth through the shallow water off the beach. In deeper water rubber boats can be used with the wire in the same way. Tide and current observations must be made at the same time as outlined in pars. 47 and 48 respectively.

52. SURVEY BY BOAT OFF ENEMY SHORE.--For the offshore approaches where dangers possibly exist, or surveys are required for large craft, the following methods may be used at night and when hostile patroling permits:

a. The simplest method is a purely dead reckoning one. The following must be known:

(1) At least one accurately located point off the enemy shore.

(2) The actual speed and distance through the water off the boat at various engine speeds.

(3) The leeway characteristics of the boat; that is, the effect of winds of various forces and directions on the boat.

(4) Strength and directions of currents, whether tidal or otherwise. This current information may be obtained on the spot in a few minutes by actually making an observation.

It will be found best to run a series of parallel lines normal to the beach. When turning from one line to another, the distance between lines is determined by the time of run, or number of revolutions of the engine. The next line is run on the reverse course, allowing for the current and wind effects as have been previously determined.

Sounding should be done with the recording depth indicator, as this permits the greatest speed for the boat, and is, by far, the most accurate method. Other types of depth indicators may be used, but must be read as the work is done, as each sounding appears only as a flash of light on a dial, or is shown by the position of the hand on a registering meter. The hand lead may be used, but it is slower, requires some light to read, and generally is not as accurate.

Regardless of the method used for the survey, the work will have to be adjusted for boat speed, current, and wind to agree with

bearings taken and to make a consistent survey. It will often be found desirable to run one or two cross lines at carefully regulated speeds, and use these for tying in the other lines by making the soundings on the two sets of lines agree at their crossings. If the ends of a cross line can be fairly accurately positioned, then the whole survey may be fairly well adjusted. It will probably be advantageous to run the cross line during the period of best visibility; then do the other work in the darker periods where closer approach to the shore is necessary.

b. Plant an aid at a known position (secret aid or otherwise) in the general vicinity of the area to be covered, and run radial lines of soundings out and back in loops, by accurate compass and log, adjusting each loop for closure made on the aid. (This is similar to adjustment of traverses. See TM 5-235 and FM 21-35).

For any of these methods, tides must be read half-hourly in an area as near to the surveys as possible and corrections applied. Current observations, from a vessel anchored near any guiding aid, would increase the accuracy of either of the above methods. If points, peaks, natural objects, or planted buoys can be seen, the reconnaissance party can use three-point fixes. This will lead to greater accuracy in the surveys.

53. **SAILING DIRECTIONS.**--Sailing directions will include the following data which is accumulated during the course of the surveys:

a. Appearance of the land from seaward.

b. Directions for clearing outlying dangers.

c. Descriptions of shores and points of land for land marks.

d. Descriptions of aids to navigation.

e. Descriptions of anchorages and directions for approaching them.

f. Local wind and weather conditions.

g. Currents and tides.

h. Descriptions of ports, towns, and settlements.

i. Descriptions of natural ranges and conspicuous hills and trees, pinnacle rocks, and any other landmarks which are useful to the mariner approaching the land.

54. PROCESSING AND COMPILING DATA.--a. In general, time will be a material factor in determining the amount of processing that may be given any particular survey. The results probably will be required as soon as possible. This will, then, permit the very least amount of office work, consisting of:

(1) A verification of soundings from the record (fathogram).

(2) A verification of tide reducing factors, and a check on reduced soundings.

(3) A re-plotting of soundings, giving the reduced values.

(4) A tracing made of this survey.

(5) A sufficient number of B & W (black and white) prints made to accomplish the desired result.

b. As time permits, a further compilation may be made consisting of:

(1) Tide and Current data.

Height of Mean Low Water, or Mean Lower Low Water.

Mean Sea Level.

High Water Interval.

The Lunitidal Interval.

The range of tide, including the highest and lowest tide of the period of observations.

Time of Slack-- Flood begins; time of Slack-- Ebb begins.

Time and strength of Flood; time and strength of Ebb.

Direction of Flood; direction of Ebb.

(2) A Coast Pilot which will have all the additional data given in paragraph 53, SAILING DIRECTIONS.

PART I

INTELLIGENCE

Chapter 9

HYDROGRAPHIC RECONNAISSANCE - AERIAL PHOTOGRAPHS

	Paragraph
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Technique of the Interpretation of Hydrographic Details	57
Examples of Interpretation	58

55. GENERAL.--a. Role of the Army Air Force. It is a function of the Army Air Force to take aerial photographs for other units. The unit of the Air Support Command normally attached to a Ground Force unit will fly whatever reconnaissance and photographic missions are required. Requests for photographs must be made through normal channels to the commander of the Ground Force unit. Missions will be flown sufficiently in advance of an amphibious operation so that the photographs may be studied by tactical commanders as well as Engineer Special Brigade intelligence officers.

b. Aerial photographs for use in determining hydrographic detail must be quite different from those ordinarily employed for study of ground areas. Specific requirements for photography should, therefore, accompany all requests for photographic reconnaissance. In general, large scale photographs of specific areas will be necessary for tactical use. Photographs should be taken earlier or later in the day than is common practice in the Air Force in order to minimize glare from the water and to give as much shadow as possible. The customary midday photographs are not feasible because at this time of day the sun's rays are reflected directly to the camera from the water, especially if the surface is rippled by a light breeze. This reflection will cause most of the water to appear white, and no submarine detail will appear through it. The shadows of morning and afternoon are, moreover, an aid in reading ground relief.

More than one flight over an area will usually be necessary to study different stages of tide and current and various effects of different winds. Example of this appears in Fig. 24. When only one mission is possible, the time of photography must be specified in order to photograph conditions at the desired stage of tide.

Infra-red and color photography aid in the detection of camouflage. Infra-red is particularly useful in piercing haze from

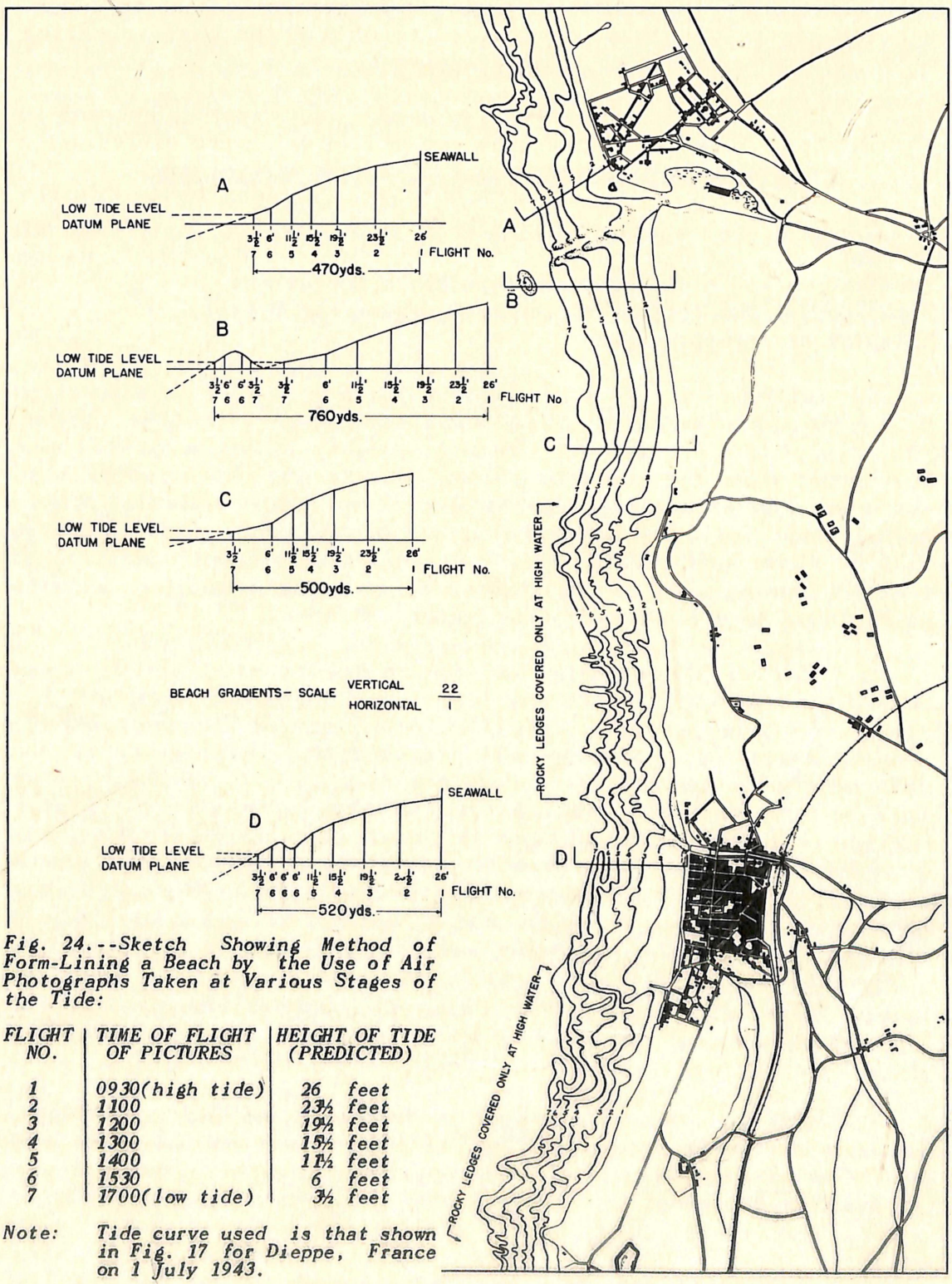


Fig. 24.--Sketch Showing Method of Form-Lining a Beach by the Use of Air Photographs Taken at Various Stages of the Tide:

FLIGHT NO.	*TIME OF FLIGHT OF PICTURES*	*HEIGHT OF TIDE (PREDICTED)*
1	*0930(high tide)*	*26 feet*
2	*1100*	*23½ feet*
3	*1200*	*19½ feet*
4	*1300*	*15½ feet*
5	*1400*	*11½ feet*
6	*1530*	*6 feet*
7	*1700(low tide)*	*3½ feet*

Note: Tide curve used is that shown in Fig. 17 for Dieppe, France on 1 July 1943.

high altitudes. In processing film, it is generally best to underdevelop slightly when it is desired to obtain the best submarine detail. Prints should be relatively light.

For better interpretation of aerial photographs, courses in visual air observation should be given all intelligence officers.

c. General Types of Photographs. Great strides forward in the technique of aerial photography have been made in this war. Extremely fast planes, flying at very low or very high altitudes, are equipped with any of a variety of cameras especially designed for the type of photograph required.

The general types of photographs are:

(1) Vertical aerial photograph-- A photograph taken with the axis of the camera lens approximately perpendicular to the earth's surface.

(2) Stereopair-- Two vertical photographs of an area taken from the same elevation but from different camera positions and with an overlap of not less than 60% and not more than 75%.

(3) Pin-point-- Two or more stereoscopic verticals of an isolated object.

(4) Strip-- Successive overlapping photographs taken from an airplane flying a selected course line.

(5) Mosaics-- (a) Uncontrolled. An uncontrolled mosaic is made up of several overlapping vertical photographs taken from different camera positions, matched by details, and joined together.

(b) Controlled. A controlled mosaic is one in which the overlapping vertical photographs are adjusted to ground control points, with modifications and allowances for error incorporated.

(6) Oblique aerial photograph-- Any photograph which is not a true vertical. A High Oblique shows terrain up to the horizon; a Low Oblique covers less terrain, but gives more detail.

(7) Photomap-- A single photograph, strip, or mosaic which has been prepared as a map by the addition of a grid and marginal and place-name data. Photomaps can be produced in quantity by engineer topographic units.

d. Data on Photographs. Data appearing on photographs contains a great deal of information which must always be noted carefully

before beginning interpretation. The following system is prescribed and will generally be found in the order given:

(1) North arrow in lower left-hand corner.

(2) Name of locality or nearest locality.

(3) Approximate coordinates of the center of the photograph.

(4) Scale of the photograph. (In the case of a vertical, this is expressed as a representative fraction; in the case of an oblique, altitude above the ground in feet and focal length of the camera are given).

(5) Hour.

(6) Date.

(7) Designation of squadron.

(8) Serial number of the negative.

In the case of reconnaissance strips, the first and last photographs only will be titled as above. The other photographs will simply be numbered serially. Fig. *28a* is fully titled as an example.

e. References. For further general discussion of aerial photographs see FM 21-25, FM 21-26, FM 1-35, and FM 30-21.

56. APPLICATION TO INTELLIGENCE IN AMPHIBIOUS OPERATIONS.--a. General Value. Ideal conditions for the study of an enemy shore will exist when charts, maps, photomaps, aerial photographs, sailing directions, and tide and current tables are available and can be supplemented with direct ground and aerial observation. By themselves, however, aerial photographs can give a great deal of the essential information for amphibious operations. In situations where other information is lacking or is incomplete, they will be invaluable.

b. Use as Maps. Aerial photographs may be used as map substitutes, in which case they will be in the form of photomaps, strips, or single photographs. More often, however, they will be used to supplement existing maps and charts which are not up to date or which lack the necessary detail.

(1) Advantages of Aerial Photographs over Maps:

(a) Show minute detail including features not appearing on maps.

(b) Shadows aid materially in locating and identifying objects. In this connection, sand banks, channels, runnels, rocks, dunes, and cliffs are of especial interest.

(2) Disadvantages of Aerial Photographs compared to Maps:

(a) Distortions accrue from various sources-- camera tilt, film and paper stretching and shrinkage, laying of mosaics, and others.

(b) Difficulty arises in interpretation of elevation, especially in the field where the use of stereocomparative methods is not easy.

c. Scale, 'Plan', 'Profile'. Vertical photographs are supplied in the field at scales ranging from 1:2,000 to 1:20,000, depending on the focal length of the lens employed and the height at which the plane is forced to fly. These show the 'plan' of the beach together with a portion of the land and water adjacent to it. Obliques, on the other hand, give an indication of the 'profile' of the beach and of the hinterland.

d. Hydrographic Interpretation. It is the hydrographic interpretation of single and strip vertical photographs, stereoscopic pairs, and obliques with which Engineer Special Brigade intelligence officers are principally concerned. For information on the interpretation of terrain and enemy installations and dispositions, see TM 5-246.

57. TECHNIQUE OF THE INTERPRETATION OF HYDROGRAPHIC DETAILS.-- a. Equipment. The following equipment is the minimum recommended for use in interpreting aerial photographs:

(1) Magnifying glass-- If possible one containing an attachment for directly lighting the area under observation, such as the Flash-O-Lens (trade name).

(2) Stereoscope-- Pocket size.

(3) Scales-- A scale graduated into 1000ths of a foot (since most measurements will be desired in feet), an engineer scale, and a millimeter scale.

(4) Pencils, straight edge, and tracing paper.

Section 10, Outside Sheet

(5) Reference material will be specific for the area in which operations are undertaken, but, wherever possible, should include:

(a) Maps and Charts

(b) Tide Tables

(c) Current Tables and Charts

(d) Sailing Directions

b. Interpretation of Substances. (1) Sand-- Sand is generally the lightest object on shoreline photographs. When not under water and when photographed in bright sunlight, it appears very nearly white. Under water, however, it appears gradually darker as the depth increases. Bottom sands will take various forms depending on the water action to which they are submitted. Wave action tends to produce soft rounded forms, and strong current a very sharply rippled pattern.

(2) Pebbles and stony beaches-- These appear darker than the sand near which they are often found. The minute shadows cast by each stone give a texture to a stony area which usually distinguishes it. As in all interpretations, it is well in such cases to try to deduce possible causes of the apparent phenomena. If, for instance, a cause for a deposit of pebbles can be discovered, such as wave action or lack of supply of sand, the interpretation will have greater validity.

(3) Rocks-- Rocks usually photograph dark or even black when submerged. Their shadow gives an indication as to their height. Kelp patches which indicate the presence of rock will likewise appear dark. Coral appears light, on the other hand, and can easily be confused with sand.

(4) Mud-- Mud is an obstacle of major importance, but fortunately lends itself easily to identification on aerial photographs. It appears dark to black and possesses little relief. Tidal grasses often appear with mud; they are seen as lighter patches in winter, as darker patches in summer. Look carefully for little streams in conjunction with tidal flats; their meandering course will immediately indicate mud.

c. Interpretation of Shoreline Details. Sample photographs in this chapter show the appearance of various shoreline details and phenomena. These shorelines should be studied carefully, and their shape, size, relative value of white, gray, or black, and relationship to other objects noted.


4
8
1a
3
7
6
7
2
1b
5
10

d. Method of Determing the Depth of Water. (1) The methods of accurately determining depths of water from aerial photographs are of such an intricate nature as to be of little value for average field use. Relative depths can be easily inferred, however, and a hasty method, which gives quite close approximations of depth, can be used if a chart or survey is at hand. This method is particularly useful for determining depths close to shore; depths, it should be noted which are seldom shown in detail on charts, and yet are of special significance in landing operations.

(2) Procedure. Select a deep and a shallow point on the chart for which values of depth are given, and connect these with a straight line. Plot these same points and the line on the photograph. Now, making allowance for the stage of tide at which the photo was taken, depths can be assigned to any other point along the line by a visual comparison of the relative value of white, gray, or black at the chosen spot in reference to the two known points. It will be best to apply this method only where the bottom is of a homogeneous composition, for otherwise variations in color due to differences in substance may easily lead to error.

e. Method for Determining the Slope of a Beach. A very rapid and sufficiently close approximation of the slope of a beach can be made from a single photograph. On a single photograph of known scale, measure the horizontal distance in feet between the high water mark and the low water mark. Determine from tidal data the range of tide in feet. Thus, having the base and altitude of a right triangle, the third side or average slope can be quickly computed. Judgment must be used in the application of this result.

f. Interpretation of Dune Area. The terrain behind the beach can be determined accurately by phototopographical methods (see TM 5-240). However, for expediency, much information can be found on a photograph taken before 0900 or after 1500. Photographs taken at such hours will show long shadows, and the relief will be much more apparent than on photographs taken at noon. Thus the intelligence officer will be able to locate heights of ground, depressions, landmarks, amount and approximate height of vegetation, and the best exits from the beach. Roads are best studied on this type of photograph, for ruts will cast sharp shadows, and the bearing power, drainage, and gradient may more readily be deduced.

Low obliques and stereopairs are used advantageously in conjunction with terrain photographs. Information found on one photograph can then be checked on the other. From them a fair picture of the profile of the shore line as seen from seaward may be sketched to indicate principal features and landmarks for use in navigation.

58. EXAMPLES OF INTERPRETATION.--The following examples of interpretation of aerial photographs are all from a single area which has been carefully studied. They are all studies of shore lines involving beaches. Further studies of rocky and coral coasts as well as amplifications of beach studies are under preparation and will be made available at a later date.

Photographs shown in this manual lose detail in reproduction by lithography, but the contact prints, with which intelligence officers actually work, show a great deal more detail.

NOTE: An interpretation manual, made up of a collection of aerial photographs and showing typical stretches of different kinds of beaches in a variety of conditions of weather and light is being compiled and will be available upon request to Headquarters, E.A.C.

no longer available

Fig 25.

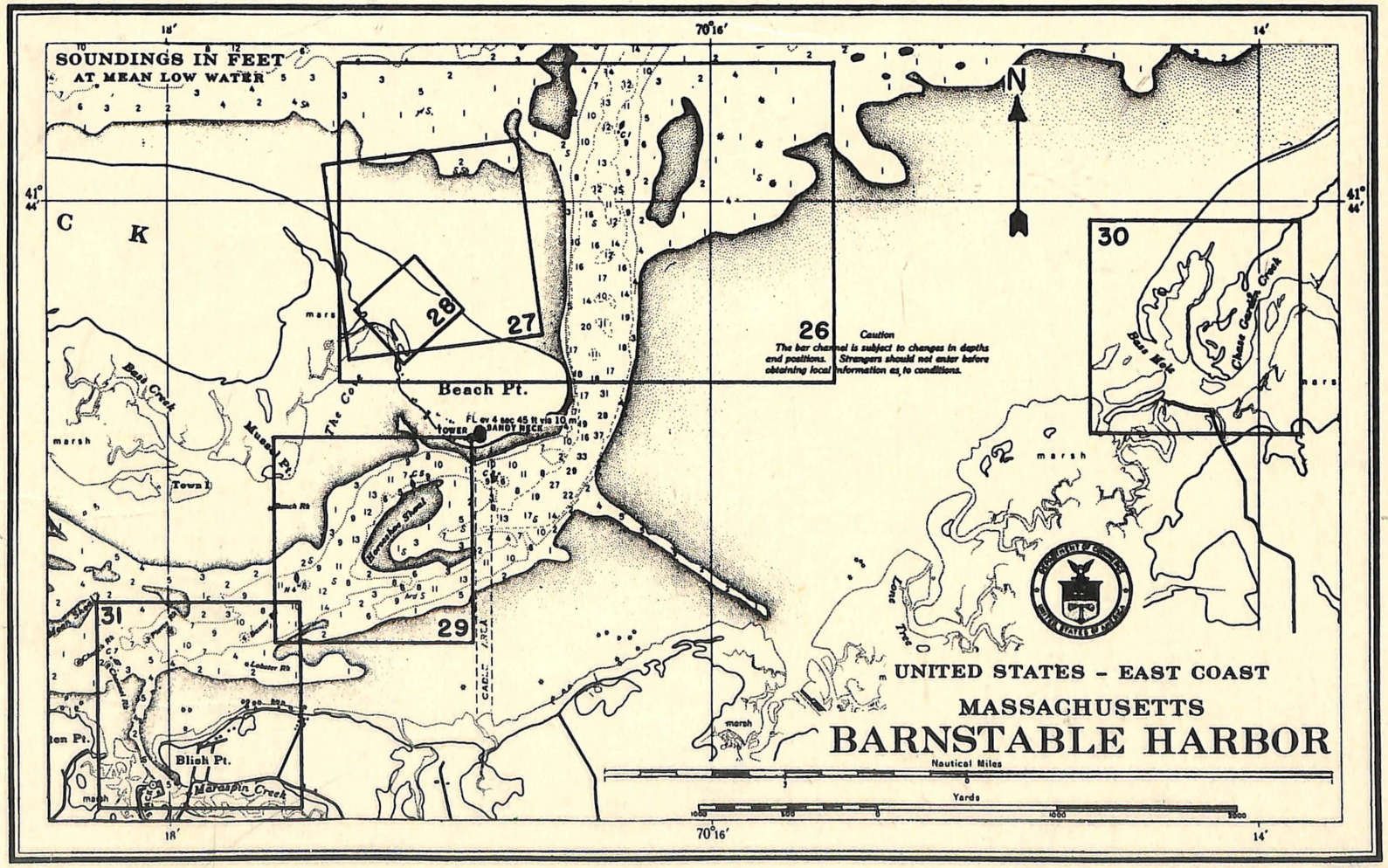


Fig. 25.--Master Chart. This chart shows the areas covered by the subsequent figures; for example, the area marked 26 is seen in Fig. 26, the area marked 27 in Fig. 27, and so on.

Interpretation of Figure 26.

Photos taken: 29 October 1942-- 1130 hours, vertical.

Weather: Clear, very light offshore breeze, sea calm.

Tide: 1 hour and 45 min. after low water.

1. Channel, average width 1000'. Note barely submerged bars on either side of channel.

2. Prominent sandbank. This is not correctly indicated on chart. Chart survey may be out of date for this particular shoal.

3. Runnel, not indicated on chart. The average depth is computed to be approximately 3' at low tide, and well over a man's head at half tide. This is determined by the value of gray within the runnel in relation to points of known depth taken from the chart. If a landing were attempted on the outside bar, for example, just before half tide, men would disembark in 2' of water but would find water over their heads in the runnel.

Although large underwater shapes are easily discerned, details of the beach and dune area do not show up well at this scale (1:10,000). See larger scale studies Figs. 28a and 29 for this.

4a. Sandbanks on either side of channel show a definite pattern, the result of wave action.

4b. Sand ripples on the bottom of the channel show a well defined current influence.

5. Fishing boat in channel, inbound. Note the wake.

Fig. 26

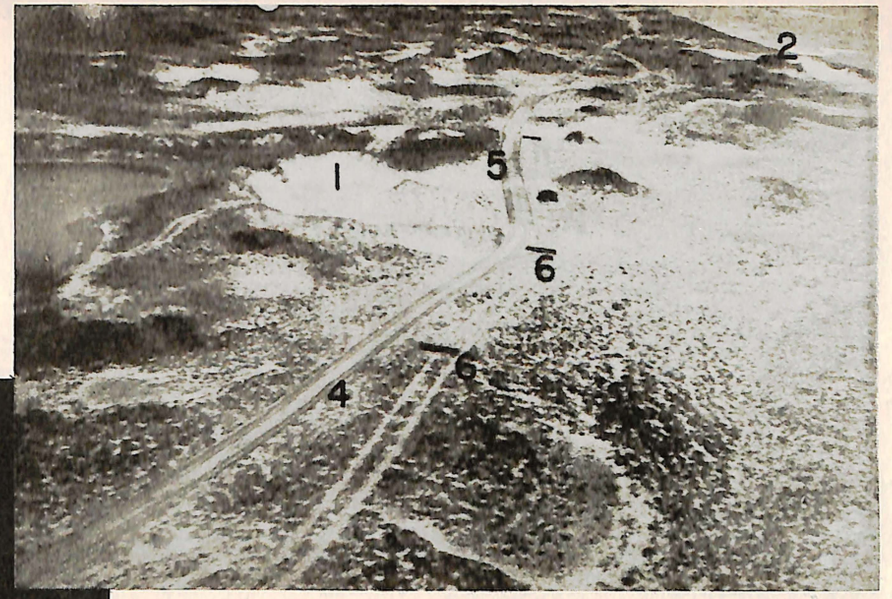

1
2
5
6
4
6

Fig. 28b.


6
3
2
5
6
BARNSTABLE HARBOR (70° 17'-41° 43') (APPROX. 1:1500) (16:00 12 NOV. '42) (152-M-10M-1)


2
4
6b
5a
3
7a
7b
5a
1
b
a
5b
0
1000
FEET

Interpretation of Figure 27.

Photo taken: 12 November 1942-- 1000 hours, vertical.

Tide: 1 hour after low water, range of tide 13 feet.

Weather: Clear, light onshore breeze.

1. The horizontal distance between high tide mark a. and low tide mark b. can be used with the range for this day to compute the average slope of the beach at this point.

$$\frac{\text{Range of tide for this day in feet (vertical distance)}}{\text{Distance between a. and b. in feet (horizontal distance)}} = \frac{13}{180} =$$

0.072 or 7%.

2. Prominent sandbank, parts of which are seen to be exposed at low water. Note the waves breaking over submerged outer bars, showing their location. In a heavy breeze, the breakers would be much larger.

3. The runnel seen in Figure 26, at larger scale.

4. Pebble bank, evidently kept free of sand by water running over sandbank and washing down the runnel toward the channel.

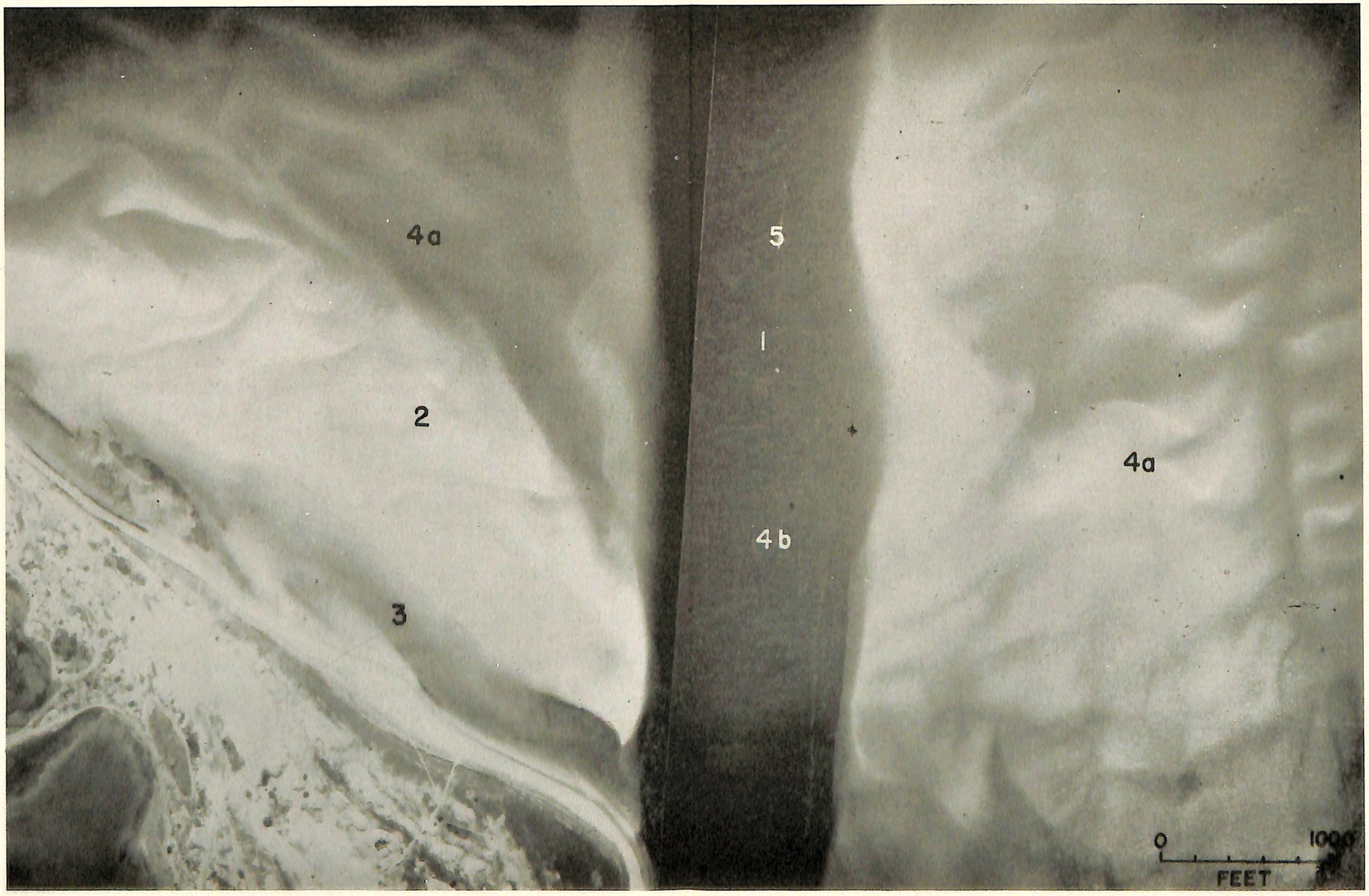
5a. Width of beach approximately 50' at this stage of the tide. The beach would be almost totally submerged here at high water; note location of tide mark.

5b. Width of beach approximately 250' at this stage of tide. Area between high water mark and first dunes, not normally covered by water, is approximately 150'.

6. The most obvious exits from the beach occur at these points. A path through a low area between the dunes at 6a, and a low spot connecting immediately with a single lane improved sand road at 6b.

7. Dark patches as illustrated at 7a are dunes; light rounded areas as at 7b are hollows between the dunes.

Fig. 27


4a
2
3
5
1
4a
4b
0
1000
FEET

Interpretation of Figures 28a and 28b.

Vertical Photo taken: 12 November 1942-- 1330 hours.

Oblique Photo taken: 7 November 1942-- 1130 hours.

The profile of a beach and dune area is best reconstructed when a vertical and oblique can be used together. Here the apparent heights and depressions can be checked by the oblique. As the width of the road running through the center of the oblique diminishes in perspective, it gives a rough approximation of scale throughout picture. In general, this area is soft sand, covered with low dune grasses, and lacking any prominent landmark.

1. Depression between sand dunes.
2. Beach.
3. Path to beach.
4. Truck tracks in sand. Deep ruts indicate soft conditions.
5. Improved single lane sand road, employing road matting.
6. Rolls of road matting.

Fig. 28a.


2
4
6b
5a
3
7a
7b
5a
1
b
a
5b
0
1000
FEET

Interpretation of Figure 29.

Photo taken: 12 November 1942-- 1000 hours, vertical.

Tide: 1 hour after low tide.

Weather: Clear, light onshore breeze.

Although the breeze has a noticeable effect on the water outside the harbor in Fig. 27, the surface within the harbor here is smooth.

1. Channel.

2. Horseshoe Shoal in the middle of the harbor channel. The tip of the shoal in the center of the picture is just going to be submerged with the flood tide running in. The shoal is hard-packed sand, and the sharply rippled ridge pattern on it indicates strong currents.

3. Dark areas consisting of mussel banks. Good bearing power for amphibian trucks landing.

4. Strong current action reflected in rippled pattern of sand at edges of channel.

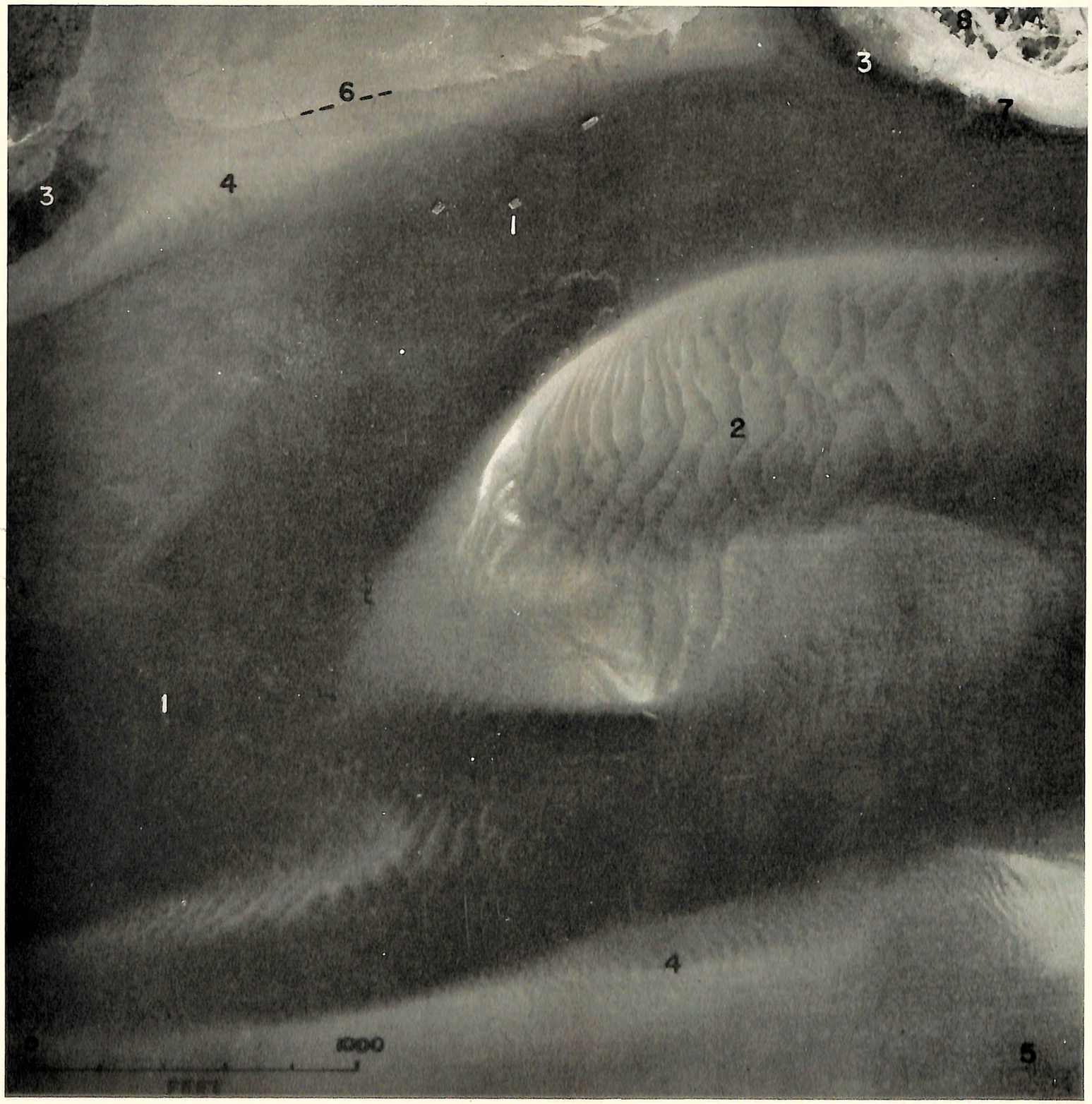
5. Dark spots here represent pebble area.

6. Water-line.

7. Mussel and pebble beach.

8. Small cottages.

Fig. 29


6
3
4
3
8
7
1
2
1
4
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1000
FEET
5

Interpretation of Figure 30.

Photo taken: 12 June 1943-- 1430 hours, vertical.

Tide: Low water.

Weather: Clear, slight haze.

A typical tidal stream running out on a shallow mud flat which shows plainly the action of current.

1. Deep parts of the channel-- close to the concave bank of the river.

2. Shoaler water, as between 1a and 1b, will normally be found between successive hollow river beds when they bend in opposite directions.

3. Island in tear drop form with sandbanks deposited by current.

4. Sand dunes along the sea beach.

5. Marshland with tidal rivulets.

6. Shallow flats in delta form.

7. Flood tide secondary channels, usually shoal in the upstream end.

8. Mud flats.

9. Small tidal stream, shallower and therefore lighter than large stream.

10. Small pond-- with steep banks.

Fig. 30


4
8
1a
3
7
6
7
2
1b
5
10

Interpretation of Figure 31.

Photo taken: 12 November 1942-- 1000 hours, vertical.

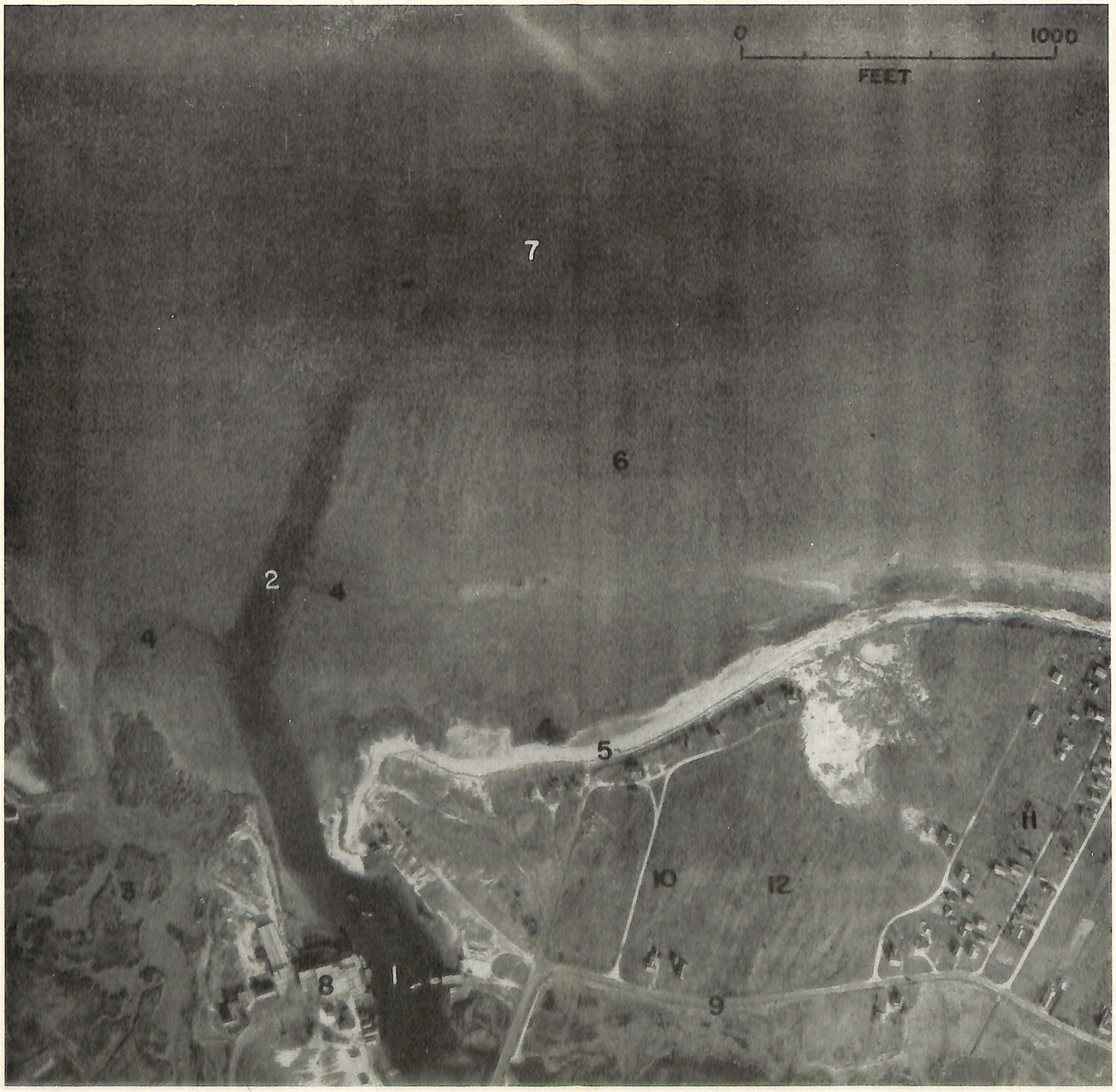
Tide: 1 hour after low water.

Weather: Clear, light onshore breeze.

1. Inner harbor approximately 250' by 750'. Note fishing boats.
2. Channel-- approximately 150' wide.
3. Marshland with muddy tidal streams.
4. Mud.
5. Soft sand beach.
6. Hard sand-- rippled pattern of strong current.
7. Deep water.
8. Fishery. Note fishing boats, long shadow of freezing plant stack, and piles of net-poles at bottom of picture.
9. 2 lane, black top, highway.
10. Single lane, dirt or gravel road.
11. Small cottages.
12. Meadow.

Fig. 31


2
4
6b
5a
7a
7b
5a
3
1
b
a
5b
0
1000
FEET


0
1000
FEET
7
6
2
4
4
5
10
12
8
1
9

PART II

NAVIGATION

Chapter 1

GENERAL

	Paragraph
Scope	59
Navigation	60

59. SCOPE.--Navigational intelligence, planning, and control involve the following:

a. Obtaining advanced navigational, hydrographic, and meteorological information. This is the function of the intelligence personnel of the brigade and has been discussed in Part I.

b. Preparation for the operation. This involves the adjusting and testing of equipment, and the preparation of necessary charts and tables with due allowance for current and other corrections.

c. Control of the operation. This involves navigation and the general operational supervision of the boat unit from the Embarkation Point to the point of landing on the far shore.

60. NAVIGATION AND CONTROL.--a. The navigation and control problems connected with small boat operations will vary greatly in different localities and with conditions of:

(1) Weather and state of the sea.

(2) Length of the run from the near to the far shore.

(3) Characteristics of the beaches and approaches.

(4) Day and night operations.

b. For example: In the Aleutian Islands, where landing beaches are limited and weather and sea conditions are severe during most of the year, weather, distances, character of shoreline, and visibility must be carefully examined and weighed. In the Caribbean Sea, or the Philippine Islands, the weather is, for the most part, good, and as far as the characteristics of beaches are concerned, landings can be made almost any place. During a large part of the year, the English Channel is not favorable for small boat operation. During part of the year, the coast of India is subject to moderate monsoon winds and surf conditions.

c. Shore-to-Shore or Ship-to-Shore.--All these factors must be weighed in deciding the type of operation which is feasible. Where conditions are too difficult and the distances involved are great, a ship-to-shore operation may be required.

PART II

NAVIGATION

Chapter 2

CONTROL AND EXECUTION

	Paragraph
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Organization and Operations	62
Equipment	63
Reconnaissance Duties of Navigators	64
Planning	65
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Boat Movement Table	67
Assembly Chart and Table	68
Approach Chart	69
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Execution	71
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Control	73

61. GENERAL.--The necessity for secrecy and surprise in shore-to-shore operations will usually require that embarkation and the landing of the initial waves take place under cover of darkness and that the use of radio be restricted to the absolute minimum. All standard and secret aids to navigation must therefore be employed to solve the problems of navigation and control under the conditions of darkness or very low visibility and drastic curtailment of audible communication. For each boat formation an Assembly Chart, a Track Chart, and, when required, an Approach Chart, with magnetic courses and distances in nautical miles, are required. The use of these charts is explained in pars. 66-70.

62. ORGANIZATION AND OPERATIONS.--a. Boat Company.

(1) For purposes of navigation and control of boat formations, the company commander has his second in command and the Operations Section consisting of:

2 First Lieutenants, navigators and patrol boat commanders
1 Staff Sergeant, boatswain
4 Technicians, grade 4, coxswains
4 Technicians, grade 5, enginemen
4 Privates, seamen
1 Private, basic
2 Command and Navigation boats
2 Patrol boats

(2) The company commander, the two first lieutenants, and the staff sergeant must be trained navigators.

(3) Communication personnel (radio operators - signalmen) and special equipment operators are essential to proper control and navigation. This personnel is available in the Communication Section. In addition, wave leaders and boat crews should all be proficient in visual signaling.

(4) The distribution of personnel in the 4 boats of the Operations Section is prescribed for each situation by the company commander. One possible set-up is as follows:

Command and Navigation Boat No. 1 (Navigator)

1 Navigator - First Lieutenant
1 Communications and Special Equipment Operator - Sergeant
2 Radiomen (Voice and CW)
1 Coxswain
1 Engineman
1 Seaman

Command and Navigation Boat No. 2 (Company Commander)

1 Commanding Officer - Company Commander
1 Communications and Special Equipment Operator - Second Lieutenant
1 Message Center Clerk (Code Clerk)
2 Radiomen (Voice and CW)
1 Coxswain
1 Engineman
1 Seaman

Patrol Boat No. 1 (Second in Command)

1 Second in Command - First Lieutenant
1 Boatswain - Staff Sergeant
1 Radioman (Voice and CW)
1 Coxswain
1 Engineman
1 Seaman

Patrol Boat No. 2

1 Patrol Boat Commander - First Lieutenant
1 Radioman (Voice and CW)
1 Coxswain
1 Engineman
1 Seaman

(5) The navigator in his command and navigation boat must keep station at the head of the formation and lead it on the prescribed course. The company commander is free to 'scout' around the formation to see that all is in order, although in general he keeps stationed a little astern of the navigator. It may be necessary for the company commander to assume the place and duties of the navigator while the navigator runs ahead to make short reconnaissance as the Rendezvous Area is approached. Since these 2 boats are equipped identically, either can perform the leading function.

(6) The 2 patrol boats have the functions of keeping the formation together, collecting strays, and carrying out general patrol duties. It may be necessary for one of the patrol boats to assist the navigator. Patrol boat No. 2 should, therefore, maintain contact with the navigator during her rounds of the formation. The second in command takes station near the rear of the formation where he can control the formation and assist the salvage boat as necessary. The second in command is also responsible for transferring troops if a boat breaks down or for taking her in tow if essential equipment is aboard. Transfer of troops in a heavy sea is difficult and may not be feasible. If available, a few spare boats should be provided for transfer of troops and for towing. If not available, the disabled boats must be anchored and brought in later after the initial landing.

(7) The Boat Company has the following boats:

2 Command and Navigation Boats
2 Patrol Boats
1 Salvage Boat
30 Surf Landing Boats, 36', LCVP
30 Tank Lighters, 50', LCM(3)

These boats may be arranged in any order in from 7 to 10 waves. The first and second waves are usually made up of LCVP's. These and other waves are made up to suit the tactical demands of the situation. Normally a wave will have no more than 10 boats. A typical formation might be set up as follows:

Command and Navigation Boat (Navigator)
Command and Navigation Boat (Company Commander)
Wave 1 -- 8 LCVP's
Patrol Boat No. 2 on the left flank (Patrol Boat Commander)
Wave 2 -- 6 LCVP's
Wave 3 -- 7 LCVP's
Wave 4 -- 7 LCVP's, 2 LCM(3)'s
Wave 5 -- 2 LCVP's, 8 LCM(3)'s
Wave 6 -- 10 LCM(3)'s
Patrol Boat No. 1 on right flank (Second in Command)

Wave 7 -- 10 LCM(3)'s
Salvage Boat

b. Boat Battalion.

(1) The personnel at the disposal of the Boat Battalion commander for navigation and control are one first lieutenant, intelligence, operations, and navigation officer, 2 second lieutenants, boat commanders, 2 technical sergeants, boatswains, and the necessary additional enlisted men including coxswains, enginemen, seamen, and communication and special equipment personnel. There are 2 command and navigation boats, one for the battalion commander, the other for the navigation officer; and 5 patrol boats, one for each of the officer boat commanders, one for each of the boatswains, and one in charge of its coxswain only.

(2) The battalion navigator normally follows his own track near the head of a battalion formation composed of the company formations. If the operation is such that all company formations are not grouped into one formation, the battalion navigator normally accompanies the company or companies involved in the main attack. The battalion commander is free to supervise the whole boat movement, while the 5 patrol boats shepherd the fleet and are liaison boats between the battalion and regiment and between the battalion and its companies. The battalion navigator and battalion commander are available and ready, in an emergency, to take over or assist as necessary. The battalion executive normally remains on the near shore to coordinate boat activities there. If he goes afloat, he may occupy the patrol boat commanded by the coxswain, or any other boat, and will remain near the rear of the formation to assist in salvage operations and in control. If a company or companies are acting alone, or if one or more companies are making landings on more than one beach, the battalion patrol boats may be assigned to the companies in any manner. In the extreme case all 5 of the battalion patrol boats can be assigned to the companies and within the company at least one boat (from either the company or the battalion) further assigned to each of the 3 boat platoons.

c. Regiment.

(1) The regimental commander has a lieutenant, senior grade (equivalent to a captain), U.S. Coast and Geodetic Survey, in the Intelligence Section of the Headquarters Platoon of Headquarters Company as navigation officer, and a second lieutenant, boat commander, in the Operations Section. There are 2 command and navigation boats, one patrol boat, and the necessary enlisted boat men and communication and special equipment personnel.

(2) As in the Boat Company and Battalion, this gives a navigation boat, a regimental commander's boat, and a patrol boat. Normally these 3 boats operate near the rear of the formation(s), and, keeping constantly in touch with the battalion and company navigators and commanders, are ready to assist them or take over any of their functions in an emergency.

d. Brigade.

(1) The brigade commander has a lieutenant commander (equivalent to a major), U.S. Coast and Geodetic Survey, as navigator and 2 second lieutenants, boat commanders from Brigade Headquarters and Brigade Operations Section respectively. There are 2 command and navigation boats and the necessary enlisted boat men and communication and special equipment personnel. The boat commanders each run one boat; the navigator occupies one, and the brigade commander, if he desires, occupies the other.

(2) Depending on the situation, the brigade navigator, in his boat, accompanies the regimental formation making the main attack, or, following his own track, keeps in touch with all formations and renders assistance or takes over as required. The brigade commander may make the crossing at any time in his boat, any other boat, or even by plane. In any case he will direct what use is to be made of his boat, and if he makes the crossing in it will personally direct its operations and course.

Marking Control Points. The command and navigation and patrol boats of all echelons are used prior to and during the boat movements to plant buoys or other aids to navigation, and to take stations to mark Assembly Areas, Rendezvous Areas, Lines of Departure, or other navigational control points. This is one of the prime duties of all echelons.

63. EQUIPMENT (Fig. 32a-f).--a. The command and navigation and patrol boats are equipped as follows:

(1) Boat compass (magnetic), and pelorus.

(2) Remote indicating compass (magnetic).

(3) Sextant.

(4) Track Chart (in chart tube).

(5) Full set of approach charts.

(6) Taffrail log.

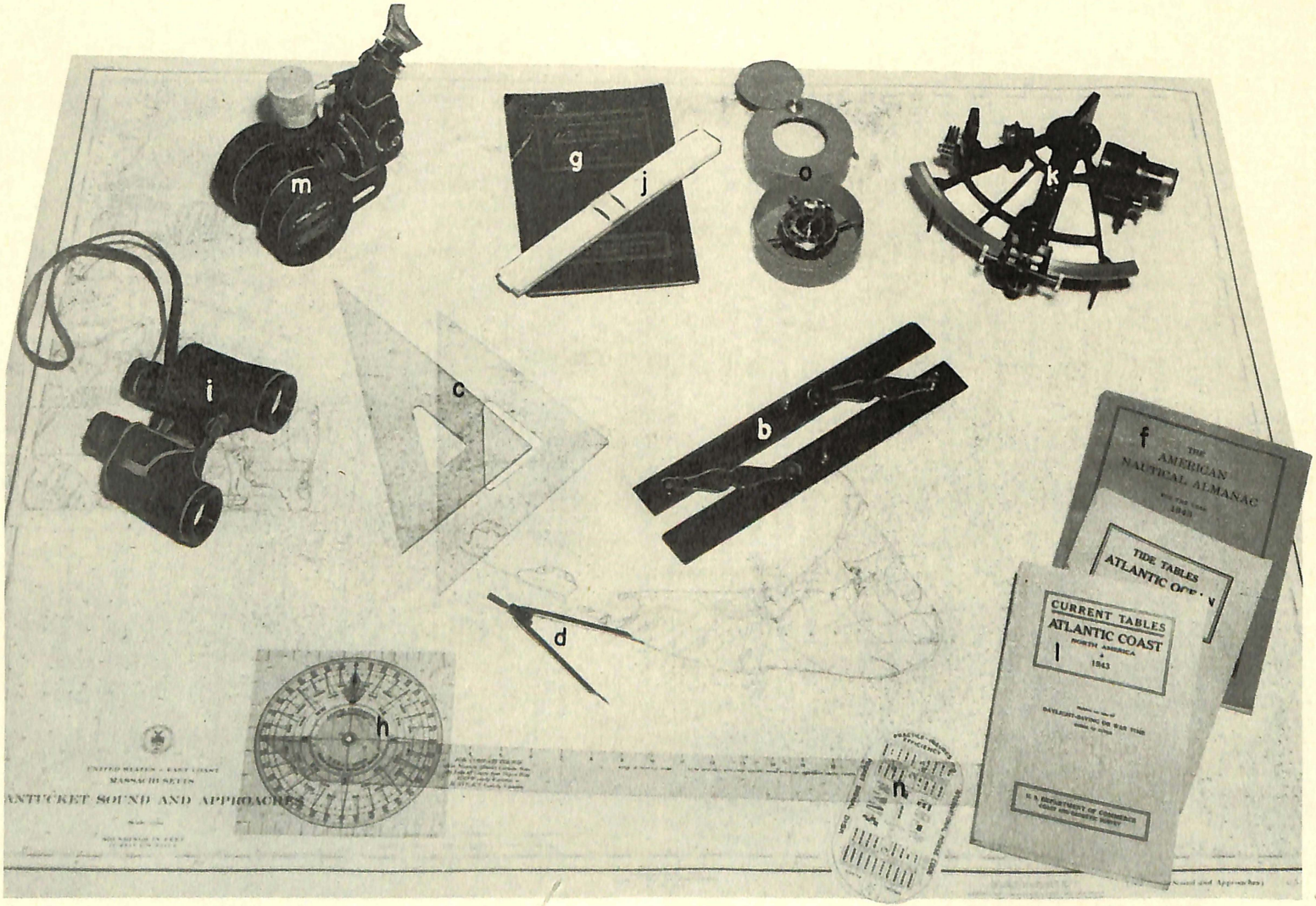

Fig. 32a.--Navigation Set.

(7) Navigation Set (Fig. 32a shows some of this equipment spread out on a chart).

(a) Three-arm protractor
(b) Parallel rule
(c) Triangles (2)
(d) Dividers (2)
(e) Pencils (2)
(f) Nautical Almanac
(g) Set Celestial Navigation Tables
(h) Single-arm protractor
(i) Binoculars
(j) Slide rule
(k) Sextant
(l) Tide and current tables
(m) Octant
(n) Pocket signal disk
(o) Chronometer

(8) Signal flags (Fig. 32b), flares (Fig. 32c), blinker pistol (Fig. 32d).

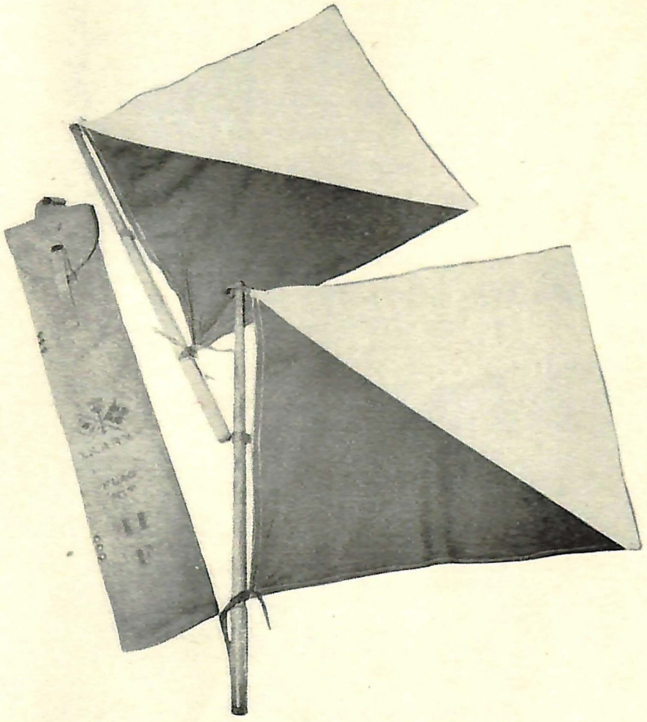

Fig. 32b.--Signal Flags.

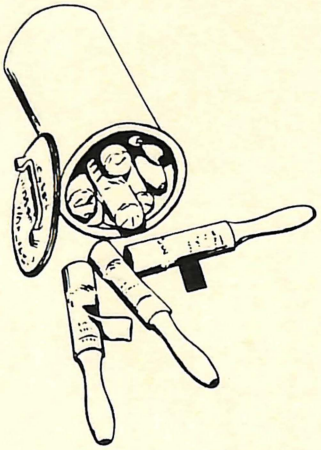

Fig. 32c.--Flares (distress signal).

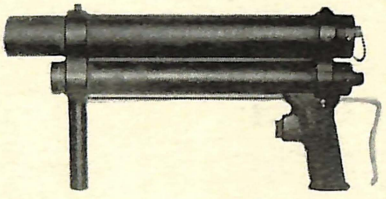

Fig. 32d.--Blinker Pistol.

(9) Radio transmitter-- Receiver (2 in command and navigation (Fig. 32e) boats; 1 of different type number in patrol boats).

(10) Automatic radio direction finder (Fig. 32f).

(11) Underwater signaling and listening gear (probably not in regiment and company command and navigation boats or in any patrol boats).

(12) Invisible light equipment.

(13) Secret equipment as furnished.

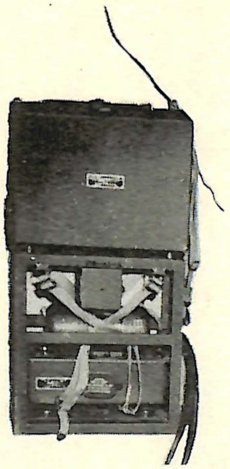

Fig. 32e.--Radio Transmitter and Receiver SCR-284.

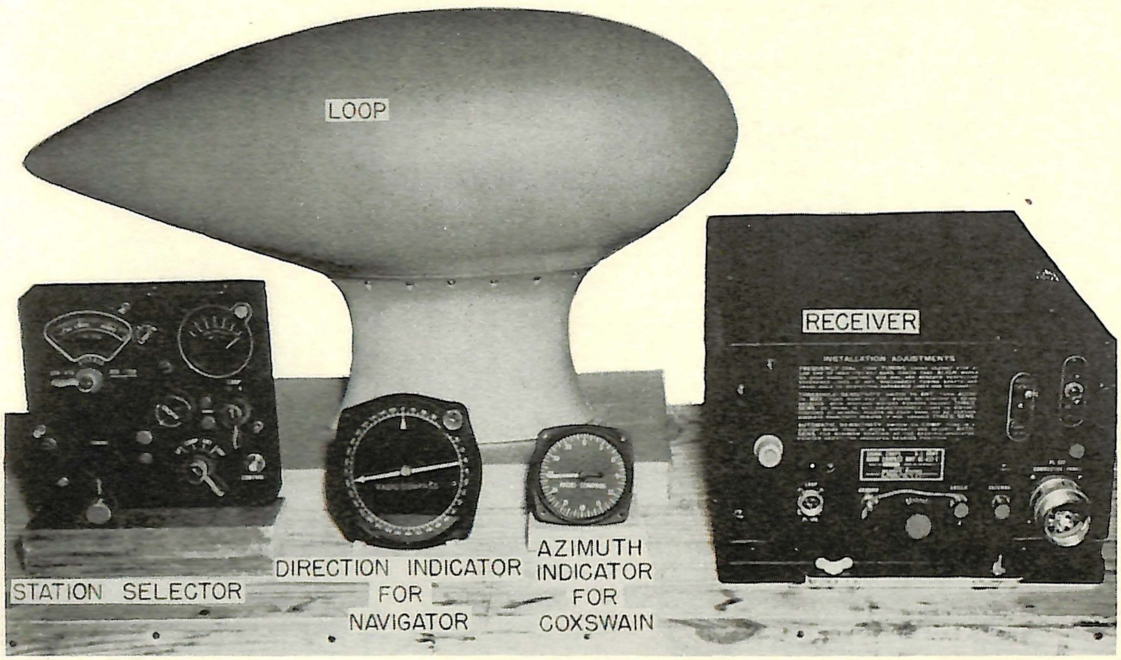

Fig. 32f.--Automatic Radio Direction Finder.

64. RECONNAISSANCE DUTIES OF NAVIGATORS.--Navigation officers in the various boat units will serve as technical assistants to the S-2 sections. They will lead reconnaissance or special missions (Part I) for the purpose of obtaining required information on the landing beaches, offshore and inshore dangers, and depths of water, tides, currents, available charts, and so forth. They may conduct actual hydrographic, tide, and current surveys to gather necessary data for planning the landing and navigation of small craft, or for the use of naval support and transport vessels.

65. PLANNING.--Preliminary preparations involve:

a. Study of existing charts, original surveys, photographs, and other existing data.

b. Reconnaissance, in cooperation with the S-2 sections, either by plane, surface boat, or by use of amphibian scouts or raiders.

c. Tabulation of beach and approach characteristics, first light, tides, weather, the moon's phase, for the selection of the beaches and the determination of 'D' day and 'H' hour.

d. Establishing and planting of secret or other aids to navigation, as required, both on the near and far shores, including control buoys off the far shore to define the Rendezvous Area, the Line of Departure, and Fire Support Areas.

e. Preparation of instruments, which will include:

(1) Swinging ship for compass error (magnetic).

(2) Calibrating radio direction finder.

(3) Calibrating logs (taffrail) or speed vs. R.P.M.'s.

(4) Testing and calibrating supersonic depth finders, signaling and listening devices, and associated equipment.

(5) Checking time pieces, sextants, and all other instruments.

66. THE TRACK CHART (Fig. 33).--a. The Track Chart is prepared on a large-scale navigation chart. The routes or tracks to be followed are carefully considered before being laid down on the chart. They show the complete route from the Assembly Area to the Rendezvous Area off the far shore and to the landing beaches. When the operation is under brigade control, this chart is prepared by the brigade staff, working with the division staff, and the pertinent parts are reproduced and distributed to each unit making up the operation.

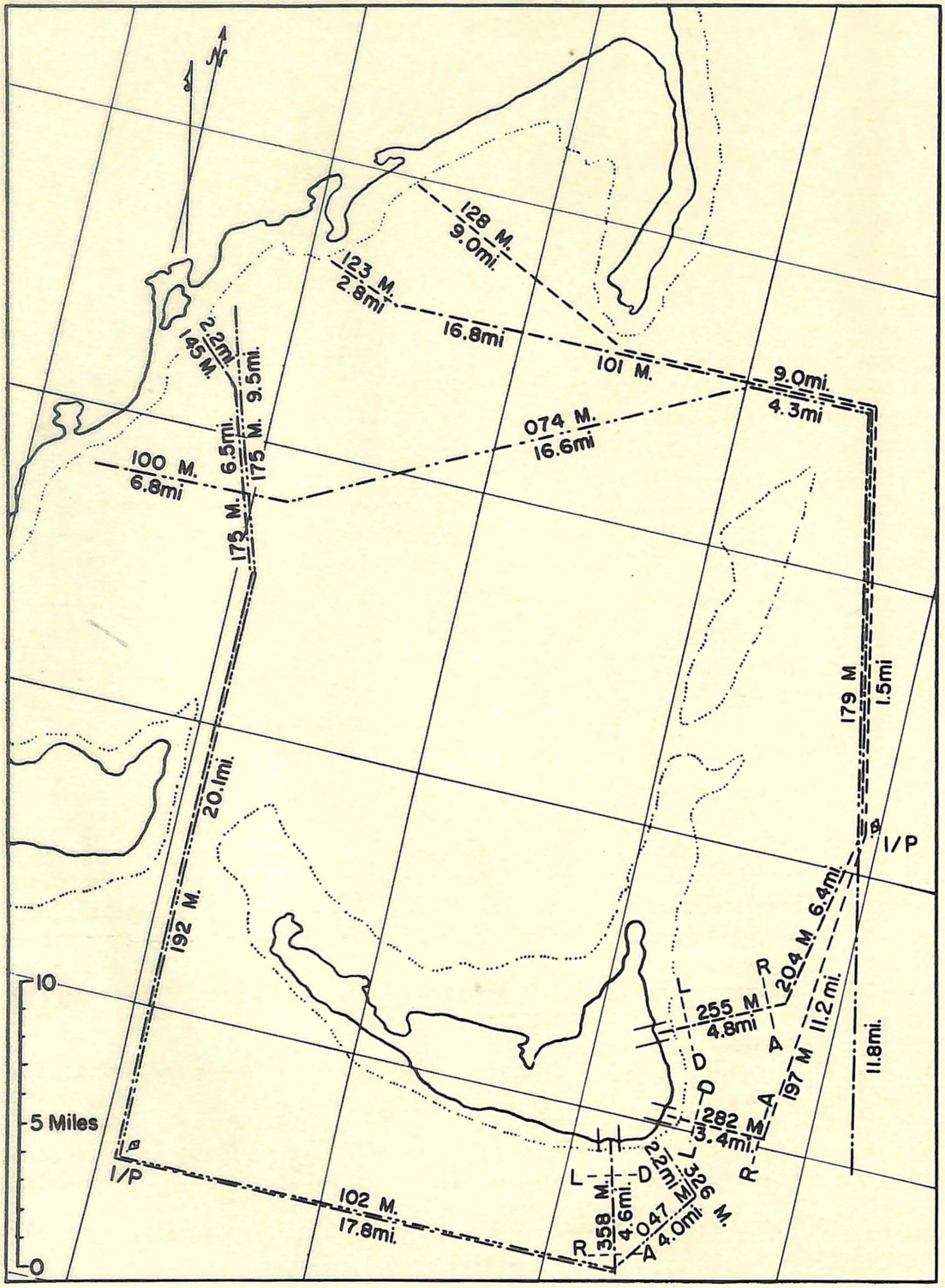

Fig. 33.--A Typical Track Chart Showing 'Initial Point'.

When smaller units are acting independently, their headquarters perform the same function in making up the Track Chart.

b. Magnetic courses and distances in nautical miles, without allowances for either ocean currents, wind effects, or compass deviation, are set down on each leg of the track. The individual unit then proceeds with the correction of all courses and determines the speed, within the operating capabilities of the boats, which must be maintained so as to arrive at the beach at exactly 'H' hour. This is usually computed backwards from the time of arrival ('H' hour), with a small safety factor allowance. The final time determined is the correct time of departure from the Assembly Area. The particular compass courses to be steered, the speed to be maintained, and the time of the run on each leg are appropriately entered in the Boat Movement Table. It is usually desirable to make up a table for several days so that, should weather or other conditions delay the operation, the data will be available for one of the next succeeding days. Copies of the company's Track Chart should be furnished the officer or noncommissioned officer in charge of each boat so that navigational instructions will be available in case the boat becomes separated from the formation, has engine trouble, or otherwise breaks down.

c. Ordinarily, the Boat Battalion staff will compute the necessary allowance for current and furnish this information to the company commander. It is essential that there be a good deviation table for the compass in each boat, and that the coxswain be familiar with the use of this card in correcting his compass for the various courses.

67. **BOAT MOVEMENT TABLE** (Fig. 34).--a. This table is a complete tabulation of **TIMES** (in minutes) and **SPEEDS** for each leg of the run from the Assembly Area to the Rendezvous Areas and to the landing beaches, for each boat unit and combat unit taking part. The table should be made up directly from the Track Chart as soon as a tentative 'D' day and 'H' hour have been determined. Several tables will be prepared, one for each of the several days immediately before and after the particular 'D' day selected. The allowances for current are given in each table for its particular day.

b. This table is prepared by the division and brigade staffs in collaboration, and furnished to the regiment when the operation is under brigade control. Otherwise, this table is prepared by the staffs of the highest units in the operation. It may be combined with the Assembly Table if the amount of detail is not too great.

68. **ASSEMBLY CHART AND TABLE** (Figs. 35a, b, and c).--a. The Assembly Chart shows Magnetic Courses from:

The **DISPERSAL AREAS** to the **EMBARKATION POINTS**; and from the **EMBARKATION POINTS** to the **ASSEMBLY AREAS.**

BOAT MOVEMENT TABLE

Combat Unit	Boat Unit	Departure		Speed	Assembly Area		Speed	R/A	Cross	Speed	Beach	First Wave Lands
		Area	Time		Arrive	Leave		Arrive	L/D			
BLT 1	Co 'A' 535 B&S	Pier 1 Waquoit Bay	0007 D-Day	5 kn.	0034 D-Day	0039	6 kn.	0245	0305	6 kn.	BLUE	0323
BLT 2	Co 'B' 535 B&S	Pier 2 Waquoit Bay	0010 D-Day	5 kn.	0057	0102	6 kn.	0250	0310	6 kn.	GREEN	0323
BLT 3	Co 'C' 535 B&S	Pier 4 Waquoit Bay	0052 D-Day	5 kn.	0129	0134	6 kn.	0310			On Order	On Order
Regt'l Command Group	Co 'C' 535 B&S	Pier 3 Waquoit Bay	On Order								On Order	On Order
Regt'l Support Group	535 B&SR	Pier 4 Waquoit Bay	On Order								On Order	On Order
Supply Echelon		New Bedford	D minus 5 days to D plus 5 days									

Fig. 34.--Example of a Typical Boat Movement Table.

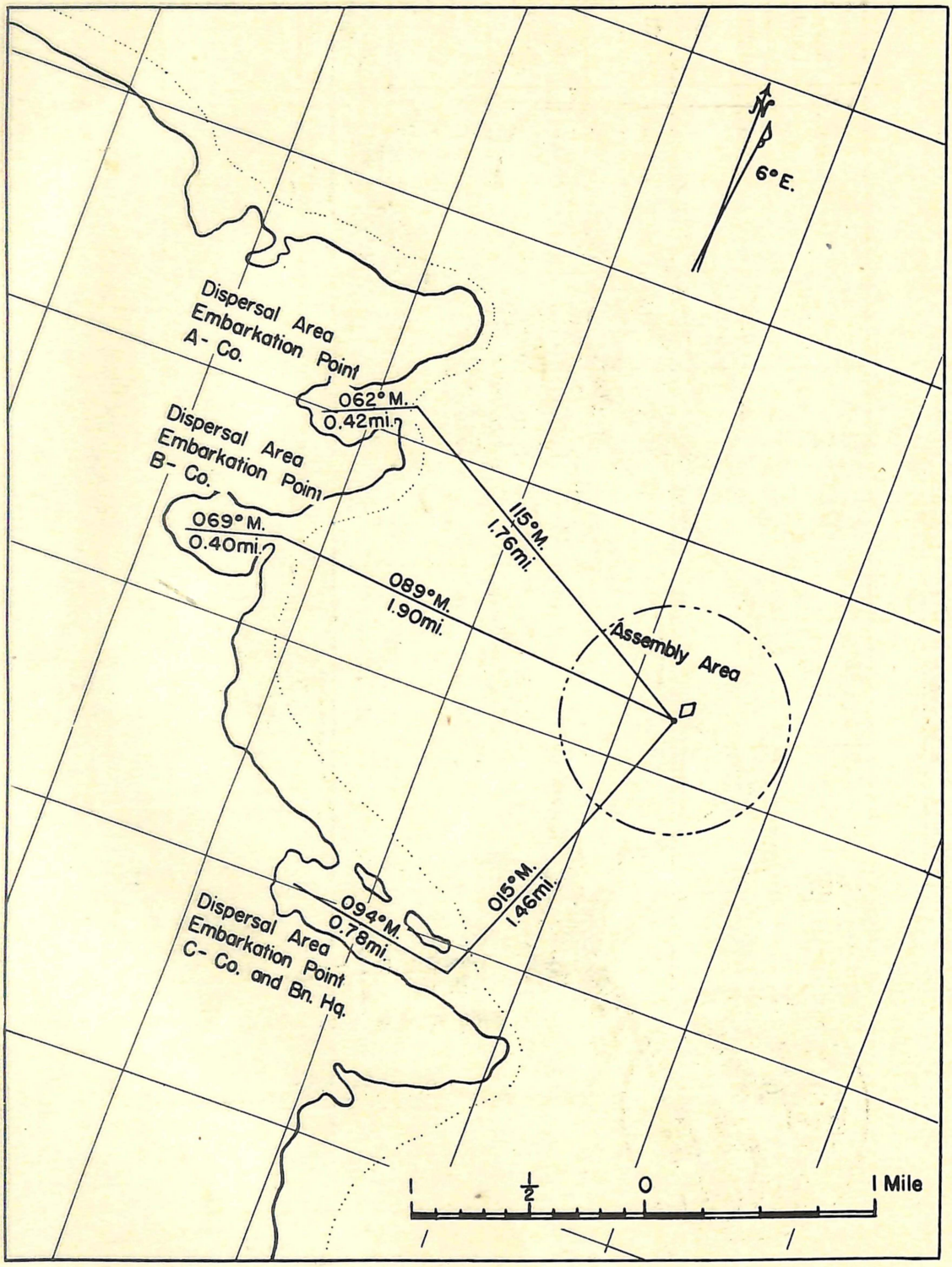

Fig. 35a.--An Assembly Chart with Battalion Separated.

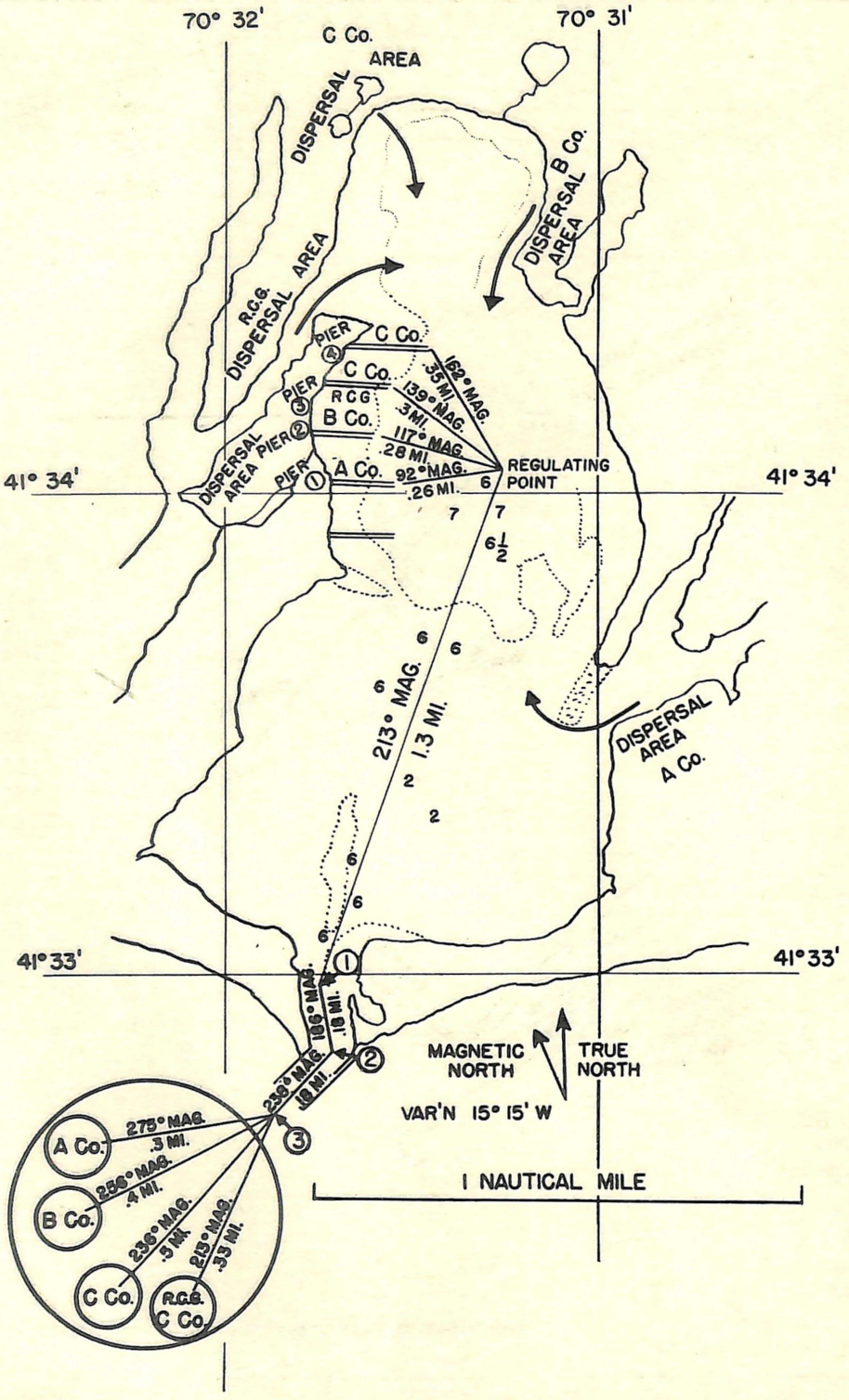

Fig. 35b.--Assembly Chart. Goes with Assembly Table Opposite.

ASSEMBLY TABLE

BLT-1	Speed	Course	1st Wave	2nd Wave	3rd Wave	4th Wave	5th Wave	6th Wave	7th Wave
Lv. E/P	5 kn.	92°	0007	0013	0019	0025	0031	0037	0043
			D Day						
Lv. R/P	5 kn.	213°	0010	0016	0022	0028	0034	0040	0046
Ar. No. 1	5 kn.	186°	0026	0032	0038	0044	0050	0056	0102
Ar. No. 2	5 kn.	238°	0028	0034	0040	0046	0052	0058	0104
Ar. No. 3	5 kn.	275°	0030	0036	0042	0048	0054	0100	0106
Ar. A/A			0034	0040	0046	0052	0058	0104	0110
BLT-2									
Lv. E/P	5 kn.	117°	0030	0035	0041	0047	0053	0059	0105
			D Day						
Lv. R/P	5 kn.	213°	0033	0038	0044	0050	0056	0102	0108
Ar. No. 1	5 kn.	186°	0049	0054	0100	0106	0112	0118	0124
Ar. No. 2	5 kn.	238°	0051	0056	0102	0108	0114	0120	0126
Ar. No. 3	5 kn.	256°	0053	0058	0104	0110	0116	0122	0128
Ar. A/A			0057	0102	0108	0114	0120	0126	0130
BLT-3									
Lv. E/P	5 kn.	139°	0059	0105	0111	0117	0123	0129	0135
			D Day						
Lv. R/P	5 kn.	213°	0103	0109	0115	0121	0127	0133	0139
Ar. No. 1	5 kn.	186°	0119	0125	0131	0137	0143	0149	0155
Ar. No. 2	5 kn.	238°	0121	0127	0133	0139	0145	0151	0157
Ar. No. 3	5 kn.	236°	0123	0129	0135	0141	0147	0153	0159
Ar. A/A			0129	0135	0141	0147	0153	0159	0206

REGT'L COMMAND GROUP			
Lv. E/P	5 kn.	162°	*X hour
Lv. R/P	5 kn.	213°	X plus 4 minutes
Ar. No. 1	5 kn.	186°	X plus 20 minutes
Ar. No. 2	5 kn.	238°	X plus 22 minutes
Ar. No. 3	5 kn.	213°	X plus 24 minutes
Ar. A/A			X plus 28 minutes

REGT'L SUPPORT GROUP			
Lv. E/P	5 kn.	162°	*X hour
Lv. R/P	5 kn.	213°	X plus 4 minutes
Ar. No. 1	5 kn.	186°	X plus 20 minutes
Ar. No. 2	5 kn.	238°	X plus 22 minutes
Ar. No. 3	5 kn.	213°	X plus 24 minutes
Ar. A/A			X plus 28 minutes

*(X) by later order.

Fig. 35c.--Assembly Table. Goes with Assembly Chart Opposite.

The Assembly Table is the TIME TABLE for each wave of each unit from the Dispersal Area to the Assembly Area. Since the timing of the entire operation depends upon following these tables accurately, it is essential that every phase of timing be adhered to exactly. Formation speeds are usually made up from the speeds of the slowest boats concerned. Any loss of time may turn out to be a serious matter, as it is difficult to make it up.

b. The Assembly Charts and Tables are prepared by the staffs of the regimental combat team and the Engineer Boat and Shore Regiment working in close cooperation. It should be noted that the time required to load materiel will largely determine the Assembly Table set-up. A copy should be furnished to each wave leader as well as to those immediately in charge of the Embarkation Area operations.

69. APPROACH CHART (Figs. 36a and b).--a. A chart showing the approaches to the far shore landing beaches is prepared when landings are to be made where there is not a clear approach from the sea. Hydrographic obstructions, narrow channels, piers and docks, and other natural objects may restrict the front of landing waves and make necessary an approach that will not be normal to the beach, that may follow a changing course, or that may even require splitting up of the waves into single boats or small groups of 2 or 3 boats.

b. When one is required, it is prepared by the Engineer Boat and Shore Regimental staff in conjunction with the regimental combat team and one copy distributed to each wave leader in the Boat Companies. It is prepared on as large a scale chart as possible and will show all the tracks to be followed and any other pertinent data which will assist in the accurate navigation of the boats.

70. OTHER CHARTS AND TABLES.--a. Boat Allotment Table. This table is prepared by the division and brigade staffs working in conjunction with each other, and becomes a part of the brigade order. A similar table is also prepared by the staffs of the regimental combat team and the Engineer Boat and Shore Regiment. It designates the allotment of craft to the combat unit to be moved and the boat unit transporting it in accordance with the tactical requirements of the mission. Full consideration is given to the types of personnel and equipment involved.

b. Embarkation and Debarkation Tables. These tables are prepared by the regimental combat team and the battalion landing team in conference with the staff of the Boat and Shore Regiment and the Boat Company commander respectively. They designate the combat unit to be transported and the boat unit transporting it with times and places of loading and debarkation.

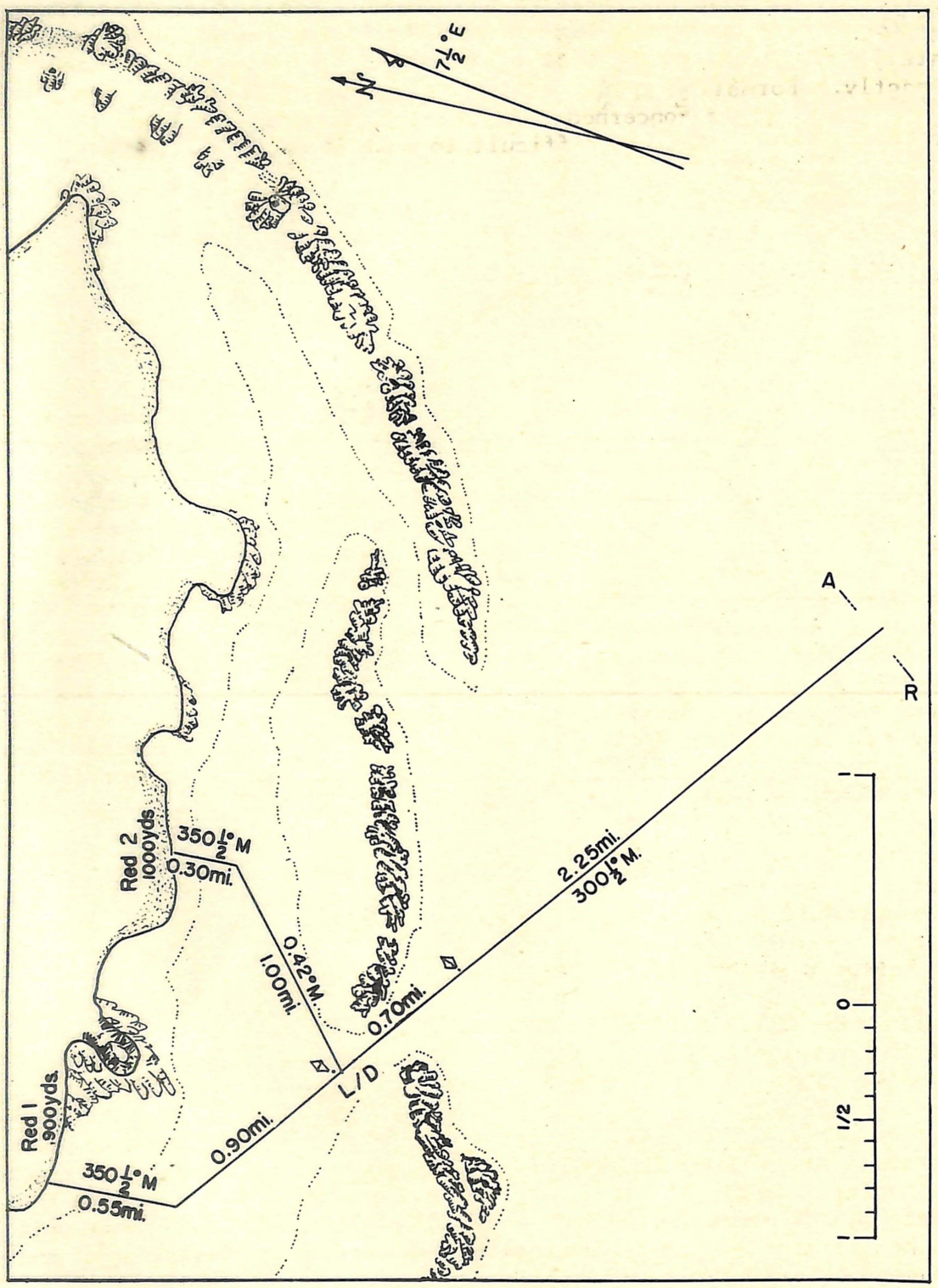

Fig. 36a.--Approach Chart.

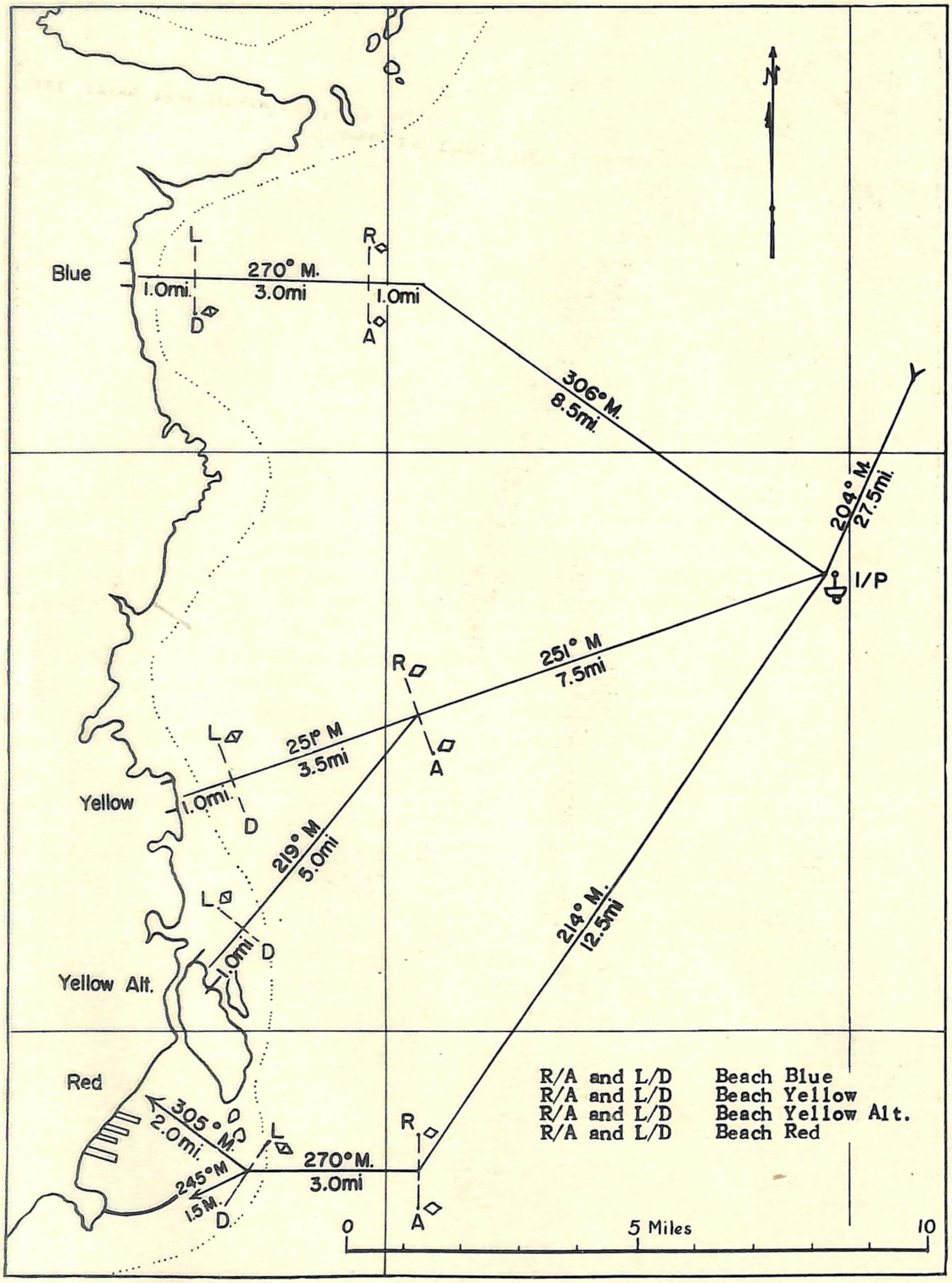

Fig. 36b.--Approach Chart, Small Scale, Showing INITIAL POINT.

c. Landing Diagrams, Landing Schedule, and Boat Assignment Tables are prepared by the battalion landing team in conference with the commanding officers of Boat and Shore Companies. The Boat Assignment Table shows personnel and equipment for each boat and boat space for each unit. The Landing Diagram and Schedule shows the formation into waves, time between waves, spacing of boats in waves, times of crossing Line of Departure and of landing, and distance and magnetic course from Line of Departure to beach.

71. EXECUTION.--a. Methods employed in guiding a formation will vary with the availability of navigational aids, adequate charts, current, visibility, and the configuration of the bottom of the ocean.

b. The position of the leading boat (command and navigation) must be known accurately to within 100 to 200 yards when 1 to 3 miles off the enemy shore. This is especially necessary if secret aids are not available or cannot be made use of due to some conditions arising prior to the operation. This accuracy is extremely difficult to attain on a dark night even with a short run. The best means for attaining the desired degree of accuracy is by the use of secret devices planted near the enemy shore, plus some method of guiding the boats to the vicinity of these aids by signaling apparatus installed on the near shore or afloat. Radar may be used for this purpose. The radio direction finder (par. 86) can also be used for this purpose with a satisfactory degree of accuracy over long distances. This instrument, when properly calibrated and operated, will give accuracies to within one or two degrees of the true bearing, and it is possible to keep this error down to one degree either side of the true direction. This error corresponds to approximately 1.8 miles in a distance of 100 miles. By having secret aids so planted that one or more will be contacted near the outer limits of this 'path' and by using the aids correctly, it is possible to arrive at a point well within the required accuracy of 100 to 200 yards off the far shore.

c. But to a large extent the command and navigation boat in the lead will still have to depend upon other means to arrive at its destination. Regardless of the distance between the Assembly Area and the Rendezvous Area, proper allowance for current must be made, supersonic depth finder soundings (par. 85) must be plotted against soundings on charts, and the log factor (par. 81) must be known so as to correct indicated distances into true distances. If there is sufficient visibility, it will be possible to take bearings on various land features as the far shore is approached. These objects must be in known relationship to the destination, and should be easily recognized after a careful study of oblique photographs of the shore. This may involve running parallel to the beach until a sufficient number of points has been recognized to establish a position and the course to the landing beach set with reasonable assurance of arriving at the correct point.

However, when a special aid is available, the navigator 'homes' on it, and with the true course from this aid to the beach being known, the balance of the run is made by compass course, taking advantage of current information and other data gained on the run from the near shore. Expedients such as anchoring vessels on the track at dusk of the night before, or the use of some accurate distance measuring device such as the taut-wire, may be required if other better and more accurate means are not available. The command and navigation boats swing to the flanks as the Line of Departure is reached, and the other boats continue on the courses prescribed.

d. Refinements in Navigation. (1) In addition to the ordinary methods of piloting by compass, log, and lead (soundings), there are several very helpful navigational refinements. To achieve the required accuracy, one or more of them must be employed, the selection depending largely on the natural problems of navigation to be overcome. It is assumed that there is complete darkness or, at best, very low visibility.

(a) Of primary use is the planting or anchoring of secret aids near or off the enemy shore. They are accurately located relative to the enemy beach, and then used as devices to 'home' on. They may be located by direct observations on shore objects selected from photos of the landing beaches, by the true azimuths from the near shore determined by radio direction finder bearings, or by very carefully run dead reckoning courses back to an anchored vessel or buoy off the near shore from which an accurate departure may be taken. They may be of use at almost any distance from the enemy shore to serve as a guide for a part of the distance. Where currents are strong and patrols and defenses will allow, one should be placed not over three miles off a particular beach.

(b) An oversize compass and log may be utilized for such runs as are to be made between aids or otherwise established positions. A course with an oversize compass can be steered, under favorable conditions, with approximately the same accuracy as a radio direction finder, i.e., one degree. However, in choppy waters, in a small craft, the accuracy will not exceed three degrees.

(c) The supersonic depth finder (par. 85) will be used where aids are not available, and bottom characteristics are such as to allow location of a vessel by soundings and logged distance. Long slender shoals or deeper areas, such as exist in the English Channel, are ideal for position finding. There are a number of applications:

(i) Approaching a shoal or deep and running to the end of it on a certain depth curve.

(ii) A logged distance or a 'taut wire' (par. 87) distance used with soundings.

(iii) Following certain depth curves around points or into bays or river mouths.

(iv) A sounding and a bearing to a shore object.

All of the above demand a careful study and use of reasonably accurate charts or hydrographic surveys. Most of the charts in the Southwest Pacific area, except for the Philippines, are 'sketchy'.

(d) Bearings on peaks, ravines, or other shore objects may be taken. Few nights are so dark that some objects cannot be made out when approaching a shore. This does not apply in fog, mist, snow, or rain.

(e) An oriented theodolite, in very clear weather, can obtain an azimuth to a plane releasing smoke at a distance up to 70 miles. The azimuth can be read to one minute or less, which is about 30 yards in 60 miles. As the plane releases the smoke, an aid to navigation is dropped. Distances can then be run to this aid by fast control boat, adjusted, and the correct distance obtained.

(f) The use of the radio direction finder precludes radio silence during the operation. If the key stations on the friendly shore are established several days in advance of the sortie and continuous broadcast of unessential character maintained, the exact nature of an operation will neither be given away nor forecast. It will not be possible for the enemy to do more than guess where and when the operation might take place. In this connection, it would be especially important that reconnaissance be carried out secretly or in such a way as to confuse the enemy. There should be no change in character of broadcast during the operation. It might, however, be necessary to move the transmitting stations due to enemy actions.

(g) Two navigation vessels may work together. One would proceed far enough ahead to reconnoiter by supersonic depth finder or other means and plant a buoy. The second vessel, guiding the formation, can then 'home' on this buoy. This requires good charts.

(h) Personnel can be placed ashore by rubber boat or parachute to show, at the selected time, a shielded light, or a beam radio transmitter, upon which the control vessel can 'home'.

Of the eight methods described above, the secretly planted

aids and the use of supersonic depth finder with good charts (employing one or two control vessels) offer the greater possibilities. Other methods require some visibility or breaking of radio silence or have other objectionable features.

(2) The following are additional refinements that will assist in the navigation of small craft:

(a) Reading a six or seven inch compass every 10 or 20 seconds, for 10 times at equal intervals, adding the readings and pointing off one place, will give the actual course being steered within 1/4 or 1/2 degree. This is known as averaging the compass headings. A new course can then be prescribed to compensate for the error. This accuracy could not be obtained in rough water. Deviation tables should be accurate to within 1/10 of a degree.

(b) A second control boat can proceed well ahead of the formation, anchor, and observe currents. As the navigation boat leading the mission approaches, the value of the current is given to her. Currents should be observed before departure from the Assembly Area.

(c) Experiments in smooth water with certain winds can be conducted and tabulated to define leeway allowance. Similarly, valuable information can be obtained as to the effects of choppy seas and heave of the sea.

(d) The navigation boat should not be required to change speed oftener than absolutely necessary, and must not turn about and leave the compass course.

(e) The loci of the vertices of an angle between two objects from a third point or object is an arc of the circumscribed circle around the triangle made by joining the three objects. Thus in Fig. 37 if two objects such as a peak on the near shore and a lighthouse between the near and far shores, both well to the flank of the course to the beach, can be seen, draw from the point of landing on the far shore the arc of the vertices of the angle A between the two objects. The portion of this arc near the far shore may be used as the final course, angles being taken at frequent intervals along the way so that this course is reached when 3 to 4 miles offshore at point X. From point X follow the arc to shore by keeping angle A constant. This will land you exactly at the chosen spot, and has been used successfully in practice problems.

72. **CONTROL POINTS OFF THE ENEMY SHORE.**--a. The marking of control points will generally be the responsibility of patrol or other boats proceeding some distance ahead of the boat formation. These

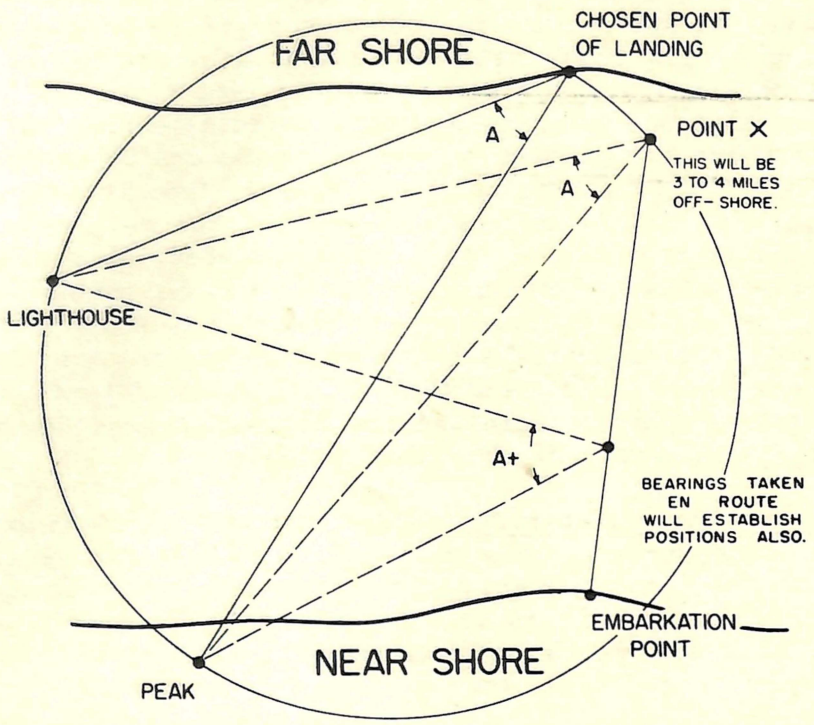

Fig. 37.--Navigation by Bearings and Angles on Distant Objects.

points may have been marked at dusk one or more evenings before the landing by small buoys. This is advisable if it can be done without losing the element of surprise. Secret submerged buoys will serve this purpose effectively.

b. There are several types of secret aids to navigation: (1) buoys, (2) invisible light beams which can be kept on a predetermined azimuth for guiding lead craft two to five miles therefrom, (3) 'homing' radio beams which must be planted on the enemy shore and upon which the lead craft 'homes'. The use of transmitters upon which to 'home' by use of radio direction finders from seaward towards the beaches is problematical. Nonetheless this possibility must always be considered in any operation. The actual planting of the transmitter necessarily has to be done by stealth, whether it is a buoy floating on the sea, or whether it is actually on the shore. In the case of the shore transmitter, it must be placed by amphibious scouts or raiders or paratroops. A homing device is much better than any guiding device which is astern of the boat (on the near shore, for example). However the difficulty of getting the devices in the desired locations and in positions where they will remain undisturbed is always to be considered.

c. Generally speaking, it is believed that the buoys will

serve the purpose best. These can be planted by plane, fast surface craft, or submarine, in such manner as to mislead the enemy. Low flying aircraft may be able to approach, cross and recross an enemy shoreline, reconnoitering at the same time, and drop a buoy a suitable distance offshore and on a certain bearing off the chosen beach. If there are dangers or shoals, buoys can be dropped to guide surface craft through the channels or away from the dangers. Fast surface craft, if the approaches are not too well patrolled, can perform the same mission. If aids are needed, at intervals, to a considerable distance offshore, this too can be accomplished. Surface craft would be required to accomplish a mission of this nature at dusk in order to have the hours of darkness to cover their return to the near shore. The weakness of the enemy defense and patrols and the hydrographic features at the approaches may, however, permit or dictate one or more of the other methods.

d. The Line of Departure (Fig. 36b) is the most important line or point to be marked. This will be marked by a single aid (usually a boat) on the line, probably a distance of one to three miles off the beach. Changes in course in the approach to the Line of Departure from the Rendezvous Area will require marking in some instances.

e. An Initial Point (Fig. 36b), well off the enemy shore (about 10 miles), should be established. This is a navigational aid to guide the boat formations to the Rendezvous Areas. The actual position will depend somewhat on the distance between the near and far shores; but it should be far enough from the far shore to allow the whole formation to rearrange time schedules if necessary. If the run from the Initial Point is great, the Rendezvous Area should also be marked. The Initial Point might also be called the Zero Point-- that is, it would also be used as a place in which to 'kill time', or take up the slack in the column. The time of departure from this point will be fixed (for anticipated conditions) so as to arrive on the enemy beach at the correct time.

f. The demands for control points will vary with the nature and locality of the operation. The Line of Departure and the Initial Point are of most importance. Submarines, showing a prearranged blinker signal offshore, have been used to 'home' upon at the Initial Point. A control vessel equipped with a supersonic depth finder and other secret aids and buoys can readily establish these points with proper accuracy if not hindered by heavy weather or enemy gunfire.

73. CONTROL.--The control problem of the commanding officer of a boat unit may be summed up as follows:

a. To get the boats in each of the smaller units to and away

from the Embarkation Points on time. This is scheduled in the Assembly Table.

b. To get the various boats into formation and away from the Assembly Area, each unit on time and with as little delay as possible. This is scheduled on the Track Chart and the Boat Movement Table.

c. To supply proper navigation by means of navigation boats from the Assembly Area to the Line of Departure off the far shore. Speed must be such that all landing craft can keep with the formation and arrive at the Rendezvous Area and the Line of Departure as scheduled. This is scheduled on the Track Chart and the Boat Movement Table.

d. To patrol the convoy in order to keep it in proper formation and to take care of craft dropping behind, broken down, or otherwise gone astray.

e. If control points, such as the Line of Departure, Rendezvous Area, and Initial Point have not previously been marked by secret aid, buoy, or anchored vessel, to dispatch a sufficient number of control vessels ahead of the formation to accomplish this in ample time for their required use.

f. To check the formation at the Rendezvous Area and slow down the different waves so that they will cross the Line of Departure as scheduled.

g. To check the successive waves across the Line of Departure and assist in their guidance to the beach. This is laid out and scheduled on the Track Chart, the Approach Chart if one is supplied, and the Landing Schedule.

PART II

NAVIGATION

Chapter 3

STANDARD NAVIGATIONAL EQUIPMENT

	Paragraph
Compass	74
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74. COMPASS.--a. The mariner's compass of the card type is illustrated and described in some detail in The American Practical Navigator, pages 28-33. There are many makes and types of magnetic compass, both dry card and liquid. The liquid type, in which the weight of the card and directing magnets is borne by the liquid, is the better and more widely used, as the oscillations due to the movement of the vessel are damped out almost completely, and steering a course by it is much easier.

b. The liquid compass (Fig. 38) consists of a skeleton card, usually of brass, resting on a pivot, and carrying on its under side two pairs of magnets. The card is often slightly dished upwards at the edges and graduated in degrees around the outer upturned edge. The magnets are placed symmetrically with the North-South axis of the card. The card is attached to a spheroidal float which carries at its center an adjustable jewel (sapphire) which rests on the gunmetal pivot. The card actually weighs about seven ounces in the air, but when supported by the liquid it weighs less than 1/6 ounce. The adjustment of the jewel accurately centers the card on the pivot.

c. The card is mounted in a brass bowl which carries an expansion chamber in the bottom (to take care of temperature effects on the liquid) and is closed liquid-tight by a glass cover.

d. The liquid in the compass is a solution of 9 parts pure alcohol and 11 parts distilled water. It freezes at a temperature of -10° F., so must be protected against temperatures lower than

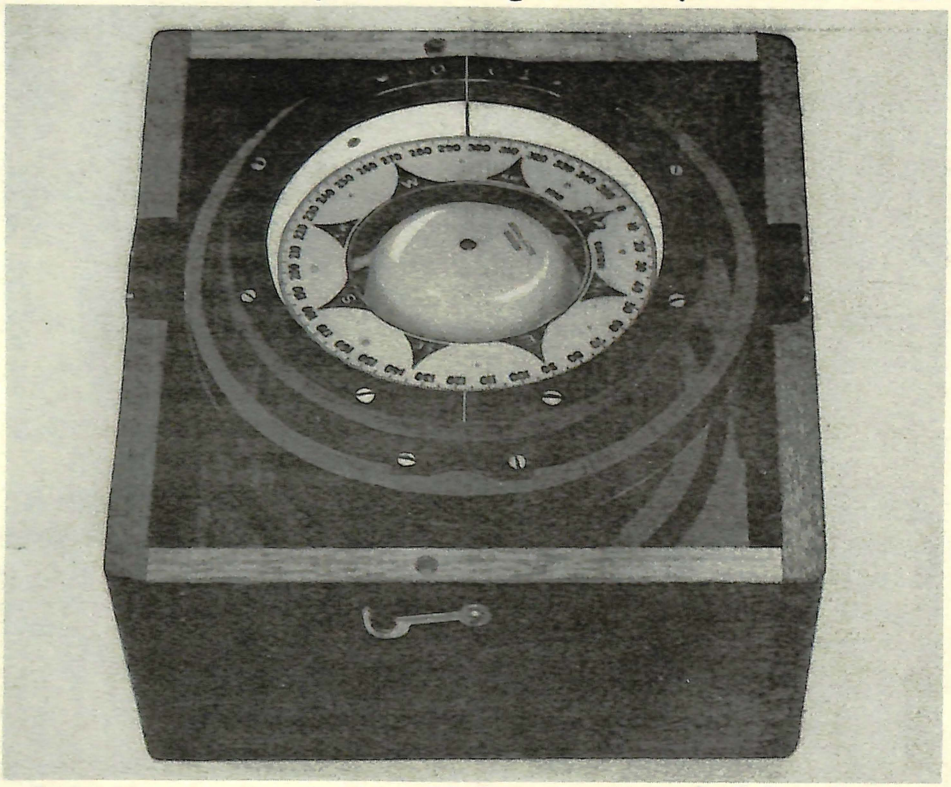


Fig. 38.--Mariner's Liquid Compass (Navy 7½" Box Type).

this. The bowl must be kept full at all times as even a small bubble will cause sluggishness due to a certain amount of friction to the card's turning. Additional liquid should be of the same proportions as the original to preserve the correct pressure on the pivot.

e. The compass should always be kept mounted in its gimbals, because the gimbal rings will absorb a considerable amount of shock. There should be no fore-and-aft or athwartship play at the knife edges, as a very small amount of play will cause a change in position relative to the compensating magnets and lead to a considerable error.

75. PIONEER COMPASS (Fig. 39).--A large number of 'PIONEER' compasses have appeared recently. This compass differs from the CARD type mainly in the fact that the indicating portion is in the form of a DRUM-- hence the name DRUM type. Further, the lubber's line is on the aft side of the compass (nearest the helmsman) instead of on the forward side (farthest from the helmsman, as in the CARD type).

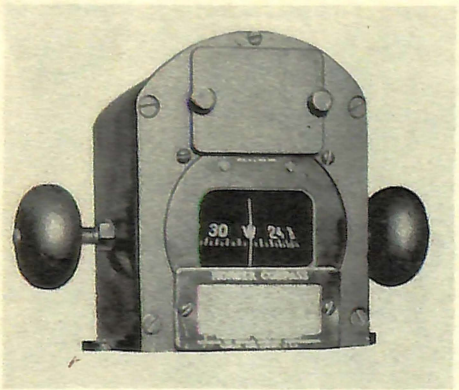


Fig. 39.--The Pioneer Compass (Drum Type).

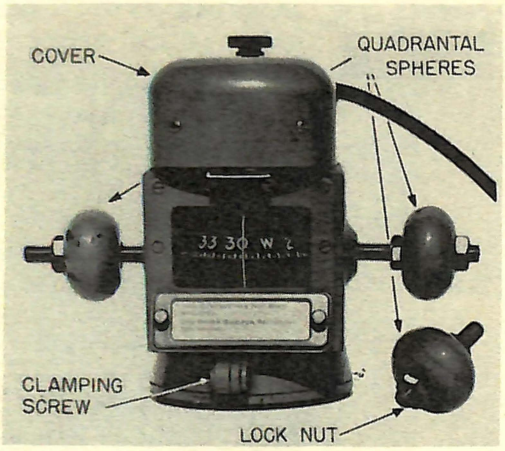


Fig. 40.--The Conn Compass (Drum Type).

The figures are highly luminous and easy to read at night without additional light. It may be a little awkward to use the DRUM type compass when used to the CARD type, but a little use will show its advantages. The motion of the card-- oscillation-- is better damped, and the figures are larger. The compass reads directly to only five degrees, but this is relatively unimportant when used in a small boat.

76. **CONN COMPASS** (Fig. 40).--This compass is similar in appearance to the PIONEER but somewhat smaller in size. The main differences are in the method supplied for compensation, and in the base of the compass which is adjustable for proper orientation fore and aft after the compass has been installed. There is a small clamping screw in the base for this purpose.

77. **MAGNESYN REMOTE INDICATING COMPASS** (Figs. 41a and b).--a. This is a special adaptation of the magnetic compass which permits the installation of the magnetic element in such a position on the craft as to reduce the effect of steel (either permanently installed or movable) to a minimum. The compass is in a water-tight case and may be mounted on a short mast, or in any desired position. The connection to the separate indicator is by means of a small inverter operating from a 12-volt battery.

b. The compensation of this compass is accomplished in a manner similar to the compensation of the standard magnetic compasses (see par. 80). It is adjusted so that the repeating indicators-- which are self-synchronizing-- read the correct magnetic directions. Repeaters-- two of which are included in this equipment-- are mounted (1) near the helmsman's stand and (2) near the navigator's table.

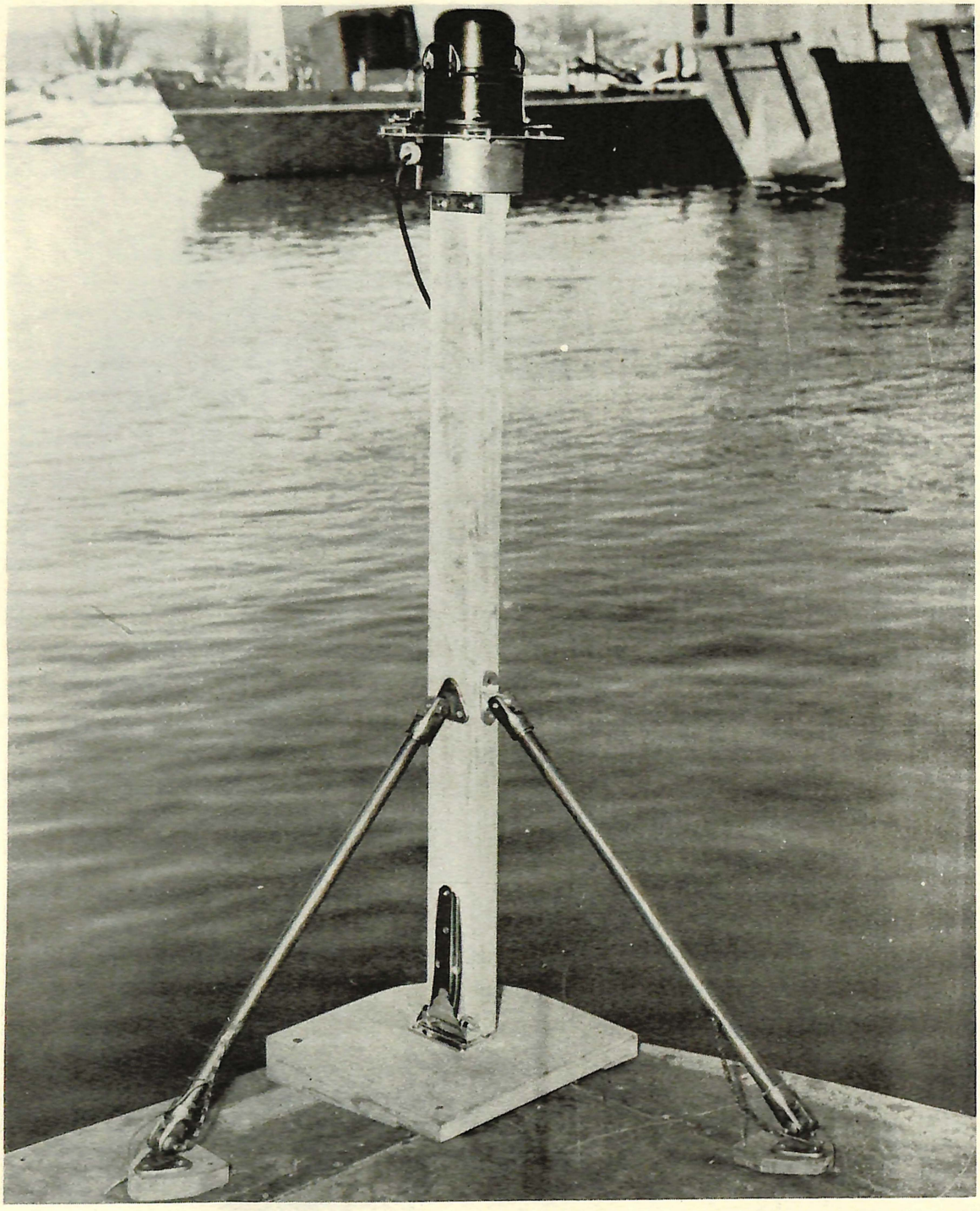


Fig. 41a.--Magnesyn Compass on LCVP in Operating Position.

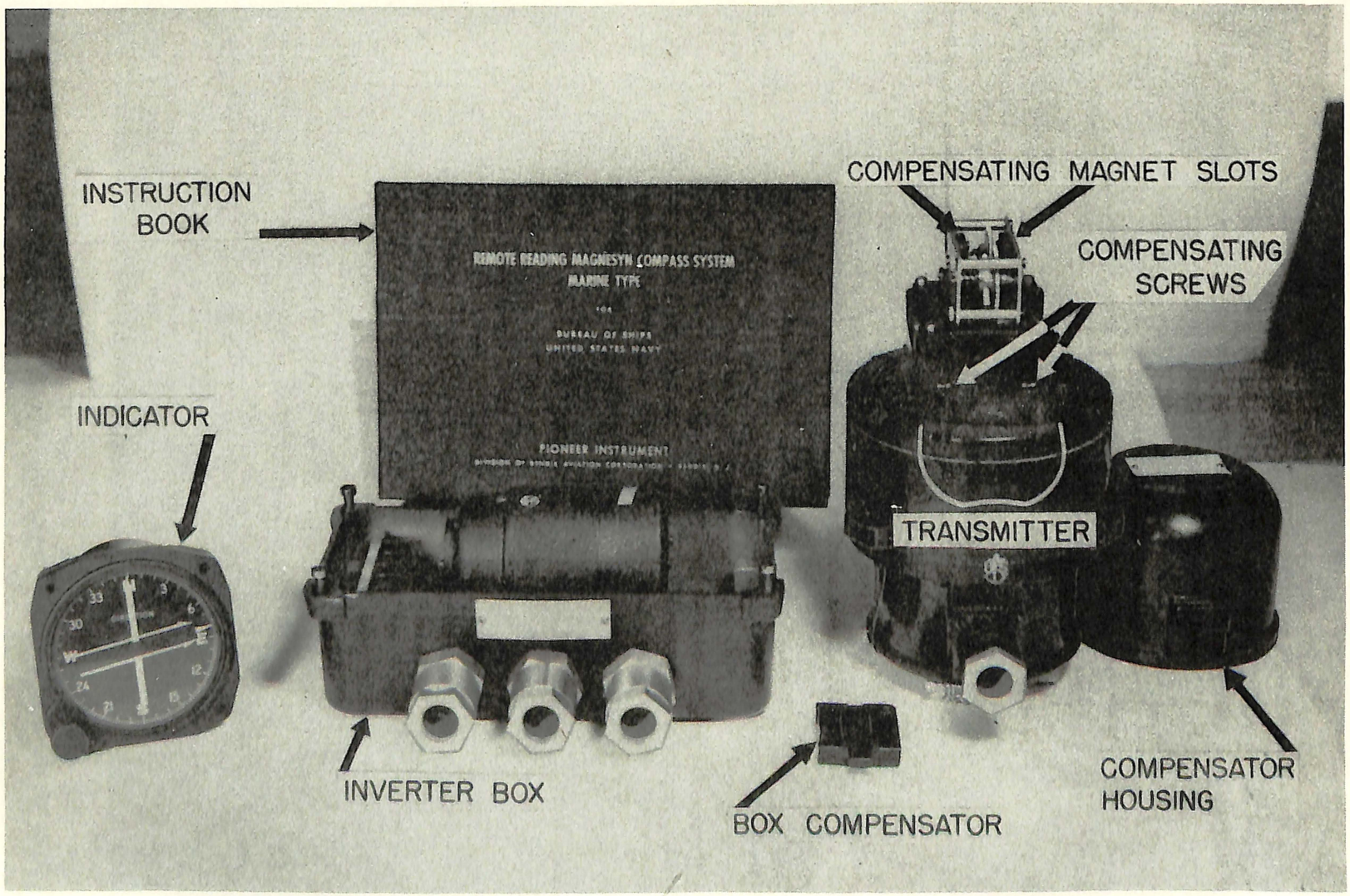


Fig. 41b.--Remote Reading Magnesyn Compass System (Marine Type).

They are about 3 inches in diameter and graduated from 0° to 360°. The dial is stationary, but is provided with a course indicator consisting of a pointer between 2 parallel wires about 3/8" apart. This is set at the desired course by means of a knurled screw. The correct course is steered when the compass needle (hand) is centered between the two wires, covering the pointer. The dial is engraved and the points and needle are treated with high-brilliant luminous paint for visibility without artificial light. The compass is in operating condition within a few minutes after starting.

c. Since this compass is electrically driven and therefore subject to certain casualties, such as power failure, it is always supplemented by a standard 6" or 7" magnetic compass. It is advisable to make frequent comparisons between the Magnesyn and standard compasses in order to keep a continuous check on the performance of the two units. Remember also that frequent checks on known bearings are necessary to know exactly the error of the compass. At least a swing on 8 points should be made shortly prior to an important run, in order to make certain of the exact value of any compass errors.

78. COMPASS ERROR AND COMPUTATIONS.--a. The compass error and computation are thoroughly discussed in The American Practical Navigator on pages 58-77. The compass error is the algebraic sum of the variation and the deviation. This discussion covers the Navy Standard Compass, but the principles involved are equally well adapted to any type of compass. A brief resume of these pages is given here.

b. Variation (Fig. 42) is the angle between the plane of the true meridian and a vertical plane passing through a freely suspended magnetic needle influenced solely by the earth's magnetism. This angle varies from place to place on the earth due to the fact that the magnetic poles do not coincide with the geographic poles. The North Magnetic Pole is in approximate position: 71° N, 96° W; while the South Magnetic Pole is in approximate position: 73° S, 156° E. (There are also minor periodic movements of the needle known as diurnal, monthly, and annual variations, which, being very small, do not actually interest the mariner). The variation is always constant for all headings of the ship.

c. Deviation (Fig. 42) is the error caused by the effect of the magnetic material within the ship itself. This differs in amount for each heading of the ship.

d. Symbols commonly used in naming directions are:

T or (t) referring to angles measured from the earth's geographic meridian called true north.

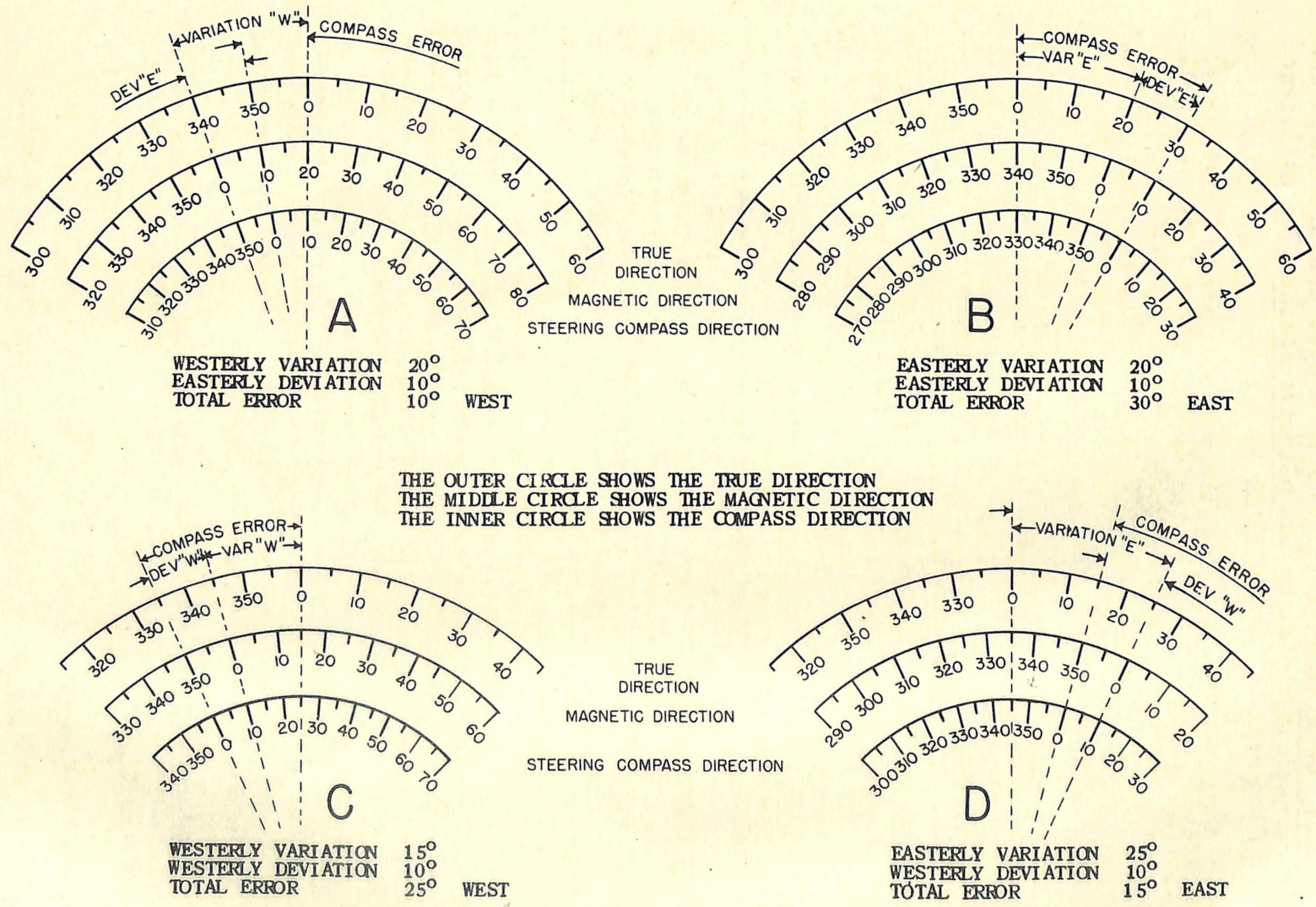


Fig. 42.--Sketches Showing Variation, Deviation, and Total Compass Error.

Mag. or M. when referring to angles measured from the earth's magnetic meridian called magnetic north. The difference between T. and Mag. is the variation.

P.S.C. (Per Standard Compass) when referring to angles measured from the north point of the compass card. The difference between Mag. and P.S.C. is the deviation. The difference between T. and P.S.C. is the compass error which is the algebraic sum of the variation and the deviation.

e. Variation and Deviation are called easterly and marked plus (+), or westerly and marked minus (-), according to whether the magnetic effect is such as to draw the compass needle to the right (east) or left (west) of the true meridian.

f. The value of the variation is shown on all navigational charts, and that value which is nearest to the area under consideration must be used if more than one is shown.

g. The value of the deviation must be determined for each compass on each boat independently. There are four general methods for ascertaining the deviations from swinging ship:

(1) Ranges
(2) Distant object
(3) Reciprocal bearings
(4) Bearings on the sun

For the purposes of this manual only the first two, namely, ranges and distant object will be considered and discussed briefly.

(1) Ranges (Fig. 43). In most localities there are either natural or artificial range marks some distance apart, which are clearly distinguishable and which, when on line, lie on a known magnetic bearing. By 'steaming' about on different headings and noting the compass bearing of the range each time it is crossed,

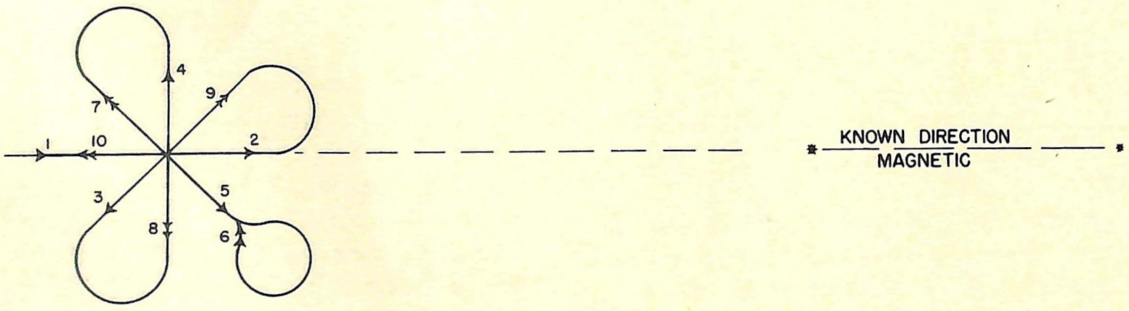


Fig. 43.--Running a Range to Obtain Deviation Table (8 Headings).

a series of deviations may be obtained, the deviation on each heading being equal to the difference between the compass and the magnetic bearing.

(2) Distant Object (Fig. 44).--A conspicuous object is selected which must be at a considerable distance (at least five miles) from the ship and upon which there is some clearly defined point on which to take bearings. The direction of this object by compass is observed on successive headings. Its true or magnetic heading, having been previously determined by actual measurement, is then compared to the compass bearings, whence the deviation is obtained. (The true or magnetic bearing may be taken from the chart or determined by observations ashore. Or, for approximations, the mean of all the headings is very close to the magnetic bearing of the object). The reason for selecting a far-distant object is so that the parallax caused in swinging the ship when underway will be very small (an angle whose tangent-- half the swinging diameter divided by the distance to the object-- does not exceed 30°).

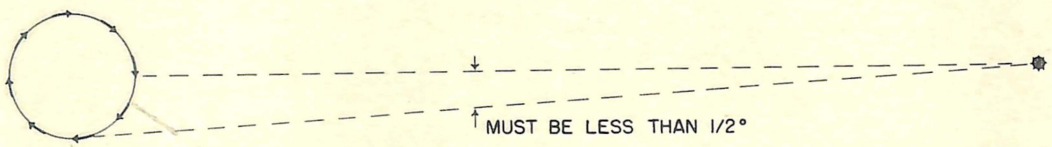


Fig. 44.--Swinging Ship to Obtain Deviation Table by Sighting on a Distant Object.

79. DEVIATION TABLE.--a. In the methods described, it will be found convenient to arrange the results in a table. In one column record the ship's heading by the Standard Compass (PSC); and across from this in successive columns the compass bearing of the object, the magnetic bearing of the object, and the difference between the last two, having due regard to the sign (plus or minus). When these results have been worked up, another table is usually made up showing only the ship's headings and the corresponding deviations. This is the deviation table for that compass.

b. It is preferable to make a deviation table to correspond to headings on each 15° interval of the compass. Often it is not possible to get the proper bearings on the exact headings wanted, differing by one or two degrees, so that, instead of finding the deviation for 30°, for example, we obtain it on a ship's heading of 33°. In all cases it will be found a great advantage to plot up the values for the different headings as ordinates and the deviations as abscissa on cross-section paper, and then draw a smooth curve through these points-- or as many as possible. The graph will show any 'wild' observations, and, if carefully drawn, will give the best probable deviation for a particular heading, taking all the nearby deviations into consideration.

c. When the deviation table has been made up, it must be determined whether compensation for these errors is advisable or not. If the deviations are small-- that is, do not exceed four or five degrees on any heading-- it might be well to leave the compass alone, as compensating in a small boat is difficult and straight-line interpolations are sufficiently accurate in this case. Where the deviations are in excess of the above maximums, it is well to compensate the compass to reduce the errors to less than five degrees.

80. **COMPASS COMPENSATION.**--a. In the installation of the magnetic compass, remember that any steel near it will affect its pointings and all movable steel must be kept as far away as possible. Permanent fixtures can be compensated for, but not such things as engine starting cranks hung (or thrown) in a locker near the compass, the possibility of steel parts in the steering wheel, large pocket knives, and even belt buckles.

b. Whenever it is necessary to compensate the compass, the swing for deviations must be made with all compensating magnets and other correctors removed from the compass and placed at a sufficiently great distance to have no effect. When the deviations have thus been determined, the compensation can be proceeded with.

c. Navy Type Compass. (1) Since most of these compasses are in non-compensating boxes or binnacles, the reduction of errors is difficult. The compensation can be done only with small permanent magnets secured in such positions as to reduce the errors as much as possible. This is usually done by fastening permanent magnets (magnet cases with their positioned magnets) to the compass stand by brass screws in a plane as near as possible the same height as the compass card. Usually, however, this will be two to three inches below the card. This will cause some additional error when rolling badly, though the heading will be correct when on an even keel. Before fastening the magnets, position them on the compass stand as follows (see Fig. 45):

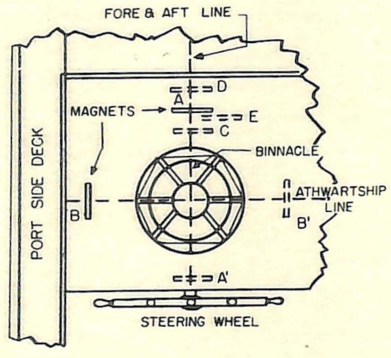


Fig. 45.--Compensation of Navy Type Compass.

1st.--Have all loose steel or other magnetic material in its permanent place and secured.

2nd.--Steady boat on compass north. Move a permanent magnet (A or A') towards or away from the compass (position C or D) on a fore-and-aft line passing through the center of the compass (not in

position E) until it reads magnetic north. If the deviation is easterly, place the north end of the magnet to starboard; or if the deviation is westerly, place the north end to port. Head on compass south, and move this magnet until the error has been reduced by half. Repeat on heading north, and make further adjustment of magnet position if necessary.

3rd.--Steady the boat on compass east. Move a permanent magnet (Magnet B or B') towards or away from the compass on an athwartship line passing through the center of the compass until it reads magnetic north. If the deviation is easterly, place the north end of the magnet forward; or if the deviation is westerly, place the north end of the magnet aft. Head on compass west, and move the magnet until the error has been reduced by half. Repeat the heading on east, and make further adjustment of magnet position if necessary. A second swing of the ship will determine the efficiency of the compensation. If the deviations have been reduced to a satisfactory minimum, a Deviation Table should be prepared for use when under way.

(2) It is possible to achieve a more satisfactory compensation if a magnet is used on each side of the compass and the positions adjusted so that they are about equally distant from it. In this case the placement of the magnets will be:

(a) When heading compass north, and with easterly deviation: Magnets forward and aft of the compass have their north ends to starboard.

(b) When heading compass north, and with westerly deviation: Magnets forward and aft of the compass have their north ends to port.

(c) When heading compass east, and with easterly deviation: Magnets to starboard and port of the compass have their north ends forward.

(d) When heading compass east, and with westerly deviation: Magnets to starboard and port of the compass have their north ends aft.

(3) It is well to hold the magnets in place by Scotch tape until compensation is completed, then secure the magnets by screws so that they cannot be moved about.

d. The Pioneer Compass. This compass is equipped with two compensators (Fig. 46): a drawer type for large deviations (over 15°), and a universal screw type for small deviations and close adjustments. Before swinging ship with this compass, first remove all magnets from the small drawer above the compass drum. Remove

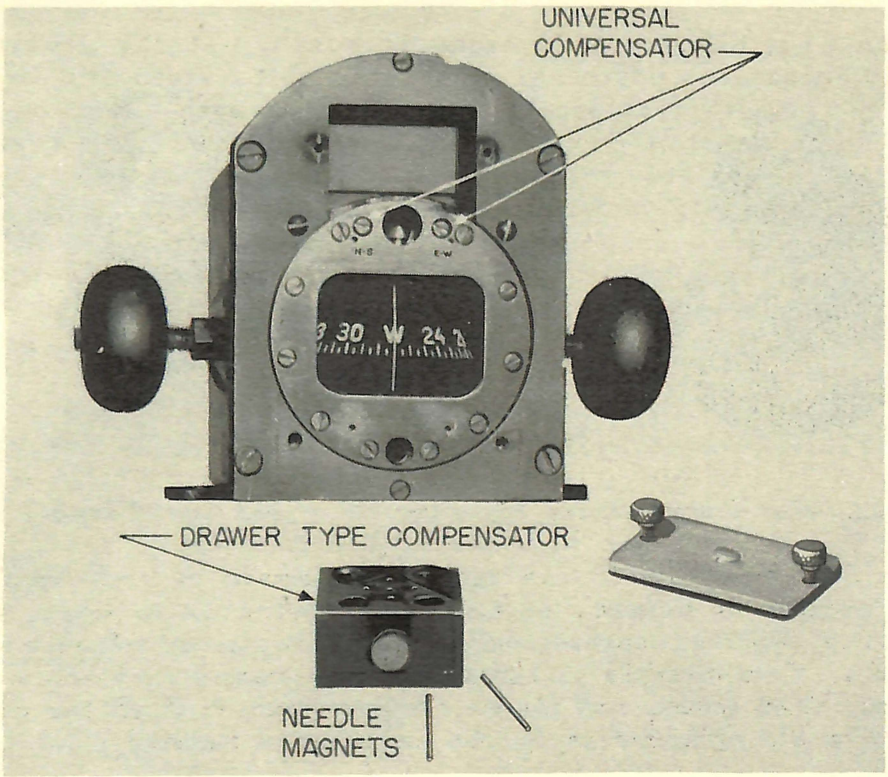


Fig. 46.--Compensating Adjustments on the Pioneer Compass.

the ring in front of the dial, and set the compensator screws so that the two white spots are down (towards the corresponding spot on the case below the screw). Determine the deviations as for the Navy compass, by a regular ship swing. Then, head the boat compass north and place a sufficient number of needle magnets in the 'NS' side of the drawer to reduce the deviation to approximately zero. Then, turn the 'NS' screw on the universal compensator until the compass reads magnetic north. Next head east, and place enough magnets in the 'EW' side of the drawer to make it read approximately magnetic east. Turn the 'EW' screw on the universal compensator until the reading is east. Head south. If there is still an error, remove half of it by adjusting the 'NS' compensator screw. Head west and remove half the error by adjusting the 'EW' compensator screw. Repeat the ship swing, and make any small adjustments by reducing the error by half in each case. A deviation table should be made up of any unadjusted errors.

e. The Conn Compass (Fig. 47). To prepare for compensation, remove the cover from the compass, remove all needle magnets from the two cylindrical holders and any beneath it. Move the two quadrantal spheres as far out as possible. Replace magnet holders and cover. Swing ship for a preliminary trial on about 8 headings.

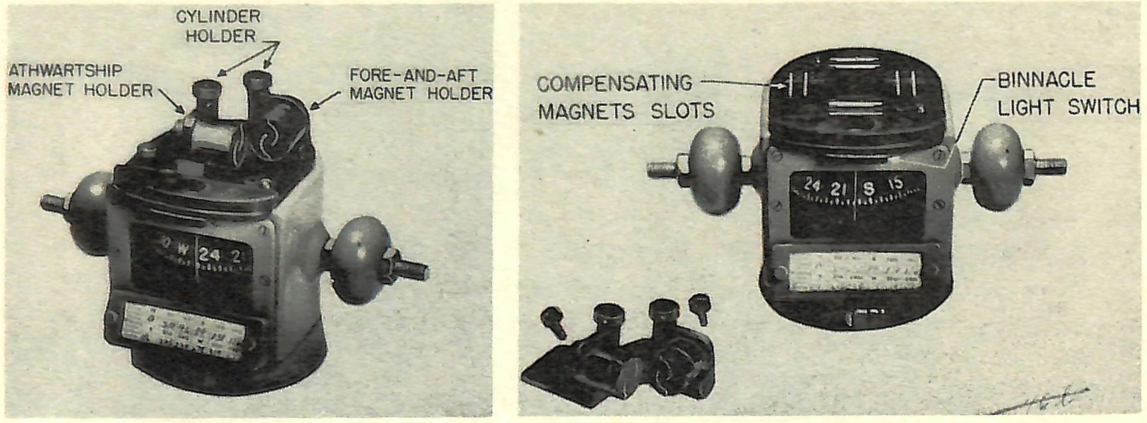


Fig. 47.--Compensating Adjustments on the Conn Compass.

Then head north, and reduce the error to zero by placing needle magnet or magnets in the outermost hole or holes of the athwartship holder, magnets pointing as explained elsewhere (see par. 80c). Considerable adjustment can be made by rotation of the cylinder. Head south, and remove the remaining half of the error by rotation of the cylinder or by the addition of magnets.

Repeat this process on east, inserting magnets in the fore-and-aft holder. Head west and reduce error by half as above. Final adjustments can be made by rotation of the cylinders. If there is an error larger than 15°, it may be necessary to place some magnets in the slots under the cylinder holder. They should be placed symmetrically if possible, that is, one in the corresponding slot on either side of center, either in the fore-and-aft positions, or in the athwartship positions. Be sure that the cylinders are tight against the holder to prevent shifting of the magnets. These magnets are very strong: try one at a time in the cylinders, or two at a time in the slots. Check results by a second ship swing. Final adjustment to the intercardinal headings can be made by moving the quadrantal spheres inwards, then locking with the lock-nut.

f. Compass Comparison. (1) It is possible that there may be no suitable ranges or distant objects on which to swing ship; also, it may be necessary to swing a number of boats in a very short time in a limited area. In these cases it is possible to determine the errors of one compass by direct comparison with another of known accuracy. This is practicable only in relatively quiet water. For the master compass it is preferable to use one of the remote indicating types (par. 77), where the transmitting unit may be installed at some distance from the metal parts of the boat, yet have the indicator near the helmsman for the comparisons.

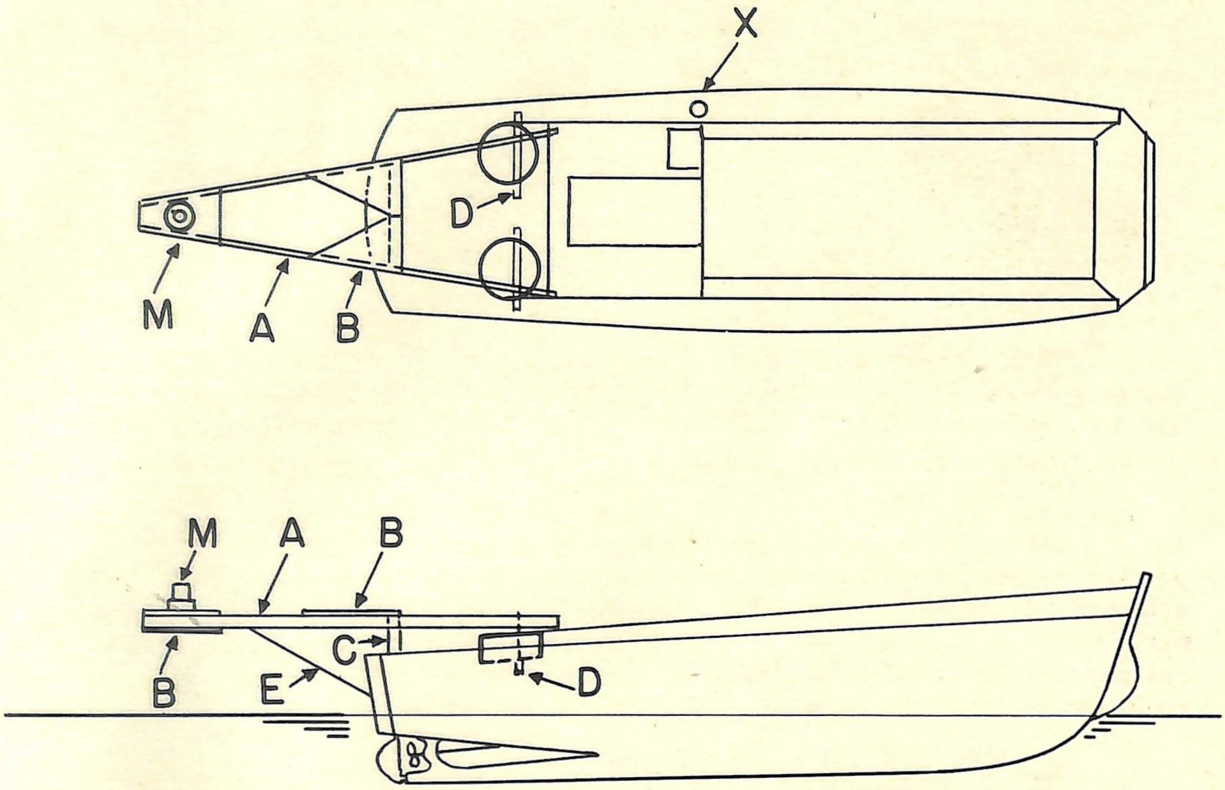


FIG. 48.--SUGGESTED ARRANGEMENT OF 'A' FRAME PLATFORM FOR 'MAGNESYN' COMPASS WHEN USED TO DETERMINE DEVIATION OF STEERING COMPASS IN A LANDING CRAFT WHEN RANGES ARE NOT AVAILABLE.

A- Main frame pieces 2" x 8" x 18';
B- Gusset plates of 3/4" plywood;
C- 2" x 6" cross-piece to keep frame as nearly horizontal as possible;
M- Magnesyn Compass Transmitter;
D- Short pieces of 2" x 4" to lash frame through machine-gun mounts;
E- 21-thread manila line to lash frame down to stern of boat;
X- Magnesyn Compass Repeater Indicator.

Note: All fastenings of the frame must be brass, preferably screws or bolts, so as to reduce local disturbance to the Magnesyn Compass Transmitter to a minimum.

The transmitter must be mounted as far aft as possible.

(2) Where a number of boats of similar types are to be swung, a frame (Fig. 48) may be made to carry the master compass-- preferably a 'Magnesyn' compass-- as far astern as possible. This 'A' frame is made up from 2''x 6''x 18' lumber, braced with pieces of 3/4" plywood, the fastenings being brass screws. The frame should be made as nearly symmetrical as possible, so that its installation in a fore-and-aft line will be easy. The ends of the frame may be secured to the boat by lashing with small line. The adjustable blocks under the frame near the stern of the boat are to keep the frame as horizontal as possible-- or, at least, parallel to the deck of the boat. The frame should overhang about 10 feet; it

supports little weight other than its own, as the compass weighs but a few pounds. Anchors and other gear should be in their permanent places on the stern of the boat.

(3) The swing is accomplished by running in circles at reduced speed, steadying briefly on each heading as it is reached, and then reading both compasses-- the steering compass and the indicator (master). The differences will constitute the deviation table. If compensation is necessary, this may be done during the progress of a second swing.

81. THE TAFFRAIL LOG (Fig. 49).--a. This is an instrument which measures the distance traveled through the water. The log, in general, consists of the following parts: (1) a COUNTER mechanism which translates the rotations of a (2) ROTOR into distance by means of a (3) LOG LINE.

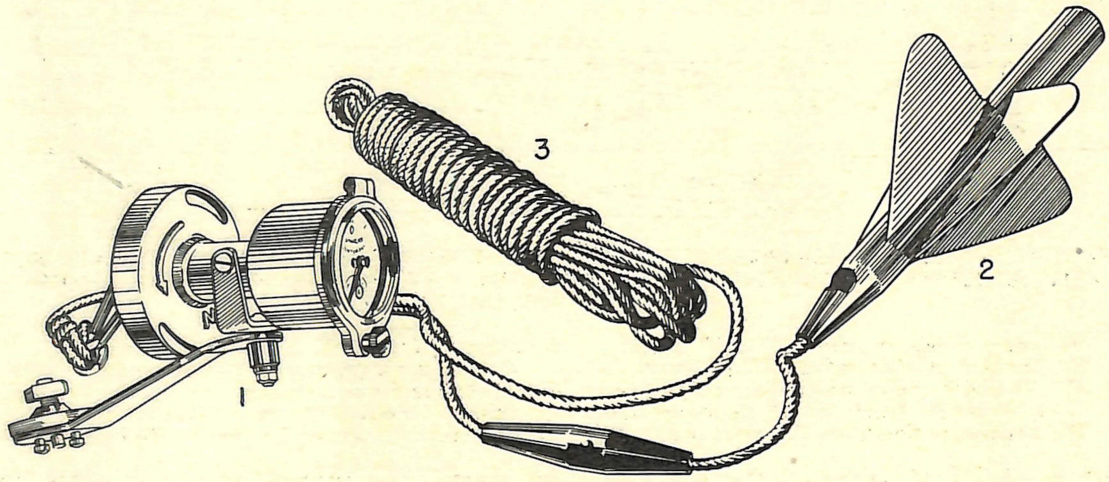


Fig. 49.--The Taffrail Log.

b. The Counter Mechanism takes several forms-- but all consist, in the main, of a gear train which converts the rotation of the rotor into the distance through which it has been pulled. The dial often appears as a clock, but divided into 100 spaces (100 nautical miles). There is a smaller dial which indicates fractions of a mile-- usually tenths, smaller fractions being estimated. Another form consists of three small dials in line, with the first indicating fractions of nautical miles, the second number of miles (10 per circumference), and a third the total number of miles (100). Some have special devices which permit the use of repeaters. This is accomplished by electrical means, though contactor systems and repeaters may be installed wherever wanted. This type can be read directly at the dial or at the repeater.

c. The Log Line is usually a cotton line similar to sash cord--very hard laid and about 3/8" diameter. The log line when not in use should be carefully coiled in such a manner that it will run out freely without tangling. If stored for any length of time, it should be thoroughly washed with fresh water to remove all the salt. To prevent tangling when taking in the line, the following plan is advised: pull in a few feet of the line, then unhook from the 'clock', tossing the hook end into the water. Haul in the rest of the line, letting the hook trail out as the line is hauled in, thus reversing the line. This will take all the twist out of the line. When the rotor is aboard, then begin hauling in the line, making a neat coil on the deck, coiling counterclockwise, and in such a way that it will pay out readily when wanted (by turning the coil upside down).

d. The Rotor is really a propeller of small diameter (about four to five inches) and large pitch (six to ten feet). The 'hub' of the rotor is tubular (hollow) and slightly tapered towards the forward end. The log line is passed through the hole, and knotted (figure '8' knot) so as to prevent turning in the tube. The blades (fins), usually four in number, are of sheet bronze carefully shaped and fitted to the tube. Since the performance of the log depends greatly on the rotor's action in the water, it must be handled carefully to prevent damage. It should be examined occasionally for dents or deformed fins caused by carelessness in handling or by striking some object in the water. The rotor should be kept in its box when not in use.

e. Rating the Log. (1) The log must be rated to determine how closely it indicates the actual distance over the ground. The tests should be repeated as often as it is suspected that there has been any change. The first essential is the correct length of line-- which should be long enough to clear the backwash from the propellers, but not so long as to cause excessive drag through the water. Usually, for small boats, a length equal to twice the boat's length is satisfactory, but in any case follow the recommendation of the manufacturer carefully in this respect.

(2) The determination of the log factor-- the percentage of the reading to indicate true distance-- may be done in many ways. It is wise to make the tests at several speeds of the boat, say, at about half speed, ordinary cruising speed, and at full speed. If there is any difference in the log factor (f) at the various speeds, a graph may be plotted which will show the value of (f) for any intermediate speed with considerable accuracy. Any sudden departures from a nearly straight line should be investigated and the corresponding tests repeated. For the small boat it is more satisfactory to relate the tests to the engine revolutions, as these

can and should be fairly constantly related to speeds; thus, the above tests might be run at 1,000, 1,800, and 2,100 engine r.p.m.'s.

The course selected should be marked by two navigation buoys, the distance between which may be accurately scaled or computed. It is not necessary to have quiet water to make log tests. There may be a very considerable current during the runs since a single test consists of a double run over the course at the fixed speed, one in each direction, which eliminates the effects of currents. It is preferable to have the current running nearly along the course over which the tests are to be made, as this will require less 'weaving' on the course.

A good stop watch is the best means for determining the time of the run. A book in which the data may be recorded should be at hand.

Have the vessel on the correct course and running at the proper speed at least 1/10 mile before approaching the first buoy. The log is read and the watch started at the instant of passing the buoy; the log is read and the watch stopped at the instant of passing the second buoy. A large radius turn is made so as to come on the reverse course at a distance of about 200 yards from the buoy, and the run is at once made in the opposite direction, observing the same set of data. This same procedure is followed for the several speeds desired.

For a close approximation, the average of the mean speeds for the two runs of a set will give the speed over the ground for that particular engine r.p.m. The Log Factor is then determined by dividing the mean of the log runs by the true distance.

For an accurate determination of the Log Factor, the solution of the following pair of simultaneous equations is necessary:

$$(f)\ L_1 + C_1 t_1 = d_1 \text{ (current same direction as vessel)}$$

$$(f)\ L_2 - C_2 t_2 = d_2 \text{ (current opposite direction to vessel)}$$

where (f) is the Log Factor, L_1 the log reading of the first run, C_1 the current velocity in nautical miles per minute, t_1 the time in minutes and decimals, d_1 the true distance in nautical miles. The values with subscript (2) are the same data for the second run of the set. Ordinarily C_1 and C_2 are considered as equal; and d_1 and d_2 are equal. The solution of the equations is usually first completed for the value of (f), but the value of C should be determined to check the solution. The (f) of a new log will be very nearly unity, probably within 1% or 2% at most (as .985 = 98.55; or,

1.013 = 101.3%). The first indicates the log reads too much; the second, that the log reads too little. The log factor should be approximately the same for all speeds. Speed through the water will not necessarily be proportional to the r.p.m.'s, but should be so related as to form a smooth curve. The drawing of the curve will serve as a check on the quality of the observed data.

If it is suspected that the (f) has changed (due to damage of the rotor), a new series of tests should be run. If there are great inconsistencies in the results from a first series of tests, it is well to look to the length of the log line; it may be either too short, when the disturbed water of the propeller stream will cause over-reading, or too long, where the added friction of the log line will cause under-reading. It is not difficult to determine where the disturbed water merges with the more or less quiet water of the sea.

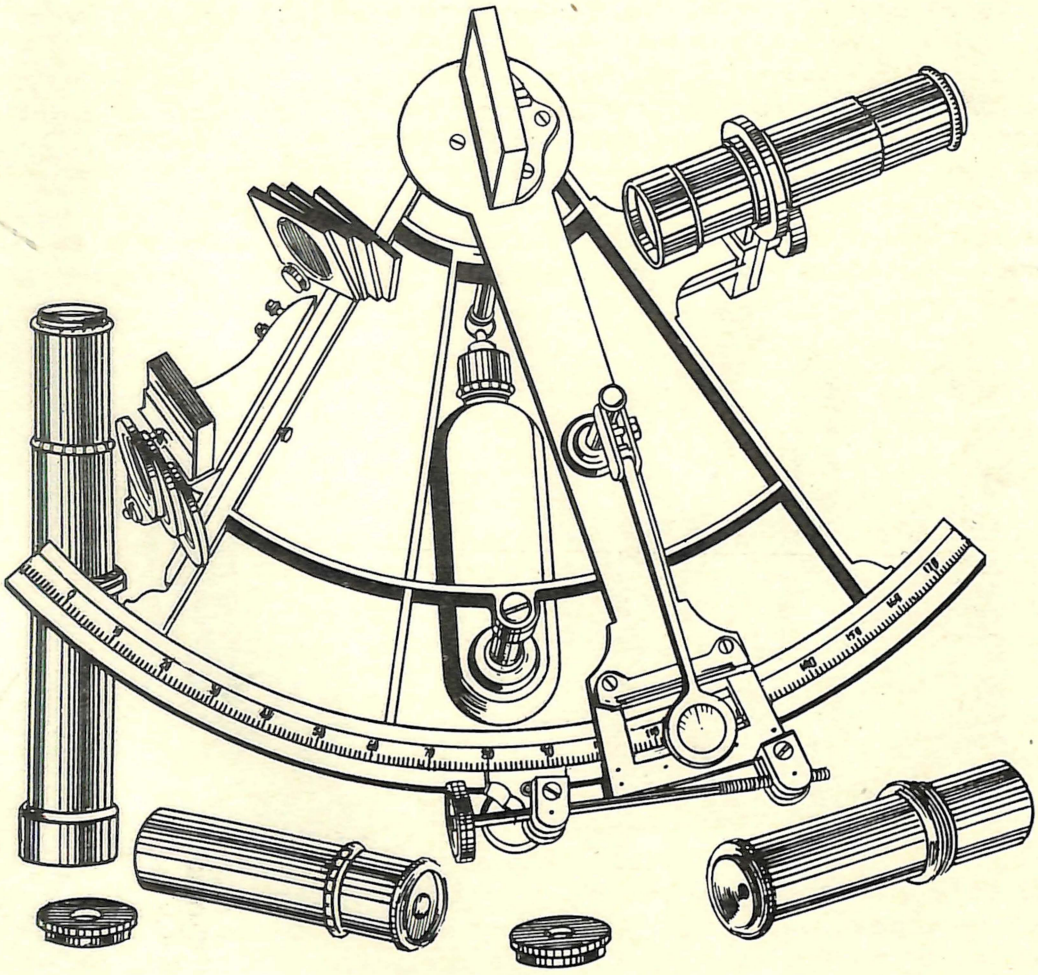


Fig. 50.--The Sextant.

82. THE SEXTANT (Fig. 50).--This is an instrument used to measure the horizontal angle between two shore objects (or objects on the water) whose positions are accurately known, the vertical angle between the horizon and a celestial object, or the vertical angle corresponding to the height of an object ashore, as a lighthouse. At sea its especial use is to observe altitudes and thus obtain latitude and longitude. For coastwise navigation (piloting) the instrument is almost indispensible, as, by the use of it, three point fixes may be obtained, and danger angles (par. 97) may be set off and followed. A thorough discussion of the use of the sextant is given in The American Practical Navigator, pages 82, 88, 125, 246, and in the pages covering the general discussion of this instrument, its description, adjustment, and use, pages 120-127, incl. Even though this instrument is necessarily rugged, it is subject to bumps and jars which will throw it out of adjustment; therefore, when it is not in use, it should be kept in its own box to prevent damage as much as possible. As the discussions above referred to amply cover the care of the sextant, they are not repeated here.

83. THE CURRENT POLE.--This is a device to measure the velocity of an ocean or tidal current where more elaborate instruments are not available, as well as to check the data from such instruments.

84. THE PELORUS (Fig. 51).--a. This is an instrument used to measure directions to some distant point, as from a ship to an object on the shore. It will give the bearing relative to the

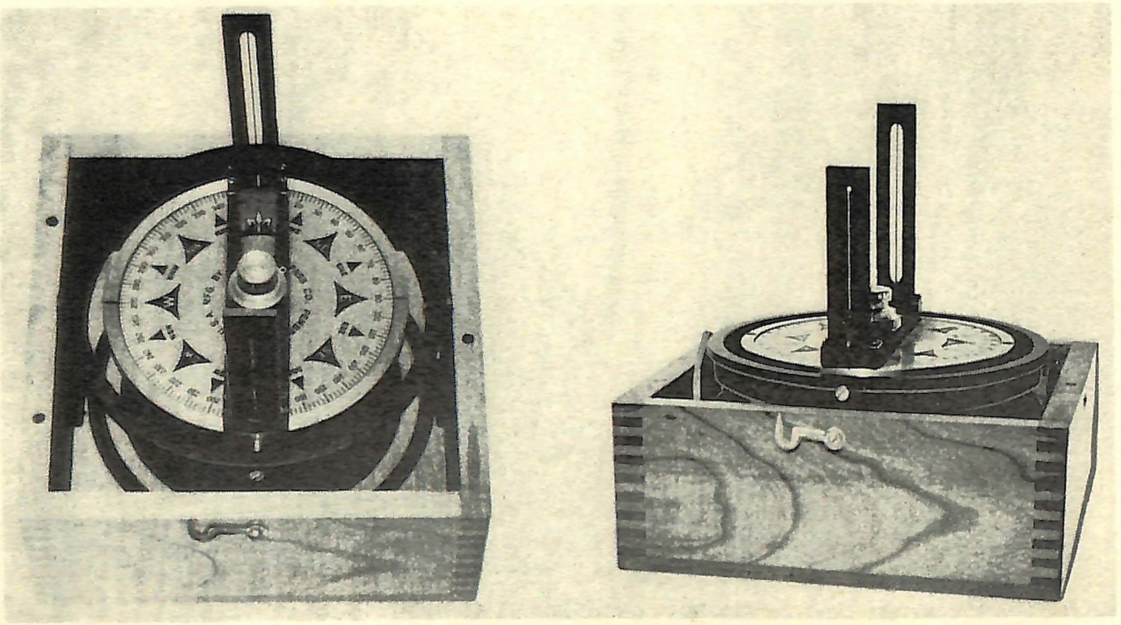


Fig. 51.--The Pelorus or Bearing Finder.

ship's heading, or, by setting the circle to the ship's true course it will give the true bearing to the object. It consists essentially of a graduated circle in a frame mounted in gimbals, with a sighting vane (alidade) pivoted over its center. A full description of this instrument is given in The American Practical Navigator, pages 36-37.

b. The pelorus must be set correctly, so that its lubber's line is parallel to the fore-and-aft line of the ship. Ordinarily, the graduated circle is set so that the 360° mark is forward and the 180° mark aft, on the lubber's lines. With this setting, all bearings are relative. It is most useful when swinging ship for compass error when oriented in this way. When sighting on objects of considerable elevation, keep the pelorus level, or as nearly so as possible. The pelorus is usually sufficiently weighted to hang level in its gimbals, but there is a tendency to try to tip the circle upwards toward the object sighted. At least the axis normal to the line of sight should be kept as nearly level as possible to avoid the large errors caused by non-perpendicularity of the sight vanes. When there are two or more pelori mounted on one vessel, their orientation should be checked to see that they agree amongst themselves. This can be done by sighting all instruments on the same distant object at the same time. They should all read alike, or should be adjusted to do so.

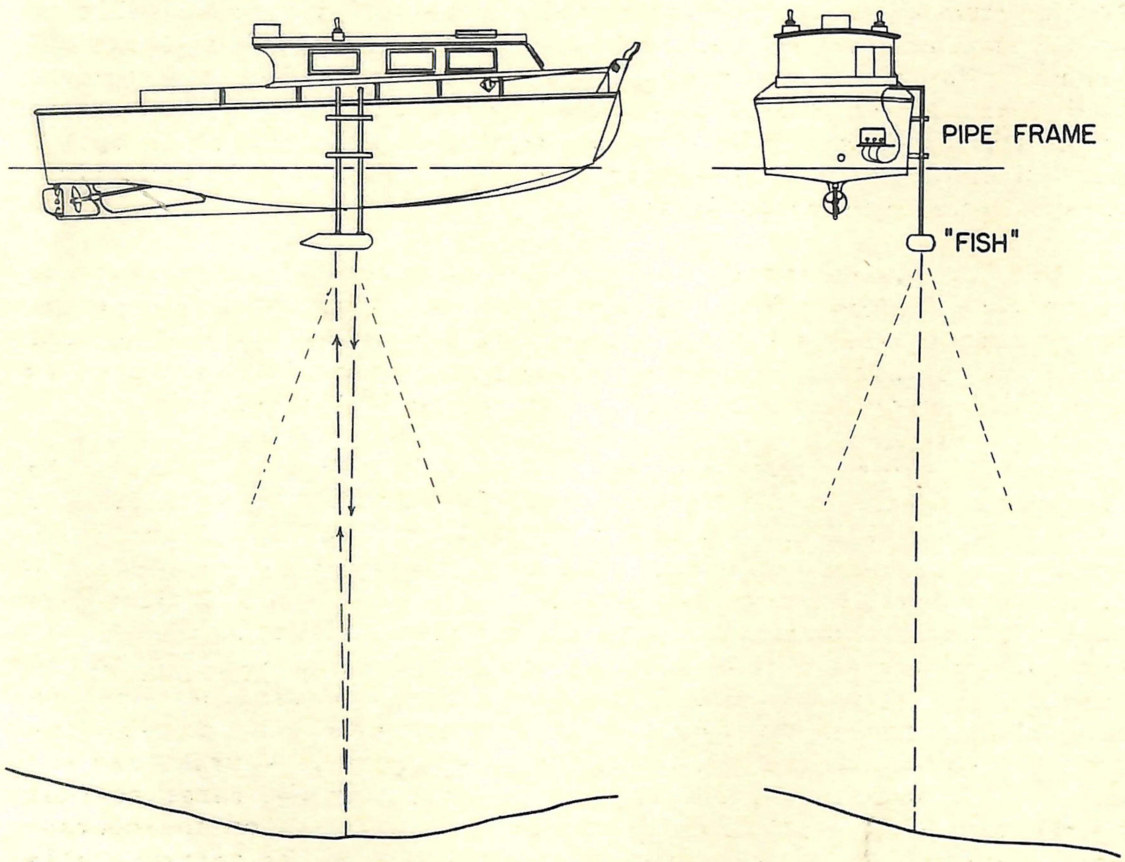
c. The plates should be kept clean and very slightly oiled so as to turn freely. This applies to the sighting alidade as well. The vertical wire in the 'objective' of the alidade should be kept tight and straight. Where a telescopic alidade is available, as good care should be taken of it as of any optical instrument.

d. One of the many uses of the pelorus is in determining the deviations of the boat's magnetic compass (par. 78). The compass is often installed in such a position that it is of little value in observing bearings. Hence, an auxiliary means is needed. The pelorus is usually mounted in such a manner that it has a clear view over the entire horizon, and so that the zero is in coincidence with the forward lubber's line, thus giving all readings relative to the keel of the ship. In observing bearings for deviation, one man sights directly on the range, and a second stands by to read the compass heading on the compass at the proper time. Courses are set at 15° intervals at a great enough distance from the range so that by the time the vessel crosses it, it will be steady on the course. At the instant of crossing the range, the man at the pelorus calls 'Mark', at which time he has his pelorus sights on the range, and the man at the compass reads the exact heading of the boat at that time. The sum of these two readings will be the compass bearing of the range on each heading of the boat. The difference between the

compass bearing and the magnetic bearing is the deviation on that heading. A similar proceeding is followed when sighting on a distant object, but care must be taken not to swing in too large a circle, as this will cause parallax errors in the pelorus bearings (see par. 78).

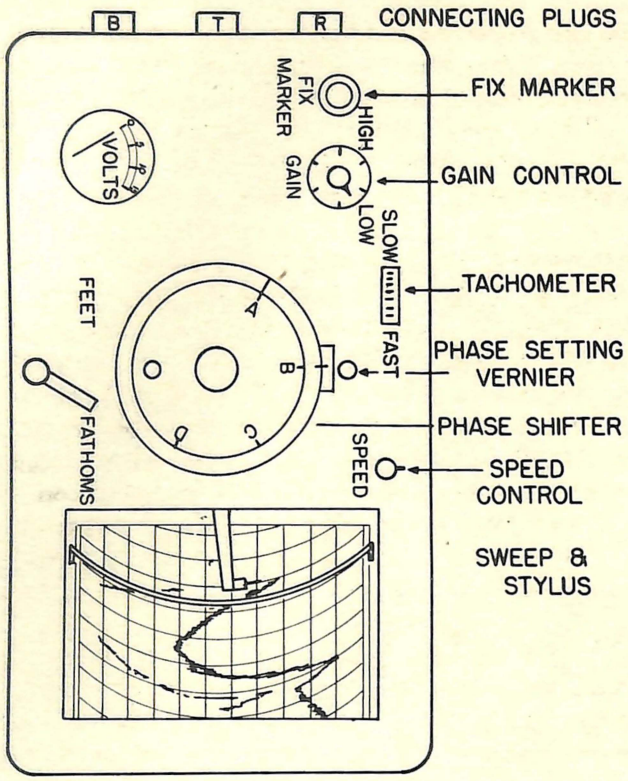
e. Bearings on other objects are observed in the same manner when fixing a boat's position. In this case it is necessary to correct the compass bearing to TRUE so as to plot it on the chart. This is easily done when the deviations and the variations are known.

85. **ECHO DEPTH FINDERS** (Fig. 52).--a. There are two classes: (1) in which the signal transmitted is audible (sonic), or, (2) in which the signal transmitted is inaudible (supersonic). The principal of operation in either case is much the same, the apparatus for the sonic depth finders usually being much simpler than that for the supersonic. The depth of the water is determined by the time

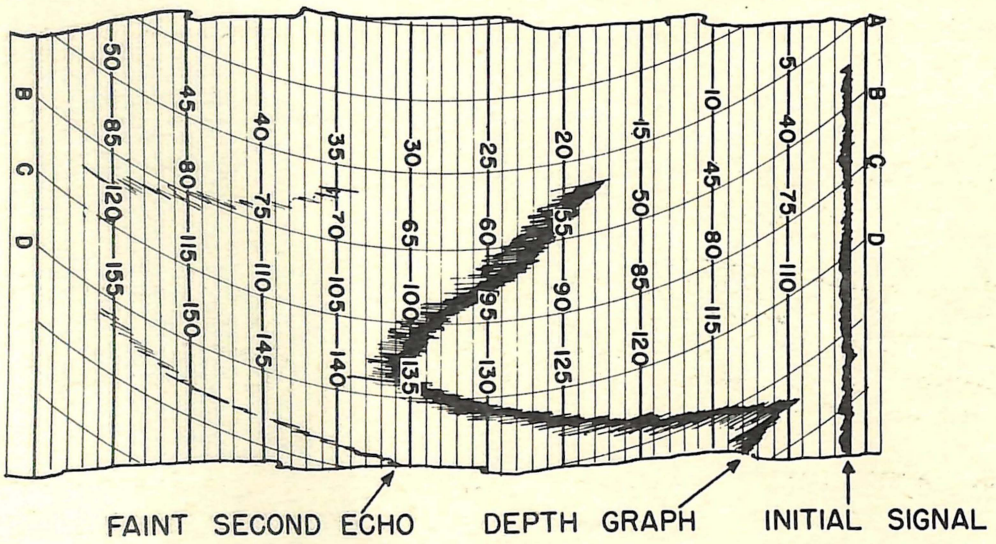


Schematic Diagram of Installation.

Fig. 52.--Supersonic Depth Recorder.



General Plan View of Recorder.



Enlarged Section of Fathogram.

Fig. 52.--Supersonic Depth Recorder.

interval elapsing between the instant of transmission of a signal and the reception of the echo as reflected from the ocean's bottom. Therefore, the essential components of the apparatus include (1) a signaling unit, (2) a time measuring device, and (3) a receiving device which picks up the echo and amplifies it to make it audible or indicates it electrically in some way.

b. A brief description of such instruments is given in The American Practical Navigator on page 28. While the various depth indicators exhibit quite different external appearances, they all operate on the same fundamental principle; that sound travels at a more or less constant speed through water; that this velocity can be calculated or measured; that a change in medium, such as the bottom of the ocean will cause a reflection (echo) which can be received, amplified, and made to indicate depth (as a function of time). The velocity of sound as generally used in such instruments is 4,800 feet per second. This requires an accuracy in timing to within a maximum of 1/400 second-- which corresponds to 1 fathom in depth.

c. Most small portable units are battery-operated, and speed control is difficult. The batteries must be kept up to normal charge at all times and, if the motor is governor controlled, the governor must be in good working condition at all times. A small drop in the voltage of the storage battery unit will often render the instrument useless. The instruction manuals should be carefully read and followed where any adjustments are necessary. For any failure of the machine other than low battery, it is best to consult a radio technician, rather than try to find the fault, unless such fault is apparent.

d. An occasional check to ascertain that the instrument is indicating the correct depth should be made. For most practical purposes, this can be done with a lead line if the depth does not exceed 10 to 15 fathoms.

e. A small depth finder has made its appearance on the market in recent months which has a very limited range (0 to 50 fathoms) in which there are no moving parts, other than a clock for timing and the pointer of an ammeter, the meter's readings being calibrated in feet instead of amperes.

86. RADIO DIRECTION FINDER (Fig. 53).--a. This instrument is thoroughly described and discussed in The American Practical Navigator (pages 90 ff.) and in Radio Aids to Navigation, H. O. No. 205. This latter book should be carefully studied in order to learn how to take bearings (pages 1-20). It treats of the R.D.F. as it is used by the Merchant Marine and Naval Ships, that is, of instruments designed to receive signals on the intermediate frequency band. It

does not treat with any of the specialized shore wave R.D.F.'s, but the application of these is similar.

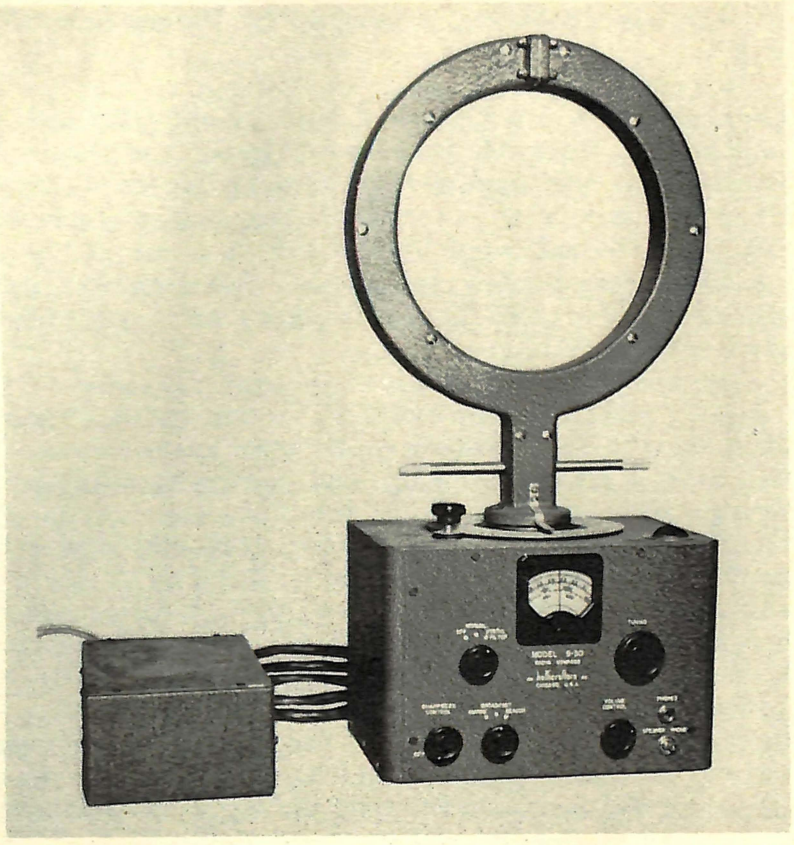


Fig. 53.--Radio Direction Finder.

b. The Radio Direction Finder (R.D.F.) is basically a radio receiver equipped with a special antenna in the form of a loop which is capable of being rotated. The loop is usually mounted over a dummy compass from which relative directions may be observed, although the more modern instruments have a repeater from the Gyro Compass in the place of the dummy-- so that the true directions may be read off at once. When the plane of the loop is parallel to the direction of the incoming radio signal, the signal received is at maximum strength; when it is normal to the direction of the incoming signal, the received signal is at its weakest. Since it is easier to differentiate between little or no signal than it is to tell when the signal is the loudest, the weakest part is used to give the direction. Properly tuned for volume, there is no audible signal at this point-- the null-- and it can usually be made very sharp and definite. There are several types of manually operated R.D.F.'s which show the null visually (either by electric eye, or by meter), and at least one type of automatic R.D.F. in which the loop turns to the null position when the receiver is correctly tuned to the trans-

mitting station. In the automatic type, the indicator will either give relative, magnetic, or true bearings, whichever is desired, according to the wishes of the operator, by the proper adjustment of his pelorus.

c. There are several types of short wave (HF) R.D.F.'s which are very accurate. Many of these are almost automatic in some respects: that is, with the loop set to receive the null, the indicator will tell one which way to steer to home directly on the beam or station. This is accomplished by the use of a specially wound loop connected into a twin indicating meter, the relative positions of the two pointers showing which way to steer (or head) to proceed directly towards the station.

d. A R.D.F. must be calibrated for deviation before reliance can be placed on its indications. In some instruments, the deviation can be reduced to nil on all headings by means of special compensating rings or discs; but, in general, this is an unnecessary refinement, and it takes a great deal of time and many swings to effect. A good deviation card or Napier Diagram is more practical. The deviation table or Napier Diagram shows the deviations for all RELATIVE bearings, and, unless the compensation has reduced the error to nil on all headings, bearings observed should be relative in order that the correct deviation value may be applied. All structural changes in a ship (or plane), such as rearrangement of booms and rigging and new structures, call for a new check on deviation, and the R.D.F. should be recalibrated at the first opportunity.

e. Deviations are determined by swinging ship at about three miles from a transmitting station. It is practical to swing ship on a standard broadcast station mast if one is visible from the sea, as this will give a continuous signal for as long as desired and so allow a regular R.D.F. shore station to carry on its regular duties. The radio bearing is determined simultaneously with an accurate pelorus bearing on the tower, and readings are taken at an interval corresponding to the compensating adjuster (10° or 15°) so that compensation will be simplified. If deviations do not exceed three to four degrees as a maximum on any heading, compensation is not resorted to, and a deviation table is made up for these values. It is possible for deviations to be in excess of 20 or 30 degrees, in which case at least one trial compensation should be made to reduce this as much as possible; usually one trial will bring it down to the three or four degrees desired. Compensation is relatively easy, and is entirely mechanical; and all R.D.F.'s have means to correct for at least a 40° error. When possible, it is advisable to check a radio bearing against a visual bearing to determine any change in error. As previously stated, all movable equipment such as booms and rigging must be in the same positions as when the R.D.F. was

calibrated-- and this includes the regular transmitting and receiving antenna of the ship, which must be grounded during the time of observing a bearing.

f. Practically all R.D.F.'s are battery operated, with storage batteries for the low voltage power and either power packs or 'B' batteries for the high voltage. All this power supply must be kept at its greatest efficiency at all times. It is impossible to get a bearing with run down batteries.

g. In addition to electrical conductors, the accuracy of a bearing is affected by several things:

(1) Inaccurate tuning of either the direction finder or the transmitting station;

(2) Presence of land between the vessel and the station;

(3) Night effects.

These various effects cannot be compensated for-- but the possibilities of their presence can be understood and the bearings used accordingly. Night effects are usually encountered between a half hour before sunset to a half hour after sunrise-- and cause erratic bearings.

h. Normally, radio bearings are accurate to within 2° up to ranges near 150 miles. Bearings to be plotted on Mercator Charts are subject to correction, and H.O. No. 205 should be consulted to determine the amount and sign of the correction. It must be remembered, too, that some R.D.F.'s are not equipped to indicate from which side the signals are coming. Great care must be taken with this type, as the mere addition of 180° to correct for reciprocal bearing will not necessarily give the true direction. The true, 'uni-directional', R.D.F. gives with certainty the true direction of the incoming signal; that is, it automatically solves the 'ambiguity' inherent in the radio direction finder.

87. **TAUT WIRE APPARATUS.**--a. The taut wire apparatus is a device used for measuring distances at sea with a considerable degree of accuracy. It is ordinarily used to measure base lines (between buoys) for the control of surveys. However it can readily be used with a depth indicator to measure distances traversed by boats when it is necessary to know with a great degree of accuracy just where the boat is at all times.

b. The taut wire apparatus consists, in general, of three parts: (1) the reel, or drum, on which the wire is wound; (2) the flyer,

which picks the wire off the reel; and (3) the measuring device, which measures the wire as it is paid out. There are two sizes of apparatus: the large one which carries 140 nautical miles of wire, and the small one which carries about 20 nautical miles of wire. The wire is No. 23 piano wire, in lengths varying from 2,000 yards to 10,000 yards, spliced together (in long splices) to make up the required lengths. The large reel weighs about 2,500 pounds, while the smaller one weighs about 500 pounds. Due to the great weight of the reels, they are held stationary, and the wire is picked off by the flyer. The reel is mounted athwartships, facing aft; the flyer rotates around the reel, through its axis, picking off the wire as it turns. From the flyer, the wire passes through a measuring device which consists, in the main, of a registering wheel of known circumference (6 feet or 2 feet). There are various fair-leads and other sheaves to keep the wire tight and direct it over the measuring wheel. The revolutions of this wheel are counted on a revolution counter-- the number of revolutions multiplied by the circumference (six or two feet) gives the distance.

c. In use, the wire is threaded through the measuring device and a small anchor (concrete or scrap iron) secured to the end. This is thrown overboard at some distance from the point where the measurement is to start (say 300 yds.). The tension on the wire is then adjusted by braking the flyer until it is about 50 lbs (as shown on an indicator). When the first marker (buoy) is passed, the counter is read. Readings may be taken at any other time, such as changes in course, and passing other markers. When the run is completed, the wire is cut and expended. When used to control navigation, readings are taken on the taut wire apparatus at specified intervals and at the same times on the depth indicator. Careful plotting of these depths at the known distances as shown by the wire will assist materially in correcting navigational errors, especially if good charts are available of the ocean areas over which the courses pass.

PART II

NAVIGATION

Chapter 4

SPECIAL NAVIGATIONAL EQUIPMENT

88. The engineer fleet will be provided with a good deal of special navigation equipment which will be indispensable in the control of formations and to accurate navigation. Detailed descriptions of the instruments cannot be given here. Suffice it to say that the latest principles of radio, magnetism, electricity, light, and sound have been adapted to provide various signaling, listening, and direction finding devices which will permit silent, unseen, sure, yet surprise approach to the enemy beaches.

Details on this special navigation equipment are available to personnel entitled to receive them in a special pamphlet, classified as Secret. Request for this pamphlet should be made to Headquarters, Engineer Amphibian Command, Camp Edwards, Massachusetts.

PART II

NAVIGATION

Chapter 5

PILOTING

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89. INTRODUCTION.--Piloting is defined as 'the navigation of a vessel alongshore or into a harbor by means of bearings on landmarks, soundings, and the guidance of buoys and beacons.' It demands a knowledge of how to lay out and run a course. It involves the continual plotting of positions on the chart and the taking of every opportunity to verify them.

90. DEFINITIONS.--Certain terms are basic. a. A line of position: A line, however determined, on some part of which the boat is located. It may be a straight line or a circle and should be considered as a series of points some one of which, not yet identified, is the boat's position.

b. A fix: An accurately known point which marks the boat's position at a given time. It is generally determined by the intersection of two lines of position.

c. The dead (from D-E-D, abbreviation of deduced) reckoning position (the D. R.): The point which represents the navigator's best judgment of the boat's position at a given time, no fix being available. Such a D. R. is developed graphically by plotting the estimated courses and distances run from the last fix making all

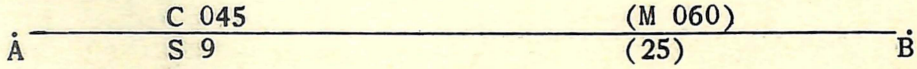
corrections and allowances. It is the best available estimate of the boat's position until a line of position or a fix can be had. If a single line of position can be obtained in any manner, the intersection of that line with the course line will mark the boat's most probable position. This position is labeled Corr. D. R. (Corrected Dead Reckoning). When two lines of position give a fix, plotting the D. R. is started anew from that point.

d. The course line: A line drawn in the direction of the course desired to make good, or, in case of error, the estimated course made good.

91. LABELS AND LINES.--The course line should be slightly heavier than other lines. In practice a continuous light line is used for a line of position, although the figures here show lines of position as a series of dots to emphasize the nature of such lines. Dash lines may be used for special purposes. Avoid unnecessarily long lines.

Immediately after drawing a line or plotting a point, label that line or point. The label for the line should lie along that line. The label for a point should not lie along any line.

The true course direction in degrees is marked above the course line, as for example, C 045, meaning true course 45°, or C 270, meaning true course 270°. The magnetic course is marked above the same line to the right of the true direction and is put in parentheses, as, for example, (M 060), meaning magnetic course 60°, or (M 285), meaning magnetic course 285°. Under the course line is marked the speed in knots; S 9, meaning 9 knots. Further to the right and also under the line, but in parentheses, is indicated the distance in nautical miles; (25), meaning 25 nautical miles.



A bearing line is labeled above the line with the time it was observed and, below the line, with its direction, as from the boat. Three figures indicate a true direction whether or not the abbreviation T or (t) is used; M. or Mag. indicates a magnetic direction; Com. or P.S.C. (Per Standard Compass), a compass direction. When a point is established, it is labeled as 0425 D.R. or 1430 Fix, etc. It is sometimes convenient to record a log reading of 87 miles as (87 mi.) after the label of a point.

The habit of accurate plotting, neatly labeled in a consistent manner, is essential.

92. PLOTTING A COURSE.--A course may be plotted either with a protractor or with parallel rules. Both methods will be discussed.

a. Protractor (Figs. 54a-c). The course protractor consists of a celluloid rose, marked as usual in compass points and degrees, with a movable celluloid arm pivoted at the center of the disc.

First, draw on the chart the course it is desired to make good. After the course has been drawn on the chart, the center of the protractor is placed on the point of departure (Fig. 54a). Make this as definite a point as possible, an easy fix. A buoy is best. Now the protractor rose must be oriented (see Fig. 54b) with the nearest rose on the chart. Swing the arm of the protractor so that its edge (or center line, depending on the type protractor available) cuts through the center of the rose on the chart. Read from the chart rose the degree which the edge cuts, and rotate the protractor rose until it is cut at the same reading by the protractor arm. The direction of the course to be steered can now be determined (Fig. 54c).

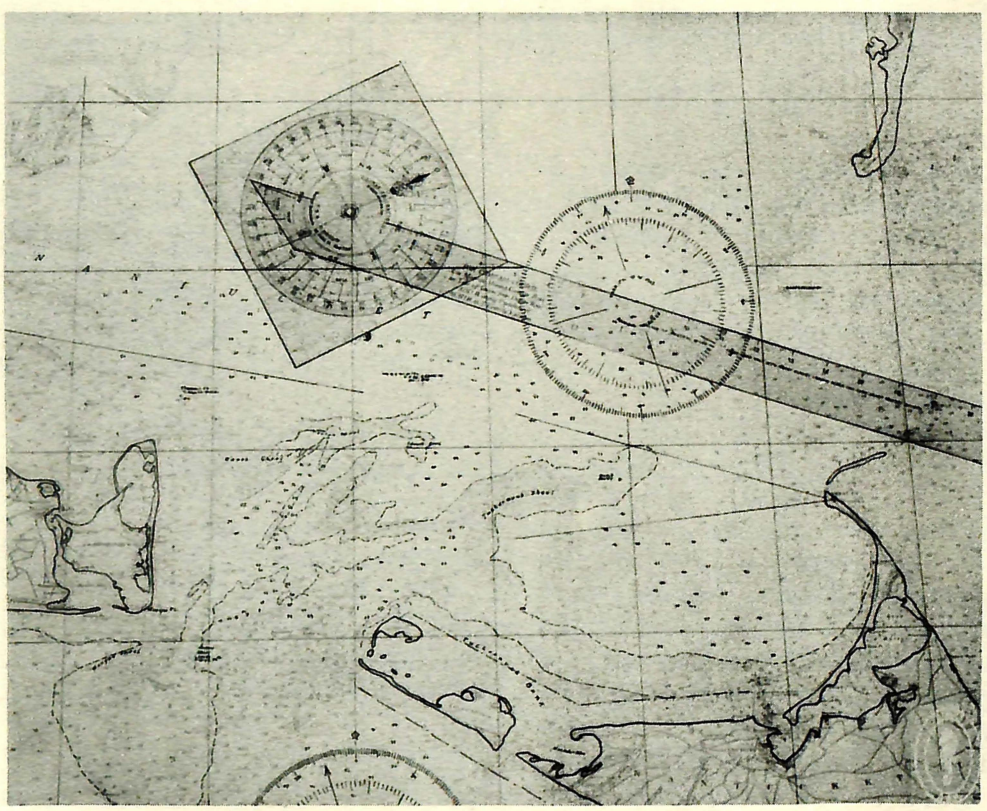


Fig. 54a.--Step 1. Place center of protractor on point of departure; swing arm to nearest chart rose.

This is done merely by swinging the protractor arm around until its edge lies along the chosen course. The course is read from the protractor rose, which after its orientation is simply a chart rose in the most convenient position possible. Care must be taken that the protractor rose does not slip.

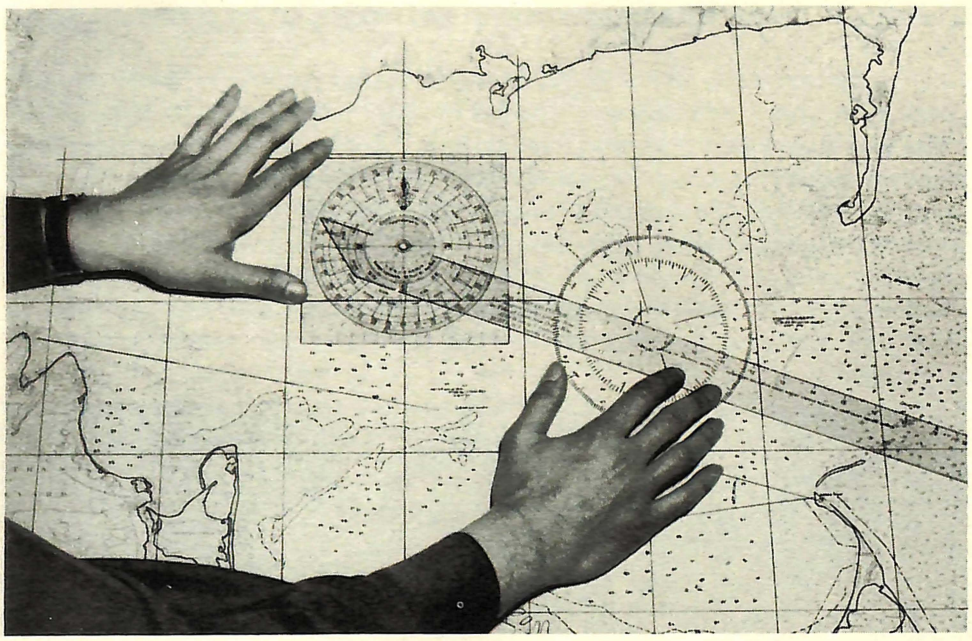


Fig. 54b.--Step 2. Orient protractor rose with chart rose.

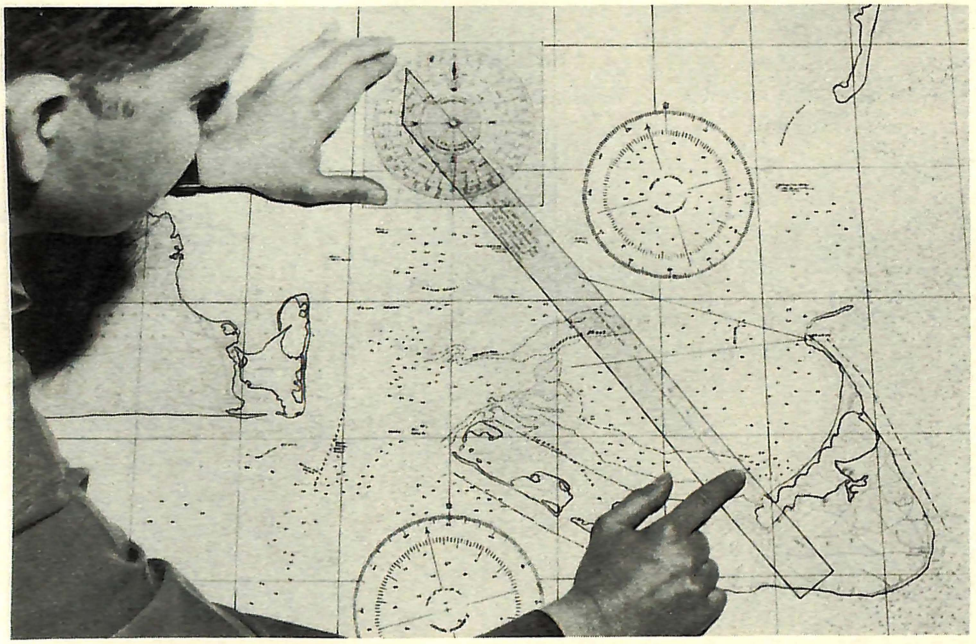


Fig. 54c.--Step 3. Swing arm to course; read course direction off protractor rose. HOLD STEADY.

b. Parallel Rules. Parallel rules (Figs. 55a-c) consist of 2 rulers attached by 2 metallic straps which allow the rulers to separate but make them always remain parallel with each other. They can be 'stepped' across a chart preserving the same direction. As in the case of the protractor care must be taken that the rulers do not slip.

To determine the direction of a course by means of parallel rules, place the beveled edge of the rules along the marked course (Fig. 55a). Step the rules (Fig. 55b) carefully across the chart to the nearest rose, until the same edge cuts through the center of the chart rose. Read the course from the edge of the rose (Fig. 55c). The beveled edge is used because its use results in greater accuracy.

Parallel rules work just opposite from the protractor. They transfer the course to the rose; the protractor transfers the rose to the course.

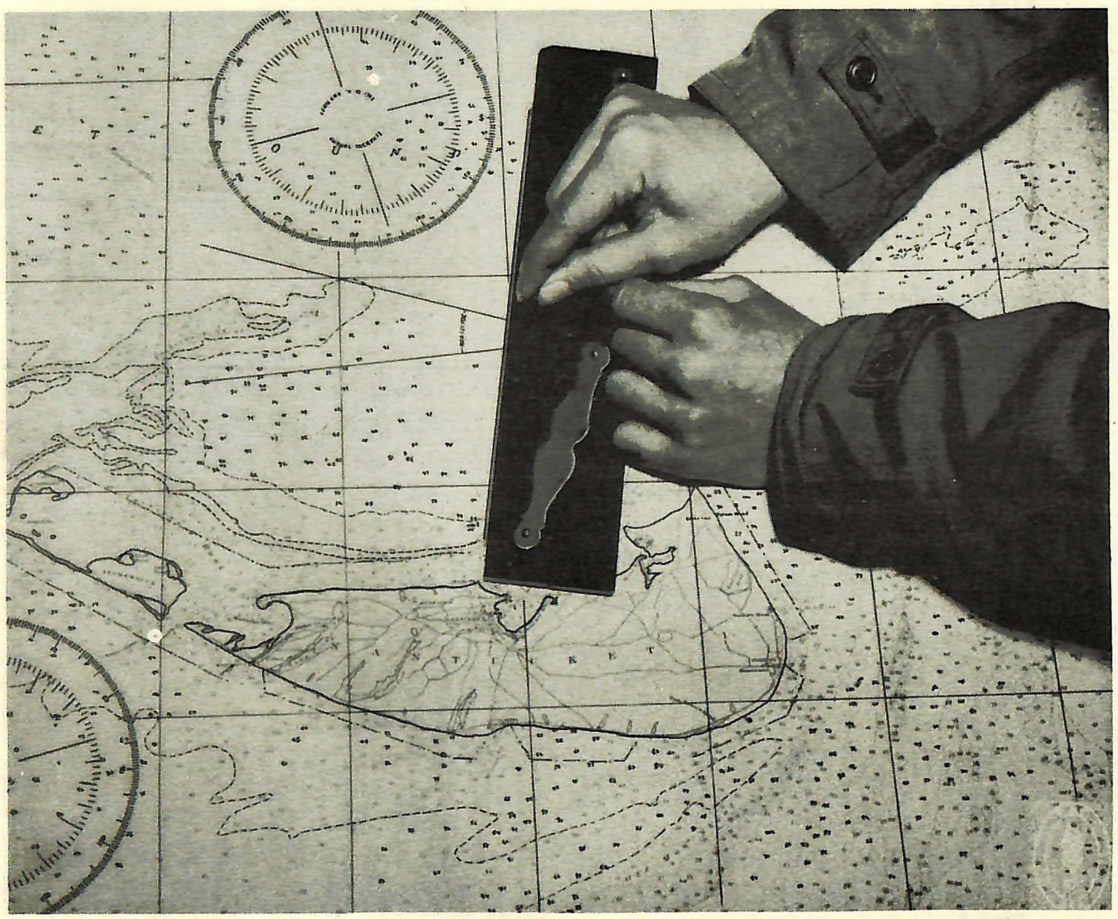


Fig. 55a.--Step 1. Place beveled edge of rules along course to be steered.

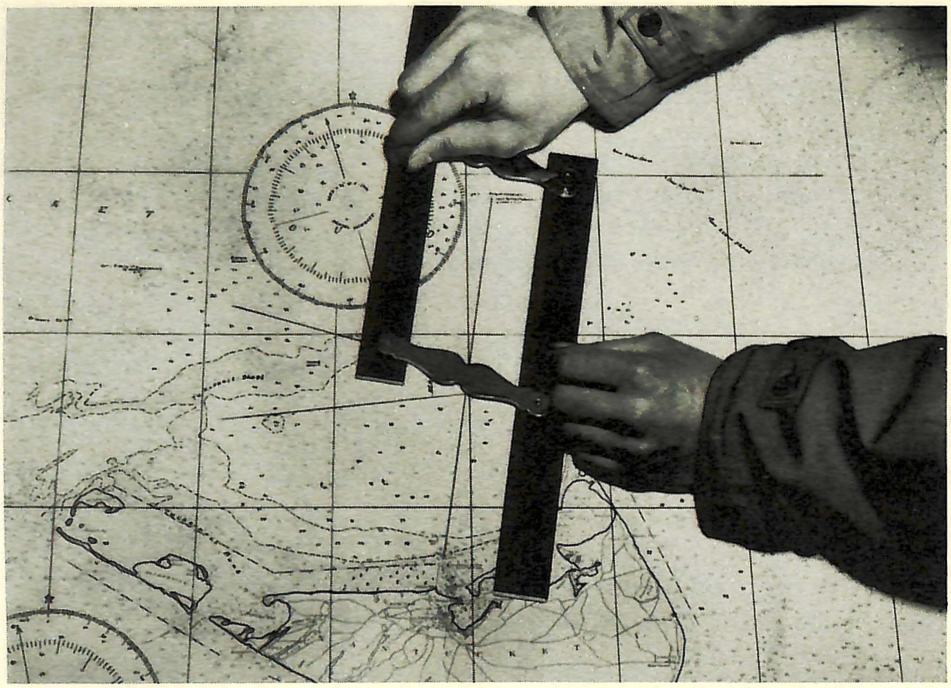


Fig. 55b.--Step 2. 'Step' rules CAREFULLY across to the nearest chart rose.

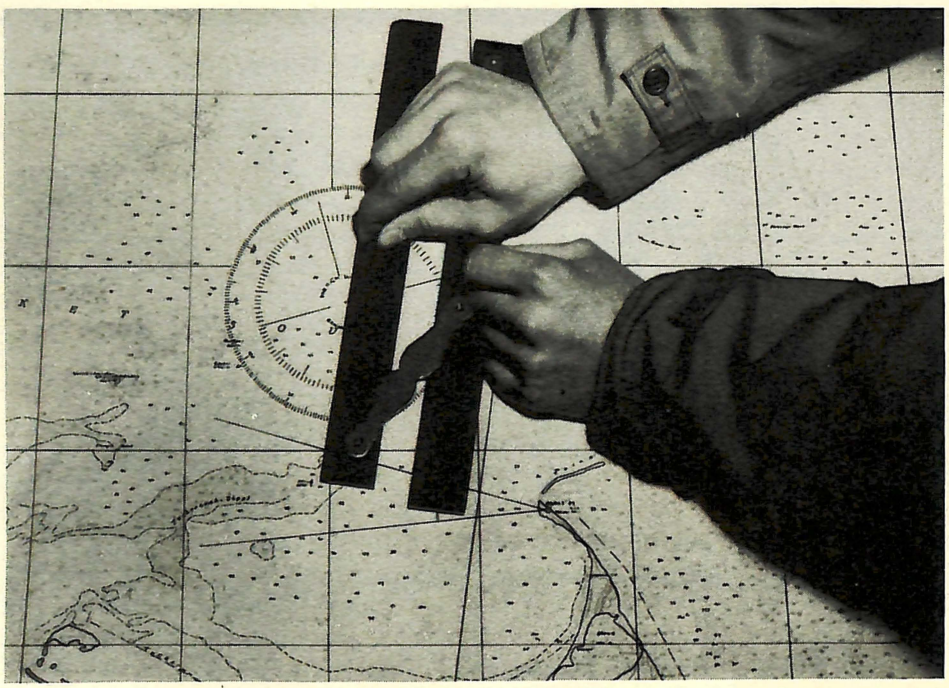


Fig. 55c.--Step 3. Read course direction off chart rose.

Fig. 55b.--Step 2. 'Step' rules CAREFULLY across to the nearest chart rose.

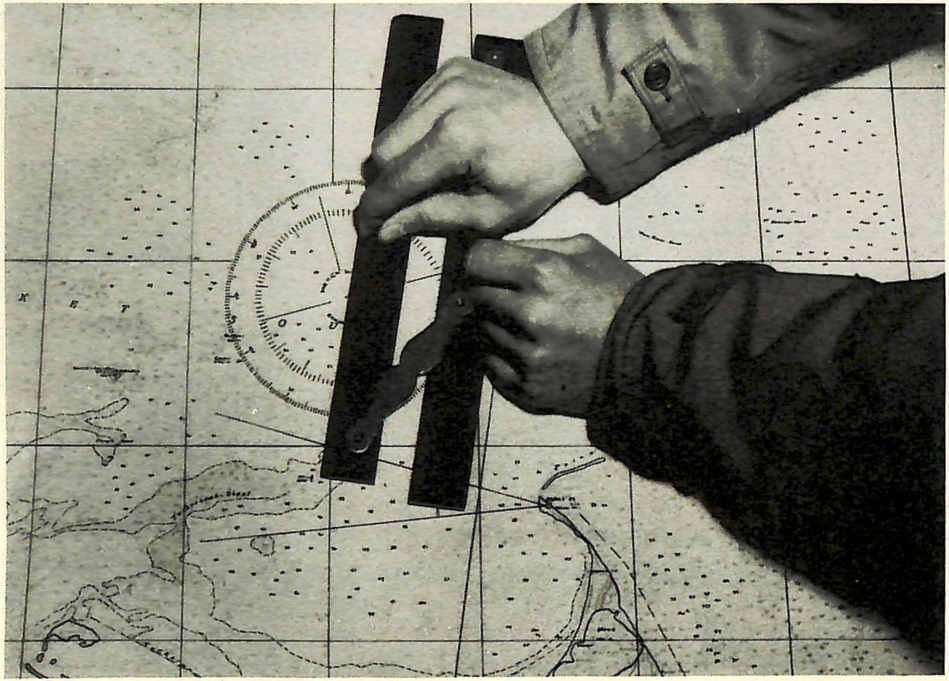


Fig. 55c.--Step 3. Read course direction off chart rose.

93. CORRECTIONS.--The compass course to be steered will be the same as the true direction of the course line only under ideal conditions. THESE WILL NEVER EXIST IN AMPHIBIOUS OPERATIONS.

First, proper corrections must be made for variation and deviation. This is discussed in paragraphs 62 and 63 above.

Second, current and leeway must be considered.

a. Correcting for Current. This is a difficult matter. The vagaries of tidal currents are well-known. Current tables and current charts give accurate information when weather is normal. But very often only local sailors (particularly fishermen) can judge the effects of current.

Two definitions are necessary in connection with current:

(1) The set of a current is the direction in which it acts; that is, the direction toward which it flows.

(2) The drift of a current is its velocity in knots.

The best way to allow for current is to run so as to keep a steady bearing on some landmark or range dead ahead. This method allows modification of the course to meet the immediate conditions, and it is easy to carry out (Fig. 56).

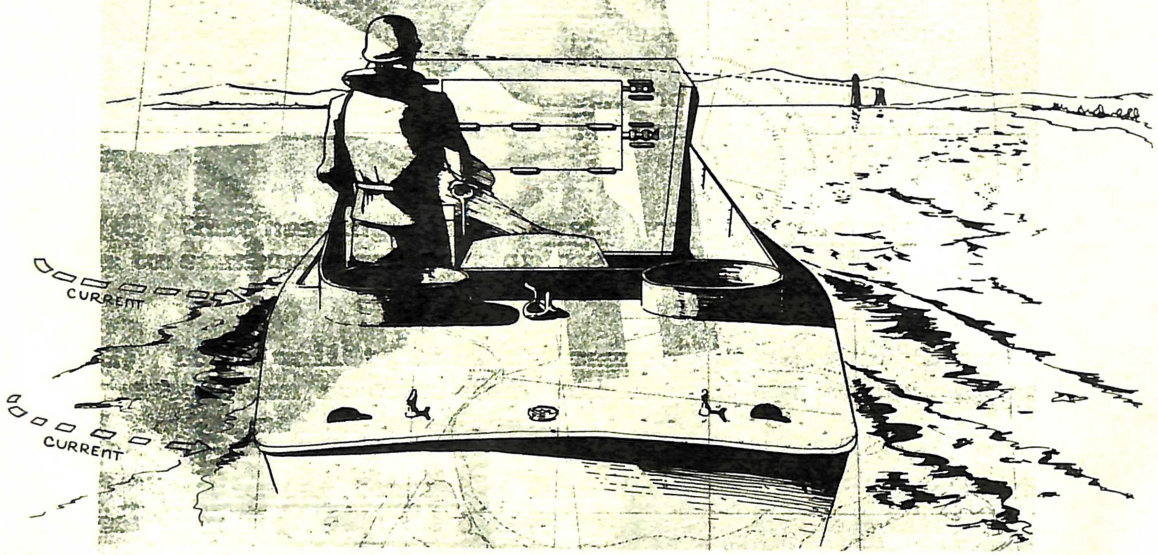


Fig. 56.--Allow for Current by Keeping a Steady Bearing on a Range or Landmark.

Where a diagram is desired, a simple parallelogram of forces is all that is necessary.

If it is desired to sail from A to X (Figs. 57a and b). A distance AB is laid off on AX equal to an hour's run of the boat in still water. A distance equal to an hour's run of the current is laid off in the direction of the current at the beginning of the run (AC), or in the opposite direction to the current at the end of the run (BD). The course to steer is the direction indicated by the line CB or AD. Actually, of course, you move along line AX--always pointing in a direction parallel to CB or AD, always being pushed by the current back onto the AX line.

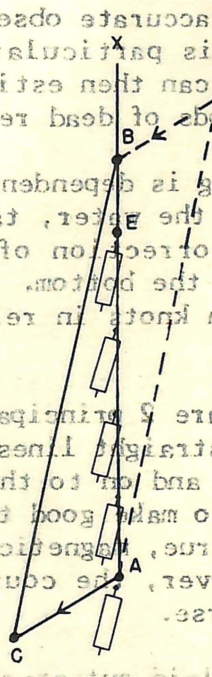


Fig. 57a.--Current Diagram Foul Current.

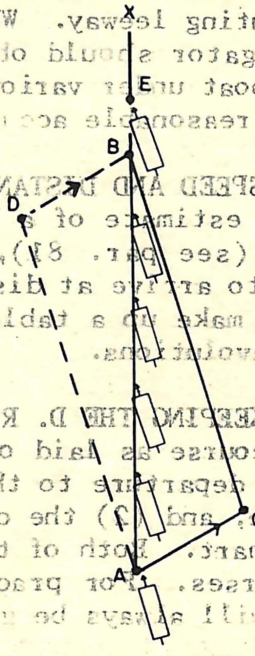


Fig. 57b.--Current Diagram Fair Current.

The distance made good can be determined by setting the dividers at the distance AB, placing one end on C and swinging an arc that intersects AB at E. AE will be the distance made good.

As said above, the same thing can be accomplished by keeping the bearing on X the same as the course to X in still water.

b. Leeway. Leeway is the leeward drift of a boat due to the pressure of the wind and heave of the sea. It is not a fixed quantity but varies with the wind and sea and with the boat. Leeway, if any, is measured by the angle between the course steered and the

direction made good over the bottom. If the wind is from the left, the ship is blown to the right of the course. Correction for this estimated leeway to the right may be made by applying it as an easterly compass error. If the wind is from the right, leeway may be applied as a westerly error. Or the drift estimated to have taken place may be applied as a course and distance as was current in par. a. above.

Estimating leeway is more difficult than applying the correction. A boat driving straight into wind and sea or with wind and sea dead aft makes no leeway; wind abeam normally causes maximum leeway. The angle between the boat's wake or the log line and the line of the keel indicates leeway roughly, but there are no rules for computing leeway. When conditions permit accurate observations, the navigator should observe the drift of his particular boat or type of boat under various circumstances. He can then estimate leeway with reasonable accuracy during long periods of dead reckoning.

94. SPEED AND DISTANCE.--Accurate piloting is dependent upon an accurate estimate of a boat's speed through the water, taken from the log (see par. 81), and upon careful correction of the log reading to arrive at distance made good over the bottom. Whenever possible make up a table indicating speed in knots in relation to engine revolutions.

95. KEEPING THE D. R.--In piloting there are 2 principal courses: (1) the course as laid out on the chart, the straight lines from the point of departure to the next buoy or buoys and on to the desired objective, and (2) the course to be steered to make good the course on the chart. Both of these courses may be true, magnetic, or compass courses. For practical purposes, however, the course to be steered will always be given as a compass course.

PLAN IN ADVANCE. Courses should be laid out starting from the anchorage to some position favorable for fixing the point of departure from which the D. R. is plotted. From this point plot the desired courses to destination and see that they run clear of danger. Where possible it is better practice to lay short courses between aids than to attempt to run a long course over an unmarked distance. This is especially true in thick weather. Distances to be made good on the various courses may be stepped off from the chart. Assume the time of departure, estimate the times of arrival at various positions. Record all data on the log sheet (Fig. 58).

At the point of departure note time, stream the log, and record its reading and the time. Some miles of the course should have been already plotted on the chart; label this course line and record the course to steer.

LOG SHEET

Mission From To Date Boat No.

Time	Place Abeam: Buoy, Landmark Aid to Navigation, etc.			Distance-off, in Nautical Miles	Log Reading	Charted Course To Next Objective				Engine R.P.M.	Time Should Be Abeam	Actual Time Abeam	Distance by Log	Actual Speed	Wind		Current		State of Sea	Weather	REMARKS
						True	Magnetic	Compass	Distance, Naut. Miles						Force	Direction	Set	Drift			

Fig. 58.

As the boat proceeds, note the time and read the log with every change of course. On the course line lay off the distance from the point of departure and label this D. R. position with time. Draw the new course line and label it. In the log book, note time, log reading, distance from last reading, and new course. If there is no change in course, the log should be read, the D. R. plotted and labeled at regular intervals, and proper entries made in the log book. This should be done at an established time, such as the beginning of each hour or each half hour by the boat's clock. Positions determined as above may be in error because of:

1. Error in point of departure
2. Deviation errors
3. Bad steering
4. Inaccurate log readings
5. Current
6. Leeway

On a strictly dead reckoning basis, with no lines of position available, one cannot correct for the first three of these errors. Corrections for the other errors have been discussed in previous paragraphs.

However, the mariner, near land, should continually check his position by the best means at hand. In clear weather, identification on the chart of every buoy, light, or landmark which can be seen gives a rough check at all times. At night, particular care should be taken to identify every visible light. When a light cannot be seen that should be seen, find out why.

96. DETERMINING THE BOAT'S POSITION.--The remainder of this chapter deals with the simpler methods of checking or fixing a boat's position when near the coast. Any landmark identifiable on the chart may be used, such as lighthouses, water towers, spires, beacons, bold headlands, or light vessels and buoys. If necessary apparatus is available, bearings from secret aids serve the same purpose as these other landmarks.

97. DANGER BEARINGS AND DANGER ANGLES.--Danger bearings and danger angles are very useful in avoiding underwater hazards, bars, or reefs.

A danger bearing is found by drawing a line on the chart from some point or buoy clear of the obstruction in question. Any hazard can be cleared with certainty merely by keeping to the right or left of this line; that is, by watching the bearing and not letting it increase or decrease beyond a certain point (Fig. 59).

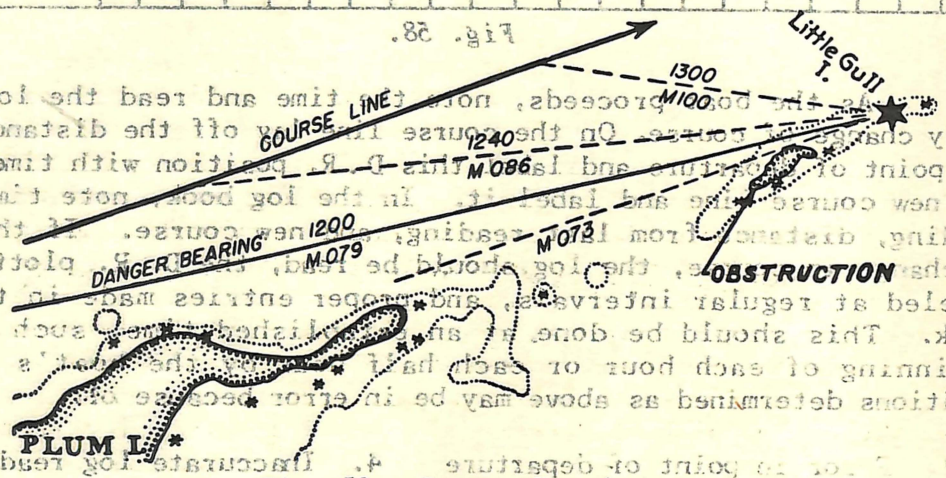


Fig. 59.--Danger Bearing.

A danger angle can be secured when there are two charted objects in sight. This angle can be used to keep the boat a safe distance inside or outside of a particular rock or shoal. If desired to keep offshore of a rock, never let the angle between the chosen guide objects get too large; if desired to keep inside one never let it get too small (Fig. 60).

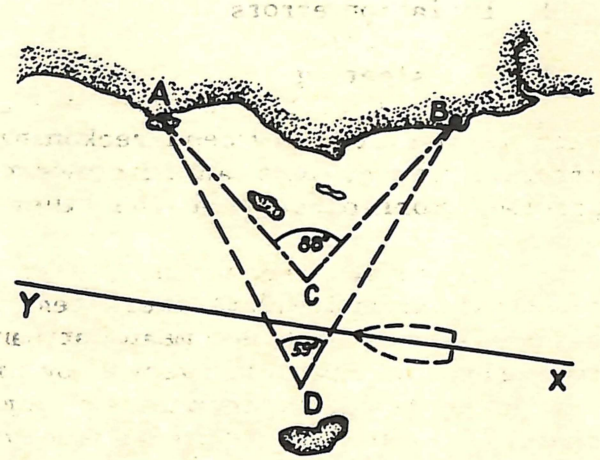


Fig. 60.--Danger Angle.

98. SOUNDINGS. --By use of the lead line, the kind of territory the boat is over and the depth of water around her can be determined. A chain or series of soundings or a sample of the bottom picked up by 'arming' the lead with tallow can also be compared with the chart to give a good slant, at least, on where she is. This is, of course, a very fallible method, but in spots anything may add to the available data and help tremendously (Figs. 61a and 61b).

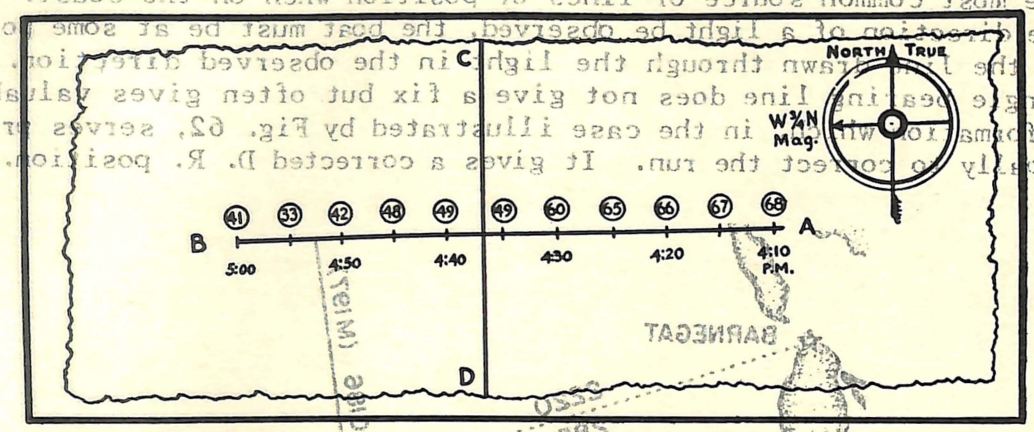


Fig. 61a.--Position by a Chain of Soundings-- Step 1. The soundings are taken at regular intervals and plotted on transparent paper.

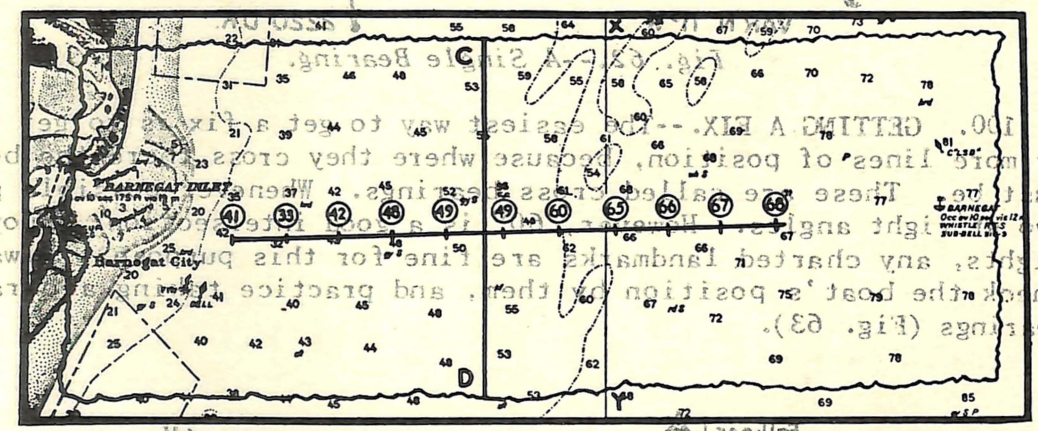


Fig. 61b.--Position by a Chain of Soundings-- Step 2. The transparent paper is moved about on the chart until the sounded depths correspond with the charted depths.

The whole point is that of a study in comparison. The lead or sounding pole reveals the basic character of the bottom under the waters the boat is in. Then the navigator finds ON THE CHART where the bottom is like that -- and that is where he is.

In waters where the bottom has its distinct and peculiar graduations or composition, it may be possible to navigate by this

means alone-- feeling the way along the bottom. However, in waters where mile after mile of a long coast line is similarly shaped and all the same, nothing can be gained but an idea of about how far offshore the boat may be. But, then, that may be just the information needed.

99. SINGLE BEARING (Fig. 62).--Bearings of fixed known objects are the most common source of lines of position when on the coast. If the direction of a light be observed, the boat must be at some point on the line drawn through the light in the observed direction. A single bearing line does not give a fix but often gives valuable information which, in the case illustrated by Fig. 62, serves principally to correct the run. It gives a corrected D. R. position.

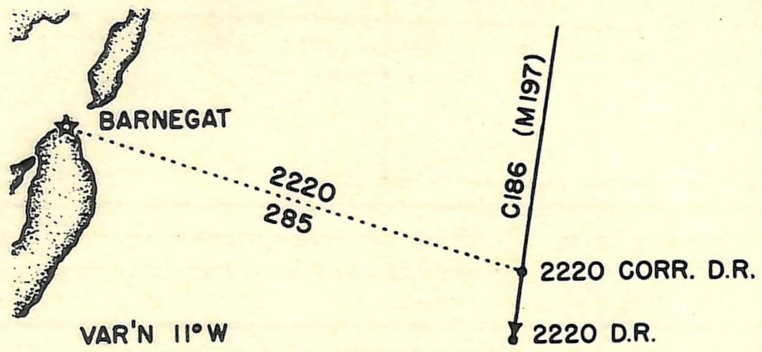


Fig. 62.--A Single Bearing.

100. GETTING A FIX.--The easiest way to get a fix is to get two or more lines of position, because where they cross there the boat must be. These are called cross bearings. Whenever possible get two at right angles. However, 60° is a good intersection. Buoys, lights, any charted landmarks are fine for this purpose. Always check the boat's position by them, and practice taking accurate bearings (Fig. 63).

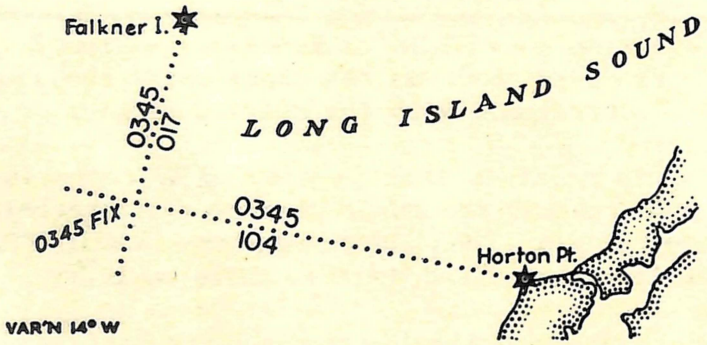


Fig. 63.--Fix by Cross Bearings.

Three bearing lines, as in Fig. 64, probably will not intersect in a point because the bearings are seldom exact, but whenever available a third bearing should be used as a check and the center of the resulting triangle used as a fix.

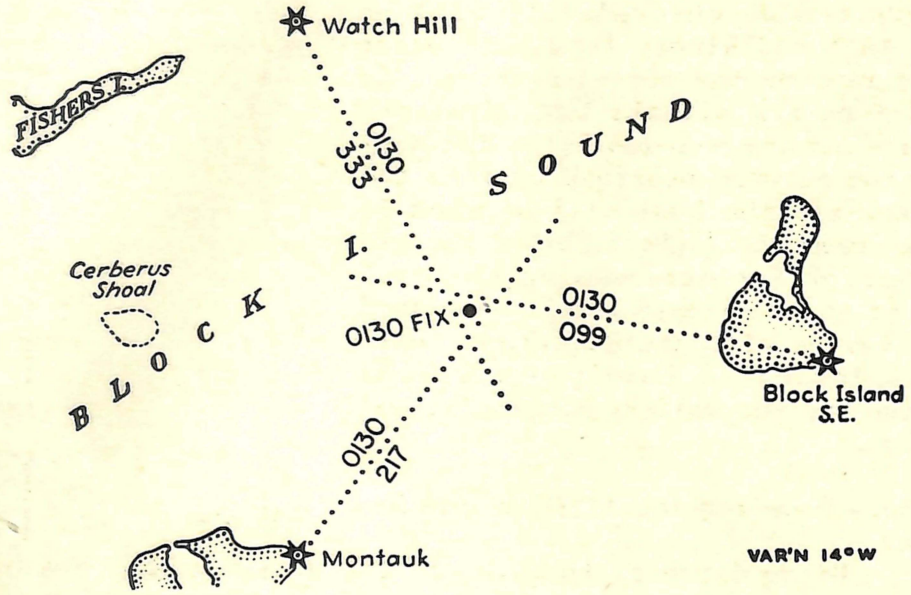


Fig. 64.--Fix by Three Bearings.

Various other tricks of the trade help to arrive at a fix by determining distance offshore. If there is a line of position running from a definite object, and if it can be determined how far from that object the boat is, her position is exactly known.

For instance, there is the bow and beam bearing. Take an observation when some object bears 45° off the bow and again when it bears directly abeam, at 90°. The distance run over the bottom-- allowance must be made for wind or current-- equals the distance off this point (Fig. 65).

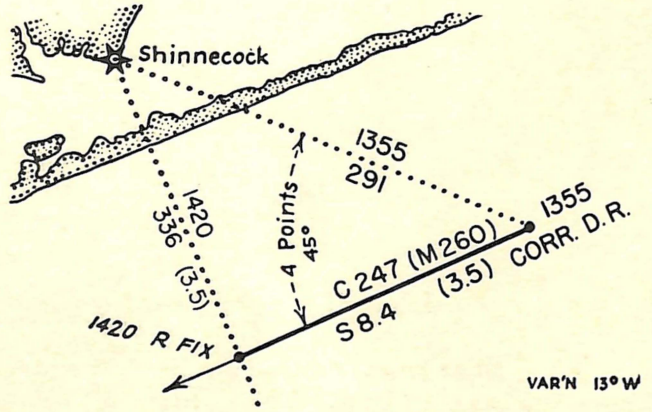


Fig. 65.--Bow and Beam Bearing.

Doubling the angle on the bow gives the same result (Fig. 66). As an example, if a log reading is taken or the time noted when an object bears 20° off the bow and again when it bears 40°, the run can be checked. It will be equal to the distance from the object at the time of the second bearing. If 2 and 4 points off the bow, 22½° and 45°, are used, seven-tenths of the distance run between bearings will be the distance off the boat will be when it passes abeam the light or other object. This factor for determining the distance at which an object will be passed abeam varies with the different bearings. Tables in Bowdith give the solution for the various combination of bearings.

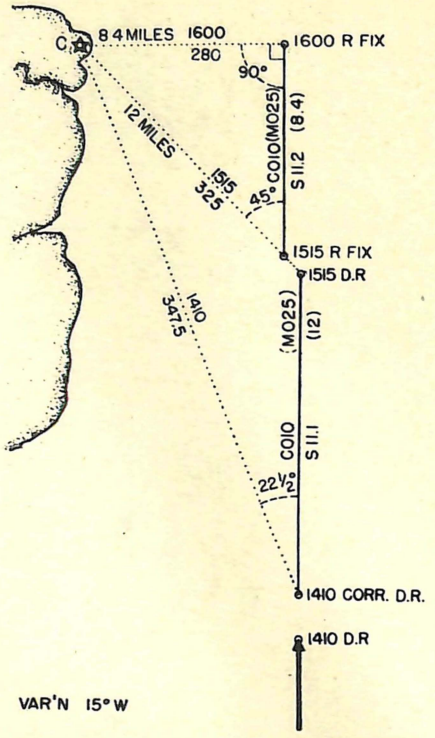


Fig. 66.--Doubling the Angle on the Bow.

Using dividers to mark off the distance run, the distance offshore can be determined by taking 2 bearings and run between. Keeping the dividers parallel to the course sailed, move them in or out until the distance they mark off fits the 2 lines on the chart (Fig. 67).

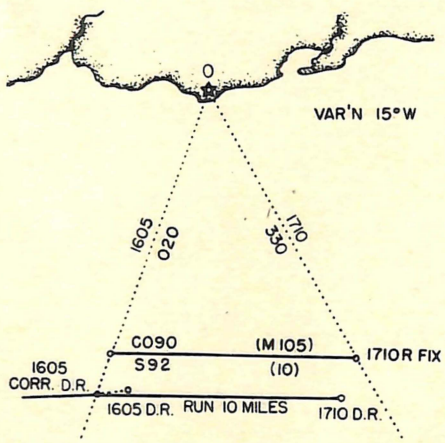


Fig. 67.--Two Bearings and a Run Between.

Bearings can also be advanced to get what is known as a 'running fix' (Fig. 68). Such a fix is labeled R Fix. This is a good trick, although an accurate course must be steered between the 2 bearings. Two bearings on the same object work in the same

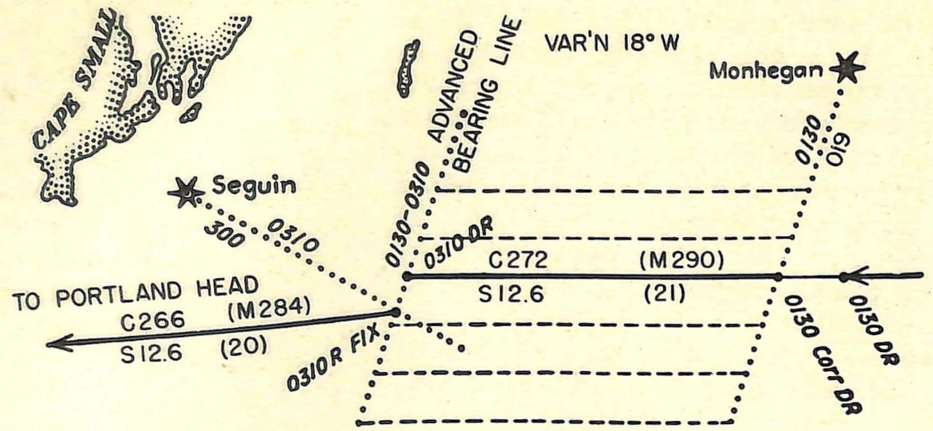


Fig. 68.--Advancing a Bearing Line. A 'Running Fix.'

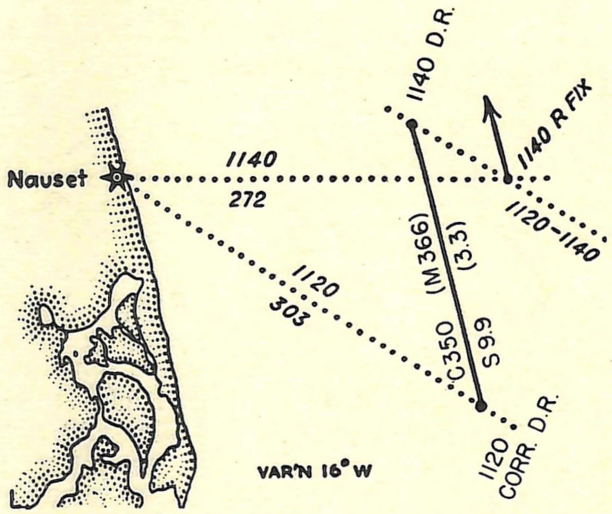


Fig. 69.--Two Bearings of Same Object.

manner and are especially useful in correcting distance off (Fig. 69). (This, in effect, is the same as 2 bearings and a run between. See Fig. 67).

101. LOCAL CONDITIONS AND RANGES.--Local conditions are a tremendous factor in all piloting. They are of particular importance if the local harbor has a twisting channel, sand bars, rocky ledges, protruding points, obscure turning buoys, or any of a number of hazards found in various places. The pilot who faces these as unknowns, faces real terrors; they may wreck and sink him any time. But the man who really knows his own waters will be able--

if he has to-- to go in and out safely in almost any weather with no buoys.

Of particular value to the pilot are ranges by which he may determine whether or not he is on his course or off it and in dangerous water. A range is simply a line of direction. A range may be taken from any natural or artificial landmarks in the vicinity: water towers, church steeples, white houses, cuts in the woods, a hump on a hill, anything at all that will give a guide to steer by, like stars or an airplane beacon at night. Some harbors have ranges actually set up. These are shown on all government charts. They are usually in the form of towers, a higher one behind a lower nearer one, and they are lighted at night (Fig. 70).

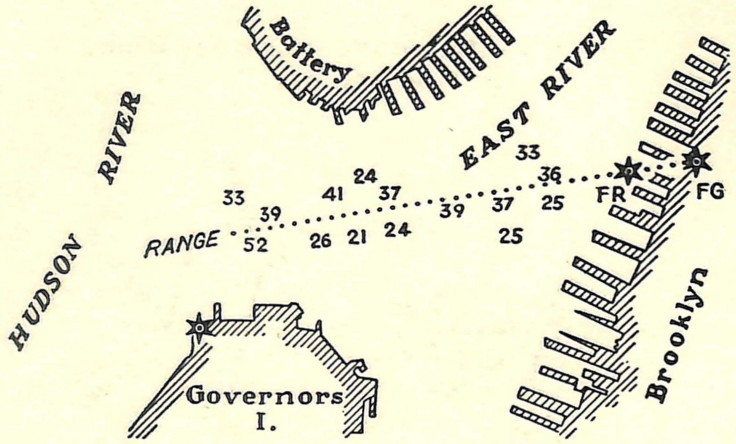


Fig. 70.--Water Channel Range, East River, New York Harbor.

102. CONCLUSION.--Piloting demands practice. The beginner should navigate by rule and not by the look of the land. Then, whenever he can check his position, he may think out for himself the probable reason or reasons for the error therein, and learn to guard against similar errors when in thick weather. Practice is the only way to develop the necessary skill and judgment whereby to cope with difficult conditions when they arise.

PART III

COMMUNICATION

Chapter 1

GENERAL

Paragraph
Scope 103

103. SCOPE.--The organization and functions of the signal units of the Engineer Special Brigade are discussed in Tentative Training Guide No. 4. In this guide, the signal means available to these units, their characteristics and allocation, and possible methods of employment are set forth.

in standing operating procedure. For routine use of other sound signals see FM 24-5.

108. WIRE COMMUNICATION.--a. General. Standard practice in the installation and operation of wire systems is outlined in FM 24-5. Field wire construction usually is employed on brigade wire lines. Existing lines, commercial or military, are employed when feasible. The extent of field wire construction depends on the requirements of the situation and on the time available. Standing operating procedure for the brigade prescribes the essential minimum of wire circuits.

b. Circuit Diagrams and Line Route Maps. Circuit diagrams and line route maps (see FM 24-5) serve as practical and convenient methods of reporting to the next superior headquarters the routes and circuits of wire lines installed as well as furnishing information of the wire system to be maintained.

109. RADIO COMMUNICATION.--a. Radio Net Organization. Radio may be used for point-to-point service between two stations; several stations may be grouped on a single frequency; or a large number of brigade units may be directed to operate on a single frequency. Grouping of a superior unit and each of its major subordinate units on a single frequency facilitates communication along normal channels of command. Grouping the stations of as many units as possible on a single frequency is particularly effective for the complete and rapid dissemination of a warning or other urgent information. Radio net organization is not rigid but is changed to fit the requirements of the situation.

b. Determination of Net. The actual radio net organization within components of a brigade is determined from a consideration of the following:

(1) Radio equipment available.

(2) Number of clear frequency channels made available by higher headquarters.

(3) Radio traffic load which may be expected at various unit headquarters.

(4) Type of action in which the brigade will be engaged.

(5) Need for a warning net.

c. Frequency Assignments. Frequencies are allotted to nets so as to be within the frequency range of all radio sets operating in

the nets and so that the frequency separation between channels is such as to reduce interference to a minimum. The number of allotted frequencies materially affects the radio net organization of the brigade. However, when the brigade is a part of a larger force, only a limited allotment of cleared frequency channels can be expected. When insufficient frequencies are allotted, stations must be regrouped in a smaller number of nets, certain nets must be silenced, or these two expedients must be employed to meet most satisfactorily the needs of the brigade as a whole.

110. STANDING OPERATING PROCEDURE.--Many of the signal operations of the Engineer Special Brigade are routine and vary little with the type of operation in which the brigade is engaged. A standing operating procedure for signal communication operation is used to establish these routine procedures. The state of training of the signal and communication personnel, the terrain of the theater in which operations are conducted, and the signal equipment and supplies available all influence the scope of the standing operating procedure. The signal officer must order deviation from standing operating procedure whenever such deviation is necessary to provide adequate means of communication.

PART III

COMMUNICATION

Chapter 3

SIGNAL EQUIPMENT

	Paragraph
Allocation of Principal Items of Equipment	111
Characteristics of Radio Equipment	112

	Signal Co.	Hq. and Hq. Co., E.B. and S.R.	Hq. and Hq. Co., Boat Bn.	Boat Co.	Hq. and Hq. Co., Shore Bn.	Totals
Flag Kit, M-113		3	9	75	8	735
Flag Kit, M-26A		1	1			6
Panel Set AP-30-C	1	1			4	16
Panel Set AP-30-D	1				4	13
Public Address Equipment PA-4	2					2
Speaker Systems, Air-Beach Master Units	1		1			4
Signal Lamp Equipment, SE 11		6	7	65	6	642
Switchboard, BD-14 (40 Drops)	1					1
Switchboard, BD-71 (6 Drops)	2	3			9	38
Switchboard, BD-72 (12 Drops)	2	3			1	14
Telegraph Printer Set EE-97	1					1
Telegraph Set TG-5	5	5				20
Telephones EE-8-A	40	48			48	328
Wire W-110-B on Recl DR-4 (Miles)	10	20			5	85
Wire W-110-B on Reel DR-5 (Miles)	60				15	105
Radio Equipment						
SCR 300 (SCR 610 may be substituted)				21		189
SCR 284	2	4	9	2	4	71
SCR 193	2	2				8
SCR 177-B	2	1			2	11
SCR 299 (with truck K-51, trailer K-52)	1					1
BC-312	5	1			1	11
Frequency Meter Sets, SCR 211	1	1	1		1	10

Fig. 71.--Allocation of Principal Items of Signal Equipment.

CHARACTERISTICS OF RADIO SETS IN BRIGADE

SCR No.	Weight	Range Voice	Range CW	Range Tone	Number in Brigade	Frequency**
*300	48	5			189	40,000-48,000 kc.
610	70	5			189	27,000-38,900 kc.
284	269	7	30		71	3800-5800 kc.
193	195	20	60	40	8	Transmitting: 1500-4500 kc. Receiving: 1500-18,000 kc.
177-B	1000	40	100	70	11	Transmitting: 400-800 kc., 1500-4500 kc. Receiving: 150-800 kc., 1500-18,000 kc.
299	500	100	250		1	Transmitting: 2000-8000 kc. Receiving: 1500-18,000 kc.

Power for the sets is provided as follows:

300	Dry batteries.
610	Dry batteries or vibrator pack with 6-volt or 12-volt storage battery.
284	Receiver run on dry batteries. Transmitter may be powered by hand-driven generator or by dynamotor run by 6-volt or 12-volt storage battery.
193	Storage batteries on continuous charge.
177-B	Gasoline-driven generator.
299	Gasoline-driven generator, trailer mounted.

*Set SCR 610 may be substituted for set SCR 300.
**The sets SCR 300 and 610 are Frequency Modulated; the sets SCR 284, 193, 177-B, and 299 are Amplitude Modulated.

Fig. 72.

PART III

COMMUNICATION

Chapter 4

ORGANIZATION OF THE SIGNAL UNITS

	Paragraph
Engineer Special Brigade	113
Signal Company, E. S. B.	114
Headquarters and Headquarters Company, E. B. & S. Regiment	115
Headquarters and Headquarters Company, Boat Battalion, E. B. & S. Regiment	116
Engineer Boat Company	117
Headquarters and Headquarters Company, Shore Battalion, E. B. & S. Regiment	118
Engineer Shore Company	119

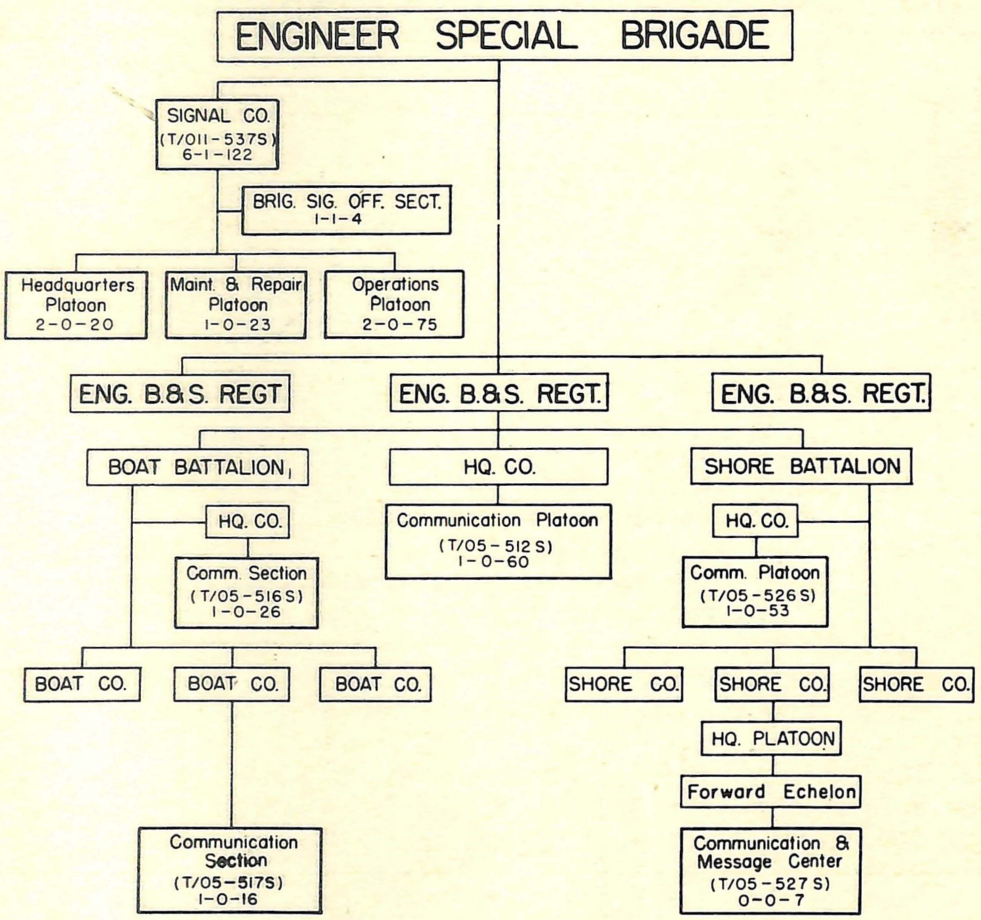


Fig. 73.--Communication Units of Engineer Special Brigade.

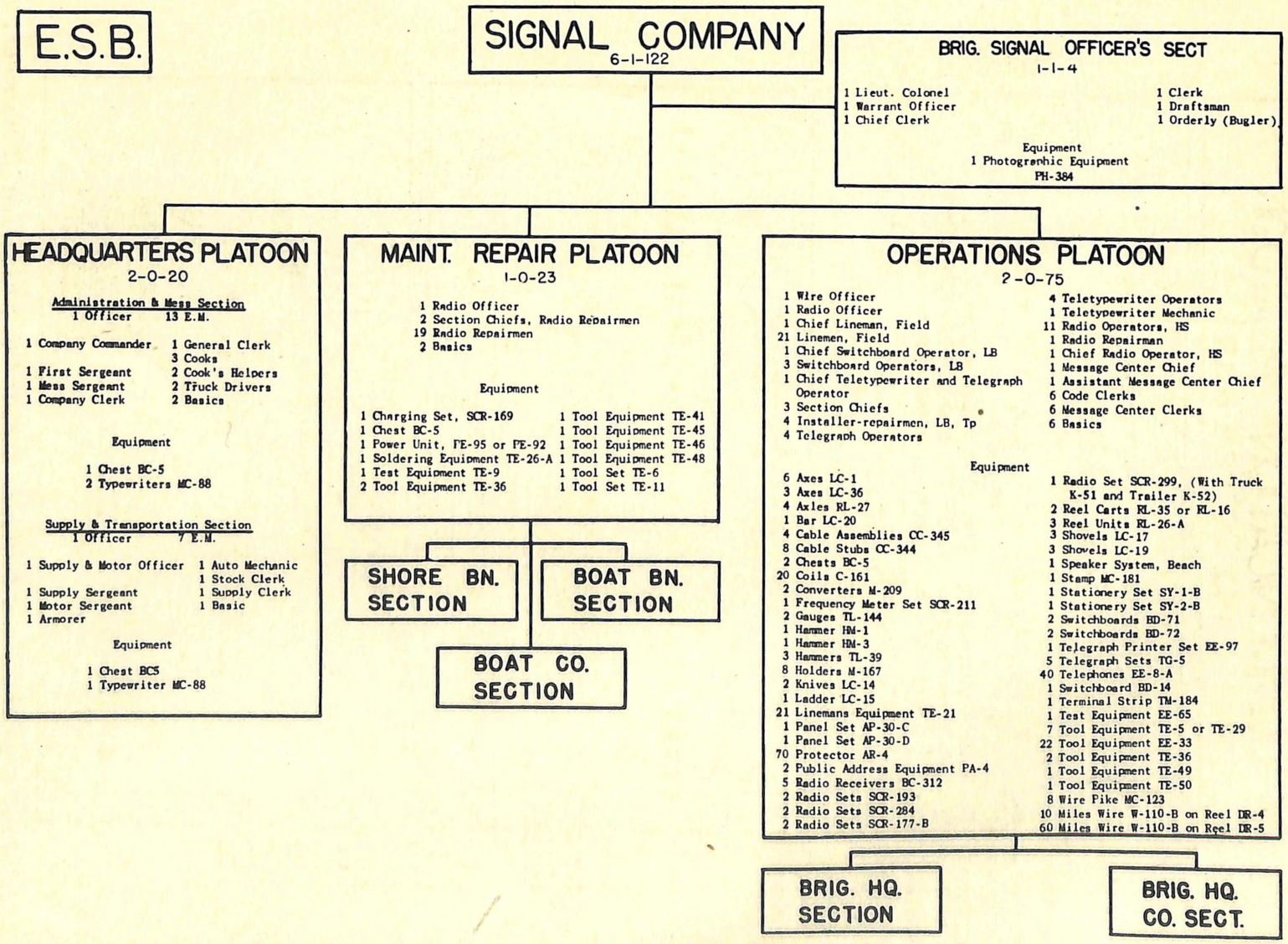


Fig. 74.--Signal Company-- Organization, Personnel, and Equipment.

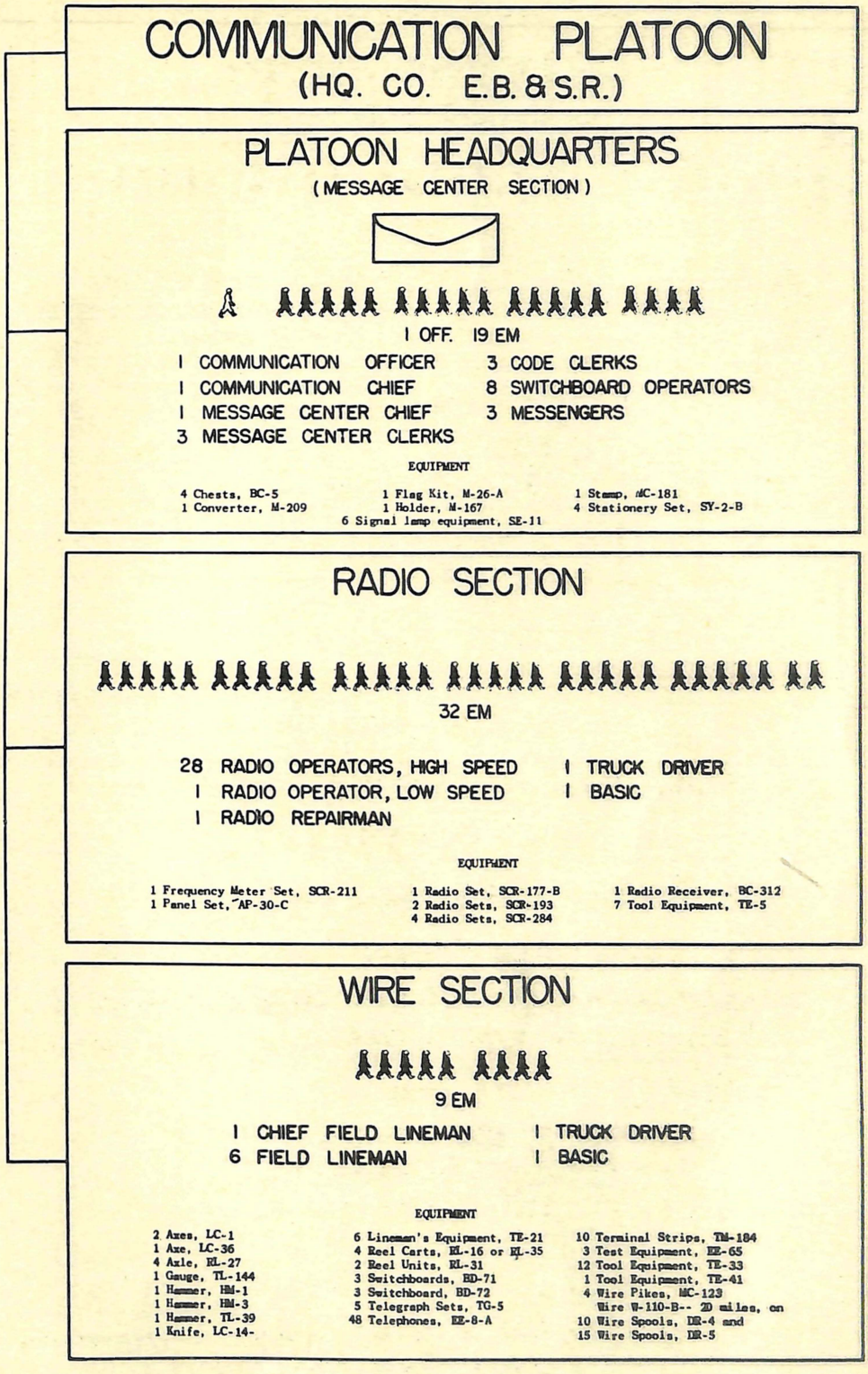


Fig. 75.--Communication Platoon, EB&SR-- Organization, Personnel, and Equipment.

COMMUNICATION SECTION
HQ. CO. BOAT BATTALION



1 OFF. 26 EM

1 COMMUNICATION OFFICER
1 COMMUNICATION CHIEF
2 CODE CLERKS
2 MESSAGE CENTER CLERKS
18 RADIO OPERATORS, HIGH SPEED
1 RADIO REPAIRMAN
2 TRUCK DRIVERS

EQUIPMENT

1 Chest, BC-5
1 Converter, M-209
1 Flag Kit M-26-A
9 Flag Kits M-113 (2 in Comm. Sec., 7 Afloat)
1 Frequency Meter Set SCR-211
1 Holder, M-167
9 Radio Sets, SCR-284
7 Signal Lamp Equipment SE-11 (Afloat)
1 Speaker System, Air, Beach Master Unit
1 Stationery Set, SY-2-B
9 Tool Equipment, TE-5
7 Tool Equipment, TE-33
1 Tool Equipment, TE-41

Fig. 76.--Communication Section, Boat Battalion-- Organization, Personnel, and Equipment.

COMMUNICATION SECTION
BOAT COMPANY



1 OFF. 16 EM

1 COMMUNICATION OFFICER
1 COMMUNICATION CHIEF
1 MESSAGE CENTER CLERK
8 RADIO OPERATORS, HIGH SPEED
4 RADIO OPERATORS, LOW SPEED
2 BASICS

EQUIPMENT

21 Radio Sets, SCR-300 (SCR-610 may be substituted).
2 Radio Sets, SCR-284
75 Flag Kits, M-113 (10 in Comm. Sec., 65 Afloat)
1 Holder, M-167
65 Signal Lamp Equipment, SE-11
2 Tool Equipment, TE-5
1 Tool Equipment, TE-41
1 Chest, BC-5

Fig. 77.--Communication Section, Boat Company-- Organization, Personnel, and Equipment.

COMMUNICATION PLATOON
(HQ. CO. SHORE BN.)

PLATOON HEADQUARTERS

1 OFF. 11 EM

1 COMMUNICATION OFFICER
1 COMMUNICATION CHIEF
1 MESSAGE CENTER CHIEF
3 CODE CLERKS
3 MESSAGE CENTER CLERKS
3 MESSENGERS

EQUIPMENT

4 Chests, BC-5
8 Flag Kits, M-113
4 Holders, M-167
4 Stationery Sets, SY-2-B
1 Converter M-209

WIRE SECTION

20 EM

1 CHIEF FIELD LINEMAN
8 FIELD LINEMAN
8 SWITCHBOARD OPERATORS
1 TRUCK DRIVER

2 BASICS

EQUIPMENT

2 Axes, LC-1
1 Axe, LC-36
4 Axles, RL-27
1 Gauge, TL-144
1 Hammer, HM-1
1 Hammer, HM-3
1 Hammer, TL-39
4 Knives, LC-14-8
8 Lineman's Equipment, TE-21
4 Reel Carts, RL-16 or KL-35
9 Switchboards, BD-71
1 Switchboard, BD-72
48 Telephones, EE-8-A
10 Terminal Strips, TM-184
12 Tool Equipment, TE-33
1 Tool Equipment, TE-41
4 Wire Pikes, MC-123
Wire, W-110-B; 20 miles:
5 mi. on 10 Reels, DR-4
15 Mi. on 15 Reels, DR-5

RADIO SECTION

22 EM

1 CHIEF RADIO OPERATOR, HIGH SPEED
3 RADIO OPERATORS, HIGH SPEED
16 RADIO OPERATORS, LOW SPEED

2 BASICS

EQUIPMENT

1 Frequency Meter Set, SCR-211
4 Panel Sets, AP-30-C
4 Panel Sets, AP-30-D
4 Radio Sets, SCR-284
2 Radio Sets, SCR-177-B (one spare set)
1 Radio Receiver, BC-312
6 Signal Lamp Equipment, SE-11
12 Tool Equipment, TE-5

Fig. 78.--Communication Platoon, Shore Battalion-- Organization, Personnel, and Equipment.

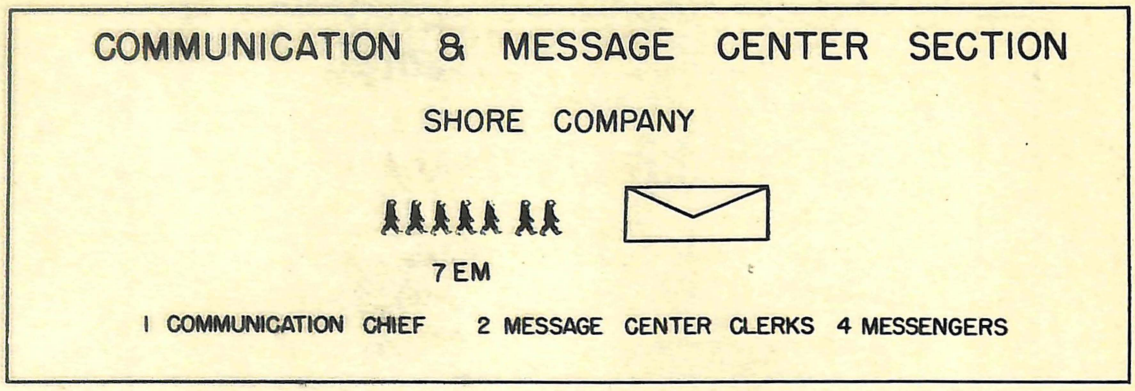


Fig. 79.--Communication and Message Center Section-- Shore Company.

PART III

COMMUNICATION

Chapter 5

SIGNAL UNITS IN OPERATION

	Paragraph
Introduction	120
Near Shore, Initial Set-Up	121
The Boat Company Afloat	122
The Battalion and Regimental Net Afloat	123
Beachhead Established, Brigade Net	124

120. INTRODUCTION.--The following signal charts for the Engineer Special Brigade give only a general concept of methods of employment of signal equipment by units. They are but one of a very considerable number of alternate plans. The plan chosen for any particular operation will, as will the employment of the brigade itself, depend on the tactical situation and dispositions.

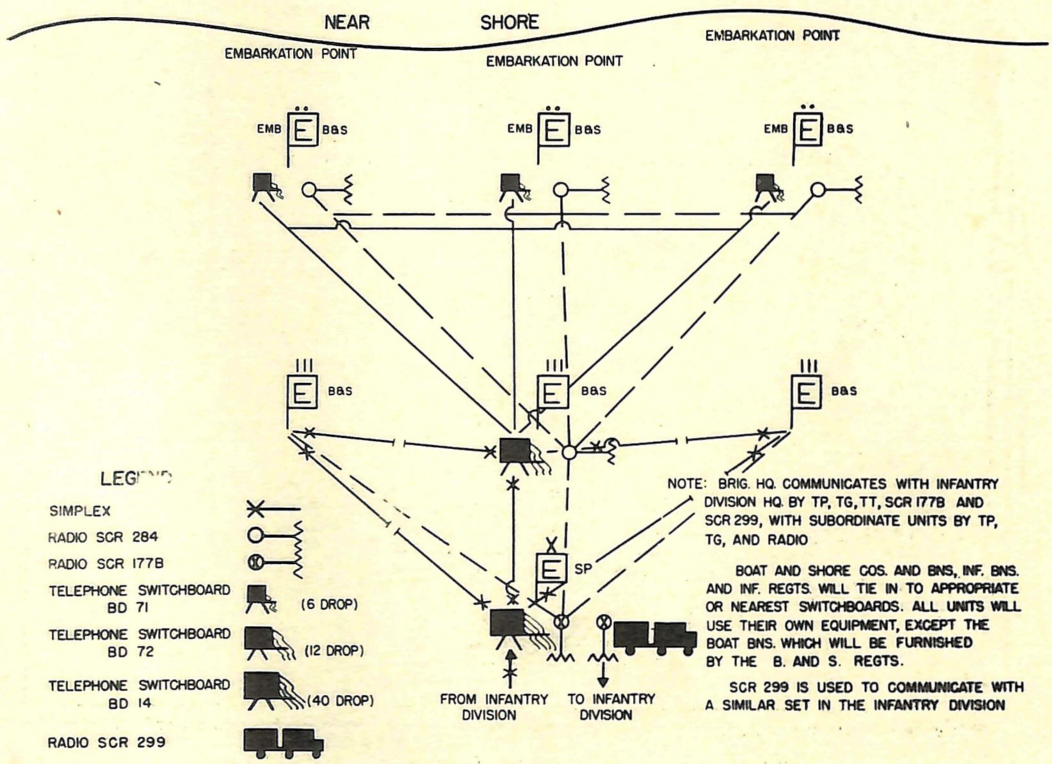


Fig. 80.--Near Shore, Initial Set-Up.

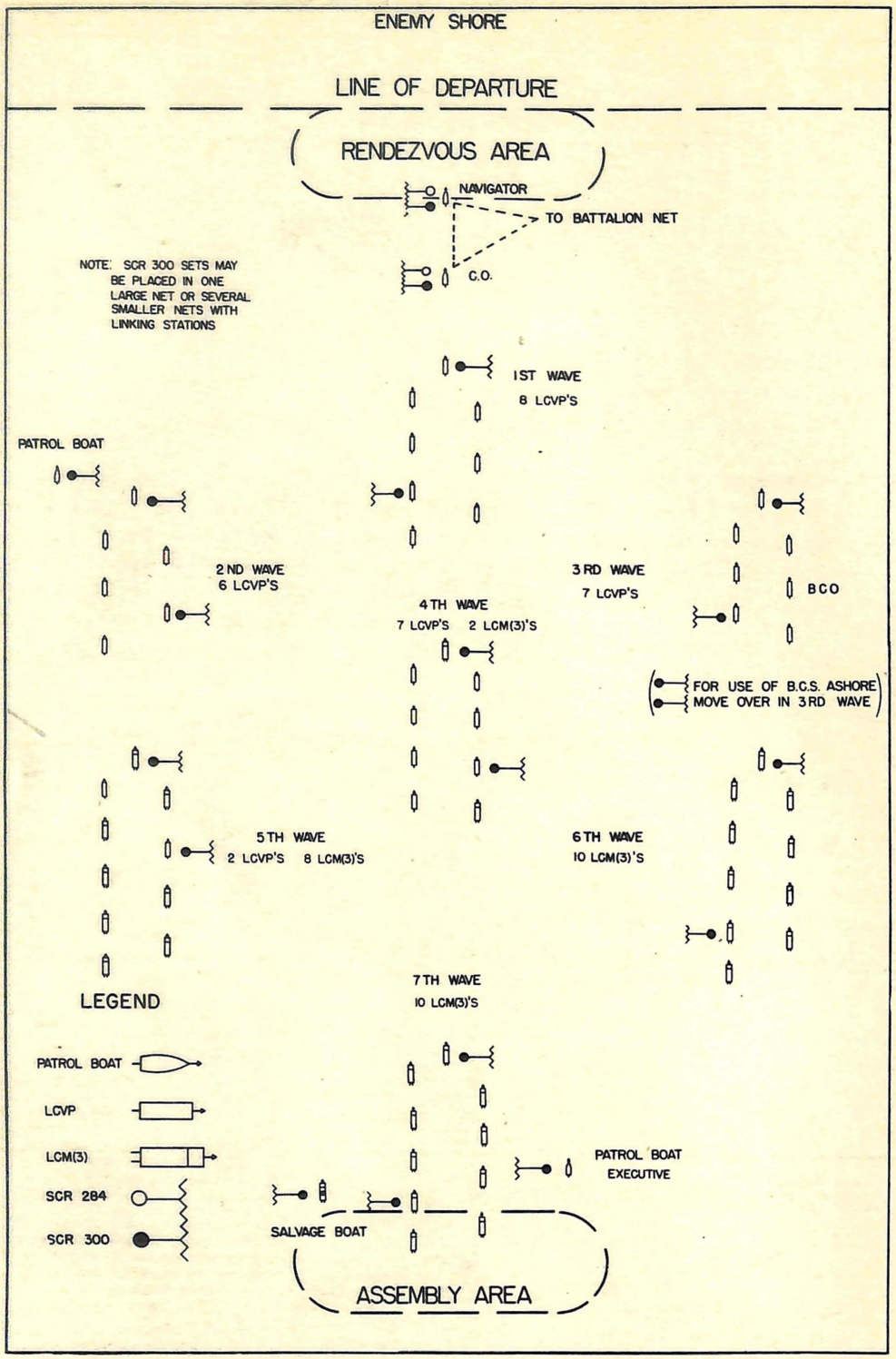


Fig. 81.--The Boat Company Afloat.

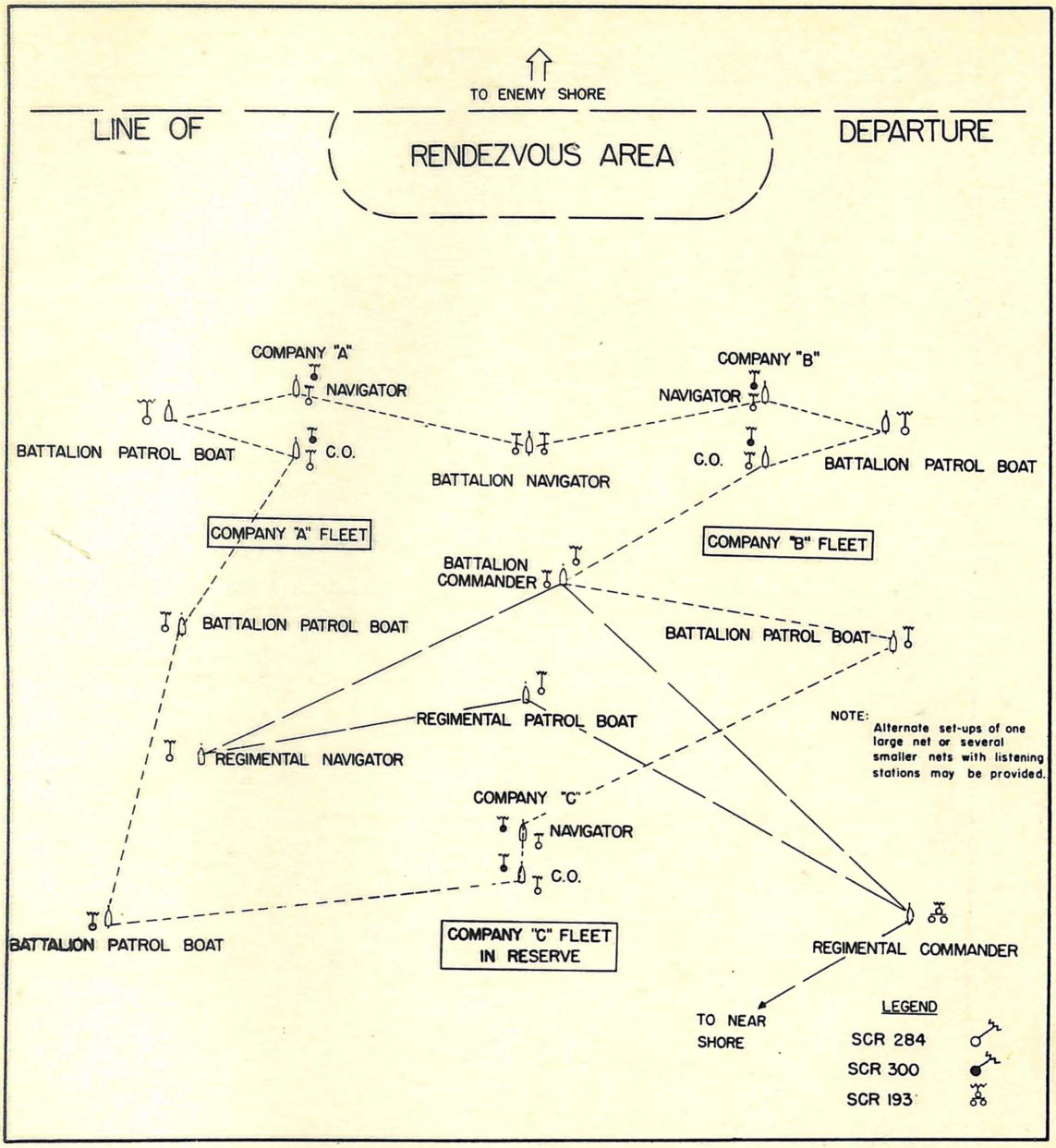


Fig. 82.--The Battalion and Regimental Net Afloat.

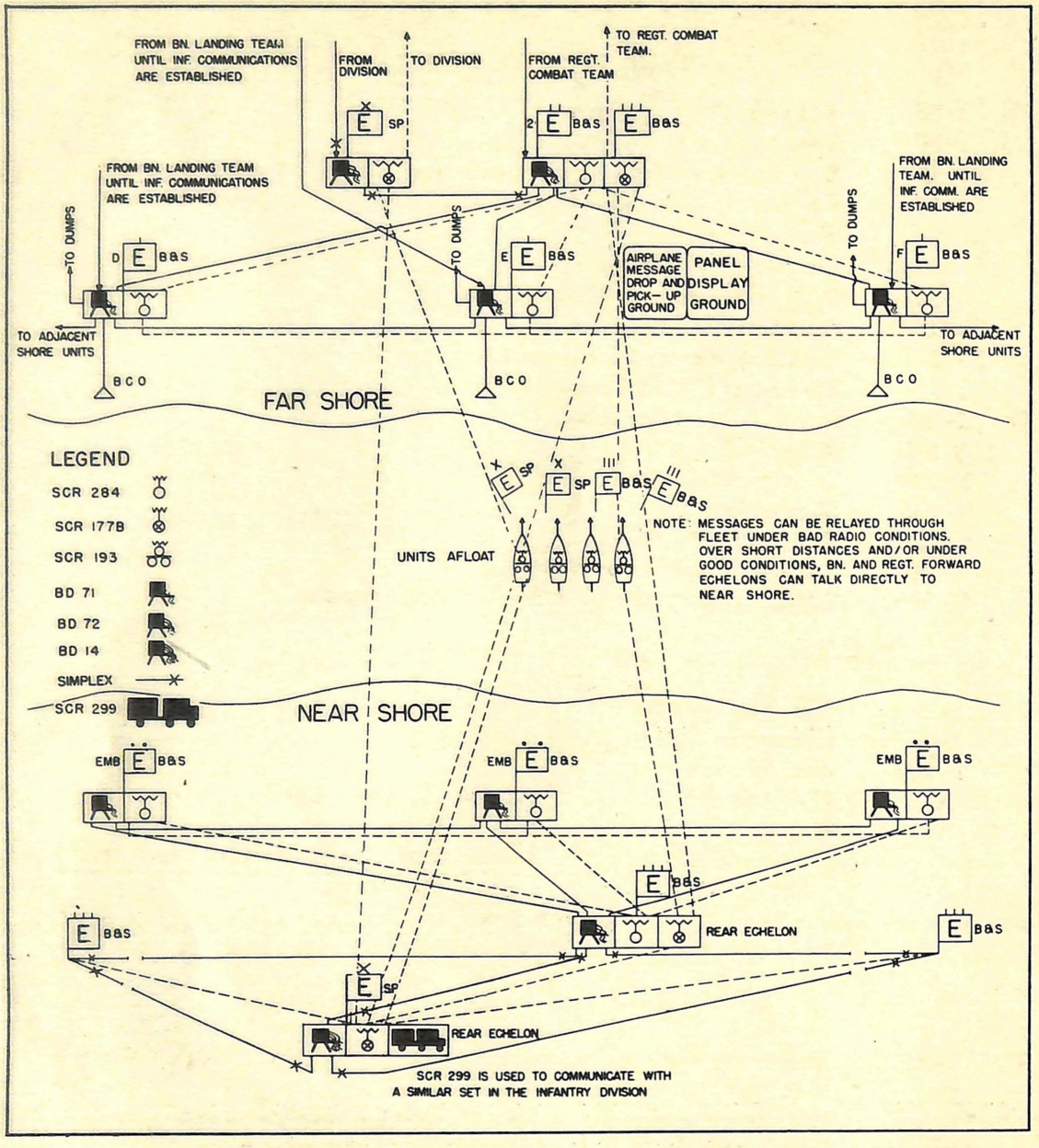


Fig. 83.--Beachhead Established, Brigade Net.

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ENGINEER AMPHIBIAN TROOPS



THE ORGANIZATION OF THE FAR SHORE

ENGINEER AMPHIBIAN COMMAND
TENTATIVE TRAINING GUIDE No. 7

FOREWORD

This is the seventh guide in a series published as an aid to training engineer amphibian units.

It is a basic manual for officers and enlisted men in Engineer Shore Battalions and other engineer amphibian units operating on the far shore. It contains the details of the duties they must perform on the far shore-- obstacle removal, road building, unloading of supplies and equipment, the installation of supply dumps, and numerous others of the important functions of shore engineers. It has been compiled from data gathered through the experience of engineer amphibian units in the field.

Unit commanders are invited to criticize and to suggest additions, deletions, changes in emphasis, or other changes, for incorporation in later editions.

Above all, this guide is intended to stress the vital importance of beach organization during a shore-to-shore operation.

Daniel Noce

DANIEL NOCE
Brigadier General, U. S. A.
Commanding.

Engineer Amphibian Command,
Camp Edwards, Massachusetts,
May, 1943.

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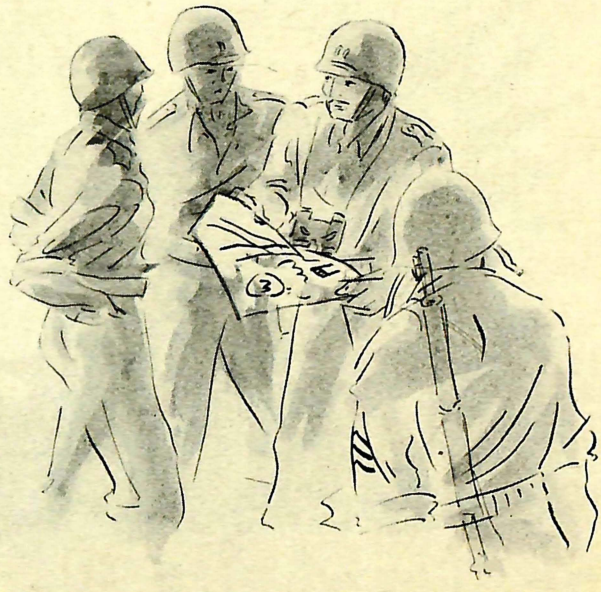



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CHAPTER 1

INTRODUCTION

	Paragraph
Background	1
Necessity for Shore Engineers	2

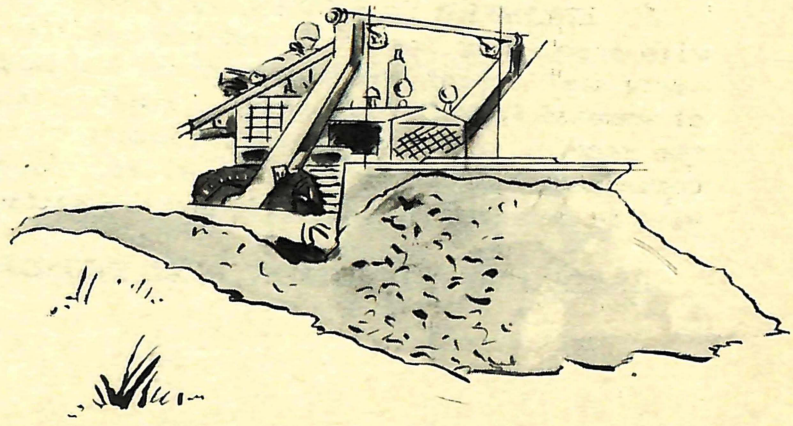
1. BACKGROUND.--The present conflict differs strategically in one great particular from World War I. In the last war the United States had available to her ample harbor facilities to land men and materiel. Our troops disembarked at French channel ports and proceeded by rail or truck to the front lines. In sharp contrast, in this war we will have to fight for our ports. In order to gain those ports we will have to land on the enemy's beaches and capture beachheads-- areas large enough to enable our infantry, artillery, tanks, and other combat units to land, form for attack, and move inland. Those beachheads will have to be held and developed as openings and supply bases through which men and materiel can be poured into enemy territory. One of our first objectives will be to capture a port or ports to which these base facilities will be shifted as early as possible.

2. NECESSITY FOR SHORE ENGINEERS.--The responsibility for holding and developing the beach area belongs to engineer shore troops. It is a job which requires a soldier to be both a builder and a fighter. To hold the beach, engineer shore troops are prepared to fight. They work with their rifles slung, or within easy reach, and frequently suspend their work long enough to repel an attack. They are equipped to defend the beach from attacks by land or air with .30 and .50 caliber machine guns and 37-mm antitank guns. They are responsible for the removal of obstacles on the beach and must, therefore, be skilled in the use of demolitions. They must first of all be good engineer soldiers.

The job of developing the beach is one for builders. Beach roads must be developed and improved to permit rapid unloading and movement across the beach. Dumps must be established, command posts set up. Everything possible must be done to permit as many men and as much materiel as possible to move rapidly across the beach and inland. Until more highly developed port facilities are captured, the work of engineer shore troops on the beach must continue.

The importance of the mission of engineer shore troops cannot be overemphasized. If there is one lesson that modern war teaches, it is that the battlefield is at the forward end of the supply line. The particular supply problem for which engineer shore troops are

responsible is tremendous. An Engineer Special Brigade is normally attached to a reinforced infantry division. In order that that division may carry out its mission at least 1500 tons of supplies and equipment must pass across the division beach daily-- 15,000 tons over a period of 10 days. These figures may well increase depending on the nature of the operation. They are too low rather than too high. These supplies must be moved rapidly. Battle experience on the beaches of North Africa and Sicily proved that victory is dependent upon a continuous flow of all types of supplies and equipment across the beaches to the assault troops ahead. Unnecessary congestion at a critical stage of the attack means disaster. There is no place where the lives of men depend more upon the coordinated activities of their fellow soldiers than in the movement of men and supplies across a hostile beach. When the time comes, it will not matter how well the tactical commander has planned, nor how skillfully the Boat Companies have brought their waves in to the right beach at the right minute-- if the beach organization breaks down, the battle is lost.



CHAPTER 2

MISSION AND EMPLOYMENT OF ENGINEER SHORE TROOPS IN GENERAL

	Paragraph
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Resupply	4
Evacuation of Wounded, Prisoners, and Salvage	5
Relationship Between Shore Engineers and Ground Forces	6
Composition of a Battalion Landing Team	7

3. BEACH ORGANIZATION.--When the boat units have performed their mission of transporting the combat units over water to the hostile far shore, the mission of engineer amphibian troops is only partially completed. True, the engineer boatman is a vital part of the engineer amphibian team, but an equally important member of that team is the shore engineer. Far shore areas, we have seen, must be organized in order to facilitate the movement inland of combat troops, their equipment, and supplies. Shore organization, or "beach organization" as it is more commonly called, is the work of the shore engineer.

This work includes marking the beach and the landing area; establishing communication; reconnoitering for roads and dump sites for all types of supplies; removal of obstacles and decontamination of gassed areas; building roads and performing other general shore engineer duties; establishing beach defenses with shore engineer weapons; keeping the beach clear; controlling beach traffic and stragglers; otherwise enforcing beach discipline.

4. RESUPPLY.--Assisting in the huge task of resupplying the combat troops is another important function of shore engineers. This involves the continuous unloading of supplies and the moving of them to dumps accessible to the combat units. Normally, this work will continue until adequate port facilities have been seized and developed. However, shore engineers may be called upon to prepare facilities and to perform all or a part of port operating functions. (See Tentative Training Guide No. 4).

5. EVACUATION OF WOUNDED, PRISONERS, AND SALVAGE.--Simultaneously with organizing the beach and the handling of resupply, shore engineers must assist engineer medical and boat units in the evacuation of wounded from the far shore. Further evacuation functions include the receipt and guarding of prisoners of war until they can be processed and removed to the near shore. Salvable equipment must likewise be received, segregated, and dispatched to the near shore.

6. RELATIONSHIP BETWEEN SHORE ENGINEERS AND GROUND FORCES.--The

basic engineer shore unit is the Engineer Shore Company, three of which, together with a Headquarters Company, comprise an Engineer Shore Battalion. There is one such battalion in each Engineer Boat and Shore Regiment, three in the Engineer Special Brigade. Each battalion is capable of providing the necessary far shore services for a regimental combat team, and all three are capable of providing far shore services for a reinforced infantry division.

Shore engineer units are either attached to or in support of combat troops. (See Tentative Training Guides Nos. 1 and 4). By referring to the troops supported as "combat" troops, it is not implied that shore engineers are not "fighting" troops. In the broadest sense-- that they must fight, and fight hard, and work with their rifles at their sides-- they are definitely "combat troops."

7. COMPOSITION OF A BATTALION LANDING TEAM.--In a typical shore-to-shore operation, an Engineer Shore Company functions as a part of a battalion landing team. To understand the duties required of the Shore Company, the shore engineer must know something of the organization of the battalion landing team. The more he knows regarding the composition of the organization he is serving, the approximate number and type of its troops, vehicles, and equipment, the better he will be able to fulfill his responsibility to that organization.

The following shows the organization of a typical battalion landing team:

1 Infantry Battalion
1 Battery Field Artillery (105-mm howitzers)
1 Platoon Combat Engineers (from Divisional Combat Engr. Bn.)
1 Platoon Antitank Company (from Inf. Regt. Antitank Co.)
1 Cannon Platoon (105-mm howitzers) (from Inf. Regt. Hq. Co.)
1 Shore Fire Control Party (Navy liaison officer and fire control personnel from Field Artillery Bn.)
1 Detachment Antiaircraft Automatic Weapons
1 Engineer Boat Company
1 Engineer Shore Company

CHAPTER 3

ORGANIZATION FOR FAR SHORE ACTIVITY

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Headquarters Company, Engineer Shore Battalion	9
Others With Whom Shore Engineers Will Have to Work	10
Boat Control Section	11
Attached Medical Personnel	12
Assignment of Personnel to Boats	13
Assignment of Shore Engineers to Waves	14

8. THE ENGINEER SHORE COMPANY.--Of primary importance to the shore engineer is a thorough knowledge and understanding of the organization of the Engineer Shore Company. It is composed of a Headquarters Platoon for command, control, communication, administrative, and defense functions; a Pioneer Platoon for general shore engineer functions; and a Utility Platoon for general longshoreman functions.

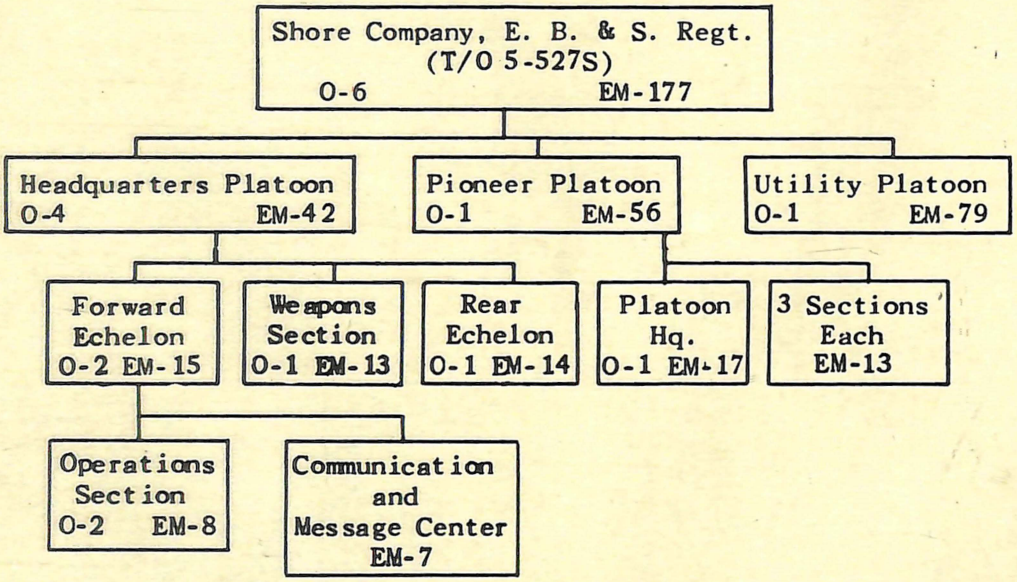


Fig. 1.--The Organization of the Engineer Shore Company.

9. HEADQUARTERS COMPANY, ENGINEER SHORE BATTALION.--In the performance of the shore engineer mission, the engineers of the Shore Companies will have the valuable assistance of other shore engineers from their own Battalion's Headquarters Company, with whom they must

work in close harmony and cooperation. From the Communication Platoon of the Shore Battalion Headquarters Company, communication personnel will be attached to the Shore Companies to assist them in carrying out their communication functions; likewise from the Combat Platoon of the Headquarters Company .50 caliber machine gun squads will be attached for antiaircraft protection of the Shore Company's beach and 37-mm gun squads for protection of the beach area against tanks, armored vehicles, and, if necessary, against attacks by small boat patrols from the sea. In addition to these 2 platoons, each Shore Battalion Headquarters Company has a Company Headquarters for administrative functions within the company, and a Headquarters Platoon which furnishes the enlisted personnel who work in Battalion Headquarters. The organization of the Headquarters Company is shown in the following chart.

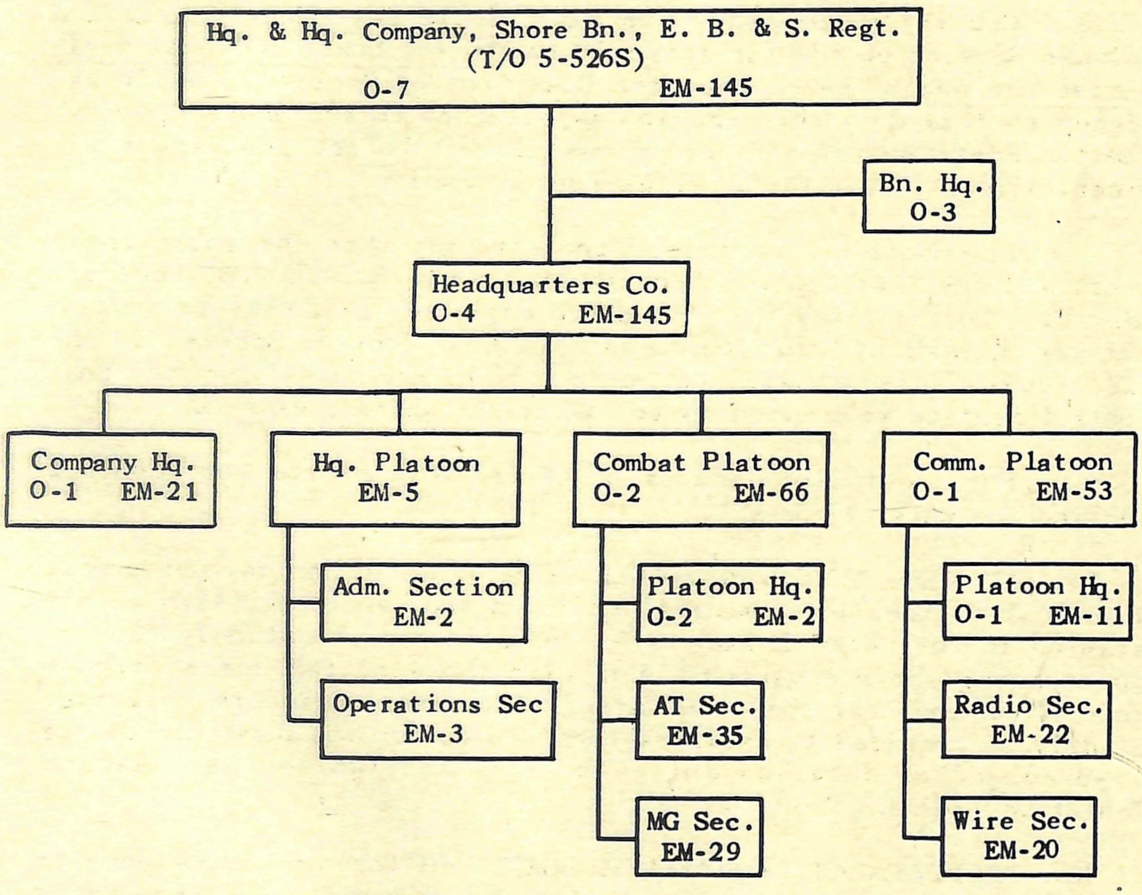


Fig. 2.--Organization of Hq. & Hq. Co., Shore Bn.

10. OTHERS WITH WHOM SHORE ENGINEERS WILL HAVE TO WORK.--Working in the same beach area with shore engineers, but performing different duties, will be a group of engineer boatmen known as the Boat

Control Section, and a group of medical men from the Boat and Shore Regimental Medical Detachment. These groups will play a most important part in the success of the shore engineer's work. Consequently he should learn what their duties are and what he must do to assist them.

11. BOAT CONTROL SECTION.--The work of the Engineer Shore Company is closely related to that of the Boat Control Section. The Boat Control Section is the descriptive name given the Boat Maintenance and Salvage Section of the Engineer Boat Company while it is functioning on the far shore. Organically this section is part of the Boat Company, and on the near shore prior to embarkation it performs second echelon maintenance on the boats of the Boat Company. On the far shore, however, it works with the shore units.

Generally speaking, the task of the Boat Maintenance and Salvage Section on the far shore is to control boats and boat traffic at the beach; hence the name Boat Control Section. While assigned to this duty this section is attached to the Shore Company, and the Boat Control officer, commander of the section, takes his orders directly from the Shore Company commander.

It cannot be emphasized too strongly that the shore engineers and the Boat Control Section must work shoulder to shoulder. Many will be the times that the shore engineers will have to suspend the performance of some job to aid the Boat Control Section in the execution of a more vital one; many will be the times when the Boat Control Section will pitch in to assist the shore engineers.

For a detailed discussion of the work of the Boat Control Section see pars. 27-33.

12. ATTACHED MEDICAL PERSONNEL.--The attached medical personnel, 1 medical officer and 9 medical enlisted men, will establish an aid station in the Shore Company area and will assist not only the injured among shore engineers, but also those of the combat troops injured on and near the beach area. The shore engineers will frequently be required to assist these "medics" in the handling of the injured. (For detailed duties of this section see par. 44 and Tentative Training Guide No. 4).

13. ASSIGNMENT OF PERSONNEL TO BOATS.--Of foremost importance to the shore engineer is the matter of boat assignment. He frequently has this question in mind: "If I am to work on the far shore, how and when do I arrive there?" To say that the shore engineer is transported in waves of boats operated by the Boat Company is only a partial answer to the how part of the question. In what boats of what waves and at about what stage of the operation is quite another

and much more complicated matter. Every shore engineer who is really interested in his job should have read enough of Tentative Training Guide No. 2, *A Manual for Boat Crews*, to understand that the Engineer Boat Company lands a battalion landing team on the far shore in "waves", and that a "wave" is a number of boats hitting a given beach at approximately the same time. He should understand further that it takes 60 boats to land a battalion landing team and that a battalion landing team is generally landed in 7 waves of not less than 6, nor more than 10, boats. He should know also that H-hour is the time the first wave of boats "hits" the far shore and that it is generally about H plus 90, or about 90 minutes after the first wave hits the beach, that the last wave of boats arrives at the far shore. The shore engineer should remember, of course, that his company is a vital part of the battalion landing team, and that somewhere in that 7 waves of boats (with a few minor exceptions) there will be a "boat space" for him and for each member of his company.

Boat assignment, or the assignment of personnel and equipment to boats, is the responsibility of the battalion landing team commander. He prepares the Boat Assignment Table showing what personnel and equipment is carried in each boat of each wave, and the time when that wave is to arrive on the far shore. This table not only assigns combat troops and their equipment to boats, but also provides for the assignment of the shore engineers and their equipment. The assignment of personnel and equipment to craft must necessarily depend upon the tactical situation, and no one can say positively that a certain section or platoon of shore engineers will be assigned to a given wave any more than one can say that certain elements of the combat troops will be transported in a given wave. This much, however, is known: that the shore engineer has many tasks to perform which are vital to the success of the operation; that these tasks must be performed on the far shore; that there is an approximate time at which these tasks must be performed; that the shore engineer must be present on the far shore in time to perform them; and that this time will depend upon the assignment to waves of other elements of the battalion landing team.

It therefore becomes necessary to determine about what stage of the operation the various combat elements of the battalion landing team will arrive on the far shore in order to approximate the time at which elements of the Engineer Shore Company should arrive. To do this we presume a normal situation in which the enemy has in its favor a fairly well defended shore line, and we have in our favor either the element of surprise or air and naval superiority, or both. In that case the battalion landing team commander would probably assign the combat elements of his command to waves as follows:

Number	Name of Wave	Principal Combat Elements in Wave
Wave I	Assault Wave	Assault Elements of 2 Assault Rifle Companies
Wave II	Support Wave	Support Elements of 2 Assault Companies
Wave III	Fire Power Wave	Heavy Weapons Company
Wave IV	Reserve & Command Wave	Infantry Bn. C. O. and Bn. Hq. and Reserve Rifle Company
Wave V	Antitank Wave	AT Platoon, Bn. Hq. Co., and AT Platoon, Regt'l AT Co.
Wave VI	Field Artillery Wave	Field Artillery Battery (105-mm howitzer)
Wave VII	Ammunition and Supply Wave	Essential transportation and ammunition for elements already landed.

14. ASSIGNMENT OF SHORE ENGINEERS TO WAVES.--If the Shore Company is to perform its mission of facilitating the landing, the movement inland, and the resupply of the combat elements of the battalion landing team listed above, when then must elements of the Shore Company be transported to the far shore? In general terms the answer is this: it is essential that command, reconnaissance, and communication details be landed early in the operation; that defense units be landed early enough to protect the beach area from infiltrating personnel or vehicles and from attack from the air; that obstacle removal and gas decontamination personnel land prior to road building elements; that road building units land prior to vehicles and artillery; that longshoremen with their transportation and other equipment be landed before the landing of resupply; and that remaining shore personnel be landed as soon as their use is essential. Therefore, one suggested method of assignment of shore personnel and principal items of equipment to waves and to boats is as given in Figure 3 below:

Fig. 3.--Assignment to Waves and Boats.

WAVE I - ASSAULT
H

BOAT 14 LCVP

ENGINEER BOAT COMPANY
Boat Control Section 1

BOAT 15 LCVP

ENGINEER BOAT COMPANY
Boat Control Section 1

WAVE II - SUPPORT
H plus 5

(none)

WAVE III - FIRE POWER
H plus 15

BOAT 34 LCVP

ENGINEER SHORE COMPANY
Hq. Platoon 1
Captain, C. O. 1
1st Sergeant 1
T/5, Reconnaissance 1
T/5, Clerk 1
Beach Marking Team
(Utility Platoon) 3
Message Center Men 3
.30 Caliber Machine Gun Crews 6

SHORE BN. HQ. COMPANY
Communication Platoon
Enlisted Men 2

ENGINEER BOAT COMPANY
Boat Control Section
Boat Control Officer 1
Boat Control EM 13
Total 32

BOAT 37 LCVP

ENGINEER SHORE COMPANY
Hq. Platoon
Reconnaissance Officer
2nd in Command 1
Weapons Officer 1
T/5, Reconnassiance 1
Clerk 1
Reconnaissance Team
(Utility Platoon) 3
Message Center Men 4
.30 Caliber Machine Gun Crews 5
SHORE BN. HQ. COMPANY
Communication Platoon
Enlisted Men 3

ENGINEER BOAT COMPANY
Boat Control Section EM 13
Total 32

WAVE IV - RESERVE AND COMMAND
H plus 40

BOAT 44 LCM(3)

ENGINEER SHORE COMPANY
Pioneer Platoon
First Lieutenant 1
Bulldozer Operator 1
Decontamination Equipment
Operator 1
Demolition Man 1
Laborers 2
SHORE BN. HQ. COMPANY
Combat Platoon
(.50 Caliber Machine Gun)
Sergeant 1
Corporal 1
Privates 3
Medical Detachment
Officers 1
Aid Men 4
Total 16

Tractor, with Angledozer, Road Building Materials, and Equipment

BOAT 45 LCVP

ENGINEER SHORE COMPANY
Pioneer Platoon
Demolition Foreman 1
Decontamination Equipment
Operator 2
Demolition Men 2
Laborer 1
SHORE BN. HQ. COMPANY
Combat Platoon
(.50 Caliber Machine Gun)
Corporal 1
Privates 3
Medical Detachment
Aid Men 5
Total 15

WAVE V - ANTITANK
H plus 50

BOAT 53 LCM(3)

ENGINEER SHORE COMPANY
Pioneer Platoon
1 Pioneer Section 12
½ Pioneer Section 6
Bulldozer Operator 1
Total 19

Tractor, with Angledozer, Road Building Materials, and Equipment.

BOAT 51 LCM(3)

ENGINEER SHORE COMPANY
Pioneer Platoon
Platoon Sergeant 1
Pioneer Section 12
½ Pioneer Section 6
Bulldozer Operator 1
Total 20

Tractor, with Angledozer, Road Building Materials, and Equipment.

WAVE VI - FIELD ARTILLERY
H plus 70

BOAT 61 LCM(3)

SHORE COMPANY
Utility Platoon
Platoon Leader 1
Enlisted Men 10
DUKW Operator 1
DUKW Engineman 1
SHORE BN. HQ. COMPANY
Combat Platoon
1-37-mm Crew 5
Total 18

1 - 2½ Ton Amphibian Truck
1 - 37-mm AT Gun in Truck

BOAT 66 LCM(3)

ENGINEER SHORE COMPANY
Utility Platoon
Enlisted Men 10
DUKW Operator 1
DUKW Engineman 1
SHORE BN. HQ. COMPANY
Combat Platoon
1 37-mm Crew 4
Total 16

1- 2½ Ton Amphibian Truck
1 - 37-mm AT Gun in Truck

WAVE VII - AMMUNITION AND SUPPLY
H plus 90

BOAT 74 LCM(3)

ENGINEER SHORE COMPANY
Utility Platoon
Enlisted Men 9

BOAT 72 LCM(3)

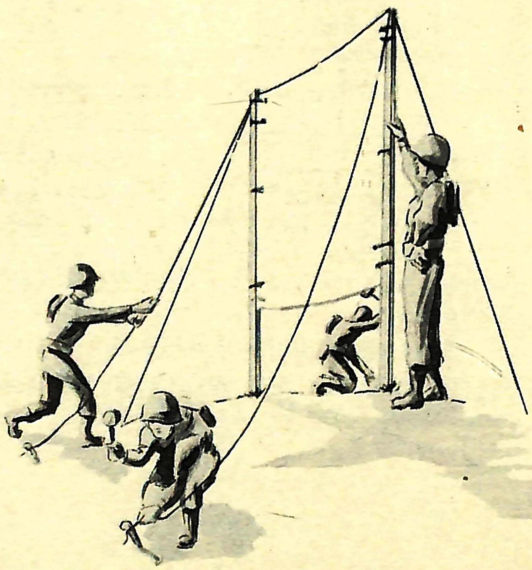
ENGINEER SHORE COMPANY
Utility Platoon
Enlisted Men 9

BOAT 75 LCM(3)

ENGINEER SHORE COMPANY
Utility Platoon
Enlisted Men 10

BOAT 71 LCM(3)

ENGINEER SHORE COMPANY
Utility Platoon
Enlisted Men 10



CHAPTER 4

HEADQUARTERS PLATOON, SHORE COMPANY, AND ATTACHMENTS

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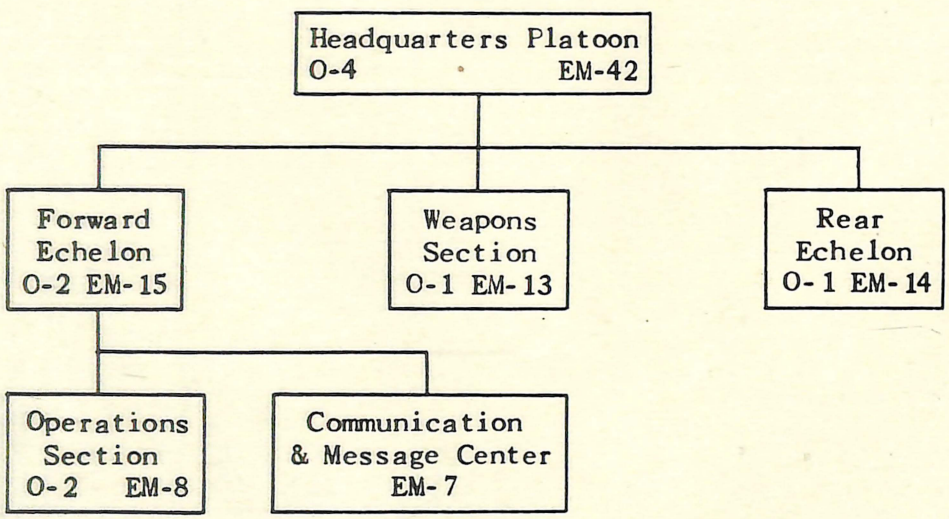


Fig. 4.--Organization of Headquarters Platoon.

15. GENERAL.--Subject to changing tactical situations, the Forward Echelon and Weapons Section of the Shore Company, with attached men from the Utility Platoon, together with certain attached communi-

cation personnel from Shore Battalion Headquarters Company and the attached BOAT CONTROL SECTION, will land early in the operation, normally in the third wave. To avoid "putting all the eggs in one basket" and to insure that the occupants of one boat will be able to "carry on" in the event of the loss of any other boat, these groups are generally divided between two boats of the third wave in general accordance with Fig. 3.

By the time these groups reach the far shore at about H plus 15, the infantry assault troops and supporting combat engineers who landed in the first two waves should have been able, with support from the air and perhaps also from naval vessels at sea, to have made paths through obstacles and to have pushed the enemy back from the landing area a sufficient distance to permit shore elements landing at this time to proceed with their beach organization activities. The most immediate of these activities have to do with beach marking, reconnaissance, and communication.

16. THE SHORE COMPANY COMMANDER.--The Shore Company commander lands with the Operations Section of the Forward Echelon, and his initial duties are closely connected with the duties of that section. While the company commander is responsible for all the activities of his company, for everything his company does or does not do, there are certain duties which he must personally perform. These are known as his primary duties, which are as follows and are performed in about the following order:

a. Establishes contact with infantry assault companies. Immediately upon landing, the company commander establishes contact with the infantry assault companies ashore (usually two) and ascertains the extent of their progress. This is a routine but most important function, since the activity of the Shore Company depends to a large extent upon the measure of success met with by the infantry. He establishes his contact by sending two runners (messengers) from the Message Center Section with instructions to locate the infantry companies and bring back information regarding their situation as well as the enemy situation. This information is important not only to the Shore Company commander but also to other commanders (particularly the battalion landing team commander) arriving on the far shore later in the operation.

b. Selects sites for beach limit markings. The company commander personally selects the sites for the beach limit markings and directs their setting up by the beach marking teams. (For discussion of "beach markers" and beach marking see par. 21).

c. Selects unloading points for vehicles. In conjunction with the boat control officer, the company commander selects the unloading

points for wheeled vehicles and directs the marking of these points by the beach marking teams (see par. 21). An unloading point for vehicles is nothing more than the beginning of a beach road, and the terms "vehicle unloading point marker" and "beach roadway marker" are interchangeable. The company commander confers with the boat control officer in the selection of these points because of the latter's technical knowledge regarding the advisability of beaching boats carrying vehicles at a particular point on the beach. In addition to selecting points where boats can be properly beached, the company commander is concerned with the selection of points which can be lengthened into beach exit roads, which can in turn be tied in with lateral roads to form an adequate supply road-net.

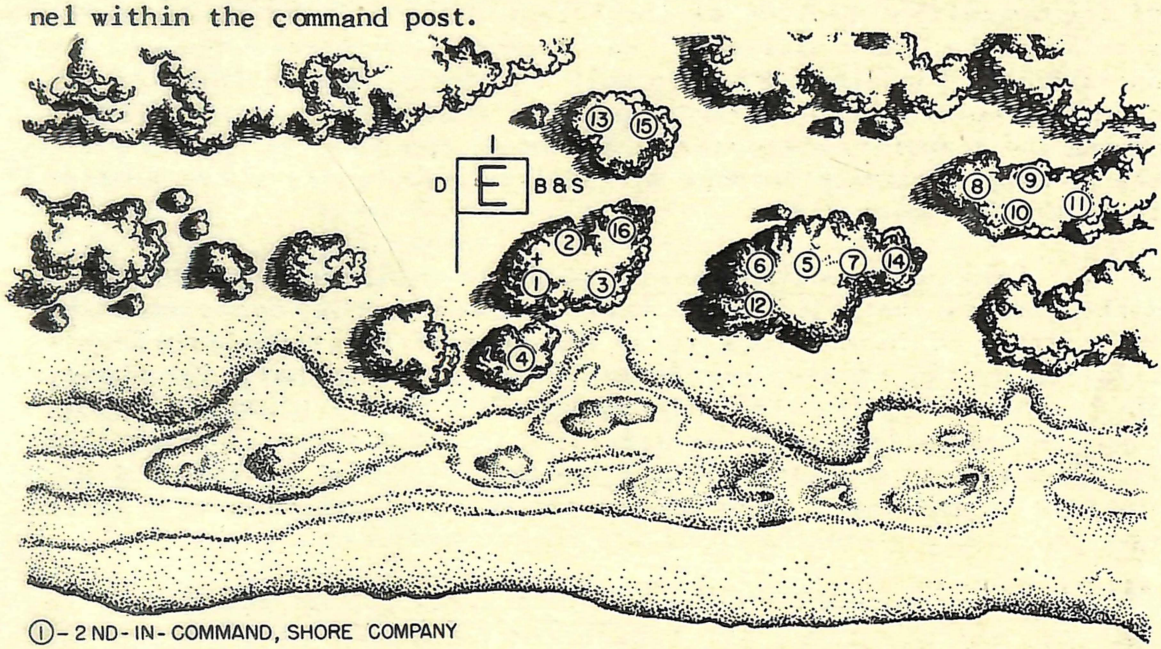
Actually the selection of beach roadways is the combined responsibility of the Shore Company commander, the reconnaissance officer, and the boat control officer. Normally, unloading points for vehicles and a beach roadway system are tentatively selected in advance after these officers have made a study of maps, aerial photographs, reports of scouts, and other intelligence. When they arrive on the far shore, therefore, they are concerned chiefly with checking and verifying their previous selections by actual ground reconnaissance, making such changes as appear necessary.

The combined responsibility of the three officers mentioned above in the selection of beach roadways may be briefly stated thus: after reconnoitering the sites tentatively selected, the company commander and the boat control officer collaborate on the selection of unloading points for vehicles; the company commander determines the general location of the beach roadways to tie into the existing road-net (if any) and the projected layout of dumps; the reconnaissance officer, following the general plan of the company commander, selects and directs the marking of the precise routes the roadways are to follow.

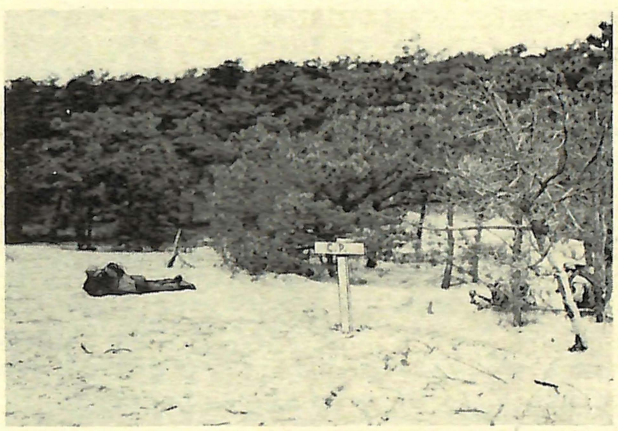
d. Locates Shore Company Command Post. The Shore Company commander reconnoiters for and selects the site for the Shore Company command post and message center. The Shore Company command post is generally a more permanent installation than command posts of other type organizations. It is not only the center of all activity within the Shore Company area, but it is also an "information point" for commanders already ashore and for those arriving at later stages of the operation. The battalion landing team commander, for example, arriving on the far shore in the fourth or fifth wave, would know very little of the situation ashore. He could acquaint himself with the situation at the command post of the Shore Company.

The site selected for the command post should be in the first suitable cover off the beach proper, should be near the center of the

beach, and afford, if possible, an excellent view of the entire beach. The site selected should cover sufficient area to accommodate approximately 16 men, who will be scattered in "working groups" in the command post and message center so that bursting bomb or shell fragments will cause as few casualties as possible. In locating the command post, advantage must be taken of all natural cover and concealment, and artificial camouflage must be added if necessary. The following schematic diagram shows the approximate location of personnel within the command post.



①– 2 ND-IN-COMMAND, SHORE COMPANY
②– 1 ST SGT.
③– T/5, CLERK (SITUATION MAP)
④– PVT, RECORDS UNITS
⑤– MESSAGE CENTER CHIEF
⑥– MESSAGE CENTER CLERK
⑦– MESSAGE CENTER CLERK
⑧ ⑨ ⑩ ⑪ } MESSAGE CENTER MESSENGERS
⑫– RADIO OPERATOR
⑬– ALTERNATE RADIO OPERATOR
⑭– SWITCHBOARD OPERATOR
⑮– ALTERNATE SWITCHBOARD OPERATOR
⑯– LINEMAN
} ★



★ ATTACHED FROM COMMUNICATION PLATOON, SHORE BATTALION HEADQUARTERS COMPANY.

Fig. 5.--An Excellent Command Post Site.

nition dumps and fuel dumps must be well separated, because fuel and explosive shells make very poor "neighbors"; fourth, that water and fuel must be separated since water and many types of fuel are transported in the same type containers, and in the course of handling, particularly at night, water and gasoline might become mixed-- with obvious results; fifth, that all dump sites must be accessible to the existing road-net or road-net to be established. (For detailed discussion of dumps, see par. 43).

c. Marks mined and gassed areas. If in making his reconnaissance, the reconnaissance officer discovers any areas in which the enemy has placed antitank or antipersonnel mines or which have been contaminated by gas, he supervises the appropriate marking of these areas, and, if necessary, provides personnel to guard them. This is necessary to prevent personnel and vehicles, particularly those arriving in later waves, from entering such danger zones. (For further discussion of marking of mined and gassed areas see par. 37).

d. Supervises the keeping of the situation map. The Shore Company situation map is a source of much valuable information, and while it is actually kept by a clerk (T/5), its importance requires that the keeping be closely supervised by the reconnaissance officer. (For detailed discussion of the situation map see par. 19).

e. Supervises the functioning of the command post and message center. During the beach organization phase of the operation and after having completed his initial duties of reconnaissance and when not otherwise engaged, the reconnaissance officer should station himself at the command post where he will supervise generally all activity within that installation. In addition to those duties already mentioned, command post activities will include communication and message center functions, keeping records of supplies and units landed, and furnishing guides for units landing. It is particularly important to have guides from the command post meet commanding officers arriving on the far shore during later stages of the operation to inform them of the situation ashore and to direct them to the Shore Company command post, or other designated location, as required.

18. FIRST SERGEANT, SHORE COMPANY.--Besides being the first enlisted assistant to the company commander and in addition to performing the normal duties required of that grade, the first sergeant assists in the supervision of command post activities. When he is not otherwise engaged, he should station himself at the command post and, when practicable, should remain there at all times when the reconnaissance officer is absent.

19. THE SITUATION MAP.--A clerk, (T/5), a member of the Operations Section, keeps the Shore Company situation map, since the Tables of Organization provide no draftsman. The importance of an accurate, up-to-the-minute situation map cannot be overemphasized. The situation map should be a reasonably accurate sketch of the beach area, showing such important terrain features as the shore line, the beach proper, the dune line, wooded areas, streams, hills, etc. It should show all Shore Company installations, and should be certain to include the following:

a. Limits of the beach, to include the location of beach limit markings.

b. Location of roads, to include all roads within the Shore Company area: beach exit roads, lateral roads, and turnarounds. Roads, of course, must be "sketched in" and beach roadway markings shown.

c. Location of the Shore Company and Boat Control Section command posts.

d. Location of dumps for all types of supplies.

e. Location of Shore Company and attached defensive weapons including .30 caliber machine guns of the Shore Company and the .50 caliber machine guns and 37-mm guns from Headquarters Company of the Shore Battalion and any weapons procured from disabled boats.

f. Location of mined and gas contaminated areas.

g. Location of any combat units within the beach area, if practicable, and, for units that have moved beyond the beach area, the direction in which they moved, the approximate distance they had advanced inland at the time of the last report, and the time that the last report was received.

The information regarding the approximate location of combat troops is of foremost interest to tactical commanders arriving on the shore, while information regarding Shore Company installations is of interest not only to the tactical commanders but also to commanders of engineer amphibian units coming ashore in that area.

Training should be held at frequent intervals within the company to give instruction and practice in the keeping of the situation map, and at least 2 enlisted men in addition to the T/5, clerk, should be trained until thoroughly qualified to do so. This instruction should include sketching, familiarization with all activities of the Shore Company, and a thorough familiarization with conventional signs and military symbols embodied in FM 21-30.

It will be necessary for the clerk keeping the situation map to accompany the reconnaissance officer while he is reconnoitering for the various installations. The remainder of the time he will generally be at the command post.

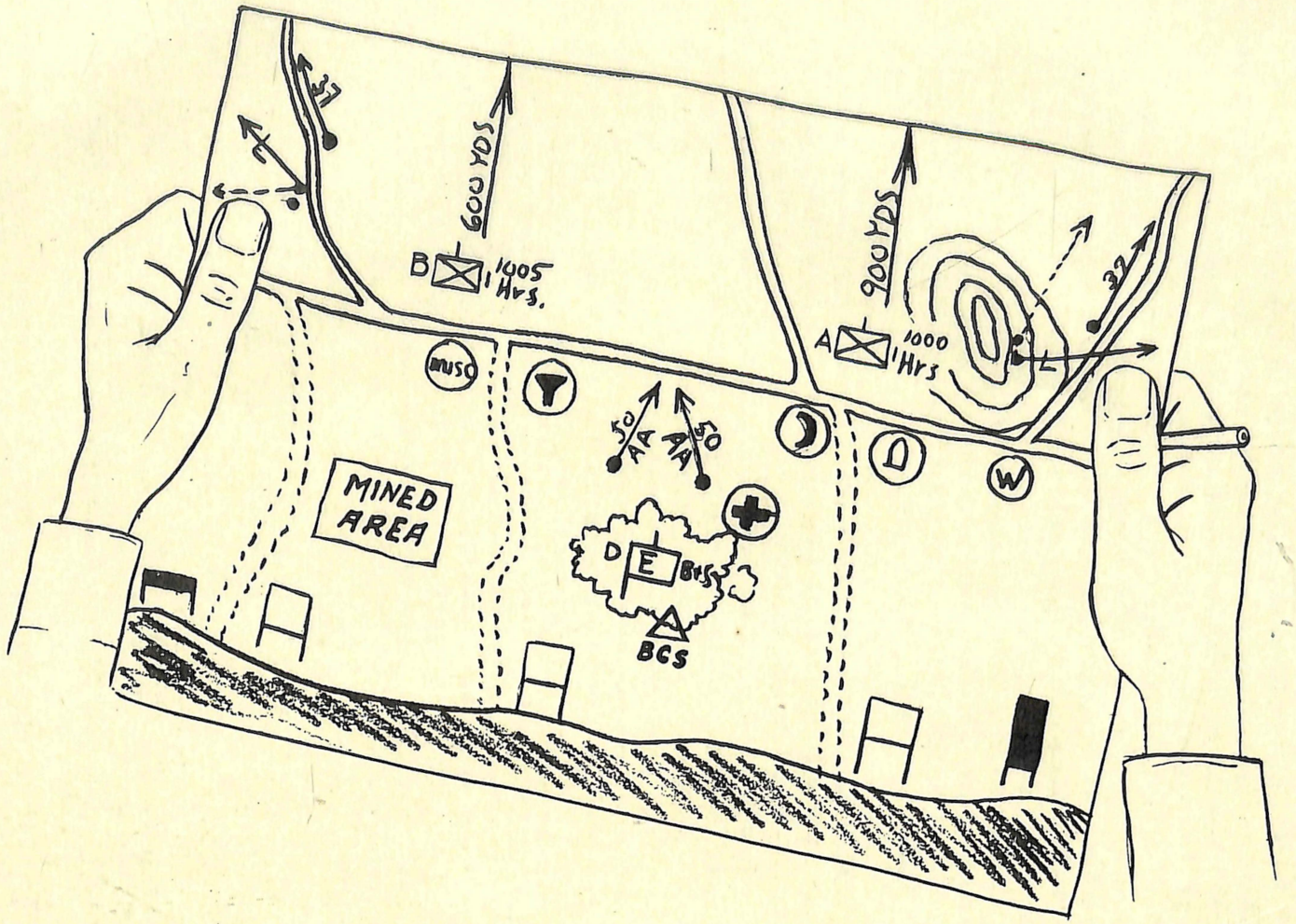


Fig. 6.--A Completed Shore Company Situation Map, Including All Installations Generally Represented.

20. RECORD OF UNITS LANDING.--A private first class records units landed in the beach area. To facilitate this activity, he should be furnished a copy of the Boat Assignment Table. This will enable him to "check off" boat numbers as boats arrive at the beach. The time of the arrival of each wave (or of each boat where boats arrive separately) should be indicated. An accurate record of units landing can be of immeasurable value to commanders of combat units, who frequently will send runners back to the Shore Company command post to learn whether a particular boat in a particular wave has arrived with a particular squad or section of troops. A hurried check by the recorder will reveal this information.

Copies of the Boat Assignment Table must not be allowed to fall into the hands of the enemy. Security measures dictate that the recorder be instructed to destroy the Boat Assignment Table in the event of the likelihood of his capture.

21. BEACH MARKING TEAMS.--One of the most significant changes in the latest approved Tables of Organization for the Shore Company is the elimination of beach marking teams as such from the Operations Section. However, the tasks formerly performed by such teams must still be performed. Reliable reports of recent landing operations reaffirm the necessity for accurate beach marking. Two such teams of 4 men each must be provided from personnel within the company. In the Operations Section are 2 reconnaissance men, T/5's, who will provide the nucleus for such teams (1 for each team). The remainder of the teams, 6 men (3 for each team), must be provided by the Utility Platoon. The 6 men from the Utility Platoon should be carefully chosen and thoroughly instructed in their duties as beach markers. When they have completed their beach marking duties, and after the remainder of the Utility Platoon has arrived on the far shore, these men will report to the commander of the Utility Platoon and, for the remainder of the operation, will function as members of that platoon.

The beach marking teams land with the Operations Section early in the operation and perform the following duties in about the following order:

a. Set up appropriate beach limit markers. (See Appendix I, *Beach and Hydrographic Markings*, for all beach marking symbols). Beaches are designated by colors, BEACH RED, BEACH BLUE, BEACH GREEN, BEACH RED-2, etc.

By day the limits of the beach are marked by appropriately colored fluorescent cloth panels. Fluorescent cloth has the quality of reflecting much light and is visible at much greater distances than ordinary cloth. It is quite expensive, and as current regula-

tions forbid its use for training purposes, it is used only in actual operations. For training purposes, painted markers made of salvaged canvas are used. The beach marking teams should securely tie the markers to the poles, make sure that at least 3 guy ropes are provided for each pole, and check that sufficient stakes are provided for guys. The complete marker should be assembled and rolled neatly prior to embarking from the near shore. Every possibility that guys may become tangled should be eliminated. Remember that the marker will very likely have to be erected under enemy fire, that it attracts attention, and that a minute saved in erecting it may save a life.

Beach limit markers should be erected at well selected points on the assigned limits of the beach. Care must be taken to insure that they are easily visible from the sea and that they are reasonably near the water's edge but are not sufficiently near to permit the rising tide to wash them away. In erecting markers, it is not necessary to drive the poles far into the ground. They need be placed in the ground only approximately 1 foot, and the sand of many beaches is soft enough to permit this without driving. If a shallow hole is dug for each pole with a shovel and the guys are properly secured to stakes, there will be no difficulty with markers falling or blowing down.

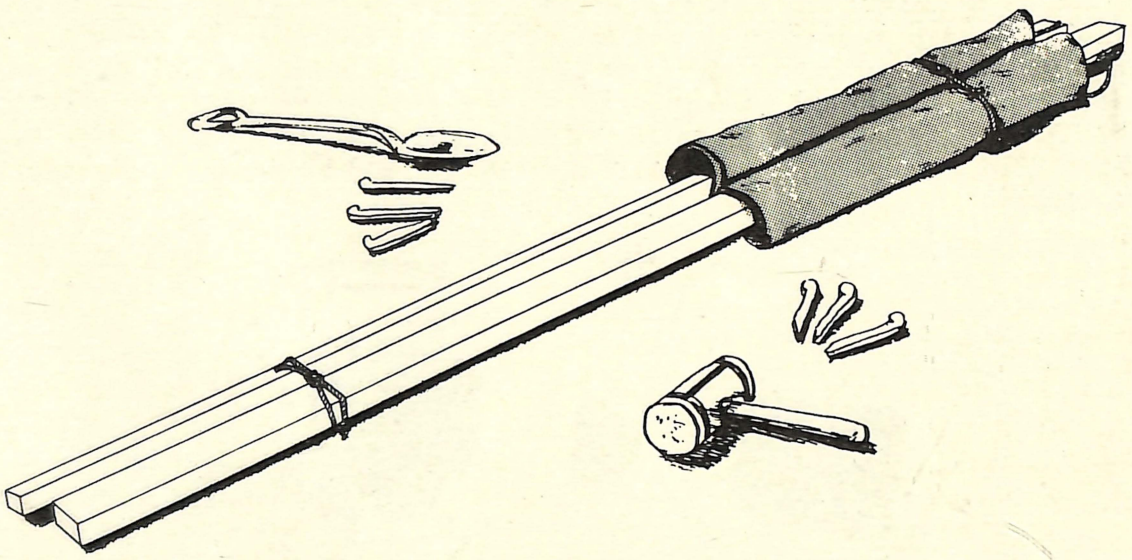


Fig. 7.--Rolled Beach Marker With Tools Necessary for Erection.

The marker in the following sketch has been properly erected. Note the holes in marker. Frequently this is done to eliminate wind resistance. When holes are cut, however, they must be carefully hemmed to prevent unraveling.

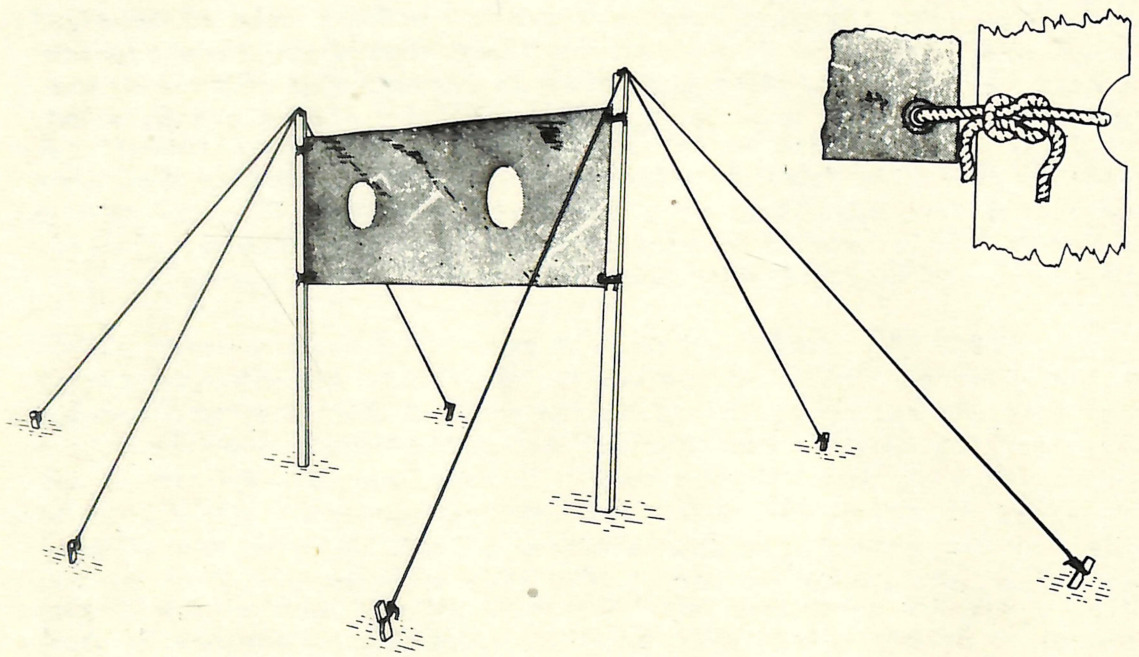


Fig. 8.--Completed Beach Marker.

By night the limits of the beach are marked by colored lights. Lights used must not be too bright and must be hooded so that they can be seen only from seaward-- not from the air or from the land. Lights may be erected on the same poles used for cloth markers merely by driving nails into the poles in the proper pattern. When used in pairs, they must be placed far enough apart to prevent diffusion.

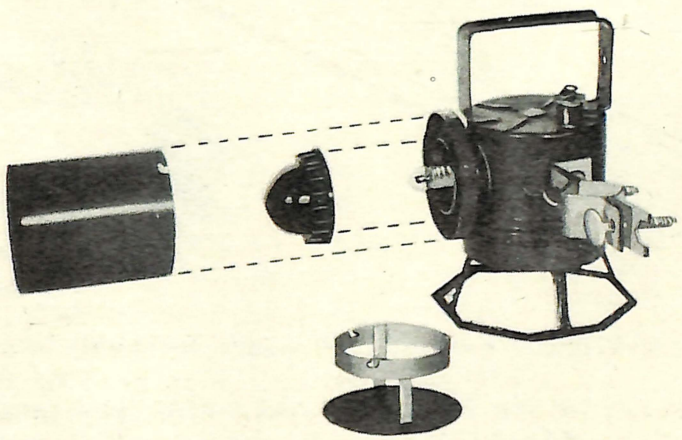


Fig. 9.--Beach Light Showing Colored Lens, Hood, and Shield.

Lights similar to the one in the above figure with interchangeable "screw-on" colored lenses and removable hood are satisfactory for beach marking. Ordinary flashlight batteries furnish the power. This same light may be converted to flashing type by the insertion of a small thermostat control element between the bulb and the battery.

b. Unloading point markers. Beach marking teams must set up unloading point markers for vehicles and for all types of supplies. Standard beach marking symbols provide markers for beach roadways, ammunition, fuel, rations, water, medical supplies, and miscellaneous supplies and equipment. Normally, the only markings which must be set up during the beach organization phase are the beach roadway markers. Other markings generally will be set up when boats begin to arrive on the far shore carrying resupply. The rules for the erection of beach limit markers apply generally to unloading point markers.

c. Beach roadway markers must be set up by the beach marking teams approximately 10 feet to the right of the beach roadway or proposed beach roadway as seen from seaward. Roadway markers must always be on the same side of the road, so that boats carrying wheeled vehicles will know on which side of the road marker to land, the beach roadway itself being difficult to see. Designating the right side of the road as seen from seaward as the site for the marker is necessitated by the fact that most of the training of engineer amphibian units requiring the use of tank lighters is with the Bureau Type LCM(3), which has the pilot house aft on the starboard side of the boat, thus enabling the coxswain to gauge his distance from a road marker better if it is on his right than if it were on his left. On the Higgins type LCM(3) the pilot house is also aft but it is amidships, and it makes little difference from a standpoint of vision whether the marker is on the right or left of the road. It is repeated, for emphasis, BEACH ROADWAY MARKERS MUST BE PLACED TO THE RIGHT OF BEACH ROADS-- AS SEEN FROM SEAWARD.

d. Marking of other Shore Company installations. In addition to installations already marked, the beach marking teams must mark all other Shore Company installations including the command post and the supply dumps, and directional signs should be placed leading thereto. These signs (both installation markers and directional signs) should be constructed of wood or canvas held by wooden stakes, and must be large enough to be visible from the beach but small enough to be unnoticeable from the air. Certain tactical situations, particularly those which present much danger from infiltrating patrols and snipers, will forbid the use of any signs.

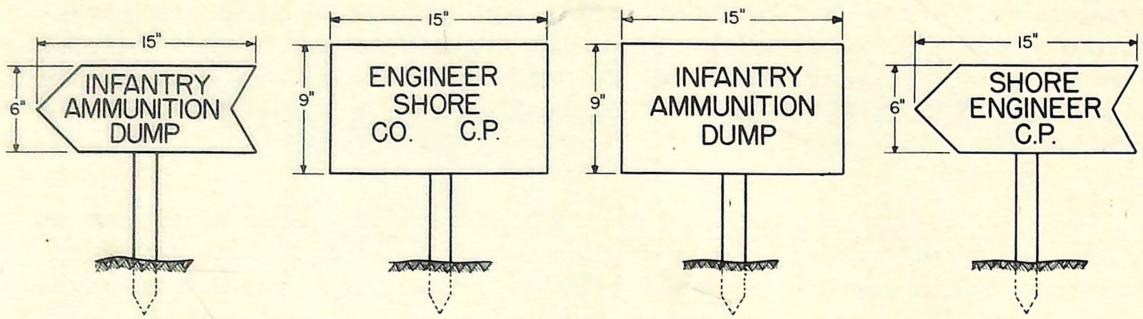


Fig. 10a.--Examples of Installation Markers and Directional Signs Made of Wood. Dimensions are suggested only.

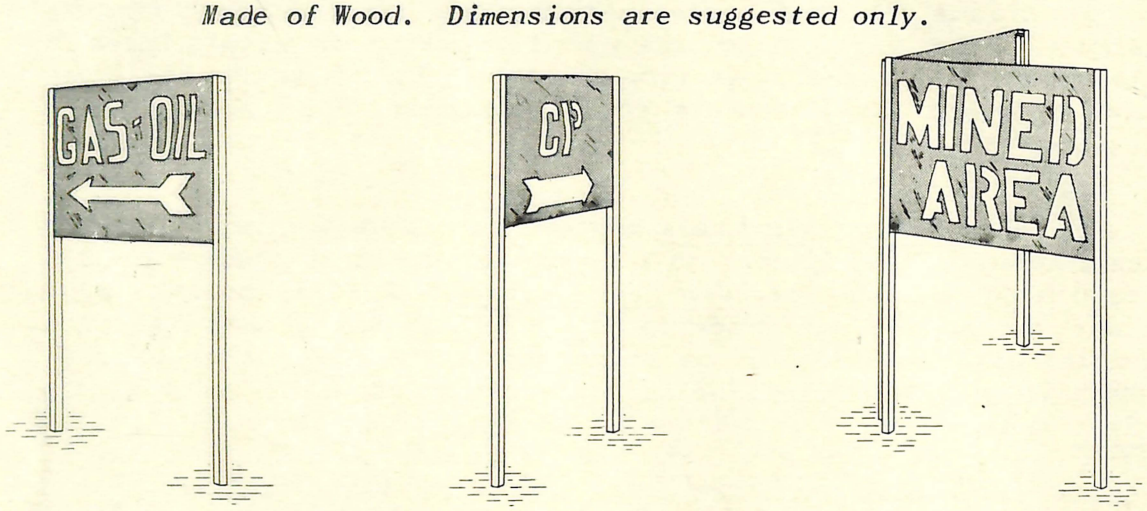


Fig. 10b.--Examples of Markers and Directional Signs Made of Canvas. These are collapsible.

e. Marking of mined and gassed areas. Under the direction of the reconnaissance officer, the beach marking teams must mark mined and gassed areas. In addition, members of those teams may be required to guard such areas until they can be cleared. The necessity for marking and guarding of these danger zones was discussed in par. 17c. The method of marking them is shown in Fig. 11.

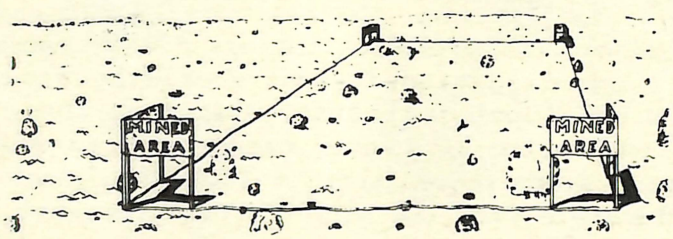


Fig. 11.--Properly Marked Mined Area.

22. COMMUNICATION AND MESSAGE CENTER SECTION.--There are certain organizations with which the Shore Company must maintain constant contact and communication. The Shore Company is supporting combat units and contact with supported units is essential; it is a part of the Shore Battalion and takes its orders from the Shore Battalion commander-- contact with Shore Battalion Headquarters is essential; it is working side by side with at least one and possibly two Shore Companies-- contact with adjacent Shore Companies is essential. The job of establishing and maintaining contact is the responsibility of the Communication and Message Center Section. The personnel in the Shore Company's Message Center Section is, however, inadequate for carrying out these communication functions. Furthermore, the Shore Company is allotted no communication equipment. There will be attached, therefore, from the Communication Platoon of the Shore Battalion Headquarters Company additional personnel plus the necessary signal equipment to enable the Message Center Section to perform its communication functions. Attached personnel will generally consist of 2 radio operators, 2 switchboard operators, and 1 lineman, who bring with them a radio (SCR-284), a switchboard (BD-71), 2 telephones (EE-8-A), wire, and other necessary signal equipment.

The Shore Company Message Center Section, thus augmented, performs the following communication functions:

a. Establishing and maintaining contact by wire, radio, or runner with adjacent Shore Companies-- contact from left to right. It is necessary that some type of communication be established between adjacent Shore Companies. Much valuable and often vital information can be exchanged between such companies concerning activity of the enemy, activity of friendly troops, movement of supplies, boat movements, and other matters. Contact will be established initially by radio or runner. Later when the situation has developed sufficiently, and if distance is not too great, a wire will be laid between the companies. In the establishment of communication either by wire or runner, it is the responsibility of the company on the left to establish the contact with the company on the right.

Contact with adjacent Shore Companies is not limited to communication between companies of the same battalion, but must also be maintained with companies outside the battalion, if they occupy an adjacent beach. Initially such contact may be by runner or visual signaling, later by wire and even by radio, the latter requiring perhaps only a change of frequencies.

b. Establishing and maintaining contact with the battalion landing team command post. In order adequately to perform far shore services for the battalion landing team, it is obviously necessary

that constant communication be maintained between the Shore Company and the battalion landing team command post. The battalion landing team commander with his headquarters normally arrives on the far shore in the fourth wave. As his headquarters moves inland across the beach, it leaves a wire behind. The shore engineer lineman "ties on" to that wire, attaches it to the Shore Company switchboard, and contact is established with the supported commander. The responsibility for establishing and maintaining this contact lies technically with the battalion landing team headquarters. If for any reason, however, contact is not established and maintained by that headquarters, the Shore Company must take the initiative to insure that some satisfactory means of communication is established and maintained, either by wire, radio, or messenger.

c. Establishing and maintaining contact with the Shore Battalion Headquarters by radio and wire. When the Shore Battalion commander is afloat and before he arrives on the far shore, contact is maintained between him and the companies of his battalion by radio. After he arrives on the far shore, contact is established by wire as well. (See par. 23a).

d. Maintaining, if necessary, contact already established with the 2 infantry assault companies. It will be remembered that one of the first duties of the company commander is to send runners to establish contact with the infantry assault companies ashore in that area. It will be necessary to maintain this contact at least until communication is established with the battalion landing team commander.

e. Visual Signaling. All communication and message center personnel within the Shore Battalion should in addition to their other duties be trained and prepared to function as visual signalmen. All these men should be expert in the use of semaphore, and certain designated men should be expert signal lamp operators. Either of these means of visual signaling can be used for intercommunication between Shore Companies occupying adjoining beaches, between elements of the Shore Company and elements of the Boat Company afloat, and might conceivably be used for communication between various elements and groups of the Shore Company scattered throughout the beach area.

f. Personnel. The following personnel will comprise the Shore Company Communication and Message Center Section after it has been augmented by personnel attached from the Shore Battalion Headquarters Company:

FROM SHORE CO.	*ATTACHED* FROM SHORE BN. HQ. CO.
1 - Communication chief	2 - Radio operators
2 - Message center clerks	2 - Switchboard operators
4 - Message center messengers	1 - Lineman

23. COMMUNICATION PLATOON, SHORE BATTALION HEADQUARTERS COMPANY (Fig. 12).--Those members of the Communication Platoon of Shore Battalion Headquarters Company not attached to Shore Companies will land with the Shore Battalion commander soon after the first 7 waves carrying the battalion landing team have landed. They install, maintain, and operate signal communication agencies for the Shore Battalion Headquarters. Their duties include the following:

a. Establishing and maintaining radio and wire communication between Shore Battalion Headquarters and all companies of the battalion. When the Shore Battalion Headquarters is afloat, it maintains contact with the 3 Shore Companies by radio. When it arrives on the far shore, contact by radio is continued, and, if practicable, wire communication is established between Battalion Headquarters and such companies as are ashore. The Shore Battalion command post may be set up in close proximity to the command post of one of the companies, in which case communication with that company will present a very minor problem, contact being maintained in some cases by runner. It will be those companies located at greater distances, or which are separated from Battalion Headquarters by difficult terrain, which will present the major communication difficulties. In some cases contact by runner or wire may be impossible, and only radio communication will be feasible.

When the Battalion Headquarters comes ashore, all communication between the companies of the battalion probably will be taken over by the battalion echelon.

b. Communicating by radio with the near shore elements of the boat and shore regimental command post. The Communication Platoon has as a part of its equipment 2 SCR-177B radios. These are powerful combination voice and code sets with a maximum range of 30 miles by voice and 100 miles by code. With one of these sets, contact can be maintained with the near shore elements of the boat and shore regimental command post.

c. Communicating by wire with the regimental combat team command post. Generally, regimental combat team headquarters and Shore Battalion Headquarters arrive on the far shore at about the same time. The Shore Battalion commander sets up his command post somewhere in the beach area, while the regimental combat team commander moves inland. As regimental headquarters moves inland it leaves a wire behind which Shore Battalion communication personnel attach to their switchboard, thus establishing contact with the supported regimental combat team.

d. Communicating with the forward echelon of the boat and shore regimental command post while afloat and after arrival on the far

shore. The Shore Battalion commander takes his orders from the regimental commander and must maintain constant communication with him. Radio will be used while he is afloat. Normally, upon arrival on the far shore, the regimental far shore command post will be located adjacent to the Shore Battalion command post. In this case contact by wire and messenger is easily established. The regiment runs a wire into the shore battalion switchboard and maintains communication with the infantry regimental combat team and with the shore elements through the Shore Battalion communication set-up.

For a better understanding of the communication functions of the Shore Battalion see Tentative Training Guide No. 5.

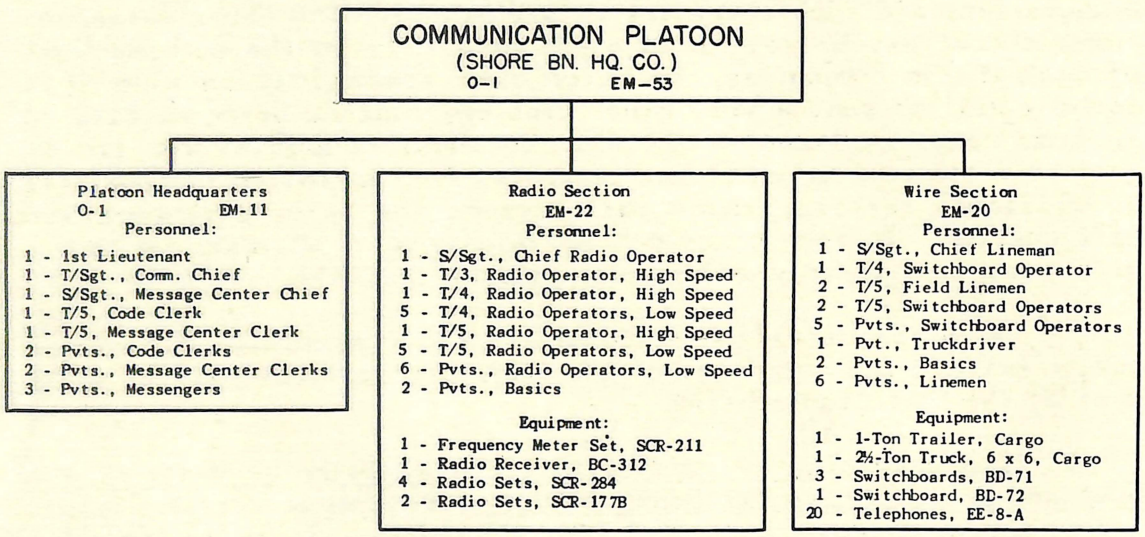


Fig. 12.--Organization of Communication Platoon, Headquarters Company.

24. **WEAPONS SECTION, HEADQUARTERS PLATOON** (Fig. 13).--The Weapons Section of Headquarters Platoon, Shore Company, consists of four .30 caliber air-cooled machine guns and the necessary crews. A second lieutenant commands the section assisted by a sergeant. The Weapons Section may be divided into 2 sections of 2 guns each. There is 1 corporal, light machine gunner, for each section of 2 guns, and 2 privates, gunners, for each gun.

There are 2 truckdrivers in this section, 1 for each of the following vehicles: one 1½-ton cargo truck and one ¼-ton truck. These trucks with their drivers probably will not be brought to the far shore with the advance elements of the Weapons Section, but will remain on the near shore until boat space is available for them. In the meantime, the guns will be "man-handled".

Other important items of the equipment of this section are 4 antitank rocket launchers, 1 for each machine gun crew.

WEAPONS SECTION	
O-1	EM-13
Personnel:	
1--2nd Lieutenant	
1--Weapons Sgt.	
2--Cpls., LMG Gunners	
8--Pvts., LMG Gunners	
2--Pvts., Truck Drivers	
Equipment:	
4--MG Guns, cal. .30	
4--Launchers, Rocket	
1--Truck, ¼ ton, 4x4	
1--Truck, 1½ ton, 6x6	

Fig. 13.--Organization of the Weapons Section.

The M1919A4 .30 caliber machine gun is mounted on the ground tripod mount M2. The gun and mount together weigh only about 43 pounds and can readily be "man-handled". It is a direct fire weapon designed to deliver automatic fire at close and mid-ranges against personnel and unarmored vehicles. It is primarily designed as an offensive weapon, but its properties of high mobility and low relief adapt it to the execution of missions of defense of the front and flanks of the beach area against infiltrating personnel or flanking maneuvers. These four .30's and their crews will be landed early in the operation, normally in the third wave. One section of 2 guns should land in each of 2 boats, and upon landing should move forward immediately toward the respective beach flanks, emplacing their weapons in the nearest cover. Later as the situation develops and the combat troops move further inland, these guns will be moved to positions further off the beach, but still within the Shore Company area, and still providing protection against infiltration and flanking movements. During the resupply phase of the operation, these weapons may be placed along the supply roads leading from the dumps inland to provide protection for the dumps. They are also used to provide protection for the 37-mm antitank guns. In placing these weapons every advantage must be taken of natural cover and concealment and fields of fire.

One rocket launcher should be kept with each gun to be fired by members of the gun crew. They are excellent direct fire weapons

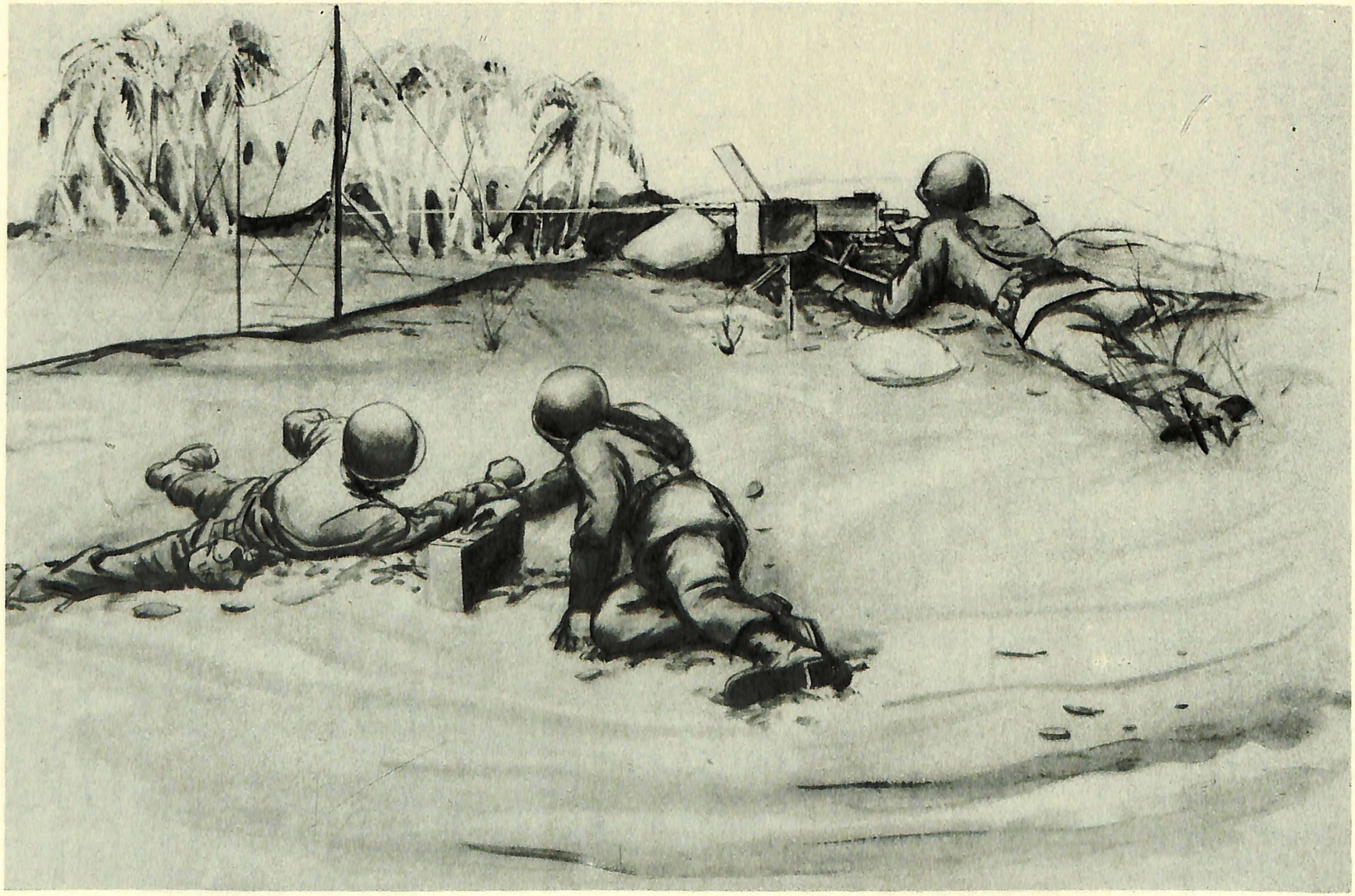


Fig. 14.--A Hasty But Effective Emplacement of Weapons.

against mechanized vehicles and furnish antimechanized defense for the crew served machine gun.

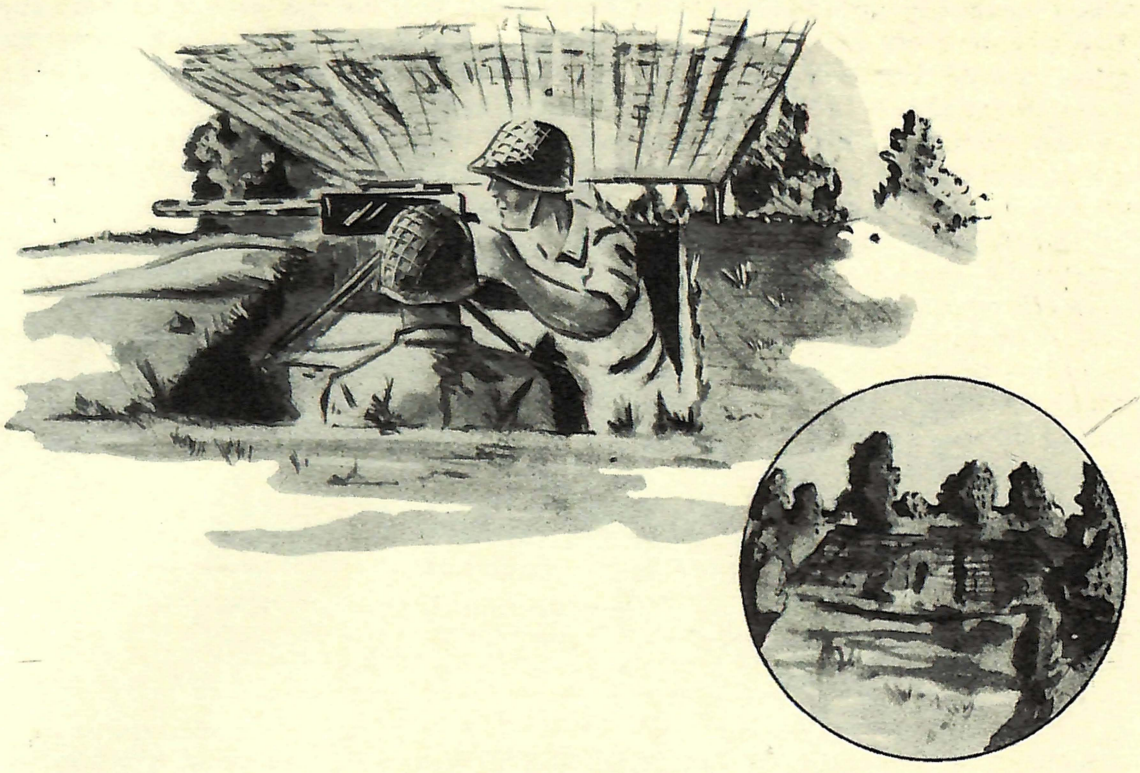


Fig. 15.--A Properly Emplaced and Camouflaged .30 Caliber L.M.G.

25. ATTACHED WEAPONS FROM SHORE BATTALION HEADQUARTERS COMPANY (Fig. 16).--The Combat Platoon of the Shore Battalion Headquarters Company has six 37-mm antitank guns and six .50 caliber antiaircraft machine guns plus the necessary crews. There are sufficient guns to allow the attachment of two 37's and two .50's to each of the 3 Shore Companies. The battalion commander may, however, divide them in any manner suitable to his plans.

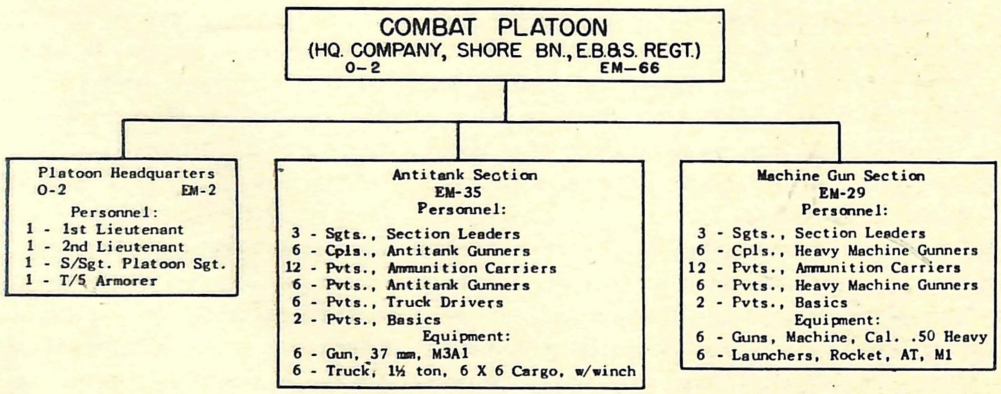


Fig. 16.--Organization of the Combat Platoon.

a. Attached Antiaircraft Weapons. The attached .50 caliber machine guns are mounted on the M3 antiaircraft mount, the gun and mount weighing approximately 500 pounds. Due to the urgent necessity for protection of the beach area against low flying planes, these guns should be brought to the far shore in the fourth wave, or as soon thereafter as boat space is available. They should be placed in such a way as to permit "all around" fields of fire laterally, and clear fields of fire overhead. These requirements preclude the use of overhead concealment such as trees or camouflage nets which cannot be quickly removed. Under normal circumstances guns should not be emplaced singly; normally, at least 2 guns should be emplaced to provide adequate protection for a single point objective. During the early stages of the operation 2 guns will generally be assigned the mission of protecting those points on the beach where unavoidable congestion will occur in unloading the boats. However, the scarcity of guns may demand that they be separated and operated singly in different parts of the beach area.

During later stages of the operation, battalion landing team beaches may be consolidated into regimental combat team beaches and the use of all the antiaircraft machine guns of the Combat Platoon will be coordinated, in which case guns will be moved inland to defend dumps, road junctions, and motor parks.

As in the Weapons Section of the Shore Company, there is allotted to the Machine Gun Section of the Combat Platoon 1 M1 antitank rocket launcher per gun. One launcher will remain with the crew of each gun, and will be used as a weapon of opportunity, primarily as an antimechanized weapon for defense of the machine gun and crew.

b. Attached Antitank Weapons. The attached 37-mm antitank guns are single shot weapons weighing 912 pounds, and fire a projectile of approximately 2 pounds. The primary function of this gun is defense against moving vehicular targets. In an operation where the situation is expected to develop so rapidly that the combat units will move forward and leave the beach area undefended save for that protection provided by the shore units themselves, it is necessary that some protection against tanks and other armored vehicles be furnished the Shore Company during the early stages of the operation. It is, therefore, necessary for the Shore Company to bring to the far shore, in not later than the sixth or seventh wave, its 2 attached 37-mm guns. These guns may be operated singly and should be set up to cover possible avenues of approach for armored vehicles. In covering an avenue of approach, the gun should be placed to fire where the movement of the target is restricted laterally by defiles such as ditches, banks, flanking swamps, woods or like obstructions. Obstacles, including road blocks, covered by fire must be used to the fullest extent practicable. In the absence of approaches which have

been channelized by natural or man-made obstructions, positions on ground where wide fields of fire are afforded should be selected. When effective concealment in firing position is impracticable, the gun squad will occupy a cover position while one of the members observes; and on the orders of the squad leader, the squad will move the gun into firing position. Alternate and supplementary positions must be selected and prepared in advance. (For details of employment of weapons see Tentative Training Guide No. 4).

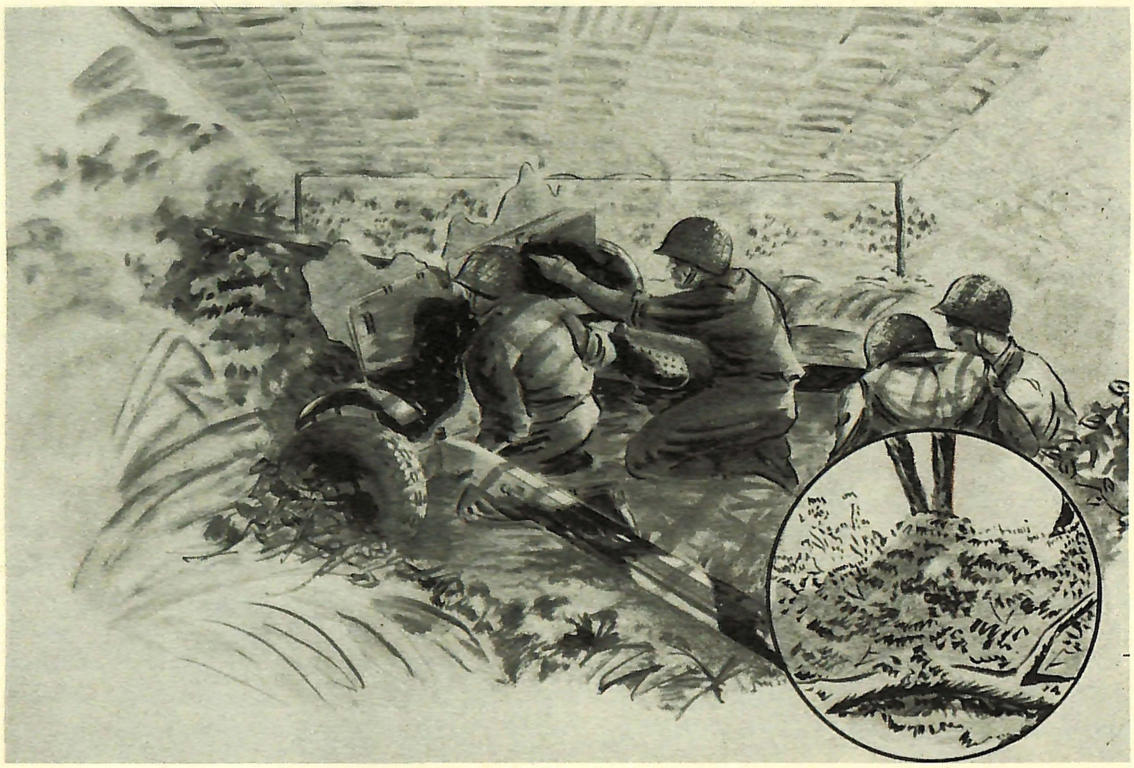


Fig. 17.--Properly Camouflaged Antitank Gun.

Six 1½-ton cargo trucks are provided as weapons carriers for the six 37-mm AT guns in the Combat Platoon. The scarcity of boat space during the early stages of the landing, however, will probably preclude the weapons carriers being brought to the far shore with the guns. For discussion of the use of the 2½-ton amphibian truck as auxiliary weapons carrier for this gun, see Chapter 7.

26. EMPLOYMENT OF BOAT COMPANY WEAPONS ON THE FAR SHORE.--On each of the Boat Company's 36-foot craft there are mounted two .30 caliber machine guns; on each of the 50-foot craft there are mounted two .50 caliber antiaircraft machine guns. This provides each Boat Company with a total of 68 .30 caliber machine guns and 62 .50 caliber

machine guns, a tremendous amount of fire power. Fire by these weapons against targets on the far shore normally will be delivered by boats of the first wave only. Twenty percent of both .30's and .50's are provided with ground mounts which are carried to the far shore by the Boat Company. Immediately upon reaching the far shore these ground mounts are turned over to the Boat Control Section. Furthermore, guns from boats damaged beyond repair are removed and turned over to the Boat Control Section. They are redistributed by the Boat Control Officer for one of the following uses: first, as replacements on undamaged boats whose guns have been put out of commission; and, second for use on ground mounts to supplement far shore defenses. When they are to be used for the latter purposes, both the guns and the appropriate number and kind of ground mounts are turned over to the Shore Company commander who uses them to augment the organic weapons of the Weapons Section as well as the attached .50's of the Combat Flatoon of Battalion Headquarters Company. Frequently, the crews from the sunken or damaged boats from which those additional weapons came may be used to operate such weapons. Though initially they are Boat Company weapons, these weapons are employed on the far shore by the Shore Company (in the case of a battalion landing team beach), or by the Shore Battalion (where battalion landing team beaches have been consolidated to form a regimental combat team beach).

27. BOAT CONTROL SECTION ORGANIZATION.--Present Tables of Organization allot 1 second lieutenant and 20 enlisted men to this section. This strength is inadequate for its many duties and responsibilities. Proposed changes in Tables of Organization for this section call for an increase to 1 first lieutenant and 36 enlisted men. Until such changes are authorized, personnel from overstrength or other duties must be trained to function in this section. The discussion which follows is based on the proposed Table of Organization as follows:

Section Headquarters.--
1 - First Lieutenant, Boat Control Officer
1 - Technical Sergeant, Section Chief, Assistant to Boat Control Officer
1 - T/4, Radio Operator
1 - T/5, Radio Operator
2 - Privates or Privates, 1st. Cl., Truckdrivers
1 - Private or Private, 1st. Cl., Clerk, General, and Messenger
1 - Truck, ¼ ton, 4 x 4
1 - Truck, 1½ ton, 6 x 6 cargo, w/winch

Maintenance Squad.--
1 - Staff Sergeant, Master Mechanic
1 - Sergeant, Foreman, Carpenter, Ship

1 - T/4, Mechanic, Diesel
1 - T/5, Mechanic, Diesel
1 - T/4, Carpenter, Ship
1 - Private or Private, 1st. Cl., Rigger

Salvage Boat Squad.--
1 - Staff Sergeant, Chief Rigger and Motorboat Operator
1 - T/4, Mechanic, Diesel
1 - T/4, Carpenter, Ship
1 - T/4, Electrician, Automotive
1 - Private or Private, 1st. Cl., Toolroom Keeper and Seaman
1 - T/5, Rigger and Signalman
1 - Boat, Salvage

3 Beach Squads, each.--
1 - Sergeant, Chief Mechanic and Motorboat Operator
1 - T/4, Mechanic, Diesel
1 - T/5, Mechanic, Diesel
1 - T/5, Rigger and Visual Signalman
1 - T/5, Shipfitter and Seaman
1 - T/4, Carpenter, Ship, and Demolition Man

28. DUTIES OF BOAT CONTROL SECTION.--The Boat Control Section will perform the following duties on the far shore:

a. Take in tow, and where practicable, repair boats which become disabled between the near and far shore.

b. Furnish 2 men to land with the first wave of boats and to set up range markers to guide later waves.

c. Assist in the removal of underwater obstacles and other hazards to navigation.

d. Mark hazards to navigation which cannot be removed.

e. Control boat traffic during the approach of boats and lighters enroute to the beach, while at the beach, and during departure from the beach.

f. Effect emergency repairs to boats and amphibian trucks.

g. Replace boats' crews if necessary.

h. Conduct salvage of boats and lighters and assist in the salvage of vehicles which may become damaged or stalled in the water at the beach.

i. Assist in evacuation of wounded from the beach in accordance with the medical plan.

j. Assist in keeping the beach clear.

29. THE BOAT CONTROL OFFICER.--The boat control officer, a first lieutenant, is responsible to the Shore Company commander for the proper functioning of the Boat Control Section on the far shore. Prior to the operation, these 2 officers make together a thorough study of the situation on the far shore using all available maps,

charts, aerial photographs, and other intelligence. Tentative plans for boat and beach control on the far shore are agreed upon including the selection of tentative landing points for boats. The Shore Company commander and the boat control officer normally arrive on the far shore in the same wave of boats. One of their first duties is to make a joint hasty ground reconnaissance of the landing area and the beach proper. They check what they actually see against what they have previously seen on aerial photographs and other intelligence documents, and affirm or change their plans accordingly. The most important phase of this reconnaissance is the selection of unloading points for wheeled vehicles. After making this reconnaissance, the boat control officer selects the site for his command post, which is usually located near the Shore Company command post, and as near the beach proper as practicable, advantage being taken of all available cover. The boat control officer then gives the necessary orders to members of his section, and from this time on supervises and controls all activity of his section, either through messenger or through personal contact. Since a large part of the boat control officer's activity will be during the hours of darkness and half light, he will wear a white brassard 4 inches in width on his left arm on which is printed in bold letters "B.C.O.".

The boat in which the boat control officer is transported to the far shore will, after reaching the far shore, be used by the boat control officer in the control of boats and boat traffic. It will be known as the "Traffic Control Boat", and it will be primarily engaged in moving between the beach and incoming waves of boats whose landing it directs, if necessary. The boat control officer may place one of the two radio operators of his section headquarters aboard this boat for the receipt and transmission of messages if deemed advisable.

30. RANGE MARKING PERSONNEL.--Two members of the Boat Control Section are detailed to land in the first wave and set up range markers. Since landings are normally effected under cover of darkness or in half light, a range marker usually consists of a flashlight fastened securely to the top of a pole. The flashlight is equipped with a colored lens corresponding to the color designation of the beach. The pole is light, sharp pointed, and equipped with guys and light metal stakes for rapid erection. Each of these 2 men carries 1 complete marker. One pole is approximately 10' in height; the other 7'. They are erected as near the center of the beach as practicable, the longer range marker approximately 10' behind the other. Care must be exercised to insure that they are visible from seaward. The 2 men carrying these markers land in separate boats near the center of the wave. Immediately upon landing, they locate the center of the beach and mark it as described above.

In addition to setting up range markers, it is the duty of these men to keep as accurate a record as possible of the boats landing in the first two waves. If possible the boat number of each boat landing should be recorded. If due to darkness or other factors this is not possible, then at least the total number of boats arriving in each wave should be indicated. This information is turned over to the boat control officer when he arrives on the far shore, who in turn transmits it to the Shore Company commander. It will supplement the record of units landing kept by the Shore Company recorder who does not arrive on the far shore until the third wave.

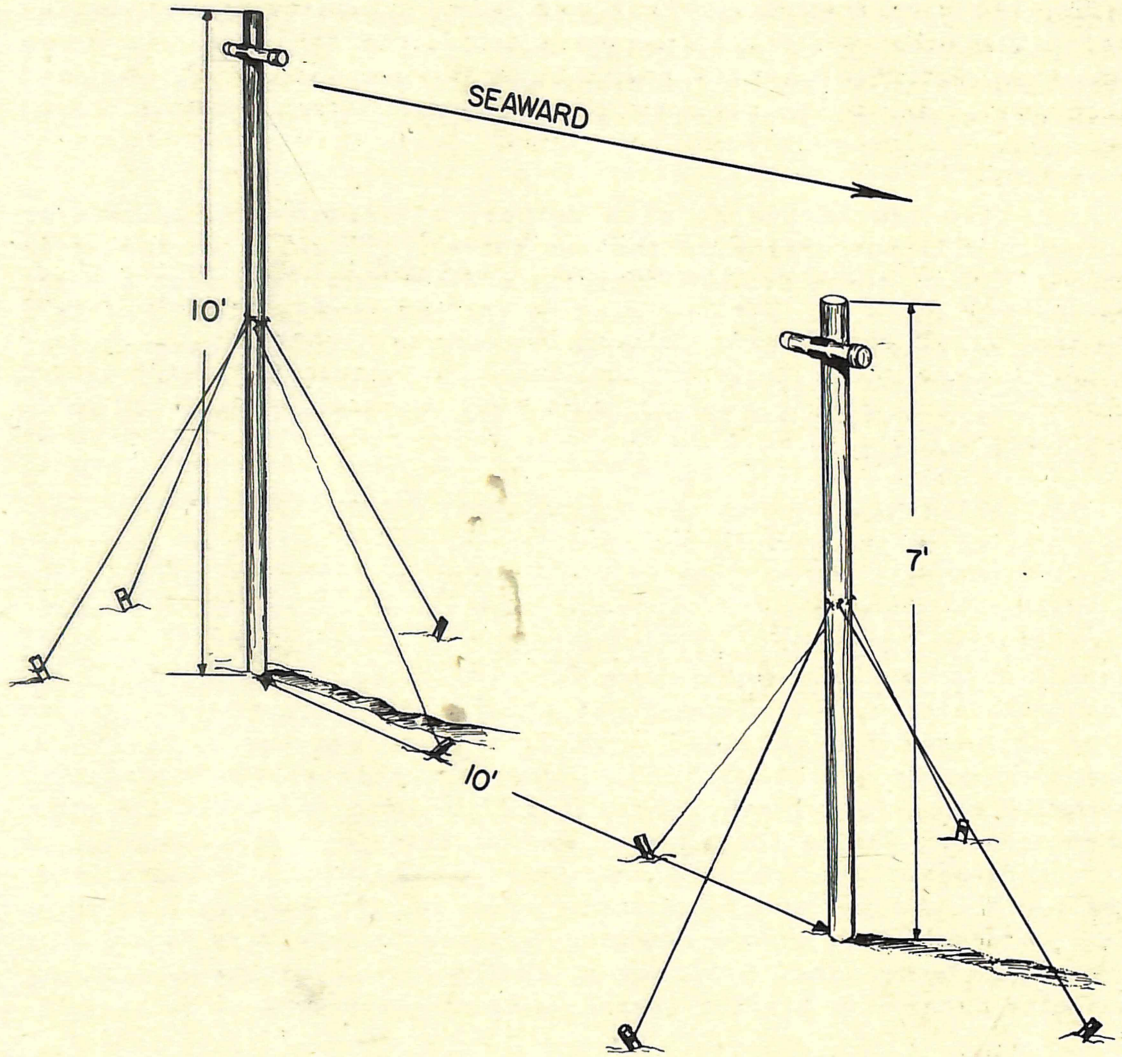


Fig. 18.--Range Markers With Flashlights Attached.

31. SECTION HEADQUARTERS.--The technical sergeant, second-in-command of the Boat Control Section; the clerk; and 2 radio opera-

tors, all members of section headquarters, will land early in the operation, normally in the third wave. Their initial duty is the establishment of the Boat Control Section command post. The technical sergeant, second-in-command, assists generally in the supervision of command post activity, and should remain in charge of the command post when the boat control officer is absent. The clerk acts as a messenger on the far shore, normally remaining with the boat control officer when not otherwise engaged. The 2 radio operators are each supplied with SCR-300 radio or substitutes. (These are short range voice sets). They transmit instructions from the boat control officer to wave leaders and boat commanders regarding proper landing places and other matters. Frequently conditions will not be suitable for the landing of a particular boat or wave, in which case (in accordance with prior instructions and not otherwise) boats may be held off shore by instructions transmitted through these radio operators.

Two truckdrivers, also members of section headquarters, normally will not arrive on the far shore until later in the operation. One of these drivers operates a ¼-ton truck and when brought to the far shore, he will be used by the boat control officer as a mounted messenger. The other driver operates a 1½-ton cargo truck, which is used exclusively in connection with maintenance work on the near shore. He will not be brought to the far shore unless needed to replace a casualty.

32. MAINTENANCE SQUAD AND SALVAGE BOAT SQUAD.--Among the important duties of the Boat Control Section is the effecting of emergency repairs to boats and salvage of boats at or near the far shore. The maintenance squad and the salvage boat squad share joint responsibility for this work. When boats become stranded or in need of repair while still some distance from the shore, it is normally the responsibility of the salvage boat squad to give assistance. On the other hand when craft need repairs or when salvage activity is required at or near the beach proper, the maintenance squad will normally take over. Each, however, will be used to assist the other when needed. The personnel of either of these squads is capable of effecting minor repairs to either hulls or engines. In addition to their other duties, the maintenance squad and the salvage boat squad will be required to effect emergency repairs to amphibian trucks, and the maintenance squad will assist in the repair or salvage of any vehicles damaged or stalled in the water at the beach.

The salvage boat squad does not arrive at the far shore until after the entire seven waves carrying the battalion landing team have landed. Its primary function is to follow the entire fleet of the Boat Company and effect repairs to any disabled boats. The maintenance squad is transported to the far shore with the major portion of

the Boat Control Section early in the operation, normally in the third wave, and is responsible for all repair and salvage activity until the salvage boat squad arrives.

In addition to the duties already mentioned, both of these sections assist the beach squads in the performance of any or all boat control activity. Especially is the salvage boat squad useful in assisting in the removal and marking of hazards to navigation.

Of the 6 men who comprise the salvage boat squad, there are 3 men who in addition to their qualifications as maintenance and salvage men, are qualified as crewmen for the salvage boat. The squad leader, chief rigger, is also a qualified motorboat operator (coxswain); the rigger is a qualified visual signalman; and the toolroom keeper is a qualified seaman.

(For detailed discussion of salvage boat activities see Tentative Training Guides Nos. 1, 2, and 3).

33. THREE BEACH SQUADS.--Three identically constituted beach squads of 6 men each, constitute the remainder of the Boat Control Section. Like most of the members of the Boat Control Section, these squads land early in the operation, normally in the third wave. For purposes of control, the beach proper is divided into 3 sections, each section under the control of one beach squad (see Fig. 19a). Each of these sections is responsible in its section of the beach for the performance of the following duties:

a. Making detailed inspection of the beach and the landing area. In order to enable the beach squads to control the landing of boats at the beach, it is necessary that they become thoroughly familiar with their section of the beach and with its water approaches. Each beach squad must know in detail the nature of the beach; the type of bottom; the depth of the water; the location of rocks, boulders, shoals, bars, sunken wrecks, and other obstacles; and the existence and nature of cross currents. More often than not it will be necessary for certain members of beach squads to wade or swim for some distance out into the water for the purpose of making this detailed inspection. For that reason, all members of the beach squads must be excellent swimmers. When the salvage boat squad arrives on the far shore, it will assist in the detailed inspection of the water approaches to the beach, especially in the matter of ascertaining depth of water at some distance from the beach.

b. Removing or marking of hazards to navigation. All hazards to navigation, including obstacles of all kinds, both natural and artificial, must be removed by the beach squads if practicable. Many types of obstacles can be removed by dragging, either with the

assistance of a boat or with the assistance of one of the Shore Company's bulldozers. Other obstacles such as sunken wrecks, large boulders, and concrete and heavy metal obstructions will have to be removed through the use of demolitions, there being qualified demolitions men in the beach squad for that purpose. In this work, assistance from demolitions men from the Pioneer Platoon of the Shore Company may be required.

All hazards to navigation which cannot be removed must be marked. Pennants placed on buoys or stakes are used for this purpose (see Appendix I, *Beach and Hydrographic Markings*). Frequently, it will be necessary to mark a channel or a suitable water approach to the beach, in which case the beach squads, with or without the assistance of the salvage boat squad or some available boat, will mark such channels or approaches with red and black pennants placed on buoys or stakes.

In performing many of its activities, particularly in the removal of underwater obstacles, the assistance of certain Shore Company personnel may be required. When such assistance is needed, the beach squad leader should immediately notify the boat control officer, who secures the necessary assistance from the Shore Company commander.

c. Controlling boat traffic during the approach of boats enroute to the beach, while at the beach, and during departure from the beach. Perhaps the most important duty of the beach squads is the proper control of boat traffic. This includes the signaling of boats to proper landing places and the giving of proper instructions concerning angle of approach, speed, beaching, lowering of ramp, unloading, and retracting. Frequently it is difficult for coxswains to judge their angle of approach to the beach. Boat Control Section personnel on shore are in a better position to determine the proper angle of approach and should direct coxswains accordingly. Beach squad personnel should familiarize themselves with proper methods of beaching landing craft under various wind and surf conditions. (For detailed discussion, see Tentative Training Guide No. 2). Frequently a coxswain may ground his boat on a bar which is close to the beach, lower the ramp, and proceed to unload personnel and equipment into deep water inshore of the bar. This results in loss and damage of equipment and perhaps drowning of personnel. Such action is inexcusable and can be prevented by diligence on the part of the beach squads, which should make certain that boats are warned of bars and that a boat is properly beached before it is unloaded. If there is any doubt as to whether a boat is beached in water shallow enough to permit unloading, members of the beach squad should wade out to the ramp of the boat to ascertain the facts.

Frequently, it is difficult for a coxswain operating a boat loaded with wheeled vehicles to determine the exact location of a beach roadway. A member of the beach squad should stand in the center of the roadway and direct the approach and beaching of craft that are so loaded. Furthermore, it is the duty of the beach squads to prevent the unloading on beach roadways of boats carrying tracked vehicles as such vehicles do not require road expedient to effect their crossing of the beach, and their tracks injure and destroy the usefulness of road matting used in the construction of such roadways.

In each beach squad, there is a visual signalman who must be thoroughly qualified in the use of semaphore for daytime signaling and blinker light for night time signaling. All members of boats' crews, particularly coxswains, should be similarly qualified. These are the means used by beach squads in giving landing directions to coxswains.

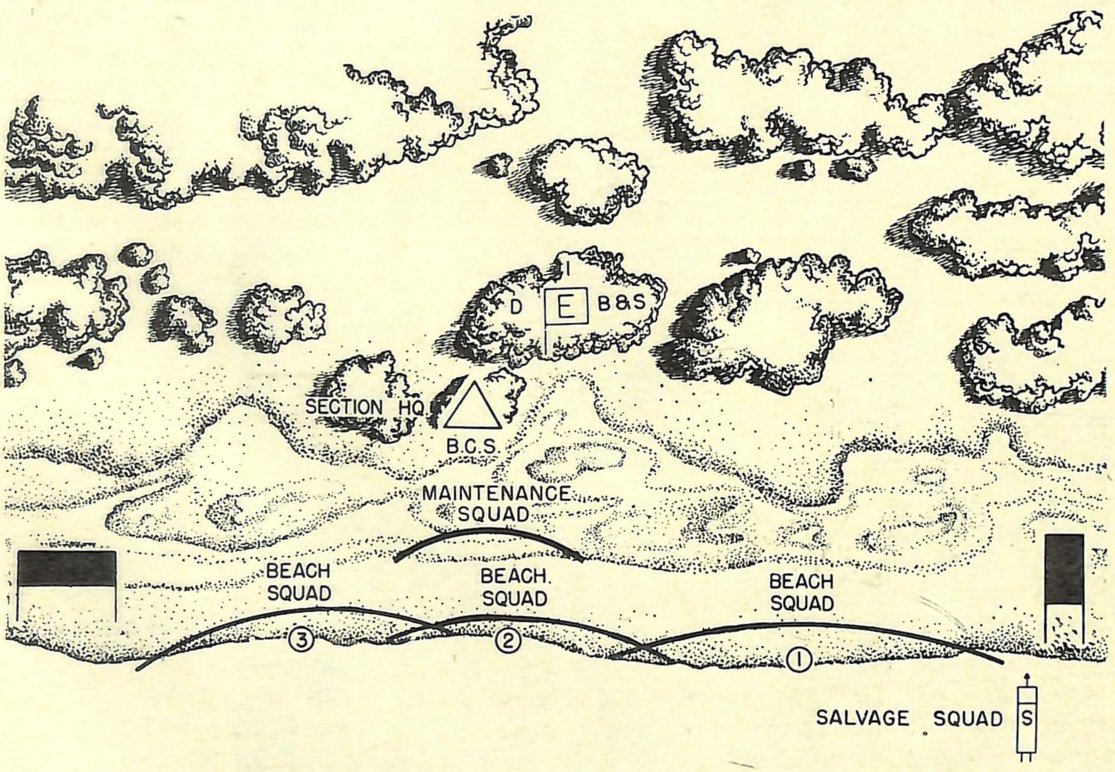


Fig. 19a.--Schematic Sketch of the Deployment of the Boat Control Section.



Fig. 19b.--The Beach Squads at Work. This is how it actually looks.

Specifically, one of the most important phases of controlling boat traffic is preventing the broaching or stranding of boats, and the rendering of assistance to boats which do become broached or stranded. Broaching or stranding can often be prevented by vigilance and close cooperation on the part of beach squads and boats' crews. The signaling of proper directions as noted just above can be very helpful in this connection. (For a detailed discussion of preventing broaching or stranding and the removal of broached or stranded boats from the beach, see Tentative Training Guides Nos. 2 and 3).

d. Keeping the beach clear. Keeping the beach clear is the joint responsibility of the beach squads and the Shore Company. Stranded boats, vehicles, supplies, and debris must not be allowed to block landing points and to prevent the free and unhampered movement of vehicles and troops across the beach.

e. Assisting in evacuation of wounded. Boat control personnel as well as shore engineers assist medical personnel in the evacuation of wounded. When a group of wounded is ready for evacuation, the Boat Control Section is notified, and a boat is delayed by a member of the beach squad until it can be made ready for and loaded with wounded evacuees. Members of the beach squads assist in this loading activity.

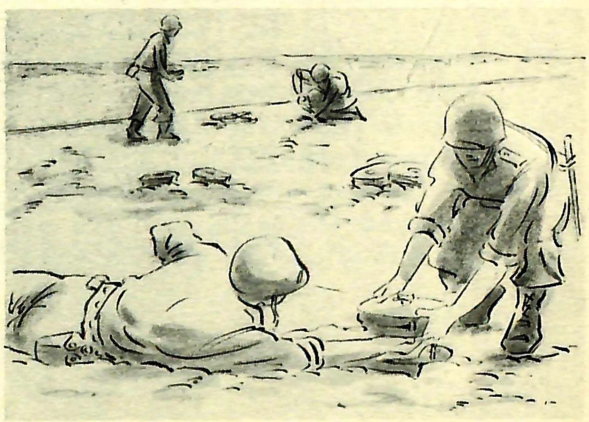
f. Replacing boats' crews. In the combined beach squads, there are 3 men who in addition to their other duties are qualified motorboat operators (coxswains); likewise there are 3 qualified seamen. These men will be used to replace casualties among boats' crews. Replacements should not be made from these men, however, unless absolutely necessary. It is preferable to replace boats' crews with crews from other boats which have been sunk or damaged beyond repair, thus leaving the Boat Control Section at full strength for its activities on the far shore.

34. REAR ECHELON OF HEADQUARTERS PLATOON (Fig. 20).--The Rear Echelon of Headquarters Platoon is composed essentially of administrative personnel. All of the personnel of this section, with the exception of the motor sergeant, the auto mechanic, and the blacksmith, will remain on the near shore during the early stages of the operation, and will be brought to the far shore as soon as their services are needed and boat space is available. Ordinarily it will not be necessary to establish cooking facilities on the far shore before the expiration of 48 hours; prior to that time canned rations will normally be used exclusively. There will, no doubt, be cases where the situation develops rapidly enough to make practicable the bringing of this administrative echelon to the far shore in about 12 hours.

REAR ECHELON

1 - 2nd Lt.
2 - Staff Sgt.
  1 Mess
  1 Supply
1 - Sgt., Motor
1 - Cpl., Co. Clerk
3 - T/4
  2 Cooks
  1 Auto Mech.
3 - T/5
  1 Blacksmith
  1 Cook
  1 Toolroom Keeper
3 - PFC or Pvt.
  2 Cooks' Helpers
  1 Bugler - Drives truck
1 - Basic
15
1 - Trailer, 1-ton, 2 wheel cargo
1 - Truck, 2½-ton, cargo, 6 x 6, w/winch

Shore Company Motor Pool. The Shore Company motor sergeant, auto mechanic, and blacksmith will be transported to the far shore as soon after the arrival of the first seven waves as is practicable. They will set up a motor pool in the Shore Company area for the servicing and maintenance of Shore Company vehicles and for emergency repairs to combat vehicles. In servicing and repairing either Shore Company or combat vehicles, motor pool personnel will have the assistance of the vehicle operators, and, if necessary, other qualified personnel from elsewhere in the Shore Company. The motor pool will be centrally located in the first available and suitable cover off the beach proper; it must be easily accessible to vehicles being towed from the beach, and every advantage must be taken of both natural and artificial cover and concealment. All "dead" vehicles which can be towed must be repaired in the motor pool; all others, which will generally include disabled bulldozers, must be repaired in that part of the beach area where they became incapacitated. (For location of Motor Pool, see Fig. 54).



CHAPTER 5

PIONEER PLATOON

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35. GENERAL.--Thus far we have seen how the advanced echelon of the Shore Company and its attachments arrived on the far shore early in the operation, how they reconnoitered and marked the beach, established the command post, initiated communication, and located defensive weapons. Among their duties were the marking of mined areas, gas contaminated areas, and other obstacles, and reconnoitering for and marking sites for beach roadways.

Shore development has thus reached the stage where attention can be turned to the decontamination of gassed areas, the removal of obstacles, the building of beach roadways, the construction of bridges, piers, and wharfs, and the performance of other general engineer duties within the beach area.

36. PLATOON HEADQUARTERS.--In the Platoon Headquarters of the Pioneer Platoon are men especially trained to perform many of these functions.

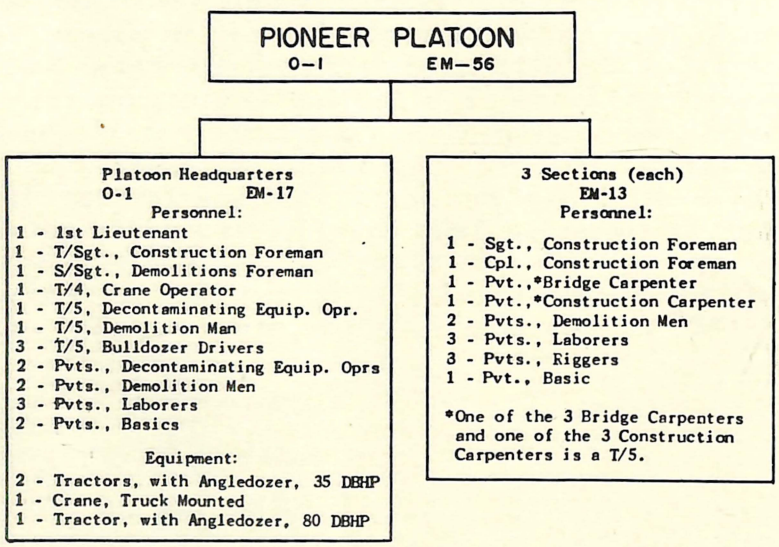


Fig. 21.--Organization of Pioneer Platoon.

Platoon Headquarters, with the exception of the platoon sergeant, the crane operator, and two of the bulldozer operators, will normally be brought to the far shore in the fourth wave. The platoon sergeant and the two bulldozer operators will remain on the near shore and accompany the Pioneer Sections to the far shore in a later wave. The crane with its operator will be brought to the far shore as soon after the battalion landing team as possible.

37. REMOVAL OF OBSTACLES.--Normally, the assault waves of the battalion landing team will carry small groups of combat (division) engineers from the engineer platoon attached to the battalion landing team. In performing their mission of furthering the advance of the combat troops, it will be necessary for these division engineers to clear passageways through obstacles including underwater and shore obstacles, to remove or make passage through enemy mine fields, and to reduce minor fortifications by use of demolitions. If advance reconnaissance of the landing beach reveals strong permanent fortifications, or indicates that the beach is otherwise strongly fortified, it will become necessary to increase the number of combat engineers brought over in the assault waves, and to include assault teams of infantry and engineers specially trained for reduction of fortified positions. (With the inclusion of such additional personnel in assault waves and the increased element of uncertainty in the progress of the attack against a strongly fortified hostile shore, the normal Boat Assignment Table may become considerably changed). To say that it is the duty of division engineers to remove all obstacles and to clear all mine fields within the beach area is just as erroneous as it is to say that these functions are exclusively those of the shore engineers. To require division engineers completely to clear the beach of all obstacles and of all mines would in many cases so dissipate their strength as to lessen their effectiveness later in the operation. Nevertheless to perform their mission of facilitating the advance of the division troops, combat engineers must clear the beach of obstacles of all types sufficiently to permit infantry foot troops and infantry supporting weapons to cross the beach and advance inland. The task of completely clearing the beach of all remaining obstacles so as to insure the unimpeded advance of truck drawn artillery, supply trucks, and all other vehicles belongs to the shore engineers assisted by the Boat Control Section.

Generally, the removal of those obstacles which present hazards to navigation are the responsibility of the demolitions personnel of the Boat Control Section. Shore engineers must assist them, if necessary, just as Boat Control Section personnel may be required, if available, to assist shore engineers in the removal of obstacles ashore. Underwater obstacles are the greatest hazard, whether they be artificial or natural. They include rocks, boulders,

reefs, bars, shoals, sunken wrecks, booms, chains, steel rods, tubular scaffolding, and sculleys and other concrete obstructions. Floating wrecks and other debris are, however, an added danger, and must be guarded against.

The element of the Shore Company charged initially with the removal of all remaining obstacles on the beach is the Platoon Headquarters of the Pioneer Platoon. In the performance of this duty, they will have the assistance of members of the Shore Company not otherwise engaged, particularly the Pioneer Sections when they arrive on the far shore.

Both natural and artificial obstacles may be encountered on the shore. Natural obstacles include beach boulders, rocks, cliffs, quicksand, underbrush, swamps, and streams. Artificial obstacles include mines, both antitank and antipersonnel, wire entanglements, gassed areas, pipe, steel rails, and concrete obstructions. Some obstacles will have to be bridged; most of them will have to be entirely or partially removed. The bulldozer is an indispensable piece of equipment in the removal of obstacles, it being particularly valuable for pushing or pulling boulders, rocks, stumps, logs, and wire off the beach. Many obstacles will have to be removed by the use of demolitions; gassed areas must be decontaminated or avoided. A grapnel is often particularly effective in eliminating antipersonnel trip mechanisms in mine fields. (The removal of obstacles through the use of demolitions, the clearing of mine fields, and decontamination of gassed areas is thoroughly covered in War Department publications. See FM 5-15, 5-25, 5-30, and TM 3-220).

After the completion of its primary duties of removing obstacles and decontaminating gassed areas, the Platoon Headquarters turns to assist the Pioneer Sections in performing their duties, foremost among which is the building of beach roadways.

38. THREE PIONEER SECTIONS.--With the addition of a bulldozer driver from Platoon Headquarters, there is a total of 14 men in each of the three Pioneer Sections (Fig. 21). Road building equipment for each team includes a bulldozer, 1 or 2 beach sleds (see Fig. 22 for description of sled), steel road matting, 1 demolition set, 6 shovels, 4 sledges, wire cutters, tracing tape, and miscellaneous equipment. Each of these sections with its equipment requires a complete LCM(3). The battalion landing team commander is not likely, therefore, to agree to include more of these sections in the fifth wave than there are beach roadways needed. If, for instance, advance reconnaissance information reveals the need for only 2 beach exit roads, 2 Pioneer Sections will be brought to the far shore in the fifth wave, and the remaining section will not be brought in until later in the operation.

In addition to building beach roadways, the Pioneer Section may be required to perform any of the following duties:

a. Assist in the removal of underwater and beach obstacles.

b. Construct docks, piers, wharfs, bridges, and other shore facilities.

c. Perform other general shore engineer duties.

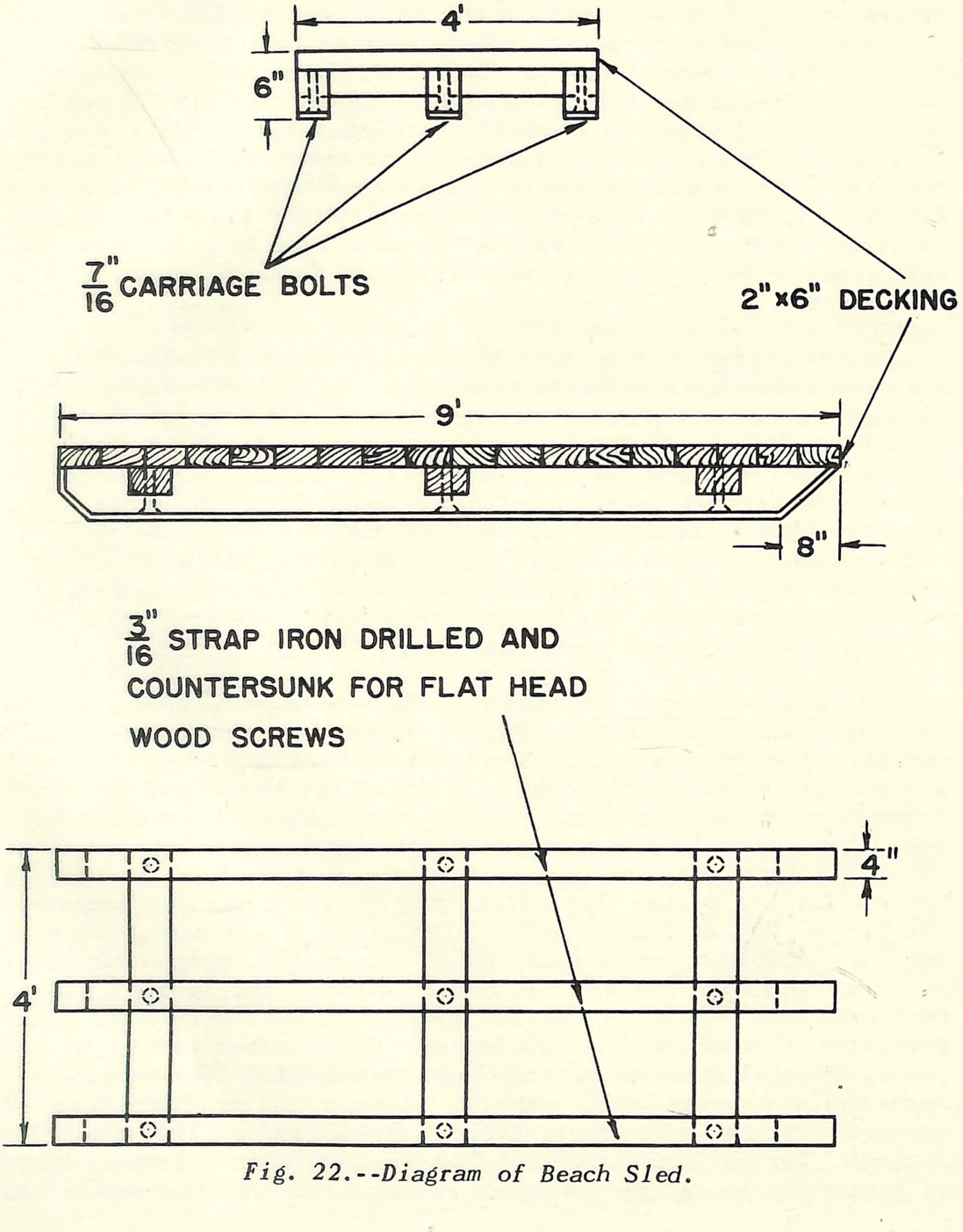


Fig. 22.--Diagram of Beach Sled.

39. CONSTRUCTION OF BEACH ROADWAYS.--a. General. In order to facilitate the movement of wheeled vehicles across the beach, it is usually necessary for the Pioneer Sections to construct beach exit roadways of steel road matting at vehicle unloading points. Such roadways must be made ready in the early stages of the operation, and they must be capable of withstanding heavy initial traffic. The arrival of truck drawn field artillery, normally in the sixth wave, necessitates the construction of at least one and preferably two or three of these roads prior to that time. It should be noted again that these roads are constructed for the use of wheeled vehicles only. Tracked vehicles normally encounter little difficulty in crossing beaches, and, since their movement over road matting results in its almost complete destruction, the use of these prefabricated roadways is denied to them. Every effort is made to construct beach road nets so that tracked vehicles can make their exit from the beach area without having to run on or cross over any road matting.

b. Selection. Prior to the operation, several possible beach exit roads should be selected from maps, aerial photographs, intelligence documents, or scout reconnaissance. Sites should be selected which offer satisfactory landing points for boats carrying wheeled vehicles and truck drawn artillery, and which offer the shortest practical routes across the beach from the water's edge directly inland toward firm ground and the existing road net. The reconnaissance officer with his beach marking detail will have selected and marked (see par. 17a) either with tracing tape or stakes, the most desirable of the previously considered sites prior to the arrival of the Pioneer Sections.

c. Types of Road Expedient. There are many types of road expedient which might conceivably be used at some stage of the operation. Most of these types, however, were developed for use as semipermanent airplane runways and are too heavy and bulky for transporting and use during the early stages of an amphibious operation, when boat space is sorely needed for combat troops. There are four important considerations in selection of road expedient for use during the initial phases of the landing operation: first, the type of beach; second, the rapidity and ease with which the road expedient can be laid; third, its weight, which must permit movement by hand by a minimum number of men; and fourth, and the most important consideration, its bulk, which must permit the transportation of a maximum lineal footage in a minimum amount of boat space. Several types of matting have been developed which generally meet these requirements, namely: Sommerfeld matting, cyclone conveyor belting, woven wire utility matting, and cyclone chain link fencing. During later stages of the operation when a greater degree of permanency is desired in beach roadways and less economy of boat

spaces is demanded, some of the following types of heavier expedient, depending upon the nature of the beach, may be used, namely: bar and rod, Irving Grid, pierced steel plank, expanded metal, latisteel.

d. Cyclone Chain Link Fencing. On most type beaches, cyclone chain link fencing has been found very satisfactory for roadway construction during the early phases of the operation.

Description (Unit of matting):
Size: 25' long x 9'6" wide
Size of roll: 12" diameter x 9'6"
Area: 237.5 sq. ft.
Weight per roll: 283 pounds for 6 ga. wire
140 pounds for 9 ga. wire
Cubage: 25 sq. ft. of road per cu. ft. of cargo

In addition to being relatively light and reasonably compact, requiring a minimum of boat space, cyclone fencing has a quality which causes it to spring back into position when heavy loads have passed over. For this reason it is generally unnecessary to staple or stake it.

Another advantage common to few types of road expedient is the quality enabling cyclone fencing to be folded as well as reeled, thus allowing it to be folded and stacked in the back end of a truck and "paid out" as the truck moves forward.

e. Construction of Beach Exit Roads Using Cyclone Fencing. Each Pioneer Section of the Pioneer Platoon must be capable of laying a beach roadway acting independently of the other sections of the platoon. Platoon Headquarters may or may not assist any or all of the Pioneer Sections in this work. Each Pioneer Section and its equipment is brought to the far shore in an LCM(3).

Fig. 23 shows the proper loading of the Higgins type LCM(3) with all personnel and equipment necessary for the construction of 100 yards of beach roadway. 100 yards of roadway is generally sufficient to effect the crossing of the difficult portions of most beaches. The situation may, however, demand that more road building material be carried.

The LCM(3) is beached where the proposed road has been taped off. As soon as the ramp is down the driver moves his bulldozer along the route established, stopping upon the signal of the sergeant, section leader, to allow the rolls of matting to be unloaded at 25 foot intervals. Four men accompany the sleds and unload the

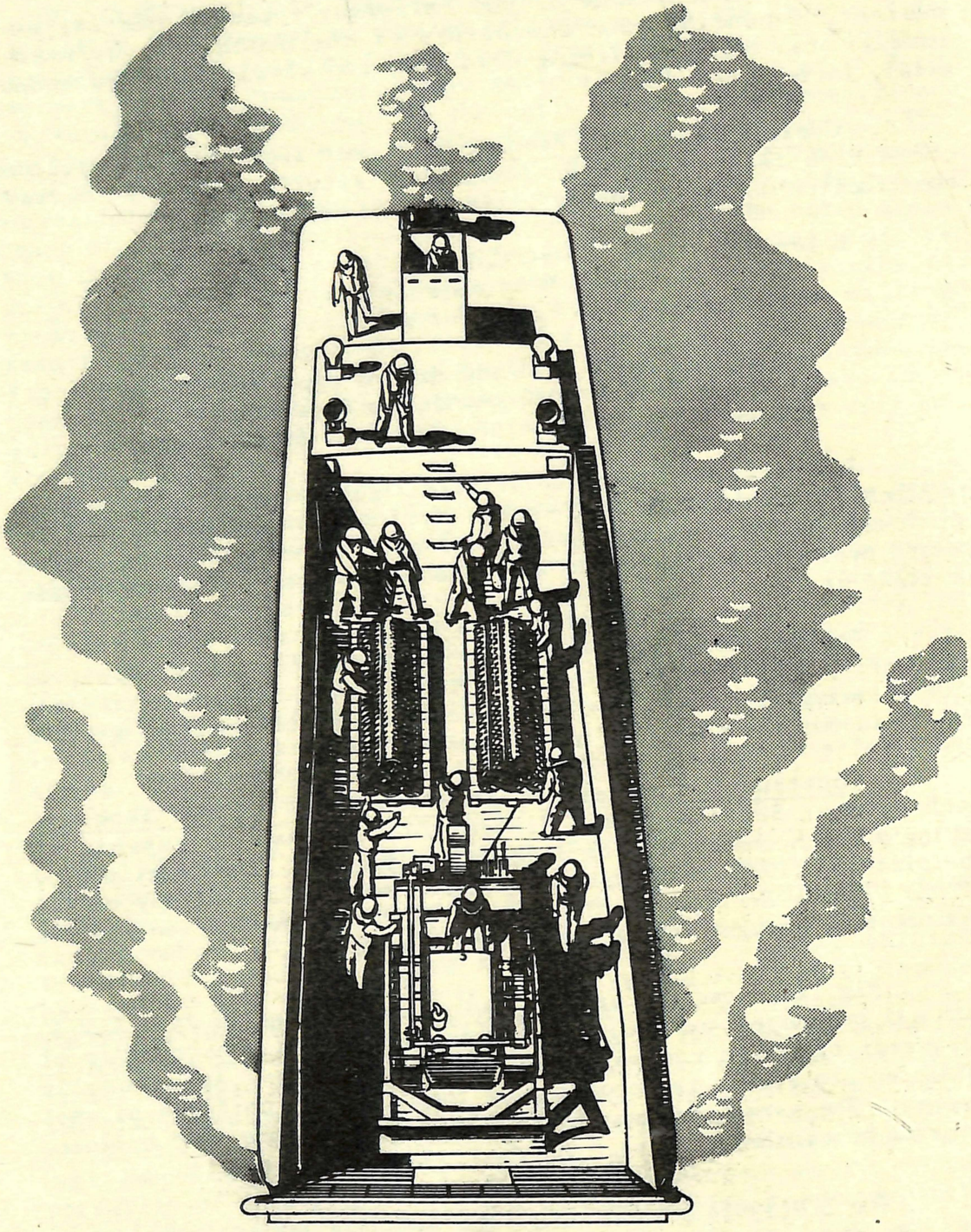


Fig. 23.--LCM(3) loaded with bulldozer, 2 sleds (9' x 4'), loaded side by side, each with 6 rolls of cyclone fencing, 9' 6" long, 12" in diameter, together with 15 men (16 including bulldozer driver).

matting upon command of the sergeant. If practicable, the bulldozer smooths out the sand as it moves inland; otherwise, after all matting is unloaded, the driver spots his sleds beyond the dune line and returns to smooth a path for the road matting. Frequently, this can be more satisfactorily accomplished by dragging the blade than by "dozing", or pushing ahead. Six men with shovels assist in smoothing a path for the road matting.

After the path is smoothed, the task of actually laying the matting begins. This work is supervised by the sergeant assisted by the corporal. At this stage 6 men are employed unrolling and laying the matting. Two men with shovels are engaged in digging shallow trenches (about 6") at places where separate units of matting butt together. The ends of the matting are laid neatly in the trench and the trench filled in with sand. This prevents the tires of vehicles from "picking up" the ends of the matting as they pass over it. The other two men with shovels are engaged in throwing a thin layer (usually ¼") of sand over the entire length of the road. The layer of sand has a tendency to hold the matting in place and to provide a foundation for the road matting. Particular emphasis must be laid upon filling in any holes beneath the wire. When sand is especially soft, a layer of cocoa matting or burlap should be laid beneath the cyclone fencing. While road matting may be handled without aids of any kind, handling may be greatly facilitated by the use of handling hooks (see Fig. 24).

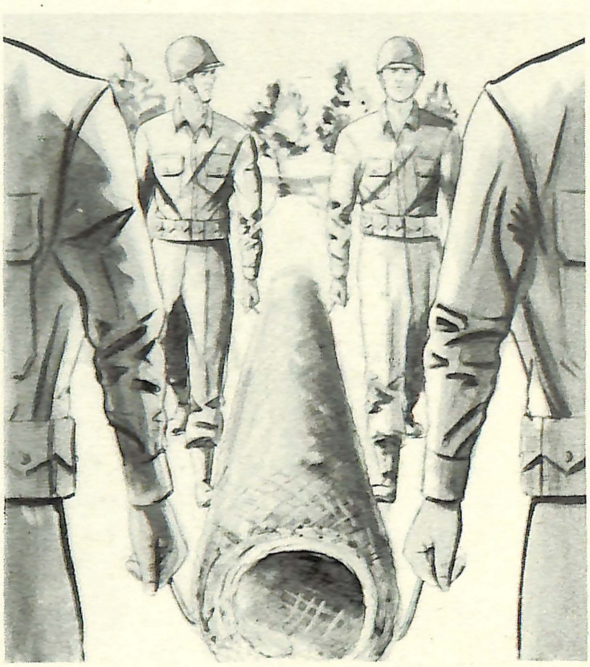


Fig. 24.--Four Men With Hooks Carrying Road Matting.

When the road is completed, the sergeant will insure that it is properly marked, either by tracing tape or stakes, and he should leave two men near the road to maintain it and to insure that unauthorized vehicles (tracked vehicles) do not land on it. The remaining personnel report to the officer in command of the Pioneer Platoon the fact that they have completed their primary task and await further orders.



Fig. 25.--BEACH ROAD MATTING IS NECESSARY FOR WHEELED VEHICLES. This and the following pictures tell the story of beach road building. It is almost impossible to move wheeled vehicles rapidly across sand without some sort of beach roadway. With steel road matting of the proper type, properly laid, vehicles will move under their own power.

Fig. 26.--EVEN THE JEEP DEMANDS A ROAD. While vehicles with 4 and 6 wheel drive can go over much poor road, even so light a vehicle as a ¼-ton truck will stick when its wheels cannot get traction.

Fig. 27.--UNLOADING ROAD MATTING FROM LCM(3). Here for training purposes only 1 sled and 3 rolls of matting were used, instead of the customary 2 sleds and 12 rolls of matting. The matting seen is cyclone chain link fencing.



Fig. 26.

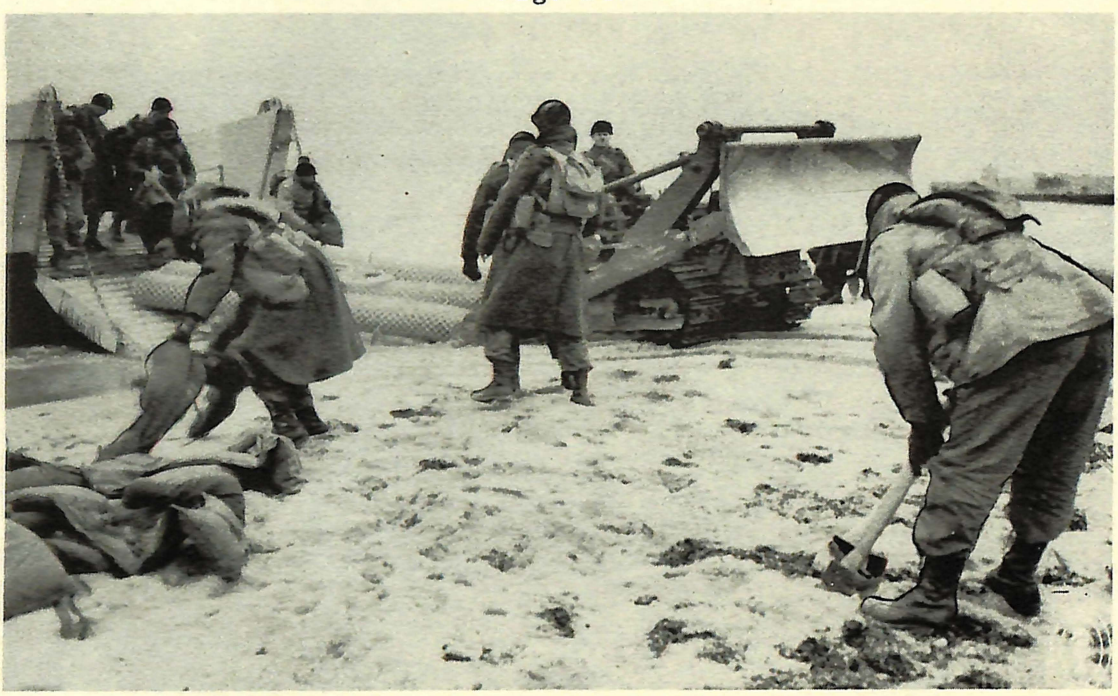


Fig. 27.

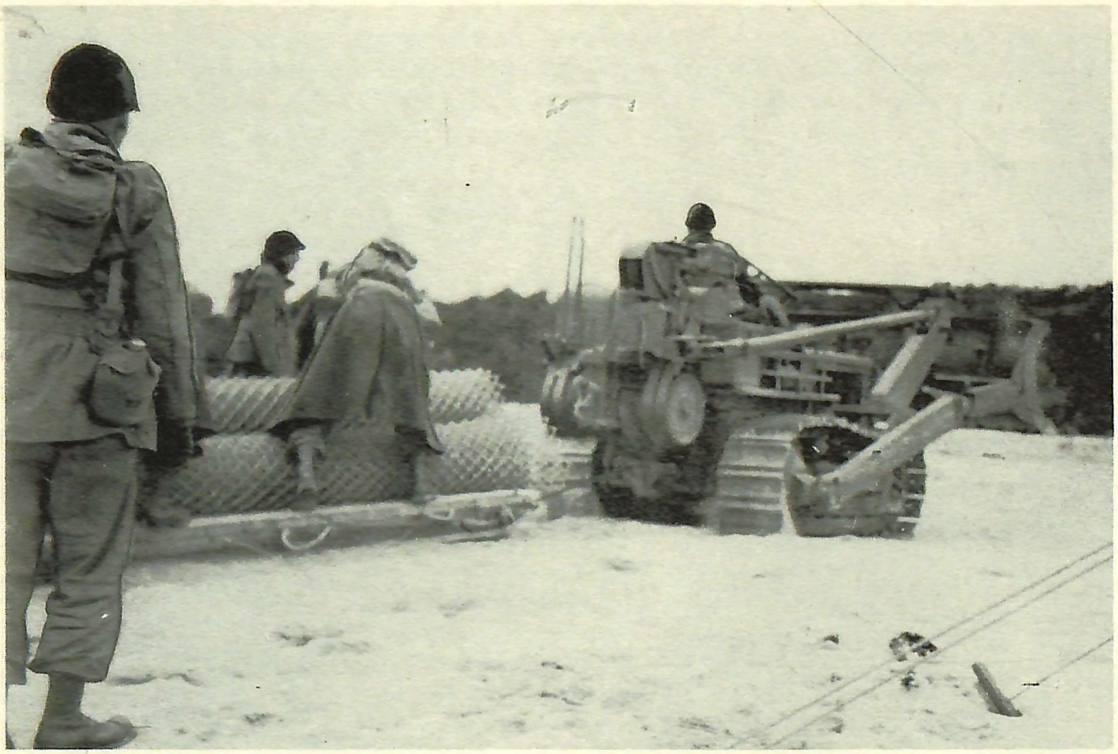


Fig. 28.

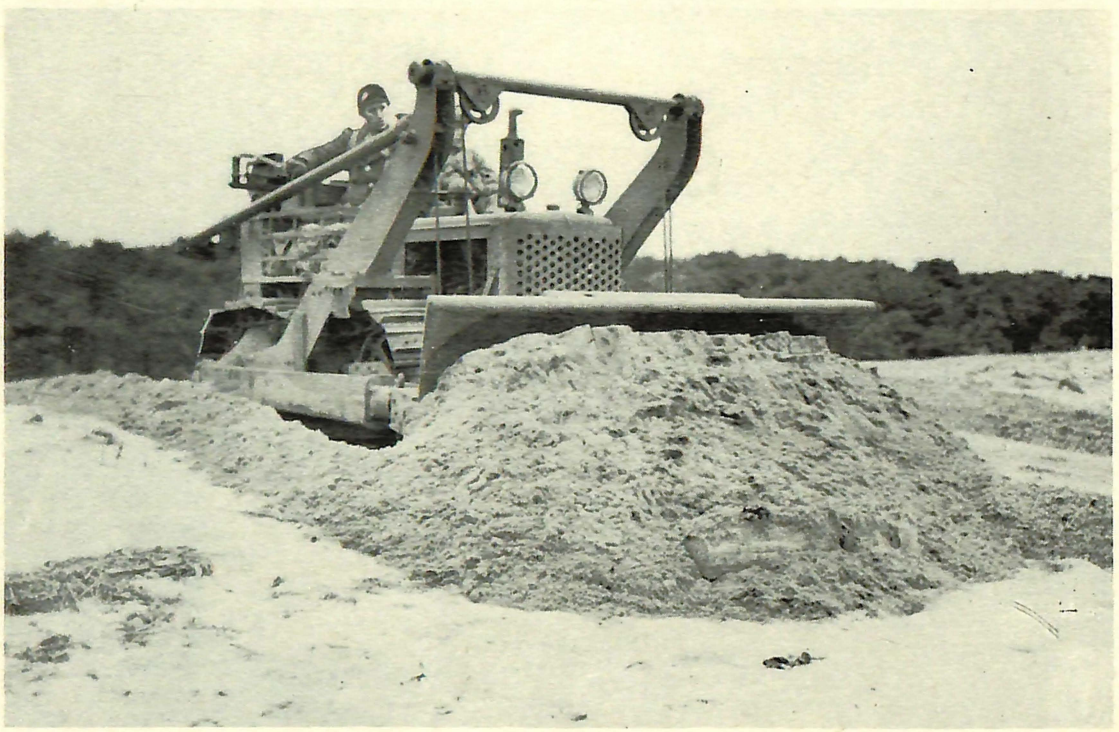


Fig. 29.

⇦ *Fig. 28.--UNLOADING CYCLONE FENCING FROM BEACH SLED. Here one roll of matting has been pushed off the sled and the driver is proceeding about 25' further before stopping to allow the unloading of another.*

⇦ *Fig. 29.--SMOOTHING THE PATH FOR BEACH ROADWAY. Frequently dragging is more effective than the "dozing" seen here. Actually here an exit is being broken through the dune line.*



Fig. 30.--PIONEER SECTION LAYING CYCLONE FENCING FOR ROAD MATTING. Members of teams for building beach roads are organized as carefully and members are given as definite assignments as members of a well trained football team.



Fig. 31.

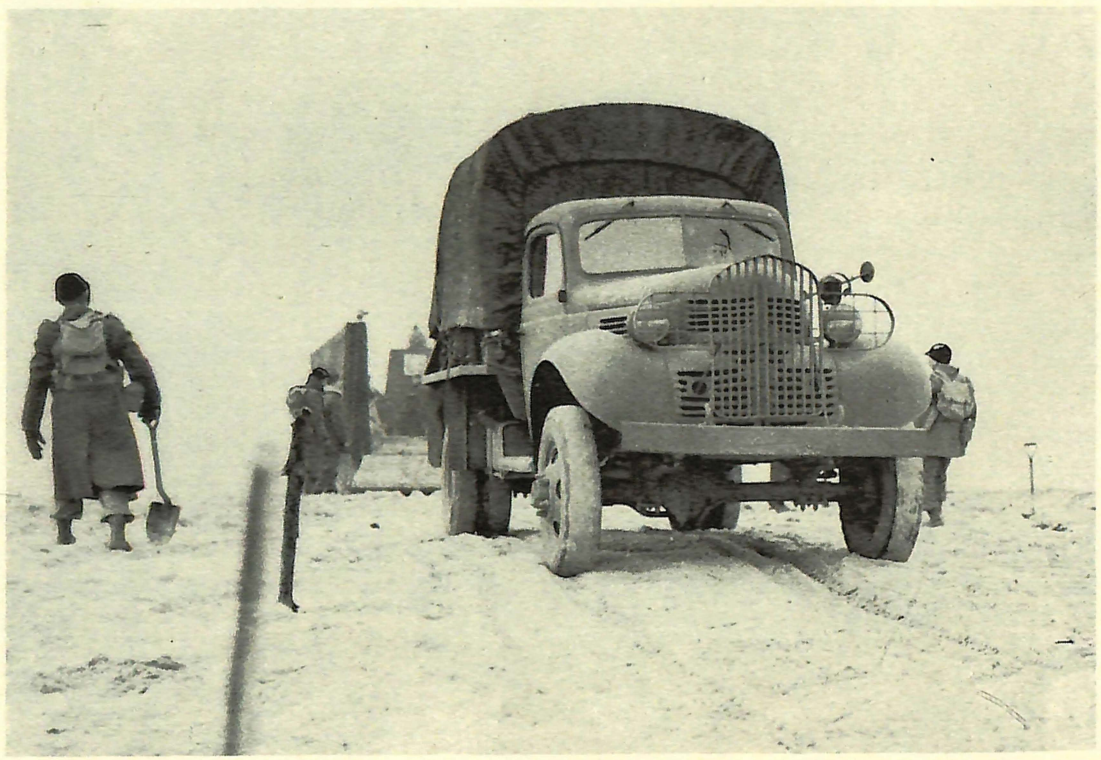
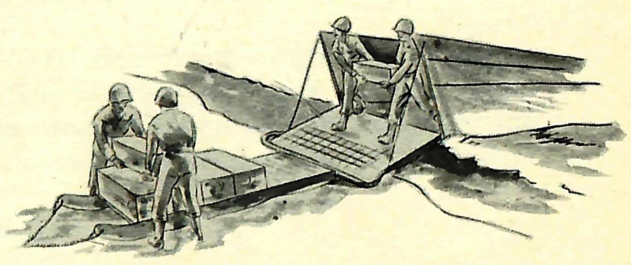


Fig. 32.

⇦ *Fig. 31.--The same section as shown above -- a step further along in their work.*

⇦ *Fig. 32.--MARKING AND USING BEACH ROADWAY. Wheeled vehicles move readily over steel road matting. Holes and rough spots beneath the matting have been filled with sand, and sand has been placed over the matting to hold it in place and to provide a more suitable foundation. To prevent the drivers of vehicles from leaving the road matting, stakes have been driven on either side of the matting. For night use these will either be painted with white paint or the road will be marked with white tracing tape.*

f. Developing Lateral Roads and Turn-arounds. After the sandy portion of the beach is crossed, firm ground is usually encountered. Normally, steel road matting is not required for the construction of roads in such portions of the shore area. Extensions to the roads already laid may be required, and lateral roads and turn-arounds will probably have to be provided, but these generally can be developed by cutting out trees and underbrush, "smoothing out" and "filling in" without the use of road matting. If considerable time is expected to elapse before port facilities are seized and developed, that is, if the shore engineers are expected to supply the combat troops for a considerable time across the beach, regular military roads with low-type surfaces should be built following the principles outlined in FM 5-10. They will replace the hasty beach roadways described above.



CHAPTER 6

UTILITY PLATOON

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Utility Platoon
O-1 EM-79
Personnel:
1 - 2nd Lieutenant
1 - S/Sgt., Platoon Sgt.
2 - Sgts., Construction Foremen
5 - Cpls., Construction Foremen
6 - T/5, Truckdrivers
60 - Pvts., Longshoremen
5 - Pvts., Basics

Equipment:
4 - Trucks, 2½-Ton, 6 x 6, Amphibian

Fig. 33.--Organization of Utility Platoon.

40. ORGANIZATION.--Although no such division is shown in the Table of Organization, the Utility Platoon is best divided into 5 longshoremen teams, each composed of 1 corporal and 12 privates.

In addition, there are in this platoon 6 operators (4 operators and 2 alternate operators) for the four 2½-ton amphibian trucks (DUKWS) allotted to the platoon. (For DUKW operation see Chapter 7). Tables of Organization provide no enginemen as members of the necessary 2-man DUKW crews. Therefore, these 4 men must be obtained from overstrength or other duties, trained as enginemen, and permanently assigned to that duty until such time as this deficiency in Tables of Organization is corrected.

41. DUTIES.--With the assistance of a large portion of the remainder of the company, it is the duty of the Utility Platoon to unload from craft and to move across the beach to dumps the large

quantity of supplies which are landed on the beach during the resupply phase of the operation. This platoon must be especially trained in the unloading and movement of supplies (with or without aids), recognition and segregation of various types and classes of supplies, and the storage of supplies within dumps and the issue of supplies therefrom.

Personnel of the Utility Platoon will normally be brought to the far shore in the sixth and seventh waves. At least 2 DUKWS should also be transported in these waves, and the remaining 2 brought to the far shore as soon as boat space is available. Even though the resupply phase of the operation may not begin for several hours after the arrival of the battalion landing team, the presence of this platoon on the far shore by the time the seventh wave is landed is essential to the Shore Company commander to enable him to complete his organization of the beach area; to clear the beach of stranded vehicles, supplies, and debris; to guard prisoners who may have been turned over to the Shore Company during early stages of the operation; to assist in the evacuation of wounded and salvable equipment to the near shore; to camouflage dumps; to collect, process, and return stragglers; and generally prepare for the handling of supplies and equipment soon to be landed.

Detailed activities of the Utility Platoon are discussed below.

42. REORGANIZATION FOR RESUPPLY.--a. General. As soon as the beach organization phase of the operation is completed, the Shore Company must undergo a general reorganization for resupply activities. By this time, most of the Shore Company personnel will have completed their initial duties, and their services must be utilized in assisting the Utility Platoon, inadequate within itself, in unloading of craft, movement of supplies, and operation of dumps. No rigid method of reorganization is prescribed, and the method adopted must necessarily depend upon existing conditions. This reorganization must provide a command post and weapons group and 2 or more handling groups.

b. The Command Post and Weapons Group. This group consists of the Shore Company commander and those men whose services are required in and near the command post and message center and the minimum number of men necessary to man Shore Company and attached weapons to protect the beach area from attack.

c. Handling Groups. The remainder of the company will be divided into handling groups, the number of which may depend upon any or all of the following conditions: the number of unloading points on the beach assigned; the number of beach roadways; the

number of dumps established; the number of docks, piers, and wharfs, if any; the amount of supplies and equipment to be handled, the facilities available for its handling, and the means by which it is transported.

In forming these handling groups, the autonomy of existing teams must be respected. Teams must not be broken up, but must work under their own leaders. Platoons will of necessity have to be divided, however. The longshoremen teams of the Utility Platoon, which are specially trained in the handling of supplies and equipment, should be assigned by teams to the groups established. Each handling group so formed should be under the command of an officer responsible directly to the company commander for a given portion of the beach (organized in depth), for the maintenance of roads and other facilities therein, for the unloading of supplies landed in that portion of the beach, and for the maintenance and control of dumps established in that area.

d. One Solution. The following represents one solution to the problem of reorganization for resupply:

Command Post and Weapons Group

C. O. Shore Company	1
Operations Section, Hq. Plat., (less 1st Lt. and 2 T/5, Reconnaissance)	4
Communication and Message Center	7
Weapons Section (less 2 truckdrivers)	12
Rear Echelon (when it arrives on far shore)	14
Crane operator and one bulldozer operator	2
	40*

Equipment included above:

1 Crane, truck mounted

1 Bulldozer

Handling Group No. 1

1st Lt., Pioneer Platoon	1
Platoon Hq., Pioneer Platoon (less crane operator and 2 bulldozer operators)	12
1 Pioneer Section	12
1 Sgt., Utility Platoon	1
2 Longshoremen teams, Utility Platoon	26
3 Truckdrivers, DUKW, Utility Platoon (2 drivers, 1 alternate)	3
1 Truckdriver (Weapons Section)	1
2 Reconnaissance men, Operations Section	2
	58*

2 DUKWS

1 Truck (1½-ton cargo)

1 Bulldozer

Handling Group No. 2

1 1st Lt., Reconnaissance Officer	1
1 2nd Lt., Utility Platoon	1
1 Staff Sgt., Utility Platoon	1
1 Sgt., Utility Platoon	1
3 Truckdrivers, DUKW, Utility Platoon	3
3 Longshoremen teams, Utility Platoon	39
2 Pioneer Sections, Pioneer Platoon	24
1 Truckdriver, Weapons Section	1
1 Bulldozer operator, Pioneer Platoon	1
	72*

2 DUKWS

1 Truck (1½-ton cargo)

1 Bulldozer

*Totals do not include basics.

e. Division of Responsibility Between Groups. With the Shore Company reorganized for resupply in a manner similar to the above, the company commander from his command post can control all Shore Company activity within the entire beach area. He controls the command post and message center through the first sergeant and the message center chief respectively; mess and supply facilities and the motor pool through the mess, supply, and motor officer; defensive measures through the Weapons Section officer; and boats and boat traffic through the Boat Control Officer.

All other activity of the Shore Company is controlled by the Shore Company commander through the 2 first lieutenants commanding handling groups. Thus is theoretically solved one of the most difficult problems of the Shore Company commander, that of effecting and maintaining control of the various elements of his company scattered throughout a beach area, possibly 1,000 yards in length and perhaps 500 yards in depth.

Each handling group is made responsible for approximately one-half of the beach area, organized in depth. It is responsible for the unloading of all supply boats landed in that portion of the beach, for the movement of supplies to dumps within that area, and for the control of dumps and the issue of supplies and equipment therefrom. In addition, it is responsible for the maintenance of beach roadways and other facilities within its assigned portion of the beach area. Handling groups lend assistance in the evacuation of wounded into boats embarking from their respective sections of the beach.

To insure that work is not unevenly distributed between handling groups, dumps should be located and divided between sections of the beach in accordance with the tonnages which are likely to be placed therein and in accordance with the time which such supplies are expected to arrive on the far shore.

To insure that boats land on that section of the beach in which a given supply dump is located, unloading point markers are provided for the various types of supplies most likely to be handled

by the Shore Company. Symbols are provided for each of the following: ammunition, fuel, rations, water, medical supplies, and miscellaneous supplies (see Appendix I, *Beach and Hydrographic Markings*). These markings are set up in that portion of the beach nearest the appropriate dump, thus eliminating lateral or diagonal movement from boat to dump. While it is quite true that craft such as LCT(5)'s will be loaded with several types of supplies, necessitating the unloading in one section of the beach of supplies destined for dumps in the other section of the beach, it is equally true that during the resupply phase of the operation boats will be loaded insofar as practicable with one type of one class of supplies. It is also true that many of the supplies may be brought to the far shore during the resupply phase of the operation in commercial type vessels, which will have to be unloaded into small landing craft or DUKWS. When this is done, such small craft and DUKWS will load only one type of supplies at a time and will land at the appropriate unloading point.

The company commander must rigidly supervise all activity with a view toward insuring that no one handling group is comparatively idle at the expense of the other. When there is obviously an uneven distribution of supplies landing in a given section, "loans" of men and equipment from one section to the other are negotiated by the company commander.

f. Unloading of Craft at the Beach. For the unloading of boats within his section of the beach and the moving of the supplies to dumps, the officer in command of the handling group should provide squads composed of 1 non-commissioned officer and 11 or 12 men. As many squads should be so employed as seems practicable. Each squad is capable of unloading a single craft of 50' or less, but when small packaged cargo is being unloaded, maximum efficiency results when 2 squads are employed.

In unloading large craft such as an LCT(5), the truck mounted crane should be used when practicable. It must be used in the handling of heavy equipment. Frequently, however, the crane will not be available and unloading will have to be done by hand. For this work 4 squads can be employed with maximum efficiency. Most efficient unloading results from moving a DUKW aboard the beached craft, loading the DUKW, and moving it across the beach to the supply dumps. When sufficient roadways have been constructed from the shore line to areas accessible to the dumps, wheeled cargo vehicles may be backed aboard the beached landing craft, loaded aboard, and dispatched to the dumps. On the vast majority of beaches there will be little difficulty in moving supplies by DUKW or by bulldozer and beach sled, although moving supplies by wheeled vehicles may frequently be highly impracticable. Piers and ferries,

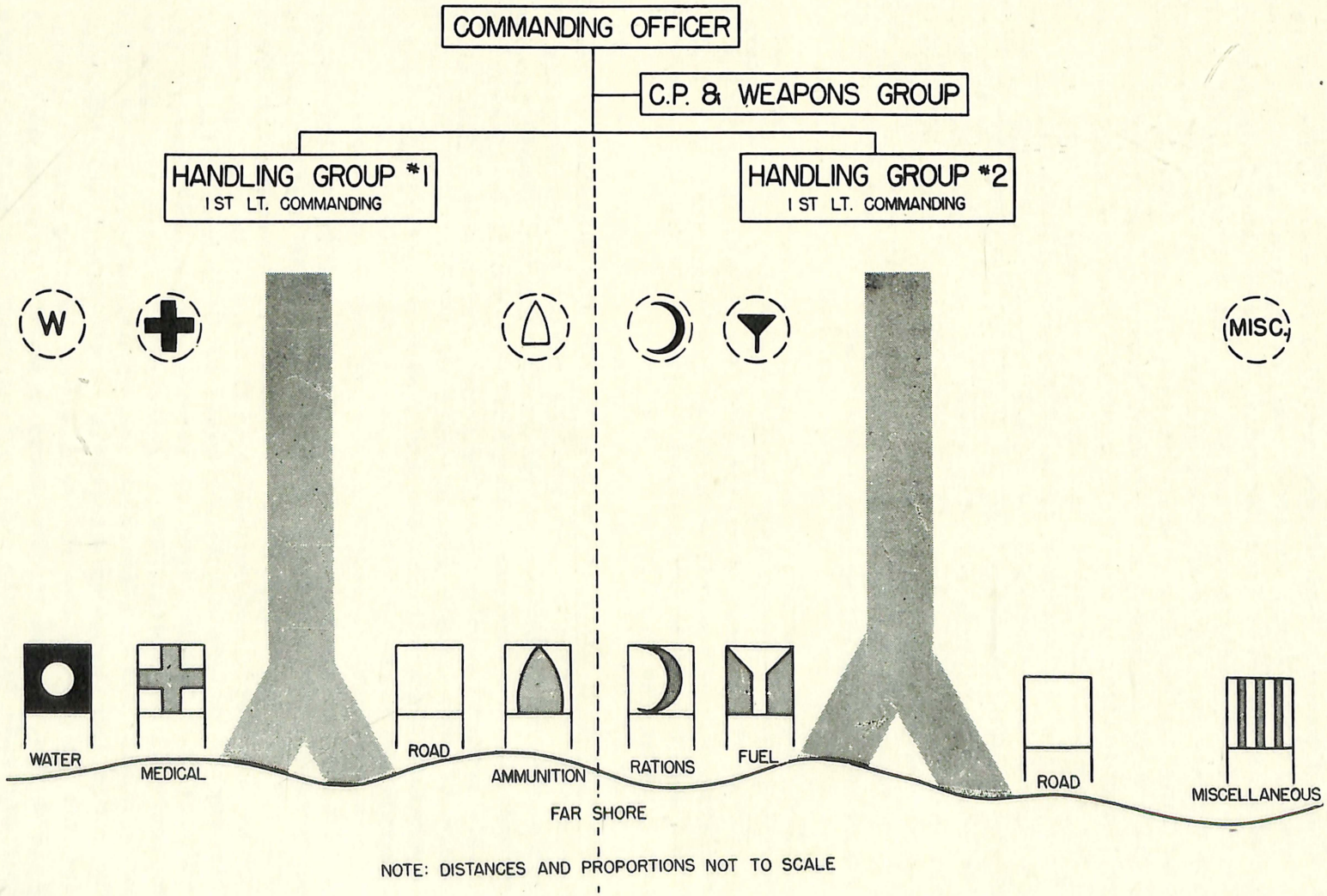

Fig. 34.--The Beach Reorganized for Resupply.